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OFFICIAL GAZETTE UNITED STATES PATENT OFFICE

VOL. 131

NOV. - DEC.

1907

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OFFICIAL GAZETTE

OF THE

UNITED STATES PATENT OFFICE.

VOLUME CXXXI.

NOVEMBER 5 TO DECEMBER 31, INCLUSIVE.

1907.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1908.

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DIGEST OF DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS IN PATENT CASES.

INDEX OF PATENTS AND PATENTEES FOR THE MONTHS OF NOVEMBER AND DECEMBER, 1907.

ERRATA.

869,998, page 70, sixth claim, line 5, for the word "shanks" read *blanks*, and seventh claim, line 3, for the word "pair" read *pairs*, and page 71, twenty-fourth claim, line 4, for the word "partitions" read *partition*.

870,313, page 227, tenth claim, line 9, for the word "roll" read *coil*.

870,334, page 240, eighteenth claim, line 4, for the words "thereon passing through the slits in said flanged side" read *between said flanged side edges and having flanged ends*.

870,530, page 333, fourth claim, lines 4–5, for the words "carried by the said base portion, contact members mounted on one side of" read *mounted on one side of the base portion, contact members carried by*.

871,479, page 826, in heading, title of invention, for "Electrogenic Body Device" read *Electric Shoe*.

871,734, pages 906–7, strike out all after number—heading, drawing, and claims—and insert the word WITHDRAWN.

872,122, page 1067, in heading, assignment, before the name of last-mentioned assignee insert the compound word *one-third*.

872,486, page 1224, fourth claim, line 6, for the word "shuters" read *shutters*.

873,100, page 1461, in heading, title of invention, for "Dental Broach" read *Dental Broach-Holder*.

873,262, page 1511, in heading, assignment, name of assignee, for "Persy S. Angle" read *Percy S. Angle*.

874,186, page 1852, first claim, line 5, for the word "brake" read *motor*.

874,275, page 1881, in heading, assignment, after the word "assignor" insert the words *of one-half*.

874,419, page 1963, fourth claim, line 3, after the word "interlocking" strike out the comma.

875,248, page 2257, in heading, assignment, for "assignor" read *assignors*.

38,951, (Designs,) page 1916, in heading, title of invention, for Handle for "Nutcrackers, Nut-Picks, and Similar Dessert Cutlery" read *Handle for Nutcrackers, Nut-Picks, and Similar Articles*.

66,542, (Trade-Marks,) page 1682, title, for "Preparation of Corn and Honey" read *Preparations of Corn and Honey and Wheat and Honey*.

Commissioner's decisions, page 691, second column, line 2 from bottom of page, for "ex parte Cuter" read *ex parte Cutler*.

Commissioner's decisions, page 694, first column, line 45, for (51 O. G., 829) read (*61 O. G., 1017.*)

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(None.)

OFFICIAL GAZETTE

OF THE

UNITED STATES PATENT OFFICE.

NOVEMBER—DECEMBER, 1907.

Patents Nos. 869,870 to 870,531.

THE OFFICIAL GAZETTE

OF THE

United States Patent Office.

[BY AUTHORITY OF CONGRESS.]

VOL. 131—No. 1. TUESDAY, NOVEMBER 5, 1907. PRICE—$5 per year.

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TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs	Trade-Marks, Labels, and Prints.
Alabama	7	.....	New Hampshire	2	.....
Arizona Territory	.....	.....	New Jersey	27	3
Arkansas	6	.....	New Mexico Ter't'y	1	.....
California	21	5	New York	94	43
Colorado	8	1	North Carolina	6	1
Connecticut	18	2	North Dakota	4	.....
Delaware	.....	.....	Ohio	56	8
District of Columbia	8	1	Oklahoma Territ'y	5	.....
Florida	1	.....	Oregon	.....	1
Georgia	3	1	Panama	.....	.....
Hawaii Territory	.....	.....	Pennsylvania	65	10
Idaho	2	.....	Philippine Islands	.....	.....
Illinois	56	12	Rhode Island	4	3
Indian Territory	1	.....	South Carolina	.....	.....
Indiana	11	2	South Dakota	5	.....
Iowa	11	4	Tennessee	5	2
Kansas	10	1	Texas	13	.....
Kentucky	5	1	Utah	3	1
Louisiana	3	4	Vermont	2	.....
Maine	4	.....	Virginia	2	2
Maryland	5	8	Washington	5	2
Massachusetts	47	17	West Virginia	11	2
Michigan	27	.....	Wisconsin	18	1
Minnesota	9	3	Wyoming	1	.....
Mississippi	1	.....	U. S. Army	.....	.....
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Nebraska	7	.....	Total to citizens of the United States	626	144
Nevada	.....	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

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Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	.....	1	Netherlands	.....	.....
Belgium	.....	.....	Newfoundland	.....	.....
Brazil	.....	.....	New South Wales	.....	.....
British West Indies	.....	.....	New Zealand	2	.....
Canada	5	.....	Norway	.....	.....
Cape Colony	.....	.....	Persia	.....	.....
Chile	.....	.....	Queensland	.....	.....
China	.....	.....	Roumania	.....	.....
Costa Rica	1	.....	Russia	1	.....
Cuba	.....	.....	Scotland	.....	1
Denmark	.....	.....	South Australia	.....	.....
Ecuador	.....	.....	Spain	.....	.....
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Java	.....	.....	Total to citizens of foreign countries	46	17
Mexico	1	.....			

Interference Notices.

DEPARTMENT OF THE INTERIOR
UNITED STATES PATENT OFFICE,
Washington, D. C., October 29, 1907.

Robert George, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The American Shoe Polish Company of Chicago, Ill., for registration of a trade-mark and a trade-mark, No. 146,682, dated August 16, 1887, registered to Robert George, of Chicago, Ill. The notice of said declaration mailed by the Patent Office in the usual manner to the said Robert George at his known address, Chicago, Ill., has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the said Robert George, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 16, 1907.

John A. Uhland, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of the Anti-Cori-Zine Chemical Company, of St. Louis, Mo., for registration of a trade-mark and a trade-mark registered to John A. Uhland, of Denver, Colo., and it appears from the record of the case that the registrant, John A. Uhland, cannot be located.

Notice is therefore hereby given to said John A. Uhland, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business October 29, 1907.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
303	XVII. Linotyping; Printing; Matrix-Making; Nut and Bolt Locks; Clutches.	Oct. 15	Sept. 30	201
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Toilet; Signals; Garment-Supporters.	Oct. 9	Aug. 10	625
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electricity, Medical and Surgical; Electric Signaling; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas and Canes.	Oct. 8	Aug. 22	277
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Measuring Instruments; Wind-Wheels; Engraving.	Oct. 5	Sept. 25	358
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Towers; Iron Structures.	Oct. 4	Sept. 25	240
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Sept. 30	Sept. 10	342
147	XXIX. Coopering; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking-Tools; Woodworking; Fire-Escapes; Ladders.	Sept. 30	Aug. 31	326
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Sept. 27	Sept. 11	307
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Fishing and Trapping; Stationery; Stone-Working; Educational Appliances.	Sept. 27	Sept. 3	429
172	XXXI. Alcohol; Charcoal and Coke; Ammonia, Water, and Wood Distillation; Gas, Heating, and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Oils, Fats, and Glue; Water Purification; Mineral Oils.	Sept. 26	Sept. 23	254
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Sept. 25	July 11	491
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Sept. 23	Sept. 3	316
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Sept. 20	Aug. 30	307
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus; Harness.	Sept. 20	Aug. 14	347
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Sept. 20	July 17	373
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Sept. 19	Sept. 16	216
152	XXX. Lamps and Gas-Fittings; Fluid-Pressure Regulators; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Sept. 16	Sept. 5	277
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Sept. 16	Sept. 3	325
332	X. Carriages and Wagons.....	Sept. 12	Aug. 27	539
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Sept. 11	Sept. 20	336
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Sept. 11	June 20	522
338	XIX. Furnaces; Stoves and Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel.	Sept. 6	July 27	488

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Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heat-Engine Plants.	Sept. 4	Aug. 10	646
322	XII. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Sept. 3	Aug. 13	693
312	VII. Games and Toys; Mechanical Motors; Paper Manufactures; Velocipedes; Optics.	Aug. 29	Aug. 31	376
327	XVIII. Steam-Engines; Steam-Boilers; Steam-Engine Valves; Steam and Vacuum Pumps; Injectors and Ejectors.	Aug. 29	July 25	353
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Aug. 29	July 15	486
167	V. Bookbinding; Harvesters; Jewelry; Music.	Aug. 28	Aug. 15	368
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Aug. 28	Aug. 12	539
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Presses; Tobacco; Store-Service; Pneumatics.	Aug. 26	Aug. 19	361
307	XIV. Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal-Ware Making; Tools; Wire-Working; Compound Tools.	Aug. 26	July 8	273
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Aug. 19	June 29	569
308	XV. Bread, Pastry, and Confection Making; Coating; Laminated Sheets and Fabrics; Fuel; Glass; Hydraulic Lime and Cement; Paper-Making; Paving; Plastics; Plastic Block and Earthenware Apparatus; Plastic Compositions; Photography.	Aug. 17	Aug. 12	637
107	XXXVII. Electricity, Conductors; Electric Lighting; Electricity, General Applications.	Aug. 15	July 5	670
142	IX. Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage; Air and Gas Pumps.	Aug. 14	Aug. 22	235
105	XXVI. Electricity, Generation; Electric Heating and Rheostats; Electric Railways; Motive Power.	Aug. 5	July 15	432
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321	XXXIX. Water Distribution; Baths and Closets.	July 16	June 13	747
352	XLI. Railway Draft Appliances; Railway-Ties and Fasteners; Railway-Rails and Joints; Resilient Tires and Wheels.	June 15	May 16	1218
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	Labels and Prints.....			

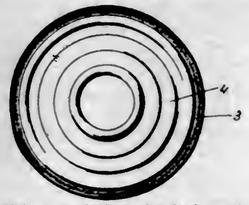
Delivery of Patent.

The patent will be delivered or mailed on the day of its date to the attorney of record, if there be one; if not, to the patentee; or, if the attorney so request, to the patentee or assignee of an interest therein.

PATENTS

GRANTED NOVEMBER 5, 1907.

869,870. COMPOSITION OF MATTER. MAX AMS, New York, N. Y., assignor to Charles M. Ams, New York, N. Y. Filed Feb. 8, 1907. Serial No. 356,443.



1. A composition consisting of gelatin and tartaric acid, for the purpose set forth.

2. A composition consisting of a comparatively large proportion of diluted gelatin and a comparatively small proportion of tartaric acid, for the purpose set forth.

3. A composition consisting of gelatin, tartaric acid and a preservative, for the purpose set forth.

4. A composition consisting of gelatin, tartaric acid and glycerin, for the purpose set forth.

5. A composition consisting of gelatin, tartaric acid and a surface-hardening agent, for the purpose set forth.

6. A composition consisting of gelatin, tartaric acid and formic acid, for the purpose set forth.

7. A composition consisting of gelatin, tartaric acid, a surface-hardening agent and a physical preservative, for the purpose set forth.

8. A composition consisting of gelatin, tartaric acid, glycerin and a surface-hardening agent, for the purpose set forth.

9. A composition consisting of gelatin, tartaric acid, formic acid, and glycerin, for the purpose set forth.

10. A composition consisting of a comparatively large proportion of diluted gelatin and comparatively small proportions of tartaric acid, formic acid and glycerin, for the purpose set forth.

11. A composition consisting of gelatin, tartaric acid, a surface-hardening agent, a preservative, and a coloring agent, for the purpose set forth.

12. A composition consisting of gelatin, tartaric acid, formic acid, and a preservative, for the purpose set forth.

13. A composition consisting of gelatin, tartaric acid, formic acid, and both chemical and physical preserving agents, for the purpose set forth.

14. A composition consisting of gelatin, tartaric acid, formic acid, suitable preservative agents, and a coloring agent, for the purpose set forth.

15. A composition consisting of gelatin, tartaric acid, formic acid, glycerin, sulfuric acid, and a coloring agent, for the purpose set forth.

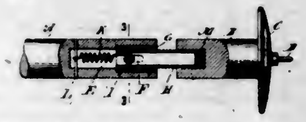
16. A composition consisting of a comparatively large proportion of diluted gelatin and comparatively small proportions of tartaric acid, formic acid, glycerin and sulfuric acid, for the purpose set forth.

17. A composition consisting of a comparatively large proportion of gelatin, comparatively small proportions of tartaric acid, formic acid, glycerin and sulfuric acid, and a coloring agent, for the purpose set forth.

18. A composition comprising the following ingredients in substantially the proportions stated: water 66 parts; gelatin 30 parts; tartaric acid, 1 part; formic acid, 1 part; sulfuric acid, ½ part; glycerin, 1 part; for the purpose set forth.

19. A composition comprising the following ingredients in substantially the proportions stated: water, 66 parts; gelatin 30 parts; tartaric acid, 1 part; formic acid, 1 part; sulfuric acid, ½ part; glycerin, 1 part; coloring agent 1½ parts; for the purpose set forth.

869,871. SPOOL FOR MUSIC-ROLLS. JAMES W. BARNES, New York, N. Y. Filed Aug. 7, 1907. Serial No. 387,412.



1. A music spool comprising a sectional spindle and tension means connecting said sections whereby said sections will be drawn toward one another, substantially as described.

2. A music spool comprising a sectional spindle, a member secured to one of said sections and having sliding engagement with the other of said sections, and resilient means connecting said member to said other section, substantially as described.

3. A music spool comprising a sectional spindle, a member having sliding engagement with one of said sections and resiliently connected thereto, said member being provided with means whereby the other section of the spindle is adjustably secured thereto, substantially as described.

4. A spool for carrying perforated sheet music, comprising a spindle having disks or flanges secured to the outer ends thereof, said spindle being divided transversely into two sections, the abutting ends of said sections being provided with openings therein, a tube threaded for a portion of its length into an opening in one of said sections, the plain portion of said tube extending into the opening formed in the other section, a spring, one end of which is secured in the opening of one of said sections and the opposite end to a pin secured in said tube, substantially as described.

5. A spool for carrying perforated sheet music, comprising a spindle provided with flanges or disks on the outer ends thereof, said spindle being divided transversely into two sections, A, B, the adjacent ends of said sections being provided with circular openings, a tube threaded for a portion of its length into the opening in section B, the opposite end of the tube being plain and sliding in the opening in the section A, a spring, one end of which is secured in the opening in section A, the opposite end of said spring being secured to a pin fixed in said tube, the ends of said pin fitting in elongated openings formed in the section A, substantially as described.

6. A spool for carrying perforated sheet music, comprising a spindle provided with flanges or disks on the outer ends thereof, said spindle being divided transversely into two sections, A, B, a tube threaded at one end in an opening in section B, the opposite end of said tube being plain, a bushing fitted in an opening in said section A and in which slides the plain end of said tube, a spring contained within said section A and having one end secured in said section, the opposite end of the spring being secured to a pin fixed in said tube, the ends of said pin extending into elongated openings formed in said section A, substantially as described.

869,872. LAUNDRY-BUTTON. JOHN S. BARNES, Detroit, Mich., assignor of one-third to Lewis E. Barnes, Detroit, Mich. Filed Sept. 20, 1906. Serial No. 335,409.



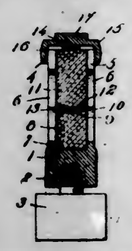
1. A button formed of a single piece of wire, one end of the wire being bent to provide a circular base with a smooth periphery and the opposite end formed into a circular head with a smooth periphery and concentric with the base, the intermediate portion of the wire forming a straight shank arranged centrally of the head and base.

2. A button formed of wire, one end of the wire being bent to provide a circular base with a smooth periphery and a circular opening, and the other end being formed into a circular head with a smooth periphery and of smaller diameter than the base, a portion of the wire between the head and base lying within the opening of the base and another intermediate portion of the wire being arranged centrally of the base and head to form the shank of the button, the base end of the wire being flattened.

3. A button formed of a single piece of wire, one end of the wire being bent to provide a circular base with a smooth periphery and the opposite end formed into a circular head with a smooth periphery and concentric with the base, the intermediate portion of the wire forming a straight shank arranged centrally of the head and base, the base end of the wire being flattened.

4. A button formed of a single piece of wire, one end of the wire being formed into a head and the other end being formed into a base having a central opening, one part of the intermediate portion of the wire being directed into said opening with another part of the intermediate portion directed at an angle to the first part forming a straight shank for the button.

869,873. INSULATOR. DUNCAN M. BASS, Fackler, Ala. Filed June 17, 1907. Serial No. 379,481.



1. An insulator comprising a slitted bracket, wire-holding means therein, between which the wire is held, and means for closing the end of the bracket and compressing the slitted portion thereof.

2. An insulator comprising a bracket with longitudinal slits, wire-holding means within the bracket, and a cap for closing the end of the bracket and closing the slits.

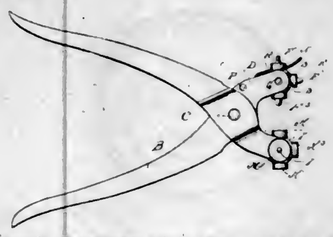
3. An insulator, comprising a bracket slitted longitudinally, removable wire-holding members therein having grooves upon their adjacent faces, and means adjustable over the end of said bracket for retaining said members and closing the slits.

4. An insulator comprising a bracket with longitudinal slits and open spaces into which the slits extend, wire-holding members in said bracket, and a cap for closing the end of the bracket and restricting the slits.

5. An insulator comprising a bracket with longitudinal slits at one end and open spaces into which the slits extend, wire-holding members in said bracket and having grooves upon their adjacent faces, one end of the bracket being screw threaded, and a cap having a threaded flange engaging the threads of the bracket.

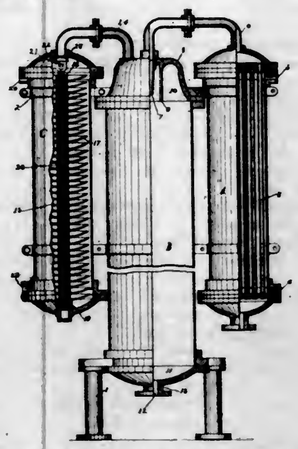
6. The insulator described consisting of a bracket with longitudinal slits at one end and exterior threads at said end, and open spaces into which the slits extend, wire-holding members in said bracket having convex and concave abutting ends with coincident grooves, and a screw threaded cap engaging the threaded end of the bracket.

869,874. REVOLVING EYELETING-TOOL. WILLIAM A. BERNARD, New Haven, Conn., assignor to The William Schollhorn Company, New Haven, Conn., a Corporation of Connecticut. Filed Mar. 14, 1906. Serial No. 306,034.



In a punch, the combination with cross lever handles; of jaws, one of which is forked; a revolving head pivotally mounted between the tines of said forked jaw; a plurality of punches carried by said head and a plate having depending pieces pivoted within said tines and having a perforation adapted to engage one of said punches to hold said head in its adjusted position, substantially as described.

869,875. FEED-WATER HEATER AND PURIFIER. WILLIAM H. BERRY, Chester, Pa. Filed Sept. 16, 1904. Serial No. 224,730.



1. In an apparatus for the purpose set forth, the combination of the separating chamber having closed ends and having an annular partition projecting inward from one end, an inlet nozzle entering said end and encircled by said partition, and an outlet leading from the annular chamber between the side of the same and the said partition, substantially as set forth.

2. In a separating apparatus, the combination of a separating chamber having an inlet at its upper end, a hollow standard rising from the bottom of the chamber, a series of pans mounted on the standard, and a bolt suspended within the casing and engaging the hollow standard and having a deflector on its upper end below the inlet in the path of the liquid escaping through said inlet, substantially as set forth.

3. In a separating apparatus, the combination of a separating chamber, a hollow standard rising from the end of the chamber and having an internally threaded bearing at its upper end, a series of pans mounted on said standard, a cross pin in the upper end of the chamber, and a bolt fitting within the standard and engaging the threaded bearing of the same and provided at its upper end with an eye engaging the cross pin, substantially as set forth.

4. In an apparatus for separating impurities held in suspension in liquids, the combination of a heating chamber and a supplemental separating chamber each adapted for communication with the steam and water spaces, respectively, of the boiler, an interposed main separating chamber, means connecting the steam end of the heating chamber with the upper end of the main separating chamber, and means for connecting the same end of said main separating chamber with the upper end of the supplemental separating chamber, substantially as set forth.

5. In an apparatus for separating impurities held in suspension in liquids, the combination of a heating chamber and a supplemental separating chamber each adapted for communication with the steam and water spaces, respectively, of the boiler, an interposed main separating chamber, means connecting the steam end of the heating chamber with the upper end of the main separating chamber, means for connecting the same end of said main separating chamber with the upper end of the supplemental chamber, and successive means within the supplemental separating chamber for arresting the impurities, substantially as set forth.

6. In an apparatus for separating impurities held in suspension in liquids, the combination of a heating chamber and a supplemental separating chamber each adapted for communication with the steam and water spaces, respectively, of the boiler, an interposed main separating chamber supporting the said heating and supplemental separating chambers, means connecting the steam end of the heating chamber with the upper end of the main separating chamber, and means for connecting the same end of said main separating chamber with the upper end of the supplemental chamber, substantially as set forth.

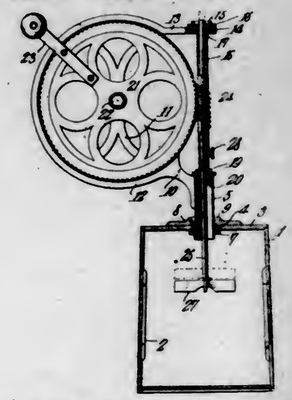
7. In an apparatus for separating impurities held in suspension in liquids, the combination of a heating chamber and a supplemental separating chamber each adapted for communication with the steam and water spaces, respectively, of the boiler, an interposed main separating chamber, a pipe leading from the steam end of the heating chamber and having a contracted nozzle connection with the upper end of the main separating chamber, and means for connecting the same end of said main separating chamber with the upper end of the supplemental separating chamber, substantially as set forth.

8. In an apparatus for separating impurities held in suspension in liquids, the combination of a heating chamber and a supplemental separating chamber each adapted for communication with the steam and water spaces, respectively, of the boiler, an interposed main separating chamber having an annular chamber formed at its upper end, a pipe leading from the steam end of the heating chamber and having a contracted nozzle connection with the upper end of the main separating chamber, and a pipe leading from the annular chamber of the main separating chamber to the upper end of the supplemental separating chamber, substantially as set forth.

9. In an apparatus for separating impurities held in suspension in liquids, the combination of a heating chamber and a supplemental separating chamber each adapted for communication with the steam and water spaces, respectively, of the boiler, a main separating chamber, means connecting the steam end of the heating chamber with the upper end of the main separating chamber, and means for connecting the same end of the main separating chamber with the upper end of the supplemental chamber, substantially as set forth.

10. In an apparatus for separating impurities held in suspension in liquids, the combination of a heating chamber and a supplemental separating chamber each adapted for communication with the steam and water spaces, respectively, of the boiler, a main separating chamber having an annular chamber formed at its upper end, a pipe leading from the steam end of the heating chamber and having a contracted nozzle connection with the upper end of the main separating chamber, a pipe connection leading from said annular chamber of the primary separating chamber to the upper end of the supplemental separating chamber, successive means within the supplemental separating chamber for arresting the impurities, and means for deflecting the liquid and scattering it upon the first of said successive means, substantially as set forth.

869,876. CHURN. WILLIAM E. BORDEN, Hillsboro, Ohio. Filed Aug. 2, 1907. Serial No. 386,816.



1. The combination with a churn body, a supporting structure thereon having an opening therein communicating with the interior of the body, and means for directing liquid into the opening; of a sleeve revoluble within the supporting structure, means for rotating the sleeve, adjustable end bearings for the sleeve, a stem adjustably mounted within the sleeve, and a dasher revoluble with the stem.

2. The combination with a churn body, a tubular body portion secured thereon and having openings therein, and a cup surrounding the apertured portion of the body; of a sleeve revoluble within the body, means supported by the body for rotating the sleeve, adjustable bearings for the sleeve, a stem extending through and adjustable within the sleeve and tubular body, means for locking the stem in adjusted position, and a dasher revoluble with the stem.

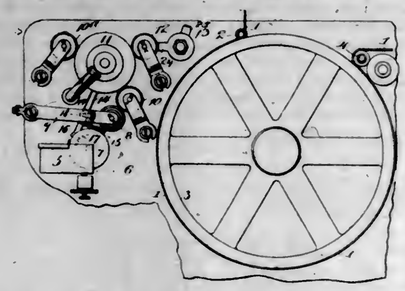
869,877. DIE FOR PRINTING CIGARETTES. ARTHUR L. BOUCHER, New York, N. Y., assignor to New York Cigarette Machine Company, New York, N. Y., a Corporation of New York. Filed Oct. 15, 1906. Serial No. 338,893.

1. A rotary die for the purpose described, comprising a plurality of sections mounted upon a common shaft, each section having a type-bearing projection fitting over the periphery of the adjacent section, and means to secure the sections together in different angular relation to each other.

2. A rotating die for the purposes described, comprising separate sections secured upon a common shaft, each section having a lateral projection extending over the periphery of the other said section, and being provided with type or other marking means, the die sections being adjustable in their relation with each other on their arcs.

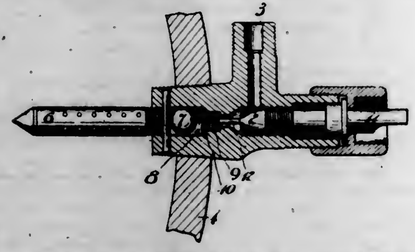
3. A die for the purposes described, composed of a plurality of sections secured upon a common shaft, each section having a lateral projection extending over the periphery of the other section and each section carrying type or other marking means which move in the same arc.

and means for adjusting the sections with relation to each other comprising a fastening means which is non-adjustable with regard to one of said sections but which is adjustable with regard to the other of said sections.



4. A die for the purposes described, composed of a plurality of sections, secured upon a common shaft, each section having a lateral projection extending over the periphery of the other section and each section carrying type or other marking means, and means for adjusting the said die sections in relation to each other, consisting of an extension on one of the sections, having a slot and a screw on the other die member for engaging in the slot in the projection and adapted to secure the said projection.

869,878. SAFETY CUT-OFF FOR STORAGE LIGHTING SYSTEMS. RUDOLPH E. BRUCKNER, Mount Vernon, N. Y., assignor to Commercial Acetylene Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 29, 1907. Serial No. 370,796.



1. A safety cut-off for gas storing and lighting systems, comprising a storage reservoir, an outlet pipe, a manually operable valve therefor, a separate check valve between the manually operable valve and the interior of said reservoir, means for normally holding said check valve open, and means carried by the first-mentioned valve for unseating the second-mentioned valve when the first one is closed.

2. A safety cut-off for gas storing and lighting systems, comprising a storage reservoir, an outlet pipe, a manually operable valve therefor, a separate check valve between the manually operable valve and the interior of said reservoir, a spring for normally holding said check valve open, and a strainer within the storage reservoir and protecting the outlet.

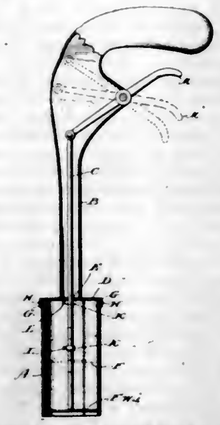
3. In a gas storage and lighting system, a storage reservoir, a pipe line extending therefrom, an automatic regulating apparatus in said pipe line arranged to reduce and maintain with substantial uniformity the pressure in that part of the line beyond said regulating apparatus, a manually operable valve in the pipe line between the reservoir and regulator, and a separate check valve between the reservoir and the manually operable valve, and a second check valve between the manually operable valve and the regulator, and means for holding both of said check valves unseated during the normal operation of the apparatus.

4. In a gas storage and lighting system, a gas storage tank, a pipe line leading therefrom, a regulator in said pipe line and adapted to reduce and maintain at a substantially uniform pressure the gas therein beyond said regulator, a manually operable valve between the storage tank and the regulator, and means separate from said manually operable valve and between the storage tank and said regulator for automatically closing said pipe line in the event of a break beyond said automatic closer.

5. In a gas storage and lighting system, a gas storage tank, a pipe line leading therefrom, a regulator in said pipe line adapted to reduce and maintain at substantial uniformity the pressure therein beyond said regulator, a manually operable valve, and means for automatically closing said pipe line in the event of a break, including two check valves separate from each other and from said first valve.

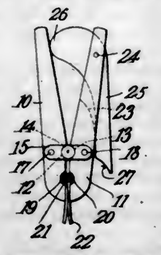
6. In an apparatus of the character described, a gas storage reservoir, an outlet pipe, a gas pressure reducing device in said outlet pipe, a valve between said reservoir and pressure reducer, and two check valves in said pipe line, one being arranged between the pressure reservoir and the manually operable valve, the other being arranged between the manually operable valve and the pressure reducer.

869,879. ICE-CREAM SERVER. WILLIAM R. CAMERON, New York, N. Y. Filed July 23, 1906. Serial No. 327,275.



In an ice cream server, the combination of a tubular receiver, a handle connected with the inner end thereof and having a pistol grip, a plunger in said receiver, a plunger rod connected with said plunger and extending rearward through said handle, and a trigger mounted in the said pistol grip and connected with said plunger rod, substantially as described.

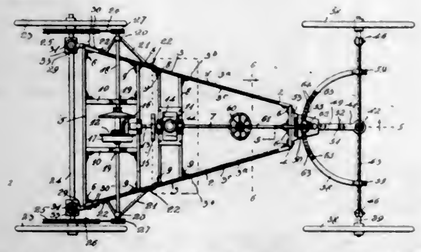
869,880. CLOTHES-PIN. ELIJAH J. CONRAD, Coalport, Pa. Filed Aug. 1, 1906. Serial No. 328,821.



1. A clothes pin comprising a pair of jaw members having a rounded fulcrum connection, both of said members being provided with approximately semi-circular recesses for engagement with a clothes line or similar support, a pair of links extending across the plane of the fulcrum, pins extending through the links and the jaw members, said links serving to prevent independent lateral play or movement of the members, a lever pivotally connected to one of said members and having at one end a cam head to engage the opposing face of the other member, substantially as specified.

2. A clothes pin comprising opposing jaw members having approximately semi-circular recesses for the reception of a clothes line or other support, the inner edges of said members being further provided with semi-circular grooves at a point beyond the clothes line receiving recesses, a roller fitting within said grooves and forming the fulcrum-point of both jaw members, a pair of links extending across the axis of the roller and serving to prevent lateral displacement thereof, pivot pins connecting the links to the jaw members, and a cam lever carried by one of said jaw members.

869,881. MOTOR-VEHICLE RUNNING-GEAR. DAVID M. DEARING, Jackson, Mich. Filed July 23, 1906. Serial No. 327,421.



1. A vehicle running gear frame comprising forwardly-converging, flanged side beams, front and rear flanged end beams, longitudinally and transversely-extending, intermediate bars, said beams being connected together and to said bars by angle plates secured to the inner faces of their webs between their upper and lower flanges, and cushioning devices for suspending said frame from front and rear axles.

2. A vehicle running gear frame comprising forwardly-converging, flanged side beams, front and rear flanged end beams, longitudinally and transversely-extending, intermediate bars, said beams being connected together and to said bars by angle plates secured to the inner faces of their webs between the upper and lower flanges, a reach bar or tube, a union between the latter and the forward end of the frame, means for mounting the rear end of said frame upon a rear axle, and a cushioning and pivoting device at the forward end of said reach bar for a front steering axle.

3. A vehicle running gear frame comprising forwardly-converging, flanged side beams, front and rear flanged end beams, longitudinally and transversely-extending, intermediate bars, said beams being connected together and to said bars by angle plates secured to the inner faces of their webs between the upper and lower flanges, a rear axle, means for connecting the rear end of the frame to said axle, a front steering axle, a reach bar or tube, a union connecting the latter to the front end of said frame, a front steering axle, a cushioning and pivoting device for the latter at the forward end of said reach bar, and a semi-circular bar connected to said front axle and slidable in said union, substantially as described.

4. A vehicle running gear frame comprising forwardly-converging, flanged side beams, front and rear flanged end beams, longitudinally and transversely-extending, intermediate bars, said beams being connected together and to said bars by angle plates secured to the inner faces of their webs between their upper and lower flanges, cushioning devices upon the rear of said frame, a rear axle mounted in said cushioning devices, a reach bar or tube, a union connecting the latter to the front end of said frame, a cushioning and pivoting device rotatably mounted in the forward end of said reach bar, a front axle pivotally mounted in said cushioning and pivoting device, guide rollers in said union, and a semi-circular bar slidably engaged with said rollers and having its ends connected to the front steering axle, substantially as shown and described.

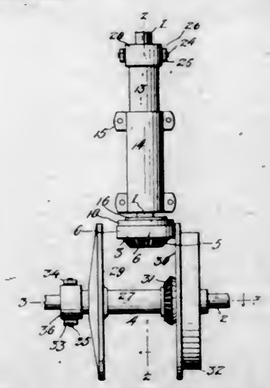
5. In a vehicle running gear comprising a horizontally-disposed frame consisting of bars or beams connected by angle plates, cushioning devices for mounting a rear axle at the rear end of said frame, a reach bar or tube, a union connecting the latter to the front end of said frame, a front axle, a pivoting and cushioning device for the latter, rotatably mounted in the forward end of said reach bar, and a semi-circular bar slidable in said union and having its ends connected to said front axle, substantially as described.

6. In a vehicle running gear, the combination of a reach bar having a tubular portion at its forward end, an axle-pivoting device having its rear end rotatable in the tubular end of said reach bar, and a transverse pin carried by the rear end of said device and projecting into a transverse slot in said reach bar, substantially as described and for the purpose set forth.

7. In combination with a vehicle running gear frame, a yoke on said frame and having forwardly-extending arms, one above the other, an axle having its central portion between said arms, a guide on said axle having vertically-projecting, alined pins extending through openings in the arms of said yoke, and cushions on said guide pins, substantially as described.

8. The combination with a vehicle running gear frame, of yokes or forked brackets secured upon said frame and having their arms apertured, an axle, guides secured upon said axle and consisting of similar upper and lower members having pins to slidably engage the apertures in the arms of said yokes, and base plates to engage said axles, and cushioning springs upon said pins, substantially as shown and described.

869,882. VARIABLE-SPEED POWER-TRANSMISSION DEVICE. DAVID M. DEARING, Jackson, Mich., assignor of one-half to Louis F. Boos, Jackson, Mich. Filed Feb. 19, 1906, Serial No. 301,891. Renewed Apr. 1, 1907. Serial No. 365,857.



1. In a device of the character described, a driving member having a bevel toothed working surface and a flat peripheral working surface, a driven member having opposing flat working surfaces to coact with the peripheral surface on said driving member and a bevel toothed working surface adjacent to the center of one of said flat surfaces to coact with the toothed surface upon said driving member, and means for varying the relative positions of said members for the purpose set forth.

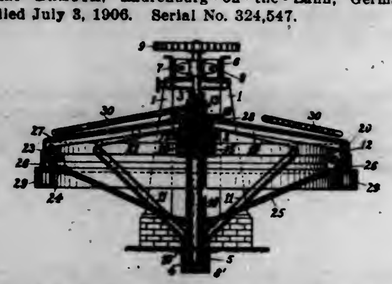
2. In a device of the character described, right angularly

disposed drive and driven shafts, a driving member slidably but non-rotatably mounted upon said driving shaft and consisting of a bevel toothed gear and a peripheral friction wheel, a driven member slidably but non-rotatably mounted upon said driven shaft and consisting of opposing friction disks to coact with said friction wheel, and a bevel toothed gear to coact with the gear upon said driving member, and means for shifting said members upon their shafts, substantially as described and for the purpose set forth.

3. In a device of the character described, a driving shaft, a sleeve slidably but rotatably mounted upon the same, a toothed bevel gear upon said sleeve, a friction wheel upon said sleeve adjacent to said gear, a driven shaft disposed at right angles to said drive shaft, a sleeve slidably but non-rotatably mounted upon said driven shaft, friction disks upon the last mentioned sleeve upon opposite sides of the driving shaft, a bevel toothed gear upon the last mentioned sleeve to coact with the first mentioned toothed gear, and levers for shifting said sleeves upon their respective shafts, substantially as described and for the purpose set forth.

4. In a device of the character described, a bearing, an outer sleeve slidable longitudinal in said bearing and having external screw-threads at one end and a radial flange at its opposite end, an inner sleeve in said outer sleeve provided at one end with external screw-threads and a radial flange, an annular row of bearing balls between said flanges, a rotatable element engaged with the outer face of the flange on said inner sleeve, a rotatable element having an internally screw-threaded hub to engage the screw-threads on said inner sleeve, a cap or collar upon the screw-threaded end of said outer sleeve, an annular row of bearing balls between said cap and said inner sleeve, and means engaged with said cap for shifting said outer sleeve longitudinally in said bearing, substantially as described.

869,883. ROUND BUDDLE FOR DRESSING ORES. ALBERT DEMUTH, Laurenburg-on-the-Lahn, Germany. Filed July 3, 1906. Serial No. 324,547.



1. A round-buddle for dressing ores having a table consisting of arms slantwise adjustable in a vertical plane, sectorlike plates each attached with one lateral edge to one of said arms and resting with its free lateral edge on the fixed lateral edge of another sectorlike plate, and a flexible cover arranged on the face of said sectorlike plates; and pulp-feeding means arranged above said table.

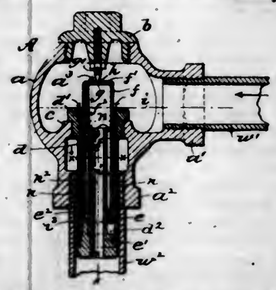
2. A round-buddle for dressing ores having a table consisting of arms stationarily supported at one end and vertically movable at the other end, sectorlike plates each attached with one lateral edge to one of said arms and overlapping with its other lateral edge the fixed lateral edge of an adjacent sectorlike plate, and a continuous cover slidingly arranged on the face of said sectorlike plates; and pulp-feeding means arranged above said table.

3. A round-buddle for dressing ores having a table consisting of arms hinged at one end to a stationary support and slidingly held in a vertically adjustable support at the other end, sectorlike plates each attached with one lateral edge to one of said arms and overlapping with its free lateral edge the fixed lateral edge of an adjacent sectorlike plate, and a cover slidingly arranged upon said sectorlike plates; means for preventing said cover from forming folds; and pulp-feeding means arranged above said table.

4. In a round-buddle the combination of a vertical driving shaft, an outer table-ring rigidly connected with said shaft, table-adjusting means carried by said driving shaft, an inner table-ring carried by said adjusting means, arms hinged to the outer table-ring and slidingly connected with said inner table-ring, sectorlike plates each secured with one lateral edge to one of said arms and overlapping with its free lateral edge the fixed lateral edge of an adjacent sectorlike plate, a continuous cover arranged on top of said plates and fixed to the inner table-ring, a ring attached to the outer edge of said cover to keep the latter free of folds, and pulp-feeding means arranged above said table.

5. In a round-buddle of the kind described the combination of a vertical driving shaft, a sleeve slidingly arranged upon said shaft, an outer table-ring rigidly connected with said shaft, table-adjusting means carried by said driving shaft and revolubly connected with said sleeve, an inner table-ring carried by said adjusting means, arms hinged with one end to said outer table-ring and slidingly connected with said inner table-ring, sectorlike plates each secured with one lateral edge to one of said arms and overlapping with its free lateral edge the fixed lateral edge of an adjacent sectorlike plate, a continuous cover arranged on said plates and fixed to said inner table-ring, a ring attached to the outer edge of said cover, bell-cranks held between lugs of said outer table-ring and connected by means of one of their arms with the ring attached to the outer edge of said cover, rods connecting the other arms of said bell-cranks with said sliding sleeve to tighten or slacken said cover in accordance with the movement of said table-adjusting means, and pulp-feeding means arranged above said table.

869,884. AUTOMATIC RELIEF DEVICE FOR STEAM-RADIATORS. THOMAS F. DEXTER, Providence, R. I. Filed Mar. 13, 1906. Serial No. 305,855.



1. As an improved article of manufacture, an automatic relief device for steam-heating systems, said device having a chambered casing provided with main inlet and outlet-passages, a downwardly extending tubular plug or outer barrel member open at the top and seated in the last-named passage, a central inner tube or member open throughout its length and surrounded by said barrel, thereby forming between them an annular space closed at the bottom, and a suitably supported intermediate tube arranged in said annular space so that the latter is converted into a plurality of spaces in continuous open communication with one another and with said inlet and outlet-passages, the upper end of said intermediate tube extending above the top of the outer and inner tubes and having a vent-opening therethrough.

2. The combination with a casing having inlet and discharge-openings and adapted to be connected with the return piping of a steam-heating system, of a self-contained automatic or self-sealing relief device B seated in said casing, said device comprising central, intermediate and outer non-movable concentric tubular members, arranged substantially as described and forming continuously open intercommunicating passages, n, n^1 and n^2, communicating with said main inlet and discharge-openings, and having the upper end of the said intermediate tube vented and extending above the corresponding ends of the other tube members, constructed, arranged and adapted for operation substantially as hereinbefore described.

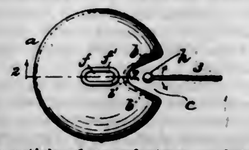
3. As an improved article of manufacture, an automatic relief device of the character described, the same comprising a suitable casing provided with main inlet and discharge-openings adapted to be connected with the return piping of a steam-heating system, a vertical stationary barrel member d mounted in the casing and communicating with said openings, a continuously open stationary central tube e located in said barrel member and forming between them an annular space closed at the bottom, and a suitably supported fixed vertical tubular member f having a vented top, said element f being disposed in said annular space so as to convert the latter into a plurality of spaces in continuous open communication with each other below the lower end of member f, the upper end of the latter extending above the corresponding portions of said barrel and tubular members, d and e, all constructed and arranged so as to form a self-sealing valveless passage for the flow of the water of condensation through the device by gravity.

4. In an automatic valveless relief device for steam-heating systems, the combination with a chambered casing having main inlet and discharge-openings, a capped central opening and an integral apertured partition formed within the casing and interposed between said openings, of a tubular or barrel member removably seated in said partition, a continuously open central tube e detachably secured to the lower end of the barrel and extending upwardly therefrom thereby when in use forming an annular water-holding space between them closed at the bottom, and an intermediate tubular member f removably though stationarily supported in said space and adapted to form a water-seal, its upper end being closed with the exception of a small vent and extending above said tubes, constructed, arranged and adapted for use substantially as hereinbefore described.

5. In a device of the character described, the combination with a chambered casing having main inlet and outlet-openings, of an open central tube disposed in said casing, a tubular member joined to and surrounding said tube and forming a space between them closed at the bottom, and a stationarily supported inverted cup-shaped member having its lower portion extending downwardly in said space to form a water-seal and at the same time permitting a free passage at the bottom for the water, substantially as described and for the purpose set forth.

6. An automatic valveless relief device, for steam-heating systems, comprising an outer tubular member having inlet in its upper portion, an inner tubular member spaced from said outer member and connected at its lower portion thereto in such fashion as completely to close the bottom of the space between the members, said inner member being open at both ends, its open lower end constituting the outlet of the device and its open upper end being disposed lower than the inlet-level of said outer member, and a non-buoyant intermediate tubular member having its upper end vented and extended above said outer member, said intermediate member being mounted stationarily in said space in such fashion as to form an outer downtake passage and an inner uptake passage permanently in communication with each other, said uptake passage being in free communication at its upper end with the open top of said inner member.

869,885. SIGNAL-BELL. GEORGE F. DREW, Brunswick, Me. Filed Oct. 13, 1906. Serial No. 338,767.



1. As a new article of manufacture, an integral or one-piece bell having one side or portion thereof formed so as to produce therein a continuously open recess having walled sides between which a striker may freely vibrate, for the purpose hereinbefore set forth.

2. As an improved article of manufacture a gong or analogous resonant member having a side thereof depressed so as to form therein a continuously open vertical recess c having walled sides between which a striker may freely vibrate, said walled sides extending inwardly from the outer edge of the gong in a convergent manner.

869,886. APPLAUDING DEVICE AND THE LIKE. FRANK M. DUCKWORTH, Bridgewater, Mass. Filed Jan. 7, 1907. Serial No. 351,111.



1. An applauding device comprising a resonant member, a flexible striker connected thereto, and means secured to the device to transversely curve the striker.

2. An applauding device comprising a resonant member, a plurality of flexible strikers connected thereto capable of being laid flat on the resonant member, and means to curve the strikers at will and retain them in said position.

3. An applauding device comprising a resonant member, a flexible striker connected thereto, means to transversely curve the striker, and means for retaining the striker in its curved position.

4. An applauding device comprising a resonant member, a flexible striker connected thereto, means connected to the free end of the striker whereby said striker may be curved at will and retained in curved position.

5. An applauding device comprising a resonant member, a plurality of flexible strikers connected thereto, cords secured one to the free end of each striker whereby the strikers may be curved at will, and means for securing the opposite ends of said cords in position after the desired curvature in the strikers has been made.

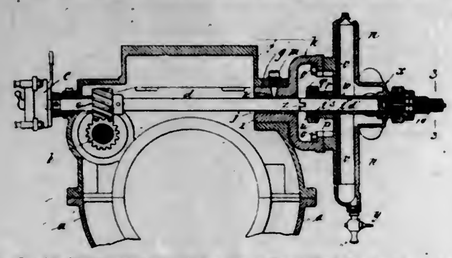
6. In an applauding device, a resonant member a striker and a card, said striker and card being connected with the resonant member.

7. An applauding device comprising a resonant member, a striker connected thereto, a band encircling the striker and resonant member, a cord attached to the free end of said striker, the opposite end of said cord adapted to be passed between the resonant member and the striker at the point where said resonant member and striker are secured together and retained therein by friction.

869,887. INTERNAL-COMBUSTION ENGINE. JAMES F. DURYEA, Springfield, Mass. Filed Jan. 19, 1907. Serial No. 353,118.

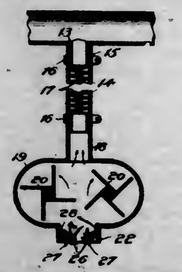
1. In an internal combustion engine of the class described, a base portion, a cam-shaft and commutator-shaft mounted therein and having means for driving one from the other, a yoke-shaped piece carried by the engine casing, a pump-casing removably secured thereto, a pump located therein, the shaft thereof having a clutch connection with the commutator-shaft whereby when the pump-casing is removed the pump-shaft is disengaged from the commutator-shaft.

2. In an improvement of the class described, a yoke-shaped piece secured to the engine casing, a circulating pump-casing removably secured to the yoke-shaped piece, a clutch connection between the shaft of the circulating pump and the commutator-shaft, a hub integral with the pump-casing and adjacent the clutch for receiving the water-tight packing material, a packing-nut on the hub whereby when the casing is removed from the yoke-shaped piece the pump-shaft is disengaged from the commutator-shaft, and the packing-nut may be removed as described.



3. An improvement of the class described, an engine casing, a yoke-shaped piece having a hub portion removably mounted in the engine-casing, a commutator-shaft, a sleeve encircling the commutator-shaft and located between said shaft and the yoke-shaped piece, means for securing the yoke-shaped piece and bushing to the casing, a circulating pump-casing detachably secured to the arms of the yoke-shaped piece, a hub extending from the pump-casing towards the engine-casing, bushings carried by the pump-shaft and located between the same and the hub, a packing-nut on the inner end of the hub, a clutch connection between the commutator and the pump-shaft whereby when the pump-casing is removed from the yoke-shaped piece, the pump-shaft is disengaged from the commutator-shaft, and whereby any leakage from the pump is prevented from entering the crank-casing.

869,888. COTTON-HARVESTING APPARATUS. STEPHEN A. ELLIS, Woodlawn, Ala., assignor of one-tenth to W. B. Copeland, Birmingham, Ala. Filed Dec. 15, 1906. Serial No. 348,025.



1. Cotton harvesting apparatus comprising a wagon, a motor supported thereby, a fan driven by said motor, draft devices for the wagon, a pneumatic conveyer tube extending forward of the wagon and supported at its outer end by said devices, a plurality of flexible suction picking tubes connected to the outer end of said conveyer tube, a screen in said conveyer tube, and a gin carried by said wagon and driven by said motor which receives the cotton from said tube, substantially as described.

2. In a portable cotton harvesting apparatus, a wagon, a tongue therefor, a pneumatic conveyer tube supported by said wagon and tongue, means to produce a suction in said tube, a cross-head at the outer end of said tube, and a plurality of flexible suction tubes depending from said cross-head.

3. In a cotton harvesting apparatus, a flexible suction tube, a picker head connected thereto and comprising a mouth piece containing rotating devices carrying grabs which project from said mouth piece, fans mounted in said head and adapted to be driven by the air blast flowing through said mouth piece, driving connections between said fans and grab devices, and means to produce a suction in said tube which co-acts with said devices in drawing cotton into the tube.

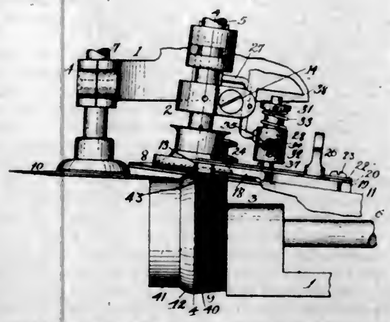
4. In a cotton harvesting apparatus utilizing a pneumatic conveyer system, flexible picking tubes in which the suction takes effect, picking heads carried by said tubes and comprising each a casing having a mouth-piece, fans journaled in said casing and inclosed thereby so that their blades are acted upon only by the air blast flowing from said mouth-piece into the tube, rotating grab devices mounted in or near the mouth-piece, and belt and pulley drive connections between said fans and devices.

5. In a cotton harvesting apparatus utilizing a pneumatic conveyer system, flexible picking tubes in which the suction takes effect, picking heads carried by said tubes and comprising each a casing having a mouth-piece, fans journaled in said casing and inclosed thereby so that their blades are acted upon only by the air blast flowing from said mouth-piece into the tube, rotating grab devices mounted in or near the mouth-piece, and belt and pulley drive connections between said fans and devices, and disposed without the casing.

6. A portable cotton harvesting apparatus, comprising a power driven fan, a pneumatic conveyer tube, a plurality of flexible suction picking tubes connected to and adapted to feed said conveyer tube, a screen in said conveyer tube, and a power driven rotary stirrer device adapted to act on the cotton at a point adjacent to said screen.

7. A portable cotton harvesting apparatus, comprising a power driven fan, a pneumatic conveyer tube, a plurality of flexible suction picking tubes connected to and adapted to feed said conveyer tube, and a cleaning chamber into which said conveyer discharges the cotton, said chamber comprising a rotary stirrer, and a screen disposed at a bend in said conveyer tube.

869,889. SKIVING-MACHINE. GEORGE W. FAIRBANKS, Wayland, Mass. Filed Aug. 20, 1904. Serial No. 221,471.



1. In a skiving machine, a rotatable disk knife, a shaft by which said knife is carried, said shaft being mounted to have angular and longitudinal adjustment, a semi-circular guard plate entirely below and extending slightly beyond the rear edge of the knife, and mounted to maintain its position relative to the knife upon adjustment of the latter.

2. In a skiving machine, a leather supporting and feeding roll comprising a cylindrical surface, a conical surface having a curved continuation joining with said cylindrical surface as described.

3. In a skiving machine, a rotatable disk knife, a leather supporting and feeding roll co-acting with the said knife to feed the leather thereto comprising a cylindrical feeding surface, and a conical surface, said cylindrical and conical surfaces being joined by a curved surface consisting of a continuation of the conical surface as described.

4. In a skiving machine, a rotatable disk knife, a guard located beneath said knife, said guard being pivotally mounted upon its support to permit of its being swung from under the knife.

5. In a skiving machine, a rotatable disk knife, a guard located beneath said knife, said guard being pivotally mounted upon its support to permit of its being swung from under the knife, and a spring lock for normally preventing movement of said guard on its pivot.

6. In a skiving machine, a rotatable disk knife, a guard located beneath said knife, said guard being pivotally mounted upon its support to permit of its being swung from under the knife, means for maintaining said guard normally locked against movement on its pivot, and means for releasing said lock.

7. In a skiving machine, a rotatable disk knife, a guard located beneath said knife, a pivotal rod or shaft on which said guard is mounted to be swung from under the knife, said rod having a longitudinal movement in its bearings and having fast thereon a collar, a stationary collar or lug with which the collar on the shaft is adapted to engage to prevent rotation of the shaft, and a spring to normally hold said collars in engagement, substantially as described.

8. In a skiving machine, in combination with a frame or standard, a rotary knife, a gage and its support, a presser arm connecting therewith, the same being curved to conform to the periphery of the knife, said gage support having an adjusting slot whereby it may be adjusted longitudinally, the said standard having a slot at substantially right angles to the slot in said gage when said gage is in place, and an adjusting screw adapted to pass through both slots, as set forth.

9. In a skiving machine, a rotatable disk-knife, a shaft by which said knife is carried, said shaft being mounted to have angular and longitudinal movement, a semi-circular guard plate or disk just beneath and extending slightly beyond the rear edge of the knife, and mounted to maintain its position relative to the knife upon adjustment of the latter, and means whereby the guard may be adjusted upon the machine to permit free access to the knife edge.

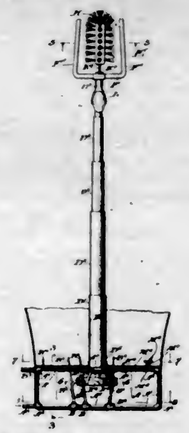
10. In a skiving machine, a rotatable disk knife, a semi-circular guard located beneath said knife, said guard extending beyond the rear edge of said knife and being beveled at its forward end to deflect the material upon contact therewith.

11. In a skiving machine, a rotary knife, a presser arm curved to conform to the periphery of the knife, a gage, and means whereby said gage and curved presser arm may together in proper coördination of position be moved around the edge of said knife and said presser arm maintain a proper position snugly adjacent thereto through the extent of its said curvature.

12. In a skiving machine, a rotatable disk knife and a feed roll co-acting with the edge thereof, said roll having faces of two diameters and between the same said roll presenting an outwardly rounding surface, and means for causing the leather to conform to the outline of said surface, substantially as and for the purposes set forth.

869,890. PORTABLE ROTARY BATHING AND MASSAGING MACHINE. CHARLES F. FAUPEL, Chicago, Ill. Filed Dec. 28, 1906. Serial No. 349,877.

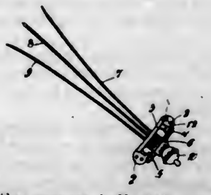
1. In a device of the kind described the combination consisting of a base of pipe fittings arranged to convey separately hot and cold water and steam; a plurality of valves in said base adapted to regulate the flow of fluid through said pipes; a telescopic case pivotally supported on said base by a ball joint; a ball joint affixed to said base and case; a telescopic shaft revolubly supported in said case having a water wheel affixed thereto, said shaft being adapted to support either a sponge, a brush or a vibrator; a pipe ring supported on said case encircling said wheel adapted to receive and to project water against said wheel and to thereby rotate said wheel and shaft; flexible pipes connecting said valves and said case and said ring; adapted to convey separate supplies of cold and hot water from said base into said case, and to operate said water wheel; a flexible water proof envelop inclosing said base, case and shaft, and adapted to inclose the body of a person standing on said base, means on said base and envelop adapted for flexible connection with a fluid supply and for the drainage of water from said envelop, as described and for the purposes specified.



2. In a device of the kind described the combination consisting of a base adapted to support a person standing thereon and to convey cold and hot water and steam; valves in said base adapted to regulate separately the flow of cold and hot water and steam through said base; a telescopic case pivotally supported on said base; means for pivotally supporting said case on said base; a telescopic shaft revolubly supported in said case having a water wheel attached thereto; means connected with the cold water valve in said base, adapted to direct water upon said wheel and to thereby rotate said wheel and shaft; means for connecting the cold and hot water valves in said base with said case; a flexible waterproof envelop inclosing said base, case and shaft, adapted to inclose the body of a person standing on said base; and means for connecting said base and valves with a fluid supply and drainage of water from said envelop, as described and for the purposes specified.

3. The combination of a bathing device of the kind described consisting of a base adapted for connection with a water and steam supply, valves therein adapted to regulate the flow of water and steam therethrough; a telescopic case pivotally attached to said base; a telescopic shaft having a water wheel, said shaft being revolubly supported in said case and adapted to be rotated by the flow of water through said base; means for conveying water from said base into said case; an envelop inclosing said base, case and shaft adapted to inclose the body of a person standing on said base; with a vibrator supported on said case and operated by said shaft, as described.

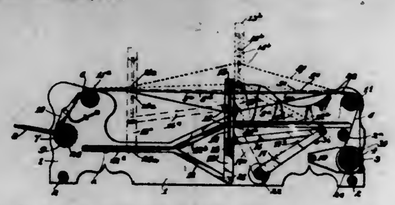
869,891. FASTENER FOR HATS, BONNETS, AND THE LIKE. JOHN FENTON, Auckland, New Zealand. Filed May 7, 1906. Serial No. 315,505.



A device for the purpose indicated comprising a frame adapted to be secured to a hat having a horizontal slot and guides upon its top and bottom edges, a slide piece

adapted to work horizontally in said guides and pins secured in a knob and passing through said slide substantially as specified.

869,892. LOOM. GEORGE E. GAY, Malden, Mass., assignor to The Linen Thread Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 6, 1905. Serial No. 285,966.



1. In a hand loom, the combination of two parallel sides provided with slots in their inside faces, said slots comprising a horizontal guideway terminating in an upwardly and a downwardly diverging guideway; a combined batten and heddle provided with engaging members adapted to move in said slots; means for reciprocating said batten-heddle longitudinally and means for preserving the alinement of said batten-heddle relative to the threads of the warp.

2. In a hand loom, the combination of two parallel sides provided with slots comprising a horizontal guideway terminating in oppositely diverging guideways; a combined batten and heddle engaging said slots, and means for preserving the alinement of the batten-heddle relative to the threads of the warp.

3. In a hand loom, the combination of a frame provided with slots; said slots comprising a horizontal guideway terminating in oppositely diverging guideways; and a heddle guided by said slots.

4. In a hand loom, the combination of a frame provided with diverging guideways; a combined batten and heddle controlled by said guideways and means for preserving the alinement of said batten-heddle relative to the threads of the warp.

5. In a hand loom, a combined batten-heddle, means for preserving the alinement of the batten-heddle relative to the threads of the warp; an upwardly and downwardly diverging guideway controlling said batten-heddle and adapted to give it a longitudinal and perpendicular motion relative to the warp when the batten-heddle is reciprocated longitudinally.

6. In a hand loom, a combined batten-heddle, and means for giving it an automatic perpendicular motion relative to the warp when reciprocated longitudinally.

7. In a hand loom, a combined batten-heddle; and means for securing automatically a longitudinal and perpendicular motion relative to the warp by each longitudinal reciprocation of the batten-heddle.

8. In a hand loom, a batten-heddle, and means for producing a longitudinal and perpendicular motion of the same relative to the warp at each longitudinal reciprocation of the batten-heddle, consisting of a guideway engaged by the batten-heddle.

9. In a hand loom, a warp beam, a batten-heddle, and means for producing a perpendicular motion of the batten-heddle relative to the warp at each longitudinal reciprocation of the same, consisting of a guideway engaged by the batten-heddle.

10. In a hand loom, a warp beam, a batten-heddle and means for giving the latter automatically a longitudinal and perpendicular motion relative to the warp when reciprocated longitudinally.

11. In a hand loom, a combined batten-heddle and means for supporting and guiding the same, which comprises a guideway substantially parallel to the warp terminating in ascending and descending guideways.

12. In a hand loom, a combined batten-heddle; means for producing a parallel motion thereof secured thereto, and means for giving the batten-heddle automatically a combined perpendicular and longitudinal motion relative to the warp when reciprocated longitudinally.

13. In a hand loom, a combined batten-heddle; diverging guideways engaged by the same and means for reciprocating the batten-heddle in contact with the guideways.

14. In a hand loom, the combination of a frame provided with slots, said slots comprising a horizontal guideway terminating in oppositely diverging guideways, and a batten guided by said slots.

15. In a hand loom, the combination of a frame provided with slots, said slots comprising a horizontal guideway terminating in oppositely diverging guideways and a batten-heddle guided by said slots.

16. In a hand loom, the combination of two parallel sides provided with slots in their inside faces, said slots comprising a horizontal guideway terminating in an upwardly and a downwardly diverging guideway; a batten provided with engaging members adapted to move in said slots; means for reciprocating said batten longitudinally, and means for preserving the alinement of said batten relative to the threads of the warp.

17. In a hand loom, the combination of two parallel sides provided with slots comprising a horizontal guideway terminating in oppositely diverging guideways, a batten engaging said slots, and means for preserving the alinement of the batten relative to the threads of the warp.

18. In a hand loom, the combination of two parallel sides provided with slots comprising a horizontal guideway terminating in oppositely diverging guideways; a heddle engaging said slots, and means for preserving the alinement of the heddle relative to the threads of the warp.

19. In a hand loom, the combination of a frame provided with diverging guideways; a batten controlled by said guideways, and means for preserving the alinement of said batten relative to the threads of the warp.

20. In a hand loom, the combination of a frame provided with diverging guideways; a longitudinally movable heddle controlled by said guideways and means for preserving the alinement of said heddle relative to the threads of the warp.

21. In a hand loom, a batten, means for preserving the alinement of the batten relative to the threads of the warp; an upwardly and downwardly diverging guideway controlling said batten and adapted to give it a longitudinal and perpendicular motion relative to the warp when the batten is reciprocated longitudinally.

22. In a hand loom, a heddle, means for preserving the alinement of the heddle relative to the threads of the warp; an upwardly and downwardly diverging guideway controlling said heddle and adapted to give it a longitudinal and perpendicular motion relative to the warp when the heddle is reciprocated longitudinally.

23. In a hand loom, a batten, and means to give it automatically a perpendicular motion relative to the warp when reciprocated longitudinally.

24. In a hand loom, a heddle, and means to give it automatically a perpendicular motion relative to the warp when reciprocated longitudinally.

25. In a hand loom, a batten, means for producing a longitudinal and perpendicular motion of the same relative to the warp at each longitudinal reciprocation of the batten, consisting of a guideway engaged by the batten.

26. In a hand loom, a heddle, and means for producing a longitudinal and perpendicular motion of the same relative to the warp at each longitudinal reciprocation of the heddle, consisting of a guideway engaged by the heddle.

27. In a hand loom, a warp beam, a batten, and means for producing automatically a perpendicular motion of the batten relative to the warp at each longitudinal reciprocation of the same.

28. In a hand loom, a warp beam, a heddle; and means for producing automatically a perpendicular motion of the heddle relative to the warp at each longitudinal reciprocation of the same.

29. In a hand loom, a warp beam, a batten, and means for automatically giving it a longitudinal and perpendicular motion relative to the warp when reciprocated longitudinally.

30. In a hand loom, a warp beam, a heddle and means for automatically giving it a longitudinal and perpendicular motion relative to the warp when reciprocated longitudinally.

31. In a hand loom, a batten and means for supporting and guiding the same, which comprises a guideway substantially parallel to the warp terminating in ascending and descending guideways.

32. In a hand loom, a heddle and means for supporting and guiding the same, which comprises a guideway substantially parallel to the warp terminating in ascending and descending guideways.

33. In a hand loom, a batten; means for producing a parallel motion thereof secured thereto, and means for automatically giving the batten a perpendicular and longitudinal motion relative to the warp when reciprocated longitudinally.

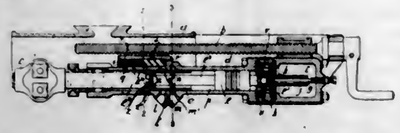
34. In a hand loom, a heddle; means for producing a parallel motion thereof secured thereto, and means for automatically giving the heddle a perpendicular and longitudinal motion relative to the warp when reciprocated longitudinally.

35. In a hand loom, a batten; diverging guideways engaged by the same and means for reciprocating the batten in contact with the guideways.

36. In a hand loom, a longitudinally movable heddle, diverging guideways engaged by the same and means for reciprocating the heddle in contact with the guideways.

37. In a hand loom, the combination of two parallel sides provided with slots in their inside faces, said slots comprising a horizontal guideway terminating in an upwardly and a downwardly diverging guideway; a heddle provided with engaging members adapted to move in said slots; means for reciprocating said heddle longitudinally, and means for preserving the alinement of said heddle relative to the threads of the warp.

869,893. HYDRAULIC ROCK-DRILL. GEORG E. GJUKE, Trelleborg, Sweden. Filed May 8, 1905. Serial No. 259,258.



1. In a device of the class described, a cylinder, a piston, a fluid pressure chamber on the axial line and to the rear of the cylinder in communication with the rear portion of the cylinder, and means actuated by the piston for drawing atmospheric air into the fluid pressure chamber upon the working stroke of the piston and compressing it therein upon the rearward or back stroke.

2. In a device of the class described, a cylinder, a piston, a fluid pressure chamber on the axial line and to the rear of the cylinder and in communication therewith, means actuated by the piston for drawing atmospheric air into the fluid pressure chamber, and means for regulating the pressure to be maintained in the fluid pressure chamber.

3. A rock-drill comprising a cylinder, a drill carrier, a carrier supporting piston reciprocating in the cylinder and actuated in the working direction by a compressed elastic fluid, the pressure of which is stored by the movement of the piston in the opposite direction, and valve means for admitting a fluid under pressure to the cylinder forward of the piston so as to drive the same rearward in the non-working direction and for permitting the escape of such pressure fluid at the conclusion of the non-working stroke.

4. In a rock-drill a cylinder, a drill supporting double headed piston reciprocating in the cylinder actuated in the working direction by power stored by its own movement, and in the other or non working direction by a pressure fluid alternately admitted to and discharged from the part of the cylinder surrounding the piston-rod between the piston heads, an auxiliary pressure relieving cylinder in connection at either end with the main cylinder, and a spring balanced piston in the relieving cylinder.

5. A rock-drill comprising a cylinder, a drill supporting double headed piston reciprocating in the cylinder actuated in the non-working direction by a pressure fluid alternately admitted to and discharged from the part of the cylinder surrounding the smaller central portion of the double-headed piston, and actuated in the working direction by power stored by its own movement in the non-working direction, a hollow rod at the rear end of the piston in communication with a fluid pressure chamber, a hollow stationary piston rod secured to the wall of the fluid pressure chamber, in communication at the outer end with the atmosphere and open at the inner end, a check-valve for said hollow stationary piston rod and a backwardly faced self-packing flexible washer or packing ring carried by the hollow stationary piston-rod located in the hollow of the piston-rod.

6. In a device of the class described, a cylinder having an inlet port and an exhaust port in the annular wall, a double headed piston the heads of which are of different diameters and secured to a central piston-rod reciprocating in the cylinder, an annular perforate walled valve surrounding the piston-rod between the piston-heads reciprocated thereby, an extension of the piston-rod extending rearward from the main piston having a central longitudinal open ended bore, an auxiliary pressure chamber in which such piston-rod extension reciprocates back and forth, a hollow rod provided with a screw-thread secured into the wall of the auxiliary pressure chamber and extending into the bore of the piston-rod extension, an inwardly opening air-check-valve located in the bore of the hollow screw-rod and a backwardly faced packing ring carried by the screw-rod and fitting snugly in the bore of the piston-rod.

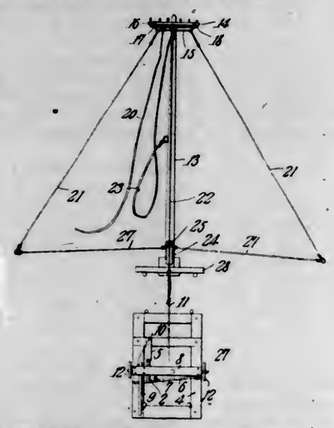
7. In a device of the class described, a cylinder having an inlet port and an exhaust port in the annular wall, a piston-rod, a piston head at one end of the piston-rod and a piston at the other end of the piston-rod reciprocating in the cylinder, and annular valve surrounding the piston-rod between the piston-heads, a relief chamber adjacent to the main cylinder extending longitudinally of the same, a piston normally located in the center of such chamber and kept in such central position by means of springs, a port always in communication with the cylinder at the forward end of the relief chamber, and a like port located in the other end of the relief chamber wall brought into and out of communication with the cylinder by the action of the valve.

8. In a device of the class described, a cylinder having an inlet port and an exhaust port in the annular wall, a piston-rod reciprocating in the cylinder, two heads secured to the piston-rod, an annular perforate-walled valve surrounding the piston-rod between the piston-beads, an extension of the piston-rod extending rearward from the main piston having a central longitudinal open ended bore, a closed auxiliary pressure chamber in which such piston-rod extension reciprocates back and forth, in communication only with the near end of the cylinder, a hollow rod provided with a screw thread secured in the wall of the auxiliary pressure chamber and extending into the bore of the piston-rod extension, an inwardly opening air-check-valve located in the bore of the hollow screw-rod, a backwardly faced packing ring carried by the screw-rod and fitting snugly in the bore of the piston-rod, a relief chamber adjacent to the main-cylinder and extending longitudinally of the same, in communication therewith at either end and a piston normally located in the center of such chamber and kept in such position by a spring on either side.

869,894. APPARATUS FOR RAISING AND LOWERING POLES. ELLIS GODWIN, Concord, N. C. Filed Aug. 19, 1907. Serial No. 389,279.

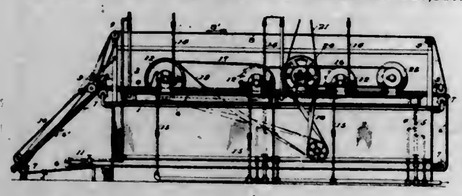
1. An apparatus of the character indicated comprising a rigging consisting of a head-rope having loops at its ends, a latch-bar adapted to be inserted between portions of the head-rope inserted through the said loops and the

said loops, a pendent rope attached to the latch-bar, guy-ropes attached to the end portions of the head-rope, said head-rope adapted to be secured at its looped end to the cross-arm of a pole, a guy rope looped around the pole between the head-rope and the cross-bar, a tow-line looped around the pole between the head-rope and the cross-arm, a prop located upon the pole and a winding drum journaled for rotation and having a tackle operatively connected to the said tow-line.



2. An apparatus of the character indicated comprising a rigging adapted to be attached to the cross-arm of a pole and having suitable guy-ropes, a tow-line held in position upon the pole by the rigging, and means for removing the rigging from the pole, a means for drawing the tow-line consisting of a drum mounted for rotation, a ratchet wheel rotating with said drum, a tackle winding upon the drum and being connected with the tow-line, uprights located at opposite ends of the drum, a cross-piece connecting said uprights together, a lever fulcrumed to one of the uprights and passing transversely across the periphery of the ratchet wheel, a spring for supporting the free end of the said lever in an elevated position, a second lever passing through the spaces between the uprights and having a cross-pin which bears against the edges of the said uprights, said second lever resting upon the upper edge of the first said lever, and a pawl adapted to hold said ratchet wheel against reverse rotation.

869,895. STEAM-TABLE. GUSTAV GOLDMAN, Baltimore, Md. Filed Sept. 22, 1904. Serial No. 225,540.



1. The combination of a heated surface, means advancing material along said surface, a plurality of rollers acting to compress said material between them and said surface as the material advances, and means admitting a heating medium to the interior of said rollers.

2. The combination of a heated surface, a pair of parallel-moving belts receiving material between them and advancing it along said surface, a plurality of hollow rollers acting to compress said material between them and the said surface, and means admitting steam to and conducting steam from said hollow rollers during their revolutions.

3. The combination of a heated surface, means including an absorbent for advancing material along said surface, and a plurality of steam heated pressure rollers acting to compress the material and belt between said surface and rollers as said belt and material advance.

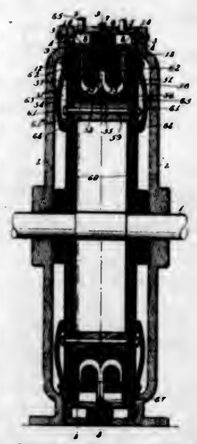
4. The combination of a heating surface, an endless carrier belt of absorbent material traveling over said surface, a plurality of retaining belts moving parallel to and with the same velocity as said carrier belt, rollers acting to compress material carried between said belts; one or more of said rollers being provided with heating means.

5. The combination of a plane heating surface, an endless carrier belt of absorbent material advancing material over said surface, a parallel retaining belt movable therewith, and heated rollers acting to compress the material between said belts.

6. The combination of a heating surface, a pair of parallel moving belts for advancing material between them along said surface, a plurality of compresser rollers each provided with heating means and acting to compress said material while passing over said heating surface and a non-heated roller acting to compress the material as it leaves the said heating surface.

7. The combination of a heating surface, a pair of parallel belts for advancing material between them along said surface, one of said belts having perforations and composed of absorbent material, a plurality of rollers acting to compress the material as it passes over said heating surface, one or more of said rollers being provided with heating means.

869,896. TURBINE. RICHARD H. GOLDSBOROUGH, Washington, D. C. Filed Mar. 11, 1907. Serial No. 361,738.



1. In a compound turbine, the combination of a rotor, an annular series of rotor vanes provided with admission and exhaust edges extending to the periphery of said rotor, a continuous zone of admission ports extending along said admission edges, and a continuous zone of exhaust ports extending along said exhaust edges throughout the angle subtended by said zone of admission ports and extending beyond the final admission ports of said zone, substantially as described.

2. In a compound turbine, the combination of a rotor, an annular series of rotor vanes provided with admission and exhaust edges extending to the periphery of said rotor, a continuous zone of admission ports extending along said admission edges, and a continuous zone of exhaust ports extending along said exhaust edges, said zone of exhaust ports extending from the angular position of the initial admission port to a point beyond the final port of said zone of admission ports, substantially as described.

3. In a compound turbine, the combination of a rotor, an annular series of rotor vanes provided with two lateral admission portions and a common central exhaust portion, means for initially directing an actuating medium through said two admission portions of the vanes, and means for repeatedly directing the discharge of such medium from the central exhaust portion again to the two lateral admission portions of the vanes, substantially as described.

4. In a compound turbine, the combination of a rotor, an annular series of rotor vanes provided with two lateral admission portions, and a common central exhaust portion, means for initially directing an actuating medium through said two admission portions of the vanes, and means for dividing the discharge of such medium from the exhaust portion of the vanes and directing it again to the two lateral admission portions thereof, substantially as described.

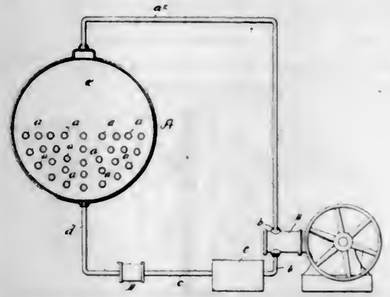
5. In a compound turbine, the combination of a rotor, an annular series of rotor vanes provided with two lateral admission portions and a common central exhaust portion, means for initially directing an actuating medium through said two admission portions of the vanes, means for repeatedly directing the discharge of such medium from the central exhaust portion again to the two lateral admission portions of the vanes, and means for heating such discharge prior to its several admissions to the vanes, substantially as described.

6. In a compound turbine, the combination of a rotor, an annular series of rotor vanes provided with two lateral admission portions and a common central exhaust portion, series of admission ports and exhaust ports extending, respectively, along said admission and exhaust portions of the vanes, means for supplying an actuating medium to the initial ports of such admission series, and means for conducting the discharge from the exhaust portions of the vanes to the next succeeding ports of said admission series, substantially as described.

7. In a compound turbine, the combination of a stator, a rotor supported in said stator to provide a suitable clearance space between said parts, packing members carried by said stator and extending across the ends of said clearance space, and packings carried by said members in engagement with said rotor at a distance from said clearance space, substantially as described.

8. In a compound turbine, the combination of a stator, a rotor supported in said stator to provide a suitable clearance space between said parts, packing members carried by said stator, and extending past said clearance space and along a portion of said rotor at a distance from the latter, and packing means carried by said members in engagement with said stator for providing between said rotor and members inclosed chambers in communication with said clearance space, substantially as described.

869,897. VAPOR-GENERATION AND POWER SYSTEM. FRANCIS X. GOVERS, Owego, N. Y. Filed Mar. 16, 1906. Serial No. 306,477.

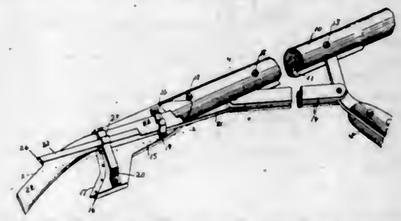


1. A system for generating power, comprising a vapor generator, a motor adapted to utilize the expansive force of the vapor, and a condenser, suitably connected in a closed circuit, said closed circuit containing tetrachlorid of carbon and its vapor.

2. In a system for generating power, a vaporizable liquid whose vapor is non-inflammable and adapted to actuate and lubricate the moving parts of a motor, said liquid comprising tetrachlorid of carbon.

3. The process of generating a gaseous vapor for power and lubricating purposes, which consists in inclosing tetrachlorid of carbon in a chamber, heating said tetrachlorid of carbon to a temperature at or above its boiling point, conducting the vapor thus produced into a motor and operating said motor by the pressure of said vapor, and then condensing said vapor and returning it to said chamber for re-use.

869,898. PRUNING-SHEARS. WILLIAM H. GRAY, Eddyville, Iowa. Filed June 24, 1905. Serial No. 266,873.



1. In a pruning shears, the combination of a stationary blade, a movable blade having a sliding connection with the stationary blade and having its cutting edge arranged at an acute angle relative to the path in which the blade slides and a guide device attached to the stationary blade and having a sliding connection with the outer face of the movable blade, said guiding device engaging the movable blade near one end of its cutting edge when the movable blade is in position for starting its stroke and engaging the movable blade near the other end of its cutting edge when the movable blade has completed its stroke.

2. In a pruning shears, the combination of a stationary blade, a movable blade slidingly connected with the stationary blade and having its cutting edge extended at an acute angle relative to the path in which the movable blade slides and a guide loop having its ends fixed to the stationary blade and passed around the movable blade engaging the face of the movable blade opposite stationary blade, said guide loop positioned to overlap the outer end of the cutting portion of the movable blade when the movable blade is in position at the end of its cutting stroke.

3. In a pruning shears, the combination of a stationary blade, a guide loop fixed to the stationary blade near one end of the cutting portion thereof and a movable blade slidingly connected with the stationary blade having its face opposite from the stationary blade engaged by the guide loop, said movable blade arranged for movement in a path that will bring its cutting edge under the guide loop during a portion of its stroke.

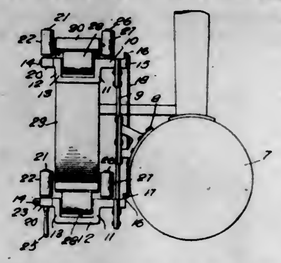
4. In a pruning shears, the combination of a stationary blade, a guide loop fixed to the stationary blade near one end of the cutting portion thereof, a movable blade slidingly connected with the stationary blade having its face opposite from the stationary blade engaged by the guide loop, said movable blade arranged for movement in a path that will bring its cutting edge under the guide loop during a portion of its stroke, a rib on the movable blade and shoulders on the guide loop to engage the sides of said rib to prevent lateral movement of the movable blade.

5. In a pruning shears, the combination of a stationary blade, a movable blade, a guide rib fixed to the movable blade on its side opposite from the stationary blade, said rib having a beveled edge, a guide loop fixed to the stationary blade to overlap the movable blade and having an inclined shoulder to engage the beveled face of said rib.

6. The combination of a stationary handle member formed with a groove, a movable handle member pivoted in said groove, a link connected with the movable handle member and movable in said groove, a stationary blade member extended laterally of the stationary handle mem-

ber, stationary guides upon the stationary blade member, one of them adjacent to the inner end of the stationary knife and formed with a raised central portion, a movable blade member comprising a body portion slidingly mounted in said guides and connected with said link and a cutting edge arranged at an acute angle relative to the body portion, and a guide rib on the movable blade tapering from its outer toward its inner end to be engaged by the raised portion of the guide.

869,899. BELT-GUIDE. HERMAN GROSS, Webster, S. D. Filed Jan. 29, 1907. Serial No. 354,673.



1. The combination, with an engine including a fly-wheel and a drive belt passing therearound, of a rod secured to the engine adjacent the fly-wheel; a bracket secured to each end of said rod; and a fixed guide and a movable guide carried by each bracket and arranged in spaced relation to each other, to permit the belt to pass therebetween.

2. The combination, with an engine including a fly-wheel and a drive belt passing therearound, of a rod secured to the engine adjacent the fly-wheel; a bracket secured to each end of said rod; a fixed guide and a movable guide carried by each bracket and arranged in spaced relation to each other, to permit the belt to pass therebetween; and means for shifting said movable guides simultaneously into and out of vertical position.

3. The combination, with an engine including a fly-wheel and a drive belt passing therearound, of a rod secured to the engine adjacent the fly-wheel; a bracket secured to each end of said rod; a stationary vertical guide attached to the inner end of each bracket; a swinging guide disposed at the outer end of each bracket; and means for moving said swinging brackets simultaneously into and out of vertical position.

4. The combination, with an engine, including a fly-wheel and a drive belt passing therearound, of a vertical rod secured to the engine adjacent the fly-wheel; a bracket secured to each end of said rod; a shaft carried by each bracket; a stationary vertical guide carried by each bracket; a guide carried by each shaft in spaced relation to the first-mentioned guides; means connecting said shafts; and means for operating said last-mentioned means to rock said shafts and shift the guides carried thereby into and out of vertical position.

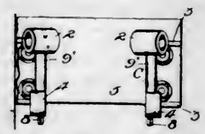
5. The combination, with an engine, including a fly-wheel and a drive belt passing therearound, of a vertical rod secured to the engine adjacent the fly-wheel; a bracket secured to each end of said rod; a shaft carried by each bracket; a vertically extending pin carried by each bracket; a roller loosely mounted on each pin; a laterally projecting pin carried by each shaft and arranged in spaced relation to said bracket pin; a roller loosely mounted on each shaft pin; a roller carried by each bracket between the rollers mounted on said pins; means connecting said shafts; and means for operating said connecting means, to rock said shafts simultaneously and shift the rollers carried thereby into and out of vertical position.

6. The combination, with an engine including a fly-wheel and a drive belt passing therearound, of a vertical rod secured to the engine adjacent the fly-wheel; a pair of spaced guides carried by each end of said rod; and means for shifting the outer guides simultaneously into and out of vertical position.

7. The combination, with an engine including a fly-wheel and a drive belt passing therearound, of a vertical rod secured to the engine adjacent the fly-wheel; a pair of spaced guides carried by each end of said rod; a horizontal guide disposed between the members of each of said first mentioned pairs of guides; and means for simultaneously shifting the outer member of each of said pairs of guides into and out of vertical position.

8. The combination, with an engine including a fly-wheel and a drive belt passing therearound, of a vertical rod secured to the engine adjacent the fly-wheel; a pair of spaced guides carried by each end of said rod; a horizontal guide disposed between the members of each of said first mentioned pairs of guides; means connecting the outer members of said pairs of guides; and means for actuating said connecting means, to shift said outer guides simultaneously into and out of horizontal position.

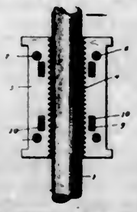
869,900. SUPPORTING-PULLEYS FOR BELT CONVEYERS. EDWIN J. HADDOCK, Columbus, Ohio, assignor to Joseph A. Jeffrey. Filed Aug. 7, 1907. Serial No. 387,542.



1. In a supporting element for a belt conveyer, the combination with the inclined pulleys A, A, with their axes in the same transverse vertical plane, and the horizontal pulley B with its axis in a plane behind the plane of the axes of the pulleys A, of the support or bracket for the said pulleys having the plate 5, the webs or standard plates 3, horizontal sockets or bearings 4, and the inclined sockets or bearings 2 all formed integrally together, and the axis of the sockets or bearings 4 being parallel to the plane of the axes of the sockets 2, 2, substantially as set forth.

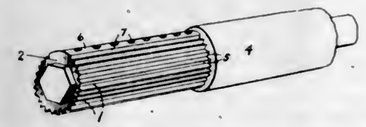
2. In a supporting element for a belt conveyer, the combination with the inclined pulleys A, A, having their axes in a common transverse vertical plane and the horizontal pulley B having its axis behind the plane of the axes of the pulleys A, of the support or bracket for all of said pulleys having a cross connecting plate 5, the side webs or standard walls 3, the inclined sockets 2, and the horizontal sockets 4, all formed integrally together with the lubricant channels 9 each communicating with the interior of a socket 2 and the interior of a socket 4, the inclined shafts each communicating with one of the said channels 9 and the horizontal shaft 6 communicating with both of the said channels 9, substantially as set forth.

860,901. TAPPET. HENRY HAHN, Stockton, Cal. Filed Jan. 17, 1907. Serial No. 352,698.



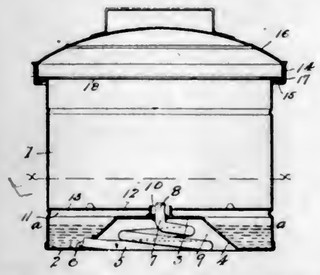
In a device of the class described, a body comprising two members having flat contiguous faces and with oppositely disposed semi-circular cavities in said faces, the flat contiguous faces extending radially of the cavities and in alinement transversely of the cavities, said cavities having internal spaced serrations adapted to engage a rod and said members having transverse slots at opposite sides of the cavities, reversely-arranged wedges received in said slots from opposite sides of the body portions, and clamp bolts uniting the body members.

869,902. TUBE-MANDREL. JERVIS R. HARBECK, Detroit, Mich., assignor to Kemiweld Can Company, Detroit, Mich., a Corporation of Michigan. Filed May 27, 1907. Serial No. 375,791.



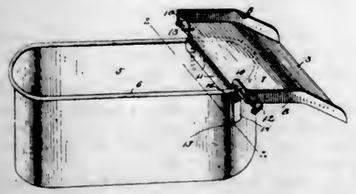
A mandrel for winding tubes having a series of longitudinal grooves, and a sleeve slidably mounted on the mandrel and formed with teeth to enter the grooves.

869,903. COOKING UTENSIL. MORTON HARLOE, Hawley, Pa. Filed June 22, 1906. Serial No. 322,896.



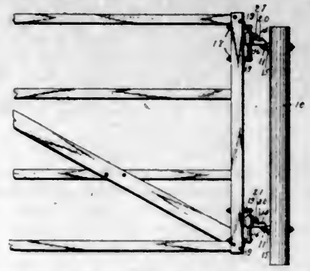
In a cooking utensil, a vessel having a cylindrical body, a bottom formed of a single sheet of metal attached to the body, the outer part of the bottom being flat and the central part being formed into a chamber having conical walls and a flat top and inclosed on all sides except the bottom; a conically-coiled tube in the chamber, one end of the tube entering the vessel near the bottom and the other end passing through the top of the chamber and protruding within the vessel, and a collar resting on the inner side of the top of the chamber and encircling the end of the tube, to decrease condensation.

869,904. ATTACHMENT FOR WASHBOILERS. HANS HEMPEL, Chicago, Ill. Filed Jan. 11, 1907. Serial No. 351,835.



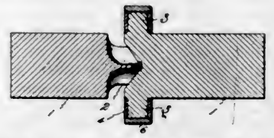
An attachment for wash-boilers comprising a chute having at one end a depending flange engageable with the wall of the boiler on the inside thereof, and a plate pivoted on the bottom of the chute, and having an upstanding arm engageable with the bead at the top edge of the boiler on the outside thereof.

869,905. GATE-HINGE. LENHARD A. HOLDEN, Ottosen, Iowa. Filed Apr. 29, 1907. Serial No. 370,759.



An improved gate hinge, comprising a hinged member having a bolt with two screw threaded portions thereon, nuts on said screw threaded portions designed to engage opposite sides of a post, and an upwardly projecting journal on the bolt, and a second hinged member comprising a rod, bolts extended through its ends, spacing blocks on said bolts, and a bracket having a circular opening to receive the rod, and a lateral extension to receive said journal, and a set screw seated in the bracket to engage the rod.

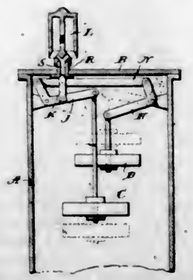
869,906. UNIVERSAL JOINT. ARTHUR I. JACOBS, Hartford, Conn., asignor to The Jacobs Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Dec. 19, 1906. Serial No. 348,531.



1. A flexible joint comprising a pair of complementary body members each provided with a pair of integral trunnions that project radially outward in opposite directions, a broken ring encircling the ends of the bodies and having sockets receiving the trunnions, and a band encircling and holding the ring intact, substantially as specified.

2. A flexible joint comprising a pair of complementary body members each provided with a pair of trunnions that project radially outward in opposite directions, a ring encircling the ends of the bodies and having sockets receiving the trunnions, said ring being broken through diametrically opposite trunnion sockets, and a band encircling and holding the ring intact, substantially as specified.

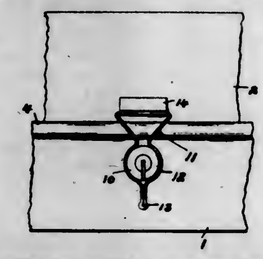
869,907. HIGH AND LOW WATER ALARM. SAMUEL E. JARVIS, Lansing, Mich. Filed Apr. 3, 1903. Serial No. 150,928.



A device of the character described comprising a casing, an outlet leading from the casing and provided with a valve seat projecting within the casing, a pair of bell

crank levers pivoted within the casing, each having a vertically disposed arm and a horizontally disposed arm, the horizontally disposed arms of said levers extending inwardly towards each other, a link connecting the vertically disposed arms of the bell crank levers and bodily movable therewith, weights suspended from the horizontally disposed arms of said levers, and a valve secured to the horizontally disposed arm of one of said levers and arranged to coöperate with the valve seat of the alarm.

869,908. BOX-FASTENER. FREDERICK S. JOHNSON, Durham, Conn., assignor to Merriam Manufacturing Company, Durham, Conn., a Corporation of Connecticut. Filed June 27, 1904. Serial No. 214,265.



1. The combination with a bottom member; of a cover member connected therewith; a laterally projecting part upon one of said members; a bearing connected with the other of said members; and a hasp preferably made of a single piece of wire bent between its ends to form a finger piece, thence outwardly to form a loop of less width than said projecting part; and the opposite ends thereof turned inwardly toward each other and mounted in said bearing.

2. The combination with a bottom member; of a cover member connected therewith; a laterally projecting part upon one of said members; a bearing, having an aperture therein, connected with the other of said members; and a yielding wire hasp bent so as to form a finger piece at one end, thence outwardly to form a loop of less width than said projecting part which has a frictional engagement with said projecting part in one of its positions, and the opposite ends thereof turned inwardly toward each other and movable endwise in the aperture in said bearing during the engagement and disengagement of said loop with said projecting part.

869,909. ANEROID BAROMETER. ADOLPH E. KAHN, New York, N. Y. Filed Dec. 27, 1906. Serial No. 349,635.



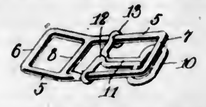
1. In an aneroid barometer with more than one scale on one of which are teeth; a shaft movable in the direction of its length and a pinion fixed on said shaft in combination with the scale 8 the teeth 12 the ring 9 and the head 14.

2. In an aneriod barometer with more than one scale one of said scales having teeth connected therewith, a pinion removably engageable with said teeth in combination with a slotted "U" shaped ring inclosing said teeth.

3. An aneriod barometer comprising multiple scales, the scale ring teeth 12 and the toothed wheel 5, with means for engaging and disengaging said toothed wheel with the teeth 12 and for revolving said toothed wheel.

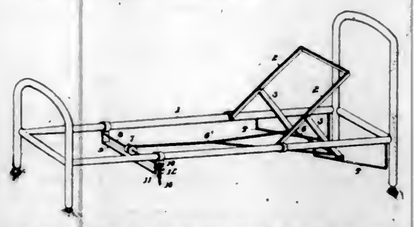
4. An aneroid barometer comprising the scale 8, the teeth 12 the ring 9, the piston 5, the shaft 4 and the head 14.

869,910. BUCKLE. ALBIN KALLBERG and LUDVIG NETZ, Milford, Mass. Filed May 2, 1907. Serial No. 371,445.



A buckle comprising a main frame having side-bars connected by end-bars, a shank having at one end laterally and oppositely projecting branches slidably mounted on the side-bars and forming a cross-bar extending therebetween, a loop on the other end of the shank, said loop and shank being offset from the main frame and means for fastening one end of a strap to the said main frame, the free end of the strap passing through the loop and between the cross-bar and one of the end-bars.

869,911. BED. HERBERT KINTZ, Sharpsburg, Pa. Filed May 8, 1907. Serial No. 372,609.



1. A bed having an adjustable head section pivotally secured thereto; lever arms pivoted to said head section, the lower ends thereof being connected by a brace rod; inclined guide members secured to the frame work upon which rests the ends of said lever arms or said brace rod; an operating rope or cable, attached to said brace rod; a suitably supported spool or drum to which is connected the operating cable; and means for revolving said drum, thereby raising or lowering said head section.

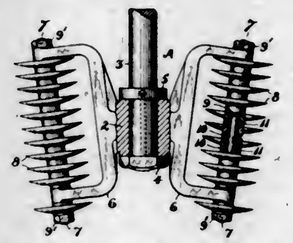
2. A bed, having an adjustable head section pivotally secured thereto; lever arms pivoted to said head section, the lower ends thereof being connected by a brace rod, inclined guide members secured to the frame work upon which rests the ends of said lever arms or said brace rod; a yoke, supported by the frame work of the bed; a shaft operatively seated in said yoke; a drum or spool secured to said shaft; an operating cable attached to said brace rod and drum; and ratchet controlled means secured to the end of said shaft for revolving said drum, thereby raising and lowering said head section.

869,912. CUTTER-HEAD FOR DREDGES. WILLIAM J. KNIGHT and EDWIN S. JOHNSON, Oakland, Cal. Filed Nov. 10, 1906. Serial No. 342,912.

1. In a cutter head for dredges in combination with the shaft for rotating the device, a plurality of arms centrally secured to said shaft and means arranged for rotation rigidly supported by said arms for separating material for removal.

2. In a cutter head for dredges in combination with the shaft for rotating the device, a plurality of inclined arms centrally secured to said shaft, and means arranged for rotation supported by said arms for separating material for removal.

3. In a cutter head for dredges in combination with the shaft for rotating the device, a plurality of equidistant arms centrally secured to a hub affixed to said shaft, and separable means arranged for rotation supported within said arms for separating material for removal.



4. In a cutter head for dredges, the combination with a shaft, a series of inclined arms centrally secured to said shaft, disk-carrying shafts mounted in said arms, and a plurality of disks mounted on said disk-carrying shafts, each of said disks having a hub provided on one end with an extension and on the other end with a socket whereby the series of disks on each disk-carrying shaft interfit together.

5. In a cutter head for dredges, the combination with a shaft, and a series of bifurcated arms secured to said shaft, of disk-carrying shafts rotatably mounted in said arms, and a series of disks mounted on each disk-carrying shaft, the hub of each disk interfitting with the hubs of the adjacent disks.

6. In a cutter head for dredges, the combination of a shaft, a hub secured thereon, a bifurcated arm arranged at an incline to the shaft and secured centrally of its ends to said hub, a disk-carrying shaft mounted in said arm, and a series of disks on said disk-carrying shaft, each disk having its hub interfitting with the hubs of adjacent disks.

7. In cutter heads for dredges, a disk having a hub provided on one end with an extension and having a socket in its opposite end.

8. A cutter head for dredges, comprising a shaft, a hub secured thereto, a plurality of bifurcated arms secured intermediate their ends to the hub and disposed at an angle to the shaft, disk-carrying shafts mounted in said arms and being also at an inclination to the said shaft, and a plurality of cutting disks arranged on said disk-carrying shafts, substantially as described.

9. In a cutter head for dredges, a shaft, a plurality of disk-carrying shafts arranged at an inclination with respect to said shaft and suitably supported therefrom and a plurality of cutter disks on each of said disk-carrying shafts.

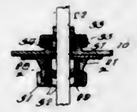
10. In a cutter head for dredges, a shaft, a plurality of disk-carrying shafts supported from the first mentioned shaft at an inclination thereto, and a plurality of cutter disks on each of said disk-carrying shafts.

869,913. CALF-WEANER. GEORGE M. KRAUSS, Omaha, Nebr. Filed May 7, 1906. Serial No. 315,607.



In a device of the character described, a wire cage or muzzle, consisting of a pair of main rings, connecting wires therefor, a supplemental ring interlaced between said connecting wires and arranged substantially parallel to the main rings, said rings each being composed of wire and having their ends looped together, an elongated hinge member having apertured ears pivotally secured to one of said main rings and having an elongated pin receiving portion, a pin in said pin receiving portion projecting beyond the ends thereof, and a sheet metal cage having apertured lugs to embrace said enlongated portion of said hinge member and having apertures to receive said pin, substantially as shown and described.

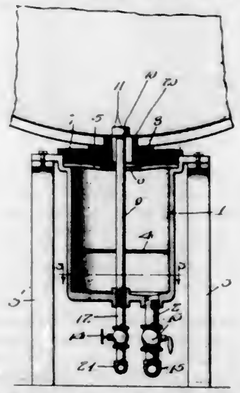
869,914. ELECTRIC-ARC LAMP. GEORGE M. LANE, Lanoka, N. J., assignor of one-third to Orlan F. Lane and one-third to Daniel S. Holmes, Forked River, N. J. Filed Mar. 24, 1905. Serial No. 251,821.



1. In an electric arc lamp, the combination of a plate having an opening for the passage of the movable electrode and provided with a ring surrounding said opening, a sleeve arranged within said ring and having transverse slots at diametrically opposite points, and dogs fitted in said slots and having their inner ends notched to snugly receive the movable electrodes.

2. In an electric arc lamp, the combination of a plate having an opening for the passage of the movable electrode and provided with a ring surrounding said opening, a sleeve arranged within said ring and having transverse slots at diametrically opposite points, dogs fitted in said slots and having their inner ends notched to snugly receive the movable electrode, and pins arranged transversely of the sleeve adjacent to the inner ends of the transverse slots and adapted to pivotally support said dogs.

869,915. BARREL-CLEANER. LEOPOLD LANGE, Chicago, Ill. Filed Mar. 19, 1906. Serial No. 306,767.



1. In a device of the kind described, a receptacle having an opening in its top, a screen extending across said receptacle, a resilient cushion partially covering said opening, and a pad positioned upon said cushion, in combination with a pipe extending through said opening to a point above said pad, and provided at its upper end with a plurality of openings, means for attaching said pipe to a steam system, and means attached to said receptacle for directing the fluids therein to a suitable discharge point.

2. In a device of the kind described, a receptacle having an open top, a resilient cushion provided with a central opening positioned concentrically in and partially closing the top of said receptacle, means for securing said cushion in position, and a pad positioned upon said cushion with a part extending into said opening.

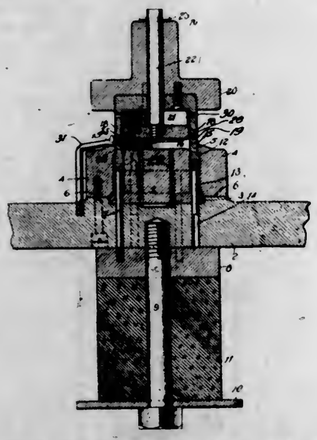
3. In a device of the kind described, a receptacle having an open top, a plate provided with a central opening positioned concentrically in the top of said receptacle, a resilient cushion positioned upon said plate about said opening, means for retaining said plate and cushion in position, and a pad positioned upon said cushion with a part extending into said opening.

4. In a device of the kind described, a receptacle having an opening at its top, a resilient cushion arranged about, and partially covering, said opening, a pipe extending through said opening to a point above said cushion and provided with one or more openings beyond said cushion, means for attaching said pipe to a steam generator, and means for conducting a fluid away from said receptacle.

5. In a device of the kind described, a receptacle having an opening at its top, a resilient cushion arranged about, and partially covering, said opening and a resilient pad positioned upon said cushion about the margin of said opening, a pipe extending through said opening to a point above said pad, and provided with a plurality of openings above the pad, and means for conducting a fluid away from said receptacle.

6. In a device of the character described, a receptacle having an open top, a resilient cushion closing the top of said receptacle and provided centrally thereof with a relatively small opening therein, and a pad positioned upon said cushion, said pad being provided with an annulus extending downwardly into the opening in the cushion and with an annulus projecting upwardly therefrom.

869,916. SHEET-METAL-STAMPING DIE. DAVID R. LEVIN, Chicago, Ill. Filed Mar. 28, 1907. Serial No. 364,983.



1. A device for forming sheet metal caps, comprising coacting male and female flanging dies, a drawing ring surrounding the male die and normally urged outward to yieldingly oppose the movement of the female die with respect to the male so as to prevent buckling of the edges of an interposed sheet of metal during the flanging operation, the opposed faces of said female die and ring being provided respectively with a recess and a rise to leave a transverse lip on the flange at a limited part of the periphery of the cap when the dies have moved together sufficiently to completely flange the remainder of the periphery.

2. A device for forming sheet metal caps, comprising coacting male and female flanging dies, a drawing ring surrounding the male die and normally urged outward to yieldingly oppose the movement of the female die with respect to the male so as to prevent buckling of the edges of an interposed sheet of metal during the flanging operation, the opposed faces of said female die and ring being normal throughout their major part and being respectively formed at a certain other part with a recess and a rise to form a transverse lip offset from the rim of the flange when the dies have moved together sufficiently to complete the part of the flange of the cap which is adjacent to said major part of said faces.

3. A device for forming sheet metal box caps, comprising a fixed flanging die, a yielding drawing ring outside of said die, and a cutting die outside of said ring, in combination with a movable flanging die coacting with said fixed die and yielding ring and having a cutting edge coacting with said cutting die, said movable die and ring being directly opposed and being provided respectively with a recess and a rise to form on the box cap a normal flange having a transverse lip on a limited part of its periphery.

4. The combination of a female flanging die, a male flanging die coacting therewith, and a yieldable drawing die opposed to said female die and embracing said male flanging die, said female flanging die and opposed drawing die being formed with major normal surfaces and with respectively interfitting recess and rise.

5. The combination of a combined female flanging and male cutting die, a male flanging die coacting therewith, a yieldable drawing die opposed to said first named die and embracing said male flanging die, and a female cutting die embracing said yieldable die and coacting with said first named die, said first named die and opposed yieldable die being formed with major normal surfaces and with respective interfitting recess and rise.

6. The combination of concentric unyielding cutting-out and flanging dies spaced apart, a yieldable die concentrically interposed between said cutting and flanging dies, an active cutting and flanging die opposed to said yieldable die, an ejector within said movable die, and means normally urging said yieldable die to a certain normal position, said active and yieldable dies being formed with opposed major normal surfaces and with respective interfitting recess and rise.

7. A die for making flanged can-caps, comprising means for cutting out a blank from sheet metal, means for drawing an endless flange upon such blank, and means for offsetting a limited fractional part of such flange to form a lip, said means coacting with each other to form a complete cap at one operation.

8. In a device for stamping can-caps, the combination of a drawing ring, a pair of opposed cutting-out dies adapted for cutting out can-cap blanks, one of said cutting-out dies embracing said drawing ring, the other being mounted to reciprocate toward and from the drawing ring, said other cutting-out die being formed with a forming recess, a male forming die within said drawing ring, being adapted to enter said recess to coact in forming a flange upon the blank, said other cutting-out die and drawing ring being shaped to form an outwardly disposed lip upon a limited fractional part of the periphery of such flange, through the operation of said dies.

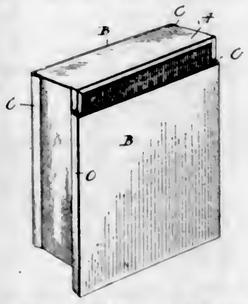
9. A device of the class described comprising a male flanging die, a female flanging die movable toward and away from said male die in axial alinement therewith, a drawing ring surrounding said male die and slidable axially thereon, said female die having a normal end surface and a depression at one side thereof, said drawing ring being formed with a normal surface opposed to the normal surface of said female die and having a rise registering with the depression in said female die, a cushion of resilient material yieldingly urging said drawing ring toward said female die, and a stop for limiting the movement of said drawing ring during the return movement of said female die.

10. A device for forming sheet metal caps of the class described, comprising a male flanging die having a substantially cylindrical periphery, a drawing ring fitting the periphery of said male die and slidably mounted thereon, a female cutting die surrounding said drawing ring and extending beyond the free end of said male die, a stop adapted to limit the outward movement of said drawing ring to a position adjacent to the face of said female cutting die, a resilient cushion yieldingly urging said drawing ring toward said stop, a tubular die member mounted in axial alinement with said male die, having an inner periphery adapted to coact with said male die for flanging an interposed disk of metal, and having an outer periphery provided with a cutting edge adapted to coact with said female cutting die for cutting such disk from a sheet of metal, the major part of the cutting face of said female die being normal and having therein a depression extending across the same between its inner and outer peripheries, the opposed face of said drawing ring being formed to fit that of said female die, and all being arranged to form a transversely extending lip at one side of the flange of the cap.

11. The combination of a female flanging die, a male flanging die coacting therewith, a yielding drawing ring opposed to said female die and embracing said male flanging die, the opposed surfaces of said female flanging die and drawing ring being normal throughout the major part thereof and being formed at another part with respective interfitting recess and rise, and guiding means controlling the movement of said drawing ring and adapted to prevent the same from turning out of registering position with respect to said female die.

12. The combination of a supporting plate, a male die rigidly mounted thereon and having a free end, a drawing ring fitting the periphery of said male die and axially movable thereon, a female cutting die surrounding said drawing ring and rigidly mounted on said plate, a female flanging die mounted in axial alinement with said male die and movable relatively thereof in an axial direction, said drawing ring and female flanging die being formed with opposed major normal surfaces and provided with respective interfitting recess and rise, a plate movably mounted below said first plate and having parts extending through said first plate into engagement with said drawing ring, and a cushion of resilient material mounted below said second plate and adapted to yieldingly urge said drawing ring toward the upper end of said male die.

869,917. COMB-HONEY SECTION. WALTER J. LEWIS, St. Louis, Mo. Filed Mar. 18, 1907. Serial No. 362,961.

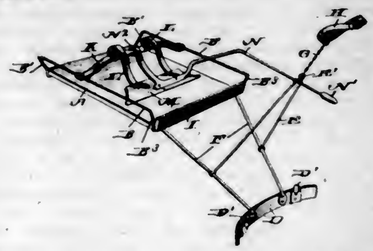


A honey section consisting of an open rectangular frame of wood, having sides and top and bottom, and having a cover formed of sheet metal with opposite edges bent to form flanges that overlap the outer surfaces of the sides of the sections, the section-engaging edges of the flange being inclined and pinching the section sides.

869,918. PORTABLE DESK. JULIUS LIPSCOND, Indianola, Miss., assignor of one-third to Jackson Hodges, Indianola, Miss. Filed Apr. 6, 1905, Serial No. 254,127. Renewed Mar. 30, 1907. Serial No. 365,602.

1. A device of the kind described comprising a board having side rails, the supporting rods having a plate connected thereto and provided with means for engaging the clothing, a bail connected to the supporting rods, a chain connected to said bail, a collar connected to the chain and a bar provided with clamping members adapted to slide on said side rails, as set forth.

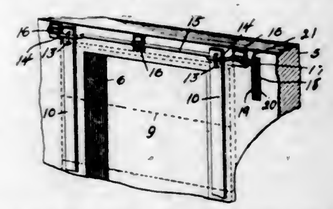
2. A device of the kind described comprising a board, having the side rails extending out at one end forming supporting rods which are connected to a plate provided with hooks, the bail connected to the supporting rods provided with an eye at its upper end, a chain fastened in said eye, and a collar attached to said chain for the purpose set forth.



3. A device of the kind described comprising a board having the side rails, a cross bar sliding upon said side rails, the presser plate and the spring arms connecting said plate and sliding cross bar and a lever connected to said plate and bar as set forth.

4. A device of the kind described comprising a board having side rails, the sliding cross-bar, the presser plate, the spring arms connecting said plate and sliding cross bar, the lifting rod connected to the presser plate said side rails extending downwardly from one end and provided with a curved plate at their ends, hooks arranged on said plate, a bail connected to the said rods provided with an eye at its end and a chain carrying a collar connected to said eye, as set forth.

869,919. CAR-DOOR CLOSURE. JOHN M. LUGAR, Otterbein, Ind. Filed Apr. 29, 1907. Serial No. 370,961.



1. In a device of the character described, the combination with a car, of a clamping member located upon each side of the doorway of the car, a plurality of boards adapted to be clamped between said clamping members and the wall of the car, a rock shaft for imparting movement to said clamping members, means controllable from the exterior of the car for actuating said rock shaft, said means comprising a pivoted lever, and a connection between one end of said pivoted lever and said rock shaft.

2. In a device of the character described, the combination with a car, of a pair of clamping members located at the opposite sides of the doorway of said car, a rock shaft mounted for rocking movement over the doorway of the car, said rock shaft being provided with crank arms which engage the clamping members, a plurality of boards adapted to be clamped in position by the clamping members when said rock shaft is actuated in one direction, and means controllable from the exterior of the car for actuating said rock shaft.

3. In a device of the character described, the combination with a car, of a pair of clamping members located at the opposite sides of the doorway of said car, a rock shaft mounted for rocking movement over the doorway of the car, said rock shaft being provided with crank arms which engage the clamping members, a plurality of boards adapted to be clamped in position by the clamping members when said rock shaft is actuated in one direction, means controllable from the exterior of the car for actuat-

ing said rock shaft, and a spring normally tending to throw said rock shaft in one direction.

4. In a device of the character described, the combination with a car, of a pair of clamping members located at the opposite sides of the doorway of said car, a rock shaft mounted for rocking movement over the doorway of the car, said rock shaft being provided with crank arms which engage the clamping members, a plurality of boards adapted to be clamped in position by the clamping members when said rock shaft is actuated in one direction, means controllable from the exterior of the car for actuating said rock shaft, a pivoted lever mounted upon the outside of the car, and a connection between said rock shaft and said pivoted lever.

5. In a device of the character described, the combination with a car, of a pair of clamping members located at the opposite sides of the doorway of said car, a rock shaft mounted for rocking movement over the doorway of the car, said rock shaft being provided with crank arms which engage the clamping members, a plurality of boards adapted to be clamped in position by the clamping members when said rock shaft is actuated in one direction, means controllable from the exterior of the car for actuating said rock shaft, a pivoted lever mounted upon the outside of the car, a connection between said rock shaft and said pivoted lever, and means for sealing said pivoted lever against movement.

869,920. EXERCISING APPARATUS. FRANK MARSLAND, Brooklyn, N. Y. Filed Feb. 28, 1906. Serial No. 303,342.



1. An exercising apparatus, comprising a pole or standard suitably anchored at one end and yieldingly supported at the other end, the body portion of the pole intermediate its ends being adapted to be grasped in the operation of employing the apparatus.

2. An exercising apparatus, comprising a sleeve, a rod freely sliding therein, means for yieldingly supporting the rod at the upper end to permit the freedom of the movement of the same, and means for anchoring or securing the sleeve at its lower end.

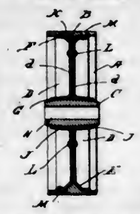
3. An exercising apparatus, comprising a sleeve member, a rod telescoping therein at one end, means for connecting the sleeve member to a support and a plurality of radiating tension devices at the other end of the rod.

4. An exercising apparatus, comprising a hoop, a pole, and means yieldingly connecting the pole or standard with the hoop at one end.

5. An exercising apparatus, comprising a frame, a hoop arranged therein, a pole, means yieldingly connecting the pole to the hoop at one end, and means for fastening the pole at the opposite end.

6. An exercising apparatus, comprising a sleeve member, a pole telescoping therein, means for movably securing the sleeve at its lower end, a frame member, and springs connecting the upper end of the pole to said frame member.

869,921. WHEEL. SAMUEL E. MERCER, Shelbyville, Ill. Filed Feb. 14, 1907. Serial No. 357,258.



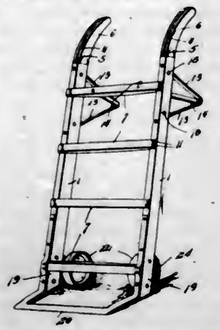
1. A wheel, consisting of a rim provided with an internal rib V-shaped in cross section, a hub, a pair of co-acting disks adapted when their body portions are together and contacting throughout from the hub to the rim, to form a groove to incase the rib of the rim, and having oppositely extending peripheral flanges, means for securing the flanges to the rim, and means whereby the hub is supported by the disks.

2. A wheel, consisting of a rim provided with a tapered internal rib, a hub, a pair of co-acting disks adapted when assembled to have their body portions contact and be in the same parallel plane and to engage and support the hub and provide a receptacle for the rib of the rim, the said disks being provided with oppositely extending flanges to contact the rim upon opposite sides of the rib, and means for securing said flanges to the rim.

3. A wheel, consisting of a rim provided with a tapered internal rib, a hub having oppositely outwardly tapered external surfaces, a pair of co-acting disks having a central opening with outwardly tapered walls, said tapered walls being adapted to surround the hub and terminate at a point within the ends of the hub to form a support therefor and be protected by the projecting ends of the hub, and means for clamping the body of the disks together to cause the same to bind the hub and the rib of the rim.

4. A wheel, consisting of a rim provided with a centrally arranged tapered internal rib, a hub having oppositely outwardly tapered external surfaces, a pair of co-acting disks, each one consisting of a single sheet of metal having a right angle flange with an inclined surface connecting the same to the body of the disk and with a centrally arranged opening having outwardly tapered walls, said walls being adapted to surround the hub and terminate at a point within the ends of the hub so that the projecting ends of the hub protect the same, means engaging the body of the disks and clamping the same together so that the bodies between the hub and rim lie parallel and contact, so as to clamp the tapered walls upon the hub and cause the inclined walls of the periphery of the disks to engage the rib, and means securing the flanges of the disks to the body of the rim.

869,922. TRUCK. SAMUEL E. MERCER, Shelbyville, Ill. Filed Feb. 14, 1907. Serial No. 357,259.



1. A truck, having side frames composed of sheet metal and bent so as to provide strengthening flanges, the forward ends being slotted centrally and bent toward each other, handle grips upon each side of the bent ends, and means for securing the grips thereto.

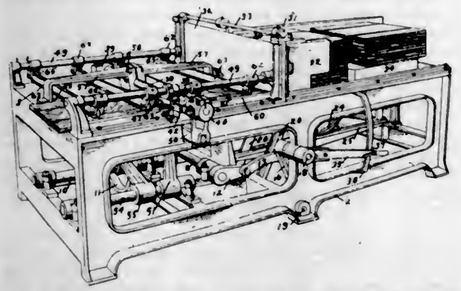
2. A truck, the side frames of which are made of sheet metal and bent to provide strengthening flanges, and cross braces made of sheet metal secured to and connecting said side frames, said cross braces being provided with ends which engage the upper face of the side frames and with shoulders to engage the braced faces of the frame and further provided with parallel strengthening flanges, which taper from the center to the ends, for the purpose set forth.

3. A side frame for trucks composed of a single sheet of metal having parallel sides U-shaped in cross section and provided with a slotted terminal, the walls of which are bent to contact each other and to form a handle support.

4. A truck, consisting of side frames, each made from a single sheet of metal bent U-shape in cross-section, the handle end of each frame being slotted centrally and having the metal upon each side of the slot bent toward each other, a handle made in two sections, each section being upon opposite sides of the compressed ends of the frame to form a handle, metal braces secured to and connecting said frames, a support secured to the lower end of said frames, a pair of legs seated within the side frames and connected thereto and to one of the braces, a pair of axle supporting brackets secured to and seated within the lower end of said frames, an axle carried by the brackets, and wheels carried by said axle.

5. A truck, consisting of two side frames made of sheet metal bent U-shape in cross-section and having a slotted and compressed handle attaching end, a handle attached to said compressed end, braces secured to the frames and U-shape in cross-section, legs for the truck having three terminals one of which is seated in and secured to one of the braces, the other two being seated in and secured to the frames, axle supports seated in and secured to the lower ends of the frames, a supplemental securing means passing through the sides of the frames and the supports, an axle carried by the supports, and wheels carried by the axle.

869,923. MACHINE FOR UNITING MATCHED BOARDS. ARNO MEREEN and CHARLES JOHNSON, Minneapolis, Minn. Filed May 4, 1905. Serial No. 258,793.



1. The combination, with means for feeding boards endwise arranged side by side and having matched contiguous edges, of means for applying pressure to one edge of the feed of boards to force their contiguous edges together, and a lengthwise adjustable backing device against which the opposite edge of the feed of boards is pressed when pressure is applied to said first named edge, substantially as described.

2. The combination, with means for feeding boards endwise arranged side by side and having matched contiguous edges, of an adjustable presser device arranged to engage one edge of the feed of boards and force their contiguous edges together, and a lengthwise adjustable stop or backing against which the opposite edge of the feed of boards is pressed, substantially as described.

3. The combination, with a table, of means for feeding boards endwise arranged side by side thereon and having matched contiguous edges, a reciprocating rod supported above said table transversely thereof, a presser device adjustably mounted on said rod and arranged to engage one edge of the feed of boards, a lengthwise adjustable stop for the opposite edge, and means for operating said rod and presser device to force the contiguous edges of the boards together, substantially as described.

4. The combination, with a table, of a presser device operating transversely thereon, a feed mechanism arranged to feed boards placed side by side and having matched contiguous edges endwise into the path of said presser device, said presser device engaging the edge of the outer board on one side, and a stop arranged to engage the edge of the outer board on the other side and resist the action of said presser device, and said stop being adjustable lengthwise of said boards to allow each feed after being engaged once by said presser device to be moved by the succeeding feed out of the path of said presser device, substantially as described.

5. The combination, with a table adapted to receive boards arranged side by side with matched contiguous edges, of means for holding the boards flatwise upon said table, and means for applying pressure to their edges to unite them, said two means being operatively connected with each other so as to be simultaneously operated, substantially as described.

6. The combination, with a table adapted to receive boards placed thereon side by side and having matched contiguous edges, of depressible bars for engaging the upper surfaces of the boards with a yielding pressure to hold them flatwise upon said table, means arranged to engage the outer edges of the feed of boards to press their matched edges together, and means for depressing said bars when the boards are being pressed together, and lifting them when the boards are being moved in the line of their feed.

7. The combination, with a table, of means for feeding boards having matched contiguous edges endwise thereon, a presser device arranged to engage one edge of the feed of boards and squeeze their matched edges together, bars arranged to bear on the upper surfaces of said boards with a yielding pressure simultaneously with the squeezing operation, and a backing arranged to engage the edge of the feed of boards on the opposite side from said presser device, and said backing being adjustable lengthwise of said boards whereby as each feed of boards is moved forward by the succeeding feed only one engagement of the presser device with each feed will be permitted.

8. The combination, with a table, of a sliding presser device arranged thereon and operating transversely thereof to engage the edges of boards placed side by side on the table and having matched contiguous edges, a bar connected with said presser device, and adapted to press upon the boards an oscillating arm means for operating the same, and a yielding connection between said arm and bar, for the purpose specified.

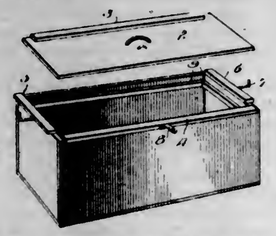
9. The combination, with a table, of rock shafts mounted thereon and provided with depending arms, bars connecting said arms across the table and having a yielding connection therewith at one end, a sliding presser device operating beneath said bars, an operating means having a yielding connection with said rock shafts and with said presser device, and means for feeding boards with matched edges into the path of travel of said presser device, beneath said arms, substantially as described.

10. The combination, with a table whereon the boards are placed side by side and having contiguous matched edges, of bars supported above said table and arranged to bear upon the upper surface of the boards, rock shafts provided with a series of arms whereon said bars are supported, a bar having a sliding pivotal connection with one of said shafts, a spring provided in said bar and bearing on its pivotal connection with said shaft, means for regulating the tension of said spring, and means for rocking said shaft.

11. The combination, with a table provided with a stop on one side, of a presser plate operating transversely on said table toward and from said stop, a reciprocating feed device arranged to feed boards endwise placed side by side with matched contiguous edges between said presser plate

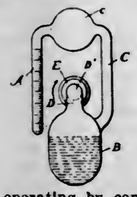
and said stop, means arranged to exert a yielding pressure on the upper surfaces of the boards and means for actuating said yielding pressure means simultaneously with the engagement of the pressure device therewith, substantially as described.

869,924. BOX AND CLOSURE THEREOF. PHILIPP METTMANN, Philadelphia, Pa. Filed Dec. 21, 1906. Serial No. 348,916.



In combination, a receptacle having one face open, guides arranged adjacent the free edges of the receptacle, a closure engaging the guides, strips hinged to the free edges of the receptacle and adapted to rest upon the cover when in applied position on the guides, and fastening means carried by the strips to engage the cover to hold the strips in engagement with the cover.

869,925. PRESSURE-GAGE. DANIEL M. MOORE, Newark, N. J., assignor to Moore Electrical Company, New York, N. Y., a Corporation of New York. Filed Apr. 2, 1906. Serial No. 309,284.

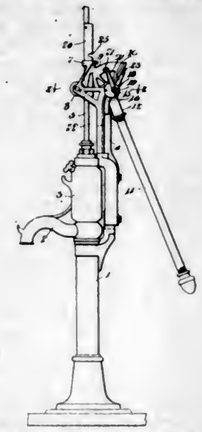


1. A manometer operating by compressing the gas or vapor whose tension is to be measured and comprising a liquid-containing bulb or chamber, a gage tube connected to said bulb at a point above the normal level of liquid therein, and a tube also connected to said chamber above the normal level of liquid therein and terminating in a tube suitably mounted to afford an axis of rotation whereby on rotation of the bulb on said axis the liquid may flow and entrap the gas or vapor flowing through the axis and tube to the gage tube, as and for the purpose described.

2. A manometer operating by compressing the gas or vapor whose tension is to be measured and comprising a liquid-containing bulb or chamber having an attached gage tube connecting with said bulb above the normal level of the liquid contained therein and a second pipe or tube leading from the chamber at a point above the level of the liquid and joined to an elbow terminating in a pipe or tube suitably mounted to afford an axis of rotation whereby the gas or vapor passing through the elbow to the gage tube by way of the space above the normal level of the liquid may be entrapped by said liquid on rotation around said axis as and for the purpose described.

3. In a manometer the combination with a liquid-containing bulb or chamber, of a tube carried thereby and terminating in a gage tube, a bulb or enlargement in the connection to the gage tube and a tube connecting the bulb with a body of gas or vapor whose tension is to be measured, said latter tube being coincident with the axis of rotation around which the structure may be rotated to entrap the gas or vapor passing through the latter tube and space above the normal level of the liquid in the bulb to the gage tube.

869,926. PUMP. PHILIP A. MYERS, Ashland, Ohio, assignor to F. E. Myers and Brother, Ashland, Ohio, a Copartnership. Filed Feb. 12, 1906. Serial No. 300,576.



1. In a rack and gear pump adapted for both windmill and hand operation, a standard provided with a fulcrum support, a rock shaft mounted in said fulcrum support and provided with an eccentric and an operating handle, a gear segment journaled on said eccentric and having a pump handle connected therewith, a pump rod provided with a rack with which the gear segment is adapted to mesh, means for supporting the pump rod against the thrust of the gear segment, and stop projections on the fulcrum support arranged in the path of the operating handle of the rock shaft at the limits of its motion in each direction, said handle being held against one of said stop projections by the weight of the load on the eccentric when said eccentric is on one side of the rock shaft and the parts are in mesh, said handle being held against the other stop projection by the same means when the eccentric is on the other side of the rock shaft and the parts are out of mesh, substantially as described.

2. In a rack and gear pump adapted for both windmill and hand operation, a standard provided with a fulcrum support having cheek pieces, a rock shaft having an eccentric fixed thereon between its ends, one end of said rock shaft bearing on one of the cheek pieces, the other cheek piece having an aperture for the passage of the eccentric, a removable plate on said last-mentioned cheek piece in which the other end of the rock shaft has its bearing, means for operating said rock shaft, a gear segment mounted on said eccentric and provided with a pump handle, and a pump rod having a rack with which said gear segment is adapted to mesh, substantially as described.

3. In a rack and gear pump adapted for both windmill and hand operation, a pump rod provided with a rack, in combination with a pump handle provided with a gear segment, means for moving said gear segment toward and from said rack to throw it into and out of mesh, and positioning means for insuring the proper registry of said gear segment and rack when thrown into mesh, substantially as described.

4. In a rack and gear pump adapted for both windmill and hand operation, a pump rod provided with a rack, in combination with a pump handle provided with a gear segment, means for moving said gear segment toward and from said rack to throw it into and out of mesh, and means for insuring the proper registry of said gear segment and rack when thrown into mesh, said means comprising a tooth of extra width on the gear segment and a blocking strip on the rack provided with a corresponding notch, substantially as described.

5. In a rack and gear pump adapted for both windmill and hand operation, a pump rod provided with a rack, in combination with a pump handle provided with a gear segment, the last and uppermost tooth of said segment being of extra width, the pump rod being provided with a blocking strip having a notch to receive said wide tooth when the pump handle is raised, and means for moving said gear segment toward and from said rack to throw it into and out of mesh therewith, substantially as described.

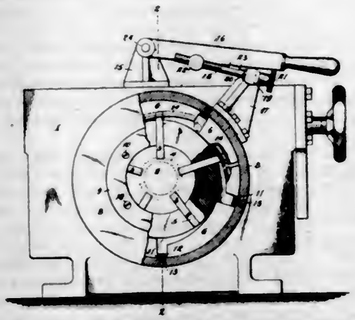
6. In a rack and gear pump adapted for both windmill and hand operation, a pump rod provided with a rack, a blocking strip located at one side of said rack and obstructing the spaces between the teeth thereof at one end of said spaces, a pump handle provided with a gear segment, and means for moving said gear segment toward and from said rack to throw the same into and out of mesh therewith, said gear segment having one tooth of extra width, and the blocking strip having a notch to receive said extra wide tooth when the parts are in proper registry, substantially as described.

869,927. CROSS-LINE BUCKLE. ORRIS H. MCBRIDE, Plankinton, S. D. Filed Jan. 15, 1907. Serial No. 352,386.



As a new article of manufacture, the herein-described cross-line buckle consisting of a frame embodying a tongue bar, two side bars secured intermediate of their ends to the ends of the tongue bar and extending in opposite directions therefrom, the ends of said side bars extending inwardly towards each other, but terminating short of each other to provide two longitudinally alined spaces in the ends of the frame on opposite sides of the tongue bar, and a tongue mounted on said tongue bar and provided at its free end with spaced spurs adapted to register with the one pair of inwardly turned side bar ends on opposite sides of the space between such ends.

869,928. SCREW-CUTTING MACHINE. RALPH MCCARTY, Lebanon, Pa. Filed Jan. 28, 1905. Serial No. 243,083.



1. In a screw-cutting machine, the combination of a cam-ring, a plurality of cams arranged circumferentially in the interior of said ring and removably secured thereto, the ends of said cams being beveled; and wedges adapted to be secured to the ring and disposed between and adapted to engage the beveled ends of the cams to secure said cams to the ring.

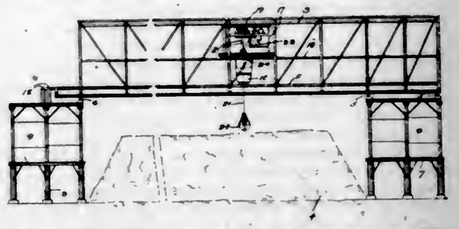
2. In a screw-cutting machine, a die-head provided with die-slots having recesses formed in the bottoms thereof, plates secured to the bottoms of said slots and provided with perforations corresponding with the recesses in the die-head, dies located in the die-slots, and spring pressed plungers located in said recesses and adapted to extend through said perforations in the plates to yieldingly press against the dies.

3. In combination, a die; a rotary cam adapted to control said die; a lever secured to a stationary part by a pivot; said stationary part; an intermediate pivot on the lever located between its first named pivot and its free-end; a stop on the lever between its intermediate pivot and its free end; an arm pivotally connected with the lever by the aforesaid intermediate pivot and with the rotary cam by a pivot which is in substantial alinement with the pivot of the lever and its intermediate pivot when the lever has been depressed until its stop abuts against the top of the arm; and adjusting means adapted to vary the length of said arm between its respective pivotal connections with the lever and with the rotary cam.

4. In combination, a die; a rotary cam adapted to control said die; a lever secured to a stationary part by a pivot; said stationary part; a screw-threaded swivel-nut on the lever located between its said pivot and its free-end; a stop on the lever between its screw-threaded swivel-nut and its free-end; a rod screw-threaded at one end to engage the threads of the screw-threaded swivel-nut and pivotally connected thereby with the lever; a plain swivel-nut connection between the rod and the rotary cam adapted to receive the unthreaded end of the rod and permit rotation of the rod within it, and constituting a pivotal connection between the rod and the rotary cam which is located in substantial alinement with the pivot of the lever and the pivot of the screw-threaded swivel-nut, when the lever has been depressed until its stop abuts against the top of the rod; and means adapted to prevent longitudinal motion of the rod through the plain swivel-nut.

5. In combination, a cam-ring; a plurality of cams secured against the interior of the ring by wedges located between the cams; said wedges; and securing means between the wedges and the ring.

869,929. COAL-HANDLING APPARATUS. JAMES M. MCCLELLON, Everett, Mass. Filed June 10, 1907. Serial No. 378,155.



1. In a coal-handling apparatus, the combination with a movable bridge sustained at its ends and extending over an open storage space, of two conveyers thereon extending longitudinally thereof, a hoisting bucket, means to operate the same, and means to position said hoisting bucket over either conveyer whereby said bucket may be discharged into either conveyer.

2. In a coal-handling apparatus, the combination with a bridge, of two tracks carried thereby, an elevating device to elevate material, and means to discharge the material into cars on either track.

3. In a coal-handling apparatus, the combination with a bridge sustained at its ends and having a well extending longitudinally thereof, of a carriage supported on said bridge within said well and arranged to traverse said bridge longitudinally, a hoisting device supported by the carriage, and means to position said hoisting device at either side of the well for discharging its load.

4. In a coal-handling apparatus, the combination with a bridge having a well extending longitudinally thereof, of a carriage supported on said bridge within the well and movable longitudinally of the bridge, a track supported by the bridge either side of the well, a hoisting bucket depending from said carriage, means to operate said hoisting bucket, and means to discharge the contents thereof into cars on either track.

5. In a coal-handling apparatus, the combination with a bridge having a well extending longitudinally thereof, of a carriage supported on said bridge within said well and movable longitudinally thereof, tracks within the well on either side of the bridge, a hoisting bucket suspended from said carriage, means to operate said bucket, and means to discharge the contents thereof into cars on either track.

6. In a coal-handling apparatus, the combination with a movable bridge, of a hoisting device carried thereby, means to move the hoisting device longitudinally of the bridge a hoisting bucket operated by the hoisting device and movable means co-acting with the falls of the hoisting bucket to control the position thereof horizontally in a direction transversely to the length of the bridge.

7. In a coal-handling apparatus, the combination with a movable bridge having a well, of a hoisting device carried thereby within the well, a hoisting bucket operated by the hoisting device and movable means co-acting with the falls of the hoisting bucket to control the position thereof transversely of the bridge.

8. In a coal-handling apparatus, the combination with a bridge, of a carriage movably mounted thereon, a track on said carriage, a trolley on the track, a hoisting device including a hoisting bucket suspended from said carriage by fall ropes which have operative engagement with the trolley, and means to operate the trolley to shift the position horizontally of the hoisting bucket.

9. In a coal handling apparatus, the combination with a bridge, of a carriage movably mounted thereon, a track on said carriage extending transversely of the bridge, a trolley on said track, a hoisting device including a hoisting bucket suspended from the carriage by fall ropes which have operative engagement with the trolley, and means to shift the position of the trolley on the track thereby to shift the position horizontally of the hoisting bucket.

10. In a coal handling apparatus, the combination with a bridge having a well, of a carriage movable longitudinally of the bridge within the well, a hoisting bucket suspended from the carriage, means for operating the hoisting bucket, and means to move said hoisting bucket horizontally with relation to the carriage.

11. In a coal handling apparatus, the combination with a bridge having a well, of a carriage movable longitudinally of the bridge within the well, a hoisting bucket suspended from the carriage, means for operating the hoisting bucket, and means to move said hoisting bucket horizontally with relation to the carriage, and to hold said bucket in any desired horizontal position.

12. In a coal handling apparatus, the combination with a movable bridge having a well, of a carriage mounted thereon for movement longitudinally thereof within the well, a hoisting bucket suspended from the carriage, means for operating the hoisting bucket, and other means independent from the means for operating the hoisting bucket for moving said hoisting bucket horizontally with relation to the carriage.

13. In a coal-handling apparatus, the combination with a bridge having a well extending longitudinally thereof, of a carriage within the well arranged to move longitudinally of the bridge, a track on each side of the bridge within the well, a hoisting bucket suspended from the carriage, and means to operate the bucket to elevate material and discharge it into a car on one of the tracks.

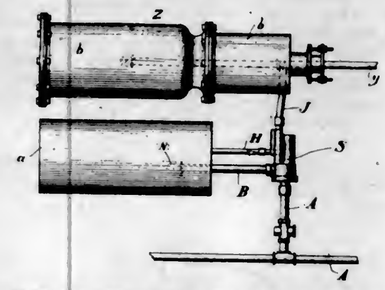
14. In a coal-handling apparatus, the combination with a bridge having a longitudinal extending well, of a track on each side of the bridge within the well and conveyers on said tracks.

869,930. AUTOMATIC AIR-BRAKE APPARATUS AND METHOD. JOHN T. MCINTOSH and JAMES S. MANTON, Chicago, Ill. Filed May 5, 1902. Serial No. 105,967.

1. In an air brake system, a local storage reservoir, said reservoir being automatically vented before the brake piston head to release the brakes; and automatically closed to conserve its excess pressure, both by a valve directly moved by the fluctuations of the train line pressure.

2. In an air brake system a storage reservoir automatically closing after each release to cut off its pressure from the cylinder and conserve its pressure for automatic release of the brakes substantially as described and shown.

3. In an air brake system a local storage reservoir, and means to directly and automatically discharge said reservoir before the brake piston head to release the brakes by a restoration of train line pressure and to automatically and directly close said reservoir to conserve its own contents, on the equalization of the brake cylinder and train line pressures, substantially as shown.



4. In an air brake system, the combination of a combined brake and reservoir cylinder, holding compressed air for applying the brakes, with an additional local storage reservoir holding compressed air, for releasing the brakes, substantially as described and shown.

5. In an air brake system, the combination, with a combined brake and reservoir cylinder, of an additional, valve-separated, local reservoir, automatically dischargeable by the equalization of pressure before the brake piston head to release the brakes, substantialy as described and shown.

6. In an air brake system, the combination with a combined brake and reservoir cylinder, of an additional local storage reservoir, automatically and directly vented before the brake piston head to release the brakes of one, or a plurality of cars by an increase of the train line pressure.

7. In an air brake system or apparatus, a storage reservoir for storage of compressed air for operating the brakes, said reservoir being automatically and directly discharged before the brake piston head through an automatically operated valve to release the brakes by an increase of pressure in the train line pipe, substantially as described and shown.

8. In an air brake mechanism, having a train-line and having a local storage releasing reservoir for the release of the brakes only, an automatic valve-mechanism, automatically closed by the excess of the pressure of the local storage releasing reservoir over the train line pressure, substantially as described and shown.

9. In an air brake system, a combined brake and reservoir cylinder in which the piston head is restored to primary position and the reservoir end of the cylinder recharged, ready for action, by air discharged in front of the piston head from a local storage reservoir, substantially as described and shown.

10. In an air brake apparatus, a body of air of high pressure, stored in a reservoir between the brake-cylinder and the train line and adapted to be automatically and successively vented before the brake piston-head, to release the brakes, without replenishing the reservoir, and automatically and successively conserved between stops or actions of the brake by a restraining valve operated by excess pressure, substantially as described and shown.

11. In an air brake apparatus, a body of air at high pressure, stored between the train line and brake cylinder, and adapted to be automatically and successively vented before the brake piston-head to release the brakes, without equalizing the pressure of the said body of stored air and the train line air, substantially as described and shown.

12. In an air brake system the combination of a combined brake and reservoir cylinder holding compressed air for applying the brakes with an additional local storage reservoir holding compressed air for releasing the brakes, said system being so arranged that upon the slightest increase in the train line pressure a corresponding increase of pressure is obtained in the combined brake and reservoir cylinder by automatic depletion of the pressure in the local storage reservoir, substantially as described and shown.

13. In an air brake system, the combination of a combined brake and reservoir cylinder, holding compressed air for applying the brakes, an additional local storage reservoir holding compressed air for releasing the brakes, a train line and an automatic valve, all being so arranged that upon an increase of train line pressure the brakes are released by the automatic depletion of the air stored in the local storage reservoir, substantially as shown and described.

14. In an air brake system, the combination of a combined brake and reservoir cylinder holding compressed air for applying the brakes and an additional local storage reservoir holding compressed air for releasing the brakes, an automatic valve and train line; all being so arranged that upon a decrease in the air pressure in the combined brake and reservoir cylinder below the pressure in the train line, a corresponding pressure of air is automatically secured from the local storage reservoir, substantially as shown and described.

15. In an air brake system, the combination of a combined brake and reservoir cylinder holding compressed air for applying the brakes, an automatic valve, an additional local storage reservoir holding compressed air for releasing the brakes and a train line, said system being so arranged that upon the train line pressure becoming greater than the pressure in the combined brake and reservoir cylinder, the pressure in the local storage reservoir is automatically depleted to equalize the pressures in the train line and the combined brake and reservoir cylinder, substantially as described and shown.

16. In an air brake system, the combination of a combined brake and reservoir cylinder holding compressed air for applying the brakes, and an additional local storage reservoir holding compressed air for releasing the brakes, and automatic valve and a train line, so arranged that upon the slightest increase in the train line pressure the compressed air in the local storage reservoir is allowed to pass through an automatically operated valve to and against a brake piston to increase by compression the air pressure in the storage end of the combined brake and reservoir cylinder, substantially as described and shown.

17. In an air brake system, a combined brake and reservoir cylinder holding compressed air for applying the brakes, an additional local storage reservoir holding compressed air for releasing the brakes, an automatic valve, and a train line, all being so arranged that an excess pressure, greater than train line pressure, remains in the local storage reservoir on one or a plurality of cars, after a reduction in the train line, substantially as described and shown.

18. In an air brake system, a combined brake and reservoir cylinder holding compressed air for applying the brakes, an additional local storage reservoir holding compressed air for releasing the brakes, an automatic valve, and a train line; all being so arranged that the automatic valve is placed in a position to allow the air to pass from the local storage reservoir by an increase of train line pressure, and is closed by the excess pressure from the local storage reservoir, substantially as described and shown.

19. In an air brake system an automatic air brake having a local storage reservoir on each car, in which said local storage reservoir all air is stored that is used in setting and releasing the brakes for that car, substantially as described and shown.

20. In an air brake system an automatic air brake having a local storage reservoir on each car, in which said local storage reservoir air is stored that is used for releasing the brakes for that car, substantially as described and shown.

21. In an air brake system an automatic air brake having a local storage reservoir on each car, in which said local storage reservoir all air is stored that is used to restore the branch train line pressure for that car, substantially as described and shown.

22. In an air brake system having a combined brake and reservoir cylinder, a local storage reservoir for each car for immediate supply of air for said cylinder, substantially as described and shown.

23. In an air brake system having a combined brake and reservoir cylinder on each car, an additional locally stored body of compressed air for supplying the brake mechanism of the car, substantially as described and shown.

24. In an air brake system having a combined brake and reservoir cylinder, an additional local storage reservoir adapted to supply by valve, either end of the combined brake and reservoir cylinder, substantially as described and shown.

25. In an air brake system, the combination of a combined brake and reservoir cylinder holding compressed air for applying and releasing the brakes, with an additional local storage reservoir holding compressed air for restoring the brake-operating pressure, substantially as described and shown.

26. In an air brake system a local storage reservoir holding compressed air, and through which reservoir all air employed in operating the brake passes after it has passed the engineer's valve, for automatically releasing the brakes, on the increase of train line pressure over brake-cylinder pressure, substantially as described and shown.

27. In an air-brake system a local storage reservoir holding compressed air, which has passed the engineer's valve and through which reservoir all air used in operating the brakes passes, for automatically releasing the brakes, substantially as described and shown.

28. In an air-brake system, a local storage reservoir holding compressed air, and through which reservoir all air employed in operating the brakes passes which has passed the engineer's valve, for automatically restoring the brake-operating pressure, substantially as described and shown.

29. In an air-brake system a local storage reservoir holding compressed air independently of the main reservoir and through which local reservoir all air employed in operating the brake passes for automatically restoring the brake-operating pressure, substantially as described and shown.

30. In an air-brake system a body of compressed air, locally stored after it has passed the engineer's valve, and applied through an automatic valve to release the brakes, substantially as described and shown.

31. In an air-brake system a body of compressed air, locally stored after it has passed the engineer's valve in a reservoir through which all air employed in operating the brake passes, and applied through an automatic valve, to restore the brake-operating pressure, substantially as described and shown.

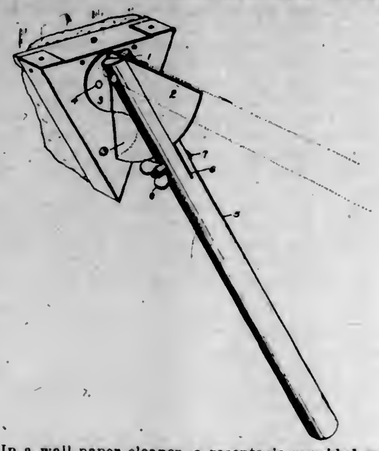
32. In an air-brake system, a body of compressed air, locally stored near the brake in a reservoir through which all air employed in operating the brakes passes and held independently of the main reservoir and applied through an automatic valve to restore the brake-operating pressure, substantially as described and shown.

33. In an air-brake system a plurality of brakes released simultaneously by the automatic discharge of compressed air locally stored near the respective brakes and discharged against the respective brake pistons through automatic valves actuated by fluctuations of the train-line pressure, substantially as described and shown.

34. In an air-brake system the combination of a local storage reservoir through which all air employed in operating the brakes passes and a valve operated automatically by fluctuations of the train-line pressure, to allow the passage of compressed air from said storage reservoir to restore the brake-operating pressure, substantially as described and shown.

35. In an air-brake system, a local storage reservoir having an automatic valve operated by the fluctuations of the train-line pressure to allow the passage of the storage reservoir pressure to the brake-operating mechanism through a branch-train-line to restore the brake applying and releasing pressure, substantially as described and shown.

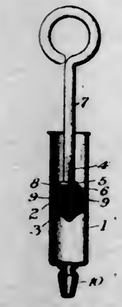
869,931. WALL-PAPER CLEANER. JACOB M. MCINTOSH, Warren, Ohio. Filed July 19, 1907. Serial No. 384,652.



1. In a wall paper cleaner, a receptacle provided with a blade, a handle pivotally attached to said blade and means for clamping the handle upon the blade, said receptacle provided with a plate having a rounded edge, substantially as and for the purpose specified.

2. In a wall paper cleaner, the combination of a tri-angular receptacle, one side of the tri-angular receptacle provided with an extended and rounded edge, a blade connected to said receptacle and a handle pivotally attached to said blade, said receptacle adapted to hold wall paper cleaning material substantially as and for the purpose specified.

869,932. PISTON. CHARLES S. MCKEE, Glencoe, Ill. Filed June 7, 1907. Serial No. 377,806.

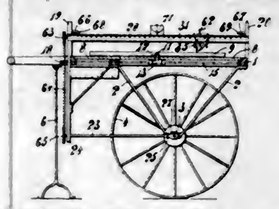


1. The combination of a stem having a head at one end and having a threaded part near said head, a nut mounted on said threaded part, a piston of rubber molded on said head so as to inclose said head and having a part thereof interposed between said head and nut, said part being of such length in proportion to its diameter that its diameter may be adjusted through the adjustment of said nut along said stem.

2. The combination of a stem, a headed screw having threaded engagement with the end of said stem, a nut mounted on said screw, a piston of rubber molded on said head so as to inclose the head and a part of the shank of said screw, the part of said piston which is interposed between said head and nut being of sufficient length in proportion to its diameter that its diameter may be adjusted through the relative adjustment of said shoulders.

3. The combination of a stem, a headed screw having threaded engagement with the adjacent end of said stem, a piston of rubber molded around the head and a part of the shank of said screw, the part of said piston which is interposed between said head and stem being of sufficient length in proportion to its diameter that its diameter may be adjusted through the relative adjustment of said shoulders, the end of said piston which is adjacent to said stem being convex toward said stem, whereby the pressure of said stem will be distributed toward the periphery of the piston and tend to cause said piston to expand uniformly and the periphery of said piston being provided with annular grooves.

869,933. APPARATUS FOR SURVEYING AND RANGE-FINDING. DONALD W. MCLEAN, Mount Hutt, Methven, New Zealand. Filed Oct. 8, 1906. Serial No. 338,021.



1. Apparatus for the purpose indicated comprising in combination a frame, stays secured to the frame, an axle revolved in the stays, road wheels secured to the axle, a bevel wheel upon the axle, a spindle journaled at one end to the frame, a bracket mounted upon the axle and having a journal for the end of the spindle a bevel wheel upon the spindle gearing with the bevel wheel upon the axle, a sprocket wheel upon the other end of the axle, a vertical pillar at the rear end of the frame having a V shaped slot, a vertical pillar at the front of the apparatus, a pointed pin upon the top of the front vertical pillar, a screw spindle journaled in the vertical pillars, a sprocket wheel upon the end of the screw spindle, a sprocket chain connecting the two sprocket wheels, a half nut threaded to engage the screw spindle, means for guiding the half nut and retaining it in engagement with the screw spindle, a pencil, means for connecting the pencil to the half nut, a drawing board boards upon the frame to support the drawing board and means for adjusting the position of the drawing board substantially as set forth.

2. Apparatus for the purpose indicated comprising in combination a frame, stays secured to the frame, an axle revoluble in the stays, road wheels secured to the axle, a bevel wheel upon the axle, a spindle journaled at one end to the frame, a bracket mounted upon the axle and having a journal for the end of the spindle, a bevel wheel upon the spindle gearing with the bevel wheel upon the axle, a sprocket wheel upon the other end of the axle, a vertical pillar at the rear of the frame having a V shaped slot, a vertical pillar at the front of the apparatus, a pointed pin upon the top of the front vertical pillar a screw spindle journaled in the vertical pillars, a sprocket wheel upon the end of the screw spindle, a sprocket chain connecting the two sprocket wheels, a half nut threaded to engage the screw spindle, a sliding block having flanges, means for attaching the half nut to the sliding block, angle bars between which the sliding block fits and secured by bolts to the vertical pillars, a bracket slidable upon the lower side of the angle bars means for connecting the bracket to the sliding block, a socket integral with the bracket and a pencil fitting the socket substantially as set forth.

3. Apparatus for the purpose indicated comprising in combination, a frame, stays secured to the frame, an axle revoluble in the stays, road wheels secured to the axle, a bevel wheel upon the axle, a spindle journaled at one end of the frame, a bracket mounted upon the axle and having a journal for the other end of the spindle, a bevel wheel upon the spindle gearing with the bevel wheel upon the axle a sprocket wheel upon the other end of the axle, a vertical pillar at the rear end of the frame having a V shaped slot, a vertical pillar at the front of the apparatus, a pointed pin upon the top of the front vertical pillar,

a screw spindle journaled in the vertical pillars, a sprocket wheel upon the end of the screw spindle, a sprocket chain connecting the two sprocket wheels, a half nut threaded to engage the screw spindle a slide block having flanges, means for attaching the half nut to the sliding block, angle bars between which the sliding block fits and secured by bolts to the vertical pillars, a bracket slidable upon the lower side of the angle bars, means for connecting the bracket to the slide block, a socket integral with the bracket, a pencil fitting the socket, a second socket integral with the bracket, a pointed pin within the second socket the said socket being sloped substantially as set forth.

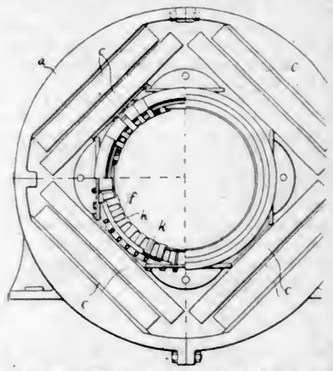
4. Apparatus for the purpose indicated comprising in combination a frame, stays secured to the frame, an axle revoluble in the stays, road wheels secured to the axle, a bevel wheel upon the axle, a spindle journaled at one end to the frame, a bracket mounted upon the axle and having a journal for the other end of the spindle, a bevel wheel upon the spindle gearing with the bevel wheel upon the axle, a sprocket wheel upon the other end of the axle, a vertical pillar at the rear of the frame having a V shaped slot, a vertical pillar at the front of the apparatus, a pointed pin upon the top of the front vertical pillar, a screw spindle journaled in the vertical pillars, a sprocket wheel upon the end of the screw spindle, a sprocket chain connecting the two sprocket wheels, a half nut threaded to engage the screw spindle, a slide block having flanges, angle bars between which the slide block fits and secured by bolts to the vertical pillars, a bracket slidable upon the lower side of the angle bars, bolts connecting together the half nut, the slide block and the bracket, springs located upon the bolt, nuts retaining the springs, a stud secured to the half nut, a cam pivoted to the top of the stud, a cover plate upon the sliding block through which the stud passes and upon which the cam may be brought to bear, substantially as set forth.

5. Apparatus for the purpose indicated comprising in combination a frame, stays secured to the frame, an axle revoluble in the stays, road wheels secured to the axle, a bevel wheel upon the axle, a spindle journaled at one end to the frame, a bracket mounted upon the axle and having a journal for the other end of the spindle, a bevel wheel upon the spindle gearing with the bevel wheel upon the axle, a sprocket wheel upon the other end of the axle, a vertical pillar on the rear of the frame having a V shaped slot, a vertical pillar at the front of the apparatus, a pointed pin upon the top of the front vertical pillar, a screw spindle journaled in the vertical pillars, a sprocket wheel upon the end of the screw spindle, a sprocket chain connecting the two sprocket wheels, a half nut threaded to engage the screw spindle a slide block having flanges, angle bars between which the slide block fits and secured by bolts to the vertical pillars, a bracket slidable upon the lower side of the angle bars, bolts connecting together the half nut, the slide block and the bracket, springs located upon the bolt, nuts retaining the springs, a stud secured to the half nut, a cam pivoted to the top of the stud, a cover plate upon the sliding block through which the stud passes and upon which the cam may be brought to bear, plates having beveled faces attached to the vertical pillars and adapted to engage an extension of the pivot pin of the cam, substantially as set forth.

6. Apparatus for the purpose indicated, comprising in combination a frame, stays secured to the frame, an axle revoluble in the stays, road wheels secured to the axle, boards secured to the top of the frame, bearings secured to the boards and supporting the spindle, a handle upon the end of the spindle, an eccentric upon the spindle, a socket fitting the eccentric, a bolt secured to the socket, a drawing board upon the top of the boarding, a channeled bar across the lower side of the drawing board and adapted to receive the head of the bolt, substantially as set forth.

7. In apparatus for the purpose indicated, a bracket a vertical socket integral with the bracket, a pencil fitting the socket, a stud passing through a slot in the socket and attached to the pencil, a spring in compression between the top of the socket and the pencil, a screw for regulating the tension of the spring, another socket integral with the bracket and sloping towards the first socket, a pointed metal pin fitting the socket a stud passing through a slot in this second socket and attached to the pointed pin, a spring in compression between the top of the socket and the pointed pin, a screw for regulating the tension of the spring, substantially as set forth.

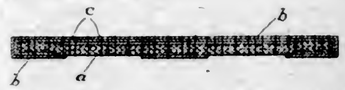
869,934. DYNAMO-ELECTRIC MACHINERY. CHARLES A. PARSONS and JOHN H. ARMSTRONG, Newcastle-upon-Tyne, England; said Armstrong assignor to said Parsons. Filed Feb. 10, 1906. Serial No. 300,483.



1. In dynamo electric machinery, a field winding comprising a plurality of separate metal strips, pole pieces, grooves in the face of said pieces parallel to the axis of the machine, flanged elements of magnetic material fitting in said grooves, projections on said elements, clamping pieces fitting over the projections, and means clamping said pieces to the machine; as set forth.

2. In dynamo electric machinery, pole pieces, an electrical winding, means fixing said winding to said pole pieces comprising grooves in the face of the pole pieces parallel to the axis of the machine, flanged elements of magnetic material fitting into the grooves, projections on said elements clamping pieces fitting over the projections, and means attaching said clamping pieces to the machine; as set forth.

869,935. CONVEYER-BELT. GEORGE C. PLUMMER, Philadelphia, Pa., assignor to Main Belting Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 10, 1907. Serial No. 367,306.



1. A conveyer belt comprising a solid woven body, having secured to the face thereof one or more layers of a wear resisting fabric constructed of animal or vegetable fibers.

2. A belt comprising a solid woven body having secured to the face thereof one or more layers of duck.

3. A conveyer belt comprising a solid woven body, having secured to the faces thereof one or more layers of a wear resisting fabric constructed of animal or vegetable fibers.

4. A conveyer belt comprising a solid woven body, having secured to the faces thereof one or more layers of duck.

5. A conveyer belt comprising a solid woven body, having secured to its edges a wear resisting fabric.

6. A conveyer belt comprising a solid woven body, having secured to its edges one or more layers of duck.

7. A conveyer belt comprising a solid woven fabric, having secured to the central portion of its face a plurality of layers of wear resisting fabric, and a lesser number of layers throughout the remainder of the face.

8. A conveyer belt comprising a solid woven fabric, having secured to the central portion of its face a plurality of layers of duck, and a lesser number of layers throughout the remainder of the face.

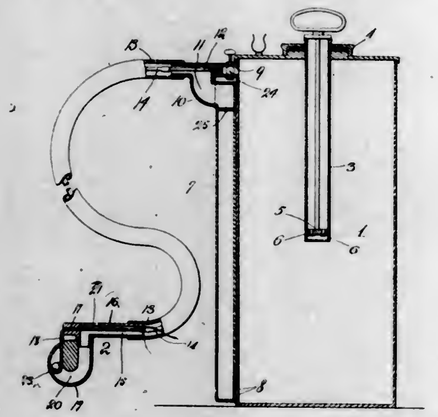
9. A conveyer belt comprising a solid woven fabric, having secured to the portion of the face adapted to travel over the idlers one or more layers of wear resisting fabric.

10. A conveyer belt comprising a solid woven fabric, having secured to the portion of the face adapted to travel over the idlers one or more layers of duck.

11. A conveyer belt comprising a solid woven fabric, having on one face one or more layers of wear resisting fabric, and on the other face, at the portion adapted to travel against the idlers, one of more layers of wear resisting fabric.

12. A conveyer belt comprising a solid woven fabric, having on one face one or more layers of duck, and on the other face, at the portion adapted to travel against the idlers, one or more layers of duck.

869,936. SPRAYING APPARATUS. DWIGHT F. PREVOST, New York, N. Y., assignor of one-half to Rutgers Ives Hurry, New York, N. Y. Filed Feb. 1, 1907. Serial No. 355,201.



1. The combination of an atomizer, two nozzles carried thereby, means for supplying liquid to one of the said nozzles, means for supplying air under pressure to the other of the said nozzles, and means for regulating the amount of liquid discharged by one nozzle controlled by the pressure of air exerted by the other nozzle.

2. The combination of an atomizer, two nozzles carried thereby, means for supplying liquid to one of the said nozzles, means for supplying air under pressure to the other of the said nozzles, and a valve for regulating the amount of liquid discharged by the one nozzle controlled by the pressure of air exerted by the other nozzle.

3. The combination of an atomizer, two nozzles carried thereby, means for supplying liquid to one of the said nozzles, means for supplying air under pressure to the other of the said nozzles, and a ball valve for regulating the amount of liquid discharged by the one nozzle controlled by the pressure of air exerted by the other nozzle.

4. The combination of an atomizer having a liquid reservoir, a nozzle extending therefrom, a second nozzle, means for supplying air under pressure to the said second nozzle, and means located in the reservoir for automatically regulating the amount of liquid discharged by one nozzle controlled by the pressure of air exerted by the other nozzle.

5. The combination of an atomizer having a liquid reservoir, a nozzle extending therefrom, a second nozzle, means for supplying air under pressure to the said second nozzle, and a valve in the nozzle extending from the reservoir and adapted to be controlled by the pressure of the air exerted by the other nozzle.

6. The combination of an atomizer having a liquid reservoir, a nozzle extending therefrom, a second nozzle, means for supplying air under pressure to the said second nozzle, and a ball valve in the nozzle extending from the reservoir and controlled by the pressure of air exerted by the other nozzle.

7. The combination of an atomizer having a liquid reservoir, a nozzle extending therefrom, a second nozzle, means for supplying air under pressure to the said second nozzle, and means for breaking up the liquid before it issues from the nozzle leading from the reservoir said means being controlled by the pressure of air exerted by the other nozzle.

8. The combination of an atomizer having a liquid reservoir, a nozzle extending therefrom, a second nozzle, means for supplying air under pressure to the said second nozzle, and a fluctuating ball for breaking up the liquid before it issues from the nozzle leading from the reservoir said ball being controlled by the pressure of air exerted by the other nozzle.

9. The combination of an atomizer, two nozzles carried thereby, means for supplying liquid to one of the said nozzles, means for supplying air under pressure to the other of the said nozzles, and means for breaking up the liquid before it issues from the nozzle said means being controlled by the pressure of air exerted by the other nozzle.

10. The combination of an atomizer, two nozzles carried thereby, means for supplying liquid to one of the said nozzles, means for supplying air under pressure to the other of the said nozzles, and a fluctuating ball for breaking up the liquid before it issues from one nozzle said ball being controlled by the pressure of air exerted by the other nozzle.

11. The combination of an atomizer having a reservoir, two nozzles in said atomizer, one of which connects with the said reservoir, means for supplying liquid under pressure to the said reservoir and nozzle connected therewith, adapted to be closed at will, and means for supplying air under pressure to the other of the said nozzles, whereby liquid contained in the reservoir is drawn out through the nozzle connected therewith by the discharge of air through the other nozzle.

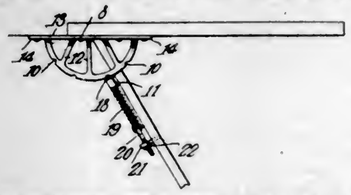
12. The combination of an atomizer having a reservoir two nozzles in said atomizer, one of which connects with the said reservoir, means for supplying liquid under pressure to the said reservoir and nozzle connected therewith adapted to be closed at will, and means for supplying air under pressure to the other of the said nozzles, whereby the liquid contained in the reservoir is drawn out through the nozzle connected therewith by the discharge of air through the other nozzle, and means located in the reservoir for automatically regulating the amount of liquid discharged by the one nozzle said means being controlled by the pressure of air exerted by the other nozzle.

13. The combination of a tank containing a body of liquid and a supply of air under pressure in free communication with each other, an atomizer having a reservoir, two nozzles on said atomizer, one of which connects with the reservoir, a connection from the lower end of the tank communicating with the reservoir and nozzle connected thereto adapted to be closed at will, and a connection from the upper end of the tank communicating with the other of the said nozzles whereby the liquid contained in the reservoir is drawn out through the nozzle connected thereto by the discharge of air through the other nozzle.

14. The combination of a tank containing a body of liquid and a supply of air under pressure in free communication with each other, an atomizer having a reservoir, two nozzles on said atomizer, one of which connects with the reservoir, a connection from the lower end of the tank communicating with the reservoir and the nozzle connected thereto, adapted to be closed at will, and a connection from the upper end of the tank communicating with the other of the said nozzles, whereby the liquid contained in the reservoir is drawn out through the nozzle connected thereto by the discharge of air through the other nozzle, and means located in atomizer for automatically regulating the amount of liquid discharged by the one nozzle and controlled by the pressure of air exerted by the other nozzle.

15. The combination of an atomizer composed of two members, one of which is provided with a passage having curved walls, a nozzle extending from said passage, a fluctuating ball contained in said passage the other of the said members being connected to the said passage, a nozzle carried by the said other member, and means for supplying air under pressure to the nozzle carried by the said other member.

869,937. DOOR-CHECK. HENRY W. SCHIERMEYER, Beatrice, Nebr. Filed Feb. 11, 1907. Serial No. 356,824.



1. The combination with a casing having a door hinged thereto, of a segmental rack secured to the door casing and disposed concentric with the door hinge, said rack having its active face provided with spaced locking recesses, a locking member pivotally mounted on the door and adapted to engage the locking recesses, a spring having one end thereof secured to the adjacent end of the locking member and its opposite end connected with the door for yieldably supporting the locking member in engagement with the rack, and means for adjusting the tension of the spring.

2. The combination with door-casing having a door hinged thereto, of a segmental rack secured to the door-casing above the door and arranged concentric with the door hinge, said rack having its active face provided with spaced locking recesses, a locking member pivotally mounted on the door and having one end thereof provided with a packing strip adapted to enter the locking recesses for holding the door in adjusted position, a lug secured to the door, a threaded pin carried by the lug, a spring interposed between the pin and one end of the locking member, and a clamping nut engaging the threads on the pin for adjusting the tension of the spring.

3. The combination with a door-casing having a door hinged thereto, of a segmental plate secured to the door casing and arranged concentric with the door-hinge, said plate being provided with spaced locking recesses, a locking member pivotally mounted on the door-casing, a bearing sleeve carried by the locking member, a pin extending through the bearing sleeve for attachment to the door and forming the pivotal axis of the locking member, a threaded lug secured to the door, a pin threaded in said lug, and a spring one end of which is secured to the pin and the opposite end thereof to the adjacent end of the locking member for yieldably supporting said locking member in engagement with the rack.

869,938. METHOD OF MAKING BIFOCAL LENSES. JOHN R. SCHWINZER, New York, N. Y., assignor to The Meyrowitz Manufacturing Company, a Corporation of New Jersey. Filed Oct. 31, 1905. Serial No. 285,259.



1. The method of making a bi-focal lens which consists in grinding and polishing a piece of glass to form a lens with a secondary or auxiliary lens surface upon a portion thereof, fusing and welding a material more fusible than glass to such secondary or auxiliary surface, said material being in any natural state or condition of form, without being ground or fitted to the surface of the lens, and finally polishing the surface of the material so added.

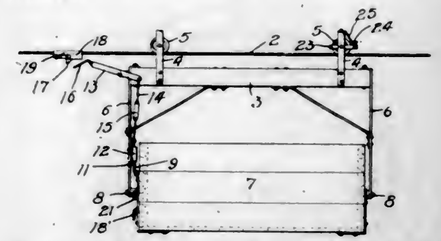
2. The method of making a bi-focal lens which consists in grinding and polishing glass to form a main or major lens having an auxiliary or secondary lens surface thereon, fusing strass of a composition more easily melted than glass to such auxiliary surface, said strass being in any natural state or condition of form without being ground or fitted to the surface of the lens and finally grinding and polishing the same.

3. The method of making a bi-focal lens having a major portion and a minor or auxiliary lens portion of any desired focal length, which consists in melting a vitreous material more readily fusible than glass, adding a compound to change the index of refraction thereof, and finally flowing such material into said minor lens portion fusing the material to an auxiliary lens surface upon the face of the major lens.

4. The method of making a bi-focal lens of any predetermined focal lengths which consists in melting strass composition, adding a varying percentage of white lead, and finally fusing the material to an auxiliary lens surface upon the face of any desired main or major lens.

5. The method of making a bi-focal lens which consists in forming a ground and polished lens with an auxiliary surface thereon, of a comparatively refractory material, and fusing and welding a more fusible material to such auxiliary surface.

869,939. LITTER-CARRIER. MARSHALL G. SHUMWAY, Farmington, Minn. Filed Dec. 7, 1906. Serial No. 346,792.



1. The combination, with an elevated cable, of a carrier suspended thereon, a receptacle pivotally supported in said carrier and adapted to swing on its pivots to discharge its load, means for locking said receptacle in position to receive its load, and means whereby said receptacle may be automatically locked in its inverted or dumping position.

2. The combination, with an elevated cable, and a carrier adapted to travel thereon, of a receptacle pivotally supported in said carrier, a plate pivoted at one end on the end of said carrier and having an adjustable connection therewith at its other end, said plate having a notch in its edge, and a locking device arranged to enter said notch and lock said receptacle in an inverted position when said plate is adjusted in a predetermined position, substantially as described.

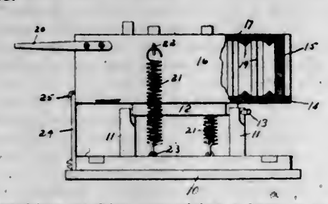
3. The combination, with an elevated cable, of a carrier having a pivoted receptacle and brackets having carrying wheels mounted therein and adapted to travel on said cable, a loop mounted in one of said brackets and inclosing one of said wheels and a flexible means connecting the ends of said loop and extending transversely over said cable and adapted to form a brake to prevent backward movement of said carrier, substantially as described.

4. An elevated carrier comprising a carrier frame, a dump box, a curved keeper arranged at an end thereof, means adjustably securing said keeper, and a latch mechanism.

5. The combination, with an elevated way, of a carrier suspended thereon, a receptacle pivotally supported in

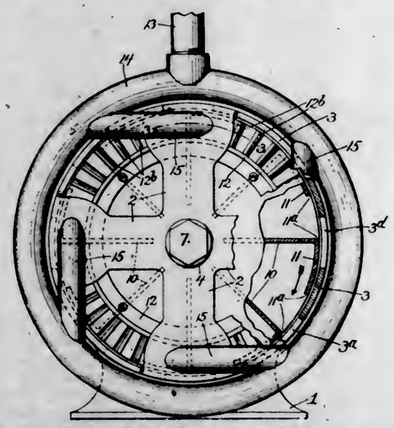
said carrier and adapted to swing on its pivots to discharge its load, and means whereby said receptacle may be automatically locked in its inverted or dumped position.

869,940. WASHING-MACHINE. GEORGE SIEWERT, Brooklyn, Iowa. Filed Apr. 18, 1906. Serial No. 312,363.



In a washing machine comprising a base, a rock shaft supported upon the base, a washing machine body of oblong rectangular form fixed to the rock shaft, with its sides arranged at an angle of approximately 45 degrees relative to the rock shaft, counter-balancing springs fixed to the base and to the body portion substantially at right angles to the rock shaft, and an operating handle fixed to one of the corners of the machine body farthest removed from the ends of the rock shaft.

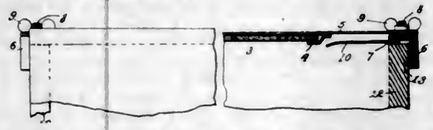
869,941. AUTOMOBILE-ALARM. JOHN K. STEWART, Chicago, Ill. Filed May 24, 1906. Serial No. 318,465.



1. An alarm-sounding device for a fluid-motor-propelled vehicle, comprising a siren wheel and its case adapted to be sounded by the air drawn into the siren wheel by its own rotation and having peripheral apertures for the discharge of the air to produce the sound; a fluid-operated motor element rigid with such siren wheel independent of the sound-producing device of the latter and having its passages non-communicating with the air passages of the siren wheel, and fluid-jet nozzles mounted on the siren-wheel case for directing jets against the motor element.

2. An alarm device for a fluid-motor-propelled vehicle comprising a siren wheel and its case, the siren wheel and case being open at the center of one side for drawing air into the siren wheel by its own rotation and having peripheral apertures for discharge of the air to cause the sound; a fluid-operated motor mounted upon the back or closed side of the siren wheel without communication with the air passages of the latter, and having water-receiving pockets opening away from said closed side of the wheel and toward the closed side of the case, and fluid-jet nozzles mounted on the case for directing jets into the motor-element pockets, the case having peripheral apertures for exhaust of the motive fluid through the pockets.

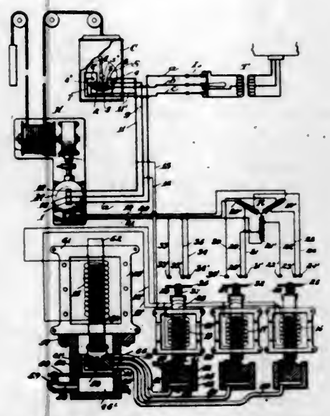
869,942. WALL-SECTION FOR DISPENSING-BOXES. LARKIN STOWE, Pleasant View, Ky. Filed July 31, 1905. Serial No. 271,890.



1. A device of the nature described, said device comprising a wall-section plate, 1, having slots, 5, adjustable jaws adjacent the ends of said plate and guided by said slots, and a tongue extending over each of said slots, substantially as described.

2. A device of the nature described, said device comprising a wall-section plate, 1, having slots, 5, a jaw adjacent each of said slots, a screw-threaded stud rising from said jaw through said slot, a nut applied to said stud, and a tongue projecting from each of said jaws over the adjacent slot, substantially as described.

869,943. ALTERNATING-CURRENT MOTOR-CONTROLLER. AUGUST SUNDH, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 18, 1905. Serial No. 292,123.



1. The combination with a plurality of electro-magnets, of means for simultaneously energizing said electro-magnets, and means dependent upon fluid-suction for effecting the successive operation of said electro-magnets.

2. The combination with a series of electro-magnets, of motor-accelerating apparatus controlled thereby, and means electricaly independent of said electro-magnets and dependent upon fluid-suction to effect the successive operation of said electro-magnets when the latter are energized.

3. The combination with a series of electro-magnets, of motor accelerating apparatus controlled thereby, and mechanically inter-connected mechanical means dependent upon fluid suction to control the successive operation of said electro-magnets when the latter are energized.

4. In motor-controlling apparatus, the combination with an opposition element, of a normally open switch, an electro-responsive device for operating said switch, means dependent upon fluid-suctional apparatus for preventing said device from closing said switch, and releasing mechanism for said means to effect the closing of said switch.

5. In motor-controlling apparatus, the combination with an opposition element connected to the motor, and means comprising fixed elements and movable elements and dependent upon formation of partial vacua for varying said opposition element to control the acceleration of said motor.

6. In motor-controlling apparatus, the combination of sectional starting resistance connected to the motor, electro-responsive apparatus tending to cut out the entire starting resistance simultaneously, and fluid-suctional means for retarding and releasing said electro-responsive apparatus to effect a gradual acceleration of the motor.

7. In motor-controlling apparatus, sectional starting resistance connected to the motor, one or more switches for controlling said resistance, electro-magnets for operating said switches tending to close the same when receiving current, and means dependent upon partial vacua to restrain the electro-magnets from closing the switches and to release them successively to effect a gradual acceleration of the motor.

8. In motor-controlling apparatus, the combination with a starting resistance, of one or more electromagnetic switches for controlling said resistance, suctional dash-pots each having one member fixed co-acting with said switches, and means for controlling said dash-pots to effect a successive actuation of said switches.

9. In alternating-current motor-controlling apparatus, the combination with an opposition element connected to the rotor of the motor, of one or more electromagents connected to the mains leading to the stator of the motor, one or more switches operated by said electromagnets to control said opposition element, and fluid suctional apparatus for controlling said electromagnets and switches.

10. In alternating-current motor-controlling apparatus, the combination with a sectional opposition element in circuit with the rotor windings, of one or more single-phase electromagnets connected to the primary, switches operated by said electromagnets to cut out said opposition element step by step to effect the gradual acceleration of said motor, and fluid suctional apparatus for effecting a successive actuation of said switches.

11. In motor-controlling apparatus, the combination with a starting resistance, of a series of auxiliary electromagnets, switches operated by said electromagnets for controlling said resistance, a dash-pot connected to each electromagnet for preventing the same from closing the switch operated thereby, a main electromagnet, and means operated by said main electromagnet for controlling said dash-pots to effect a successive releasing of said series of electromagnets.

12. In motor-controlling apparatus, the combination with a main electromagnet, of a series of auxiliary electromagnets, a plurality of switches operated by said electromagnets, fluid suctional dash-pots for preventing said electromagnets from closing their switches, a sectional starting resistance connected to the motor, and means operated by said main electromagnet for controlling said dash-pots to effect a releasing of said electromagnets and the closing of said switches to cut out said resistance step by step to gradually accelerate said motor.

13. In motor-controlling apparatus, the combination with a starting resistance, of a switch for controlling said resistance, a main electromagnet, an auxiliary electromagnet for operating said switch, a fluid suctional dash-pot connected to said auxiliary electromagnet to prevent such switch from being closed when the auxiliary electromagnet is energized, an additional fluid suctional dash-pot connected to said main electromagnet, and means connecting said dash-pots for effecting a release of the auxiliary electromagnet to close its switch in a predetermined time after the main electromagnet has been energized.

14. In motor-controlling apparatus, the combination with a sectional starting resistance, of a plurality of switches for controlling said resistance, a plurality of electromagnets for operating said switches, a fluid suctional dash-pot connected to each of said electromagnets to prevent the same from closing its switch when said electromagnet is energized, an additional electromagnet, a fluid suctional apparatus operated by said additional electromagnet for successively releasing said first-named electromagnets to effect a step by step cutting out of the starting resistance and the gradual acceleration of the motor speed.

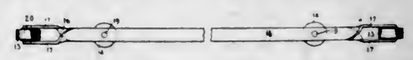
15. In motor-controlling apparatus, the combination with a starting resistance, of a plurality of switches for controlling said resistance, a plurality of electromagnets for operating said switches, a fluid suctional dash-pot connected to each of said electromagnets, an additional fluid suctional dash-pot connected to said additional electromagnet, and means establishing communication between said first-named dash-pot and said additional dash-pot.

16. In motor-controlling apparatus, the combination with a sectional starting resistance, of electric switches for controlling said resistance, a main electromagnet, auxiliary electromagnets for operating said switches, a plurality of cups or receptacles, means establishing communication between said first-named cups and said additional cup, and a piston in said additional cup having a passage therethrough to effect a successive actuation of said switches when the main electromagnet is energized.

17. In motor-controlling apparatus, the combination of a sectional starting opposition element connected to the rotor of the motor, of single-phase electromagnets connected to the primary of the motor, switches operated by said electromagnets, fluid suctional dash-pots to prevent the closing of said switches when said electromagnets are energized, an additional single-phase electromagnet, and fluid suctional apparatus operated by said additional electromagnet for effecting a successive releasing of the pistons of said first-named dash-pots and the successive closing of said switches to gradually accelerate said motor.

18. In an elevator, the combination with an induction motor, means for reversing said motor from the car, starting resistance connected to the rotor of said motor, a main electromagnet and a series of auxiliary electromagnets connected in a single-phase circuit leading to the mains supplying current to the motor, switches operated by said auxiliary electromagnets for controlling said resistance, and fluid suctional apparatus operated by said main and auxiliary electromagnets for effecting a successive closing of said switches to gradually accelerate the speed of said motor.

869,944. TYPE-WRITING MACHINE. CHARLES A. THISTLETHWAITE, Ilion, N. Y., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y., a Corporation of New York. Filed July 9, 1907. Serial No. 382,943.



1. An anti-friction roller separator comprising two plates, each plate being twisted so that the plane of one portion of each plate is substantially at right angles to the plane of another portion thereof, and anti-friction rollers between said plates.

2. An anti-friction roller separator comprising two plates, each plate being twisted so that the plane of one portion of each plate is substantially at right angles to the plane of another portion thereof, anti-friction rollers between said plates, and pivots for said rollers, said pivots extending between and uniting said plates.

3. An anti-friction roller separator comprising two plates, each plate being twisted so that the plane of one portion of each plate is substantially at right angles to that of another portion thereof, anti-friction rollers received between said plates, and pivots for said rollers, certain of said pivots extending at substantially right angles to others and conecting the said plates.

4. An anti-friction roller separator comprising two plates, each plate being twisted at two points in its length so that the plane of the plate at one portion of its length is substantially at right angles to the plane of the plate at another portion of its length, said plates being separated and parallel at said portions thereof which are at right angles to each other, and anti-friction rollers between said plates at the parts thereof which are parallel.

5. An anti-friction roller separator comprising two plates, each plate being twisted at two points in its length so that the plane of the plate at one portion of its length is substantially at right angles to the plane of the plate at another portion of its length, said plates crossing at the points of the twists therein and being separated and parallel at other portions, anti-friction rollers between said plates at the parts thereof which are parallel, and pivots

for said rollers, said pivots being in the form of rivets which unite the plates.

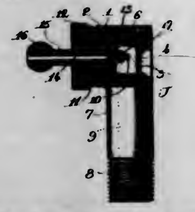
6. An anti-friction roller separator comprising two plates, each plate being twisted at two points in its length so that the plane of the plate at the central portion thereof is substantially at right angles to the plane of the plate at the ends thereof, said plates crossing at the points of the twists therein and being separated and parallel at the center and ends thereof, crossed anti-friction rollers between said plates at the parts thereof which are parallel, and pivots for said rollers, said pivots being in the form of rivets which extend at substantially right angles to one another and unite the plates.

7. An anti-friction roller separator comprising two sheet metal plates each plate being twisted at two points in the length thereof, so that the ends of each plate are in one plane and the plane of the central portion is at substantially right angles to the plane of the ends, said plates crossing at the points of the twists therein, and anti-friction rollers between said plates.

8. An anti-friction roller separator comprising two sheet metal plates each plate being twisted at two points in the length thereof, so that the ends of each plate are in one plane and the plane of the central portion is at substantially right angles to the plane of the ends, said plates crossing at the points of the twists therein, the ends of the plates when combined being in parallel planes and the central portions of the plates being in parallel planes at substantially right angles to the planes of the ends, crossed anti-friction rollers located between said plates at both sides of the twists therein, and crossed pivots for said anti-friction rollers, said pivots securing said plates together.

9. An anti-friction roller separator comprising two sheet metal plates each twisted so that the plane of one portion thereof is at substantially right angles to the plane of another portion and substantially coincident with an edge of said other portion, crossed rollers between said plates, and means for securing said plates together, the construction and arrangement being such that a line extending longitudinally and centrally of the separator will pass centrally through the axes of all the rollers.

869,945. HUMIDIFYING APPARATUS. ALBERT W. THOMPSON, Manchester, N. H. Filed Aug. 13, 1907. Serial No. 388,328.



1. In humidifying apparatus, a head having a circular chamber provided with a tangential inlet for the admission of fluid under pressure, and an axial outlet at one end of the chamber, a water inlet member detachably connected with the head and closing the other end of the chamber, said member having a discharge nozzle extended into the chamber and terminating opposite and adjacent its outlet, and a tubular support integral with the head and communicating with the inlet of the chamber.

2. In humidifying apparatus, a head having a circular chamber provided at one end with an outlet, a tubular support for the head adapted to be connected with a supply of fluid under pressure and opening into the chamber tangentially thereto, combined with a water inlet member adjustably mounted on the head and closing the end of the chamber opposite its outlet end, a discharge nozzle on said member extending axially into the chamber, and means to connect the inlet member with a water supply.

3. In humidifying apparatus, a head having a circular chamber provided with a tangential inlet and internally threaded at one end, the opposite, closed end having a central outlet opening, means to connect the inlet with fluid under pressure, a centrally apertured plug adapted to be screwed into the threaded end of and closing the chamber, a discharge nozzle extending from said plug axially into the chamber, and an extension on the outer end of the plug adapted to be connected with a water supply.

4. In humidifying apparatus, a head having a circular chamber provided with a tangential inlet for the admission of fluid under pressure, and an axial outlet at one end of the chamber, a water inlet member closing the other end of the chamber and provided with a discharge nozzle extended axially into the chamber, means to adjust the nozzle toward and from the outlet of the chamber, said inlet member being adapted for connection to a water supply, and a tubular support for the head, communicating with the inlet of the chamber.

5. In humidifying apparatus, a circular closed chamber having an outlet at one end and an inlet for admission tangentially thereto of fluid under pressure, and means to introduce water into the chamber axially thereof, the centrifugal force of the fluid under pressure creating a vacuum in the chamber to draw water thereinto while the energy of said fluid is utilized in vaporizing the water.

6. In humidifying apparatus, a closed chamber having an outlet at one end, means to introduce a vaporizing fluid under pressure to said chamber and to effect rotary motion thereof in the chamber to create a vacuum, and means to introduce a liquid at atmospheric pressure into the chamber opposite its outlet, the energy of the fluid under pressure vaporizing the liquid and discharging the same as a vapor jet from the outlet of the chamber.

7. In humidifying apparatus, a head having a closed circular chamber provided with a central outlet at one end, a tubular support integral with the head and communicating tangentially with the chamber, means to connect the support with a supply of fluid under pressure, a water inlet member mounted on the head and having a discharge nozzle extended into and coaxial with the chamber, and means on the exterior of said inlet member to connect the same with a water supply.

8. In humidifying apparatus, a head having a circular chamber provided with a tangential inlet for the admission of fluid under pressure, and an axial outlet at one end of the chamber, a water inlet member mounted on the head and having a discharge nozzle extended into and coaxial with said chamber, and an open chamber surrounding the nozzle and separated from the chamber in the head.

9. In humidifying apparatus, a head having a circular chamber provided with a tangential inlet for the admission of fluid under pressure, and an axial outlet at one end of the chamber, combined with a two-part water inlet member comprising a tubular closure for one end of the chamber in the head, extended into said chamber and having a conical, apertured tip, and an inner member secured to the closure and provided with a water discharge nozzle extending into and against the inner wall of the apertured tip of the closure, the nozzle opening registering with the aperture, to form an air chamber between the closure and the nozzle, and external means on the latter to connect the same with a water supply, said air chamber being in continuous communication with the external air.

10. In humidifying apparatus, a supply pipe for fluid under pressure, a series of vaporizers mounted thereon, each having a closed chamber provided with an outlet, and with a tangential inlet communicating with the supply pipe, and a water inlet member communicating axially with the chamber, a water supply pipe having a series of upright nipples, a controlling valve for each nipple, and a connection between each nipple and the water inlet member of an adjacent vaporizer, the water in the supply pipe being under normal atmospheric pressure.

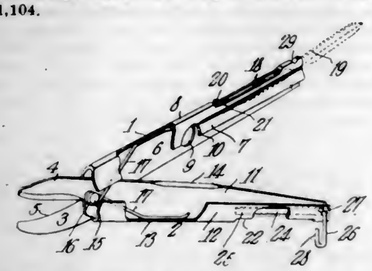
11. In humidifying apparatus, a series of vaporizers each having a closed chamber provided with an outlet and with a tangential inlet, and a water inlet member communicating axially with the chamber, means to supply fluid under pressure to the said tangential inlets, a water supply pipe having a series of upright nipples in which water is maintained at a constant level, and a connection between each nipple and the water inlet member of an adjacent vaporizer, the water in the supply pipe being under normal atmospheric pressure.

12. In humidifying apparatus, a series of vaporizers each having a closed chamber provided with an outlet and with a tangential inlet, and a water inlet member communicating axially with the chamber, means to supply fluid under pressure to the said tangential inlets, and means to supply water under normal atmospheric pressure to the water inlet members of the several vaporizers.

13. In humidifying apparatus, a series of vaporizers each having a closed chamber provided with an outlet and with a tangential inlet, and a water inlet member communicating axially with the chamber, means to supply fluid under pressure to the said tangential inlets, an upright nipple connected with the water inlet member of each vaporizer, and means to supply water at normal atmospheric pressure to the several nipples, the water being maintained at a constant level in the nipples.

14. In a humidifying apparatus, a series of vaporizers, each having a closed chamber provided with an outlet and with a tangential inlet, and means to supply fluid under pressure to said inlet, and with a water inlet member communicating axially with the chamber from below, and a water supply pipe communicating with the said water inlets, the water in the supply pipes being maintained at such pressure that the normal level of the water therein is below the level of the discharge orifices of the vaporizers when not in operation.

869,946. MANICURE IMPLEMENT. ABRAHAM L. TOLMAN, Orange, Mass. Filed Apr. 30, 1907. Serial No. 371,104.



1. A pair of shears or scissors comprising suitable handles, cutting blades formed thereon, a pivotal connection between the blades, and a spring surrounding the pivot and tending to maintain the blades in operative cutting relation, the said spring having extensions engaging the handles and tending normally to open the cutting blades.

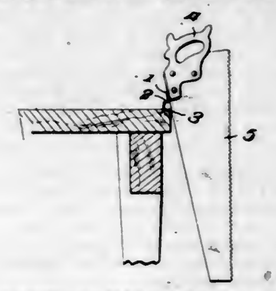
2. A pair of shears or scissors comprising hollow handles, cutter blades extending therefrom, a pivotal connection between the handles, and a spring coacting with the pivot to maintain the blades in cutting relation one to the other and having extensions housed in said hollow handles and tending to separate the handles to open the blades.

3. A pair of shears or scissors comprising hollow handles, cutter blades formed on one end thereof, a pivotal conection for the handles, an abrading tool immovably housed in one of the hollow handles and having its cutting edge exposed through a slot therein, and a knife blade housed in the other handle and constructed to be projected from the end thereof and provided with manipulating means extending through a slot formed in the said handle.

4. A pair of shears or scissors comprising sheet metal handles each composed of a single piece bent over to form two sides joined together along one edge and each provided with a cutting blade, a pivotal connection for the handles, and a knife blade movable longitudinally into and out of one of the handles and held therein by the compression of the sides of the handle one toward the other.

5. A manicure implement having a handle formed of one piece bent on itself and slotted to constitute two side members, a file between the side members and having its cutting edge below the edges of the slot, and fastening means passing through the side members and file for immovably holding the latter in place.

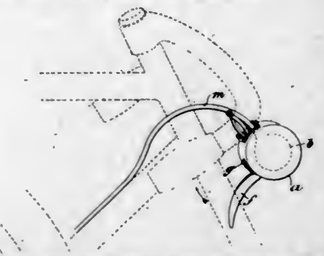
869,947. SAW ATTACHMENT. FAY TUPPER, Kingsburg, Cal. Filed Mar. 20, 1907. Serial No. 363,513.



1. An attachment for saws comprising a body having a concaved inner surface, apertures therein to receive fastening means, an extension at the lower end of said body and at right angles thereto and a tapered point depending from the outer end of said extension adapted to engage an object and support a saw.

2. An attachment for saws comprising a body having a concaved inner surface, a series of apertures through said body in substantially parallel lines, an extension at the lower end of said body and at right angles thereto and a tapered point depending downwardly from the outer end of said extension at an angle of a little more than 45 degrees, adapted to engage an object and support a saw.

869,948. BRAKE FOR CYCLES, MOTOR-CARS, AND THE LIKE. ALBERT R. TURNER, London, England. Filed Oct. 25, 1906. Serial No. 340,526.

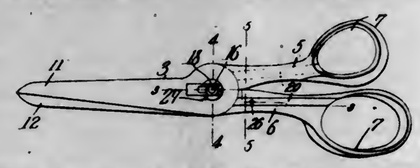


1. A brake for cycles and other vehicles consisting of a transmission tube containing fluid, an expansion bulb and a compressor bulb connected to the respective extremities of said transmission tube, means for compressing said compressor bulb consisting of a compressor casing within which said compressor bulb is secured, helical projections on the inner periphery of said compressor casing and a compressor plate adapted on rotation to ride on said projections brake blocks, and means for transmitting pressure from the expansion bulb to the brake blocks substantially as described.

2. A brake for cycles and the like consisting of a transmission tube containing fluid an expansion bulb and a compressor bulb attached to the respective extremities of said transmission tube means for compressing said compressor bulb consisting of a compressor casing within which said compressor bulb is secured, helical projections on the inner periphery of said compressor casing, a brake handle, a plate

integral with said brake handle having projections adapted to ride on said projections on the rotation of said plate, brake blocks, and means for transmitting pressure from the expansion bulb to said brake blocks consisting of a plate and two levers fulcrumed upon a fixed part of the frame between which said expansion bulb is secured and to which said brake blocks are attached.

869,949. SCISSORS. ANTON WESTERDAHL, Carney, Mich. Filed May 24, 1907. Serial No. 375,508.



1. An implement of the class described including operating handles, cutting blades pivotally connected with the operating handles and provided with spaced locking recesses, said blades being adjustable at an angle with respect to the handles and locking members carried by the handles and adapted to engage the recesses for locking the cutting blades in adjusted position.

2. An implement of the class described including operating handles, cutting blades pivotally connected with the operating handles and adjustable at an angle thereto, a pin forming a pivotal connection between the cutting blades and handles, and means independent of the pivot pin for positively locking the cutting blades in adjusted position.

3. An implement of the class described including operating handles, cutting blades pivotally connected with the handles and provided with spaced locking recesses, said blades being adjustable at an angle with respect to said handles, locking members slidably mounted on the handles for locking the cutting blades in adjusted position, and a tension device disposed at the pivotal juncture of the blades and handles.

4. An implement of the class described including operating handles, cutting blades pivotally connected with the handles and provided with locking recesses, and locking members slidably mounted on the handles and adapted to engage the recesses.

5. An implement of the class described including operating handles, cutting blades pivotally connected with the operating handles and adjustable at an angle thereto, said cutting blades being pivoted with a plurality of locking recesses, and locking members carried by the operating handles and adapted to engage the recesses in the cutting blades for locking the latter in adjusted position.

6. An implement of the class described including operating handles, cutting blades pivotally connected with the operating handles and adjustable at an angle thereto, said cutting blades being provided with spaced locking recesses, spring actuated locking members slidably mounted on the handles and adapted to engage the locking recesses, a pin forming a connection between the handles and cutting blades, respectively, and a tension device engaging the pin.

7. An implement of the class described including operating handles provided with lateral enlargements having alined recesses formed therein, cutting blades pivotally mounted for lateral movement on the enlargements and provided with terminal slots for the reception of said enlargements, said cutting blades being adjustable at an angle to the operating handles, a pivot pin extending through the openings in the enlargements and engaging the cutting blades, and means for locking the cutting blades in adjusted position.

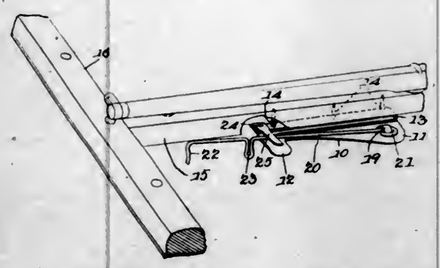
8. An implement of the class described including operating handles each provided with a reduced extension defining oppositely disposed stop-shoulders, cutting blades pivotally connected with the operating handles and having recesses formed in their pivoted ends for the reception of the reduced extensions, said cutting blades being provided with spaced locking recesses and adjustable at an angle to the operating handles, and means carried by the operating handles and adapted to engage the recesses for locking the cutting blades in adjusted position.

9. An implement of the class described including operating handles each provided with a circular enlargement defining oppositely disposed curved shoulders, cutting blades pivotally connected with the operating handles and having slots formed in the pivoted ends thereof for the reception of the circular extensions, said cutting blades being adjustable at an angle to the operating handles and provided with spaced locking recesses, and spring actuated locking members slidably mounted on the handles and adapted to engage the recesses in the cutting blades for locking the latter in adjusted position.

10. An implement of the class described including operating handles having longitudinal grooves formed therein and provided with recesses communicating with said grooves, cutting blades pivotally connected with the operating handles and adjustable laterally at an angle to said operating handles, said cutting blades being provided with spaced locking recesses, locking members slidably mounted in the grooves in the operating handles and provided with terminal locking lips adapted to engage the recesses in the cutting blades for locking the latter in adjusted position, and springs seated in the recesses in the operating handles and bearing against the locking members for normally and yieldably supporting the latter in operative position.

11. An implement of the class described including operating handles having longitudinal grooves formed therein the walls of which are dove-tailed, cutting blades pivotally connected with the handles and adjustable laterally at an angle thereto, said cutting blades being provided with spaced locking recesses, a pivot pin piercing the cutting blades and operating handles and provided with a terminal nut, a plate secured to one of the cutting blades and provided with an overhanging spring arm embracing the pin and bearing against the nut, and dove-tailed locking members slidably mounted in the grooves in the operating handles and provided with terminal lips adapted to engage the adjacent locking recesses in the cutting blades for locking the latter in adjusted position.

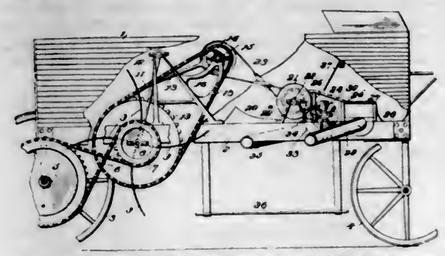
869,950. VEHICLE-SHAFT SUPPORT. CULLEN D. WHITE, Union City, Tenn. Filed Apr. 27, 1906. Serial No. 314,039.



1. A thill support comprising a plate having a pair of lateral extensions, an arm pivotally connected with one of the extensions and having its free end provided with a hook to engage a stop on a vehicle body, and a resilient arm-retaining clip secured to the plate and bridging the other extension thereby to hold the arm in inoperative position.

2. A thill support comprising a plate provided with a longitudinal depression and having a pair of lateral extensions, an arm pivotally connected with one of the extensions and having its free end provided with a hook to engage a stop on a vehicle body, and a resilient arm-retaining clip secured to the plate and bridging the other extension, whereby to hold the arm in the depression when in inoperative position.

869,951. COTTON-HARVESTER. EDWARD M. WILLIAMS, Dallas, Tex. Filed Apr. 9, 1907. Serial No. 367,134.

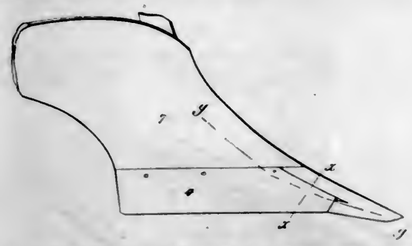


1. A cotton harvester comprising a wheeled support a series of picking forks mounted in said support, means for swinging said forks forwardly and upwardly whereby they will sweep through the growing plants, a series of vibrating stripping forks mounted in said support, means for actuating the stripping forks, ginning mechanism carried by the support and adapted to receive the cotton from the stripping forks, and means for driving the ginning mechanism.

2. A cotton harvester comprising a wheeled support, a series of picking forks mounted in said support, a revoluble shaft upon which said forks are carried, means for driving said shaft in the direction to carry the said forks forwardly and upwardly through the growing plants, a series of spring arms mounted in longitudinally spaced arrangement on the respective forks, the arms of one fork alternating with the arms of the next fork, and means for stripping the cotton from said forks.

3. A cotton harvester comprising a wheeled support, spaced picking forks, a shaft journaled in the support and extending transversely thereof, the picking forks being mounted on said shaft, a series of stripping forks suspended in the support, means for vibrating said stripping forks back and forth in the spaces between the picking forks, a shaft journaled in the support and provided with an eccentric, a pitman operatively connected at one end with said eccentric and having an operative connection with the stripping forks and an operative connection between the means for driving the picking forks and said eccentric shaft.

869,952. PLOW. JOHN WILLIG, Harris, Minn. Filed Mar. 14, 1907. Serial No. 362,331.



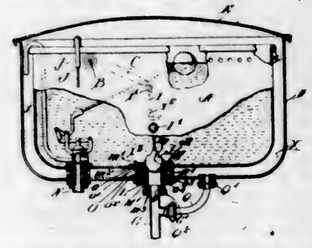
1. In a plow, the combination of a cast point, comprising a wing and longitudinal flange at one side of the wing forming part of a land-slide, said point on its upper surface having a longitudinal depression, a share having its inner end secured in said longitudinal depression of said point, with a frog-piece fitting under the point and thus fastened flange to flange and wing to wing of said frog-piece and point and connected to mold-board.

2. In a plow, the combination of a point having a longitudinal depression and an approximately transverse depression, and a wear piece seated in said transverse depression of the point and overlapping the contiguous ends of the share and mold-board at their juncture with said wear point.

3. In a plow, the combination with the point comprising a wing and a longitudinal flange forming part of a land-side, of a frog comprising a wing, a flange and a bar, the wing and flange of the frog-piece fitting within the angle formed between the wing and flange of the point and the bar extending in the rear of the said longitudinal flange, protecting means applied to the outer side of the said bar and flush with the aforesaid longitudinal flange, and a sole piece underlapping the said bar and its protecting means and having its outer edge about flush with the outer side of the aforesaid protecting means.

4. In a plow, the combination with the point comprising a wing and a longitudinal flange forming part of a land-side, of a frog comprising a wing, a flange and a bar, the wing and flange of the frog-piece fitting within the angle formed between the wing and flange of the point and the bar extending in the rear of said longitudinal flange, plates attached to the outer side of the said bar and flush with the aforesaid longitudinal flange, a sole piece underlapping the said bar and plates attached thereto, and an angle iron attached to the inner side of the said bar and having a wing extended over the inner longitudinal edge portion of the said sole piece.

869,953. WATER-TANK. CHARLES WILLMS, Baltimore, Md. Filed Sept. 5, 1906. Serial No. 333,307.



1. The combination of a water tank having a discharge opening in its bottom, a condensation collector associated with the tank and having an opening in line with the discharge opening thereof, a valve-seat having its valve-receiving portion extending below the bottom of the tank and having a laterally projecting flange at its upper end surrounding the opening in the tank a nut for clamping the valve seat to the bottom of the tank, said valve-seat being formed with a threaded projection extending through the opening in the condensation collector, a nut for clamping said projection to the condensation collector, a flush-pipe extending into said projection and means for detachably coupling the flush-pipe thereto.

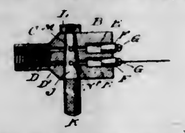
2. The combination of a water tank having a discharge opening in its bottom, a condensation collector associated with the tank and having an opening in line with the discharge opening thereof, a drawn metal valve-seat applied to the tank at its discharge opening, having a tapered or inclined valve-receiving portion extending below the bottom of the tank formed with a flange surrounding the discharge opening of the tank and with a threaded projection extending through the opening in the condensation collector, the lower end of which is formed with an inwardly projecting flange a nut between the condensation collector and the tank for clamping the valve seat to the tank, a nut outside the condensation collector for clamping the valve seat to the condensation collector, a flush-pipe and means for detachably connecting the lower end of the valve seat with the flush pipe.

3. The combination of a water tank, a condensation collector surrounding it and having an air space between its sides and bottom and the sides and bottom of the tank and which is provided with an opening or fenestrum in its back wall communicating with said air space, a cover closing the top of the condensation collector and buffers on the back of the condensation collector surrounding the fenestrum for holding the collector away from the wall

to which it is applied to permit air to freely pass to or out of the air space surrounding the tank.

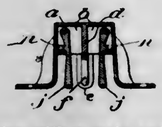
4. The combination of a water-containing tank, a condensation collector associated therewith and having an air space between its bottom and the bottom of the tank and also around the tank and which is provided with an opening or fenestrum in its back, a cover closing the top of the condensation collector, means on the back of the condensation collector for holding it away from the wall to which it is applied, a flush pipe connected with the water-containing tank, and a branch pipe connecting the flush pipe with the condensation collector, the arrangement being such that air will be made to pass from the flush pipe into the condensation collector and thence outwards through the fenestrum.

869,954. GAS-BURNER. LOUIS R. YANSKY, Chicago, Ill. Filed Apr. 25, 1906. Serial No. 313,632.



In a gas burner of the kind described the combination with a main body adapted to be attached to an ordinary gas fixture, two parallel gasways extending through said body, a barrel adapted for a plug extending through said body and intersecting said gas ways at right angles, of a plug revoluble secured in said barrel, a plurality of radial gas ways in said plug adapted to register with one and both of said gas ways in said body as said plug is revolved, and a pair of tips supported in a parallel position to each other in said gas ways in said body, and so adjusted that the plane of the flames therefrom will be at right angles to the plane of said gas ways and at right angles to the length of said plug, said gas ways and tips so spaced from each other that the two flames will merge into one.

869,955. SWITCH FOR TROLLEY-WIRES. FRANK M. ZIMMERMAN, Aurora, Ill. Filed Oct. 23, 1905. Serial No. 283,897.



1. The combination with a main and divergent trolley-wires and switch-blades suspended and movable, laterally, from end to end and in same direction at their lower edges, of a trolley-wheel to close one of said blades to the main wire in going in either direction to said switch.

2. The combination with a main and divergent trolley-wires and switch-blades suspended and movable, laterally, from end to end and in same direction at their lower edges, of a trolley-wheel to converge one of said blades to said main wire and to, simultaneously, diverge the opposite one of said blades from said main wire while going in either direction to said switch.

3. The combination with a main and divergent trolley wires, of switch-blades on fixed points, said blades normally apart and of largest motion at their point-ends, and vibratable transversely to their vertical plane of direction from said suspensions.

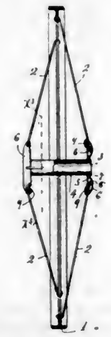
4. The combination with a main and divergent trolley-wires, of switch-blades on fixed suspensions, and vibratable therefrom, transversely to their vertical plane of direction, of largest motion at their point-ends, each, alternately, touching the side of the main wire.

5. The combination with a cap, main and divergent wires thereto, switch-blades, suspended from said cap and movable, laterally, from end to end and in same direction at their lower edges, of a trolley-wheel to close one of said blades to the main wire in going in either direction to said switch.

6. The combination with a main and divergent trolley-wires, of switch-blades to said several wires, on fixed suspensions, normally apart, and of largest motion at their point ends, vibratable towards each other, and automatic means to connect either blade with the main and a divergent trolley-wire.

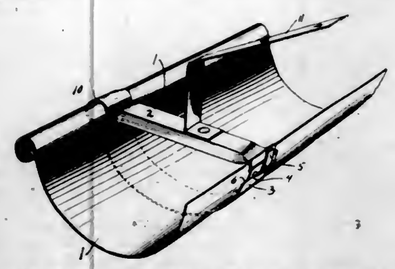
7. The combination with a main and divergent trolley-wires, and switch-blades, normally open, of a trolley-wheel with but a single flange on each side thereof to close one of said blades with one of its flanges, in going in either direction to said switches.

869,956. METALLIC WHEEL. WILLIAM F. BAILEY, Minneapolis, Minn. Filed Dec. 10, 1906. Serial No. 347,107.



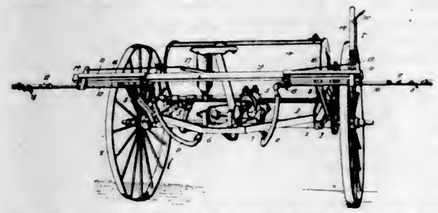
In a wheel, the combination with a suitable rim and approximately V-shaped spoke forming rods attached to said rim at their outer ends, of a hub made up of the outer spacing sleeve 4, the inner bearing sleeve 3 having flanged ends 7, and the clamping plates 5—6 arranged in pairs and clamped on the ends of said sleeve 3 between the flanged ends 7 thereof and the abutting ends of said spacing sleeve, said clamping plates 5 having laterally pressed hooks 8 that engage the bowed inner portions of said spoke forming rods, and the said clamping plates 6 coöperating with said plates 5 and hooks 8 to hold the inner portions of said rods, and provided with lip extensions 9 bent over the said clamping plates 5 between the spokes, substantially as described.

869,957. EAVES-TROUGH HANGER. WATSON BATDORFF, Canton, Ohio. Filed Nov. 9, 1905. Serial No. 286,591.



In an eaves trough hanger, the combination of bridge and strap portions formed integral and adapted to be connected to an eaves trough, the strap portion of the hanger provided with a slot and a bend, said bend in the strap portion located between the top and bottom walls of the slot, and the upper portion of the strap above the slot extended outward and away from contact with the trough, and a tang formed integral with the bridge portion and adapted to be placed between the trough and the upward extended portion of the strap and through the slot in the strap portion of the hanger and the tang bent upward upon the outer edge of the portion of the strap above the slot, and a hanger secured to the bridge portion, substantially as and for the purpose specified.

869,958. PLANT-SPRAYING MACHINE. FRANK BATEMAN, Grenloch, and HILLES C. JONES, Allentown, N. J., assignors to Bateman Manufacturing Company, Grenloch, N. J., a Corporation of New Jersey. Filed May 8, 1905. Serial No. 259,375.

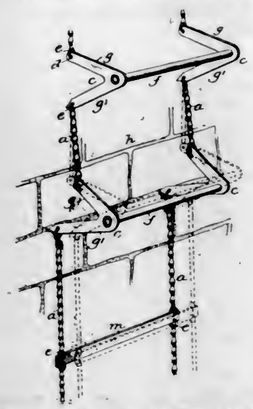


1. The combination in a spraying machine, of two relatively long, inflexible and longitudinally movable spray pipes of constant length, a supporting frame therefor, a lever, a link connecting one arm thereof with one pipe, an operating handle connected to the other pipe, and a second link connecting said lever to said handle, with means for supplying the pipes with spraying liquid in their different positions of adjustment, substantially as specified.

2. The combination in a spraying machine, of a pair of relatively long, inflexible spray pipes of constant length, a supporting frame therefor, means for effecting longitudinal movement of one of said spray pipes on said supporting frame, and connections between said spray pipe and the opposite pipe, whereby corresponding movement of the latter is effected, substantially as specified.

3. The combination in a spraying machine, of a wheeled frame, a frame pivotally mounted thereon and susceptible of being raised and lowered in respect thereto, a relatively long, inflexible spray pipe of constant length supported upon said swinging frame, and means for moving said pipe longitudinally relatively to the swinging frame, substantially as specified.

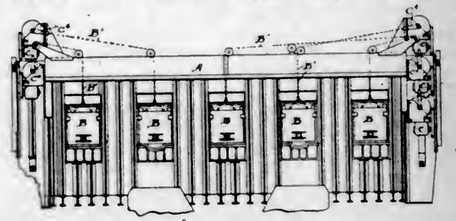
869,959. FIRE-ESCAPE. FREDERIC J. BRYANT, New York, N. Y. Filed Dec. 20, 1905. Serial No. 292,526.



1. A fire-escape made up of sections, each section consisting of a rung; a pair of rung-holders provided with two arms bent at an angle to each other, the ends of said rung being supported and held from the wall of the building by said rung-holders; and flexible suspensory members secured to the ends of said rung-holders and permitting the rotation thereof under the weight of the user; the angle between the arms of said rung-holder being such that the lower arm assumes a position substantially at right angles to the wall of the building under the weight of the user.

2. A fire-escape made up of sections, each section consisting of a rung; a pair of rung-holders provided with two arms bent at an angle to each other, the ends of said rung being supported and held from the wall of the building by said rung-holders; and flexible suspensory members secured to the ends of said rung-holders and permitting the rotation thereof under the weight of the user; the angle between the arms of said rung-holder being such that the lower arm assumes a position substantially at right angles to the wall of the building under the weight of the user and the end of said lower arm being pointed to grip the wall against which it is pressed.

869,960. METALLURGICAL FURNACE. JOHN C. CROMWELL, Cleveland, Ohio, assignor to The Garrett-Cromwell Engineering Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 13, 1906. Serial No. 334,401.



1. A furnace having a reciprocating door and a motor for moving the door carried by the furnace, a member adapted to be successively and indefinitely rotated by said motor and a connection between the door and the said member and pivotally secured to the latter.

2. A movable furnace having a reciprocating door, and a motor carried by the furnace but adapted to have flexible connection with its source of power, a member adapted to be successively and indefinitely rotated by the motor, a flexible connection between the door and the said member and pivotally connected to the latter.

3. Furnace apparatus comprising a reciprocating closure and a motor for moving the closure, a member adapted to be successively rotated in a constant direction by said motor, and a connection between the closure and said member and pivotally connected to the latter.

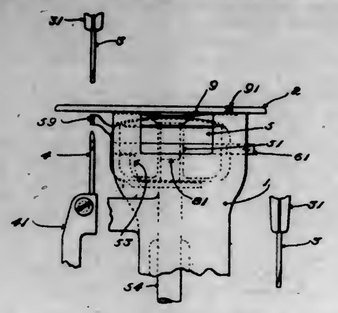
4. Furnace apparatus comprising a reciprocating closure and a motor for moving the closure, a rotatable member connected to said motor and adapted to be given thereby a plurality of rotations in the same direction, a connection pivotally secured to said rotating member and also secured to said closure, said rotating member being mounted to allow a full reciprocation of the closure connection upon each full rotation of said member.

869,961. LOCK-STITCH SEWING-MACHINE. HENRY H. CUMMINGS, Malden, Mass., assignor to Union Lock Stitch Company, Boston, Mass., a Corporation of Maine. Filed June 17, 1904. Serial No. 212,929.

1. In a lock-stitch sewing machine, the combination with a rotary loop-taker having a source of supply for the locking thread, of a rotatable disk with a radially-extending face thereof immediately adjacent the edge of the rim of the loop-taker, the said parts being constructed and arranged to cause the locking thread to be compressed intermittingly between the said edge and face.

2. In a lock-stitch sewing machine, the combination with a rotary shuttle, of a rotatable disk occupying a working position with a radially extending face thereof immediately adjacent the edge of the rim of the shuttle, the said parts being constructed and arranged to cause

the locking thread to be compressed intermittingly between the said face and edge as it issues between them.



3. In a lock-stitch sewing machine, the combination with a rotary loop-taker having a source of supply for the locking-thread, of a rotatable disk occupying a working position with a face thereof adjacent the edge of the rim of the loop-taker, the said edge having a clamping portion which acts in the rotation of the loop-taker to compress the locking-thread intermittingly as the said thread issues between the said edge and face.

4. In a lock-stitch sewing machine, the combination with a rotary shuttle, of a rotatable disk occupying a working position with a face thereof adjacent the edge of the rim of the shuttle, the said edge having a clamping portion which acts in the rotation of the shuttle to compress the locking-thread intermittingly as the said thread issues between the said edge and face.

5. In a lock-stitch sewing machine, in combination, a thread-container, a loop-taker rotating around said thread-container, and a rotatable disk with a radially extending face thereof immediately adjacent the edge of the rim of the loop-taker, the said loop-taker being constructed and arranged to intermittingly compress the locking thread between said edge and said face of the disk in the rotation of the loop-taker.

6. In a lock-stitch sewing machine, in combination, a thread-container from which the locking-thread extends toward the stitch-forming point in the machine, and a loop-taker rotating around the said thread-container and provided with thread-compression means acting in the direction of the length of the axis of rotation to intermittingly compress the said thread at a point between the thread-container and the stitch-forming point.

7. In a lock-stitch sewing machine, in combination, the rotary shuttle provided with an intermittingly acting shuttle-thread compressing surface which by the rotation of the shuttle is carried past the portion of shuttle-thread extending over the rim of the shuttle from the interior of the latter, and a disk which is con-axial with the shuttle and against one face of which the said portion of shuttle-thread is compressed by the said surface as the latter passes, with increase in the tension of the shuttle-thread, to thereby withstand the pull on the needle-thread in setting the stitch.

8. In a lock-stitch sewing machine, a shuttle-thread lock comprising, essentially, the rotary shuttle provided with a locking surface which by the rotation of the shuttle is carried past the portion of shuttle-thread extending over the rim of the shuttle from the supply within the latter, and an opposing disk which is con-axial with the latter and against one face of which the said portion of shuttle-thread is pinched by the said locking surface as the latter passes, one of the locking members being yielding.

9. In a lock-stitch sewing machine, the combination comprising the rotary shuttle provided with the intermittingly acting compressing surface, the opposing disk, con-axial with the shuttle and against which the said compressing surface is caused by the rotation of the shuttle to clamp the shuttle-thread, and the spring acting in connection with the said disk.

10. In a lock-stitch sewing machine, in combination, the rotary shuttle having the rim thereof provided with the swell, and a disk which is con-axial with the shuttle and against one face of which the portion of shuttle-thread extending over the rim of the shuttle from the interior of the latter is pinched by the said swell as the latter passes the said portion of thread, to thereby withstand the pull on the needle-thread in setting the stitch.

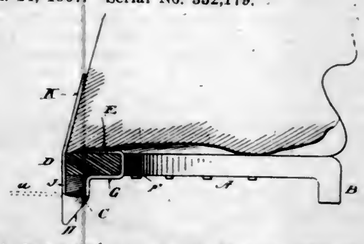
11. In a lock-stitch sewing machine, in combination, the rotary shuttle having the bobbin-chamber and having its rim provided with the swell, the bobbin contained in the said chamber and from which the thread passes between the edge of one head of the said bobbin and the rim of the shuttle, and over the latter, and a disk which is con-axial with the shuttle and against one face of which the portion of shuttle-thread passing over the shuttle-rim is pinched by the said swell as the latter passes, to thereby withstand the pull on the needle-thread in setting the stitch.

12. In a lock-stitch sewing machine, in combination, a rotary loop-taker, a rotatable disk adjacent the edge of the rim of the said loop-taker, said parts being constructed and arranged to compress the shuttle thread as the latter travels from a central source of supply between the edge of the rim of the loop-taker and the radially extending face of the disk.

13. In a lock-stitch sewing machine, the combination with a rotary loop-taker having a source of supply for the locking thread, of a rotatable disk with a radially extending face thereof immediately adjacent the edge of the rim of the loop-taker, the said loop-taker being constructed and arranged to cause the locking thread to be compressed intermittingly between the said edge and face.

14. In a lock-stitch sewing machine, the combination with a rotary shuttle, of a rotatable disk occupying a working position with a radially extending face thereof immediately adjacent the edge of the rim of the shuttle, the said shuttle being constructed and arranged to cause the locking thread to be compressed intermittingly between the said face and edge as it issues between them.

869,962. CALK. ANDREW DISTLER, Peoria, Ill. Filed Jan. 14, 1907. Serial No. 352,179.



1. A detachable calk of the character described, comprising a member having an extremity adapted to enter between the hoof and the shoe, thence extending downward behind the toe portion of said shoe, thence extending forward beneath the shoe, thence extending downward behind the toe calk, thence beneath it, thence forward and upward to inclose said toe-calk and the toe of the shoe and terminating in an upward extension adapted to lie against the hoof, substantially as described.

2. As an article of manufacture, a member having a portion extending rearward then downward, then forward and again downward and provided with an enlargement at the last-named downward portion, and having an upturned portion above the said enlargement, substantially as described and shown.

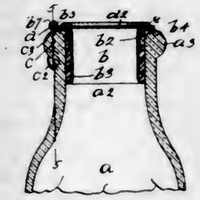
3. An article of manufacture having a horizontal portion extending rearward, thence downward, then forward to form a hook, thence extending downward and having an enlargement at and below the downward bent portion, and a horizontal forward projection, substantially as shown and for the purposes set forth.

4. A detachable calk comprising a horizontal portion, a vertical downturned portion and a horizontal portion parallel to and beneath the first, arranged to form an inclosure to engage the toe of a horse-shoe in the manner described, and having a downturned portion provided with an enlargement beneath the calk of the shoe, and an extension projecting from such an enlargement adapted to be turned up against said calk and the shoe and against the hoof, substantially as described and shown.

5. In a detachable calk, a hooked portion adapted to slidably engage the toe of a horse-shoe in the manner described, and having a downturned portion beneath the toe-calk of the shoe to inclose the same, an enlargement on said downturned portion, and a projection thereon adapted to be turned up against the said toe-calk and the toe of the shoe and against the hoof.

6. In combination with a horse-shoe, a detachable calk having a hooked portion to slidably engage the toe of the shoe and adapted to be placed thereon without removal of the shoe from the hoof, and having a portion below the shoe adapted to fit snugly around the toe-calk of the shoe, and a portion forming a part of the device and lying beneath the toe-calk for the purposes set forth, and a second portion extending upward from the first said portion adapted to lie against the shoe and its toe-calk and against the hoof.

869,963. BOTTLE-CLOSURE. PHILIP DOERSCH, Nyack, N. Y. Filed May 1, 1907. Serial No. 371,326.



1. A device of the class described, comprising a vessel, a cover therefor, lugs provided with slots mounted on said vessel, a shaft secured to said cover and rotatable in said slots, said shaft being flattened at its bearing points to permit the insertion thereof into said slots and said slots being terminated in enlarged recesses.

2. A device of the class described, comprising a vessel, a cover therefor, lugs mounted on said vessel and provided with slots terminating in enlarged recesses, a shaft in said slots and secured to said cover, said shaft being flattened to permit its insertion into said slots, and weights on said shaft below the axis thereof.

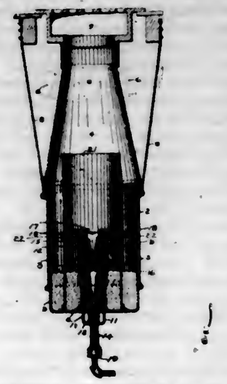
3. A device of the class described, comprising a vessel, a tubular plug in the neck thereof, lugs on said plug, a shaft rotatable in said lugs, a cover secured to said shaft and weights on said shaft below the axis thereof.

4. A device of the class described, comprising a vessel, a cover therefor, a shaft secured to said cover, lugs mounted on said vessel, said lugs serving as bearings for said shaft said lugs being recessed and said shaft being angularly formed to permit the insertion into and preventing the removal of said shaft from said lugs when in any other than one predetermined position, and means for maintaining said shaft and cover in a horizontal position when the vessel is moved out of vertical position.

5. A device of the class described, comprising a vessel, a cover therefor, a shaft secured to said cover, lugs mounted on said vessel and serving as bearings for said shaft, said lugs being recessed and said shaft angularly formed, thereby permitting the insertion into and removal from said lugs, of said shaft, when in a predetermined relative position.

869,964. BURNER FOR HOT-AIR FURNACES. JOHN EDWARDS and WILLIAM V. SHEPPARD, Allegheny, Pa. Filed Mar. 24, 1906. Serial No. 307,765.

1. In a hot air furnace, the combination of a burner consisting of a burner chamber for feeding air to the burner, a funnel and a cone located in said chamber and a gas conduit leading to the neck of the funnel; substantially as specified.



2. In a hot air furnace, the combination of a burner chamber consisting of telescoping parts, means for adjusting the parts, a burner consisting of a funnel, cone, and deflector, said funnel and cone located within the burner chamber, and a hot air chamber surrounding said burner chamber; substantially as specified.

3. In a hot air furnace, the combination of a burner chamber consisting of telescoping parts, a burner consisting of a funnel and a cone, said burner chamber feeding air to the burner, and means for adjusting the burner in the burner chamber; substantially as specified.

4. In a hot air furnace, a burner consisting of a funnel having a neck telescoping on the end of a gas conduit, an inverted cone situate within the funnel, a deflector, a burner chamber consisting of telescoping parts surrounding the burner, and means for adjusting the telescoping parts of the burner chamber; substantially as specified.

5. In a hot air furnace, the combination of a burner chamber consisting of telescoping parts, a burner within said chamber comprising a funnel and an inverted cone situate within the funnel, a deflector supported upon said cone and projecting beyond said chamber, and burner apertures in said burner chamber adjacent to the top of said funnel.

869,965. EAR-RING. FRANK E. FARNHAM, Providence, R. I. Filed July 2, 1907. Serial No. 381,924.



1. The improved ear ring herein described, consisting of the combination of a wire spring substantially U-shaped in form and provided with two looped ends; a button secured in one of said ends; a perforated disk in said button; a bead filled with a plastic material; and a screw mounted at one end in said disk and embedded at its threaded end in the filling of the bead.

2. The improved ear ring herein described, consisting of the combination of a wire spring substantially U-shaped and having at each end a circular loop, which loops are arranged opposite each other; a button mounted in one of said loops and extending inwardly; a bead mounted on said button and extending outwardly; and means for securing the bead in position upon the button.

3. The improved ear ring herein described, consisting of the combination of a wire spring substantially U-shaped and adapted to embrace an ear lobe above the lower rim of the ear and automatically to hold the ear ring in said position; a circular loop on each end of said wire, which loops are arranged opposite each other; a button mounted

in one of said loops and extending inwardly; a bead mounted on said button and extending outwardly; and means for securing the bead in position upon the button.

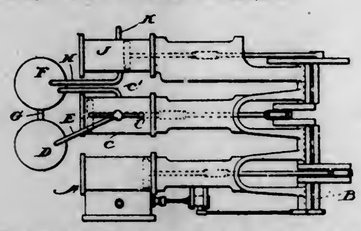
4. The improved earring herein described, consisting of the combination of a U-shaped resilient ear wire; a circular loop on one end of said ear wire; a button mounted on the other end of said ear wire opposite to said circular loop; and a bead mounted on said button.

5. The improved ear ring herein described, consisting of the combination of an ear wire; a button having a circumferentially grooved neck; a circular loop on one end of the ear wire surrounding the neck of the button in engagement with said groove thereof; and a bead mounted on said button.

6. The improved ear ring herein described, consisting of the combination of an ear wire; a button having a circumferentially grooved neck; a circular loop on one end of the ear wire surrounding the neck of the button in engagement with said groove thereof; a bead mounted on said button and in bearing contact with the circular loop and means of holding said bead in place upon the button and in contact with the circular loop.

7. The improved ear ring herein described, consisting of the combination of a U-shaped resilient ear wire; an integral circular loop upon one end of the ear wire bent transversely in a direction at a right angle to said ear wire; a button having a circumferentially grooved neck; an integral circular loop upon the opposite end of the ear wire and surrounding the neck of the button in engagement with said groove thereof, which last named circular loop is opposite to the first named circular loop; a bead having a plastic filling; and a screw whose head is supported within said button and whose threaded shank is embedded in the plastic filling of the bead, all so arranged that the pressure of the button upon the ear lobe produced by the resilience of the ear wire causes the part of the ear lobe so pressed to enter into and fill the aperture of the transversely bent circular loop.

869,966. PROCESS FOR COMPRESSING AND PURIFYING AIR. WILLARD O. FELT, New York, N. Y. Filed Apr. 9, 1906. Serial No. 310,627.



1. The process which consists in compressing a gas, and injecting glycerin in the gas while being compressed whereby the aqueous vapor and impurities contained in the gas and the heat generated by compression are absorbed by the glycerin.

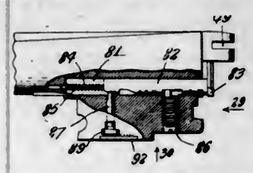
2. The process which consists in compressing air, injecting glycerin in the air during compression, exhausting the glycerin and air, separating the air and glycerin, and again injecting the glycerin into the air being compressed.

3. The process which consists in compressing air, injecting glycerin in the air during compression, exhausting the glycerin and air, separating the air and glycerin, again injecting the glycerin into the air being compressed, and utilising the separated air.

4. The process which consists in mixing a gas and glycerin together while the gas is under compression.

869,967. BREECH-LOADING GUN. ANDREW FYRBERG, Hopkinton, Mass. Filed Sept. 11, 1905. Serial No. 277,856.

1. In a gun, the combination with the frame and barrel firing mechanism, of a shell ejector, an ejector detent, a movable member having a releasing piece for the detent, and a trigger on said movable member for holding said detent in retracted position, said releasing piece being movable into the position to engage the detent.



2. In a gun, the combination with the frame and barrel firing mechanism, of a spring-pressed shell ejector, an ejector detent, a sliding bolt having a spring-pressed releasing piece for the detent, and a sliding trigger in the bolt for holding said detent in retracted position, said releasing piece being movable into position to engage the detent.

3. In a gun, the combination with the frame and barrel firing mechanism, of a shell ejector, an ejector detent, a bolt, a releasing piece movably mounted on the bolt for engaging the detent to hold it away from the ejector, a trigger mounted on the bolt for holding the releasing piece in retracted position, and stationary pins projecting into the bolt to engage the releasing piece and trigger for operating them as the bolt is reciprocated.

4. In a gun, the combination of the frame, a barrel firing mechanism, a spring-pressed shell ejector, an ejector detent, and a sliding bolt having a spring-pressed releasing piece for the ejector detent which is moved into position to be engaged when the gun is fired.

5. In a double barrel breech-loading gun, the combination of the frame, the barrels pivoted thereto, a spring-pressed shell ejector for each barrel, a detent for each shell ejector, a firing hammer for each barrel, and a sliding-bolt for each hammer, each of said sliding bolts having a catch piece and a trigger which holds the catch-piece out of the way, and which is released so that the catch-piece may be engaged by the ejector detent after the slide has been moved forward by the firing hammer.

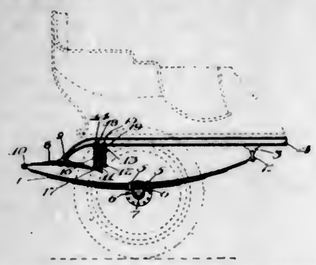
6. In a double barrel breech-loading gun, the combination of the frame, the barrels pivoted thereto, a spring-pressed shell ejector for each barrel, a detent for each shell ejector, a firing hammer for each barrel, two sliding bolts, each of said sliding bolts having a catch-plate to be engaged by an ejector-detent, and a trigger for holding said catch-plate back out of the way, and transverse pins in the frame serving to set and release the catch-plates, whereby the shell-ejectors are controlled by the firing of the gun.

7. In a gun, the combination with the frame and barrel, of a spring-pressed shell ejector, a detent for the ejector, a firing hammer, a bolt having a catch-piece and a trigger for holding the catch-piece out of the way, and means for releasing the trigger so that the catch-piece may be engaged by the ejector detent after the bolt has been moved forward by the firing hammer.

8. In a gun, the combination with the frame and barrel, of a shell ejector, a detent therefor, a firing-hammer, a bolt having a catch-plate adapted to be engaged by the ejector detent, a trigger for holding said catch-plate back out of the way, and transverse pins in the frame adapted to set and release the catch-plate, whereby the shell ejector is controlled by the firing of the gun.

9. In a gun, the combination of an ejector, means for controlling the ejector, a hammer adapted to move said means when operated to firing position to set the ejector, a safety adapted to be moved and held in three different positions, and means connected with the ejector for holding the trigger from moving so that the gun cannot be discharged when the safety is in one position; for permitting the trigger to be pulled to fire the gun and set the ejector when the safety is in the second position; and to permit the hammer to be lowered while the gun is being closed without discharging the shell and to set the ejector, when the safety is in the third position, whereby the opening of the gun after the hammer is lowered will eject the shell as if it had been discharged.

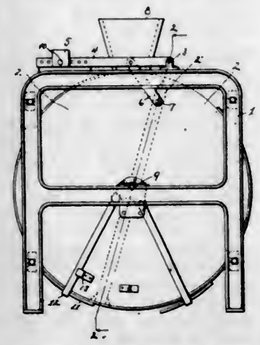
869,968. SPRING-SUSPENSION FOR AUTOMOBILES. EDWIN J. JENNESS, Chicago, Ill. Filed Jan. 18, 1906. Serial No. 296,701.



1. A spring-suspension for vehicles comprising, in combination, a supporting spring connected at one end to the body of the vehicle and at an intermediate point connected to the running gear, a lever pivoted at an intermediate point to the body of the vehicle and at one end connected with the opposite end of said supporting spring, a second spring secured to the vehicle, and means carried by the other end of said lever and projecting vertically upwards to engage said second spring, whereby the downward movement of said other end of the lever is opposed by the action of said second spring.

2. A spring-suspension for vehicles comprising, in combination, a supporting spring connected at one end to the body of the vehicle and at an intermediate point connected to the running gear, a resilient lever pivoted at an intermediate point to the body of the vehicle and at one end connected with the opposite end of said supporting spring, a second spring secured to the vehicle, and means carried by the other end of said lever and projecting vertically upwards to engage said second spring, whereby the downward movement of said other end of the lever is opposed by the action of said second spring.

869,969. WEIGHING DEVICE. RANSOM E. KIMBLE, Vicksburg, Mich. Filed Feb. 25, 1907. Serial No. 359,121.



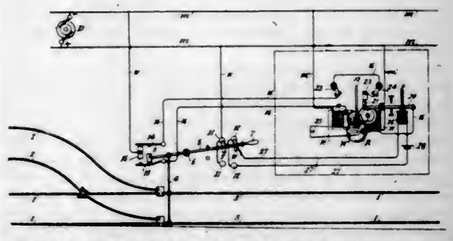
1. In an automatic scale, the combination of a hopper; a double compartment weighing box formed of a receptacle divided by a centrally-arranged partition, and having discharge openings for each compartment; a centrally-arranged pivot on which said weighing box is oscillatingly supported; a scale beam; a weight adjustably secured thereto; a link pivoted to said scale beam and to said weighing box, whereby said weighing box is held in position for said hopper to deliver to one or to the other of its compartments when said scale beam is at rest; doors for said discharge openings; supporting links for said doors, pivoted to said weighing box at each side of its pivot; pins for limiting the inward movement of said links; and catches on said weighing box, adapted to engage said door supporting links as the weighing box oscillates, for the purpose specified.

2. In an automatic scale, the combination of a hopper; a double compartment weighing box formed of a receptacle divided by a centrally-arranged partition, and having discharge openings for each compartment; a centrally-arranged pivot on which said weighing box is oscillatingly supported; a scale beam; a weight; a link pivoted to said scale beam and to said weighing box, whereby said weighing box is held in position for said hopper to deliver to one or the other of its compartments when said scale beam is at rest; doors for said discharge openings; supporting links for said doors, pivoted to said weighing box at each side of its pivot; pins for limiting the inward movement of said links; and catches on said weighing box, adapted to engage said door supporting links as the weighing box oscillates, for the purpose specified.

3. In an automatic scale, the combination of a hopper; a double compartment weighing box formed of a receptacle divided by a centrally-arranged partition and having discharge openings for each compartment; a centrally-arranged pivot on which said weighing box is oscillatingly supported; a scale beam; a weight adjustably secured thereto; a link pivoted to said scale beam and to said weighing box, whereby said weighing box is held in position for said hopper to deliver to one or to the other of its compartments when said scale beam is at rest, for the purpose specified.

4. In an automatic scale, the combination of a hopper, a double compartment weighing box formed of a receptacle divided by a centrally-arranged partition and having discharge openings for each compartment; a centrally-arranged pivot on which said weighing box is oscillatingly supported; a scale beam; a weight; a link pivoted to said scale beam and to said weighing box, whereby said weighing box is held in position for said hopper to deliver to one or to the other of its compartments when said scale beam is at rest, for the purpose specified.

869,970. RAILWAY SIGNAL AND SAFETY APPLIANCE. CHARLES J. KINTNER, New York, N. Y. Filed Aug. 10, 1905, Serial No. 273,671. Renewed Jan. 18, 1907. Serial No. 352,962.



1. In a railway system a signal operatively connected to the rotary armature of an electric motor and adapted to hang by its own weight when released in a vertical position; in combination with means for causing said armature to rotate in reverse directions, and means for locking the signal in either one of two definite positions against a constantly acting force, as gravity; together with electromagnetically controlled means for interrupting the motor circuit when the signal is thus locked, substantially as described.

2. In a railway system a signal constructed so as to hang by its own weight when released in a vertical position and operatively controlled by a single source of power adapted to move it in opposite directions against a constantly acting force, as gravity; in combination with means for locking the signal in either of one or more definite positions so as to point in opposite directions and additional means for disconnecting the first-named source of power from the signal during the time that it is so locked, substantially as described.

3. In a railway system a signal operatively connected

with a single source of power adapted to move it in opposite directions against a constantly acting force, as gravity; in combination with locking means for locking it in either of one or more definite positions with the source of power disconnected; together with means for releasing said signal, the arrangement being such that it gives either of two indicated positions of a definite nature when locked and a single definite position indicating danger when released, substantially as described.

4. In a railway system a signal operatively connected with an electromotive device adapted to move the signal in opposite directions against a constantly applied force, as gravity; in combination with a source of electrical energy for actuating said electromotive device and means for varying the direction of movement of the signal through a variation of current effect upon the electromotive device; together with means for locking the signal in a definite position, and additional means for simultaneously disconnecting the source of electrical energy from the electromotive device, whereby the signal remains locked in such definite position with the constantly applied force acting thereon, substantially as described.

5. In a railway system a signal adapted, when released, to hang by its own weight in a vertical position and operatively connected with the rotary armature of a single electric motor; in combination with a source of electrical energy for propelling said motor; a pole changing device for varying the direction of current flow through the motor in such manner as to move the signal in opposite directions, when desired; and means for locking the signal in a definite position against a constantly applied force; together with circuit interrupting means for simultaneously interrupting the current supply to the motor, substantially as described.

6. In a railway system a signal operatively connected with the rotary armature of a single electric motor; a source of electrical energy for propelling said motor; means for varying the direction of flow of the current therethrough so as to rotate the armature in opposite directions; locking means for locking the signal in either of two positions against the action of gravity; circuit interrupting means for simultaneously interrupting the current flow from the source of electrical energy through the motor; together with a source of electrical energy wholly independent of or disconnected from the first-named source of electrical energy for controlling the operation of the locking and current interrupting means, substantially as described.

7. A railway signal operatively connected with an electromotive device adapted to move it in opposite directions; in combination with a source of electrical energy for effecting the operation of said electromotive device; together with locking means for locking the signal in either of two positions and circuit interrupting means for interrupting the circuit to the electromotive device, said locking means and circuit interrupting means being controlled in their operation by a source of electrical energy wholly independent of or disconnected from the first-named source of electrical energy, substantially as described.

8. A railway signal operatively connected to the rotary armature of an electric motor and adapted, when released, to hang by its own weight in a vertical position; in combination with a source of electrical energy for rotating said armature; together with means for causing the armature to rotate in opposite directions, and additional means for automatically interrupting the circuit if the signal be moved beyond a definite point in either direction, substantially as described.

9. A railway signal operatively connected to the rotary armature of an electric motor; in combination with a source of electrical energy for rotating said armature, and means for causing it to rotate in either direction; together with means for locking the signal in a definite position in either of two positions against the force of gravity; a source of electrical energy wholly independent of or disconnected from the first-named source of electrical energy for controlling said locking means, and additional means for automatically interrupting the circuit of the first-named source of electrical energy if the signal be moved beyond a definite point in either direction, substantially as described.

10. In a railway system a main track, a side track and switch rails operatively connected to a switch for moving the switch rails in alinement with either the main or the side track rails; in combination with a signal operatively connected with the rotary armature of an electric motor; together with a source of electrical energy for said electric motor and means operatively connected with the switch for causing the armature of the motor to rotate in opposite directions when the switch is placed so that the rails are first in alinement with the main track and then in alinement with those of the side track, substantially as described.

11. In a railway system a switch signal operatively connected with the rotary armature of an electric motor; a source of electrical energy connected with said motor; a rail switch operatively connected with a pair of switch rails, and means connected with the rail switch for causing the armature of the motor to rotate in reverse directions dependent upon the position of the switch, substantially as described.

12. In a railway system a switch signal operatively connected with the rotary armature of an electric motor; a source of electrical energy connected with said motor; a rail switch operatively connected with a pair of switch rails, and means connected with the rail switch for causing the armature of the motor to rotate in reverse direction, dependent upon the position of the switch; in combination with means controlled by a source of electrical energy wholly independent of or disconnected from the first-named source of electrical energy for locking the signal in either of two positions, and additional means for simultaneously interrupting the circuit of the first-named source of electrical energy, substantially as described.

13. A railway signal operatively connected to the rotary armature of an electric motor; in combination with a source of electrical energy and a rail switch connected to a pair of switch rails; together with a pole changing device operatively connected to the rail-switch and circuits and circuit connections whereby the signal is caused to rotate in opposite directions, dependent upon the position of the switch rails, substantially as described.

14. A railway signal operatively connected with the rotary armature of an electric motor; a source of electrical energy operatively connected with said motor; a pole changing device and circuits and circuit connections whereby the direction of rotation of the armature may be effected; in combination with locking means for locking the signal against the force of gravity in either of two positions; together with means for automatically interrupting the circuit of the source of electrical energy when the signal is locked, substantially as described.

15. In a railway system a pair of switch-rails operatively connected with a means for moving them into alinement with different pairs of rails; in combination with an electrically controlled stop-device operatively connected through circuits and circuit connections with said means; a train controlling device carried by a car or train, said stop-device being normally held out of the path of the train controlling device; together with circuits and circuit connections whereby when the switch-rails are moved out of alinement with either pair of rails the stop-device is made operative upon the train controlling device, substantially as described.

16. In a railway system a signal operatively connected with the rotary armature of an electric motor and adapted to assume either of three positions; in combination with a stop device movable with the signal and a train controlling device carried by a car or train, the arrangement being such that when the signal is in one of the three positions it is safe for the train to proceed, and when in either of the other two positions the train will be automatically stopped by the train controlling device, substantially as described.

17. In a railway system a rotary semaphore; in combination with a stop arm or device connected thereto, and a train controlling device carried by a car or train adapted to be acted upon by either the semaphore itself or the stop-arm, dependent upon the position of the semaphore, substantially as described.

18. A railway signal embracing a semaphore, a stop arm carried thereby and three lenses adapted to pass before a single lamp; in combination with a train stopping device carried by a car or train and adapted to be acted upon either by the semaphore or the stop arm, the arrangement being such that the semaphore and the lenses will give an indication of any one of three conditions, substantially as described.

19. In a railway system a semaphore signal operatively connected with the rotary armature of an electric motor; a pair of switch rails operatively connected with a rail switch; a source of electrical energy for propelling the motor, and means connected with the switch for causing the motor to rotate in reverse directions; in combination with a train stopping device carried by a car or train and adapted to stop the train when the semaphore indicates danger, substantially as described.

20. In a railway system a semaphore operatively connected with the rotary armature of an electric motor; a source of electrical energy for propelling said motor; a rail switch operatively connected with a pair of switch rails and with circuit changing devices for effecting the rotation of the armature of the motor in reverse directions; in combination with a locking device for locking the signal in either of two positions and a train controlling device carried by a car or train, the arrangement being such that when the locking device is released the train controlling device will be actuated if a motorman or engineer fails to stop his train, substantially as described.

21. A switch signal capable of giving two indications of track condition and a single indication of danger, said signal being controlled by an electromotive device operatively connected to a source of electrical energy and the switch lever in such manner that said lever must be left in closed position when thrown in either direction, in order to give a correct indication of the location of the switch rails by the signal, substantially as described.

22. A switch signal capable of giving two indications of a rail position; in combination with an electromotive device and a source of electrical energy operatively connected thereto and to the switch lever in such manner that any substantial movement of the switch rails in either direction causes the signal to give an indication of danger, unless said rails be moved through their complete phases, substantially as described.

23. A switch signal capable of giving two indications of rail position and a single indication of danger, said signal being operatively connected to a source of electrical energy and an electromotive device adapted to move it in opposite directions through the agency of circuits and circuit connections between the source of electrical energy, the switch, and the electromotive device; in combination with a train controlling device carried by a car or train and adapted to be actuated in such manner as to stop the train when the signal indicates danger, substantially as described.

24. A safety appliance for railways embracing a double or duplex stop device normally held out of action with a train control device carried by a car or train, one part of said stop device being adapted to actuate the train control device on failure or interruption of its controlling source of energy and the other for an abnormal track condition, substantially as described.

25. A safety appliance for railways embracing a double or duplex stop device normally held out of action with a train control device carried by a car or train, said stop device being operatively connected with a rail-switch and the arrangement such that when the switch-rails are in alinement with the main track a car or train may pass without effecting the operation of the train control device, and when the switch-rails are in reverse position or in alinement with the side track one part of the stop device will effect the stoppage of the train, and when the controlling source of energy is interrupted the other part thereof will effect the stoppage of the train, substantially as described.

26. A safety appliance for railways embracing a double or duplex stop device normally held out of action with a train control device, carried by a car or train, by a locking electromagnet and adapted, when released, to drop by force of gravity; in combination with an electro-motive device for moving said stop device into a different position so that the second part of the stop device is placed in the path of the train control device, the arrangement being such that if the current flow through the locking magnet be interrupted it will set the stop device for action, substantially as described.

27. A railway signal of the semaphore type operatively connected with an electric motor adapted to rotate it in opposite directions; in combination with a pole changing device for varying the current relations through the motor; means for holding the signal in either of two positions and a circuit interrupting device for interrupting the circuit of the motor when thus held, the arrangement being such that the semaphore is moved in one direction to give a definite indication and in a reverse direction to give a second definite indication, and is allowed to assume a third indication through the action of gravity, substantially as described.

28. A railway signal of the semaphore type operatively connected with an electric motor; in combination with a source of electrical energy for driving said motor and a pole changing device for varying the current direction through the motor; together with electromagnetically controlled locking means so constructed that when the semaphore points in either of two directions the motor is cut out of circuit and when the locking mechanism is released the semaphore hangs in a vertical position by its own weight, substantially as described.

29. A three position signal embracing a semaphore operatively connected to an electric motor; in combination with a pole-changing device adapted to reverse the direction of current through the motor; holding means for holding the signal in either of two positions, and circuit interrupting means for interrupting the motor circuit when thus held, the arrangement being such that the controlling motor is disconnected from the circuit when the signal is thus held and a third indication is given by the signal when released through the influence of the force of gravity, substantially as described.

30. A three-position signal controlled by an electric motor and a pole changing device; in combination with a stop-device operatively connected with the signal, substantially as described.

31. A three-position signal operatively connected with an electric motor; a pole changing device and a source of electrical energy; in combination with a stop-device controlled by the signal, and locking means independently controlled for holding the signal in either of two positions against the force of gravity, substantially as described.

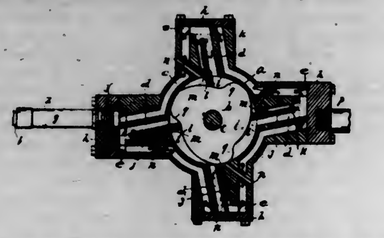
32. In a railway system a main track, a side track, and a switch for effecting the conveyance of cars from one to the other; an electrically controlled stop-device normally held out of action by a closed circuit; circuits and circuit connections between the switch and the stop-device whereby the latter is made operative on the interruption of the circuit, substantially as described.

33. In a railway system a main track, a side track, and a switch for effecting the conveyance of cars from one to the other; an electrically controlled stop-device included in a normally closed circuit operatively connected with the switch in such manner that when the switch-rails are moved out of alinement with the main track the stop-device is made operative; in combination with a train control device carried by a car or train and made operative by the stop-device when the controlling circuit thereof is interrupted, substantially as described.

869,971. ROTARY ENGINE. KAARLO H. KORHONEN, Detroit, Mich. Filed Mar. 12, 1907. Serial No. 362,002.

1. A rotary engine comprising a cylinder, a driven shaft, a rotatable piston mounted upon the shaft within the cylinder formed with peripheral cam surfaces forming peripheral chambers and adjacent impact shoulders, periph-

eral air chests upon the cylinder communicating with the peripheral chambers of the piston, respectively, an exhaust channel leading from each of the peripheral chambers, radially movable valves to prevent the passage of air from the respective air chests to the corresponding exhausts, means to seat said valves, said valves retracted by the cam surfaces of the piston, said cylinder provided with an air inlet channel communicating with said air chests.



2. A rotary engine comprising a cylinder, a driven shaft, a rotatable piston mounted upon the shaft within the cylinder formed with peripheral chambers and adjacent impact shoulders, peripheral air chests upon the cylinder communicating with the peripheral chambers of the piston, respectively, an exhaust channel leading from each of the peripheral chambers, radially movable valves to prevent the passage of air from the respective air chests to the corresponding exhausts, means to seat said valves, said cylinder provided with an air inlet channel communicating with each of said air chests, handles engaged with opposite air chests, and means to control the admission of compressed air to the air channel.

3. A rotary engine comprising a cylinder, a driven shaft, a rotatable piston mounted upon the shaft within the cylinder formed with peripheral chambers and adjacent impact shoulders, peripheral air chests upon the cylinder communicating with the peripheral chambers of the piston, respectively, an exhaust channel leading from each of the peripheral chambers, radially movable valves to control the passage of air from the respective air chests to the corresponding exhausts, means to seat said valves, said cylinder provided with an air inlet channel communicating with each of said air chests, handles engaged with opposite air chests, and means to prevent the admission of compressed air to the air channel and valve mechanism actuated by one of said handles to control admission of air into the air inlet.

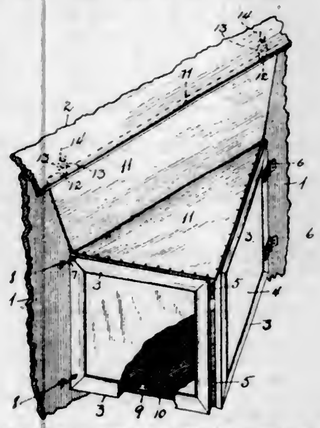
4. A rotary engine comprising a cylinder, a driven shaft, a rotatable piston mounted upon the shaft within the cylinder constructed with peripheral cam surfaces forming peripheral chambers and adjacent impact shoulders, peripheral air chests upon the cylinder communicating with the peripheral chambers, respectively, exhaust channels leading from each of the peripheral chambers, radially movable valves to control the exhaust channels, springs to normally seat said valves, respectively, said valves retracted by the cam surfaces of the piston, said cylinder formed with an air inlet channel extended thereabout leading from one air chest to another.

5. A rotary engine comprising a cylinder, a driven shaft, a rotatable piston mounted upon the shaft within the cylinder formed with peripheral chambers and adjacent impact shoulders, peripheral air chests upon the cylinder communicating with the peripheral chambers of the piston, respectively, an exhaust channel leading from each of the peripheral chambers, radially movable valves to prevent the passage of air from the respective air chests to the corresponding exhausts, springs to seat said valves, said cylinder provided with an air inlet channel extending thereabout leading from one air chest to another, and a rotatable push rod engaged with said cylinder.

6. A rotary engine comprising a cylinder, a driven shaft, a rotatable piston mounted upon the shaft within the cylinder formed with peripheral chambers and adjacent impact shoulders, peripheral air chests upon the cylinder communicating with the peripheral chambers of the piston, respectively, an exhaust leading from each of the peripheral chambers, radially movable valves to prevent the passage of air from the respective air chests to the corresponding exhausts, springs to seat said valves, said cylinder provided with an air inlet channel extending thereabout leading from one air chest to another, the wall of the air chest forming a guide and backing for the radially movable valves.

7. A rotary engine comprising a cylinder, a driven shaft, a rotatable piston mounted upon the shaft within the cylinder formed with peripheral chambers and adjacent impact shoulders, peripheral air chests upon the cylinder communicating with the peripheral chambers of the piston, respectively, an exhaust channel leading from each of the peripheral chambers, radially movable valves to prevent the passage of air from the respective air chests to the corresponding exhausts, springs to seat said valves, said cylinder provided with an air inlet channel extending thereabout leading from one air chest to another, said valves always seated upon the periphery of the piston.

869,972. CAB-WINDOW. JOHN D. LANE, Etherly, Ill. Filed Feb. 27, 1907. Serial No. 359,633.

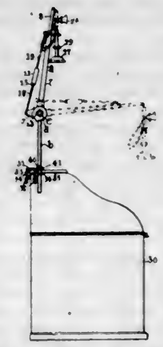


1. In a device of the character described, a cab frame provided with a window opening a plurality of sashes hinged to fold together, means for hinging one of them to the cab frame at one side of the window opening, means for removably securing the other to the frame at the other side of said opening, the combined area of the two sashes when in the bowed position thus formed being greater than that of the window opening, and a flexible hood fixed to the upper portions of the sashes, it being adapted to pass through the window opening and to be secured to the interior of the cab.

2. In a device of the character described, a cab frame provided with a window opening a plurality of sashes hinged to fold together, means for hinging one of them to the cab frame at one side of the window opening, means for removably securing the other to the frame at the other side of said opening, the combined area of the two sashes when in the bowed position thus formed being greater than that of the window opening and a fender hinged to the bottom of one of the sashes and adapted to fold thereagainst when in one position, and to cover the space between the lower sash rails when in another position.

3. In a device of the character described, a cab frame provided with a window opening a plurality of sashes hinged to fold together, means for hinging one of them to the cab frame at one side of the window opening, means for removably securing the other to the frame at the other side of said opening, the combined area of the two sashes when in the bowed position thus formed being greater than that of the window opening a flexible hood fixed to the upper portions of the sashes, it being adapted to pass through the window opening and to be secured to the interior of the cab, and a fender hinged to one of the sashes and adapted to fold thereagainst when in one position, and to cover the space between the sash rails when in another position.

869,973. TELEPHONE-SUPPORTING APPARATUS. WILLIAM B. LEHMKUHL, Cambridge, Mass. Filed May 9, 1906. Serial No. 315,957.



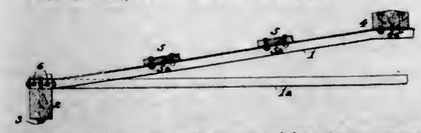
1. In a support of the character described, in combination, two members pivotally connected together, a ratchet wheel carried by one of said members, a pawl coöperating with said ratchet wheel, a carrier for said pawl encircling said ratchet wheel, a yielding connection between said pawl carrier and one of said members, and means to create resistance to the movement of said ratchet wheel, substantially as described.

2. In a support of the character described, in combination, two members pivotally connected together, a ratchet wheel carried by one of said members, a pawl coöperating with said ratchet wheel, a carrier for said pawl encircling said ratchet wheel, a connecting device between said pawl carrier and the outer end of one of said members, and means to create resistance to the movement of said ratchet wheel, substantially as described.

3. In a support of the character described, in combination, a pivoted arm having an extensible section, a rotatable device, means coöperating with said rotatable device to effect rotation thereof when moved in one direction, a yielding connection between said means and said arm, and means to retain said rotatable device stationary when the pivoted arm is moved in the opposite direction, substantially as described.

4. In a support of the character described, in combination, two members pivotally connected together, a ratchet wheel carried by one of said members, a pawl coöperating with said ratchet wheel, a carrier for said pawl movable independently of said ratchet wheel, yielding means to connect said carrier with one of said members, and means to create resistance to the movement of said ratchet wheel, substantially as described.

869,974. ROOF-CARLINE. GEORGE B. MALTBY, Cleveland, Ohio, assignor to Cleveland Car Specialty Company, Cleveland, Ohio, a Corporation of West Virginia. Filed Oct. 19, 1906. Serial No. 339,614.



1. A metal roof carline comprising two compression members of angle section, bent downwardly from their middle portions toward their ends, and a tension member or tie, interposed between the compression members and connected thereto adjacent to their ends, which are adapted to fit in recesses in the side plates of a car frame, the tension member having lateral flanges adapted to lie longitudinally of and abut against the outer sides of the side plates.

2. A metal roof carline comprising two compression members of angle section, bent downwardly from their middle portions towards their ends, a tension member or tie interposed between the compression members and connected thereto adjacent to their ends, in combination with the side plates of a car frame having recesses to receive the carline ends, the tension member having lateral flanges adapted to lie longitudinally of and abut against the outer sides of the side plates.

869,975. ROOF-CARLINE. GEORGE B. MALTBY, Cleveland, Ohio, assignor to Cleveland Car Specialty Company, Cleveland, Ohio, a Corporation of West Virginia. Filed Oct. 19, 1906. Serial No. 339,615.



1. A sheet or plate metal roof carline having an integral body comprising a web of inverted U or channel section and lateral flanges projecting from the side members thereof, the body being downwardly curved from its middle portion to its ends, and horizontal end or base flanges formed by the metal of the lateral flanges of the body turned directly into planes substantially radial to the curvature of the adjoining portions.

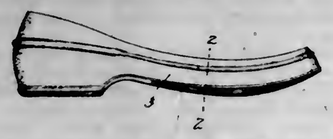
2. A sheet or plate metal roof carline having an integral body comprising a web of inverted U or channel section and lateral flanges projecting from the side members thereof, the body being downwardly curved from its middle portion to its ends, horizontal end or base flanges formed by the metal of the lateral flanges of the body turned directly into planes substantially radial to the curvature of the adjoining portions and vertical end flanges formed by the metal of the lateral flanges and intermediate web portions, turned substantially at right angles to the horizontal flanges.

3. The combination of a sheet or plate metal roof carline having an integral body comprising a web of inverted U or channel section and lateral flanges projecting from the side members thereof, the body being downwardly curved from its middle portion to horizontal end or base flanges formed by the metal of the lateral flanges of the body turned directly into planes substantially radial to the curvature of the adjoining portions, and filling strips of wood resting on the lateral flanges of the body and abutting against the side members of the web.

869,976. RUBBER OVERSHOE. HERBERT C. MASON, Providence, R. I. Filed Sept. 11, 1906. Serial No. 334,132.

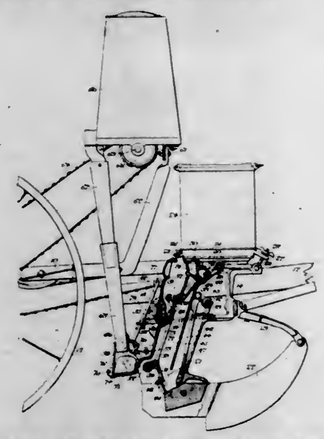
A low cut sole rubber or overshoe having a flexible upper which is highest at the heel portion and is in front of the shank but little higher than the sole of the shoe to which the overshoe is fitted, said upper having an internal sole engaging bead near its upper edge and a single continuous longitudinally elastic spring of material independent of

that of the upper embedded between the layers of which the upper is made and coextensive with said bead, said



bead being caused by said spring, substantially as described.

869,977. FERTILIZER ATTACHMENT FOR PLANTERS. CLEMENT W. MICHAEL, Racine, Wis., assignor to J. I. Case Plow Works, Racine, Wis., a Corporation. Filed Sept. 20, 1906. Serial No. 335,339.



1. In check-row planters, the combination with the seed and fertilizer hoppers, discharge chutes leading from said hoppers and valves in said chutes, of means for operating said seed valve and separate adjustable means for operating the fertilizer valve, whereby the fertilizer may be dropped at different distances from the seed, substantially as described.

2. In planters, the combination with the seed and fertilizer discharging devices, of means for variably operating said devices in different timed relation whereby the fertilizer may be dropped at different distances from the seed.

3. In check-row planters, the combination with the seed and fertilizer hoppers, discharging chutes leading from said hoppers and discharging valves in the lower ends of said chutes, of actuating devices for said seed discharging valve and separate adjustable actuating devices for said fertilizer discharging valve, whereby the fertilizer may be dropped at different distances from the seed, substantially as described.

4. In planters, the combination with the seed and fertilizer discharging valves arranged in line, of operating mechanism arranged to variably operate said valves in different timed relation, whereby the fertilizer may be dropped at different distances from the seed.

5. In planters, the combination with the seed and fertilizer discharging valves arranged in line, of mechanism for actuating the seed discharging valve, separate independent mechanism for actuating the fertilizer discharging valve and means controlled by the seed valve actuating mechanism for throwing the fertilizer valve actuating mechanism into operation.

6. In check-row planters, the combination with the seed dropping mechanism and the fertilizer dropping mechanism arranged in line, of devices for variably operating said seed and fertilizer dropping mechanisms, whereby the fertilizer may be dropped at different distances from the seed, substantially as described.

7. In planters, the combination with the seed dropping mechanism and the fertilizer dropping mechanism in line therewith, of actuating means for said seed dropping mechanism and separate adjustable actuating means for said fertilizer dropping mechanism, whereby the fertilizer may be dropped at different distances from the seed.

8. In planters, the combination with the seed and fertilizer dropping mechanisms and discharging valves therefor, of actuating means for the seed discharging valve, separate adjustable actuating means for the fertilizer discharging valve and devices controlled by the seed valve actuating means for throwing the fertilizer valve actuating means into operation.

9. In planters, the combination with the seed and fertilizer dropping mechanisms and with the discharging valves therefor, of a check rower for operating said seed discharging valve and mechanism driven from the ground wheels for operating the fertilizer discharging valve.

10. In planters, the combination with the seed and fertilizer dropping mechanisms and separate discharging valves therefor arranged in line, of a swinging check-row lever, actuating connections between said check-row lever and said seed discharging valve, a shaft driven from the ground wheels and means actuated by said shaft for operating the fertilizer discharging valve.

11. In planters, the combination with the seed and fertilizer dropping mechanism and discharging valves therefor of a check row lever operatively connected to said seed discharging valve, a shaft driven from the ground wheels, an adjustable tappet arm on said shaft and means actuated by said tappet arm for tripping the fertilizer discharging valve, substantially as described.

12. In planters, the combination with the seed and fertilizer discharging devices, of a check rower operatively connected to said seed discharging devices and means driven from the ground wheels and controlled by said check rower for operating the fertilizer discharging device.

13. In planters, the combination with the seed and fertilizer discharging valves, of a check-row lever connected to the seed discharging valve, mechanism for operating the fertilizer discharging valve, and a clutch controlled by said check-row lever for connecting said mechanism to the ground wheels, substantially as described.

14. In planters, the combination with the seed and fertilizer dropping mechanism and discharging valves therefor, of a check-row lever operatively connected to the seed discharging valve, mechanism for operating the fertilizer discharging valve, a continuously driven clutch member and means controlled by said check-row lever for operatively connecting said clutch member to the actuating mechanism of the fertilizer discharging valve.

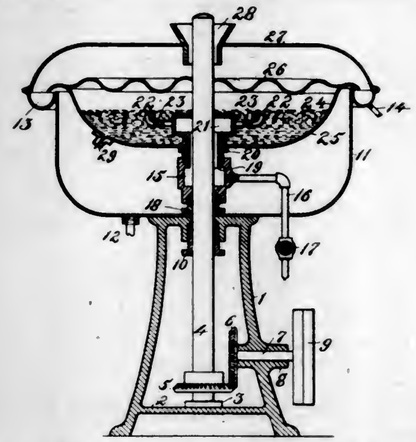
15. In planters, the combination with the seed and fertilizer dropping mechanisms and discharging valves therefor, of a check-row lever operatively connected to said seed discharging valve, an adjustable tappet arm, means tripped by said tappet arm for operating the fertilizer discharging valve and a clutch controlled by said check-row lever for operatively connecting said tappet arm to the ground wheels, substantially as described.

16. In planters, the combination with the seed and fertilizer dropping mechanisms and separate discharging valves therefor arranged in line, of a check-row lever operatively connected to the seed discharging valve, a shaft, a clutch controlled by said check-row lever for intermittently connecting said shaft to the ground wheels, a tappet arm adjustably mounted on said shaft and means actuated by said tappet arm for operating the fertilizer discharging valve.

17. In planters, the combination with the seed and fertilizer dropping mechanisms and separate discharging valves therefor arranged in line, of a check-row rock shaft having an arm connected to operate the seed discharging valve, a rotary seed shaft, a clutch for intermittently connecting said seed shaft to the ground wheels, a trip arm on the check-row rock shaft controlling said clutch, a tappet arm adjustably mounted on said seed shaft and a spring-held rock arm actuated by said tappet arm and operatively connected to the fertilizer discharging valve.

18. In check-row planters, the combination with the seed and fertilizer hoppers, discharge chutes leading therefrom and discharging valves in the lower ends of said chutes, of separate actuating devices for said seed and fertilizer discharging valves, and a check rower controlling the operation of said actuating devices, the actuating device for said fertilizer discharging valve being adjustable, whereby the fertilizer may be dropped at different distances from the seed, substantially as described.

869,978. PASTEURIZING APPARATUS. EDWARD J. MILLER, Canton, Ohio. Filed Mar. 11, 1907. Serial No. 361,728.



1. A device of the class described comprising a rotatable sealed tank the top whereof constitutes a treating plate for the reception of a liquid to be treated transversely-arranged with respect to the axis of rotation of said tank, a collecting trough surrounding said tank for receiving the liquid from said treating plate, means for introducing to said tank a heating medium, and means for rotating the same.

2. A device of the class described comprising a rotatable member, means for rotating the same, a sealed tank mounted on said member arranged to move in unison therewith the top of which constitutes a treating plate, a collecting trough surrounding said treating plate arranged to receive liquid therefrom, means to introduce a heating medium to said tank, and means to deposit liquid to be treated on the central portion of said treating plate.

3. A device of the class described comprising a horizontally-rotatable sealed tank, the top whereof is arranged to constitute a treating plate transverse to the axis of rotation of said tank, means to rotate said tank, a receiving trough surrounding said treating plate arranged to receive liquid therefrom, means to deposit liquid on the upper surface of said treating plate near the center thereof, and a safety valve carried by said tank arranged to prevent excessive pressure in said tank.

4. A device of the class described comprising a rotatable sealed tank, the upper surface of the top whereof is arranged to constitute a treating plate transverse to the axis of rotation of said tank, said treating plate being provided with a plurality of concentric corrugations, a collecting trough surrounding said treating plate to receive liquid therefrom, means to supply liquid to said treating plate near the center thereof, means to heat the interior of said tank, and means to revolve the same.

5. A device of the class described comprising a shaft suitably mounted, means to rotate said shaft, a stationary tank inclosing the upper end of said shaft, a collecting trough inclosing the upper end of said tank, an outlet to said collecting trough, a drip for said tank, a rotatable sealed tank mounted on the upper end of said shaft the upper surface of the top of which is arranged to constitute a treating plate having a downturned outer edge arranged within said collecting trough, means to introduce a heating medium into said rotary tank whereby the upper surface is constantly maintained at a definite temperature, and means to deposit on said treating plate near the center thereof a liquid to be treated.

6. A device of the class described comprising a suitably-supported rotatable sealed tank the upper surface of the top of which is arranged to constitute a treating plate, a collecting trough surrounding said treating plate to receive liquid therefrom, said treating plate being mounted transverse to the axis of rotation of said tank, means to introduce to the interior of said tank a heating medium, a stationary tank arranged to surround said first tank and support said collecting trough, a safety valve in said first tank operable at a predetermined pressure within said first tank, the drip whereof is arranged to flow into said stationary tank, and means to revolve said first named tank.

7. A device of the class described comprising a rotatable sealed tank, the upper surface of the top of which is arranged to constitute a treating plate provided with a plurality of concentric corrugations and a downturned outer edge, a collecting trough surrounding said tank to receive liquid from said treating plate, a stationary drip-collecting tank surrounding said first tank arranged to support said collecting trough, means to revolve said first tank, and means to introduce a heating medium thereto.

8. A device of the class described comprising a suitably-supported shaft, means to rotate the same, a stationary tank inclosing the upper end of said shaft, a rotatable sealed tank mounted on said shaft arranged to be moved in unison therewith within the confines of said stationary tank the upper surface of the top of said rotatable tank being arranged to constitute a treating plate with a downturned outer edge, a collecting trough supported by said stationary tank to receive liquid from said treating plate, means to deposit on said treating plate near the center thereof a liquid to be treated, and means for heating the interior of said rotatable tank.

9. A device for the pasteurization of liquids comprising a sealed rotatable tank the top of which is formed with a plurality of concentric corrugations arranged to constitute a treating plate, means for introducing to said tank a heating medium, and means to rotate said tank.

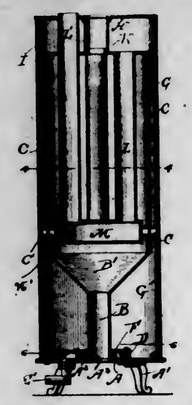
10. A device for the pasteurization of liquids comprising a sealed rotatable tank having a corrugated top to constitute a treating plate, a collecting trough surrounding said treating plate arranged to receive liquid driven therefrom by centrifugal force, means to deposit liquid to be treated on said treating plate near the center thereof, and means to introduce to the interior of said tank a heating medium.

11. A pasteurizing device consisting of a rotatable sealed tank having a corrugated upper surface constituting a treating plate, said treating plate being transverse to the axis of rotation of said tank, means to support said tank, means to receive liquid driven from said treating plate by centrifugal force, and means to deposit a liquid for pasteurization on said treating plate.

12. A device of the class described comprising a standard, a shaft rotatably mounted thereon, means for rotating said shaft, a stationary tank mounted on said standard inclosing the upper end of said shaft, a collecting trough inclosing the upper edge of said stationary tank, a rotatable sealed tank mounted on said shaft within said stationary tank, the top of said rotatable tank being provided with a plurality of corrugations arranged to constitute a treating plate with a downturned outer edge extending into said collecting trough, means to heat the interior of said rotatable tank, and means for permitting the deposit of a liquid to be treated on the central portions of said treating plate.

13. A device for the pasteurization of liquids comprising a closed rotatable tank the top of which is arranged to constitute a treating plate, means for receiving a liquid driven from said top by centrifugal force, means for controlling the temperature of said treating plate, and means for rotating the same.

869,979. GAS-STOVE. MELVILLE C. MCVITTY, North Baltimore, Ohio. Filed Aug. 1, 1905. Serial No. 272,225.



1. A gas stove comprising a centrally apertured base, a shell, arranged upon said base and provided with a top, a heating drum suspended from said top, said heating drum having a funnel, at its lower end, and from which extends a draft tube, the lower end of which fits in the central apertured base, a burner surrounding the draft tube, the apertured plate arranged upon the top of the heating drum, the inner cylindrical box and the pipes connected to said box and top of heating drum as set forth.

2. A gas stove comprising a centrally apertured base having a shell arranged thereon, said base being provided with an annular flange having an extension adapted to embrace an opening in said base in which fits the gas supply pipe, and an apertured burner plate connected to the said flange and a draft tube carried by the shell, mounted upon the base and resting within the apertured burner plate, substantially as described.

3. In a gas stove a centrally apertured base, having a burner arranged in connection therewith, the shell attached to the base, the heating drum having the funnel and draft tube at the lower end, the exterior straps attached to the heating drum the cylindrical box arranged within the heating drum and also having exterior straps, pipes leading to and from the cylindrical box, the apertured plate forming the top of the heating drum, means for supporting said plate and the top attached to the shell as set forth.

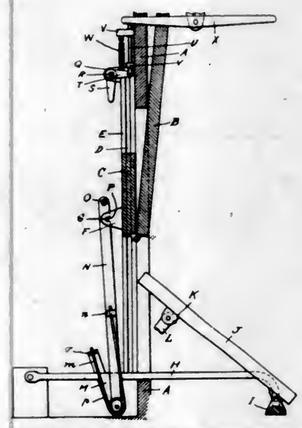
4. A gas stove comprising a centrally apertured base, provided with an annular seat and an annular flange surrounding said annular seat, said annular flange having an extension adapted to embrace an opening formed in the base in which fits the gas supply pipe, a burner plate having a central opening, and secured upon the flange, the draft tube fitting in the annular seat, funnel and heating drum, the apertured plate at the top of the heating drum, the exterior shell and top, the supporting rods, the inner cylindrical box and the pipes connected thereto and the spacing straps connected to the heating drum and the cylindrical portion all arranged substantially as described.

869,980. FOLDING PEDAL. ROBERT W. PAIN, New York, N. Y., assignor to The Aeolian Company, a Corporation of Connecticut. Filed June 28, 1907. Serial No. 381,190.

1. In a musical instrument, the combination of a casing, a door in the casing, a swinging support, a pedal mechanism mounted thereon, and means connecting the door and support, whereby the movement of the door causes the pedal mechanism to swing in and out of the casing.

2. In a musical instrument, the combination of a casing, a door in the casing, a swinging support, a pedal mechanism mounted thereon, and means detachably connecting the door and support, whereby the movement of the door causes the pedal mechanism to swing in and out of the casing.

3. In a musical instrument, the combination of a casing, a door in the casing, a swinging support, a pedal mechanism mounted thereon, guides on the casing, a lifting bar hinged to the door and arranged to slide on the casing, and means for connecting the lifting bar to the swinging pedal support.



4. In a musical instrument, the combination of a casing, a door in the casing, a swinging support, a pedal mechanism mounted thereon, guides on the casing, a lifting bar hinged to the door and arranged to slide on the casing, and means for detachably connecting the lifting bar to the swinging pedal support.

5. In a musical instrument, the combination of a casing, a door in the casing, a swinging support, a pedal mechanism mounted thereon, guides on the casing, a lifting bar hinged to the door and arranged to slide on the casing, and means for detachably connecting the lifting bar to the swinging pedal support, comprising pins on the bar, cooperating notches on the swinging support, and means for disengaging the pins from the notches.

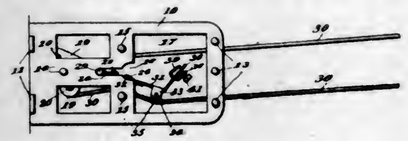
6. In a musical instrument, the combination of a swinging support, a pedal mechanism pivotally mounted thereon, a pivoted link connected to the support, raising and lowering mechanism and means for detachably connecting the link with the raising and lowering mechanism.

7. In a musical instrument, the combination of a swinging support, a pedal mechanism pivotally mounted thereon, a pivoted link connected to the support, a spring arranged to press said link outwardly, raising and lowering mechanism and means for detachably connecting the link with the raising and lowering mechanism.

8. In a musical instrument, the combination of a casing, a pedal mechanism having a pair of pivoted pedal rest arms, pedal rests secured to the ends of such arms and a pedal pivoted thereto, the pedal rest arms having pivoted thereto a spring controlled lifting link having a notch in its end, a door in the casing arranged to be raised and lowered, lifting pins carried by the door and adapted to engage the notches in the lifting links, and a lever mechanism for disengaging the links from the pins.

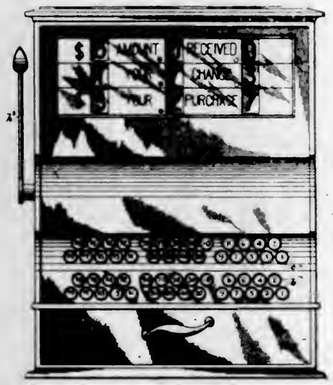
869,981. STROPPING-MACHINE. AUGUST W. PETERSON, Highwood, Ill. Filed Jan. 28, 1907. Serial No. 354,470.

In a stropping machine, the combination with the spaced apart frame plates each having at about its middle a rearwardly extending slot and one of said plates having an opening in its front portion, of tie-rods uniting said plates, anti-friction rollers located between the frame plates, a pair of rocking members pivotally mounted between the frame plates, anti-friction rollers journaled on said members between the same and in a line with its pivot, a retainer pivotally connected at its rear portion to the front portion of the rocking members and having projections at its ends to loosely engage the slots in the frame plates and provided at its front edge with adjustable jaws, a blade holding attachment consisting of an angular plate having near its rear edge an enlargement to fit between said adjustable jaws and provided at its upper



and lower ends with apertured lugs, an anti-friction roller journaled on said lugs, a jaw adjustably held on the front portion of the angular plate, and a strop extended around the anti-friction rollers on the rocking members and between the rollers of the frame plates, substantially as described.

869,982. CASH-INDICATOR. JOHN PFEIFER, Springfield, Ohio. Filed Dec. 13, 1902. Serial No. 135,058.



1. The combination with indicators of operating devices and intermediate mechanism adapted to move upon being released by said devices, whereby two amounts of an individual transaction and their difference will be displayed, and means to return said devices to normal position, substantially as specified.

2. The combination with an indicator for amount received, an indicator for amount purchased, and an intermediate indicator adapted to be operated in one direction by the first mentioned indicator and in the opposite direction by the second mentioned indicator, means for holding same in indicating position and means for simultaneously returning all indicators to normal position, for the purpose specified.

3. The combination of one set of indicators and a second set of indicators located below the first set of indicators, an intermediate set of indicators operated in one direction by the first mentioned indicators and operated in the opposite direction by the second mentioned indicators and means for simultaneously returning all indicators to normal position, for the purpose specified.

4. The combination of an indicator for the purpose of indicating one part of a transaction, a second indicator for the purpose of indicating another part of the same transaction, and an intermediate indicator for indicating the differences in the two parts of said transaction, means for operating said last mentioned indicator in unison with said first mentioned indicator and means for reversing the movement of said last mentioned indicator and moving same in unison with said second mentioned indicator, means for holding said indicators in indicating position but adapted to permit all to be returned simultaneously, for the purpose specified.

5. In a cash register, the combination of an indicator for indicating one part of a transaction, with a second indicator for indicating another part of the same transaction, an intermediate indicator located between said first and second indicators and adapted to indicate the difference between the amounts or numbers indicated by the first indicator and that indicated by the second indicator, means for moving said intermediate indicator in one direction in unison with said first indicator and for moving same in the opposite direction in unison with said second indicator, means for holding all said indicators in indicating position, and means for returning same simultaneously to normal position, for the purpose specified.

6. The combination with indicators, of two sets of finger keys of like value, and intermediate mechanism common to all and adapted to be controlled in part by each of said keys, said mechanism including means adapted to move one of said indicators in opposite directions, whereby upon the successive depression of a key in each set, two amounts of like value with the key depressed and their difference will be displayed, substantially as specified.

7. The combination with indicators, of two sets of finger keys of like value, and intermediate mechanism common to all and adapted to be controlled in part by each of said keys, said mechanism including racks adapted to move one of said indicators in opposite directions, whereby upon the successive depression of a key in each set two amounts of like value with the keys depressed and their difference will be displayed, substantially as specified.

8. The combination with indicators, of two sets of finger keys of like value, and intermediate mechanism common to all and adapted to be controlled in part by each of said keys, said mechanism including racks adapted to move one of said indicators in opposite directions, one of said racks adapted to move in and out of operative relation, whereby upon the successive depression of a key in each set two amounts of like value with the keys depressed and their difference will be displayed, substantially as specified.

9. The combination with indicators and self-acting actuating mechanism therefor, of two sets of finger keys of like values adapted to release and control said mechanism, whereby upon the successive depression of a key in each set, two amounts of like value with the keys depressed and their difference will be displayed, substantially as specified.

10. The combination with indicators, of two sets of finger keys of like value, and self-acting intermediate mechanism common to all and adapted to be released and controlled by each of said keys, whereby upon the successive depression of a key in each set, two amounts of like value with the keys depressed and their difference will be displayed, substantially as specified.

11. The combination with indicators, of two sets of finger keys of like value, and intermediate mechanism adapted to move upon being released by said keys, whereby upon the depression of a key in each set, two amounts of like value with the keys depressed and their difference will be displayed, and means to return said mechanism to normal position, substantially as specified.

12. The combination with indicators, of two sets of finger keys of like value and intermediate mechanism adapted to move upon being released by said keys, said mechanism being common to all of said keys and limited in its movement thereby, whereby upon the depression of a key in each set, two amounts of like value with the keys depressed and their difference will be displayed, and means to return said mechanism to normal position, substantially as specified.

13. The combination with indicators, of two sets of finger keys, and intermediate mechanism, controlled by said keys, operating by gravity to move said indicators, means to hold said mechanism in an elevated position, and means to release said mechanism, whereby two amounts and their difference will be displayed by said indicators.

14. The combination with indicators, of two sets of finger keys and intermediate mechanism, operating by gravity to move said indicators, means to hold said mechan-

lsm in an elevated position, and a movable frame to elevate and release said mechanism subject to the control of said keys, whereby two amounts and their difference will be displayed by said indicators.

15. The combination with indicators, of two sets of finger keys, intermediate mechanism, operating by gravity to move said indicators, including means adapted to move one of said indicators in opposite directions, means to hold said mechanism in an elevated position, devices to elevate and release said mechanism, subject to the control of said keys, whereby two amounts and their difference will be displayed by said indicators.

16. The combination with indicators, of two sets of finger keys, intermediate mechanism, controlled by the depression of said keys, operated by gravity to move said indicators, devices to hold said keys in their depressed position and said mechanism in an elevated position, means to elevate and release said mechanism subject to the control of said keys, and devices to release and return said keys, whereby two amounts and their difference will be displayed by said indicators.

17. The combination with units, tens and hundreds banks of keys, each bank consisting of a set of cash keys and a set of purchase keys of like value, of indicators for each of said banks representing corresponding values, and intermediate mechanism, including devices adapted to carry units of a lower denomination to those of a higher denomination, whereby upon the successive depression of a cash key and a purchase key in any one or more of the respective banks, two amounts of like value with the cash and purchase keys depressed and the amount of their difference will be displayed by said indicators.

18. The combination with units, tens and hundreds banks of keys, each bank consisting of a set of cash keys and a set of purchase keys of like values, of indicators for each of said banks representing corresponding values, intermediate mechanism to normally move said indicators in accordance with the keys depressed and adapted at predetermined intervals to move one of the indicators for the tens and hundreds banks an additional distance, whereby upon the successive depression of a cash key and a purchase key in any one or more of the respective banks, two amounts of like value with the cash and purchase keys depressed and the amount of their difference will be displayed by said indicators.

19. The combination with units, tens and hundreds banks of keys, each bank consisting of a set of cash keys and a set of purchase keys of like values, of indicators for each of said banks representing corresponding values, intermediate mechanism, including devices adapted to normally move one of the indicators in each bank in opposite directions in accordance with the value of the cash and purchase keys depressed, and adapted at predetermined intervals to move said last named indicators for the tens and hundreds banks an additional distance, whereby upon the successive depression of a cash key and a purchase key in any one or more of the respective banks, two amounts of like value with the cash and purchase keys depressed and the amount of their difference will be displayed by said indicators.

20. The combination with units, tens and hundreds banks of keys, each bank consisting of a set of cash keys and a set of purchase keys of like values, of indicators for each of said banks representing corresponding values, intermediate mechanism, including devices to normally move one of the indicators in each bank in opposite directions in accordance with the value of the cash and purchase key depressed, one number of said devices in each bank being adapted to engage and disengage with said last named indicators and at predetermined intervals to move an additional distance, whereby upon the successive depression of a cash key and a purchase key in any one or more of the respective banks, two amounts of like value with the cash and purchase keys depressed and the amount of their difference will be displayed by said indicators.

21. The combination with units, tens and hundreds banks of keys, each bank consisting of a set of cash keys and a set of purchase keys of like values, of indicators for each of said banks representing corresponding values, intermediate mechanism operated by gravity to move said indicators and adapted to carry units of a lower denomination to those of a higher denomination, means to hold said mechanism in an elevated position, and devices to elevate and release said mechanism subject to the control of said keys, whereby upon the successive depression of a cash and purchase key in any one or more of said banks and the release of said mechanism, two amounts and their difference will be displayed by said indicators.

22. The combination with units, tens and hundreds banks of keys, each bank consisting of a set of cash keys and a set of purchase keys of like values, of indicators for each of said banks representing corresponding values, intermediate mechanism operated by gravity to move said indicators, two members of said mechanism in each bank adapted to normally move one indicator in their respective banks in opposite directions in accordance with the cash and purchase keys depressed, one of said members being adapted to engage and disengage with said last named indicators and at predetermined intervals to move an additional distance, means to hold said mechanism in an elevated position, and devices to elevate and release said mechanism subject to the control of said keys, whereby upon the successive depression of a cash and purchase key in any one or more of said banks, two amounts of like value to the cash and purchase key depressed and the amount of their difference will be displayed by said indicators.

23. The combination of units, tens and hundreds banks of keys, each bank consisting of a set of cash keys and a set of purchase keys, indicators for each bank to display the amount received, the amount of purchase and the amount of change, intermediate devices between said cash keys and amount received indicators with auxiliary devices to move the change indicator in one direction, intermediate devices between said purchase keys and the amount of purchase indicators with auxiliary devices adapted to be thrown into engagement with and move said change indicators in the opposite direction, means actuated by the depression of a purchase key in any one or more banks to throw said last named auxiliary devices into engagement with all of said change indicators, and means to throw said devices out of engagement, substantially as and for the purpose specified.

24. The combination of units, tens and hundreds banks of keys, each bank consisting of a set of cash keys and a set of purchase keys, indicators for each bank to display the amount received, the amount of purchase and the amount of change, intermediate mechanism, operating by gravity, connecting the amount received indicators with said cash keys, with auxiliary devices moving therewith to move the change indicators in one direction, intermediate mechanism operated by gravity connecting the amount of purchase indicators with said purchase keys, with auxiliary devices moving therewith, adapted to be thrown into engagement with and to move said change indicators in the opposite direction, means actuated by the depression of a purchase key in any one or more banks to throw said last named auxiliary devices into engagement with all of said change indicators, means to give, at predetermined intervals, an increased movement to one or more of said last named devices, means to hold said mechanism and devices in an elevated position, and devices to elevate and release said mechanism and auxiliary devices subject to the control of said keys, whereby upon the successive depression of a cash and purchase key in any one or more of said banks, two amounts of like value to the cash and purchase keys depressed and the amount of their difference will be displayed by said indicators.

25. The combination of a set of indicators, a series of keys, a set of operating devices for said indicators released by said keys, a second set of indicators and two sets of actuating devices for said second mentioned indicators, a third set of indicators and a set of operating devices for same, means for causing said actuating devices to move in unison with each set of operating devices, and means for giving one one of the sets of said actuating devices additional predetermined movements independent of the movement of its corresponding operating device, for the purpose specified.

26. The combination of indicators and keys for different denominations, operating devices for the indicators of each denomination, a second set of indicators for different denominations and a plurality of actuating devices for each indicator, means for causing said actuating devices to move in unison with the operating devices and means for causing one of the actuating devices for each indicator above the lowest denomination to move an additional distance independent of the operating devices, for the purpose specified.

27. The combination of indicators with keys, operating devices for each indicator released by said keys, actuating devices supported by said operating devices and adapted to move therewith, a spring normally under tension for causing said actuating devices to move an additional distance, means for disconnecting the actuating and operating devices and adapted to cause said spring to give said actuating device an additional predetermined movement, and means for winding up said spring and connecting said actuating and operating devices at the end of the operation of the machine, for the purpose specified.

28. The combination with a set of indicators for indicating the amounts received, a set of operating devices for each indicator, a set of indicators for indicating amounts purchased and a set of operating devices for same, intermediate indicators for indicating the difference between said amounts, a plurality of intermediate actuating devices for each indicator, means for causing said actuating devices to move in unison with both sets of operating devices, means for disconnecting one of said actuating devices from its corresponding operating device, and means for giving said actuating device an additional movement independent of its corresponding operating device, for the purpose specified.

29. The combination of a set of indicators, a series of keys, a set of operating devices for moving said indicators, one for each indicator, an additional set of indicators and a set of actuating devices for moving said last mentioned indicators in reverse direction from the movement of said first mentioned indicators, means for causing the actuating and operating devices to move in unison and means for causing an additional movement of said last mentioned indicators in a reverse direction from the movement of the first mentioned indicators and independent of the movement of the first mentioned indicators, for the purpose specified.

30. The combination of a set of indicators, a series of keys, a set of operating devices for rotating said indicators, one for each indicator, an additional set of indicators and a set of actuating devices for said last mentioned indicators, means for causing the two sets of indicators to rotate in unison but in opposite directions, means for causing an additional movement of the last mentioned indicators independent of the first mentioned indicators, means for throwing the actuating devices out of engagement with the last mentioned indicators, for the purpose specified.

31. In a cash register, minuend indicators, subtrahend indicators, remainder indicators, means for causing the remainder indicators to move in one direction in correspondence with the minuend indicators, and then in the reverse direction in correspondence with the subtrahend indicators, and means for resetting all the indicators to zero at each operation of the machine.

32. In a machine of the character described, for temporarily indicating value received, value retained and value returned in the form of change in any special transaction, the combination of a remainder indicating drum, means for moving said drum in one direction corresponding to the minuend, and means for moving the drum in the opposite direction corresponding to the subtrahend, and means for readjusting the several indicating drums to the starting point on the beginning of an indication.

33. In a cash indicator, a set of minuend indicators, a set of subtrahend indicators, a motor for each set of indicators, a series of keys for each set of indicators adapted when depressed to release said motors to permit them to operate said indicators and determine the movement thereof, a set of remainder indicators, means for causing the remainder indicators to move in one direction in correspondence with the minuend indicators and then in a reverse direction in correspondence with the subtrahend indicators, and means for resetting all the indicators to zero and also resetting the motors at each operation of the machine.

34. In a machine having minuend indicator mechanism, a subtrahend indicator mechanism, a motor comprised in each of said mechanisms, a remainder indicator mechanism, a bank of keys for releasing and permitting the motor for the minuend indicator mechanism to operate said mechanism and determine the movement thereof, a separate bank of keys for releasing and permitting the motor for the subtrahend indicator mechanism to operate said mechanism and determine the movement thereof, and means whereby the operation of the minuend and subtrahend indicator mechanisms may operate to effect the desired adjustment of the remainder indicator mechanism.

35. In a machine of the character described for temporarily indicating value received, value retained and value returned in the form of change in any special transaction, the combination of a remainder indicator drum, a series of minuend and a series of subtrahend keys, a motor released and controlled by the minuend keys for moving said drum in one direction corresponding to the minuend, a motor released and controlled by the subtrahend keys for moving the drum in the opposite direction corresponding to the subtrahend, and means for readjusting said drum to the starting point and resetting the said motors.

36. A machine for temporarily indicating value received, value retained and value returned in the form of change in each special transaction, and consisting of a minuend indicator mechanism, a subtrahend indicator mechanism, and a remainder indicator mechanism, a series of keys for the minuend indicator mechanism and a series of keys for said subtrahend indicator mechanism, motors released and controlled by said keys for moving said minuend and subtrahend indicator mechanisms, and means whereby the operation of the minuend and subtrahend indicator mechanisms may operate the remainder indicator mechanism, and means for readjusting the several indicator mechanisms to the starting point and resetting said motors.

37. The combination with a series of keys representing the amounts of sales, a second series of keys representing the amounts paid in, a change indicator, and motors for said change indicator adapted to be released and controlled by the respective series of keys to cause said indicator to be set to a position representing the difference between the amounts set up on the respective series of keys.

869,983. SICKLE-SUPPORT FOR GRINDSTONES. WELDEN C. RARIG, Ogden, Utah. Filed Dec. 6, 1906. Serial No. 346,543.

1. The combination with a grind stone, of an upright crane, means for rotatably supporting said crane adjacent the grind stone, and a flexible member depending from the end of said crane and having means at its lower end for supporting a sickle.

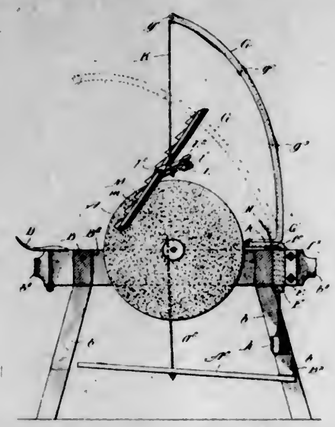
2. The combination with a grind stone, of an upright sickle supporting crane, a base casting in which said crane is rotatably supported, and a flexible member depending from said crane removably secured to the sickle at the middle thereof.

3. The combination with a grind stone, of a sickle support mounted upon the frame of the grind stone, a flexible connection guided upon and depending from said support, means for removably securing one end of said connection to a sickle, a counter balance secured to the other end of said connection, and means for adjusting said support relatively to the grind stone frame.

4. The combination with a grind stone, of a sickle supporting arm, a base mounted upon the supporting frame of the grind stone to rotate about a vertical axis, means for pivotally supporting said arm upon said base to swing in a vertical plane, and a flexible member depending from the end of said arm for supporting a sickle.

5. The combination with a grind stone, of a sickle sup-

port mounted upon the frame of the grind stone, means for adjusting said support relative to the grind stone frame, a flexible connection guided upon and depending from said arm, means for detachably securing one end of said connection to a sickle, and a counter balance secured to the other end of said connection.



6. The combination with a grind stone, of a sickle supporting arm, a base mounted upon the supporting frame of the grind stone to rotate about a vertical axis, means for pivotally supporting said arm upon said base to swing in a vertical plane, a flexible connection guided upon and depending from said arm, means for detachably securing one end of said connection to a sickle, and a counter balance secured to the other end of said connection.

7. The combination with a grind stone, of a sickle supporting arm, a base mounted upon the supporting frame of the grind stone to rotate about a vertical axis, a pair of laterally projecting flanges on said base between which a laterally projecting portion of said arm is pivoted, means for retaining said arm in adjusted positions relatively to said base, and means for supporting a sickle from the upper end of said arm.

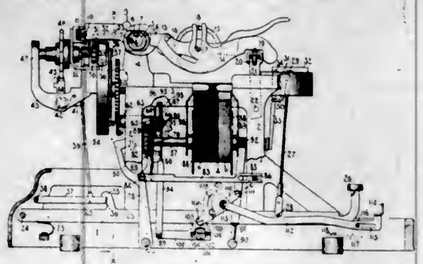
8. The combination with a grind stone, of a sickle supporting arm, a base mounted upon the supporting frame of the grind stone to rotate about a vertical axis, a pair of laterally projecting flanges on said base between which a laterally projecting portion of said arm is pivoted, means for retaining said arm in adjusted positions relatively to said base, a resilient bracket secured to said base and having a series of notches therein, an element on said arm adapted to engage said notches to retain said arm in adjusted positions relatively to the base, and means for supporting a sickle from said arm.

9. The combination with a grind stone, of a sickle supporting arm, a tubular support secured to the frame of the grind stone, a base having a depending tubular portion rotatably supported within said tubular support, a pair of laterally projecting flanges on said base between which said arm is pivoted, and means for retaining said arm in adjusted positions relatively to said base.

10. The combination with a grind stone, of a sickle supporting crane, means for rotatably supporting said crane adjacent the grind stone, a flexible member depending from the upper end of said crane, and a clamp secured to said flexible member comprising two members between which a sickle is removably supported.

11. The combination with a grind stone, of a sickle supporting arm, means for rotatably supporting said arm upon the supporting frame of the grind stone, a flexible connection guided upon and depending from said arm, a clamp comprising two members having registering holes through which said connection passes, said connection having an enlargement below the clamp to prevent the detachment of the clamp therefrom, and a counter balance secured to the other end of said flexible connection from said clamp.

869,984. TYPE-WRITING MACHINE. PERLEY E. REES, Kansas City, Mo., assignor to Densmore Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed July 26, 1906. Serial No. 327,847.



1. In a typewriting machine, the combination of a ribbon having longitudinally extending fields of different characteristics; means for automatically effecting a longitudinal feed of the ribbon irrespective of which field is in an operative position; means for automatically effecting a transverse feed of the ribbon, said last mentioned means comprising connections, some of whose elements are adapted to have their relations changed so that when one field of the ribbon is in an operative position a transverse feed of the ribbon can be automatically effected, and when another field of the ribbon is in operative position no automatic transverse feed of the ribbon shall be effected; and hand actuated controlling means for bringing the desired field of the ribbon to operative position and for changing the relations between some of said elements.

2. In a typewriting machine, the combination of a ribbon having longitudinally extending fields of different characteristics; means for automatically effecting a longitudinal feed of the ribbon irrespective of which field is in an operative position; means for automatically effecting a transverse feed of the ribbon; said last mentioned means comprising constantly united connections, certain of the elements of which are adapted to have their relations changed so that when one field of the ribbon is in an operative position a transverse feed of the ribbon can be automatically effected through said connections and when another field of the ribbon is in an operative position the connections shall be inoperative to transmit automatic transverse feed to the ribbon; and hand actuated controlling means for bringing the desired field of the ribbon to operative position and for changing the relations between said elements.

3. In a typewriting machine, the combination of ribbon spools; a ribbon having longitudinally extending fields of different characteristics; means for automatically effecting a longitudinal feed of the ribbon irrespective of which field is in an operative position; means for automatically effecting a transverse feed of the ribbon, said last mentioned means comprising convertible connections operative during the feed of the ribbon either as positive or lost-motion connections; and hand actuated means for controlling said connections and for shifting the ribbon transversely to bring the desired field to an operative position.

4. In a typewriting machine, the combination of ribbon spools; a ribbon having longitudinally extending fields of different characteristics; means for automatically effecting a longitudinal feed of the ribbon irrespective of which field is in an operative position; means for automatically effecting a transverse feed of the ribbon, said last mentioned means comprising convertible connections operative either as positive or lost-motion connections, the connections being operative as lost-motion connections when one field of the ribbon is in an operative position so that no transverse feed thereof will be effected, and operative as positive connections when another field of the ribbon is in an operative position so as to effect a transverse feed of the ribbon; and hand actuated means for converting said connections into either positive or lost motion connections as desired.

5. In a typewriting machine, the combination of ribbon spools; a ribbon having longitudinally extending fields of different characteristics; means for automatically effecting a longitudinal feed of the ribbon irrespective of which field is in an operative position; means for automatically effecting a transverse feed of the ribbon, said last mentioned means comprising a driving device and a convertible connection between said driving device and the ribbon spools to move them axially to effect a transverse feed of the ribbon when one field thereof is in an operative position, and to move certain of the connections without moving the ribbon spools axially when another field is in an operative position so that no transverse feed of the ribbon shall thus be effected; and hand-actuated means for controlling the relations between the parts of said connections to determine which field of the ribbon shall be presented in an operative position and to determine whether or not said connections shall be operative to effect an axial movement of the ribbon spools.

6. In a typewriting machine, the combination of ribbon spools; a ribbon having longitudinally extending fields of different characteristics; means for automatically effecting a longitudinal feed of the ribbon irrespective of which field is in an operative position; means for automatically effecting a transverse feed of the ribbon, said last mentioned means comprising a two-part link; and means for changing the relations between the parts of said link, a transverse feed of the ribbon being effected when the parts of the link are in certain relative positions and no transverse feed of the ribbon being effected when the parts of the link have other relative positions.

7. In a typewriting machine, the combination of a ribbon having longitudinally extending fields of different characteristics; means for automatically effecting a longitudinal feed of the ribbon irrespective of which field is in an operative position; means for automatically effecting a transverse feed of the ribbon, said last mentioned means comprising a two-part link; and means for changing the relations between the parts of said link, both parts of the link moving together as one part to effect a transverse feed of the ribbon when the parts of the link are set in certain relative positions and the parts of the link moving relatively to each other and no transverse feed of the ribbon being effected when the parts of the link are set in other relative positions.

8. In a typewriting machine, the combination of ribbon spools; a ribbon having longitudinally extending fields of different characteristics; means for automatically effecting a longitudinal feed of the ribbon irrespective of which field is in an operative position; means for automatically effecting a transverse feed of the ribbon, said last mentioned means comprising a two-part link; and means for changing the relations between the parts of said link, the two-part link working as a lost motion connection in one condition and as a positive connection in another condition.

9. In a typewriting machine, the combination of ribbon spools; a ribbon having longitudinally extending fields of different characteristics; means for automatically effecting a longitudinal feed of the ribbon irrespective of which field is in an operative position; means for automatically effecting a transverse feed of the ribbon, said last mentioned means comprising a driving device, and a connection between said driving device and the ribbon spools, said connection including a two-part link; and hand actuated means for changing the relations between the parts of said link, so that it shall work as a lost motion connection in one condition and as a positive connection in another condition.

10. In a typewriting machine, the combination of ribbon spools; a ribbon having longitudinally extending fields of different characteristics; means for automatically effecting a longitudinal feed of the ribbon irrespective of which field is in an operative position; means for automatically effecting a transverse feed of the ribbon, said last mentioned means comprising a cam, and connections between said cam and said ribbon spools to move them axially, said connections including a two-part device; and hand actuated means for changing the relations of the parts of said device so that when one of the fields of the ribbon is in an operative position said device will act as a lost motion device and no axial movement will be given the ribbon spools, and when another field of the ribbon is in the operative position it will act as a positive connection and axial movement will be given the ribbon spools.

11. In a typewriting machine, the combination of a carriage; ribbon spools; a ribbon having longitudinally extending fields of different characteristics; means controlled by the feed movement of the carriage for rotating said ribbon spools irrespective of which field of the ribbon is in an operative position; and means controlled by the feed movement of the carriage for effecting a transverse feed of the ribbon, said last mentioned means including a two-part device that operates as a positive connection to effect an axial movement of the ribbon spools when one field of the ribbon is in an operative position, and as a lost motion connection when another field of the ribbon is in an operative position so that no axial movement will be given the ribbon spools.

12. In a typewriting machine, the combination of a carriage; ribbon spools; a ribbon having longitudinally extending fields of different characteristics; means controlled by the feed movement of the carriage for rotating said ribbon spools irrespective of which field of the ribbon is in an operative position; and means controlled by the feed movement of the carriage for effecting a transverse feed of the ribbon, said last mentioned means comprising a cam, a two-part device actuated by said cam, and connections between said two-part device and the ribbon spools; and means for changing the relations between the members of said two-part device so as to render it either a positive connection or a lost motion connection.

13. In a typewriting machine, the combination of a carriage; ribbon spools; a ribbon having longitudinally extending fields of different characteristics; means controlled by the feed movement of the carriage for rotating said ribbon spools irrespective of which field of the ribbon is in an operative position; and means controlled by the feed movement of the carriage for effecting a transverse feed of the ribbon, said last mentioned means comprising a driving device, a rock shaft actuated by said driving device, and a two-part link between said rock-shaft and the ribbon spools; and means for changing the relations between the members of said link so that it will act either as a positive or a lost motion connection between the parts as may be desired.

14. In a typewriting machine, the combination of ribbon spools; a ribbon having longitudinally extending fields of different characteristics; means for automatically rotating said ribbon spools irrespective of which field of the ribbon is in an operative position; and means for automatically effecting a transverse feed of the ribbon, said last mentioned means comprising a driving device, and connections between said driving device and ribbon spools to move them axially, said connections being convertible into either a lost motion connection or a positive connection, as may be desired.

15. In a typewriting machine, the combination of ribbon spools; a ribbon having longitudinally extending fields of different characteristics; means for automatically rotating said ribbon spools irrespective of which field of the ribbon is in an operative position; and means for automatically effecting a transverse feed of the ribbon, said last mentioned means comprising a driving device and connections between said driving device, and ribbon spools to move them axially, said connections being convertible into either lost motion connections or positive connections, as may be desired.

16. In a typewriting machine, the combination of ribbon spools; a ribbon having longitudinally extending fields of different characteristics; means for automatically rotating said ribbon spools irrespective of which field of the ribbon is in an operative position; and means for automatically effecting a transverse feed of the ribbon, said last-mentioned means comprising an automatically actuated driving device, a rock shaft actuated by said driving device, and a two-part link between said rock shaft and the ribbon spools; and hand actuated means for changing the relations of the parts of said link so that it will act either as a positive or a lost motion connection.

17. In a typewriting machine, the combination of a carriage; ribbon spools; a ribbon having longitudinally extending fields of different characteristics; means controlled by the feed movement of the carriage for rotating said ribbon spools irrespective of which field of the ribbon is in an operative position; means controlled by the feed movement of the carriage for effecting a transverse feed of the ribbon, said last-mentioned means comprising a cam that is turned by a feed movement of the carriage, a rock shaft actuated by said cam, and a two-part link between the rock shaft and said ribbon spools for moving them axially; and hand actuated controlling means cooperating with said link and operative thereon to cause it to act either as a lost motion connection and render it ineffective to produce an axial movement of the ribbon spools when one field of the ribbon is in an operative position, or to act as a positive connection to effect an axial movement of the spools when another field of the ribbon is in an operative position, as may be desired.

18. In a typewriting machine, the combination with the carriage-driving mechanism, of a ribbon having longitudinally extending fields, and means for feeding the ribbon transversely when one field is in use, said means including permanently connected devices between the ribbon and the carriage-driving mechanism and movable relatively by hand to render said means inoperative on the ribbon.

19. In a typewriting machine, the combination with the carriage-driving mechanism of a ribbon having longitudinally extending fields, and means for feeding the ribbon transversely when one field is in use, said means including two pivoted devices permanently connected together and permanently connected with the carriage-driving mechanism and ribbon and movable angularly by hand to render said means inoperative on the ribbon.

20. In a typewriting machine, the combination with the carriage-driving mechanism of a ribbon having longitudinally extending fields, means for feeding the ribbon transversely when one field is in use, said means including two pivoted devices permanently connected together and with the carriage-driving mechanism and movable angularly by hand to render said means inoperative on the ribbon, and means for feeding the ribbon longitudinally irrespective of which field is in use.

21. In a typewriting machine, the combination with the carriage-driving mechanism, of a ribbon having longitudinally extending fields, and means for feeding the ribbon transversely when one field is in use, said means including a link composed of parts movable relatively by hand to render said means inoperative on the ribbon.

22. In a typewriting machine, the combination with the carriage-driving mechanism, of a ribbon having longitudinally extending fields, and means for feeding the ribbon transversely when one field is in use, said means including a link composed of parts pivoted together between the ends of the link and to coöperative devices at the ends of the link, the parts of said link being angularly movable by hand to render said means inoperative on the ribbon.

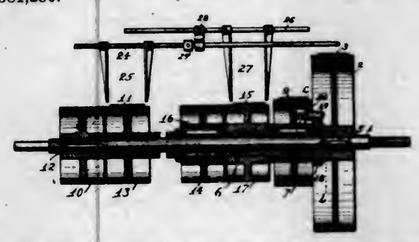
23. In a typewriting machine, the combination with the carriage-driving mechanism, of a ribbon having longitudinally extending fields, means for feeding the ribbon transversely when one field is in use, said means including a link composed of parts pivoted together between the ends of the link and to coöperative devices at the ends of the link, the parts of said link being angularly movable by hand to render said means inoperative on the ribbon, and means for feeding the ribbon longitudinally irrespective of which field is in use.

24. In a typewriting machine, the combination with the carriage-driving mechanism, of a ribbon having longitudinally extending fields, and means for feeding the ribbon transversely when one field is in use, said means including a link composed of parts pivoted together between the ends of the link and to coöperative devices at the ends of the link, one of said parts containing a slot and the other having on it a stud extending through said slot, and the parts of said link being angularly movable by hand to render said means inoperative on the ribbon.

25. In a typewriting machine, the combination with carriage-driving mechanism, of a ribbon having longitudinally extending fields, means for feeding the ribbon transversely when one field is in use, said means including a link composed of parts pivoted together between the ends of the link and to coöperative devices at the ends of the link, one of said parts containing a slot and the other having on it a stud extending through said slot, and the parts of said link being angularly movable by hand to render said means inoperative on the ribbon, and means for feeding the ribbon longitudinally irrespective of which field is in use.

26. In a typewriting machine, the combination of a ribbon guide, a ribbon having longitudinally extending fields of different characteristics, means for bringing and maintaining either field at the printing point and for feeding the ribbon transversely when one field is in use, said means including a link composed of parts movable relatively by hand to render said means inoperative on the ribbon.

869,985. SELECTIVE SPEED DEVICE. ERNST RICHTER, Cincinnati, Ohio, assignor to The G. A. Gray Company, Cincinnati, Ohio. Filed June 28, 1907. Serial No. 381,250.



1. A selective speed device comprising a first rotary part to turn at constant speed, a second rotary part concentric therewith to turn at selective speed, transmission mechanism for turning said first rotary part at its constant speed, transmission mechanism for turning said second rotary part at speed greater than that of the first rotary part, means for throwing said last-mentioned transmitting mechanism out of effective action, and pawl and ratchet mechanism connecting the first and second rotary parts and serving to transmit rotation from the former to the latter, combined substantially as set forth.

2. A selective speed device comprising a first rotary part to turn at constant speed, a second rotary part concentric therewith to turn at selective speed, transmission mechanism for turning said first rotary part at its constant speed, transmission mechanism for turning said second rotary part at speed greater than that of the first rotary part, means for throwing said last-mentioned transmitting mechanism out of effective action, a ratchet carried by the first rotary part, and a pawl carried by the second rotary part and serving to transmit rotation from the first to the second rotary part, combined substantially as set forth.

3. A selective speed device comprising a first rotary part to turn at constant speed, a second rotary part concentric therewith to turn at selective speed, transmission mechanism for turning said rotary part at its constant speed, transmission mechanism for turning said second rotary part at speed greater than that of the first rotary part, means for throwing said last-mentioned transmitting mechanism out of effective action, a ratchet carried by the first rotary part, a pawl carried by the second rotary part to serve in transmitting rotation from the first to the second rotary part, and an adjustable spring pressing the pawl into engagement with the ratchet and adapted to yield and permit the pawl to be free of the ratchet when the second rotary part is moving at its superior speed, combined substantially as set forth.

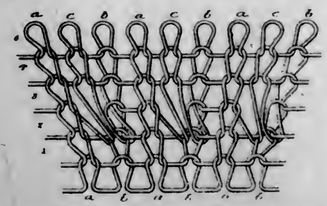
4. A selective speed device comprising a shaft, transmitting mechanism for driving the shaft at constant speed, a pulley fast on the shaft to transmit motion therefrom at constant speed, a pulley loose relative to the shaft for transmitting motion therefrom at selective speed, disconnectible transmitting mechanism for driving the latter pulley at speed greater than that of the shaft, and pawl and ratchet mechanism connecting the shaft and second pulley and serving to transmit rotation from the shaft to the second pulley when the disconnectible transmitting mechanism is out of effective action, combined substantially as set forth.

5. A selective speed device comprising a shaft, transmitting mechanism for turning the shaft at constant speed, a first pulley fast on the shaft for transmitting motion therefrom at constant speed, a sleeve loose on the shaft, a second pulley fast on the sleeve, disconnectible transmitting mechanism for turning the sleeve at a higher rate of speed than that of the shaft, and pawl and ratchet mechanism connecting the shaft and second pulley and serving to transmit rotation from the former to the latter when said disconnectible transmitting mechanism is out of effective action, combined substantially as set forth.

6. A selective speed device comprising a shaft, a first pulley fast thereon for transmitting motion therefrom at constant speed, a second pulley loose on the shaft for transmitting motion therefrom at selective speed, pawl and ratchet mechanism connecting the shaft and second pulley to serve in transmitting rotation from the formed to the latter at the lower speed for the second pulley, transmitting mechanism for giving motion to the shaft at constant speed, transmitting mechanism for giving motion to the second pulley at speed greater than that of the shaft, mechanism for throwing into and out of effective action at will the transmitting mechanism which drives the shaft at constant speed, mechanism for throwing into and out of effective action at will the transmitting mechanism which gives to the second pulley its high speed of motion, and connections between said two throwing mechanisms to cause the throwing into effective action of the transmitting mechanism for driving the second pulley at its high speed to bring about the throwing into action of the mechanism for transmitting motion to the shaft at its constant speed, combined substantially as set forth.

7. A selective speed device comprising a shaft, a pulley fast thereon for transmitting motion therefrom, a main driving pulley fast on the shaft for transmitting motion thereto, a loose pulley mating with the main driving pulley, a belt-shipper for controlling the main driving belt coöperating with the main driving pulley, a sleeve loose on the shaft, a second transmitting pulley fast on the sleeve for transmitting motion from the shaft at selective speeds, pawl and ratchet mechanism connecting the shaft and the second transmitting pulley, a secondary driving pulley fast on the sleeve, a loose pulley mating with the secondary driving pulley, a belt-shipper for controlling the secondary driving belt, and a connection between the two belt shippers to cause the throwing of the secondary belt to the secondary driving pulley to bring about the throwing of the main driving belt to the main driving pulley, combined substantially as set forth.

869,986. RIB-KNITTED FABRIC. ROBERT W. SCOTT, Leeds Point, N. J., assignor of one-half to Louis N. D. Williams, Ogontz, Pa. Filed Oct. 25, 1905. Serial No. 284,395.



1. A machine-knit ribbed fabric comprising two webs, one having wales in excess of those in the other, some of the wales of each face extending throughout both webs, and other wales of each face being interknitted with wales of the other face at the point of change.

2. A machine-knit ribbed fabric comprising two webs, one having wales in excess of those in the other, some of the wales of each face extending throughout both webs, and other wales of either face having stitches drawn only through wales of the other face where the change of web is effected.

3. A machine-knit ribbed fabric comprising two webs, one having wales in excess of those in the other, some of the wales of each face extending throughout both webs and stitches of wales of each face being drawn through a single stitch of a preceding course at the point of change.

4. A seamless, tubular, machine-knit ribbed fabric comprising two webs, one having wales in excess of those in the other, some of the wales of each face extending throughout both webs, and other wales of each face being interknitted with wales of the other face at the point of change.

5. A seamless, tubular, machine-knit ribbed fabric comprising two webs, one having wales in excess of those in the other, some of the wales of each face extending throughout both webs, and other wales of either face having stitches drawn only through wales of the other face where the change of web is effected.

6. A seamless, tubular, machine-knit ribbed fabric comprising two webs, one having wales in excess of those in the other, some of the wales of each face extending throughout both webs, and stitches of wales of each face being drawn through a single stitch of a preceding course at the point of change.

7. A machine-knit ribbed fabric comprising two webs, and having a yarn common to both, one of the webs having wales in excess of those in the other, some of the wales of each face extending throughout both webs, and other wales of each face being interknitted with wales of the other face at the point of change.

8. A machine-knit ribbed fabric comprising two webs, and having a yarn common to both, one of the webs having wales in excess of those in the other, some of the wales of each face extending throughout both webs, and other wales of either face having stitches drawn only through wales of the other face where the change of web is effected.

9. A machine-knit ribbed fabric comprising two webs, and having a yarn common to both, one of the webs having wales in excess of those in the other, some of the wales of each face extending throughout both webs and stitches of wales of each face being drawn through a single stitch of a preceding course at the point of change.

10. A seamless, tubular, machine-knit ribbed fabric comprising two webs having a yarn common to both, one of the webs having wales in excess of those in the other, some of the wales of each face extending throughout both webs, and other wales of each face being interknitted with wales of the other face at the point of change.

11. A seamless, tubular, machine-knit ribbed fabric comprising two webs having a yarn common to both, one of the webs having wales in excess of those in the other, some of the wales of each face extending throughout both webs, and other wales of either face having stitches drawn only through wales of the other face where the change of web is effected.

12. A seamless, tubular, machine-knit ribbed fabric comprising two webs having a yarn common to both, one of the webs having wales in excess of those in the other, some of the wales of each face extending throughout both webs and stitches of wales of each face being drawn through a single stitch of a preceding course at the point of change.

869,987. MEANS FOR KEEPING SWITCH AND SIGNAL APPARATUS FREE FROM SNOW AND ICE. FRANCIS G. SHAW, Boston, Mass., assignor to The International Switch & Signal Company, Boston, Mass., a Corporation of Maine. Filed Apr. 29, 1907. Serial No. 370,802.

1. In a device for preventing switches from becoming frozen, a casing constituting a heating chamber extending

beneath the rails between the ties and supported independently of the ties, and heat-generating means within the chamber.



2. In a device for preventing switches from becoming frozen, a casing constituting a heating chamber extending beneath the rails between the ties and supported independently of the ties, and heat-generating means within the chamber, said chamber having openings adjacent to the movable parts of the switch.

3. In apparatus of the class described, the combination with a heating chamber made in sections and arranged to be placed beneath the rails of a switch between the ties and to be supported independently of the ties, of means within the chamber for generating heat, the sections of the chamber being separated to allow the heat to escape.

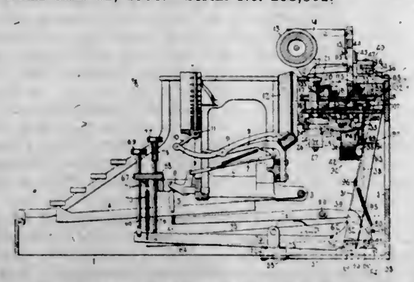
4. In an apparatus of the class described the combination with a casing open at its bottom and adapted to rest on the ground between the ties of a railroad track, of heat-generating means within the casing.

5. In an apparatus of the class described, the combination with a casing V-shaped in cross section and adapted to be received between the ties of a railroad track, of heat-generating means within the casing.

6. In an apparatus of the class described, the combination with a sectional casing substantially V-shape in cross section and adapted to be received between the ties of a railroad track, of heat-generating means within the casing.

7. In a device of the class described, the combination with chamber sections each substantially V-shape in cross section and adapted to be received between the ties of a railroad track, of heat-generating means within the casing.

869,988. TYPE-WRITING MACHINE. ARTHUR W. SMITH, New York, N. Y., assignor to Yost Writing Machine Company, Ilion, N. Y., a Corporation of New York. Filed Jan. 12, 1906. Serial No. 295,801.



1. In a typewriting machine and in a tabulating mechanism, the combination of a releasable carriage; carriage feeding mechanism; a plurality of column stops; a co-operating stop number; and a column selecting member operative by said stop member to effect the release of the carriage and to cause said stop member to coöperate with a predetermined column stop to arrest the carriage.

2. In a typewriting machine and in a tabulating mechanism, the combination of a releasable carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; hand operated mechanism for variably setting said column selecting member to enable it to select predetermined columns; and a movable stop member for coöperating with said column stops, said column selecting member being adapted, after it has been set, to be actuated by said stop member to cause the release of the carriage and said stop member being adapted to coöperate with the particular column stop predetermined by the column selecting member.

3. In a typewriting machine and in a tabulating mechanism, the combination of a releasable carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; key-controlled column selecting devices adapted to set said column selecting member for different columns; and a movable stop member operative to actuate said column selecting member to cause the release of the carriage and the coöperation thereafter of said stop member with a predetermined column stop to arrest the carriage.

4. In a typewriting machine and in a tabulating mechanism, the combination of a releasable carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; key-controlled column selecting devices adapted to move said column selecting member different extents; means for maintaining said member in the positions to which it is moved by said column selecting devices; and a movable stop member operative to actuate said column selecting member after it has been set, in order to cause the release of the carriage and the coöperation thereafter of said stop member with a predetermined column stop.

5. In a typewriting machine and in a tabulating mechanism, the combination of a releasable carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; key-controlled column selecting devices adapted to move said column selecting member different extents; means for maintaining said member in the positions to which it is moved by said column selecting devices; a movable stop member operative to actuate said column selecting member after it has been so set, in order to cause the release of the carriage and the coöperation thereafter of said stop member with a predetermined column stop; and means for causing the arrest of said stop member after it has been moved to position to coöperate with said predetermined column stop.

6. In a typewriting machine and in a tabulating mechanism, the combination of a releasable carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; key-controlled column selecting devices adapted to move said column selecting member different extents; means for maintaining said member in the positions to which it is moved by said column selecting devices; a movable stop member operative to actuate said column selecting member after it has been so set, in order to cause the release of the carriage and the coöperation thereafter of said stop member with a predetermined column stop; and means for limiting the movement of said column selecting member when actuated by said stop member, said means thereby serving to arrest said stop member when it has reached a position to coöperate with a predetermined column stop.

7. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; key controlled column selecting devices adapted to move said column selecting member different extents; means for maintaining said member in the positions to which it is moved by said column selecting devices; a movable stop member operative to actuate said column selecting member after it has been so set; and a carriage releasing member adapted to be actuated by said column selecting member to release the carriage so as to cause the coöperation of said stop member with a predetermined column stop.

8. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; key controlled column selecting devices adapted to move said column selecting member different extents; means for maintaining said member in the positions to which it is moved by said column selecting devices; a movable stop member operative to actuate said column selecting member after it has been so set; and a carriage releasing member adapted to be actuated by said column selecting member to release the carriage so as to cause the coöperation of said stop member with a predetermined column stop, said carriage releasing member serving as a stop to arrest said stop member after it has been moved to position to coöperate with said predetermined column stop.

9. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a coöperating movable stop member comprising a stop part and an actuating arm; and means including a column selecting member operative by the actuating arm of said stop member to effect the release of the carriage and to cause the stop part of said stop member to coöperate with a predetermined column stop to arrest the carriage.

10. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; hand operated mechanism for variably setting said column selecting member; and a movable stop member comprising a stop part and an actuating arm, said column selecting member, after it has been set, being operative by the actuating arm of said stop member to cause the release of the carriage and the coöperation thereafter of the stop part of said stop member with a predetermined column stop in order to arrest the carriage.

11. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; key controlled column selecting devices adapted to move said column selecting member different extents; means for maintaining said member in the positions to which it is moved by said column selecting devices; and a movable stop member comprising a stop part and an actuating arm, the arm of said stop member being adapted to operate said column selecting member after it has been set and thereby to cause the release of the carriage and the coöperation of the stop part of said stop member with a predetermined column stop.

12. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; key controlled column selecting devices adapted to move said column selecting member different extents; means for maintaining said member in the positions to which it is moved by said column selecting devices; a stop member comprising a stopping part and an actuating arm, said arm being adapted to operate said column selecting member after it has been set and thereby to cause the release of the carriage and the coöperation of the stopping part of said stop member with a predetermined column stop; and means for causing the arrest of said stop member after it has been moved to position to coöperate with said predetermined column stop.

13. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; key controlled column selecting devices adapted to move said column selecting member different extents; means for maintaining said member in the positions to which it is moved by said column selecting devices; a member adapted to release the carriage from its feeding mechanism; and a movable stop member comprising a stopping part and an actuating arm, said arm being adapted to operate said column selecting member after it has been set and thereby to cause said column selecting member to coöperate with said carriage releasing member to effect the release of the carriage and the coöperation between the stopping part of said stop member with a predetermined column stop.

14. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; key controlled column selecting devices adapted to move said column selecting member different extents; means for maintaining said member in the positions to which it is moved by said column selecting devices; a member adapted to release the carriage from its feeding mechanism; a stop member comprising a stopping part and an actuating arm, said arm being adapted to operate said column selecting member after it has been set and thereby to cause said column selecting member to coöperate with said carriage releasing member to effect the release of the carriage and the coöperation between the stopping part of said stop member and a predetermined column stop, said carriage releasing member being adapted to serve as a relatively fixed abutment to arrest the actuating arm of said stop member after the latter has been moved to such a position that its stopping part will coöperate with said predetermined column stop.

15. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a column selecting member adapted to be moved variable extents in two directions at angles to each other; and a stop adapted to be moved variable extents to coöperate with a predetermined column stop, the extent of effective movement of the variably movable stop being regulated by said column selecting member.

16. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a column selecting member; means for moving said member variable extents in one direction; means for moving said member variable extents in another direction; and a stop movable variable extents to positions for coöperation with a predetermined column stop, the extent of effective movement of the variably movable stop being regulated by said column selecting member.

17. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a column selecting member; means for moving said member variable extents in one direction; means for moving said member in another direction variable distances, the extent of which depends on the extent of movement of said member by said first recited moving means; and a stop movable variable extents to position for coöperation with a predetermined column stop, the extent of effective movement of the variably movable stop being regulated by said column selecting member.

18. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a column selecting member; a plurality of key controlled devices each adapted to move said column selecting member in one direction to an extent different from that to which said member is moved by the other key controlled devices; means for moving said member variable extents in another direction; and a stop movable variable extents to a position for coöperation with a predetermined column stop, the extent of effective movement of the variably movable stop being regulated by said column selecting member.

19. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a column selecting member; mechanism controlled by said keys for moving said column selecting member in one direction to an extent different from that to which said member is movable by the others of said keys; other key controlled mechanism for moving said column selecting member variable extents in another direction; and a stop movable variable extents to a position for coöperation with a predetermined column stop, the extent of effective movement of the variably movable stop being regulated by said column selecting member.

20. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a column selecting member; means for moving said member variable extents in one direction; means for maintaining said member in the position to which it has been so moved; means for moving the said member, after it has been set, variable extents in another direction; and a stop movable variable

extents to a position for coöperation with a predetermined column stop, the extent of effective movement of the variably movable stop being regulated by said column selecting member.

21. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a column selecting member; means for moving said member variable extents in one direction; means for maintaining said member in the position to which it has been so moved; means for moving said member in another direction variable distances, the extent of which depends on the extent of movement of said member by said first recited means; and a stop movable variable extents to position for coöperation with a predetermined column stop, the extent of effective movement of the variably movable stop being regulated by said column selecting member.

22. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a column selecting member; a plurality of key controlled devices, each adapted to move said member in one direction to an extent different from that to which said member is movable by the others of said key controlled devices; means for maintaining said column selecting member to the position to which it has been so moved; means for thereafter moving said member variable extents in another direction; and a stop movable variable extents to position for cooperation with a predetermined column stop, the extent of effective movement of the variably movable stop being regulated by said column selecting member.

23. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops, a column selecting member; a plurality of column selecting keys; mechanism controlled by said keys for moving said column selecting member in one direction to an extent different from that to which said member is movable by the others of said keys; means for maintaining said column selecting member in the position to which it has been so moved; other key controlled means for moving said column selecting member, after it has been so set, variable extents in another direction; and a stop movable variable extents to position for coöperation with a predetermined one of said column stops, the extent of effective movement of the variably movable stop being regulated by said column selecting member.

24. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; means for moving said member variable extents in one direction; means for moving said member variable extents in another direction; a stop movable variable extents to position for coöperation with a predetermined one of said column stops; and means for releasing the carriage from its feeding mechanism, said means being actuated by said column selecting member after the stop has been moved to a position where it will coöperate with said predetermined column stops.

25. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; means for moving said member variable extents in one direction; means for moving said member in another direction variable distances, the extent of which depends upon the extent of movement of said member by said first recited means; a coöperating stop movable variable extents to position for coöperation with a predetermined one of said column stops; and means for releasing the carriage from its feeding mechanism, said means being actuated by said column selecting member after said coöperating stop has been moved to a position where it will co-act with said predetermined column stop.

26. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; a plurality of key controlled devices each adapted to move said column selecting member in one direction to an extent different from that to which said member is movable by the others of said devices; means for moving said member variable extents in another direction; a coöperating stop movable variable extents to position for coöperation with a selected one of said column stops; and means for releasing the carriage from its feeding mechanism, said means being actuated by said column selecting member after said coöperating stop has been moved to a position where it will coöperate with a predetermined column stop.

27. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; a plurality of column selecting keys; mechanism controlled by each of said keys for moving said column selecting device in one direction to an extent different from that to which it is moved by the others of said keys; other key controlled mechanism for moving said column selecting member variable extents in another direction; a coöperating stop movable variable extents to position for coöperation with a predetermined one of said column stops; and means for releasing the carriage from its feeding mechanism, said means being operative by said column selecting member, after said coöperating stop has been moved to a position where it will coöperate with said predetermined column stop.

28. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; a plurality of column selecting keys; mechanism controlled by each of said keys for moving said column selecting member in one direction to an extent different from that to which said member is movable by the others of said keys; means for maintaining said column selecting member in position to which it has been so positioned; other key controlled mechanism for moving said column selecting member, after it has been so set, variable extents in another direction; a coöperative stop movable variable extents to position for coöperation with a predetermined one of said column stops; and means for releasing the carriage from its feeding mechanism, said means being operative by said column selecting member after said coöperating stop has been moved to a position where it will coöperate with said predetermined column stop.

29. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a member comprising a plurality of column stops; a coöperative stop member, one of said stop members being movable relatively to the other to position said members so that said coöperative stop may cooperate with a predetermined column stop; and a column selecting element movable by the movable one of said first recited members and serving to regulate the extent of effective movement of said movable member.

30. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a member comprising a plurality of column stops having contact surfaces in different paths of movement; a coöperative stop member, one of said members being movable different extents relatively to the other to position said member so that said coöperative stop, skipping any intervening column stops, may cooperate with a predetermined column stop; and a column selecting element movable by the movable one of said members and serving to regulate the extent of effective movement of said movable member.

31. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a member comprising a plurality of column stops having contact surfaces in different paths of movement; a coöperative stop member, one of said members being movable different extents relatively to the other to position said member so that said coöperative stop, skipping any intervening column stops, may coöperate with a predetermined column stop; and a column selecting element movable by said movable members, said column selecting element having a plurality of contact portions, each adapted to coöperate with the carriage releasing means at a different point in the path of movement of said element and serving to regulate the extent of effective movement of said movable member.

32. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a member comprising a plurality of column stops having contact surfaces in different paths of movement; a coöperative stop member, one of said members being movable different extents relatively to the other to position said member so that said coöperative stop, skipping any intervening column stops, may coöperate with a predetermined column stop; a column selecting element movable by said movable member, said column selecting element having a plurality of contact portions, each adapted to coöperate with the carriage releasing means at a different point in the path of movement of said element; and means to render said carriage releasing member a relatively fixed abutment which coöperates with the contact portions of said column selecting element to limit the movement of said movable member.

33. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a member adapted to release said carriage from its feeding mechanism; a plurality of column stops; a coöperative stop member; a column selecting element or member comprising a plurality of contact portions; means for positioning said element so that when subsequently operated a predetermined one of said contact portions will be caused to coöperate with said carriage releasing member, said carriage releasing member being adapted to limit the movement of said column selecting element when the latter is subsequently operated.

34. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a member adapted to release said carriage from its feeding mechanism; a plurality of column stops; a coöperative stop member; a column selecting element or member operative by said coöperative stop member and comprising a plurality of contact portions; means for initially moving said element to position to cause a predetermined one of said contact portions to coöperate with said carriage releasing member, said carriage releasing member being adapted to limit the movement of said column selecting element when the latter is subsequently operated by said coöperative stop member.

35. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; carriage releasing mechanism; a plurality of column stops; a coöperative stop; column selecting means; a plurality of keys for operating said means; means for locking said keys, when actuated, in operative position and for unlocking the locked key when any other of said keys is operated.

36. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a cooperative stop; column selecting means adapted to cause a coöperation between said coöperative stop and a predetermined column stop when the carriage is released; a plurality of column keys for operating said means; and means for locking said column keys in operative position and for unlocking the locked column key when another one of said column keys is operated.

37. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a cooperative stop; column selecting means adapted to be set or locked to cause a coöperation between said cooperative stop and a predetermined column stop when the carriage is released, said means being adapted to remain set until it is operated to bring about a cooperative relation between said coöperative stop and another one of said column stops.

38. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a cooperative stop; column selecting means adapted to be set or locked to cause a coöperation between said cooperative stop and a predetermined column stop when the carriage is released; a plurality of column keys for operating said column selecting means, said column selecting means being adapted to be set for one column when one of said column keys is operated and to remain so set until another column key is operated.

39. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a cooperative stop; a column selecting member; a plurality of key controlled devices for variably operating said member; and means for locking said member in operative position when moved thereto by one of said devices, said locking means being adapted to unlock said member when another of said devices is operated.

40. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a cooperative stop; a column selecting member; a plurality of key controlled devices for variably operating said member; and means for locking said devices one at a time in operative position and thereby setting said column selecting member, the locked device being unlocked when another of said devices is operated.

41. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a set of cooperative denomination stop members; and a column selecting member adapted to be actuated by said denomination stop members to effect the release of the carriage and to cause the actuated denomination stop member to cooperate with a predetermined column stop to arrest the carriage at a predetermined denominational position in a predetermined columnar field.

42. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; key operated mechanism for variably setting said column selecting member; and a set of denomination stop members, said column selecting member being adapted, after it has been set, to be actuated by said denomination stop members to cause the release of the carriage and the coöperation thereafter of the actuated denomination stop member with a predetermined column stop in order to arrest the carriage in desired denominational position.

43. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; key controlled column selecting devices adapted to set said column selecting member for different columns; a set of denomination stop members, each adapted to actuate said column selecting member to cause the release of the carriage and the coöperation thereafter of the actuated denomination stop member with a predetermined column stop.

44. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; key controlled column selecting devices adapted to move said column selecting member different extents; means for maintaining said member in position when so moved; and a set of denomination stop members adapted to actuate said column selecting member, after said member has been so set, to effect the release of the carriage and the coöperation of the actuated denomination stop member with a predetermined column stop.

45. In a typewriting machine and in a tabulating mech-

anism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; key controlled column selecting devices adapted to move said member different extents; means for maintaining said member in position when so moved; a set of denomination stop members adapted to actuate said column selecting member after it has been set, in order to effect the coöperation of the actuated column stop with a predetermined column stop; and means for causing the arrest of said denomination stop member after it has been moved to coöperative position.

46. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a set of cooperating denomination stop members, each comprising a stop part and an actuating arm; and a column selecting member adapted to be operated by the actuating arms of said denomination stop members to effect the release of the carriage and to cause the stop part of the actuated denominational stop member to coöperate with a predetermined column stop to arrest the carriage at a predetermined denominational position in a predetermined column.

47. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; key operated means for variably setting said column selecting member; and a set of denomination stop members each comprising a stop part and an actuating arm, said column selecting member being adapted, after it has been set, to be operated by the actuating arms of said denomination stop members to cause the release of the carriage and the coöperation thereafter of the stop part of the actuated denomination stop member with a predetermined column stop in order to arrest the carriage at a predetermined donominational position in a predetermined column.

48. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; key controlled column selecting devices adapted to move said column selecting member different extents; means for maintaining said member in the positions to which it is so moved; and a set of denomination stop members, each comprising a stop part and an actuating arm, the arms of said denomination stop members being adapted to operate said column selecting member, after it has been set, and thereby to cause the release of the carriage and the coöperation of the stop part of the actuated denomination stop member with a predetermined column stop, whereby the carriage is arrested at a predetermined denominational position in a predetermined column.

49. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; key controlled column selecting devices adapted to move said member different extents; means for maintaining or setting said member in the positions to which it is so moved; a set of denomination stop members, each comprising a stop part and an actuating arm, said arms being adapted to operate said column selecting member after it has been set, and thereby to cause the release of the carriage and the coöperation of the stop part of the actuated denomination stop member with a predetermined column stop; and means for causing the arrest of the actuated denomination stop member after it has been moved to position to coöperate with said predetermined column stop.

50. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; key controlled column selecting devices adapted to move said member different extents; means for maintaining said member in the positions to which it is so moved; a member adapted to release the carriage from its feeding mechanism; and a set of denomination stop members, each comprising a stop part and an actuating arm, said arms being adapted to operate said column selecting member after it has been set, and thereby to cause said member to coöperate with said carriage releasing member to effect the release of the carriage and the cooperation between the stop part of the actuated denomination stop member with a predetermined column stop.

51. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; key controlled column selecting devices adapted to move said member different extents; means for maintaining or setting said member in the positions to which it is so moved; a member adapted to release the carriage from its feeding mechanism; a set of denomination stop members, each comprising a stop part and an actuating arm, said arms being adapted to operate said column selecting member after it has been set and thereby to cause said member to coöperate with said carriage releasing member to effect the release of the carriage and the coöperation between the stop part of the actuated denomination stop member and a predetermined column stop, said carriage releasing member being adapted to serve as a relatively fixed abutment to arrest the actuated arm of said actuated denomination stop member after the latter has been moved to such a position that its stop part will coöperate with said predetermined column stop.

52. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a column selecting member adapted to be moved variable extents in two directions at angles to each other; and a set of denomination stops adapted to be moved variable extents to coöperate with predetermined column stops, the extent of effective movement of said denomination stops being regulated by said column selecting member.

53. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a column selecting member; means for moving said member variable extents in one direction; means for moving said member variable extents in another direction; and a set of denomination stops movable variable extents to positions for coöperation with predetermined column stops, the extent of effective movement of said denomination stops being regulated by said column selecting member.

54. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a column selecting member; means for moving said member variable extents in one direction; means for moving said member in another direction variable distances, the effective extents of which depend on the extent of movement of said member by said first recited moving means; and a set of denomination stops movable variable extents for coöperation with predetermined column stops, the extent of movement of said denomination stops being regulated by said column selecting member.

55. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said mechanism; a plurality of column stops; a column selecting member; a plurality of key controlled devices adapted to move said member in one direction different extents; means for moving said member variable extents in another direction; and a set of denomination stops movable variable extents to positions for coöperation with predetermined column stops, the extent of movement of said denomination stops being regulated by said column selecting member.

56. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said mechanism; a plurality of column stops; a column selecting member; a plurality of key controlled devices adapted to move said member in one direction different extents; other key controlled mechanism for moving said member

variable extents in another direction; and a set of denomination stops movable variable extents to positions for coöperating with predetermined column stops, the extent of movement of said denomination stops being regulated by said column selecting member.

57. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a column selecting member; means for moving said member variable extents in one direction; means for maintaining said member in the position to which it has been so moved; means for moving said member, after it has been set, variable extents in another direction; and a set of denomination stops movable variable extents to positions for coöperation with predetermined column stops, the extent of movement of said denomination stops being regulated by said column selecting member.

58. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; a plurality of column selecting keys; mechanism controlled by said keys for moving said member different extents in one direction; means for maintaining said column selecting member in the position to which it has been so moved; other key controlled means for moving said column selecting member, after it has been so set, variable extents in another direction; and a set of denomination stops movable variable extents to positions for coöperation with predetermined column stops, the extent of movement of said denomination stops being regulated by said column selecting member.

59. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; means for moving said member variable extents in one direction; means for moving said member variable extents in another direction; a set of denomination stops movable variable extents to positions for coöperation with predetermined column stops; and means for releasing the carriage from its feeding mechanism, said means being operative by said column selecting member, after the actuated denomination stop has been moved to a position to coöperate with a predetermined column stop.

60. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a plurality of column stops; a column selecting member; a plurality of column selecting keys; mechanism controlled by said keys for moving said member different extents in one direction; means for maintaining said column selecting member in positions to which it may be so moved; other key controlled mechanism for moving said column selecting member, after it has been set, variable extents in another direction; a set of denomination stops movable variable extents for coöperation with predetermined column stops; and means for releasing the carriage from its feeding mechanism, said means being operative by said column selecting member after the actuated denomination stop has been moved to a position where it will coöperate with a predetermined column stop.

61. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a member adapted to release said carriage from its feeding mechanism; a plurality of column stops; a set of coöperative denomination stops; a column selecting element or member comprising a plurality of contact portions; and means for moving said member to position to cause a predetermined one of said contact portions to coöperate with said carriage releasing member, said carriage releasing member being adapted to limit the movement of said column selecting element when the latter is subsequently operated, whereby a selected denomination stop is caused to coöperate with a predetermined column stop.

62. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; a member adapted to release said carriage from its feeding mechanism; a plurality of column stops; a set of coöperative denomination stop members; a column selecting element or member operative by said denomination stop members and comprising a plurality of contact portions; and means for initially moving said element to position to cause a predetermined one of said contact portions to coöperate with said carriage releasing member, said carriage releasing member being adapted to limit the movement of said column selecting element when the latter is subsequently operated by a selected one of said denomination stop members.

63. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; carriage releasing mechanism; a plurality of column stops; a set of coöperative denomination stops; column selecting means; a plurality of keys for operating said means; and means for locking said keys, when actuated, in operative position and for unlocking the locked key when any other of said keys is operated, the locked key being adapted to remain locked in operated position during the operations of said denomination stops.

64. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a set of coöperative denomination stops; column selecting means adapted to cause a coöperation between said denomination stops and predetermined column stops when the carriage is released; a plurality of column keys for operating said selecting means; and means for locking said column keys in operative position and for unlocking a locked column key when any one of said column keys is operated, said locked key remaining locked during the operation of said denomination stops.

65. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a set of coöperative denomination stops; and column selecting means adapted to be set or locked to cause a coöperation between a selected denomination stop and a predetermined column stop when the carriage is released, said selecting means being adapted to remain set until it is operated to bring about a coöperative relation between any one of said column stops and the denomination stops.

66. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a set of denomination stops; column selecting means adapted to be set or locked to cause a coöperation between the selected denomination stops and a predetermined column stop when the carriage is released; and a plurality of column keys for operating said selecting means, said selecting means being adapted to be set for one column when one of said column keys is operated and to remain so set until another column key is operated and during the operations of selected denomination stops.

67. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a set of coöperative denomination stops; a column selecting member; a plurality of key controlled devices for variably operating said member; and means for locking said member in operated position when moved thereto by one of said devices, said means being adapted to unlock said member when another of said devices is operated, said member being adapted to remain locked during the operations of selected denomination stops.

68. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a plurality of column stops; a set of coöperative denomination stops; a column selecting member; a plurality of key controlled devices for variably operating said member; and means for locking said devices one at a time in operated position and thereby setting said column selecting member to effect a coöperation between a

predetermined column stop and selected denomination stops, the locking device being unlocked when any of said devices other than the locked device is operated.

69. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; a stop bar; a plurality of adjustable column stops on said bar, the contact surfaces of said stops being out of line with each other; a set of key operated denomination levers; denomination stops associated therewith; and a column selecting slide, said slide being adapted to be given a movement of translation by the column keys and a rotary movement by the denomination keys.

70. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; a stop bar; a plurality of adjustable column stops on said bar, the contact surfaces of said stops being out of line with each other; a set of key operated denomination levers; denomination stops associated therewith; a column selecting slide; and a set of key operated column selecting levers, said slide being operative first by one of said column selecting levers and thereafter by one of said denomination levers.

71. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; a stop bar; a plurality of adjustable column stops on said bar, the contact surfaces of said stops being out of line with each other; a set of key operated denomination levers; denomination stops associated therewith; a column selecting slide normally maintained against said levers and adapted to slide thereover, said slide being provided with a plurality of contact edges; and a set of key operated column selecting levers adapted to coöperate with said contact edges of said slide to move the latter different extents, said slide being adapted to be given a rotary movement thereafter by said denomination stop members.

72. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; a stop bar; a plurality of adjustable column stops on said bar, the contact surfaces of said stops being out of line with each other; a set of key operated denomination levers; denomination stops associated therewith; a column selecting slide normally maintained against said levers and adapted to slide thereover, said slide being provided with a stepped contact portion; carriage releasing devices comprising a pivoted release plate or elbow lever; and key controlled column selecting levers adapted to move said slide different extents, said slide being adapted to be moved thereafter by said denomination stop levers to operate with said carriage releasing plate.

73. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; a stop bar; a plurality of adjustable column stops on said bar, the contact surfaces of said stops being out of line with each other; a set of key operated denomination levers; denomination stops associated therewith; a column selecting slide normally maintained against said levers and adapted to slide thereover, said slide being provided with a stepped contact portion; carriage releasing devices comprising a pivoted release plate or elbow lever; key controlled column selecting levers adapted to move said slide different extents, said slide being adapted to be moved thereafter by said denomination stop levers to coöperate with said carriage releasing plate; and a pivoted spring pressed locking plate adapted to lie under the actuated column selecting lever and maintain said lever in operative position.

74. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; a stop bar; a plurality of adjustable column stops on said bar, the contact surfaces of said stops being out of line with each other; a set of key operated denomination levers; denomination stops associated therewith; a column selecting slide normally maintained against said levers and adapted to slide thereover, said slide being provided with a stepped contact portion; carriage releasing devices comprising a pivoted release plate or elbow lever; key controlled column selecting levers adapted to move said slide different extents, said slide being adapted to be moved thereafter by said denomination stop levers to coöperate with said carriage releasing plate; and a pivoted spring pressed locking plate adapted to lie under the actuated column selecting lever and maintain said lever in operative position, each of said column selecting levers being provided with a cam edge which is operative on said locking plate to move the latter and release a hitherto operated column selecting lever.

75. In a typewriting machine and in a tabulating mechanism, the combination of a carriage; a stop bar; a plurality of adjustable column stops on said bar, the contact surfaces of said stops being out of line with each other; a set of key operated bell crank denomination levers having denomination stops at their ends, which stops are adapted to be moved variable extents transversely of the path of movement of said column stops; a slide provided with column selecting stops, said slide being arranged against said denomination levers and being movable thereover; key operated column selecting levers operative to move said slide different extents; a locking plate operative to maintain one of said column selecting levers operative until another of said levers is actuated; and carriage releasing devices comprising a pivoted releasing plate or lever, said slide being adapted, after it has been set by one of said column selecting members, to be moved by any one of said denomination levers to cause a predetermined column selecting stop to coöperate with said releasing plate to release said carriage.

76. In a typewriting machine, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; and a device for regulating the speed of said carriage when released, said device being operative by said releasing means and comprising a screw and a coöperative member adapted to rotate said screw.

77. In a typewriting machine, the combination of a carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; a device for regulating the speed of said carriage when released, said device being operative by said releasing means and comprising a screw and a coöperative member adapted to rotate said screw; and means for regulating the power required to turn said screw.

78. In a typewriting machine, the combination of carriage; carriage feeding mechanism; means for releasing said carriage from said feeding mechanism; and a device for regulating the speed of said carriage when released, said device being operative by said releasing means and comprising a screw and a coöperative member adapted to rotate said screw; and a friction spring operative on said screw.

79. In a typewriting machine, the combination of a carriage; carriage feeding mechanism; means for releasing the carriage from said feeding mechanism; and a speed regulating device operative by said releasing means, said device comprising a screw rod rotatably mounted on said carriage and a coöperating finger on the machine frame.

80. In a typewriting machine, the combination of a carriage; carriage feeding mechanism; means comprising a releasing lever for releasing the carriage from said feeding mechanism; a screw rod rotatably mounted on said carriage; and a finger pivoted on the machine frame and adapted to coöperate with said screw rod to regulate the speed of said carriage, said finger being normally rendered inoperative by said releasing lever.

81. In a typewriting machine, the combination of a carriage; carriage feeding mechanism; means comprising a releasing lever for releasing the carriage from said feeding mechanism; a screw rod rotatably mounted on said carriage; and a finger pivoted on the machine frame and adapted to coöperate with said screw rod to regulate the speed of said carriage, said finger being normally rendered inoperative by said releasing lever; and means for regulating the power necessary to rotate said rod.

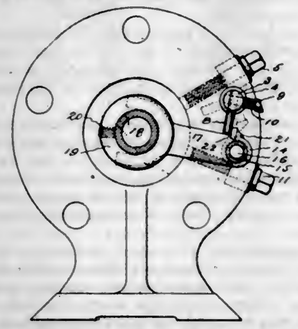
82. In a typewriting machine, the combination of a carriage; carriage feeding mechanism; means comprising a releasing lever for releasing the carriage from said feeding mechanism; a screw rod rotatably mounted on said carriage; a finger pivoted on the machine frame and adapted to coöperate with said screw rod to regulate the speed of said carriage, said finger being normally rendered inoperative by said releasing lever; and an adjustable friction spring operated on said screw rod.

83. In a typewriting machine and in tabulating mechanism, the combination of a releasable carriage, a plurality of column stops, a set of movable denominational stop members, and means for variably arresting any actuated denominational stop member in position for coöperation with any selected one of said column stops, said means comprising a selecting member adjustable to different positions for selecting different column stops.

84. In a typewriting machine and in a tabulating mechanism, the combination of a releasable carriage; a plurality of column stops; a set of movable denominational stop members; and means operative to arrest the actuated stop member in position where it will coöperate with a predetermined column stop, said means including a column selecting member movable by each of said denominational stop members.

85. In a typewriting machine and in a tabulating mechanism, the combination of a releasable carriage; a plurality of column stops; a set of movable denominational stop members; means for arresting the actuated stop member in position where it will coöperate with a predetermined column stop, said means including a column selecting member movable by any actuated denomination stop member; and hand-operated mechanism for variably setting said selecting member.

869,989. THREADING MECHANISM FOR SCREW-MACHINES. CHRISTOPHER M. SPENCER, Windsor, Conn., assignor to The Universal Machine Screw Company, Hartford, Conn., a Corporation of Connecticut. Filed Mar. 8, 1906. Serial No. 304,840.



1. The combination with the movable tool head of a screw machine, of a spindle loosely supported by said head, a threading tool clamped to the spindle, pins projecting from said spindle, a slide loosely supported by the head, and means for holding the slide when the head is moved backwardly so that the pins will be carried into the plane of the slide, substantially as specified.

2. The combination with the movable tool head of a screw machine, of a spindle loosely supported by the head, a threading tool clamped to the spindle, pins projecting from the spindle back of the head, a slide back of and loosely supported by the head, and means for holding the slide when the head is moved backwardly so that the pins will be carried into the plane of the slide, substantially as specified.

3. The combination with the movable tool head of a screw machine, of a spindle loosely supported by the head, a threading tool clamped to the spindle, a spring arranged to thrust the spindle forwardly, pins projecting from said spindle, a slide loosely supported by the head, and means for holding the slide when the head is moved backwardly so that the pins will be carried into the plane of the slide, substantially as specified.

4. The combination with the movable tool head of a screw machine, of a bushing clamped in an opening in the head, a spindle movable in the bushing, a threading tool clamped to the spindle, pins projecting from the spindle back of the head, a slide loosely supported by the head, and means for holding the slide when the head is moving backwardly so that the pins will be carried into the plane of the slide, substantially as specified.

5. The combination with the movable tool head of a screw machine, of a spindle loosely supported by the head, a threading tool clamped to the spindle, pins projecting from the spindle back of the head, a post carried by the head, a sleeve movable on the post, and means for holding the sleeve when the head is moving backwardly so that the pins will be carried into the plane of the sleeve, substantially as specified.

6. The combination with the movable tool head of a screw machine of a spindel loosely supported by the head, a threading tool clamped to the spindle, pins projecting from the spindle back of the head, a shouldered post adjustably clamped to and extending backwardly from the head, a sleeve movable on the post, and means for holding the sleeve when the head is moving backwardly so that the pins will be carried into the plane of the sleeve, substantially as specified.

7. The combination with the movable tool head of a screw machine, of a spindle loosely supported by the head, a threading tool clamped to the spindle, pins projecting from the spindle back of the head, a shouldered post adjustably clamped in an opening in and extending backwardly from the head, a sleeve movable on the post, an arm extending from the sleeve, and a collar adjustably fixed upon the shaft and adapted to engage the arm and hold the sleeve when the head is moving backwardly, substantially as specified.

8. The combination with the movable tool head of the screw machine, of a spindle loosely supported by the head, a threading tool clamped to the spindle, a fixed pin projecting from the spindle, a spring pin projecting from the spindle, a shouldered post held in an opening in the head, a sleeve movable on the post and having an inwardly extending forked arm, and an adjustable collar adapted to engage the forked arm when the head is moved backwardly, substantially as specified.

9. A threading mechanism for a screw machine having a head, a spindle loosely supported by said head, a pin fixed to the spindle, and a pin movably connected with the spindle back of the head, a post supported by the head, a sleeve movable longitudinally on the post back of the head, means for holding the sleeve against turning on the post, and a wall on the sleeve adapted to be engaged by the pins, substantially as specified.

869,990. ATTACHMENT FOR SEWING-MACHINES FOR PRODUCING FELLING, BLINDSTITCHING, &c. GEORGE J. STEVENS, London, England, assignor, by mesne assignments, to American Attachment Company, Portland, Me., a Corporation of Maine. Filed May 15, 1902. Serial No. 107,436.

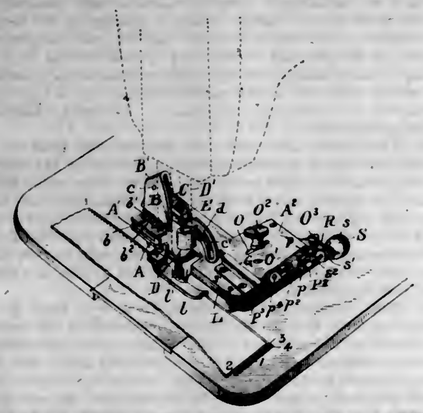
1. In an attachment for sewing machines, an oscillating pusher, means for operating the pusher from the needle bar to advance said pusher, and means operating independent of the needle bar and its connections for retracting the pusher when the pusher has completed its work and each time the feed of the cloth is to take place.

2. In an attachment for sewing machines, an oscillating pusher, means for operating the same from the needle-bar of the machine, said means having a back and forth movement throughout, and independent means for retracting the said pusher when its work is completed said pusher being retracted each time the feed of the cloth takes place.

3. In a sewing machine attachment, an oscillating pusher, a sliding plunger engaging with and acting upon the pusher to extend it at every alternate stitch, and independent means for retracting the said pusher as soon as it has completed its work, substantially as shown and described.

4. In a sewing machine attachment, an oscillating pusher, means for operating the pusher from the needle-bar of the machine so that it will be extended at every

alternate stitch, and independent means for retracting the pusher so that it will remain extended only when and while it is doing its work, said pusher being retracted when the feed of the cloth takes place, substantially as described.



5. In a sewing machine attachment, a pusher, a sliding plunger having a cam surface engaging with and extending the pusher at every alternate stitch, means for operating the plunger from and in synchronism with the needle-bar of the machine, and independent means for retracting the pusher.

6. In an attachment for sewing machines, a pusher having back and forth movements and means for moving the same out and in synchronously with a reciprocation of the needle bar, said pusher being retracted immediately its work is done and while the feed of the cloth is taking place, said means including connections to the needle bar, substantially as described.

7. In a sewing machine attachment, a pusher, a sliding oscillatory plunger provided with a cam surface engaging with and actuating the pusher, an alternator controlling the movements of the plunger, and means for actuating the plunger from the needle-bar of the machine.

8. In combination, a pusher, a plunger acting thereupon directly and means for operating the plunger synchronously from the needle bar and means for rendering one stroke of the plunger ineffective upon the pusher, substantially as described.

9. In a sewing machine attachment an oscillating pusher, a plunger having a cam surface engaging with and actuating the pusher, means for actuating the plunger at every down stroke of the needle-bar, and for causing the plunger to extend the pusher on alternate strokes of the plunger.

10. A sewing machine attachment having an oscillating pusher, a plunger engaging with and actuating the pusher, an alternator controlling the movements of the plunger, stops limiting the movements of the alternator, and means for actuating the plunger from the needle-bar of the machine.

11. A sewing machine attachment, having an oscillating pusher, a plunger engaging with and directly actuating the pusher, an oscillating alternator controlling the movements of the plunger, a catch arm engaging with and holding the alternator during the extension of the pusher, and means for operating the plunger from the needle-bar of the machine.

12. In a sewing machine attachment, a pusher formed in two parts, superimposed and one extending beyond the other each of said parts having a vertical portion which forms one of the jaws of the pusher.

13. In a sewing machine attachment, a pusher formed in two parts, superimposed and one extending beyond the other each of the said parts having a vertical portion which forms one of the jaws of the pusher, the said two parts being suitably secured together, so that the said vertical portions shall be separated a sufficient distance so that they will pass, one on either side of the needle when the pusher is extended.

14. In combination an oscillating pusher, a plunger engaging with and operating the pusher, a spring engaging with the plunger to hold the same to its work, an alternator controlling the movements of the plunger, and means for operating the plunger from the needle-bar of the machine.

15. In combination an oscillating pusher, a spring, a plunger working between the pusher and the spring, an oscillating alternator controlling the movements of the plunger and causing the plunger to extend the pusher at every alternate down-stroke of the needle-bar, and means for operating the plunger from the needle-bar.

16. In a sewing machine attachment, a pusher, a plunger, an oscillating alternator pivotally secured to the base-plate of the attachment, and stops limiting the movement of the alternator in either direction said parts controlling the movement of each other and one of said parts acting upon the pusher.

17. In a sewing machine attachment, a pusher, a plunger, an oscillating alternator pivotally secured to the base-plate, stops limiting the movement of the alternator in either direction, a spring holding the alternator in one of its two positions, and a catch arm for holding the alternator in the other of its said positions said parts controlling the movement of each other and one of said parts acting upon the pusher.

18. In combination an oscillating pusher, a plunger engaging with and operating the pusher, an alternator controlling the movements of the plunger, the said alternator having a portion of one of its sides formed in the arc of a circle, and means for operating the plunger from the needle-bar of the machine.

19. In combination, a pusher, a plunger, and an oscillating alternator in the path of the plunger and arranged independent of the pusher, said plunger operating the pusher, said alternator being operated by the plunger substantially as described.

20. In combination a pivoted oscillating pusher, a plunger, a pivoted oscillating alternator, the said alternator having an arm which projects into the path of the plunger and deflects the plunger so that it engages alternately with the two sides of the alternator and extends the pusher at every alternate down-stroke of the needle-bar.

21. In combination a pivoted oscillating pusher, a plunger, a pivoted oscillating alternator, the said alternator having an arm which projects into the path of the plunger and deflects the plunger so that it engages alternately with the two sides of the alternator and extends the pusher at every alternate down stroke of the needle-bar and independent means for retracting the pusher.

22. In a sewing machine attachment a pusher, a plunger, means for actuating the plunger an oscillating alternator pivoted to the base-plate of the attachment and adapted to control the movements of the plunger-stops limiting the movement of the alternator in either direction, a spring constantly acting upon the alternator in one direction, and a catch-arm pivoted at the side of the alternator and locking the alternator in place while the pusher is extended.

23. In combination, the pusher and connections between the same and the needle bar including the lever C and the draw rod E and a hood G extending over the top of the draw rod and serving to retain the same in place, substantially as described.

24. In combination, a pusher, a reciprocating oscillatory plunger acting directly against the same and an alternator for controlling the oscillatory movements of the plunger and locking means for the alternator, substantially as described.

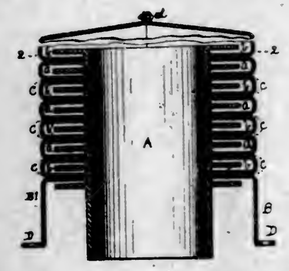
25. In combination, a pusher, a reciprocating oscillatory plunger acting directly against the same and an alternator for controlling the oscillatory movements of the plunger, and locking means for the alternator, said locking means being controlled by contact with the plunger, substantially as described.

26. In combination, the needle bar, a pusher having a back and forth movement, a plunger for operating the pusher, means for operating the plunger from the needle bar and an alternator for controlling the movements of the plunger, said alternator having a curved bearing for the plunger whereby a dwell will occur in the advancing effect of the plunger on the pusher, substantially as described.

27. In combination with a pusher, a plunger and an alternator, one of said parts being arranged to operate the pusher and the said alternator having a curved surface over which the plunger may continue to slide without altering the position of the pusher, substantially as described.

28. In combination, a pusher, a needle bar, a plunger connected with the needle bar for operating the pusher directly, said plunger advancing the pusher as the needle bar descends and being retracted as the needle bar rises, and means for retracting the pusher as the plunger retracts, substantially as described.

869,991. GAS-ENGINE. ELLIOTT J. STODDARD, Detroit, Mich. Filed Apr. 29, 1907. Serial No. 370,761.



1. In combination, a gas engine cylinder having cooling ribs and fins separate from said cylinder extending between said cooling ribs so as to intercept the radiant heat from adjacent cooling ribs and prevent one of said cooling ribs from radiating heat to the other of said cooling ribs, substantially as described.

2. In a gas engine, the combination of a cylinder having cooling ribs, a hood and fins connected with said hood and extending between said ribs so as to intercept the radiant heat from adjacent cooling ribs and prevent one of said ribs from radiating heat to the other of said cooling ribs.

3. In a gas engine, the combination of a cylinder having cooling ribs, of a hood, the material of said hood being bent inward and outward to form fins extending between said ribs to intercept the radiant heat from adjacent ribs and to prevent one of said ribs from radiating heat to the other of said ribs.

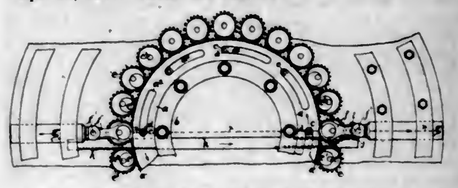
4. In a gas engine, the combination of a cylinder having cooling ribs and a hood, the material of said hood being bent inward and outward to form fins extending between said ribs to intercept the radiant heat from adjacent ribs and prevent one of said ribs from radiating heat to the other of said ribs, and heat insulating material between an inward and outward fold of each of said fins.

5. In combination with an object to be cooled, having cooling ribs thereon, of fins separate from said object extending between adjacent ribs so as to intercept the radiant heat from said ribs and prevent one of said ribs from radiating heat to the other of said ribs.

6. In combination with an object to be cooled, having cooling ribs thereon, of fins supported beyond the outer edge of said ribs and extending between said ribs so as to intercept radiant heat from adjacent ribs and to prevent one of said ribs from radiating heat to the other of said ribs.

7. The combination with a gas engine cylinder, having cooling ribs, of a composite fin consisting of two plates of metal separated by a material adapted to prevent the transmission of heat from one sheet to the other extending between adjacent ribs so as to intercept radiant heat from said ribs and prevent one of said ribs from radiating heat to the other of said ribs.

869,992. BOLTWORK MECHANISM FOR SAFE AND VAULT DOORS. EMIL A. STRAUSS, Chicago, Ill. Filed Apr. 22, 1907. Serial No. 369,472.



1. The combination with reciprocable locking-bolts and pitman-rods connected thereto, of a rotatable gear-wheel, pinions to engage said wheel, and means to reciprocably connect said pinions and pitman-rods.

2. The combination with reciprocable locking-bolts and pitman rods connected thereto, of a master gear-wheel and gear-wheels and means to rotate said wheels and to actuate said bolts.

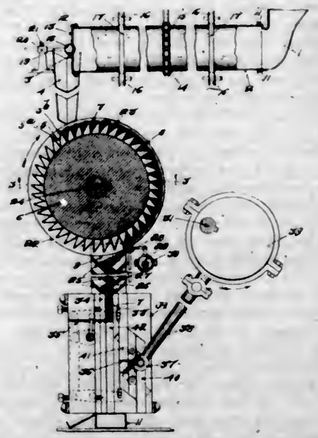
3. The combination with a master gear-wheel, pinions engaging therewith, pitman-rods connected to said pinions and means to actuate said parts, of reciprocable bolts connected to said rods.

4. The combination with a master gear-wheel, pinions engaging therewith, pitman rods connected to said pinions, and means to actuate said rods and to hold them at the dead center, of reciprocable bolts connected to said rods.

5. The combination with reciprocable locking-bolts, of a master gear-wheel, pinions engaging therewith, eccentrics thereon and means to reciprocably connect said bolts and eccentrics.

6. The combination with locking-bolts and a reciprocable rack, of pinions eccentrics secured to said pinions pitman-rods to connect said bolts and eccentrics, and means to reciprocate said rack.

869,993. MACHINE FOR BOXING TOOTHPICKS. SIMON S. TAINTER, WILLIS W. TAINTER, and GEORGE P. STANLEY, Dixfield, Me. Filed Mar. 4, 1907. Serial No. 360,341.



1. In a machine for boxing tooth picks, a rotary wheel conveyer having upon its periphery a series of trough-shaped buckets, means for rotating said conveyer, guards at each side of the buckets independent thereof, cover

guards extending from said side guards circumferentially inward toward each other and covering the tops of said buckets at each end thereof, said covers extending from near the highest point in the rotation of said conveyer to nearly the lowest point in the rotation of the conveyer.

2. In a machine for boxing tooth picks, a rotary wheel conveyer having upon its periphery a series of trough shaped buckets, means for rotating said conveyer, mechanism for delivering tooth picks to the buckets on the conveyer, a chute to which the picks are delivered from the conveyer buckets after the bucket has passed through a portion of its circular path of movement from the mechanism which feeds the picks to the conveyer, guards at each side of the buckets independent thereof, cover guards extending from each of said side guards toward each other covering the tops of said buckets at each end thereof, said covers extending from near the highest point in the rotation of said conveyer to the point of discharge from the buckets into the chute beneath the conveyer.

3. In a machine for boxing tooth picks, a rotary wheel conveyer having upon its periphery a series of trough shaped buckets, means for rotating said conveyer, mechanism for delivering tooth picks to the buckets on the conveyer, guards at each side of the buckets independent thereof, cover guards extending from each of said side guards toward each other covering the tops of said buckets at each end thereof, said covers extending from near the highest point in the rotation of said conveyer to the point of discharge of the buckets, said covers having their upper ends formed diagonal with relation to the sides of the guards.

4. In a machine for boxing tooth picks, a rotary wheel conveyer having upon its periphery a series of trough shaped buckets, means for rotating said conveyer, mechanism for delivering tooth picks to the buckets on the conveyer, guards on each side of the buckets independent thereof, cover guards extending from each of said side guards toward each other covering the tops of said buckets at each end thereof, said covers extending from near the highest point in the rotation of said conveyer to the point of discharge from the buckets, said covers having their upper ends formed diagonal with relation to the sides of the guards and sloping inwardly.

5. In a machine for boxing tooth picks, a rotary wheel conveyer having upon its periphery a series of trough shaped buckets, means for rotating said conveyer, mechanism for delivering tooth picks to the buckets on the conveyer, guards on each side of the buckets independent thereof, cover guards extending from each of said side guards toward each other covering the tops of said buckets at each end thereof, said covers extending from near the highest point in the rotation of said conveyer to the point of discharge from the buckets, said covers having their upper ends formed diagonal with relation to the sides of the guards, the inner edges of said cover guards being spaced apart from each other.

6. In a machine for boxing tooth picks, a rotary wheel conveyer having upon its periphery a series of trough-shaped buckets, means for rotating said conveyer, guards on each side of the buckets independent thereof, cover guards extending from said side guards circumferentially inward toward each other and covering the tops of said buckets at each end thereof, said covers extending from near the highest point in the rotation of said conveyer to nearly the lowest point in the rotation of the conveyer, the said buckets being in length at least as great as the length of the tooth picks whereby the tooth picks may lie parallel with each other in said buckets lengthwise thereof and transversely of the periphery of the wheel.

7. In a machine for boxing tooth picks, a rotary wheel conveyer having upon its periphery a series of trough-shaped buckets, means for rotating said conveyer, guards at each side of the buckets independent thereof, cover guards extending from said side guards circumferentially inward toward each other and covering the tops of said buckets at each end thereof, said covers extending from near the highest point in the rotation of said conveyer to nearly the lowest point in the rotation of the conveyer, a rotary cylinder mounted at an incline and through which the tooth picks pass before reaching the said rotary wheel conveyer, and a chute through which the picks pass from said cylinder to said wheel conveyer.

8. In a machine for boxing tooth picks, a rotary wheel conveyer having upon its periphery a series of trough-shaped buckets, means for rotating said conveyer, guards at each side of the buckets independent thereof, cover guards extending from said side guards circumferentially inward toward each other and covering the tops of said buckets at each end thereof, said covers extending from near the highest point in the rotation of said conveyer to nearly the lowest point in the rotation of said conveyer, a rotary cylinder mounted at an incline and through which the tooth picks pass before reaching the said rotary wheel conveyer, a chute through which the picks pass from said cylinder to said wheel conveyer and a feed chute into which the picks drop from the buckets after they have rotated past the cover guards.

9. In a machine for boxing tooth picks, a rotary wheel conveyer, a rotary cylinder mounted at an incline through which the tooth picks pass before reaching said wheel conveyer, said cylinder being journaled at each end, means for rotating said cylinder and anti-friction bearings which support said cylinder intermediate its ends.

10. In a machine for boxing tooth picks, a rotary wheel conveyer, a rotary cylinder mounted at an incline through which the tooth picks pass before reaching said wheel conveyer, said cylinder being journaled at each end, means for rotating said cylinder, said cylinder being formed with a plurality of circumferential ribs intermediate its ends and grooved anti-friction wheels which engage said ribs, said anti-friction wheels being mounted on fixed supports.

11. In a machine for boxing tooth picks, a rotary wheel conveyer having upon its periphery a series of trough-shaped buckets, means for rotating said conveyer, guards at each side of the buckets independent thereof, cover guards extending from said side guards circumferentially inward toward each other and covering the tops of said buckets at each end thereof, said covers extending from near the highest point in the rotation of said conveyer to nearly the lowest point in the rotation of the conveyer, said buckets being V-shaped in cross section and having the rear wall substantially radial to the axis of the wheel on which the buckets are mounted and having the forward wall inclined to the radius of said wheel.

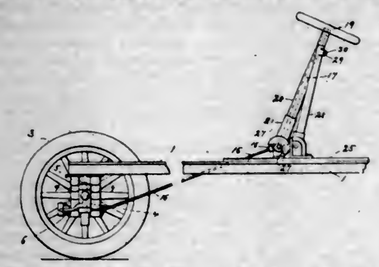
12. In a machine for boxing tooth picks, a rotary wheel conveyer, a rotary cylinder mounted at an incline through which the tooth picks pass before reaching said wheel conveyer, said cylinder having its exit end provided with a cover through which there is an aperture for the passage of the tooth picks and an adjustable valve whereby the size of the passage through said aperture may be varied.

13. In a machine for boxing tooth picks, a rotary cylinder mounted at an incline through which the tooth picks pass, an inlet chute whereby the tooth picks are fed into said cylinder at one end, a cover for the other end of said cylinder provided with an aperture through which the tooth picks are discharged from said cylinder and an adjustable valve which partially closes said aperture whereby the size of the passage through said aperture may be varied.

869,994. STEERING MECHANISM FOR AUTOMOBILES. RALPH P. THOMPSON and EMIL KOEB, Springfield, Ohio. Filed Oct. 16, 1905. Serial No. 282,892.

1. In an automobile, the combination, with a main frame and an axle provided with pivoted steering ground wheels and spring connected to the main frame so as to be movable relatively thereto, of a supporting plate rigidly secured to said axle, a worm gear segment pivoted to said supporting plate and operatively connected with the steering ground wheels, a worm carried by said supporting plate and meshing with said worm gear segment, and a controlling device supported on the main frame and operatively connected with said worm, substantially as described.

2. In an automobile, the combination, with a main frame, and an axle provided with pivoted steering ground wheels and spring-connected to the main frame so as to be movable relatively thereto, of a steering gearing mounted on said axle and operatively connected with the steering ground wheels, a steering shaft supported on the main frame, and a flexible rod provided with universal couplings whereby its ends are connected to said steering gearing and steering shaft, substantially as described.

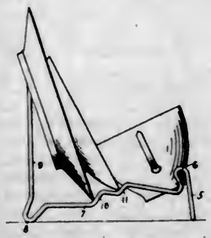


3. In an automobile, the combination, with a main frame, and an axle provided with pivoted steering ground wheels and spring-connected to the main frame so as to be movable relatively thereto, of a steering gearing mounted directly on said axle and comprising a lever pivoted to said axle and having one end operatively connected with the steering ground wheels, a toothed segment on the oposite end of said lever, a worm meshing therewith, a steering shaft mounted on the main frame, and a flexible rod provided with universal couplings whereby its ends are connected to the steering shaft and worm, substantially as described.

4. In a steering mechanism for automobiles, the combination, with a steering shaft having a steering hand wheel, of a bearing sleeve for said shaft provided with pivot plates having stop shoulders, and fixed pivot lugs to which said pivot plates are pivotally connected, said lugs being arranged in the path of the stop shoulders, substantially as described.

5. In a steering mechanism for automobiles, the combination, with a fixed support having a clamping bolt threaded therein, of a steering shaft provided with a steering wheel, and a bearing sleeve for said steering shaft pivoted to swing in a vertical plane, said bearing sleeve being provided with a lug having an open-mouthed slot adapted to receive that portion of said clamping bolt lying between its head and the part into which it is threaded, substantially as described.

869,995. DISPLAY-EASEL. JOHN B. TIMBERLAKE, Jackson, Mich., assignor to J. B. Timberlake & Sons, a Corporation of Michigan. Filed June 7, 1907. Serial No. 377,813.



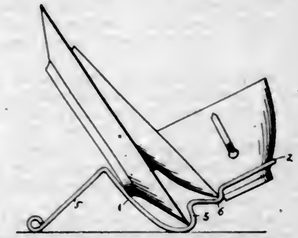
1. A display easel consisting of two side members joined by cross elements, each side member comprising a front supporting leg, a rear upright section, and a longitudinal connecting section, said connecting section being provided with a stop intermediate of its ends for a plate or plate like article to be displayed, and approximately parallel extensions in advance of said stop to form a support for a cup or cup-like article.

2. A display easel consisting of two side members joined by cross elements, each side member comprising a front supporting leg, a rear upright section, and a longitudinal connecting section, said connecting section being provided with a stop intermediate of its ends for a plate or plate-like article to be displayed, and approximately parallel extensions in advance of said stop to form a support for a cup or cup-like article, and being further provided with a stop at its forward end to hold in place said cup or cup-like article.

3. A display easel consisting of two side members, joined by cross elements, each side member comprising a front supporting leg, a rear upright section, and a longitudinal connecting section, said connecting section having all its parts disposed approximately in one vertical plane and being provided with a stop intermediate of its end for a plate or plate-like article to be displayed, and being extended in advance of said stop to form a support for a cup or cup-like article.

4. A display easel having the rear upright sections 9, 9, the turns 8, 8, longitudinal connecting sections 7, 7, each of which is provided with a bend 10, the turns 6, 6, front supporting legs 5, 5, and the cross connecting pieces 2 and 4.

869,996. DISPLAY-RACK. JOHN B. TIMBERLAKE, Jackson, Mich., assignor to J. B. Timberlake & Sons, a Corporation of Michigan. Filed June 7, 1907. Serial No. 377,814.



1. A display easel comprising a ring shaped rest for a cup or similar article lying in a plane inclined to the horizontal, and a rest in the rear thereof made of two inclined wires substantially perpendicular to the plane of the ring shaped rest, and adapted to hold a plate, saucer or other flat article.

2. A display easel comprising the rest 2 for a cup-like article, one or more pairs of stops 3—3, 6—6, etc., the plate rest 4—4, and the rear supports 5—5, substantially as set forth.

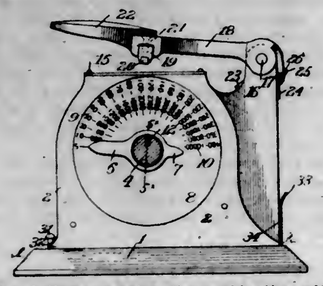
3. A display easel comprising a rear rest adapted to hold a plate or plate-like article made of two substantially parallel upright sections of wire the lower front ends of which are adapted to act as points of support for the easel, integral upward-turned vertical extensions of the lower ends of said sections, and immediately disposed forward integral extensions of said last-named sections lying in a plane approximating the horizontal, said last-named extensions meeting at their front ends to form one integral circular rest.

4. A display easel having the front circular rest 2, the stops 3, 3 immediately in the rear thereof, the rear plate rest 4, 4, and the supports 5, 5.

869,997. PRINTING APPARATUS. LIBANUS M. TODD and CHARLES G. TIEFEL, Rochester, N. Y., assignors, by direct and mesne assignments, to G. W. Todd and Company, Rochester, N. Y., a Firm. Filed Feb. 14, 1903. Serial No. 143,325.

1. In a printing apparatus, the combination with a printing wheel having a plurality of rows of printing characters arranged longitudinally of the axis of the wheel designating limiting amounts, said amounts in different rows expressing different values, and a casing in which said wheel is journaled having an opening arranged above

the wheel, of a dial mounted on the casing and provided with characters corresponding to the amounts appearing in the different rows on the wheel, said characters on the dial being arranged in inner and outer rows on the dial, diametrically arranged index fingers of different lengths attached to the wheel and coöperating respectively with said inner and outer rows of characters on the dial, and a platen pivotally mounted on the casing and coöperating with the wheel through said opening.

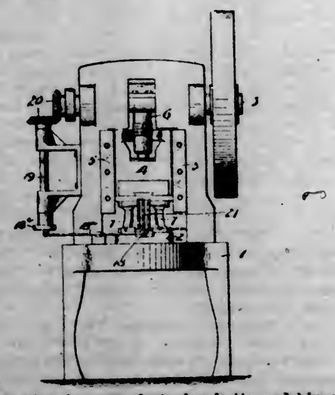


2. In a printing apparatus, the combination with a casing, a printing wheel therein having type characters thereon, an arm journaled in a bearing on the casing and a platen on the arm, of a spring normally moving the arm away from the casing and a pivoted stop adjustable laterally on the arm into and out of engagement with the casing in rear of the bearing to limit the opening movement of the arm.

3. In a printing apparatus, the combination with a casing, a wheel journaled therein having printing characters and a scale provided with similar characters mounted on the casing, of a shaft secured to the wheel, an index finger provided with an aperture and a sleeve secured to the shaft having a shoulder thereon and provided with an end extending through the aperture in the finger and expanded into contact therewith.

4. In a printing apparatus, the combination with a casing and a printing wheel journaled therein, independently movable arms provided with slots opening toward the printing wheel, an inking roller having the shaft engaged in said slots and separate springs connected to the arms for holding them in engagement with the inking roller and to yieldingly support the latter in contact with the printing wheel.

869,998. MACHINE FOR MAKING BUTTS AND HINGES. WILLIAM S. TRASK, New Britain, Conn., assignor to P. & F. Corbin, New Britain, Conn., a Corporation of Connecticut. Filed May 17, 1905. Serial No. 260,838.



1. In a machine for manufacturing butts and hinges, a run-way divided into two parts by a longitudinal fixed partition, a longitudinally reciprocal feed plunger for feeding successive sets of companion leaf blanks along said run-way step by step, successive sets of opposed reciprocal knuckle-forming devices for progressively performing different forming operations upon opposite outer edges of a pair of companion leaf blanks while in said run-way, the central partition receiving the thrust of said devices, each set of knuckle-forming devices being located at intervals equal to the length of the blanks, means for supplying mechanically to said run-way partially formed leaves, and means for moving the said feed plunger at each stroke a distance not less than the length of each leaf blank, the knuckle-forming movement of said forming means occurring in alternation with the forward movement of said feed plunger.

2. In a machine for manufacturing butts and hinges, a bed having a longitudinal and centrally divided run-way, a longitudinally movable feed plunger adapted to operate in both divisions at one end of said run-way, a longitudinally movable pin-driving plunger operable at the opposite end of said run-way and located centrally relatively thereto but above the same, a plurality of sets of laterally movable plungers located along each side of said run-way for progressively performing different knuckle forming operations upon the opposite blanks of each set while the latter are supported in said run-way, including means for tilting a pair of finished companion blanks to cause their knuckles to register and to bring them into coöperative relation with the pin-driving plunger, a reciprocating head, and means carried by said head and coöperatively engaging the knuckle forming and tilting plungers to reciprocate the same.

3. In a machine for manufacturing butts and hinges, a run-way for blanks, means to feed blanks through said run-way, means to automatically form knuckles at the outer edges of said blanks and means to turn the blanks on their longitudinal axes and cause the knuckles of two separate blanks to register.

4. In a machine for manufacturing butts and hinges, a bed having a longitudinal run-way, a chute for conveying pairs of blanks into said run-way, a member for engaging each pair of blanks and feeding them forward in said run-way in contact with the preceding blanks, a series of laterally movable plungers arranged along each side of said run-way for performing different operations upon the blanks while in said run-way, each of said plungers having a vertical passage, a reciprocating head, and cams carried by said head adapted to operate in said plunger passages for bringing the plungers into operation.

5. In a machine for manufacturing butts and hinges, a run-way for blanks, a longitudinally movable plunger for feeding blanks through said run-way in contact with each other, a reciprocating head, means carried thereby for crimping the outer edges of blanks supported in said run-way, laterally movable plungers arranged on opposite sides of said run-way and having undercut portions to engage and curl the crimped edges, means for turning the blanks to aline the knuckles, means for inserting a pin in the alined knuckles, and cams carried by said head for operating said laterally movable plungers and pin inserting means.

6. In a machine for manufacturing butts and hinges, a run-way for blanks, a longitudinally movable plunger for feeding blanks through said run-way in contact with each other, a reciprocating head, shapers carried thereby for crimping the edges of said shanks, laterally movable plungers for curling the crimped edges into tubular knuckles, flies carried by said head for trimming the ends of the knuckles, laterally movable plungers for turning the blanks and assembling them with their knuckles in alinement, means for inserting a pin, and a series of cams carried by said head for operating said laterally movable plungers and pin-inserting means.

7. In a machine for manufacturing butts and hinges, a runway for the blanks, means for feeding blanks into said runway in contact with each other and in pair, means for crimping the outer edges of a pair of blanks while supported in said runway, separate means for curling the crimped edges of said blanks into tubular knuckles while supported in said runway, means for trimming the ends of the knuckles while supported in said runway, and means for turning the blanks on their longitudinal axes to bring the knuckles into alinement while supported in said runway.

8. In a machine for manufacturing butts and hinges, a run-way for supporting blanks during all the operations of the machine, means to feed a pair of blanks simultaneously into said run-way, means to crimp the outer edges of said blanks, means to curl the crimped edges of said blanks into tubular knuckles, means to trim the ends of adjacent knuckles on one leaf to afford clearance for alternate knuckles on the opposite companion leaf, means to tilt a companion pair of finished blanks and aline their knuckles, means for feeding pins, means to select one pin, and means to insert the selected pin through said alined knuckles.

9. In a machine for manufacturing butts and hinges, a divided run-way, a presser bar above each part of said run-way, means for feeding companion blanks into said run-way and beneath said presser bars, means for forming said blanks while held by said presser bars, and means for assembling said blanks when disengaged from said presser bars.

10. In a machine for manufacturing butts and hinges, a run-way, means for feeding blanks through said run-way, means laterally of said run-way to automatically form knuckles at the edge of said blanks, and yielding presser bars above said run-way for holding said blanks down into position in said run-way during the knuckle-forming operation.

11. In a machine for manufacturing butts and hinges, a run-way, a central longitudinal partition therein, means for feeding companion blanks through said run-way on opposite sides of said partition, means for forming knuckles on the outer edges of said blanks to form hinge leaves, means for moving said leaves to bring said knuckles into alinement above said partition, and means in alinement with the assembled knuckles for automatically inserting a pin thereinto.

12. In a butt and hinge machine, a run-way, a yielding presser bar above said run-way, means for successively feeding blanks beneath said presser bar and into said run-way, and means for operating on said blank while held beneath said presser bar and in said run-way.

13. In a butt and hinge machine, a run-way, a yielding presser bar above the run-way, means for successively feeding blanks into said run-way beneath said presser bar, and means for bending the knuckle forming portions of the blanks while held by the presser bar in said run-way.

14. A machine of the character described, including a run-way having a central longitudinal fixed partition for holding the inner edges of the leaf blanks, yielding presser bars along opposite sides of said partition, opposed coöperating shaping dies along the sides of said partition in said run-way, said shaping dies having inclined outer edges, parallel reciprocating shapers coöperating with said dies from above and outside of said presser bars, and means for feeding blanks along said run-way to and from said dies.

15. A machine of the character described, including a run-way having a central longitudinal partition, opposed coöperating shaping dies along the sides of said partition and spaced therefrom and having inclined outer edges, yielding presser bars above the run-way for engaging the blanks and holding them down in said dies, and a shaper adapted to coöperate with the blanks in said dies to crimp knuckle-forming portions on the outer edges.

16. A machine of the character described, including shaping-dies having inclined outer blank supporting edges, and means forward of said dies for holding the blanks at an inclination and means for feeding blanks into said dies while at an inclination from the horizontal with their outer edges above the inner edges, a shaping plunger adapted to said shaping-dies to act upon blanks supported on said dies to crimp the outer edges of said blanks.

17. A machine of the character described, including a blank-holding hopper, and means to hold the blanks therein at an inclination, a shaping-die having an inclined shaping-portion in front of said hopper, and a coöperating reciprocating plunger in front of said die the forward end thereof being beveled so as to engage only the lowermost blank in said hopper and convey it to said die, and a vertically movable shaping-plunger coöperating with said die to crimp the edge of any blank resting on the die.

18. In a butt and hinge machine, a run-way, a presser bar above the run-way, a perforated cover plate above the presser bar, and a reciprocating trimmer operable through the perforation in said plate.

19. A machine of the character described, including a run-way having a longitudinal partition for supporting the inner edges of blanks, means for feeding blanks along said run-way, laterally sliding plungers having undercut portions adapted to engage the previously crimped outer edges of companion blanks and form knuckles.

20. A machine of the character described, including a run-way having a longitudinal partition, means for feeding blanks along said run-way, laterally sliding plungers having undercut portions adapted to engage the previously crimped outer edges of companion blanks and form knuckles, and a presser bar above said run-way for holding said blanks down while being operated upon.

21. A machine of the character described, including a stationary bed forming a support for companion blanks having knuckle portions, presser bars for holding down said blanks, and reciprocating trimmers adapted to engage the knuckles of said blanks while thus held down.

22. A machine of the character described, including an abutment for supporting the inner edges of partially formed hinge leaves, a run-way on opposite sides of said abutment, laterally moving plungers having inclined shoulders for engaging leaves having finished knuckles and turning them over on their longitudinal axes to unite the knuckles, and means for pinning a pair of finished leaves.

23. A machine of the character described, including a supporting bed, a central partition, and means for lifting the outer edges of the blanks and placing them against said partition with their knuckles interlocked.

24. A machine of the character described, including a support, a central partition acting as an abutment, and laterally moving plungers for pushing the blanks against the partitions and turning them over, said plungers having yielding portions.

25. A machine of the character described, including a bed and a central partition acting as an abutment and laterally moving plungers having inclined portions adapted to engage the edges of the blanks to push them against the partition and turn them over and bring their knuckles into alinement above said partition.

26. A machine of the character described, including a central partition forming a support, laterally operating plungers having yielding portions adapted to engage the knuckles of a pair of blanks supported on said partition, means for selecting a pin and means for inserting a pin while the knuckles are held by the plungers.

27. In a machine for manufacturing butts and hinges, means for assembling the blanks of a pair with the knuckles in alinement, a laterally movable plunger having a groove adapted to be brought into line with the knuckles, means for automatically depositing a pin in said groove, and means for engaging the pin while resting in said groove to force the pin into the knuckles.

28. In a machine for manufacturing butts and hinges, means for holding a pair of blanks with their knuckles in alinement, a pin containing hopper having a cut-away portion to hold the middle part of a single pin partially exposed, and a laterally movable plunger having a pin selecting hook arranged to make side engagement with the exposed portion of said pin, and a receiving groove below and at the side of said hook to receive a pin detached by said hook and coöperating means to move the plunger so as to bring the pin in said receiving groove into alinement with said alined knuckles, and means to drive said pin.

29. In a machine for manufacturing butts and hinges, means for holding a pair of blanks with their knuckles in

alinement, a pin containing hopper, means at the bottom to support a single pin and having a cut-away portion to expose the middle part of said pin, a spring for holding said pin on said support in front of a pin selecting hook, and a laterally movable member having a pin selecting hook arranged to engage the exposed portion of said pin and remove the same.

30. A machine of the character described, including a bed having a longitudinal run-way, means for feeding blanks along said run-way, means for forming knuckles on the blanks while in said run-way, means for turning the blanks on edge in said run-way and alining the knuckles, and means for inserting a pin in the knuckles of said blanks while supported in said run-way.

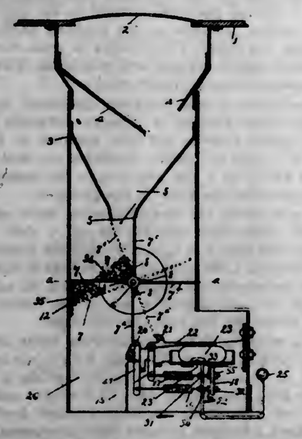
31. A machine of the character described, including feeding, forming and assembling mechanisms, a bed supporting the feeding and part of the forming and the assembling mechanism, and a vertically reciprocating head carrying the remainder of the forming mechanism, and cams carried by said reciprocating head for operating the other portions of the forming mechanism and the assembling mechanism.

32. A machine of the character described, including a feed plunger, knuckle-forming plungers, assembling plungers, a pin-inserting plunger, a support for said plungers, a vertically reciprocating head and cams carried by said head for operating said knuckle forming, assembling, and pin inserting plungers.

33. A machine of the character described, including a central partition, laterally movable plungers for engaging the outer edges of companion blanks while abutting against said partition and forming knuckles, a reciprocating head and cams carried by said head operating said plungers.

34. In a machine of the character described, a support for a pair of companion hinge leaves oppositely arranged with their knuckles at their outer edges, oppositely arranged leaf turning and knuckle alining plungers, each plunger comprising a rigid upper part and a yielding shovel-nosed lower part arranged to slide under and lift the outer edge of the adjacent blank preparatory to turning the same.

869,999. METER FOR WEIGHING COAL, GRAIN, AND LIKE MATERIAL. MONTROSS WASHBURN, Ossining, and ROGER D. GRANGER, Brooklyn, N. Y. Filed Oct. 13, 1906. Serial No. 338,758.



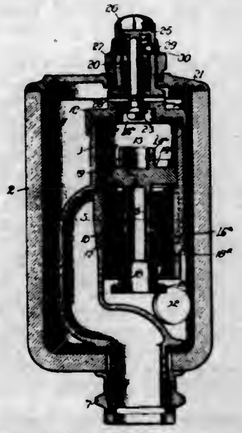
1. In an automatic weighing device the combination of a revolving bucket, with two pivoted levers, each having a stop at one end and a spring attached thereto at the other end; said springs being of progressively increasing tension as said stops are sequentially engaged successively by the wings of said bucket—whereby said bucket is prevented from revolving successively by said stops until the pressure thereon is sufficient to overcome successively the tension of said springs.

2. In an automatic weighing device the combination of a revolving bucket consisting of a plurality of revolving compartment partitions on a shaft; with two pivoted levers, each having a stop at one end and a spring attached thereto at the other end; said springs being of progressively increasing tension as said stops are sequentially engaged by said revolving compartment partitions—whereby said partitions are successively prevented from revolving by said stops until the pressure thereon is sufficient to overcome successively the tension of said springs.

3. In an automatic weighing device, the combination of a chute; a shaft therein provided with a series of wings forming compartments, the whole forming a revolving bucket; two spring-actuated pivoted levers each having a stop; and a semi-circular wall projecting inwardly from said chute—the parts being so arranged that the weight of the load of material to be weighed actuates one lever and stop, and the sliding of the load in the bucket to the periphery thereof against the inwardly projecting wall of said chute actuates the other lever and stop.

4. In an automatic weighing device, the combination of a chute; a shaft therein provided with a series of wings forming compartments, the whole forming a revolving bucket; two spring-actuated pivoted levers, each having a stop; and a semi-circular wall projecting inwardly from said chute—the parts being so arranged that the weight of the load of material to be weighed actuates one lever and stop, and the sliding of the load in the bucket to the periphery thereof against the inwardly projecting wall of said chute actuates the other lever and stop, both levers and stops being actuated by the successively preceding revolving wing.

870,000. WATER-CLOSET. EARL G. WATROUS, Chicago, Ill. Filed Oct. 17, 1904. Serial No. 228,838.



1. In a water closet, the combination of a bowl, a water chamber arranged at one side of the bowl and communicating therewith through separate passages, and slow closing valve mechanism arranged within said chamber for controlling the supply of water thereto, said chamber being of a capacity to supply the "refill" substantially as described.

2. In a water closet, the combination of a bowl with a jet and a rim flush, a water chamber arranged at one side of the bowl and having outlets near its upper and lower ends to communicate with the bowl, and slow closing valve mechanism arranged within said chamber for controlling the supply of water thereto, the lower outlet of said chamber being in communication with the jet of the bowl, whereby the contents of the chamber will provide the refill for the bowl after the valve mechanism has been closed; substantially as described.

3. In a water closet, the combination of a bowl, a water chamber arranged at one side of said bowl and in open communication therewith, and a slow-closing valve located within said water chamber and operating, when closed, to cut off the water supply from the interior of the chamber in which the valve is located, and when opened to admit water supply thereto and thence to the water closet bowl; substantially as described.

4. In a water closet the combination of a bowl having a jet and rim flush, a water chamber arranged at one side of the bowl and provided at its lower and upper ends with outlets to the jet and rim flush, respectively, and a slow-closing valve located within said chamber and operating when closed to cut off the water supply from the interior of the chamber in which the valve is located, and when opened to admit the water supply thereto and thence to the jet and rim flush of the closet bowl; substantially as described.

5. In a water closet, the combination of a bowl having a water supply chamber in communication therewith, and slow closing valve mechanism for controlling the supply of water to such chamber comprising a valve casing communicating respectively with a source of water under pressure and with said water supply chamber, a piston actuated valve movable within said casing, said piston and valve being exposed to the water under pressure and the former having the greater pressure area, means for equalizing the pressure on opposite sides of the piston, and means for trapping the water in said casing above the piston after a partial traverse of the latter to prevent water hammer.

6. In a water closet, the combination of a bowl having a water supply chamber in communication therewith, and slow closing valve mechanism for controlling the supply of water to such chamber comprising a valve casing communicating respectively with a source of water under pressure and with said water supply chamber, a piston-actuated valve movable within said casing, said piston and valve being exposed to the water under pressure and the former having the greater pressure area, means for equalizing the pressure on opposite sides of the piston, and means controlled by the movement of the piston for closing the outlet from the casing independently of said manually operated valve and thereby trapping water in said casing above the piston; substantially as described.

7. In a water closet, the combination of a bowl having a water supply chamber in communication therewith, and slow closing valve mechanism therein for controlling the supply of water to such chamber comprising a valve casing communicating respectively with a source of water under pressure and with said chamber, a piston-actuated main valve movable in said casing for governing the passage through the casing, means for equalizing the pressure on opposite sides of the piston, the upper end of the casing above the piston being provided with a recess or socket and a relief outlet into said chamber, a valve governing said outlet, and means controlled by said piston and arranged to coöperate with said socket to close said relief outlet and thereby trap water above the piston after partial movement of the latter.

8. In a water closet, the combination of a bowl having a water supply chamber in communication therewith, and slow closing valve mechanism therein for controlling the supply of water to such chamber comprising a valve casing communicating respectively with a source of water under pressure and with said chamber, a piston actuated main valve movable in said casing for governing the passage through the casing, means for equalizing the pressure on opposite sides of the piston, the upper end of the casing above the piston being provided with a circular recess or socket which is provided with a relief outlet, and a relief valve governing said outlet, said piston being provided with a tubular extension adapted to fit said socket after a partial movement and to thereby close said outlet independently of the relief valve to trap water in the space above the piston; substantially as described.

9. In a water closet, the combination of a bowl having a water supply chamber in communication therewith, and slow closing valve mechanism therein for controlling the supply of water to such chamber comprising a valve casing communicating respectively with a source of water under pressure and with said chamber, a piston-actuated main valve movable in said casing for governing the passage through the casing, means for equalizing the pressure on opposite sides of the piston, the upper end of the casing above the piston being provided with a recess or socket which is provided with a valve-governed relief opening or outlet, a supplemental valve movable with the main valve and adapted to close said passage in the casing when the latter valve is fully open, said piston being provided with an extension arranged to enter said socket to close the relief outlet independently of the relief valve substantially at the time of the closing of the supplemental valve and thereby trap water in the space above the piston to prevent water hammer; substantially as described.

10. In a water closet, the combination of a bowl, and slow closing valve mechanism coöperating therewith and comprising a casing, a valve device movable therein and means for trapping water in one end of the casing after a partial movement of the valve device to prevent water hammer; substantially as described.

11. In a water closet, the combination of a bowl, and slow closing valve mechanism coöperating therewith and comprising a casing, a piston actuated valve movable within the casing, means for releasing the pressure within the casing above the piston and means for trapping water above the piston after partial traverse of the latter to prevent water hammer; substantially as described.

12. In a water closet, the combination, with an earthenware bowl, of a water chamber formed integrally with said bowl and in open communication therewith, and a slow-closing valve located within said water chamber and operating when closed to cut off the water supply from the interior of said chamber within which the valve is located and when opened to admit the water supply thereto and thence to the closet bowl; substantially as described.

13. In a water closet, the combination, with an earthenware bowl having a rim flush and a jet, of a water chamber formed integrally with said bowl, and having a discharge passage at its upper end leading to the rim flush of said bowl and another discharge passage at its lower end leading to the jet thereof, and a slow-closing valve located within said water chamber and operating when closed to cut off the water supply from the interior of said chamber within which the valve is located and when opened to admit it thereto and thence to the rim and jet of the closet bowl; substantially as described.

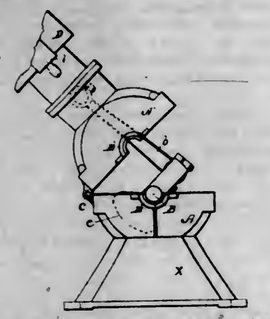
14. In a water closet, the combination, with an earthenware bowl, of a water chamber formed integrally with said bowl and freely communicating therewith, a valve casing located within said chamber and having direct communication with the water supply independently of said chamber, and a slow-closing valve controlling the passage of water through said casing to the interior of said chamber; substantially as described.

15. In a water closet, the combination of the earthenware bowl 1, the water chamber 2 formed integrally with said bowl and communicating therewith, the valve casing 3 located therein and having the integrally formed depending water supply pipe 4 projecting at its lower end through the bottom of the chamber 2 and secured thereto, the piston and main valve operating within said casing, and the relief valve controlling the pressure above the piston and having a stem extending vertically through the top of the water chamber and provided with means for depressing it; substantially as described.

16. In a water closet, the combination of the earthenware bowl 1, the water chamber 2 formed integrally with said bowl and communicating therewith, the valve casing 3 located within said chamber and provided with the depending water supply pipe having its lower end projecting through and secured in the bottom of the chamber 2, the top plate or cap 21 for closing the upper end of the chamber 2, the piston and main valve operating within the main casing 3, the screw cap 12 for closing the upper end of the valve casing and provided with the tubular extension projecting upward through the top 21 of the chamber

2, the relief passage through the cap 12 from the interior of the valve casing to the interior of the water chamber, and the relief valve 23 having the stem 22 projecting upward through the tubular extension of the cap 12 and carrying a push button for operating the valve; substantially as described.

870,001. ENGINE. CHARLES H. WAY, Lansing, Mich., assignor to Clarkmobile Company, Lansing, Mich. Filed Sept. 19, 1904. Serial No. 225,118.



1. The combination of a crank shaft casing consisting of a base section adapted to serve as an oil receptacle, and a cap section; a connecting hinge therefor; means for securing said casing sections in their closed position; an engine cylinder carried by said cap section and opening therein at its inner end; a piston; a connecting rod; a crank shaft; and bearings therefor consisting of base sections carried by the base section of said crank shaft casing, and cap sections carried by the cap section thereof, the base sections of said bearings projecting into the casing beyond the cap sections thereof, for the purpose specified.

2. The combination of a crank shaft casing consisting of a base section adapted to serve as an oil receptacle, and a cap section; a connecting hinge therefor; means for securing said casing sections in their closed position; an engine cylinder carried by said cap section and opening therein at its inner end; a piston; a connecting rod; a crank shaft; and bearings therefor consisting of base sections carried by the base section of said crank shaft casing and cap sections carried by the cap section thereof, for the purpose specified.

3. The combination of a crank shaft casing consisting of a base section adapted to serve as an oil receptacle and a cap section; means for securing said casing sections in their closed position; an engine cylinder carried by said cap section and opening therein at its inner end; a piston; a connecting rod; a crank shaft; and bearings therefor consisting of base sections carried by the base section of said crank shaft casing, and cap sections carried by the cap section thereof, the base sections of said bearings projecting into the casing beyond the cap sections thereof, for the purpose specified.

4. The combination of a crank shaft casing consisting of a base section adapted to serve as an oil receptacle, and a cap section; means for securing said casing sections in their closed position; an engine cylinder carried by said cap section and opening therein at its inner end; a piston; a connecting rod; a crank shaft; and bearings therefor consisting of base sections carried by the base section of said crank shaft casing, and cap sections carried by the cap section thereof, for the purpose specified.

5. The combination of a crank shaft casing consisting of a base section adapted to serve as an oil receptacle, and a cap section; a connecting hinge therefor; means for securing said casing sections in their closed position; an engine cylinder carried by said cap section and opening therein at its inner end; a crank shaft; and bearings therefor consisting of base sections carried by the base section of said crank shaft casing, and cap sections carried by the cap section thereof, the base sections of said bearings projecting into the casing beyond the cap sections thereof, for the purpose specified.

6. The combination of a crank shaft casing consisting of a base section adapted to serve as an oil receptacle, and a cap section; a connecting hinge therefor; means for securing said casing sections in their closed position; an engine cylinder carried by said cap section and opening therein at its inner end; a crank shaft; and bearings therefor consisting of base sections carried by the base section of said crank shaft casing, and cap sections carried by the cap section thereof, for the purpose specified.

7. The combination of a crank shaft casing consisting of a base section adapted to serve as an oil receptacle, and a cap section; means for securing said casing sections in their closed position; an engine cylinder carried by said cap section and opening at its inner end; a crank shaft; and bearings therefor consisting of base sections carried by the base section of said crank shaft casing, and cap sections carried by the cap section thereof, the base sections of said bearings projecting into the casing beyond the cap sections thereof, for the purpose specified.

8. The combination of a crank shaft casing consisting of a base section adapted to serve as an oil receptacle, and a cap section; means for securing said casing sections in their closed position; an engine cylinder carried by said cap section and opening therein at its inner end; a crank shaft; and bearings therefor consisting of base sections carried by the base section of said crank shaft casing, and cap sections carried by the cap section thereof, for the purpose specified.

9. The combination of a crank shaft casing consisting of a base section and a cap section; a connecting hinge therefor; means for securing said casing sections in their closed position; an engine cylinder carried by said cap section and opening therein at its inner end; a piston; a connecting rod; a crank shaft; and bearings therefor consisting of base sections carried by the base section of said crank shaft casing, and cap sections carried by the cap section thereof, for the purpose specified.

10. The combination of a crank shaft casing consisting of a base section and a cap section; means for securing said casing sections in their closed position; an engine cylinder carried by said cap section and opening therein at its inner end; a piston; a connecting rod; a crank shaft; and bearings therefor consisting of base sections carried by the base section of said crank shaft casing, and cap sections carried by the cap section thereof, for the purpose specified.

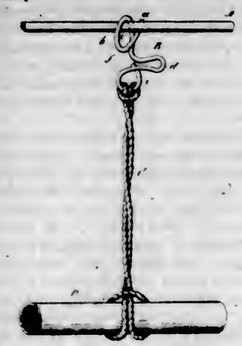
11. The combination of a crank shaft casing consisting of a base section and a cap section; means for securing said casing sections in their closed position; an engine cylinder carried by said cap section and opening therein at its inner end; and bearings therefor consisting of base sections carried by said base section of said crank shaft casing, and cap sections carried by the cap section thereof, for the purpose specified.

12. The combination of a crank shaft casing consisting of a base section and a cap section; means for securing said casing sections in their position; an engine cylinder carried by said cap section and opening therein at its inner end; a crank shaft; and bearings therefor consisting of base sections carried by the base section of said crank shaft casing, and cap sections carried by the cap section thereof, for the purpose specified.

870,002. CABLE-SUSPENSION DEVICE. MALCOLM C. WILLIAMS, Kansas City, Mo. Filed Oct. 3, 1906. Serial No. 337,220.

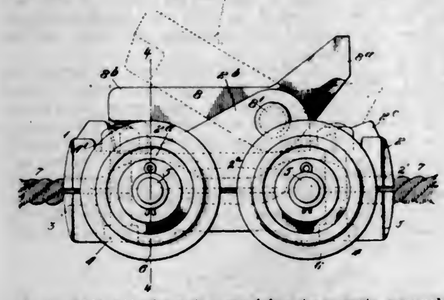
1. A cable suspension device consisting of a single piece of resilient wire provided at one end with a loop whereby said device may be attached to a span-wire, said loop having an upwardly-extending end portion angularly disposed to the plane thereof, and means for supporting a cable therefrom.

2. A cable suspension device consisting of a single piece of resilient wire provided at one end with a loop whereby said device may be attached to a span-wire, said loop having an upwardly-extending end portion angularly-disposed to the plane thereof, and provided at the other end with a ring having its plane substantially at right angles to the plane of said loop.



3. A cable suspension device consisting of a single piece of resilient wire provided at one end with a loop, said loop being continued into an outwardly extending portion lying in a plane substantially at right angles to the plane of said loop, and the lower portion of said loop and said outwardly extending portion forming an entrance to said loop which is smaller than the diameter of the span-wire to which said device is to be applied, whereby said device may be snapped onto said span-wire and then turned at right angles thereto for locking the same to said span-wire, and means for supporting a cable from said device.

870,003. CABLE ATTACHMENT. FREEMAN R. WILLSON, Jr., Worthington, Ohio, assignor to Joseph A. Jeffrey, Columbus, Ohio. Filed May 4, 1906. Serial No. 315,160.



1. A cable attachment comprising two parts separable on longitudinal lines, and each provided with a longitudinal groove arranged to receive a portion of the cable and with a transverse groove arranged to receive a portion of an axle, an axle fitted into said transverse grooves, and rollers on the axle.

2. A cable attachment comprising two parts separable on longitudinal lines and each having a longitudinal groove and a transverse groove, the longitudinal grooves coöperating to receive the cable and the transverse grooves coöperating to receive an axle, an axle fitted into said transverse grooves, and rollers on the said axle.

3. A cable attachment comprising two parts separable on longitudinal lines and having transverse grooves arranged to register with each other and to receive an axle and longitudinal grooves adapted to receive the cable, the longitudinal groove in the upper part of the clamp being deeper immediately above the point at which the axle is inserted than elsewhere throughout its length, an axle fitted into said transverse grooves and adapted to force the cable into the deeper portion of the said upper longitudinal groove, and rollers on said axle.

4. A cable attachment formed in two parts, an upper and a lower one, separable on longitudinal lines and having transverse grooves arranged to register with each other and to receive an axle and correlated longitudinal grooves arranged to receive the cable, the longitudinal groove in the upper part of the clamp being deeper immediately above the point at which the said axle is inserted than elsewhere throughout its length, an axle fitted into said transverse grooves and having its central portion bent downwardly and arranged to engage the cable and to press it into the said deeper portion of the longitudinal groove in the upper part of the clamp, and rollers on said axle.

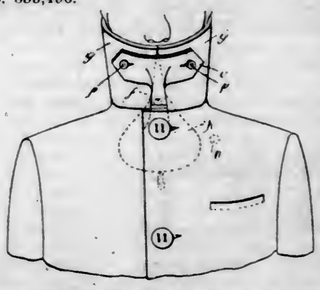
5. A cable attachment formed in two parts, an upper and a lower one, separable on longitudinal lines and having transversely-arranged curved grooves adapted to register with each other and to receive an axle and coöperating longitudinally-arranged grooves adapted to receive the cable, the longitudinal groove in the upper part of the clamp being deeper immediately above the point at which the said axle is inserted than elsewhere throughout its length, an axle fitted into said transverse grooves and having its central portion bent downwardly and adapted to press the cable upwardly into the said deeper portion of the longitudinal groove in the upper part of the clamp, and rollers on the axle.

6. In a conveyer carriage, the combination of the body part, a bent axle, the body part having a depressed seat receiving the bent portion of the axle, means for clamping the axle in the said seat, and wheels on the axle.

7. In a conveyer carriage, the combination of a body part, an axle round in cross section and bent intermediate its ends, the body part having a depressed seat receiving the bent portion of the axle, means for clamping the axle in the said seat and wheels on the axle.

8. In a conveyer carriage, the combination of a body comprising two parts separable on longitudinal lines, a bent axle, one of the body parts having a depressed seat receiving the bent portion of the axle, means for clamping the two body parts together and thereby locking the axle in position, and wheels on the axle.

870,004. THROAT-PROTECTOR. CHARLES E. WINKS, Winnipeg, Manitoba, Canada. Filed Feb. 2, 1907. Serial No. 355,496.

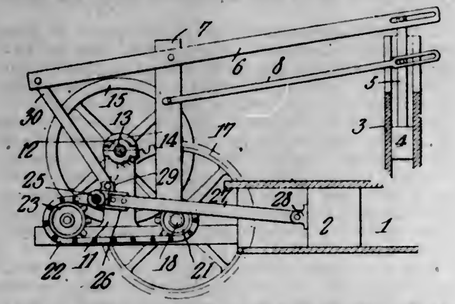


1. The combination with a coat and collar thereof having a pair of fastening devices thereon, the ends of the said collar having a space therebetween, of a throat protector disconnected from the coat when not in use and consisting of a strip adapted to cover the front portion only of the neck and having fastening devices whereby the upper end of the protector is fastened to the collar, and a portion depending from the strip, such protector being narrow at its middle and widened towards its lower end and adapted to be stuffed through the said space between the ends of the collar.

2. The combination with a coat and collar thereof having a pair of fastening devices thereon, the ends of the said collar having a space therebetween, of a throat protector disconnected from the coat when not in use and consisting of a strip e adapted to cover the front portion only of the neck and having fastening devices whereby the upper end of the protector is fastened to the collar,

and a portion *k* depending from the strip, such protector being narrow at its middle and widened towards its lower end and adapted to be stuffed through the said space between the ends of the collar, and a loop upon the said lower end of the protector.

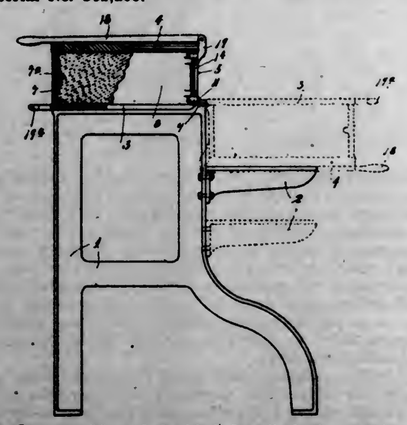
870,005. HAY-PRESS. JOHN W. WIRTZ and EMILE J. HERNLEN, Augusta, Ga. Filed Mar. 22, 1907. Serial No. 363,881.



1. In a press, a pressure chamber, a follower therefor, a pitman connected to the follower, two parallel, endless, spaced sprocket chains, sprocket pinions supporting the chains in planes parallel with the plane of movement of the follower, power transmitting mechanism connected to the sprocket pinions, and a wrist pin connected to the end of the pitman remote from the follower and constituting at each end one of the pivot connections of adjacent links of the respective sprocket chain.

2. In a press, a pressure chamber, a follower therefor, a pitman connected to the follower, two parallel, endless, spaced sprocket chains, sprocket pinions supporting the chains in planes parallel with the plane of movement of the follower, power transmission mechanism connected to the sprocket pinions, a wrist pin connected to the end of the pitman remote from the follower and constituting at each end the pivot connection of two adjacent links of the respective sprocket chain, a feeder mechanism, and a link connection therefrom to the wrist pin.

870,006. CONCRETE-BLOCK MACHINE. CHARLES WOLFENDEN, Minneapolis, Minn. Filed Mar. 8, 1907. Serial No. 361,209.



1. In a machine of the kind described, the combination with a supporting frame, of a bottom plate, two side plates and two end plates, one of which side plates and said bottom plate being pivoted to said frame by axially alined hinges, the said end plates being hinged to the free end of one of said wall plates, a latch for securing the adjacent end of said latter hinged side plate to the adjacent end plate, a pallet board applicable to the top of the mold, a clamping lever hinged to one of said side plates and engageable with said pallet board, and a hand piece projecting from the free edge of said bottom plate and together with said clamping lever affording means for turning the mold upside down with the formed block, substantially as described.

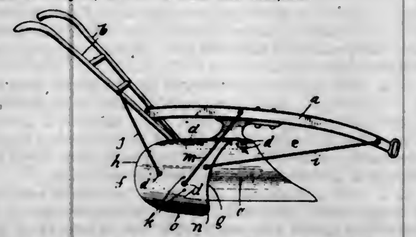
2. In a machine of the kind described, the combination with a supporting frame having projecting supporting arms located below its upper portion, one of said arms being vertically adjustable with respect to the other, of a bottom plate and four wall forming plates connected by hinges, adapting the mold to be opened up and the entire mold to be inverted or turned upside down, an extension plate applicable to one end of said mold for forming corner blocks, a loose pallet board applicable to the top of the filled mold, and means for clamping said pallet board to the mold while the same is being turned upside down, the said supporting arms of which frame are adapted to receive and support the pallet board when the said mold is inverted, substantially as described.

3. In a machine of the kind described, the combination with a supporting frame, of a bottom plate hinged thereto, four wall plates connected to said frame for movement with said bottom plate, an angular extension plate applicable to one end of the mold for forming corner blocks, and an angular pallet board applicable to the top of the body and upwardly extended end portion of the mold, and reversible with the mold, substantially as described.

4. In a machine of the character described, the combination with a supporting frame, of a bottom plate hinged thereto, four wall plates connected by hinges and a latch, and connected to said frame for pivotal movements with said bottom plate, an approximately U-shaped rectangular extension plate applicable to one end of the mold and cooperating with one of the end plates thereof to form the extensions of corner blocks, and an angular pallet board applicable to the top of the body and the extended end portion of the mold and reversible therewith, substantially as described.

5. In a machine of the kind described, the combination with a supporting frame, of a bottom plate hinged thereto, four wall plates in rectangular arrangement connected to said frame and reversible with said bottom plate, one of said four plates being connected for a hinge-like opening movement, a bar secured to the end members of said wall plates and provided with laterally spaced partition plates coöperating with said hinged wall plate to form a multiplicity of bricks or small blocks, and a pallet board applicable to the top of the mold and reversible therewith, substantially as described.

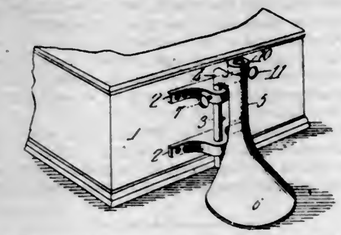
870,007. PLOW. AMUND J. AMUNDSON, Baldwin, Wis. Filed July 1, 1907. Serial No. 381,583.



1. In a plow, the combination with the plow-beam and moldboard of a spring metal shield the top edge of which is secured to said moldboard and the bottom edge of which is adapted to extend between the furrow being turned and the furrow next before laid and to a sufficient depth to direct the soil of the furrow being turned into place; said shield being concave towards said moldboard at its bottom portion and being thereby adapted to confine said soil to the place formed for its reception; and brace-rods connecting said shield with said plow-beam.

2. In a plow, the combination with the moldboard and plow-beam of a spring-metal shield secured thereto along the top edge of said shield; the bottom edge of said shield inclining towards the longitudinal axis of the plow from front to rear and being adapted to run along the outer side of the furrow being turned and the inner side of the furrow next before laid to a depth sufficient to direct the soil of the former furrow into place; the bottom portion of said shield being curved concave towards said moldboard and thereby adapted to confine the soil to the place formed for its reception and brace-rods connecting said shield with said plow-beam.

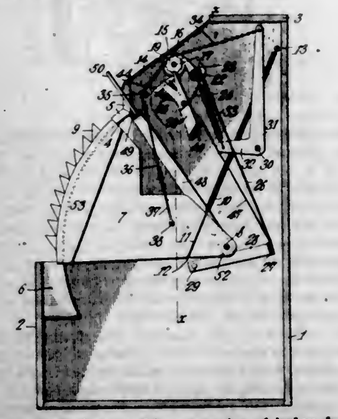
870,008. AMPLIFYING-HORN SUPPORT. FRANK L. BEDELL, Carbondale, Pa. Filed Apr. 22, 1907. Serial No. 369,592.



1. An amplifying horn support for talking machines comprising a socketed stand or post provided with an extended base or foot and an integral stem spaced from but parallel with the stand or post, and suitable brackets for the stem arranged for attachment to the case or cabinet of the talking machine, said stand or post being movable about the longitudinal axis of the stem.

2. An amplifying-horn support for talking machines comprising a socketed stem with an extended foot or base and provided with a clamp screw near its upper end, said support also having an offset stem parallel with the body of the support, suitable brackets for the stem arranged to be attached to the case or cabinet of the talking machine, and means for locking said stem against movement in said brackets.

870,009. CALCULATING-MACHINE. WALTER M. BOEHM, Iowa City, Iowa. Filed Apr. 6, 1907. Serial No. 366,776.



1. In a calculating machine, a series of index drums arranged for indicating successively higher denominations, a series of operating levers, one for each denomination embraced in the series of index drums and each having an extent of movement sufficient to comprise the digits of the denomination it represents, means for normally holding each drum against reverse movement, and flexible connections fast to and movable in both direction with the operating levers, said connections rotating the drums when moved in one direction and normally passing idly by said drums when moved in the other direction.

2. In a calculating machine, a series of index drums, each independently rotatable, a ratchet wheel secured to and movable with each drum, operating levers, one for each drum and movable for a distance commensurate with the number of digits carried by each drum, a chain connection between each lever and the toothed periphery of the respective ratchet wheel for moving said wheel and drum with said lever, and means for normally preventing the reverse movement of the ratchet wheel when the lever is returned to its normal position.

3. In a calculating machine, a series of rotatable index drums, ratchet wheels, one for each drum and each connected to its respective drum for rotation therewith, operating levers for causing the rotation of the drums in one direction, chain connections, each secured at one end to one of the levers and passing over and in engagement with the teeth of the respective ratchet wheel, springs connected to the other ends of said chain connections to maintain them taut and to return them to their normal positions, and means for normally holding the ratchet wheels against reverse rotation when the levers are returned to their normal positions.

4. In a calculating machine, operating levers, chains connected at one end to the levers, means at the other ends of the chains for maintaining them in a taut condition under movement, rotatable index drums, ratchet wheels, one for each drum and each connected to its respective drum for rotation therewith, said ratchet wheels being engaged by the chains at points intermediate of the length of the chains, and means for normally holding the ratchet wheels against reverse rotation when the levers and chains are returned to their normal positions.

5. In a calculating machine, operating levers, rotatable index drums, ratchet wheels, one for each drum and each connected to its respective drum for rotation therewith, means for normally holding the drums against movement except in one direction, and chain connections fast to the levers and engaging the teeth of the ratchet wheels when the chains are moved in one direction to rotate said ratchet wheels and passing idly over the said teeth of the ratchet wheels when the chains are moved in the other direction and the ratchet wheels are locked against reverse rotation.

6. In a calculating machine, a series of index drums, a ratchet wheel fast on each drum, operating levers, one for each drum, flexible connections secured to the levers and passing over the ratchet wheels for positively engaging the teeth of the same only when the levers are moved in one direction, pawls normally in engagement with the ratchet teeth for preventing the reverse movement of the drums, and means for communicating motion from one drum to the next adjacent drum comprising a pin on one drum, a spring-controlled pivoted support having a finger in the path of said pin and a pawl also carried by said plate in the path of the teeth of the ratchet wheel of the next adjacent drum.

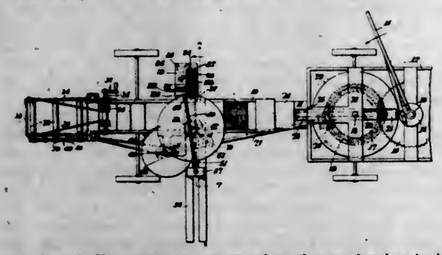
7. A calculating machine comprising a series of index drums, ratchet wheels, one for each drum and fast thereto, a series of operating levers, one for each drum, chain connections between each lever and the ratchet wheel of the respective drum and positively engaging the teeth of the ratchet wheel when the drum is moved in one direction, pawls normally engaging the ratchet wheels to prevent reverse rotation thereof, connecting means between the drums each comprising a finger in the path of the pin of a drum and a pawl in the path of the teeth of the next adjacent ratchet wheel, and means for moving the pawls out of engagement with the ratchet wheels and for moving all the levers simultaneously to the full extent of their movement and for then permitting them to return simultaneously to their initial position to reset all the index drums to the zero position.

8. In a calculating machine comprising index drums rotatable in both directions, locking mechanism for normally holding the drums against rotation in one direction, means for rotating all the drums simultaneously in the forward direction, means for releasing the drums from their normal locking mechanism actuated by the first-named means, means for causing a reverse simultaneous rotative movement of the drums, and means for arresting the reverse movement of each drum when it reaches the zero position.

9. In a calculating machine, a series of rotatable index drums, ratchet wheels therefor, pivoted levers, one for each drum, flexible connections between the levers and the ratchet-wheels for rotating the drums, pawls normally engaging said ratchet wheels to direct their rotation in one direction only, interconnecting means between the drums comprising pins on the drums, pivoted plates having fingers in the paths of said pins and pawls in the paths of the next adjacent ratchet wheels, a pivoted bar connected to all the pawls, a frame arranged to engage all the operating levers simultaneously and to also engage the pivoted bar connected to the pawls, and springs for returning the parts to normal position after being moved out of normal position.

10. A calculating machine comprising a series of rotatable drums, a ratchet wheel for each drum fast to the same at one side thereof, a pin projecting from the other side of the drum, a spring-retained pawl for each ratchet wheel, a spring-retained plate for each drum having a finger in the path of the pin thereof and a spring-retained pawl in normal engagement with the ratchet wheel of the next adjacent drum, a series of spring-retained segmental actuating levers having curved faces provided with fingerpieces, chain connections fast at one end to each lever and at the other end to a spring-controlled arm and passing over and in operative relation to the ratchet wheel of a corresponding index drum, a pivoted bar connected to all the pawls, and a pivoted arm movable into contact with all the levers to impel them simultaneously in one direction against the action of their return springs and provided with cam faces engaging the pawl-actuating bar.

870,010. BALING-PRESS. FRANK BOWEN, Purdy, Mo. Filed Sept. 13, 1906. Serial No. 334,476.



1. In a baling press, a compression plunger having in its forward face a transverse slot for the passage of a wire carrying needle, a spring actuated closure for said slot, a wire twisting mechanism arranged at the opposite side of the machine, a crank disk arranged at the top of the machine and having a wrist pin, a rod connecting the wrist pin to the needle, a gear on the crank disk, a mutilated gear engaging the crank disk gear, a plunger actuating mechanism including gearing connections, means for transmitting movement from said gearing connections to the mutilated gearing, a mutilated gear carried by the crank disk, a wire twisting mechanism arranged at that side of the machine opposite the needle, wire clipping and gripping means associated with the twisting mechanism, and means for transmitting movement from the mutilated gear of the crank disk to the wire twisting, clipping and gripping mechanisms.

2. The combination with a baling press, of a wire gripping device comprising a plurality of gripping fingers arranged to successively engage the wire, a revoluble carrier for said fingers, and a pivotally mounted spring pressed clamping member formed in sections for coöperation with successive fingers.

3. A wire gripping device comprising a revoluble disk, a plurality of wire engaging fingers carried thereby and operable in successive order, and a spring pressed wire clamp curved to conform to the periphery of the disk, and yieldably held there against, said clamping member being formed of a plurality of sections for coöperation with successive fingers.

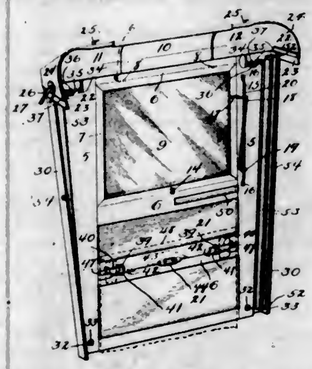
4. The combination with a baling press, of means for feeding the wire across the baling chamber, means for gripping the ends of the wire, a frusto-conical twisting head having a plurality of wire engaging fingers arranged to engage with and intertwist the wires at a point between the gripping devices and the bale.

5. The combination with a baling press, of a needle for carrying a bale wire across the baling chamber, a gripper engaging the wire, a twister over which the wire passes, a cutter arranged between the twister and gripper, an operating shaft geared to the twister and gripper, and a crank carried by said shaft and connected to the cutter.

6. The combination with a baling press, of a wire twister comprising a frusto-conical body portion, and a plurality of diametrically opposed pins projecting from the periphery of said body portion and arranged to be engaged by the wires to be twisted.

7. The combination with a baling press, of a pivotally mounted chute arranged at the delivery end of the baling chamber, means for adjusting the position of the chute, and driven rollers arranged in the lower portion of said chute.

870,011. STORM-FRONT FOR VEHICLES. FREDERICK C. BROCK and EDWARD M. DU BOIS, Columbus, Ohio, assignors to The Vehicle Apron & Hood Company, Columbus, Ohio, a Corporation of Ohio. Filed Mar. 8, 1907. Serial No. 361,357.



1. In a storm front for vehicles, the combination with a frame, of means for clamping said frame to the dashboard of a vehicle, a hood carried by said frame, stop members carried by said hood adapted to engage the front bow of a vehicle, means for drawing said hood toward said bow, vertical extension strips located at each edge of said frame and movable with relation thereto, spring rollers supported at each edge of said frame and upon said movable strips, curtains carried by said rollers, and members secured to said curtains which are adapted to engage about a portion of the vehicle top.

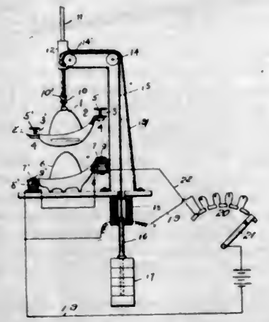
2. In a device of the character described, the combination with a frame, of a hood secured to the upper edge of said frame, said hood being made in sections which telescope with relation to each other, stop members carried by said hood which are adapted to rest against the front bow of a vehicle, means for drawing said hood toward said bow, means for clamping said frame to the dash-board of a vehicle, vertical extension strips located at the edges of the main frame and movable with relation thereto, means for clamping said strips against movement with relation to said frame, spring rollers carried by said extension strips, curtains carried by said rollers, and members carried by said curtains which are adapted to engage a portion of the vehicle top.

3. In a storm front for vehicles, the combination with a frame, of means for clamping said frame to the dashboard of a vehicle, vertical extension strips located at each side of said frame and movable with relation to said frame, means for clamping said strips in their adjusted positions, and vertically disposed spring actuated curtain rollers mounted upon and movable with said extension strips.

4. In a device of the character described, the combination with a frame, of means for securing said frame to a vehicle, a hood carried by the upper portion of the frame, vertical extension strips having bolt and slot connections with said frame and adapted to be moved bodily with relation to said frame, spring actuated rollers carried by said extension strips, curtains carried by said rollers, and means for securing said curtains to a portion of the vehicle.

5. In a device of the character described, the combination with a supporting frame, of means for securing said frame to a vehicle, a hood carried by the upper portion of the frame, vertical extension strips mounted at the sides of the frame and movable with relation to said frame, spring actuated rollers carried by said extension strips, curtains mounted upon said rollers, and means for holding said curtains in position when they are withdrawn from said rollers.

870,012. ELECTROMAGNETIC PRESS. JOHN P. BUCKLEY, New York, N. Y. Filed Apr. 19, 1907. Serial No. 369,135.



1. In a press, a plurality of platens and magnetic means for relatively moving said platens.

2. In a press, a plurality of die-members and magnetic means for causing the approach of said die-members.

3. A press having die-members comprising magnetic material, and electro-magnetic means for moving said die-members.

4. A press having relatively movable die-members, armatures on one of said members, electro-magnets on the other member, and an exciting circuit for said electro-magnets.

5. A shaping press having relatively movable die-members, armatures adjustably mounted on one of said members, electro-magnets on the other member, an exciting circuit for said magnets and controlling means for said circuit.

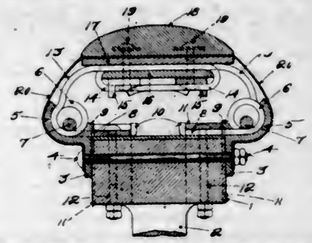
6. In a shaping press, in combination, a stationary die carrying electro-magnets, a counterbalanced movable die comprising magnetic material, and electro-magnetic means for bringing said movable die into the field of said electro-magnets.

7. In a shaping press, in combination, a lower die, electro-magnets mounted thereon, a counterbalanced upper die carrying armatures, a solenoid for lifting the counterbalance, exciting circuits for said solenoid and electro-magnets, and means for successively closing said circuits.

8. In a shaping press, in combination, removable, coöperating dies, electro-magnets mounted on one of said dies, adjustable armatures on the other die, a counterbalance for said last named die, a solenoid for lifting said counterbalance, exciting circuits for said solenoid and electro-magnets, and controlling means for said circuits.

9. In a shaping press, in combination, a lower die, electro-magnets mounted thereon, a counterbalanced upper die carrying armatures, guiding means for said upper die, a solenoid for lifting the counterbalance, exciting circuits for said solenoid and electro-magnets, and means for successively closing said circuits.

870,013. VEHICLE-TIRE. ALTON W. BUTLER, Brockton, Mass. Filed Dec. 8, 1906. Serial No. 346,839.



1. A wheel having an annular flanged bracket secured to each side of the rim, a flange on each of said brackets extending laterally away from the side of the rim, a series of coil springs seated on said flanges and secured thereon, each coil spring having an arm which extends transversely of the face of the rim at some distance radially outward from the rim and a tread portion seated upon and secured to said spring arms.

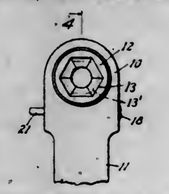
2. A wheel having an annular flanged bracket secured to each side of the rim, a flange on each of said brackets extending laterally away from the side of the rim, a series of coil springs seated on said flanges and secured thereon, lateral abutments for said springs on both sides thereof, each of said springs having an arm which extends transversely of the face of the rim at some distance radially outward from the rim and a tread portion seated upon and secured to said spring arms.

3. A wheel having an annular flanged bracket secured to each side of the rim, a flange on each of said brackets extending laterally away from the side of the rim, a series of coil springs seated on said flanges and secured thereon, lateral abutments for said springs on both sides thereof, each of said springs having an arm which extends transversely of the face of the rim at some distance radially outward from the rim and a tread portion seated upon and secured to said spring arms, the said arms being formed with an inward return bend, the transverse arms of the coil springs upon one side of the arm being arranged in staggered relation with the transverse arms of the springs upon the other side, the return bends of the spring arms on one side lapping past the return bends of the spring arms upon the other side, an annular band passing through the loops formed by said spring arms and an annular band surrounding said spring arms upon the outer side thereof, said annular bands being separated from each other by said spring arms, a tread portion outside of said outer band and means for securing said tread and bands together.

4. A wheel having an annular flanged bracket secured to each side of the rim, a flange on each of said brackets extending laterally away from the side of the rim, a series of coil springs seated on said flanges and secured thereon, lateral abutments for said springs on both sides thereof, each of said springs having an arm which extends transversely of the face of the rim at some distance radially outward from the rim and a tread portion seated upon and secured to said spring arms, the said arms being

formed with an inward return bend, the transverse arms of the coil springs upon one side of the arm being arranged in staggered relation with the transverse arms of the springs upon the other side, the return bends of the spring arms on one side lapping past the return bends of the spring arms upon the other side, an annular band passing through the loops formed by said spring arms and an annular band surrounding said spring arms upon the outer side thereof, said annular bands being separated from each other by said spring arms, a tread portion outside of said outer band, means for securing said tread and bands together and a protecting cover secured between the tread and the outer annular band, the edge of said cover extending around outside of the springs and secured to the rim whereby the said springs are entirely inclosed.

870,014. TOOL. SOLOMON A. CAMPBELL, Boston, Mass., assignor of one-half to Edward T. Kimball, Boston, Mass. Filed Mar. 11, 1907. Serial No. 361,649.

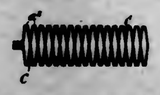


1. The combination, with a stock, a barrel journaled therein and a rolling member between them, of a plunger set loosely in the stock and arranged to retract the rolling member.

2. The combination, with a stock, a barrel journaled therein, these parts having coöperating grooves intersecting nearly tangentially, and a rolling member in the grooves, of means forcing the member yieldingly toward their intersection, and means to eject the rolling member from one of the grooves.

3. The combination, with a stock, a barrel rotatable and movable endwise therein, having an annular groove, there being a hole in the stock intersecting said groove nearly tangentially and a ball in the hole, of means forcing the ball yieldingly toward the intersection, and a plunger set loosely in the stock in line of said hole, one end engaging the ball and the other end projecting externally.

870,015. STORAGE BATTERY. JOSEPH C. COOK and EDWARD SOKAL, Buffalo, N. Y.; said Sokal assignor to said Cook. Filed May 10, 1905. Serial No. 259,710.



1. A combination Faure and Planté battery plate having a paste or mass adapted to be formed according to the Faure process and a relatively large superficial area of lead adapted to be exposed to the Planté action in service, substantially as set forth.

2. A storage battery plate having a paste of active material adapted to be formed according to the Faure process and numerous closely-arranged pin-like projections forming a relatively large area of lead adapted to be exposed to the Planté action in service, substantially as set forth.

3. A storage battery plate having a paste of active material adapted to be formed according to the Faure process and numerous closely-arranged tubular projections forming a relatively large area of lead adapted to be exposed to the Planté action in service, substantially as set forth.

4. A storage battery plate having numerous closely-arranged tubular projections forming a relatively large area of lead adapted to be exposed to the Planté action in service, and a paste of active material arranged around the projections and adapted to be formed according to the Faure process, substantially as set forth.

5. A storage battery plate having numerous closely-arranged pin-like projections forming a relatively large lead area adapted to be exposed to the Planté action in service and a paste of active material applied to the base portions of the projections, leaving their remaining portions exposed to the Planté action, said paste adapted to be formed according to the Faure process, substantially as set forth.

6. The herein described method of producing a combination Faure and Planté battery plate, which consists in providing the plate with a relatively large superficial area of lead and applying to the plate a paste or material designed to become active, then forming the plate according to the Faure process and finally exposing the superficial lead area to the Planté action in service, substantially as set forth.

7. The herein described method of producing a combination Planté and Faure battery plate, which consists in constructing a lead plate with numerous closely-arranged tubular projections forming a relatively large area, applying a paste of material designed to become active to the plate, then forming the plate according to the Faure process and finally subjecting the projections to the Planté action in service, substantially as set forth.

870,016. WHIFFLETREE-HOOK. MICHAEL J. CORCORAN, York, Pa. Filed Mar. 18, 1907. Serial No. 362,992.



1. A whiffletree-hook comprising a right-angularly shaped bar, means to secure the same to a whiffletree, a trace retaining arm pivotally mounted on the outer end of said bar, a flat spring, and means on said arm adapted to be engaged by said spring to hold the arm in an open or closed position, substantially as described.

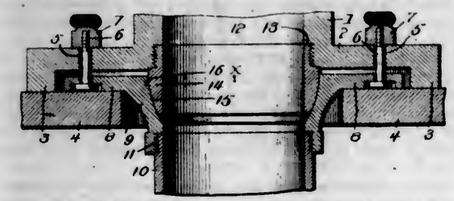
2. A whiffletree-hook comprising a right-angularly shaped bar, means to secure the same to a whiffle-tree, a trace retaining arm pivotally mounted on the outer end of said bar, a spring, and a squared head on the upper end of said arm, the right-angularly disposed sides of which are adapted to be engaged by said spring to hold said arm in an operative and inoperative position, substantially as described.

3. A whiffle tree hook comprising a longitudinally-disposed bar having at one end a right-angularly downwardly-projecting lug, an integrally formed fastening plate on the lower end of said lug, said plate projecting in the opposite direction to said bar, means to secure said plate to a whiffle tree, a trace retaining arm arranged on the outer end of said bar, a pivot screw passed through the upper end of said arm and adapted to be screwed into engagement with a threaded socket in the end of said bar whereby said arm is connected to the bar to turn laterally thereon, and a flat spring secured to the upper sides of the bar and projecting beyond the ends of the same to engage said arm and hold the same in an open or closed position, substantially as described.

870,017. WATER-CLOSET CONNECTION. JOSEPH J. COSGROVE, Scranton, Pa., assignor to Standard Sanitary Manufacturing Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Oct. 25, 1906. Serial No. 340,543.

1. The combination with a water closet having an outlet passage and a soil pipe, of a thimble secured in said outlet passage and having an externally spherical end projecting below the outlet passage, and a bell or socket carried by the drain pipe and formed with a spherical seat to receive the convex end of the thimble.

2. The combination with a water closet having an outlet passage internally screw threaded at its extremity, and a soil pipe, of a bell or socket carried by the soil pipe and formed with a spherical seat and a thimble having one end externally screw threaded and screwing into the outlet passage of the closet and the other end spherical, said spherical end fitting the seat in the bell or socket.

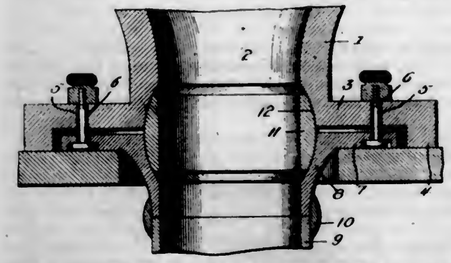


3. The combination with a water closet composed of hard metal, a soil pipe, and a soft metal bell or socket carried by the soil pipe and formed with a spherical seat, of a soft metal thimble secured to the water closet and projecting below the same, the projecting end of the thimble being spherical and contacting directly with and fitting the spherical seat in the bell or socket.

4. The combination with a water closet having an outlet passage, of a thimble carried by the closet at the end of the outlet passage said thimble having its projecting end of spherical form on its external surface, a soil pipe and a bell or socket carried by the soil pipe and formed with a spherical seat, to receive the rounded or spherical end of the thimble.

5. The combination with a water closet bowl having a base flange adapted to rest on the floor and having a spherical thimble screwed into its outlet passage, of a bell or socket having a spherical seat and a floor flange, the said thimble being adapted to contact with the seat in the bell or socket and form a metal to metal connection, while the flanges are out of contact.

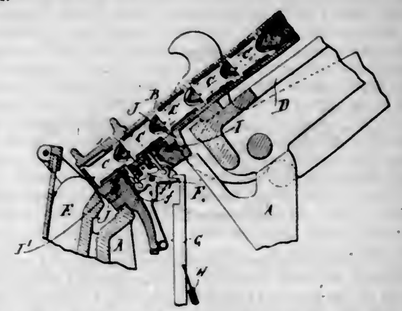
870,018. WATER-CLOSET CONNECTION. JOSEPH J. COSGROVE, Scranton, Pa., assignor to Standard Sanitary Manufacturing Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Oct. 25, 1906. Serial No. 340,544.



The combination with a water closet having an integral outlet passage terminating in a spherical socket, of a soil pipe having a spherical seat the surface of which coincides with that of the socket and an interposed thimble having a spherical peripheral surface coinciding with the surfaces of said socket and seat.

870,019. LINOTYPE-MACHINE. PHILIP T. DODGE, Brooklyn, N. Y., assignor to Mergenthaler Linotype Company, a Corporation of New York. Filed Mar. 27, 1906. Serial No. 308,359.

1. In a linotype machine, the combination of a main-frame, a magazine mounted thereon and adapted as described to contain all the matrices in a set or font, and escapement mechanism complete in itself, and means connecting the magazine and escapement mechanism, said means adapted to permit the instantaneous and entire disconnection of the escapement mechanism from the magazine.



2. As an improvement in linotype machines, a magazine complete in itself and adapted to carry an entire set or font of matrices, and an escapement mechanism complete in itself, said magazine and escapement mechanism being connected by means substantially as shown adapted to permit their instantaneous and entire disconnection.

3. A magazine having channeled top and bottom plates extended to the extreme lower end with openings in the under side to admit the operative ends of escapements, in combination with escapement mechanism comprising a bar and pivoted escapements therein, and locking connections between the two edges of the escapement bar and the magazine, said connections adapted to permit the instantaneous separation of the parts.

4. A magazine having rigid parallel bars on its under side in combination with the escapement mechanism removably secured between said bars.

5. In a linotype machine, the combination of an inclined channeled magazine removable at will, an escapement mechanism complete in itself, means for instantly effecting a rigid connection and disconnection of the magazine and escapement mechanism, and a main frame adapted to support the magazine and also adapted to support the escapement mechanism only after its disconnection from the magazine.

6. In a linotype machine, the combination of a main-frame, a magazine mounted thereon and adapted to contain all the matrices in a set or font, an escapement mechanism complete in itself, and connections through which the escapement mechanism is sustained from the magazine, said connections adapted to permit the instantaneous and entire disconnection of the escapement mechanism from the magazine.

7. In combination, a longitudinally channeled magazine and a coöperating escapement mechanism comprising a series of escapements, a supporting bar therefor, and escapement actuating springs, said mechanism secured transversely to the magazine substantially as described and removable therefrom lengthwise of the bar at will.

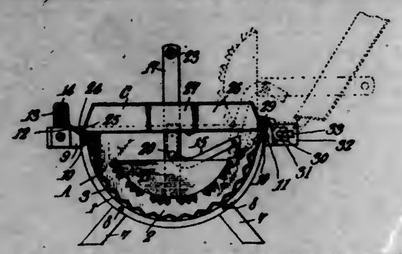
8. A longitudinally channeled magazine, in combination with a series of escapements acting through the side of the magazine, and a bar wholly sustaining the escapements, said bar secured to the magazine by longitudinal sliding connections adapted to permit the removal of the bar at will in an endwise direction with the escapements therein.

870,020. WASHING-MACHINE. JOHN H. DOUB, Walnut, Kans. Filed Mar. 8, 1907. Serial No. 361,868.

1. In a washing machine, the combination of a suds box, a pan-shaped cover therefor, carrying arms for said cover, means for hingedly and removably connecting the arms with the box, and a stop engaging said arms and arranged to hold the cover in open position.

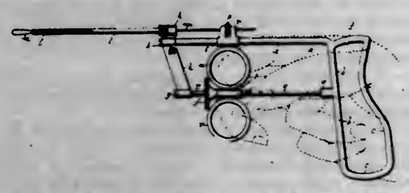
2. In a washing machine, the combination of a suds box, side bars attached thereto and projecting beyond the box at one end, a cover for the said suds box, bifurcated arms on the cover, pins on the projecting ends of the side bars with which the bifurcated arms engage for removably

holding the cover in place, and stop devices adjacent the pins and arranged to hold the cover in open position.



3. In a washing machine, the combination of a suds box, pivotally mounted members therein disposed adjacent the sides of the box and supported thereby, a rubber arranged in the box, handle members set in the outer side surfaces of the rubber, pivots for connecting the handle members to the pivotally mounted members, said handle members each being offset, and a cover for the suds box arranged to be engaged by the offset portions of the handle members as the rubber is swung out of the box.

870,021. NASAL SNARE. THOMAS E. DUFFER, Winchendon, Mass. Filed Jan. 11, 1907. Serial No. 351,797.



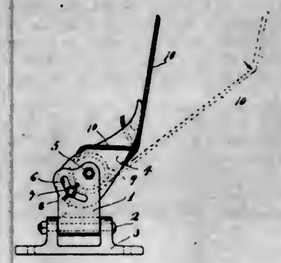
1. In a surgical instrument of the character described, a skeleton handle of the general shape of a pistol-handle whereby a pistol-grip may be obtained, a frame comprising two parallel braces one above the other and both rigidly connected with and extending horizontally from the said handle, a carriage sliding on said braces and provided with a plurality of finger-holes or rings, a rod for holding the snare or operating tool, and mechanism intermediate of the carriage and said rod whereby the application of power to the finger-holes applies a direct longitudinal draft to the rod.

2. In a surgical instrument of the character described, a frame provided with upper and lower parallel braces and suitable end-bars, a handle rigid with said frame and of the general shape of a pistol-handle whereby a pistol-grip may be obtained, a carriage sliding on said upper and lower braces and provided with a plurality of finger-holes or rings, a tubular extension on the upper end of the front end-bar of the frame, a bifurcated extension on the upper end of the carriage, an instrument or rod for holding the snare or operating tool extending through said extensions and parallel with said braces, and a hand-nut on the threaded portion of said rod within the bifurcated extension, for the purpose set forth.

870,022. LINE-FASTENER. ARTHUR DYER, Deephaven, Minn. Filed Mar. 7, 1907. Serial No. 361,152.

1. A line fastener comprising a support and a bifurcated arm pivotally connected thereto and provided with a hub portion between its sides over which and the extended end of said arm the line to be held is adapted to be passed, substantially as described.

2. In a line fastener, the combination with an anchoring bracket, of a bearing block pivotally connected thereto, and an arm adjustably pivoted to said block for movement transversely of the pivotal movement of said block, said arm having a hub portion over which and the extended end of said arm the line to be fastened is adapted to be passed, substantially as described.



3. In a line fastener, the combination with an anchoring bracket, of an approximately U-shaped bearing block pivotally connected thereto, a bifurcated arm pivotally attached to said U-shaped bearing block, said arm having a hub portion between its sides, and means for securing said arm in different adjustments, with respect to said bearing block, substantially as described.

4. In a line fastener, the combination with an anchoring bracket 3, of an approximately U-shaped bearing block 1 pivotally connected to said bracket, a bifurcated arm 4 working between and pivotally connected to the laterally spaced sides of said block 1, a sheave mounted between the laterally spaced sides of said arm, and a stud carried by said arm and working through a slot in the adjacent side of said block 1, and provided at its outer end with a nut whereby said arm 4 may be secured in different adjustments in respect to said block 1, substantially as described.

5. In a line fastener, the combination with an approximately U-shaped bearing block, of a bifurcated arm pivotally connected thereto and provided with a hub portion between its laterally spaced sides, and means for rigidly securing said arm in different angular adjustments in respect to said bearing block, substantially as described.

6. A line fastener comprising a bifurcated arm having a hub portion located between its laterally spaced sides and over which hub and the extended end of which arm a line is adapted to be passed and fastened, substantially as described.

870,023. HAY-PRESS. ROBERT W. EASTERLING, Yoakum, Tex., assignor of one-third to T. J. King and one-third to S. V. Wood, Brady, McCulloch county, Tex. Filed July 15, 1907. Serial No. 383,802.

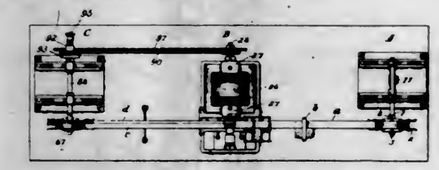


1. In a baling press, the combination with a reciprocating plunger having a rearwardly extending member provided with a foot portion for engaging the floor of the press box, a lever pivotally hung in the rear end of the press box having a heel portion adapted at times to engage the foot portion of the plunger extension and straddle links that connect the lever and said plunger extension, substantially as shown and for the purposes described.

2. The combination with the press box, having a removable closure member in the discharge end, and a feed opening in top at the other end; of a plunger movable in the press box having a rearwardly extended member having a downwardly inclined upper edge, and a heel portion that rides on the bottom of the press box, a lever pendently hung on the front end of the press box, link members that connect the said lever and the plunger extension, said lever having a heel portion, adapted to positively engage the heel portion of the plunger extension at times, for the purposes specified.

3. The hereinbefore described improvements in hay presses, comprising the following elements in combination, a press box having slotted sides, a closure member removably mounted in the discharge end, a pivoted lock bail adapted to be held over the discharge end of the press box, a detent on the press box for holding the bail locked, said press box having a feed inlet at one end, spring hold backs mounted on the sides of the press box, adapted to be pushed back by the plunger, a plunger mounted in the press box having a rearwardly extended member, having an inclined upper edge and having a heel portion that rides on the bottom of the press box, a cross shaft mounted on the front end of the press box, a lever pendently hung on said shaft, having a heel portion adapted at times to positively engage the heel member on the plunger extension and link connections that join said lever and the plunger extension, all being arranged substantially as set forth.

870,024. APPARATUS FOR PRODUCING PERFORATED STRIPS. THOMAS A. EDISON, Llewellyn Park, Orange, N. J., assignor to Edison Storage Battery Company, West Orange, N. J., a Corporation of New Jersey. Filed Mar. 24, 1905. Serial No. 251,759.



1. In an apparatus of the character described, a pair of coöperating perforating rolls, means for progressively feeding to said rolls a strip of material of greater width than the working surfaces of the rolls, means for guiding one edge of said strip into alinement with one edge of said surfaces, and means for continuously separating the perforated and unperforated portions of the strip, substantially as set forth.

2. In an apparatus of the character described, a pair of coöperating perforating rolls, means for progressively feeding to said rolls a strip of material of greater width than the working surfaces of the rolls, means for guiding one edge of said strip into alinement with one edge of said surfaces, and means in alinement with the other edge of said surfaces for continuously separating the perforated and unperforated portions of the strip, substantially as set forth.

3. In an apparatus of the character described, a pair of coöperating perforating rolls, means for progressively feeding to said rolls a strip of material of greater width than the working surfaces of the rolls, means for guiding one edge of said strip into alinement with one edge of said surfaces, and coöperating cutting edges carried by the rolls for continuously separating the perforated and unperforated portions of the said strip, substantially as set forth.

4. In an apparatus of the character described, a pair of coöperating perforating rolls, means for progressively feeding to said rolls a strip of material of greater width than the working surfaces of the rolls, means for guiding one edge of said strip into alinement with one edge of said surfaces, and coöperating cutting edges carried by the rolls and occupying the same plane as the other edge of said surfaces for continuously separating the perforated and unperforated portions of the said strip, substantially as set forth.

5. In an apparatus of the character described, a pair of coöperating perforating rolls, means for progressively feeding to said rolls a strip of material of greater width than the working surfaces of the rolls, one or more guides in alinement with one edge of said surfaces, means for pressing one edge of said strip against said guides and means for continuously separating the perforated and unperforated portions of the strip, substantially as set forth.

6. In an apparatus of the character described, a pair of coöperating perforating rolls, means for progressively feeding to said rolls a strip of material of greater width than the working surfaces of the rolls, one or more guides in alinement with one edge of said surfaces, means for pressing one edge of said strip against said guides, and coöperating cutters carried by the rolls for continuously separating the perforated and unperforated portions of the said strip, substantially as set forth.

7. In an apparatus of the character described, a pair of coöperating perforating rolls, means for progressively feeding to said rolls a strip of material of greater width than the working surfaces of the rolls, one or more guides in alinement with one edge of said surfaces, one or more spring pressed guides for pressing said strip laterally against said first guides, and means for continuously separating the perforated and unperforated portions of the said strip, substantially as set forth.

8. In an apparatus of the character described, a pair of coöperating perforating rolls, means for progressively feeding to said rolls a strip of material of greater width than the working surfaces of the rolls, one or more guides in alinement with one edge of said surfaces, one or more spring pressed guides for pressing said strip laterally against said first guides and coöperating cutting edges carried by the rolls for continuously separating the perforated and unperforated portions of the said strip, substantially as set forth.

9. In an apparatus of the character described, a pair of coöperating perforating rolls, means for progressively feeding to said rolls a strip of material of greater width than the working surfaces of the rolls, one or more guides capable of lateral adjustment into alinement with one edge of said working surfaces, means for pressing one edge of said strip against said guides and means for continuously separating the perforated and unperforated portions of said strip, substantially as set forth.

10. In an apparatus of the character described, a pair of coöperating perforating rolls, means for progressively feeding to said rolls a strip of material of greater width than the working surfaces of the rolls, a guide, means for holding said guide in various positions of vertical adjustment, means for pressing one edge of said strip against said guide and means for continuously separating the perforated from the unperforated portions of said strip, substantially as set forth.

11. In an apparatus of the character described, a pair of coöperating perforating rolls, means for progressively feeding to said rolls a strip of material of greater width than the working surfaces of the rolls, a vertically and laterally adjustable guide, means for pressing one edge of said strip against said guide and means for continuously separating the perforated and unperforated portions of said strip, substantially as set forth.

12. In an apparatus of the character described, a pair of coöperating perforating rolls, means for progressively feeding to said rolls a strip of material of greater width than the working surfaces of the rolls, one or more guides in alinement with one edge of said surfaces, one or more laterally adjustable spring pressed guides for pressing said strip laterally against said first guides, and means for continuously separating the perforated and unperforated portions of the said strip, substantially as set forth.

13. In an apparatus of the character described, a pair of coöperating perforating rolls, means for progressively feeding to said rolls a strip of flexible material, a plurality of guide rods so placed as to deflect and frictionally retard the said strip, and guides laterally adjustable on said rods, substantially as set forth.

14. In an apparatus of the character described, a pair of coöperating perforating rolls, means for progressively feeding to said rolls a strip of flexible material, a plurality of laterally adjustable guide rods so placed as to deflect and frictionally retard the said strip, and guides laterally adjustable on said rods, substantially as set forth.

15. In an apparatus of the character described, a roll or die support consisting of a frame or block supported at its rear on a slide and at its front on a vertical adjusting screw, substantially as set forth.

16. In an apparatus of the character described a support for a roll or die consisting of a frame or block supported at its rear on a slide and at its front on a vertical adjusting screw, and means for laterally adjusting said block, substantially as set forth.

17. In an apparatus of the character described, a support for a roll or die, consisting of a frame or block supported at its rear on a slide and at its front on a vertical adjusting screw, and means for tilting said slide in a vertical plane, substantially as set forth.

18. In an apparatus of the character described, a support for a roll or die consisting of a frame or block 43 supported at its rear on a slide 44 and at its front on a vertical adjusting screw 45, and a laterally adjustable guide plate 60 carried by said frame, substantially as set forth.

19. In an apparatus of the character described, a pair of coöperating perforating rolls, means for guiding a strip of sheet metal through said rolls with one edge in alinement with one edge of the working surfaces thereof, means for longitudinally severing said strip, and a pair of reels for separately receiving the two parts of said severed strip, substantially as set forth.

20. In an apparatus of the character described, a pair of coöperating perforating rolls, means for guiding a strip of sheet metal through said rolls with one edge in alinement with one edge of the working surfaces thereof, means for longitudinally severing said strip, a pair of reels for separately receiving the two parts of said severed strip, means for driving said reels, and frictional connections interposed between said reels and said driving means, substantially as set forth.

21. In an apparatus of the character described, a pair of coöperating perforating rolls, means for guiding a strip of sheet metal through said rolls with one edge in alinement with one edge of the working surfaces thereof, means for longitudinally severing said strip, a pair of reels for separately receiving the two parts of said severed strip, means for separately driving said reels, and frictional connections interposed between each of said reels and said driving means, substantially as set forth.

22. In an apparatus of the character described, a pair of coöperating perforating rolls, means for guiding and feeding a strip of sheet metal through said rolls with one edge in alinement with one edge of the working surfaces thereof, a revoluble supply reel for said strip and means for retarding the revolution of said reel, substantially as set forth.

23. In an apparatus of the character described, a pair of coöperating perforating rolls, means for guiding and feeding a strip of sheet metal through said rolls with one edge in alinement with one edge of the working surfaces thereof, a supply reel carried by a revoluble shaft and a friction clamp applied to said shaft for retarding its movement, substantially as set forth.

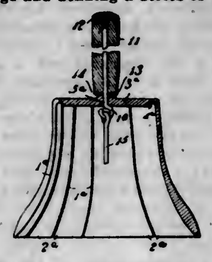
24. In an apparatus of the character described, a body or bed plate, an outwardly movable journal block, means for clamping said journal block to said bed plate, a driven shaft having a reduced end journaled in said block and a threaded portion adjacent thereto, a removable perforating roll carried by said driven shaft, and a nut threaded on said shaft for securing said roll, substantially as set forth.

870,025. MUSICAL INSTRUMENT. EDWARD J. ELSAS, Blue Mound, Mo. Filed Mar. 10, 1906. Serial No. 306,369.

1. A musical instrument comprising a bell having a series of straight and curved slits extending from the crown plate to the lip thereof and sub-dividing the bell into sections proportioned to produce the tones of the diatonic scale.

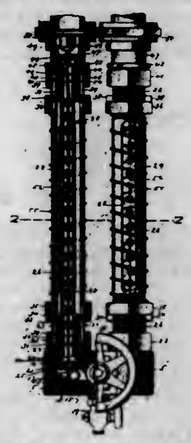
2. A musical instrument comprising a resonant element having a series of curved and straight lines extending to the edge thereof from points adjacent its center and subdividing said element into sections proportioned to produce tones pitched at diatonic intervals.

3. A device of the class described comprising a resonant element provided with a series of diverging slits intersecting its outer edge and defining a series of vibratory sound-



ing elements, and a central supporting body therefor, the resonant elements having different musical pitches.

870,026. WATER-GAGE. HENRY R. FAY, Boston, Mass. Filed Apr. 1, 1907. Serial No. 365,634.



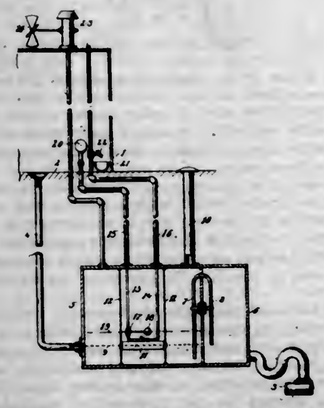
1. In a water-gage, a water-glass; a chain fitting slidingly in and substantially filling said glass; a base provided with a chamber and having an inlet-passage leading to said chamber and a passage connected with the lower end of the glass; a wire or rod extending from the lower end of the chain normally to the floor of said chamber; and a ball on said floor held normally by the wire or rod away from the passage connected with the glass, whereby the breaking of the glass will allow the in-rush of water to raise the wire or rod, crumple up the chain and force the ball against the passage leading to the glass, closing said passage.

2. In a water-gage, a water-glass; a chain fitting slidingly in and substantially filling said glass; a base provided with a chamber and having an inlet-passage leading to said chamber; a case surrounding the glass; tubular connections intermediate of the case and base supporting the glass and connecting the glass and case with the chamber in the base; a wire or rod extending from the lower end of the chain through said connections normally to the floor of the chamber; and a ball on said floor held by the wire or rod normally away from the passage connecting with the glass, whereby the breaking of the glass will allow the in-rush of water to raise the wire or rod, crumple up the chain and force the ball against the passage leading to the glass, closing said passage.

3. In a water-gage, a water-glass; a chain fitting slidingly in and substantially filling said glass; a base provided with a chamber and having an inlet-passage leading to said chamber and a passage connected with the lower end of the glass; a wire or rod extending from the lower end of the chain normally to the floor of the chamber; a ball on said floor held normally by the wire or rod away from the passage connecting with the lower end of the glass; a steam-inlet valve above and connected by a passage with the upper end of the glass; and a rod or wire connecting the upper end of the chain with said valve and holding it normally above and away from its seat, whereby the breaking of the glass will allow the chain to crumple up and the ball and upper valve to be driven to their seats by the water and steam, shutting off the supply thereof.

4. In a water-gage, a water-glass; a case surrounding the glass and provided at its ends with opposite longitudinal slots; a chain fitting slidingly in and substantially filling said glass; a base provided with a water-inlet passage, a chamber, an outlet port and a valve; counterbored nuts at opposite ends of the glass and case and screwing into said base and connecting with the port therein at the lower ends of the glass and case; a suitable union connecting with the said nut at the upper ends of the glass and case and provided with a valve connected with the upper end of the chain; elastic bushings surrounding the glass at its opposite ends; ferrules surrounding the bushings within the counterbored nuts; and glands surrounding the glass and extending against the bushings, said glands being provided with lugs which are adapted to slide in the slots in the opposite ends of the case, the valves being forced to close automatically by the pressure of steam and water when the glass breaks and the chain is allowed to crumple up.

870,027. DRAIN SYSTEM AND APPARATUS. JOSEPH F. GROSS, New York, N. Y. Filed July 11, 1906. Serial No. 325,594.



1. A separator for a drainage system, comprising a receptacle having a liquid inlet, a siphon for permitting the discharge of water when a predetermined level is reached, a float adapted to ride on the surface of the water, and means mounted on said float for removing a lighter compound.

2. A separator for a drainage system, comprising a receptacle having an inlet for water and a volatile compound, an outlet for said volatile compound in a gaseous state, an outlet for the water comprising a siphon for removing the water from the bottom of the receptacle when the level reaches a predetermined height, a float adapted to ride on the surface of the water, and means carried on the float for removing the liquid volatile compound.

3. A separator for a drainage system, comprising a receptacle having an inlet for water and a volatile compound, an outlet for said volatile compound in a gaseous state, an outlet for the water comprising a siphon for removing the water from the bottom of the receptacle when the level reaches a predetermined height, a float adapted to ride on the surface of the water, and a pipe carried by said float to remove the volatile compound.

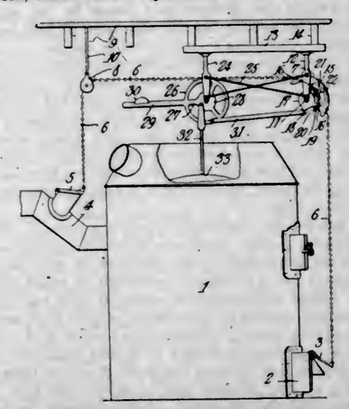
4. A separator for a drainage system, comprising a receptacle having an inlet for water and a volatile compound, an outlet for said volatile compound in a gaseous state, an outlet for the water comprising a siphon for removing the water from the bottom of the receptacle when the level reaches a predetermined height, a float adapted to ride on the surface of the water, and means carried by the float in communication with the exterior of the receptacle for removing the volatile compound.

5. A separator for a drainage system, comprising a receptacle having an inlet for water and a volatile compound, an outlet for said volatile compound in a gaseous state, an outlet for the water comprising a siphon for removing the water from the bottom of the receptacle when the level reaches a predetermined height, a float adapted to ride on the surface of the water, and means carried by the float in communication with the exterior of the receptacle to remove the volatile compound, said means being capable of adapting itself to the changing position of the float.

6. In a drainage system, a separator located between the inlet of the drain pipe and the sewer, comprising a receptacle normally containing a minimum quantity of liquid, a siphon for permitting the discharge of water when a predetermined level is reached, a float adapted to ride on the surface of the water, and means mounted on the float but independently operable therefrom for removing a lighter compound.

7. A separator for a drainage system, comprising a receptacle for water and a volatile compound, a siphon extending through the wall of said receptacle to a point near the bottom of the interior thereof, a float, guides therefor, and means carried by said float for removing said volatile compound.

870,028. FURNACE-REGULATOR. WILLUM L. HAGER, Lincoln, Nebr. Filed Apr. 4, 1907. Serial No. 366,358.



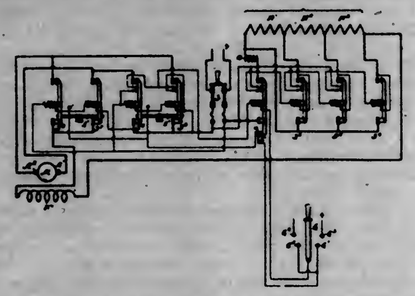
1. In a furnace, a dome capable of expansion and contraction under the action of heat, an ashpit, a draft valve for the ashpit, a smoke pipe, an air valve for the smoke pipe, a chain connection between the two valves, a pivoted sector over which the chain passes, said sector having a slot radially therethrough, a connection for fastening the chain to the sector consisting of a pointer adjustably secured to the sector and extending through the slot and a link of the chain, and other connections between the sector and the furnace dome.

2. In a furnace, a dome capable of expansion and contraction under the action of heat, an ashpit, a draft valve for the ash-pit, a smoke pipe, an air valve for the smoke pipe, chain connections between the two valves, a pivoted sector over which the chain passes and to which it is connected, a rotatable member connected to the sector, and connections between said rotatable member and the furnace dome.

3. In a furnace, a dome capable of expansion and contraction under the action of heat, an ashpit, a draft valve

for the ash-pit, a smoke pipe, an air valve for the smoke pipe, chain connections between the two valves, a pivoted sector over which the chain passes, said sector being provided with a radial slot, a pointer extending through said slot and engaging the chain and adjustably connected to said sector, a rotatable counterbalance wheel located over the furnace, a connection between the wheel and the sector, and another connection between the wheel and the dome of the furnace.

870,029. SYSTEM OF MOTOR CONTROL. JAY H. HALL, Cleveland, Ohio, assignor to Electric Controller and Supply Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 19, 1906. Serial No. 306,757.



1. In a system for controlling electric motors, a motor, a magnetically operated main switch therefor, a magnetically controlled reversing mechanism for said motor and an auxiliary switch mechanically opened by the closure of said main switch and mechanically closed by the opening of said switch for preventing the operation of said reversing mechanism while the main switch is closed.

2. In a system for controlling electric motors, a motor, a main magnetically operated switch therefor, a magnetically controlled reversing mechanism for said motor, a master controller, a connecting wire from said master controller to said reversing mechanism, and means whereby the circuit through said wire is broken on the closure of the said main switch and remains broken as long as the main switch is closed and remains closed as long as the main switch is open.

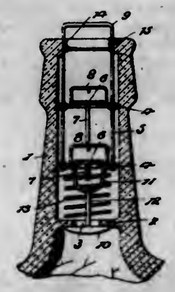
3. In a system for controlling electric motors, a reversing mechanism, a pair of electro-magnets for operating said reversing mechanism, the windings of said pair of electro-magnets being normally connected in series across the supply mains, a magnetically operated main switch, an auxiliary switch opened by the closure of said main switch and closed by the opening of said main switch, and a master switch, the connections being such that when the master switch is operated to start the motor in either direction the winding of one of said pair of electro-magnets will be short circuited and the other winding of said pair will be connected directly across the supply mains until said magnetically operated main switch is closed, the closure of the main switch mechanically opening the auxiliary switch and thereby opening the short circuit and disconnecting said winding from the master controller.

4. In a system for controlling electric motors, a motor reversing mechanism, electro-magnets for operating said reversing mechanism, a magnetically operated main switch, and a master switch, said master switch being connected to one end of the winding of the operating coil of said main switch and through an auxiliary switch to the windings of the electro-magnets which operate said reversing mechanism, said auxiliary switch being mechanically interlocked with said main switch in such manner that it is opened by the closure of said main switch and is closed by the opening of said main switch, thus preventing actuation of the reversing mechanism when the main switch is closed.

5. In a system for controlling electric motors, a motor, a main switch therefor, a magnetically controlled reversing mechanism for said motor, a master controller entirely disconnected from the controlling magnets of said reversing mechanism when said main switch is closed, and an auxiliary switch mechanically closed by the opening of said main switch whereby the master controller is connected to said reversing mechanism when the main switch is open.

6. In a system for controlling electric motors, a motor, a main switch, an electro-magnet for closing the same, an electro-magnetically controlled reversing mechanism for said motor, a master controller, two wires leading from the same, one being in circuit with the winding of the electro-magnet of the main switch and the other in circuit with the winding of the electro-magnets of the reversing mechanism when said main switch is open, and means mechanically controlled by the closure of said main switch for entirely opening the circuit between the master controller and the electro-magnets of the reversing mechanism.

870,030. BOTTLE-CLOSURE. JOE S. HAWKINS, Highlandville, Mo. Filed Apr. 20, 1907. Serial No. 369,316.



1. In a device of the character described, the combination of a receptacle formed with a neck, a disk movably mounted within the neck, a valve carried by the disk, a finger-piece for operating the disk, a valve mounted within the neck, and means carried by the disk for operating the second mentioned valve.

2. In a device of the character described, the combination of a receptacle formed with a neck, a disk slidably mounted within the neck, a valve carried by the disk, a ball connected to the disk and extending beyond the mouth of the neck, a second valve mounted within the neck, and means carried by the disk for operating the second mentioned valve.

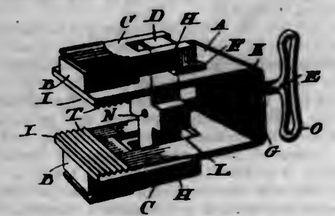
3. In a device of the character described, the combination of a receptacle formed with a neck having an annular flange projecting inwardly therefrom and defining an outlet opening, a disk slidably mounted within the neck, a valve carried by the disk, an arm pendent from the disk and passing through the opening defined by the said flange, a valve carried by the arm and adapted to close the opening, and a finger-piece connected to the disk.

4. In a device of the character described, the combination of a receptacle formed with a neck having an annular flange projecting inwardly therefrom and defining an outlet opening, a disk slidably mounted within the neck, a valve carried by the disk, a second valve for closing the outlet opening defined by the said annular flange, connecting means between the disk and the second mentioned valve, a spring interposed between the flange and the disk whereby the latter is caused to normally seat the second mentioned valve, and a finger-piece connected to the disk.

5. In a device of the character described, the combination of a receptacle formed with a neck, a pair of spaced disks slidably mounted within the neck, connecting means between the disks, a valve carried by each of the disks, a valve mounted within the neck and having an operative connection with the spaced disks, and means for moving the spaced disks to operate the last mentioned valve.

6. In a device of the character described, the combination of a receptacle formed with a neck, a valve controlling the flow through the neck, a valve carrying frame movably mounted within the neck, a valve carried by the said frame and also controlling the flow through the neck, and connecting means between the valve carrying frame and the first mentioned valve.

870,031. AXLE-NUT WRENCH FOR VEHICLES. ELMER F. HAYES, Kirwin, Kans. Filed Mar. 19, 1907. Serial No. 363,324.



1. An axle nut wrench, having the body formed of a member with a basal center the free ends of such member forming the jaws lugs secured on the outer side of said jaws an adjustable connecting rod and dogs secured at each end of said rod which rod in combination with a screw member moves the dogs against said lugs, thus forcing the V shaped ends of the dogs in an outward direction against the hub band, which secures the jaws to the axle nut.

2. An axle nut wrench having the body formed of a member with a basal center the free ends of such member forming the jaws, lugs secured on the outer side of said jaws an adjustable connecting rod which passes through longitudinal slots in the member of said jaws and dogs secured at each end of said rod, which rod, in combination with a screw member moves the dogs with respect to the lugs on said jaws.

3. An axle nut wrench having the body formed of a member with a basal center the free ends of such member forming the jaws lugs secured on the outer side of said jaws, an adjustable connecting rod which passes through longitudinal slots in the member of said jaws, dogs secured at each end of said rod and a screw member having a threaded engagement with an eye in the basal portion of the member of said jaws and rotatively secured to said connecting rod, whereby said rod is adjusted to move the dogs with respect to the lugs on the free ends of said jaws.

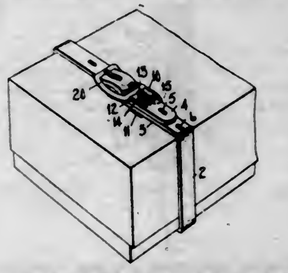
4. An axle nut wrench having the body formed of a member with a basal center the free ends of such member forming the jaws lugs secured on the outer side of said jaws an adjustable connecting rod which passes through longitudinal slots in the member of said jaws dogs secured at each end of said rod and a screw member with a thumb piece on its outer end and having a threaded engagement with an eye in the basal portion of the member of said jaws and rotatively secured to said connecting rod whereby said rod is adjusted to move the dogs with respect to the lugs on the free ends of said jaws.

5. An axle nut wrench having the body formed of a member with a basal center the free ends of such member forming the jaws having a corrugated face on the inner side lugs secured on the outer side of said jaws an adjustable connecting rod which passes through longitudinal slots in the member of said jaws dogs secured at each end of said rod, and a screw member with a thumb piece on its outer end and having a threaded engagement with an eye in the basal portion of the member of said jaws and rotatively secured to said connecting rod, whereby said rod is adjusted to move the dogs with respect to the lugs on the free ends of said jaws.

6. An axle nut wrench having the body formed of a member with a basal center the free ends of such member forming the jaws having a corrugated face on the inner side and lugs secured on the outer side of said jaws an adjustable connecting rod which passes through longitudinal slots in the member of said jaws, dogs secured at each end of said rod lugs secured on the outer side of the member forming said body, for holding the dogs in position for use, and a screw member with a thumb piece on its outer end and having a threaded engagement with an eye in the basal portion of the member of said jaws and rotatively secured to said connecting rod whereby said rod is adjusted to move the dogs with respect to the lugs on the free ends of said jaws.

7. An axle nut wrench having the body formed of a member and lugs secured on the outer side of the free ends of such member forming the jaws, an adjustable connecting rod, dogs secured at each end of said rod, and a screw member with a thumb piece on its outer end and rotatively secured to said rod, whereby said rod is adjusted to move the dogs with respect to the lugs on the free ends of said jaws.

870,032. STRAP-FASTENER. MOSES HERZOG, Washington, D. C. Filed May 13, 1907. Serial No. 373,464.



1. An approximately U-shaped spring metal clip having an aperture in one leg thereof and a staple extending laterally from the inner face of the other leg and adapted to project through and be withdrawn from the aperture in the first mentioned leg, and a lock adapted to be passed through the end of said staple outside said apertured leg to detachably connect said legs together.

2. A fastening device comprising an approximately U-shaped spring metal clip having an aperture through one leg thereof, an integral laterally extending lug projecting from the inner face of the other leg in position to pass through the opening in the first-mentioned leg, said lug having its free end apertured, and the legs of said clip being normally spread apart with the lug out of engagement with the apertured leg to facilitate the application of the device, and means for passing through the aperture in said lug after the passage of the lug through the opening in the apertured leg to detachably connect said legs.

3. The combination with a strap having perforated overlapping ends, of a U-shaped clip having an inwardly projecting apertured lug on one leg, the legs of said clip straddling the ends of said strap with the perforated lug extending through registering apertures therein, the other leg of said clip having a slot arranged to fit over said lug and means for passing through said lug outside said slotted arm to secure the legs of said clip together and lock the overlapped ends of the strap against separation.

870,033. FISH-HOOK GUARD. EUGENE W. HILDRETH, Melrose, Mass. Filed Apr. 10, 1907. Serial No. 367,354.



1. A fish hook guard for a fishing rod carrying a line with a hooked end, consisting in a socket secured to said rod to guard the barbed end of said hook.

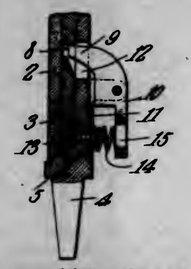
2. A fish hook guard for a fishing rod carrying a line with a hooked end, consisting in a socket to cover the barbed end of said hook and a spring tongue carrying said socket secured to said rod adapted to confine said hook.

3. A fish hook guard for a fishing rod carrying a line with a hooked end, consisting in a socket on said rod to guard the barbed end of said hook and a tongue on said rod adapted to confine the said hook.

4. A fish hook guard for a fishing rod carrying a line with a hooked end, consisting in a socket to guard the barbed end of said hook, a spring tongue carrying said socket adapted to confine said hook and a spring clip adapted to secure said tongue to said rod.

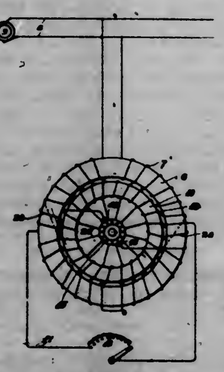
5. A fish hook guard for a fishing rod carrying a line with a hooked end, consisting in a socket to guard the barbed end of said hook, a spring tongue carrying said socket adapted to confine said hook and a spring clip adapted to secure said tongue to said rod, said tongue and socket forming an integral part of said clip.

870,034. SCREW-DRIVER. LAFAYETTE B. HOPKINS, North Lawrence, Kans. Filed Apr. 23, 1906. Serial No. 313,274.



A screw driver comprising a shank, a handle, a double ended blade centrally pivoted to the shank and having depressions equidistant from the pivot thereof, a thumb latch on the shank arranged adjacent to the handle and adapted to engage the depressions, a frame supporting the latch, a coiled spring for holding the latch in engagement with one or the other of the depressions, and a screw for attaching the frame to the shank, the head of the screw being projected within the coils of the spring to retain the latter in place.

870,035. DYNAMO-ELECTRIC MACHINE. DUGALD C. JACKSON, Madison, Wis. Filed Dec. 22, 1902. Serial No. 136,144.



1. In a dynamo electric machine, the combination with an armature winding, of a commutator therefor, said commutator having an integral conductor of high resistance and a contact surface for brushes, connected with said winding and with said high resistance conductor.

2. In a system of electrical power transmission, the combination with a source of alternating current, of a motor receiving current from said source, the armature of said motor having a commutated winding, and an associated commutator therefor, said commutator having an integral conductor of high resistance and a contact surface for brushes connected with said commutated winding and with said high resistance conductor.

3. In a dynamo electric machine, the combination with an armature winding, of a commutator therefor, said commutator comprising an integral ring conductor connected with said winding, and brushes in electrical connection with said ring conductor.

4. In a system of electrical power transmission, the combination with a source of alternating current, of a motor receiving current from said source, the armature of said motor having a commutated winding, and a commutator for said winding, said commutator comprising an integral ring conductor connected with said winding, and brushes in electrical connection with said ring conductor.

5. In a system of power transmission, the combination with a source of alternating current, of a motor in circuit therewith, the said motor having its armature provided with a short-circuited and a commutated winding, a commutator for said commutated winding, said commutator having an integral conductor of high resistance and a contact surface for brushes connected with said winding and with said high resistance conductor, brushes for engaging said commutator, and an auxiliary field winding in circuit with said brushes and the commutated winding, substantially as described.

6. In a system of power transmission, the combination with a source of alternating current, of a motor in circuit therewith, the said motor having its armature provided with a short-circuited and a commutated winding, a commutator for said commutated winding, said commutator comprising an integral ring conductor connected with said winding, brushes for engaging said commutator, and a circuit for impressing upon the brushes an electromotive force of the frequency of said source.

7. In a system of power transmission, the combination with a source of alternating current, of a motor in circuit therewith, the said motor having its armature provided with a short-circuited and a commutated winding, a commutator therefor, said commutator having an integral conductor of high resistance and a contact surface for brushes connected with said commutated winding and with said high resistance conductor, brushes bearing on the contact surface of said commutator, an external circuit connecting said brushes, and a suitable controller in said external circuit.

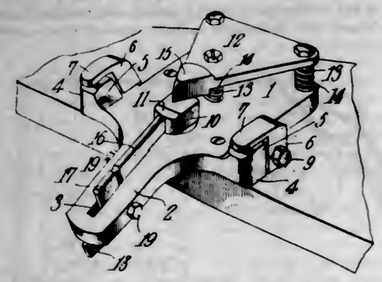
8. In a system of power transmision, the combination with a source of alternating current, of the field magnet of a motor in circuit with said source, an armature for said motor, a winding on said armature, a commutator therefor, said commutator comprising an integral ring conductor connected with said winding, brushes in electrical connection with said ring conductor at points intermediate between the neutral plane and the plane of commutation, and an external electrical circuit joining said brushes.

9. In an alternating current dynamo electric machine, the combination with a field magnet, of an armature provided with a commutated winding, a commutator therefor, said commutator having an integral conductor of high resistance and a contact surface for brushes connected with said winding and with said high resistance conductor, brushes bearing on said commutator at points intermediate between the neutral plane and the plane of commutation, and an external circuit to which said brushes are connected.

870,036. SAW-SET. JOHN H. KEETER, Spencer, N. C. Filed May 28, 1907. Serial No. 376,129.

1. In a saw set the combination with a base having an inclined tongue and setting means carried by the base; of angular rest members adjustably connected to the tongue, one of said members being reversible and disposed to constitute a guard and to lap a saw, and means for detachably securing the members to the tongue.

2. The combination with a base; of laterally extending fixed blade engaging devices upon the base, blocks adjustably connected to the base, and tongues extending from the blocks and overhanging said fixed members, the adjoining faces of said members and tongues being curved.



3. A saw set comprising a base, posts upstanding therefrom, a triangular plate slidably mounted upon the posts, yieldable supports upon the posts and interposed between the base and plate, one corner of the plate constituting a setting nose, and an anvil upon the base and below the setting nose.

4. A saw set comprising a base, a longitudinally slotted inclined tongue extending therefrom, an anvil upon the base, a setting nose coöperating therewith, and adjustable angular saw rests secured within the slotted tongue and extending close to the anvil, one of said rests being disposed to extend over a saw blade and constitute a guard.

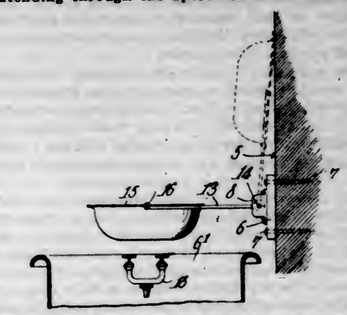
870,037. FELT BOOT. JOHN P. KLINE, Brooklyn, Mich. Filed Feb. 4, 1907. Serial No. 355,647.



The combination with an overshoe including a fastening device, a boot arranged within the over-shoe, a flexible protector one end of which is interposed between the overshoe and boot and secured to the latter at a point above the upper edge of the over-shoe, the free end of the protector being foldable downwardly over the over-shoe, said protector being provided with a cut away portion disposed in alinement with the fastening device, an elastic strip secured to the protector at the cut away portion thereof, a flexible shield covering the elastic strip, and a hook secured to the shield and having its bill spaced from the latter for engagement with the fastening device of the over-shoe when the protector is folded downwardly on the latter, said shield forming a housing for the hook and fastening device.

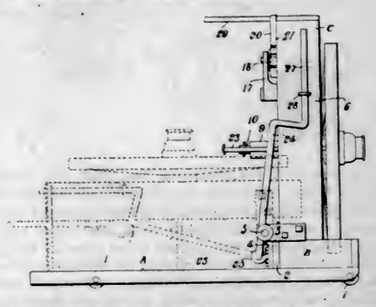
870,038. PORTABLE FOLDING WASHSTAND. JOHN C. KNAPP, Philadelphia, Pa. Filed Feb. 18, 1907. Serial No. 357,999.

The combination with a support, of spaced brackets secured to the support and provided with lateral enlargements having sockets formed therein defining horizontally disposed stop shoulders, there being a vertically disposed recess formed in one wall of the socket of each bracket and intersected by a transverse aperture, spring pressed arms pivotally mounted for vertical movement in the sockets and having their free ends spaced apart and provided with means for attachment to a receptacle, and pivot pins extending through the apertures in the brackets and



engaging the arms, the walls of each recess being curved and inclined from the adjacent pivot pin to the top of the bracket downward movement of said arms being limited by engagement with the shoulders, and the upward movement thereof by engagement with the walls of the vertical recesses.

870,039. TIRE-BENCH. GEORGE M. LEASE, Lamar, Mo. Filed Dec. 15, 1906. Serial No. 348,079.



1. In an apparatus of the class described the combination of a trough, a wheel supporting frame, a cross head movable longitudinal of said frame, and a spindle supported on the cross head and movable therewith and adapted also to be moved in a direction transverse to its first mentioned movement.

2. In an apparatus of the class described the combination of a trough, a wheel supporting frame, a cross head support movable longitudinally thereon, an adjustable cross head carried by said support, a wheel carrying spindle on said cross head and movable also in a direction transverse that of said support.

3. In an apparatus of the class described, the combination of a trough, a wheel supporting frame, a cross head support mounted thereon, means for moving said support longitudinally of said frame, a cross head adjustably attached to said support, a spindle carried by said cross head, and means for moving said spindle in a direction transverse to that of said support, whereby the wheel may be raised above said frame or lowered thereon.

4. In an apparatus of the class described, the combination of a trough, a wheel supporting frame hinged thereto, a longitudinally movable cross head support, a transversely adjustable cross head mounted thereon, a transversely movable spindle carried by said cross head and means for moving said spindle.

5. In an apparatus of the class described, the combination of a trough, a wheel supporting frame, a cross head support slidably mounted in said frame, rearwardly pro-

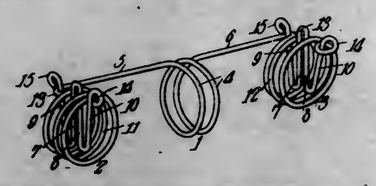
jecting plates on said support, a cross head adjustably secured to said plate, a wheel spindle slidable in said cross head and a treadle adapted to move said spindle.

6. In an apparatus of the class described, the combination of a trough, a wheel supporting frame hinged thereto, a support movable longitudinally of said frame, a cross head slidable on said support, a wheel carrying spindle attached to said cross head, and means for sliding said cross head axially of the spindle.

7. In an apparatus of the class described, the combination of a trough, a wheel supporting frame hinged thereto, and an operating lever pivoted to said trough between and below its hinged connection to said frame and extending longitudinally of said frame on its rear side for a suitable distance and then turned and carried onwardly at the side of said frame and through a guide thereon.

8. In an apparatus of the class described, the combination of a trough, a wheel supporting a frame hinged thereto, a U-shaped operating lever pivoted to said trough between and below its hinged connection to said frame, the arms of said lever extending longitudinally of said frame on its rear side for a suitable distance and are then turned to opposite sides thereof, one of said arms being continued along the side of said frame to form a handle, and a guide on said frame for said handle.

870,040. CLOTHES-PIN. JOSEPH W. LEWIS, Daingerfield, Tex., assignor of one-half to Joseph E. Phillips, Daingerfield, Tex. Filed June 5, 1907. Serial No. 377,401.



1. In a device of the character described, the combination with a clamp composed of a strip of resilient material having its intermediate portion doubled to form a pair of coöperatively arranged gripping jaws, the outer ends of the strip being doubled toward the outer sides of the gripping jaws, of a helical spring having its ends connected to the free ends of the outer arms of the clamp and having its convolutions arranged on each side of the doubled portions of the clamp.

2. A device of the character described composed of a single strip of resilient material having its intermediate portion coiled to form a line receiving portion, the ends of the coil extending in opposite directions to form a pair of clamp connecting arms, the end of each connecting arm being doubled to form a loop and thence coiled to form a helical spring, the free end of the latter being doubled in a direction diametrically of the spring to form a clamp, the free end of the latter engaging the said loop.

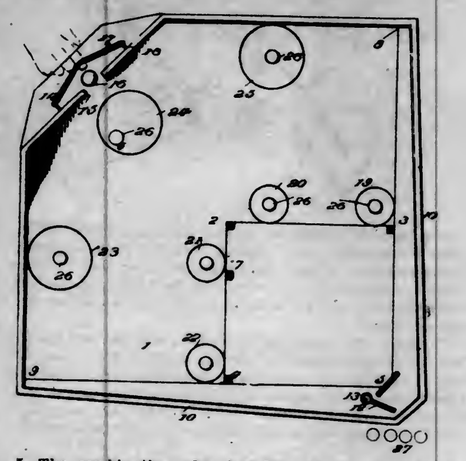
870,041. GAME APPARATUS. CARL E. I. LUNDBERG, Spokane, Wash. Filed Feb. 28, 1907. Serial No. 359,922.

1. The combination of a board, game pieces upon the board, a bat mounted upon the board and having a shiftable pivot, and means for delivering a ball to the bat.

2. The combination of a board, game pieces upon the board, the said board having an opening formed therein, a bat provided with a pivot pin received loosely within the opening to admit of the pivot point of the bat being shifted, and means for delivering a ball to the bat.

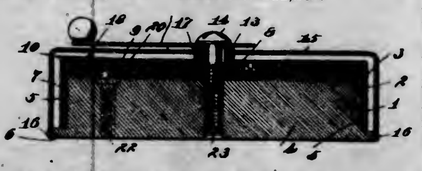
3. The combination of a board having an opening formed therein, game pieces upon the board, a bat having one end thereof enlarged and the enlarged portion being formed with a pin received loosely within the opening in the base, and means for delivering a ball to the bat.

4. The combination of a board, a guard surrounding the board, one portion of the guard being spaced from an edge of the board to provide a rest for the ball and having an opening formed therein, game pieces upon the board, a bat mounted upon the board, and means outside of the guard for delivering a ball through the opening to the bat.



5. The combination of a board, a guard surrounding the board and having an opening formed therein, game pieces upon the board, a bat mounted upon the board, and an elastic applied to the guard upon opposite sides of the before mentioned opening therein and adapted to deliver a ball through the opening to the bat.

870,042. RESISTANCE-ADJUSTING DEVICE. HECTOR P. MACLAGAN, Chicago, Ill., assignor to National Rheostat Company, Chicago, Ill., a Corporation of Arizona. Filed Oct. 11, 1905. Serial No. 282,282.



1. In a device of the class described, the combination with a resistance winding formed of a wire wound transversely around a band across the edges thereof, of a contact lever adapted for engagement with the adjacent turns along one edge of the band.

2. In a device of the class described, the combination with a resistance winding formed of wire wound transversely around the wall of a cylindrical shell and across the edges thereof, of a rotatable contact lever pivoted at the center of said shell and having a contact for engagement with the ends of adjacent coils along an edge of said shell.

3. In a device of the class described, the combination with a cylindrical mounting block, of a resistance winding formed of wire wound transversely around the wall of a cylindrical shell across the edges thereof, said shell being mounted about the cylindrical face of the block, and a rotatable contact lever pivoted at the center of said block and having a contact for engaging the wire at the ends of adjacent coils along one edge of the shell.

4. In a device of the class described, the combination with a winding formed of wire wound around the wall of a cylindrical shell across the edges of the shell, of a contact lever pivoted at the center of said shell and adapted upon rotation to engage the wire at the end of the adjacent coils along one edge of the shell, an actuating lever

for said contact lever, and a cover for said device disposed between the actuating and the contact levers whereby said actuating lever will be at the outside of the cover and the contact lever at the inside of the cover.

5. In a device of the class described, the combination with a cylindrical mounting block, of a resistance coil in the form of a flexible sheet wound transversely with wire across the edges thereof and subsequently bent cylindrically to be secured about the cylindrical surface of the mounting block and engaging at its end with the end of adjacent coils along one edge of the sheet, the end of the contact arm upon rotation of the arm passing along the edge of the sheet into successive engagement with the ends of adjacent coils.

6. In a device of the class described, the combination with a cylindrical mounting block, of a resistance coil thereon, said resistance coil being in the form of a continuous winding mounted on a flexible strip or ribbon subsequently bent into a cylindrical form to fit about the cylindrical edge of the mounting block, the upper edge of said coil extending a slight distance above the mounting block, a lever pivoted at the center of the block, and a contact on said lever bearing against the upper edge of said winding, rotation of said lever causing said contact to be carried over the edge of the winding into successive engagement with the coils thereof.

7. In a device of the class described, the combination with a resistance winding wound with a non-insulated wire on a cylindrical shell, the coils of said winding being arranged longitudinally and adjacent to each other but separated slightly, insulating material applied to the winding to maintain insulation of the coils from each other, a contact lever at the center of said coil, and a contact at the end of said lever pressed by said lever into engagement with one edge of said cylindrically arranged winding, rotation of said lever causing said contact to be carried successively into engagement with the coils on the winding.

8. In a device of the class described, the combination with a resistance coil composed of non-insulated wire wound transversely over a flexible strip or ribbon of insulating material, adjacent coils being slightly separated and the strip with the windings thereon being subsequently bent to form a cylindrical shell, insulating material in the form of sodium silicate applied between and on the winding to insulate the coils thereof and to protect them against mechanical injury, the top edge of the winding being left free from said insulating material, and a contact on said lever pressed thereby against the edge of the winding of the coil, rotation of the lever causing the contact to be carried about said edge into successive engagement with the coils of the winding.

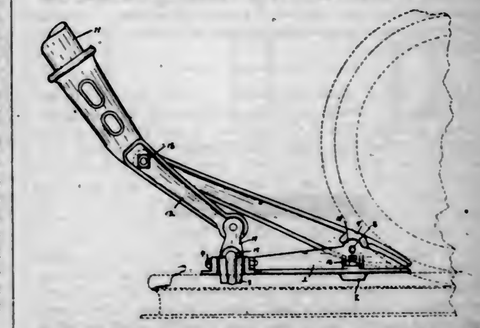
9. In a device of the class described, the combination with a cylindrical mounting block having a horizontal flange at its lower end, of a resistance coil in the form of a continuous winding wound on a flexible strip or ribbon of insulating material subsequently bent in the form of a cylindrical shell and secured about the cylindrical edge of the mounting block to rest on said flange, the upper edge of said coil extending a distance above the mounting block, a pivot post at the center of said mounting block, a contact arm pivoted to said pivot post and engaging at its end on the upper edge of said winding, a separate actuating handle pivoted to said pivot post and secured to the contact lever, and an inclosing shell for the device adapted to be disposed between the actuating lever and the contact lever whereby the actuating lever only will be at the exterior of the cover, said cover being secured about the cylindrical edge of the flange.

10. An adjustable resistance device composed of a cylindrical mounting block of insulating material, a cylindrical shell secured about the mounting block, a resistance winding wound continuously about said shell to form transverse coils whose vertical edges are disposed to form a circular contact edge, an actuating arm pivoted at the center of the mounting block, and a contact on said arm held in spring engagement with said resistance edge, rotation of said arm causing said contact to be carried about said edge in successive engagement with the ends of the coils composing said edge.

11. An adjustable resistance device composed of a cylindrical mounting block of insulating material, a cylindrical shell secured about the mounting block, a resistance winding wound continuously about said shell to form transverse coils whose vertical edges are disposed to form a circular contact edge, an actuating arm pivoted at the center of the mounting block, and a contact on said arm held in spring engagement with said resistance edge, rotation of said arm causing said contact to be carried about said edge in successive engagement with the ends of the coils composing said edge, the wire forming the winding being normally uninsulated and wound to leave spaces between coils, said spaces being subsequently filled with insulating material adapted to harden to maintain electrical separation of the coils and to protect them against mechanical injury.

12. An adjustable resistance device composed of a cylindrical mounting block of insulating material, a cylindrical shell secured about the mounting block, a resistance winding wound continuously about said shell to form transverse coils whose vertical edges are disposed to form a circular contact edge, an actuating arm pivoted at the center of the mounting block, and a contact on said arm held in spring engagement with said resistance edge, rotation of said arm causing said contact to be carried about said edge in successive engagement with the ends of the coils composing said edge, the cylindrical shell being normally in the form of a band or ribbon by which the wire is wound and subsequently bent with the wire thereon into the cylindrical form.

870,043. CAR-MOVER. ANDREW J. MAINE, Appleton, Wis. Filed June 27, 1907. Serial No. 380,994.



1. A car mover comprising a support, a lever fulcrumed thereto, and adapted to engage a car wheel, an actuating lever, rail gripping devices mounted on said support and connected therewith, and connections between the rail gripping devices and the actuating lever, arranged to communicate a gripping movement to the said devices during the working stroke of said lever.

2. A car mover comprising a support, a lever fulcrumed thereto, and adapted to engage a car wheel, an actuating lever, rail gripping devices mounted on said support and connected therewith, and connections between the rail gripping devices and the actuating lever, arranged to communicate a gripping movement to the said devices during the working stroke of said lever, said connections being also arranged to serve as a fulcrum for the actuating lever during its working stroke.

3. A car mover comprising a support, a lever fulcrumed thereto, and adapted to engage a car wheel, an actuating lever, rail gripping devices mounted on said support and connected therewith, and connections between the rail gripping devices and the actuating lever, arranged to communicate a gripping movement to said devices during the working stroke of said lever, said connections comprising links pivotally connected with actuating levers on opposite sides of the first mentioned lever.

4. A car mover comprising a rail shoe, a set of gripping devices connected therewith, an actuating lever operatively connected with the gripping devices and a load lever ful-

crumed to the rail shoe and pivotally connected with the actuating lever between its outer end and the point of connection with the gripping devices.

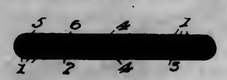
5. A car mover comprising a rail shoe, a set of gripping devices connected therewith, an actuating lever operatively connected with the gripping devices and a load lever fulcrumed to the rail shoe and pivotally connected with the actuating lever between its outer end and the point of connection with the gripping devices, said actuating lever being forked and arranged to receive the connected arm of the load lever between the fork arms.

6. A car mover comprising a rail shoe, a lever pivotally connected therewith, and adapted to engage a car wheel, an actuating lever, rail gripping devices mounted on said shoe and connected therewith, and connections between the rail gripping devices and the actuating lever arranged to communicate a gripping movement to said devices during the working stroke of said lever, said first mentioned lever having supporting fulcrum members in rocker bearing contact with said shoe above the pivotal axis and above the point of initial lever contact with the wheel.

7. A car mover comprising a rail shoe, a set of gripping devices connected therewith, an actuating lever operatively connected with the gripping devices and a load lever fulcrumed to the rail shoe and pivotally connected with the actuating lever between its outer end and the point of connection with the gripping devices, said rail shoe being also provided with set screws having rail gripping projections.

8. A car mover comprising a rail shoe provided with a longitudinal channel in its upper surface, a load lever pivotally secured to the shoe and oscillating in said channel, said load lever having projections above the pivot and the shoe having curved bearing surfaces for said projections, a forked actuating lever connected with the shoe, and straddling the rear end of the load lever and a pivotal connection between the rear end of the load lever and the actuating lever.

870,044. BELT AND BELTING. DAVID NETTENSTROM, Chicago, Ill., assignor to U. S. Chemical Rubber Company, Chicago, Ill., a Corporation of the District of Columbia. Filed Sept. 29, 1906. Serial No. 336,783.



1. A belt having its interior portion composed of inelastic cords forming a warp to take the strain of work, an adhesive and elastic casing surrounding said cords, a flexible covering surrounding said casing, a second similar adhesive and elastic casing over said covering, and an outer flexible covering for the belt, the joints of said flexible coverings being located on opposite sides of the belt.

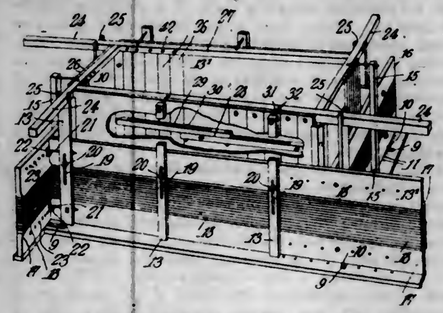
2. A belt comprising a central portion composed of strands extending the length of the belt and side by side, adhesive elastic material surrounding said strands, a canvas covering around said material, a second similar material, and a second canvas covering, the joints of said canvas coverings being located on opposite sides of the belt.

870,045. BURIAL-VAULT MOLD. JOHN M. PRUETT and WILLIAM ARD, Rockville, Ind. Filed Feb. 23, 1907. Serial No. 358,896.

1. A mold including an adjustable bottom section provided with spaced sockets, an outer mold section engaging said sockets, and an inner mold section spaced from the outer section and supported by the latter.

2. A mold including an outer mold section provided with spaced standards having recesses formed therein, an inner mold section spaced from the outer section arms extending laterally from the inner mold section and adapted to engage said recesses for supporting the inner section in spaced relation to the outer section, and an adjustable bottom section forming a support for the outer section.

3. A mold including an adjustable bottom section provided with spaced sockets, an outer mold section including detachable side and end walls provided with vertical standards adapted to engage the sockets, there being recesses formed in the upper ends of some of the standards, an inner mold section spaced from the outer section, and arms projecting laterally from the inner mold section and adapted to engage the recesses in adjacent standards.

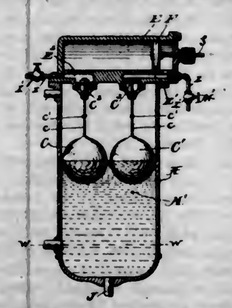


4. A mold including a bottom section formed of longitudinal and transverse bars arranged in rectangular form, one end of each bar being provided with a perforated strap and the opposite end thereof formed with a plurality of spaced openings, there being sockets formed in the bars between the straps and openings, pins passing through the perforations in the straps and engaging adjacent openings, an outer mold section resting on the bottom mold section and provided with spaced standards seated in said sockets, and an inner mold section spaced from and supported by the outer section.

5. A mold including a bottom section provided with spaced sockets, an outer mold section having spaced standards engaging said sockets, some of the standards being formed with terminal recesses, an inner mold section spaced from the outer section and provided with laterally extending arms engaging the recesses in said standards, and braces carried by the outer section and engaging sockets formed in the upper edge of the inner section.

6. A mold including a base provided with spaced socket, an outer mold section resting on the base and having its side and end walls formed of longitudinal timbers, removable strips interposed between the timbers and forming a continuation of the side walls, standards secured to the side and end walls of the sections and engaging the sockets in the base, there being slots formed in said standards, bolts secured to one of the timbers of said walls and extending through the slots in the standards, an inner mold section spaced from the outer mold section, and horizontally disposed bars secured to the free ends of the standards and engaging sockets in the upper edge of the inner mold section.

870,046. WATER-FEED REGULATOR. THOMAS G. RAKESTRAW, Detroit, Mich., assignor to U. S. Boiler Supply Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 5, 1906. Serial No. 341,994.



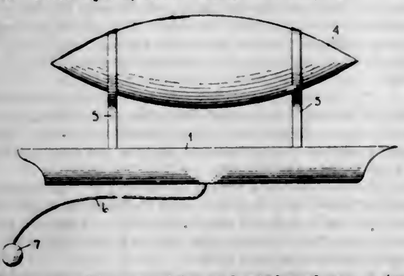
1. In a water feed regulator for boilers, a water column having communication with the boiler, a steam cylinder communicating with the water column through a pair of passages, the column being contracted longitudinally intermediate its sides, a piston in the cylinder, float valves arranged within the column for reciprocation to open and close the passages between the cylinder and column, alternately, to operate said piston, the float valves being arranged upon opposite sides of said longitudinal contraction, and a shut-off valve in the feed pipe to the boiler controlled by the piston.

2. In a water feed regulator for boilers, a water column having communication with the boiler, a steam cylinder communicating with the water column through a pair of passages, the column being contracted longitudinally intermediate its sides, a piston in the cylinder, float valves arranged within the column for reciprocation to open and close the passages between the cylinder and column, alternately, to operate said piston, the float valves being arranged upon opposite sides of said longitudinal contraction, a shut-off valve in the feed pipe to the boiler controlled by the piston, a low water alarm, and means for sounding said low water alarm by one of the float valves.

3. In a water feed regulator for boilers, a water column having communication with the boiler, a steam cylinder communicating with the column through a pair of passages, a piston in the cylinder, a pair of float valves arranged within the column for reciprocation to open and close the passages between the cylinder and column, alternately, to operate the piston, the float valves being arranged upon opposite sides of the column, and a shut-off valve in the feed pipe to the boiler controlled by the piston.

4. In a water feed regulator for boilers, a water column having communication with the boiler, a steam cylinder communicating with the column through a pair of passages, a piston in the cylinder, a pair of valves for cooperation with said passages, a float connected with the stem of each of said valves, whereby upon reciprocation of the floats the valves will be moved into and out of engagement with said passages, alternately, to operate the piston, the stem of each valve being composed of alining jointed sections, and a shut-off valve in the feed pipe to the boiler controlled by the piston.

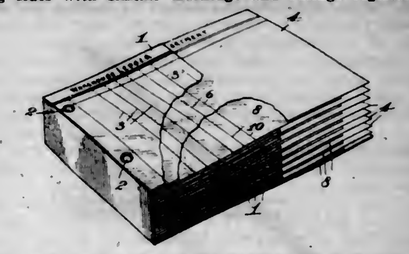
870,047. TOY AIR-SHIP. WILSON J. REMALY, Nazareth, Pa. Filed Apr. 1, 1907. Serial No. 365,751.



A toy air ship comprising a boat-shaped car, a longitudinal brace strip extending through the center of the car from end to end, a transverse brace strip arranged between said ends of the car and intersecting said longitudinal strip, an elliptically-shaped balloon arranged above the car, fastening bands or strips arranged around said balloon and secured to the transverse brace strip of the car, a holding cord connected at one end to said transverse brace strip and a holding weight secured to the outer end of the cord, substantially as described.

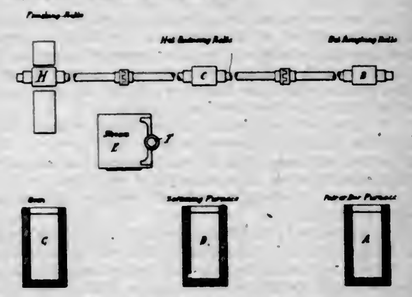
870,048. COMBINED WAREHOUSE INVOICE AND FREIGHT BOOK. SOLOMON M. RICH, St. Louis, Mo. Filed Jan. 15, 1906. Serial No. 296,096.

A combination book of the class described, comprising a plurality of sets of sheets arranged in block form and detachably connected at one edge, the sheets of each set being of the same length but of varying widths, said sheets being each provided on portions of their surfaces at their attaching sides with similar markings and rulings registering



with each other, and said sheets being provided on their remaining spaces with dissimilar markings and rulings.

870,049. METHOD OF MANUFACTURING SHEET METAL. AMBROSE RIDD, Newport, Ky. Filed Sept. 29, 1905. Serial No. 280,707.



1. The method of manufacturing sheet metal, which consists in rolling a pack of sheets at a high temperature, stripping the sheets apart while still hot in the presence of oxidizing agents, thereby oxidizing the surfaces, and then densifying the oxidized surface by pressure without permitting the sheets to cool below a dark cherry red heat.

2. The method of manufacturing sheet metal which consists in rolling a pack of oxid coated sheets at a high temperature, stripping the sheets apart while still hot to separate the films of oxid from each other and preserve on each sheet the film of oxid initially formed thereon, the stripping operation being accomplished in the presence of an oxidizing agent, thereby further oxidizing the surfaces, and then densifying the oxid surfaces by pressure.

870,050. CONVEYING-MACHINE. PERCY A. ROBBINS, Englewood, N. J. Filed June 11, 1906. Serial No. 321,111.

1. A conveyer comprising head and tail rollers a plurality of endless bands arranged substantially parallel to each other, an endless belt supported by said bands and means independent of said rollers for tightening said bands.

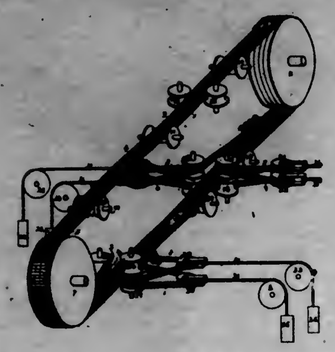
2. A conveyer comprising head and tail rollers a plurality of independent endless traveling bands, an endless traveling belt supported by said bands and means independent of said rollers for tightening said bands.

3. A conveyer comprising a plurality of endless bands, and an endless belt supported substantially throughout its upper length and throughout a portion of its lower length by said bands.

4. A conveyer comprising a plurality of endless traveling bands, and an endless belt supported on top of the upper lengths of said bands, and on top of a portion of the lower lengths of said bands.

5. A conveyer comprising head and tail pulleys, a plu-

rality of endless bands passing around said pulleys, grooved troughing pulleys, an endless belt supported by said bands, deflecting pulleys intermediate the length of said bands, and tightening pulleys for holding the bands tight.



6. A conveyer comprising head and tail pulleys, one of which is provided with grooves, a plurality of endless bands passing around said pulleys, grooved troughing pulleys, an endless belt supported by said bands, deflecting pulleys intermediate the length of said bands, and tightening pulleys for holding the bands tight.

7. A conveyer comprising a plurality of endless traveling bands arranged substantially parallel to each other, an endless belt supported by said bands, and means for deflecting said bands from one side of the lower length of the belt, and returning them to the opposite side of said length of the belt.

8. A conveyer comprising a plurality of endless traveling bands arranged substantially parallel to each other, an endless belt supported by said bands, and means for deflecting said bands from the upper side of the lower length of the belt to the lower side of said length of the belt.

9. A conveyer comprising a plurality of endless traveling bands arranged substantially parallel to each other, an endless belt supported by said bands, means for deflecting said bands from the upper surface of the lower length of the belt to the lower surface, and means for again deflecting the bands from the lower surface to the upper surface of said length of belt, whereby the belt is supported throughout a portion of its lower length by said bands.

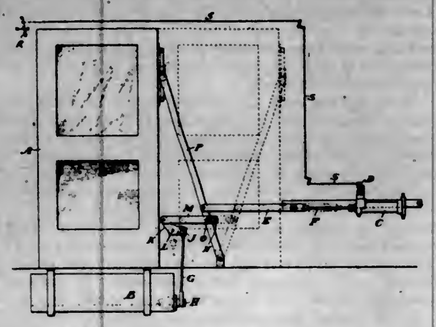
10. The combination, in a conveyer consisting of a number of endless bands and an endless belt, of a number of pulleys by means of which the endless bands are deflected from one side of the endless belt and returned to the opposite side of the endless belt, all substantially as set forth.

11. In combination with a conveyer consisting of a number of endless bands, a supporting pulley consisting of a number of sections mounted upon a common shaft, each section having one or more circumferential grooves in its surface, one or more sections being fixed to the shaft and one or more sections being free to revolve upon the shaft, the shaft being adapted to be carried in suitable bearings, all substantially as set forth.

12. In combination with a conveyer consisting of a number of endless bands, two deflecting pulleys with concave faces mounted upon a common shaft carried in suitable bearings, all substantially as set forth.

870,051. CAR DOOR AND STEP OPERATING MECHANISM. HAROLD ROWNTREE, Chicago, Ill., assignor to Burdett-Rowntree Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed May 13, 1907. Serial No. 373,370.

1. The combination with a car door and a movable step, of means whereby as the door closes the step is moved, out of position for use, the movement of the step being initiated slowly and thereafter in constant ratio of acceleration relative to the movement of the door.



2. The combination with a car door and a movable step, of means for gradually initiating a coincident retracting movement of the step as the door closes.

3. The combination with a car door and a movable step, of operating means for the door and mechanism whereby said operating means gradually initiates a retracing movement of the step as the door closes.

4. The combination with a car door and a movable step, of intermediate connections for causing coincident movement of said door and step, said intermediate connections effecting a gradual initial movement of the step as the door closes.

5. The combination with a car door and a movable step, of intermediate connections for coincident movement of said door and step, and means whereby said connections effect an initial closing movement of the door without effecting a movement of the step.

6. The combination with a car door and a movable step, of intermediate connections for causing coincident movement of the door and step when the door is closed, said means operating to accelerate the movement of the step as the door approaches its closed position.

7. The combination with a car door, a motor, and connections actuated by the motor for moving the door, of a movable car step, a link connected thereto for moving the same, said link having an elongated slot, and a pin carried by the door moving connections and operating in said slot.

8. The combination with a car door, and a pivoted lever having sliding connection with the door, whereby, when said lever is rocked the door is moved, of a step, connections operated by said lever for moving the step, and a motor for rocking said lever.

9. The combination with a car door, and a pivoted lever having operating connection with the door, whereby, when the lever is rocked the door is moved, of a step, lost motion connections between the step and the said lever, and means for rocking said lever.

10. The combination with a car door and a pivoted lever having operating connection with the door, whereby when the lever is rocked the door is moved, of a step, and devices intermediate the lever and step for initially moving the step at a slow rate of speed and thereafter accelerating the rate of speed of such movement when said lever is rocked.

11. The combination with a car door and a pivoted lever for moving the same, of a movable step, an operating rod therefor, a bell crank lever to one arm of which said rod is connected, and a link connected to the other arm of said bell crank lever and having a pin and slot connection with the door operating lever.

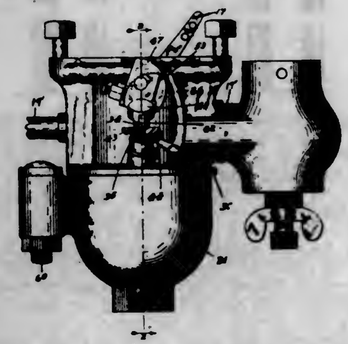
12. The combination with a car door and moving lever therefor, of a movable step, a bell crank lever, a rod connecting said step and bell crank lever, a link also connected to said bell crank lever, and provided with an elongated slot, a pin carried by the door moving lever, and operating in said slot, and means for actuating said door moving lever.

13. The combination with a movable car door and step of intermediate pivoted connections between the door and step, arranged to be brought into practical dead center alinement when the door is open and the step in position for use.

14. The combination with a movable car door and step or a rod having pivoted connection with the step, pivoted devices intermediate the rod and door, the points of pivotal connections of said devices adapted to be brought into line with each other when the step is in usable position.

15. The combination with a movable car door and a pivoted step and means whereby as the power required to move the step decreases the speed of movement of the step increases relative to the movement of the door.

870,052. CARBURETER. GEORGE M. SCHEBLER, Indianapolis, Ind. Filed Sept. 21, 1906. Serial No. 335,621.



1. In a carbureter, the combination, with a fuel container having a discharge outlet, of a fuel valve, an air passage communicating with said outlet, a throttle valve for controlling the flow through said passage, and intermediate connections between said throttle valve and fuel valve whereby operation of the throttle valve will automatically shift the fuel valve, and means for so adjusting the connections between the throttle valve and fuel valve that the effect of movement of the throttle valve on he fuel valve may be independently varied at different points of adjustment of the throttle valve.

2. In a carbureer, the combination, with a fuel holder having a discharge outlet, of a fuel valve for controlling the flow therefrom, an air passage communicating with said outlet, means for heating said passage, a second air passage, into which the first discharges, a yieldingly closed valve arranged in the inlet end of said second passage, a throttle valve controlling the flow from both of said passages, intermediate connections between the throttle valve and fuel valve, whereby the fuel valve will be the effect of movement of the throttle valve on the fuel valve, and means for adjusting said connections to vary the effcet of movement of the throttle valve on the fuel valve variously at different points in the movement thereof.

3. In a carbureter, the combination, with a fuel holder having a discharge outlet, of a fuel valve controlling the flow therefrom, an air passage communicating with said outlet, a second air passage in which the first discharges, a yieldingly closed valve arranged in the inlet end of said second passage, a throttle valve controlling the flow from both of said passages, a means for simultaneously operating the throttle valve and fuel valve, and intermediate connections between the throttle valve and fuel valve, whereby the fuel valve will be shifted simultaneously with the movement of the throttle valve, and means for adjusting said connections to vary the effect of movement of the throttle valve on the fuel valve variously at different points in the movement thereof.

4. In a carbureter, the combination, with a fuel holder having a discharge outlet, of a fuel valve for controlling the flow therefrom, an air passage communicating with said outlet, means for heating said passage, a second air passage into which the first discharges, a yieldingly closed valve arranged in the inlet end of said passage, a throttle valve controlling the flow from both of said passages, a cam operated by movement of the throttle valve, means for adjusting the throw of said cam at different points in the length thereof, and intermediate connections between said cam and the fuel valve.

5. In a carbureter, the combination, with a fuel holder having a discharge outlet, of a fuel valve for controlling the flow therefrom, an air passage communicating with said outlet, a second air passage into which the first discharges, a yieldingly closed valve arranged in the inlet end of said second passage, a throttle valve controlling the flow from both of said passages, a cam operated by movement of the throttle valve at different points in the length thereof, means for adjusting the throw of said cam, and intermediate connections between said cam and the fuel valve.

6. In a carbureter, the combination, with a fuel holder having a discharge outlet, of a fuel valve for controlling the flow therefrom, an air passage communicating with said outlet, means for heating said passage, a second air passage into which the first discharges, a yieldingly closed valve arranged in the inlet end of said passage, a throttle valve controlling the flow from both of said passages, a cam having an operating face formed of a flexible strip, and means for adjusting said strip to change its operating shape relative to the axis of the cam.

7. In a carbureter, the combination, with a fuel holder having a discharge outlet, of a fuel valve for controlling the flow therefrom, an air passage communicating with said outlet, a second air passage into which the first discharges, a yieldingly closed valve arranged in the inlet end of said second passage, a throttle valve controlling the flow from both of said passages, a cam having an operating face formed of a flexible strip, and means for adjusting said strip to change its operating shape relative to the axis of the cam.

8. In a carbureter, the combination, with a fuel holder having a discharge outlet, of a fuel valve for controlling the flow therefrom, an air passage communicating with said outlet, means for heating said passage, a second air passage into which the first discharges, a yieldingly closed valve arranged in the inlet end of said passage, a throttle valve controlling the flow from both of said passages, a cam having an operating face formed of a flexible strip and means for adjusting said strip differentially at different points in its length relative to the axis of the cam.

9. In a carbureter, the combination, with a fuel holder having a discharge outlet, of a fuel valve for controlling the flow therefrom, an air passage communicating with said outlet, a second air passage into which the first discharges, a yieldingly closed valve arranged in the inlet end of said second passage, a throttle valve controlling the flow from both of said passages, a cam having an operating face formed of a flexible strip and means for adjusting said strip differentially at different points in its length relative to the axis of the cam.

10. In a carbureter, the combination, with a main body having a fuel reservoir, an exhaust receiving chamber, a primary air passage passing through said chamber, but having no connection therewith, a secondary air passage, a throttle valve for controlling the flow of carbureted air, a fuel-discharge nozzle forming a connection between the reservoir and one of said air passages, a valve for controlling the flow of fuel through said nozzle, a cam carried by the throttle valve, means for adjusting the throw of said cam at various points in the length thereof, and means operated by the cam for shifting the fuel valve carrier.

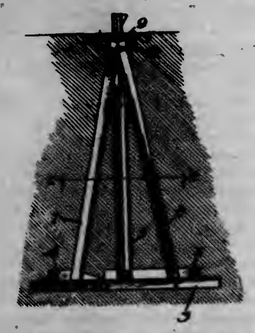
11. In a carbureter, the combination, with a fuel holder and discharge nozzle, of a tubular valve-carrier mounted in the fuel holder, a spring for normally urging said carrier toward the nozzle, a valve mounted in said carrier, a spring for normally urging said valve away from the nozzle, an adjustable means forming an abutment for said valve whereby it may be adjusted toward and from the

nozzle, and means for shifting the valve carrier away from the nozzle.

12. In a carbureter, the combination, with a fuel valve, of means for shifting said fuel valve comprising two co-operating members, one of which is a flexible strip flexible transversely of its length, and means for adjusting said strip transversely at intermediate points of its length.

13. In a carbureter, the combination, with a fuel valve, of means for shifting said fuel valve, comprising a cam having a face flexible transversely of its length, and means for adjusting said face transversely at intermediate points in its length.

870,053. BASE FOR SKELETON TOWERS. DANIEL R. SCHOLES, Chicago, Ill. Filed June 29, 1906. Serial No. 324,046.



1. In an anchor base for skeleton towers, the combination with a basic part, of a plurality of upwardly extending supports converging at their upper ends and forming a socket at their converging point for the reception of the leg of the tower.

2. In an anchor base for skeleton towers, the combination with a basic part, of a plurality of upwardly extending supports formed of angle irons, and converging at their upper ends and forming a socket at their converging point for the reception of the leg of the tower.

3. In an anchor base for skeleton towers, the combination with a basic part formed of angle irons, of a plurality of upwardly extending supports converging at their upper ends.

4. In an anchor base for skeleton towers, the combination with an embedded basic part, of a plurality of upwardly extending supports converging at their upper ends and forming a socket at their converging point for the reception of the leg of the tower, and a screw clamp surrounding said supports to clamp them together.

5. In an anchor base for skeleton towers, the combination with a basic part, of a plurality of upwardly extending converging supports, mortise jointed at their upper ends, and a suitable clamp for securing said supports together.

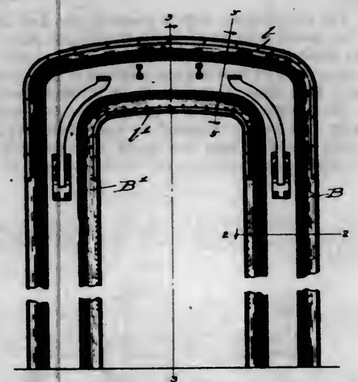
6. An embedded base for skeleton towers consisting of a basic portion, a plurality of upwardly extending supports, converging and forming a socket for the leg of the tower, and a clamp for securing said supports together.

7. In an anchor base for skeleton towers, the combination with a basic part, of a plurality of upwardly extending supports converging to join at their upper ends with the leg of the tower.

870,054. RAILWAY VESTIBULE-DIAPHRAGM. HARRY H. SCHROYER, Chicago, Ill. Filed Dec. 24, 1906. Serial No. 349,302.

1. A car vestibule diaphragm comprising a strip of fabric folded to afford plaits and of a length to provide the sides and top of the diaphragm, a rigid strap of metal engaged in the alternate plaits and curved to form and shape the corners, said strap of metal having short legs extending downwardly in the plaits and one of said folds adapted to be opened.

2. A diaphragm of the class described comprising a strip of fabric folded in plaits and formed to afford an integral top and one leg, a metallic strap secured in alternate plaits and shaping the corners thereof and supporting the top upon the legs and means affording access through the diaphragm.



3. A diaphragm comprising a strip of fabric folded in plaits, a strip of reinforcing in the alternate folds and shaped to form an arched roof and to shape the corners of the diaphragm, said reinforcing strap extending a short distance in the legs and the folds from the ends of the reinforcing sewed or riveted to form a strong structure and one of said folds laced to afford access therethrough.

4. A vestibule diaphragm of the class described embracing a one piece outer diaphragm, folded in plaits, a rigid reinforcement shaped to fit in the legs and top thereof and rigidly secured in alternate folds of the diaphragm and shaping the corners and the integral top thereof, an inner diaphragm and means affording access between the same and outer diaphragm.

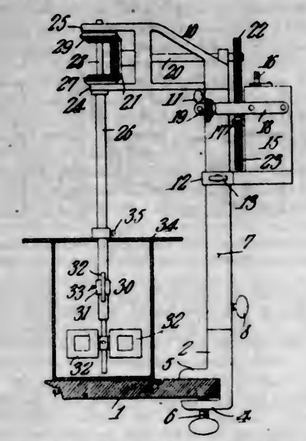
5. A vestibule diaphragm of the class described embracing a one piece outer diaphragm folded in plaits, a rigid reinforcement shaped to fit in the legs and top thereof and riveted in alternate folds of the diaphragm and shaping the corners and integral top thereof, one of the folds or plaits below said reinforcement being laced to permit opening the same.

6. A device of the class described embracing a strip of fabric folded longitudinally to provide a plurality of relatively narrow plaits and of a length to afford the legs, the corners, and the top of a diaphragm, stiffening reinforcing material secured in the top thereof and about which said plaits are bent to afford the corners, of the diaphragm, the remaining plaits being sewed and one of said folds or plaits being adapted to be readily opened.

7. A construction of the class described embracing an outer diaphragm having integral legs and top, a stiffening and reinforcing strap secured in the outer plaits or folds thereof and shaping the top and corners, an inner diaphragm comprising a like folded strip or fabric comprising a plurality of plaits and embracing integral legs and a top, a reinforcing stiffening member secured across the top and in the legs of the inner folds and shaping the corners and top, each of said diaphragms being stitched or otherwise rigidly secured at the folds, and one of the central plaits of the inner diaphragm having a central opening therethrough adapted to be closed by lacing and affording access therethrough to the space between the diaphragms.

870,055. CHURN-OPERATING MECHANISM. GEORGE E. SMITH, Winnfield, La., assignor of one-half to George M. Selden, Winnfield, La. Filed July 30, 1907. Serial No. 386,226.

1. A churn operating mechanism comprising a standard adapted to be removably attached to a suitable support, a sleeve movable on said standard and having means for fixing it thereto, a horizontal bracket removably attached to the top of the sleeve, a horizontal shaft turning in bearings on said bracket, a removable motor carried by the sleeve, and gearing between the motor and shaft.



2. A churn operating mechanism comprising a standard, a vertically adjustable sleeve thereon to permit the use of vessels of different sizes in which to churn, an overhanging bracket projecting laterally from the top of said sleeve and carrying a horizontal shaft, a removable motor on the sleeve and connected to said horizontal shaft by gearing, a vertical shaft screwed into a gear wheel meshing at the bottom of a larger gear on the horizontal shaft, a smaller shaft passing through said hollow shaft and screwed into a gear wheel meshing at the top of the gear wheel on the horizontal shaft, a horizontal plate adjustably attached to the hollow shaft, and a dasher mounted on the lower end of each vertical shaft and vertically adjustable thereon.

3. A churn operating mechanism comprising a standard having a foot piece with a clamp thereon, a sleeve vertically movable on said standard and having a clamping means for securing it to the standard, a motor, and a horizontal bracket carrying the churn dashers and their operating gearing and having a pin on its under side fitting freely in a vertical socket in the top of said sleeve and adapted when raised vertically to be disengaged from the sleeve and the motor and to withdraw said dashers from the receptacle without moving the latter, and means on said sleeve for holding the bracket in fixed position.

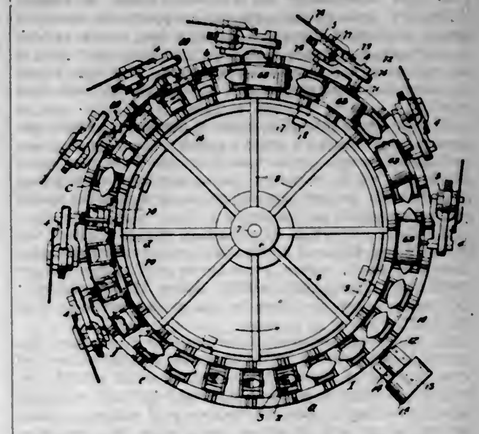
870,056. POLISHING-MACHINE. GODFREY SMITH, Canal Dover, Ohio. Filed Mar. 30, 1907. Serial No. 365,577.

1. The combination of a continuously rotating work carrier, work chucks thereon for holding sad irons or other articles to be polished, a plurality of polishing wheels arranged around the carrier, and means for swinging said chucks to present different side faces of the irons or other work in them to said polishing wheels.

2. The combination of a continuously rotating work carrier, work chucks thereon for holding sad irons or other articles to be polished, a plurality of polishing wheels arranged around the carrier, means for swinging said chucks to either side to present different faces of the irons or other work to certain of said polishing wheels, and means for swinging said chucks endwise to present different portions of said faces of the irons to said wheels.

3. The combination with a polishing wheel, of a rotary carrier frame, and a work chuck mounted upon said carrier frame for swinging movement in planes at angles to each other.

4. The combination with a polishing wheel, of a rotary carrier frame, a pivoted support upon said carrier frame and a work chuck pivotally mounted upon said support for movement in a plane at right angles to the movement of said support.



5. The combination with a polishing wheel, of a rotary carrier frame, a work chuck mounted for swinging movement upon said carrier frame means for locking the chuck against movement and means for unlocking the same.

6. The combination with a polishing wheel, of a rotary carrier frame, a swinging work chuck upon said carrier frame and means for locking the chuck against movement.

7. The combination with a polishing wheel, of a rotary carrier frame, a pivoted support upon said carrier frame, means for tilting said support, a swinging work chuck upon said support, and means for actuating said chuck.

8. The combination with a polishing wheel, of a rotary carrier frame, a movable support upon said carrier frame, means for actuating said support, a swinging work chuck upon said support, means for actuating said chuck and means for locking said chuck against movement.

9. The combination with a polishing wheel, of a rotary carrier frame, a pivotally mounted support upon said carrier frame, means for swinging said support upon its pivot, a pivotally mounted work chuck upon said support and means for swinging said chuck upon its pivot.

10. The combination with a polishing wheel, of a rotary carrier frame, a pivotally mounted support upon said carrier frame, means for swinging said support upon its pivot, a pivotally mounted work chuck upon said support, means for swinging said chuck upon its pivot and means for locking said chuck against movement.

11. The combination with a polishing wheel, of a rotary carrier frame, a swinging support upon said carrier frame, worm gearing for actuating said support, a swinging work chuck upon said support, means for locking said chuck against movement, and a pawl and ratchet device for swinging said chuck upon its pivot.

12. The combination of a carrier frame, a support thereon, a work chuck pivotally mounted on said support, a ratchet wheel carried by said chuck, a sliding pawl for actuating said ratchet wheel and a trip device for actuating said pawl.

13. The combination of a carrier frame, a support pivotally mounted thereon and carrying a worm gear, a worm upon said carrier frame to mesh with said gear, a shaft geared to said worm, a toothed wheel upon said shaft, a stationary rack for engagement with said toothed wheel and a work chuck upon said support.

14. The combination of a carrier frame, a support thereon, a chuck pivotally mounted upon said support and provided with seats, a locking lever to engage said seats, a slide bar for actuating said lever, a trip device for actuating said slide bar and means for swinging said chuck upon its pivot.

15. The combination of a carrier frame, a work chuck mounted thereon and having a movable jaw, a cam lever

for actuating said jaw, a sliding bar for actuating said cam lever and a trip device for actuating said sliding bar.

16. The combination of a carrier frame, a support thereon, a work chuck upon said support and provided with a stationary jaw and a movable jaw, a slide carried by said movable jaw, a spring for actuating said slide in one direction, a cam lever for actuating said slide in the opposite direction and means for actuating said cam lever.

17. The combination of a pivot bearing, a wheel like carrier frame having a hub to engage said bearing, a rim and radial spokes connecting said hub and rim, work chucks carried by said rim, rollers arranged around said pivot bearing and an annular rail secured to said spokes and engaged with said rollers.

18. The combination of a vertical pivot, a wheel like carrier frame disposed horizontally and rotatably mounted upon said pivot, means for rotating said carrier frame, work chucks upon said carrier frame and a relatively stationary polishing wheel to engage the work in said chucks.

19. The combination of a vertical pivot, a wheel like carrier frame disposed horizontally and rotatably mounted upon said pivot, said carrier frame having spaced rim members, swinging supports arranged between said rim members, swinging work chucks upon said supports, means for operating said supports and means for operating said work chucks.

20. The combination of a rotatable carrier frame, swinging supports thereon, swinging chucks upon said supports, means for locking said chucks, means for actuating said chucks, means for actuating said supports and stationary devices for operating the chuck locking means, the chuck actuating means and the support actuating means.

21. In a machine for polishing sad irons or other articles, the combination with polishing means, of a carrier work holders upon said carriers, means for swinging said work holders to either side to present different faces of the irons or other work to said polishing means and means for swinging said work holders endwise to present different portions of the faces of the irons to said polishing means, substantially as described.

22. The combination with a polishing means of a carrier, a work chuck or holder pivoted on the carrier, a ratchet upon the chuck, a pawl for actuating the ratchet and means for actuating said pawl, substantially as described.

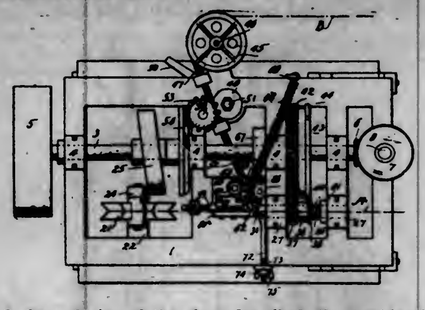
23. The combination with a polishing means, of a carrier, a work holding support pivoted upon the carrier, a worm gear upon said support, a worm upon the carrier to mesh with said gear, a shaft operatively connected to said worm, a toothed wheel upon said shaft and a stationary rack to actuate said toothed wheel, substantially as described.

24. The combination with a polishing means, of a carrier a pivoted work holder of the chuck upon the carrier, means for swinging said chuck, a locking member adapted to engage the chuck and hold it against movement in its different positions and means for actuating said locking member, substantially as described.

25. The combination with a polishing means, of a carrier, a work chuck thereon and having a stationary jaw and a movable jaw, a slide carried by the movable jaw, a spring for actuating said movable jaw to its closed position, a cam to engage the slide and operate the movable jaw to its open position and means for actuating said cam, substantially as described.

870,057. WIRE-BARBING MACHINE. PETER W. SOMMER and JOSEPH W. SOMMER, Peoria, Ill. Filed Mar. 4, 1903. Serial No. 146,211.

1. In a device of the class described, the combination with barbing mechanism, of feeding rolls, one carried by an eccentrically disposed shaft, mechanism for shifting the axis of said cam eccentrically disposed, intermittent gearing associated with said rolls for partially rotating the same and holding said rolls stationary at predetermined periods, and severing devices, all substantially as described and shown.

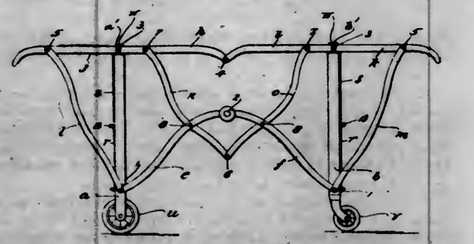


2. In a device of the class described, the combination of a spindle, a rod slidable in said spindle carrying a coiling pin, a sleeve carrying a gear and a beveled flange on said spindle and having a fixed connection with the rod, a power wheel associated with the gear of the sleeve for rotating the spindle, and means for intermittingly shifting the rod in the spindle, and yielding means for returning the sleeve to its normal position after it has been shifted, all substantially as described and shown.

3. In a device of the class described, the combination with barbing mechanism, of feeding rollers, intermittent gearing associated with said rollers, means in the gearing for locking the movement of the rollers at predetermined periods, an oscillating cutter held normally under tension of a spring, a cam adapted to oscillate said cutter, a wire guide, and an adjusting bar for said guide, all substantially as described and shown.

4. In a barb-wire machine, the combination of a continuously rotated spindle carrying a coiling pin, means for intermittingly reciprocating said pin during its rotation with the spindle, feeding rollers, intermittent gearing for actuating said rollers, and means in the gearing for locking the rollers at predetermined periods, a wire guide, an oscillating cutter normally held under tension of a spring, means for actuating the oscillating cutter, and an adjustable stationary cutter associated with the oscillating cutter, all substantially as described and shown.

870,058. CASKET-TRUCK. FRANK P. SPARMAKER, Woodbury, N. J., assignor to H. S. Eckels & Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 17, 1907. Serial No. 368,645.



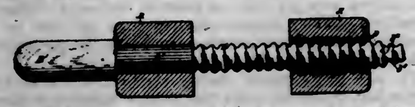
1. A collapsible truck comprising a plurality of two part telescopically fitted standards, and a series of lazy tongs arranged, connected and disposed between each adjacent pair of standards both at the sides and ends thereof.

2. A collapsible truck comprising a plurality of two-part telescopically arranged standards, a lazy-tongs connection between each adjacent pair of standards both at the sides and ends of the truck so arranged, constructed and connected in relation thereto that a portion of the lazy-tongs are carried by each of the respective members of the two-part standards.

3. A collapsible truck comprising a plurality of two-part telescopically arranged standards of which some of the parts form legs and the other parts are movable vertically thereof, a lazy-tongs connection between each adjacent pair of standards at the sides of the truck comprising a series of intersecting bars pivotally connected together at their inner ends and pivotally connected at their intersection and also pivotally connected at their outer ends to the legs, and oppositely arranged bars pivotally connected to said intersecting bars and pivoted together at their inner ends and having pivotal relation with the uppef end of said vertically movable parts and a lazy-tongs connection at the ends of said truck.

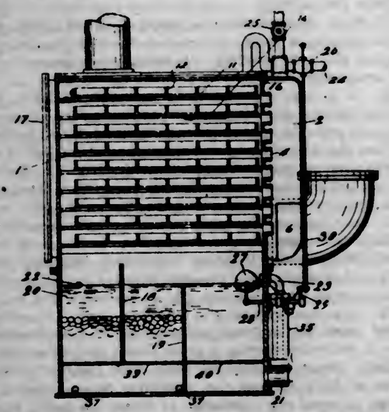
4. A collapsible truck comprising a plurality of two-part telescopically arranged standards of which some of said part form legs and the other parts are movable vertically thereof, a lazy-tongs connection between each adjacent pair of standards both at the sides and ends of the truck so constructed, arranged and connected that a portion of the said lazy-tongs are pivotally carried by the legs and movable parts respectively, a pair of supports pivotally secured to the said movable parts at each end of the truck and projected outward beyond the same and a pivotal link between each of the said supports and legs.

870,059. SCREW. JOHN STERNAMAN, Jr., Springfield, Ill. Filed Jan. 15, 1906. Serial No. 296,212.



A tubular screw-body threaded alike outside and inside, in combination with a reinforcement having a handle provided with a shoulder.

870,060. FEED-WATER HEATER. COLE STICKLE, Indianapolis, Ind., assignor to Open Coil Heater & Purifier Company, Indianapolis, Ind. Filed Apr. 2, 1906. Serial No. 309,449.

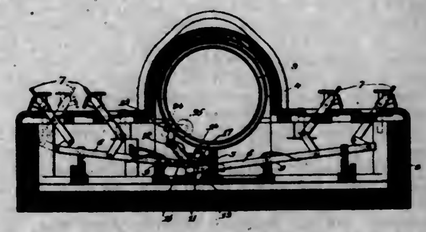


1. A feed water heater comprising a casing having therein a plurality of substantially level trays located one above the other, each being adapted to receive water from the tray above at one end and to overflow into the tray below at the other end, each of said trays having thereon a plurality of partitions extending across the same to cause the water to flow in a tortuous path between the receiving and delivery ends of the tray and the tops of said partitions being spaced below the tray above to permit the flow of steam across them, said casing having steam inlet and outlet passages arranged to cause steam to flow along the trays above the tops of said partitions, in a direct path from end to end of the trays and in a direction transverse to the length of said partitions and substantially parallel with the trays, said partitions being arranged to shield the water from the direct current of the steam, and thereby prevent the steam from disturbing the water or driving the same toward one end of the tray.

2. In a feed water heater, the combination of a casing having therein a plurality of horisontally disposed trays, each adapted to receive water at one end and to overflow into the next tray below at the other end, a header extending along said casing at one side thereof and a plurality of oblong openings connecting said header with said casing, said openings being located respectively between successive trays of said series and each of said openings having its long dimensions horisontal and adapted to direct the steam in a wide flat column at the entrance to the trays, and each of said openings being surrounded by a flared flange extending inwardly of said header and adapted to prevent oil or water condensing on the walls of said header from being carried into said heater.

3. In a device of the class described, the combination of a casing having therein a series of trays arranged one above the other and each arranged to overflow into the tray next below, a water supply for feeding water to the uppermost tray, a discharge outlet for withdrawing from the receptacle water that has passed along said series of trays, a steam pipe or header extending along one side of said receptacle and having individual branch passages communicating with the different spaces between the trays of said receptacle, an exhaust pipe for exhausting steam from said header, a valve connecting said exhaust pipe and header, and a steam outlet connecting the interior of said casing with said exhaust pipe at a point beyond said valve.

870,061. TIME-RECORDER. DEBBIE A. STOWELL and CHARLES T. HAWLEY, Gardner, Mass., assignors to Simplex Time Recorder Company, Gardner, Mass., a Corporation of Massachusetts. Filed Feb. 5, 1906. Serial No. 299,429.



1. In a time recorder, the combination with mechanism to make perforations of different characters in a record sheet and manually-operative actuating means therefor, of time-controlled means separate from said mechanism to determine the interval of time during which each of the different characters of perforations may be made by said manual operation of the actuating means.

2. In a time recorder, the combination with means to support a record sheet, of a main marking device adapted at all times to make a complete time record on said sheet, an auxiliary marking device normally in inoperative position, means for actuating said marking devices, and means separate from said actuating means to move the auxiliary marking device to carry it into marking position.

3. In a time recorder, the combination with means to support a record sheet, of a main marking device adapted at all times to make a complete time record on said sheet, an auxiliary marking device, actuating means for said marking devices, and automatic means separate from said actuating means to move the auxiliary marking device to carry it into and out of operative position.

4. In a time recorder, the combination with means to support a record sheet of a main marking device adapted of itself at all times to make on said sheet a complete time record, actuating means for said marking device, an auxiliary marking device normally in inoperative position, and

means to move the auxiliary marking device relative to the main marking device to carry said auxiliary marking device into operative position.

5. In a time recorder, the combination with means to support a record sheet, of a main marking device adapted at all times to make a complete time record on said sheet, actuating means for said marking device, an auxiliary marking device normally out of operative position, and automatic means to throw it into operative position at predetermined intervals of time.

6. In a time recorder, the combination with means to support a record sheet, of a main marking device adapted at all times to make a complete time record on said sheet, an auxiliary marking device, automatic means to carry the auxiliary marking device into and out of operative position, and manually-operative means to move the marking devices to cause the record to be made.

7. In a time recorder, the combination with means to support a record sheet, of a main marking device adapted at all times to make a complete time record on said sheet, an auxiliary marking device, manually-operative means to move the marking devices to cause the record to be made, and means to move the auxiliary marking device into and out of operative position.

8. In a time recorder, the combination with means to support a record sheet of a main marking device adapted at all times to make a complete time record on said sheet, a normally-inoperative auxiliary marking device, and automatic means to throw the auxiliary marking device into operative position at a definite time and to maintain said marking device in operative position for a definite interval.

9. In a time recorder, the combination with means to support a record sheet, of a main marking punch adapted at all times to make a complete time record on said sheet, an auxiliary marking punch normally in inoperative position, means for manually actuating said punches, and automatic means to move the auxiliary punch into and out of operative position at a definite time.

10. In a time recorder, the combination with means to support a record sheet, of a main marking punch normally in operative position, an auxiliary marking punch normally in inoperative position, means for moving said punches simultaneously toward the record sheet, and means to shift the position of the auxiliary punch relative to the main punch at predetermined times to carry said auxiliary punch into operative position.

11. In a time recorder, the combination with means to support a record sheet of a main marking punch, an auxiliary marking punch, manual means for moving the punches simultaneously toward the record sheet, the main marking punch being in position to penetrate the sheet during each movement, and the auxiliary marking punch being normally in position not to penetrate the sheet during such movement, and means to move the auxiliary punch relative to the main punch to carry said auxiliary punch into operative position so that it will penetrate the sheet.

12. In a time recorder, the combination with a record sheet, of a main marking punch and an auxiliary marking punch, means to actuate said punches simultaneously, the main punch normally being in position to penetrate the sheet when actuated, and the auxiliary punch normally being out of position to penetrate the sheet, and time-controlled means to carry the auxiliary punch into position to penetrate the sheet when actuated.

13. In a time recorder, means to support a record sheet, a main marking device, an auxiliary marking device adapted to be actuted by the main marking device, and means to throw the auxiliary marking device into and out of operative position.

14. In a time recorder, means to support a record sheet, a main marking device, an auxiliary marking device adapted to be actuated by the main marking device, and automatic means to throw the auxiliary marking device into operative position at a predetermined time and out of operative position after a predetermined interval.

15. In a time recorder, means to support a moving record sheet, a main marking punch, a pivoted lever for operating said punch, and an auxiliary marking punch in contact with said lever, whereby said auxiliary marking punch is moved by the movement of the lever in giving the main marking punch its penetrative movement.

16. In a time recorder, means to support a moving record sheet, a main marking punch, a pivoted lever for operating said punch, an auxiliary marking punch in contact with said lever, whereby said auxiliary marking punch is moved by the movement of the lever in giving the main marking punch its penetrative movement, and automatic means to throw the auxiliary marking punch into and out of operative position.

17. In a time recorder, the combination with a marking device and means to actuate it, of means to move said marking device into and out of operative position, and a controller to control the time of operation of said means.

18. In a time recorder, the combination with a marking device and means to actuate it, of automatically-operative means to move said marking device into and out of operative position, and a controller to control the time of operation of said means.

19. In a time recorder, the combination with a plurality of marking devices, of a spring to move said marking devices simultaneously into and out of operative position, and automatic means to maintain said spring under tension.

20. In a time recorder, the combination with clock work mechanism, of a plurality of marking devices, a spring to move said marking devices simultaneously into and out of operative position, and means operated by the clock mechanism to maintain said spring under tension.

21. In a time recorder, the combination with a marking device and means for actuating it, of automatically-operative means to move said marking device into and out of operative position, and a time controller to govern the time of operation of said means.

22. In a time recorder, a marking device, a spring-impelled shaft to move said marking device into and out of operative position, a disk controller having a notch, an arm on said shaft normally held against the controller by said spring, and means to move the controller, whereby when the arm comes opposite the notch the spring operates to turn the shaft.

23. In a time recorder, a spring-impelled shaft, a controller having a notch, an arm on the shaft normally held against the controller by the spring, and means to move the controller.

24. In a time recorder, a spring-impelled shaft, a controller having a notch and a projection, two oppositely-disposed arms on said shaft, one of which is normally held against the controller by the spring and the other of which is adapted to engage the projection when the shaft has made a partial turn, and means to move the controller.

25. In a time recorder, a spring-impelled shaft, a controller having a notch, an arm on the shaft normally held against said controller by the spring, means to move the controller, thereby to bring the notch into engagement with said arm to permit the arm to pass through the notch, and means to retard the turning movement of the shaft.

26. In a time recorder, a marking device, a spring-impelled shaft for shifting the position of the marking device, a controller having a notch and a projection, two oppositely disposed arms on said shaft, one of which is normally held against the controller by the spring, and means to move the controller to bring the notch opposite said arm, thereby to permit the arm to pass through the notch and the shaft to make a partial turn to bring the other arm against the projection.

27. In a time recorder, a marking device, a spring-impelled shaft for shifting the position of the marking device, a controller having a notch and a projection, two oppositely disposed arms on said shaft, one of which is normally held against the controller by the spring, means to move the controller to bring the notch opposite said arm, thereby to permit the arm to pass through the notch and the shaft to make a partial turn to bring the other arm against the projection, and means to retard said turning movement of the shaft.

28. In a time recorder, the combination with a marking device and means for actuating it, of a shaft for moving said marking device into and out of operative position, and time-controlled means to rotate said shaft.

29. In a time recorder, the combination with a marking device and means for actuating it, of a shaft for moving said marking device into and out of operative position, and time-controlled means to turn said shaft intermittently.

30. In a time recorder, the combination with a main marking device, an auxiliary marking device, and means for actuating said marking device, of a shaft to move said auxiliary marking device into and out of operative position, and time-controlled means to give said shaft an intermittent turning movement.

31. In a time recorder, the combination with a main marking device, an auxiliary marking device, and means to actuate said marking device, of means to move said auxiliary marking device into and out of operative position, said means including a spring-impelled shaft normally held against turning movement, and time-controlled means to release said shaft at definite intervals.

32. In a time recorder, the combination with a marking device and means to actuate it, of automatically-operative marking-device-controlling means, to move said marking device into and out of marking position and two co-operating escapements controlling the time of operation of said means.

33. In a time recorder, the combination with a marking device, and means to actuate it, of automatically-operative marking-device-controlling means, to move said marking device into and out of marking position and two successively operating coöperating escapements controlling the time of operation of said means.

34. In a time recorder, the combination with a marking device, and means to actuate it, of automatically-operative, marking-device-controlling means, to move said marking device into and out of marking position and two co-operating escapements of different degrees of sensitiveness controlling the time of operation of said means.

35. In a time recorder, the combination with a marking device, and means to actuate it, of automatically-operative means, to move said marking device into and out of marking position a main escapement normally holding the automatically-operative means inactive but adapted to partially release the same at a definite time, and an auxiliary escapement to effect the complete release of said means.

36. In a time recorder, the combination with a marking device, and means to actuate it, of automatically-operative means, to move said marking device into and out of marking position a main escapement normally holding said means inactive but adapted to release said means at a definite time, and an auxiliary escapement to control the means when released by the main escapement.

37. In a time recorder, a spring-impelled marking-device-controlling shaft, a marking device controlled as to its position thereby, means to operate the marking device, and two coöperating escapements controlling the time of operation of said shaft, said escapements acting successively and each operating to lock the shaft against forward movement for a certain period.

38. In a time recorder, manually-operative means to make perforations of different characters in a record sheet, automatic means to determine the interval of time in which it is possible to make any character or record, and a signal operated by said automatic means by which the character of the perforations made at any time may be determined.

39. In a time recorder, a marking device, means to throw the marking device into and out of operative position, a casing inclosing said marking device and provided with a sight opening, and a movable signal operatively connected to said means and adapted to be thrown into and out of line with said sight opening thereby.

40. In a time recorder, a main marking device, an auxiliary marking device, means to throw the auxiliary device into and out of operative position, a casing inclosing said parts and provided with a sight opening, and a movable signal operatively connected to said means and adapted to be thrown into and out of line with said sight opening thereby.

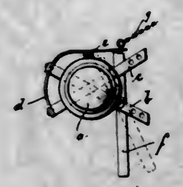
870,062. RAILWAY-CAR DOOR. OSCAR TOWER, Kenmore, N. Y., assignor of one-half to Frank E. Blakeslee, Buffalo, N. Y. Filed Feb. 4, 1907. Serial No. 355,553.



1. A railway car door comprising an intermediate section, hangers connected at their lower ends with opposite vertical edges of said intermediate section and pivoted at their upper ends on the car body, an upper section pivoted at its lower end on said hangers, means for detachably connecting the upper part of said upper section with said hangers, and a lower section pivotally connected with said intermediate section, substantially as set forth.

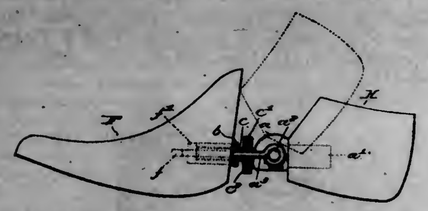
2. A railway car door comprising an intermediate section, hangers connected at their lower ends with opposite vertical edges of said intermediate section and pivoted at their upper ends on the car body, an upper section pivoted at its lower end on said hangers, means for detachably connecting the upper part of said upper section with said hangers, a U-shaped frame having a lower horizontal bar adapted to be arranged at the floor of the car and two upright side bars which are connected at their lower ends with the horizontal bar while their upper ends are pivoted to the lower ends of said hangers, a lower section pivoted at its upper end on said side bars, and means for detachably connecting the lower end of said lower section with the lower part of said frame, substantially as set forth.

870,063. BURGLAR-ALARM. BERNHARD UHLMANN, Passaic, N. J., assignor of one-half to Antonio Alves, Englewood, N. J. Filed Nov. 13, 1906. Serial No. 343,235.



The combination with the two sashes of a window, of an alarm bell, a frame carrying said bell and secured to the inner sash, a plate spring secured to the frame of said bell, the same extending over the button of the latter and resting with its free end on the outer sash, and a swinging lever pivoted to the frame of the bell serving to cut off the connection between the spring plate and the alarm bell, substantially as and for the purpose specified.

870,064. SHOE-FORM. HORACE A. WEEKS, Lynn, Mass., assignor to A. E. Little & Company, Lynn, Mass., a Firm. Filed June 11, 1907. Serial No. 378,885.

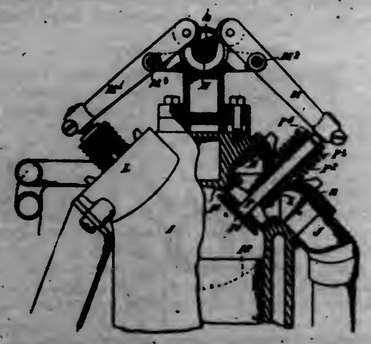


1. A shoe-form comprising a fore part and a heel part, a socket member rigidly connected with the heel part and having opposite lugs, guide pins pivotally and directly connected with said lugs and longitudinally slidable in the fore part, and a coupling having a threaded connection with the fore part and a pivotal and rotatable connection with the socket member independent of the connection between the lugs and guide pins, said coupling being provided with a thumb-piece.

2. A shoe-form comprising a fore part and a heel part, a longitudinally-slotted member having a ball-socket and rigidly conected with the heel part, parallel guide pins pivotally connected with said member and longitudinally slidable in the fore part, and a coupling having a threaded connection with the fore part, and provided with a ball to enter the slotted member and swivel in the socket therein, said coupling having an annular enlargement by which it may be rotated.

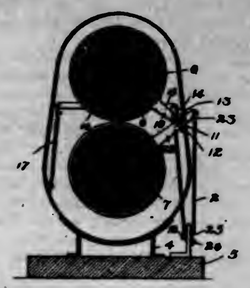
3. A shoe-form comprising a fore part and a heel part, a longitudinally slotted socket member having a tubular shank fixedly inserted in the heel part and provided with a ball socket in the opposite walls of the slot, opposite lugs on said member, guide pins longitudinally slidable in the fore part and having eyes to receive the lugs, to pivotally connect the pins and the socket member, and an adjusting screw having a threaded connection with the fore part and at its rear end provided with a ball-like head to rotatably enter the socket of the socket member, and also adapted to rock therein when the heel part is tipped relatively to the fore part.

870,065. GAS-ENGINE. ALLIE R. WELCH and FRED S. WELCH, Pontiac, Mich. Filed May 29, 1905. Serial No. 262,780.



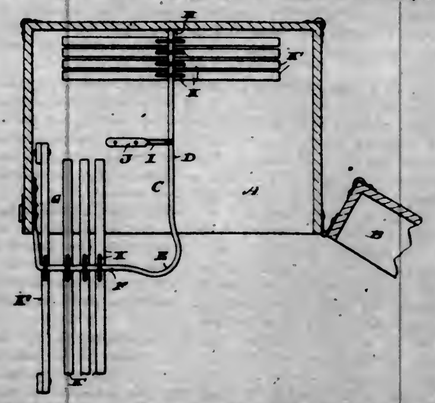
In a gas engine, the combination of a cylinder having an interior wall at its head end in the approximate shape of a portion of the surface of a sphere, an inlet and an exhaust valve forming parts of said wall when closed, each of said valves being provided with a stem extending at right angles thereto, one of said valves being located upon one side of said axis and the other upon the other side thereof, a shaft adapted to be actuated by the engine, said shaft being located upon the head of said cylinder adjacent, and approximately at right angles, to the axis of said cylinder, a single cam upon said shaft, and levers pivoted upon said cylinder and adapted to contact the valve stems and to be contacted by said cam to secure the proper timing and operation of said valves.

870,066. SIGNALING DEVICE FOR HEADLIGHTS. FREDERICK WESSEL, San Antonio, Tex. Filed Sept. 27, 1906, Serial No. 336,482. Renewed Sept. 19, 1907. Serial No. 393,660.



A headlight comprising a body, a casing projecting therefrom, a lens holder disposed transversely and having an arm pivotally mounted in said casing, a lever disposed transversely and pivoted intermediate its ends in said casing, a link connecting one end of said lever to said arm, a spring connected to said casing and to the other end of said lever and serving to normally retain said lens holder out of the field of light, and an operating element connected to said arm to move said holder into the field of light against the tension of said spring.

870,067. TRUNK ATTACHMENT. GEORGE H. WHEARY, Racine, Wis., assignor to The Hartmann Trunk Company, Racine, Wis. Filed May 14, 1906. Serial No. 316,617.



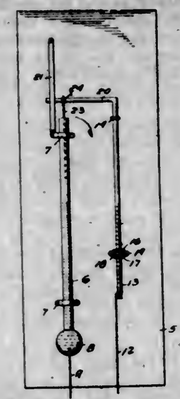
1. A trunk attachment consisting of a garment hanger runway support having straight portions at an approximately right-angle one to the other in a horisontal plane when said support is in position to suspend the hanger slidable thereon.

2. A trunk attachment consisting of a garment hanger runway support having straight portions connected by a partly offset loop and at an approximately right-angle one to the other in a horisontal plane when said support is in position to suspend the hanger slidable thereon.

3. A trunk attachment consisting of a garment hanger runway support having straight portions at an approximately right-angle one to the other in a horisontal plane when said support is in position to suspend the hanger slidable thereon, and foot extensions at either end of the straight portions.

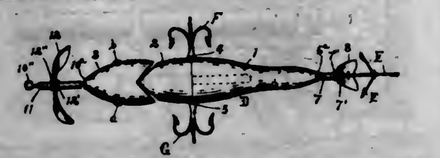
4. A trunk attachment consisting of a garment hanger runway support having straight portions at an approximately right-angle one to the other in a horisontal plane when said support is in position to suspend the hanger slidable thereon, foot extensions at either end of the straight portions, and an intermediate supporting bracket in connection with one of the straight portions, clearance being had in the bracket for said hanger.

870,068. FIRE-ALARM. ROBERT M. WHIPPLE, Mayfield, Idaho. Filed June 19, 1907. Serial No. 379,781.



An alarm of the class described comprising a tube provided at its lower end with a bulb, an expansible fluid contained in the tube and the bulb, the fluid being a conductor of electricity, a rod provided with a threaded portion, a cylindrical nut engaged upon the threaded portion of the rod and provided with a circumscribing groove, a bracket including a collar portion fitting in the groove, the rod being bent at its upper end to extend above the upper end of the tube, a wire suspended from the bent portion of the rod and extending into the tube, a conductor wire leading into the bulb and into the fluid contained therein, a wire connected with the lower end of the rod, a battery interposed in one of the said wires, and an electric bell to which the wires are connected.

870,069. FISH-DECOY. CHARLES M. WILCOX, New Paris, Ohio, assignor of one-third to James E. Kirkpatrick, Anderson, Ind., and one-third to Charles P. Kirkpatrick, New Paris, Ohio. Filed Apr. 1, 1907. Serial No. 365,850.



1. In a fish decoy adapted to be trolled, a body containing an air-chamber, means for closing the air-chamber, a head pivoted to the forward end of the body, a single-blade spinner revolubly mounted in the rear of the body and adapted to impart a sig-sag motion to the body when the device is being trolled.

2. In a fish lure comprising a body, a head pivoted to the body, a frame included in the body and the head, and a spinner adapted to impart a wiggling motion to the device when it is being trolled.

3. In a fish lure comprising a buoyant body, a head pivoted in front of the body for lateral movements with relation thereto, a frame on which the head and the body are secured, and a single-blade spinner mounted on said frame and located in the rear of the body.

4. In a fish decoy including a buoyant body, a head pivoted in front of the body and pivotally mounted with relation to the body, a frame on which the head and the body are secured, a double-blade spinner mounted on said frame in front of the head, and a single-blade spinner mounted on said frame and located in the rear of the body.

5. In a fish bait simulating a minnow, a buoyant body, a head pivotally connected to the body, and a spinner adapted to cause the device to wiggle when being trolled, all substantially as shown and described.

6. In a lure or bait simulating a minnow or the like, a two-part body, a head pivoted to the body, a frame on which the body and head are mounted, and a spinner for causing the device to describe a sig-sag course when being trolled.

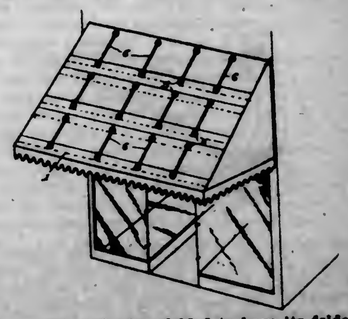
7. A fish lure simulating a live bait, comprising a body, a head pivoted to the body, hooks pendent from the body with means for changing the inclinations of said hooks, a forward two-blade spinner, and a rear single-blade spinner adapted to revolve and cause the device to describe a sig-sag course through the water when being trolled.

8. A fish lure comprising a metal frame, a buoyant body mounted on the frame, a head mounted on the frame and adapted to move laterally a limited distance, a plurality of hooks pivoted to the frame, means for adjusting the inclination of certain of the hooks, a rear single-blade spinner pivoted to the frame and adapted to cause the device to wiggle from side to side when it is being trolled forward.

9. A fish decoy constructed to simulate a live bait, comprising a metal frame, a plurality of hooks depending from said frame, a buoyant body mounted on the frame, a laterally movable head mounted on the frame and located in front of the body, a spinner mounted on the frame in front of the head and adapted to cause the head to follow a direct forward course when being trolled, a second spinner mounted on the frame in the rear of the body and adapted to cause the rear portion of the body to wiggle from side to side when being trolled.

10. A fish bait comprising a body having an air chamber therein, a frame on which the body is mounted, a head pivoted to the forward end of the body by said frame which projects through the head and the body, a forward double-blade spinner, a rear single-blade spinner, socket hangers located in the sides of the body and carried by said frame, screw-eyes threaded in said socket hangers, and groups of hooks depending from said screw-eyes, the inclination of said hooks depending on the distance said screw-eyes are inserted in said socket hangers.

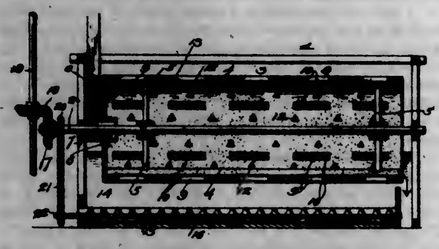
870,070. AWNING. JOHN C. WILLIAMS, Wheeling, W. Va. Filed Sept. 25, 1905. Serial No. 279,912.



An awning adapted when folded to have its folded portion formed with a series of regular hanging folds and a series of regular standing folds in alternate relation consisting of a frame having a front bar and side bars, pulleys, a cover on the frame, a series of longitudinally

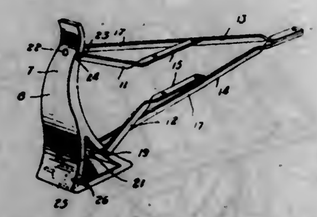
extending parallel reinforcing strips formed in said cover by plaiting or doubling the fabric under, a row of spaced eyelets extending through the three thicknesses of material to secure the plaits, said strips being arranged in pairs, the distance between such pairs being relatively less than the distance between the strips comprising a pair, cords engaging the pulleys and secured to said front bar, said cords extending through the eyelets and lying on top of the cover between the eyelets composing the pairs and engaging the under face of the cover in the space between the pairs, whereby when the cover is folded the same between the eyelets composing pairs can drop to form hanging folds, and the cover between the pairs will form standing folds assisted in maintaining standing position by that portion of the cords engaging the under face of the cover, the standing folds being of less height than the hanging folds.

870,071. ROTARY GRAIN-SCOURER. SAMUEL T. WILSON, Charleston, W. Va., assignor of one-third to Jackson Carr and one-third to H. W. Sentz, Charleston, W. Va. Filed Dec. 22, 1906. Serial No. 349,179.



In a rotary grain scourer, a supporting frame, a shaft journaled for rotation therein, a scouring cylinder fixed upon and for rotation with the shaft and comprising a plurality of connected segmental sections, said cylinder being provided with screened discharge openings and having one of its ends wholly open and its other end closed by a head having a central inlet opening, a series of triangular projections arranged at spaced intervals over the inner surface of the cylinder, and serving to spread the material within the latter, a fabric covering applied over the whole inner surface of the cylinder, and having a coating of abrasive material, a feed chute having an angularly disposed portion projected into said inlet opening and arranged concentric with the shaft, and means for driving the latter.

870,072. WHEEL-FENDER. THOMAS J. WILSON, Quitman, Ga. Filed June 27, 1907. Serial No. 381,153.



1. The combination with a truck having a central cross beam, axles, and journal boxes arranged to receive the outer ends of the axles and carried by said beam, of a pair of wheel fenders each having a body spaced from the outer edges of the wheels upon the axles, upper and lower outside braces having their outer ends connected to the outside portions of the fender bodies and their inner ends engaged with and secured to the top and bottom faces of said journal boxes, upper and lower inside braces having their outer ends connected to the inner edges of said fender bodies and their inner ends united and engaged with said cross beam of the truck and a fastening for uniting the inner ends of said inside braces to said cross beam, substantially as described.

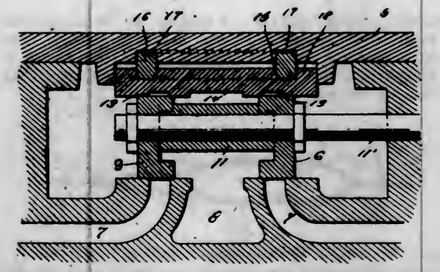
2. The combination with a car truck, of a wheel fender supported from the truck in advance of one of its wheels, said fender having a substantial vertically disposed body provided with a central portion curved to conform to the curvature of the wheel, an outwardly curved upper end terminating close to the body of the car to prevent anything from being drawn up by the wheel between it and the car body, said fender also having a substantially triangular shaped lower end with an outwardly curved front face, substantially as and for the purpose set forth.

3. A wheel fender comprising a body formed with a transverse slot, inner and outer attaching braces having angular ends to enter said slot in the body from opposite sides of the latter and a fastening to retain said angular ends of the braces in the said slot substantially, as described.

4. The herein described wheel fender comprising a body having a central portion curved to conform to the contour of a wheel and an upwardly and outwardly curved upper end, the lower end of said body being triangular in shape and having a downwardly and outwardly curved outer face, the outer pair of angular attaching and supporting braces having their inner ends disposed in parallel relation in horizontal planes and apertured for attachment to a journal box and their outer portion twisted into vertical planes and arranged in diverging relation with their extremities attached to the upper and lower portions of the body, and the inner pair of angular supporting and attaching braces arranged in converging relation with their outer ends attached to the upper and lower portions of the body and their inner ends twisted into horizontal planes and in contact with each other and apertured to receive a fastening to secure them to the truck, substantially as described.

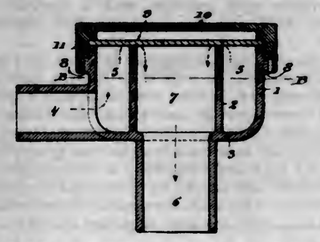
5. A wheel fender comprising a body curved to conform to the contour of a wheel and having a triangular shaped lower end, the latter being hollow and formed in its bottom with an opening, a pivoted pin arranged in the bottom and across said opening, a roller journaled upon said pin and means for supporting said body in advance of a wheel and with its roller out of contact with the track, substantially as described.

870,073. BALANCED VALVE. JAMES H. WOODRING, Corry, Pa. Filed Mar. 28, 1906. Serial No. 308,537.



A device of the type set forth, the combination with a steam chest of a sliding valve comprising a rectangular body including sides and ends, an integral sleeve connecting said sides and communicating with the outer surfaces thereof, said sleeve being designed to receive the valve rod therethrough, a wear plate imposed on said valve and formed in its upper surface with an annular groove, said steam chest having one of its walls formed with a groove confronting and alining said first named groove, and a packing ring having portions thereof disposed in each of said grooves.

870,074. APPARATUS FOR THE PRODUCTION OF VIBRATIONS. JOHN ASTROM, Milwaukee, Wis. Filed Feb. 2, 1905, Serial No. 243,912. Renewed Jan. 21, 1907. Serial No. 353,355.

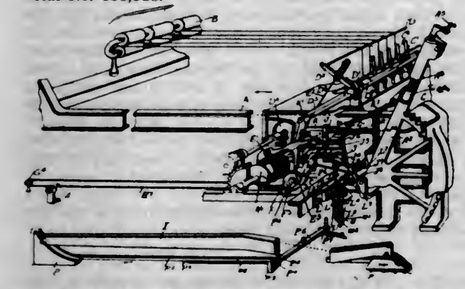


1. An apparatus comprising a pair of vessels open at one end, and arranged one within the other, one vessel having an inlet and the other an outlet, which communicate, one with the space between the two vessels, and the other with the space inside the inner vessel; in combination with a movable closure for the open ends of said vessels, whereby the said device may be put into vibration by the passage therethrough of an interrupted current of fluid under pressure.

2. In an apparatus for the production of vibrations, the combination with two vessels, arranged one within the other with a space within the inner vessel, and another space between the two vessels, the latter being open at one end and one of said vessels having an inlet for the admission of fluid under pressure, and the other an outlet for said fluid, of a movable closure for the open ends of said vessels, said closure being adapted to be moved by said fluid to enable the fluid to flow from one to the other of said spaces, and then to be instantly closed, the difference in pressure between the inlet and outlet causing the said vibrations in the operation of the device.

3. An apparatus for the production of vibrations, consisting of two vessels arranged one within the other, and open at one end, the said vessels there terminating on practically the same plane, and one vessel having an inlet and the other an outlet, in combination with a movable diaphragm secured against the open-end edge of the outer vessel and resting loosely against the corresponding edge of the inner vessel, the said inlet being for the admission of fluid under pressure.

870,075. AUTOMATIC CHAIN-DRIVE-REGULATING DEVICE FOR SPINNING-MACHINES. JOHN M. BAIN, Peterboro, Ontario, Canada. Filed Oct. 11, 1906. Serial No. 338,528.



1. In an automatic device for controlling the chain drive of a spinning machine, the combination with the tension wire, and the dog arm, of a chain connected at one end to the tension wire and at the opposite end to the dog arm and independent of the builder wire and means for automatically and gradually bending such flexible connection as the bobbin increases in size as and for the purpose specified.

2. In an automatic device for controlling the chain drive of a spinning machine, the combination with the tension wire and the dog arm, of a flexible connection between the dog arm and the tension wire and means operated by the builder bar for automatically and gradually bending such flexible connection as the bobbin increases in size as and for the purpose specified.

3. In an automatic device for controlling the chain drive of spinning machines, the combination of the tension wires, the dog arm, the flexible connection supporting the free end of the dog arm, of a longitudinal movable pressure bar designed to be automatically brought against the flexible support of the dog arm as the bobbin increases in size as and for the purpose specified.

4. In an automatic device for controlling the chain drive of a spinning machine, the combination with the tension wire the dog arm, the flexible support for the dog arm, and the longitudinally movable pressure bar, of the movable builder bar blocks, a lever pivoted intermediately of its length, one end of which is spring held against a stop connected to the said block and the other end provided with an upward projection, a vertical shaft journaled in brackets in the frame and provided with a right angular off set designed to engage with the upward projection of the lever, mechanism interposed between the shaft and the pressure bar whereby the longitudinal movement is imparted thereto upon the said upward projection of the lever and off set coming into contact as and for the purpose specified.

5. In an automatic device for controlling the chain drive of a spinning machine, the combination with the tension wire, the dog arm, the flexible connection supporting the free end of the dog arm, the ratchet and pulley gear, and the builder bar, of a longitudinally movable pressure bar designed to be brought gradually against the flexible support of the dog arm, and means operated by the builder bar for imparting such movement to the pressure bar, as and for the purpose specified.

6. In an automatic device for controlling the chain drive of spinning machines, the combination of the tension wire the dog arm, the flexible connection supporting the free end of the dog arm, the ratchet, pulley gear and builder bar, of a longitudinally movable pressure bar, a shoe having a notched edge a compound lever the upper end of which is connected to the pressure bar, the lower end designed to rest on the edge of the notched shoe and means for imparting a longitudinal movement to the shoe from beneath the end of the lever, as and for the purpose specified.

7. In an automatic device for controlling the chain drive of spinning machines, the combination with the tension wire, the dog arm, the flexible connection supporting the dog arm, the ratchet, the pulley gear and builder bar, of a longitudinal movable pressure bar, a shoe secured to a longitudinal slidable bar, and provided with a series of bars of varying lengths forming a notched edge, a compound lever connected at the upper end of the pressure bar and the lower designed to rest on the edge of the shoes and means operated from the builder bar for imparting a longitudinal movement to the shoe supporting bar, as and for the purpose specified.

8. In a device of the class described the combination with the dog arm and flexible support therefor of a longitudinally movable pressure bar designed to be fed forward against the chain, a shoe composed of bars of varying lengths and a clamp for holding such bars together to form an inclined notched edge, a compound lever connected at its upper end to the pressure bar and designed to rest at its lower end on the edge of the notched shoe and means for imparting a longitudinal movement to the shoe supporting plate, as and for the purpose specified.

9. In a device of the class described the combination with the bobbin carriage, the bobbin spindles, the tension wire, dog arm, flexible support therefor and the builder bar, of a pressure bar designed to be moved against the flexible support of the dog arm, a notched shoe, a compound lever connected at the upper end of the pressure bar and designed at the lower to rest against the notched edge of the shoe, a longitudinal slidable supporting bar, a vertical rock shaft journaled at right angles to the plate, a right angular projection secured to the lower end

of the shaft, a movable stop designed to be moved gradually into the path of such projection by the action of the builder bar and a connecting gear between the rock shaft and plate designed to impart a longitudinal movement to the plate, as and for the purpose specified.

10. In a device of the class described the combination with the tension wire, dog arm, and flexible support for the arm, of a pressure bar designed to be brought into contact with the flexible support, means for moving such bar into contact as the bobbin increases in height, and an adjustable stop designed to limit the movement of the pressure bar, as and for the purpose specified.

11. In a device of the class described the combination with the tension wire, dog arm, and flexible support for the arm, of a pressure bar designed to be brought into engagement with the flexible support of the arm by a step by step movement and connecting mechanism between the builder bar and pressure bar, for imparting such movement from the movement of the builder bar, as and for the purpose specified.

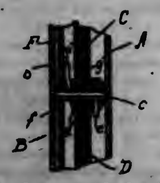
12. In a device of the class described the combination with the tension wire, the dog arm, the flexible support for the arm, of the pressure bar, a spring held lever connected to such bar designed to impart a longitudinal movement to the pressure bar, and a trip device operated by the builder bar for imparting a gradual longitudinal movement to the pressure bar, as and for the purpose specified.

13. In a device of the class described the combination with the tension wire, dog arm, the flexible support therefor and the builder bar, of a longitudinally movable pressure bar, a lever for operating the pressure bar, a longitudinally movable plate, supporting a tripping device for the lever, connecting mechanism between the plate and builder bar whereby a step by step movement is imparted to the plate and a locking means for holding the plate between the longitudinal movements thereof, as and for the purpose specified.

14. In a device of the class described the combination with the tension wire, dog arm, the flexible support therefor and the builder bar, of a longitudinal movable pressure bar, a lever for operating the pressure bar, a spring held longitudinal movable plate supporting a tripping device for the lever and having an inclosed end, connecting mechanism between the plate and builder bar whereby a step by step movement is imparted to the plate and a wedge plate designed to coact with the inclined end of the movable plate to hold the plate in position, as and for the purpose specified.

15. In a device of the class described, the combination with the tension wire, having a notch in the free end thereof, the dog arm, the flexible support for the arm and the ratchet wheel, of a pivotally supported spring held trip arm designed to enter the notch in the dog arm, and suitably located stops designed to coact with the lower end thereof, to throw the upper end into and out of engagement with the notch on the dog arm, as and for the purpose specified.

870,076. BAND FOR BRACELETS. THOMAS S. BENNETT, Attleboro, Mass. Filed May 29, 1907. Serial No. 376,276.

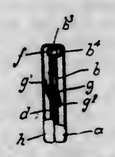


1. A lazy-tongs band composed of pairs of arms pivoted to each other at or near their centers, each pair of arms comprising first, a front arm comprising a plate provided with pivots upon its ends and an intermediate opening, an outside shell provided with a marginal flange folded upon itself, ears upon the shell engaging the plate, and second, a back arm provided with means for receiving said pivots.

2. A lazy-tongs band composed of pairs of arms pivoted to each other at or near their centers, each pair of arms comprising first, a front arm provided with pivots upon its ends, and second, a back arm comprising a plate adapted to receive the pivots, and having an intermediate opening, an outside shell provided with a marginal flange folded upon itself, and ears upon the shell engaging the plate.

3. A lazy-tongs band composed of pairs of arms pivoted to each other at or near their centers, each pair of arms comprising first, a front arm comprising a plate provided with pivots upon its ends and an intermediate opening, an outside shell provided with a marginal flange folded upon itself, ears upon the shell engaging the plate, and second, a back arm comprising a plate adapted to receive the pivots and having an intermediate opening, an outside shell provided with a marginal flange folded upon itself, and ears upon the shell engaging the plate.

870,077. BAND FOR BRACELETS. THOMAS S. BENNETT, Attleboro, Mass. Filed May 29, 1907. Serial No. 376,277.



1. A lazy-tongs band composed of pairs of arms pivoted to each other, each pair of arms comprising first, a front arm provided with rivets upon its ends, a tubular bearing projecting from the face of said arm intermediate the end rivets, a flange upon the end of the baring, and second, a back arm provided with means for receiving the rivets, and a hub loosely mounted upon the tubular bearing and retained thereon by said flange.

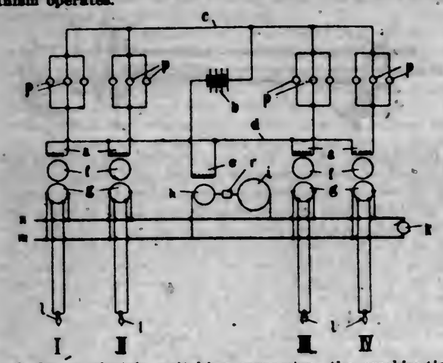
2. A lazy-tongs band composed of pairs of arms pivoted to each other, each pair of arms comprising first, a front arm provided with rivets upon its ends, a tubular bearing projecting from the face of said arm intermediate the end rivets, and second, a back arm provided with means for receiving the rivets, and a hub loosely mounted upon the tubular bearing, and third, a spring within the tubular bearing having free ends which bear against the walls of both arms.

3. A lazy-tongs band composed of pairs of arms pivoted to each other, each pair of arms comprising first, a front arm comprising a shell having a marginal flange, a rivet carrying plate engaged by the flange, and provided with perforations in its ends to receive the rivets, a hollow bearing projecting from the plate, and second, a back arm comprising a shell provided with marginal ears, a plate retained in the shell by the marginal ears and provided with openings for the rivets, a hub upon the last mentioned plate loosely mounted on the bearing, and third, rivets passing through the openings of both plates, and heads upon one end of the rivets resting against the shell of the front arm.

4. A lazy-tongs band composed of pairs of arms pivoted to each other at or near their centers, each pair of arms comprising a front arm provided with a shell having integral portions inclosing its outer face and sides, and a back arm provided with a shell having integral portions inclosing its outer face and sides.

870,078. ELECTRIC SWITCHING APPARATUS AND CONTROLLING APPARATUS THEREFOR. ALFRED BLACKMORE, Kensington, London, England. Filed Apr. 2, 1906. Serial No. 309,469.

1. In an electric switching apparatus the combination with a power mechanism of an electric switch having a fixed and movable part, an operating mechanism adapted to close and open the switch at alternate operations, a tripping device in conjunction with the switch operating mechanism adapted to control the connection of the power mechanism to that operating mechanism, means for setting in operation the tripping mechanism, and apparatus controlled by said means adapted to set in operation the power mechanism immediately after the tripping mechanism operates.



2. In an electric switching apparatus, the combination of an electromagnetic power mechanism, a switch having a fixed and movable part, an operating mechanism adapted to close and open the switch at alternate operations, an electromagnetic tripping device in conjunction with the switch operating mechanism adapted to control the connection of the power mechanism to that operating mechanism, means for setting in operation any one of the tripping mechanisms, and apparatus controlled by said means adapted to set in operation the power mechanism immediately after the tripping mechanism operates.

3. In an electric switching apparatus, the combination of an electromagnetic power mechanism, a source of electrical power, a relay device adapted to connect said power mechanism to the source of power, an electric switch, operating mechanism therefor, an electromagnetic tripping device, and means for simultaneously setting in operation said tripping device and the relay device, whereby the switch may be opened or closed by a single movement.

4. In an electric switching apparatus, the combination of an electromagnetic power mechanism, a source of electrical power, a relay device adapted to connect said power mechanism to the source of power, an electric switch, operating mechanism therefor, an electromagnetic tripping device, a local electrical circuit containing in series said electromagnetic tripping device and the relay device, and a plurality of means for closing said local circuit whereby the tripping device and the relay device are simultaneously operated so as to bring the power mechanism into working action to open or close the switch.

5. In an electric switching apparatus, the combination with an electromagnetic power mechanism of a source of power, a relay device adapted to connect said power mechanism to the source of power, a plurality of electric switches, a mechanism in connection with each switch adapted to close and open the switch at alternate operations, an electromagnetic tripping device in connection with each switch operating mechanism adapted to control the connection of the power mechanism to the switch operating mechanism, a local electrical circuit including all the electromagnetic tripping devices in parallel with each other and in series with the relay device, and a plurality of means in the circuit of said electromagnetic tripping devices adapted to close the local electrical circuit for any desired switch, whereby the tripping device for that switch and the relay device are simultaneously operated so as to connect the power mechanism to the operating mechanism of the particular switch and to join the power mechanism to the source of power.

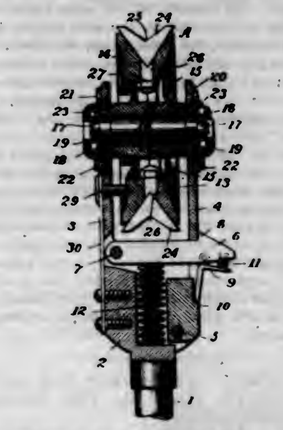
870,079. EYEGLASS-MOUNTING. ISAAC BOLTAN, Hot Springs, Ark. Filed Mar. 30, 1907. Serial No. 365,559.

An eyeglass mounting comprising a bow, nose pieces carried by the bow, an integral flat stud projecting from each end of the bow, said studs being each formed with a pair of openings one of which is threaded and one not threaded, detachable studs coöperating with the before-mentioned integral studs and each comprising a perforated wing a laterally extending body portion engaging the edges of the lens, and a projection designed to enter the



unthreaded opening in the corresponding integral stud, the said detachable studs being designed to be applied to either side of the lenses, and clamping screws passing through the perforated wings of the detachable studs and engaging the threaded openings in the integral studs to clamp the lens in position.

870,080. TROLLEY-WHEEL. CHARLES P. BOSTIAN and HOMER C. BOSTIAN, Milton, Pa., assignors of one-third to Harry R. Frick, Milton, Pa. Filed July 15, 1907. Serial No. 383,801.



1. In a trolley, a harp comprising a base and two sideplates, one of which is hinged to the base, a latch for holding the hinged sideplate in operative position, a spring for yieldingly closing the latch, and means for positively locking the latch when closed.

2. In a trolley, a harp comprising a base and two sideplates, one of which is hinged to the base, a spring latch for holding the hinged sideplate in operative position, and means for positively locking the latch in operative position, said means consisting in a part hinged to the latch and coöperating with a shoulder on the movable sideplate.

3. In a trolley, a harp comprising a base and two sideplates, one of which is hinged to the base, a spring latch for holding the hinged sideplate in operative position, means for positively locking the latch in operative position, said means consisting in a part hinged to the latch and coöperating with a shoulder on the movable sideplate, and a spring for normally holding said part in engagement with said shoulder.

4. In a trolley, a harp comprising a base, a sideplate fixed to said base, a second sideplate hinged to said base, a latch pivotally connected with the fixed sideplate and passing through and engaging the hinged sideplate, and a lock for the latch consisting in a part connected with the latch and adapted to normally engage a shoulder on the movable sideplate when the said sideplate is in operative position.

5. In a trolley, a harp comprising a base, a fixed sideplate, a relatively movable sideplate, a latch connecting the base with the movable sideplate, a spring located in a socket in said base and bearing upon said latch, and means for positively locking the latch against displacement when the movable sideplate is in operative position.

6. In a trolley, the combination with a fixed sideplate of a relatively movable sideplate, said plates having oppositely disposed openings to receive the axle of a trolley wheel, in combination with a trolley wheel having an axle adapted to pass through said openings and adapted to engage ball bearings on the outside of the sideplates, and a ball cup connected to the outside of each sideplate, each of said ball cups being provided with a series of balls and with means for retaining said balls in the cups when the axle is withdrawn from its bearings, the said ball cups being adjustable about the trolley axis and non-adjustable longitudinally thereof.

7. In a trolley, a wheel provided with teeth on its periphery for engaging the conductor in combination with the harp in which the wheel is mounted, and means for locking the wheel against rotation, for the purpose set forth.

8. In a trolley, a wheel provided with teeth on its periphery for engaging the conductor in combination with the harp in which the wheel is mounted and a pawl connected with the harp and adapted to engage and lock the wheel against rotation, for the purpose set forth.

9. In a trolley, a wheel provided with a series of teeth on its periphery and having on one side means for preventing rotation of the trolley, the said trolley being reversible in its bearings, for the purpose set forth.

10. In a trolley, the combination with a harp and a pawl thereon of a wheel having teeth on one side adapted to coöperate with the pawl to lock the wheel, the said wheel being reversible in the harp, for the purpose set forth.

11. In a trolley, the combination with a wheel having a series of teeth on its periphery and a series of ratchet teeth on one side face, of a harp having bearings for the wheel, and a spring pressed pawl connected with the harp and adapted to engage the ratchet teeth on the side wheel.

12. In a trolley, a wheel consisting of two parts meeting in a plane at right angles to the axis of the wheel, and a series of teeth projecting radially from the periphery of the wheel and having shanks engaged and locked between the two parts of the wheel, and means for connecting the parts of the wheel.

870,081. RIDING ATTACHMENT FOR HARROWS. LOAMA A. BRENIZER, Miami, Mo. Filed Feb. 23, 1907. Serial No. 358,871.

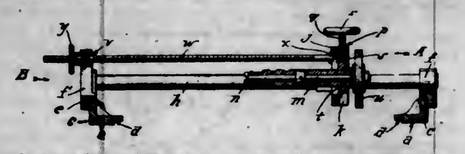


1. In a riding attachment for harrows, the combination with a seat supporting bar, of means for pivoting said bar to the harrow so that the bar may swing laterally, a seat mounted on said bar, a supporting wheel, a support to which said wheel is rotatively secured, said support having two transverse members disposed one above the other and slidably engaging respectively the upper and lower sides of said bar for supporting the free end of said bar.

2. In a riding attachment for harrows, the combination with a seat supporting bar, of means for pivoting said bar to the harrow so that the bar may swing laterally, a seat adjustable lengthwise on said bar, a supporting wheel, and a support pivoted to said wheel and provided with two transverse members disposed one above the other and engaging respectively the upper and lower sides of said bar and adjustable with said support lengthwise of said bar.

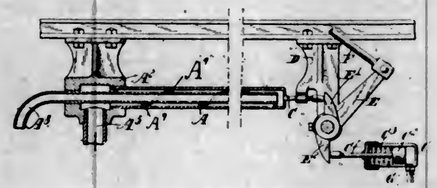
3. In a riding attachment for harrows, the combination with a seat supporting bar, of a supporting member to which said bar is pivoted so as to swing laterally, means adjustable lengthwise of said member for securing said member to the harrow, a seat mounted on said bar, a support having two transverse members disposed one above the other and respectively engaging the upper and lower sides of the seat supporting bar and adjustable with said support lengthwise of said bar, and a wheel rotatively mounted on and carrying said support.

870,082. MACHINE FOR GRINDING LOCOMOTIVE VALVE-SEATS. JESSE A. CHADWICK, Moberly, Mo. Filed Feb. 12, 1907. Serial No. 357,090.



In a machine of the character described, the combination of a pair of base-blocks each formed with ways upon its top; a pair of slide-blocks one mounted on the top of each of said base-blocks; a pair of guide-rods fitted in said slide-blocks and lying in a plane parallel to the ways upon the top of said base-blocks; a grinding-head mounted free to slide along said guide-rods and formed with guideways; a journal-block slidably fitted in said guideways; a rotary shaft mounted in said journal-block; a grinding wheel mounted on said shaft; means for moving said grinding-head along said guide-rods; and means for moving said journal-block vertically at right angles to the direction of said guide-rods; said slide-blocks being movable along the ways on top of said base-blocks horizontally and at right angles to the direction of said guide-rods.

870,083. REGULATOR FOR LIQUID-FUEL BURNERS. THOMAS CLARKSON and WILLIAM J. MORISON, Chelmsford, England. Filed Jan. 2, 1906. Serial No. 294,228.



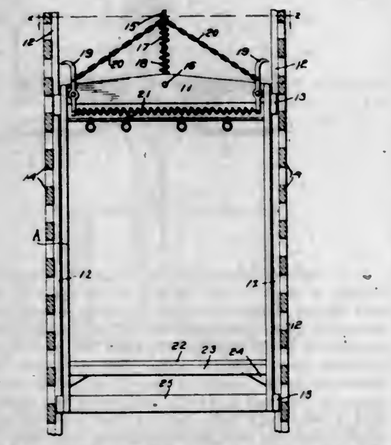
1. In a regulating device for a liquid fuel burner, the combination with a rocking bell-crank lever and an operative connection between one arm of the lever and the burner-regulating device, of a tubular expansible member to which the contents of the generator heated by the burner have access, a fixed bearing for one end of the tube, a support for the other end of the tube, means whereby the contents of the generator have access to the tube, means for transmitting movement due to the expansion of said tube to the bell crank lever, a casing, a movable member in the casing, means whereby the pressure of the generator contents has access to the movable member, and means whereby the movable member acts upon the bell-crank lever.

2. In a regulating device for a liquid fuel burner, the combination with a rocking bell-crank lever, and an operative connection between one arm of the lever and the burner-regulating device, of a tubular expansible member to which the contents of the generator heated by the burner have access, a fixed bearing for one end of the tube, a bearing for the other end of the tube in which it can slide, means whereby the contents of the generator have access to the tube, means for transmitting movement from said tube to the bell crank lever, a casing, a movable member in the casing, means whereby the pressure of the generator contents has access to the movable member, and means whereby the movable member acts upon the bell-crank lever.

3. In a regulating device for a liquid fuel burner, the combination with a lever, a rocking shaft carrying the lever, and an operative connection between the lever and the burner-regulating device, of an expansible tubular member closed at one end, a fixed hollow bearing for the open end of the tube, a projection on the closed end of the tube, a bearing in which the projection can slide, an arm fixed to the rocking shaft and adapted to be contacted by the projection, a second projection on the rocking shaft, a piston, a cylinder in which the piston works, a connection between the cylinder and the interior of the generator, a rod connected to the piston and adapted to contact with the second projection on the rocking shaft, and a spring bearing against one side of the piston.

4. In a regulating device for a liquid fuel burner, the combination with a lever, a rocking shaft carrying the lever, and an operative connection between the lever and the burner-regulating device, of an expansible tubular member closed at one end, a fixed hollow bearing for the open end of the tube, a pipe leading into the hollow bearing, a projection on the closed end of the tube, a bearing in which the projection can slide, a tube leading through the hollow bearing to the inner end of the expansible member, circulating devices between the tubes, an arm fixed to the rocking shaft and adapted to be contacted by the projection on the closed end of the expansible tube, a second projection on the rocking shaft, a piston, a cylinder in which the piston works, a tubular connection between the cylinder and the interior of the generator, a rod connected to the piston and adapted to contact with the second projection on the rocking shaft, and a spring bearing against one side of the piston.

870,084. SAFETY APPLIANCE FOR ELEVATORS. JESSE COLEMAN, Shelburn, Ind. Filed Jan. 29, 1907. Serial No. 354,642.

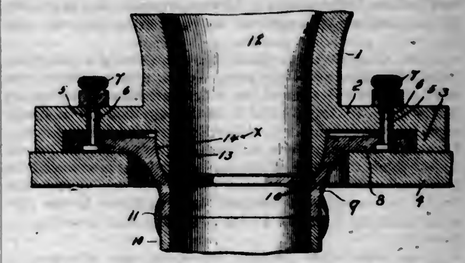


An elevator cage comprising overhead bars, hooks having shanks centrally pivoted on the ends of the bars and adapted to be operated to engage means on the sides of the elevator-shaft to hold the elevator-cage against dropping, a hoisting cable, chains connected at their outer ends with the upper arms of the shanks of the hooks and centrally connected with the lower end of the cable to hold the hooks normally out of engagement with the said means on the sides of the elevator shaft, springs connecting the lower end of the cable with said bars, and springs engaged at their ends with the lower arms of the hooks, and operating with a tendency to throw said hooks into action upon the failure of the hoisting cable and the slacking of the said chains.

870,085. WATER-CLOSET CONNECTION. JOSEPH J. COSGROVE, Scranton, Pa., assignor to Standard Sanitary Manufacturing Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Oct. 25, 1906. Serial No. 340,545.

1. The combination with a water closet having an outlet passage and a soil pipe, of an integral spigot extending from said outlet passage and terminating in an externally spherical end, and a bell or socket carried by the drain pipe and formed with a spherical seat which receives the convex end of the spigot.

2. The combination with a water closet bowl having a laterally extending base, and having an outlet passage terminating in a spherical spigot end, of a soil pipe, a bell or socket carried by the soil pipe, said bell or socket being formed with a spherical seat to receive the spigot end of the outlet passage of the bowl and being formed with a laterally extending flange and bolts passing through the base of the bowl and through the flange of the bell or socket.



3. The combination of a water closet and a soil pipe having a ball-and-socket joint connection with each other.

4. A water closet having a spherical projection constituting an extension of its outlet passage and adapted to form a coupling member.

5. The combination with a water closet bowl having a base flange adapted to rest on the floor and having an integral spherical spigot terminating its outlet passage, of a spherical soil pipe bell or socket having a floor flange, the spigot and socket being adapted to contact and form an all metal joint while the closet and soil pipe socket flanges are out of contact.

870,086. ATTACHMENT FOR BATH-TUBS. WYLIE C. DE CAMPS, Parkersburg, W. Va. Filed Mar. 21, 1907. Serial No. 363,586.

1. A bath tub fixture adapted for attachment to a bath tub comprising journal supports arranged adjacent to the rim or roll edge of the bath tub, a frame having journals adapted to said supports and having portions curved to overhang the roll or rim of the bath tub, and a locking means constructed to lock the frame against movement when in position to overhang the rim of the tub.

2. An attachment for bath tubs comprising a longitudinally extensible support having a floor plate at one end and a curved head at the other end adapted to fit under the roll edge of a bath tub, journal bearings carried by said support below but adjacent to the head engaging under the roll edge of the tub, said frame being bent to a shape

to overhang the roll edge of the tub, and means for locking said frame in the overhanging position.

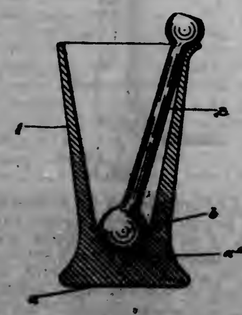
3. An attachment for bath tubs comprising a longitudinally extensible support having a floor plate at one end and a curved head at the other end adapted to fit under the roll edge of a bath tub, journal bearings carried by said support below but adjacent to the head engaging under the roll edge of the tub, said frame being bent to a shape to overhang the roll edge of the tub, and a spring-retained lock for the frame active to lock the frame when the latter is in a position to overhang the roll of the bath tub and inactive in any other position of the frame.

4. An attachment for bath tubs comprising a longitudinally adjustable post or support having a floor plate at one end and a curved head at the other end adapted to engage under the edge or roll of a bath tub, journal bearings formed on this support below the curved head thereof, a frame having journals in said journal supports and curved to overhang the edge of the tub when in a predetermined position, and spring-actuated lock bolts carried by said frame and arranged to engage fixed portions of the support when the frame is in the predetermined overhanging position.

5. An attachment for bath tubs consisting of a post or support having means at one end for engaging the floor and at the other end for engaging under the roll edge of a bath tub, means for adjusting the length of the support to adapt it to clamp between the edge of the tub and the floor, journal bearings carried by the support below the upper end thereof, a frame having a tubular portion provided with journals adapted to said journal supports, and oppositely-moving, spring-actuated lock bolts in said tubular portion of the frame, each bolt being provided with a tongue extending through slots in the tubular portion of the frame and arranged to enter recesses in the journal bearings.

6. An attachment for bath tubs comprising a two-part tubular support having at one end a curved head adapted to engage under the roll edge of a bath tub, a floor plate for the other end of said support, a coupling or turnbuckle uniting the two parts of the support and adapted to adjust them longitudinally relative one to the other, a frame journaled in said support and appropriately bent to overhang the roll edge of the tub when moved to a predetermined position, and a spring-actuated locking means coacting with the frame and support for locking the frame against movement on its journals when in the predetermined overhanging position.

870,087. COMBINED MEASURING-GLASS AND PESTLE AND MORTAR. ARTHUR W. M. DICKINS, Bromley, England. Filed Dec. 17, 1906. Serial No. 348,201. (Model.)



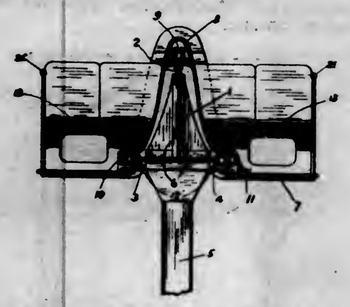
A combined pulverizing and measuring instrument comprising a glass mortar with a thick base and transparent sides, a concave crushing cavity in said base, graduations marked on said sides and a pestle having a round end fitting closely in the crushing cavity as herein described.

870,088. RAILROAD-JOINT. MICHAEL DRAKE, Cora, Idaho. Filed Apr. 1, 1907. Serial No. 365,752.



A rail joint comprising a pair of rails, one of which is provided at its meeting ends with a recess in the tread thereof and with its sides cut away to form a tongue, and a vertically-extending hook carried by said tongue, and the meeting end of the other rail having a longitudinally-extending tongue formed at the tread thereof to fit in the recess in the tread of the other rail, said tongue having a shouldered recess in its lower face to fit over and engage the vertical hook of the other rail and side flanges engaging the opposite sides of the tongue of the first-mentioned rail.

870,089. RAILWAY. MARK ST. CLAIR ELLIS, U. S. Navy. Filed Aug. 28, 1907. Serial No. 389,760.



1. A railway comprising a mono-rail having bearing flanges or faces at its top and at its opposite sides and cars having flanged or grooved roller contact with said flanges or faces and provided with projections or guards underlying the bottom of the sides of the rail and also provided upon opposite sides with passenger seats arranged to fix the center of gravity below the top bearing flange or face and to fix the position of the passengers in such a way that they can see and converse with each other across the rail, substantially as described.

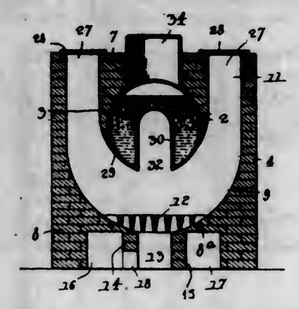
2. A railway comprising a mono-rail having bearing flanges or faces at its top and opposite sides said side flanges or faces projecting laterally to afford a wide base, and cars having roller contact with said flanges or faces and provided upon opposite sides with passenger seats arranged to fix the center of gravity below the top bearing flange or face and to fix the position of the passengers in such a way that they can see and converse with each other across the rail.

870,090. STEAM-BOILER FURNACE. WILLIAM J. ELLIS, Andrews, N. C., assignor of one-half to Columbus W. Savage, Andrews, N. C. Filed Mar. 1, 1906, Serial No. 303,698. Renewed Sept. 12, 1907. Serial No. 392,571.

1. A steam boiler furnace comprising a body having a centrally-disposed, longitudinally-extending ash pit, longitudinally-extending passages upon opposite sides of said ash pit and in communication therewith, a combustion chamber and a fuel magazine forming the upper portion of said body, a grate above said ash pit, and a boiler in the upper portion of said body, having a flue opening through its bottom and disposed above said grate.

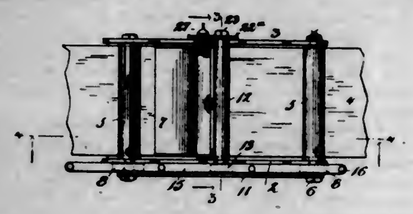
2. A steam boiler furnace comprising a body having side and end walls, a horizontal partition 8^a and vertical

partitions 14, 15, forming a central ash pit 13, and longitudinal air passages 16, 17, and having openings to establish communication between the ash pit and said air passages, a combustion chamber 9, a fuel magazine 11, a grate in the partition 8^a, above the ash pit, doors to close



the open front ends of the ash pit and air passages, and a steam boiler arranged horizontally in the fuel magazine 11 and combustion chamber 9 and having a longitudinally-extending flue opening through the bottom thereof and above said grate, substantially as described.

870,091. STROPPING MECHANISM FOR RAZORS. HENRY J. GAISMAN, New York, N. Y., assignor to Auto Strop Company, a Corporation of New York. Filed Mar. 30, 1904. Serial No. 200,725.



1. The combination of a frame adapted to be reciprocated with respect to a strop and provided with means for receiving and rocking a blade, with a razor frame provided with means for pivotally supporting a blade, so the latter may rock in said razor frame, said blade supporting means being arranged to be applied to the blade rocking means of the first named frame for rocking the blade thereby, substantially as described.

2. The combination of a frame adapted to be reciprocated with respect to a strop and provided with a pivoted blade holder and means for rocking said holder, with a safety razor frame provided with a blade pivotally supported in said razor frame to rock therein and adapted to be fitted to the blade holder of said first mentioned frame, substantially as described.

3. The combination of a frame adapted to be reciprocated with respect to a strop and provided with a pivoted blade holder and means for rocking said holder, with a safety razor frame provided with a pivoted blade holder and having an opening through from side to side to permit the free passage of the first named frame while the blade holder of the razor frame is fitted to the holder of the first named frame, substantially as described.

4. The combination of a frame adapted to be reciprocated with respect to a strop and provided with a pivoted blade holder and means for rocking said holder, with a safety razor frame provided with a pivoted blade holder and having an opening through from side to side and also open at one end to permit the razor frame to be slid transversely of the first named frame to enable the holder of the razor frame to be fitted to the holder of the first named frame, substantially as described.

5. The combination of a frame adapted to be reciprocated with respect to a strop and provided with a pivoted blade holder and means for rocking said holder, with a safety razor frame provided with a pivoted blade holder adapted to be fitted to the holder of the first named frame, and means for securing said frames together while their respective holders are fitted together, substantially as described.

6. The combination of a frame adapted to be reciprocated with respect to a strop and provided with a pivoted blade holder and means for rocking said holder, with a safety razor frame provided with a pivoted blade holder adapted to be fitted to the holder of the first named frame, the safety razor frame having a base member beneath its holder and one end open to receive the first named frame, and a guide for holding the safety razor frame upon the first named frame, substantially as described.

7. The combination of a frame adapted to be reciprocated with respect to a strop and provided with a pivoted blade holder and means for rocking said holder, with a safety razor frame provided with a pivoted blade holder adapted to be fitted to the holder of the first named frame, the safety razor frame having a base member beneath its holder and one end open to receive the first named frame, the first named frame having a guide adapted to receive the base member of the safety razor frame for holding the latter upon the former while the blade holders are fitted together, substantially as described.

8. The combination of a frame adapted to be reciprocated with respect to a strop and provided with a pivoted blade holder and means for rocking said holder, with a safety razor frame provided with a base portion and an upright on one side, a blade holder pivotally carried by said upright, the end of the frame opposite said upright being free to be passed over the first named frame, said blade holder being arranged to be fitted firmly to the blade holder of the first named frame, substantially as described.

9. The combination of a frame adapted to be reciprocated with respect to a strop and provided with a pivoted blade holder and means for rocking said holder, with a safety razor frame provided with a base portion and an upright on one side, a blade holder pivotally carried by said upright, the end of the frame opposite said upright being free to be passed over the first named frame, said blade holder being arranged to be fitted firmly to the blade holder of the first named frame, the first named frame having a guide to receive the base portion of the safety razor frame, substantially as described.

10. In a stropping device the combination of a frame, a blade holder pivotally carried by said frame, rollers journaled on the frame on opposite sides of said holder, and mechanism connecting said rollers with said holder for rocking the latter by the former, substantially as described.

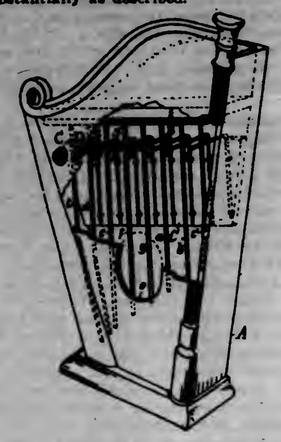
11. A stropping device comprising a frame, a blade holder pivotally carried by said frame, rollers journaled on said frame on opposite sides of the holder, an independent member mounted to slide with respect to the frame, and mechanism connecting said member with said rollers and holder for rocking the latter by means of said rollers, substantially as described.

12. A stropping device comprising a frame, a blade holder pivotally carried thereby, rollers journaled on the frame on opposite sides of the holder, racks movably carried by the frame, and gears connected with the rollers and holder and operated by said racks, substantially as described.

13. A razor stropping device comprising a frame, a blade holder pivotally carried thereby, rollers journaled on the frame on opposite sides of the holder, gears connected with said rollers and holder, and racks meshing with said gears, the point of contact of the gear of the holder being on the side opposite the contact of the gears of the rollers with the corresponding rack, substantially as described.

870,092. MUSICAL INSTRUMENT. WILLIAM A. GAY, Newark, N. J. Filed Dec. 1, 1906. Serial No. 345,891.

1. The combination with a sound emitting device, of a striking-finger having a torsion-spring section, and suitable damping means contacting with the torsion-spring section, substantially as described.



2. The combination of a series of sound emitting devices, and a series of striking-fingers each having a torsion-spring section and suitable damping means contacting with the torsion-spring section, substantially as described.

3. The combination with a suitable base, of a vibrating rod fixed at one end in the base, a striking-finger having a torsion-spring section, and suitable damping means contacting with the torsion-spring section, substantially as described.

4. The combination with a suitable base, of a series of vibrating rods fixed to the base, and a corresponding series of striking-fingers operatable by the fingers of the musician and arranged to contact with the vibrating rods, each having a torsion-spring section and suitable damping means contacting with the torsion-spring section, substantially as described.

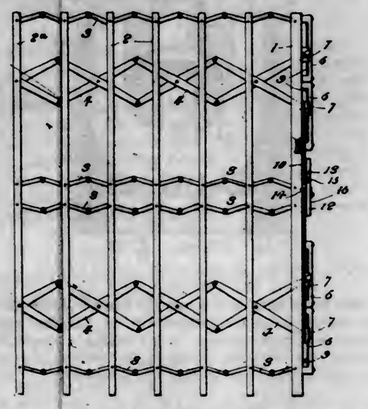
5. The combination with a suitable base, of a series of vibrating rods fixed to the base, a corresponding series of striking-fingers operatable by the fingers of the musician and arranged to contact with the vibrating rods, each having a torsion-spring section and suitable damping means contacting with the torsion-spring section, and an inclosing case formed to resemble a stringed instrument, substantially as described.

6. The combination with a suitable base, of a series of vibrating rods fixed to the base, a corresponding series of striking-fingers operatable by the fingers of the musician and arranged to contact with the vibrating rods, each having a torsion-spring section and suitable damping means contacting with the torsion-spring section, and an inclosing case formed to resemble a stringed instrument with openings through which the tips of the striking-fingers may be actuated, substantially as described.

7. In a musical instrument, the combination of a series of sound emitting devices, of a series of striking-fingers formed of spring wires with looped ends to be operated by the fingers of the musician, and arranged to contact with the sound emitting devices, substantially as described.

870,093. GATE FOR RAILWAY-CARS. NICHOLAS GRASSO, New York, N. Y. Filed Mar. 21, 1907. Serial No. 363,676.

1. A gate of the character described, comprising a foundation bar, an end bar and intermediate bars, upper and lower sets of lazy-tongs connected to the end bar and adapted to move the end bar towards and from the foundation bar, means for supporting the intermediate bars in parallel relation during such movement, a segment mounted on the foundation bar between the lazy-tongs, means for moving said segment, blocks secured to the adjacent ends of the members of both sets of lazy-tongs, boxes secured to the foundation bar and having a tongue and groove connection with the blocks, and upwardly and downwardly extending rods connecting said blocks with said segment.



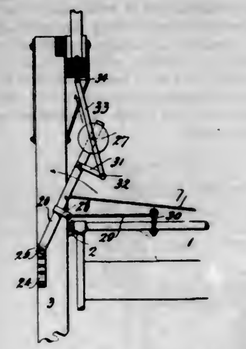
2. A gate of the character described, comprising a foundation bar and a series of intermediate bars and an end bar, all parallel with the foundation bar, jointed connections between said bars, upper and lower sets of lazy tongs connected to the end bar, a segment mounted on the foundation bar between the sets of lazy-tongs, said segment being toothed, a lever having a toothed segmental end meshing with the teeth of the segment, blocks secured to the adjacent ends of the members of both sets of lazy-tongs, boxes secured to the said foundation bar and in which said blocks have a tongue and groove sliding connection, and upwardly and downwardly extending rods connecting said blocks with said segment.

3. A gate of the character described, comprising a foundation bar, intermediate bars and an end bar, jointed connections between said bars whereby they may be moved towards and from each other in parallel relation, a lazy-tong connection between the end bar and the foundation bar, said foundation bar being formed with a slot through which the inner members of the lazy-tong project, boxes secured to the outer face of the foundation bar on opposite sides of said slot, blocks mounted to slide in said boxes and connected, respectively, to the projecting ends of the lazy-tong, means for simultaneously moving said blocks, rods connected to the respective blocks, a segment mounted on the foundation bar and to which the ends of said rods are connected, and means for moving said segment.

4. A gate of the character described, comprising a foundation bar and a series of intermediate bars and an end bar, all parallel with the foundation bar, jointed connections between said bars, upper and lower sets of lazy-tong connected to the end bar, a segment mounted on the foundation bar between the sets of lazy-tongs, means for moving said segment, blocks secured to the adjacent ends of the members of both sets of lazy-tongs, and upwardly and downwardly extending rods connecting said blocks with said segment, as and for the purpose set forth.

870,094. GATE-OPERATING MECHANISM. GEORGE HAAS, Tremont, Ill. Filed Mar. 12, 1906. Serial No. 305,577.

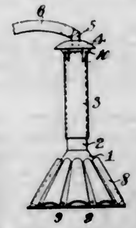
1. The combination with an upright, of a gate hinged thereto, a weighted lever pivotally connected at one end to the upright and disposed normally in an inclined position, a strap projecting from said weighted lever, connection between said strap and the said gate, a second strap projecting from said weighted lever, an operating lever, and connection between said last mentioned strap and said operating lever.



2. The combination of an upright, of a gate hinged thereto, a spring latch-bar secured at one end to the forward end of said gate, an operating lever, a weighted lever pivotally connected at one end to said upright and disposed normally in an inclined position, connection between said latch-bar and said weighted lever, a strap projecting from the weighted lever and means connected with said strap and said operating lever, a second strap attached to said weighted lever and connection between said last mentioned strap and said gate.

3. The combination with a gate, of a pair of operating levers, each of which consist of a bar and a pair of straps connected to said bars and projecting from the same into close proximity to each other, a pair of spaced rollers journaled between the said straps at the inner end of one of said levers, a rod connected with the inner ends of the straps of the opposite lever and having movement between the rollers aforesaid of first mentioned lever, and connections between said gate and one of said levers.

870,095. WASHING APPARATUS. ROBERT T. HAINES and FREDERICK WHIT-GOULD, London, England. Filed Jan. 24, 1907. Serial No. 353,903.



In combination, a funnel-shaped body, an upright pipe communicating with the body at the apex thereof, a second pipe telescopically engaging the first named pipe, a cap carried by the second named pipe, a pipe carried by the cap and projecting therethrough, and a weight arranged within the funnel-shaped body at the apex therof, said weight having a perforation registering with the first named pipe, and guards secured to the outer surface of the funnel-shaped body, said funnel-shaped body having a series of perforations adjacent its edge.

870,096. GRAFTING-TOOL. JAMES M. HALEY, Springdale, Ark., assignor of one-half to Frank F. Young, Springdale, Ark. Filed July 25, 1907. Serial No. 385,527.

1. A tool of the character described comprising a tubular body having a beveled end provided with a curved outer portion and a straight transversely extending inner portion, the edge of the curved outer portion being sharpened to provide an incision cutting knife and said straight inner portion being sharpened to provide a bud cutting knife an ejector slidably mounted in the body, and a coil spring arranged in the body and engaged with one end of said ejector for projecting the opposite end of the latter out of the beveled end of the body, substantially as described.



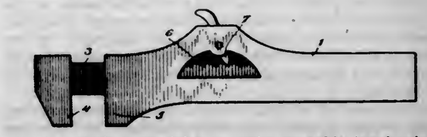
2. A tool of the character described comprising a tubular body having a beveled end provided with a curved outer portion and a straight transversely extending inner portion, said outer portion being sharpened to provide a convex incision cutting blade and said straight inner portion being sharpened to provide a transverse bud cutting blade, an outwardly projecting cutting rib disposed upon and extending longitudinally of the outer portion of the beveled end of the body, the latter being also formed with a longitudinal slot, an ejector slidably arranged in the body and having a beveled outer end formed with a recess, a coil spring arranged in the body and engaged with one end of the ejector for projecting its opposite end out of the beveled end of the body, and a finger piece carried by the ejector and working in the slot in the body, substantially as described.

3. A tool of the character described comprising a body having a hollow or tubular portion provided with a beveled end, the inner portion of said end being straight and sharpened to provide the transverse bud cutting blade 8, substantially as described.

4. A tool of the character described comprising a tubular body having a beveled end provided with a rounded outer portion, said outer portion being sharpened to provide the convex incision cutting blade 10, and the outwardly projecting rib 11 arranged centrally upon and extending longitudinally of the outer portion of the beveled end of the body, substantially as described.

5. A tool of the character described comprising a body of U-shape in cross section, the sides of said body being formed upon their inner faces with opposing guide grooves, a blade slidably engaged with said guide grooves and adapted to close the open side of the body, a knife upon one end of the body, an ejector slidably arranged in the body, a coil spring in the body in rear of the ejector and engaged with the same, and a screw passed through a threaded opening in the curved side of the body and adapted to impinge against the inner face of said blade to hold the latter against movement, said screw being also engaged by said spring to form a stop for the same, substantially as described.

870,097. WRENCH. THOMAS G. HARRYMAN and ALFRED P. HARRYMAN, Box, Okla. Filed Jan. 26, 1907. Serial No. 354,302.



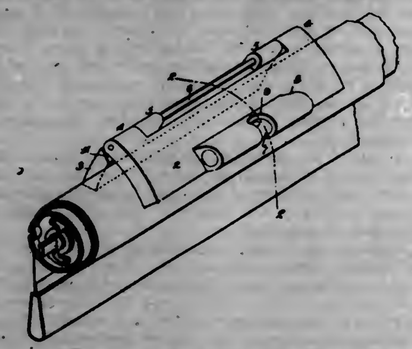
1. A wrench, comprising an outer movable jaw having a shank, a rigid jaw having a hollow handle to receive said shank, said shank having an elongated recess therein, a spring actuated dog pivotally carried by said hollow handle, said dog having means to engage said elongated recess to prevent the removal of the said shank, said shank having, upon its upper face, a plurality of notches to be engaged by said spring-actuated dog.

2. A wrench comprising an outer movable jaw, having a shank, a rigid jaw having a hollow handle to receive said shank, said shank having an elongated recess therein, a

spring actuated dog having a depending lug designed to enter said elongated recess to prevent removal of the shank, said shank having upon its upper face, a plurality of notches to be engaged by said spring-actuated dog.

3. A wrench comprising an outer movable jaw having a shank, a rigid jaw having a hollow handle to receive said shank, said hollow handle being provided with an enlargement, an opening therein communicating with the hollow portion of the handle, said shank having an elongated recess therein and a plurality of notches in its upper surface, a spring-actuated dog, pivotally mounted in the opening of the enlargement and designed to engage the said notches to hold the shank in an adjusted position, said spring-actuated dog having a depending lug, entering the said elongated recess to prevent removal of the movable jaw and its shank.

870,098. SHADE-HANGER LEVEL. EDMUND F. HARTSHORN, Newark, N. J., assignor to Stewart Hartshorn Company, East Newark, N. J., a Corporation of New Jersey. Filed Feb. 20, 1905. Serial No. 246,425.



1. A device for leveling shade rollers which comprises a body portion which is adapted to rest upon and straddle the roller, the said body portion having means thereon, observable from below for indicating the horizontalism of the roller.

2. A device for leveling shade rollers which comprises a body portion adapted to rest upon and be supported by the roller, and having means for indicating the horizontalism of the roller, and means for permitting the adjustment of the body portion so that it may be made to conform to the shape of the roller irrespective of the diameter of the latter.

3. A device for leveling shade rollers, which comprises a body portion adapted to rest upon and be supported by the roller, and having means for indicating the horizontalism of the roller, such means being observable from below, and means for permitting the adjustment of the body portion so that it may be made to conform to the shape of the roller irrespective of the diameter of the latter.

4. A device for leveling shade rollers, which comprises a body adapted to rest upon and be supported by the roller, the said body being formed of two plates hinged together, and carrying a level, the plates being curved in cross-section.

5. A device for leveling shade rollers, which comprises a body formed of two plates hinged together and carrying a level, the body being adapted to rest upon and be supported by the roller, and having means for indicating the horizontalism of the roller, the plates being of sufficient thickness to be of material weight, whereby the device will be self-centered.

6. A device for leveling window shade rollers which comprises a body formed of two plates having ears thereon, a rod passing through the ears and constituting a hinge, and a level upon one of the plates, the said level being substantially parallel to the rod.

7. A device for leveling window shade rollers, which comprises a body adapted to rest upon and be supported by the roller, the said body being formed of two plates having ears thereon, a rod passing through the ears and constituting a hinge, and a level upon one of the plates, the said plates having cutaway portions adjacent to the ears, so that they can be compactly folded together.

8. A device for leveling window shade rollers, which comprises a body curved in transverse section and adapted to rest upon and straddle the roller, the said body having means observable from below for indicating the horizontalism of the roller.

870,099. SHADE-ROLLER. EDMUND F. HARTSHORN, Newark, N. J., assignor to Stewart Hartshorn Company, East Newark, N. J., a Corporation of New Jersey. Filed Dec. 10, 1906. Serial No. 347,094.



1. A cap for a shade roller having a dog casing attached thereto and an opening for the spear dogs within the casing each of the said dogs being smaller than the spear opening and means for retaining the dogs within the casing such means being independent of the spear.

2. A cap for a shade roller having a dog casing, with channels for the dogs, windows in the channels, and dogs within the channels, the said dogs having projections which extend through the windows.

3. A cap for a shade roller having a dog casing thereon, the said dog casing having integral channels for the dog, windows within the channels, the said windows being stamped from inward outward so that the bur made by stamping will project outward.

4. A dog casing for shade roller caps, the said casing being made of sheet metal and having stamped channels for the dogs, the said channels having windows, the said windows being stamped from inward outward so that the bur will extend outward from the channel.

5. A sliding dog for a shade-roller made of a stamping, with an integral lateral projejction stamped out from the dog.

6. A cap for a shade roller having a dog casing thereon, the said dog casing being made of a stamping, with integral channels and projections inclosing the ends of the channels and bent back of the cap for securing the casing and cap.

7. A shade roller having a spear with notches therein, a ferrule, a cap, a dog casing on the cap, the said dog casing having channels the said channels being inclosed by means independent of the ferrule and sliding dogs within the dog casing engaging with the notches in the spear and means in addition to the spear for keeping the dogs within the channels.

8. A shade roller having a spear with notches therein and a cap, the said cap having a sheet metal dog casing thereon, the said casing having stamped channels with windows, sliding dogs within the channels, the said dogs having projections which pass through the windows, the said dogs engaging with the notches in the spear.

870,100. CORD ATTACHMENT FOR WINDOW-SHADES. EDMUND F. HARTSHORN, Newark, N. J., assignor to Stewart Hartshorn Company, East Newark, N. J., a Corporation of New Jersey. Filed June 7, 1907. Serial No. 377,683.

1. A cord attachment for window shades which comprises a clasp formed of a plate having a prong adapted to engage one side of the slat, and an upwardly turned lower end having a prong adapted to engage the bottom of the slat, substantially as set forth.

2. A cord attachment for window shades which comprises a clasp formed of a plate having a prong adapted to engage one side of the slat, an upwardly turned lower end having a prong adapted to engage the bottom of the slat, and depending below the slat to form a trough for the knot of the cord, substantially as set forth.

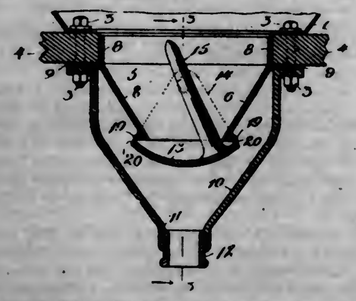


3. A cord attachment for window shades comprising a clasp formed of a plate having a prong adapted to engage one side of the slat, an upwardly turned lower end having a prong adapted to engage the bottom of the slat, a trough for the knot of the cord depending below the slat and a slot in the side of the upwardly turned end open at its top and adapted to receive the cord, substantially as set forth.

4. A cord attachment for window shades comprising a clasp formed of a plate having a prong adapted to engage one side of the slat, an upwardly turned lower end having a prong adapted to engage the bottom of the slat, shoulders on the upwardly turned end limiting the entrance of the prong into the bottom of the slat, a knot trough depending below the slat, and a slot in the side of the upwardly turned end to receive the cord, substantially as set forth.

5. A cord attachment for window shades comprising a plate 3, prong 4, trough 5, shoulders 6, 7, prong 8, and slot 9, substantially as described for the purposes specified.

870,101. SAND-BOX. CHARLES G. HENSLEY, New York, N. Y., assignor, by mesne assignments, to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 2, 1907. Serial No. 360,134.



1. In a sand box, a hopper, a swing gate valve having a curved bottom, said valve being adapted to close the end of the hopper, and outwardly extending flanges on the hopper for closing the space between the end of the hopper and the said valve.

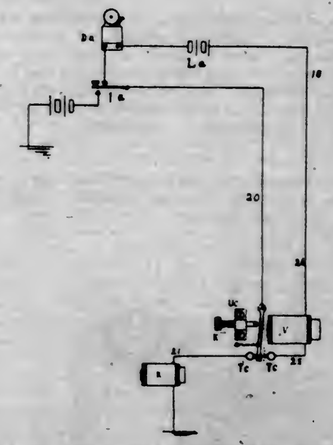
2. In a sand box, a hopper, a swing gate valve having a curved bottom adapted to lie below the end of the hopper, outwardly extending flanges on the end of the hopper adapted to close the space between the hopper and valve, the said valve being adapted to swing and open the hopper.

3. In a sand box, a hopper, a swing gate valve having a bottom curved on an arc whose radius is as long as the distance between axle of the valve and the middle of the valve bottom, said valve being adapted to lie below the end of the hopper, and flanges on the hopper end adapted to close the space between the hopper and valve.

4. In a sand box, a hopper, a swing gate valve having a curved bottom, said valve bottom being adapted to lie below the hopper end, a casing inclosing the hopper and valve, and flanges on the hopper end adapted to close the space between the hopper and valve, the said valve bottom being adapted to pass the flanges.

5. In a sand box, a hopper rectangular in cross section, a swing valve comprising a curved bottom adapted to lie below the end of the hopper, having upwardly extending plates adapted to inclose the hopper on two sides, and flanges on the remaining sides of the hopper adapted to extend toward and near the edges of the valve bottom to complete the inclosure of the hopper end.

870,102. ELECTRIC SIGNALING APPARATUS. FELIX B. HERZOG, New York, N. Y. Filed July 12, 1889. Serial No. 317,369.



1. A circuit controlling device comprising circuit terminals, arranged and adapted to be brought into contact after an armature has begun to be moved mechanically from its normal position of rest, together with this armature; a magnet coöperating with this armature to continue the change in the circuit conditions established as the result of such contact; means under the control of an operator for moving the armature mechanically away from its normal position of rest; means, including a suitable source of current and connection, by which the current is enabled to flow through both the magnet and the said terminals only after the armature has been moved mechanically, as described; and means controlled from a distant point and coöperating to restore these parts.

2. At a signaling station a circuit controller which when operated at will by an operator thereat causes the armature of an electro-magnet to be moved; means whereby said movement changes the course of one or more neighboring parts of the circuit to a distant station; combined with a normally open pair of terminals for said circuit substantially as described.

3. At a signaling station a circuit controller which, when operated at will by an operator causes the armature of an electro-magnet to be moved; means whereby such movement changes the course of one or more neighboring parts of the circuit to a distant station, including in its operation the establishment of a circuit closed through the magnet, and remaining closed until some subsequent

operation at the distant connected station; together with means for re-opening such closure independently of subsequent act by the signaling operator.

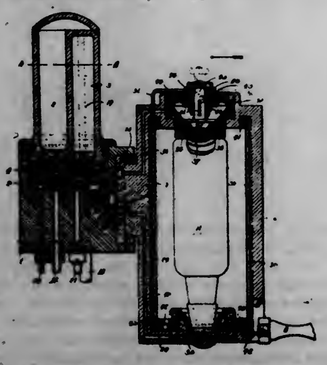
4. In combination with two lines in parallel from a sub-station to a central station, a circuit closing device at the sub-station signaling station, adapted and arranged to produce a circuit change which sends an alarm to the central station; means for continuing this circuit change without further action on the part of the operator, and a magnet at the sub-station controllable from the central station only after the signal has been received thereat and operating to restore the normal conditions, substantially as described.

5. At one station a signaling instrument including terminals to a circuit leading to a distant station; means for joining these and thereby giving the signal, a magnet coöperating in this operation, and an armature for the magnet constructed and arranged to be moved mechanically during the operation of giving the signal.

6. In signaling apparatus the armature of an electromagnet coöperating with contact points to act as a top or bottom contact key, or two ways switch; said points both coöperating with the main circuit to the second station; means for causing the armature to coöperate with the abnormal contact, and devices at a second station whereby the normal condition is restored; substantially as described.

7. In a call box telegraph, a call answering signal, an electro-magnet normally deënergized but energized when said answering signal is moved to inoperative position, and adapted to hold said signal inoperative and to release said signal when said magnet is deënergized, and means for moving said signal to inoperative position by the sending of calls, substantially as described.

870,103. AERATING AND BOTTLING APPARATUS. GEORGE HIGGINSON, London, England. Filed Feb. 6, 1906. Serial No. 299,703.



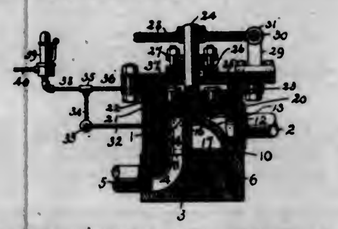
1. The improved aerating and bottling apparatus comprising a fixed frame, a chamber on the frame adapted to be filled with water, means for supplying the chamber with water and with gas once in every cycle of operation, a rotary disk valve for controlling the supply of water and gas and delivery of aerated water, cup shaped packers in the valve, a frame for holding a bottle adapted to be rotated in the plane of its longitudinal axis, a second rotary valve having one face on the fixed frame and one face on the bottle frame, cup shaped packers in the valve, and passages adapted to lead aerated water from the chamber to the mouth of the bottle, substantially as described.

2. The improved aerating and bottling apparatus comprising a fixed frame, a chamber in the frame adapted to be filled with water, a second chamber adapted to be filled with syrup, means for supplying the first chamber with water and means for supplying the second chamber with syrup once during every cycle of operations, a gas supply leading to the first chamber, a rotary disk valve for controlling said supplies and delivery of the aerated water, cup shaped packers in the valve, a frame for holding a bottle and adapted to be rotated in the plane of its longitudinal axis, a second rotary valve having one face in the fixed frame and one face on the bottle frame, cup shaped packers in the valve and passages adapted to lead the water and syrup to the mouth of the bottle.

3. The improved aerating and bottling apparatus, comprising a chamber adapted to be filled with water, a second chamber adapted to be filled with syrup, a frame containing a bottle and adapted to be rotated in the plane of the longitudinal axis of the bottle, means for supplying the first chamber with water, means for supplying the second chamber with syrup, a gas supply leading to the first chamber, valves for controlling said supplies, valves and passages adapted to lead said gas supply through the first chamber and through the second chamber to the mouth of the bottle, a bottle guard, means for holding the bottle in position, and means for operating said bottle guard, said means being actuated by the pressure of the gas supply, substantially as set forth.

4. The improved aerating and bottling apparatus comprising a chamber adapted to be filled with water, a second chamber adapted to be filled with syrup, a frame containing a bottle and adapted to be rotated in the plane of the longitudinal axis of the bottle, means for supplying the first chamber with water, means for supplying the second chamber with syrup, a gas supply leading to the first chamber, valves for controlling said supplies, valves and passages adapted to lead said gas supply through the first chamber and through the second chamber to the mouth of the bottle, a bottle guard, a cup on said frame adapted to receive the mouth of the bottle, a pneumatic pad on said frame for holding the base of the bottle, and means for operating said bottle guard, said means and pneumatic pad being actuated by the pressure of the gas supply, substantially as set forth.

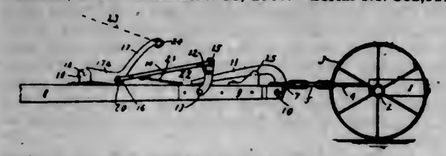
870,104. HYDRAULIC VALVE. DANIEL L. HOLDEN, New York, N. Y., assignor to Federal Ice Company, New York, N. Y., a Corporation of New York. Filed Feb. 19, 1906. Serial No. 301,795.



1. In a hydraulic valve, a case having an inlet and multiple outlets, a rotatable valve having ports to control said outlets, one of said ports passing through the valve, means to rotate the valve for such control; a balancing piston connected to the valve and subjected to the same pressure per square inch upon its under side as the valve has upon its top; a chamber above the piston, a passage from the interior of the case to said chamber, normally open, and supplying the deficiency of pressure above the piston and a valve controlling the passage of fluid therethrough.

2. In a hydraulic valve, a case having an inlet and multiple outlets, a rotatable valve having ports to control said outlets, one of said ports being through the valve, means to rotate the valve for such control; a balancing piston connected to the valve and subjected to the same pressure per square inch upon its under side as the valve has upon its top; a chamber above the piston, a passage normally open from the interior of the case to said chamber, to supply a deficiency of pressure above the piston, a valve controlling said passage, and a safety valve adapted to limit the pressure introduced into the chamber from the interior of the case, and whereby the pressure of the valve upon its seat is adjusted and limited.

870,105. VEHICLE-COUPLING. JOHN W. IMPECOVEN, Kidder, S. D. Filed Mar. 18, 1907. Serial No. 362,911.



1. In a coupling of the class described, the combination with an elongated frame piece adapted to be secured on the front end of the pole of the drawn vehicle, an L-shaped lever pivoted to the front end thereof and adapted to have its long arm folded rearwardly upon the pole, a ring adapted to engage in the curve of said lever, a chain or like means securing said ring to the motor vehicle or its tender, and means for locking the L-shaped lever in said position; said locking means consisting of a clevis pivoted at the sides of the pole and engaging with its arch the L-shaped lever, a bracket fixed upon the pole in rear of the clevis a pair of links pivoted together to form a knee-joint normally resting upon the pole and having their other ends pivoted, one to the clevis and the other to the bracket at points higher than the knee-joint, one of the links having an arm by which to throw the knee-joint upward when the clevis is to release the L-shaped lever.

2. In a coupling of the class described, the combination with an elongated frame piece adapted to be secured on the front end of the pole of the drawn vehicle, an L-shaped lever pivoted to the front end thereof and adapted to have its long arm folded rearwardly upon the pole, a ring adapted to engage in the curve of said lever, a chain or like means securing said ring to the motor vehicle or its tender, and means for locking the L-shaped lever in said position; said locking means consisting of a clevis pivoted at the sides of the pole and engaging with its arch the L-shaped lever, a bracket fixed upon the pole in rear of the clevis a pair of links pivoted together to form a knee-joint normally resting upon the pole and having their other ends pivoted, one to the clevis and the other to the bracket at points higher than the knee-joint, one of the links having an arm by which to throw the knee-joint upward when the clevis is to release the L-shaped lever, and a spring acting on the links to hold them downward against accidental uncoupling.

3. In a coupling of the class described, the combination with an elongated frame piece adapted to be secured on the front end of the pole of the drawn vehicle, an L-shaped lever pivoted to the front end thereof and adapted to have its long arm folded rearwardly upon the pole, a ring adapted to engage in the curve of said lever a chain or like means securing said ring to the motor vehicle or its tender, and means for locking the L-shaped lever in said position; and a guard fixed upon the pole to keep the ring in the curved part of the lever.

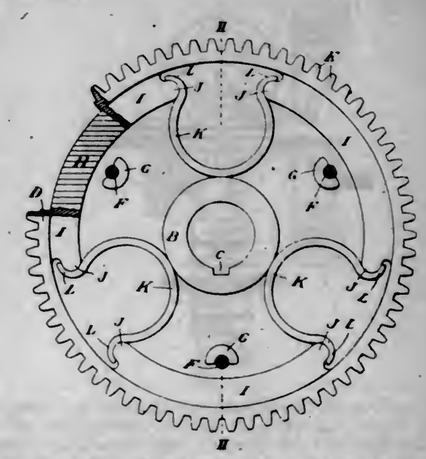
870,106. GEAR-WHEEL. JOSHUA J. JONES, Avalon, Pa. Filed Feb. 18, 1907. Serial No. 357,886.

1. A wheel comprising outer side portions, and a relatively movable rim portion, each of said portions having bearing abutments, and a U shaped spring having terminals engaging said abutments, substantially as set forth.

2. A wheel comprising outer side portions having bearing abutments, a relatively movable rim portion having similar bearing abutments, and a U shaped spring having oppositely pressing hooked terminals engaging said abutments, substantially as set forth.

3. A wheel comprising outer side portions having bearing abutments upon their inner peripheries and inwardly extending hubs, a relatively movable rim portion mounted on the peripheries of said side portions and having bearing abutments extending between the side portion abutments, and a U shaped ring having oppositely pressing terminals engaging said abutments, substantially as set forth.

4. A wheel comprising outer side portions having oppositely located pairs of bearing abutments, a relatively movable rim portion having corresponding bearing abutments, and a plurality of U shaped springs having oppositely pressing terminals engaging said abutments, substantially as set forth.



5. A wheel comprising outer side portions having bearing abutments, a relatively movable rim portion having similar bearing abutments, and a U shaped spring having oppositely pressing terminals engaging the abutments of the side portions and adapted to be engaged at one side by one of the abutments of the rim upon relative movement thereof, substantially as set forth.

6. A wheel comprising outer side portions and a relatively movable rim portion, each of said portions having bearing abutments assembled together and presenting their bearing ends side by side across the width of the wheel and a spring having terminals adapted to bear against all of said abutments when they are together or to be engaged by one or more of said abutments when one or more of the abutments are shifted with relation to the others, substantially as set forth.

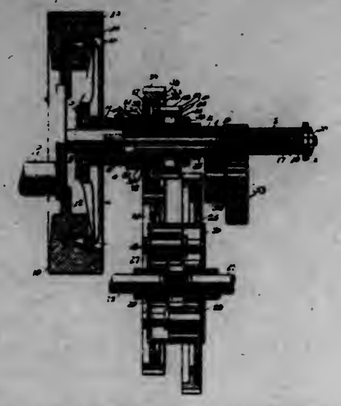
7. In a wheel, the combination of outer side portions provided with a plurality of inwardly extending abutments, a relatively movable rim portion having a plurality of abutments adapted to coöperate therewith, said abutments being assembled side by side across the width of the wheel and providing intervening clearance spaces between their ends, and a plurality of springs inserted in said clearance spaces and bearing by their opposite terminals against the ends of said assembled abutments, substantially as set forth.

8. In a wheel, the combination of outer side portions provided with a plurality of inwardly extending abutments, a relatively movable rim portion having a plurality of abutments adapted to coöperate therewith, said abutments being assembled side by side across the width of the wheel and providing intervening clearance spaces between their ends, and a plurality of springs inserted in said clearance spaces and bearing by their opposite terminals against the ends of some of said assembled abutments and adapted to be engaged by the ends of others of said abutments, substantially as set forth.

870,107. TRANSMISSION-GEAR. EMIL KOEB, Leipsic, Ohio, assignor of one-half to Ralph P. Thompson, Springfield, Ohio. Filed Sept. 10, 1906. Serial No. 333,879.

1. In a device of the character described, the combination, with a driven shaft and high and low speed gears carried thereby, of a driving shaft extending parallel to said driven shaft, a gear rotatably mounted on said driving shaft and having inner and outer teeth, the outer teeth of said rotatable gear being permanently in mesh with

said high speed gear, a pinion slidably mounted on said driving shaft and rotating therewith and adapted to engage either the inner teeth of said rotatable gear or to engage said low speed gear, and means for shifting said pinion, substantially as described.



2. In a device of the character described, the combination, with a longitudinally movable driving-shaft and a driven shaft, of a gear carried by said driven shaft, a gear rotatably mounted on said driving-shaft, and having inner and outer teeth formed thereon, said outer teeth meshing with the gear on said driven shaft, a driving pinion mounted to slide on said driving shaft and adapted to engage the inner teeth of said rotatably mounted gear, and means for preventing said rotatably mounted gear from moving longitudinally with said shaft, substantially as described.

3. In a device of the character described, the combination, with a longitudinally movable driving shaft and a driven shaft, of a gear mounted on said driven shaft, a collar secured to said driving shaft and having an overhanging flange formed on the upper edge thereof and forming a recess between said flange and said shaft, a gear rotatably mounted on said collar and having inner and outer teeth formed thereon, said outer teeth meshing with the gear on said driven shaft, means for preventing said gear from moving longitudinally with said shaft, a driving pinion mounted to slide longitudinally of said driving shaft and comprising a sleeve portion adapted to enter said recess, and an overhanging portion provided with teeth adapted to engage the inner teeth of said gear, and means for shifting said driving pinion, substantially as described.

4. In a device of the character described, the combination, with a driving-shaft and a driven shaft, of a gear mounted on said driven shaft, a collar secured to said driving shaft and having an overhanging flange formed on the upper edge thereof and forming a recess between said flange and said shaft, a gear rotatably mounted on said collar and having inner and outer teeth formed thereon, said outer teeth meshing with the gear on said driven shaft, a driving pinion mounted to slide longitudinally of said driving-shaft, and comprising a sleeve portion adapted to enter said recess, and an overhanging portion provided with teeth adapted to engage the inner teeth of said gear, and means for shifting said driving pinion, substantially as described.

5. In a device of the character described, the combination, with a driving-shaft, a driven shaft and high and low speed gears on said driven shaft, of a rotatably mounted gear on said driving shaft permanently in mesh with said high speed gear, a pinion sliding on said driving-shaft adapted to engage with said rotatable gear for operating said high speed gear on the driven shaft and adapted to engage directly with said low speed gear thereon, and means for shifting said pinion, substantially as described.

6. In a device of the character described, the combination, with a driving-shaft, a driven shaft and a high and low speed gearing carried by the driven shaft, of a gear rotatably mounted on said driving-shaft and having inner and outer teeth formed thereon, said outer teeth being permanently in mesh with the high speed gearing of said driven shaft, a driving pinion sliding on said driving shaft and rotating therewith and adapted to engage the inner teeth on said gear for driving said high speed gearing and adapted to engage directly with the teeth of said low speed gearing on said driven shaft, substantially as described.

7. In a device of the character described, the combination, with a driving-shaft, a driven shaft, and high and low speed gears carried by said driven shaft, of a gear rotatably mounted on said driving-shaft and meshing with the high speed gear on said driven shaft, a driving pinion slidably mounted on said driving-shaft and adapted to engage said rotatable gear, a pair of reversing gears slidably mounted beneath said driving gear and having the horizontal plane of their axes of rotation at a point intermediate of the horizontal planes of the axes of rotation of said driving shaft and said driven shaft, one of said gears being adapted to mesh with the low speed gearing on said driven shaft and the second of said reversing gears being adapted to be engaged by said driving pinion, substantially as described.

8. In a device of the character described, the combination, with a driving-shaft, a driven shaft, high and low speed gearing carried by said driven shaft, a gear rotatably mounted on said driving shaft and having inner and outer teeth, said outer teeth meshing with said high speed gearing, and a pinion slidably mounted on said driving shaft and rotating therewith and adapted to engage either the internal teeth on said rotatable gear or said low speed gearing, of a reversing gear comprising a large and a small pinion slidably mounted near said driving and driven shafts and rotating in unison, said small gear being adapted to engage the low speed gearing on said driven shaft, and said large gear being adapted to be engaged by the driving means on said driving-shaft, substantially as described.

9. In a device of the character described, the combination, with a driving means and a clutch member carried thereby, of a hollow driving-shaft capable of a longitudinal sliding movement and a clutch member carried at one end of said shaft, means for shifting said shaft to move said clutch member into and out of engagement with the first mentioned clutch member, means contained within said hollow shaft for holding said clutch members normally in engagement, a driving gear carried by said shaft, a driven gear mounted near the same and an intermediate gear adapted to transmit motion from said driving-shaft to the driven gear, substantially as described.

10. In a device of the character described, the combination, with a balance-wheel, means for driving the same, a trunnion therefor, and a clutch member carried by said balance-wheel, of a driving-shaft capable of a longitudinal sliding movement in its bearings, a clutch member carried at one end of said shaft, a bearing formed in the end of said shaft and adapted to receive said trunnion, means for shifting said shaft to bring said clutch members into engagement, means carried by said shaft and connected to said trunnion for holding said clutch members normally in engagement, a driving gear mounted on said driving-shaft, a driven gear mounted near the same and intermediate gearing for transmitting motion from said driving-shaft to said driven gear, substantially as described.

11. In a device of the character described, the combination, with a balance-wheel and means for driving the same, a trunnion therefor, and a clutch member carried thereby, of a hollow driving-shaft capable of longitudinal movement, a driving gear carried thereby, a clutch member at one end of said shaft, a bearing formed in one end of said shaft and adapted to receive said trunnion, means for shifting said shaft to bring said clutch members into engagement, an extension carried by said trunnion adapted to enter said hollow shaft, and a spring interposed between said extension and said shaft for holding said clutch members normally in engagement, substantially as described.

12. In a device of the character described, the combination, with a balance-wheel, having an annular recess in one face thereof means for driving said balance-wheel and a trunnion therefor, of a hollow driving-shaft capable of longitudinal movement, radial arms secured to one end of said shaft, a ring carried by said arms and adapted to engage the recess in said balance-wheel, a bearing formed in one end of said shaft adjacent to said clutch member and adapted to receive said trunnion, a rod secured to said trunnion and extending through said hollow shaft, a coiled spring surrounding one end of said rod within said shaft, a projection within said shaft engaging one end of said spring, a stop near the outer end of said rod engaging the opposite end of said spring, means for shifting said shaft longitudinally of its bearings, a driven shaft, and means for driving the same from said driving shaft substantially as described.

13. In a device of the character described, the combination, with a balance-wheel, means for driving the same, a trunnion therefor, and a clutch member carried thereby, of a driving-shaft capable of longitudinal movement, a clutch member carried by one end of said shaft, a bearing formed in said shaft and adapted to receive said trunnion, means for holding said clutch members firmly in engagement, means for shifting said shaft longitudinally of its bearings, a driven shaft, high and low speed gears carried by said driven shaft, a gear rotatably mounted on said driving-shaft and engaging the high speed gear on said driven shaft, a pinion rotating with said driving-shaft and sliding thereon and adapted to engage either said rotatable gear or said low speed gear, and means for shifting said pinion, substantially as described.

14. In a device of the character described, the combination, with a driven-shaft and high and low speed gears carried thereby, a driving shaft capable of a sliding movement in a longitudinal direction, a gear rotatably mounted on said driving shaft adapted to engage the high speed gear on said driven shaft, a pinion slidably mounted on said driving shaft and adapted to engage either said rotatable gear or said low speed gear of a clutch mechanism comprising a driving member having a recess in one face thereof, said recess having outwardly diverging walls, a member carried by said driving shaft and adapted to engage said recess, and means for shifting said shaft to bring said members into engagement, substantially as described.

15. In a device of the character described, the combination, with a driven shaft and high and low speed gears carried thereby, a driving shaft capable of a sliding movement in a longitudinal direction, a gear rotatably mounted on said driving shaft adapted to engage the high speed gear on said driven shaft, and a pinion slidably mounted on said shaft and adapted to engage either said rotatable gear or said low speed gear of clutch mechanism comprising a driving member having an annular V-shaped recess in one face thereof, a member carried by said driving shaft and adapted to engage said recess, and means for shifting said shaft to bring said members into engagement, substantially as described.

870,108. BALL-DISTRIBUTER. AMBROSE KOWASTCH, New York, N. Y., and LUDWIG REINICKE, Hoboken, N. J. Filed Nov. 3, 1905. Serial No. 285,777.

1. A ball distributer comprising a tubular ball-holder having apertures at different points of its length, a slide adjustable on the holder, a screw carried by said slide and adapted to be projected into the holder through said apertures, and means for controlling the discharge of the balls from the holder.

2. A ball distributer comprising a tubular ball-holder, a slide adjustable lengthwise of said holder, a screw-threaded stop carried by said slide and movable relatively thereto and capable of being projected into the holder or withdrawn therefrom, and means for controlling the discharge of the balls from the holder.

3. A ball distributer comprising a tubular ball holder, means for controlling the discharge of the balls from the holder, and a counting-off device located between the inlet and discharge ends of the holder and separate from the discharge controlling means, said counting-off device being adjustable to points at different distances from the discharge end of the holder and being further provided with a movable part adapted to be projected into the holder or withdrawn therefrom.

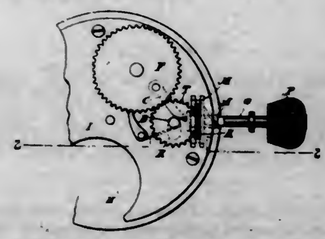


4. A ball distributer comprising a tubular ball-holder, a toothed discharge wheel projecting into the path of the balls, and a support in which said wheel is journaled, said support being adjustable to carry the wheel toward or from the holder.

5. A ball distributer comprising a tubular ball-holder, a toothed discharge wheel journaled at one side of the holder and projecting into the path of the balls, and a spring engaging said wheel to prevent accidental movement.

6. A ball distributer comprising a tubular ball-holder, a toothed discharge wheel projecting into the path of the balls, a support in which said wheel is journaled, said support being adjustable to carry the wheel toward or from the holder, and a spring engaging said wheel to prevent accidental movement, said spring being adjustable toward and from the wheel's axis.

870,109. STEM WINDING AND SETTING WATCH. EDMOND KUHN, East Orange, N. J., assignor to Gustav Bunzl and Ernest Bunzl, New York, N. Y. Filed June 6, 1907. Serial No. 377,501.



1. In a watch movement, the combination with a winding arbor, of a laterally movable rotatable shaft, means adapted to engage said arbor and shaft for moving the latter when said arbor is pressed inwardly, and means for automatically returning the parts to their normal winding positions when the pressure on the winding arbor is relieved, substantially as described.

2. In a watch movement, the combination with a longitudinally movable winding arbor, of a laterally movable shaft having intermediate winding and setting pinions rigidly secured thereto, means adapted to engage said winding arbor and shaft for moving the latter out of its winding into its setting position when said arbor is pressed inwardly, and a spring engaging said shaft for automatically returning the latter to its normal or winding position

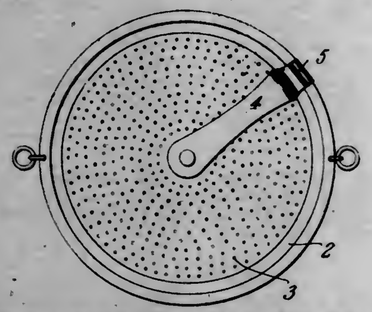
when the pressure on the winding arbor is relieved, substantially as described.

3. In a watch movement, the combination with a winding arbor, of a laterally movable shaft, and a single lever, the free end of which lies between and is adapted to engage with said shaft and said winding arbor, whereby said shaft will be caused to move when pressure is applied to said arbor and lever, substantially as described.

4. In a watch movement, the combination with a longitudinally movable winding arbor having a head on the inner end thereof, of a shaft mounted in elongated openings formed in the top and pillar plates, a lever pivoted to one of said plates and having its free end adapted to engage with said shaft and head, whereby when said arbor is pressed inwardly said shaft will be moved in a direction at right angles to the axis of said winding arbor, and means for automatically returning the parts to their normal positions when the pressure on the arbor is relieved, substantially as described.

5. In a watch movement, the combination with a longitudinally movable winding arbor having a head formed on the inner end thereof, of a top and pillar plates provided with lateral elongated openings, a shaft the ends of which are mounted in said elongated openings and having tightly secured thereto the intermediate winding and setting pinions, a lever pivoted at one end to one of said plates, the free end being adapted to engage with said head and shaft whereby when the winding arbor is pressed inwardly said shaft will be moved in a direction at right angles thereto, and a spring engaging said shaft for returning the parts to their normal positions when the pressure on the winding arbor is relieved, substantially as described.

870,110. CREAM-SEPARATOR. HENRY J. LAWRENCE, Longbeach, Cal. Filed June 19, 1907. Serial No. 379,806.



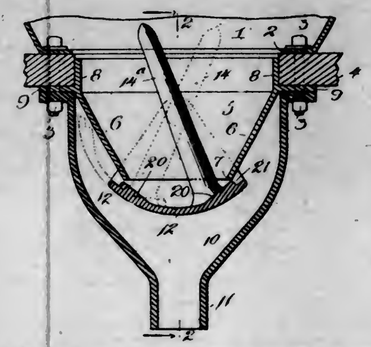
A cream separator comprising an outer imperforated pan, an inner pan adapted to nest snugly within and fit closely against the inner surface of the outer pan and having a perforated bottom and a scraper pivoted to the bottom of the inner pan and extending radially thereof.

870,111. SAND-BOX. JOSEPH L. LEVY, New York, N. Y., assignor, by mesne assignments, to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 2, 1907. Serial No. 360,260.

1. In a sand box, a hopper, a swing gate valve having a curved bottom, said valve being adapted to close the end of the hopper, and projecting ribs on the valve bottom extending toward the hopper end, for closing the space between the valve and hopper end.

2. In a sand box, a hopper, a swing gate valve having a curved bottom adapted to lie below the end of the hopper, upwardly extending ribs on the bottom of the valve adapted to close the space between the hopper end and valve, the said valve being adapted to swing and open the hopper.

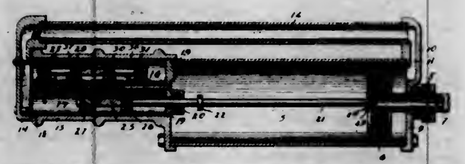
3. In a sand box, a hopper, a swing gate valve having a bottom curved on an arc whose radius is as long as the distance between the axle of the valve and the middle of the valve bottom, said valve being adapted to lie below the end of the hopper and projecting ribs on the valve bottom adapted to close the space between the hopper and valve.



4. In a sand box, a hopper, a swing gate valve having a curved bottom, said valve bottom being adapted to lie below the hopper end, a casing inclosing the hopper and valve and projecting ribs adapted to close the space between the valve bottom and hopper end, the said ribs being adapted to pass the hopper end, as the valve is oscillated.

5. In a sand box, a hopper, rectangular in cross-section, a swing valve comprising a curved bottom adapted to lie below the end of the hopper, having upwardly extending supporting plates adapted to inclose the hopper on two sides, and projections extending between the said supporting plates and projecting near and toward the hopper end to complete the inclosure of the hopper end.

870,112. WATER-MOTOR. LEWIS C. LEWIS, Columbus, Ohio, assignor to The Monarch Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed Oct. 1, 1906. Serial No. 336,866.



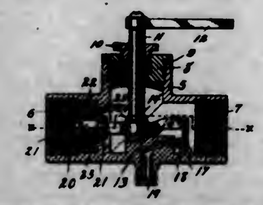
1. A water motor comprising two centrally disposed valve chambers 16 and 17, an exhaust chamber located upon one side of the centrally disposed valve chambers, an exhaust pipe leading from said exhaust chamber, a central chamber 42 located upon the opposite side of the valve chambers, chambers 38, 39, 40 and 41 located upon the same side of the valve chambers as the chamber 42, ports establishing communication between all of said chambers and the valve chambers, ports establishing communication between both of the valve chambers and the exhaust chamber, a main cylinder, a port establishing communication between the chamber 40 and one end of the cylinder, a port 44 establishing communication between the chamber 38 and the opposite end of the cylinder, a primary valve located in one of said valve chambers, a secondary valve located in the other of said valve chambers, means for causing the piston to move the primary valve at each end of its stroke, said primary valve controlling the flow of fluid to the secondary valve, and said secondary valve controlling the flow of fluid to the cylinder.

2. A water motor, comprising two centrally disposed valve chambers 16 and 17, an exhaust chamber located upon one side of the centrally disposed valve chambers, a central chamber 42 located upon the opposite side of the valve chambers, chambers 38, 39, 40 and 41 located upon the same side of the valve chambers as the chamber 42, there being ports establishing communication between all of said chambers and the valve chambers and there being ports establishing communication between both of the valve chambers and the exhaust chamber, a main cylinder, there being a port establishing communication between the chamber 40 and one end of the cylinder, a chamber 13 located at one end of the valve chambers, there being a port 44 which establishes communication between the chamber 13 and chamber 38 and there being a by-pass leading from chamber 13 to the opposite end of the cylinder, a primary valve located in one of said valve chambers, a secondary valve located in the other of said valve chambers, means for causing the piston to move the primary valve at each end of its stroke, said primary valve controlling the flow of fluid to the secondary valve, and said secondary valve controlling the flow of fluid to the cylinder.

3. A water motor, comprising two centrally disposed valve chambers 16 and 17, an exhaust chamber located upon one side of the centrally disposed valve chambers, a central chamber 42 located upon the opposite side of the valve chambers, chambers 38, 39, 40 and 41 located upon the same side of the valve chambers as the chamber 42, there being ports establishing communication between all of said chambers and the valve chambers and there being ports establishing communication between both of the valve chambers and the exhaust chamber, a main cylinder, there being a port establishing communication between the chamber 40 and one end of the cylinder, a chamber 13 located at one end of the valve chambers, there being a port 44 which establishes communication between the chamber 13 and chamber 38 and there being a by-pass establishing communication between chamber 13 and the opposite end of the cylinder, a primary valve located in one of said valve chambers, a secondary valve located in the other of said valve chambers, a rod which projects through the cylinder head into the cylinder and is rigidly connected to the primary valve, a hollow piston rod in which the end of said rod is disposed to travel, and means for causing the piston to shift said rod at each end of its stroke.

4. A valve casing for water motors, comprising two centrally disposed valve chambers 16 and 17, an exhaust chamber located upon one side of the centrally disposed valve chambers, an exhaust pipe leading from said exhaust chamber, a central chamber 42 located upon the opposite side of the valve chambers, chambers 38, 39, 40 and 41 located upon the same side of the valve chambers as the chamber 42, ports establishing communication between all of said chambers and the valve chamber, ports establishing communication between both of the valve chambers and the exhaust chamber, a port establishing communication between the chamber 40 and one end of the cylinder of a water motor, a port 44 establishing communication between the chamber 38 and the opposite end of the cylinder, and valves mounted in said valve chamber.

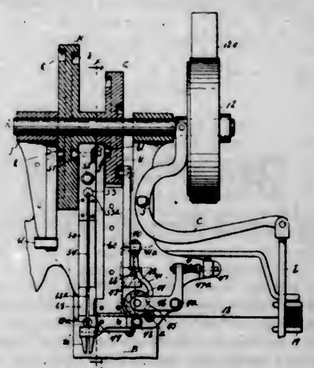
870,113. STOP AND WASTE VALVE. LEWIS C. LEWIS, Columbus, Ohio, assignor to The Monarch Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed Jan. 11, 1907. Serial No. 351,801.



1. In a device of the character described, the combination with a casing having a longitudinal passage formed therethrough, of a wall which partially closes said passage and which has a valve seat formed therein, a valve adapted to engage said valve seat, a stem to which said valve is connected, a boss upstanding from the bottom of the casing and having a waste port formed therethrough which opens into the main casing at one side of said boss, a depending member formed upon the valve stem, and a valve carried by said depending member which is adapted to close said waste port, and means for actuating the valve stem.

2. In a device of the character described, the combination with a casing having a longitudinal opening formed therethrough and having a vertical extension, of a valve rod mounted to turn in said extension, a valve stem adapted to move longitudinally in the casing, connections between said stem and said valve rod whereby rotation of the valve rod imparts longitudinal movement to the valve stem, a wall which partially closes the longitudinal passage through the casing, said wall having a valve seat formed therein, a ring which projects from said wall, a valve mounted upon said valve stem and slidably disposed in said ring, there being ports formed through said ring, an upstanding boss projecting from the bottom of the main casing and having a waste port formed therethrough which opens into the main valve casing at one side of said boss, a depending member carried by the valve stem, and a valve carried by said depending member adapted to control the flow of fluid through said waste port.

870,114. STAPLE-FORMING MACHINE. WILLIAM G. LIEBIG, Detroit, Mich. Filed May 23, 1906. Serial No. 318,336.



1. In a staple forming mechanism, the combination of wire gripping and advancing means, means for cutting the wire into lengths of the desired size, comprising a fixed block having an exposed shearing face and a vertically reciprocating shearing block adapted to engage thereagainst and to subsequently participate in the formation of the staple, an anvil controlled as to its movements by said wire advancing means and adapted to be projected thereby into the path of the reciprocating block during a portion of each cycle of operations, and means engaging through said reciprocating block and deriving its actuation independently of the other elements, adapted to be actuated against the head of the newly formed staple, and to descend a specific distance with said block, and thereafter, when said block has ceased its descent, to drive the staple by further downward pressure thereupon, substantially as described.

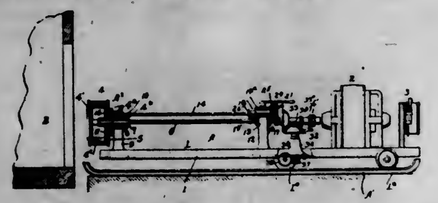
2. In the staple forming mechanism of a brush making machine, in combination with means for feeding foward a specific length of wire at each cycle of operations, a fixed block beyond whose shearing edge the length of wire is projected, a reciprocating block adapted to sever said length of wire by shearing engagement with respect to said fixed block, an anvil member projected by the movement of said wire-advancing means into the path of travel of said reciprocating block below the point of shearing of the wire,

adapted to coöperate with said reciprocating block in bending the wire to staple form, and a driving needle engaging through said reciprocating block, though deriving its actuation independently thereof, said needle moving with said reciprocating block during a portion of each cycle of operations, and thereafter by continued downward movement forcing the staple from the reciprocating block and into a brush back, substantially as described.

3. A staple forming mechanism, having in combination with an anvil member, means for feeding forward a predetermined length of wire, said means actuating by its movement said anvil, a portion of which is connected therewith, wire cutting means a part of which is adapted to participate in the bending of the staple after the desired length of wire has been severed, and a driving needle adapted to engage the staple when formed and to drive the same free from the cutting and forming means, substantially as described.

4. A holder for the driving needle of a staple forming machine, comprising a slide adapted to be reciprocated within a vertical path of travel, said slide being provided with a groove along a portion of its length wherein said needle engages, and an eccentrically pivoted wheel across the upper end of the needle, a portion of the periphery of said wheel being smooth and a portion being serrated, and being adapted to regulate the degree of projection of the needle from the slide because of said eccentricity of pivoting, substantially as described.

870,115. CAR-LOADER. WILBUR S. MAYERS, Fairmont, W. Va., assignor to Fairmont Box Car Loader Company, Fairmont, W. Va., a Corporation of West Virginia. Filed Oct. 9, 1905. Serial No. 282,008.



1. In a box car loader, the combination with a rotatable casing and a rotary shovel therein, of a power shaft for rotating the said shovel, a casing actuating shaft arranged parallel to said power shaft, power transmitting devices between said casing actuating shaft and the said power shaft, and means for actuating said power shaft.

2. In a box car loader, the combination of a rotatable casing, a rotary shovel within said casing, a rotary drive shaft for the shovel, a casing actuating shaft having its axis eccentric to the axis of said drive shaft, power transmitting means interposed between the said casing actuating shaft and the casing, and means for turning in either direction said casing actuating shaft.

3. In a box car loader, the combination with a rotatable casing adapted to receive material, and a rotary shovel within the casing adapted to distribute the material, of a drive shaft for the said shovel, a casing adjusting shaft, power transmitting means interposed between said casing adjusting shaft and said casing, and power transmitting means interposed between said casing shaft and said drive shaft.

4. In a box car loader, the combination with a rotatable casing adapted to receive material, and a rotary shovel within the casing adapted to distribute the material, of a drive shaft for the said shovel, a casing adjusting shaft, power transmitting means interposed between said casing adjusting shaft and said casing, power transmitting means interposed between said drive shaft, and means for throwing into and out of operation said last described power transmitting means operable from a point outside of the car when the casing is in working position within the car.

5. In a box car loader, the combination with a casing adapted to receive material, and a rotary shovel within the casing adapted to distribute material, of means for rotating said shovel, means for rotating said casing, and power transmitting devices interposed between said shovel rotating means and said casing rotating means.

6. In a box car loader, the combination with a casing adapted to receive material, and a rotary shovel within the casing adapted to distribute material, of means for rotating said shovel, means for rotating said casing, power transmitting devices interposed between said shovel rotating means and said casing rotating means, and means for controlling the operation of said power transmitting means operable from a point without the car when said casing is in working position within the car.

7. In a box car loader, the combination with a rotatable casing, and a rotary shovel within the casing, of a drive shaft for the said shovel, an actuating shaft for the said casing, and power transmitting devices interposed between said drive shaft and said casing actuating shaft adapted to rotate said casing actuating shaft.

8. In a box car loader, the combination with a rotatable casing, and a rotary shovel within the casing, of a drive shaft for the said shovel, a casing actuating shaft parallel to said drive shaft and connected with said casing, and power transmitting devices interposed between said drive shaft and said casing actuating shaft adapted to rotate said casing actuating shaft.

9. In a box car loader, the combination with a rotatable material receiving casing and a rotary material distributing shovel therein, of a drive shaft for the shovel, a casing actuating shaft connected with said casing and friction driving devices interposed between said driving shaft and said casing actuating shaft.

10. In a box car loader, the combination with a rotatable material receiving casing and a rotary material distributing shovel therein, of a drive shaft for the shovel, a casing actuating shaft connected with said casing and friction driving devices interposed between said driving shaft and said casing actuating shaft and adapted to rotate said casing actuating shaft in either direction.

11. In a box car loader, the combination with a rotatable material receiving casing, and a rotary material distributing shovel therein, of a drive shaft for the said shovel, a motor for actuating said drive shaft, a casing actuating shaft, means connecting said casing actuating shaft with said casing, and power transmitting means interposed between said motor and said casing actuating shaft.

12. In a box car loader, the combination with a rotatable material receiving casing, and a rotatable distributing shovel therein, of a casing actuating shaft, means connecting said casing actuating shaft with said casing, a motor, and a train of power transmitting devices interposed between said casing actuating shaft and said motor having in said train a friction driving device.

13. In a box car loader, the combination with a rotatable material receiving casing, and a rotatable distributing shovel therein, of a casing actuating shaft, means connecting said casing actuating shaft with said casing, a motor, and a train of power transmitting devices interposed between said casing actuating shaft and said motor having in said train friction gearing adapted to rotate said casing actuating shaft in either direction.

14. In a box car loader, the combination with a rotatable material receiving casing, and a rotatable distributing shovel therein, of a casing actuating shaft, means connecting said casing actuating shaft with said casing, a motor, a train of power transmitting devices interposed between said casing actuating shaft and said motor, and means operable from a point without the car when said casing is in working position within the car for controlling the operation of said train of power transmitting devices.

15. In a box car loader, the combination with a rotatable casing and a rotary shovel therein, of a motor, a drive shaft interposed between said motor and said rotary shovel, a casing actuating shaft parallel with said drive shaft, an internal gear secured to said casing, a pinion connecting said actuating shaft with said internal gear, and power transmitting mechanism interposed between said casing actuating shaft and said drive shaft and operable at will to rotate said casing actuating shaft.

16. In a box car loader, the combination with a rotatable casing and a rotary shovel therein, of a motor, a drive shaft connecting said rotary shovel with said motor, a casing actuating shaft parallel with said drive shaft, power transmitting devices connecting said casing actuating shaft with said casing, a friction wheel on said casing actuating shaft, a rocking frame mounted on said drive shaft, two friction pulleys mounted on said rocking frame and each adapted to be swung with it in one direction into engagement with said friction pulley on the casing actuating shaft, gearing mounted on said rocking frame adapted to rotate said friction pinions in opposite directions, and a gear adapted to connect said drive shaft with the gearing on said rocking frame.

17. In a box car loader, the combination of a wheel supported carriage adapted to move forward and back relative to a car, a rotatable casing mounted on the carriage, a rotary shovel within the said casing, a motor supported on the said carriage, power transmitting devices interposed between said motor and said rotary shovel, means for connecting said motor to said casing to rotate the latter and power transmitting devices interposed between said motor and the carriage wheels for actuating the carriage.

18. In a box car loader, the combination of a wheel supported carriage adapted to move forward and back relative to a car, a rotatable casing mounted on the carriage, a rotary shovel within the said casing, a motor supported on the said carriage, power transmitting devices interposed between said motor and said rotary shovel, power transmitting means including a friction drive interposed between said motor and said casing for actuating the latter and power transmitting means interposed between said motor and said carriage wheels controllable at will to cause the travel of the carriage in either direction.

19. In a box car loader, the combination of a wheel supported carriage adapted to move forward and back relative to a car, a rotatable casing mounted on the carriage, a rotary shovel within the said casing, a motor supported on the said carriage, power transmitting devices interposed between said motor and said rotary shovel, power transmitting means including separable friction elements interposed between said motor and said casing for actuating the latter power transmitting devices interposed between said motor and the supporting wheels of said carriage adapted to cause the travel of said carriage forward and backward, and means operable at will for throwing into and out of operation said last described power transmitting means.

20. In a box car loader, the combination of a carriage having track engaging supporting wheels, a rotatable material receiving casing mounted on said carriage, a rotary material distributing shovel in said casing, a motor supported on the carriage, power transmitting devices interposed between the said motor and said shovel, power transmitting devices interposed between said motor and said casing for rotating it, power transmitting devices interposed between said motor and supporting devices of said carriage, and means for throwing into and out of operation at will said last described power transmitting means.

21. In a box car loader, the combination of a carriage having track engaging supporting wheels, a rotatable material receiving casing mounted on said carriage, a rotary material distributing shovel in said casing, a motor supported on the carriage, power transmitting devices interposed between the said motor and said shovel, power transmitting devices interposed between said motor and said casing for rotating it, power transmitting devices interposed between said motor and supporting devices of said carriage, means for throwing into and out of operation at will said last described power transmitting means, and means for throwing into and out of operation at will said power transmitting means between said motor and said casing.

22. In a box car loader, the combination with a rotatable material receiving casing and a rotary material distributing shovel therein, of a chute for directing material into said casing, and means for feeding material from said chute in a stream substantially of uniform thickness.

23. In a box car loader, the combination with a rotatable material receiving casing and a rotary material distributing shovel therein, of a chute adapted to introduce material into said casing, and means arranged within said chute adapted to retard the flow of material along it and to feed the material to the said casing in a stream of a substantially uniform flow.

24. In a box car loader, the combination with a rotatable material receiving casing, and a rotary material distributing shovel therein, of a chute adapted to initially receive the material to be introduced into said casing, and a material retarding and feeding mechanism arranged in said chute and adapted to retard the flow of material along the chute and to deliver it therefrom in substantially uniform charges and in a continuous stream.

25. In a box car loader, the combination with a rotatable material receiving casing, and a rotary material distributing shovel therein, of a chute adapted to receive the coal and to direct it to said casing, and the two part feeding device for controlling the flow of coal through said chute and to the said casing, one of said parts being adapted to regulate the quantity of material fed to the casing and the other of said parts being adapted to retard the flow of coal immediately in advance of the first described part and to assist the said first described part in feeding the material along the chute in substantially uniform charges.

26. In a box car loader, the combination with a rotatable material receiving casing, and a rotary material distributing shovel therein, of a coal chute adapted to receive and direct the coal to the said casing, a rotary coal feeding mechanism arranged in said chute and adapted to feed the coal forward from it in a substantially uniform stream, and power transmitting devices for actuating said rotary feeding mechanism.

27. In a box car loader, the combination with a rotatable material receiving casing, and a rotary distributing shovel therein, of a coal chute adapted to receive and direct the coal to said casing, a coal feeding mechanism within said chute, arranged to automatically move up and down to accommodate itself to the size of the lumps of coal in the said chute and adapted to feed the coal forward from it in a substantially uniform stream, and power transmitting means for actuating said coal feeding mechanism.

28. In a box car loader, the combination with a rotatable material receiving casing, and a rotary distributing shovel therein, of a chute adapted to receive and direct the coal to said casing, of a feed regulator for the coal arranged in the said chute and comprising a transverse shaft carrying a series of spiders, and power transmitting means connected with said shaft for actuating it.

29. In a box car loader, the combination with a rotatable material receiving casing, and a rotary distributing shovel therein, of a chute adapted to receive and direct the coal to said casing, of a feed regulator for the coal arranged in the said chute and comprising a transverse shaft, a series of spiders adapted to be adjusted in any desired position thereon, and power transmitting means connected with said shaft for actuating it.

30. In a box car loader, the combination with a rotatable material receiving casing, and a rotary distributing shovel therein, of a chute adapted to receive and direct coal to the said casing, a feed regulator arranged within said chute and adapted to feed the coal forward from it in a substantially uniform stream, and a gate arranged within said chute in advance of said feed regulator and adapted to assist the said feed regulator in feeding forward the coal in a uniform stream.

31. In a box car loader, the combination with a rotatable material receiving casing, and a rotary distributing shovel therein, of a chute adapted to receive and direct coal to the said casing, a feed regulator arranged within said chute and adapted to feed the coal forward from it in a substantially uniform stream, and an adjustable gate

arranged within said chute in advance of said feed regulator, and adapted to prevent the coal from piling up on and clogging the said feed regulator.

32. In a box car loader, the combination of a casing adapted to receive material, a rotary shovel within the casing for distributing the material, means for rotating the shovel, power transmitting mechanism interposed between the shovel rotating means and the casing for turning the latter, a rocking frame carrying a part of the power transmitting mechanism and arranged when moved in one position to connect the said parts and when moved in another position to disconnect them, and means for rocking the frame arranged to yieldingly lock the casing against rotation when it is disconnected from the shovel rotating means, substantially as set forth.

33. In a box car loader, the combination with a rotatable casing and a rotary shovel therein, of a power shaft for actuating said shovel, a casing-actuating shaft, power transmitting mechanism interposed between said casing-actuating shaft and said power shaft, and means for rotating said power shaft.

34. In a box car loader, the combination with a movable carriage, a motor thereon, a rotatable casing on the carriage and a rotary shovel in the casing, of power transmitting mechanism interposed between said motor and said rotary shovel, and power transmitting mechanism interposed between said motor and said casing for rotating the latter.

35. In a box car loader, the combination of a rotatable casing, a rotary shovel in the casing, a rotary drive shaft for the shovel, a casing-actuating shaft having its axis eccentric to the axis of said drive shaft, and spur gearing interposed between said casing-actuating shaft and said casing adapted to impart rotary motion to said casing in either direction.

36. In a box car loader, the combination with a casing adapted to receive material, and a rotary shovel within the casing adapted to distribute the material, of means for rotating said shovel, and means interposed between said shovel-rotating means and the casing for rotating the latter.

37. In a box car loader, the combination with a casing adapted to receive material, and a rotary shovel within the casing adapted to distribute the material, of means for rotating said shovel, and means including a friction drive interposed between said shovel-rotating means and the casing for rotating the latter.

38. In a box car loader, the combination with a rotatable casing and a rotary shovel therein, of a drive shaft for the shovel, an actuating shaft for the said casing, and power transmitting mechanism adapted to connect said casing-actuating shaft to said drive shaft and including a friction wheel on said casing-actuating shaft, a rocking frame carrying a coöperating friction wheel, and gearing arranged between said last described friction wheel and the drive shaft.

39. In a box car loader, the combination with a rotatable casing, a rotary shovel therein, a drive shaft for the shovel, and an actuating shaft for the casing, of a friction wheel secured to said actuating shaft, a rocking frame, a friction wheel carried by said rocking frame and adapted to be thrown into engagement with the friction wheel on said casing-actuating shaft, power transmitting mechanism interposed between the friction wheel on the said rocking frame and the said drive shaft, and means for rocking the said frame.

40. In a box car loader, the combination with a rotatable casing, a rotary shovel therein, a drive shaft for the shovel, and an actuating shaft for the casing, of a friction wheel secured to said actuating shaft, a rocking frame, a friction wheel carried by said rocking frame and adapted to be thrown into engagement with the friction wheel on said casing-actuating shaft, power transmitting mechanism interposed between the friction wheel on the said rocking frame and the said drive shaft, and means for rocking the frame to effect alternately the engagement of said friction wheels and the moving of the frame into engagement with the friction wheel on the casing-actuating shaft to oppose its rotation.

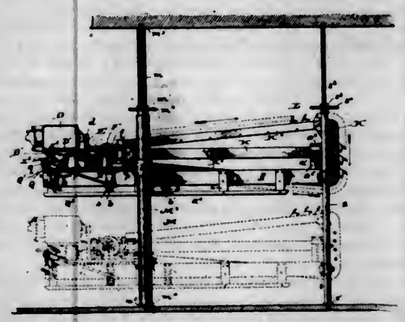
41. In a box car loader, the combination of a material-receiving casing, a material distributer therein, a chute adapted to introduce material into said casing, and means for retarding the flow of material along said chute and for delivering it therefrom to the said casing in a substantially uniform stream.

42. In a box car loader, the combination of a material receiving casing adapted to be inserted within a car, a material distributer within said casing, a chute arranged to direct material to said casing, and means for retarding the flow of material along said chute and adapted to deliver it therefrom in substantially uniform charges.

43. In a box car loader, the combination with a material receiving casing adapted to be inserted into a car, and a material distributer in said casing, of a chute adapted to receive material and to direct it into said casing, and a material-retarding and feeding mechanism arranged in combination with said chute and adapted to retard the flow of material along the chute and to deliver it therefrom in substantially uniform charges.

44. In a box car loader, the combination with a material receiving casing and a material distributer therein, of an inclined chute adapted to receive material and direct it while moving along the chute under the influence of gravity toward the casing, a feeding mechanism arranged near the lower end of said chute and adapted to feed material forward from it to the casing in a substantially uniform stream, and power transmitting devices for actuating said feeding mechanism.

870,116. MINING-MACHINE. EDWIN R. MERRILL, Columbus, Ohio, assignor to Joseph A. Jeffrey, Columbus, Ohio. Filed Apr. 7, 1898. Serial No. 676,813.



1. In a mining machine, the combination of a reciprocating carriage having a chain frame arranged vertically between the sides of the carriage, a cutter chain on said chain frame adapted to cut a vertical slot narrow horizontally but elongated vertically, a bed frame for the carriage extended laterally horizontally and having substantially parallel side bars for guiding the carriage and adapted to lie in substantially the same horizontal plane, the vertically arranged supporting devices for the bed comprising columns at the sides of the frame and adapted to be secured to the roof and floor, and means for vertically adjusting the bed frame upon the vertical supporting devices, substantially as set forth.

2. In a mining machine the combination of a reciprocating carriage, a chain frame on the carriage arranged in vertical planes between the side bars of the carriage, a cutter chain on said frame adapted to operate at the front end of the machine, a motor on the carriage at the rear end and traveling therewith, a rectangular bed frame for the carriage extended laterally horizontally and having substantially horizontal parallel side bars for guiding the carriage and a vertical support for the bed arranged to provide a ground support therefor comprising two independent columns independently fastened to the floor and to the roof, one upon each side of the bed frame and situated in the transverse plane of the center of gravity of the whole

mechanism when the carriage is in its rearmost position, substantially as set forth.

3. In a mining machine, the combination of the bed, the carriage moving thereon, the cutter frame on the carriage, the vertically arranged columns, adapted to be secured independently of each other to the roof and to the floor of the mine and situated at fixed points adjacent to the bed, one on each side thereof, vertical racks carried by the columns respectively, the pinions mounted on and in fixed relations to the bed and connected with the racks, means for actuating the pinions independently and means for actuating them simultaneously, substantially as set forth.

4. In a mining machine, the combination of the bed frame, the carriage thereon, the cutter frame arranged vertically between the sides of the carriage, the vertical columns for supporting the bed arranged independently of each other, means for securing the columns independently to the floor and to the roof of the mine, means for adjusting the bed vertically upon said columns, and the bed supporting devices supplemental to the adjusting devices and adapted to be thrown out of action without affecting the bed.

5. In a mining machine, the combination of the bed, the carriage thereon, the vertical supporting devices for the bed, one on each side near the rear thereof, means for adjusting the bed vertically on said supporting devices, supplemental supporting devices at the forward part of the bed adjustably connected therewith independently of the aforesaid vertical supporting devices, and friction clamps supplemental to said adjusting means for securing the bed to the supporting devices, whereby the adjusting devices can be relieved.

6. In a mining machine, the combination of the bed, the carriage thereon, the vertically arranged columns adapted to be secured independently of each other to the roof and the floor of the mine, the racks, the pinions engaging with the racks, means for rotating the pinions to effect the vertical adjustment of the bed, and the friction clamps independent of the adjusting devices for binding the bed to the columns whereby the adjusting devices are relieved, substantially as set forth.

7. In a mining machine, the combination of the bed, the carriage thereon having a cutting apparatus, the vertically arranged columns adapted to be secured to the roof and the floor of the mine, and mechanism for adjusting bodily the bed and the carriage vertically, comprising the racks on the columns, the pinions engaging therewith, the longitudinally arranged shafts for actuating the pinions, and the cross shaft for actuating the longitudinal shafts said columns being transversely opposite to each other, and independently adjustable relatively to the bed, substantially as set forth.

8. In a mining machine, the combination of the horizontally arranged and laterally extended bed frame, the horizontally extended carriage mounted on and traveling along said bed frame, the vertically arranged chain frame on the carriage, the cutter chain on said frame, the electric motor at the rear end of said carriage, said carriage with the chain frame and motor moving bodily forward and back and changing the position of the center of gravity of the bed frame and the carriage, the vertically arranged columns one on each side of the bed frame, and secured to the roof and the floor of the mine independently of each other, the vertical racks arranged in the transverse vertical plane of the center of gravity of the carriage and of the bed frame when the carriage is in its rearmost position and the pinions mounted on said bed and in engagement with said racks and adapted for adjusting the bed vertically; substantially as set forth.

9. In a mining machine, the combination of the bed, the carriage thereon, the cutter-frame, the vertically arranged support for the bed, the racks and pinions connecting the bed to the vertical support, and two sets of devices for actuating the pinions independently of each other or simultaneously, as desired, substantially as set forth.

10. In a shearing mining machine, the combination of a bed frame, supporting wheels, means for connecting the supporting wheels to the bed frame whereby it can be supported on a track or on the ground, a vertical support for the bed frame, means for adjusting the said frame vertically on the said support, a carriage on the bed frame and an endless cutter on the carriage adapted to make a vertical rectilinear cut while the carriage is held against vertical movement.

11. In a mining machine, the combination of the bed, the carriage thereon, the cutter frame on the carriage, the rear columns, one at each side of the machine, independent of each other and adapted to be secured independently to the roof and the floor of the mine, the front columns secured to the roof and the floor of the mine independent of each other and secured to the front of the bed independently of the rear columns, and means for adjusting the bed frame vertically on the columns, the rear columns being arranged to relieve the front columns of the weight of the machine when the carriage is in its rear position; substantially as set forth.

12. In a mining machine, the combination of the bed, the carriage thereon having the cutter-frame, the vertical supports relatively near the rear end of the bed, means for adjusting the bed thereon, the supplemental vertical supports at the front end of the bed, and clamps for securing the front end of the bed to the front vertical supports, said clamps being pivotally connected to the bed, substantially as set forth.

13. In a mining machine, the combination of the bed-frame, the carriage thereon having the cutter-frame, the columns M M, the clamps N, the racks O, guiding and actuating means on said carriage having paths extending to the front and rear of said columns, pinions P, the longitudinal shafts p, the cross shaft q geared to the shafts p, and means for rotating the shaft q, substantially as set forth.

14. In a mining machine, the combination of the bed, the carriage thereon having the cutter-frame, the columns M, the racks O, the clamps N, the pinions P, the shafts p mounted in the clamps N and also on the bed, and means for rotating the shafts p, substantially as set forth.

15. In a mining machine, the combination of the bed, the carriage thereon having the cutter-frame, the columns M, the racks O, the pinions P, the shafts p, the two-part shaft q, and means for connecting together the two parts of the shaft q, substantially as set forth.

16. In a mining machine, the combination of the bed, the carriage thereon having the cutter-frame, the vertical columns or supports for the rear part of the bed, means for adjusting the bed thereon, and the front columns S having the adjustable clamps connected by hinges or pivots as at f^4 f^5 to the bed, substantially as set forth.

17. In a mining machine, the combination of a rectangular horizontally arranged bed-frame, a cutter-chain in a vertical plane between the side bars of the bed frame, a carriage on the bed-frame and means for supporting the bed frame at different positions vertically above the ground, a frame for the chain having the side chain guides one above the other, a central longitudinal bar for the chain-frame, a support at the rear of the carriage for the chain-frame, the guide at the front end of the bed for the central bar, and the bars extending upwardly from the bed for supporting the guide, substantially as set forth.

18. In a mining machine, the combination of the rectangular bed having substantially parallel side bars adapted to lie in substantially the same horizontal planes, the cutter-chain, the carriage, the frame for the chain having the chain-guides arranged substantially as set forth to have the forward, the downward and the backward moving parts of the chain in the same vertical planes between the side bars of the bed, and having the central supporting bar, the front elevated guide for the chain-frame, an upwardly extended supporting bracket for the rear end of the chain-frame, and means extending horizontally laterally from the chain-frame for connecting it to the supporting bracket, substantially as set forth.

19. In a mining machine, the combination of the rectangular bed frame having two substantially parallel side bars adapted to lie in substantially the same horizontal planes, the cutter-chain, the carriage, having a gearing supporting part and a frame for the chain, a horizontal chain-driving shaft, a vertically rotating sprocket wheel

thereon, the chain frame having guides which hold the forward-moving, the downward-moving, and the backward-moving parts of the chain in the same vertical planes between the side bars of the bed frame, and having a central thrust-bar mounted in an elevated guide-way supported at the front end of the bed, and a bracket or support for the rear end of the chain frame extending upwardly from the gearing support, substantially as set forth.

20. In a mining machine, the combination of a bed-frame, a cutter-chain cutting on vertical lines, a supporting frame for the chain, a motor at the rear of the carriage, a longitudinally arranged shaft geared to the motor, a horizontal transverse shaft in front of the motor gearing, and geared to the longitudinal shaft, and a vertically rotating sprocket wheel in the longitudinal vertical planes of the chain-frame and of the motor whereby a relatively short chain can be employed arranged entirely in front of the motor and substantially all utilized for cutting as described.

21. In a shearing mining machine, the combination of the bed frame, a carriage movable longitudinally of the bed frame, an endless cutter on the carriage adapted to form an elongated vertical rectilinear slot, a front support for the bed frame adapted to be fastened to the roof and floor of the mine and to support the said frame near its front end, a rear vertical support for the bed frame adapted to be fastened to the roof and floor of the mine, and support the said frame near its rear end, a vertical guide for the rear end of the frame adapted to engage the said rear support and to sustain the weight of the entire machine, and a supplemental guide for the front portion of the machine adapted to engage with said front support and to be thrown out of supporting action independently of the rear guide.

22. In a shearing mining machine, the combination of a rear vertical support adapted to be secured to the roof and to the floor of the mine, a front vertical support adapted to be secured to the roof and floor of the mine independently of said rear support, a bed frame slidable vertically along the said independent supports, a carriage on said bed frame, movable forward and back thereon, a front thrust cutting apparatus having an endless chain arranged to travel in a vertical plane, a chain frame on the carriage having an elongated rectilinear chain supporting guide at the front end adjacent to the line of thrust, a motor at the near end of the carriage, gearing connecting the motor to the cutter chain, and means for raising and lowering the said bed frame arranged to bear upon said frame, substantially in the transverse plane of the center of gravity of the bed, the motor and the carriage.

23. In a shearing mining machine a rear vertical support adapted to be secured to the roof and the floor of the mine, a front vertical support adapted to be secured to the roof and floor of the mine independently of the rear column or support, a bed frame slidable vertically along the said independent supports, means for clamping the bed frame to the vertical supports, said parts being arranged substantially as set forth whereby the supports can be arranged vertically while their lower ends or upper ends are in different horizontal planes, power devices arranged relatively near the rear end of the bed frame for adjusting the bed vertically and sustaining its weight, a carriage on the said bed frame and adapted to move forward and back thereon, an endless cutter chain, a chain supporting frame on the carriage arranged to hold the chain in a vertical plane, a motor at the rear end of the carriage, chain driving gearing actuated by and situated in front of the motor, the rear support and the devices for adjusting the bed vertically being arranged as set forth to receive the weight of the motor when the carriage is in its rear position, substantially as set forth.

24. In a shearing mining machine, the combination of the rear vertical support adapted to be secured to the roof and floor of the mine, the front vertical support, adapted to be secured to the roof and floor of the mine independently of said rear support, a reciprocating carriage having a chain frame comprising an upwardly inclined chain guide, a downwardly inclined chain guide, a vertically arranged chain guide at the front end connecting the divergent ends of the inclined chain guides, and a central thrust bar, the bed frame for the carriage slidable vertically along said independent supports and having a relatively wide support and guide way for the rear end of the carriage and the relatively narrow support and guide way for the central thrust bar of the chain frame, the motor on the carriage, an endless cutter chain on the chain frame, and power transmitting devices interposed between said motor and said chain.

25. In a shearing mining machine, the combination of the rear vertical support adapted to be secured to the roof and floor of the mine, the front vertical support, adapted to be secured to the roof and floor of the mine independently of said rear support, a reciprocating carriage having a chain frame comprising an upwardly inclined chain guide, a downwardly inclined chain guide, a vertically arranged chain guide at the front end connecting the divergent ends of the inclined chain guides, and a central thrust bar, the bed frame for the carriage slidable vertically along said independent supports and having a relatively wide support and guide way for the rear end of the carriage, and the relatively narrow support and guide way for the central thrust bar of the chain frame, the motor on the carriage, an endless cutter chain on the chain frame, power transmitting devices interposed between said motor and said chain, and means for adjusting said bed frame vertically.

26. In a mining machine, the combination of a reciprocating carriage having a chain frame arranged vertically between the sides thereof, a cutter chain on the said chain frame adapted to cut an elongated vertical slot, a bed frame for the carriage adapted to support it on both sides of the said chain frame, the vertically arranged supporting devices for the bed frame adapted to be secured to the roof and floor, and means for vertically adjusting the bed frame upon the said vertical supporting devices.

27. In a mining machine, the combination of a reciprocating carriage having a chain frame arranged vertically between the sides thereof, a cutter chain on said chain frame adapted to cut an elongated vertical slot, a motor on said carriage, a bed frame for the carriage adapted to support it on both sides of said chain frame and of said motor, the vertically arranged supporting devices for the bed frames adapted to be secured to the roof and floor, and means for vertically adjusting the bed frame upon the vertical supporting devices.

28. In a mining machine, the combination of the reciprocating carriage, a chain frame on the carriage, a cutter chain on the said frame adapted to operate at the front end of the machine, a motor secured to the rear end of the carriage, a bed frame for the carriage and a vertical support for the bed comprising two independent columns fastened to the floor and roof, one upon each side of the bed frame, and situated in the transverse plane of the center of gravity of the whole mechanism when the carriage is in its rearmost position.

29. In a mining machine, the combination of a bed frame, a carriage arranged to move forward and back thereon, a cutter frame movable with the carriage, vertically arranged supports for the bed, one at either side thereof, vertical racks and pinions connecting the bed with the vertical supports to permit the bodily adjustment of the bed vertically, and sets of actuating devices, one for each pinion, each set being independently operable.

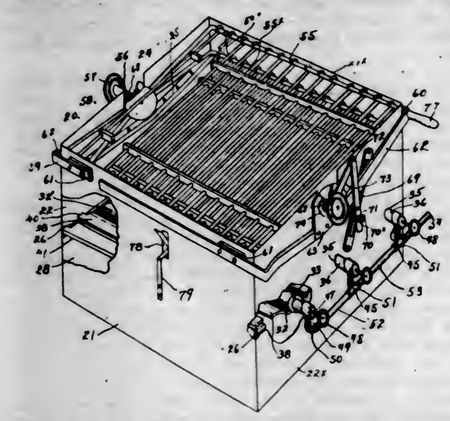
30. In a mining machine, the combination of the bed, the carriage thereon having the cutter frame, the vertical support relatively near the rear end of the bed, means for adjusting the bed thereon, the supplemental vertical support for the front end of the bed, and means pivotally connected to the bed for securing the front end thereof to the front vertical support.

870,117. BROILING APPARATUS. GEORGE J. MILLER, Kansas City, Mo. Filed Sept. 29, 1906. Serial No. 336,764.

1. In a broiling apparatus the combination with the case of a broiler a rocking bar journaled on said case lever arms upon said rocking bar means for rocking said bar and suitable bearings upon the lever arms for the broiler.

2. In a broiling apparatus the combination with the case and with a rotary broiler and trunnions upon said broiler of a rocking bar journaled on said case lever arms upon said rocking bar, means for rocking said bar and bearings on the lever arms supporting the trunnions on the broiler.

3. In a broiling apparatus the combination with the case and with a rotary broiler and trunnions upon said broiler of a rocking bar journaled upon said case, means for rocking said bar, lever arms upon said rocking bar and journal bearings having openings for the trunnions upon the said lever arms and rotary securing devices upon the journal bearings for securing the trunnions removably within said bearings.



4. In a broiling apparatus a case, a broiler and perforate pipes or burners within said case beneath the broiler, longitudinally extended flanges extending from the opposite sides of said pipes and lateral extensions of said flanges extending in an upward direction above the horizontal plane of the burners, the said flanges upon the respective pipe burners being inclined toward each other and having apertures between for the down draft of the smoke.

5. The combination in a broiling apparatus with a supporting frame of a rock bar journaled thereon, lever arms connected with the rock bar, a rotary broiler trunnions upon said broiler suitable journal bearings on the lever arms for said trunnions, inner and outer jointed bars pivotally connected with said supporting frame and yokes on the outer ends of said outer bars grasping said trunnions and means for operating the rocking bar.

6. In a broiling apparatus the combination with the supporting frame and the broiler and with the trunnions supporting said broiler raising and lowering devices for said broiler and journal bearings thereon having separate grasping parts and a rotary annular yoke grasping said trunnions having a grooved outer surface adapted to receive the separate parts of the journal bearings and a bar for operating said yoke.

7. In a broiling apparatus the combination with a suitable case lever arms fulcrumed thereon, a broiler trunnions on said broiler journaled upon said arms, ratchet teeth on said trunnions extensible inner and outer jointed bars said inner bars being pivotally connected with said case, yokes on said outer bars and ratchet teeth in said yokes engaging with the ratchet teeth upon said trunnions.

8. In a broiling apparatus the combination with a suitable case, a broiler, trunnions on said broiler, lever arms fulcrumed on said case, supporting devices upon said arms for said trunnions, means for locking said trunnions on said supports when the lever arms are raised in position, rods or bars pivotally connected with said case and means on said bars and said trunnions for imparting a rotary movement to said trunnions and means for adjusting the position of said trunnions supporting devices to the changed positions of the trunnions.

9. In a broiling apparatus the combination with a suitable case, lever arms fulcrumed upon said case and journal boxes upon said arms having separable parts a broiler trunnions on said broiler and ratchet teeth on said trunnions extensible jointed bars pivotally connected with each other and said case, yokes on said bars rotatively connected with said journal boxes and ratchet teeth on said yokes engaging with the ratchet teeth on said trunnions.

10. In a broiling apparatus the combination with a suitable case, a broiler, trunnions on said broiler and ratchet teeth on said trunnions, lever arms fulcrumed on said case, journal bearings upon said arms jointed arms pivotally connected with said case and yokes on said arms having extensible grooved portions within said journal bearings and rotatively fitted thereto, said yokes being adapted to admit the trunnions to its center and ratchet teeth upon the inner circular portion of said yokes engaging with the ratchet teeth on said trunnions.

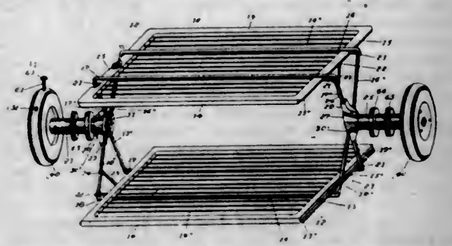
11. In a broiling apparatus the combination with a suitable case of lever arms fulcrumed on said case journal boxes upon said lever arms, a broiler, trunnions thereon journaled in said boxes, arms on said case and grasping jaws on said arms imparting a rotary movement to said trunnions.

12. In a broiling apparatus the combination with a suitable case lever arms fulcrumed thereon, journal bearings upon said lever arms, extensible bars pivotally connected with each other and said case grasping jaws upon said extensible bars adapted to grasp said trunnions and laterally extended portions of said jaws having externally grooved surfaces within the said journal bearings.

13. In a broiling apparatus the combination with a suitable case, lever arms fulcrumed on said case, journal boxes on said lever arms, a broiler trunnion thereon journaled in said boxes, jointed inner and outer arms on said case grasping arms on the outer arms imparting a rotary movement to said trunnions and adjusting devices on said case with which the inner arms are pivotally connected.

14. In a broiling apparatus the combination with a suitable case and with lever arms fulcrumed on said case and suitable journal bearings and trunnions supporting said frame within said bearings upon the lever arms, devices on said lever arms connected with the trunnions acting to impart a rotary movement to said broiler frame and a spring actuated plate on the said case with which the said broiler frame comes in contact.

870,118. BROILER. GEORGE J. MILLER, Kansas City, Mo. Filed Jan. 19, 1907. Serial No. 353,089.



1. In a rotary broiler the combination with opposite, grasping members for the article to be broiled of axial supports for said members and adjustable folding arms upon said supports for the said members and means for securing said folding arms in an open or closed position upon said axial supports.

2. In a rotary broiler the combination with opposite grasping members for the article to be broiled of axial supports for said members and pivotally connected folding arms upon said supports for said members means for adjusting said arms in an open or closed position and means for locking said arms on said axial supports.

3. In a rotary broiler the combination with supporting handles of opposite movable grasping holders for the article to be broiled and pivotally connected folding arms supporting said holders upon said handles.

4. In a rotary broiler the combination with separate folding grasping frames for the articles to be broiled and with folding arms for said grasping frames of means coacting with the folding arms to maintain the longitudinal axes of the frames in coincident alining positions with the axis of the broiler in moving to and from each other.

5. In a rotary broiler the combination with separate grasping frames for the article to be broiled and hollow spindles forming the axis of said frames and rotary bearings in said spindles radial arms yieldingly connected with said frames and having their inner ends connected respectively with said spindles and rotatively with the rotary bearings in said spindles means for operating the arms connected with the rotary bearings and alining devices pivotally connected with said arms and the said frames.

6. In a rotary broiler the combination with axial supports and radial extension arms on said supports and connecting devices connecting the outer ends of said arms on the respective supports of frames between which the articles to be broiled is held having flanges in the ends thereof and supporting devices upon said arms extending beneath said flanges.

7. In a rotary broiler the combination with folding frames and axial supports and radial arms upon said supports for said frames of connecting bars connected with the outer ends of said arms on the respective axial supports and supporting devices for said frames upon said arms and pivoted spring bars upon said arms detachably connected with said frames.

8. In a rotary broiler the combination with holders between which the article to be broiled is held and with pivoted folding arms connecting said holders with each other of means for holding said arms in a position under tension.

9. In a rotary broiler the combination with holders between which the article to be broiled is held of hollow spindles rotary bearings within said spindles, radial arms connected respectively with said spindles and said holders and separate radial arms connected with said holders having extensions extending within said spindles and mechanism upon the spindles for imparting a partial rotary movement to said extensions of said arms.

10. In a rotary broiler the combination with opposite grasping holders for holding the article to be broiled and hollow spindles or handles of radial arms connected at their outer ends with the ends of the respective holders and at their inner ends with said spindles and separate radial arms connected with said holders and extensions of the inner ends of said arms extending within said hollow spindles rotatable bearings within the inner ends of said spindles through which said extensions of said arms are rotatably supported rotary knobs on said spindles and resilient connecting mechanisms connecting said knobs with said extensions of said arms.

11. In a broiler the combination with opposite holders for the articles to be broiled of hollow spindles, radial arms connected with said frames and the respective spindles and separate radial arms connected with said frames and having extensions extending within said hollow spindles rotary bearings within said spindles for said extensions of said arms and means for securing said arms in position.

12. In a broiler the combination with holders between which the article to be broiled is held and hollow spindles radial arms connected with and supporting said holders lugs on said spindles radial arms with which said lugs are connected, separate radial arms bent extensions of which extend parallel with each other within said hollow spindles rotatable bearings within the inner ends of the spindles fixedly connected with said extensions of said arms, rotary knobs on said spindles torsion springs respectively connected with said rotary bearings for the extended portions of said arms and the said knobs and means for locking said knobs on said spindles.

13. The combination with hollow spindles supporting the broiler and inner and outer rotary bearings within the spindles and radial arms having bent portions extending within said spindles and connected rotatively within said bearings and separate radial arms connected rigidly with said spindles of bars connected at their respective ends with the outer ends of the arms on the respective spindles knobs having central openings adapted to receive the outer ends of said spindles, plates connected with the said knobs, springs within said spindles having their outer ends connected with said plates on said knobs, and their inner ends with outer bearings for the extended portions of the radial arms and interlocking devices on said knobs and spindles.

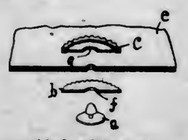
14. In a broiler the combination with opposite grasping frames and handles having separate rotatively connected parts supporting said frames of pivoted frame extending folding arms on said handles and means actuated by one portion of said handles for opening and closing said folding arms.

15. In a broiler the combination with opposite grasping frames and spindles at the axis of the broiler of knobs rotatively connected with the spindles, spring actuated locking devices on said knobs engaging with the spindles, frame extending devices on said spindles and actuated thereby and by said knobs and yielding connecting devices connecting said devices with said knobs.

16. In a broiler the combination with opposite grasping holders and hollow spindles at the axis of said broiler and knobs rotatively connected with said spindles of plates on said knobs at the outer ends of said spindles rotary bearings within said spindles near the inner and outer ends, radial arms connected rigidly with said spindles at their inner ends and separate radial arms having the inner ends extending within said bearings bars connected with the outer ends of the respective radial arms on the respective spindles and extensions on the outer bearings within the spindles, coiled springs on the respective extensions having their inner ends connected therewith and the outer ends connected with the plates on said knobs.

17. In a rotary broiler the combination with opposite grasping frames for the article to be broiled and with radial folding arms supporting said frames of axial supports for said radial arms and means coacting with said radial folding arms to maintain the alinement of said grasping frames with said axial supports in the movement of said frames to and from each other.

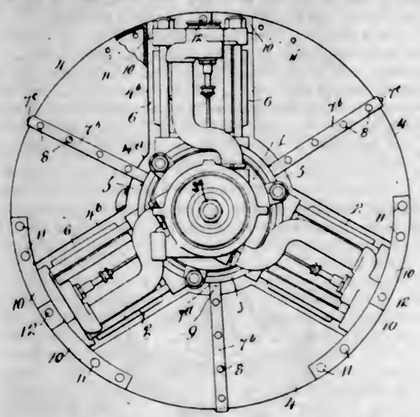
870,119. MEANS FOR SECURING ENVELOPS FROM FRAUDULENT OR UNAUTHORIZED OPENING. WILLIAM MYERS, New Brighton, England. Filed Apr. 26, 1904. Serial No. 204,997.



1. An envelop provided with a slot on the crease line of the flap, and a projection adapted to pass through said slot and gummed, whereby it may be fastened down to close up the slot, and means for securing envelops against fraudulent or unauthorized opening, comprising a stud of soft metal adapted to be passed through the parts of the envelop to be secured, and a soft metal wafer harder than said stud and adapted to be placed against the opposite side of the envelop, and through which the head of said stud passes, and a second soft metal wafer through which the head of said stud also passes, with the soft metal of the stud compressed and projecting over the edges of said wafers.

2. An envelop provided with a slot on the crease line of the flap, and a projection adapted to pass through said slot and gummed, whereby it may be fastened down to close up the slot, said envelop being provided with serrations, to give additional security to the envelope and prevent breaking of the seal without tearing of the envelop, and means for securing envelops against fraudulent or unauthorized opening, comprising a stud of soft metal adapted to be passed through the parts of the envelop to be secured, and a soft metal wafer harder than said stud and adapted to be placed against the opposite side of the envelop and through which the head of said stud passes, and a second soft metal wafer through which the head of said stud also passes, with the soft metal of the stud compressed and projecting over the edges of said wafers.

870,120. REVOLVING-CYLINDER MOTOR. THOMAS O'BRIEN, New York, N. Y., assignor to Revolving Cylinder Motor Co., New York, N. Y., a Corporation of Delaware. Filed Dec. 11, 1906. Serial No. 347,310.



1. The combination of a motor having cylinders adapted to revolve around a central axis, with shields interposed between the cylinders and having curved peripheries, and also having side walls substantially flush with the corresponding sides of the cylinders and extending near to the cylinders providing spaces therebetween.

2. The combination of a motor having a casing and cylinders adapted to revolve around a central axis, with shields in box-like form interposed between the cylinders at a distance from the cylinders and from the motor casing to prevent air resistance to the cylinders during their rotation and to cause air to flow between the shields, the cylinders and casing.

3. The combination of a motor having a casing and cylinders adapted to revolve around a central axis, with shields in box-like form interposed between said cylinders and having their peripheries curved substantially on an arc described around the axis of rotation of the cylinders, and having curved under walls at a distance from the motor casing, providing centrally disposed spaces, and outwardly disposed walls at a distance from the cylinders providing spaces communicating with the first named spaces.

4. The combination of a motor having cylinders adapted to revolve around a central axis, with shields interposed between the cylinders and having curved peripheries, said shields being of less length than the distance between the cylinders and having inner walls located at a distance from the walls of adjacent cylinders providing spaces therebetween that open freely to the atmosphere at the outer ends of the cylinders for the flow of air outwardly.

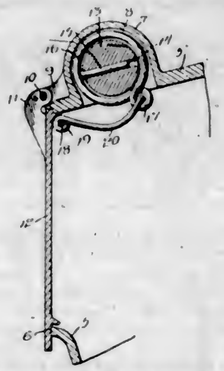
5. The combination of a motor having a casing and cylinders adapted to revolve around a central axis, with shields interposed between the cylinders, said shields having curved peripheries and inner faces located at a distance respectively from the adjacent sides of the cylinders and the motor casing providing spaces between the cylinders and casing and the adjacent walls of the shields, and also having side walls extending between the cylinders substantially flush with the side walls of the cylinders.

6. The combination of a motor having cylinders adapted to revolve around a central axis, with shields in box-like form interposed between the cylinders, and supports secured to the shields and firmly connected with the motor for holding the shields between the cylinders at a distance from the adjacent walls of the latter.

7. The combination of a motor having cylinders adapted to revolve around a central axis, with shields in box-like form interposed between the cylinders and having walls at a distance from the cylinders, and supports secured to the shields and firmly detachably connected with the motor for holding the shields between the cylinders, said shields being held at a distance from the cylinders providing spaces therebetween for the flow of air.

8. The combination of a motor having cylinders adapted to revolve around a central axis, with shields interposed between the cylinders, said shields being of box-like form, supporting arms secured on opposite sides of the shields and secured to the motor, and bracing strips secured to the shields.

870,121. JOURNAL-BOX. JAMES S. PATTEN, Baltimore, Md. Filed Dec. 18, 1906. Serial No. 348,443.



1. A journal box comprising a hollow body portion having an opening therein, a lid pivotally suspended to said box, and adapted to normally close said opening, a core carried by the body portion and having a passage therethrough, a torsional spring surrounding said core, and having an end engaged in said passage, and connections between said spring and said lid whereby movement of the latter away from the opening energizes the former.

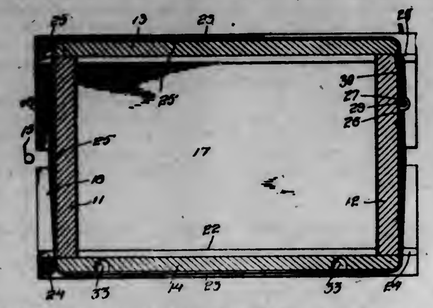
2. A journal box comprising a hollow body portion having an opening therein, a lid for the opening, a core carried by the body portion and having a passage therein, a spring surrounding the core and having an end engaged in the passage, and a member connected with the lid and with the spring for movement to energize the spring when the door is moved out of closed position.

3. A journal box comprising a hollow body portion having an opening therein, said box having a hollow enlargement formed upon its top, a core located within the enlargement, said core having a passage therein, a helical spring surrounding the core and having an end engaged in the passage, a lid pivoted for movement into and out of position to close the opening of the box, and a rod connected with the spring and with the lid, said rod being arranged for movement with the lid to energize the spring when the lid is moved out of closed position.

870,122. KNOCKDOWN CRATE. WILLIAM A. PERKINS, Charlottesville, Va. Filed Mar. 28, 1906. Serial No. 308,544.

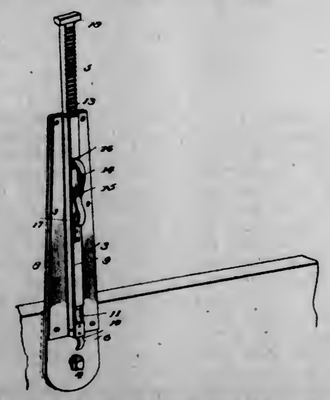
A knockdown crate comprising sides, ends, a top, and a bottom, all of which are separable, the ends of the sides, top and bottom being adapted to project beyond the end sections of the crate when the same is in set up condition, the sides, top and bottom being grooved longitudinally, a staple carried by one of the end sections of the crate, a

binding strip engaged around the crate, in the grooves in the side sections thereof and having its ends adapted for the engagement therethrough of the staple, the ends being overlapped, a staple carried by the other end section of the crate, in the grooves in the top and bottom thereof, the ends of the binding strip being overlapped and arranged for the engagement therethrough of the said staple, a wire



threaded through the first named staple and through the adjacent projecting end of the adjacent side section of the crate at opposite sides of the groove therein, the ends of the wire having a seal connection, and a similar wire threaded through the last named staple and through the adjacent projecting end of the top section of the crate at opposite sides of the groove therein, the ends of the wire having a seal connection.

870,123. CAR-STAKE. JEBE D. PERRY, Lincoln, Me. Filed Mar. 1, 1907. Serial No. 359,999.



1. In a device of the character described, the combination of a support, a swinging standard mounted upon the support and formed with a channel and also with a slot communicating with the channel, and a bar telescoping within the channel and rabbeted to receive the edges of the slot.

2. In a device of the character described, the combination of a base plate, a swinging standard mounted upon the base plate and formed with a channel, a bar telescoping within the channel, and a catch mounted between the sides of the channel and engaging the base plate to lock the standard in the desired position.

3. A car stake comprising a standard having a channel formed therein and also provided with a slot communicating with the channel, and a bar telescoping within the channel and being rabbeted to receive the edges of the slot.

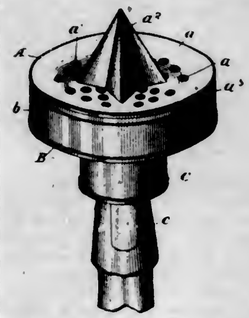
4. In a device of the character described, the combination of a support, a swinging standard mounted upon the support, the said standard comprising a pair of plates, one of which is formed with a channel, and a bar telescoping within the channel.

5. In a device of the character described, the combination of a support, a swinging standard mounted upon the support and comprising a pair of plates one of which is formed with a slot, while the opposite plate is formed with a corresponding channel, and a bar telescoping within the channel and being rabbeted to receive the edges of the slot.

6. In a device of the character described, the combination of a support, a notched base plate secured to the support, a swinging standard mounted upon the base plate, a telescoping rod mounted upon the standard, and a catch carried by the standard and engaging in the base plate to hold the standard in an adjusted position.

7. In a device of the character described, the combination of a support, a swinging standard mounted upon the support, the said standard having a channel formed therein, means for locking the standard in an adjusted position, a bar telescoping within the channel and having a rack formed upon one face thereof, and a catch carried by the standard and engaging the rack to hold the telescoping bar in an adjusted position.

870,124. FRUIT-JUICE EXTRACTOR. OLE PERSEN, Fortuna, Cal. Filed June 12, 1907. Serial No. 378,555.

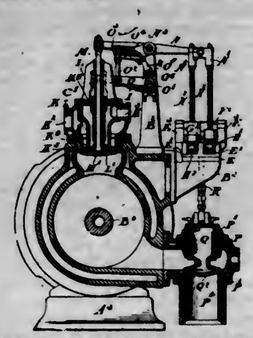


1. A juice extractor comprising three separable parts, the first part having a dished upper surface provided with strainer openings and having an expressing conical projection, the second part engaging the first part and provided with a strainer of fine mesh, and the third part having a body portion engaging the second part and an elongated tubular projection adapted to extend into the neck of a bottle, substantially as described.

2. A juice extractor comprising three separable parts having a telescoping connection, the first part having a dished upper surface provided with coarse mesh strainer openings and having a centrally located expressing conical projection, the second part having a fine mesh strainer in the bottom thereof, and the third part having a telescoping connection with the second part and provided with an elongated tubular projection adapted to extend into the neck of a bottle, substantially as described.

870,125. ADMISSION-VALVE FOR GAS-ENGINES. GUSTAV B. PETSCHE, Philadelphia, Pa., assignor to Southwark Foundry & Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 9, 1905. Serial No. 240,153.

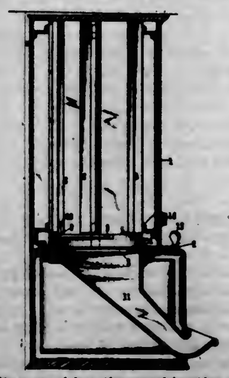
1. In a gas engine an admission valve casing having an air admission port K^2, opening into the cylinder through a valve seat K^3, and a gas port K^2, opening into the air port close to the seat K^3, in combination with a main valve M^1, adapted to seat itself on seat K^3, and having an actuating stem M, extending through the casing, a valve L^1, adapted to act on the mouth of the gas port and having a sleeve stem L, surrounding the stem M, of the main valve, a valve actuating lever connected to valve stem M, and a shiftable connection from sleeve L, to said lever whereby the lever also imparts motion to the gas valve and whereby such motion can be varied.



2. In a gas engine an admission valve casing having an air admission port K^2, opening into the cylinder through a valve seat K^3, and a gas port K^2, opening into the air port close to the seat K^3, in combination with a main valve M^1, adapted to seat itself on seat K^3, and having an actuating stem M, extending through the casing, a valve L^1, adapted to act on the mouth of the gas port and having a sleeve stem L, surrounding the stem M, of the main valve, a valve actuating lever connected to valve stem M, a shiftable connection from sleeve L, to said lever whereby the lever also imparts motion to the gas valve and whereby such motion can be varied, said connection being also of a character which permits a short movement of the main valve from its seat before the gas valve is opened, and a spring for holding the gas valve to its seat when the main valve is closed.

3. In a gas engine an admission valve casing having an air admission port K^2, opening into the cylinder through a valve seat K^3, and a gas port K^2, opening into the air port close to the seat K^3, in combination with a main valve M^1, adapted to seat itself on seat K^3, and having an actuating stem M, extending through the casing, a valve L^1, adapted to act on the mouth of the gas port and having a sleeve stem L, surrounding the stem M, of the main valve, a valve actuating lever connected to valve stem M, said lever having attached to it a segment N^2, a lever O, connected to the sleeve stem, a link and slide block connecting lever O, with segment N^2, the slide block forming a loose fit in the segment to permit a certain lost motion, a spring acting to press lever O, in the direction to close the gas valve, and means for adjusting the slide block in the segment.

870,126. VENDING-MACHINE. LOUIS PINNER, New York, N. Y. Filed Apr. 20, 1907. Serial No. 369,375.



1. In a vending machine the combination of a rotatable, apertured disk channeled on its upper face; guides thereover adapted to contain a cross stacked pile of articles to be vended and extending into the channels in the disk; and means for rotating the disk to release the bottom article.

2. In a vending machine the combination of a guide ring; an apertured, rotatable disk therein having a channel in its upper face; guides thereover adapted to contain a cross stacked pile of articles to be vended and extending into the channel in the disk; and means for rotating the disk to release the bottom article.

870,127. PLOW. EDWARD V. POSEY, Gage, Okla. Filed July 11, 1907. Serial No. 383,297.



1. In a plow, the combination of a land-side having a laterally-projecting wing-plate at its forward end and a triangular shaped share adjustably and reversibly secured to said wing-plate.

2. In a plow, the combination with a land-side having a laterally-projecting wing-plate near one end of a triangular-shaped share secured to said wing-plate and adapted for lateral adjustment and a plow leveling member secured near the outer end of said wing-plate which is adapted for longitudinal adjustment with respect to the plow.

3. In a plow, the combination with a land-side having a standing cutter and a laterally-projecting wing-plate at its forward end, of a share having a plurality of cutting edges secured to said wing-plate and adjustable laterally of the plow, and a longitudinally disposed plow leveling member adjustably secured under and near the outer end of said wing-plate.

4. In a plow, the combination with a land-side having a laterally projecting wing at one end and provided with spaced slots, of a share having a plurality of cutting edges, and screws extending through said slots and engaging said share.

870,128. ADJUSTABLE HINGING-STRIP FOR DOORS. LEWIS S. PRENTISS, Oklahoma, Okla. Filed June 24, 1907. Serial No. 380,411.



In the combination of a door and a door frame for buildings; a door frame having one of its jambs rearwardly off-set to form in conjunction with the inside casing a vertical channel in which said casing constitutes its left wall the right wall being parallel thereto secured to the frame jamb and having a vertical strip secured to the right and left walls to form the rear wall of said channel; threaded nut-plates h secured to the upper rear and to the lower front portion of the rear wall of the channel, said wall having perforations in line with the openings in the plate-nuts for adjusting bolts; a hinging strip consisting of an elongated strip slidably fitted edgewise in said channel and having the door hinged to its front edge and having upper and lower adjusting bolts with collars thereon engaging the heads of said bolts which pass transversely through said hinging strip from the front their ends being threaded into the said plate-nuts for adjusting the door; face plates secured to the front edge of said hinging strip to cover the heads of said adjusting bolts and having perforations to afford access to the nicks in the heads of said bolts to be turned by a screw driver; a hook-plate f secured to one side of the hinging strip; an L-shaped supporting plate set in the adjacent channel wall

in position to coöperate with said hook-plate to sustain the weight of the said hinging strip and the door hinged thereto, for the purposes set forth.

870,129. REINFORCING-BAR FOR CONCRETE STRUCTURES. ARTHUR PRIDDLE, San Francisco, Cal. Filed Sept. 20, 1906. Serial No. 335,391.



1. A reinforcing element for concrete structures, comprising a flat metallic bar having slits formed longitudinally therein, and having the portions of the bar adjacent to said slits bent laterally in opposite directions at right angles to the plane of the bar, whereby flanged elliptical openings are formed, and the base or bottom of each flange or bent portion is in the form of an arch lengthwise of the bar, and the outer edge is in the form of an arch at right angles to the plane of the bar.

2. A flat, spiral, twisted reinforcing bar having an opening extending longitudinally thereof, said opening having oppositely curved sides, each formed by a longitudinally-curved lip projecting laterally from the general plane of that portion of the bar in which said opening is located, said lips being broadened at their centers and narrowed toward their ends, and respectively extending from opposite sides of the bar.

870,130. CAR-UNDERFRAME. HERMAN C. PRIEBE, Blue Island, Ill. Filed Apr. 13, 1907. Serial No. 368,036.



1. In a car underframe, the combination of a car floor and sills, with a bolster comprising two sections secured to said sills, each of said sections having an upright portion extending between the center and intermediate sills, and channel irons between the bolster sections substantially as described.

2. In a car underframe, the combination of the car floor and sills with a body bolster comprising two sections, each of said sections having an upright portion which extends between the center and intermediate sills, channel irons between the center sill and bolster sections and a filler block between said bolster sections.

3. In a car underframe the combination of the car floor and longitudinal sills, the side of the center sill being against the car floor, with a bolster comprising two separate sections, each of said sections having an upright portion fitting between the center sill and the next side sill, channel irons between the center sill and the upright portions of the bolster sections, and means for securing said bolster sections, channel irons and center sill together, substantially as described.

4. In a car underframe, the combination of the car floor and longitudinal sills, the side of the center sill being against the car floor, with a bolster comprising two separate sections, each of said sections having an upright portion fitting between the center and intermediate sills, channel irons between the center sill and the upright portions of the bolster sections, and a filler block beneath the center sill and between the bolster sections.

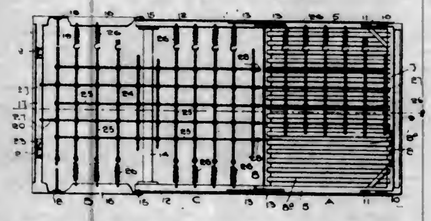
5. In a car underframe, the combination of the car floor and longitudinal sills, with a bolster having two separate sections, each of said sections having an upright portion fitting between the center sill and the next sill thereto, channel irons secured to the center sill and the upright portions of the bolster sections, a filler block, a channel iron between said filler block and the center sill, and means for securing the aforesaid channel irons together, substantially as described.

6. In a car underframe, the combination of a car floor and the longitudinal sills, with a bolster having two separate sections, each of said sections having an upright portion extending between the center sill and the sill next to it, channel irons between said center sill and upright portions of the bolster sections, a filler block between said sections, and a reinforcing plate extending above the longitudinal sills and the upright portions of the bolster sections and secured to the longitudinal sills.

7. In a car underframe, the combination of the car floor and sills, with a bolster comprising two sections, each of said sections having an upright portion fitting between the longitudinal sills, a center sill, channel irons between the center sill and bolster sections and a reinforcing plate above the center sill and upright portions of the bolster sections.

8. In a car underframe, the combination of the car floor, side sills and double center sills, with a body bolster comprising two separate sections, each of said sections having an upright portion fitting between one of said center sills and the sill next to it, and channel irons reinforcing said center sills, substantially as described.

870,131. SOFA-BED. WILLIAM REDDELL, Denver, Colo. Filed Mar. 4, 1907. Serial No. 360,550.



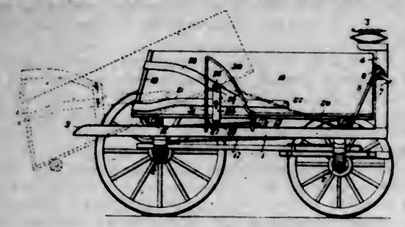
1. In a sofa bed, a body element including upright posts, an upright head board and horizontal, parallel rails extending unconnected from the head board, a middle section comprising parallel rails connected intermediate their extremities by a depending transverse yoke, a foot section comprising parallel rails connected at one of their extremities, the rails of the middle section being pivotally connected at their extremities respectively to the free extremities of the rails comprised in the body element and in the foot section, and a spring comprising two pliably connected sections respectively stretched between the rails of the body element and the middle section and between the rails of the foot section.

2. In a sofa bed, a body element including upright posts, an upright head board and horizontal, parallel rails extending unconnected from the head board, a middle section comprising parallel rails connected intermediate their extremities by a depending, transverse yoke, a foot section comprising parallel rails connected at one of their extremities, the rails of the middle section being pivotally connected at their extremities respectively to the free extremities of the rails comprised in the body element and in the foot section, and a flexible member stretched between the rails of the said body element and the said sections.

870,132. DUMPING-WAGON. JOSIAH M. RIPPLE, Martinsburg, W. Va. Filed Dec. 6, 1906. Serial No. 346,644.

1. The combination with a bed; of a tiltable body movable longitudinally thereon, a tailboard carried by the body, and adjustable means connected to the tailboard and bearing upon the bed to limit the downward movement of the board during the tilting of the body.

2. The combination with a bed; of a tiltable body movable longitudinally thereon, a tailboard movably connected to the body, an adjustable hanger connected to the tail board and bearing upon the bed to prevent downward movement of the board during the tilting of the body, and manually operated means supported by the bed for positively moving the body longitudinally in either direction.



3. The combination with a bed; of a tiltable body movable longitudinally thereon, a tailboard, arms extending therefrom and pivotally connected to the body, an adjustable hanger depending from one of the arms and adapted to contact with the bed, and manually operated rotatable means upon the bed for moving the body longitudinally in either direction.

4. The combination with a bed; of a tiltable body movable longitudinally thereon, means for moving the body in either direction, a tailboard movably connected to the body, an adjustable hanger movable with the board and overlapping and adapted to contact with the bed, and manually operated rotatable means upon the bed for moving the body longitudinally in either direction.

5. The combination with a bed; of a tiltable body movable longitudinally thereon, means for moving the body in either direction, a tailboard movably connected to the body, an adjustable hanger movable with the board and overlapping and adapted to contact with the bed, and manually operated rotatable means for moving the body longitudinally in either direction upon the bed.

6. The combination with a bed; of a tiltable body movable longitudinally thereon, means for moving the body in either direction, a tailboard movably connected to the body, an adjustable hanger movable with the board a friction roller carried thereby for contact with the bed, and manually operated rotatable means upon the bed for moving the body longitudinally in either direction.

7. The combination with a bed; of a tiltable body, supporting rollers therefor movably mounted upon the bed, means for projecting the body beyond the bed to tilt the same, guard rails disposed upon the bed and above the rollers, said rails having deflecting portions, and means for moving the rollers against the deflecting portions to return the body to its normal position.

8. The combination with a bed and guard rails thereabove and having deflecting portions; of a body, supporting rollers therefor movable upon the bed and beneath the guard rails, means for actuating the body in either direction, and means for locking said body against movement.

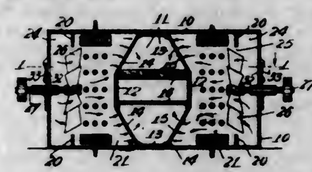
9. The combination with a bed and guard rails thereabove and having deflecting portions; of a tiltable body, supporting rollers therefor movable upon the body end beneath the guard rails, means for actuating the body in either direction, a tailboard movably connected to the body, and means carried by said board to prevent downward movement during the tilting of the body.

10. The combination with a bed having side strips and wear plates upon said strips; of flanged rollers mounted upon the wear plates, a body supported thereby, said body being tiltable, guard rails disposed above the rollers and normally preventing tilting, said rails having upwardly extending portions, and means for actuating the body to bring the rollers beneath or at points removed from the upwardly extending portions.

11. The combination with a bed having side strips and wear plates upon said strips; of flanged rollers mounted upon the wear plates, a body supported thereby, said body being tiltable, guard rails disposed above the rollers and normally preventing tilting, said rails having upwardly extending portions, means for actuating the body to bring the rollers beneath or at points removed from the upwardly extending portions, a tailboard connected to the body, and means for holding said board against downward movement of said body.

12. The combination with a bed; of a body movable longitudinally thereon, means for positively moving said body in either direction upon the bed, said body being tiltable when moved in one direction, and deflecting devices in the path of the tilted body for swinging said body into its original position upon the movement thereof in the opposite direction.

870,133. DRIER. ALLAN C. SARGENT, Westford, Mass., assignor to C. G. Sargent's Sons, Westford, Mass., a Corporation of Massachusetts. Filed Apr. 11, 1907. Serial No. 367,509.



1. A drier having an inner metallic casing and a drying platform therein, said casing having openings both above and below said platform whereby the air is admitted on both sides of the platform.

2. A drier comprising a drying platform, and a chamber in which it is located, said chamber having a plurality of removable perforated walls.

3. A drier comprising a drying platform, and a chamber in which it is located, said chamber having four removable perforated metallic walls, two of said walls constituting each side of the chamber.

4. A drier comprising a drying platform, and a chamber in which it is located, said chamber having two side walls and four perforated walls having their edges resting against the two side walls and slanting inwardly therefrom, and means for causing air to pass through said perforated walls.

5. A drier having an inner metallic casing and a drying platform therein, said casing having openings both above and below said platform whereby the air is admitted on both sides of the platform, and fans for causing air to pass through said openings located above and below the platform and on each side thereof.

6. In a drier, the combination of an inner drying chamber, a drying platform therein, said chamber having perforations both above and below the platform, and draft fans located on opposite sides of the chamber, each of said fans extending both above and below the platform, whereby currents of air will be driven into the chamber on both sides of the platform.

7. In a drier, the combination of an inner drying chamber, a drying platform therein, said chamber having perforations both above and below the platform, draft fans located on opposite sides of the chamber, each of said fans extending both above and below the platform, whereby currents of air will be driven into the chamber on both sides of the platform, and steam coils located between each fan and the adjacent walls of the chamber whereby the steam coils will serve to heat the currents of air and also to heat the chamber.

8. In a drier, the combination of a drying chamber, a platform therein, said chamber having perforations through its walls both above and below the platform, an outer casing in which said casing is located, an intermediate wall or partition forming a chamber between the inner chamber and the outer casing, said intermediate wall having a perforation, a fan located adjacent to said perforation, and steam pipes located in said intermediate chamber.

9. In a drier, the combination of an outer casing, an inner drying chamber, an intermediate wall forming an intermediate chamber between the drying chamber and the outer casing, steam pipes located longitudinally in said

intermediate chamber substantially throughout the height thereof, and means for forcing air between said steam pipes into the drying chamber, whereby said steam pipes act to spread, distribute and heat the air before it enters the drying chamber.

10. In a drier, the combination of an outer casing, an inner drying chamber, a platform therein, an intermediate wall forming an intermediate chamber between the drying chamber and the outer casing, steam pipes located from the bottom to the top of the intermediate chamber and spaced from each other, and means for forcing air between said steam pipes into the drying chamber both above and below said platform.

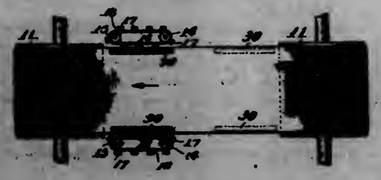
11. In a drier, the combination of an outer casing, an inner drying chamber, an intermediate wall forming two intermediate chambers one on each side of the drying chamber, said intermediate chambers extending throughout a part of the length of the drying chamber, steam coils within said intermediate chamber and extending substantially the entire length thereof adjacent to the walls of the inner chamber, and means for forcing air between said steam pipes into said inner chamber.

12. In a drier, the combination of an outer casing, an inner drying chamber extending throughout the length thereof and having intermediate walls or partitions forming an intermediate chamber along the side of said inner chamber throughout a part of the length thereof, said intermediate walls being spaced from the outer casing to form a side passage and an end passage, and means for forcing air through the side walls of the intermediate chamber and the side wall of the inner chamber, and along the inner chamber in both directions to the ends thereof, whereby it will be discharged, said end passages communicating with the side passages whereby the air may be forced from the side passages back through the inner chamber.

13. In a drier, the combination of an outer casing having inlet passages in its side wall and outlet passages near the end, an intermediate wall or partition located within said chamber and spaced therefrom at the sides and ends to form side passages and end passages, and an inner drying chamber having perforated walls extending through the intermediate walls from end to end of the outer casing, said perforations communicating with the end passages and with an intermediate chamber formed by the intermediate wall, the side walls of the outer casing having means for admitting air, the intermediate side walls having perforations to admit the air from the outside therethrough, and the outer casing being provided with dampers whereby the outlet passages may be closed or the connection between the side and end passages may be closed to control the circulation of air.

14. A drier for wool and the like having an outer casing, an inner drying chamber extending throughout the length of the outer casing, and intermediate walls extending part way along the sides of the inner chamber forming intermediate chambers spaced at their sides and ends from the outer casing.

870,134. APRON-GUIDE. FREDERICK G. SARGENT, Westford, Mass., assignor to C. G. Sargent's Sons Corporation, Westford, Mass., a Corporation of Massachusetts. Filed May 22, 1907. Serial No. 375,122.



1. An apron guide comprising a device for engaging the edge of an apron, said device being bodily movable as a whole for a material distance parallel with the apron while in contact therewith.

2. An apron guide comprising an endless carrier mounted at the side of the apron to be guided, and having means thereon for engaging the apron.

3. The combination with a traveling apron, of a guide located at the side thereof and comprising an endless carrier having a plurality of devices for engaging the edges of the apron.

4. The combination with a traveling apron, of a pair of guides therefor located on opposite sides thereof, each of said guides comprising an endless carrier having devices thereon for engaging the edge of the apron and adapted to travel parallel with the edge of the apron through a certain distance.

5. The combination with a traveling apron, of a guide therefor comprising an endless carrier having guiding devices mounted thereon for engaging the edge of the apron and traveling therewith, and running strips located above and below the apron and near the edge thereof for holding the apron in position to engage said guiding devices.

6. The combination with a traveling apron, of a guide for the edge thereof, and running strips located above and below the apron near its edges for holding the same in proper plane to engage said guiding device.

7. The combination with a traveling apron and supports therefor, of running strips independent of said supports located near the edge of said apron and above and below the same to hold the edge thereof from vibration.

8. The combination with a pair of drums, and an endless apron traveling thereon, of running strips supported independently of said apron and drums and located near the edge of said apron, one above and one below the same to guide said edge.

9. The combination with a traveling apron, of running strips having outwardly turned ends located near the edge of said apron, one above and one below the same to hold the edge from vibration.

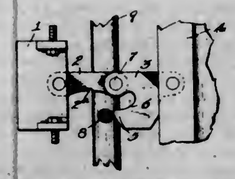
10. An apron guide comprising a pair of wheels, an endless carrier supported thereby, and a series of guiding devices supported by said endless carrier.

11. An apron guide comprising a pair of sprocket wheels, a chain supported thereby, said chain comprising links having projections thereon extending outwardly, and disks mounted on said projections.

12. An apron guide comprising a pair of brackets, adjustable screw points supported thereby, a pair of wheels supported by said screw points, an endless carrier carried by said wheels, and guiding devices located on said carrier.

13. An apron guide comprising a pair of brackets, adjustable screw-points supported thereby, a pair of wheels supported by said screw-points, an endless carrier carried by said wheels, and guiding devices located on said carrier, one of said wheels being mounted concentrically and the other eccentrically.

870,135. MECHANICAL MOVEMENT. WILLIAM E. SCHNEIDER, Washington, D. C. Filed Dec. 11, 1906. Serial No. 347,319.



1. A toggle-joint, of the character described, comprising two members directly pivoted together, one member provided with a laterally offset finger extending in a line substantially parallel with the longitudinal axis of said member for the purpose specified.

2. A toggle joint, of the character described, comprising two members directly pivoted together, one member provided with a laterally offset finger extending in a line substantially parallel with the longitudinal axis of said member, and a slot between said finger and the body of said member.

8. A toggle-joint, of the character described, comprising two members directly pivoted together, one member provided with a laterally offset finger extending in a line substantially parallel with the longitudinal axis of said member, and a curved slot between said finger and the body of said member.

4. A toggle-joint, of the character described, comprising two members directly pivoted together, one member provided with a laterally offset finger extending in a line substantially parallel to the longitudinal axis of said member, the other member having a recess in its surface to receive the end of said finger when the toggle is folded.

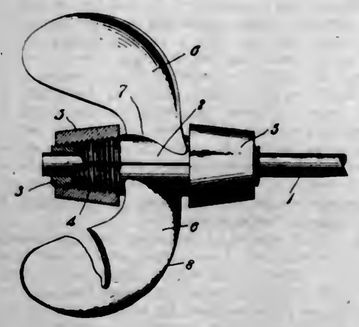
5. The combination, with a fixture and a movable piece, of a toggle-joint arranged therebetween, and common means unfastened to either member of said toggle for extending and folding the same.

6. The combination, with a fixture and a movable piece, of a toggle-joint arranged therebetween, one member of said toggle provided with a laterally offset finger extending in a line substantially parallel with the longitudinal axis of said member, and an operatively mounted pin adapted to enter between said finger carrying member and said finger to extend and fold said toggle.

7. The combination, with a fixture and a movable piece, of a toggle-joint arranged therebetween, one member of said toggle provided with a laterally offset finger extending in a line substantially parallel with the longitudinal axis of said member, and an operatively mounted pin adapted to engage said finger and operate said toggle, said finger being of such length as to permit said operating pin to escape past its end when the toggle has been completely extended.

8. The combination, with a fixture and a movable piece, of a toggle joint arranged therebetween, one member of said toggle provided with a laterally offset finger extending in a line substantially parallel with the longitudinal axis of said member and also having a slot between said finger and body of said member, and an operatively mounted pin adapted to enter said slot, engage said finger and operate said toggle.

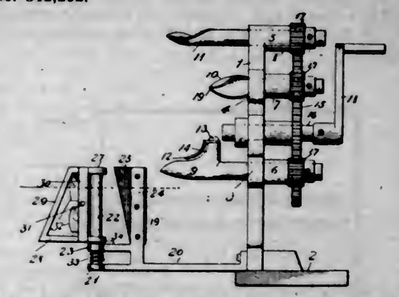
870,136. PROPELLER-WHEEL. ROBERT W. SHAW, Stamford, Conn. Filed Sept. 15, 1906. Serial No. 334,723.



1. A propeller comprising a sectional hub, means upon the ends of the sections for clamping the same upon a shaft, and outwardly inclined blades disposed diagonally to the axis of the hub, each blade being concavo-convex in cross section.

2. A propeller comprising a sectional hub, the ends of said sections being tapered and screw-threaded, means engaging the threaded ends of the sections for clamping the same upon a shaft, and outwardly inclined blades disposed diagonally to the axis of the hub, each blade being concavo-convex in section.

870,137. APPLE-TRIMMING MACHINE. WILLIAM SMITH, Springdale, Ark. Filed Nov. 6, 1906. Serial No. 342,202.



1. In an apple trimming machine, the combination of an upright standard 1; boring bit 9, horizontally journaled in said standard and provided with a shoulder 14 at right angles thereto, near its rear end; a curved blade 12, adjustably secured to the shoulder of said bit 9; a boring bit 10, its rear end terminating in a number of cutting edges 19, horizoutally journaled in said standard immediately above said first mentioned bit; a boring bit 11, its rear end terminating in a number of cutting edges, horizontally journaled in said standard above said bits; pinions 17, connected to said bits near their front ends; a cog wheel 15, journaled near the front side of said standard and adapted to mesh with said pinions, with means for effecting a rotation of said cog wheel; a horizontal arm 20, one end secured to the lower end of said standard 1, its other forming a bearing 21; a vertical post 24, rising from the upper face of said horizontal arm 20; a rearwardly extending bearing 23, having a vertical perforation in its rear end, and secured at its front end to said vertical post; a vertical roller 22, its lower end journaled in said bearings; a coil spring 33, between said bearings, one end of which is secured to said vertical roller, the other being fastened to bearing 21, adapted to revolve said post; a frame, consisting of upper and lower horizontal beams 27 and 28, connected at their rear ends by an oblique connecting beam 29, their other ends secured to said vertical roller 22; a blade supporting beam 30, its end secured to the horisontal beams of said frame, and a blade 32, adjustably secured to said blade supporting beam, substantially as shown and described and for the purposes set forth.

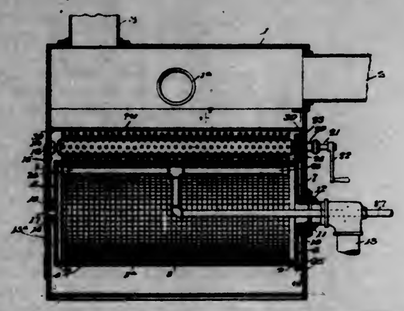
2. In an apple trimming device, the combination of an upright standard; boring bits 9, 10 and 11, horizontally journaled in said standard; a shoulder 14, mounted near the rear end of bit 9, and extending at right angles thereto; and a curved blade 12, adjustably secured to said shoulder; pinions, rigidly secured on the front ends of said bits, and a drive wheel 15, journaled to said upright and adapted to drive said pinions, said device provided with means for removing any skin or skip that may be left on the apple after having been operated on by said bits and blade, substantially as shown and described and for the purposes set forth.

870,138. FEED-WATER FILTER. OMAN L. STUMP, CHARLES B. KING, and HARRY J. BARNHART, Marion, Ohio. Filed Feb. 23, 1907. Serial No. 358,794.

1. In a device of the character described, the combination, with a feed water heater having a bearing lug on one wall thereof, and an aperture in the opposite wall thereof, of a rotary filter having trunnions, one of which is adapted to engage said bearing lug and the other to engage said aperture, said other trunnion having a passageway therein connecting the interior of said filter with the feed water pipe, and a filtering fabric extending about the outer surface of said hollow filter, and means for detachably securing the same to said filter.

2. In a device of the character described, the combination, with a feed water heater having an aperture in one wall thereof, a closure for said aperture having a bearing

thereon, and a bearing on the opposite wall of said heater, of a hollow filter of less diameter than the aperture in the wall of said heater and having trunnions adapted to engage said bearings, and an outlet connected with the interior of said hollow filter, substantially as described.



3. In a device of the character described, the combination, with a feed water heater, of a hollow filter rotatably mounted within said heater, a brush rotatably mounted in said heater and adapted to engage the surface of said hollow filter near the top thereof, and a spray pipe mounted within said hollow filter and adapted to discharge against the inner surface thereof at a point beneath the point of contact of said filter with said brush.

4. In a device of the character described, the combination, with a feed water heater, of a hollow filter rotatably mounted within said heater, a brush mounted in said heater and adapted to engage the surface of said hollow filter, and a spray pipe mounted within said hollow filter and adapted to discharge against the inner surface of said hollow filter at a point out of alinement with the point of contact with said brush, substantially as described.

5. In a device of the character described, the combination, with a feed water heater, of a hollow filter rotatably mounted within said heater, a brush mounted within said heater and adapted to engage the surface of said hollow filter, a spray pipe mounted within said hollow filter and adapted to discharge against the inner surface thereof, and a hood extending over said filter and along the sides thereof to a point near the lower surface of the heater.

6. In a device of the character described, the combination, with a feed water heater, and a filter mounted within the same, of a hood extending between the walls of said heater and supported thereby and having side members extending on the opposite sides of said filter to a point near the bottom of the heater, substantially as described.

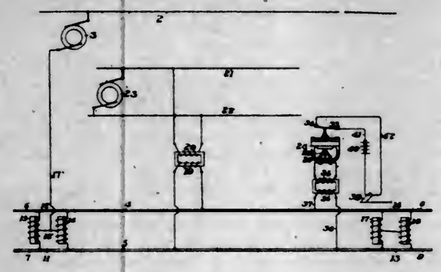
7. In a device of the character described, the combination, with a feed water heater, a filter rotatably mounted within the same, and a brush rotatably mounted above said filter and adapted to engage the surface thereof, of a hood extending above said brush and supported by the walls of said heater, and extending on opposite sides of said filter to a point near the lower surface of the heater, substantially as described.

8. In a device of the character described, the combination, with a feed water heater, and a filter mounted within the same, of a hood extending between the walls of said heater above said filter and extending along the sides thereof to a point near the lower surface of the heater a door extending longitudinally of said hood near the top thereof, and a manhole formed in the wall of said heater near the door in said hood and extending substantially the full length thereof, substantially as described.

9. In a device of the character described, the combination with a feed water heater having an aperture in one wall thereof, a closure therefor, and bearings supported by the opposite walls of said heater, of a hollow filter of less diameter than the aperture in the wall of said heater and having trunnions adapted to engage said bearings, and an outlet connected with the interior of said hollow filter.

10. In a device of the character described, the combination, with a feed water heater, and a rotary filter mounted within the same, of a hood extending over said filter and along both sides thereof.

870,139. TRACK-RELAY. JOHN D. TAYLOR, Swissvale, Pa., assignor to Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Apr. 18, 1907. Serial No. 368,997.



1. In a block signaling system, a track section connected to a source of alternating current of high frequency, and a relay comprising a motor whose speed of rotation is dependent on the frequency of the current, a centrifuge driven by the motor, and a contact maker actuated by the centrifuge for closing a signal circuit when the speed of rotation corresponds to the frequency of the track circuit current.

2. In a block signaling system, a track section connected to a source of alternating current having a frequency greater than that of any foreign current in the track section, and a relay comprising an induction motor whose speed of rotation is approximately proportioned to the frequency of the current supplied to it, a centrifuge driven by the motor, and a contact maker actuated by the centrifuge for closing a signal circuit when the speed of rotation of the motor corresponds to the frequency of the track circuit current and is greater than that corresponding to the frequency of the foreign current.

3. A frequency relay containing an induction motor and a centrifuge together with a contact-making device actuated by the centrifuge for closing a signal circuit when the speed of rotation corresponds to the frequency of the track circuit current; substantially as described.

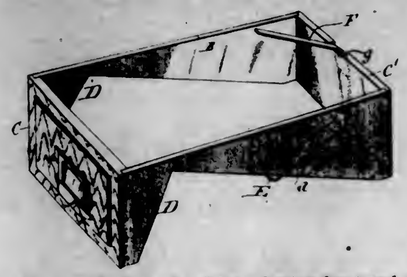
4. A frequency relay connected to the track circuit and receiving its entire current therefrom, said relay containing an induction motor a centrifuge driven by the motor, and a contact maker actuated by the centrifuge for closing a signal circuit when the speed of rotation corresponds to the frequency of the track circuit current; substantially as described.

5. In a block system, a frequency relay containing an induction motor, and a centrifuge, said motor receiving alternating current of a certain frequency through the track circuit, which frequency is higher than any current which may be communicated by unbalancing of the propulsion current or foreign currents; substantially as described.

6. In a block signaling system, an insulated track section connected to a source of alternating current of high frequency, and a frequency relay having a speed selective device arranged to operate the signal circuit; substantially as described.

7. In a block signaling system for electric railroads, an insulated track section connected to a source of alternating current of higher frequency than the propulsion current, and a relay having a speed device arranged to operate a circuit when its speed reaches a predetermined rate; substantially as described.

870,140. FURNITURE-DRAWER. ANTHONY J. THROM, Buffalo, N. Y. Filed June 7, 1907. Serial No. 377,673.

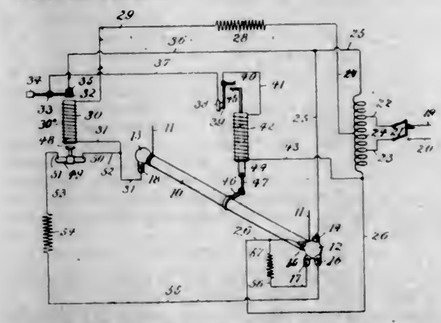


1. The combination of a drawer having front and rear walls and side walls provided with recesses which permit the drawer to drop to an inclined position when partly withdrawn, and a supporting-spring projecting forwardly from the lower portion of the rear wall of the drawer, substantially as set forth.

2. A bottomless drawer having its side walls provided with recesses in their lower edges, and spring-tongues extending forwardly from the upper and lower edges of the rear wall of the drawer, substantially as set forth.

3. A bottomless drawer having its side walls provided with recesses in their lower edges, a retaining spring secured to the rear wall of the drawer and normally extending upwardly and forwardly from the upper edge thereof, and a supporting-spring also secured to the rear wall and normally extending downwardly and forwardly from the lower edge thereof, substantially as set forth.

870,141. AUTOMATIC STARTING DEVICE FOR ALTERNATING-CURRENT VAPOR-LAMPS. CARL H. VOM BAUR, New York, N. Y. Filed Apr. 16, 1907. Serial No. 368,547.



1. In a device of the character described, a vacuum tube having a pair of positive main electrodes, a negative main electrode, a positive auxiliary electrode, and a negative auxiliary electrode, combined with automatic means for rocking the tube, substantially as specified.

2. In a device of the character described, a vacuum tube having a pair of positive main electrodes, a negative main electrode, a positive auxiliary mercury electrode, and a negative auxiliary mercury electrode, combined with automatic means for rocking the tube, whereby the contact between the mercury electrodes is made or broken, substantially as specified.

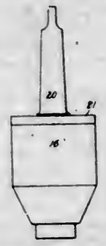
3. In a device of the character described, a vacuum tube having a pair of positive main electrodes, a negative main electrode, a positive auxiliary mercury electrode, and a negative auxiliary mercury electrode, combined with a magnet having a core operatively connected to the tube, and automatic means for alternately energizing and deenergising said magnet, substantially as specified.

4. In a device of the character described, a vacuum tube having a main cathode at one end, a pair of main anodes, an auxiliary anode and an auxiliary cathode at the other end, combined with a magnet having an armature operatively connected to the tube, a circuit for energizing said magnet, means controlled by the armature for breaking and closing said circuit, and independent means controlled by the lamp-current for breaking said circuit, substantially as specified.

5. In a device of the character described, a vacuum tube having a main cathode at one end, a pair of main anodes, an auxiliary anode and an auxiliary cathode at the other end, combined with a magnet having an armature operatively connected to the tube, a first switch in circuit with the magnet, a second circuit adapted to produce an arc between the auxiliary anode and the auxiliary cathode, a second switch controlling said second circuit, and means controlled by the lamp-current for operating both switches, substantially as specified.

6. In a device of the character described, a vacuum tube having a main cathode at one end, a pair of main anodes, an auxiliary anode and an auxiliary cathode at the other end, combined with automatic means for rocking the tube to produce an arc between the auxiliary anode and auxiliary cathode, a first switch controlling said means, a second switch in circuit with the auxiliary anode and auxiliary cathode, and means controlled by the lamp-circuit for opening both switches, substantially as specified.

870,142. CHUCK. VERNER J. WAHLSTROM, New York, N. Y. Filed Oct. 25, 1906. Serial No. 340,522.



1. In a chuck, the combination with a radially movable jaw having an inclined face, of a roller carried by said jaw and arranged to be rolled up said inclined face by contact with a tool shank, substantially as described.

2. In a chuck, the combination with a radially movable jaw having an inclined face, of a roller carried by said jaw and arranged to be rolled up said inclined face by contact with a tool shank, and means for normally keeping the roller out of contact with the inclined face, substantially as described.

3. In a chuck, the combination with a radially movable jaw having an inclined face, of a roller carried by said jaw and arranged to be rolled up said inclined face by contact with a tool shank, and spring actuated means for normally holding the roller out of contact with the inclined face, substantially as described.

4. In a chuck, the combination with a radially movable jaw having an inclined face, of a roller having at each end a stud loosely fitted in a transverse slot in the jaw, the width of the slot being sufficient to permit of the roller being thrown in and out of contact with the inclined face, and spring plungers located in the jaw for normally holding the roller out of contact with the inclined face, substantially as described.

5. In a chuck, the combination with a chuck-body having a central aperture and radial slots cut through the walls of the body into the aperture, of a plurality of jaws mounted in said slots each jaw having an inclined face, a plurality of rollers one of which is carried by each jaw and arranged to be rolled up said inclined face by contact with a tool shank, means for positively moving the jaws toward the axis of the chuck, and spring actuated means for moving the jaws outward, substantially as described.

6. In a chuck, the combination with a chuck-body having a central aperture and radial slots cut through the walls of the body into the aperture, of a plurality of jaws mounted in said slots each jaw having an inclined face, a plurality of rollers one of which is carried by each jaw and arranged to be rolled up said inclined face by contact with a tool shank, spring actuated means for positively moving the jaws toward the axis of the chuck, and spring actuated means for moving the jaws outward, substantially as described.

7. In a chuck, the combination with a chuck-body partly cylindrical and partly conical in shape having a central aperture therein and a plurality of radial slots cut through the conical walls, of a plurality of tapered jaws mounted in said slots each jaw having an inclined face, a plurality of rollers one of which is carried by each jaw and arranged to be rolled up said inclined face by contact with a tool shank, springs for moving the jaws outwardly, a sleeve surrounding the conical portion of the body and contacting with the tapered edges of the jaws, and means for producing a longitudinal movement of the sleeve to positively move the jaws toward the axis of the aperture, substantially as described.

8. In a chuck, the combination with a chuck-body partly cylindrical and partly conical in shape having a central aperture therein and a plurality of radial slots cut through the conical walls, of a plurality of tapered jaws mounted in said slots each jaw having an inclined face, a plurality of rollers one of which is carried by each jaw and arranged to be rolled up said inclined face by contact with a tool shank, springs for moving the jaws outwardly, a sleeve surrounding the cylindrical and conical parts of the body the conical part of the sleeve contacting with the tapered edges of the jaws, and means for moving the sleeve spirally about the chuck-body to positively move the jaws toward the axis of the aperture, substantially as described.

9. In a chuck, the combination with a chuck-body partly cylindrical and partly conical in shape having a central aperture therein and a plurality of radial slots cut through the conical walls, of a plurality of tapered jaws mounted in said slots each jaw having an inclined face, a plurality of rollers one of which is carried by each jaw and arranged to be rolled up said inclined face by contact with a tool shank, springs for moving the jaws outwardly, a sleeve surrounding the cylindrical and conical portion of the body the conical portion of the sleeve contacting with the tapered edges of the jaws, a spiral slot in the cylindrical portion of the body, a stud fitted in the sleeve and working in said slot, and a spring for rotating the sleeve whereby the sleeve is given a spiral movement to positively move the jaws toward the axis of the aperture, substantially as described.

870,143. CHUCK. VERNER J. WAHLSTROM, New York, N. Y. Filed Feb. 18, 1907. Serial No. 358,106.

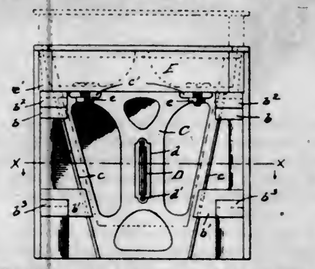


1. In a chuck, the combination with a radially movable jaw provided with a longitudinal channel open at both ends and the base of which has an inclined face, of a roller loosely mounted in the channel and arranged to be rolled up the inclined face by contact with a tool shank, and means for retaining the roller within the channel, substantially as described.

2. In a chuck, the combination with a radially movable jaw provided with a longitudinal channel open at both ends and the base of which has an inclined face, of a roller the diameter of which is greater than the depth of the channel and which is loosely mounted in the channel and arranged to be rolled up the inclined face by contact with a tool shank, and means for retaining the roller within the channel, substantially as described.

3. In a chuck, the combination with a radially movable jaw provided with a longitudinal channel the base of which has an inclined face, of a roller loosely mounted in the channel and arranged to be rolled up the inclined face by contact with a tool shank, the outer edges of the channel walls being bent toward each other to retain the roller within the channel, substantially as described.

870,144. COLLAPSIBLE CORE. JOSEPH A. WALKER, Detroit, Mich. Filed Aug. 6, 1906. Serial No. 329,483.



1. A collapsible core consisting of side and end sections movably interlocked by means of oblique slides and slide grooves, of a wedge shaped core-center engaged with the oppositely disposed end plates, substantially as described.

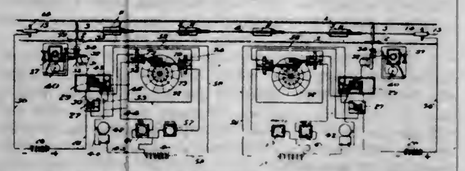
2. A collapsible core consisting of a wedge shaped core-center engaging the end sections of said core, of side members engaging said end section and actuated thereby, substantially as described.

3. A collapsible core consisting of side and end sections movably interlocked by means of oblique slides and slide grooves, of a wedge shaped core-center engaged with the oppositely disposed end plates, of a guide member attached to said core-center and admitting of an upward and downward motion in a groove on the inner surface of the side plates, substantially as described.

4. A core-center having downward and inwardly inclined edges movably inserted in socket grooves of end sections, of side plates movably secured to said end sections by means of oblique slides and grooves, of a guide plate secured to the core-center adapted to move in grooves on the inner surface of the side plates, of a stop screw at the upper portion of said groove, substantially as described.

5. A collapsible core consisting of a plurality of side plates two or more of which are movably attached by means of socket grooves to the outer oblique edges of a core-center and engaging by means of oblique slides and slide grooves the remaining core plates, substantially as described.

870,145. ELECTRIC SIGNALING SYSTEM FOR RAILWAYS. HARRY J. WARTHEN, Washington, D. C., assignor of one-third to Andrew J. Hurley and one-third to Walter A. Reiss, Washington, D. C. Filed Jan. 19, 1907. Serial No. 352,897.



1. An electric railway system embodying a third rail, resistances therein, a contact member carried by a moving part for contact with said third rail, differently colored lights on the engine, and a recording device having differently colored markers in circuit one with each of said lights.

2. An electric railway system embodying a third rail, resistances therein, a contact member carried by a moving part for contact with said third rail, differently colored lights on the engine, a recording device having differently colored markers in circuit one with each of said lights, and an audible signal in circuit with the red light.

3. An electric railway system embodying a third rail, resistances therein, a contact member carried by a moving part for contact with said third rail, differently colored lights on the engine, a recording device having differently colored markers in circuit one with each of said lights, an audible signal in circuit with the red light, and a galvanometer.

4. An electric railway signaling system embodying a third rail, resistances therein, means for automatically alternately displaying differing visual signals, and means for simultaneously making a record thereof.

5. An electric railway signaling system embodying a third rail, resistances therein, means for automatically alternately displaying differing visual signals, means for simultaneously making a record thereof, and an audible signal actuated simultaneously with the visual signal.

6. In an electric railway signaling system, a current-supplying rail, a plurality of independently operable visual signals of different color, recording devices of different colors in circuit with said signals and an audible signal simultaneously operable with one of said visual signals.

7. In an electric railway signaling system, a current-supplying rail, independently operable visual signals of different color, and recording devices one operable with each of said visual signals.

8. In an electric railway signaling system, a current-supplying rail, independently operable visual signals of different color, recording devices one operable with each of said visual signals, and means for throwing one of said recording devices out of operative position as the other is thrown into operation.

9. In an electric railway signaling system, a current-supplying rail, independently operable visual signals of different color, recording devices one operable with each of said visual signals, and an audible signal operable with one of said visual signals.

10. In an electric railway signaling system, a current-supplying rail, independently operable visual signals of different color, recording devices one operable with each of said visual signals, means for throwing one of said recording devices out of operative position as the other is thrown into operation, and an audible signal operable with one of said visual signals.

11. In an electric signaling system for railways, a third rail having resistances therein, visual signals operable independently of each other, a rotary dial, and relatively fixed marking devices operable one in connection with each of said signals.

12. In an electric signaling system for railways, a third rail having resistances therein, visual signals operable independently of each other, a rotary dial, relatively fixed marking devices operable one in connection with each of said signals, and means for throwing one of said marking devices out of operative position as the other is thrown into operation.

13. In an electric signaling system for railways, a third rail having resistances therein, a rotary dial, differently colored markers for coöperation therewith, a solenoid and a switch operable in connection therewith, and an inclosing casing therefor.

14. In an electric signaling system for railways, a third rail having resistances therein, a rotary dial, differently colored markers for coöperation therewith, a solenoid and a switch operable in connection therewith, an inclosing casing therefor, and differently colored lights operatively connected with said markers.

15. In an electric signaling system for railways, a third rail having resistances therein, a rotary dial, differently colored markers for coöperation therewith, a solenoid and a switch operable in connection therewith, an inclosing casing therefor, and an audible signal controlled by said switch.

16. In an electric signaling system for railways, a third rail having resistances therein, a rotary dial, differently colored markers for coöperation therewith, a solenoid and a switch operable in connection therewith, an inclosing casing therefor, differently colored lights operatively connected with said markers, and an audible signal controlled by said switch.

17. In an electric signaling system for railways, a third rail having resistances therein, a rotary dial, differently colored markers for coöperation therewith, a solenoid and a switch operable in connection therewith, an inclosing casing therefor, differently colored lights operatively connected with said markers, and a galvanometer in the circuit.

18. In an electric signaling system for railways, a third rail having resistances therein, a rotary dial, differently colored markers for coöperation therewith, a solenoid and a switch operable in connection therewith, an inclosing casing therefor, an audible signal controlled by said switch, and a galvanometer in the circuit.

19. In an electric signaling system for railways, a third rail having resistances therein, a rotary dial, differently colored markers for coöperation therewith, a solenoid and a switch operable in connection therewith, an inclosing casing therefor, differently colored lights operatively connected with said markers, an audible signal controlled by said switch, and a galvanometer in the circuit.

870,146. TOY. POWHATAN A. WEBB, Atlanta, Ga., assignor of one-half to J. B. Cleland, New York, N. Y. Filed June 24, 1907. Serial No. 380,602.



1. A frame for spinning wheels, comprising two members pivoted together at one end, means at the other end for receiving and holding the wheel, a spring between the two members tending to force them apart, and releasable means for preventing the separation of the members.

2. A frame for spinning wheels, comprising two members pivoted together at one end, means at the other end for receiving and holding the wheel, a spring between the two members tending to force them apart, and a connecting piece pivoted to one member and having its other end bent so as to releasably engage and hold the other member.

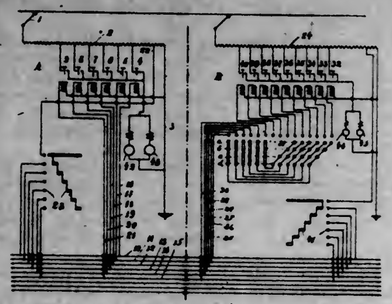
870,147. MULTIPLE-UNIT-CONTROLLING SYSTEM FOR ELECTRIC LOCOMOTIVES OR MOTOR-CARS. RAGNAR WIKANDER, Westerås, Sweden. Filed Jan. 5, 1907. Serial No. 351,006.

1. The combination of a multiple-unit-controlling-system for electric railway-trains, and means whereby the respective voltages supplied to the motors of each unit may be independently regulated.

2. The combination with a multiple-unit-controlling-system for electric railway-trains, of transformers supplying the motor units, means for controlling the connections of the motor units to the said transformers, and means for changing independently the connections of said controlling means, substantially as and for the purpose set forth.

3. The combination with a multiple-unit-controlling-system for electric railway-trains, of transformers supplying the motor-units, said transformers having a greater number of spaced leads than the number of speed stages of the motors, and means for changing independently the groups

of spaced leads used for supplying the motors, substantially as and for the purpose set forth.



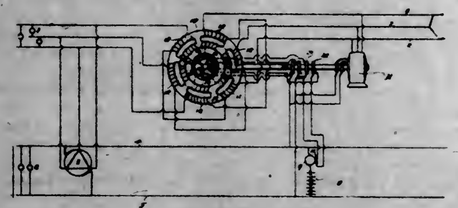
4. The combination with a multiple-unit-controlling-system for electric railway-trains, of transformers supplying the motor-units, a number of switches for regulating the voltages supplied to the motor-units from the said transformers, a number of circuits controlling the said switches, and means for changing the connections between the said switches and the said controlling circuits, substantially as and for the purpose set forth.

870,148. PROCESS OF PRODUCING HYDROGEN PEROXID. RICHARD WOLFFENSTEIN, Berlin, Germany. Filed June 15, 1906. Serial No. 321,847.

1. The process of producing hydrogen peroxid which consists in treating barium peroxid with carbonic acid; the treatment being commenced in alkaline solution and continued in acid solution.

2. The process of producing hydrogen peroxid which consists in causing a solution of carbonic acid to react upon barium peroxid; the latter being in excess during the first phase of the reaction and the former in excess during a subsequent phase.

870,149. SYSTEM OF ELECTRICAL DISTRIBUTION. JOSEPH L. WOODBRIDGE, Philadelphia, Pa. Filed Apr. 19, 1905. Serial No. 256,477.



1. The combination of a source of alternating current power and its transmission lines including a suitable converter and its direct current transmission lines, a battery and its booster, and a booster controller comprising primary and secondary windings arranged in inductive relation and whereof the latter is provided with a commutator and the former is operatively arranged in the alternating current circuit, and also comprising commutator brushes connected respectively with the direct current lines and with the booster field regulating coil, substantially as described.

2. The combination of a regulating coil, alternating and direct current circuits having connected between them a suitable converter, windings in inductive relation and whereof the primary appertains to the alternating circuit and the secondary is provided with a commutator, and brushes respectively appertaining to the coil and to the direct current circuit, substantially as described.

3. A magnetic circuit all parts of which are relatively fixed, alternating current and direct current means for producing a resultant magnetic field in said circuit, a regulating coil, and means for applying to the regulating coil the electro-motive-force produced by the resultant field.

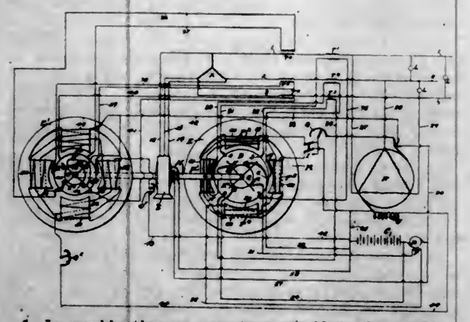
4. The combination of an alternating current circuit, a fixed primary winding operatively arranged therein for producing a rotary magnetic field, a fixed secondary winding in inductive relation to the magnetic field and provided with a fixed commutator, commutator brushes whereof some are provided with a regulating circuit, means for applying constant direct current potential to the other commutator brushes, and means for rotating all the brushes in synchronism with the rotary field, substantially as described.

5. An alternating current source, a magnetic circuit, means for applying to the magnetic circuit exciting current from the source, a winding in inductive relation to the magnetic circuit, a commutator for said winding, two angularly displaced sets of brushes bearing upon said commutator, means for maintaining relative rotation between commutator and brushes in synchronism with the source, means for fixing the potential difference between the brushes of one set, and a regulating coil connected to the other set.

6. An alternating current source, a magnetic circuit, connections for exciting the circuit from the source, a plurality of conducting coils in inductive relation to the magnetic circuit; commutating devices for said coils including two relatively displaced sets of brushes, means for maintaining relative rotation of the brushes and coils in synchronism with the source, means for fixing the potential difference between the brushes of one set, and means for utilizing the current from the other set.

7. An alternating current circuit, a magnetic circuit, a winding in inductive relation to the magnetic circuit and its commutator; a set of brushes for said commutator; means for applying to the magnetic circuit a source of excitation proportional to the current in the alternating current circuit; means for maintaining between said brushes a direct current difference of potential independent of the alternating current excitation, a second set of brushes for the commutator displaced from the first set, a regulating coil connected to the second set of brushes, and means for producing relative rotation of brushes and commutator.

870,150. SYSTEM OF ELECTRICAL DISTRIBUTION. JOSEPH L. WOODBRIDGE, Philadelphia, Pa. Filed May 21, 1907. Serial No. 374,043.



1. In combination an armature provided with winding and commutator, a magnetic field structure in inductive relation to the armature and adapted to complete the magnetic circuit for two sets of magnetic lines through the armature, each corresponding in number of poles with the armature winding but angularly displaced with respect to the other; two sets of brushes bearing on the commutator, a conducting circuit connecting the opposite brushes of one set and including a compensating winding on the field structure and an external regulating coil, a conducting circuit connecting the other pair of brushes, means for producing relative rotation of armature and field structure, and means for supplying exciting current to the armature winding.

2. In combination an armature provided with winding and commutator, a magnetic field structure in inductive relation to the armature and adapted to complete the magnetic circuit for two sets of magnetic lines through the armature, each corresponding in number of poles with the armature winding but angularly displaced with respect to the other; two sets of brushes bearing on the commutator, a conducting circuit connecting the opposite brushes of one set and including a compensating winding on the field structure, a conducting circuit connecting the other pair of brushes, means for producing relative rotation of armature and field structure; and means for supplying exciting current to the armature winding.

3. In combination, an alternating current circuit and its source, a dynamo electric machine comprising armature and magnetic field structure relatively rotatable; means for supplying to the armature alternating currents corresponding in phase relation and proportional to those in the circuit; means for producing relative rotation of armature and field in synchronism with the source; a commutator connected to the armature; two sets of brushes for the commutator, angularly displaced with respect to each other; means for maintaining a predetermined potential across the opposite brushes of one set; a regulating coil connected across the opposite brushes of the other set; and a winding on the magnetic field connected in series with the regulating coil and adapted to compensate for the armature reaction produced by the current from said brushes.

4. In combination, an alternating current circuit and its source, a dynamo electric machine comprising armature and magnetic field structure relatively rotatable; means for supplying to the armature alternating currents corresponding in phase relation and proportional to those in the circuit; means for producing relative rotation of armature and field in synchronism with the source; a commutator connected to the armature; two sets of brushes for the commutator angularly displaced with respect to each other, means for maintaining across the opposite brushes of one set a potential independent of the field excitation, a regulating coil connected across the opposite brushes of the other set; and a winding on the magnetic field connected in series with the regulating coil and adapted to compensate for the armature reaction produced by the current from said brushes.

5. In combination, an alternating current circuit and its source, a dynamo electric machine comprising armature and magnetic field structure relatively rotatable; means for supplying to the armature alternating currents corresponding in phase relation and proportional to those in the circuit; means for producing relative rotation of armature and field in synchronism with the source; a commutator connected to the armature; two sets of brushes for the commutator angularly displaced with respect to each other; means for maintaining a predetermined potential across the opposite brushes of one set; a regulating coil connected across the opposite brushes of the other set; and a winding on the magnetic field adapted to compensate for the armature reaction produced by the current from said brushes.

6. In combination, an alternating current circuit and its source, a dynamo electric machine comprising armature and magnetic field structure relatively rotatable, means for supplying to the armature alternating currents; corresponding in phase relation and proportional to those in the circuit; means for producing relative rotation of armature and field in synchronism with the source; a commutator connected to the armature; two sets of brushes for the commutator angularly displaced with respect to each other; means for maintaining across the opposite brushes of one set a potential independent of the field excitation; a regulating coil connected across the opposite brushes of the other set; and a winding on the magnetic field adapted to compensate for the armature reaction produced by the current from said brushes.

7. In combination an alternating current circuit and its source; a synchronous dynamo electric machine connected to the alternating current circuit and provided with a regulating coil adapted to control the transfer of wattless currents between the machine and the alternating current circuit; an exciter for the regulating coil comprising a magnetic field and an armature provided with a winding and commutator; means for transmitting through the armature winding alternating currents corresponding in phase and proportional to those in the alternating current circuit; two sets of brushes bearing upon the commutator and angularly displaced with respect to each other; means for maintaining a predetermined potential across one set of brushes; electrical connections from the second set to the regulating coil; a winding on the field of the exciter connected in series between the second set of brushes and the regulating coil and adapted to compensate for the armature reaction due to the current from said brushes; and means for producing relative rotation between the field and armature of the exciter in synchronism with the alternating current source.

8. In combination an alternating current circuit and its source, a synchronous dynamo-electric machine connected to the alternating current circuit and provided with a regulating coil adapted to control the transfer of wattless currents between the machine and the direct current circuit; an exciter for the regulating coil comprising a magnetic field and an armature provided with a winding and commutator; means for transmitting through the armature winding alternating currents corresponding in phase and proportional to those in the alternating current circuit; two sets of brushes bearing upon the commutator and angularly displaced with respect to each other; a conducting circuit of low resistance connected across one set of brushes; electrical connections from the second set to the regulating coil; a winding on the field of the exciter connected in series between the second set of brushes and the regulating coil and adapted to compensate for the armature reaction due to the current from said brushes; and means for producing relative rotation between the field and armature of the exciter in synchronism with the alternating current source.

9. In combination an alternating current circuit and its source; a synchronous dynamo-electric machine connected to the alternating current circuit and provided with a regulating coil adapted to control the transfer of wattless currents between the machine and the alternating current circuit; an exciter for the regulating coil comprising a magnetic field and an armature provided with a winding and commutator; means for transmitting through the armature winding alternating currents corresponding in phase and proportional to those in the alternating current circuit; two sets of brushes bearing upon the commutator and angularly displaced with respect to each other; means for maintaining a predetermined potential across one set of brushes; electrical connections from the second set to the regulating coil, and means for producing relative rotation between the field and armature of the exciter in synchronism with the alternating current source.

10. In combination an alternating current circuit and its source; a synchronous dynamo-electric machine connected to the alternating current circuit and provided with a regulating coil adapted to control the transfer of wattless currents between the machine and the alternating current circuit; an exciter for the regulating coil comprising a magnetic field and an armature provided with a winding and commutator; means for transmitting through the armature winding alternating currents corresponding in phase and proportional to those in the alternating current circuit; two sets of brushes bearing upon the commutator and angularly displaced with respect to each other, a conducting circuit of low resistance connected across one set of brushes; electrical connections from the second set to the regulating coil; and means for producing relative rotation between the field and armature of the exciter in synchronism with the alternating current source.

11. In combination, an alternating current circuit and its source, a direct current source, transforming apparatus connected between the alternating current circuit and the direct current source and adapted to interchange-

ably transfer energy from one to the other; a regulating coil adapted to control said transfer of energy; an exciter for said regulating coil comprising a magnetic field and an armature provided with a winding and commutator; means for transmitting through the armature winding alternating current corresponding in phase and proportional to those in the alternating current circuit; two sets of brushes bearing upon the commutator, angularly displaced with respect to each other, means for maintaining a predetermined potential across one set; electrical connections between the second set and the regulating coil; a winding on the field of the exciter connected in series between the second set and the regulating coil and adapted to compensate for the armature reaction due to the current from the second set of brushes; and means for producing relative rotation between the field and armature of the exciter in synchronism with the alternating current source.

12. In combination, an alternating current circuit and its source, a direct current source, transforming apparatus connected between the alternating current circuit and the direct current source, and adapted to interchangeably transfer energy from one to the other; a regulating coil adapted to control said transfer of energy; an exciter for said regulating coil comprising a magnetic field and an armature provided with a winding and commutator; means for transmitting through the armature winding alternating currents corresponding in phase and proportional to those in the alternating current circuit; two sets of brushes bearing upon the commutator angularly displaced with respect to each other; means for maintaining a predetermined potential across one set; electrical connections between the second set and the regulating coil, and means for producing relative rotation between the field and armature of the exciter in synchronism with the alternating current source.

13. In combination an alternating current circuit and its source; a direct current source; transforming apparatus connected between the alternating current circuit and the direct current source and adapted to interchangeably transfer energy from one to the other; one regulating coil adapted to control said transfer of energy; a second regulating coil adapted to control the transfer of wattless currents between the transforming appa ratus and the alternating current circuit; an exciter for each regulating coil each exciter comprising a magnetic field and an armature provided with a winding and commutator; means for transmitting through the armature winding of each exciter alternating currents corresponding in phase and proportional to those in the alternating current circuit; two sets of brushes for each exciter, bearing upon its commutator and angularly displaced with respect to each other; means for maintaining a predetermined potential across one set of brushes on each exciter, electrical connections from the second set of brushes on each exciter to the corresponding regulating coil of the transforming apparatus, a winding on the field of each exciter connected in series between the second set of brushes and the corresponding regulating coil of the transforming apparatus, and adapted to compensate for the armature reaction due to the current from said brushes; and means for producing relative rotation between the field and armature of each exciter in synchronism with the alternating source.

870,151. TOOL. ROLLIN ABELL, Boston, Mass., assignor, by direct and mesne assignments, of one-third to Solomon A. Campbell and one-third to Edward T. Kimball, Boston, Mass. Filed Oct. 19, 1906. Serial No. 339,644.

1. A tool, comprising a stock; a barrel, having its body portion journaled therein and having its end formed as a face of the tool; there being within the journal an annular groove in one part and a groove in the same plane therewith in the other part intersecting it nearly tangentially; and a rolling member located partly in each groove at the intersection.

2. The combination of a stock having a cylindrical opening with a barrel having a cylindrical body journaled therein; there being in the journal an annular groove in one part, and in the other part a groove in the same plane intersecting it nearly tangentially; with a rolling member located partly in each groove and forced yieldingly toward their intersection.



3. The combination of a stock; a barrel journaled therein and having an annular groove within its journaled surface; there being a hole in the stock intersecting the groove nearly tangentially; a ball located partly in the hole and partly in the groove; and a spring pushing it toward their intersection.

4. The combination of a stock; a barrel journaled therein; there being a groove in each part in its journaled surface, intersecting nearly tangentially, one being annular; with a rolling member located partly in each groove and forced yieldingly toward their intersection; the sides of one groove being formed to inclose the rolling member loosely therein.

5. The combination of a stock; a barrel rotatable and movable endwise therein; one of these having an annular groove and the other a groove in the same plane intersecting it nearly tangentially; with a rolling member located partly in each groove and forced yieldingly toward their intersection, thereby latching the parts and normally preventing endwise motion of the barrel.

6. The combination of a stock having a cylindrical opening, and having a cylindrical hole intersecting said opening nearly tangentially; a ball in the hole, projecting less than half its diameter therefrom into said opening; and a barrel rotatable in said cylindrical opening and having an annular groove in which the ball may engage.

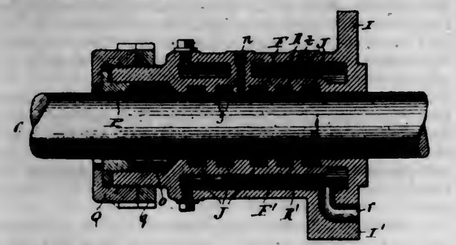
7. A tool, comprising a stock portion; a barrel rotatable therein, having an annular groove externally; there being a hole in the stock in the same plane with the groove and intersecting it nearly tangentially; spherical members located on each side of the intersection, fitting into both hole and groove; and means to retract each spherical member therefrom independently.

8. A tool, comprising a stock portion; a barrel rotatable therein, having an annular groove externally; there being a hole in the stock in the same plane with the groove and intersecting it nearly tangentially; spherical members located on each side of the intersection, fitting into both hole and groove; and a cam adjacent arranged to engage and retract either spherical member.

9. A tool, comprising a stock portion; a barrel rotatable therein, having an annular groove externally; there being a hole in the stock in the same plane with the groove and intersecting it nearly tangentially; spherical members located on each side of the intersection, fitting into both hole and groove; and a cam adjacent arranged to engage and retract either spherical member, said cam being mounted on a shaft projecting externally and having a handle and visible indicator externally to adjust and indicate the direction of action of the tool.

870,152. STUFFING-BOX. ALVAN H. ALBERGER, Buffalo, N. Y. Filed May 14, 1906. Serial No. 316,856.

1. A stuffing box comprising a tubular body having two semi-cylindrical sections which are adapted to receive a movable rod between them, each of said sections containing a semi-cylindrical water jacket or chamber which is independent of and unconnected with the water jacket or chamber of the other section except at one point at which said jackets or chambers communicate with each other by means of a passage, and one of said jackets or chambers having a water inlet and the other a water outlet, substantially as set forth.



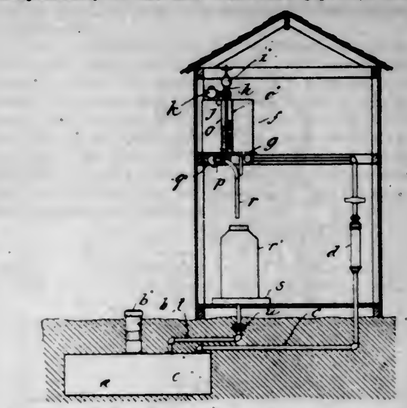
2. A stuffing box comprising a tubular body having two semi-cylindrical sections which are adapted to receive a movable rod between them, each of said sections containing a semi-cylindrical water jacket or chamber which is independent of and unconnected with the water jacket or chamber of the other section except at corresponding ends thereof where the same are connected by a passage formed in a lateral enlargement of the body sections and extending across the joint between the sections, and said jackets or chambers being provided at their corresponding opposite ends with a water inlet and a water outlet, respectively, substantially as set forth.

870,153. STOVE. WILLIAM ANDREW, Norwood, Ohio. Filed Apr. 30, 1906. Serial No. 314,457.

A lining for heating stoves, formed of a series of staves, portions of the staves being cut away forming within themselves a series of complete vertical flues closed at the bottom and at the top, the uncut away portions of the staves forming the front, sides and back of said flues, said flues having contracted openings above the grate into the combustion chamber, whereby the air supporting combustion in the fuel is compelled to pass up through the grate and mix with the generated gases and then pass into the side flues and thence into the combustion chamber above the fuel bed, substantially as described.

870,154. MEASURING APPARATUS FOR GASOLENE OR OTHER OILS. JOHN F. BARKER, Springfield, Mass. Filed June 16, 1906. Serial No. 321,949.

A liquid dispensing apparatus comprising a permanent storage tank provided with inlets and an outlet, a temporary tank having a valved outlet, a pipe permanently fitted in the outlet of the permanent tank and having unrestricted communication with the temporary tank directly through the bottom of the latter, a pump arranged in the line of said pipe intermediate the ends of the latter, a drip pan coöperating with the valved outlet, a pipe between the drip pan and one of the aforesaid inlets to return oil from the pan to the permanent storage tank independently of the first mentioned pipe and said outlet of the permanent storage tank, and a gage tube arranged adjacent the temporary tank for coöperation with the latter.



870,155. ELECTRIC POPCORN-MACHINE. WILLIAM H. BEAN, Gadsden, Ala. Filed Nov. 26, 1906. Serial No. 345,259.

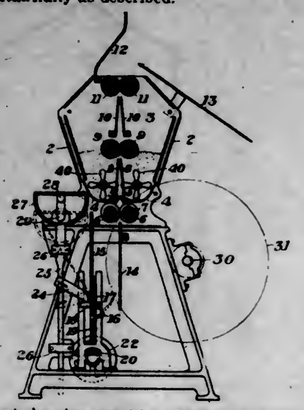
1. In a machine of the class described, a casing, a hollow bracket therein attached to one side thereof, a rack on the upper end of said bracket, an electric heater in the lower portion of said rack and having feed wires extending through said hollow bracket, a pan in the upper portion of the rack and removable therefrom, a motor on the casing, a vertical shaft geared to said motor and having a stirrer to operate in the pan, means to raise and lower said shaft, and a cover for the pan, having an opening through which said shaft extends, and movable vertically on said shaft.

2. In a machine of the class described, a casing, a rack supported therein and having an enlarged upper portion, an electric heater in the lower portion of said rack, a pan in the enlarged upper portion of said rack and removable therefrom, a cover for the casing, removable therefrom, a motor on said cover, and a vertical shaft having a bearing in the cover, geared to said motor and having a stirrer at its lower end to operate in the pan.

870,156. BRANNING-MACHINE. JAMES W. BRYSON, New Castle, Pa., assignor to American Sheet & Tin Plate Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Mar. 29, 1906. Serial No. 308,819.

1. A sheet-cleaning machine having a lower entrance opening, vertically arranged guiding means below the said opening, and an oscillating feeding receptacle arranged to

receive the sheets in inclined position and then tilt their upper edges against the guiding means, said feeder being also arranged to raise said sheet during its backward movement; substantially as described.



2. A sheet-cleaning machine, having a lower entrance opening, a pair of feed rollers below said opening, a guide device below the feed rollers, an oscillating feeder receptacle, having a portion adapted to tilt the sheet in one direction of its movement, and to raise the sheet to the bite of said rolls by its opposite movement, and means for actuating the receptacle; substantially as described.

3. In a sheet-cleaning machine, an oscillating feeding receptacle, arranged to receive a sheet in inclined position and to tilt the sheet in one direction of its movement, and to raise the sheet during its opposite movement, and means for actuating the receptacle; substantially as described.

4. In a sheet-cleaning machine, a pivoted feeding receptacle having a sheet-support below its pivot, and means for oscillating said receptacle, substantially as described.

5. In a sheet-cleaning machine, a pivoted feeding receptacle, means for oscillating said receptacle, and means for adjusting the pivotal point of said receptacle; substantially as described.

6. In a sheet-cleaning machine, a feeding receptacle, consisting of a plurality of pivoted rest-bars having sheet supports at their lower portions below their pivots, and means for oscillating said bars in unison; substantially as described.

7. In a sheet-cleaning machine, a feeding receptacle, consisting of a plurality of rest-bars having sheet-supports at their lower ends, a fulcrum bar connecting the rest-bars above their sheet-supports, and vertically adjustable bearings for the fulcrum bar; substantially as described.

8. In a sheet-feeding machine, having a lower feed-in opening, a vertical sheet guide below the said opening, and a tilting feeder receptacle arranged to first tilt the upper edge of a sheet against the said guide and subsequently to raise the sheet; substantially as described.

870,157. PROCESS OF TREATING AND DEGUMMING POROUS AND FIBROUS SUBSTANCES. GEORGE D. BURTON, Boston, Mass. Filed Sept. 21, 1906. Serial No. 335,592.

1. The process of treating porous and fibrous substances for the purposes of softening, degumming, and separating the same, which consists in immersing said substances in a bath containing a suitable softening agent, heating said bath while the substances are immersed therein, and then subjecting said substances to roller pressure.

2. The process of treating porous and fibrous substances for the purpose of softening, degumming, and separating the same, which consists in immersing said substances in a bath containing a suitable softening agent, and then subjecting said substances to roller pressure.

3. The process of treating porous and fibrous substances for the purpose of softening, degumming, and separating the same, which consists in immersing said substances in a bath containing a suitable softening agent, then subjecting said substances to roller pressure, and then washing the same in a suitable cleansing solution.

4. The process of treating porous and fibrous substances for the purpose of softening, degumming, and separating the same, which consists in immersing said substances in a bath containing a suitable softening agent, then subjecting said substances to roller pressure, and then washing the same in warm water containing oxalic acid.

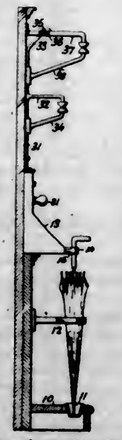
5. The process of treating porous and fibrous substances for the purpose of softening, degumming, and separating the same, which consists in immersing said substances in a bath containing a suitable softening agent, then subjecting said substances to roller pressure, and then washing the same in warm water containing oxalic acid and castile soap.

6. The process of treating porous and fibrous substances for the purpose of softening, degumming, and separating the same, which consists in immersing said substances in a bath containing a suitable softening agent, then subjecting said substances to roller pressure, and then washing the same in a saponaceous solution containing oxalic acid.

7. The process of treating porous and fibrous substances for the purpose of softening, degumming, and separating the same, which consists in immersing said substances in a bath containing a suitable softening acid, then subjecting said substances to roller pressure, and then washing the same in a saponaceous solution containing oxalic acid.

8. The process of treating porous and fibrous substances for the purpose of softening, degumming, and separating the same, which consists in immersing said substances in a bath containing a suitable softening agent, heating said bath while the substances are immersed therein, then subjecting said substances to roller pressure, and then washing the substances in a suitable cleansing solution.

870,158. COAT AND HAT RACK. GEORGE W. CHUBB, Binghamton, N. Y. Filed May 19, 1906. Serial No. 317,769.



1. In a device of the character described, the combination with a stationary jaw, of a slidably mounted jaw cooperating with the stationary jaw, a pivotally mounted lever connected to the slidably mounted jaw, a slide connected to the lever, a hook, and a rod connected to the slide and provided with a lateral arm coöperating with the hook.

2. In a device of the character described, the combination with a stationary jaw, of a slidably mounted jaw cooperating with the stationary jaw, a pivotally mounted lever, a link connection between the lever and slidably mounted jaw, a slide, a link connection between the slide and lever, a hook, and a rod secured to the slide and provided with an arm coöperating with the hook.

3. In a device of the character described, the combination with a stationary jaw, of a slidably mounted jaw coöperating with the stationary jaw, a pivotally mounted lever, a link connection between the lever and slidably mounted jaw, a slide, a link connection between the slide and lever, a hook, a rod secured to the slide and provided with an arm coöperating with the hook, and a locking means carried by the slide.

4. In a device of the character described, the combination with a stationary jaw, of a movable jaw slidably mounted upon the stationary jaw, a pivotally mounted lever connected to the movable jaw, and a slide connected to the lever.

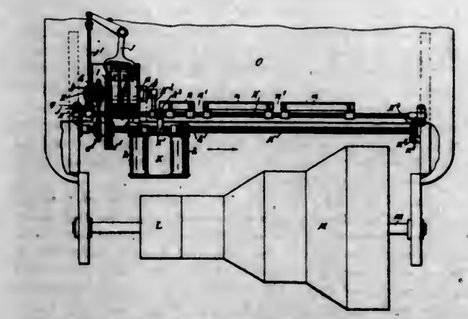
5. In a device of the character described, the combination with a stationary jaw, of a movable jaw slidably mounted upon the stationary jaw, a pivotally mounted lever, a link connection between the lever and the slidably mounted jaw, a slide, and a link connection between the slide and the lever.

6. In a device of the character described, the combination with coöperating jaws, of operating means connected with one of the jaws, a lock secured to the operating means and having the bolt thereof provided with a notch, a pivotally mounted lever, a member secured to the lever for engagement in the notch of the bolt, and means by which the lever may be operated to withdraw the member from the notch.

7. In a device of the character described, the combination with a stationary jaw, of a movable jaw mounted for coöperation with the stationary jaw, a pivotally mounted lever connected to the movable jaw, a slide connected with the lever, a lock secured to the slide, and a retractable means adapted to prevent the withdrawal of the bolt of the lock.

8. In a device of the character described, the combination with a stationary jaw, of a movable jaw mounted for coöperation with the stationary jaw, a pivotally mounted lever connected to the movable jaw, a slide connected with the lever, a lock secured to the slide and having its bolt provided with a notch, a pivotally mounted lever, a member secured to the lever for engagement in the notch of the bolt, and means by which the lever may be operated to withdraw the member from the notch.

870,159. BELT-SHIFTER FOR MOTOR-VEHICLES. CHARLES H. DENT, Tamworth, England. Filed Apr. 16, 1906. Serial No. 312,021.

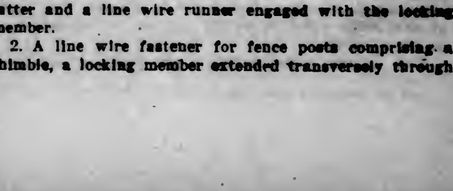


1. In a mechanically operated belt-shifting gear for use on a motor vehicle or car driven by a belt passing over two stepped cones, the combination with the driving belt and one of the stepped cones of a belt shifter and means for causing the belt shifter when once started by the driver to traverse the driving belt until the next speed is reached, substantially as and for the purposes described herein.

2. In a mechanically operated belt-shifting gear for use on a motor vehicle or car driven by a belt passing over two stepped cones, the combination with one of the stepped cones of a rocking shaft, a belt shifter, a horn carried by the belt shifter, wings or flaps carried by the rocking shaft and located intermediate between said horn and stepped speed cone, gearing for moving said belt shifter in either direction and means connecting said gearing and rocking shaft, substantially as and for the purposes described herein.

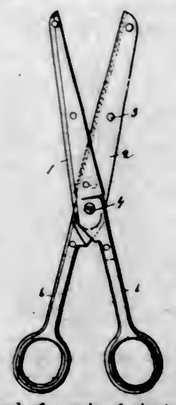
3. In a mechanically operated belt-shifting gear for use on a motor vehicle or car driven by a belt passing over two stepped cones, the combination with a wormed rod or screw and a belt shifter of three pulleys, a belt passing round said pulleys, chain and tooth gearing connecting said pulleys to the wormed rod or screw, a rocking shaft provided with wings or flaps, and a horn carried by said belt shifter and adapted to coöperate with the wings or flaps, substantially as described herein and illustrated by the accompanying drawings.

870,160. AUTOMOBILE-VEIL. DORA DUNCAN. New York, N. Y. Filed Apr. 5, 1907. Serial No. 366,638.



An automobile veil comprising a strip of veiling divided longitudinally from each end and thereby forming two pairs of flaps, one pair of flaps being adapted to be brought around and tied under the chin and the other pair of flaps being adapted to pass around the neck and tied.

870,161. SCISSORS. JOHANN FEINENBURG, Auf der Höhe, near Solingen, Germany. Filed July 2, 1907. Serial No. 381,863.



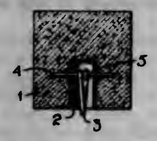
Scissors composed of a pair of pivoted soft metal members, and steel blades secured thereto, said blades being provided with slots back of the pivot, and turned up tongues defined by said slots, substantially as specified.

870,162. CEMENT FENCE-POST AND LINE-WIRE FASTENER THEREFOR. WILLIAM M. GIBBS, Anderson, Ind. Filed Nov. 28, 1906. Serial No. 345,465.

1. A line wire fastener for fence posts comprising a thimble, a locking member extending transversely through the thimble at a point removed from the inner end of the latter and a line wire runner engaged with the locking member.

2. A line wire fastener for fence posts comprising a thimble, a locking member extended transversely through

the thimble at a point remote from the inner end of the latter and a line wire runner having hooked terminals designed to pass between said member and the inner end



of the thimble for engagement with the member.

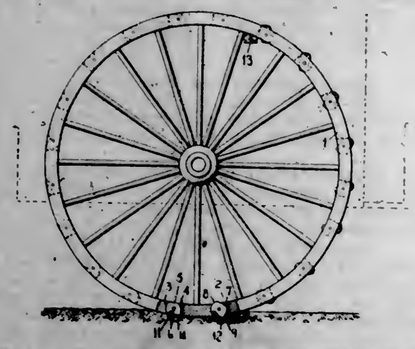
3. A line wire fastener for fence posts comprising a thimble, a locking member extended transversely through the thimble at a point remote from the inner end of the latter and having end portions projected beyond the sides of the thimble and a line wire runner engaged with the locking member.

4. A line wire fastener for fence posts comprising a thimble, closed at one end and provided with transversely-disposed orifices, an anchoring member engaging the orifices and extending beyond the thimble, and a line wire runner having hooked terminals to engage the anchor.

5. A line wire fastener for fence posts comprising a thimble, an anchoring member combined therewith, and a line wire runner combined for longitudinal and vertical movement with the anchor.

6. The combination with a cement fence post, of a plurality of supporters molded therein, each comprising a cylindrical thimble, closed at one end and provided with transverse orifices, an anchoring member engaging the orifices and projecting beyond the sides of the thimble, and a line wire runner having hooked terminals to engage loosely with the anchor.

870,163. TRACTION-WHEEL. ALFRED E. GLASCOCK, Washington, D. C., assignor, by mesne assignments, to Farm Motor Company, a Corporation of South Dakota. Filed Apr. 9, 1907. Serial No. 367,229.



1. A traction wheel having its rim provided with openings, movable tractors mounted in said openings and normally lying wholly within the same, and means whereby said tractors will be automatically projected when the wheel passes over a soft traction surface.

2. A traction wheel provided with a rim having openings therein, tractors pivoted in said openings and normally lying wholly within the same, and means whereby said tractors will be automatically projected when the wheel passes over a soft traction surface.

3. A traction wheel having a rim provided with openings, said openings having three straight walls and one arcuate wall and tractors pivoted in said openings.

4. A traction wheel having a rim provided with openings, said openings having three straight walls and one arcuate wall, tractors pivoted in said openings and having arcuate sides which fit snugly against the arcuate walls of the openings.

5. A traction wheel having a rim provided with openings having three straight walls and an arcuate wall, tractors pivoted in said openings and having sides which meet at an acuminate edge.

6. A traction wheel having a rim provided with openings having three straight walls and an arcuate wall, tractors having arcuate sides which fit snugly against said arcuate walls and sides which meet at an acuminate edge.

7. A traction wheel having a rim provided with openings having three straight walls and an arcuate wall, tractors pivoted in said openings and having arcuate sides which fit snugly against said arcuate walls and sides which meet at an acuminate edge.

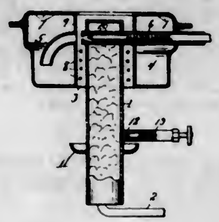
8. A traction wheel having a rim provided with openings, tractors pivoted in said openings and having sides which meet at an acuminate edge, and means whereby said tractors will be automatically projected when the wheel passes over a soft traction surface.

9. A traction wheel having a rim provided with openings, tractors pivoted in said openings and having sides provided with grooves.

10. A traction wheel having a rim provided with openings, tractors pivoted in said openings and having sides with grooves extending transversely with relation to the rim.

11. A traction wheel having a rim provided with openings, tractors pivoted in said openings and having sides which meet at acuminate edges which are located upon one side of the pivots, and grooves located upon the opposite sides of the pivots.

870,164. ALCOHOL-BURNER. HAROLD P. GLAZIER, Chelsea, Mich., assignor to Glazier Stove Company, Chelsea, Mich., a Corporation. Filed Sept. 17, 1906. Serial No. 334,885.

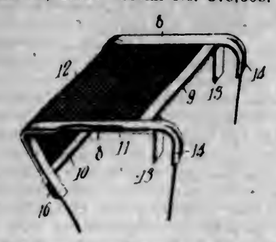


1. In an alcohol vaporizer, in combination with a retort, a feed pipe leading thereinto from beneath, a gas containing chamber surrounding the top of the retort and spaced therefrom, the interior side walls of said chamber and its top being perforated to permit the flow of vapor therethrough, and a conductor pipe within said gas containing chamber adapted to conduct the vapor liberated from the retort directly to the interior of said gas containing chamber, substantially as described.

2. In an alcohol vaporizer, the combination of a stand pipe, a fibrous filling therefor, a supply pipe leading thereinto from beneath, a gas distributing chamber surrounding the upper portion of the pipe and spaced therefrom at the top and sides, the top of said chamber being perforated for the escape of vapor for ignition thereabove, and means within said chamber whereby the direct flow of vapor from said stand pipe into said distributing chamber may be controlled, substantially as described.

3. An alcohol burner, having in combination with a retort provided with means for feeding fluid thereinto, a combustion chamber surrounding the same and having its walls adjacent thereto at the top and sides spaced therefrom, the top wall of said chamber being perforated for the escape of gas whose ignition thereabove is desired, means within said chamber for regulating the direct flow of gas from the retort thereinto, a cup for initial lighting extending about said retort below said chamber, and a valve whereby the flow of alcohol from the retort into said cup may be regulated, substantially as described.

870,165. SCREEN FOR EAVES-TROUGHS. JEFFERSON D. HAGLER and MELL PICKENS, Vernon, Tex. Filed June 18, 1907. Serial No. 379,609.



1. An eaves trough protector including a frame having transverse pockets and provided at its opposite ends with means for engagement with a trough, a screen carried by the frame and forming a cover for the top of the trough, and attaching members passing through the pockets and having their opposite ends extended laterally beyond said frame.

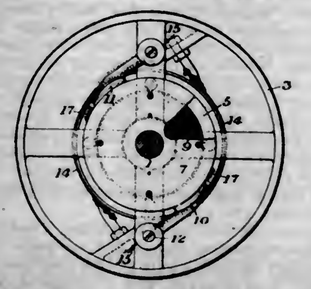
2. An eaves trough protector including a frame having transverse pockets and provided at its opposite ends with spaced attaching arms for engagement with the adjacent longitudinal edges of the trough, a screen carried by the frame and forming a cover for the top of the trough, and wires passing through pockets and extending beneath said trough.

3. An eaves trough protector including a frame having its opposite ends bifurcated to produce spaced attaching arms for engagement with the trough, and a screen carried by the frame and forming a cover for the top of the trough, one end of the frame and screen being foldable downwardly to accommodate troughs of different widths.

4. An eaves trough protector comprising a frame including side bars connected by end bars, the opposite ends of the side bars being extended longitudinally beyond the adjacent end bars and bifurcated to form spaced attaching members for engagement with the adjacent longitudinal edges of the trough, and a screen carried by the frame and forming a cover for the top of the trough.

5. An eaves trough protector including side bars bent upon themselves to form intermediate pockets and connected by end bars, the side bars being extended longitudinally beyond the end bars and provided with spaced depending attaching members for engagement with the adjacent longitudinal edges of the trough, a screen seated in said pockets and forming a cover for the top of the trough, and wires seated in the pockets and having their opposite ends extended longitudinally beyond the attaching members.

870,166. ELECTRIC CLUTCH. NOAH S. HARTER, Waukegan, Ill., assignor to American Steel & Wire Company, Worcester, Mass., a Corporation of New Jersey. Filed June 25, 1907. Serial No. 380,676.



1. In a clutch, a driving member, a member to be driven thereby, friction straps for connecting said members, and electro-magnetic means carried by a third and stationary member and arranged to operate the friction straps; substantially as described.

2. In a clutch, a constantly driven pulley loosely mounted on the shaft to be driven, a clutch member fixedly secured to said shaft, a stationary coil surrounding said shaft, a ring of magnetic material surrounding the coil, a plurality of pivoted armatures carried by the pulley, and friction devices connected to the armatures and arranged to engage the relatively fixed clutch member; substantially as described.

3. In a clutch, a constantly driven driving member, a member to be driven thereby, friction straps for connecting said members, a non-rotating coil or winding, and armatures actuated by the coil or winding and arranged to actuate the straps; substantially as described.

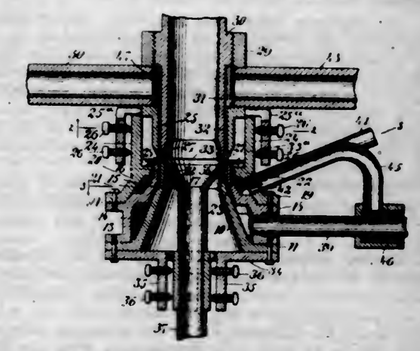
4. In an electric clutch, a constantly driven driving member, a member to be driven thereby, friction straps carried by the constantly driven member and arranged to engage the member to be driven thereby, and electromagnetic means for actuating said straps; substantially as described.

5. In an electric clutch, a member to be driven, a driving member, pins or shafts journaled in the driving member, straps connected to the pins or shafts and arranged to frictionally engage the member to be driven, a fixed coil or winding, and armatures actuated thereby and connected to the pins or shafts; substantially as described.

6. In a clutch of the character described, a stationary member, a coil carried thereby, a constantly driven member, pivoted armatures carried by the constantly driven member, a member to be driven, and friction devices operated by said armatures for connecting the member to be driven with the constantly driven member; substantially as described.

7. In an electric clutch, a fixed member having a coil, a magnetic ring surrounding said coil, a constantly driven member, armatures carried by the constantly driven member and arranged to engage said ring, shafts to which the armatures are connected, and clutch devices connected to said shafts; substantially as described.

870,167. AIR-INSPIRATOR. JOHN HEIMLICH, Port Clinton, Ohio. Filed Dec. 19, 1904. Serial No. 237,462.



1. An inspirator comprising a casing having an annular expansion-chamber provided with an annular discharge orifice, a fire-chamber surrounding said expansion-chamber, and an atmospheric air-inlet adjacent to said orifice.

2. In an inspirator, the combination of a casing having an annular expansion-chamber provided with an annular discharge orifice, a fire-chamber surrounding the expansion-chamber, an inlet-opening for comparatively cool air adjacent to said orifice, pipes opening into said chambers, and an outlet-pipe leading from the fire-chamber and entering a casing or jacket surrounding the pipe leading to the expansion-chamber.

3. In an inspirator, the combination with a casing having an annular expansion-chamber provided with an annular discharge orifice, a fire-chamber surrounding said expansion-chamber, and an inlet-opening for comparatively cool air adjacent to the outlet, of a partition in the

heating-chamber and inlet and outlet pipes opening into the fire-chamber at each side of the partition.

4. An inspirator comprising two walls one of which encircles the other, forming an intermediate annular expansion-chamber having a discharge orifice, walls furnishing a passage situated opposite said orifice and leaving an air port, means for supplying air to the expansion-chamber, and means for heating a wall of the expansion-chamber.

5. An inspirator comprising two walls, one of which encircles the other, forming an annular expansion-chamber, a jacket surrounding the outer chamber-wall and forming a fire-chamber, walls furnishing an annular passage situated opposite the discharge orifice of the expansion-chamber and leaving an inlet-opening, means for supplying air to the expansion-chamber and a source of heat in communication with the fire-chamber.

6. An inspirator comprising two walls one of which encircles the other, forming an annular expansion-chamber, a jacket surrounding the outer wall of said chamber and forming a fire-chamber, walls supported upon the jacket and furnishing a passage situated opposite the discharge orifice of the expansion-chamber and leaving an inlet-opening, means for supplying air to the expansion-chamber, and a source of heat in communication with the fire-chamber.

7. An inspirator comprising two walls one of which encircles the other, forming an intermediate annular expansion-chamber having a discharge orifice, walls situated in substantial alinement with those first-named, and forming a passage the entrance of which is situated opposite the discharge orifice of the expansion-chamber, means for supplying air to the expansion-chamber, and means for heating a wall of the expansion-chamber.

8. An inspirator comprising two walls one of which encircles the other forming an intermediate annular expansion-chamber having a discharge orifice, walls situated in substantial alinement with those first-named and forming a passage the entrance to which is situated opposite said discharge orifice, the two outer walls having closely adjacent chamfered ends, means for supplying air to the expansion-chamber, and means for heating a wall of the chamber.

9. An inspirator comprising two walls one of which encircles the other, forming an annular expansion-chamber, a jacket surrounding the outer chamber-wall and forming a fire-chamber, walls forming a passage the entrance to which is situated opposite the discharge orifice of the expansion-chamber, both walls and jacket having meeting projections, means for supplying air to the expansion-chamber, and a source of heat in communication with the fire-chamber.

10. An inspirator comprising two walls one of which encircles the other, forming an annular expansion-chamber, a jacket surrounding the outer wall of said chamber and forming a fire-chamber, walls furnishing a passage the entrance to which is situated opposite the discharge orifice of the expansion-chamber, both walls and jacket having projecting arms, screws extending through one set of projecting arms and contacting with the other arms, means for supplying air to the expansion-chamber, and a source of heat in communication with the fire-chamber.

11. An inspirator comprising two walls one of which encircles the other, forming an intermediate annular expansion-chamber having a discharge orifice, walls furnishing a passage the entrance to which is situated opposite said discharge orifice, the inner of these last-named walls being adjustable, means for supplying air to the chamber, and means for heating a wall of the chamber.

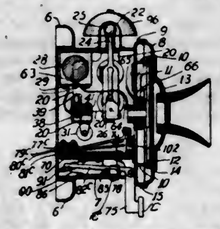
12. An inspirator comprising two walls one of which encircles the other, forming an annular expansion-chamber, a jacket surrounding the outer wall of said chamber and forming a fire-chamber, walls furnishing a passage the entrance to which is situated opposite the discharge orifice of the expansion-chamber, means for supplying air to the expansion-chamber, means for insulating the heating-chamber from the inlet-opening, and a source of heat in communication with the fire-chamber.

13. An air inspirator comprising a double walled body having therein an annular atmospheric air inlet, an annular expansion-chamber orifice, and an annular air outlet port, the said orifice, port and inlet all being in communication at a common point, substantially as described.

14. An air inspirator comprising a double walled body having therein an annular atmospheric air inlet, an annular expansion-chamber orifice, and an annular air outlet port, the said orifice, port and inlet all being concentric and in close communicating relation with each other.

15. An air inspirator comprising a double walled body having therein an annular atmospheric inlet, an annular expansion-chamber orifice, an annular air outlet port, said orifice, port and inlet being in close communication and concentric relation with each other, and an annular fire-chamber encircling the expansion-chamber in proximity to its point of communication with the atmospheric air inlet and air outlet port.

870,168. INTERCOMMUNICATING TELEPHONE. WILLIAM W. HENRY, Wollaston, Mass., assignor to Samuel H. Couch, Boston, Mass. Filed Sept. 17, 1906.



1. A bell movement; induction coil; receiver switch and necessary connectors, all removably secured within a telephone box; said box; and a switch adapted to progressively close the talking and ringing circuits through the operation of a lever; and said lever, both removably secured within said box.

2. A bell movement; induction coil; receiver switch; and necessary connectors, all removably secured within a telephone box; said box; and a switch adapted to progressively close the talking and ringing circuits through the operation of a lever; said lever; and automatic locking means attached to said lever for maintaining said talking circuit, all removably secured within said box.

3. A bell movement; induction coil; receiver switch; and necessary connectors, all removably secured within a telephone box; said box; and a switch adapted to progressively close the talking and ringing circuits through the operation of a lever; said lever; and automatic locking means attached to said lever for maintaining said talking circuit, automatic releasing means for causing release of said lock through the operation of the receiver-supporting lever, and said receiver-supporting lever, all removably secured within said box.

4. A formed metal telephone box comprising a base, a body rigidly secured to said base, and a two-part cover removably secured to said body and adapted to support the transmitter; in combination with a bell movement, induction coil, receiver switch, signaling switch, and necessary connectors, all removably secured within said body.

5. A bell movement, induction coil, receiver switch, and necessary connectors, all removably secured within a telephone box; said box and a cover removably secured to same; in combination with signaling means operated by a lever, and said lever, both removably secured within said box, one end of said lever protruding from the box and being provided with a button.

6. In inter-communicating telephones, a bell movement, induction coil, receiver switch and necessary connectors, all removably secured within a telephone box; said box and cover; in combination with a composite switch comprising a base removably secured within said box, a series of bent levers pivotally mounted on said base, whose long arms protrude from the body of said box and are provided with buttons; a series of groups of circuit-closers supported upon said base, of which each circuit-closer is normally out of contact with every other in its group, and each group is positioned so as to be operated by a different one of said levers to cause progressive contact therein, thereby closing the talking and ringing circuits, substantially as described.

7. In inter-communicating telephones, a bell movement, induction coil, receiver switch and necessary connectors, all removably secured within a telephone box; said box and cover; in combination with a composite switch comprising a base removably secured within said box, a series of bent levers pivotally mounted on said base, a series of groups of circuit closers supported on said base, of which each circuit closer is normally out of contact with every other in its group and each group is positioned to be operated by a different one of said levers to cause progressive contact therein, thereby closing the talking and ringing circuits; and locking means for automatically maintaining said talking circuits, consisting of a series of arms pivotally mounted on the series of bent levers, all adapted to independently enter into locking connection with said base, substantially as set forth.

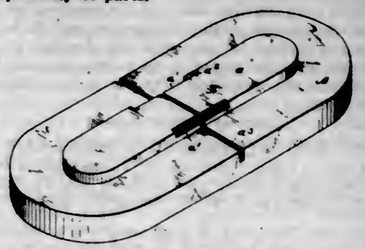
8. In inter-communicating telephones, a bell movement, induction coil, receiver switch and necessary connectors, all removably secured within a telephone box; said box and cover; in combination with a composite switch comprising a base removably secured within said box, a series of bent levers pivotally mounted on said base, a series of groups of circuit closers supported on said base, of which each circuit-closer is normally out of contact with every other in its group, and each group is positioned to be operated by a different one of said levers to cause progressive contact therein, thereby closing the talking and ringing circuits, automatic locking means attached to said levers for maintaining such talking circuits; and automatic releasing means operated by the receiver supporting lever for releasing said locking means; and said receiver supporting lever, substantially as set forth.

9. In inter-communicating telephones, the combination of a bell movement, induction coil, receiver switch and necessary connectors, all removably secured within a telephone box; said box and cover; and a composite switch comprising a base removably secured within said box, a plurality of bent levers pivotally mounted upon said base, each adapted to cause progressive contact of a different series of circuit-closers, which are normally out of such contact; said circuit-closers, supported on said base; and mechanism supported on said base and positioned to be operated independently by each of said levers for the purpose of breaking a contact and preventing this station from being called, substantially as set forth.

10. In inter-communicating telephones, the described bell movement, induction coil, receiver switch and necessary connectors, all mounted as a unit on a frame adapted to be removably secured within a telephone box; said box of formed metal construction, and a two-part cover removably secured to said box; in combination with a composite switch comprising a base removably secured within said box, a plurality of levers pivotally mounted on said base and each adapted to progressively move a different series of circuit closers into contact; said series of circuit closers supported on said base and normally out of such contact; a series of buttons mounted outside of said box on protruding ends of said levers, each adapted to receive a suitable label; automatic locking means attached to each of said levers for independently causing the retention of certain of the above named contacts; and automatic releasing means attached to the receiver supporting lever for causing the release of said lock; and said receiver supporting lever, substantially as set forth.

870,169. APPARATUS FOR MAKING RAIL-BONDS. ALBERT B. HERRICK, Ridgewood, N. J., assignor to The Electric Railway Improvement Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 5, 1904. Serial No. 206,496.

1. In apparatus for manufacturing rail-bonds, a block provided with a raised surface about which a conductor is adapted to be wound and with slots dividing said surface into a plurality of parts.



2. In apparatus for manufacturing rail-bonds, a block provided with a raised surface of an outline similar to the combined outline of two of said bonds about which a conductor is adapted to be wound and a transverse slot dividing said surface into two similar parts.

3. In apparatus for manufacturing rail-bonds, a block provided with a raised boss of an outline similar to that of the bond and around which the latter may be formed, said boss having two oppositely disposed spaces cut into its sides.

4. In apparatus for manufacturing rail-bonds, a block provided with a raised boss of an outline similar to that of the bond and around which the latter may be formed, said boss having two oppositely disposed spaces cut in its sides, said spaces intersecting the plane of the outer or main surface of the boss.

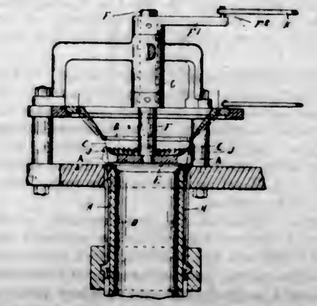
5. In apparatus for manufacturing rail-bonds, a block provided with a raised surface about which a conductor is adapted to be wound and with slots dividing said surface into a plurality of parts, said raised surface having spaces cut into its sides at points adjacent to said slots.

6. In apparatus for manufacturing rail-bonds, a block provided with a raised boss, of an outline similar to the combined outlines of two of said bonds, about which a conductor is adapted to be wound, and a transverse slot dividing said boss into two similar parts, said boss having spaces cut into its sides at the points of their intersection by said slot.

7. In apparatus for manufacturing rail-bonds, a block provided with a raised boss of substantially elliptical outline about which a conductor is adapted to be wound, and a transverse slot dividing said boss into two similar parts.

8. In apparatus for manufacturing rail-bonds, a block provided with a raised boss of substantially elliptical outline about which a conductor is adapted to be wound, and a transverse slot dividing said boss into two similar parts, said boss having spaces cut into its sides at the point of their intersection by said slot.

870,170. WARP-KNITTING MACHINE. HENRY HILL, Nottingham, England. Filed Dec. 17, 1906. Serial No. 348,278.

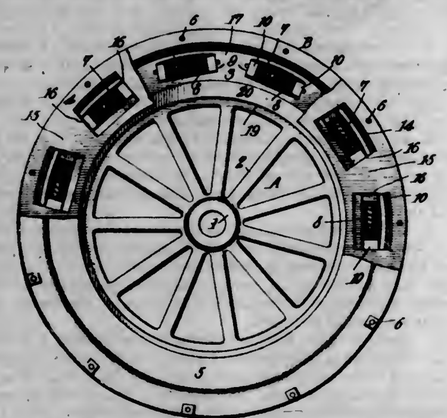


1. In a warp knitting machine the combination of the needles, the thread guiding mechanism, and jacks which are always retained in mesh with the threads and are re-

ciprocated with the thread guiding mechanism, substantially as described.

2. In a warp knitting machine the combination of the needles, the thread guiding mechanism, and jacks which are always retained in mesh with the threads and are reciprocated with the thread guide mechanism, and needle-latch stop mechanism carried by the jacks, substantially as described.

870,171. SPRING-CUSHIONED AUTOMOBILE-WHEEL. WALTER A. HILL, Callicoon, N. Y., assignor of one-half to Valentine Scheidell and Guernsey Meyers, Callicoon, N. Y. Filed Jan. 2, 1907. Serial No. 350,392.



1. The combination in a wheel, of a body section, the tire portion of which is provided with a plurality of openings, independent compression springs arranged within the openings, said springs being arranged in an annular series, blocks at the end of the springs, said blocks projecting beyond the sides of the body section, and a tire section having openings, the end walls of which form wedges for engagement with the projecting blocks to thereby compress the springs in successive order during the rotation of the wheel.

2. A wheel comprising a body section having a notched felly, springs arranged in the notches of the felly, members interposed between the ends of the springs and end walls of the notches and projecting from opposite sides of the felly, and a tire section having a pair of plates provided with slots arranged with their end walls engaging the said members to compress the springs by the relative movement of the body and tire sections.

3. A wheel comprising a body section having a notched felly, a compression spring in each notch, members at the ends of the springs projecting from opposite sides of the felly, a pair of plates disposed at the sides of the felly and movable with respect thereto and having slots forming wedges between the adjacent members of juxtaposed springs, and cover plates secured to the said slotted plates.

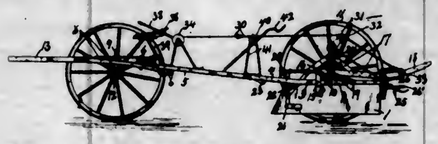
4. A wheel comprising a body section, a rim section movable with respect thereto, and a plurality of cushioning devices between the sections, each device comprising a compressible member on one section and wedges on the other section operating on the said member, the compression force being exerted lengthwise of the cushioning devices, and in a direction substantially concentric with the periphery of the wheel.

5. A wheel comprising a body section, a rim section movable with respect thereto, and a plurality of cushioning devices between the sections, each device comprising a compression spring, members arranged at the ends thereof, and wedges engaging the said members to compress the spring, each spring being helical in form and compressible endwise, and in a direction approximately concentric to the periphery of the wheel.

6. A wheel comprising a body section, a rim section movable with respect thereto, and a plurality of cushioning devices between the sections, each device comprising a compression spring and members arranged at the ends thereof, a rod extending through the spring and members for holding the same on one section, and wedges on the other section engaging the said members to compress the spring.

7. A wheel comprising a body section having a felly, a rim section, and cushioning devices between the same, said rim section comprising a pair of rings disposed on opposite sides of the felly and projecting outwardly over the latter, cover plates disposed on the outside of the rings, bolts passing through the rings and plates, and washer plates arranged between the felly and rings.

870,172. WHEEL-SHOVEL. CHARLES T. HOOKWAY, Syracuse, N. Y. Filed Jan. 24, 1907. Serial No. 353,924.



1. In combination with the front and rear trucks of a vehicle, a reach-bar connecting said trucks and pivoted to the front truck, a tiltable shovel mounted upon the rear truck below the rear axle, means to tilt the shovel to and from its digging position, and a detent mounted on the rear truck and adapted to drop by gravity into holding engagement with the rear end of the shovel to prevent overturning of said shovel during the operation of loading.

2. In combination with the front and rear axles of a vehicle, a reach-bar pivotally connected to the front axle, an open frame beneath the rear axle secured to the rear end of the reach bar, a shovel pivotally mounted upon said frame and tiltable vertically, and means to tilt said shovel to and from its digging position.

3. In combination with the front and rear axles of a vehicle, and wheels thereon, a reach-bar having its front end pivoted to the front axle and extending rearwardly therefrom, an open frame secured to the front end of the reach-bar, a shovel pivoted to said frame below the rear axle, a vertically rocking frame journaled in the wheels and connected to said shovel whereby the latter may be rocked upon its pivot to and from its digging position, a cable connected to the vertical rocking frame and a winding drum connected to the cable, and means for rotating said drum.

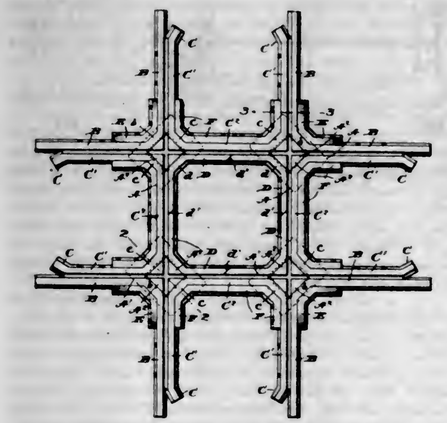
4. A wheel shovel comprising a front axle and a rear axle, and supporting wheels thereon, a reach-bar extending rearwardly from the rear axle and connected thereto, an open frame secured to the rear end of the reach-bar, a shovel pivotally mounted upon said frame below the rear axle, and means for tilting said shovel upon its pivot to and from its digging position.

5. In combination with the front and rear axles of a four wheeled vehicle, a reach-bar pivotally connected to the front axle, a shovel supporting frame secured to the reach bar, a shovel pivoted to said frame to tilt vertically, means to tilt said shovel vertically to and from its digging position, and separate means to hold the shovel against overturning during the digging operation.

6. In combination with the front and rear axles of a four wheeled vehicle, a reach-bar pivoted to the front axle, an open frame secured to the reach-bar, a shovel pivoted to the open frame to tilt vertically, and means including a drum and cable for tilting said shovel upon its pivot.

7. In combination with the front and rear axles of a four wheeled vehicle, a reach-bar pivoted to the front axle, an open frame secured to the reach-bar, a shovel pivoted to the open frame to tilt vertically, means including a drum and cable for tilting said shovel upon its pivot, and means for engaging the shovel and preventing its overturning during the loading operation.

870,173. RAILWAY-CROSSING. ARTHUR HOSMER, Fort Worth, Tex., assignor of one-half to James D. Collett, Fort Worth, Tex. Filed Jan. 24, 1907. Serial No. 353,923.



1. In a railway crossing, oppositely disposed angular rail members, the diverging arms of which form parts of the running rails of the several tracks of the crossing, and a substantially U-shaped rail member secured between the adjacent arms of said rail members with its base in alinement with the other arms of said rail members.

2. In a railway crossing, an integral frog or center piece comprising a base and a rectangular portion extending upwardly therefrom, and a rail member provided with a portion supported upon the base of said frog and lying along side of one side of the rectangular portion thereof and with a bent portion in alinement with one of the tracks of said crossing.

3. In a railway crossing, a frog or center piece, and a rail member comprising an intermediate portion lying along side of said frog and end portions extending at an angle from said intermediate portion and forming parts of the tracks of said crossing.

4. In a railway crossing, a frog or center piece having crossed grooves in the top extending transversely thereof, and a rail member comprising an intermediate portion lying along side of one side of said frog and end portions extending at an angle from said intermediate portion and in alinement with the grooves in the top of the frog.

5. In a railway crossing, a frog comprising a base and a portion positioned centrally thereof, and a rail member comprising an intermediate portion supported upon said base adjacent one side of the portion of the frog and end portions extending at an angle from said intermediate portion and in alinement with the tracks of the crossing.

6. In a railway crossing, a frog or center piece, a rail member comprising an intermediate portion lying along side of said frog and end portions extending at an angle from said intermediate portion and forming parts of the tracks of said crossing, and an angular brace secured in the corner of said rail member.

7. In a railway crossing, a corner piece, a plurality of rail members extending from said corner piece and forming parts of the rails and guard rails of both lines of said crossing, said rail members having bent portions engaging said center piece.

8. In a railway crossing, a frog comprising a base and a portion arranged centrally thereof, and a rail member having a portion forming a part of one of the tracks of said crossig and a bent portion supported upon the base of said frog, the side of the central portion of said frog being provided with recessed portions adapted to receive the adjacent portions of the head and flange of said rail member.

9. In a railroad crossing, track running rails, crossing running rails in alinement with said track running rails, and guard rails for the running rails of the crossing, said guard rails comprising four angular rail members having their abutting ends beveled.

10. In a railway crossing, a pair of frogs or center pieces each comprising a base and a portion of approximately parallelogram form arranged centrally thereof, rail members forming parts of the tracks of said crossing and provided with bent portions supported upon the bases of the frogs and along side the parallelogram portions thereof, and a U-shaped rail member secured between said first-mentioned rail members.

11. In a railway crossing, a pair of frogs or center pieces each comprising a base and a portion arranged centrally thereof, a pair of rail members each comprising an intermediate portion supported upon the base of one of said frogs and end portions extending at an angle from said intermediate portion and in alinement with the tracks of the crossing, and a U-shaped member secured between the adjacent arms of said rail members.

12. In a railway crossing, a frog or center piece comprising a base and an upwardly extending portion arranged centrally thereof, a pair of rail members each comprising an intermediate portion supported upon the base of one of the frogs and lying alongside the upwardly extending portion thereof and end portions extending at an angle from said intermediate portion and constituting arms in alinement with the tracks of the crossing, and fastening means connecting the adjacent arms of said rail members.

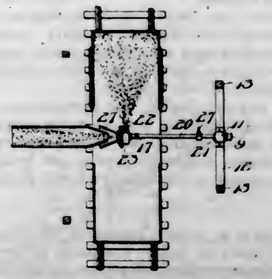
13. In a railway crossing, a frog or center piece comprising a base and a rectangular portion arranged centrally thereof, angular rail members supported upon the base of said frog and provided at the corners thereof with portions engaging the side walls of the rectangular portion of the frog, said side walls being provided with recessed portions to receive the heads and flanges of the adjacent rails, and fastening means connecting the adjacent arms of said rail members.

14. In a railway crossing, four angular rail members, the diverging arms of which form part of the running rails of the several tracks of the crossing, substantially U-shaped rail members connecting the adjacent arms of said angular rail members and guard rails arranged adjacent the bases of said U-shaped members.

15. In a railway crossing, corner pieces at the corner of the crossing, each of said corner pieces being embraced by the running rails and guard rails of both lines.

16. A railway crossing having four rectangular equisided center pieces of uniform dimensions provided with flange ways extending from the corners thereof.

870,174. ROTARY SHOVEL FOR LOADING CARS. JOHN H. HUHN and CHARLES F. ICE, Fairmont, W. Va., assignors to Fairmont Box Car Loader Company, Fairmont, W. Va., a Corporation of West Virginia. Filed Dec. 16, 1904, Serial No. 237,098. Renewed June 30, 1906. Serial No. 324,206.



1. In combination, a head having an opening, a disk within the head, a rotary shaft leading within the head and having the disk secured thereto, delivery lugs on the disk and a deflector within the head.

2. In combination, a head, having an opening a disk

within the head, a rotary shaft leading within the head and having the disk secured thereto, delivery lugs on the disk and a deflector within the head in line with the opening and being so positioned that the delivery lugs pass around the outer surface thereof.

3. In combination, a head having an opening, a disk within the head, a rotary shaft leading within the head and having the disk secured thereto, delivery lugs on the disk and a deflector within the head and a chute carried by the head and emptying therein.

4. In combination, a head having an opening, a disk within the head, a rotary shaft leading within the head and having the disk secured thereto, delivery lugs, on the disk, a deflector within the head and a chute loosely carried by the head and emptying therein.

5. In combination, a head having an opening, a rotatable shaft leading within the head and loosely supporting the head, a disk within the head and secured to the shaft, delivery lugs carried by the disk and a deflector within the head.

6. In combination a head having an opening, a suitable shaft leading within the head and loosely supporting the head, a disk within the head and secured to the shaft, delivery lugs carried by the disk and a deflector within the head and means for turning the head on the rotatable shaft.

7. In combination, a head having an opening, a disk within the head, means for rotating the disk, delivery lugs carried by the disk and a deflector within the head.

8. In combination, a head having an opening, a disk within the head, means for rotating the disk, delivery lugs on the disk, a cap for the head, and a deflector carried by the cap extending within the head.

9. In a box car loader, the combination of a rotatable casing having an axially arranged material-receiving opening and a peripherally arranged material-discharge opening, a rotary shovel within said casing, means for rotating material through the said axially arranged receiving opening, a rotary shovel within said casing, means for rotating said shovel, and means for rotating said casing to position its discharge opening as desired.

10. In a box car loader, the combination of a rotatable casing having a material-receiving opening and a peripheral material-discharge opening, a rotary distributer within said casing, a chute swiveled to said casing and adapted to direct material through said material-receiving opening irrespective of the position of adjustment of said discharge opening, means for rotating said distributer, and means for rotating said casing to position its discharge opening as desired.

11. In a box car loader, the combination of a rotatable casing having material-receiving and discharge openings, a chute swiveled to said casing and arranged to direct material through said material-receiving opening, and a rotary distributer within said casing.

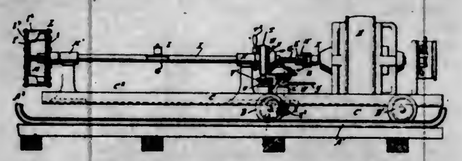
12. In a box car loader, the combination of a casing having material-receiving and discharge openings, a deflector arranged within said casing, and a rotary distributer arranged therein.

13. In a box car loader, the combination of a casing having material-receiving and discharge openings, a deflector arranged within said casing, and a rotary distributer arranged therein and having distributing blades adapted to travel around said deflector.

14. In a box car loader, the combination of a casing having material-receiving and discharge openings, a concavo-convex deflector arranged within said casing, and a rotary distributer arranged therein and having distributing blades adapted to travel around said deflector.

870,175. JOHN H. HUHN, Fairmont, W. Va., assignor to Fairmont Box Car Loader Company, Fairmont, W. Va., a Corporation of West Virginia. Filed Oct. 14, 1905. Serial No. 282,776.

1. In a loader or distributer, the combination with a rotatable material receiving casing and a rotary material distributing head therein, of a drive shaft for said rotary head, a hollow casing adjusting shaft on said drive shaft, a motor, and power transmitting devices interposed between said motor and said casing adjusting shaft for actuating it.



2. In a loader or distributer, the combination of a carriage adapted to travel forward and back, a rotatable material receiving casing having a hollow actuating shaft, a rotary material distributing head in said casing having a driving shaft extending through said hollow actuating shaft, a motor on the carriage, and power transmitting devices interposed between said motor and said hollow actuating shaft.

3. In a loader or distributer, the combination of a carriage adapted to travel forward and back, a rotatable material receiving casing having a hollow actuating shaft, a rotary material distributing head in said casing having a driving shaft extending through said hollow actuating shaft, a motor on the carriage, power transmitting devices interposed between said motor and said hollow actuating shaft, and power transmitting devices interposed between said motor and the carriage running gear for effecting the forward and backward travel of the carriage.

4. In a loader or distributer, the combination of a carriage adapted to travel forward and back, a motor on the carriage, power transmitting devices interposed between the motor on the carriage and the carriage running gear for effecting the travel of the carriage, a rotatable material receiving casing mounted on the carriage, a hollow casing actuating shaft, a rotary distributing head within said casing, a drive shaft for said rotary head extending through said hollow casing actuating shaft, means connecting said drive shaft with said motor, and means for connecting said casing actuating shaft to said motor.

5. In a loader or distributer, the combination of a carriage adapted to travel forward and back, a motor on said carriage, a rotatable material receiving casing on the carriage, having a discharge opening for the material, a rotary material distributing head within said casing, a drive shaft connected with said rotary head and with said motor, a hollow casing actuating shaft mounted on said drive shaft and connected with said casing, and power transmitting devices interposed between said casing actuating shaft and said drive shaft.

6. In a loader or distributer, the combination of a carriage adapted to travel forward and back, a motor on said carriage, a rotatable material receiving casing on the carriage having a discharge opening for the material, a rotary material distributing head within said casing, a drive shaft connected with said rotary head and with said motor, a hollow casing actuating shaft mounted on said drive shaft and connected with said casing, and power transmitting mechanism comprising a friction drive interposed between said casing actuating shaft and said drive shaft.

7. In a loader or distributer, the combination of a carriage adapted to travel forward and back, a motor on the carriage, a rotatable material receiving casing on the carriage having a discharge opening, a rotary material distributing head in said casing, a drive shaft connected with said head and with said motor, a hollow casing actuating shaft mounted on said drive shaft and connected at one end to said casing, power transmitting devices interposed between said casing actuating shaft and said motor, and means for controlling the action of said power transmitting devices operable from a point without the car when the casing is in working position within the car.

8. In a loader or distributer, the combination of a carriage adapted to travel forward and back, a motor on the carriage, a rotatable material receiving casing on the carriage having a discharge opening, a rotary material distributing head in said casing, a drive shaft connected with said head and with said motor, a hollow casing actuating shaft mounted on said drive shaft and connected at one end to said casing, power transmitting devices interposed between said casing actuating shaft and said drive shaft, and means for controlling the action of said power transmitting devices operable from a point without the car when the casing is in working position within the car.

9. In a loader or distributer, the combination of a carriage adapted to travel forward and back, a motor on the carriage, a rotatable material receiving casing on the carriage having a discharge opening, a rotary material distributing head in said casing, a drive shaft connected with said head and with said motor, a hollow casing actuating shaft mounted on said drive shaft and connected at one end to said casing, and friction driving mechanism interposed between said casing actuating shaft and comprising a longitudinally stationary friction element, a longitudinally movable friction element, and means for effecting the engagement of said movable element with said stationary one.

10. In a loader or distributer, the combination with a rotatable material receiving casing and a rotary material distributing head therein, of a drive shaft for said rotary head, a hollow casing adjusting shaft on said drive shaft, a motor, power transmitting devices interposed between said motor and said casing adjusting shaft for actuating it, and a brake for stopping the rotation of said casing actuating shaft.

11. In a loader or distributer, the combination of a rotatable material-receiving casing, a rotatable material-distributing head therein, a drive shaft for said rotary head, a hollow casing-adjusting shaft on said drive shaft, means for rotating said drive shaft, and power transmitting devices interposed between said casing adjusting shaft and said drive shaft.

12. In a loader or distributer, the combination of a carriage adapted to move forward or back, a motor mounted thereon, a material-receiving casing, a rotary material-distributing head mounted in the casing and driven by the motor, power transmitting devices interposed between the motor and the carriage running gear for effecting the travel of the carriage, comprising a pair of bevel gears connected respectively with the motor and the carriage running gear, the latter being mounted on a vertical shaft along which it is movable, and means for sliding the said bevel gear upon its shaft to move it into or out of engagement with the other bevel gear, substantially as set forth.

13. In a loader or distributer, the combination of a carriage adapted to travel forward or back, a motor mounted on the carriage, a material-receiving casing, a rotary material-distributing head within the casing driven by the motor, power transmitting devices interposed between the motor and the carriage running gear for effecting the travel of the carriage, such devices including friction gearing, one member of the friction gearing being movable along its shaft so as to be carried into or out of engagement with the other friction member, and means for operating the said movable friction member, substantially as set forth.

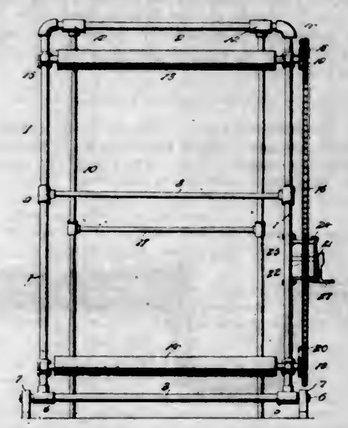
14. In a loader or distributer, the combination of a rotatable material-receiving casing, a rotatable material-distributing head therein, a drive shaft for said head, a hollow casing-adjusting shaft on said drive shaft, means for rotating said drive shaft, and power transmitting means interposed between said casing adjusting shaft and said drive shaft including a friction drive.

15. In a loader or distributer, the combination of a movable carriage, a rotatable material-receiving casing on the carriage, a rotary material-distributing head in said casing, a drive shaft connected with said head, a hollow casing-actuating shaft mounted on said drive shaft, power transmitting devices interposed between said casing-actuating shaft and said drive shaft, and means for controlling the action of said power transmitting devices operable from a point without the car when the casing is in working position within the car.

16. In a loader or distributer, the combination of a rotatable material-receiving casing, a rotatable material distributing head in said casing, a drive shaft connected with said head and with said motor, a hollow casing actuating shaft mounted on said drive shaft and connected at one end to said casing, power transmitting devices interposed between said casing actuating shaft and said drive shaft, and means for controlling the action of said power transmitting devices operable from a point without the car when the casing is in working position within the car.

17. In a loader or distributer, the combination of a rotatable material-receiving casing, a rotary material-distributing head therein, a drive shaft for said rotary head, means for connecting said casing to said drive shaft to effect the rotation of the former, and a brake for stopping the rotation of said casing.

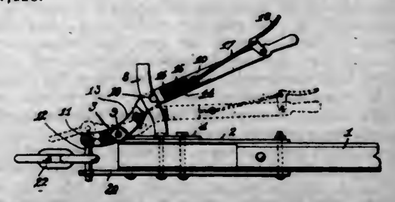
870,176. DISPLAY-RACK. SMITH M. HULTZ and CHARLES I. SMITH, Elyria, Ohio. Filed Mar. 23, 1907. Serial No. 364,007.



1. In a display rack, the combination of a frame, rollers for receiving the goods, sprocket wheels mounted upon journals of the rollers and having a ratchet connection therewith, the ratchet connection of one sprocket wheel being arranged in an opposite direction to the ratchet connection of the other sprocket wheel to admit of one sprocket wheel slipping, while the other sprocket wheel is imparting movement to the roller, and a drive chain connecting the two sprocket wheels.

2. A display rack comprising a frame pivotally supported at one end, a brace having loose connection with the opposite end of the frame to hold the same in adjusted position, rollers adjustable upon the frame, sprocket wheels, a ratchet connection between the sprocket wheels and the journals of the rollers upon which they are mounted, one ratchet connection being arranged in an opposite direction to the other ratchet connection, a sprocket chain connecting the sprocket wheels, a drive shaft and a pinion fast to the drive shaft and in mesh with a run of the sprocket chain.

870,177. DRAFT-RELEASING DEVICE. ELIJAH L. HURD, Howell, S. D. Filed Apr. 10, 1907. Serial No. 367,418.

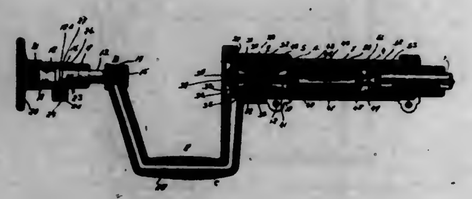


1. In a draft releasing device, the combination of a draft pole or bar, a metallic strap bolted to the upper side of said pole or bar, and consisting of a base plate bent back on

itself to form a top plate and a bolt receiving socket, a lever pivoted intermediate its length in said socket, a coupling pin pivoted to the outer end of said lever, and a coupling plate fixed to the underside of said pole or bar with which said coupling pin is adapted to be engaged.

2. In a draft releasing device the combination of a draft pole or bar, a metallic strap bolted to the upper side of said pole or bar and consisting of a base plate bent back on itself to form a top plate and a bolt receiving socket, said top plate and socket being slotted centrally and longitudinally, and slotted laterally at the rear end of said longitudinal slot, a curved locking bar having its lower bent end fitting in said lateral slot in said top plate and being bolted in position, a lever pivoted intermediate its length in the slot in said socket, a coupling pin pivoted to the outer end of said lever, a coupling plate fixed to said draft pole or bar with which said coupling pin is adapted to engage, and a locking bolt on said lever adapted to engage said curved bar to lock the parts.

870,178. HAMMER-DRILL. ALFRED E. JOHNSON, Denver, Colo., assignor to The Iler Rock Drill Manufacturing Company, Denver, Colo. Filed Feb. 23, 1906. Serial No. 302,879.

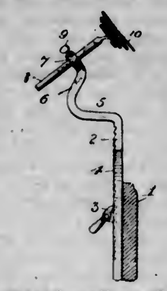


1. In a construction of the class described, the combination with the body of the tool, of a hollow crank rigidly connected with the tool at one extremity, a hollow spindle detachably connected with the opposite extremity of the crank and communicating with the passage way of the crank, an abutment having a chamber into which one extremity of the spindle protrudes, the hollow of the spindle being in communication with said chamber, the part of the spindle within the abutment chamber being enlarged to form a head provided with a beveled front face located opposite a shoulder of the abutment when the latter is at its rearward limit of movement, the spindle and its head being free to slide in the sleeve of the abutment the latter being provided with a fluid induction port located at the forward extremity of the abutment chamber and communicating with the space between the beveled face of the spindle and the shoulder of the abutment, the extremity of the spindle and its head within the abutment chamber being of a size to allow the motive fluid to pass therearound for the purpose set forth.

2. In a hammer drill, the combination with the body of the instrument, of an abutment, a hollow member connecting the body of the tool with the abutment, the abutment extremity of the crank consisting of a hollow spindle detachably connected with the said hollow member and having an enlarged head located within a chamber formed in the abutment, the spindle and its head being free to slide in the said chamber the said head being provided with a beveled forward face and the abutment with a shoulder located opposite the said face when the abutment is at its rearward limit of movement, the abutment being provided with a motive fluid induction port communicating with the abutment chamber.

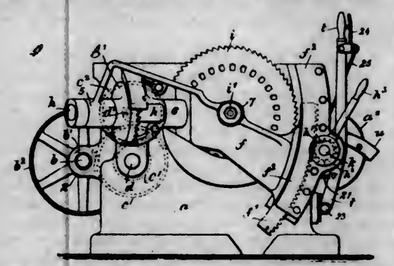
870,179. HEAD-REST. NELS J. JOHNSON, Wallingford, Iowa. Filed Dec. 17, 1906. Serial No. 348,205.

In combination, an attachment for a chair comprising a standard having an angular end portion and a rod carried by the free end of the angular portion, said rod being held in an inclined position with relation to the chair,



said rod having an end portion coiled to form a cone-shaped spring member.

870,180. MACHINE FOR SAWING METALS. CHARLES A. JUENGST, Croton Falls, N. Y., assignor to Higley Machine Company, Croton Falls, N. Y., a Corporation of New York. Filed Mar. 9, 1905. Serial No. 249,177.



1. In a metal sawing machine, the combination with a gravity moving saw frame and saw and the saw feed engaging, operating and releasing devices, of devices which upon the release of the feeding and operating devices automatically come into engagement with and hold the gravity moving saw and saw frame and gradually return the same to an initial position.

2. In a metal sawing machine, the combination with a gravity moving saw frame and saw, a shaft, a pinion and a toothed-segment, and means for turning the said shaft to raise the saw frame and the saw to and progress the same through the work, of devices which upon the release of the feeding devices automatically come into engagement with the said shaft and hold the gravity moving saw and saw frame and gradually return the same to an initial position.

3. In a metal sawing machine, the combination with a gravity moving saw frame and saw, a shaft, a pinion and a toothed-segment, and means for turning the said shaft to raise the saw frame and the saw to and progress the same through the work, of devices associated with the said shaft and with a power shaft of the machine normally running free but brought into evidence upon the release of the feed and operating devices to automatically come into engagement with and hold the gravity moving saw frame and saw and gradually return the same to an initial position.

4. In a metal sawing machine, the combination with a gravity moving saw frame and saw, a shaft, a pinion and a toothed-segment, and means for turning the said shaft to raise the saw frame and the saw to and progress the same through the work, of a sprocket loose upon said shaft, a sprocket upon a power shaft of the machine, a chain passing around and connecting the two sprockets and shafts, a ratchet fast upon the aforesaid shaft, a spring controlled pawl fast upon the loose sprocket and engaging the teeth of the fast ratchet, said parts being adapted for engagement upon the release of the feeding and operating devices so as to automatically engage and hold the gravity moving saw frame and saw and permit the same to return to an initial position at a speed controlled by the movement of said sprockets and chain.

5. In a metal sawing machine, the combination with the pivotally mounted saw frame and saw, a toothed segment on said saw frame, a revoluble shaft, a pinion thereon meshing with the toothed-segment, a toothed wheel also on said shaft, and means for engaging said toothed wheel to rotate the same and said shaft and progressively feed the saw through the work, and means for disengaging the aforesaid feeding devices at the end of the cut, of devices co-acting with said shaft and with a power shaft of the machine and acting upon the release of the feeding devices to engage and hold the said revoluble shaft, pinion, segmental gear and the saw frame and saw and permit the saw frame and saw to return gradually to an initial position.

6. In a metal sawing machine, the combination with the pivotally mounted saw frame and saw, a toothed-segment on said saw frame, a revoluble shaft, a pinion thereon meshing with the toothed-segment, a toothed-wheel also on said shaft, and means for engaging said toothed-wheel to rotate the same and said shaft and progressively feed the saw through the work, and means for disengaging the aforesaid means at the end of the cut, of a ratchet fast upon said shaft, a sprocket loose upon said shaft, a pawl on the face of said sprocket adjacent to and engaging the teeth of the ratchet, a spring for holding the pawl in engagement with the ratchet, a sprocket on a power or prime-mover shaft of the machine, and a chain passing around the sprockets, said sprockets and chain running free with the machine in the advancing movement of the saw and frame, and acting upon the reverse movement of the saw frame and saw and upon the release of the feeding devices to bring the pawl and ratchet into engagement and support the saw frame and saw by the said shaft and permit the same to gradually return to an initial position with the rotation of said shaft.

7. In a metal sawing machine, the combination with a gravity moving saw frame and saw, a shaft, a pinion and toothed segment and means for turning said shaft in one direction to raise the saw frame and the saw to and progress the same through the work, of devices connecting said shaft with a power shaft of the machine and which devices are adapted to rotate in a direction the opposite to the first aforesaid shaft, devices for releasing the feeding and operating devices and other devices automatically engaging upon the release of the feeding and operating devices to hold the gravity moving saw frame and saw and permit the same to return to an initial position.

8. In a metal sawing machine, the combination with a gravity moving saw frame and saw, and the saw feed engaging operating and releasing devices, of devices connecting the latter devices with a power shaft of the machine and which devices are adapted to rotate in a direction the opposite to the second aforesaid devices, and other devices automatically engaging upon the release of the feeding and operating devices to hold the gravity moving saw frame and saw and permit the same to return to an initial position.

870,181. RAILWAY-TRACK CONSTRUCTION. HENRY B. A. KEISER, Akron, Ohio. Filed June 11, 1902. Serial No. 111,146.

1. A continuous track support consisting of transversely stiffened metallic plates secured directly to each other at their ends, means for securing the rail-bases directly to said plates, said stiffened plates forming the sole support for the rails; substantially as described.

2. A track support consisting of metallic plates secured together end to end, each plate extending the distance of several ties, said plates having transverse corrugations; substantially as described.

3. A track support consisting of metallic plates secured together end to end and having transverse corrugations each plate extending the distance of several ties, said plates having water sheds at their side edges; substantially as described.

4. A curved track support having transverse corrugations, said corrugations being arranged to support one rail at a higher level than that of the other; substantially as described.



5. A curved track support having transverse corrugations which are deeper or closer at one side than at the other; substantially as described.

6. A curved track support having transverse corrugations which are flattened along one side; substantially as described.

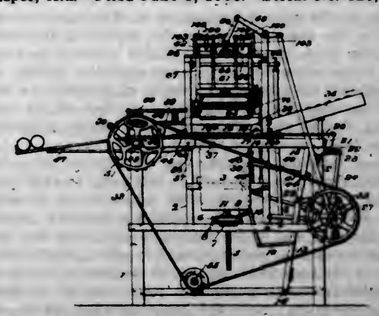
7. A continuous metallic track support running longitudinally beneath the rails and composed of transversely stiffened plates to which said rails are directly secured; substantially as described.

8. A continuous track support consisting of transversely stiffened plates fastened end to end in combination with a cement filling interposed between said plate and a compacted earth surface; substantially as described.

9. A continuous railroad track support consisting of metallic plates of suitable thickness, each plate extending the distance of several ties, said plates being provided with transverse corrugations, and having means for the attachment thereto of the rails; substantially as described.

10. A continuous track support consisting of metallic plates of suitable thickness, rolled in the direction of their length, said plates being transversely stiffened and having longitudinally disposed means thereon for the attachment of the rails; substantially as described.

870,182. LABELING-MACHINE. CHARLES W. KELLY, Jasper, Ala. Filed June 8, 1906. Serial No. 320,877.



1. In a labeling machine, the combination of a label magazine, a paster movable towards the magazine to apply paste to the labels therein, a paste applying roller, means for passing said roller across the pasting surface of the paster to apply paste thereto, means adapted to project past the pasting surface of the paster to prevent adhesion of the label thereto, and means for retracting said last named means from the pasting surface of the paster preparatory to passing the roller over such surface.

2. In a labeling machine, the combination of a label magazine, a paster movable towards the magazine to apply paste to the labels therein, means for passing a receptacle across the magazine to apply a label thereto, a spring pressed label removing device adapted to prevent the adhesion of a label to the paster, when the latter is withdrawn from the magazine, means for retracting said label removing device to a position above the pasting surface of the paster during the withdrawal of the latter from the magazine, and means for applying paste to said surface with the label removing device in its retracted position.

3. In a labeling machine, the combination of a label magazine, means for carrying the receptacles across the magazine to apply a label thereto, a paste applying device adapted to move downwardly into contact with the uppermost label in the magazine, and embodying a series of spaced pasting strips, plates normally projecting beyond the pasting surface of said strips, and movable in spaces between the latter, said plates being spring pressed in a downward direction, means for raising the paster from the magazine, means for retracting the plates from the pasting surfaces of the strips during the rising movement of the paster, a paste applying roller adapted to pass over pasting surfaces of said strips with a movement at right angles to the movement of the paster, means for passing said roller back and forth over the said surface with the label removing device in retracted position, and means for automatically releasing the said label removing device from such retracted position in the downward movement of the paster.

4. In a labeling machine, the combination of a label magazine open at its upper end and adapted to receive labels in stack, receptacle supply means, grippers for engaging and carrying a receptacle across the open end of the magazine to apply a label thereto, pasting mechanism for the labels, levers operably connected with the grippers to effect movement thereof, and means for feeding labels upwardly in the magazine operated by said levers.

5. In a labeling machine, the combination of receptacle supply means, label supply means, means for pasting the labels grippers arranged to engage the receptacles and apply them to the labels, means for imparting rotary movement to the receptacles as the labels adhere thereto, and means for delivering the receptacles from the machine embodying a traveling belt arranged to continue the rotary movement of the receptacles after same have been delivered from the grippers, and a compression plate cooperating with said delivery belt.

6. In a labeling machine, the combination of a label magazine open at its upper end, a vertically movable paste-applying device above the label magazine, a receptacle supply chute, rectilinearly operating grippers movable across the open end of the magazine and below the paste-applying mechanism and arranged to effect application of a label to the receptacle, means for delivering the labeled receptacles from the machine, a label remover or ejector device coöperating with the paste-applying device, said label remover embodying a plurality of elements normally projecting from the paste-applying surface of the paste-applying device, and spring pressure means coöperating with the label remover or ejector device.

7. In a labeling machine, the combination of a label magazine open at its upper end, a vertically movable paste-applying device above the label magazine, a receptacle supply chute, rectilinearly operating grippers movable across the open end of the magazine and below the paste-applying mechanism and arranged to effect application of a label to the receptacle, means for delivering the labeled receptacles from the machine, a label remover or ejector device coöperating with the paste-applying device, said label remover embodying a plurality of elements normally projecting from the paste-applying surface of the paste-applying device, spring pressure means coöperating with the label remover or ejector device, means for applying paste to the pasting surface of the pasting device, and means for withdrawing the elements of the label remover or ejector device from the projected positions normally assumed thereby.

8. In a labeling machine, the combination of a label supply means, label pasting mechanism including a paster movable to apply paste to a label, means for actuating the paster, receptacle supply means, means for applying the label to a receptacle, a label remover or ejector device for preventing adherence of the labels with the paster and movable with said paster, and means for actuating the ejector device independently of the paster.

9. In a labeling machine, the combination of receptacle supply means, label applying mechanism, pasting mechanism including a vertically movable paster, a label remover or ejector device for preventing adherence of a label with the paster and comprising a plurality of blades adapted to project from the pasting surface of the paster, means for holding said blades normally projected from the pasting surface of the paster, means for withdrawing the blades from the pasting surface of the paster on ascent of the latter, and means for supplying the paster with paste when the ejector blades are withdrawn.

10. In a labeling machine, the combination of receptacle supply means, label applying mechanism, pasting mechanism including a vertically movable paster, a label remover or ejector device mounted on the paster and comprising a plurality of blades, spring means coöperating with the blades to normally project the same from the pasting surface of the paster, trip means for withdrawing the blades from the projected positions on ascent of the paster, and means for supplying the pasting surface of the paster with paste when the blades of the ejector device have been withdrawn.

11. In a labeling machine, the combination of receptacle supply means, label applying mechanism, pasting mechanism including a vertically movable paster, a label remover or ejector device mounted on the paster and comprising a plurality of blades, spring means coöperating with the blades to normally project the same from the pasting surface of the paster, trip means for withdrawing the blades from the projected positions on ascent of the paster, means for supplying the pasting surface of the paster with paste when the blades of the ejector device have been withdrawn, the last mentioned means consisting of a paste-applying roller movable across the pasting surface of the paster, a paste receptacle, and a paste feeding roller for contact with the paste applying roller.

12. In a labeling machine, the combination of receptacle supply means, label applying mechanism, pasting mechanism including a vertically movable paster, a label remover or ejector device mounted on the paster and comprising a plurality of blades, spring means coöperating with the blades to normally project the same from the pasting surface of the paster, trip means for withdrawing the blades from the projected positions on ascent of the paster, means for applying the pasting surface of the paster with paste when the blades of the ejector device have been withdrawn, the last mentioned means consisting of a paste-applying roller movable across the pasting surface of the paster, a paste receptacle, a paste feeding roller for contact with the paste applying roller, and means for rotating the paste feeding roller.

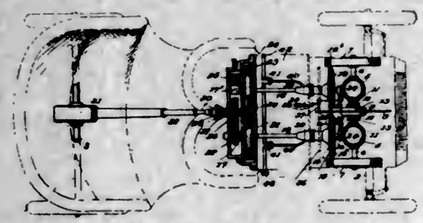
13. In a labeling machine, the combination of receptacle supply means, label supply means, means for supplying paste to the labels, means for supplying the labels to the receptacles including a gripper, a frame having said gripper slidably mounted thereon, means for effecting sliding movement of the gripper on the frame, and means for actuating said frame to effect engagement of the gripper with the receptacle.

14. In a labeling machine, the combination of receptacle supply means, label supply means, means for applying the labels to the receptacles including a pair of grippers, a pair of frames having the grippers slidably mounted thereon, means for actuating the grippers to effect movement thereof longitudinally of the frames, and means for effecting lateral movement of the frames to cause engagement of the grippers with a receptacle.

15. In a labeling machine, the combination of receptacle supply means, label supply means, means for applying the labels to the cans consisting of a pair of grippers, a pair of frames arranged horizontally, means slidably connecting the grippers with the frames, means for effecting lateral movement of the frames to cause engagement of the grippers with a receptacle, means for imparting longitudinal movement of the grippers on the frames to apply the labels to the receptacles, and means for imparting rotary movement to the grippers in the last mentioned operation.

16. In a labeling machine, the combination of receptacle supply means, label supply means, means for applying the labels to the cans consisting of a pair of grippers, a pair of frames arranged horizontally, means slidably connecting the grippers with the frames, means for effecting lateral movement of the frames to cause engagement of the grippers with a receptacle, means for imparting longitudinal movement of the grippers on the frames to apply the labels to the receptacles, wheels connected with the grippers, and flexible connections connected with the wheels of the grippers to impart rotary movement thereto by unwinding therefrom.

870,183. TRANSMISSION-GEARING. ELIHU B. KENT, Lansing, Mich. Filed Oct. 25, 1906. Serial No. 340,597.



1. In a transmission gear, the combination with a pair of engines including shafts and wheels, of a friction disk interposed between said shafts, means for connecting one or both of said shafts to the friction disk, two counter shafts, a friction gear on each counter shaft located each side the friction disk, an eccentric bearing for each counter shaft, means for simultaneously turning the eccentric bearings to cause the friction gears to engage opposite sides of the friction disk or to engage the two fly-wheels, transmission friction gears on the counter shaft, and a pinion on one of said counter shafts.

2. In a transmission gear, the combination with a pair of engines including shafts and wheels, of a friction disk interposed between said shafts, means for connecting one or both of said shafts to the friction disk, two counter shafts, a friction gear on each counter shaft located each side the friction disk, an eccentric bearing for each counter shaft, means for simultaneously turning the eccentric bearings to cause the friction gears to engage opposite sides of the friction disk or to engage the two fly-wheels, transmission friction gears on the counter shaft, a slidable bearing for one of said counter shafts, a spring normally holding said bearing toward the other counter shaft, and a pinion on one of the counter shafts.

3. In a transmission gear, the combination of a pair of engines, each engine including a shaft and a fly-wheel, of a friction disk mounted between the engines, a clutch on each side the friction disk to connect one or both engines to said disk, levers to operate the clutches, two counter shafts, a stationary bearing, eccentric bearings, a movable bearing, one of said counter shafts being mounted in a stationary bearing, and one of the eccentric bearings, the other counter shaft being mounted in one of the eccentric bearings, and the movable bearing, friction gears slidably mounted on said two counter shafts, levers connected to the friction gears to simultaneously slide them to or from the engines, gears on the counter shafts, means for operating the eccentric bearings to cause the friction gears to contact with opposite faces of the friction disk or with the fly wheels, an axle, and gears between the axle and the gears on the counter shafts.

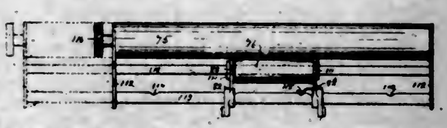
4. In a transmission gear, the combination of a pair of engines, each engine including a shaft and a fly-wheel, a friction disk interposed between the engines, a pair of counter shafts extending from the engines, friction-gears carried by said shafts, means for engaging the friction gears with opposite sides of the friction disk or with the fly-wheels, gears connecting the counter-shafts, an axle, supporting wheels mounted on the axle, a gear on the axle, a coupling connecting the sections of said shaft, a universal joint, and gears between the universal joint and the gears on the counter shaft.

5. In a transmission gear, the combination with a pair of engines, each engine including a shaft and a fly-wheel, of a friction disk interposed between the engines, means for connecting the friction disk to one or both engines, a pair of counter shafts, friction gears mounted on the counter shafts between the fly-wheels and the friction disk, a second pair of friction gears mounted on said counter shafts, means for moving the counter shafts to cause the first said friction gears to engage opposite sides of the friction disk or with the fly-wheels, a spring actuated bearing for forcing one of said counter shafts toward the other to hold the second set of friction gears in contact with each other, and a drive-pinion on one of said counter shafts.

6. In a transmission gear, the combination with a pair of engines, of a friction disk, a pair of fly-wheels, slidably mounted friction gears interposed between the friction disk and the fly-wheels, eccentric bearings, counter shafts mounted in the eccentric bearings, friction gears on the counter shafts, a rock shaft, links connecting the eccentric bearings with said rock shaft, and a foot lever for operating the rock shaft to throw the friction gears in contact with the opposite sides of the disk or the fly-wheels.

7. In a transmission gear, the combination with a pair of engines, each engine including a shaft, of a friction disk mounted between the engines and on the shafts thereof, a hub on the disk having two beveled friction surfaces, a friction gear each side the friction disk, each friction gear having a beveled frictional surface and a peripherical friction surface, means for causing the peripherical surfaces to simultaneously contact with the disk, and also for causing the beveled frictional surfaces of the gears to contact with the beveled frictional surfaces of the hub.

870,184. COMPUTING-MACHINE. ALVIN W. KRAHN, Milwaukee, Wis. Filed May 4, 1903. Serial No. 155,513.



1. In a machine of the described class, the combination with number carrying devices, differential levers and motion transmitting connections between said levers and the number carrying devices, of a sliding bar provided with a stop adapted to limit the movement of the number carrying devices; lateral projections on said bar in position for engagement by the differentiating levers during their final key stroke movement; and a spring normally holding the bar in a position to render the stop inoperative; said bar being arranged to be actuated by the levers to push the stop into operative position.

2. In a machine of the described class, the combination with number carrying devices, and a set of differentiating levers for each such device, of two parallel sliding bars for each set of said levers, provided with projections in the paths of the levers, and unconnected therewith; and springs arranged to retract said bars; one of said bars having motion transmitting connection with the number carrying device, and being arranged with its projection in position to receive substantially the entire stroke of any corresponding lever; and the other of said bars having a stop for the number carrying device, and being arranged with its projections in position for lever engagement only during the completion of the lever stroke, whereby said stop is held in operative position during a

final key stroke movement and an initial retractive movement.

3. In a machine of the described class, the combination of a plurality of registering wheels, each provided with two consecutive sets of peripheral numerals ranging from zero to nine inclusive; independent actuating mechanism for each registering wheel; a cam on each registering wheel for each set of numerals thereon; said cam being graduated in correspondence with the numerical value of the several numerals of the corresponding set; and separate motion transmitting connections for each cam, adapted to communicate motion from such cam to another registering wheel; together with means for detaining such motion transmission during the active movement of said independent actuating mechanism.

4. In a machine of the described class, the combination of a plurality of registering wheels, each provided with plural sets of peripheral numerals arranged consecutively and ranging from zero to nine inclusive; independent actuating connections for each registering wheel; and independent motion transmitting connections for each set of numerals on each wheel; said motion transmitting connections being adapted to communicate motion from one registering wheel to the next; once during each revolution of the corresponding set of numerals; together with trip mechanism adapted to detain the motion transmitting connections when the wheels are being advanced by their independent actuating connections.

5. In a machine of the described class, the combination of a set of registering wheels, means for actuating them independently, a set of independently acting spring operated transferring mechanisms for transmitting step by step motion from one wheel to that of next higher value, a set of cam projections on the transferring wheel, located to rotate in different planes parallel to the wheel, and arranged with each member of the set operatively connected to independently actuate one of the transferring mechanisms in opposition to its actuating spring once during each revolution of the registering wheel,—said registering wheel having consecutive sets of peripheral numerals corresponding with the cam projections and arranged with the numeral of highest value in each set substantially coincident with the highest point on one of the cam projections.

6. In a machine of the described class, the combination with a set of independently revoluble registering wheels, of a cam wheel operatively connected with each registering wheel; an oscillating yoke, having an arm in motion receiving relation to the cam; and devices for communicating motion from said yoke to advance another of said registering wheels step by step; a set of differentiating levers; connections for separately actuating the registering wheels therefrom; and trip mechanism controlled by said connections for detaining the wheel advancing devices of the yokes during the operation of the differentiating levers.

7. In a machine of the described class, the combination with registering wheels, differentiating levers, and wheel rotating connections directly operated by the levers,—of a cam wheel connected with each registering wheel; a spring controlled oscillatory member having an arm arranged to receive motion from the cam wheel in opposition to the spring controlling said member; pawl and ratchet mechanism for transmitting the reactionary movement of said member to an adjacent registering wheel; and trip mechanism, controlled by the differentiating levers, to prevent reactionary movements of said oscillatory members during a wheel advancing movement of said levers.

8. In a machine of the described class, the combination with registering wheels, differentiating levers, and wheel rotating connections operated by the levers,—of an oscillatory member adjacent to each registering wheel; connections for moving said member in one direction in correspondence with the rotation of the wheel; member retracting devices operative at fixed intervals of wheel rotation; connections arranged to communicate motion from said member to advance an adjacent registering wheel one step during the retractive movement of such member; and devices operated by the differentiating levers, for preventing a retractive movement of said member during the wheel advancing movement of said levers.

9. In a machine of the described class, the combination of a set of registering wheels, means for actuating them independently, a set of independently acting transferring mechanisms for transmitting step by step motion from one wheel to the next, and a set of cam projections on the wheel from which the transfer is made, each arranged to actuate a single transferring mechanism at a different interval from the others, said cam supporting registering wheel having consecutive sets of peripheral numerals, arranged with the numeral of the highest value in each set, substantially corresponding in relative position with the highest point on one of the cam projections.

10. In a machine of the described class, the combination of a set of registering wheels, means for actuating them independently, a set of independently acting transferring mechanisms for transmitting step by step motion from one wheel to the next, and a set of cam projections on the wheel from which the transfer is made, each arranged to actuate a single transferring mechanism at a different interval from the others, said cam supporting registering wheel having consecutive sets of peripheral numerals arranged with the numeral of highest value in each set, substantially corresponding in relative position with the highest point on one of the cam projections, said cam projections being in different planes.

11. In a device of the described class, a set of registering wheels each having more than one sequence of peripheral numerals; separate actuating mechanism for each wheel; a cam wheel for each sequence of numerals; an oscillatory yoke for each cam wheel, each yoke having a cam actuated arm and one yoke being located within another; springs arranged to retract said yokes, when the cam arm bears on the short cam radius; step by step mechanism for advancing a registering wheel during the retractive movement of the yoke; together with mechanism controlling the retraction of the yokes and determining the intervals of such retraction.

12. In a machine of the described class, a set of registering wheels, segment carrying levers for operating the same; additional type carrying segments connected with said levers; catch mechanism for holding the levers in a position for printing; printing mechanism; and devices connected with the printing mechanism for releasing the catch mechanism.

13. In a device of the described class, a set of registering wheels, segment carrying levers for operating the same; type carrying segments connected with said levers; catch mechanism for holding the type segments in any position of printing adjustment; printing mechanism; catch releasing mechanism connected with the printing mechanism; a record sheet holder and step by step mechanism for automatically advancing the sheet in the intervals between the printing strokes.

14. In a machine of the described class, the combination of printing mechanism; type carrying members; and a resilient support for cipher types connected therewith and normally located outside of the line of printing pressure; devices for adjusting the members to printing position; and other devices independently supported and coöperative therewith, for adjusting the cipher type supports into printing position at the right of the members in printing position; together with a projection on said adjusting devices adapted to engage and actuate the cypher type adjusting devices.

15. In a machine of the described class, the combination of a set of type carrying segments; a printing roller in operative relation to the segments; means for reciprocating the printing roller; catch mechanism for holding the type segments in any desired position of adjustment; and devices connected with the reciprocating mechanism of the printing roller for disengaging the catch mechanism, and permitting the printing segments to return to normal position.

16. In a machine of the described class, the combination with a set of registering wheels and actuating levers therefor, of a set of type carrying segments operatively connected with the actuating levers of the registering wheels; means for locking the segments in any position to which they may be adjusted by said levers; printing devices in operative relation to said segments; and means, connected with said printing devices, for releasing the segments and permitting them to return to normal position after the printing operation.

17. In a machine of the described class, the combination with a set of registering wheels provided with indicating numerals; a cam connected with each registering wheel, with its radii corresponding in length to the value of the numerals on the registering wheels; a set of printing segments and a set of key operated levers for actuating said segments,—said cams being arranged to serve as fulcrums for the respective segment actuating levers, whereby the throw of said levers is regulated by the cams.

18. In a machine of the described class, the combination with a set of registering wheels, of a cam connected with each registering wheel; a set of adjustable type carrying segments; a corresponding set of segment adjusting levers; a set of actuating levers, adapted to communicate motion respectively to said adjusting levers, and key operated connections therefor,—said cams being arranged to serve as fulcrums for said actuating levers, whereby the throw of any one of said levers is determined by the position of its corresponding cam fulcrum.

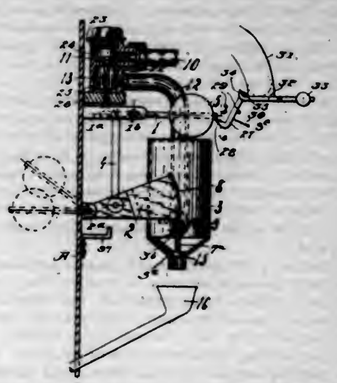
19. In a machine of the described class, the combination with a set of registering wheels, each having independent actuating connections, and transferring mechanism comprising a graduated member carried by each registering wheel, a tripping device in operative relation to the graduated member, and a pawl and ratchet in operative relation to the tripping device; of a manually actuated member, adjustable into and out of the paths of the transferring pawls, and adapted, in one position of adjustment, to render the same inoperative.

20. In a machine of the described class, the combination of a set of registering wheels, means for actuating them independently, a set of independently acting transferring mechanisms for transmitting step by step motion from one wheel to the next, and a set of cam projections on the wheel from which the transfer is made, each arranged to actuate a single transferring mechanism at a different interval from the others, said cam supporting registering wheel having consecutive sets of peripheral numerals, arranged with the numeral of highest value in each set, substantially corresponding in relative position with the highest point on one of the cam projections, together with means, controlled by the independent wheel actuating mechanism, for detaining the delivery of a transferring movement to the next wheel until after the completion of the active stroke of the independent wheel actuating mechanism.

870,185. APPARATUS FOR AUTOMATIC SALE OF LIQUIDS. ERICK W. LINDGREN, Hagalund, near Stockholm, Sweden, assignor to Aktiebolaget Svenska Automat Fabriken, Stockholm, Sweden. Filed Mar. 26, 1906. Serial No. 308,064.

1. In an apparatus of the class described, the combination, of a movable vessel provided with a valve seat, a filling pipe projecting into said vessel and engaging the same to insure movement in a straight line, said filling pipe being provided with a valve seat, a double valve adapted to alternately coöperate with said valve seats to close the filling pipe or vessel, a pivotally mounted supporting lever, a flexible connection for said supporting member and vessel, a weighted valve operating lever, a link connecting said supporting and valve operating levers, and a valve inlet or supply for said vessel operated by said weighted lever.

2. In an apparatus of the class described, the combination, of a vessel provided with a valve seat, a filling pipe projecting into said vessel and engaging the same to insure movement in a straight line, said filling pipe being provided with a valve seat, a double valve adapted to alternately coöperate with said valve seats to close the filling pipe or vessel, a pivotally mounted supporting lever connected with said vessel, a weighted valve operating lever connected with said supporting lever, and a valve inlet or supply for said vessel operated by said weighted lever.



3. In an apparatus of the class described, the combination, of a vessel provided with a valve seat, a filling pipe projecting into said vessel and engaging the same to insure movement in a straight line, a valve closure for said vessel valve seat, means associated with said closure and filling pipe for unseating the former, a pivotally mounted supporting lever connected with said vessel, a valve operating lever connected with said supporting lever, means for operating said valve lever and therethrough effecting movement of said vessel, and a valve inlet or supply for said vessel actuated by said operating lever.

4. In an apparatus of the class described, the combination of a movable vessel provided with a valve seat, a filling pipe provided with a valve seat, and a double valve coöperating with said seats.

5. In an apparatus of the class described, the combination of a movable vessel provided with a valve seat, a stationary filling pipe projecting into said vessel and serving as a guide therefor, said filling pipe also having a valve seat, and a double valve coöperating with said vessel and pipe seats.

6. In an apparatus of the class described, the combination of a movable vessel provided with a valve seat, a stationary filling pipe projecting into said vessel and engaging the same to guide it, said filling pipe also having a valve seat, and a double valve coöperating with said vessel and pipe seats, the movement of said vessel and the disposition of said double valve being such that the pipe seat acts through the valve to unseat the valve from the vessel seat and vice versa.

870,186. BRAKE-BEAM. CHARLES A. LINDSTRÖM, Allegheny, Pa., assignor to Pressed Steel Car Company, Pittsburg, Pa., a Corporation of New Jersey. Filed May 6, 1907. Serial No. 371,990.



1. A brake beam having a compression member formed by an integral casting having a greater effective area of material at its central portion than at its ends; substantially as described.

2. A trussed brake beam having its compression member formed by an integral casting of trough shape in cross-section, and of greater effective sectional area at its central portion than at its ends; substantially as described.

3. A trussed brake beam having its compression member formed by an integral casting of trough shape in cross-section, and having reinforcing ribs; substantially as described.

4. A brake beam having a compression member formed by a single casting of trough shape in cross-section, the free edges of the flanges of the section having longitudinally extending ribs or enlargements; substantially as described.

5. A brake beam having a compression member formed by an integral casting of trough shape in cross-section, and having the flanges of the section connected by transverse ribs; substantially as described.

6. In a brake beam, a compression member consisting of an integral casting of trough shape in cross-section, and having its vertical or web portion provided with longitudinally-extending ribs; substantially as described.

7. In a brake beam, a compression member consisting of an integral casting having openings along the center line of its vertical or web portion, and longitudinally-extending reinforcing ribs adjacent to said openings; substantially as described.

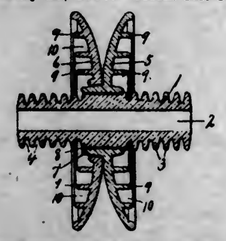
8. A trussed brake beam having a compression member formed by an integral casting of trough shape in cross-section, said section being deeper at the central portion of the member than at its ends; substantially as described.

9. A trussed brake beam having a compression member formed of an integral casting of trough shape in cross-section, and formed with longitudinally and transversely-extending reinforcements; substantially as described.

10. A brake beam having a compressed member formed by an integral casting of trough shape in cross-section, and arched between its ends in a horizontal direction; substantially as described.

11. A brake beam having a compression member formed by an integral casting of trough shape in cross-section, said cross-section being deeper at the central portion of the member than at its ends, and the member arched between its ends in a horizontal direction; substantially as described.

870,187. WALL-INSULATOR. FRED M. LOCKE, Victor, N. Y. Filed July 18, 1907. Serial No. 384,314.



1. A wall insulator comprising an entrance tube, and a concavo-convex disk surrounding the central portion of the tube.

2. A wall insulator comprising an entrance tube, and a pair of disks surrounding the central portion of the tube and having convex meeting faces.

3. A wall insulator comprising a corrugated entrance tube, and a pair of disks arranged side by side upon the central portion of the tube and having the outer edges of the meeting faces spaced apart.

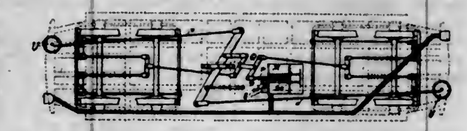
4. A wall insulator comprising an entrance tube, and a pair of concavo-convex disks surrounding the tube with their convex faces in juxta-position.

5. A wall insulator comprising an entrance tube, and a concavo-convex disk surrounding the entrance tube and provided with a laterally projecting annular flange.

6. A wall insulator comprising an entrance tube and a pair of concavo-convex disks surrounding the tube and each provided with a series of concentric annular flanges projecting from their concave faces.

870,188. BRAKE FOR VEHICLES. JOSEPH N. MAHONEY, Brooklyn, N. Y., assignor to himself, and James D. Leys and Samuel Jacobson, New York, N. Y. Filed June 2, 1906. Serial No. 319,417.

1. In a braking system for vehicles, the combination of friction brake apparatus, a spring under tension whose reaction effects the pressure between the braking surfaces, an electric motor acting to increase tension of the spring and thereby relieve the pressure between said surfaces, switch devices under the control of the motorman whereby the motor may at will be energized to so further increase tension of the spring, means for then automatically opening the circuit of the electric motor, automatically acting power controlled means for retaining the brake spring under such further tension and means for at will automatically releasing the retaining devices to permit engagement of the braking surfaces by reaction of the brake spring.



2. In a braking system for vehicles, the combination of friction brake apparatus, a spring under tension whose reaction effects the pressure between the braking surfaces, an electric motor acting to increase tension of the spring and thereby relieve the pressure between said surfaces, switch devices under the control of the motorman whereby the motor may at will be energized to so further increase tension of the spring, means for then automatically opening the circuit of the electric motor, automatically acting power controlled means for retaining the brake spring under such further tension and means for at will releasing the retaining devices to permit engagement of the braking surfaces by reaction of the brake spring.

3. In a braking system for vehicles, the combination of friction brake apparatus, a spring under tension whose reaction effects the pressure between the braking surfaces, an electric motor for further increasing tension of the spring and relieving the pressure between said surfaces, switch devices under the control of the motorman whereby the motor may at will be energized to so further increase tension of the spring, means for then automatically opening the circuit of the electric motor, automatically acting power controlled means for retaining the brake spring under such further tension and electro magnetic means for at will automatically releasing the retaining devices to permit engagement of the braking surfaces by reaction of the brake spring.

4. In a braking system for vehicles, the combination of friction brake apparatus, a spring under tension whose reaction effects the pressure between the braking surfaces, an electric motor for further increasing tension of the spring, means for retaining the spring under such increased tension, electro magnetic means for releasing the retaining devices, a brake controller and its contacts and circuit connections, whereby, in one position thereof, the motor is energized to subject the brake spring to such further tension and the electro-magnetic device of the retaining devices energized to thereby retain the brake spring under such further tension; in another position, a resistance is introduced into the circuit of such electro magnetic device; and in another position, such electro magnetic device deënergized to thereby release the retaining devices and permit the re-action of the brake spring to bring the braking surfaces into engagement.

5. In a braking system for vehicles, the combination of friction brake apparatus, a spring under tension whose reaction effects the pressure between the breaking surfaces, an electric motor for further increasing tension of the spring, a brake controller and means whereby on movement of the controller from maximum braking position said retaining means are first set to retain increased tension of the spring and then the circuit of the motor is closed, and on partial reverse movement of the controller the motor circuit is opened and on further reverse movement the retaining devices may be controlled to permit desired application of the brakes.

6. In a braking system for vehicles, the combination of friction brake apparatus, a spring under tension whose reaction effects the pressure between the braking surfaces, an electric motor for further increasing tension of the spring, means for retaining the spring under such further tension, a brake controller and means whereby on movement of the controller from maximum braking position said retaining means are first set to retain increased tension of the spring and then the circuit of the motor is closed, and on partial reverse movement of the controller the motor circuit is opened and on further reverse movement the retaining devices may be controlled to permit desired application of the brakes and means independent of the controller automatically acting to open the motor circuit when desired maximum tension has been imposed upon the spring, and to close such break in the circuit on reduction of such maximum tension.

7. In a braking system for vehicles, the combination of friction brake apparatus, a spring under tension whose reaction effects the pressure between the braking surfaces, an electric motor for further increasing tension of the spring, means for retaining the spring under such increased tension, electro magnetic means for releasing the retaining devices, a brake controller and means whereby on movement of the controller from maximum braking position said retaining means are first set to retain increased tension of the spring and then the circuit of the motor is closed, and on partial reverse movement of the controller the motor circuit is opened and on further reverse movement the retaining devices may be controlled to permit desired application of the brakes and means independent of the controller automatically acting to open the motor circuit when desired maximum tension has been imposed upon the spring, and to close such break in the circuit on reduction of such maximum tension.

8. In a braking system for vehicles, the combination of friction brake apparatus, a spring under tension whose reaction effects the pressure between the braking surfaces, an electric motor for further increasing tension of the spring, means for retaining the spring under such increased tension, electro magnetic means for releasing the retaining devices, a brake controller and means whereby on movement of the controller from maximum braking position said retaining means are first set to retain increased tension of the spring and then the circuit of the motor is closed, and on partial reverse movement of the controller the motor circuit is opened and on further reverse movement the retaining devices may be controlled to permit desired application of the brakes and means independent of the controller automatically acting to open the motor circuit when desired maximum tension has been imposed upon the spring, and to close such break in the circuit on reduction of such maximum tension.

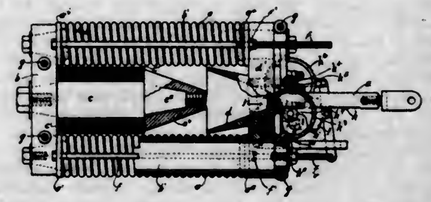
9. In a braking system for vehicles, the combination of two or more vehicles coupled into a train, a brake controller and train cable on each vehicle, the several train cables being electrically coupled, and on each vehicle a braking system comprising the combination of friction brake apparatus, a spring under tension whose reaction effects the pressure between the braking surfaces, an electric motor acting to increase tension of the spring and relieve the pressure between the braking surfaces, electro magnetic devices for retaining this spring under such further tension and circuit connections whereby on movement from maximum braking position of the controller on any one of the vehicles the circuit of the electro-magnetic retaining devices is first closed and then the motor circuit is closed while that of the retaining devices remains closed, and on partial reverse movement the motor circuit is opened and on further reverse movement the retaining devices may be controlled to permit desired application of the brakes.

10. In a braking system for vehicles, the combination of two or more vehicles coupled into a train, a brake controller and train cable on each vehicle, the several train cables being electrically coupled, and on each vehicle a braking system comprising the combination of friction brake apparatus, a spring under tension whose reaction effects the pressure between the braking surfaces, an electric motor acting to increase tension of the spring and relieve the pressure between the braking surfaces, electro magnetic devices for retaining this spring under such further tension and circuit connections whereby on movement from maximum braking position of the controller on any one of the vehicles the circuit of the electro-magnetic retaining devices is first closed and then the motor circuit is closed, and on partial reverse movement the motor circuit is opened and on further reverse movement the retaining devices may be controlled to permit desired application of the brakes and means independent of the controller for automatically opening the circuit of the motor when desired maximum tension has been imposed upon the spring and to close such break in the circuit on reduction of such maximum tension.

11. In a braking system for vehicles, the combination of friction brake apparatus, a spring under tension whose reaction effects the pressure between the braking surfaces, an electric motor acting to increase tension of the spring and thereby relieve the pressure between said surfaces, switch devices under the control of the motorman whereby the motor may at will be energized to so further increase tension of the spring, means for then automatically opening the circuit of the electric motor, automatically acting power controlled means for retaining the brake spring under such further tension and electro magnetic means for at will releasing the retaining devices to permit engagement of the braking surfaces by reaction of the brake spring.

12. In a braking system for vehicles, the combination of friction brake apparatus, a spring under tension whose reaction effects the pressure between the braking surfaces, an electric motor acting to increase tension of the spring and thereby relieve the pressure between said surfaces, switch devices under the control of the motorman whereby the motor may at will be energized to so further increase tension of the spring, means for then automatically opening the circuit of the electric motor, automatically acting power controlled means for retaining the brake spring under such further tension and power operated means under the control of the motorman for at will releasing the retaining devices to permit engagement of the braking surfaces by reaction of the brake spring.

870,189. BRAKE FOR POWER-DRIVEN VEHICLES. JOSEPH N. MAHONEY, Brooklyn, N. Y., assignor to himself, and James D. Leys and Samuel Jacobson, New York, N. Y. Filed Oct. 30, 1905. Serial No. 284,986.



1. In vehicle brake mechanism, the combination of a brake spring under tension tending to apply the brakes, a motor acting to impose further tension upon the spring to partially or wholly hold the brakes out of operation, retaining devices automatically acting while the motor is energized and after its circuit is opened to retain any such further tension of the spring, means for automatically opening the circuit of the motor when the brakes have been drawn to release position, a brake staff and operative mechanical connections between the staff and the retaining devices whereby the latter may be operated to abruptly or gradually release the increased tension of the spring to effect abrupt or variable application of the brakes.

2. In vehicle brake mechanism, the combination of a brake spring under tension tending to apply the brakes, an electric motor acting to impart further tension to the spring to partially or entirely hold the brakes out of operation, retaining devices automatically acting throughout the time the circuit of the motor is closed to retain any such further tension of the spring, a device under manual control of the motorman, means controlled thereby acting to deënergize the motor and operative mechanical connections between said device and the retaining devices whereby the latter may be operated to abruptly or gradually re-

lease the increased tension of the spring to effect abrupt or variable application of the brakes.

3. In vehicle brake mechanism, the combination of a brake spring under tension tending to apply the brakes, an electric motor acting to impose further tension upon the spring and partially or entirely hold the brakes out of operation, retaining devices adapted to retain the spring under any such further tension or release it at will of the motorman, and a manually controlled device acting when moved to brake release position to first set the retaining devices so as to retain further tension imparted to the spring and then close the circuit of the motor to effect such further tension of the spring.

4. In vehicle brake mechanism, the combination of a brake spring under tension tending to apply the brakes, an electric motor acting to impose further tension upon the spring and partially or entirely hold the brakes out of operation, retaining devices comprising a part free to move in one direction, as the action of the motor imposes further tension upon the brake spring, and adapted to be held against movement in the opposite direction to thereby retain the spring under such further tension, said retaining devices comprising friction devices for so holding said part, a device under control of the motorman, an operative mechanical connection between it and the friction devices, the motor circuit and its circuit controlling contacts, the parts being so organized that when the device under control of the motorman is moved to brake release position said friction holding devices are brought into operation and the circuit of the motor then closed.

5. In vehicle brake mechanism, the combination of a brake spring under tension tending to apply the brakes, a motor acting to impose further tension upon the spring to relieve the brakes, spring tension retaining devices comprising a friction shoe for locking said retaining devices to retain the increased tension of the spring, a lever upon which the shoe is mounted, a yielding spring-fulcrum for the lever, and means for at will applying power to the lever to bring the friction shoe into operation.

6. The vehicle brake mechanism, the combination of a brake spring under tension tending to apply the brakes, a motor acting to impose further tension upon the spring to relieve the brakes, spring tension retaining devices comprising oppositely disposed friction shoes and an interposed part upon which they operate to lock said retaining devices, levers upon which the friction shoes are mounted, a yielding spring fulcrum interposed between the levers, and means for at will applying power to the levers to yieldingly force the friction shoes against said interposed part, the force of such application of the friction shoes being regulated by the extent of movement of the levers.

7. In vehicle brake apparatus, the combination with a brake spring under tension tending to apply the brakes, and a motor acting to impose further tension upon the spring and partially or wholly hold the brakes out of operation, of spring pressure retaining devices acting to controllably retain the spring under any such further tension, and comprising a brake spring pressure retaining disk, oppositely disposed friction shoes acting thereon, levers upon which such shoes are mounted, the telescoping connection m and the spring connection n interposed between the levers and acting substantially as described.

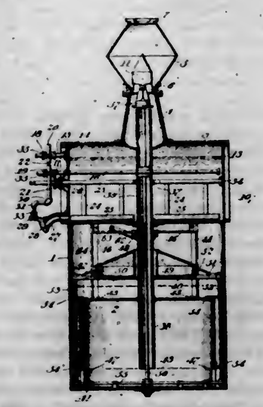
8. In vehicle brake apparatus the combination of disk e, oppositely disposed friction shoes acting thereon, levers upon which the friction shoes are mounted, and temporarily acting and yielding spring fulcrums both interposed between levers and operating substantially as described.

9. In vehicle brake mechanism, the combination of a brake spring under tension tending to apply the brakes, an electric motor acting to impose further tension upon the spring and partially or entirely hold the brakes out of operation, retaining devices adapted to retain the spring under any such further tension or release it at will of the motorman, and a manually controlled device acting when moved to brake release position to first set the retaining devices so as to retain further tension imparted to the spring and then close the circuit of the motor to effect such further tension of the spring and means acting automatically to open the circuit of the motor when maximum tension has been imposed upon the spring and close such break in the circuit on reduction of such maximum tension.

10. In vehicle brake mechanism, the combination of a brake spring under tension tending to apply the brakes, a motor acting to impose further tension upon the spring to partially or wholly hold the brakes out of operation, retaining devices automatically acting while the motor is energized and after its circuit is opened to retain any such further tension of the spring, a brake staff and operative mechanical connections between the staff and the retaining devices whereby when the staff is moved to release the brakes the retaining devices are first set to retain increased tension of the spring and then the circuit of the motor is closed, and on partial reverse movement the motor circuit is opened and on further reverse movement the retaining devices may be controlled to permit desired application of the brakes.

11. In a vehicle brake mechanism, the combination of a brake spring under tension tending to apply the brakes, a motor acting to impose further tension upon the spring to partially or wholly hold the brakes out of operation, retaining devices automatically acting while the motor is energized and after its circuit is opened to retain any such further tension of the spring, a brake staff and operative mechanical connections between the staff and the retaining devices whereby when the staff is moved to release the brakes the retaining devices are first set to retain increased tension of the spring and then the circuit of the motor is closed, and on partial reverse movement the motor circuit is opened and on further reverse movement the retaining devices may be controlled to permit desired application of the brakes and means independent of the controller automatically acting to open the circuit of the motor when desired maximum tension has been imposed upon the spring and to close such break on reduction of such maximum tension.

870,190. ACETYLENE-GAS MACHINE. LOUIS H. MILLER, Campbell, Cal. Filed Apr. 15, 1907. Serial No. 368,130.



1. The combination in an acetylene gas machine of a tank, gas generator, carbid holder, a float and a carbid valve attached to said float, said valve having a plurality of steeply inclined spoon like depressions, substantially as described.

2. The combination in an acetylene gas machine of a tank, gas generator, carbid holder, a float and a carbid valve attached to said float and having a series of steeply inclined spoon like depressions and a series of narrow knife like edges, substantially as described.

3. The combination of a tank, gas generator, carbid holder, a float, a spear like valve having a series of steeply inclined spoon like depressions attached to the float, and a lever carried by the tank and attached to the float whereby the latter may be raised or depressed at will, substantially as described.

4. The combination of a tank, a stationary gasometer therein, a cylindrical gas generator placed transversely of the tank and on the top thereof, a carbid holder placed on the top of the generator, a float in the tank and a valve which projects into the bottom of the carbid holder and which is connected to the float, substantially as described.

5. The combination of a tank, a stationary gasometer therein, a cylindrical gas generator placed transversely of the tank and on the top thereof, a carbid holder placed on the top of the generator, a float having a conical top, and a valve connected to the float and projecting into the carbid holder, substantially as described.

6. The combination of a tank, a stationary gasometer therein, a cylindrical gas generator placed transversely of the tank on the top thereof, a carbid holder placed on the top of the generator, a float having a conical top, a valve connected to the float, a pipe extending from a point near the carbid holder to a point near the bottom of the gasometer and a perforated plate carried by the pipe at its lower end, substantially as set forth.

7. The combination of a tank, a stationary gasometer therein, a cylindrical gas generator placed transversely of the tank and on the top thereof, a carbid holder placed on the generator, a float carrying a valve projecting into the carbid holder, and an agitator in the generator and adapted to stir the contents of the holder when the same is being emptied, substantially as described.

8. The combination of a tank, a gasometer therein, a cylindrical gas generator on the tank, a carbid holder on the generator, a float carrying a valve projecting into the carbid holder, and an agitator having a U shaped yoke passing from end to end of the generator and adapted to stir the contents thereof when the same is being cleaned, substantially as described.

9. The combination of a tank, a gasometer therein, a gas generator, an agitator extending from end to end of the generator, a washout pipe opening in the generator, a water supply pipe extending from end to end of the generator and having a plurality of fine openings, and means to supply the generator with carbid, substantially as described.

10. The combination of a tank, a gasometer therein, a gas generator cylindrical in shape and carried by the tank, an agitator extending from end to end of the generator and capable of a movement of nearly 180 degrees, a washout pipe opening into the generator, a water supply pipe extending from end to end of the generator and having a series of fine openings therein, and means to supply the generator with carbid, substantially as described.

11. The combination with a tank, a gasometer therein, a gas generator carried by the tank, a float in the tank and carrying a valve which projects into the carbid supply holder, a carbid holder, carried by the gas generator, a washout pipe opening into the generator, a spray pipe extending from end to end of the generator, and an agitator capable of movement in an arc of about 180 degrees extending from end to end of the generator, and an overflow pipe opening into the generator, substantially as described.

12. The combination with a tank of a stationary gasometer therein, a cylindrical gas generator carried by the tank, a carbid holder carried by the generator, a pipe extending from a point near the carbid holder to a point near the bottom of the gasometer, a perforated plate carried by the pipe at its lowest end, a float having a conical top, rods extending from the float down into the bottom of the tank, a bar connecting the rods and a long rod carrying a valve extending up through the pipe to a point near the carbid holder, substantially as described.

13. The combination of a tank, a stationary gasometer therein, a cylindrical gas generator carried thereby, a carbid holder carried by the gas generator, a float in the tank, a valve projecting into the carbid holder and connected with the float, a rod carried by the tank and a pair of links connecting the rod to the float whereby the latter may be raised or lowered at will, substantially as described.

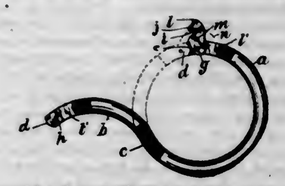
14. The combination of a tank, a stationary gasometer therein a cylindrical gas generator carried thereby, a carbid holder carried by the generator and above the same, a float having a conical top in the tank, a valve projecting into the carbid holder and connected with the float, a pipe extending from a point near the carbid holder to a point near the bottom of the gasometer, a perforated plate carried by the pipe, and means to raise or lower the float at will, substantially as described.

15. In a valve for feeding calcium carbid, the combination of a cylindrical base, a narrow flange extending from the bottom of the base, and a series of sharp knife like edges carried by the base and extending above the same, substantially as described.

16. In a valve for feeding calcium carbid, the combination of a cylindrical base, a flange extending from the bottom of the base, and a series of knife like edges carried by the base and meeting in a point above the same, substantially as described.

17. In a valve for feeding calcium carbid, the combination of a flanged base, a series of knives carried thereby, said knives meeting in a point at a distance above the base, and filling between each pair of knives whereby a series of steeply inclined curved surfaces are presented to the material through which the valve moves, substantially as described.

870,191. KEY-RING. LUCENA M. MORDEN, Waterbury, Conn. Filed Oct. 25, 1905. Serial No. 284,297.



1. The combination, with the key-ring having the body a and the section b jointed thereon by pintle c so as to turn laterally and backwardly, and the joint of the section having the slot l' extended longitudinally therethrough, of the transverse pins g and h inserted across the slot upon the members a and b respectively, and the latch d pivoted upon one of the pins and having the notch i to engage the other pin, whereby the latch is concealed in the slot when the sections are locked together.

2. The combination, with a key ring having separable sections and a slot extended longitudinally through the joint of the sections, of transverse pins inserted across the slot adjacent to the joint and a latch pivoted upon one of the pins and having a hook to engage the other pin, and a projection upon the latch extended within the ring when the hook is locked upon said pin, whereby the hook may be pushed outwardly.

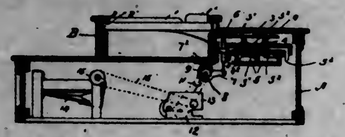
3. The combination, with a key ring having separable sections and a slot extended longitudinally through the joint of the sections, of transverse pins inserted across the slot adjacent to the joint and a latch pivoted upon one of the pins and having a hook to engage the other pin and a projection upon the latch extended within the ring when the hook is locked upon said pin, and a toe whereby to lift the hook from the slot and concealed normally within the slot until the hook is pushed outwardly by pressure upon the said projection.

4. The combination, with a key ring having separable sections and a slot extended longitudinally through the joint of the sections, of transverse pins inserted across the slot adjacent to the joint and a latch pivoted upon one of the pins and having an eccentrically disposed notch forming a hook to engage the other pin, whereby the hook is crowded past the pin in the closing movement and clears the pin when wholly closed.

5. The combination, with a key ring having a movable section with a pintle whereby it may swing laterally, and the separable ends of the sections provided with a stud and recess to lock elastically, and a slot extended longitudinally through the joint of the sections, of trans-

verse pins inserted across the slot adjacent to the joint and a latch pivoted upon one of the pins and having an eccentric notch forming a hook to engage the other pin, the latch having a projection extended within the ring when the hook is closed, and a toe adapted to lift the hook from the slot and concealed normally within the slot until the hook is pushed outwardly by pressure upon the said projection.

870,192. PEDAL BASS-ORGAN. LEONARD D. MORRIS, Chicago, Ill. Filed Oct. 20, 1906. Serial No. 339,813.



1. The combination with an organ having pedal keys, of a piano mounted on said organ and adapted to be operated simultaneously with said keys, wind generating means in said organ, a motor adapted to actuate said wind generating means and means operated by the pedal keys adapted to supply energy to the motor.

2. In a device of the class described the combination with pedal keys, of valves actuated thereby, wind generating means, a spring motor adapted to operate the same and mechanism adapted to automatically wind said motor when the keys are operated.

3. In a device of the class described the combination with pedal keys, of valves actuated thereby, bellows adapted to generate wind for said valves, a spring motor, winding mechanism therefor and means operatively connecting said pedal keys with the winding mechanism and adapted to operate the same when the keys are operated.

4. In an organ, the combination with pedal keys of diaphragm valves actuated thereby, a wind generating device, a motor adapted to operate the same and means operated by the pedal keys adapted to supply energy to the motor.

5. In an organ, the combination with valves, of pedal keys each having a rigid extension thereon adapted to open a corresponding valve when the pedal is depressed, a bellows adapted to supply wind to said valves, a motor adapted to operate the bellows and means operated by the keys for transmitting energy to said motor.

6. In an organ, the combination, of pedal keys, with valves, a rigid extension on each pedal key adapted to open a corresponding valve when the pedal key is depressed, a vertical bar 6 adapted to be pressed downward by the downward movement of the pedal key, a lever 7 connected by means of a joint with the said vertical bar, a shaft 8 upon which the lever 7 is rotatively mounted, a ratchet wheel 9 secured to said shaft 8, a disk on said lever, pawls 7^2 mounted upon the disk and in ratchet connection with said ratchet wheel, a sprocket wheel 10 mounted upon the shaft 8 and rigidly secured thereto, a spring motor 13, a winding mechanism for said motor, a sprocket wheel 12 and a chain 11 adapted to convey the rotary movement of the shaft 8 to the winding mechanism, a bellows adapted to be operated by said motor and means for conveying the wind from the bellows to said valves.

7. In an organ, the combination of pedal keys, with valves, means on said keys adapted to open said valves when the keys are depressed, a bellows, wind connections between the bellows and said valves, a spring motor adapted to operate said bellows and means connected with each pedal key adapted to wind the motor when the keys are operated.

8. In an organ, the combination with pedal keys of valves operated thereby, a shaft journaled beneath said keys, means operated by each key adapted to rotate said shaft, a spring motor, winding means therefor operatively connected with said shaft, a bellows driven by said motor and means for conveying wind from said bellows to said valves.

9. In an organ, the combination of pedal keys, with valves, means connected with said pedal keys adapted to open one of said valves whenever the corresponding pedal key is depressed, a shaft journaled beneath the keys, means actuated by said keys adapted to rotate the shaft, a bellows adapted to supply wind to the valves, a motor adapted to operate said bellows and means operatively connected with said shaft for energizing the motor.

10. In an organ, the combination with pedal keys, of valves, means connected with the said pedal keys adapted to open one of said valves whenever the corresponding pedal key is depressed, a rotative shaft, means actuated by said keys adapted to rotate the shaft, a spring motor 13, a spring winding mechanism thereon, means connected with said shaft and adapted to operate said winding mechanism, a bellows operated by the motor and means for conveying wind from the bellows to said valves.

11. In an organ, the combination of pedal keys, and a rigid extension 3 secured on each, with valves adapted to be opened by said extension 3, a shaft 8, means adapted to rotate said shaft when the pedal keys are depressed, a spring motor 13, a spring winding mechanism on said motor, means adapted to transmit the movement of said shaft to the spring winding mechanism to actuate the latter, a sprocket wheel 13^{11} attached to the motor, a wind generating bellows 14, a crank shaft 16 and connecting rod 14' operating said bellows, a sprocket wheel 16' secured to the said crank shaft 16, means adapted to connect the sprocket wheel 13^{11} with the sprocket wheel 16' conveying the movement of the mechanism in said spring motor 13 to said crank shaft 16 and operating the bellows.

12. In an organ, the combination with pedal keys, of valves, a shaft 8 adapted to be rotated, means connected with said keys and adapted to actuate said valves and said shaft simultaneously, a motor 13, means whereby the said movement of the shaft is adapted to operate said motor, a wind generating bellows 14, and means connecting said motor with the wind generating bellows and actuating the latter.

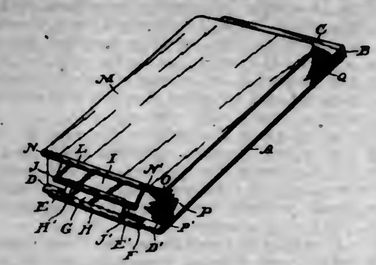
13. In an organ, the combination with pedal keys, of valves operated thereby, a shaft, means connecting each key with said shaft and adapted to rotate the same, a motor 13, means actuated by said shaft adapted to operate the motor, a wind generating bellows 14, operated by said motor, a wind reservoir 18, wind connection between said bellows 14 and reservoir 18, a stop action chamber 19, diaphragm stop valves therein, a pedal stop 20, wind connection between said reservoir and said stop action chamber, a valve chest 5 containing the valves 4, and wind connection between said stop action chamber and the corresponding valve chest.

14. In an organ, the combination with pedal keys, of valves, means adapted to actuate said valves when the corresponding pedal key is depressed, a motor 13, devices interposed between said motor and said pedal keys adapted to actuate said motor when each pedal key is depressed, a bellows actuated by said motor, a stop action chamber 19, a wind connection between said bellows and said chamber, a reservoir 18 interposed in said connection, a plurality of valve chests 5 and wind connection between the said stop action chamber and the corresponding valve chest.

870,193. MANIFOLDING-BILL-PAD HOLDER. PERRY A. MCCASKEY, Alliance, Ohio, assignor to The McCaskey Register Company, Alliance, Ohio, a Corporation of Ohio. Filed Feb. 13, 1907. Serial No. 357,180.

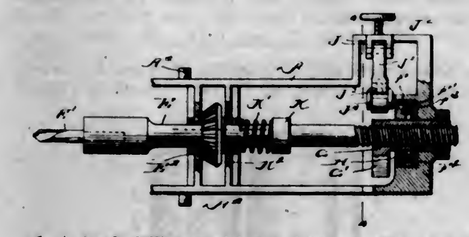
1. A bill pad holder comprising an oblong-rectangular plate with an upturned head piece on a shorter side thereof and a clamp-bar on the head piece to hold the head end of a pad, said plate having a hinge part formed on the opposite side thereof, a hinge member connected to the hinge part of the plate, a second hinge member connected to the first-mentioned hinge member and extending farther from said plate than said upturned head piece extends from the plate, and an oblong-rectangular tablet having a narrower side thereof connected to said second hinge member.

2. A bill pad holder comprising an oblong-rectangular plate with an upturned head piece on a shorter side thereof, and a clamp-bar on the head piece, the plate having two clips formed on corner portions of the opposite side thereof and also a hinge part between the two clips, a hinge member connected to the hinge part of the plate, a



relatively wider hinge member connected to the other hinge member, and an oblong-rectangular tablet having a narrower side thereof connected to the wider hinge member.

870,194. BALL-BEARING TRACK-DRILL. CHARLES E. NELSON, Harvey, Ill. Filed June 2, 1906. Serial No. 319,908.



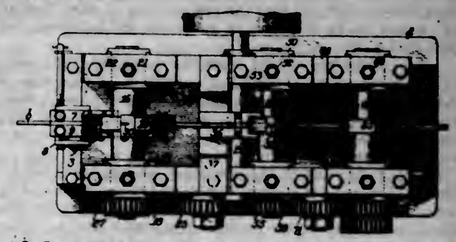
1. A track drill comprising a frame provided with a socket, a rotatable drill holding spindle mounted in the frame, the rear portion of the spindle being screw-threaded, an interiorly screw threaded sleeve rotatably mounted in said socket, the threaded end of said spindle working in the sleeve, a cam carried by said sleeve, a bracket mounted on one side of the frame, a roller yieldably connected to said bracket, and adapted to momentarily retard the rotation of said sleeve and feed said spindle forwardly as set forth.

2. A track drill comprising a frame, a spindle having an interiorly threaded sleeve rotatably mounted in said frame, a portion of the spindle being threaded and adapted to work in said sleeve, a cam carried by said sleeve, lugs mounted on one side of the frame, an angled bracket comprising a vertical and a horizontal arm, pivoted in said lugs, a hanger pivotally suspended from said horizontal arm, a roller mounted in the free end of said hanger and adapted to lie in the path of said cam, a spring bearing against said hanger, and the vertical arm of said bracket and a set-screw working through the side of the frame and engaging said bracket as set forth.

3. A device of the kind described, comprising a frame a rotatable drill holding spindle mounted in the frame, the rear portion of said spindle being threaded, a threaded sleeve rotating in said frame, the threaded portion of the spindle working in said sleeve, a cam carried by the sleeve, an angled bracket, a hanger pivotally connected to one member of said bracket, a spring bearing at one end upon the other member of the bracket and upon the hanger, and a roller carried by said hanger, and in the path of the cam.

870,195. APPARATUS FOR MAKING BOX-STRAPPING. ELLIOTT S. NORTON, Chicago, Ill., assignor to Acme Flexible Clasp Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 14, 1906. Serial No. 330,556.

1. In a machine of the character described the combination of means for scoring the blank strip at intervals on both sides, and means for expanding the strip in the scored lengths thereof.



2. In a machine of the character described, the combination of means for scoring the blank strip at intervals on both sides, means for expanding the strip in the scored lengths thereof and means for flattening the expanded strip.

3. In a machine of the character described, the combination of rolls carrying pairs of scoring tools to act on opposite sides of the strip, and means for expanding the strip in the scored lengths thereof.

4. In a machine of the character described, the combination of rolls carrying pairs of scoring tools to act on opposite sides of the strip and a roll carrying expanding tools to pass through the scored parts of the strip.

5. In a machine of the character described, the combination of rolls carrying pairs of scoring tools to act on opposite sides of the strip, a roll carrying expanding tools to pass through the scored parts of the strip and a companion roll carrying dies to receive the said expanding tools.

6. In a machine of the character described, the combination of rolls carrying pairs of scoring tools to act on opposite sides of the strip, means for expanding the strip in the scored lengths thereof and means for flattening the expanded strip.

7. In a machine of the character described, the combination of rolls carrying pairs of scoring tools to act on opposite sides of the strip, means for expanding the strip in the scored lengths thereof and rolls for flattening the expanded strip.

8. In a machine of the character described, the combination of rolls carrying pairs of scoring tools to act on opposite sides of the strip, a roll carrying expanding tools to pass through the scored parts of the strip and means for flattening the expanded strip.

9. In a machine of the character described, the combination of rolls carrying pairs of scoring tools to act on opposite sides of the strip, a roll carrying expanding tools to pass through the scored parts of the strip and rolls for flattening the expanded strip.

10. In a machine of the character described, the combination of rolls carrying pairs of scoring tools to act on opposite sides of the strip, a roll carrying expanding tools to pass through the scored parts of the strip, a companion roll carrying dies to receive the said expanding tools, and means for flattening the expanded strip.

11. In a machine of the character described, the combination of rolls carrying pairs of scoring tools to act on opposite sides of the strip, a roll carrying expanding tools to pass through the scored parts of the strip, a companion roll carrying dies to receive the said expanding tools and rolls for flattening the expanded strip.

12. In a machine of the character described, the combination of means for scoring the blank strip at intervals on both sides, and a roll carrying expanding tools to pass through the scored parts of the strip.

13. In a machine of the character described, the combination of means for scoring the blank strip at intervals on both sides, a roll carrying expanding tools to pass through the scored parts of the strip and a companion roll carrying dies for said expanding tools to enter.

14. In a machine of the character described, the combination of means for scoring the blank strip at intervals on both sides, a roll carrying expanding tools to pass through the scored parts of the strip and means for flattening the expanded strip.

15. In a machine of the character described, the combination of means for scoring the blank strip at intervals on both sides, a roll carrying expanding tools to pass through the scored parts of the strip and rolls for flattening the expanded strip.

16. In a machine of the character described, the combination of means for scoring the blank strip at intervals on both sides, a roll carrying expanding tools to pass through the scored parts of the strip, a companion roll carrying dies for said expanding tools to enter and means for flattening the expanded strip.

17. In a machine of the character described, the combination of means for scoring the blank strip at intervals on both sides, a roll carrying expanding tools to pass through the scored parts of the strip, a companion roll carrying dies for said expanding tools to enter and rolls for flattening the expanded strip.

18. In a machine of the character described, the combination of a roll carrying expanding tools to pass through the strip, rolls for flattening the expanded strip, and gearing connecting said rolls with the expanding tool roll with provisions for increased surface speed of the flattening rolls.

19. In a machine of the character described, the combination of means for scoring the blank strip at intervals, a roll carrying expanding tools to pass through the scored parts of the strip, rolls for flattening the expanded strip, and gearing connecting said rolls with the expanding tool roll with provisions for increased surface speed of the flattening rolls.

20. In a machine of the character described, the combination of a roll carrying expanding tools to pass through the strip, a companion roll carrying dies for said expanding tools to enter, rolls for flattening the expanded strip, and gearing connecting said rolls with the expanded tool and die rolls with provisions for increased surface speed of the flattening rolls.

21. In a machine of the character described, the combination of means for scoring the blank strip at intervals, a roll carrying expanding tools to pass through the scored parts of the strip, a companion roll carrying dies for said expanding tools to enter, rolls for flattening the expanded strip, and gearing connecting said rolls with the expanding tool and die rolls with provisions for increased surface speed of the flattening rolls.

22. In a machine of the character described, the combination of means for scoring the blank strip at intervals on both sides, a roll carrying expanding tools to pass through the scored parts of the strip, rolls for flattening the expanded strip and gearing connecting said rolls with the expanding tool roll with provisions for increased surface speed of the flattening rolls; substantially as and for the purpose described.

23. In a machine of the character described, the combination of means for scoring the blank strip at intervals on both sides, a roll carrying expanding tools to pass through the scored parts of the strip, a companion roll carrying dies for said expanding tools to enter, rolls for flattening the expanded strip and gearing connecting said rolls with the expanding tool and die rolls with provisions for increased surface speed of the flattening rolls; substantially as and for the purpose described.

24. In a machine of the character described, a strip guide comprising a fixed block, a movable block and a pair of bars interposed between said blocks and adapted to be clamped in place by adjustment of the movable block, a guideway for the strip being formed between said bars.

25. In a machine of the character described, the combination of a pair of peripherally recessed rolls, slotted tool holders occupying the recesses thereof, means for securing said holders in the recesses, scoring blades occupying the slots of the holders, wedges in the latter for determining the amount of projection of the blades from the peripheries of the rolls, and means for preventing outward movement of the blades after adjustment.

26. In a machine of the character described, a strip guide comprising a block with a dovetail channel, and a pair of grooved bars occupying said channel and formed with lugs to prevent longitudinal movement.

27. In a machine of the character described, a strip guide comprising a block with a dovetail channel, and a pair of grooved bars occupying said channel and formed with lugs to prevent longitudinal movement, said bars being bifurcated at the ends from which the strip issues.

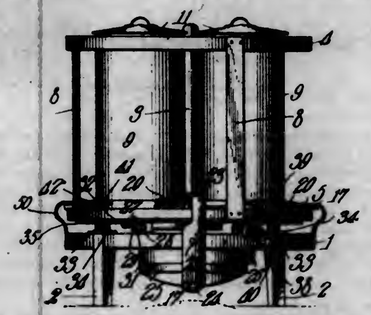
28. In a machine of the character described, the combination with a roll carrying expanding tools, of a companion roll recessed in its periphery, and dies occupying the recesses and each composed of a pair of sliding blocks spring-pressed towards each other.

29. In a machine of the character described, the combination with a roll carrying expanding tools, of a companion roll recessed in its periphery, and dies occupying the recesses and each composed of a pair of sliding blocks spring-pressed towards each other with provisions for varying the spring pressure.

30. In a machine of the character described, the combination with a roll carrying expanding tools, of a companion roll recessed in its periphery, dies occupying the recesses and each composed of a pair of sliding blocks, collars compounded with said companion roll, screws carried by the collars, and springs interposed between said screws and the die-slides.

31. In a machine of the character described the combination of means for scoring the blank strip at intervals on both sides, and means for expanding the strip in the scored lengths thereof, with provisions for continuously advancing the strip.

870,196. GROCERY-CABINET. WILLIAM J. PERRITT, Rogers, Ark. Filed July 16, 1907. Serial No. 384,059.



1. In a cabinet of the character described, the combination with a base, and a movable carrier mounted thereon and provided with a plurality of receptacles, of a cut-off for each receptacle, and an operating lever on the base arranged to coöperate with the respective cut-offs.

2. In a cabinet of the character described, the combination with a base, and a movable carrier mounted thereon and provided with a plurality of receptacles, of a cut-off for each receptacle having a pivoted member having a portion projecting beyond the carrier, and an operating lever pivoted on the base having a part arranged to coöperate with the projecting portion of the cut-off members.

3. In a cabinet of the character described, the combination with a base, and a movable carrier mounted thereon and provided with a plurality of receptacles, of a cut-off for each receptacle, means normally operating to close the cut-off, and a cut-off operating device arranged on the base and adapted to coöperate with a cut-off when its respective receptacle is in discharging position.

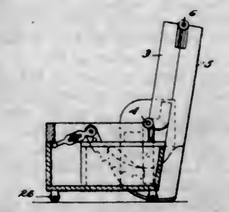
4. In a cabinet of the character described, the combination with a base, and a movable carrier mounted thereon and provided with a plurality of receptacles, of a cut-off for each receptacle, an operating lever for actuating all the cut offs, and a friction device coöperating with the operating lever for retaining it in different adjusted positions.

5. In a cabinet of the character described, the combination with a base, and a carrier rotatably mounted thereon and provided with a plurality of bins, of cut-offs for the respective bins, an operating lever on the base arranged to coöperate with the respective cut-offs to operate them, and devices for locking the carrier in fixed relation to the base when one of the bins is in discharging position.

6. In a cabinet of the class described, the combination with a base, of a spring actuated locking lever carried thereby, a pin projecting upward from the lever, a revoluble carrier having recesses for the reception of the pin, a hopper on the base, the carrier being provided with openings movable successively into vertical alinement with the hopper, a plurality of receptacles mounted on the carrier and having bottom discharge openings alining with those of the carrier, and independent cut offs for controlling the flow of material through such discharge openings.

7. In a cabinet of the character described, the combination with a base, of a carrier rotatably mounted thereon embodying upper and lower circular members, the upper member being provided with a series of concentric openings, and the lower member having a set of discharge openings, a set of receptacles mounted in the said apertures of the upper member, and circular supports arranged in the lower member and having peripheral flanges arranged to coöperate with the lower edges of the receptacles to center them relatively to the discharge openings.

870,197. SETTEE-BED AND COUCH. JACOB PHILLIPSON, Chicago, Ill. Filed Oct. 15, 1906. Serial No. 339,032.



1. The combination of a box-seat adapted to be used as a receptacle for storing bed clothes and having a recess extending into said receptacle from the rear along the inside of each side wall of the receptacle, a cover hinged to said seat along the rear, a back hinged to said seat along the rear, an extension hinged to said back, a rocker on said extension opposite each of said recesses, said rockers being adapted to roll into said recesses when the settee bed is folded, a pair of arms secured to said cover and extending into said recesses, and means engaging said arms and adapted to secure said cover at an angle above said box.

2. The combination of a box-seat adapted to be used as a receptacle for storing bed clothes and having a recess extending into said receptacle from the rear along the inside of each side wall of the receptacle, a cover hinged to said seat along the rear, a back hinged to said seat along the rear, an extension hinged to said back, a rocker on said extension opposite each of said recesses, said rockers being adapted to roll into said recess when the settee bed is folded, a pair of ratchet bars secured to said cover and extending into said recesses, and means engaging said ratchet bars and adapted to hold said cover at an angle above said box.

3. The combination of a box-seat adapted to be used as a recepacle for storing bed clothes and having a recess extending into said receptacle from the rear along the inside of each side wall of the receptacle, a cover hinged to said seat along the rear, a back hinged to said seat along the rear, an extension hinged to said back, a rocker on said extension opposite each of said recesses, said rockers being adapted to roll into said recesses when the settee bed is folded, a pair of arms secured to said cover and extending into said recesses along the sides of and in position to overlap said rockers, and means engaging said arms and adapted to hold said cover at an angle above said box.

4. The combination of a box-seat having a cover pivoted at its rear, a back hinged to said seat on the same axis with said cover, a pair of ratchet bars pivoted to said cover and extending into said box, means for engaging said ratchet bars and adapted to hold said cover at an angle above said box, and a handle secured to said ratchet bars, extending to the front of said cover, and adapted to disengage said bars from said means.

5. The combination of a box-seat having a cover pivoted at its rear, a back hinged to said seat on the same axis with said cover, a pair of ratchet bars pivoted to said cover and extending into said box, means for engaging said ratchet bars and adapted to hold said cover at an angle above said box, a pair of arms pivoted to said ratchet bars and slidingly secured within the cover, and a rod secured to said arms, extending along the inner front edge of said cover and adapted to release said ratchet bars from said means.

6. The combination of a box-seat adapted to be used as a receptacle for storing bed clothes, and having a casing along the inside of each side wall of said receptacle, a cover hinged to the rear of said seat, a back hinged to said seat on the same axis with said cover, a pair of arms secured to said cover and each extending into one of said casings, means adapted to engage said arms and hold said cover at an angle to said box, and a handle for disengaging said bars from said means.

7. The combination of a base, a cover hinged thereto along its rear edge, a ratchet-bar pivoted to said cover at each side thereof, means on said base engaging the ratchet-bars, a handle slidingly secured to the cover, extending to the inner front part thereof, pivoted to each of the ratchet bars, and adapted to move the same out of engagement with said means.

8. The combination of a base, a cover hinged thereto along its rear edge, a ratchet-bar pivoted to said cover at each side thereof, each bar having a projection above the pivot, means on the base for engaging the teeth of the ratchet-bars, and an arm pivoted to each of said projections, extending along the inner front edge of the cover and adapted for tilting the ratchet-bars so as to permit their teeth to pass said means.

870,198. ELECTRICAL HORN. WILLIAM E. RUSSELL, Danbury, Conn. Filed Sept. 28, 1906. Serial No. 336,527.



1. An electrical horn of the class described, comprising a magnet having a hollow core, a diaphragm across the end thereof, a rod attached to the diaphragm and extending through said hollow core, a circuit breaker also connected to said rod to control the electrical connections with the magnet.

2. An electrical horn of the class described, comprising a magnet having a hollow core, a diaphragm across the same, a rod attached to the diaphragm, a binding post and contact plate, a circuit breaker connected with both the magnet and the rod to engage the contact plate.

3. An electrical horn of the class described, comprising a magnet, a diaphragm adjacent thereto, a binding post and contact plate, a circuit breaker for engagement with said plate, connections intermediate the diaphragm and contact breaker whereby the movements of the former are imparted to the latter.

4. An electrical device of the class described, comprising a magnet having a hollow core therein, a diaphragm adjacent thereto, a circuit breaker upon the opposite side of the magnet and connected with the magnet, a rod attached to the diaphragm and adjustably connected to the breaker.

5. An electrical device of the class described, comprising a magnet having a hollow core therein, a diaphragm adjacent thereto, a circuit breaker upon the opposite side of

the magnet and connected with the magnet, a rod attached to the diaphragm, and adjustably connected to the breaker, casings inclosing the said parts and a horn covering the said diaphragm.

6. In an electrical device of the class described, the combinations of a case, a magnet attached therein and provided with a hollow core, a diaphragm covering the end of casing and extended across the magnet, a horn covering the outer surface of diaphragm, a circuit breaker connected with the magnet, and means connecting said diaphragm and circuit breaker.

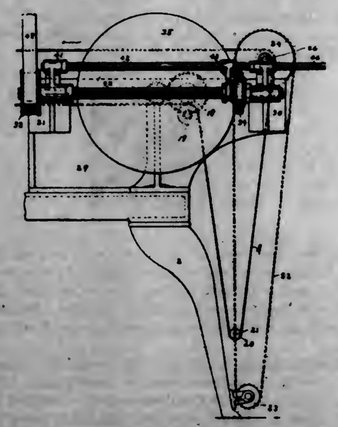
7. In an electrical horn of the class described, the combination of a cylindrical case, a base attached thereto, a diaphragm inclosing the end of case, a horn covering said diaphragm, a magnet within the cylinder and having a hollow core, a circuit breaker attached to the base and connected with the magnet, and a rod connecting the diaphragm and circuit breaker.

8. In an electrical horn of the class described, the combination with a case, of a magnet contained therein, a diaphragm, a binding post connecting with the magnet, a circuit breaker connected with the opposite side of the magnet, a second binding post and a contact plate for the circuit breaker, and a rod connecting the diaphragm and circuit breaker.

9. In an electrical device of the class described, the combination of a diaphragm, a rod attached thereto, a circuit breaker connected to the opposite end of the rod, a magnet adjoining the rod and electrical connections intermediate the magnet and circuit breaker.

10. An electrical horn of the class described, comprising a diaphragm, a magnet, a circuit breaker and connections intermediate the diaphragm and circuit breaker for imparting movements from the diaphragm to the breaker.

870,199. FEEDING AND TENSION MECHANISM. BURTON W. SCOTT, Detroit, Mich., assignor to Kemiweld Can Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 3, 1906. Serial No. 346,006.

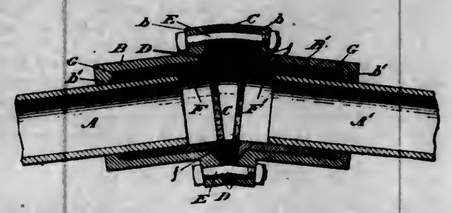


1. In a tube machine, the combination of feed rolls for the tube material, gears to connect the same, a friction disk to drive said rolls, a constantly driven friction wheel to contact with the face of said disk and actuate the same at variable speed, a chain gear mechanism to position the friction wheel, and a roller carried by the chain gear mechanism, the position of said roller being determined by the tension of the tube material.

2. In a tube machine, the combination of a bed, a pair of feed rolls, means to control the pressure between the same, friction gears for driving the rolls at variable speed, a toothed gear to control the relative positions of the gears, chain wheels connected to said toothed gear, chains engaging said wheels, a shaft and roller carried by said chains, and a second roller over which the material passes, the band of tube material passing between the feed rolls, down and up around the roller mounted on the chains, and over the second roller, the height of the first roller being determined by the tension on the band, and the speed of the feed rolls being determined by the height of the roller.

3. The combination of feed rolls for a band of flexible material, friction gears to drive the same, and a chain gear mechanism to control the relative positions of the friction gears, the chain gear mechanism being positioned according to the tension on the band of material.

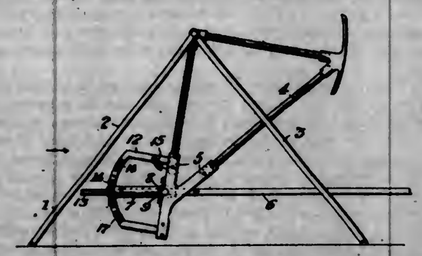
870,200. ANGLE-PIPE COUPLING. WILDER R. SHECKLER, Greenville, Pa. Filed Dec. 16, 1905. Serial No. 292,062.



1. An angle pipe-coupling comprising confronting coupling-sleeves which fit on the adjacent ends of contiguous pipe-sections, the said coupling-sleeves having external flanges at their inner or front ends, an annular wedge interposed between the flanges of said coupling-sleeves, and bent fastening bolts for securing the parts together, the bolt-holes therefor being formed in the flanges substantially at right-angles to the confronting faces thereof and being bent in the wedge to coincide with the bolt-holes of the flanges at both sides of the wedge.

2. An angle pipe-coupling comprising confronting coupling-sleeves, each having an external front flange and an internal annular shoulder at its rear or outer end, the said coupling-sleeves adapted to fit over the adjacent ends of contiguous pipe-sections, packing glands fitted in said sleeves and adapted to fit over the ends of said pipe-sections, the front or inner ends of said glands having external flanges fitting in annular depressions therefor in the confronting faces of the coupling-sleeves, packings arranged in the annular spaces between the rear ends of the glands and the said internal annular shoulders of the coupling-sleeves, an annular wedge interposed between the confronting faces or flanges of the coupling-sleeves, flat packing-rings interposed between the opposite faces of said wedge and the flush confronting faces of the coupling-sleeves and glands, and fastening bolts entered through the flanges of the coupling-sleeves and through the wedge binding the parts together.

870,201. AUTOMATIC PULL-ROD ADJUSTER. HERBERT G. SMITH, Wayside, Kans. Filed Jan. 10, 1907. Serial No. 351,700.



1. In a device of the class described the combination with a pump jack, of a pull rod connected therewith and means for automatically adjusting the length of the pull rod at every stroke thereof.

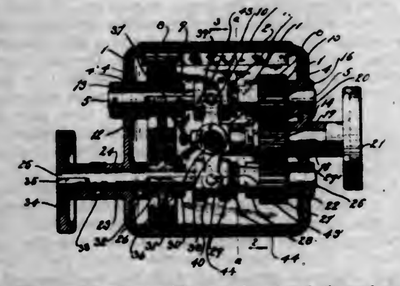
2. In a device of the class described the combination with a pump jack, of a guiding sleeve pivoted to said pump jack, a pull rod slidably mounted in said sleeve, means engaging said sleeve for regulating the length of the pull rod, and means for operating said regulating means.

3. In a device of the class described the combination with a pump jack, of a sleeve pivotally secured to said pump jack, a pull rod slidably mounted within said sleeve, a pinion engaging said sleeve and screw threaded on said pull rod, and means for turning said pinion in either direction depending upon the condition of the pull rod.

4. In a device of the class described the combination with a pump jack, guiding means pivoted to said pump jack, of a pull rod loosely engaging said guiding means, means for preventing the withdrawal of said pull rod from the guiding means, said means constituting adjusting means for the pull rod, means for operating the adjusting means, and means for holding the operating means in engagement with the adjusting means.

5. In a device of the class described the combination with a pump jack, of a guiding sleeve pivoted to said pump jack, of a pull rod slidably mounted in said guiding means, means for preventing the rotation of said pull rod, an adjusting pinion threaded on the end of said pull rod, a hinged frame normally bearing against said pinion and riding idly thereover, and teeth extending from the side of said frame and adapted to engage said adjusting pinion to alter the length of the rod according to its temperature condition.

870,202. REVERSING-GEAR. CHARLES W. SPONSEL, Hartford, Conn. Filed Apr. 3, 1906. Serial No. 309,628.



1. The combination, with a casing consisting of a casting having a bridge integral therewith, and connecting its sides, said bridge provided with bearings, of a driving-shaft journaled in the casing and bridge; a gear rigid with said driving-shaft; a pair of integral driven shafts, one on each side of said driving-shaft; gears loose on the driven shafts, and each carrying a clutch-element; clutches splined to the driven-shafts; means for actuating said clutches; and engaging gear-elements between the driven shafts.

2. The combination, with a casting having three sets of bearings in line with each other, of a driving-shaft journaled in the intermediate set of bearings; a gear rigid with said driving-shaft; shafts journaled in the other sets of alined bearings; gears loose on said shafts, and in constant mesh with the gear on said driving-shaft; clutches splined to the driven shafts; lever-mechanism for shifting said clutches; and a pair of intermeshing gears, one carried by each driven shaft.

3. The combination, with a casing, having sets of alined bearings, and a bridge connecting one set of said bearings, and provided with a bearing located at an angle to the connected set of bearings, of a driving-shaft journaled in the casing, and in the bearing of said bridge; a gear rigid with said driving-shaft; driven shafts journaled in the other alined bearings of the casing; gears loose on the driven shafts, and each having a clutch-element; a rock-shaft journaled in the bearings of the bridge; lever-arms carried by said rock-shaft; clutches operated by said lever-arms, and in sliding connection with the driven shaft; means for operating the rock-shaft; and gearing connecting the driven shafts.

4. The combination, with a casing having alined bearings in its sides, of a bridge connecting said bearings; a driving-shaft journaled at one end in said bridge, and at its power-end in the casing; a gear rigid with said driving-shaft; driven shafts, one on each side of the driving-shaft; gears loose on said driven shafts, and each having a clutch-element, said gears being in constant engagement with the gears loose on the driven shafts, whereby they are driven in the same direction; connecting gears, one rigid with each driven shaft; clutches in sliding engagement with the driven shaft; a rock-shaft journaled in the bearings of the bridge; and devices connecting said rock-shaft with the clutches on the driven shafts.

870,203. SPEED-INDICATOR. CHARLES W. SPONSEL, Hartford, Conn. Filed Oct. 18, 1906. Serial No. 339,474.



1. A speed indicator comprising a casing, a counting and indicating device, a bearing slidable within the casing, a spindle carried by the bearing for engaging the device the speed of which is to be ascertained, and clutch-elements for engaging said spindle with the counting and indicating device.

2. A speed indicator comprising a casing, a counting and indicating-device carried by said casing, a device movable with relation to said casing, means for engaging said movable device with the counting and indicating-device when the movable device is applied to an object the speed of which is to be ascertained and a stop for preventing end-thrust of the movable device and its engaging means against an element of the counting and indicating device.

3. A speed-indicator comprising a casing, a counting and indicating-device carried by said casing, a bearing slidable with relation to said casing, a spindle movable in a bore of the bearing, and carrying at one end a device for engaging an object the speed of which is to be ascertained, and at its other end a clutch and means for disconnecting said clutch from the counting and indicating-device.

4. A speed-indicator comprising a casing, a bearing slidable in said casing, a spindle rotatable in a bore of the bearing, a clutch-element carried by the spindle, and a counting and indicating-device actuated by said clutch-element.

5. A speed-indicator comprising a casing, a bearing slidable in the casing, a spindle rotatable in a bore of the bearing, and shaped on one end to engage an object the speed of which is to be ascertained, a clutch-element on the spindle, a counting and indicating-device, a shaft for actuating said device, and a clutch-element carried by said shaft, and adapted to engage the clutch-element of the spindle.

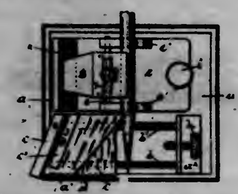
6. A speed-indicator comprising a casing having a slot, a bearing slidable in said casing, a spindle rotatable in a bore of the bearing and shaped on one end to engage an object the speed of which is to be ascertained, a clutch-element on the spindle, a counting and indicating-device visible through the slot of the casing, a shaft for actuating said device, a clutch-element carried by said shaft and adapted to engage the clutch-element of the spindle, and means for disengaging said clutch-elements.

7. A speed-indicator comprising a casing, a counting and indicating-device mounted within the casing, a bearing slidable within the casing, a tube within the casing, a spring surrounding the tube, and engaging one end of the

bearing, a spindle rotatable within the bearing, and having a device at one end adapted to engage an object the speed of which is to be ascertained, a clutch-element on the opposite extremity of the spindle, and a clutch-element carried by a member of the counting and indicating-device.

8. The combination, with a casing, of a flanged tube loose within a part of said casing, a spring surrounding said tube, and bearing at one end against the flange thereof; a bearing slidable in the casing, said bearing having a bore; a spindle rotatable in the bore, and having a head at each extremity; a shaft-engaging-device rigid with one of the spindle heads; and a clutch-element rigid with the other spindle-head, said clutch-element being adapted to engage an element of the counting and indicating-device.

870,204. PENCIL-SHARPENER. NELSON STAFFORD, New York, N. Y., assignor to N. Stafford Company, New York, N. Y., a Corporation of New York. Filed Dec. 23, 1905. Serial No. 293,076.



1. In a pencil sharpener the combination with a base and a support for the pencil to be sharpened, of a cutting blade and a sliding support therefor, moving at right angles to the axial line of the pencil as held, and in a downward direction at an angle of about 10 to 15 degrees to the base.

2. In a pencil sharpener the combination with a base and a support for the pencil to be sharpened, of a cutting blade and a sliding support therefor, moving at right angles to the axial line of the pencil as held, and in a downward direction at an angle of about 10 to 15 degrees to the base, the said cutting blade being set in its support at an angle of about 45 degrees to its line of movement.

3. In a pencil sharpener the combination with a base and a support for the pencil to be sharpened, of rods forming slideways and supports therefor, a frame and means connecting the said frame to said rods whereby said frame is slidable on said rods, a cutting blade and a bracket device supporting the blade above the frame and also connecting the same to and supporting the same upon said movable frame.

4. In a pencil sharpener the combination with a base and a support for the pencil to be sharpened, of rods forming slideways and supports therefor, a frame and means connecting the said frame to said rods whereby said frame is slidable on said rods, a cutting blade, a bracket device connecting the same to and supporting the same upon and above said movable frame, and an adjustable stop against which the movable frame contacts and by which its extent of movement and the length of cut on the pencil is controlled.

5. In a pencil sharpener the combination with a base and a pencil support secured to said base, and lugs upon said base rising therefrom, of rods passing through said lugs at an inclination to said base and forming slideways, a frame having lugs through which said rods pass, and which frame is movable upon said rods, a bracket device secured to said frame, a cutting blade, and means for securing the same to said bracket with the plane of the cutting blade at an inclination to the plane of the movable frame, and the cutting edge at an inclination to the line of movement of the said frame.

6. In a pencil sharpener the combination with a base and a pencil support secured to said base, and lugs upon said base rising therefrom, of rods passing through said lugs at an inclination to said base and forming slideways, a frame having lugs through which the rods pass, and which frame is movable upon said rods, a bracket device secured to said frame, a cutting blade, means for securing the same to said bracket with the plane of the cutting blade at an inclination to the plane of the movable frame, and the cutting edge at an inclination to the line of movement of the said frame, and a screw passing through one of said lugs and adjustable and forming a stop against which the forward end of said movable frame contacts for limiting the movement of said frame.

7. In a pencil sharpener, the combination with a base and a movable cutting blade and supports therefor upon said base, of an adjustable plate and means for pivotally connecting the same to said base, a support for the pencil to be sharpened upon said plate and means for holding the pencil in place on said support.

8. In a pencil sharpener the combination with a base and a movable cutting blade and supports therefor upon said base, of a plate, standards upon said plate having curved seats to receive the pencil to be sharpened, a hinge structure for pivotally connecting said plate to the base, an adjusting screw at the free end of said plate for regulating the height of the pencil supports according to the size of the pencil, and a spring actuated clamp device for holding the pencil in place.

9. In a pencil sharpener the combination with a base and a movable cutting blade and supports therefor upon said base, of a plate, standards upon said plate having curved sides to receive the pencil to be sharpened, a hinge structure for pivotally connecting said plate to the base, an adjusting screw at the free end of said plate for regulating the height of the pencil supports according to the size of the pencil, a clamp plate and means for pivotally connecting the same to and between the pencil supports, and a spring acting upon the said clamp plate to cause the same to bear upon the pencil with force.

10. In a pencil sharpener, the combination with a base, of an adjustable plate and means for pivotally connecting the same to said base, a support for the pencil to be sharpened upon said plate, means for holding the pencil in place, a movable cutting blade, a movable support for the cutting blade and supports therefor upon said base, the cutting blade being set at an angle of about 45 degrees to the line of movement of its support and the support moving at right angles to the line of the pencil.

11. In a pencil sharpener, the combination with a base, of an adjustable plate and means for pivotally connecting the same to said base, a support for the pencil to be sharpened upon said plate, means for holding the pencil in place, a sliding support for the cutting blade moving at right angles to the axial line of the pencil as held and in a downward direction at an angle of about 10 to 15 degrees to the base, supports for said sliding support upon said base, the said cutting blade being set in its support at an angle of about 45 degrees to its line of movement.

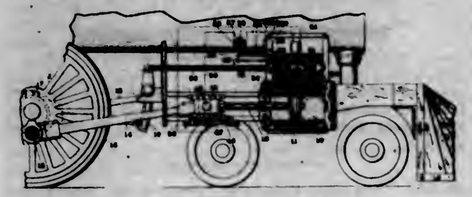
12. In a pencil sharpener, the combination with a horizontally disposed base and a support thereon for the pencil to be sharpened, of inclined devices forming slideways and supports therefor upon said base, a frame and means connecting the frame to said devices whereby said frame is slidable and downwardly movable on said devices, a cutting blade and a bracket device secured to said frame and supporting the blade upon the frame.

870,205. ENGINE-VALVE-SETTING DEVICE. ROBERT E. STEPHENSON, Indianapolis, Ind. Filed Sept. 29, 1905. Serial No. 280,588.

1. A means for indicating the position of the valve of an engine, which means consists of a marking instrument capable of producing a record on a part associated with the valve, and intermediate connections between said marking instrument and the piston for actuating said marking instrument for a limited period at each end of the stroke of the piston.

2. A means for indicating the position of the valve of an engine, which means consists of a recording instrument capable of making a record on a part associated with the valve and longitudinally thereof, and intermediate connections between said recording instrument and the piston for actuating said recording instrument for a limited period at each end of the stroke of the piston.

3. A means for indicating the position of the valve of an engine, which means consists of a recording instrument capable of producing a record on a part connected with the valve, electrically-controlled means for actuating said recording instrument, and means actuated by the piston for actuating said electrically-controlled means at the ends of the stroke of the piston.



4. A means for indicating the position of a valve of an engine, which means consists of a recording instrument capable of producing a record on a part connected with the valve longitudinal of the movement thereof, electrically-controlled means for actuating said recording instrument, and means actuated by the piston for actuating said electrically-controlled means at the ends of the stroke of the piston.

5. A means for indicating the position of the valve of an engine, said means consisting of a marking tram capable of engaging and marking the valve stem longitudinally, means for holding said tram in operative position, and intermediate connections between said tram and the piston for moving the tram into engagement with the valve stem at each end of the stroke of the piston.

6. A means for indicating the position of the valve of an engine, said means consisting of a tram, means for supporting said tram adjacent the valve stem, an electromagnet, and means controlled by said electro-magnet for bringing the tram into marking engagement with the valve stem.

7. A means for indicating the position of the valve of an engine, said means consisting of a tram, means for supporting said tram adjacent the valve stem, an electromagnet, an electric switch adapted to be attached to the piston rod, contact pieces moved into and out of the circuit of the electro-magnet, and means for actuating said contact pieces at the opposite ends of the stroke of the piston.

8. A means for indicating the position of the valve of an engine, said means consisting of a recording instrument capable of producing a record longitudinally of the movement of a part associated with the valve, and means, dependent upon the movement of the piston, for operating said recording instrument at each end of the piston stroke.

870,206. CLUTCH. VERNER J. WAHLSTROM, New York, N. Y. Filed Apr. 6, 1907. Serial No. 366,696.



1. In a clutch, the combination with a shaft, of a ring loosely mounted concentric with the shaft, a roller interposed between the ring and shaft, a cam surface on the inner periphery of the ring contacting with the roller, and spring actuated means for producing a relative rotary movement of the ring and shaft, substantially as described.

2. In a clutch, the combination with a shaft, of a ring loosely mounted concentric with the shaft, a roller interposed between the ring and shaft, a cam surface on the inner periphery of the ring contacting with the roller, spring actuated means for producing a relative rotary movement of the ring and shaft, and means for producing a positive reverse movement, substantially as described.

3. In a clutch, the combination with a shaft, of a ring loosely mounted concentric with the shaft, a plurality of rollers symmetrically arranged between the ring and shaft, cam surfaces on the inner periphery of the ring contacting with the rollers, and spring actuated means for producing a relative rotary movement of the ring and shaft, substantially as described.

4. In a clutch, the combination with a shaft, of a ring loosely mounted concentric with the shaft, two diametrically disposed rollers between the ring and shaft, cam surfaces on the inner periphery of the ring contacting with the rollers, and spring actuated means for producing a relative rotary movement of the ring and shaft, substantially as described.

5. In a clutch, the combination with a shaft, of a ring loosely mounted concentric with the shaft, a plurality of rollers disposed between the ring and shaft, cam surfaces on the inner periphery of the ring contacting with the rollers, spring actuated means for producing a relative rotary movement of the ring and shaft, and means engaging the ring for producing a positive reverse movement, substantially as described.

6. In a clutch, the combination with a shaft, a plurality of rollers disposed between the ring and shaft, cam surfaces on the inner periphery of the ring contacting with the rollers, spring actuated means for producing a relative rotary movement of the ring and shaft, and means including studs fast in the ring and connections for producing a positive reverse movement, substantially as described.

7. In a clutch, the combination with a shaft, of a ring loosely mounted concentric with the shaft, a plurality of rollers disposed between the ring and shaft, cam surfaces on the inner periphery of the ring contacting with the rollers, spring actuated means for producing a relative rotary movement of the ring and shaft, and means including studs fast in the ring and connections mounted to slide in a direction parallel to the axis of the shaft for producing a positive reverse movement, substantially as described.

8. In a clutch, the combination with a shaft, of a ring loosely mounted concentric with the shaft, a plurality of rollers disposed between the ring and shaft, cam faces on the inner periphery of the ring contacting with the rollers, spring actuated means for producing a relative rotary movement of the ring and shaft, studs fast in the ring, rods having cam faces contacting with the studs and mounted to slide in a direction parallel to the axis of the shaft, and a collar sliding on the shaft and engaging the rods to move them simultaneously, substantially as described.

9. In a clutch, the combination with a shaft, of a sleeve fast on the shaft, a ring loosely mounted concentric with the shaft, a plurality of rollers disposed between the ring and sleeve, cam surfaces on the inner periphery of the ring contacting with the rollers, and spring actuated means for producing a relative rotary movement of the ring and sleeve, substantially as described.

10. In a clutch, the combination with a shaft, of a sleeve fast on the shaft, a ring loosely mounted concentric with the sleeve, a hub disposed between the ring and sleeve, a plurality of rollers carried by the hub, cam surfaces on the inner periphery of the ring contacting with the rollers, and spring actuated means for producing a relative rotary movement of the ring and sleeve, substantially as described.

11. In a clutch, the combination with a shaft, of a

sleeve fast on the shaft, a ring loosely mounted concentric with the sleeve, a plurality of rollers disposed between the ring and sleeve, cam surfaces on the inner periphery of the ring contacting with the rollers, abutments outside the ring, and means interposed between the ring and abutments for producing a relative rotary movement of the ring and sleeve, substantially as described.

12. In a clutch, the combination with a shaft, of a sleeve fast on the shaft, a ring loosely mounted concentric with the sleeve, a plurality of rollers disposed between the ring and sleeve, cam surfaces on the inner periphery of the ring contacting with the rollers, abutments outside the ring, and spring plungers interposed between the ring and abutments for producing a relative rotary movement of the ring and sleeve, substantially as described.

13. In a clutch, the combination with a shaft, of a sleeve fast on the shaft, a ring loosely mounted concentric with the sleeve, a plurality of rollers disposed between the ring and sleeve, cam surfaces on the inner periphery of the ring contacting with the rollers, abutments outside the ring, and spring plungers mounted in the ring and bearing against the abutments for producing a relative rotary movement of the ring and sleeve, substantially as described.

14. In a clutch, the combination with a shaft, of a sleeve fast on the shaft, a ring loosely mounted concentric with the sleeve, a plurality of rollers disposed between the ring and sleeve, cam surfaces on the inner periphery of the ring contacting with the rollers, abutments outside the ring, spring plungers interposed between the ring and abutments for producing a relative rotary movement of the ring and sleeve, and means for producing a positive reverse movement, substantially as described.

15. In a clutch, the combination with a shaft, of a sleeve fast on the shaft, a ring loosely mounted concentric with the sleeve, a hub interposed between the ring and sleeve, a plurality of rollers carried by the hub, cam surfaces on the inner periphery of the ring contacting with the rollers, abutments rigidly connected with the hub and lying outside the ring, and spring plungers interposed between the ring and abutments for producing a relative rotary movement of the ring and sleeve, substantially as described.

16. In a clutch, the combination with a shaft, of a sleeve fast on the shaft, a ring loosely mounted concentric with the sleeve, a pulley having a hub interposed between the ring and sleeve, a plurality of rollers carried by the hub, cam surfaces on the inner periphery of the ring contacting with the rollers, abutments formed on the pulley outside the ring, and spring plungers interposed between the ring and abutments for producing a relative rotary movement of the ring and sleeve, substantially as described.

17. In a clutch, the combination with a shaft, of a sleeve fast on the shaft, a ring loosely mounted concentric with the sleeve, a pulley having a hub provided with a series of pockets extending therethrough and interposed between the ring and sleeve, a plurality of rollers mounted in the pockets, cam surfaces on the inner periphery of the ring contacting with the rollers, abutments formed on the pulley outside the ring, and spring plungers interposed between the ring and abutments for producing a relative rotary movement of the ring and sleeve, substantially as described.

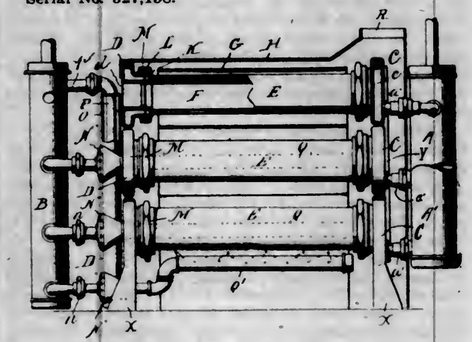
18. In a clutch, the combination with a shaft, of a sleeve fast on the shaft, a ring loosely mounted concentric with the sleeve, a pulley having a hub provided with a series of pockets extending therethrough and interposed between the ring and sleeve, a plurality of rollers mounted in the pockets, cam surfaces on the inner periphery of the ring contacting with the rollers, abutments formed on the pulley outside the ring, spring plungers interposed between the ring and abutments for producing a relative rotary movement of the ring and sleeve, studs in the ring, rods having cam surfaces engaging the studs, and a collar sliding on the shaft and engaging the rods to operate them to produce a positive reverse movement, substantially as described.

870,207. MUSICAL INSTRUMENT. CHRISTIAN WEISS, Trossingen, Germany. Filed July 17, 1906. Serial No. 326,608.



In a musical instrument, a mouth-piece, a plurality of trumpets carried thereby, a side opening in each trumpet, and a reed device in the trumpet adjacent to the sound opening.

870,208. WATER-HEATER. JOSEPH M. WHITE and FRANK H. ROSS, Cleveland, Ohio. Filed July 21, 1906. Serial No. 327,158.



1. A water heater section comprising a pair of units each of which consists of an inner and an outer tube with a water space between, headers connected to said tubes and connecting said units, the headers at one end being open to allow a flow from one unit to the other, and the headers at the other end being closed against such flow, and connected at opposite sides to inlet and outlet pipes, and said headers having openings therethrough into the inner tubes, to admit a burner therein.

2. A water heater comprising a plurality of superposed sections, each section comprising a pair of double tubes connected together at one end and with a water space between the inner and the outer tubes, inlet and outlet manifolds connected respectively to the other ends of the tubes of all the sections, burners extending into the inner tubes of each section, and burners located under the outer tubes of the sections.

3. A water heater comprising a plurality of superposed horizontally extending sections, each section having inner and outer tubes with headers at the ends, said headers having openings therethrough into the inner tubes, burners extending through the headers into the inner tubes, a burner located under the bottom section, and a shield inclosing said sections and extending from the last mentioned burner, to confine the heat therefrom to the outer tubes.

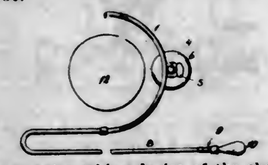
4. A water heater comprising a plurality of superposed sections, each section consisting of sets of inner and outer tubes with water spaces therebetween, said tubes arranged horizontally, the respective sets of each section being connected together at both ends by headers, the header at one end allowing flow from one set to the other and the header at the other end being connected on opposite sides to inlet and outlet vessels which are connected in common to all the sets, a series of burners corresponding to the sets, each burner consisting of a pipe which extends through one of the headers into the inner tube, burners

located under the lower section, a shield leading from said last mentioned burners up around the outer tubes of all the sections, said burners being removable lengthwise, within the tubes, and said tubes having detachable connections to the headers.

5. In a water heater, in combination, a plurality of superposed sections, each section consisting of inner and outer tubes extending substantially horizontally and having a water space therebetween, a burner extending lengthwise within each inner tube and having jet openings along the same, and another burner located under the outer tubes.

6. In a water heater, in combination, a plurality of sections placed one above the other, each section consisting of inner and outer horizontal tubes with a water space therebetween, headers having openings therethrough at the ends of the tubes, burners extending through the openings in the headers into the inner tubes, and a burner located under the assembled sections.

870,209. GARMENT-MARKING DEVICE. ALEXANDER E. WISE, New York, N. Y. Filed June 7, 1906. Serial No. 320,530.



1. In a garment marking device of the character designated, the combination of a curved conduit the concave surface of which is perforated longitudinally and horizontally, means for adjusting said conduit vertically upon its support, said support, and means for injecting a marking powder into said curved conduit and ejecting said powder therefrom through the concave side thereof, for the purpose described.

2. In a garment marking device of the character designated, the combination of a curved conduit formed with a horizontal series of holes in its concave side, a vertical support for said conduit, adjustable means for securing said conduit to said vertical support, and means for injecting a marking powder into said conduit and ejecting the same therefrom through said horizontal series of holes, for the purpose described.

3. In a garment marking device of the character designated, the combination of a curved conduit formed with a horizontal series of holes in its concave side, a support for said conduit consisting of a standard formed with a vertical scale indicating different heights, adjustable means for securing said conduit on said standard and with relation to said vertical scale, and means for injecting a marking powder into said conduit and ejecting the same therefrom through said horizontal series of holes, for the purpose described.

4. In a garment marking device of the character designated, the combination of a horizontal semi-circular marking tube the concave side of which is perforated longitudinally and horizontally, adjustable means for securing said tube upon a vertical support, said vertical support, and means for injecting a marking powder into said semi-circular marking tube and ejecting said powder therefrom through the concave side thereof, for the purpose described.

5. In a garment marking device of the character designated, the combination of a curved conduit the concave side of which is perforated horizontally and longitudinally, a flexible tube connecting with said curved conduit, and means for injecting a marking powder through said flexible tube into said curved conduit and ejecting the powder therefrom through the perforated concave side thereof, for the purpose described.

6. In a garment marking device of the character designated, the combination of a curved conduit the concave side of which is perforated horizontally and longitudinally, adjustable means for securing said curved conduit to a vertical support, said vertical support, a flexible tube connecting with said curved conduit, and means for injecting, a marking powder through said flexible tube into said curved conduit and ejecting the powder therefrom through the perforated concave side thereof, for the purpose described.

7. In a garment marking device of the character designated, the combination of a vertical standard, a curved horizontal marking tube formed with a series of holes in its concave side, adjustable means for securing said marking tube upon said vertical standard, means for closing one end of said horizontal marking tube, a flexible tube connecting with the otherwise open end of said horizontal marking tube, said flexible tube, and means for injecting a marking powder through said flexible tube into said horizontal marking tube and ejecting the same therefrom through said series of holes in the concave side thereof, for the purpose described.

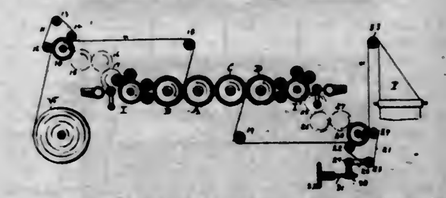
8. In a garment marking device of the character designated, the combination of a supporting standard formed with a vertical scale indicating different heights, a curved horizontal marking tube formed with a series of holes in its concave side, adjustable means for securing said marking tube upon said supporting standard and with relation to the vertical scale thereon, means for closing one end of said horizontal marking tube, a flexible tube connecting with the otherwise open end of said horizontal marking tube, said flexible tube, and means for injecting a marking powder through said flexible tube into said horizontal marking tube and ejecting the same therefrom through said series of holes in the concave side thereof, for the purpose described.

9. A skirt marker composed of a base, a rod projecting upwardly therefrom, a slide movable upon the rod, means for clamping the slide to the rod at different elevations, a perforated tube carried by the slide, and means for ejecting a marking powder from said tube, substantially as specified.

10. A skirt marker composed of a base, a rod projecting upwardly therefrom, a slide movable upon the rod, means for clamping the slide to the rod at different elevations, a curved perforated tube carried by the slide, and a powder gun communicating with the tube, substantially as specified.

11. In a garment marking device of the character designated, the combination of a curved conduit open longitudinally on its concave side in horizontal line, adjustable means for securing said curved conduit to a vertical support, said vertical support, and means for injecting a marking powder into and ejecting it through the open concave side of said curved conduit, for the purpose described.

870,210. ROTARY WEB-PERFECTING PRINTING-MACHINE. HENRY A. W. WOOD, New York, N. Y., assignor to Campbell Printing Press & Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Oct. 16, 1907, Serial No. 655,380. Renewed Dec. 28, 1903. Serial No. 186,923.



1. The combination with a rotary web-perfecting printing press in which the plates are set so that the margins will register and in which the web is led freely through the press so that when the margins of the plates register the web will be released, of a web forwarding device having a fixed speed ratio with said printing machine arranged to bite on the web coming from the printing machine and to forward the same for further manipulation at a constant speed.

2. The combination with a rotary web-perfecting printing machine in which the plates are set so that the margins will register and in which the web is led freely through the press so that when the margins of the plates register the web will be released, a folder, and a web forwarding device arranged between the printing machine and folder and having a fixed speed ratio with said printing machine and folder, whereby said forwarding device will furnish the web at proper speed to the folder.

3. The combination with a rotary web printing machine in which the plates are set so that the margins will register, of a folder, a web-feeding device between the web-roll and printing machine, and a web-forwarding device arranged between the printing machine and folder and having a fixed speed ratio with said printing machine and folder whereby said forwarding device will furnish the web at proper speed to the folder.

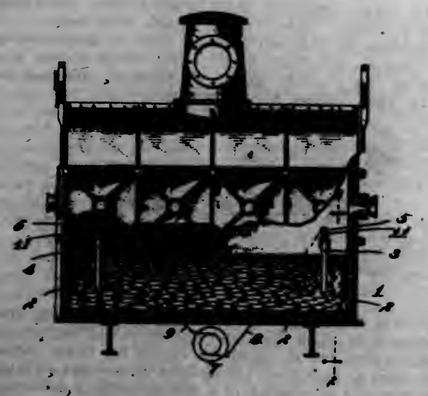
4. The combination with a rotary web-perfecting printing machine in which the plates are set so that the margins will register and in which the web is led freely through the machine so that when the margins of the plates register the web will be released, and a positively geared web forwarding device arranged between the printing machine and folder and having a fixed speed ratio with said printing machine and folder.

5. The combination with a rotary web perfecting printing machine in which the plates are set so that the margins between the same will register, of a folder, and a web-forwarding device consisting of a cylinder and coacting tapes arranged between the printing machine and folder, said cylinder being geared to have a fixed speed ratio with said printing machine and folder.

6. The combination with a rotary web-perfecting printing machine in which the plates are set so that the margins will register, of a folder, a positively geared feeding-in device for feeding the web forward from the web-roll to the printing machine, and a positively geared web-forwarding device between the printing machine and folder.

7. The combination with a rotary web-perfecting printing press in which the plates are set so that the margins will register, a folder, a feeding in device for feeding the web forward from the web-roll to the printing machine, and a web-forwarding device for forwarding the web from the printing machine to the folder, the web passing freely from the web feeding device to the web forwarding device so that when the margins of the plates register the web will be released and adjusted between the web-feeding device and web forwarding device.

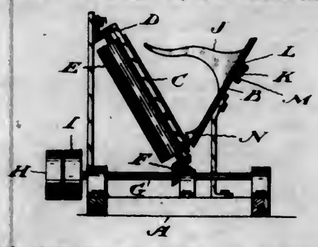
870,211. EVAPORATOR. EDWARD ZAREMBA, Chicago, Ill. Filed Mar. 12, 1906. Serial No. 305,474.



1. An apparatus for evaporating corrosive liquors comprising a suitable receptacle, a non-conducting, refractory lining therefor, non-corrodible electrodes which extend below the designed liquid level and electrical conductors connected to said electrodes and supported entirely above the liquor level.

2. In an evaporator, the combination of a suitable closed receptacle, a refractory lining therefor, electrodes, means for supporting said electrodes comprising rods which are conductors of electricity and which extend across said receptacle and electrical conductors which connect said electrodes with said rods, said rods projecting through the wall of said receptacle at one side, a source of electrical energy and electrical conductors which connect said electrode supporting rods with the poles of said source of electrical energy.

870,212. APPARATUS FOR ELEVATING AND HANDING UP DOUGH. ALFRED E. ALDRED, Glencoe, Ontario, Canada. Filed Apr. 12, 1907. Serial No. 367,742.



1. Dough elevating and handing up mechanism, comprising a substantially V-shaped inclined trough having one side formed by a traveling band having the plane of its surface inclined from the vertical plane passing through the axis of the trough.

2. Dough elevating and handing up mechanism, comprising a substantially V-shaped inclined trough having one side formed by a traveling band having the plane of its surface inclined from the vertical plane passing through the axis of the trough; and a pressure bar located above the lower angle of the V.

3. Dough elevating and handing up mechanism, comprising a substantially V-shaped inclined trough having one side formed by a traveling band having the plane of its surface inclined from the vertical plane passing through the axis of the trough; and a pressure bar located above the lower angle of the V, and adjustable to and from the same.

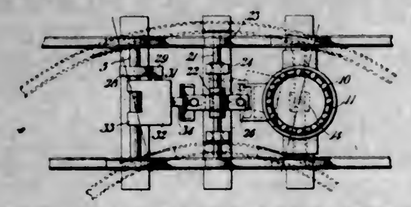
4. Dough elevating and handing up mechanism, comprising a substantially V-shaped inclined trough having one side formed by a traveling band having the plane of its surface inclined from the vertical plane passing through the axis of the trough; and a pressure bar located above the lower angle of the V, and concave in cross section on its under side.

5. Dough elevating and handing up mechanism, comprising a substantially V-shaped inclined trough having one side formed by a traveling band having the plane of its surface inclined from the vertical plane passing through the axis of the trough; a pressure bar located above the lower angle of the V; and a filling piece in the lower angle of the V.

6. Dough elevating and handling mechanism, comprising an inclined closed trough; an endless band conveyer running through the trough from end to end and having the plane of its surface inclined from the perpendicular plane passing through the axis of the trough; and a backing for the band.

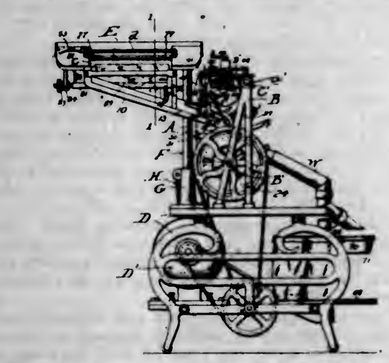
870,213. RAIL-TRAVERSING TRUCK. EDWIN E. ARNOLD, Wilkinsburg, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Apr. 13, 1905. Serial No. 255,342.

1. In a rail traversing truck, a frame portion, a main wheel-carrying axle pivotally mounted thereon, an auxiliary wheel-carrying axle, bearings therefor mounted on said frame portion through which said axle is longitudinally movable, a collar formed on said auxiliary axle, a sleeve rotatably mounted on said axle between said collars and an arm carried by said sleeve and operating through a slot connection to vary the position of said main axle relative to said frame portion.



2. In a rail traversing truck, a frame portion, main wheel-carrying axles pivotally mounted at each end of said portion, an auxiliary wheel-carrying axle, bearings therefor mounted on said portion and through which said axle is longitudinally movable, collars formed on said auxiliary axle, a sleeve rotatably mounted between said collars and an arm carried by said sleeve and operating through slot connections to vary the positions of said main axles relative to said frame portion.

870,214. COIN COUNTING, REGISTERING, AND BAGGING MACHINE. CHARLES S. BATDORF, Brooklyn, N. Y., assignor, by mesne assignments, to Universal Coinwrapping Machine Company, a Corporation of New Jersey. Filed Jan. 12, 1904. Serial No. 188,689.



1. The combination of coin supplying mechanism, means for advancing the coins separately, means for registering the advance of each coin, bag holding appliances, and a coin distributing means for supplying the counted coins to appropriate bags.

2. The combination of coin supplying mechanism; means for advancing the coins separately, means for indicating the advance of each coin, a receiving receptacle for counted coins; and coin distributing means leading to said receptacle.

3. A coin counting machine having in combination an inclined coin supplying mechanism along which the coins roll on edge, and rotatory means engaging the coins while on edge and advancing said coin in its upright condition.

4. The combination with a coin conductor, of a member rotating in a vertical plane and provided with coin advancing means, bag holding devices, and means for distributing the advanced coins thereto.

5. The combination with an inclined coin conductor of a series of coin advancing members for engaging successive coins delivered into the range of action of said members, bag holding devices, and distributing means between the said holding devices and the coin advancing means.

6. The combination with a series of members movable about a single axis and adapted to engage successive coins, of means for delivering coins into the range of action of said members, coin counting mechanism, bag holding devices and distributing means for delivering the counted coins to appropriate bags.

7. The combination of a series of members parallel with and movable about a single horizontal axis and adapted to engage successive coins, and means for delivering the coins on edge into the range of action of said members.

8. The combination of a series of members parallel with and movable about a single axis and each adapted to advance a single coin, means for delivering the coins on edge separately into the range of action of said members, and means for indicating the advance of each coin.

9. The combination of a series of members parallel with and movable about a single axis and operating successively to advance coins, means for delivering the coins on edge into the range of action of said members, and means actuated by each advanced coin for registering said advance.

10. The combination of a member movable about a single horizontal axis and having a series of successively operating horizontal transversely projecting means for advancing successive coins, means for delivering coins on edge into the range of action of said coin advancing means, a registering mechanism, and means connected therewith and actuated by each coin advanced, to operate the register.

11. The combination with a coin conductor and a spring pressed vertically movable member guarding the final discharge therefrom, of a coin advancing means movable about a single axis and successively ejecting coins past said member, and registering devices actuated by the movement of said member.

12. The combination of coin conducting means, a pivoted member positioned at the final discharge thereof, coin advancing means movable about a single axis and successively ejecting single coins past said member, registering devices actuated by the member during the advance of each coin, bag holding devices, and distributing means for delivering the counted coins thereto.

13. The combination of a coin conductor into which the coins are received, a coin advancing means rotatable about a single axis for advancing the coins in succession, means for registering the advance of the coins, and means controlled by the advance of a final coin of a predetermined number of coins for automatically stopping the operation of the machine.

14. The combination of a coin conductor into which the coins are received, a series of coin advancing members rotating about a single axis and each advancing a coin separately during a single rotation of the series, means for registering the advance of each coin, and means controlled by the register for automatically stopping the operation of the machine by the advance of a final coin of a predetermined number of coins.

15. The combination of a coin conductor, means for separately advancing the coins received therefrom, means for registering the advance of each coin, a motor circuit including a switch lever or cut-out, and means for interrupting said circuit by the advance of a final coin of a predetermined number of coins.

16. The combination of a coin conductor into which the coins are received; means for advancing the coins from the conductor; means for regulating the advance of the coins; a registering mechanism advanced step-by-step by the coins advanced from the conductor; and means actuated by the registering devices for stopping the coin advancing means by the advance of the final coins of a predetermined number of coins.

17. The combination of a coin conductor; means for advancing the coins therefrom; means for registering the advance of the coins; and means including an electric circuit, a stop on the register, and a means including a member engaged by said stop at predetermined intervals to interrupt the circuit and stop the operation of the coin advancing means.

18. The combination of a coin conductor; means for advancing the coins separately therefrom, means for registering the advance of the coins, a motor circuit, and means including a stop in the registering mechanism, a

rock shaft actuated thereby during the counting of the final coin of a predetermined number of coins, and a lever arm carried by the rock shaft for making and breaking the connection with the motor circuit which controls the motion of the machine.

19. The combination of a coin conductor; means for advancing the coins therefrom; means for registering the advance of the coins including a pair of subdivided register wheels one of said wheels having perforations corresponding to its subdivisions; a plug or pin removably fitting said perforations; a rock shaft having a member disposed in the path of said plug or pin and actuated thereby; and an electric circuit; said shaft having a lever to engage and disengage said contact to make and break an electric circuit whereby the motor circuit is established or interrupted.

20. The combination with coin conducting means, means for advancing the coins therefrom, and means for registering the advance of the coins, of means for holding bags or receptacles for the counted coins, and coin distributing means between the coin advancing means and the bag holding devices said last-named devices and the distributing means being rotatable one relative to the other whereby the coins are successively deposited in the bags in predetermined quantities.

21. The combination of a coin conductor, means for advancing coins received therefrom, means for registering the advance of the coins, a motor circuit including a switch lever or cut-out, a trip device on the register, and a connection from the switch lever or cut-out, having one end disposed in the range of action of the trip means whereby the cut-out is operated to interrupt the motor circuit and stop the machine by the advance of a final coin of a predetermined number of coins.

22. The combination of a coin conductor, means for advancing the coins received therefrom, means for registering the advance of the coins, a motor circuit including a switch lever or cut-out and connections therefrom, a transfer registering mechanism, and means carried thereby and operating the cut-out to interrupt the motor circuit and stop the operation of the machine by the advance of a final coin of a predetermined number of coins.

23. The combination of a coin conductor, means for advancing the coins received therefrom, means for registering the advance of the coins, means controlled by the register for automatically stopping the operation of the machine and the further advance of coins, coin receiving means, and coin distributing means leading to the receiving means.

24. The combination of a coin conductor, means for advancing the coins received therefrom, means for registering the advance of the coins, a motor circuit including a switch lever or cut-out and connections therefrom, a transfer registering mechanism including a movable ratcheted disk having a series of holes, a pin or member adapted to fit said holes, and a member on the switch lever disposed in the range of action of the pin and engaged thereby during the count of the final coin of a predetermined number of coins for tripping the lever and cutting out the motor.

25. The combination of a coin conductor, means for advancing the coins received therefrom, means for registering the advance of the coins, a transfer registering mechanism including a movable disk having a ratchet surface and series of perforations, a pivoted lever between the initial and transfer registers and having a part to engage the ratchets of the latter, said initial register having a cam or lug adapted to engage an arm of said lever during the completion of a rotation of said initial register whereby the transfer register is advanced one ratchet or point, a pin adapted to removably fit the perforations of the movable disk of the transfer register, and a projection on the switch lever normally disposed in the path of movement of the pin and adapted to be tripped by the latter to cause the lever to break the motor circuit and stop the further operation of the machine.

26. The combination of a coin conductor, means for advancing the coins received therefrom, means actuated by and registering the advance of the coins, a member movable into and out of the path of coins in the conductor, and normally out of said path, and connections between said member and the registering devices and actuated by the count of a final coin of a predetermined number of coins to project said member into the path of the next advancing coin and stop the advance thereof.

27. The combination of a coin conductor, means for advancing the coins received therefrom, registering means actuated by the advance of the coins, a transfer-register and connections whereby it is advanced one step during each final count of the first-named register, a motor circuit including a switch lever and a means for tripping the same during the final count of the transfer register, a pivoted lever having one end disposed in the path of movement of the switch lever, a second lever pivoted between its ends and a pin carried thereby and adapted to be moved into the path of coins in the conductor, and a connection between the first and second levers whereby the travel of the coins is stopped substantially simultaneously with the breaking of the motor circuit.

28. The combination with a coin conductor, means for advancing separate coins received therefrom, means for registering the advance of each coin, a motor circuit including a switch lever and connection by which it is actuated during the count of a final coin of a predetermined number of coins, a centrally pivoted lever having one end to be engaged by the switch lever, a rod connected to the other end of said pivoted lever, a second centrally pivoted lever, a horizontal projection thereon disposed in the plane of the coin passage and normally out of the path of the coins, and adapted to be projected into said passage in the path of the coins whereby the switch lever is tripped to break the motor circuit, and means for withdrawing the pin from the path of the coins when the switch lever is closed and the circuit again established.

29. The combination of an inclined coin conductor having a portion of its passage substantially vertically disposed; means for temporarily retaining single coins in said vertical portion of the passage, coin advancing means, and a force feed member actuated by the advancing means for delivering the suspended coin past the retaining means and into the range of action of the coin advancing means.

30. The combination of an inclined coin conductor having a vertically disposed portion near its delivery end, a yielding support for temporarily retaining single coins above said delivery end, coin advancing means, and a force feed member actuated by the advancing means and delivering the retained coin into the range of action of the advancing means.

31. The combination of an inclined coin conductor having a coin passage with a vertically disposed portion, a spring positioned above the point of final discharge of the conductor and obstructing the passage of said coin, coin advancing means, and a vertically operating force feed member actuated by and in unison with the advancing means for delivering the obstructed coin into the range of action of said advancing means.

32. The combination of a coin conductor having an inclined passage with a vertically disposed portion, a spring member intercepting the passage and supporting the coin therein, and a force feed mechanism for delivering the coin past the spring member.

33. The combination of a coin conductor having an inclined passage with a vertically disposed portion, and an oscillating force feed member normally above the vertical portion of the passage and adapted to enter said passage and engage passing coins.

34. The combination of a coin conductor, having a coin passage, a force feed mechanism for delivering coins from the passage, and a rotatory coin advancing means for finally delivering the coins placed in its range of action by the force feed mechanism.

35. The combination with a coin conductor having a coin passage with a vertically disposed portion, and a means for advancing coins received therefrom, of an oscillating member operating vertically in the plane of said vertical portion and positively delivering the coins into the range of action of the coin advancing means.

36. The combination with a coin conductor having a coin passage with a vertically disposed portion, and means for advancing the coins received therefrom, of an oscillating arm operating in the plane of the vertical portion of the passage, and a spring connected with the arm and having a portion extending into the range of action of the coin advancing means and actuated thereby.

37. The combination with a coin conductor having a coin passage with a vertically disposed portion and means for advancing the coins received therefrom, of a rocking arm having a curved member operating in the plane of said vertical portion of the passage, and a torsional spring having one member connected to said arm and a second member disposed in the range of action of and actuated by the coin advancing means.

38. The combination of a coin conductor, means for advancing coins received therefrom, means for registering the advance of the coins including a movable member past which the coins are carried by the coin advancing means, a registering wheel having two series of reversely arranged teeth, a pawl actuated by said movable member and engaging the teeth of one series of ratchets and moving the wheel each time a coin is advanced, and a second pawl engaging the other series of ratchet teeth and normally holding the wheel against movement, said pawls having engaging portions whereby the first pawl disengages the second pawl from its ratchet surface during the beginning of the first part of the movement of the former and releases said second pawl to allow it to reengage its ratchet surface and lock the wheel about the time first pawl has made its complete advance movement.

39. A coin counting machine having a coin passage adjustable in width and height, and unitary means for effecting both adjustments substantially simultaneously.

40. A coin counting machine having a coin passage adjustable in two directions simultaneously to accommodate coins of different diameters and thicknesses.

41. In a machine of the character described, a coin conductor, in combination with a distributing table leading thereto and provided with a detector or gage bar adjustable towards and from the table to permit the passage past the same of coins of different thicknesses.

42. A coin counting machine having a coin conductor with a receiving or hopper portion and a runway leading therefrom said hopper adjustable transversely and said runway adjustable both vertically and transversely, to accommodate coins of different diameters and thicknesses.

43. In a machine of the character described, a coin conductor having a runway including a stationary lower part upon which the edge of the coins rolls and an upper part said upper part adjustable towards and from the lower part to increase and decrease the height of the coin passage.

44. A coin counting machine having a stationary, inclined coin conductor with a runway including top and bottom members and front and back members said top member adjustable towards and from the bottom member to increase and decrease the vertical height of the coin passage, and said front member adjustable towards and from the back member to increase and decrease the horizontal width of said passage and unitary means for effecting both adjustments substantially simultaneously.

45. In a machine of the character described, a coin conductor having a runway a portion of which is substantially vertical and means for increasing and decreasing the width of said vertical portion.

46. In a machine of the character described, a coin conductor having an inclined runway including vertical side members and top and bottom members said top member having a downwardly turned lower end for diverting the course of the coin and forming a wall of a vertical extension of the coin passage, a horizontal member having a vertical portion forming the opposite wall of the vertical portion of the passage, said top member, one of the side members and said horizontal member movable towards and from their opposing members to adjust the size of the coin passage relative to the coins to be passed therethrough.

47. In a machine of the character described, a coin conductor having a receiving or hopper portion with parallel sides, and a distributing table communicating with the space between said sides and having a gage bar beneath which the coins pass, in combination with means for adjusting the gage bar and simultaneously adjusting the width of the said space.

48. In a machine of the character described, a coin conductor having a receiving or hopper portion with parallel spaced sides, in combination with means for adjusting said sides to vary the width of the space between them, and means for indicating the extent of such adjustment.

49. In a machine of the character described, a coin conductor having a receiving or hopper portion with parallel spaced sides, and a distributing table leading to said space and provided with a gage bar beneath which the coins pass, in combination with means for simultaneously adjusting the gage bar and the space between said sides, and means for indicating the adjustment of said sides and bar.

50. In a machine of the character described, a coin conductor having a receiving portion with fixed and movable parallel spaced sides, and a distributing table communicating with said space and having a gage bar beneath which the coins pass, in combination with means including connected slide bars having a coördinate movement one of said slide bars engaging and adjusting the said movable side relative to its companion, and the other slide bar simultaneously adjusting the gage bar relative to the table surface.

51. In a machine of the character described, a coin conductor having fixed and movable parallel sides separated from each other to form a coin passage, said movable side having rearward extensions, in combination with a slide bar having wedge portions engaging said extensions to move said side relative to the fixed side to increase and decrease the space between the sides, and means for operating the slide bar.

52. In a machine of the character described, the combination of a coin conductor having fixed and movable parallel sides separated from each other to form a coin passage, said movable side having rearwardly extending pins or members, springs acting upon said movable side to normally separate it from its companion, a slide bar having wedge portions acting upon said pins or members to cause said movable side to approach the fixed side and thereby reduce the width of the space between said sides, means for operating the slide bar, and means for indicating the adjustment of said movable side.

53. In a machine of the character described, the combination of a coin conductor having fixed and movable parallel sides separated from each other to form a coin passage, said movable side having rearwardly extending pins or members, bars secured to the inner ends of said members and spaced from the fixed side, a slide bar having wedge portions operating between the last-named bars and the fixed side and adjusting the movable side relative to the latter, a rotatable nut engaging a threaded portion of the slide bar, for operating said bar, and an indicator connected with and operated by the slide bar to disclose the adjustment of the coin passage.

54. In a machine of the character described, the combination with a coin conductor, of a table communicating therewith, a gage bar mounted on the table and beneath which the coins are caused to pass said gage bar having guided pins or projections extending through the table, a slide bar beneath the table and having wedge portions engaging said pins or projections to move the gage bar relative to the table and thereby adjust the space beneath the bar, means for adjusting the width of the passage in the coin conductor, a connection between the last-named means and the slide bar for operating the latter, and means for indicating the amount of said adjustments.

55. In a machine of the character described, a coin conductor, in combination with a distributing table connecting with the conductor, a gage bar on the table and beneath which the coins pass to the conductor, springs for holding the bar normally above the table and means for depressing the bar relative to the table for adjusting the space beneath the bar.

56. In a machine of the character described, a coin conductor having a runway including a fixed back plate and a movable front plate said front plate being spring-pressed, and a wedge mechanism for moving the front plate in opposition to its spring pressure and thereby adjusting the width of the coin passage.

57. A coin counting machine having a stationary inclined coin conductor with an inclined runway including a bottom and a slidably mounted top, in combination with means for moving the top relative to said bottom and in a direction substantially at right angles to the travel of the coin, to vary the height of the coin passage.

58. In a machine of the character described, a coin conductor having a runway including fixed bottom, a movable top, a fixed back and a movable front in combination with a sliding wedge-mechanism for adjusting the said movable top and front and thereby varying the vertical height and transverse width of the coin passage.

59. In a machine of the character described, the combination of a main frame having inclined slots, a coin conductor having a runway including a fixed bottom and a movable top said top having lugs guided in said slots, a plate or member connected to each of said lugs and disposed on the back of the main frame, a traveling nut slidably engaging said plates or members, and a rotatable screw for operating the nut.

60. In a machine of the character described, the combination of a main frame having inclined slots, a coin conductor having a runway including a fixed bottom, a movable top, a fixed back and a movable front, said front being spring-pressed and having rearwardly extending guided pins, lugs on the movable top and having inclined plates fixed to them, one of said plates having a wedge portion to engage said pins and move the front relative to the fixed back, simultaneously with the movement of the top, a traveling nut slidably engaging said inclined plates, and a rotatable screw for operating the nut.

61. In a machine of the character described, the combination of a main frame having inclined and horizontal slots, a coin conductor having a runway including a stationary inclined bottom, a movable inclined top guided in said inclined slots, a fixed back member and a movable front member, said front member having a downturned end, and a member slidable in the horizontal slot of the frame and opposing said downturned end of the front member and forming therewith a vertical portion of the coin passage, a traveling nut slidably engaging the inclined top, a second traveling nut having a wedge shaped surface engaging a corresponding surface on the horizontally slidable member, a wedge-shaped member carried by the movable top and engaging the movable front, and a right and left screw for actuating the nuts and their adjuncts in unison.

62. In a machine of the character described, the combination with a coin conductor having a runway adjustable in height and width for coins of different sizes and including fixed and movable members, means including operating wedges and traveling nuts for adjusting said movable members, an indicator, a pointer movable over the same and a connection between one of the nuts and the pointer whereby the latter discloses the extent of adjustment of the conductor.

63. A machine of the character described including a distributing table having an adjusting gage bar beneath which the coins pass; a coin conductor connecting with the table and having a hopper-like receiving end and a runway extension; means for adjusting the transverse width of the hopper; means for adjusting the gage bar; means for adjusting the vertical height and transverse width of the runway; means for advancing coins received from the conductor; a registering mechanism for the coins; and a receiving mechanism for registered coins.

64. A coin counting machine having a stationary conductor with an inclined passage the outlet portion of which includes a top and bottom movable in unison towards and from each other for coins of different diameters.

65. A machine of the character described including a stationary conductor with an inclined coin passage the outlet portion of which includes a top and bottom member between which the coin is received said members movable towards and from each other for coins of different diameters, means for advancing the coin from said outlet portion and means for registering the advance of the coin.

66. A machine of the character described including a stationary conductor with an inclined coin passage the outlet portion of which includes a top and bottom and means for adjusting the space between them, rotary means operating in said space for advancing the coins, and counting mechanism actuated by the advanced coin.

67. In a machine of the character described the combination with a coin conductor and means for advancing the coins separately, of a force feed mechanism operating vertically in the coin passage for positioning the coin into the range of action of the coin advancing means.

68. In a machine of the character described, the combination with a coin runway and a means for advancing the coins issuing therefrom, of a reciprocating force feed member operating vertically in the runway and delivering the coin therefrom into the path of the coin advancing means.

69. In a machine of the character described, the combination with a coin conductor having an inclined runway a portion of which is made substantially vertical to divert the course of the coin, and means for advancing the coins separately, of a force feed device operating in the plane of the vertical portion of the runway and delivering the coin into the range of action of the coin advancing means.

70. In mechanism of the character described, the combination of a coin-channel adjustable for the passage of coins of different diameters and thicknesses, means for adjusting the coin-channel to correspond to the diameter and thicknesses of coins of different denominations, and coin-operated counter-mechanism.

71. In mechanism of the character described, the combination of coin-delivery-mechanism, a coin-channel adjustable for the passage of coins of different diameters and thicknesses, means for adjusting the coin-channel to correspond to the diameter and thickness of coins of different denominations, and coin-operated counter-mechanism.

72. In mechanism of the character described, the combination of a coin-channel, comprising an adjustable pivoted arm, means for adjusting said arm to vary the width of the channel for coins of different denominations, and coin-operated counter-mechanism.

73. In mechanism of the character described, the combination of coin-delivery-mechanism, a coin-channel, a counter, mechanism for advancing the counter step-by-step, comprising a lever having a part extending into the path of a coin passing through said channel, a ratchet, a pawl shifted by said lever, and an adjustable stop for limiting the operation of the counter-advancing-mechanism.

870,215. PROCESS OF FILLING BAGS. ADELMER M. BATES, Cleveland, Ohio, assignor to Bates Valve Bag Company, Cleveland, Ohio, a Corporation of West Virginia. Filed Aug. 16, 1902. Serial No. 119,858.

1. The process of producing an inclosed package of loose, granular or powdery material which consists in forcibly discharging into the top of the bag from a substantially horizontal feed tube and through a valve adapted to inclose said feed tube, such loose, granular or powdery material, feeding the material into the bag through such tube until the material within the bag applies pressure to the inner side of the inner lip of the valve, and then withdrawing the tube.

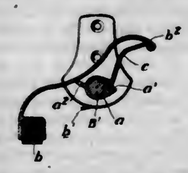
2. The process of producing an inclosed package of loose granular or powdery material which consists in making a bag with a valve controlled opening, inserting through such valve controlled opening a tube adapted to separate the lips of the valve, feeding the material into the bag through such tube until the material within the bag applies pressure to the inner side of the inner lip of the valve, then withdrawing the tube, then applying pressure to the outside of the bag near the valve to seat the valve more firmly.

3. The process of producing an inclosed package of loose granular or powdery material which consists in making a bag with a valve controlled opening, inserting through such valve controlled opening a tube adapted to separate the lips of the valve, feeding the material into the bag through such tube until the material within the

bag applies pressure to the inner side of the inner lip of the valve, then simultaneously withdrawing the tube to permit the lips of the valve to come together and applying external pressure to the bag near the valve.



870,216. DOOR-CHECK. WILLIAM BENNETT and WILLIAM A. RALSTON, Rochester, N. Y., assignors to Caldwell Manufacturing Company, Rochester, N. Y. Filed July 30, 1906. Serial No. 328,337.



In a door stop, the combination of the plate A, adapted for attachment to a door, and having a lug a; a lever pivoted upon said lug, adapted at one end to engage the floor, and a spring supported at one end by said lug a and at the other by the free member of the lever, at points so located with respect to each other that the outer end of the spring crosses a line passing through the lower end of the spring and the pivotal center of the lever, as the stop is moved from its engaging to its disengaging position and vice versa.

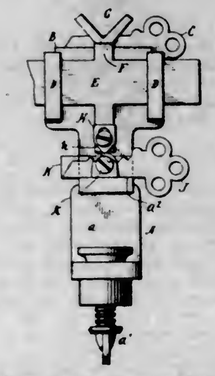
870,217. MANUFACTURE OF BUTTER. ARTHUR H. BORGSTRÖM, Hangö, Russia. Filed May 9, 1907. Serial No. 372,799.

1. The herein described method of manufacturing butter consisting in working cream or milk at such a low temperature, that no formation of butter can take place, heating the mass to such a temperature, as permits formation of butter, and leaving the butter to separate from the milk.

2. The herein described method of manufacturing butter consisting in working cream or milk at such a low temperature, that no formation of butter can take place, heating the mass to such a temperature as permits formation of butter, and gently agitating the mass, until the butter has separated sufficiently from the same.

3. The herein described method of manufacturing butter consisting in adding acid to the cream or milk, working the cream or milk at such a low temperature, that no formation of butter can take place, heating the mass to such a temperature as permits formation of butter, and gently agitating the mass until the butter has separated sufficiently from the churn-milk.

870,218. KEY-FILING DEVICE. JOHN D. BOWNE, New York, N. Y., assignor of one-half to John Wallace Slawson, New York, N. Y. Filed Nov. 15, 1906. Serial No. 343,613.



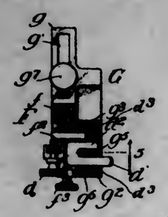
1. In a key-filing device, the combination with a key blank clamp, of a pattern key clamp located at a lower point than the said key blank clamp, a movable member, means constructed and arranged to guide the said movable member vertically and horizontally, an adjustable block secured to the said movable member and having a portion adapted and disposed to follow the shape of the key, and a file guide having a recess in its bottom adapted to admit the key blank, the said file guide being secured to the said movable member whereby the said file guide is moved with respect to the key blank in correspondence with the shape of the pattern key and the depth and extent of the various cuts to be made indicated on the key blank, substantially as described.

2. In a key-filing device, the combination with a key blank clamp, of a pattern key clamp located at a lower point than the said key blank clamp, a movable member, means constructed and arranged to guide the said movable member vertically and horizontally, an adjustable block secured to the said movable member and having a portion adapted and disposed to follow the shape of the key, and a file guide, the said file guide being secured to the said movable member whereby the said file guide is moved with respect to the key blank in correspondence with the shape of the pattern key and the depth and extent of the various cuts to be made indicated on the key blank, substantially as described.

3. In a key-filing device, the combination with a key blank clamp, of a pattern key clamp, the said clamps being arranged to hold the said blank and pattern parallel, a file guide having the form interiorly of the variations in the pattern, a device adapted to engage the variations of the pattern, and means constructed and arranged to carry the said file guide and said device and give both the same movements, the said file guide being adapted to be presented transversely to the key blank and moved along the surface of the blank thereby indicating visually on the blank the extent and depth of the various cuts to be made, substantially as described.

4. In a key-filing device, the combination with a key blank clamp, of a pattern key clamp, a file guide having the form interiorly of the variations in the pattern, a device adapted to engage the variations of the pattern, and means constructed and arranged to carry the said file guide and said device and give both the same movements, the said file guide being adapted to be presented transversely to the key blank and moved along the surface of the blank thereby indicating visually on the blank the extent and depth of the various cuts to be made, substantially as described.

870,219. SEWING-MACHINE ATTACHMENT. JAMES H. BOYE, Chicago, Ill., assignor to The Boye Needle Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 12, 1906. Serial No. 338,622.



1. The combination with a presser-foot of a sewing-machine, of a combination shirring and attachment-attaching bar extending transversely beneath the presser-foot and equipped on its upper side with flanges and a clamping screw constructed and arranged to permit adjustment of said bar to a position in front of the needle for shirring purposes and in the rear of the needle to accommodate a second attachment, said bar having an extension at one end equipped with means for adjustably mounting a second attachment thereon.

2. A device of the character set forth, comprising a bar having its upper surface provided near one end with an open-topped and open-ended presser-foot channel extending transversely of said bar, the opposite end of said bar having a guide extending longitudinally of the bar for adjustably mounting another attachment, and a clamping screw extending longitudinally of said bar into said presser-foot channel, for the purpose set forth.

3. The combination with a presser-foot of a sewing-machine, of a transversely extending bar passing beneath the presser-foot and clampingly secured thereto, and a substantially parallel hem-stitcher bar carried by and adjustable longitudinally with relation to said first-named bar, said hem-stitcher bar having a tapering extremity adapted to vary the space between layers of cloth in the hem-stitching operation, according to the adjustment of the hem-stitcher bar with relation to the first-named bar.

4. In false hem-stitching means, an adjustable attaching shank and a tapering bar projecting therefrom and equipped with a series of needle openings.

5. The combination with the presser-foot bar of a sewing machine, of a tapering longitudinally adjustable bar-form member adapted to lie between plies of cloth and separate the same in a greater or less degree, according to the adjustment of said member.

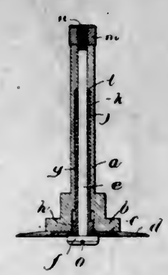
6. The combination with a presser-foot and needle of a sewing-machine, of a combination shirring and attachment-attaching member adjustably clamped thereon and constructed and arranged to permit adjustment to a position either in the front or in the rear of the position of the needle, and an attachment carried by said first-named member and adjustable with relation thereto at right-angles to the first-named adjustment.

7. The combination of a bar equipped with means for clampingly securing it at right angles to a presser-foot, and a second tapering bar carried by and adjustable longitudinally with relation to said first-named bar, for the purpose set forth.

8. The combination with a bar equipped near one end on its upper side with a transverse open-topped and open-ended channel, with a clamping-screw projecting therefrom, and equipped near the other end with a guide, and a parallel bar having its rear edge adjacent to the front edge of said first-named bar and equipped with a shank provided with a guide engaging said first-named guide.

9. The combination with a presser-foot, of a bar equipped on its upper surface at one end thereof with flanges, one of said flanges projecting past an edge of the bar, a set screw carried by the other flange, and a longitudinal guide carried by the opposite end portion of said bar.

870,220. DISK-KNIFE HOLDER. JOHN BROOKS, Brockton, Mass. Filed Apr. 15, 1907. Serial No. 368,409.



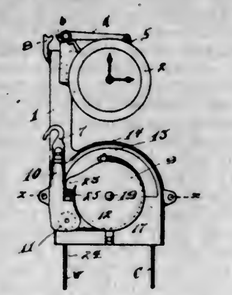
1. An attachment for skiving machines, comprising in combination, a long tubular spindle adapted to be contained in a bearing in the head of a skiving machine, a laterally-extending wide flange on the end of said spindle having a plane surface at right angles to the spindle axis, a thin wide disk knife bearing against the plane surface of said flange near the periphery of the latter, a centering sleeve within the bore of the spindle having a greater diameter than the eye of the knife and formed with a conical zone on its outer end of a height not greater than the thickness of the knife and tapering to a less diameter than the eye thereof, yielding means tending to force the conical end of said sleeve out of the spindle and into the eye of the knife, and a retainer having a shank passing through the spindle and secured at the remote end thereof, and a head pressing the knife against the bearing surface of the flange, whereby the knife is held firmly with its circular edge in a plane perpendicular to its axis of rotation.

2. A disk-knife holder for skiving machines, comprising a tubular spindle having a bearing surface at one end, a retainer provided with a head adapted to hold a disk-knife against said bearing surface and a shank passing through the bore of the spindle, a centering sleeve within the bore of the spindle having an external bearing on the inner surface of the spindle so as to be held centrally therein, and formed with a tapered end, and yielding means pressing said tapered end toward the head of the retainer and into the eye of the disk to center the same, said sleeve having a diameter as great as that of the eye at a less distance from its end than the thickness of the disk.

3. A rotary cutter holder, comprising a tubular spindle having a flange at one end with an outer plane abutting surface for the cutter, a retainer having a shank adapted to be held within the bore of the spindle and having a head with a surface extending in one plane from the shank to the periphery thereof, opposed to the abutting surface of the spindle flange for clamping a cutter against the latter, and a centering sleeve contained within the bore of the spindle surrounding the retainer shank and yieldingly impelled outward toward the head of the retainer, said centering sleeve being tapered at its outer end and of such diameter as to contact with the rim of the eye of the cutter before being projected entirely through the same.

4. A rotary cutter holder, comprising a tubular spindle adapted to be held rotatably in bearings, having at one end a transverse abutting surface for the cutter and a central cavity of greater diameter than the bore of the spindle, an integral shoulder between said bore and cavity, a retainer having a shank adapted to be passed through said bore and a head for clamping the cutter against the abutting surface of the spindle, a centering sleeve having a tapered end for entering the eye of the cutter, located within said recess, and a spring also located in said recess and pressing against said shoulder and sleeve for projecting the tapered end of the latter into the eye of the cutter.

870,221. TIME-CONTROLLED DAMPER. SILAS B. BROWN, Cincinnati, Ohio. Filed Jan. 8, 1906, Serial No. 295,084. Renewed Aug. 30, 1907. Serial No. 390,825.



1. In a device of the class described, a time releasing mechanism, a tension controlled member to be released having a tripping member, and a damper setting mechanism having no positive connection with the member to be released, and adapted to be independently manipulated, but also adapted to be engaged and operated by the trip at the appointed time.

2. In a device of the class described, a time releasing mechanism, a tension controlled member to be released adapted to be bodily suspended on the time releasing mechanism, a trip connected to and controlled by the member to be released, and a damper setting mechanism adapted to be engaged and operated by the trip, substantially as described.

3. In a device of the class described, a time releasing mechanism, a tension controlled member to be released having a tripping member, and a damper setting mechanism having a member adapted to be selectively set in the path of travel of the trip, substantially as described.

4. In a device of the class described, a time releasing mechanism, a member to be released, a rotary spring actuated trip connected to the member to be released, a rotary damper setting mechanism, the said rotary elements being concentrically journaled, and having projections in their coincident path of travel, substantially as described.

5. In a device of the class described, a time releasing mechanism, a member to be released, a swiveled spring controlled trip attached to the member to be released, so as to contract the spring when set, a lug on the periphery of the trip, an abutment against which the lug strikes when the spring is contracted, and a damper setting mechanism having a member adjustable in the path of travel of the tripping lug, substantially as described.

6. In a device of the class described, a time releasing mechanism, a member to be released, adapted to be suspended upon a portion of the time releasing mechanism, a rotary member having a peripheral tripping lug, a stationary abutment adapted to be engaged by said lug, a spring adapted to force said lug normally towards said abutment, a cable connecting the rotary element with the member to be released, and a damper setting mechanism having a member adjustable in the path of travel of said lug, substantially as described.

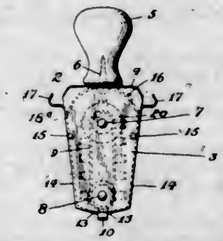
7. In a device of the class described, a time releasing mechanism, a member to be released, adapted to be suspended upon a portion of the time releasing mechanism, a rotary member having a peripheral tripping lug, a stationary abutment adapted to be engaged by said lug, a spring adapted to force said lug normally towards said abutment, a cable connecting the rotary element with the member to be released, a second rotary member concentrically journaled relative to the first named rotary member, a damper cable engaging said second rotary member, and a peripheral lug projected from said second rotary member into the path of movement of said tripping lug, substantially as described.

870,222. COLLAR-BUTTON. SAMUEL M. BRYDGES, Nelson, British Columbia, Canada. Filed July 30, 1906. Serial No. 328,414.



A collar button consisting of a piece of material having a forked end and having portions extending laterally at right angles to the body of the shank, said shank having openings adjacent the laterally extending portions, a second piece of material fitting over said laterally extending portions and forming the base, an oval shaped head pivoted in the forked end of the shank and lying in the same plane with the shank when ready for inserting in the button hole, said head having a recess in each end thereof, a bolt passing through the base and shank adapted to engage with either recess in the head, a head on the bolt engaging with the outer face of the base and a projection on the bolt extending into the opening adjacent the base, said head and projection acting as stops to limit the movement of the bolt.

870,223. STAMP. TAYLOR S. BUCK, New York, N. Y. Filed Mar. 4, 1907. Serial No. 360,321.



1. The combination with the main frame, the type bands and a pressure bar in said frame, of a pair of opening and closing devices for retaining the type below the pressure bar, substantially as and for the purpose described.

2. In a stamp, a main frame, an upper rod and a pressure bar held in said main frame and type bands mounted on said rod and pressure bar, in combination with a pair of spring clamps arranged to confine the type between the printing faces thereof and the said pressure bar, substantially as described.

3. A stamp comprising a main frame, an upper guide rod, a lower pressure bar, type bands mounted on said rod and bar, a pair of levers fulcrumed to said main frame and provided with clamping plates or flanges at their lower ends, and a spring for closing said clamping plates or flanges upon the type below the pressure bar, substantially as described.

4. A stamp comprising a main frame, an upper guide rod, a lower pressure bar, a cushion mounted on said pressure bar, type bands mounted on said upper rod and upon the cushion of said pressure bar, and opening and closing devices for grasping the type on the type bands below the said pressure bar, substantially as and for the purposes described.

5. A stamp comprising a main frame, an upper guide rod, a lower pressure bar, a cushion mounted on said pressure bar, type bands mounted on said guide rod and upon the said cushion of said pressure bar, a pair of levers fulcrumed to said main frame and provided with clamps at their lower ends and a spring for closing said clamps upon the type below the pressure bar, substantially as described.

6. In a stamp, a main frame having two permanent side pieces, and a fulcrum pin held by the said side pieces so

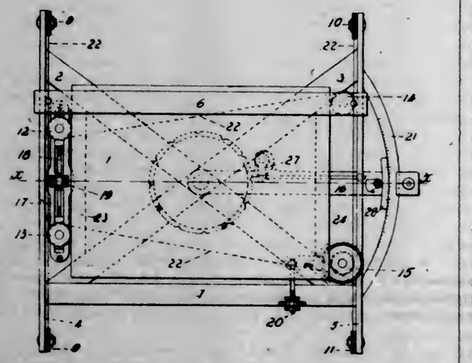
as to span the space between them, in combination with a lever fulcrumed on said pin, a clamp at the lower end of said lever, type mounted on bands held in the said frame and a spring for operating said lever, substantially as described.

7. In a stamp, a main frame having two permanent side pieces and a pair of fulcrum pins held by the said side pieces so as to span the space between them, in combination with a pair of levers fulcrumed on said fulcrum pins, type mounted on bands held in the said frame and having clamps at their lower ends and springs for closing said levers, substantially as described.

8. The main frame comprising a pair of side pieces connected to a top piece and a spring secured to said top piece in combination with side levers fulcrumed to the said side pieces, and formed with clamps at their lower ends, substantially as described.

9. The main frame having fulcrum pins at its open sides, type mounted on bands held in the said frame and a spring attached to said main frame, in combination with side plates or levers formed with a recess to engage with said fulcrum pins, and having clamps at their lower ends substantially as described.

870,224. DRAWING-BOARD. HENRY L. BURBANK and JAMES W. MANSON, Akron, Ohio. Filed Apr. 6, 1907. Serial No. 366,866.



1. In a drawing board, the sheaves 8, 9, 10, 11, 12, 13 and 14, and the drum 15, all mounted on the supporting frame of the said board, the said drum being interchangeable in respect of position with the sheaves 12, 13, or 14, means for increasing or decreasing the distance between the sheaves 12 and 13, in combination with the movable straight-edge 6 and the controlling wire 22, substantially as set forth and described.

2. In a drawing board, a rotating board, a supporting frame, a protractor limb rotatably mounted on an axis coincident with the axis of rotation of the said rotating board, the said protractor limb extending beyond the said rotating board, a graduated scale attached to the said supporting frame, means for fastening the said protractor limb to the said supporting frame at various angles, and a pawl mounted on the said protractor limb, the said pawl interchangeably engaging with stops rotating with the said rotating board, in combination, substantially as set forth and described.

3. In a drawing board, a rotating board, a supporting frame, a protractor limb rotatably mounted on an axis coincident with the axis of rotation of the said rotating board, the said protractor limb extending beyond the said rotating board, a graduated scale attached to the said supporting frame, means for fastening the said protractor limb to the said supporting frame at various angles, and a pawl mounted on the said protractor limb, the said pawl interchangeably engaging with stops rotating with the said rotating board, a locking bar slidably mounted on the said protractor limb and pivotally attached at one end to the said pawl, and means mounted on the said protractor limb to prevent longitudinal movement of the said locking bar when desired, in combination, substantially as set forth and described.

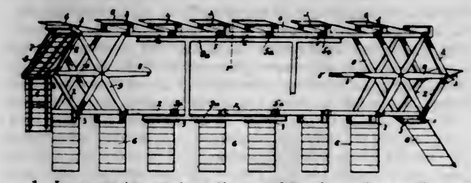
4. In a drawing board, in combination, a straight-edge, a straight-edge controlling wire, a spacing device consisting of a drum around which the said controlling wire is coiled, a notched wheel rotating with the said drum, a spacing pawl and a releasing pawl both of which are pivotally and slidably mounted near the periphery of the said notched wheel, the said spacing pawl acting to limit the rotation of the said notched wheel in one direction, the said releasing pawl acting to limit the rotation of the said notched wheel in the contrary direction and to disengage the said spacing pawl from the said notched wheel when the said releasing pawl is slidably actuated by the rotation of the said notched wheel, and means to restore the said spacing and releasing pawls to the respective positions in which they are ready to perform their function of limiting the rotation of the said notched wheel, substantially as set forth and described.

5. In a drawing board, in combination, a straight-edge, a straight-edge controlling wire, a spacing device consisting of a drum around which the said controlling wire is coiled, a notched wheel rotating with the said drum, a movable arm rotatable about the axis of the said drum, means for fastening and adjusting the said arm, a spacing pawl and a releasing pawl, both of which are pivotally and slidably mounted on the said arm, the said spacing pawl acting to limit the rotation of the said notched wheel in one direction, the said releasing pawl acting to limit the rotation of the said notched wheel in the contrary direction and to disengage the said spacing pawl from the said notched wheel when the said releasing pawl is slidably actuated by the rotation of the said notched wheel, and means to restore the said spacing and releasing pawls to the respective positions in which they are ready to perform their function of limiting the rotation of the said notched wheel, substantially as set forth and described.

6. In a drawing board, in combination, a straight-edge, a straight-edge controlling wire, a spacing device consisting of a drum around which the said controlling wire is coiled, a notched wheel rotating with the said drum, a spacing pawl and a releasing pawl both of which are pivotally and slidably mounted near the periphery of the said notched wheel, the said spacing pawl acting to limit the rotation of the said notched wheel in one direction, the said releasing pawl acting to limit the rotation of the said notched wheel in the contrary direction and to disengage the said spacing pawl from the said notched wheel when the said releasing pawl is slidably actuated by the rotation of the said notched wheel, means to restore the said spacing and releasing pawls to the respective positions in which they are ready to perform their function of limiting the rotation of the said notched wheel, and means to disengage the said spacing and releasing pawls from the said notched wheel, substantially as set forth and described.

7. In a drawing board, in combination, a straight-edge, a straight-edge controlling wire, a spacing device consisting of a drum around which the said controlling wire is coiled, a notched wheel rotating with the said drum, a movable arm rotatable about the axis of the said drum, means for fastening and adjusting the said arm, a spacing pawl and a releasing pawl, both of which are pivotally and slidably mounted on the said arm, the said spacing pawl acting to limit the rotation of the said notched wheel in one direction, the said releasing pawl acting to limit the rotation of the said notched wheel in the contrary direction and to disengage the said spacing pawl from the said notched wheel when the said releasing pawl is slidably actuated by the rotation of the said notched wheel, means to restore the said spacing and releasing pawls to the respective positions in which they are ready to perform their function of limiting the rotation of the said notched wheel, and means to disengage the said spacing and releasing pawls from the said notched wheel, substantially as set forth and described.

870,225. WATER-MOTOR. EZRA T. CAMPBELL and BERNHARD H. NOELTING, Nebraska City, Nebr. Filed July 27, 1906. Serial No. 328,067.



1. In a water motor, the combination of a series of frames, each consisting of two rectangular bars transversely perforated at either end, and connected at one end by a transverse inverted U shaped brace; oblique braces, their ends secured to the inner faces of said bars; transverse connecting rods, one passing through the perforations in the end of each frame, and the perforations in the opposite end of the adjacent frame; longitudinal bars, hinged to said connecting rods within said frames; rectangular paddles, their under faces secured to said last mentioned bars, and wheels having radial arms provided with concave recesses in their ends, the outer ends of said connecting rods adapted to engage in the recesses of the radial arms of said wheels and effect their rotation, substantially as shown and described, and for the purposes set forth.

2. In a water motor, the combination of a series of frames, each consisting of two rectangular bars; inverted U shaped braces connecting one of the ends of said frames; oblique braces, their ends secured to the inner faces of said frame bars; means for pivotally connecting the adjacent ends of said frames; rectangular paddles, hinged longitudinally to said frames, and wheels having radial arms provided with recesses in their ends, said wheels adapted to be put in rotation by said frames, substantially as shown and described, and for the purposes set forth.

3. The combination of a series of frames forming a chain, each frame consisting of two bars transversely perforated near their ends; braces secured to the inner faces of said bars, bracing them a predetermined distance apart; transverse rods, passing through the perforations in said frames, and hinging the same together; paddles carried by said frames, and wheels having radial arms adapted to catch the outer ends of said transverse rods, said paddles adapted to rotate said wheels when operated by the current, substantially as shown and described, and for the purposes set forth.

4. The combination of a series of frames forming a chain, each chain consisting of two bars transversely perforated near their ends; braces secured to the inner faces of said bars, bracing them a predetermined distance apart; transverse rods passing through the perforations in said frames, and hinging the same together; spools, journaled on the ends of said rods; paddles, carried by said frames; wheels, having radial arms adapted to catch the outer ends of said transverse rods, and a vertical frame provided with upper and lower rails for said spools to run on, substantially as shown and described and for the purposes set forth.

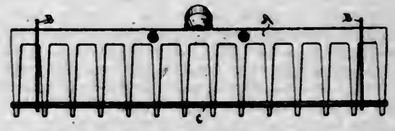
870,226. BUST REDUCER AND SUPPORTER. OLIVE D. CORNELL, New York, N. Y. Filed Feb. 16, 1907. Serial No. 357,692.

1. A garment of the class described adapted to be worn around the upper portion of the chest or body above the waist line, said garment consisting of an oblong flexible strip having a substantially straight top edge and parallel ends provided with fastening devices, the width of the ends being greater than the width of the central back portion, and the bottom edge being curved downwardly and outwardly from the central back portion to the ends and being provided with a draw cord.

2. A garment of the class described adapted to be worn around the upper portion of the chest or body above the waist line, said garment consisting of an oblong flexible strip having a substantially straight top edge and parallel ends provided with fastening devices, the width of the ends being greater than the width of the central back portion, and the bottom edge being curved downwardly and outwardly from the central back portion to the ends and being provided with a draw cord, said garment being also provided at the top with shoulder straps.



870,227. RAKE. WILLIAM CRONK, Montour Falls, N. Y. Filed Apr. 10, 1907. Serial No. 367,428.

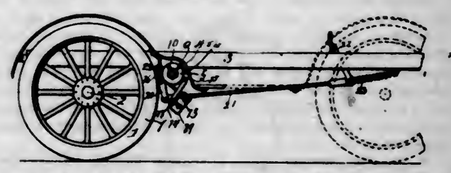


1. A cleaning attachment for rakes comprising two slotted retainer plates constructed to be hung edgewise upon a rake head intermediate the ends thereof, and a pair of parallel bars run through and fastened to the lower ends of said plates.

2. A cleaning attachment for rakes comprising two slotted retainer plates, each cut through at the lower end into its slot, and a pair of parallel bars fastened to said plates at opposite sides of the cuts.

3. A cleaning attachment for rakes comprising two slotted retainer plates, each plate being composed of two members hinged together at one end and provided with projections at the opposite end to close the slot, and a pair of parallel bars fastened to said plates at their lower ends.

870,228. EMERGENCY BRAKE FOR AUTOMOBILES. HERMAN F. DIETZ, Liverpool, N. Y., assignor of one-half to Anthony Will, Syracuse, N. Y. Filed May 16, 1906. Serial No. 317,051.



1. A vehicle brake, a support, a flexible connection carried by said support, and clamping means carried by the flexible connection adapted to engage the wheel of the vehicle and draw said flexible connection thereunder.

2. A vehicle brake, a drum, a flexible connection wound thereabout, a clamping shoe attached to the flexible connection, and means for forcing said shoe into engagement with the vehicle wheel, acting to draw said flexible connection thereunder.

3. A vehicle brake, a shaft, flexible connections supported by said shaft and adapted to be wound thereabout, and clamping means carried by said flexible connections designed to engage the wheels of the vehicle when thrown in contact therewith, acting to draw said flexible connections thereunder.

4. In a vehicle, the combination with a wheel having a

rubber-tire, and a suitable support disposed in front of the wheel, of an emergency-brake comprising a flexible band rigidly fastened at one end to said support, a grip secured to the other end of the band and normally sustained out of contact with the tire, and means for forcing the grip onto the tire whereby the said grip is carried under the wheel and back of its bearing upon the ground so as to cause the band to be dragged under the tire as set forth.

5. In a vehicle having rubber-tired wheels, the combination with a frame, an emergency-brake comprising a flexible band suitably fastened at one end to the frame, a grip securely fastened to the other end of the band and consisting of a curved spring-plate adapted to engage a wheel-tire, a movable support normally sustaining the grip out of contact with the tire, manually-operated means for moving said support to force the grip onto the tire whereby the grip is carried therewith to drag the flexible band under the tire, and spring-actuated means automatically moving the grip-support to its normal position as set forth.

6. In a vehicle having rubber-tired wheels, the combination with the running-gear frame and a rear wheel, of an emergency-brake comprising a flexible band suitably connected at one end to the frame and provided at its other end with a grip adapted to engage the wheel-tire, an arm pivotally connected to the frame in front of the wheel and normally supporting the grip out of contact with the wheel-tire, manually-operated means for swinging said arm toward the wheel to force the grip onto the tire, whereby the said grip is carried with the wheel back of its bearing upon the ground so as to drag the flexible band under the tire, and a spring operative for swinging the aforesaid arm to its normal position as set forth.

7. In a vehicle having rubber-tired wheels, the combination with the running-gear frame and a rear wheel, of an emergency-brake comprising a flexible band firmly fastened at one end to the frame and provided at its other end with a U-shaped grip adapted to engage the wheel-tire, a movable forked-member connected to the frame and normally supporting the grip out of contact with the tire and adapted to straddle the tire, a manually-operated lever for moving said forked-member toward the wheel to force the grip onto the tire whereby the grip is carried with the tire to drag the band thereunder, and a spring operative for moving the forked-member to its normal position as set forth.

8. In combination with a vehicle having rubber-tired wheels, an emergency-brake comprising a transverse roller suitably journaled in front of a wheel, a flexible band connected at one end to the roller and normally wound thereon, and provided at its other end with a grip consisting of a U-shaped spring-plate adapted to engage the wheel-tire and provided with spring-catches, a suitably supported transverse rock-shaft disposed back of said roller, an arm fastened at one end to the rock-shaft and provided on its free end portion with means for engaging said spring-catches to normally support the grip out of contact with the wheel-tire, a foot-lever connected to the rock-shaft and operative for swinging the arm toward the wheel to force the grip onto the tire whereby the grip is carried therewith to drag the flexible band under the tire, and a spring operative for automatically swinging the arm to its normal position as set forth.

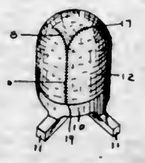
9. In combination with a vehicle having rubber-tired wheels, an emergency-brake comprising a rigid transverse shaft supported in front of the rear-wheels, a roller journaled on the shaft adjacent to one of the wheels, a flexible band securely fastened at one end to the roller and normally wound thereon, a grip fastened to the other end of the band and consisting of a U-shaped spring-plate adapted to engage the wheel-tire and having its ends bent to form catches, a rock-shaft supported back of the roller-shaft, an arm fastened at one end to the rock-shaft and provided on its free end with a fork having its members terminating in offsets to receive the catches on the grip to normally support the latter out of contact with the wheel-tire, a foot-lever connected to the rock-shaft and operative for swinging the said arm toward the wheel to cause the fork-members to straddle the wheel-tire and thereby force the grip onto the tire, whereby the said grip is carried with the tire to drag the flexible band thereunder, and a spring connected to the foot-lever and serving to swing the arm to its normal position as set forth.

10. In combination with a vehicle having rubber-tired wheels, an emergency-brake comprising a transverse roller suitably journaled in front of a wheel, a drag-shoe consisting of a flexible band connected at one end to the roller and normally wound thereon and provided at its opposite end with a grip normally supported in front of the wheel and below the roller, a spring retaining the grip out of contact with the wheel-tire when it is in its normal position, a yielding detent serving to prevent accidental unwinding of the drag-shoe from the roller, and a lever for moving the grip-support toward the wheel-tire whereby the said grip is caused to engage the tire and carry the shoe under the wheel as set forth.

11. In combination with a vehicle having rubber-tired wheels, an emergency-brake comprising a drag-shoe composed of a flexible band having a suitable rigid fastening at one end and provided at its opposite end with a grip consisting of a curved spring-plate adapted to engage the wheel-tire and thereby carry the shoe under the wheel, a forked crank-arm normally supporting said grip out of contact with the wheel-tire, means for moving the crank-arm toward the tire to force the grip thereon, and a suitably arranged spring operative for moving the crank-arm to its normal position as set forth.

12. In combination with a vehicle having rubber-tired wheels, an emergency-brake comprising a drag-shoe composed of a flexible band suitably fastened at one end and provided at its opposite end with a grip consisting of a curved spring-plate conforming to the wheel-tire, a transverse rock-shaft, a crank-arm fastened to said rock-shaft and provided with a fork adapted to straddle the tire, said fork terminating in offsets on which the said grip is normally supported, means for turning the rock-shaft in one direction to force the grip onto the tire, whereby the said shoe is carried under the wheel, and a spring for turning the rock-shaft in reverse direction to move the fork to its normal position as set forth.

870,229. GAS-MANTLE. PAUL R. FINCH, Des Moines, Iowa. Filed Aug. 10, 1907. Serial No. 387,985.



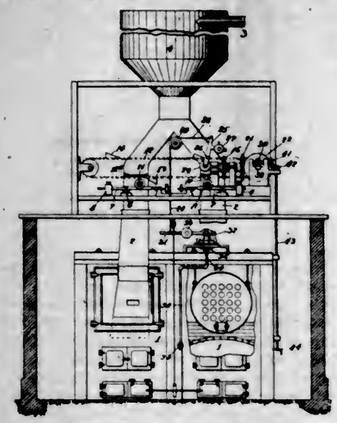
1. A gas mantle embodying a cylindrical web having a hemi-spherical base formed evenly and symmetrically, a pair of oppositely disposed longitudinal seams extending through the top of said web and terminating at points away from the extremity of the base thereof, and two divergent branches extending from the lower end of each seam to extend on the outer portions of the base extremity.

2. A gas mantle embodying a cylindrical web having a hemi-spherical base, said web being divided in its body into two parts by a pair of straight seams and adjacent the extremity of the hemi-spherical base having its line of division extending in curved paths so as to be on the outer portions of the extremity of the hemi-spherical base.

870,230. FUEL-FEEDING DEVICE. GEORGE W. GARDNER, San Francisco, Cal. Filed June 5, 1906. Serial No. 320,352.

1. In a fuel feeding apparatus, a feed chute, a normally closed gate therein, a traveling member for opening said gate at intervals, means for varying the speed of said member and automatic means starting and stopping said member.

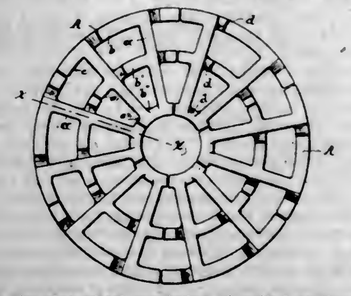
2. In a fuel-feeding apparatus, a furnace, a feed chute, a hinged gate within said chute for restraining and passing charges of fuel, an endless traveling chain having means for opening said gate intermittently, a friction disk feathered upon the shaft of one of the supporting wheels for said chain, a rack connected to said friction disk, a pinion for operating said rack, a shaft extending into the furnace room, bevel-gearing connecting said shaft and pinion, a second friction disk, a shaft movable endwise and carrying said last named disk, means for bringing said disks into frictional contact, and means for keeping them normally out of contact.



3. In a fuel-feeding apparatus, a feed chute, a hinged gate therein, a traveling member for opening said gate at intervals, a pair of gears for transmitting motion to said traveling member, a shaft movable endwise, upon which one of said gears is mounted, a lever for moving said shaft, a fluid pressure device, a weighted lever connected thereto and a connection between said levers; whereby upon a decrease in steam pressure the weighted lever will, through such connection throw the gearing into operation and cause the movement of said traveling member.

4. In combination with a furnace and with a chute for supplying it with fuel, a hinged gate within said chute for restraining and passing charges of fuel, a lever on the shaft of said gate, a roller hinged on said lever, and a traveling member adapted to operate said lever by contact with its roller such roller being capable of being swung out of the path of said traveling member in order to render the full feed inoperative.

870,231. ABRASIVE WHEEL. ROLAND GARDNER, Cleveland, Ohio. Filed Oct. 7, 1904. Serial No. 227,589.



1. An abrasive wheel consisting of united sections each section resembling a sector like skeleton structure with radial walls and circular walls with projections which space the radial walls as shown and for the purpose as set forth.

2. An abrasive wheel comprising a plurality of hollow blocks having projecting meeting faces, which form spaces between adjoining blocks, said blocks being mounted upon a plate having adjustable circumferential clamps all constructed and arranged substantially as and for the purpose set forth.

3. An abrasive wheel comprising a plurality of sector like hollow blocks provided with side lugs arranged in the manner as and for the purpose set forth.

870,232. SIGNALING DEVICE FOR RAILWAYS. GEORGE S. GETCHELL, Los Angeles, Cal. Filed Jan. 24, 1907. Serial No. 353,838.

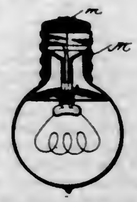


1. In a railway signal, a series of track contacts adapted to be operated by passing trains, a plurality of signals electrically connected to each of said contacts, the signals connected to each of said contacts being different from the signals connected to the remainder of said contacts, said signals arranged at intervals along the track, and a source of electrical energy in circuit with said contacts and signals.

2. In a railway signal, a series of track contacts adapted to be operated by passing trains, a plurality of groups of signals arranged along the track, each one of said contacts being connected to one signal in all of said groups, the signals connected to each of said contacts being distinguishable from the signals connected to the other contacts, and a source of electrical energy in circuit with said contacts and signals.

3. In a railway signal, a plurality of contacts spaced along the track and adapted to be operated by passing trains, a plurality of groups of signals spaced along the track, each of said contacts being operatively connected to one signal in each and every one of said groups, the signals connected to each of said contacts being distinguishable from the signals connected to the other contacts, and manual means to operate said signals.

870,233. PROCESS OF MANUFACTURING REFLECTOR INCANDESCENT LAMPS. HOWARD GILMORE, Brookline, Mass. Filed Aug. 16, 1905, Serial No. 274,386. Renewed May 29, 1907. Serial No. 376,417.



1. In the process of manufacturing a reflector incandescent lamp, wherein the reflector is curled and inserted through the neck of the bulb, the following steps, viz.:—first, inserting the filament stem and connected parts through the neck of the bulb; second, bringing the reflector and filament stem into axial alinement with the neck and thereafter changing the relative position and securing in place.

2. In the process of manufacturing a reflector incandescent lamp, wherein the reflector is curled and inserted through the neck of the bulb, the following steps, viz.:—first, restoring the reflector to substantially normal shape by mechanical manipulations; second, inserting the filament stem and connected parts through the neck of the

bulb; third, bringing the reflector and filament stem into axial alinement with the neck and thereafter changing the relative position and securing in place.

3. In the process of manufacturing a reflector incandescent lamp, wherein the reflector is curled and inserted through the neck of the bulb, the following steps, viz., first, inserting the filament stem with its connected parts through the neck and into the aperture of the reflector; second, rotating the bulb until the filament stem drops into the neck, leaving the reflector and stem substantially in position for securing in place.

4. In the process of manufacturing a reflector incandescent lamp, wherein the reflector is curled and inserted through the neck of the bulb, the following steps, viz., first, restoring the reflector to substantially normal position; second, inserting the filament stem with its connected parts through the neck and into the aperture of the reflector; third, rotating the bulb until the filament stem drops into the neck, leaving the reflector and stem substantially in position for securing in place.

5. In the process of manufacturing a reflector incandescent lamp, wherein the reflector is curled and inserted through the neck of the bulb, the following steps, viz., first, inserting a chambered weight into the bulb through the neck; second, positioning the reflector on the weight; third, inserting the filament stem with its connected parts through the neck and into the alined apertures of the reflector and weight; fourth, rotating the bulb until the weight falls out of the neck, leaving the reflector and stem substantially in position for securing in place.

6. In the process of manufacturing a reflector incandescent lamp, wherein the reflector is curled and inserted through the neck of the bulb, the following steps, viz., first, restoring the reflector to substantially normal position; second, inserting a chambered weight into the bulb through the neck; third, positioning the reflector on the weight; fourth, inserting the filament stem with its connected parts through the neck and into the alined apertures of the reflector and weight; fifth, rotating the bulb until the weight falls out of the neck, leaving the reflector and stem substantially in position for securing in place.

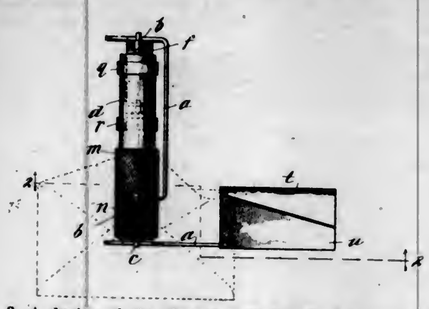
7. In the process of manufacturing a reflector incandescent lamp, wherein the reflector is curled and inserted through the neck of the bulb, the following steps, viz., first, restoring the reflector to substantially normal position; second, inserting a chambered weight into the bulb through the neck; third, positioning the reflector on the weight; fourth, inserting the filament stem with its connected parts through the neck and into the alined apertures of the reflector and weight; fifth, rotating the bulb until the weight falls out of the neck, leaving the reflector and stem substantially in position for securing in place; sixth, sealing the stem to the neck of the bulb.

8. In the process of manufacturing a reflector incandescent lamp, wherein the reflector is curled and inserted through the neck of the bulb, the following steps, viz., first, restoring the reflector to substantially normal position; second, inserting a chambered weight into the bulb through the neck; third, positioning the reflector on the weight; fourth, inserting the filament stem with its connected parts through the neck and into the alined apertures of the reflector and weight; fifth, rotating the bulb until the weight falls out of the neck, leaving the reflector and stem substantially in position for securing in place; sixth, heating and expanding the end of the stem; seventh, sealing the expanded stem to the walls of the neck of the bulb.

870,234. MOISTENING DEVICE. CHARLES W. GRAY, Chattanooga, Tenn. Filed Aug. 31, 1906. Serial No. 332,748.

1. A device of the class described including two moistening rollers having displaced axes, one roller projecting beyond the other, whereby one roller is particularly adapted for moistening envelop flaps and the other roller is particularly adapted for moistening portions of the envelops that are to receive the stamps.

2. A device of the class described including two moistening rollers having displaced axes, one roller projecting beyond the other, whereby one roller is particularly adapted for moistening envelop flaps and the other roller is particularly adapted for moistening portions of the envelops that are to receive the stamps, the moistening peripheries of said rollers being substantially in line where the rollers meet to prevent the envelops from being kinked.



3. A device of the class described including two moistening rollers having displaced axes, one roller projecting beyond the other, whereby one roller is particularly adapted for moistening envelop flaps and the other roller is particularly adapted for moistening portions of the envelops that are to receive the stamps, the moistening peripheries of said rollers being substantially in line where the rollers meet to prevent the envelops from being kinked, the filler ring or rings surrounding the roller companion to the flap moistening roller for holding the flaps against the flap moistening roller as the envelops pass between the rollers.

4. A device of the class described including two moistening rollers having displaced axes, one roller projecting beyond the other, whereby one roller is particularly adapted for moistening envelop flaps and the other roller is particularly adapted for moistening portions of the envelops that are to receive the stamps, said moistening rollers including perforated water-containing cylinders and rings of absorbent material surrounding the cylinders where the perforations are located, which rings of absorbent material convey the moisture to the envelops.

5. A device of the class described including two moistening rollers having displaced axes, one roller projecting beyond the other, whereby one roller is particularly adapted for moistening envelop flaps and the other roller is particularly adapted for moistening portions of the envelops that are to receive the stamps, the moistening peripheries of said rollers being substantially in line where the rollers meet to prevent the envelops from being kinked, said moistening rollers including perforated water-containing cylinders and rings of absorbent material surrounding the cylinders where the perforations are located, which rings of absorbent material convey the moisture to the envelops.

6. A device of the class described including two moistening rollers having displaced axes, one roller projecting beyond the other, whereby one roller is particularly adapted for moistening envelop flaps and the other roller is particularly adapted for moistening portions of the envelops that are to receive the stamps, the moistening peripheries of said rollers being substantially in line where the rollers meet to prevent the envelops from being kinked, the filler ring or rings surrounding the roller companion to the flap moistening roller for holding the flaps against the flap moistening roller as the envelops pass between the rollers, said moistening rollers including perforated water-containing cylinders and rings of absorbent material surrounding the cylinders where the perforations are located, which rings of absorbent material convey the moisture to the envelops.

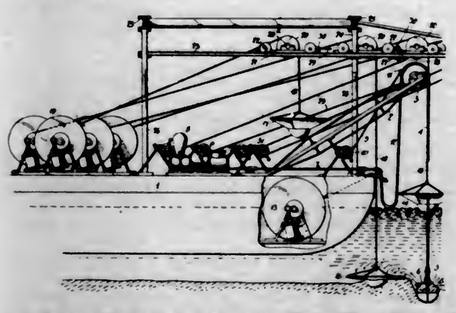
7. A device of the class described including two moistening rollers having displaced axes, one roller projecting beyond the other, whereby one roller is particularly adapted for moistening envelop flaps and the other roller is particularly adapted for moistening portions of the envelops that are to receive the stamps, said moistening rollers including perforated water-containing cylinders and rings of absorbent material surrounding the cylinders where the perforations are located, which rings of absorbent material convey the moisture to the envelops, said perforations extending throughout segments of the cylinders.

8. A device of the class described including two moistening rollers having displaced axes, one roller projecting beyond the other, whereby one roller is particularly adapted for moistening envelop flaps and the other roller is particularly adapted for moistening portions of the envelops that are to receive the stamps, the moistening peripheries of said rollers being substantially in line where the rollers meet to prevent the envelops from being kinked, said moistening rollers including perforated water-containing cylinders where the perforations are located, which rings of absorbent material convey the moisture to the envelops, said perforations extending throughout segments of the cylinders.

9. A device of the class described including two moistening rollers having displaced axes, one roller projecting beyond the other, whereby one roller is particularly adapted for moistening envelop flaps and the other roller is particularly adapted for moistening portions of the envelops that are to receive the stamps, the moistening peripheries of said rollers being substantially in line where the rollers meet to prevent the envelops from being kinked, the filler ring or rings surrounding the roller companion to the flap moistening roller for holding the flaps against the flap moistening roller as the envelops pass between the rollers, said moistening rollers including perforated water-containing cylinders and rings of absorbent material surrounding the cylinders where the perforations are located, which rings of absorbent material convey the moisture to the envelops, said perforations extending throughout segments of the cylinders.

10. A device of the class described including a moistening roller comprising a water-containing cylinder perforated throughout a segmental portion thereof, and a ring of absorbent material surrounding the material where the cylinder perforations are located, said cylinder being counter-weighted to maintain said perforations normally uppermost.

870,235. DEEP-WATER GOLD-DREDGE. WARDELL GUTHRIE, Chicago, Ill. Filed Apr. 12, 1907. Serial No. 367,732.



1. In a gold dredge, the combination with a float, of dredging-means adapted to be raised and lowered, hoisting mechanism arranged to act upon the dredging-means, a bucket, and hoisting devices and tackle arranged to raise and lower the said bucket adjacent to the said dredging-means.

2. In a gold dredge, the combination with a float, of dredging-means adapted to be raised and lowered, hoisting mechanism arranged to act upon the said dredging-means, a plurality of buckets, and hoisting devices and tackle arranged to raise and lower the said buckets adjacent to the said dredging-means.

3. In a gold dredge, the combination with a float, of hydraulic dredging-means adapted to be raised and lowered, hoisting mechanism arranged to act upon the dredging-means, a bucket, and hoisting devices and tackle arranged to raise and lower the said bucket adjacent to the said dredging-means.

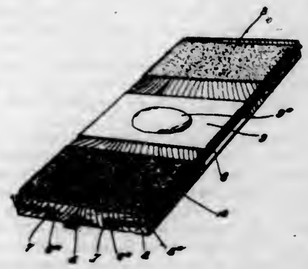
4. In a gold dredge, the combination with a float, of hydraulic dredging-means adapted to be raised and lowered, hoisting mechanism arranged to act upon the said dredging-means, a plurality of buckets, and hoisting devices and tackle arranged to raise and lower the said buckets adjacent to the said dredging-means.

5. In a gold dredge, the combination with a float, of a hose having a nozzle and adapted to be raised and lowered, hoisting mechanism arranged to act upon the said hose, a plurality of buckets, and hoisting devices and tackle arranged to raise and lower the said buckets separately adjacent to the said hose.

6. In a gold dredge, the combination with a float, of dredging-means adapted to be raised and lowered, hoisting mechanism arranged to act upon the dredging-means, a bucket, hoisting devices and tackle arranged to raise and lower the said bucket adjacent to the said dredging-means, and traveling devices whereby the said bucket may be moved towards or from the float.

7. In a gold dredge, the combination with a float, of dredging-means adapted to be raised and lowered, hoisting mechanism arranged to act upon the dredging-means, a plurality of buckets, hoisting devices and tackle arranged to raise and lower the said buckets adjacent to the said dredging-means, and traveling devices whereby the said buckets may be moved towards or from the float.

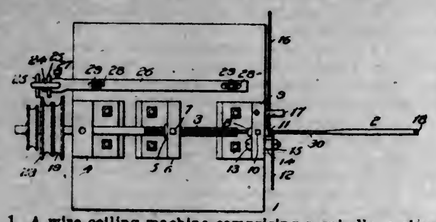
870,236. SAD-IRON CLEANER AND WAXER. JOHN HORNUNG, Dresden, Ohio. Filed Jan. 7, 1907. Serial No. 351,035.



1. A sad iron cleaner and waxer, comprising the combination of a board of quadrangular form provided with grooves in its opposite longitudinal edges, pieces of flexible material, substantially as described, extending across the board and across said grooves, two rods each angularly bent to extend around two corners of the board for clamping the flexible material in said grooves, each rod being hingedly secured at one end of the board to swing in a plane flatwise of the board and each rod provided with a hook at its opposite end, and an eye at the other end of the board to receive said hook; said hook being freely passed into and from said eye.

2. A sad iron cleaner and waxer, comprising the combination of a board of quadrangular form provided with grooves in its longitudinal edges, pieces of flexible material extending across the board and across both said grooves, two rods each angularly bent to extend around two corners of the board and curved inwardly toward the board between the bends thereof for clamping the flexible material in said grooves, each rod being hingedly secured at one end of the board to swing in a plane flatwise of the board and each rod provided with a hook at its free end, and an eye at the other end of the board into which and from which said hook can be freely passed.

870,237. WIRE-COILING MACHINE. ROBERT L. HORSLEY, Fort Worth, Tex., assignor to Worth Wire Works, a Corporation of Texas. Filed Feb. 10, 1906. Serial No. 300,478.



1. A wire coiling machine comprising a spindle, a sleeve bearing for said spindle, combined means for rotating said spindle and for reciprocating the same in said sleeve, said sleeve having an angular cut-out for directing the wire to be fed to said spindle, and an adjusting guide blade coöperating with said sleeve for determining the flight of the coil of the wire.

2. A wire coiling machine having a spindle, a sleeve bearing for said spindle, means for rotating said spindle and for reciprocating the same in said bearing, and means for directing wire to said spindle and for determining the flight of the coil of the wire, said spindle having a large portion for gripping the wire coil and a smaller portion whereon the coil is formed.

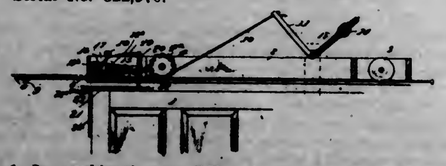
3. A wire coiling machine having a spindle, means for feeding wire to said spindle, means for rotating and axially moving said spindle to form wire coil, means for rotating and axially moving said spindle in the opposite direction to withdraw said spindle from portions of said coil whereby said coil is fed from said spindle, and means for regulating the flight of the coil.

4. A wire coiling machine having a rotatable and axially movable spindle, means for guiding wire to said spindle, means for regulating the flight of coils to be formed on said spindle, suitable bearings for said spindle, gearing for driving said spindle for forming wire coil, shifting means for releasing said gearing, means for varying the time for said shifting means to release said gearing, and gearing for rotating said spindle for feeding off wire coil from said spindle.

5. A wire coiling machine having a rotatable and axially movable spindle, means for guiding wire to said spindle, suitable bearings for said spindle, a spindle carrier, a forward driving pulley rigidly mounted on said carrier, an idler mounted on said carrier, a belt for driving said pulley, a shifter for shifting said belt from said pulley to said idler and from said idler to said pulley, means for setting said shifter at different longitudinal and vertical adjustments, and a backward driving pulley rigidly mounted on said carrier.

6. A wire coiling machine having a spindle, means for feeding wire to said spindle, and means for driving said spindle, said spindle having a small portion on which the coil is formed and a large portion for gripping the wire coil whereby the wire is drawn through the machine, the large portion of said spindle tapering to the small portion and the coil of wire being fed from the small portion to the large portion.

870,238. LOCK MECHANISM FOR DOORS. IVER JOHNSON, Bellingham, Wash. Filed June 22, 1906. Serial No. 322,970.



1. In combination, a sliding door, a supporting wheel for the door, means for automatically moving the door in one direction, and means coöperating with the supporting wheel for preventing the said movement.

2. In combination, a sliding door, a supporting wheel for the door, means coöperating with the supporting wheel for automatically moving the door in one direction, and the means for locking the supporting wheel against turning in order to prevent the said movement of the door.

3. In combination, a sliding door, a supporting wheel therefor, means for automatically closing the door, means for locking the door in a closed position, means coöperating with the supporting wheel to prevent closing of the door and an operating member connected to the means for locking the door in a closed position and the means coöperating with the supporting wheel to prevent the closing of the door.

4. In combination, a door, a supporting wheel for the door, means for automatically moving the door in one direction and a pawl coöperating with the supporting wheel to prevent the said movement of the door.

5. In combination, a door, a supporting wheel for the door, means coöperating with the supporting wheel for automatically closing the door, a catch for locking the door in a closed position, means coöperating with the supporting wheel for preventing the automatic closing of the door, and an operative connection between the said means for locking the door against closing movement and the catch for holding the door in a closed position.

6. In combination, a door, means for locking the door closed, means normally tending to close the door, means for preventing closing of the door when once opened, operable connections between the locking means aforesaid and the means preventing the door from closing after opening thereof, and means for actuating the door locking means to permit the door to close automatically.

7. In combination, a door, a sliding carriage supporting said door and including a ratchet wheel, means for automatically closing the door, a locking catch for holding the door closed, a locking pawl arranged for coöperation with the ratchet wheel of the carriage, and operating mechanism for governing the action of the locking catch and locking pawl aforesaid.

8. In combination, a door, a carriage attached to the upper portion of the door and adapted for sliding movement with the door, a rail, a ratchet wheel mounted in the carriage and traveling along the rail aforesaid, a locking pawl coöperating with said ratchet wheel and movable independently of the carriage, and means for operating said locking pawl.

9. In combination, a door, a carriage attached to the upper portion of the door and adapted for sliding movement with the door, a rail, wheels mounted in the carriage and traveling along the rail aforesaid, a ratchet wheel applied to the carriage, a locking pawl coöperating with said ratchet wheel and movable independently of the carriage, a locking catch for holding the door closed, a spring operatively connecting the locking pawl and the locking catch, and means for actuating the locking catch.

10. In combination, a door, a sliding carriage attached to the door, and movable therewith, a ratchet wheel mounted in said carriage, means coöperating with said ratchet wheel to automatically close the door, and a pawl engaging the ratchet wheel for preventing closing of the door.

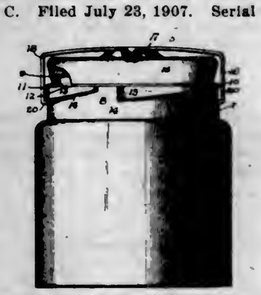
11. In combination, a sliding door, a carriage attached to the door and movable therewith, a ratchet wheel mounted in said carriage, means coöperating with the ratchet wheel to automatically move the door in one direction, a pawl movable independently of the door and adapted to engage the above named ratchet wheel to prevent said automatic movement of the door and means for actuating the said pawl.

12. In combination, a sliding door, a carriage carried by the door, a supporting wheel journaled in the carriage and provided in its periphery with teeth, a tension member coöperating with the supporting wheel to automatically move the door in one direction, a pawl loosely mounted upon the carriage and adapted to engage the toothed periphery of the supporting wheel to prevent the said automatic movement of the door, a spring arm controlling the pawl and a finger piece mounted upon the door and having an operative connection with the spring arm.

13. In combination, a sliding door, a ratchet wheel connected therewith, means coöperating with the ratchet wheel to effect automatic movement of the door, a locking pawl coöperating with the ratchet wheel to prevent the automatic movement of the door, a locking catch for holding the door closed, means for operating the locking catch, and a spring operatively connecting the locking catch and the locking pawl and admitting of movement of the locking pawl independently of the door.

14. In combination, a sliding door, a ratchet wheel connected therewith, means coöperating with the ratchet wheel to effect automatic movement of the door, a locking pawl coöperating with the ratchet wheel to prevent the automatic movement of the door, a locking catch for holding the door closed, means for operating the locking catch, a spring operatively connecting the locking catch and the locking pawl and admitting of movement of the locking pawl independently of the door, the means for automatically closing the door above mentioned being comprised of a weighted lever, and a flexible connection along which the ratchet wheel is movable.

870,239. JAR-CLOSURE. DALLAS KNOWLTON, Washington, D. C. Filed July 23, 1907. Serial No. 385,181.

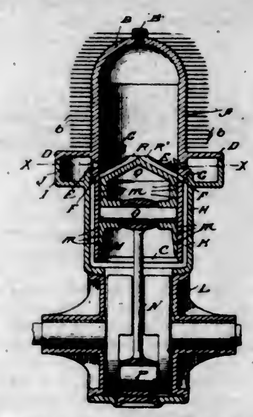


The combination with a jar having on its neck inclined bearing faces, and a cap therefor having a central depression on its upper surface, of a clamp provided at its ends with inturned projecting fingers to engage with said inclined bearing faces and centrally with a depending conoidal shaped truss-like strut, for engagement with said central depression the cross-section of the strut being greater than the remainder of the clamp.

870,240. GAS-ENGINE. DORVILLE LIBBY, Jr., San Francisco, Cal., assignor to The Sunset Automobile Company, San Francisco, Cal., a Corporation of California. Filed Feb. 25, 1905. Serial No. 247,334.

1. A gas engine, comprising a cylinder having a series of inlet and exhaust openings surrounding the cylinder, one above the other, an outwardly extending flange carried by the cylinder above the exhaust openings, a second flange carried by the cylinder between the exhaust and inlet series of openings, and screw-threaded, a casing screwed to the said flange and spaced a distance from the cylinder and having an outwardly extending flange abutting the flange carried by the cylinder above the exhaust openings, and a piston within said cylinder and having means for conveying the mixture inward to the center of the cylinder.

2. A gas engine, comprising a cylinder having a series of inlet and exhaust openings, entirely surrounding the cylinder, and the exhaust opening arranged above the inlet opening, an outwardly extending flange carried by the cylinder above the exhaust openings, a second flange carried by the cylinder between the exhaust and inlet series of openings and screw-threaded, a casing screwed to said flange and spaced a distance from the cylinder, and having an outwardly-extending flange abutting the flange carried by the cylinder above the exhaust openings, a piston within the cylinder, radially-extending ribs carried by the upper end of said cylinder, and a cap carried by the ribs and having a central opening for discharging the explosive mixture inwardly and upwardly at the center of the cylinder.



3. A gas engine, comprising a cylinder having a series of inlet and exhaust openings surrounding the cylinder, one above the other, an outwardly-extending flange carried by the cylinder above the exhaust openings, a second flange carried by the cylinder between the exhaust and inlet series of openings, a casing having a tight joint with said flange and spaced a distance from the cylinder and having an outwardly-extending flange abutting the flange carried by the cylinder above the exhaust openings, means for securing the casing to the cylinder in said position and a piston within the cylinder and having means for conveying the mixture inward to the center of the cylinder.

4. A gas engine comprising a cylinder having a series of inlet ports and exhaust ports entirely surrounding the cylinder one above the other, and a piston having passageways for conveying the exhaust from the cylinder, and for conveying the charge to the cylinder, whereby the charge is heated as it enters the cylinder.

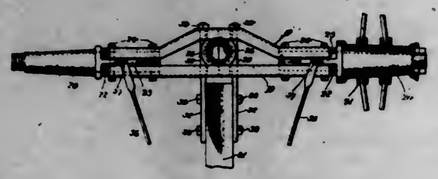
5. A gas engine, comprising a cylinder having a series of inlet ports and exhaust ports entirely surrounding the cylinder one above the other, and a piston having passageways extending inwardly to the center and adapted to convey the exhaust from the cylinder and to convey the charge to the cylinder, and whereby the heat of the exhaust is utilized to heat the charge as it passes to the cylinder, and also to clean the inlet supply ports of the piston.

6. A gas engine, comprising a cylinder having a series of inlet and exhaust openings entirely surrounding the cylinder one above the other, an outwardly-extending flange carried by the cylinder above the exhaust openings, a second flange carried by the cylinder between the exhaust and inlet series of openings, a casing having a tight joint with said flange and spaced a distance apart from the cylinder and having an outwardly-extending flange abutting the flange carried by the cylinder above the exhaust openings, means for securing the casing to the cylinder in said position, and a piston within the cylinder having passages extending inwardly to the center, and adapted to convey the exhaust from the cylinder and to convey the charge to the center of the cylinder, whereby the charge is heated in passing through the exhaust passage of the piston.

870,241. DRAFT APPARATUS FOR WAGONS AND THE LIKE. WALLACE F. MACGREGOR and WILLIAM H. CAHALL, Racine, Wis., assignors to J. I. Case Threshing Machine Company, Racine, Wis., a Corporation. Filed July 17, 1905. Serial No. 269,957.

1. The combination with a bolster having a ball connected to its lower end by a neck, of the front steering

axle formed of connected channel bars having inturned flanges, a box split in a vertical plane, the sections of which are supported between the flanges of said channel bars, said box having a socket formed in its separate sections to receive said ball, and means for securing said sections together and to clamp the same upon said ball, substantially as described.



2. The combination with the bolster having a ball at its lower end, of the axle formed of channel-bars with inturned flanges, journal studs secured between the end of said bars, a split box, the sections of which are supported between the flanges of said channel-bars, said box having a socket to receive said ball, and bolts extending through said channel-bars on opposite sides of said split box, substantially as described.

3. The combination with the bolster having a ball at its lower end, of the axle formed of channel-bars with inturned flanges, journal studs secured between the ends of said bars, a split box, the sections of which are supported between the flanges of said channel-bars, said box having a socket to receive said ball, the center of said ball-and-socket connection being in rear of the center line of said journal studs, bolts extending through said channel-bars on opposite sides of said split box, said bolts having flattened ends and a pole rigidly secured between the flattened ends of said bolts, substantially as described.

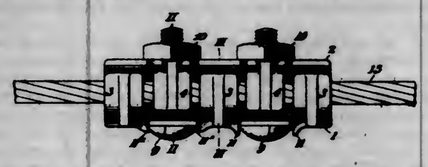
4. The combination with the wagon body comprising the main sills, the sub-sills arranged below the rear ends of said main sills, connecting uprights, inclined brace bars connecting the forward ends of said main and sub-sills and a rear axle connected to said sub-sills, of the set of depending brace bars connected at their upper, divergent ends to the forward ends of said main sills, the head or bolster connected to the lower ends of said brace bars, the front steering axle having a ball and socket connection with said bolster and a draft pole rigidly secured to said axle, substantially as described.

5. The combination with the main sills, sub-sills arranged below the rear ends of said main sills, connecting uprights, inclined brace-bars connecting the forward ends of said sills and rear axles connected to said sub-sills, of depending brace-bars connected to the front end of said main sills, the head or bolster connected to the lower ends of said depending brace-bars, the front steering axle having a ball-and-socket connection with said bolster, the center of which connection is in rear of the center line of the axle journals and a draft pole rigidly secured to said front axle, substantially as described.

6. The combination with the bolster and the axle block having a ball-and-socket connection with said bolster, of the axle formed of two channel-bars set on edge and having inturned flanges supporting said block, and axle studs secured between the ends of said channel-bars, the central portion of the rear channel-bar being outwardly bent around said axle block, substantially as described.

7. The combination with the main sills and cross-bars connecting the same, of the U-shaped brace bars having their upper, divergent ends connected to said cross bars, said U-shaped bars being inclined inwardly and downwardly toward each other, a ball connected by a neck to the lower end of said brace bars, a front steering axle, a box mounted thereon having a socket to receive said ball, said box being split on a vertical plane, means for securing the sections of said box together and a pole rigidly secured to said axle.

870,242. CABLE-CLAMP. ALFRED H. MERCH, Chatham, N. Y. Filed Oct. 1, 1906. Serial No. 336,867.

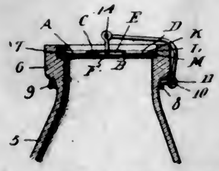


1. In a cable clamp, a pair of members each having legs with inside inclined faces one of said members having square holes of uniform transverse section, bolts having square shanks contained in said holes, said bolts having heads with rounded upper faces, flat under faces and thin peripheral edges, and means on the member engaging said edges for holding the bolts thereto said bolts being adapted to be positioned between the cables to be clamped to engage said cables whereby they constitute abutments for the cables when the members are drawn together.

2. In a cable clamp, a pair of members each having legs with inside inclined faces, bolts for drawing said members together, and ridges or projections on one of the members acting in conjunction with said bolts to form abutments for the cable to be clamped.

3. In a cable clamp, a member having legs with inside divergent faces, a second member also having legs and abutments integral with said member and coöperating with said faces to clamp a cable, and means for drawing said members toward one another.

870,243. BOTTLE-CLOSURE. AARON MOREHOUSE, Atlantic Highlands, N. J., assignor to Frank A. Morehouse, Atlantic Highlands, N. J. Filed May 17, 1907. Serial No. 374,148.



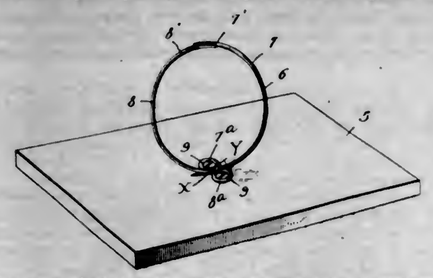
1. The combination with a bottle, of a wire engaged around the neck thereof and bent to form spaced eyes, a stopper removably engaged within the neck of the bottle, a yoke having the detached ends of its legs pivotally connected with the eyes of the wire, said legs being bent to bring the bight portion of the yoke over the mouth of the bottle, and a second yoke having the ends of its legs pivotally connected with the bight of the first named yoke, said second yoke having its bight connected with the stopper.

2. The combination with a bottle, of a stopper removably engaged in the neck thereof, said stopper including two disks secured against each other, and having their peripheral portions separated, a circular washer engaged between said peripheral portions of the disks, a yoke having its bight disposed between the disks, with its legs extending outwardly through one of said disks and a member pivotally connected with the said legs and with the bottle for movement to bring the stopper into and out of the bottle.

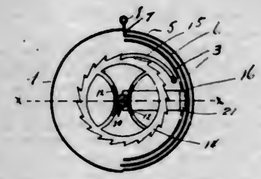
870,244. BILL-FILE. AARON MOREHOUSE, Atlantic Highlands, N. J., assignor to Frank A. Morehouse, Atlantic Highlands, N. J. Filed May 17, 1907. Serial No. 374,149.

In a bill file, the combination with a support, of a single wire bent to form curved end portions having overlapping extremities and laterally extending oppositely disposed loops adjacent to the connected ends of the end portions, and fastening devices engaged in the loops and in the support, said overlapping end portions being located

opposite to the loops and being movable away from each other in a plane parallel to the plane of the loops for engagement of papers over the extremities of said end portions.

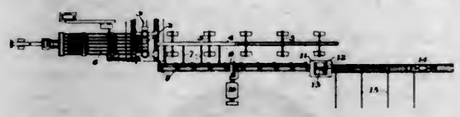


870,245. CLOTHES-LINE REEL. RODERICK MURCHISON, Kewanee, Ill. Filed Dec. 5, 1906. Serial No. 346,434.



In a device of the character described, the combination with a reel and shaft, of a cylindrical casing therefor having one side open and each end provided in the region of such opening with an internal arcuate flange, a curved door overlying said flange, and an arm secured to the inside of said door at each end thereof with its inner end having an abutting bearing against the reel shaft, said arms being angled to provide shoulders which engage the inner sides of said flanges.

870,246. METHOD OF MAKING SEAMLESS TUBING. JOHN H. NICHOLSON, Pittsburg, Pa., assignor to National Tube Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Dec. 15, 1904. Serial No. 237,012.



1. The herein described improvement in the manufacture of seamless tubing, which consists in cross-rolling the tube over a mandrel to remove interior scores or grooves and to true up its gage, without materially reducing the thickness of its wall; substantially as described.

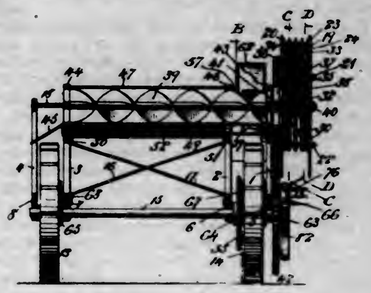
2. The herein described method of making seamless tubing which consists in rolling the pierced blank or billet in a plug-mill, then removing the blank and cross rolling it over a mandrel to eliminate interior ridges or grooves and to true up the gage; substantially as described.

3. The herein described method of making seamless tubing which consists in rolling the pierced billet or blank in a plug-mill, then removing the blank and cross-rolling it over a mandrel to smooth out the interior grooves and ridges, and to true up the gage, without materially reducing the thickness of wall, and subsequently cold-drawing the tube; substantially as described.

4. In the method of making seamless tubing, the steps which consist in elongating and thinning the pierced billet in a plug-mill, and then removing the blank and cross-rolling it over a mandrel to smooth out the interior scores or grooves while the blank is hot, without materially changing the thickness of its wall; substantially as described.

5. In the method of making seamless tubing, the following steps: elongating and thinning the pierced billet by rolling it over a plug, then removing the hot blank and rolling it over a mandrel to smooth out its interior without changing its gage, and then cold-drawing the blank, substantially as described.

870,247. CORN-HARVESTER. JACOB NIXON, Stockport, Iowa. Filed Nov. 6, 1906. Serial No. 342,184.



1. A corn harvester comprising curved stripper arms arranged in a gang and provided with cutting edges, means for supporting the gang of curved stripper arms in operative position, means for rotating the gang of strippers and means for directing the stripped product away from the arms toward the side of the harvester.

2. A corn harvester comprising curved sectional stripper arms arranged in a gang and provided with cutting edges, means for supporting the gang of curved stripper arms in operative position, means for rotating the gang of strippers and means for directing the stripped product away from the arms toward the side of the harvester.

3. A corn harvester comprising curved stripper arms arranged in a gang, means for supporting the gang of curved stripper arms in operative position, means for rotating the gang of strippers and a central cone within the gang of strippers for directing the stripped product away from the arms toward the side of the harvester.

4. A corn harvester comprising curved stripper arms, arranged in a gang, each arm provided with one left hand and one right hand cutting-edge, means for supporting the gang of curved stripper arms in operative position, means for rotating the gang of strippers and means for directing the stripped product away from the arm toward the side of the harvester.

5. A corn harvester comprising curved stripper arms, arranged in gangs, each arm provided with one left hand and one right hand cutting-edge, and provided with firmly united flanges for holding their cutting edges at angles of ten to forty degrees to their vertical plane respectively, means for supporting the gang of curved stripper arms in operative position, means for rotating the gang of strippers and means for directing the stripped product away from the arm toward the side of the harvester.

6. A corn harvester comprising a shaft, curved stripper arms arranged in gangs and radiating from hubs on the shaft, the gangs being adjustable longitudinally along the shaft, said arms being each composed of a base section extending from the hub and an operating section fixed in the base section, means for operating the arms and means for directing the product away from within the arms toward the side of the harvester.

7. A corn harvester comprising a shaft, curved stripper arms arranged in gangs, means for adjusting the gangs longitudinally along the shaft, a casing comprising outer and inner walls and half arm sections fixed to the outer and inner walls of the casing to correspond with the arms arranged in gangs within the casing, means for rotating the arms and means for delivering the product away from within the casing toward the side of the harvester.

8. A corn harvester comprising a shaft, stripper arms arranged in gangs, the gangs being adjustable longitudinally along the shaft, a casing comprising outer and inner walls connected by bolts, the inner wall being provided with a central opening, means for rotating the stripper arms and means for directing the product through the opening in the inner wall toward the side of the harvester.

9. A corn harvester comprising curved arms arranged in gangs, a shaft on which the arms are mounted, interchangeable spacing blocks between the gangs of arms on the shaft, means for rotating the shaft and hence the arms and means for delivering the product from within the arms toward the side of the harvester.

10. A corn harvester comprising stripper arms arranged in gangs, a casing surrounding the arms, spur gear secured to the casing, traction wheels, gears connecting the traction wheels, with the spur gear, for rotating the arms and means for delivering the product from within the curved arm casing toward the side of the harvester.

11. A corn harvester comprising stripper arms arranged in gangs, a shaft on which the stripper arms are mounted, means for rotating the shaft, a screw conveyer mounted loosely on the shaft, means for driving the screw conveyer independently of the stripper arms and means for directing the product from the arms to the screw conveyer.

12. A corn harvester comprising stripper arms, means for rotating them, a screw conveyer, means for directing the product from the stripper arms to the screw conveyer and husking rolls mounted in position to operate on the product while it is being advanced by the screw conveyer.

13. A corn harvester comprising stripper arms, means for rotating them, a screw conveyer, means for directing the product from the stripper arms to the screw conveyer, husking rolls located beneath the screw conveyer and a casing common to the screw conveyer and husking rolls.

14. A corn harvester comprising stripper arms, means for rotating them, a screw conveyer, means for directing the product from the arms to the screw conveyer, husking rolls in proximity to the screw conveyer, gears for connecting one of the husking rolls with the spiral conveyer and means for rotating the rolls and hence the conveyer.

15. A corn harvester comprising stripper arms, means for rotating them, a screw conveyer, means for directing the product from the arms to the conveyer, traction wheels for supporting the arms and conveyer, husking rolls in proximity to the conveyer, a sprocket gear from the drive wheel to one of the husking rolls and gears connecting the husking roll with the conveyer.

16. A corn harvester comprising four upright frames, cross braces connecting the four uprights, a shaft supported in the uprights, stripper arms carried on the projecting end of the shaft, a screw conveyer mounted on the shaft, means for rotating the shaft and hence the stripper arms, independent means for rotating the screw conveyer and means for directing the product from the stripper arms to the conveyer.

17. A corn harvester comprising stripper arms, means for rotating the arms, a traveling support for holding the stalks in position to be operated on, said support comprising an endless chain provided with pivoted fingers and means for mounting the support in position to engage the stalks as the harvester travels along a row.

18. A corn harvester comprising stripper arms, means for rotating them, a traveling support comprising an endless chain provided with pivoted fingers for engaging the stalks and means for mounting the traveling support in vertically swinging adjustment.

19. A corn harvester comprising stripper arms, means for rotating the arms, a traveling support consisting of an endless chain provided with pivoted fingers and a slotted pipe track for supporting the chain and adjusting the fingers.

20. A corn harvester comprising stripper arms, means for rotating the arms, a traveling support consisting of an endless chain provided with fingers arranged to swing laterally thereon and a pipe track for the support, the said track being provided with diagonal slots for directing the fingers from upright to horizontal and horizontal to upright as they travel along the track.

21. A corn harvester comprising stripper arms, means for rotating the arms, a traveling support consisting of an endless chain provided with pivoted fingers and a pipe track along which the chain travels, the said track being provided with reinforced diagonal slots for adjusting the fingers.

22. A corn harvester comprising stripper arms, means for rotating the arms, a traveling support, a casing for supporting the traveling support, means for pivoting the casing to the frame of the harvester and means for raising and lowering the casing and hence the traveling support toward and away from the stripper arms, at pleasure.

23. A corn harvester comprising stripper arms, means for rotating the arms, an endless chain support provided with pivoted fingers, a track for carrying the chain and grooved idle pulleys for supporting the chain at opposite ends of the track.

24. A corn harvester comprising stripper arms, means for rotating the arms, a traveling support arranged to operate in conjunction with the stripper arms, said support comprising an endless chain provided at intervals with a swivel link, fingers mounted in the swivel links to turn laterally with respect to the travel of the chain and means for directing the adjustment of the fingers from vertical to horizontal and horizontal to vertical as the harvester moves along.

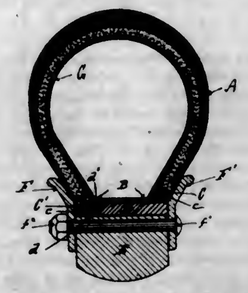
25. A corn harvester comprising stripper arms, means for rotating the arms, a traveling support arranged to operate in conjunction with the stripper arms and comprising an endless chain having fingers pivoted to swing laterally with respect thereto and a casing for protecting the fingers during their forward or return movement.

26. A corn harvester comprising stripper arms, means for rotating the arms, traveling support arranged to operate in conjunction with the arms, and a lifting and alining frame attached to the support frame for lifting and alining the stalks in advance of the said traveling support.

27. A corn harvester comprising stripper arms, means for rotating the arms, means for directing the product away from the arms, a blower arranged to act upon the product as it leaves the arms and means for operating the blower.

28. A corn harvester comprising stripper arms, means for rotating the arms, a screw conveyer, means for directing the product from the arms to the conveyer and husking rolls arranged to engage the product while being carried along by the conveyer, the said rolls having spiral teeth extending along their peripheries.

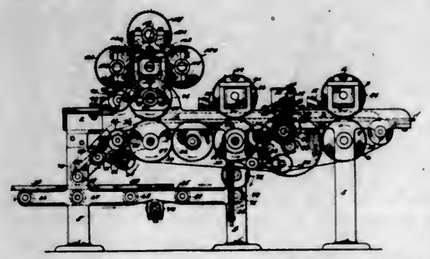
870,248. PNEUMATIC TIRE. HARRY A. PALMER, Akron, Ohio. Filed Apr. 5, 1906. Serial No. 310,084.



1. The combination in a wheel-rim for pneumatic tires, of a metal tire having one edge thereof cut away, pointed studs in the cut-away edge of the tire, and a flange adapted to clamp the inner edge of the tire-sheath against the cut-away edge of the tire and the pointed studs therein, substantially as set forth.

2. The combination of a wheel-rim, a metal tire thereon having one edge thereof cut away, flanges removably bolted to the sides of the wheel-rim, a tire-sheath rifted at its inner face and having the edges of the rift therein nonextensible and one edge of the rift of greater annular circumference than the other, and pointed studs adapted to be pressed into the edge of the tire by the pressure exerted on the removable flanges, substantially as set forth.

870,249. CRULLER-CUTTING MACHINE. THOMAS C. PATTERSON, New York, N. Y. Filed Jan. 20, 1904. Serial No. 189,919.



1. The combination with a drum, of dies thereon each comprising an outer and an inner annular cutting blade, the former surrounding the latter, outer and inner ejectors in said dies, and means for operating said ejectors.

2. The combination with a drum, of dies thereon each comprising an outer and an inner annular cutting blade, the former surrounding the latter, outer and inner connected ejectors in each die, and means for operating said ejectors.

3. The combination with a drum, of dies mounted thereon in rows and each comprising an outer and an inner annular cutting blade, the former surrounding the latter, outer and inner connected ejectors in each die, bars extending along said rows and connected to said ejectors, and means for operating said bars.

4. The combination with a drum, of dies mounted thereon in rows and each comprising an annular outer cutting blade which is attached to the drum and an annular inner cutting blade which is provided with openings in its sides and is attached to the drum, an ejector within each of said outer blades, an ejector within each of said inner blades, arms extending through said openings to connect the inner to the outer ejectors, bars extending along said rows for operating said ejectors, and means for operating said bars.

5. The combination with a drum provided with dies and a coöperative drum, of an endless conveyer belt passing between said drums to be engaged forcibly by said dies, two pairs of rolls, a flour-sifter between said pairs, and a stripper for the upper roll of each pair; said belt passing between the rolls in each pair, and the rolls on one pair being set closer together than the rolls in the other pair.

6. The combination with a drum provided with dies, of means for removing the dough from the dies, and a drum having means for removing the scraps of dough only from between the dies.

7. The combination with a drum provided with dies, of means upon the drum for ejecting the dough from the dies, and a drum having pickers in position to pick the scraps only from between the dies.

8. The combination with a drum provided with dies, of means for ejecting the dough from the dies, a drum having pickers in position to pick the scraps from between the dies, and a stripper for said picker drum.

9. The combination with a drum provided with dies, of ejectors upon said drum, a drum of smaller diameter geared thereto and having pickers, and a stripper for said picker drum.

10. The combination with a drum provided with dies, of a conveyer belt for conveying a plate of dough to the drum, means supporting the belt against the pressure of the dies, ejectors upon the drum, a platter conveyer, and means for moving said conveyer.

11. The combination with a drum provided with dies, of an endless conveyer belt, a roll supporting said belt against the pressure of the dies, ejectors upon said drum, a device for picking scraps from said drum, a second belt for conveying the blanks cut out by said dies, a platter conveyer, and means for moving said platter conveyer.

12. The combination with a drum having round dies mounted thereon in contiguity, of a drum geared to said drum and provided with pickers only to take the scraps from between said dies.

13. The combination with a drum having round dies mounted thereon in contiguity, and provided with ejectors, of a drum geared to said drum and provided with pickers for forcibly removing the scraps of dough from between said dies.

14. The combination with a drum having round dies mounted thereon in contiguity, of plungers for removing the dough from within the dies, and pickers for removing the dough scraps forcibly from between the dies.

15. The combination with means for feeding plastic material, of a plurality of drums provided with dies, the dies upon one drum being different from those upon the other, and means for enabling the movement of either drum into action and the other simultaneously out of action.

16. The combination with means for feeding plastic material, of a plurality of drums provided with dies, a cooperative drum or support, and means for holding either member of said plurality in position to coöperate with said coöperative drum while the remaining drums are silenced.

17. The combination with means for feeding plastic material, of a plurality of drums provided with dies, and means for rendering either drum effective at will and simultaneously silencing the other drum.

18. The combination with a dough-conveying belt, a plurality of drums provided with dies, and a coöperative drum, of means for gearing either member of said plurality to said coöperative drum at will.

19. The combination with means for feeding dough, of a plurality of drums provided with dies, and a frame whereon said drums are mounted; said frame being shiftable to enable either member of said plurality to be put into action.

20. The combination with means for feeding dough, of a plurality of drums provided with dies, a journaled frame whereon said drums are journaled, and means for securing said frame in various positions, to enable either member of said plurality to act, at will.

21. The combination with a plurality of drums provided with dies, of a frame whereon they are journaled, a cooperative drum or support, and means for effecting adjustment of one of said frame and coöperative drum elements, to regulate the action of the dies; said cooperative drum and said frame being mounted for relative movement to bring either drum into action.

22. The combination with means for feeding plastic material, of a plurality of drums provided with dies, means for throwing either drum into action and the other simultaneously out of action, and adjustable devices for regulating the action of the dies.

23. The combination with means for feeding dough, of a plurality of drums provided with dies, a journaled frame whereon said drums are journaled, means for securing said frame in different positions, to enable any drum thereon to act, and means for adjusting said frame to regulate the die action.

24. The combination with means for feeding dough, of a plurality of drums provided with dies, means for enabling either drum to be put into action and the other out of action at will, and means for discharging the dough from the dies.

25. The combination with means for feeding dough, of a plurality of drums provided with dies, a coöperative drum or support, means for enabling either member of said plurality to coöperate with said coöperative drum, adjustable means for regulating the die action, and means for ejecting the dough from the dies.

26. The combination with means for feeding dough, of a plurality of drums provided with dies, a frame whereon said drums are journaled, said frame being mounted so that either drum may be thrown into action, ejectors within said dies, and means for operating said ejectors.

27. The combination with means for feeding dough, of a movable frame, and a plurality of drums thereon; dies mounted in rows upon each drum, ejectors within said dies, ejector bars extending along said rows, and cams for operating the ejector bars.

28. The combination with means for feeding dough, of a journaled frame, a plurality of drums journaled thereon, cams upon said frame at the ends of said drums, dies mounted in rows upon said drums, ejectors within said dies, and ejector bars extending longitudinally of said drums and engaging said cams.

29. The combination with means for feeding dough, of a plurality of drums each provided with dies, means for bringing either drum into action at will, and means called into action by the rotation of the drums, for ejecting dough from the dies.

30. The combination with a pair of feed rolls and means for effecting relative adjustment thereof, of a conveyer belt passing between the rolls, a plurality of drums each provided with dies, a coöperative drum, means for enabling said coöperative drum to coöperate with either of said die drums at will, and means for effecting relative adjustment between said coöperative drums and said die drums, to regulate the action of the dies.

31. The combination with adjustable means for rolling dough to different thicknesses at will, of different sets of means for cutting different shapes from the dough at will and means for bringing either set into use and silencing the other set.

32. The combination with a conveyer belt and two pairs of rolls, said belt passing between the rolls in each pair, of means for adjusting a roll in each pair, to roll dough of different thicknesses, and means for cutting different shapes from the dough at will and silencing the other drum.

33. The combination with adjustable dough-rolling means, of a plurality of drums each provided with cutting dies, and means for bringing either drum into action at will.

34. The combination with means for feeding plastic material, of a plurality of drums having dies, means for moving either drum to working position, a drum having pickers for picking material from one of said drums, and means for enabling said picker drum to be moved out of working position.

35. The combination with means for feeding plastic material, of a plurality of drums having dies, means for ejecting the material from the dies, a drum having catches in position to pick the scraps from between the dies on one of said die drums, and means for enabling either of said die drums to be moved to working position.

36. The combination with adjustable means for rolling cruller-dough to different thicknesses at will, of a plurality of sets of means for cutting out differently shaped blanks from the dough, and means for silencing either set and rendering the other set effective.

37. The combination with adjustable means for sizing or rolling plastic material, of a plurality of drums each provided with cutting dies, and means for bringing either drum into action at will and silencing the other drum; each of said drums being provided with dies for cutting out blanks.

38. A machine for molding or forming plastic material, comprising a conveyer belt, means coöperating with said belt for gradually reducing the thickness of the material by rolling, said reducing means including a succession of rolls, a drum having thereon a set of cutters for cutting out ring-like blanks from the material; said cutters mounted to press against said belt; means supporting the belt against such pressure and means for ejecting the scrap from between the cutters.

39. A machine for molding or forming plastic material, comprising a conveyer belt, two pairs of rolls through which said belt runs, the second pair of rolls being set closer together than the first, a flour-sifter between said pairs of rolls, strippers for the upper rolls of the pairs, a drum having thereon a set of dies for cutting out ring-like blanks from the material; a drum which coöperates with said die drum and over which said belt runs, so that the dies run in forcible contact with the belt, and pickers for removing the scrap from the die drum.

40. A machine for forming or molding plastic material, comprising a material conveying belt, material rolling means coöperating therewith, a drum having thereon a set of dies for cutting out ring-like blanks from the material; each die comprising outer and inner annular cutters, the opposite sides of each of the outer cutters converging radially towards the drum axis; and a drum coöperating with said die-drum; said belt running over said coöperating drum and in forcible contact with the dies.

41. A machine for forming or molding plastic material, comprising a conveying belt, two pairs of rolls through which said belt runs, the rolls in one pair being relatively adjustable, and the second pair of rolls being set closer together than the first pair, a flour-sifter between said pairs of rolls, a drum having thereon a set of dies for cutting out ring-like blanks from the material; each die comprising outer and inner annular cutters, the opposite sides of each of the outer cutters converging radially towards the drum axis; a drum coöperating with said die-drum; said belt running over said coöperating drum and running in forcible contact with the dies; means operating to remove the ring-like blanks from the dies; and means for subsequently removing the scrap from the die-drum.

42. In a sizing and cutting machine for plastic material, the combination of a supporting bed, a series of sizing and cutting rolls, a plurality of said rolls being journaled in parallel relation above said bed in supporting heads, which in turn are journaled above said bed, means for locking said heads at points in their circular adjustment and means for feeding the material along said bed.

43. In a machine for forming or molding plastic material, the combination of a supporting frame, a bed secured to said frame, heads or supports journaled in said frame and adapted for a turning adjustment, forming or molding rolls journaled in parallel relation in said heads and including a cutting roll, and means for feeding the material along said bed.

44. In a forming or molding machine for plastic material, the combination of a supporting frame, a bed secured to said frame, heads or supports journaled in said frame and adapted for a turning adjustment, forming or molding rolls including a sizing roll and a cutting roll, a plurality of said rolls journaled in parallel relation in said heads, and a feed roll journaled in the main frame beneath the rolls which are journaled in said heads.

45. In a forming or molding machine for plastic material, the combination of a supporting frame, a bed secured to said frame, heads or supports journaled in said frame and adapted for a turning adjustment, forming or molding rolls including a sizing roll and a cutting roll, a plurality of said rolls being journaled in parallel relation in said heads, means for securing said heads at the required turning adjustment, and means for feeding the material along said bed.

46. In a forming or molding machine for plastic material, the combination of a supporting frame, a bed secured to said frame, heads or supports journaled in said frame and adapted for a turning adjustment, forming or molding rolls including a sizing roll and a cutting roll, a plurality of said rolls being journaled in parallel relation in said heads, means for securing said heads at the required turning adjustment, and a feed roll journaled in the main frame beneath the rolls in said heads.

47. In a forming or molding machine for plastic material, the combination of a supporting frame, a bed secured to said frame, heads or supports journaled in said frame and adapted for a turning adjustment, forming or molding rolls including a sizing roll and a cutting roll, a plurality of said rolls being journaled in parallel relation in said heads, means for imparting positive rotation to the rolls journaled in said head, and means for feeding the material along said bed.

48. In a forming or molding machine for plastic material, the combination of a supporting frame, a bed secured to said frame, heads or supports journaled in said frame and adapted for a turning adjustment, forming or molding rolls including a sizing roll and a cutting roll, a plurality of said rolls journaled in parallel relation on said heads, a feed roll journaled in the main frame beneath the rolls in said heads, and means for imparting positive rotation to the rolls journaled in said head and to the feed rolls.

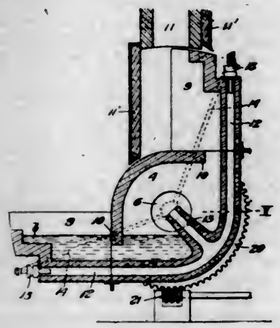
49. A machine for rolling or sizing plastic material and forming blanks thereof, comprising a plurality of drums, each drum having means for acting differently from the other upon the material, and means for enabling the movement of either drum into action and the other simultaneously out of action.

50. A machine for rolling or sizing plastic material and blanking the same, comprising a support, a plurality of drums, and means for bringing either member of said plurality into coöperation with said support to act upon the dough carried by said support, while the other member of said plurality is silenced; each drum constructed to act differently from the other upon the material.

51. The combination with means for conveying dough, of a plurality of drums, each having means to act differently from the other upon the material, and a coöperative drum, of means for gearing either member of said plurality to said coöperative drum at will.

52. The combination with means for carrying dough, of a plurality of drums each having means to act differently from the other upon the material, and a frame whereon said drums are mounted; said frame being shiftable to enable either member of said plurality to be put into action.

870,250. APPARATUS FOR DELIVERING MOLTEN GLASS. ROGER S. PEASE, Allegheny, Pa., assignor to Alfred M. Lee, trustee, Pittsburg, Pa. Filed Jan. 15, 1907. Serial No. 352,389.



1. A tipping glass-holding vessel having a drawing chamber, and fuel passages leading through its walls underneath the interior cavity, substantially as described.

2. A tipping glass-holding vessel having a drawing chamber and fuel passages leading through its walls underneath the interior cavity, and opening into the interior of the vessel, substantially as described.

3. A tipping glass holding vessel having a fuel-supply port incorporated in its wall, and an inwardly projecting hollow pier communicating with said port, substantially as set forth.

4. A tipping glass-holding vessel having a drawing chamber, and fuel passages leading through its walls underneath the interior cavity, and opening into the interior of the vessel, and provided with means for supplying fuel to said passages, substantially as described.

5. A rotatable glass holding vessel provided with a receiving opening and a laterally extending drawing chamber, and means incorporated with the vessel for heating its walls, substantially as set forth.

6. A rotatable glass holding vessel provided with a receiving opening and a laterally extending drawing chamber, and having fuel passages leading through its walls, substantially as set forth.

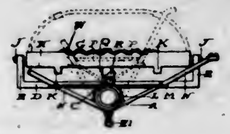
7. A rotatable glass holding vessel provided with a receiving opening and a laterally extending drawing chamber, and having fuel passages leading through its walls and to its interior, substantially as set forth.

8. A rotatable glass holding vessel provided with a receiving opening and a laterally extending drawing chamber, and having fuel passages leading through its walls, with means arranged to furnish a fuel supply to said passages at varying positions of the vessel, substantially as set forth.

9. A rotatable glass holding vessel provided with a laterally extending drawing chamber and having a fuel conduit leading through its wall and into the interior of the vessel, substantially as set forth.

10. A rotatable glass holding vessel provided with a laterally extending drawing chamber and having a fuel conduit leading through its wall and into the interior of the vessel, with means for supplying fuel to said conduit at varying positions of the vessel, substantially as set forth.

870,251. TRAP FOR RABBITS AND OTHER ANIMALS. FRODE RASMUSSEN, Inglewood, Victoria, Australia. Filed Oct. 5, 1906. Serial No. 337,663.



1. In a trap, the combination with a bottom piece, a cross piece secured thereon and a tiltable table mounted above the cross piece, of looped levers fulcrumed upon the bottom piece, springs upon the bottom piece and exerting a constant pressure upon the levers, jaws pivotally mounted upon the cross piece and adapted when extended to bear adjacent their pivots upon the levers, a locking device, and a catch movable with the table for holding or releasing the locking device.

2. In a trap the combination with a bottom piece, a cross piece secured thereto, and spring pressed looped levers fulcrumed upon the bottom piece and embracing the cross piece; of jaws pivotally mounted upon the cross piece and having resilient edges, means for locking the jaws in extended position and against the tension of the levers, and movable means for releasing the jaws.

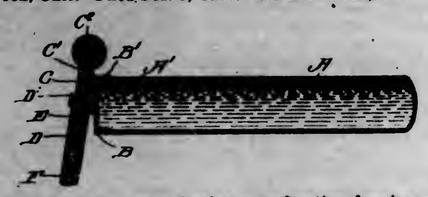
3. In a trap the combination with a bottom piece, a cross piece secured thereto, and spring pressed looped levers fulcrumed upon the bottom piece and embracing the cross piece; of jaws pivotally mounted upon the cross piece and having resilient and serrated edges, means for locking the jaws in extended position and against the tension of the levers, and movable means for releasing the jaws.

4. In a trap the combination with a bottom piece and a cross piece secured thereto; of bowed jaws pivotally mounted upon the cross piece, means for automatically swinging the jaws together, said jaws having serrated working edges, a tiltable table, a locking device for holding the jaws against movement, and means operated by the table for releasing the locking device.

5. A jaw for traps comprising a non-resilient bowed strip having a channeled portion, a folded yielding material clamped within and projecting beyond the channeled portion, and a non-yielding strip interposed between the folds of said material.

6. In a trap the combination with a bottom piece, separate looped levers fulcrumed thereon, and a spring upon said bottom piece exerting a constant pressure upon the looped levers; of a cross piece connected to the bottom piece, jaws pivotally mounted thereon and adapted to be overlapped and actuated by the levers, stops upon the jaws for limiting the movements of the levers, means for locking the jaws in extended position and against the tension of the levers, and movable means for releasing the jaws.

870,252. ENVELOP-SEALER. HOWARD RICHISSIN, Akron, Ohio. Filed Feb. 5, 1907. Serial No. 355,855.



1. A reservoir, a cap having a perforation forming one end of the reservoir, a holder carried by the cap, a collar sliding upon the holder, an absorbent material carried by the holder, and a piece of absorbent material carried by the collar.

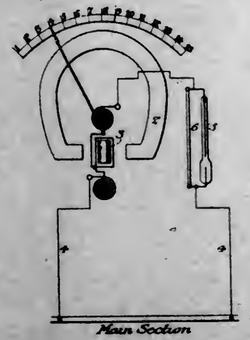
2. A device of the kind described comprising a cylindrical reservoir, a cap carried thereby, a holder carried by the cap, and at an angle thereto, a piece of absorbent material arranged in said holder, a collar fitting upon the holder, a piece of absorbent material carried by said collar, the two pieces of absorbent material being brought together by adjustment of the collar upon the holder.

3. A device of the kind described comprising a cylindrical holder, a perforated cap mounted thereon, a sponge holder carried by the cap, lugs formed on said holder, a roller journaled in said lugs, and a sponge holding collar slidable upon the holder.

4. A device of the kind described comprising a cylindrical handle forming a reservoir, said handle being open at one end and crimped, a perforated cap fitting upon said crimped portion, a sponge holder carried by said cap, an adjustable sponge holding collar carried by the holder, and a roller carried by said holder.

5. A device of the kind described comprising a hollow cylindrical handle forming a reservoir, a cap closing one end of said handle, said cap being perforated, a sponge holder carried by the cap, a roller mounted upon the holder a collar slidable upon the holder and adapted to contain an absorbent material to be brought into contact with a sponge carried by the holder, and an off-set tongue carried by an end of the collar.

870,253. ELECTRIC COMPENSATOR. EDMUND O. SCHWEITZER, Chicago, Ill., assignor of one-half to John J. Schayer, Chicago, Ill. Original application filed Dec. 14, 1903, Serial No. 185,093. Divided and this application filed Nov. 2, 1904. Serial No. 231,169.

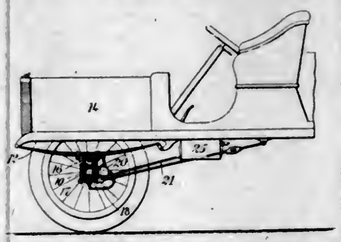


1. A compensator for electric measuring instruments and the like, comprising an electrical device whose conductivity varies in proportion to the temperature to which it is subjected, and a fixed resistance member, the whole being arranged in the circuit of an electric measuring instrument, and adapted to compensate for changes of resistance in said circuit or a connected part, induced by changes of temperature therein, substantially as described.

2. An electric compensator, comprising a variable resistance member, containing a liquid column, sensitively responsive to changes in its temperature, in combination with a fixed resistance member arranged in parallel circuit-relation therewith, the whole being included in a temperature-varied-resistance circuit, substantially as described.

3. An electric main, a measuring instrument, and the derived instrument circuit connected with said main, in combination with an electric compensator, comprising two members, in parallel relation, together arranged in series in said instrument circuit, one of said members being a fixed resistance member and the other being such that its conductivity varies in proportion to the temperature to which the instrument is subjected, to compensate for temperature-induced changes of resistance therein, substantially as described.

870,254. SHOCK-ABSORBER. WILLIAM E. SLATER, San Francisco, Cal. Filed May 31, 1906. Serial No. 319,499.



1. A vehicle having an axle and a bolster, one of which is provided with a cavity therein, and the other of which is provided with a part movable within said cavity, a pneumatic cushion located in the cavity and sustaining the bolster, and means for automatically controlling the application of pressure to said cushion.

2. A vehicle having an axle with a cavity therein, a bolster having connection with the vehicle body and provided with a part movable in the cavity, a pneumatic cushion located in the cavity and sustaining the bolster and its connections, and means for automatically controlling the application of pressure to said cushion.

3. A vehicle having an axle with a cavity therein, a bolster having connection with the vehicle body and provided with a part movable in the cavity, a pneumatic cushion located in the cavity and sustaining the bolster and its connections, a valve controlling the application of pressure to said cushion, and means for operating the valve upon the descent of the body.

4. A vehicle having an axle with a cavity therein, a bolster having connection with the vehicle body and having a part movable in the cavity, a pneumatic cushion located in the cavity and sustaining the bolster and its connections, a valve controlling the admission of pressure to said cushion, a valve stem for said valve, and means carried by said bolster and coöperating with said valve stem for opening the valve upon the descent of the body.

5. A vehicle having an axle with a cavity therein, a bolster having a part movable in the cavity, springs secured to said bolster, a body supported upon said springs, a pneumatic cushion located in the cavity and sustaining the bolster and its connecting parts, a source of fluid pressure supply, a conduit leading from said source to the pneumatic cushion, a valve in said conduit, and means for opening said valve upon the descent of the body.

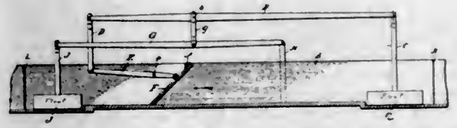
870,255. COMPOSITE RAILWAY-TIE. JOHN SMITH, El Paso, Tex. Filed Apr. 3, 1907. Serial No. 366,079.

1. A composite railway tie, comprising a body portion formed of plastic compound, a stiff metal bar embedded lengthwise in the said body portion, the said bar having recesses in its upper surface near its ends, tie plates also embedded in the said body and resting upon the said bar within the said recesses, the said tie plates having orifices through them for the passage of the spikes, and blocks embedded in the said body portion on both sides of the said bar and beneath the tie plates to receive the spikes, substantially as described.



2. A composite railway tie, comprising a body portion formed of plastic compound, a steel bar embedded lengthwise in the said body portion, tie plates also embedded in the said body portion and resting upon the said bar, the said tie plates having orifices through them for the passage of the spikes, and pyramidal wooden blocks embedded in the said body portion on both sides of the said bar and beneath the said orifices in the tie plates to receive the spikes, substantially as described.

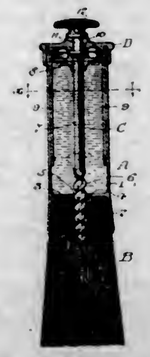
870,256. FLOOD-GATE. SAMUEL C. SMITH, Daisy, La. Filed June 20, 1907. Serial No. 379,973.



1. In combination with a channel, a gate swung therein and adapted to open downwardly and normally close, a lever pivoted within the channel below the gate and adapted to close the same when its lower end is raised, a link attached to the lower end of this lever, a lever attached to the upper end of this link, fulcrum means for this lever, a float in the channel at a point above the gate and means connecting this float to the upper end of the last named lever, for the purpose set forth.

2. In combination with a channel containing an outwardly opening gate, a gate closing lever, a float in the channel above the gate, a float of smaller size in the channel below the gate, and a system of levers and connections connecting the gate closing lever of the two floats, substantially as and for the purpose set forth.

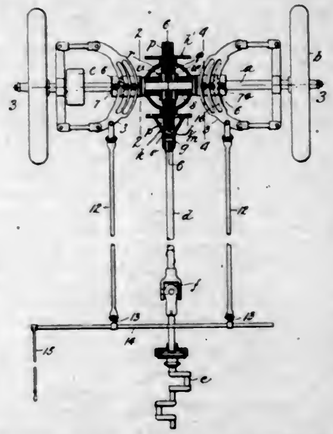
870,257. FOUNTAIN SHAVING-BRUSH. IRVING D. STEVENS, Chicago, Ill. Filed July 16, 1906. Serial No. 326,347.



1. In a fountain shaving brush, a hollow handle forming a reservoir for liquid soap and having a discharge nozzle projecting within the bristle portion of the brush, in combination with means for ejecting liquid soap from the reservoir into the bristle portion of the brush by way of said discharge nozzle and consisting of a rotary rod arranged centrally within the handle and having a spirally bladed end portion operative within the discharge nozzle for conveying and forcing liquid soap from the reservoir into the bristle portion, and a non-rotary nut or plunger fitted within the reservoir and also fitted as a nut on a threaded portion of the rotary rod, which latter when rotated in one direction propels the plunger plate toward the point of discharge synchronously with and as an auxiliary to the ejecting action of its spiral bladed portion.

2. In a fountain shaving brush, a hollow handle forming a reservoir for liquid soap and having a discharge nozzle projecting within the bristle portion of the brush, in combination with means for ejecting liquid soap from the reservoir into the bristle portion of the brush by way of said discharge nozzle and consisting of a rotary rod arranged centrally within the handle and having a double spirally bladed end portion operative within the discharge nozzle for conveying and forcing liquid soap from the reservoir into the bristle portion, and a non-rotary nut or plunger fitted within the reservoir and also fitted as a nut on a threaded portion of the rotary rod, which latter when rotated in one direction propels the plunger plate toward the point of discharge synchronously with and as an auxiliary to the ejecting action of its spiral bladed portion.

870,258. DRIVING MECHANISM FOR AUTOMOBILES. EDWARD O. SUTTON, Springfield, Mass. Filed Feb. 15, 1907. Serial No. 357,537.



1. A friction driving mechanism comprising a driving disk and means to rotate the same, a second disk in axial alinement therewith, said disks being located on opposite sides of an axle or shaft whose axis is at right angles to that of the disks; friction disks rotatably supported on the axle on opposite sides of the axis of the driving disk, and clutches on the axle arranged to engage either of the driven disks at will, said clutches having a sliding movement on the axle and being rotatable therewith, together with means to move the driven disks radially of the driving disks, the clutches and the driven disks being capable of movement in opposite directions as a unit.

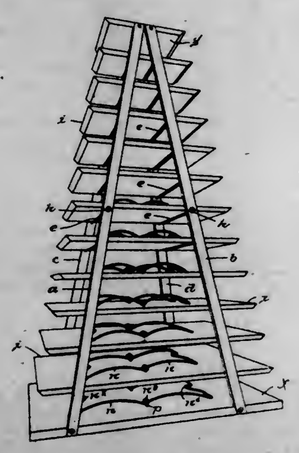
2. A friction driving mechanism comprising a driving disk and means to rotate the same, driven disks, and an axle or shaft on which the driven disks are rotatably supported and endwise movable; clutches to engage the driven disks slidable on and rotatable as one with the axle, and means common to both driven disks and clutches to effect the engagement of the clutches and driven disks and to move both of these members radially of the driving disk; the periphery of the driven disks being in frictional contact with the side of the driving disk.

3. A friction driving mechanism comprising an axle or shaft, frictionally driven disks on the axle facing one another, and clutches located on the axle to effect a driving engagement between either of said driven disks and the axle to rotate the latter in either direction; a driving friction disk with which the driven disks have a constant rotative engagement one on either side of the axis of said driving disk, and means to move the driven disks radially of the driving disk, and to effect the engagement and disengagement of said clutches and driven disks successively at one point only of the radial movement of the driven disks.

4. The combination with a driving disk, a shaft therefor, and oppositely facing driven disks having an operative frictional contact with the driving disk and an axle or shaft on which the driven disks are normally freely rotatable, of clutches to effect the engagement of either of the driven disks with the axle to rotate the latter in either direction, and means for moving the clutches alternately for effecting the engagement and disengagement of the clutches.

5. The combination with frictionally driven elements and an axle for rotatably supporting the same, of clutch disks carried by the axle for locking the driven elements to the axle, means for longitudinally moving the clutch disks in opposite directions for engaging and disengaging the opposite faces of the driven elements, said means including arc-shaped elements provided with concentric openings, and means carried by the clutch disks and engaging the openings, as described.

870,259. BAG-RACK. GEORGE H. TENNEY, West Townsend, Mass. Filed Mar. 16, 1907. Serial No. 362,710.



1. A bag-rack comprising a supporting frame, a series of flat supporting members, a part of which are removable and are retained against displacement, retaining means for so holding said members, automatically operative upon insertion of the members into the frame, and spring clips mounted on the surface of each member arranged to hold resiliently folded packages of bags.

2. A bag-rack comprising a supporting frame, a series of flat supporting members, a number of which are removable, interengaging portions on the frame and members automatically brought into locking engagement upon insertion of the members into the frame, whereby the members are supported and held from displacement in the planes which they respectively occupy, and spring clips mounted on the surface of each member arranged to hold resiliently folded packages of bags.

3. A bag-rack comprising a frame having lateral members and transverse rods or bars, removable shelves or plates adapted to extend across said rods between the side members and having shoulders adapted to embrace the rods to prevent lateral removal therefrom by a pull in the direction of withdrawal of a bag, and a yielding bag retainer mounted on each shelf for holding a folded package of bags against the upper surface thereof.

4. A bag-rack comprising a frame having lateral members and transverse rods or bars arranged in groups at different levels, the rods of any group being at approximately the same level, removable shelves or plates adapted to extend across said groupes of rods between the side members and having shoulders adapted to embrace the rods to prevent lateral removal therefrom by a pull in the direction of withdrawal of a bag, and a yielding bag retainer mounted on each shelf for holding a folded package of bags against the upper surface thereof.

5. A bag-rack comprising a frame having side members and cross bars or rods extending between opposite side members arranged in pairs at different levels, shelves or plates, each having parallel grooves in its under surface spaced to correspond with the bars of one of the pairs and of sufficient depth to receive the bars, whereby the shelves are retained in place until raised clear of the bars, and retaining devices for the bags on each of the shelves.

6. A bag-rack comprising a frame having upwardly converging side members and cross bars or rods extending between opposite side members arranged in pairs at different levels, the bars of each pair being at successively less distances apart as their distance from the base is increased, shelves or plates of different sizes, each having parallel grooves in its under surface spaced to correspond with the bars of one of the pairs and of sufficient depth to receive the bars, whereby the shelves are retained in place until raised clear of the bars, and retaining devices for the bags on each of the shelves.

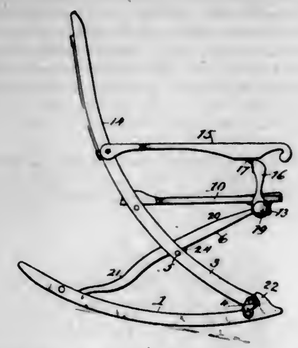
7. A bag-rack comprising a frame having upwardly converging side members and cross bars or rods extending between opposite side members arranged in pairs at different levels, the bars of each pair being at successively less distances apart as their distance from the base is increased, shelves or plates of different sizes, each having parallel grooves in its under surface spaced to correspond with the bars of one of the pairs and of sufficient depth to receive the bars, a securing pin on one or more of the shelves passing through guides on the under side of the latter adapted to extend across the grooves and beneath the cross bars on which the shelf is supported, and a retaining device on each of the shelves for holding a folded bundle of bags on the upper surface thereof.

8. In connection with a bag-rack having a series of removable shelves, a bag retainer for each shelf consisting of a continuous spring wire bent to form two longitudinal members and transverse end members, the longitudinal members being coiled approximately at their middle points and there secured to the upper surface of the shelf.

9. In connection with a bag-rack having a series of removable shelves, a bag retainer for each shelf consisting of a single length of wire bent to form a frame with longitudinal members coiled approximately at their middle points and transverse members inwardly offset, and fastenings securing the coiled portions of the retainer to the median line of the shelf, the parts of the longitudinal members between the coils and ends thereof being outwardly bowed from the shelf.

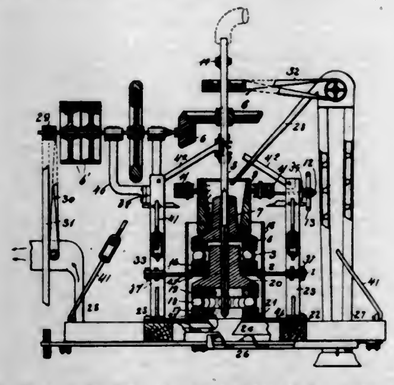
870,260. FOLDING CHAIR. WILLIAM H. THOMAS, Syracuse, N. Y., assignor of one-half to George Arthur Thomas, Syracuse, N. Y. Filed Mar. 8, 1907. Serial No. 361,204.

In a folding chair having the rear legs foldable onto the tops of the rockers, the combination with said members, of hooks projecting from the tops of the front end portions of the rockers and disposed with their open ends toward the rear of the chair to receive the lower ends of the rear legs, and links pivotally connecting the said legs to the rockers and inclined with their upper ends toward the



front of the chair, to force said legs into said hooks as set forth.

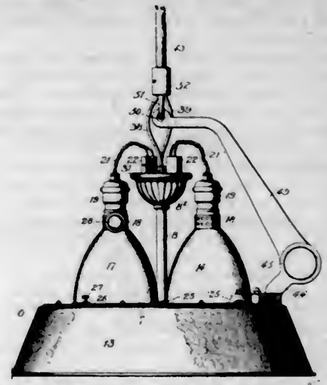
870,261. PULVERIZER. BYRON I. TURMAN, Oakland, Cal., assignor to New Idea Pulverizing Mill Company, San Francisco, Cal., a Corporation of Arizona. Filed Nov. 6, 1906. Serial No. 342,311.



1. In a pulverizer, an upper base and a lower base, each provided with a central perforation and flanged annularly, the flanges being near the openings, the lower base being flanged upon the top and the upper base being flanged upon both sides, a casing between said bases and surrounding their respective flanges, a casing resting upon the upper base and surrounding the flange thereon, a raceway between the top flange of each base and the perforation, a set of rollers in each raceway, an inverted raceway on each set of rollers, a cone on each inverted raceway, a rotary shaft through the cones for rotating them, means for passing a current of air between the casings and the rollers, and means for returning the rejects to the rollers and the raceways.

2. In a pulverizer, an upper base and a lower base, each comprising a flat metallic plate, perforated at its center and adjacent to its edges and flanged annularly near to the central perforation, casings and crushers on said bases at a distance apart and in engagement with said flanges, posts, the ends of which are flanged and perforated to register with the edge perforations of the bases, bolts through said flanges and said bases for securing them together, braces and cross pieces connected with the upper posts, means for passing a current of air between the casings and the crushers, and means for returning the rejects to the crushers.

870,262. THERAPEUTIC LAMP. JULIUS B. WANTZ, Chicago, Ill., assignor to Victor Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 9, 1907. Serial No. 361,425.



1. In a therapeutic lamp, the combination with a base-plate provided with a plurality of hood-seating openings arranged in pairs at right-angles to each other, hoods seated in said openings and having inner reflecting surfaces, lamps, supported in said hoods, separable electrical connections for said lamps whereby various light combinations can be obtained and means connected with the base plate for flexibly suspending said lamp from a support.

2. In a therapeutic lamp, the combination of a base-plate provided with a plurality of hood-seating openings, a hood seated non-removably in one of said openings and a hood removably seated in another of said openings, said hoods having inner reflecting-surfaces, lamps supported in said hoods, and means connected with the base-plate for flexibly suspending said lamp from a support.

3. In a therapeutic lamp, the combination of a base-plate provided with a plurality of hood-seating openings, a hood seated non-removably in one of said openings, a hood removably seated in another of said openings, said hoods having inner reflecting-surfaces, a handle on said removable hood, lamps supported in said hoods, and means connected with the base-plate for flexibly suspending said lamp from a support.

4. In a therapeutic lamp, the combination of a base comprising a plate with a flange extending about it, having an inner reflecting surface, said plate containing a plurality of hood-seating openings, hoods seated in said openings and having inner reflecting surfaces, and lamps supported in said hoods.

5. In a therapeutic lamp, the combination of a base-plate provided with a plurality of hood-seating openings, hoods seated in said openings and having inner reflecting-surfaces, lamps supported in the hoods, means connected with the base-plate for flexibly suspending it with the parts upon it, and a device for adjusting the angle of suspension, consisting of a rigid arm on said plate and an arm adjustably connected with said rigid arm and engaging with the flexible suspending medium.

6. In a therapeutic lamp, the combination of a base-plate provided with a plurality of hood-seating openings, hoods seated in said openings and having inner reflecting-surfaces, lamps supported in the hoods, a flexible suspending medium connected with said plate and having a hook, and means for adjusting the angle of suspension, consisting of a rigid arm on said plate provided with a screw-stud, an arm pivotally supported on said stud and having an eye in its free end at which it engages said hook, and a nut working on said stud for fastening said arms together in their adjusted relation.

7. In a therapeutic lamp, the combination with a base-plate provided with a plurality of hood-seating openings, hoods having inner reflecting-surfaces seated in said openings and provided with electric-lamp sockets, electric-

lamps supported in said sockets within the hoods, flexible conductors extending from said sockets and provided on their outer ends with coupling plugs, a conductor for supplying current for said lamps, electric connecting means adapted to have coupled thereto said plugs, and means connected with the base plate for flexibly suspending said lamp from a support.

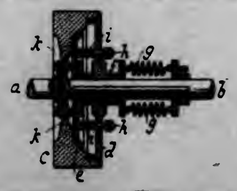
8. In a therapeutic lamp the combination with a base-plate provided with a plurality of hood-seating openings, hoods having inner reflecting-surfaces seated in said openings and provided on their ends with electric-lamp sockets, electric-lamps supported in said sockets within the hoods, flexible conductors extending from said sockets and provided on their outer ends with coupling-plugs, a conductor for supplying current for said lamps, a head carrying connector wires, binding posts extending from said wires to which the conductor is attached, and pins extending from said wires to be engaged by said coupling-plugs.

9. In a therapeutic lamp, the combination of a base-plate provided with a plurality of hood-seating openings, hoods, having inner reflecting-surfaces, seated in said openings and provided with electric-lamp sockets, electric-lamps supported in said sockets within the hoods, flexible conductors extending from said sockets and provided on their outer ends with coupling-plugs, a post rising from said plate, a head on said post provided with electric connecting means adapted to have coupled thereto said plugs and the conductor for supplying current to said lamps, and means connected with the base-plate for flexibly suspending said lamp from a support.

10. In a therapeutic lamp, the combination of a base-plate provided with a plurality of hood-seating openings, hoods having inner reflecting-surfaces seated in said openings and provided on their ends with electric-lamp sockets, electric-lamps supported in said sockets within the hoods, flexible conductors extending from said sockets and provided on their outer ends with coupling-plugs, a post rising from said plate, a head on said post carrying on its under-side connector-wires, binding-posts extending from said wires and adapted to have connected with them the conductor for supplying current to said lamps, and pins extending from said wires to be engaged by said coupling-plugs.

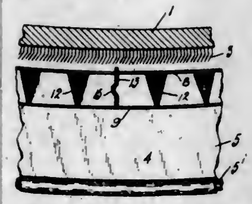
11. A multiple therapeutic lamp comprising, in combination, a base consisting of a plate with a circumferential outwardly-flaring flange, having inner reflecting-surfaces, said plate containing a plurality of hood-seating openings, hoods seated non-removably in certain of said openings and a handle-equipped hood removably seated in another of said openings, means on said base for releasably fastening said removable hood in place, said hoods having inner reflecting-surfaces, electric-lamp sockets on the hoods, electric-lamps supported in said sockets within the hoods, flexible conductors extending from said sockets and provided on their outer ends with coupling-plugs, a post rising from said plate, and a head on said post provided with electric coupling means for said plugs and with binding-posts at which to connect wires for supplying current to the lamps.

870,263. CLUTCH. WILLIAM R. WARREN, New York, N. Y. Filed Mar. 7, 1906. Serial No. 304,724.



A clutch comprising the combination with a driving and a driven element, of a clutch member secured to one of said elements and provided with a pair of inclined seats having their walls at different degrees of flare or inclination, a clutch member slidably mounted upon the other of said elements and comprising two sections with differently inclined faces to respectively correspond to the inclines of the seats, loose connecting studs for the sections to compel the same to rotate together while allowing the same to move toward and from one another, springs for moving the sections apart, and means for moving the sections to and from the seats, the section of greater flare or flatter shape being placed in advance of the other section so that such section of flatter shape engages its seat before the other section comes into engagement.

870,264. UNDER-SCREEN FOR CARDING-MACHINES. RANDALL M. WHITNEY, Worcester, Mass., assignor to Albert E. Carroll, Boston, Mass. Filed Apr. 26, 1907. Serial No. 370,439.



1. In an article of the class described, the combination, with a suitable frame, of a series of triangular bars secured thereto, and a flat bar mounted upon its edge between said triangular bars, and having its upper edge extend above said triangular bars.

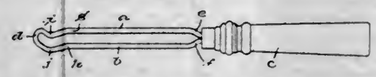
2. In an article of the class described, the combination, with a suitable frame, of a series of triangular bars secured thereto, and a corrugated flat bar mounted upon its edge between said triangular bars, and having its upper edge extend above said triangular bars.

3. In an article of the class described, the combination, with a suitable frame, of a series of triangular bars secured thereto, and a flat bar mounted upon its edge between said triangular bars, and having its upper edge provided with a series of teeth extending above said triangular bars.

4. In an article of the class described, the combination, with a suitable frame, of a series of triangular bars secured thereto, and a corrugated flat bar mounted upon its edge between triangular bars and in line with the radius of the card-cylinder, and having its upper edge provided with a series of teeth extending above said triangular bars.

5. In an article of the class described, the combination, with a suitable frame, of a series of triangular bars secured thereto, and a series of flat bars mounted upon their edges between said triangular bars, and having their upper edges provided with teeth extending above said triangular bars.

870,265. SHOE-CREASER. GEORGE H. WILKINS, Brockton, Mass., assignor to Geo. E. Keith Company, Campello, Mass., a Corporation of Massachusetts. Filed Jan. 7, 1907. Serial No. 351,090.



1. An implement for creasing the vamps of shoes consisting of rods or wires, each having a laterally offset portion intermediate its ends, and arranged with their corresponding portions parallel.

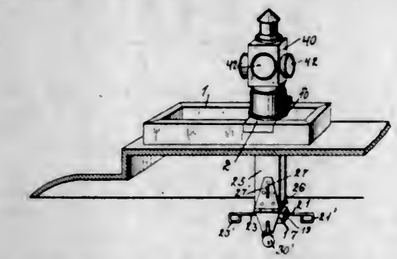
2. An implement for creasing the vamps of shoes consisting of a handle, and rods or wires secured to the handle extending therefrom parallel to, and somewhat separated from, each other; each rod having near the end remote from the handle an angular bent portion.

3. A shoe-creasing implement consisting of stiff wires parallel to each other connected together at one end, and a handle to which the wires are secured at their other ends; said wires being straight throughout the greater part of their length and offset to form protuberances near their connected ends.

4. A shoe-creasing implement consisting of a stiff wire bent double and having its members arranged parallel to each other and a slight distance apart, the members being formed with similar parallel offset protuberances.

5. An implement for creasing shoes comprising parallel separated members, each having a straight portion for determining the direction of the crease and a protuberant portion of limited extent for indenting and setting the crease.

870,266. TRAIN-SIGNAL-OPERATING DEVICE. ALLEN L. WOOD, Grayville, Ill. Filed Feb. 28, 1907. Serial No. 359,867.



1. A train signal operating device comprising a supporting frame, a revoluble lantern supporting plate mounted thereon and having an angular opening therein, a rod having an angular head projecting through said opening and secured therein, a yoke depending from said frame through which the lower end of said rod extends, a block secured to the lower end of said rod and having arms extending therefrom at diametrically opposite points, and a member hinged to said yoke and provided with means for engaging one of said arms to hold the lantern in adjusted position.

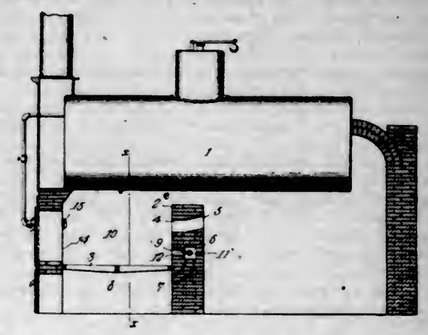
2. A train signal operating device comprising a supporting frame, a revoluble lantern supporting plate mounted thereon and having a depending collar with an angular socket extending therethrough, a rod having an angular head projecting through said socket and secured therein, a yoke depending from said frame through which the lower end of said rod extends, a block secured to the lower end of said rod and having arms extending therefrom and a member hinged to said yoke and provided with means for engaging one of said arms to hold the lantern in adjusted position.

3. A train signal operating device comprising a supporting frame, a revoluble lantern supporting plate mounted thereon and having an angular opening therein, a rod having an angular head projecting through said opening and secured therein, a yoke depending from said frame through which the lower end of said rod extends, a block secured to the lower end of said rod and having arms extending therefrom at diametrically opposite points and each being colored to correspond with an eye of the lantern to be supported on said plate, and means for locking said arms in adjusted position.

4. A train signal operating device comprising a supporting frame, a revoluble lantern supporting plate mounted thereon and having an angular opening therein, a rod having an angular head projecting through said opening and secured therein, a yoke depending from said frame through which the lower end of said rod extends, a block secured to the lower end of said rod and having arms extending therefrom at diametrically opposite points, and a member hinged to said yoke and provided with a slot to fit over one of said arms for locking it in adjusted position.

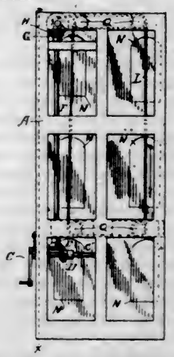
5. A train signal operating device comprising a supporting frame, a revoluble signal supporting member mounted thereon and having a depending operating member, laterally-extending arms connected with said operating member, a bracket suspended from said frame, a member hinged to said bracket and provided with a slot to fit over one of said arms for locking the operating member in adjusted position.

870,267. STEAM-BOILER FURNACE. ALFRED K. YOUNG, Pittsburg, Pa. Filed Nov. 2, 1906. Serial No. 341,744.



The combination with a fire box, a bridge wall at one end thereof, and a boiler above the fire box and bridge wall, there being a space between the boiler and bridge wall for the passage of products of combustion; of flues within the end portions of the bridge wall and having inclined outlets for directing blasts against the side portions of the boiler bottom, means for directing combustion supporting fluid through the fire box and into the flues, an air conduit within the bridge wall and having an inlet passage opening below the fire box, an outlet port opening into the fire box, and means within the conduit for discharging fluid under pressure through the ports and into the fire box, said ports being disposed in a plane below the flues.

870,268. SHOW-CASE. EBENEZER S. BEDFORD, Grand Rapids, Mich., assignor of one-half to Raymond M. Ferguson, Grand Rapids, Mich. Filed May 21, 1906. Serial No. 318,108.



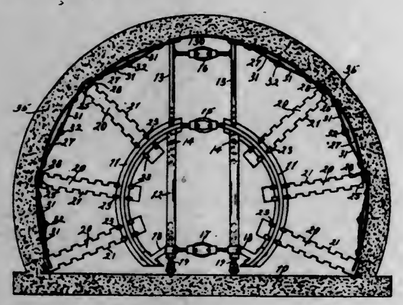
1. In combination with a vertical show case, independent hangers adjustably secured to each side of the case, a short shaft in each of said hangers, a sprocket wheel revolubly mounted on each of said shafts, endless sprocket chains mounted vertically on said sprocket wheels, a crank and shaft, an equalizing shaft set to one side of the vertical chains, means for transmitting motion from the crank shaft to the equalizing shaft, a sprocket chain connecting the sprocket wheel at each end of the equalizing shaft to a corresponding sprocket wheel connected with each vertical chain so that each chain will be driven independent of, but in unison with the other.

2. In combination, a vertical show case, independent adjustable hangers secured to each side of the case at top

and bottom, a short shaft in each of said hangers, a sprocket wheel revolubly mounted on each of said shafts, vertical sprocket chains mounted on said wheels, one at each side of the case and each independent of the other, cross bars between said chains, an equalizing shaft to one side of said chains, a sprocket wheel at each end of the equalizing shaft, a sprocket chain connecting each of said sprocket wheels with a sprocket wheel arranged to drive the sprocket wheels that carry the chain, each independent of but in unison with the other, means for revolving the equalizing shaft and through it the sprocket wheels in the case, and guards covering the vertical chains.

3. In combination, a vertical show case, independent sprocket wheels mounted therein each upon a short shaft independent of the other, vertically movable chains mounted on said sprocket wheels, an equalizing shaft mounted in the case some distance from the chains, means for revolving the equalizing shaft, a sprocket wheel at each end of the equalizing shaft, a sprocket chain from each of said sprocket wheels to a corresponding sprocket wheel in position to transmit motion to each of the first named sprocket chains independently of but in unison with the other, and an index connected with and actuated by the mechanism that transmits motion to the chains.

870,269. FORM FOR SEWERS AND THE LIKE. GEORGE G. F. BOSWELL, Lawrence, Ind. Filed Feb. 14, 1907. Serial No. 357,354.



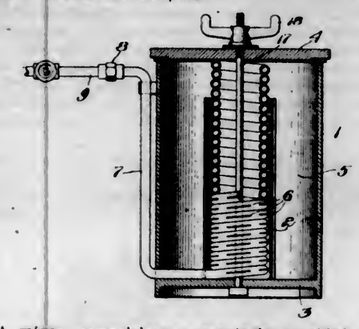
1. A form for sewers and the like including a pair of segmental inner holders, radially extending braces with notched edges, fasteners for adjustably securing said braces to the holders, said fasteners consisting of a plate extending over said brace with four extensions projecting through notches in said brace and overlapping said inner holder, and mold plates held in position by the outer ends of said braces.

2. A form for sewers and the like, including a central form, outwardly extending braces, concave mold plates notched on one side with the notched edge of one plate overlapping the adjacent edge of the next plate, the outer ends of said braces adapted to extend through said notches, and a pivoted head on the outer end of each brace adapted to clamp said plates against the end of the brace.

3. A form for sewers and the like, including a pair of segmental inner holders, a pair of telescoping posts connected with the ends thereof, turnbuckles connecting the ends of the posts and also the ends of the inner holders substantially as set forth, mold plates, and means extending from said inner holders for holding the mold plates in place.

4. A form for sewers and the like including a pair of segmental inner holders T-shaped in cross-section, a pair of vertical telescoping posts extending through one flange of each segmental holder near its upper end, turnbuckles connecting the ends of said posts and the ends of said inner holders, a crown plate mounted upon the upper end of said posts, other concave mold plates, and means for holding said mold plates in place.

870,270. MIXER FOR SPRAYING PURPOSES AND THE LIKE. WILLIAM C. BROWN, Melrose, Mass. Filed Nov. 6, 1905. Serial No. 285,972.



1. A mixer, comprising a receptacle provided with a chamber for the solid ingredients, and a water pipe provided with means to coöperate with the flow of liquid through said pipe to draw in said ingredients to be carried along with the liquid.

2. A mixer, comprising a receptacle provided with a chamber for the solid ingredients, and a water pipe provided with means to coöperate with the flow of liquid through said pipe under pressure to produce a gyratory motion in the chamber and draw in said ingredients to be carried along with the liquid.

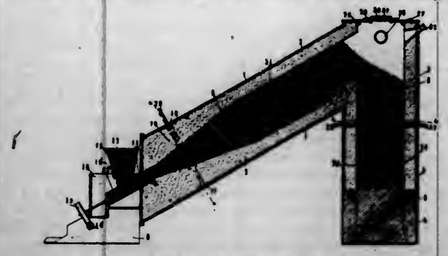
3. A mixer, comprising a receptacle provided with a chamber for the solid ingredients, and a continuous pipe extending through said passage having an inlet at one end and an outlet at the other end, said pipe within said passage being provided with slits for the escape and entrance of liquid.

4. A mixer, comprising a receptacle provided with a chamber for the solid ingredients, and a coil of pipe arranged coaxially of said chamber, provided at one end with an inlet and at the other end with an outlet, for the continuous flow of liquid, and having a series of slits or openings in the side of the coil next to the contained ingredients.

5. A mixer, comprising a receptacle having a centrally arranged liquid conductor provided with means for producing a gyratory movement of the liquid, said conductor having external openings for the escape of the liquid into said receptacle, and means, operated independently of the flow of liquid, for regulating the mixing effects of said liquid.

6. A mixer, comprising a receptacle, containing a chamber for holding the solid ingredients to be mixed, a central liquid conveyer provided with means for delivering liquid to said ingredients with a whirling movement and for receiving the mixture back into said conveyer, and means for moving said ingredients toward said conveyer.

870,271. GAS-PRODUCER. GEORGE W. BULLEY, New York, N. Y. Filed Dec. 19, 1906. Serial No. 348,533.



1. In a gas producer, the combination of a furnace having an upwardly inclined generating chamber adapted to contain a body of incandescent carbonized material, said chamber being provided with a seat of combustion intermediate the ends thereof, a water seal provided at the lower end of said chamber, and means for introducing fresh fuel through said water seal into said chamber adapted to feed the same progressively past said seat of combustion.

2. In a gas producer, in combination, a furnace having an upwardly inclined generating chamber adapted to contain a body of incandescent coke, said furnace being provided intermediate its ends with a plurality of blast twyers adapted to deflect the entering air in a downward direction, and means for introducing fresh fuel into said generating chamber behind said incandescent coke and for feeding the same progressively past said blast twyers.

3. In a gas producer, the combination of a generating chamber adapted to contain a body of incandescent coke, a water seal in the lower portion of said generating chamber, means for introducing fuel into the lower portion of said generating chamber through said water seal and behind said incandescent coke, said means being adapted for progressively feeding the fuel in an upward direction within said chamber, a receptacle leading from the upper portion of said chamber into which said coke is continuously discharged, and a water seal located at the bottom of said receptacle.

4. In a gas producer, the combination of a generating chamber having an upwardly inclined leg and a vertically disposed leg leading therefrom, said chamber being constructed to receive a body of incandescent coke, means for introducing fresh fuel into said upwardly inclined chamber at the lower portion thereof and for feeding the same in an upwardly direction, whereby said coke is continuously discharged into said vertical leg, a gas exit opening located at the upper end of said upwardly inclined leg and a gas exit opening located at the lower portion of said vertical leg.

5. In a gas producer, the combination of a retort comprising an upwardly inclined leg and a vertically disposed leg leading from the former at the upper portion thereof, said retort being adapted to contain a carbonaceous material in a carbonized state, means for introducing fresh carbonaceous material behind the carbonized portion thereof and progressively feeding the same through the upwardly inclined portion of said retort, whereby the carbonized portion thereof is discharged into said vertical chamber, a gas delivery opening in the upper end of said upwardly inclined chamber, and a second gas delivery opening at the lower portion of said vertical chamber.

6. In a gas producer, the combination of a retort having an upwardly inclined chamber and a vertically disposed chamber leading therefrom, a water seal provided at the lower portion of said upwardly inclined chamber, and a water seal provided at the lower portion of said vertical chamber, said retort being adapted to contain a carbonaceous mass in an incandescent condition, a seat of combustion formed within the upwardly inclined portion of said retort intermediate the ends thereof, means for introducing fresh carbonaceous material behind the carbonized portion thereof and for feeding the same progressively in an upward direction past said seat of combustion, whereby the carbonized portion of said mass is discharged into said vertical chamber, and gas delivery openings provided in each of said chambers.

7. In a gas producer, the combination of a retort having an upwardly inclined generating chamber and a vertical chamber leading therefrom at the upper end thereof, said retort being adapted to contain carbonized material in an incandescent carbonized state, means for introducing fresh carbonaceous material behind the carbonized portion thereof, and means for discharging air into said retort at a point between the carbonized and uncarbonized portions of said carbonaceous material and for directing the same towards the point of introduction of said carbonaceous material.

8. In a gas producer, the combination of a retort having an upwardly inclined chamber and a vertical chamber leading therefrom at its upper end, said retort being constructed to contain carbonaceous material in an incandescent carbonized condition, a plurality of blast twyers located intermediate the ends of said upwardly inclined chamber, and means for introducing fresh carbonaceous material into the lower portion of the latter chamber and for feeding the same progressively past said blast twyers.

9. In a gas producer, the combination of a retort comprising an upwardly inclined chamber and a vertical chamber, said retort being adapted to contain a mass of incandescent carbonaceous material, a fuel receiving opening in the lower portion of said upwardly inclined chamber, an ash delivery receptacle at the lower portion of said vertical chamber, means for introducing fresh carbonaceous material into the former chamber and for feeding the same progressively therethrough, whereby said carbonaceous material when carbonized is continuously discharged into said vertical chamber, and water seals provided at the lower end of each of said chambers.

10. In a gas producer, the combination of a retort comprising a vertical chamber and an upwardly inclined chamber leading thereinto, said retort being constructed to contain carbonaceous material in an incandescent condition, means for introducing fresh carbonaceous material into the lower portion of said upwardly inclined chamber, a plurality of blast twyers located in said retort above the point of introduction of said carbonaceous material and below the carbonized portion thereof, said last named means being adapted to feed said fuel progressively past said blast twyers whereby the carbonized portion thereof is continuously discharged into said vertical chamber, means for discharging gas at the upper portion of said retort, and means for discharging gas at the lower portion of the vertical chamber thereof.

11. In a gas producer, the combination of a retort having a vertical leg and an upwardly inclined leg leading thereinto, a water seal for the lower end of said vertical chamber, a water seal for the lower end of said upwardly inclined chamber, a fuel receiving opening leading into said chamber from said last-named water seal, an ash receiving receptacle located in the lower portion of said vertical chamber, blast twyers located intermediate the ends of said upwardly inclined chamber, a gas delivery opening located in the upper portion of said retort, and a gas delivery opening leading from the lower portion of said vertical chamber.

12. In a gas producer, the combination of a retort having a vertical chamber and an upwardly inclined chamber leading thereinto, said retort being adapted to contain carbonaceous material in an incandescent condition, means for feeding fresh carbonaceous material behind the incandescent portion thereof, blast twyers located above the point of introduction of said carbonaceous material and below the incandescent portion thereof, auxiliary blast twyers located above said first named blast twyers, gas exit openings leading from said retort at the upper portion thereof and at the lower portion of said vertical chamber, and a water seal provided at the lower portion of said upwardly inclined chamber and at the corresponding portion of said vertical chamber.

13. In a gas producer, the combination of a retort having a vertical chamber and an upwardly inclined chamber leading thereinto, said retort being adapted to contain carbonaceous material in an incandescent state, means for feeding fresh carbonaceous material behind the incandescent portion thereof, blast twyers located above the point of introduction of said carbonaceous material and below the incandescent portion thereof, auxiliary blast twyers leading into the upwardly inclined chamber, auxiliary blast twyers leading into the vertical chamber, gas exit openings leading from said retort at the upper portion thereof and other gas exit openings leading from the vertical chamber at its lower portion, and a water seal for said vertical chamber below the latter gas exit openings.

870,272. TELESCOPE-SIGHT FOR FIREARMS. FRANK F. BURTON, New Haven, Conn., assignor to Winchester Repeating Arms Company, New Haven, Conn., a Corporation. Filed Mar. 4, 1907. Serial No. 360,488.

1. The combination with a telescope, of a mounting therefor, a spring-actuated plunger located in the said

mounting and having a slot extending from front to rear, and a rib located upon the telescope and entering the said slot in which it has frictional bearing.



2. The combination with a telescope, of a mounting therefor, two fixed rivets mounted in the upper portion of the said mounting on opposite sides of the center thereof, a rib located upon the lower face of the telescope, and a spring-actuated plunger located in the lower portion of the said mounting and having a slot for the reception of the said crib.

3. The combination with a telescope, of a mounting therefor, fixed rivets mounted in the upper portion of the said mounting on the opposite sides of the center thereof and formed upon their inner ends with conical bearing points, a rib fixed upon the lower face of the telescope and having beveled sides, and a spring-actuated plunger located in the lower portion of the said mounting and formed with a slot for the reception of the said rib and adapted to be rotated to accommodate itself to the lateral movement of the rear end of the telescope.

4. The combination with a telescope, of a mounting in which the same reciprocates, and groove-and-tongue connection between the said telescope and mounting for guiding the former as it reciprocates and preventing it from rotation, the said groove-and-tongue connection including a spring-actuated plunger.

5. The combination with a telescope, of a mounting therefor, a hollow plunger interlocked with the telescope for guiding the same, a spring located within the plunger, and a pin mounted at its ends in the mounting and passing through the plunger for supporting the spring, the plunger being formed with openings larger in diameter than the pin to permit the plunger to move up and down and to rotate.

870,273. TELESCOPE-SIGHT FOR FIREARMS. FRANK F. BURTON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed July 1, 1907. Serial No. 381,633.

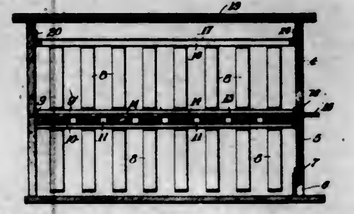


1. The combination with a telescope having a longitudinal groove, of front and rear supports in which the said telescope is longitudinally movable, and a spring-actuated plunger mounted in one of the said supports and formed with a nose entering the said groove, whereby the telescope is guided in its longitudinal movement but prevented from rotation.

2. The combination with a telescope having a longitudinal groove formed in the center of the lower face of its front end, of front and rear supports in which the telescope is longitudinally movable, and a spring-actuated plunger located in the front support and formed with a nose entering the said groove, whereby the telescope is guided in its longitudinal movement but prevented from rotation.

3. The combination with a telescope having a longitudinal groove the front end of which forms a stop, of front and rear supports in which the said telescope is longitudinally movable, and a spring-actuated plunger mounted in one of the said supports and formed with a nose entering the said groove, whereby the said telescope is not only guided in its longitudinal movement and prevented from rotation, but stopped against being pulled too far rearward through the said supports by the engagement of the forward end wall of the said groove with the said nose of the plunger.

870,274. BEE-GUM. WILLIAM E. CAPERTON, McGregor, Tex. Filed May 15, 1907. Serial No. 373,762.



1. A bee hive comprising upper and lower compartments removably connected together, a perforated member removably mounted within the lower compartment at the top of the latter, the upper compartment having a slot in one end near its lower edge, a perforated slide mounted upon the aforesaid perforated member for movement to open and close the perforations of the latter, said slide having a reduced end to form a handle for movement through said slot, the reduced end of the slide also forming shoulders to engage the slotted end of the upper compartment to limit the outward movement of the slide, a foraminated member at the top of the upper compartment, a removable top member fitted upon the upper compartment in spaced relation to the foraminated member, the lower compartment having an opening in one end, and a closure slidably mounted over said opening.

2. A bee hive comprising upper and lower compartments removably connected together, a perforated member forming a partition between the upper and lower compartments, a perforated slide mounted upon said perforated member for movement to open and close the perforations of the latter, the sides and ends of the upper compartment alining with the sides and ends of the lower compartment and the upper compartment having depending cleats along its lower edges for engagement with the upper inner edges of the lower compartment to prevent accidental displacement of one compartment with respect to the other, comb frames mounted in both compartments, a foraminated member supported within the upper compartment upon the comb frames of the latter, and a top member disposed upon the upper compartment and having its sides and ends arranged in alinement with the sides and ends of the compartment and also provided with depending cleats upon the lower inner edges of its sides and ends for engagement with the upper inner edges of the sides and ends of the upper compartment to prevent accidental displacement of said top member with respect to said upper compartment.

870,275. CAP FOR KEYS OF TYPE-WRITING AND ANALOGOUS MACHINES. EDWARD D. CONKLIN, Newark, N. J., assignor to The Whitehead & Hoag Company, Newark, N. J., a Corporation of New Jersey. Filed June 25, 1906. Serial No. 323,316.

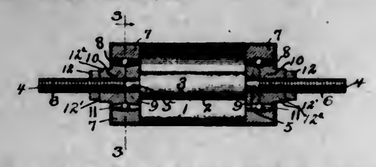


1. A cap for typewriting machine keys comprising two cups adhesively secured together, one within the other, the inner cup bearing the printed character and the outer cup being transparent to render said character visible therethrough and to protect said character from obliteration.

2. A cap for typewriting machine keys comprising an inner cup of paper bearing the printed character, and an outer cup of transparent pyroxylin material fitting upon and adhesively secured to the inner cup.

3. In a key for typewriting machines, a base portion, a paper cup fitted upon and adhesively secured to the base, and a transparent cup fitted upon and adhesively secured to the paper cup.

870,276. DOUBLE-CONE BALL-BEARING AXLE. CHARLES DACKIEWICZ, Donora, Pa., assignor of one-half to Ladislaus Odziemczewski, Donora, Pa. Filed Apr. 24, 1907. Serial No. 370,111.



1. In a device of the character described, the combination of an axle, comprising a central, cylindrical body portion provided at its ends with reduced, cylindrical portions, each reduced portion provided with a smooth surface at its inner end contiguous to the central portion and with a screw-threaded surface extending from said smooth surface to the end of said reduced portion, primary cones provided with smooth, inner bores in engagement with the smooth surfaces of the reduced portions and at their inner faces with the ends of said central portion, auxiliary cones threaded upon the reduced portions and in engagement with the outer side of said primary cones, the outer faces of said primary and auxiliary cones producing ball-races, each auxiliary cone provided with an end having a polygonal surface, locking nuts threaded upon the reduced ends and in engagement with the outer ends of the auxiliary cones, a casing surrounding said axle and cones, annular members positioned within and secured near the ends of said casing, each annular member provided with a ball race upon its inner face, and balls positioned between the annular members and cones and within the ball-races of said cones and annular members.

2. In a device of the character described, the combination of an axle provided with a cylindrical, central, enlarged portion and with a pair of reduced, cylindrical end portions integral with the ends of said cylindrical portion, each end portion provided with a smooth surface and a screw-threaded surface, a cone engaging and fixedly secured to the smooth surface of each reduced portion, a cone threaded upon and adjustable longitudinally of the threaded surface of each reduced portion, means for securing said adjustable cone in an adjusted position, each two cones provided with a ball-race, balls positioned within said ball-races, and a rotatable hub-structure mounted upon said balls.

3. A ball bearing, comprising an axle consisting of a central and end portions, the central portion of greater diameter than the end portions, each end portion provided with a smooth surface contiguous to one end of the central portion and with a screw-threaded surface extending from the smooth face to the end, a primary cone provided with a smooth bore secured to the smooth surface of each end portion and in engagement with one end of said central portion, an auxiliary adjustable cone threaded upon the threaded surface of each end portion and in engagement with the first-mentioned cone, a locking nut threaded upon each end-portion and normally in engagement with the outer end of the auxiliary cone, balls in engagement with said primary and auxiliary cones, annular members provided with ball-races, mounted upon said balls, and a cylindrical casing mounted upon said annular members.

870,277. EDUCATIONAL MATERIAL. ALICE R. ELIOT, Brookline, Mass. Filed Nov. 22, 1906. Serial No. 344,586.

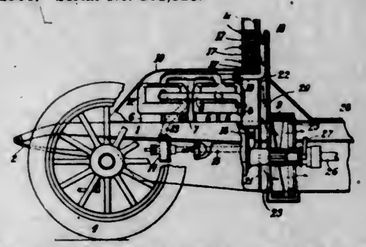
1. A material calculation unit for elementary training, consisting of a rigid metal bar, polygonal in cross section, coated with an adherent enamel.

2. A material calculation unit for elementary training, consisting of a rigid metal bar, polygonal in cross section,



coated with an adherent enamel, said coating thickened at the edges of the bar.

870,278. COOLING SYSTEM FOR AUTOMOBILE-ENGINES. JAY N. EMLEY, New York, N. Y. Filed Feb. 17, 1906. Serial No. 301,528.



1. The combination of a vehicle frame having an engine compartment containing a water cooled engine, a radiator carried by said frame and outside said compartment, an air conduit leading from said radiator rearwardly of the vehicle, and means actuated by the engine for producing a draft of air through said radiator and conduit, said compartment having an opening whereby to permit air to be exhausted therefrom into said conduit, substantially as described.

2. The combination with an inclosed water cooled explosion engine and a radiator, of a single means for creating independent drafts through the engine compartment to cool the engine and through the radiator, substantially as described.

3. In an explosion engine cooling system, the combination with an inclosed water cooled engine and a radiator, of means for creating a draft through the radiator independently of the engine inclosure, said means also causing a separate draft through said engine inclosure, substantially as described.

4. In an explosion engine cooling system including a radiator and an engine compartment in which said engine is located, the combination of means for producing a current of air outside the engine casing through the radiator, and an air conduit therefor, of means whereby heated air from the engine compartment is withdrawn therefrom and discharged with the air from the radiator, substantially as described.

5. In an explosion engine cooling system including a radiator and an engine compartment containing said engine, the combination with means for producing a current of air through the radiator and with an air conduit therefor, of means whereby heated air from the engine compartment is withdrawn therefrom and discharged with the air from the radiator, said eduction air current being produced by the radiator air current, substantially as described.

6. In an explosion engine cooling system including a radiator, the combination with means for producing a current of air to cool the radiator, of a conduit for said air behind the radiator, an engine compartment separated from said conduit by a partition, said partition having an opening whereby to permit the engine compartment to be ventilated through said conduit, substantially as described.

7. In an explosion engine cooling system including a radiator, the combination with means for producing a current of air to cool the radiator, of a conduit for said air behind the radiator, and an engine compartment separated from said conduit by a partition, said compartment having an opening communicating with said conduit whereby to permit the engine compartment to be ventilated into said conduit, said current being produced by the air current in said conduit, substantially as described.

8. In an explosion engine cooling system including a radiator, the combination with a fan for producing a current of air to cool the radiator, of a conduit for said air behind the radiator, and an engine compartment separated from said conduit by a partition, said partition having an opening whereby to permit the engine compartment to be ventilated through said conduit by eduction, substantially as described.

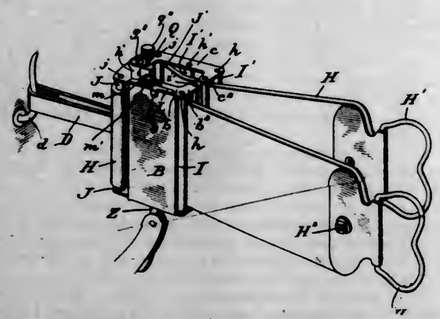
9. In an explosion engine cooling system including a radiator, the combination with a fan for producing a current of air to cool the radiator, of a conduit for said air behind the radiator, an engine compartment separated from said conduit by a partition, said partition having an opening whereby to permit the engine compartment to be ventilated by eduction through said conduit, said fan being carried by the engine flywheel, substantially as described.

10. In an explosion engine cooling system including a radiator, the combination with said radiator of an air conduit leading rearwardly therefrom, a fan in said conduit, an engine compartment, and a ventilating passage from said engine compartment to said air conduit located at a point between the radiator and the fan, substantially as described.

11. In a vehicle, the combination with an explosion engine, and a compartment therefor, of a water cooling system for the engine, a radiator in said system disposed outside of said engine compartment, an air conduit leading from the radiator and located in part between said engine compartment and the vehicle dash, a fan carried by the engine flywheel and located in said conduit, and an opening from said engine compartment into said conduit and located at a point between the radiator and the fan, substantially as described.

12. In a vehicle, the combination with an explosion engine, and a compartment therefor, of a water cooling system for the engine, a radiator in said system disposed outside of said engine compartment, an air conduit leading from the radiator and located in part between said engine compartment and the vehicle dash, and a fan carried by the engine flywheel and located in said conduit, substantially as described.

870,279. CUTLERY-SHARPENING MACHINE. LEON A. FLINKER and JOHN SCHADE, Jr., New York, N. Y.; said Schade assignor to said Flinker. Filed Feb. 18, 1907. Serial No. 357,976.



1. In a device of the class described, a supporting member, movable guide members, a movable blade-holder, and a strop coöperating with the blade-holder and with the guide-members for holding both guide-members in closed positions by a pull on the strop in either direction, said strop operating directly on said blade-holder for reversing the position of said blade-holder upon a change in the direction of the pull on said strop.

2. In a device of the class described, a movable blade-holder, pivoted guide members at the respective sides of the blade-holder, a strop coöperating with said guide members and the blade-holder, and guides for the strop carried by the aforesaid guide members, the pivots of said guide members being out of line with guides on said members, whereby a pull on said strop exerts such frictional pressure on the pivots and the guide members as will keep both guide members in closed positions.

3. In a device of the class described, a supporting member, guide members pivoted thereto and provided near their free ends with guides for a strop, other guides carried by the guide-members and located thereon between the first named guides and the pivots of the said guide-members, a blade-holder, and a strop coöperating with the blade-holder and with the pivots of the guide members, said strop having frictional engagement with the pivots of the guide members for holding the same in closed positions.

4. In a device of the class described, a blade-holder, movable guide members, a strop, and means positively for holding or locking said guide members.

5. In a device of the class described, a blade-holder, a strop, guide-members for said strop at the respective sides of the blade-holder, and locking means for said guide members.

6. In a device of the class described, a blade-holder, a strop, guide members for the strop, and automatic locking means operated by spreading the members apart and adapted to hold the same securely in an open position.

7. In a device of the class described, a blade-holder, a strop, guide members provided with means for locking the blade-holder, and a separate locking member coöperating with the guide members, whereby the blade-holder and the guide members may be locked when opened.

8. In a device of the class described, a strop, guide members for said strop, means for locking the blade-holder by opening the guide members, and independent locking means for the guide members.

9. In a device of the class described, a blade-holder, a strop, guide members for said strop, means movable with said guide members for locking the blade-holder upon spreading the guide members, and an automatic latch for locking the guide members in their open positions.

10. In a device of the class described, a supporting member, guide members having pivotal connection with said supporting member, a movable blade-holder, a strop, and automatic locking means adapted to engage said blade-holder and the guide members for holding said parts in fixed relation upon spreading the guide members relative to the blade-holder.

11. In a device of the class described, a supporting member, pivoted side members, a movable blade-holder between the side members, a strop guided by said members, and means operated by spreading the side members for locking the blade-holder and said members in fixed relation.

12. In a device of the class described, a blade-holder, and positive adjusting means therein for forcing an inserted device, such as a razor blade or an auxiliary blade-holder, edgewise and into clamping engagement with the blade-holder.

13. In a device of the class described, a blade-holder of wedge-shaped cross section, and means within said blade-holder for positively adjusting an inserted device edgewise therein, whereby an inserted device may be clamped in wedging engagement with the holder.

14. In a device of the class described, a blade-holder open at one end for the insertion of a device, such as a blade or auxiliary blade-holder, said holder having a longitudinal slot along a narrow side thereof, and means for positively adjusting such inserted device edgewise in the holder, whereby the inserted device may be adjusted so that a razor edge projects through the slot of the holder.

15. In a device of the class described, a slotted blade-holder, a spring therein, and means for positively adjusting the spring relative to the slot of said blade-holder.

16. In a device of the class described, a slotted blade-holder, a yieldable member extending longitudinally of said holder, and means for positively adjusting said yieldable member, whereby said member operates to adjust an inserted device, such as a razor blade or an auxiliary blade-holder edgewise in said holder.

17. In a device of the class described, a blade-holder, a yieldable member secured at one end to said holder, and an adjusting device coöperating with said member for bringing it in engagement with an inserted device, such as a razor blade or an auxiliary blade-holder and moving the aforesaid inserted device edgewise in said holder.

18. In a device of the class described, a supporting member, pivoted side members carried by said supporting member and provided with guides at one end, a strop arranged between the guides of the side members, other strop-guides on the side members between the pivots thereof and the aforesaid guides thereon, and a reversible blade-holder coöperating with said strop.

19. In a razor sharpening mechanism, a movable blade-holder, an auxiliary blade-holder insertible in the aforesaid holder, and means for tightening the auxiliary blade-holder in the movable blade-holder, whereby the auxiliary blade-holder is adapted to be clamped upon a blade held therein.

20. In a razor sharpening mechanism, a movable blade-holder, an auxiliary compressible blade-holder insertible in the aforesaid blade-holder, and means for wedging the auxiliary blade-holder in the movable blade-holder, whereby the auxiliary blade-holder may be compressed upon a blade adapted to be held therein.

21. In a razor sharpening mechanism, a hollow wedge-shaped blade-holder, an auxiliary sectional blade-holder insertible in the aforesaid blade-holder, and means for adjusting the auxiliary blade-holder edgewise within the first-named holder, thereby compressing the sections of the auxiliary holder upon a blade adapted to be held therein.

22. In a razor sharpening mechanism, a main blade-holder, and an auxiliary blade-holder adapted to be inserted and withdrawn by an endwise movement into and from said main blade-holder, said auxiliary blade-holder being clamped by engagement with the main blade-holder into engagement with a blade adapted to be held in said auxiliary holder.

23. A device of the class described comprising a supporting member, side members pivoted to the supporting member, means for locking the side members in their closed positions, a blade-holder, and a strop coöperating with the blade-holder and guided by the side members.

24. In a device of the class described, pivoted guide members, a blade carrier coöperating therewith, and means for locking said guide members together when in operative position.

25. In a device of the class described, guide members, a blade-supporting means coöperating therewith, and locking means adapted to hold the blade-supporting means in a fixed position with reference to said guide members.

26. In a device of the class described, pivoted guide members, blade-supporting mechanism coöperating therewith, and means for locking said members in their open positions and also locking the blade-supporting mechanism relative to said members.

27. In a device of the class described, a main blade-holder, and an auxiliary blade-holder insertible endwise in the main blade-holder.

28. In a device of the class described, a main blade-holder, and an auxiliary blade-holder coöperating therewith and detachable therefrom.

29. In a device of the class described, strop supporting means, means for supporting a blade, and means for locking said blade-supporting means in a fixed position when the strop is not in operation.

30. In a device of the class described, strop supporting means, blade-holding means, and means operating when the strop is at rest for holding or retaining the blade-holding means in substantially a stationary position.

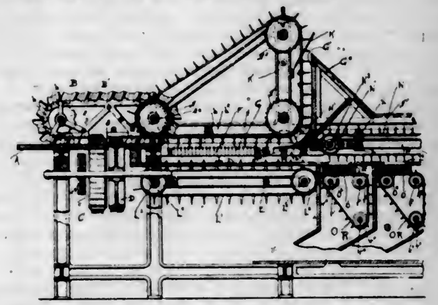
31. In a device of the class described, a slotted supporting member, means for connecting said member to a suitable anchor, blade-supporting means, and strop guiding means.

32. In a device of the class described, a slotted supporting member, an anchor strap fitted in the slot of said supporting member, blade supporting means on the supporting member, and strap guiding devices in coöperative relation to the blade supporting means.

33. In a device of the class described, a blade-holder, guide-supporting members, a strap, and strap-guides adjustably supported on the guide supporting members.

34. In a device of the class described, a blade-holder, guide supporting members each having transverse slots, a strap, and strap guides adjustable in the slots of the guide supporting members.

870,280. BROOM-CORN-FIBER SORTING AND SIZING MACHINE. RICHARD D. GALLAGHER, Sr., Lamar, Colo. Filed May 17, 1905. Serial No. 260,899.



1. In a fiber sorting machine, the combination with feeding mechanism adapted to carry bundles of fibers; of a comber positioned to be supplied by said feeding mechanism, a separator for severing the individual fibers from each other located in rear of the comber, conveyer mechanism for transporting the separated fibers, and a table over which said conveyer travels provided with a series of graduated sorting openings increasing in size rearward through which the fibers of increasing size fall successively.

2. In a broom fiber sorting machine, the combination with sorting mechanism for grading the individual fibers; of a gripper conveyer located in advance of said sorting mechanism and constructed to transport fiber bundles laterally, a comber located at one side of the conveyer and operating transversely away from its path of travel to operate upon the fiber bundles while held by said conveyer, and a separator located in rear of the comber at the other side of the conveyer and operating transversely away from said conveyer also to operate upon the fiber bundles while held thereby.

3. In a fiber sorting machine, the combination with feeding mechanism; of a separator adapted to be supplied with bundles of fibers by said feeding mechanism and constructed to sever the individual fibers from each other, a reciprocating screen provided with elongated parallel openings through which the separated fibers pass, conveyer mechanism located beneath said screen, and a table underlying said conveyer mechanism and provided with a series of graduated sorting openings increasing in size rearward through which the screened fibers of increasing length fall successively.

4. In a broom fiber sorting machine, the combination of a screen, means for creating an air suction therethrough for alining the fibers along their ends against the screen, and means for sorting the alined fibers into lengths.

5. In a broom fiber sorting machine, the combination of a screen, means for creating an air suction therethrough for alining the fibers along their ends against the screen, a table provided with a series of graduated sorting openings increasing in size rearward and having one set of their edges substantially in alinement, and conveyer mechanism for transporting the alined fibers over said openings with the alined ends of the fibers adjacent the alined edges of the openings.

6. In a broom corn fiber sizing machine, the combination of a screen, means for creating an air suction therethrough for alining the fibers along their ends against the

screen, and means for trimming the opposite ends of the fibers.

7. In a broom fiber sorting machine, the combination of means for alining the fibers along their butt-ends, conveyer mechanism for transporting the alined fibers, a table underlying said conveyer mechanism and provided with a series of graduated sorting openings through which the fibers fall having their edges adjacent the path of the butt-ends of the fibers substantially in alinement, shelves beneath said openings upon which the fibers fall, means for alining the fibers thereon along their tip ends, and mechanism for trimming the butt-ends.

8. In a broom fiber sorting machine, the combination of a screen, an air conduit leading therefrom, and means for creating an air suction through said screen and conduit for alining the fibers with their butt-ends against said screen, conveyer mechanism for transporting the alined fibers, a table underlying said conveyer mechanism and provided with a series of graduated sorting openings through which the fibers fall having their edges adjacent the butt-ends of the fibers substantially in alinement, shelves beneath said openings upon which the fibers fall, a screen above each shelf, a branch pipe between each of the last-named screens and the conduit to create an air suction through the screens, said screens being arranged adjacent the tip ends of the fibers to aline them along these ends, and trimming mechanism for alining the butt-ends.

9. In a fiber sorting machine, the combination with a table provided with a series of graduated sorting openings, of a conveyer for transporting the fibers over said openings to permit them to fall therethrough, having a continuous forward travel combined with a reciprocating movement.

10. In a fiber sorting machine, the combination with a table provided with a series of graduated sorting openings, a conveyer located over said openings, for transporting the fibers to fall therethrough, wheel carriers upon which said conveyer is carried, and means for imparting a simultaneous longitudinal reciprocating movement to said carriers.

11. In a fiber sorting machine, the combination with a table provided with a series of graduated sorting openings, an endless conveyer having a continuous travel over said openings and provided with teeth arranged to depend above the table to transport the fibers over said openings, wheel carriers upon which the conveyer is mounted, and means for imparting a simultaneous longitudinal reciprocating movement to said carriers.

12. In a fiber sorting machine, the combination with a longitudinal frame, and means for imparting reciprocating movement to said frame; of a screen mounted in the forward part of said frame and provided with elongated parallel openings through which the fibers fall, a table located beneath said screen and provided in rear thereof with a series of graduated sorting openings, transverse shafts mounted in the rear portion of the frame, a conveyer carried by said shafts and disposed above the graduated openings, and means for giving said conveyer a continuous travel to distribute the screened fibers through said openings.

13. In a fiber sorting machine, the combination with a screen provided with elongated parallel openings through which the fibers fall, a table located beneath said screen and provided in rear thereof with a series of graduated sorting openings, the portion of said table immediately beneath said screen having a longitudinal slot; of an endless conveyer mounted beneath said slotted portion of the table and provided with teeth arranged to travel through the slot and project above the surface of the table, and a second endless conveyer mounted above the apertured portion of the table and provided with teeth arranged to project downward and travel over the surface thereof.

14. In a sorting machine, the combination with a table having a series of graduated sorting openings, and conveyer mechanism arranged to transport the fibers over the table to permit them to fall through said openings; of a series of bins beneath the openings, each bin being provided in its upper portion with a slotted shelf upon which the fibers fall, trimming mechanism for bringing the fibers to a size, and conveyer mechanism operating in the slotted shelf to carry the sized fibers over the edge thereof into the lower portion of the bin.

15. In a fiber sorting mechanism, the combination of a carrier constructed to convey broom-corn, and a comber comprising a traveling belt provided with teeth and arranged at an incline to the path of said carrier, whereby said teeth enter gradually between the broom-corn fibers as they pass along the length of said fibers.

16. In an apparatus of the character described, the combination of a carrier constructed to convey broom-corn, a comber arranged in the path of said carrier, means constructed to sever the broom-corn fibers from each other, and a screen constructed to separate the fine fibers from the stalks and coarse particles, said screen comprising a series of vertical plates provided with enlarged heads.

17. In an apparatus of the character described, the combination of a carrier constructed to convey broom-corn, a comber arranged in the path of said carrier, means constructed to sever the broom-corn fibers from each other, a screen constructed to separate the finer fibers from the stalks and coarse particles, a second screen arranged below the first and adjacent to one side thereof, and means constructed to induce a current of air progressively through said first and second screens and thereby assemble the screened fibers with their ends against said second screen.

18. In an apparatus of the character described, the combination with feeding mechanism, of means constructed to sever the individual broom-corn fibers from each other, a screen constructed to separate the fine fibers from stalks and coarse material, endless carriers provided with projections disposed to travel immediately above the surface of the screen and remove the stalks and coarse particles therefrom, and means arranged adjacent the path of said carriers and constructed to remove such material.

19. In a fiber sorting machine, the combination of a carrier constructed to carry broom-corn, a comber arranged in the path of said carrier, means constructed to sever the broom corn fibers from each other, a screen constructed to separate the fine fibers from the stalks and coarse material, means constructed to assort the screened fibers into desired lengths, and means constructed to assemble the asorted fibers with their fine tip ends in juxtaposition.

20. In an apparatus of the character described, the combination of feeding mechanism, a comber arranged in the path of such feeding mechanism, means constructed to sever the broom-corn fibers from each other, a screen constructed to separate the fine fibers from stalks and coarse particles, means constructed to assort the screened fibers into desired lengths, means constructed to assemble the assorted fibers with their fine tips in juxtaposition, and means constructed to trim the butt-ends of such assembled fibers to bring the fibers to a uniform length.

21. In a fiber sorting machine, the combination with mechanism for entering between and passing longitudinally of the fibers, and with sorting mechanism, of an endless feeding device passing adjacent the field of operations of said first-named mechanism and constructed to hold the fibers securely while operated upon thereby, said feeding device comprising a series of gripping jaws arranged to receive the material between them at a feeding point and to deliver the material to said sorting mechanism.

22. In a fiber sorting mechanism, the combination with mechanism for entering between and passing longitudinally of the fibers, and with sorting mechanism, of an endless feeding device passing adjacent the field of operation of said first-named mechanism and constructed to hold the fibers securely while operated upon thereby, said feeding device comprising a series of gripping jaws arranged to present at the feeding point rearward directed closing gripping mouths formed between them and to deliver the material to said sorting mechanism.

23. In a fiber sorting mechanism, the combination with mechanism for entering between and passing longitudinally of the fibers, and with sorting mechanism, of an endless chain feeding device passing adjacent the field of operation of said first-named mechanism and constructed to hold the fibers securely while operated upon thereby, said feeding device comprising links having complementary gripping faces formed between them and arranged to deliver the fibers to said sorting mechanism.

24. In a fiber sorting machine, the combination with mechanism for entering between and passing longitudinally of the fibers, and with sorting mechanism, of wheel carriers, and an endless chain feeding device carried thereby adjacent the field of operation of said first-named mechanism and constructed to hold the fibers securely while operated upon thereby and to deliver the fibers to said sorting mechanism, said feeding device comprising pivoted links having gripping faces extending outward from the plane of the pivots.

25. In a fiber sorting machine, the combination with mechanism for entering between and passing longitudinally of the fibers, and with sorting mechanism, of an endless feeding device passing adjacent the field of operation of said first-named mechanism and constructed to hold the fibers securely while operated upon thereby and to deliver the fibers to said sorting mechanism, said feeding device comprising resilient gripping jaws arranged to close upon the material at a feeding point and to release the material at said sorting mechanism.

26. In a fiber sorting machine, the combination with mechanism for entering between and passing longitudinally of the fibers, and with sorting mechanism, of an endless chain feeding device passing adjacent the field of operation of said first-named mechanism and constructed to hold the fibers securely while operated upon thereby and to deliver the fibers to said sorting mechanism, said feeding device comprising pivoted links having dovetailed sockets extending outward from the plane of the pivots, and resilient gripping faces inserted in said sockets.

27. In a fiber sorting machine, the combination with mechanism for entering between and passing longitudinally of the fibers, and with sorting mechanism, of an endless feeding device passing adjacent the field of operation of said first-named mechanism and comprising a series of jaws arranged to hold the fibers securely between them while operated upon by said mechanism and to deliver the fibers to said sorting mechanism, and of means for holding said jaws closed when adjacent the field of operation of said first-named mechanism.

28. In a fiber sorting machine the combination with mechanism for entering between and passing longitudinally of the fibers, and with sorting mechanism, of an endless chain feeding device constructed to hold the fibers securely while operated upon by the first-named mechanism and to deliver the fibers to said sorting mechanism, said feeding device comprising links having complementary gripping faces arranged to be closed together by the straightening of the chain when adjacent the field of operation of said first-named mechanism.

29. In a fiber sorting machine, the combination with mechanism for entering between and passing longitudinally of the fibers, and with sorting mechanism, of an endless chain feeding device comprising links having complementary gripping faces and operating to convey the fibers within the field of operation of said first-named mechanism and to deliver them to said sorting mechanism, and of a guide arranged to engage with said links when adjacent the field of operation of said first-named means to insure secure gripping of the fibers.

30. In a fiber sorting machine, the combination with a feeding table, opposed wheel carriers mounted thereover, sorting mechanism disposed adjacent one of said carriers, and mechanism operating transversely between said carriers to enter between and pass longitudinally of the fibers; of an endless chain feeding device carried by the carriers, complementary gripping faces formed between the links of the chain and arranged to close together between the carriers, pivot pins connecting the links, rollers mounted on the ends of said pins and a guide located between the carriers for engagement with said rollers to insure the closing of the gripping faces when adjacent the field of operation of said transversely operating mechanism.

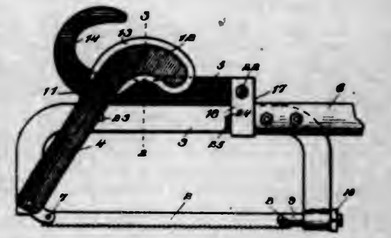
870,281. COAL-DRILL. BENJAMIN V. GILMORE, Red House Shoals, W. Va. Filed Dec. 4, 1906. Serial No. 346,316.



1. A removable point for mining drills, the same comprising an approximately flattened head of substantially circular outline and having a centrally disposed threaded opening and provided with integral bits projected from its outer face about in line with the axis of the threaded opening and located to one side thereof.

2. A mining drill having its extremity reduced and threaded and a removable point consisting of a flattened head of approximately rounded form having a centrally disposed threaded opening to match the reduced threaded extremity of the drill, and bits forming a part of the head and projected from the outer or lower face thereof and located upon opposite sides of the opening formed therein, said bits flaring towards their extremities and having a partial twist in their length.

870,282. PRUNING IMPLEMENT. LEWIS S. GOFF, Spencer, W. Va., assignor of one-third to Okey J. Chambers, Spencer, W. Va. Filed Dec. 7, 1906. Serial No. 346,803.



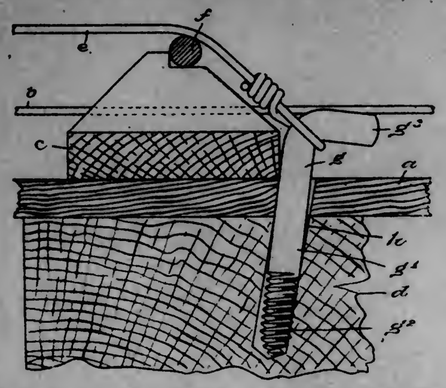
1. In a pruning implement, the combination of a saw, a frame therefor, of a shearing knife pivoted to said frame, a slidable hooked member pivoted to said knife, a slide carried by said slidable hooked member for engagement with the frame of the saw, said slide comprising a member having a rectangular portion extending under the said frame, and a similar member having its bottom edge constructed for interlocking engagement with the said rectangular portion of said first mentioned member, substantially as described.

2. In a pruning implement, the combination of a saw and a back therefor, a shearing knife pivoted to said back, said knife being provided with a rearwardly curved blade, said blade being provided with a knife edge entirely surrounding the same, a slidable hooked member pivoted to said knife edge on the forward edge of said knife blade, said slidable hooked member being hollowed out and provided with an edge for coacting with the said knife edge of the knife on the rear edge of said knife, substantially as described.

870,283. HITCH-PIN FOR STRINGED INSTRUMENTS. JOSEPH R. GREEN, Wakefield, Mass., assignor to The Phonoharp Company, East Boston, Mass., a Corporation of Maine. Filed Jan. 28, 1907. Serial No. 354,384.

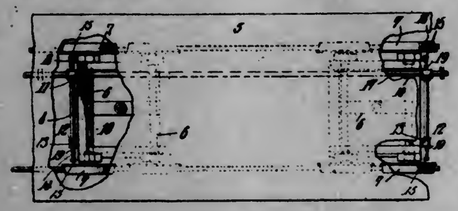
1. A musical instrument having a bridge and a pin aperture, the mouth of which is substantially tangential to the bridge, and a hooked hitch pin located in said aperture to engage the bridge and having a threaded end adapted to be embedded in the wall of the aperture by a strain of the string upon the pin.

2. A stringed musical instrument having a bridge, and a hitch pin aperture whose mouth is substantially tangential to the edge of the bridge, and whose axis is at an



inclination to a perpendicular to the surface of the sounding board of the instrument, and a hitch pin having a hooked upper end and a threaded lower end.

870,284. SAFETY DEVICE FOR AIR-BRAKES. JOHN W. GUFFEY, Arkansas City, Kans. Filed Aug. 28, 1907. Serial No. 390,508.



1. The combination with a rail-way car including a train pipe, of a pipe section rigidly secured to the platform of the car and communicating with the train pipe, and frangible portions carried by the opposite ends of the pipe section and adapted to be broken by contact with the adjacent car wheels upon the derailment of said car.

2. The combination with a rail-way car including a train pipe, of a pipe section extending transversely of the car and rigidly secured to the platform thereof, and extensions carried by the opposite ends of the pipe section and provided with weakening grooves, said extensions being arranged between the wheels of the car and adapted to be broken by contact with the latter upon derailment of said car.

3. The combination with a rail-way car including a train pipe, hangers rigidly secured to the platform of the car, a pipe section supported by the hangers and provided with frangible portions disposed between the wheels of the car and adapted to be broken by contact with said wheels upon derailment of the car.

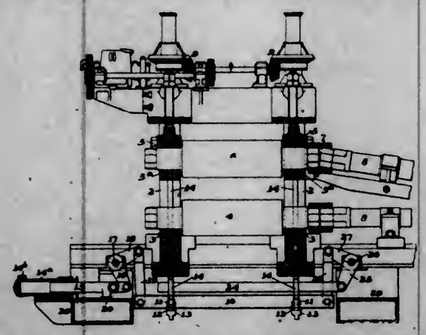
4. The combination with a rail-way car including a train pipe, of a pipe section depending from and rigidly secured to the platform of the car and communicating with the train pipe, frangible portions carried by the opposite ends of the pipe section and adapted to be broken by contact with the adjacent wheels upon derailment of said car, and a valve interposed between the pipe section and train pipe for cutting off communication between the two.

5. The combination with a rail-way car including a train pipe, hangers rigidly secured to the platform of the car, a pipe section extending transversely across the car and supported by said hangers, frangible portions extending longitudinally from the opposite ends of the pipe section and arranged between the wheels of the car, said frangible portions being provided with weakening grooves and adapted to be broken by contact with the wheels of the car upon derailment of the latter, and a valve interposed between one end of the pipe section and the train pipe for cutting off communication between the two.

6. The combination with a railway car including a train pipe, hangers rigidly secured to the platform of the car, a pipe section extending transversely of the car and supported by the hangers, frangible portions engaging the opposite ends of the pipe section and providing terminal caps, said frangible portions being arranged between the wheels of the truck and provided with weakening grooves adapted to be broken by contact with the wheels of the car upon derailment of the latter, and a valve interposed between the pipe section and the train pipe for controlling communication between the two.

7. The combination with a rail-way car including a train pipe, hangers rigidly secured to the platform of the car, a pipe section extending transversely of the car and having its opposite ends curved upwardly, an elbow joint secured to one of the up-turned ends of the pipe section, a T coupling secured to the opposite up-turned end of said pipe section, detachable frangible portions threaded in the elbow and T couplings, respectively, and extending between the wheels of the car, said frangible portions being provided with weakening grooves and adapted to be broken by contact with the wheels of the car upon derailment of said car, and a valve for cutting off communication between the train pipe and pipe section.

870,285. HYDRAULIC COUNTERBALANCE FOR ROLLING-MILLS. ALEXANDER K. HAMILTON, New Brighton, N. Y., and ALBERT T. KELLER, Pittsburg, Pa.; said Keller assignor of one-half of his right to Mesta Machine Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Nov. 24, 1905. Serial No. 288,888.



1. In a rolling mill, a vertically movable roll, a lifting member supporting the bearing for the roll, a lifting beam for actuating the lifting member, said beam being located below the roll housings and extending in a direction substantially parallel to the roll axes, motive devices located outside of the roll housings in the direction of the length of the beam, and an actuating connection between the motive devices and the beam for raising it and thereby the roll bearing and roll; substantially as described.

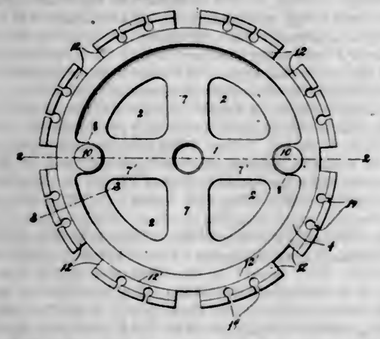
2. In a rolling mill, a vertically movable roll, a lifting member supporting the roll bearing, a lifting beam for actuating the lifting member, said beam being located below the roll housings and extending in a direction parallel to the roll axes, hydraulic cylinders outside of the roll housing and at one end of the beam, and an actuating connection between the piston of the cylinders and the beam; substantially as described.

3. In a rolling mill, a vertically movable roll, a lifting member supporting the roll bearing, a lifting beam for actuating the lifting member, said beam being located below the roll housings and extending in a direction parallel to the roll axes, hydraulic cylinders outside of the roll housing and at one end of the beam, and actuating connections from the piston of one cylinder to one end portion of the beam, and actuating connections from the piston of the other cylinder to the opposite end portion of said beam; substantially as described.

4. In a rolling mill, the combination with lifting rods for the movable roll bearings and cross-heads carrying the said rods, of a beam below the roll housings to which the cross-heads are connected, bell cranks connected to the end portions of the beam, and hydraulic cylinders connected to the bell cranks; substantially as described.

5. In a rolling mill, the combination with movable roll bearings, of a vertically movable beam below the roll housings, means carried by the beam for supporting the roll bearings, bell-crank levers at opposite ends of the mill and connected to the beam, and a hydraulic cylinder connected to each bell crank lever; substantially as described.

870,286. THREAD-GAGE. BENGT M. W. HANSON, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed Nov. 8, 1904. Serial No. 231,912.



1. A thread-gage comprising a carrier, a series of slotted thread-segments, having non-cutting threads; screws passing through the carrier, in threaded engagement with the segments, and serving to force them to conform to the surface of the carrier; and means independent of the screws for preventing movement of the segments.

2. A thread-gage comprising a circular carrier, a series of yieldable thread-segments having threaded seats arranged upon the surface of said carrier, and each having a non-cutting thread; tongue-and-groove connections for preventing lateral movement of said segments; and screws passing through the carrier and engaging said seats.

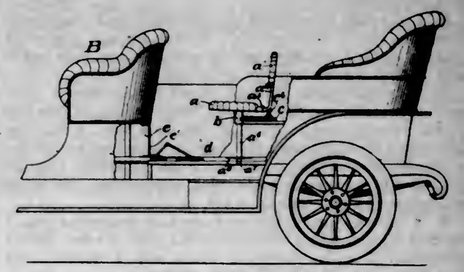
3. A thread-gage comprising a circular carrier, and a series of yieldable thread-segments conforming to the surface of the carrier; devices for securing said segments to the carrier; and means independent of said devices for preventing longitudinal and lateral movement of the segments with relation to said securing devices.

4. A thread-gage comprising a carrier, having a circular bearing-surface, and yieldable thread-segments shaped on their backs to conform to said bearing-surface, and extending longitudinally thereof; screws for securing the segments in place, and thereby forcing the segments against the carrier; and devices independent of the screws and inserted in openings of the segments and carrier for preventing movement of the segments with relation to said screws.

5. A thread-gage comprising a carrier having a circular bearing-surface, slotted non-cutting thread-gage segments, bolts for locking the segments on the carrier, and dowel-pins, passing through openings in the carrier, and entering the segments for preventing movement of these segments with relation to the bolts.

6. The combination, with an annular carrier having a split-extension, of a series of thread-gage segments secured to the inner surface of said carrier; a filling-piece in the split-extension; and means for clamping the parts of said extension together.

870,287. VEHICLE CONSTRUCTION. CHARLES J. HARRIS, Bridgeport, Conn. Filed Nov. 5, 1906. Serial No. 341,966.



1. An automobile having a body of the tonneau type and provided with a collapsible seat construction, the same comprising a seat bottom having a hinged back and a centrally hinged supporting rod, an underlying bracket adjacent the seat bottom and through which said rod passes, said bracket having laterally diverging arms, one provided with a straight end and the other with a curved end, a socket at the floor of the body for receiving the lower portion of the supporting rod, a socket plate secured to a side member of the vehicle body, said socket plate comprising a curved socket and a straight socket in which the curved and straight ended arms of the bracket respectively are removably secured and a spring pressed latching pin for retaining the straight ended arm in its socket.

2. An automobile having a body of the tonneau type and provided with a collapsible seat construction, the same comprising a seat bottom having a hinged back and a centrally hinged supporting rod, an underlying bracket adjacent the seat bottom and through which said rod passes, said bracket having laterally diverging arms, one provided with a straight end and the other with a curved end, a socket at the floor of the body for receiving the lower portion of the supporting rod, and a socket plate secured to a side member of the vehicle body, said socket plate comprising a curved socket and a straight socket in which the curved and straight ended arms of the bracket respectively are removably secured.

3. An automobile having a body of the tonneau type and provided with a removable and collapsible seat construction, the same comprising a seat bottom having a hinged back and a centrally hinged supporting rod, an underlying bracket adjacent the seat bottom and through which said rod passes, for removably securing said seat bottom upon said bracket said bracket having laterally diverging arms, one provided with a straight end and the other with a curved end, a socket at the floor of the body for receiving the lower portion of the supporting rod, a socket plate secured to a side member of the vehicle body, said socket plate comprising a curved socket and a straight socket in which the curved and straight ended arms of the bracket respectively are removably secured.

4. An automobile having a body of the tonneau type and provided with a collapsible seat construction, the same comprising a seat bottom having a hinged back and a centrally hinged supporting rod, an underlying bracket adjacent the seat bottom and through which said rod passes, said bracket having laterally diverging arms, one provided with a straight end and the other with a curved end, a socket at the floor of the body for receiving the lower portion of the supporting rod, a socket plate secured to a side member of the vehicle body, said socket plate comprising a curved socket and a straight socket in which the curved and straight ended arms of the bracket respectively are removably secured and a foot-rest to coöperate with said collapsible seat having means to permit of its adjustment towards and from the latter.

5. A carriage body provided with a collapsible seat construction, the same comprising a seat bottom having a hinged back and a hinged supporting rod, an underlying bracket adjacent the seat bottom, in which bracket the

rod is removably held and supported, means for removably supporting the bracket upon the carriage body, and a socket at the carriage floor for receiving the end of the seat supporting arm.

6. A carriage body having a removable seat comprising a seat bottom, a folding back, a folding leg and removable bracket to hold the leg near the seat bottom, and means also to hold the leg near its lower end.

7. A carriage body of the tonneau type having a main seat, a collapsible and removable seat mounted at one side of the tonneau and in front of the main seat, a foot-rest adjustably mounted upon the floor of the tonneau body for movement towards or from said removable seat, and the means for supporting said seat comprising removable bracket to hold the seat in place.

8. A carriage body having a seat, a depending leg, a bracket for removably holding the leg, said bracket having diverging laterally extending arms, and a socket plate in which the arms are removably secured.

9. A carriage body having a collapsible auxiliary seat and a removable seat holder, said seat and holder having coöperating disengageable members for retaining said seat in seating position and to permit its ready removal from said holder.

10. A carriage body provided with a main seat, a removable seat having means for supporting it in front of the main seat and at the side of said carriage, an adjustable foot rest, supported adjacent the floor of said carriage body and in front of said seats and comprising a pair of notched plates each mounted at one side of the floor of said carriage for supporting said foot rest, said foot rest comprising collapsible jointed members having means for temporarily engaging the notches of said plates.

11. An automobile body of the tonneau type having front and rear seats and a collapsible auxiliary seat and foot rest means arranged in the space between said seats provided with means for respectively securing the same upon the side and floor of said body and to permit their convenient removal.

12. A carriage body provided with a collapsible seat comprising a bottom or seat member, a hinged back and a folding leg, and supporting means in which said leg is swiveled.

13. An automobile having a body of the tonneau type, a removable collapsible seat, means including a socket plate and a disengageable seat supporting bracket for placing the seat in position in front of the rear seat of the tonneau.

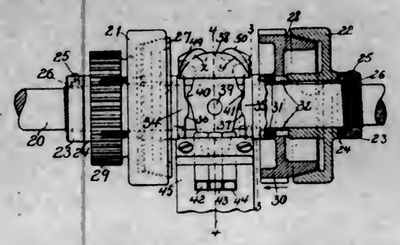
14. An automobile body having a removable collapsible auxiliary seat, a removable projecting seat holding member for maintaining the seat in position, and a support on the carriage body provided with latching means for removably securing said holding member thereto.

15. An automobile body having a fixed support *o* secured thereto, a removable seat supporting bracket *b* having means for readily applying it to and supporting it from and permitting it to be readily removed from said fixed support, and an auxiliary seat *a*, said seat and bracket having coöperating portions for retaining said seat in seating position upon said bracket and for permitting its ready removal from said bracket.

16. An automobile body having a fixed support *o* secured thereto, a removable seat supporting bracket *b* having means for readily applying it to and supporting it from and permitting it to be readily removed from said fixed support, and an auxiliary seat *a*, said seat having a rod a^6 for retaining said seat in seating position upon said bracket and for permitting its ready removal from said bracket.

870,288. CLUTCH MECHANISM. JAMES HARTNESS, Springfield, Vt. Filed Mar. 20, 1903. Serial No. 148,717.

1. In combination, a shaft, two members having complemental engaging surfaces, one of said members being fixed to said shaft and the other loose thereon, and one of said members being axially movable with respect to the other, a non-rotary device, means for holding said device against movement in lines parallel to the axis of said shaft, and an actuator pivoted to said shaft, and adapted when engaged by said device to move on its pivot and move said axially-movable member relatively to both said device and said actuator.



2. In combination, a support, two rotatable members on said support having complemental engaging faces, of which members one is axially movable with respect to the other, an actuator pivoted on said support and having means for moving one of said members axially relatively to said actuator into engagement with the other member and holding it against reverse movement, whereby said members are caused to rotate together, and a stationary abutment for intermittently engaging and moving said actuator.

3. In combination, a support, two members on said support of which one is axially movable with respect to the other said members having complemental engaging surfaces, an actuator pivoted upon said support and having a cam for moving one of said members axially and holding it against reverse movement, and means for oscillating said actuator.

4. In combination, two rotary members having complemental engaging surfaces, one of said members being movable axially with respect to the other, non-rotary devices, relatively to which said members rotate, held against movement in lines parallel to the axes of said members, and an actuator rotatable with one of said members but movable relatively thereto when engaged by said non-rotary devices to impel the movable member axially in either direction with relation to the actuator and to the other of said members without stopping the rotation of said actuator.

5. In combination, two rotary members of which one is axially movable with respect to the other, an actuator rotatable with one of said members but pivoted independently thereof and movable relatively thereto to effect the axial actuation of the movable member, and a non-rotary member adapted to be projected into the path of the actuator in consequence of which said actuator swings it about its pivot and causes the axial movement of said movable member relatively to both said actuator and the other member.

6. In combination, two rotary members having complemental surfaces for engagement, one of said members being axially movable with respect to the other, an actuator rotatable with one of said members supported independently of said member and movable relatively thereto to impel said movable member axially to cause the engagement or disengagement of said surfaces, and independent keys for engagement with said actuator to move it in one direction or the other.

7. In combination, two rotary members of which one is axially movable with respect to the other, an actuator connected to one of said members to rotate therewith, but supported independently thereof and movable relatively thereto, said actuator and the movable member having complemental engaging surfaces in consequence of which a movement of the actuator effects the axial movement of said member relatively to the other member, and relatively stationary means adapted to be moved into the path of a part of the actuator to move it in one direction or the other whereby said rotary members may be clutched to rotate together or unclutched, as the case may be.

8. In combination, two complemental members, one of said members being movable into engagement with the other, an actuator rotatable with one of said members but supported independently of and movable relatively to both said members in consequence of which it is adapted to move the movable member relatively to its complemental member, and manually-operable keys held against movement longitudinally of the lines of movement of said actuator and adapted to be thrust into engagement with said actuator to move it in either direction at will and thereby effect the engagement or disengagement of the two members.

9. In combination, two complemental clutch-members adapted to be moved into clutching relation, a stationary abutment, and means supported independently of but rotatable with one of said members, and movable relatively to said members so as to be engaged by said stationary abutment and moved to thereby move said clutch members into and out of clutched relation.

10. In combination, two rotatable members having complemental engaging surfaces, a stationary abutment and a pivoted device rotatable with one of said members and in wedging relation to one of said members, said device being adapted to engage said stationary abutment and be moved about its pivot, thereby to wedge one of said members into engagement with the other.

11. In combination, two complemental clutch-members adapted to be moved into clutching relation, a stationary abutment, and an oscillatory cam rotatable with one of said members and adapted to engage said stationary abutment so as to be actuated relatively to said members and by its movement to thereby move said clutch-members into clutched relation, said cam and said abutment having complemental engaging surfaces.

12. In combination, two complemental clutch-members adapted to be moved into clutching relation, an actuator rotatable with one of said members, and adapted to move said members into clutched relation, a plurality of keys normally in inoperative position and adapted to be operated singly to operate said actuator, and stationary means for supporting said keys.

13. In combination, a shaft, two members of which one is splined upon and the other is loose upon the shaft, and of which one is axially movable and the other is axially stationary, said members having complemental surfaces for engagement, an actuator pivoted upon said shaft, and adapted to engage and move the axially movable member relatively to the other member, and a stationary abutment adapted to engage said actuator to swing it about its pivot.

14. In combination, a driving-shaft, complemental clutch members of which one is splined upon and the other is loose upon the shaft, and of which one is axially movable and the other is axially stationary, a rocking cam pivoted upon said shaft, and adapted to move the axially movable clutch member into engagement with its complemental clutch-member, a stationary abutment adapted to engage said cam to rock it on its pivot, and a collar splined on said shaft and interposed between the cam and the rocking cam, said collar and said cam having cam-surfaces adapted to be engaged when the cam is rocked by said abutment to effect the axial movement of said clutch-member.

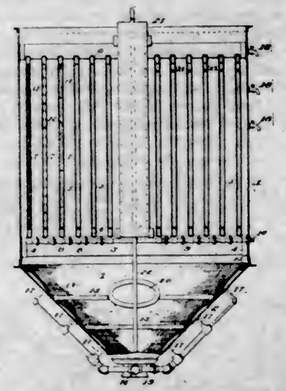
15. In combination, a driving shaft, two pairs of complemental clutch-members, the inner members of each pair being axially movable into clutched relation to their complemental members, and each pair having one member fast on and the other member loose on said shaft, and an oscillatory actuator supported on said shaft independently of said members for moving said inner clutch members alternately into engagement with their complemental members.

16. In combination, a driving-shaft, two pairs of complemental clutch-members, the inner members of each pair being axially movable into clutched relation to their complemental members, and each pair having one member fast on and the other member loose on the said shaft, an actuator movable on and rotatable with said shaft for moving said inner clutch-members alternately into engagement with their complemental members, and a stationary abutment for moving said actuator.

17. In combination, a driving-shaft, two pairs of complemental clutch-members, the inner members of each pair being axially movable into clutched relation to their complemental members, and each pair having one member fast on and the other member loose on said shaft, a rocking cam rotatable with said shaft and having provisions for actuating said inner clutch members alternately, and a plurality of stationary independently operable abutments for rocking said cam.

18. In combination, a driving-shaft, two pairs of complemental clutch-members, the inner members of each pair being axially movable into clutched relation to their complemental members, and each pair having one member fast on and the other member loose on said shaft, a rocking cam rotatable with said shaft, and having opposite cam-projections adapted to be brought alternately into engagement with said inner clutch-members to move them axially, and independent keys or abutments adapted to engage said cam to rock it in one direction or the other.

870,289. METHOD OF RECOVERING SOLUTIONS. WILBUR A. HENDRYX, Denver, Colo. Filed Apr. 25, 1907. Serial No. 370,319.



1. The method of recovering solutions which consists in introducing a liquid beneath a charge containing a solid and a solution, displacing the solution by the upward flow of such liquid, and filtering and thereby withdrawing the displaced solution.

2. The method of recovering solutions which consists in introducing a liquid in a substantially uniform manner beneath a charge containing a solid and a solution, displacing the solution by the upward flow of such liquid, and filtering and thereby withdrawing the displaced solution.

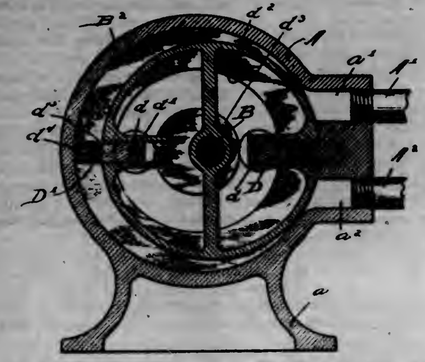
3. The method of recovering solutions which consists in introducing a liquid in a substantially uniform manner beneath a charge containing a solid and a solution, displacing the solution by the upward flow of such liquid, and withdrawing the displaced solution at a plurality of points.

870,290. ROTARY ENGINE. ADOLF W. HENKEL, Kenosha, Wis., assignor of one-half to Robert Erskine Wilkinson, Kenosha, Wis. Filed Jan. 21, 1907. Serial No. 353,215.

1. In a device of the class described the combination with a cylinder of a head on each end thereof, a rotary element journaled eccentrically in said cylinder, piston or abutments radially slidable therein, a cam integral with each head, a removable ring bearing against each head and rollers carried on each abutment or piston adapted to track between said cam and ring.

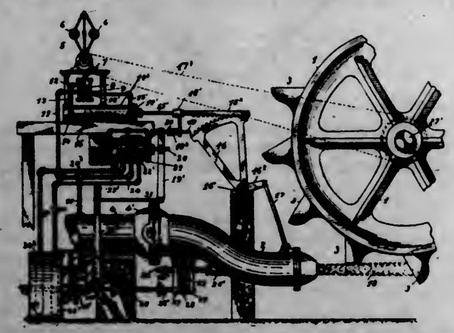
2. In a rotary engine the combination with a cylinder having inlet and exhaust ports of a head rigidly engaged to each end of the cylinder, a rotary element journaled eccentrically in the cylinder, a reciprocating abutment or piston in said element, oppositely disposed wheels journaled to the piston, a cam adapted to force said abut-

ments outwardly and a removable ring adapted to actuate the abutments inwardly.



3. In a rotary engine, a cylinder having a head rigidly bolted to each end, a rotary element in the cylinder, an abutment or piston slidable radially in said element, a shaft journaled in each, a wheel rigidly engaged on each end thereof, a cam adapted to contact each wheel to positively extend the abutment to contact the cylinder and a removable element adapted to retract said piston or abutment.

870,291. REGULATING MEANS FOR WATER-WHEEL NOZZLES. GEORGE J. HENRY, Jr., San Francisco, Cal., assignor of one-half to The Pelton Water Wheel Company, San Francisco, Cal., a Corporation of California. Filed June 9, 1903. Serial No. 160,735.



1. In a hydraulic regulating means, the combination with the hydraulic motor, of a governor, a nozzle, a plug for regulating the outlet area of the nozzle, means for imparting movement to the plug in one direction, including a shaft connecting with the plug, and a drive wheel connected to the shaft, and means for imparting reverse movement to the plug, including a sleeve mounted upon the shaft, a drive wheel carried by the sleeve, and means for connecting the sleeve to the shaft, a lever connected with the shaft and a connected supplemental lever operatively associated with the governor, whereby the operation of the plug is regulated by the movement of the governor.

2. In a hydraulic regulating means, the combination with the hydraulic motor, of a governor, a pivoted nozzle, and means for automatically adjusting the nozzle on its pivot including a sliding piston controlled by the governor, a stem for the piston having a rack thereon, a pivoted toothed segment lever connected with said rack, and lever connections between said segment lever and the nozzle, in combination with means for regulating the cross sectional area of the discharge of the nozzle, to vary the same proportionately to the working load of the motor, the said means including a reciprocatory plug for the nozzle, actuating devices therefor and connecting devices including gearing interposed between one of the actuating devices and plug, and means for bringing said actuating device and gearing into play only when movement in one direction is to be imparted to the plug.

3. The combination with a hydraulic motor, of the governor mechanism, a nozzle for the discharge of an impact or propelling stream onto the motor, of means actuated by the governor mechanism for varying the direction of the discharged stream, automatically operated means for varying the discharge of the nozzle proportionately to the working load of the motor, said means having associated therewith devices for bringing said means to a positive state of rest the moment the nozzle's discharge has been proportioned to the working load of the motor.

4. In an hydraulic apparatus, the combination with a water wheel provided on its periphery with a series of buckets of a deflectable nozzle for discharging an impact stream onto the buckets of the water wheel, of a needle valve arranged within the nozzle, of governor mechanism for controlling the deflection of the nozzle in accordance with load changes, of hydraulic means actuated by said mechanism for gradually moving the needle valve within the nozzle to vary the discharge of the said nozzle in accordance with changed positions thereof to place the impact stream wholly or partially onto and off the buckets of the water wheel, and of devices associated with said means for bringing the same to a state of rest upon the nozzle discharge being proportioned to the working load of the motor.

5. In a hydraulic regulating means, the combination with the hydraulic motor, of a governor, a pivoted nozzle, and means for automatically adjusting the nozzle on its pivot, including a cylinder, a slide valve within the cylinder actuated by said governor, a supply inlet for the cylinder, a piston cylinder, a sliding piston within the cylinder, a connection between said cylinders whereby according to the operation of the governor, the piston will be reciprocated, a stem for the piston having a rack thereon, a pivoted toothed segment lever connected with said rack, and lever connections between said segment lever and the nozzle in combination with means for regulating the cross sectional area of the discharge of the nozzle to vary the same proportionately to the working load of the motor, the said means including a reciprocatory plug for the nozzle, motors therefor and connections between the motors and the plug, said connections including gearing independently actuated by one of the motors to impart the forward movement to the plug.

6. In a hydraulic regulating means, the combination with the hydraulic motor, of a governor, a pivoted nozzle, and means for automatically adjusting the nozzle on its pivot including a reciprocating arm, and means operatively associated with said arm for regulating the cross sectional area of the discharge of the nozzle to vary the same proportionately to the working load of the motor, the said means including a reciprocatory plug for the nozzle, a valve mechanism operative by the movement of said arm, hydraulic motor devices for imparting backward and forward movements to said plug, connections between said valve mechanism and said motor devices whereby the latter are set into operation by the former, and means for bringing the plug actuating means to a positive state of rest the moment the nozzle's discharge has been proportioned to the working load of the motor.

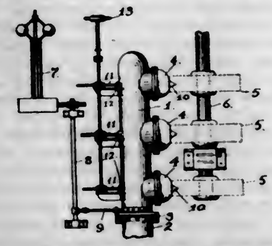
7. The combination with a hydraulic motor, of the governor mechanism, a nozzle for the discharge of an impact or propelling stream onto the motor, and means controlled by the governor for varying the discharge of the nozzle, including a reciprocatory plug for the nozzle, and gearing therefor constructed and arranged to permit the closing movement of the plug to be relatively slower than the opening movement thereof.

8. The combination with a hydraulic motor, of the governor mechanism, a nozzle for the discharge of an impact or propelling stream onto the motor, and means for varying the discharge of the nozzle including a reciprocatory plug and a plurality of hydraulic motors having connections with, and operating respectively according to the movement of the governor to impart forward and back movements to the plug, connection between said motors and plug and said connection being constructed and arranged to permit the forward movement of the plug to be relatively slow.

9. The combination with a hydraulic motor of a governor mechanism, a nozzle for the discharge of an impact stream, and means for varying the discharge of the nozzle, including a reciprocatory plug, a plurality of oppositely acting hydraulic motors controlled by the governor mechanism to impart forward and back movements to the plug, connections between the motors and the plug, the connection between one of the motors and the plug including a series of interposed gears constructed and arranged to cause the forward movement of said plug to be relatively slow.

10. In a hydraulic regulating means, the combination with a hydraulic motor, of a governor, a pivoted nozzle, and means for automatically adjusting the nozzle on its pivot including a sliding piston actuated by the governor, a stem for the piston having a rack thereon, a pivoted toothed segment lever connecting with said rack, and lever connections between said segment lever and the nozzle, in combination with means for regulating the cross sectional area of the discharge of the nozzle to vary the same proportionately to the working load of the motor, the said means including a reciprocatory plug for the nozzle, and means for imparting forward and back movements to said plug including a plurality of hydraulic motors, a supply cylinder having communication with the respective motors, a piston in said cylinder, a stem for the piston, an operating lever having pivotal connection with said stem and operatively connected with the said stem of the first mentioned piston, and means whereby the actuating devices for the plug will be brought to a state of rest upon the nozzle's discharge being proportioned to the working load of the motor.

870,292. REGULATING MEANS FOR IMPACT-STREAMS. GEORGE J. HENRY, Jr., San Francisco, Cal., assignor of one-half to The Pelton Water Wheel Company, San Francisco, Cal., a Corporation of California. Filed Aug. 29, 1905. Serial No. 276,254.



1. The combination with a hydraulic motor of a main line water pipe, a straight longitudinal nozzle supply pipe movable about its own longitudinal axis, to vary the direction of the stream relative to the motor.

2. The combination with a hydraulic motor of a main line water pipe, an elongated substantially straight nozzle pipe extending in a direction parallel with the axis of the motor and means for rotating the nozzle pipe about its own longitudinal axis.

3. The combination with a water wheel or hydraulic motor, of a main line water supply pipe, of a straight longitudinal member rotatably connected therewith and constituting a prolongation thereof for directing the impact stream onto the water wheel, an outlet opening in said rotatable member, of mechanism for rotating said member about its own longitudinal axis for directing an impact stream onto or off the water wheel, and means for controlling the discharge area of the outlet of the rotatable member to regulate the quantity of the water discharge therefrom.

4. The combination of a hydraulic motor of a main line water pipe, a nozzle pipe movable about its own longitudinal axis and about the stream passing therethrough, and means for moving the nozzle pipe relative to the periphery of the motor wheel while maintaining it fixed against movement across said periphery.

5. In combination with a water wheel, of a water supply pipe, means for automatically turning a portion of the water flowing from the pipe away from or towards the wheel, said means including a straight longitudinal member constituting a prolongation of said pipe and rotatable about its own longitudinal axis, a valve to regulate the flow of water, a speed governor, and interconnecting operating mechanism between the governor and the automatic turning means.

6. In combination with a water wheel, an elongated supply nozzle member rotatable about its own longitudinal axis, to dispose its outlet at different points around the periphery of the wheel whenever the wheel changes its speed, a valve to regulate the flow of water from the nozzle, and valve operating mechanism.

7. In combination with a hydraulic motor, of the governor mechanism, a water supply pipe, a longitudinal straight hollow nozzle carrying device actuated by the governor mechanism for varying the direction of the discharge stream from the nozzle, the said carrying device constituting a prolongation of said supply pipe in the same direction, and a nozzle connected directly to said device and extending at substantially right angles to the direction of the flow of the stream through said device, and means for varying the discharge from the nozzle.

8. The combination with a hydraulic motor, of a main line water pipe, of a plurality of nozzles and a single longitudinal straight carrying pipe for said nozzle rotatable about its own longitudinal axis and connected to said water pipe and constituting a continuation thereof in substantially the same line whereby the relative position of said nozzles with respect to said motor may be simultaneously adjusted in the same direction relative to the motor.

9. The combination with a hydraulic motor, of a main line water pipe, of a plurality of connected nozzles removable relative to the motor to change the direction of the issuing stream, means for varying the discharge outlet of the respective nozzles, and a common actuating means for said last mentioned means.

10. The combination with a hydraulic motor, of a main line water pipe, a plurality of connected nozzles simultaneously movable relative to the motor to change the direction of the issuing stream, automatically operable means for adjusting said nozzles, means for varying the discharge outlet of the respective nozzles, and a common actuating means for said last mentioned means.

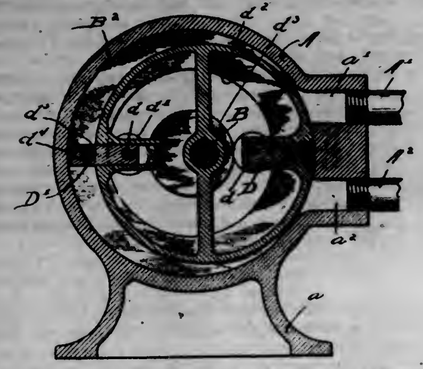
11. The combination with a hydraulic motor, of a main line water pipe, a plurality of connected nozzles simultaneously movable relative to the motor to change the direction of the issuing stream, means mounted within the nozzles for varying the discharge outlet of the respective nozzles, and a common actuating means for said last mentioned means.

12. The combination with a series of hydraulic motors mounted on a single shaft, of a main line pipe, of a rotatable device having a series of nozzles extending at right angles thereto for directing the impact stream onto and off the water wheels, the said device being rotatably connected at one end to one terminal of the main line pipe, and arranged parallel to the wheel shaft.

13. The combination with a series of hydraulic motors mounted on a single shaft, of a main line supply pipe having branch extensions at its outlet end, of a rotatable device having a series of nozzles for directing the impact stream onto and off the water wheels, the said device being rotatably connected at its opposite ends to the respective terminals of the main line pipe.

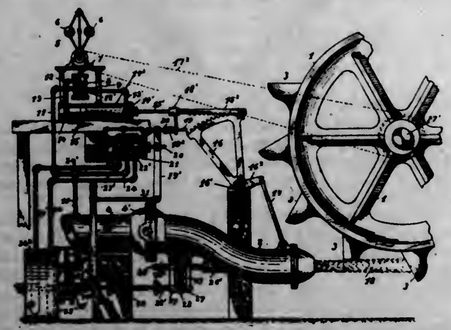
14. The combination with a series of hydraulic motors mounted on a single shaft, of a main line supply pipe having branch extensions at its outlet end, of a rotatable device having a series of nozzles for directing an impact stream onto and off the water wheels, the said device being rotatably connected at its opposite ends to the re-

ments outwardly and a removable ring adapted to actuate the abutments inwardly.



3. In a rotary engine, a cylinder having a head rigidly bolted to each end, a rotary element in the cylinder, an abutment or piston slidable radially in said element, a shaft journaled in each, a wheel rigidly engaged on each end thereof, a cam adapted to contact each wheel to positively extend the abutment to contact the cylinder and a removable element adapted to retract said piston or abutment.

870,291. REGULATING MEANS FOR WATER-WHEEL NOZZLES. GEORGE J. HENRY, Jr., San Francisco, Cal., assignor of one-half to The Pelton Water Wheel Company, San Francisco, Cal., a Corporation of California. Filed June 9, 1903. Serial No. 160,735.



1. In a hydraulic regulating means, the combination with the hydraulic motor, of a governor, a nozzle, a plug for regulating the outlet area of the nozzle, means for imparting movement to the plug in one direction, including a shaft connecting with the plug, and a drive wheel connected to the shaft, and means for imparting reverse movement to the plug, including a sleeve mounted upon the shaft, a drive wheel carried by the sleeve, and means for connecting the sleeve to the shaft, a lever connected with the shaft and a connected supplemental lever operatively associated with the governor, whereby the operation of the plug is regulated by the movement of the governor.

2. In a hydraulic regulating means, the combination with the hydraulic motor, of a governor, a pivoted nozzle, and means for automatically adjusting the nozzle on its pivot including a sliding piston controlled by the governor, a stem for the piston having a rack thereon, a pivoted toothed segment lever connected with said rack, and lever connections between said segment lever and the nozzle, in combination with means for regulating the cross sectional area of the discharge of the nozzle, to vary the same proportionately to the working load of the motor, the said means including a reciprocatory plug for the nozzle, actuating devices therefor and connecting devices including gearing interposed between one of the actuating devices and plug, and means for bringing said actuating device and gearing into play only when movement in one direction is to be imparted to the plug.

3. The combination with a hydraulic motor, of the governor mechanism, a nozzle for the discharge of an impact or propelling stream onto the motor, of means actuated by the governor mechanism for varying the direction of the discharged stream, automatically operated means for varying the discharge of the nozzle proportionately to the working load of the motor, said means having associated therewith devices for bringing said means to a positive state of rest the moment the nozzle's discharge has been proportioned to the working load of the motor.

4. In an hydraulic apparatus, the combination with a water wheel provided on its periphery with a series of buckets of a deflectable nozzle for discharging an impact stream onto the buckets of the water wheel, of a needle valve arranged within the nozzle, of governor mechanism for controlling the deflection of the nozzle in accordance with load changes, of hydraulic means actuated by said mechanism for gradually moving the needle valve within the nozzle to vary the discharge of the said nozzle in accordance with changed positions thereof to place the impact stream wholly or partially onto and off the buckets of the water wheel, and of devices associated with said means for bringing the same to a state of rest upon the nozzle discharge being proportioned to the working load of the motor.

5. In a hydraulic regulating means, the combination with the hydraulic motor, of a governor, a pivoted nozzle, and means for automatically adjusting the nozzle on its pivot, including a cylinder, a slide valve within the cylinder actuated by said governor, a supply inlet for the cylinder, a piston cylinder, a sliding piston within the cylinder, a connection between said cylinders whereby according to the operation of the governor, the piston will be reciprocated, a stem for the piston having a rack thereon, a pivoted toothed segment lever connected with said rack, and lever connections between said segment lever and the nozzle in combination with means for regulating the cross sectional area of the discharge of the nozzle to vary the same proportionately to the working load of the motor, the said means including a reciprocatory plug for the nozzle, motors therefor and connections between the motors and the plug, said connections including gearing independently actuated by one of the motors to impart the forward movement to the plug.

6. In a hydraulic regulating means, the combination with the hydraulic motor, of a governor, a pivoted nozzle, and means for automatically adjusting the nozzle on its pivot including a reciprocating arm, and means operatively associated with said arm for regulating the cross sectional area of the discharge of the nozzle to vary the same proportionately to the working load of the motor, the said means including a reciprocatory plug for the nozzle, a valve mechanism operative by the movement of said arm, hydraulic motor devices for imparting backward and forward movements to said plug, connections between said valve mechanism and said motor devices whereby the latter are set into operation by the former, and means for bringing the plug actuating means to a positive state of rest the moment the nozzle's discharge has been proportioned to the working load of the motor.

7. The combination with a hydraulic motor, of the governor mechanism, a nozzle for the discharge of an impact or propelling stream onto the motor, and means controlled by the governor for varying the discharge of the nozzle, including a reciprocatory plug for the nozzle, and gearing therefor constructed and arranged to permit the closing movement of the plug to be relatively slower than the opening movement thereof.

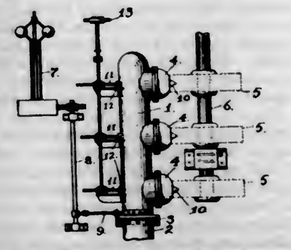
8. The combination with a hydraulic motor, of the governor mechanism, a nozzle for the discharge of an impact or propelling stream onto the motor, and means for varying the discharge of the nozzle including a reciprocatory plug and a plurality of hydraulic motors having connections with, and operating respectively according to the

movement of the governor to impart forward and back movements to the plug, connection between said motors and plug and said connection being constructed and arranged to permit the forward movement of the plug to be relatively slow.

9. The combination with a hydraulic motor of a governor mechanism, a nozzle for the discharge of an impact stream, and means for varying the discharge of the nozzle, including a reciprocatory plug, a plurality of oppositely acting hydraulic motors controlled by the governor mechanism to impart forward and back movements to the plug, connections between the motors and the plug, the connection between one of the motors and the plug including a series of interposed gears constructed and arranged to cause the forward movement of said plug to be relatively slow.

10. In a hydraulic regulating means, the combination with a hydraulic motor, of a governor, a pivoted nozzle, and means for automatically adjusting the nozzle on its pivot including a sliding piston actuated by the governor, a stem for the piston having a rack thereon, a pivoted toothed segment lever connecting with said rack, and lever connections between said segment lever and the nozzle, in combination with means for regulating the cross sectional area of the discharge of the nozzle to vary the same proportionately to the working load of the motor, the said means including a reciprocatory plug for the nozzle, and means for imparting forward and back movements to said plug including a plurality of hydraulic motors, a supply cylinder having communication with the respective motors, a piston in said cylinder, a stem for the piston, an operating lever having pivotal connection with said stem and operatively connected with the said stem of the first mentioned piston, and means whereby the actuating devices for the plug will be brought to a state of rest upon the nozzle's discharge being proportioned to the working load of the motor.

870,292. REGULATING MEANS FOR IMPACT-STREAMS. GEORGE J. HENRY, Jr., San Francisco, Cal., assignor of one-half to The Pelton Water Wheel Company, San Francisco, Cal., a Corporation of California. Filed Aug. 29, 1905. Serial No. 276,254.



1. The combination with a hydraulic motor of a main line water pipe, a straight longitudinal nozzle supply pipe movable about its own longitudinal axis, to vary the direction of the stream relative to the motor.

2. The combination with a hydraulic motor of a main line water pipe, an elongated substantially straight nozzle pipe extending in a direction parallel with the axis of the motor and means for rotating the nozzle pipe about its own longitudinal axis.

3. The combination with a water wheel or hydraulic motor, of a main line water supply pipe, of a straight longitudinal member rotatably connected therewith and constituting a prolongation thereof for directing the impact stream onto the water wheel, an outlet opening in said rotatable member, of mechanism for rotating said member about its own longitudinal axis for directing an impact stream onto or off the water wheel, and means for controlling the discharge area of the outlet of the rotatable member to regulate the quantity of the water discharge therefrom.

4. The combination of a hydraulic motor of a main line water pipe, a nozzle pipe movable about its own longitudinal axis and about the stream passing therethrough, and means for moving the nozzle pipe relative to the periphery of the motor wheel while maintaining it fixed against movement across said periphery.

5. In combination with a water wheel, of a water supply pipe, means for automatically turning a portion of the water flowing from the pipe away from or towards the wheel, said means including a straight longitudinal member constituting a prolongation of said pipe and rotatable about its own longitudinal axis, a valve to regulate the flow of water, a speed governor, and interconnecting operating mechanism between the governor and the automatic turning means.

6. In combination with a water wheel, an elongated supply nozzle member rotatable about its own longitudinal axis, to dispose its outlet at different points around the periphery of the wheel whenever the wheel changes its speed, a valve to regulate the flow of water from the nozzle, and valve operating mechanism.

7. In combination with a hydraulic motor, of the governor mechanism, a water supply pipe, a longitudinal straight hollow nozzle carrying device actuated by the governor mechanism for varying the direction of the discharge stream from the nozzle, the said carrying device constituting a prolongation of said supply pipe in the same direction, and a nozzle connected directly to said device and extending at substantially right angles to the direction of the flow of the stream through said device, and means for varying the discharge from the nozzle.

8. The combination with a hydraulic motor, of a main line water pipe, of a plurality of nozzles and a single longitudinal straight carrying pipe for said nozzle rotatable about its own longitudinal axis and connected to said water pipe and constituting a continuation thereof in substantially the same line whereby the relative position of said nozzles with respect to said motor may be simultaneously adjusted in the same direction relative to the motor.

9. The combination with a hydraulic motor, of a main line water pipe, of a plurality of connected nozzles removable relative to the motor to change the direction of the issuing stream, means for varying the discharge outlet of the respective nozzles, and a common actuating means for said last mentioned means.

10. The combination with a hydraulic motor, of a main line water pipe, a plurality of connected nozzles simultaneously movable relative to the motor to change the direction of the issuing stream, automatically operable means for adjusting said nozzles, means for varying the discharge outlet of the respective nozzles, and a common actuating means for said last mentioned means.

11. The combination with a hydraulic motor, of a main line water pipe, a plurality of connected nozzles simultaneously movable relative to the motor to change the direction of the issuing stream, means mounted within the nozzles for varying the discharge outlet of the respective nozzles, and a common actuating means for said last mentioned means.

12. The combination with a series of hydraulic motors mounted on a single shaft, of a main line pipe, of a rotatable device having a series of nozzles extending at right angles thereto for directing the impact stream onto and off the water wheels, the said device being rotatably connected at one end to one terminal of the main line pipe, and arranged parallel to the wheel shaft.

13. The combination with a series of hydraulic motors mounted on a single shaft, of a main line supply pipe having branch extensions at its outlet end, of a rotatable device having a series of nozzles for directing the impact stream onto and off the water wheels, the said device being rotatably connected at its opposite ends to the respective terminals of the main line pipe.

14. The combination with a series of hydraulic motors mounted on a single shaft, of a main line supply pipe having branch extensions at its outlet end, of a rotatable device having a series of nozzles for directing an impact stream onto and off the water wheels, the said device being rotatably connected at its opposite ends to the re-

spective terminals of the main line pipe, and means within the respective nozzles for varying the discharge therefrom.

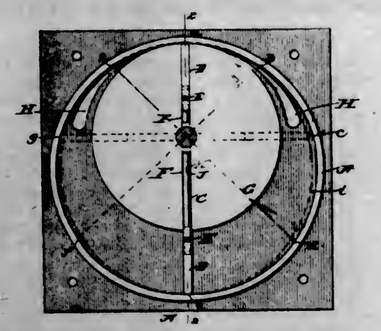
15. The combination with a series of hydraulic motors mounted on a single shaft, of a main line supply pipe having branch extensions at its outlet end, of a rotatable device having a series of nozzles for directing an impact stream onto and off the water wheels, the said device being rotatably connected at its opposite ends to the respective terminals of the main line pipe, means within the respective nozzles for varying the discharge therefrom and a common actuating means for said last mentioned means.

16. The combination with a series of hydraulic motors, mounted on a single shaft, of a main line supply pipe having branch extensions at its outlet end, of an automatically rotatable device having a series of nozzles for directing the impact stream onto and off the water wheels, the said device being rotatably connected at its opposite ends to the respective terminals of the main line pipe.

17. The combination of a water wheel, a main line water pipe, a nozzle pipe comprising a longitudinal member carrying a series of nozzles and means for rotating the nozzle pipe about its own longitudinal axis whereby the nozzles are moving simultaneously in the same direction towards and from the wheel.

18. The combination with a hydraulic motor of a main line water pipe, a member rotatably connected therewith and comprising a longitudinal member rotatable about its own longitudinal axis for directing an impact stream wholly or partially onto and off the motor and mechanism for actuating said member in accordance with the working load of the motor.

870,293. ROTARY ENGINE. HENRY A. HEWEY, Claremont, N. H. Filed Apr. 23, 1906. Serial No. 313,264.

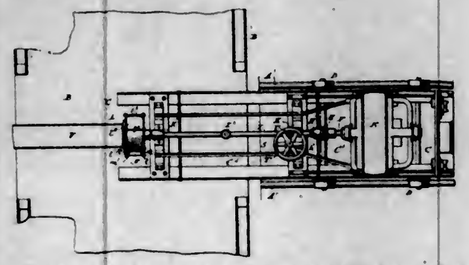


1. In a rotary engine a cylinder, a power shaft, a hub, pistons movable radially in the hub each provided with a socket, a coupling bar having its ends fitted to said sockets and binding screws for rigidly connecting the pistons to the coupling bars.

2. In a rotary engine a cylinder having an opening through one head thereof normally closed, a power shaft, a hub, pistons movable radially in the hub each provided with a socket, a coupling bar having its ends fitted to said sockets, a binding screw associated with each piston extending through the same from one radial edge thereof, the heads of said binding screws being designed to be registered with said opening in the travel of the pistons, and means for forcing the pistons outwardly when the screws are loosened.

3. In a rotary engine, a cylinder, a power shaft, a hub, two pistons movable radially in the hub, each provided with a socket, a coupling bar having its ends fitted to the sockets, a spring located in each socket normally under compression between the end wall of the latter and the adjacent end of the coupling bar, and a binding screw associated with each piston for rigidly connecting the same to the coupling rod.

870,294. CAR-LOADER. JOHN H. HUHN and CHARLES F. ICE, Fairmont, W. Va., assignors, by direct and mesne assignments, to Fairmont Box Car Loader Company, Fairmont, W. Va., a Corporation of West Virginia. Filed May 12, 1905. Serial No. 260,140.



1. The combination of a relatively stationary casing, a rotary distributing device in the casing, both supported at one side of the casing, and the driving shaft for the distributing device, said casing having an outer end wall with a central feed opening an inner end wall centrally secured to a holder or support and a peripheral wall with a discharge opening, and said rotary distributing device having an inner ring wall adjacent and parallel to the inner wall of the casing and an outer disk wall with blades or vanes connecting the ring wall and the disk wall, substantially as set forth.

2. The combination of a relatively stationary casing, a rotary distributing device in the casing, both supported at one side of the casing, and the driving shaft for the distributing device, said casing having an inner ring end wall with a central feed opening, an outer disk end wall centrally secured to a holder or support and a peripheral wall with a discharge opening, and said rotary distributing device having an inner ring wall adjacent and parallel to the inner wall of the casing, and an outer disk wall with blades or vanes connecting the ring wall and the disk wall, said blades or vanes being from end to end remote from the central support of the distributing device, said parts being constructed and arranged substantially as set forth whereby material can be introduced centrally through an unobstructed passage in the two inner ring walls.

3. The combination with a relatively stationary casing having an inner ring end wall and a central feed opening and an outer disk wall centrally secured to a holder or support, of an interior distributing device having an inner ring wall adjacent and parallel to the ring wall of the casing an outer disk wall and blades or vanes connecting the ring wall to the disk wall and a driving shaft secured to the disk wall of the rotary distributing device and extending through the casing support, said parts being constructed and arranged substantially as set forth, whereby the loader can receive the material through an unobstructed central passage way on the side opposite to the casing support, as described.

4. The combination of the casing having suitable inlet and discharge orifices, a driving shaft, and a rotary distributing head having a disk wall at the outer end secured to said shaft, and a ring wall at the inner end disconnected from the shaft but having a centrally unobstructed central inlet opening or feed orifice, and blades or vanes cast integrally with the said ring wall and said disk wall and having their inner edges from end to end situated on lines remote from the axis, whereby an open space is provided between the axis and the said inner edges of the blades from end to end of the latter, substantially as set forth.

5. The combination with the casing, of the driving shaft, and the rotary distributing head secured thereto, said rotary head having an outer end wall, and an inner end wall with opposite outward diverging faces and having blades extending from the outer end wall to the inner end wall and arranged to have an open space between the central shaft support and the inner edges of the blades, said open space extending continuously from one of said walls to the other, substantially as set forth.

6. The combination of a driving shaft, the rotary distributing head secured to the shaft, said head having at the outer end a disk and at the inner end a centrally open ring with blades or vanes extending from the ring to the disk, the disk, the ring and the blades being cast integrally together, and a casing surrounding the head and having at its inner end a relatively stationary ring adjacent to the rotary head ring with a centrally unobstructed central feed opening and a peripheral discharge opening, substantially as set forth.

7. The combination with the inclosing casing, of a driving shaft, and a rotary distributing head secured to said shaft, said distributing head having an outer disk wall secured to the shaft an inner ring-like wall or annulus and blades or vanes cast integral with the disk wall and the ring wall, said blades each having two opposite and outwardly converging working faces, substantially as set forth.

8. The combination with the casing, of the rotary distributing head, and the driving shaft therefor, the head having an outer disk wall connected to the driving shaft and an inner ring wall with a central feed opening and having blades or vanes, each blade or vane having two nonradial outwardly converging working faces, and said disk wall and ring wall having their opposite faces made to outwardly diverge, substantially as set forth.

9. The combination with a rotary distributing head, of a casing inclosing more or less of said head, said casing having an outer disk-like end wall an inner ring-like end wall and a peripheral wall arranged on a curved line of a radius shorter than the radii of the ring wall and the disk wall, and connecting and clamping bolts joining the disk wall and the ring wall on lines outside of the peripheral wall, substantially as set forth.

10. The combination with a rotary distributing head, of a casing inclosing more or less of said head, said casing having an outer disk like end wall with a curved groove or recess therein, an inner ring-like end wall having a curved groove or recess therein, a peripheral wall having its edges inserted in the said grooves or recesses in the end walls, and clamping and connecting bolts joining the ring wall and the disk wall of the casing on lines outside of the said peripheral wall, substantially as set forth.

11. In a car loading mechanism, the combination of the driving shaft, the rotary head secured thereto having at its outer end a disk-like wall and having shoveling blades, and the casing having at its outer end a disk wall provided with apertures for the escape of material adjacent to the outer face of the rotary head disk, and means for removing the said material from the casing disk, substantially as set forth.

12. In a car loading mechanism, the combination of the driving shaft, the rotary head secured thereto having at its inner end a ring wall and at its outer end a disk-like wall with shoveling blades connecting the said walls, and the casing having at its inner end a ring-like wall provided with escape apertures O, and at its outer end a disk wall having escape passages P, substantially as set forth.

13. In a car loading mechanism, the combination with the longitudinally movable carriage, the rotary head, the driving shaft connected thereto, the casing surrounding the rotary head and having the elongated sleeve surrounding the driving shaft, of the combined adjusting and locking mechanism for the casing consisting of the worm wheel secured to the sleeve, the worm mounted on the carriage and engaging with the worm wheel, and manual devices for rotating the worm, substantially as set forth.

14. In a car loading mechanism, the combination with the truck frame, of the casing having an outer disk-like end wall, an inner ring-like end wall and a peripheral wall having an opening therethrough for the escape of material from the casing, the rotary distributing head, the roller bearings supporting said casing, means for rotating the casing and means for rotating said distributing head.

15. The combination of the rotary distributing head, the casing inclosing more or less of said head, and comprising inner and outer end walls and a peripheral wall having an opening therethrough for the escape of material, the roller bearings arranged to support said casing at points at either side of the vertical axial plane of the casing, and means for rotating the casing.

16. The combination with a rotary distributing head, of a casing inclosing more or less of said head and comprising inner and outer end walls, and a peripheral wall having a discharge passageway therethrough for the material, and the bars for reinforcing the edges of said peripheral wall at either side of the said opening.

17. In a box car loader, the combination of a casing having material-receiving and discharge openings, a rotary distributing device in said casing, said rotary distributing device having an inner ring wall, an outer wall and blades or vanes connecting the inner ring wall with the outer wall, and means for rotating said distributing device.

18. In a box car loader, the combination of a casing having material-receiving and discharge openings, a rotary distributing device in said casing, said rotary distributing device having an inner ring wall, an outer wall and blades or vanes connecting the inner ring wall with the outer wall, means for rotating said distributing device, and means for rotating said casing to position its discharge opening as desired.

19. In a box car loader, the combination of a casing arranged to receive the material to be loaded, a rotary distributer in said casing adapted to direct the said material therefrom, said rotary distributer having an inner ring wall, an outer wall and blades or vanes connecting the said walls, and means for rotating said distributing device.

20. In a box car loader, the combination of a casing arranged to receive the material to be loaded, a rotary distributer in said casing adapted to direct the said material therefrom, said rotary distributer having an inner ring wall, an outer wall and blades or vanes connecting the said walls, means for rotating said distributing device, and means for adjusting said casing to vary the point of delivery therefrom.

21. In a box car loader, the combination of a rotatable casing having an axially arranged material-receiving opening and a peripherally arranged discharge opening, a rotary distributer within said casing having an inner ring wall adjacent to the casing wall having the said material-receiving opening in it, an outer wall, and a series of blades or vanes arranged adjacent to the periphery of said casing and connecting said outer and inner walls, and means for rotating said distributing device.

22. In a box car loader, the combination of a rotatable casing having an axially arranged material-receiving opening and a peripherally arranged discharge opening, a rotary distributer within said casing having an inner ring wall adjacent to the casing wall having the said material-receiving opening in it, an outer wall, and a series of blades or vanes arranged adjacent to the periphery of said casing and connecting said outer and inner walls, means for rotating said distributing device, and means for rotating said casing to position its discharge opening as desired.

23. In a car loading mechanism, the combination of a rotary shaft, a distributing head secured thereto having at its inner end a ring wall and at its outer end a disk-like wall with shoveling blades connecting the said walls, and a casing having at its inner end a material-receiving opening, a peripheral discharge opening, and a series of escape apertures O extending through its inner wall and adjacent to its periphery.

24. In a car loading mechanism, the combination of a movable carriage, a rotary material-receiving casing mounted thereon to rotate about a horizontal axis and having a peripheral discharge opening, a rotary distributing device in said casing, anti-friction bearings for supporting the casing, means for rotating the casing, and means for rotating said distributing device.

870,295. TELESCOPE-SIGHT FOR FIREARMS. THOMAS C. JOHNSON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed July 1, 1907. Serial No. 381,634.



1. The combination with a telescope, of a mounting therefor having a fixed bearing surface convexed from front to rear and concaved from end to end.

2. The combination with a telescope, of a front and a rear mounting therefor, the said front mounting being provided with a fixed bearing surface convexed from front to rear and concaved from end to end, and means for adjusting the telescope vertically and laterally at its rear end.

3. The combination with a telescope, of a front and a rear mounting therefor, the latter having a fixed bearing surface convexed from front to rear and concaved from end to end, and means for adjusting the telescope vertically and laterally at its rear end.

4. The combination with a longitudinally movable telescope, of a mounting therefor, and a swiveling bearing shoe located in the mounting and having a bearing surface convexed from front to rear and concaved from end to end.

5. The combination with a longitudinally movable telescope, of a laterally adjustable mounting therefor, a chambered screw located in the top of the said mounting in which it is vertically adjustable, a bearing shoe swiveled in the said screw and providing a bearing for the telescope and means for yieldingly holding the telescope against the said shoe.

6. The combination with a longitudinally movable telescope, of a laterally adjustable mounting therefor, a bearing shoe located within the said mounting and constituting a bearing for the telescope, a chambered micrometer screw for the reception of the said bearing shoe and the vertical adjustment thereof and means for yieldingly pressing the telescope against the said shoe.

7. The combination with a longitudinally movable telescope, of a mounting therefor, an adjusting screw carried by the said mounting, and a bearing shoe mounted in the said screw and provided with a centering bevel coacting with a corresponding bevel in the end of the screw.

8. The combination with a longitudinally movable telescope, of a mounting therefor, a bearing for the telescope, and a transversely arranged cradle-like wire spring to yieldingly lift the telescope against the said bearing.

9. The combination with a telescope mounting, of a spring having its ends inclined rearward and inward for entrance into correspondingly inclined holes in the said mounting, whereby the spring is retained in place.

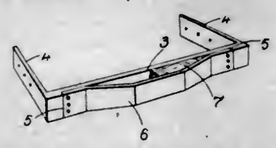
10. The combination with a longitudinally movable telescope, of a laterally adjustable rear mounting therefor provided at its lower end with a laterally arranged dovetail rib formed in one of its beveled faces with a shallow recess, a base adapted to be secured to a gun barrel and formed with a dovetail groove for the reception of the said rib, and a longitudinally bowed spring located in the said recess and coacting with one of the beveled walls of the said base for taking up slack and wear.

11. The combination with a longitudinally movable telescope, of a rear mounting therefor, a micrometer screw carried by the said mounting and vertically adjustable therein, a telescope bearing carried by the said screw and partaking of the vertical adjustment thereof, a base adapted to be secured to the gun barrel and carrying the said rear mounting, and a micrometer screw coacting with the said rear mounting and base for the lateral or "windage" adjustment of the telescope.

12. The combination with a longitudinally movable telescope, of a mounting therefor, a bearing for the telescope, and a transversely arranged wire spring comprising two retaining arms, and a cross member or reach upon which the telescope rests.

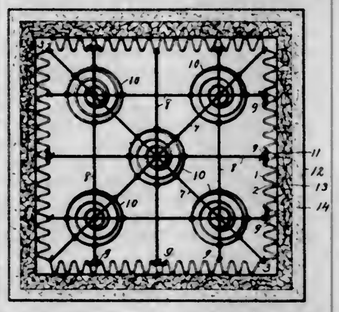
13. The combination with a telescope, of front and rear mountings therefor provided with fixed bearing surfaces convexed from front to rear and concaved from end to end, and means for adjusting the telescope vertically and laterally at its rear end.

870,296. CAR CONSTRUCTION. ISAAC L. KISER and OSCAR M. PRINCE, St. Charles, Mo. Filed Feb. 2, 1907. Serial No. 355,454.



In combination with the end-plate of a car, an outer truss secured thereto having an exposed compression member, an inner tension member provided with abutments or shoulders forming supports for the ends of the compression member, a side plate, terminal rearwardly extending wings on the tension member engaging the outer faces of the side-plates for a suitable distance from the adjacent ends of the side plates, and a cushioning filler between the tension and compression members.

870,297. SOFA-PILLOW. PETER KNUPPEN, Milwaukee, Wis. Filed Mar. 6, 1907. Serial No. 360,819.



1. A pillow comprising an open marginal frame composed of resilient wire bent into zigzag form, with the bends extending inwardly and outwardly with reference to the central portion of the pillow, a covering, and cushioning devices separating the upper and lower walls of the covering between the frame margins.

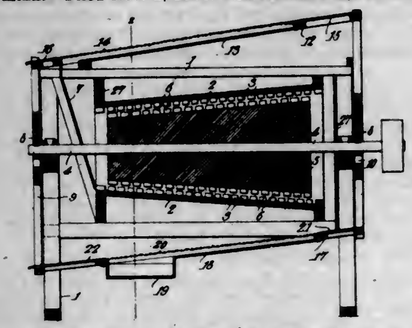
2. A pillow comprising an open marginal frame, composed of resilient wire bent into zigzag form, a set of coverings for the frame, packing interposed between the coverings, and a set of coiled springs within the frame disposed with their axes crossing the planes of the frame and of the individual bends of the frame wire.

3. A pillow comprising an open marginal frame, composed of resilient wire bent into zigzag form, a set of coverings for the frame, packing interposed between the coverings, and a set of coiled springs within the frame disposed with their axes crossing the planes of the frame and of the individual bends of the frame wire, together with sets of cords extending divergently from the inner bends of the frame wire to the respective ends of the coiled springs and arranged to serve as stays for both the coiled springs and the frame.

4. A pillow comprising an open frame composed of resilient wire bent into zig zag form, a set of coverings for the frame, and suitable packing interposed between the coverings, all of said bends in the wire being substantially in a plane common to the general outline of the frame.

5. A pillow comprising an open frame composed of resilient wire bent into zig zag form, a set of coverings for the frame, and suitable packing interposed between the coverings, said wire being coiled at the corners of the frame and the several sides being formed integrally.

870,298. HULLING-MACHINE. LEVI LASH, Garretson, S. D., assignor of one-half to Jay P. Petersen, Russell, Minn. Filed Nov. 2, 1906. Serial No. 341,746.



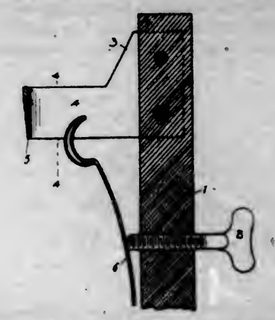
1. In a machine of the character described the combination with a casing having rectangular diagonally spaced teeth upon the inner face thereof, a shaft extending through the casing, and a roller upon the shaft and having spaced series of rectangular teeth thereof, the teeth of each series being alternately arranged and diagonally spaced; of parallel inclined screens above and below the casing respectively, an inclined imperforate member below and movable with each screen, each member having an outlet, arms rigidly secured to and connecting the ends of the screens, means operated by the shaft and within the arms, for reciprocating the arms and screens laterally during the rotation of the shaft, and means for directing material from the inclined device below the upper screen to the casing, said casing being disposed to discharge material upon the lower screen.

2. In a machine of the character described the combination with a casing, a shaft extending therethrough, and a roller upon the shaft and rotatable within the casing; of parallel inclined screens above and below the casing respectively, an inclined board below and movable with each screen, each board having an outlet, parallel arms rigidly secured to and connecting the ends of the screens, said shaft extending through the arms, cams upon the shaft and within the arms for reciprocating said arms together, and means for directing material from the board of the upper screen to the casing, said casing being adapted to discharge material upon the lower screen.

870,299. TAPPING-KNIFE FOR RUBBER-TREES AND THE LIKE. CHARLES A. LESHER, Soconusco, Mexico, assignor to La Zacualpa Rubber Plantation Company, San Francisco, Cal., a Corporation of California. Filed Apr. 25, 1907. Serial No. 370,202.

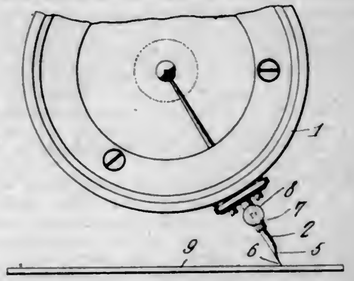
1. A knife of the character described comprising a handle, a substantially U-shaped cutter blade extending transversely to the handle, and having a sharp lower edge, and a gage bar directly secured at its lower end only to the handle, the upper end extending between the sides of the U-shaped cutter blade, and being rounded convexly to the center of the U-shaped blade, and a screw for adjusting the distance of said upper end from said center, substantially as described.

2. A knife of the character described comprising a handle a U-shaped cutter blade extending transversely thereto, the edge nearest the center of the handle being the cutting edge, said edge being beveled on its outer side, a spring gage bar secured at one end of the handle, the free end extending between the sides of the U-shaped cutter blade, and being rounded convexly towards the center of



the cutter blade, a screw screwed through the handle and bearing against said spring gage bar to adjust the depth of the cut, substantially as described.

870,300. STYLUS FOR SOUND-REPRODUCING MACHINES. SAMUEL LEVIN, Highland Park, Ill. Filed Mar. 7, 1907. Serial No. 361,122.



1. A stylus for sound-reproducing machines composed of a thin piece of horny, homogeneous material having one end bent into a cylinder of a size to fit the stylus-holding socket of a sound-box and the other end bent out into an approximately flat shape with the sides approaching and merging into a point adapted to the sound groove of a sound record tablet.

2. A stylus for sound-reproducing machines composed of a thin piece of quill bent at one end into a cylinder of a size adapted to fit the stylus socket of a sound-box and the other end formed approximately flat with side walls tapering to a point adapted to engage a sound record groove.

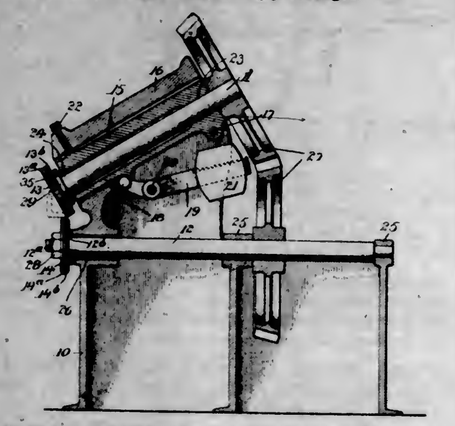
3. A stylus for sound-reproducing machines having a rounded or cylindrical shank and a flat, thin, tapering, pointed end of substantially equal thickness throughout and wide in the direction of vibration.

870,301. BEVELING-MACHINE. CARL E. LINGENFELTER, Chicago, Ill., assignor to Scully Steel & Iron Company, Chicago, Ill., a Corporation. Filed Aug. 22, 1904. Serial No. 221,683.

1. The combination with the cutter shaft, of a reversible cutter having cutting edges upon its opposite faces, mounted upon the end of said shaft with its outer face substantially in the plane with the end face of the shaft, a shoulder on said shaft adjacent its end, and bolts removably securing said cutter to said shoulder, the bolt-holes in said cutter being countersunk upon opposite faces of said cutter to receive the heads of said bolts.

2. The combination with the cutter shaft, of a reversible cutter mounted upon the outer projecting end of said shaft having cutting edges upon its opposite faces, a shoul-

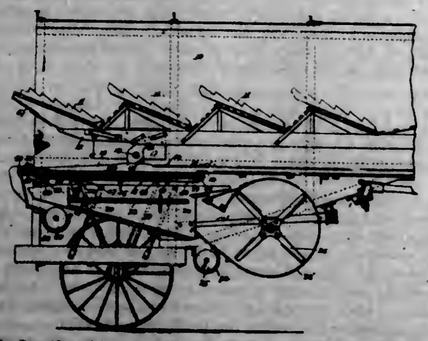
dered portion on said shaft adjacent its end, a series of bolt holes in said cutter and bolts extending through said holes and securing said cutter to said shouldered portion, some of said bolt-holes being countersunk on one face of said cutter and the others upon the opposite face thereof to receive the heads of said bolts, the countersinks in the opposite faces being correspondingly arranged.



3. The combination with the cutter shaft, of a reversible cutter mounted upon the outer projecting end of said shaft having cutting edges upon its opposite faces, a shouldered portion on said shaft adjacent its end, a circular series of bolt-holes in said cutter alternately countersunk in opposite faces thereof, a collar on said shaft adjacent its end and screw bolts threaded into said collar with their heads arranged within the countersinks in the opposite faces of said cutter.

4. In beveling machines, the combination with the frame, of shaft bearings, upper and lower cutter shafts projecting beyond the outer shaft-bearings, reversible cutters mounted upon the outer projecting ends of said shaft adjacent said outer bearings, said shafts having cutting edges upon opposite faces thereof, the outer face of the upper cutter being in substantially the same plane with the end of said upper shaft, a collar on said upper shaft adjacent its end, and a series of bolts securing said shaft to said collar, part of the bolt-holes on said cutter being countersunk in one face thereof and part in the opposite face to receive the heads of said bolts, the countersinks in the opposite faces being correspondingly arranged.

870,302. SIEVE FOR THRESHING-MACHINES. WALLACE F. MACGREGOR, Racine, Wis. Filed July 17, 1905. Serial No. 270,012.



1. In threshing machines, the combination with the sieve frame and the longitudinally reciprocating grain pan having extended side supports for the sieve frame, of a cross piece between said supports having rigid upper and lower flanges between which the forward end of said sieve frame fits, and separate clamping devices at opposite sides for rigidly and detachably securing the rear end of the sieve frame directly to said side supports, said sieve frame being movable end-wise, when said clamping devices are released, into and out of engagement with the flanges of said cross piece, substantially as described.

2. In a threshing machine, the combination with the sieve frame and with a longitudinally reciprocating grain pan having extending side supports for said sieve frame, of a cross piece between said supports having upper and lower flanges for receiving the forward end of the sieve frame and devices at the rear end of the sieve frame for detachably connecting the same to said side supports and for forcing the sieve frame end-wise into engagement with the flanges of said cross piece, substantially as described.

3. In a threshing machine, the combination with the sieve frame and with longitudinally reciprocating side supports therefor, of a cross piece between said supports having rigid upper and lower flanges between which one end of the sieve frame fits, and separate clamping devices arranged at opposite sides for rigidly but detachably connected the other end of the frame directly to said side supports, said clamping devices including means for forcing the frame end-wise into place between the flanges of said cross piece, substantially as described.

4. In threshing machines, the combination with the sieve-frame and with the reciprocating side supports therefor, of a cross-piece between said supports having flanges between which one end of the sieve-frame fits, companion lugs fixed to the opposite end of the sieve-frame and to said side supports, and bolts extending longitudinally through said lugs for forcing the sieve-frame endwise into place between the flanges of said cross-piece, substantially as described.

5. In threshing machines, the combination with the sieve-frame and grain pan having extended side supports for the sieve-frame, of a cross-piece having flanges for engaging the forward edge of said sieve-frame and means detachably connecting the rear end of said sieve-frame and said side supports, said connecting means being arranged to force the sieve-frame forwardly into place between the flanges of said cross-piece, substantially as described.

6. In threshing machines, the combination with the sieve-frame and with the side supports therefor, of a cross-piece having flanges for engaging the forward edge of said sieve-frame, lugs arranged in line fixed respectively to the rear ends of said sieve-frame and side supports, the lugs on the frame being in rear of and separated from those on the supports, and bolts longitudinally extending through said lugs, substantially as described.

7. In threshing machines, the combination with the sieve-frame and the grain pan having rearwardly extended side supports to form the sieve-frame, of a cross-channel bar between said side supports arranged to engage the forward edge of said sieve-frame, brackets having lugs arranged in line fixed respectively to the rear ends of said frame and side supports, the lugs on the frame brackets being in rear of and separated from those of the support brackets and bolts longitudinally extending through said lugs, substantially as described.

8. In threshing machines, the combination with the longitudinally reciprocating grain pan having extended side supports, of the sieve-frame comprising side and end bars and intermediate longitudinal bars, a cross-piece secured to said side supports having rearwardly projecting flanges arranged to engage the forward edge of said side supports, lugs on the rear ends of said frame and side supports and bolts extending longitudinally through said lugs to force the frame endwise to place between the flanges of said cross piece, substantially as described.

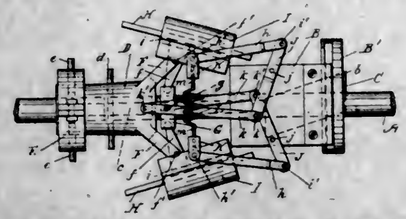
9. In threshing machines, the combination with the sieve-frame and with the longitudinally shifting grain pan having extended side supports, of pieces secured to the underside of said supports in rear of the pan bottom, a cross-bar between said side supports in front of the ends of said side pieces, a channel bar secured to the rear face of said cross-bar arranged to engage the forward end of said sieve-frame, brackets fixed to the rear ends of said frame and side supports and having depending offset lugs, the lugs of the frame brackets being in rear of and separated from those of the support-brackets and bolts extending longitudinally through said lugs, substantially as described.

10. In threshing machines, the combination with the main sieve and with the side supports extending beyond the rear edge of said sieve, of a sieve extension hinged to the rear edge of said main sieve, companion brackets fixed to said extension and to the rear ends of said side supports and clamp bolts extending through said brackets, whereby the weight of said extension is entirely carried by said side supports, one set of said brackets having bolt-receiving slots to permit the adjustment of said sieve extension, substantially as described.

11. In threshing machines, the combination with the main sieve and with the side supports therefor extending beyond the rear edge of said sieve, of a sieve extension hinged to the rear edge of said main sieve, a bracket fixed to each side of said extension intermediate its ends, a companion bracket fixed to the adjacent side support, clamp bolts extending through said brackets, whereby the weight of said extension is carried from said side supports, said bracket of each set having a bolt-receiving slot to permit the adjustment of said sieve extension, substantially as described.

12. In a threshing machine, the combination with the longitudinally reciprocating grain pan and the side supports therefor extending beyond its rear edge, of a main sieve, a cross piece extending between said side supports having upper and lower flanges for receiving the forward edge of the main sieve, means for detachably securing the rear edge of the main sieve to said side supports and for forcing the same longitudinally into position between the flanges of said cross piece, a sieve extension hinged directly to the rear edge of said main sieve and means on the rear ends of said side supports for adjustably supporting said sieve extension, substantially as described.

870,303. SPEED-GOVERNOR. WILLIAM J. D. MILLER, Hillsboro, Mo. Filed Mar. 23, 1907. Serial No. 364,190.



1. In a speed governor, the combination, with a driving-shaft, a guide-block secured thereon, an eccentric slidable on the said guide-block, and a longitudinally slidable reversing-plate for moving the said eccentric crosswise of the said shaft; of a support which revolves with the said shaft, governor-arms pivoted to the said support and operatively connected at one end with the said reversing-plate, spring-pressed governor-weights carried by the other ends of the said arms, levers pivoted to the said guide-block, and rods connecting the ends of the said levers with the said governor-weights and support respectively.

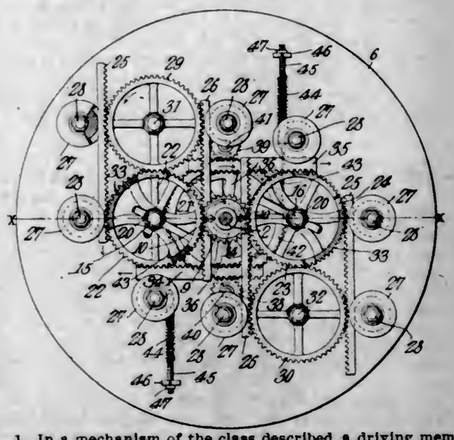
2. In a speed governor, the combination, with a driving-shaft, a guide-block secured thereon, an eccentric slidable on the said guide-block, and a longitudinally slidable reversing-plate for moving the said eccentric crosswise of the said shaft; of a support which revolves with the said shaft, means for sliding the said support longitudinally to reverse the engine, governor-arms pivoted to the said support and operatively connected at one end with the said reversing-plate, guide-bars carried by the outer ends of the said arms, spring-pressed governor-weights slidable on the said bars, levers pivoted to the said guide-block, and rods connecting the ends of the said levers with the said governor-weights and support respectively.

3. In a speed governor, the combination, with a driving-shaft, a guide-block secured thereon, an eccentric slidable on the said guide-block, and a longitudinally slidable reversing-plate for moving the said eccentric crosswise of the said shaft; of a support which revolves with the said shaft, governor-arms pivoted to the said support and operatively connected at one end with the said reversing-plate, guide-bars carried by the outer ends of the said arms, governor-weights slidable on the said bars, pivots at the middle portions of the said weights, springs arranged between the said pivots, means for sliding the said support to move the pivots of the governor-arms from one side of the said pivots to the other, levers pivoted to the said guide-block, rods connecting the outer ends of the said levers with the said pivots, and rods connecting the inner ends of the said levers with the said support.

4. The combination, with a driving-shaft, and a reversing mechanism mounted thereon and provided with a longitudinally slidable reversing-sleeve; of a reversible speed-governor operatively connected with the said reversing mechanism and having the arms of its governor-weights pivotally supported by the said reversing-sleeve.

5. The combination, with a driving-shaft, and a reversing mechanism mounted thereon and provided with a longitudinally-slidable reversing-plate and a longitudinally slidable reversing-sleeve; of a reversible speed-governor provided with governor-arms which are pivotally supported by the said sleeve, means for sliding the said sleeve independent of the said governor, and means for pivotally connecting the said governor-arms with the said plate so that the said plate is slid by the said governor independent of the said reversing-sleeve.

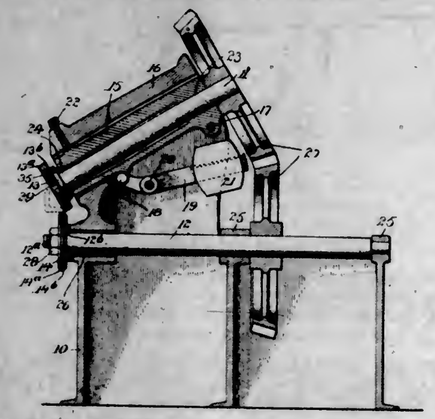
870,304. POWER-TRANSMISSION GEARING. GEORGE MILNEE, Brooklyn, N. Y., assignor to The Milner Power Multiplying Machine Company, Inc., Brooklyn, N. Y. Filed Feb. 7, 1907. Serial No. 356,228.



1. In a mechanism of the class described, a driving member, a driven member, a pinion carried by the driven member and coupled to the driving member, gear wheels meshing with said pinion, pairs of rack bars receiving sliding motion from said gear wheels, other gear wheels receiving motion from said rack bars, other rack bars receiving motion from said last-named gear wheels, a gear train receiving motion from the last-named rack bars, and elastic connections between said gear train and the driven member.

2. In a mechanism of the class described, a driving member, a driven member, a pinion carried by said driven member and receiving motion from said driving member, gear wheels receiving motion from said pinion, oppositely-mov-

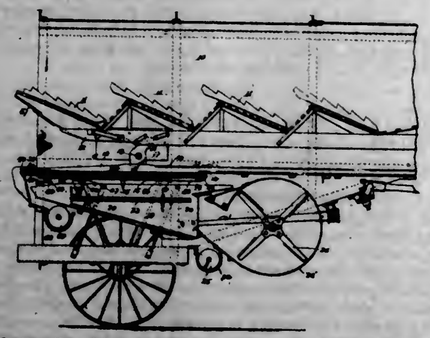
dered portion on said shaft adjacent its end, a series of bolt holes in said cutter and bolts extending through said holes and securing said cutter to said shouldered portion, some of said bolt-holes being countersunk on one face of said cutter and the others upon the opposite face thereof to receive the heads of said bolts, the countersinks in the opposite faces being correspondingly arranged.



3. The combination with the cutter shaft, of a reversible cutter mounted upon the outer projecting end of said shaft having cutting edges upon its opposite faces, a shouldered portion on said shaft adjacent its end, a circular series of bolt-holes in said cutter alternately countersunk in opposite faces thereof, a collar on said shaft adjacent its end and screw bolts threaded into said collar with their heads arranged within the countersinks in the opposite faces of said cutter.

4. In beveling machines, the combination with the frame, of shaft bearings, upper and lower cutter shafts projecting beyond the outer shaft-bearings, reversible cutters mounted upon the outer projecting ends of said shaft adjacent said outer bearings, said shafts having cutting edges upon opposite faces thereof, the outer face of the upper cutter being in substantially the same plane with the end of said upper shaft, a collar on said upper shaft adjacent its end, and a series of bolts securing said shaft to said collar, part of the bolt-holes on said cutter being countersunk in one face thereof and part in the opposite face to receive the heads of said bolts, the countersinks in the opposite faces being correspondingly arranged.

870,302. SIEVE FOR THRESHING-MACHINES. WALLACE F. MACGREGOR, Racine, Wis. Filed July 17, 1905. Serial No. 270,012.



1. In threshing machines, the combination with the sieve frame and the longitudinally reciprocating grain pan having extended side supports for the sieve frame, of a cross piece between said supports having rigid upper and lower flanges between which the forward end of said sieve frame fits, and separate clamping devices at opposite sides for rigidly and detachably securing the rear end of the sieve frame directly to said side supports, said sieve frame being movable end-wise, when said clamping devices are released, into and out of engagement with the flanges of said cross piece, substantially as described.

2. In a threshing machine, the combination with the sieve frame and with a longitudinally reciprocating grain pan having extending side supports for said sieve frame, of a cross piece between said supports having upper and lower flanges for receiving the forward end of the sieve frame and devices at the rear end of the sieve frame for detachably connecting the same to said side supports and for forcing the sieve frame end-wise into engagement with the flanges of said cross piece, substantially as described.

3. In a threshing machine, the combination with the sieve frame and with longitudinally reciprocating side supports therefor, of a cross piece between said supports having rigid upper and lower flanges between which one end of the sieve frame fits, and separate clamping devices arranged at opposite sides for rigidly but detachably connected the other end of the frame directly to said side supports, said clamping devices including means for forcing the frame end-wise into place between the flanges of said cross piece, substantially as described.

4. In threshing machines, the combination with the sieve-frame and with the reciprocating side supports therefor, of a cross-piece between said supports having flanges between which one end of the sieve-frame fits, companion lugs fixed to the opposite end of the sieve-frame and to said side supports, and bolts extending longitudinally through said lugs for forcing the sieve-frame endwise into place between the flanges of said cross-piece, substantially as described.

5. In threshing machines, the combination with the sieve-frame and grain pan having extended side supports for the sieve-frame, of a cross-piece having flanges for engaging the forward edge of said sieve-frame and means detachably connecting the rear end of said sieve-frame and said side supports, said connecting means being arranged to force the sieve-frame forwardly into place between the flanges of said cross-piece, substantially as described.

6. In threshing machines, the combination with the sieve-frame and with the side supports therefor, of a cross-piece having flanges for engaging the forward edge of said sieve-frame, lugs arranged in line fixed respectively to the rear ends of said sieve-frame and side supports, the lugs on the frame being in rear of and separated from those on the supports, and bolts longitudinally extending through said lugs, substantially as described.

7. In threshing machines, the combination with the sieve-frame and the grain pan having rearwardly extended side supports to form the sieve-frame, of a cross-channel bar between said side supports arranged to engage the forward edge of said sieve-frame, brackets having lugs arranged in line fixed respectively to the rear ends of said frame and side supports, the lugs on the frame brackets being in rear of and separated from those of the support brackets and bolts longitudinally extending through said lugs, substantially as described.

8. In threshing machines, the combination with the longitudinally reciprocating grain pan having extended side supports, of the sieve-frame comprising side and end bars and intermediate longitudinal bars, a cross-piece secured to said side supports having rearwardly projecting flanges arranged to engage the forward edge of said side supports, lugs on the rear ends of said frame and side supports and bolts extending longitudinally through said lugs to force the frame endwise to place between the flanges of said cross piece, substantially as described.

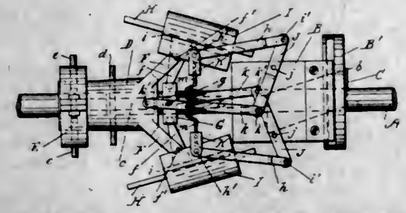
9. In threshing machines, the combination with the sieve-frame and with the longitudinally shifting grain pan having extended side supports, of pieces secured to the underside of said supports in rear of the pan bottom, a cross-bar between said side supports in front of the ends of said side pieces, a channel bar secured to the rear face of said cross-bar arranged to engage the forward end of said sieve-frame, brackets fixed to the rear ends of said frame and side supports and having depending offset lugs, the lugs of the frame brackets being in rear of and separated from those of the support-brackets and bolts extending longitudinally through said lugs, substantially as described.

10. In threshing machines, the combination with the main sieve and with the side supports extending beyond the rear edge of said sieve, of a sieve extension hinged to the rear edge of said main sieve, companion brackets fixed to said extension and to the rear ends of said side supports and clamp bolts extending through said brackets, whereby the weight of said extension is entirely carried by said side supports, one set of said brackets having bolt-receiving slots to permit the adjustment of said sieve extension, substantially as described.

11. In threshing machines, the combination with the main sieve and with the side supports therefor extending beyond the rear edge of said sieve, of a sieve extension hinged to the rear edge of said main sieve, a bracket fixed to each side of said extension intermediate its ends, a companion bracket fixed to the adjacent side support, clamp bolts extending through said brackets, whereby the weight of said extension is carried from said side supports, said bracket of each set having a bolt-receiving slot to permit the adjustment of said sieve extension, substantially as described.

12. In a threshing machine, the combination with the longitudinally reciprocating grain pan and the side supports therefor extending beyond its rear edge, of a main sieve, a cross piece extending between said side supports having upper and lower flanges for receiving the forward edge of the main sieve, means for detachably securing the rear edge of the main sieve to said side supports and for forcing the same longitudinally into position between the flanges of said cross piece, a sieve extension hinged directly to the rear edge of said main sieve and means on the rear ends of said side supports for adjustably supporting said sieve extension, substantially as described.

870,303. SPEED-GOVERNOR. WILLIAM J. D. MILLER, Hillsboro, Mo. Filed Mar. 23, 1907. Serial No. 364,190.



1. In a speed governor, the combination, with a driving-shaft, a guide-block secured thereon, an eccentric slidable on the said guide-block, and a longitudinally slidable reversing-plate for moving the said eccentric crosswise of the said shaft; of a support which revolves with the said shaft, governor-arms pivoted to the said support and operatively connected at one end with the said reversing-plate, spring-pressed governor-weights carried by the other ends of the said arms, levers pivoted to the said guide-block, and rods connecting the ends of the said levers with the said governor-weights and support respectively.

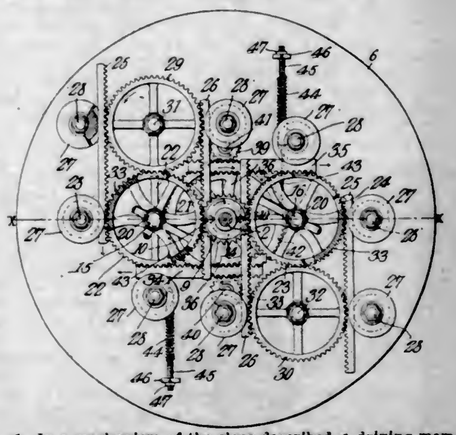
2. In a speed governor, the combination, with a driving-shaft, a guide-block secured thereon, an eccentric slidable on the said guide-block, and a longitudinally slidable reversing-plate for moving the said eccentric crosswise of the said shaft; of a support which revolves with the said shaft, means for sliding the said support longitudinally to reverse the engine, governor-arms pivoted to the said support and operatively connected at one end with the said reversing-plate, guide-bars carried by the outer ends of the said arms, spring-pressed governor-weights slidable on the said bars, levers pivoted to the said guide-block, and rods connecting the ends of the said levers with the said governor-weights and support respectively.

3. In a speed governor, the combination, with a driving-shaft, a guide-block secured thereon, an eccentric slidable on the said guide-block, and a longitudinally slidable reversing-plate for moving the said eccentric crosswise of the said shaft; of a support which revolves with the said shaft, governor-arms pivoted to the said support and operatively connected at one end with the said reversing-plate, guide-bars carried by the outer ends of the said arms, governor-weights slidable on the said bars, pivots at the middle portions of the said weights, springs arranged between the said pivots, means for sliding the said support to move the pivots of the governor-arms from one side of the said pivots to the other, levers pivoted to the said guide-block, rods connecting the outer ends of the said levers with the said pivots, and rods connecting the inner ends of the said levers with the said support.

4. The combination, with a driving-shaft, and a reversing mechanism mounted thereon and provided with a longitudinally slidable reversing-sleeve; of a reversible speed-governor operatively connected with the said reversing mechanism and having the arms of its governor-weights pivotally supported by the said reversing-sleeve.

5. The combination, with a driving-shaft, and a reversing mechanism mounted thereon and provided with a longitudinally-slidable reversing-plate and a longitudinally slidable reversing-sleeve; of a reversible speed-governor provided with governor-arms which are pivotally supported by the said sleeve, means for sliding the said sleeve independent of the said governor, and means for pivotally connecting the said governor-arms with the said plate so that the said plate is slid by the said governor independent of the said reversing-sleeve.

870,304. POWER-TRANSMISSION GEARING. GEORGE MILNER, Brooklyn, N. Y., assignor to The Milner Power Multiplying Machine Company, Inc., Brooklyn, N. Y. Filed Feb. 7, 1907. Serial No. 356,228.



1. In a mechanism of the class described, a driving member, a driven member, a pinion carried by the driven member and coupled to the driving member, gear wheels meshing with said pinion, pairs of rack bars receiving sliding motion from said gear wheels, other gear wheels receiving motion from said rack bars, other rack bars receiving motion from said last-named gear wheels, a gear train receiving motion from the last-named rack bars, and elastic connections between said gear train and the driven member.

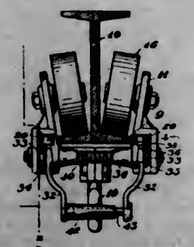
2. In a mechanism of the class described, a driving member, a driven member, a pinion carried by said driven member and receiving motion from said driving member, gear wheels receiving motion from said pinion, oppositely-mov-

ing sliding rack bars receiving motion from said gear wheels, other gear wheels receiving motion from said rack bars, gear wheels meshing with said last-named gear wheels, rack bars moving at an angle to the motion of the first-named rack bars and receiving motion from said last-named gear wheels, pinions receiving motion from said last-named rack bars, a gear wheel mounted on the axis of the driven member and receiving motion from said pinions, and elastic connections between said last-named gear wheel and the driven member.

3. In a mechanism of the class described, a driving member, a driven member, a disk carried by and moving with the latter, a pinion mounted on the axis of the driven member and receiving motion from the driving member, gear wheels on opposite sides of and meshing with said pinion, sliding rack bars engaged by said gear wheels on diametrically opposite sides of the latter and in the plane of engagement with the pinions, other gear wheels engaged by said rack bars on opposite sides, still other gear wheels engaged by and receiving motion from the last-named gear wheels, rack bars receiving motion from the last-named gear wheels in planes at right angles to the planes of motion of the first-named rack bars, pinions receiving motion from said last-named rack bars, a gear wheel mounted on the axis of the driven member and receiving motion from said pinions, elastic connections between said last-named gear wheel and the disk, and supports upon the disk for the journals of the several gear wheels and for the rack bars.

4. In a mechanism of the class described, a drive shaft, a driven shaft in line therewith, a pinion mounted on said driven shaft and receiving motion from said drive shaft, a disk fast on said driven shaft, gear wheels mounted on said disk and engaging said pinion on opposite sides, rack bars engaged by said gear wheels and having roller bearings supported by said disk with the said pinion forming one of the roller bearings for the rack bars, other gear wheels mounted on said disk and engaged on opposite sides by the rack bars, still other gear wheels having the same axis of rotation as the gear wheels engaged by the aforesaid pinion and receiving motion from the gear wheels actuated by the rack bars, other rack bars moving in planes at right angles to the first-named rack bars and receiving motion from the last-named of the series of gears, pinions engaged by the last-named rack bars, a single gear wheel loosely mounted upon the driven shaft and receiving motion from the pinions, and adjustable springs connected to said last-named gear wheel and to the disk.

870,305. LOCKING MECHANISM FOR TROLLEYS. EDWARD Y. MOORE, Cleveland, Ohio. Filed June 8, 1907. Serial No. 377,889.



1. The combination of a trolley adapted to travel on a trackway which may be curved and a clamp adapted to bind the trolley to its support, said clamp being laterally shiftable to allow the trolley to move around such curve.

2. In a mechanism of the character described, the combination of a frame, flangeless supporting wheels carried by the frame, lateral guide wheels carried by the frame, whereby said frame may be freely shifted, and a laterally shiftable clamp adapted to bind said frame to its support.

3. In a mechanism of the character described, the combination of a frame, supporting wheels carrying the same, a transverse shaft mounted in the frame, a pair of clamping shoes slidably mounted on the shaft, coöperating cam surfaces between the shaft and shoes and adapted to move said shoes, and means for rocking the shaft.

4. In a mechanism of the character described, the combination with the trolley of a transverse shaft, a pair of clamping shoes slidably mounted thereon, cam surfaces movable therewith, and coöperating cam surfaces rigid with said shaft, and means for rocking the shaft.

5. The combination with the support and mechanism adapted to travel thereon, of a cross shaft, a pair of hubs slidable thereon and carrying clamping shoes for engaging the support, a spring surrounding said shaft and pressing said hubs outwardly, and means for forcing the hubs inwardly.

6. In a mechanism of the character described, the combination with the trolley of a transverse shaft, a pair of clamping shoes slidably mounted thereon, cam surfaces rigid with said shaft adapted to engage and move said shoes, and a spring surrounding the shaft and tending to press said shoes outwardly.

7. The combination with the support and mechanism adapted to travel thereon, of a cross shaft, a pair of hubs slidable thereon and carrying clamping shoes for engaging the support, a spring surrounding said shaft and pressing said hubs outwardly, cam surfaces rigid with the shaft whereby the rocking of the shaft forces the hubs inwardly, and arms rigid with the shaft whereby it may be rocked.

8. The combination with the trolley of a shaft mounted thereon, members rigid therewith and having cam surfaces on their inner faces, hubs slidable on said shaft and having coöperating cam surfaces, clamping shoes carried by said hubs, means for preventing the rotation of said hubs, and a spring surrounding the shaft and tending to force the hubs outwardly.

9. The combination of mechanism adapted to travel on the lower flange of an I-beam, of a shaft extending crosswise beneath such I-beam, a pair of shoes slidable on the shaft adapted to engage the opposite edges of the I-beam, coöperating cam surfaces between said shoes and members rigid with the shaft, and means for rocking the shaft.

10. The combination with the trolley of a shaft mounted thereon, a pair of arms rigid with the shaft but adjustable thereon, cam surfaces on the inner faces of said arms, a telescoping connection between said arms whereby they may be adjusted and still form a bail, and clamping shoes operated by said cam surfaces.

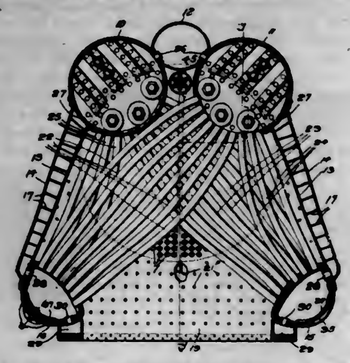
11. The combination with the trolley of a shaft mounted thereon, a pair of arms keyed to the shaft and having cam surfaces on their inner faces, nuts screwing onto the shaft for limiting the outward position of the arms, a telescoping connection between said arms whereby they may be adjusted and still form a bail, and clamping shoes operated by said cam surfaces.

12. In mechanism adapted to travel on a trackway, the combination of a frame, flangeless supporting wheels carried thereby, guide wheels on vertical journals, and a clamp loosely carried by the frame and adapted to shift laterally.

13. The combination with an I-beam, of a mechanism adapted to travel on the lower flange thereof comprising a frame, supporting wheels riding on such flange, guiding wheels adapted to engage the edge of the flange, and a clamp adapted to engage the opposite edges of the flange, said clamp being loosely carried by the frame to allow it to shift as a whole when the mechanism passes around a curve.

870,306. FIRE-BOX FOR LOCOMOTIVE BOILERS. JAMES M. MCCLELLON, Everett, Mass. Filed Dec. 20, 1906. Serial No. 348,789.

1. In a boiler structure of the locomotive type, the combination with a shell having flues therethrough, of a fire-box having a water-chamber at the top and other chambers at the bottom on each side, and inclined water-tubes connecting each lower chamber with the upper chamber on the opposite side of the fire-box, said water-tubes covering substantially the entire end of the shell.



2. In a boiler of the locomotive type, the combination with a shell having flues extending therethrough, of a fire-box having two upper drums and two lower drums, one at each side thereof, water-tubes connecting the lower drum on each side to the upper drum on the opposite side and a water leg at each side of the fire-box connecting the upper and lower drums.

3. In a boiler of the locomotive type, the combination with a shell having flues extending therethrough, of a fire-box having two upper drums and two lower drums, one at each side thereof, and water-tubes connecting the lower drum on each side to the upper drum on the opposite side, said water-tubes covering substantially the full area of the end of the shell.

4. In a boiler of the locomotive type, the combination with a boiler shell having flues therethrough, of a fire-box at one end of the shell, said fire-box having two drums at the top thereof and a drum at each side at the bottom, the drums on each side being connected by a water-leg, and water-tubes connecting the lower drum on each side with the upper drum on the opposite side.

5. In a boiler of the locomotive type, the combination with a boiler shell having flues therethrough, of a fire-box at one end of the shell, said fire-box having two drums at the top thereof and a drum at each side at the bottom, the drums on each side being connected by a water-leg, and water-tubes connecting the lower drum on each side with the upper drum on the opposite side, said water-tubes covering substantially the full area of the end of the shell.

6. In a boiler structure of the locomotive type, the combination with a shell having flues therethrough, of a fire-box having a water-chamber at the top and other chambers at the bottom on each side, and inclined water-tubes connecting each lower chamber with the upper chamber on the opposite side of the fire-box, said water-tubes covering substantially the entire end of the shell, and means to cause all the hot gases generated in the fire-box to pass through the net work of water-tubes in transit to the flues.

7. In a boiler of the locomotive type, the combination with a boiler shell having flues therethrough, of a fire-box at one end of the shell, said fire-box having two drums at the top thereof and a drum at each side at the bottom, the drums on each side being connected by a water-leg, water-tubes connecting the lower drum on each side with the upper drum on the opposite side, said water-tubes covering substantially the full area of the end of the shell, and means to cause all the hot gases to impinge against the water-tubes in transit to the flues.

8. The combination with a boiler shell having a flue-sheet at one end and flues extending therethrough of a fire-box having two upper drums at its top, two lower drums one at each side, a water leg connecting the upper drum on each side to the lower drum on the same side, and water-tubes connecting each lower drum to the upper drum on the opposite side.

9. The combination with a boiler shell having a flue-sheet at one end and flues extending therethrough of a fire-box having two upper drums at its top, two lower drums, one at each side, a water leg connecting each upper drum with the lower drum on the same side, a water leg at the back of the fire-box connected to both lower drums, and water-tubes connecting each lower drum with the upper drum on the opposite side.

10. A boiler having two upper drums at the top thereof, and two lower drums, one on each side, water-legs connecting the upper and lower drum on each side of the fire-box, and water-tubes connecting each lower drum to both of the upper drums.

11. A boiler having two upper drums at the top thereof, two lower drums, one on each side, a mud-ring below the lower drums and communicating therewith, water-tubes connecting the lower drum on each side with the upper drum on the opposite side and means to admit water to the boiler through said mud-ring.

12. A boiler having two upper drums at the top thereof, two lower drums, one on each side, a mud-ring below the lower drums and communicating therewith, water-tubes connecting each lower drum with both upper drums and means to admit water to the lower drums through the mud-ring.

13. A boiler having two upper drums separated from each other, a steam-drum riveted and nippled to each of the upper drums, two lower drums, one on each side of the fire-box, water-tubes connecting the lower drum on each side with the upper drum on the opposite side and water legs connecting the upper drums to the lower drums.

14. A boiler having two upper drums at the top thereof and two lower drums, one at each side, each drum being provided with water-tube-receiving apertures, water-tubes connecting the lower drum on each side with the upper drum on the opposite side, the aperture in each drum being larger than the water-tube, and a bushing surrounding the water-tubes and filling said aperture.

15. In a boiler of the locomotive type, the combination with a shell, a flue-sheet at the end thereof, flues extending therethrough and through the shell, drums secured at one end to said flue-sheet and forming the top of the fire-box, two lower drums, one at each side of the fire-box, and water-tubes connecting each lower drum with the upper drum on the opposite side of the fire-box.

16. In a boiler of the locomotive type, the combination with a boiler shell having a flue-sheet at one end, of flues extending therethrough and through the shell, said flue-sheet projecting below the shell, another sheet forming with the projecting portion of the flue-sheet a water-leg, two drums secured at one end to said flue-sheet and forming the top of the fire-box, two lower drums, one on each side of the fire-box, and water-tubes connecting said drums.

17. In a boiler of the locomotive type, the combination with a boiler shell having a flue-sheet at one end, of flues extending therethrough and through the shell, said flue-sheet projecting below the shell, another sheet forming with the projecting portion of the flue-sheet a water-leg, two drums secured at one end to said flue-sheet and forming the top of the fire-box, two lower drums, one on each side of the fire-box, and water-tubes connecting said drums, said lower drums communicating with said water-leg.

18. In a boiler of the locomotive type, the combination with a boiler shell having a flue-sheet at one end of flues extending therethrough and through the shell, said flue-sheet projecting below the shell, another sheet forming with the projecting portion of the flue-sheet a water-leg, two drums secured at one end to said flue-sheet and forming the top of the fire-box, two lower drums, one on each side of the fire-box, water-tubes connecting said drums, said lower drums communicating with said water-leg, and a water-leg at each side of the boiler connecting the upper and lower drums at said side.

19. In a boiler of the locomotive type, the combination with a boiler shell having a flue-sheet at one end, flues extending therethrough and through the shell, said flue-sheet projecting below the shell, another sheet forming with the projecting portion of the flue-sheet a water-leg,

two drums forming the top of the fire-box and each secured at one end to said flue-sheet, two lower drums one on each side of the fire-box, water-tubes connecting said drums, and a mud-ring below the lower drums and communicating therewith and with the water-leg.

20. In a boiler of the locomotive type, the combination with a boiler shell of a fire-box at one end thereof, a water-leg at the back of the fire-box, means affording communication between the interior of the shell and the water-leg, drums at the top of the fire-box, two lower drums one on each side of the fire-box, water-tubes connecting the upper and lower drums, and a mud-ring below the lower drums, said mud-ring communicating both with the water-leg and with said drums.

21. In a boiler of the locomotive type, the combination with a boiler shell having flues therethrough, of a fire-box at one end of the shell, a water-leg at the back of the fire-box below the shell, means to deliver water from the upper portion of the shell to said water-leg, upper drums forming the top of the fire-box, two lower drums one at each side of the fire-box, said lower drums communicating with the water-leg, and water-tubes connecting the upper and lower drums.

22. In a boiler of the locomotive type, the combination with a boiler shell having flues therethrough of a fire-box at one end of the shell, a water-leg at the back of the fire-box below the shell, means to deliver water from the upper portion of the shell to said water-leg, upper drums forming the top of the fire-box, two lower drums one at each side of the fire-box, said lower drums communicating with the water-leg, water-tubes connecting the upper and lower drums, and other water-legs at the sides of the fire-box communicating with the upper and lower drums.

23. In a boiler of the locomotive type, the combination with a boiler shell having flues therethrough of a fire-box at one end of the shell, a water-leg at the back of the fire-box below the shell, means to deliver water from the upper portion of the shell to said water-leg, upper drums forming the top of the fire-box, two lower drums one at each side of the fire-box, water-tubes connecting the upper and lower drums, and a mud-ring below the lower drums, said mud-ring communicating with said drums and with the water-leg.

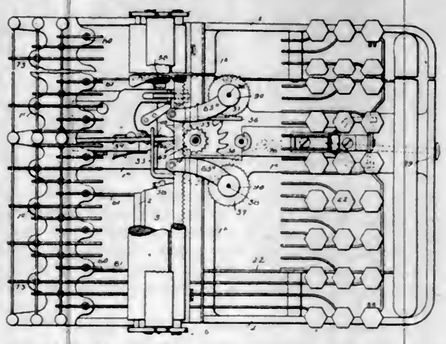
24. In a boiler of the locomotive type, the combination with a boiler shell of a fire-box at one end of the shell, a water-leg at the back of the fire-box below the shell, upper drums forming the top of the fire-box, two lower drums one at each side of the fire-box, water-tubes connecting the upper and lower drums, water-legs at the sides of the fire-box connecting the upper and lower drums, and a water-leg forming the door end of the fire-box, said latter water-leg communicating with both the upper and lower drums.

870,307. RIBBON-FEED MECHANISM FOR TYPE-WRITERS. WILLIAM A. MCCOOL, Beaver Falls, Pa., assignor to Union Specialty Manufacturing Company, a Corporation of Pennsylvania. Original application filed June 19, 1903, Serial No. 162,225. Divided and this application filed Oct. 9, 1905. Serial No. 282,045.

1. In a typewriter, the combination of key levers, a type wheel mounted on an upright shaft, shafts carrying ribbon spools mounted in stationary bearings and disposed substantially parallel with the shaft of the type wheel, ratchet wheels mounted on the spool carrying shafts, a bifurcated double pawl arranged to act upon the ratchet wheels, a rocking frame arranged to be actuated whenever the key levers are operated, a connection between the rocking frame and the pawl, and means for shifting the pawl to engage with either one or the other of the ratchet wheels, substantially as set forth.

2. In a typewriter, the combination of a bank of key levers, a type wheel situated above the key levers, a pair of ribbon spools also above the key levers, shafts on which the ribbon spools are mounted extending downward through the bank of key levers, ratchet wheels on the spool shafts also below the key levers, and mechanism operated by the key levers for engaging with the ratchet wheels to turn the spool shafts, substantially as set forth.

3. In a typewriter, the combination of the key levers, the rocking bar mounted beneath said levers for engagement therewith, the two ribbon spools, the upright shafts carrying said spools and extending below the key levers, ratchets on said shafts also below the levers, the pawl actuated by the rocking bar and adapted to engage with either ratchet at will, and the lever extending to the front of the frame below the bank of keys and connected to the pawl, whereby it may be shifted from one to the other ratchet as may be desired.



4. In a typewriter, the combination of a frame, keys on the frame, a paper carriage above the keys, a type-wheel close to the carriage, two ribbon spools on vertical shafts parallel with the type wheel, ratchets on said shafts situated below the keys, a bifurcated pawl between and in alinement with the ratchets, a rocking frame below the keys, a yoke embracing the stem of the pawl and extending to the front of the machine and pivotally attached to the frame, whereby the pawl may be shifted from one ratchet to the other.

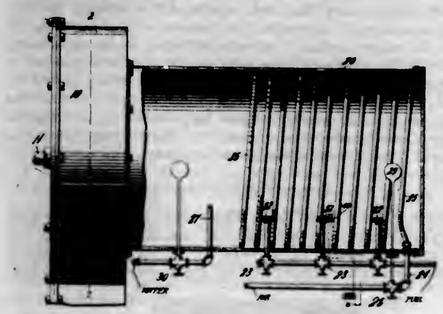
5. In a typewriter, the combination of the type-wheel on a vertical axis, two vertical shafts, one at each side, and both in front of the axis of the type-wheel, ratchets near the lower ends of said shafts, ribbon spools upon their upper ends, resistance springs for the spools, vertical ribbon rollers near the plane of the operative type, pawl-like devices engaging with the said ratchets alternately, a yoke embracing the pawl-like devices, springs interposed between the yoke and the pawl-like devices, and a lever extending from the yoke to the front of the machine, substantially as set forth.

6. In a typewriter, the combination of a bank of key-levers, a type wheel situated above the key levers, a pair of ribbon spools, shafts on which the ribbon spools are mounted extending downward through the bank of keys, means for turning the spool shafts arranged below the bank of keys, and a lever extending to the front of the frame below the keys for shifting the means for operating the spool shafts to cause the rotation of one or the other thereof as desired, substantially as set forth.

870,308. ENGINE. CHARLES W. MCGONIGLE, North Yakima, Wash., assignor of one-half to O. L. Young, North Yakima, Wash. Filed Oct. 31, 1906. Serial No. 341,461.

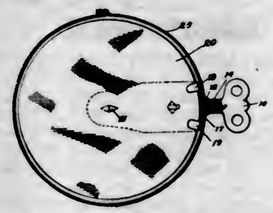
1. The combination with an engine, of a pressure chamber in permanent communication therewith, a perforated conduit arranged helically within the chamber, a plurality of burners disposed within the chamber in proximity to the conduit to receive air therefrom for supporting combustion, means for supplying air to the conduit in excess of the amount required to support combustion to be heated by the burners, and an automatic means sensitive to the temperature of the air within the chamber for controlling the air supply.

2. In combination, a turbine engine, a fluid pressure generating chamber in direct communication therewith, a gas burner in the chamber, a perforated air pipe coiled within the chamber, and means for forcing air under pressure through said pipe.



3. The combination with a turbine engine, of a pressure chamber in direct communication therewith, a perforated tube arranged in a helical coil within the chamber, means for forcing air under pressure through said tube, a gas burner arranged within the chamber and serving to heat and expand the air, and a water jet pipe extending within the chamber at a point in advance of the burner.

870,309. DAMPER. HARRY W. NEAL, Indianapolis, Ind., assignor to himself, Willard Harmon, and Charles E. Hall, Indianapolis, Ind., a Copartnership. Filed Apr. 6, 1907. Serial No. 366,660.



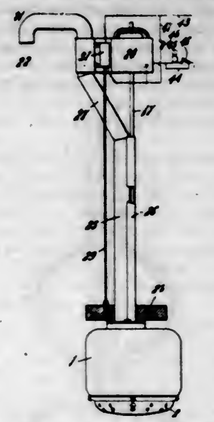
1. A damper support comprising a main plate 16 having a tongue 18 and a perforated tongue 17, other tongues carried by said plate for receiving and holding a damper plate, and a sheet metal shank member having a U-shaped shank adapted to enter the perforated tongue 17 and provided near its end with a notch adapted to receive the tongue 18, a collar slidably mounted on said shank and provided with a tongue lying between the arms of the shank, and a spring mounted on the shank and engaging said collar, all substantially as and for the purpose set forth.

2. A damper support comprising a main plate 16 having a tongue 18 and a perforated tongue 17, other tongues carried by said plate for receiving and holding a damper plate, and a shank member adapted to enter the perforated tongue and provided near its inner end with a notch adapted to receive the adjacent tongue 18 of the main plate, and a spring carried by the shank member to act longitudinally thereof against the main plate, substantially as described.

3. A damper support comprising a main plate 16 having a tongue 18 and a perforated tongue 17, and a sheet metal shank member having a U-shaped shank adapted to enter the perforated tongue 17 and provided near its end with a notch adapted to receive the tongue 18, a collar slidably mounted on said shank and a spring mounted on the shank and engaging said collar, all substantially as and for the purpose set forth.

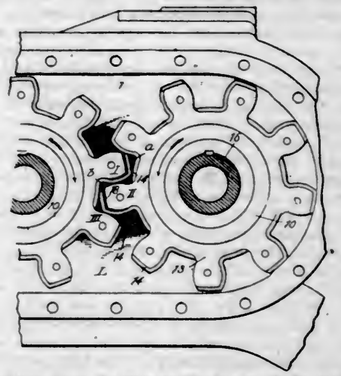
870,310. ROTARY PUMP. JAMES J. O'DONNELL, Paducah, Ky. Filed July 31, 1906. Serial No. 328,594.

The combination of a pump, an electric motor for driving the same, an automatically actuated mechanism for opening and closing the circuit of the motor, a signal device connected in circuit with the motor, and a manually



controlled device for controlling the motor independently of the said mechanism.

870,311. ROTARY PUMP. GORO OKAMOTO, New York, N. Y. Filed May 4, 1907. Serial No. 371,876.



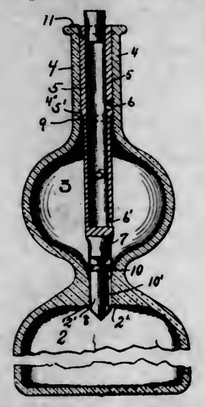
In a rotary pump, having two gear wheels in mesh with each other for conveying fluid, elastic material on the engaging faces of the teeth of said gear wheels and a lining of resistive material protecting said elastic material, said resistive lining being disposed to be lifted by the difference of pressure in the pump when the teeth are engaging, to tighten the engaging surfaces of the teeth against leakage from the high-pressure side to the low-pressure side of the pump.

870,312. NON-REFILLABLE BOTTLE. CLARENCE A. PARKER, Craigsville, N. Y. Filed Apr. 23, 1907. Serial No. 369,736.

1. A non-refillable bottle comprising a body portion and a bulbous portion connected thereto by a passage, a neck and a downwardly movable outlet tube extending through said neck and into the lower part of said bulbous portion, said tube carrying a stopper for the body portion at its lower end and being formed with inlet openings at its lower end above the stopper and above the lower end at a distance therefrom slightly less than the length of the said bulbous portion and means for preventing the withdrawal of the tube from the bottle.

2. A non-refillable bottle comprising a body portion, a bulbous portion and a neck, a downwardly movable outlet tube extending through said neck and bulbous portion and

carrying a stopper at its lower end to close the body portion and having inlet openings at the lower end and at a distance from the lower end slightly less than the length of said bulbous portion, and an outwardly opening spring latch carried at the lower end of the tube below the stopper thereof adapted to engage with the wall of the body portion and prevent the withdrawal of said central tube.



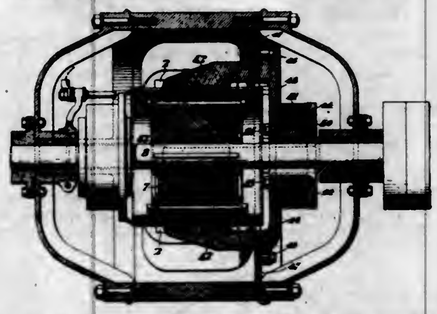
3. A non-refillable bottle comprising a body portion, a bulbous portion and a neck, a downwardly movable outlet tube extending through said neck and bulbous portion, a stopper at its lower end to close the body portion and having inlet openings at the lower end and at a distance from the lower end slightly less than the length of said bulbous portion, said tube below the stopper being extended in the form of ribs adapted to engage with the walls of the passage leading from the body portion to the bulbous portion, and a ring surrounding said ribs provided with downwardly and outwardly extending resilient fingers having barbs thereon adapted to engage with the body portion of the bottle to prevent the withdrawal of said tube.

4. A non-refillable bottle comprising a body portion, a bulbous portion and a neck, a downwardly movable outlet tube extending through said neck and bulbous portion and carrying a stopper at its lower end to close the body portion and having inlet openings at the lower end and at a distance from the lower end slightly less than the length of said bulbous portion, said tube below the stopper being extended in the form of ribs adapted to engage with the walls of the passage leading from the body portion to the bulbous portion, a ring surrounding said ribs provided with downwardly and outwardly extending resilient fingers, said fingers having upper and lower barbs thereon adapted to successively engage with the body portion of the bottle when the tube is in its uppermost position, and when it is in its lowermost position to prevent the withdrawal of said tube.

5. A non-refillable bottle comprising a body portion, a bulbous portion and a neck, a downwardly movable outlet tube extending through said neck and bulbous portion, having the upper portion thereof fitting said bulbous portion and being reduced below to form a shoulder, packing carried against said shoulder, the lower end of said tube having a stopper to close the body portion, and having inlet openings at the lower end and at a distance from the lower end slightly less than the length of said bulbous portion, said tube below the stopper being extended in the form of ribs adapted to engage with the walls of the passage leading from the body portion to the bulbous portion, a ring surrounding said ribs provided with downwardly and outwardly extending resilient fingers, said fingers having upper and lower barbs thereon adapted to successively engage with the body portion of the bottle when the tube is in its uppermost position, and when it is in this lowermost position to prevent the withdrawal of said tube.

6. In a non-refillable bottle, a body portion, a bulbous neck above the body portion and a neck above the bulbous portion, a central downwardly movable tube extending through the neck and bulbous portion, outlet openings through the wall of said tube at a distance from each other slightly less than the length of the bulbous portion and so arranged that when the tube is in its upward position the upper outlet is closed and when in its lowermost position the upper outlet opens into the bulbous portion, a stopper carried on the lower end of the tube adapted to close the passage between the bulbous portion and the body portion, removable means for preventing the depression of said tube, and means for preventing the withdrawal of said tube after its depression.

870,313. DYNAMO-ELECTRIC MACHINE. MATHIAS PFATISCHER, Philadelphia, Pa., assignor to Electro Dynamic Company, New York, N. Y., a Corporation of Pennsylvania. Filed July 23, 1906. Serial No. 327,278.



1. In a direct current shunt wound motor, the combination with an armature; of a field magnet frame provided with main polar projections; auxiliary polar projections of different cross sectional area, said auxiliary polar projections forming, in conjunction with the armature iron, a magnetic circuit independent of that of the main polar projections; a coil common to said auxiliary poles disposed in axial alinement with the armature; means connecting said main coils in shunt relation to the armature windings; means connecting said auxiliary coil in series relation to the armature windings; and, means arranged to adjustably vary the strength of the current in said shunt coils, independently of said series coil, substantially as set forth.

2. In a direct current shunt wound motor, the combination with an armature; of a field magnet frame provided with main polar projections; auxiliary polar projections of different cross sectional area; coils for said main polar projections; a coil common to said auxiliary polar projections, disposed in axial alinement with the armature; means connecting said main coils in shunt relation to the armature windings; and means connecting said auxiliary coil in series relation to the armature windings, substantially as set forth.

3. In a dynamo electric machine, the combination with an armature; of a field magnet frame supporting a set of main polar projections and a set of auxiliary polar projections in alternate relation with said main polar projections; a set of coils for the main polar projections respectively local thereto in a series surrounding said armature; and, a single coil common to said auxiliary polar projections, disposed in axial alinement with the armature and constituting a compensating winding, substantially as set forth.

4. In a dynamo electric machine, the combination with an armature; of a field magnet frame provided with main polar projections; auxiliary polar projections located between said main polar projections; and, a coil for said auxiliary polar projections, disposed in axial alinement with said armature, substantially as set forth.

5. In a dynamo electric machine, the combination with an armature; of a field magnet frame provided with main polar projections; auxiliary polar projections located between the main polar projections; and, a coil for said auxiliary polar projections, disposed in axial alinement with the armature, substantially as set forth.

6. In a dynamo electric machine, the combination with an armature; of a field magnet frame provided with main polar projections; auxiliary polar projections which are of smaller cross-sectional area and are located between the main polar projections; bearing brackets at the opposite ends of said field magnet frame; a shaft for said armature mounted in said brackets; and, a coil arranged in axial alinement with the armature to energize said auxiliary polar projections, substantially as set forth.

7. In a dynamo electric machine, the combination with an armature; of a field magnet frame having a set of main polar projections; a set of auxiliary polar projections that alternate in position with the main polar projections; a set of main coils respectively local to said main polar projections; and, a single coil common to said auxiliary polar projections, constituting a compensating and regulating winding, substantially as set forth.

8. In a dynamo electric machine, the combination with an armature; of a field magnet frame supporting two sets of alternately disposed polar projections having windings connected respectively in series and in shunt relation to the armature windings; the windings that are series connected being in axial alinement with the armature, substantially as set forth.

9. In a dynamo electric machine, the combination with an armature; of a field magnet frame supporting two sets of alternately disposed polar projections of respectively different cross sectional area and windings connected respectively in series and in shunt relation to the armature windings, the series connected windings being in axial alinement with the armature, substantially as set forth.

10. In a dynamo electric machine, the combination with an armature; of a field magnet frame having a set of main polar projections; a set of auxiliary polar projections that alternate in position with the main polar projection; a set of main coils respectively local to said main polar projections; a single coil common to said auxiliary polar projections, constituting a compensating winding, said alternate auxiliary polar projections extending respectively from opposite ends of said single roll, substantially as set forth.

11. In a dynamo electric machine, the combination with an armature; of a field magnet frame provided with main polar projections; auxiliary polar projections located between said main polar projections; and, a single coil common to said auxiliary polar projections; said auxiliary polar projections extending alternately from opposite ends of said coil, substantially as set forth.

12. In a dynamo electric machine, the combination with a rotary armature; of a stationary field magnet frame provided with stationary main polar projections; stationary auxiliary projections, forming in conjunction with the armature iron, a magnetic circuit distinct from that of the main polar projections; and, a coil disposed in axial alinement with said armature, arranged to energize said auxiliary polar projections, substantially as set forth.

13. In a dynamo electric machine, the combination with an armature; of a main field comprising coils provided with main polar projections; an auxiliary field comprising a coil provided with auxiliary polar projections extending alternately from the respectively opposite ends thereof, and between said main polar projections, substantially as set forth.

14. In a dynamo electric machine, the combination with an armature; of a main field comprising coils provided with main polar projections; an auxiliary field comprising a coil provided with auxiliary projections extending alternately from the respectively opposite ends thereof, and between said main polar projections; said auxiliary field coil being disposed in axial alinement with said armature, substantially as set forth.

15. In a dynamo electric machine, the combination with an armature; of a main field comprising coils provided with main polar projections; an auxiliary field comprising a coil provided with auxiliary polar projections extending between said main polar projections; said auxiliary polar projections being of respectively alternate polarity, substantially as set forth.

16. In a dynamo electric machine, the combination with an armature; of a main field comprising coils provided with main polar projections; an auxiliary field comprising a coil provided with auxiliary polar projections extending between said main polar projections; said auxiliary polar projections being of respectively alternate polarity, and equal in number to said main polar projections, substantially as set forth.

17. In a dynamo electric machine, the combination with an armature; of a main field comprising coils provided with main polar projections; an auxiliary field comprising a coil provided with auxiliary polar projections extending between said main polar projections; said auxiliary polar projections being of respectively alternate polarity; whereby lines of force of said auxiliary field local to the armature, extend circumferentially with respect to the armature axis, substantially as set forth.

18. In a dynamo electric machine, the combination with an armature; of a main field comprising coils provided with main polar projections; an auxiliary field comprising a coil provided with auxiliary polar projections, extending between said main polar projections; said auxiliary coil being disposed in concentric relation with said armature, substantially as set forth.

19. In a dynamo electric machine, the combination with an armature having a shaft; of a main field magnet frame provided with polar projections; an auxiliary field magnet frame comprising a central hub encircling said armature shaft; polar projections extending outwardly from said hub within said main frame and between said main polar projections; and, means detachably securing said main field frame and auxiliary field frame in concentric relation, substantially as set forth.

20. In a dynamo electric machine, the combination with an armature having a shaft; of a main field magnet frame provided with polar projections; an auxiliary field magnet frame comprising a central hub encircling said armature shaft; polar projections extending outwardly from said hub within said main frame and between said main polar projections; and, means detachably securing said main field frame and auxiliary field frame in concentric relation, substantially as set forth.

21. In a dynamo electric machine, the combination with an armature having a shaft; of a main field magnet frame provided with polar projections; an auxiliary field magnet frame provided with polar projections extending within said main frame between said main polar projections; and, means securing said main field frame and auxiliary field frame in concentric relation, comprising an annular plate detachably connected with both of said frames, substantially as set forth.

22. In a dynamo electric machine, the combination with an armature having a shaft; of a main field magnet frame provided with polar projections; an auxiliary field magnet frame provided with polar projections extending within said main frame between said main polar projections; and, means securing said main field frame and auxiliary field frame in concentric relation, comprising a plate detachably connected with both of said frames, substantially as set forth.

23. In a dynamo electric machine, the combination with an armature having a shaft; of a main field magnet frame provided with polar projections; an auxiliary field magnet frame distinct from said main frame and comprising separable members, extending transversely with respect to said shaft, carrying auxiliary polar projections; and, means detachably securing said auxiliary frame members in separable relation, substantially as set forth.

24. In a dynamo electric machine, the combination with an armature having a shaft; of a main field magnet frame provided with polar projections; an auxiliary field magnet frame distinct from said main frame and comprising separable members, extending transversely with respect to said shaft, carrying auxiliary polar projections; and, a coil between said frame members arranged to energize said auxiliary polar projections, substantially as set forth.

25. A dynamo electric machine having an armature,

main field polar projections and auxiliary commutating-field polar projections; the axes of said main polar projections being radial with respect to the armature axis, and the axes of said auxiliary polar projections being parallel with the armature axis; and, a coil arranged with its axis parallel with the axis of the armature to energize said auxiliary polar projections, substantially as set forth.

26. A dynamo electric machine having an armature, main field polar projections and auxiliary commutating-field polar projections; the axes of said main polar projections being radial with respect to the armature axis, and the axes of said auxiliary polar projections being parallel with the armature axis; a main field frame rigidly connecting said main polar projections independently of said auxiliary polar projections; and, an auxiliary field frame rigidly connecting said auxiliary polar projections independently of said main polar projections, substantially as set forth.

27. A dynamo electric machine having an armature, main field polar projections and auxiliary commutating-field polar projections; and, a coil arranged with its axis parallel with the axis of the armature to energize said commutating-field polar projections, substantially as set forth.

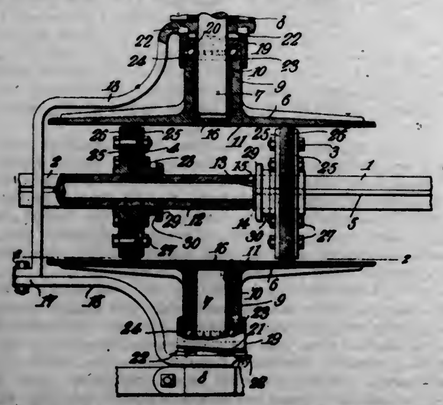
28. In a dynamo electric machine, the combination with a rotary armature; of a stationary field magnet frame provided with stationary main polar projections; stationary auxiliary projections, forming in conjunction with the armature iron, a magnetic circuit distinct from that of the main polar projections; and, a coil disposed in axial alinement with said armature, arranged to energize said auxiliary polar projections, substantially as set forth.

870,314. SHOW-CASE. ORLANDO E. PIERCE, San Francisco, Cal. Filed May 21, 1907. Serial No. 374,949.



A show case comprising a lower section having glass sides, an upper section having a glass top, and sides, and a glass bottom, and overhanging the lower section at the front, sockets for incandescent lamps secured beneath the overhanging portion of the upper section, and sloping shelves in the lower section, substantially as described.

870,315. DRIVING-GEAR. JOHN B. RAHN, Racine, Wis. Filed Nov. 26, 1906. Serial No. 345,170.



1. In a device of the class described, the combination of a driving shaft and a driven shaft, a pair of friction disks, a friction wheel slidable on each shaft and adapted to engage said friction disks, and means for causing said wheels to traverse said disks at different speeds.

2. In a device of the class described, the combination of a driving shaft and a driven shaft, a pair of friction disks having plain parallel faces, a friction wheel slidable on each shaft and adapted to engage said friction disks, and means for causing said wheels to traverse said disks at different speeds.

3. In a device of the class described, the combination of a driving shaft and a driven shaft, a pair of frictions disks, a friction wheel slidable on each shaft and adapted to engage the faces of said friction disks, and means for simultaneously moving both friction wheels in the same direction, one of which is adapted to cross the axis of the friction disks.

4. In a device of the class described, the combination of a driving shaft and a driven shaft, a pair of friction disks having plain parallel faces and rotatable on the same axial line, a friction wheel slidable on each shaft and adapted to engage said friction disks, a pivoted operating lever extending below said shafts, and means connected to said lever above and below said shafts and to said friction wheels for sliding them on said shafts.

5. In a device of the class described, the combination of a driving shaft and a driven shaft, a pair of friction disks having plain parallel faces and rotatable on the same axial line, a friction wheel slidable on each shaft and adapted to engage said friction disks, a pivoted operating arm extending below said shafts, a loose ring on the hub of each wheel, and a link pivoted to each ring and to said lever, one link being above and the other below said shafts.

6. In a device of the class described, the combination of a driving shaft and a driven shaft, a pair of friction disks having plain parallel faces and rotatable on the same axial line, a friction wheel feathered on each shaft and adapted to engage said friction disks, a pivoted operating lever extending below said shafts, and means connected with said lever above and below said shafts and said friction wheels for sliding them on said shafts.

7. In a device of the class described, the combination of a driving shaft and a driven shaft in the same axial line, a pair of friction disks having plain parallel faces and rotatable on the same axial line, a friction wheel slidable on each shaft and adapted to engage said friction disks, a pivoted operating lever extending below said shaft and adapted to move said friction wheels at different speeds across the faces of said friction disks.

8. In a device of the class described, the combination of a driving shaft and a driven shaft in the same axial line, one of said shafts being journaled in the other, a pair of friction disks having plain parallel faces and rotatable on the same axial line at a right angle to the line of said driving and driven shafts, a friction wheel slidable on each shaft and adapted to engage said friction disks, a pivoted operating lever extending below said shafts and adapted to move said friction wheels across the faces of said friction disks, and means for sliding said disks on their shafts into and out of engagement with said friction wheels.

870,316. METHOD OF MAKING LEAD PIGMENTS. ALEXANDER S. RAMAGE, Detroit, Mich. Filed May 15, 1907. Serial No. 373,715.

1. The method which consists in reacting on lead sulfate with an alkali metal carbonate and hydroxid to produce basic lead carbonate, bringing the resulting solution into contact with chamber sulfate, thereby acidifying said solution and eliminating lead therefrom and abstracting acid from said chamber sulfate, converting said sulfate into basic carbonate of lead, dissolving the basic carbonate in an acid solvent, purifying the solution, and preparing a chrome pigment therefrom.

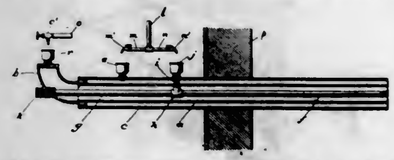
2. The method which consists in reacting on lead sulfate with an alkali metal carbonate and hydroxid to produce basic lead carbonate, bringing the resulting solution into contact with chamber sulfate, thereby acidifying said solution and eliminating lead therefrom and abstracting acid from said chamber sulfate, converting said sulfate into basic carbonate in acetic acid, purifying the solution and rendering it basic by the successive addition of a bichromate and a compound of lead, and preparing a chrome pigment from the purified solution.

3. The method of preparing chrome pigments which consists in dissolving impure basic carbonate of lead in an acid solvent, purifying the solution and rendering it basic and preparing a chrome pigment from the basic solution.

4. The method of preparing chrome pigments which consists in dissolving impure basic carbonate of lead in an acid solvent, adding an oxidizing agent, rendering the solution basic, and preparing a chrome pigment from the basic solution.

5. The method of preparing chrome pigments which consists in dissolving impure basic carbonate of lead in acetic acid, purifying the solution and rendering it basic by the successive addition of a bichromate and a compound of lead, and preparing a chrome pigment from the purified solution.

870,317. OIL-BURNER. SAMUEL B. RAPPLEYE, Philadelphia, Pa. Filed Apr. 20, 1906. Serial No. 312,767.



1. An oil burner comprising an oil tube, a second tube within and surrounded by the oil tube, a third tube outside the oil tube, water receiving cups connected respectively with the second and third tubes, and means to regulate the admission of air to the second tube.

2. An oil burner comprising an oil tube having a turned up rear end through which oil is supplied, an inner tube within the oil tube, the rear end of which extends through the rear wall of the oil tube, an outer tube surrounding the horizontal part of the oil tube, means by which water is supplied to the outer and inner tubes, and a cap on the projecting rear end of the inner tube for regulating the admission of air thereto.

3. An oil burner comprising an oil tube having a turned up rear end through which oil is supplied, an inner tube within the oil tube, the rear end of which extends through the rear wall of the oil tube, an outer tube surrounding the horizontal part of the oil tube, a water receiving inlet tube communicating with the inner tube and extending through the walls of the oil tube and outer tube, and a water-receiving cup on the outer tube.

4. An oil burner comprising an intermediate vaporizing tube means to admit thereto oil, an inner tube extending longitudinally within the oil tube, an outer tube within which the inner tube extends longitudinally, means to supply water to the inner and outer tubes, and means to supply air to all the tubes.

5. An oil burner adapted for insertion into a fire-box and comprising an intermediate vaporizing tube, means to admit oil to the vaporizing tube, an inner tube extending longitudinally within the vaporizing tube, an outer tube within which the intermediate tube extends longitudinally, said inner and outer tubes being open to the atmosphere at points back of their exit ends, means to supply an oxygen containing fluid to both the inner and outer tubes, whereby the oil is vaporized and oxygenized before exit from the burner and before mixture with the oxygen containing fluids emerging from the outer and inner tubes.

6. An oil burner adapted for insertion into a fire-box and comprising an intermediate vaporizing tube, means to admit oil to the vaporizing tube, an inner tube extending longitudinally within the vaporizing tube, an outer tube within which the intermediate tube extends longitudinally, and means to supply water to the inner and outer tubes, all said tubes being open to the atmosphere at points back of their exit ends.

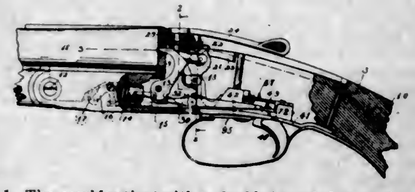
7. An oil burner adapted for insertion into a fire-box and comprising an intermediate vaporizing tube, means to admit oil to the vaporizing tube, an inner tube extending longitudinally within the vaporizing tube, an outer tube within which the intermediate tube extends longitudinally, means to supply water to the inner and outer tubes, means to supply air in regulated quantities to at least one of the last-named tubes, and means to supply air to the oil-vaporizing tube.

8. An oil burner adapted for insertion into a fire-box, comprising an intermediate vaporizing tube having an oil inlet opening to the atmosphere, means to drip oil through said opening, an inner tube extending longitudinally within the oil tube, and an outer tube within which the intermediate tube extends longitudinally, said inner and outer tubes being open to the atmosphere at points back of their exit ends.

9. An oil burner adapted for insertion into a fire-box comprising a vaporizing tube having an inlet opening to the atmosphere, means supplying oil through said inlet to the vaporizing tube, and two tubes extending longitudinally of the vaporizing tube and arranged concentrically with respect thereto and with respect to each other, the two last-named tubes having inlets opening to the atmosphere, and means supplying water to one or both of the two last named tubes through its said inlet.

10. An oil burner adapted for insertion into a fire-box comprising a vaporizing tube having at one end an oil inlet opening to the atmosphere, and two tubes extending longitudinally of the vaporizing tube, one surrounding, and the other surrounded by, the vaporizing tube, each of the two last-mentioned tubes having water inlets opening to the atmosphere.

870,318. SINGLE-TRIGGER MECHANISM. ANTON RAUS, Cleveland, Ohio. Filed Apr. 24, 1906. Serial No. 313,369.



1. The combination with a double-barreled gun of a single trigger mechanism including a movable dog adapted to be set for either barrel and having a mid position into which the firing of either barrel brings it, the involuntary pull consequent thereupon shifting it into position for the other barrel.

2. The combination of a trigger, a shiftable dog mounted thereon, a bar for moving the dog, a plate, coöperating ratchet teeth on the bar and plate to cause the dog to travel crosswise consequent upon the up and down movement of the trigger, and means for automatically returning said dog to initial position when the gun is opened.

3. In a single trigger mechanism, the combination of a trigger, a shiftable bar mounted thereon, a dog for operating the sears movable by said bar, a shiftable plate, co-operative ratchet teeth on the bar and the plate to cause said bar to move in either direction according to the position of the plate, and means for returning said bar to initial position.

4. In a single trigger mechanism, the combination of a trigger, a shiftable bar mounted thereon, a dog for operating the sears movable by said bar, a spring pressed plunger for holding said bar in position, a shiftable plate, and co-operative ratchet teeth on the bar and the plate to cause said bar to move in either direction according to the position of the plate.

5. The combination of a trigger, a pivoted sear-operating dog monnted thereon, a pivoted bar engaging said dog, a

spring pressed plunger for holding said bar in proper position, means operated by the raising and lowering of the trigger to shift said bar laterally, and means for reversing direction of such shifting.

6. The combination of a trigger, a pivoted sear-operating dog mounted thereon, a pivoted bar engaging said dog, means operated by the raising and lowering of the trigger to shift said bar laterally, and means for reversing direction of such shifting, and means operated when the gun is opened to automatically return said bar to initial position, said means being automatically shifted when the bar movement is shifted.

7. The combination with the sears of a trigger, a pivoted sear-operating dog mounted thereon, a pivoted bar having a spring engagement with said dog, a spring-pressed plunger having a beveled engagement with said bar, means operated by the raising and lowering of the trigger to shift said bar laterally.

8. In a single trigger mechanism, the combination of a trigger, a shiftable bar mounted thereon, and having teeth on its upper surface, means for operating the sears controlled by said bar, a member above the bar having teeth coöperative with the teeth of the bar, said member being shiftable to bring its teeth into or out of engagement with teeth on the bar.

9. In a single trigger mechanism, the combination of a trigger, a shiftable member mounted thereon, and having teeth on its upper surface, means for operating the sears controlled by said member, a second member having teeth coöperative with the teeth mentioned, one of such members having two sets of such teeth and one of said members being shiftable to bring either set of teeth into engagement with teeth from the other member to cause said shiftable member to travel laterally in either direction as desired.

10. In a double-barreled gun, the combination of a single trigger mechanism automatically shiftable from either barrel to the other, an indicator stationary during the shifting for indicating the direction of shift, and an indicator movable with the shifting for indicating the barrel in action.

11. The combination, with the sears, of a pivoted trigger, laterally movable mechanism mounted on the trigger and adapted to be shifted in either direction to control either sear, a locking device for the barrel, a member operated by the releasing movement of such locking device, a connection between said member and the sear-operating mechanism, and means for shifting said connection.

12. The combination with the sears of operating mechanism therefor, means for automatically shifting said mechanism from either sear to the other, and means for disengaging the automatic operation and leaving either sear as desired in action.

13. In a single trigger mechanism, the combination with the sears of operating mechanism therefor including a dog automatically shiftable in either direction to engage either sear, finger-operated mechanism for determining the direction of shift, said dog and mechanism having intermediate positions which disengage the automatic operation.

14. In a trigger mechanism, the combination with the sears and the trigger, of operating mechanism automatically shiftable from either sear to the other, mechanism for changing the direction of shift, and a finger device independent of the mechanism for changing the direction of shift, and adapted to shift the operating mechanism in either direction.

15. The combination with a double barreled gun of single trigger mechanism automatically shiftable from either sear to the other, means for changing the direction of the shift, such means giving an indication of the selected direction, means operating when the gun is opened to automatically return the trigger mechanism to initial position, and independent finger-operated means to shift the operating mechanism as desired without interfering with the automatic mechanism, the position of said independent means indicating which barrel is in action, said finger operated means having a button or engageable part on the under side of the lock plate just in front of the trigger.

16. The combination of sears, a trigger, a laterally shiftable member mounted thereon, a second member, two sets of coöperating ratchet teeth carried by said members to cause the first mentioned member to travel crosswise consequent of its up and down movement, and means for longitudinally shifting the second mentioned member to change the direction of such crosswise movement.

17. The combination with the sears of a trigger, a dog carried thereby adapted to operate either sear, means for automatically shifting said dog from either sear to the other, and means for throwing out of action such automatic operation, whereby the dog may independently operate either sear as desired.

18. The combination with the sears of a double-barreled gun, of sear operating mechanism, means for automatically shifting said mechanism from either sear to the other, means for changing the direction of such shift and for indicating the direction in which the mechanism is set to shift, and means for indicating the particular barrel with which the mechanism is in operation.

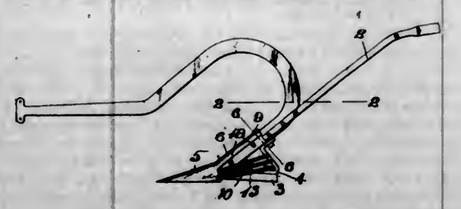
870,319. COMBINED PLOW AND CULTIVATOR. JOSEPH SCHIMANOSKI, St. Louis, Mo. Filed Jan. 18, 1907. Serial No. 352,889.



1. An implement of the class described, comprising a plow beam, a horizontally disposed bar fixed to the lower end of the beam, a brace arranged between the beam and the rear end of the bar, a cultivator shovel detachably fixed on the forward ends of the beam and bar, an integral arm projecting upwardly from the center of the shovel, cultivator mold boards hinged to the sides of the arm, and braces connected to the rear sides of the mold boards and being adjustably attached to the brace between the plow beam and horizontally disposed bar.

2. An implement of the class described, comprising a plow beam, a lug formed thereon, a horizontally disposed bar fixed to the lower end of the beam, a brace arranged between the beam and the rear end of the bar, a plowshare detachably arranged on the lower end of the plow beam, a notched plate carried by the plowshare for engaging the lug on the plow beam, and a brace attached to the rear side of the plowshare and detachably secured to the brace between the plow beam and the horizontally disposed bar.

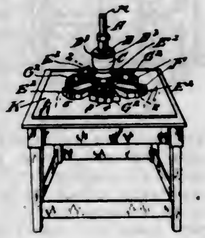
870,320. POTATO-DIGGER. JOSEPH SCHIMANOSKI, St. Louis, Mo. Filed June 10, 1907. Serial No. 378,058.



1. A potato digger, comprising a plow beam, a plow detachably arranged on said beam, an arm integral with said plow and projecting upwardly on the beam, a pair of perforated lugs carried by each side of the arm, an arch plate rigidly fixed to the under side of the plow adjacent its rear edge, blocks detachably fixed to the side portions of the arch plate, and a series of fingers projecting rearwardly from each block.

2. A potato digger, comprising a plow beam, a plow detachably secured thereto, a transversely disposed arch plate rigidly fixed to the under side and rear portion of the plow, pairs of perforated lugs integral with the arch plate, blocks arranged beneath the rear end of the plow against the arch plate, pins rigidly fixed in said blocks and projecting through the perforated lugs on the arch plate, means whereby said pins are locked to the arch plate, and a series of fingers rigidly fixed to each block and projecting rearwardly therefrom.

870,321. POLISHING-MACHINE FOR MARBLE AND ANALOGOUS MATERIALS. CHARLES STAMPER and JAMES D. STAMPER, Cincinnati, Ohio. Filed Sept. 21, 1906. Serial No. 335,657.



1. In a grinding and polishing machine, the combination of a series of grit holders, connected to a ring, a series of grit holders connected to an inner ring, an intermediate screw threaded ring whose thread engages a thread on the interior of the first named or outer ring, and means for compelling the inner ring to rise and fall as this intermediate ring is raised or lowered relatively to the outer ring, substantially as and for the purposes specified.

2. In a grinding and polishing machine, the combination of a series of grit holders connected to a ring, a series of grit holders connected to an inner ring, an intermediate screw threaded ring whose thread engages a thread on the interior of the first named or outer ring, and a flat ring extending over the top of the intermediate ring, and secured to the top of the inner ring, substantially as and for the purposes specified.

3. In a grinding and polishing machine, the combination of a series of grit holders forming a disk, and a second series of grit holders forming a disk, the grit holders of one series located alternately between the grit holders of the other series, and means for elevating and lowering the one series relatively to the other, substantially as and for the purposes specified.

4. In a grinding and polishing machine, the combination of a series of grit holders connected to a ring, a series of grit holders connected to an inner ring, an intermediate screw threaded ring whose thread engages a thread on the interior of the first named or outer ring and means for causing the inner ring to rise and fall as this intermediate ring is raised or lowered relatively to the outer ring, and a ball and socket joint, connected to the inner ring of the series of grit holders, substantially as and for the purposes specified.

5. In a grinding and polishing machine, the combination of a series of grit holders forming a disk, and a second series of grit holders forming a disk, the grit holders of one series located alternately between the grit holders of the other series, means for elevating and depressing the one series relatively to the other, and a ball and socket joint, substantially as and for the purposes specified.

6. In a discal grinding and polishing machine, the combination of means for imparting a rotary motion to the disk, and a ball joint interposed between the disk and the means for imparting rotary motion to the disk, the ball of the joint having lugs, located in the plane of a diameter of the ball, and respectively extending into grooves in the socket, and a series of grit holders connected to a ring, a series of grit holders connected to an inner ring, an intermediate screw threaded ring whose thread engages a thread on the interior of the first named or outer ring, and a flat ring extending over the top of the intermediate ring and secured to the top of the inner ring, each series of grit holders arranged to receive between successive grit holders the respective grit holders of the other series, substantially as and for the purposes specified.

7. In a discal grinding and polishing machine, the combination of a socket secured to the disk, a ball received in this socket, a cap whereby the ball is kept in the socket, the lugs whereby a rotatory movement of the ball is communicated to the socket, these lugs being located in the plane of a diameter of the ball, a shaft connected to the ball, a conduit therein, and in the socket, and having its outlet at the grinding face of the disk, and a series of grit holders connected to a ring, a series of grit holders connected to an inner ring, an intermediate screw threaded ring whose thread engages a thread on the interior of the first named or outer ring, and a flat ring extending over the top of the intermediate ring and secured to the top of the inner ring, each series of grit holders arranged to receive between successive grit holders the respective grit holders of the other series, each series of grit holders extended out radially from their respective rings and increasing in size toward the peripheral line of the disk, which they go to form, substantially as and for the purposes specified.

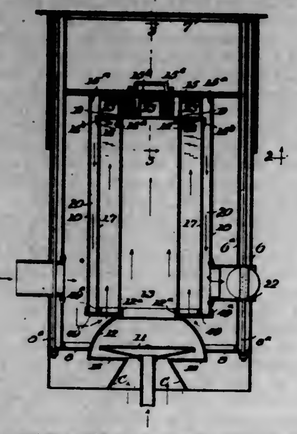
8. In a grinding and polishing machine, the combination of a series of grit holders, connected to a ring, a series of grit holders connected to an inner ring, an intermediate screw threaded ring whose thread engages a thread on the interior of the first named or outer ring, and means for compelling the inner ring to rise and fall as this intermediate ring is raised or lowered relatively to the outer ring, the aforesaid mechanism provided with a central passageway for the introduction of water centrally to the article to be ground, substantially as and for the purposes specified.

9. In a discal grinding and polishing machine, the combination of a socket secured to the disk, a ball received in this socket, a cap whereby the ball is kept in the socket, the lugs whereby a rotatory movement of the ball is communicated to the socket, these lugs being located in the plane of a diameter of the ball, a shaft connected to the ball, a conduit therein, and in the socket, and having its outlet at the grinding face of the disk, and a series of grit holders connected to a ring, a series of grit holders connected to an inner ring, an intermediate screw threaded ring whose thread engages a thread on the interior of the first named or outer ring, and a flat ring extending over the top of the intermediate ring and secured to the top of the inner ring, each series of grit holders arranged to receive between successive grit holders the respective grit holders of the other series, each series of grit holders extended out radially from their respective rings and increasing in size toward the peripheral line of the disk, which they go to form, the said shaft being provided with the passage M and a passage M^3, M^3, M^4, provided through the ball, socket and rings for the conduct of water therethrough, substantially as and for the purposes specified.

870,322. FURNACE. HENRY STRAND, Cleveland, Ohio, assignor to Strand Heater Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 9, 1907. Serial No. 372,742.

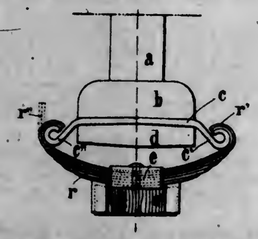
In a gas furnace, the combination of a burner extended laterally to form an overhanging portion at the edge thereof, a fire pot surrounding the same, the fire pot being of less diameter than the burner at the top and expanded outwardly and downwardly to form an enlarged chamber

around the burner, and having a lower inwardly extended portion which projects under the burner and forms a



contracted opening at the center of less diameter than said burner.

870,323. ELASTIC TIRE FOR VEHICLE-WHEELS. GUSTAVE E. N. I. E. SUBRA, Paris, France. Filed Mar. 18, 1907. Serial No. 362,842.

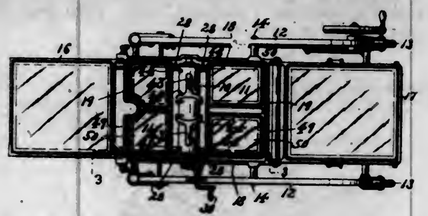


1. An elastic tire for vehicle wheels connected to the wheel rim comprising a steel rim mounted on said wheel rim and having curved portions beyond same, steel springs composed each of a number of curved blades on said metal rim, having bent up portions conforming in shape to the curved portions of the metal rim and recesses in their middle portion, a tread in connection with said springs, an intermediate device connecting the springs and said tread having a hollow portion surrounding the recessed portion of the spring and an extended portion adapted to receive and support the tread, and a stop block located within the peripheral channel of the metal rim.

2. An elastic tire for vehicle wheels connected to the wheel rim comprising a steel rim bent outwardly at its ends, strengthening members below said rim in conformity thereto, securing bolts passing through the wheel rim said metal rim and said members, curved bent end portions formed on each member, steel springs composed each of a number of curved blades one on each member, having bent up portions conforming in shape to the curved portions of the metal rim and recesses in their middle portion, a tread in connection with said springs, an intermediate device connecting the springs and said tread having a hollow portion surrounding the recessed portion of the spring and an extended portion adapted to receive and support the tread, and a stop block located within the peripheral channel of the metal rim.

3. An elastic tire for vehicle wheels connected to the wheel rim comprising a steel rim bent outwardly at its ends, strengthening members below said rim in conformity thereto, securing bolts passing through the wheel rim said metal rim and said members, curved bent end portions formed on each member, steel springs composed each of a number of curved blades one on each member, having bent up portions conforming in shape to the curved portions of the metal rim and recesses in their middle portion, a tread in connection with said springs, an intermediate device connecting the springs and said tread having a hollow portion surrounding the recessed portion of the spring and an extended portion adapted to receive and support the tread, a second elastic steel spring secured inside of the first steel spring, and three stop blocks in the peripheral channel of the inner strengthening member.

870,324. OPERATING-TABLE. BERNARD D. THORNER, New York, N. Y., assignor of one-half to David Frank, Brooklyn, N. Y., and one-half to John Trounstine, New York, N. Y. Filed Feb. 6, 1907. Serial No. 355,999.



1. In an operating-table for the use of surgeons, a table-top comprising head and foot frames, a middle section between said frames, a transverse bar interposed in said middle section, and braces on said bar at each side of its center to confine the abdominal parts of a patient thereon, combined with means for supporting said bar, and means for raising and lowering the same, said bar being adapted, when raised, to the support of the abdominal parts of a patient; substantially as set forth.

2. In an operating-table, a table-top, a transverse bar interposed therein to afford a center-support, and adjustable braces on said support at each side of the center thereof, said support having a series of recesses along its length to receive and afford a lock for the lower portions of said braces, combined with means supporting said bar, and means for raising and lowering the same; substantially as set forth.

3. In an operating-table for the use of surgeons, a table-top comprising head and foot frames, a middle section between said frames, and a transverse bar interposed in said middle section, said middle section comprising leaf-sections at opposite sides of said bar free to slide at their outer ends and having at their inner ends means of connection with said bar, combined with means for supporting said bar, and means for raising and lowering the same, said bar being adapted, when raised, to the support of the abdominal parts of a patient; substantially as set forth.

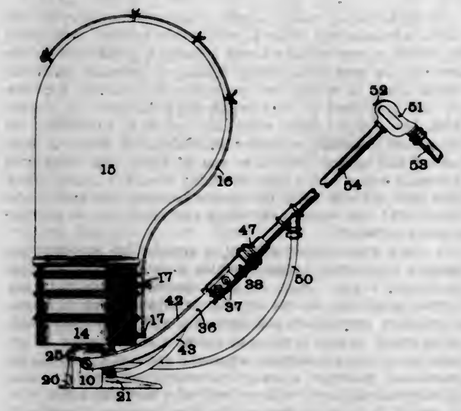
4. In an operating-table for the use of surgeons, a table-top comprising head and foot frames, a middle section between said frames, and a transverse bar interposed in said middle section, said middle section comprising leaf-sections at opposite sides of said bar free to slide at their outer ends, combined with separable means for hinging the inner ends of said leaf-sections to said bar, means for supporting said bar, and means for raising and lowering the same, said bar being adapted, when raised, to the support of the abdominal parts of a patient; substantially as set forth.

5. In an operating-table for the use of surgeons, a table-top comprising head and foot frames, a middle section between said frames, and a transverse bar interposed in said middle section, said middle section comprising leaf-sections at opposite sides of said bar free to slide at their outer ends and having at their inner ends means of connection with said bar, combined with means pivotally mounting said table top as a whole, means for supporting said bar, and means for raising and lowering the same, said bar being adapted, when raised, to the support of the abdominal parts of a patient; substantially as set forth.

6. In an operating-table, a table-top, a transverse bar interposed therein to afford a center support, means for raising and lowering said support, leaf-sections mounted in said top at opposite sides of said support and free to slide at their outer ends, movable plates on the ends of said support to engage the inner ends of said sections, and means for throwing said plates into and out of operative position, whereby said support may be raised alone or be compelled to carry the inner ends of said sections with it; substantially as set forth.

7. In an operating-table, a table-top, a transverse bar interposed therein to afford a center support, means for raising and lowering said support, leaf-sections mounted in said top at opposite sides of said support and free to slide at their outer ends, hook-plates 23 pivotally secured in pairs on the ends of said support, and cam-plates 27 carried at the ends of said support for moving said plates 23 inwardly clear of or outwardly to engage the inner ends of said sections, said sections having pins to be engaged by said hook-plates when the latter are in their outer operative position; substantially as set forth.

870,325. PNEUMATIC RENOVATOR. JOHN S. THURMAN, St. Louis, Mo. Filed Nov. 5, 1904. Serial No. 231,488.



1. In a pneumatic renovator, the combination with a casing, of a plurality of blast nozzles carried by said casing, and an extensible handle connected with said casing and provided with an air supply conduit, said handle having two members, one longitudinally movable relative to the other and said handle comprising a valve situated outside said casing, said valve being governed by the longitudinal movement of one of said members.

2. In a pneumatic renovator, the combination with a casing, of a plurality of blast nozzles carried by said casing, and a telescopic handle connected with said casing and provided with an air supply conduit, said handle having two members, one telescoping the other and said handle comprising a valve situated outside said casing, said valve being governed by the telescopic movement of one of said members.

3. In a pneumatic renovator, the combination with a casing, of a plurality of blast nozzles carried by said casing, a hollow member having ports communicating with said nozzles, and a second hollow member sliding in said first-named member and provided with ports adapted to successively register with the ports in said first-named member.

4. In a pneumatic renovator, the combination with a casing, of a plurality of blast nozzles carried by said casing, a hollow member pivotally mounted on said casing and provided with ports, flexible connections between said ports and said nozzles, and a second hollow member sliding in said first-named member and provided with ports adapted to register successively with the ports in said first-named member.

5. In a pneumatic renovator, the combination with a casing provided with an outlet, of a plurality of blast nozzles carried by said casing, an air supply conduit, a hollow handle connected with said conduit and comprising a controlling device for shifting the air supply from one of said nozzles to another, a nozzle discharging through the outlet of said casing, and a conduit extending from said latter named nozzle to said handle at a point beyond said controlling device.

6. In a pneumatic renovator, the combination with a casing provided with an outlet, of a plurality of blast nozzles carried by said casing, an air supply conduit, a hollow handle connected with said conduit and provided with a hand piece and comprising a controlling device for shifting the supply of air from one of said nozzles to another, said controlling device being situated at a point intermediate said hand piece and said casing, a nozzle discharging through the outlet of said casing, and a conduit extending from said latter named nozzle to a point intermediate said hand piece and said controlling device.

7. In a carpet renovator, a casing having blast-nozzles and air passages leading to said nozzles, a handle formed of two members, one of which is movable relative to the other, and an air valve controlling said passages and actuated by said movable member.

8. In a carpet renovator, a casing having blast-nozzles and air passages leading to said nozzles, a handle formed of two members, one of which is movable relative to the other, an air valve controlling said passages and actuated by said movable member, and means for limiting the operative stroke of said movable member.

9. In a carpet renovator, a casing having blast nozzles and air passages leading to said nozzles, a handle formed of two members, one of which is movable relative to the other, an air valve controlling said passages and actuated by said movable member, and abutments for limiting the reciprocatory movement of said movable member and valve.

10. In a carpet renovator, a casing having blast nozzles, a handle consisting of two members, one of which is reciprocally mounted within the other, said renovator having an inlet-port and air passages extending from said port to said blast nozzles, and a valve connected to the reciprocatory member of said handle and arranged to control said air passages.

11. In a carpet renovator, the combination of a casing, a telescopic handle by which the casing is operated arranged to move telescopically when the direction of the movement of the casing is reversed, means in the casing controlling the delivery of the air blast against the carpet at one angle or another, and means controlled by the telescopic movements of the handle for causing the air to be discharged against the carpet in one direction when the casing is moved forward and in a different direction when it is moved backward, substantially as set forth.

12. In a carpet renovator, the combination of a casing, a telescoping handle connected thereto, blast nozzles mounted in the casing, a source of air supply, an air passage leading to each of said nozzles, and means arranged between the source of air supply and the air passages for the nozzles, operated by the telescoping handle for controlling the air to the said nozzles alternatingly, substantially as set forth.

870,326. ELECTRIC FURNACE. FRANK J. TONE, Niagara Falls, N. Y. Filed Mar. 7, 1905. Serial No. 248,919. Renewed Apr. 1, 1907. Serial No. 365,862.

1. An electric resistance furnace having a self-sustaining resistance conductor composed of shaped pieces of resistance material assembled to form a continuous electrical conductor, substantially as described.

2. An electric resistance furnace having a self-sustaining resistance conductor composed of shaped pieces of resistance material assembled to form a continuous electrical conductor, and a chamber inclosing said conductor

and provided with a receptacle for the charge, said charge being out of contact with the resistance conductor, substantially as described.



3. An electric resistance furnace having a self-sustaining resistance conductor composed of shaped pieces of resistance material assembled to form a continuous electrical conductor, and a chamber inclosing said conductor and a charge out of contact with said conductor; said charge being disposed with sloping sides exposed to the heat radiated from the conductor, substantially as described.

4. An electric resistance furnace having a self-sustaining resistance conductor composed of shaped pieces of resistance material assembled to form a continuous electrical conductor, and a chamber inclosing said conductor and a charge out of contact with said conductor; said charge being disposed with a sloping surface conforming approximately to the surface of an inverted cone and exposed to the heat radiated from the conductor, substantially as described.

5. An electric resistance furnace having a self-sustaining resistance conductor composed of shaped pieces of resistance material assembled to form a continuous electrical conductor, and a chamber inclosing said conductor and a charge out of contact with said conductor; said charge being disposed with a sloping surface conforming approximately to the surface of an inverted cone and exposed to the heat radiated from the conductor; and the furnace being provided with means for removing the products of the charge and for bringing fresh charge material into the sloping zone of reaction, substantially as described.

6. An electric resistance furnace having a self-sustaining resistance conductor composed of shaped pieces of resistance material assembled to form a continuous electrical conductor and disposed so as to heat a charge in proximity thereto; the furnace being provided with means for removing the products of the charge and for bringing fresh charge material into the zone of reaction, substantially as described.

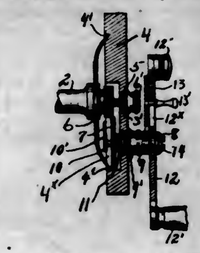
7. An electric resistance furnace having a resistance conductor composed of shaped pieces of resistance material assembled to form a continuous electrical conductor and disposed so as to heat a charge in proximity thereto; said conductor being of ununiform resistance in parts of its length exposed to the charge thereby heating the charge ununiformly, substantially as described.

8. A combined arc and resistance furnace, the resistance element of which is composed of shaped pieces of resistance material assembled to form a self-sustaining electrical conductor, substantially as described.

870,327. FISHING-REEL. CHARLES ULRICH, New York, N. Y. Filed Mar. 30, 1907. Serial No. 365,475.

1. In a fishing reel, a spool, a spindle for carrying the same, a supporting frame in which said spindle is mounted to rotate, a crank arm on the exterior of said supporting frame, a laterally shiftable crank arbor on which the crank arm is mounted, mechanism for engaging the crank arbor with said spindle when the arbor is shifted inward, a sleeve in which the arbor is supported and against the end of which the crank arm normally bears, and a slide shiftably mounted on the crank arm and adapted to be interposed between the end of the sleeve and the crank arm to hold the arbor and crank arm in their outwardly shifted position.

2. In a fishing reel, a spool, a spindle for carrying the same, a supporting frame in which said spindle is mounted to rotate, a crank arm on the exterior of said supporting frame having a longitudinal slot therein, a laterally shiftable crank arbor on which the crank arm is mounted, a spring for normally forcing said crank arbor inward, mechanism for engaging the crank arbor with said spindle when the arbor is shifted inward, a sleeve in which the arbor is supported and against the end of which the crank arm normally bears, a slide shiftably mounted in a longitudinal slot in the crank arm and adapted to be pushed inward between the end of the sleeve and the crank arm to hold the arbor and crank arm in their outwardly shifted position, and disengaged from the reel spindle.



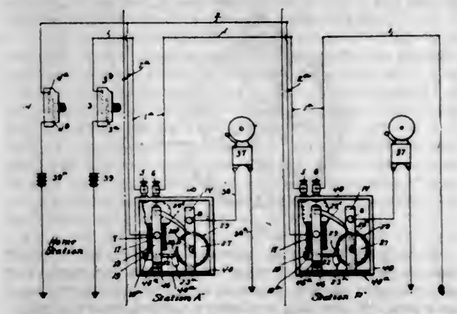
3. In a fishing reel, a spool, a spindle for carrying the same, a supporting frame in which said spindle is mounted to rotate, a gear wheel on said spindle, a crank arm on the exterior of said supporting frame, a laterally shiftable crank arbor on which the crank arm is mounted, a pinion on the inner end of said crank arbor adapted to engage with the spindle gear when the arbor is shifted to its innermost position, a sleeve in which the arbor is supported and against the outer end of which the crank arm normally bears, and a slide shiftably mounted on the crank arm and adapted to be interposed between the end of the sleeve and the crank arm when the arbor and crank are shifted outward.

4. In a fishing reel, a spool, a spindle for carrying the same, a supporting frame in which said spindle is mounted to rotate, a gear wheel on said spindle, a longitudinally slotted crank arm on the exterior of said supporting frame, a laterally shiftable crank arbor on which the crank arm is mounted, a pinion on said crank arbor adapted to engage with the spindle gear when the arbor is shifted to its innermost position, a sleeve in which the arbor is supported and against the outer end of which the crank arm normally bears, a spring within the sleeve and surrounding the crank arbor forcing the said arbor inward, and a slide shiftably mounted in a longitudinal slot in the crank arm and adapted to be interposed between the end of the sleeve and the crank arm when the arbor and crank are shifted outward.

5. In a fishing reel, a spool, a spindle for carrying the same, a supporting frame in which said spindle is mounted to rotate, a gear wheel on said spindle, a longitudinally slotted crank arm on the exterior of said supporting frame, a laterally shiftable crank arbor on which the crank arm is mounted, a pinion on said crank arbor adapted to engage with the spindle gear when the arbor is shifted to its innermost position, a sleeve in which the arbor is supported and against the outer end of which the crank arm normally bears, a spring within the sleeve and surrounding the crank arbor forcing the said arbor inward, and a slide on the inner face of said crank arm having a finger piece projecting through the slot thereof, said slide at its inner end being cut out to partly surround the crank arbor, said slide being adapted when moved inward the length of said slot to be interposed between the crank arm and the end of the sleeve to hold the crank arbor and its pinion out of engagement with the spindle gear wheel.

6. In a fishing reel, a spool, a spindle for carrying the same, a supporting frame in which said spindle is mounted to rotate recessed on the inside face thereof, a gear wheel on said spindle located within said recess, a longitudinally slotted crank arm on the exterior of said supporting frame, a laterally shiftable tubular crank arbor on which the crank arm is mounted, a pinion on said crank arbor located in said recess of the frame and adapted to engage with the spindle gear when the arbor is shifted to its innermost position, a plate bridging the recess in the side support and having a pin projecting into the inner end of the tubular arbor to form a bearing for the same, and a slide on the inner face of said crank arm having a finger piece projecting through the slot thereof, said slide at its inner end being cut out to partly surround the crank arbor, said slide being adapted when moved inward the length of said slot to be interposed between the crank arm and the end of the sleeve to hold the crank arbor and its pinion out of engagement with the spindle gear wheel.

870,328. ELECTRIC SIGNALING MECHANISM. JEAN F. WEBB, Jr., Chicago, Ill., assignor to Electric Signagraph and Semaphore Co., Chicago, Ill. Filed May 31, 1907. Serial No. 376,562.



1. A step-by-step circuit controlling mechanism comprising in combination a magnet supporting frame, operating magnets carried thereby, an armature pivotally mounted in said frame, a wheel carrying frame, a unidirectionally rotatable shaft mounted therein, a contact carrying disk mounted on said shaft, a ratchet wheel mounted on said shaft, a pawl carried by the armature for engaging with said ratchet wheel, an escapement wheel mounted on said shaft, an escapement verge pivotally supported on said wheel carrying frame, connections between the armature and the verge whereby the motion of the armature is imparted to the verge, and means for electrically connecting the magnet supporting frame to said contact disk at times, substantially as shown and described.

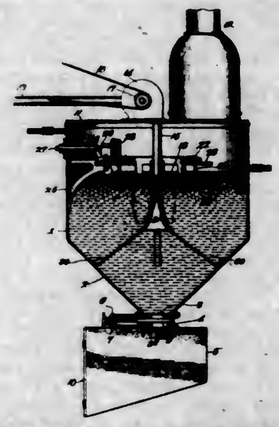
2. A step-by-step circuit controlling mechanism comprising in combination with a magnet supporting frame, operating magnets adjustable in said frame, an armature pivotally mounted in said frame, means for adjusting and limiting the movement of said armature, a wheel carrying frame, a rotatable shaft mounted in said wheel carrying frame, a ratchet disk mounted on said shaft, an escapement wheel also mounted on said shaft, a pawl carried by said armature for engaging said ratchet disk, a pivotally supported escapement verge, connections between the armature and the verge, a contact carrying disk mounted on said shaft and having a contact plate, and a dog pivoted on the magnet carrying frame and engaging said contact carrying wheel.

3. A step-by-step circuit controlling mechanism comprising in combination a suitable supporting frame, an electro magnet, an oscillating armature, a uni-directionally rotatable circuit closer carrier, a contact dog pivotally mounted on said supporting frame, adapted to engage said circuit closer carrier, a ratchet wheel rotatable with said circuit closer carrier, a pawl carried by said armature for engaging said ratchet wheel, an escapement wheel rotating synchronously with said carrier, and an escapement verge coöperating therewith, and means for oscillating the verge by the movement of the armature.

4. A step-by-step circuit controlling device comprising in combination with a suitable supporting frame, an electro magnet, an oscillating armature therefor, a unidirectionally rotatable circuit closer having a contact portion, a ratchet disk rotating synchronously with said circuit closer, a pawl pivotally mounted on said armature for engaging said ratchet disk, a dog mounted on said supporting frame for engaging said circuit closer, an escapement wheel rotatable synchronously with said circuit closer, an escapement verge coöperating with said escapement wheel, and connections between the escapement verge and the armature for imparting the armature movement to the escapement verge to oscillate the same.

5. A step-by-step circuit controlling mechanism, comprising in combination with a suitable magnet supporting frame, an oscillating armature mounted therein and insulated therefrom, a second supporting frame, a unidirectionally rotatable circuit closer carrier rotatably mounted in said second frame, a contact pawl pivotally mounted on said first mentioned frame, and adapted to engage said circuit closer carrier, a ratchet wheel rotatable with said circuit closer carrier, a dog carried by the armature for engaging the ratchet wheel, an escapement wheel rotating synchronously with said carrier, an escapement verge coöperating therewith, and means for oscillating the verge by the movement of the armature, substantially as shown and described.

870,329. SMOKE-SEPARATOR. RUDOLPH H. WEBER and DAVID W. SMITH, Kansas City, Kans. Filed Feb. 7, 1907. Serial No. 356,286.



1. A smoke separator comprising a tank containing liquid, a smoke pipe having its end submerged in the liquid, a rotary disk mounted horizontally in the tank vertically above the end of the smoke pipe, means for rotating the said disk, and a strainer consisting of fluted foraminous walls depending from said disk.

2. A smoke separator comprising a tank containing liquid, a smoke pipe having its end submerged in the liquid, brackets on the wall of the tank, a rotary disk arranged above the end of the smoke pipe and having an annular horizontal flange resting on said brackets and a horizontal gear wheel above said flange, an annular strainer depending from said disk, and a driving shaft mounted in the wall of the tank and carrying a pinion meshing with the gear wheel on the disk.

3. A smoke separator, comprising a tank containing a liquid, a conical spreader submerged in said liquid, a disk having its lower surface submerged in the liquid above the spreader, and a pipe having its lower end submerged in the liquid above the spreader, and means for forcing the products of combustion from a furnace down through said pipe into said liquid and onto said spreader.

4. A smoke separator, comprising a tank containing a liquid, an escape pipe communicating with the upper portion of the tank, a spreader submerged in the liquid of the

tank, a rotating disk having its lower surface submerged in the liquid of the tank above the spreader and provided with a depending obstruction or strainer, a pipe extending into the tank and down through said disk, a smoke pipe, and means connecting the smoke pipe and the pipe extending down through the disk for the purpose of creating a suction through the former and a blast through the latter to discharge the volatile products into the liquid and upon the said spreader.

870,330. EAR-RING. EBEN F. WILDE, Attleboro, Mass., assignor to Attleboro Manufacturing Company, Attleboro, Mass., a Corporation of Rhode Island. Filed June 28, 1907. Serial No. 381,264.



1. An ear-ring comprising a U-shaped spring frame having a clamping end and a pivot end with a serrated surface, a clamping member having a pivot end with a serrated surface, means for pivotally securing the pivot ends of the frame and clamping member together, and means for holding the serrated surfaces of the pivot ends together under spring tension.

2. An ear-ring comprising a U-shaped frame having a circular clamping end and a circular pivot end with a serrated surface, a round clamping member having a circular pivot end with a serrated surface, means for pivotally securing the pivot ends of the frame and clamping member together, and means for holding the serrated surfaces of the pivot ends together under spring tension.

3. An ear-ring consisting of a U-shaped frame having a dished circular clamping end and a flat circular pivot end with a serrated surface, a dished circular clamping member having a flat circular pivot end with a serrated surface and an oppositely-disposed tongue, means for pivotally securing the pivot ends of the frame and clamping member together, and means comprising a spring washer for holding the serrated surfaces of the pivot ends together under spring tension.

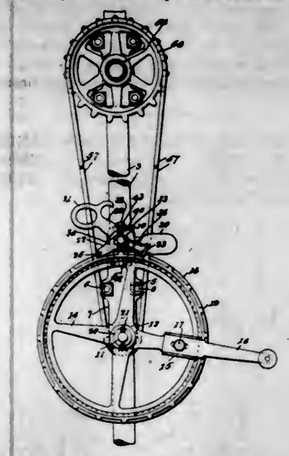
4. In an ear-ring, the combination of a frame *a* consisting of a wire 6 bent U-shape and having a dished circular clamping end 7 and a flat circular pivot end 8 with a central hole 9 and a serrated surface 10, a clamping member *b* consisting of a circular dished head 11 having a short arm 12 on which is a flat circular end 13 with a central hole 14 and a serrated surface 15, and an oppositely-disposed tongue 16 with an L-shaped end 17, a spring washer 18, and a rivet 19 which extends through the holes 9 and 14 in the pivot ends 8 and 13 and through the spring washer 18, as described.

870,331. OPERATING MECHANISM FOR VENTILATORS. ALVIN Q. WOLF, Dayton, Ohio, assignor to The Wolf Machine Company, Dayton, Ohio, a Corporation of Ohio. Filed Nov. 6, 1906. Serial No. 342,255.

1. In an apparatus of the character described, the combination, with a sash actuating mechanism, of a power wheel provided with teeth, oppositely extending pawls adapted to engage said teeth either separately or simultaneously and to lock said power wheel against movement in one or both directions, and means for connecting said power wheel with said sash-operating mechanism, substantially as described.

2. In a device of the character described, the combination, with a sash actuating mechanism, of a power wheel provided with teeth, a pawl held normally in operative relation with the teeth of said wheel, a brake mechanism supported independently of said pawl, means for simultaneously releasing said pawl and actuating said brake mechanism, and means for operatively connecting said power wheel with said sash-actuating mechanism, substantially as described.

3. In an apparatus of the character described, the combination, with a sash actuating mechanism, of a power wheel provided with teeth along one side of its periphery, a pawl normally in engagement with said teeth, a brake supported independently of said pawl and adapted to engage the opposite side of said periphery, and means for simultaneously releasing said pawl and actuating said brake mechanism, substantially as described.



4. In a device of the character described, the combination, with a hinged member, of an operating mechanism comprising a support, a power wheel mounted thereon and provided with teeth, a stud-shaft carried by said support, a pawl mounted on said shaft and normally in engagement with the teeth of said wheel, a brake mechanism mounted on said shaft separately from said pawl, and means carried by said shaft for releasing said pawl and actuating said brake mechanism, substantially as described.

5. In a device of the character described, the combination, with a hinged member, of an operating mechanism comprising a support, a power wheel carried thereby and provided with teeth, a stud-shaft carried by said support, a pawl mounted on said shaft and provided with a lug, and a weighted lever mounted on said shaft and having a recess therein adapted to receive the lug on said pawl, thereby causing the pawl to move in unison with said lever, substantially as described.

6. In an apparatus of the character described, the combination, with a hinged member, of an operating mechanism comprising a support, a power wheel mounted thereon and provided with teeth, a stud-shaft carried by said support, a pawl mounted on said stud-shaft and normally in engagement with the teeth of said wheel, a brake mechanism mounted on said shaft separately from said pawl and adapted to engage the rim of said wheel, and means mounted on said shaft for releasing said pawl and for operating said brake, substantially as described.

7. In an apparatus of the character described, the combination, with a hinged member, of an operating mechanism comprising a support, a power wheel carried thereby, a stud-shaft carried by said support, a brake mechanism slidably mounted on said shaft and consisting of a plate having a brake shoe thereon, and means for moving said plate to bring said shoe into contact with said wheel, substantially as described.

8. In an apparatus of the character described, the combination, with a hinged member, of an operating mechanism comprising a support, a power wheel mounted thereon, a stud-shaft carried by said support, a plate mounted to slide transversely of said shaft and having a brake shoe secured thereto, a lug carried by said plate, and a cam mounted on said shaft adapted to engage said lug to move said plate and bring said brake shoe into engagement with the rim of said wheel, substantially as described.

9. In an apparatus of the character described, the combination, with a hinged member, of an operating mechanism comprising a support, a power wheel mounted thereon, a stud-shaft carried thereby, a plate mounted to move transversely of said shaft and having a brake shoe and a lug on one face thereof, a slot in the opposite face thereof, a lug carried by said support and engaging said slot, and a cam mounted on said shaft and adapted to move said plate to bring said brake shoe into engagement with the rim of said wheel, substantially as described.

10. In an apparatus of the character described, the combination, with a hinged member, of an operating mechanism comprising a support, a power wheel mounted thereon, a stud-shaft carried by said support, a plate having a brake shoe and mounted to move transversely of said shaft, a lug on said plate, and a lever having two cams thereon, one of said cams being adapted to engage said lug and move said plate to bring the brake shoe into engagement with the inner side of the rim of said wheel and the other cam being adapted to engage the outer side of the rim of said wheel, substantially as described.

11. In an apparatus of the character described, the combination, with a hinged member, of an operating mechanism comprising a power wheel having one side of its rim recessed to form teeth and its opposite side cylindrical, a stud-shaft carried by said support, a pawl mounted on said shaft and normally in engagement with one of said teeth, a lug carried by said pawl, a lever mounted on said shaft and adapted to engage said lug, and a cam carried by said lever and adapted to engage the cylindrical portion of said rim when said lever is moved to release said pawl, substantially as described.

12. In an apparatus of the character described, the combination, with a hinged member, of an operating mechanism comprising a support, a power wheel mounted thereon having one side of its rim recessed to form teeth and the other side cylindrical, a stud-shaft carried by said support, a pawl mounted on said shaft and normally in engagement with said teeth, a lug on said pawl, a plate slidably mounted on said shaft and having a brake shoe extending beneath the cylindrical portion of said rim, a lug carried by said plate, a lever mounted on said shaft and having a recess adapted to receive the lug on said pawl, an oblong bearing aperture, and a boss on said lever having two cam surfaces, one adapted to engage the lug on said plate and the other to engage the cylindrical portion of said rim, substantially as described.

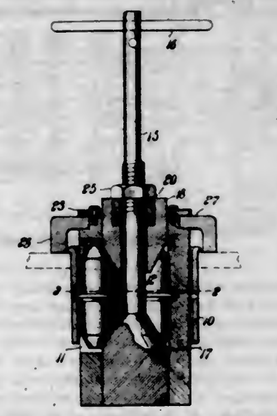
13. In an apparatus of the character described, the combination, with a sash and an operating mechanism, of a shaft, means for operatively connecting said shaft to said operating mechanism, a pinion secured to said shaft, a toothed arm carried by said sash and engaging said pinion, a yoke surrounding said pinion and having its opposite ends slotted to receive said toothed arm, substantially as described.

14. In an apparatus of the character described, the combination, with a sash and an operating mechanism, of a shaft operatively connected with said operating mechanism, a pinion on said shaft, a toothed arm connected to said sash and engaging said pinion, a yoke having its opposite ends slotted to receive said toothed arm, and flanges on the central portion thereof engaging the opposite sides of the teeth of said pinion, substantially as described.

15. In an apparatus of the character described, the combination, with a sash and an operating mechanism, of a shaft operatively connected to said operating mechanism, a pinion secured to said shaft, a toothed arm secured to said sash, a yoke surrounding said pinion and having its opposite ends slotted to receive said toothed arm, and a guideway formed in the central portion of said yoke and having apertures through the outer edge thereof, substantially as described.

16. In an apparatus of the character described, the combination, with a sash, a shaft extending parallel thereto and operatively connected therewith, and a sprocket wheel carried by said shaft, of a power wheel, a sprocket wheel connected to said power wheel, a sprocket chain connecting said sprocket wheels, and a pair of oppositely facing pawls adapted to engage said power wheel either singly or simultaneously to lock the same against movement either in one or in both directions.

870,332. TUBE CUTTER AND EXPANDER. WILLIAM C. WOOD, Saco, Ala. Filed May 1, 1907. Serial No. 371,247.



1. In a tool of the class described, a casing, roller tools therein, a pair of adjustable cone bearings for said tools, an operating rod, and means for locking the cones to the casing.

2. In a tool of the class described, a casing, roller tools therein, a pair of cone bearings for the tools, an operating rod, and a locking member adjustable to interlock the casing and one of the cones, or to permit independent rotation thereof.

3. In a tool of the class described, a casing, roller tools therein, an operating rod, a cone carried thereby, a second cone mounted on the rod and adjustable toward and from the first cone, the adjusting cone having a diametrically arranged slot at one end, and the casing being provided with a pair of diametrically opposed notches, and a reversible collar carried by the rod and arranged to fit within the slots and lock the cone to the casing.

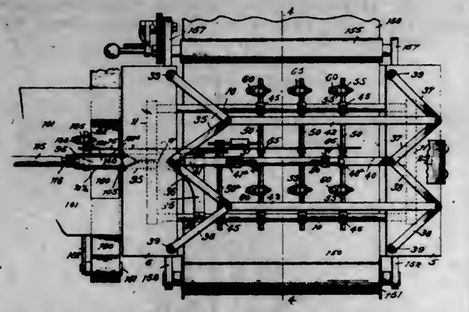
4. In a tool of the class described, a casing, roller tools therein, an operating rod having a threaded portion, a cone carried by the rod, a second cone loosely mounted on the rod and provided at one end with diametrically arranged slots, a disk secured to the outer end of the casing and provided with diametrically opposed notches, a reversible collar having flanged side walls fitting within the slot and provided with projecting lugs or fingers arranged to enter said notches, and a nut carried by the threaded portion of the rod for forcing the cones toward each other.

5. In a tool of the class described, a casing having a reduced upper end, a disk secured to said reduced upper end and provided with diametrically opposed notches, a gage collar fitting within the reduced portion of the casing and having projecting fingers for engagement with the tube, a flue sheet, a rod extending through the casing, a cone secured to the rod, a second cone adjusted on the rod and provided with a diametrically extending slot, roller tools having bearings on the cones, a reversible collar arranged to fit within the slot and having projecting lugs adapted to enter the notches, and a nut carried by the threaded portion of said rod and bearing against the collar.

870,333. MEANS FOR SIMULTANEOUSLY WRITING A PLURALITY OF SIGNATURES OR INSCRIPTIONS. WILLIAM R. WOODWARD, New York, N. Y. Filed Nov. 3, 1906. Serial No. 341,927.

1. A multiple writing device comprising a suitable bed plate, a carriage supported above and movable in all directions parallel with the bed plate, a plurality of writing

members mounted upon the carriage and movable toward and away from said bed plate, a monitor handle, and a compound lever supported upon the carriage and connecting the monitor handle and the writing members.



2. A multiple writing device comprising a suitable bed plate, a carriage supported above and movable in all directions parallel with the bed plate, a plurality of writing members mounted upon the carriage and movable with the carriage, parallel with the bed plate and up and down upon the carriage with relation to said bed plate, a monitor handle, and a compound lever pivoted upon the carriage and movable in a vertical plane thereon and connecting the monitor handle and the writing members, whereby the up and down movements of the monitor handle will cause corresponding movements of the writing members.

3. A multiple writing device comprising a suitable bed plate, a carriage supported above and movable in all directions parallel with the bed plate, a plurality of writing members mounted upon the carriage and movable with the carriage parallel with the bed plate and up and down upon the carriage toward and away from said bed plate, a monitor handle controlling all of the movements of the carriage and writing members, levers upon the carriage connecting the monitor handle and the writing members, and a universal joint between the monitor handle and levers.

4. In a multiple writing device, the combination of a bed plate, a carriage supported above and movable in all directions parallel with the bed plate, means restricting the carriage to motion of translation, a plurality of writing members mounted upon the carriage and movable thereon toward and away from the bed plate and movable with the carriage parallel with the bed plate, a lever mounted upon the carriage and connected with the writing members, and a monitor handle connected with said lever.

5. In a multiple writing device, the combination of a bed plate, a carriage movably mounted above the bed plate, means restricting the carriage to motion of translation, a plurality of writing members yieldingly mounted upon the carriage and movable thereon toward and away from the bed plate, and movable with the carriage parallel with the bed plate, a lever pivotally mounted upon the carriage and connected with the writing members, and a monitor handle having universal joint connection with said lever.

6. In a multiple writing device, the combination of a bed plate, a carriage movable over the bed plate, means restricting the carriage to motion of translation, a plurality of writing members mounted upon the carriage and movable thereon toward and away from the bed plate, and a vertically movable lever mechanism including a monitor handle pivotally mounted upon the carriage and connected with the writing members in such manner that the up and down movements of the monitor handle will cause corresponding movements of the writing members, and the horizontal movements of said handle will cause the same movements of the carriage and writing members over the bed plate.

7. In a multiple writing device, the combination of a bed plate, with a carriage movable over the bed plate, means restricting the carriage to motion of translation, a plurality of writing members mounted upon the carriage and movable thereon toward and away from the bed plate, an independent yielding connection between each writing member and the carriage, and a monitor controlling device mounted upon the carriage and suitably connected with the writing members.

8. In a multiple writing device, the combination of a bed plate, with a carriage movable over the bed plate, means restricting the carriage to motion of translation, a plurality of writing members mounted upon the carriage and movable toward and away from the bed plate, a compound lever mounted upon the carriage and connected with the writing members, a gimbal-joint connected with the compound lever, and a monitor handle rotatably connected with the gimbal-joint.

9. In a multiple writing device, the combination of a bed plate, a carriage supported above and movable parallel with said bed plate, means for restricting said carriage to motion of translation, a plurality of rock shafts journaled upon the carriage, a plurality of writing members mounted upon said rock shafts, a vertically movable controlling lever pivoted upon said carriage, and means connecting said controlling lever with said rock shafts to cause the writing members to be raised and lowered in unison.

10. In a multiple writing device, the combination of a bed plate, a carriage supported above and movable parallel with said bed plate, means for restricting said carriage to motion of translation, a plurality of rock shafts journaled upon the carriage, a plurality of writing members mounted upon said rock shafts, an independent yielding connection between each writing member and its rock shaft, a vertically movable controlling lever pivoted upon said carriage, and means connecting said controlling lever with said rock shafts to cause the writing members to be raised and lowered in unison.

11. In a multiple writing device, the combination of a bed plate, a carriage supported above and movable parallel with said bed plate, means for restricting said carriage to motion of translation, a plurality of rock shafts journaled upon the carriage, a plurality of writing members mounted upon said rock shafts, a controlling lever pivotally mounted upon said carriage and suitably connected with said rock shafts, a gimbal-joint connected with said lever, and a monitor handle rotatably connected with said gimbal-joint, as set forth.

12. In a multiple writing device, the combination of a bed plate, a carriage movable over the bed plate, means for restricting said carriage to motion of translation, a plurality of main writing members mounted upon the carriage and movable toward and away from the bed plate, a monitor writing member independently mounted upon the carriage, a controlling bar connecting the main writing members with the monitor writing member for causing the latter to be moved simultaneously with the former, and a monitor handle suitably connected with the controlling bar for operating all of the writing members.

13. In a multiple writing device, the combination of a bed plate, a monitor table, a carriage movable over the bed plate and monitor table, means for restricting said carriage to motion of translation, a plurality of main writing members upon the carriage and movable toward and away from the bed plate, a monitor writing member mounted upon the carriage and movable toward and away from the monitor table, a controlling bar connecting the main writing members and the monitor writing member for causing all of the writing members to move simultaneously up and down upon the carriage, and a monitor handle suitably connected with the carriage and the controlling bar.

14. In a multiple writing device, the combination of a bed plate, a carriage movable over the bed plate, a plurality of rock shafts mounted upon the carriage, writing members carried by said rock shafts, a monitor writing member mounted upon one of said rock shafts, rock arms projecting from said rock shafts, a controlling bar connecting said rock arms to cause the shafts to rock a controlling lever connected with the controlling bar, and a monitor handle suitably connected with the controlling lever for operating the carriage and writing members.

15. In a multiple writing device, the combination of a bed plate, a carriage movable over the bed plate, a plurality of rock shafts journaled upon the carriage, a plurality of writing members mounted upon said rock shafts, means for operating the carriage and rock shafts, and a counterbalance weight connected with said rock shafts for the purpose set forth.

16. In a multiple writing device, the combination of a bed plate, a carriage movable over the bed plate, a plurality of rock shafts journaled upon the carriage, a plurality of writing members mounted upon said rock shafts, means connecting said rock shafts to cause them to move in unison, a monitor handle suitably connected with said rock shafts for controlling them, and an adjustable counterbalance weight connected with said rock shafts for the purpose set forth.

17. In a multiple writing device, the combination of a bed plate, a carriage movable over the bed plate, a plurality of rock shafts journaled upon the carriage, a plurality of writing members mounted upon said rock shafts, means connecting said rock shafts, a monitor handle suitably connected with said rock shafts for controlling them, a rock arm projecting from one of said rock shafts, and an adjustable counterbalance weight mounted upon said rock arm for the purpose set forth.

18. In a multiple writing device, the combination of a suitable bed plate, with a carriage movable over the bed plate, means for restricting the carriage to motion of translation, bearings above and below parts of the carriage for confining it in a horizontal plane, a plurality of writing members mounted upon the carriage, means for operating the carriage and for controlling the writing members, and a spring device arranged to sustain the weight of the carriage and connected parts.

19. In a multiple writing device, the combination of a suitable frame including a bed plate and an overhanging bracket, with a carriage movable over the bed plate, means for restricting the carriage to motion of translation, bearings above and below parts of the carriage for confining it in a horizontal plane, a plurality of writing members mounted upon the carriage, means for operating the carriage and for controlling the writing members, and a suspension spring secured to said bracket and connected with the carriage to counterbalance the weight of the carriage and connected parts.

20. In a multiple writing device, the combination of a suitable bed plate, with a carriage mounted above the bed plate, means for restricting the carriage to motion of translation, bearings above and below parts of the carriage for confining it in a horizontal plane, a plurality of writing members mounted upon the carriage, a bracket secured to the bed plate and extending over the carriage, and a suspension spring connecting said bracket and yoke and yieldingly supporting the weight of the carriage.

21. In a multiple writing device, the combination of a suitable bed plate, with a carriage movable thereover, means for restricting the carriage to motion of translation, a plurality of writing members mounted upon the carriage, ball bearings between the carriage and bed plate above and below parts of the carriage for confining the carriage in a horizontal plane, and a spring sustaining the weight of the carriage.

22. In a multiple writing device, the combination of a suitable bed plate, with a carriage movable thereover, a plurality of writing members mounted upon the carriage, ball bearings between the carriage and bed plate, a bracket secured to the bed plate and extending over the carriage, and a suspension spring connecting the carriage and bracket.

23. In a multiple writing device, the combination of a bed plate, a carriage supporting a plurality of writing members, means for restricting the carriage to motion of translation, a controlling lever suitably connected with the carriage and writing members, a monitor handle, and a gimbal-joint between the monitor handle and said controlling lever, the handle being rotatably connected with the gimbal-joint.

24. In a device of the character described, the combination of a support for a writing member including a rock shaft, a two part pen grip mounted upon the rock shaft, a spring between the two parts of the pen grip, and a writing member secured in one part of the pen grip.

25. In a device of the character described, the combination of a support for a writing member including a rock shaft, a block secured to the rock shaft, a pen grip movably mounted upon the rock shaft, a spring mounted between the block and the pen grip, and a writing member secured in the pen grip.

26. In a device of the character described, the combination of a support for a writing member including a rock shaft, a block secured on the rock shaft and formed with a shoulder and a cut away portion, a pen grip movably mounted upon the rock shaft and embracing said block, a spring mounted between the cut away portion of said block and the pen grip and yieldingly holding the pen grips against the shoulder of the block, and a writing member secured in the pen grip.

27. In a multiple writing device, the combination of a main bed plate, a monitor table supported in front of the main bed plate, a carriage movable over the main bed plate, an extension plate projecting forwardly from the carriage over the monitor table, a plurality of writing members mounted upon the carriage above the main bed plate, a monitor writing member mounted upon said extension plate above the monitor table, controlling means connecting all of said writing members, and a monitor handle for operating the controlling means.

28. In a multiple writing device, the combination of a main bed plate and a monitor table, with the carriage operating thereover and having a forwardly projecting extension plate, ball bearings between the carriage and main bed plate and between the extension plate and monitor table, a plurality of writing members mounted upon the carriage, a monitor writing member mounted upon the extension plate, and manually operating controlling means for the writing members.

29. In a multiple writing device, the combination of a main bed plate having a forwardly projecting monitor table, a carriage movable over the main bed plate and formed with a forwardly projecting extension plate, a plurality of writing members mounted in the carriage, a monitor writing member mounted upon the extension plate, a controlling bar connected with said plurality of writing members and projecting forwardly parallel with the extension plate, means of engagement between the controlling bar and monitor writing member, and manually operated means for controlling the movements of the writing members.

30. In a multiple writing device, the combination of a main bed plate, a monitor table supported in front of the main bed plate, a carriage movable over the main bed plate, an extension plate projecting forwardly from the carriage over the monitor table, a plurality of rock shafts journaled upon the carriage, a plurality of writing members mounted upon said rock shafts, a bracket mounted upon said extension plate, a rock shaft mounted upon said bracket above the monitor table, a monitor writing member mounted upon said bracket rock shaft controlling means including a bar connecting all of said rock shafts, and a monitor handle for operating the controlling means.

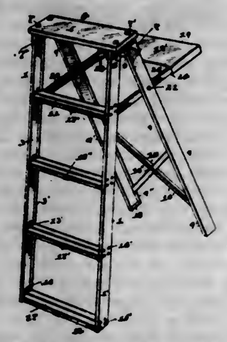
31. In a multiple writing device, the combination of a main bed plate, with a carriage movably mounted above the bed plate, a plurality of rock shafts journaled in the carriage, means connecting said rock shafts to cause them to move in unison, a plurality of writing members mounted upon said connected rock shafts and supported thereby in operative relation to the bed plate, a bell crank lever pivotally mounted upon the carriage and having link connection with one of said rock shafts, a controlling lever also pivotally mounted upon the carriage and engaging said bell crank lever, and a monitor handle having jointed connection with said controlling lever.

32. In a multiple writing device, the combination of a main bed plate, a carriage movably mounted above the bed plate, a plurality of writing members mounted upon the carriage, an extension plate projecting from the carriage, a bell crank lever suitably connected with the writing members, a controlling lever pivotally mounted upon

the carriage extension plate and connected with said bell crank lever, and a monitor handle having jointed connection with the controlling lever.

33. In a multiple writing device, the combination of a main bed plate, a monitor table, a carriage operating over the main bed plate and formed with an extension which projects over the monitor table, a plurality of main writing members mounted upon the carriage above the main bed plate, a monitor writing member mounted upon the extension plate above the monitor table, a monitor handle controlling the movements of the carriage and the writing members, and means for supplying a strip of paper to the monitor table in a position to be inscribed by the monitor pen.

870,334. METALLIC STEP-LADDER. HENRY ADLER, Pittsburg, Pa., assignor to H. Adler Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed July 1, 1904. Serial No. 214,891.



1. A ladder constructed of sheet metal, the sides or standards thereof having doubled flanged side edges and the steps being each provided with flanged side edges, and means for securing the flanges on the steps between the layer of the doubled flanged side edges on the standards.

2. A ladder constructed of sheet metal, the sides or standards thereof and the steps being each provided with doubled flanged side edges, and means for securing the doubled flanges on the steps between the layer of the doubled flanged side edges on the standards.

3. A ladder constructed of sheet metal, the sides or standards thereof being provided with doubled flanged side edges slit and bent on their inner portions to form seats, and the steps being provided with flanged side edges for fitting within said seats.

4. A ladder constructed of sheet metal, the sides or standards thereof being provided with double flanged side edges slit and bent on their inner portions to form seats, and the steps being provided with doubled flanged side edges for fitting within the seats.

5. A ladder constructed of sheet metal, the sides or standards thereof being provided with doubled flanged side edges slit and bent on their inner portions to form seats, and the steps resting upon the upper ends of the lower slit inner portions and being provided with doubled flanged side edges for fitting within said seats.

6. A ladder constructed of sheet metal, the sides or standards thereof being provided with doubled flanged sides slit and bent on their inner portions to form seats, and the steps resting upon the upper end of the lower slit inner portions while the upper slit inner portions rest against the top of said steps, said steps being provided with doubled flanged side edges for fitting within said seats.

7. A ladder constructed of sheet metal, comprising side standards, a series of steps, each constructed of sheet metal and provided with flanged side edges, and flanges on the ends of said flanged side edges for abutting the inner faces of said standards, and means for securing said flanges to said standards.

8. A ladder constructed of sheet metal, comprising side standards, a series of steps, each constructed of sheet metal and provided with flanged side edges, flanges on the ends of said flanged side edges for abutting the inner faces of said standards and having holes therein, and projections on said standards and adapted to engage with the holes in said step-flanges for securing said steps to said standards.

9. A ladder constructed of sheet metal, comprising side standards, a series of steps, each constructed of sheet metal and provided with flanged side edges, flanges on the ends of said flanged side edges for abutting the inner faces of said standards and having holes therein, and a series of projections formed in said standards and passing through said holes and clenched against said step-flanges for securing said step-flanges to said standards.

10. A ladder constructed of sheet metal, comprising side standards, a series of steps, each constructed of sheet metal and provided with flanged side edges, flanges on the ends of the body portion of said steps and on the ends of said flanged side edges for abutting the inner faces of said standards, and means for securing said flanges to said standards.

11. A ladder constructed of sheet metal comprising side standards, a series of steps, each constructed of sheet metal and provided with flanged side edges, flanges on the ends of the body portion of said steps and on the ends of said flanged side edges for abutting the inner faces of said standards, said flanges being provided with holes, and projections on said standards engaging with the holes in said flanges and securing the same to said standards.

12. A ladder constructed of sheet metal comprising side standards, a series of steps, each constructed of sheet metal and provided with flanged side edges, flanges on the ends of the body portion of said steps and on the ends of said flanged side edges abutting the inner faces of said standards, said flanges having holes therein, and a series of projections formed in said standards and passing through said holes and clenched against said flanges for securing the same to the standards.

13. A ladder constructed of sheet metal comprising side standards provided with doubled flanged side edges, metallic steps secured between said standards, and a bottom cross-piece having flanged ends fitting and secured within said doubled flanged side portions.

14. A ladder constructed of sheet metal comprising side standards provided with double flanged side edges having slits at their lower ends, metallic steps secured between said standards, and a bottom cross-piece having flanged ends passing through the ends of slits in said doubled flanged side portions and secured thereto.

15. A ladder constructed of sheet metal comprising side standards, metallic steps secured between said standards, legs, arms pivoted to said legs having flanged side edges provided with inturned portions thereon, and a shelf composed of a body portion having flanged side edges provided with flanges thereon for fitting around the inturned portions on said arms.

16. A ladder constructed of sheet metal, comprising side standards, metallic steps secured between said standards, legs, arms pivoted to said legs having flanged side edges, a shelf composed of a body portion having flanged side edges fitting around and between the flanged side edges on said arms, and a brace having flanged side edges fitting under said body portion and between the flanged side edges of said arms and body portion.

17. A ladder constructed of sheet metal comprising side standards, steps provided with flanged side edges, and a cross strip extending across and under the step and connected to and between said flanged side edges thereof for bracing the same.

18. A ladder constructed of sheet metal comprising side standards, steps provided with flanged side edges and slits within the same, and a strip extending under the step and thereon passing through the slits in said flanged side thereon passing through the slits in said flanged side edges and secured in place to brace said step.

19. A ladder constructed of sheet metal comprising side standards, steps provided with flanged side edges and slits within the same, and a strip extending under the step and between said flanged side edges and having flanged ends passing through the slits in said flanged side edges and fitting around said edges to brace the step.

20. A ladder constructed of sheet metal comprising side standards, metallic steps secured between said standards, legs, arms pivoted to said legs having doubled flanged side edges, a shelf composed of a body portion having flanged side edges fitting around and between the doubled flanged side edges on said arms, and a brace having flanged side edges fitting under said body portion and between the side edges of said arms and body portion.

21. A ladder constructed of sheet metal comprising side standards, steps provided with doubled flanged side edges, and a cross brace extending under the steps and connected to and between said doubled flanged side edges for bracing the same.

22. A ladder constructed of sheet metal comprising side standards, steps provided with doubled flanged side edges and slits within the same, and a cross brace extending under the step and between said doubled flanged side edges and having flanged ends thereon for passing through the slits in said doubled flanged side edges to brace said steps.

23. A ladder constructed of sheet metal comprising side standards and legs provided with flanged side edges, metallic steps secured between said standards, and U-shaped clamping pieces fitting around the upper ends of said standards and legs for securing said standards and said legs being pivoted to said clamping-pieces.

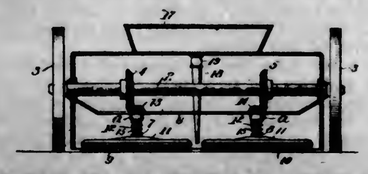
24. A ladder constructed of sheet metal comprising side standards and legs provided with doubled flanged side edges, metallic steps secured between said standards, and U-shaped clamping pieces fitting around the upper ends of said standards and legs for securing said standards and said legs being pivoted to said clamping-pieces.

25. A ladder constructed of sheet metal comprising side standards and legs, metallic steps secured between said standards, metallic clamping-pieces fitting around the upper ends of said standards and legs for the securing of said standards and said legs being pivoted to said clamping-pieces, a platform above said clamping-pieces, and L-shaped pieces extending along and secured to said clamping-pieces for securing said platform thereto.

26. A ladder constructed of sheet metal comprising side standards and legs, metallic steps secured between said standards, metallic clamping-pieces fitting around the upper ends of said standards and legs for the securing of said standards and said legs being pivoted to said clamping-pieces, L-shaped pieces extending along and secured to said clamping-pieces, and a platform secured to said L-shaped pieces and formed of upper and lower portions having flanges around the same and fitting within each other.

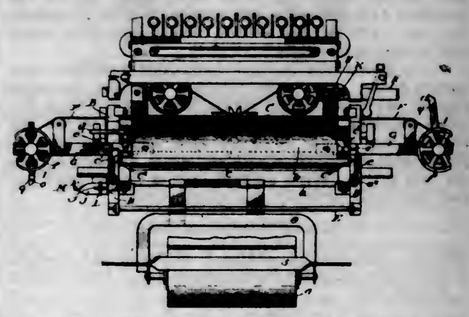
27. A ladder constructed of sheet metal comprising side standards and legs, metallic steps secured between said standards, metallic clamping-pieces fitting around the upper ends of said standards and legs for the securing of said standards and said legs being pivoted to said clamping-pieces, L-shaped pieces extending along and secured to said clamping-pieces, and a platform secured to said L-shaped pieces and formed of upper and lower portions having flanges around the same and fitting within each other, and said lower portion having upwardly extending doubled flanges for supporting the upper portions.

870,335. SCRUBBING-MACHINE. PHILIP H. APPLE, Lavalle, Wis. Filed Apr. 26, 1907. Serial No. 370,421.



A machine of the class described comprising a casing, a drive shaft mounted for rotation through said casing and having bearing wheels, gears spaced apart upon said shaft within said casing, a hanger disposed within said casing and having upturned ends swinging upon said shaft and bearing against the inner faces of the casing, short vertical shafts mounted for rotation in said hanger and with brushes at one end and gears at their other ends meshing with the gears of said drive shaft, and a handle rigidly connected to said casing.

870,336. TYPE-WRITER. ENGLAND J. BARKER, Morgan Park, Ill. Original application filed Sept. 11, 1905, Serial No. 277,982. Divided and this application filed June 25, 1906. Serial No. 323,283.



1. In a typewriting machine a suitable supporting-frame, a reciprocal carrier, a platen, and auxiliary inking devices therefor mounted on and movable with said carrier, in combination with stationary means adjustably secured to said frame for actuating said inking devices.

2. In a typewriting machine a suitable supporting-frame, a reciprocal carrier, a platen, and manifold inking devices therefor mounted on and movable with said carrier, in combination with stationary arms for actuating said inking devices secured to said supporting-frame and adjustable pivotally.

3. In a typewriting machine a suitable supporting-frame a reciprocal carrier, a platen, and manifold inking devices therefor mounted on and movable with said carrier, in combination with stationary arms for actuating said inking devices secured to said supporting-frame and adjustable longitudinally.

4. In a typewriting machine a suitable supporting-frame, a reciprocal carrier, a platen, and manifold inking devices therefor mounted on and movable with said carrier, in combination with stationary arms for actuating said inking devices secured to said supporting-frame and adjustable pivotally and longitudinally.

5. A typewriting machine comprising a suitable supporting-frame, a reciprocal carrier, a platen journaled therein, manifold inking devices and longitudinally disposed brackets mounted on and projecting beyond the ends of the carrier on which said inking devices are journaled.

6. A typewriting machine comprising a suitable supporting-frame, a reciprocal carrier, a platen journaled therein, manifold inking devices and longitudinally disposed brackets removably mounted on and projecting beyond the ends of the carrier, on which said inking devices are journaled.

7. A typewriting machine comprising a suitable supporting-frame, a reciprocal carrier, a platen journaled therein, a shield therefor mounted on and movable with said carrier, manifold inking devices, and longitudinally disposed brackets secured to said shield on which said inking devices are mounted.

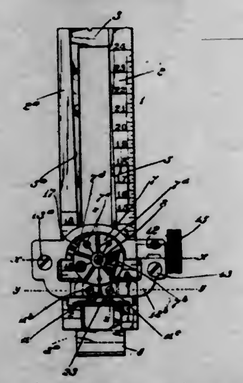
8. A typewriting machine comprising a suitable supporting-frame, a reciprocal carrier, a platen journaled therein, manifold inking devices and longitudinally disposed brackets mounted on and projecting beyond the ends of the carrier on which said inking devices are journaled in combination with stationary means adjustably secured to said frame for actuating said inking devices.

9. A typewriting machine comprising a suitable supporting-frame, a reciprocal carrier, a platen journaled therein, a shield therefor mounted on and movable with said carrier, manifold inking devices, and longitudinally disposed brackets secured to said shield on which said inking devices are mounted in combination with stationary means adjustably secured to said frame for actuating said inking devices.

10. A typewriting machine comprising a suitable supporting-frame, a reciprocal carrier, a platen journaled therein, manifold inking devices and longitudinally disposed brackets mounted on and projecting beyond the ends of the carrier on which said inking devices are journaled in combination with stationary arms for actuating said inking devices secured to said supporting frame and adjustable pivotally.

11. A typewriting machine comprising a suitable supporting-frame, a reciprocal carrier, a platen journaled therein, manifold inking devices and longitudinally disposed brackets mounted on and projecting beyond the ends of the carrier on which said inking devices are journaled in combination with stationary arms for actuating said inking devices secured to said supporting-frame and adjustable pivotally and longitudinally.

870,337. GUN-SIGHT. JOHN Y. BASSELL and FRED C. BLENKNER, Columbus, Ohio. Filed May 1, 1907. Serial No. 371,311.



1. In a gun sight, the combination of a leaf having a vertical guideway and a guideway to provide for driftage correction, a carrier on said leaf comprising a part movable on and controlled by said vertical guideway and a part movable on and controlled by said driftage guideway, a rotatable sighting member connected with the part of said carrier controlled by the driftage guideway and engaged by the part of the carrier controlled by the vertical guideway, said sighting member having a plurality of sight apertures of various sizes the sighting centers of which are equally distant from the axis of rotation of said member.

2. In a gun sight, the combination of a leaf having a vertical guideway and a guideway to provide for driftage correction, a carrier on said leaf comprising a part movable on and controlled by said vertical guideway and a part movable on and controlled by said driftage guideway, a rotatable sighting member connected with the part of said carrier controlled by the driftage guideway and engaged by the part of the carrier controlled by the vertical guideway, said sighting member having a plurality of sight apertures of various sizes the sighting centers of which are equally distant from the axis of rotation of said member, and a lower notch or battle sight on the part of the carrier controlled by said vertical guideway whereby said battle sight moves in a substantially vertical line in adjusting said carrier.

3. In a gun sight, the combination of a leaf having a vertical guideway and a guideway for driftage correction, a slide movable in and controlled by the guideway for driftage, a rotatable sighting member carried by said slide, said rotatable member having sight apertures of various sizes the sighting centers of which are equally distant from the axis of rotation of said member, a second slide movable on and controlled by said vertical guideway, said second slide having a scale-observing opening, the edge of the slide below said opening alining with the several sight openings when the latter are in sighting position.

4. In a gun sight, the combination of a leaf having a vertical guideway and a guideway for driftage correction, a carrier on said leaf comprising a part movable on and controlled by said vertical guideway and a part movable on and controlled by said driftage guideway, a recess in the part controlled by the vertical guideway, a rotatable sighting member provided with sight apertures of various sizes the sighting centers of which are equally distant from the axis of rotation of said member, said sighting member being seated in said recess in the part of the carrier controlled by the vertical guideway and connected with the part of the carrier controlled by the driftage guideway.

5. In a gun sight, the combination of a sight leaf and a rotatable sighting member thereon having a plurality of sight openings, said sighting member being provided on its outer face with a series of radial ribs intermediate said sight openings and dividing the outer surface of the sighting member into separate and distinct fields for the several sight openings.

6. In a gun sight, the combination of a sight leaf provided with a vertical guideway and a guideway to provide for driftage correction, a sighting member having a plurality of sight openings of various sizes the sighting centers of which are equally distant from the axis of rotation of said member, a carrier for the sighting member comprising a part movable on and controlled by said vertical guideway and a part movable on and controlled by said driftage guideway, said sighting member being rotatably connected with the part controlled by the driftage guideway and said sighting member being engaged by the part controlled by the vertical guideway, and a latching device for said sighting member comprising a block connected with the part of the carrier controlled by the driftage guideway, said block having a projection at its edge adapted to engage notches provided at the edge of the under surface of the rotatable sighting member to hold the latter in set position for sighting.

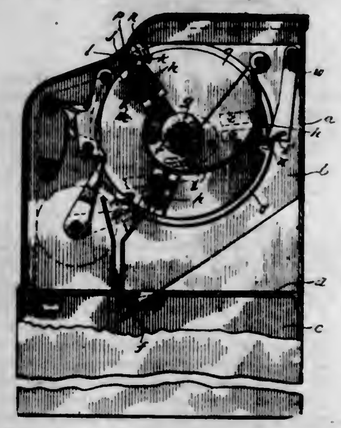
7. In a gun sight, the combination of a leaf having a guideway to provide for driftage correction, a slide movable in and controlled by said guideway, a rotatable sighting member carried by said slide, said rotatable member having sight apertures of various sizes the sighting centers of which are equally distant from the axis of rotation of said member, guide lines for the sight apertures on the sighting member, and an index carried by said slide for vertical alinement with said guide lines when the several sight apertures are in sighting position.

8. In a gun sight, the combination of a leaf having a vertical guideway and a guideway to provide for driftage correction, a carrier on said leaf comprising a slide movable in and controlled by the driftage guideway and a slide movable on and controlled by the vertical guideway, a rotatable sighting member carried by the slide on the vertical guideway and connected with and controlled for driftage by the slide in the driftage guideway, said sighting member having sight apertures of various sizes, the sighting centers of which are equally distant from the axis of rotation of said member.

9. In a gun sight, the combination of a leaf having a vertical guideway and a guideway to provide for driftage correction, a carrier on said leaf comprising a slide movable in and controlled by the driftage guideway and a slide movable on and controlled by the vertical guideway, a rotatable sighting member carried by the slide on the vertical guideway and connected with and controlled for driftage by the slide in the driftage guideway, a latching member carried by the slide on the vertical guideway and connected with and controlled for driftage by the slide in the driftage guideway, and means on the sighting member to be engaged by said latching member to latch the sighting member in sighting position.

10. In a gun sight, the combination of a leaf having a vertical guideway and a guideway to provide for driftage correction, a carrier on said leaf comprising a slide movable in and controlled by the driftage guideway and a slide movable on and controlled by the vertical guideway, a rotatable sighting member carried by the slide on the vertical guideway and connected with and controlled for driftage by the slide in the driftage guideway, said sighting member having sight apertures of various sizes, and a lower notch or battle sight on the slide controlled by the vertical guideway.

870,338. CHECK-OPERATED MECHANISM. EDWARD A. BEAUMONT, Jr., and GEORGE W. GARMON, Philadelphia, Pa. Filed Feb. 9, 1906, Serial No. 300,221. Renewed Sept. 12, 1907. Serial No. 392,570.



1. In a check-controlled apparatus, in combination, an inclosing case, a shaft, coin carriers carried by said shaft, means for rotating said shaft, and a stationary cleaning device for cleaning out said coin carriers during their revolution.

2. In a check-controlled apparatus, in combination, an inclosing case, a shaft, coin carriers carried by said shaft, said carriers being adapted to engage opposite edges of the coin and being open at the top and bottom, a stationary cleaning device adapted to form a stop for the coin when first placed in said carriers and afterwards during the rotation of said shaft and carriers to sweep the carriers from their inner to their outer ends, and means for rotating said shaft and carriers.

3. In a check-controlled apparatus, in combination, an inclosing case, a shaft, disks carried by said shaft, coin carriers, the opposite parts of which are carried one on one disk the other on the other disk, a stationary cleaning device placed between said disks, said cleaning device having substantially the form of a spiral one end of which starts at a point below the lower ends of the coin carriers and which gradually passes outward until its outer end terminates at or near the outer ends of said coin carriers, and means for rotating said shaft and carriers.

870,339. JOINT-RING FOR ACETYLENE-GAS LAMPS. CHARLES W. BECK, Rockville Center, N. Y. Filed Dec. 22, 1906. Serial No. 349,067.

1. A joint ring for connecting together two members of an acetylene gas lamp comprising an upward extending cylindrical inner member formed on the lower part and provided with an outward extending flange at its top, an outer cylindrical member formed on the other part and adapted to fit over the inner member, a sectional clamping ring carried by the outer member and provided with cam lugs extending inward through slots in the outer member and adapted to engage the flange on the inner member, a packing ring carried by the outer member and adapted to rest upon the top of the flange of the inner member, and means for drawing together the sections of the clamping ring, whereby the cams will draw the packing ring against the flange on the inner member to form a gas tight joint.



2. A joint ring for connecting together two parts of an acetylene gas lamp or generator comprising an inner cylindrical member formed on one part of the lamp or generator and provided with an outward extending flange near its upper end, a cylindrical outer member formed on the other part and adapted to fit over the inner member, a clamping ring carried by the outer member and provided with cam lugs extending inward through slots in the outer member and, adapted to engage the flange on the inner member, a packing ring carried by the outer member and adapted to rest upon the flange of the inner member, and a lever device for drawing together the ends of the clamping ring, whereby the diameter of said ring will be reduced and the cams will draw the packing ring to the flange on the inner member.

3. A joint ring for connecting together two telescoping parts comprising an outward extending flange formed on the inner part, a clamping ring carried by the outer part and provided with cam lugs extending inward through the outer part and adapted to engage the flange of the inner part, a packing ring carried by the outer part and adapted to rest upon the flange of the inner part, and means for drawing inward the ends of the clamping ring.

4. A joint ring for connecting together two telescoping parts comprising an outward extending flange formed on the inner part, a sectional clamping ring carried by the outer part and provided with cam lugs adapted to extend inward through the outer part and adapted to engage the flange of the inner part, means for hinging together the ends of the sections of the clamping ring, and means for drawing together said sections, whereby the cam lugs will be caused to engage the flange on the inner part.

5. A joint ring for connecting together two telescoping parts comprising an outward extending flange formed on the inner part, a sectional clamping ring carried by the outer part and provided with cam lugs extending inward through the outer part and adapted to engage the flange on the inner part, means for hinging together the ends of the sections of the clamping ring, and a lever device for drawing together the sections of the clamping ring.

6. A joint ring for connecting together two telescoping parts comprising an outward extending flange formed on the inner part provided with an inclined cam surface, a sectional clamping ring carried by the outer part and provided with lugs extending through the outer part and adapted to engage the cam surface of the flange on the inner part, hooks formed on the ends of the clamping ring sections, a hinge plate engaging said hooks to flexibly connect the sections of the clamping ring, and means for drawing inward the sections of the clamping ring.

7. A joint ring for connecting together two telescoping parts comprising an outward extending flange formed on the inner part, a sectional clamping ring carried by the outer part and provided with cam lugs extending through the outer part and adapted to engage the flange on the inner part, adjustable means for hinging together the ends of the sections of the clamping ring, and a lever device for drawing together said sections, whereby the cam lugs will be caused to engage the flange on the inner part.

8. A joint ring for connecting together two telescoping parts comprising an outward extending flange formed on the inner part, a sectional clamping ring carried by the

outer part and provided with cam lugs extending through the outer part and adapted to engage the flange on the inner part, a hinge plate connecting together the two ends of the clamping ring sections, a link connected to one of said sections, a lever connected to the other section, said link being also connected to the lever between its free end and its pivot and extending across the joint between the ring sections, whereby the clamping ring may be contracted by moving the lever.

9. A joint ring for connecting together two telescoping parts comprising an outward extending flange formed on the inner part, a two-part clamping ring carried by the outer part and provided with cam lugs extending through the outer part and adapted to engage the flange on the inner part, a hinge plate connecting together two ends of the clamping ring sections, a link pivoted to the other end of one of said sections, a lever pivoted to the free end of the other section, said link being also pivoted to the lever between its free end and its pivot near its lower edge and extending across the joint between the ring sections, for the purpose set forth.

10. A joint ring for connecting together two telescoping parts comprising an inner part provided with an outward extending flange, said flange being formed with an inclined cam surface, an outer part formed with two annular exterior beads forming a channel between them, a split clamping ring carried by the outer part and fitting the channel formed by said beads, cam lugs formed on said clamping ring and extending inward through the outer part and adapted to engage the cam surface of the inner part, a link pivoted to one end of the clamping ring, a lever pivoted to the other end of said clamping ring and extending back upon said ring, the link bridging the space between the ring ends and connected to the lever beyond its pivot whereby when the lever is brought into alinement with the ring the link will draw the ends of the ring toward each other.

11. A joint ring for connecting together two telescoping parts comprising an inner part provided with an outward extending flange, said flange being formed with an inclined cam surface, an outer part formed with two annular exterior beads forming a channel between them, a split clamping ring carried by the outer part and fitting the channel formed by said beads, cam lugs formed on said clamping ring and extending inward through the outer part and adapted to engage the cam surface of the inner part, a link pivoted to one end of the clamping ring, a lever pivoted to the other end of said clamping ring and extending back upon said ring, the link bridging the space between the ring ends and connected to the lever beyond its pivot, whereby when the lever is brought into alinement with the ring the link will draw the ends of the ring toward each other, an inward extending flange formed on the link adapted to engage the upper edge of the lever in its locked position to prevent further downward movement of said lever.

12. A joint ring for connecting two members of a gas container comprising two cylindrical members, one of said members being formed with a flange, a split clamping ring carried by the other member, lugs on said clamping ring extending inward through one member and adapted to engage the flange on the other member, and a lever device connected to the clamping ring and adapted to contract the same to cause the lugs to engage the flange to draw the two members toward each other.

13. A joint ring for connecting together two telescoping parts comprising an outward extending flange formed on the inner part, a clamping ring carried by the outer part and provided with cam lugs extending inward through the outer part and adapted to engage the flange of the inner part, a packing ring carried by the outer part and adapted to rest upon the flange of the inner part, and means for forcing inward the lugs of the clamping ring.

14. A joint ring for connecting together two telescoping parts comprising an outward extending flange formed on the inner part, a clamping ring carried by the outer part, cam lugs extending inward through the outer part and adapted to engage the flange of the inner part, a packing ring carried by the outer part and adapted to rest upon the flange of the inner part, and means for forcing inward the lugs of the clamping ring.

15. A joint ring for connecting two members of a gas container comprising two cylindrical members, one of said members being formed with a flange, a clamping ring carried by the other member, lugs extending inward through one member and adapted to engage the flange on the other member and a device connected to the clamping ring and adapted to force the lugs inward to draw the two members towards each other.

870,340. PULLEY. WILLIAM H. BECROFT and ABRAHAM ISAACS, West Hoboken, N. J. Filed Apr. 26, 1907. Serial No. 370,367.



1. In a pulley, a sectional wheel or roller having a chamber, a plurality of balls in said chamber, an axle passed through said sections and chamber and in direct contact with said balls, means integral with one of said sections and connecting said sections upon opposite sides of said balls, and a suspension support for said axle.

2. In a pulley, a sectional wheel or roller, an axle therefor, a sectional suspension support for said axle with one section of which said axle is integral, a series of balls interposed between said wheel and axle, and means joining the wheel sections upon opposite sides of the said balls and with which they directly engage.

3. In a pulley, a sectional wheel or roller, an axle therefor, a suspension support for said axle with which the latter is integral, said wheel being provided with a chamber around the axle, balls in said chamber and adapted to roll in direct contact with said axle, and means integral with one of the wheel sections connected with the other section and against which said balls roll in direct contact.

4. In a pulley, a wheel or roller formed of sections, an axle for said wheel, one of said sections being provided with a chamber around said axle, the other section being adapted to close said chamber, and a ball-bearing occupying said chamber, a support for said axle and means for connecting said sections as one and against which the balls directly roll.

5. In a pulley, a wheel or roller formed of sections with alined openings for an axle, and rims, and rivets integral with one section adapted to pass through the other section and be connected therewith and a support for said axle.

6. In a pulley, a wheel or roller, an axle therefor, and a support for said axle, said support being formed in sections, and said axle being integral with one of said sections and being adapted to pass entirely through the other section and be connected therewith.

7. In a pulley, a wheel or roller, an axle therefor, a support for said axle, said support being formed in sections, and rivets respectively integral with one of said sections and being adapted to pass entirely through the other section and be connected therewith, and means integral with one of said sections connecting said sections at their lower end.

8. In a pulley, a wheel or roller, an axle therefor, a support for said axle, said support being formed in sections, and means for connecting said sections, said means and said axle being integral with one of said sections and adapted to pass entirely through the other section and be connected therewith, and means integral with one of said sections connecting said sections at their lower end.

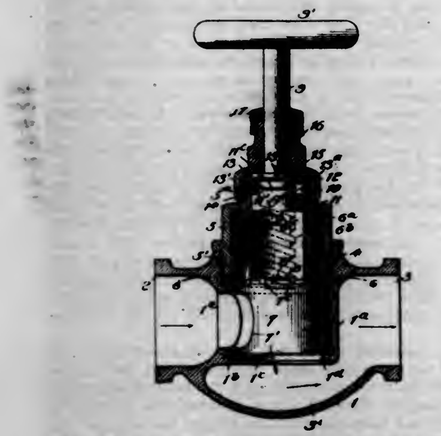
9. In a pulley, a wheel or roller, an axle therefor, said wheel having a chamber around said axle, a ball-bearing in said chamber, a support for said axle, said wheel being formed in sections having integral means for connecting them as one, and said support being formed in sections having integral means for connecting them as one.

870,341. INCANDESCENT LAMP. HERMAN BOEHM, Youngstown, Ohio. Filed Nov. 21, 1906. Serial No. 344,496.



An incandescent lamp bulb of cylindrical formation throughout a portion of its length and throughout the remaining portion of its length flattened at opposite points, the flattened portions extending from one end of the bulb to and terminating at the cylindrical portion, and leading-in wires flattened against the flat sides of the bulb.

870,342. VALVE. AUGUSTUS H. BOSTLEY, South Williamsport, Pa., assignor of one-third to George H. Young, Williamsport, Pa., and one-third to Benjamin F. Auchmuty, South Williamsport, Pa. Filed Mar. 20, 1906. Serial No. 307,111.



1. In a valve mechanism, the combination with a suitable casing having a passageway therethrough and a valve seat in said passageway, of means for opening and closing the passageway through said casing comprising a main valve arranged to reciprocate to and from said valve seat, a hollow rotary valve surrounding said reciprocatory valve, and means for actuating said valves, said means being inactive to rotate said rotary valve until said main valve is in a predetermined position relative to said rotary valve.

2. In a valve mechanism, the combination with a suitable casing having a passageway therethrough and a valve seat in said passageway, of means for opening and closing the passageway through said casing comprising a main valve arranged to reciprocate to and from said valve seat, a hollow rotary valve surrounding said reciprocatory valve, and means for actuating said valves, said means being disconnected from said rotary valve when acting to move said main valve to or from a predetermined position relative to said rotary valve.

3. In a valve mechanism, the combination with a suitable casing having a passageway therethrough and a valve seat in said passageway, of means for opening and closing the passageway through said casing comprising a main valve arranged to reciprocate to and from said valve seat, a hollow rotary valve surrounding said reciprocatory valve, and means for actuating said valves, said means arranged to reciprocate said main valve within said rotary valve and to automatically effect the rotation of said rotary valve in either direction when the main valve is a predetermined distance from said valve seat.

4. In a valve mechanism, the combination with a suitable casing having a passageway therethrough and a valve seat in said passageway, of means for opening and closing the passageway through said casing comprising a main valve arranged to reciprocate to and from said valve seat, a hollow rotary valve surrounding said reciprocatory valve, and mechanical means for automatically effecting the rotation of the rotary valve and then the closing of the main valve, and for opening the main valve and then rotating the rotary valve.

5. In a valve mechanism, the combination with a suitable casing having a passageway therethrough and a valve seat in said passageway, of means for opening and closing the said passageway through the casing comprising a main valve arranged to reciprocate to and from said valve seat, a hollow rotary valve surrounding said main valve, and mechanical means for controlling the operation of both of said valves, said means acting to rotate said rotary valve when said reciprocatory valve is moved a predetermined distance away from the said valve seat, and at other times acting to cause the movement of said main valve within the rotary valve.

6. In a valve mechanism, the combination with a suitable casing having a passageway therethrough and a valve seat in said passageway, of means for opening and closing the said passageway through the casing comprising a hollow rotary valve, a main valve arranged to reciprocate within said rotary valve and to rotate it, and mechanical means arranged to move said main valve a predetermined distance away from said valve seat and then to rotate it.

7. In a valve mechanism, the combination with a suitable casing having a passageway therethrough and a valve seat in said passageway, of means for opening and closing the said passageway through the casing comprising a hollow rotary valve, a main valve arranged to reciprocate within said rotary valve and to rotate it, and mechanical means for causing the movement of said main valve toward and from said valve seat and for rotating it when a predetermined distance from said valve seat.

8. In a valve mechanism, the combination with a suitable casing having a passageway therethrough and a valve seat in said passageway, of a rotary tubular valve within said casing for opening and closing the passageway therethrough, a reciprocatory valve for opening and closing the passageway through said casing, arranged to operate within and connected with said rotary valve to effect the simultaneous rotation of the two valves, and means for operating said valves including clutch mechanism arranged to be thrown into operation to oppose the reciprocation of the said reciprocatory valve and cause its rotation after it has moved a predetermined distance in one direction.

9. In a valve mechanism, the combination with a suitable casing having a passageway therethrough and a valve seat in said passageway, of a rotary tubular valve for opening and closing said passageway, a reciprocatory valve arranged to operate within said rotary valve and to cooperate with said valve seat to open and close the said passageway through the casing, said reciprocatory valve being internally screw threaded, a screw threaded valve stem fitted into said reciprocatory valve, and clutch mechanism interposed between said reciprocatable valve and said stem and arranged to cause the valve to turn with the stem and to rotate the said rotary valve.

10. In a valve mechanism, the combination with a suitable casing having a passageway therethrough and a valve

seat in said passageway, of a rotary tubular valve for opening and closing said passageway, a reciprocatory valve arranged to operate within said rotary valve and to coöperate with said valve seat to open and close the passageway through the said casing, said reciprocatable valve being internally screw threaded, a screw threaded valve stem fitted within said reciprocating valve, and clutch mechanism interposed between said stem and said reciprocatory valve and comprising a collar movable longitudinally of said stem and carrying a lug or projection adapted to engage with the walls of a correspondingly shaped recess within the reciprocatory valve to cause the said valve to turn with the said stem and to revolve the rotary valve.

11. In a valve mechanism, the combination with a suitable casing having a passageway therethrough and a valve seat therein, of a hollow rotary valve mounted within said casing and arranged to open and close the passageway therethrough, a reciprocatory valve arranged to operate within said rotary valve and connected thereto to rotate therewith, and having a head adapted to engage said valve seat in the casing, means for reciprocating said reciprocatory valve and forcing and holding its valve head forced against said valve seat, and means for causing the said last described means to turn the said reciprocatory valve and rotate the rotary valve after the reciprocatory valve has traveled a predetermined distance within said rotary valve.

12. In a valve mechanism, the combination with a suitable casing having a passageway therethrough and a valve seat therein, of a hollow rotary valve within said casing for opening and closing the said passageway, a valve arranged to reciprocate within said rotary valve to open and close the said passageway at said valve seat, and connected with said rotary valve to rotate therewith, and a single hand operated device for controlling the operation of both of said valves, and adapted to cause their simultaneous rotation only when the reciprocatory valve is moved a predetermined distance away from the said valve seat.

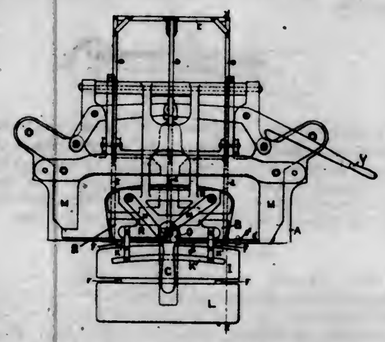
13. In a valve mechanism, the combination with a suitable casing having a passageway therethrough and a valve seat therein, of a hollow rotary valve within said casing for opening and closing said passageway, a valve arranged to reciprocate within said hollow valve and to coöperate with said valve seat for opening and closing the passageway through the casing, and a single rotary device for controlling the operation of both of said valves and adapted to force and hold said reciprocatory valve forced against said valve seat.

14. In a valve mechanism, the combination with a suitable casing having a passageway therethrough and a valve seat in said passageway, of a main reciprocatory valve adapted to seat against said valve seat, a rotary valve surrounding said reciprocatory valve and adapted to open and close the passageway through said casing, and means for operating said valve to open and close the passageway through the said casing, arranged to open the passageway by first lifting the said main valve a predetermined distance from said valve seat and then rotating said rotary valve, and arranged to close the passageway by first rotating said rotary valve a predetermined distance and then closing the main valve against said valve seat.

870,343. FOLDING-MACHINE. EUGENE H. BROWN, Troy, N. Y. Filed Dec. 30, 1905. Serial No. 293,903.

1. In a machine for folding collar and cuff blanks of the type having a collapsible die; infolders for folding and pressing the blanks over the edges of the die upon the bed of the machine; a block adapted to fit between sections of the die, thereby preventing the die from collapsing; a lever with said block mounted upon one end thereof; said lever so arranged and constructed that the infolders will press down the other end of the lever when the infolders are in contact with the blank on the bed of the machine, thereby raising the block in position between the sections of the die and thereby preventing the collapsing of the die until the infolders are removed from the blank, substantially as described.

2. In a machine for folding collar and cuff blanks; sliding bars extending lengthwise across the bed of the machine and below or flush with the surface of the bed plate; projections upon said bars back of the bed plate of the machine extending above the plane of the surface of the bed plate, and adapted to engage a blank folded and pressed thereon; means for propelling said sliding bars forward, whereby the collar or cuff will be moved over the bed plate beyond the front of the machine; catches adapted to engage said blank when the sliding bars return whereby said blank will be retained and dropped in front of the machine; a yielding table in front of said machine adapted to receive said blanks when deposited thereon by said sliding bars and said catches; a presser plate attached to the die and adapted to press upon the blanks when deposited upon said yielding table, substantially as described and for the purposes set forth.



3. In a machine for folding collar and cuff blanks; sliding bars extending lengthwise across the bed of the machine and below or flush with the surface of the bed plate; projections upon said bars back of the bed plate of the machine extending above the plane of the surface of the bed plate, and adapted to engage a blank folded and pressed thereon; a foot pedal attached to an elbow crank; rods connecting said elbow crank to said sliding bars whereby said sliding bars may be propelled forward by pressing upon said foot pedal and thereby moving the blank forward over the bed plate beyond the front of the machine; catches adapted to engage said blank when the sliding bars return whereby said blank will be retained and dropped in front of the machine; a yielding table in front of said machine adapted to receive said blanks when deposited thereon by said sliding bars and said catches; a presser plate attached to the die and adapted to press upon the blanks when deposited upon said yielding table, substantially as described and for the purposes set forth.

4. In a machine, for folding collar and cuff blanks, of the type having a collapsible die; means for locking the collapsible die when the die is upon the blank being folded in the machine while the die is pressing the goods upon the bed of the machine, infolders to fold the edges of the blank over the die; sliding bars extending lengthwise across the bed of the machine and below or flush with the surface of the bed plate; projections upon said bar back of the bed plate of the machine extending above the plane of the surface of the bed plate, and adapted to engage a blank folded and pressed thereon; an elbow crank, a foot pedal attached thereto; rods connecting said elbow crank to said sliding bars; whereby said sliding bars may be propelled forward by pressing said foot pedal and thereby moving the blank forward over the bed plate beyond the front of the machine; catches adapted to engage said blank when the sliding bars return whereby said blank will be retained and dropped in front of the machine, a yielding table in front of said machine adapted to receive said blanks when deposited thereon by said sliding bars and said catches; a presser plate attached to the die and adapted to press upon the blanks when deposited upon said yielding table, substantially as described and for the purposes set forth.

5. In a machine for folding collar and cuff blanks of the type having a collapsible die; infolders for folding and pressing the blanks over the die; a lever with a block on one end thereof; said block adapted to come in contact with and lock said collapsible die when said die is upon the blank on the bed of the machine; means whereby said infolders will operate said lever thereby causing said block to lock said die when said infolders are pressing said blank over said die, substantially as described and for the purposes set forth.

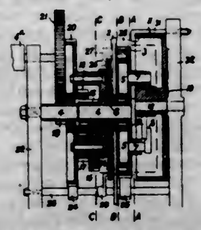
870,344. DRAFT-EQUALIZER. WILLIAM C. CAMPBELL, St. Louis, Mo., assignor to Campbell Easy Doubletree Company, St. Louis, Mo., a Corporation of Oklahoma. Filed Jan. 7, 1907. Serial No. 351,171.



1. A device of the character described, comprising a doubletree provided at its center with a metallic strengthening member having an opening for a hammer-pin and provided on its upper face with undercut lugs and with an integral ring-shaped portion surrounding said opening, in combination with a plate adapted to be connected to the pole-hound of a vehicle and provided with flanges which extend underneath said undercut lugs, said plate being provided with a hammer-pin having an enlarged portion that fits inside of the ring-shaped portion on the upper face of said strengthening member; substantially as described.

2. A device of the character described, comprising a member having a leaf-spring connected to the rear edge thereof, a channel-shaped metallic strengthening device incasing the central portion of said member and having a portion of its web cut away, and a removable plate arranged in said cutaway portion and having the fastening devices for the leaf-spring extending through same; substantially as described.

870,345. CLOTH-TAKE-UP MOTION FOR LOOMS. WILLIAM H. CLEGG, Burnley, England. Filed Mar. 5, 1906. Serial No. 304,358.



1. In a cloth taking up motion for looms, a draw or sand roller, a central shaft, a catch wheel mounted on said shaft, a sleeve on said shaft, pinions concentrically mounted in said catch wheel and gearing with said sleeve, suitable gearing between said sleeve and said draw or sand roller, and means for rotating said pinions relative to said catch wheel.

2. In a cloth taking up motion for looms, a draw or sand roller, a central shaft, a catch wheel mounted on said shaft, a sleeve on said shaft, gearing between said sleeve and said draw roller, means for rotating said sleeve in advance of said catch wheel, and means for adjusting the relative motions of said catch wheel and said sleeve.

3. In a cloth taking up motion for looms, a draw or sand roller, a catch wheel, a shaft carrying said catch wheel, a plurality of pinions centrically mounted in said catch wheel, a sleeve on said shaft adapted to gear with said pinions, an eccentric portion on said shaft, an eccentric mounted on said eccentric portion, cranks and connecting rods between each of said pinions and said eccentric part, and means for adjusting the eccentric on the eccentric part of said shaft.

4. In a cloth taking up motion for looms, a draw or sand roller, a shaft, a catch wheel on said shaft, a pawl carrier adapted to rotate said catch wheel, a sleeve on said shaft, means for rotating said sleeve at varying speeds relative to the speed of said catch wheel, and gearing between said sleeve and said sand roller.

5. In a cloth taking up motion for looms, a draw or sand roller, a catch wheel, a shaft carrying said catch wheel, means for intermittently rotating said catch wheel, a series of pinions mounted in said catch wheel, a plurality of shafts one for each of said pinions, bearing in and centrically to said catch wheel pinions, means of engagement between said shafts and said pinions to make rotative connection in one direction only, and gearing between said pinions and said draw roller.

6. In a cloth taking up motion for looms, a draw or sand roller, a catch wheel, a shaft carrying said wheel, a sleeve on said shaft, adjustable differential gear between said catch wheel and said sleeve, reducing gear connected to said sleeve, and a draw roller wheel between the draw or sand roller and said reducing gear.

7. In a cloth taking up motion for looms, a draw or sand roller, a catch wheel, a second catch wheel, differential gear between said first and second catch wheels, and connections between said second catch wheel and said sand or draw roller.

8. In a cloth taking up motion for looms, a draw or sand roller, a catch wheel, a shaft carrying said catch wheel, an eccentric part on said shaft, an eccentric mounted on said eccentric part, a plurality of pinions mounted centrically in said catch wheel, shafts connected to said pinions, means for oscillating said shafts from said second eccentric, means for permitting rotation of said shafts in one direction relative to the pinions, a sleeve on said shaft gearing with said pinions, and a second catch wheel intermediate to said first catch wheel and said sand or draw roller, said second catch wheel being capable of rotation by hand.

9. In a cloth taking up motion for looms, a draw or sand roller, a catch wheel, adjustable differential gearing between said catch wheel and said sand roller, and means for turning said sand roller independently of said catch wheel.

10. In a cloth taking up motion for looms, a draw or sand roller, a catch wheel, adjustable differential gear between said catch wheel and said draw or sand roller, and means for registering the amount of adjustment of said differential gear.

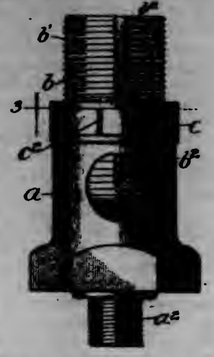
870,346. GREASE-CUP. WILLIAM W. CROSBY, Tacoma, Wash. Filed Jan. 19, 1907. Serial No. 353,098.

1. A grease cup comprising a grease receptacle provided at one end with an annular recess, a plunger mounted in the grease cup, and means mounted in the recess to lock the plunger against movement.

2. A grease cup comprising an outer grease receptacle, a plunger mounted therein, said receptacle being provided with an annular recess at one end and with a passageway opening into the recess, a longitudinally movable plunger mounted in the receptacle, said plunger having a longitudinal recess in its side, and means mounted in the annular recess and engaging the passageway and plunger recess to lock the plunger against movement.

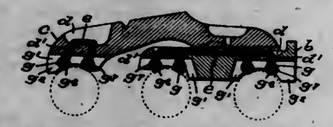
3. A grease cup comprising a grease receptacle having an annular recess at one end and a passageway communicating with the recess, a plunger mounted in the receptacle having a longitudinal recess, and a spring member

mounted in the annular recess and encircling the receptacle, said spring member being provided at one end with an inwardly turned portion entering the passageway and longitudinal recess.



4. A grease cup comprising an outer grease receptacle, a plunger mounted therein, a clasp spring encircling the outer receptacle, and provided with means engaging the plunger to prevent movement thereof.

870,347. TOP-ROLL SADDLE. EZRA DIXON, Bristol, R. I. Filed Aug. 16, 1905. Serial No. 274,401.



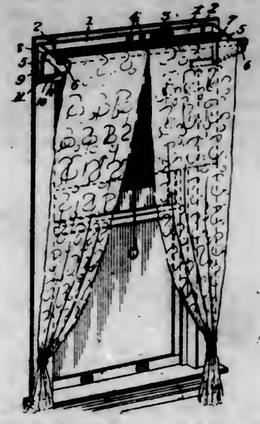
1. A back top roll saddle *b* constructed to have the cavities *g' g'*, the side walls *g² g²*, the countersunk portions *g³ g³*, the plates *g⁴ g⁴* secured in the countersunk portions *g³ g³* by the screws *g⁵ g⁵*, the rolls *g⁶ g⁶* rotatably secured in the bearings *g⁷ g⁷* formed in the side walls *g² g²*, the whole forming the roller bearings *g g* adapted to bear on the back and intermediate top roll journals of a spinning machine, and means for oiling the roller bearings *g g*, as described.

2. A front top roll saddle *c* constructed to have the cavity *g'*, the side walls *g² g²*, the countersunk portion *g³*, the plate *g⁴* secured in the countersunk portion *g³* by the screw *g⁵*, the rolls *g⁶ g⁶* rotatably secured to the bearings *g⁷ g⁷* in the side walls *g² g²*, the whole forming the roller bearing *g* adapted to bear on the front top roll journal of a spinning machine, and means for oiling the roller bearing *g*, as described.

3. The combination of a back top roll saddle *b* constructed to have the cavities *g' g'*, the side walls *g² g²*, the countersunk portions *g³ g³*, the plates *g⁴ g⁴* secured in the countersunk portions *g³ g³* by the screws *g⁵ g⁵*, the rolls *g⁶ g⁶* rotatably secured in the bearings *g⁷ g⁷* formed in the side walls *g² g²*, the whole forming the roller bearings *g g* adapted to bear on the back and intermediate top roll journals of a spinning machine, and a front top roll saddle *c* constructed to have the cavity *g'*, the side walls *g² g²*, the countersunk portion *g³*, the plate *g⁴* secured in the countersunk portion *g³* by the screw *g⁵*, the rolls *g⁶ g⁶*, rotatably secured in the bearings *g⁷ g⁷* in the side walls *g² g²*, the whole forming the roller bearing *g* adapted to bear on the front top roll journal of a spinning machine, and means for oiling the roller bearings *g g* in the back and front saddles *b* and *c*, as described.

870,348. COMBINED SHADE AND CURTAIN BRACKET. ENOCH DUNKERLEY, Jr., Vilas, Pa., assignor of one-half to Fredrick Dunkerley, Oneida, N. Y. Filed July 20, 1906. Serial No. 327,046.

1. A window fixture, comprising two bracket members adjustably connected together and adapted to be secured to the window frame or casing, and a horizontally extending arm projecting inwardly from each bracket member and adapted to overlie and bear against the face of the window casing at a point below said bracket members, said arms being of sufficient length to serve as a brace or support for the bracket ends in whatever position they occupy when extended beyond the sides of the window casing.



2. A window fixture consisting of two bracket members adjustably connected together and adapted to be secured to the window frame or casing, said bracket members comprising in each instance a support-engaging portion, a bracket arm extending at an angle from the support-engaging portion, and a horizontally extending arm connected to the bracket arm at the lower end thereof and adapted to overlie and bear against the front face of the window casing, said arms lying in the same vertical plane with the support-engaging portion and being of sufficient length to serve as a brace or support for the bracket arms in whatever position they occupy when extended beyond the sides of the window casing.

870,349. PROCESS OF PRODUCING COMPOUNDS CONTAINING RUBBER AND FIBER. FREDERICK M. EKERT, Akron, Ohio, assignor to The Ekert Fibre Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 20, 1907. Serial No. 363,472.

1. The process of producing compounds of rubber or similar gum-like material and fiber which consists in forming said rubber or material into a sheet, adding the fiber to the sheet, folding the sheet, passing the folded sheet between substantially even-motioned rolls, continuously repeating the operations of adding fiber and folding until the requisite amount of fiber has been incorporated with the rubber or similar material, the folding of the sheet being made generally in the same direction to prevent the breaking of the fiber, meanwhile maintaining the sheet in a plastic condition to enable the fiber to be pressed thereinto substantially without friction.

2. The process of producing compounds of rubber or similar gum-like material and fiber which consists in forming said rubber or material into a sheet, adding the fiber to the sheet, folding the sheet, passing the folded sheet between substantially even-motion rolls, adding fiber to the sheet thus formed, folding the sheet in the same direction as before and passing the sheet in the same direction as before through the even-motion rolls, repeating the above operations until the requisite amount of fiber has been incorporated with the rubber or similar material.

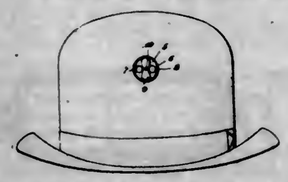
3. The process of producing compounds of rubber or similar gum-like material and fiber which consists in forming said rubber or material into a sheet, adding the fiber to the sheet, folding the sheet, passing the folded sheet between substantially even-motion rolls, adding fiber to the sheet thus formed and again folding the sheet in the same direction as before and passing the folded sheet through the even-motion rolls in substantially the same direction as before, repeating the above operations, with the addition of emollients to preserve the plasticity of the rubber, until the requisite amount of fiber has been incorporated.

4. The process of producing compounds of rubber or similar gum-like material with fiber and another ingredient which consists in forming said rubber or material into a sheet, adding to the sheet one of the aforesaid ingredients, folding the sheet thus treated, passing the folded sheet between substantially even-motion rolls, repeating the operations of adding the ingredient, folding and rolling until the desired amount of said ingredient has been incorporated, then adding to the sheet of rubber and said ingredient the second ingredient, folding the sheet, passing the folded sheet between the rolls, repeating the operations of adding the second ingredient, folding and rolling until the desired amount of the latter ingredient has been incorporated, and maintaining the plasticity of the rubber to permit the frictionless incorporation of the ingredients therewith.

5. The process of producing compounds of rubber or similar gum-like material with fiber and another ingredient, which consists in forming said rubber or material into a sheet, adding to the sheet one of the aforesaid ingredients, folding the sheet thus treated, subjecting the folded sheet to frictionless pressure, repeating the operations of adding the ingredient, folding and subjecting to frictionless pressure until the desired amount of said ingredient has been incorporated, then adding to the sheet of rubber and said ingredient the second ingredient, folding the sheet, subjecting the folded sheet to frictionless pressure, repeating the operations of adding the second ingredient, folding and subjecting to frictionless pressure until the desired amount of the latter ingredient has been incorporated, the folding of the fiber-containing sheet being made in the same direction to prevent friction and the breaking of the fiber, substantially as specified.

6. The process of producing compounds of rubber or similar gum-like material and fiber which consists in forming said rubber or material into a sheet, adding the fiber to the sheet, folding the sheet, passing the same between substantially even-motion rolls to form a new sheet, quickly removing the sheet thus formed, adding fiber to said sheet, and repeating the operations of folding, passing between the rolls, and quick removal therefrom until the requisite amount of fiber has been incorporated, meanwhile maintaining the rubber in a plastic condition to permit the frictionless incorporation of the fiber therewith, substantially as specified.

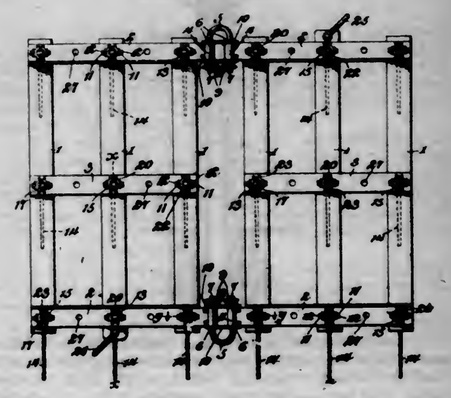
870,350. HAT-VENTILATOR. ALBERT L. ELIEL, New York, N. Y. Filed Dec. 13, 1906. Serial No. 347,614.



As a new article of manufacture, a hat ventilator, adapted to be secured to the outer surface of a hat body, comprising a disk having a depressed outer face, ventilating openings through said face, an exposed thin damper pivoted on the depressed face of the disk and protected by the projecting edge of the disk and pliable pins projecting from the back of the disk for securing the disk upon the hat body, substantially as set forth.

870,351. HARROW. EDWARD ETHRIDGE, Stattler, Ark. Filed Apr. 3, 1907. Serial No. 366,178.

1. In a harrow, the combination with harrow sections having transverse bars provided with eyes, pivots arranged in the eyes and hinging the harrow sections together, fastening devices securing the transverse bars to the harrow sections and provided with nuts, harrow teeth, and means for securing the harrow teeth to the harrow sections, said means also serving to lock the nuts against rotary movement.



2. In a harrow, the combination with harrow sections having transverse bars provided with eyes, pivots arranged in the eyes and hinging the harrow sections together, fastening devices securing the transverse bars to the harrow sections and provided with nuts, harrow teeth, and ratchet washers securing the teeth in their adjustment and locking the nuts against rotary movement.

3. In a harrow, the combination of cross bars, fastening devices securing the bars together and provided with nuts, harrow teeth, and ratchet washers locking the harrow teeth in their adjustment and engaging the nuts to prevent rotary movement thereof.

4. In a harrow, the combination of a harrow frame having a fastening device provided with a nut, a harrow tooth having a shank piercing the harrow frame, and a ratchet washer engaging and locking both the tooth and the nut.

5. In a harrow, the combination of a harrow frame having a fastening device provided with a nut, a harrow tooth provided with a shank piercing the harrow frame and provided with a groove, and a ratchet washer having exteriorly and interiorly arranged teeth engaging the nut and a groove of the harrow tooth.

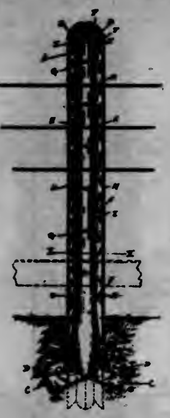
6. In a harrow, the combination of a harrow frame, a harrow tooth having a shank piercing the harrow frame and provided with a groove, a ratchet washer having an interiorly arranged tooth engaging the groove, and means mounted on the harrow frame for engaging the ratchet washer.

7. In a harrow, the combination of a harrow frame having a fastening device provided with a nut, a harrow tooth having a shank piercing the harrow frame, a ratchet washer engaging the nut, and a key piercing the shank of the harrow tooth and interlocked with the ratchet washer.

8. In a harrow, the combination of a harrow frame having a fastening device provided with a nut, a harrow tooth having a shank piercing the harrow frame, a ratchet washer provided with opposite notches and having teeth for engaging the said nut, and a key piercing the shank and engaging the notches of the ratchet washer.

9. In a harrow, the combination of a harrow frame having spaced fastening devices provided with nuts, a harrow tooth piercing the harrow frame at a point between the fastening devices and having grooves, a ratchet washer arranged on the harrow tooth and provided with interiorly and exteriorly arranged teeth for engaging the said grooves and the nuts, said ratchet washer being also provided with opposite notches, and a key piercing the harrow tooth and engaging the notches of the ratchet washer.

870,852. FENCE-POST. JAMES H. FITZGIBBON, Milwaukee, Wis. Filed Mar. 28, 1907. Serial No. 365,085.



1. A metallic post comprising a longitudinal cylindrical central member, and two longitudinal semi-cylindrical side members formed integrally from a single piece of sheet metal, said semi-circular side members being curved forwardly partially around said cylindrical central member, and means for supporting the transversely arranged fence material from the vertical edges of said semi-circular side members.

2. A metallic post comprising a longitudinal cylindrical central member, and two longitudinal semi-cylindrical side members formed integrally from a single piece of metal said semi-circular side member being curved forwardly partially around said cylindrical central member and a solid wooden member supported within said cylindrical central member and means for supporting the transversely arranged fence material from the vertical edge of said semi-circular side members and the vertical center of said cylindrical central member between the edges of said vertical side members.

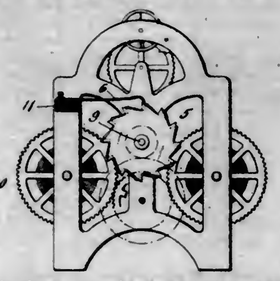
3. A metallic post comprising a longitudinal cylindrical central member, and two longitudinal semi-cylindrical side members, two horizontal anchorage members and two vertical members connected at their lower edges with said horizontal anchorage members, all of said parts being formed integrally from a single piece of metal and said posts being provided with means for securing the transversely arranged material thereto.

4. A metallic fence post comprising a longitudinal cylindrical central member provided with a longitudinal series of perforations, and two longitudinal semi-cylindrical side members, each provided with a longitudinal series of perforations and longitudinal series of diagonal slits communicating from said last named series of perforations to the vertical edges of said side members for the reception of fence wires, all of said parts being formed integrally from a single piece of metal, a vertical wooden member centrally located within said longitudinal central member, two laterally projecting anchorage plates and two vertically arranged strengthening plates all of said plates except said wooden member being formed integrally from a single piece of metal, all substantially as and for the purpose specified.

870,853. CIRCUIT-CLOSER. THEODORE M. FOOTE, Allston, Mass. Filed Nov. 3, 1906. Serial No. 341,889.

1. A circuit closer comprising two substantially similar toothed wheels secured together, one slightly in advance angularly of the other, the teeth of one of said wheels being composed of electrically non-conductive material, and of the other of said wheels of electrically conductive material, and a single contact piece arranged to successively engage the said teeth of both said wheels.

2. A circuit closer comprising two substantially similar toothed wheels secured together, one slightly in advance of the other, the teeth of one of said wheels being composed of electrically non-conductive material, and the teeth of the other of said wheels composed of electrically conductive material and arranged to extend radially slightly further than the other said teeth, and a contact piece arranged to successively engage the said teeth.



3. A circuit closer comprising two substantially similar wheels having ratchet teeth, one of said wheels composed of metal, and the other of vegetable material, one of said wheels set slightly in advance of the other, and a single contact piece common to both said wheels arranged to successively engage the teeth of both said wheels.

4. A circuit closer comprising a brass toothed wheel 7, and a rubber toothed wheel 8, secured together, the latter slightly in advance of the former, means for rotating the two contact wheels together, and a relatively stationary contact piece 6, arranged opposite the teeth of both said wheels, and arranged to engage the successive teeth of the said wheels in alternation.

5. A circuit closer comprising two substantially similar toothed wheels insulated from each other and secured together, one slightly in advance angularly of the other, and a single contact piece arranged to successively engage the said teeth of both said wheels.

6. A circuit closer comprising two substantially similar toothed wheels insulated from each other and secured together one slightly in advance angularly of the other, whereby portions of the teeth of one wheel will project above portions of the teeth of the other wheel, but other portions of the teeth of the latter said wheel will project beyond similar portions of the teeth of the former said wheel, and a contact piece arranged to bear upon the teeth of said wheels, said contact piece being kept away from the teeth of one wheel by the teeth of the other said wheel in alternation.

870,354. CENTERING DEVICE FOR TABLE-LEG BLANKS. HENRY M. FUNK, Hanover, Pa., assignor of one-third to John W. Funk and one-third to Jacob C. Ernst, Hanover, Pa. Filed Jan. 30, 1907. Serial No. 354,787.



1. A centering device for table leg turning machine such device comprising, a rotatable head, a plurality of springs upon said head to engage a pillow leg blank, a plurality of spurs upon said head to engage the blank, and a locking device to secure the head to a table leg turning machine, substantially as described.

2. A centering device for table leg turning machines such device comprising, a rotatable head, a plurality of springs arranged upon one face of said head and equi-distant from the center thereof, spurs upon said face intermediate of said springs, and a locking device to secure the head in rotatable connection with a table leg turning machine, substantially as described.

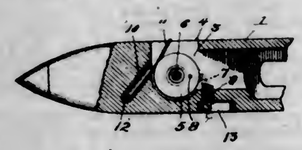
3. A centering device for table leg turning machines such device comprising, a rotatable head, a plurality of centering springs upon one face of said head, and spurs upon said head intermediate of said springs, in combination with locking levers hinged to said head, and connected means to move said locking levers to release the head from the leg turning machine, substantially as described.

4. The combination in a centering device for table leg turning machines, of a rotatable head, centering springs upon said head equi-distant from the center of said head, spurs projecting from said head intermediate of said springs, locking levers hinged to said head, and a cam to move said levers, with the center of a leg turning machine, and means to rotate said head upon said center, substantially as described.

5. The combination with a rotatable head, centering springs upon one face of said head and equi-distant from the center thereof, and spurs projecting from said head intermediate of said springs, of locking levers hinged to said head, jaws upon said lever to engage the center of a turning machine, a cam hinged to the head to move the levers, an arm to move said cam, and locking indents upon said arm to engage projecting lugs upon the levers to hold said levers in locked position, substantially as herein set forth.

6. The combination with the center of a table leg turning machine and with a groove in said center pin, of a rotatable head having centering springs upon one of its sides and equi-distant from its center, locking levers upon said head having jaws to engage the groove of the center, a spring connected to hold the levers in position to maintain the jaws thereof in engagement with the groove in the center, a cam to positively move the levers outwardly and the jaws thereon out of engagement with the groove in the center of the turning machine, substantially as described.

870,355. SHUTTLE. JAMES A. GALLAGHER, Lancaster, Pa. Filed Apr. 6, 1907. Serial No. 366,802.



1. The combination with a shuttle, of a drag replenishing device mounted on the shuttle, said device comprising means for holding a supply of drag forming material, and means for permitting the material to be drawn out piece by piece for renewing the drag.

2. The combination with a shuttle, a drag-carrying spool mounted therein, and means for yieldingly holding the spool stationary.

3. The combination of a shuttle, a removable spool therein, a drag yarn thereon, and a brake in the shuttle for yieldingly holding the spool stationary.

4. The combination of a shuttle, a drag-carrying spool, a screw pivot for holding the spool in place, and a spring arranged in the shuttle to engage the spool to form a brake therefor.

5. The combination of a shuttle provided with a chamber open to one side, a drag-carrying spool removable through the open side of the chamber, a pivot for holding the spool in the chamber, a guide for the drag through which the latter is drawn from the spool, and a brake releasably engaging the spool.

6. The combination of a shuttle having a chamber opening at one side, a drag-carrying spool in the chamber and removable from the open side thereof, a removable pivot for the spool, a guide through which the drag is drawn from the spool, and a spring arranged in the chamber to engage the periphery of the spool and having its free end accessible through the open side of the chamber.

870,356. TUBULAR STRUCTURAL MEMBER. HARRY C. GAMMETER, Cleveland, Ohio. Filed July 26, 1906. Serial No. 327,955.



1. In a tubular structural member, the combination of a sheet metal shell bent to present nearly a complete periphery and having integral portions extending inwardly adjacent to each other, said integral portions continuing diametrically across the shell and being turned outwardly along the inner surface of the shell.

2. In a tubular structural member, the combination of a sheet metal shell having integral portions extending inwardly and continuing across the shell and being turned outwardly in arcs along the inner surface of the shell, there being integral portions turned from the ends of the arc-shaped portions inwardly into engagement with the first-mentioned portions.

3. A tubular structural member comprising a shell with inturned portions and a connecting plate lying between such portions.

4. A tubular structural member comprising a shell with inturned diametric portions and a connecting plate lying between such portions, said plate having its inner end turned to lie alongside of the shell and being held between it and the diametric portions.

5. The combination of a tubular member having a pair of parallel inturned integral portions, a connecting plate lying between such portions and extending outside of the tube, and a binder passing around the member.

6. The combination of a tubular member having a pair of parallel inturned integral portions, a connecting plate lying between such portions and extending outside of the tube, and an eyelet passing through such connecting plate.

7. A tubular structural member comprising a shell with inturned diametric portions, combined with a pair of plates lying between such portions, said plates having their inner ends turned to lie alongside of the shell and being held between it and the diametric portions, and an eyelet outside of the shell connecting said pair of plates.

8. The combination of a sheet metal member formed to present a cylindrical exterior and having integral portions turned inwardly substantially diametrically, said integral portions being further turned outwardly parallel with the cylindrical portion, a connecting member consisting of a pair of plates between such diametrical portions, said plates having their ends turned outwardly in opposite directions between the cylindrical shell and the outward extensions of the diametric portions.

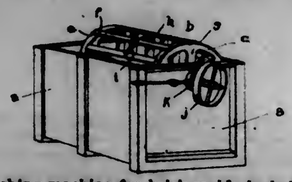
9. The combination of a sheet metal member formed to present a tubular shell with integral portions turned inwardly, such inturned portions being extended parallel with the shell, a connecting member consisting of a pair of plates between such inturned portions, said plates having their ends turned and lying between the shell and the extensions of the inturned portions, an eyelet passing through said pair of plates and wires passing around the shell adjacent to the connecting plates and binding the structure together.

870,357. WASHING-MACHINE FOR BRICK-MOLDS. JOHN W. GOULDING, Trenton, N. J. Filed July 5, 1907. Serial No. 382,347.

1. A washing machine for brick molds including a tank, a rotary wheel in said tank composed of opposite heads having radial grooves in their inner faces adapted to receive the molds, and means for engagement with the outer faces of such molds to retain them in position.

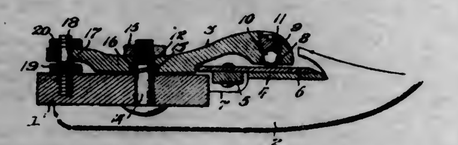
2. A washing machine for brick molds including a tank, a rotary wheel in such tank composed of opposite heads having radial grooves in their inner faces adapted to receive the molds, longitudinal brace bars connecting such heads and means carried by such brace bars for engage-

ment with the outer faces of the molds to retain them in position.



3. A washing machine for brick molds including a tank, a rotary wheel in such tank composed of opposite heads having radial grooves in their inner faces adapted to receive the molds, brace bars connecting said heads and spring devices carried by said brace bars and capable of engagement with such molds to retain them in position.

870,358. MOWING-MACHINE. DAVID R. GRIFFITHS, Richville, N. Y. Filed May 23, 1907. Serial No. 375,804.



1. In a mowing apparatus, a finger bar having a guard carrying a stationary cutter, a reciprocatory cutter coacting therewith, a clip, a fastening securing the clip intermediate its ends to the finger bar on which said clip is adapted to tilt, a spring associated with said fastening to normally exert lifting pressure on the clip, an anti-friction bearing on the forward portion of the clip engaging the reciprocatory cutter, and an adjustable fastening connection between the rear end of the clip and the finger bar, whereby the clip may be tilted to regulate the pressure of said bearing.

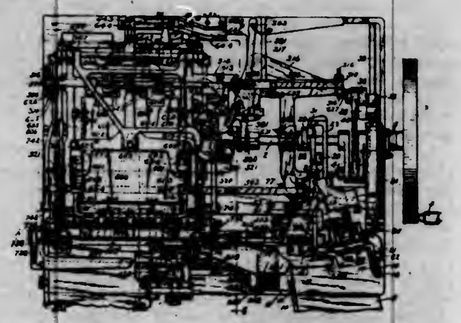
2. In a mowing apparatus, a finger bar having a guard carrying a stationary cutter, a reciprocatory cutter coacting therewith, a bolt extending upwardly through the finger bar, a clip having an opening for the passage of said bolt and a communicating socket, said clip having portions extending forwardly over the reciprocatory cutter and rearwardly over the finger bar, an anti-friction bearing upon the forward portion of the clip engaging the reciprocatory cutter, an adjustable connection between the rear portion of the clip and the finger bar, an expansion spring housed within the socket about the bolt, and a nut associated with the bolt and bearing on the clip.

870,359. MACHINE FOR STAMPING AND SEALING MAIL-MATTER. LOUIS J. HALL, Chicago, Ill., assignor, by mesne assignments, to Morris-Hall Mail Closer Company, a Corporation of Delaware. Filed Apr. 29, 1899, Serial No. 715,042. Renewed Jan. 16, 1903. Serial No. 139,352.

1. The combination with a stamp affixing mechanism, of a stamp carriage, means for moving said carriage past the affixing mechanism, means for supporting separate sheets of stamps on the carriage, means for feeding a sheet of stamps forward row by row to the affixing mechanism, and means for feeding the succeeding sheets forward, each in continuation of the preceding sheet.

2. The combination with a stamp affixing mechanism, of a stamp carriage, means for moving the carriage past the affixing mechanism, means for supporting separate sheets of stamps on the carriage, movable jaws on the carriage for advancing a sheet of stamps row by row to the affixing mechanism, and means for advancing the succeeding sheets of stamps between said jaws each in continuation of the preceding sheet.

3. The combination with a stamp affixing mechanism, of a stamp carriage, means for moving the carriage past the affixing mechanism, a magazine on the carriage supporting sheets of stamps in separate parallel relation, movable jaws on the carriage for advancing a sheet of stamps row by row to the affixing mechanism, means for moving the magazine to bring the sheets of stamps in succession opposite said jaws, and means for moving each sheet of stamps edgewise between the jaws when brought opposite the latter.



4. The combination with a stamp affixing mechanism, of a stamp carriage, means for moving the carriage past the affixing mechanism, a magazine on the carriage supporting separate sheets of stamps at different levels, movable jaws on the carriage for advancing a sheet of stamps row by row to the affixing mechanism, means for moving the magazine vertically in the carriage to bring the sheets of stamps in succession opposite said jaws, and means for advancing each sheet of stamps edgewise between the jaws when brought opposite the latter.

5. The combination with a stamp affixing mechanism, of a stamp carriage, means for moving the carriage step by step past the affixing mechanism, means for supporting separate sheets of stamps in the carriage comprising a magazine provided with a plurality of separate sheet carrying trays, movable jaws on the carriage for advancing a sheet of stamps row by row to the affixing mechanism, means for moving the magazine to bring the trays in succession opposite said jaws, and means for pushing each sheet of stamps between the jaws when its supporting tray is moved opposite the latter.

6. The combination with means for holding an envelop, of a moistening device, comprising an upright moistening surface, means for projecting said surface against the envelop, means for supplying an excess of moisture at the upper portion of said surface, and means for removing the surplus moisture from the lower portion of said surface before it strikes the envelop.

7. The combination with means for holding an envelop, of a moistening device, comprising an upright moistening surface, means for supplying an excess of moisture at the upper portion of said surface, a wiper arranged to contact with the lower portion of said surface to remove the excess of moisture therefrom and means for projecting the moistening surface past the wiper and against the envelop.

8. The combination with means for holding an envelop, of a moistening device comprising a moistening pad having a flexible edge depending below the moistening surface of the pad, means for supplying moisture to said pad, a wiper arranged to contact with said depending edge to remove the excess of moisture from the pad, and means for projecting the pad past the wiper and against the envelop.

9. The combination with means for holding an envelop, of a moistening surface provided on a movable support, means for moving said support to project the moistening surface against the envelop, means for supplying moisture to said surface, a drip pan movably mounted on said support with its front end normally projecting in front of the moistening surface but adapted to move back on the support as the moistening surface comes in contact with the envelop, and means for moving the drip pan forward on the support when the latter is retracted.

10. The combination with means for supporting an envelop, of a moistening surface provided on a movable support, means for moving said support to project the moistening surface against the envelop, means for supplying moisture to said surface, a drip pan movably mounted on said support with its front end normally projecting in front of the moistening surface but adapted to be forced back on the support as the moistening surface comes in contact with the envelop, a wiper on said drip pan arranged to contact with said moistening surface and remove the excess of moisture therefrom when the drip pan is thus moved back, and means for moving the drip pan forward on the support when the latter is retracted.

11. The combination with means for supporting an envelop, of a moistening surface provided on a movable support and having a depending flexible edge, means for moving said support to project the moistening surface against the envelop, means for supplying moisture to said surface, a drip pan movably mounted on said support with its front end normally projecting in front of the moistening surface but adapted to be forced back on said support as the moistening surface comes in contact with the envelop, a wiper in the drip pan arranged to deflect said depending edge to remove the excess moisture from the moistening surface before the latter strikes the envelop, and means for moving the drip pan forward on the support, when the latter is retracted.

12. A stamp affixing mechanism comprising a clamp consisting of a yielding platen and a movable plunger, means for guiding an envelop and sheet of stamps between the platen and plunger, means for projecting the plunger to clamp a stamp against the envelop between the platen and plunger, and means for clamping the surrounding portions of the sheet of stamps stationary when the plunger is projected, whereby the movement of the plunger tears the engaged stamp from the sheet.

13. A stamp affixing mechanism, comprising a clamp consisting of a yielding platen and a plunger movable against said platen, means for guiding an envelop and sheet of stamps between the plunger and platen, including an apertured plate through which the plunger reciprocates and on opposite sides of which the envelops and stamps are inserted, a clamping head movably mounted about the plunger, means for projecting the plunger against the yielding platen, and means for projecting the clamping head to hold the surrounding portions of the sheet of stamps stationary while the affixed stamp is torn loose therefrom by the projection of the plunger.

14. A stamp affixing mechanism consisting of a yielding platen and movable plunger, means for guiding an envelop and sheet of stamps between the platen and plunger, means for projecting the plunger to clamp a stamp against the envelop between the platen and plunger, means for clamping the surrounding portions of the sheet of stamps stationary when the plunger is projected, a latch for holding the platen temporarily retracted after the affixing of the stamp, and a trip for releasing said latch when the succeeding envelop is fed between the plunger and platen.

15. The combination with an affixing mechanism comprising a plunger and spring pressed platen, of a carrier for delivering an envelop between the plunger and platen, means for feeding stamps between the plunger and platen, means for projecting the plunger to clamp a stamp against the envelop, a latch for holding the platen retracted after the stamp is affixed and means connected with the carrier for tripping said latch when the carrier is advanced to supply the succeeding envelop.

16. A stamp affixing mechanism consisting of a plunger and spring pressed platen, means for guiding an envelop and sheet of stamps between the plunger and platen, means for projecting the plunger against the platen to affix a stamp to the envelop, a latch for holding the platen temporarily retracted after the affixing of the stamp, a trip for releasing the latch after the succeeding envelop is fed between the plunger and platen, and means for governing the projection of the platen when the latch is released.

17. The combination with an affixing mechanism comprising a plunger and spring pressed platen, of a reciprocating carrier for delivering envelops between the plunger and platen, means for feeding stamps between the plunger and platen, means for projecting the plunger to affix a stamp to an envelop, a latch for holding the platen temporarily retracted after the affixing of the stamp, means for tripping said latch when the carrier is advanced to supply the succeeding envelop, and means temporarily connecting the platen and carrier for retarding the former when released.

18. The combination with an affixing mechanism comprising a plunger and spring pressed platen, of a reciprocating carrier for delivering envelops between the plunger and platen, means for feeding stamps between the plunger and platen, means for projecting the plunger to affix a stamp to an envelop, a latch for holding the platen temporarily retracted after the affixing of the stamp, means for tripping said latch when the carrier is advanced to supply the succeeding envelop, and a pivoted lever engaging the platen at one end and loosely contacting with the carrier at its other end, whereby the platen when released can only be projected as the carrier is withdrawn.

19. The combination with an affixing mechanism comprising a plunger and spring pressed platen, of a reciprocating carrier for delivering envelops between the plunger and platen, means for feeding stamps between the plunger and platen, means for projecting the plunger to affix a stamp to an envelop, and a pivoted latch adapted to engage the platen at one end to hold it temporarily retracted after the affixing of the stamp and with its opposite end depending into the path of the carrier to be tripped thereby when the carrier is advanced to supply the succeeding envelop.

20. The combination with an affixing mechanism comprising a plunger and spring pressed platen, of a reciprocating carrier for delivering envelops between the plunger and platen, means for feeding stamps between the plunger and platen, means for projecting the plunger to affix a stamp to an envelop, a pivoted latch adapted to engage the platen at one end to hold it temporarily retracted after the affixing of the stamp, and with its opposite end depending into the path of the carrier to be tripped thereby when the carrier has advanced to supply the succeeding envelop, and means for temporarily connecting the platen and carrier to retard the projecting of the former when released.

21. The combination with an affixing mechanism comprising a plunger and spring pressed platen, of a reciprocating carrier for delivering envelops between the plunger and platen, means for feeding stamps between the plunger and platen, means for projecting the plunger to affix a stamp to an envelop, a pivoted latch adapted to engage the platen at one end to hold it temporarily retracted after the affixing of the stamp and with its opposite end depending into the path of the carrier to be tripped thereby when the carrier is advanced to supply the succeeding envelop, and a pivoted lever engaging the platen at one end and loosely contacting with the carrier at its other end whereby the platen when released can only be projected as the carrier is withdrawn.

22. The combination with a plunger and yielding platen, of a carrier for delivering envelops between the plunger and platen, a die plate provided with an aperture through which the plunger loosely reciprocates, mechanism for delivering a sheet of stamps between the plunger and platen on the opposite side of the die plate from the envelop, means for projecting the plunger through the die plate aperture to tear off and affix the intervening stamp to the envelop, a clamping head adapted to engage the die plate about the platen to hold the surrounding stamps stationary, and connections between said plunger and head for projecting the latter when the former is projected.

23. The combination with a plunger and yielding platen, of a carrier for delivering envelops between the plunger and platen, a die plate provided with an aperture through which the plunger loosely reciprocates, mechanism for delivering a sheet of stamps between the plunger and platen on the opposite side of the die plate from the envelops, means for projecting the plunger through the die plate aperture to tear off and affix the intervening stamp to the envelop, a clamping head adapted to engage the die plate about the platen to hold the stamps stationary, and yield-

ing connection between said plunger and head for simultaneously projecting the latter when the former is projected.

24. The combination with a die plate provided with an aperture, of a plunger, means for projecting the plunger through the aperture, means for delivering a sheet of stamps between the plunger and die plate, a clamping head movably mounted to engage the die plate about the aperture, a cam surface on the plunger, and a bell crank lever engaging at one end with said cam surface and at its other end with parts connected with the clamping head to project the latter when the plunger is projected.

25. The combination with a die plate provided with an aperture, of a plunger, means for projecting the plunger through the aperture, means for delivering a sheet of stamps between the plunger and die plate, a clamping head movably mounted to engage the die plate about the aperture, spring pressed parts movably supported on the clamping head, and a lever engaging the plunger to be oscillated thereby and also engaging said spring pressed parts to yieldingly project the clamping head when the plunger is projected.

26. The combination with a die plate provided with an aperture, of a plunger, means for projecting the plunger through the aperture, means for delivering a sheet of stamps between the plunger and die plate, a clamping head movably mounted to engage the die plate about the aperture, guide rods secured to said clamping head to support the latter and mounted to slide longitudinally in a supporting bracket, spring pressed collars movably mounted on the ends of said rods, a cam surface on the plunger, and a bell crank lever engaging at one end with said cam surface and at its other end with said collars to yieldingly project the clamping head when the plunger is projected.

27. The combination with an apertured plate, of a plunger arranged to reciprocate through the aperture in the plate, said plunger being provided with a rearwardly extending supporting bar off set from the plunger head and mounted to slide in a supporting bracket, and adjustable guide screws engaging lateral surfaces of the plunger, whereby the plunger head may be adjusted within the aperture.

28. A plunger reciprocating mechanism comprising parallel oppositely facing bearing surfaces provided on the plunger, crank arms mounted to rotate between said bearing surfaces and radiating from their rotary axis at different angles, and wrist pins projecting from said crank arms and each arranged for contact with one of said bearing surfaces, substantially as described.

29. A plunger reciprocating mechanism comprising parallel oppositely facing bearing surfaces provided on the plunger and off set laterally relatively to each other, crank arms mounted to rotate between said bearing surfaces, and radiating from their rotary axis at different angles, and wrist pins projecting from said crank arms and engaging the opposite bearing surfaces, substantially as described.

30. The combination with a stamp affixing mechanism, of a stamp carriage, means for moving said carriage past the affixing mechanism, a magazine on the carriage supporting sheets of stamps separated from each other, movable jaws on the carriage for advancing a sheet of stamps row by row to the affixing mechanism, means for moving the magazine to bring the sheet of stamps in succession opposite said jaws, and means for moving each sheet of stamps edgewise between the jaws when brought opposite the latter, comprising a push frame arranged to be projected into the magazine against the sheet of stamps, and a stationary cam part for projecting said push frame as the carriage is moved past the affixing mechanism.

31. The combination with a stamp affixing mechanism, of a stamp carriage, means for moving the carriage past the affixing mechanism, a magazine on the carriage supporting sheets of stamps separated from each other, movable jaws on the carriage for advancing a sheet of stamps row by row to the affixing mechanism, means for moving the magazine to bring the sheets of stamps in succession opposite said jaws, and means for moving each sheet of stamps edgewise between the jaws when brought opposite the latter, comprising a two part push frame arranged to be projected into the magazine against the sheet of stamps, adjustable connections between the two parts of the push frame, and a stationary cam part acting on the push frame to project the latter as the carriage is moved past the affixing mechanism.

32. The combination with a stamp affixing mechanism, of a stamp carriage, means for moving the carriage past the affixing mechanism, means for supporting separate sheets of stamps on the carriage, movable jaws on the carriage, means for maintaining said jaws normally open and retracted, means for advancing the jaws at each end of the carriage movement, means for closing said jaws before such advanced movement, means for opening the jaws after such advance movement, and means for retracting the open jaws again, and means for advancing the succeeding sheets of stamps between the jaws each in continuation of the preceding sheet.

33. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating said carriage step by step past the affixing mechanism, vibratory jaws on the carriage engaging the stamps intermittently to advance them row by row, and means operated by the carriage movements for actuating said jaws, substantially as described.

34. The combination with a stamp affixing mechanism, of a reciprocatory stamp carriage, means for reciprocating said carriage step by step past the affixing mechanism, movable jaws on the carriage, means for maintaining said jaws normally open and retracted, means for advancing the jaws at each end of the carriage movement, means for closing the jaws prior to their advancing movement, means for opening the jaws after their advancing movement, and means for retracting the open jaws again, substantially as described.

35. The combination with a stamp affixing mechanism, of a stamp carriage, means for moving the carriage step by step past the affixing mechanism, movable jaws on the carriage for advancing a sheet of stamps row by row to the affixing mechanism, and means for actuating said jaws at each end of the carriage movement, comprising an oscillating frame pivoted to the carriage and extending longitudinally thereof, a vibratory mechanism actuated at each step of the carriage movement, and means for operatively engaging said vibratory mechanism and frame to oscillate the latter at each end of the carriage movement, and connections between said frame and jaws.

36. The combination with a stamp affixing mechanism, of a stamp carriage, means for supporting separate sheets of stamps in the carriage comprising a plurality of sheet-carrying trays, telescopic or collapsible connections between said trays, movable jaws on the carriage for advancing a sheet of stamps row by row to the affixing mechanism, and means for lowering the trays to bring each sheet in succession opposite said jaws.

37. The combination with a stamp affixing mechanism, of a stamp carriage, means for supporting separate sheets of stamps in the carriage comprising a plurality of sheet-carrying trays, telescopic or collapsible connections between said trays, movable jaws on the carriage for advancing a sheet of stamps row by row to the affixing mechanism, means for lowering the trays to bring each sheet in succession opposite said jaws, and means for sliding each sheet of stamps between said jaws when lowered opposite the latter.

38. A sheet feed comprising a plurality of separate sheet carrying trays, telescopic or collapsible connections between said trays, an overhead support from which said trays are suspended, means for removing the sheets from the trays, and means for lowering said support to bring the trays in succession within range of said removing means.

39. The combination with a stamp affixing mechanism, of a stamp carriage, a stamp magazine in said carriage comprising a plurality of sheet supporting trays, a movable frame supporting the trays in the carriage, a stepped part upon which the frame rests, and means for moving said part to drop the frame step by step and lower the trays to deliver their stamps in succession.

40. The combination with a stamp affixing mechanism, of a stamp carriage, a stamp magazine in said carriage comprising a plurality of sheet supporting trays, a pivoted frame supporting the trays in the carriage, a stepped cam upon which the free end of the frame rests, and means for intermittently rotating said cam to let down the frame step by step and lower the trays to deliver their sheets in succession.

41. The combination with a stamp affixing mechanism, of a stamp carriage, a stamp magazine comprising a plurality of separate sheet carrying trays, a movable frame supporting the trays in the carriage detachable connections between said frame and trays whereby the magazine may be removed bodily from the carriage, and means for lowering said frame.

42. The combination with a stamp affixing mechanism, of a stamp carriage, a stamp magazine in said carriage comprising a plurality of sheet supporting trays, telescopic or collapsible connections between said trays, a pivoted frame on the carriage from which said trays are suspended, detachable connections between the free ends of said frame and the trays, and means for lowering said frame to drop the trays together in the base of the carriage to deliver their stamps in succession.

43. The combination with a stamp affixing mechanism, of a stamp carriage, means for moving the carriage step by step past the affixing mechanism, a sheet magazine in the carriage, means acting at each end of the carriage movement to feed a sheet of stamps row by row to the affixing mechanism from the magazine, and means acting occasionally at the end of the carriage movement to move the magazine and present a succeeding sheet to the feed mechanism.

44. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage step by step past the affixing mechanism, means for supporting separate sheets of stamps in the carriage comprising a magazine provided with a plurality of separate sheet carrying trays, movable jaws on the carriage for moving the stamps to the affixing mechanism, means for advancing said jaws one row at each end of the carriage movement, and means for moving the magazine occasionally at the end of the carriage movement to bring the trays in succession opposite said jaws.

45. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating said carriage past the affixing mechanism, means for feeding a sheet of stamps forward row by row to the affixing mechanism, a clamp for receiving and holding the advanced edge of the foremost row of stamps, and means for temporarily releasing said clamp at each end of the carriage movement.

46. The combination with a movably mounted carriage provided with a rack, of means for imparting to said carriage a reciprocating step by step movement comprising a pair of vibratory levers, driving pawls pivotally connected with said levers and means for moving said pawls alternately into engagement with the rack on the carriage, said moving means being arranged to permit one idle stroke of the levers between the alternate engagements of the pawls with the rack, whereby a dwell of one interval occurs at each end of the carriage movement.

47. The combination with the envelop magazine and stamp affixing mechanism, means for moistening the stamp receiving surface of each foremost envelop in the magazine, and means for removing the envelops in succession from the magazine, of a printing form, and means for projecting said form against the foremost envelop at each operation of the moistening device.

48. The combination with the envelop magazine, a moistener acting against the surface of each foremost envelop in the magazine and means for removing the envelops in succession from the magazine to a stamp affixing mechanism, a movable part supporting the moistener, and a reciprocating bar connected to said movable part to operate the moistener, of a printing form arranged to be projected against the foremost envelop in the magazine, and connections between said printing form and reciprocating bar for projecting said form when the moistener is rejected.

49. The combination with the magazine and stamp affixing mechanism, of a carrier mounted to reciprocate between them and means for actuating said carrier mechanism comprising a bell crank lever, a pivotal link connecting the carrier to one end of said lever, a reciprocating crosshead, a sliding swivel joint connecting the other end of the lever to the reciprocating cross head, and a pitman connecting said cross head with an actuating crank.

50. The combination with the magazine and stamp affixing mechanism, of a reciprocating carrier for transferring envelops between them, jaws movably mounted on said carrier, a spring applied to normally hold said jaws closed, means for opening said jaws at one end of the carrier movement, means for releasing said jaws to permit them to close at the opposite end of said movement, and means for releasing said spring at will.

51. As a means for imparting step by step movement to a reciprocatory carriage, two oscillatory parts, driving pawls on said parts alternately engaging a rack on the carriage, springs normally projecting said pawls, locking pawls engaging the driving pawls, and means operating at each end of the carriage movement to shift the locking pawls and alternate the direction of the driving pawls, substantially as described.

52. As a means for imparting step by step movement to a reciprocatory carriage, two oscillatory parts, driving pawls on said parts alternately engaging a rack on the carriage, springs and locking dogs on said parts to alternate the projection of the driving pawls, dogs mounted upon adjacent stationary parts and arranged to be moved into the path of the locking pawls to oscillate the latter, and means for moving said dogs at each end of the carriage movement, substantially as described.

53. As a means for imparting step by step movement to a reciprocatory carriage, two oscillatory parts, driving pawls on said parts alternately engaging a rack on the carriage, springs and locking pawls mounted on said parts and applied to said driving pawls, dogs mounted on relatively stationary parts and arranged to be projected into the path of movement of said locking pawls, and a reversing bar arranged for contact with the carriage at each end of its movement for oscillating said dogs to alternate the direction of the driving pawls, substantially as described.

54. The combination with a reciprocatory carriage, of two oscillatory parts, driving pawls on said parts, devices on said parts for alternating the projection of said pawls at each end of the carriage movement, dogs mounted upon relatively stationary parts and projecting into the path of the movement of said devices, and means for shifting said dogs at each end of the carriage movement, substantially as described.

55. The combination with a reciprocatory carriage, of two oscillatory parts, driving pawls on said parts alternately engaging a rack on the carriage, springs and locking dogs on said parts for alternating the projection of the driving pawls, dogs mounted upon relatively stationary parts and projecting into the path of the movement of said dogs at each end of the carriage movement, substantially as described.

56. The combination with a reciprocatory carriage, of two oscillatory parts, driving pawls on said parts alternately engaging a rack on the carriage, springs normally projecting said driving pawls, locking pawls for retracting and holding retracted driving pawls in opposition of said springs, dogs mounted on said relatively stationary parts in the path of the movement of said locking pawls and a reversing bar actuated by a contact with the carriage at each end of its path of movement, substantially as described.

57. The combination with a stamp affixing mechanism, of a stamp carriage, provided with sheet carrying trays, means for advancing the sheets of stamps row by row to the affixing mechanism, and means for moving the trays to bring each sheet in succession opposite said advancing means.

58. The combination with a stamp affixing mechanism, of a stamp carriage provided with sheet carrying trays, means for advancing the sheets of stamps row by row to

the affixing mechanism, means for moving the trays to bring each sheet in succession opposite said advancing means, and means for sliding each sheet of stamps to said advancing means when moved opposite the latter.

59. The combination with a stamp affixing mechanism, of a stamp carriage provided with sheet carrying trays, an overhead support from which said trays are suspended, means for removing the sheets from the trays, and means for lowering said support to bring the trays in succession within the range of the said removing means.

60. The combination with a stamp carriage provided with sheet supporting trays, telescopic or collapsible connections between said trays, a movable frame on the carriage from which said trays are suspended, a step part upon which the frame rests, means for moving said part to drop the frames step by step and lower the trays into the base of the carriage to deliver their sheets in succession.

61. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage step by step past the affixing mechanism, a stamp magazine in said carriage comprising a plurality of sheet carrying trays, a pivoted frame supporting the trays in the carriage, a stepped cam upon which the free end of the frame rests, and means acting occasionally at the end of the carriage movement to let down the frame step by step and lower the trays to deliver their sheets in succession.

62. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage step by step past the affixing mechanism, a stamp magazine in said carriage comprising a plurality of sheet supporting trays, a pivoted frame supporting the trays in the carriage, a stepped cam upon which the free end of the frame rests, a toothed segment on said cam, a ratchet provided with a pawl engaging the ratchet wheel once in each revolution, and means operating at the end of the carriage movement for giving a rotary impulse to said ratchet wheel.

63. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage step by step past the affixing mechanism, a stamp magazine on said carriage comprising a plurality of sheet supporting trays, a pivoted frame supporting the trays in the carriage, a stepped cam, a toothed segment on said cam, a ratchet wheel provided with a pawl engaging the toothed segment once in each revolution, a sliding bar on the carriage, a pawl on said bar engaging the ratchet wheel, and contacts at each end of the carriage movement for shifting said bar to intermittingly rotate said ratchet wheel.

64. The combination with a stamp affixing mechanism, of a stamp carriage, a stamp magazine in said carriage comprising a plurality of sheet supporting trays, a yoke from which said trays are suspended, vertical guides in the carriage engaging the yoke, a movable frame in the carriage supporting said yoke, and means for lowering said frame.

65. The combination with a stamp affixing mechanism, of a stamp carriage, a stamp magazine on said carriage comprising a plurality of sheet carrying trays, the uppermost tray being movably suspended in the carriage and the lower trays being suspended by rivets from the trays above, the other trays being cut away in lines with the rivets of each two connected trays to permit said rivets to telescope through and the magazine to fold together when lowered in the carriage.

66. The combination with a stamp affixing mechanism, of means for advancing stamps thereto, row by row, comprising jaws embracing a plurality of rows, means for vibrating said jaws through the width of one row, and means for feeding succeeding sheets of stamps between said jaws.

67. The combination with a stamp affixing mechanism, of means for advancing stamps thereto, row by row, comprising a pair of jaws, a vibratory frame linked to said jaws, and means engaging and vibrating said frame occasionally as the advance row is exhausted.

68. The combination with a stamp affixing mechanism, of means for advancing stamps thereto row by row, comprising jaws embracing a plurality of rows, a vibratory frame linked to said jaws, and means engaging and vibrating said frame occasionally to move the jaws through the width of one row.

69. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating said carriage past the affixing mechanism, jaws on said carriage between which the stamps are passed, a vibratory frame linked to said jaws, and means for vibrating said frame to move the jaws at the limits of the carriage movement.

70. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage past the affixing mechanism, a pair of jaws on the carriage, a vibratory frame on the carriage linked to said jaws, a latch normally holding said frame from vibratory movement, means for releasing said latch at the limits of the carriage movement, and a vibratory part engaging and actuating said frame when released by the latch.

71. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the said carriage past the affixing mechanism, jaws on said carriage, a vibratory frame on the carriage linked to said jaws, a latch in sliding contact with said frame and normally preventing it from vibrating, means for releasing said latch at the limits of the carriage movement, and a vibratory part engaging and actuating the frame when released by the latch.

72. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage, jaws on the carriage, a vibratory frame on the carriage linked to said jaws, a latch normally holding said frame, a ratchet wheel actuated at each step of the carriage movement, a pawl lifted in each revolution of the ratchet wheel, means for projecting the lifted pawl against the latch to release the frame, and means for vibrating the frame when released, substantially as described.

73. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage step by step past the affixing mechanism, jaws on the carriage, a vibratory frame on the carriage linked to said jaws, a latch normally holding said frame, a ratchet wheel actuated at each step of the carriage movement, a superjacent lever lifted in each revolution of the ratchet wheel, a pawl on said lever, a spring normally holding said pawl away from the latch, a vibrating member normally above the pawl but engaging and forcing the pawl against the latch to release the frame when the lever is lifted by the ratchet wheel, and means for vibrating the frame to actuate the jaws when the latch is released, substantially as described.

74. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage past the affixing mechanism, jaws on the carriage, a vibratory frame on the carriage linked to said jaws, a latch normally holding said frame, means for releasing said latch at the end of the carriage movement, a member vibrating across the frame but normally out of contact therewith, a movable dog on said member and means for lifting said dog to engage the frame when released by the latch, substantially as described.

75. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage past the affixing mechanism, jaws on the carriage, a vibratory frame on the carriage linked to said jaws, a latch normally holding said frame, means for releasing the latch at the end of the carriage movement, a member vibrating across the frame but normally out of contact therewith, a dog adjustably pivoted on said member, and means for lifting said dog to engage the frame when released by the latch, substantially as described.

76. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage past the affixing mechanism, jaws on the carriage, a vibratory frame on the carriage linked to said jaws, a latch normally holding said frame, means for releasing the latch at the end of the carriage movement, a member vibrating across the frame and normally out of contact therewith but provided with a part projecting in front of the frame, a movable dog on said member and means for projecting said dog back of the frame opposite said part when the frame is released by the latch, substantially as described.

77. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage step by step past the affixing mechanism, jaws on the carriage, a vibratory frame on the carriage linked to said jaws, a latch normally holding said frame, means for releasing the latch at the end of the carriage movement, a member vibrating across the frame and provided with a part projecting in front of the frame, a movable dog on said member, and means for projecting said dog back of the frame when the latter is released by the latch, substantially as described.

78. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage step by step past the affixing mechanism, jaws on the carriage, a vibratory frame on the carriage linked to said jaws, a latch normally holding said frame, a ratchet wheel actuated at each step of the carriage movement, a pawl lifted in each revolution of the ratchet wheel, means for projecting the pawl against the latch to release the frame, a member vibrating across the frame but normally out of contact therewith, and means for engaging said vibrating member with the frame to actuate the latter when released by the latch, substantially as described.

79. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage step by step past the affixing mechanism, jaws on the carriage, a vibratory frame on the carriage linked to said frame, a ratchet wheel actuated at each step of the carriage movement, a pawl lifted in each revolution of the ratchet wheel, means for projecting the lifted pawl against the latch to release the frame, a member vibrating across the frame but normally out of contact therewith, a lug on said member normally above said pawl but contacting with it when lifted to project it against the latch, a movable dog on said member, means for lifting the dog to engage and project the frame when released, and means on said member for retracting the frame when projected.

80. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage step by step past the affixing mechanism, jaws on the carriage, a vibratory frame on the carriage linked to said jaws, a latch normally holding said frame, a ratchet wheel actuated at each step of the carriage movement, a superjacent lever lifted in each revolution of the ratchet wheel, a pawl on said lever, a spring normally holding said pawl away from the latch, a vibrating member normally above the pawl but engaging and forcing the pawl against the latch to release the frame when the lever is lifted by the ratchet wheel, a movable dog on said member, means for lifting the dog to engage and project the frame when released, and means for retracting said frame when projected, substantially as described.

81. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage step by step past the affixing mechanism, jaws on the carriage, a vibratory frame on the carriage linked to said jaws, a latch normally holding said frame, a ratchet wheel actuated at each step of the carriage movement, a superjacent lever lifted in each revolution of the ratchet wheel, a pawl on said lever, a spring normally holding said pawl away from the latch, a vibrating member normally above the pawl but engaging and forcing the pawl against the latch to release the frame when the lever is lifted by the ratchet wheel, a part on said member projecting in fromt of the frame, a movable dog on said member and means for projecting said dog back of the frame when the latter is released by the latch, substantially as described.

82. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage step by step past the affixing mechanism, jaws on the carriage, a vibratory frame on the carriage linked to said jaws, a latch normally holding said frame, a ratchet wheel actuated at each step of the carriage movement, a superjacent lever lifted in each revolution of the ratchet wheel, a pawl on said lever normally retracted from the latch, a vibrating member normally above the pawl but engaging and forcing the pawl against the latch to release the frame when the lever is lifted by the ratchet wheel, a dog pivoted to said member and resting yieldingly upon said lever, said dog being raised to project back of the frame by the lifting of the lever, and a part on said member engaging the front of the frame, substantially as described.

83. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage step by step past the affixing mechanism, jaws on the carriage, a vibratory frame on the carriage linked to said jaws, a latch normally holding said frame, a ratchet wheel actuated at each step of the carriage movement, a superjacent lever lifted in each revolution of the ratchet wheel, a pawl on said lever, a spring normally holding said pawl away from the latch, a vibrating member normally above the pawl but engaging and forcing the pawl against the latch to release the frame when the lever is lifted by the ratchet wheel, a spring secured to said lever, a dog pivoted to said member and resting upon said spring, said dog being raised to project back of the frame by the lifting of the lever, and a part on said member engaging the front of the frame, substantially as described.

84. The combination with a stamp affixing mechanism, of means for advancing the stamps row by row thereto, comprising a pair of jaws, a vibratory frame consisting of two adjustably connected sections, connections between one section of the frame and the jaws, and means for engaging the other section to vibrate the frame occasionally, substantially as described.

85. The combination with a stamp affixing mechanism, of means for advancing the stamps thereto row by row, comprising a pair of jaws, means for closing and advancing the jaws and for opening and retracting them, a clamp engaging and holding the stamps when released by the jaws, and means for releasing said clamp when the jaws are closed and projected, substantially as described.

86. The combination with a stamp affixing mechanism, of means for advancing the stamps thereto row by row, comprising jaws embracing a plurality of rows, means for opening and closing the jaws, means for vibrating said jaws through the width of one row, a clamp engaging and holding the stamps when released by the jaws, and means for releasing said clamp when the jaws are closed and projected, substantially as described.

87. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the stamp carriage past the affixing mechanism, jaws on said carriage between which the stamps are passed, a vibratory frame linked to said jaws, means for vibrating said frame to move the jaws at the limits of the carriage movement, a clamp engaging and holding the stamps when released by the jaws, and means for opening said clamp at the limits of the carriage movement, substantially as described.

88. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating said carriage past the affixing mechanism, means on the carriage for intermittingly advancing said stamps, a clamp normally engaging and holding the stamps, sliding frames on the carriage connected with the clamp, and cam surfaces engaging said frames to release the clamp at the limits of the carriage movement, substantially as described.

89. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage past the affixing mechanism, means on the carriage for intermittingly advancing the stamps, pivoted clamps on the carriage normally engaging and holding said stamps, levers supporting a transverse bar engaging said stamps, sliding frames engaging said levers, springs applied to normally close the clamps, and cam surfaces engaging the frames to open the clamps at the limits of the carriage movement, substantially as described.

90. The combination with a stamp affixing mechanism, of means for advancing the stamps thereto row by row, comprising a pair of jaws, means for projecting and retracting said jaws, means normally closing said jaws, oppositely arranged bell cranks with their adjacent ends projecting between parts on the jaws, and connections between the outer ends of said bell cranks, and a relatively stationary part for oscillating the bell cranks to separate

the jaws when the latter are projected, substantially as described.

91. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage past the affixing mechanism, jaws on said carriage, means for closing and projecting and for opening and retracting said jaws, locking devices for holding the jaws apart when opened, and means operated at the end of the carriage movement to withdraw the locking devices.

92. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating said carriage past the affixing mechanism, jaws on said carriage, means for closing and projecting and for opening and retracting said jaws, spring pressed locking devices arranged to project between parts on the jaws when opened, and means operated at the ends of the carriage movement to withdraw the locking devices, substantially as described.

93. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage past the affixing mechanism, jaws on said carriage, means for closing and projecting and for opening and retracting said jaws, locking devices for holding the jaws apart when open, a sliding bar on the carriage, cam surfaces on said bar arranged to engage and retract the locking devices, and contacts engaging and reciprocating said bar at the ends of the carriage movement, substantially as described.

94. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating said carriage past the affixing mechanism, pivotally mounted frames on said carriage, radial guides on said frames, jaws movably mounted on said guides, springs normally closing said jaws, means for oscillating the frames to project and retract the jaws, means for opening the jaws when projected, locking devices holding the jaws apart during the retraction, and means for withdrawing said locking devices before the jaws are projected, substantially as described.

95. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating the carriage past the affixing mechanism, pivotally mounted frames on said carriage, radial guides on said frames, jaws movably mounted on said guides, springs normally closing said jaws, means for oscillating the frames to project and retract the jaws, oppositely arranged bell cranks mounted on the frames with their adjacent ends projecting between parts on the jaws, connections between the outer ends of said bell cranks and a relatively stationary part on the carriage for oscillating the bell cranks to separate the jaws when projected, locking devices holding the jaws apart during retraction, and means for withdrawing said locking devices before the jaws are projected, substantially as described.

96. The combination with a stamp affixing mechanism, of a stamp carriage, pivotally mounted frames on the carriage, jaws movably mounted in said frame, means for oscillating the frames to project and retract the jaws, curved stamp guides concentric to the frame pivots passing between the jaws concentrically to the frame pivots, and means for opening and closing the jaws, substantially as described.

97. The combination with a stamp affixing mechanism, comprising a reciprocating plunger and platen, of a stamp carriage, means for reciprocating the carriage past the affixing mechanism, stamp guides on said carriage provided with fingers projecting between the plunger and platen and arranged for the plunger to reciprocate between them, and means on the carriage for feeding the stamps through said guides, substantially as described.

98. The combination with a stamp affixing mechanism, of a stamp carriage, means for reciprocating said carriage past the affixing mechanism, means for feeding a sheet of stamps forward row by row to the affixing mechanism, a clamp for engaging and holding the foremost row of stamps, and means for temporarily releasing said clamp at each end of the carriage movement.

99. The combination with a stamp affixing mechanism, of means for advancing the stamps thereto row by row, comprising a pair of jaws, means for closing and advancing the jaws and for opening and retracting them, a clamp engaging and holding the stamps when released by the jaws, means for releasing said clamp when the jaws are closed and projected, a clamp for engaging and holding the foremost row of stamps, means for temporarily releasing the latter clamp at each end of the carriage movement, substantially as described.

100. The combination with a stamp affixing mechanism, of means for feeding each individual stamp in a sheet of stamps to the affixing mechanism, comprising a carriage, means for moving the carriage step by step past the affixing mechanism in reverse directions with a dwell of one step interval at each reversal, means for moving the sheet forward row by row on the carriage, and a clamp engaging the body of the sheet when not otherwise constrained.

101. A stamp affixing mechanism comprising a plunger, an opposing platen, a die plate between the plunger and platen containing an aperture through which the head of the plunger may be projected, means for guiding an envelop between the platen and die plate, yielding means for projecting the platen to force the envelop against the die plate opposite the aperture, means for feeding a sheet or row of stamps between the plunger and die plate so as to bring the individual stamps of the sheet or row in succession opposite the aperture, means for holding stationary the individual stamps of the sheet surrounding the one opposite the aperture, means for projecting the plunger to force the one stamp on the sheet or row through the aperture in the die plate and against the envelop and to push the stamp, envelop and platen away from the die plate, thus pressing the stamp on the envelop and tearing it from the sheet of stamps.

102. A stamp affixing mechanism comprising a clamp consisting of a yielding platen and a movable plunger, means for guiding an envelop and sheet of stamps between the platen and plunger including an apertured die plate lying between the envelop and stamps, means for projecting the plunger to clamp a stamp against the envelop between the platen and plunger and through the aperture in the die plate, and means for clamping the surrounding stamps against the die plate when the plunger is projected, to permit the movement of the plunger to tear the opposing stamp from the sheet and affix it to the envelop.

103. A stamp affixing mechanism comprising a clamp, a die plate provided with an aperture through which the clamp is movable, means for feeding an envelop and sheet of stamps into the clamp on opposite sides of said die plate, means for clamping the sheet of stamps to the die plate around the aperture, and means for closing the clamp upon the envelop and stamp and moving it bodily within the aperture to tear the inclosed stamp from the sheet and affix it to the envelop.

104. The combination with a stamp affixing clamp, means for feeding envelops into the clamp, a stamp carriage, means for moving the carriage past the stamp affixing clamp step by step and for returning it step by step, means for advancing a sheet of stamps on the carriage at each end of its path of movement to present the succeeding row of stamps to the action of the clamp, and means for closing the clamp and moving it bodily to tear the inclosed stamp from the sheet and affix it to the envelop.

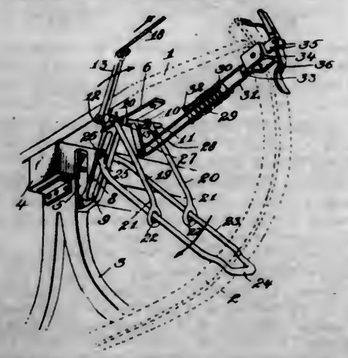
105. The combination with a stamp affixing clamp, of a carrier mechanism for moving the envelops one by one into the clamp, a stamp carriage, means for moving the carriage past the clamp step by step with each movement thereof and for returning it step by step, means for advancing the sheet of stamps on the carrier at each end of its path of movement, means for holding fast the sheet of stamps around the clamp, and means for closing the clamp and moving it bodily to tear the inclosed stamp from the sheet and affix it to the envelop.

870,360. FLY-TRAP SHED. WILLIAM H. HARBUCK, Anderson, Tex. Filed July 29, 1907. Serial No. 386,114.

1. In a device of the class described, a shed comprising a body and a roof supported by the body, the body being composed of sides and ends, each side being hinged to an end to permit the latter to constitute gates, means for separably connecting the roof with the body, said roof having an opening in its top, a trap supported by the top of the roof, also having an opening therein to register with the other opening, a valve connected with the said trap for controlling said opening, and a rod connected with the valve and extending to a point exteriorly of the trap, for operating said valve.

3. In a device of the class described, a shed comprising a body and a roof separably connected with each other, the body being composed of sides and ends, each of said sides being hinged to an end, means for fastening the ends to the respective sides, a crown-piece on the roof, having an opening communicating with the interior of the shed, a stall extending longitudinally of the shed and having swinging gates at its opposite ends, combined with a trap supported by said crown-piece, the trap having an opening in its bottom to register with said other opening, a valve pivoted to said bottom for controlling the opening therein, and a rod connected with the valve and extending exteriorly of the trap to permit the operation of the valve from a point outside said trap.

870,361. SLED-BRAKE. JOHN D. HARE, McCook, Nebr. Filed Apr. 2, 1907. Serial No. 365,979.



1. A sled brake comprising a rock shaft, actuating means therefor, a pair of shiftable arms, a brake shoe carried thereby, and links fixed at one end to the rock-shaft and at the other end slidably mounted upon said arms for shifting them to initially position the brake shoe when the rock shaft is actuated by said means.

2. A sled brake comprising a rock shaft, actuating means therefor, a pair of shiftable arms, a brake shoe carried thereby, links connected to said arms for shifting them to initially position the brake shoe when the rock shaft is actuated by said means, and means for automatically returning the brake shoe to inoperative position.

3. A sled brake comprising a rock shaft, actuating means therefor, a pair of shiftable arms, a brake shoe carried thereby, links connected to said arms for shifting them to initially position the brake shoe when the rock shaft is actuated by said means, and means for returning said actuating means to normal position in advance of the return of the brake shoe to inoperative position.

4. A sled brake comprising a rock shaft, actuating means therefor, a pair of shiftable arms, a brake shoe carried thereby, links connected to said arms for shifting them to initially position the brake shoe when the rock shaft is actuated by said means, means for automatically returning the brake shoe to inoperative position, and means for returning said actuating means to normal position in advance of the return of the brake shoe to inoperative position.

5. A sled brake comprising a pair of shoe-carrying arms, a slotted supporting means for the upper end of said arms, a shoe carried by the lower end of said arms, a rock shaft, means depending from said rock shaft and engaging with said arms for shifting them to apply the shoe to braking position, and means connected with said rock shaft for actuating it.

6. A sled brake comprising a pair of shoe-carrying arms, a slotted supporting means for the upper ends of said arms, a shoe carried by the lower end of said arm, a rock shaft, means depending from said rock shaft and engaging with said arms for shifting them to apply the shoe to braking position, means connected with said rock shaft for actuating it, and means whereby said actuating means can be returned to normal position in advance of the returning of the brake shoe to inoperative position.

7. A sled brake comprising a pair of shoe-carrying arms, a slotted supporting means for the upper ends of said arms, a shoe carried by the lower ends of said arms, a rock shaft, means depending from said rock shaft and engaging with said arms for shifting them to apply the shoe to braking position, means connected with said rock shaft for actuating it, and means for automatically returning said brake shoe to inoperative position.

8. A sled brake comprising a pair of shoe-carrying arms, a slotted supporting means for the upper ends of said arms, a shoe carried by the lower ends of said arms, a rock shaft, means depending from said rock shaft and engaging with said arms for shifting them to apply the shoe to braking position, means connected with said rock shaft for actuating it, means for automatically returning said brake shoe to inoperative position, and means whereby said actuating means can be returned to normal position in advance of the return of the brake shoe to inoperative position.

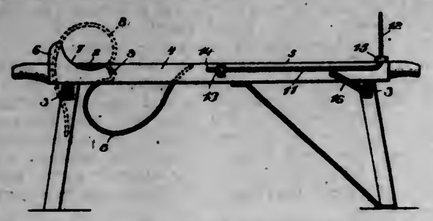
9. A sled brake comprising a brake shoe, means for retaining said shoe in an inoperative position, means for releasing said shoe and shifting it to braking position, actuating means for said shifting and releasing means, means for automatically returning said shoe to inoperative position, and means whereby said actuating means can be returned to normal position in advance of the return of the brake shoe to inoperative position.

10. A sled brake comprising a pair of shoe-carrying arms, a shoe connected to the outer ends of said arms, a slotted supporting means for the other ends of said arms, means for retaining the shoe in an inoperative position, means for releasing and shifting the shoe to operative position, actuating means for said releasing and shifting means, and means for automatically returning said brake shoe to a position to be engaged by said retaining means.

11. A sled brake comprising a pair of shoe-carrying arms, a shoe connected to the outer ends of said arms, a slotted supporting means for the other ends of said arms, means for retaining the shoe in an inoperative position,

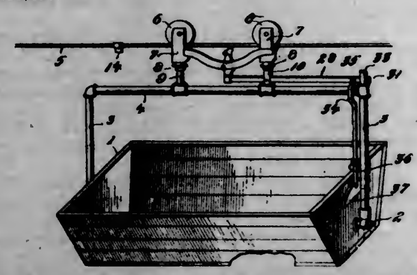
means for releasing and shifting the shoe to operative position, actuating means for said releasing and shifting means, means for automatically returning said brake shoe to a position to be engaged by said retaining means, and means whereby said actuating means can be returned to normal position in advance of the return of the brake shoe to inoperative position.

870,362. BUNDLER AND BINDER. WILLIAM D. HARRELL and JOSEPH E. MCNOWN, Lagro, Ind. Filed Feb. 27, 1907. Serial No. 359,594.



In a bundler and binder of the character described, the combination of two parallel pieces forming a table and having a portion thereof cut away on an arc of a circle, a curved crane or lever associated with said table, one end of said curved crane or lever forming a stirrup, said lever being arranged to form substantially a circle with the said cut away portion of said table and a sliding arm associated with said table for drawing the fodder in position to be engaged by said curved crane or lever, substantially as described.

870,363. ELEVATED CARRIER. PETER A. HENNING, Kenyon, Minn. Filed July 12, 1907. Serial No. 383,497.



1. In a carrier ,a frame, a receptacle mounted thereon, carrier wheels connected to said frame by standards, and a guard plate supported in said standards and provided with laterally projecting arms disposed beneath the periphery of said wheels adjacent thereto.

2. A carrier provided with a frame, a receptacle mounted thereon, carrier wheels connected to said frame by standards, and a guard plate provided with laterally extending recessed arms having a shoulder to engage the base of said standards at the opposite side thereof from said plate.

3. A carrier provided with a frame, a receptacle mounted thereon, carrier wheels connected to said frame by standards, a guard plate provided with laterally extending recessed arms having a shoulder to engage the base of said standards at the opposite side thereof from said plate, and a swiveled connection between said standards and said frame.

4. In a carrier, a frame, a receptacle pivotally mounted thereon, carrier wheels for said frame, a pivotally mounted trip lever having a contact block at one end, an independent pivoted finger lever having faces at opposite sides of its pivot and adapted to contact with said block, and means extending from the trip lever to a retaining device upon the receptacle.

5. In a carrier, a frame, a receptacle pivotally mounted thereon, carrier wheels connected with said frame, a pivotally mounted trip lever having a contact block at one end, a pivotally mounted finger having a face in contact with said block, a bolt extending from said lever to a retaining plate on said receptacle, a slotted pivoting standard for one of said wheels in which said lever is mounted, and a guiding standard carried by the frame at the free end of said lever.

6. In a carrier, a frame, a receptacle pivoted thereon, standards extending from said frame and provided with carrier wheels, a guard plate extending between said standards and provided with lateral arms disposed beneath said wheels, a trip finger provided with an angular under face, and a tripping lever connected with said receptacle and having a contact block to engage said face.

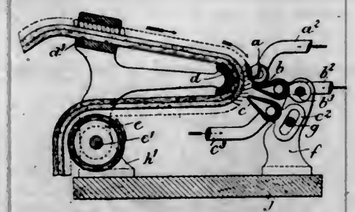
7. In a carrier, a frame, a receptacle pivoted thereon, standards extending from said frame and provided with carrier wheels, a guard plate extending between said standards and provided with lateral arms disposed beneath said wheels, a trip finger provided with an angular under face, a tripping lever pivotally mounted in one of said standards and provided with a portion extending to said receptacle, and a contact block carried by the inner face of said lever and having an angular face to engage that of the tripping finger.

8. In a carrier, a receptacle, a frame therefor, a carrier wheels, a standard for one of said wheels comprising a slotted post threaded at its opposite ends for engagement with said frame and the wheel support, and a tripping lever extended through said slot and pivotally mounted therein.

9. In a carrier, a receptacle, a frame therefor, carrier wheels, a standard for one of said wheels comprising a slotted post threaded at its opposite ends for engagement with said frame and the wheel support, a tripping lever extended through said slot and pivotally mounted therein, and a slotted guide standard projected from said frame and adapted to receive the free end of said lever.

10. In a carrier, wheel standards provided at their upper ends with a pivot extended laterally therefrom and at their lower portion with a lateral base, swiveled couplings secured to said base, a frame, a receptacle carried thereby, and posts extending between said couplings and said frame.

870,364. APPARATUS FOR HARDENING AND TEMPERING CARD-TEETH. ANTOINE G. HERMAN, Aix-la-Chapelle, Germany. Filed Nov. 9, 1906. Serial No. 342,745.



1. Apparatus for hardening and tempering card teeth comprising a heater, a preliminary cooling device, and a final cooling device, substantially as set forth.

2. Apparatus for hardening and tempering card teeth comprising a heater, a preliminary cooling device, and a final cooling device adjustable relatively to said preliminary cooling device substantially as set forth.

3. Apparatus for hardening and tempering card teeth, comprising a heater, a preliminary cooling device, a final cooling device and means for successively conveying card teeth under the influence of said heater, said preliminary cooling device and said final cooling device, substantially as set forth.

4. Apparatus for hardening and tempering card teeth comprising a heater, a preliminary cooling device, a final cooling device, adjustable relatively to said preliminary cooling device, and means for successively conveying card teeth under the influence of said heater, said preliminary cooling device and said final cooling device, substantially as set forth.

5. Apparatus for hardening and tempering card teeth comprising means for heating the points of card teeth, a device arranged near to said heating means adapted to chill the heated card teeth, a second cooling device, and means for successively conveying card teeth under the influence of said heating means, said first cooling device and said second cooling device, substantially as set forth.

6. Apparatus for hardening and tempering card teeth comprising means for heating the points of card teeth, a device arranged near to said heating means adapted to chill the heated card teeth, a second cooling device adjustable relatively to said first cooling device, and means for successively conveying card teeth under the influence of said heating means, said first cooling device and said second cooling device, substantially as set forth.

7. Apparatus for hardening and tempering card teeth comprising means for heating the points of card teeth, a nozzle arranged near said heating means adapted to deliver a jet of cooling medium onto the heated card teeth, a second similar cooling nozzle adjustable towards and away from said first cooling nozzle, and means for successively conveying card teeth under the influence of said heating means, the cooling jet from said first nozzle and the cooling jet from said second nozzle, substantially as set forth.

8. Apparatus for hardening and tempering card teeth comprising a gas burner the flame of which is adapted to heat card teeth, a preliminary cooling device, a final cooling device adjustable relatively to said preliminary cooling device and means for successively conveying card teeth under the influence of said heater, said preliminary cooling device and said final cooling device, substantially as set forth.

9. Apparatus for hardening and tempering card teeth comprising a gas burner the flame of which is adapted to heat card teeth, a nozzle arranged near said burner, adapted to deliver a jet of cooling medium onto the heated card teeth, a second similar cooling nozzle adjustable towards and away from said first cooling nozzle and means for successively conveying card teeth under the influence of a flame from said burner, the cooling jet from said first nozzle and the cooling jet from said second nozzle, substantially as set forth.

10. Apparatus for hardening and tempering card teeth comprising a guide over which card clothing may be passed, means facing said guide adapted to heat the teeth of card clothing on said guide, a device arranged near to said heating means adapted to chill the heated card teeth, a second cooling device adjustable relatively to said cooling device and means for drawing card clothing over said guide to bring the card teeth successively under the influence of said heating means, said first cooling device and said second cooling device, substantially as set forth.

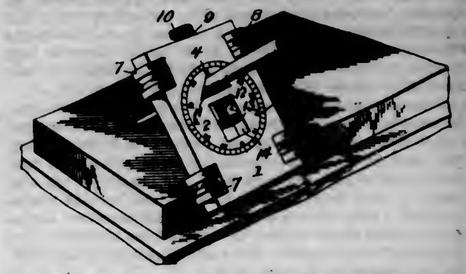
11. Apparatus for hardening and tempering card teeth comprising means for heating the outer end portions of card teeth, a preliminary chilling device arranged near to said heating means adapted to chill the outer end portions of the heated card teeth for a length less than that heated by said heating means, and a second device adapted to completely chill the heated and partly chilled card teeth adjustable relatively to said preliminary chilling device, substantially as set forth.

870,365. GRAVER-SHARPENER. ROBERT L. HIGHT, Decatur, Ill. Filed Mar. 11, 1907. Serial No. 361,813.

1. In a graver sharpener, a bed plate, a tool holder thereon, and grooved bearing rollers disposed at one end thereof with their axes parallel to the side of the plate.

2. In a graver sharpener, a bed plate, a rotatable tool holder thereon, parallel bearing rollers disposed at one end thereof, and means to retain the holder in adjusted position.

3. In a graver sharpener, a bed plate provided with a grooved bearing roller at one end to engage an edge of an abrading surface at one side, and a graduated holder rotatably mounted in said plate to coöperate with a graduation thereon.



4. In a graver sharpener, a bed plate provided with a holder rotatably mounted in said plate and provided with graduations thereon, and a bearing roller carried by the plate to effect a travel thereof transversely of the axis of the holder.

5. In a graver sharpener, a bed plate, a graduated holding disk mounted therein flush with the opposite faces of the plate for rotary adjustment and provided with an angular tool aperture therein, and a clamping screw mounted on the disk at the base of said aperture.

6. In a graver sharpener, a bed plate, a circular graduated holder having a grooved periphery mounted therein for rotary adjustment and provided with an angular tool aperture therein, a clamping screw at said aperture, and a locking screw threaded through said plate to engage the periphery of said holder.

7. In a graver sharpener, a bed plate, a circular graduated holder mounted therein for rotary adjustment and provided with a triangular tool aperture therein, a clamping screw at the base of said aperture, a locking screw mounted on the bed to engage said holder, grooved bearing rollers disposed at the opposite ends of said plate, and longitudinally extending pivots for said rollers extending through the grooved periphery of said holder.

8. In a graver sharpener, a bed plate, a tool holder flush with the opposite faces thereof and having a grooved periphery rotatably adjustable in said plate, and a retaining rod carried by the plate to enter said groove.

9. In a graver sharpener, a bed plate, means for retaining a tool therein, and bearing rollers at one end of said plate having their axes parallel to the sides of the plate.

870,366. PRUNING-KNIFE. JOHN B. HOWARD, St. John, Kans. Filed June 7, 1907. Serial No. 377,807.



1. In a pruning knife operable by a pull upon the handle, the combination with a handle member, of a hook member

formed with a hook and having a shank in sliding connection with said handle member, a blade pivoted to said hook member adjacent said hook and having a back edge extending in line with said shank and handle member, an operating rod connected to the outer end of said blade and to said handle member, and a tension spring connected adjacent said hook and to said handle member and adapted to maintain said blade normally in line with said shank and handle member, substantially as described.

2. In a pruning knife operable by a pull upon the handle, the combination with a handle member, of a hook member formed with a hook and having a shank in sliding connection with said handle member, a blade pivoted to said hook member adjacent said hook, an operating rod connected to the outer end of said blade and to said handle member, a stop pin upon said blade arranged to engage and stop said hook member at both ends of its travel, and a spring for maintaining the parts normally in one position, substantially as described.

3. In a pruning knife operable by a pull upon the handle, the combination with a handle member, of a hook member formed with a hook and having a shank in sliding connection with said handle member, a blade pivoted to said hook member adjacent said hook, an operating rod connected to the outer end of said blade and to said handle member, a stop pin upon said blade arranged to engage and stop said hook member at an end of its travel, and a tension spring connected at one end to said stop pin and at the other end to said operating rod upon said handle member, substantially as described.

4. In a pruning knife operable by a pull upon the handle, the combination with a handle member provided with a perforation near the lower end thereof, of a hook member formed with a hook and having a shank in sliding connection with said handle member, a blade pivoted to said hook member adjacent said hook, an operating rod connected at one end to the outer end of said blade and having its other end bent over and making a pivotal connection with the handle member in said perforation, and a spring connecting said blade and the bent over end of said operating rod, substantially as described.

870,367. GLUE. GEORGE KELLY, Hinsdale, Ill. Filed Apr. 18, 1906. Serial No. 312,442.

1. A glue or binder, comprising liquid glass and sulfur, the proportion of the liquid glass being greater than the proportion of sulfur.

2. A glue or binder, comprising liquid glass, sulfur and rubber.

3. A glue or binder, comprising liquid glass, vegetable gum, sulfur and white lead.

4. A glue or binder, comprising liquid glass, sulfur, rubber and white lead.

5. A glue or binder, comprising liquid silicate of sodium, sulfur, rubber and white lead.

6. A glue or binder, consisting of a composition of ninety-five parts of liquid glass and five parts of sulfur.

870,368. INSULATING BOARD OR SLAB. GEORGE KELLY, Hinsdale, Ill. Filed June 22, 1906. Serial No. 322,944.

1. The method of manufacturing insulating boards and the like, which consists in applying to sheets having printers' ink thereon, an alkali and cementing said sheets together.

2. The method of manufacturing insulating boards and the like, which consists in applying to sheets having printers' ink thereon, a solution of borax and water that cuts the grease in said ink, and afterwards cementing said sheets together with liquid glass.

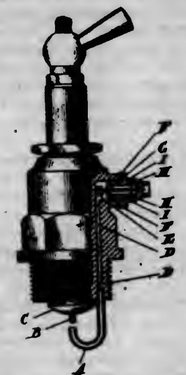
3. The method of manufacturing insulating boards and the like, which consists in employing a plurality of sheets having printers' ink thereon, cutting the grease in the ink, applying a binding agent to the sheets, and cementing said sheets together with said binding agent.

4. The method of manufacturing insulating boards and the like, which consists in employing a plurality of sheets of paper of substantially the same size having printers' ink thereon, cutting the grease in the ink on said sheets by applying borax and water thereto, and cementing said sheets together with liquid glass.

5. As an article of manufacture, a body comprising a plurality of sheets of material having printers' ink thereon, the fat in said ink having been cut, and layers of a cementitious binder interposed between said sheets.

6. As an article of manufacture, a body comprising a plurality of sheets of paper having printers' ink thereon, the fat in the ink having been saponified by an alkali, and layers of liquid glass interposed between the sheets, said liquid glass constituting a binding agent for securing the sheets together.

870,369. SPARKING PLUG FOR INTERNAL-COMBUSTION ENGINES. ARTHUR E. LAMKIN, Croydon, England. Filed Dec. 4, 1905. Serial No. 290,235.



In an electrical device of the class described, a sparking plug comprising a conductor insulated from said plug, said plug having a passage-way terminating at one end in a chamber, a nut secured in said chamber and having an opening therethrough, a non-return valve arranged within the opening in the nut, said nut further provided with holes for admitting air from the atmosphere within the said chamber, protective means covering said holes to exclude dust, and a tube forming a conductor mounted in the other end of the passage-way and bent on itself to bring the bore of the tube in direct alinement with the first mentioned conductor.

870,370. PROCESS FOR MAKING ARTIFICIAL STONE AND CONCRETE. FRANKLIN S. LAMSON, Washington, D. C., assignor to Cosmos Construction Company, Washington, D. C., a Corporation of the District of Columbia. Filed Aug. 14, 1902, Serial No. 119,673. Renewed Sept. 21, 1906. Serial No. 335,647.

1. The process of making Portland stone or concrete, consisting in mixing the materials (cement, sand, water, etc.) with their temperature between 39° and 32° F., such range enabling the adaptation of temperature to the varying quality of the mixtures, produced by the different proportions of the materials used, whereby stiff plasticity is given to each mixture, substantially as described.

2. The process of making artificial stone or concrete, consisting in mixing the material at about the expansive decreasing-temperature of water—39° to 32° F., and keeping it at about this temperature until the setting of the cement be complete, substantially as described.

3. The process of making artificial stone or concrete, consisting in mixing the material at about the expansive decreasing-temperature of water—39° to 32° F., packing it by ramming or compression, and keeping it at about this temperature until the setting of the cement be complete, substantially as set forth.

4. The process of making artificial stone or concrete, consisting in mixing the material at about the expansive decreasing-temperature of water—39° to 32° F., packing it by ramming or compression, and keeping it under compression at such temperature until the setting of the cement be complete, substantially as described.

5. The process of making artificial stone or concrete, consisting in mixing the material at about 39° F., packing it by ramming or compression, and causing its temperature to descend to 32° F., or lower, before the setting of the cement be complete, substantially as described.

6. The process of making artificial stone or concrete, consisting in mixing the material at about 39° F., packing it by ramming or compression, causing its temperature to descend to 32° F., or lower, before the setting of the cement, and keeping it at such temperature until the setting of the cement be complete, substantially as described.

7. The process of making artificial stone or concrete, consisting in mixing the material at about 39° F., packing it by ramming or compression, and keeping it under compression with the temperature descending to 32° F., or lower, before the setting of the cement be complete, whereby the compression is increased by the expansive force of freezing water during the period of setting, substantially as set forth.

8. In the production of Portland stone or concrete, the material for which has been rammed or compressed before the setting of the cement, a method of adding increased pressure during the period of the setting of the cement, substantially as described.

9. The process of making artificial stone or concrete, consisting in mixing the material at about the expansive decreasing-temperature of water—39° to 32° F., and giving the plastic mass a concrete form, while kept at said temperature, substantially as set forth.

10. The process of making artificial stone or concrete, consisting in mixing the material at about the expansive decreasing-temperature of water—39° to 32° F., giving the plastic mass concrete forms, and emplacing them on, in or with a structure, while kept at said temperature, substantially as set forth.

11. The process of making artificial stone or concrete, consisting in mixing the material at about the expansive decreasing-temperature of water—39° to 32° F., giving the plastic mass concrete forms, emplacing them on, in or with a structure, and applying pressure thereto, while kept at said temperature, substantially as set forth.

12. The process of making artificial stone or concrete, consisting in mixing the material at about the expansive decreasing-temperature of water—39° to 32° F., and giving the plastic mass a concrete form of progressive continuity, while kept at said temperature, substantially as set forth.

13. The process of making artificial stone or concrete, consisting in mixing the materials with their temperature between 39° and 32° F., and giving the stiffy-plastic mass a concrete form of regular size, while kept at such temperature, substantially as set forth.

14. The process of making artificial stone or concrete, consisting in mixing the materials with their temperature between 39° and 32° F., and giving the stiffy-plastic mass a concrete form of regular size and progressive continuity, while kept at such temperature, substantially as set forth.

15. The process of making artificial stone or concrete, consisting in mixing the materials with their temperature between 39° and 32° F., and giving the stiffy-plastic mass a concrete form of regular thickness, while kept at such temperature, substantially as set forth.

16. The process of making artificial stone or concrete, consisting in mixing the materials with their temperature between 39° and 32° F., and giving the stiffy-plastic mass a concrete form of regular thickness and progressive continuity, while kept at such temperature, substantially as described.

17. The process of making Portland stone or concrete which consists in mixing the material with its temperature at about 39° to 32° F., and giving the plastic mass concrete form.

18. The process of making Portland stone or concrete which consists in mixing the material with its temperature at about 39° to 32° F., and giving the plastic mass concrete forms of regular size.

19. The process of making Portland stone or concrete which consists in mixing the material with its temperature at about 39° to 32° F., and giving the plastic mass concrete forms of regular thickness.

20. The process of making Portland stone or concrete which consists in mixing the material with its temperature at about 39° to 32° F., and giving the plastic mass concrete forms of progressive continuity.

21. The process of Portland concrete construction which consists in mixing the material with its temperature at about 39° to 32° F., giving the plastic mass concrete forms, and emplacing them in a structure while fresh.

22. The process of Portland concrete construction which consists in mixing the material with its temperature at about 39° to 32° F., giving the plastic mass concrete forms, emplacing them in a structure while fresh, and applying pressure thereto.

23. The process of Portland concrete construction which consists in mixing the material with its temperature at about 39° to 32° F., giving the plastic mass concrete forms, and emplacing them in a structure while fresh in a plurality of forms or layers, whereby formations of varying quality or form may be conjointly laid, ready for compression.

24. The process of Portland concrete construction which consists in mixing the material with its temperature at about 39° to 32° F., giving the plastic mass concrete forms of regular size, emplacing them while fresh upon a prepared foundation, and by pressure bringing them to desired figure or contour while still fresh.

25. The process of Portland concrete construction which consists in mixing the material with its temperature at about 39° to 32° F., giving the plastic mass concrete forms of regular size, emplacing them while fresh upon a prepared foundation, by pressure bringing them to desired figure or contour while still fresh, and covering or inclosing the pressed construction with non-conducting material while the cement sets.

26. The process of Portland concrete construction which consists in mixing the material with its temperature at about 39° to 32° F., giving the plastic mass concrete forms of desired size and figure, emplacing them while fresh in desired position, by pressure bringing them to correct figure or contour while still fresh, and subsequently applying to the compressed construction additional pressure while the cement sets.

27. The process of making Portland stone or concrete, consisting in mixing the materials with their temperature between 39° and 32° F., giving the stiffy-plastic mass a concrete form of regular size, and depositing it on molds, plates or conveyers, while kept at such temperature, substantially as described.

28. The process of making Portland stone or concrete, consisting in mixing the materials with their temperature between 39° and 32° F., giving the stiffy-plastic mass a concrete form of regular size and progressive continuity, and depositing it on molds, plates or conveyers, while kept at such temperature, substantially as described.

29. The process of making Portland stone or concrete, consisting in mixing the materials with their temperature between 39° and 32° F., giving the stiffy-plastic mass a concrete form of regular size and progressive continuity, depositing it on molds, plates or conveyers, and cutting or separating it into regular sections of any desired size and form, while kept at such temperature, substantially as set forth.

30. The process of making Portland stone or concrete, consisting in mixing the materials with their temperature between 39° and 32° F., giving the stiffy-plastic mass a concrete form of regular size and progressive continuity, depositing it on molds, plates or conveyers, cutting or separating it into regular sections of any desired size and form, and conveying it to places of deposit, while kept at such temperature, substantially as described.

31. The process of making Portland stone or concrete,

consisting in mixing the materials with their temperature between 39° and 32° F., giving the stiffly-plastic mass a concrete form of regular size and progressive continuity, depositing it on molds, plates or conveyers, cutting or separating it into regular sections of any desired size and form, conveying it to places of deposit and depositing it, while kept at such temperature, substantially as described.

32. The process of making Portland stone or concrete, consisting in mixing the materials with their temperature between 39° and 32° F., giving the stiffly-plastic mass a concrete form of regular size and progressive continuity, depositing it on molds, plates or conveyers, cutting or separating it into regular sections of any desired size and form, conveying it to places of deposit, and compressing it, while kept at such temperature, substantially as described.

33. The process of making artificial stone or concrete, consisting in mixing the material at about the expansive decreasing-temperature of water—39° to 32° F., giving the plastic mass a concrete form of progressive continuity, depositing it on molds, plates or conveyers, cutting or separating it into sections, conveying it to places of deposit, compressing it, and keeping it under compression at said temperature until the setting of the cement be complete, substantially as set forth.

34. The process of concrete construction which consists in mixing the material to stiff plasticity, thereby enabling the use of operative machines for giving such material concrete form, substantially as described.

35. The process of concrete construction which consists in mixing the material to stiff plasticity, and giving the plastic mass concrete form.

36. The process of concrete construction which consists in mixing the material to stiff plasticity, and giving the plastic mass concrete forms of regular size.

37. The process of concrete construction which consists in mixing the material to stiff plasticity, and giving the plastic mass concrete forms of regular thickness.

38. The process of concrete construction which consists in mixing the material to stiff plasticity, and giving the plastic mass concrete forms of progressive continuity.

39. The process of concrete construction which consists in mixing the material to stiff plasticity, giving the plastic mass concrete forms, and emplacing them in a structure while fresh.

40. The process of concrete construction which consists in mixing the material to stiff plasticity, giving the plastic mass concrete forms, emplacing them in a structure while fresh, and applying pressure thereto.

41. The process of concrete construction which consists in mixing the material to stiff plasticity, giving the plastic mass concrete forms, and emplacing them in a structure while fresh in a plurality of forms or layers, whereby formations of varying quality or form may be conjointly placed, ready for jointure or compaction.

42. The process of concrete construction which consists in mixing the material to stiff plasticity and giving the plastic mass regular form, substantially as described.

43. The process of concrete construction which consists in mixing the material to stiff plasticity, giving the plastic mass regular form, and emplacing it while fresh on, in or with a structure.

44. The process of concrete construction which consists in mixing the material to stiff plasticity, giving the plastic mass regular form, emplacing it while fresh on, in or with a structure, and applying pressure thereto.

45. The process of Portland concrete construction which consists in mixing the material to stiff plasticity, giving the plastic mass regular form, and emplacing it while fresh on, in or with a structure.

46. The process of Portland concrete construction which consists in mixing the material to stiff plasticity, giving the plastic mass regular form, emplacing it while fresh on, in or with a structure, and applying pressure thereto.

47. In a process for making concrete structures, the step of emplacing the freshly plastic material in concrete forms.

48. In a process for making concrete structures, the step of emplacing the freshly plastic material in concrete forms of desired shape, thickness or size.

49. In a process for making concrete structures, the steps of emplacing the freshly plastic material in concrete forms of desired shape, thickness or size, and applying pressure to unite or compact them.

50. In a process for making concrete structures, the step of emplacing freshly plastic material of concrete forms in a plurality of forms or layers, whereby formations of varying quality or form may be conjointly placed, ready for union or compaction by pressure applied.

51. In a process for making concrete structures, the step of emplacing the freshly plastic concrete in a layer or layers of regular thickness, substantially as described.

52. In a process for making concrete structures, the step of emplacing the freshly plastic concrete in blocks, or sections, of regular size, whereby such material can be quickly and regularly emplaced.

53. In a process for making concrete structures, the step of placing plastic concrete blocks in formations which break joints laterally or vertically, whereby pressure may most thoroughly unite and compact them into a monolithic mass of formed stone.

54. In a process for making concrete structures, the step of emplacing plastic concrete in regular forms.

55. In a process for making concrete structures, the steps of emplacing plastic concrete in regular forms, and applying pressure to unite them.

56. In a process for making concrete structures which consists in emplacing the freshly plastic material in regular forms, the method of correcting inaccuracies by the application of loose material of adapted quality and temperature.

57. In a process for making concrete structures, the step of interposing non-conducting and non-absorbing material between the plastic concrete surface and an exterior heat-conducting and water-absorbing medium, whereby the desired temperature and moisture of the concrete may be retained while the cement sets.

58. In a process for making concrete structures, the step of interposing non-conducting material between the plastic concrete and an exterior heat-conducting medium, substantially as described.

59. In a process for making concrete structures, the step of emplacing plastic concrete of regular form in a plurality of layers, whereby layers of varying quality may be conjointly laid, ready for compaction by pressure applied.

60. In a process for making concrete structures which consists in the emplacing of the freshly plastic material in regular forms, the method of introducing metal strengthening material between such regular forms of plastic material.

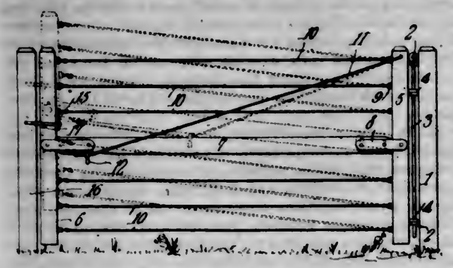
61. In a process for making concrete structures which consists in the emplacing of the freshly plastic material in regular forms, the method of introducing metal strengthening material between such regular forms of plastic material, and applying pressure thereto.

62. In a process for making concrete structures which consists in the emplacing of the freshly plastic material in forms of regular thickness, the method of correcting inaccuracies by the application of loose material of adapted quality and temperature, substantially as described.

63. In a process for making Portland stone and steel-frame constructions, substantially as described, the method of uniting such stone and such frame by connecting them with freshly plastic cement material, whereby such stone and frame combine to carry the load, and the plastic cement material, when set, protects the steel from corrosion.

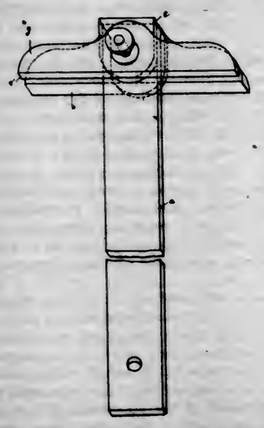
870,371. GATE. MARION W. LEGG, Trenton, Mo. Filed June 17, 1907. Serial No. 379,467.

1. The combination with a gate post; of a gate hingedly connected thereto and comprising end bars, a rail interposed between the middle portions of the bars, means secured to the rail and lapping and pivotally connected to the bars for holding the rail and bars together, flexible means interposed between and pivotally connected to the bars for maintaining the bars parellel, a diagonally disposed bracing device secured at one end to the upper portion of one of the bars and at its other end to the opposite end portion of the rail, a slide movable along the lower face of the rail, means integral therewith for engaging the bracing device, and a handle depending from the slide.



2. A gate comprising parallel end bars, a rail interposed between and pivotally connected to the middle portions of the bars, means interposed between and pivotally connected to the bars for maintaining the bars parallel, flexible bracing means disposed diagonally upon opposite faces of the gate, said means being secured at one end to the upper portion of one of the bars and at the other end to the opposite portion of the rail, a slide movable upon the bottom face of the rail, oppositely extending hooks integral with the slide and movably engaging the flexible bracing device, and a handle depending from the slide.

870,372. ATTACHMENT FOR T-SQUARES. GASPAR A. LEONARD, Boston, Mass. Filed Apr. 10, 1907. Serial No. 367,360.

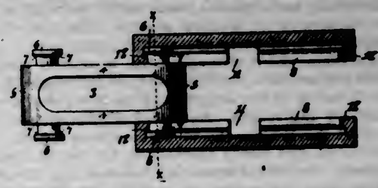


1. An attachment for T-squares comprising a support, means for detachably securing the support to the head of a T-square, a swivel head having a straight edge for engaging the edge of a drafting board mounted on the support, and means for securing the swivel head in position with its edge at any desired angle with the edge of the T-square head, substantially as described.

2. An attachment for T-squares comprising a support provided with arms adapted to embrace the head of a T-square, means for securing the head of a T-square between said arms, a head mounted to turn on one of said arms, and means for securing the head in adjusted position, substantially as described.

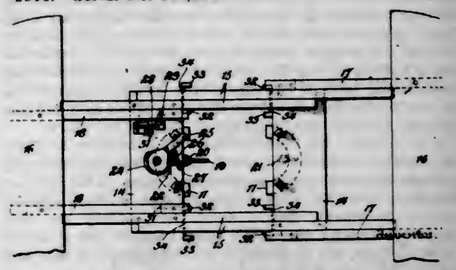
3. An attachment for T-squares comprising a U-shaped support the arms of which are adapted to embrace the head of a T-square, a screw threaded stud projecting from one of said arms, a clamping screw mounted in the other arm, a head mounted to turn on the stud, and a clamping nut on the stud, substantially as described.

870,373. SPROCKET-CHAIN. COLIN LIVINGSTON, Muskegon, Mich. Filed May 22, 1907. Serial No. 375,076.



In a chain of the class described, the combination of a central link provided at its ends with laterally projecting studs having heads, the latter being provided at their inner sides with inclined or angularly disposed faces, and side links provided at their inner faces with longitudinal grooves extending from one end of the links to the other and having their walls beveled or undercut to form inclined or angularly disposed faces for engaging those of the studs, whereby the faces of the sides are drawn together when the same are interlocked, said walls being of uniform thickness and continuous at the ends and at one of the longitudinal edges of each link and provided at the opposite longitudinal edge with an entrance slot communicating with the groove and located at a point between the ends of the link to permit the studs to be introduced into and removed from the said grooves.

870,374. EXTENSION-TABLE. ALBERT C. LONG, Hanover, Pa., assignor to The Long Furniture Co., Hanover, Pa., a Corporation of Pennsylvania. Filed May 15, 1906. Serial No. 316,954.



1. In a table, the combination with a pedestal comprising separable sections movable to and from an abutting position, of slidable connections between the pedestal sections that permit their movement to and from such abutting position, top sections movable to and from an abutting position over the pedestal, slidable connections between the top sections and pedestal sections that permit the movement of the top sections to and from their abutting position when the pedestal sections are abutted, a lock connecting the pedestal sections and holding the same in abutted position while permitting the relative movement of the top sections, and actuating means for the lock exposed when the top sections are separated and prior to the separation of the pedestal sections.

2. In a table, the combination with supporting sections, of cross bars carried thereby, slidably associated connections mounted on the cross bars to permit the relative movement of the supporting sections, a lock connecting the supporting sections and having actuating means disposed above the plane of the cross bars, and top sections movably mounted on the cross bars and movable independently of the supporting sections to and from an abutting position over the supporting sections, said top sections when in abutted position, covering the lock actuating means and exposing the same on their separation and when the supporting sections are still locked.

3. In a table, the combination with a support comprising relatively movable sections, of relatively movable top sections mounted on the support and relatively movable

independent of the relative movement of the support sections, a lock for holding the support sections against relative movement, and means automatically operated on the relative movement of the top sections independently of the supporting sections to operate the lock.

4. In a table, the combination with a support comprising relatively movable sections, of relatively movable top sections mounted on the support and relatively movable independent of the relative movement of the support sections, a lock for holding the support sections against relative movement, and means operated by the top on the said independent relative movement of the sections thereof to release the lock and permit the relative movement of the support sections.

5. In a table, the combination with a support comprising relatively movable sections, of relatively movable top sections mounted on the support and having a limited movement independently of said support sections, a lock for holding the support sections against relative movement, and automatic means for releasing the lock and permitting the relative movement of the support sections when the top sections have reached said limit of movement.

6. In a table, the combination with a support comprising relatively movable sections, of relatively movable top sections mounted on the support and movable independently of the relative movement of the sections thereof, a lock for holding the support sections against relative movement, and actuating means for the lock including a device disposed in the path of movement of a portion of the top sections and operated by the same upon their relative movement independent of the relative movement of the support sections.

7. In a table, the combination with a support, comprising relatively movable sections, of relatively movable top sections mounted on the support and having limited movements independently of the support sections, a lock for holding the support sections against relative movement, and actuating means for the lock including a device disposed in the path of movement of a portion of one of the top sections and operated by the same when said top section has reached said independent limit of movement.

8. In a table, the combination with a support comprising relatively movable sections, of relatively movable top sections mounted on the support and movable thereon, an automatic lock for holding the support sections against relative movement, and a latch for holding the lock against movement, said latch being engaged and operated by one of the top sections on the movement of said top sections on their supporting sections.

9. In a table, the combination with a support, comprising relatively movable sections, of relatively movable top sections mounted on the support, a lock mounted on one of the support sections for holding the support sections against relative movement, an automatic spring actuated device for moving the lock to an inoperative position, and a latch movably mounted on the support section having the lock and engaging the actuating device for preventing its movement, said latch having a portion operated by the top section to release it from the actuating device.

10. In a table, the combination with a support, comprising relatively movable sections, of relatively movable top sections mounted on the support, a lock for holding the support sections against relative movement, an automatic spring actuated device for moving the lock to an inoperative position, and a latch engaging the actuating device for preventing its said movement, said latch being disposed in the path of movement of a portion of the top sections and disengaged thereby from the actuating device.

11. In a table, the combination with a supporting pedestal, comprising relatively movable sections, of top sections slidably mounted on the pedestal and movable independently of said pedestal sections, a lock for holding the pedestal sections against relative movement, an automatic actuating device for the lock mounted on one of the pedestal sections, a latch for holding the actuating device against movement, and means carried by one of the top sections and operating on the latch to release the automatic actuating device.

12. In a table, the combination with a pedestal comprising sections, of cross bars secured to the pedestal sections, associated slides secured to the cross bars, top sections having slides that are slidably associated with the first mentioned slides, a lock mounted on one of the pedestal sections and detachably engaging the other, an automatic spring actuated device for operating the lock mounted on one of the cross bars, a latch mounted on the cross bar and detachably engaging the operating device, and a trip for the latch carried by one of the slides of the top sections.

13. In a table, the combination with a pedestal comprising relatively movable sections and cross bars secured to the upper ends of the sections, of a locking hook pivotally mounted on one section and detachably engaging the other section, a cam rotatably mounted on one of the cross bars, a link connection between the cam and locking hook, a spring engaging the cam for moving it in one direction, a latch that detachably engages the cam to prevent its movement, slidably associated slides secured to the cross bars, top end-sections having slides that are slidably associated with the slides of the cross bars, and a trip carried by one of the end section slides and movable into engagement with the latch to release the cam.

14. In a table, the combination with relatively movable supporting sections, of relatively movable top sections movable on and with respect to the supporting sections, and means for holding the supporting and top sections against relative movement during the movement of the latter a predetermined distance.

15. In a table, the combination with relatively movable supporting sections, of relatively movable top sections, each of which is slidable on one of the supporting sections, and means for holding the top sections and their related supporting sections against relative movement during the movement of the top sections a predetermined distance.

16. In a table, the combination with relatively movable supporting sections, of relatively movable top sections movable on and with respect to the supporting sections, means for holding the supporting and top sections against relative movement during the movement of the latter a predetermined distance, and means for releasing said holding means to permit the relative movements of the top sections independently of the supporting sections.

17. In a table, the combination with a support including a section, of a top including a section mounted on said support section and having a predetermined limited sliding movement thereon, and a latch carried by one of said sections and detachably engaging with the other section when the top section moves beyond said predetermined limits to effect the movement of the support section therewith.

18. In a table, the combination with a support, including a section, of a top including a section mounted on said support section and having a predetermined limited reciprocatory movement thereon, and a latch carried by one of said sections and detachably interlocking with the other section when the top section moves beyond said predetermined limit to effect the movement of the support section with the top section upon the return inward movement of the top section.

19. In a table, the combination with a support including a section, of a top including a section mounted on said support section and having a predetermined limited reciprocatory movement thereon, a latch carried by one of said sections and detachably interlocking with the other section when the top section moves beyond said predetermined limit to effect the movement of the support section with the top section upon the return inward movement of the top section, and means for automatically operating the latch to again permit the said reciprocatory movement of the top section when said top section again reaches the predetermined limit on the return movement.

20. In a table, the combination with a support including relatively movable reciprocatory sections, of a top including a reciprocatory section movable on and with respect to one of the supporting sections, means for connecting the said top and supporting sections to insure their movement together, and means for automatically operating the connecting means to disconnect the sections when they reach a predetermined position.

21. In a table, the combination with a support having a reciprocatory section, of a reciprocatory top section movable on and with respect to said support section, a keeper carried by one of said sections, and a latch carried by the other of said sections and movable into engagement with the keeper when the sections reach a predetermined position on their relative movement.

22. In a table, the combination with a pedestal comprising sections movable toward and from each other, of top sections slidably mounted on the pedestal sections and having limited movements with respect thereto and toward and from each other, and means carried by the top sections and engaging the pedestal sections when the latter are separated and when the top sections are in their outer positions thereon to move said pedestal sections together upon the movement of the top sections towards each other.

23. In a table, the combination with a pedestal comprising sections movable toward and from each other, of top sections slidably mounted on the pedestal sections and having limited movements with respect thereto and toward and from each other, means carried by the top sections and engaging the pedestal sections when the latter are separated to move them together upon the movement of the top sections towards each other, and a device for operating said means to automatically disengage the top sections from the pedestal sections when the latter are together to permit a further inward movement of said top sections.

24. In a table, the combination with a pedestal comprising sections movable away from and toward each other, of a top comprising sections movable away from and toward each other, each top section having a limited movement on a pedestal section and effecting the relative outward movement of said pedestal sections on their relative movements beyond such limit, devices carried by the top sections and engaging the pedestal sections when the latter are separated to effect their movement toward each other on the corresponding movements of the top sections, and a trip carried by each pedestal section and engaging the device on the opposite top section to disengage the same from the opposite pedestal section when the pedestal sections are together to permit the independent relative movement of the top sections.

25. In a table, the combination with a pedestal, comprising sections movable toward and from each other and having cross bars, of slides connecting the pedestal sections, a top comprising sections movable away from and towards each other, slides carried by each top section and slidably associated with the pedestal slides, each top section having a limited sliding movement on a pedestal section and effecting the relative outward movement of said pedestal sections on the relative movement of the top section beyond such limit, keepers mounted on the cross bars of the pedestal sections, latches carried by the slides of the top sections and engaging the keepers when the pedestal sections are separated to effect the movement of the pedestal sections towards each other on the corresponding movement of the top sections, and trips mounted on the cross bars and engaging the latches of the opposite top sections to disengage the same from the opposite pedestal sections when said pedestal sections are together, to permit the independent relative movement of the top sections.

26. In a table, the combination with a support comprising sections movable toward and from each other, of top sections slidably mounted on the support sections and having a limited movement thereon towards and from each other, means carried by the top sections and engaging the support sections when the latter are separated and the top sections are in their outer positions thereon to move said supporting sections together upon the corresponding movement of the top sections, and means for locking the support sections together and permitting the said limited movements of the top sections thereon.

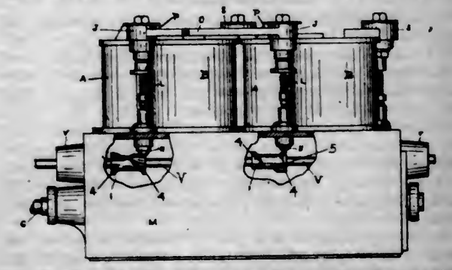
27. In a table, the combination with a pedestal comprising sections movable towards and from each other, of top sections slidably mounted on the pedestal sections and having limited movements thereon towards and from each other, means carried by the top sections and engaging the pedestal sections when the latter are separated to move them together upon the corresponding movement of the top sections, a lock for holding the pedestal sections together and permitting the said limited relative movements of the top sections thereon, and means for automatically unlocking the pedestal sections on the movement of the top sections away from each other beyond said limited movement independently of the pedestal sections.

28. In a table, the combination with a pedestal comprising sections, of slidably associated slides connecting the pedestal sections, top sections having slides that are slidably associated with the pedestal slides, said top sections having relative movements towards and from each other independently of the movement of the pedestal sections, a lock for holding the pedestal sections together, automatic means for actuating the lock to release the pedestal sections when the top sections are moved outwardly a predetermined distance, means carried by the top sections and engaging the pedestal sections to move the latter together, when separated, on the movement of the top sections towards each other, and means for automatically disengaging the top sections from the pedestal sections when the latter are together to permit the further movement of said top sections towards each other.

29. In an extension table, the combination with a support comprising separable sections, of a top section movable thereon independently of the movement of the support sections, a lock for holding the support sections against separation, and means whereby said lock is operated on the said independent movement of the top section on the support.

30. In an extension table, the combination with a support comprising separable sections, of top sections relatively movable on the support independently of the relative movement of the support sections, a lock for holding the support sections against separation, and means whereby said lock is operated on the relative movement of the top sections independently of the support sections.

870,375. STEAM-ENGINE. JOHN D. MACLACHLAN, Detroit, Mich., assignor to Detroit Steam Engine Company, Detroit, Mich. Filed Jan. 28, 1907. Seral No. 354,467.



1. The combination in an engine comprising a plurality of high and low pressure cylinders arranged in pairs, and inlet valves communicating with the high pressure cylinders, of means for holding said valves open throughout one or more cycles, said means adapted to temporarily seat one of the inlet valves when the cranks are in balanced positions.

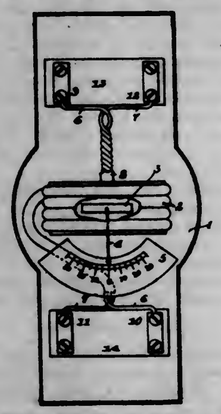
2. The combination in an engine comprising a plurality of high and low pressure cylinders arranged in pairs, and inlet valves communicating with the high pressure cylinders, of cams for holding said valves open throughout one or more cycles, said cams adapted to temporarily seat one of the inlet valves when the cranks are in balanced positions.

3. The combination in an engine comprising a plurality of high and low pressure cylinders arranged in pairs, inlet valves communicating with the high pressure cylinders, a shaft extending in alinement with the inlet

valves and cams on the shaft for operating the valves, the outer ends of the cams each being concentric with the shaft and having a depressed contour forming a low spot adapted to permit one of the inlet valves to temporarily seat when the cranks are in balanced positions.

4. The combination in an engine comprising a plurality of high and low pressure cylinders arranged in pairs, inlet valves communicating with the high pressure cylinders, a shaft extending in alinement with the valves, cams on the shafts, the cams comprising body portions concentric with the shaft, and inclined spiral ribs projecting from the peripheries of the body portions, the inclines extending in opposite directions from points near the transverse center of the body portion, the ribs gradually increasing in width from their inner ends to their outer ends the outer ends of the ribs nearly encircling the body portion so as to form a depression.

870,376. CONTACT-GALVANOMETER. JOHN W. MANLEY, New Barnet, England, assignor of one-half to The Electric Safety Appliances Company, Limited, London, England. Filed Sept. 29, 1906. Serial No. 336,791.



1. In an electric measuring or indicating apparatus, the combination of a pair of conductors belonging to two distinct circuits and twisted on each other, a magnetized movable element, and a support for said element, said twisted conductors being coiled around the field of play of said element, substantially as described.

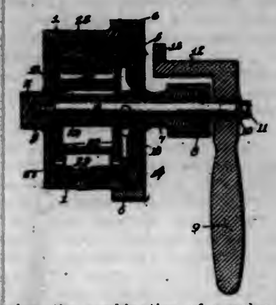
2. In an electric measuring or indicating apparatus, the combination of a pair of conductors belonging to two distinct circuits and twisted on each other, a magnetized movable element, said twisted conductors being spirally coiled around the field of play of said element, substantially as described.

3. The combination of a pair of conductors twisted on each other, a magnetized movable element, a support for said element, said twisted conductors being coiled around the field of play of said element, and an electric circuit comprising an alarm device and a magnetized circuit-closure disposed in operative proximity to the magnetized movable element, substantially as described.

4. The combination of a pair of conductors twisted on each other, a magnetized movable element, a support for said element, said twisted conductors being coiled around the field of play of said element, and an electric circuit comprising a cut-out and a magnetized circuit closure disposed in operative proximity to the magnetized movable element, substantially as described.

870,377. VALVE. PHILIP W. MARETT, Philadelphia, Pa. Filed Mar. 4, 1907. Serial No. 360,527.

1. In a valve, the combination of a valve seat and a roller mounted to be seated thereon, and having a delayed movement with relation to its mounting, substantially as described.



2. In a valve, the combination of a valve seat and an independently revoluble roller adapted to be seated thereon, said roller being mounted to rotate about a central axis, and having a delayed movement with relation to its mounting, substantially as described.

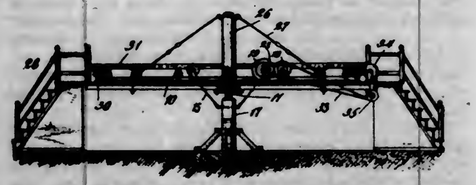
3. In a valve of the class described, the combination with a casing having hot and cold water inlets and a universal outlet, of suitably mounted rollers adapted to be operated to open and close said inlets and said outlet, one of said rollers having a delayed movement with relation to the others, substantially as described.

4. In a valve of the class described, the combination with a casing having hot and cold water inlets and a universal outlet, of suitably mounted independently revoluble rollers arranged in spaced relation within said casing, and bearing against the wall thereof, said rollers being adapted to be operated to open and close said inlets and said outlet, one of said rollers having a delayed movement with relation to the others, substantially as described.

5. In a valve of the class described, the combination with a casing having hot and cold water inlets and a universal outlet, of a plurality of independently revoluble rollers mounted to rotate about a central axis and arranged to open and close said inlets during their rotative movement, one of said rollers having a delayed movement with relation to the others, substantially as described.

6. In a valve of the class described, the combination with a casing having hot and cold water inlets and a universal outlet, of a rotating frame mounted therein, a pair of independently revoluble rollers mounted in spaced relation in, and rotating with, said frame, a supplemental frame loosely mounted within said main frame and a roller revolubly mounted in said supplemental frame and having a limited sliding movement on the rotation of said main frame, substantially as described.

870,378. AMUSEMENT APPARATUS. HYLA F. MAYNES, Gaines, Pa. Filed Oct. 6, 1906. Serial No. 337,694.



1. The combination with a platform, and means for tilting same in the operation of the device, of an endless track thereon, a car mounted to travel on said track, and means for rotating the car upon the track, independently of the tilting operation.

2. The combination with a platform and an endless track thereon, of a car mounted to rotate upon the track, and independently controlled means for simultaneously rotating the car and tilting the platform.

3. The combination with a platform and an endless track thereon, of a car mounted to rotate upon the track, a motor and independently controlled means driven by said motor for simultaneously rotating the car and tilting the platform.

4. The combination with a platform mounted to tilt about a geometric center located below the center of gravity thereof, and a support for said platform, containing such geometric center, of means carried by said platform for tilting same in various directions from the horizontal about said geometric center.

5. The combination with a tilting platform, of means for tilting same comprising cables engaging the platform, and a part relatively stationary therewith, an endless track upon said platform, a car thereon, and means for rotating said car while the platform is being tilted.

6. The combination with a tilting platform, and a central support for same about which it may tilt in every direction, of means for tilting same comprising a motor mounted thereon, winding drums driven by said motor, cables engaging said winding drums, direction pulleys upon said tilting platform over which said cables are bent, the ends of said cables secured to a part stationary with respect to said tilting platform.

7. The combination with a tilting platform, of manually controlled power operated means for tilting the platform in any direction at will, an endless track upon said platform, a car upon said track, and means for rotating the car upon the track.

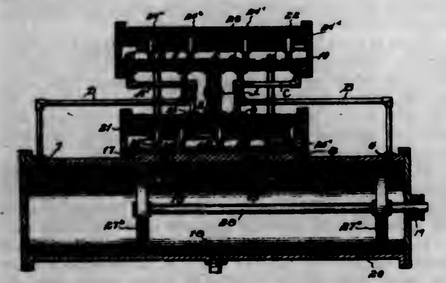
8. The combination with a tilting platform, an endless circular track thereon, a car mounted upon said track, and means for rotating said car comprising a cable engaging the periphery thereof, and a motor carried by said platform for driving said cable.

9. The combination with a tilting platform, of independently controlled means carried by the platform for simultaneously tilting and rotating same.

10. The combination with a platform, of a car mounted to rotate thereon, and independently controlled means for simultaneously tilting and rotating the platform.

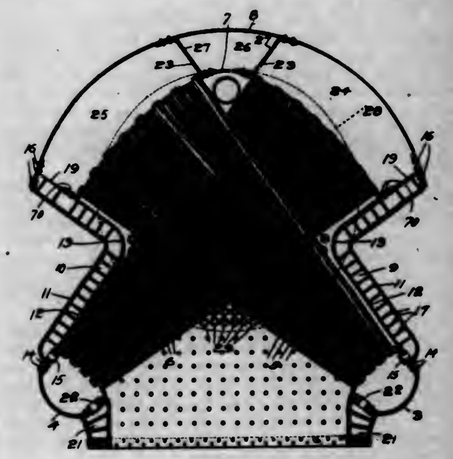
11. The combination with a platform, an endless circular track thereon, a car upon said track, means for rotating the car, and means for tilting and rotating the platform.

870,379. HYDRAULIC MOTOR. WALTER F. MOTTIER, Gibson City, Ill. Filed Mar. 12, 1907. Serial No. 362,022.



In a fluid motor of the character described, a cylinder, a piston rod mounted for reciprocation therein, and extending through one of the heads thereof, two suitably spaced pistons upon said rod, a primary valve chest, a valve rod mounted for reciprocation in the latter, four pistons suitably spaced upon said rod, ports and ducts so connecting the ends of the cylinder with the primary valve chest that in the various positions of the valve rod, one of said connections will be open and the other closed to the supply, a secondary valve chest, a valve rod mounted for reciprocation in the latter, five suitably spaced pistons upon said valve rod, four ports so connecting the secondary valve chest with the cylinder that in each terminal position of the piston rod in the latter, three of said ports shall communicate with the space between the pistons while the fourth port shall communicate through the ports and ducts aforesaid with the primary valve chest, ports and ducts constantly connecting the spaces between the terminal pistons upon the valve rod in the primary valve chest with the space between the pistons in the cylinder, an eduction port in the space intermediate the pistons in the cylinder, means for supplying fluid under pressure to the valve chests centrally between the ends thereof and ports and ducts connecting the spaces adjacent to the central piston in the secondary valve chest with the spaces between the terminal pistons in the primary valve chest and the heads of the latter.

870,380. FIRE-BOX FOR LOCOMOTIVE-BOILERS. JAMES M. MCCLELLON, Everett, Mass. Filed Dec. 20, 1906. Serial No. 348,790.



1. In a boiler of the locomotive type, the combination with a boiler shell having flues therethrough of a fire-box at one end of the shell, said fire-box having separated inner and outer sheets at its top said inner sheet being outwardly curved, a longitudinally-extending water space at each side of the fire-box near the bottom, and water-tubes connecting each water space with the space between the inner and outer sheets, the water-tubes extending from one water space crossing those that extend from the other, and said water-tubes covering substantially the entire inner sheet.

2. A fire-box having inner and outer sheets at the top the inner sheet being outwardly curved, a longitudinally extending drum at each side thereof at the bottom, a water-leg at each side connecting the corresponding drum with the space between the two sheets, and water-tubes connecting each drum with said space, the water-tubes that extend from one drum crossing those that extend from the other drum.

3. A fire-box for a locomotive boiler having separated inner and outer sheets at its top the inner sheet being outwardly curved, a longitudinally extending drum at each side thereof at the bottom, and water-tubes connecting each drum with the space between the inner and outer sheets, the water-tubes extending from one drum crossing those that extend from the other drum, and the water-tubes that extend from each drum being nearer together at their lower ends than at their upper ends.

4. A fire-box for a locomotive boiler having separated inner and outer sheets at its top, a longitudinally extending drum at each side thereof at the bottom, and banks or nests of water-tubes connecting each drum with the space between said sheets, each nest of tubes having a staggered arrangement where they enter the drum and being in substantially the same plane where they enter the inner sheet.

and the tubes which extend from one drum crossing those which extend from the other drum.

5. A fire-box having at its top two sheets, and near its bottom at each side a longitudinally extending drum, a water leg connecting each drum with the space between the sheets, a plurality of banks of water-tubes connecting each drum with said space, the water-tubes of each bank having a staggered arrangement at the lower end and being in the same plane at the upper end, and the water-tubes of adjacent banks having a staggered arrangement, the water-tubes extending from one drum crossing those extending from the other drum.

6. A fire-box having two separated sheets at its top, a longitudinally extending drum at each side near the bottom, two separated sheets at each side connecting the drum with the sheets at the top, said sheets from the sides extending inwardly from both the top and the bottom, and water-tubes connecting each drum with the space between the sheets at the top of the boiler.

7. A fire-box having two separated sheets at its top, a longitudinally extending drum on each side near the bottom, two separated sheets at each side connecting the drum with the sheets at the top, said sheets at the side extending inwardly from both the top and the bottom, and water-tubes connecting each drum with the space between the sheets at the top of the boiler, the water-tubes extending from one drum crossing those extending from the other drum.

8. A fire-box for a locomotive boiler having two separated sheets at the top, a longitudinally extending drum at the bottom on each side, water-tubes connecting each drum with the space between the sheets at the top, the water-tubes extending from one drum crossing those extending from the other drum, and separated sheets at each side of the boiler, the upper and lower portions of each sheet being inclined inwardly toward the center of the fire-box.

9. A boiler having a water space at the top, a longitudinally extending drum at each side near the bottom, and water-tubes connecting each drum with the space at the top of the boiler, each drum being formed of two U-shaped parts connected together along opposite sides of the drum, the portion on the inner side to which the water-tubes are connected being formed of wrought metal and the outer portion being formed of cast metal.

10. A boiler having a water space at the top, a drum at each side thereof at the bottom, water-tubes extending from each drum to the space at the top of the boiler, and separated sheets forming a water leg at the sides of the boiler, said sheets on each side of the boiler both being riveted to the outside of the corresponding drum.

11. A boiler having a water space at the top, a drum on each side thereof near the bottom, water-tubes extending between said drums and the water space, water legs at each side of the boiler connecting the drums with the space at the top of the boiler, and a mud-ring below the drums.

12. A boiler having two separated sheets at the top forming a water space between them, and two separated sheets at each side of the boiler constituting a water leg, the inner sheet at each side of the boiler being riveted to both the inner and outer sheets at the top of the boiler.

13. A boiler having two separated sheets at the top forming a water space between them, and two separated sheets at each side of the boiler constituting a water leg, the inner sheet at each side of the boiler being riveted to both the inner and outer sheets at the top of the boiler, and both sheets at each side of the boiler being riveted to the top sheet.

14. A boiler comprising two separated sheets at its top forming a water space between them, the outer sheet being curved to the arc of a true circle, and the inner sheet being flattened on its sides, a drum at each side of the boiler, and water tubes connecting each drum to the flattened portion of the inner sheet on the opposite side of the boiler, the water-tubes which extend from one drum crossing those which extend from the other.

15. A fire-box for a locomotive boiler having separated inner and outer sheets at its top, the inner sheet being outwardly curved, a longitudinally-extending drum at each side thereof at the bottom, and water-tubes connecting each drum with the space between the inner and outer sheets, the water-tubes extending from one drum crossing those that extend from the other drum, and the water-tubes that extend from each drum being spread at their upper ends to cover substantially the entire area of the inner sheet.

16. A boiler having a water space at its top and a longitudinally-extending drum at each side thereof at the bottom, water-tubes extending from each drum to the space at the top of the boiler, and separated sheets forming a water leg at each side of the boiler, the lower ends of the sheets for each water leg overlapping each other and being secured to the outside of the corresponding drum.

17. A fire-box having a water space at its top, a longitudinally-extending drum at each side at the bottom, two separated sheets at each side connecting the drum with the space at the top and forming between them a water leg, said sheets being bent inwardly at their central longitudinal median line, and water-tubes connecting each drum with the space at the top.

18. A fire-box for a locomotive boiler having inner and outer sheets at the top, the inner sheet being outwardly curved, a longitudinally-extending water space at each side near the bottom, a water leg at each side connecting the corresponding water space with the space between the two sheets, and water-tubes connecting each water space at the lower side of the drum with the space between the sheets at the top of the drum, the water-tubes that extend from one water space crossing those that extend from the other.

19. A fire-box for a locomotive boiler having inner and outer sheets at the top, the inner sheet being outwardly curved, a longitudinally-extending water space at each side near the bottom, a water leg at each side connecting the corresponding water space with the space between the two sheets, and water-tubes connecting each water space at the lower side of the drum with the space between the sheets at the top of the drum, the water-tubes that extend from one water space crossing those that extend from the other, and the water-tubes that extend from each water space being nearer together at their lower ends than at their upper ends.

20. A fire-box having a chamber at its top and a longitudinally-extending water space at each side near the bottom, two sheets at each side forming between them a water leg which connects the space at the side with the chamber at the top, said sheets extending inwardly from both the top and the bottom.

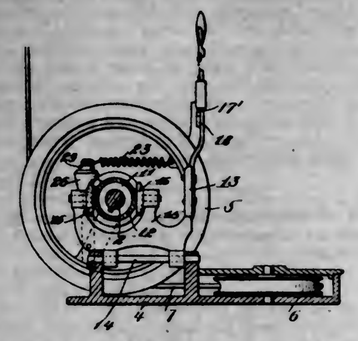
21. A fire-box having a chamber at its top and a longitudinally extending water space at each side near the bottom, two sheets at each side forming between them a water leg which connects the space at the side with the chamber at the top, said sheets extending inwardly from both the top and the bottom, and water-tubes connecting each water space with the chamber at the top.

22. A fire-box having a water space at its top and a longitudinally-extending water space at each side at the bottom, two separated sheets at each side forming a water leg connecting the space at said side with the water space at the top, said sheets each being bent inwardly at their central longitudinal median line, and water-tubes connecting each longitudinally-extending water space with the space at the top of the fire-box.

870,881. CLUTCH MECHANISM. CARL T. PAINTER, Chattanooga, Tenn., assignor to Patten Manufacturing Company, Chattanooga, Tenn., a Corporation of Tennessee. Filed Jan. 4, 1907. Serial No. 350,778.

1. The combination of a wheel having a rim, a divided ring disposed within said rim and for directly engaging the latter, said ring being provided with a rigid arm at one end thereof and extending inward from said end substantially radially of the ring, and a lever, the arm having a slot through which said lever passes, the toe of the lever being positioned to engage the free end of the ring, the lever being pivoted to said arm and being

operable to expand the ring to cause the same to engage said rim.



2. Clutch mechanism having a divided ring, and a lever to expand the ring, the opposite ends of the ring having notches in both of which the lever operates.

3. Clutch mechanism having a divided ring, a lever for expanding the ring having a key-way, a key movable in said key-way longitudinally of the lever and provided with offset ends, an anti-friction roller surrounding the lever and key, a collar between the outer offset end of the key and the anti-friction roller, and a holding screw tapped through the collar to engage against the key.

4. The combination of a wheel, a divided ring provided at one end with a rigid arm extending inward from said end substantially radially of the ring, a lever pivotally mounted upon the arm between the ends thereof, the toe of the lever being positioned to engage the free portion of the ring for expanding the same into clutching connection with the wheel, and a spring connected with the lever and the ring for operating the lever in a direction to cause the same to permit contraction of the ring.

5. The combination of a wheel having a rim, a divided ring disposed within said rim and for directly engaging the latter, said ring being provided with a rigid arm at one end thereof extending inward from said end and substantially radially of the ring, a lever pivotally mounted upon said arm between the ends thereof, the toe of the lever positioned to engage the free end of the ring for expanding the same into engagement with said rim, and a tapered anti-friction roller adjustably mounted on the lever.

6. The combination of a wheel having a rim, a divided ring disposed within said rim and for directly engaging the latter, said ring being provided with a rigid arm at one end thereof extending inward from said end and substantially radially of the ring, a lever pivotally mounted upon said arm between the ends thereof, the toe of the lever positioned to engage the free end of the ring for expanding the same into engagement with said rim, and a spring connected with the lever and the ring for operating the lever in a direction to cause the same to permit contraction of said ring.

870,382. METAL-CEILING CONSTRUCTION. MANVILLE E. PERRY, Philadelphia, Pa., assignor of one-half to Evan L. Moore, Philadelphia, Pa. Filed Feb. 21, 1907. Serial No. 358,746.



1. The process of mounting metal ceilings formed of detached plates, which consists in providing flexible supports for said plates having duplex engaging parts and duplex attaching parts, securing one of said supports permanently in place, securing another support in proper relation thereto but unattached at one side, slipping the edges of the ceiling plates between the engaging parts of both the fixed and semi-detached supports, and maintaining said latter support in the semi-detached condition until all of the plates to be confined thereby are mounted in place.

2. The process of mounting metal ceilings formed of detached plates, which consists in providing flexible supports for said plates having duplex engaging parts and duplex attaching parts, securing one of said supports permanently in place, securing another support in proper relation thereto but unattached at one side, slipping the edges of the ceiling plates between the engaging parts of both the fixed and semi-detached supports, maintaining said latter support in the semi-detached condition until all of the plates to be confined thereby are mounted in place, and then permanently securing the semi-detached support whereby the plates engaged by one side of the same are clamped in place.

3. In a metal ceiling structure, the combination of a series of plates forming said ceiling, supporting means for said plates, the latter having turned edges, and clamping means carried by said supports and engaging the lower surface and the margin of the turned edges only of said plates.

4. In a metal ceiling structure, the combination of the plates, supports for the same, said supports having parting strips closing the joint between said plates and engaging the lower surface of the same, and clamping means carried by said supports engaged by the margin of the turned edges only of the plates whereby the latter are confined by the parting strips and said clamping means.

5. In metal ceiling construction, the combination of plates forming the same and having turned edges, and supports for said plates having parting strips and clamping portions respectively engaging the lower surface and the margin of the turned edges only of said plates, said supports being made of single sections of sheet metal and having flaring legs.

6. In metal ceiling construction, the combination of plates forming the same and having turned edges, and supports for said plates having parting strips and clamping portions respectively engaging the lower surface and the margin of the turned edges only of said plates, said supports being made of sheet metal in a single piece, and being flexible for adjustment from and toward the mounting to which they are secured.

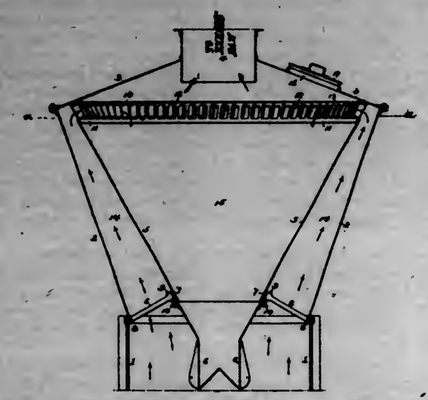
7. In metal ceiling construction, the combination of the plates forming the same and having turned edges, supports for said plates having clamping portions to receive said turned edges, a parting strip covering said edges and integral with the support, and supplemental clamping members also having parting strips to receive the edge of the sheets and disposed at right angles to the parting strips of the supports.

8. A flexible support for metal ceiling plates having turned edges, said support having clamping means for engagement with the lower surface and the margin of the turned edges only of said plates, and having flaring legs capable of adjustment from and toward their point of attachment.

9. As a new article of manufacture, a support for metal ceiling plates having turned edges, said support having a parting strip formed of two plies of the metal pressed together, shoulders between which and said parting strip the edges of the plates are confined by engagement with the lower surface and the margin of the turned edge only of said plates, and flexible legs whereby the position of said parting strip may be adjusted from and toward the point at which the support is attached, said legs being abruptly bent to form the shoulders.

10. As a new article of manufacture, a support for metal ceiling plates having turned edges, said support having means for engagement with the lower surface of the plates and shoulders for engagement with the margin of the turned edges of the same, and compressible supporting legs whereby said edges can be clamped by the shoulders at the point of engagement with said support, said legs being abruptly bent to form the shoulders.

870,353. SEPARATOR FOR POWDERED MATERIAL. JOHN F. POOT, Philadelphia, Pa., assignor to The American Sugar Refining Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 11, 1903. Serial No. 254,954.



1. In a separator for powdered material, the combination of an outer casing forming a continuation of the casing of a grinding mill, a drum centrally disposed within said casing and forming a chamber between its outer wall and the inner wall of the casing, and a draft pipe disposed above the casing and communicating with the interior of said drum, the chamber surrounding said drum being in communication with the interior of the same through openings at its top through which the lighter particles of material can flow laterally, and said drum being disposed wholly within the casing and communicating at its bottom with the grinding mill casing from which said powdered material is drawn.

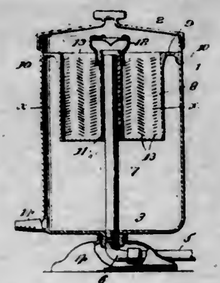
2. In a separator for powdered material, the combination of an outer casing forming a continuation of the casing of a grinding mill, a drum centrally disposed within said casing and forming between it and the casing an annular chamber, and a draft pipe disposed above the casing and communicating with the interior of the drum, said drum being also in communication with said chamber through openings around the top of the drum, which openings are provided with adjustable vanes or shutters, and being disposed wholly within the casing and communicating at its bottom with the grinding mill casing from which said powdered material is drawn.

3. In a separator for powdered material, the combination of an outer casing forming a continuation of the casing of a grinding mill, a drum centrally disposed within the same, and a draft pipe disposed above the casing and communicating with the interior of said drum, said drum forming a chamber between it and the casing and being in communication with said chamber through openings formed in the upper wall of the drum, said openings being provided with struck-up vanes or shutters susceptible of inclination with respect to the inner face of the drum, and said drum being disposed wholly within the casing and communicating at its bottom with the grinding mill casing from which said powdered material is drawn.

4. In a separator for powdered material, the combination of an outer casing forming a continuation of the casing of a grinding mill, a drum centrally disposed within the same with its axis substantially vertical and forming with the casing a chamber, said drum having in its upper portion openings through which the lighter particles of material can flow, a draft pipe disposed above the casing and communicating with the chamber inside the drum, said drum being disposed wholly within the casing and communicating at its bottom with the grinding mill casing from which said powdered material is drawn, and valve mechanism controlling such communication.

5. In a separator for powdered material, the combination of an outer casing forming a continuation of the casing of a grinding mill, a drum centrally disposed within the same and supported with its axis substantially vertical and forming with the casing a chamber, a draft pipe disposed above the casing and communicating with the chamber within said drum, the latter having openings at its top communicating with the chamber exterior the same and openings at its bottom communicating with the grinding mill casing fram which said powdered material is drawn, and swinging plates forming valves and normally closing said bottom openings.

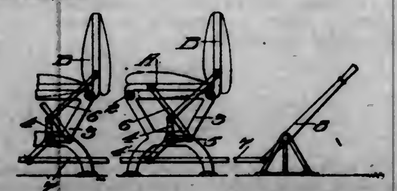
870,384. BEER-PIPE CLEANER. CHARLES H. RICHARDSON, Jr., Allegheny, Pa. Filed Nov. 24, 1906. Serial No. 344,971.



1. In a device of the character described, the combination of a body portion, a hollow stand upon which said body portion is mounted, means extending through the stand for connecting said body portion to a suitable source of water supply, the said body portion being provided with a water leg extending upwardly therein, a sieve-like container suspended within the body portion and surrounding the upper portion of the water leg and provided with a cap adapted to be placed over the upper end of the water leg and designed to establish communication between the interior of the water leg and the interior of the container, and a water outlet nozzle connected to the body portion.

2. In a device of the character described, the combination with a body portion provided with a water outlet nozzle and also provided with a water inlet pipe, one section of which extends upwardly within the body portion, and a receptacle adapted to be suspended within the body portion and provided with an open ended tube extending upwardly from its bottom and surrounding the upwardly extending portion of the water inlet pipe, and a cap secured to the upper end of said tube and extending over the upper end of the same, said cap being open at its lower edge and establishing communication between the interior of the tube and the interior of the receptacle, the said receptacle being provided with perforations in its side walls, and said walls being spaced from the walls of the body portion as and for the purpose set forth.

870,385. REVERSIBLE CAR-SEAT. EUGENE P. RIDEOUT, East Oakland, Cal., assignor of one-half to Fred W. Lake, Oakland, Cal. Filed Feb. 20, 1907. Serial No. 358,456.



1. In a reversible car-seat the combination of a suitable seat support, seat and back sections hinged to opposite sides of the support and arranged interchangeable with one another, a bell-crank, and cross-links having one end pivoted to an arm of the bell-crank and the other end to the section opposite.

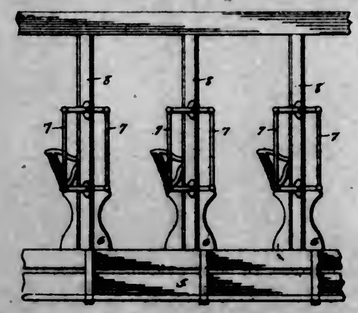
2. In a reversible car-seat the combination of a suitable seat support, seat and back sections hinged to opposite sides of the support and arranged interchangeable with one another, a bell-crank, cross-links having one end pivoted to an arm of the bell-crank and the other end to the section opposite, and means including a reciprocating bar and operating lever connected with the bell-crank to reverse the sections.

3. In a reversible car-seat, the combination of a suitable seat support, seat and back sections pivoted to the support, a Y lever fulcrumed to a fixed point of support, links connected with the Y and the sections to reverse the seat on the rocking of the Y, and means independent of the section to rock the Y.

4. In a car the combination of a plurality of seats each comprising independent hinged back and seat sections, a pivoted Y lever arranged with respect to each seat, links connecting the arms of each Y lever with respective sections of the seat, and connection between the stems of the several Y levers to operate all the seats simultaneously.

5. In a car the combination of a plurality of seats each comprising independent hinged back and seat sections, a pivoted Y lever arranged with respect to each seat, links connecting the arms of each Y-lever with respective sections of the seat, a bar detachably connecting the stems of all the Y-levers to operate all the seats simultaneously, and means for disconnecting any Y-lever from said bar to permit its seat to be operated independent of all the other seats.

870,386. HANDLE FOR CARS. GEORGE ROBBINS, Columbus, Ohio. Filed July 19, 1907. Serial No. 384,659.

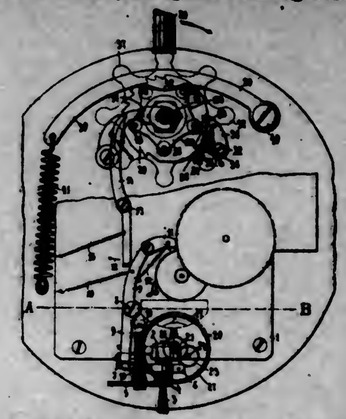


The combination with an open car having side posts upon both sides thereof, of handles fixed to said side posts, the handles upon one side of the car projecting forwardly from the side posts and the handles upon the other side of said car projecting rearwardly from said side posts.

870,387. FARE-INDICATOR. BERTHOLD SCHNEIDER, Berlin, Germany. Filed Sept. 12, 1906. Serial No. 334,312.

1. A fare-indicator comprising an odometer operating shaft, a cam disk carried thereby, a spring controlled oscillatory lever adapted to have one end engaged by the cam disk causing thereby the actuating of the lever in one direction, an indicating means for the distance which has been traversed and a pawl carried by the other end of the lever and adapted to actuate an indicating means when the lever is shifted in one direction by the cam disk.

2. A fare-indicator comprising an odometer operating shaft, a pinion keyed thereon, a worm-shaft, a spur wheel mounted upon the worm-shaft and adapted to be engaged and actuated by the pinion, an indicating means for checking the distance traversed, a worm-wheel carried by the worm-shaft, and indicating means for registering the distance traversed and an intermediate gear actuated by the worm-wheel for operating said indicating means.



3. A fare-indicator comprising a rotatable flag-shaft, a star-wheel keyed to the flag-shaft and having its periphery provided with obtuse-angled recesses, a spring-controlled lever having an obtuse-angled projection adapted to engage in the recesses of the star-wheel, and rolls carried by the angular portions of the star-wheel and adapted to engage and slide off the angular projection of the lever thereby prevent the adjustment of the apparatus for less than full fares.

4. A fare-indicator comprising the combination with a flag-shaft, of a locking mechanism to prevent the accidental operation of the indicator from its adjusted position indicating "empty" to a position to indicate "fares," said mechanism comprising a ratchet-wheel keyed upon the flag-shaft and provided with a recess, a spring-controlled pawl adapted to engage in the recess when the indicator has been adjusted to indicate "empty," and a spring-controlled bent lever adapted to engage in said recess when the indicator has been adjusted to indicate "empty," said bent lever and pawl when engaging in said recess locking the ratchet-wheel, said bent lever adapted to be shifted out of said recess by a backward movement of the flag-staff, said action further causing the removal of the pawl out of the recess and thereby release the ratchet-wheel.

5. In a fare-indicator the combination with a shield for exposing and concealing the indicating disk, of means for operating the shield, said means consisting of a series of links arranged in the form of a parallelogram, one of said links being stationary and attached to the shield and another of said links extending beyond the parallelogram, a link 47 connected to that link which extends beyond the parallelogram, a bent lever for actuating the link 47, and a cam adapted to engage the bent lever for operating it.

6. A fare-indicator comprising mechanism for returning a fare-indicating disk to zero when the fare indicator is set at "empty" or out of use, said means comprising the combination with the operating means for the indicating disk embodying a shiftable element provided with a stud, of an oscillatory lever adapted when shifted to bear against said stud thereby moving said element to an inoperative position, combined with a pawl to prevent back-lash for said disk, said pawl to prevent back-lash moved to inoperative position simultaneously with the moving of said element to an inoperative position by said lever.

7. A fare-indicator comprising the combination with an indicating disk, of means for arresting the movement of said disk after it has indicated the highest amount it is adapted to indicate, said means comprising a ratchet wheel for actuating the disk, a pawl for shifting the ratchet-wheel, a stop-pin carried thereby, a pawl 91 arranged in the path of said stop-pin for arresting the movement of the ratchet-wheel when the pin abuts against the pawl, said pawl 91 when engaged by said stop-pin adapted to

be forced against the pawl 70 and lock it, and means for releasing the pawl 70 to allow of the disk being returned to zero position.

8. A fare indicator comprising a rotatable flag shaft, a rotatable element carried thereby and having a plurality of recesses, a spring controlled member provided with a projection adapted to engage in said recesses, and rotatable members carried by said element and adapted to engage and slide off the projection of said spring controlled member, thereby preventing the adjustment of the apparatus for less than full fare.

9. A fare indicator comprising a rotatable flag shaft, a rotatable member carried thereby and having a plurality of recesses, a shiftable element provided with a projection adapted to engage in said recesses, and rotatable elements carried by said member and adapted to engage and slide off the projection of said shiftable element, thereby preventing the adjustment of the apparatus for less than full fare.

10. A fare indicator comprising the combination of a flag shaft, of a locking mechanism to prevent the accidental operation of the indicator from its adjusted position indicating "empty" to a position to indicate "fares", said mechanism comprising a rotatable member carried by the flag shaft and provided with a recess, a pair of locking elements engaging said recess when the indicator has been adjusted to indicate "empty", thereby locking said member, one of said elements adapted to be shifted out of said recess by a backward movement of the flag shaft, said action further causing the removal of the other of said elements out of the recess, thereby releasing the said member.

11. An indicator comprising a fare indicating mechanism, a flag staff connected thereto and adapted when shifted to actuate said mechanism to indicate the payment of a fare, a recess member connected with said staff, and a duplex means engaging in said member and adapted to prevent the actuation of said mechanism to indicate payment of fare when said flag staff is accidentally shifted.

12. An indicator comprising means for measuring the total distance traversed, operating means therefor, means for registering the actual distance traversed to constitute a check, means actuated from said operating means for operating the registering means, a fare indicating means, a flag staff connected thereto and adapted when shifted to actuate said mechanism to indicate the payment of a fare, and means to prevent the actuation of said mechanism to indicate payment of fare when said flag staff is accidentally shifted.

13. In an indicator comprising means for measuring the total distance traversed, operating means therefor, means for registering the actual distance traversed to constitute a check, means actuated from said operating means for operating the registering means, a fare indicating mechanism, a flag staff connected thereto and adapted when shifted to actuate said mechanism to indicate the payment of a fare, and means whereby the actuation of said mechanism is prevented for indicating other than full fare.

14. An indicator comprising means for measuring the total distance traversed, operating means therefor, means for registering the actual distance traversed to constitute a check, means actuated from said operating means for operating the registering means, a fare indicating mechanism, a flag staff connected thereto and adapted when shifted to actuate said mechanism to indicate the payment of a fare, means whereby the actuation of said mechanism is prevented for indicating other than full fare, and means whereby the actuation of said mechanism is prevented to indicate payment of fare when the flag staff is accidentally shifted.

15. An indicator for vehicles comprising an operating shaft, a cam disk and a pinion carried by said shaft, an indicator mechanism, a lever mechanism actuated by said cam disk for operating said indicating mechanism, a registering disk, means actuated by said pinion for operating the said disk, and means driven from a moving part of the vehicle and connected with said shaft for operating it.

870,388. PEN-GUIDE. ROBERT L. SHAW, Paterson, N. J. Filed July 20, 1907. Serial No. 384,774.



1. The combination of a pen-holder, a pen, and a pen-guide consisting of a curved shank mounted in the pen-holder and having a ball at its free end, substantially as described.

2. The combination of a pen-holder comprising a shank, a ferrule, and a sleeve inserted in said ferrule, a pen, and a pen-guide having one end flattened and inserted in between the ferrule and the sleeve, said pen-guide being curved away from the pen-holder, substantially as described.

870,389. WELL-TUBE STRAINER. GEORGE H. SHOEMAKER, Benton township, Berrien county, Mich. Filed Oct. 13, 1905. Serial No. 282,687.

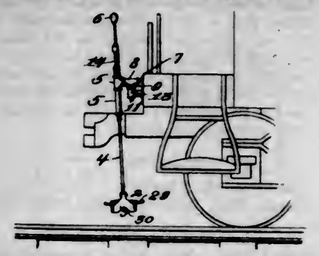


1. In a well tube strainer, the combination of an outer foraminated tube, an inner foraminated tube contained in the outer tube, a tubular screen of reticulated material interposed between and arranged close against the outer and inner foraminated tubes, and a solder connection occupying one of the openings in the outer tube and extending inward at a right angle therefrom and fastened of itself at its inner end in the interstices of the tubular screen, for the purpose set forth.

2. In a well tube strainer, the combination of an outer foraminated tube, an inner foraminated tube contained in the outer tube, a tubular screen of reticulated material interposed between and arranged close against the outer and inner foraminated tubes, a solder connection occupying one of the openings in the outer tube and extending inward at a right angle therefrom and fastened of itself at its inner end in the interstices of the tubular screen, and a packing ring fixed on the outer side of the upper portion of the outer foraminated tube, for the purpose set forth.

870,390. TORPEDO-PLACING MACHINE. HARRY W. SIMCOX, Louisville, Ky. Filed July 23, 1907. Serial No. 385,119.

1. In a torpedo-placing machine, the combination of a casing, a rod extending through the casing for vertical and turning movement with respect thereto, spring means acting against the rod to turn and to raise the same after the same has been lowered and turned by hand, and torpedo-placing mechanism connected with said rod.



2. In a torpedo-placing machine, the combination of a casing, a rod extending through the casing for vertical and turning movements, torpedo-placing mechanism connected with the rod, said rod being turnable to apply successively two torpedoes, and means for insuring the correct approach of the torpedo-placing mechanism toward a track rail in each of its two turned positions.

3. In a torpedo-placing machine, the combination of a casing having a slot provided at its lower end with branch slots, a rod extending through the casing for vertical and turning movements, a pin on the rod, to enter the branch slots in alternation during the depression of the rod, and torpedo-placing mechanism connected with the rod.

4. In a torpedo-placing machine, the combination of a laterally-swinging casing, a rod extending through the casing for vertical movement, and torpedo-placing mechanism connected with the rod.

5. In a torpedo-placing machine, the combination of a casing, a rod extending through the casing for vertical movement with respect thereto, torpedo-placing mechanism connected with the rod, a bearing, and a pivot on said casing, mounted in said bearing, to permit lateral swinging of the casing.

6. In a torpedo-placing machine, the combination of a casing, a rod extending through the casing for vertical movement with respect thereto, torpedo placing mechanism connected with the rod, a bearing, a pivot on said casing, mounted in said bearing, to permit lateral swinging of the casing, and a pin on said pivot, the bearing having a slot to receive said pin and the latter being adapted to abut alternately against the ends of said slot.

7. In a torpedo-placing machine, torpedo-placing mechanism involving an endwise-moving torpedo-ejecting device and a wheel, the wheel having diametrically opposite pins, the torpedo-ejecting device having a groove to receive one of said pins, and the wheel being adapted to turn to operate said ejecting device, on engagement with a rail and the other of said pins serving to engage the torpedo-ejecting device opposite sides of said groove to thereby limit the endwise movements of said torpedo-ejecting device.

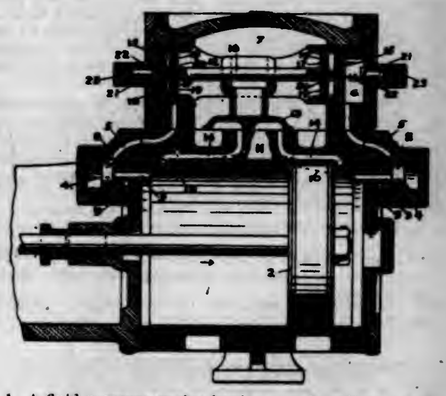
8. In a torpedo-placing machine, torpedo-placing mechanism involving a frame provided with an endwise-reciprocatory torpedo-ejecting device, a wheel supported by the frame and adapted to be turned by contact with a railway rail for operating said ejecting device, spring-arms arranged in pairs to overlie respectively the spring side branches of torpedoes supported by said frame and bosses on said frame, said spring-arms having portions coiled about said bosses.

9. In a torpedo-placing machine, torpedo-placing mechanism comprising a frame, an endwise-reciprocatory torpedo-ejecting device carried by said frame, a wheel carried by the frame, for operating the ejecting device when the wheel is turned by contact with a railway rail, a shaft carrying said wheel and supported by said frame, bosses surrounding the shaft and also carried by said frame, and spring-arms to overlie torpedoes supported by the frame, said spring-arms having portions coiled about said bosses.

10. In a torpedo-placing machine, torpedo-placing mechanism comprising a frame, an endwise-reciprocatory torpedo-ejecting device carried by said frame and having a groove in its upper side, the upper surface of said torpedo-ejecting device being plain at opposite sides of said groove, and a wheel carried by the frame and embodying two disks, and diametrically opposite pins connecting said disks, one pin being located in the groove to effect the endwise movement of the torpedo-ejecting device on the turning of said wheel, and the other pin serving to alternately engage the torpedo-ejecting device at opposite sides of said groove to thereby limit the movement of the same.

11. In a torpedo-placing machine, torpedo-placing mechanism involving a frame, a torpedo-ejecting device carried thereby, and an operating wheel for the said torpedo-ejecting device, rotatable when in contact with a railway rail, said frame being provided with sides having apertures the walls of which converge upwardly.

870,391. STEAM-ACTUATED VALVE. DANVILL W. STARRETT, Oakland, Cal. Filed Mar. 8, 1906. Serial No. 304,861.



1. A fluid pressure engine having a main cylinder, a piston reciprocating therein, a fluid pressure chamber, a valve piston reciprocating therein, its heads having passages for the escape of the pressure fluid, a valve moved by said piston and controlling the ports from said chamber to the cylinder and from the cylinder to exhaust, passages leading from the ends of the pressure fluid chamber to exhaust, escape valves controlling said latter passages and operated by the main piston in its reciprocation, and an auxiliary piston reciprocating within the valve piston and also having passages in its heads, each head of the auxiliary piston adapted to close the head of the valve piston when it moves up thereto, substantially as described.

2. A fluid pressure engine having a main cylinder and a piston reciprocating therein, a fluid pressure chamber and a valve piston reciprocating therein, its heads having passages for the escape of the pressure fluid, a valve moved by said piston and controlling the ports from said chamber to the cylinder and from the cylinder to exhaust, passages leading from the ends of the pressure fluid chamber to exhaust, escape valves controlling said conduits and operated by the main piston in its reciprocation, and an auxiliary piston reciprocating with the valve piston and also having passages in its heads, the valve piston heads having conical mouths to their apertures, and the auxiliary piston heads having conical plugs adapted to close said mouths, substantially as described.

3. A fluid engine having a main cylinder and a piston reciprocating therein, a fluid pressure chamber and a valve piston reciprocating therein, its head having passages for the escape of the pressure fluid, a valve moved by said piston and controlling the ports from said chamber to the cylinder and from the cylinder to exhaust, passages leading from the ends of the pressure fluid chamber to exhaust, escape valves controlling said conduits and operated by the main piston in its reciprocation, an auxiliary piston reciprocating within the valve piston and also having passages in its heads, each head of the auxiliary piston being

adapted to close the head of the valve piston when it moves up thereto, and resiliently supported shutters for closing the passages in the valve piston heads, substantially as described.

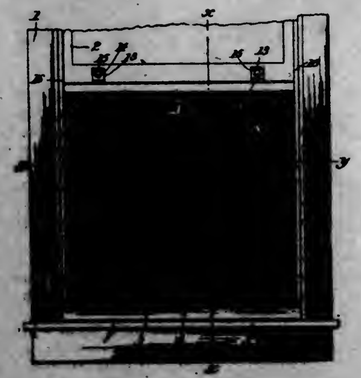
870,892. TROUSERS-GUARD. MARTIN M. STEARLING, Missoula, Mont. Filed May 10, 1907. Serial No. 372,881.



1. An article of manufacture, comprising a single piece of spring material bent on itself to form a loop, a compound curvature formed near each end of the said piece and arranged diametrically opposite each other, a hook at one terminal of the said piece, and a flanged head at the opposite terminal thereof for engagement with the hook, said hook and flanged head bent angularly with respect to the body of the single piece of material.

2. A trousers guard comprising a piece of spring material having near opposite ends a compound curvature and being bent intermediate the curvatures to form a loop portion for encircling a limb, and a hook and head member carried by the respective ends of the single piece of material for locking engagement with each other.

870,893. ROLLING WINDOW-SCREEN. BALTHASAR STEINMAN, Scranton, Pa. Filed Apr. 26, 1907. Serial No. 370,477.



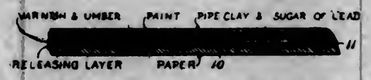
1. The combination, with a casing secured to a window sill and having a slot at one end opening at the bottom, of a screen-carrying roller arranged in said casing and having a lug extending into said slot whereby said roller is retained in said casing and cannot be taken therefrom without removing said casing from the window sill.

2. The combination, with a casing adapted to fit snugly between the sides of a window frame, said casing having a slot at one end opening at the bottom and a flange along its front edge whereby it is secured to the window sill, of a screen-carrying roller having a lug extending into said slot whereby said roller is retained in said casing and cannot be taken therefrom without removing said casing from the window sill.

3. The combination, with a window frame, of a casing secured to the window sill, a roller mounted in said casing, a screen wound on said roller, guides on the sides of said window frame, a flat strip secured to the upper edge of said screen and adapted to fit between said guides, and lifts hinged to said strip and having perforations adapted to engage lugs on the bottom bar of the window sash.

4. The combination, with a window frame, of a casing fitting snugly between the sides of said frame, said casing having a flange along its front edge whereby it is secured to the window sill, a roller mounted in said casing, a screen wound on said roller, guides on the sides of said window frame and fitting down closely upon said casing, a flat strip secured to the upper edge of said screen and adapted to fit between said guides and lifts hinged to said strip and having perforations adapted to engage lugs on the bottom bar of the window sash.

870,894. ARTIFICIAL VENEER. CHRISTIAN TANGENBERG, Chicago, Ill. Filed Oct. 22, 1906. Serial No. 340,047.



1. An artificial transfer veneer comprising an absorbent base of yieldable or flexible material, a releasing layer thereon, an ornamental varnish layer on the releasing layer, a layer of paint on the varnish layer, and a final layer of non-fibrous, non-adhesive material on the layer of paint.

2. An artificial veneer comprising a flexible absorbent base, a releasing layer thereon, an ornamented layer of varnish or the like on the releasing layer, a layer of slow-drying paint on the ornamental layer of varnish, and a non-adhesive layer on the layer of paint.

3. An artificial veneer comprising a base of flexible material, a releasing layer thereon, a plurality of layers of paint or the like on the releasing layer, and a non-adhesive layer formed of pipe clay and sugar of lead arranged on top of the layer of paint.

4. An artificial veneer comprising a flexible absorbent base, a releasing layer thereon, an ornamented layer of varnish or the like on the releasing layer, a layer of slow-drying paint on the ornamented layer of varnish, and a non-fibrous, non-adhesive layer on the layer of paint.

5. An artificial veneer comprising a flexible absorbent base, a releasing layer thereon, an ornamented layer of varnish or the like on the releasing layer, a layer of slow-drying paint on the ornamented layer of varnish, and a non-fibrous, non-adhesive layer on the layer of paint acting as a drier for the slow-drying paint.

6. The herein described method of manufacturing artificial veneer, said method consisting in applying a soluble releasing layer to a flexible base, placing thereon a layer of varnish or the like, ornamenting said layer, covering the ornamental layer by a layer of paint, and finally applying a layer of non-fibrous non-adhesive material.

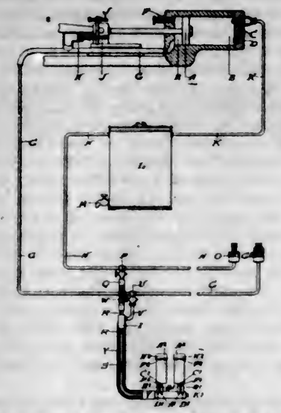
870,895. APPARATUS USED FOR MILKING COWS. WILLIAM J. TEESE, Balaclava, Victoria, Australia, assignor to William Henry Blackham, Melbourne, Australia. Filed Apr. 19, 1907. Serial No. 369,084.

1. In the apparatus used for milking cows a reciprocating-pump cylinder having an inlet valve and a relief valve, said inlet valve being closed by a spring and opened by an adjustable tappet, said relief valve being closed by a spring and opened by an adjustable tappet, said tappets being reciprocated by the pump, all as and for the purposes hereinbefore described or as illustrated in the drawings.

2. In an apparatus for milking cows, a reciprocating-pump cylinder in one end of which a vacuum is formed and in the other end of which compressed air is formed, an inlet valve upon the compressed air end of the cylinder, a relief valve, and adjustable tappets actuated by said pump for opening said valves, for the purpose set forth.

3. In the apparatus used for milking cows a milk and vacuum pipe line having a cock thereon, an intermediate pipe communicating with said cock in which intermediate pipe is a glass tube, said intermediate pipe communicating with an inner pipe inside an outer pipe, said outer pipe being closed at its top upon said inner pipe in combination with a compressed air and vacuum pipe line having a cock

thereon, an intermediate pipe attached to said cock, said intermediate pipe communicating with the outer pipe, all as and for the purposes hereinbefore described or as illustrated in the drawings.



4. In the apparatus used for milking cows an external compressed air and vacuum udder pipe inside which is an internal milk and vacuum udder pipe, a plug ring between the two said pipes, a removable inspection and cleansing plug in the internal pipe, milk and vacuum branches passing through the external pipe and into the internal pipe, compressed air and vacuum branches communicating with the external pipe, all as and for the purposes hereinbefore described or as illustrated in the drawings.

5. In the apparatus used for milking cows a teat cup the bottom end of which has attached thereto a piston, said piston moving within a cylindrical casing and consisting of an upper and a lower cup leather, an upper and a lower and an intermediate disk, said upper disk having a concave area in its middle, a milk discharge tube uniting the bottom of the teat cup and the piston, the top end of said milk discharge tube having a flange thereon, the underneath portion of said flange being concave, a compressed air and vacuum tube passing through said piston, all as and for the purposes hereinbefore described or as illustrated in the drawings.

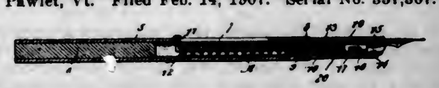
6. In the apparatus used for milking cows, a reciprocating pump in one end of which a vacuum is formed, which vacuum is communicated to a milk and vacuum reservoir and to a milk and vacuum pipe line having a vacuum regulating valve thereon, in the other end of which reciprocating pump compressed air and partial vacuum are formed, an air inlet valve to said pump also a relief valve upon said pump or upon a compressed air and vacuum pipe line leading from said pump, said air inlet valve and relief valve being operated by tappets, a pressure regulating valve upon said compressed air and vacuum pipe line, all as and for the purposes hereinbefore described or as illustrated in the drawings.

7. In apparatus used for milking cows, a vacuum pipe communicating with the milk and vacuum reservoir, a milk and vacuum pipe line having a vacuum regulating valve thereon, a cock upon said milk and vacuum pipe line communicating with an intermediate pipe having a window cut therein inside which is a glass tube, said intermediate pipe communicating with an inner pipe, said inner pipe communicating with an internal flexible milk and vacuum pipe, in combination with the compressed air and vacuum pipe-line, containing a pressure-regulating valve, an outer pipe, an intermediate pipe connecting said air and vacuum pipe-line with said outer pipe, a cock in said last-named intermediate pipe, and an external flexible compressed air and vacuum pipe communicating with said pipe, for the purpose set forth.

8. In apparatus used for milking cows an external flexible compressed air and vacuum pipe the upper end of which is attached to an outer pipe and the lower end to an external compressed air and vacuum udder pipe, branches leading from the said udder pipe, flexible tubular connections on said branches, each connection leading to a compressed air and vacuum tube, a teat-cup, a piston beneath said cup, and to which the upper end of said compressed-air and vacuum-tube is connected, in combination with an internal flexible milk and vacuum pipe the upper end of which is attached to an inner pipe and the lower end of which is attached to an internal milk and vacuum udder pipe, the end of said internal milk and vacuum udder pipe having a removable inspection and cleansing plug therein, an annular plug ring between the ends of said inner and outer udder pipes, branches passing through the external compressed air and vacuum udder pipe and into the internal milk and vacuum udder pipe, flexible connections attached to said branches, each said connection being attached to a milk discharge tube, the upper end of which is attached to the bottom of said teat cup, all as and for the purposes hereinbefore described or as illustrated in the drawings.

9. In apparatus used for milking cows a cylindrical casing having a neck-portion with an overturned edge beyond said neck-portion, a teat-cup in said casing provided at its top with a flange fitting over the overturned edge of the casing, an udder ring having a turned down portion bearing against the flange of said teat-cup, the lower end of said cylindrical casing being open, a piston inside the lower end of said cylindrical casing, said piston being attached by a milk discharge tube to the bottom of the teat cup, a compressed air and vacuum tube passing through the said piston and communicating with an annular chamber between the said teat cup and the cylindrical casing, all as and for the purposes hereinbefore described or as illustrated in the drawings.

870,896. PENHOLDER. WILLIAM W. THOMAS, West Pawlet, Vt. Filed Feb. 14, 1907. Serial No. 357,367.



1. A pen holder comprising a handle having a chamber therewithin opening through its forward end and having a longitudinal slot communicating with the chamber, a core engaged in the forward portion of the chamber and extending outwardly thereof, said core having a passage formed therethrough, a rod slidably engaged within the handle and the core and having its inner end turned laterally to extend through the slot of the handle and having a lateral portion extending out through the slot, a collar carried by the inner portion of the rod and arranged for engagement of the sides of the chamber to prevent disengagement of the laterally turned portion of the rod from the slot, a spring engaged with the rod between the collar and the inner end of the core, a sleeve engaged with the outer portion of the core, a tube slidably engaged within the sleeve and arranged for the reception of a pen point between it and the sleeve, a block slidably engaged within the tube, means for limiting the movement of the block with respect to the tube and for movement of the tube with the block, and a pin carried by the block and extending laterally beyond the tube for engagement of a pen point, said rod being engaged in the block to move the latter with the rod.

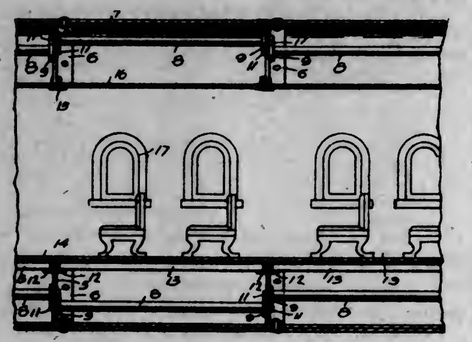
2. In a pen holder the combination with a sleeve, of a tube slidably engaged within the sleeve and arranged for the reception of a pen point between it and the sleeve, said tube having a longitudinal slot therein, a block slidably disposed within the tube, a pin carried by the block and extending through the slot of the tube, means for moving the block, and means for limiting the movement of the block with respect to the tube and for movement of the tube with the block.

3. In a pen holder, the combination with inner and outer members arranged for the reception of a pen point therebetween, said inner member being movable for the ejection of a pen point so engaged, of means for initially moving the pen point with respect to the inner and outer

members and for subsequently moving the inner member to eject the point.

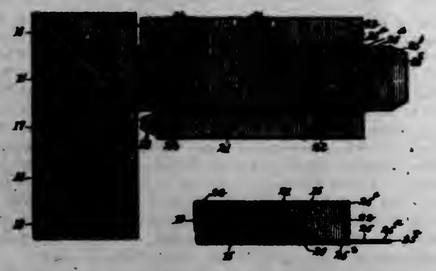
4. A pen holder comprising a handle having a chamber formed therewithin opening through its forward end, said handle having a longitudinal slot communicating with the chamber, a core engaged in the forward end of the chamber and extending therebeyond, said core having a passage therethrough, a rod slidably engaged within the chamber and having an end turned to extend outwardly through the slot a collar carried by the inner portion of the rod, a spring engaged between the collar and core to hold the rod yieldably against forward movement, a sleeve engaged with the forward portion of the core, and pen-engaging means carried by the forward end of the rod for movement therewith into and out of coöperative relation to the sleeve.

870,397. RAILWAY-CAR. FRANK E. THOMPSON, Tiskilwa, Ill. Filed Sept. 13, 1906. Serial No. 334,522.



A structure of the class described comprising a plurality of annular frames, tie-rods having collars abutting the opposing sides of adjacent frames, the said tie-rods being threaded at their ends, nuts engaged upon the threaded ends of the tie-rods and abutting the frames, and a shell inclosure for the frames.

870,398. BOX. FRANCIS E. WARD, New York, N. Y. Filed July 22, 1905. Serial No. 270,796.



1. A box comprising an inner or tray-like part formed of a bottom panel, two side panels at opposite edges of the bottom panel, tabs at the ends of the side panels, the tabs being adapted to form the ends of the sections of the box, a connecting piece projecting from one end of the bottom panel, and a tongue projecting from the other end of the bottom panel, said tongue being folded upon itself and having its end passed under the tabs, the pull piece being foldable against the outer faces of said tabs and an outer part or casing open at both ends and within which said inner or tray-like part slides, the said limiting or connecting piece of the tray being joined to the end of the bottom of the casing.

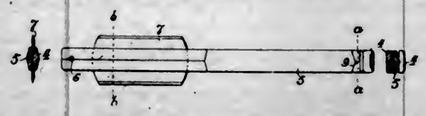
2. A box comprising an inner or tray-like part formed of a bottom panel, two side panels at opposite edges of the bottom panel, tabs at the ends of the side panels, the tabs being adapted to form the ends of the sections of the box, a foldable connecting piece projecting from one end of the bottom panel, and a tongue projecting from the other end of the bottom panel, said tongue being folded upon itself to form a pull piece and having its ends passed under the tabs, the pull piece being foldable against the outer faces of the tabs and an outer part or casing open at both ends and within which said inner or tray-like part slides, the said limiting or connecting piece of the tray being joined to the end of the bottom of the casing, all of said parts being formed of an integral section of material.

3. A box, comprising an open ended casing, and a tray slidable in the casing, said tray being formed of a bottom panel, two side panels at the edges of the bottom panel, tabs at the ends of the side panels, a foldable piece projecting from one end of the bottom panel of the tray and secured to the bottom of the casing, and a tongue projecting from the opposite end of the bottom panel, said tongue being folded upon itself to form a pull piece and having its end passed under the tabs, bent up over the edges of the same and secured to the outer faces thereof, said pull piece being foldable against the outer faces of the tabs.

4. In a box, the combination with a casing open at both ends, of a coverless box fitted to slide in the casing, the box being provided with extensions projecting from the ends of the bottom of the box, one extension being creased or scored at the middle of its length and secured to the bottom of the casing at one end thereof, and the other extension being folded and its end passed into the box between the bottom and end thereof, the folded portion of the said extension forming a pull piece and adapted to lie against the end of the box.

5. A blank, comprising a piece of flexible material having score lines to form two wide panels, a narrow panel connecting the wide panels, and narrow panels at the outer edges of the wide panels, and a second piece of flexible material projecting from one longitudinal edge of the first piece opposite one of the wide panels thereof and provided with score lines to form a main panel, side panels having tabs at each end, two panels at the inner end of the main panel, and a tongue at the outer end of said main panel and projecting beyond the tabs of the side panels, the tongue being provided with creases or scores.

870,399. HOLDER FOR USE IN SHARPENING BLADES OF SAFETY-RAZORS. NELSON A. WELLES, Wyalusing, Pa. Filed Dec. 1, 1906. Serial No. 345,867.



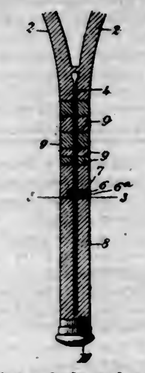
1. A holder for use in sharpening double edged blades of safety razors, consisting of a handle member and a clamping member provided with means for holding at its middle the blade of a safety razor so as to expose both edges thereof and beveled towards either edge to serve as a guide in sharpening both edges of the blade.

2. A holder for use in sharpening blades of safety razors consisting of a handle portion having a recurved end notched on its inner surface, a curved clamping portion pivoted to the opposite end thereof and having a ridge at its free end for engagement with the notch in said recurved end and means for holding the blade between said members.

3. A razor blade holder having a handle, and two clamping members adapted to hold between them a double-edged razor blade, each of said clamping members having its outer side beveled in two planes meeting at the axis of the clamping member, and respectively lying in the same planes as the planes of the edges of the said razor blade.

4. A device for holding safety razor blades, consisting of a pair of interpivoted members having opposed clamping portions of less width than the width of the razor blade to be clamped and shaped to expose both edges of the blade to the strop simultaneously, one of said members having holding projections on its inner face adapted to enter holes in the blades and both clamping portions having their outer surfaces double-beveled, substantially as described.

870,400. CRUTCH. ALVIN D. WICK, Topeka, Kans., assignor of one-third to William W. Wick, Jr., Portland, Oreg. Filed Mar. 19, 1907. Serial No. 363,256.



1. A crutch having a body and a main leg section removably attached thereto, and removable blocks between said main leg section and said body and adapted to be removed or replaced to change the length of the crutch.

2. A crutch having a body with a stem extending downwardly from the lower end thereof, and a leg attached to said stem and having a plurality of removable blocks adapted to change the length of the crutch.

3. A crutch having a body with a threaded stem extending downwardly from the lower end thereof, a plurality of blocks received over said stem, a main leg section below said blocks and having a recess in the side thereof, and a nut mounted in said recess and received on said stem.

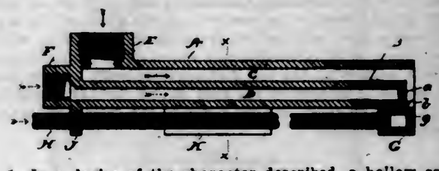
870,401. NON-REFILLABLE BOTTLE. AUGUST WICKE, New York, N. Y. Filed Apr. 5, 1907. Serial No. 366,510.



1. A closure for bottles, comprising an annular body adapted to be held within the bottle neck by frictional engagement therewith, a conical lining for the passage of said body, a substantially cone-shaped cup adapted to seat within said passage and close the same, projections at the smaller end of said cup for limiting the outward movement thereof, and a weight adapted to engage with the bottom of said cup for forcing the latter into place.

2. A bottle having a perforated diaphragm adjacent the mouth thereof, and a closure within the neck thereof, said closure comprising an annular body held in place by a frictional engagement with the walls of the bottle neck and having a centrally disposed passage through the same, a cone-shaped lining for said passage, a cone-shaped cup adapted to seat within said lining and control the flow of liquid through said passage, a ball adapted to engage with the bottom of said cup for moving it in one direction, a second ball within the bottle body for engaging with the cup to move the latter in the opposite direction, and an air-tube extending from the bottom of the bottle through the annular body at one side of the main passage therethrough.

870,402. LOCOMOTIVE OIL-BURNER. GEORGE E. WITT, San Francisco, Cal. Filed Sept. 19, 1905. Serial 279,188.



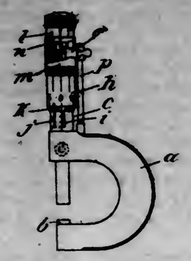
1. In a device of the character described, a hollow casing having a central web dividing its interior into parallel upper and lower passages, said casing having means by which said passages may be respectively connected to an oil and steam supply, said oil passage extending through the front end of the casing and said web terminating short of the front extremity of the casing, and said casing having a vertical wall connecting with the front end of the web and extending over and closing the front end of the underlying steam passage except for a slit in said wall, said casing having a lip positioned in front of and below said slit, to enable the oil emerging from the oil passage to flow downward over said wall and across said slit into the range of action of the steam issuing from the latter.

2. In an oil burner the combination of a hollow casing having a web which divides its interior into upper and lower passages for oil and steam respectively said web terminating short of the front end of the casing and connecting with a vertical wall which extends across the front end of the steam passage and closes said steam passage except for a slit formed in said wall, and a lip at the base of the vertical wall and projecting in front thereof below said slit, said casing having a hollow projection on the lower part of its front end and closed on all sides except for a slit in its front wall below said lip, and a supplemental steam pipe entering said hollow projection and delivering steam thereto whereby oil overflowing the lip will flow down over the wall of the hollow projection and into the range of action of the steam delivered through the slit in said projection.

3. An oil burner provided with oil and steam passages having outlets arranged in parallel relation, the oil outlet being provided with a gutter of maximum depth at the center and having a rear dam wall, a central bottom wall, side walls inclining downwardly from the sides of the outlet to the bottom wall, and barrier lips projecting upwardly from the outer edges of the side walls in parallel relation to said dam wall and inclining downwardly from the sides of the outlet to said bottom wall, the bottom wall forming a shelf of restricted width between the lower ends of the side walls and barrier lips.

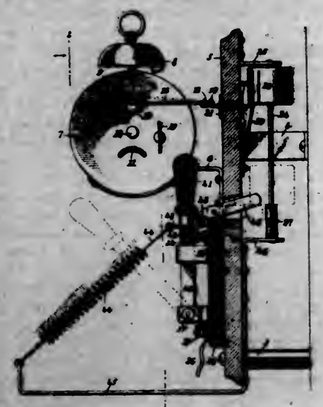
4. An oil burner provided with oil and steam passages having outlets arranged in parallel relation, the oil outlet being provided with a gutter of maximum depth at the center and having inclined side walls leading thereto, and lips projecting upwardly from said side walls and inclined toward the deepest portion of the gutter and separated to form a shelf for the reduced flow of oil therethrough.

870,403. MICROMETER-GAGE. LOUIS C. WOERNER, Berlin, Germany. Filed Feb. 5, 1907. Serial No. 355,789.



In a micrometer gage, a hollow shank provided with inch and millimeter scales; a micrometer screw working in the shank and having a hollow cap furnished with circular graduations at the edge for reading off fractions of the unit of measurement determined by the pitch of the micrometer screw, and vertical divisions corresponding with the other unit of measurement; and a sleeve rotating and axially sliding on the cap and provided with a scale for reading off fractions of the said second unit of measurement; and an index for the scale on the sleeve; substantially as described.

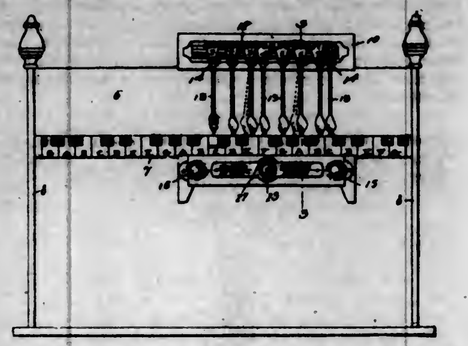
870,404. TIME-CONTROLLED ELECTRIC SWITCH. JOHN W. WOOD, Mobile, Ala., assignor of two thirds to Charles W. Stanton and James H. Zelnicker, Mobile, Ala. Filed July 3, 1907. Serial No. 382,053.



1. The combination of a clock provided with an alarm having a movable member, a link connected with said movable member, a spring latch connected with said link and adapted to be moved thereby, a weight engaging said spring latch and supported temporarily thereupon, a buffer for said weight, a lever disposed partially within the path of said weight, and an electric switch connected temporarily with said lever and adapted to be released by movement of the same.

2. The combination of a clock provided with an alarm having a movable member, a link connected with said movable member, a spring latch connected with said link and adapted to be moved thereby, a weight engaging said spring latch and supported temporarily thereupon, an electric switch, and releasing mechanism connected with said electric switch and provided with a portion extending into the path of said weight, to be actuated by the fall of said weight.

870,405. MUSIC-CHART. PETER ZUCKERMEL, Cleveland, Ohio. Filed Jan. 12, 1907. Serial No. 352,011.



1. A music chart, comprising a board upon which the representation of a key-board is displayed, a carriage movable along the same, pointers supported on the carriage, and movable laterally relative to the carriage to indicate different keys, and a slide mounted on the carriage and connected to the pointers, to shift the same.

2. A music chart, comprising a board upon which the representation of a key-board is displayed, a carriage movable along the same, pointers carried thereby, for the keys said pointers being movable relative to the carriage, and means to shift some of the pointers without shifting the others, to indicate different scales.

3. A music chart, comprising a board upon which the representation of a key-board is displayed, a carriage movable along the same, pointers mounted on the carriage and movable laterally relative to the carriage to indicate different keys, and means to shift all of the pointers simultaneously, to indicate the keys of different scales, including a slide mounted on the carriage and connected to the pointers.

4. A music chart, comprising a board upon which the representation of a key-board is displayed, a carriage movable along the same, a set of pointers pivoted to the carriage and indicating the keys of the board, the pointers being movable to indicate different keys, and a slide movable on the carriage and connected to the pointers, to move the same.

5. A music chart, comprising a board upon which the representation of a key-board is displayed, a carriage movable along the same, a set of pointers pivoted to the carriage, and means connected to the pointers to simultaneously shift the same, to indicate transposition.

6. A music chart, comprising a board having the representation of a key-board thereon, a carriage movable along the board, pointers on the carriage, pointing to the keys said pointers being movable relative to the carriage, means connected to the pointers to move all of the same, and means to move selected pointers independently.

7. A music chart, comprising a board having the representation of a key-board thereon, a carriage slidable along the board, pointers corresponding to the notes of the scale and pivoted on the carriage and arranged to indicate the keys, and having arms projecting therefrom, a slide on the carriage, having recesses into which the arms project, some of said recesses being enlarged, means to shift the slide, to swing the pointers, and means to independently swing the pointers having arms in said enlarged recesses.

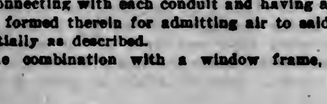
8. A music chart comprising a board having thereon the representation of a key-board, a carriage movable along the board and divided into separate parts related respectively to different chords, and key pointers attached to the carriage, said pointers being divided into groups according to the chords, the pointers of each group being attached to the respective part.

9. A music chart, comprising a board having thereon the representation of a key-board, a carriage movable along the board and having separate parts related to different chords, movable key pointers attached to the carriage, said pointers being divided into groups according to the chords, the pointers of each group being attached to the respective part, and devices to move the pointers of each of the parts to indicate different keys.

10. A music chart, comprising a board having thereon the representation of a key-board, a carriage movable along the board and divided into separate parts related respectively to different chords, movable key pointers attached to the carriage, said pointers being divided into groups according to the chords, the pointers of each group being attached to the respective part, devices to move the pointers of each of the parts to indicate different keys, and means to connect said devices together, to move the pointers of all of the parts simultaneously.

11. The combination of a chart having thereon the representation of a key-board; transposition indicators movable thereon, a manipulating device located at a distance from the said chart and indicators, to operate the latter, adjustable supports between the chart and said device, and connections between said device and the indicators.

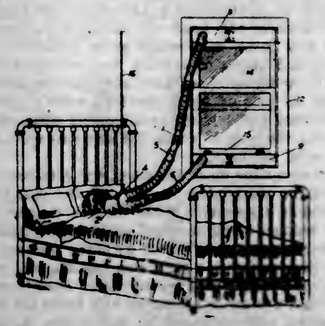
870,406. WATER-CLOSET LID AND DEVICE FOR PREVENTING SEATS FROM SPLITTING AND WARPING. JAMES E. ALBRIGHT, Greensboro, N. C. Filed Apr. 18, 1907. Serial No. 368,984.



1. A closet seat having a continuous circular groove in its inner side, a circular metal hoop arranged in said groove, the normal diameter of said wire being slightly less than the diameter of the groove, whereby the hoop, when expanded under the influence of heat, is of sufficient diameter for insertion in the groove and then upon cooling grips the inner wall of the groove by the contractile force induced by the lower temperature.

2. The method herein described consisting in forming a continuous groove in the seat, and inserting therein a continuous metal hoop whose normal diameter is slightly less than that of the groove, expanding said hoop by heat to the diameter of the groove and forcing it into the groove, as shown and described.

870,407. FRESH-AIR CONVEYER. KOHATH ANTHONY, Wilmerding, Pa., assignor of one-half to A. L. Trevaskis, Turtle Creek, Pa. Filed May 17, 1907. Serial No. 374,250.

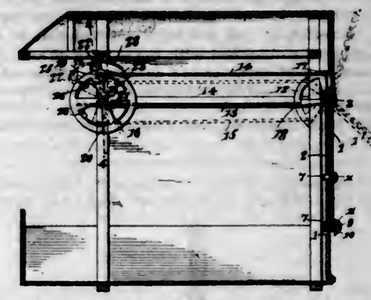


1. A fresh air conveyer consisting of a mask, a hood connecting therewith, detachable bands connecting with said hood, flexible conduits connecting with one of said bands, coiled springs arranged in said conduits, a folding board connecting with each conduit and having a screened opening formed therein for admitting air to said conduit, substantially as described.

2. The combination with a window frame, and the sashes thereof, folding boards adapted to fit in said frames beneath the lower sash and above the top sash of said frame, said boards having openings formed therein, flexible conduits communicating with the openings of said boards, a hood connecting with said conduit, and a mask carried by said hood.

3. The combination with a window frame, of boards adapted to fit at the bottom and top of said frame, said boards having openings formed therein, flexible conduits connecting with said boards, a hood communicating with said conduits, and a mask carried by said hood.

870,408. BACK-CURTAIN-RAISING DEVICE. THEODORE H. BAUER, Middletown, Ohio. Filed May 31, 1906. Serial No. 319,597.



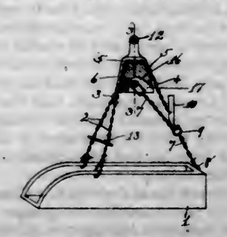
1. A device of the class described comprising a rear pivotally mounted member, a curtain carrying frame connected to and movable with the said member, a front pivoted member, parallel horizontal rods arranged one above the other and pivoted to the front and rear members for causing the same to move in unison, and means for operating the front member.

2. A device of the class described comprising a rear pivotally mounted member, a curtain carrying frame connected to and movable with said member, a front pivoted member, parallel rods pivoted to the front and rear members for causing the same to move in unison, a pivoted handle mounted on the front pivoted member, a pawl or dog connected with and operated by the pivoted handle, and a ratchet arranged to be engaged by the pawl or dog.

3. A device of the class described comprising a pivotally mounted curtain carrying frame provided at the top with a shaft, a sector mounted on the shaft, a front pivoted member, and parallel rods connecting the front pivoted member with the sector.

4. A device of the class described comprising a rear pivotally mounted sector, a curtain carrying frame connected thereto, a front pivotally mounted wheel having operating means, and parallel rods pivoted to the wheel and to the sector for causing the same to move in unison.

870,409. SELF-DUMPING BUCKET. BURTON A. BAUS, St. Johnsville, N. Y. Filed July 29, 1907. Serial No. 385,968.



1. The combination with a dumping-bucket; and a hoisting-block provided with a fixed chain-runway; of a chain connecting said hoisting-block with the rear end of said bucket; an automatically releasing hook adapted to con-

nect with an intermediate portion of said chain; and a chain-connection between the front end of said bucket and said hook passing over said fixed runway.

2. The combination with a dumping-bucket; and a hoisting-block having a fixed chain-runway formed in part by a horisontal surface, and in part by vertical surfaces, on opposite sides of said block; of a chain connecting said hoisting-block with the rear end of said bucket; an automatically releasing hook adapted to connect with an intermediate portion of said chain; and a chain-connection between the front end of said bucket and said hook passing over said runway surfaces.

3. The combination with a dumping-bucket; and a hoisting-block having a fixed chain-runway, and provided on its underside with an open recess; a bail embracing between its legs said hoisting-block; and a rivet inserted through and connecting together the legs of said bail and the interposed hoisting-block, passing through said open recess; of a chain connected at one end with the rear end of said bucket, and at the other end with the portion of said rivet located within said open recess; an automatically releasing-hook adapted to connect with an intermediate portion of said chain; and a chain-connection between the front end of said bucket and said hook passing over said runway.

870,410. OIL-WELL PUMP. GEORGE F. BELL, Sistersville, W. Va. Filed July 23, 1906. Serial No. 327,335



1. In a pump of the class described, the combination with an abutment or stop, of means for detachably locking the abutment or stop at any point in a well tube or casing, a plunger, lifting mechanism therefor working through the abutment or stop, and a spring located below the abutment or stop and engaging the same and the plunger, said spring and abutment or stop being removable from the well on the withdrawal of the plunger and its lifting mechanism.

2. In a pump of the class described, the combination with an abutment or stop, of means for detachably locking the abutment or stop at any point in a well tube or casing, a plunger, lifting mechanism therefor working through the abutment or stop, and a spring located below the abutment or stop and engaging the same and the plunger, said locking means being released by the lifting mechanism, and the said spring and the abutment or stop being removable from the well on the withdrawal of the plunger and its lifting mechanism.

3. In a pump of the class described, the combination of a plunger, a spring for actuating the plunger on the down stroke, a head or abutment arranged to be engaged by the upper end of the spring for anchoring the same, a locking device for securing the head or abutment at any point within the tube of a well, and lifting mechanism for moving the plunger upwardly, including upper and lower jars or members, one of the jars or members being provided with means for operating the locking device to release the head or abutment.

4. In a pump of the class described, the combination of a plunger, lifting mechanism for moving the plunger upwardly, a spring for actuating the plunger on the down stroke, and means operable by the lifting mechanism for detachably anchoring the spring at any point in a well tube or casing, so that the spring will be compressed on the up stroke, said spring being removable with the plunger and its lifting mechanism.

5. In a pump of the class described, the combination of a plunger, a spring for actuating the plunger on the down stroke, a head or abutment arranged to be engaged by the upper end of the spring for anchoring the same, a locking device for securing the head or abutment at any point in a well tube or casing, and lifting mechanism for moving the plunger upwardly, including upper and lower jars or members, the upper jar or member being provided with means for operating the locking device to release the head or abutment.

6. In a pump of the class described, the combination of a plunger, a spring for actuating the plunger on the down stroke, a head or abutment arranged to be engaged by the upper end of the spring, a wedge for clamping the head or abutment against the well tube for anchoring the spring, and lifting mechanism for moving the plunger upwardly, including upper and lower jars or members, the upper jar or member being arranged to strike the head and loosen the wedge and then engage the latter in removing the same from the well tube.

7. In a pump of the class described, the combination of a plunger, a spring for actuating the plunger on the down stroke, a head or abutment for anchoring the spring, a wedge for clamping the head or abutment against the well tube at any point, and lifting mechanism for moving the plunger upwardly, including upper and lower jars or members, the upper jar or member being arranged to strike the head to loosen the wedge and provided with a hook for supporting the wedge out of engagement with the head or abutment.

8. In a pump of the class described, the combination of a plunger, a spring for actuating the plunger on the down stroke, a head or abutment arranged to anchor the spring, a wedge for clamping the head or abutment against the well tube at any point, said wedge being provided with an upwardly projecting loop, and lifting mechanism for moving the plunger upwardly, including upper and lower jars or members, the upper jar or member being provided with means for engaging the loop of the wedge for supporting the latter above the head.

9. In a pump of the class described, the combination of a plunger, a spring for actuating the plunger on the down stroke, a head or abutment for anchoring the spring, a wedge for clamping the head or abutment against the well tube at any point, said wedge being provided with a resilient loop, and lifting mechanism for moving the plunger upwardly, including upper and lower jars or members, the upper jar or member being provided with a hook for engaging the loop and having an angularly disposed portion for flexing the loop to cause the same to spring into engagement with the hook.

10. In a pump of the class described, the combination of a plunger, lifting mechanism for moving the plunger upwardly, including upper and lower jars or members, the lower jar or member being provided with a connecting rod, and means for connecting the rod with the plunger, said means being provided with a seat, a spring disposed on the rod and arranged on the seat for actuating the plunger on the down stroke, a head or abutment also arranged on the rod and adapted to be engaged by the spring, a locking device for anchoring the head or abutment at any point in the well, and means carried by the jars or members for actuating the locking device to release the head or abutment.

11. In a pump of the class described, the combination of a plunger, lifting mechanism for moving the plunger upwardly, including upper and lower jars or members, the lower jar or member being provided with a rod, a spring disposed on the rod, and a coupling member connected with the plunger and with the rod and provided with a seat for the spring, a head or abutment loosely arranged on the rod and having an angularly disposed face, a wedge for engaging the said face for anchoring the head or abutment at any point in the well, and means carried by the upper jar or member for releasing the head or abutment and for supporting the wedge out of engagement with the same.

12. In a pump of the class described, the combination with a plunger, of lifting mechanism for moving the plunger upwardly, including upper and lower jars, the lower jar being provided with a rod, and a coupling member connected with the plunger and having an enlarged upper end, the latter being provided with a chamber and having a slot communicating therewith, a spring seated on the enlarged end of the coupling member, a head loosely arranged on the rod and engaging the spring, said head being provided with a groove, and means for anchoring the head at any point in the well tube.

13. In a pump of the class described, the combination with a plunger, and lifting mechanism for moving the plunger upwardly, of a spring for actuating the plunger on the down stroke, a head arranged to be engaged by the upper end of the spring, whereby the latter will be compressed on the up stroke of the pump, a wedge for clamping the head against the well tube for anchoring the spring, and means for releasing the head and for holding the wedge out of engagement with the same, to permit the apparatus to be removed from the well tube.

14. In a pump of the class described, the combination with a plunger, of a spring for actuating the plunger on the down stroke, a head arranged to be engaged by the upper end of the spring, whereby the latter will be compressed on the up stroke of the pump, a locking device for clamping the head against the well tube for anchoring the spring, and means for moving the plunger upwardly and for releasing the head and for holding the said device out of engagement with the same to permit the apparatus to be removed from the well tube, said means comprising a pair of movably connected members, one of the members being arranged to strike the head to release the locking device.

15. In a pump of the class described, the combination of a plunger, a spring for actuating the plunger on the down stroke, a head or abutment arranged to be engaged by the upper end of the spring for anchoring the same, a locking device for securing the head or abutment at any point within the tube of a well, and lifting mechanism for moving the plunger upwardly, provided with means for operating the locking device to release the head or abutment.

870,411. SAFETY APPLIANCE FOR ELEVATORS. JAMES L. BOREN, Carterville, Ill. Filed Apr. 2, 1907. Serial No. 365,989.



1. In a device of the class described, an elevator shaft including a casing, a hoisting element, a car or cage including a bottom frame connected with and supported by the hoisting element and a tilting platform supported upon the bottom frame, a rock shaft mounted for oscillation upon the tilting platform and having oppositely extending cranks and terminal radial arms, aprons hingedly connected with the platform, links connecting the aprons with the cranks of the rock shaft, a spring disposed to force the free edges of the aprons in the direction of the walls of the casing, a yoke or bail connected with the hoisting element, links connecting the side members of said yoke with the terminal arms of the rock shaft, an engaging member upon the tilting platform, and a cam member connected with the shaft structure in the path of said engaging member.

2. In a device of the class described, the combination with an elevator car or cage of a hingedly supported apron of a width approximately equal to that of the car or cage, and means for projecting the free edge of said apron in an outward direction.

3. In a device of the class described, an elevator car or cage including a bottom frame, a hoisting element connected with and supporting said frame, and a tilting platform supported upon the bottom frame, aprons supported hingedly upon the tilting platform, adjacent to the front and rear ends of the latter, and means for projecting the free edges of said aprons outwardly, said means including a rock shaft supported in bearings upon the tilting platform and having oppositely extending cranks, and links connecting said cranks with the aprons.

870,412. MOP-HOLDER. OLIVE K. BROWN, Asherville, Kans. Filed Aug. 20, 1907. Serial No. 389,392.



1. A mop holder, comprising a hollow staff, jaws pivoted thereto at one end, links connected to said jaws, a rod mounted to move longitudinally within the said staff and connected to the said links, said rod being spring pressed in a direction to open the jaws, a pivoted handle connected to the opposite end of the rod from the links, and a hook carried by the staff, the pivoted handle being designed to be swung outwardly over one end of the staff into engagement with the hook as and for the purpose set forth.

2. A mop holder comprising a hollow staff, jaws pivotally connected thereto at one end, a spring pressed rod mounted within the staff and movable in one direction to open the jaws, an operative connection between the jaws and the rod, and means for locking the rod to the staff with the jaws in closed position.

3. A mop holder, comprising a hollow staff, jaws pivotally connected thereto at one end, means for closing said jaws, a rod mounted within the staff and provided at one end with a loop, said rod being mounted to turn and also move longitudinally in the staff, and a handle secured to said rod.

870,413. COMBINED KNIFE AND FORK. WALLACE E. BROWN, Tidioute, Pa. Filed June 28, 1907. Serial No. 380,811.

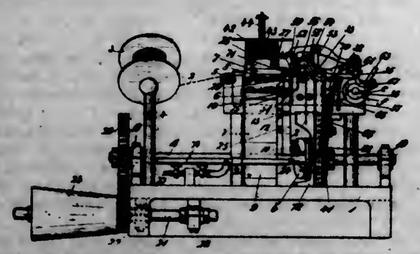


1. An article of the class described, comprising a handle presenting a plate with longitudinally disposed slots formed therethrough, said slots having enlargements constituting eyes, and a second handle having a plate having heads offset therefrom and adapted to pass through said eyes, said heads being connected at opposite points with said last plate by inclined tongues adapted to lie in said slots, and blades carried by said handles respectively and having different functions.

2. In an article of the class described, a handle consisting of separable sections, one of said sections presenting a plate having longitudinally disposed slots formed therein, with enlargements constituting eyes, the other of said sections having a plate with heads formed integrally therewith and offset from the material thereof, said heads having tongues connecting the same with said second plate and disposed in a plane extending longitudinally of said second section whereby said sections may be applied to each other with said heads inserted into said eyes, the longitudinal movement of said section affording means for passing said heads out of alinement with said eyes.

3. In an article of the class described, a handle composed of separable sections, one of said sections presenting a plate with longitudinally disposed slots therein, said slots having enlargements constituting eyes, the other of said sections presenting a plate having substantially circular heads offset therefrom and adapted to be received through said eyes when said sections are applied together, said heads being connected with said second plate by inclined tongues adapted to pass through said slots whereby said sections may be united by inserting said heads through said eyes and moving said sections longitudinally relatively to each other.

870,414. MACHINE FOR AUTOMATICALLY MAKING SOLDERED CABLE AND GLOBULAR OR PEA-SHAPED CHAINS. LUDWIG BAUCKMANN, Pforzheim, Germany. Filed Mar. 19, 1906. Serial No. 306,879.



1. In a chain soldering machine, means for guiding the chain, means for engaging and intermittently feeding said chain, a flux applying member carried by and movable with the chain feeder to apply flux after each feeding movement, a solder strip feeder, means for cutting particles of solder from the strip and intermittently feeding such particles to the chain, the solder being held in place by the flux, and means for fusing the solder.

2. In a machine of the class described, stationary jaws and a movable jaw all provided with chain guiding grooves, the walls of such grooves being arranged to engage and maintain the two series of links of which the chain is formed in proper relative positions, a chain feeding pin arranged to engage with alternate links, a slidable carriage, a pivotally mounted pin carrying lever mounted thereon, means for moving the carriage toward and from the chain, means for operating the lever to feed the chain, and an intermittently operable flux applying member supported by said carriage.

3. In a machine of the class described, a plurality of chain guiding jaws having grooves for the reception of the chain links, a reciprocatory carriage, means for actuating the same, a lever pivoted to said carriage, a chain engaging pin secured to the lever, means for rocking said lever and thereby effecting feeding of the chain, and a flux applying member supported by the carriage.

4. In a mechanism of the class described, the combination with chain guiding jaws, of a reciprocatory carriage, a lever pivoted on such carriage, a chain feeding pin secured to the lever, a shaft, and a pair of cams secured to the shaft, one of said cams engaging the carriage, and the other engaging the lever.

5. In a mechanism of the class described, the combination with the chain guiding jaws, of means for feeding the chain, a reciprocatory carriage, a spring supported conical roller carried thereby and arranged to engage and feed the solder strip, and means for depressing the roller and thus effecting its engagement with the strip during the movement of the carriage in one direction.

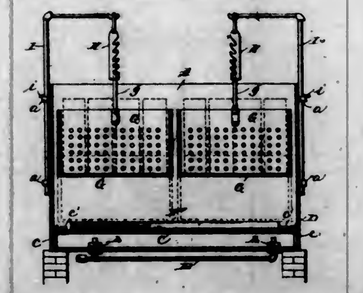
6. In a mechanism of the class described, the combination with the guiding and feeding means, of a reciprocatory carriage, a conical solder strip feeding roller, a spring tending to move the same to release the strip, a pivotally mounted lever, a roller carried thereby and arranged to engage the conical roller during the forward movement of the carriage and to release said roller during the rearward movement of the carriage thereby alternately clutching and unclutching the strip, and means for actuating said lever.

7. In a machine of the class described, the combination with a chain guiding and feeding means, of a solder strip feeding device, a pivotally mounted cutter, a discharge chute for receiving the severed piece of solder, and an ejector movable through the chute for forcing the severed piece of solder to the chain.

8. In a machine of the class described, a solder strip feeder, a strip cutting knife, a chute into which the pieces of solder fall after clipping, means for feeding the chain beneath the chute, and means for forcing the severed piece of solder through the chute to the chain.

9. In a machine of the class described, solder strip feeding means, a movable knife for severing pieces of solder from the strip, a pivotally mounted spring held pawl co-acting with the knife to hold and carry the severed pieces of solder, a chute into which the severed piece is delivered, and an ejector for forcing the piece of solder through such chute.

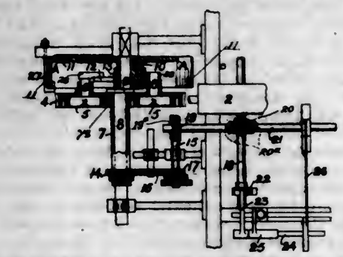
870,415. APPARATUS FOR CANNING AND WASHING. HERBERT D. CHANCE, Loveland, Colo. Filed Dec. 26, 1906. Serial No. 349,516.



1. The improved apparatus for the purpose specified, comprising a water holder or tank, a false perforated bottom having on its upper side a series of ribs, and a receptacle for articles to be subjected to the action of hot water, the same being formed of perforated sheet metal and arranged in said tank and supported on the said ribs, as described.

2. The improved apparatus for the purpose specified, comprising a water holder or tank, and a false-bottom arranged parallel to the true bottom of the tank but spaced therefrom and consisting of a perforated plate having on its upper side a series of ribs for supporting a receptacle for articles to be subjected to the action of hot water, and provided on its sides with openings for free circulation of water, and devices adapted for closing such openings, substantially as described.

870,416. MEASURING AND MARKING MOTION FOR USE IN CONNECTION WITH YARN-SIZING AND SIMILAR MACHINES. WILLIAM H. CLEGG, Burnley, England. Filed Mar. 10, 1906. Serial No. 305,896.



1. In a marking machine for yarn or cloth, a roller over which the cloth passes, adjustable differential gearing driven from said roller, and a marking device driven from said differential gearing.

2. In a machine for marking cloth or the like, a roller over which the cloth passes; a wheel driven from said roller; a series of shafts carried by said wheel; a pinion mounted upon each of said shafts; a crank connected to one end of each of said shafts; means for actuating said cranks as said wheel is rotated and thereby causing the pinions to rotate; a rotatable member driven by said pinions; a marking device; and a driving connection intermediate said marking device and said rotatable member.

3. In a marking machine for cloth or the like, a roller over which the cloth to be marked passes; a wheel driven from said roller; a shaft to which said wheel is secured; a sleeve mounted upon said shaft; a series of pinions carried by the wheel and gearing with the sleeve; means for rotating said pinions; means for varying the relative speeds of rotation of said pinions and the wheel; a marking device; and connections between said sleeve and marking device.

4. In a marking machine for cloth or the like, a roller over which the cloth to be marked passes; a wheel driven from said roller; a shaft carrying the wheel, said shaft being provided with an eccentric portion; an eccentric member mounted upon said eccentric portion; a series of shafts carried by said wheel; a pinion mounted upon each of said shafts; a crank carried by each of said shafts; connections between the outer ends of said cranks and the eccentric member; a rotatable member driven by the pinions; a marking device; and actuating connections between said marking device and the rotatable member.

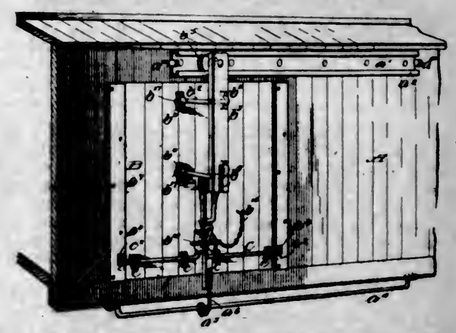
5. In a marking machine for cloth or the like, a roller over which the cloth to be marked passes; a wheel driven from said roller; a shaft upon which said wheel is carried; a sleeve loosely mounted upon said shaft; a series of shafts carried by the wheel; a pinion for each of said shafts; a clutch device between each of said shafts and its pinion; means for actuating said shafts; means for adjusting the actuating means; driving connections between the sleeve and the pinions; a marking device; and actuating means intermediate said marking device and the sleeve.

6. In a marking machine for cloth or the like, a roller over which the cloth to be marked passes; a wheel driven from said roller; a shaft carrying said wheel; a sleeve on the shaft; differential gearing between said wheel and sleeve; and a marking device actuated by said sleeve.

7. In a marking machine for cloth or the like, a roller over which the cloth to be marked passes; a wheel driven from said roller; a shaft carrying said wheel, the shaft being provided with an eccentric extension; a sleeve mounted on the shaft; a series of shafts carried by the wheel; a pinion mounted upon each of said shafts, the pinions meshing with the sleeve; a clutch mechanism between each of said pinions and its shaft; cranks connected to the shafts; an adjustable eccentric member mounted upon the eccentric portion of the first-named shaft; eccentric rods connecting the cranks to said eccentric member; means for securing said eccentric member in its adjusted position; a marking device; and driving connections intermediate said marking device and the sleeve.

8. In a machine for marking cloth or the like, a roller over which the cloth to be marked passes; a worm-wheel driven from said roller; a series of shafts carried by said wheel and arranged equidistantly from the center of said wheel; a pinion adjustably mounted upon each of said shafts; a crank connected to the opposite end of each of said shafts; an adjustable eccentric; eccentric rods connected to the cranks and to said adjustable eccentric; an index-plate for said eccentric; means for securing said eccentric in its adjusted position; a rotatable member driven by the pinions; and a marking device actuated by said rotatable member.

870,417. CAR-DOOR. THEODORE A. CORSON, Portland, Ark. Filed Jan. 31, 1907. Serial No. 354,994.



1. The combination with the car having a door opening, a track above the opening, the upper edge of the opening being provided with recesses, a door adapted to fit within the opening and having dowel pins for engaging the recesses, bearings on the door, U-shaped links having their arms journaled in the bearings, a bar mounted on the body portion of the U-shaped links, a wheel journaled on the upper end of the bar and engaging the track, a bracket secured to the door, a handle pivoted to the bracket, a link pivotally connected with the handle and with the body portion of said lowermost U-shaped link, whereby to swing the door on the links, a fastening device for the door comprising a shaft journaled transversely of the lower end of the door and having a cranked portion at the center thereof, and lugs on the ends thereof, the sides of the door opening being provided with recesses for receiving the lugs whereby to lock the door, and a common securing device for the handle and the cranked portion of the shaft.

2. The combination with the car having a door opening, and a track above the opening, of a door fitted within the opening, U-shaped links arranged transversely of the door and spaced apart from each other, bearings on the door in which the arms of the links are journaled, a bar pivotally connected to the body portion of the U-shaped links, a wheel on the upper end of the bar for engaging the track,

means connected with the lower end of the bar and the door for swinging the door on the links, a fastening device for the door, and a common securing device for the swinging means and the fastening device.

3. The combination with a car having a door opening and a track above the opening, of a door fitting within the opening, U-shaped links arranged transversely of the door and spaced apart from each other, bearings on the door in which the arms of the link are journaled, a bar pivotally connected to the body portions of the links, a wheel on the upper end of the bar for engaging the track, means connected with the lower end of the bar and the door for swinging the door on the links, and an independent fastening device for the door.

4. The combination with the car having a door opening, and a track above the opening, of a door adapted to fit within the opening, U-shaped links having their arms pivotally connected with the door, a vertical bar pivotally connected with the body portions of the links, a wheel on the upper end of the bar for engaging the track, means for swinging the door on the links and means for fastening the door within the opening.

870,418. ADDRESSING-MACHINE. SANFORD C. COX, Rock Rapids, Iowa, assignor, by mesne assignments, to Cox Multi-Mailer Company, Augusta, Me., a Corporation of Maine. Filed June 24, 1901. Serial No. 65,806.



1. In an addressing machine, the combination of a galley or race for containing slugs, a type-wheel or cylinder, having slug pockets arranged adjacent to the end of said race, a continuous movable bottom for feeding the slugs from said race into said pockets, an incline or chute at the discharge end of said bottom, a platen, means for forcing said platen towards said type-wheel, and means coöperatively connecting said platen and type-wheel together, substantially as set forth.

2. In an addressing machine, the combination of a galley or race for containing slugs, a movable bottom member on which the slugs rest and by which they are fed along said race, a type-wheel or cylinder having slug pockets arranged adjacent to said race, and a platen coöperatively related to said type-wheel for producing the impression, substantially as set forth.

3. In an addressing machine, the combination of a galley or race for containing slugs, a continuous belt arranged in the bottom of said race and constituting a movable support for feeding said slugs there-along, a type-wheel or cylinder having slug pockets arranged adjacent to the end of said race, and a platen coöperatively related to said type-wheel, for producing the impression, substantially as set forth.

4. In an addressing machine, the combination of a galley or race for containing slugs, having an incline or chute at its discharge end, and a cross-stop over said chute for engaging the upper edge of the slug when the latter arrives at the chute, a type-wheel having pockets arranged adjacent to the end of said chute, for receiving said slugs, and a platen coöperatively related to said type-wheel, for producing the impression, substantially as set forth.

5. In an addressing machine, the combination of a galley or race for containing slugs, a traveling belt in the bottom of said race for feeding the slugs there-along, a type-wheel or cylinder having pockets for receiving said slugs from said race, geared to, and operating in unison with, said belt, and a platen coöperatively related to said type-wheel, substantially as set forth.

6. In an addressing machine, the combination of a galley or race for slugs, a type-wheel arranged adjacent thereto and having pockets for receiving the slugs therefrom, cut away or oblique on one side and radial on the other side, whereby the slugs will readily drop into said pockets, and afterwards be held in a radial position with reference to said wheel, and a platen coöperatively related to said wheel, for producing the impression from said slugs, substantially as set forth.

7. In an addressing machine, the combination of a galley or race for slugs, a type-wheel arranged adjacent thereto and having pockets for receiving the slugs therefrom, each having its bottom formed to fit the edge of the slug, and one of its side walls cut away on an oblique angle, said cut-away side being presented upwardly to the discharge end of the race, and means for producing the impression from the slugs while in said wheel, substantially as set forth.

8. In an addressing machine, the combination of a galley or race for slugs, a type-wheel having pockets for said slugs, means for feeding the slugs from said galley into said pockets, an impression device, and means for intermittently oscillating the said impression device towards and from the type-wheel, for pinching the paper between it and said type-wheel, substantially as set forth.

9. In an addressing machine, the combination of a galley or race for slugs, a type-wheel having pockets for receiving the slugs therefrom, means for feeding the slugs from said galley into said pockets, an idle impression roll, and means for intermittently oscillating said roll for pinching the paper between it and said type-wheel, substantially as set forth.

10. In an addressing machine, the combination of a galley or race for slugs, a type-wheel having pockets for receiving the slugs therefrom, means for feeding said slugs from said galley into said pockets, an impression device, a spring for pressing said device towards said type-wheel for producing the impression, and means for forcing it away from said wheel to allow the paper to pass, substantially as set forth.

11. In an addressing machine, the combination of a galley or race for slugs, a type-wheel having pockets for receiving the slugs therefrom, an impression device located adjacent to said type-wheel, means for forcing said device in one direction with reference to said wheel, and a cam having waves corresponding in number to the number of pockets in said wheel, for forcing said device in the opposite direction, substantially as set forth.

12. In an addressing machine, the combination of a galley or race for slugs, a type-wheel having pockets for receiving the slugs therefrom, an impression device located adjacent to said wheel, means for forcing said device in one direction with reference to the wheel, and a cam carried by said wheel and having waves corresponding in number to the number of pockets in said wheel, for forcing said device in the opposite direction as each slug passes it, substantially as set forth.

13. In an addressing machine, the combination of a type-wheel having pockets for holding slugs, an impression device coöperatively related thereto, a chute for said slugs arranged under said wheel for catching them, and a flexible band extending around a part of the lower side of said wheel from said chute upward, substantially as set forth.

14. In an addressing machine, the combination of a type-wheel having pockets for receiving and holding slugs, an impression device coöperatively related thereto, a chute for receiving said slugs as they fall from said type-wheel, said chute being as wide at the top as the length of the slug, and of less width at the bottom, whereby the slug will be turned on end as it falls from the wheel, substantially as set forth.

15. In an addressing machine, the combination of a type-wheel having pockets for receiving and holding slugs, an impression device coöperatively related thereto, a chute for said slugs arranged under said wheel for catching them as they fall therefrom, and means in said chute for turning the slugs on end as they fall, substantially as set forth.

16. In an addressing machine, the combination of a type-wheel having pockets for receiving and holding slugs, an impression device coöperatively related thereto, a chute for said slugs, arranged under the wheel, for catching them as they fall therefrom, the upper end of said chute being as wide as the length of the slug, and the pin extending across one side of said chute for engaging one end of the slug and turning it up on end as it falls into the chute, substantially as set forth.

17. In an addressing machine, the combination of a type-wheel having pockets for receiving and holding slugs, an impression device coöperatively related thereto, a chute arranged under the lower side of said wheel for catching the slugs as they fall therefrom, means in said chute for turning the slugs on end, and a twisted horizontal galley extending from the lower end of said chute, for receiving the slugs and turning them right side up, substantially as set forth.

18. In an addressing machine, the combination of a type-wheel having pockets for receiving and holding slugs, an impression device coöperatively related thereto, a chute arranged under said wheel for receiving the slugs as they fall therefrom, and an elastic band extending around a part of the lower side of the wheel from said chute upwardly, for holding the slugs in place in the wheel until the chute is reached, substantially as set forth.

19. In an addressing machine, the combination of a type-wheel having pockets for receiving and holding slugs, an impression device coöperatively related thereto, a chute arranged under said wheel, for receiving the slugs as they fall therefrom, a band arranged around the lower side of said wheel for holding the slugs in place until said chute is reached, and an elastic roller, over which the lower end of said band runs, and against which the slugs impinge as they approach the chute, substantially as set forth.

20. In an addressing machine, the combination of a type-wheel having pockets for receiving and holding slugs, an impression device coöperatively related thereto, a chute arranged under said wheel for receiving the slugs as they drop therefrom, a horizontal galley for receiving the slugs from said chute, a reciprocating pusher for advancing the slugs along said galley, and a cam, actuated in unison with said type-wheel, and having waves equal in number to the pockets therein for operating said pusher, substantially as set forth.

21. In an addressing machine, the combination of means for printing the address on the papers, means for collecting the papers together after the address is printed thereon, and means for depositing markers between the papers at stated intervals, substantially as set forth.

22. In an addressing machine, the combination of means for printing the address upon the papers, means for collecting the papers together thereafter, and means for depositing markers between the papers at stated intervals, timed with, and coöperatively related to, said addressing means, substantially as set forth.

23. In an addressing machine, the combination of means for printing the addresses upon the papers, a package receptacle for the addressed papers, means for depositing the papers in said receptacle, and means for depositing a marker in said receptacle between the papers at stated intervals, substantially as set forth.

24. In an addressing machine, the combination of means for printing the addresses upon the papers, a package receptacle for the addressed papers, means for depositing the papers in said receptacle, a holder for a number of markers or cards, arranged to discharge into said receptacle, a feeder for advancing said markers along said holder, and means connecting said feeder with said addressing means, substantially as set forth.

25. In an addressing machine, the combination of a type-wheel adapted to carry a number of slugs, means for printing the papers from the slugs therein, means for collecting the printed papers together, and means actuated by the slugs in said wheel, for depositing markers between the papers at stated intervals, substantially as set forth.

26. In an addressing machine, the combination of means for advancing a plurality of differently shaped slugs, and producing impressions therefrom, means for collecting the printed papers together, and means actuated by the slugs of a certain shape, for depositing markers between the papers at stated intervals, substantially as set forth.

27. In an addressing machine, the combination of means for advancing a plurality of differently shaped slugs, means for producing impressions therefrom, means for collecting the impressions together, a holder for a plurality of marker cards, a follower for advancing said cards along said holder, a screw for advancing said follower, and a pin-wheel for operating the said screw, arranged to be operated by the slugs of a certain shape, substantially as set forth.

28. In an addressing machine, the combination of a type-wheel having pockets therein for receiving and holding slugs of different shapes, means for producing impressions from said slugs while in said wheel, means for collecting said impressions together, a holder for a plurality of markers arranged to discharge the same between said impressions, means for advancing said markers along said holder, and a pin-wheel arranged adjacent to said type-wheel, and adapted to be struck and operated by the slugs of a certain shape therein, and means operatively connecting said pin-wheel with said means for advancing the markers along said holder, substantially as set forth.

29. In an addressing machine, the combination of a type-wheel having a number of pockets for receiving and holding slugs, an impression device coöperatively related to said type-wheel, upper and lower tapes for advancing the papers between said type-wheel and impression devices, stops or gages projecting between said tapes for arresting the movement of the papers, and a cam coöperatively related to said stops or gages, and having waves equal in number to said pockets, for disengaging said gages at each impression, substantially as set forth.

30. In an addressing machine, the combination of means for producing an impression, means for holding a store of papers, means for carrying the papers from said store to said impression means, a gage or stop for arresting the papers between said impression means, means for disengaging said gage or stop at each impression, a needle block for engaging the papers, one at a time, in said store, and levers connecting said block with said gage or stop, for actuating the block at each impression to feed a paper to said carrying means, substantially as set forth.

31. In an addressing machine, the combination of a feed box for holding a store of papers, an endless belt arranged in the bottom thereof and provided with eyelets, a follower arranged in said box and connected with said belt, and means for feeding the papers from said box, coöperatively connected with said belt, substantially as set forth.

32. In an addressing machine, the combination of a galley or race for containing slugs, a continuous belt having a plain upper surface arranged in the bottom of said race and constituting a movable support for feeding said slugs along the race, and impression devices arranged at the end of the race for producing impressions from the slugs successively as they are fed forward by said belt.

33. In an addressing machine, the combination of a galley or race for containing slugs, impression devices arranged at the end of said race for producing impressions from the said slugs successively, a member movable towards said impression devices, arranged in the race and having a plain friction surface against which the slugs bear, and means for moving said member towards said printing devices independently of the slugs.

34. In an addressing machine, the combination of a galley or race for containing slugs, a tape or band arranged in the bottom of the race and supported throughout its length, whereby it will not sag, and having a plain surface constituting a support for the slugs in the race, impression devices arranged at the end of the race for pro-

during impressions from the slugs successively, and means for moving said tape or band towards said impression devices.

35. In an addressing machine for addressing papers and the like, the combination of a hopper or box for containing a store of papers to be addressed, means for holding the papers inclined in said hopper, means for feeding the store forward as a whole, needle-blocks for engaging and feeding the papers from the hopper singly, pivoted arms to which said needle-blocks have pivotal connection, means for operating said arms in unison to move said blocks in an inclined plane, and means for applying the address to the papers thus fed outwardly by the needle-blocks.

36. In an addressing machine, the combination of a feed box for holding a store of papers, an endless belt arranged in the bottom thereof and provided with eyelets, a follower arranged in the box, a spring controlled finger carried by the follower and adapted to engage the eyelets, means for disengaging said finger, means for moving the belt, and means operatively related to the belt for feeding the papers from the box.

37. In an addressing machine, the combination of a feed box for holding a store of papers, a slide moving at the forward end of the box, an arm pivoted at one end to the slide, a needle block pivoted to the free end of the arm and adapted to engage the paper, a pivoted lever, a connection between the lever and the slide, and means for rocking the lever to move the slide for causing the block to feed the papers.

38. In a paper-addressing machine, the combination of means for putting the address on the papers, embodying notched and unnotched disconnected slugs bearing the matter to be printed on the papers, and means for holding and carrying the slugs while the impression is being made therefrom, means for collecting the papers together after they are addressed, and means arranged to engage in the notches of said slugs, and to be engaged by the unnotched slugs for designating one batch of the addressed papers from another.

39. In an addressing machine, the combination of a plurality of notched and unnotched slugs disconnected from each other, a rotary type-wheel having pockets or holders for carrying said slugs while being printed from, means for collecting the addressed papers together, and means for distinguishing some of said papers from others after they are addressed, embodying a member arranged contiguous to said type-wheel so as to run in the notched slugs and be engaged and actuated by the unnotched slugs.

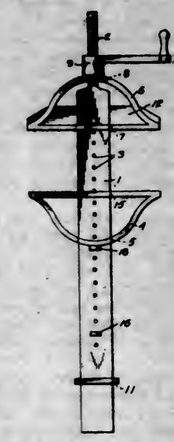
40. In an addressing machine for addressing papers and the like, the combination of a hopper or box for containing a store of papers to be addressed, means for feeding the store forward as a whole, a pivoted support, a needle block pivoted to the support and means for moving the support to bodily move the block downwardly in a plane parallel with the plane of the papers to feed the said papers.

41. In an addressing machine for addressing papers and the like, the combination of a hopper or box for containing a store of papers to be addressed, means for holding the papers inclined in said hopper, means for feeding the store forward as a whole, pivotally supported needle blocks, and means for bodily moving the needle blocks downwardly in an inclined plane to feed the papers.

42. In an addressing machine for addressing papers and the like, the combination of a hopper or box for containing a store of papers to be addressed, means for holding the papers inclined in said hopper, means for feeding the store forward as a whole, a pivoted support, a needle block pivotally connected to the support, and means for moving the support to bodily move the needle block downwardly in an inclined plane to feed the papers.

43. In an addressing machine for addressing papers and the like, the combination of a hopper or box for containing a store of papers to be addressed, means for holding the papers inclined in said hopper, means for feeding the store forward as a whole, a pivoted support, a needle block pivotally connected to the support, means for bodily moving the support and the needle block to cause the latter to move downwardly in an inclined plane to feed the papers, and means for applying the addresses to the papers thus fed by the needle blocks.

870,419. CLAMP. DENIS J. CYR, Hugo, Minn. Filed Apr. 11, 1907. Serial No. 367,673.



1. A clamp comprising a bar having holes formed therethrough at intervals and provided on its upper end with a reduced screw-threaded portion, a crank nut on said end, adjustable jaws on said bar, one of which is adapted to be acted upon by said crank nut, combined with a cooperating bar also having holes formed therethrough and having a sliding connection with the first-mentioned bar, a fixed jaw on the upper end of the latter bar, and an adjustable jaw thereon below the fixed jaw, and pins insertible through the holes in the bars for the support of the lower adjustable jaws.

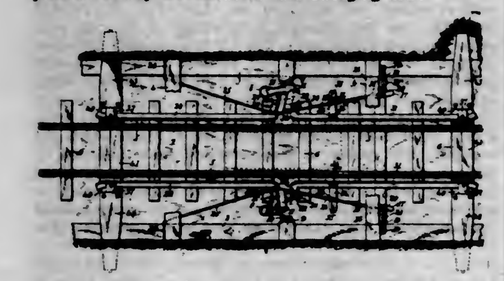
2. A clamp comprising a bar having holes formed therethrough at intervals, and provided on its upper end with a reduced screw-threaded portion, a crank nut on said end, adjustable jaws on said bar, one of which is adapted to be acted upon by said crank nut, combined with a cooperating bar also having holes formed therethrough, the lower end of the coöperating bar having a slotted angular end portion through which the first-mentioned bar projects to afford a sliding connection between the two bars, a fixed jaw on the upper end of the latter bar, and an adjustable jaw thereon below the fixed jaw, and pins insertible through the holes in the bars for the support of the lower adjustable jaws.

870,420. MINE-DOOR. OSCAR N. EARTHOM and TOLBERT GALLAHER, Adena, Ohio, assignors of one-third to George W. Tidrich, Dillonvale, Ohio. Filed June 21, 1907. Serial No. 380,064.

1. In a device of the class described, a flexible door arranged to open and close transversely of the mine passageway, a car-actuated member independent of said door and adapted to engage said door to open the same when said member is actuated, resilient means for normally holding said door in a closed position, and a resiliently-held block, said car actuated member being pivotally mounted upon said block at the end first engaged by the car.

2. In a device of the class described, a flexible door, a swinging arm having an end section at a side of the mine passageway and adapted on operation to engage said door at the opposite end to open the same, and car-actuated mechanism controlling said arm, said door being operable independent of any movement of said arm.

3. In a device of the class described, a flexible door arranged to open and close transversely of the mine passageway, a swinging arm having an end secured at a side of the mine passageway and adapted on operation to engage said door at the opposite end to open the same, said arm normally lying at an angle with the longitudinal direction of said passageway, and car-actuated mechanism controlling said arm, said door being operable independent of any movement of said swinging arm.



4. In a device of the class described, a flexible door arranged to open and close transversely of the mine passageway, arms at opposite sides of said door and adapted on operation to engage said door at the present ends to open same, the opposite ends of each arm being pivoted at a side of the mine passageway, and car-actuated mechanism controlling one of said arms to operate said door, said door being operable independent of any movement of said arms.

5. In a device of the class described, a door arranged to open and close transversely of the mine passageway, a swinging arm having an end pivoted at a side of the mine passageway and adapted to engage said door at the opposite end to open the same when said arm is operated, said arm normally extending into said passageway when said door is closed, means for holding said arm in a normal position, and a member controlling said arm and adapted to be actuated by a car, said door being capable of operation independent of any movement of said arm and said member.

6. In a device of the class described, a door arranged to open and close transversely of the mine passageway, a swinging arm having an end secured to said door and the opposite end pivoted at a side of the mine passageway, a spring-held lever operatively connected with said arm to hold the same in a normal position with the door closed, and a pivoted member adapted to engage said arm to operate said door when said member is actuated by a car.

7. In a device of the class described, a door arranged to open and close transversely of the mine passageway, a swinging arm having an end secured to said door and the opposite end pivoted at a side of the mine passageway, said arm normally extending from the side of the mine passageway to hold said door in a closed position, a lever, a spring holding said lever in the normal position, a link operatively connecting said arm and said lever, and a pivoted member controlling said arm and adapted to be actuated by a car.

8. In a device of the class described, a door arranged to open and close transversely of the mine passageway, a swinging arm having an end secured to said door and the opposite end pivoted at a side of the mine passageway, a lever, a link operatively connecting said lever and said arm, a spring resisting the movement of said lever, a pivoted member operable by a car and adapted to engage said arm to operate said door when said member is actuated, and means for resiliently holding the end of said member first engaged by a car.

9. In a device of the class described, a door arranged to open and close transversely of the mine passageway, an arm having an end secured to said door and the opposite end pivoted at a side of the mine passageway, a second arm at the opposite side of said door remote from said first arm and having an end hinged to said door and the opposite end pivoted at a side of the mine passageway, a lever, a link operatively connecting said lever and said first arm, a spring resisting the movement of said lever, a member having a pivoted arm engaging said first arm and adapted to be actuated by a car, and a second member at the side of said door remote from said first member and adapted to be actuated by a car, said members being pivotally connected.

10. In a device of the class described, a door arranged to open and close transversely of the mine passageway, an arm having an end secured to said door and the opposite end pivoted at a side of the mine passageway, a member adapted to be actuated by a car, a second member at the side of said door remote from said first member and adapted to be actuated by a car, said second member having a slot near the end, said first member having a pin operatively arranged in said slot, and resiliently-held blocks, said members being pivoted on said blocks near the ends first engaged by the car.

11. In a device of the class described, a flexible door arranged to open and close transversely of the mine passageway, an arm having an end secured to said door and the opposite end pivoted at a side of the mine passageway, resilient means for resisting the movement of said arm, a second arm at the side of said door remote from said first arm and having a hinged part pivotally mounted at said door, said second arm having the end remote from said hinged part pivotally mounted at a side of the mine passageway, and a plurality of members at the opposite sides of said door and controlling said first arm to operate said door, said members being adapted to be actuated by a car.

12. In a device of the class described, a flexible door arranged to open and close transversely of the mine passageway, an arm having an end secured to said door and the opposite end pivoted at a side of the mine passageway, resilient means for resisting the movement of said arm, a member having a pivoted arm presenting a slot, said first arm having a pin engaging said slot, a second member at the side of said door remote from said first member and operatively connected with said first member, the ends of said members remote from said door being resiliently held.

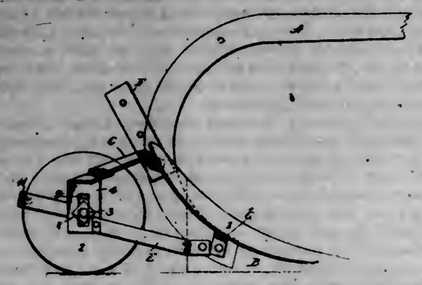
13. In a device of the class described, a flexible door arranged to open and close transversely of the mine passageway, an arm having an end secured to said door and the opposite end pivoted at a side of the mine passageway, a lever, a link operatively connecting said arm and said lever, a spring resisting the movement of said lever, a second arm having a hinged part pivotally mounted at said door, said second arm having the end remote from said hinged part pivotally mounted at a side of the mine passageway, brackets at each side of said door, blocks slidably arranged upon said brackets, springs resisting the movement of said blocks, members pivoted on said blocks and extending toward said door and normally at an angle with the longitudinal direction of the mine passageway, said opposite members being operatively connected, one of said members having a pivoted slotted arm engaging said first arm to control said door.

870,421. PLOW. JOHNATHAN H. EDWARDS, Gilbertsville, Ky. Filed July 25, 1907. Serial No. 385,533.

1. In a plow, the combination with a beam, land side, and moldboard, of a brace having a depending vertically slotted arm, said brace secured to the moldboard, an axle adjustably secured to the slotted arm, a wheel having a flanged hub mounted on the axle and a mud guard secured over the axle and over-reaching the flange on the hub.

2. In a plow, the combination with a beam, land side, and moldboard, of a brace having a depending vertically slotted arm, said brace secured to the moldboard, an axle adjustably secured in the slotted arm, a wheel having a flanged hub mounted on the axle, a mud guard secured

over the axle and over-reaching the flange on the hub, a mud scraper projecting rearwardly from the arm, and braces extending from the brace and the lower end of the arm to the plow beam.



3. In a plow, the combination with a beam, land side and moldboard, of a brace having a depending slotted arm, an axle screw threaded at one end, said screw threaded end extending through the slot in the arm, nuts on said threaded end on each side of the arm for adjustably securing the axle to the arm, and a wheel mounted on the other end of the axle.

870,422. IMPLEMENT FOR EXTRACTING SPIKES AND BOLTS. SAMUEL F. EUBANK, Columbia, Ky., assignor of one-third to Charles S. Harris and James Garnett, Columbia, Ky. Filed Apr. 12, 1907. Serial No. 367,762.



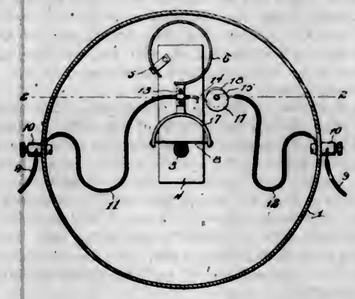
1. The combination with a handle lever having a slot in one end, two gripping jaws having extended portions that are pivoted side by side in the slot, so as to rock toward and from each other, and a spring between the jaws pressing thereon, of a supplementary lever, means for supporting said lever at one side of the jaws, and two opposed cams between the levers that are controlled by the supplementary lever.

2. The combination with a handle lever having a slot in one end, two gripping jaws having extended portions that are pivoted on separate bolts side by side in the slot so as to rock toward and from each other, and an abutment pin passed through the slot between inserted ends of the extension portions, of a supplementary lever, a clamping bolt loosely inserted through the jaws whereon the supplementary lever is mounted, and means controlled by said lever for moving the jaws.

3. The combination with a handle lever slotted in one end, two similar extension bars having tongues on one end which occupy the slot and are pivoted so as to rock therein, and two gripping jaws on the ends of said extension bars, of a bolt passed through the jaws near their gripping edges, a spring mounted on said bolt normally pressing the jaws apart, and means carried by the bolt, adapted for compressing the jaws against stress of the spring.

4. The combination with a handle lever, two extension bars pivoted at one end of each bar upon the same end of the handle lever, a gripping jaw on the opposite end of each extension bar, said bars each having a toe extended forwardly on the gripping jaw thereof, a fulcrum stud projected from one gripping jaw for contact with the other gripping jaw, a clamping bolt passing through opposite perforations in the gripping jaws near their cutting edges, and having a head on one end and a nut on the other end, of an expansible spring on the bolt pressing upon the jaws, a cam swell fixed on one gripping jaw through which the clamping bolt passes, a supplementary lever rockable on the bolt near its head, a ratchet wheel mounted upon the clamping bolt, a spring pressed pawl engaging teeth of said ratchet wheel, and a cam swell on the ratchet wheel having contact with the mating cam on the gripping jaw.

870,423. ELECTRICAL THERMOSTATIC ALARM. JODA FINCH, Lyndhurst, N. J. Filed Feb. 26, 1907. Serial No. 359,302.

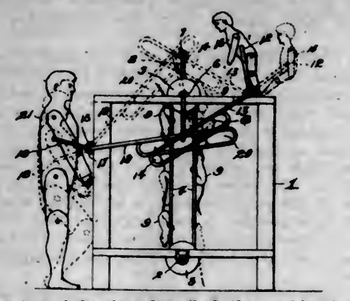


1. In a device of the class described, the combination of a support, a thermostatic element mounted thereon, binding posts on the support, flexible conductors connected with the posts, and one attached to the element, a shaft disposed at one side of the element for rotation, an adjustable member on the shaft normally separated from the conductor attached to the element and adapted to contact therewith, and means connecting the other conductor with the shaft for completing the circuit therethrough, said means including a moving contact.

2. In a device of the class described, the combination of a casing, an arbor therein, a temperature indicating hand thereon, a thermostatic element, a mechanism between the element and arbor for actuating the latter, conductors within the casing, means for connecting them with an external circuit, a shaft mounted in the casing and extending through one wall thereof, means for turning the shaft by hand, a permanent electrical connection between one conductor and the shaft, and an eccentric with which the other conductor is adapted to contact by the movement of the thermostatic element.

3. In a device of the class described, the combination of a support, a thermostatic element thereon, a conductor attached to the element and having one end formed into a shoe or contact, a second conductor, a rotary shaft on the support, a collar thereon with which the second conductor is in permanent contact, an eccentric arranged in line with the shoe or contact of the first conductor for making contact therewith by the movement of the thermostatic element, and an indicating means for determining the adjustment of the eccentric with respect to the said shoe or contact.

870,424. TOY. GREEN B. FLOYD, Irma, Ala. Filed June 5, 1907. Serial No. 377,864.



1. In a toy of the class described, the combination of an endless traveling element, figures on and carried thereby a revoluble element to actuate the same and having a crank, a rock shaft having a crank portion and a crank arm, the latter being slotted and engaged by the wrist of the crank of such revoluble element, and a figure connected to and operated by the crank portion of the said rock shaft.

2. In a toy of the class described, the combination of an endless traveling element, figures on and carried thereby a revoluble element to actuate the same and having a crank, a rock shaft having a crank portion and a crank arm, the latter being slotted and engaged by the wrist of the crank of such revoluble element, and a flexibly jointed figure connected to and operated by the crank portion of the said rock shaft.

3. A toy comprising a frame, shafts mounted therein and having drums, one of said shafts also having means whereby it may be rotated and further provided with a crank, an endless belt connecting such drums, figures on and carried by such endless belt, a rock shaft mounted on such frame and having a crank portion, a rock arm, the latter provided with a slot engaged by the wrist of the crank of the driving shaft, a figure on such frame and attached to the crank portion of such rock shaft, a rock shaft mounted on one end of the frame having a crank portion and further provided with a rock arm having a slot engaged by the wrist of the crank of the driving shaft and a flexibly jointed figure opposite said end of the frame and connected to the crank portion of the last mentioned rock shaft for operation thereby.

870,425. RAZOR-BLADE HOLDER. SCHUYLER FRAZIER, Bristol, Va. Filed Mar. 22, 1907. Serial No. 363,828.

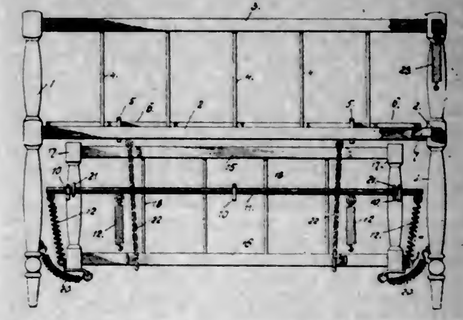


1. A device of the class described having a handle with a rigid jaw, said jaw having pins projecting from the inner face thereof, a movable jaw having a resilient extension attached to said handle and tending to hold said jaw removed from said fixed jaw, said movable jaw having openings therein opposite said pins, and a thumb-screw connecting said jaws and adapted to force the same together.

2. A device of the class described having a handle with a fixed jaw, a movable jaw having an offset resilient extension rigidly attached thereto and tending to hold said movable jaw removed from said fixed jaw, and means connecting said jaws, for drawing the same together.

870,426. INFANTS' BED. JOHN GAMBER and OTTO F. HEER, Washington, Pa. Filed Apr. 13, 1907. Serial No. 367,928.

1. An infant's bed embodying rectangular frames arranged one above the other, frames hinged to the inner sides of the lowermost frame and adapted to fold inwardly, forming a bed, a crib resiliently suspended within said frames, rods resiliently connected to the sides of said crib, and means to detachably connect said rods to the uppermost frame.



2. In an infant's bed, the combination with frames, arranged one above the other, frames hinged to the innermost sides of the lowermost frame and adapted to fold inwardly, a crib resiliently supported in said frame, rods resiliently connected to said crib, and means projecting from said rods to support said crib in an elevated position.

3. An infant's bed consisting of horizontal frames, legs supporting said frames, a crib arranged in said frames, rods arranged at the sides of one of said frames and connecting with said crib for resiliently supporting said crib in an elevated position, means connecting with one of said frames for holding one end of said crib stationary, means suspended from one of said frames for holding said crib in a lowered position, and means for resiliently connecting said crib to the lower ends of said legs.

4. An infant's bed consisting of horizontal frames, a crib resiliently supported in said frames, rods arranged at the sides of said crib and adapted to resiliently support said crib in an elevated position, and means connecting with one of said frames for holding one end of said crib stationary.

5. An infant's bed consisting of horizontal frames, a crib resiliently supported in said frames, rods arranged at the sides of said crib and adapted to resiliently support said crib in an elevated position, means connecting with one of said frames for holding one end of said crib stationary, and means suspended from one of said frames for holding said crib in a lowered position.

6. An infant's bed consisting of horizontal frames, legs supporting said frames, a crib arranged in said frames and connected by resilient means to the lower ends of said legs, rods connected by both permanent and detachable resilient means to said crib frame for supporting the crib in an elevated position, means connecting with one of said frames for holding one end of said crib stationary, and means suspended from one of said frames for holding said crib in a lowered position.

7. An infant's bed embodying rectangular frames arranged one above the other, a crib resiliently suspended within said frames, rods connected to the sides of said crib by resilient members, auxiliary depending resilient members carried by said rods and by the ends of said upper frame and adapted to be detachably secured to the crib frame, and means to detachably connect said rods to the uppermost frame.

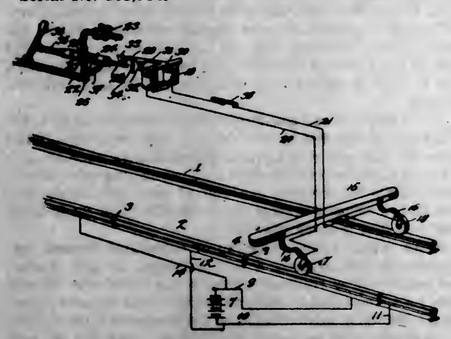
8. In an infant's bed, the combination with horizontal frames arranged one above the other, frames hinged to the innermost sides of the lowermost frame and adapted to fold inwardly, a crib resiliently supported in said frame, rods arranged at the sides of said crib and adapted to resiliently support said crib in an elevated position, and means carried by said crib and connecting with the lowermost of said frames for holding one end of said crib stationary.

9. An infant's bed embodying horizontal rectangular frames arranged one above the other, legs supporting said frames, longitudinally disposed frames hinged to the in-

innermost sides of the lowermost frame and adapted to fold inwardly and braces connecting the confronting edges of said frames, forming a bed, a crib resiliently suspended within said frames, rods arranged at the sides of and resiliently connected to said crib, means projecting from said rods to support said crib in an elevated position, means connected with one of said frames for holding one end of the crib stationary, and means suspended from one of said frames for holding said crib in a lowered position.

10. In an infant's bed, the combination with horizontal rectangular frames arranged one above the other, vertically arranged bars connecting said frames, legs supporting said frames, longitudinally disposed rectangular frames provided with suitable webbing and hinged to the innermost sides of the lowermost frame and adapted to fold inwardly and strengthening cross braces connecting the confronting edges of said frames, forming a bed, a crib resiliently suspended within said frames, resilient members connecting the lower corners of said crib to the lower ends of said legs, rods arranged at the sides of said crib and carrying suitable projections for engaging the uppermost of said frames to support said crib in an elevated position, the ends of said rods being securely connected by resilient members to the lower corners of said crib, auxiliary resilient members carried by said rods and by the ends of said uppermost frame and adapted to be detachably secured to the crib frame, a means detachably connecting one end of the lowermost frame with one end of said crib for holding one end of the latter stationary, and means suspended from the lowermost frame for holding said crib in a lowered position.

870,427. TRAIN-CONTROLLING APPARATUS. WILLIAM GEBMINER, Pueblo, Colo., assignor of two-fifths to Marshall L. Brittain, Pueblo, Colo. Filed Apr. 2, 1907. Serial No. 365,984.



1. A train controlling apparatus including a series of independent track circuits, normally open circuits carried by the locomotives and adapted to be closed in conjunction with each other and with any one of the track circuits, an electro-magnet in each of the locomotive circuits, and a bleed valve for the train pipe operated on the movement of said armature.

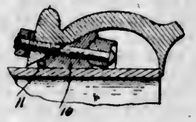
2. A train controlling apparatus including a series of independent track circuits, normally open circuits carried by the locomotive and adapted to be closed in conjunction with each other and with any one of the track circuits, an electro-magnet included in each locomotive circuit, a bleed valve arranged in the train pipe, means connected with the armature of the electro-magnet to lock said valve in closed position, and means to move the valve to open position upon the operation of the armature in the energization of the electro-magnet.

3. A train controlling apparatus including a series of independent track circuits, normally open circuits carried by the locomotive and adapted to be closed in conjunction with each other and with any one of the track circuits, an electro-magnet included in each locomotive circuit, a bleed valve arranged in the train pipe, a by-pass leading from said pipe and normally closed by a valve, means for maintaining said valve in closed position during deënergization of the electro-magnet, and means for moving the valve to open position upon the energization of the magnet.

4. A train controlling apparatus including a series of independent track circuits, normally open circuits carried by the locomotive and adapted to be closed in conjunction with each other and with any one of the track circuits, an electro-magnet included in each locomotive circuit, a bleed valve arranged in the train pipe, a by-pass leading from said pipe and normally closed by a valve, means for maintaining said valve in closed position during deënergization of the electro-magnet, a spring for moving the valve to open position, a hook projecting from the valve, and a hook lever projecting from the armature and adapted to engage the valve hook when the electro-magnet is deenergized.

5. A train controlling apparatus including a series of independent track circuits, normally open circuits carried by the locomotive and adapted to be closed in conjunction with each other and with any one of the track circuits, an electro-magnet included in each locomotive circuit, a bleed valve arranged in the train pipe, a by-pass leading from said pipe and normally closed by a valve, means for maintaining said valve in closed position during deënergization of the electro-magnet, a spring for moving the valve to open position, a hook projecting from the valve, a hook lever projecting from the armature and adapted to engage the valve hook when the electro-magnet is deenergized, and means for adjusting the valve operating spring.

870,428. PIPE-COUPLING PACKING. ANDREW W. GRAHAM, Bradford, Pa. Filed Mar. 3, 1906. Serial No. 304,106.



1. A packing for pipe couplings, consisting of a compressible ring of wedge shape cross section, and a pipe gripping member of rigid material embedded in the edge of said ring and protruding thereheyond.

2. A packing for pipe couplings, consisting of a compressible ring of wedge shape cross section, and a pipe gripping member of rigid material embedded in the edge of said ring and protruding thereheyond, said member being formed of a multiplicity of sections.

3. A packing for pipe couplings, consisting of a compressible ring of wedge shape cross section, and a pipe gripping member of rigid material embedded in the edge of said ring, said member being formed of a multiplicity of sections, said sections being spaced.

4. A packing for pipe couplings, consisting of a compressible ring of wedge shape cross section, and a pipe gripping member of rigid material embedded in the smaller edge of said ring, said member being of wedge shape.

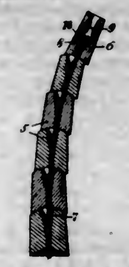
5. A packing for pipe couplings, consisting of a compressible ring of wedge shape cross section, and a pipe gripping member of rigid material embedded in the smaller edge of said ring, said member being of wedge shape and formed of a multiplicity of sections.

6. A packing for pipe couplings, consisting of a compressible ring of wedge shape cross section, and a pipe gripping member of rigid material embedded in the smaller edge of said ring, said ring having at its wider edge a shield of soft metal.

870,429. SECTIONAL STAND. FRANK G. GRIMLER, Buffalo, N. Y. Filed Apr. 27, 1907. Serial No. 370,657.

1. A sectional stand composed of a series of units each having a central aperture, a cord affixed to a unit at one

end of the stand and passing through the apertures of the intermediate units, the aperture of each unit closely fitting the cord at one end, and formed with an enlarged portion at its opposite end, and means arranged at the opposite end of the stand including a resilient member for adjusting the tension on said cord.

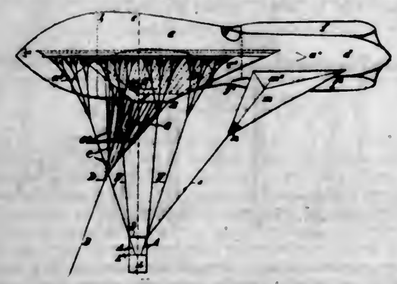


2. A sectional stand, comprising a base having a cylinder mounted thereon, a series of joints movably mounted one upon the other with the lower joint passing into said cylinder, means connecting the joint within the cylinder to said base, a cord attached to the top joint and passing through central apertures formed in the intermediate joints, an eye-bolt slidably mounted within the bottom joint to which said cord is attached, a thumb-nut threaded on said eye-bolt, a washer supported on said eye-bolt by said thumb-nut, and a spring interposed between the washer and the bottom joint.

3. A sectional stand composed of a series of joints, an electric lamp carried by the top joint, means connected to the top joint and passing through the intermediate joints bindingly connecting all of said joints together, bands having eyes integral therewith fixed to certain of said joints, and a conductor passing through said eyes and through said top joint to the lamp.

4. A sectional stand composed of a series of units slidable one upon the other, a cord attached to one of said units and passing through the intermediate units, a device slidably mounted within one of said units to which said cord is attached, a spring, and adjustable means carried by said device bearing on said spring.

870,430. CAPTIVE BALLOON. HENRI A. HERVÉ, Paris, France. Filed Dec. 9, 1902. Serial No. 134,533.



1. A captive balloon comprising a hull of elongated shape, a cylindrical body being a prolongation of the hull at the rear part without assisting in the general sustentation so as not to bring backwards the center of buoyancy and simply adapted to insure the stability of orientation, auxiliary cylindrical bodies arranged on the cylindrical prolongation with the purpose to increase the transverse resistance, lateral sail surfaces also mounted on the cylindrical prolongation, a suspension system, a towage system independent of the former and so arranged that the line of the tractive force will pass through the crossing point of the sustaining axis and of the axis of resistance.

2. A captive balloon, comprising an elongated hull having a pointed forward end and provided with a cylindrical extension at its rear end, a pair of auxiliary cylindrical bodies on each side of the extension of the hull, a sail-like surface extending between each pair of said bodies, a sail on each side of the lower portion of the said extensions, a series of suspension ropes connected with the hull, and a series of towing ropes also connected with the hull.

3. A captive balloon, comprising an elongated hull having an ogival front end and provided with a cylindrical extension at its rear end, the major transverse axis of the hull being forward of the center of gravity of the balloon, and cylindrical bodies secured upon the said extension.

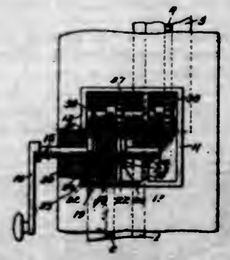
4. A captive balloon, comprising an elongated hull having an ogival front end and provided with a cylindrical extension at its rear end, cylindrical bodies secured upon the extension, and sail-like surfaces at the sides of said extension.

5. A captive balloon, comprising an elongated hull having an ogival front end, and provided with a cylindrical extension at its rear end, cylindrical bodies secured upon the extension, sail-like surfaces at the sides of the extension, and sails secured to the extension below the sail-like surfaces.

6. A captive balloon, comprising an elongated hull having an ogival front end and provided with a cylindrical extension at its rear end, cylindrical bodies secured upon the extension, sails secured to the sides of the extension, and triangular sails secured to the extension below the first named sails, said triangular sails extending below the extension and connected together.

7. A captive balloon, comprising an elongated hull having an ogival front end and provided with a cylindrical extension at its rear end, cylindrical bodies secured upon the extension, sails at the sides of the extension, sails secured to the extension below the first named sails, said last named sails extending below the extension and connected together, suspension ropes secured to the sides of the hull, and towing ropes secured to the hull between the suspension ropes.

870,431. SASH OPERATING, LOCKING, AND BALANCING MECHANISM. JOHN D. HESS, near Baltimore, Md. Filed June 1, 1907. Serial No. 376,879.



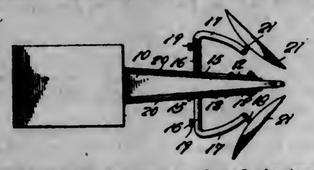
1. Sash operating, locking and balancing mechanism comprising in combination with an upper and lower sash, each having a rack at one side, a counter shaft having a pinion engaging the rack of the upper sash and further provided with a second pinion; an operating shaft mounted for rotation and for longitudinal movement and having a master gear for engagement either with the second pinion or the rack of the lower sash, and stop devices actuated by such operating shaft, one for engagement with and disengagement from such second pinion and the other for engagement with and disengagement from the rack of the lower sash.

2. Sash operating, locking and balancing mechanism comprising in combination with an upper and lower sash, each having a rack at one side, a counter shaft having a pinion engaging the rack of the upper sash and further provided with a second pinion; an operating shaft mounted for rotation and for longitudinal movement and having a master gear for engagement either with the second pinion or the rack of the lower sash, and stop devices actuated by such operating shaft, one for engagement with

and disengagement from such second pinion and the other for engagement with and disengagement from the rack of the lower sash, and means to prevent such stop devices from turning with such counter shaft.

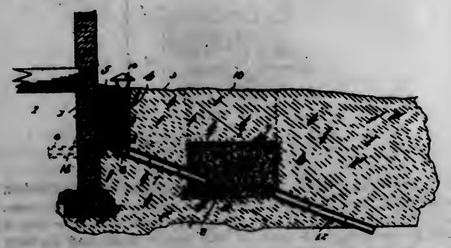
3. Sash operating, locking and balancing mechanism comprising in combination with racks with which the respective upper and lower sashes are provided, a counter shaft having a pinion engaging the rack of the upper sash and further provided with a second pinion, an operating shaft mounted for rotation and also for longitudinal movement, a master gear on such operating shaft for engagement with either or both the second pinion and the rack of the lower sash, stop devices, one for engagement with and disengagement from the second pinion and the other for engagement with and disengagement from the rack of the lower sash, such stop devices being movable longitudinally with such master gear, and means to prevent such stop devices from turning.

870,432. SEED-PLANTER. PRATT H. HIGLEY, Chillicothe, Ohio. Filed July 7, 1906. Serial No. 325,166.



An attachment for the runner of seed planters comprising two bars attached to the forward portions of the runners and inclined upwardly and rearwardly, their upper rearward ends extending above the runner and provided with lateral extensions, hollow angular disk-supporting arms into the upper portion of which the said extensions are projected and adjustable, the lower ends of the arms projecting forwardly toward the front end of the runner and provided on their free ends with spindles to support furrow-opener disks, the said spindles being adjustably connected with the disks.

870,433. DRAINAGE FOR BUILDING-FOUNDATIONS. EMERY C. HODGES, Bloomington, Ill. Filed May 3, 1906. Serial No. 315,085.

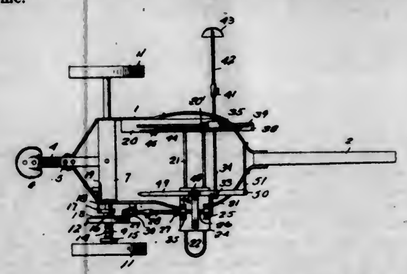


1. The combination with the foundation of a structure, of a filtering bed surrounding the exterior of the structure, drainage pipes embedded in the filtering bed, a discharge pipe leading from the drainage pipes, and sewer connections from the discharge pipe.

2. The combination with a building foundation of a filtering bed surrounding the exterior of the structure, a system of drainage pipes embedded in the filtering bed, a discharge pipe for the drainage system, a cinder bed for receiving said discharge from the drainage system, and a sewer-discharging pipe leading from the cinder bed.

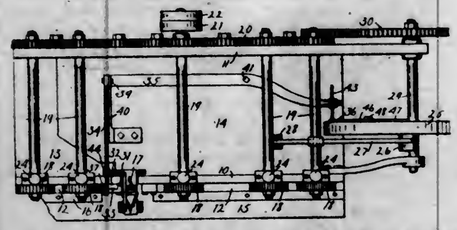
870,434. COTTON-CHOPPER. JOHN HUDSON, Hamlin, Tex. Filed July 17, 1907. Serial No. 384,158.

1. A machine of the type set forth, comprising a frame, a shaft supported thereby, traction wheels carried upon said shaft, a post carried by the frame and formed with communicating slots in all the faces thereof, a slidably adjustable plate, a shaft mounted on said plate, gearing between one of said traction wheels and said shaft for driving the latter from the former, a crank arm carried by said shaft, a pitman pivoted to said crank arm, a lever pivoted adjacent said post and projected through a pair of opposed slots, said lever being formed with a slot between the slots of said post, said pitman being projected through said last named slot, a shank secured to the end of said pitman, a hoe carried by said shank, and means for adjusting said plate laterally with relation to said frame.



2. A machine of the type set forth, comprising a frame, a shaft supported thereby, traction wheels carried upon said shaft, a pivotally mounted post carried by the frame and formed with communicating slots in all the faces thereof, a slidably adjustable plate, a shaft mounted on said plate, gearing between one of said traction wheels and said shaft for driving the latter from the former, a crank arm carried by said shaft, a pitman pivoted to said crank arm, a member secured to said post, a lever pivoted to said member and projecting through a pair of registering slots in said post, said pitman being projected through said last named slot, a shank secured to the end of said pitman, a hoe carried by said shank, means for adjusting said plate laterally with relation to said frame, and means for adjusting said post on its pivot.

870,435. RATAN-SPLITTING MACHINE. DAVID C. HULL, Westfield, Mass., assignor to United States Whip Company, Westfield, Mass., a Corporation of Maine. Filed Mar. 21, 1907. Serial No. 363,693.



1. The combination, in a splitting machine, of a knife, means to position such knife in the path of the stock which the machine is adapted to handle, a raceway and feed and guide mechanism for said stock, means to open and close the entrance to such raceway, and means to withdraw the knife from such path before sufficient time elapses for the stock in the grasp of said feed mechanism to travel a distance equal to the length of the stock.

2. The combination, in a splitting machine, with the raceway and feed and guide mechanism for the stock, and cam-actuated means for opening the entrance to such raceway of a knife, spring-actuated means for retaining such knife in said raceway, and cam-actuated means for withdrawing said knife from the raceway.

3. The combination, in a splitting machine, with the raceway and feed and guide mechanism for the stock, and mechanism adapted to open and close the entrance to the raceway at predetermined intervals, of a knife normally extending into said raceway, and means to withdraw such knife from the raceway, such means having relative action to that of the opening and closing mechanism for the raceway.

4. The combination, in a splitting machine, with the raceway of the machine, a slidingly-mounted knife, and resilient means to normally retain such knife in the raceway, of relatively operating means to open the entrance to the raceway and to actuate said knife against such resilient means out of said raceway.

5. The combination, in a splitting machine, with the raceway and feed and guide mechanism for the stock, and mechanism adapted to open and close the entrance to the raceway at predetermined intervals, of a slidingly-mounted knife, resilient means to normally retain such knife in the raceway, and means to actuate said knife against such resilient means out of said raceway, such means having relative action to that of the opening and closing mechanism for the raceway and comprising a suitably mounted bell-crank-lever in operative relation with said knife, a cam, and a pivotally-mounted arm having one end in engagement with said bell-crank-lever and the other end in the path of said cam.

6. The combination, in a splitting machine, with the raceway and feed and guide mechanism for the stock, a cam, and a lever connected with the feed mechanism at the entrance to said raceway and having one terminal lying in the path of said cam, of a slidingly-mounted knife, resilient means adapted to normally retain such knife in the raceway, a second cam, and mechanism in operative relation with said knife and adapted to be so actuated by said second cam as to withdraw the knife from the raceway and hold it out of the path of the stock until released again to the resilient means.

870,436. STEEL UNDERFRAMING FOR RAILWAY-CARS. FRANK L. IRWIN, Columbus, Ohio, assignor to The Ralston Steel Car Company, Columbus, Ohio. Filed May 28, 1907. Serial No. 376,074.



1. In a car underframe, a depressed seat for a side sill or stringer comprising a support for said side sill or stringer, and a flange projecting rearwardly from and above and below said support, said flange having holes for the passage of bolts to secure the device to the end of a transverse member of the car underframe.

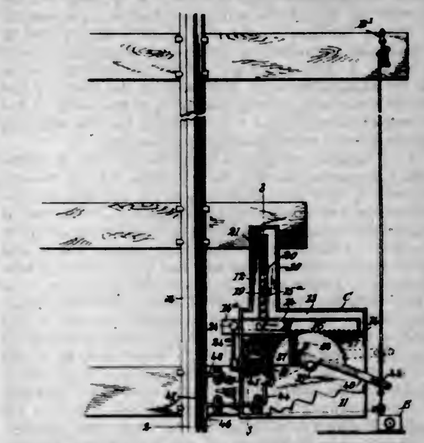
2. In a car underframe, the combination with a center girder and a transverse member secured thereto, of depressed supports at the ends of said transverse members and provided with perforated flanges to receive bolts for securing the depressed seat to the ends of said transverse members.

3. In a car underframe, the combination with a transverse member having its respective ends notched, of a depressed seat for a side sill or stringer secured to the notched ends of the transverse member and lying below the plane or the top of the latter.

4. In a car underframe, the combination with a transverse member, of a casting comprising a seat for a side sill or stringer and flanges to receive said transverse member between them, fastening means passing through said flanges and transverse member and said seat disposed in a plane below the top of said transverse member.

5. In a car underframe, the combination with a transverse member, of a seat for a side sill or stringer located at the end of said transverse member and disposed in a plane below the top of the latter, said seat provided with a flange secured to the transverse member.

870,437. TORPEDO-PLACER. FREDERICK JAMES, Lansboro, Pa. Filed May 16, 1907. Serial No. 373,961.



1. In a device for placing torpedoes, a casing, an anvil at the exterior of the casing, a feed device for torpedoes, movable to and from the anvil, means for supplying torpedoes to the feed device, a hammer operative to and from the anvil, a setting mechanism for the hammer, means for simultaneously operating the feed device and setting mechanism, and a trip for the latter.

2. In torpedo placers, a feed device for torpedoes, a hammer mounted to act upon a torpedo fed by said device, a setting mechanism for the hammer and means common to both the feed device and setting mechanism for simultaneously operating both, and a trip for the setting mechanism adapted to be acted upon by a passing train.

3. In torpedo placers, a feed device for torpedoes, a hammer mounted to act upon a torpedo fed by said device, a setting mechanism for the hammer, an operating lever common to and having simultaneous operation upon the feed device and setting mechanism, a signal controlling mechanism connected with the said lever, a trip for the setting mechanism, and means for operating the trip by a passing train.

4. In a torpedo placer, a feed device for torpedoes, a tension-controlled hammer for exploding a torpedo, a setting mechanism for the hammer, a signal operating mechanism, means for operating the feed device and the setting mechanism by the movement of the signal controlling mechanism, and a trip device for the hammer setting mechanism.

5. In a torpedo placer, a feed device for torpedoes, a tension-controlled hammer for exploding a torpedo, a setting mechanism for the hammer, a signal operating mechanism, means for operating the feed device and the setting mechanism by the movement of the signal controlling mechanism, a trip for the hammer setting mechanism set by said mechanism, means for operating the said trip by a passing train, and means for consecutively supplying torpedoes to the said feed device.

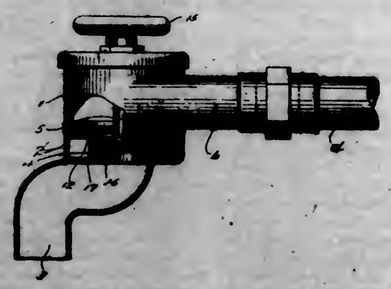
6. In a torpedo placer, a casing provided with a magazine chamber for torpedoes, a follower within said chamber and an anvil at the outer side of the casing, a torpedo feed bar receiving torpedoes from the magazine chamber, a support for the said feed bar, the bed of which support is in horizontal alinement with the upper face of the anvil, a spring-controlled shaft, a hammer secured to said shaft adapted for movement to and from the anvil, a setting mechanism for the said shaft of the hammer, a locking

device for the shaft when in set position, an operating lever having simultaneous operative connection with the setting mechanism for the hammer and the feed bar, and a trip for the locking device for the hammer shaft, adapted to be operated from a point outside of the casing.

7. In a torpedo placer, a casing provided with a magazine chamber, a follower therein, a torpedo feed device operating across and receiving material from the said magazine chamber, a hammer, a spring-controlled shaft therefor, the hammer being adapted for striking engagement with the torpedo fed by the said feed bar, a segmental gear loosely mounted on the said shaft, a dog carried by the said gear, adapted for controlling engagement with said shaft, a lever mounted within the casing, having teeth for engagement with the teeth on the feed bar and teeth for simultaneous engagement with the teeth of the said segmental gear, and a trip device for the said dog operative from a point outside of the casing.

8. In a torpedo placer, the combination with a casing having a magazine chamber for torpedoes formed therein, a follower in said magazine chamber, a bed crossing the said chamber and located within the casing, which bed is continued out beyond a side of the casing to form an anvil, and a feed bar mounted to slide upon the said bed to and from its anvil projection, the said bar being provided with an opening or pocket at one end to receive torpedoes from the said magazine chamber, of a spring-controlled shaft located within the casing and extending beyond a side thereof, a hammer secured to the said shaft, adapted for movement to and from the anvil, a wheel secured to the shaft, having a peripheral recess, a segmental gear loosely mounted on the shaft, a dog carried by the gear, engaging mounted within the casing, having a toothed surface for engagement with the teeth of the feed bar, and a second with the peripheral surface of the said wheel, a lever toothed surface for engagement with the segmental gear, a switch-controlled mechanism, a connection between said mechanism and the said lever, a trip for the dog, located within the casing, and means for operating the said trip by a passing train, which means are at the exterior of the casing.

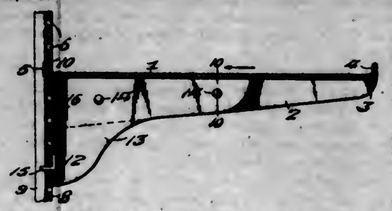
870,438. COMBINED HOT AND COLD WATER FAUCET. ARTHUR JOHNSON, Hyde Park, Mass. Filed Jan. 26, 1907. Serial No. 354,322.



1. A faucet of the character described comprising an internally threaded cylinder having an outlet nozzle in the bottom thereof, a valve seat in the upper portion of said nozzle, a regulator comprising spaced threaded rings having alined openings therein, said regulator being fixed to a valve stem, a valve on the end of said stem, and a hand wheel for operating the regulator and unseating the valve, to permit hot or cold water through the alined openings, substantially as described.

2. In a faucet, a cylinder, inlet pipes communicating therewith, a threaded regulator fitted within said cylinder and comprising spaced rings having alined openings therein, one-half of said rings being covered by a disk or diaphragm, a valve, a stem to which said valve and regulator are connected, and means for raising and lowering said regulator and valve, substantially as described.

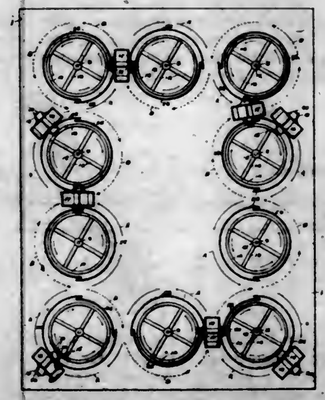
870,439. ADJUSTABLE BRACKET. CHARLES F. KADE, Sheboygan, Wis. Filed Jan. 9, 1906. Serial No. 295,283.



1. A metal bracket comprising a horizontal flange, and a vertical flange extending from one side of said horizontal flange, an upturned lug at the inner end of said horizontal flange, and laterally extending sustaining lugs formed on the vertical flange, and a supporting rail provided with horizontal slots for engagement of the upturned lug and providing a bearing face for the laterally extended sustaining lugs.

2. A sheet metal bracket comprising a horizontal flange, a vertical flange extending from one side of said horizontal flange, an upturned lug at the inner end of said horizontal flange, an extension piece secured to said vertical flange, a sustaining lug formed on said extension piece and extending laterally therefrom, a supporting rail provided with horizontal slots and intermediate cross bars, and a lip extending at right angles to said sustaining lug.

870,440. HORIZONTAL ROLLER-COASTER. BURTON A. KARR, Omaha, Nebr., assignor, by mesne assignments, to Universal Amusement Company, a Corporation of Oklahoma. Filed Aug. 12, 1907. Serial No. 388,271.



1. In a pleasure-railway, a plurality of driving-wheels, means for synchronously actuating the same, wheeled cars, means carried by said cars for engagement with the driving-wheels, and means for guiding the cars whereby the same will be actuated successively by each of the driving wheels and move in endless alternating curvilinear paths.

2. In a pleasure-railway, driving-wheels revoluble in a horizontal plane and equidistantly spaced around an area inclosed thereby, means for actuating said driving-wheels, wheeled cars, means carried by said cars for engagement with the driving-wheels, and means for guiding the cars whereby the same will be actuated successively by each of the driving-wheels and move around a portion of the peripheries of each of the same.

3. In a pleasure-railway, two sets of wheeled cars, an endless series of driving-wheels disposed in a substantially horizontal plane, means carried by the cars for engagement with the driving-wheels, and means for guiding each set of the cars whereby the same will be actuated successively by each of the driving-wheels and move in intersecting endless alternating curvilinear paths.

4. In a pleasure-railway, a substantially horizontal platform, an endless series of driving wheels disposed parallel with said platform, two sets of guide-rail sections, the sections of one set being of greater height and of smaller radius of curvature than the sections of the other set, one section of each set of guide-rails being placed around a portion of each of the driving-wheels, two sets of wheeled cars resting on said horizontal platform, the cars of one set having means for engaging one of the sets of guide-rail sections, the other set of cars having means for engaging the other set of guide-rail sections, and means for connecting the cars and driving-wheels whereby the cars will be driven around endless paths adjoining the guide-rails engaged thereby.

5. In a pleasure-railway, a substantially horizontal platform, an endless series of driving-wheels arranged above said platform and parallel therewith, cars supported by caster-wheels and movable on said horizontal platform, teeth at each side of the cars adapted for engagement with corresponding means on the rims of the driving-wheels, guide-rail sections disposed adjacent the rims of the driving wheels, and rollers carried at the sides of the cars adjacent the teeth thereon and adapted for engagement with said guide-rail sections, the arrangement being such that as any car passes between any adjoining pair of the driving wheels the rollers engaging the guide-rail section around one of the wheels will disengage therefrom and the rollers at the other side of the car will engage the corresponding guide-rail section around the other driving wheel, so that the car will be transferred from one of the driving-wheels to the other.

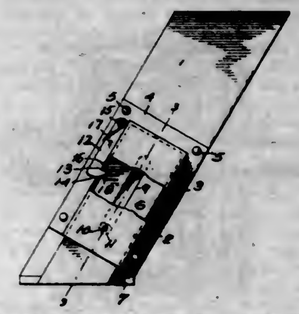
870,441. NUT-CUTTING TOOL. JESSE J. KERR, Dunbar, Pa. Filed Aug. 23, 1907. Serial No. 389,859.

1. A nut-cutting tool, comprising a body portion provided with a projection having a longitudinal bore screw-threaded for a portion of its length, a sharpened die or anvil block suported by said body portion, a screw fitting the threaded portion of said bore, and a chisel supported within said bored projection below said screw.

2. A nut-cutting tool comprising a body portion slotted to provide a handle, and having a lateral projection formed with a longitudinal bore, said bore being of circular cross section and internally-threaded for a part of its length and of square cross section for the remainder of its length, a sharpened die or anvil block removably secured to the lower portion of the tool, a headed screw within the threaded portion of the bore, and a chisel fitting the squared part of said bore.

3. A nut-cutting tool comprising a body portion slotted to provide a handle, and having a dove-tail recess at its lower end, and also having a lateral projection bored throughout its length, said bore being of circular cross-section and threaded for a part of its length, and of square cross section for the remainder of its length, a triangular die or cutter fitting said dove-tail recess, a headed screw fitting the threaded portion of said bore, and a chisel-pointed cutter within the squared portion of said bore.

870,442. CAR-STEP. OSCAR A. KNEELAND, Lisbon, N. D. Filed Apr. 11, 1907. Serial No. 367,517.



In a device of the type set forth, the combination with a side-sill, of a casing fixed thereto and spaced away therefrom, said casing having an open end and having flanges overlying and secured to said sill, a bracket slidably disposed between said sill and said casing and having a longitudinal slot, a pin having its ends mounted in said sill and said casing and projected through said slot, a friction-roller on said pin, said casing being formed with an opening in one of the closed sides thereof, said bracket being formed with a notch in one of its side edges, and a dog pivoted to said sill and having its working portion projected through said opening and engaged in said notch.

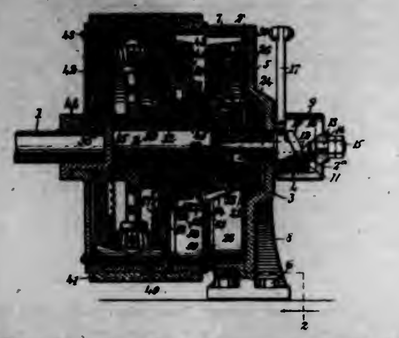
870,443. STEEL FENCE-POST. JOSEPH P. LAVOIE, Kibbey, Mont. Filed Apr. 5, 1906. Serial No. 310,118. Renewed Apr. 26, 1907. Serial No. 370,441.



The combination, with a hollow fence-post having an intact top and a pointed intact bottom, and provided with a longitudinal slot extending into the hollow of the post from near the top to near the bottom, and enlarged at its upper end to form an entrance aperture; of a wire-holding clip having a flat upper portion provided with a bolt-hole, and a concavo-convex portion adapted to embrace the wire and terminating in a tab or point extending into the slot; and a headed bolt provided with a nut on its threaded end and arranged in said bolt-hole, the bolt head being passed through said aperture with its shank fitting in said slot, and the nut being adapted to be turned upon the threaded

shank of the bolt to tighten the flat portion of the clip against the post and clamp the fence-wire in place within said concavo-convex portion.

870,444. GEARING. JOHN W. LEONARD and HARRY E. BROWN, Washington, Pa. Filed June 29, 1907. Serial No. 381,481.



1. The combination with a stationary head, of a drive shaft, a gear fixedly secured to said shaft, a driving wheel mounted to rotate freely on said shaft and provided with a laterally toothed ring, a sleeve mounted on said shaft and provided with an operating arm, gears carried by said sleeve engaging the gears of said shaft and wheel, gripping bands connected together by means of said operating arm and adapted to bear against said wheel and head respectively, and means for binding one of said bands to its adjacent locking member independently of the other band.

2. The combination with a stationary head, of a driving shaft, a gear fixedly secured to said shaft, a sleeve mounted to rotate freely on said shaft and provided with an operating arm, gears carried by said sleeve engaging the gear of said shaft, a driving wheel mounted to rotate freely on said sleeve and provided with a laterally toothed ring engaging the gears of said sleeve, gripping bands connected with said arm and adapted to bear against said wheel and head respectively, and mechanism for binding one of said bands against its adjacent locking member independently of the other bands.

3. The combination with a stationary head, of a drive shaft, a gear fixedly secured to said shaft, a sleeve mounted to rotate on said shaft and provided with an operating arm, gears carried by said sleeve meshing with the gear of said shaft, a wheel adapted to rotate on said sleeve and provided with a laterally toothed gear engaging the gears of said sleeve, gripping bands attached to said operating arm and adapted to bear against said wheel and head respectively, a ring mounted on the hub of said wheel, and means connected with said ring adapted to operate the gripping band of said wheel independently of the gripping band of said head.

4. The combination with a stationary head, of a drive shaft, a gear fixedly secured to said shaft, a sleeve adapted to rotate freely on said shaft and provided with an operating arm, gears carried by said sleeve engaging the gear of said shaft, a driving wheel mounted to rotate freely on said sleeve and provided with a gear engaging the gears of said sleeve, gripping bands connected with said operating arm, auxiliary clutches connected with said gripping bands, and means for operating one of said auxiliary clutches independently of the other.

5. The combination with a stationary head, of a drive shaft, a gear fixedly secured to said shaft, a sleeve mounted to rotate on said shaft provided with an operating arm, gears carried by said sleeve engaging the gear of said shaft, a wheel adapted to rotate on said sleeve and provided with a laterally toothed gear engaging the gears of said sleeve, gripping bands connected with said operating arm, an auxiliary clutch mounted on the hub of said wheel, an auxiliary clutch mounted on said head, connecting mechanism between said clutches and bands respectively, and means for operating said clutches so as to bring one of the gripping bands in contact with its respective locking member.

6. The combination with a stationary head, of a drive shaft, a gear fixedly secured to said shaft, a sleeve mounted to rotate on said shaft provided with an operating arm, gears carried by said sleeve engaging the gear of said shaft, a wheel provided with a hub adapted to rotate on said sleeve, gripping bands secured to said operating arm and adapted to bear against said head and wheel respectively, an auxiliary clutch head mounted on the outer end of said shaft having a sliding engagement therewith, and adapted to rotate freely thereon, means connecting said head with one of said gripping bands, and mechanism adapted to hold said last named head in frictional contact with said stationary head.

7. The combination with a stationary head, of a driving shaft, a gear fixedly attached thereto, a sleeve adapted to rotate freely on said shaft and provided with an operating arm, gears carried by said sleeve engaging the gear of said shaft, a driving wheel adapted to rotate on said sleeve and provided with a gear engaging the gears of the sleeve, a ring freely mounted on the hub of said wheel, a gripping band connected with said wheel and operating arm, a head rotatably mounted on said shaft and having a sliding movement longitudinally thereof, a gripping band connected with said head and operating arm, an operating head adapted to move longitudinally of said shaft and hold said sliding head in engagement with the stationary head, and means connected with said operating head adapted to control the operation of the gripping band of said wheel.

8. The combination with a stationary head, of a drive shaft having a hollow end, a gear fixedly secured to said shaft, a sleeve mounted to rotate on said shaft and provided with an operating arm, gearing carried by said sleeve engaging the gear of the drive shaft, gripping bands connected with said arm and with said wheel and stationary head respectively, an auxiliary clutch head mounted to rotate on the outer end of said shaft and move longitudinally thereof, an operating head having a sliding movement longitudinally of said shaft adapted to hold the auxiliary clutch head in engagement with the stationary head, a pin movable in the hollow end of said shaft, a sleeve provided with a cam slot, and an operating lever adapted to move said pin and operating head longitudinally of said sleeve.

9. The combination with a stationary head, of a drive shaft, a gear fixedly secured to said shaft, a sleeve mounted to rotate on said shaft provided with an operating arm, gears carried by said sleeve engaging the gear of the drive shaft, a wheel freely journaled on said sleeve and provided with a gear engaging the gears of said sleeve, gripping bands secured at one end to said arm and adapted to bear against said wheel and stationary head respectively, an auxiliary clutch ring mounted on the hub of said wheel and connected with the gripping band of said wheel, an auxiliary clutch head mounted on said shaft and connected to the gripping band of the stationary head, and mechanism for binding said auxiliary head in engagement with the stationary head and for clamping said ring to the hub of the driving wheel.

10. The combination with a stationary head, of a drive shaft journaled in said head, a gear fixedly attached to said shaft, a sleeve mounted to rotate freely on said shaft and provided with an operating arm, gears carried by said sleeve engaging the shaft gear, a drive wheel mounted to rotate freely on said sleeve, a ring freely mounted on the hub of said wheel, a gripping band connected with said operating arm and ring, and means for clamping said ring and wheel together.

870,445. TICKET-HOLDER. CHARLES B. LIVERMORE, Seattle, Wash. Filed June 7, 1907. Serial No. 377,820.

1. A ticket holder, comprising a casing formed of outer and inner tubular parts, the outer part being provided with a longitudinal slot and two shoulders adjacent to its open end, the inner of said parts being provided with a hollow bead-like flange overhanging a portion of the inner part and provided within the flange with a pin or abutment which co-acts with the shoulders upon the outer part, said inner part being provided with a longitudinal slot adapted at times to register with the slot in the outer part.

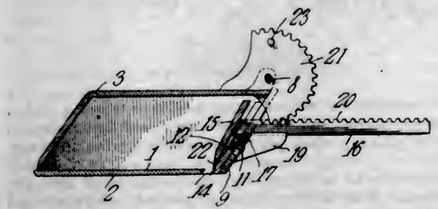


2. A ticket holder comprising a casing formed of outer and inner tubular parts, each having a closed end, the outer of said parts being provided with a longitudinal slot, and a circumferential recess adjacent its open end, said recess terminating in shoulders, the inner of said parts being provided with a longitudinal slot and a bead-like flange overhanging a portion of the inner part and adapted to receive and envelop the open end of the outer part, an abutment or pin within the flange of the inner part, co-acting with the shoulders for the purpose set forth, and a bead or projection carried by the outer part and adapted to be received within the flange of the inner part, whereby the parts are detachably united.

3. A ticket holder comprising a casing formed of outer and inner tubular parts each having a closed end, the outer part being provided with a longitudinal slot and a circumferential recess terminating in shoulders, the inner part being provided with a longitudinal slot, and formed with an inner and outer lip adjacent to said slot, the ends of the outer lip being adapted to bear lightly upon the inner lip for the purpose set forth, and means for limiting the rotation of the parts one upon the other.

4. A ticket holder comprising a casing formed of outer and inner tubular parts, each provided with a longitudinal slot, the inner part being formed with an inner and outer lip, one overlapping the other adjacent to the slot in said part, the ends of the outer lip being so formed as to bear lightly upon the lower lip, while the central portion of said lip is out of engagement with said lower lip, and means for limiting the rotation of the parts one upon the other.

870,446. ICE-SHAVER. WILLIAM A. LUPTON, Eros, La., assignor of one-half to Robert E. Collins, Eros, La. Filed June 8, 1907. Serial No. 378,021.



1. In a device of the character described, the combination with a suitable receptacle, and a closure movable relatively thereto, of an ejector mounted to operate in the receptacle, and an operating connection between the closure and ejector for causing a discharging movement of the ejector during the opening movement of the closure.

2. In a device of the character described, the combination with a receptacle and a closure mounted in pivotal relation therewith, of a follower mounted to reciprocate within the receptacle, and an operative connection between the closure and follower for causing a discharging movement of the latter when the closure is opened.

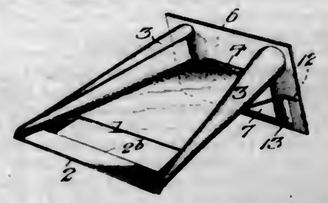
3. In a device of the character described, the combination with a receptacle having a shaving blade mounted in the rear thereof, a closure pivotally mounted on the receptacle, and a gear mounted to turn with the closure, of a follower mounted to reciprocate longitudinally of the receptacle and having a rack formed on a portion thereof and coöperating with the said gear for the transmission of movement from the closure to the follower.

4. In an ice shaver, the combination with a suitable receptacle having a shaving blade mounted angularly therein, of a follower mounted to reciprocate longitudinally within the receptacle, and a guiding stem for the follower, the latter being arranged at an angle to the blade and arranged to engage it at a point immediately adjacent to its cutting edge.

5. In an ice shaver, the combination with a receptacle having a shaving blade mounted therein, of a follower mounted to reciprocate longitudinally of the receptacle, a guiding stem rigidly attached to the follower and extending through one of the walls of the receptacle, and a bracket attached to the said wall and provided with a guiding groove coöperating with the said stem.

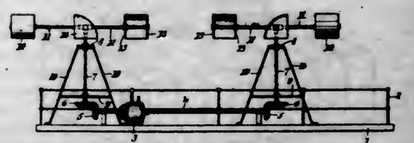
6. In an ice shaver, the combination with a receptacle having a shaving blade mounted therein, and a closure pivotally attached to the receptacle, of a follower mounted to reciprocate longitudinally of the receptacle, a guiding stem rigidly attached to the follower and provided with a rack, a gear mounted to turn with the closure and coöperating with the said rack, and a bracket secured to the receptacle opposite to the gear and serving to retain the rack in coöperative relation therewith.

870,447. COMBINATION DUST-PAN AND BROOM-HOLDER. CHARLES H. LYONS, Kansas City, Mo. Filed Sept. 8, 1906. Serial No. 333,829.



In a dust pan having bottom and side walls and being open at front and back, a rear closure or end gate consisting of a flat plate pivoted intermediate its sides to the rear edge of the bottom, said back plate having elongated slots cut therein on each side of, below, and extending transversely to the pivotal axis thereof, and springs each attached to the underside of the bottom of the pan at one end and having its free end extending through one of the said slots and bent laterally to form a stop, whereby the back plate is held either in position to form a rear closure for the pan or against the bottom of the pan so as to leave the rear end thereof open.

870,448. ATTACHMENT FOR AIR-SHIPS. ALBERT MATHEWS, New York, N. Y. Filed Mar. 16, 1907. Serial No. 362,643.



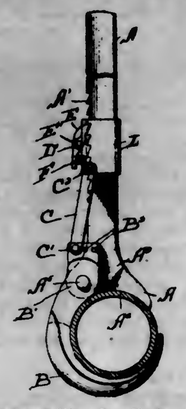
1. An air ship attachment comprising a plurality of buckets rotatable in a horizontal plane, and provided with curved walls extending in a quarter circle, and similar oppositely disposed sector ends.

2. An air ship attachment comprising a plurality of buckets having curved walls extending in a quarter circle and similar oppositely disposed sector ends mounted upon horizontally rotating arms.

3. An air ship attachment comprising vertically arranged rotating shafts provided with radial arms, and a

plurality of buckets having oppositely disposed sector ends secured to said arms, and curved walls extending in the arc of a circle.

870,449. PIPE AND NUT WRENCH. ALVA C. MAY, Massillon, Ohio. Filed Jan. 17, 1907. Serial No. 352,788.

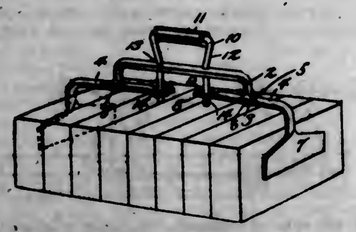


1. The combination with a handle having a toothed edge and provided with a jaw at one end, of a jaw provided with a bifurcated end pivotally mounted on said jaw, a sleeve mounted on said handle provided with a pawl adapted to engage the teeth of the handle and links pivotally mounted on said sleeve connected to the ends of the pivoted jaws to the rear of its fulcrum.

2. The combination with a handle having a toothed edge, and an enlarged end having a curved edge, of a jaw pivoted over said end, a sleeve mounted on said handle provided with a pivoted pawl adapted to engage the toothed edge of the handle, and links pivotally mounted on said sleeve adjustably connected to said pivoted jaw, for the purpose described.

3. The combination with a handle having a toothed edge and an enlarged end having a curved edge, of pins projecting out said enlarged end of the handle, a curved jaw provided with a bifurcated end having apertured walls mounted on said pins, links adjustably mounted in said apertured walls, a sleeve slidably mounted on said handle connected to said links and a spring-actuated pawl mounted on said sleeve adapted to engage said teeth on the handle, for the purpose described.

870,450. LIFTER. FREDRIC H. MAYER, Manhattan, Kans. Filed Apr. 24, 1907. Serial No. 370,070.



1. A lifter comprising a connecting bar, gripping levers supported thereby, and a handle member movably connected with the bar and directly connected with said levers.

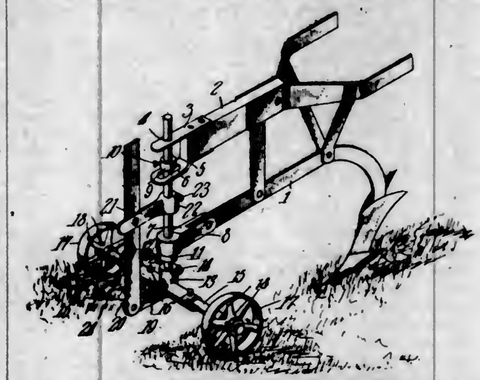
2. A lifter comprising a connecting bar, clamping levers supported thereby, bearing plates carried by the outer ends of the levers, and a handle member connecting the inner ends of the levers, said handle member operating through the connecting bar.

3. A lifter comprising a connecting bar, a handle member movable through the bar, clamping levers pivotally supported by the bar and extending in opposite directions therefrom, said handle member being directly connected to the inner ends of the levers, and bearing plates carried at the outer ends of the levers.

4. A lifter comprising a connecting bar bent to provide terminal depending portions, the free end of each of which is formed to provide spaced ears, a clamping lever formed with pivot bearings intermediate the ends, a pivot pin joining the ears of the connector bar and engaging the pivot bearing, a clamping plate carried by the end of said lever, a handle member slidably mounted in the connecting bar, the terminal of said member being passed through openings formed in the relatively inner end of the clamping levers, and means for securing said member to the lever.

5. A lifter comprising a connecting bar bent to provide terminal depending portions, the free end of each of which is formed to provide spaced ears, a clamping lever formed with a pivot bearing intermediate the ends, a pivot pin joining the ears of the connector bar and engaging the pivot bearing, a clamping plate carried by one end of said lever, a handle member slidably mounted in the connecting bar, the terminals of said member being passed through openings formed in the relatively inner end of the clamping levers, and a ring connected to the handle member beyond the clamping lever and embracing the clamping lever beyond the handle member.

870,451. LISTER ATTACHMENT. RUDOLPH C. MILLS, Eldorado, Okla. Filed May 7, 1907. Serial No. 372,336.

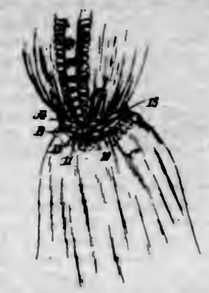


In combination with a beam having a bearing and a tongue arranged parallel with the beam and having spaced bearing plates, a shaft journaled in said bearing and bearing plates, a fitting attached to the lower end of the shaft, spindles carried by the fitting, wheels journaled upon the spindles, a draft bar extending parallel with the shaft and being connected with the same and the fitting and an adjustable collar located upon the shaft and lying between the bearing plates of the tongue.

870,452. SHIRT-WAIST-RETAINING BELT. EMILE J. MONTIGNY, New York, N. Y. Filed June 12, 1907. Serial No. 378,488.

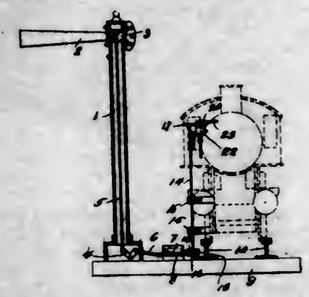
1. As an improved article of manufacture, a shirt-waist retaining belt consisting of a series of independent elastic tapes of uniform length laid in parallelism, and in substantially close relation one to the other, binding strips for the ends of the body tapes, an intermediate binding strip for the said body tapes, the intermediate binding strip being provided with eyelets for the reception of hooks, and means carried by the end binding strips for connecting the end portions of the belt when worn.

2. As an improved article of manufacture, a shirt-waist retaining belt consisting of a series of elastic body tapes of equal length and equal width laid one close to the other in parallelism, binding strips for the ends of the said tapes connecting all of them at such points, eyelets located in one end binding strip, hooks carried by the



other binding strip to be received by the eyelets, an intermediate binding strip attached transversely to all of the said body tapes and located centrally between the ends of said tapes, and eyelets located in the said intermediate binding strip.

870,453. RAILWAY-SIGNAL. JOHN M. MOORE, Bridgeville, and FRANK F. KAMP, Jr., Lawrence, Pa. Filed Aug. 15, 1907. Serial No. 388,605.

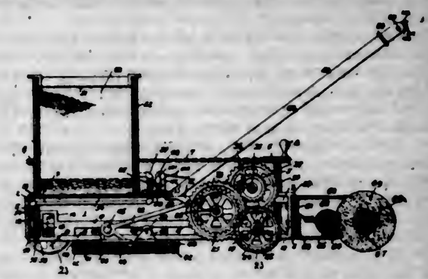


1. The combination with a signal post, and a semaphore arm pivotally secured thereto, of a bell-crank lever fulcrumed at the base of the post, a rigid connection between said arm and bell-crank lever, a horizontally-guided slide connected to said bell-crank lever, and means carried upon a locomotive adapted to contact with said slide and operate a brake-valve upon the locomotive, comprising a vertical shaft, a shouldered disk at the lower end of said shaft, and interlocking shouldered disks, one mounted upon the upper end of said shaft, and the other upon the stem of the brake-valve.

2. The combination with a signal post, of a semaphore arm pivotally secured thereto, a bell-crank lever fulcrumed at the base of said post, a rigid connection between said arm and lever, a guide located at the side of a railway track, a slide movably supported within said guide provided with a projecting arm, and having a link connection with said bell-crank lever, a vertically disposed shaft carried by a locomotive, a shouldered disk mounted upon the lower end of said shaft, a similar disk secured to the upper end of the shaft, a brake-valve and a shouldered disk thereon adapted to engage the disk at the upper end of said shaft.

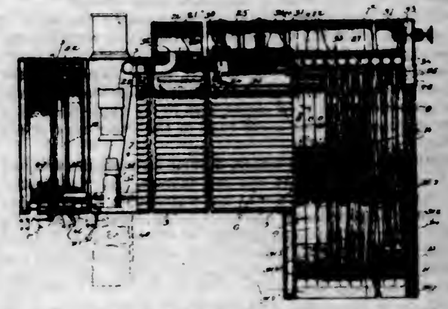
870,454. SCRUBBING-MACHINE. THOMAS MCCABE, Homestead, and JOHN J. RAUCH, Munhall, Pa. Filed July 3, 1905. Serial No. 268,132.

In a device of the class described, a supporting frame, spaced bearing blocks mounted in said frame and extending inwardly from the sides thereof, axles mounted in said blocks and provided with carrier wheel, guide members having vertical guide ways near the ends and slidably mounted on said blocks and having longitudinal guide ways intermediate the ends and guide stops at the ends bearing against the end members of said frame, a brush casing, brackets carried by said brush casing, guide rolls



carried by said brackets and operating in the longitudinal guide ways of said guide members, means carried by said frame for adjusting said members vertically, means carried by said frame for reciprocating said brush casing, and means whereby the rotary motion of one of said axles is communicated to said reciprocating means.

870,455. LOCOMOTIVE-BOILER. JAMES M. MCCLELLON, Everett, Mass. Filed July 13, 1904. Serial No. 216,315.



1. A locomotive boiler having a fire-box at one end and a smoke-chamber at the other, a water-containing chamber extending from the fire-box to the smoke-chamber, steam-generating spaces associated with the fire-box, said spaces being separate from the water-containing chamber, whereby the water in said spaces may be maintained at a higher temperature than that in the chamber, and means connecting the top of the chamber with said steam-generating spaces so that water will only flow into said spaces from the chamber when the latter is filled.

2. In a locomotive boiler, a water-containing chamber and a fire-box separated by a flue-sheet, flues extending from said chamber and opening into the fire-box, a steam-generator associated with the fire-box, said generator being separate from the chamber, whereby the water in the generator may be maintained at a higher temperature than that in the chamber, and means to connect the top of the chamber to the generator so that water will flow into the generator only when the chamber is filled.

3. In a locomotive boiler, the combination with a fire-box and steam-generating spaces around said fire-box, of a water-containing chamber which terminates at one end at the fire-box and extends forwardly therefrom, said chamber being separate from the steam-generating spaces, whereby the water in said chamber and said spaces may be maintained at different temperatures, and means to connect the top of said chamber to said spaces.

4. A locomotive boiler, having a fire-box at one end, a

water-containing chamber extending from said fire-box toward the front of the boiler, flues extending from the fire-box through said chamber, steam-generating water tubes within the fire-box, means connecting the top of the chamber with the lower ends of said water-tubes, and a steam chamber in which the steam collects, said steam chamber being connected in series with the water-containing chamber and water-tubes.

5. In a locomotive boiler, a shell forming the body of the boiler and having an outlet at or near its top, a fire-box at one end of the shell, water-tubes forming the sides of the fire-box, means connecting the outlet from the shell to the lower ends of said water-tubes, and a steam space communicating with said water-tubes.

6. In a locomotive boiler, a water-receiving shell forming the body of the boiler, a fire-box at one end of said shell, water-tubes forming the sides and top of the fire-box, means to deliver water from the upper portion of the shell to the lower ends of said tubes and a steam space connected in series with the water-tubes and shell.

7. In a locomotive boiler, a water-receiving shell forming the body of the boiler, a fire-box at one end thereof, water-tubes forming the sides of the fire-box, other water-tubes within the fire-box, means to deliver water from the upper end of the shell to the lower end of said water-tubes and a steam-dome communicating only with said water-tubes.

8. In a locomotive boiler, a shell forming the body of the boiler, a fire-box at one end thereof, and vertically extending water-tubes at the sides of the fire-box said water tubes being connected with each other at their lower ends, the water-tubes on each side of the fire-box adjacent the shell forming down-takes to conduct the water from the shell to the lower ends of the other water tubes.

9. In a locomotive boiler, a shell forming the body of the boiler, a fire-box at one end thereof, and vertically-extending water-tubes at the sides of the fire-box said water tubes being connected together at their lower ends, the water-tubes on each side of the fire-box adjacent the shell being connected at their upper ends to the upper portion of the shell and at their lower ends to the lower ends of the other water-tubes.

10. In a locomotive boiler, a shell forming the body of the boiler, a fire-box at one end thereof, and water-tubes at the sides of the fire-box, the water-tubes on each side of the fire-box adjacent the shell being connected at their upper ends to the upper portion of the shell and at their lower ends to the lower ends of the other water-tubes, the tubes within the fire-box connected to the tubes at the sides of said fire-box.

11. In a locomotive boiler, a shell forming the body of the boiler, a fire-box at one end thereof, water-tubes at the sides of the fire-box, the water-tubes on each side of the fire-box adjacent the shell being connected at their upper ends to the upper portion of the shell and at their lower ends to the lower ends of the other water-tubes, and crossed inclined tubes within the fire-box.

12. In a locomotive-boiler having a fire-box at one end and a smoke-chamber at the other, a water-containing chamber extending from the fire-box to the smoke-chamber, a steam generator at the fire-box end of the boiler, and means within the smoke-chamber to initially heat the feed water, said means, water-containing chamber and steam-generator being connected in series.

13. In a locomotive boiler, a fire-box having its sides formed by closely arranged vertically extending water-tubes, a smoke-chamber, a water containing chamber extending from the fire-box to the smoke-chamber, and means to connect the top of said water containing chamber to the bottom of the water-tubes at the sides of the fire-box.

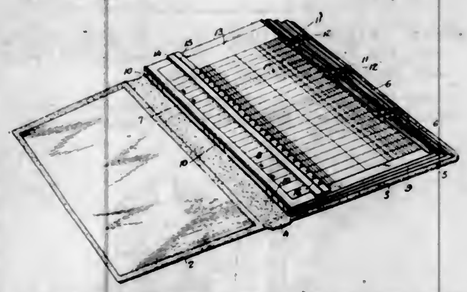
14. In a locomotive boiler, a fire-box having its sides formed by closely arranged vertically-extending water-tubes, a smoke-chamber, a water containing chamber extending from the fire-box to the smoke-chamber, means to connect the top of said water-containing chamber to the bottom of the water-tubes at the sides of the fire-box, and a steam-dome communicating with the upper end of said water-tubes.

15. In a locomotive boiler, a fire-box having its sides and top formed by closely arranged water-tubes running perpendicularly to the length of the boiler, a smoke-chamber, a water-containing chamber extending from the fire-box to the smoke-chamber, and means to connect said chamber with the water-tubes of the fire-box.

16. In a locomotive boiler, a shell having a fire-box at one end and a smoke-chamber at the other, a water-containing chamber extending from the fire-box toward the front of the boiler, said chamber terminating at the fire-box, and the latter having steam generating spaces which are separate from said chamber, and means to connect the top of said chamber to said steam generating spaces whereby the water will flow into the spaces only when the chamber is full.

17. In a locomotive boiler having at one end a fire-box provided with steam generating spaces, a water-containing chamber terminating at the fire-box and extending forwardly therefrom, means to connect the top of said chamber to the bottom of the steam generating spaces, and means within the fire-box to superheat the steam generated in said steam generating spaces.

870,456. MANIFOLDING DEVICE. BARTHOLOMEW E. MCSHEEHY, Jersey City, N. J. Filed Dec. 14, 1906. Serial No. 347,893.



1. In a manifolding device, the combination with a back or cover, of a series of rigid leaves hinged to said back or cover, and provided with angularly bent outer edges for securing record sheets thereon, and an adjustable strip superposed upon one of the plates or leaves for adjusting the inner edges of the record sheets.

2. In a manifolding device, the combination with a back or cover, and a series of rigid leaves connected thereto, of, an adjusting strip provided with equidistant marks removably fixed to said back or cover, and an arm mounted to slide on said adjusting strip at right angles thereto.

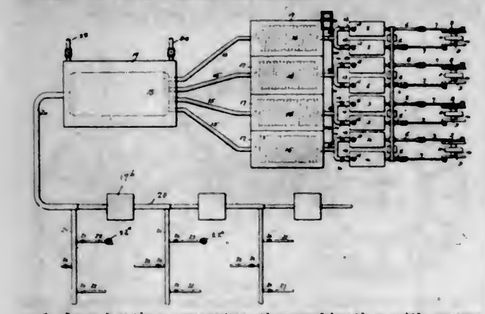
3. In a manifolding or copying device, the combination with a back or cover, of a plate secured to said back, and a plurality of rigid leaves hinged to said plate and having their outer edges turned at an angle to said back, and an adjusting strip removably secured to one of said leaves to hold record sheets thereon, said strip having markings which are spaced apart to conform to the rulings on said record sheet.

4. In a manifolding and copying device, the combination with a back or cover, of a series of sheet metal leaves provided with upturned outer edges to contain loose record sheets, a marker for holding the inner ends of the sheets and a squaring member mounted to slide on the marker.

5. In a manifolding and copying device, the combination with a back or cover, of sheet metal leaves provided with upturned outer edges to contain loose record sheets, a marker for holding the inner ends of the sheets, and a rule or triangle mounted to slide upon said marker.

6. In a manifolding and copying device, the combination with a back or cover, of a series of sheet metal leaves provided with upturned outer edges to contain loose record sheets, a strip provided with a series of marks thereon, a sliding triangle mounted upon said strip, and a pawl carried by said triangle and adapted to engage perforations in said strip, substantially as described.

870,457. HEATING OR REFRIGERATING APPARATUS. HECTOR NARANJO, Alajuela, Costa Rica. Filed Mar. 15, 1907. Serial No. 362,510.



1. In a heating apparatus, the combination with means for compressing air, of means for distributing the said air to the place of use, comprising a main conduit and one or more branch conduits leading therefrom, an initial heat exchanger at a central station for receiving the compressed air from the compressing means, a supplementary heat exchanger under control of the central station and arranged to receive the air from said initial heat exchanger on its way to the distributing system, and to discharge the said air directly into the main conduit, substantially as described.

2. In a heating apparatus, the combination with means for compressing air, comprising a plurality of air compressing devices, of means for distributing said air to the place of use, and a heat exchanger, comprising a plurality of heat exchangers located between the compressing means and said place of use for imparting the desired temperature thereto and all communicating with the main distributing conduit of the system, substantially as described.

3. In a heating apparatus, the combination with means for compressing air, comprising a plurality of air compressing devices, of means for distributing said air to the place of use, and a heat exchanger, comprising a plurality of initial heat exchangers located between the compressing means and said place of use for imparting the desired temperature thereto, and a supplementary heat exchanger arranged to receive the air from all of said initial heat exchangers on the way to the distributing system, substantially as described.

4. In a heating apparatus, the combination with means for compressing air, comprising a plurality of air compressing devices, of means for distributing said air to the place of use, and a heat exchanger, comprising a plurality of initial heat exchangers located between the compressing means and said place of use for imparting the desired temperature thereto, and a supplementary heat exchanger arranged to receive the air from all of said initial heat exchangers on its way to the distributing system, said distributing system comprising a main conduit with suitable branch conduits leading to the points of delivery, substantially as described.

5. In a heating apparatus, the combination with an air compressing means, of a distributing system connected therewith comprising one or more conduits arranged to distribute the air to the place or places of use, a heat exchanging means comprising a plurality of heat exchangers interposed between the compressing means and distributing system, a conduit connecting said heat exchangers with the distributing system, and one or more individual reheaters located in the distributing system near the place or places of use, substantially as described.

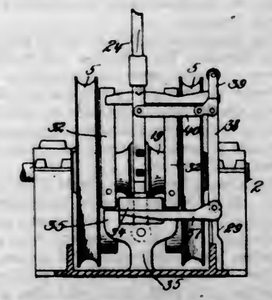
6. In a heating apparatus, the combination with an air compressing means, of the distributing system connected therewith comprising a main conduit and one or more branch conduits arranged to distribute the air to the place or places of use, a heat exchanging means interposed between the compressing means and distributing system, comprising an initial heat exchanger for receiving the air from the compressing means, and a supplementary heat exchanger connected to said initial heat exchanger and to the main conduit, and one or more individual reheaters located in the distributing system near the place or places of use, comprising a heater supplied with a fluid medium, and a casing surrounding the conduit through which said fluid-medium circulates, substantially as described.

7. In a heating apparatus, the combination with an air compressing means of the distributing system connected therewith comprising a main conduit and one or more branch conduits arranged to distribute the air to the place or places of use, and heat exchanging means interposed between the compressing means and distributing system, comprising an initial heat exchanger for receiving the air from the compressing means, and a supplementary heat exchanger connected to said initial heat exchanger and to the main conduit, and one or more individual reheaters located in the distributing system near the place or places of use, comprising a heater above the surface of the ground supplied with a fluid medium, and a casing surrounding the conduit through which said fluid circulates, substantially as described.

8. In a heating apparatus, the combination with air compressing means comprising a plurality of air compressing devices, of an initial heat exchanger comprising a plurality of heat exchanging units receiving air from said compressing devices at a central station, one or more supplementary heat exchangers under control of the central station receiving the air from said initial heat exchanger, a distributing system connected thereto for distributing the said air from the same, and a conduit connecting said supplementary heat exchanger or exchangers with the distributing system, substantially as described.

9. In a heating apparatus, the combination with air compressing means, comprising a plurality of air compressing devices, of an initial heat exchanger comprising a plurality of heat exchanging units receiving air from said compressing devices at a central station, one or more supplementary heat exchangers receiving the air from said initial heat exchanger, a distributing system connected thereto for distributing the said air from the same, and one or more reheating devices located in said distributing system near the place or places of use as substantially described.

870,458. HOISTING APPARATUS. CARL T. PAINTER, Chattanooga, Tenn., assignor to Patten Manufacturing Company, Chattanooga, Tenn., a Corporation of Tennessee. Filed Jan. 4, 1907. Serial No. 350,777.



1. A hoisting apparatus having a pair of sheaves, clutch mechanism to connect the sheaves alternately with a source of power, brake mechanism to act against the sheaves, and means to operate the clutch mechanism to simultaneously throw the sheaves out of coöperative relation with such source of power and for operating the brake mechanism to simultaneously block the motion of said sheaves.

2. A hoisting apparatus having a pair of sheaves, a power shaft loosely carrying said sheaves, clutch mechanism to connect the sheaves alternately with said power shaft, brake mechanism to act against the sheaves, and means to operate the clutch mechanism to throw the sheaves out of driving relation with such shaft and for

operating the brake mechanism to simultaneously block the motion of said sheaves.

3. A hoisting apparatus having a pair of sheaves, a power shaft loosely carrying said sheaves, clutch mechanism to connect the sheaves alternately with said power shaft, a pulley to direct a cable from one of the sheaves to the other, brake mechanism to act against the sheaves, and means to operate the clutch mechanism to simultaneously throw the sheaves out of coöperative relation with said power shaft and for operating the brake mechanism to simultaneously block the motion of said sheaves.

4. A hoisting apparatus having a pair of sheaves, a source of power, clutch mechanism to connect the sheaves alternately with such source of power, brake mechanism to act against the sheaves, and means to operate the clutch mechanism to simultaneously throw the sheaves out of coöperative relation with such source of power and to afterwards operate the brake mechanism to simultaneously block the motion of said sheaves.

5. A hoisting apparatus having a pair of sheaves, clutch mechanism, a hand operable member to actuate the clutch mechanism to alternately connect the sheaves with a source of power or to simultaneously throw said sheaves out of coöperative relation with such source of power, brake mechanism to act against the sheaves, and means connected with said hand operable member to operate the brake mechanism to simultaneously block the motion of said sheaves when the latter are out of coöperative relation with said source of power.

6. A hoisting apparatus having a pair of sheaves, clutch mechanism to connect the sheaves alternately with a source of power, a manually operable member for actuating the clutch mechanism to alternately throw the sheaves into operative relation with such source of power or to simultaneously move them both out of such operative relation, brake mechanism to act against the sheaves, a toggle operable by said manually operable member, and means between the toggle and the brake mechanism for actuating said brake mechanism to simultaneously block the motion of said sheaves when the toggle is in its effective relation and after the sheaves are out of coöperative relation with such source of power.

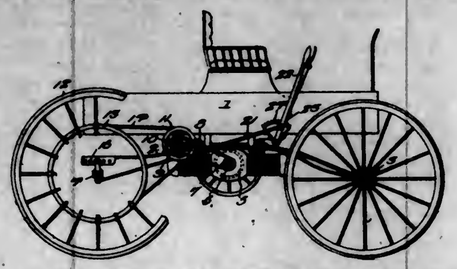
7. A hoisting apparatus having a pair of sheaves, clutch mechanism to connect the sheaves alternately with a source of power, strap brakes surrounding the sheaves, a rocker to which one end of each strap brake is connected, a toggle coöperative with the rocker, means for operating the toggle to cause the same to simultaneously set the two strap brakes and for also shifting the clutch mechanism into a position to simultaneously throw the two sheaves into inoperative relation.

8. A hoisting apparatus having a pair of sheaves, clutch mechanism to connect the sheaves alternately with a source of power, a hand lever for actuating the clutch mechanism, brake mechanism to act against the sheaves, and means involving a toggle operable by said hand lever for operating the brake mechanism to simultaneously block the motion of said sheaves and after the clutch mechanism has unclutched said sheaves.

9. A hoisting apparatus having a pair of sheaves, clutch mechanism to connect the sheaves alternately with a source of power, a hand lever for shifting the clutch mechanism to throw the sheaves alternately into and out of operative relation with said source of power, a rocker, brake straps for the sheaves connected with said rocker, a toggle connected with said rocker and with a fixed part, and a connection between the toggle and the hand lever, said hand lever when it is operated to simultaneously unclutch the two sheaves being also operable to move said toggle into its effective position for simultaneously setting the two strap brakes.

870,459. MOTOR-VEHICLE. GEORGE P. PARKS, Bedford, Ind., assignor, by direct and mesne assignments, to Postal Auto and Engine Company, Bedford, Ind. Filed Nov. 19, 1906. Serial No. 343,899.

1. In a motor vehicle, the combination of reach springs, an axle pivotally connected with the springs, means for adjusting the pivotal connections longitudinally on the springs, drive wheels carried by the axle, belt gearing for driving said wheels, and means for swinging the axle on its pivotal connections for adjusting said gearing.

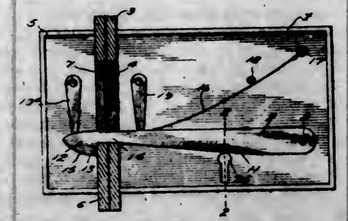


2. The combination, in a vehicle, of reach springs, each provided with a series of openings, an axle, brackets carried by the axle, pivot pins for pivotally connecting the brackets adjustably with the opposite portions of the springs, drive wheels carried by the axle, belt gearing for driving said wheels, and means for swinging the axle on the said pivotal connection.

3. The combination, in a vehicle, of reach springs provided with enlarged rear ends, each having a series of transverse openings, an axle, brackets carrying the axle and provided with upstanding portions, pins passing through said portions and pivotally connecting the same with the apertured portions of the springs, drive wheels carried by the axle, belt gearing for driving said wheels, and means for swinging the axle on the pivotal connections.

4. The combination, in a vehicle, of reach springs, each provided with an enlarged rear end having a series of transverse openings, an axle arranged below the springs and carrying drive wheels, brackets engaging the axle and having upturned ears embracing the apertured ends of the springs, pins connecting said ears with the apertured ends of the axle, belt gearing for driving the wheels, and means connected with a depending portion of one of said brackets for swinging the axle on its pivotal connections.

870,460. LOCK. WILLIAM E. PEEPLES, Pomeroy, Ohio. Filed June 18, 1907. Serial No. 379,586.

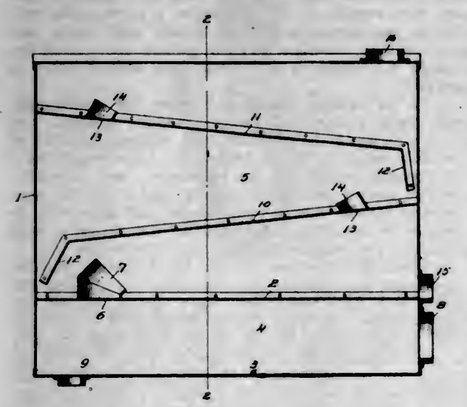


1. In a lock, the combination of a casing, a plurality of latches pivoted in the casing, a spring for holding the latches down, a dead latch pivoted in the casing upon a turn button, and a keeper member provided with a dead latch mounted upon a turn button.

2. In a lock, the combination of a casing, latches pivoted therein, a keeper member, dead latches pivoted in the casing and in the keeper member, said dead latches being connected to turn buttons each provided with a head having an aperture therein for the connection of a seal.

870,461. STEAM-CONDENSER. GEORGE W. PENDLETON, Mineola, Tex. Filed Mar. 26, 1907. Serial No. 364,695.

1. In a device of the class described, the combination of a casing having a steam inlet and water and gas outlets, a partition dividing the casing into a re-boiler compartment and a condensing compartment, and means in the condensing compartment for directing the water of condensation along the partition for boiling the water to liberate the suspended gases therein.



2. In a device of the class described, of a casing, a partition dividing the same into compartments, means for admitting steam to the bottom compartment, means for separating the gases from the steam in the upper compartment, means for supplying cooling water to condense the steam while passing through the upper compartment, and deflector plates on the casing for shedding the cooling water from the sides of the bottom compartment.

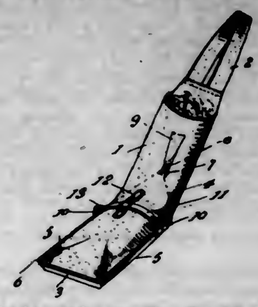
3. In a device of the class described, the combination of a casing, a horizontal partition therein dividing the casing into separate compartments, oppositely inclined plates in one of the compartments, chutes at the bottom ends of the plates, and means for conveying the steam successively over the plates.

4. In a device of the class described, the combination of a casing, a partition having an opening adjacent one end, an inlet for the compartment below the partition, oppositely inclined spaced plates in the compartment above the partition and having their lower ends bent to form chutes, and means for directing the steam successively over the plates and for preventing the steam from passing through the chutes.

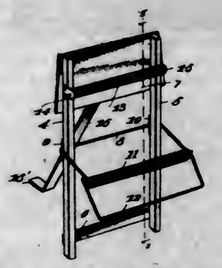
5. In a device of the class described, the combination of a casing, a horizontal partition adjacent the bottom thereof dividing the casing into separate compartments, an inlet for the lower compartment for discharging steam into the same, means arranged at the outside of the lower compartment for preventing the condensation of steam therein, a plurality of oppositely inclined plates in the upper compartment on which the water of condensation flows to the partition, an outlet for the water of condensation, an outlet for the gases liberated from the steam, and guttera or troughs on the casing for discharging water over the exterior of the casing for condensing the steam in the upper compartment.

870,462. GUARD FOR COTTON-PICKERS' BAGS. BENJAMIN C. PENINGTON, Oscar, Ind. Ter. Filed July 6, 1906. Serial No. 325,036.

In a device of the character described, the combination of a bag, a shield therefor formed of a single piece of sheet material and comprising a base plate, the said plate being provided with a forward upwardly inclined extension and also with upwardly extending side and end flanges coöperating with the forward extension and plate to form a receptacle receiving the lower portion of the bag, a ring connected to the forward extension of the base plate, a catch carried by the bag and detachably engaging the said ring, and a strap encircling the upper portion of the bag and connecting the side flanges of the shield.

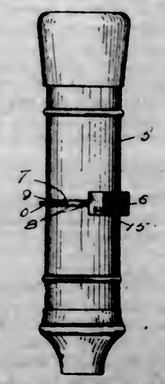


870,463. MOP AND CLOTH WRINGER. EDWARD F. PETTIBONE, Los Angeles, Cal. Filed Aug. 15, 1905. Serial No. 274,328.



A mop wringer comprising a frame; a roller mounted in bearings secured to said frame near the top thereof; a bail secured to said frame below said top roller; a roller mounted in said bail; a handle secured to said bail; and a detention bar secured to said frame at the top thereof, said detention bar having a foot piece on the bottom thereof and being connected to the frame by a hinge.

870,464. WHIP-SOCKET LOCK. JOHN W. POPE, Vernal, Utah. Filed Aug. 11, 1906. Serial No. 330,202.



In a device of the class described, the combination with a whip socket provided with an opening, and a slot leading from the opening, a lock casing seated within the opening, a resilient strip forming one wall of the lock casing and extending therefrom normally around the inner wall of the whip socket and in a plane with the lock casing and clos-

ing the slot in the whip socket, a pin formed integral with the strip and projecting through the slot at all times whereby the strip may be contracted, said strip being provided with a plurality of openings which extend in a plane with the pin and from the same to a point adjacent the free end of the strip, the strip when contracted being adapted to have its free end moved along its portion which forms one wall of the lock casing, the latter portion of the strip being also provided with an opening, and a spring pressed pin bolt arranged within the lock casing and engaged at all times through the opening in that portion of the strip which forms one wall of the casing and adapted for interchangeable engagement in the first mentioned openings substantially as described.

870,465. MOSQUITO-NET SUPPORT. FRANCIS D. RAPPELEE, Green Bay, Wis., assignor to Green Bay Cot Company, Green Bay, Wis. Filed Jan. 22, 1907. Serial No. 353,413.

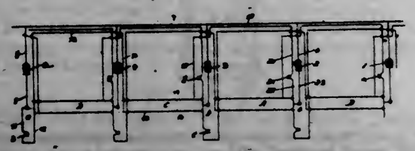


1. A mosquito net support, consisting of upper members pivotally connected at their upper ends and having eyes at the lower ends, lower members passing through the eyes of the upper members, said lower members having eyes at their upper ends through which the upper members pass, said upper and lower members being bent whereby to permit the upper members to take an inclined position with respect to the lower members.

2. A mosquito net support consisting of upper members pivotally connected and lower members slidably connected with the upper members, the upper members having eyes formed at their lower ends, inclined in direction of each other, and lower members being provided with eyes at their upper ends extending in reverse direction to the eyes of the upper members, the eyes of the lower members being adapted for engagement with the eyes of the upper members when the frame members are in position for use.

3. A mosquito net support consisting of two upper members pivotally connected, each upper member being provided with an eye at its lower end, the said eyes being elongated and inclined downwardly and inwardly, and two lower members, each of which is passed through the lower eye of the upper members, each lower member being provided with an elongated eye at its upper end inclined upwardly and outwardly, the body portions of the upper members passing through said eyes, whereby when the lower members are drawn fully downward the eyes of said upper members by engagement of the lower eyes of the upper members produce a strengthening locking contact.

870,466. ELECTRICAL SIGNALING SYSTEM FOR RAILWAYS. HARRY L. RIDER, Oil City, Pa. Filed Oct. 26, 1906. Serial No. 340,766.



1. In an electrical signaling system, the combination with signals and electric circuits therefor, of track stop-plates included in said circuits and means carried by a locomotive adapted to strike said plates, a valve casing also carried by the locomotive, two pistons within said casing, and means for operating said pistons to set the air brakes, and to release said brakes.

2. In an electrical signaling system, the combination with signals and electric circuits therefor, of track stop-plates, electrical means for operating said plates, a contact lever carried by the locomotive, a valve casing carried by the locomotive, pistons within said casing, and ports and air passages in said pistons and casing for causing a leakage of air when said contact lever is operated.

3. In an electric signaling system, the combination with track signals and electric circuits therefor, and track stop-plates included in said electric circuits, of means for applying the air brakes of a train comprising a valve casing carried by the locomotive, two vertically-movable pistons within said casing, and a pivoted lever normally holding said pistons elevated and adapted to be operated by said stop-plates to permit the pistons to drop and allow the passage of air to apply the brakes.

4. Electrically-operated means for actuating railway signals and mechanically-operated means for applying the brakes of a train, comprising track signals, electric circuits therefor, and track stop-plates included in said circuits, a valve casing carried by the locomotive normally in open communication with the air supply of the air brakes, two pistons in said valve casing, and means also carried by the locomotive for normally holding said pistons in position to respectively uncover the inlet port to the valve casing and cover the outlet port of said valve casing and operated by said track stop-plates to permit the pistons to move into position to cover the air inlet port of the valve casing and uncover the air outlet port thereof.

5. Electrically-operated means for actuating railway track signals and mechanically operated means for applying the brakes of a train, comprising track signals, electric circuits therefor, and track stop-plates included in said circuits, a valve casing carried by the locomotive having an inlet and an outlet port, the inlet port being normally in communication with the air supply and the outlet port normally closed, two pistons in said valve casing, and means also carried by the locomotive for normally holding said pistons in position to respectively uncover the inlet port to the valve casing and cover the outlet port thereof, said means operating by said track stop-plates to permit movement of the pistons to uncover the outlet port of the valve casing and thereafter close the inlet port thereof, substantially as described.

870,467. SHAVING-BRUSH. WILLIAM J. ROCHE, New Bethlehem, Pa. Filed Feb. 11, 1907. Serial No. 356,750.

1. The combination with a brush having a body portion, of a combined casing and handle consisting of a cap, a yoke carried thereby and having arms formed with semi-cylindrical confronting faces, said arms having openings formed therein, pins or screws extending through said openings and engaging in the body of said brush, semi-cylindrical sections hinged to said cap and having reamed edges to engage in said body and said arms, and means to hold said sections together.

2. The combination with a brush having a body portion, of a combination casing and handle consisting of a cap, a yoke carried thereby, and having arms adapted to engage said body portion, pins or screws passing through said arms and engaging in said body portion, semi-cylindrical sections hinged to said cap and adapted to embrace said arms and said body portion, and means to lock said sections in a closed position.

3. The combination with a brush having a body portion, of an end cap, a yoke secured to said end cap and having arms adapted to embrace said body portion, hinged sections carried by said end cap adapted to inclose said yoke, and said body portion, and means to hold said sections in a closed position.

4. A shaving brush having a body portion, a yoke pivotally connected thereto, an end cap to which said yoke is connected, handle-sections hinged to said end cap, and

adapted to embrace said body portion and said yoke, and means to hold said sections in a closed position.



5. A brush having a combined handle and casing consisting of a yoke pivotally connected to said brush, an end cap, handle sections carried by said end cap and adapted to inclose the yoke, and means to hold said sections in a closed position, substantially as described.

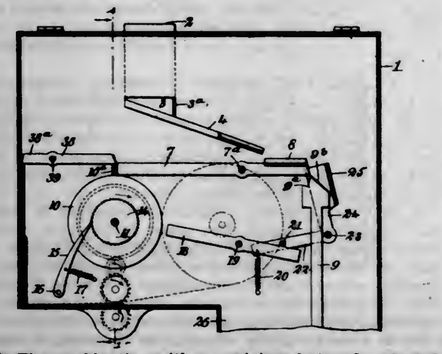
6. The combination with a brush, of a yoke pivotally connected thereto, an end cap and hinged sections carried by said end cap and adapted to inclose the yoke.

7. In a brush, an end cap or base constituting a support for a brush-carrying member, said brush-carrying member, a brush pivotally hung in said brush-carrying member, handle sections hinged to said end cap, and means for securing the hinged handle sections in closed position.

8. In a shaving brush, an end cap, a yoke connected thereto, a brush body pivotally hung in the outer end of the yoke, handle sections hinged to the end cap, and means carried by said handle sections for engagement with the brush body to hold the latter in alined position with the yoke.

9. In a shaving brush, a combined handle and brush casing comprising an end cap and two hinged sections closed at one end by the end cap and bent at the other end, a yoke mounted within the sections, a brush holder pivotally hung in the outer end of said yoke, and means carried by the hinged sections and engaging the brush holder for securing the latter in alined position with the yoke.

870,468. VENDING-MACHINE. JAMES J. RONAN and JOHN F. BARRY, Jersey City, N. J. Filed Nov. 13, 1906. Serial No. 343,187.



1. The combination with a receiving chute, of a pivoted lever provided with a plate adapted to receive a coin, a post arranged adjacent to the end of said lever, provided with a notch adapted to support said end, a lever provided with a scoop pivotally connected with said post and provided with a bell crank arm, a pivoted lever having a spring connected therewith at one end, a wheel mounted upon a rotating shaft and provided with a pin adapted to bear against the end of the receiving lever and lock said wheel against rotary motion, and be released from said pin when a coin is placed on the opposite end of said lever, so as to permit said wheel to be rotated, and said pin to operate against said spring controlled lever, thereby releasing said scoop so as to allow the coin to drop from said post.

2. The combination of a receiving chute, a pivoted lever adapted to receive a coin, a pivoted scoop arranged adjacent to the receiving end of said lever, a wheel mounted upon a rotating shaft and adapted to engage the end of the receiving lever, and be released therefrom when a coin is placed on the opposite end of said lever, and means connected with said wheel and scoop adapted to tilt said scoop.

3. The combination of a receiving chute, a pivoted lever adapted to receive a coin, a pivoted scoop arranged opposite to the receiving end of said lever, a wheel mounted upon a rotating shaft and adapted to engage one end of the said receiving lever, and connecting mechanism adapted to be operated by said wheel and tilt said scoop.

4. The combination of a receiving chute, a pivoted lever adapted to receive a coin, a pivoted scoop arranged adjacent to the receiving end of said lever, a spring actuated lever adapted to tilt said scoop, and a wheel mounted upon a rotating shaft and adapted to engage the ends of the receiving lever and the spring-actuated lever.

5. The combination of a receiving chute, a pivoted lever adapted to receive a coin, a pivoted scoop adjacent to the receiving end of said lever, a spring actuated lever adapted to tilt said scoop, a wheel mounted upon a rotating shaft and adapted to engage the ends of the receiving and spring-actuated levers, and means for rotating said shaft.

6. The combination of a pivoted lever adapted to receive a coin, a pivoted scoop adapted to hold said coin in position on the receiving lever, a wheel mounted upon a rotating shaft adapted to engage one end of the receiving lever, and connecting mechanism adapted to be operated by said wheel and tilt said pivoted scoop.

870,469. RAILROAD CATTLE-GUARD. FRANK SACK and FRANK A. TYLER, Smartville, Nebr. Filed Mar. 23, 1907. Serial No. 364,087.



1. In a cattle guard, the combination of a supporting structure consisting of cross ties and sleepers secured thereto, with guard sections rigidly secured to the structure and disposed intermediate and along the outside of the sleepers and guard strips secured to the sleepers and arranged to cover the space between the guard sections and sleepers.

2. In a cattle guard, the combination of a supporting structure, rails thereon, inclined guard sections disposed between and at the outside of the rails, stationary guard members arranged parallel with the sections, and fixed serrated guard strips adjacent the bottom of the sections, each section comprising inclined supporting members, means for holding them spaced apart, and rollers mounted on the supporting members.

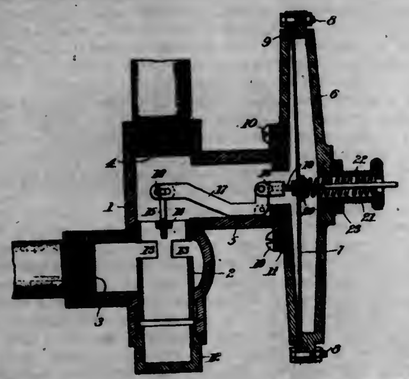
3. In a cattle guard, the combination of a plurality of cross ties, side and end members coöperating with the ties to form a pit, sleepers on the cross ties, rails on the sleepers, inclined guard sections disposed in the pit and on opposite sides of the sleepers, and guard strips arranged on the sleepers and side members in coöperative relation with the guard sections.

4. In a cattle guard, the combination of a plurality of cross ties, sleepers thereon, brackets for preventing lateral movement of the sleepers, rails mounted on the sleepers, apertured metal plates under the rails for receiv-

ing the spikes driven into the sleepers to hold the rails in place, and guard sections mounted on the cross ties.

5. In a cattle guard, the combination of a supporting structure including cross members, sleepers secured thereto, and side members spaced from the sleepers, with guard sections each comprising inclined end pieces secured to the structure, rods secured to the inclined end pieces, a roller on the rods, shields secured to the structure and to the end pieces between the sleepers, and guard strips secured to the sleepers, near the insides thereof and to the side members and projecting inwardly therefrom.

870,470. GAS-GOVERNOR. ANDREW SCHECK and WILLIAM H. FINFROCK, Chicago, Ill. Filed June 4, 1907. Serial No. 377,172.



1. A gas governor of the character described comprising a body or casing having inlet, and outlet ports, a valve arranged across said inlet port, an adjusting screw engaging said valve and having a slot in its head, a diaphragm, and an intermediately pivoted lever connected at one end to said diaphragm and at the other end to the slot in the head of said screw.

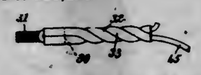
2. A gas governor of the character described comprising a body or casing having inlet and outlet ports, a valve arranged across said inlet port, a diaphragm, a pivoted lever connected at one end to said valve, a toggle connected to the other end of said lever, and a screw having swivel connection with said toggle and adjustably engaging the diaphragm.

3. A gas governor of the character described comprising a body or casing having inlet and outlet ports, a valve arranged across said inlet port, a diaphragm, a pivoted lever connected at one end to said valve, an adjustable screw connected to the other end of said lever and to said diaphragm, a coiled tension spring engaging said diaphragm, a hollow screw engaging the casing and partially inclosing said spring, the first mentioned screw extending through said spring and beyond said hollow screw for operation.

4. A gas governor of the character described comprising a body or casing having inlet and outlet ports, a valve arranged across said inlet port, a diaphragm, a pivoted lever connected at one end to said valve, an adjustable screw connected to the other end of said lever and to said diaphragm, a coiled tension spring engaging said diaphragm, a hollow screw engaging the casing and partially inclosing said spring, the first mentioned screw extending through said spring and beyond said hollow screw for operation and a lock nut on said hollow screw and adapted to engage the outside of the casing.

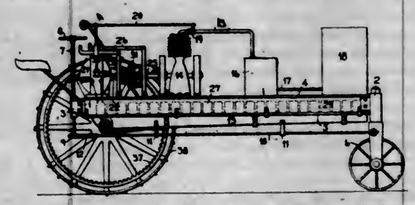
5. A gas governor of the character described comprising a body or casing having inlet and outlet ports, a slotted tubular valve adapted to move across said inlet port, a diaphragm and a lever pivoted intermediate of its ends, one end of said lever being connected to said diaphragm and the other end connected to said valve.

870,471. CONNECTING DEVICE. GEORGE A. SCHNAUFER and HARRY G. SMOCK, Denver, Colo., assignors of one-third to Richard A. Leigh, Denver, Colo. Filed July 7, 1906. Serial No. 325,128.



In a connecting device, the combination of a plug provided with a threaded stem to be screwed into a support, and tubes of malleable material mounted upon said plug and adapted to be twisted for the purpose of holding a wire, the general direction of said tubes being out of alinement with the axis of said stem.

870,472. TRACTION ATTACHMENT FOR MOVING OBJECTS. GEORGE G. SCHROEDER, Washington, D. C., assignor to Farm Motor Company, a Corporation of South Dakota. Filed Apr. 23, 1907. Serial No. 369,811.



1. A device of the character as described consisting of a beam mounted upon a wheel, and adapted to be attached to a moving object, an engine mounted upon said beam, a motor and dynamo mounted upon said beam and having its shaft in alinement with the engine shaft, storage batteries carried by said beam, and being electrically connected with said motor and dynamo, and a means for transmitting motion from the engine, motor and dynamo, to the moving object.

2. A device of the character as described consisting of a beam mounted upon a wheel, and adapted to be attached to a moving object, an engine mounted upon said beam, a motor and dynamo mounted upon said beam and adapted to be operatively connected with said engine, storage batteries carried by said beam, and being electrically connected with said motor and dynamo, and a means for transmitting motion from the engine, motor and dynamo to the moving object.

3. A device of the character as described consisting of a beam mounted upon a wheel, and adapted to be attached to a moving object, a motor and dynamo located upon said beam, and storage batteries located along the side of the beam and electrically connected with the prime mover, and a means for transmitting motion from the prime mover to the moving object.

4. A device of the character as described consisting of an I-beam mounted upon a wheel, and adapted to be attached to a moving object, a motor and dynamo located upon said beam, and storage batteries located along each side of the I-beam and electrically connected with the prime mover, and a means for transmitting motion from the prime mover to the moving object.

5. In a device of the character as described, a means for transmitting motion from prime movers to a moving object consisting of a gear wheel receiving in its sides the ends of the shafts of the prime movers, and serving to separate said ends, said wheel adapted to be made to rotate with one or the other of the same, or both, and a means for transmitting motion from said gear to the moving object.

6. In a device of the character as described, a means for transmitting motion from prime movers to a moving object consisting of a gear wheel located between the prime movers, and serving to separate said ends and receiving in its opposite sides the alined shafts of the movers, said wheel adapted to be made to rotate with one or the other of the same, or both, and a means for transmitting motion from said gear to the moving object.

7. In a device of the character as described, a means for transmitting motion from prime movers to a moving object consisting of a gear wheel receiving in the center of its opposite sides the alined shafts of the movers, said wheel adapted to be made to rotate with one or the other of the same, or both, and a means for transmitting motion from said gear to the moving object.

8. A traction attachment for moving objects consisting of an engine and a motor and dynamo mounted with their shafts in alinement but spaced apart, a means located in said space between the shafts but not rigidly attached to either, and adapted to transmit motion from said engine and motor and dynamo to the moving object, and a means for causing the first said means to rotate with both of said shafts.

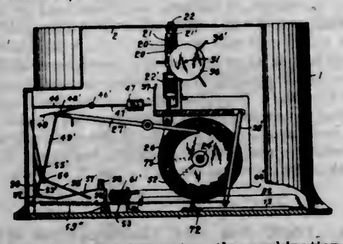
9. A traction attachment for moving objects consisting of an engine and a motor and dynamo mounted with their shafts in alinement but spaced apart, a means located in said space between the shafts but not rigidly attached to either, and adapted to transmit motion from said engine and motor and dynamo to the moving object, said means to rotate with either or both said shafts.

10. In the device of the character as described, a means for transmitting motion from a plurality of prime movers having their shafts spaced apart to a moving object consisting of a gear wheel located in the space between the shafts of the prime movers, but not rigidly attached to either, and adapted to be made to rotate with the same, and a means for transmitting motion from said gear wheel to the moving object.

11. In a device of the character as described, a means for transmitting motion from a plurality of prime movers having their shafts spaced apart, to a moving object consisting of a gear wheel located in the space between the shafts of the prime movers, but not rigidly attached to either, and adapted to be made to rotate with one or the other of the same, and a means for transmitting motion from said gear wheel to the moving object.

12. In a device of the character as described, a means for transmitting motion from a plurality of prime movers, having their shafts spaced apart to a moving object, consisting of a gear wheel located in the space between the shafts of the prime movers, but not rigidly attached to either, and adapted to be made to rotate with one or the other of the same, and a means for transmitting motion from said gear wheel to the moving object, consisting of a shaft leading to the moving object, a gear wheel journaled upon said shaft and meshing with the first said gear wheel, and a means for causing the last said gear wheel to rotate with the shaft leading to the moving object.

870,473. RACING-GAME APPARATUS. GUSTAV F. W. SCHULTZE, Oakland, Cal., assignor to Schultze Novelty Co., a Corporation of California. Filed Sept. 17, 1906. Serial No. 334,877.



1. In a racing game apparatus, the combination with a series of racing figures, of mechanism for imparting movement thereto and bringing the same to a state of rest at the conclusion of the race with one figure in advance of the others, of means whereby one or more players of the game may deposit a token to register a guess as to the winner of the race, and devices controlled by the racing figures for actuating the registering means for returning the deposited token to the player of the game whose registered guess coincides with the winding figure of the race.

2. The combination with a racing game apparatus, of means for enabling the players thereof to register a guess as to the winner of the race, through the medium of a deposited token, and of devices actuated by the racing figures for returning the deposited token to the player of the game whose registered guess coincides with the winning figure of the race.

3. The combination with a racing game apparatus, of means associated therewith for enabling the players to deposit a token to register a guess as to the winner of the race, and devices actuated by the racing figures for controlling the return of said deposited token to the depositor thereof in accordance with the coincidence or diversity of the registered guess to the winner of the race.

4. A racing game apparatus comprising a series of racing figures, mechanism for starting the racing figures from substantially an alined position, and bringing the same to a state of rest at the conclusion of the race with one figure in advance of the others, devices for separately advancing and retarding the figures during the racing movement thereof, and means for enabling the players of the game to deposit a token for registering a guess as to the winner of the racing figures, and devices actuated by the racing figures for controlling the return of said deposited token to the depositor thereof in accordance with the coincidence or diversity of the registered guess to the winner of the race.

5. In a racing game apparatus, the combination with a series of racing figures, of means for enabling the players thereof to register through the medium of a token a guess as to the winner of the race and returning the deposited token or not in accordance with the coincidence or diversity of the registered guess to the winning figure of the race.

6. In a racing game apparatus, the combination with the racing figures thereof, of a register for each racing figure for enabling the players of the game to register through the medium of a deposited token a guess as to the winner of the race, of means actuated by the racing figures for returning to the winner of the race the deposited token, and devices for releasing the tokens deposited in the registers for the remaining figures of the race.

7. In a game apparatus of the described character, the combination with a series of racing figures, of devices for advancing and retarding the racing figures during the racing movement thereof in order to positively change the position of the said figures with respect to each other, a series of registering means for depositing a token to register a guess by the players as to the winner of the figures, a controlling gate for each register, and electrically controlled means for operating one of said gates to return to the player registering a guess as to the winning figure of the race the deposited token.

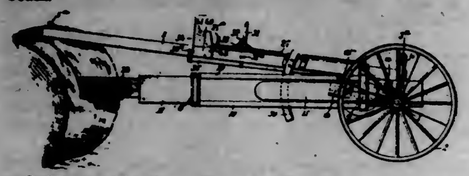
8. In a game apparatus of the described character, the combination with a series of racing figures, of mechanism for propelling said figures around a trackway, of means for registering a guess as to the winner of the race by the depositing of a token, and of electrically controlled mechanism for returning the deposited token to the player on the registered guess coinciding with the winning figure of the race.

9. In a game of the described character, the combination with a series of racing figures, of the operating mechanism thereof, of means whereby the players may register a guess through the medium of a deposited token, and electrically controlled means for returning to the player the deposited token on the registered guess coinciding with the winning figure of the race.

870,474. DRAG-SAW. BARTON W. SCOTT, San Jose, Cal. Filed Dec. 1, 1906. Serial No. 345,880.

1. The combination with an auxiliary frame, of a main frame rotatably mounted thereon, a saw beam frame pivoted to said main frame, a saw beam having a reciprocating movement in said frame, a double rack and run-way

connected with said saw beam, a beam fixedly secured to said main frame, an engine secured to said beam, a lever loosely mounted on the drive shaft of said engine, and a pinion and roller mounted on the end of said shaft and adapted to engage said rack bar and run-way of the saw beam.



2. The combination with an auxiliary frame, of a main frame rotatably mounted thereon, a beam fixedly secured to the main frame, an engine mounted on said main frame, a saw beam frame pivoted to the main frame, a saw beam adapted to reciprocate in said beam frame, mechanism connected with said engine adapted to operate said saw beam, a shoe movable in an aperture formed in the main frame, a lever adapted to bear against the end of said shoe, a connecting rod pivoted to said lever, and a lever mounted upon said beam connected with said rod and provided with a pawl and ratchet.

3. The combination with an auxiliary frame having a carrying wheel adapted to be arranged parallel to or at right angles with an opposite carrying wheel, a main frame rotatably mounted on said auxiliary frame, a saw beam frame pivotally secured to said main frame, a saw beam adapted to reciprocate in said frame, an engine mounted on the main frame, and mechanism connected therewith adapted to operate said saw beam.

4. The combination with an auxiliary frame, of a main frame rotatably mounted thereon, a beam fixedly secured to the main frame, an engine secured to the main frame, a saw beam frame pivotally mounted upon the main frame, a saw beam adapted to reciprocate in said beam frame, and provided with a run way and double rack, and mechanism connected with said engine and saw beam, comprising a roller adapted to engage said run-way, a pinion adapted to engage said double rack, and a sprocket wheel connected with said roller and pinion and the axle of said engine.

5. The combination with an auxiliary frame mounted upon wheels, one of which is adapted to be arranged at a right angle to the other, a main frame rotatably mounted upon said auxiliary frame, a beam fixedly secured to said main frame, an engine secured to said main frame, a bracket secured to said beam and engine, a saw beam frame pivoted to said bracket, a saw beam adapted to reciprocate in said saw beam frame, and mechanism connected with said engine adapted to operate said saw beam.

6. The combination with an auxiliary frame, of a main frame having a horisontal axis, rotatably mounted on the auxiliary frame, a saw beam frame pivotally secured to the main frame, a saw beam having a reciprocating longitudinal movement on said frame, and means for operating said saw beam.

7. The combination with an auxiliary frame mounted on carrying wheels, of a main frame having a horisontal axis, rotatably mounted on the auxiliary frame, a saw beam frame pivotally secured to the main frame, a saw beam having a reciprocating longitudinal movement on said frame, and means for operating said beam.

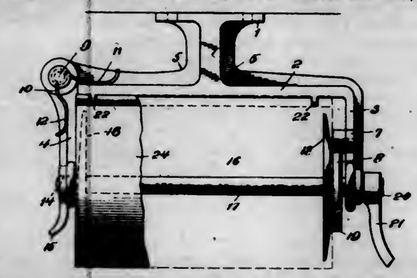
8. The combination with an auxiliary frame, of a main frame having a horisontal axis, rotatably mounted on the auxiliary frame, a saw beam frame pivoted to the main frame, a beam fixedly secured to the main frame, an engine secured to the main frame, and mechanism detachably connected with said engine adapted to operate said saw beam.

9. The combination with an auxiliary frame, of a main frame rotatably mounted on the auxiliary frame, a beam fixedly secured to said frame, an engine mounted on said frame, a saw beam frame pivoted to the main frame, a saw beam adapted to reciprocate in said beam frame, mechanism connected with said engine and beam, adapted to operate said saw beam, and a brake adapted to hold the main frame against rotary motion on the auxiliary frame.

10. The combination with an auxiliary frame comprising an axle mounted upon wheels, and provided with a vertical ring, of a main frame comprising a ring adapted to rotate on the auxiliary frame with a horizontal axis, a beam fixedly secured to the main frame, a saw beam frame pivotally mounted on the main frame, an engine secured to said main frame, and mechanism connected with said engine and adapted to operate said saw beam.

11. The combination with an auxiliary frame having a vertically pivotal movement on a horizontal axis, a main frame rotatably mounted with a horizontal axis on the auxiliary frame, an engine and main beam secured to the main frame, a saw beam mounted on the main frame and having a reciprocating movement thereon, and driving mechanism connected with said engine and saw beam.

870,475. CLOTHES-LINE REEL. FRED SHAFFER, Vandergrift, Pa. Filed Oct. 22, 1906. Serial No. 339,901.



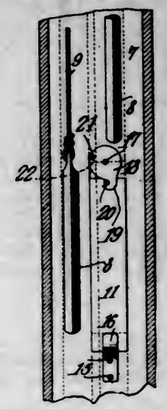
1. A clothes line reel, comprising a frame having two forwardly-projecting parallel arms one of which is integral with the frame and the other of which is hinged at its inner end to the frame, each of said arms having openings extending laterally thereof to provide closed bearings, an upwardly-projecting extension carried by said integral arm, a pawl mounted on said extension, a spring engaging the hinged-arm and the frame, said spring permanently engaging the arm intermediate its hinged connection and its bearing-opening to normally hold the said hinged-arm parallel with the integral arm, a shaft journaled in said arms, disks carried by said shaft adjacent the arms, a toothed-wheel on the shaft to be engaged by said pawl, and means for rotating said shaft.

2. In a clothes line reel, a frame having an arm at each end, one of said arms being rigidly secured to the frame, the other arm being hinged at its inner end to said frame, each of said arms having an opening to provide a permanently closed bearing, a spring pressing against the frame and against the outer face of the hinged arm at a point intermediate its hinged connection and its bearing-opening for normally holding said arm parallel with the other arm, a reel removably mounted within the bearings of said arms, said reel including a shaft journaled in the openings of said arms and having one end extended beyond the face of the integral arm, a crank on said extended portion of the shaft, a toothed wheel on the shaft, said wheel and crank being located on opposite sides of the integral arm, a pawl supported above one of the arms and engaging said toothed-wheel, and a pivotally supported hood normally extending over said reel.

870,476. LOCK FOR THE CLOSURES OF WINDOW-FRAME POCKETS. CHARLES F. SMITH, Miami, Fla. Filed Mar. 9, 1907. Serial No. 361,511.

1. The combination with a window frame having a weight receiving pocket and provided with an opening communicating with said pocket, a pocket piece forming a closure for said opening, and a locking member mounted for rotation on the frame within the weight-receiving pocket and adapted to engage the pocket piece, there being a recess formed in one end of the pocket piece for the reception of an operating tool.

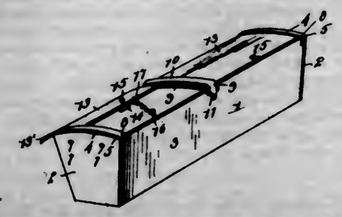
2. The combination with a window frame having a weight receiving pocket and provided with an opening communicating with said pocket, a removable pocket piece forming a closure for said opening and having its inner face provided with a stud, and a locking member mounted for rotation on the frame within the weight receiving pocket an dprovided with a terminal hook adapted to engage the stud, there being a recess formed in the pocket piece for the reception of an operating tool.



3. The combination with a window frame having a weight receiving pocket and provided with an opening communicating with said pocket, a pocket piece forming a closure for the opening and having a recess formed therein, a locking member mounted for rotation in the weight receiving pocket and adapted to engage one end of the pocket piece, there being an aperture formed in the locking member and adapted to register with the recess in the pocket piece for the reception of an operating tool.

4. The combination with a window frame having a weight receiving pocket and provided with an opening communicating with said pocket, a removable pocket piece forming a closure for said opening and having a recess formed in one end thereof, a stud secured to the inner face of the pocket piece, a locking member mounted for rotation within the weight receiving pocket and provided with a terminal hook adapted to engage the stud, a spring plate secured to the interior walls of the weight-receiving pocket and bearing against the adjacent end of the pocket piece, there being an aperture formed in the locking member and adapted to register with the recess in the pocket piece for the reception of an operating tool.

870,477. FEED-HOPPER. GRANT E. SNYDER, Cooperstown, N. D. Filed Mar. 25, 1907. Serial No. 364,385.



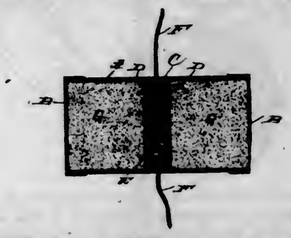
The combination with a seed hopper, of castings secured at the ends thereof and having their inner faces formed with arcuate grooves, a casting secured centrally thereof parallel to said first named castings and having its faces formed with arcuate grooves confronting and in alinement with said first named grooves, arcuate covers having their ends disposed within said respectively confronting grooves, said covers having angularly disposed extensions projecting from their front edges, and terminating short of their end edges and coil-springs having their ends engaged with the front portions of said covers and with the adjacent front wall of said hopper.

870,478. SPOOL ATTACHMENT. WERNER I. STAAF, Pittsburg, Pa. Filed July 26, 1906. Serial No. 327,876.



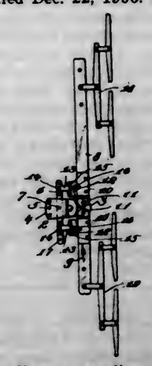
A thread holder for spools formed from a single piece of wire comprising a straight central bar adapted to bear against the thread on the spool and extended at the ends at angles to the central bar and thence bent at right angles to the bar and bearing against the ends of the spool with the terminals extending inwardly to bear in the aperture of the spool at opposite ends, said bar being flattened at the juncture of the bar and the angular portions and sharpened to form cutting means for the thread.

870,479. FIRE-EXTINGUISHER. SHIRLEY Q. STANLEY, Casper, Wyo. Filed Nov. 3, 1906. Serial No. 341,881.



A fire extinguisher consisting of an open ended vessel, frangible caps arranged closing the open ends of the vessel, an explosive cartridge arranged in the vessel about midway from its ends, forming separate chambers on opposite sides thereof, a series of fuses extending from the cartridge to the outer side of the vessel, the fuses being arranged projecting in opposite directions, and fire extinguishing powder in said chambers.

870,480. DRAFT-EQUALIZER. FRANKLIN B. STOUT, Baltic, S. D. Filed Dec. 22, 1906. Serial No. 349,106.

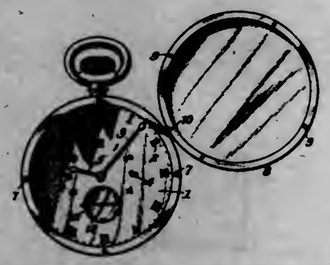


1. In a draft equalizer, a coupling member consisting of lower and upper plates suitably connected together and having series of registering perforations and spaced apart to receive the clevis of a plow, an evener fitted in the

space between the plates and pivoted to the coupling member, equalising bars provided with plates having rearwardly extending arms, said latter plates being pivoted to the lower plate of the coupling member forward of the evener, said arms and evener having series of perforations at opposite sides of the coupling member, links, and pins connecting the links with the evener and said arms and adapted to fit the respective perforations.

2. In a draft equaliser, a coupling member consisting of lower and upper plates suitably connected together and spaced apart to receive the clevis of a plow, one of the plates having a portion extending forwardly beyond the other plate, an evener fitted in the space between the plates and pivoted to the coupling member, equalising bars provided with plates at their inner portions, having rearwardly extending arms, said latter plates being pivoted to the forwardly extending portion of the coupling member and forward of the evener, and links connected with the evener at opposite sides of the coupling member and also connected with said arms.

870,481. DIAL FOR WATCHES AND CLOCKS. JOHN STRANG, Quebec, Quebec, Canada. Filed Oct. 26, 1905. Serial No. 284,521.



1. A dial for watches and clocks having inner and outer raised numerals arranged to correspond to the minute and hour hands of a watch or clock, said dial being also provided with a depressed portion to receive the seconds hand, and a small crystal fitted over the depressed portion to cover and protect the seconds hand.

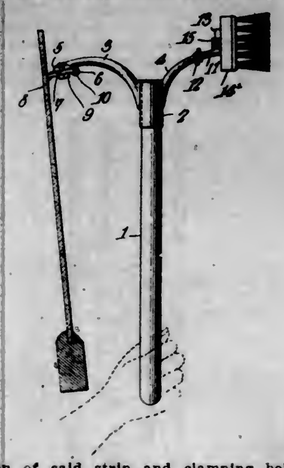
2. A watch or clock, comprising a case divided into quarters by projecting lugs and having a hinged lid with indentations corresponding to and arranged to receive the projections when the lid is closed, and a dial having inner and outer raised numerals.

3. A dial for watches having inner and outer series of raised numerals arranged to correspond with the minute and hour hands of a watch, said dial being also provided with a depressed portion intersecting the inner series of numerals, projecting lugs located opposite the 9, 12 and 3 of the inner series of numerals, a seconds hand arranged in the depressed portion, a small crystal fitted over the depressed portion to protect the seconds hand, and hour and minute hands, the hour hand traveling over the inner numerals and the minute hand extending beyond the inner numerals and traveling over the outer numerals.

4. A dial for watches and clocks having inner raised Arabic numerals and outer raised Roman numerals arranged to correspond to the minute and hour hands of a watch or clock, said dial being also provided with a depressed portion to receive the seconds hand, and a small crystal fitted over the depressed portion to cover and protect the seconds hand.

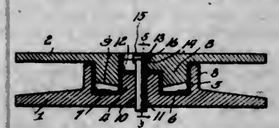
870,482. WINDOW-CLEANER. FRANKLIN S. THOMAS and LEOPOLD THOMAS, New York, N. Y. Filed Jan. 15, 1907. Serial No. 352,449.

A cleaner adapted to be manipulated from the inner side of a window for cleaning the outer side thereof, comprising a staff, a ferrule mounted thereon and having an upwardly and outwardly extending branch provided with laterally disposed bifurcated lugs, a metallic plate located under said lugs, a flexible strip located under said plate, said plate having its rear edge curled and bearing against the



rear portion of said strip and clamping bolts passing through the bifurcations of the lugs and said plate and strip.

870,483. CENTER-BEARING. WILLIAM TOWNSEND, Milan, Mo. Filed Nov. 17, 1906. Serial No. 343,010.



1. A center bearing comprising a bottom plate provided with an upwardly extending circular boss having a vertical opening therethrough, an upwardly extending circular flange concentric with the boss and forming therewith a raceway having a bottom track, bearing rollers arranged in the raceway and resting on the track, a top plate having a bearing portion projecting into the raceway and resting on the rollers, and a pin carried by the top plate and projecting through the opening in the boss, said plate having means for an interlocking engagement of the upper end of the pin therewith, whereby the pin is locked against movement when the parts are combined and may be disconnected by a lateral movement when the parts are released.

2. A center bearing comprising a bottom plate having an annular raceway and provided with a pin-receiving opening, a top plate having a bearing portion projecting into said raceway, anti-friction bearings between said bearing portion and the opposing surface of the raceway, the top plate being further provided with an elongated pin-receiving opening having a groove at one end thereof and a guard flange overhanging the groove, and a centering pin fitted at its lower end in the opening in the bottom plate and extending at its upper end into the opening in the top plate with a portion of its head fitted into said groove below the guard flange.

870,484. METHOD OF TURNING LASTS. WALTER E. TRUFANT, Whitman, Mass., assignor, by mesne assignments, to The Premier Last Company, Great River, Long Island, N. Y., a Corporation of New York. Filed Oct. 15, 1904. Serial No. 228,651.

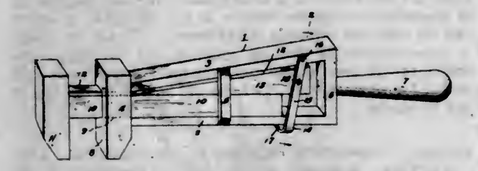
1. The method of turning last parts, which consists in first finishing an abutting or secant surface on the block, securing a hinge to the block, supporting the hinge end of the block in the lathe by means of said hinge, and then turning the foot shape contour.

2. The method of turning lasts or last parts, which consists in finishing the abutting or secant ends of fore-part and heel-part blocks, connecting the said blocks by a hinge or other connecting device to be used in the finished last, and then turning the said blocks in the ordinary manner.



3. The method of turning lasts or lasts parts, which consists in finishing the abutting or secant ends of fore-part and heel-part blocks, providing said ends with suitable surfaces for receiving a hinge or other connecting device to be used in the finished last, connecting the said blocks by a suitable device for holding them in the same relation as they would bear if connected by said hinge, and then turning the said blocks in the ordinary manner.

870,485. WRENCH. BRUCE R. WARD, Fort Kent, Me. Filed Apr. 5, 1907. Serial No. 366,595.



1. A wrench comprising a body carrying a stationary jaw, a movable jaw provided with a shank and a strip to project into and slide in said body and a wedge arranged in said body between said shank and said strip.

2. A wrench comprising a body carrying a stationary jaw, a movable jaw provided with a shank and a strip to project into and slide in said body, a wedge arranged in said body between said shank and said strip, and means for operating said wedge.

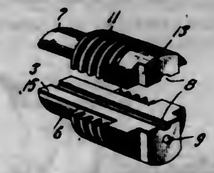
3. A wrench comprising a body carrying a stationary jaw, a movable jaw provided with a shank and a strip to project into and slide in said body, a wedge arranged in said body between said shank and said strip, and a lever for operating said wedge.

4. A wrench comprising a body carrying a stationary body, a movable body provided with a shank and a strip to project into and slide in said body, a wedge arranged in said body between said shank and said strip, and a U-shaped lever passed transversely over said body and having the ends of its arms pivoted upon the latter and the intermediate portions of its arms pivotally connected to said wedge.

5. A wrench comprising a body having united side bars, a handle at one end and a stationary jaw at its other end, said jaw having an opening in communication with said body, a movable jaw carrying a shank and a flexible strip to project into and slide in said body and the opening in said stationary jaw, and a wedge within said body and between said shank and strip to force them into contact with the side bars of said body.

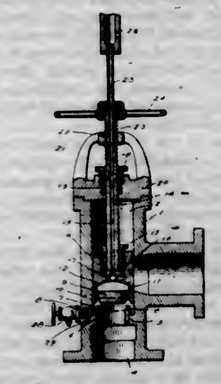
6. A wrench comprising a body having united side bars, a handle at one end and a stationary jaw at its other end, said jaw having an opening in communication with said body, a movable jaw carrying a shank and a flexible strip to project into and slide in said body and the opening in said stationary jaw, a wedge within said body and between said shank and strip to force them into contact with the side bars of said body, and a pivoted lever for operating said wedge.

870,486. CONDUCTING-WIRE SUPPORT AND INSULATOR. HARVEY W. WISTNER, Ogden, Utah. Filed June 13, 1906. Serial No. 321,475.



In a device of the class described, the combination of a support having an opening of different diameters, and threaded in the portion of larger diameter and provided with a slot opening radially from the said opening, an insulator having cylindrical end portions of different diameters and a thread on the inner end portion of larger diameter for engagement in the opening of the support and provided with an non-circular extremity, said insulator being composed of two parts having registering grooves for receiving a conductor and one section having a longitudinal passage adjacent the groove thereof, and a tie wire extending through the passage and adapted to be fastened to the conductor passing through the insulator.

870,487. BLOW-OFF VALVE. LAWRENCE A. BERTRAM, Allegheny, Pa. Filed Nov. 14, 1906. Serial No. 343,417.



1. A blow-off valve provided with an oppositely beveled valve seat, a valve head provided with a V-shaped annular groove, a series of perforations extending through the groove, a tubular valve stem, and means for seating and unseating the valve.

2. In a blow-off valve, the combination of a perforated valve head, a valve seat therefor, and a laterally extended intake located above the valve seat, a tubular stem for the valve, and means for unseating the valve for cleaning the same, substantially as described.

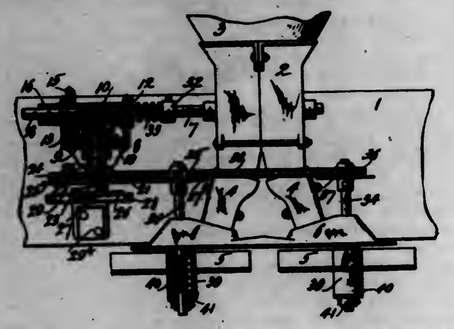
3. A blow-off valve comprising a perforated head, a valve seat therefor, a tubular valve stem, and means for unseating the valve and cleaning the same prior to the blow-off operation, substantially as described.

4. A blow-off valve comprising a perforated head, a valve seat therefor, a tubular valve stem, and means whereby the initial movement of said valve opens communication between the tubular valve stem and the valve seat, and the subsequent movement of the valve opens communication between the intake branch and the outlet, substantially as described.

5. A blow-off valve comprising a casing, a valve mounted to move in said casing and provided with a valve head having an annular groove therein to fit an oppositely beveled valve seat, perforations in the grooves, a steam chamber above the valve head, and a tubular valve stem

communicating with said chamber, and means for seating and unseating the valve head.

870,488. SEEDING DEVICE. WILLIAM G. BOLUS, Peoria, Ill. Filed Feb. 8, 1906. Serial No. 300,162.



1. In a device of the character described, the combination of a horizontal driving shaft, driven shafts, distributers carried by said shafts, a compensating drive on the driving shaft, connections between said drive and the driven shaft or shafts, and a resilient connection between the said fans and their shafts.

2. In a device of the character described, the combination of a shaft, a distributer carried thereby, and a resilient connection between the distributer and said shaft.

3. In a device of the character described, the combination of a shaft, a distributer carried thereby, and a coil spring connection between the distributer and the shaft, said spring being connected at one end to the shaft and its opposite end to the distributer.

4. In a device of the character described, the combination of a shaft, a distributer carried thereby and having an enlarged tubular hub, and a coil spring carried on said shaft within the hub of the distributer, one end thereof connected to the shaft and the opposite end connected to the distributer.

5. In a device of the character described, the combination with seeding devices, distributers adapted to operate in unison therewith, means for actuating the seeding devices, a driven shaft in connection with said actuating means and supporting said distributer, and a resilient connection between the distributer and its shafts.

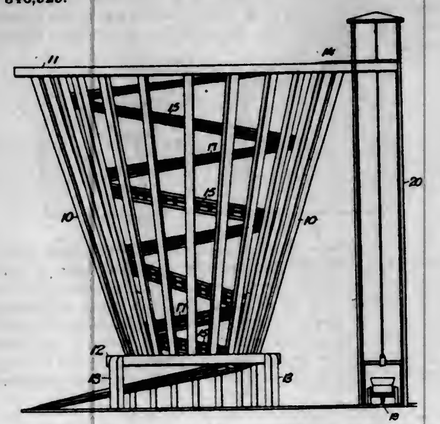
6. In a device of the character described, the combination with a shaft, of a driven wheel carried on one end thereof, a distributer carried on the opposite end, and a resilient connection on said shaft between the driven wheel and the distributer.

7. In a device of the character described, the combination with seeding devices, means for actuating the same, a driven shaft adapted to operate in unison with said seeding devices, a driven pinion on one end of said shaft and in connection with said actuating means, a distributer on the opposite end of said shaft, and a resilient connection on said shaft between the pinion thereof and the distributer.

8. In a device of the character described, the combination of a horizontal driving shaft, a plurality of driven shafts, driven pinions carried on one end of said driven shafts and supporting distributers at their opposite ends, a compensating drive on the driving shaft, connections between said drive and the pinions on the driven shafts, and a resilient connection on said driven shafts between the pinions thereof and the said distributers.

9. In a device of the character described, the combination with a casing for supporting suitable seeding devices, a feed way depending from said casing, a distributer rotatably supported beneath the discharge end of the feed way, a shaft for supporting the distributer, means for actuating said shaft, and a resilient connection between said shaft and the distributer.

870,489. AMUSEMENT DEVICE. JOHN W. BOUAKE, New York, N. Y. Filed Dec. 8, 1906. Serial No. 346,929.



In an amusement device the combination of a structure of a funnel shape, of a track of substantially spiral shape running down the interior of the structure and inclined from the horizontal to a substantially vertical position as it proceeds towards the bottom of the structure, a safety rail between the two rails of the track, a car for the track, a roller carried by the car and adapted to engage the safety rail to prevent the car from leaving the track, and means for elevating the car from the bottom to the top of the structure.

870,490. COMBINED ELECTRIC CONNECTOR AND SWITCH. STEPHEN F. BURBANK, Wilmington, N. C. Filed Jan 24 1906. Serial No. 297,628.



1. A device of the character described, comprising two sets of insulated conductors, the conductors of one set having sockets receiving projecting portions of the conductors of the other set and said sets of conductors revoluble relatively to each other through 360 degrees.

2. A device of the character described, comprising two sets of insulated conductors, one conductor of each set being annular and concentric with the other conductor and the conductors of one set having sockets in one end and the conductors of the other set having projecting portions entering said sockets and capable of revoluble and longitudinal movement relative to each other.

3. In a device of the character described, the combination of two blocks, each comprising a central conducting core, an annular conductor encircling the same and insulating material between said core and annular conductor, said conducting core and annular conductor of one block having projections on one end, and the core and annular conductor of the other block recessed to receive said projections said blocks maintaining the continuity of the circuit throughout any revoluble movement of one block relatively to the other.

4. In a device of the character described, the combination of two pipe sections and a sleeve embracing said pipe sections and secured to one of them, of a connector block in each pipe section, each connector block comprising a central conducting core and an annular conductor encircling the core and insulated therefrom and from the pipe section, the core of one block having a socket and the annular conductor of the same block having an annular groove in one end, an annular rib on the annular conductor of the other block to enter said annular groove, and the central core having a tenon to enter the socket in the central core of the other block.

870,491. CUE-CLUTCH. JEREMIAH J. CALLAGHAN, St. Louis, Mo. Filed Mar. 29, 1907. Serial No. 365,310.



1. A device of the class described consisting of a tube provided exteriorly with means between the ends thereof for positively preventing endwise movement of the tube when the same is held in the hand of a player.

2. A device of the class described consisting of a tube provided with an exterior groove to receive the finger of a hand to positively prevent endwise movement of the tube when the latter is held by the hand.

3. A device of the class described consisting of a tube provided with spirally arranged external ribs separated to provide a finger-receiving space or groove.

4. A device of the class described consisting of a tube provided exteriorly with a plurality of ribs stitched thereto and separated to provide a finger-receiving space.

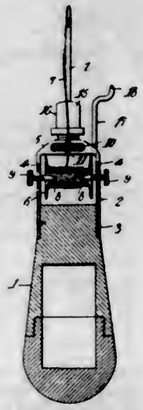
5. A device of the class described consisting of a tube provided exteriorly with substantially spirally disposed ribs suitably attached thereto and converging toward one end of the tube.

6. A device of the class described consisting of a tube having substantially spirally disposed ribs provided with enlarged ends suitably attached to the tube.

7. A device of the class described consisting of an elongated tube adapted to be held by the hand of a player and provided with means on the outside between the ends thereof to positively position the index finger of said hand with respect to the tube.

870,492. PUNCHING AND STITCHING TOOL. SEALY E. S. CLARK, Gage, Okla. Filed Aug. 17, 1906. Serial No. 331,090.

1. In a stitching tool, the combination with a body portion or handle, and a needle suitably mounted thereon, of a pair of bearing members arranged in alinement and adjustable relatively to each other and to the handle or body portion and having conical inner ends, and a thread supply spool having axially arranged recesses to receive the proximate ends of the bearing members and adapted to supply thread to the needle.



2. In a stitching tool, the combination with a handle portion, and a needle suitably mounted thereon, of a pair of bearing members embodying set screws arranged in alinement and adjustable relatively to one another, and a spool for supplying thread to the needle having axially arranged recesses adapted to receive and coöperate with the proximate ends of the said set screws, relative adjustment of the set screws serving to adjust the tension of the thread supplied to the needle.

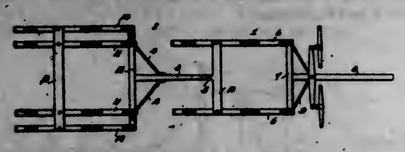
3. In a stitching tool, the combination with a handle, of a yoke having its arms secured to the handle, a needle arranged on the intermediate portion of the yoke in alinement with the handle, a thread supplying device mounted between the arms of the yoke for feeding thread to the needle, and a waxing device arranged on the intermediate portion of the yoke and in alinement with the needle and the thread supplying device for automatically waxing the thread as it is drawn therefrom.

4. In a stitching tool, the combination with a handle, of a yoke having its arms attached to the handle and provided with an intermediate portion extending transversely of the handle and having an inwardly extending recess, a waxing substance contained in said recess, a needle attached to the intermediate portion of the yoke at the forward side thereof, and a thread supplying reel arranged between the arms of the yoke and in alinement with the needle and the wax receiving recess.

5. In a stitching tool, the combination with a handle or body portion, of a yoke having its arms secured to the handle and provided with an intermediate cross piece having recesses extending from the opposite sides thereof, a thread supplying spool journaled between the arms of the yoke in rear of the said recesses, of a waxing substance contained within the said recesses, and a needle secured to the yoke in alinement with the spool and the wax containing recesses.

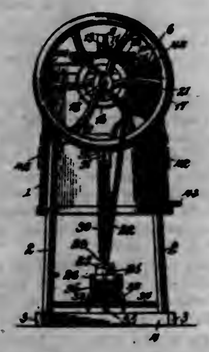
6. A device of the character described, comprising a handle, a yoke consisting of a ferrule having a pair of arms and a cross-piece, a spool mounted between said arms, adjusting screws extending through said arms and engaging said spool for exerting tension upon the thread, wax-holders connected with the cross-piece of said yoke, a split socket mounted upon said cross-piece and having a coned end, a needle mounted in said socket, a cap having a coned portion for holding said needle in position, and a stitch gage comprising a crank bar having a pointed outer end adapted to clear the upper end of said cap and a threaded inner end adapted to engage said cross-piece.

870,493. SLED. LUCIUS J. COLLINS, Sarles, N. D. Filed Mar. 23, 1907. Serial No. 364,098.



A sled comprising a forward section having parallel runners, and a rear section also having parallel runners and auxiliary runners located outside of and parallel with the aforesaid runners, a common cross-bar connecting the main and auxiliary runners of the rear section, and knee braces interposed between said cross-bar and the runners connected thereby, substantially as described.

870,494. CHURN. JOHN W. CONNETT, Missouri Valley, Iowa. Filed Dec. 26, 1906. Serial No. 349,426.

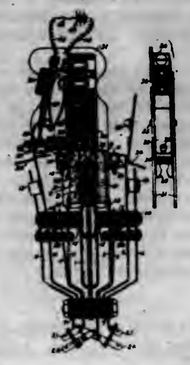


1. In a churn, the combination with a churn body, of a dasher, gearing connected with the dasher and having a vertically disposed combined crank and balance wheel, a pitman connected at its upper end with the said wheel and provided at its lower end with a head, a treadle, a bearing block having a socket to receive the head of the pitman, removable cap plates secured to the bearing block and provided with inner recessed edges receiving the pitman and retaining the head in the socket, and a spring connected with the treadle and with the body.

2. In a churn, the combination with a churn body, of a dasher, gearing connected with the dasher and having a vertically disposed combined crank and balance wheel, a pitman connected at its upper end with the said wheel and provided at its lower end with a head, a treadle, a bearing block having a socket to receive the head of the pitman, removable cap plates secured to the bearing block and provided with inner recessed edges receiving the pitman and retaining the head in the socket, one of the said plates being provided with an inverted hook, a spring connected with the said hook, and means for connecting the spring with the body.

3. In a churn, the combination with a body, of a dasher, gearing for operating the dasher, said gearing being provided with a crank wheel, a treadle, a pitman connected at its upper end with a crank wheel and provided at its lower end with a head, a bearing block having a socket receiving the said head, a sectional cap fitted on the bearing block and having contiguous recesses through which the pitman passes, one of the sections being provided with an inverted hook, a bracket mounted on the churn body and provided with a hook, and a coiled spring having terminal loops engaging the said hooks.

870,495. AUTOMATIC RESOLDERING DEVICE FOR ELECTRICAL PROTECTIVE APPARATUS. FRANK B. COOK, Chicago, Ill. Original application filed Mar. 8, 1906, Serial No. 304,929. Divided and this application filed May 11, 1907. Serial No. 373,140.



1. A repairing device for thermal protectors of the character described, comprising two pairs of normally separated spring members, means for normally holding the pairs of spring members in this separated relation, and a thumb-piece adapted to be depressed whereby the contact between each pair of spring members is closed.

2. A repairing device for apparatus of the character described, comprising two pairs of contact members and means for normally holding the members of each pair in separated relation, the said means permitting the members of each pair to make electrical connection with each other when the repairing device is connected with the said apparatus, for purposes substantially as described.

3. A repairing device for apparatus of the character described, comprising two pairs of contact members, means for normally holding the members of each pair in separated relation, and means for operating one of the contact members when the repairing device is connected with the said apparatus, whereby the contact members of each pair are electrically connected with each other.

4. A repairing device for thermal protectors, comprising two pairs of contact members normally held out of contact with each other, an operating spring between the pairs of contact members, and a thumb-piece adapted to be depressed against the tension of the operating spring whereby the members of each pair are electrically connected with each other.

5. A repairing device for apparatus of the character described, comprising pairs of contact members, means for normally holding the members of each pair in separated relation, a spring acting on one of the said contact members, and means whereby the latter said contact member is operated against the tension of the said spring when the repairing device is connected with the said apparatus, whereby the contact members of each pair are electrically connected with each other.

6. A repairing device for electrothermal protectors, comprising pairs of contact members, one said pair being pivoted near its center, means normally holding the contact members of each pair in separated relation, an operating spring between the pairs of contact members acting on the said pivoted pair, and means for operating the said pivoted pair against the tension of the operating spring whereby the contact members of each pair are electrically connected with each other, for purposes substantially as described.

7. A repairing device for electrothermal protectors of the character described, comprising contact members for closing a circuit through a protector, one of the contact members being pivoted, a spring member operating on the pivoted contact member to cause the latter to close a circuit through a protector, a suitable source of electricity connected in circuit with the said contact members, and means whereby each of the said contact members is disconnected from the said source when the circuit through the protector has been closed a sufficient length of time.

8. A repairing device for electrothermal protectors of the character described, comprising contact members for closing a circuit through the protector, means for operating one of the contact members when the said device is connected with a protector, a suitable source of electricity connected in circuit with the said contact members, and means whereby each of the said contact members is automatically disconnected from the said source when the circuit through the protector has been closed a sufficient length of time.

9. In a resetting and resoldering device for thermal protectors, pairs of contact members normally held in separated relation but adapted to be electrically connected with each other in pairs when the said device is connected with a protector, and an adjustable contact for at least one of the said pairs.

10. In a resoldering device for thermal protectors of the character described, a pair of spring members connected in circuit with a source of electricity, members for engaging the protective apparatus to reset same and close the circuit of the said source through the protector for resoldering, means for normally holding the said spring members out of contact with the said engaging members, an actuating spring, and means for overcoming the tension of the said actuating spring whereby the circuit is closed between the said spring members and engaging members when it is desired to reset the protector.

11. In a resoldering device for thermal protectors of the character described, a pair of spring members connected in circuit with a source of electricity, members for engaging the protective apparatus to reset same and close the circuit of the said source through the protector for resoldering, means for normally holding the said spring members out of contact with the said engaging members, and means whereby connecting the said device with the protector closes the circuit between the said spring members and engaging members, for purposes substantially as described.

12. A resetting device for thermal protectors of the character described, comprising pairs of springs, one pair being pivoted near its center and carrying a thumb-piece adapted to be depressed, an operating spring between the said pairs acting against pressure on the thumb-piece, and means near the free ends of the pairs of springs adapted to hold the springs of each pair out of contact with each other when the pressure on the thumb-piece is removed and to allow the springs of each pair to make contact with each other when sufficient pressure is applied to the thumb-piece to overcome the tension of the operating spring.

870,496. BUTTER MEASURE AND CUTTER. DAVID F. CURTIN, St. Louis, Mo. Filed Mar. 29, 1907. Serial No. 365,239.

1. A combined butter measure and cutter consisting of a handle carrying a computing chart, a mold at the lower end of same, said mold open at its lower end and comprising rigid side and rear walls, and a sliding flexible front wall adapted to cut butter at the lower end of mold.

2. A combined butter measure and cutter consisting of a handle carrying a computing chart, a mold at the lower end of same, said mold open at its lower end and comprising three rigid walls, and a movable flexible wall, the side walls having grooves in which said flexible wall slides, said grooves located near the front edges of the side walls and extending downwardly and curved rearwardly at their lower ends to the rear wall of the mold, a transverse plunger fitted to slide within said mold, guide rods extending upwardly from said plunger through the upper wall of the mold, a ring secured to the upper ends of said guide rods and surrounding the handle and means on the handle for regulating and limiting the upward movement of the ring located at the upper end of the guide rods.

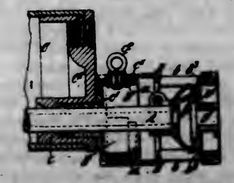
3. A butter mold and cutter consisting of a box open at its lower end and having rigid side and rear walls, a front wall fitted to slide between the side walls and having a flexible portion adapted to be guided across the open lower end of the mold and cut the butter.



4. A butter mold and cutter comprising a box open at its lower end and having rigid side and rear walls and a front slidable wall, said slidable wall fitted in grooves in the side walls, said grooves extending downwardly in a straight line and curving rearwardly to the rear wall of the box at its extreme lower end, said slidable wall having a flexible portion which follows said grooves, said flexible wall serving as a cutter to sever the butter which has been forced into the mold from a bulk.

5. The combined butter computing measure and cutter, consisting of a box having its lower end open and comprising three rigid vertical walls and a top wall, a front wall fitted to slide in grooves formed in the side walls, said grooves extending in a straight line from the upper end of the box to near its lower end where they curve rearwardly to the rear wall and across the extreme lower end of the box, the slidable wall having a flexible portion which follows the said curved grooves and forming a cutter, a stop on said slidable wall to limit its upward movement, a transverse plunger fitted to slide within said box, guide rods extending upwardly from said plunger through the upper wall of the box, a ring secured to the upper ends of the rods and surrounding a handle projecting upwardly from the box, said handle having a computing chart thereon, a stop ring adjustably held on said handle to limit the upward movement of the sliding ring, and means for locking the stop ring on the handle.

870,497. MUZZLE ATTACHMENT FOR AUTOMATIC GUNS. ARTHUR T. DAWSON and JAMES RAMSAY, Westminster, London, England, assignors to Vickers Sons & Maxim, Limited, Westminster, London, England. Filed Mar. 15, 1905. Serial No. 250,284.



1. In a muzzle attachment for an automatic gun having a reciprocating barrel, the combination with the barrel, of a disk movable therewith, an imperforated annular stationary disk surrounding an aperture co-axial with the barrel and of greater diameter than the movable disk, overlapping the latter and forming therewith a gas space from which the powder gases are free to escape radially

outward as they enter between said disks but are prevented from escaping axially by the overlapping of the stationary disk, and means for connecting said stationary disk to a non-recoiling part of the gun and for affording a free radial escape of the powder gases from the disks to the atmosphere without resorting to apertures in the stationary portion facing said movable disk, other than the aforesaid co-axial aperture, for the purpose specified.

2. In a muzzle attachment for an automatic gun having a reciprocating barrel, the combination with the barrel, of a disk movable therewith, an imperforated annular stationary front disk surrounding an aperture co-axial with the barrel and of greater diameter than the movable disk, overlapping the latter and forming therewith a gas space from which the powder gases are free to escape radially outward as they enter between said disks but are prevented from escaping axially by the overlapping of the stationary disk, and a plurality of widely spaced longitudinal bars connecting said front disk with a non-recoiling part of the gun so as to afford a free radial escape of the powder gases from the disks to the atmosphere without resorting to apertures in the stationary portion facing said movable disk, other than the aforesaid co-axial aperture, for the purpose specified.

3. In a muzzle attachment for an automatic gun having a reciprocating barrel, the combination with the barrel, of a disk movable therewith, an imperforated annular stationary front disk surrounding an aperture co-axial with the barrel and of greater diameter than the movable disk, overlapping the latter and forming therewith a gas space from which the powder gases are free to escape radially outward as they enter between said disks but are prevented from escaping axially by the overlapping of the stationary disk, and a plurality of widely spaced longitudinal bars of small sectional area connecting said front disk with a non-recoiling part of the gun so as to afford a free radial escape of the powder gases from the disks to the atmosphere without resorting to apertures in the stationary portion facing said movable disk, other than the aforesaid co-axial aperture for the purpose specified.

4. In a muzzle attachment for an automatic gun having a reciprocating barrel, the combination with the barrel, of a disk movable therewith, an imperforated stationary front disk surrounding an aperture co-axial with the barrel and of greater diameter than the movable disk, overlapping the latter, and forming therewith a gas space from which the powder gases are free to escape radially outward as they enter between said disks but are prevented from escaping axially by the overlapping of the stationary disk, and a plurality of widely spaced longitudinal bars of small triangular section connecting said front disk with a non-recoiling part of the gun and having their apexes directed inwardly so as to afford a free radial escape for the powder gases from the disks to the atmosphere without resorting to apertures in the stationary portion facing said movable disk, other than the aforesaid co-axial aperture, for the purpose specified.

5. In a muzzle attachment for an automatic gun having a reciprocating barrel the combination with the barrel of a concave or dished disk movable therewith, an imperforated annular stationary concave or dished front disk surrounding an aperture co-axial with the barrel and of greater diameter than the movable disk, overlapping the latter, and forming therewith a gas space from which the powder gases are free to escape radially outward as they enter between said disks but are prevented from escaping axially by the overlapping of the stationary disk, and means for connecting said front disk to a non-recoiling part of the gun and for affording a free radial escape of the powder gases from the disks to the atmosphere without resorting to apertures in the stationary portion facing said movable disk, other than the aforesaid co-axial aperture, for the purpose specified.

6. In a muzzle attachment for an automatic gun having a reciprocating barrel, the combination with the barrel, of a concave or dished disk movable therewith, a stationary front disk having an aperture co-axial with the barrel and a concave or dished cavity surrounded by a beveled or chamfered peripheral portion on its active face, and means for connecting said front disk to a non-recoiling part of the gun and for affording a free radial escape of the powder gases from the disks to the atmosphere for the purpose specified.

7. In a muzzle attachment for an automatic gun having a reciprocating barrel, the combination with the barrel, of a concave or dished disk movable therewith, a stationary front disk having an aperture co-axial with the barrel and a concave or dished cavity surrounded by a beveled or chamfered peripheral portion on its active face, and a plurality of widely spaced longitudinal bars of small triangular cross-section connecting said front disk with a non-recoiling part of the gun and having their apexes directed inwardly for the purpose specified.

8. In a muzzle attachment for an automatic gun having a reciprocating barrel, the combination with the barrel of a concave or dished disk movable therewith, a stationary front disk having an aperture co-axial with the barrel and a concave or dished cavity surrounded by a beveled or chamfered peripheral portion on its active face, a sleeve carrying said front disk and surrounding the barrel-disk and having wide radial openings therein separated by narrow bars, and means for detachably connecting said sleeve with a non-recoiling part of the gun substantially as described.

9. In a muzzle attachment for an automatic gun having a reciprocating barrel, the combination with the barrel, of a concave or dished disk detachably connected therewith, a stationary front disk having an aperture co-axial with the barrel and a concave or dished cavity surrounded by a beveled or chamfered peripheral portion on its active face, a sleeve detachably carrying said front disk and surrounding the barrel-disk and having wide radial openings therein separated by narrow triangular bars, and means for detachably connecting said sleeve with a non-recoiling part of the gun substantially as described.

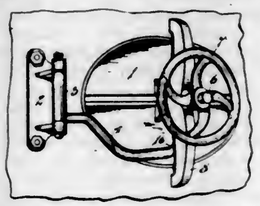
10. In a muzzle attachment for an automatic gun having a reciprocating barrel; the combination with the barrel, of a concave or dished disk detachably connected therewith, a stationary front disk having an aperture co-axial with the barrel and a concave or dished cavity surrounded by an outwardly beveled or chamfered peripheral portion on its active face, a sleeve detachably carrying said front disk and having wide radial openings therein separated by narrow triangular bars, and means for detachably connecting said sleeve with a non-recoiling part of the gun substantially as described.

11. In a muzzle attachment for an automatic gun having a reciprocating barrel; the combination with the barrel, of a concave or dished disk detachably connected therewith, a stationary front disk having an aperture co-axial with the barrel and a concave or dished cavity surrounded by a beveled or chamfered peripheral portion on its active face, a sleeve detachably carrying said front disk and having wide radial openings therein separated by narrow triangular bars, interrupted fillets on the said sleeve, and corresponding interrupted fillets on a non-recoiling part of the gun for engagement therewith substantially as described.

12. In a muzzle attachment for an automatic gun having a reciprocating barrel; the combination with the barrel, of a concave or dished disk detachably connected therewith, a stationary front disk having an aperture co-axial with the barrel and a concentric concave or dished cavity surrounded by a beveled or chamfered peripheral portion on its active face, a sleeve detachably carrying said front disk and having wide radial openings therein separated by narrow triangular bars, interrupted screw threads on the said sleeve, corresponding interrupted screw threads on a non-recoiling part of the gun for engagement therewith, and stop pieces on the interrupted portions of said non-recoiling part substantially as described.

13. In a muzzle attachment for an automatic gun having a reciprocating barrel, the combination with the barrel, of a water jacket surrounding said barrel, a stuffing box and gland in the front cap of said water jacket in which said barrel reciprocates, a concave or dished disk detachably connected with the barrel, a stationary front disk having an aperture co-axial with the barrel and a concentric concave or dished cavity surrounded by a beveled or chamfered peripheral portion on its active face, a sleeve detachably carrying said front disk and having wide radial openings therein separated by narrow triangular bars, and means for detachably connecting said sleeve with said front cap of the water jacket substantially as described.

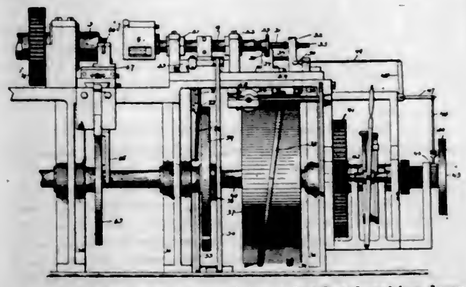
870,498. MANHOLE-COVER. WILLIAM EGLE, Detroit, Mich., assignor to Eureka Manufacturing Company, Detroit, Mich., a Corporation. Filed Oct. 10, 1906. Serial No. 338,204.



1. In combination with a manhole cover, a yoke adjustably engaging thereacross, a hinged supporting arm therefor, a universal joint connection between the free end of said arm and said cover and yoke, and a screw bolt engaging said cover and through said yoke whereby the cover may be drawn tightly against the complementary edge of the aperture in a wall whose closure is desired, and against whose wall portions adjacent thereto the end portions of said yoke engage, substantially as described.

2. In combination with the apertured wall of a tank, an arm hinged thereto in position to swing in front of the aperture, said arm being formed so that the portion intermediate its hinged portion and the outer end whose projection in front of the aperture is not desired is not in interfering position with the passage of an object thereabove and through the aperture, a man-hole cover and a yoke supported thereby, said yoke being adapted to engage with its ends against those portions of the walls on each side of the aperture, a universal joint connection between said yoke said cover and the outer end of the arm, and a screw bolt provided with a hand wheel whereby the cover may be drawn closely against the edge of the opposite face of the wall from that engaged by the yoke, and adapted to be swung over said intermediate portion of the arm and through said aperture, substantially as described.

870,499. SCREW-MACHINE. JAMES ENGLISH, New Haven, Conn., assignor to Reynolds & Co., New Haven, Conn., a Corporation. Filed Mar. 25, 1907. Serial No. 364,488.

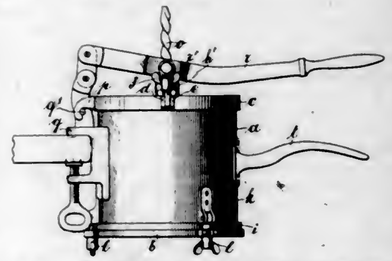


1. A screw machine comprising a head, a breaking-down cutter mounted therein, a slide arranged in one side of said head, a finishing cutter mounted in said slide, and means for advancing said slide beyond said head, substantially as described.

2. In a screw machine, a head carrying a breaking-down cutter, a slide mounted in said head and carrying a finishing cutter, springs connecting said slide and head and tending to keep the finishing cutter in rear of the reducing cutter, means for advancing said head and slide, and means for advancing the slide beyond said head, substantially as described.

3. In a screw machine, a head mounted upon a hollow shaft, a breaking-down cutter mounted in said head, a slide arranged in one side of said head, a finishing cutter mounted in said slide, said slide connected with a shaft extending through the said hollow shaft, means for moving said shafts to advance said head and slide together, and for advancing said slide independent of the head, substantially as described.

870,500. APPARATUS FOR STRAINING LIQUIDS. EMIL C. FAHRENHEIM, Hamburg, Germany. Filed Mar. 19, 1907. Serial No. 363,229.



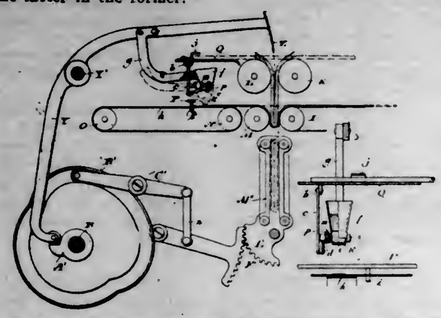
1. An apparatus for straining quantities of liquids comprising a cylindrical vessel open at both ends, a removable bottom with open spaces, an exchangeable sieve, having centrally a knob or bearing, located at the bottom end of the vessel and on the removable bottom, a detachable, horizontal cross bar on the top of the vessel, a whirling device consisting of a vertical shaft rotating in the bearing of the sieve having a reduced top portion which moves in the central part of the horizontal cross bar forming a vertical screw at the top and having near its bottom end radial bars with wooden bottom surfaces, a clamping device adapted to secure the apparatus so that it projects from its support, and a lever movably connected to the top portion of the clamping device, a loose nut secured in said lever and on the vertical screw of the shaft, so arranged that by moving up and down the lever the whirling device is actuated whereby the top surface of the sieve is cleaned and the liquid agitated thus effecting quick straining of same.

2. In an apparatus of the type described a whirling device consisting of a vertical shaft with pointed bottom end, a support for the lower end of said vertical shaft, having a reduced upper portion thereon forming a vertical screw at the top, a plurality of radial bars near the bottom end of the shaft and having wooden bottom surfaces, a horizontal lever forming a ring, a nut loosely mounted in said ring engaging the vertical screw, so arranged that by moving the lever up and down the whirling device is actuated and means for supporting said whirling device and said horizontal lever.

870,501. WRAPPING-MACHINE. SCHUYLER E. FARNHAM, Racine, Wis., assignor, by mesne assignments, to National Mfg. & Mailing Co., Racine, Wis., a Corporation of Wisconsin. Filed July 31, 1905. Serial No. 271,910.

1. A publication wrapping machine comprising a roller feed-mechanism, means for folding a wrapper and publication one on another into the feed-mechanism, and means coöperative with the folding-mechanism for depositing adhesive material intermediate of the wrapper and publication coincident with the folding operation on same, the operation of said feed-mechanism resulting in adhesion of

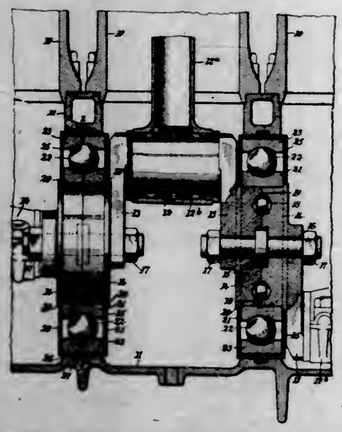
said wrapper and publication preliminary to enveloping the latter in the former.



2. A publication wrapping machine having a folding-blade, a receptacle for adhesive material in connection with an arm of said blade, a feed-roller extending through the lower portion of the receptacle and having a ratchet-wheel in connection therewith, a pawl engaging the ratchet-wheel, and a suspended pawl-controlling lever.

3. A publication wrapping machine having a folding-blade, a receptacle for adhesive material in connection with an arm of said blade, a feed-roller extending through the lower portion of the receptacle and having a ratchet-wheel in connection therewith, a pawl engaging the ratchet-wheel, a pawl-controlling lever loose at one end on the spindle of said roller, and a link by which the other end of the lever is suspended from a wrapper support in said machine.

870,502. CRANK-SHAFT. THOMAS J. FAY, New York, N. Y., and JOHN M. ELLSWORTH, Bernardsville, N. J. Filed Apr. 8, 1907. Serial No. 367,025.



1. A crank shaft made up of a plurality of sections having surfaces facing each other, said surfaces being provided with oppositely disposed recesses and dowel buttons seated within said recesses but out of engagement with the bottoms thereof.

2. A crank shaft made up of a plurality of sections having surfaces facing each other, said surfaces being provided with oppositely disposed recesses and tapered dowel buttons within said recesses, seated and centered by the bringing of the sections together.

3. A crank shaft made up of a plurality of sections having surfaces facing each other, said surfaces being provided with oppositely disposed tapered recesses and tapered dowel buttons within said recesses, and seated and centered by the bringing of the sections together.

4. A crank shaft made up of a plurality of sections having surfaces facing each other, said surfaces being provided with an annular row of recesess and a centrally disposed passageway, a plurality of dowel buttons seated within said recesses, and a centrally disposed bolt extending through said passageway.

5. In a crank shaft, a hub made up of a plurality of sections meeting in a plane at an angle to the axis of rotation, the meeting faces of the adjacent hub sections being provided with a plurality of pairs of oppositely disposed recesses, a button located within each pair of recesses, and means for locking the sections together.

6. In a crank shaft, a hub made up of a plurality of sections, the meeting faces of said sections being provided with a plurality of pairs of oppositely disposed recesses, buttons located within each pair of opposed recesses and adapted to float to positions of equal pressure, and an axially disposed bolt rigidly securing said sections together.

7. In a crank shaft, a hub made up of separate sections, the meeting surfaces of said sections being provided with oppositely disposed conical recesses, a plurality of double conical buttons located within said recesses, and an axial bolt rigidly securing said sections together.

8. A crank shaft made up of a plurality of sections having the meeting faces thereof lying in a plane at an angle to the axis of rotation, and each of said meeting faces being provided with a plurality of conical recesses, and means lying within said recesses and in engagement with the oppositely disposed sections for preventing rotary movement of one section in respect to the other.

9. A crank shaft made up of a plurality of sections, each of said sections having a recess in the face thereof, and a locking bolt having an annular flange in engagement with the recesses of the adjacent faces, and having locking nuts at each end thereof.

10. A crank shaft made up of a plurality of sections, each of said sections having a recess in the face thereof, and a locking bolt having a projection extending into the recesses of the adjacent faces, said locking bolt serving to hold the sections in engagement with each other.

11. A crank shaft made up of a plurality of sections, and a locking bolt for holding the adjacent sections in engagement with each other, said bolt being provided with means adapted to engage with the sections, whereby they may be forced out of engagement with each other by the longitudinal movement of the bolt.

12. In combination, a ball bearing including a race-ring having an outer circumferential bearing face, and two cranks each having a hub portion extending into said race ring from the opposite ends thereof and engaging with the race ring to prevent movement thereof in the line of the axis of rotation and the inner ends of said hubs facing each other and lying in planes substantially at right angles to the axis of rotation.

13. In combination, a ball bearing having a race ring having an outer circumferential bearing face, two cranks each having a hub portion extending into said race ring from the opposite ends thereof and engaging with the race ring to prevent movement thereof in the line of the axis of rotation, and frictionally engaging therewith to prevent the rotation thereof independent of the hub portions, and the inner ends of said hubs facing each other and lying in planes substantially at right angles to the axis of rotation, and means for securing the simultaneous rotation of said hub portions.

14. In combination, a plurality of cranks, each having two hub portions and the hub portions of the adjacent cranks lying in planes at right angles to the axis of rotation, a ball bearing common to said adjacent hub portions, said bearing including a race ring surrounding the hub portions in the plane of the opposed faces, and means for rigidly securing together the hub portions of the adjacent cranks the hub portions being constructed to bind the race ring in place under the influence of said securing means.

15. In combination, a plurality of cranks, each having two hub portions, the hub portions of the adjacent cranks having opposed faces lying in planes at right angles to the axis of rotation, means for securing the simultaneous rotation of the cranks, and a ball bearing common to both hub portions, said bearing including a race ring surrounding the adjacent hubs and held by frictional engagement from rotation in respect to the hub portions.

16. A crank shaft made up of a plurality of sections, each section terminating in a face lying substantially at right angles to the axis of rotation of the shaft and adjacent the face of a similar section, independent and detachable fastening means each in engagement with both of said sections, one of said fastening means serving to prevent longitudinal movement of one section in respect to the other and the other of said fastening means being disposed within said sections and serving to secure the simultaneous rotation of both sections, and a ball bearing surrounding the said sections in the plane of the opposed faces.

17. In combination, a plurality of cranks, each having two hub portions, the hub portions of the adjacent cranks having opposed faces lying in planes at right angles to the axis of rotation, means for securing the simultaneous rotation of the cranks, a ball bearing common to both hub portions, said bearing including a race ring surrounding the adjacent hubs, and a locking bolt extending through the adjacent hubs for locking them together, said hub portions being provided with means for binding said race ring in place under the influence of said locking bolt.

18. In combination, a plurality of cranks, each having two hub portions, the hub portions of the adjacent cranks facing each other in a plane at right angles to the axis of rotation, and each having an annular flange, a race ring surrounding said hub portions and between said flanges, and means for rigidly securing together the adjacent hub portions and simultaneously binding said race ring in place between said flanges.

19. A device of the class described comprising a plurality of sections each having a plurality of conical recesses in its meeting face, and a plurality of double conical buttons adapted to frictionally engage with the walls of said recesses without contacting with the bottoms thereof, and be forced into place by the bringing together of the sections, said buttons being longitudinally movable to float to positions of equal pressure.

20. A device of the class described comprising a plurality of sections each having a plurality of conical recesses in its meeting face, and a plurality of double conical buttons adapted to float to positions of equal pressure within said recesses without contacting with the bottoms thereof when said sections are forced together.

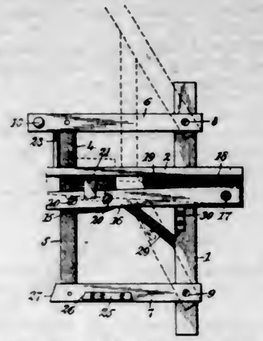
21. A device of the class described comprising a plurality of sections each having a plurality of conical recesses in its meeting face, a plurality of double conical buttons adapted to frictionally engage with the walls of said recesses without contacting with the bottoms thereof, and be forced into place by the bringing together of the sections, said buttons being longitudinally movable to float to positions of equal pressure, and a clamping bolt having a projection adapted to engage with one of said sections for forcing said sections apart.

22. A device of the class described comprising a plurality of sections each having a plurality of conical recesses in its meeting face, a plurality of double conical buttons adapted to float to positions of equal pressure within said recesses without contacting with the bottoms thereof when said sections are forced together, and a clamping bolt having a projection adapted to engage with one of said sections for forcing said sections apart.

870,503. BREAD-SLICER. HENRY FRANK, Lickingville, Pa. Filed Feb. 14, 1907. Serial No. 357,284.

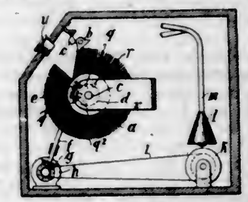
1. In a bread slicer, in combination, a table adapted to support the loaf, a swinging frame, a knife carried thereby and adapted to pass through the loaf, a gage arm pivotally mounted beneath the table, a gage plate carried by said arm, a spring tending to hold said gage arm in a depressed position, and a member carried by said swinging frame and adapted to engage said gage arm in an elevated position of said frame.

2. In a bread slicer, in combination, a table having a slit therein, a swinging frame, a knife carried by said frame and passing through said slit, a slot in said table adjacent to said slit, a gage arm pivotally mounted below said table, a gage plate carried by said arm and adapted to project upwardly through said slot, a spring tending to



hold said gage arm in a depressed position, and a dog carried by swinging frame and adapted to engage said arm in an elevated position of said frame.

870,504. MUTOSCOPE. PAUL FROST, Berlin, Germany. Filed Jan. 25, 1907. Serial No. 354,081.



1. The combination with a mutoscope, of a phonograph driven in unison with the views presented, an electric illuminating circuit containing differently colored lights, and means on the rotating mutoscope picture drum to directly control said lights.

2. The combination with a mutoscope of a phonograph driven in unison therewith, an electric lamp circuit containing a plurality of differently colored lamps, fixed contacts adjacent the picture drum of the mutoscope, and contacts on the drum to close an electric circuit through the fixed contacts and lamps by the rotation of the drum.

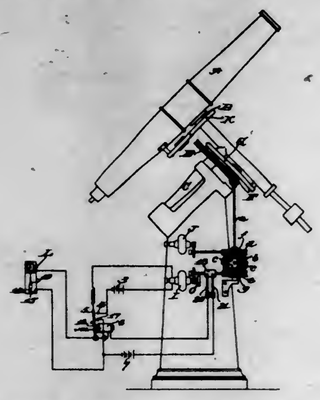
3. In combination, a mutoscope the individual pictures of which are stereoscopic pictures, a phonograph driven in unison with the pictures, an electric light circuit containing a plurality of differently colored lamps, contacts fixed in proximity to the mutoscope drum and contacts on the mutoscope drum to close the circuit through said contacts to any one of the lamps.

870,505. APPARATUS FOR SYNCHRONIZING MOTORS. WILLARD P. GERRISH, Cambridge, Mass., assignor of one-half to The Alvan Clark and Sons Corporation, Cambridge, Mass., a Corporation of New Jersey. Filed Jan. 23, 1905. Serial No. 242,272.

1. An apparatus for synchronizing a motor, having, in combination, a speed controlling electric circuit adapted to be changed from a condition in which the speed of the motor is accelerated to a condition in which the speed of the motor is retarded, means for placing the circuit in one of said conditions at regular intervals, means controlled by the motor for restoring the circuit to the other condition during each interval, and means for retaining the circuit in said last mentioned condition during the remainder of the interval while permitting a change to the other condition.

2. An apparatus for synchronizing a motor, having, in

combination, a speed controlling electric circuit adapted to be changed from a condition in which the speed of the motor is accelerated to a condition in which the speed of the motor is retarded, means for placing the circuit in one of said conditions at regular intervals, means controlled by the motor for restoring the circuit to the other condition during each interval, and means independent of the motor for retaining the circuit in said last mentioned condition during the remainder of the interval.



3. An apparatus for synchronizing a motor, having, in combination, a speed controlling electric circuit adapted to be changed from a condition in which the speed of the motor is accelerated to a condition in which the speed of the motor is retarded, means acting momentarily at regular intervals to place the circuit in one of said conditions, means for retaining the circuit in said condition, and means controlled by the motor for restoring the circuit to the other condition during each interval.

4. An apparatus for synchronizing a motor, having, in combination, a speed controlling electric circuit, means acting at regular intervals to change the circuit from a condition in which the speed of the motor is retarded to a condition in which the speed of the motor is accelerated, means controlled by the motor for restoring the circuit during each interval to a condition in which the speed of the motor is retarded, and means independent of the motor for retaining the circuit in said last mentioned condition during the remainder of the interval.

5. An apparatus for synchronizing a motor, having, in combination, a speed controlling electric circuit, means acting at regular intervals to change the circuit from a condition in which the speed of the motor is retarded to a condition in which the speed of the motor is accelerated, means controlled by the motor for restoring the circuit during each interval to a condition in which the speed of the motor is retarded, and means for retaining the circuit in said last mentioned condition during the remainder of the interval while permitting a change to a condition in which the speed of the motor is accelerated.

6. An apparatus for synchronizing a motor, having, in combination, a speed controlling electric circuit, a relay the contacts of which are included in said circuit, means for energizing the relay at regular intervals to change said circuit from a condition in which the speed of the motor is retarded to a condition in which the speed of the motor is accelerated, and means controlled by the motor for actuating the relay contacts during each interval to restore the circuit to a condition in which the speed of the motor is retarded.

7. An apparatus for synchronizing a motor, having, in combination, a speed controlling electric circuit, a relay the contacts of which are included in the motor circuit, means acting momentarily at regular intervals for energizing the relay to change said circuit from a condition in which the speed of the motor is retarded to a condition in which the speed of the motor is accelerated, means for retaining the circuit in said last mentioned condition, and means controlled by the motor for actuating the relay contacts during each interval to restore the circuit to a condition in which the speed of the motor is retarded.

8. An apparatus for synchronizing a motor, having, in combination, a speed controlling electric circuit, means acting momentarily at regular intervals to change the circuit from a condition in which the speed of the motor is retarded to a condition in which the speed of the motor is accelerated, means for retaining the circuit in said last mentioned condition, and means controlled by the motor for restoring the circuit during each interval to a condition in which the speed of the motor is retarded.

9. An apparatus for synchronizing an electric motor, having, in combination, means for closing the power circuit of the motor at regular intervals, means controlled by the motor for breaking said circuit after each closure, and means for maintaining said circuit open after each break while permitting a closure of the circuit.

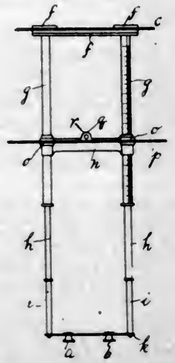
10. An apparatus for synchronizing an electric motor, having, in combination, means for closing the power circuit of the motor at regular intervals, means controlled by the motor for breaking said circuit after each closure, and means independent of the motor for maintaining said circuit open after each break.

11. An apparatus for synchronizing an electric motor, having, in combination, a relay the contacts of which are included in the motor circuit, means for energizing the relay at regular intervals to close the motor circuit at the relay contacts, and means controlled by the motor for opening the motor circuit at the relay contacts after each closure.

12. An apparatus for synchronizing an electric motor, having, in combination, a relay the contacts of which are included in the motor circuit, means for momentarily closing the circuit of the relay at regular intervals to close the motor circuit at the relay contacts, means for maintaining the motor circuit closed at the relay contacts until broken by the action of the motor, and means controlled by the motor for opening the motor circuit at the relay contacts after each closure.

13. An apparatus for synchronizing an electric motor, having, in combination, means acting momentarily at regular intervals to close the power circuit of the motor, means for retaining said circuit closed until broken by the action of the motor, and means for breaking said circuit by the action of the motor after each closure.

870,506. INSTRUMENT FOR DETERMINING THE POSITION OF AN ORGAN OR THE LIKE WITHIN HUMAN BODIES. JOSEPH GILLET, Schöneberg, near Berlin, Germany, assignor to Siemens & Halske, A. G., Berlin, Germany. Filed July 6, 1907. Serial No. 382,543.



1. An instrument, for determining the position of foreign bodies and organs by means of Roentgen stereograms taken stereoscopically, comprising in combination a holder for the stereogram, a support fixed to said holder, a yoke carrying lenses mounted on said support, and a material point mounted between said lenses and said holder movable at right angles to the plane of said stereogram in said holder, as set forth.

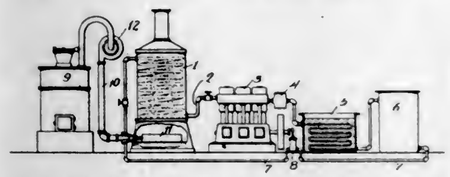
2. An instrument, for determining the position of foreign bodies and organs by means of Roentgen stereograms taken stereoscopically, comprising in combination a holder for the stereogram, a support fixed on said holder, a yoke fastened to said support carrying lenses, said yoke being mounted and movable at right-angles to the plane of said stereogram in said holder, and a material point mounted between said lenses and said holder movable at right angles to the plane of said stereogram in said holder, as set forth.

3. An instrument, for determining the position of foreign bodies and organs by means of Roentgen stereograms taken stereoscopically, comprising in combination a holder for the stereogram, a support fixed on said holder, a yoke carrying lenses fastened to said support, and a material point mounted between said lenses and said holder movable at right-angles and parallel to the plane of said stereogram in said holder, as set forth.

4. An instrument, for determining the position of foreign bodies and organs by means of Roentgen stereograms taken stereoscopically, comprising in combination a holder for the stereogram, a support fixed on said holder, a yoke carrying lenses fastened to said support, and a material point mounted between said lenses and said holder adapted to be moved in all directions in space as set forth.

5. An instrument, for determining the position of foreign bodies and organs by means of Roentgen stereograms taken stereoscopically, comprising in combination a holder for the stereogram, a support fixed on said holder, a yoke carrying lenses fastened to said support, a material point mounted between said lenses and said holder movable at right-angles to the plane of said stereogram in said holder and means for reading by measurement the position of said material point in space as set forth.

870,507. HEAT-ENGINE. FRANCIS X. GOVERS, Owego, N. Y. Filed Apr. 2, 1907. Serial No. 365,921.



1. A heat engine comprising in combination, a vapor generator, a motor, a condenser and means connecting the same in a closed circuit, said closed circuit containing a pure chlorid of carbon as working fluid, and a purifier in such circuit containing a chemical material adapted to remove impurities from such chlorid of carbon.

2. A heat engine comprising in combination, a vapor generator, a motor, a condenser and means connecting the same in a closed circuit, said closed circuit containing an anhydrous chlorid of carbon as working fluid, and a dehydrator containing a hygroscopic agent in said circuit.

3. A heat engine comprising in combination, a vapor generator, a motor, a condenser and means connecting the same in a closed circuit, said closed circuit containing an anhydrous chlorid of carbon as working fluid, and a purifying chamber in such circuit containing solid purifying material.

4. A heat engine comprising in combination, a vapor generator, a motor, a condenser and means connecting the same in a closed circuit, said closed circuit containing an anhydrous chlorid of carbon as working fluid, and a purifier in such circuit containing solid dehydrating material.

5. A heat engine comprising in combination, a vapor generator, a motor, a condenser and means connecting the same in a closed circuit, said closed circuit containing an anhydrous chlorid of carbon as working fluid, and a purifier in said chamber containing calcium chlorid.

6. A system for generating power, comprising a vapor generator, a condenser, means for abstracting energy from the cycle, and means for connecting said parts in a closed circuit, said closed circuit containing an anhydrous chlorid of carbon as working fluid, and a purifier in such circuit containing chemical dehydrating means.

7. A heat engine comprising in combination means for converting an anhydrous chlorid of carbon as working fluid from liquid to gaseous condition and thence back to liquid condition, including means for abstracting energy from the cycle, and means for circulating such working fluid in a complete circuit, and a purifier in such circuit comprising chemical dehydrating means.

870,508. PAINT AND VARNISH REMOVER. WALTER S. HANNA and JOSEPH D. BRYANT, Columbus, Ohio. Filed Apr. 6, 1907. Serial No. 366,759.

1. A compound for the purpose specified prepared of fat, nitric acid, rosin oil, benzol, and alcohol.

2. A compound for the purpose specified prepared of fat, nitric acid, rosin oil, benzol, alcohol and a perfuming material.

3. A compound for the purpose specified prepared of fat, nitric acid, benzol, and alcohol.

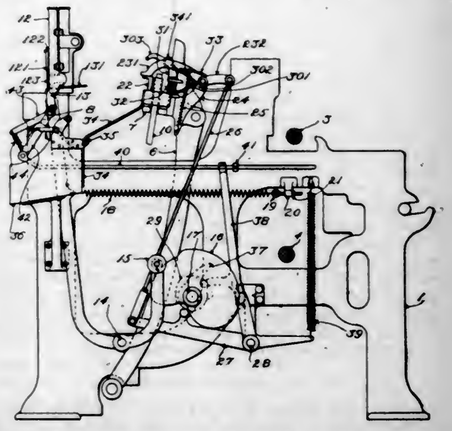
4. A compound for the purpose specified prepared of fat, nitric acid, benzol, alcohol, and oil of citronella.

5. A compound for the purpose specified prepared of fat, nitric acid, benzol, alcohol and a perfuming material.

6. A compound for the purpose specified prepared of fat, nitric acid, rosin oil, benzol, alcohol and oil of citronella.

7. A compound for the purpose specified, prepared of fat, a suitable acid, rosin oil, benzol and alcohol.

870,509. WEFT-REPLENISHING LOOM. HENRY I. HARRIMAN, Hyde Park, Mass. Filed Sept. 11, 1905. Serial No. 277,818.



1. In a loom, in combination, means for effecting a predetermined corrective result, a weft or filling indicator indicating for the functional operation of the said means for the attainment of such result in case of predetermined condition of the working weft-supply, and a secondary weft-indicator or detector which controls the consummation of the said result.

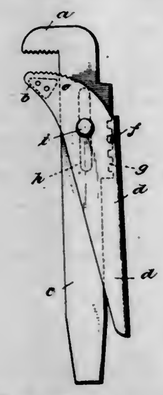
2. In a loom, the combination with instrumentalities for replenishing the working weft-supply, and a detector indicating the said instrumentalities into action in case of depletion of the said weft-supply to a predetermined extent, of a secondary weft-detector operating in the absence of weft or filling on the return of the shuttle to the

feeding end of the loom to prevent the consummation of the replenishing action.

3. In a loom, the combination with weft-replenishing instrumentalities, and a weft or filling-indicator calling or indicating for the operation of the said instrumentalities on depletion of the working weft-supply to a predetermined extent, of a weft or filling-detector operating to call or indicate for stoppage of the loom on absence of weft or filling from the shed on the return of the working shuttle to the feeding end of the loom.

4. In a loom, the combination with weft-replenishing instrumentalities, and a weft or filling-detector adapted to ascertain absence of weft or filling from the shed on the return of the working shuttle to the feeding end of the loom, and operating to call or indicate for stoppage of the loom in case of such absence, of a weft or filling-indicator calling or indicating the said instrumentalities and weft or filling-detector into action on depletion of the working weft-supply to the predetermined extent.

870,510. SHIFTING SPANNER OR WRENCH. FRANK HARTRIDGE, THOMAS G. THORNE, and EDWIN ROOKES, Sittingbourne, England. Filed Feb. 12, 1907. Serial No. 357,035.



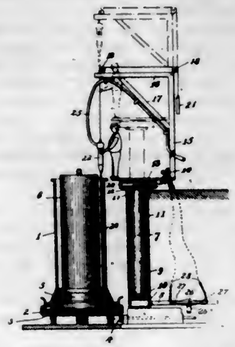
1. In a shifting spanner, the combination of a wrench including two jaws each having a handle, the handle of the upper jaw being provided with a slot and with a ratchet on its rear edge, and the handle of the lower jaw being provided with a pin engaging the slot in the upper jaw handle, and with a pawl adapted to engage said ratchet, substantially as described.

2. A shifting spanner comprising an upper jaw provided with a handle, said handle having a slot therein provided with teeth on one side of said slot, and said handle having ratchet teeth upon its rear edge, a lower jaw provided with a channeled handle, with a tooth or pawl and with a fulcrum pin adapted to pass through the slot in the upper jaw handle, substantially as described.

870,511. FOUNDRY APPARATUS. GEORGE B. HAYES, Buffalo, N. Y., and JOHN A. HAYES, Burlington, N. J.; said George B. Hayes assignor to George D. Hayes, Buffalo, N. Y. Filed June 11, 1906. Serial No. 321,143.

1. In foundry apparatus, the combination with a platform for workmen to stand upon, means for raising and lowering said platform, an overhead jib carried by and raised and lowered with said platform, and a rammer suspended by counterweight from said jib in position to be raised, lowered and manipulated by workmen on said platform.

2 In foundry apparatus, the combination of a platform for workmen to stand upon, means for raising and lowering said platform, an overhead jib carried by and raised and lowered with said platform, and a plurality of rammers suspended by counterweight from said jib in position to be raised, lowered and manipulated by workmen on said platform.



3. In foundry apparatus, the combination of a platform for workmen to stand upon, means for raising and lowering said platform, and a rammer suspended from said platform in position to be manipulated by workmen standing on said platform and raised and lowered by said platform.

4. In foundry apparatus, the combination of a platform for workmen to stand upon, means for raising and lowering the same, means whereby said platform may be moved horizontally independently of said raising and lowering means, and a rammer supported from and moved up and down and horizontally with the platform in position for manipulation by the workman on the platform, whereby said rammer with operator may be supported in proper place directly over flasks of different sizes.

5. In foundry apparatus, the combination of a platform for workmen to stand upon, means for raising and lowering the same, an overhead jib carried by and raised and lowered with said platform, pulleys on said jib, and a rammer and a counterweight connected by a cord or the like running over said pulleys.

6. In foundry apparatus, the combination of a platform for workmen to stand upon, means for raising and lowering the same, an overhead jib carried by and raised and lowered with said platform, pulleys on said jib, and rammers and counterweights connected by cords or the like running on said pulleys.

7. In foundry apparatus, the combination of a platform, means for raising and lowering said platform, means whereby said platform may be moved horizontally independently, a jib mounted on said platform, pulleys mounted on said jib, and a connected rammer and counterweight supported on said pulleys.

8. In foundry apparatus, the combination of a turntable, a platform thereon, means for raising and lowering said turntable and platform, and a rammer supported from and raised, lowered and operated independently of said platform.

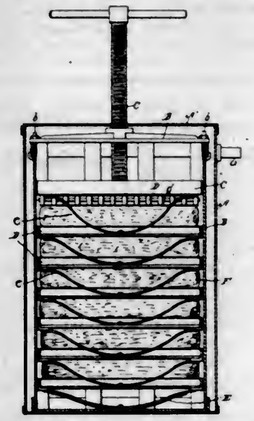
9. In foundry apparatus, the combination of a turntable, a platform thereon for workmen to stand upon, a jib connected with said platform, a rammer suspended from and movable relatively to said jib, and means for raising and lowering said turntable and platform.

10. In foundry apparatus, the combination of a turntable, a platform for workmen to stand upon and movable horizontally thereon, means for raising and lowering said turntable and platform, and a rammer supported from said platform.

11. In foundry apparatus, the combination of a turntable, a platform movable horizontally thereon, a jib mounted on said platform, pulleys on said jib, a rammer and a counterweight connected by a cord or the like running on said pulleys, and means for raising and lowering said turntable and platform.

12. In foundry apparatus, the combination of a turntable, a platform movable horizontally thereon, overhead pulleys supported from said platform, rammers, counterweights, and cords running on said pulleys and connecting rammers and counterweights, with means for raising and lowering said turntable and platform.

870,512. WAX-EXTRACTOR. OREL L. HERSHISER, Buffalo, N. Y. Filed Sept. 28, 1904. Serial No. 226,386.



1. In a wax extractor, the combination of a boiler A; a filling passage *a* at the side, leading to the bottom, and a discharge passage *a'* towards the top, and a draw off pipe *a''* at the bottom; a metal frame work B within the boiler; a cover over the boiler, perforated at the center; a detachable top for the frame work within the boiler; a compression screw passing through a screw-threaded hole in the detachable top of the frame work; a follower acted upon by the screw; heavy springs E in the bottom of the frame work; frames D bearing slatted forms covered with screen, adapted to be arranged within the main frame work within the boiler; comparatively light springs *e* on said frames D for normally separating them; retaining cloths for holding the slumgum in cheese form between the said frames; all coacting substantially as described and for the purpose specified.

2. In a wax extractor, the combination of a boiler A; a metal frame work B within the boiler; a cover over the boiler perforated at the center; a detachable top for the frame work within the boiler; a compression screw passing through a screw-threaded hole in the detachable top of the frame work; a follower acted upon by the screw; heavy springs E in the bottom of the frame work; frames D bearing slatted forms covered with screen, adapted to be arranged within the main frame work within the boiler; comparatively light springs *e* on said frames D for normally separating them; retaining cloths for holding the slumgum in cheese form between the said frames; all coacting substantially as described and for the purpose specified.

3. In a wax extractor, the combination of a boiler A; a filling passage *a* at the side, leading to the bottom, and a discharge passage *a'* towards the top, and a draw-off pipe *a''* at the bottom; a metal frame work B within the boiler; a cover over the boiler perforated at the center; a detachable top for the frame work within the boiler; a compression screw passing through a screw-threaded hole in the detachable top of the frame work; a follower acted upon by the screw; frames D bearing slatted forms covered with screen, adapted to be arranged within the main frame work within the boiler; comparatively light springs *e* on said frames D for normally separating them; retaining cloths for holding the slumgum in cheese form between the said frames, all coacting substantially as described and for the purpose specified.

4. In a wax extractor, the combination of a boiler A; a metal frame work B within the boiler; a cover over the boiler perforated at the center; a detachable top for the frame work within the boiler; a compression screw passing through a screw-threaded hole in the detachable top of the frame work; a follower acted upon by the screw; frames D bearing slatted forms covered with screen, adapted to be arranged within the main frame work within the boiler; retaining cloths for holding the slumgum in cheese form between the said frames, all coacting substantially as described and for the purpose specified.

5. In a wax extractor, the combination of a boiler A; a filling passage *a* at the side, leading to the bottom, and a discharge passage *a'* towards the top, and a draw-off pipe *a''* at the bottom; a metal frame work B within the boiler; a cover over the boiler, perforated at the center; a detachable top for the frame work within the boiler; a compression screw passing through a screw-threaded hole in the detachable top of the frame work; a follower acted upon by the screw; heavy springs E in the bottom of the frame work; frames D bearing slatted forms covered with screen, adapted to be arranged within the main frame work within the boiler; retaining cloths for holding the slumgum in cheese form between the said frames; all coacting substantially as described, and for the purpose specified.

6. In a wax extractor, the combination of a boiler A; a metal frame work B within the boiler; a cover over the boiler perforated at the center; a detachable top for the frame work within the boiler; a compression screw passing through a screw-threaded hole in the detachable top of the frame work; a follower acted upon by the screw; heavy springs E in the bottom of the frame work; frames D bearing slatted forms covered with screen, adapted to be arranged within the main frame work within the boiler; retaining cloths for holding the slumgum in cheese form between the said frames, all coacting substantially as described and for the purpose specified.

7. In a wax extractor, the combination of a boiler A; a filling passage *a* at the side, leading to the bottom, and a discharge passage *a'* towards the top, and a draw-off pipe *a''* at the bottom; a metal frame work B within the boiler; a cover over the boiler perforated at the center; a detachable top for the frame work within the boiler; a compression screw passing through a screw-threaded hole in the detachable top of the frame work; a follower acted upon by the screw; frames D bearing slatted forms covered with screen, adapted to be arranged within the main frame work within the boiler; retaining cloths for holding the slumgum in cheese form between the said frames, all coacting substantially as described and for the purpose specified.

8. In a wax extractor, the combination of a boiler A; a metal frame work B within the boiler; a cover over the boiler, perforated at the center; a detachable top for the frame work within the boiler; a compression screw passing through a screw-threaded hole in the detachable top of the frame work; a follower acted upon by the screw; frames D bearing slatted forms covered with screen, adapted to be arranged within the main frame work within the boiler; retaining cloths for holding the slumgum in cheese form between the said frames, all coacting substantially as described and for the purpose specified.

9. In a wax extractor, the combination of a boiler; a frame work within the boiler with a detachable top and pressure screw; frames to go within the frame work within the boiler, of slatted construction, covered with screen; cloths for retaining the slumgum in cheese form, between the frames, coacting for the purpose specified.

10. In a wax extractor, the combination of a boiler; a press; frames to go within the press within the boiler, of slatted construction, covered with screen; cloths for retaining the slumgum in cheese form within the press, coacting for the purpose specified.

11. In a wax extractor, the combination of a boiler; a press within the boiler with a spring to exert spring pressure; slatted frames, screen covered, to go within the press; springs on the said frames, for holding them normally separated; means for retaining the slumgum in

cheese form between the said frames, coacting for the purpose specified.

12. In a wax extractor, the combination of a boiler; a press within the boiler; slatted frames, screen covered, to go within the press; springs on the said frames, for holding them normally separated; means for retaining the slumgum in cheese form between the said frames, coacting for the purpose specified.

13. In a wax extractor, the combination of a boiler; a press within the boiler with a spring to exert spring pressure; slatted frames, screen covered, to go within the press; means for retaining the slumgum in cheese form between the said frames, coacting for the purpose specified.

14. In a wax extractor, the combination of a boiler; a press within the boiler; slatted frames, screen covered, to go within the press; and means for retaining the slumgum in cheese form between the said frames, coacting for the purpose specified.

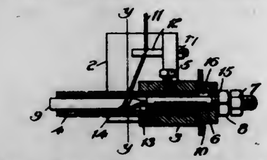
15. In a wax extractor, the combination of a boiler; a press within the boiler; means for retaining the slumgum in layers; and means for separating the layers after compression, for the purpose specified.

870,513. COVER-LIFTER FOR SHEET-METAL BOXES. LEON F. HIRSH, York, Pa. Filed May 16, 1907. Serial No. 374,066.



In combination with the box and cover, the flat sheet metal key-like cover-lifter consisting of the finger piece *a*, the pivot *b*, and the intermediate shouldered strip *c* formed integral, the pivot *b* and finger piece *a* being located upon, and projecting from, opposite edges of the shouldered strip *c*, the device as a whole standing at right angles to the side of the box and connected thereto by the pivot *b* in position to permit its shouldered portion *c* to act against the edge of the cover in order to lift the same, as hereinbefore shown and described.

870,514. WIRE-COILING MACHINE. ROBERT L. HORSLEY, Fort Worth, Tex., assignor to Worth Wire Works, a Corporation of Texas. Filed Mar. 2, 1906, Serial No. 303,884. Renewed July 24, 1907. Serial No. 385,314.



1. A wire coiling machine comprising a spiral feeder and a former rotating in said feeder, said former consisting of a blade twisted substantially one eighth and the twisted portion extending a distance substantially only one flight of the spiral feeder and said twisted portion being opposite the receiving portion of said feeder.

2. A wire coiling machine comprising a spiral feeder and a former rotating in said feeder, said former consisting of a blade twisted only at the receiving portion of said feeder, a part of said twisted portion entering in the coil being formed.

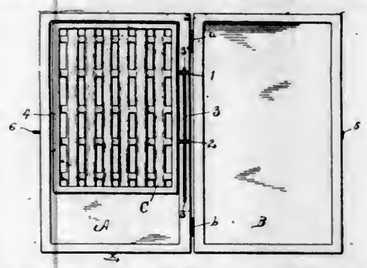
3. A wire coiling machine comprising a spiral feeder and a former rotating in said feeder, said former consisting of a blade having a twisted section entering slightly within the coil being formed and a straight section forward of the coil being formed.

4. A wire coiling machine having a shaft carrying a former, said former having a twisted section at the commencement of the formation of the coil and a straight section forward of the formation of the coil.

5. In a wire coiling machine, the combination of a feeder, a rotating former operating in said feeder and having a twisted section at the receiving portion of said feeder to regulate the formation of the coil, and means for axially adjusting said former whereby the twisted portion of said former may be varied relative to the receiving portion of said feeder for operating on wire of different sizes and different temper.

6. In a wire coiling machine, the combination of a feeder, a former having a twisted section at the receiving portion of said feeder, said twisted section terminating in slight grooves on opposite sides thereof, and means for driving said former.

870,515. CORN-GRADER. CHARLES HUNNICUTT, Wilmington, Ohio. Filed Apr. 15, 1907. Serial No. 368,223.



1. A corn grader comprising a grading-device having a corrugated bottom and having slots formed through the bottom in the depressions of said corrugations, two receptacles hinged together, a hanger-bar supported at its ends near the juncture of said receptacles, and means for pivoting one edge of said grading-device on said bar whereby the grading-device may be vibrated and inverted.

2. A corn grader comprising a grading-device having a corrugated bottom and having slots formed through said bottom, two receptacles hinged together, a hanger-bar supported at its ends near the juncture of said receptacles, and means for pivoting one edge of said grading-device on said bar whereby the grading-device may vibrated and inverted.

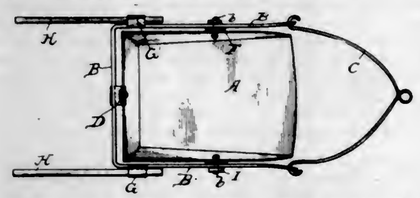
3. A corn grader comprising a frame having a bottom with elongated apertures formed therethrough, a hanger-bar to which said frame is connected for endwise reciprocating motion and also by which the frame is pivoted whereby it may be inverted, a receptacle located below the frame when the frame is in operative position, and a second receptacle located below the frame when the frame is in an inverted position.

4. A corn grader comprising a grading-device having a metal bottom with corrugations thereacross and with elongated apertures formed therethrough, two receptacles joined together by hinges, a hanger-bar removably supported at its ends near the juncture of said receptacles, means for pivoting one edge of the screen to said bar whereby the screen may be vibrated and inverted, and means whereby the receptacles may be formed into a case inclosing the screen and the hanger-bar after the latter has been detached from operative position, all substantially as set forth.

870,516. ROAD-SCRAPER. CHARLES H. LYONS, Gila River Valley, N. Mex. Filed Nov. 17, 1906. Serial No. 343,823.

1. In a road or earth scraper, the combination of the scoop A, side bars, and back bars B, the drawing bail C, the locking device or latch D, having the spring E, washers F on pivot or bolt I having thereon an immovable nut, the handles H held to the rear ends of said side bars B in the sockets G constructed and operated substantially as shown, and described.

2. In a road or earth scraper, the combination of scoop A pivoted in between two side bars, at or near its top, or upper edge, at a point in a direct line above its center, side bars, and back bar B constructed of a single piece of metal bent at right angles, said side bars being slightly curved on their under edge, and attached to said scoop midway between their ends, a drawing bail C linked or hooked at its ends to the front ends of said side bars and operating therein, the pivot, or immovable bolt I for pivoting said scoop to said side bars, the latch, or locking device D having therein the spiral spring E, for locking said scoop to said back bar B, said latch, or locking device, affixed to the back of said scoop, midway between the sides, washers F on said pivot I, the handles H held in sockets G on the outside of the back ends of said side bars constructed and operated substantially as shown and described.



3. The combination in a road or earth scraper of the scoop A pivoted near its top, or upper edge, at a point in a direct line above its center, with the pivot or immovable bolt and nut I, and washers F, to the inner side and midway from their ends, and arranged to revolve between them in discharging its load, to two side bars B, said side bars and back bar B consisting of a single piece of metal bent at right angles, and of the desired shape, said side bars being slightly curved on their under sides, the drawing bail C hooked or linked at its ends in holes in the front ends of said side bars, the latch or locking device having therein the spring E, said locking device, or latch secured to the back of said scoop midway thereof to lock said scoop in place by engagement with said back bars, and the handles H held in sockets G on the outside of the rear ends of said side bars constructed and operated substantially as shown and described.

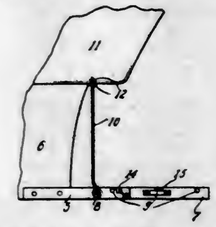
4. The combination in an earth or road scraper, having two side bars and a back bar, of a scoop pivoted at its top or upper edge in a direct line from its center to said side bars midway from their ends, and arranged to revolve between the same to discharge its load at the dumping place and to readjust itself in position to repeat the operation, constructed and operated substantially as shown and described.

5. In a road or earth scraper, the combination of a back bar, and two side bars, said side bars slightly curved on their under edges, and having holes in their front ends in which to hook the ends of a drawing bail, and sockets on the outside of their rear ends in which to hold the handles of said scraper, a scoop pivoted at its top or upper edge at a point in direct line from the center of same, in the middle of said side bars and arranged to turn between said bars to discharge its load, and to readjust itself for further operation, constructed and operated as shown and described.

6. The combination in a road or earth scraper of a back bar, and two side bars, said side bars slightly curved on their under edges, and having holes in their front ends in which to connect a drawing bail, and a device on the outside of their rear ends for holding handles to guide said scraper, a scoop pivoted near its top at a point in direct line from its center to said side bars midway between their ends, and arranged to turn between said bars to discharge its load and to readjust itself for further operation, a locking device, consisting of a spring latch or clip, midway of the back of said scoop to automatically lock said scoop to said back bar and to hold it in position in the operation of scraping, and hauling its load to the dumping place, constructed and operated substantially as shown and described.

7. In a road or earth scraper, a scoop pivoted near its top or upper edge in a central position to two side bars, and constructed to operate between them, two side bars, and a back bar, said side bars slightly curved on their under edges, and having holes at their front ends in which to connect the ends of a drawing bail and a device on their rear ends for holding the handles of the apparatus, a locking device consisting of a spring latch or clip midway of the back of said scoop constructed to operate automatically to fasten said scoop to said back bar and to hold it in position for operation, a drawing bail with its ends bent in the shape of a hook to connect in the holes in the front ends of said side bars, two shoes on the bottom of said scoop consisting of two bars extending out about two inches at the back of said scoop, and handles for guiding said scraper, constructed and operated substantially as shown and described.

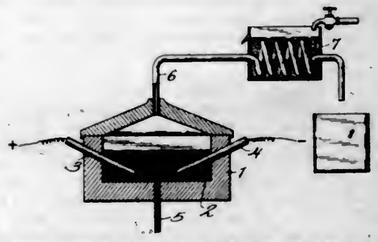
870,517. AUTOMOBILE-RACK. JOHN A. MASON, Newton, Mass. Filed Apr. 1, 1907. Serial No. 365,725.



1. A folding rack for automobiles and the like, comprising a skeleton frame of rigid material pivoted at its lower corners to projecting supports rigidly secured to the vehicle, the device having also depending supports connecting it to the seat-base, for the purpose set forth.

2. The improved automobile rack described, comprising rigid horizontal arms and a folding member, pivoted thereto, formed marginally of strap steel set edgewise, its end portions being bent into parallelism and connected by parallel rods, one of said rods forming the fourth or lower side of said member and the pivot which unites it to said arms, each arm projecting beyond the pivot and formed with a stop to support the folding member when spread, substantially as set forth.

870,518. PROCESS OF PRODUCING CARBON TETRACHLORID. FREDERICK J. MAYWALD, New York, N. Y. Filed Oct. 6, 1902. Serial No. 126,058.



1. The process of forming a chlorid of carbon which consists in contacting incandescent carbon with a stream of chlorin, removing the products of reaction from the point of formation as fast as formed and condensing the same.

2. The process of making carbon tetrachlorid which consists in continuously passing a stream of chlorin gas past and in contact with a mass of incandescent carbon, continuously removing the carbon tetrachlorid formed and condensing the same.

3. The process of making carbon tetrachlorid which consists in continuously passing a stream of chlorin gas past and in contact with a mass of carbon kept at incandescent temperature by an electric current, continuously remov-

ing the carbon tetrachlorid formed and condensing the same.

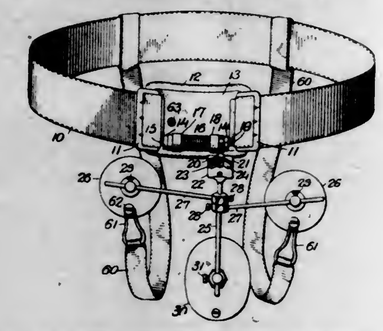
4. The process of making carbon tetrachlorid which consists in continuously passing a stream of chlorin gas into contact with incandescent coke, continuously removing the carbon tetrachlorid formed and condensing the same.

5. The process of making carbon tetrachlorid which consists in continuously passing a stream of chlorin gas into contact with incandescent coke having an electric current traversing the same, continuously removing the carbon tetrachlorid formed and condensing the same.

6. The process of forming a chlorid of carbon which consists in contacting incandescent carbonaceous material with a stream of chlorin, removing the products of reaction from the point of formation, and condensing the same.

7. The process of forming a chlorid of carbon which consists in contacting incandescent carbonaceous material with a stream of chlorin gas under regulated pressure, removing the products of reaction from the point of formation and condensing the same.

870,519. TRUSS. FERDINAND C. D. MCKAY, Willseyville, N. Y., assignor to William L. McKay, Geneva, N. Y. Filed Nov. 10, 1906. Serial No. 342,874.



1. In a truss, the combination of a pad carrying buckles to which the belt is attached, an adjustable stem depending from the pad, a spring adapted to press the stem towards the body of the wearer, and one or more adjustable pads carried by the stem.

2. In a truss the combination of a pad secured to the belt, a stem pivoted to the said pad and adjustable on its pivots, a spring interposed between the pad and the stem to deliver a certain amount of tension to the stem, arms adjustable on the stem and carrying pads which are adjustable on said arms and an adjustable pad on the stem.

3. In a truss the combination of a pad having buckles at each end for the attachment of the belt, brackets on the pad, a shaft in the brackets carrying a sleeve, a spring attached to the sleeve, a loose sleeve carried by the other end of the spring, a pin in the sleeve and carrying a plate, a second plate adjustable on the first and carrying a stem, pads adjustable on the stem and straps adapted to brace the pads and carried by the belt.

4. A truss including a spring pressed member, a pad carrying member adjustably secured to the spring pressed member, and a pad adjustably mounted upon the carrying member.

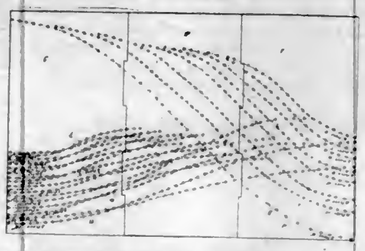
5. A truss including a spring pressed member, a pad carrying member mounted upon the spring pressed member, and a pad adjustably secured to the carrying member.

6. A truss including a spring pressed pad carrying member, and pads mounted upon said member, each of said pads being capable of independent adjustment.

7. A truss including a plate, a member pivotally mounted upon the plate, a spring adapted to exert tension upon the member, and a pad carrying member mounted upon said first named member.

8. A truss including a plate, a member pivotally mounted upon the plate, a spring adapted to exert tension upon the member, and a pad carrying member adjustably mounted upon the said first named member.

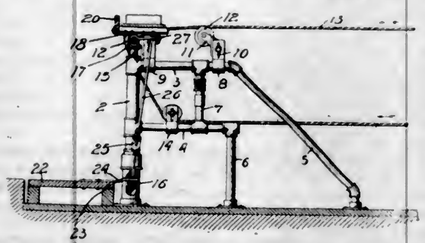
870,520. ELBOW-CHART. EMIL PALM, Kiron, Iowa, assignor of one-half to O. E. Strahn, Kiron, Iowa. Filed Dec. 12, 1905. Serial No. 291,434.



1. As an improved article of manufacture, a pattern for outlining the parts of elbow joints, the same comprising a series of strips hinged together in the direction of their length, each strip having thereon a plurality of apertured curved lines of different lengths and of different degrees of curvature forming continuities of each other throughout the length of the different strips diagonally from end to end of the strips and across the lines of junction of said strips, for each line extended throughout the series of strips, whereby the shape of pieces required to form a particular sized elbow may be instantly ascertained.

2. As an improved article of manufacture, a pattern for outlining the parts of elbow joints, the same comprising a series of strips hinged together in the direction of their length, each strip having thereon a plurality of apertured curved lines of different lengths and of different degrees of curvature forming continuities of each other throughout the length of the different strips and across the lines of junction of said strips, for each line extended throughout the series of strips, whereby the shape of pieces required to form a particular sized elbow may be instantly ascertained, said strip having also a second series of apertured curved lines extending in the opposite direction, said two series of lines extending diagonally across the pattern from diametrically opposite corners and intersecting each other.

870,521. DUMP-TABLE. FRANK S. PECK, Menomonie, Wis., assignor of one-half to S. J. Hewson, Minneapolis, Minn. Filed Mar. 25, 1907. Serial No. 364,475.



1. The combination, with a suitable frame having sheaves, of cable conveyers operating over said sheaves, a vertically moving table arranged between said conveyers and normally below the level of the upper section of said conveyers, said table being adapted to receive loaded pallets of brick, the pallets projecting beyond the ends of the table, and means for raising said table to lift it and the pallet thereon temporarily above the level of said cables, and said table returning by gravity when released, to its normal position to deposit the pallet upon the tables, substantially as described.

2. The combination, with the power operated cables, of a pivoted table adapted to receive a pallet loaded with brick, said table being normally in a substantially vertical position and adapted to swing to a horizontal position between said cables and below the level of the top of the same, means for raising said table above the level of the upper section of said cables, and the ends of the pallets projecting beyond the ends of said table, whereby when said table is released and returns to its normal position between said cables, the pallet will be automatically delivered to said cables, substantially as described.

3. The combination, with a suitable frame, of sheaves mounted therein, power-operated cables passing over said sheaves, a vertically moving frame, a pivoted plate connected with said frame and adapted to lift the same when weight is applied thereto, a hinged table carried on said frame between said cables and having a ledge at one end and normally being in an inclined position to receive the loaded pallets of brick and adapted to swing to a substantially horizontal position between said cables and below the level of the upper portion thereof, and said frame when elevated raising said table above the level of said cables, and whereby the loaded pallets placed on said table and raised above the level of said cables will be deposited thereon when the weight is removed from said plate, and said table returns to its normal position.

4. The combination, with a frame, of a conveyer operating therein, a vertically moving table normally below the level of the upper section of said conveyer and adapted to receive loaded pallets of brick, the pallets projecting beyond the ends of said table, means for raising said table to lift it and the pallet thereon above the level of said conveyer, and over the upper section thereof, whereby when the said table is returned to its normal position the said pallet will be deposited upon said conveyer.

5. The combination, with a frame having sheaves mounted therein, of cable conveyers operating over said sheaves, a vertically moving table arranged between said conveyers and normally below the level of the upper portion thereof, said table being adapted to receive loaded pallets of brick, the pallets projecting beyond the ends of the table, and a tilting platform connected with said table and arranged to elevate the table and pallet, said platform being tilted by the weight of the workman stepping thereon, and the table returning by gravity to its normal position when the platform is relieved of the weight, whereby the pallet will be automatically deposited upon the conveyer, substantially as described.

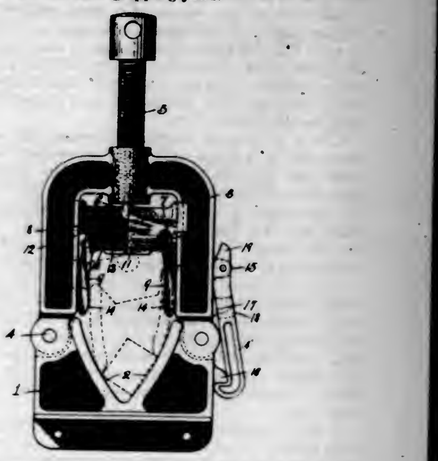
6. The combination, with a suitable frame having sheaves, of cable conveyers operating therein, a tilting table normally in an inclined position and adapted to receive a pallet loaded with bricks, the ends of the pallet projecting beyond the ends of said table, means for raising said table and its load above the level of said conveyers, and the weight of the brick causing the table to assume a horizontal position when raised, whereby the pallet will be deposited upon the conveyers when the table returns to its normal position.

870,522. VISE. ERNEST G. SEYMOUR, Toledo, Ohio, assignor to John E. Seymour, Toledo, Ohio. Filed Mar. 25, 1907. Serial No. 364,393.

1. A vise comprising a fixed jaw having a V-shaped work recess provided with outwardly curved work coacting surfaces, a movable member guided above said recess, and gripping-jaws swingingly suspended from said member and intended, when lowered, to coact with the curved surfaces of the fixed jaw and to coöperate to hold the work against movement therein.

2. A vise comprising a substantially V-shaped fixed jaw the opposing surfaces of which describe arcs of circles, a member mounted for vertical movement relative to said jaw, a pair of gripping-jaws suspended from said member in position, when lowered, to coact with the curved surfaces of the fixed jaw and to coöperate to hold the work in said fixed jaw, said gripping-jaws being longitudinally curved to conform to the coacting surfaces of the fixed jaw.

3. A vise comprising a fixed jaw, a slide-way carried by the fixed jaw, a member movable in said slide-way and tiltable relative thereto, gripping-jaws swingingly carried by said member, and means for actuating a sliding movement of the member and gripping-jaws.

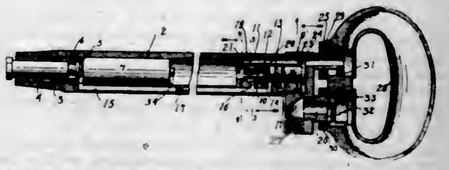


4. A vise comprising a fixed jaw, an inverted U-shaped frame forming a slide-way, a cross-head mounted to have sliding and tilting movements in said frame, pendent swingingly mounted gripping-members carried by the cross-head to coöperate with the fixed jaw to hold the work and adapted to accommodate themselves to the shape of the work due to the tilting of the cross-head, and means for moving the cross-head.

5. The combination with the hinged parts of a vise, of a latch-member pivoted to one part, and a lug on each part coöperating with the latch-member to prevent an opening of the parts and relieving the latch pivot of strain.

6. The combination with the hinged parts of a vise carrying, respectively, the fixed and movable jaws thereof, one of said parts having two lugs and the other having one lug formed thereon, of a latch-member pivoted to one of said two lugs and coöperating with the other lug of the pair and with the sole lug on the other part to prevent an opening of said parts.

870,523. PNEUMATIC TOOL. OWEN W. THOMAS, St. Paul, Minn., assignor to Anna Helwig, St. Paul, Minn. Filed May 15, 1905. Serial No. 260,577.



1. In a machine of the class described, the combination, with a main cylinder, a hammer piston arranged therein, and a valve chamber arranged in line with said cylinder and provided with an opening leading from said chamber into said cylinder, the duct 15 extending parallel and communicating with the cylinder at its forward end and with the valve chamber through the openings 16 and 16', and the duct 17 communicating with the rear end of the valve chamber and with the cylinder at a point near the middle thereof, the ducts 19 arranged parallel with the valve chamber and communicating therewith, of a reciprocating controlling valve 10 arranged in said valve chamber and having a reduced end arranged to project through and close the opening leading from the chamber into said cylinder and having also the central opening 11, the annular

grooves 12 and 13, and the series of ports 14 leading from the central opening into the groove 12.

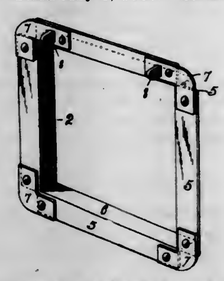
2. In a machine of the class described, the combination, with the main cylinder provided with a valve-chamber and a piston-controlling valve, of a head secured upon said cylinder and provided with projections, one of which has an inlet opening extending through it and communicating with said valve chamber, a handle slidably secured upon said projections, and an air duct in said handle communicating with the inlet opening in said projection, substantially as described.

3. In a machine of the class deacribed, the combination, with a main cylinder, of a head screw-threaded and provided with suitable projections, a handle slidably secured upon said projections, said handle being provided with an air inlet opening and one of said projections being provided with an opening communicating with the interior of said cylinder, and a valve arranged in said handle and controlling the passage of air to said cylinder.

4. In a machine of the class described, the combination, with a main cylinder provided with an air inlet tube projecting therefrom, of a handle slidably arranged upon said tube and provided with an air inlet and with an air passage communicating with said tube, a valve arranged in said handle and controlling the passage of air to said tube and the adjusting device for regulating the movement of said valve.

5. In a machine of the class described, the combination, with a main cylinder, provided with a reciprocating piston and a controlling valve, of an inlet tube projecting therefrom, a handle slidably arranged upon said tube, an air passage arranged in said handle and communicating with said tube, a valve arranged in the air passage in said handle, means for operating said valve and an adjusting device for limiting the movement of said valve.

870,524. CHUTE-FRAME. JAMES M. TRIGGS, Morenci, Mich., assignor of one-half to William B. Rorick, Morenci, Mich. Filed May 1, 1907. Serial No. 371,333.



1. A chute comprising a frame formed of a single piece of angle-bar, having one flange provided with a series of slits, and its other flange folded along lines coincident with said slits to form the frame, metal reinforcing means secured to the slit flange at the corners of the frame, and a chute body telescoping with the bent flange of the frame and secured thereto.

2. A chute comprising a bar of angle-steel having one flange slit at intervals to form a plurality of sections and its other flange folded at the slit points to form a frame, angled plates secured to and connecting the contiguous ends of the separated sections of the slit flange and uniting the meeting ends of the bar, and a chute body secured to the bent flange.

3. In combination, a chute-frame comprising a bar of angle steel having one flange provided with a series of slits corresponding to the number of bends to be made in the bar and the other flange being bent at such slit points to form a polygonal frame, angle-plates secured to and connecting the contiguous separated ends of the slit flange sections and firmly uniting the ends of the bar, two of said plates having pivot lugs projecting therefrom, and a chute body telescoping with the bent flange and secured thereto.

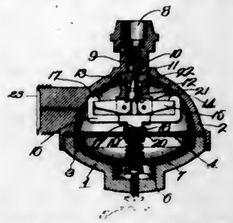
870,525. ADVERTISING DEVICE. CHARLES C. BONNERT, Baltimore, Md., assignor of one-half to Jerome I. Vogeler, Baltimore, Md. Filed Feb. 4, 1907. Serial No. 355,595.



1. In an advertising device, the combination of the bottle having an opening 4 in its bottom substantially coincident with the inner circumference of the bottle, a stand having an annular recess in which the bottle rests and an aperture through said recess.

2. In an advertising device, the combination of the bottle having an opening 4 in its bottom substantially coincident with the inner circumference of the bottle, a stand having an annular recess 5 in which the bottle rests and an aperture 10 in said recess through which the electric wire passes, a socket secured to the central raised portion of the stand, and an electric globe secured to said socket.

870,526. REGULATING-VALVE FOR LIGHTING-TANKS. ALBERT T. BOSSERT, Kansas City, Mo., assignor of one-half to William B. Doddridge, Kansas City, Mo. Filed May 31, 1907. Serial No. 376,460.

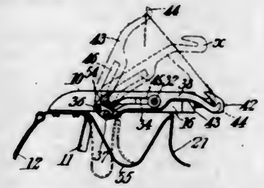


1. The combination of a casing having inlet and outlet openings, a diaphragm therein, a plug within the casing above the diaphragm having openings communicating with the inlet and outlet openings of the casing, a valve within the plug arranged to close the inlet opening, levers having their inner ends bearing against the bottom of the valve, and a yoke carried by the diaphragm and having its ends extended up beyond and turned over to rest upon the outer ends of the levers.

2. The combination of a casing having inlet and outlet passages, a diaphragm therein, a plug within the casing above the diaphragm having openings communicating with the inlet and outlet passages of the casing, the lower end of the plug being bifurcated, a valve within the plug arranged to close the inlet opening, levers pivoted within the bifurcation at the lower end of the plug and having their inner ends bearing against the bottom of the valve, and a yoke carried by the diaphragm and playing in said bifurcation and having its ends projecting upward beyond the outer ends of the levers and turned over to rest upon the same.

870,527. KNOTTER. BRITTON E. BYRD, Durham, N. C., assignor to Byrd Manufacturing Company, Durham, N. C. Filed Oct. 31, 1906. Serial No. 341,455.

1. A hand carried and manipulated tier, including a frame, a helically grooved shaft mounted therein, an operating slide having a projection entering the grooves, a tying bill arranged at one end of the shaft, a combined thread guide, clamp and throw off device arranged at one side of the frame, and means operatively connecting said device to said slide.



2. In a device of the class described, a frame having a bearing opening at one end, a shaft having a reduced portion forming a shoulder, the reduced portion of the shaft extending through said opening, an adjustable screw forming a bearing for the opposite end of the shaft, a tying bill carried by the reduced end of the shaft, said shaft being provided with a helical groove, and a manually operable slide mounted within the frame and having a projection entering said groove.

3. The combination with a revoluble tying bill, of a pair of pivotally mounted members having cam slots, one of said members forming a thread guide, and the other a knock off finger, and a slidable member entering said cam slots and serving to effect movement of the members to first grip the thread and exert tensional strain thereon, and afterwards complete the movement of the knock off finger to release the thread.

4. The combination with a frame, of a revoluble tying bill, a manually operable slide for operating the same, a pair of pivotally mounted members having cam slots, one of said members having an inclined slot for the reception of the threads during the tying operation, and the other member forming a knock off finger, and a projection extending from the slide and entering the cam slots.

5. In a device of the class specified, the combination with a frame, of a tying bill, a pair of pivotally mounted arms each provided with cam slots and having different pivotal points respectively, one of said members being open for the reception of the other, and being recessed to form a thread guide, and means for operating said members to grip the thread, exert tensional strain thereon, and finally to release the thread.

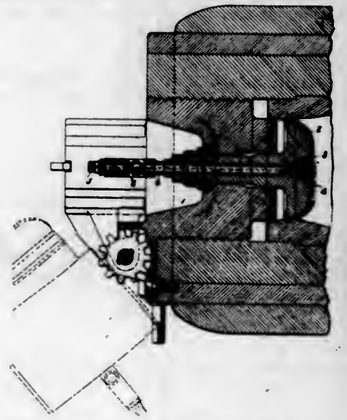
6. The combination in a frame, of a revoluble tying bill, a pair of pivotally mounted arms, one forming a thread guide, and the other a knock off finger, and both coacting to grip the thread, and means for moving said members through different arcuate distances and at different speeds, respectively.

7. In a device of the class specified, the combination with a frame including side plates having longitudinal slots, a slide mounted within the frame and having anti-friction rollers projecting through said slots, a helically grooved shaft mounted within the frame, the slide having a projection entering said groove, a revoluble tying bill carried by the shaft at a point outside the frame, a pair of pivotally mounted arms arranged at one side of the frame, one of said arms being recessed to form a thread guide, and being open for the reception of the other arm, there being cam slots in said arms, said slots being arranged to receive one of the anti-friction rollers projecting from the slide, and a thumb or finger piece extending from said slide.

870,528. MEANS FOR CLEANING OUT THE CHAMBERS AND BORES OF GUNS. ALBERT H. EMERY, Stamford, Conn. Filed Sept. 19, 1907. Serial No. 393,697.

1. In a gun a passage for supplying cooling or cleaning fluid thereto, having a check valve to prevent back flow of powder gases, at time of firing and concentric inlets through which the fluid is brought.

2. A breech block constructed with an axially disposed passage for supplying cooling or cleaning fluid to the gun, having a check valve to prevent back flow of powder gases, at time of firing and concentric inlets through which the fluid is brought.



3. A passage through the breech block for supplying cooling or cleaning fluid to a gun, having a check valve to prevent back flow of powder gases, at time of firing and concentric inlets through which the fluid is brought, arranged in injector relation one to the other.

4. A breech block constructed with an axially disposed passage for supplying cooling or cleaning fluid to a gun, having a check valve to prevent back flow of powder gases, at time of firing and concentric inlets through which the fluid is brought, arranged in injector relation one to the other.

5. A mushroom having a passage for supplying cleaning or cooling fluid to the gun, and a plurality of openings through which to admit fluids from separate sources and concentric passages conducting the fluid from the respective openings into the mushroom passage.

6. A mushroom having a passage for supplying cleaning or cooling fluid to the gun, and a plurality of openings through which to admit fluids from separate sources and concentric passages conducting the fluid from the respective openings into the mushroom passage, said concentric passages being arranged in injector relation one to the other.

7. In a gun, a passage for supplying cleaning or cooling fluid thereto having a plurality of concentric inlets, and means for regulating or limiting the flow through one of said inlets.

8. In combination with the mushroom of a gun, a passage for supplying cleaning or cooling fluid therethrough having a plurality of concentric inlets, and means for regulating or limiting the flow through one of said inlets.

9. A mushroom provided with a passage therethrough for cleaning or cooling fluid, a check valve for closing said passage against back flow of powder gases at time of firing, a valve stem extending into the passage and guiding mesna preventing lateral vibration of the valve stem.

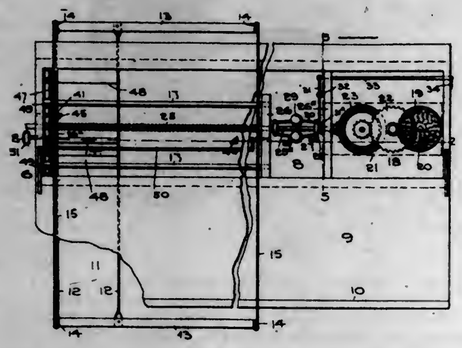
10. A mushroom for guns constructed with a passage therethrough, a check valve for closing said passage against back flow of powder gases, having a stem projecting into said passage, a piston on said valve stem and means for supplying fluid pressure to the piston to unseat the valve.

11. A mushroom for guns constructed with a passage therethrough, a check valve for closing said passage against back flow of powder gases, having a stem projecting into said passage, a piston on said valve stem, an inlet for supplying a fluid medium through said passage to the gun and a duct for delivering a portion of said fluid medium to the piston to unseat the valve.

12. A mushroom for guns constructed with a passage

therethrough, a check valve for closing said passage against back flow of powder gases, having a stem projecting into said passage, a piston on said valve stem and means supplying fluid pressure to the piston to unseat the valve, and a spring opposing said piston and seating said valve when the fluid pressure is removed from the piston.

870,529. MUSIC-STAND. MARTIN R. HACKERSON, Denver, Colo. Filed Oct. 3, 1906. Serial No. 337,239.



1. A music stand comprising in combination, a desk adapted to support a music sheet, a carrier intermediate its ends having a reciprocating movement, and linear, indicatory members extending transversely of the desk above its supporting surface and connected at their extremities with the carrier.

2. A music stand comprising in combination a desk, adapted to support a music sheet, an actuating mechanism, a reciprocating carrier normally at one end of the desk carrying indicatory members transversely of the desk and above its supporting surface, and having means to operatively connect with the said actuating means, means to automatically return the carrier to its normal position and an instrumentality adapted to break the connection between the said carrier and the actuating means.

3. A music stand comprising in combination a desk, adapted to support a music sheet, an actuating mechanism, a reciprocating carrier normally at one end of the desk carrying indicatory members transversely of the desk and above its supporting surface, and having means to operatively connect with the said actuating mechanism, means to automatically return the carrier to its normal position, and means to automatically break the connection between the actuating mechanism and the carrier when the latter has traveled a predetermined distance.

4. A music stand comprising in combination a desk, adapted to support a music sheet, an actuating mechanism, a reciprocating carrier normally at one end of the desk carrying indicatory members transversely of the desk and above its supporting surface, and having means to operatively connect with the said actuating mechanism, means to automatically return the carrier to its normal position, means to automatically break the connection between the actuating means and the carrier when the latter has traveled a predetermined distance, and automatic means to reëstablish the said connection when the carrier reaches its normal position.

5. A music stand comprising in combination a desk, adapted to support a music sheet, a carrier normally at one end of the desk carrying indicatory members transversely thereof and above its supporting surface, an endless screw rotatably mounted on the desk, a motor to actuate the screw, a detent on the carrier arranged to operatively engage the screw, and means to automatically return the carrier to its normal position.

6. A music stand comprising in combination a desk, adapted to support a music sheet, a carrier normally at one end of the desk carrying indicatory members transversely thereof and above its supporting surface, an endless screw rotatably mounted on the desk, a motor to actuate the screw, a detent on the carrier arranged to operatively engage the screw, means to automatically return the carrier to its normal position, and a governor arranged to regulate the rotational velocity of the screw.

7. A music stand comprising in combination with the music supporting desk, an endless screw rotatably mounted thereon, a motor to actuate the screw, a carrier having an indicatory member extending over the upper surface of the desk, a detent on the said carrier arranged to normally engage the screw and automatic means to release the said detent at the end of the carrier's stroke.

8. A music stand comprising in combination with the desk, an endless screw rotatably mounted thereon, a motor to actuate the screw, a laterally movable carrier having an indicatory member extending over the upper surface of the desk, a detent on the said carrier normally engaging the screw, a tension device tending to retain the carrier in its normal position, and means to release the detent when the carrier has traveled a predetermined distance.

9. A music stand comprising in combination with the desk, an endless screw rotatably mounted thereon, a motor to actuate the screw, a laterally movable carrier having an indicatory member extending over the upper surface of the desk, a detent on the said carrier normally engaging the screw, a tension device tending to retain the carrier in its normal position, means to release the detent at the termination of the carrier's travel, locking means to retain the detent in the released position, and means to cause its reëngagement when the carrier reaches its normal position.

10. A music stand comprising in combination with the desk, an endless screw rotatably mounted thereon, a motor to actuate the screw, a laterally movable carrier having an indicatory member extending over the upper surface of the desk, a detent on the said carrier normally engaging the screw, a tension device tending to retain the carrier in the latter's normal position, and means to release the detent at an arbitrary point of the carrier's travel.

11. A music stand comprising in combination with the music supporting desk, a carrier having indicatory members extending above its upper surface, a mechanism adapted to impart a reciprocating movement to the said carrier and to be operatively connected with mechanisms of adjacent, similar stands, suitable means to make the said connection, and a suitably located motor arranged to actuate the connected mechanisms.

12. A music-stand comprising in combination with the music-supporting desk, an endless screw rotatably mounted thereon, a carrier having indicatory members extending over the upper surface of the desk, operatively connected with the said screw, means to operatively connect the latter's extremities with screws of adjacent similar stands, and a suitably located motor arranged to rotate the connected screws.

870,530. INDIVIDUAL PROTECTOR UNIT. FRANK B. COOK, Chicago, Ill. Original application filed Jan. 18, 1906, Serial No. 296,714. Divided and this application filed Feb. 11, 1907. Serial No. 356,881.



1. An individual protector, comprising a sheet-metal base, insulating portions secured to one side of the said base, spring members carried by the said insulating portions and inserted through holes therein, and suitable fuses and lightning arresters held in place by the said spring members.

2. An individual protector comprising a ribbed sheet-metal base, insulating portions, tubular rivets securing the said insulating portions to the said base, the said rivets being adapted to receive mounting screws, spring members rigidly secured to the said insulating portions, inclosed fuses carried by the said spring members, and lightning arresters suitably held between certain ones of the spring members and a portion of the said base.

3. An individual protector unit comprising a sheet-metal base portion, insulating blocks mounted on one side of the base portion, contact springs carried by the insulating blocks, a pair of inclosed fuses suitably clamped in place by the said contact springs, a bent-up portion at one end of the said base portion, and a pair of lightning arresters suitably mounted against the said bent-up portion at one end of the fuses, at an angle with the base portion.

4. An individual protector unit comprising a sheet-metal base portion having a bent-up portion at one end thereof and suitable holes therethrough for mounting same, insulating blocks carried by the said base portion, contact members mounted on one side of the said blocks, a pair of inclosed fuses held in place by some of the said contact members, and a pair of lightning arresters inserted between the said bent-up portion and a pair of the said contact members, at one end of the fuses.

5. An individual protector unit comprising a metallic mounting strip, a pair of tubular fuses mounted substantially parallel with the said strip and lengthwise thereof, a pair of lightning arresters mounted at one end of the fuses, in an upwardly extending position, suitable contact members for holding the fuses and lightning arresters in place, and suitable means for connecting the several protective devices for use.

6. An individual protector unit comprising a sheet-metal mounting plate, insulating blocks secured thereto by hollow rivets adapted to receive screws or bolts for mounting the protector in place, spring contact members carried by the said blocks, and suitable fuses and lightning arresters held in place by the said contact members.

7. An individual protector unit of the character described, comprising a ribbed sheet-metal base having one end portion bent at an angle with the base, insulating blocks secured to the base by hollow rivets adapted to receive mounting screws, prongs on the base portion adapted to prevent the insulating blocks from turning thereon, contact spring members inserted through holes in the insulating blocks to securely mount them in place, inclosed fuses clamped in place by the said contact spring members, and lightning arresters at one end of the fuses held in place between the said contact spring members and the bent-up portion of the said base.

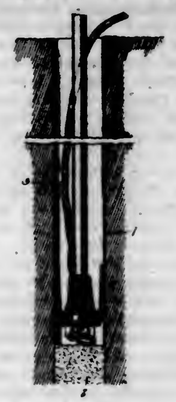
8. An individual protector unit comprising a metallic ground strip, insulating portions carried by the ground strip, suitable contact members carried by the said insulating portions, a pair of fuses carried by the said contact members, substantially parallel with the said strip and lengthwise thereof, a pair of lightning arresters at one end of the said fuses, electrically connected with the said ground strip, and suitable means for connecting the several protective devices for use.

9. An individual protector unit comprising a metallic ground strip, insulating portions carried by the ground strip, suitable contact members carried by the said insulating portions, a fuse carried by the said contact members, substantially parallel with the said strip and lengthwise thereof, a lightning arrester at one end of the fuse, electrically connected with the said ground strip, and suitable means for connecting the fuse and lightning arrester for use.

870,531. FUSE-HOLDER. ROBERT O. GROOMS, Ottumwa, Iowa. Filed Feb. 26, 1906. Serial No. 303,034.

1. In a fuse-holder, a body-portion adapted to retain a fuse, self-contained means for keeping the holder in position in a drill-hole, and means for guiding the holder to its desired position, said means comprising a ferrule shaped to engage the body portion of the holder and straddle the fuse carried thereby.

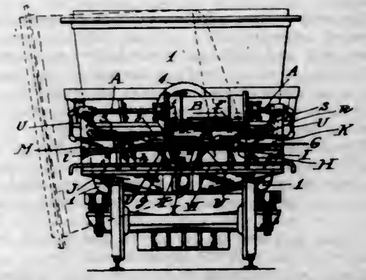
2. In a fuse-holder, a straight body portion with a fuse-holding eye, consisting of twisted wires whose ends at either end of said body portion are bent in planes at right angles to the body portion, and a rod provided with a ferrule having two parallel pair of prongs, said prongs being adapted to engage the body of the holder at either



side of the eye aforesaid, and the space between the pairs of prongs being adapted to fit over said eye.

REISSUES.

12,714. MOTOR-OPERATED DUMPING-CAR. CARL P. ASTROM, Orange, N. J., assignor to M. H. Treadwell & Co., a Corporation of New York. Filed June 3, 1907. Serial No. 377,123. Original No. 792,306, dated June 13, 1905. Serial No. 223,379.



1. In a motor-operated dumping car and the like, a reciprocating motor cylinder, a fixed piston and piston rod for said cylinder, connections between said cylinder and the dumping car body, a member on said cylinder provided with an opening, a member on a fixed part of the car also provided with an opening, and a locking pin adapted to be received through said openings when the cylinder has been shifted so that said openings are opposite, substantially as and for the purposes set forth.

2. In a motor-operated dumping car and the like, a reciprocating motor cylinder, a fixed piston and piston rod for said cylinder, connections between said cylinder and the dumping car body, a member on said cylinder provided with an opening, a member on a fixed part of the car also provided with an opening, a locking pin adapted to be received through said openings when the cylinder has been shifted so that said openings are opposite, and means for retaining said pin in its locking position, substantially as and for the purposes set forth.

3. In a motor-operated dumping car and the like, a reciprocating motor cylinder, a fixed piston and piston rod for said cylinder, connections between said cylinder and the dumping car body, a member on said cylinder provided with an opening, a member on a fixed part of the car also provided with an opening, and a locking pin adapted

to be received through said openings when the cylinder has been shifted so that said openings are opposite, said pin being provided with a handle and a lug, which project outwardly from said pin in different directions, one of the aforesaid openings being so adapted to said lug that when the pin is inserted through the openings and turned so that its handle extends vertically downward, that the said lug abuts against the side of one of said openings which is so adapted, and thereby prevents the pin from being withdrawn, substantially as and for the purposes set forth.

4. In a motor-operated dumping car and the like, a reciprocating motor cylinder, a fixed piston and piston rod for said motor cylinder, connections between said motor cylinder and the dumping car body, a cushion cylinder attached to said motor cylinder and reciprocating therewith, a fixed piston and piston rod for said cushion cylinder, an opening through the wall of said cushion cylinder in the middle part thereof, and a valve at each end of said cushion cylinder adapted to permit air to be sucked into said cylinder, but to resist its being forced out of said cylinder, substantially as and for the purposes set forth.

5. In a motor-operated dumping car and the like, a reciprocating motor cylinder, a fixed piston and piston rod for said cylinder, connections between said cylinder and the dumping car body, a fixed spring buffer or buffers against which the end or ends of said cylinder abuts at the limits of its travel, substantially as and for the purposes set forth.

6. In a motor-operated dumping car and the like, a reciprocating motor cylinder, a fixed piston and piston rod for said motor cylinder, connections between said motor cylinder and the dumping car body, a cushion cylinder attached to said motor cylinder and reciprocating therewith, a fixed piston and piston rod for said cushion cylinder, and a valve at each end of said cushion cylinder adapted to permit air to be sucked into said cylinder but to resist its being forced out of said cylinder, substantially as and for the purposes set forth.

7. The combination with a car body supported to tilt and travel laterally, of a cylinder arranged to travel laterally back and forth and connected with the car body for imparting to the car body its laterally traveling movement, means for actuating the cylinder, means for tilting the car body during its traveling movement, and a fluid cushioning device for checking the movement.

8. The combination with a car body supported to tilt and travel laterally, of a cylinder arranged to travel laterally back and forth and connected with the car body for imparting to the car body its laterally traveling movement, means for actuating the cylinder, means for tilting the car body during its traveling movement, and a fluid cushioning device moving with the actuating cylinder.

9. A car body mounted to tilt and travel laterally, in combination with a laterally traveling motor for actuating the car body, means whereby the car body tilts during its lateral movement, and a cushioning cylinder effective to cushion the movement of the car body at the ends in each direction.

10. A car body mounted to move laterally, in combination with a laterally moving motor, and cushioning means independent of the motor but moving therewith.

11. The combination with a laterally movable car body, of a laterally movable operating cylinder connected therewith, and a laterally movable cushioning cylinder having a movement co-extensive with that of the motor.

12. The combination with a tilting car body and a bodily movable operating cylinder connected therewith, of a bodily movable cushioning cylinder connected to move with the motor.

13. The combination with a movable car body and a longitudinally movable operating cylinder connected therewith, of a longitudinally movable cushioning cylinder carried by the operating cylinder.

14. The combination with a tilting and bodily movable car body, of a longitudinally movable operating cylinder having a movement co-extensive with the bodily movement of the car body, and a cushioning cylinder carried by the operating cylinder.

15. The combination with a tilting and bodily movable car body, of a longitudinally movable operating cylinder having a movement co-extensive with the bodily movement of the car body, and a movable cushioning device having a movement co-extensive with the lateral movement of the car body.

16. In a dumping car, the combination with a laterally movable car body, and means for moving it to discharging position, of means independent of the actuating mechanism for controlling the rate of movement of the car body, substantially as described.

17. In a dumping car, the combination with a laterally movable car body, and means for moving it to discharging position, of fluid checking means separate from the actuating mechanism for controlling the movement of the car body, substantially as described.

18. In a dumping car, the combination with a pivoted and bodily movable car body, and means for moving and tilting it, of means independent of the actuating mechanism for controlling the rate of movement of the car body, substantially as described.

19. In a dumping car, the combination with a pivoted and bodily movable car body, and means for moving bodily and tilting it, of fluid checking means separate from and independent of the actuating mechanism for controlling the movement of the car body, substantially as described.

20. In a dumping car, the combination with a pivoted and bodily movable car body, and a power cylinder for moving the car body, of fluid checking means separate from and independent of the power cylinder for controlling the movement of the car body, substantially as described.

21. In a dumping car, the combination with a pivoted and bodily movable car body, and a power cylinder for moving the car body, of fluid checking means moving with the actuating means for controlling the movement of the car body, substantially as described.

22. In a dumping car, the combination with a laterally movable car body, and means for actuating the same, of means moving laterally with the car body for controlling the movement thereof, substantially as described.

23. In a dumping car, the combination with a pivoted and bodily movable car body, and a power cylinder for moving the car body, of fluid checking means moving with the actuating means and carried thereby for controlling the movement of the car body, substantially as described.

24. In a dumping car, the combination with a pivoted and bodily movable car body, and a movable power cylinder for moving the car body, of a movable fluid checking cylinder for controlling the movement of the car body, substantially as described.

25. In a dumping car, the combination with a movable car body, of actuating means therefor, means for positioning said actuating means to move the car body to opposite sides, and means independent of the actuating means and effective in both directions for controlling the movement of the car body, substantially as described.

26. The combination with a bodily movable car body, and a motor for moving it, of a cushioning device constructed to automatically check the movement at the ends and to permit free movement at an intermediate position.

27. The combination with a movable car body, and a motor for moving it in both directions, of a cushioning device comprising a cylinder closed at the ends and open at the middle.

28. The combination with a bodily movable car body, and a motor for moving it, of a cushioning device constructed to automatically check the movement at the ends and to permit free movement at an intermediate position, and means permitting unretarded movement away from the ends.

29. The combination with a movable car body, and a motor for moving it in both directions, of a cushioning device comprising a cylinder closed at the ends and open at the middle, and means permitting unretarded movement away from the ends.

30. The combination with a tilting and laterally movable car body, and an operating motor having a corresponding movement, of a cushioning device moving with the motor for checking the movement at the ends and permitting free movement away from the ends.

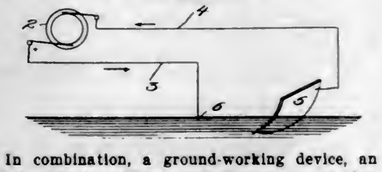
31. A car body mounted to move laterally from a central position in either direction, in combination with a motor mounted to move laterally to move the car body, and cushioning means independent of the motor to move therewith.

32. The combination with a tilting and laterally movable car body, of a movable operating cylinder connected therewith in such manner as to tilt and move the car body laterally in either direction from a central position, and a movable cushioning cylinder connected to move with the motor.

33. In a dumping car, the combination with a car body movable laterally in either direction from a central position, and motor means for moving it to discharging position, of means independent of the actuating mechanism for controlling the rate of movement of the car body in either direction.

34. In a dumping car, the combination with a pivoted and bodily movable car body, means for moving and tilting it to either side from a central position, means independent of the actuating mechanism for controlling the rate of movement of the car body.

12,715. ELECTRICAL ATTACHMENT FOR MOVABLE OBJECTS. JOHN R. DAWKINS, Dallas, Tex. Filed Sept. 30, 1907. Serial No. 395,321. Original No. 855,389, dated May 28, 1907, Serial No. 301,885.



1. In combination, a ground-working device, an electrical source, a positive conductor communicating with said source and grounded, and a negative conductor communicating with the electrical source and electrically connected to the ground-working device.

2. The combination with a movable element contacting with an adhering earthy electrical conducting substance, of a source of electrical energy, a negative electrical conducting means connecting said source and said element, and a positive electrical conducting means connecting said source and said substance at a point removed from said element, whereby an electrical circuit is completed to prevent the adhering of the said substance to said element.

3. In combination, a ground-working device, a source of electrical energy, an electrical connection between said source and said device, and electrical connections between said source and the ground thereby completing an electrical circuit to prevent the adhering of earthy substances to said device.

12,716. PADLOCK. CHARLES E. JOHNSON, New Britain, Conn., assignor to Corbin Cabinet Lock Company, New Britain, Conn., a Corporation or Connecticut. Filed Sept. 25, 1907. Serial No. 394,440. Original No. 864,743, dated Aug. 27, 1907, Serial No. 370,133.

1. In a pad-lock a solid body or case, two parallel bores extending into the top of the same, one of said bores being deeper than the other and extending nearly through the case, a third bore parallel to the others but extending into the case from the lower end and between the first two, two or more bores extending into one side edge of the case, and including a relatively large bore and relatively small bore, the former intersecting the shorter of the upper bores, the latter intersecting the lower bore.

2. In a pad-lock, a solid body or case, three parallel bores extending longitudinally thereof, two of the same entering the case from above, the third entering from below, two or more transverse bores entering the case from the same side and in substantially the same plane and at right-angles to the first-mentioned bores, one of said bores being of relatively large caliber, and means to close the open ends of said side bores.



3. In a pad-lock, a solid case, three parallel bores extending longitudinally thereof, two of said bores entering from above, the third from below, a hasp in the first two, a rotatable bolt-operating device in the third, key-operated means for locking and unlocking the latter, transverse bores in said case, one of the latter being of relatively large diameter, a locking-bolt therein coöperating with the hasp, said key-operated means standing in said smaller bores, and means to close the outer ends of all of said side bores.

4. In a pad-lock, a solid case, three parallel bores extending longitudinally thereof, two of said bores entering from above, the third from below, a hasp in the first two, a rotatable bolt-operating device in the third, key-operated means for locking and unlocking the latter, transverse bores in said case, one of the same being of relatively large diameter, a locking-bolt therein coöperating with said hasp, means to close the outer ends of said side bores, and means to prevent the removal of said hasp and plug from said case.

5. In a pad-lock, a solid case, a sliding hasp carried thereby, a bolt carried thereby, a rotatable bolt-operating plug carried thereby, key-operated means for locking and unlocking said rotatable plug, and including a pin movable laterally of said plug, all of said members being mounted and operating in openings of circular cross section.

6. In a pad-lock, a solid case, a sliding hasp carried thereby, a bolt carried thereby, a rotatable bolt-operating plug carried thereby, key-operated means for locking and unlocking said rotatable plug, and including a pin movable laterally of said plug, all of said members being mounted and operating in openings of circular cross section, and means for preventing the removal of said hasp and said plug.

7. In a pad-lock, a solid case, a sliding hasp carried thereby, a bolt carried thereby, a rotatable bolt-operating plug carried thereby, key-operated means for locking and unlocking said rotatable plug, and including a pin movable laterally of said plug, all of said members being mounted and operating in openings of circular cross section, means for preventing the removal of said hasp and said plug, and means including the hasp to close all of said openings.

8. In a pad-lock, a solid case, two parallel bores entering into the top of the same, one of said bores being deeper than the other, a third bore parallel with the first two, but entering the case from the lower end and in a plane between the first two, a fourth bore entering the case at one side edge and intersecting the shorter of the first two mentioned bores, a fifth bore of smaller diameter than the others entering the case from the same edge as the fourth bore, but of smaller diameter, a hasp adapted to the first two bores, a key-plug adapted to the third bore, a spring-pressed bolt adapted to the fourth bore, a spring-pressed pin adapted to the fifth bore, means for closing in said fourth and fifth bores, and means for holding said hasp and plug against accidental detachment.

9. In a pad-lock, a solid body, a hasp, a bolt, a key-rotatable plug, locking means therefor, a locking pin for said plug, all of said parts being contained in bores of circular cross section, and a single means for covering the bores for the bolt and locking pin.

10. In a pad-lock, a solid body, a hasp, a bolt, a key-rotatable plug, locking means therefor, a locking pin for said plug, all of said parts being contained in bores of circular cross section, and a single means for covering the bores for the bolt and locking pin, said means comprising a plate making a dove-tail connection with said solid body.

DESIGNS.

38,868. DOMINO. GEORGE JAMES THOMAS, New York, N. Y. Filed July 22, 1907. Serial No. 385,096. Term of patent 14 years.



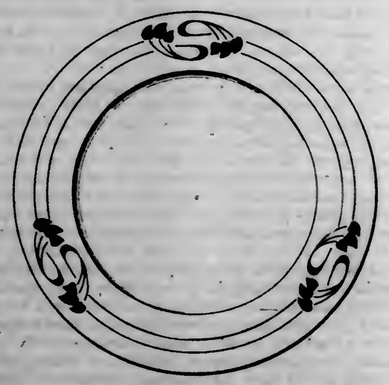
The ornamental design for a domino, as shown.

38,869. LEG FOR CHAFING-DISH STANDS. EDWARD A. GUTERMANN, Meriden, Conn., assignor to Manning, Bowman & Company, Meriden, Conn., a Corporation of Connecticut. Filed Aug. 13, 1907. Serial No. 388,424. Term of patent 7 years.



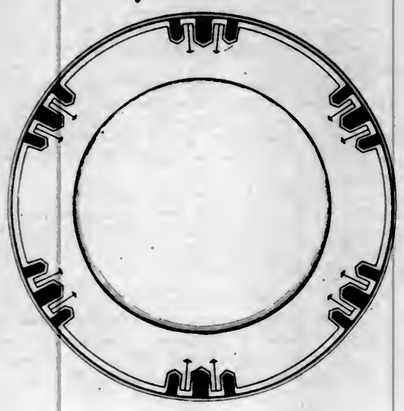
The ornamental design for a leg for a chafing dish stand as shown.

38,870. PLATE. ELMER E. WALTER, Syracuse, N. Y., assignor to Onondaga Pottery Company, Syracuse, N. Y., a Corporation. Filed Sept. 16, 1907. Serial No. 393,247. Term of patent 7 years.



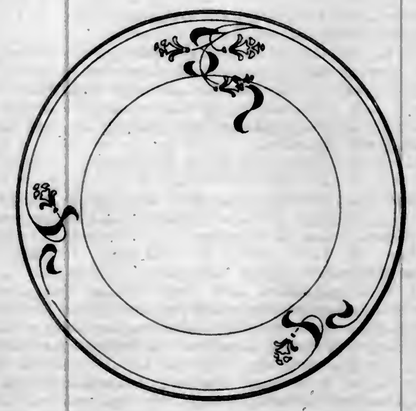
The ornamental design for a plate, as shown.

38,871. PLATE. ELMER E. WALTER, Syracuse, N. Y., assignor to Onondaga Pottery Company, Syracuse, N. Y., a Corporation. Filed Sept. 17, 1907. Serial No. 393,414. Term of patent 7 years.



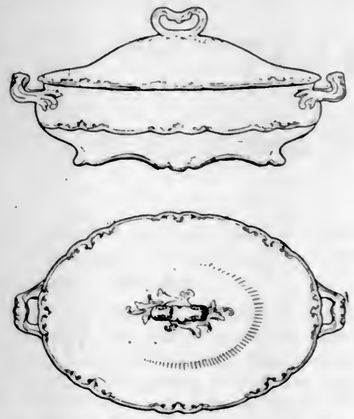
The ornamental design for a plate, as shown.

38,872. PLATE. ELMER E. WALTER, Syracuse, N. Y., assignor to Onondaga Pottery Company, Syracuse, N. Y., a Corporation. Filed Sept. 19, 1907. Serial No. 393,738. Term of patent 7 years.



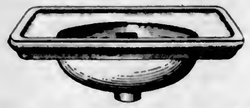
The ornamental design for a plate, as shown.

38,873. COVERED DISH OR SIMILAR ARTICLE. ALFRED JOHN MEAKIN, Tunstall, England. Filed Sept. 12, 1907. Serial No. 392,598. Term of patent 7 years.



The ornamental design for a covered dish or a similar article as shown.

38,874. LAVATORY. HENRY PODMORE, Trenton, N. J., assignor to Trenton Potteries Company, Trenton, N. J., a Corporation of New Jersey. Filed Apr. 2, 1906. Serial No. 309,551. Term of patent 14 years.



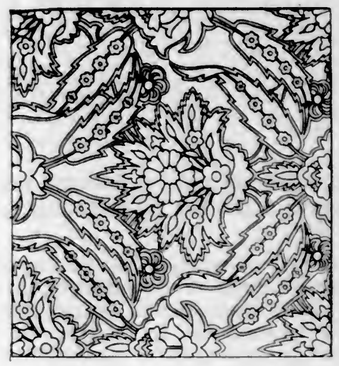
The ornamental design for a lavatory, as shown.

38,875. CHAIR. HENRY GROSSMAN, New York, N. Y. Filed Sept. 6, 1907. Serial No. 391,733. Term of patent 7 years.



The ornamental design for a chair as shown.

38,876. TEXTILE FABRIC. ADA M. RAPP, Irvington, N. J., assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Sept. 16, 1907. Serial No. 393,249. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

38,877. TEXTILE FABRIC. ARTHUR MIDDLETON ROSE, New York, N. Y., assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Sept. 16, 1907. Serial No. 393,251. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

TRADE-MARKS

PUBLISHED NOVEMBER 5, 1907.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 8,991. (CLASS 55. WINES.) CARL DRESEL, Sonoma, Cal. Filed June 24, 1905.



Particular description of goods.—Wines.

Ser. No. 10,262. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) STERN & Co. (INCORPORATED), Richmond, Va. Filed July 13, 1905.



Particular description of goods.—Leather Shoes.

Ser. No. 10,715. (CLASS 12. MASONRY MATERIALS.) CHARLES ZUNZ, LIMITED, Brussels, Belgium. Filed July 22, 1905.



Particular description of goods.—Portland or Hydraulic Cement.

Ser. No. 11,225. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ETNA CHEMICAL COMPANY, New York, N. Y. Filed Aug. 3, 1905.

PHENALGIN

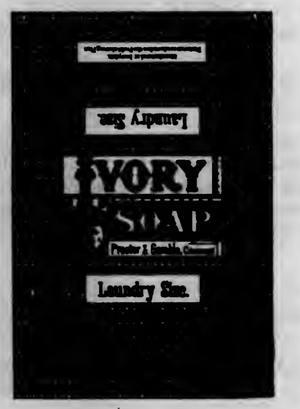
Particular description of goods.—An Antipyretic and Analgesic Medical Preparation.

Ser. No. 12,484. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) GEBRÜDER MOSSE, Berlin, Germany. Filed Sept. 11, 1905.



Particular description of goods.—Bed and Table Linen.

Ser. No. 14,322. (CLASS 8. DETERGENTS.) THE PROCTER & GAMBLE COMPANY, Ivorydale, Ohio, and Kansas City, Kans. Filed Nov. 4, 1905.



Particular description of goods.—Soap for Laundry, Toilet, and General Use.

Ser. No. 17,923. (CLASS 10. FERTILIZERS.) RASIN-MONUMENTAL COMPANY OF ANNE ARUNDEL COUNTY, Baltimore, Md. Filed Mar. 15, 1906.



Particular description of goods.—Fertilizers.

Ser. No. 19,354. (CLASS 31. FILTERS AND REFRIGERATORS.) STURGES & BURN MFG. CO., Chicago, Ill. Filed May 7, 1906.



Particular description of goods.—Ice-Cream Freezers.

Ser. No. 19,669. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) WILLIAM RENNIE THOMLINSON, Partick, Scotland. Filed May 18, 1906.

TUSITE

Particular description of goods.—Foot-Ball Leather, Foot-Ball-Boot Leather, Picking-Band Leather.

Ser. No. 19,989. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) CHEMISCHE FABRIK VON HEYDEN AKTIEN-GESELLSCHAFT, Radebeul, near Dresden, Germany. Filed June 2, 1906.

Novargan

Particular description of goods.—Antiseptic Silver Salts Used for Gonorrhea and Eye Diseases.

Ser. No. 20,154. (CLASS 4. ABRASIVE AND POLISHING MATERIALS NOT INCLUDED IN CLASSES 8 AND 16.) THE A. SPIEGEL CO., Milwaukee, Wis. Filed June 8, 1906. Used ten years.

LONDON

POLISH

Particular description of goods.—An Abrasive Polish for Cleaning, Scouring, and Polishing Bar-Fixtures and Drain-Boards, Tin, Zinc, Brass, Copper, and All Kitchen Utensils.

Ser. No. 21,923. (CLASS 48. DAIRY PRODUCTS.) ELWOOD S. DAVIS, Philadelphia, Pa. Filed Sept. 5, 1906.



Particular description of goods.—Butter.

Ser. No. 24,432. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) J. M. DELANEY & CO., New York, N. Y. Filed Jan. 4, 1907.

LINCOLN

Particular description of goods.—Sole-Leather Taps, Top Pieces, Squares, Jumbo-Blocks, Outsoles, Insoles, Counters, Sides, Crop, Backs, Bends, Butts, Strips, Butt-Shoulders, Side Shoulders, Back Shoulders, Heads, Bellies, and Heel-Stock.

Ser. No. 24,979. (CLASS 47. CONFECTIONERY.) UNITED DRUG COMPANY, Jersey City, N. J. Filed Jan. 29, 1907.



Particular description of goods.—Candy.

Ser. No. 24,980. (CLASS 47. CONFECTIONERY.) UNITED DRUG COMPANY, Jersey City, N. J. Filed Jan. 29, 1907.

Saturday

Particular description of goods.—Candy.

Ser. No. 25,160. (CLASS 8. DETERGENTS.) ELI ATWELL, Mountaindale, N. Y. Filed Feb. 6, 1907.

THEOZONE

Particular description of goods.—Powdered Detergent Hand-Cleaning Preparation.

Ser. No. 25,325. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) V. SAVARESE & BROS., Brooklyn, N. Y. Filed Feb. 15, 1907.



Particular description of goods.—Macaroni and Vermicelli.

Ser. No. 26,112. (CLASS 72. MERCHANDISE NOT OTHERWISE CLASSIFIED.) THERMOS-GESELLSCHAFT M. B. H., Berlin, Germany. Filed Mar. 20, 1907.

Thermos

Particular description of goods.—Double-Walled Glass Vessels with Vacuum Between the Walls.

Ser. No. 26,203. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) ALLEN BROTHERS COMPANY, Omaha, Nebr. Filed Mar. 25, 1907.

Forest City

Particular description of goods.—Rolled Oats and Wheat-Flour.

Ser. No. 26,204. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) ALLEN BROTHERS COMPANY, Omaha, Nebr. Filed Mar. 25, 1907.

Forest City

Particular description of goods.—Pancake-Flour.

Ser. No. 26,212. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ALLEN BROTHERS COMPANY, Omaha, Nebr. Filed Mar. 25, 1907.

Forest City

Particular description of goods.—Canned Fruits, Canned Vegetables, Dried Fruits, Spices, Flavoring Extracts, Olives, Jams, Pickles, Vinegar, Catsups, Mustard.

Ser. No. 26,352. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) HARLAN P. COLE, New York, N. Y. Filed Mar. 30, 1907.



Particular description of goods.—Boots, Shoes, Slippers, and Sandals Made of Leather.

Ser. No. 26,463. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) THE HARTFORD RUBBER WORKS COMPANY, Hartford, Conn. Filed Apr. 4, 1907.

No77

Particular description of goods.—Rubber Wheel-Tires.

Ser. No. 26,579. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) DANIEL H. HOFFMAN, New Orleans, La. Filed Apr. 9, 1907.



Particular description of goods.—Roasted Coffee.

Ser. No. 26,582. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) DANIEL H. HOFFMAN, New Orleans, La. Filed Apr. 9, 1907.



Particular description of goods.—Roasted and Ground Coffee.

Ser. No. 27,071. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) MORSE & ROGERS, New York, N. Y. Filed May 2, 1907.

LUCKY

Particular description of goods.—Leather Boots, Shoes, and Slippers.

Ser. No. 27,138. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) WHITRIDGE, WHITE & COMPANY, Baltimore, Md. Filed May 4, 1907.

ORIOLE

Particular description of goods.—Burlaps.

Ser. No. 27,786. (CLASS 70. STATIONERY NOT OTHERWISE CLASSIFIED.) AMERICAN LEAD PENCIL CO., New York, N. Y. Filed May 31, 1907.



Particular description of goods.—Eraser-Holders for Application to the Ends of Lead-Pencils.

Ser. No. 27,790. (CLASS 20. CUTLERY NOT INCLUDED IN CLASS 61, AND EDGE-TOOLS.) FREEMAN DELAMATER & Co., Detroit, Mich. Filed May 31, 1907.

CRAFT

Particular description of goods.—Axes, Table-Cutlery, Butcher-Knives, Hay-Knives, Scythes, Adzes, Hatchets, Razors, Pocket-Knives, Chisels, and Draw-Knives.

Ser. No. 27,806. (CLASS 12. MASONRY MATERIALS.) ROCKLAND-ROCKPORT LIME CO., Rockland, Me. Filed May 31, 1907.

R—R

Particular description of goods.—Lime and Ready-Mixed Mortar.

Ser. No. 28,077. (CLASS 70. STATIONERY NOT OTHERWISE CLASSIFIED.) CHARLES L. SCHAAR, Chicago, Ill. Filed June 12, 1907.



Particular description of goods.—Loose-Leaf Ledgers.

Ser. No. 28,159. (CLASS 69. SMOKERS' ARTICLES NOT INCLUDED IN CLASS 71.) WM. WARNE & Co., LIMITED, London, England. Filed June 15, 1907.



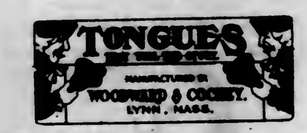
Particular description of goods.—Tobacco-Pouches.

Ser. No. 28,465. (CLASS 15. OILS AND GREASES NOT INCLUDED IN CLASSES 6, 16, AND 50.) THE GOOD ROADS IMP. CO., Cincinnati, Ohio. Filed June 29, 1907.

Asphaltoilene

Particular description of goods.—Asphalt-Oils from Which Gasoline and the Lighter Distillate Have Been Removed, Intended for Use on Roadways.

Ser. No. 28,804. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) WOODWARD & COCHEY, Lynn, Mass. Filed July 15, 1907.



Particular description of goods.—Shoe-Tongues, Shoe-Eyelet Stays, Shoe-Back Stays, Shoe-Top Stays, Shoe-Bottom Linings, Shoe-Heel Linings, Shoe-Toe Tips, Shoe-Quarter Linings.

Ser. No. 28,858. (CLASS 22. FIREARMS, AND EQUIPMENTS AND PROJECTILES NOT OTHERWISE CLASSIFIED.) HARRINGTON AND RICHARDSON ARMS COMPANY, Worcester, Mass. Filed July 18, 1907.



Particular description of goods.—Shotguns, Rifles, and Revolvers.

Ser. No. 29,115. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) JOHN DEWSBURY & SON, Walsall, England. Filed July 30, 1907.

Particular description of goods.—Bridle-Bits, Stirrups, Spurs, Buckles, Rings, Terrets, D's, Swivels, and Chains, All Made of Metal.

Ser. No. 29,118. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) ATCHISON OAT MEAL AND CEREAL CO., Atchison, Kans. Filed July 30, 1907.

CRESCENT

Particular description of goods.—Rolled Oats.

Ser. No. 29,157. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) FRESNO HOME PACKING COMPANY, Fresno, Cal. Filed Aug. 1, 1907.

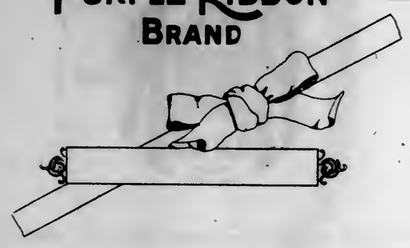
YELLOW RIBBON
BRAND



Particular description of goods.—Canned, Dried, and Preserved Fruits and Canned Vegetables.

Ser. No. 29,158. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) FRESNO HOME PACKING COMPANY, Fresno, Cal. Filed Aug. 1, 1907.

PURPLE RIBBON
BRAND



Particular description of goods.—Canned, Dried, and Preserved Fruits and Canned Vegetables.

Ser. No. 29,159. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) FRESNO HOME PACKING COMPANY, Fresno, Cal. Filed Aug. 1, 1907.

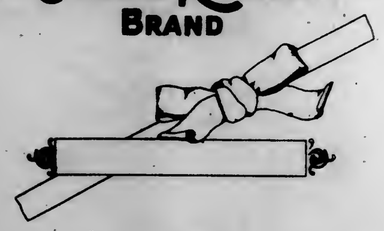
WHITE RIBBON
BRAND



Particular description of goods.—Canned, Dried, and Preserved Fruits and Canned Vegetables.

Ser. No. 29,160. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) FRESNO HOME PACKING COMPANY, Fresno, Cal. Filed Aug. 1, 1907.

GREEN RIBBON
BRAND



Particular description of goods.—Canned, Dried, and Preserved Fruits and Canned Vegetables.

Ser. No. 29,196. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) DR. HUNTER CHEMICAL COMPANY, New York, N. Y. Filed Aug. 3, 1907.



Particular description of goods.—Tablets for Diseases of the Blood and the Nervous System.

Ser. No. 29,279. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) BERNARD MILLER, Chicago, Ill. Filed Aug. 7, 1907.

TONOCOLA

Particular description of goods.—A Tonic Medicine.

Ser. No. 29,455. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) ISAAC L. LIPSCHUTZ, Philadelphia, Pa. Filed Aug. 19, 1907.

Queen of Pennsylvania

Particular description of goods.—Whisky.

Ser. No. 29,465. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) JOHN B. BRIGHT & SON, INC., Indianapolis, Ind. Filed Aug. 19, 1907.

SAN TOY

Particular description of goods.—Coffee.

Ser. No. 29,471. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) JOSEPH A. COTTEN, Kansas City, Mo. Filed Aug. 19, 1907.

CA

Particular description of goods.—A Veterinary Medicine.

Ser. No. 29,534. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) SCANDINAVIAN FUR & LEATHER CO., New York, N. Y. Filed Aug. 23, 1907.

SF&LC.

Particular description of goods.—Rubber Automobile-Coats, Rubber Wraps, Rubber Robes, Rubber Hats, Rubber Shirts, Rubber Boots, and Rubber Gloves.

Ser. No. 29,544. (CLASS 23. HAND-TOOLS NOT OTHERWISE CLASSIFEID.) WIEBUSCH & HILGER, LTD., New York, N. Y. Filed Aug. 23, 1907.

REX

Particular description of goods.—Hammers.

Ser. No. 29,648. (CLASS 71. TOBACCO PRODUCTS.) FALK TOBACCO COMPANY, New York, N. Y., and Richmond, Va. Filed Aug. 28, 1907.

CHAMPAGNE
COCKTAIL

Particular description of goods.—Smoking-Tobacco.

Ser. No. 29,672. (CLASS 37. PAPER AND PAPER MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE CLEVELAND-AKRON BAG CO., Cleveland, Ohio. Filed Aug. 29, 1907.

CHAMOIS

Particular description of goods.—Paper Bags.

Ser. No. 29,705. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) SOLOMON COHEN, New York, N. Y. Filed Aug. 31, 1907.

The Boys Friend

Particular description of goods.—Overalls.

Ser. No. 29,719. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) CHRISTIAN T. NELSEN, Chicago, Ill. Filed Sept. 3, 1907.



Particular description of goods.—A Vegetable Compound to be Used for Constipation, Dyspepsia, Liver and Kidney Complaints, and for Purifying the Blood.

Ser. No. 29,721. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) AURORA MANTLE MANUF'G. CO., Aurora, Ill. Filed Sept. 3, 1907.



Particular description of goods.—Gas and Vapor Burner Mantles, Mountings and Fixtures for Said Mantles.

Ser. No. 29,723. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) F. BRIGHAM & GREGORY COMPANY, Boston, Mass. Filed Sept. 3, 1907.

Greenback
CALF

Particular description of goods.—Leather Boots and Shoes and Leather Employed in Their Manufacture.

Ser. No. 29,726. (CLASS 53. SACCHARINE FOODS NOT INCLUDED IN CLASS 47.) WM. A. SELSER, Jenkintown, Pa. Filed Sept. 3, 1907.

BLOSSOM
NECTAR

Particular description of goods.—Honey.

Ser. No. 29,729. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) STITZEL DISTILLING COMPANY, Louisville, Ky. Filed Sept. 3, 1907.



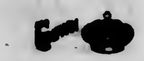
Particular description of goods.—Whisky.

Ser. No. 29,730. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE JOHN ELLWANGER CO., Dubuque, Iowa. Filed Sept. 3, 1907.



Particular description of goods.—Whisky.

Ser. No. 29,733. (CLASS 47. CONFECTIONERY.) BALTIMORE CHEWING GUM CO., Baltimore, Md. Filed Sept. 3, 1907.



Particular description of goods.—Chewing-Gum.

Ser. No. 29,734. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) WEIL CHEMICAL MFG. CO., Pine Bluff, Ark. Filed Sept. 3, 1907.

Pneumo

Particular description of goods.—Salves.

Ser. No. 29,760. (CLASS 65. MUSICAL INSTRUMENTS AND TALKING-MACHINES AND SUPPLIES THEREFOR. S. R. HUYETT, Abilene, Kans. Filed Sept. 5, 1907.

BLACK END BEAUTIES

Particular description of goods.—Musical Strings.

Ser. No. 29,780. (CLASS 41. KNITTED, NETTED, AND LACE GOODS.) RICHMOND HOSIERY MILLS, Chattanooga, Tenn., and Rossville, Ga. Filed Sept. 6, 1907.

Wunderhose

Particular description of goods.—Hosiery.

Ser. No. 29,782. (CLASS 71. TOBACCO PRODUCTS.) FALK TOBACCO COMPANY, New York, N. Y., and Richmond, Va. Filed Sept. 6, 1907.

CHAMPAGNE COCKTAIL

Particular description of goods.—Cigars and Cigarettes.

Ser. No. 29,790. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE VI-DERMIS CO., Dayton, Ohio. Filed Sept. 7, 1907.

VI-DERMIS

Particular description of goods.—A Pharmaceutical Preparation for the Skin.

Ser. No. 29,845. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) BOERICKE & TAFEL, Philadelphia, Pa. Filed Sept 10, 1907.



Particular description of goods.—Boracic Acid, Tooth-Wash, Mouth-Wash, Antiseptic Dressings, and Disinfectants and Antiseptics.

Ser. No. 29,859. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) W. B. COSGRAVE SHOE CO., Zanesville, Ohio. Filed Sept. 11, 1907.



Particular description of goods.—Leather Boots and Shoes.

Ser. No. 29,871. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) MORRIS CHEMICAL CO., Dallas, Tex. Filed Sept. 11, 1907.



Particular description of goods.—A Rheumatic Remedy.

Ser. No. 29,893. (CLASS 41. KNITTED, NETTED, AND LACE GOODS.) THE TROY KNITTING COMPANY, Troy, N. Y. Filed Sept. 12, 1907.

Trojan Knit

Particular description of goods.—Men's, Women's, and Children's Knitted Underwear.

Ser. No. 29,901. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE BRADFIELD REGULATOR CO., Atlanta, Ga. Filed Sept. 12, 1907.



Particular description of goods.—Remedies for Female Use, the Remedies Being for Female Disorders and for the Relief of the Suffering Incident to Child-Bearing.

Ser. No. 29,902. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE BRADFIELD REGULATOR CO., Atlanta, Ga. Filed Sept. 12, 1907.

MOTHER'S FRIEND

Particular description of goods.—Remedies for Female Use, the Remedies Being for the Relief of the Suffering Incident to Child-Bearing.

Ser. No. 29,903. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE BRADFIELD REGULATOR CO., Atlanta, Ga. Filed Sept. 12, 1907. Used ten years.

BRADFIELD

Particular description of goods.—Remedies for Female Use, the Remedies Being for Female Disorders and for the Relief of the Suffering Incident to Child-Bearing.

Ser. No. 29,904. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE BRADFIELD REGULATOR CO., Atlanta, Ga. Filed Sept. 12, 1907.



Particular description of goods.—Remedies for Female Use, the Remedies Being for the Relief of the Suffering Incident to Child-Bearing.

Ser. No. 29,905. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE BRADFIELD REGULATOR CO., Atlanta, Ga. Filed Sept. 12, 1907. Used ten years.

REGULATOR

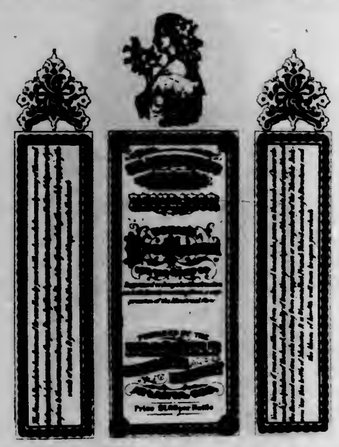
Particular description of goods.—Remedies for Female Use, the Remedies Being for the Treatment of Female Disorders.

Ser. No. 29,906. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE BRADFIELD REGULATOR CO., Atlanta, Ga. Filed Sept. 12, 1907. Used ten years.

REGULATOR

Particular description of goods.—Remedies for Female Use, the Remedies Being for the Treatment of Female Disorders.

Ser. No. 29,908. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE BRADFIELD REGULATOR CO., Atlanta, Ga. Filed Sept. 12, 1907.



Particular description of goods.—Remedies for Female Use, the Remedies Being for the Treatment of Female Disorders.

Ser. No. 29,909. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE BRADFIELD REGULATOR CO., Atlanta, Ga. Filed Sept. 12, 1907. Used ten years.

BRADFIELD

Particular description of goods.—Remedies for Female Use, the Remedies Being for Female Disorders and for Relief of the Suffering Incident to Child-Bearing.

Ser. No. 29,910. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE BRADFIELD REGULATOR CO., Atlanta, Ga. Filed Sept. 12, 1907.

Bradfield

Particular description of goods.—Remedies for Female Use, the Remedies Being for the Treatment of Female Disorders.

Ser. No. 29,915. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) THE INTERNATIONAL DENTAL COMPANY, Rockymount, Va. Filed Sept. 12, 1907.

ANTISEPTOL

Particular description of goods.—Mouth-Wash.

Ser. No. 29,967. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) F. MAYER BOOT & SHOE CO., Milwaukee, Wis. Filed Sept. 14, 1907.

Soaring Sadie

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 29,984. (CLASS 58. GAMES AND TOYS, AND SPORTING GOODS NOT OTHERWISE CLASSIFIED.) NEWBERN H. LEWIS, Silver Springs, N. Y. Filed Sept. 16, 1907.



Particular description of goods.—Game-Cards.

Ser. No. 29,996. (CLASS 47. CONFECTIONERY.) DREYFUS BROS., Montgomery, Ala. Filed Sept. 16, 1907.

Eureka

Particular description of goods.—Peanut-Candy.

Ser. No. 30,007. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) L. CANDEE & Co., New Haven, Conn. Filed Sept. 16, 1907. Used ten years.

Federal

Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 30,008. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) L. CANDEE & Co., New Haven, Conn. Filed Sept. 16, 1907. Used ten years.

"Candee"

Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 30,009. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) L. CANDEE & Co., New Haven, Conn. Filed Sept. 16, 1907. Used ten years.

CANDEE

Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 30,012. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) WOONSOCKET RUBBER COMPANY, Woonsocket, R. I. Filed Sept. 16, 1907. Used ten years.

WOONSOCKET

Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 30,013. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) WOONSOCKET RUBBER COMPANY, Woonsocket, R. I. Filed Sept. 16, 1907. Used ten years.



Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 30,014. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) WOONSOCKET RUBBER COMPANY, Woonsocket, R. I. Filed Sept. 16, 1907.

ATLAS

Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 30,019. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) NATIONAL INDIA RUBBER CO., Bristol, R. I. Filed Sept. 16, 1907.

Colonial Rubber Co.

Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 30,023. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) GOODYEAR'S METALLIC RUBBER SHOE CO., Naugatuck, Conn. Filed Sept. 16, 1907.

ARMOR

Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 30,024. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) GOODYEAR'S METALLIC RUBBER SHOE CO., Naugatuck, Conn. Filed Sept. 16, 1907.

ACME

Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 30,025. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) GOODYEAR'S METALLIC RUBBER SHOE CO., Naugatuck, Conn. Filed Sept. 16, 1907. Used ten years.

CONNECTICUT

Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 30,026. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) ALBERGER CONDENSER COMPANY, New York, N. Y. Filed Sept. 17, 1907. Used ten years.

CORRUGATED

Particular description of goods.—Steam-Condensers.

Ser. No. 30,027. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) ALBERGER CONDENSER COMPANY, New York, N. Y. Filed Sept. 17, 1907. Used ten years.

WAINWRIGHT

Particular description of goods.—Steam-Condensers.

Ser. No. 30,037. (CLASS 65. MUSICAL INSTRUMENTS AND TALKING-MACHINES AND SUPPLIES THEREFOR.) COLUMBIA PHONOGRAPH COMPANY, GENERAL. New York, N. Y. Filed Sept. 18, 1907.

Dictaphone

Particular description of goods.—Graphophones.

Ser. No. 30,046. (CLASS 20. CUTLERY NOT INCLUDED IN CLASS 61, AND EDGE-TOOLS.) SIMMONS HARDWARE COMPANY, St. Louis, Mo. Filed Sept. 18, 1907

SENATOR

Particular description of goods.—Razors.

Ser. No. 30,054. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE SMITH & EGGE MFG. CO., Bridgeport, Conn. Filed Sept. 18, 1907. Used ten years.

RED METAL

Particular description of goods.—Sheet-Metal Chains.

Ser. No. 30,057. (CLASS 59. HOROLOGICAL INSTRUMENTS.) BYRON L. STRASBURGER & Co., New York, N. Y. Filed Sept. 18, 1907.

PRINCESS

Particular description of goods.—Watches and Watch-Movements.

Ser. No. 30,059. (CLASS 59. HOROLOGICAL INSTRUMENTS.) BYRON L. STRASBURGER & Co., New York, N. Y. Filed Sept. 18, 1907.

LADV TESS

Particular description of goods.—Watches and Watch Movements.

Ser. No. 30,061. (CLASS 59. HOROLOGICAL INSTRUMENTS.) BYRON L. STRASBURGER & Co., New York, N. Y. Filed Sept. 18, 1907.

CAPITOL

Particular description of goods.—Watches and Watch-Movements.

Ser. No. 30,062. (CLASS 59. HOROLOGICAL INSTRUMENTS.) BYRON L. STRASBURGER & Co., New York, N. Y. Filed Sept. 18, 1907.

OBELISK

Particular description of goods.—Watches and Watch-Movements.

Ser. No. 30,066. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) HABICHT, BRAUN & Co., Chicago, Ill. Filed Sept. 18, 1907.



Particular description of goods.—Shelled Almonds.

Ser. No. 30,067. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) HABICHT, BRAUN & Co., Chicago, Ill. Filed Sept. 18, 1907.



Particular description of goods.—Shelled Almonds.

Ser. No. 30,068. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) HABICHT, BRAUN & Co., Chicago, Ill. Filed Sept. 18, 1907.



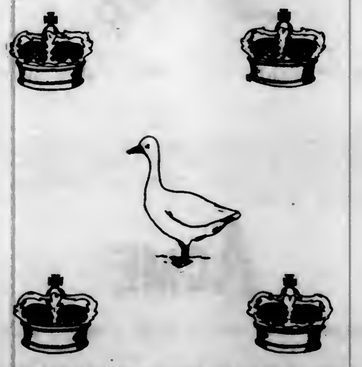
Particular description of goods.—Shelled Almonds.

Ser. No. 30,069. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) HABICHT, BRAUN & Co., Chicago, Ill. Filed Sept. 18, 1907.



Particular description of goods.—Shelled Almonds.

Ser. No. 30,070. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) HABICHT, BRAUN & Co., Chicago, Ill. Filed Sept. 18, 1907.



Particular description of goods.—Shelled Almonds.

Ser. No. 30,071. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) HABICHT, BRAUN & Co., Chicago, Ill. Filed Sept. 18, 1907.



Particular description of goods.—Shelled Almonds.

Ser. No. 30,135. (CLASS 47. CONFECTIONERY.) NATIONAL CANDY COMPANY, Jersey City, N. J., and St. Louis, Mo. Filed Sept. 21, 1907.

AZ-U-LY-KIT

Particular description of goods.—Chewing-Gums.

Ser. No. 30,167. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) HOOD RUBBER CO., Boston, Mass. Filed Sept. 23, 1907.

TUESDAY

Particular description of goods.—Rubber Vehicle-Tires and Rubber Boots and Shoes.

Ser. No. 30,185. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) RICHMOND CEDAR WORKS, Richmond, Va. Filed Sept. 24, 1907.

MAJESTIC

Particular description of goods.—Domestic Washing-Machines for Laundry Purposes.

Ser. No. 30,221. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE KORA COMPANY, New York, N. Y. Filed Sept. 26, 1907.

Fluffy Ruffles

Particular description of goods.—Dress-Shields and Hose-Supporters.

Ser. No. 30,200. (CLASS 54. SEA FOODS.) EDWIN SHIVELL, Boston, Mass. Filed Sept. 27, 1907.

ROUND ROBIN

Particular description of goods.—Sardines, Salmon, and Herrings, and Mackerel Kippered and Otherwise Treated.

Ser. No. 30,271. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) G. C. HANFORD MANUFACTURING CO., Syracuse, N. Y. Filed Sept. 28, 1907.

SLEEKENE

Particular description of goods.—A Condition-Powder for Horses, Cattle, Sheep, and Swine.

Ser. No. 30,278. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Sept. 28, 1907.

GOOD LUCK

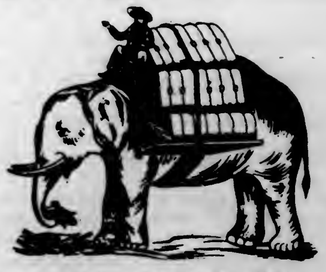
Particular description of goods.—Fertilizers.

Ser. No. 30,279. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Sept. 28, 1907.

JUMBO

Particular description of goods.—Fertilizers.

Ser. No. 30,280. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Sept. 28, 1907.



Particular description of goods.—Fertilizers.

Ser. No. 30,283. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) MINOT FLOUR MILL CO., Minot, N. D. Filed Sept. 28, 1907.

MINODAK

Particular description of goods.—Flour Made from Wheat.

Ser. No. 30, 294. (CLASS 2. MINERAL.) THE UNITED STATES GRAPHITE COMPANY, Saginaw, Mich. Filed Sept. 30, 1907.

FAVORITA

Particular description of goods.—Silver Lead or Plumbago, Foundry-Facings, and Pulverized Graphite.

Ser. No. 30,305. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE DERMATONE COMPANY, Chicago, Ill. Filed Sept. 30, 1907.

OILUNEED

Particular description of goods.—An Ointment for the Treatment of Catarrh, Headache, Coughs, Colds, Croup, Sore Throat, Bronchitis, Whooping-Cough, Hoarseness, Catarrhal Deafness, Influenza, Neuralgia, Earache, Toothache, Asthma, Hay-Fever, Burns, Cramps, and Rheumatism.

Ser. No. 30,307. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) EDWARD BAUM, Baltimore, Md. Filed Sept. 30, 1907.



Particular description of goods.—Suppositories for the Nasal Passages.

Ser. No. 30,310. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) HOLTON & ADAMS, New York, N. Y. Filed Sept. 30, 1907.

"Zpl

Particular description of goods.—Brushes.

Ser. No. 30,355. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) HERMAN OBERNAUER, Pittsburg, Pa. Filed Oct. 2, 1907.



Particular description of goods.—Stomach-Bitters.

TRADE-MARKS

REGISTERED NOVEMBER 5, 1907.

65,956. ANTISEPTIC ANTIFEBRILE UNGUENT EXTERNAL MEDICINE. THOMAS W. ALGEO, Chicago, Ill.
Filed March 4, 1907. Serial No. 25,731. PUBLISHED SEPTEMBER 3, 1907.

65,957. BITTERS. ASCHENBACH & MILLER INCORPORATED, Philadelphia, Pa.
Filed July 27, 1906. Serial No. 21,196. PUBLISHED NOVEMBER 20, 1906.

65,958. LIQUID TOOTH-CLEANSING COMPOUND. THOMAS M. CHILDS, Providence, R. I.
Filed November 7, 1906. Serial No. 23,157. PUBLISHED SEPTEMBER 3, 1907.

65,959. SUPPOSITORIES, TABLETS, AND PILLS. DR. PIERRE CHEMICAL COMPANY, Chicago, Ill.
Filed July 5, 1907. Serial No. 28,604. PUBLISHED SEPTEMBER 3, 1907.

65,960. SALVE FOR BURNS, FROST-BITES, AND SORES. FANNIE HARKNESS, New York, N. Y.
Filed July 23, 1907. Serial No. 28,999. PUBLISHED SEPTEMBER 3, 1907.

65,961. WITCH-HAZEL CREAM. ELMER E. HESS, Brook, Ind.
Filed July 10, 1907. Serial No. 28,699. PUBLISHED SEPTEMBER 3, 1907.

65,962. SUSPENDERS. LAFAYETTE SUSPENDER COMPANY, Easton, Pa.
Filed July 31, 1907. Serial No. 29,136. PUBLISHED SEPTEMBER 3, 1907.

65,963. LADIES' HAIR-COMBS. PACIFIC NOVELTY COMPANY, New York, N. Y.
Filed July 27, 1907. Serial No. 29,066. PUBLISHED SEPTEMBER 3, 1907.

65,964. LINIMENT. JOHN D. SHULER, Vernal, Utah.
Filed July 9, 1906. Serial No. 20,804. PUBLISHED SEPTEMBER 3, 1907.

65,965. COUGH REMEDIES. EGBERT J. SORMANI, Brooklyn, N. Y.
Filed April 17, 1907. Serial No. 26,762. PUBLISHED SEPTEMBER 3, 1907.

65,966. TASTELESS CASTOR-OIL. VOIGT & Co., Chattanooga, Tenn.
Filed July 8, 1907. Serial No. 28,662. PUBLISHED SEPTEMBER 3, 1907.

65,967. CERTAIN PHARMACEUTICAL PREPARATIONS. C. S. WELCH & Co., New York, N. Y.
Filed July 11, 1907. Serial No. 28,730. PUBLISHED SEPTEMBER 3, 1907.

65,968. COUGH MEDICINE OR MEDICINAL CORDIAL. GEORGE E. WHITTAKER, Somerville, Mass.
Filed May 2, 1907. Serial No. 27,077. PUBLISHED SEPTEMBER 3, 1907.

65,969. CERTAIN UNDERCLOTHING. THE WILLIAM CARTER CO., Highlandville, Mass.
Filed July 16, 1906. Serial No. 20,952. PUBLISHED SEPTEMBER 3, 1907.

65,970. WATER-HEATERS AND HEAT-EXTRACTORS. ALBERGER CONDENSER COMPANY, New York, N. Y.
Filed January 17, 1906. Serial No. 16,250. PUBLISHED SEPTEMBER 3, 1907.

65,971. WATER-HEATERS AND HEAT-EXTRACTORS. ALBERGER CONDENSER COMPANY, New York, N. Y.
Filed January 17, 1906. Serial No. 16,251. PUBLISHED SEPTEMBER 3, 1907.

65,972. COVER-PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed June 24, 1907. Serial No. 28,326. PUBLISHED SEPTEMBER 3, 1907.

65,973. WRITING AND PRINTING PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed June 24, 1907. Serial No. 28,334. PUBLISHED SEPTEMBER 3, 1907.

65,974. WRITING AND PRINTING PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed June 24, 1907. Serial No. 28,336. PUBLISHED SEPTEMBER 3, 1907.

65,975. WRITING AND PRINTING PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed June 24, 1907. Serial No. 28,337. PUBLISHED SEPTEMBER 3, 1907.

65,976. WRITING AND PRINTING PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed June 24, 1907. Serial No. 28,341. PUBLISHED SEPTEMBER 3, 1907.

65,977. WRITING AND PRINTING PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed June 24, 1907. Serial No. 28,344. PUBLISHED SEPTEMBER 3, 1907.

65,978. WRITING AND PRINTING PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed July 22, 1907. Serial No. 28,977. PUBLISHED SEPTEMBER 3, 1907.

65,979. STOVES, RANGES, BOILERS, AND FURNACES. THE BOYNTON FURNACE COMPANY, New York, N. Y.
Filed February 28, 1907. Serial No. 25,650. PUBLISHED AUGUST 27, 1907.

65,980. CERTAIN HEATING AND VENTILATING APPARATUS. SAMUEL CLELAND DAVIDSON, Belfast, Ireland.
Filed February 6, 1907. Serial No. 25,169. PUBLISHED SEPTEMBER 3, 1907.

65,981. MUST OR GRAPE-JUICE. DEUTSCHE WEINMOSTKELTEREI ALKOHOLFREIER OBST UND TRAUBENSAFTE H. LAMPE & Co. WORMS A/ RH. G. M. B. H., Worms-on-the-Rhine, Germany.
Filed April 6, 1907. Serial No. 26,525. PUBLISHED SEPTEMBER 3, 1907.

65,982. TONIC BEVERAGES. ROBERT LEE DUFFY, Newbern, N. C.
Filed June 24, 1907. Serial No. 28,350. PUBLISHED SEPTEMBER 3, 1907.

65,983. WRAPPING-PAPER. THE HANLON-SHARPS CO., Wheeling, W. Va.
Filed April 25, 1907. Serial No. 26,900. PUBLISHED SEPTEMBER 3, 1907.

65,984. WRAPPING-PAPER. THE HANLON-SHARPS CO. Wheeling, W. Va.
Filed April 25, 1907. Serial No. 26,901. PUBLISHED SEPTEMBER 3, 1907.

65,985. CERTAIN PAPER. C. ROHDE, Hamburg, Germany.
Filed June 5, 1907. Serial No. 27,802. PUBLISHED SEPTEMBER 3, 1907.

65,986. LEATHER BOOTS AND SHOES. BENTLEY & OLMSTED COMPANY, Des Moines, Iowa.
Filed February 18, 1907. Serial No. 25,362. PUBLISHED SEPTEMBER 3, 1907.

65,987. JEWELRY. CARTER, QVARNSTROM & REMINGTON, Attleboro, Mass.
Filed July 18, 1907. Serial No. 28,861. PUBLISHED SEPTEMBER 3, 1907.

65,988. FISH-HOOKS. W. E. COMPTON, Redditch, England.
Filed June 21, 1905. Serial No. 8,744. PUBLISHED SEPTEMBER 3, 1907.

65,989. CERTAIN RUBBER GOODS. DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany.
Filed May 16, 1906. Serial No. 19,608. PUBLISHED SEPTEMBER 3, 1907.

65,990. CERTAIN FISHING-TACKLE. THE E. A. PFLUEGER COMPANY, Akron, Ohio.
Filed July 27, 1907. Serial No. 29,067. PUBLISHED SEPTEMBER 3, 1907.

65,991. CERTAIN HARNESS-TRIMMINGS. THE E. A. PFLUEGER COMPANY, Akron, Ohio.
Filed July 27, 1907. Serial No. 29,068. PUBLISHED SEPTEMBER 3, 1907.

65,992. AUTOMATIC INSTRUMENTS FOR MAKING CONVENTIONAL FIGURES. E. I. HORSMAN CO., New York, N. Y.
Filed August 5, 1907. Serial No. 29,238. PUBLISHED SEPTEMBER 3, 1907.

65,993. LUBRICATING-OIL. GALENA-SIGNAL OIL COMPANY, Franklin, Pa.
Filed July 14, 1905. Serial No. 10,315. PUBLISHED SEPTEMBER 3, 1907.

65,994. LUBRICATING-OILS. GALENA-SIGNAL OIL COMPANY, Franklin, Pa.
Filed July 14, 1905. Serial No. 10,317. PUBLISHED SEPTEMBER 3, 1907.

65,995. LUBRICATING-OIL. GALENA-SIGNAL OIL COMPANY, Franklin, Pa.
Filed July 25, 1905. Serial No. 10,783. PUBLISHED SEPTEMBER 3, 1907.

65,996. RUBBER BOOTS AND SHOES. THE GOODYEAR'S METALLIC RUBBER SHOE CO., Naugatuck, Conn.
Filed July 12, 1907. Serial No. 28,742. PUBLISHED SEPTEMBER 3, 1907.

65,997. RUBBER BOOTS AND SHOES. THE GOODYEAR'S METALLIC RUBBER SHOE CO., Naugatuck, Conn.
Filed July 12, 1907. Serial No. 28,743. PUBLISHED SEPTEMBER 3, 1907.

65,998. ARTIFICIAL BAIT FOR FISH. JAMES F. GREGORY, St. Louis, Mo.
Filed July 31, 1907. Serial No. 29,140. PUBLISHED SEPTEMBER 3, 1907.

65,999. CERTAIN JEWELRY. KAUTZMANN & SUSSFELD, Newark, N. J.
Filed April 12, 1907. Serial No. 26,659. PUBLISHED SEPTEMBER 3, 1907.

66,000. LEATHER AND CANVAS SHOES. KEIFFER BROS., New Orleans, La.
Filed July 13, 1907. Serial No. 28,765. PUBLISHED SEPTEMBER 3, 1907.

66,001. LEATHER AND CANVAS SHOES. KEIFFER BROS., New Orleans, La.
Filed July 13, 1907. Serial No. 28,766. PUBLISHED SEPTEMBER 3, 1907.

66,002. LEATHER AND CANVAS SHOES. KEIFFER BROS., New Orleans, La.
Filed July 13, 1907. Serial No. 28,770. PUBLISHED SEPTEMBER 3, 1907.

66,003. LEATHER AND CANVAS SHOES. KEIFFER BROS., New Orleans, La.
Filed July 13, 1907. Serial No. 28,772. PUBLISHED SEPTEMBER 3, 1907.

66,004. GLASS TUBES FOR WATER-GAGES. RICHARD KLINGER, Gumpoldskirchen, near Vienna, Austria-Hungary.
Filed July 29, 1907. Serial No. 29,079. PUBLISHED SEPTEMBER 3, 1907.

66,005. LEATHER BOOTS, SHOES, SLIPPERS, AND LEGGINGS. MILLER HAPGOOD SHOE CO., Lynn, Mass.
Filed July 29, 1907. Serial No. 29,093. PUBLISHED SEPTEMBER 3, 1907.

66,006. RUBBER TIRES AND INNER TUBES. PACIFIC COAST RUBBER CO., Seattle, Wash.
Filed August 3, 1907. Serial No. 29,185. PUBLISHED SEPTEMBER 3, 1907.

66,007. CIGARETTES. RECTORS, New York, N. Y.
Filed August 9, 1906. Serial No. 21,439. PUBLISHED JULY 2, 1907.

66,008. JEWELRY. S. & B. LEDERER COMPANY, Providence, R. I.
Filed August 1, 1907. Serial No. 29,163. PUBLISHED SEPTEMBER 3, 1907.

66,009. LEATHER BOOTS AND SHOES. SELZ, SCHWAB & COMPANY, Chicago, Ill.
Filed July 19, 1907. Serial No. 28,898. PUBLISHED SEPTEMBER 3, 1907.

66,010. LEATHER BOOTS AND SHOES. SELZ, SCHWAB & COMPANY, Chicago, Ill.
Filed July 19, 1907. Serial No. 28,899. PUBLISHED SEPTEMBER 3, 1907.

66,011. WATCHES AND WATCH-MOVEMENTS. BYRON L. STRASBURGER, New York, N. Y.
Filed July 24, 1907. Serial No. 29,021. PUBLISHED SEPTEMBER 3, 1907.

66,012. LEATHER BOOTS AND SHOES. A. W. TEDCASTLE & CO., Boston, Mass.
Filed June 26, 1907. Serial No. 28,403. PUBLISHED JULY 23, 1907.

66,013. ILLUMINATING-OIL. TIDE WATER OIL CO., New York, N. Y.
Filed July 19, 1907. Serial No. 28,881. PUBLISHED SEPTEMBER 3, 1907.

66,014. WHIPS. UNITED STATES WHIP COMPANY, Westfield, Mass.
Filed June 14, 1907. Serial No. 28,129. PUBLISHED SEPTEMBER 3, 1907.

66,015. CALCULATORS. CHARLES MICHAEL YOUNG, San Francisco, Cal.
Filed August 2, 1907. Serial No. 29,181. PUBLISHED SEPTEMBER 3, 1907.

66,016. CANNED SALMON. AMERICAN TRADING COMPANY, (PACIFIC COAST,) San Francisco, Cal.
Filed July 15, 1907. Serial No. 28,812. PUBLISHED SEPTEMBER 3, 1907.

66,017. CANNED SALMON. AMERICAN TRADING COMPANY, (PACIFIC COAST,) San Francisco, Cal.
Filed July 15, 1907. Serial No. 28,813. PUBLISHED SEPTEMBER 3, 1907.

66,018. OIL BLACKINGS, PASTE BLACKINGS, SHOE-DRESSINGS, AND LEATHER-DRESSINGS. THE ASSOCIATED SHOE COMPANY, Boston, Mass.
Filed June 4, 1907. Serial No. 27,880½. PUBLISHED SEPTEMBER 3, 1907.

66,019. SPOOL-COTTON OR SEWING-THREAD. BLODGETT & ORSWELL CO., Pawtucket, R. I.
Filed May 26, 1906. Serial No. 19,870. PUBLISHED SEPTEMBER 3, 1907.

66,020. DAMP-PROOF PAINT. DEXTER BROTHERS COMPANY, Boston, Mass.
Filed June 26, 1907. Serial No. 28,408. PUBLISHED SEPTEMBER 3, 1907.

66,021. WATCH-GLASSES. HAMMEL, RIGLANDER & CO., New York, N. Y.
Filed July 15, 1907. Serial No. 28,807. PUBLISHED SEPTEMBER 3, 1907.

66,022. KITCHEN-CABINETS. THE HOOSIER MFG. CO., Newcastle, Ind.
Filed July 2, 1907. Serial No. 28,562. PUBLISHED SEPTEMBER 3, 1907.

66,023. CERTAIN CEREAL FOODS. J. G. HUTCHISON & CO., Ottumwa, Iowa.
Filed November 26, 1906. Serial No. 23,593. PUBLISHED SEPTEMBER 3, 1907.

66,024. MATCHES. JÖNKÖPINGS OCH VULCANS TÄNDSTICKS-FABRIKSAKTIEBOLAG, Jönköping, Sweden.
Filed February 12, 1906. Serial No. 16,934. PUBLISHED SEPTEMBER 3, 1907.

66,025. POLISHING-CLOTHS. JOSEPH A. KIEFERLE, Allegheny, Pa.
Filed February 28, 1907. Serial No. 25,657. PUBLISHED APRIL 9, 1907.

66,026. COTTON DUCK. MOUNT VERNON-WOODBERRY COTTON DUCK COMPANY, Baltimore, Md.
Filed July 18, 1905. Serial No. 10,504. PUBLISHED SEPTEMBER 3, 1907.

66,027. COTTON DUCK. MOUNT VERNON-WOODBERRY COTTON DUCK COMPANY, Baltimore, Md.
Filed July 26, 1905. Serial No. 10,840. PUBLISHED SEPTEMBER 3, 1907.

66,028. CERTAIN PREPARATIONS OF TAR. F. SCHACHT, Brunswick, Germany.
Filed May 6, 1907. Serial No. 27,159. PUBLISHED SEPTEMBER 3, 1907.

66,029. FEED COMPOSED OF CRUSHED GRAIN. HUGO EMIL SCHRADER, Chicago, Ill.
Filed May 11, 1907. Serial No. 27,307. PUBLISHED SEPTEMBER 3, 1907.

66,030. CORUNDUM AND EMERY GRINDING-WHEELS. SELIG SONNENTHAL & CO., London, England.
Filed March 26, 1907. Serial No. 26,265. PUBLISHED SEPTEMBER 3, 1907.

66,031. MINCE-MEAT, DRIED FRUITS, AND FLAVORING EXTRACTS. SMITH LICHTY & HILLMAN COMPANY, Waterloo, Iowa.
Filed August 30, 1906. Serial No. 21,815. PUBLISHED SEPTEMBER 3, 1907.

66,032. BISCUITS. STANDARD WAFER CO., New York, N. Y.
Filed July 13, 1907. Serial No. 28,795. PUBLISHED SEPTEMBER 3, 1907.

66,033. SILK PIECE GOODS AND SILK-MIXED PIECE GOODS. SUSQUEHANNA SILK MILLS, New York, N. Y.
Filed May 29, 1907. Serial No. 27,744. PUBLISHED SEPTEMBER 3, 1907.

66,034. WHEAT-FLOUR. THE WALL-ROGALSKY MILLING CO., McPherson, Kans.
Filed April 18, 1907. Serial No. 26,780. PUBLISHED SEPTEMBER 3, 1907.

66,035. CHOCOLATES AND CANDIES. ALLEN-DAY COMPANY, New York, N. Y.
Filed July 24, 1907. Serial No. 29,013. PUBLISHED SEPTEMBER 3, 1907.

66,036. SPOOL-COTTON, SEWING-COTTON, AND THREAD. THE AMERICAN THREAD COMPANY, Jersey City, N. J.
Filed July 31, 1907. Serial No. 29,125. PUBLISHED SEPTEMBER 3, 1907.

66,037. FURS AND SKINS. BECKER BROS. & CO., New York, N. Y.
Filed April 13, 1906. Serial No. 18,772. PUBLISHED SEPTEMBER 3, 1907.

66,038. DRIED FRUITS, OLIVES, CANNED FRUITS AND VEGETABLES. THE C. S. MOREY MERCANTILE COMPANY, Denver, Colo.
Filed August 28, 1905. Serial No. 12,062. PUBLISHED SEPTEMBER 3, 1907.

66,039. POTATO-CHIPS. THO'S. B. CLEWELL & SON, Allentown, Pa.
Filed August 5, 1907. Serial No. 29,212. PUBLISHED SEPTEMBER 3, 1907.

66,040. COAL. COLEMAN MINING CO., Louisville, Ky.
Filed July 25, 1907. Serial No. 29,030. PUBLISHED SEPTEMBER 3, 1907.

66,041. SNAP-HOOKS. COVERT MANUFACTURING CO., Watervliet, N. Y.
Filed August 5, 1907. Serial No. 29,220. PUBLISHED SEPTEMBER 3, 1907.

66,042. CERTAIN MACHINERY. SAMUEL CLELAND DAVIDSON, Belfast, Ireland.
Filed February 6, 1907. Serial No. 25,168. PUBLISHED SEPTEMBER 3, 1907.

66,043. IMITATION METAL LEAF. GANE BROTHERS & CO., New York, N. Y.
Filed April 25, 1907. Serial No. 26,898. PUBLISHED SEPTEMBER 3, 1907.

66,044. CERTAIN METALS AND ALLOYS. TH. GOLDSCHMIDT, Essen-on-the-Ruhr, Germany.
Filed August 18, 1905. Serial No. 11,964. PUBLISHED SEPTEMBER 3, 1907.

66,045. STATEMENTS OF CREDIT RATINGS PERIODICALLY ISSUED. BERNARD P. GRUNAUER, Cleveland, Ohio.
Filed January 7, 1907. Serial No. 24,491. PUBLISHED SEPTEMBER 3, 1907.

66,046. CERTAIN RUBBER GOODS. THE M. LINDSAY RUBBER MANUFACTURING CO., Washington, D. C.
Filed February 6, 1906. Serial No. 16,802. PUBLISHED AUGUST 20, 1907.

66,047. TOOTH AND NAIL BRUSHES. WM. L. MARTIN, New York, N. Y., assignor to Deitsch Brothers, New York, N. Y., a Firm.
Filed August 5, 1907. Serial No. 29,239. PUBLISHED SEPTEMBER 3, 1907.

66,048. BREAD. HENRY MATTHAEI, Kansas City, Mo.
Filed August 2, 1907. Serial No. 29,177. PUBLISHED SEPTEMBER 3, 1907.

66,049. COTTON DUCK. MOUNT VERNON-WOODBERRY COTTON DUCK COMPANY, Baltimore, Md.
Filed July 18, 1905. Serial No. 10,499. PUBLISHED SEPTEMBER 3, 1907.

66,050. COTTON DUCK. MOUNT VERNON-WOODBERRY COTTON DUCK COMPANY, Baltimore, Md.
Filed July 18, 1905. Serial No. 10,502. PUBLISHED SEPTEMBER 3, 1907.

66,051. COTTON DUCK. MOUNT VERNON-WOODBERRY COTTON DUCK COMPANY, Baltimore, Md.
Filed July 18, 1905. Serial No. 10,503. PUBLISHED SEPTEMBER 3, 1907.

66,052. COTTON DUCK. MOUNT VERNON-WOODBERRY COTTON DUCK COMPANY, Baltimore, Md.
Filed September 11, 1905. Serial No. 12,449. PUBLISHED SEPTEMBER 3, 1907.

66,053. COTTON DUCK. MOUNT VERNON-WOODBERRY COTTON DUCK COMPANY, Baltimore, Md.
Filed August 5, 1907. Serial No. 29,223. PUBLISHED SEPTEMBER 3, 1907.

66,054. BEER. NORTHERN BREWERY COMPANY, Portland, Oreg.
Filed August 10, 1905. Serial No. 11,489. PUBLISHED SEPTEMBER 3, 1907.

66,055. BEER. WM. PFEIFER BERLIN WEISS BEER CO., Chicago, Ill.
Filed May 6, 1907. Serial No. 27,175. PUBLISHED SEPTEMBER 3, 1907.

66,056. HYDROGEN PEROXID. GUY OSBORN, Mount Vernon and New York, N. Y.
Filed September 14, 1906. Serial No. 22,080. PUBLISHED NOVEMBER 13, 1906.

66,057. CANDY. SAUERSTON & BROWN, Cincinnati, Ohio.
Filed August 3, 1907. Serial No. 29,206. PUBLISHED SEPTEMBER 3, 1907.

66,058. CANDIES. TROWBRIDGE CHOCOLATE CHIP CO., Meadville, Pa.
Filed August 3, 1907. Serial No. 29,201. PUBLISHED SEPTEMBER 3, 1907.

66,059. CANNED FRUITS AND VEGETABLES. H. P. TAYLOR, Jr., Richmond, Va.
Filed August 10, 1907. Serial No. 29,329. PUBLISHED SEPTEMBER 3, 1907.

66,060. WHISKY. ROEWEKAMP BROS., Oshkosh, Wis.
Filed April 16, 1907. Serial No. 26,745. PUBLISHED SEPTEMBER 3, 1907.

66,061. CANDIES. TROWBRIDGE CHOCOLATE CHIP CO., Meadville, Pa.
Filed August 3, 1907 Serl No. 29,202. PUBLISHED SEPTEMBER 3, 1907.

66,062. TEAS AND COFFEES. UPHAM BRO'S, New York, N. Y.
Filed July 25, 1907. Serial No. 29,031. PUBLISHED SEPTEMBER 3, 1907.

66,063. WHEAT-FLOUR. WASHBURN CROSBY COMPANY, Minneapolis, Minn.
Filed June 28, 1907. Serial No. 28,458. PUBLISHED SEPTEMBER 3, 1907.

66,064. FINANCIAL AND COMMERCIAL NEWSPAPER. MEYER AUERBACH, New York, N. Y.
Filed August 3, 1907. Serial No. 29,193. PUBLISHED SEPTEMBER 3, 1907.

66,065. TIN, TERNE, LEADED, AND BLACK SHEETS. BALDWINS LIMITED, Wilden Iron Works, near Stourport, England.
Filed June 21, 1905. Serial No. 8,670. PUBLISHED SEPTEMBER 3, 1907.

66,066. TIN PLATES. BALDWINS, LIMITED, Wilden Iron Works, near Stourport, England.
Filed June 21, 1905. Serial No. 8,671. PUBLISHED SEPTEMBER 3, 1907.

66,067. BEER. CENTRAL BREWING CO., East St. Louis, Ill.
Filed November 16, 1906. Serial No. 23,411. PUBLISHED SEPTEMBER 3, 1907.

66,068. DISINFECTING AND DEODORIZING APPARATUS. CHEMISCHE FABRIK AUF ACTIEN (VORM. E. SCHERING), Berlin, Germany.
Filed September 7, 1905. Serial No. 12,313. PUBLISHED SEPTEMBER 3, 1907.

66,069. [WITHDRAWN.]

66,070. COMPOUND OF MALT AND HOPS. FRANK M. DOYLE, Boston, Mass.
Filed April 16, 1907. Serial No. 26,741. PUBLISHED SEPTEMBER 3, 1907.

66,071. CERTAIN CLOTHING. F. A. PATRICK & Co., Duluth, Minn.
Filed April 10, 1907. Serial No. 26,605. PUBLISHED SEPTEMBER 3, 1907.

66,072. TYPE-WRITING MACHINES. FABRIK STOLZENBERG DEUTSCHE BUREAU-EINRICHTUNGS-GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Oos, Germany.
Filed May 26, 1906. Serial No. 19,878. PUBLISHED SEPTEMBER 3, 1907.

66,073. MAGAZINES. ROLLAND R. FISHER, Freeport, Ill.
Filed May 14, 1907. Serial No. 27,370. PUBLISHED SEPTEMBER 3, 1907.

66,074. NEWSPAPER. WILLIAM R. HEARST, New York, N. Y.
Filed May 14, 1906. Serial No. 19,487. PUBLISHED SEPTEMBER 18, 1906.

66,075. NEWSPAPER. WILLIAM R. HEARST, New York, N. Y.
Filed May 14, 1906. Serial No. 19,490. PUBLISHED SEPTEMBER 18, 1906.

66,076. NEWSPAPER. WILLIAM R. HEARST, New York, N. Y.
Filed May 14, 1906. Serial No. 19,491. PUBLISHED SEPTEMBER 18, 1906.

66,077. NEWSPAPER. WILLIAM R. HEARST, New York, N. Y.
Filed May 14, 1906. Serial No. 19,492. PUBLISHED SEPTEMBER 18, 1906.

66,078. NEWSPAPER. WILLIAM R. HEARST, New York, N. Y.
Filed May 14, 1906. Serial No. 19,495. PUBLISHED SEPTEMBER 18, 1906.

66,079. NEWSPAPER. WILLIAM R. HEARST, New York, N. Y.
Filed May 14, 1906. Serial No. 19,498. PUBLISHED SEPTEMBER 18, 1906.

66,080. NEWSPAPER. WILLIAM R. HEARST, New York, N. Y.
Filed May 14, 1906. Serial No. 19,500. PUBLISHED SEPTEMBER 18, 1906.

66,081. NEWSPAPER. WILLIAM R. HEARST, New York, N. Y.
Filed May 14, 1906. Serial No. 19,501. PUBLISHED SEPTEMBER 18, 1906.

66,082. MAGAZINE. THE GRAFTON PRESS, New York, N. Y.
Filed July 8, 1907. Serial No. 28,667. PUBLISHED SEPTEMBER 3, 1907.

66,083. WHISKY. JESSE MOORE HUNT CO., San Francisco, Cal.
Filed June 24, 1905. Serial No. 8,932. PUBLISHED SEPTEMBER 3, 1907.

66,084. TYPE-WRITER RIBBONS AND TYPE-WRITER CARBON-PAPER. THE MONARCH TYPEWRITER COMPANY, Syracuse, N. Y.
Filed June 28, 1907. Serial No. 28,454. PUBLISHED SEPTEMBER 3, 1907.

66,085. MALT EXTRACT. PARAGON MALT EXTRACT CO., New York, N. Y.
Filed July 30, 1907. Serial No. 29,114. PUBLISHED SEPTEMBER 3, 1907.

66,086. [WITHDRAWN.]

66,087. WHISKY. WM. SANDERSON & SON, Leith, Scotland.
Filed November 10, 1906. Serial No. 23,248. PUBLISHED SEPTEMBER 3, 1907.

66,088. PANTALOONS. J. SCHOENEMAN, Baltimore, Md.
Filed June 22, 1906. Serial No. 20,501. PUBLISHED SEPTEMBER 3, 1907.

66,089. BEER. UNION BREWING & MALTING CO., San Francisco, Cal.
Filed August 10, 1905. Serial No. 11,491. PUBLISHED SEPTEMBER 3, 1907.

66,090. NEWSPAPER. WILLIAM R. HEARST, New York, N. Y.
Filed May 14, 1906. Serial No. 19,486. PUBLISHED SEPTEMBER 18, 1906.

TRADE-MARKS CANCELED.

44,174. CHOCOLATE AND CANDY. THEODORE H. AUERBACH, Boston, Mass. Registered February 14, 1905. Canceled September 30, 1907.

46,253. CHOCOLATE AND CANDY. THEODORE H. AUERBACH, Boston, Mass. Registered September 12, 1905. Canceled September 30, 1907.

LABELS

REGISTERED NOVEMBER 5, 1907.

13,849.—*Title:* "FORTUNE TELLER COFFEE." (For Coffee.) THE JAMES HEEKIN CO., Cincinnati, Ohio. Filed September 19, 1907.

13,850.—*Title:* "ARBUCKLES' CERTIFIED COFFEES." (For Coffee.) ARBUCKLE BROS., New York, N. Y.: Pittsburg, Pa., and Chicago, Ill. Filed October 3, 1907.

13,851.—*Title:* "HYBALL GINGER ALE." (For Ginger-Ale.) SETHNESS COMPANY, Chicago, Ill. Filed September 19, 1907.

13,852.—*Title:* "HORLACHER 9 MONTHS OLD." (For Beer.) FRED. H. HORLACHER, Allentown, Pa. Filed September 25, 1907.

13,853.—*Title:* "COCA COLA." (For a Non-Alcoholic Beverage.) THE COCA COLA COMPANY, Atlanta, Ga. Filed September 24, 1907.

13,854.—*Title:* "TATE SPRING MINERAL WATER." (For Mineral Water.) THOS. TOMLINSON, Tate Springs, Tenn. Filed September 28, 1907.

13,855.—*Title:* "PREFERITO." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed September 21, 1907.

13,856.—*Title:* "COMPLIMENTS OF THE SEASON." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed September 21, 1907.

13,857.—*Title:* "PURELLO." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed September 21, 1907.

13,858.—*Title:* "VOLUMO." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed September 21, 1907.

13,859.—*Title:* "EL-KO." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed September 21, 1907.

13,860.—*Title:* "PALACE BOUQUET." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed September 21, 1907.

13,861.—*Title:* "ELATO." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed September 21, 1907.

13,862.—*Title:* "LAVA TEA." (For a Preparation for the Nerves and Brain.) JOHN J. RUEGG, Clifton, N. J. Filed October 5, 1907.

13,863.—*Title:* "PURITY BATH." (For a Toilet Deodorant.) MAY WALTON KENT, Chicago, Ill. Filed September 9, 1907.

13,864.—*Title:* "DIME." (For Evaporated Apples.) WALLERSTEIN PRODUCE CO., Richmond, Va. Filed September 30, 1907.

13,865.—*Title:* "ATLAS BRAND." (For Spices.) WOOLSON SPICE COMPANY, Toledo, Ohio. Filed October 2, 1907.

13,866.—*Title:* "DIXON'S MICA OIL." (For Mica-Oil.) JAMES Q. DIXON, Buffalo, N. Y. Filed October 3, 1907.

13,867.—*Title:* "PRESTO." (For a Silver-Cleaner.) PRESTO MFG. CO., Council Bluffs, Iowa. Filed August 15, 1907.

13,868.—*Title:* "T-WHARF RINGED FISH HOOKS." (For Fish-Hooks.) HORACE A. WHITTEMORE, Boston, Mass. Filed October 3, 1907.

PRINTS

REGISTERED NOVEMBER 5, 1907.

2,145.—*Title:* "KITCHEN PROFITS." (For Flour.) WASHBURN CROSBY COMPANY, Minneapolis, Minn. Filed August 7, 1907.

2,146.—*Title:* "RAINIER BEER." (For Beer.) SEATTLE BREWING & MALTING CO., Seattle, Wash. Filed October 3, 1907.

2,147.—*Title:* "BOYD'S CHART OF BY-PRODUCTS OF EC-ZINE." (For Ec-Zine Products.) CHARLES L. BOYD, Chicago, Ill. Filed September 26, 1907.

2,148.—*Title:* "MEN'S AND BOYS' APPAREL." (For Men's and Boys' Apparel.) H. C. LYTTON, Chicago, Ill. Filed October 5, 1907.

2,149.—*Title:* "THE HARVARD PIANO." (For Pianos.) THE JOHN CHURCH COMPANY, Cincinnati, Ohio. Filed October 3, 1907.

2,150.—*Title:* "THE EVERETT PIANO." (For Pianos.) THE JOHN CHURCH COMPANY, Cincinnati, Ohio. Filed October 3, 1907.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

AUXER *v.* PEIRCE, JR.

Decided May 15, 1907.

INTERFERENCE—MOTION TO DISSOLVE—DELAY IN BRINGING EXCUSED.

A delay of seven days in filing an amended motion to dissolve, curing objections relating to indefiniteness of the allegations of a prior motion, may be excused where it appears that the first motion attemped in good faith to comply with the practice of the Office.

APPEAL on motion.

CABLE-HANGER.

Messrs. Thurston & Woodward for Auxer.

Messrs. Owen & Owen and *Messrs. Church & Church* for Peirce, Jr.

MOORE, *Acting Commissioner, now Commissioner:*

This is an appeal by Auxer from the decision of the Examiner of Interferences refusing to transmit his motions to dissolve the interference.

Auxer's motion for dissolution filed February 25, 1907, in response to an order to show cause why judgment on the record should not be rendered against him, alleged the non-patentability of each count of the issue in view of a large number of domestic and foreign patents cited. This motion was brought within the proper time, but was properly refused transmission by the Examiner of Interferences on the ground that the motion is indefinite in that it fails to specify what particular patents are to be urged against the respective counts or are to be combined together to show anticipation.

Seven days from the date of the above decision of the Examiner of Interferences Auxer filed an amended motion to dissolve. The form of this motion was not objected to by the Examiner of Interferences; but he refused transmission on the ground that it was—

filed late and is accompanied by no reasons to show why a specific motion was not filed in the first place.

The motion is accompanied by the affidavit of counsel that it is filed in good faith and not for the purpose of delay and that the former motion to dissolve was thought at the time it was filed to set forth with sufficient particularity the grounds for dissolution in view of the simple nature of the invention involved.

Allowing for the time required for transmission in the mails, this motion was filed promptly after the decision of the Examiner of Interferences refusing to transmit the prior motion. Reference to the former motion shows that appellant considered the patents cited by him as divisible into two groups, and he stated how he proposes to combine the two groups to anticipate the counts; but he failed to specify which patents constitute the respective groups. The simple character of the invention is admitted by the opponent. In view of this attempt to apply the references, the promptness with which the second motion was filed, and the fact that refusal of the motion will be fatal to appellant's case, it is thought the last motion to dissolve should be transmitted to the Primary Examiner.

The decision of the Examiner of Interferences is reversed as to the amended motion and is affirmed as to the prior motion.

COLLOM *v.* THURMAN.

PATENT INTERFERENCE.

Decided June 21, 1907.

INTERFERENCE—CONSTRUCTION OF ISSUE—EQUIVALENTS.

Where the claim in issue calls for a "plurality of blast-nozzles," a device which has an "oscillating blast-nozzle" cannot be considered as a reduction to practice on the ground that it is an equivalent. In the consideration of an interference the Patent Office is no more competent than the courts to say that an element which an applicant has placed in his claims is an immaterial one. (*Streat* v. *Freckleton*, 87 O. G., 695.)

APPEAL from Examiners-in-Chief.

PNEUMATIC RENOVATOR.

Mr. H. S. Bailey and *Messrs. Byrnes & Townsend* for Collom.

Messrs. Higdon & Longan and *Mr. John S. Barker* for Thurman.

MOORE, *Commissioner:*

This is an appeal by Collom from a decision of the Examiners-in-Chief affirming a decision of the Examiner of Interferences and awarding priority of invention to Thurman upon the following issue:

1. In a pneumatic renovator, the combination with a casing, of a plurality of blast-nozzles carried by said casing, and an extensible handle connected with said casing and provided with an air-supply conduit, said handle having two members, one longitudinally movable relative to the other and said handle comprising a valve situated outside said casing, said valve being governed by the longitudinal movement of one of said members.

2. In a pneumatic renovator, the combination with a casing, of a plurality of blast-nozzles carried by said casing, and a telescopic handle connected with said casing and provided with an air-supply conduit, said handle having two members, one telescoping the other and said handle comprising a valve situated outside said casing, said valve being governed by the telescopic movement of one of said members.

3. In a pneumatic renovator, the combination with a casing, of a plurality of blast-nozzles carried by said casing, a hollow member having ports communicating with said nozzles, and a second hollow member sliding in said first-named member and provided with ports adapted to successively register with the ports in said first-named member.

4. In a carpet-renovator, a casing having blast-nozzles and air-passages leading to said nozzles, a handle formed of two members, one of which is movable relative to the other, and an air-valve controlling said passages and actuated by said movable member.

5. In a carpet-renovator, a casing having blast-nozzles and air-passages leading to said nozzles, a handle formed of two members, one of which is movable relative to the other, an air-valve controlling said passages and actuated by said movable member, and means for limiting the operative stroke of said movable member.

6. In a carpet-renovator, a casing having blast-nozzles and air-passages leading to said nozzles, a handle formed of two members, one of which is movable relative to the other, an air-valve controlling said passages and actuated by said movable member, and abutments for limiting the reciprocatory movement of said movable member and valve.

7. In a carpet-renovator, a casing having blast-nozzles, a handle consisting of two members, one of which is reciprocally mounted within the other, said renovator having an inlet-port and air-passages extending from said port to said blast-nozzles, and a valve connected to the reciprocatory member of said handle and arranged to control said air-passages.

Thurman has taken no testimony and is therefore restricted to his record date, November 5, 1904. Collom in his preliminary statement alleged conception, disclosure, and the making of drawings about May 19, 1902, the making of a model about February 14, 1903, and a reduction to practice on December 20, 1904.

The Examiner of Interferences held that Collom had not proved reduction to practice prior to Thurman's filing date, that the testimony tending to show conception by Collom prior to that date was not satisfactory, but that if it be held to so establish conception Collom was not diligent in reducing the invention to practice just prior to Thurman's record date and subsequent thereto. The Examiners-in-Chief held that Collom had proved no date sufficiently early to overcome Thurman's filing date.

Collom has introduced in evidence as "Exhibit No. 3" and "Exhibit No. 5" two machines which are alleged to embody the invention in issue.

Exhibit No. 3 comprises a casing having therein an oscillatory drum provided with a single slot from which the blast of air is projected upon the carpet in alternate directions as the drum is oscillated in consonance with the backward-and-forward movement of the renovator. Branch pipes lead from the main air-supply pipe to each end of this drum, a flexible branch pipe connecting the main air-supply pipe to the outer member of the handle of the renovator. Manifestly the exhibit is not an embodiment of the invention set forth in counts 1, 2, and 3 of the issue, each of which includes as an element "a plurality of blast-nozzles carried by said casing," nor of counts 4, 5, 6, and 7, each of which includes as an element "a casing having blast-nozzles and air-passages leading to said nozzles."

It is urged that this exhibit should be considered a reduction to practice because the oscillating blast-nozzle is the equivalent of two nozzles facing in opposite directions; but in the consideration of an interference the Office is no more competent than the courts to say that an element which an applicant has placed in his claims is an immaterial one. (*Streat* v. *Freckleton*, 87 O. G., 695.)

In view of the holding that this exhibit does not embody the invention in issue it is unnecessary to consider the testimony as to the time when it was made and tested.

Exhibit No. 5 is the renovator shown in Collom's application in interference and embodies the invention in issue.

Collom testifies that work on this machine was begun about November 30, 1904, and that the machine was completed and put in operation before Christmas of that year. (Qs. 180–182.)

The only other witness who testified with any definiteness as to the date when work on this machine was started and when the machine was completed is Nock, in whose shop it was constructed.

Tabor and Crawford each testifies that he was familiar with the machine and its operation; but neither fixes the time when he first saw it used. Each of them testified that he could fix this time by reference to certain books, (Tabor, Q. 24; Crawford, Q. 15;) but these books were not produced, nor did either witness testify to having looked up the entries therein to which he had referred.

Nock testifies that he commenced work on "Exhibit No. 5" October 1, 1904, and that it was completed not later than December 7, 1904. (Qs. 20–21.) He does not say how he fixes these dates. No bill for this work is produced, and he makes no reference to an entry in his books, although it is apparent from his answer to question 6, when testifying as to "Exhibit No. 3," that he had books to which reference could have been made.

This testimony is clearly insufficient to establish that work was commenced on "Exhibit No. 5" earlier than November 30, 1904, which according to Collom's preliminary statement and his testimony is the time when he began work on this machine.

It is therefore not necessary to consider the testimony offered to establish conception and disclosure by Collom prior to Thurman's record date. If this testimony is not sufficient to establish such conception, then Collom was the last to conceive and the last to reduce to practice. If it is sufficient, then Collom, while the first to conceive, was the last to reduce to practice, and there is no testimony to show that he was diligent at the time Thurman filed his application nor at any time subsequent thereto until he commenced work on "Exhibit No. 5." In neither case can Collom prevail.

The decision of the Examiners-in-Chief awarding priority of invention to Thurman is affirmed.

CROUSE-HINDS COMPANY *v.* APPLETON ELECTRIC COMPANY.

OPPOSITION.

Decided September 25 1907.

1. TRADE-MARKS—OPPOSITION—DISSIMILARITY OF MARKS—DEMURRER.

Held that trade-marks for electric-wiring purpose consisting of the words "Wirelets" and "Conduiets" are not so similar in appearance as to deceive a purchaser using reasonable care and diligence in the selection of the goods and that a demurrer to the notice of opposition was properly sustained.

2. SAME—SAME—SAME—UNFAIR COMPETITION IN TRADE NOT CONSIDERED.

The question of unfair competition in trade cannot be considered in an opposition proceeding.

APPEAL from Examiner of Interferences.

OUTLET-BUSHINGS FOR ELECTRIC-WIRING PURPOSES.

Mr. Arthur E. Parsons for Crouse-Hinds Company.

Mr. Luther L. Miller for Appleton Electric Company.

MOORE, *Commissioner:*

This is an appeal from the decision of the Examiner of Interferences sustaining the demurrer of the Appleton Electric Company and dismissing the notice of opposition filed by the Crouse-Hinds Company on the ground that the trade-mark of the applicant does not so nearly resemble the trade-mark of the opposer as to cause confusion in the mind of the public or as to deceive purchasers. The trade-mark sought to be registered by the applicant is the word "Wirelets" for outlet-bushings for electric-wiring purposes. The trade-mark of the opposer is the word "Condulets." These trade-marks are applied in the same manner to goods which are substantially identical in construction. It is urged that the trade-marks have the same suggestive meanings, "wire-outlets" and "conduit outlets" each signifying an outlet for electrical conductors, and that the manner in which the marks applied to articles of the same construction is calculated to cause confusion in the mind of the public. In the notice of opposition it is alleged that actual confusion in trade has been caused by the similarity of these marks. It is therefore contended that the demurrer should have been overruled and the applicant required to answer the notice of opposition, so the opposer might present testimony relative to this confusion in trade.

The questions whether the goods of the opposing parties are identical and whether the marks are applied to such goods in the same manner by the opposing parties relate to unfair competition in trade, and it is not a matter which can be settled in opposition proceedings.

The similarity of appearance in the words "Wirelets" and "Condulets" is not in my opinion such as would deceive an ordinary purchaser using reasonable care and diligence in the selection of the goods. In the case of *Hall and Ruckel* v. *Ingram* (126 O. G., 759) the Court of Appeals of the District of Columbia said:

Two trade-marks are substantially the same if the resemblance would deceive an ordinary purchaser giving such attention as he usually gives in making a purchase and to cause him to purchase one article mistaking it for the other. (See *Gorham Company* v. *White*, 14 Wall., 511; *McLean* v. *Fleming*, 96 U. S., 256; *Gaines* v. *Carlton Importation Company*, 27 App. D. C., 574; *Buchanan-Anderson-Nelson Company* v. *Breen & Kennedy*, 27 App. D. C., 574.)

While in the present case the marks may possibly be considered as remotely having the same suggestion, it is not believed that this is sufficient in view of the difference in appearance and sound of the respective words to cause an ordinary purchaser to mistake the goods of one manufacturer for those of the other.

The decision of the Examiner of Interferences is affirmed.

LEWIS AND BROS. COMPANY *v.* PHOENIX PAINT AND VARNISH COMPANY.

TRADE-MARK INTERFERENCE.

Decided August 3, 1907.

1. TRADE-MARK—INTERFERENCE—RE-FORMATION OF ISSUE.

Where the issue of a trade-mark interference is declared to be for "mixed paints" it should not be re-formed so as to read "ready-mixed paints" when one of the parties does not use the words "ready-mixed paints" to define the goods upon which the mark is used.

2. SAME—SAME—SAME CLASS OF GOODS—CONSIDERED AT FINAL HEARING.

The question whether the goods to which a mark forming the issue of an interference has been applied by the respective parties are of the same descriptive properties is a question which may be decided by the Examiner of Interferences at final hearing.

APPEAL from Examiner of Interferences.

TRADE-MARK FOR PAINTS.

Mr. Francis M. Phelps for Lewis and Bros. Company.

Mr. T. W. Johnson for Phoenix Paint and Varnish Company.

BILLINGS, *Acting Commissioner.*

This is an appeal by the Phoenix Paint and Varnish Company from the decision of the Examiner of Interferences dismissing its motion to re-form the issue without prejudice to the moving party to urge the subject-matter thereof at final hearing.

The issue of the above interference is the word "Phoenix" for mixed paints. The testimony has been taken. It is now desired by the Phoenix Paint and Varnish Company to change the issue from "mixed paints" to "ready-mixed paints." It appears from the record that the issue was made "mixed paints" by the Examiner of Trade-Marks upon consideration of the definitions of the goods respectively used by the parties to this interference. In support of the motion it is urged that the testimony taken in the interference shows "mixed paints" and "ready-mixed paints" to be goods of distinctively different characteristics. An inspection of the respective files, however, shows that while the Phoenix Paint and Varnish Company claims the use of the mark as applied to "ready-mixed paints and stains, japans and varnishes" the John T. Lewis and Bros. Company claim the use of the mark applied to "mixed paints, white zinc and pigments other than white lead used for paints, in Class 16, Paints and painters' materials." It is therefore seen that John T. Lewis and Bros. Company do not use the words "ready mixed paints" to define the goods upon which their trade-mark is used. Obviously it would not be proper to change the issue so as to specifically exclude the goods now claimed by John T. Lewis and Bros. Company. It is believed that the issue as it now stands clearly defines those goods used by both parties which have common characteristics.

It is to be noted that the Examiner of Interferences has jurisdiction to decide at final hearing the question raised upon this motion—namely, whether "mixed paints" and "ready mixed paints" are goods of different descriptive properties, for the trade-mark statute provides for the determination of the question of the "right of registration to such trade-mark." The trade-mark statute gives a much larger jurisdiction than the patent statute, which merely provides for the determination of the question of priority.

The decision of the Examiner of Interferences is affirmed.

EX PARTE HERBST.

APPLICATION FOR PATENT.

Decided October 16, 1907.

REJECTION—EXPLANATION OF GROUNDS OF REJECTION BY EXAMINERS.

Where in answer to a rejection by the Examiner giving a fair statement of his reasons for rejection the applicant responds

by fully stating what he considered to be disclosed in the references, what he considered to be covered by the rejected claims, and why such claims were not anticipated and requests a further statement from the Examiner as to the bearing of the references upon the broadest claim presented, the Examiner should not finally reject merely upon the reasons formerly stated, but he should make a further statement of the reasons of rejection in the light of applicant's argument.

ON PETITION.

APPARATUS FOR COOLING SYRUP-CANS OF SODA-FOUNTAINS.

Mr. E. G. Siggers and *Mr. H. F. Riley* for the applicant.

BILLINGS, *Assistant Commissioner:*

This is a petition that the final rejection entered in the case be withdrawn and the references cited be more fully explained.

The record shows that the Examiner rejected certain claims in this application on certain specified patents, and he gave a fair statement of his reasons for the rejection. The applicant responded by filing a paper in which he quite fully stated what he considered to be disclosed in the references and what he considered to be covered by the claims which were rejected, and he pointed out why, in his opinion, the references did not meet the claims. He also asked for a further statement from the Examiner as to the bearing of the references upon the broadest claim presented. The Examiner responded by stating that the reasons for rejection were so fully stated in the first Office letter that any additional statement was unnecessary, and he finally rejected the claims. In the present condition of the case there is nothing for the applicant to do but to appeal to the Examiners-in-Chief.

While it is not incumbent upon the Office to answer all the arguments presented by counsel in the prosecution of his case, yet the prosecution of the case should be so conducted as to permit a fair chance for the amendment of the claims after the decision of the Office is made clear. In this particular case it is believed that the applicant was entitled to a further statement of the reasons for rejection in the light of his argument, so that he might amend or request a reconsideration in view of further argument.

The petition is granted.

PAPENDELL *v.* BUNNELL *v.* REIZENSTEIN *v.* GAISMAN *v.* GILLETTE.

PATENT INTERFERENCE.

Decided October 29, 1907.

1. INTERFERENCE—MOTION TO DISSOLVE—GROUND OF NON-PATENTABILITY BASED ON ART TO BE SUBSEQUENTLY CITED—TRANSMISSION.

Held that a motion to dissolve an interference on the ground that the claims in issue are not patentable in view of certain patents and others which "will be cited more than five days before the hearing" should not be transmitted. Rule 122 requires that the motion for dissolution must "contain a full statement of grounds relied upon."

2. SAME—MOTION TO DISSOLVE BROUGHT IN ANSWER TO ORDER TO SHOW CAUSE UNDER RULE 114 MAY BE TRANSMITTED.

The fact that a record judgment may be rendered against a junior party under the provisions of Rule 114 does not preclude him from presenting motions for dissolution.

APPEAL on motion.

SAFETY-RAZOR.

Messrs. Redding, Kiddle & Greeley for Papendell.

Messrs. Redding, Kiddle & Greeley and *Mr. A. P. Greeley* for Bunnell.

Messrs. Wiedersheim & Fairbanks for Reizenstein.

Mr. T. F. Bourne for Gaisman.

Mr. E. D. Chadwick and *Messrs. Bacon & Milans* for Gillette.

BILLINGS, *Assistant Commissioner:*

This case is before me upon appeals by Bunnell from the decision of the Examiner of Interferences denying the transmission of his motion for dissolution; by Reizenstein from the denial of the transmission of one motion for dissolution and also from the denial of the transmission in part of a second motion for dissolution, and by Gillette from the decision of the Examiner of Interferences transmitting Reizenstein's second motion in part.

The transmission of the motion for dissolution by Bunnell was denied upon the ground that the allegations upon which the motion was based were not sufficiently specific. The grounds alleged in that motion were irregularity in declaration of the interference, that the counts have different meanings in the cases of the different parties, and that the issue of the interference was not patentable—

* * * in view of the prior state of the art, part of which is set forth in United States Letters Patent No. 375,592, dated December 27, 1887, and granted to A. S. Aloe. Further matter showing the state of the art will be cited more than five days before the hearing on this motion as soon as found.

No sufficient reasons were alleged in support of the first and second grounds of this motion, and its transmission was properly denied as to these grounds. In respect to the third ground of the motion it is to be noted that but one patent is cited. There is a reservation that other art will be cited in connection with this ground of the motion before the hearing upon the same by the Primary Examiner. This portion of the motion is also informal. It has been held that where but a single reference is cited against a claim the motion may be transmitted. (*McCanna* v. *Morris*, 128 O. G., 1292.) In this case, however, the reference cited does not appear to be relied upon as wholly anticipating the issue, inasmuch as it is stated to be a part only of the art relied upon, and no other reference is cited, but the matter left open for further citation. The statement of reasons for the ground of the motion is wholly insufficient.

It is contended by Bunnell that under long standing practice he should be permitted to give notice of other references five days before the hearing of the motion. The reasons for this practice, which was followed in the past, but which has not been permitted for some time, do not now exist. Since the date of the decisions under which an applicant was permitted to give notice five days before the date of hearing of additional reasons for dissolving the interferences Rule 122 has been amended and the time within which motions may be brought in interference cases extended from twenty days to thirty days. It has also been amended to require that a motion for dissolution must contain "a full statement of the grounds relied upon."

The rule further provides that such motions—

should if possible be made not later than the thirtieth day after the statements of the parties have been received and approved.

It is therefore open to the applicant, if he is unable to make a sufficiently exhaustive search of the art within

the thirty days provided for by the rule, to present the motion for dissolution after the expiration of the thirty days, accompanied by a sufficient showing of compelling reasons why he was unable to present such motion at an earlier date. (*Sturgis* v. *Hopewell*, 109 O. G., 1067; *McKee* v. *Baker*, 120 O. G., 657; *Steinmetz* v. *Thomas*, 119 O. G., 1260.)

The decision of the Examiner of Interferences in refusing to transmit Bunnell's motion as to all grounds was right and is affirmed.

Reizenstein in his first motion for dissolution alleged that each count of the issue is an aggregation—

* * * according to the interpretation of the claims set forth in the decisions of *Reckendorfer* v. *Faber* (92 U. S., 347) and the decisions cited in and based upon this decision.

2d. That each of the counts of the interference has a different meaning when based upon the construction illustrated and described by the different parties hereto.

3d. That each issue of the interference is not patentable in view of certain prior patents.

Two patents were cited in support of the third ground of the motion, over each of which it is alleged "no invention is shown." The motion also states:

* * * and certain other Letters Patent and a state of art not herein cited but which will be cited and notice thereof, as well as reasons therefor, served upon the parties hereto more than five days before the hearing of this motion.

The first ground of this motion is insufficiently stated, for the reason that it is not pointed out in what respect the claims of the issue comprise aggregations and not combinations. The second ground is insufficiently stated, since the differences in the meanings of the claims are not pointed out. The third ground in so far as it relates to the cited patents is believed to be sufficient and should have been transmitted for the reasons stated in *McCanna* v. *Morris*, *supra*.

The decision of the Examiner of Interferences is affirmed as to the first and second grounds and is reversed as to the third, it being understood that subsequently-cited art should not be considered by the Primary Examiner in consideration of this motion for the reasons above stated.

In respect to Reizenstein's second motion it appears that the third ground thereof, which is substantially the same as the corresponding ground of the first motion, was transmitted, and in view of the conclusion above reached it is unnecessary to discuss this ground of the motion.

The first ground of Reizenstein's second motion comprises merely an elaboration of the first ground of his original motion, and this was denied transmission by the Examiner of Interferences because in his opinion no reason appeared why this ground might not have been made specific in the first instance.

The record shows that the second motion by Reizenstein was filed five days after the decision upon his first motion was rendered and is supported by an affidavit by counsel in the case setting forth facts in excuse of the delay and further stating that the reasons set forth in connection with the first ground of the first motion were believed to be sufficient, for the reason that in the *Reckendorfer* v. *Faber* decision the analogy to the present case was believed to be apparent, since—

* * * each of the counts of the present interference claims the combination of a razor with a handle; the party Reizenstein relied upon the seeming evident applicability of the rubber and its handled as aggregations to the razor and its handle in the present instance as like aggregations.

In view of the fact that Reizenstein moved promptly to make his motion in respect to this ground more specific when informed that the original ground was not presented with sufficient particularity, it is believed that the motion should have been transmitted as to this ground, especially in view of the fact that the showing in support of the second motion was considered by the Examiner of Interferences sufficient to warrant its transmission as to the third ground.

No attempt has been made to set forth the second ground of the motion with more particularity, and this ground of the motion was properly denied transmission.

The decision of the Examiner of Interferences is reversed as to the first ground of Reizenstein's second motion and is affirmed as to the second ground. Since it has been held that the original motion should have been transmitted as to the third ground, it is not necessary to consider that branch of the motion in connection with this appeal.

It is contended in behalf of Gillette that motions to dissolve an interference upon the ground that the issue is not patentable should not be transmitted where such motions are brought by junior parties in response to an order to show cause under Rule 114. It is urged that the junior party against whom a record judgment will be rendered is in no better position to contest the question of patentability of the issue to the senior party than any other member of the general public and that he should not therefore be heard to deny the patentability of the same. This contention is believed to be untenable. Judgment of priority will not be rendered in any case except upon a patentable invention. Until the interference has been finally determined the parties involved in such interference clearly have the right to invoke all of the provisions of the rules which may be applicable to the case, and since Rule 122 includes a provision that motions for dissolution may be presented upon the ground that the issue is not patentable any party to an interference has a right under proper conditions to present a motion upon this ground within the time limit prescribed by the rule.

To summarize: The decision of the Examiner of Interferences in refusing to transmit Bunnell's motion is affirmed. The motions of Reizenstein should be transmitted in so far as relates to the denial of the patentability of the claims in issue upon the ground of aggregation and in view of the two references cited in the third part of these motions.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 31, 1907.

The Kittredge Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Business Magazine Company, of Knoxville, Tenn., for registration of a trade-mark and a trade-mark registered to The Book-keeper Publishing Company, Limited, of 61 Fort street, Detroit, Mich., and a trade-mark registered to The Kittredge Company, of 800 Broad street, Newark, N. J., and 73 Reade street, New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said The Kittredge Company having been returned undelivered, notice is hereby given to The Kittredge Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 26, 1907.

Mayer Sam & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Palace Clothing Company, of 709-711 Kansas avenue, Topeka, Kans., for registration of a trade-mark and a trade-mark registered to Mayer Sam & Company, of 24 West One Hundred and Twenty-fifth street, New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Mayer Sam & Company having been returned undelivered, notice is hereby given to the said Mayer Sam & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 22, 1907.

Adams Packing Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Edward C. Flaccus, of Wheeling, W. Va., for registration of a trade-mark and a trade-mark registered to the Adams Packing Company, of Indianapolis, Ind., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Adams Packing Company having been returned undelivered, notice is hereby given to the said Adams Packing Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 14, 1907.

The Saint Paul Roller Mill Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Ralston Purina Company, of Eighth and Gratiot streets, St. Louis, Mo., for registration of a trade-mark and a trade-mark registered to The St. Paul Roller Mill Company, of St. Paul, Minn., and the notice of said declaration mailed by the Patent Office in the usual manner to the said The St. Paul Roller Mill Company having been returned undelivered, notice is hereby given to the said The St. Paul Roller Mill Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 12, 1907.

Reade Manufacturing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The Hewitt Brothers Soap Company, of Dayton, Ohio, for registration of a trade-mark and a trade-mark registered to the Reade Manufacturing Company, of Chicago, Ill., and it appears from the record of the case that the registrant, Reade Manufacturing Company, or its attorneys of record cannot be located.

Notice is therefore hereby given to said Reade Manufacturing Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 7, 1907.

J. Meyer & Company, their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of P. Raguet Fils & R. Vignes, of Troyes, France, for registration of a trade-mark and a trade-mark registered to J. Meyer & Company, of New York, N. Y., and it appears from the record of the case that the registrant, J. Meyer & Company, cannot be located.

Notice is therefore hereby given to said J. Meyer & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 4, 1907.

McCulloch & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Alart & McGuire, of 66 Madison street, borough of Manhattan, New York, N. Y., for registration of a trade-mark and a trade-mark registered to McCulloch & Company, of 88 Water street, New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said McCulloch & Company having been returned undelivered, notice is hereby given to the said McCulloch & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

[BY AUTHORITY OF CONGRESS.]

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Reissues	3	No. 12,717 to No. 12,719, inclusive.
Total	710	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	1	....	New Hampshire	....	....
Arizona Territory	3	....	New Jersey	25	6
Arkansas	3	....	New Mexico Ter'ty	....	....
California	19	3	New York	93	40
Colorado	10	3	North Carolina	1	....
Connecticut	13	2	North Dakota	3	....
Delaware	1	1	Ohio	45	9
District of Columbia	2	2	Oklahoma Territ'y	7	....
Florida	3	....	Oregon	4	....
Georgia	2	4	Panama	....	....
Hawaii Territory	....	....	Pennsylvania	49	12
Idaho	1	....	Philippine Islands	....	....
Illinois	67	5	Rhode Island	2	....
Indian Territory	2	....	South Carolina	....	....
Indiana	16	5	South Dakota	2	....
Iowa	10	2	Tennessee	2	....
Kansas	6	1	Texas	3	1
Kentucky	3	1	Utah	1	....
Louisiana	3	1	Vermont	....	....
Maine	2	1	Virginia	3	....
Maryland	4	2	Washington	10	1
Massachusetts	31	4	West Virginia	6	....
Michigan	19	6	Wisconsin	9	1
Minnesota	13	2	Wyoming	....	....
Mississippi	....	....	U. S. Army	....	....
Missouri	15	6	U. S. Navy	....	....
Montana	....	....			
Nebraska	6	....	Total to citizens of the United States	522	121
Nevada	2	....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina	....	....	Natal	....	....
Austria-Hungary	2	1	Netherlands	....	....
Belgium	....	....	Newfoundland	....	....
Brazil	2	....	New South Wales	....	....
British West Indies	....	....	New Zealand	....	....
Canada	11	1	Norway	....	....
Cape Colony	....	....	Persia	....	....
Chile	....	....	Queensland	....	....
China	....	....	Roumania	....	....
Colombia	1	....	Russia	....	....
Cuba	....	....	Scotland	1	....
Denmark	....	....	South Australia	....	....
Ecuador	....	....	Spain	....	....
England	9	1	Sweden	1	....
France	4	6	Switzerland	2	....
Germany	14	3	Transvaal, South Africa	1	....
Haiti	....	....	Victoria	1	....
Ireland	1	....	Western Australia	....	....
Italy	1	1			
Japan	....	....			
Java	....	....	Total to citizens of foreign countries	51	13
Mexico	....	....			

Change in Classification.

(ORDER NO. 1741.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 26, 1907.

The following change in the classification of patents is hereby directed, to take effect this day:

In Division XXXVIII, class 215, Bottles and Jars, establish the following subclass:

Bottle attachments—
116. Nursing-bottle holders.

EDWARD B. MOORE,
Commissioner.

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 22, 1907.

Adams Packing Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Edward C. Flaccus, of Wheeling, W. Va., for registration of a trade-mark and a trade-mark registered to the Adams Packing Company, of Indianapolis, Ind., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Adams Packing Company having been returned undelivered, notice is hereby given to the said Adams Packing Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business November 5, 1907.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Toilet; Signals; Garment-Supporters.	Oct. 22	Aug. 10	625
303	XVII. Linotyping; Printing; Matrix-Making; Nut and Bolt Locks; Clutches.	Oct. 16	Oct. 1	209
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electricity, Medical and Surgical; Electric Signaling; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas and Canes.	Oct. 11	Aug. 22	308
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Towers; Iron Structures.	Oct. 10	Oct. 5	234
147	XXIX. Coopering; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking-Tools; Woodworking; Fire-Escapes; Ladders.	Oct. 9	Sept. 10	340
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Oct. 7	Sept. 10	336
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Fishing and Trapping; Stationery; Stone-Working; Educational Appliances.	Oct. 7	Sept. 3	434
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Oct. 5	Sept. 13	279
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Oct. 2	Sept. 17	337
172	XXXI. Alcohol; Charcoal and Coke; Ammonia, Water, and Wood Distillation; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Oils, Fats, and Glue; Water Purification; Mineral Oils.	Oct. 2	Sept. 13	262
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants and Flowers.	Oct. 1	Sept. 12	306
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus; Harness.	Oct. 1	Aug. 14	354
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Sept. 30	Sept. 25	211
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Sept. 28	July 20	494
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Sept. 27	Aug. 31	287
332	X. Carriages and Wagons.....	Sept. 26	Aug. 27	535
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Sept. 26	Aug. 8	397
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Sept. 24	Sept. 9	349
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Sept. 19	Sept. 27	359
142	IX. Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage; Air and Gas Pumps.	Sept. 18	Sept. 6	224
152	XXX. Lamps and Gas-Fittings; Fluid-Pressure Regulators; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Sept. 16	Sept. 24	272
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heat-Engine Plants.	Sept. 16	Aug. 19	633
288	XIX. Furnaces; Stoves and Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel.	Sept. 16	Aug. 3	505

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Sept. 16	July 1	529
322	XII. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Sept. 14	Aug. 27	649
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Measuring Instruments; Windwheels; Engraving.	Sept. 13	Oct. 7	348
327	XVIII. Steam-Engines; Steam-Boilers; Steam-Engine Valves; Steam and Vacuum Pumps; Injectors and Ejectors.	Sept. 13	Aug. 6	356
167	V. Bookbinding; Harvesters; Jewelry; Music.	Sept. 7	Aug. 19	352
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Sept. 5	July 22	499
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Presses; Tobacco; Store-Service; Pneumatics.	Sept. 4	Sept. 3	351
308	XV. Bread, Pastry, and Confection Making; Coating; Laminated Sheets and Fabrics; Fuel; Glass; Hydraulic Lime and Cement; Paper-Making; Paving; Plastics; Plastic Block and Earthenware Apparatus; Plastic Compositions; Photography.	Sept. 3	Aug. 27	665
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Sept. 3	Aug. 20	559
107	XXXVII. Electricity, Conductors; Electric Lighting; Electricity, General Applications.	Sept. 3	July 11	649
312	VII. Games and Toys; Mechanical Motors; Paper Manufactures; Velocipedes; Optics.	Aug. 29	Aug. 31	378
307	XIV. Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal-Ware Making; Tools; Wire-Working; Compound Tools.	Aug. 26	July 8	265
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Aug. 20	July 6	603
105	XXVI. Electricity, Generation; Electric Heating and Rheostats; Electric Railways; Motive Power.	Aug. 5	July 15	444
280	XL. Deposit and Collection Receptacles; Special Receptacles and Packages; Check-Controlled Apparatus; Fine Arts; Paper Receptacles; Package and Article Carriers; Wooden Receptacles; Baggage; Lighting-Fixtures; Cloth, Leather, and Rubber Receptacles.	July 30	June 22	1000
109	XVI. Telegraphy; Telephony.....	July 27	June 4	659
321	XXXIX. Water Distribution; Baths and Closets.	July 20	June 13	774
352	XLI. Railway Draft Appliances; Railway-Ties and Fasteners; Railway-Rails and Joints; Resilient Tires and Wheels.	July 6	May 18	1229
	Total number of applications awaiting action			18,599
161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS.			
	Trade-Marks.....	Oct. 30	Oct. 12	278
	Designs.....	Nov. 4	Oct. 2	53
	Labels and Prints.....	.....	.....	....

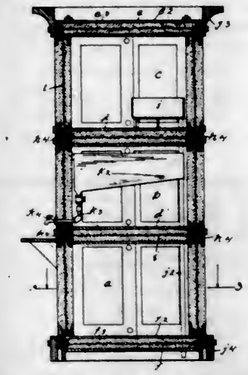
Communications to the Patent Office.

RULE 9. A separate letter should in every case be written in relation to each distinct subject of inquiry or application. Assignments for record, final fees, and orders for copies or abstracts must be sent to the Office in separate letters.

PATENTS

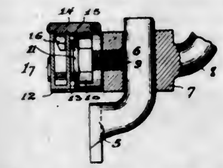
GRANTED NOVEMBER 12, 1907.

870,532. REFRIGERATOR. JOSEPH A. AGRILLO, Rockaway Beach, N. Y. Filed Mar. 2, 1907. Serial No. 360,164.



A refrigerator divided into separate compartments one above another, said refrigerator being composed of front, back and side walls and of a top, a bottom, and horizontal partitions by which the refrigerator is divided into separate compartments one above another, said front, side and back walls, the top, the bottom and horizontal partitions being all composed of frames filled in with concrete, and corner frames also filled in with concrete, all of said frames being provided with interlocking means whereby they may be secured together by means of bolts passed therethrough.

870,533. LOCK-CONTROLLED NUT AND SET-SCREW GUARD. KARL E. AHLBERG and JOSEPH AHLBERG, Chicago, Ill. Filed Feb. 23, 1907. Serial No. 359,013.



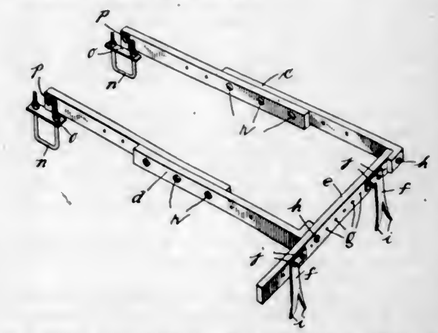
1. In a guard of the character described, the combination with a fastening device having a wrench-hold and a locking member, of a guard incasing said wrench-hold and provided with a movable key-controlled coöperating locking member, said coöperating locking members preventing removal but permitting rotation of said guard upon said fastening device, substantially as described.

2. In a guard of the character described, the combination with a fastening device having a wrench-hold and an annular locking groove, of a guard incasing said wrench-hold and provided with a removable key-controlled locking tongue adapted to engage said locking groove in a manner to prevent removal but permit rotation of said guard upon said fastening device, substantially as described.

3. In a guard of the character described, the combination with a set-screw having a squared head provided with an annular groove, of a guard incasing said head, said guard having a key-controlled pivoted member carrying a locking tongue adapted to engage said annular groove in a manner to prevent withdrawal but permit rotation of said guard upon said head, substantially as described.

4. In a guard of the character described, the combination with a set-screw having a squared head provided with an annular groove, of a guard incasing said head, said guard having a fixed inwardly projecting locking tongue engaging said groove and further having a key-controlled pivoted member carrying a locking tongue adapted to engage said annular groove at a point opposite said fixed locking tongue, whereby said guard may be locked rotatably upon said head, substantially as described.

870,534. CLEANING ATTACHMENT FOR HARVESTERS. CARL AMUNDSON, Slayton, Minn. Filed Apr. 19, 1907. Serial No. 369,133.



1. A cleaning attachment for harvesters consisting of a pair of side-arms; a front board detachably secured to one of said side-arms and connected with the other of said side-arms, said front-board being formed with a plurality of holes; and a pair of claws detachably secured to said front-board and movable along the same from hole to hole therein.

2. A cleaning attachment for harvesters consisting of a pair of two-part side-arms, the parts of each side-arm overlapping and being adjustable with respect to each other; a front-board formed with holes; bolts passing through a pair of said holes for securing said front-board to an end of each of said side-arms; and claws detachably secured to said front-board and movable along the same from hole to hole therein.

870,535. PROJECTION APPARATUS. EDWARD BAUSCH, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 25, 1907. Serial No. 370,200.

1. In a condensing lens system, a lens element comprising a tube having an inwardly-extending flange adapted to engage a lens, and a retaining ring slidingly fitting within said tube and having means to engage the lens to hold the latter to the flange.

2. In a condensing lens system for projection apparatus,

a lens element comprising a tube, having a lens seat formed therein, a retaining ring fitted within said tube, adapted to engage a lens on the seat and provided with a lens-seat, and a retaining ring for a lens held on the latter lens-seat.

3. In a condensing lens system, a lens element comprising a lens tube, a lens seat in said tube, a lens for the seat, a ring having means to engage the lens on the seat, a second lens seated against the ring, and a ring holding the latter lens in place and provided with friction devices to engage the wall of the tube.



4. In a condensing lens system, a lens element comprising a lens tube having an inwardly-extending flange, and a retaining ring having inwardly-extending fingers to center the lens on the flange.

5. In a condensing lens system, a lens element comprising a lens tube having a lens seat therein, and a retaining ring having spaced devices to center the lens on its seat.

6. In a condensing lens-system, a lens element comprising a tube, an inwardly-extending flange arranged within the tube and having openings, a lens seated on the flange and surrounded by the openings, and a retaining device for the lens.

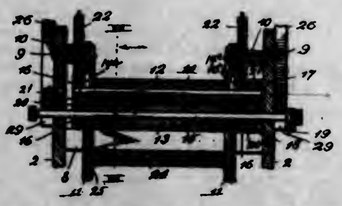
7. In a condensing lens-system, a lens element comprising a tube, an inwardly-extending flange arranged within the tube and having openings, a lens seated on the flange and surrounded by the openings, and a retaining device for the lens, said device comprising a ring fitting within the tube and having inwardly-extending fingers engaging the lens.

8. In a condensing lens-system, a tube, a lens seated in the tube, and a retaining ring having fingers frictionally engaging the inner wall of the tube.

9. In a condensing lens system for projection apparatus, a lens element comprising a tube, and a pair of lenses supported in said tube, the support for one of said lenses comprising an annular flange provided with openings.

10. In a condensing lens system, a lens tube having an inwardly-extending annular flange provided with openings, and a lens seated on the flange and surrounded by the openings.

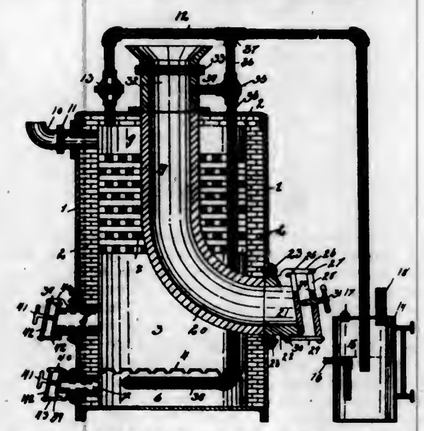
870,536. LAUNDRY-MACHINE. ROSS C. BEEKMAN, Independence, Kans. Filed Jan. 21, 1907. Serial No. 353,229.



1. In a machine of the character described, the combination with the washbench having upright standards rising above the supports for the tubs, and transverse strips connecting said standards; of a pair of channeled side bars carried by the standards and having oblique crossed grooves near their lower ends, and above them oppositely disposed upright slots, two rollers whose shafts pass through said side bars and the uppermost stands in said slots, ball bearings for the shafts arranged in boxes next outside the side bars, springs pressing the uppermost boxes downward, and a crank handle on the lower shaft and a removable and reversible water table adapted to engage either pair of grooves and to direct the water from the wringer in to the proper tub.

2. In a machine of the character described, the combination with the washbench having upright standards rising above the supports for the tubs, and transverse strips connecting said standards; of a pair of channeled side bars carried by the strips, spacing sleeves between said side bars and standards, bolts connecting these members and passing through said sleeves, two rollers whose shafts pass through said side bars, ball bearings for the shafts arranged in boxes next outside the side bars, intermeshing cog wheels connecting the two shafts, and a crank handle on the lower shaft.

870,537. GAS-GENERATOR. ROBERT M. BIDELMAN, Adrian, Mich. Filed Dec. 31, 1902, Serial No. 137,243. Renewed Mar. 11, 1907. Serial No. 361,831.

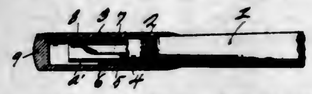


1. In a gas generator, the combination of a suitable casing, a combustion chamber therein having a suitable grate, a checker work above the combustion chamber, a retort, a pipe leading from the top of the retort downwardly through the combustion chamber, said pipe having a perforated end portion extending under the grate, a gas chamber above the checker work, a pipe leading therefrom, a scrubber into which the last named pipe leads, and means for connecting the upper end of the retort directly with said pipe.

2. In a gas generator, the combination of a suitable casing, a combustion chamber therein having a suitable grate, a checker work above the combustion chamber, and a second chamber above the checker work, a gas pipe leading from said second chamber, and a scrubber with which said pipe connects, a vertical pipe leading downwardly through the combustion chamber and under the grate, a retort passing downwardly through the checker work and combustion chamber having means for closing the ends thereof, and means for connecting the upper end of the retort alternately with said downwardly extending pipe, and with the pipe leading to the scrubber.

3. In a gas generator, the combination with a suitable case, a combustion chamber therein, a grate at the bottom of said chamber, a retort passing vertically downward through the case, and having a curved lower end that passes through the combustion chamber, and opens upon the exterior of the case, a gas pipe leading from the upper end of the combustion chamber, a scrubber with which said pipe communicates, a pipe leading from the upper end of the retort and passing downwardly having a lower perforated portion which lies under the grate, and means for connecting the upper end of the retort directly with the pipe leading to the scrubber.

870,538. FOUNTAIN-PEN. WILLIAM BOLLES, Toledo, Ohio. Filed Nov. 3, 1906. Serial No. 341,899.

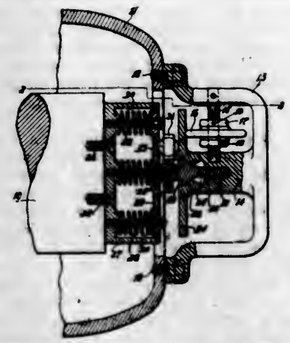


1. In a fountain pen, a pen cap closed at one end and provided with an annular ink-holding pocket opening in the direction of the closed end of the cap, substantially as described.

2. In a fountain pen, a pen cap closed at one end, and a member inserted into and held within the cap, said member having the end adjacent to the closed end of the cap reduced to provide an annular ink-holding pocket opening in the direction of the closed end of the cap, substantially as described.

3. In a fountain pen, the combination with the pen cap, closed at one end, and the pen nozzle adapted to receive the cap thereon, of a tubular member adapted to be inserted into and held within the cap, the end of the member adjacent to the closed end of the cap being reduced to provide an annular pocket opening in the direction of the closed end of the cap, the opposite end of said tubular member coöperating with the end of the pen nozzle to effect a liquid-tight joint, substantially as described.

870,539. SHAFT-OSCILLATOR. WILL F. BOUCHÉ, Norwood, Ohio, assignor to The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Sept. 14, 1905. Serial No. 278,525.



1. In combination, a shaft, a shaft oscillator therefor, comprising an eccentric disk, a plate mounted for universal movement and engaged by the periphery of said disk, and means for transmitting oscillatory movement between said plate and said shaft.

2. In combination, a shaft, a shaft oscillator therefor, comprising a disk eccentrically mounted on a spindle, a plate engaged by the periphery of said disk and mounted for rotary and oscillatory movement, and means for transmitting oscillatory movement from the plate to the shaft.

3. In combination, a shaft, a plate adjacent thereto and mounted to turn about a single point, a rotary member between said shaft and said plate engaging the adjacent surfaces thereof, and a disk eccentrically mounted on a spindle and having its periphery in engagement with said plate.

4. In combination, a shaft, a yieldingly mounted plate on the end of said shaft, and a shaft oscillator comprising a plate or disk mounted for rotary and oscillatory movement about a point in line with the axis of the shaft, a disk eccentrically mounted and having its periphery in engagement with said plate or disk, and means for transmitting movement between said plate or disk and the yieldingly mounted plate on the shaft.

5. In combination, a shaft, and a shaft oscillator comprising a disk eccentrically mounted on a spindle at right angles to the axis of the shaft, a plate engaged on one side by the periphery of the disk and mounted for both rotary and oscillatory movement, and a member engaging the other side of the plate and the end of the shaft for transmitting movement between said shaft and plate.

6. In combination, a shaft, and a shaft oscillator comprising a plate mounted for universal movement, a rolling member between the end of the shaft and one side of said plate, and a disk eccentrically mounted on a spindle at right angles to the axis of the shaft and engaging the other side of the plate.

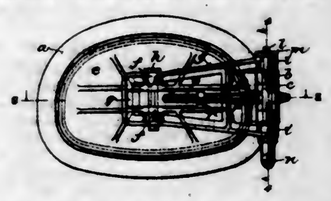
7. In combination, a shaft, and a shaft oscillator comprising a plate mounted for universal movement, a rolling member between the end of the shaft and one side of the plate, and a disk eccentrically mounted and engaging the other side of the plate and means for adjusting the position of the roller bearing between the shaft and plate whereby the length of oscillation imparted to the shaft may be adjusted.

8. In combination, a shaft, a shaft oscillator, comprising a plate mounted for rotary and oscillatory movement, means engaging the end of the shaft and one side of the plate for imparting rotary movement to the plate, an eccentric disk engaging the other side of the plate, and means for adjusting the position of said disk whereby the period and length of oscillation may be adjusted.

9. In a dynamo electric machine, a shaft, a plate adjacent the end thereof mounted for rotary and oscillatory movement, means engaging the end of the shaft and one side of the plate for imparting rotary movement to the plate, and means engaging the other side of the plate for imparting anoscillatory movement to the plate and shaft.

10. In a dynamo electric machine, a shaft, a yielding end member therefor, a plate mounted for rotary and oscillatory movement about a point in line with the center of the shaft, a roller bearing between one side of the plate and the yielding member on the shaft, means for adjusting the position of the roller bearing, an eccentric disk engaging the other side of the plate, and means for adjusting the position of the disk, whereby the shaft will be oscillated and the period and length of oscillation can be adjusted at will.

870,540. COVER-CLOSURE. FREDERICK BREDEL, Milwaukee, Wis. Filed May 19, 1906. Serial No. 317,712.



1. The combination with a cover and frame, of an arm pivoted to the cover and connected with the frame by an eccentric hinge pin, and a strut interposed between the cover and frame at an angle to said arm, substantially as described.

2. The combination with a cover and frame, of an arm pivoted to the central portion of the cover, an eccentric hinge pin connecting said arm with the frame at one side and an adjustable strut interposed between the frame and cover at an angle to said arm, substantially as described.

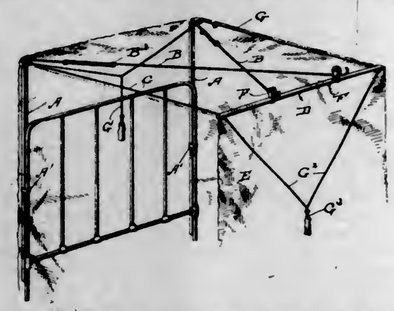
3. The combination with a cover and its frame, of an arm pivoted to the cover and connected with the frame by an eccentric hinge pin, and a strut pivoted to the cover and having a seat projecting from the frame transversely to the opening therein and beyond the cover hinge, substantially as described.

4. The combination with a cover and a frame having a

hinge ear on one side, of an arm pivoted at one end to the outside of the central portion of the cover and having hinge ears at the other end, a hinge pin fitted to turn in the ear on the frame and having corresponding eccentrics fitted to turn in the ears of said arm, and a strut interposed between the cover and frame at an angle to said arm, substantially as described.

5. The combination with a cover and its frame, of an arm pivoted to the cover and connected with one side of the frame by an eccentric hinge pin, said arm being bent inwardly towards the frame and hinge pin, and a strut interposed between the cover and a bearing on the frame adjacent to and outside of the hinge, substantially as described.

870,541. BED-CANOPY. CHARLES D. BRUMLEY, Norfolk, Va. Filed July 2, 1906. Serial No. 324,461.



1. The combination with the uprights, of the side rods pivotally connected thereto and adapted to swing horizontally, a cross rod provided with pulleys mounted on said rods together with means for moving the cross rods back and forth.

2. The combination with uprights having sockets formed in their upper end, of extensible side rods provided with angled ends mounted in said sockets, a cross rod provided with pulleys mounted on said rods, the canopy connected to the cross rod, and uprights, and means for moving said cross rod, back and forth, for the purpose described.

3. The combination with the uprights, the side rods pivotally connected to said uprights and adapted to cross each other, the cross rod provided with pulleys mounted on the free ends of the side rods, the canopy connected to the sliding cross rod and the uprights and the cord for moving the cross rod back and forth.

4. The combination with the uprights, of the side rods connected to the upper end thereof and adapted to turn thereon, said side rods crossing each other, the sliding cross rod provided with swiveled pulleys mounted on the free ends of the side rods, the canopy connected to the cross rod and uprights and the cords connected to the ends of the cross rod and adapted to lead said cross rod back and forth and simultaneously fold and unfold the canopy and side rods.

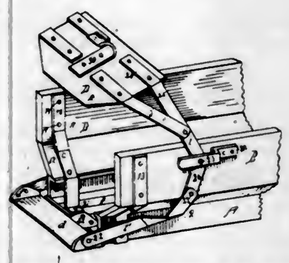
5. The combination with the uprights, of the extensible side rods pivotally connected to the upper ends of said uprights the double gromets, the cross rod, suspended from the side rods, the swivel pulleys carried by the cross rod and through which the free ends of the side rods pass, the canopy connected to the cross rod, the cords connected to the cross rods, said cords being connected and arranged substantially as described.

6. The combination with uprights having sockets formed in their ends, of extensible side rods provided with angled ends mounted in said sockets, pulleys mounted on said side rods carrying a cross-rod and means for moving said cross-rod back and forth, for the purpose described.

7. The combination with uprights having vertical sockets formed in their ends, of rods provided with angled ends mounted in said sockets, rods slidably mounted on said rods, pulleys mounted on said rods carrying a cross-bar and means for moving said bar back and forth, for the purpose described.

8. The combination with uprights provided with sockets, of side rods having their inner angled ends pivotally mounted in said sockets, a cross bar suspended from the outer angled ends of said side rods, double gromets mounted upon and having their rear eyes pierced by said inner angled ends, of said rods, and cords connected to said cross-bars adjacent its ends passing down through the forward eyes of said gromets, for the purpose described.

870,542. MINE-CAR. EUGENE C. CALLAHAN and FRANK L. CALLAHAN, Terre Haute, Ind. Filed Apr. 6, 1907. Serial No. 366,725.

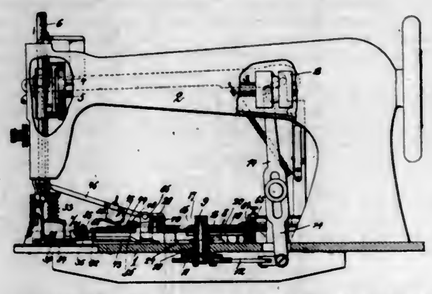


1. In a mine-car the combination of a metallic frame constructed of channel and angle iron parts and provided with open clips adapted to engage the standards of the side-boards, draw-bars at each end, axle sleeves, axles and traction wheels, with a bed consisting of hopper-like side-boards, provided with standards adapted to brace the sides and to engage clips provided upon the sides of the metallic frame, a rear end-gate attached to the side-boards, an automatic front end-gate attached to the front ends of the frame and bed, by means of a system of operating levers, a system of levers attached, respectively, to the sides of the car and the front end-gate and adapted to operate the front end-gate, all substantially as described and shown and for the purpose set forth.

2. In a mine-car the combination of a metallic car-frame, a set of four car-wheels mounted upon axles attached to said frame, strap-hangers adapted to attach said axles to the car-frame, draw-bars attached to either end of the car-frame, with a bed composed of side-boards of the design shown, and provided with standards removably attached thereto and adapted to engage open clips provided therefor upon the sides of the car-frame, a rear end-gate removably attached to the rear ends of said side-boards and provided with a metallic binder and two standards adapted, together, to hold said end-gate in proper position, and strong upright metallic braces disposed at the inner and forward end of said bed and frame and adapted to strengthen the same, and an automatically operating front end-gate attached to the car by means of a system of operating levers, all substantially as described and shown and for the purpose set forth.

3. In a mine-car the combination of a metallic frame of the structure described and the hopper-like bed mounted upon said frame in the manner described, and consisting of side-boards, standards and rear end-gate assembled together as shown, with an automatic end-gate consisting of a downward swinging gate, an upwardly swinging gate attached to the sides of the car-bed by means of levers fulcrumed thereon and in pivotal connection with coöperating levers attached to the downward opening gate, a trip-hook attached to the upper gate and hinges adapted to attach the lower gate to the end of the car frame, draw-bars attached at either end of the car-frame and suitable car-wheels, axles and hangers, adapted to support said car, all substantially as described and shown in the drawings and for the purposes set forth.

870,543. SEWING-MACHINE. FRANKLIN H. CHILTON, Union City, Conn., assignor to The National Machine Company, Mamaroneck, N. Y., a Corporation of New York. Filed May 31, 1906. Serial No. 319,428.



1. A sewing machine comprising stitch forming mechanism, work feeding means, a label support, comprising means for receiving and supporting labels composed of yielding flexible material, means for feeding labels to the support, and means for moving the support to present labels to the stitching mechanism whereby they will partake of the work feeding movements and be stitched to the goods so fed.

2. A sewing machine comprising stitch forming mechanism, means for feeding a strip of labels and for severing individual labels from the strip, a label support for receiving a severed label, and means for moving the support to present the labels so severed to the stich forming mechanism.

3. A sewing machine comprising stitch forming mechanism, a label support, means for folding over the edges of a label over the support, and means for moving the support to present the label so folded to the said mechanism for stitching.

4. A sewing machine comprising stitch forming mechanism, means for feeding a strip of labels and for severing individual labels from the strip, means for folding over the edges of a label so severed, and means for presenting the label so folded to the stitching mechanism.

5. A sewing machine comprising stitch forming mechanism, means for feeding a strip of labels and for severing individual labels so fed forward, means for folding over the edges of a label so severed, a work clamp, and means coöperating with the work clamp for presenting the label so folded to the stitch forming mechanism.

6. A sewing machine comprising stitch forming mechanism, a work clamp, a label support, means for moving the label support into and out of operative engagement with the work clamp, and means for simultaneously operating the work clamp and the label support.

7. A sewing machine comprising stitch forming mechanism, a work clamp, means for imparting horizontal movements to the work clamp in directions at right angles to each other, a label support, means for moving the label support into and out of operative engagement with the work clamp, said label support adapted to partake of the movements of the work clamp in one direction.

8. A sewing machine comprising stitch forming mechanism, a work clamp, a label support pivotally mounted at the side of the work clamp, means for imparting feeding movements to the work clamp, and means whereby the label support may be moved longitudinally of its pivotal axis to partake of feeding movements of the work clamp.

9. A sewing machine comprising stitch forming mechanism, a work clamp, means for imparting feeding movements thereto, a shaft mounted adjacent said work clamp, a label support splined upon said shaft, and means for imparting rotative movements to said shaft to move the label support into and out of engagement with the said work clamp, substantially as specified.

10. A sewing machine comprising stitch forming mechanism, a work clamp comprising upper and lower plates 31, 32, having jaws with an open central portion, means for imparting feeding movements to said work clamp, a shaft 36 mounted contiguous said work clamp, a label support comprising a hub 35 splined upon said shaft 36, and a plate 34 projecting therefrom, said plate arranged to be received within the open portion of said work clamp, and an operating member for imparting rotative movements to the said shaft 36.

11. A sewing machine comprising stitch forming mechanism, a platform, means for feeding labels over said platform, a work clamp, a label support, and means for moving the label support from a position adjacent said platform to a position adjacent said work clamp.

12. A sewing machine comprising stitch forming mechanism, label feeding means, a work clamp, a label support movable from a position in line with the feeding means to a position adjacent the clamp, and folding means for the edges of the label.

13. A sewing machine comprising stitch forming mechanism, a work clamp, a label support, label folding means coöperating with said label support, and means for moving the label support with the folded label thereon into and out of operative position with the work clamp.

14. A sewing machine comprising stitch forming mechanism, a label support comprising a thin plate, folding blades mounted adjacent the edges of the said plate, means for operating the said folder blades, and means for moving the said plate and the said folder blades into and out of position to present the label for stitching.

15. A sewing machine comprising stitch forming mechanism, a platform, means for feeding a label thereon, a label support adapted to be moved to a position engaging the label on the platform, folding means for folding the edges of the label around the label support, and means for moving the label support with the label so folded thereon to a position to present the label to the stitching mechanism.

16. A sewing machine comprising stitch forming mechanism, a platform, means for feeding labels over said platform, a work clamp a label support pivotally mounted between said platform and said work clamp, and folding means coöperating with said label support.

17. A sewing machine comprising stitch forming mechanism, a platform, a work clamp, a label support pivotally mounted between the said platform and work clamp, folder blades adapted to coöperate with the label support, means for moving the label support about its pivotal axis from a position adjacent the platform to a position adjacent the work clamp, and means engaging the folder blades to operate them when the label support is adjacent the said platform.

18. A sewing machine comprising stitch forming mechanism, a platform, a work clamp, a shaft mounted between the platform and work clamp, a label support splined upon the said shaft, folder blades also splined upon the said shaft adjacent the opposite edges of the said label support, levers 43 for engaging the folder blades when the label support is in one position, and operating means for reciprocating the said levers to operate the folder blades.

19. A sewing machine comprising stitch forming mechanism, a label feed comprising a reciprocating gripper, a label support adapted to be moved between positions adjacent the label feed and adjacent the stitch forming mechanism, and means for throwing the gripper out of operative position during the return portion of its reciprocating movement.

20. A sewing machine comprising stitch forming mechanism, a platform, a reciprocating gripper arranged to travel over said platform to feed labels across same, a label support adapted to be moved to a position over said platform and to a position adjacent said stitching mechanism, and means for lifting the gripper clear of said platform upon the return portion of its reciprocating movement.

21. A sewing machine comprising stitch forming mechanism, a platform, a work clamp, a reciprocating gripper adapted to travel over said platform, a label support pivotally mounted between said platform and said work clamp, folder blades mounted adjacent said label support, means for operating said folder blades when the label sup-

port is in a position adjacent said platform, and means for lifting the gripper at such times clear of the path of movement of the folder blade adjacent same.

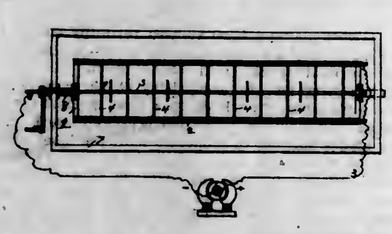
22. A sewing machine comprising stitch forming mechanism, label feeding mechanism, means for folding over the edges of a label, and means for presenting the label so folded to the stitching mechanism.

870,544. HOSE-SUPPORTER. LEVI M. CHURCHILL, Minneapolis, Minn. Filed Apr. 13, 1907. Serial No. 368,071.



A hose supporter constructed from a single piece of flat sheet metal and comprising a flat head portion 4 and cooperating spring prongs 3, the said prongs having flaring outer ends 6, and the adjacent inner edges of which prongs diverge or flare from said diverging end portions 6 inward toward said head 4 and terminate in an eye or enlarged opening 5 formed in said head 4, substantially as described.

870,545. PLATING DEVICE. GEORGE W. CLOUGH, Cleveland, Ohio, assignor of one-half to John R. Baird, Cleveland, Ohio. Filed Oct. 10, 1906. Serial No. 338,202.

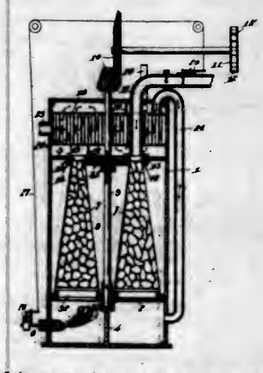


1. In a plating device, a reservoir, a pivoted receptacle therein, said receptacle having upper sides which at their edges are provided with a margin of conducting metal, a series of contact strips arranged across the sides and bottom of said receptacle and being secured at their ends to said margins to connect the latter, an anode bar secured to the receptacle, a series of downwardly projecting vertically disposed anodes secured to said bar at their upper ends and a source of electrical supply connected to said margins and to said anode bar.

2. In a plating device, a reservoir, a pivoted receptacle therein, said receptacle having two longitudinal metal parts, a series of contact strips arranged across the sides and bottom of said receptacle and connecting said metal parts, an anode bar secured to the receptacle, a series of depending anodes of semi-circular form secured to said anode bar, said anodes being disposed on said bar to aline with the space between said contacts of said receptacle, and electrical connections to said metal parts and to said anode bar.

3. In a plating device, a reservoir, a pivoted receptacle therein, cathode strips along the sides and bottom of said receptacle, an anode bar secured to the receptacle, anodes of plate-like form secured at their upper ends to said bar and extending downwardly in said receptacle so as to have their length disposed transverse of the length of said bar, means for connecting the ends of said cathodes, and electrical connections for said means and said anode bar.

870,546. AIR-DRIER FOR DESICCATING APPARATUS. ERNEST W. COOKE, New York, N. Y., assignor, by mesne assignments, to The Cokel Company, a Corporation of New Jersey. Filed Feb. 11, 1904. Serial No. 193,205.



1. An air drier comprising a plurality of movable receptacles adapted to contain moisture-absorbing substance, relatively stationary means to convey a current of air through one of said receptacles and means to periodically move said receptacles so as to place another of them in position to receive said current of air.

2. An air-drying apparatus comprising a plurality of receptacles adapted to contain a moisture-absorbing substance, a source of heat, an air inlet and an air outlet, and means to move said receptacles at predetermined regular intervals of time from a position adjacent to said source of heat to a position between said inlet and said outlet and vice versa whereby the operation can be carried on continuously.

3. An air-drying apparatus comprising a plurality of receptacles adapted to contain a moisture-absorbing substance, a source of heat, an air inlet and an air outlet, means to move said receptacles at predetermined regular intervals of time from a position adjacent to said source of heat to a position between said inlet and said outlet, a thermostat in said outlet pipe and connections therefrom to said source of heat, whereby the amount of heat is automatically regulated and the operation can be carried on continuously.

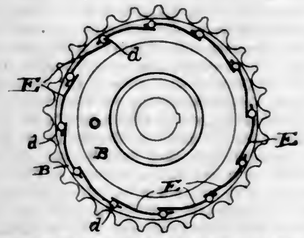
4. An air-drying apparatus comprising a casing, a revoluble frame within said casing, a plurality of receptacles adapted to contain a moisture-absorbing substance carried by said frame, a source of heat within said casing, air inlet and air outlet pipes, means to intermittently revolve said frame to bring one of said receptacles adjacent to said source of heat and another of said receptacles in connection with said pipes, whereby the operation can be carried on continuously.

5. An air-drying apparatus comprising a casing, a rotatable shaft vertically mounted within said casing, a frame attached to said shaft and carrying a plurality of receptacles adapted to contain a moisture-absorbing substance, a furnace within said casing below said frame, an air-inlet below said frame and an air-outlet above the same, and automatic means to rotate said shaft at predetermined regular intervals of time to place each of said receptacles successively over said furnace and then between said air-inlet and air-outlet, whereby the operation can be carried on continuously.

6. An air-drying apparatus comprising a casing divided horizontally by apertured partitions into three superimposed sections, the lowermost section being divided into two compartments, a frame, carrying a plurality of receptacles adapted to contain a moisture-absorbing substance, revolubly mounted in the central section, a furnace located in one of the said compartments in the lowermost section, tubes arranged in the uppermost section to receive the products of combustion of said furnace, means to force air into said uppermost section and around said tubes, a pipe to convey the air thus heated from said uppermost section to the other compartment of said lowermost section, an air-outlet pipe communicating with said central section and means to intermittently revolve said frame to place each of said receptacles successively over said source of heat with its upper end in communication with said tubes and over said last-mentioned compartment of the lowermost section with its upper end in communication with said outlet pipe.

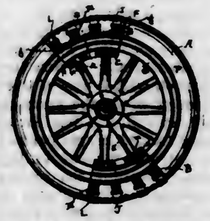
7. An air drier comprising a casing, a shaft vertically journaled in the center of said casing, a pair of receptacles adapted to contain moisture absorbing substance carried by said shaft at diametrically opposite points, means to supply a current of air at one end of said casing and to cause it to pass through one of said receptacles, a source of heat at the other end of said casing and means to periodically rotate said shaft through 180° so as to change the relative positions of said receptacles.

870,547. BOLT-LOCK. OTTO CULLMAN, Chicago, Ill. Filed Sept. 13, 1906. Serial No. 334,497.



The combination of bolts arranged so that adjacent bolts constitute the first and last bolts of a series, a series of holes extending through the head of each bolt, and springs, each bolt having one of such springs passed through one of the holes thereof, such springs arranged to be substantially straight when not under tension and so that the free end of a spring which is passed through a hole in the head of one bolt is in removable engagement with the head of an adjacent bolt to force the spring under tension tending to tighten the bolt to which it is attached and to be retracted from engagement with such head when moved longitudinally back in the hole; substantially as described.

870,548. TIRE-SHOE. GEORGE DENTZEAU, West New York, N. J. Filed Nov. 4, 1905. Serial No. 285,846.



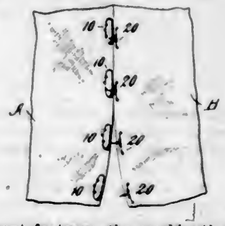
1. In a vehicle wheel, the shoe, consisting of two halves, having serrated outer surfaces, and spoke sockets, means of holding the shells together at the bottom consisting of bolts and nuts, and means of holding the outer edges.

2. In a vehicle wheel, the shoe, consisting of two shells, each having serrated outer surfaces, means of holding the shells on to the tire and wheel consisting of bolts, and means of holding the outer ends together consisting of the bands J, passing through slots in shells and secured to the same by bolts.

3. In a vehicle wheel, the shoe, formed in two halves, each having a serrated edge, the cushion interposed between the shells and rim of the wheel, and means of holding the parts together at the bottom, and means of holding the parts together at the top consisting of metal bands suitably secured to the side of the shells.

4. In a vehicle wheel, the shoe consisting of two parts or shells having serrated edges, the interposing cushion placed between the shells and rim, and the interposing cushions placed between the tire and metal bands J, means of securing the shells together at the bottom consisting of bolts, and means of holding the outer edges of the shells together consisting of the bands J suitably secured to the said shells.

870,549. GARMENT-FASTENER. HENRY DICKINSON, Flushing, N. Y. Filed Aug. 21, 1906. Serial No. 331,442.

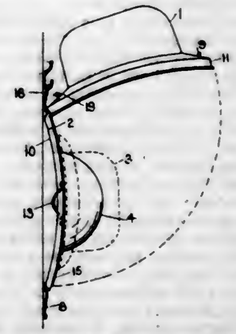


1. In a garment fastener, the combination of a member constructed to form two openings of different size connected by a restricted passage, and a second member having a wedge-shaped head of greater width at its widest portion than that of the larger of said two openings.

2. A garment fastener, consisting of two members constructed of spring wire, one of said members being of such shape as to form two loops of different size and a restricted passage between said loops, the other of said members being constructed to form a wedge-shaped head having front faces at an acute angle to each other, and a shank.

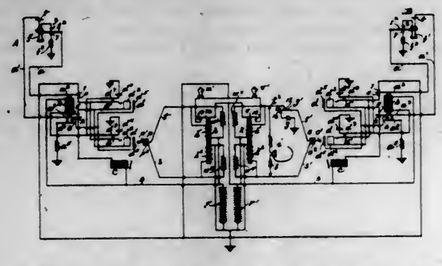
3. A garment fastener, consisting of two members constructed of spring wire, one of said members being of such shape as to form two loops of different size and a restricted passage between said loops, the other of said members being constructed to form a wedge-shaped head having front faces at an acute angle to each other, a shank, and means on each of the members for attaching them to a body or bodies with their operative faces in planes at right angles to said bodies.

870,550. HAT-BOX. WILLIAM DOD, Newbury, England. Filed Aug. 9, 1906. Serial No. 329,938.



The combination with a hat box made of light material shaped approximating to the shape of a hat and having a spring lid hinged thereto, of two tabs and a spring bolt or catch, one of which tabs is attached to the box and the other to the spring bolt or catch, such tabs serving to hang up the box, and, when pulled apart to release the lid of the box, substantially as set forth.

870,551. CENTRAL-ENERGY TELEPHONE SYSTEM. FRANCIS W. DUNBAR, Chicago, Ill., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 19, 1900. Serial No. 40,385.



1. The combination with a pair of telephone lines adapted to be united through an inductive device, of a signal controlling electro-magnet bridged between the two limbs of the talking circuit of one of said lines, said electro-magnet having two windings and possessing impedance to the passage of talking currents, and a charging source of electricity adapted to send current over the two limbs of the line in series and through said windings in a direction to cause the same to neutralize each other, said current source serving also to send an excess current through one of said windings to operate the magnet, substantially as described.

2. The combination with a pair of telephone lines adapted to be united through an inductive device, of a signal controlling electromagnet bridged between the two limbs of the talking circuit of one of said lines and having two windings and possessing impedance to the passage of talking currents, a charging source of electricity included in series between said windings to send current through said windings in a direction to cause the same to neutralize each other, and means for unbalancing said windings to energize said electromagnet, substantially as described.

3. The combination with a pair of telephone lines adapted to be united through an inductive device, of a signal controlling electro-magnet bridged between the two limbs of the talking circuit of one of said lines and having two windings and possessing impedance to the passage of talking currents, a charging source of electricity adapted to send current through said windings and over the telephone line to the substation in series to cause the said windings to neutralize each other, and means for sending current through one of said windings alone to energize said electromagnet, substantially as described.

4. The combination with a pair of telephone lines adapted to be united through an inductive device, of a signal controlling electro-magnet bridged between the two limbs of the talking circuit of one of said lines and having two windings and possessing impedance to the passage of talking currents, a charging source of electricity adapted to send current through said windings in a direction to cause the same to neutralize each other and over the telephone line to the substation for talking purposes, and means for sending current from said source over one limb through one of said windings alone with suitable return to energize said electro-magnet, substantially as described.

5. The combination with a pair of telephone lines adapted to be united through an inductive device, of a supervisory signal controlling electromagnet bridged between the two limbs of the talking circuit of one of said lines and having two windings and possessing impedance to the passage of talking currents, a charging source of electricity adapted to send current over the telephone line for talking purposes and through said windings in a direction to cause the same to neutralize each other, and means for closing circuit from said charging source through one of said windings alone over one limb of the telephone line with return through a third conductor, substantially as described.

6. The combination with a telephone line, of an electro-magnet bridged thereacross with a single core and two windings mounted upon opposite ends thereof, of a source of electricity adapted to send current through said windings in series to cause the same to normally neutralize each other and over the telephone line for talking purposes, whereby the passage of charging current neutralizes said core while the said windings offer impedance to the passage of non-continuous currents, means to unbalance the magnetism of said core by current from said source whereby the said electro-magnet is operated, and parts operated by said electro-magnet, substantially as described.

7. The combination with a telephone line, of a charging source of electricity bridged between the limbs thereof, a pair of electromagnetic windings included in said bridge, one on each side of said source of electricity, and a signaling device rendered inert by the passage of current through both of said windings and adapted to be actuated by the passage of current through one of said windings, substantially as described.

8. The combination with a telephone line, of a charging source of electricity for sending current therethrough, a repeating coil through which said line is adapted to be connected with another line for conversation, said repeating coil having its windings divided into two parts or coils, one situated upon each side of said charging source of electricity and a signal controlling electromagnet having two windings one in parallel with each of the parts or coils of said repeating coil, substantially as described.

9. The combination with a telephone line, of a repeating coil through which the same is adapted to be united with another line, said repeating coil having each winding thereof divided into two parts, a source of electricity connected between the two parts of each winding, a signal controlling electromagnet associated with said telephone line, and having two windings, one winding being in parallel with each part of the winding of said repeating coil connected with said line, and a switch at the substation for closing the circuit of said battery at will through both of the windings of said electromagnet or through one of the windings thereof, substantially as described.

10. The combination with a telephone line, of a repeating coil through which the same is adapted to be united with another telephone line, said repeating coil having each winding divided into two parts, a source of electricity connected between the two parts of each of said windings and connected upon one side with a third conductor, a signal controlling electromagnet having two windings, one winding being included in parallel with each of the parts of the winding of the repeating coil connected with said telephone line, and a switch at the substation for closing the circuit of said source of electricity through both of the windings of said electromagnet over the two limbs of the telephone line, or for closing the circuit of said source through one of the windings of said electromagnet over one limb of said telephone line with return through said third conductor, substantially as described.

11. The combination with a pair of telephone lines, of a repeating coil through which the same are adapted to be inductively united for conversation, each winding of said repeating coil being formed in two parts, a source of electricity connected between the two parts of each of said windings, a signal controlling electromagnet for each of said telephone lines, each electromagnet having two windings, one winding being connected in parallel with each of the parts of the winding of the repeating coil connected with said line, and a switch at each substation for closing the current at will through one or both of the windings of the electromagnet belonging to said line, substantially as described.

12. The combination with telephone lines, of an operator's cord circuit to establish connections with the lines for conversation, an electro-magnet having two differential windings bridged across the cord circuit and possessing impedance to the passage of voice currents, a central source of current adapted to send current through said windings in a direction to cause the same to neutralize each other and over the telephone line for conversational purposes, and means for sending an excess current from said source through one of said windings to unbalance the same and energize said electro-magnet, substantially as described.

13. The combination with a metallic circuit telephone line and a third conductor, of a charging source of electrictly adapted to send current in series over the two sides of said metallic circuit, a signal controlling electro-magnet bridged between the limbs of said metallic circuit and having differential windings, said windings being included in series in the path of said current over the line and adapted to neutralize each other when so traversed by current from said source, and means for closing the circuit of said charging source of electricity over one limb of said circuit and through one winding of said electro-magnet with return through the third conductor to operate said electro-magnet, substantially as described.

14. The combination with a plurality of telephone lines, each having connection terminals upon the different sections of a multiple switchboard, of means at each section of the switchboard including a repeating coil for uniting the lines in pairs for conversation, a signal controlling electro-magnet bridged across the talking circuit of each united pair upon each side of said repeating coil and possessing impedance to the passage of voice currents, each of said electro-magnets having two differential windings, means for sending a charging current over said lines to the substations and through said windings in series to neutralize said electro-magnets, and a switch at each substation for permitting an excess current to flow through one winding of the corresponding electro-magnet to energize the same, substantially as described.

15. The combination with a telephone line, of a cord circuit, a battery bridged across the cord circuit as long as the line is switched for use and having one pole grounded, a differential supervisory signal controlling electro-magnet bridged across the cord circuit and posessing impedance to the passage of voice currents, the windings of said electro-magnet being in the path of current from said source over the metallic line, a suitable signal controlled by said electro-magnet, a hook switch, and a grounded signaling bell at the substation, said switch being adapted to close circuit from said battery through one winding of said electro-magnet and one line wire, and thence through the grounded bell when the receiver is upon the switch-hook, whereby the electro-magnet is operated, and to close circuit over the metallic line when the receiver is displaced to render the electro-magnet inoperative, substantially as described.

16. The combination with a pair of telephone lines, of a pair of plugs and cords and an inductive means for joining the cords for uniting the lines for conversation, a signal controlling electro-magnet bridged across each cord and possessing impedance to the voice currents, each of said electro-magnets having two differential windings, a source of charging current bridged across the strands of each cord and adapted to send current through said windings, and a switch at the substation of each of said lines to permit current to flow from said source over the metallic circuit of the corresponding line without energizing said electro-magnet, and over one limb only of said line and ground return to energize said electro-magnet, substantially as described.

17. In a telephone exchange system, the combination with a telephone line extending from a substation to an exchange, of a cord circuit at the exchange for connecting said telephone line with another, a signal for the cord circuit provided with a controlling magnet having differentially wound coils bridged across the cord circuit, a source of current at the central office connected between said windings and adapted to send current over the metallic line for conversation, and a telephone hook switch at the subscriber's station serving to close circuit through one of said coils when depressed through the agency of the receiver, and serving to close circuit through both of said coils when elevated, substantially as described.

18. In a telephone exchange system, the combination with a telephone line extending from a subscriber's station to an exchange, of an indicator at the exchange provided with a controlling electro-magnet having differentially wound coils bridged between the conductors of the talking circuit, a source of current at the central office connected between said coils and adapted to send current over the telephone line for conversation, a switch-hook at the subscriber's station, and means whereby when the switch-hook is depressed through the agency of the receiver supported thereby one of said coils is included in a circuit, and whereby when the said switch-hook is elevated circuit is completed through both of said coils, substantially as described.

19. The combination with a pair of telephone lines, of a pair of plugs and cords and an inductive means joining the cords for uniting the lines for conversation, a signal controlling electro-magnet for each cord bridged thereacross and possessing impedance to the passage of voice currents, each of said electro-magnets having two differential windings and connected with the opposite sides of the cords, a separate source of charging current between the windings of each electro-magnet, and a switch hook at each of the substations of the lines, whereby each source is allowed to send current in series over the two sides of the metallic circuit of the corresponding lines without energizing the electro-magnet associated therewith, or over one limb only of said line to energize said electro-magnet, substantially as described.

20. The combination with a pair of telephone lines adapted to be united through an inductive device, of a signal controlling electro-magnet bridged between the two limbs of the talking circuit of each of said lines and having two windings, said electro-magnet possessing impedance to the passage of the talking currents, a separate charging source of electricity adapted to send current through the windings of each electro-magnet and over the two sides of the telephone line in series to cause the same to neutralize each other, and means controlled by the subscriber for unbalancing said windings to energize said electro-magnet, substantially as described.

21. The combination with a pair of telephone lines, of a cord circuit including an inductive means joining its two ends to unite the lines for conversation, a signal controlling electro-magnet bridged between the two limbs of one end of the cord circuit and having two windings and possessing impedance to the passage of talking currents, a charging source of electricity adapted to send current through said windings in a direction to cause the same to neutralize each other, and means for sending current through one of said windings to energize said electro-magnet, substantially as described.

22. The combination with a pair of telephone lines adapted to be united through a cord circuit including an inductive device, of a signal controlling electro-magnet bridged between the two limbs of the cord circuit at one side of said device and having two windings and possessing impedance to the passage of talking currents, a charging source of electricity adapted to send current over the metallic telephone line for talking and through said windings in a direction to cause the same to neutralize each other, and means for sending current from said source over one limb through one of said windings with suitable return, substantially as described.

23. The combination with a pair of telephone lines adapted to be united through a cord circuit including an inductive device, of a supervisory signal controlling electro-magnet bridged between the two limbs of the talking circuit of one of said lines and having two windings and possessing impedance to the passage of talking currents, a charging source of electricity adapted to send current over the two sides of the line in series for talking purposes and through said windings in a direction to cause the same to neutralize each other, and means for closing circuit from said charging source through one of said windings over one limb of the telephone line with return through a third conductor, substantially as described.

24. The combination with a telephone line and a connection terminal therefor normally in inoperative relation with said line, of a connecting plug and cord circuit adapted to coöperate with said line, a supervisory signal controlling electro-magnet having two differential wind-

ings bridged across the cord circuit, a battery connected between said windings and adapted to send current over the metallic line for conversation, a switch at the subscriber's station, and means controlled by the insertion of the plug into the connection terminal for placing said connection terminal in operative relation with the line whereby said signal controlling magnet is placed under the control of the subscriber, substantially as described.

25. The combination with a telephone line and a connection terminal in the form of a spring jack, of a central source of current associated with said line circuit to furnish current for talking purposes, a cord circuit a supervisory signal controlling electro-magnet having differential coils bridged across the cord circuit and possessing impedance to the passage of voice currents, the windings of said electro-magnets being connected in the path of current from said source over the metallic line, and a relay actuated from said source by the insertion of the plug into and its withdrawal from said jack for controlling the operative relation of said jack with the line, substantially as described.

26. In a telephone system, a metallic circuit line, a connection terminal in the form of a spring jack normally not in operative relation with said line, a connecting plug and a cord circuit, a line signaling device normally in operative relation with said line, a central source of current and a supervisory signal controlling electro-magnet associated with said line and cord circuit, said magnet having two differential windings bridged across the cord circuit and possessing impedance to the passage of voice currents, the said source being connected between said windings and adapted to furnish current for talking purposes, and a relay actuated from said source when the plug is inserted in said jack to place said device in inoperative relation with said line and said jack in operative relation with said line, substantially as described.

27. The combination with a telephone line, of a line signal therefor, a cord circuit to establish conversational circuits with the line, a source of current associated with the cord circuit and adapted to be included in the metallic line to furnish current for talking, a supervisory signal controlling electro-magnet bridged across the cord circuit and having differential windings disposed one in each side of the path of current from said source over the metallic line, said magnet being actuated when the magnetic effects in its coils are unbalanced, and a cut-off device for the line energized from said source when a connection is established by the cord circuit with the line to render said line signal inoperative and at the same time without unbalancing said supervisory signal controlling electro-magnet or operating said line signal by the act of making the connection, substantially as described.

28. The combination with a telephone line, of a connection terminal therefor normally operatively disconnected from the line, a line signaling device for the line, a cord circuit, a source of current to send current over the metallic line for talking, a supervisory signal controlling electro-magnet bridged across the cord circuit and having differential windings disposed in the path of current from said source over the line circuit, said magnet being rendered neutral by current over the metallic circuit during conversation and energized by current over one side of the line at the termination of the conversation, a cut-off relay for the line to connect said terminal with the line and to render said signal inoperative, and means to energize said relay from said source by the act of connecting the cord circuit with the line without operating said signal by current over its circuit or unbalancing said electro-magnet, substantially as described.

29. The combination with a telephone line having a switchboard section normally operatively disconnected from the external line circuit, of a line signal normally connected with the external line circuit and separate from the switchboard section of the line, a cord circuit to establish conversational circuits with the line, a source of current adapted to be included in the metallic line to furnish current for talking, a supervisory signal controlling electro-magnet bridged across the cord circuit and having differential windings disposed one in each side of the path of current from said source over the cord circuit, said magnet being actuated when the magnetic effects in its coils are unbalanced and inoperative when the magnetic effects in its coils are neutral, and a cut-off relay for the line energized in connecting the cord circuit with the line to render said line signal inoperative and to connect said switchboard section with the external line circuit, all without unbalancing and operating said supervisory signal controlling electro-magnet, substantially as described.

30. The combination with a plurality of telephone lines, of a cord circuit to loop said lines together in pairs for conversation, means to inductively unite the ends of the cord circuit, a magnet bridged across each end of the cord circuit and having two differential windings, a source of current connected between said windings and adapted to send current over the corresponding metallic line during conversation, the magnet being neutral to such current, one pole of said source being grounded or connected to a common return, means controlled by the subscriber to cause current to flow from said source through one winding of the said magnet with return through the ground or common return to operate the magnet, a supervisory signal for each end of the cord circuit in a local circuit closed by the corresponding magnet when operated and opened thereby when deënergized, whereby the signals are normally inoperative but when a connection is established and the subscribers' telephones are not in use said signals are operated and are again inoperative during conversation, substantially as described.

31. In a telephone system, the combination with subscribers' lines having connection terminals and line signaling devices at the central office, of a cord circuit to establish connections between the lines for conversation, said cord circuit having a strand in each side of the talking circuit, means for inductively connecting and conductively separating the two ends of the cord circuit, means at the central office for supplying current to the lines for conversation, supervisory relay windings connected in series with said means for supplying current and between said cord strands and upon each side of the said inductive means, a normally inoperative supervisory signal for each end of the cord circuit controlled respectively by the said windings on the same side of the inductive means, the excitation of one of the said windings on each side of the inductive means causing the operation of the corresponding signal and the simultaneous excitation of the associated winding causing the said signal to become inoperative, substantially as described.

32. In a telephone system, the combination with subscribers' lines having connection terminals and line signaling devices at the central office, of a cord circuit to establish connections between the lines for conversation, said cord circuit having a strand in each side of the talking circuit, means for inductively connecting and conductively separating the two ends of the cord circuit, double supervisory signals associated with the cord circuit, a source of direct current at the central office, a relay for each of said signals associated, one with each end of the cord circuit, two windings for each of said relays connecting between the branches of the cord circuit and opposite poles of said source, said windings being adapted, one to neutralize the magnetizing effect of the other when equal currents flow through each, but to energize the relay when unequal currents flow therethrough, the actuation of each of said relays serving to display the signal associated therewith, substantially as described.

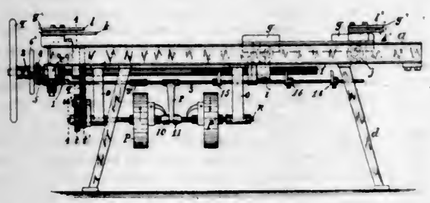
33. In a telephone system, the combination with a telephone line, of a source of current and a pair of relay windings bridged between the two limbs of the talking circuit thereof, a switch at the substation and a switch at the central station for controlling the circuits through said relay windings, and a signal controlled by the conjoint energization of said relay windings, substantially as described.

34. In a telephone system, the combination with a telephone line, of a source of current and an electro-magnetic winding bridged between the two limbs of the talking circuit thereof, a second electro-magnetic winding connected in a circuit including a portion of one side of the talking circuit, and means for energizing it, a switch at the substation and a switch at the central station for controlling the circuits through said electromagnetic windings, and a supervisory signal controlled by the joint action of said electromagnetic windings, substantially as described.

35. The combination with a metallic telephone line free from permanent grounds outside the central office, of a cord circuit a charging current source, a third conductor, a pair of relay windings associated with the cord circuit, one of said windings being energized over the telephone line, and the other over a portion of the talking circuit and the third conductor and a signal controlled by the conjoint action of said relay windings, substantially as described.

36. The combination with a telephone line, of a source of electricity and a pair of relay windings adapted to be bridged between the limbs of the talking circuit thereof, a switch at the central station for controlling the circuit through said relay windings, and a signal adapted to be controlled by the conjoint action of said windings, substantially as described.

870,552. WIRE-MATTRESS STRETCHER. JULIUS ERLANDSEN, New York, N. Y. Filed Oct. 6, 1906. Serial No. 337,813.



1. In a wire mattress stretcher, the combination, with a head for holding one end of the wire fabric, of wheels acting as rollers, a stretching carriage moving on the wheels, and means on the carriage to engage the other end of the wire fabric.

2. In a wire mattress stretcher, the combination, with a head for holding one end of the wire fabric, of a stretching carriage moving on wheels, means on the carriage to engage the other end of the wire fabric, guides adapted to direct the movements of the wheels, and wheels between the carriage and the guides.

3. In a wire mattress stretcher, the combination, with a head for holding one end of the wire fabric, of a stretching carriage on wheels, means on the carriage to hold the other end of the wire fabric, and guides having surfaces adapted to engage the wheels and prevent displacement of the carriage in any direction but that essential to its function.

4. In a wire mattress stretcher, the combination, with a head for holding one end of the wire fabric, of a stretching carriage moving on wheels, wheels between the carriage and the guides, means to engage the other end of the wire fabric, and side-rails and flanges on the side-rails extending beyond the wheels to protect them from dirt.

5. In a wire mattress stretcher, the combination, with a head for holding one end of the wire fabric, of a stretching carriage moving on wheels, wheels between the carriage and the guides, means on the carriage to engage the other end of the wire fabric, and guides having flanges inclosing the said wheels.

6. In a wire mattress stretcher, the combination, with a head for holding one end of the wire fabric, of a stretching carriage, wheels on which the carriage moves, means on the carriage to engage the other end of the wire fabric and flanged side-rails having the upper flange projecting beyond the lower flange, whereby the lower flange is protected from a deposit of dirt.

7. In a wire mattress stretcher, the combination, with a head for holding one end of the wire fabric, of a stretching carriage, wheels upon which the carriage rolls, means on the carriage to engage the other end of the wire fabric and a screw for actuating the stretching carriage.

8. In a wire mattress stretcher, the combination, with a head for holding one end of the wire fabric, of a stretching carriage moving on wheels, means on the carriage to engage the other end of the wire fabric, a screw for actuating the stretching carriage, a frame supporting such screw, and wheels upon which the carriage moves.

9. In a wire mattress stretcher, the combination, with a head for holding one end of the wire fabric, of a stretching carriage moving on wheels, wheels upon which the carriage moves, means on the carriage to hold the other end of the wire fabric, a screw with suitable gearing for actuating the stretching carriage, and a frame supporting said screw and gearing.

10. In a wire mattress stretcher, the combination, with a head for holding one end of the wire fabric, of a stretching carriage mounted on wheels, means on the carriage to engage the other end of the wire fabric, and a frame having channeled side-rails adapted to act as guides for the said wheels.

11. In a wire mattress stretcher, the combination, with a head for holding one end of the wire fabric of a stretching carriage, wheels upon which the carriage moves, means on the carriage to engage the other end of the wire fabric, a screw for actuating the stretching carriage and a frame supporting said screw, having side-rails inclosing the wheels upon which the carriage moves.

12. In a wire mattress stretcher, the combination, with a head for holding one end of the wire fabric of a stretching carriage moving on wheels, wheels upon which the carriage moves, means on the carriage to engage the other end of the wire fabric, a screw with suitable gearing for actuating the stretching carriage, and a frame, supporting said screw and gearing, having channeled side-rails inclosing the wheels upon which the said carriage moves.

13. In a wire mattress stretcher, the combination, with a head for holding one end of the wire fabric, of a stretching carriage mounted on wheels and having means to engage the other end of the wire fabric, a screw with suitable gearing for actuating the stretching carriage, a frame for supporting said screw and gearing, guides on the frame engaging the wheels of the said carriage, a shaft upon the frame and clutches for reversing the motion of the said gearing.

14. In a wire mattress stretcher, the combination, with a stationary head for holding one end of the wire fabric of a stretching carriage mounted on wheels and having means to engage the other end of the wire fabric, a screw with suitable gearing for moving the stretching carriage, a frame for supporting said screw and gearing, guides on the frame engaging the wheels of the said carriage, a shaft upon the frame with clutches for reversing the said gearing, and a shifter to operate the clutches.

15. In a wire mattress stretcher, the combination, with a stationary head for holding one end of the wire fabric of a stretching carriage mounted on wheels and having means to engage the other end of the wire fabric, a screw with suitable gearing for actuating the stretching carriage, a frame for supporting said screw and gearing, guides on the frame engaging the peripheries of the wheels of the said carriage, a shaft upon the frame with clutches for reversing the said gearing, a shifter to operate the clutches and a safety stop for actuating the same, to limit the movement of the carriage.

16. In a wire mattress stretcher, the combination, with a head for holding one end of the wire fabric of a stretching carriage mounted on wheels and having means to engage the other end of the wire fabric, a screw with suitable gearing for moving the stretching carriage, a frame for supporting said screw and gearing, guides on the frame engaging the wheels of the said carriage, a shaft upon the frame with clutches for reversing the motion of the said gearing, a shifter to operate the clutches, a safety stop for actuating the said shifter to limit the movement of the carriage in one direction and a safety stop to limit the movement of the carriage in the opposite direction.

17. In a wire mattress stretcher, the combination, with a stationary head for holding one end of the wire fabric,

of a stretching carriage moving on wheels and having means to engage the other end of the wire fabric, wheels upon which the carriage moves, a screw with suitable gearing for moving the stretching carriage, a frame for supporting said screw and gearing, channeled side-rails on the frame engaging the wheels of the said carriage, a shaft upon the frame with clutch-pulleys for reversing the said gearing, a shifter to engage or disengage either clutch-pulley, and safety-stops actuated by the carriage to limit its movement in either direction.

18. In a wire mattress stretcher, the combination, with a head for holding one end of the wire fabric of a stretching carriage mounted on wheels and having means to engage the other end of the wire fabric, a screw with suitable gearing for actuating the stretching carriage, a frame for supporting said screw and gearing, channeled side-rails on the frame engaging the wheels of the said carriage, a shaft upon the frame with clutch-pulleys for reversing the said gearing, a shifter to engage or disengage either clutch-pulley, safety-stops to limit the extreme movement of the carriage in either direction and a stop actuated by the carriage during its reverse movement to set the carriage in its receiving position.

19. In a wire mattress stretcher, the combination, with a stationary head for holding one end of the wire fabric, of a stretching carriage mounted on wheels and having means to engage the other end of the wire fabric, a screw with suitable gearing for moving the stretching carriage, a frame for supporting said screw and gearing, side-rails engaging the wheels of the said carriage, a shaft upon the frame, clutch-pulleys upon the shaft, a shifter to engage or disengage the clutch-pulleys, stops for actuating the same, and a hand-lever to actuate the shifter.

20. In a wire mattress stretcher, the combination, with a stationary head for holding one end of the wire fabric, of a stretching carriage, having means to engage the other end of the wire fabric, wheels upon which the carriage moves, a screw for actuating the stretching carriage, and a double-armed hand-lever journaled upon the shank of the screw.

21. In a wire mattress stretcher, the combination, with a stationary head for holding one end of the wire fabric, of a stretching carriage moving on wheels and having means to engage the other end of the wire fabric, wheels upon which the carriage moves, a screw for actuating the stretching carriage, a bevel-pinion mounted upon the shank of the screw, handles on the bevel pinion and a segmental bevel-gear meshing with the said bevel-pinion.

22. In a wire mattress stretcher, operated by power, the combination, of a stretching screw, a frame supporting said screw, a shaft mounted upon the frame, clutch-pulleys mounted upon the shaft, a shifter adapted to engage the clutch-pulleys, a shifter-rod mounted parallel with the screw, a rack attached to the shifter-rod, a bevel pinion mounted rotatably upon the shank of the said screw, handles on the bevel-pinion and a segmental gear meshing with the bevel-pinion and the rack, to communicate any motion of the handles to the shifter.

23. In a wire mattress stretcher, operated by power, the combination, with a stationary head for holding one end of the wire fabric, of a stretching carriage having means to engage the other end of the wire fabric, a screw and gearing for moving the stretching carriage, a frame for supporting said screw and carriage, a shaft upon the frame, clutch-pulleys on the shaft, a shifter, a shifter-rod to operate the shifter, a rack attached to the shifter-rod, a bevel-pinion mounted loosely upon the shank of the said screw, handles on the bevel-pinion and a segmental gear meshing with the bevel-pinion and the rack.

24. In a wire mattress stretcher, operated by power, the combination, with a frame having channeled side-rails of a carriage mounted on wheels, a screw with suitable gearing for moving the carriage, a shaft with clutch-pulleys thereon, a shifter adapted to engage either clutch-pulley, a shifter-rod, a rack-bar, a connection between the shifter-rod and rack-bar, an oscillating hand-lever mounted loosely upon the shank of the said screw, a pinion formed on the hand-lever, and an intermediate gear meshing with the rack and pinion.

25. In a wire mattress stretcher, operated by power, the combination, with a frame having channeled side-rails, wheels adapted to rotate within the channels, a carriage moving upon the wheels, a screw for moving the carriage supported on the frame, a shaft with clutch-pulleys thereon, gearing connecting the shaft and screw, a shifter adapted to engage either clutch-pulley, a shifter-rod, arms on the shifter-rod whereby the movement of the carriage operates the shifter-rod, a rack-bar, a connector joining the rack-bar to the shifter-rod, an oscillating hand-lever mounted loosely upon the shank of the said screw, a pinion formed on the nave of the hand-lever and an intermediate segmental gear meshing with the rack and pinion.

26. In a wire mattress stretcher, the combination, with a head to hold one end of the wire fabric, a movable carriage to engage the opposite end, a screw for moving the carriage, a hand-wheel for turning the screw, a frame supporting the screw and carriage, a shaft upon the frame, adjustable gearing connecting the shaft and screw to drive the screw at various speeds, and means for disengaging the shaft from the screw to admit turning the screw by hand.

27. In a wire mattress stretcher, the combination, with a head to hold one end of the wire fabric, a movable carriage to engage the opposite end, a screw for moving the carriage, a hand-wheel and spur-gear mounted on the shank of the screw, a frame supporting the screw and carriage, a shaft upon the frame, speed pinions on the shaft, a sweep loosely mounted on the shaft, intermediate gears mounted on the sweep and meshing with the speed pinions, a handle on the sweep whereby either intermediate may be moved in mesh with the spur-gear, or the intermediate disengaged therefrom, and a bolt adapted to secure the sweep to position.

28. In a wire mattress stretcher, the combination of a frame having side-rails, channels in the side-rails having bearing surfaces inclined to the horizontal, wheels in peripheral contact with the bearing surfaces, a carriage moving on the said wheels, a nut held by the carriage, a screw rotatably mounted on the frame and adapted to engage with the nut and means for turning the screw.

29. In a wire mattress stretcher, the combination, with means for holding the ends of the wire fabric, of a frame having side-rails with projecting beveled guides, wheels fitted to the guides whereby the wheels and a carriage mounted thereon are prevented from lateral movement, a carriage with a nut thereon, and a screw rotatably mounted on the frame engaging with the nut.

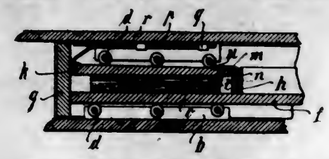
30. In a wire mattress stretcher, the combination, with means for holding the fabric, of a frame having side-rails with projecting beveled flanges, a carriage, wheels fitted respectively to the beveled surfaces of the separate flanges, and adjustable brackets upon the carriage supporting the journals of the said wheels.

31. In a wire mattress stretcher, the combination, with means for holding the fabric, of a frame having side-rails with projecting flanges, a carriage, wheels fitted respectively to the separate flanges, adjustable brackets upon the carriage, a nut held on the carriage, and a screw mounted rotatably upon the frame engaging with the nut to control the movement of the carriage.

32. In a wire mattress stretcher, the combination, with a frame having side-rails with projecting flanges, of a carriage, wheels fitted with individual journals, brackets secured adjustably upon the carriage and provided with bearings for the said journals, a screw mounted rotatably upon the frame and a nut on the carriage engaging with the screw.

33. In a wire mattress stretcher, the combination of a frame having flanged side-rails, wheels fitted to the flanges, adjustable brackets supporting the journals of the wheels, a carriage mounted on the brackets, a nut held on the carriage, a screw journaled on the frame and engaging with the nut, a spur-gear secured on the shank of the screw, a shaft upon the frame, speed pinions on the shaft, a sweep loosely mounted on the shaft, intermediate gears mounted on the sweep and meshing with the speed pinions, a handle on the sweep whereby either intermediate may be moved in mesh with the spur-gear or the intermediates may be disengaged therefrom, a hand-lever loosely mounted on the shank of the said screw, a pinion formed on the hub of the hand-lever, a rack-bar and a shifter-rod mounted on the frame, an intermediate segmental gear meshing with the pinion and rack-bar, a connector joining the rack-bar and shifter-rod a shifting-fork on the shifter-rod, a shifter, driving-pulleys, and means for connecting either driving-pulley with the shaft.

870,553. COPYING-PRESS. EDUARD EULENSTEIN, Leipzig, Germany. Filed Apr. 1, 1907. Serial No. 365,780.



1. A copying press comprising in combination a drawer and drawer casing, two press-plates the outer surfaces of which converge towards the rear in said drawer and movable therewith and two stationary series of rollers in the casing, said rollers being in planes converging with the same angle as the press-plates

2. A copying press comprising in combination a drawer and drawer casing, means comprising a hinged pressure plate for applying pressure to a book in the drawer, and means whereby the press-plate is automatically lifted from the book when the drawer is opened.

3. A copying press comprising in combination a drawer and drawer casing, means comprising a hinged pressure plate for applying pressure to a book in the drawer, and means whereby the press-plate is automatically lifted from the book when the drawer is opened said means consisting of a hook connected to the casing above the press, said hook having limited movement in a direction parallel to the drawer.

870,554. FENCE-POST. GEORGE I. GARGETT, Alma, Mich. Filed Mar. 28, 1907. Serial No. 365,061.



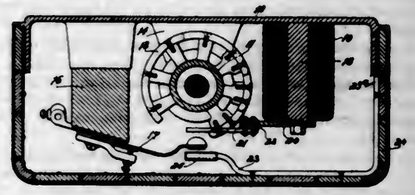
1. A fence post comprising a base of plastic material, a metal tubing embedded therein, a filling of plastic material in said tube, and a wire embedded in the plastic filling of the tube and in the base, for the purpose set forth.

2. A fence post comprising a base of plastic material, a metal tube embedded therein, a filling of plastic material in said tube, and a wire embedded in the plastic filling in the tube and in said base, and having its ends projecting to serve in securing fence wires to the post.

3. A fence post comprising a base of plastic material, a metal tube embedded therein, a filling of plastic material in said tube, and a wire embedded in and extending through the plastic filling of the tube, the upper projecting end of the wire being bent to form a loop or eye and the lower projecting end being bent to form an anchor and embedded in the said base.

4. A fence post comprising a rectangular plastic base provided with an enlarged substantially diamond-shaped lower end, a metal tube having its lower end embedded in the base, a filling of plastic material in said tube, a wire extending through the plastic filling of the tube and having its upper end bent to form a loop or eye and an anchor embedded in said filling, and having its lower end bent to form an anchoring loop embedded in the enlarged lower end of the base, said lower end of the wire projecting upwardly and out of the top of the base, and a second wire bent intermediate its ends to form a loop surrounding the tube above the top of the base and its lower ends projecting into and anchored in the upper portion of the base, substantially as shown and for the purposes set forth.

870,555. CONTROLLER. FRANK W. GARRETT, Norwood, Ohio, assignor to The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Aug. 21, 1905. Serial No. 275,124.



1. In a controller, a plurality of contact fingers, a rotatable drum carrying contact segments adapted to engage said contact fingers, and a blow-out magnet having a plurality of polar projections of like polarity located between said segments adjacent to said fingers.

2. In a controller, a plurality of contact fingers, a rotatable drum carrying contact segments adapted to engage said contact fingers, a blow-out magnet having a plurality of polar projections of like polarity located between said segments adjacent to said fingers, and a plurality of strips of magnetic material also adjacent to said fingers and forming the return paths for the flux of said magnet.

3. In a controller, a plurality of contact fingers, a rotatable drum carrying contact segments adapted to engage said contact fingers, a blow-out magnet having a plurality of polar projections located between said segments adjacent to said fingers, and a cover for said controller carrying a plurality of strips of magnetic material adjacent to said contact fingers, said strips forming the return paths for the flux of said magnet.

4. In a controller, a plurality of contact fingers, a rotatable drum carrying contact segments adapted to engage said contact fingers, a blow-out magnet having a plurality of polar projections located between said segments adjacent to said fingers, a cover for said controller carrying a plurality of strips of magnetic material adjacent to said contact fingers, said strips being bent away from said cover toward the fingers and provided at their ends with insulating material.

5. In a controller, a plurality of contact fingers, a rotatable drum carrying contact segments adapted to engage said contact fingers, a blow-out magnet having a plurality of polar projections located between said segments adjacent to said fingers, and a plurality of strips of magnetic material also adjacent to said fingers and forming the return paths for the flux of said magnet, each of said strips being behind a contact finger and the polar projections being substantially in front of said finger, the arrangement being such that the arc which tends to form between the contact finger and its corresponding segment is located in the path of the flux in the gap between one of the polar projections and one of said strips.

6. In a controller, a drum having contact segments pro-

jecting therefrom, contact fingers adapted to engage said segments, a blow-out magnet having polar projections of like polarity located between said projecting segments adjacent to said fingers, and a member or members of magnetic material located on the opposite side of said fingers and forming a return path for the flux of said magnet.

7. In a controller, a drum having contact segments projecting therefrom, contact fingers adapted to engage said segments, a blow-out magnet, a plate of magnetic material fastened to the core of said magnet, and a plurality of strips of magnetic material fastened to said plate, but insulated therefrom and projecting between said segments adjacent to said contact finger.

8. In a controller, a drum having contact segments projecting therefrom, contact fingers adapted to engage said segments, a blow-out magnet, a plate of magnetic material fastened to the core of said magnet, a plurality of strips of magnetic material fastened to said plate, but insulated therefrom and projecting between said segments adjacent to said contact finger, and a plurality of strips of magnetic material located on the opposite side of said fingers and forming the return path for the flux of said magnet.

9. In a controller, a controller casing, a front cover therefor of non-magnetic material, a blow-out magnet, and a plurality of strips of magnetic material carried by said cover and forming part of the path of the flux from said magnet.

10. In a controller, relatively fixed and movable coöperating contacts, a blow-out magnet, a controller casing, a front cover therefor of non-magnetic material, and a strip or strips of magnetic material carried by said cover and forming part of the path of the flux from said blow-out magnet.

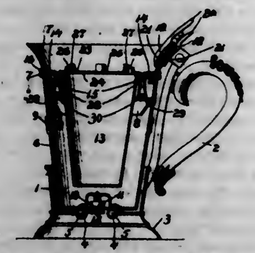
11. In a controller, a plurality of contact fingers, a rotatable drum carrying contact segments adapted to engage said contact fingers, and a single blow-out magnet having a plurality of polar projections located between said segments adjacent to said fingers.

12. In a controller, a plurality of contact fingers, a rotatable drum carrying contact segments adapted to engage said contact fingers, a single blow-out magnet having a plurality of polar projections located between said segments adjacent to said fingers, and a plurality of strips of magnetic material also adjacent to said fingers and forming the return paths for the flux of said magnet.

13. In a controller, a plurality of contact fingers, a rotatable drum carrying projecting contact segments adapted to engage said contact fingers, and a blow-out magnet having a plurality of polar projections from one of its pole pieces, said projections alternating with said projecting segments and located adjacent to said fingers.

14. In a controller, a controller casing, a front cover therefor, a blow-out magnet, a single controlling drum, and a plurality of strips of magnetic material carried by said cover adjacent to said drum and forming part of the path of the flux from said magnet.

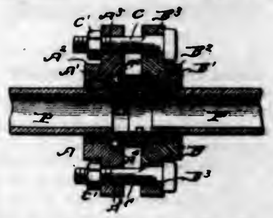
870,556. COMMUNION-CUP. ORANGE V. L. HARBOUR, Fairmount, Ind. Filed May 24, 1906. Serial No. 318,486.



1. A communion cup comprising a holder having a circular opening in the bottom thereof, the edge at said opening being bent up to form a ball race, balls in said race, a rotary receptacle in said holder supported on said ball bearing, said receptacle having a discharge valve in the bottom thereof in alinement with said opening.

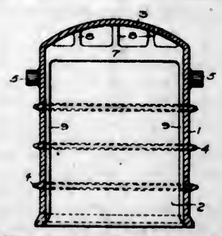
2. In a communion cup, a holder having a circular opening in the bottom thereof, the edge at said opening being bent up to form a ball race, balls in said race, a rotary receptacle in the holder supported on said ball bearing, a spring closed discharge valve in the bottom thereof in alinement with said opening, and a downwardly flaring guide tube surrounding said valve, extending into said circular opening and below the upturned edge thereof, whereby said valve is retained in approximate alinement with the center of the opening, and a push rod or other instrument may be readily brought in contact with the valve to open the same.

870,557. PIPE-COUPLING. FRANK HAUS, Metropolitan, N. Y. Filed June 30, 1904. Serial No. 214,774.



A pipe coupling comprising iron collars having bolt openings, said collars having bosses on their outer faces, and being interiorly threaded, oppositely beveled brass seats fitting in said collars, said seats having exterior and interior threads, inwardly extending studs carried by the seats and bolts connecting the collars.

870,558. ANNEALING-BOX. JOHN B. HENRY, Aspinwall borough, Pa., assignor to Union Steel Casting Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed May 26, 1906. Serial No. 318,914.



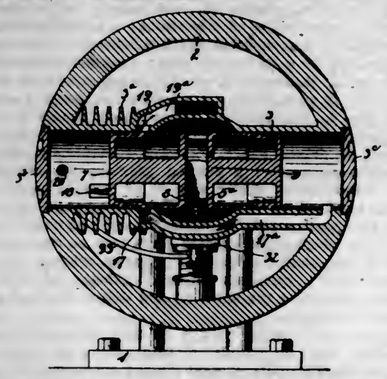
1. An annealing box having side and end walls, an arched roof, and a transverse tie member connecting the side walls near their tops, all said parts being a single integral casting.

2. An annealing box having side and end walls, a roof, and a truss member connecting the side walls near their tops and supporting the roof, all said parts being a single integral casting.

3. An annealing box comprising side and end walls, a roof, a chord extending between the side walls near their tops, and struts extending from said chord to the roof, all said parts being a single integral casting.

870,559. GAS-ENGINE. JOHN J. HOGAN, West Haven, Conn. Filed May 16, 1906. Serial No. 317,192.

1. In combination, a fly wheel, a cylinder extending diametrically across and within said fly wheel, a piston in said cylinder, a fixed crank shaft piercing the walls of said cylinder and said piston, a connection between the crank portion of said shaft and said piston, one end of said cylinder performing the function of the pump and means for supplying gas to the pump end of said cylinder, transferring it to the other end and there igniting the same to cause the cylinder, piston and fly wheel to rotate bodily around said fixed crank shaft.



2. In combination, a fixed crank shaft, a cylinder, hubs on said cylinder, said hubs being supported by said crank shaft, the crank portion of said shaft being between said hubs and within the cylinder, a piston within the cylinder surrounding the crank portion of said shaft, a connection between said crank shaft and said piston, clearance spaces in said piston for said crank and crank shaft, and a fly wheel flange carried by said cylinder one end of said cylinder performing the function of a pump.

3. In combination, a fly wheel, a cylinder extending diametrically thereof and revoluble therewith, one end of said cylinder performing the function of a pump, a piston within said cylinder and extending across the middle portion of the same, hubs on the middle portion of said cylinder and on opposite sides thereof, a stationary crank shaft piercing said hubs, a gas inlet port in one of said hubs, leading to the pump end of said cylinder, a gas transfer passage leading from said end of said cylinder to the other end thereof, and an exhaust passage leading from the latter end of said cylinder to the other hub, a gas inlet head bearing against the hub having the gas inlet port, and an exhaust head bearing against the hub having the exhaust port therein.

4. In combination, a stationary shaft, a cylinder having hubs midway in its length and on opposite sides thereof, said cylinder being supported by said shaft, a piston in said cylinder, the cylinder at one end of said piston performing the function of a pump, a stationary crank on said shaft, said crank being arranged within said cylinder and piston, a gas admission passage leading from one of said cylinder hubs to the pump end of said cylinder, a communicating or gas transfer passage leading from this end of said cylinder to the other end of said cylinder, and an exhaust passage leading from the last named end of said cylinder to an exhaust port in the other cylinder hub.

5. In combination, a stationary crank shaft, a cylinder revolubly supported thereby on opposite sides of the crank portion thereof, a fly wheel flange carried by said cylinder, a piston within said cylinder and extending across the center line of said crank shaft, the cylinder at one end of said piston performing the function of a pump, means for causing said piston to travel an equal distance on each side of said center line, a connection between the crank portion of said shaft and said piston, and means for supplying gas to the pump end of the cylinder and transferring said gas to the opposite end of said cylinder, and means for igniting the gas at the desired time, and discharging the burned gases therefrom.

6. In combination, a stationary crank shaft, a cylinder supported thereby and rotatable about the axis thereof, a hub on each side of said cylinder, a piston separating and spacing the two ends of said cylinder, one end of said cylinder performing the function of a pump, an inlet gas passage leading through one of said hubs to the pump end of the cylinder, said passage being open when the piston is near the opposite end of the cylinder, a gas transfer passage leading from the pump end of the cylinder to the opposite end, said passage being open when the piston is near the pump end of said cylinder, and an exhaust passage leading from the power end of said cylinder outwardly through the other hub, said exhaust passage being open simultaneously with said transfer passage, and a connection between said piston and said crank shaft, and means for igniting the gas at the proper time in that end of said cylinder opposite to the pump end.

7. In combination, a stationary crank shaft, a crank fixed on said shaft, a single piston directly connected to the crank portion of said shaft, a cylinder surrounding said piston, and acting at one end as a pump, hubs on said cylinders and passages through said hubs, one of said passages leading to the pump end of the cylinder for the admission of gas, the other passage leading from the other end of said cylinder to the other hub for exhausting burned gas, a gas transfer passage independent of the first two passages leading from the space at one end of the cylinder to the space at the other end of the cylinder, the opening and closing of all of said passages being controllable by said piston.

8. In combination, a stationary crank shaft, a cylinder rotatably supported thereby, one end of said cylinder acting as a pump, a portion of one side of said cylinder being removable to permit of the introduction into said cylinder of the crank portion of said crank shaft, a piston within said cylinder, an opening in the side of said piston to permit said crank shaft to be inserted into the same, and longitudinal openings in opposite sides of the piston to afford clearance for the opposite ends of the shaft adjacent to the crank, admission, transfer, and exhaust passages, all controlled by said piston.

9. In combination, a piston, a central web therein, a transverse guide-way formed in said web, a fixed crank shaft projecting through said piston, the crank pin of said crank shaft operating in said way when the engine is in motion, a cylinder surrounding said piston and crank, one end of said cylinder acting as a pump, an admission passage leading thereto, and a discharge passage leading from the other end of said cylinder, said cylinder being rotatably mounted on said shaft.

10. In combination, a piston, a transverse guide-way formed in said piston, a fixed crank shaft projecting through said piston, the crank pin of said crank shaft operating in said way when the engine is in motion, a cylinder revolubly mounted transversely of its axis, said piston serving to pump gas through one end of said cylinder to the other end when said engine is in motion.

11. In combination, a stationary crank shaft, a cylinder having central hubs on opposite sides transversely to its axis and supported by said shaft, a piston within said fly wheel and operatively connected with the crank portion of said shaft, said piston dividing said cylinder into two compartments, one a gas receiving compartment or pump chamber, the other a gas burning compartment or combustion chamber, means for admitting gas into the pump chamber when the cylinder is at one angle relatively to the shaft, means for transferring the gas contained in said pump chamber to the combustion chamber when the cylinder is at another angle relatively to the shaft, and means for igniting the gas contained within the combustion chamber when the cylinder stands at or about the first mentioned angle.

12. In combination, a fly-wheel, a cylinder extending diametrically across said fly-wheel, a piston in said cylinder, a fixed crank shaft piercing the walls of said cylinder and said piston, a connection between the crank portion of said shaft and said piston, hub bearings on the cylinder supported on said shaft, said piston operating in conjunction with said cylinder as the latter is rotated to pump fluid into one end of said cylinder and discharge it from the other end of said cylinder, an admission passage leading to the pump end of said cylinder, a transfer passage leading from the pump end of said cylinder to the discharge end thereof, and an exhaust passage leading from the discharge end of said cylinder.

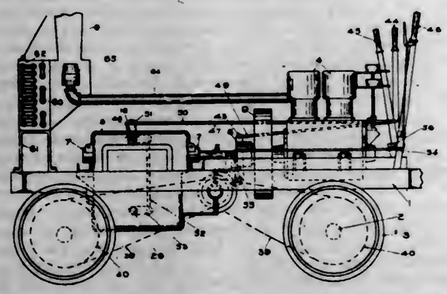
13. In combination, a fly-wheel, a cylinder extending

diametrically across the same and revoluble therewith, a piston within said cylinder and extending across the middle portion of the same and dividing said cylinder to form a pump chamber at one end and a discharge chamber at the opposite end, hubs on the middle portion of said cylinder and on opposite sides thereof, a stationary crank shaft supporting said hubs, an operative connection between the crank portion of said shaft and said piston to permit the piston to reciprocate relatively to the cylinder as the latter is revolved, an inlet leading to the pump end of said cylinder, a transfer passage leading from the pump end of said cylinder to the discharge end thereof, and a discharge passage leading from the latter end of said cylinder.

14. In combination, a fly-wheel, a cylinder extending diametrically across the same and revoluble therewith, a piston within said cylinder and extending across the middle portion of the same and dividing said cylinder to form a pump chamber at one end and a discharge chamber at the opposite end, hubs on the middle portion of said cylinder and on opposite sides thereof, a stationary crank shaft supporting said hubs, an operative connection between the crank portion of said shaft and said piston to permit the piston to reciprocate relatively to the cylinder as the latter is revolved, an inlet leading to the pump end of said cylinder, a transfer passage leading from the pump end of said cylinder to the discharge end thereof, and a discharge passage leading from the latter end of said cylinder, the inlet passage leading through one hub, the discharge passage leading through the opposite hub.

15. In combination, a piston, a transverse guide-way in said piston, a fixed crank shaft projecting through said piston, the crank pin of said crank shaft operated in said way when the engine is in motion, a cylinder revolubly mounted transversely of its axis, a pump chamber, a combustion chamber, a gas transfer port leading from one to the other, and inlet and exhaust ports therefor respectively.

870,560. LOCOMOTIVE. WILLIAM S. HOVEY, Three Rivers, Mich., assignor to The Sheffield Car Company, Three Rivers, Mich. Filed Oct. 18, 1906. Serial No. 339,534.



1. The combination with a suitable frame, of a pair of axles; traction wheels on said axles; an engine arranged longitudinally of said frame; a transmission gear comprising a transmission shaft connected to the engine crank shaft by a universal joint; a second transmission shaft, said transmission shafts being arranged longitudinally of said frame; a plurality of gears arranged in trains to connect said transmission shafts whereby the speed of said second transmission shaft may be varied; a driven shaft arranged transversely of said transmission shafts; a beveled gear on the second of said transmission shafts; a pair of beveled gears revolubly mounted on said driven shaft arranged to mesh with said gear on said transmission shaft; a clutch mechanism by which either of said gears may be connected to said driven shaft; a pair of sprocket wheels for said driven shaft; sprockets on said axles; sprocket chains connecting the same to said driven shaft; and a brake mechanism for said driven shaft, for the purpose specified.

2. The combination with a suitable frame, of a pair of axles; traction wheels on said axles; an engine arranged longitudinally of said frame; a transmission gear comprising a transmission shaft connected to the engine crank shaft by a universal joint; a second transmission shaft, said transmission shafts being arranged longitudinally of said frame; a plurality of gears arranged in trains to connect said transmission shafts whereby the speed of said second transmission shaft may be varied; a driven shaft arranged transversely of said transmission shafts; a beveled gear on the second of said transmission shaft; a pair of beveled gears revolubly mounted on said driven shaft, arranged to mesh with said gear on said transmission shaft; a clutch mechanism by which either of said gears may be connected to said driven shaft; a pair of sprocket wheels for said driven shaft; sprockets on said axles; and sprocket chains connecting the same to said driven shaft, for the purpose specified.

3. The combination with a suitable frame, of a pair of axles; traction wheels on said axles; an engine arranged longitudinally of said frame; a transmission gear comprising a transmission shaft connected to the engine crank shaft by a universal joint; a second transmission shaft, said transmission shafts being arranged longitudinally of said frame; a plurality of gears arranged in trains to connect said transmission shafts whereby the speed of said second transmission shaft may be varied; a driven shaft arranged transversely of said transmission shaft; a beveled gear on the second of said transmission shafts; a pair of beveled gears revolubly mounted on said driven shaft arranged to mesh with said gear on said transmission shaft; a clutch mechanism by which either of said gears may be connected to said driven shaft; driving connections for said driven shaft to said axles; and a brake mechanism for said driven shaft, for the purpose specified.

4. The combination with a suitable frame, of a pair of axles; traction wheels on said axles; an engine arranged longitudinally of said frame; a transmission gear comprising a transmission shaft connected to the engine crank shaft by a universal joint; a second transmission shaft, said transmission shafts being arranged longitudinally of said frame; a plurality of gears arranged in trains to connect said transmission shafts whereby the speed of said second transmission shaft may be varied; a driven shaft arranged transversely of said transmission shafts; a beveled gear on the second of said transmission shafts; a pair of beveled gears revolubly mounted on said driven shaft arranged to mesh with said gear on said transmission shaft; a clutch mechanism by which either of said gears may be connected to said driven shaft; a pair of sprocket wheels for said driven shaft; sprockets on said axles; sprocket chains connecting the same to said driven shaft; and a brake mechanism for said driven shaft, for the purpose specified.

5. The combination with a suitable frame, of a pair of axles; traction wheels on said axles; an engine arranged longitudinally of said frame; a transmission gear comprising a transmission shaft, connected to the engine crank shaft; a second transmission shaft, said transmission shafts being arranged longitudinally of said frame; a plurality of gears arranged in trains to connect said transmission shafts whereby the speed of said second transmission shaft may be varied; a driven shaft arranged transversely of said transmission shafts; a beveled gear on the second of said transmission shafts; a pair of beveled gears revolubly mounted on said driven shaft arranged to mesh with said gear on said transmission shaft; a clutch mechanism by which either of said gears may be connected to said driven shaft; a pair of sprocket wheels for said driven shaft; sprockets on said axles; sprocket chains connecting the same to said driven shaft; and a brake mechanism for said driven shaft, for the purpose specified.

6. The combination with a suitable frame, of a pair of axles; traction wheels on said axles; an engine arranged longitudinally of said frame; a transmission gear comprising a transmission shaft, connected to the engine crank shaft; a second transmission shaft, said transmission shafts being arranged longitudinally of said frame; a plurality of gears arranged in trains to connect said transmission shafts whereby the speed of said second transmission shaft may be varied; a driven shaft arranged transversely of said transmission shafts; a beveled gear on the second of said transmission shafts; a pair of beveled gears revolubly mounted on said driven shaft arranged to mesh with said gear on said transmission shaft; a clutch by which either of said gears may be connected to said driven shaft; a pair of sprocket wheels for said driven shaft; sprockets on said axles; and sprocket chains connecting the same to said driven shaft, for the purpose specified.

7. The combination with a suitable frame, of a pair of axles; traction wheels on said axles; an engine arranged longitudinally of said frame; a transmission gear comprising a transmission shaft connected to the engine crank shaft; a second transmission shaft, said transmission shafts being arranged longitudinally of said frame; a plurality of gears arranged in trains to connect said transmission shafts whereby the speed of said second transmission shaft may be varied; a driven shaft arranged transversely of said transmission shafts; a beveled gear on the second of said transmission shafts; a pair of beveled gears revolubly mounted on said driven shaft arranged to mesh with said gear on said transmission shaft; a clutch mechanism by which either of said gears may be connected to said driven shaft; driving connections for said driven shaft to said axles, for the purpose specified.

8. The combination with a suitable frame, of a pair of axles; traction wheels on said axles; an engine arranged longitudinally of said frame; a variable speed transmission gear therefor; a driven shaft arranged transversely of said frame; a beveled gear connected to said transmission gear; a pair of beveled gears revolubly mounted on said driven shaft arranged to mesh therewith; a clutch by which either of said gears may be connected to said driven shaft; a pair of sprocket wheels for said driven shaft; sprockets on said axles; and sprocket chains connecting the same to said driven shaft, for the purpose specified.

9. The combination with a suitable frame, of a pair of axles; traction wheels on said axles; an engine arranged longitudinally of said frame; a variable speed transmission gear therefor; a driven shaft; a beveled gear connected to said transmission gear; a pair of beveled gears revolubly mounted on said driven shaft arranged to mesh therewith; a clutch by which either of said gears may be connected to said driven shaft; and driving connections for said driven shaft to said axles, for the purpose specified.

10. The combination with a suitable frame, of a pair of axles; traction wheels on said axles; an engine; a variable speed transmission gear therefor; a driven shaft arranged transversely of said frame; a beveled gear connected to said transmission gear; and a pair of beveled gears revolubly mounted on said driven shaft arranged to mesh therewith; a clutch by which either of said gears may be connected to said driven shaft; a pair of sprocket wheels for said driven shaft; sprockets on said axles; and sprocket chains connecting the same to said driven shaft, for the purpose specified.

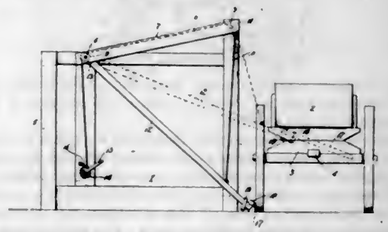
11. The combination with a suitable frame, of a pair of axles; traction wheels on said axles; an engine; a variable speed transmission gear therefor; a driven shaft; a beveled gear connected to said transmission gear; a pair of beveled gears revolubly mounted on said driven shaft arranged to mesh therewith; a clutch by which either of said gears may be connected to said driven shaft; and driving means for said driven shaft to said axles, for the purpose specified.

12. The combination with a suitable frame, of a pair of axles; traction wheels on said axles; an engine arranged longitudinally of said frame; a driven shaft arranged transversely of said frame; a pair of beveled gears revolubly mounted on said driven shaft; a clutch by which either of said gears may be connected to said driven shaft; a beveled gear driven by said engine arranged to mesh with said gears on said driven shaft; a pair of sprocket wheels for said driven shaft; sprockets on said axles; and sprocket chains connecting the same to said driven shaft, for the purpose specified.

13. The combination with a suitable frame, of a pair of axles; traction wheels on said axles; an engine arranged longitudinally of said frame; a driven shaft; a pair of beveled gears revolubly mounted on said driven shaft; a clutch by which either of said gears may be connected to said driven shaft; a beveled gear driven by said engine arranged to mesh with said gears on said driven shaft; and driving connections for said driven shaft to said axles, for the purpose specified.

14. The combination with a suitable frame, of a pair of axles; traction wheels on said axles; an engine; a driven shaft arranged transversely of said frame; a pair of beveled gears revolubly mounted on said driven shaft; a clutch by which either of said gears may be connected to said driven shaft; a beveled gear driven by said engine arranged to mesh with said gears on said driven shaft; a pair of sprocket wheels for said driven shaft; sprockets on said axles; and sprocket chains connecting the same to said driven shaft, for the purpose specified.

870,561. WAGON-BOX AND HAY-RACK REMOVER. EDWARD JOSE, Harrisville, W. Va. Filed Jan. 7, 1907. Serial No. 351,170.



1. A device for raising wagon boxes, racks or the like, having a hoisting element provided with a swinging extension pivotally mounted to permit it to be swung between the reach or pole and the box or rack of a wagon or the like, substantially as described.

2. A device for raising wagon boxes, racks or the like, having a swinging element, and a pivotally mounted extensible section upon said element to permit it to be swung between the reach and the wagon box or rack of a wagon or the like, substantially as described.

3. A device for raising wagon boxes, racks or the like, having a swinging element, a pivotally mounted extensible section upon said element to permit it to be swung between the reach and the wagon box of a wagon or the like, and means for operating said swinging element, substantially as described.

4. A device of the character described, comprising a support, a lever pivoted thereon, an extensible section pivotally mounted upon said lever to permit it to be swung between the reach and the body or box of a wagon or the like, means for holding said section extended, and means for raising and lowering said lever, substantially as described.

5. A device of the character described, comprising a support, a lever pivoted thereon, an extensible section pivotally mounted upon said lever and adapted to be swung between the reach and the box or rack of a wagon or the like, and means for operating said lever, substantially as described.

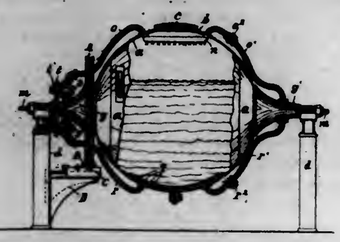
6. A device of the character described, comprising a frame, a pair of levers concentrically pivoted thereon, extensible sections pivoted upon the front ends of said levers, and adapted to be swung between the reach and the box or rack of a wagon or the like, cables attached to said levers, guides for said cables, and means for winding and unwinding said cables, substantially as described.

7. In a hoisting device, a hoisting element mounted for vertical swinging movement, an extensible member pivoted

upon said hoisting element and a slidable endless band carried by said hoisting element and adapted to engage said slidable member to hold it in extended position.

8. In a hoisting device, a hoisting lever, an extensible arm pivoted intermediate its ends upon said lever and adapted to be swung into longitudinal alinement therewith and a sliding band upon said lever to engage the short inner end of said arm and retain the latter in alinement with said lever.

870,562. ROTARY DIGESTER OR COOKER. MICHAEL R. KENNEDY, Dansville, N. Y., assignor to The National Straw Pulp Company, New York, N. Y., a Corporation of South Dakota. Filed Sept. 17, 1906. Serial No. 334,951.



1. A rotary cooker having journals at opposite ends with bearings adapted to yield under the expansion and contraction of the cooker.

2. A rotary cooker having journals at opposite ends with a bearing upon one of said journals adapted to swivel horizontally to compensate for expansion of the cooker.

3. A rotary cooker having journals at opposite ends with a bearing upon one of the said journals having a bed with anti-friction rolls supporting the said journal to permit longitudinal movement.

4. A rotary cooker having journals at opposite ends with one of the journals held from longitudinal movement and a bearing from the opposite journal permitting longitudinal movement to compensate for expansion of the cooker.

5. A rotary cooker having journals at opposite ends with one of the journals held from longitudinal movement, a gear-wheel upon the trunnion adjacent to such journal, means for rotating such gear-wheel, and a bearing for the opposite journal permitting longitudinal movement to compensate for expansion of the cooker.

6. A rotary cooker having trunnions with journals at opposite ends, a manhole for inserting a charge in the cooker, means extended through the trunnion for supplying fluids to the charge within the cooker, and means for rotating the cooker at various speeds as required by the condition of the charge.

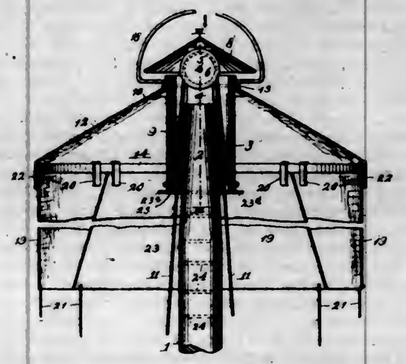
7. A rotary cooker having trunnions with journals at opposite ends, a manhole for inserting a charge in the cooker, means extended through the trunnion for supplying fluids to the charge within the cooker, and means for rotating the cooker in opposite directions at various speeds when required by the condition of the charge.

8. A rotary cooker supported on trunnions and having a manhole in one side for inserting a charge, a pipe extended into the cooker with connection through the trunnion to supply fluid to or withdraw it from the cooker, a valve in said pipe having a rotary plug with cog-wheel thereon, and a stationary cog-wheel held concentric with the movement of the cooker for rotating such valve when the cooker rotates.

9. A rotary cooker supported on trunnions and having a manhole in one side for inserting a charge, a pipe extended into the cooker with connection through the trunnion to supply fluid to or withdraw it from the cooker, a valve in said pipe having a rotary plug with cog-wheel thereon, and a stationary segmental cog-wheel held stationary about the trunnion to rotate the valve intermittently when the cooker revolves.

10. The combination, with a rotary digester containing pulp or fiber mixed with liquor, of a glass water-gage having apertures extending through the shell of the digester at different levels, and a screen I extending over the apertures and over the space between the same, to form a chamber within which the liquid may be strained from the pulp and circulate in the tube of the gage.

870,563. PORTABLE STACK-COVER. WILLIAM KINDT, Belleville, Kans. Filed May 22, 1906. Serial No. 318,138.



1. In a stack cover, the combination with the pole having a tapered upper end, a tapered ferrule adapted to fit said end and having a pair of arms extending upwardly and turned outwardly and downwardly, sheave-wheels journaled between said arms, a spacing-block between them, and a conical cap secured on their upper ends; of a sleeve surrounding and larger than said ferrule, a stack-cover proper carried by said sleeve, two ropes leading upward between said ferrule and sleeve, passing in opposite directions over said wheels, and having their terminals secured to the lower portion of the sleeve, and additional means for adjusting the vertical position of said sleeve.

2. In a stack cover, the combination with the pole, a ferrule adapted to fit said pole and having a pair of arms extending upwardly and turned outwardly and downwardly, sheave-wheels journaled between said arms, and a conical cap secured on their upper ends; of a sleeve surrounding and larger than said ferrule, a stack-cover proper carried by said sleeve, two ropes leading upward between said ferrule and sleeve, passing in opposite directions over said wheels, and having their terminals secured to the sleeve, a series of transverse holes being formed through the pole, and a pin adapted to be inserted in any of said holes and to have both ends project beneath the sleeve and in position to be engaged by said ropes.

3. In a stack-cover, the combination with the pole, a ferrule adapted to fit its end and having a pair of arms extending upwardly and turned outwardly and downwardly, sheave-wheels journaled between said arms, and a conical cap secured on their upper ends; of a sleeve surrounding and larger than said ferrule, a stack-cover proper carried by said sleeve, two ropes leading upward between said ferrule and sleeve, passing in opposite directions over said wheels, and having terminals secured to the sleeve, and a bail whose ends are swiveled in the sleeve near its upper extremity and whose body is of a size to loosely surround the cap, for the purpose set forth.

4. In a stack-cover, the combination with the pole, a ferrule adapted to fit its upper end and having a pair of arms extending upwardly and turned outwardly, sheave-wheels journaled between said arms, and a conical cap secured on their upper ends; of a sleeve surrounding and larger than said ferrule, a stack-cover proper carried by said sleeve, two ropes leading upward between said ferrule and sleeve, passing in opposite directions over said wheels, and having their terminals secured to the lower end of the sleeve, and a bail swivelly connected to its upper end and loosely embracing the cap, for the purpose set forth.

5. In a stack-cover, the combination with a pole, a ferrule removably mounted on its upper end, a sheave-wheel carried by the ferrule, and a conical cap rigidly supported by the ferrule above the wheel; of a sleeve larger than the pole and ferrule, a rope leading upward between the ferrule and sleeve and over the wheel and connected with the sleeve, a stack-cover proper whose top is gathered around the upper portion of the sleeve, and a bail whose body loosely embraces the cap and whose ends are inturned and swiveled in the sleeve, as and for the purpose set forth.

6. In a stack-cover, the combination with a pole, a ferrule removably mounted on its upper end, and a conical cap carried by the ferrule; of a sleeve larger than the ferrule but smaller than the cap, a stack-cover proper whose upper end is gathered around the sleeve so as to be protected by the cover, means for adjusting from the ground the height of the sleeve with respect to the ferrule, and a bail swiveled to the sleeve and loosely embracing the cap so that it may be turned aside and adjusted vertically from above to permit the descent of the sleeve, but when raised it will also raise the cap and ferrule.

7. In a stack-cover, the combination with a pole, a ferrule removably mounted on its upper end, and a conical cap carried by the ferrule; of a sleeve larger than the ferrule but smaller than the cap, a stack-cover proper whose upper end is gathered around the sleeve so as to be protected by the cover, means for sustaining the sleeve at different heights with respect to the pole, and a bail swiveled to the sleeve and loosely embracing the cap so that it may be turned aside and adjusted vertically from above to permit the descent of the sleeve, but when raised it will also raise the cap and ferrule.

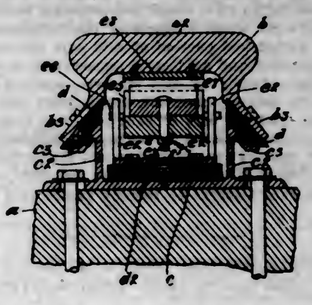
8. A portable stack-cover comprising a conical cap and sleeve adapted to be sustained by a pole, the sleeve having a peripheral flange near its upper end beneath said cap, a flexible top having a peripheral flange and split radially to produce overlapping edges, a gathering rope around said top and sleeve above the flange on the latter, an expansible hoop within the flange of the top having button-and-slot connection at its ends, hooks on the top near its edges, a lacing rope engaging said gathering rope and adapted to be laced over said hooks and wound about said button, aprons forming the sides of the cover and having hooks removably engaging said hoop, and ropes for securing the lower ends of the aprons in place.

9. A portable stack-cover comprising a conical cap and sleeve adapted to be sustained by a pole, the sleeve having a peripheral flange near its upper end beneath said cap, a flexible top having a peripheral flange, a gathering rope around said top and sleeve above the flange on the latter, an expansible hoop within the flange of the top having button-and-slot connection at its ends, aprons forming the sides of the cover and having hooks engaging said hoop, and ropes for securing the lower ends of the aprons in place.

870,564. THIRD-RAIL ELECTRIC-RAILWAY SYSTEM. CHARLES KOHLSNIK, New York, N. Y. Filed June 16, 1904. Serial No. 212,770.

1. A third rail for electric railways, the same being a hollow rail composed of an upper and a lower part united together but insulated from each other, armature supports within said rail having separated uprights provided with notches in their upper ends, armatures lying between said uprights and having pins engaging said notches, and an electric connection for said armatures, substantially as described.

2. A hollow third rail for electric railways composed of an upper part, and a lower part, each having downwardly inclined flanges at the sides, the two parts being connected together with an insulating material between said flanges



insulating said parts from each other, substantially as described.

870,565. DOUBLE-LOCK HUB. SAMUEL D. LATTY, Cleveland, Ohio. Filed Feb. 5, 1906. Serial No. 299,435.



1. In a device of the character described, the combination with a cylindrical axle having an angular end and projecting ears removed at a distance from said end; of a suitable wheel-hub for said axle having a plurality of flanges secured thereto, said flanges adapted non-rotatably to engage with said angular end and said ears, respectively.

2. In a device of the character described, the combination of an axle having an angular end and projecting ears removed at a distance from said end; a suitable wheel-hub for said axle; and a flange secured at each end of said hub, one of said flanges having a hole adapted to receive said angular end and the other flange having longitudinally-disposed grooves adapted to receive said ears.

3. In a device of the character described, the combination of an axle having a rectangular-shaped end and two projecting ears removed at a distance from said end; a suitable wheel-hub for said axle; and a flange secured at each end of said hub, one of said flanges having a rectangular-shaped hole adapted to receive said rectangular-shaped end and the other flange having a hole through which the axle is adapted to pass, said last-named flange having longitudinally-disposed grooves intersecting the axle-hole and adapted to receive said ears.

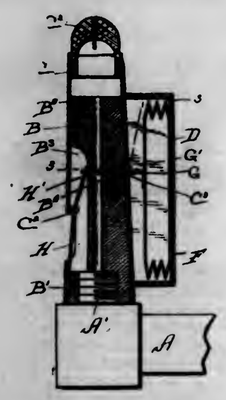
4. In a device of the character described, the combination of an axle having an angular end and two projecting ears removed at a distance from said end, said ears being stamped out of the body of the axle; a suitable wheel-hub for said axle; and a flange secured at each end of said hub, one of said flanges having a hole adapted to register with said angular end and the other flange having a hole through which said axle is adapted to pass, said last named flange having slots intersecting the axle-hole and adapted to receive said ears.

5. In a wheel construction, the combination with an axle having an end portion of angular cross-section and less diameter than the axle proper, and being provided with laterally projecting ears removed from such end portion; of a wheel non-rotatably mounted upon said axle, such wheel comprising two annular members respectively engaging said ears and said angular end portion, a sleeve disposed between said members and adapted to hold the same apart, and spokes mounted in said hub members.

6. In a wheel construction, the combination with an axle having an end portion of angular cross-section and

less diameter than the axle proper and being provided at a distance from such end portion with oppositely disposed laterally projecting ears, stamped out of the body of the axle itself; of a wheel non-rotatably mounted upon said axle, such wheel comprising two washers mounted upon the cylindrical portion of said axle and adjacent to said end-portion and said ears, respectively, a sleeve disposed intermediately of said washers, and two annular, peripherally notched members respectively engaging the end-portion and the ears of said axle, and spokes having their inner ends located between said members and the respective washers contiguous thereto, the portions of said members intermediate between the notches being bent over upon said washers to thereby secure said spokes in place.

870,566. GAS-BURNER. EDWARD M. LOFTUS, St. Paul, Minn. Filed Nov. 23, 1906. Serial No. 344,726.



1. In a gas burner, the combination with a plug provided with a bore and a cut out portion, of a tube arranged over said plug carrying a gas tip, a casing secured to said tube a thermostatic frame arranged in said casing carrying a cut off bar working in a slot in the plug and tube and a lever pivoted in the cut out portion of the plug connected to said cut off bar for the purpose described.

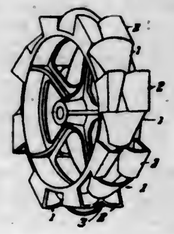
2. In a gas burner, the combination with a plug having a bore and a cut out portion, of a tube arranged over said plug provided with a cutaway portion, a gas tip arranged in said tube, a casing secured to one side of said tube, a thermostatic frame arranged in said casing, a cut off bar provided with an opening connected to said frame working in a slot in said plug, and tube, and a lever pivoted in the cut out portion of the plug connected to said cut off bar, for the purpose described.

3. In a gas burner, the combination with a plug provided with a vertical bore, and a transverse slot terminating in a cut out portion, of a tube arranged over said plug provided with a casing, a thermostatic frame arranged in said casing, a cut off bar secured to said frame extending through said slot into said cut out portion, provided with an opening at its end, and an opening adapted to register with the vertical bore of the plug and a lever pivoted to the tube in said cut out portion of the plug, provided with a reduced end working in the opening in the end of the cut off bar, for the purpose described.

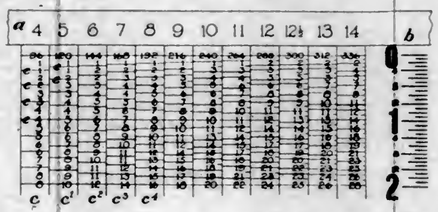
870,567. TURBINE. WILHELM LÖH, Höchst-on-the-Main, Germany. Filed Nov. 2, 1905. Serial No. 285,596.

A turbine wheel comprising a rim, half cone buckets (1), and quarter cone buckets (2) mounted on the rim and arranged so that a half cone bucket follows a pair of quarter cone buckets.

870,567.



870,568. CHART FOR COMPUTING-SCALES. GEORGE M. LUDLOW, Chicago, Ill., assignor to The Computing Scale Company, Dayton, Ohio, a Corporation of Ohio. Filed Apr. 4, 1907. Serial No. 366,400.



1. In a chart for computing or price scales, a series of graduations indicating pounds and ounces, a series of columns of figures, one figure in each column placed opposite a certain division of said pounds and ounces representing the commercial value of any article at a certain price per pound, of a weight indication opposite said figure, in combination with a series of indications in each of said columns representing the number of monetary units in the given price per pound contained in the space occupied by the pound and ounce graduations.

2. In a chart for computing or price scales, a series of prices, a series of columns of figures adjacent to said prices, one column for each price, said columns of figures representing the commercial value of different weights at the price corresponding to said column, in combination with a series of indications in the same columns representing the number of divisions of the weight unit corresponding to the number of units of value contained in the price per unit of value, as and for the purpose specified.

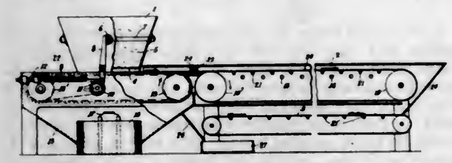
3. In a chart for price or computing scales, pound and ounce graduations, a series of figures representing prices per pound, a series of columns of figures adjacent to said price, one column for each price, said figures representing the commercial value of pounds and divisions thereof and placed opposite to said divisions, each of said columns being also provided with a series of indications for each pound corresponding to the number of monetary units contained in the price per pound.

4. In a chart for computing or price scales, a series of divisions representing weights, a series of columns of figures representing values parallel to said divisions of weight, said figures in each column being arranged opposite to the division of weight, a series of prices representing the number of monetary units in a unit of weight, said price figures being arranged adjacent to said columns, one price figure for each column, the figures in said columns representing the commercial value of the different divisions of weight opposite to which they are placed at the price adjacent to said column, and a series of indications in each of said columns representing the division of the weight unit into as many parts as there are monetary units in the price adjacent to said column.

5. In a chart for computing or price scales, a series of graduations representing pounds and ounces or other units of weights, a series of figures placed opposite said graduations indicating the commercial value of any weight unit or fraction thereof, and a series of indications representing values determined by dividing the unit of weight by the number of monetary units in the particular price per pound, said commercial value and said actual values being printed in different colors, in combination with a series of prices adapted to stand opposite each of said series of computations, substantially as specified.

6. In a chart for computing or price scales, a series of graduations representing units of weight, a series of figures placed opposite said graduations indicating the commercial value of any weight unit or fraction thereof, and a series of indications representing values determined by dividing the unit of weight by the number of monetary units in the price per unit, in combination with a series of prices adapted to stand opposite each of said series of computations, substantially as specified.

870,569. APPARATUS FOR COATING DISKS AND SIMILAR ARTICLES. THOMAS H. MACDONALD and FRANK L. CAPPS, Bridgeport, Conn., assignors to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Feb. 14, 1907. Serial No. 357,397.



1. The combination of a hopper containing a sieve, a perforated conveyer beneath the same, a striker acting upon said hopper, means for regulating the force of said striker, and means for actuating said conveyer and said striker.

2. The combination with a hopper having a sieve, and a perforated conveyer beneath the same, of a heat-box containing a second conveyer in juxtaposition to the first conveyer.

3. The combination with a hopper having a sieve, and a perforated conveyer beneath the same, of a heat-box containing a second conveyer in juxtaposition to the first conveyer, and a bridge spanning the space between the two conveyers.

4. The combination of a hopper and a conveyer beneath the same, a heat-box having a second conveyer in juxtaposition to the first conveyer, and a cooling conveyer adjacent to said heat-box.

5. The combination of a hopper and a conveyer beneath the same, a heat-box having a second conveyer in juxtaposition to the first conveyer, a cooling conveyer adjacent thereto, and means for inverting articles carried by said heating conveyer to deliver them upside down on the cooling conveyer.

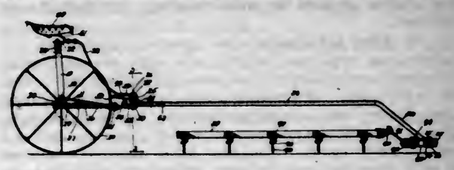
6. The combination with a hopper having one or more transverse bars, a revoluble disk having pins, a lever having adjustable spring control and mounted to be actuated by said pins and to strike upon said bar.

7. A hopper having a sieve, a perforated conveyer beneath the same, common means for imparting a blow to said hopper and for driving said conveyer and means for adjusting the force of the blow.

8. In a disk-coating apparatus, a hopper having a sieve, a plurality of endless chains beneath the same and constituting a perforated conveyer, a casing inclosing said chains and a pit beneath the same, and a trough adjacent to said pit.

870,570. RIDING ATTACHMENT FOR HARROWS. JOSEPH MANGAN, Galesburg, Ill. Filed July 13, 1905. Serial No. 269,467.

1. In riding attachments for harrows and the like, the combination with the wheel frame, of the coupling sleeve provided with divergent arms, a vertical pivot bolt connecting said sleeve and wheel frame, divergent angle bars rigidly secured to the arms of said coupling sleeve and arranged to extend over the harrow, said divergent angle bars having downwardly bent front portions with flattened ends engaging one of the bars of the draft evener and bolts for rigidly securing the flat ends of said bars to the draft evener, substantially as described.



2. In riding attachments for harrows and the like the combination with the wheel frame comprising upper and lower bars having forwardly projecting portions, of a coupling sleeve arranged between the forward ends of said frame bars, a vertical pivot bolt connecting said sleeves and frame bars and a pair of divergent connecting bars rigidly secured at their rear ends to said coupling sleeve, substantially as described.

3. In riding attachments for harrows and the like, the combination with the wheel frame comprising upper and lower bars having forwardly projecting portions, of a coupling sleeve arranged between the forwardly projecting portions of said frame bars, a vertical pivot bolt connecting said sleeve and frame bars, a pair of divergent connecting bars rigidly secured at their rear ends to said sleeve and arranged to extend forwardly and horizontally over the harrow, said connecting bars having downwardly extending front portions and means for rigidly securing the forward ends of said connecting bars to the draft evener, substantially as described.

4. In riding attachments for harrows and the like, the combination with the wheel frame comprising upright side bars and upper and lower bars connected to said side bars and having forwardly extending portions, of a coupling sleeve between the forwardly extending portions of said upper and lower frame-bars, a vertical pivot bolt extending through said bars and sleeve, and divergent connecting brace-bars secured at their rear ends to said coupling sleeve arranged to extend over said harrow and connect to the draft evener, substantially as described.

5. In riding attachments for harrows and the like, the combination with the wheel frame comprising upright side bars and upper and lower bars connected to said side bars and having flat, horizontal, forwardly extending portions, of a coupling sleeve having flat ends arranged between said forwardly extending portions, a vertical pivot bolt extending through said sleeve and the front portion of said frame-bars, and a pair of divergent connecting-bars secured at their rear ends to said sleeve, substantially as described.

6. In riding attachments for harrows and the like, the combination with the wheel frame comprising upper and lower bars having forwardly projecting portions, of a coupling sleeve between the forward ends of said frame bars, a vertical pivot bolt connecting said sleeve and bars, and divergent angle-bars connected at the rear end to said sleeve arranged to extend forwardly in horizontal position over the harrow and having downwardly extending front portions with flattened ends shaped to engage one of the evener-bars, substantially as described.

7. In riding attachments for harrows and the like, the combination with the wheel frame comprising upper and lower bars having forwardly projecting portions, of a coupling sleeve between the forward ends of said frame bars, a vertical pivot bolt connecting said sleeve and bars, divergent angle-bars secured at their rear ends to said coupling sleeve, arranged to extend forwardly in horizontal position and having downwardly extending front portions with flattened ends and downturned lips to snugly engage the evener-bar, and bolts rigidly connecting the ends of said angle-bars to said evener-bar, substantially as described.

8. In riding attachments for harrows and the like, the

combination with the coupling, of a wheel frame comprising the wheel axle, upright side bars connected to the ends of said axle, upper and lower frame-bars connected to said side bars extending forwardly therefrom and vertically pivoted to said coupling, and connecting brace-bars rigidly secured to said coupling, substantially as described.

9. In riding attachments for harrows and the like, the combination with the coupling and with the connecting brace-bars secured thereto, of the wheel frame comprising the wheel axle, the upright side bars, the upper and lower center bars secured respectively to the upper ends of said side bars and to said wheel axle, the forward ends of said center frame bars being vertically pivoted to said coupling, and inclined brace-bars extending between the forward end of said lower center bar and the ends of said axle, substantially as described.

10. In riding attachments for harrows and the like, the combination with the wheel axle, supporting wheels and wheel boxes, of the upright side-bars, the lower horizontal frame bars, bolts connecting the lower ends of said upright, the rear ends of said brace-bars and the inner wheel boxes to said axle, an upper frame bar connected at its rear end to the upper ends of said uprights, a coupling sleeve arranged between the forward ends of said frame bars, a vertical pivot bolt connecting said sleeves and bars, and connecting brace-bars secured at their rear ends to said coupling sleeve.

11. In riding attachments for harrows and the like, the combination with the wheel frame having upper and lower forwardly extending bars, of a sleeve arranged between the forward ends of said frame bars, a vertical pivot bolt connecting said bars and sleeve, connecting bars secured at their rear ends to said sleeve and a depressible spring-held latch comprising separate arms arranged on opposite sides of said coupling sleeve and horizontally pivoted thereto, said latch having means engaging one of said frame bars to hold the wheel frame against lateral swing, substantially as described.

12. In riding attachments for harrows and the like, the combination with the wheel frame carrying a rider's seat and comprising frame bars extending forwardly from the wheel axle and the rider's seat, of a coupling to which said frame bars are vertically pivoted at their forward ends, connecting brace-bars for engaging the harrow secured at their rear ends to said coupling, and a releasable latch having an operating foot-piece for holding the wheel frame against lateral swing, substantially as described.

13. In riding attachments for harrows and the like, the combination with the wheel frame having upper and lower forwardly extending bars, of a sleeve arranged between the forward ends of said frame bars, a vertical pivot bolt connecting said bars and sleeve, connecting bars secured at their rear ends to said sleeve and a depressible spring-held latch comprising separate arms arranged on opposite sides of said coupling sleeve and horizontally pivoted thereto, said latch having a laterally extending foot-piece and a pair of lugs for engaging the upper frame bar to hold the wheel frame against lateral swing, said lugs being cam shaped to automatically reengage said frame bar when released therefrom, substantially as described.

14. In riding attachments for harrows and the like, the combination with wheel frame comprising frame-bars having forwardly extending portions, of a coupling sleeve arranged between the front ends of said frame bars, a vertical pivot bolt connecting said sleeve and bars, connecting-bars secured at their rear ends to said sleeve and a releasable spring-held latch horizontally pivoted on said coupling sleeve and arranged to engage one of the bars of said wheel frame to hold the same against lateral swing, substantially as described.

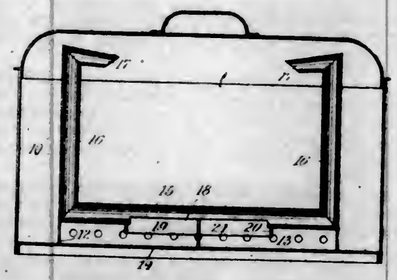
870,571. WIRE-FENCE TIE. GEORGE R. MILLS, Hudson, Mich. Filed June 25, 1907. Serial No. 380,727.

1. In combination with crossed fence wires, a wire tie comprising a piece of wire having its middle portion bent substantially in circular form and engaging the fence wires at substantially four equi-distant points, and also arranged concentric with the crossing point of said fence wires, the ends of said tie crossing the fence wires at the same side, and side by side, the outer end of said tie being bent inward substantially radially and alongside of the fence wire and thence partially around the circular portion of the tie, the other end being bent partially around the fence wire oppositely to the first described end, and also within the circular portion of the tie, the said ends both terminating within the said circular portion, and within the plane thereof, and oppositely directed.



2. In a wire fence, in combination with fence wires consisting of a line wire and stay wire crossed at substantially right angles, a wire tie consisting of a circular portion arranged concentric with the crossing point of said wires and engaging the non-adjacent sides of the same at four substantially equi-distant points, the ends of the tie wires crossing a fence wire side by side, and the outer end of the tie wire being bent inward alongside of said fence wire and thence partially around the circular portion of the tie, and also engaging both fence wires close to the crossing thereof, and the other end of the tie wire being bent partially around the last named fence wire and oppositely to the other end of the tie wire, and also engaging both fence wires close to the crossing thereof, the ends of the tie wires being oppositely directed and within the circular portion of the tie.

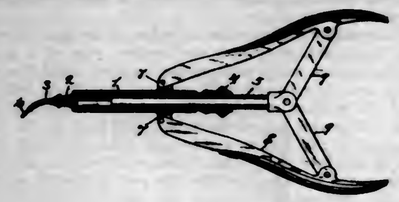
870,572. WASHBOILER. JAKOB MOHR, New York, N. Y. Filed Mar. 21, 1907. Serial No. 363,605.



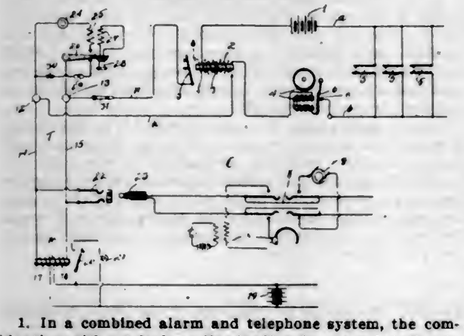
A wash boiler provided with a false bottom having an outer flange, an inner flange of less height than the outer flange, said false bottom being perforated only outside the inner flange, a transverse partition within the inner flange, a tube extending along the false bottom and open only within the inner flange, pipes communicating with the ends of the tube, and nozzles on the pipes, substantially as specified.

870,573. INSTRUMENT FOR INTRODUCING LIQUID MEDICAMENT INTO TEETH. CHARLES G. MYERS, Cleveland, Ohio. Filed Apr. 12, 1904. Serial No. 202,807.

An instrument for introducing fluid medicament into teeth, consisting of a barrel; a plunger in the same; a pair of handles fulcrumed upon the barrel; and a pair of toggle-links pivoted to the handles and the plunger.



870,574. FIRE-ALARM SYSTEM. CHARLES W. MCDANIEL, Kansas City, Mo. Filed Apr. 23, 1906. Serial No. 313,175.



1. In a combined alarm and telephone system, the combination with a telephone line leading from a substation to a central exchange, of an alarm circuit at the substation, a source of direct current and a rheotome alarm bell for said alarm circuit, thermostatic mechanism for controlling the alarm circuit, an electromagnet having a primary winding included in said alarm circuit, a secondary winding for the electromagnet adapted for connection with the telephone line, the armature of said electromagnet being normally disposed to open the secondary circuit, and signaling apparatus and a source of current at the central exchange, actuation of the alarm circuit causing actuation of the electromagnet to close the secondary circuit, whereupon induced current will flow through the secondary circuit and the telephone line to cause actuation of the signaling apparatus at the central exchange.

2. In a combined alarm and telephone system, the combination with a telephone line leading from a substation to a central exchange, of an alarm circuit at the substation, a source of current and a rheotome alarm bell for the alarm circuit, thermostat controlling means for the alarm circuit, an electromagnet having a primary winding included in the alarm circuit, a secondary winding for the electromagnet, one terminal of the secondary winding being connected with one of the line limbs, the other terminal of the secondary winding being adapted for connection with the other line limb upon actuation of the electromagnet armature, signaling apparatus and a source of current at the central exchange, and operator's telephone apparatus at the central exchange adapted for connection with the telephone line, actuation of the alarm circuit causing actuation of the electromagnet armature to close the secondary circuit, whereby the signaling apparatus at the central exchange is actuated and whereby current flow is induced in the secondary circuit to cause the noise in the operator's telephonic apparatus upon connection thereof with the telephone line in response to the signaling apparatus.

3. In an alarm system, the combination of a main alarm circuit, a source of current and an alarm apparatus in said circuit, circuit controlling means for the alarm circuit, an electromagnet having a winding included in said alarm circuit, a secondary winding for said electromagnet, an auxiliary alarm circuit adapted to include said secondary winding but normally held open by the armature of the electromagnet, and alarm or signaling mechanism in said auxiliary circuit, actuation of the main alarm circuit causing first closure of the auxiliary alarm circuit and then induction of current flow therein to actuate the alarm mechanism connected therewith.

4. In an alarm system, the combination with a main alarm circuit having a source of current and alarm mechanism, an electromagnet having a primary winding included in the alarm circuit, a secondary winding for the electromagnet in inductive relation with the primary winding, a secondary alarm circuit adapted to include the secondary winding upon actuation of the electromagnet armature when the alarm circuit is actuated, a source of current for the secondary circuit, and alarm apparatus for the secondary circuit, actuation of the main alarm circuit causing attraction of the electromagnet armature to close the secondary circuit whereby the source of current in said secondary circuit supplies current through the secondary winding to maintain actuation of the electromagnet armature, said secondary circuit then receiving induced current from the primary winding, which induced current causes actuation of the alarm mechanism connected with the secondary circuit.

5. In an alarm system, the combination with a main alarm circuit having a source of current and a rheotome bell, an electromagnet having a primary winding included in the alarm circuit, a secondary winding for the electromagnet in inductive relation with the primary winding, a secondary alarm circuit adapted to include the secondary winding upon actuation of the electromagnet armature when the alarm circuit is actuated, a source of current for the secondary circuit, and alarm mechanism for the secondary circuit, actuation of the main alarm circuit causing attraction of the electromagnet armature to close the secondary circuit whereby the source of current in said secondary circuit supplies current through the secondary winding to maintain actuation of the electromagnet armature, said secondary circuit then receiving induced current from the primary winding, which induced current causes actuation of the alarm mechanism when connected with the secondary circuit.

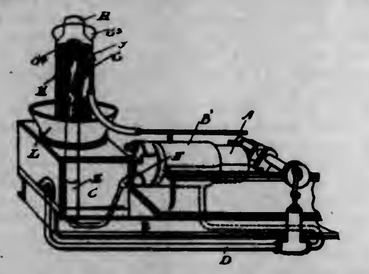
6. In an alarm system, the combination of a main alarm circuit, a source of current and an alarm apparatus in said circuit, thermostatic controlling mechanism for the alarm circuit, an electromagnet having a primary winding included in said alarm circuit, a secondary winding for said electromagnet, an auxiliary alarm circuit adapted to include said secondary winding but normally held open by the armature of the electromagnet, and alarm or signaling mechanism in said auxiliary circuit, actuation of the main alarm circuit causing first closure of the auxiliary alarm circuit and then induction of current flow therein to actuate the alarm mechanism connected therewith.

7. In an alarm system, the combination of a main alarm circuit having a source of current and alarm mechanism, thermostatic controlling devices in said main alarm circuit, an electromagnet having a primary winding included in the alarm circuit, a secondary winding for the electromagnet in inductive relation with the primary winding, a secondary alarm circuit adapted to include the secondary circuit upon actuation of the electromagnet armature when the alarm circuit is actuated, a source of current for the secondary current, and alarm mechanism for the secondary circuit, actuation of the main alarm circuit causing attraction of the electromagnet armature to close the secondary circuit, whereby the source of current in said secondary circuit supplies current through the secondary winding to maintain actuation of the electromagnet armature, said secondary circuit then receiving induced current from the primary winding, which current causes actuation of the alarm mechanism when connected with the secondary circuit.

8. In an alarm system, the combination of a main alarm circuit, a source of current and a rheotome bell in said circuit, thermostatic mechanism for controlling the alarm circuit, an electromagnet having a primary winding included in said alarm circuit, a secondary winding for said

electromagnet, an auxiliary alarm circuit adapted to include said secondary winding upon actuation of the electromagnet armature when the alarm circuit is actuated, a source of current for the secondary circuit, and alarm apparatus for the secondary circuit, actuation of the main alarm circuit causing attraction of the electromagnet armature to close the secondary circuit whereby the source of current in said secondary circuit supplies current through the secondary winding to maintain actuation of the electromagnet armature, said secondary circuit then receiving induced current from the primary winding, which induced current causes actuation of the alarm mechanism connected with the secondary circuit.

870,575. WATER-COOLING APPARATUS FOR GAS OR GASOLENE ENGINES. JOHN C. MCLACHLAN, Toronto, Ontario, Canada. Filed Dec. 26, 1906. Serial No. 349,405.



1. In a water cooling apparatus for gas or gasolene engines, the combination with the exhaust pipe of a gasolene engine, of a water tank having an open ended flue extending upwardly therethrough and into which the bottom end of the exhaust pipe extends, a stack surrounding the flue, water cooling means carried by the stack a return pipe extending from the tank to the water jacket of the engine, a flow pipe extending from the water jacket into the stack and a perforated ring located in the stack and surrounding the flue and connected to the flow pipe, as and for the purpose specified.

2. In a water cooling apparatus for gas or gasolene engines, the combination with the exhaust pipe of a gasolene engine, of a water tank having an open-ended flue extending upwardly therethrough and into which the bottom end of the exhaust pipe extends, a stack surrounding the flue, a return pipe extending from the tank to the water jacket of the engine, a flow pipe extending from the water jacket into the stack, a perforated ring located in the stack and surrounding the flue and connected to the flow pipe and a wire screen located in the stack and surrounding the flue, as and for the purpose specified

3. In a water cooling apparatus for gas or gasolene engines, the combination with the exhaust pipe of a gasolene engine, of a water tank having an open ended flue extending upwardly therethrough and into which the bottom end of the exhaust pipe extends, a stack surrounding the flue, a return pipe extending from the tank to the water jacket of the engine, a flow pipe extending from the water jacket into the tank and a perforated ring located in the stack and surrounding the flue and connected to the flow pipe and screens forming a portion of the wall of the stack surrounding the flue as and for the purpose specified.

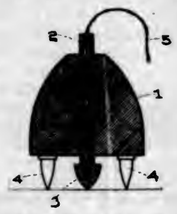
4. In a water cooling apparatus for gas or gasolene engines the combination with the exhaust pipe of a gasolene engine, of a water tank having an open ended flue extending upwardly therethrough and into which the bottom end of the exhaust pipe extends a stack surrounding the flue, a hopper surrounding the stack and provided with perforations at the bottom communicating with the tank, and a return pipe extending through the tank to the water jacket of the engine, a flow pipe extending from the water jacket into the stack, a perforated ring located in the stack and surrounding the flue and connected to the flow pipe, screens surrounding the flue and located beneath the ring, a cap for the stack provided with the exit flue extending from the flue in the stack, as and for the purpose specified.

5. In a water cooling apparatus for gas or gasolene engines, the combination with the exhaust pipe of a gasolene engine, of a water tank having an open ended flue extending upwardly therethrough and into which the bottom end of the exhaust pipe extends, a stack surrounding the flue, a return pipe extending through the tank to the water jacket of the engine, a flow pipe extending from the water jacket into the stack, a perforated ring located in the stack and surrounding the flue and connected to the flow pipe, screens surrounding the flue and located beneath the ring, a cap for the stack provided with the exit flue of greater diameter than the flue in the stack and having the lower end tapered where the flue extends therein to as and for the purpose specified.

6. In combination, the tank connected to the water jacket of the engine, the central flue, the stack surrounding the flue and extending upwardly from the tank and open at the bottom and a water spraying means located in the stack and connected to the water jacket of the engine and the exhaust pipe leading into the vertical flue as and for the purpose specified.

7. In combination, the tank connected to the water jacket of the engine, the central flue, the stack surrounding the flue and extending upwardly from the tank and open at the bottom and a water spraying means located in the stack and connected to the water jacket of the engine, the exhaust pipe leading into the vertical flue and means for retarding the water in its descent into the tank as and for the purpose specified.

870,576. PLUMB-BOB. ORLANDO C. MCQUAID, Franklin, Pa. Filed Apr. 29, 1907. Serial No. 370,985.



1. A plumb bob having a body provided upon its lower end with a plurality of pointed legs, there being a central vertical hole through said body, a stem passing loosely through said hole, and a removable pointed head upon said stem.

2. A plumb-bob consisting of a body provided upon its bottom or lower face with a plurality of pointed legs, there being a central hole through said body, a removable, vertically movable stem, pointed at its lower end seated in said hole and means at the upper end of said stem for attaching a line.

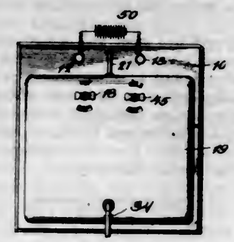
870,577. ELECTRICAL WATER-HEATER. EMIL NAUMER, New York, N. Y. Filed July 17, 1906. Serial No. 326,557.

1. A heater pipe-coil comprising hollow carbon rods, combined with an electric switch, a valve mechanically connected to said switch, and an independent by-pass valve.

2. A plurality of hollow carbon rods and metallic connections between the rods, said rods and connections being arranged to form a continuous conductor for both electric and hydraulic currents.

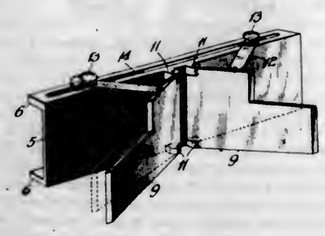
3. A plurality of hollow carbon rods and metallic connections between the rods, said rods and connections being arranged to form a continuous conductor for both electric and hydraulic currents, combined with a switch and a valve mechanically connected together.

4. A base, a plurality of hollow carbon rods mounted obliquely upon said base, metallic brackets connecting the rods together and to the base, said rods and brackets being arranged to form a continuous conductor for both electric and hydraulic currents, a hydraulic supply-pipe, a valve between said pipe and said rods, and a vent in said valve.



5. A base, a plurality of hollow carbon rods mounted obliquely upon said base, metallic brackets connecting the rods together and to the base, said rods and brackets being arranged to form a continuous conductor for both electric and hydraulic currents, a hydraulic supply-pipe, an outlet-pipe, insulating tubing connecting said pipes with the hollow carbon rods; a source of electrical supply, a switch therefor, a valve in the hydraulic supply-pipe, a vent in said valve, said switch and said valve being mechanically connected together, and an independent by-pass valve connecting the supply-pipe and the outlet-pipe.

870,578. GAGE FOR PAPER-CUTTING MACHINES. GEORGE NELSON, Chicago, Ill. Filed Mar. 16, 1907. Serial No. 362,763.



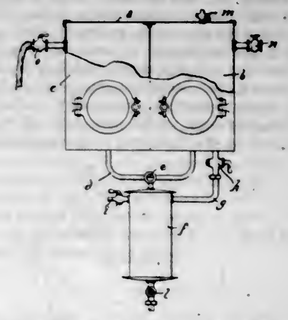
1. A gage for paper cutting machines comprising an upright base and two wings pivoted thereto about separate axes parallel to the path of the cutter of the machine.

2. A portable gage for paper cutting machines consisting of a base adapted to rest upon the table and against the permanent gage of the machine, wings pivoted to said base upon different axes, the inner corners of said wings being separated from each other and means for setting said wings in desired position.

3. A portable gage for paper cutting machines having a base adapted to stand upright upon the table of the cutting machine and against the permanent gage thereof, wings pivoted to said base upon axes remote from each other, rods pivoted to said wings and adjustably connected to said base whereby wings may be set independently of each other at any desired angle.

4. A portable gage for paper cutting machines having a paper table and a permanent gage, said gage comprising a base adapted to stand upright upon the table, horizontal flanges on said base for abutting the permanent gage, the upper one of said flanges being slotted longitudinally, wings pivoted to said base, rods pivoted at one end to said wings, set screws pivoted to the other end of said rods and extending through said slot, and nuts on said screws beneath said flange for holding the parts in adjusted position.

870,579. OIL SUCTION AND COLLECTING APPARATUS FOR STEAM ENGINES. CESARE ORENGO, Genoa, Italy. Filed Nov. 6, 1906. Serial No. 342,185.



1. In an oil suction and collecting apparatus for steam engines a box comprising two chambers which communicate at their bases one with the other and provided with a cock, a communication from a stuffing box of the engine to one of said chambers, a condenser and a communication from the other of said chambers to said condenser.

2. In an oil suction and collecting apparatus for steam engines, a box comprising two chambers, a pipe whereby said chambers communicate one with the other, a receiver for water from said chambers, a pipe connecting said receiver with the first-mentioned pipe, and a three-way cock at the junction of said pipes.

3. In an oil suction and collecting apparatus for steam engines, a box comprising two chambers a pipe whereby said chambers communicate one with the other, a receiver for water from said chambers, a pipe connecting said receiver with the first-mentioned pipe, a three-way cock at the junction of said pipes, and a condenser connected with said receiver and independently of the pipes aforesaid.

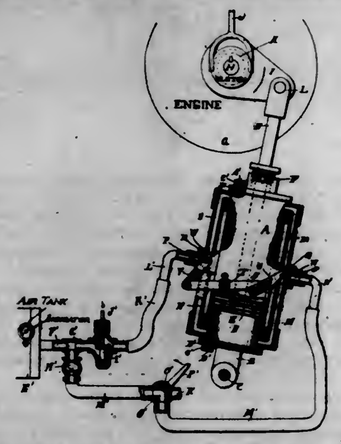
4. In an oil suction and collecting apparatus for steam engines, a stuffing box, a condenser, a box comprising two chambers one communicating with said stuffing box and the other communicating with the condenser, a pipe whereby said chambers communicate one with the other, a receiver for water from said receiver with the first-mentioned pipe, a pipe independent of those named for connecting the receiver with the chamber connected as aforesaid with the condenser, cocks which put the receiver and last-mentioned chamber in communication with the atmosphere, and a discharge cock for the receiver.

870,580. ENGINE-STARTER. FRANCIS L. ORR, Thurman, Iowa, assignor of one-half to Mark Morrow, Percival, Iowa. Filed Feb. 6, 1907. Serial No. 356,019.

1. An engine starter comprising an oscillatory cylinder, a piston in the cylinder, the piston being provided with a rod projecting outside of the cylinder, a crank-arm loosely arranged on a rotatable shaft of the engine, clutch devices on the engine shaft adapted to fixedly connect the crank-arm therewith, an air storage tank, passageways providing open communication between the cylinder and storage tank, the passageways being constructed with branch passageways, leading into opposite ends of the cylinder, valves in said branch passageways, means adapted to operate the valves in said branch passageways, providing respectively feed and exhaust into, and from the cylinder, a manually operated valve in one passageway leading from the storage-tank, a check-valve and an outlet valve in a separate passageway leading from the storage tank, and vent valves in the end of the oscillatory cylinder.

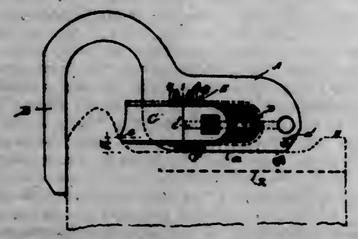
2. The combination with a driven shaft of an engine, of a crank-arm loosely arranged on said shaft, clutch devices adapted to fixedly connect the crank-arm and said driven-shaft, a cylinder provided with oscillatory support at one end thereof, a piston in the cylinder, the piston be-

ing provided with a rod constructed and adapted to extend through the free, or swinging end of the cylinder, and for attachment to the outer or free end of the crank-arm, vent valves in the cylinder ends, a storage-tank, passageways with branch passageways at one end thereof, the branch passageways being arranged leading into opposite ends of the oscillatory cylinder, and the main passageways affording communication, leading from the storage tank, valves in the branch passageways, a fixedly held device with means operatively connected to the valves in the branch passageways, and a manually operated, check, and outlet valve in the tank end of the passageways.



3. In combination, an engine shaft, a crank-arm loosely arranged on the engine shaft, means to secure the crank-arm against movement on said shaft, an oscillatory cylinder and piston therein, the piston being operatively connected with the outer end of the crank-arm, and the cylinder provided with venting valves leading to the outer air, a storage tank, and means connecting said tank and cylinder, comprising passageways with controller, check, outlet and cylinder valves, the combined apparatus or devices being adapted for operation to effect boosting or cranking action to the engine shaft by pressure of air stored in the tank, and also, for operation, to restore air into the tank.

870,581. COMBINATION WHEEL AND TIRE GAGE. JOHN E. OAMER, Chicago, Ill. Filed May 7, 1906. Serial No. 315,507.



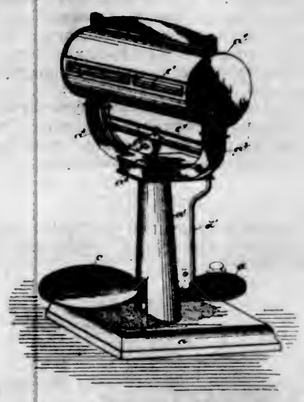
1. The combination with a gage adapted to fit on the rim of a wheel and provided with a hook to engage with the face of the wheel, of a slidable indicating member for measuring the thickness of the flange at a given distance from the face of the wheel.

2. In a gage for measuring the thickness of wheel flanges, the combination of a body portion having a straight edge adapted to fit on the wheel tread, an extension or hook from said body portion adapted to engage with the outer face of the wheel adjacent to the flange, a slide having a projection adapted to engage with the flange at the point where the measurement is to be taken, and a scale for indicating the thickness of the flange when the slide is in engagement therewith.

3. A measuring instrument for measuring the thickness of wheel flanges, comprising a body portion A, a hook B, a slide C, a scale on said body portion, an indicating line on said slide, and a spring for holding said slide in adjusted position.

4. In a wheel and tire gage, the combination of a body portion provided with a hook, a slide in said body portion having a pointed end and adapted to coact with said hook in taking measurements, and marks on said slide adapted to register with scales on said body portion for indicating the thickness of the flange and for indicating the amount of cut to be taken off from the wheel for a given thickness of flange, substantially as described.

870,582. COMPUTING-SCALE. ORANGE O. OZIAS, Dayton, Ohio, assignor to The Computing Scale Company, Dayton, Ohio, a Corporation of Ohio. Filed June 18, 1906. Serial No. 322,144.



1. In a price scale, the combination with a lever, a goods-receiver and a counterweight receiver carried by said lever, upwardly extending check arms connected with said receivers, links for maintaining the horizontal parallelism of the receivers, an indicator located above the receiver, and links connected with said indicator extending substantially in right angular position to said first-mentioned links, and a connecting arm between said last-mentioned links and one of the check arms, the hub member connected to the indicator, and means connecting said member with said links, substantially as specified.

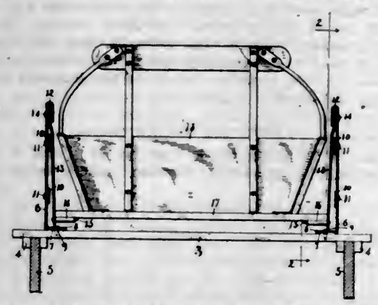
2. In a price scale, the combination with a counterbalancing lever, a goods-receiver and a counterweight receiver pivotally carried by said lever, an indicator, movable link members connected at one end to said receivers and at the other end to a stationary part of the scale frame or support, connecting members placed in right angular relation to the said links, said connecting members being connected to the indicator and also to one of the receivers, substantially as specified.

3. In a price scale, the combination with a lever pivoted intermediate its ends, a goods receiver and a counterweight receiver carried on opposite ends of said lever, pivotally extending arms connected to each of said levers, and links connected to each of said arms and to a stationary part of the frame or support for maintaining the parallelism of said receivers, a cylindrical rotating indicator, and a connecting member extending parallel with the axis of said rotating indicator and connected at each end to said indicator, said connecting member being arranged at right angles to said links and connected to one of said receivers, substantially as specified.

4. In a price scale, the combination with an indicator and a casing surrounding the indicator, of a counterbalancing lever, a goods-receiver and a counterweight receiver carried by said lever, upwardly extending check arms, and links connected with said arms for maintaining the parallelism of the receivers, cross-bars above said first-mentioned links, and an arm connecting said cross-bars with one of said check arms, connections at the ends of the cross-bars extending to the indicator, and connections also located at the end of the cross-bars connected with the stationary casing of the indicator.

5. In a price scale, a counterbalancing lever, a goods-receiver and a weight-receiver pivotally carried at the respective ends of said lever, a set of links connected with said receivers for maintaining the parallelism thereof, a rotary indicator, a bar having a driving connection at each end to said indicator to impart rotary movement thereto and also having a connection at each end with a counterbalancing spring, and a connection between said bar and one of said receivers substantially as specified.

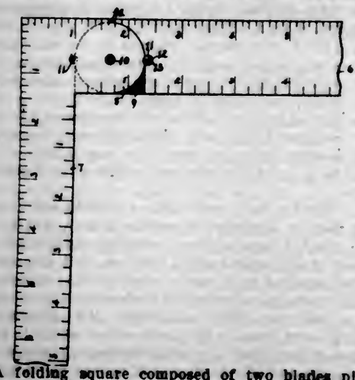
870,583. WAGON-SEAT. OSMOND E. PASKO, Fond du Lac, Wis. Filed Nov. 22, 1906. Serial No. 344,580.



1. A seat-support consisting of two pairs of standards the members of each pair consisting of flat metal bars suitably connected and braced, means for rigidly connecting said standards with a wagon-box, arms pivotally hung from the upper ends of said standards, and means connected with said arms for removably supporting a wagon seat.

2. A seat-support consisting of two pairs of standards, the members of each pair suitably connected and braced, each standard consisting of a metal strap having its lower end bent to form a foot and its upper end bent upon itself to form a housing, parallel arms pivotally hung from the upper ends of said standards, and a rod secured to the lower ends of said arms, said rod adapted to form a support for a wagon seat.

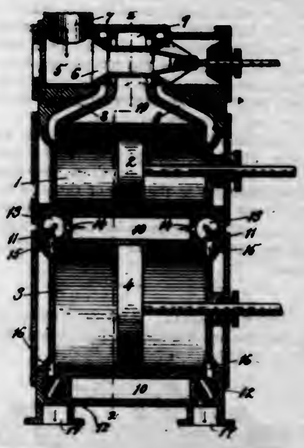
870,584. CARPENTER'S SQUARE. MARVIN C. POST, Brookfield, Mo. Filed Apr. 15, 1907. Serial No. 368,198.



1. A folding square composed of two blades pivotally connected, one blade having a shouldered lateral hinge member and the other blade furnished with a shouldered end hinge member, said members having registering notches, locking rivets secured to said blades respectively and on opposite sides of the square, and adapted to engage the notches in the margins of said hinge members, each of said rivets having a mutilated head to permit the latter when turned to release its respective hinge member and allow the said blades to be folded.

2. A folding square, including a larger blade having a hinge member projecting from its end, a smaller blade furnished with an integral lateral hinge member, said members having registering notches, a pivot connecting said members and locking rivets secured to said blades and adapted to engage the notches in the margins of said hinge members, each of said rivets having a head cut away upon one side to permit the latter when turned to release its respective hinge member and allow the said blades to be turned upon the connection pivot.

870,585. METHOD OF UTILIZING WORKING FLUID IN JACKETED ENGINES. SIDNEY A. REEVE, Worcester, Mass., assignor to Charles F. Brown, trustee, Reading, Mass. Filed Apr. 24, 1901. Serial No. 57,255.



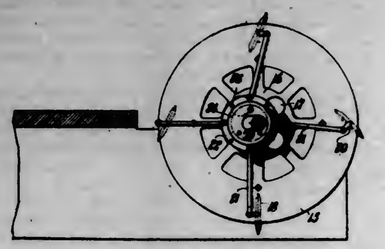
1. The process of converting the thermal energy of a highly-superheated fluid into mechanical energy which consists in performing mechanical work by the action of the working-fluid, thereafter exhausting the fluid into an unreheated receiver-space, and jacketing the fluid doing the work by means of the exhaust fluid.

2. The process of converting the thermal energy of a highly-superheated fluid into mechanical energy which consists in performing mechanical work by expansive action of the working fluid in a cylinder, exhausting the fluid from said cylinder, and without reheating the exhaust fluid, employing the latter to abstract heat from the fluid in the working cylinder.

3. The process of converting the thermal energy of a highly-superheated fluid into mechanical energy which consists in performing mechanical work by expanding the working fluid successively in a plurality of cylinders, exhausting the fluid from the high-pressure cylinder into an intermediate unreheated receiver-space, and jacketing the fluid in both high and low-pressure cylinders by means of said exhaust-fluid, whereby the high-pressure working fluid is cooled and the low-pressure fluid heated.

4. The hereindescribed process which consists in performing mechanical work by the action of a working fluid composed of superheated steam and products of combustion, thereafter exhausting said fluid, and communicating heat from the working fluid to the exhaust fluid through the walls of the working chamber.

870,586. WATER-WHEEL. FREDERICK E. RENICK, Mammoth Spring, Ark. Filed May 16, 1907. Serial No. 373,892.

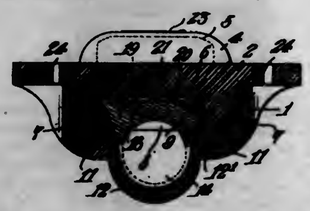


1. The combination in a feathering paddle wheel, of end disks, blades, shafts revolubly mounted in said disks and carrying the blades and provided with rocker arms, a revoluble ring mounted eccentrically to the axis of rotation of the wheel, studs extending from said ring and having constantly changing points of contact with said wheel, and means for connecting the ring to the rocker arms.

2. The combination in a feathering paddle wheel, of end disks, blades, shafts revolubly mounted in said disks and carrying the blades, rocker arms on the shafts, a revoluble ring mounted eccentrically to the axis of rotation of the wheel, a plurality of studs projecting from said ring, one of the disks being recessed for the reception of the studs, and the walls of said recesses transmitting rotative movement to the ring through said studs, and means for connecting the ring to the rocker arms.

3. The combination in a feathering paddle wheel, of end disks, blades, shafts revolubly mounted in said disks and carrying the blades, rocker arms on the shafts, a disk mounted eccentrically to the axis of rotation of the wheel, a revoluble ring mounted on said disk, studs projecting from the ring, one of the disks having openings for the reception of the studs, and links connecting the ring to the rocker arms.

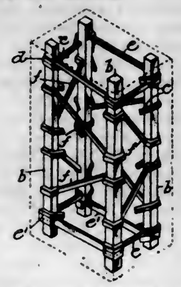
870,587. JOURNAL-BOX. SAMUEL REYNOLDS and SAMUEL J. REYNOLDS, Plymouth, Pa. Filed Feb. 6, 1907. Serial No. 356,056.



A car axle journal box comprising a body having a lubricant reservoir and an axle receiving chamber, a bearing block fitted in the chamber and provided with passages adjacent its ends and connected basins on the top surface of the bearing block, and a removable member on the body for closing the underside of the chamber, the bottom of the said reservoir being provided with openings for supplying lubricant to the passages and basins of the bearing block.

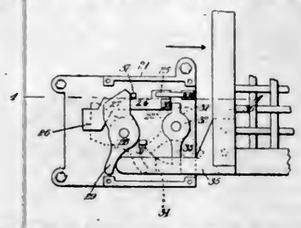
870,588. REINFORCED CONCRETE STRUCTURE. ALSON ROGERS, Warren, Pa. Filed May 12, 1906. Serial No. 316,500.

1. In a reinforced structure, the combination with metallic frame-members the ends of which abut and the filling of cementitious material, of a clamp-bar formed at each end with a recess complementary to the cross-section of the frame-members which engage in it; said clamp-bar being of sufficient width to span the joint between the abutting ends of the frame-members and to overlap both of said ends and being formed at each end with a locking finger which extends inwardly to close the recess and to lock said abutting ends therein.



2. In a reinforced concrete structure, the combination of a pair of frame members; a clamp-bar which engages and locks said members in position, said clamp-bar consisting of a straight bar formed at its ends with recesses in which said members snugly fit filling the same and with locking fingers which extend from the outer wall of each recess inwardly towards each other to close the recesses and lock the frame members therein; and a filling of cementitious material in which said frame members and clamp-bars are embedded.

870,589. ELEVATOR-LOCK. FRANK W. RUPPMAN, Philadelphia, Pa. Filed Apr. 13, 1906. Serial No. 311,521.



1. An elevator lock comprising a gravity operated member one end of which is constructed to engage a door, means for engaging the other end of said member to hold the same in locking position, and means for disengaging said locking member from said holding means.

2. An elevator lock comprising a gravity operated door locking member arranged to engage a door, and a pivoted member for normally preventing disengagement of said locking member, said pivoted member being provided with means adapted to be engaged by a controller member, whereby said pivoted member may be moved.

3. An elevator lock comprising a gravity operated door locking member arranged to engage a door, and a horizontally movable pivoted member for normally preventing disengagement of said locking member, said pivoted member being provided with means adapted to be engaged by a controller member, whereby the former may be moved.

4. An elevator lock comprising a gravity operated door locking member arranged to engage a door, and a pivoted member having an arm normally in engagement with said locking member to prevent disengagement thereof, said pivoted member being provided with means adapted to be engaged by a controller member, whereby the former may be moved.

5. An elevator lock comprising a gravity operated door locking member arranged to engage a door, and a spring pressed pivoted member for normally preventing disengagement of said door locking member, said pivoted member being provided with means adapted to be engaged by a controller member, whereby the former may be moved.

6. An elevator lock comprising an approximately straight pivoted member the lower end of which is adapted to engage a door, and a pivoted retaining member engaging the upper end of said door locking member to normally lock the same.

7. An elevator lock comprising a gravity operated door locking member arranged to engage a door, a pivoted retaining member for normally preventing disengagement of said locking member, and means for rendering said retaining member temporarily inoperative.

8. An elevator lock comprising a gravity operated door locking member, a spring pressed pivoted retaining member for normally rendering said locking member operative, and means for moving said retaining member in a direction opposed to its spring tension.

9. An elevator lock comprising an approximately straight pivoted member the lower end of which is adapted to engage a door, a pivotally supported angular retaining member, one arm of which normally engages the upper end of said door locking member, and means for engaging the other arm of said retaining member to disengage the latter from said locking member.

10. An elevator lock comprising a gravity operated door locking member, a retaining member for holding said locking member in locked position, and means adjacent said door locking member for locking the controller of an elevator.

11. An elevator lock comprising a gravity operated door locking member, a spring pressed retaining member for holding said locking member in locked position, and means adjacent said door locking member for locking the controller of an elevator.

12. An elevator lock comprising a pivoted door locking member, a pivoted retaining member supported independently of said locking member and normally engaging the same to hold it in locking position, and a controller locking member pivotally mounted adjacent the door locking member.

13. In an elevator lock the combination with a door provided with an arm having a notch therein, of a locking member engaging said notch, a pivoted retaining member supported independently of said locking member and normally engaging the latter to hold it from movement, and an overbalanced controller locking member held normally inoperative by the free end of said arm.

14. In an elevator lock the combination with a door provided with an arm having a notch therein, of a locking member to engage said notch, a pivoted retaining member to normally prevent movement of said locking member, and a pivoted controller locking member provided with an upper overbalance portion and a lower finger intercepting the path of movement of the free end of said arm.

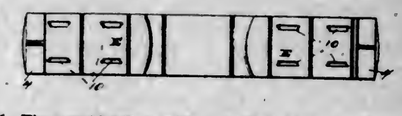
15. An elevator lock comprising a door locking member, a pivoted retaining member for holding said door locking member in locking position, a controller locking member, and means operated by the controller for moving said retaining member out of engagement with the door locking member.

16. In an elevator lock the combination with a door locking member, a pivoted retaining member supported independently of said door locking member and normally engaging the latter to hold it in locking position, and a controller locking member, of a controller, and a slidable member connected thereto to move said retaining member in a direction to render said door locking member inoperative.

17. An elevator lock comprising a casing, a door locking member mounted therein, a controller locking member also mounted therein, and a retaining member for holding said door locking member normally in operative position, in combination with a controller shaft, an arm or lever mounted thereon, and a slidable member loosely connected to the free end of said arm and arranged to move said retaining member out of engagement with the door locking member.

18. An elevator lock comprising a casing, a door locking member mounted therein, a controller locking member also mounted in said casing, and a retaining member for holding said door locking member normally in operative position, in combination with a controller shaft, a slidable member for operating said retaining member and provided with an angular slot, and an arm secured to said controller shaft and having its free end connected to said angular slot.

870,590. DUST-PREVENTER. BALDWIN F. SCHIRMER, Indianapolis, Ind. Filed Nov. 4, 1905. Serial No. 285,919.



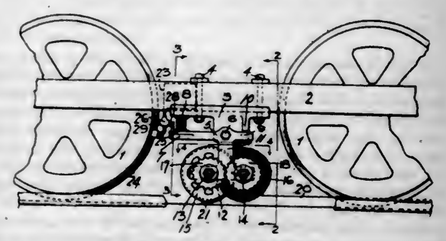
1. The combination with a vehicle having wheels and axles, of a dust preventer interposed between said axles and the ground, hinged extremities to said dust preventer, and downwardly turned edges to said dust preventer, substantially as described.

2. The combination with a vehicle having wheels and axles, of a dust preventer interposed between said axles and the ground, hinged extremities to said dust preventer, and means for raising and lowering said extremities, substantially as described.

3. The combination with a vehicle having wheels and axles, and bearings therefor, of a dust preventer, interposed between said axles and the ground, the said dust preventer having a plane body portion and downwardly turned sides, and hinged terminal portions, said hinged portions having also downwardly turned sides and ends, an arc upon each hinged terminal, and a dog or keeper upon the vehicle, substantially as described.

4. The combination with a vehicle having trucks, of a dust preventer apron thereunder, hinged extremities for said apron, and means for raising and lowering the outer ends of said hinged portions, substantially as described.

870,591. STREET-RAILWAY CURVE SWEEPER AND LUBRICATOR. DAVID P. SMALL, Mount Oliver borough, Pa. Filed Sept. 6, 1907. Serial No. 391,571.



1. In a track sweeper, the combination of a rocking frame adapted to be secured to a truck or car body, a brush rotatably mounted on said frame, a wheel also mounted in said frame adapted to contact with the guard rail or flange and to be raised thereby to rock the frame and lower the brush into the groove of the rail, and gearing connecting said wheel and brush.

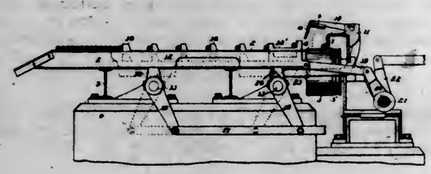
2. In a track sweeper, the combination of a rocking frame adapted to be secured to a truck or car body, a brush rotatably mounted in said frame, a wheel mounted in said frame and adapted to contact with the guard rail or flange and be raised thereby to rock the frame and lower the brush into the grooved rail, a spring arranged to rock the frame in the opposite direction from that which it is rocked by the wheel, and gearing connecting the wheel and brush.

3. In a track sweeper and oiler, the combination of a rocking frame adapted to be secured to a car truck or body, a brush rotatably mounted in said frame, a wheel also mounted in the frame and arranged to contact with the guard rail or flange and be raised thereby to rock the frame and lower the brush into the groove of the rail, gearing connecting the wheel and brush, an oil reservoir, a valve controlling an outlet therefrom, and connections between said valve and rocking frame whereby the rocking of the latter opens said valve.

4. In a track sweeper and oiler, the combination of a rocking frame adapted to be secured to a car truck or body, a brush rotatably mounted in said frame, a wheel also mounted in the frame and adapted to contact with a guard rail or flange and be raised thereby to rock the frame and lower the brush into the groove of the rail, a spring arranged to rock said frame in a direction opposite to that in which it is rocked by the wheel, an oil reservoir having an outlet arranged to supply oil to a wheel flange, a valve in said outlet, and connections between the rocking frame and said valve arranged when the frame is rocked by the wheel to open said valve.

5. In a track sweeper, the combination of a rocking frame adapted to be secured to a truck or car body, a brush rotatably mounted in said frame, a wheel mounted in the frame and adapted to contact with the guard rail or flange and be raised thereby to rock the frame and lower the brush into the groove of the rail, a spring arranged to rock the frame in the opposite direction, a stop for limiting the rocking of the frame in the last named direction, and gearing connecting the wheel and brush.

870,592. COOLING-BED AND CONVEYER. JOHN A. SMITMANS, Sharon, Pa. Filed Mar. 15, 1907. Serial No. 362,507.



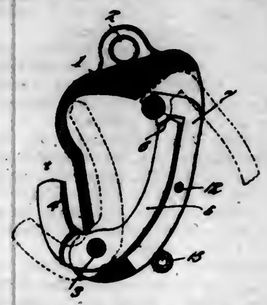
1. The combination of a cooling bed open from below at its receiving end and forward from said end, rod-receiving rolls in the receiving end of the bed, longitudinally movable conveyer bars adapted to raise and lower, rod moving lugs on the bars adapted to be projected through and above the bed for moving the rods forward on the latter, the rear ends of the bars being higher than their remaining portions to lift the rods from the rolls at the receiving end of the bed.

2. The combination of a cooling-bed, a rod-confining box extending transversely of the receiving end of the bed, the wall closing the delivery side of the box being adapted to raise and lower, levers to which said movable wall is secured, conveyer members movable longitudinally of the bed, supports movable vertically for raising and lowering said members, and an operative connection between the support mechanism and the levers for causing the movable portion of the rod-confining box to operate simultaneously with the raising and lowering of the conveyer members.

3. The combination of a cooling-bed, a rod-confining box extending transversely of the receiving end of the bed, angular levers to which the delivery side of the box is connected for raising and lowering the same, conveyer devices adapted to reciprocate longitudinally of the bed, rock shafts, arms projecting from said shafts on which the conveyer members are adapted to reciprocate, and a connection between one of said shafts and the said angular levers for opening and closing the rod confining box simultaneously with the raising and lowering of the conveyer members.

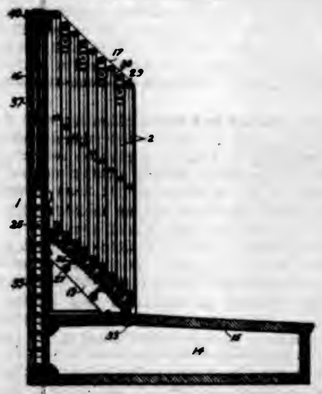
870,593. LOGGING-HOOK. AUGUST SPROGIS, Gleason, Wis. Filed Dec. 19, 1906. Serial No. 348,614.

A logging chain comprising a casing, a hook pivoted within the casing and provided with a shank extending within the casing, said shank having a curved end, a locking lever provided with trunnions, and a curved portion



to engage the curved end of the shank of the hook, and a pin to hold said locking lever in locking position.

870,594. ACCOUNT-REGISTER. ALBERT F. STAPLES, Boston, and CHARLES W. POTTER, Waltham, Mass. Filed Mar. 1, 1907. Serial No. 360,106.



1. An account register having, in combination, a plurality of bill-holder frames, a base for the frames comprising a plurality of relatively-movable base bars connected together, and pivotal connections between each bill-holder frame and one of the base bars.

2. An account register having, in combination, a plurality of bill-holder frames, a base bar pivotally connected with each frame, and connections between the base bars permitting relative lateral movements but preventing rotation of the bars.

3. An account register having, in combination, a plurality of bill-holder frames, a base bar pivotally connected with each frame, a spring interposed between each frame and its base bar and tending to cause relative movement of these parts, and connections between the base bars permitting relative lateral movements but preventing rotation thereof.

4. An account register having, in combination, a plurality of bill-holder frames, a base bar pivotally connected with each frame, and connections between the base bars constructed and operating to permit relative lateral movements thereof and to equalize the distances between the bars.

5. An account register having, in combination, a plurality of bill-holder frames, a base bar pivotally connected with each frame, and a lazy-tongs connection between the base bars acting to equalize the spaces between the bars.

6. An account register having, in combination, a plurality of bill-holder frames, a base bar pivotally connected

with each frame, and means for holding the base bars together when the device is not in use.

7. An account register having, in combination, a plurality of bill-holder frames, a base bar pivotally connected with each frame, connections between the bars constructed and operating to keep them in alinement but to permit relative lateral movement of the bars, and means for holding the bars together when the device is not in use.

8. An account register having, in combination, a plurality of bill-holder frames, a base bar pivotally connected with each frame, a spring interposed between each frame and its base bar, a cabinet, and means in the cabinet for receiving and uniformly spacing the bars when the device is in use.

9. An account register having, in combination, a plurality of bill-holder frames, a base bar pivotally connected with each frame, and connections between the base bars constructed and operating to permit relative lateral movements of the base bars and to limit such movements.

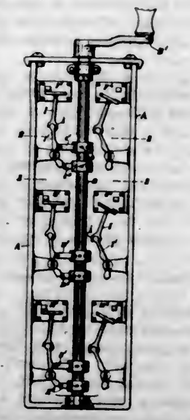
10. An account register having, in combination, a plurality of bill-holder frames, a base bar pivotally connected with each frame, connections between the base bars constructed and operating to equalize the spaces between the bars when the bars are moved with relation to each other, and a cabinet provided with means for receiving and spacing the bars.

11. An account register having, in combination, a plurality of bill-holder frames, a base bar pivotally connected with each frame, connections between the base bars constructed to equalize the spaces between the bars when they are moved with relation to each other, and a cabinet provided with means for retaining the bars.

12. An account register having, in combination, a bill-holder frame, a base member therefor, a pivot fixed to and outwardly-projecting from each lower corner of the frame and engaging the base member, spring pintles fixed to and inwardly-projecting from said corners, and springs interposed between the base member and the frame, the springs being mounted on said spring pintles and removable from the inner ends thereof.

13. An account register having, in combination, a plurality of pivotally-mounted bill-holder frames, and an anti-friction roller journaled on one of the frames and engaging the adjacent frames to separate the frames and reduce the friction between them.

870,595. CONTROLLER. LEWIS L. TATUM, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Apr. 16, 1906. Serial No. 311,843.



1. In a controller, a rotatable shaft, a plurality of cams thereon, and a plurality of snap switches operated by each of said cams as said shaft is rotated.

2. In a controller, a rotatable shaft, a cam on said shaft, and a plurality of snap switches operated by said cam as the shaft is rotated.

3. In a controller, a rotatable shaft, cams on said shaft, and a plurality of snap switches arranged to be closed by one of said cams and opened by another of said cams as the shaft is rotated in one direction or the other.

4. In a controller, a rotatable shaft, cams on said shaft, and a plurality of toggle switches arranged to be operated by each of said cams as the shaft is rotated.

5. In a controller, a rotatable shaft, a plurality of cams on said shaft, and a plurality of snap switches, each cam being arranged to operate a number of said switches successively as the shaft is rotated.

6. In a controller, a rotatable shaft, a plurality of cams on said shaft and a plurality of snap switches arranged to be closed successively by some of said cams and opened successively by others of said cams as the shaft is rotated, each cam operating more than one of said switches.

7. In a controller, a rotatable shaft, a plurality of cams on said shaft, and a plurality of snap switches arranged to be simultaneously closed by some of said cams and simultaneously opened by others of said cams as the shaft is rotated in one direction or the other.

8. In a controller, a rotatable shaft, a pair of cams on said shaft, and a plurality of switches arranged to be closed by one of said cams and opened by the other of said cams as the shaft is rotated.

9. In a controller, a rotatable shaft, a pair of cams on said shaft, and a plurality of snap switches arranged to be successively closed by one of said cams as the shaft is rotated in one direction and to be successively opened by the other cam as the shaft is rotated in the other direction.

10. In a controller, a rotatable shaft, a pair of cams on said shaft, and a plurality of toggle switches arranged to be closed by one of said cams and opened by the other.

11. In a controller, a rotatable shaft, cams on said shaft, and a plurality of switches arranged to be operated by one of said cams as the shaft is rotated in one direction, and by another of said cams as the shaft is rotated in the other direction.

12. In a controller, a rotatable shaft, a pair of cams on said shaft, a switch, and means normally in the path of one of said cams and arranged to be moved by said cam into the path of the other cam as the shaft is rotated in one direction, and to be moved by said other cam into the path of the first as the shaft is rotated in the other direction, said means operating the switch as it is moved.

13. In a controller, a rotatable shaft, a plurality of cams on said shaft, and a plurality of groups of snap switches, the different switches of a group being arranged to be successively operated by said cams as the shaft is rotated.

14. In a controller, a shaft, a plurality of cams on said shaft, and a plurality of groups of snap switches, the different switches of a group being arranged to be successively closed by some of the cams as the shaft is rotated in one direction and successively opened by other cams as the shaft is rotated in the other direction.

15. In a controller, a shaft, a plurality of cams on said shaft, and a plurality of similar groups of snap switches, corresponding switches of the groups being arranged to be simultaneously operated by the cams as the shaft is rotated.

16. In a controller, a shaft, a plurality of cams on said shaft, and a plurality of similar groups of snap switches, the corresponding switches of the groups being arranged to be simultaneously closed by some of the cams as the shaft is rotated in one direction, and simultaneously opened by others of the cams as the shaft is rotated in the other direction.

17. In a controller, a shaft, a plurality of cams on said shaft and a plurality of similar groups of snap switches, the corresponding switches of the groups being simultaneously operated and the different switches of each group being successively operated by the cams as the shaft is rotated.

18. In a controller, a shaft, a plurality of cams on said shaft, and a plurality of similar groups of snap switches,

the corresponding switches of the groups being simultaneously closed and the different switches of each group successively closed by certain of the cams as the shaft is rotated in one direction, and the corresponding switches of the groups being simultaneously opened and the different switches of each group successively opened by others of the cams as the shaft is rotated in the other direction.

19. In a controller, a rotatable shaft, a plurality of groups of snap switches, and a pair of cams on the shaft for each group of switches, one of each pair of cams being arranged to close its group of switches as the shaft is rotated in one direction, the other of each pair of cams being arranged to open its group of switches as the shaft is rotated in the other direction.

20. In a controller, a rotatable shaft, a plurality of groups of snap switches, and a cam on the shaft for each group of switches, each of said cams being arranged to operate its group of switches as the shaft is rotated.

21. In a controller, a rotatable shaft, a plurality of groups of snap switches, and a pair of cams on the shaft for each group of switches, said cams being arranged to close the different switches of their respective groups successively as the shaft is rotated in one direction and to open said switches successively as the shaft is rotated in the other direction.

22. In a controller for induction motors, a shaft, a group of switches for each current phase of the motor, and a cam on the shaft for each group of switches arranged to operate the different switches of its group successively as the shaft is rotated.

23. In a controller for induction motors, a shaft, a group of switches for each current phase of the motor, and a cam on the shaft for each group of switches arranged to operate the corresponding switches of the different groups simultaneously as the shaft is rotated.

24. In a controller for induction motors, a shaft, a group of switches for each current phase of the motor, and a pair of cams on the shaft for each group of switches so arranged that one of each pair of cams closes its switches successively as the shaft is rotated in one direction and the other of each pair opens its switches successively as the shaft is rotated in the other direction.

25. In combination, an induction motor, a resistance in the rotor circuit of said motor, a plurality of snap switches, each arranged to short circuit a portion of said resistance, a rotatable shaft, and a cam on said shaft arranged to operate said switches as the shaft is rotated.

26. In combination, an induction motor, a resistance in the rotor circuit thereof, a plurality of snap switches, each arranged to short-circuit a portion of said resistance, a rotatable shaft, and a pair of cams on said shaft, so arranged that one of said cams closes said switches successively as the shaft is rotated in one direction and the other cam opens said switches as the shaft is rotated in the other direction.

27. In combination, a polyphase induction motor, a resistance for each phase of the rotor circuit of the motor, a group of snap switches associated with the resistance for each phase, each switch being arranged to short-circuit a portion of its associated resistance, a rotatable shaft, and a cam on the shaft for each group of switches arranged to operate its switches successively as the shaft is rotated.

28. In combination, a polyphase induction motor, a resistance for each phase of the rotor circuit of the motor, a group of snap switches associated with the resistance for each phase, each switch being arranged to short-circuit a portion of its associated resistance, a rotatable shaft, and a cam on the shaft for each group of switches arranged to operate corresponding switches of the various groups simultaneously as the shaft is rotated.

29. In combination, a polyphase induction motor, a resistance for each phase of the rotor circuit of the motor, a group of snap switches associated with the resistance for each phase, each switch being arranged to short-circuit a portion of its associated resistance, a rotatable shaft, and a cam on the shaft for each group of switches arranged to operate corresponding switches of the various groups simultaneously and the different switches of each group successively as the shaft is rotated.

30. In combination, a polyphase induction motor, a resistance for each phase of the rotor circuit of the motor, a group of snap switches associated with the resistance for each phase, each switch being arranged to short-circuit a portion of its associated resistance, a rotatable shaft, and a pair of cams on the shaft for each group of switches, one of each pair of cams closing its associated switches successively as the shaft is rotated in one direction, and the other of each pair of cams opening said switches successively as the shaft is rotated in the other direction.

31. In combination, a polyphase induction motor, a resistance for each phase of the rotor circuit of the motor, a group of snap switches associated with the resistance of each phase, each switch being arranged to short-circuit a portion of its associated resistance, a rotatable shaft, and a pair of cams on the shaft for each group of switches, one of each pair of cams closing the corresponding switches of the various groups simultaneously as the shaft is rotated in one direction and the other of each pair of cams opening said corresponding switches simultaneously as the shaft is rotated in the other direction.

32. In combination, a three-phase induction motor, a Y-connected resistance in its rotor circuit, a group of snap switches associated with each section of said resistance, and means for operating the different switches of each group successively to gradually cut out said resistance.

33. In combination, a three-phase induction motor, a Y-connected resistance in its rotor circuit, a group of snap switches associated with each section of said resistance, and means for operating the corresponding switches of the various groups simultaneously to cut out parts of their associated resistance sections.

34. In combination, a three-phase induction motor, a Y-connected resistance in its rotor circuit, a group of snap switches associated with each section of said resistance, a rotatable shaft, and cams on said shaft for opening or closing said switches according to the direction of rotation of said shaft.

35. In combination, a three-phase induction motor, a Y-connected resistance in its rotor circuit, a group of snap switches associated with each section of said resistance, a rotatable shaft and a pair of cams on said shaft for each group of switches for closing corresponding switches of the various groups simultaneously as the shaft is rotated in one direction and opening said corresponding switches simultaneously as the shaft is rotated in the other direction.

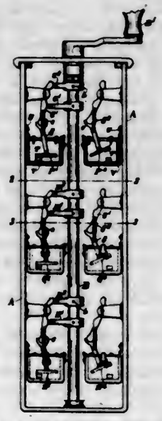
36. In combination, a three-phase induction motor, a Y-connected resistance in its rotor circuit, a group of snap switches associated with each section of said resistance, a rotatable shaft, and a pair of cams on said shaft for each group of switches, one of each pair of cams being arranged to close its associated switches as the shaft is rotated in one direction, the other of each pair of cams being arranged to open said switches successively as the shaft is rotated in the other direction.

37. In combination, a three-phase induction motor, a Y-connected resistance in its rotor circuit, a group of snap switches associated with each section of said resistance, a rotatable shaft, and a pair of cams on said shaft for each group of switches, one of each pair of cams being arranged to close its associated switches successively as the shaft is rotated in one direction, the other of each pair of cams being arranged to open said switches successively as the shaft is rotated in the other direction, corresponding switches of the various groups being operated simultaneously.

870,596. MOTOR-CONTROLLER. LEWIS L. TATUM, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Aug. 31, 1906. Serial No. 332,728.

1. In a controller, a rotatable shaft, a cam on said shaft, and a plurality of oil immersed snap switches operated by said cam as the shaft is rotated.

2. In a controller, a rotatable shaft, cams on said shaft, and a plurality of oil immersed snap switches arranged to be closed by one of said cams and opened by another of said cams as the shaft is rotated in one direction or the other.



3. In a controller, a rotatable shaft, cams on said shaft, and a plurality of oil immersed toggle switches arranged to be operated by each of said cams as the shaft is rotated.

4. In a controller, a rotatable shaft, a plurality of cams on said shaft, and a plurality of oil immersed switches, each cam being arranged to operate a number of said switches successively as the shaft is rotated.

5. In a controller, a rotatable shaft, a plurality of cams on said shaft, and a plurality of oil immersed snap switches arranged to be closed successively by some of said cams and opened successively by others of said cams as the shaft is rotated, each cam operating more than one switch.

6. In a controller, a rotatable shaft, a plurality of cams on said shaft, and a plurality of oil immersed snap switches arranged to be simultaneously closed by some of said cams and simultaneously opened by others of said cams as the shaft is rotated in one direction or the other respectively.

7. In a controller, a rotatable shaft, a pair of cams on said shaft, and a plurality of oil switches arranged to be closed by one of said cams and opened by the other of said cams as the shaft is rotated.

8. In a controller, a rotatable shaft, a pair of cams on said shaft, and a plurality of oil immersed snap switches arranged to be successively closed by one of said cams as the shaft is rotated in one direction and to be successively opened by the other cam as the shaft is rotated in the other direction.

9. In a controller, a rotatable shaft, a pair of cams on said shaft, and a plurality of oil immersed toggle switches arranged to be closed by one of said cams and opened by the other.

10. In a controller, a rotatable shaft, cams on said shaft, and a plurality of oil immersed switches arranged to be operated by one of said cams as the shaft is rotated in one direction and by another of said cams as the shaft is rotated in the other direction.

11. In a controller, a rotatable shaft, a pair of cams on said shaft, an oil immersed switch, and means normally in the path of one of said cams and arranged to be moved by said cam into the path of the other cam as the shaft is rotated in the other direction, and to be moved by said other cam into the path of the first as the shaft is rotated in the other direction, said means operating the switch as it is moved.

12. In a controller, a rotatable shaft, a plurality of cams on said shaft, and a plurality of groups of oil immersed snap switches, the different switches of the groups being arranged to be successively operated by said cams as the shaft is rotated.

13. In a controller, a shaft, a plurality of cams on said shaft, and a plurality of groups of oil immersed snap switches, the different switches of the groups being arranged to be successively closed by some of the cams as the shaft is rotated in one direction, and successively opened by others of the cams as the shaft is rotated in the other direction.

14. In a controller, a shaft, a plurality of cams on said shaft, and a plurality of similar groups of oil immersed snap switches, corresponding switches of the groups being arranged to be simultaneously operated by the cams as the shaft is rotated.

15. In a controller, a shaft, a plurality of cams on said shaft, and a plurality of similar groups of oil immersed snap switches, the corresponding switches of the groups being arranged to be simultaneously closed by some of the cams as the shaft is rotated in one direction, and simultaneously opened by others of the cams as the shaft is rotated in the other direction.

16. In a controller, a shaft, a plurality of cams on said shaft and a plurality of similar groups of oil immersed snap switches, the corresponding switches of the groups being simultaneously operated and the different switches of each group being successively operated by the cams as the shaft is rotated.

17. In a controller, a shaft, a plurality of cams on said shaft, and a plurality of similar groups of oil immersed snap switches, the corresponding switches of the groups being simultaneously closed and the different switches of each group successively closed by certain of the cams as the shaft is rotated in one direction, and the corresponding switches of the groups being simultaneously opened and the different switches of each group successively opened by others of the cams as the shaft is rotated in the other direction.

18. In a controller, a rotatable shaft, a plurality of groups of oil immersed snap switches, and a pair of cams on the shaft for each group of switches, one of each pair of cams being arranged to close its group of switches as the shaft is rotated in one direction, the other of each pair of cams being arranged to open its group of switches as the shaft is rotated in the other direction.

19. In a controller, a rotatable shaft, a plurality of groups of oil immersed snap switches, and a cam on the shaft for each group of switches, each of said cams being arranged to operate its group of switches as the shaft is rotated.

20. In a controller, a rotatable shaft, a plurality of groups of oil immersed snap switches, and a pair of cams on the shaft for each group of switches, said cams being arranged to close the different switches of their respective groups successively as the shaft is rotated in one direction and to open said switches successively as the shaft is rotated in the other direction.

21. In a controller for induction motors, a shaft, a group of oil immersed switches for each current phase of the motor, and a cam on the shaft for each group of switches arranged to operate the different switches of its group successively as the shaft is rotated.

22. In a controller for induction motors, a shaft, a group of oil immersed switches for each current phase of the motor, and a cam on the shaft for each group of switches arranged to operate the corresponding switches of the different groups simultaneously as the shaft is rotated.

23. In a controller for induction motors, a shaft, a group of oil immersed switches for each current phase of the motor, and a pair of cams on the shaft for each group of switches so arranged that one of each pair of cams closes its switches successively as the shaft is rotated in one direction and the other of each pair opens its switches successively as the shaft is rotated in the other direction.

24. In combination, an induction motor, a resistance in the rotor circuit of said motor, a plurality of oil immersed snap switches, each arranged to short circuit a portion of said resistance, a rotatable shaft, and a cam on said shaft arranged to operate said switches as the shaft is rotated.

25. In combination, an induction motor, a resistance in the rotor circuit thereof, a plurality of oil immersed snap switches, each arranged to short-circuit a portion of said

resistance, a rotatable shaft, and a pair of cams on said shaft so arranged that one of said cams closes said switches successively as the shaft is rotated in one direction and the other cam opens said switches as the shaft is rotated in the other direction.

26. In combination, a polyphase induction motor, a resistance for each phase of the rotor circuit of the motor, a group of oil immersed snap switches associated with the resistance for each phase, each switch being arranged to short-circuit a portion of its associated resistance, a rotatable shaft, and a cam on the shaft for each group of switches arranged to operate its switches successively as the shaft is rotated.

27. In combination, a polyphase induction motor, a resistance for each phase of the rotor circuit of the motor, a group of oil immersed snap switches associated with the resistance for each phase, each switch being arranged to short-circuit a portion of its associated resistance, a rotatable shaft, and a cam on the shaft for each group of switches arranged to operate corresponding switches of the various groups simultaneously as the shaft is rotated.

28. In combination, a polyphase induction motor, a resistance for each phase of the rotor circuit of the motor, a group of oil immersed snap switches associated with the resistance for each phase, each switch being arranged to short-circuit a portion of its associated resistance, a rotatable shaft, and a cam on the shaft for each group of switches arranged to operate corresponding switches of the various groups simultaneously, and the different switches of each group successively as the shaft is rotated.

29. In combination, a polyphase induction motor, a resistance for each phase of the rotor circuit of the motor, a group of oil immersed snap switches associated with the resistance for each phase, each switch being arranged to short-circuit a portion of its associated resistance, a rotatable shaft, and a pair of cams on the shaft for each group of switches, one of each pair of cams closing its associated switches successively as the shaft is rotated in one direction, and the other of each pair of cams opening said switches successively as the shaft is rotated in the other direction.

30. In combination, a polyphase induction motor, a resistance for each phase of the rotor circuit of the motor, a group of oil immersed snap switches associated with the resistance of each phase, each switch being arranged to short-circuit a portion of its associated resistance, a rotatable shaft, and a pair of cams on the shaft for each group of switches, one of each pair of cams closing the corresponding switches of the various groups simultaneously as the shaft is rotated in one direction and the other of each pair of cams opening said corresponding switches simultaneously as the shaft is rotated in the other direction.

31. In combination, a three-phase induction motor, a Y-connected resistance in its rotor circuit, a group of oil immersed snap switches associated with each section of said resistance, and means for operating the different switches of each group successively to gradually cut out said resistance.

32. In combination, a three-phase induction motor, a Y-connected resistance in its rotor circuit, a group of oil immersed snap switches associated with each section of said resistance, and means for operating the corresponding switches of the various groups simultaneously to cut out parts of their associated resistance sections.

33. In combination, a three-phase induction motor, a Y-connected resistance in its rotor circuit, a group of oil immersed snap switches associated with each section of said resistance, a rotatable shaft, and cams on said shaft for opening or closing said switches according to the direction of rotation of said shaft.

34. In combination, a three-phase induction motor, a Y-connected resistance in its rotor circuit, a group of oil immersed snap switches associated with each section of said resistance, a rotatable shaft and a pair of cams on said shaft for each group of switches for closing corresponding switches of the various groups simultaneously as the shaft is rotated in one direction and opening said corresponding switches simultaneously as the shaft is rotated in the other direction.

35. In combination, a three-phase induction motor, a Y-connected resistance in its rotor circuit, a group of oil immersed snap switches associated with each section of said resistance, a rotatable shaft, and a pair of cams on said shaft for each group of switches, one of each pair of cams being arranged to close its associated switches as the shaft is rotated in one direction, the other of each pair of cams being arranged to open said switches successively as the shaft is rotated in the other direction.

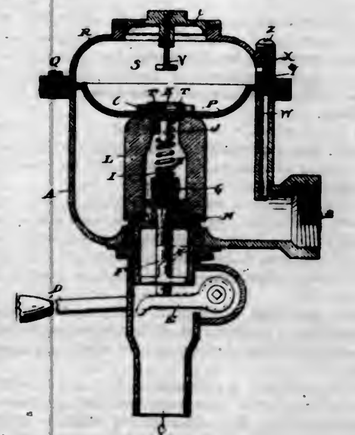
36. In combination, a three-phase induction motor, a Y-connected resistance in its rotor circuit, a group of oil immersed snap switches associated with each section of said resistance, a rotatable shaft, and a pair of cams on said shaft for each group of switches, one of each pair of cams being arranged to close its associated switches successively as the shaft is rotated in one direction, the other of each pair of cams being arranged to open said switches successively as the shaft is rotated in the other direction, corresponding switches of the various groups being operated simultaneously.

37. In a controller, a rotatable shaft, a plurality of independent current admitting switches and of resistance varying switches arranged to be operated by said shaft in its rotation, said current admitting switches being immersed in oil.

38. In a controller, a rotatable shaft, a plurality of switches arranged to be operated by the rotation of said shaft, and a separate oil tank for each switch.

39. In a controller, a rotatable shaft, a plurality of switches arranged to be operated by the rotation of said shaft, and a separate removable oil tank for each switch.

870,597. FLUSHING DEVICE. JULIUS D. TSCHOPIK and NELSON G. GOREAU, New Orleans, La. Filed Oct. 27, 1904, Serial No. 230,275. Renewed July 10, 1906. Serial No. 325,513.



1. The combination of a substantially cylindrical casing, a discharge pipe leading substantially centrally from the bottom of the casing, a main valve seat at the top of said discharge pipe, a hollow main valve resting on said seat, a diaphragm secured to the top of said main valve, a cover securing the diaphragm to the casing, a guide cage reciprocable within the discharge pipe and connected to the main valve for directing its movement, a pilot valve seat within the main valve, a pilot valve resting on said seat and having a stem passing through and to a point below the guide cage, a spring resting upon the pilot valve, and an adjusting screw near the top of the hollow main valve forming an abutment for the spring and providing means of adjustment for the same.

2. The combination of a substantially cylindrical casing, a discharge pipe leading substantially centrally from the bottom of the casing, a main valve seat at the top of said discharge pipe, a hollow main valve resting on said seat, a diaphragm secured to the top of said main valve, a cover securing the diaphragm to the casing, a guide cage reciprocable within the discharge pipe and connected to the main valve for directing its movement, a pilot valve seat within the main valve, a pilot valve resting on said seat and having a stem passing through and to a point below the guide cage, a spring resting upon the pilot valve, an adjusting screw near the top of the hollow main valve forming an abutment for the spring adjustable in the main valve for regulating the action of the spring.

3. The combination of a valve casing, a discharge pipe, an inlet pipe, a hollow main valve within the casing, a guide cage therefor movable in the discharge pipe, a diaphragm connected to the main valve, and dividing the casing into an upper and a lower part, a by-pass leading from the inlet to the upper part of the casing, a pilot valve within the hollow main valve, a spring holding the pilot valve normally on its seat, a perforated screw member in the main valve, serving as an abutment for the spring, as adjusting means therefor, and permitting fluid to pass from the upper part of the casing to the interior of the main valve, and a stem on the pilot valve extending through the guide and below the guide cage, and a finger actuated from outside the casing and adapted to raise the stem of the pilot valve.

4. The combination of a casing, a hollow main valve therein and free from the casing, a diaphragm connected to said valve and the casing, a tubular member communicating with the casing, a guide cage movable in said tubular member and connected to the main valve serving to guide said valve, an auxiliary valve within the main valve, a spring for closing the auxiliary valve, and a perforated abutment carried in the bore of the main valve serving to hold the spring against the auxiliary valve.

5. The combination of a casing, a hollow main valve therein and free from the casing, a diaphragm connected to said valve and casing, a tubular member communicating with the casing, a guide cage movable in said tubular member and connected to the main valve serving to guide said valve, an auxiliary valve within the main valve, a spring for closing said main valve, and an abutment for the spring adjustable in the main valve for regulating the action of the spring.

6. The combination of a casing, a tubular member communicating with the casing, a main valve seat thereon, a hollow main valve within and free from the casing and seating on said main valve seat, a guide cage connected to the main valve and movable within the tubular member, an auxiliary valve seat within the main valve, an auxiliary valve seating thereon, a spring tending to set the auxiliary valve, and an abutment adjustable within the main valve for regulating the pressure of the spring.

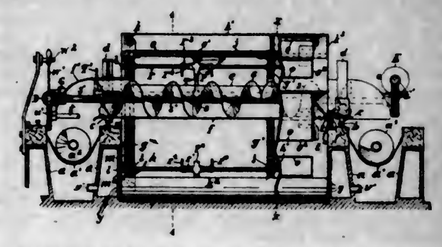
7. In devices of the character described, the combination, of a hollow main valve, a valve seat therein, an auxiliary valve normally resting on the seat, a spring urging the auxiliary valve to normal position, and an abutment for the spring adjustably mounted in the main valve.

870,598. MALT-STIRRING APPARATUS. BENJAMIN W. TUCKER, Newark, N. J., assignor to Charles H. Unverzagt, New York, N. Y. Filed Apr. 16, 1907. Serial No. 368,590.

1. In a turning cylinder for malt turning apparatus, the combination, with an annular cylinder, of a stationary center supporting the same, and vanes secured upon the annular cylinder to operate at its periphery for lifting the grain.

2. In a turning cylinder for malt turning apparatus, the combination, with an annular cylinder, of a stationary center for supporting the same and reversible vanes pivoted upon the annular cylinder and adapted to pick up the grain at the periphery of the cylinder when rotated in opposite directions.

3. In a turning cylinder for malt turning apparatus, the combination, with an annular cylinder, of a stationary center supporting the same and reversible vanes pivoted upon the annular cylinder and adapted to pick up the grain at the periphery of the cylinder when rotated in opposite directions, and means operating automatically when the rotation of the cylinder is reversed, for reversing the said vanes.



4. In a malt turning cylinder, the combination, with a revolving cylinder, of vanes operating upon the periphery of the cylinder to pick up the grain and arranged to discharge it to the interior of the cylinder, and means within the cylinder for discharging the grain at the end into an adjacent receiving channel.

5. In a turning cylinder for malt turning apparatus, the combination, with an annular cylinder, of beams extended through the same with disks fitted to support the annular cylinder, a trough supported upon the beams inside the cylinder, and vanes secured upon the annular cylinder for lifting the grain, with openings at the inner ends of the vanes to discharge the grain into the said trough.

6. In a turning cylinder for malt turning apparatus, the combination, with an annular cylinder, of beams extended through the same with disks fitted to support the annular cylinder, a trough supported upon the beams inside the cylinder, and vanes secured upon the annular cylinder for lifting the grain, with openings at the inner ends of the vanes to discharge the grain into the said trough, and means for holding the openings continuously closed to retain the grain in the vanes when turning the malt over and over.

7. In a turning cylinder for malt turning apparatus, the combination, with an annular cylinder, of beams extended through the same with disks fitted to support the annular cylinder, a trough supported upon the beams inside the cylinder, and vanes secured upon the annular cylinder for lifting the grain with openings at the inner ends of the vanes and movable plates with mechanism for operating the plates to close the openings and hold the grain in the vanes until over the trough.

8. In a malt turning apparatus, a carriage with wheels to support the same movably and having frames at its opposite ends with beams connecting the said frames, disks supported upon the said frames, an annular cylinder mounted to rotate upon the disks and provided with stirring vanes, and means for automatically reversing the vanes when the rotation of the cylinder is reversed upon the carriage.

9. In a malt turning apparatus, a carriage with wheels to support the same movably and having frames at its opposite ends with beams connecting the said frames, disks supported upon the said beams, annular cylinder-heads fitted to turn thereon, vane-shafts extended between the heads, segmental vanes fitted to the said shafts with an arm connected to each vane, and means connecting the said arms for reversing the said segmental vanes when required.

10. In a turning cylinder for malt turning apparatus, the combination, with an annular cylinder having annular heads and longitudinal openings upon its periphery with bridges between such openings, of reversible vanes pivoted over the openings, valve-plates pivoted in the openings each having a pinion p' to turn the same, a shaft r adjacent to each valve-plate, a segment upon such tie-bar meshing with the said pinion, means for holding the segment and valve-plate in a central position and adapted to

yield when pressed in either direction, a crank attached to each segment and a cam for moving the cranks at a given point in the rotations of the cylinder to tip the said valve-plate, as and for the purpose set forth.

11. In a turning cylinder for malt turning apparatus, the combination, with an annular cylinder having annular heads and longitudinal openings upon its periphery with bridges between such openings, of reversible vanes pivoted over the openings, valve-plates pivoted in the openings each having a pinion p' to turn the same, a shaft r adjacent to each valve-plate, a segment upon such shaft meshing with the said pinion, means for holding the segment and valve-plate in a central position and adapted to yield when pressed in either direction, means for traversing the cylinder in a malting alley and for reversing its movement and its rotations, means connected with the cylinder reversing mechanism for reversing the position of the vanes and a cam with means for moving it into the path of the segment cranks to thereby rock the valve-plates and discharge the contents of the vanes successfully when desired.

12. In a malt turning apparatus having a malting alley with walls at its opposite edges, the combination, with a carriage movable upon the walls, of a stationary center supported upon the carriage, an annular cylinder rotatable thereon, segmental vanes k' pivoted upon the said cylinder and extending from one end to the other of the cylinder and having heads k sloped outwardly at both edges to scrape the grain from the walls of the alley.

13. In a turning cylinder for malt turning apparatus, the combination, with a stationary center, of an annular cylinder rotatable thereon with longitudinal openings in the cylinder and bridges connecting the cylinder heads between said openings, valve-plates pivoted between the bridges to wholly close the periphery of the cylinder, reversible vanes pivoted upon the cylinder with heads k sloped outwardly at both edges to scrape the grain from the walls of the alley, and wedge-shaped blocks k^2 at the ends of the longitudinal openings fitted to the inner sloping faces of the heads k'.

14. In a turning cylinder for malt turning apparatus, the combination, with a stationary center, of an annular cylinder rotatable thereon with longitudinal openings in the cylinder and bridges connecting the cylinder-heads between said openings, valve-plates pivoted between the bridges to wholly close the periphery of the cylinder, and reversible vanes pivoted upon the cylinder over said valve-plates.

15. In a turning cylinder for malt turning apparatus, the combination, with a stationary center, of a cylinder having annular heads rotatable upon the center and having longitudinal openings in its periphery with bridges extended between the openings, vane-shafts extended between the heads in the said openings with reversible vanes thereon, valve-plates pivoted in the openings upon the vane-shafts and each provided with a toothed pinion p', a shaft r between the cylinder heads adjacent to each of the valve-plates with segment p journaled thereon and meshing with the pinion p', the segment having hub with tooth r^3 thereon at each end, the collars r^5 having each the lug r^4 to engage the teeth r^3 in opposite directions, springs r' operating to turn the collars r^5 in opposite directions, and each collar having a slot and pin to limit the movement of the lug r^4 and hold the segment normally in a central position.

16. In a malt turning apparatus, a carriage with wheels to support the same movably and having frames at its opposite ends with beams connecting the said frames, disks supported upon the said beams with a trough extended through the said disks and beyond the frame of the carriage, annular cylinder-heads fitted to turn upon the disks, vane-shafts extended between the heads, segmental vanes fitted to the said shafts with an arm connected to each vane, means connecting the said arms for reversing all the said vanes simultaneously when required, plates pivoted upon the vane-shafts for closing the inner ends of the vanes, a crank-shaft adjacent to each of the vane-shafts with gearing operating to rock the said plates, and a cam with means for moving it by hand into the path of the said cranks when over the trough, whereby the grain may be retained in each vane until discharged into the trough.

17. In a malt turning apparatus, a malting alley with side-walls for retaining the grain, a receiving trough adjacent to one of such walls, a carriage with wheels fitted to roll upon the said walls and having frames at its opposite ends with beams connecting the said frames, disks supported upon the said beams, a trough extended through the disks and over the adjacent channel, an annular cylinder mounted to rotate upon the disks and provided with stirring vanes, means for retaining the grain in the vanes when turning the malt over and over, and means for discharging the grain from the vanes into the said trough, with a conveyer in the cylinder to shift such grain to the adjacent channel.

18. In a malt turning apparatus, a malting alley having hollow side-walls for retaining the grain with apertures discharging from the wall toward the grain, means for supplying heating or cooling fluid to the interior of the walls, a carriage traversed upon the walls and a stirring cylinder rotated upon the carriage for stirring the grain between the walls.

19. In a malt turning apparatus, a carriage with wheels to support the same movably and having frames at its opposite ends with beams e connecting the said frames, and a malt turning cylinder comprising disks g supported upon the said beams, annular cylinder-heads h connected by tie-bars h^2 having wheels i fitted to the peripheries of the disks, flanges h' fitted to the sides of the disks to prevent longitudinal movement, and vanes mounted upon the periphery of the cylinder for turning the grain.

20. In a malt turning apparatus, the combination, with a malting alley having side-walls for retaining the grain and a channel a' adjacent thereto with conveyer a^2 therein, of a carriage traversed upon the walls comprising frames d with beams e connecting the same, disks supported upon the beams, an annular cylinder mounted to rotate upon the disks, a trough supported upon the beams inside the cylinder with spout and hood extended over the channel a', a conveyer within the trough for discharging the grain to the channel, vanes secured upon the annular cylinder for turning and lifting the grain, the cylinder having openings within the vanes to discharge the grain into said trough, and valve-plates closing said openings with mechanism for tipping the valve-plates when over the trough to discharge the grain from the vanes thereto whereby the grain may be stirred until it is malted and then transferred from the alley to the channel a'.

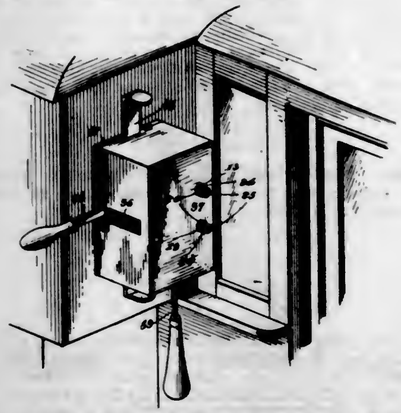
21. In a malt turning apparatus, the combination, with a malting alley having side-walls for retaining the grain and a channel a' adjacent thereto with conveyer a^2 therein, of a carriage traversed upon the walls comprising frames d with beams e connecting the same, disks supported upon the beams, an annular cylinder mounted to rotate upon the disks, a trough f supported upon the beams inside the cylinder with spout and hood f' extended over the channel a', a conveyer s within the trough having shaft s' extended outwardly through the hood, means for rotating such conveyer while the carriage is traversing the alley, and a gear-plate G upon the hood with gearing operated by the conveyer-shaft to traverse the carriage upon the walls of the alley and to rotate the turning cylinder reversibly upon the carriage.

22. In a malt turning apparatus, the combination, with a malting alley having side-walls for retaining the grain and channels a' at opposite sides of the alley with conveyers a^2 therein, of a carriage traversed upon the walls comprising frames d with beams e connecting the same, disks supported upon the beams, an annular cylinder mounted to rotate upon the disks, a trough f supported upon the beams inside the cylinder with spout and hood f' extended beyond the frame d over the channels a', a conveyer f within the though having shaft s' extended outwardly through both of the hoods, an electric motor mounted upon both of the hoods with connections to rotate the conveyer-shaft, a gear-plate G upon the other hood with gearing operated by the conveyer-shaft to propel the carriage and to rotate the turning cylinder, and electric connections for operating the electric motor.

23. In a malt turning apparatus, the combination, with a malting alley having side-walls for retaining the grain, such walls having track-rails and toothed racks upon the top, of a carriage comprising frames d with beams e connecting the same, disks supported upon the beams, an annular cylinder movable upon the disks with vanes to turn the grain, a shaft upon the carriage with means for rotating the same continuously, a traversing shaft t extended across the carriage with pinions at opposite ends meshing with the toothed racks, a cylinder-shaft I extended through the disks, with gearing connected to the cylinder to rotate the same upon the disks and connections from the shaft s' to the traversing shaft and the cylinder-shaft for operating them, substantially as herein set forth.

24. In a malt turning apparatus, the combination, with a malting alley having side-walls for retaining the grain, such walls having track-rails and toothed racks upon the top, of a carriage comprising frames d with beams e connecting the same, disks supported upon the beams, an annular cylinder movable upon the disks with vanes to turn the grain, a shaft upon the carriage with means for rotating the same continuously, a traversing shaft t extended across the carriage with pinions at opposite ends meshing with the toothed racks, a cylinder-shaft I extended through the disks, ring-gears upon the cylinder-heads with pinions upon the cylinder-shaft to drive the same, a cross-shaft D upon the carriage for the reverse gearing with connections to the traversing shaft t and to the cylinder-shaft I, and reversing gears driven by the shaft s' with clutches for connecting the same alternately with the cross-shaft, the clutches having an operating handle w' movable in the direction of the alley and dogs fixed near the ends of the alley to contact with such handle and reverse the clutches to traverse the carriage in opposite directions.

870,599. INDICATOR FOR RAILWAY AND OTHER PURPOSES. ERNEST M. VAUGHAN, New York, N. Y. Filed Jan. 19, 1907. Serial No. 353,081.



1. An indicator of the character described, comprising a longitudinally movable sleeve, a reel on said sleeve and revoluble therewith, a motor axially at one end of said sleeve and adapted to be directly engaged thereby, means at the other end of said sleeve, tending to establish an engaged relation between said motor and sleeve, means extending contiguous to the motor for interrupting and maintaining interrupted said engaged relation, a display web for winding on said reel, and means normally holding the web against movement but adapted to intermittently release the hold on said web.

2. An indicator of the character described, comprising a longitudinally movable sleeve, a reel on said sleeve and revoluble therewith, a motor axially at one end of said sleeve and adapted to be directly engaged thereby, means at the other end of said sleeve, tending to establish an engaged relation between said motor and sleeve, means extending contiguous to the motor for interrupting and maintaining interrupted said engaged relation, a display web adapted to wind on said reel, provision for holding said web counter to the winding tendency of the reel, and means for releasing said provision.

3. An indicator of the character described, comprising a spring motor, a longitudinally movable sleeve adapted to be engaged at one end with said motor, and having key engaging means at its opposite portion, a reel mounted on and revoluble with said sleeve, a display web adapted to wind on said reel, and means for disengaging the sleeve from the motor.

4. An indicator of the character described, comprising a spring motor, a longitudinally movable sleeve adapted to be engaged at one end with said motor, and having key engaging means at its opposite portion, a reel mounted on and revoluble with said sleeve, means for disengaging said sleeve from said motor, a display web for winding on said reel, and means normally holding the web against movement but adapted to intermittently release the hold on the web.

5. An indicator of the character described, comprising a spring motor, a longitudinally movable sleeve adapted to be engaged at one end with said motor, and having key engaging means at its opposite portion, a reel mounted on and revoluble with said sleeve, means for disengaging said sleeve from said motor, a display web adapted to wind on said reel, provision for holding said web counter to the winding tendency of the reel, and means for releasing said provision.

6. An indicator of the character described, comprising a reel, driving means therefor, a display web adapted to wind on said reel, a rotative element rotated by the movement of the web, a movable plate carried by said rotative element and controlling the rotation of the reel, a stop against which said plate bears and provision for causing said plate to clear said stop and thereby permit the reel to be actuated.

7. An indicator of the character described, comprising a reel, driving means therefor, a display web adapted to wind on said reel, a rotating element actuated by the rotation of the reel, a plate carried by and adapted to slide relative to said element and having a projecting end, a stop against which said end bears, and provision for causing said end to clear said stop and thereby permit the reel to be actuated.

8. An indicator of the character described, comprising a reel, driving means therefor, a display web adapted to wind on said reel, a rotative element actuated by the rotation of the reel, a sliding plate carried by said element and of such length that when one end projects, the other end will be out of position, a stop against which the projecting plate-end bears, and provision for causing said projecting end to be moved out of position to clear the stop and the other plate-end to be projected to subsequently contact with said stop.

9. An indicator of the character described, comprising a longitudinally movable sleeve, a reel on said sleeve and revoluble therewith, a motor axially at one end of said sleeve and adapted to be directly engaged thereby, means at the other end of said sleeve tending to establish an engaged relation between said motor and sleeve, means extending contiguous to the motor for interrupting and maintaining interrupted said engaged relation, a display web adapted to wind and unwind on and from said reel, means for permitting the reel to intermittently wind portions of the web thereon, and provision in frictional engagement with said sleeve for retarding the paying-off rotation of said reel.

10. An indicator of the character described, comprising a pair of reels, driving means and parts for each reel, whereby the latter may be brought into or thrown out of engaged relation with its driving means, a display web for winding on and unwinding from said reels, a pair of rotative elements actuated from an engaged reel, a movable plate carried by each element, a stop against which one of said plates bears, means for displacing said plate to clear said stop, and provision for shifting the stop to bring it into juxtaposition with the plate of the other element.

11. An indicator of the character described, comprising a reel, means for driving the same, a display web adapted to wind on said reel, a rotative element actuated by the rotation of the reel, a movable plate carried by said rotative element and controlling the rotation of the reel, a stop against which said plate bears, and a manually operable lever carrying a tappet for displacing said plate to clear the stop and thereby permit the reel to be actuated.

12. An indicator of the character described, comprising a reel, means for driving the same, a display web adapted to wind on said reel, a sliding plate controlling the rotation of the reel, a stop against which said plate bears, a manually operable lever, a rocking tappet thereon, adapted, when the lever is operated, to force said plate out of position to clear the stop and thereby permit the reel to be actuated.

13. An indicator of the character described, comprising driving means, a pair of reels, means for normally and independently maintaining each reel in engaged relation with the driving means, a display web for winding on and unwinding from said reels, a manually operable lever and plates connected thereto to be simultaneously moved inward and retracted respectively at each movement of the lever, whereby one plate longitudinally moves one reel out of engaged relation with the driving means, while the withdrawal of the other plate permits the reel pertaining thereto, to assume an engaged relation with said driving means.

14. An indicator of the character described, comprising a rotative disk, a spiral spring for driving said disk, a sleeve actuated by said disk, a reel carried by said sleeve means establishing an engaged relation between the sleeve and reel, when the sleeve revolves in one direction, but permitting a reverse rotation of the sleeve independent of the reel, a display web for winding on the reel, and means normally holding the web against movement but adapted to intermittently release the hold on said web.

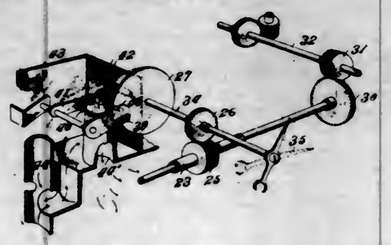
15. An indicator of the character described, comprising independently revoluble disks, motor springs therefor, a longitudinally movable sleeve for engagement with and actuated by each disk, a reel carried by each sleeve means establishing an engaged relation between each sleeve and reel when the sleeve is revolved in one direction, but permitting a reverse rotation of each sleeve independent of its reel, a display web for winding on and unwinding from said reels, means normally holding the web against movement but adapted to intermittently release the hold on said web, and provision for disengaging either of said sleeves from its disk.

16. An indicator of the character described, comprising independently revoluble and longitudinally movable sleeves, driving means with which said sleeves are adapted to be engaged, a reel carried by each sleeve to be revolved thereby, said reel having a head at one end, a disk frictionally bearing against each head, provision for disengaging each sleeve, a display web for winding on and unwinding from said reels, and means normally holding the web against movement but adapted to intermittently release the hold on said web.

17. An indicator of the character described, comprising a display web, means for effecting the travel of the same, a rotative element actuated by said web, independently sliding plates at right angles to each other and guided in said element, each plate being of a length whereby when a portion thereof projects at one end, the other end will be out of position, a stop against which the projecting portion of a plate bears, and means for successively shifting each plate to clear the stop and permit the intermittent travel of the web.

870,600. PREPAYMENT GAS-METER. BENJAMIN G. WAGONER, Philadelphia, Pa. Filed May 11, 1906. Serial No. 259,934.

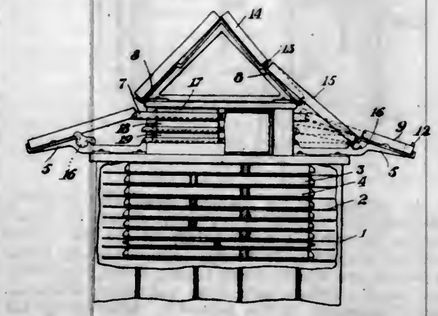
1. In apparatus of the type specified the combination of a rock shaft having arms of which one is provided with a gas valve, a cam shaft provided with a cam for operating the other of said arms, a hand driven shaft arranged transversely of the cam shaft and provided with an internal gear wheel, a gas driven shaft alined with the hand driven shaft and provided with a gear wheel arranged within the internal gear wheel, a sleeve loosely mounted on the last mentioned shaft and provided with an arm carrying toothed wheels which mesh with both said gear wheels, and worm gearing interposed between said sleeve and cam shaft, substantially as described.



2. In apparatus of the type specified a rock shaft having arms of which one is provided with a gas valve and of which the other constitutes the sole means for operating the gas valve and is provided with a laterally projecting pin, a generally circular cam having a radial opening approximately fitting the pin and having substantially parallel sides and said cam having a high part adjacent to the opening, and means for turning the cam whereby the rock shaft is turned and the valve positively seated with practically no lost motion, substantially as described.

3. In apparatus of the type specified the combination of a hand driven shaft provided with an internal gear wheel, a gas driven shaft alined with the first mentioned shaft and provided with a gear wheel arranged concentrically with the internal gear wheel, a sleeve mounted on the gas driven shaft and provided with an arm carrying toothed wheels that mesh with both said wheels, a worm on said sleeve, a rock shaft provided with arms whereof one is provided with a gas valve and the other constitutes the sole means for actuating the rock shaft and is provided with a projection, a radially notched cam provided with a high part and coöperating with a projection to force the valve to its seat, and a cam shaft carrying said cam and provided with a worm wheel engaging said worm, substantially as described.

870,601. COMPOSITOR'S BRACKET-CABINET. FRANK J. WALKER, New Rochelle, N. Y. Filed June 25, 1907. Serial No. 380,818.



1. In a compositors' bracket-cabinet a plurality of condensed type cases, run-ways on which the condensed type cases slide, adapted to support one side of the type case when in position for use, and sockets adapted to support the other side of the type case when in position for use.

2. In a compositors' bracket-cabinet a combined galley rest and waste box, brackets for supporting the combined galley rest and waste box, sockets on the brackets for supporting one side of a type case and brackets for supporting the other side of the type case, and a condensed case.

3. In a compositors' bracket-cabinet a combined galley rest and waste box, brackets for supporting the combined galley rest and waste box, a plurality of condensed type cases, separate pairs of run-ways for each condensed type case to slide on and having outer ends adapted to support one side of the condensed type cases when in position for use, and sockets on the brackets adapted to support the other side of either of the condensed type cases, or one side of a standard type case, and brackets adapted to support the other side of the standard case when none of the condensed cases is in use, and adapted to entirely support the standard case when either of the condensed cases is in use, and stops on the last mentioned brackets to support a condensed case when the aforesaid standard case is either removed or dropped into the sockets.

4. In a compositors' bracket-cabinet, brackets adapted to support a combined galley rest and waste box and brackets adapted to support a standard case or two condensed cases, or one condensed case, and partially support a standard case which is also supported by sockets on the first mentioned brackets.

5. In a compositor's bracket cabinet, brackets adapted to support a case, run-ways below said brackets adapted to carry a case, brackets below said run-ways adapted to support a case or a combined galley rest and waste box and a case on the run-ways adapted to pull out into the space between the two sets of brackets.

6. In a compositor's bracket cabinet, brackets adapted to support a combined galley rest and waste box or one side of a standard case, run-ways adapted to carry condensed cases the ends of which run-ways being adapted to support the other side of the standard case, and brackets above adapted to support a case.

870,602. SPRING-WHEEL. DANIEL WARNER, Bronson, and HORACE KITCHEL, Coldwater, Mich., assignors to The American Auto Wheel Company, Coldwater, Mich., a Corporation. Filed Nov. 12, 1906. Serial No. 343,172.



1. In a spring wheel, the combination with a hub, of the inner spoke sections secured therein; a rim on the outer ends of said inner spoke sections; side plates secured to said rim, said side plates being provided with inwardly projecting annular flanges adapted to receive said rim; spring pockets on said side plates; screw caps for said pockets; spiral springs arranged in said pockets and retained therein by said pocket caps, the outer coils of the springs being adapted to fit the walls of the pockets; a felly; T-shaped outer spoke sections, secured to said felly, the arms of said spokes being arranged in the inner coils of said springs; and guards of flexible material secured to said side plates and rim.

2. In a spring wheel, the combination with a hub, of the inner spoke sections secured therein; a rim on the outer ends of said inner spoke sections; side plates secured to said rim, said side plates being provided with inwardly projecting annular flanges adapted to receive said rim; spring pockets on said side plates; screw caps for said pockets; spiral springs arranged in said pockets and retained therein by said pocket caps, the outer coils of the springs being adapted to fit the walls of the pockets; a felly; and T-shaped outer spoke sections, secured to said felly, the arms of said spokes being arranged in the inner coils of said spring; and guards of flexible material secured to said side plates and rim.

3. In a spring wheel, the combination with a hub, of the inner spoke sections secured therein; a rim on the outer ends of said inner spoke sections; side plates secured to said rim, said side plates being provided with inwardly projecting annular flanges adapted to receive said rim; spring pockets on said side plates; screw caps for said pockets; spiral springs arranged in said pockets and retained therein by said pocket caps, the outer coils of the springs being adapted to fit the walls of the pockets; a felly; T-shaped outer spoke sections, secured to said felly, the arms of said spokes being arranged in the inner coils of said springs.

4. In a spring wheel, the combination with a hub, of the inner spoke sections secured therein; a rim on the outer ends of said inner spoke sections; side plates secured to said rim; spring pockets on said side plates; screw caps for said pockets; spiral springs arranged in said pockets and retained therein by said pocket caps, the outer coils of the springs being adapted to fit the walls of the pockets; a felly; and T-shaped outer spoke sections, secured to said felly, the arms of said spokes being arranged in the inner coils of said spring.

5. In a spring wheel, the combination with a hub, of the inner spoke sections secured therein; a rim on the outer ends of said inner spoke sections; side plates secured to said rim, said side plates being provided with inwardly projecting annular flanges adapted to receive said rim; spring pockets on said side plates; spiral springs arranged in said pockets; a felly; T-shaped outer spoke sections, secured to said felly, the arms of said spokes being arranged in the inner coils of said springs; and guards of flexible material secured to said side plates and rim.

6. In a spring wheel, the combination with a hub, of the inner spoke sections secured therein; a rim on the outer ends of said inner spoke sections; side plates secured to said rim; spring pockets on said side plates; spiral springs arranged in said pockets; a felly; and T-shaped outer spoke sections, secured to said felly, the arms of said spokes being arranged in the inner coils of said springs and rim.

7. In a spring wheel, the combination with a hub, of the inner spoke sections secured therein; a rim on the outer ends of said inner spoke sections; side plates secured to said rim, said side plates being provided with inwardly projecting annular flanges adapted to receive said rim; spring pockets on said side plates; spiral springs arranged in said pockets; a felly; and T-shaped outer spoke sections, secured to said felly, the arms of said spokes being arranged in the inner coils of said spring.

8. In a spring wheel, the combination with a hub, of the inner spoke sections secured therein; a rim on the outer ends of said inner spoke sections; side plates secured to said rim; spring pockets on said side plates; spiral springs arranged in said pockets; a felly; and T-shaped outer spoke sections, secured to said felly, the arms of said spokes being arranged in the inner coils of said springs.

9. In a spring wheel, the combination with a hub, of the inner spoke sections secured therein; a rim on the outer ends of said inner spoke sections; side plates secured to said rim; spring pockets on said side plates; spiral springs arranged in said pockets; a felly; outer spoke sections, secured to said felly arranged to engage the inner coils of said springs; and guards of flexible material secured to said side plates and rim.

10. In a spring wheel, the combination with a hub, of the inner spoke sections secured therein; a rim on the outer ends of said inner spoke sections; side plates secured to said rim; spring pockets on said side plates; spiral springs arranged in said pockets; a felly; outer spoke sections, secured to said felly arranged to engage the inner coils of said springs.

11. In a spring wheel, the combination with a hub, of the inner spoke sections secured therein; spring pockets arranged in pairs carried by said inner spoke sections; screw caps for said pockets; spiral springs loosely arranged in said pockets and retained therein by said pocket

caps; a felly; and T-shaped outer spoke sections, secured to said felly, the arms of said spokes being loosely arranged in the inner coils of said springs.

12. In a spring wheel, the combination with a hub, of the inner spoke sections secured therein; spring pockets arranged in pairs carried by said inner spoke sections; spiral springs loosely arranged in said pockets; a felly; and T-shaped outer spoke sections secured to said felly, the arms of said spokes being loosely arranged in the inner coils of said spring.

13. In a spring wheel, the combination with a hub, of the inner spoke sections secured therein; spring pockets arranged in pairs carried by said inner spoke sections; screw caps for said pockets; spiral springs arranged in said pockets and retained therein by said pocket caps; a felly; and T-shaped outer spoke sections secured to said felly, the arms of said spokes being arranged in the inner coils of said springs.

14. In a spring wheel, the combination with a hub, of the inner spoke sections secured therein; spring pockets arranged in pairs carried by said inner spoke sections; spiral springs arranged in said pockets; a felly; and T-shaped outer spoke sections secured to said felly, the arms of said spokes being arranged in the inner coils of said springs.

15. In a spring wheel, the combination with a hub, of the inner spoke sections secured therein; spring pockets carried by said inner spoke sections; screw caps for said pockets; spiral springs loosely arranged in said pockets and retained therein by said pocket caps; a felly; and outer spoke sections secured to said felly arranged to engage the inner coils of said springs.

16. In a spring wheel, the combination with a hub, of the inner spoke sections secured therein; spring pockets carried by said inner spoke sections; spiral springs arranged in said pockets; a felly; and outer spoke sections secured to said felly arranged to engage the inner coils of said springs.

17. In a spring wheel, the combination with a hub, of the inner spoke sections secured thereto; spring pockets carried by said inner spoke sections; springs loosely arranged in said pockets; a felly or rim; and spoke sections secured thereto arranged to loosely engage the inner coils of said springs.

18. In a spring wheel, the combination with the hub, of the inner spoke sections secured thereto; spring pockets carried by said inner spoke sections; springs arranged in said pockets; a felly or rim; and spoke sections secured thereto arranged to engage the inner coils of said springs.

19. In a spring wheel, the combination with a hub, of the inner spoke sections secured thereto; spiral springs arranged in pairs carried by said inner spoke sections; a felly or rim; and T-shaped spoke sections secured thereto arranged between said pairs of springs with their arms arranged to engage the inner coils thereof.

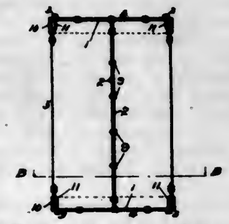
20. In a spring wheel, the combination with a hub, of the inner spoke sections secured thereto; a felly or rim; outer spoke sections secured thereto; and spiral springs for connecting said spoke sections arranged in pairs one at each side of the spoke sections, for the purpose specified.

21. In a spring wheel, the combination with a hub, of the inner spoke sections secured thereto; a felly or rim; outer spoke sections secured thereto; and springs for connecting said spoke sections arranged in pairs at each side of the spoke sections, for the purpose specified.

22. In a spring wheel, the combination with a hub of the inner spoke sections secured thereto; a felly or rim; outer spoke sections secured thereto; and spring devices for connecting said spoke sections arranged in pairs at each side of the spoke sections, for the purpose specified.

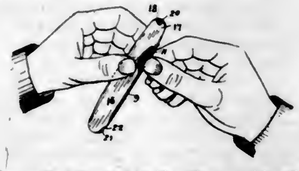
870,603. SHIPPING-PACKAGE. CHARLES G. WATSON, Mount Morris, Mich. Filed May 10, 1906. Serial No. 316,092.

1. A knockdown metallic receptacle comprising a body portion composed of a single sheet of resilient material, one longitudinal edge of which is provided with slots, studs on the opposite edge adapted to project through the slots when the meeting edges are brought together, depressed heads receivable in the opposite ends of the body portion, the heads adapted to prevent the meeting edges from springing together, angular brackets fastened to the inner periphery of the body portion near the opposite ends and fastening means passing through the heads and engaging the brackets.



2. A knockdown metallic receptacle comprising a body portion composed of a single sheet of resilient material, one longitudinal edge of which is provided with slots, studs on the opposite edge adapted to project through the slots when the meeting edges are brought together, and depressed heads receivable in the opposite ends of the body portion, the heads adapted to prevent the meeting edges from springing together.

870,604. COMBINED POCKET-KNIFE AND MANICURING-TOOL. HENRY M. WILLIS, Hempstead, N. Y. Filed Nov. 30, 1906. Serial No. 345,825.



1. In a so-called pocket-knife, the combination with a handle and blades, of a blade-spring, located between the sides of the handle, and which is provided with a finger-nail-filing surface, said surface being depressed below the sides of the knife-handle.

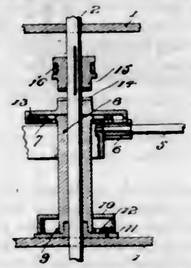
2. In a so-called pocket-knife, the combination with a handle and blades, of a blade spring located between the sides of the knife-handle, and which is provided with a finger-nail-filing surface, said surface being located beneath the edges of the sides of the knife-handle, so that said edges will form guides and gages respectively for the ball of the finger.

3. A so-called pocket-knife, having the upper or outer side of the blade-spring provided with suitable rasping facilities for trimming the nails of fingers and toes, and having said spring so embedded between the side portions of the knife case that the portions of said case that project outward from the filing or rasping surface will form guides and gages respectively for controlling the position of the nail relatively to the filing surface, whereby to keep the nail onto the file and also prevent too great an abrasion of said nail, and means for paring the nail.

4. A so-called pocket-knife, comprising blades, a casing for the blades and a spring, said spring being set beneath the edges of said casing and provided with a rasping surface, and said edges forming a guide and gage respectively to control the body to be rasped relatively to the rasping surface.

870,605. GEARING. GARLAND D. WILSON, Surveyor, W. Va. Filed May 18, 1907. Serial No. 374,573.

1. The combination of a drive shaft, a driven shaft, a gear element on the driven shaft, gear elements mounted on the drive shaft, and all of which are always in driving connection with the gear element of the driven shaft, means for clutching one of the gear elements of the drive shaft to the said shaft, and a driving connection between the other gear element of the drive shaft and the drive shaft, said last named driving connection permitting the said last named gear element to overrun.

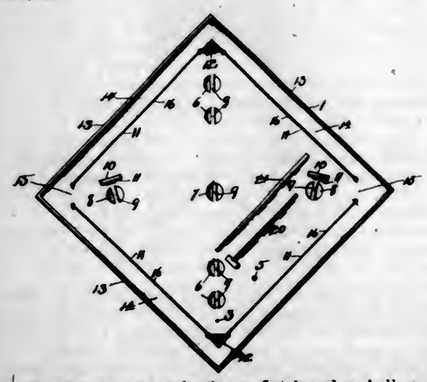


2. The combination of a drive shaft, a driven shaft, gear elements mounted on the drive shaft, one concentric of the other and both of them always in driving connection with the driven shaft, one of said gear elements having a ratchet connection with the drive shaft and the other loose on said shaft, and means for clutching said loose element to the drive shaft.

3. The combination of a drive shaft, a driven shaft, a pinion on said driven shaft, a low speed gear element having a ratchet connection with the drive shaft and meshing with said pinion, a high speed gear element loose on the drive shaft and also meshing with said pinion, and means for clutching the high speed gear element to the drive shaft.

4. The combination of a drive shaft, a driven shaft, a pinion on said driven shaft, a gear wheel meshing with said pinion and mounted on said drive shaft, said gear wheel being provided with a ratchet, a pawl disk fast on the drive shaft, a pawl mounted on said disk and meshing with said ratchet, another gear wheel meshing with said pinion and mounted loosely on the drive shaft, encircling and concentric to the first named gear, and means for clutching said last named gear wheel to the drive shaft.

870,606. GAME APPARATUS. JAMES H. ADAMS, Kensington, Md., assignor of one-half to Paul H. Tamplet, Kensington, Md. Filed Sept. 15, 1906. Serial No. 334,720.



1. A game apparatus having a flat board, a ball, a series of pockets in said board and a bridge extending across each of said pockets over which the ball is adapted to be driven, substantially as described.

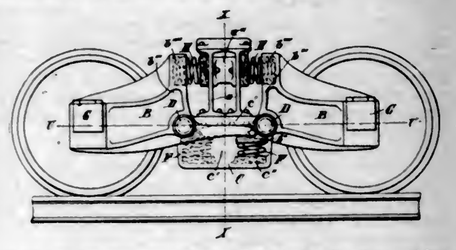
2. A game apparatus having a board, pockets over which a ball is adapted to be driven and resilient opposite goal posts, substantially as described.

3. A game apparatus having a board, a series of pockets over which a ball is adapted to be driven and having openings of sufficient size to permit the ball to drop into the pockets, each pocket having a bridge extending across the same, resilient goal posts and barriers having corner openings, substantially as described.

4. A game apparatus having a board, a ball, a series of pockets, each pocket having openings of sufficient size to permit the ball to drop into the pocket and retaining means at the bottom of the pocket and a fixed bridge extending across the pocket over which the ball is adapted to be driven, substantially as described.

5. A game apparatus having a board, said board having pockets arranged at opposite end corners of the board, side pockets and a central pocket, a bridge across each of said pockets, and a resilient buffer near one of said pockets at the end of said bridge, substantially as described.

870,607. CAR-TRUCK. WALTER E. AMBERG, Chicago, Ill. Filed Apr. 1, 1907. Serial No. 365,728.



1. A car truck comprising wheels and axles, in combination with a load-sustaining transom, and pivotally articulated spring containing and supported side-frames carrying said transom, substantially as described.

2. A car truck comprising wheels and axles, in combination with a load-sustaining transom, having a truck center, and pivotally articulated spring supported side frames carrying said transom, substantially as described.

3. A car truck comprising wheels and axles, in combination with side frames connecting said axles, each said side-frame comprising a plurality of pivotally connected parts, a transom connecting and resting upon said side-frames, and springs interposed between the parts of said side-frame to support the same in elevated position, substantially as described.

4. A car truck comprising wheels and axles, in combination with side frames connecting said axles, each said side-frame comprising a plurality of pivotally connected parts, a transom connecting and resting upon said side-frames, and springs interposed between the parts of said side-frame, and between said parts and said transom substantially as described.

5. A car truck comprising wheels and axles, in combination with a bolster having hinge portions at its ends, side frame members extending from said axles and hinged upon said transom, and springs interposed between said transom and said side frame members, substantially as described.

6. A car truck comprising wheels and axles, in combination with a transom having hinge members upon its ends, spring brackets depending from the ends of said transom, side frame members extending from said axles and at their inner ends hinged upon said transom, said side frame members having arms extending beneath the ends of said transom and springs interposed between said arms and said brackets, substantially as described.

7. A car truck comprising wheels and axles, in combination with a transom having hinge members upon its ends, spring brackets depending from the ends of said transom, side frame members extending from said axles and at their inner ends hinged upon said transom, said side frame members having arms extending beneath the ends of said transom, springs interposed between said arms and said bracket and other springs interposed between the upper portions of said members and the sides of said transom, substantially as described.

8. A car truck comprising wheels and axles, in combina-

tion with a transom, side frame members extending from said axles and at their inner ends hinged to said transom and springs interposed between said side frame members and said transom and holding said members and said transom in elevated positions, substantially as described.

9. A car truck comprising wheels and axles, in combination with a transom, side frame members extending from said axles and at their inner ends hinged to the lower part of said transom, said side frame members having arms adjacent to the sides of said transom and springs interposed between the said arms and said transom, substantially as described.

10. A car truck comprising wheels and axles, in combination with a transom, side frame members extending from said axles and at their inner ends hinged upon said transom, said side frame members having upwardly extending arms, springs tending to distend said arms, other substantially horisontal arms upon said side frame members and springs interposed between the same and said bolster, substantially as described.

11. A car truck comprising wheels and axles, in combination with a transom, side frame members extending from said axle and hinged upon said transom, spring brackets depending from said transom, substantially horizontal arms extending from said side frame members and springs interposed between said arms and said brackets, substantially as described.

12. A car truck comprising wheels and axles, in combination with side frame members extending from said axles, mid-members whereon respective pairs of side frame members are hinged, spring brackets depending from said mid-members, springs interposed between said brackets and said side frame members and means whereby the load is transmitted to said mid-members, substantially as described.

13. A car truck comprising wheels and axles, in combination with pairs of side frame members extending from said axles and provided with horizontal and vertical arms, mid-members whereon respective pairs of members are hinged, springs tending to separate the vertical arms of said members and other springs interposed between said mid-members and the horizontal arms of respective side frame members, substantially as described.

14. A car truck, comprising wheels and axles, in combination with pivotally articulated side frames, a transom resting upon said side frames, springs arranged between the parts and supporting the same in elevated position and a suspended brake mechanism vertically movable with said transom, substantially as described.

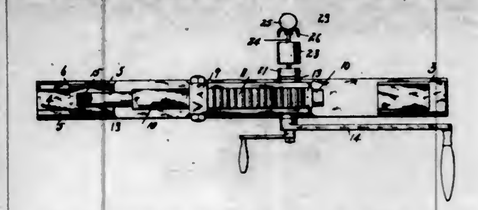
15. A car truck comprising wheels and axles, in combination with a transom, mid-members at the ends thereof, side frame members extending from said axles and having horizontal and vertical arms, hinge pins whereby said frame members are attached to the ends of said mid-members and springs interposed between said frame and mid-members and between said frame members and said transom, substantially as described.

16. A car truck comprising wheels and axles, in combination with a transom, pivotally articulated spring containing and supported side frames carrying said transom and said side frames having integral journal boxes, substantially as described.

870,606. DEVICE FOR CONTRACTING AND RELOADING GUN-SHELLS. JAMES ANSELL, McKeesport, Pa., assignor of one-half to William A. Hurley, McKeesport, Pa. Filed Mar. 8, 1907. Serial No. 361,228.

1. In a cartridge loading machine, the combination with a plunger, of a shaft and pinion for moving the plunger endwise for ramming action in conjunction with the shell, shell crimping means carried on one end of the shaft, and operating means for said crimping means passing through said shaft.

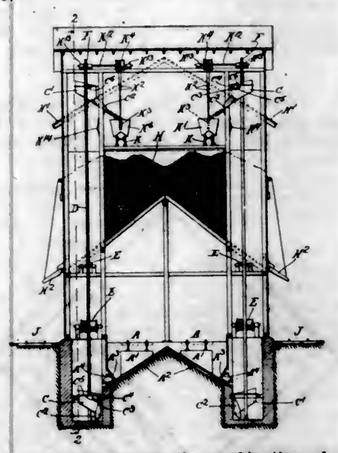
2. In a cartridge loading machine, the combination with a plunger, of a stationary support therefor, an operating shaft journaled in said support, a pinion fixed to said shaft for moving the plunger endwise for ramming action upon the shell, shell crimping means on one end of the shaft, an operating shaft for said means passing through said first named shaft, and shell holding means carried by said support in juxtaposition to said crimping means.



3. In combination with a plunger for acting upon a shell, of a holder comprising spaced side walls provided with shoulders, a shell contracting die having open ends and being adapted to be received between the side walls of said holder, a removable end plate for closing the rear end of the die to retain the shell therein, said plate engaging said shoulders to prevent displacement of the shell from the die during action of the plunger thereon.

4. In a cartridge loading machine, the combination with a plunger for acting upon the shell and mounted in a suitable base for endwise movement, a pair of spaced walls on said base provided with shoulders, a holder for the shell having an open rear end and fitting between said walls, a removable end plate for closing said rear end of the holder, said shoulders supporting said holder against endwise movement due to the action of the plunger upon the shell, the space between the walls being greater than the diameter of the shell whereby upon removal of said end plate the shell may be forced by said plunger out of said rear end of the holder and ejected between said walls.

870,609. COAL-HANDLING DEVICE. EDWARD E. BARRETT, La Grange, Ill. Filed Jan. 12, 1907. Serial No. 352,049.



1. In a conveying system, the combination of elevator apparatus comprising a pair of buckets, means for raising and lowering the buckets simultaneously and in alternation, a receptacle to receive the material hoisted by the elevator apparatus, distributing cars operating over the receptacle and into which the material hoisted is loaded, and means for operating the elevator apparatus and distributing cars so that the same operate in conjunction with each other to hoist and distribute the material by a single continuous process.

2. In a conveying system, the combination of elevator apparatus working intermittently in opposite directions to hoist the material with distributing apparatus receiving the material from the elevator apparatus and working intermittently in opposite directions to distribute the material laterally with respect to the elevator apparatus.

3. In a conveying system, the combination of elevator apparatus working intermittently in opposite directions to hoist the material, with distributing apparatus operated by said elevator apparatus receiving the material from the elevator apparatus and working intermittently in opposite directions to distribute the material laterally with respect to the elevator apparatus.

4. In a conveying system, the combination of elevator apparatus, with distributing apparatus operated by said elevator apparatus receiving the material from the elevator apparatus and working intermittently in opposite directions to distribute the material laterally with respect to the elevator apparatus.

5. In a conveying system, the combination of an elevator shaft with a pair of elevator buckets, means for alternately raising and lowering the same, a storage receptacle for the material handled, a pair of tracks extending over said storage receptacle from the elevator shaft, a pair of distributing cars, and means for moving said cars in alternation to and from the elevator shaft so that their movements correspond with the movements of the elevator buckets.

6. In a conveying system, the combination of an elevator shaft with a pair of elevator buckets, a single drum, cables attached to said drum whereby said elevator buckets are alternately raised and lowered, a storage receptacle for the material handled, a pair of tracks extending over said storage receptacle from the elevator shaft, a pair of distributing cars, and means for moving said cars in alternation to and from the elevator shaft so that their movements correspond with the movements of the elevator buckets.

7. In a conveying system, the combination of an elevator shaft with a pair of elevator buckets, a single drum, cables attached to said drum whereby said elevator buckets are alternately raised and lowered, a storage receptacle for the material handled, a pair of tracks extending over said storage receptacle from the elevator shaft, a pair of distributing cars, and means operated by the driving mechanism of the elevator buckets for moving said cars in alternation to and from the elevator shaft so that their movements correspond with the movements of the elevator buckets.

8. In a conveying system, the combination of an elevator shaft with a pair of elevator buckets, a common driving device for the elevator buckets, a storage receptacle for the material handled, tracks extending over said receptacle from the elevator shaft, a drum, and cables to operate said cars in alternation to and from the elevator shaft, said drum being associated with the driving mechanism of the elevating buckets.

9. In a conveying system, the combination of elevator apparatus with a storage receptacle for the material handled, a pair of inclined tracks extending from the elevator apparatus over the storage receptacle, cars to run on said tracks, and a common driving device whereby the cars are moved simultaneously and in alternation to and from the elevator device.

10. In a conveying system, the combination of elevator apparatus with a storage receptacle for the material handled, a pair of inclined tracks extending from the elevator apparatus over the storage receptacle, cars to run on said tracks, and a common driving device whereby the cars are moved simultaneously and in alternation to and from the elevator device, said tracks being inclined downward from the elevator device.

11. In a conveyer system, the combination of an elevator bucket adapted to raise the material from a lower level to a higher level, with a car laterally movable in approximately said higher level and adapted to receive the material from the bucket and convey it laterally to distribute it, and means for simultaneously moving the elevator bucket and the car, the latter adapted to travel the entire length of its excursion at each operation and both timed so that they simultaneously reach the point of intersection of their paths.

12. In a conveyer system the combination of an elevator bucket adapted to raise the material from a lower level to a higher level, with a car laterally movable on approximately said higher level and adapted to receive the material from the bucket and convey it laterally to distribute it, the car adapted to travel the entire length of its excursion at each operation, and both car and bucket timed so that they simultaneously reach the point of intersection of their paths.

13. In a conveyer system, the combination of an elevator bucket adapted to raise the material from a lower level to a higher level, with a pair of cars laterally movable on approximately said higher level and adapted to receive material, at least one of them, from said bucket and both at approximately the same point and convey it laterally to distribute it, rails on which said cars travel outwardly and downwardly inclined from the point where they receive their loads, a cable connecting the two cars so that they are alternately at the outer and inner ends of their excursion, and controlling mechanism associated with such cable.

14. In a conveyer system, the combination of two elevator buckets adapted to raise the material from a lower level to a higher level, a cable which connects them, driving mechanism whereby they balance each other and are alternately at opposite ends of their excursion, with two cars laterally movable on approximately said higher level and adapted to receive the material from the bucket and convey it laterally to distribute it, rails outwardly inclined from the intersection of the path of the car and bucket and on which the cars travel, a cable which connects the cars, and means for controlling them, said cars alternately at opposite ends of their respective excursions.

870,610. GUN-SIGHT. JOHN Y. BASSELL and FRED C. BLENKNER, Columbus, Ohio. Filed Dec. 11, 1906. Serial No. 347,247.



1. In a gun sight, the combination of a base for attachment to a rifle barrel, a sight piece detachably mounted on the base, a hood detachably mounted on the base, and a ring mounted on the base and movable into and out of position adjacent the sight piece.

2. In a gun sight, the combination of a base for attachment to a rifle barrel, a sight piece detachably mounted on the base, a hood mounted on the base and adjustable longitudinally of the barrel, and a ring mounted on the base and movable into and out of position adjacent the sight piece.

3. In a gun sight, the combination of a base for attachment to a rifle barrel, a sight piece detachably mounted on the base, a hood detachably mounted on the base and adjustable longitudinally of the barrel, and a ring mounted on the base and movable into and out of position adjacent the sight piece.

4. In a gun sight, the combination of a base for attachment to a gun barrel, a sight piece detachably mounted in said base, a sighting ring mounted on said base independently of the sight piece, and a hood detachably secured to the base independently of the sight piece and movable longitudinally of the barrel.

5. The combination with a fixed front sight block and its sight receiving groove, of a sight base having a projection adapted to fit in said groove, a sight piece mounted on the base, and a hood movable on the base.

6. In a gun sight, the combination of a base piece for attachment to a gun barrel, a sight piece mounted on the base piece, and a hood for the sight piece mounted on the base piece to slide longitudinally of the barrel.

7. In a gun sight, the combination of a base piece for attachment to the barrel, a detachable sight piece mounted

in the base piece, and a hood for the sight piece mounted on the base piece to slide longitudinally of the barrel.

8. In a gun sight, a base, a sight piece mounted on the base, a hood adjustable on the base, and a ring mounted independently of the sight piece and the hood.

9. In a gun sight, a base, a sight piece, a hood movable on said base, means for locking the hood in place, and means for releasing the hood and throwing the locking means out of operation.

10. In a gun sight, a base, a sight piece, a hood movable on said base, locking means adapted to engage the hood to hold the same in place, and means for throwing the locking means out of engagement with the hood.

11. In a gun sight, a base, a sight piece removably mounted on the base, a hood carried by the base, a ring movably mounted on the base independently of the sight piece and the hood, and means for locking the sight piece in position.

12. In a gun sight, the combination with a sight piece, of a base, a hood shorter than the base and adapted to be moved thereon to cover and uncover the sight piece, and a ring adapted to be moved into concentric relation with the sight piece.

13. In a gun sight, the combination with a sight piece, of a base having a concaved recess, a hood shorter than the base movable thereon and conforming to the contour of the recess to form therewith a globe, and a ring adapted to stand concentric with the center of the sight piece.

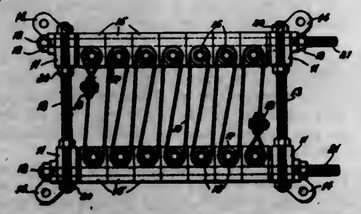
14. In a gun sight, a base having a longitudinal concaved recessed portion formed with a ring receiving depression, and a ring adapted to lie snugly in said depression having its upper portion shaped to conform to the contour of the recess.

15. In a gun sight, a base having a longitudinally concaved recessed portion formed with a ring receiving depression, a ring adapted to lie snugly in said depression having its upper portion shaped to conform to the contour of the recess, and a hood carried by the base.

16. In a gun sight, the combination of a base piece for attachment to the barrel, a sight piece mounted on the base piece, a hood for the sight piece mounted on the base piece and adjustable longitudinally of the barrel, and means for latching the hood in adjusted positions.

17. In a gun sight, the combination of a base piece for attachment to a barrel, a sight piece mounted on the base piece, and a detachable hood for the sight piece mounted on the base piece and adjustable longitudinally of the barrel.

870,611. SERIES SHUNT FOR DYNAMO-ELECTRIC MACHINES. HENRY C. BEEKLEY, Norwood, Ohio, assignor to The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Nov. 29, 1905. Serial No. 289,550.



1. In a series-shunt for dynamo-electric machines, a strip of resistance material, a frame comprising a plurality of removable sections, said strip being wound or looped about said sections, and means for holding said sections together and for placing said strip under tension.

2. In a series-shunt for dynamo-electric machines, a looped or zig-zag strip of resistance metal, a frame therefor comprising a number of sections or blocks of insulating material, a plurality of bolts passing through said sections or blocks, and means for adjusting the relative position of said bolts to place the strip under tension.

3. In a series-shunt for dynamo-electric machines, a looped or zig-zag strip of resistance metal, a supporting frame therefor comprising removable insulating blocks, and a plurality of parallel supporting rods about which said strip is looped, means for supporting said blocks, and means for adjusting the relative position of said supporting means.

4. In a series-shunt for dynamo-electric machines, a looped or zigzag strip of resistance metal, a frame comprising a plurality of bolts and a support for same, insulating blocks mounted on said bolts, means for permitting a variable number of blocks to be mounted on said bolts, and rods carried by said blocks, said strip of resistance metal being looped about said rods.

5. In a series-shunt for dynamo-electric machines, a looped or zig-zag strip of resistance metal, a frame comprising a plurality of bolts and a support for same, insulating blocks mounted on said bolts, means for permitting a variable number of blocks to be mounted on said bolts, rods carried by said blocks, said strip of resistance metal being looped about said rods, and means for adjusting the frame to put the strip under tension.

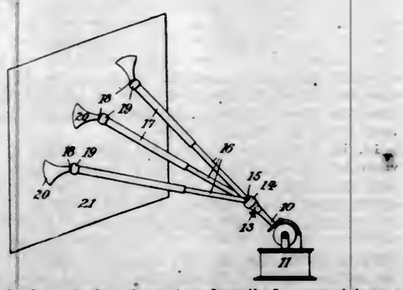
6. In a series-shunt for dynamo-electric machines, a looped or zig-zag strip of resistance metal, and a supporting frame therefor comprising two pairs of longitudinal supporting bolts and a plurality of removable sections mounted on the bolts of each pair, said strip being looped about said sections.

7. In a series-shunt for dynamo-electric machines, a looped or zig-zag strip of resistance metal, a supporting frame comprising longitudinal supporting bolts, removable insulating sections mounted on said bolts, said bolts and sections being in two sets, the resistance strip being looped between the sections of each set, and means for forcing said sets apart for putting the strip under tension.

8. In a series-shunt for dynamo-electric machines, a looped or zig-zag strip of resistance material, a supporting frame comprising two pairs of longitudinal bolts, a number of removable insulating blocks mounted on each bolt, transverse parallel insulated rods mounted in the blocks of each pair, said strip being looped around each insulated rod, and bolts for spreading apart the two pairs of bolts and blocks thereon, to put the strip under tension.

9. In a series-shunt for dynamo-electric machines, a looped or zig-zag strip of resistance metal, a substantially rectangular frame therefor comprising four metal castings for the corners of the frame, four longitudinal parallel bolts passing through the castings two of said bolts passing through opposite ends of the same castings, an equal number of removable insulating blocks mounted on each of said longitudinal bolts between the castings, rods mounted in said insulating blocks said rods being in two opposite parallel sets, insulating tubes surrounding each of said last named rods, said resistance metal being looped about the tubes of the two sets, and end bolts passing through the metal castings at right angles to the aforesaid bolts for spreading the castings apart to put the resistance strip under tension.

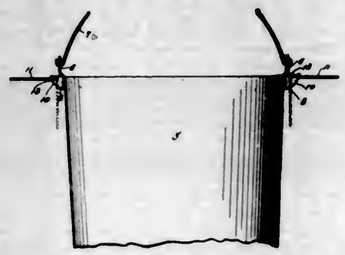
870,612. PHONOGRAPH ATTACHMENT. VETAL BESSIER, New York, N. Y. Filed July 20, 1907. Serial No. 384,749.



1. A device of the character described, comprising a screen, a sound generator, a series of tubes communicating therewith, bells on the tubes, and means for adjustably sustaining the tubes relatively to the screen, substantially as specified.

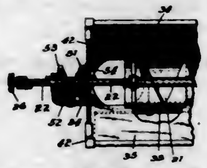
2. A device of the character described, comprising a screen, a sound generator having a divided horn, a series of tubes communicating therewith, bells on the ends of the tubes, and means for adjustably sustaining said tubes relatively to the screen, substantially as specified.

870,613. MILK-PAIL SUPPORT. ELIJAH A. BLUE, Burket, Ind. Filed Feb. 23, 1907. Serial No. 358,959.



The combination with a pail, of ears thereon having cheeks, knee supports comprising a looped spring wire having its free ends extending between the cheeks and pivotally connected thereto, and top and bottom stop-projections on the cheeks engageable by the knee supports for hoding the same in horizontal and vertical position, respectively.

870,614. CONVEYER. CHESTER BRADFORD, Indianapolis, Ind. Filed Apr. 18, 1906. Serial No. 312,311.



1. The combination, in a screw conveyer, of the tube or casing, an auger, an auger shaft, and a bowl-like end to the casing embodying a bearing for the shaft.

2. The combination, in a screw conveyer, of the tube or casing, the auger, an auger shaft adapted to be shifted endwise, handles secured to the ends of the shaft by which the shifting is effected, a bowl-like end secured to one end of the conveyer and embodying one of the bearings for the shaft, the cavity of the bowl being adapted to receive the adjacent handle when the shaft is shifted toward the opposite end of the conveyer.

3. The combination, in a screw conveyer, of the casing, an auger adapted to be moved endwise in said casing, and handles by which the movement of the shaft is effected consisting of knobs loosely mounted on studs secured to the ends of the shaft.

4. The combination, in a screw conveyer, of the tube or casing, a receiving hopper consisting of a combined inner head and annular ring to which the tubular portion of the casing is also connected, an outer head, a discharging mouth, a member connecting said annular ring and said discharging mouth on the lower side, and two side members connecting the two heads at the upper portion, substantially as shown and described.

5. The combination, in a conveyer, of a tubular casing provided with an inlet hopper at one end and discharging mouths at both ends, said hopper being curved or rounded at a point adjacent to the tubular portion of the casing whereby a rounded inlet is provided for the material being conveyed, and the conveying devices.

6. The comination, with a conveyer, the shaft whereof is adapted to be driven by either of two driving wheels arranged side by side thereon, of a support embodying offset and reversible brackets, whereby the position of the conveyer may be shifted a distance equal to the distance between the two driving wheels by reversing the position of said brackets.

7. The combination, in a conveyer, of the casing, the conveyer shaft, a train of gearing for driving said shaft, and a reversible housing for carrying said train of gearing having one open side, whereby, by reversing said housing, the open side thereof may be presented in either direction.

8. The combination, in a conveyer, of the casing, the conveyer shaft, a train of gearing for driving said shaft, and a reversible housing for carrying said train of gearing having one open side, whereby, by reversing said housing, the open side thereof may be presented in either direction, a portion of said housing being in the form of a plate forming a part of one end of the hopper, the adjacent parts being formed to receive said plate.

9. The combination, in a conveyer, of the casing, the conveyer shaft, a train of gears for driving said shaft, means whereby said gears may be reversed by moving the shaft endwise, knob-like handles at the ends of said shaft for moving it, and studs secured in longitudinal perforations in the ends of said shaft whereby said knob-like handles are secured thereto.

10. The combination, in a conveyer, of the casing, the conveyer shaft, a train of gears for driving said shaft, means whereby said gears may be reversed by moving the shaft endwise, knob-like handles at the ends of said shaft for moving it, and studs secured in longitudinal perforations in the ends of said shaft whereby said knob-like handles are secured thereto, and pins passing through the shaft and engaging with said studs whereby the latter are secured in place.

870,615. WIRE-ROPE PACKING AND PROCESS OF PRODUCING SAME. BENJAMIN BRAZELLE, Kirkwood, Mo., assignor to A. Leschen & Sons Rope Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 26, 1906. Serial No. 349,497.



1. The improvement in the process of packing wire rope for use in oil wells which consists in filling the hole through which said rope passes with a plastic packing material insoluble in the liquid of the well and causing said packing to fill the interstices of said rope.

2. The improvement in the process of packing wire rope for use in oil wells which consists in liquefying an oil resistant packing material and filling the hole through which the rope passes together with the interstices of said rope with said material while liquefied.

3. The combination of a wire rope, a stuffing box and a packing of plastic material filling the interstices of said rope.

4. The combination of a wire rope, a stuffing box and a

packing of oil-resistant material filling the interstices of said rope.

5. The combination of a wire rope, a stuffing box and a packing of viscid material filling the interstices of said rope.

6. The combination of a wire rope, a stuffing box, and a packing of plastic material filling the interstices of said rope, said plastic material comprising a considerable proportion of beeswax.

7. The combination of a wire rope, a stuffing box, and a packing of plastic material filling the interstices of said rope, said plastic material comprising a mixture of beeswax and resin.

8. The combination of a wire rope, a stuffing box, and a packing of plastic material filling the interstices of said rope, said plastic material comprising a mixture of beeswax and resin in substantially equal proportions.

870,616. OIL-WELL APPLIANCE. BENJAMIN BRAZELLE, Kirkwood, Mo., assignor to A. Leschen & Sons Rope Company, St. Louis, Mo., a Corporation of Missouri. Filed Dec. 26, 1906. Serial No. 349,480.



1. The combination of a rope having a rope socket thereon, a stuffing box through which said rope extends, and detachable fastening devices arranged to fasten said stuffing box to said rope, the least diameter of said stuffing box being sufficient to permit the passage of said rope socket therethrough.

2. The combination with a rope having packing members and a rope socket, of a tubular stuffing box adapted to coöperate with said packing members, the bore of said stuffing box being sufficient to permit said rope socket to pass therethrough.

3. The combination with a rope having packing members and a rope socket, of a tubular stuffing box, through which said rope extends, said stuffing box having an internal shoulder constituting a seat for one of said members and the opening in said shoulder being sufficient to permit said rope socket to pass therethrough, and means for fastening said stuffing box to said rope.

4. The combination with a rope having packing members and a rope socket, of a tubular stuffing box through which said rope extends, said stuffing box having an internal shoulder constituting a seat for one of said members, and the opening in said shoulder being sufficient to permit said rope socket to pass therethrough, and means for fastening said stuffing box to said rope, said means comprising a device adapted to clamp said rope and adjustably connected to said stuffing box.

5. The combination with a tubular stuffing box having an internal shoulder, of a rope extending through said stuffing box, a rope socket on the end of said rope, a washer on said rope adapted to bear against said shoulder, a crowder arranged to coöperate with said washer, and means for detachably securing said stuffing box to said rope, said rope socket being larger than the bore of said washer but small enough to pass through said stuffing box, whereby the washer and crowder are removable from said stuffing box with said rope.

6. The combination of a rope having a rope socket, a tubular stuffing box through which said rope extends, means for detachably securing them together, said stuffing box having a shoulder for a packing washer and having a bore sufficient to permit the rope socket to pass endwise through it, a packing washer on said rope and arranged to coöperate with said shoulder, and a crowder arranged to coöperate with said washer.

7. The combination of a rope having a rope socket, a stuffing box through which said rope extends, and means for detachably securing said stuffing box to said rope, said stuffing box having a shoulder for a packing washer, a packing washer therein, and a crowder, said securing means comprising a device adapted to be clamped on the rope and longitudinal screw bolts connecting said clamping device and said stuffing box, the narrowest bore of said stuffing box being greater than the diameter of said rope socket, substantially as and for the purpose described.

8. The combination with an oil well of a tubular piston rod having a stuffing box, a rope extending through said stuffing box and having a rope socket, and means for fastening said rope to said stuffing box, said stuffing box having a shoulder for a packing washer, a packing washer therein and a crowder arranged to coöperate with each other, said fastening means comprising a device adapted to be clamped on the rope and longitudinal screw bolts connecting said clamping device and said stuffing box and said stuffing box being open at the upper end and having a bore through its shoulder of sufficient diameter to permit the rope socket to pass through it, substantially as and for the purpose described.

870,617. CLASP. RICHARD FALTER, New York, N. Y. Filed July 26, 1906. Serial No. 327,972.



1. A clasp member having a body portion provided with a part adapted to interlock, a tongue projecting from the body provided with a part to interlock, and a pair of arms projecting from the body on opposite sides of the tongue.

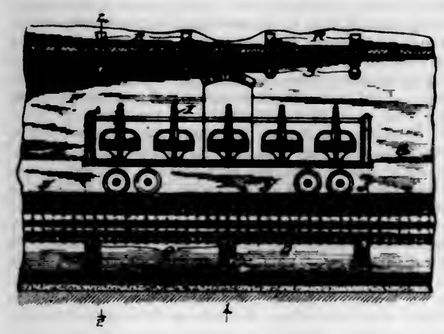
2. A clasp member having a body portion provided with a depression centrally thereof forming an element of an interlocking means, a tongue extending from the body with its end out of the plane of the surface of the body, a projection on the tongue extending toward said plane, and a pair of arms on opposite sides of the tongue.

3. A clasp member having a body portion provided with one element of an interlocking means, a tongue projecting from the body, a projection on said tongue, and arms extending from the body on opposite sides of the tongue, said tongue and arms being offset from the body in opposite directions.

4. A clasp member comprising a body portion having attaching means, a depression thereon, a tongue formed integral with one edge of the body portion, said tongue being bent at an angle to the plane of the body portion and having a projection thereon, an arm on each side of the tongue, said arms having fastening means and having their outer ends in a different plane from the plane of the body portion.

5. A sheet metal clasp member comprising a body portion provided with one element of an interlocking means, and parts extending from one edge of the body part and forming substantially the limbs of the letter W.

870,618. UNDERGROUND RAILWAY SYSTEM. JACOB H. FARRAR, Chicago, Ill. Filed Mar. 18, 1907. Serial No. 362,984.



1. An underground railway system, comprising a subway disposed between the curb-wall of the street and the building line, a transparent roof on said subway forming the side walk, there being ventilating openings establishing communication between said subway and the outer air.

2. An underground railway system, comprising a subway disposed between the curb-wall of the street and the building line, a transparent roof on said subway forming the side walk, there being ventilating openings establishing communication between said subway and the outer air, said subway communicating at intervals with buildings bordering the same to afford entrance and exit for passengers.

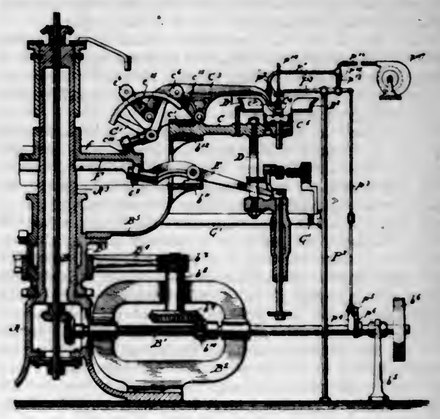
3. An underground railway system comprising a subway disposed beneath a transparent side-walk between the street curb and building walls, rails disposed in said subway on which cars are adapted to run, and a platform in said subway disposed substantially on a level with the car floor, there being ventilating openings establishing communication between said subway and the outer air.

4. An underground railway system, comprising a subway disposed between the curb-wall of the street and the building line, a transparent roof on said subway forming the side-walk, a conduit disposed in the bottom of said subway and communicating with the latter through openings covers for said openings, rails resting upon the top wall of said conduit on either side of said openings, and cars traveling on said rails.

5. An underground railway system, comprising a subway disposed between the curb-wall of the street and the building line, a transparent roof on said subway forming the side-walk, a concrete bottom for said subway having a conduit formed therein, there being openings in the top of said conduit establishing communication between the latter and said subway, covers for said openings, rails resting on the upper walls of said conduit on either side of said openings, cars traveling on said rails, and a platform disposed at a higher level than said rails between the latter and said building line.

6. An underground railway system, comprising a subway disposed between the curb-wall of the street and the building line, a transparent roof on said subway forming the side-walk, a concrete bottom for said subway having a conduit formed therein, there being openings in the top of said conduit establishing communication between the latter and said subway, covers for said openings, rails resting on the upper walls of said conduit on either side of said openings, cars traveling on said rails, and a platform disposed at a higher level than said rails between the latter and said building line, said concrete being reinforced vertically and horizontally.

870,619. LABEL AND STAMP APPLYING MACHINE. EDWIN FIDELL, Jersey City, N. J. Filed May 11, 1906. Serial No. 316,277.



1. In means of the character described, the combination with a packet-holder, of a stamp-carrying head, means for applying paste to the stamp-back, means for affixing the stamps to one side of the packet, means for directing a blast of air against the extended stamp-ends, and means for affixing the stamp-ends to the packet-ends.

2. In means of the character described, the combination with a movable stamp-head adapted to support a stamp and affix the same to a packet, said stamp having ends extending over the packet ends, of air connections arranged upon the stamp-head and terminating above the stamp-extensions, and means for supplying a blast of air to said connections.

3. In means of the character described, the combination with a movable stamp-head adapted to support a stamp and affix the same to a packet, said stamp having ends extending over the packet ends, of air connections arranged upon the stamp-head and terminating above the stamp-extensions, means for supplying a blast of air to said connections to deflect the stamp-extensions, and means for affixing the deflected stamp-extensions to the packet ends.

4. In means of the character described, the combination with a continuously-movable stamp-head adapted to support a stamp and affix the same to a packet, said stamp having ends extending over the packet-ends, of an air connection arranged upon the stamp-head and having branches terminating above the stamp-extensions, a stationary air-supplying means adjacent to the movable air connection, and yielding means between the stationary air supplying means and the movable connection whereby a blast of air is directed against the stamp-extensions.

5. In means of the character described, the combination with a movable stamp-head adapted to support a stamp and affix the same to a packet, said stamp having ends extending over the packet ends, of an air connection arranged upon the stamp-head and having branches terminating above the stamp-extensions, a stationary support adjacent to the movable air connection, a tubular arm yieldingly mounted upon the stationary support and adapted to periodically engage the movable air-connection, and means for supplying a blast of air to said tubular arm.

6. In means of the character described, the combination with a continuously-movable packet-holder, of a stamp-carrying head movable therewith, means for applying paste to the stamp-back, a stipper-plate yieldingly mounted upon the stamp-head, means carried by a stationary support and adapted to engage the stripper-plate to detach the stamp from the head and means for supplying a blast of air to project the stamp upon the packet.

7. In means of the character described, the combination with a continuously movable packet-holder, of a stamp-carrying head movable therewith, means for applying

paste to the stamp-back, a stripper-plate yieldingly mounted upon the stamp-head, a stationary support, an arm pivoted to said stationary support and engaging the stripper-plate, and means for actuating said arm to detach the stamp from the head and affix it to the packet.

8. In means of the character described, a movable packet-holder adapted to support a label-enfolded packet, a stamp-holder movable therewith and means for supplying a blast of air to detach the stamp from said holder and project it upon the packet.

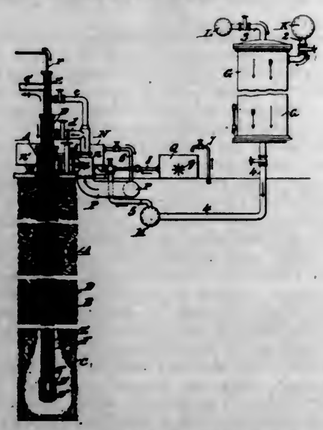
9. In means of the character described, a packet-holder adapted to support a label-enfolded packet and arranged for continuous advancement, a stamp-holder movable therewith, and means for supplying a blast of air to detach the stamp from said holder and project it upon the packet.

10. In means of the character described, a packet-holder adapted to support a label-enfolded packet, a stamp-holder co-acting therewith, stripping devices combined with said holder and means for actuating said devices, means for applying paste to the stamp-back, and means supplementary to the stripping devices for supplying a blast of air to affix the stamp to the label-enfolded packet.

11. In means of the character described, a packet-holder, a stamp-holder co-acting therewith, stripping devices combined with said holder, means for actuating said devices, and means for supplying a blast of air to project the stamp upon the packet.

12. A machine comprising means for supporting a packet, means for holding a stamp, stripping devices combined with said last named means, means for actuating said devices, and fluid means under pressure adapted to disengage said stamp and project the same on a packet.

870,620. MINING SULFUR. HERMAN FRASCH, New York, N. Y., assignor to The Frasch Sulphur Process Company, Kittery, Me., a Corporation of Maine. Filed Oct. 30, 1903. Serial No. 179,232.



1. The improved process of fusion mining in porous deposits, which process is characterized not only by the introduction of fusion fluid into an underground porous deposit of fusible material and by the removal of the melted material therefrom, but also by the introduction of comminuted material into said deposit in order thereby to restrict the freedom of movement of said fusion fluid in the deposit, substantially as described.

2. The improved process of fusion mining in porous deposits, which process is characterized not only by the introduction of fusion fluid into an underground porous deposit of fusible material and by the removal of the melted material therefrom, but also by the introduction of comminuted material mixed with water into said deposit in order thereby to restrict the freedom of movement of said fusion fluid in the deposit, substantially as described.

3. In mining by fusion, the improvement consisting in introducing into an underground porous deposit comminuted material in admixture with water heated above the melting point of the material to be mined, and in removing the melted material, substantially as described.

4. In mining by fusion, the improvement consisting in melting the material in an underground porous deposit by hot water introduced without return into said deposit at a rate sufficiently above five hundred gallons a minute to prevent inroads into the melting space of naturally present water from the surrounding rock, and in removing the melted material, substantially as described.

5. In mining by fusion, the improvement consisting in melting the material in an underground porous deposit by hot water introduced into said deposit, for such introduction supplying said hot water to the mine piping at a pressure above that corresponding with its temperature on leaving the heaters, causing the supply of so introduced water to flow away underground and so to hold back naturally present water, and removing the melted material, substantially as described.

6. In mining by fusion, the improvement consisting in effecting the melting by hot water introduced into an underground deposit which does not naturally admit of a pressure therein equal to that corresponding with the temperature of the hot water on leaving the heaters when added to the pressure of a water column the length of the mine piping, for such introduction supplying said hot water to the mine piping at a pressure above that corresponding with its temperature on leaving the heaters, causing the supply of so introduced water to flow away underground and so to hold back naturally present water, and removing the melted material, substantially as described.

7. In mining by fusion, the improvement consisting in introducing hot water into an underground porous deposit in order to melt the material therein, applying additional pressure to said water after heating and before its introduction into the deposit in order further to increase the rate of its delivery thereinto, causing the supply of so introduced water to flow away underground and so to hold back naturally present water, and removing the melted material, substantialy as described.

8. In mining by fusion, the improvement consisting in introducing hot water without return and comminuted material in admixture therewith into the underground deposit, and for such introduction supplying said hot water to the mine piping at a pressure above that corresponding with its temperature on leaving the heaters, and in removing the melted material, substantially as described.

9. The improved process of fusion mining in porous deposits, which process is characterized not only by the introduction of fusion fluid into an underground porous deposit of fusible material and by the removal of the melted material therefrom, but also by the introduction into said porous deposit of water without return and of comminuted material in admixture therewith, substantially as described.

10. In mining by fusion, the improvement consisting in introducing hot water without return and comminuted material in admixture therewith into an underground porous deposit, applying additional pressure to said water between the heaters and the mine piping, and removing the melted material, substantially as described.

11. In mining by fusion, the improvement consisting in heating water to a temperature above the melting point of the material to be mined by condensation of live steam therein under pressure, introducing the so heated water into an underground porous deposit, for such introduction supplying the so heated water to the mine piping at a pressure above that of said live steam, causing the supply of so introduced water to flow away underground and so to hold back naturally present water, and removing the melted material, substantially as described.

12. In mining by fusion, the improvement consisting in heating water to a temperature above the melting point of the material to be mined by condensation of live steam therein under pressure, introducing the so heated water into an underground porous deposit which does not naturally admit of a pressure therein equal to that of said steam when added to the pressure of a water column the length of the mine piping, for such introduction supplying the so heated water to the mine piping at a pressure above that of said live steam, causing the supply of so introduced water to flow away underground and so to hold back naturally present water, and removing the melted material, substantially as described.

13. In mining by fusion, the improvement consisting in melting the material in the underground deposit by hot water introduced partly through the pipe up which the melted material is raised in intervals between such raising and partly through separate hot water piping, causing both supplies of hot water to flow away underground and so to hold back naturally present water, and raising the melted material, the introduction of the hot water through the first mentioned pipe being stopped when the melted material is to be raised and the raising of said material being effected during such stoppage, substantially as described.

14. Apparatus for mining by fusion, having a pipe up which the melted material is raised provided with a branch for delivering said material and a branch for receiving hot water for fusion, and separate hot water piping, said pipe and piping leading to an underground porous deposit and means being provided for closing the latter against return of water to the surface of the ground, substantialy as described.

15. Apparatus for mining by fusion, having three pipes leading from hot water heaters to an underground deposit, one of which pipes is provided with a branch for delivery of melted material and also with means for shutting off the hot water connection during such delivery, the apparatus as a whole being arranged to confine the water from all the pipes to the deposit and so cause the supply from all of them to flow away underground, substantially as described.

16. Apparatus for mining by fusion, having means for introducing comminuted material into an underground deposit, and also having means for introducing fusion fluid into said deposit and for removing melted material therefrom, substantially as described.

17. Apparatus for mining by fusion, having means for introducing comminuted material in admixture with water into an underground deposit, and also having means for introducing fusion fluid into said deposit and for removing melted material therefrom, substantially as described.

18. Apparatus for mining by fusion, having means for introducing water at the fusing temperature into an underground deposit, and also means for allowing comminuted material to be mixed with said water, in combination with means for removing melted material from said deposit, substantially as described.

19. The combination of mine piping, means for supplying a mining fluid to the said mine piping, means for removing mined material, a mixing tank, a water supply for said tank, and connections between the said tank and the said mine piping, substantially as described.

20. The combination of mine piping, heaters, connections between the said heaters and the said mine piping, means for raising melted material through the said mine piping, a mixing tank provided with a stirrer, a water supply for said tank, and connections between the said tank and the said mine piping, substantially as described.

21. The combination of mine piping, means for raising melted material through said mine piping, a mixing tank, heaters, and connections between said mine piping and said mixing tank and heaters, substantially as described.

22. The combination with mine piping leading to an underground deposit of material to be mined, means for supplying fusion fluid to said piping, means for raising the melted material, and means whereby said deposit is closed against the return of the fusion fluid, of means for supplying comminuted material to said piping, substantially as described.

23. The combination of mine piping, means for raising melted material through said mine piping, a mixing tank, heaters, and pumps between said mine piping and said mixing tank and heaters, substantially as described.

24. The combination with mine piping leading to a porous deposit, means for raising melted material through said piping, and means whereby said deposit is closed against return of water to the surface of the ground, of heaters, and pumps between said heaters and said mine piping, substantially as described.

25. The combination with mine piping, means for raising melted material through said piping, and means for supplying hot water under pressure to said piping, of a mixing tank, and a pump receiving material from said tank and discharging it into said mine piping, substantially as described.

26. The combination of hot water heaters, mine piping, means for raising melted material through said mine piping, pumps between said heaters and said mine piping, and a mixing tank delivering material to a pump connected with said piping, substantially as described.

27. Apparatus for mining by fusion, in which water is heated by condensation of live steam in contact therewith, having pumps between such steam-condensing water heaters and the mine piping for forcing the so heated water through said piping into an underground deposit, and also having means for raising melted material from said deposit, and means whereby said deposit is closed against the return of the hot water to the surface of the ground, substantially as described.

28. Apparatus for mining by fusion having mine piping leading to an underground porous deposit, means for raising melted material from said deposit, means whereby said deposit is closed against the return of water to the surface of the ground, and means which supply water heated above the melting point of the material to be mined to said mine piping at a rate sufficiently above five hundred gallons per minute to prevent inroads of naturally present water from the surrounding rock, substantially as described.

29. Apparatus for mining by fusion, having hot water heaters and also having three pipes which lead from said heaters and open at different levels into an underground deposit of the material to be mined, means being provided for raising the melted material through that one of said pipes which opens into the deposit at the lowest level, and this last mentioned pipe being provided with a branch for delivery of the melted material raised through the same and also with means for shutting off the water connection during such delivery, the apparatus as a whole being arranged to confine the water from all the pipes to the deposit and so cause the supply from all of them to flow away underground, substantially as described.

30. Apparatus for mining by fluid, having means for introducing a mining fluid into a porous underground deposit of material to be mined, means for removing the mined material from said deposit, and means for introducing into the deposit comminuted material for choking passages therein and thus restricting the freedom of movement of said mining fluid, substantially as described.

31. Apparatus for mining by fluid, having means for introducing a mining fluid into a porous underground deposit of material to be mined, means for removing the mined material from said deposit, and means for introducing into the deposit at different levels comminuted material for choking passages therein and thus restricting the freedom of movement of said mining fluid, substantially as described.

32. Apparatus for mining by fluid, having means for introducing a mining fluid into a porous underground deposit of material to be mined, means for removing the mined mineral from said deposit by the pressure in said deposit, and means for introducing into the deposit comminuted material for choking passages therein and thus restricting the freedom of movement of said mining fluid, substantially as described.

33. The process of mining by fluid, characterized not only by the introduction of mining fluid into a porous underground deposit of material to be mined and by the removal of the mined material, but also by the introduction into said deposit of comminuted material for choking passages therein and thus restricting the freedom of movement of said mining fluid, substantially as described.

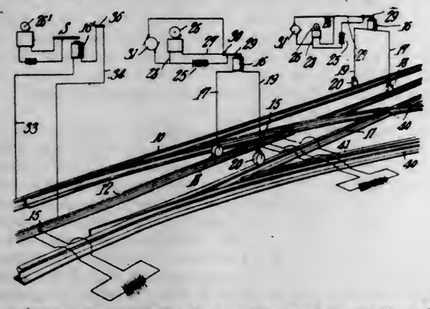
34. The process of mining by fluid, characterized not

only by the introduction of mining fluid into a porous underground deposit of material to be mined and by the removal of the mined material, but also by the introduction into said deposit at different levels of comminuted material for choking passages therein and thus restricting the freedom of movement of said mining fluid, substantially as described.

35. The process of mining by fluid, characterized not only by the introduction of mining fluid into a porous underground deposit of material to be mined and by the removal of the mined material, but also by the introduction into said deposit of comminuted material in the nature of sawdust for choking passages therein and thus restricting the freedom of movement of said mining fluid, substantially as described.

36. The process of mining by fluid, characterized not only by the introduction of mining fluid into a porous underground deposit of material to be mined and by the removal of the mined material, but also by the introduction into said deposit of comminuted material of a specific gravity not greater than that of water and in particles of about the size of sawdust for choking passages therein and thus restricting the freedom of movement of said mining fluid, substantially as described.

870,621. ELECTRIC RAILWAY SIGNALING SYSTEM. NORMAN P. FRASER and WILLIAM GRIBBEN, Carsonville, Mich. Filed May 17, 1907. Serial No. 374,116.



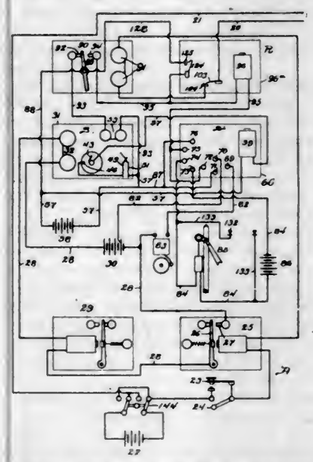
1. In an electric railway signaling system, traffic rails, a conductor divided into sections, a source of energy connecting each two sections, the entire series of sections and entire series of sources of electrical energy being connected in series, an alarm mechanism on each train, and a train circuit including contacts, one arranged to engage the sectional conductor, and the other arranged to engage one or other of the traffic rails in accordance with the direction in which the train is to travel.

2. In an electric railway signaling system, a pair of traffic rails, a sectional conductor, a battery connecting each two sections, the several sections and batteries being connected in a continuous series, an electro magnet on each train, a train circuit extending from the electro-magnet to traveling contact shoes arranged to engage the conductor and one or other of the traffic rails, a source of energy on each train, a local alarm circuit connected to such source of energy, and an armature arranged under the control of the electro magnet and serving to close the local circuit when the magnet is energized.

3. In an electric railway signaling system, a pair of traffic rails, a conductor divided into sections, a battery connecting each two sections, the entire series of conductor sections and batteries being connected in series, an electro magnet on each train, conducting wires extending from the electro magnet to traveling contacts on the train, one contact arranged to engage the conductor, and the other one or other of the traffic rails, an armature disposed within the field of force of the electro magnet, a source of electrical energy, an alarm, and an electric motor, all arranged on the train, the motor being designed to operate a train controlling device, and local circuits connecting the source of energy, the alarm and the motor, said local circuits being under the control of the armature.

4. In an electric railway signaling system, the combination with traffic rails, and siding rails, the latter including a guard rail, a sectional conductor parallel with the main traffic rails, batteries connecting each two sections of the conductor, connections between the guard rail and one of the sections of the conductor and between one of the siding rails and one of the main rails, and an alarm arranged on each engine and disposed in the train circuit having terminals arranged to engage one with the sectional conductor, and the other with one or other of the traffic rails.

870,622. ELECTRIC SIGNALING SYSTEM. WILLARD H. GILMAN, Medford, Mass., assignor, by mesne assignments, to International Telemeter Company, a Corporation of Arizona. Filed Oct. 31, 1906. Serial No. 341,428.



1. A signaling system, comprising a conducting circuit, means for transmitting current impulses of different character over the circuit, and signal-controlling apparatus operable only by certain of the impulses and including primary and secondary rotatable contact mechanisms.

2. A signaling system, comprising a conducting circuit, means for transmitting current impulses of different length over the circuit, and signal-controlling mechanism operable only by the longer of the impulses.

3. The combination with a main circuit, of transmitting means, a local signal-controlling circuit, electro-magnetic mechanism associated with the main circuit and having a movable actuating member, and a rotatable contact member controlling the local circuit, said local circuit being closed upon one movement of the actuating member and opening on its reverse movement.

4. The combination with a main circuit, of transmitting means, a local signal-controlling circuit, electro-magnetic mechanism associated with the main circuit and having a movable actuating member and a plurality of pairs of contact members included in the local circuit, said local circuit being closed at one pair of contacts for each movement of the actuating member and at another pair of contacts only for certain of such movements.

5. A signaling system comprising a conducting circuit, means for transmitting current impulses of different length over the circuit, primary controlling mechanism associated with said circuit, secondary controlling mechanism under the influence of the primary controlling mechanism and being controlled only by the longer of the impulses, and a signal operable by the secondary controlling mechanism.

6. The combination with a conducting circuit, of transmitting means, primary controlling mechanism operable by the transmitting means, secondary controlling mechanism provided with motor means which may be released by the primary controlling mechanism, and a signal operable by the travel of the secondary controlling mechanism.

7. The combination with a conducting circuit, of transmitting means, primary controlling mechanism operable by the transmitting means, secondary controlling mechanism under the influence of the primary controlling mechanism, and audible and visual signals successively operated by the controlling mechanism.

8. The combination with a conducting circuit, of transmitting means, controlling mechanism under the influence of the transmitting means and having a traveling contact member, a signal governed by the controlling mechanism during the travel of said contact, and a second signal operable at the end of its travel.

9. The combination with a conducting circuit, of transmitting means, controlling mechanism under the influence of the transmitting means and having a traveling contact operating member and two relatively fixed contact devices, one of said fixed contact devices being operable for a considerable time by the traveling member and the other of which is situated at the termination of travel of the contact operating member, an audible signal operated by the coaction of the first-named contact device and the traveling member, and a visual signal operable by the arrival of the traveling member at the terminal contact device.

10. A signaling system comprising a main line, current transmitting means included therein, electro-magnetic mechanism associated with the main line, a traveling and a relatively fixed contact member, the latter being advanced by the electro-magnetic mechanism, a local circuit including said contacts, and rotatable signal-controlling mechanism connected in the local circuit.

11. A signaling system comprising a main line, current transmitting means included therein, electro-magnetic mechanism associated with the main line, a traveling and a relatively fixed contact member, the latter being advanced by the electro-magnetic mechanism, a local circuit including said contacts, and signal-controlling mechanism connected in the local circuit and having motor means released by the closing of the contacts.

12. A train-despatching system comprising a line conductor provided with stations each having telegraphic transmitting and receiving instruments, signal-controlling mechanism at a plurality of the stations governed by the operation of a telegraph transmitting instrument, and means situated at fewer than the whole number of stations and being independent of said governing transmitting instrument for rendering the controlling mechanism operative.

13. A signaling system comprising a main line provided with a plurality of stations, signal-controlling mechanism at each station, a lock for each of the controlling mechanisms, and means situated at one of the stations for releasing the locks, said means being actuated over the same portion of the main line as is the signal-controlling mechanism, but by a current of different polarity.

14. A signaling system comprising a conducting circuit, means for transmitting current impulses over the circuit, signal-controlling mechanism and a locking mechanism therefor associated with the conducting circuit, means for varying the character of the impulses in one way to operate the locking mechanism, and in another way to operate the signal-controlling mechanism.

15. A signaling system comprising a conducting circuit, means for transmitting current impulses over the circuit, signal-controlling mechanism and a locking mechanism therefor associated with the conducting circuit, means for varying the direction of current in the circuit to operate the locking mechanism, and means for varying the strength of the current for operating the signal-controlling mechanism.

16. The combination with a conducting circuit, of a source of electrical energy and signal-controlling mechanism included therein, an electro-magnetic lock for the signal-controlling mechanism, and means for reversing the polarity of the source of electrical energy to operate the lock.

17. A signaling system comprising a line circuit, a local circuit, signal-controlling mechanism associated with the local circuit, locking means for the signal-controlling mechanism, and a relay having its winding included in the line circuit and its contacts included in the local circuit with the locking means.

18. A signaling system comprising a line circuit, including a source of electrical energy, a pole-changer and a circuit breaker, a local circuit, a signal-controlling mechanism associated with the local circuit and being operable by the circuit breaker, and a polarized relay having its winding included in the line circuit and its contacts in the local circuit with the locking means and being responsive to the pole-changer to govern the locking mechanism.

19. The combination with a conducting circuit, of transmitting means, primary controlling mechanism operable by the transmitting means, secondary controlling mechanism under the influence of the primary controlling mechanism, a signal operable by the secondary controlling mechanism, and an electro-magnetic lock for the primary controlling mechanism.

20. The combination with a conducting circuit, of transmitting means, primary controlling mechanism operable by the transmitting means, rotatable secondary controlling mechanism provided with motor means and being under the influence of the primary controlling mechanism, a signal operable by the secondary controlling mechanism, an automatic return-signal mechanism governed by the secondary controlling mechanism during its rotation.

21. The combination with a conducting circuit, of transmitting means, primary controlling mechanism operable by the transmitting means, secondary controlling mechanism under the influence of the primary controlling mechanism and having a traveling member, a signal operable by the secondary controlling mechanism, and an automatic return-signal mechanism operable by the secondary controlling mechanism at a plurality of points in its travel.

22. The combination with a conducting circuit, of transmitting means, controlling mechanism under the influence of the transmitting means, audible and visual signals successively operable by the controlling mechanism, and return-signal mechanism automatically operable by the operation of both the audible and visual signals.

23. The combination with a conducting circuit, of transmitting means, controlling mechanism under the influence of the transmitting means, audible and visual signals successively operable by the controlling mechanism, and return-signal mechanism automatically operable by the operation of both the audible and visual signals and governed by the controlling mechanism.

24. The combination with a conducting circuit, of signal-controlling mechanism, a return-signal mechanism governed by the controlling mechanism, and independent means for governing the return-signal mechanism.

25. The combination with a conducting circuit, of signal controlling mechanism, a return-signal mechanism governed by the controlling mechanism, independent means for governing the return-signal mechanism, and means associated with the return-signal mechanism for nullifying the effect of the last-named governing means.

26. The combination with a conducting circuit, of signal controlling mechanism, a return-signal mechanism governed by the controlling mechanism, independent means for governing the return-signal mechanism, and means associated with the return-signal mechanism for nullifying the effect of the last-named governing means during the operation of the signal by the controlling mechanism.

27. A signaling system comprising a conducting circuit, signal-controlling mechanism, a lock therefor, a return-signal mechanism, and means common to both for governing the lock and return-signal mechanism.

28. A signaling system comprising a line circuit, local circuits, signal-controlling mechanism, an electro-magnetic lock therefor and a return-signal mechanism, all having windings in the local circuits, and a relay provided with a winding included in the main circuit and terminals included in the local circuits with both the lock and return-signal mechanism.

29. A signaling system comprising a conducting circuit, signal-controlling mechanism, a lock therefor, a return-signal mechanism, means common to both for governing the lock and return-signal mechanism, and means for nullifying the effect of the governing means upon the return-signal mechanism in certain positions thereof.

30. A signaling system comprising a line circuit, local circuits, signal-controlling mechanism, an electro-magnetic lock therefor and a return-signal mechanism, all having windings in the local circuits, and a relay provided with a winding included in the main circuit and terminals included in the local circuits with both the lock and return-signal mechanism, and with an armature adapted to complete more than one of said local circuits.

31. A signaling system comprising a line circuit, local circuits, signal-controlling mechanism, an electro-magnetic lock therefor and a return-signal mechanism, all having windings in the local circuits, a relay provided with a winding included in the main circuit and terminals included in the local circuits with both the lock and return-signal mechanism, and with an armature adapted to complete more than one of said local circuits, and means operable by the return-signal mechanism for maintaining the circuit through its windings independently of the position of the armature.

32. A train despatching system comprising a telegraph line having stations provided with keys in said line and local circuits associated therewith, an electro-magnetic circuit-controlling mechanism included in each local circuit and having a movable contact operating member and a plurality of relatively fixed coacting contact devices, a bell circuit connected with one of the fixed contact devices, and a semaphore circuit connected with another fixed contact device.

33. A telegraph system comprising a main line having stations provided with keys and line relays, local circuits governed by the relays, signals associated with said local circuits, and a controlling mechanism for each signal rotatable step by step and continually in one direction upon the opening and closing of the line by a key.

34. A telegraph system comprising a main line having stations provided with keys and line relays, local circuits governed by the relays, signals associated with said local circuits, and a controlling mechanism for each signal rotatable step by step and continually in one direction upon the opening and closing of the line by a key, and each having a plurality of signal-controlling contacts, all of which are closed when said line is open.

35. A telegraph system comprising a main line having stations provided with keys and line relays, local circuits governed by the relays, signals associated with said local circuits and a controlling mechanism for each signal rotatable step by step and continually in one direction upon the opening and closing of the line by a key, each of said controlling mechanisms being provided with a rotatable contact operating member and a companion contact differently situated at each of the stations.

36. A telegraph system comprising a main line having stations provided with keys and line relays, local circuits governed by the relays, signals associated with said local circuits, a controlling mechanism for each signal rotatable step by step and continually in one direction upon the opening and closing of the line by a key, each of said controlling mechanisms being provided with a rotatable contact operating member and a companion contact differently situated at each of the stations, and an independent contact device for each controlling mechanism.

37. A telegraph system comprising a main line having stations provided with keys and line relays, local circuits governed by the relays, signals associated with said local circuits, a controlling mechanism for each signal rotatable step by step and continually in one direction upon the opening and closing of the line by a key, each of said controlling mechanisms being provided with a rotatable contact operating member and a companion contact differently situated at each of the stations, an independent contact device for each controlling mechanism, the contacts under the influence of the rotatable member being operable once for each complete rotation, and a second set of contacts operable for each step of the controlling mechanism.

38. A train despatching system comprising a main line having stations, one of which is appropriated to the use of the train despatcher, keys and line relays at the stations, local circuits governed by the relays, signals associated with the local circuits at a plurality of the stations, controlling mechanism for each signal, an electro-magnetic lock for the controlling mechanism, and means situated at the train despatcher's station only for operating the lock.

39. A train despatching system comprising a main line having stations, one of which is appropriated to the use of the train despatcher, keys and line relays at the stations, local circuits governed by the relays, signals associated with the local circuits at a plurality of the stations, controlling mechanism for each signal, return-signal mechanism associated with each controlling mechanism, and means situated at the train despatcher's station only for permitting the sending out of a return signal.

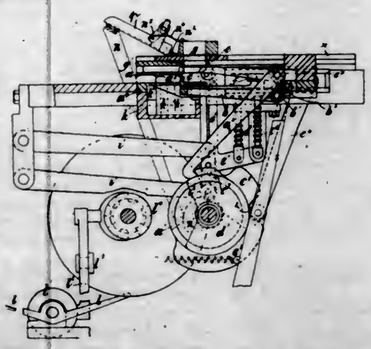
40. A train despatching system comprising a main line having stations, one of which is appropriated to the use of the train despatcher, keys and line relays at the stations, local circuits governed by the relays, signals associated with the local circuits at a plurality of the stations, primary signal-controlling mechanism responsive to the key of the train despatcher, and motor-driven controlling mechanism released by the primary controlling mechanism and serving to operate the signal.

41. A railway signaling system comprising a conducting line provided with a plurality of stations, controlling mechanism at a station included in a local circuit, relatively fixed signals operable by the controlling mechanism, and electro-magnetic mechanism movable with trains and being dependent for its operation upon the closure of said local circuit by the controlling mechanism.

42. A railway signaling system comprising a conducting line provided with a plurality of stations, controlling mechanism at a station included in a local circuit, relatively fixed signals operable thereby, contact rails associated with the signals and being connected with the local circuit at a station, continuations of said station circuit situated upon a train, a local train circuit governed by the combined station and track circuit, and an electro-magnetic mechanism in the local train circuit.

43. A railway signaling system comprising a conducting line provided with a plurality of stations, controlling mechanism at one station included in a local circuit, relatively fixed signals operable thereby, contact rails associated with the signals and being connected with the local circuit at a station, continuations of said station circuit situated upon a train, contacts in the controlling mechanism included in the combined station and train, and electro-magnetic mechanism associated with said combined circuit and governed in the contacts.

870,623. APPARATUS FOR WRAPPING CIGARETTES WITH TIN-FOIL OR THE LIKE. ALFRED GODFREY, London, England. Filed May 2, 1905. Serial No. 258,523.



1. In a cigarette wrapping machine in combination, a main shaft, a cam thereon, a lifting lever moving about a center operated by the said cam, a race, a movable roof to the said race forming part of the said lever, transverse under projections on said roof making a joint upon the packets, the said roof being lifted by the said cam to admit sliding movement of the packets therennder.

2. In a cigarette wrapping machine, in combination, a main shaft having operative means thereon, a race, a movable roof to the said race operated from the said shaft, a lever carrying the said roof, and an under bar carrying fingers, affording a stop mutually geared with the said lever of the extended roof to keep the cigarettes in the said race when the foil is not fed.

3. In a cigarette wrapping machine, in combination, a main shaft having a cam thereon, a lever operated by said cam and attached to the sliding plate, a sliding plate receiving motion therefrom, a race, an under pusher having projecting fingers to push the packet from one position to the next, a projecting stop from the sliding plate engaging with lost motion with the said under pusher, and means for lowering the said pusher on the return stroke to clear the packet.

4. In a cigarette wrapping machine, in combination a race, a movable roof thereto, a fixed plate above the said roof having three projections downwards, which pass to either side of the said roof, their lower edges forming a guide in the race to the passing packets, the first parts of the said edges being above the normal level of the cigarettes, and the latter part of the said edges being brought down to the normal level of the packed cigarettes.

5. In a cigarette wrapping machine, in combination, a main shaft with a sliding plate, a race, bell cranks operated by said sliding plate, side pressers on each side of said race operated by said bell cranks, a fixed plate above the race, an under fixed plate below the race the faces of such presser plates being furnished with projections adapted to slightly enter between the fixed plate above the race and the under fixed plate below the race, thus entering on to the packet so as to form a complete nip to the ends of the covering material.

6. In a cigarette wrapping machine, in combination, a race, a fixed plate above the said race, and a spring shield fixed to the front of the said fixed plate above the said race, whose lower edge does not come down to the final level of the finished package to make the third fold, and thus to permit the passage of slightly distorted goods.

7. In a cigarette wrapping machine, in combination, an upper slotted table, a matrix therein, a main shaft with cams on it, a hinged folding plate pivoted to the side of the matrix, operated by a cam from the said shaft, of such a length so as to reach up to the top level of the said slotted table, an under pusher with raised plates to push the made packet, and a separate mechanism bringing down the said folding plate over all the cigarettes and holding same in position, until the plates on under pusher engage the packets.

8. In a cigarette wrapping machine, in combination, a main shaft having cams thereon, a sliding plate receiving motion therefrom, a race, a matrix a hinged folding plate by side of matrix, a main pusher fixed to the sliding plate, the said pusher by the action of the said plate pushes the cigarettes towards the exit in the race, a hinged folding plate pivotally fixed to the side of matrix, thin projecting fingers upon the said main pusher, sliding in recesses under the hinged folding plate, and a movable roof to the said race operated by the said shaft and cam, so as to come down on the cigarette packets to retain the same while the pusher retires.

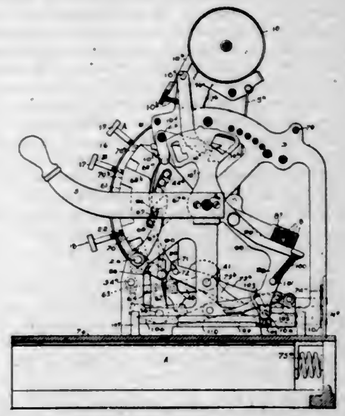
9. In a cigarette wrapping machine in combination a race, a main shaft with a cam thereon, an under bar lifted by the said cam to come up at the end of said race said cam having a recess therein to allow said bar to fall and to lift again, when the point of the bar is under the cigarette case, a sliding plate with a projection thereon to operate the said under bar, tuckers situated on either side of the said race, and flat fingers upon the said under bar adapted to be lowered by engagement with the said cam recess and to be afterwards lifted by the subsequent level of the cam to permanently fold the said cover against the under side of the said tuckers.

10. In combination with a cigarette wrapping machine, a main shaft, a cam thereon giving movement to an under reciprocating moving platform, a matrix, a moving platform forming the floor to the matrix, two parallel horizontal levers, forming a parallel motion to keep the said moving platform vertical without a fixed bearing.

11. In a cigarette wrapping machine, in combination, a tunnel a fixed floor to the machine, an adjoining floor fixed thereto under the said tunnel with apertures through it, an under box side tuckers and folders mounted upon standards in the under box, the said under box forming a shallow tray for the accumulation of dust.

12. In a cigarette wrapping machine, in combination, a main shaft, a cam thereon, means for wrapping a package with foil, means for making a nip upon the ends of the foil covering the package to prevent the foil opening out again after it leaves the machine and means controlled by said cam for operating the said nipping means from the main shaft of the machine.

870,624. CASH-REGISTER. HENRY S. HALLWOOD, Columbus, Ohio, assignor to The International Register Company, Columbus, Ohio, a Corporation of Ohio. Filed Oct. 22, 1906. Serial No. 340,096.



1. In a cash register, an operating mechanism including a series of oscillatory members, value setting elements for limiting the movements of said members in one direction, a single normally locked oscillatory hand lever for moving the members in the opposite direction, a series of normally unexposed cash safes, means for maintaining said safes in unexposed positions, selective manipulating devices for permitting any desired safe to be exposed and for releasing the hand lever, and interlocking mechanism between the value setting elements and the said selective manipulating devices for preventing the exposure of a cash safe until after the depression of a value setting element has been followed by the operation of the selective manipulating device corresponding with the safe to be exposed.

2. In a cash register, an operating mechanism including a series of oscillatory members, keys for limiting the movement of said members in one direction, a single normally locked oscillatory hand lever for moving the members in the opposite direction, a series of cash safes, means for maintaining said safes in an unexposed position, selective manipulating devices for permitting any desired safe to be exposed and for releasing the hand lever, interlocking mechanism between the keys and the said selective manipulating devices for preventing the exposure of a cash safe until after the depression of a key has been followed by the operation of the selective manipulating device corresponding with the safe to be exposed, and a recording device for keeping a continuous record showing the operations of the selective manipulating devices.

3. In a cash register, the combination with a series of oscillatory operating elements, of a plurality of independent counters controlled by the same, means for limiting the movements of the oscillatory elements in one direction, a series of independent cash drawers, a normally locked oscillatory hand lever for returning the said

elements to their normal positions independently of the movements of any cash drawers, and selective manipulating means for releasing the desired counter and the hand lever and for opening a corresponding cash drawer.

4. In a cash register, the combination with a series of oscillatory operating elements, of a plurality of independent counters controlled by the same, means for limiting the movements of the oscillatory elements in one direction, a series of independent cash safes, a normally locked oscillatory hand lever for returning the elements to their normal positions independently of the movements of the cash safes, selective manipulating means for releasing the desired counter and the hand lever and for opening a corresponding cash safe, and mechanism for preventing the operation of the selective manipulating means until after the operation of the means for limiting the movements of the oscillatory elements.

5. In a cash register, the combination with an operating mechanism including accounting devices, and a series of oscillatory members, of means for limiting the movement of the members in one direction, a normally locked oscillatory hand lever controlling the movements of the elements in this same direction and for moving them positively in the opposite direction, a series of cash receptacles adapted to be opened simultaneously with the initial movement of the hand lever, a plurality of selective manipulating means each of which opens a desired receptacle and releases the hand lever, and mechanism for preventing the operation of the selective manipulating means until after the operation of the means for limiting the movements of the oscillatory elements.

6. In a cash register, the combination with operating mechanism including accounting devices, and a series of oscillatory operating members, means for limiting the movements of the members in one direction, a single normally locked oscillating hand lever for operating the oscillatory members, a series of cash safes any one of which is adapted to be opened simultaneously with the initial movement of the hand lever, and selective manipulating means for both opening any desired safe and releasing the oscillatory hand lever.

7. In a cash register, the combination with operating mechanism including account devices, and a series of oscillatory operating members, means for limiting the movements of the members in one direction, a normally locked oscillating hand lever for operating the oscillatory members, a series of cash safes adapted to be opened simultaneously with the initial movement of the hand lever, selective manipulating means for opening any desired safe and releasing the oscillatory hand lever, and mechanism for preventing the operation of the selective manipulating means until after the operation of the means for limiting the movements of the oscillatory elements.

8. In a cash register, the combination with an operating mechanism including accounting devices and a series of oscillatory members, means for limiting the movements of the members in one direction, a normally locked oscillating hand lever for moving the members in the opposite direction, a latch for holding the said lever normally in a retracted position, a series of cash safes adapted to be opened simultaneously with the movement of the said oscillating hand lever, and selective manipulating means for both releasing said oscillating hand lever and for opening a desired cash safe.

9. In a cash register, the combination with an operating mechanism including account devices and a series of oscillatory members, means for limiting the movements of the members in one direction, an oscillating device for moving the members in the opposite direction, a latch for holding the said device normally in a retracted position, a series of cash safes adapted to be opened simultaneously with the movement of the said oscillating device, selective manipulating means for releasing said oscillating device and for opening a desired cash safe, and mechanism for preventing the operation of the selective manipulating means until after the operation of the means for limiting the movements of the oscillatory elements.

10. In a cash register, the combination with an operating mechanism including accounting devices and a series of oscillatory operating elements, means for limiting the movement of the elements in one direction, an oscillating hand lever for returning the elements to their normal positions, a series of cash safes adapted to be opened simultaneously with the initial movement of the hand lever, selective manipulating means for controlling the opening of the cash safes and the release of the hand lever, and mechanism for preventing the operation of the selective manipulating means until after the operation of the means for limiting the movements of the oscillatory elements.

11. In a cash register, the combination with an operating mechanism including account devices, and a series of oscillatory members, of means for limiting the movements of the oscillatory members in one direction, a pivoted hand lever for moving the oscillatory members in the opposite direction, a series of cash drawers which may be opened independently of the movement of the lever, selective manipulating devices for releasing a desired drawer and for releasing the hand lever, and mechanism for preventing the operation of the selective manipulating means until after the operation of the means for limiting the movements of the oscillatory elements.

12. In a cash register, the combination with an operating mechanism including accounting devices, and a series of oscillatory members, of a series of keys for limiting the movements of the members in one direction, an oscillating hand lever for moving the members in the opposite direction, a latch for the hand lever, a series of cash drawers which may be moved simultaneously with the initial movement of the lever, latches for the cash drawers, selective manipulating devices for operating the desired drawer latch and the lever latch, and mechanism for preventing the operation of the selective manipulating devices until after a key has been operated.

13. In a cash register, the combination with an operating mechanism, of setting devices therefor, an oscillating actuator for the operating mechanism, a series of cash safes adapted to be opened simultaneously with the initial movement of the actuator, and means for releasing any desired safe and the actuator simultaneously, and mechanism requiring the operation of one of the setting devices prior to the operation of the means for releasing the safes.

14. In a cash register, the combination with an operating mechanism including a series of oscillatory members, keys for limiting the movements of the members in one direction, a hand lever for moving the members in the opposite direction, a plurality of independent counters coöperating with the operating elements, a plurality of cash drawers which may be opened independently of the movement of the hand lever, selective manipulating means for releasing the hand lever and determining which of the counters will be operated and which of the cash drawers will be opened, and mechanism for requiring the operation of a key before the selective manipulating means can be operated.

15. In a cash register the combination with an operating mechanism including a series of oscillatory members, keys for limiting the movement of the members in one direction, an oscillatory hand lever for moving the said members in the opposite direction, a series of independent accounting devices arranged to be brought into connection with the oscillatory members, a series of independent cash safes which may be opened independently of the movement of the hand lever, selective manipulating devices for determining which cash safe will be opened and which accounting device will be operated, means controlled by said selective devices for releasing the hand lever, and mechanism requiring the operation of a key before the selective manipulating devices can be operated.

16. In a cash register, the combination with a series of oscillatory elements, keys for limiting the movement of the elements in one direction, an oscillatory main actuator for moving said elements in the opposite direction, a printing mechanism, a series of cash safes adapted to be opened simultaneously with the initial movement of the main actuator, selective manipulating devices for opening a desired safe and for setting the printing mechanism, means controlled by the said selective devices for unlatching the main actuator and for producing a record showing which selective manipulating device and which cash safe has been operated, and mechanism for requiring the operation of a key before the selective manipulating devices can be operated.

17. In a cash register, the combination with a series of oscillatory members, of keys for limiting the movement of the members in one direction, an oscillatory hand lever for moving the members in the opposite direction, a series of independent counters arranged to coöperate with the oscillatory members, a special indicator, a series of cash safes arranged to be opened simultaneously with the movement of the hand lever, selective manipulating devices for opening a desired cash safe and for controlling the proper counters and the special indicator, means controlled by the selective devices for unlatching the hand lever, and mechanism for requiring the operation of a key before the selective manipulating devices can be operated.

18. In a cash register, the combination with an oscillating fulcrumed operating lever, a latch for said lever, a series of cash drawers, independent latches for said drawers, a series of selective devices, and connections for operating simultaneously the lever latch and any one of the drawer latches, a series of value keys and means under control of the value keys for preventing the operation of either latch until the value key is first depressed.

19. In a cash register, the combination with an oscillating fulcrumed operating lever, a latch for said lever, a series of cash drawers, independent latches for said drawers, a series of selective devices, and connections for operating simultaneously the lever latch and any one of the drawer latches, a series of value keys, means under control of the value keys for preventing the operation of either latch until the value key is first depressed, and a recording device for producing a record showing which keys and which selective device has been operated.

20. In a cash register, the combination with an operating mechanism, of an operating fulcrumed hand lever and latch for same, a series of cash drawers, independent latches for said drawers, a series of release devices connected to the drawer latches, means arranged to be operated by any of the release devices for releasing the operating hand lever, and means for producing a record showing which drawer release device has been operated.

21. In a cash register, the combination with a series of nested yokes having graduated stop segments, accounting devices coöperating with the yokes, a series of keys for limiting the movement of the yokes in one direction, a single oscillatory operating lever for said yokes, a series of cash drawers adapted to be opened simultaneously with the initial movement of the operating lever, selective manipulating devices for opening any desired drawer and releasing the operating lever, and mechanism for requiring the operation of one of said keys before the selective manipulating devices can be operated.

22. In a cash register, the combination with a series of oscillating elements, of keys for limiting the movement of the elements in one direction, an oscillatory hand lever for moving the elements in the opposite direction, accounting devices coöperating with the elements, a series of cash safes which may be opened simultaneously with the initial movement of the lever, a latch for the lever, selective devices for opening any desired safe and for operating the lever latch simultaneously therewith, and means requiring the operation of a key before the selective devices can be operated.

23. In a cash register, the combination with a series of oscillatory elements, means for limiting the movements of the elements in one direction, an oscillatory hand lever for moving said elements in the opposite direction, indicators connected with said elements, a series of cash safes arranged to be opened simultaneously with the initial movement of the hand lever, a common means for releasing the indicators, the hand lever and the selected cash safe, and mechanism for requiring the operation of the said limiting means before the said common releasing means can be operated.

24. In a cash register, the combination with a series of oscillatory elements, of keys for limiting the movements of the same in one direction, an oscillatory hand lever for moving said elements in the opposite direction, a series of indicators arranged to be set by said oscillatory elements, means for automatically returning the indicators to their normal positions when they are released, a series of cash safes any one of which may be opened simultaneously with the movement of the hand lever, means for selecting and opening a cash safe and for releasing the hand lever and the indicator, and mechanism for requiring the operation of a key before a cash safe can be selected and opened.

25. In a cash register, the combination with a series of nested yokes carrying graduated stop segments, of keys coöperating with said segments, of accounting devices controlled by the yokes, an oscillatory hand lever for operating said yokes, a series of independent cash drawers, selective manipulating devices for releasing the desired drawer and for simultaneously releasing the hand lever, and means for requiring the operation of a key before the selective manipulating devices can be operated.

26. In a cash register, the combination with a series of oscillating operating elements, of accounting devices controlled by said elements, means for limiting the movements of the elements in one direction, an oscillatory hand lever for moving the elements in the opposite direction, a series of independent cash safes, selective manipulating devices for releasing the desired safe and the hand lever, and mechanism for requiring the operation of said limiting means before the selective manipulating devices can be operated.

27. In a cash register, the combination with operating mechanism, of accounting devices, a pivoted operating hand lever for actuating the same, a series of independent cash drawers, means for latching the drawers in their closed positions, and devices for preventing the relatching of a cash drawer after it has been opened until the pivoted hand lever has been returned to normal position.

28. In a cash register, the combination with operating mechanism, of accounting devices, a pivoted operating hand lever for actuating the same, a series of cash drawers, means for latching the drawers in their closed positions, devices for preventing the relatching of a cash drawer after it has been opened until the pivoted hand lever has been returned to normal position, and a recording mechanism for producing a record showing which drawer has been unlatched.

29. In a cash register, the combination with a series of oscillatory elements, of accounting devices coöperating therewith, means for limiting the movements of the elements in one direction, a single oscillating hand lever for returning the elements to their normal positions, a series of independent cash drawers, latches for said drawers, and means for preventing the relatching of a released drawer until the oscillatory elements are returned to normal position by the oscillating hand lever.

30. In a cash register, the combination of a series of oscillatory elements, of accounting devices coöperating therewith, means for limiting the movements of the elements in one direction, a single oscillating hand lever for returning the elements to their normal positions, a series of independent cash drawers, latches for said drawers, means for preventing the relatching of a released drawer until the oscillatory elements are returned to norami position by the oscillatory hand lever, and a recording mechanism for producing a record showing which drawer has been unlatched.

31. In a cash register, the combination with a suitable casing, of a series of oscillatory elements, accounting devices coöperating therewith, value keys for limiting the movements of the elements in one direction, a single pivoted hand lever for moving said elements in the opposite direction, a series of cash drawers, latches for said drawers, clerks' keys for unlatching any cash drawer desired, springs for projecting the drawers from the casing, means for preventing the relatching of the drawers in the casing until after the pivoted hand lever has returned the oscillatory elements to their normal positions and means requiring the operation of a value-key before any cash drawer can be released by a clerk's key.

32. In a cash register, the combination with a suitable casing, of a series of oscillatory elements, accounting devices coöperating therewith, value keys for limiting

the movements of the elements in one direction, a single pivoted hand lever for moving said elements in the opposite direction, a series of cash drawers, latches for said drawers, clerks' keys for releasing any drawer desired, springs for normally projecting the drawers from the casing, means for preventing the relatching of the drawers in the casing until after the pivoted hand lever has returned the oscillatory elements to their normal positions, a recording mechanism for producing a record showing which receptacle has been unlatched and means requiring an operation of a value-key before any drawer can be released by a clerk's key.

33. In a cash register, the combination with a series of oscillating yokes pivoted co-axially upon a single shaft, keys for limiting the movement of said yokes in one direction, a single oscillatory hand-lever for moving the yokes in the opposite direction, a latch for said hand-lever, a plurality of independent cash drawers, a release key for each drawer, and connections between each release key and its respective drawer and between each release key and the latch for the hand-lever whereby the operation of a release key will open its respective drawer and will also release the hand lever.

34. In a cash register, the combination with an operating mechanism including oscillatory elements, an oscillatory hand-lever for moving said elements a printing device controlled by said elements, value keys for controlling the movement of the elements in one direction, clerks' release keys for said elements and operating mechanism, a series of cash drawers, means for releasing any drawer by the depression of its corresponding clerks' release key, means controlled by the said release keys for setting the printing device so as to produce a record showing which release key and which drawer has been operated, and mechanism for compelling the operation of a value key before a clerk's key can be operated.

35. In a cash register, the combination with a plurality of accounting devices, common operating mechanism for said devices, a normally locked oscillatory operating handle for said mechanism, a series of cash drawers, release keys for said operating handle, and for cash drawers, an indicator and type carrier controlled by the release keys and means whereby the operation of a release key will set the type carrier and indicator.

36. In a cash register, the combination with a plurality of normally inoperative accounting devices, common operating mechanism for said devices, a normally locked oscillatory operating handle for said mechanism, release keys for said operating handle, a series of cash drawers, an indicator and type carrier controlled by the release keys and means whereby the operation of a release key will set the type carrier and indicator, and will release the corresponding accounting device the operating handle and the corresponding cash drawer.

37. In a cash register, the combination with an operating mechanism, value setting elements for controlling the operating mechanism in one direction, a normally locked, oscillatory hand-lever for moving the said mechanism in the opposite direction, a series of cash receptacles, a series of manipulative controlling devices for said receptacles and for releasing the hand lever and interlocking means between the value setting elements and the manipulative controlling devices for preventing access to a cash receptacle until the depression of a value setting element is followed by the operation of one of said controlling devices.

38. In a cash register, the combination with an operating mechanism, value setting elements for controlling the operating mechanism in one direction, a normally locked, oscillatory hand-lever for moving the said mechanism in the opposite direction, a series of cash receptacles, a series of manipulative controlling devices for said receptacles and for releasing the hand-lever, interlocking means between the valve setting elements and the manipulative controlling devices for preventing access to a cash receptacle until the depression of a value setting element is followed by the operation of one of said controlling devices, and mechanism for producing a record showing which cash safe has been released.

39. In a cash register, the combination of an operating mechanism, value keys for controlling the same, a series of cash drawers, clerks' keys for controlling the cash drawers, interlocking means between the value keys and clerks' keys, and means for preventing the opening of a cash drawer until a clerk's key has been fully depressed.

40. In a cash register, the combination of an operating mechanism, value keys for controlling the same, a series of cash drawers, clerks' keys for controlling the cash drawers, interlocking means between the value keys and clerks' keys, said means requiring a full operation of a clerk's key for opening a cash drawer and mechanism for producing a record showing which cash safe has been released.

41. In a cash register, the combination with a series of oscillating elements, value keys for controlling the same, an oscillatory hand-lever for operating said elements, a series of cash drawers, clerks' keys for releasing said drawers and said hand lever and means for preventing the operation of more than one clerks' key at a time, so that all the cash drawers are prevented from opening except the one corresponding to the single clerk's key operated.

42. In a cash register, the combination with a series of oscillating elements, value keys for controlling the same, an oscillatory hand-lever for operating said elements, a series of cash drawers, clerks' keys for releasing said drawers and said hand lever, means for preventing the operation of more than one clerk's key at a time, so that all the cash drawers are prevented from opening except the one corresponding to the single clerk's key operated, and mechanism for producing a record showing which cash safe has been released.

43. In a cash register, the combination with a series of oscillating elements, an oscillatory hand-lever for operating said elements, a series of value keys for controlling the movements of said mechanism in one direction, a series of clerks' keys for releasing the hand lever, a series of cash drawers, a series of independent pivoted locking elements intermediate the respective clerks' keys and drawers, and interlocking mechanism requiring the operation of a value key before a clerk's key can be depressed.

44. In a cash register of the class described, a series of normally depressible value keys, detents for the same, said detents being adapted to release any key upon the depression of another key in the same series, a plurality of normally inoperative clerks' initial drawer release keys, a detent for said drawer release keys, and a latch plate for said drawer release keys, said latch plate being adapted to move the value key detent into unreleasable position and thereby render the depressed value keys non-releasable until a registration is complete.

45. In a cash register of the class described, a plurality of drawers, a series of normally depressible value keys, detents for the same, said detents being adapted to release any key upon the depression of another key in the same series, a plurality of normally inoperative clerks' initial drawer release keys, there being one of said keys for each drawer, a detent for said drawer release keys and a latch plate for said drawer release keys, said latch plate being adapted to move the value key detent into unreleasable position and thereby render the depressed value keys non-releasable until a registration is complete.

46. In a cash register, the combination of an operating mechanism including oscillatory members, an oscillating handle therefor, value keys for controlling the movement of the members, a latch for said handle, a series of release keys controlling said latch, locking devices intermediate said release keys and latch for preventing the release of said handle and the operating mechanism until the release key is positively locked in its operated position and means for preventing the operation of a release key until after a value key has been operated.

47. In a cash register, the combination of an operating mechanism including oscillatory members, an oscillating handle therefor, value keys for controlling the movement of the members, a latch for said handle, a series of release keys controlling said latch, locking devices intermediate said release keys and latch for preventing the release of said handle and the operating mechanism until the release key is positively locked in its operated position, means for preventing the operation of a release key until after a value key has been operated, an indicator for showing what release key has been operated, and means controlled by the release key for permitting said indicator to come to zero position.

48. In a cash register, the combination with an operating mechanism, a detent latch for holding said mechanism in normal position, a release key for said latch, a second latch connected with the detent latch for the operating mechanism, and means connecting the release key with the second latch whereby the release of the operating mechanism is prevented until the release key is fully depressed.

49. In a cash register, the combination with an operating mechanism, a detent latch for holding said mechanism in normal position, a release key, a latch plate operated by said key, said latch plate operating the detent latch, and means for coupling the latch plate to the detent latch, whereby the release of the operating mechanism is prevented until the release key is fully depressed.

50. In a cash register, the combination with an operating mechanism, a plurality of release keys for the same, a double detent for locking the operating mechanism and means under control of the double detent for compelling the full depression of a release key before the main operating mechanism can be operated.

51. In a cash register, the combination with an operating mechanism, of an accounting device, a printing device, a plurality of cash drawers, a plurality of clerks' release keys for the same, there being a clerks' release key for each drawer, a double detent for the main operating mechanism, means under control of the double detent for compelling the full depression of a release key before the main operating mechanism can be operated, the printing device being adapted to produce a record showing which release key has been operated.

52. In a cash register, the combination with an operating mechanism, of an accounting device, a plurality of cash receptacles, a plurality of latches for the said receptacles, a double detent for the operating mechanism, a release key for each cash receptacle, means connecting said release keys and the latches for their respective receptacles and means engaging the double detent for preventing the operation of the operating mechanism until a release key is arrested in depressed position.

53. In a cash register, the combination with an operating mechanism, of a printing device, a plurality of cash receptacles, a plurality of latches for the said receptacles, a double detent for the operating mechanism, a release key for each cash receptacle, means connecting said release keys and the latches for their respective receptacles and means engaging the double detent for preventing the operation of the operating mechanism until a release key is arrested in depressed position, said printing device being adapted to produce a record showing which release key has been operated.

54. In a cash register, the combination with an operating mechanism, of an accounting device operated thereby, a plurality of independent cash drawers, a plurality of clerks' initial release keys, there being one key corresponding to and releasing each drawer, a proprietor's key adapted to release all drawers, a double detent for the operating mechanism, a detent plate common to each release key for holding said keys in depressed position, a release plate for each clerks' key, said release plates being common to the proprietor's key and a latch plate common to the clerks' keys and proprietor's key, said latch plate being provided with a stud, said stud being adapted to be engaged by a hook of the double detent when any of said keys are depressed, whereby the operating mechanism can not be released by a blow upon any release key and said keys must be fully depressed before the machine can be operated.

55. In a cash register, the combination with an operating mechanism, of an accounting device operated thereby, a plurality of independent cash drawers, a plurality of clerks' initial release keys, there being one key corresponding to and releasing each drawer, a proprietor's key adapted to release all drawers, a latch for the operating mechanism, a detent plate common to each release key for holding said keys in depressed position, a release plate for each clerks' key, said release plates being common to the proprietor's key, a latch plate common to the clerks' keys and proprietor's key, said latch plate being provided with a stud, and means for coupling said stud to the latch for the operating mechanism, whereby the operating mechanism can not be released by a blow upon any release key and said keys must be fully depressed before the machine can be operated.

56. In a cash register adapted for use by a plurality of clerks, a plurality of cash drawers,—one for each clerk, a series of clerks' initial draw-release keys, each key being adapted to release its corresponding cash drawer, a proprietor's key adapted to open all of the cash drawers simultaneously, and means for preventing the operation of a clerks' key while the proprietor's key is in operated position.

57. In a cash register adapted for use by a plurality of clerks, a plurality of cash drawers,—one for each clerk, a series of clerks' initial drawer-release keys, each key being adapted to release its corresponding cash drawer, a proprietor's key adapted to open all of the cash drawers simultaneously, and means for preventing the operation of the proprietor's key while a clerk's key is in operated position.

58. In a cash register adapted for the use of different clerks, a plurality of cash drawers,—one for each clerk, a series of value setting elements, a series of drawer releasing elements, there being a releasing element for each clerk and each drawer and a releasing element for the proprietor, interlocking mechanism between the value setting elements and the releasing elements for preventing the operation of a clerks' releasing element until after the operation of a value setting element, said interlocking mechanism also preventing the operation of the proprietor's releasing element after the operation of a value setting element and means for opening simultaneously all of the cash drawers by a depression of the proprietor's releasing element.

59. In a cash register adapted for the use of different clerks, a plurality of cash drawers,—one for each clerk, a series of value setting elements, a series of drawer releasing elements, there being a releasing element for each clerk and each drawer and a releasing element for the proprietor, interlocking mechanism between the value setting elements and the releasing elements for preventing the operation of a clerks' releasing element until after the operation of a value setting element, said interlocking mechanism also preventing the operation of the proprietor's releasing element after the operation of a value setting element, means for opening simultaneously all of the cash drawers by a depression of the proprietor's releasing element, and mechanism for producing a record showing what releasing element has been operated.

60. In a cash register adapted for the use of a plurality of clerks, a plurality of cash drawers, one for each clerk, a plurality of clerks' initial drawer release keys, there being one of said keys for each drawer and each key adapted to release its corresponding drawer only, a proprietor's key adapted to open all the cash drawers simultaneously, means for preventing the depression of more than one drawer release key at one operation of the cash register.

61. In a cash register adapted for the use of a plurality of clerks, a plurality of cash drawers, one for each clerk, a plurality of clerks' initial drawer release keys, there being one of said keys for each drawer and each key adapted to release its corresponding drawer only, a proprietor's key adapted to open all the cash drawers simultaneously, means for preventing the depression of more than one drawer release key at one operation of the cash register, and a recording device for producing a record showing which release key has been operated.

62. In a cash register adapted to be used by different clerks, the combination of register operating elements, value keys for controlling the said elements, a plurality of cash drawers, one for each clerk, a plurality of clerks'

initial drawer release keys, one for each clerk, said release keys having means for attaching a pad-lock thereto, a proprietor's release key, latches for said cash drawers and means connecting said release keys with the drawer latches, the pad-locks on the clerks' keys being adapted to prevent a depression of said keys and access to the corresponding cash drawer except by the proprietor's release key.

63. In a cash register adapted to be used by different clerks, the combination of register operating members, value setting elements for controlling the said members, a plurality of cash safes, one for each clerk, a plurality of clerks' safe releasing elements, one for each clerk, said releasing elements having means for attaching a pad-lock thereto, a proprietor's releasing element, latches for said cash safes and means connecting said releasing elements with the safe latches, the pad-locks on the clerks' releasing elements being adapted to prevent an operation of said releasing elements and access to the corresponding cash safe except by the proprietor's releasing element.

64. In a cash register adapted for the use of different clerks, register operating elements, cash keys for determining the movement of said elements, a plurality of cash drawers, one for each clerk, a proprietor's release key for the cash drawers, a plurality of clerks' initial drawer release keys, one for each clerk, said clerks' keys having slots to receive the user's private pad-lock, said pad-lock being adapted to prevent the depression of said key and access to the corresponding cash drawer by another clerk, and means under control of the proprietor's key for opening all of the cash drawers when the clerks' keys are either locked or unlocked.

65. In a cash register, the combination of an operating mechanism, of a plurality of cash drawers independent of the operating mechanism, a series of clerks' initial release keys, one for each drawer, a proprietor's release key controlling all the drawers, means to prevent the depression of more than one release key at a time and a release plate between each of the release keys and the corresponding drawer whereby, upon the depression of a clerk's initial key, the drawer corresponding therewith will be released and upon a depression of the proprietor's release key all the drawers will be simultaneously released.

66. In a cash register, the combination of an operating mechanism including a normally locked hand member, of a plurality of cash drawers independent of the hand member, a series of clerks' initial release keys, one for each drawer, a proprietor's release key controlling all the drawers, means to prevent the depression of more than one release key at a time, a release plate between each of the release keys and the corresponding drawers, whereby, upon the depression of a clerk's initial key, the drawer corresponding therewith will be released and upon a depression of the proprietor's release key all the drawers will be simultaneously released, and means for unlocking the hand member by the depression of either of the release keys.

67. In a cash register, a main actuator therefor, a pawl connected with said actuator, a rack adapted to be engaged by said pawl, said rack and pawl requiring a full stroke of the actuator in each direction, an alarm bell and means for ringing said bell twice at each operation of the machine, the bell being rung first upon the release of the main actuator and second after the main actuator has been returned and arrested in normal position, whereby the operator may know that the register is ready for the next transaction.

68. In a cash register, an accounting mechanism, an oscillatory member for operating said mechanism, an alarm bell, a hammer for said bell, and means carried by said member and engaging with the hammer twice during the operation of the cash register, the bell ringing only upon the initial and upon the final movement of the oscillatory member.

69. In a cash register, a main shaft, means for oscillating said shaft as the register is operated, a cam carried by said shaft, an alarm bell, a hammer for said bell, a spring-pressed plunger carried by said hammer for engagement with the said cam, said plunger engaging the cam twice during the operation of the cash register to ring the bell upon the initial movement of the said shaft and also at the end of the return movement thereof an accounting device, and connections for operating said device from the main shaft.

70. In a cash register, a main shaft, means for oscillating said shaft during the operation of the register, a cam carried by said shaft, an alarm bell, a hammer for said bell, means carried by said hammer and adapted to be engaged by said cam as the latter oscillates with the shaft, a strut arm carried by said shaft, a pin on the bell hammer, said pin adapted to be engaged by the strut arm to prevent the ringing of the bell until the main shaft has oscillated to the desired extent an accounting device, and connections for operating said device from the main shaft.

71. In a cash register, a main shaft, means for oscillating said shaft during the operation of the register, a cam carried by said shaft, an alarm bell, a hammer for said bell, a plunger carried by said hammer and adapted to be engaged by said cam as the latter oscillates with the shaft, a strut arm carried by said shaft, a pin on the bell hammer, said pin adapted to be engaged by the strut arm to prevent the ringing of the bell until the main shaft has oscillated to the desired extent, said cam engaging the plunger to cause the bell to ring at substantially the beginning of the advance oscillation of the main shaft and also at substantially the end of the return oscillation thereof an accounting device, and connections for operating said device from the main shaft.

72. In a cash register, a registering device, means for operating said registering device, value keys for controlling said operating means, a shield for the registering devices, said shield being provided with a slot through which the register may be read, a shutter for closing said slot, a plurality of clerks' initial keys, a proprietor's key, having means for applying a pad lock thereto means for preventing the operation of a clerks' key when the proprietor's key is operated and means connected with the proprietor's key for opening the shutter so as to disclose the register wheels through the said slot.

73. In a cash register, a registering device, means for operating said registering device, value keys for controlling said operating means, a shield for the registering devices, said shield being provided with a slot through which the register may be read, a shutter for closing said slot, a plurality of clerk's initial keys, a proprietor's key, having means for applying a pad lock thereto means connected with the proprietor's key for opening the shutter so as to disclose the register wheels through the said slot, and means for preventing the shutter from operating while a value key or a clerk's key is operated.

74. In a cash register, a registering device and means for operating the same, a shield for covering the said registering device, said shield being provided with a slot through which the registering device may be read, a shutter adapted to normally close the said slot, a lever pivoted to the shield and having a slot for engaging with the said shutter and a key connected with said lever whereby the depression of said key will oscillate the said lever and rock the shutter so as to disclose the registering device through the slot in the shield.

75. In a cash register, a registering device and means for operating the same, value keys for controlling said means, a shield for covering the said registering device, said shield being provided with a slot through which the registering device may be read, a shutter adapted to normally close the said slot, a lever pivoted to the shield and having a slot for engaging with the said shutter, a key connected with said lever whereby the depression of said key will oscillate the said lever and rock the shutter so as to disclose the registering device through the slot in the shield, and means for preventing the operation of the shutter while a value key is operated.

76. In a cash register adapted for the use of a plurality of clerks, a plurality of registering devices, there being one registering device for each clerk, means for operating the registering devices upon the operation of the cash register, means for normally holding said registering devices out of operation, a series of clerks' keys, one for each register, connections between each clerks' key and the corresponding registering device, whereby the depression of a clerk's key will release the register corresponding thereto, a proprietor's key, a shield for the registering devices, said shield having a slot, a shutter for closing said slot, means connected with the proprietor's key for rocking said shutter to disclose the registers through the slot in the shield and interlocking mechanism between the clerks' keys and the proprietor's keys for preventing the opening of the shutter after a clerk's key has been depressed.

77. In a cash register adapted for the use of a plurality of clerks, a plurality of registering devices, and a plurality of cash drawers, there being one cash drawer and one registering device for each clerk, means for operating the registering devices upon the operation of the cash register, means for normally holding said registering devices out of operation, a series of clerks' keys, one for each register and cash drawer, latches for said cash drawer, connections between each clerks' key and the latch for the corresponding cash drawer and between each clerks' key and the corresponding registering device, whereby the depression of a clerk's key will release both the drawer and the register corresponding thereto, a proprietor's key, a shield for the registering devices, said shield having a slot, a shutter for closing said slot, means connected with the proprietor's key for rocking said shutter to disclose the registers through the slots in the shield and interlocking mechanism between the clerks' keys and the proprietor's keys for preventing the opening of the shutter after a clerk's key has been depressed.

78. In a cash register and recorder adapted to the use of a plurality of clerks or departments, a plurality of separate cash receptacles, one for each clerk or department, a series of operating yokes, a series of springs for moving said yokes to initial position, an oscillating, normally locked main operating hand-lever for returning the yokes to normal position, a series of value keys, a series of clerk's initial keys, and interlocking mechanism requiring the depression of a value key before a clerk's initial key can be operated to release its corresponding drawer and the oscillating hand-lever.

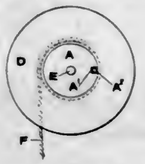
79. In a cash register, a registering mechanism, means for operating said mechanism, a plurality of character keys, a plurality of cash drawers, connections between each of said keys and its respective drawer, whereby the drawer may be released when its key is depressed, means for preventing the operation of the operating mechanism until after a character key is fully depressed, and means for preventing the opening or release of another drawer until the register is placed in normal position and the registering mechanism has been operated.

80. In a cash register, a bank of keys, means for locking said keys in their operated positions, a plurality of cash drawers, one for each key, connections between each key and its respective cash drawer for releasing the latter when its key is depressed, a normally locked oscillatory operating member, a plate movable by the depression of any one of said keys, connections between said plate and the operating member, whereby the latter is unlocked when a key is depressed, the release of the operating member and the cash drawer taking place substantially at the same instant, and after the key has been moved to locked position.

81. In a cash register, a bank of keys, means for locking said keys in their operated positions, a plurality of cash drawers, one for each key, connections between each key and its respective cash drawer for releasing the latter when its key is depressed, a normally locked oscillatory operating member, a plate movable by the depression of any one of said keys, connections between said plate and the operating member whereby the latter is unlocked when the key is depressed, the release of the operating member and the cash drawer taking place substantially simultaneously and after the key has been moved to locked position, and means for preventing the subsequent operation of a second key.

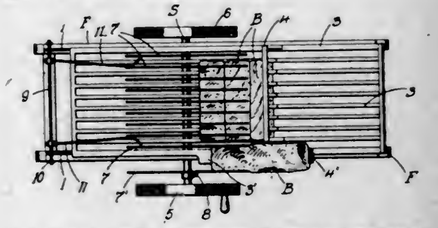
82. In a cash register, a bank of keys, means for locking said keys in their operated positions, a plurality of cash drawers, one for each key, connections between each key and its respective cash drawer for releasing the latter when its key is depressed, a normally locked oscillatory operating member, a plate movable by the depression of any one of said keys, connections between said plate and the operating member, whereby the latter is unlocked when the key is depressed, the release of the operating member and the cash drawer taking place substantially simultaneously and after the key has been moved to locked position, and a recording device that is adapted to produce a record showing what key has been operated.

870,625. ATTACHMENT FOR WINDOW-SHADE ROLLERS. JOHN L. HARRISON, Montreal, Quebec, Canada. Filed Mar. 21, 1906. Serial No. 307,153.



The combination of a window shade roller having a longitudinal key-way set therein, a spool adapted to fit over the end of said roller, said spool having a vertical interior flange and a dished exterior flange, means for fastening said spool to the roller, and a winding cord adapted to pass through an opening in the drum of said spool and having a knot adapted to lie in the key-way of the roller.

870,626. BREAD-CUTTER. FRANK J. HASSELL, Dallas, Tex., and ROY S. CUNNINGHAM, St. Louis, Mo. Filed Apr. 18, 1907. Serial No. 368,920.



1. A bread cutter comprising a supporting frame, a slide or feed-frame mounted thereon, an abutment on the slide against which the bread loaves may bear, a transverse shaft having a series of cutter disks, a lateral extension or platform formed on the slide for supporting a loaf longitudinally, a terminal adjustable blade on the shaft between which and the first blade of the inner series said loaf can be inserted and its sides trimmed, the parts operating substantially as set forth.

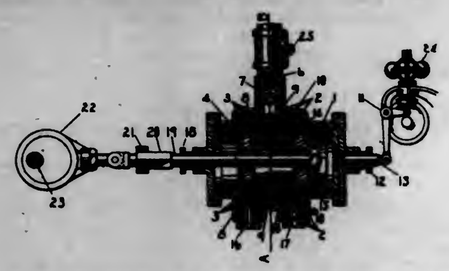
2. A bread cutter comprising a supporting frame, a slide or feed-frame, means for supporting bread loaves on said slide both transversely and longitudinally, means for trimming the loaves when supported in their longitudinal positions, and for slicing them while occupying a transverse position across the frame, and means mounted with frame for seizing the slices collectively at the conclusion of the cutting operation, substantially as set forth.

870,627. GOVERNOR FOR EXPLOSIVE-ENGINES. LUCIAN C. JACKSON, Warren, Pa. Filed Dec. 27, 1901. Serial No. 87,462.

1. The combination of a casing having an air inlet and a gas inlet, communicating with a mixing chamber having an outlet passage, mixture ports communicating with said passage, a reciprocating valve device having an external annular chamber designed for receiving a mixture from said mixture ports and delivering same to outlet ports, a sleeve having ports designed to register with said ports

and a governing device which is adapted to automatically vary the capacity of said ports, substantially as set forth.

2. The combination of a casing having an air inlet and a gas inlet, communicating with a mixing chamber having an outlet passage, mixture ports communicating with said passage, a reciprocating valve device having an external annular chamber designed for receiving a mixture from said mixture ports and delivering same to outlet ports, a sleeve having ports designed to register with said ports, a governing device which is adapted to automatically vary the capacity of said ports and a reciprocating valve device having a definite length of stroke and adapted to open and close certain ports, substantially as set forth.



3. The combination of a casing having an air inlet and a gas inlet, communicating with a mixing chamber having an outlet passage, mixture ports communicating with said passage, a reciprocating valve device having an external annular chamber designed for receiving a mixture from said mixture ports and delivering same to outlet ports, a sleeve having ports designed to register with said mixture and outlet ports, a governing device which is adapted to automatically vary the capacity of said ports, a reciprocating valve device having a definite length of stroke and adapted to open and close said outlet ports and positively operating by means of an eccentric secured to a shaft which revolves at one-half the speed of the engine crank shaft, substantially as set forth.

4. In a regulating valve device for controlling the supply of air and other gases to a gas engine, the combination, with air and gas inlets, of a mixing chamber and passage having mixture ports and a reciprocating valve device having an external annular chamber receiving a mixture from said mixture ports, said valve device in constant communication with said mixture ports and which is adapted to be brought into and out of communication with outlet ports, a sleeve having ports designed to register with said mixture and outlet ports and a governing device which is adapted to automatically vary the capacity of said ports, substantially as set forth.

5. In a regulating valve device for controlling the supply of air and other gases to a gas engine, the combination, with air and gas inlets, of a reciprocating valve device having an external annular chamber, movable into communication with mixture and outlet ports and means to vary the capacity of said ports, substantially as set forth.

6. In a regulating device for controlling the supply of air and other gases to a gas engine, the combination, with air and gas inlets, of a casing, a valve device having an external annular chamber, located and movable within said casing and means for moving said valve into communication with ports and passages from said casing to the combustion chamber of an engine only during its suction stroke, substantially as set forth.

7. In a regulating device for controlling the supply of air and other gases to a gas engine, the combination with air and gas inlets and of a reciprocating valve device having an external annular chamber and an annular sleeve surrounding said reciprocating valve device, the valve device controlling the direction of flow of the mixture of air and other gases and the sleeve controlling the quantity of such mixture, substantially as set forth.

8. In a regulating valve device for gas engines, the combination with air and gas inlets, of a reciprocating valve device having an external annular chamber, movable into communication with mixture and outlet ports, means to vary the capacity of said ports, and means to regulate the air and gas inlets, substantially as set forth.

9. In a regulating valve device for controlling the supply of air and other gases to a gas engine, the combination with air and gas inlets, and means to control said air and gas inlets, of a casing with ports, and a hollow reciprocating valve device having an external annular chamber movable into communication with said ports and means to vary the capacity of said ports, substantially as set forth.

870,628. BEARING FOR SHADE-ROLLERS. WILLIAM D. JANES, Saginaw, Mich. Filed Oct. 9, 1905. Serial No. 282,012.



1. The combination with a spear having an enlarged ratchet formed integrally therewith and located intermediate the ends of the spear, a bearing surface located in advance of the ratchet, and a pawl plate and pawl engaging the ratchet, of a smooth bushing received upon the bearing surface, the pawl plate resting upon the bushing and means for retaining the bushing in position.

2. The combination with a spear having an enlarged ratchet formed integrally therewith, a reduced circular bearing surface formed integrally with the ratchet and projecting therefrom, and a pawl plate rotatable relative to the spear, of a bushing encircling the bearing surface only, the bushing provided with a smooth periphery upon which the pawl plate rests.

3. The combination with a spear having an enlarged ratchet formed integrally therewith, a reduced circular bearing surface formed integrally with the ratchet and projecting therefrom, and a pawl plate rotatable relative to the spear, of a bushing encircling the bearing surface only, the bushing provided with a smooth periphery upon which the pawl plate rests, a flange carried by the bushing and a washer swaged on the outer end of the bearing surface for maintaining the bushing in position.

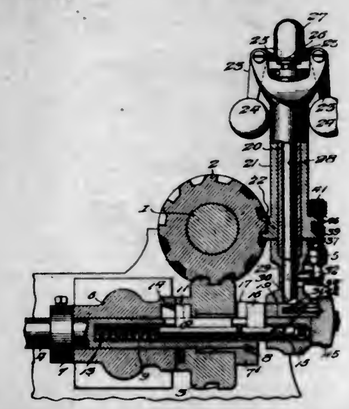
4. The combination with a spear having an enlarged ratchet formed integrally therewith, a reduced circular bearing surface formed integrally with the ratchet and projecting therefrom, and a pawl plate rotatable relative to the spear, of a bushing encircling the bearing surface only, the bushing provided with a smooth periphery upon which the pawl plate rests, and a washer swaged on the outer end of the bearing surface for maintaining the bushing in position.

870,629. GAS-ENGINE GOVERNOR. EUGIE P. JOHNSON and CHESTER I. LEE, Hartselle, Ala. Filed May 2, 1906. Serial No. 314,794.

1. The combination with the rotary shaft of a gas engine, of a cam-shaft for controlling the valve mechanism, coacting gears on said shafts, a sliding spring seated key adapted to lock one of said gears to the cam-shaft and unlock the same, a latch for throwing said key, and a governor operating upon the attainment of a certain speed to lock said latch in position to shift the key against the tension of said spring, and disconnect the gear wheel on the cam-shaft.

2. The combination with the rotary shaft of a gas engine, of a cam-shaft for controlling the valve mechanism, intermeshing gears on said shafts, a governor geared to the engine shaft and driven thereby, a sliding key movable in one direction by a spring and shiftable to connect the cam-shaft with its gear or with a stationary abutment, a latch for shifting said key, and a latch controlled by the governor for locking the latch in position to shift the key.

3. The combination with the rotary shaft of a gas engine, of a cam-shaft for controlling the valve mechanism, intermeshing gears on said shafts, a governor geared to the engine-shaft, a shiftable key carried by the cam-shaft in one position to lock the gear of said shaft thereon and in another position to disconnect said gear from the cam-shaft, a thrust-spring operating to force said key in one direction, a latch for shifting the key, and a self-retracting catch adapted to be thrown by the governor into holding engagement with the latch for positioning said latch to shift the key.



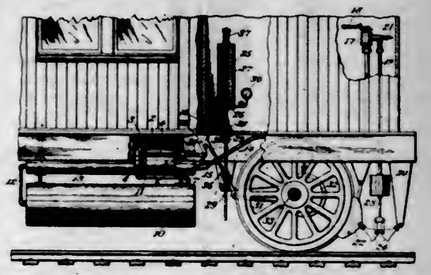
4. The combination with the rotary shaft of an engine, of a cam-shaft for controlling the valve mechanism, intermeshing gears on said shafts, a shiftable key for throwing one of the gears into and out of engagement with the cam-shaft, a governor geared to the engine shaft, a latch for shifting the key, and means actuated by the cam-shaft and adapted to be actuated by the latch for shifting the key, a spring for thrusting the latch into operative position for shifting the key, and a catch operated by the governor for holding the latch in position to shift the key.

5. The combination with the rotary shaft of an engine, of a cam-shaft for controlling the valve mechanism, intermeshing gears thereon, a shiftable key for connecting one of said gears to the cam-shaft and disconnecting the same therefrom, a key thrusting spring seated in the cam-shaft, a latch for throwing the key shifting device, means for urging the latch to a position where it will operate upon the key shifting device, a catch operated by the governor for locking and unlocking the latch, means for resisting the movement of the catch toward its locking position, and means for adjusting the degree of resistance of said catch.

6. The combination with the rotary shaft of an engine, of a cam-shaft for controlling the valve mechanism, intermeshing gears on said shafts, a shiftable key for connecting one of said gears to and disconnecting the same from the cam-shaft, a key-shifting device actuated by the cam-shaft, a self-positioning latch for actuating the key shifting device, a governor geared to the engine shaft, a self-retracting catch adapted to be thrown by the governor into locked engagement with the latch, and manually operable means adjustable while the engine is in motion for varying the degree of resistance of the catch to the force applied thereto by the governor, substantially as described.

870,630. MEANS FOR CONTROLLING FLUID-PRESSURE. FRANK E. KINSMAN, Plainfield, N. J. Filed Dec. 17, 1901. Serial No. 86,312.

1. The combination with a compressed-air brake; of a compressed-air system governing the operation of said brake and embodying a compressor having a variable stroke, a reservoir, a train-pipe leading from said reservoir, a brake-pipe, an air outlet, a three-way valve for connecting said brake-pipe with the train-pipe or the air-outlet to admit pressure into the brake-pipe or release the pressure therein, a regulating chamber having a piston one side of which is in communication with said train-pipe, and a regulating spring at the other side of said piston; and means movable in correspondence with said piston and with the variable pressure exerted by the spring, and controlled by the movement of said piston consequent on the closing or opening of communication between the train-pipe and the brake-pipe by said three-way valve, for shortening or lengthening the stroke of the compressor at any point between maximum and minimum and thereby regulating the pressure in said train-pipe and brake-pipe.



2. The combination with a compressed-air brake; of a compressed-air system governing the operation of said brake and embodying a compressor having a variable stroke, a reservoir, a train-pipe, a brake-pipe, an air-outlet, controlling means for connecting said brake-pipe with the pressure in the system or the air-outlet to admit pressure into the brake-pipe or release the pressure therein, a regulating chamber having a piston one side of which is in communication with the pressure in the system, and a regulating spring at the other side of said piston; and means movable in correspondence with said piston and with the variable pressure exerted by the spring, and controlled by the movement of said piston consequent on the closing or opening of communication between the pressure in the system and the brake-pipe by said controlling means, for shortening or lengthening the stroke of the compressor at any point between maximum and minimum and thereby regulating the pressure in said system and brake-pipe.

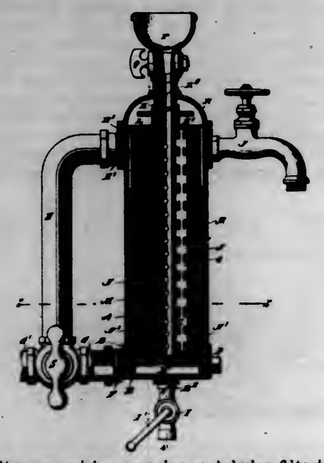
3. The combination with a fluid-pressure brake, of a fluid-pressure system governing the operation of said brake and embodying a pump, a spring opposing such fluid-pressure, a reciprocatory controlling member subjected both to said fluid-pressure and to said spring pressure and actuated by the difference in pressure between said fluid-pressure and said spring pressure, and means governed by said controlling member and movable in correspondence therewith and with the variable pressure exerted by the spring for so varying the pumping action at any point between maximum and minimum as to constantly tend to maintain the normal fluid-pressure in the system for governing the brake.

4. The combination with a compressed-air brake, of a compressed-air system governing the operation of said brake and embodying a compressor, a spring opposing such air-pressure, a reciprocatory controlling member subjected both to said air-pressure and to said spring pressure and actuated by the difference in pressure between said air-pressure and said spring pressure, and means governed by said controlling member and movable in correspondence therewith and with the variable pressure exerted by the spring for so varying the compressing action at any point between maximum and minimum as to constantly tend to maintain the air-pressure necessary for releasing said brake.

870,631. FILTER. GEORGE M. KNEUPER, New York, N. Y., assignor of one-third to George Kneuper and one-third to Kate Kneuper. Filed June 1, 1906. Serial No. 319,674.

1. A filter comprising a casing, a perforated tubular member therein, a filtering material surrounding said

member, and a layer of perforated material wrapped around said filtering material and held by the inner wall of the casing.



2. A filter comprising a casing, a tubular filtering material therein, and a layer of perforated material wrapped around said filtering material and held by the inner wall of the casing.

3. A filter comprising a casing, a tubular filtering material therein, and a layer of perforated material wrapped around said filtering material and provided with external spacing projections in engagement with the inner wall of the casing.

4. A filter comprising a casing, a tubular filtering material therein, and a layer of perforated material wrapped around said filtering material and provided with longitudinal spacing ribs in engagement with the inner wall of the casing.

5. A filter comprising a casing, a tubular filtering material therein, a layer of perforated material wrapped around said filtering material and projections for spacing said perforated material from the inner wall of the casing.

6. A filter comprising a casing, a perforated pipe rising from the bottom of the casing and screw-threaded at its upper end, a tubular filtering material surrounding said pipe, a top plate fitted around the pipe and arranged to engage the end of the filtering tube, a channeled clamping nut screwing on said pipe and engaging said top plate, and a receptacle supported by said nut and having a valved connection with the channel thereof.

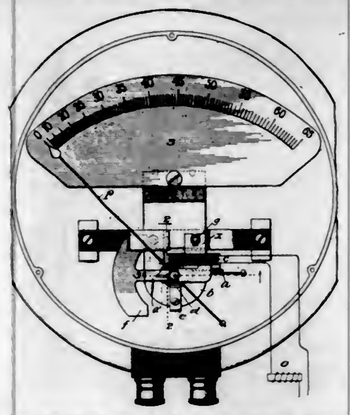
870,632. ELECTRICAL MEASURING INSTRUMENT. JOHN M. LEA, Chicago, Ill., assignor to International Electric Meter Company, Chicago, Ill., a Corporation of Illinois. Filed June 4, 1906. Serial No. 319,979.

1. In an electrical measuring instrument, the combination with a stationary exciting coil, a movable closed secondary coil and a laminated iron core linking said coils in mutual inductive relation, of an additional closed secondary coil around said core stationarily mounted in position to exert an attractive force upon the movable secondary in a direction to assist the repelling force exerted by the primary.

2. In an electrical measuring instrument, the combination with a core, of a primary and a secondary coil fixed upon said core at a distance apart, a movable secondary coil mounted to oscillate along the core between said fixed coils, and an indicator moved by said movable secondary coil.

3. A movable secondary element for a transformer-type measuring instrument comprising a sheet-metal frame cut in the form of a closed loop having integrally-formed ears turned at an angle at opposite ends thereof, pivot-posts mounted upon said ears, and a damping vane formed by an extension of one of said ears.

4. In an electrical measuring instrument, the combination with a closed transformer-core, and the primary coil thereon, of a flat sheet-metal frame forming a closed loop surrounding said core and constituting a movable secondary element of the transformer, said frame having ears struck out integral therewith, pivot posts mounted upon said ears, pivot pins having their points entering bearings in said posts, and a spiral spring connected to oppose the repulsion of said secondary element by said primary coil.

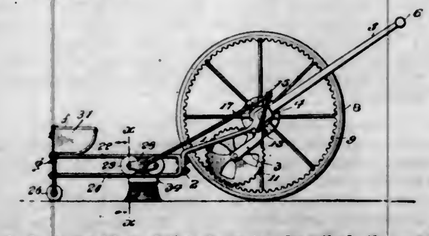


5. In an electrical measuring instrument, the combination with a transformer core, primary and secondary coils thereon at a distance apart, said secondary coil being adjustable to and from the primary, of a freely movable secondary coil mounted to oscillate along the core between said fixed coils.

6. In an electrical measuring instrument, the combination with a core, of a stationary primary coil on said core, included in a primary energizing circuit, a secondary coil also on said core in inductive relation to the primary and mounted to oscillate on said core toward or from said primary, means for adjusting the reactance and resistance of the circuit including said primary coil, said circuit having its reactance and resistance so proportioned that the effect of its change in impedance under changes in frequencies of the primary current approximately balances the effect of changes in magnetizing current, and means for indicating the extent of movement of said secondary coil.

7. In an electrical measuring instrument, the combination with a core, of a primary and a secondary coil fixed upon said core at a distance apart, a movable secondary coil mounted to oscillate along the core between said fixed coils, said primary coil having such a number of turns that the effect of its change in impedance approximately balances the effect of changes in magnetizing current under changes in frequency of the primary current, and an indicator moved by said movable secondary coil.

870,633. FLOOR-CLEANING MACHINE. FLORENCE A. LEWIS, Shadypoint, Ind. Ter. Filed Nov. 22, 1906. Serial No. 344,611.



1. In a machine of the character described, the combination of a frame comprising upper and lower longitudinal rods, a removable head connecting the extremities of the rods at one end of the frame, rearwardly extending side pieces connected to opposite end portions of the rods, a carriage slidably mounted between the rods, a drive wheel mounted between the side pieces, and mechanism operated by the drive wheel for reciprocating the carriage.

2. In a machine of the character described, the combination of a frame comprising upper and lower longitudinal rods, a removable head connecting the extremities of the rods at one end of the frame, the said head being provided with means for supporting the frame, rearwardly extending side pieces connected to opposite end portions of the rods, a carriage slidably mounted between the rods, a drive wheel mounted between the side pieces, and mechanism operated by the drive wheel for reciprocating the carriage.

3. In a machine of the character described, the combination of a frame comprising a pair of oppositely arranged U members, a removable U-shape head connecting the extremities of the arms of the U members, a carriage slidably mounted between the arms of the two U members, a drive wheel connected to the frame, and mechanism operated by the drive wheel for reciprocating the carriage.

4. In a machine of the character described, the combination of a drive wheel provided with teeth upon opposite sides of its periphery, a frame connected with the drive wheel, a carriage slidably mounted upon the frame, gears meshing with the teeth on opposite sides of the drive wheel, crank shafts actuated by the gears, and pitmen connecting the crank shafts to the carriage.

5. In a machine of the character described, the combination of side bars having sockets at one end thereof, handle bars fitting in said sockets, a shaft mounted in the side bars, a drive wheel mounted upon the shaft and provided with teeth, gears meshing with the teeth upon the drive wheel, a frame carried by the opposite ends of the side bars, provided with oppositely arranged guide ways, a carriage slidably mounted within the guide ways, and connecting means between the before mentioned gears and the carriage whereby the latter is given a reciprocating motion through the action of the drive wheel.

6. In a machine of the character specified, a combination of side-bars forwardly diverged and having sockets at their rear ends, handle-bars fitted in said sockets, a shaft mounted in said side bars, a drive wheel mounted upon said shaft and provided with cog teeth at opposite portions, shafts located upon opposite sides of the drive wheel and provided with crank arms and connected to the respective cog gearing of the drive wheel, a frame extended forward from the aforementioned side-bars, a carriage mounted upon said frame and adapted to have a floor treating device fitted thereto, and pitman connections between said carriage and the aforementioned crank arms.

7. In a machine of the character described, the combination of a drive wheel, a frame connected therewith, a carriage slidably mounted upon the frame and comprising a body portion having extensions at opposite ends thereof, roller carrying plates fitted upon the extensions, and mechanism operated by the drive wheel for reciprocating the carriage.

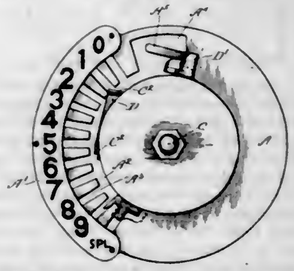
8. In a machine of the character specified a carriage comprising a body of angular formation in cross section and provided with end extensions, each extension comprising an angular portion and a rounded part, end pieces fitted upon the angular portions of said extensions and provided at their ends with supporting wheels and pitman connections fitted to the rounded portions of said extensions.

9. In a machine of the character described, the combination of a drive wheel, a frame connected therewith, a carriage slidably mounted upon the frame, and comprising a body portion having extensions at opposite ends thereof, each extension having an angular portion, roller bearing plates fitted upon the angular portions of the extensions, pitmen connected to the extensions, and means actuated by the drive wheel for operating the pitmen and reciprocating the carriage.

10. In a machine of the character described, the combination of side bars provided at one end thereof with downwardly extending arms, a frame carried by the opposite end portions of the side bars, a carriage slidably mounted upon the frame, a drive wheel journaled between said bars and provided upon its periphery with teeth, gear wheels carried by the before mentioned downwardly extending arms and meshing with the teeth upon the drive wheel, and means actuated by the gear wheels for reciprocating the carriage.

11. In a machine of the character described, the combination of a pair of side bars provided at one end with downwardly extending arms, a U-shaped member connected to the opposite end of each of the side bars, the said U-shaped members being arranged in parallel relation to each other and constituting a frame, a removable head for the frame, a carriage slidably mounted upon the frame, a drive wheel journaled between the side bars and having its periphery provided with teeth, gear wheels carried by the before mentioned downwardly extending arms at one end of the side bars, the said gear wheels meshing with the teeth upon the periphery of the drive wheel, and means actuated by the said gear wheels for reciprocating the carriage.

870,634. CALLING DEVICE FOR TELEPHONE-EXCHANGES. FRANK A. LUNDQUIST, Chicago, Ill. Filed May 28, 1906. Serial No. 319,065.



1. In a calling device, a series of indicating characters mounted upon a plate, a lever adapted to be moved by hand, means by which upon releasing the lever after being moved by hand to any indication said lever will pass within the device and out of reach of the operator, and means by which upon said lever passing within the device said device will automatically make a series of electrical contacts corresponding in number to the indication to which the lever was moved by hand.

2. The combination with a dial plate provided with numbers and having openings adjacent to its numbers, of a lever adapted to be manually moved to engage any one of said openings, a contact making device arranged to be set by such movement of said lever, and automatically operating means by which upon releasing said lever, it will pass behind said plate so as to be out of the reach of manual operation and said contact maker will make as many contacts as was primarily indicated by the manual operation of said lever.

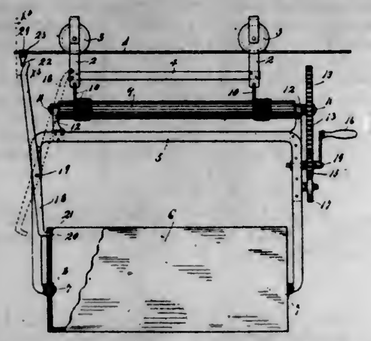
3. The combination with a calling device arranged to make a series of electrical contacts corresponding to a manual operation thereof, of a lever by which the device is set for any desired number of contacts to be made, and automatically operating means by which upon releasing said lever it will pass within the device and remain there during the making of the desired contacts.

4. In a calling device, the combination with a plate, and a lever adapted to move in one direction on one side of said plate and in the opposite direction on the other side, of an electrical connection arranged to be closed when the lever is on one side of the plate and to be open when it is on the other side.

870,635. LITTER-CARRIER. EDWARD B. MANN, Mankato, Minn. Filed July 19, 1907. Serial No. 384,644.

1. The combination with an overhead track, of a carrier frame made up of two sections, the upper of which has

wheels arranged to travel on said track, and the lower of which is supported from the upper section with freedom for vertical adjustments, a bucket pivotally mounted on the lower frame section, a bucket locking lever pivoted to said lower frame section and having its upper end arranged in a plane at one side of the overhead track, and a tripping abutment secured to said overhead track and provided with a laterally projecting portion that is engageable with the upper end of said lock lever under different vertical adjustments of said lower frame sections, substantially as described.



2. The combination with an overhead track and a tripping abutment supported thereby but projecting at one side thereof, of a carrier frame made up of two sections, the upper of which has wheels arranged to travel on said track, and the lower of which has depending legs, a bucket mounted on said legs, means supporting said lower frame section from the upper frame section with freedom for vertical adjustments, and a lock lever intermediately pivoted to said lower frame section and operative to lock said bucket in working position, and the upper end of which lock lever is in a vertical plane offset from the vertical plane of said track and is engageable with said tripping abutment under different vertical adjustments of said lower frame section, substantially as described.

870,636. KEY-RING. ARTHUR H. MERRILL, Hartford, Conn. Filed Feb. 21, 1906. Serial No. 302,165.



1. A ring having free ends, a device uniting said free ends, and rotatable thereon, and a projection carried by, and parallel with, said device.

2. A ring having free ends, a spring-actuated plunger connecting said free ends, and rotatable thereon; and a blade carried by the plunger and engaging the ring.

3. A key-ring comprising a wire-loop, having a socket in one end, a spring-actuated plunger connecting the free ends of the loop, and free to rotate when withdrawn, a plate carried by said plunger, and a blade projecting from said plate, and having its end shaped to enter the socket in the ring.

870,637. INCANDESCENT-LAMP GUARD. CHARLES MOLITOR, Chicago, Ill., assignor to James H. McGill, Valparaiso, Ind. Filed Mar. 8, 1906. Serial No. 304,946.

1. A guard for incandescent lamps, comprising in combination a supporting member consisting of a cup having a stem through which the electrical connections pass, and carrying the lamp socket, an annular flange on said cup at one end provided with a plurality of key-hole openings, a perpendicular annular flange at the free end of said first-named flange, a plurality of recesses in said first-named flange alternating with said openings therein, and a guard member comprising a cage consisting of two parallel flat rings, two sets of perpendicularly disposed bars passing through and secured in said rings, said bars being relatively alternated and one set thereof secured in one end in the upper ring and held thereby against revolution relatively to said ring, and the other ends of said bars being threaded and passing through threaded openings in the lower ring, thumb-nuts on the threaded ends of said bars having central openings enlarged at one end, the extreme free ends of threaded ends of said bars being upset to prevent removal of said thumb-nuts.



2. A guard for incandescent lamps, comprising in combination a supporting member consisting of a cup having a stem through which the electrical connections pass, and carrying the lamp socket, an annular flange on said cup at one end provided with a plurality of key-hole openings, a perpendicular annular flange at the free end of said first-named flange, a plurality of recesses in said first-named flange alternating with said openings therein, said cup being provided with an annular L-shaped recess inwardly of said first-named flange, the cylindrical wall of said recess being threaded, an inverted glass cup threaded at one end adapted to fit said recess, and a rubber washer disposed in said recess and adapted to be compressed by the edge of said cup, and a guard member comprising a cage consisting of two parallel flat rings, two sets of perpendicularly disposed bars passing through and secured in said rings, said bars being relatively alternated and one set thereof secured in one end in the upper ring and held thereby against revolution relatively to said ring, and the other ends of said bars being threaded and passing through threaded openings in the lower ring, thumb-nuts on the threaded ends of said bars having central openings enlarged at one end, the extreme free ends of threaded ends of said bars being upset to prevent removal of said thumb-nuts.

3. A guard for incandescent lamps comprising in combination a supporting member consisting of a cup having a stem through which the electrical connections pass, and carrying the lamp socket, an annular flange on said cup at one end provided with a plurality of key-hole openings, a perpendicular annular flange at the free end of said first-named flange, a plurality of recesses in said first-named flange alternating with said openings therein, said cup being provided with an annular L-shaped recess inwardly of said first-named flange, the cylindrical wall of said recess being threaded, an inverted glass cup threaded at one end adapted to fit said recess, and a rubber washer disposed in said recess and adapted to be compressed by

the edge of said cup, an insulating plug in said stem, through which said electrical connections pass, a member adapted to receive said stem, and a supporting member to which said last-named member is adapted to be removably secured, and a guard member comprising a cage consisting of two parallel flat rings, two sets of perpendicularly disposed bars passing through and secured in said rings, said bars being relatively alternated and one set thereof secured in one end in the upper ring and held thereby against revolution relatively to said ring, and the other ends of said bars being threaded and passing through threaded openings in the lower ring, thumb-nuts on the threaded ends of said bars having central openings enlarged at one end, the extreme free ends of threaded ends of said bars being upset to prevent removal of said thumb-nuts.

4. A guard for incandescent lamps comprising a supporting member carrying the lamp and having an annular portion provided with openings, and a guard or cage member adapted to receive said lamp and be secured to said supporting member, said guard or cage member carrying a plurality of threaded projections carrying nuts, said nuts being adapted to pass through said openings at one end thereof and to engage said annular portion adjacent said openings when said cage is turned relatively to said supporting member, said openings and said threaded ends of said bars and said nuts constituting a bayonet joint, the central openings in said nuts being enlarged at one end and said threaded ends of said bars being upset at their ends to prevent removal of said nuts.

5. In a device of the kind specified, the combination with a supporting member having an annular supporting surface provided with a plurality of key-hole openings and with recesses between said openings, of a cage or guard member comprising a plurality of parallel rings, bars disposed perpendicularly to said rings and passing therethrough, alternate bars being threaded at their ends and passing through threaded openings in the lowermost ring, nuts on the projecting threaded ends having their openings enlarged at one end to receive the upset extreme ends of said threaded portions, the other bars being upset at their lower ends below said rings, the said threaded ends and nuts being adapted to pass through said keyhole openings and said upset ends of said other bars being adapted to enter said recesses.

6. In a device of the kind specified, the combination with a supporting member having an annular supporting surface provided with a plurality of key-hole openings and with recesses between said openings, of a cage or guard member comprising a plurality of parallel rings, bars disposed perpendicularly to said rings and passing therethrough, alternate bars being threaded at their ends and passing through threaded openings in the lowermost ring, nuts on the projecting threaded ends having their openings enlarged at one end to receive the upset extreme ends of said threaded portions, the other bars being upset at their lower ends below said rings, the said threaded ends and nuts being adapted to pass through said key-hole openings and said upset ends of said other bars being adapted to enter said recesses, the other ends of said last-named bars being curved and convergent and provided with heads, recessed clamping members adapted to receive said heads and engage said bars, and a hook having a reduced threaded shank adapted to engage said clamping members and force the same toward each other.

7. In a device of the kind specified, the combination with a supporting member having an annular supporting surface provided with a plurality of key-hole openings and with recesses between said openings, of a cage or guard member comprising a plurality of parallel rings, bars disposed perpendicularly to said rings and passing therethrough, alternate bars being threaded at their ends and passing through threaded openings in the lowermost ring, nuts on the projecting threaded ends having their openings enlarged at one end to receive the upset extreme ends of said threaded portions, the other bars being upset at their lower ends below said rings, the said threaded ends and nuts being adapted to pass through said key-hole openings, and said upset ends of said other bars being adapted to enter said recesses, the other ends of said last-named bars being curved and convergent and provided with heads, recessed clamping members adapted to receive said heads and engage said bars, and a hook having a reduced threaded shank adapted to engage said clamping members and force the same toward each other, the other ends of said threaded bars being upset and engaging the uppermost ring, and means for holding said threaded bars against revolution relatively to said rings.

8. In a device of the kind specified, the combination with a cage comprising a plurality of parallel rings, and two sets of bars disposed perpendicularly relatively to said rings and passing through openings in the latter, one set of said bars being upset to engage the lowermost ring and having their ends curved and converging and provided with heads at their ends adapted to enter and be engaged by a suitable clamping device, and the other set of bars being upset at their upper ends to engage the uppermost ring and threaded at their lower ends, said threaded ends passing through threaded openings in the lowermost ring and carrying nuts below the latter, said ends being upset to prevent removal of said nuts, of a supporting member carrying the lamp and provided with a concentric supporting surface provided with key-hole openings to receive said nuts and threaded ends and with recesses to receive the upset lower ends of the other set of said bars, a stem on said supporting member through which the feed wires pass, and a base adapted to be removably secured to said stem.

9. In a guard cage, the combination with converging wires provided adjacent their free ends with annular grooves, of dished clamping members provided in their edges with recesses adapted to receive the grooved portions of said wires, said clamping members being each provided with a central opening, one of said openings being threaded, and a member of greater diameter than either of said central openings having a threaded shank adapted to pass freely through the central opening in one of said members and engage the threaded opening in the other to draw said members toward each other.

10. In a guard cage, the combination with converging wires provided adjacent their free ends with annular grooves, of dished clamping members disposed edge to edge and provided with recesses in said edges adapted to receive the grooved portions of said wires, there being central openings in said clamping members, and means passing through said central opening and engaging both said clamping members for holding the same in engagement with said wires.

11. A device of the kind specified, comprising a handle-portion and a cage portion, a supporting plate on handle portion provided adjacent its periphery with a plurality of key-hole slots, threaded projections on said cage member adapted to enter said slots, and nuts disposed on said threaded projections having their central openings annularly enlarged at their outer ends, the free ends of said threaded projections being upset to prevent removal of said nuts.

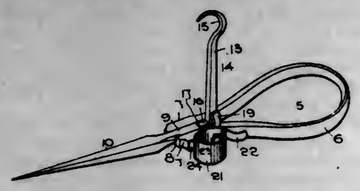
12. A lamp guard having a cage adapted to receive the lamp bulb, a plurality of inwardly projecting laterally movable loops disposed in said cage, and a wire passed through said loops and engaging the lamp bulb adjacent its free end to cushion the same.

13. A lamp guard having a cage adapted to receive the lamp bulb, a plurality of inwardly projecting laterally movable loops disposed in said cage, and a flexible wire passed through said loops and engaging the lamp bulb adjacent its free end to cushion the same.

14. A lamp-guard having a cage provided between its ends with a reinforcing ring, flexible tongues secured to said ring and projecting inwardly therefrom and longitudinally toward the mouth thereof, said tongues being adapted to yieldingly engage the lamp bulb to cushion the same.

15. A guard for incandescent electric lamps provided with a threaded projection adapted to receive a lamp socket, and cushioning means disposed in the path of said socket, said means comprising a dished washer provided in its outer edge with substantially radial recesses.

870,688. MINER'S CANDLESTICK. GUY D. NEILL, Denver, Colo. Filed Mar. 4, 1907. Serial No. 360,548.



1. In a miner's candle stick, the combination of an expansible yoke having normally parallel, longitudinally grooved jaws, and a pair of pivotally connected supporting devices, pivotally positioned within the grooves, the said yoke being adapted to pinchingly retain the said devices in their adjusted positions.

2. In a miner's candle stick, the combination of an expansible yoke having jaws adapted to clamp an interposed object, and a pair of pivotally connected supporting devices, pivotally mounted between the said jaws, the said yoke being adapted to pinchingly retain the said devices in their adjusted positions.

3. In a miner's candle stick, the combination of an expansible yoke having normally parallel, longitudinally grooved jaws, an entering point having a rounded terminal portion normally within the grooves and pivotally mounted between the jaws at a point intermediate its extremities, and a suspending hook, pivotally secured upon the extremity of the said terminal portion, the said yoke being adapted to pinchingly retain the said entering point in its adjusted positions.

4. In a miner's candle stick, the combination of a resilient handle having normally parallel, longitudinally grooved jaws, an entering point having a bifurcated terminal portion normally within the grooves and pivotally mounted between the jaws at a point remote from its extremity, and a hook member having a lateral lug pivotally secured upon the bifurcated terminal.

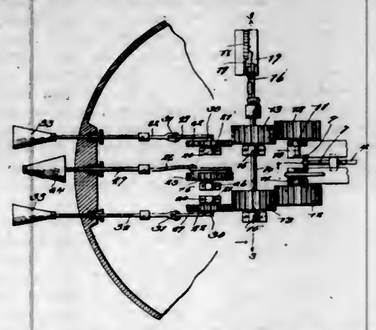
5. In a miner's candle stick, the combination of a resilient handle having normally parallel, longitudinally grooved jaws, an entering point pivotally mounted between the jaws, a suspending hook pivotally secured at the inner extremity of the said point, and an arm upon the handle having a proturberance adapted to engage the said hook when the latter is at right angles to the entering point and its pivoted extremity is within the handle.

6. In a miner's candle stick the combination of a resilient handle having normally parallel, longitudinally grooved jaws, an entering point pivotally mounted between the jaws, a suspending hook, pivotally secured at the inner extremity of the said point and a locking means upon the handle adapted to frictionally engage the said hook when the latter is at right angles to the entering point and its pivoted extremity is within the handle.

870,639. PROPELLER. JAMES NIELSEN, Lake Forest, Ill. Filed June 27, 1907. Serial No. 381,033.

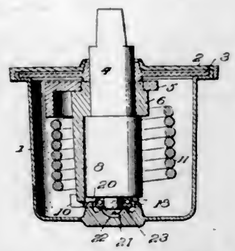
1. In a device as specified, an engine having a reciprocating piston rod, a crank shaft having gears at its ends, said rod having a pitman rod connection with the crank shaft, a pair of outside propellers, gears having pitman rod connections therewith, a centrally disposed propeller, a centrally disposed gear having a pitman connection therewith, and movable means adapted to engage the centrally disposed gear at certain times for stopping the boat without stopping said engine or reversing the same.

2. In a device as specified, a boat equipped with a pair of propellers for driving the same forward, gears having pitman rod connections therewith, a centrally disposed propeller so formed as to impinge against the water, a centrally disposed gear having a pitman rod connection therewith, axially movable gears for imparting motion at certain times to the centrally disposed propeller, a lever having a rod connection with said movable gears for moving the same, an engine, gears having a crank shaft to be operated thereby, said last-named gears being continually in engagement with the movable gears.



3. In a device as specified, a boat having an engine provided with a reciprocating piston rod, a crank shaft having gears at its ends, said rod having a pitman rod connection with the crank shaft, a pair of outside propellers, gears having pitman rod connections therewith, a centrally disposed propeller, a centrally disposed gear having a pitman connection therewith, axially movable gears for imparting motion at certain times to the centrally disposed propeller, for stopping the boat without stopping said engine or reversing the same and means for moving the said movable gears.

870,640. DOOR-CONTROLLING DEVICE. CHARLES H. OCUMPAUGH, Rochester, N. Y. Filed Jan. 22, 1906. Serial No. 297,229.



1. In a floor hinge, a casing, sleeves, a spring connecting the sleeves, and a spring-tension-adjusting-device forming part of the permanent structure, said device maintaining the tension produced thereby.

2. In a floor hinge, a casing, a pintle, a sleeve on the pintle, a spring-carrying sleeve on the first named sleeve, a spring connecting the sleeves, and means for adjusting the normal situation of the sleeves to vary the tension of the spring said means consisting of a screw operatively engaged with one sleeve and bearing on the other.

3. In a floor hinge, a casing having a cover-receiving flange surrounding its open top, a detachable casing cover on the flange, a pintle, a sleeve on the pintle, a spring-carrying sleeve on said first named sleeve, a spring connecting the sleeves, and means for adjusting the relative circumferential situation of the sleeves to vary the tension of the spring, said casing having an opening in its side and below its covers and said flange to permit said adjustment.

4. In a floor hinge, a casing, a detachable spring-controlled rotatable pintle having a reduced portion, ball raceways mounted thereon, balls in said raceways, and separable means distinct from the casing for holding the raceways against longitudinal movement on the pintle.

5. In a floor hinge, a casing, a detachable spring-controlled rotatable pintle having a reduced portion, ball raceways mounted thereon, balls in said raceways, and separable means distinct from the casing for holding the raceways against longitudinal movement on the pintle, said casing having a socket or seat, and a bearing therein for the lower raceway, and also a recess for the raceway-holding means.

870,641. SASH-FASTENER. JOHN C. O'NEILL, Hamburg, N. Y. Filed Mar. 12, 1906. Serial No. 305,534.

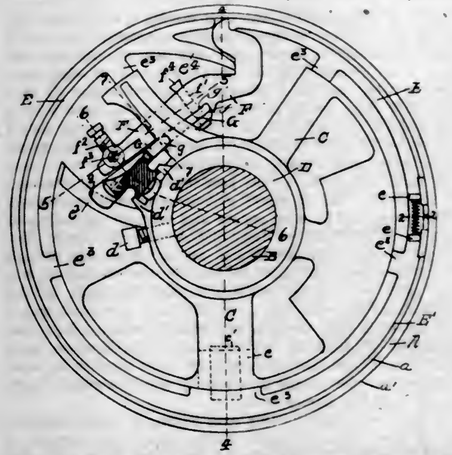


1. A window fastener comprising a body pivoted to one member of a window, an arm extending from said body substantially in the plane thereof, a sharpened projection extending from one side of said arm and adapted to be driven into another member of the window, and a driving portion on said arm opposite to said sharpened projection, substantially as set forth.

2. A window fastener comprising a body pivoted to one member of a window, an arm offset from said body, and a sharpened projection extending from one side of said arm and adapted to be driven into another member of the window, said offset arm forming a driving portion for said sharpened projection, substantially as set forth.

3. A window fastener comprising a pivoted body, a sharpened projection extending from said body substantially in the plane thereof, a driving portion extending at an angle to the plane of the body, and a second sharpened projection offset from said body, substantially as set forth.

870,642. FRICTION-CLUTCH. ALFRED OSKAMP, Wyoming, Ohio. Filed Mar. 13, 1906. Serial No. 305,753.



1. In a key for operating friction clutches, the combination of a contact piece secured to the key by means of a rivet having a flaring head adapted to strip under strain; and a set screw adapted to press the contact piece away from the key thereby permitting adjustment through a large arc, substantially as specified.

2. In a key for operating friction clutches, the combination of a contact piece secured to the key by means of a rivet having a flaring head, the rivet hole being countersunk between the two, to form a space around the rivet; and a set screw adapted to press the contact piece away from the key, substantially as specified.

3. In a friction clutch, the combination of an element having a friction surface; a friction ring adapted to contact therewith; a key for applying the ring to the surface; a contact piece provided with a beveled surface and secured to the key by means of a rivet having a flaring head; a set screw carried by the key and engaging the contact piece immediately behind the highest portion of its beveled surface; and an operating nose adapted to engage the beveled surface on the contact piece and operate the key, substantially as specified.

4. In a friction clutch, the combination of an element having a friction surface; a friction ring adapted to contact therewith; a key for applying the ring to the surface; a contact piece provided with a beveled surface and secured to the key by means of a rivet having a flaring head, the rivet hole being countersunk between the two, to form a space around the rivet; a set screw carried by the key and engaging the contact piece immediately behind the highest portion of its beveled surface; and an operating nose adapted to engage the beveled surface on the contact piece and operate the key, substantially as specified.

5. In a friction clutch, the combination of an element having a friction surface; a friction ring adapted to contact therewith; key F contact piece G provided with a beveled surface and secured to the key by means of a rivet having a flaring head, the rivet hole being countersunk between the two to form a space around the rivet; a set screw carried by the key and engaging the contact piece immediately behind the highest point of the beveled surface; lugs g engaging members c^2 for guiding the key; stop f for limiting the movement of the key; and an operating nose adapted to engage piece G and operate the key, substantially as specified.

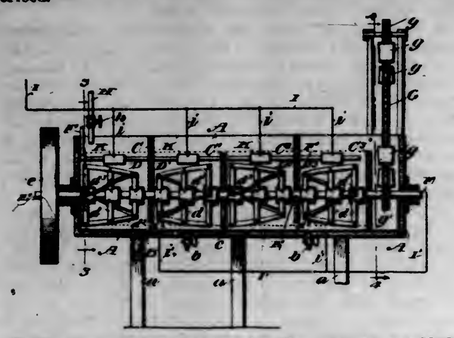
6. In a friction clutch, the combination of a friction surface; a metallic friction ring mounted concentrically therewith; a loose friction ring interposed between the metallic friction ring and the friction surface and projecting beyond them; sockets secured to the projecting edges of the loose ring; springs imprisoned between the sockets and adapted to expand the ring, and means for expanding the metallic ring, substantially as specified.

7. In a friction clutch, the combination of a friction surface; a metallic friction ring mounted concentrically therewith; a loose friction ring interposed between the metallic friction ring and the friction surface and projecting beyond them; sockets secured to the projecting edges of the loose ring; clamps adapted to engage sockets and relieve the tension on the ring; springs imprisoned between the sockets and adapted to expand the ring; and means for expanding the metallic ring, substantially as specified.

870,643. AMALGAMATOR. GEORGE E. PAULLINS, Colorado Springs, Colo., assignor of five twenty-fourths to Charles E. Bibb, five twenty-fourths to Charles H. Theobald, and five twenty-fourths to Haywood L. Butler, Colorado Springs, Colo. Filed Oct. 6, 1905. Serial No. 281,677.

1. The improved apparatus for the purpose specified comprising a wooden trough having its rounded bottom lined with copper and provided with a series of transverse partitions alternate ones extending to the bottom and terminating below the top of the trough and others terminating above the bottom of the trough and extending to the top thereof, a shaft passing through the longitudinal center of the trough, a series of agitators keyed thereon and comprising radial arms and strips connecting their outer ends, an endless conveyer arranged in the last compartment which is adjacent to the last of the series of agitators, a perforated pipe arranged along one side of the trough for delivering mercury into the several compartments containing the agitators, a pipe arranged for discharging a saline solution into the trough, and electric-circuit connections comprising conductors extending to a source of electric supply, one of said conductors being connected with the copper lining of the trough and the other

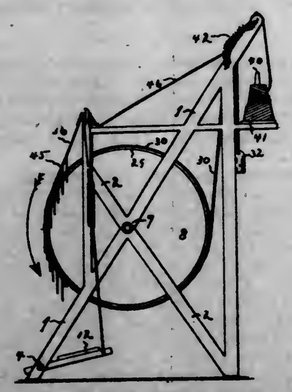
with plates arranged in the trough, as shown and described.



2. The improved apparatus for the purpose specified, comprising a wooden trough having its rounded bottom provided with a copper lining, a series of transverse wooden partitions, the first and third extending to the top of the trough and terminating short of the bottom thereof and the alternating or second and fourth partitions extending to the bottom and terminating short of the top, whereby a passage for fluid is provided beneath one partition and over the adjacent one as described, a longitudinal shaft passing through the trough and its several partitions, and a series of agitators corresponding in number to the compartments of the trough, the same consisting of a series of radial arms fixed to the shaft, and metal strips connecting their outer ends, the arms being arranged spirally so that the strips are inclined to the axis of the shaft, as shown and described.

3. The improved apparatus comprising a wooden trough having a copper-lined bottom, a series of transverse wooden partitions terminating alternately short of the bottom and top of the trough as described, a longitudinal shaft, and a series of agitators arranged one in each of the several compartments formed by said partitions, and pipes arranged for delivery of mercury and a saline solution into the trough, the bottom of the latter having cocks for drawing off the amalgam, and a conveyer arranged at the rear end of the trough for removing the ore deposited from the solution, as shown and described.

870,644. NET-MAKING MACHINE. HENRY T. RICHMOND, Malvern, Iowa. Filed Oct. 29, 1906. Serial No. 340,944.



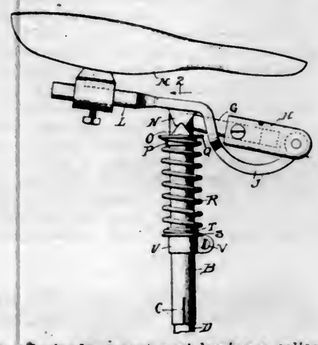
1. A machine for the purpose described, comprising a pair of recessed shifting-bars disposed adjacent and parallel with reference to each other; a revoluble table having an outer surface disposed parallel with and adjacent to said shifting-bars, and means to cause a longitudinal movement of said recessed shifting bars.

2. A machine for the purpose described, comprising a pair of shifting-bars disposed adjacent and parallel with reference to each other; a revoluble table having an outer surface disposed parallel with and adjacent to said shifting-bars, and means to cause a simultaneous longitudinal movement of said shifting-bars.

3. A machine as described comprising a pair of shifting-bars, mounted upon a suitable frame and disposed adjacent and parallel with reference to each other; an operating table formed as a cylinder and mounted upon said frame and having a surface disposed parallel with and adjacent to said shifting-bars; means to cause a revoluble movement of the operating table and means to cause a simultaneous longitudinal movement of said shifting-bars in directions opposite to each other.

4. A machine for the purpose described, comprising a pair of adjacently disposed recessed shifting-bars; a revoluble table having an outer surface disposed adjacent to said shifting bars; and means to cause a longitudinal movement of said adjacently-disposed shifting-bars in directions opposite to each other.

870,645. VELOCIPEDE SEAT-POST. MEYER ROSEN, Bloomington, Ill. Filed Mar. 18, 1907. Serial No. 362,963.

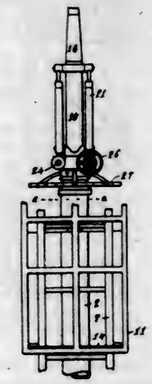


1. In a velocipede, a seat post having a collar disposed on its lower end, a spiral spring supported thereon, a collar supported by said spring and movable on said seat post, a bifurcated arm on the upper end of said seat-post, a lever pivotally secured in the free end of said arm, said lever being provided between its ends with a longitudinal slot adapted to receive said seat-post, and a seat mounted upon the free end portion of said lever, the latter being supported by said spring.

2. In a velocipede, a seat post having a collar disposed on its lower end, a spiral spring supported thereon, a collar supported by said spring and movable on said seat post, inverted V-shaped lugs disposed on the upper face of said collar, a bifurcated arm on the upper end of said seat post, a lever pivotally secured in the free end of said arm, said lever being provided between its ends with a longitudinal slot adapted to receive said seat-post, and a seat mounted upon the free end portion of said lever, and depending projections, on said lever disposed on each side of said slot and provided at their free ends with V-shaped recesses adapted to receive the free ends of said lugs on said last-named collar.

3. In a velocipede, a seat post having a collar disposed on its lower end, a spiral spring supported thereon, a collar supported by said spring and movable on said seat post, inverted V-shaped lugs disposed on the upper face of said collar, a bifurcated arm on the upper end of said seat post, a lever pivotally secured in the free end of said arm, said lever being provided between its ends with a longitudinal slot adapted to receive said seat-post, and a seat mounted upon the free end portion of said lever, and depending projections, on said lever disposed on each side of said slot and provided at their free ends with V-shaped recesses adapted to receive the free ends of said lugs on said last-named collar, said pivoted end portion of said lever being curved and extending below said arm of said seat post, and said slot extending into said curved portion thereof.

870,646. WATER-TOWER. WILLIAM H. SHAFER, Cincinnati, Ohio. Filed Apr. 19, 1906. Serial No. 312,608.



1. The combination of a derrick, a tube movable longitudinally therein, a flexible tube swiveled thereon and terminating in a nozzle, an extensible arm adapted to bend the flexible tube with the nozzle in different angles and means for actuating the arm.

2. The combination of a main mast, a tubular top mast extensibly secured thereto, a flexible tube secured thereon and provided with a nozzle, a worm gear mechanism and an extensible lever actuated thereby for bending the tube with the nozzle in different angles.

3. The combination of a tubular mast, a conning deck attached to its upper portion, a flexible tube swiveled on the top of the mast and terminating in a nozzle, a pilot wheel for rotating, and hand actuated lever mechanism for bending, the flexible tube, said pilot wheel and said mechanism being both accessible from the deck.

4. The combination of a stand pipe a conning deck mounted on the upper portion thereof, a flexible tube swiveled on the top portion of said stand pipe and provided with a nozzle, and lever mechanism actuated by a hand wheel accessible from the conning deck and adapted to move and maintain the flexible tube in different positions of curvature with the nozzle in different angles to the stand pipe.

5. The combination of a derrick, an inflexible tube extensibly mounted therein, a conning deck mounted on its upper portion, a flexible tube swiveled on the upper end of the inflexible tube and provided with a nozzle, extensible means of access to the deck, hand actuated mechanism accessible from the deck for either rotating or bending the flexible tube, and hand actuated mechanism for moving and maintaining the tube in different extensible positions in relation to the derrick.

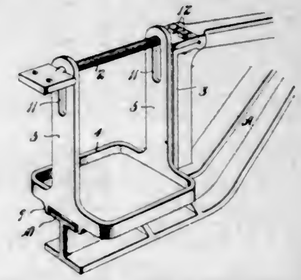
870,647. CAR-TRUCK. CHARLES S. SHALLENBERGER, St. Louis, Mo. Filed Aug. 12, 1907. Serial No. 388,202.

1. A side frame for car trucks formed with a recess in its upper face and provided with a combined compression member and spring seat support which closes the top of said recess; substantially as described.

2. A cast metal side frame for car trucks formed with a recess in its upper face and provided with a removable spring seat support which extends across said recess and closes the top thereof; substantially as described.

3. A cast metal side frame for car trucks having a recess in its upper face, columns forming the sides of said recess, and a removable spring seat support resting on said columns and closing the top of said recess; substantially as described.

4. A car truck comprising a cast side frame having a recess, a removable compression member spanning said recess, a spring seat arranged within said recess and pivoted to said member, and a bolster yieldingly supported on said spring seat; substantially as described.



5. A car truck comprising a side frame having a recess that is normally closed at its top by a removable compression member, a spring seat pivoted to said member, and a bolster yieldingly supported on said spring seat; substantially as described.

6. A car truck comprising a side frame having a recess, a removable compression member located within and closing the top of said recess, a spring seat pivoted to said compression member, and a bolster yieldingly supported on said spring seat; substantially as described.

7. A car truck comprising a side frame having a recess that is enlarged at its top, a removable compression member located within and closing the top of said recess, a spring seat having upwardly extending arms that are pivoted to said compression member, lugs for limiting the movement of the spring seat, a bolster interposed between said compression member and spring seat, and a spring interposed between the bolster and spring seat; substantially as described.

8. A car truck comprising a side frame, a bar having flattened ends which are secured to the side frame, a spring seat having slotted arms through which said bar passes, and a bolster yieldingly supported on said spring seat; substantially as described.

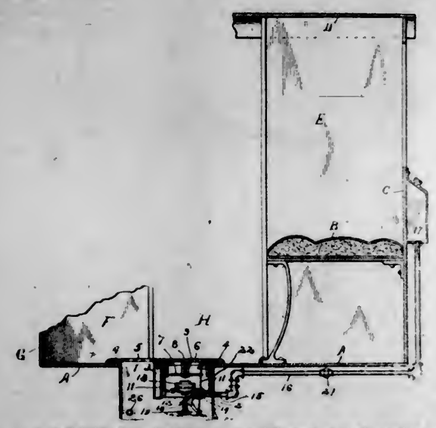
9. A car truck comprising a bolster having slots adjacent its end, a spring seat having upwardly extending arms which pass through said slots, a support for the spring seat arranged above the bolster, and a spring interposed between the bolster and spring seat; substantially as described.

10. In a car truck, side frames, springs, spring seats supported by removable members, said spring seat supports being rigidly secured to the side frames, a bolster having its end portions interposed between said springs and spring seat supports, and means for limiting the movement of said bolster and spring seats; substantially as described.

11. In a car truck, cast metal side frames each of which is formed with a recess in its upper face, spring seat supports extending across said recesses, spring seats pivoted to said supports, a bolster, springs interposed between the bolster and spring seats, and means for limiting the movement of said bolster and spring seats; substantially as described.

12. In a car truck, cast metal side frames each of which is formed with a recess in its upper face, removable spring seat supports extending across said recesses, spring seats pivoted to said supports, a bolster, springs interposed between the bolster and spring seats, and means for limiting the movement of said bolster and spring seats; substantially as described.

870,648. VEHICLE-HEATER. JOHN A. SHUTZ and MADISON L. KIRKMAN, Richmond, Ind., assignors, by direct and mesne assignments, of one-half to The Standard Pattern & Mfg. Co., Richmond, Ind., and one-fourth to Henry A. Wehrly and one-fourth to Lewis C. Ashman, New Paris, Ohio. Filed Oct. 18, 1906. Serial No. 339,430.



1. A vehicle floor-heater, comprising a metal casing or box constructed to depend from the floor of the vehicle and having a combustion chamber, a burner-supporting spider secured to the side walls of the combustion chamber intermediate its depth, layers of heat-non-conducting material overlying the upper portions of the inner surfaces of the side-walls of the combustion chamber and supported at their lower edges on the upper side of the spider, and a grate-carrying floor-plate overlying the top of the casing and having depending flanges which overlie the inner surfaces of said heat non-conducting layers and confine them against the walls of the combustion chamber.

2. A vehicle floor-heater, comprising a metal casing or box constructed to depend from the floor of the vehicle and having a vertical partition extending downward from its top and terminating above its bottom, dividing the interior of the casing into a cold-air chamber and a combustion chamber which communicate at their bottoms, a liquid-fuel burner within the combustion chamber, means supporting the burner from the side walls of the combustion chamber, a starting oil-cup supported by and below the burner, a portion of the bottom of the casing being constructed to open to give access to said oil-cup, and a removable grate covering the top of the combustion chamber and giving access to the burner.

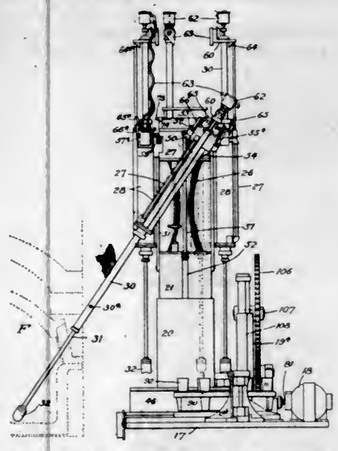
870,649. GLASS GATHERING AND PRESSING MACHINE. THEODORE C. STEIMER, Buckhannon, W. Va. Filed Mar. 10, 1906. Serial No. 305,425.

1. The combination with continuously operating automatic glass pressing mechanism, of an automatic gathering device having means to continuously supply the press mold, and cutting off in the furnace before removal from the mass, a definite quantity of glass for said molds.

2. The combination of a continuously operating glass pressing machine, an automatic gathering and measuring mechanism adapted to deliver to each mold a definitely measured quantity of glass, and means by which the gathering head follows the falling level of glass in the furnace in proportion to the amount taken out.

3. In a glass gathering machine, the combination of a measuring device having a cup of definite capacity, means to positively close the cup and sever the charge while the cup is in the mass of glass, and automatic means to thrust the gathering cup into the melting pot and remove it therefrom.

4. The combination with a gathering and measuring device having automatic means to open and close it in the mass of glass, of automatic means to introduce the gatherer into the furnace and to carry the charge of glass and expel it into the mold.



5. In a glass gathering machine, the combination of a set of pivoted cylinders, each having on its piston rod a gathering and measuring device, and suitable mechanism to swing the cylinder and thrust the measuring device into the pot and withdraw it, and means to place the measurer over the mold and to automatically and forcibly expel the charge of glass therefrom.

6. The combination with a pivoted cylinder and means to move it, of an extensible piston rod therefor, a gathering and measuring device on the piston rod, and automatic means to open and close the measuring device, and to carry the piston rod to position to discharge the glass into a mold.

7. In a glass gathering machine a gathering head having means to cut off in the mass and take out of the pot an exact measured quantity of glass, a support and carrier for said head and means to extend the reach of the support in exact proportion to the change of level in a receptacle containing the supply of glass.

8. In a glass gathering machine, a gathering head adapted to remove from a furnace a definite quantity of metal, a supporting arm for the head having a straight-away motion to dip the head in the glass, and an automatic regulating device on the arm adapted to increase the reach of the gatherer in proportion to the measured amount of glass removed.

9. In a glass gathering machine a gathering head with a flared mouth and means to thrust it into the mass of glass and thereby fill it, means to retain the charge, and automatic means to forcibly expel the glass from the gathering head.

10. A glass gathering device comprising a receptacle adapted fo dip into the glass, and a rotary cutter inside the receptacle adapted to separate the charge from the mass before removal.

11. In a glass gathering and pressing machine, the combination with a traveling mold plate, and a traveling support carrying a series of gatherers, of a rack and pinion mechanism to move the said mold carrier and gatherer support by harmonic motion, substantially as described.

12. In a glass handling machine a gathering head and means to thrust it into a mass of glass, and means in said head to allow escape of the air and to cut off a definite measured quantity of glass before removal from the mass.

13. In a glass gathering machine, the combination with a reciprocating support carrying a gathering device, and automatic means on said support to extend its reach at each reciprocation.

14. In a gathering machine, the combination with a cylinder and a reciprocating piston rod therein carrying a gathering device, of means for regulating the reach of the piston rod, comprising a threaded extension of the piston rod having a gear wheel threaded thereon, a trip on said extension and a pin on the cylinder adapted for turning said gear at each reciprocation of said rod, substantially as described.

15. In a gathering machine, the combination with a cylinder having a hollow reciprocating piston rod carrying a gathering device, of means for regulating the reach of the rod, comprising a threaded extension therein carrying a gear wheel thereon, a support on the extension carrying an adjustable trip for turning said gear and an adjustable stop engaging the trip at each reciprocation of said rod, substantially as described.

16. A glass gathering and measuring device comprising a casing block with a flared opening, a hollow measuring cup seated in the casing for rotation therein, having an opening in register with said casing opening, and means to turn said measuring cup in the casing to shear off the glass therein.

17. In a glass gathering and measuring device, the combination with an open mouthed casing having a cylindrical opening, of a cylindrical cup turning therein, said cup having a mouth in register with the mouth of the casing, and means to turn the cup, whereby the edge of its opening will sever the glass extending therein.

18. A glass gathering and measuring device comprising a rotary cup having perforations through its bottom, a casing for the cup having an opening registering with the mouth of the cup, and openings for the escape of air, and means to rotate the cup after it is filled so as to sever and separate the glass extending into the cup.

19. A glass measuring cup adapted to receive and cut off a definite quantity of glass in the furnace before removal from the mass, and automatic means to operate the cup and to introduce and remove it from the furnace.

20. A glass measuring device comprising a casing having a flared mouth, a rotary cup and cutter in the casing, means to carry the cup and automatic means on the carrier to rotate the cup, substantially as described.

21. The combination with a rotary measuring cup of means to close and open the same and means to forcibly discharge the glass therefrom, substantially as described.

22. The combination with a measuring cup, of means to cause removal of the air therefrom by pressure of the glass itself when it is thrust into molten glass, and means to eject the glass and cool the cup by a blast of compressed air.

23. In a glass measuring device, the combination with a casing having a mouth and an opening closed by a removable plate, of a combined measuring cup and cutter operating in said opening to intermittently register with the mouth of the casing and removable by taking off said plate.

24. In a glass measuring device, the combination with a casing having a cylindrical opening, of a removable steel lining therein, and a rotary cylindrical measure and cutter within the steel lining, and means for revolving said cutter.

25. The combination with automatic means for gathering and severing a charge of glass from the mass while in a furnace before lifting from the mass, of automatic means to carry it to a mold, and to discharge the glass into the mold.

26. In a feeding device for glass gathering machines, the combination of an extensible supporting arm for a gathering and measuring tool having a threaded portion, a gear threaded thereon, an operating gear and shaft therefor, a trip attached to said shaft and a spring ratchet, and adjustable means to throw the trip through varying arcs, whereby the rate of extension of the arm may be regulated.

27. The combination with a main cylinder 28, having an extensible and adjustable piston rod, of a glass measuring device on one end of said piston rod, operating means for opening and closing the measuring device, comprising an auxiliary cylinder carried on the other end of said piston rod, and automatic means on the main cylinder to operate the closing device when the piston descends carrying the auxiliary cylinder, substantially as described.

28. In a glass gathering machine, the combination of a rotary column 21, a series of pivoted cylinders 28 carried thereon, means to swing said cylinders on their pivots, valves to operate the piston in said cylinders, an automatic glass measuring device carried on the rod of said piston, and means operated by the motion of the pivoted cylinder to open and close the measuring device, substantially as described.

29. In a glass gathering machine the combination of a pivoted main cylinder, an operating piston rod therein carrying an automatic gathering device, said piston rod extending through the top of the main cylinder, and carrying thereon an auxiliary cylinder, and proper trips and valves operated thereby by the swinging movement of the main cylinder to actuate the piston of the auxiliary cylinder and operate the gathering device, substantially as described.

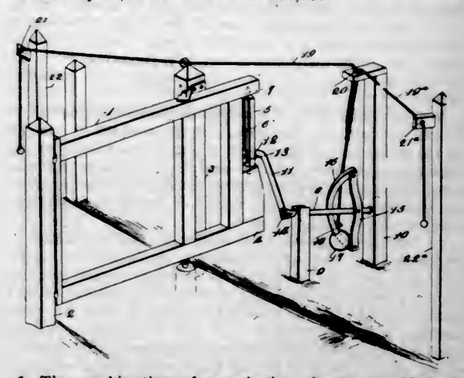
30. In a glass gathering machine, the combination with a cylinder having a piston rod carrying a measuring device, of means for automatically extending the reach of the piston rod, including a ratchet trip, and actuating means whereby the reach of the piston rod may be extended automatically but retracted manually, independent of the mechanism for extending it.

31. In a glass gathering machine the combination of a measuring device, means to support and automatically extend it into and withdraw it from a melting furnace, means to operate the measuring device to fill it and sever the glass in the furnace before removal from the mass, automatic means to feed out the support as the level of the glass changes, and means to regulate the rate of said feed of the support.

32. The combination with an automatic glass pressing mechanism, of a glass gathering device adapted to measure off and sever a definite quantity of glass in the melting furnace before removal from the mass, and mechanism to operate said gatherer and to carry it to the press molds and deposit the charge of glass therein, whereby there is no waste of glass and it can be worked in a highly liquid state, substantially as described.

33. A glass gathering machine having a gathering head and means to thrust it straight forward into the mass of glass, said head having an air escape and being of form adapted to force out the air by pressure of the glass in entering the head, substantially as described.

870,650. GATE. DAVID A. VANDEVORT, Scottsburg, Ind. Filed July 25, 1907. Serial No. 385,539.



1. The combination of a swinging closure provided at its hinged end with an extension, a shaft journaled at one side of the swinging closure and arranged in alinement therewith when the same is in an intermediate position between open and closed, a crank arm carried by the shaft and having an operative connection with the extension, and means for rotating the shaft to operate the swinging closure.

2. The combination of a swinging closure provided at its hinged end with an extension, a guide member loosely mounted upon the extension, a shaft journaled at one side of the swinging closure, a crank arm carried by the shaft and having a sliding connection with the guide member, and means for rotating the shaft to operate the swinging closure.

3. The combination of a swinging closure provided at its hinged end with an extension, a guide member loosely mounted upon the extension and provided with a slot, a shaft journaled at one side of the swinging closure, a crank arm hinged to the shaft and provided with a pin received loosely within the slot of the guide member, and means for rotating the shaft to operate the swinging closure.

4. The combination of a swinging closure, a horizontal shaft journaled at one side of the swinging closure, means for operating the swinging closure by rotating the horizontal shaft, a guide bar carried by the said shaft, a weight slidable upon the guide bar, and means coöperating with the weight to rotate the shaft.

5. The combination of a swinging closure provided at its hinged end with an extension, an upright bar loosely mounted upon the extension and formed with a vertical slot, a horizontal shaft mounted at one side of the swinging closure, a crank arm carried by the shaft, a roller carried by the crank arm and operating within the vertical slot, and means for rotating the shaft to operate the swinging closure.

6. The combination of a swinging closure provided at its hinged end with an extension, an upright bar loosely mounted upon the extension to swing upon a vertical axis, the said bar being formed with a vertical slot, a horizontal shaft mounted at one side of the swinging closure, a crank arm hinged to the horizontal shaft, a roller carried by the crank arm and operating within the vertical slot of the bar, and means for rotating the horizontal shaft to open and close the swinging closure.

7. The combination of a swinging closure, a horizontal shaft journaled at one side of the swinging closure, means for operating the swinging closure by rotating the shaft, a guide bar carried by the shaft and adapted to be swung upon opposite sides of the same, a weight slidable upon the guide bar, and an operating cable connected to the weight, the said weight moving freely in one direction and binding upon the guide bar when a pull is exerted upon the operating cable.

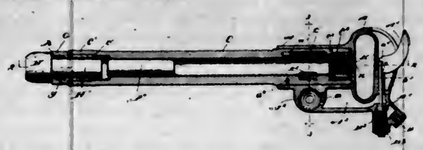
8. The combination of a swinging closure, a shaft mounted at one side of the swinging closure, means for operating the swinging closure by rotating the shaft, a guide bar carried by the shaft and designed to assume an upright position upon either side of the shaft according as the swinging closure is opened or closed, a weight slidable upon the guide bar, and a cable coöperating with the weight to rotate the shaft and operate the swinging closure.

9. The combination of a swinging closure provided at its hinged end with an extension, a shaft mounted at one side of the gate and provided with a crank arm having an operative connection with the extension, a frame mounted upon the shaft, a weight shiftable upon the frame, and a cable coöperating with the weight to rotate the shaft and operate the swinging closure.

10. The combination of a swinging closure provided at its hinged end with an extension, a guide member loosely mounted upon the extension, a horizontal shaft mounted at one side of the swinging closure and provided with a crank arm having an operative connection with the guide member, a frame mounted upon the horizontal shaft and comprising a guide bar designed to assume an upright position upon either side of the shaft according as the closure is opened or closed, a weight slidable upon the guide bar, and a cable coöperating with the weight to operate the swinging closure.

11. The combination of a swinging closure, a shaft mounted at one side of the swinging closure, means for operating the swinging closure by revolving the shaft, a longitudinally curved guide bar carried by the shaft and designed to assume an upright position upon either side thereof according as the closure is opened or closed, a weight slidable upon the curved guide bar, and a cable cooperating with the weight to operate the shaft.

870,651. FLUID-PRESSURE-OPERATED TOOL. HENRY H. VAUGHAN, Chicago, Ill., assignor, by mesne assignments, to The Pittsburg Pneumatic Company, Canton, Ohio, a Corporation of New Jersey. Filed Sept. 20, 1901. Serial No. 75,975.



1. In a device of the character described, the combination with a cylinder, of a reciprocating piston therein, a valve casing having supply and exhaust ports and ports leading to the interior of the cylinder, a differential piston valve located within said casing and controlling the ports communicating therewith, said valve having a central radial flange the opposite surfaces of which are alternately exposed to fluid pressure from the supply port, and means for permitting fluid pressure to flow from one side of said flange to a port leading to the cylinder from a point in said valve casing located on the opposite side of said flange.

2. In a device of the character described, the combination with a cylinder, of a reciprocating piston therein, a valve casing having supply and exhaust ports and ports leading to the interior of the cylinder, a differential piston valve located within said casing and controlling the ports communicating therewith, said valve having a central radial flange the opposite surfaces of which are alternately exposed to fluid pressure from the supply port, said valve also having passages therein leading from either side of said flange through which fluid pressure flows to the respective ends of the cylinder.

3. In a device of the character described, the combination with a cylinder having passages leading to its opposite ends and passages leading to points at predetermined distances from its ends, of a piston adapted to reciprocate within said cylinder, a differential piston valve having reduced ends, a central radially projecting flange and two radially projecting surfaces between the opposite sides of said flange and the reduced ends of the valve, a valve casing having a chamber communicating with the source of supply within which said flange reciprocates, such valve casing comprising chambers communicating with the passages leading to the opposite ends of the cylinder and within which the radial surfaces reciprocate, said valve casing also comprising chambers communicating with said passages leading to points distant from the ends of the cylinder and within which the reduced ends of the valve reciprocate, substantially as described.

4. In a fluid pressure operated tool, the combination with a cylinder, of a reciprocating piston therein, a valve casing having supply and exhaust ports and ports communicating with the opposite ends of the cylinder, said valve casing having a central chamber, intermediate chambers of less bore than and communicating with the central chamber, and end-chambers of less bore than and communicating with the intermediate chambers, and a differential piston valve located in said valve casing and controlling the ports communicating therewith.

5. In a fluid pressure operated tool, the combination with a cylinder, of a reciprocating piston therein, a valve casing having a central supply chamber and chambers of reduced bore located on either side of said supply chamber and communicating with exhaust ports and with passages leading to the opposite ends of the cylinder, a differential piston valve located in said valve casing and having a central radial flange adapted to reciprocate in said supply chamber and outwardly directed radial surfaces on either side of said central flange located in said chambers of reduced bore, said valve having passages therethrough leading from either side of said central flange to the radial surface on the opposite side thereof, and means for reciprocating said valve.

6. In a fluid pressure operated tool, the combination with a cylinder, of a reciprocating piston therein, a valve casing having a central supply chamber and chambers of reduced bore located on either side of said supply chamber and communicating with exhaust ports and with passages leading to the opposite ends of the cylinder, a differential piston valve located in said valve casing and having a central radial flange adapted to reciprocate in said supply chamber and outwardly directed radial surfaces on either side of said central flange located in said chambers of reduced bore, means for connecting the supply chamber on either side of said central flange with ports on the opposite sides of the flange leading to the interior of the cylinder, and means for reciprocating said valve.

7. In a fluid pressure operated tool, the combination with a cylinder, of a reciprocating piston therein, a valve casing having supply and exhaust ports and ports leading to the opposite end of the cylinder, a differential piston valve located in said casing and controlling the ports communicating therewith, said valve having a central radial flange the opposite surfaces of which are alternately exposed to pressure from the supply port to retain the valve in each position, said valve also having a plurality of radial surfaces on either side of said central flange, those on one side adapted to be exposed to fluid pressure flowing to and from the cylinder to move the valve against pressure exerted on the opposite side of the central flange.

8. In a device of the character described, the combination with a cylinder having pressure-admission passages and valve-controlling passages leading to the interior thereof, of a valve casing having chambers communicating with said valve-controlling passages and also having supply and exhaust ports, of a valve in said casing controlling the supply and exhaust of fluid pressure through said pressure admission passages; the ends of which control the communication between said valve-controlled passages and said chambers and between said chambers and exhaust ports, whereby when one valve-controlling passage is open to its communicating chamber the other valve-controlling passage is closed and the chamber communicating therewith connected with an exhaust port, substantially as described.

9. In a fluid pressure operated tool, the combination with a cylinder, of a reciprocating piston therein, a sleeve longitudinally movably mounted upon said cylinder and having a valve casing therein extending transversely to and located on one side of the axis of said cylinder and a valve in said casing adapted to control the supply and exhaust of fluid pressure to the opposite sides of said piston, substantially as described.

10. In a fluid pressure operated tool, the combination with a cylinder having passages leading to predetermined points within the same and terminating at the outer periphery thereof, of a reciprocating piston within said cylinder, a sleeve longitudinally movably mounted on said cylinder and having a valve casing therein extending transversely to the axis of the cylinder, said valve casing having ports adapted to register with the terminal of said passage on the periphery of the cylinder, and a valve within said casing controlling said ports, substantially as described.

11. In a fluid pressure operated tool, the combination with a cylinder having an exhaust port leading from one end thereof, of a sleeve mounted on said cylinder and movable longitudinally with relation thereto, said sleeve having an exhaust port adapted to register with said exhaust port from the cylinder when said sleeve occupies a given position relatively to the cylinder, means connecting said cylinder and sleeve to limit the relative longitudinal movement and to prevent a relative rotary movement thereof, said means comprising a key extending transversely through said cylinder and elongated slots in said sleeve surrounding the projecting ends of the key and engaged thereby, substantially as described.

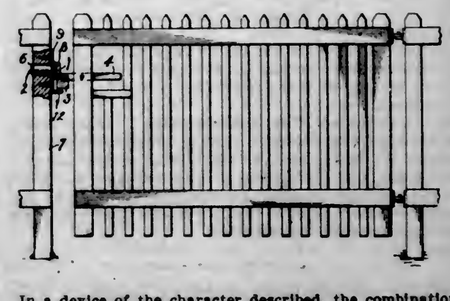
12. In a fluid pressure operated tool, the combination with a cylinder having a port leading through one end thereof, of a reciprocating piston in said cylinder, a handle mounted on said cylinder and longitudinally movable with relation thereto, said handle having an exhaust port adapted to register with said port through the cylinder when the handle occupies a given position relatively to the cylinder thereby opening communication between an end of the cylinder and the atmosphere, substantially as described.

13. In a device of the character described, the combination with a cylinder having a passage leading to one end and a passage leading to a point at a predetermined distance from said end, of a piston adapted to reciprocate within said cylinder, a differential piston valve having radially projecting surfaces, a valve casing having supply and exhaust ports and ports communicating with the passages in the cylinder and controlled by said valve, one of said radial surfaces of the valve adapted to be exposed to presssure from the source of supply, while two other radial surfaces located on the side of the first radial surface opposite to the side thereof exposed to fluid pressure are adapted to be exposed to pressure passing to the working end of said cylinder and from the working end thereof when the piston uncovers said passage leading to the predetermined point of the end of said cylinder, the sum of the two latter surfaces being greater in area than that of the first, substantially as described.

14. In a fluid pressure operated tool, the combination with a cylinder having an exhaust port leading from one end thereof, of a reciprocating piston in said cylinder, a handle mounted on said cylinder and longitudinally movable with relation thereto, means actuated by said handle adapted to open said exhaust port by its movement away from the cylinder and to close said exhaust port by its movement towards the cylinder.

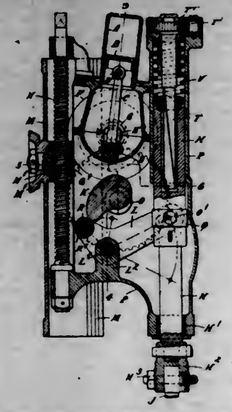
15. In a device of the character described, the combination with a cylinder, of a reciprocating piston in said cylinder, a valve casing, a differential piston valve in said casing, said valve casing having supply and exhaust ports leading to the cylinder through which motive fluid passes to reciprocate the piston which are controlled by the valve, said cylnider having passages controlled by the piston and which lead to the valve casing to reciprocate the valve, and said valve having a series of areas and controlling surfaces so related to said supply and exhaust ports and valve-controlling passages that the valve is held in one position by pressure from the supply port and when in such position is adapted to be reversed by exposure to pressure from the cylinder flowing through only one of said valve-controlling passages.

870,652. LATCH-KEEPER. EUGENE W. VEST, Tacoma, Wash. Filed Oct. 15, 1906. Serial No. 339,129.



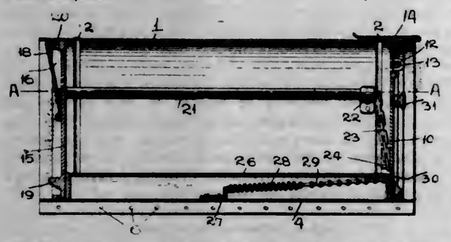
In a device of the character described, the combination with the gate post, of a pivot journaled therein having a projecting portion formed with a shoulder, a securing plate on said post formed with a boss between which and one face of the post is seated the said shoulder, and a latch keeper secured to said pivot.

870,653. ROCK-DRILL AND OTHER PERCUSSION TOOL. THOMAS WARSOP, Coniston, England. Filed Aug. 7, 1905. Serial No. 273,040.



The combination in a percussion tool, of a petrol motor, a shaft driven by said motor, a second shaft geared to the first shaft, a cam on said second shaft, a tool carrying spindle, a pair of bell crank levers pivoted intermediate their ends, the outer ends of said bell crank levers being connected to said spindle, a cam roller mounted between the inner ends of said bell crank levers and in the path of said cam, whereby said cam will move said spindle in one direction and a spring for moving the spindle in the other direction.

870,654. MAIL-BOX. WILLIAM E. WESTON and GEORGE WESTON, Kansas City, Mo. Filed Jan. 14, 1907. Serial No. 352,325.

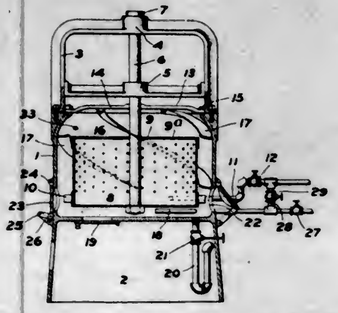


1. In a mail box of the character described, a suitable casing, a flanged head in the front end thereof, a pin on the inside of said flanged head, a flanged head in the rear end thereof, a longitudinal tube, one end thereof fixed to the inside of the casing, an adjustable plate pivotally mounted to the rear head, a chain or cable through the longitudinal tube, one end thereof engaging the adjustable plate in the rear and adapted to engage and disengage the pin on the inside of the front head of the box; substantially as described.

2. In a mail box of the class described, a suitable casing, an adjustable flap mounted thereon, an adjustable bottom therein, a bracket rigid to the bottom of the casing, a spring engaging the bracket, a chain engaging the spring at one end and engaging a bracket at the opposite end, which bracket is fixed to the door at the front end of the box; substantially as described.

870,655. CENTRIFUGAL MACHINE. LOUIS P. WILLIAMS, Rochester, N. Y. Filed Jan. 8, 1906. Serial No. 295,196.

1. A centrifugal machine comprising an outer casing provided with a bottom and a cover closing the upper end of the casing, means for introducing the material to be treated into said upper end, a rotary perforated cage within said casing, and one or more spiral conductors upon the inner side of the said casing and having trough-shaped upper ends curved inwardly under the cover of the casing and discharging upon the upper side of the cage.



2. A centrifugal machine comprising a closed outer casing, a rotary perforated cage therein, a steam pipe and a water pipe entering the lower part of the casing, a short pipe connecting said steam and water pipes and valves in all three pipes, whereby water or steam or a mixture thereof may be discharged into the casing.

870,656. DETACHABLE TREAD FOR PNEUMATIC TIRES. CHARLES B. WOODWORTH, Newton, Mass. Filed Dec. 12, 1906. Serial No. 347,438.



1. In a detachable tread for pneumatic tires, the tread portion; a wire substantially concentric therewith and adapted to extend entirely around the wheel, said wire being rendered expansible and contractible in the general direction of its length by its shape; and hooks connected with the tread portion and extending inward radially into engagement with the said wire, for the purpose set forth.

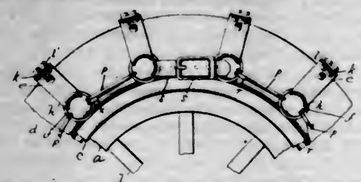
2. In a detachable tread for pneumatic tires, the tread portion; a wire substantially concentric therewith and adapted to extend entirely around the wheel, said wire being rendered expansible and contractible in the general direction of its length by its shape; and hooks connected with the tread portion and extending inward radially into detachable engagement with the said wire, for the purpose set forth.

3. In a detachable tread for pneumatic tires, the tread portion; a wire substantially concentric therewith and adapted to extend around the wheel, said wire being formed with crimps or waves; and means for connecting said crimps or waves separately with the tread portion, for the purpose of preventing creeping.

4. In a detachable tread for pneumatic tires, the tread portion; a wire substantially concentric therewith and adapted to extend around the wheel, said wire being formed with crimps or waves; and hooks connected with the tread portion and extending radially into engagement with said crimps or waves.

5. In a detachable tread for pneumatic tires, the tread portion; a wire substantially concentric therewith and adapted to extend around the wheel, said wire being formed with crimps or waves; and hooks connected with the tread portion and extending radially into detachable engagement with said crimps or waves.

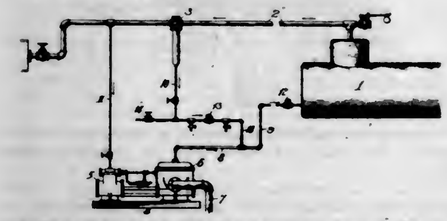
870,657. TRACTION ATTACHMENT FOR VEHICLE-TIRES. CHARLES B. WOODWORTH, Newton, Mass. Filed Apr. 9, 1907. Serial No. 367,272.



1. In a detachable traction-attachment for vehicle-tires, a series of sections adapted to extend across the periphery or tread portion of the tire and each consisting of a folded flexible strap with its ends secured together whereby loops are formed at the ends of the section on opposite sides of the tire, rings secured in said loops, and detachable links intermediate of and connecting said rings, for the purpose set forth.

2. In a detachable traction-attachment for vehicle-tires, a series of sections adapted to extend across the periphery or tread portion of the tire and each consisting of a folded flexible strap with its ends secured together whereby loops are formed at the ends of the section on opposite sides of the tire, rings secured in said loops, a series of links connecting the rings on opposite sides of the tire, and means for connecting and drawing toward each other the opposite ends of the series of loops and rings on each side of the tire, whereby the sections are held in position on the tire without being secured together under the rim.

870,658. SYSTEM OF DRIP-WATER RETURN. WALTER H. ZIMMERMAN, De Kalb, Ill. Filed Oct. 24, 1906. Serial No. 340,265.



1. In a drip water return system, a steam boiler; a steam pipe; an intermittently acting feed pump; a feed pipe connecting said pump and boiler; and a drip pipe connecting said steam pipe and said feed pipe and having a check valve, substantially as described.

2. In a drip water return system, a steam boiler; a steam pipe; an intermittently acting feed pump; a feed pipe connecting said pump and boiler; a drip pipe connecting said steam pipe and said feed pipe and having a check valve; and entering said feed pipe at a point remote from said boiler, substantially as described.

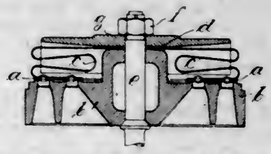
3. In a drip water return system, a steam boiler; a steam pipe; an intermittently acting feed pump; a feed pipe connecting said pump and said boiler; a collector chamber wherein drip water may collect and be retained under steam pressure; and a connecting pipe whereby the collected drip water may drain into said feed pipe when the pressure in said feed pipe falls below the steam pressure, substantially as described.

4. In a drip water return system, a steam boiler; a steam pipe; an intermittently acting feed pump; a feed pipe connecting said pump and said boiler; a collector chamber wherein drip water may collect and be retained under steam pressure; and a pipe having a check valve and connecting with said feed pipe, substantially as described.

5. In a drip water return system; a steam boiler; a steam pipe; an intermittently-acting feed pump; a feed pipe connecting said pump and said boiler; a collector chamber wherein drip water may collect and be retained under steam pressure; and a pipe having a check valve and connecting with said feed pipe at a point remote from said boiler, substantially as described.

6. In a drip water return system, a steam boiler; a feed water pipe; a drip water pipe adapted to hold water of condensation and under the steam pressure of said boiler and to permit the flow of the water of condensation into said feed water pipe when the water pressure in said feed water pipe at the point of connection with said drip water pipe is less than the steam pressure in said steam boiler; a check valve in said drip pipe; and means for varying the water pressure in said feed water pipe above and below the steam pressure in said steam boiler, substantially as described.

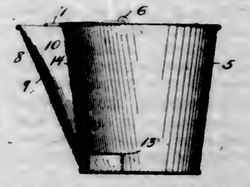
870,659. VALVE FOR PUMPS, COMPRESSORS, AND THE LIKE. HUGO ACKERMANN, Berlin, Germany. Filed Nov. 9, 1906. Serial No. 342,720.



1. A valve for compressors, pumps and the like, comprising in combination: a valve disk, a valve-seat coöperating with said valve-disk, radially arranged laminated springs, rigidly secured to the valve disk at their ends and having a multiple curvature and a valve spindle for holding fast the laminated springs on the valve-seat.

2. A valve for compressors, pumps and the like, comprising in combination: a valve disk, a valve-seat coöperating with said valve-disk and having a projection, radially arranged laminated springs, rigidly secured to the valve-disk at their ends and having a multiple curvature, a valve-spindle and a screw thereupon for holding fast the springs on said projection of the valve seat, and a covering surrounding the springs and serving as a washer for said screw.

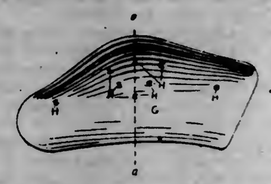
870,660. COMBINED FEED AND WATER BUCKET. JOHN F. ALEXANDER, Columbus, Ohio, assignor of one-half to E. W. Stribling, Columbus, Ohio. Filed Feb. 23, 1907. Serial No. 358,775.



1. In a device of the character described, the combination with an annular pail, of a feed hopper secured to said pail at one side thereof, said feed hopper comprising a plane front wall and end walls, the plane front wall being adapted to rest against a wall to prevent the pail from swinging, there being openings formed through the wall of the pail to establish communication between the interior of the pail and the interior of the feed hopper.

2. In a device of the character described, the combination with an annular pail, of a feed hopper secured to said pail at one side thereof, said feed hopper comprising a plane front wall and end walls, the plane front wall being adapted to rest against the wall to prevent the pail from swinging, there being openings formed through the wall of the pail to establish communication between the interior of the pail and the interior of the feed hopper, and a bail by which the pail may be carried, said bail lying over the top of the feed hopper when the structure is hung upon a wall.

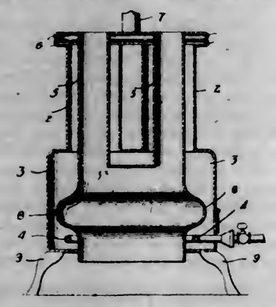
870,661. ARCH-SUPPORTER. CHARLES L. AUSTIN, Jr., Mahopac Falls, N. Y. Filed Sept. 19, 1906. Serial No. 335,188.



1. In an arch supporter; a frame adapted to be supported along one edge by the sole, the opposite edge being in contact with the upper within a shoe; a flexible rest for the arch of a foot suspended between the supporting sides of the said frame, with a ventilated covering over said rest for a bearing surface for the arch of the foot.

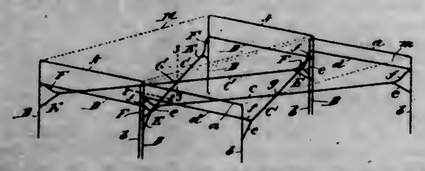
2. An arch supporter comprising a frame which is supported at its edges, one side thereof upon the sole within a shoe, and the other by being in contact with the upper thereof; with a flexible and adjustable rest for the arch suspended from said frame.

870,662. HEATING-STOVE. ELISHA W. BABCOCK, Lorain, Ohio. Filed Mar. 28, 1907. Serial No. 365,002.



A heating stove comprising an outer casing having an enlarged lower end to form the outer wall of a combustion chamber, and arranged at its upper end to form two heat conducting chambers, an inner casing arranged at its upper end to form air conducting tubes within said heat conducting chambers and having an open reduced lower end above which said inner casing is bulged to form a baffle or heat deflecting projection, a burner pipe arranged below said projection, a perforated bottom to cover the space between the lower end of said outer and inner casings, and parallel radially projecting flanges formed on the upper ends of said inner and outer casings, said flanges having inwardly turned edges adapted to be secured together to close the upper end of the heat chambers, substantially as described.

870,663. BED. GEORGE W. BENT, Boston, Mass. Filed July 16, 1907. Serial No. 384,100.

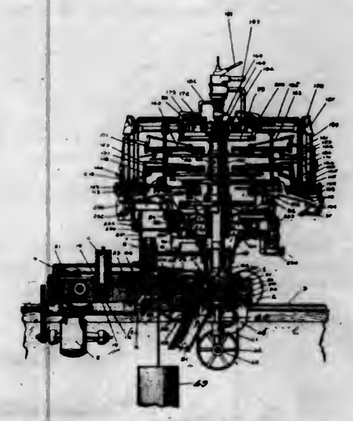


1. In a bed frame, the combination of tension fabric, end frames comprising fabric holding end bars and supports, and diagonal braces secured to the end frames extending diagonally from corner to corner of the bed frame as a whole and constituting the sole longitudinal strut of the frame.

2. In a bed frame, the combination of tension fabric, end frames comprising fabric holding end bars and supports, and diagonal braces secured to the end frames and extending diagonally from corner to corner of the bed frame as a whole and secured together at their crossing point, said diagonal braces constituting the sole longitudinal strut of the bed frame.

3. In an extension bed, two sections each comprising a tension fabric, end frames composed of fabric holding end bars and supports, and diagonal braces secured to the end frames extending diagonally from corner to corner of the section as a whole and constituting the sole longitudinal strut of the bed section, the diagonal braces and fabric of the smaller section movable transversely between the fabric and braces of the larger.

870,664. MACHINE FOR GATHERING AND SHAPING GLASS. WILLIAM E. BOCK, Toledo, Ohio, assignor to The Toledo Glass Company, Toledo, Ohio, a Corporation of Ohio. Filed May 2, 1905. Serial No. 258,562.



1. In a glass gathering machine, a rotary and reciprocating counterbalanced frame, and the gathering molds thereon.

2. In a glass gathering machine, a rotary and reciprocating frame, and a series of gathering molds thereon.

3. In a glass gathering machine, a rotary and reciprocating frame, and a series of neck molds and body blank molds thereon.

4. In a glass gathering machine, a series of sectional neck molds, body blank molds, means for opening and closing said molds, and a rotary and reciprocating frame carrying these parts.

5. In a glass gathering machine, a rotary and reciprocating frame, a series of gathering molds thereon, nonrotating cams reciprocating with the frame, and means for opening and closing the molds from the cams during the rotational movement of the frame.

6. In a glass gathering machine, the combination of a series of traveling sectional blank-gathering molds, mechanism for operating and closing the molds, and means for simultaneously bodily reciprocating the series of molds and their operating mechanism.

7. In a glass forming machine, a rotary and reciprocating frame and a series of coöperating gathering blank molds and blowing molds carried thereby.

8. In a glass gathering machine, the combination of a base, a rotary frame above the base, the gathering molds thereon, and means for adjusting the height at which the molds on the frame rotate above the base.

9. In a glass gathering machine, the combination of a base, a rotary frame above the base, the gathering molds thereon, means for adjusting the height at which the molds on the frame rotate above the base, and means for causing the frame to reciprocate.

10. In a glass gathering machine, the combination of a base, a rotary frame above the base, the gathering molds thereon, and means for causing the frame and molds to reciprocate during the rotational movement.

11. In a glass gathering machine, the combination of a base, slide shafts guided on the base, means for reciprocating the shafts, and a rotary frame supported at the top of the shafts.

12. In a glass gathering machine, the combination of a base, slide shafts guided in the base, a base ring supported on the top of the shafts, a rotary frame supported on the base ring and means for reciprocating the shafts with the supported parts.

13. In a glass-gathering machine, the combination of a base, slide shafts passing through the base, a counterbalancing device applied to the lower end of the shafts, means for reciprocating the shafts, and a rotary mold-carrying frame supported at the upper ends of the shafts.

14. In a glass gathering machine, the combination of a base, slide shafts passing through the base, a counterbalancing device applied to the lower end of the shafts, means for reciprocating the shafts, means for adjusting the height of the shafts relative to the base without detaching said reciprocating means, and a rotary mold-carrying frame on the top of the shafts.

15. In a glass gathering machine, the combination of a base, a rotary mold-carrying frame, the slide shafts supporting the frame above the base, sleeves on the slide shafts, rack bars thereon, gear segments for reciprocating the rack bars, and adjusting nuts between the rack bars and shafts for the purpose described.

16. In a glass-gathering machine, the combination of a base, a hollow base ring supported above the base, a rotary mold-carrying frame on the base ring, and an air supply connection through the base ring to the rotary frame.

17. In a glass gathering machine, the combination of the base, the sleeve 66, the hollow base ring supported above the base and having a guide ring slidingly engaging with the sleeve, a rotary frame supported on the base ring, and air connections to the sleeve through the same into the base ring and connections therefrom to the frame.

18. In a glass gathering machine, the combination of a base, the sleeve thereon, an air connection to the sleeve, a hollow base ring communicating with the sleeve, a rotary frame on the base ring, and a lower spider on the frame having air passages communicating with the chamber in the base ring.

19. In a glass-gathering machine, the combination of the base, the base ring supported above the base, a central post on the base, a sleeve on the post to which the base ring is secured, a rotary frame supported on the base ring, sectional gathering molds thereon, cam rings secured to the sleeve, means for reciprocating the base ring, frame and sleeve, and actuating connections between the cam rings and mold sections.

20. In a glass gathering machine, the combination of a rotary frame, the sectional gathering molds thereon, the lower spider of the frame, having air channels therein connected with a source of air supply and conduits from the air channels to the gathering molds, for the purpose described.

21. In a glass gathering machine, the combination of a rotary frame, the sectional gathering molds thereon, the lower spider of the frame, having channels therein connected with a source of air supply, and valve-controlled conduits from the air channels to the gathering molds, for the purpose described.

22. In a glass gathering machine, the combination of a rotary frame, the sectional gathering molds thereon, the lower spider of the frame, having channels connected to a source of air supply, conduits from the air channels to the gathering molds, means for opening and closing the sections of the molds, and valves controlling the conduits, opening on the opening of the blank molds and closed with the closing thereof.

23. In a glass gathering machine, the combination of a traveling sectional gathering mold, levers supporting the sections, carrying conduits, and means for opening the conduits when the sections are open.

24. In a glass gathering machine, the combination of a traveling sectional gathering mold, hollow levers supporting the sections having connections with an air supply and having discharge ports adjacent to the mold sections, and means for opening the air supply valve when the sections are open.

25. In a glass gathering machine, the combination of a sectional gathering mold, hollow levers supporting the sections having discharge ports adjacent to the mold sections, a ported air supply conduit over which the levers move in their opening and closing movement and ports in the levers adapted to register with the ports in the conduit in the open position of the levers.

26. In a glass gathering machine, the combination of a series of sectional molds, levers for opening and closing the molds, air conduits leading to the mold sections in their open positions, and means operated by the opening of the mold sections for opening the air conduits.

27. In a glass gathering machine, the combination of a series of sectional traveling gathering molds, a complementary series of neck molds, air conduits leading to the exterior and beneath the sections of the gathering molds in the open position thereof, and means for holding the neck molds closed during all or a part of the cooling period of the gathering molds.

28. In a glass shaping machine, the combination of a blank-gathering mold, means for opening and closing it, a coöperative blowing mold, and conduits carried with the blowing mold adapted to direct a cooling current on the blank mold sections in their open position.

29. In a glass-shaping machine, the combination of a blank gathering mold, means for opening and closing it, a hinged blowing mold support, a blowing mold thereon, means for moving the blowing mold into the plane of the blank mold, and air conduits on the blowing mold support, having discharge ports adapted to discharge cooling air currents on the blank mold when open.

30. In a glass-shaping machine, a blowing mold, a hinged supporting arm therefor, having valve-controlled air channels therein, means for closing the valve when the mold is in its inoperative position, and for opening it when in its operative position.

31. In a glass shaping machine, the combination of the lower spider, having air conduits, the hollow blowing mold frame hinged on the spider, the conduits of the spider communicating with the conduits in the frame through the hinge joint, and said joint, which acts as a valve to open and close communication between the conduit in the spider and the frame.

32. In a glass-shaping machine, a blowing head having an aperture therethrough, a detachable plunger adapted to be projected through the aperture, means for connecting the blowing mold thereto, and means for attaching a bushing within the aperture.

33. In a glass-shaping machine, an apertured blowing head, a detachable bushing secured therein, and a detachable plunger adapted to be projected therethrough for the purpose described.

34. In a glass-shaping machine, the combination of a reciprocating head, a pin or plunger detachably secured thereto, an apertured blowing head through which said pin is adapted to be projected, and means for varying the size of opening through the head for pins of different size.

35. In a glass-shaping machine, the combination of an apertured blowing head, a detachable bushing in the aperture projecting below the head, and a neck mold engaging the projecting portion of the bushing.

36. In a glass-shaping machine, the combination of an apertured blowing head, a detachable bushing on the aperture projecting below the head, a circular inclined flange on this projection, and neck mold sections having complementary grooves adapted to clamp upon this flange.

37. In a glass-blowing machine, the combination of a traveling sectional mold, means traveling with the mold for closing said mold including a spring member, whereby said molds are held closed by spring pressure, and whereby interposed obstacles will not break the actuating devices.

38. In a glass blowing machine, the combination of traveling neck molds and body blank molds, separate actuating devices traveling with the molds for closing

the sections thereof, and a spring member included in each actuating device, for the purpose described.

39. In a glass gathering machine, a traveling gathering mold, a cut-off knife traveling therewith, and means for adjusting the knife for cutting off at the bottom of molds of varying length.

40. In a glass gathering machine, the combination of a traveling gathering mold, a cut-off knife carried thereby, means for rocking the shaft, and means for effecting a vertical adjustment of the knife in relation to the mold.

41. In a glass-gathering machine, the combination of a gathering mold, a rock shaft, a cut-off knife thereon, and means for imparting a rocking and reciprocating movement to the shaft.

42. In a glass gathering machine, the combination of a gathering mold, a rock shaft, a cut-off knife thereon, inclined guides adjacent to the shaft, members of the shaft working therein, and means for rocking the shaft to effect the operation described.

43. In a glass-gathering machine, the combination of a sectional gathering mold, levers supporting the sections, a cut-off device for the bottom of the mold carried by one of the levers, and means for operating the cut-off.

44. In a glass-gathering machine, the combination of a blank mold, a pin or plunger for forming an initial opening in the gathered blank, means for inserting and withdrawing the pin, and means for heating the pin when withdrawn.

45. In a glass gathering machine, the combination of a blank mold, a pin or plunger for forming an initial opening in the gathered blank, means for inserting and withdrawing the pin, a reciprocating gas nozzle and means for moving it to the pin when it is withdrawn.

46. In a glass gathering machine, the combination of the blowing head arm, a blank mold adapted to be closed beneath the arm, a pin or plunger for forming an initial opening in the gathered blank, means for inserting and withdrawing the pin, the reciprocating blowing valve on the blank mold arm, and a gas nozzle on the valve beneath the pin in its withdrawn position.

47. In a glass-shaping machine, the combination of a neck mold, a blowing mold, means for moving the blowing mold against the neck mold and for holding the two in contact by spring pressure.

48. In a glass-shaping machine, the combination of a traveling neck mold, a blowing mold traveling therewith, means for moving the blowing mold to and from the neck mold, and a spring acting to hold the two together when in coöperative relation.

49. In a glass-shaping machine, the combination of the traveling blowing head arm, the blowing head thereon, the neck mold below the blowing head, a hinged frame traveling with the blowing head arm, the blowing mold on the hinged frame, a camway for raising and lowering the blowing mold to and from the neck mold, and a spring roller on the camway, whereby the blowing mold will be held in contact with the neck mold by spring-pressure.

50. In a glass-shaping machine, the combination of a rotary frame, a neck mold thereon, a hinged frame on the rotary frame, a sectional blowing mold carried at the outer end of the frame, a camway for raising and lowering the mold to and from the neck mold, and means for opening and closing the blowing mold.

51. In a glass-shaping machine, the combination of a rotary frame, a neck mold therein, a hinged frame on the rotary frame, a sectional blowing mold at the outer end of the hinged frame, a camway for raising and lowering the blowing mold to and from the neck mold, a stationary cam about which the rotary frame revolves, and means operated from the stationary cam for opening and closing the mold sections.

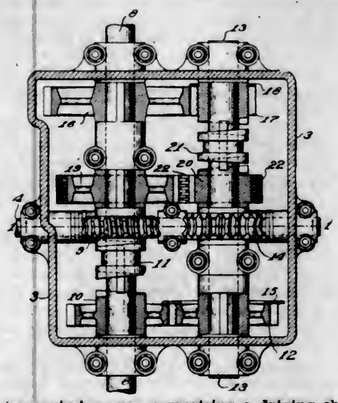
52. In a glass-shaping machine, the combination of a rotary frame, a hinged frame thereon, a sectional blowing mold on the hinged frame, means for raising and lowering the hinged frame, a slide block on the rotary frame, means for operating the slide during the travel of the rotary frame, and connections from the slide for opening and closing the mold sections.

53. In a glass shaping machine the combination of a rotary frame, a neck mold therein, the traveling, hinged blowing mold frame, means for raising and lowering it, a sectional mold thereon adapted to be moved to and from the neck mold, and means for opening and closing the mold during the travel thereof.

54. In a glass-shaping machine, the traveling, hinged, blowing mold frame, means for raising and lowering it, a blowing mold section supported on a pivot in the frame, levers independent of the support for opening and closing the mold sections, and a spring in the actuating device for the levers.

55. In a glass shaping machine, the traveling hinged blowing mold frame, a bracket adjustably supported at the outer end thereof, and the sectional blowing mold pivoted on the bracket.

870,665. TRANSMISSION-GEAR. ANDREW F. COLGREN, Chicago, Ill. Filed Dec. 28, 1906. Serial No. 349,783.



1. A transmission gear comprising a driving shaft having thereon two worms in alinement with each other, a driven shaft extending transversely of said driving shaft, a worm-wheel thereon meshing with one of the worms on said driving shaft, a counter-shaft disposed in parallel relation to said driven shaft, a worm-wheel thereon meshing with the other worm on said driving shaft, a plurality of pairs of gears of different pitch ratios connecting said driven and counter-shafts, and clutches arranged to permit said driven shaft to receive power directly from its worm and wheel connection with said driving shaft or through said counter-shaft and any of said pairs of gears.

2. A transmission gear comprising a driving shaft having thereon two worms of different pitch in alinement with each other, a driven shaft extending transversely of said driving shaft, a worm-wheel thereon meshing with one of the worms on said driving shaft, a counter-shaft disposed in parallel relation to said driven shaft, a worm-wheel thereon meshing with the other worm on said driving shaft, a plurality of pairs of gears of different pitch ratios connecting said driven and counter-shafts, and clutches arranged to permit said driven shaft to receive power directly from its worm and wheel connection with said driving shaft or through said counter-shaft and any of said pairs of gears.

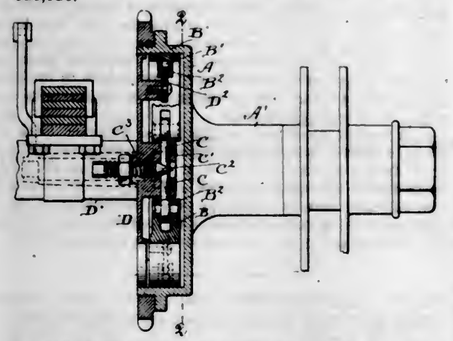
3. A transmission gear comprising a driving shaft having thereon two worms in alinement with each other, a driven shaft extending transversely of said driving shaft, a worm-wheel thereon meshing with one of the worms on said driving shaft, a counter-shaft disposed in parallel relation to said driven shaft, a worm-wheel thereon meshing with the other worm on said driving shaft, a pair of gears respectively mounted on said driven and counter-shafts and meshing with each other, a pair of sprocket wheels respectively mounted on said driven and counter-shafts, a belt connecting them, and clutches arranged to permit said driven shaft to be driven directly through its worm and wheel conection with said first shaft or indirectly through said counter-shaft and said gears or said sprocket wheels.

4. The combination of a driven shaft, a counter shaft parallel therewith, a driving shaft disposed transversely to said driven and counter-shafts and having means for directly and separately driving said driven and counter-shafts, a plurality of pairs of gears of different pitch ratios connecting said driven and counter-shaft, and clutches arranged to permit said driven shaft to receive power directly from said driving shaft or indirectly through said countershaft and any pair of said gears, at the will of the operator.

5. The combination of a driving shaft having two worms in alinement with each other, a driven shaft, a worm wheel mounted thereon meshing with one of said worms, a counter-shaft, a worm-wheel keyed thereon meshing with the other of said worms, a gear loosely mounted on said driven shaft, a second gear rigid on said counter shaft and having driving connection with said first gear, and a clutch member splined to said driven shaft and adapted to alternately connect said shaft with its worm wheel or gear.

6. The combination of a driving shaft having thereon a pair of worms, a driven shaft, a worm-wheel thereon meshing with one of said worms, a counter shaft, a worm-wheel thereon meshing with the other of said worms, one of said worm-wheels being rigid on its shaft and the other being loose on its respective shaft, a plurality of pairs of driving members connecting said driven and counter shafts and having different pitch ratios for driving said shafts at different relative speeds, and clutches controlling the operation of said loose worm wheel and each of said pairs of driving members so that any pair may be thrown into or out of operative conection with said driven shaft.

870,666. VEHICLE-BRAKE. DE WITT COOKINGHAM, Cleveland, Ohio, assignor of one-half to John H. Hertner, Cleveland, Ohio. Filed June 23, 1906. Serial No. 323,023.



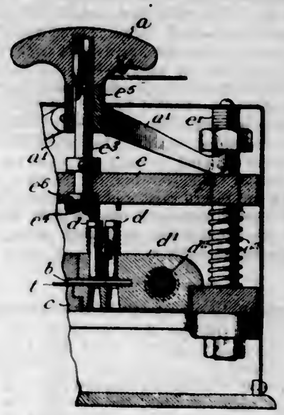
1. In a vehicle brake, a brake frame and brake shoes adapted to frictionally engage said frame, a member on which the said shoes are pivotally supported, means for forcing the shoes into engagement with the brake frame, said shoes being wholly incased, and means accessible from the exterior of the incasing structure adapted to move the shoes toward the brake frame at the pivotal points.

2. In a vehicle brake, a brake frame and a plate forming a closed casing, brake shoes pivotally mounted so as to be carried by the supporting plate and inclosed within the casing, and means accessible from the exterior of the casing adapted to advance the brake shoes toward the brake frame at their pivotal points.

3. In a vehicle brake, a brake frame and brake shoes, and means adapted to force said shoes into engagement with the brake frame comprising a member slidably mounted on a rotatable head and positioned to transmit thrust to each shoe upon rotation of said head, the reaction from each shoe being transmitted to the other shoe.

4. In a vehicle brake, a brake frame inclosing two brakes pivotally supported and adapted to engage the frame when forced apart, means for forcing them apart comprising a rotatable head having a bar slidably mounted thereon, and positioned to engage said shoes upon rotation of the said head.

870,667. RECORDER. PHILIP J. DARLINGTON, Hinsdale, Ill. Original application filed Dec. 7, 1904, Serial No. 235,850. Divided and this application filed Oct. 30, 1905. Serial No. 285,021.



1. In a recording machine, the combination with a traversing carriage and time controlled means for moving the same, of markers operatively mounted on said carriage, a plunger, and means for bringing either of said markers into operative relation to said plunger.

2. In a recording machine, the combination with a traversing carriage, of time-controlled mechanism for moving the same, differential marking mechanism, and a plunger adapted to set and operate said mechanism.

3. In a recording machine, the combination with a card receiver, of a longitudinally moving carriage and time controlled means for moving the same, a punch carried by said carriage adapted to engage a card, and means for actuating said punch in any position along its journey.

4. The combination with a traversing carriage having a slit therein adapted to receive the edge of a card, of time controlled mechanism for moving said carriage relatively to said card, a punch pin mounted in said carriage above the card receiving slit, a die plate below the card having a hole therein registering with said punch, and a plunger block located above the path of the punch pin and adapted to be depressed to operate said punch pin in any position along its journey.

5. In a time recorder, the combination with a traversing carriage and time controlled means for moving the same, of a pair of punch pins operatively mounted in said carriage, means for holding a card in position to be engaged by said punch pins in any position of said carriage, a reciprocating plunger plate e above said punch pins, a movable distance block e^4 and means for interposing the same between said plunger plate and the head of either punch pin.

6. In a recorder, the combination with a traversing carriage and time controlled means for moving the same, of a pair of punches operatively mounted on said carriage, a card receiver adapted to hold a card in position to be engaged by either of said punches in any position to which said carriage is moved, and means for selectively operating either of said punches at any time during the travel of said carriage.

7. In a time recorder, the combination with a punch, of time-controlled means for causing a continuous movement of said punch along a time card, and a plunger adapted to successively actuate said punch, in any position thereof; whereby the lapse of time between successive operations

of said punch is indicated by the distance between the punch marks on said card.

8. In a time recorder, the combination with a reciprocating traversing carriage, a screw for moving said carriage, an electromagnet time controlled means for operating said magnet and means operated by successive excitations thereof for turning said screw step by step to advance said carriage, a punch moved by said carriage along a record blank, and means for actuating said punch at any point in its journey.

9. In a time recorder, the combination with marking mechanism and time-controlled means for causing continuous relative movement between said marking mechanism and a record blank, an operating handle arranged to reciprocate and also to rotate, selector mechanism for causing a distinction in the marks of said marking mechanism, and means controlled by the rotation of said operating handle for adjusting said selector mechanism.

10. In a recording machine, the combination with a pair of markers adapted to mark a record blank, of time controlled means for governing the relative position of said markers and record card, and a plunger adapted in its rotation to render operative one of said markers, said plunger in its longitudinal movement being adapted to operate the selected marker.

870,668. PROCESS OF DESULFURIZING AND REDUCING SULFID ORES. EDUARD DEDOLPH, Marysville, British Columbia, Canada. Filed Mar. 23, 1907. Serial No. 364,094.

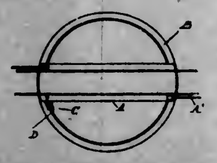
1. The process of desulfurizing and reducing sulfid ores, which consists in roasting the ground ore intimately mixed with finely-divided carbonaceous fuel, in such fashion as to oxidize the sulfur and a portion only of the fuel, and then smelting the product consisting of the roasted ore and the unconsumed fuel.

2. The process of desulfurizing and reducing sulfid ores, which consists in roasting the ground ore intimately mixed with finely divided solid carbonaceous fuel, in such fashion as to drive off the sulfur and consume the volatile portions of the fuel without consuming the resultant fixed carbon, and then smelting the mixture of roasted ore and fixed carbon.

3. The process of desulfurizing and reducing sulfid ores, which consists in roasting the ground ore intimately mixed with sawdust, in such fashion as to drive off the sulfur and consume the volatile portions of the fuel, leaving charcoal, and then smelting the mingled roasted ore and charcoal.

4. The herein described method of treating ore containing sulfur and zinc as impurities, which consists in grinding the ore and mixing intimately with finely-divided carbonaceous fuel, roasting the mixture in such fashion as to oxidize the sulfur and consume the volatile constituents of the fuel, reducing the latter to fixed carbon, and then smelting the mingled roasted ore and fixed carbon in a blast furnace.

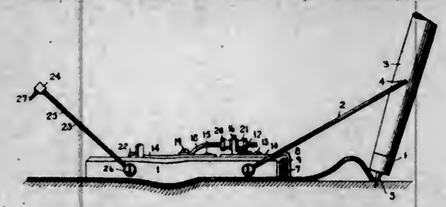
870,669. TURN-TABLE. JOSIAH C. FLEMING, Detroit, Mich., assignor to Pilling Air Engine Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 23, 1906. Serial No. 331,710.



1. The combination with a turn-table, of a propelling mechanism comprising a track wheel, a motor, a frame on which said motor and track wheel are mounted, a drive train between said motor and track wheel comprising the motor shaft, a parallel shaft, a gear and pinion connection between said parallel shaft and track wheel, intermeshing gears on said motor and parallel shaft, and a clutch for disconnecting the gear from the motor shaft, for the purpose described.

2. The combination with a turn-table, of a propelling mechanism therefor comprising a supporting frame pivoted to the table, a motor thereon, a traction wheel journaled in bearings on the frame, a drive train between said wheel and motor, and a clutch for disconnecting the motor from the traction wheel to permit the table to be operated by hand.

870,670. CARPET-STRETCHER. ISAAC FREED, Harrisburg, Pa. Filed Apr. 15, 1907. Serial No. 368,333.



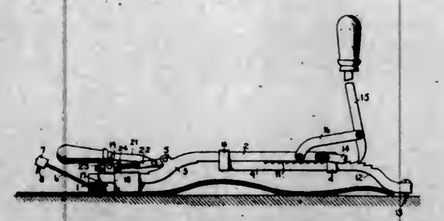
1. A carpet stretcher comprising a stretcher head or block, a stretcher link pivotally connected to said block, a stretcher lever fulcrumed to said link, carpet engaging means, and means to operate and lock said carpet engaging means.

2. A carpet stretcher having a stretcher head or block, a clamping jaw, a lever pivotally mounted on the stretcher head, a link having a pivotal connection with the lever and the clamping jaw, and a stop coacting with the tension of the work on the clamping jaw to hold the lever in position to lock said clamping jaw, substantially as described.

3. A carpet stretcher having a stretcher head or block, a clamping jaw, a lever pivotally mounted on the stretcher head, a link having a pivotal connection with the lever and the clamping jaw, a stop coacting with the tension of the work on the clamping jaw to hold the lever in position to lock said clamping jaw, and means to initially adjust the clamping jaw according to the thickness of the carpet to be engaged thereby.

4. A carpet stretcher comprising a stretcher head or block, a holder pivotally connected thereto and adapted to be folded against the same, a stretcher link pivotally connected to the stretcher block and adapted to be folded against the same, a stretcher lever fulcrumed to said stretcher link, a clamping jaw, and means to operate and lock said clamping jaw, substantially as described.

870,671. CARPET-STRETCHER. ISAAC FREED, Harrisburg, Pa. Filed Apr. 15, 1907. Serial No. 368,334.

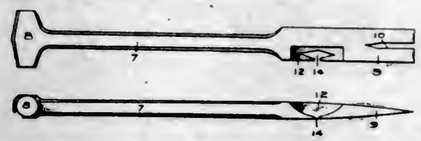


1. In a carpet stretcher, the combination of means for grasping a carpet, a ratchet bar connected therewith for longitudinal movement and having means to engage the floor, a dog, carried by said carpet-grasping means, and a lever, connected with said carpet-grasping means and adapted to coact with the ratchet bar to move said carpet-grasping means in the direction required to stretch the carpet.

2. In a carpet stretcher, the combination of a carpet grasping element comprising a bar, a head carried by said bar, a jaw movable on said bar toward and from the head, and means to operate and lock said jaw; a ratchet bar connected to the first-mentioned bar for longitudinal movement and having means to temporarily secure it to a floor, a dog, carried by the first-mentioned bar to coact with the ratchet bar, a lever, and links connecting said lever to the first-mentioned bar, said lever being adapted to engage the ratchet bar, for the purpose set forth.

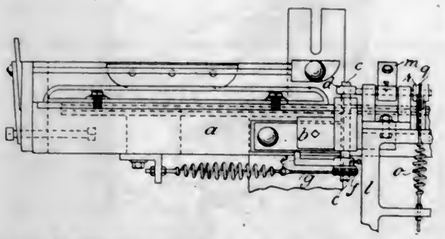
3. In a carpet stretcher, the combination of a stretcher head, a longitudinal bar extending therefrom and having a dog at its outer end, a jaw having a guide loop slidable on the longitudinal bar, said jaw coacting with said stretcher head to grasp the carpet between them, a guide pivotally mounted on said guide loop, a lever pivotally connected to the said longitudinal bar for vertical angular movement, a screw link pivotally connected to said lever and free to slide in the said pivotally mounted guide, adjusting nuts on said screw link on opposite sides of said guide, a ratchet bar slidably connected to the said longitudinal bar and having means at its outer end to engage the floor, said ratchet bar being engaged by said dog, an operating lever for coaction with said ratchet bar, and links pivotally connected to said operating lever and to said longitudinal bar, substantially as described.

870,672. COMBINATION-TOOL. ORTON O. FRINK and FRANK W. SCANLING, Chrisman, Ill. Filed Jan. 7, 1907. Serial No. 351,271.



A tool provided in its face with a notch or dent; the bottom of said dent being provided with a perforation formed flaringly from its ends towards the center of the dent, and having a side entrance thereto from the edge of the tool and communicating with the central portion of the perforation, and forming thereby a pair of opposed prongs which terminate in a feather edge.

870,673. SHUTTLE-POSITIONING MEANS FOR FILLING-REPLENISHING LOOMS. JOHANNES GABLER, Mülhausen, Germany. Filed Sept. 13, 1906. Serial No. 334,556.

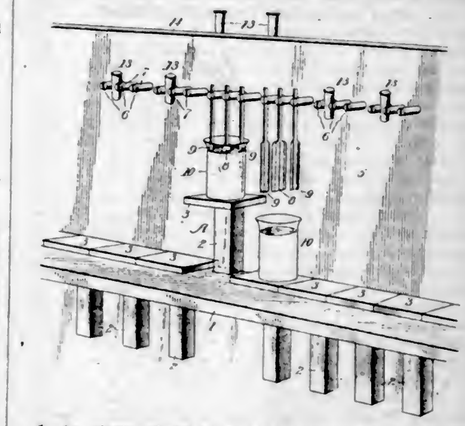


1. In a shuttle-positioning means, a lay, a shaft journaled vertically at one side thereof, the upper end of the shaft being provided with an arm, and the lower end with a striker and a pulley, a coiled spring connected at one end with the lay to the rear of the shaft, a flexible connector from the other end of the spring to said pulley for normally holding the striker against the side of the lay, a stop for engaging with said arm and moving its free end in front of the shuttle box, means for moving the stop into its operative position and means for moving the stop out of its operative position.

2. In a shuttle-positioning means, a lay, an arm pivotally mounted thereon, a lever provided with a roller for engaging with the arm and moving its free end in front of the shuttle box, a spring for normally holding said lever and stop in an operative position, a second lever connected at one end with the stop lever and provided at the other end with a weft fork, and means adapted to be engaged by the weft fork for causing the stop lever and its roller to be moved into the operative position.

3. In a shuttle-positioning means, a lay, an arm pivotally mounted thereon, a stop for engaging with the arm and forcing its free end in front of the shuttle box, means for moving said stop into its operative position, a lever for actuating said means, a shouldered weft fork pivotally connected with one end of said lever, a weft hammer, one end of which is adapted to be engaged by the weft fork, a cam for engaging with the other end of the weft hammer, whereby the stop is caused to engage with said arm and actuate it whenever the weft fork is in engagement with the weft hammer and means for moving the stop out of its operative position.

870,674. APPARATUS FOR ELECTROCHEMICAL ANALYSIS. GEORGE A. GUESS, Silverton, Colo., and HERBERT E. T. HAULTAIN, Nelson, British Columbia, Canada. Filed Apr. 26, 1905. Serial No. 257,540.



1. An electro-chemical apparatus, comprising the combination of three terminals in a set, slit longitudinally, and an independent electrode arranged in the slit of each terminal and frictionally held thereby, the electrode in the middle terminal adapted to receive the deposit, and the several terminals connected up in circuit.

2. An electro-chemical apparatus, comprising a bench, a series of beaker supports adjustable therein, and a series of terminals over each beaker support, and electrical connections for the terminals.

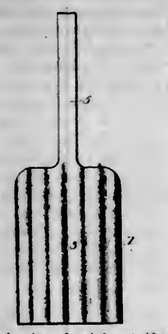
3. An electro-chemical apparatus, comprising slit terminals arranged in sets of three, an independent electrode applied frictionally in the slit of each of said terminals, means for connecting the several terminals in series, and means for short-circuiting any one or more of the sets of terminals.

4. An electro-chemical apparatus, comprising aluminium terminals, slit longitudinally and each adapted to receive and hold an independent electrode by frictional engagement in its slit, means for connecting the terminals in circuit, and a thimble adapted to be interposed between the terminals for short-circuiting purposes.

870,675. ELECTRODE. GEORGE A. GUESS, Silverton, Colo., and HERBERT E. T. HAULTAIN, Nelson, British Columbia, Canada. Filed Apr. 26, 1905. Serial No. 257,541.

The herein-described electrode for electro-chemical analysis, having the blade and the central straight tang, con-

structed integrally of thin sheet metal and corrugated or crimped longitudinally, and adapted to be engaged frictionally with a terminal and without the intervention of a binding-screw, hooks or other usual devices.



870,676. CRUTCH. EDWARD E. HAYDEN, Washington, D. C. Filed Dec. 6, 1906. Serial No. 346,638.



1. In a crutch, the combination of a standard, a hand-hold, and an arm-rest or brace for the arm of the user below the arm-pit.

2. In a crutch, the combination of a standard, a hand-hold, and an arm-rest or brace for the arm of the user, said arm-rest constituting an extension or prolongation of the standard.

3. In a crutch, the combination of a standard, a hand-hold, and an upwardly and rearwardly inclined arm-rest or brace for the arm of the user.

4. In a crutch, the combination of a standard, a hand-hold, and a resilient arm-rest or brace for the arm of the user secured to said standard.

5. In a crutch, the combination of a standard, a hand-hold, and an arm-rest or brace for the arm of the user adjustably secured to said standard.

6. In a crutch, the combination of a standard, a hand-hold, and an arm-rest or brace for the arm of the user below the arm-pit, said rest being concaved for the reception of the arm of the user.

7. In a crutch, the combination of a standard, a hand-hold, and an arm-rest or brace, said rest consisting of a concaved part for the reception of the arm of the user below the arm-pit and a support or bracket attached to said standard.

8. In a crutch, the combination of a standard, a hand-hold, and an arm-rest or brace, said rest consisting of a support or bracket and an adjustable concaved part for the reception of the arm of the user below the arm-pit.

9. In a crutch, the combination of a standard, a hand-hold, and an arm-rest or brace, said rest consisting of a concaved part for the reception of the arm of the user and a support or bracket adjustably secured to said standard.

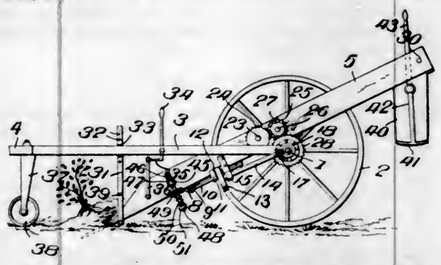
10. In a crutch, the combination of a standard, a hand-hold, and a resilient arm-rest or brace for the arm of the user.

11. In a crutch, the combination of a standard, of a hand-hold, and an arm-rest or brace consisting of a concaved part for the reception of the arm of the user, and a resilient supporting arm or bracket.

12. In a crutch, the combination of a standard, a resilient hand-hold, and an arm-rest or brace for the arm of the user below the arm-pit.

13. In a crutch, the combination of a standard, a hand-hold, and an adjustable arm-rest or brace for the arm of the user below the arm-pit.

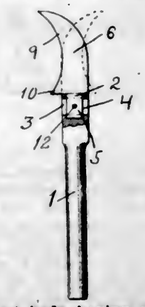
870,677. POTATO DIGGER AND SHAKER. MARTIN HEBTING, Kaw, Okla. Filed Sept. 26, 1906. Serial No. 336,310.



1. In a digger of the class described, the combination with an inclined conveyer frame and means to support and adjust the same, of a carrier in said frame, longitudinally-disposed slats beneath said carrier, a shaker in the lower portion of said frame, and means to move said shaker laterally, and a pulling device mounted in the forward end of said frame over the free end of the shaker.

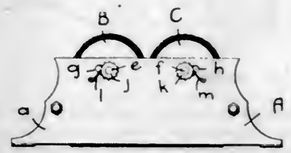
2. In a digger of the class described, the combination with an inclined conveyer frame and means to support and adjust the same, of a carrier in said frame, longitudinally-disposed slats beneath said carrier, a shaker in the lower portion of said frame, and means to move said shaker laterally, a pulling device mounted in the forward end of said frame over the free end of the shaker, and means for allowing the said pulling device to automatically adjust itself to differing bulks of earth.

870,678. KNIFE. JOHN H. HENSON, Cooley, Okla. Filed Jan. 29, 1907. Serial No. 354,744.



In a knife, a bent body having a handle at one end and a socket at the other, said socket being arranged longitudinally of the body and having oppositely disposed openings communicating with its bottom, and the walls of the socket being each provided with a perforation, said openings being of the same cross sectional areas as the socket and the perforations being midway between the sides of the body and at a distance from the outer end equal to the distance from the perforations to either side, and an invertible and reversible blade having its inner end reduced to form a shank and shoulders, the shank being of substantially the same area in cross section as the socket, or said openings, and adapted to fit therein, and also perforated midway of its width and at a distance from said shoulders equal to the distance from the perforations in the body to the outer end, or to either side, and the cutting edge of the blade being curved from its tip to the shoulder upon the forward side of the shank, and a pin adapted to be passed through the perforations in the body and the perforation in the shank when the latter is seated within the socket or in either of said openings.

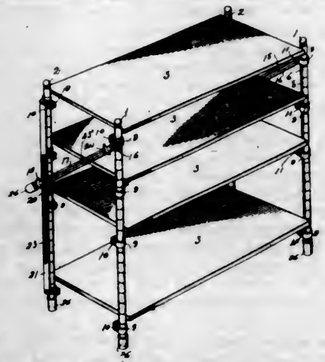
870,679. BOOT-CLEANER. ANDREW C. HOUGHTON, Winnipeg, Manitoba, Canada. Filed Feb. 20, 1907. Serial No. 358,524.



1. In a boot cleaner, the combination of a casing having end members each provided with a pair of downward-convergent slots, and a pair of rotary brushes having shafts journaled at both ends in said slots.

2. In a boot cleaner, the combination of a casing having end members each provided with a pair of slots, a pair of rotary brushes having shafts journaled at both ends in said slots, oppositely-toothed ratchet wheels on the ends of said shafts, and spring pawls mounted on the casing and engaging the outer sides of said ratchet wheels, tending to hold the shafts at the inner ends of the slots.

870,680. DISPLAY-RACK. JULIUS J. KARGES, Kansas City, Mo. Filed July 7, 1906. Serial No. 325,171.



1. In a display rack, the combination with two forward and two rear standards, of two series of horizontal rods, one series connecting the forward and the other series connecting the rear standards, means for securing to said standards the rods adjacent thereto, transverse members pivoted respectively to the forward and rear rods, whereby the standards may be swung to and from the vertical position and parallel with each other, an extensible brace pivotally connected to one forward standard and adjustable lengthwise of the adjacent rear standard, and releasable means for locking the brace to the said adjacent rear standard.

2. In a display rack, the combination with two forward and two rear standards, of two series of horizontal rods, one series disposed between the forward standards and the other series disposed between the rear standards, means for securing said rods to the adjacent standards respectively, transverse members pivoted respectively to the forward and rear series of rods, whereby the standards may be swung relative to and parallel with each other, an extensible brace comprising two members adjustable lengthwise one relative to the other, one member of said brace being pivoted to one forward standard and adjustable lengthwise of the adjacent rear standard, the other brace member being adapted to serve as a leg for supporting the rack, and means for releasably locking said brace to said adjacent rear member.

3. In a display rack, the combination with two forward and two rear standards, one rear one having a longitudinal guide, of a plurality of horizontal rods disposed between the rear standards, a plurality of horizontal rods disposed between the forward standards, means for securing said rods to the adjacent standards, transverse members pivoted respectively to the forward and rear rods so that the forward standards may be swung relative to and parallel with the rear standards, an extensible brace pivoted to the forward standard which is adjacent to the standard having the said guide, and means adjustable lengthwise of said guide for securing said brace thereto.

4. In a display rack, the combination with two forward and two rear standards, of a plurality of shelves disposed one above the other, means for pivoting said shelves to the forward and rear standards so that the forward standards may be swung relative to and parallel with the rear standards, an extensible brace pivoted to one of the forward standards and adjustable lengthwise of the adjacent rear standard, the extensible brace when extended and the standards are inclined to the proper position serving as a leg to support the rack, and means for releasably locking the said brace to the rear standard adjacent thereto.

5. In display racks, the combination with two forward and two rear standards, the rear ones having each a longitudinal guide, of two bars pivoted respectively to the forward standards, means adjustable lengthwise of said guides for locking the said bars thereto respectively, a plurality of shelves disposed one above the other, means for pivotally securing the shelves to said standards so that the rear standards may be swung relative to and parallel with the forward standards, two bars longitudinally adjustable relative to the first named bars respectively, and releasable means for locking adjacent ones of said bars together.

6. In display racks, the combination with two pairs of standards, the standards of one pair being lengthwise extensible, of a lengthwise extensible brace pivoted to one standard and adjustable lengthwise of the adjacent standard of the other pair, means for releasably locking the brace to said adjacent standard, a plurality of shelves, and means for pivotally supporting said shelves to both pairs of standards so that one pair may be swung relative to and parallel with the other pair.

7. In display racks, the combination with two pairs of standards, of two series of horizontal rods disposed one series between the standards of each pair, said rods being adjustable lengthwise of said standards, securing devices lengthwise adjustable on each standard for securing the adjacent rods thereto, transverse members pivoted each to a rod of each series, whereby the standards may be swung to and from a vertical position and parallel with each other, two braces pivoted respectively to the standards of one pair and lengthwise adjustable relative to the standards of the other pair, and releasable means for locking said braces to the two standards relative to which they are lengthwise adjustable.

8. In display racks, the combination with two forward and two rear standards, each longitudinally grooved, of two series of horizontal rods, the ends of one series being longitudinally movable respectively in the grooves of the forward standards, the other series of rods being similarly mounted in the grooves in the rear standards, securing devices longitudinally adjustable on each standard and provided with means for securing the rods adjacent thereto to

the standard, transverse members pivoted to the rods of the two series, whereby the standards may be swung relative to and parallel with each other, two braces pivoted respectively to the forward standards and adjustable lengthwise of the rear standards respectively, and means for releasably locking the braces to the rear standards.

9. In display racks, the combination with two pairs of longitudinally grooved standards, of two series of horizontal rods, one series longitudinally adjustable in the grooves respectively of the standards of one pair, the other series of rods being longitudinally adjustable in the grooves of the standards of the other pair, means for securing said rods to the standards adjacent thereto, two guide plates mounted respectively on the standards of one pair and disposed parallel therewith, two braces pivoted respectively to the standards not provided with the guide plates, said braces being respectively adjustable lengthwise of said guide plates, releasable means for locking said braces to said guide plates, and a plurality of transverse members pivoted to said two series of rods so that the standards of one pair may be swung relative to and parallel with those of the other pair.

10. In display racks, the combination with two forward and two rear standards, the rear standards having each a longitudinal guide, of two series of horizontal rods, means for securing the ends of one series to the forward standards, means for securing the ends of the rods of the other series to the rear standards, transverse members each pivoted to one rear and one horizontal rod, two extensible braces comprising each two bars longitudinally slidable one relative to the other, one bar of each brace being pivoted to the adjacent forward standard, the other bar being adapted to form a leg for supporting the adjacent rear standard, and releasable means for locking the braces to the guides on the rear standards relative to which the braces are adjustable lengthwise of.

11. In display racks, the combination with two forward and two rear standards, of two guide plates secured lengthwise one to each rear standard, two extensible braces pivoted respectively to the forward standards and when extended serving as legs, said braces being adjustable lengthwise respectively of the rear standards, means for releasably locking each brace to the plate of the adjacent rear standard, two series of horizontal rods, means for securing the ends of the rods of one series to the forward standards respectively, means for securing the ends of the rods of the other series to the rear standards respectively, and transverse members pivoted each to one rod of each series, whereby the forward standards may be swung relative to and parallel with the rear standards.

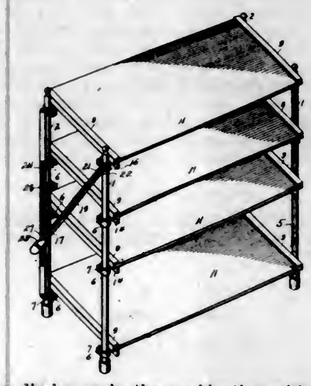
12. In display racks, the combination with one rear and one forward pair of standards, one pair being lengthwise extensible, of two lengthwise extensible braces pivoted respectively to the standards of the forward pair and each adjustable lengthwise of the adjacent rear standard, said braces when extended adapted to serve as legs for the rack to support the standards in the inclined position, releasable means for locking each brace to the adjacent rear standard, two series of vertically adjustable horizontal rods, means for securing the ends of the rods of one series to the forward standards respectively, means for securing the ends of the rods of the other series to the standards of the rear pair, and transverse members each pivoted to one rod of each series, whereby the rear standards may be swung relative to and parallel with the forward standards.

870,681. DISPLAY-RACK. JULIUS J. KARGES, Kansas City, Mo. Filed Dec. 21, 1906. Serial No. 348,951.

1. In a display rack, the combination with front and rear supports, of transverse members pivoted respectively to the front and rear supports, and a plurality of shelves forwardly and rearwardly adjustable on said transverse members.

2. In a display rack, the combination with front and rear supports, of transverse members pivoted respectively to the front and rear supports, and a plurality of shelves disposed one above the other and slidably mounted on said transverse members.

3. In a display rack, the combination with front and rear supports, of transverse members pivoted respectively to the front and rear supports and disposed in pairs with longitudinal grooves on adjacent sides, and a plurality of shelves disposed one above the other and mounted in said grooves.



4. In a display rack, the combination with front and rear supports, of transverse members pivoted respectively to the front and rear supports and disposed in pairs with longitudinal grooves on adjacent sides, and a plurality of shelves slidably mounted one in the grooves of each pair.

5. In a display rack, the combination with front and rear supports, of transverse members pivoted respectively to the front and rear supports whereby said supports may be swung to and from a vertical position, releasable means for locking the supports in the position in which they may be disposed, and a plurality of shelves disposed one above the other and supported by and adjustable lengthwise of said transverse members.

6. In a display rack, the combination with front and rear supports, of transverse members pivoted respectively to the front and rear supports whereby said supports may be swung to and from a vertical position, a brace pivoted to one of said supports and adjustable lengthwise of the other support, and a plurality of shelves disposed one above the other and supported by and adjustable lengthwise of said transverse members.

7. In a display rack, the combination with front and rear supports, of transverse members pivoted respectively to the front and rear supports whereby the supports may be swung to and from a vertical position, an extensible brace pivoted to one of said supports and adjustable lengthwise of the other support, and a plurality of shelves disposed one above the other and supported by and adjustable lengthwise of said transverse members.

8. In a display rack, the combination with front and rear supports, of a plurality of forwardly and rearwardly adjustable shelves disposed one above the other, means pivotally connected respectively with said front and rear supports and supporting said shelves, whereby the supports may be moved to and from a vertical position, and releasable means for locking the supports in their adjusted position.

9. In a display rack, the combination with front and rear supports, of a plurality of forwardly and rearwardly adjustable shelves disposed one above the other, means pivotally connected respectively with the front and rear supports and supporting said shelves, whereby the supports may be moved toward and from a vertical position, and a brace pivoted to one of said supports and movable lengthwise of the other support, and means for releasably locking said brace to said other support.

10. In a display rack, the combination with front and rear supports, of a plurality of shelves disposed one above the other and forwardly and rearwardly adjustable, means for supporting said shelves pivoted respectively to the front and rear supports, whereby the supports may be moved toward and from a vertical position, and an extensible brace pivoted to one support and connected to and adjustable lengthwise of the other support.

11. In a display rack, the combination with front and rear supports, of a plurality of shelves disposed one above the other, the upper shelf having perforations for receiving articles, the shelves being adjustable forwardly and rearwardly relative to the support, and means pivoted respectively to the front and rear supports and supporting said shelves.

12. In a display rack, the combination with front and rear supports, of a plurality of shelves disposed one above the other, the upper shelf having perforations for receiving articles, means on which the shelves are slidably mounted pivoted to the front and rear supports respectively, whereby said supports may be moved toward and from a vertical position, and releasable means for locking said supports in the position to which they may be adjusted.

13. In a display rack, the combination with front and rear supports, of transverse members pivoted respectively to the front and rear supports, whereby the supports may be moved toward and from a vertical position, bracing means connected to the front and rear supports and adjustable lengthwise of one of said supports, and variable means for limiting such adjustment.

14. In a display rack, the combination with front and rear supports, of transverse members pivoted respectively to the front and rear supports, whereby said supports may be moved toward and from a vertical position, an extensible brace pivoted to one of said supports and adjustable lengthwise of the other support, and adjustable means for limiting such adjustment.

15. In a display rack, the combination with front and rear supports, of a plurality of shelves disposed one above the other, means pivoted to said front and rear supports respectively for supporting said shelves, a brace pivoted to one of said supports and adjustable lengthwise of the other support, and adjustable means for limiting such adjustment.

16. In a display rack, the combination with front and rear supports, a longitudinal guide being provided on one of said supports, of a plurality of transverse members pivoted respectively to the front and rear supports, a brace pivoted to the support opposite the one having the guide and longitudinally adjustable on said guide, and means adjustable lengthwise of said guide for limiting the adjustment of the brace relative to said guide.

17. In a display rack, the combination with front and rear supports, the rear support having a longitudinal guide, of a plurality of shelves disposed one above the other, means for pivotally connecting the shelves with the front and rear supports, a brace pivoted to the front support and adjustable lengthwise of said guide, means for releasably securing the brace to the guide, and a stop for said brace adjustable lengthwise of said guide.

18. In a display rack, the combination with front and rear supports, of a plurality of transverse members pivoted respectively to the front and rear supports, an extensible brace pivoted to one support and adjustable lengthwise of the other support, adjustable means for limiting such adjustment, and shelves detachably supported by said members.

19. In a display rack, the combination with the front and rear supports, of transverse members pivoted respectively to the front and rear supports, shelves slidably mounted on said transverse members, the transverse members having means for yieldingly gripping said shelves for resisting such sliding movement of the shelves, and adjustable bracing means connecting the front and rear supports.

20. In a display rack, the combination with front and rear supports, of a plurality of shelves disposed one above the other, transverse members pivoted respectively to the front and rear supports and provided with resilient means for gripping the shelves which are slidably mounted on said members, and adjustable bracing means connecting the front and rear supports.

21. In a display rack, the combination with two front and two rear standards, of two series of horizontal rods, one series connecting at their ends to the rear standards, and the other series connecting at their ends to the front standards, transverse members pivoted to the front and rear horizontal rods and adjustable lengthwise of said rods, and adjustable bracing means connecting the front and rear standards.

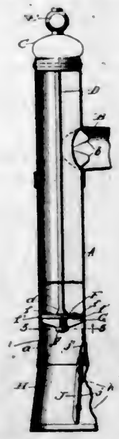
22. In a display rack, the combination with two front and two rear standards, of two sets of horizontal rods, one set connecting the front and one set connecting the rear standards, transverse members pivoted to and adjustable lengthwise on said rods, and a brace pivoted to one standard and adjustable lengthwise of one of the rear standards.

23. In a display rack, the combination with two front and two rear standards, of two sets of horizontal rods, one set connecting the front standards and the other set connecting the rear standards, transverse members pivoted to the front and rear rods and adjustable lengthwise of said rods, and an extensible brace connecting a front and a rear standard, pivoted to one and adjustable lengthwise of the other standard.

24. In a display rack, the combination with two front and two rear standards, of two sets of horizontal rods, one set connecting the front standards and the other set connecting the rear standards, transverse members pivoted to the front and rear horizontal rods and adjustable lengthwise of said rods, shelves detachably mounted on said members, and adjustable bracing means connecting one front and one rear standard.

25. In a display rack, the combination with two front and two rear standards, of two sets of horizontal rods, one set connecting the front standards and the other set connecting the rear standards, grooved transverse members pivoted to the front and rear rods and adjustable lengthwise of said rods, shelves slidably mounted in the grooves in said members, and detachable from said members, and adjustable bracing means connecting a front and a rear standard.

870,682. PUMP. THOMAS E. MOON, Sabina, Ohio. Filed Mar. 20, 1906. Serial No. 307,124.

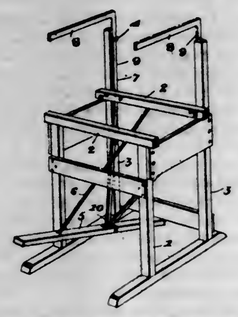


1. The combination of a cistern or shallow-well pump, of a sheet-metal pump-barrel having a cap at its upper end and a lateral opening near said end having surrounding portions of metal cut out in forming said opening projecting laterally and adapted for the attachment thereto of a discharge spout and also a frusto-conical portion at its lower end provided with inlet openings at one side thereof, together with an inwardly-opening valve controlling said inlet openings and a piston-rod extending through an opening in said cap and carrying an upwardly-opening valve, substantially as described.

2. In a cistern or shallow-weel pump a pump-barrel composed of sheet-metal tubing having a frusto-conical portion

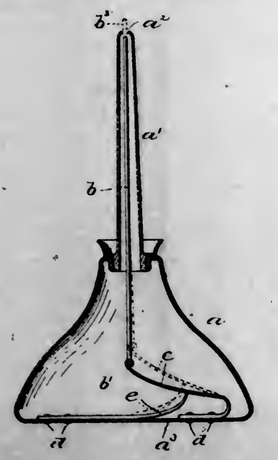
at its lower end with closed bottom and valve-controlled inlet openings at one side, said pump-barrel near its upper end having a series of projections integral therewith for attaching a discharge spout thereto, said projections being formed by bending sections of the metal cut out in forming a discharge opening communicating with the spout, substantially as described.

870,683. APPLE-BOX PRESS. JAMES MCCAUGHAN, Canon City, Colo. Filed June 14, 1906. Serial No. 321,728.



An apple box press comprising a stand including box rests and standards extending above the rests and to which one of the latter is secured, guides carried by the opposed faces of the standards adjacent to their upper ends, bars held for sliding movements by the guides and having their upper portion bent to form horizontally-extending clamps, and the lower portions deflected inwardly and forwardly, a foot lever to which the lower ends of the bars are secured, and a spring connected with the lever and the stand.

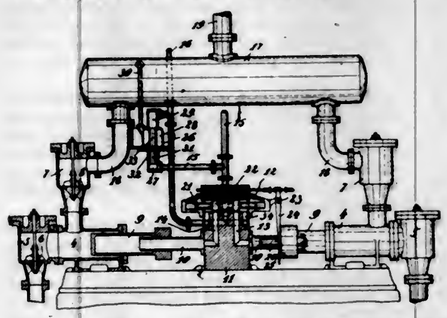
870,684. OIL-CAN. SAMUEL R. PARKS, Pawtucket, R. I. Filed Feb. 6, 1907. Serial No. 356,118.



1. In an oil can, a receptacle having a nozzle, a flat spring member secured adjacent one end to the inner face of the bottom of said receptacle and having its free end curved upwardly, a second spring member having one end secured to the inner face of the bottom of said receptacle adjacent the free end of the first mentioned spring member, said second spring member being curved to over-lie the free end of the first spring member and be engaged thereby, and a plunger rod extending into the nozzle and having its lower end pivoted to the free end of said second spring member.

2. In an oil can, a receptacle having a nozzle, two leaf-spring members secured to the inner face of the bottom of said receptacle, one of said spring members over-lying the other spring member and engaging the free end thereof, and a plunger rod extending into the nozzle and pivoted at its lower end to said over-lying spring member.

870,685. MEANS FOR MAINTAINING FLOW IN WATER-COLUMNS. CARL PRÖTT, Hagen, Germany. Filed Mar. 26, 1907. Serial No. 364,704.



1. In a device for maintaining the movement of the water-columns on changing the stroke of hydraulically worked pumps, the combination of three independent cylinders 27 28 29, of which one stands in communication with the conduit 15 for the driving-water, the second with the conduit 30 for the drawing-water and the third with the conduit 16 for the waste-water, in each of these cylinders a piston, and the connection of the pistons in a manner that by any one of them the two others are moved and drive out the water from the respective cylinder-chambers or into the same, substantially as set forth.

2. In a device for maintaining the movement of the water-columns on changing the stroke of hydraulically worked pumps, the combination of three cylinders working independently of each other but being arranged in one axis and connected with each other, of which one stands in communication with the conduit for the driving-water, the second with the conduit for the drawing-water and the third with the conduit for the waste-water, and with a triple piston, 31 32 33, which works in each of the three cylinders, substantially as set forth.

3. In a device for maintaining the movement of the water-columns on changing the stroke of hydraulically worked pumps, the combination of three cylinders working independently of each other but being arranged in one axis and connected with each other, of which one stands in communication with the conduit for the driving-water, the second with the conduit for the drawing-water and the third with the conduit for the waste-water, and with a triple piston, 31 32 33, which works in each of the three cylinders, and of which the piston 32 has a greater pressing surface than the piston 31, substantially as set forth.

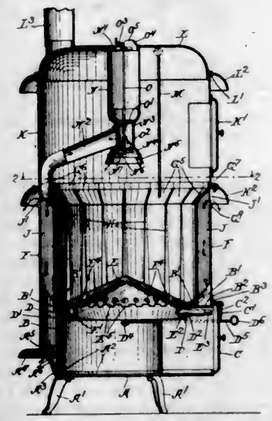
4. In a device for maintaining the movement of the water-columns on changing the stroke of hydraulically worked pumps, the combination of three independent cylinders connected with the conduits for the driving-water, the drawing-water and the waste-water and pistons working in the same, a return-valve 36 intercalated between one of these cylinders and its corresponding conduit and a throttling-channel 37 to effect a rapid entering of the water and a slow leaving, or vice versa, substantially as set forth.

5. In a device for maintaining the movement of the water-columns on changing the stroke of hydraulically worked pumps, the combination of three independent cylinders connected with the conduits for the driving-water, the drawing-water and the waste-water and pistons working in the same, and an additional piston 39 branching off from the piston for the conduit for the waste-water which additional piston works in a gage-glass 40 connected with the cylinder for the conduit for the waste-water in which gage-glass the column of water exerts a pressure on the additional piston, substantially as set forth.

6. In a device for maintaining the movement of the water-columns on changing the stroke of hydraulically worked pumps, the combination of three independent cylinders connected with the conduits for the driving-water, the drawing-water and the waste-water and pistons working in the same, and an additional piston 39 branching off from the piston for the conduit for the waste-water with additional piston works in a gage-glass 40 connected with the cylinder for the conduit for the waste-water, and an air-chamber 41 connected with the gage-glass, substantially as set forth.

7. In a device for maintaining the movement of the water-columns on changing the stroke of hydraulically worked pumps, the combination of three independent cylinders connected with the conduits for the driving-water, the drawing-water and the waste-water and pistons working in the same, and an additional piston 39 branching off from the piston for the conduit for the waste-water with additional piston works in a gage-glass 40 connected with the cylinder for the conduit for the waste-water, and an air-chamber 41 connected with the gage-glass, and a throttling valve 42 intercalated between the gage-glass or tube 40 and the said air-chamber, substantially as and for the purpose set forth.

870,686. STOVE. JOHN L. REID, Chicago, Ill. Filed Mar. 16, 1906. Serial No. 306,382.



1. In a stove, the combination of a grate with a surrounding fire box casing having inside and outside vertical channels, the inside channels extending to the lower outside rim of the grate and to a point above the fire and within the stove, and the outside channels opening above and below the fire into the surrounding chamber or room.

2. In a stove, the combination of a grate closed at the center to exclude air, with a fire box having a recessed wall, the recesses of which are of diminishing width from the bottom to the top and form air feeding channels, said channels communicating with the air below the grate.

3. In a stove, the combination of an inclosing shell, with a grate, a plurality of fire box sections arranged within the shell and around the grate and composing a fire box closed on the side and recessed so as to form air heating flues between the fire box and the outer shell, said sections spaced from one another to form narrow air feeding passages communicating with the fire box at the side and lying between the several air heating flues.

4. In a stove, the combination of an inclosing shell, with a conical grate imperforate except for a series of holes at its edge, a plurality of fire box sections arranged within the shell and around the grate and composing a fire box closed on the side and recessed so as to form air heating flues between the fire box and the outer shell, said sections spaced from one another to form narrow air feeding passages communicating with the fire box at the side and lying between the several air heating flues.

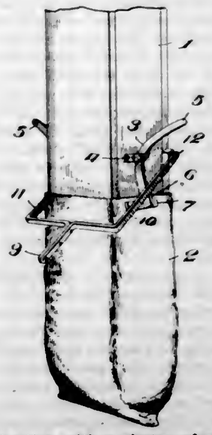
5. In a stove, the combination of an outer shell with a grate and a plurality of separable vertical fire box sections consisting of box like structures arranged about the grate and within the shell so as to form a fire pot closed at the sides, vertical air feeding channels within the fire pot, said sections spaced from one another to form vertical air flues lying outside of the fire pot and between the air feeding channels.

6. In a stove, the combination of an outer shell with a grate and a plurality of separable vertical fire box sections consisting of box like structures open at the bottom and along the inside, closed at the top and having spacing flanges along the sides to space them apart, said sections being arranged about the grate and within the shell so as to form a fire pot closed at the sides, vertical air feeding channels within the fire pot and said sections spaced from one another to form vertical air heating flues lying outside of the fire pot and between the air feeding channels.

7. In a stove, the combination of an outer shell with a grate and a plurality of separable vertical fire box sections consisting of box like structures arranged about the grate and within the shell so as to form vertical air feeding channels within the fire pot, and vertical air flues lying outside of the fire pot and between the air feeding channels, the outer shell having an opening near the upper ends of said fire box sections so that the air heating flues open out of the stove at the top.

8. In a stove, the combination of an outer shell with a ring within said shell forming an air space with the outer shell, a grate mounted on said ring, and a plurality of fire box sections above the ring consisting of box like structures arranged about the grate so as to form vertical air feeding channels within the fire box and vertical air heating flues between the fire box and the outer shell, said flues being in communication with said air space, and the outer shell having an opening at the upper ends of the fire box sections so that the air heating flues open out of the stove at the top.

870,687. BAG-HOLDER. WILLIAM M. RENNE, Belvidere, Ill. Filed Apr. 17, 1907. Serial No. 368,663.

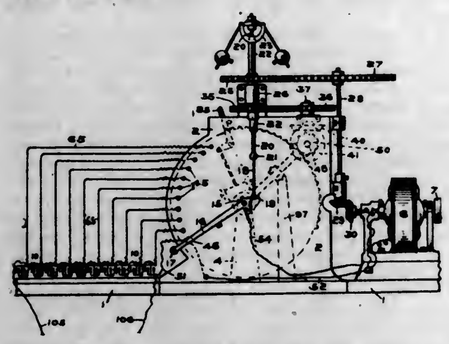


1. The combination with a chute; of means to secure a bag thereon comprising a pair of arms, the upper portions of which are curved outwardly and the outer edges of the

lower ends thereof tapered to form a wedge, means to pivotally mount said arms on the chute, a plate at the lower end of each of said arms, a bifurcated lever having bars thereon, adapted to engage the tapered edges to secure the bag to the chute, and to engage the curved ends thereof to release the plates from the bag, and means to pivotally mount said lever in operative position on the chute.

2. The combination with a chute; of means to secure a bag to the lower end thereof, comprising a pair of arms, the upper portions of which are curved outwardly and the lower outer edge thereof tapered to form a wedge, means to pivotally mount said arms upon the chute, a lever having bars thereon adapted to extend to opposite sides of the chute and over said arms, means to pivotally secure the free ends of said bars to the rear edge of the chute, the pivotal point of said arms being substantially in a horizontal plane with the pivotal point of the arms, whereby when said lever is lowered, the bars will engage the tapered edge of the arms and force the same inwardly, clamping plates on the lower ends of said arms, said plates having a plurality of points on the engaging face thereof.

870,688. AUTOMATIC ELECTRIC-STORING DEVICE. JOHN W. RINGER, Castleton, Ind. Filed July 17, 1906. Serial No. 326,552.



1. In a device of the character described comprising a fixed face-plate, a pivotally mounted movable means on said face-plate, a disk wheel movably mounted in a parallel plane with the face-plate, means for operating said disk wheel, a series of contacting plugs mounted on both the face-plate and disk wheel, a series of cells connected with the plugs on the disk wheel, a suitable electric generator connected with the pivotally mounted movable means, and means for operating the last-named means.

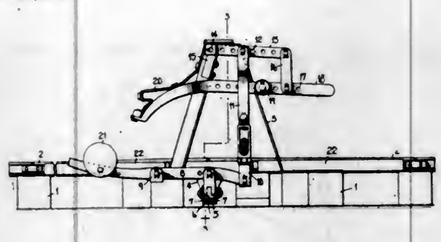
2. In a device of the character described comprising a fixed face-plate, a pivotally mounted movable means on said face-plate, a disk wheel movably mounted in a parallel plane with the face-plate, means for operating said disk wheel, a series of contacting plugs mounted on both the face-plate and disk wheel, a series of cells connected with the plugs on the disk wheel, a suitable electric generator connected with the pivotally mounted movable means and the cells, means for operating the pivotally mounted movable means, means for disengaging the driving means from the disk wheel, and means for returning the disk wheel to its initial position.

3. In a device of the character described comprising a fixed face-plate, an arm movably mounted on said face-plate, means for actuating said arms, a disk wheel mounted parallel with the face-plate and susceptible to a rocking movement, means for moving the disk wheel, a throw-out device on the disk wheel, trip means carried by the arm to engage and trip the throw-out device, means for returning the disk wheel to its initial position, and a stationary means to engage the throw-out device for moving the driving means into engagement with the disk wheel.

4. In a device of the character described comprising a fixed face-plate, an arm movably mounted on said face-plate, means for actuating said arm, a disk wheel mounted parallel with the face-plate and susceptible to a rocking movement, means for moving the disk wheel, a throw-out device on the disk wheel, trip means carried by the arm to engage and trip the throw-out device, means for returning the disk wheel to its initial position, a stationary means to engage the throw-out device for engaging the driving means with the disk wheel, a series of contacting plugs on both the face-plate and disk wheel, cells connecting with the plugs on the disk wheel, and an electric generator connecting with the movable arm and the cells.

5. In a device of the character described comprising a fixed face-plate, an arm movably mounted on said face-plate and adapted to move across its surface, a movable disk wheel mounted parallel with the face-plate, a series of contacting plugs carried by the face-plate and disk wheel, a series of cells connected with the plugs on the disk wheel, an electric generator connecting with the movable arm and the cells, a driving means for the disk wheel, throw-out means carried by the disk wheel to contact the movable arm for disengaging said driving means from the disk wheel, and a fixed stop device to contact the throw-out device for moving the driving means into engagement with the disk wheel.

870,689. TRAIN-OPERATED MECHANISM FOR OPENING AND CLOSING DOORS. POMPIE L. ROBERTSON, Maybeury, W. Va. Filed July 3, 1907. Serial No. 382,035.



1. In combination with track rails free for limited vertical movement, transverse connecting members arranged under the adjacent ends of the rails, said members being pivotally connected at their inner ends, means for connecting said members with the rails, longitudinally disposed operating bars pivoted near said rails and connected with the outer ends of the connecting members, a flexible door suspended above and transversely of the rails, longitudinally disposed door operating members pivoted above the rails and connected at their free ends with the lower end of the door, means for connecting the pivot ends of said members with the operating bars and weights adjustably mounted on the frame ends of the operating bars.

2. In combination with track rails free for limited vertical movement, transverse connecting members pivotally connected at their inner ends and arranged under the rails, means for connecting said members with adjacent ends of the rails, longitudinally disposed operating members pivoted near the rails, a flexible door sustained above the rails, longitudinally disposed door operating members pivoted above the rails and connected at their free ends with the door, adjustable connections between the operating bars and door operating members and weights adjustably arranged on the free ends of the operating bars.

3. In combination with track rails free for limited vertical movement, connecting members arranged transversely under adjacent ends of the rails, said members being pivotally connected at their inner ends, means for connecting the rails with said connecting members, longitudinally disposed operating bars pivoted intermediately of their ends near said rails, and connections between the operating bars and outer ends of the connecting members.

4. In combination with track rails free for limited vertical movement, transversely disposed connecting members arranged under the rails, said members being pivotally connected at their inner ends, means for connecting the connecting members with the rails, longitudinally disposed operating bars pivoted near the rails, adjustable connections between the operating bars and connecting members, upright frames arranged at the sides of the rails, a flexible door sustained by the frames, longitudinally disposed door operating members pivoted to the frames and connected at their free ends with the door, a rock shaft journaled between the frames above said door operating members, adjustable connections between the ends of the shaft and pivot ends of the door operating members, adjustable connections between the free and pivot ends of the operating bars and door operating members respectively and weights adjustable on the free ends of the operating bars.

870,690. METHOD OF ROASTING SULFUROUS ORES. ADOLF SAVELSBERG, Aachen, Germany. Filed Sept. 17, 1906. Serial No. 335,018.

1. A method of roasting sulfurous ores consisting in roasting the crude ore in a converter in the presence of a substance which after being heated swells up in contact with water, and thereby partially desulfurizing the same, adding water to the mass thus obtained and thereby destroying the structure resulting from the sintering of the same, and roasting the mass again under the action of a blast in a converter.

2. A method of roasting sulfurous ores consisting in roasting the crude ore in a converter in the presence of a substance which after being heated swells up in contact with water, and thereby partially desulfurizing the same, adding water to the mass thus obtained and thereby destroying the structure resulting from the sintering of the same, adding crude ore to said mass, and roasting the mixture under the action of a blast in a converter.

3. A method of roasting sulfurous ores consisting in mixing the crude ore with a substance which after being heated swells up in contact with water, roasting said mixture in a converter and thereby partially desulfurizing the same, adding water to the mass thus obtained and thereby destroying the structure resulting from the sintering of the same, and roasting the mass again under the action of a blast converter.

4. A method of roasting sulfurous ores consisting in mixing the crude ore with limestone, roasting said mixture in a converter and thereby partially desulfurizing the same, adding water to the mass thus obtained and thereby destroying the structure resulting from the sintering of the same, and roasting the mass again under the action of a blast in a converter.

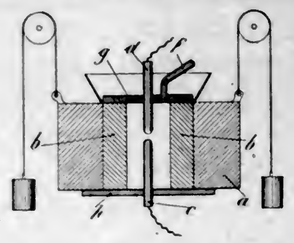
5. A method, which comprises roasting sulfurous ores in a converter in the presence of a substance which after being heated disintegrates in water, dumping the charge, wetting the same, and charging the wet disintegrated mass into a converter and roasting the same under the action of the blast.

6. A method of roasting sulfurous ores consisting in mixing the crude ore with limestone, roasting said mixture in a converter and thereby partially desulfurizing the same, adding water to the mass thus obtained and thereby destroying the structure resulting from the sintering of the same, disintegrating the same, mixing limestone with said disintegrated mass, and roasting the latter mixture again under the action of a blast in a converter.

870,691. PROCESS OF PRODUCING POROUS BARIUM OXID. HERMANN SCHULZE, Bernburg, Germany. Filed Oct. 15, 1903. Serial No. 177,212.

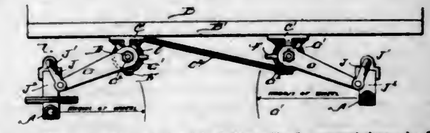
1. The process of producing porous barium oxid which consists in melting barium carbonate mixed with carbon, in an electric furnace, at a temperature of about 2000° C., then again mixing it with carbon and barium nitrate and heating and inflating it in an electric furnace.

2. The process of producing porous barium oxid which consists in melting about 94 parts by weight of barium carbonate mixed with about 6 parts by weight of carbon, in an electric furnace, then mixing about 89 parts by weight of the product thus obtained with about 10 parts



of barium nitrate and 1 part of carbon and heating and thereby inflating the mixture in an electric furnace.

870,692. SPRING-GEAR FOR VEHICLES. JAMES L. B. SHEPARD, Grayville, Ill., assignor of one-fifth to William M. Hall, Grayville, Ill. Filed Aug. 25, 1906. Serial No. 332,024.



1. A spring gear of the kind described comprising shafts, arms mounted upon said shaft, ratchets, pawls carried by the arms, and in engagement with the ratchets, links pivotally carried by bolsters and connected to the arms, an equalizing bar, levers keyed to the shafts and pivotally connected to the ends of said bar and springs supported by said shafts.

2. A vehicle gear of the kind described comprising vehicle springs, parallel shafts, ratchets carried by the shafts, arms carried by the shafts, links pivotally mounted upon portions of the vehicle and pivotally connected to said arms; pawls carried by said arms and adapted to engage the ratchets, and an equalizing bar extending between the shafts and pivotally connected to the shafts, the ends of the bar being in different and horizontal planes.

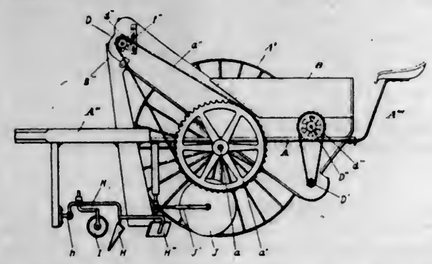
3. A device of the kind described comprising vehicle springs, parallel shafts supporting said springs, levers secured to said shafts, an equalizing bar pivotally connected at its ends to said levers, one end of the bar being in a higher plane than the other, ratchet wheels carried by said shafts, arms carried by the shafts, pawls carried by the arms and adapted to engage the ratchets, and means for pivotally connecting the free ends of the arms to the portions of the vehicle body.

4. A device of the kind described comprising parallel shafts, levers carried by said shafts, an equalizing bar pivotally connected at its ends to said levers, one end of the bar being in a higher plane than the other, coil springs arranged end to end upon said shafts, the outer ends of the springs being connected to a fixed support and the inner ends being connected to the levers, arms carried by the shafts, ratchets carried by the shafts, pawls carried by the arms adapted to engage the shaft, and links pivotally supported from a part of the vehicle and pivotally connected to the ends of the arms.

5. A device of the kind described comprising parallel shafts, bearings carried by a vehicle body for said shafts, a rock lever keyed to one of said shafts, a bell crank lever keyed to the other shaft, an equalizing bar pivoted at one end to the upper end of the rock lever and at the opposite end to the depending member of the bell crank, coil springs surrounding said shafts, and having their outer ends secured to the bearings and their inner ends to said levers, respectively, arms loosely mounted upon said shafts, ratchets on said shafts, pawls carried by the arms adapted to engage the ratchets, bearings carried by the vehicle bolsters,

links pivotally connected to said bearings and also to the arms and nuts working upon the shaft and adapted to lock the arms with respect to the shafts.

870,693. ROOT-PLANTING MACHINE. JOHN H. SHIRLEY, Mentha, Mich., assignor to A. M. Todd Company, Limited, Kalamazoo, Mich. Filed Mar. 6, 1906. Serial No. 304,607.



1. The combination with a main frame of the carrying wheels; an axle therefor on which said frame is mounted; a pair of hoppers having forwardly inclined bottoms; delivery spouts or chutes arranged at the forward ends thereof; furrow openers behind which said delivery spouts are arranged to deliver; feed conveyers arranged in the bottoms of said hoppers, consisting of sprocket chains having cross-pieces thereon, provided with projecting fingers; sprocket wheels for said chains; shafts on which said sprocket wheels are mounted; a driving connection for one of said shafts to said axle; toothed rollers arranged above said feed conveyers at their delivery ends; connections for driving said rollers in a direction opposite to that of said conveyers; toothed clearing rollers arranged below said conveyers at the delivery ends; driving connections therefor; wheels having projecting fingers on their peripheries, arranged in said hoppers above said feed conveyers; a shaft on which said wheels are mounted; and driving connections therefor to the lower feed conveyer shaft, for the purpose specified.

2. The combination with a main frame of the carrying wheels; an axle therefor on which said frame is mounted; a pair of hoppers having forwardly inclined bottoms; delivery spouts or chutes arranged at the forward ends thereof; furrow opers behind which said delivery spouts are arranged to deliver; feed conveyers arranged in the bottoms of said hoppers, consisting of sprocket chains having cross-pieces thereon; sprocket wheels for said chains; shafts on which said sprocket wheels are mounted; a driving connection for one of said shafts to said axle; toothed rollers arranged above said feed conveyers at their delivery ends; connections for driving said rollers in a direction opposite to that of said conveyers; toothed clearing rollers arranged below said conveyers at the delivery ends; driving connections therefor; wheels having projecting fingers on their peripheries, arranged in said hoppers above said feed conveyers; a shaft on which said wheels are mounted; and driving connections therefor to the lower feed conveyer snaft, for the purpose specified.

3. The combination with a main frame of the carrying wheels; an axle therefor on which said frame is mounted; a pair of hoppers having forwardly inclined bottoms; delivery spouts or chutes arranged at the forward ends thereof; furrow openers behind which said delivery spouts are arranged to deliver; feed conveyers arranged in the bottoms of said hoppers, consisting of sprocket chains having cross-pieces thereon; sprocket wheels for said chains; shafts on which said sprocket wheels are mounted; a driving connection for one of said shafts to said axle; toothed rollers arranged above said feed conveyers at their delivery ends; connections for driving said rollers in a direction opposite to that of said conveyers; wheels having projecting fingers on their peripheries, arranged in said hoppers above said feed conveyers; a shaft on which said wheels are mounted; and driving connections therefor to the lower feed conveyer shaft, for the purpose specified.

4. The combination with a main frame of the carrying wheels; an axle therefor on which said frame is mounted; a pair of hoppers having forwardly inclined bottoms; delivery spouts or chutes arranged at the forward ends thereof; furrow openers behind which said delivery spouts are arranged to deliver; feed conveyers arranged in the bottoms of said hoppers, consisting of sprocket chains having cross-pieces thereon; sprocket wheels for said chains; shafts on which said sprocket wheels are mounted; a driving connection for one of said shafts to said axle; toothed rollers arranged above said feed conveyers at their delivery ends; connection for driving said rollers in a direction opposite to that of said conveyers; toothed clearing rollers arranged below said conveyers at the delivery ends; and driving connections therefor, for the purpose specified.

5. The combination with a main frame of the carrying wheels; an axle therefor on which said frame is mounted; a pair of hoppers having forwardly inclined bottoms; delivery spouts or chutes arranged at the forward ends thereof; furrow openers behind which said delivery spouts are arranged to deliver; feed conveyers arranged in the bottoms of said hoppers, consisting of sprocket chains having cross-pieces thereon; sprocket wheels for said chains; shafts on which said sprocket wheels are mounted; a driving connection for one of said shafts to said axle; toothed clearing rollers arranged below said conveyers at the delivery ends; driving connections therefor; wheels having projecting fingers on their peripheries, arranged in said hoppers above said feed conveyers; a shaft on which said wheels are mounted; and driving connections therefor to the lower feed conveyer shaft, for the purpose specified.

6. The combination with a main frame of the carrying wheels; an axle therefor on which said frame is mounted; a pair of hoppers having forwardly inclined bottoms; delivery spouts or chutes arranged at the forward ends thereof; furrow openers behind which said delivery spouts are arranged to deliver; feed conveyers arranged in the bottoms of said hoppers, consisting of sprocket chains having cross-pieces thereon; sprocket wheels for said chains; shafts on which said sprocket wheels are mounted; wheels having projecting fingers on their peripheries, arranged in said hoppers above said feed conveyers; a shaft on which said wheels are mounted; and driving connections therefor to the lower feed conveyer shaft, for the purpose specified.

7. The combination with a main frame of the carrying wheels; an axle therefor on which said frame is mounted; a pair of hoppers having forwardly inclined bottoms; delivery spouts or chutes arranged at the forward ends thereof; furrow openers behind which said delivery spouts are arranged to deliver; feed conveyers arranged in the bottoms of said hoppers, consisting of sprocket chains having cross-pieces thereon; sprocket wheels for said chains; shafts on which said sprocket wheels are mounted; a driving connection for one of said shafts to said axle; toothed clearing rollers arranged below said conveyers at the delivery ends; and driving connections therefor, for the purpose specified.

8. The combination with a hopper; a delivery spout or chute arranged at the forward end thereof; a furrow opener behind which said delivery spout is arranged to deliver; a feed delivery conveyer arranged in the bottom of said hopper; a toothed roller arranged above said feed conveyer at its delivery end; means for driving said roller in a direction opposite to that of said conveyer; a toothed roller arranged below said conveyer at its delivery end; and a wheel having projecting fingers arranged in said hopper above said feed conveyer, for the purpose specified.

9. The combination with a hopper; a delivery spout or chute arranged at the forward end thereof; a furrow opener behind which said delivery spout is arranged to deliver; a feed or delivery conveyer arranged in the bottom of said hopper; a toothed roller arranged below said conveyer at its delivery end; and a wheel having projecting fingers arranged in said hopper above said feed conveyer, for the purpose specified.

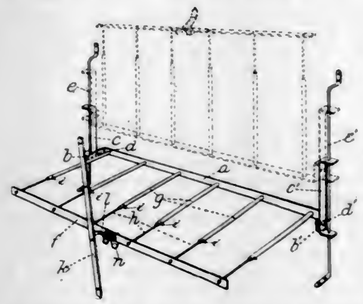
10. The combination with a hopper; a delivery spout or cuute arranged at the forward end thereof; a furrow opener behind which said delivery spout is arranged to deliver; a feed or delivery conveyer arranged in the bottom of said hopper; a toothed roller arranged above said feed conveyer at its delivery end; means for driving said roller in a direction opposite to that of said conveyer; and a toothed roller arranged below said conveyer at its delivery end, for the purpose specified.

11. The combination with a hopper; a delivery spout or chute arranged at the forward end thereof; a furrow opener behind which said delivery spout is arranged to deliver; a feed or delivery conveyer arranged in the bottom of said hopper; and a toothed roller arranged below said conveyer at its delivery end, for the purpose specified.

12. In a root planting machine, the combination with a hopper, of a feed device arranged to take the roots from the bottom of the hopper; means for agitating said roots in said hopper above said feed device; a gage device coacting with said feed device to regulate the feeding of the roots; and a clearing device for said feed device, for the purpose specified.

13. In a root planting machine, the combination with a hopper, of a feed device; a gage device coacting with said feed device to regulate the feeding of the roots; and a clearing device for said feed device, for the purpose specified.

870,694. FEED-RACK. JAMES S. SMITH, Spokane, Wash. Filed Dec. 29, 1906. Serial No. 350,040.



1. In combination with a feed trough, a feed rack within the trough, consisting of rods attached to one side of the trough, a guard frame slidably mounted thereon, and means for controlling the movement of the frame on the rods.

2. In combination with a feed trough, a feed rack within the trough, consisting of rods attached to one side of the trough, a ratchet bar with downwardly disposed teeth attached to the opposite side of the trough, and a guard frame slidably mounted at one side on the rods, the other side having a tongue engaging the ratchet bar.

3. In combination with a feed trough, a feed rack within the trough, consisting of two parallel rods attached to one side of the trough, a sliding piece mounted on each rod consisting of a bar having its ends bent at right angles to the bar, the said ends having holes engaging the rod, and a guard frame pivoted on one side at each end to the sliding pieces.

4. In combination with a feed trough, a feed rack within the trough, consisting of two parallel rods attached to one side of the trough, a sliding piece mounted on each rod consisting of a bar having its ends bent at right angles to the bar, the said ends having holes engaging the rod; and a guard frame composed of side bars and transverse bars connecting the side bars, the ends of the side bar at one side of the guard frame being extended and bent at right angles toward the other side bar, and again bent at right angles outwardly from the guard frame and beveled, the said side bar being pivoted at each end between the angles thereof to the sliding pieces.

5. In combination with a feed trough, a feed rack within the trough, consisting of rods attached to one side of the trough, a channeled ratchet bar with downwardly disposed teeth attached to the opposite side of the trough, and a guard frame slidably mounted at one side on the rods, the other side having a hinged tongue and a spring attached to the frame engaging the tongue, the said tongue being held in engagement with the channeled ratchet bar by the spring and provided on each side with a shoulder near its end, the shoulders engaging the ratchets and the extremity of the tongue the channel.

6. In combination with a feed trough, a feed rack within the trough, consisting of rods attached to one side of the trough, a guard frame composed of telescoping sections slidably mounted thereon, and means for controlling the upward movement of the frame on the rods.

7. In combination with a feed trough, a feed rack within the trough, consisting of rods attached to one side of the trough, a ratchet bar with downwardly disposed teeth attached to the opposite side of the trough, and a guard frame composed of side bars and transverse bars connecting the side bars, the transverse bars being in two sections slidably mounted on each other, one side of the guard frame being slidably mounted on the rods, and the other side of the guard frame having a tongue engaging the ratchet bar.

8. In combination with a feed trough, a feed rack within the trough, consisting of two parallel rods attached to one side of the trough, a channeled ratchet bar with downwardly disposed teeth attached to the opposite side of the trough, a sliding piece mounted on each rod consisting of a bar having its ends bent at right angles to the bar, the said ends having holes engaging the rod; and a guard frame composed of side bars and transverse bars connecting the side bars, the transverse bars being in two sections slidably mounted on each other, one side of the guard frame being pivoted at each end to the sliding pieces, and the other side of the guard frame having a tongue engaging the ratchet bar.

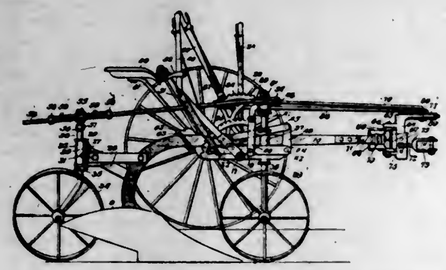
9. In combination with a feed trough, a feed rack within the trough, consisting of two parallel rods attached to one side of the trough, a channeled ratchet bar with downwardly disposed teeth attached to the opposite side of the trough, a sliding piece mounted on each rod consisting of a bar having its ends bent at right angles to the bar, the said ends having holes engaging the rod, and a guard frame composed of side bars and transverse bars connecting the side bars, the transverse bars each consisting of a rod attached to one side of the guard frame sliding within a tube attached to the other side of the guard frame, and a set screw near the outer end of the tube engaging the rod, the ends of the side bar at one side of the guard frame being extended and bent at right angles toward the other side bar, and again bent at right angles outwardly from the guard frame and beveled, the said side bar being pivoted at each end between the angles thereof to the sliding pieces, and the other side of the guard frame having a hinged tongue and a spring attached to the frame engaging the tongue, the said tongue being held in engagement with the channeled ratchet bar by the spring and provided on each side with a shoulder near its end, the shoulders engaging the ratchets and the extremity of the tongue the channel.

870,695. PLOW. WILLIAM SOBEY, Racine, Wis., assignor to J. I. Case Plow Works, Racine, Wis., a Corporation. Filed Feb. 23, 1906. Serial No. 302,528.

1. In wheeled plows, the combination with the rear furrow wheel and its upright standard, of a turning member for said furrow wheel controlled by the draft animals and a shifter under control of the rider for said furrow wheel, said turning members being arranged to turn said wheel without changing the position of said shifter.

2. In wheeled plows, the combination with the furrow wheels and their standards, of a turning member under

control of the draft animals and a shifter under control of the rider, said turning members and shifter being connected together and to said standards to turn said furrow wheel.



3. In wheeled plows, the combination with furrow wheels and their upright rotatable standards, of a turning member under control of the draft animals and a shifter under control of the rider, said turning member and said shifter being connected to said standard to turn the same independently of each other.

4. In wheeled plows, the combination with front and rear furrow wheels, upright standards therefor, a turning member under control of the draft animals, a shifter under control of the operator and means connecting said shifter and both said shifter and turning member to said standards to turn the same and said furrow wheels.

5. In wheeled plows, the combination with the front and rear furrow wheels, upright rotatable standards whereon said furrow wheels are mounted, a turning member under control of the draft animals, a shifter under control of the rider and means connecting both said shifter and said turning member to said standards arranged to effect the turning of said standards and furrow wheels by either of said parts independently of the other.

6. In wheeled plows, the combination with the front and rear furrow wheels, upright rotatable standards therefor, connections between said standards, a turning member under control of the draft animals, a shift lever and means connecting both said shift lever and said turning member to the standard of the front furrow wheel, said connections being arranged to permit the independent turning of said furrow wheels either by said turning member or said shift lever.

7. In wheeled plows, the combination with a furrow wheel and its upright standard, of a turning member under control of the draft animals, a connection secured to said standard and having a lost motion engagement with said turning member and means for operating said connection to turn said furrow wheel independently of said turning member.

8. In wheeled plows, the combination with the front furrow wheel and its upright rotatable standard, of a turning member under control of the draft animals having a slotted arm, an arm on said standard, a connecting rod pivoted to the standard arm and engaging the slot of the turning member arm, a shift lever and a connection between said shift lever and said rod.

9. In wheeled plows, the combination with the front and rear furrow wheels, of upright rotatable standards whereon said furrow wheels are mounted, connections between said standards, a pivoted turning member under control of the draft animals having a slotted arm, an arm secured to said standard, a connecting rod pivoted to said standard arm and engaging the slot of said turning member arm, a pivoted shift lever and a rod connecting said shift lever and said first mentioned connecting rod, substantially as described.

10. In wheeled plows, the combination with the front and rear furrow wheels, upright rotatable standards whereon said furrow wheels are mounted, connections between said standards, a front pivoted turning member having a horizontal slotted arm, an arm adjustably mounted on the front furrow wheel standard, a connecting rod pivoted at its rear end to said arm and engaging the slot of said turning member arm at its front end, a pivoted shift lever and a connecting rod pivoted at its rear end to said shift lever and at its forward end to the forward end of the first mentioned connecting rod.

11. In wheeled plows, the combination with the plow and plow beam, of the front and rear furrow wheels, standards therefor, sleeves for said standards connected to the plow beam, connections between said standards, a front turning member under control of the draft animals, a shift lever and means connecting said turning member and said shift lever to said standards arranged to effect the independent turning of said standards and furrow wheels by either of said parts.

12. In wheeled plows, the combination with the plow and plow beam, of the front and rear furrow wheels, upright rotatable standards therefor, sleeves for said standards connected to the plow beam, connections between said standards, a turning member pivoted to the front end of the plow beam, a shift lever pivotally connected to the plow beam, a connecting rod from the front furrow wheel standard having a lost motion engagement with said turning member and a second rod connecting said first mentioned rod with said shift lever.

13. In wheeled plows, the combination with the plow and plow beam, of the front and rear furrow wheels, upright rotatable standards therefor, sleeves for said standards connected to the plow beam, connections between said standards, a turning member pivoted to the front end of the plow beam, a shift lever pivotally connected to the plow beam, a horizontal slotted arm on said turning member, a horizontal arm on the upper arm of the front wheel standard and rods connecting said shift lever and said standard with the slotted arm of said turning member.

14. In wheeled plows, the combination with the plow and plow beam, of front and rear furrow wheels, upright standards therefor, connections between said standards, sleeves for said standards connected to the plow beam, an arm adjustably mounted on said front furrow wheel standard, a turning member pivoted to the front end of the plow beam and having a horizontal slotted arm, a rod pivoted to said standard arm engaging the slot of said turning member and a shift lever pivoted to the plow frame and connected to shift said rod independently of said turning member.

15. In wheeled plows, the combination with the plow and plow beam, of front and rear furrow wheels, upright standards therefor, connections between said standards, sleeves for said standards connected to the plow beam, a turning member pivoted to the front end of said plow beam, a clevis connected to said turning member to shift the same, arms on said turning member and the front furrow wheel standard, a connecting rod between said arms and a shift lever pivotally connected to the plow beam and connected to said rod to shift the same independently of said turning member.

16. In wheeled plows, the combination with the plow and plow beam, of a shaft journaled on the plow beam, an arm on said shaft, a land-side wheel on said arm, front and rear furrow wheels, upright rotatable standards for said furrow wheels, sleeves for said standards connected to the plow beam, connections between said standards, a shift lever connected to said shaft and to the front furrow wheel standard for raising and lowering said land-side and front furrow wheels, a turning member pivoted to the front end of the plow beam and connections between said turning member and the front furrow wheel standard.

17. In wheeled plows, the combination with the plow and plow beam, of a shaft journaled on the plow beam, a land-side wheel carried by said shaft, front and rear furrow wheels, upright standards therefor, sleeves for said standards connected to the plow beam, a turning member connected to the forward end of the plow beam, connections between said turning member and said standards and a clevis connected to said turning member.

18. In wheeled plows, the combination with the plow and plow beam, of transverse bars bolted to said plow beam, a cross shaft journaled in bearings on said bars, an arm adjustably fixed to one end of said shaft, a land-side wheel on said arm, a bracket fixed to said bars on the furrow side of the plow and having an upright sleeve, a front furrow wheel, a standard therefor extending through said sleeve, a shift lever on said shaft adjacent said bracket, a short shaft journaled in said bracket, arms on said shaft, links connecting said arms to said shift lever and said standard, a rear furrow wheel, a standard therefor, a sleeve for said standard connected to the rear end of said plow beam, and connections between the standards of said front and rear furrow wheels.

19. In wheeled plows, the combination with the plow and plow beam, a pair of transverse bars bolted to the plow beam, a cross shaft journaled in the bearings connected to said bars, an arm adjustably secured to one end of said shaft, a land-side wheel on said arm, a bracket fixed to said bars on the furrow side of the plow and having an upright sleeve, a front furrow wheel having a standard extending through said sleeve, a shift lever fixed to said shaft adjacent said bracket, a short shaft journaled in said bracket, arms on said shaft, links connecting said arms with said shift lever and said standard respectively, a rear furrow wheel having an upright standard, a sleeve for said standard rigidly secured to the rear end of the plow beam, arms on said standards and a connecting rod extending between said arms.

20. In wheeled plows, the combination with the plow and plow beam, of transverse bars bolted to the plow beam, a land-side wheel and a front furrow wheel shiftably connected to said bars, a common shift lever for said land-side and front furrow wheels, a rear furrow wheel having an upright standard, a sleeve for said standard and a bracket secured to the rear end of the plow beam whereon said sleeve is rotatably adjustable.

21. In wheeled plows, the combination of the front and rear furrow wheels, standards therefor, connections between said standards, an arm on the front furrow wheel standard, a turning member having a slotted arm and a connecting rod extending between said standard arm and said turning member and engaging said slotted arm.

22. In wheeled plows, the combination with the plow and plow beam, of front and rear furrow wheels, standards therefor, sleeves for said standards connected to the plow beam, a turning member under control of the draft animals pivoted to the forward end of the plow beam and connections between said turning member and said standards.

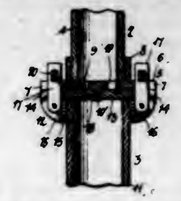
23. In wheeled plows, the combination with the plow and plow beam, of front and rear furrow wheels, standards therefor, sleeves for said standards connected to the plow beam, a turning member under control of the draft animals pivoted to the forward end of the plow beam, horizontal arms on said standards and on said turning member and connecting rods extending between said arms.

24. In wheeled plows, the combination with the plow and plow beam, of front and rear furrow wheels, upright standards therefor connected together, sleeves for said standards connected to the plow beam, a turning member under control of the draft animals swiveled in the front end of the plow beam and connections between said turning member and the front furrow wheel standard.

25. In wheeled plows, the combination with the plow and plow beam, of front and rear furrow wheels, upright standards therefor connected together, sleeves for said standards connected to the plow beam, a bracket adjustably mounted on the front end of the plow beam, a turning member swiveled to swing horizontally on said bracket, a clevis swiveled to swing vertically on said turning member and connections between said turning member and the front furrow wheel standard.

26. In wheeled plows, the combination with the plow and plow beam, of front and rear furrow wheels, upright standards therefor connected together, sleeves for said standards connected to the plow beam, a turning member swiveled to the front end of the plow beam, a clevis connected thereto to turn the same, arms on said turning member and on the front furrow wheel standard, and a connecting rod extending between said arms.

870,696. GATE-POST. DANIEL E. STETLER, Medford, Okla. Filed Feb. 4, 1907. Serial No. 355,731.



1. A gate post consisting of two gate members, one comprising a tube having a head composed of a circular plate having a number of slots in its periphery and an annular interiorly threaded flange formed on its upper face, screwed to its lower end, and the other a tube having a head composed of a circular plate having a number of slots in its periphery, an annular interiorly threaded flange having slotted locking members pivoted to its outer face, formed on its lower face, screwed to its upper end, and key blocks, adapted to work in the slots of said slotted locking members, substantially as described.

2. A gate post comprising upper and lower sections, heads attached to the meeting ends of said sections and provided with radial opening slots, perforated locking members pivoted to one of the sections for movement into engagement with the slots and keys designed for insertion through said perforations to fix the members in locking position.

3. A gate post comprising upper and lower sections, heads attached to the meeting ends of the sections and provided with bearing openings, movable locking members attached to one of the sections for entrance into said openings to couple the sections and means for fixing the locking members in coupling position.

4. In a gate post the combination of a tube; a head comprising a circular plate having slots in its periphery equi-distances apart, a central opening and an annular interiorly threaded flange on its upper face, screwed to the lower end of said tube; a lower tube, a head, comprising a circular plate having slots in its periphery equi-distances apart, and an annular interiorly threaded flange on its lower face, screwed to the upper end of said lower tube; slotted locking members, pivoted to the outer face of said last mentioned head opposite said slots; key blocks, adapted to work in the slots of said slotted locking members, and a cap, screwed on the upper end of said upper tube, substantially as described.

5. In a gate post, the combination of an upper tube, a head screwed on the lower end of said tube; a lower tube and a head screwed on the upper end of said lower tube, with means for removably locking said heads together, substantially as described.

870,697. WOVEN FABRIC. WILLIAM M. STEVENSON, Indian Orchard, Mass. Filed Aug. 5, 1905. Serial No. 272,888.



1. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and a plurality of intermediate weft threads, are combined with stuffer warp threads disposed between said intermediate weft threads, and binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, substantially as specified.

2. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and a plurality of intermediate weft threads, are combined with stuffer warp threads interposed between said intermediate weft threads, and also between the latter and the face weft

threads, and binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, substantially as specified.

3. A woven fabric, in which sets of weft threads, each comprising opposite face weft threads and one or more intermediate weft threads, are combined with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the warp threads of either face floating on the inside of the fabric when not required for binding purposes, substantially as specified.

4. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and a plurality of intermediate weft threads, are combined with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the warp threads of either face floating between said intermediate weft threads when not required for binding purposes, substantially as specified.

5. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and one or more intermediate weft threads, are combined with one or more stuffer warp threads and with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, each of said binding warp threads floating on the inside of the fabric when not required for binding purposes, substantially as specified.

6. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and a plurality of intermediate weft threads, are combined with stuffer warp threads located between the intermediate weft threads and face weft threads, and binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, each binding warp thread floating between said intermediate weft threads when not required for binding purposes, substantially as specified.

7. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and one or more intermediate weft threads, are combined with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the warp threads of either face appearing upon that face only and floating on the inside of the fabric when not required for binding purposes, substantially as specified.

8. A woven fabric in which sets of weft threads, each comprising face weft threads and a plurality of intermediate weft threads, are combined with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the warp threads of either face appearing upon that face only and floating between the intermediate weft threads when not required for binding purposes, substantially as specified.

9. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and one or more intermediate weft threads, are combined with one or more stuffer warp threads and with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the binding warp threads of either face appearing upon that face only and floating on the inside of the fabric when not required for binding purposes, substantially as specified.

10. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and a plurality of intermediate weft threads, are combined with stuffer warp threads disposed between said intermediate weft threads and face weft threads, and with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the binding warp threads of either face appearing upon that face only and floating between the intermediate weft threads when not required for binding purposes, substantially as specified.

11. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and a plurality of intermediate weft threads, disposed directly one above or below another, are combined with stuffer warp threads disposed between said intermediate weft threads, and binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, substantially as specified.

12. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and a plurality of intermediate weft threads, disposed directly one above or below another, are combined with stuffer warp threads interposed between said intermediate weft threads, and also between the latter and the face weft threads, and binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, substantially as specified.

13. A woven fabric, in which sets of weft threads, each comprising opposite face weft threads and one or more intermediate weft threads, are combined with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the warp threads of either face floating on the inside of the fabric when not required for binding purposes, substantially as specified.

14. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and a plurality of intermediate weft threads, disposed directly one above or below another, are combined with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the warp threads of either face floating between said intermediate weft threads when not required for binding purposes, substantially as specified.

15. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and one or more intermediate weft threads, are combined with one or more stuffer warp threads and with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, each of said binding warp threads floating on the inside of the fabric when not required for binding purposes, substantially as specified.

16. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and a plurality of intermediate weft threads, disposed directly one above or below another, are combined with stuffer warp threads located between the intermediate weft threads and face weft threads, and binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, each binding warp thread floating between said intermediate weft threads when not required for binding purposes, substantially as specified.

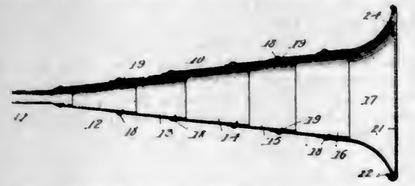
17. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and one or more intermediate weft threads, are combined with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the warp threads of either face appearing upon that face only and floating on the inside of the fabric when not required for binding purposes, substantially as specified.

18. A woven fabric in which sets of weft threads, each comprising face weft threads and a plurality of intermediate weft threads, disposed directly one above or below another, are combined with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the warp threads of either face appearing upon that face only and floating between the intermediate weft threads when not required for binding purposes, substantially as specified.

19. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and one or more intermediate weft threads, are combined with one or more stuffer warp threads and with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the binding warp threads of either face appearing upon that face only and floating on the inside of the fabric when not required for binding purposes, substantially as specified.

20. A woven fabric in which sets of weft threads, each comprising opposite face weft threads and a plurality of intermediate weft threads, disposed directly one above or below another, are combined with stuffer warp threads disposed between said intermediate weft threads and the face weft threads, and with binding warp threads which pass alternately around a face weft thread and around an intermediate weft thread, the binding warp threads of either face appearing upon that face only and floating between the intermediate weft threads when not required for binding purposes, substantially as specified.

870,698. FOLDABLE PHONOGRAPH-HORN. JULIUS C. STOCKER, Pittsburg, and DARRELL A. WELSH, Mount Oliver, Pa. Filed Apr. 22, 1907. Serial No. 369,497.

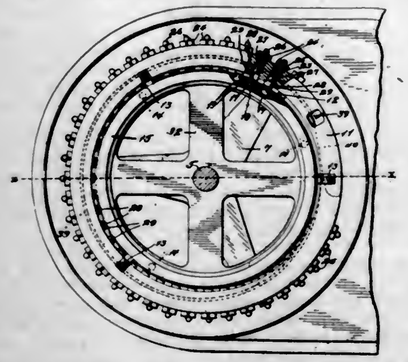


1. A collapsible horn comprising telescopic sections, the sections having slots formed therein and located to lie outwardly of the adjacent sections when the horn is extended, springs connected with said sections and engaged in the slots, said springs lying normally in position to engage the adjacent sections to hold the horn in extended position, and being movable through the slots out of said position, a hinged closure for the outer of said sections a spring carried by the outer section and arranged to hold the closure in an elevated position when the sections are extended, and a removable closure for the opposite end of the outer section.

2. A horn comprising a plurality of telescopic sections, including a bell section, a removable closure on one end of bell section, a hinged closure on the other end of said bell section, a spring carried by said section and bearing against said closure to hold the closure in an elevated position, and means for holding the closure in operative position.

3. In a collapsible horn, the combination with telescopic sections having slots formed therein and located to lie outwardly of the adjacent sections when the horn is extended, of springs connected with said sections and engaged in the slots, said springs lying normally in position to engage the adjacent sections to hold the horn in extended position, and being movable through the slots out of such position.

870,699. TYPE-SETTING MACHINE. ELAH TERRELL, Columbus, Ohio, assignor to Edward V. Gambler, trustee. Filed Mar. 20, 1905, Serial No. 250,938. Renewed Mar. 11, 1907. Serial No. 361,834.



1. In a type setting machine, the combination with a plurality of tubes and a revolving device for conveying the type by centrifugal force, of means for delivering the type face down from the tubes to the revolving device.

2. In a type setting machine, the combination with a plurality of type containing tubes, of a ring associated with the tubes, means supported from the ring for ejecting the type from the tubes, revolving means for receiving the type and conveying the same from the machine, and means for causing the type to be delivered to the revolving means face downward.

3. In a type setting machine, the combination with a plurality of type containing tubes and a support therefor formed with a cut-away portion, of a revolving device for conveying the type, inwardly acting means arranged outside of the tubes for ejecting the type from the tubes, and means acting in conjunction with the cut-away portion for delivering the type from the tubes to the revolving device.

4. In a type setting machine, the combination with means for holding a stack or pile of type in position and a conveyer, of inwardly acting ejecting means outside of the tubes arranged to simultaneously eject a type from the stack and partially turn the same, and means for completing the turning of the type and delivering the same to the conveyer.

5. In a type setting machine, the combination with means for holding a stack or pile of type in position, a table having guiding grooves associated with said holding means, means for ejecting a type from the pile, and a rotatable disk arranged beneath the table adapted to carry type around the grooves thereof.

6. In a type setting machine, a plurality of type containing tubes, a collar supporting the tubes, pusher bars adapted to engage the type to push them from the tubes, a table supporting the pusher bars and acting in conjunction with the collar to turn the type, the said table being provided with curved grooves, means for supporting the table against rotation, and a rotatable disk adapted to receive the type and carry them around the said grooves.

7. The combination of a rotary table for receiving type having projections, and delivering said type under the influence of centrifugal force, and a guide-way disposed above the table adapted to be engaged by a projection of the type on the table.

8. The combination of a rotary table for receiving type and delivering it under the influence of centrifugal force, and a stationary guide ring disposed above the table, provided with a continuous convolute guide-way comprising two overlapping turns, of which the inner turn is preferably concentric, the outer turn being volute.

9. The combination of a rotary centrifugal table, a stationary guide type disposed above the table and provided with a continuous convolute guide-way, a rotatable receiving table disposed above said rotatable table and provided on its under side with a curved guide-way registering with the convolute guide-way disposed above the centrifugal table, and means for collecting the type from said curved guide-way.

10. The combination of a rotary centrifugal table for receiving the type, and a guide-way disposed above said table, and adapted to be engaged by the type carried by said table.

11. The combination of a rotary centrifugal table for receiving type, and a plate disposed above said table and having a guide-way on its under side for guiding the type on said table.

12. The combination of a stationary composing cylinder having vertical gravity feed type holding grooves, a rotary centrifugal table under said cylinder, ejectors outside of the type tubes, and means for thrusting said ejectors inwardly towards the center of the table to deliver the type to the table.

13. The combination of a stationary composing cylinder having vertical gravity feed type holding grooves, a rotary centrifugal table under said cylinder ejectors mounted outside of the type tubes and adapted to be moved inwardly, and means for actuating said ejectors inwardly towards the center of the table into turning channels.

14. The combination of a stationary composing cylinder having vertical gravity feed type holding grooves, a rotary centrifugal table under said cylinder ejectors mounted outside of the type tubes and adapted to be moved inwardly, and means for actuating said ejectors inwardly

towards the center of the table into turning vertical channels.

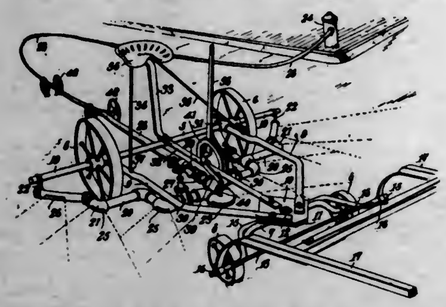
15. The combination of a stationary composing cylinder, having vertical gravity feed type holding grooves, a rotary centrifugal table under said cylinder, a stationary guide-way concentric with the axis of the table and adapted to receive at any point type from the vertical feed tubes, said guide-way being provided with a curved or arc shaped channel for turning the type in ejecting.

16. The combination of a stationary composing cylinder, having vertical gravity feed type holding grooves, a rotary centrifugal table under said cylinder, a stationary guide-way concentric with the axis of the table and adapted to receive at any point type from the vertical feed tubes, said guide-way being provided with a curved or arc shaped channel for turning the type in ejecting, ejectors arranged outside of the type tubes, and means for thrusting said ejectors inwardly towards the center into said turning channels.

17. The combination of a stationary composing cylinder, having vertical gravity feed type holding grooves, a rotary centrifugal table under said cylinder, a stationary guide-way concentric with the axis of the table and adapted to receive at any point type from the vertical feed tubes, a volute guide-way, connecting with the concentric guide-way, extending around outside of the latter and having its point of delivery near its entrance point, a pointed switch tongue connecting the concentric and volute guide-ways and beveled ejectors operative to partially turn the type in ejecting.

18. The combination of a stationary composing cylinder, having vertical gravity feed type holding grooves, a rotary centrifugal table under said cylinder, a stationary guide-way concentric with the axis of the table and adapted to receive at any point type from the vertical feed tubes, a volute guide-way, connecting with the concentric guide-way, extending around outside of the latter and having its point of delivery near its entrance point, a pointed switch tongue connecting the concentric and volute guide-ways, and beveled ejectors arranged outside of the type tubes and adapted to be actuated inwardly, and means for actuating said ejectors.

870,700. STREET-FLUSHER. GEORGE H. THEBUS, Belleville, Ill. Filed Jan. 10, 1907. Serial No. 351,629.



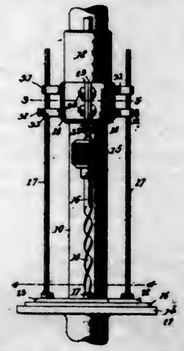
1. A street flushing device including a truck having front and rear axles and connected by a frame, one end of which is pivotally connected with the front axle, the opposite ends of the rear axle being extended laterally beyond the adjacent wheels of the truck, a hollow frame extending across the truck and provided with a plurality of discharge orifices, hangers depending from the extensions of the rear axle and forming a pivotal connection between the hollow frame and rear axle, a hose connecting the frame with a source of water supply, main and auxiliary valves for controlling the supply of water to the hollow frame, and auxiliary trucks for supporting the hose.

2. A street flushing device including a wheeled truck having front and rear axles, the front axle of which is bowed intermediate its ends, superposed plates mounted on the bowed portion of the axle, a frame forming part of the truck and secured to one of said plates, a draft bar secured to the opposite plate and extending over and beyond the bowed portion of the front axle and having its opposite ends bent laterally for connection with a draft device, a hollow frame carried by the truck, a hose connecting the hollow frame with a source of water supply, and main and auxiliary valves for controlling the flow of water to the hollow frame.

3. A street flushing device including a wheeled truck having front and rear axles, the rear axle being extended laterally beyond the rear wheels, superposed plates mounted on the front axle, a frame forming part of the truck and secured to one of said plates, a draft bar secured to the opposite plate and extending over and beyond the front axle and having its opposite ends bent laterally to form terminal bearings for connection with the draft device, a hollow frame extending transversely across the truck and provided with a plurality of spaced discharge orifices, hangers mounted on the opposite ends of the rear axle and connected with the hollow frame, a hose forming a source of communication between the hollow frame and source of water supply, and main and auxiliary valves for controlling the supply of water to the frame.

4. A street flushing device including a wheeled truck, a tubular hollow frame mounted on the truck and formed of a plurality of tubular sections united by elbow joints, segmental slots formed in some of the elbow joints, longitudinal slots formed in the tubular sections at each end of the hollow frame, a hose connecting the hollow frame with a source of water supply, there being a segmental discharge slot formed in the middle of the hollow frame at its connection with the hose, and main and auxiliary valves for controlling the flow of water from the water supply to the hollow frame.

870,701. DRILLING APPLIANCE. HARRY TYLDESLEY, Central City, Ky., assignor of one-third to Thomas Tyldesley and one-third to Milton P. Creel, Central City, Ky. Filed Mar. 1, 1907. Serial No. 360,048.

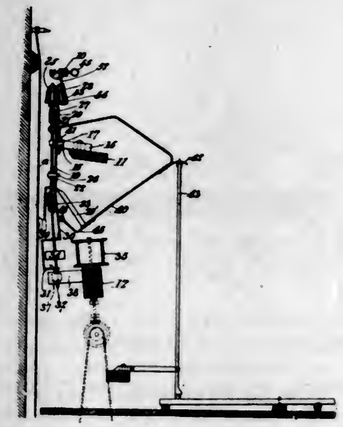


1. The combination with a relatively fixed drill head through which the drill spindle extends, of a collar clamped around said head and having projecting lugs, a drill guide adapted to rest upon the work, and standards fixed to the guide and extending upwardly therefrom and through the lugs, and adjustably secured therein.

2. The combination with a fixed drill head, of a drill guide comprising a frame of separable parts, each part having a standard projecting upwardly therefrom beside the drill and fixed to the drill head, and opposite plates removably held in the frame and having a guide opening therebetween through which the drill works.

870,702. VIOLIN-PIANO. JAMES L. WARNER, Girard, Kans. Filed July 24, 1906. Serial No. 327,575.

1. In a violin-piano, a revoluble vibrator, a flexible shaft carrying the same, a rocking support for the shaft, a frame mounted on the support for rocking the shaft, means for turning the shaft, and a damper connected to the frame.



2. In a violin-piano, a revoluble vibrator, a vibrator shaft carrying said vibrator and having a number of flexibly connected sections, a pivotal support for the shaft, a frame connected to the support for rocking said shaft, and means for moving said frame.

3. In a violin-piano, a revoluble vibrator, a vibrator shaft formed of a number of flexibly connected sections, a pivoted block forming a bearing for one of the shaft sections, a frame connected to said block for rocking the shaft, and a damper carried by the frame.

4. In a violin-piano, a revoluble vibrator, a vibrator shaft formed of a number of flexibly connected sections, a pivotally mounted bar having bearings for two of the shaft sections, and means for rocking the shaft and bar.

5. In a violin-piano, an upright shaft including an intermediate section and end sections having flexible connections between them, a pivotal support for the intermediate section, a revoluble vibrator secured to the uper shaft section, a roller secured to the lower shaft section, a continuously operable roller driving belt, and means for rocking the support and shaft to move the roller toward and from the belt and the vibrator toward and from the strings.

6. In a violin-piano, a revoluble vibrator shaft including a central and end sections flexibly connected to each other, a pivotal support for the central section, a revoluble vibrator carried by one of the end sections, a driving roller carried by the other end section, a continuously operable belt with which said roller may be engaged, a shaft rocking frame, and means for actuating said frame.

7. In a violin-piano, an upright revoluble vibrator shaft including a central and end sections having flexible conections, a pivotal support for the center section, a vibrator carried by one of the end sections, a driving roller carried by the other end section, a roller driving means, a shaft supporting bar having bearings for the reception of the center and upper sections of the shaft, a bearing bracket for the lower section of the shaft, a spring connecting the bar and bracket, and means for rocking the support and shaft.

8. In a violin-piano, an upright shaft formed of a number of flexibly connected sections, a pivoted block forming a bearing for one of the sections, a vibrator carried by one of the end sections of the shaft, a driving roller carried by the other end section, a constantly operated belt with which the roller may engage, a supporting bar carried by the pivot block and having bearings for the intermediate and upper sections of the shaft, a bracket forming bearings for the lower roller supporting section of the shaft, a spring connecting the bar and bracket, a rocking frame having one end connected to the block and the other end to the bar, and means for rocking said frame.

9. In a violin-piano, an upright shaft including a central section and end sections having flexible connections, a revoluble vibrator carried by the upper section, a driving roller carried by the lower section of the shaft, a driving belt with which said roller may be engaged, a flange, a pivoted block carried thereby and forming a bearing for the central section of the shaft, a bar carried by the block and provided with bearings for the central and upper shaft sections, a bracket having bearings for the lower shaft section, a spring connecting the bar and bracket, a rocker frame having its lower end secured to the bar and its upper end to the pivoted block, an arm extending from the frame, a roller supported by said arm and engaging the bracket supporting spring, and means for operating said frame.

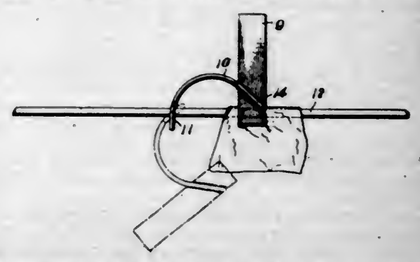
10. In a violin-piano, an upright shaft including a center and end sections having flexible connections, a revoluble vibrator carried by the upper shaft section, a driving roller carried by the lower section of the shaft, means for operating the roller, a flange, a pivoted block carried thereby and forming a bearing for the central section of the shaft, a bar carried by said block and provided with bearings for the central and upper shaft sections, a bracket for the reception of the lower shaft section, a spring strip connecting the bar and bracket, the lower end of said bar having a forwardly bent arm, a rocker frame having one end connected to said arm and the other end to the pivoted block, an arm projecting from the rocker frame, a roller carried thereby and engaging the spring strip, and a damper carried by said bar.

11. In an instrument of the class described, a revoluble vibrator of frusto-conical form, comprising a series of dished disks, and intermediate spacing disks, of less diameter than the dished disks, said spacing disks serving to hold the dished disks in spaced relation in order to permit free peripheral yielding movement.

12. In a violin-piano, a pivotally mounted bar, a loop arranged at one end of the bar, a shaft having flexible sections, said shaft having bearings in the loop, means for rotating the shaft, and a vibrator mounted on one of the shaft sections.

13. In an instrument of the class described, strings, revoluble vibrators, vibrator carrying shafts arranged in parallel relation with the strings, shaft supports, and key actuated carrying members for said shaft supports, said key actuated carrying members being disposed in vertical planes at an angle to the length of the strings.

870,703. CLOTHES-PIN. WILLIAM D. WATKINS, San Jose, Cal., assignor of one-half, to John P. Key, San Jose, Cal. Filed Oct. 8, 1906. Serial No. 338,018.

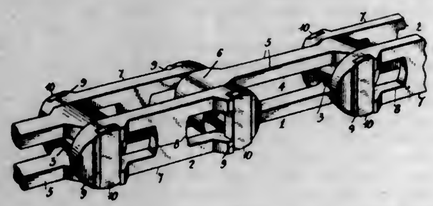


1. A clothes pin comprising a pair of clamping jaws having grooves formed in their exterior side faces, and a spring clamping member seated in said grooves and having one end thereof provided with an off-set portion bearing against the adjacent longitudinal edges of the clamping jaws and extended to form an eye for the reception of a clothes line, that portion of the handle between the eye and the clamping jaws being curved laterally.

2. A clothes-pin comprising a pair of freely separable spring clamping jaws having their adjacent faces pro-

vided with lateral off-sets and their opposite ends inclined to form terminal finger-pieces, there being grooves formed in the exposed faces of the jaws and across one end thereof, and a spring clamping member formed of a single piece of wire an intermediate portion of which is bent to form an eye for the reception of a clothes-line and its opposite ends extended laterally in parallel relation and bent to form loops adapted to engage the grooves in the exposed faces of the clamping jaws, the terminals of the wire forming the clamping member being bent inwardly and seated in the grooves in the end walls of said jaws.

870,704. CHAIN. JAMES H. WESTON, Tamaqua, Pa., assignor of one-third to John F. Wagner and one-third to George A. Wilford, Tamaqua, Pa. Filed Mar. 28, 1907. Serial No. 365,010.



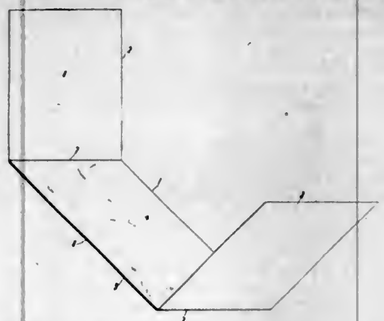
1. In a chain, the combination of a link having a slot extending nearly from end to end thereof and having a narrowed portion at a point intermediate its ends, a link comprising a pair of laterally-movable, separable members on opposite sides of the first-mentioned link, said members having slots and further provided on their outer sides with recesses communicating with said slots and disposed at an angle with reference thereto, and a pivoting lock element in the slots of said links connecting said links together and having heads for engagement with the recesses of the members of the separable member link, the length of said lock element between the heads thereof being substantially equal to the combined width of the broadened end of the first-mentioned link and the members of the separable-member link, for the purpose set forth.

2. In a chain, the combination of a link having a slot extending nearly from end to end thereof and having a narrowed portion at a point intermediate its ends, a link comprising a pair of laterally-movable, separable members on opposite sides of the first-mentioned link, said members having slots and further provided on their outer sides with transverse recesses coincident with and at an angle to the said slots, and pivoting lock elements in the slots of said links connecting said links together and having heads flattened on opposite sides for engagement with the recesses of the members of the separable-member link, the length of the said lock members between the heads thereof corresponding substantially with the combined thickness of the members of the separable member link and thickened end of the first-mentioned link.

870,705. ADVERTISING DEVICE. RICHARD WIGHTMAN, Mount Vernon, N. Y. Filed Dec. 3, 1906. Serial No. 346,010.

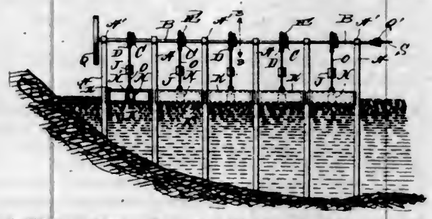
1. In a device of the class described, in combination, a strip of paper or the like having a sized surface adapted to receive printed matter and an unsized surface adapted to be used for blotting purposes and provided with one or more detachable portions adapted to receive printed matter, said detachable portions being folded upon said strip with the printed matter upon one of their surfaces in contact with the blotting surface, and means for securing said strips in position thereon.

2. In a device of the class described, in combination, a strip of paper or the like having a sized surface adapted to receive printed matter and an unsized surface adapted to be used for blotting purposes, one or more detachable portions secured thereto and folded upon the blotting surface thereof, the removal of said strips being necessary to expose



said blotting surface, and a clip or similar device for securing said portions to said surface.

870,706. TIDE OR WAVE MOTOR. HIRAM P. WOODARD, Douglas, Ariz. Filed Feb. 16, 1906, Serial No. 301,421. Renewed Apr. 15, 1907. Serial No. 368,247.



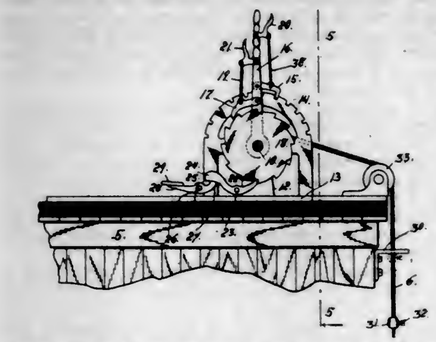
A tide or wave motor comprising, in combination with a series of outlined piles, parallel to each other, a rotatable shaft supported by said piles, hollow floats which have a valve-regulated opening therein, two of the opposite sides of each float being parallel and provided each with a vertical-angular outlined channel therein, each channel designed to receive a pile, whereby the float may be guided in its vertical movement, an eye fixed through the top of each float, sheaves loosely mounted upon said shaft, a rope fixed to each eye and passing about one of said sheaves, a weight secured to one end of the rope, ratchet wheels fixed to the shaft, a pawl pivoted to each sheave and having its free end designed to engage the ratchet wheel, as set forth.

870,707. BRAKE-OPERATING MECHANISM. GEORGE C. WORTMAN, Wortman, Colo. Filed Oct. 11, 1906. Serial No. 338,401.

1. In brake operating mechanism, the combination with a car, of a winding shaft horizontally mounted a suitable distance above the car, a wheel fast on the shaft, an operating cable connected with the wheel and adapted to wind thereon, a ratchet wheel fast on the shaft, an operating lever loose on the shaft, a pawl connected with the lever and adapted to engage the ratchet wheel for operating the shaft, a quadrant, a suitable connection between the quadrant and the lever, a locking pawl engaging the ratchet, and a foot lever arranged to release the locking pawl, substantially as described.

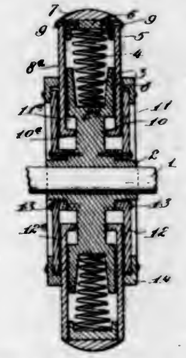
2. In brake setting mechanism, the combination with a car, of an operating shaft journaled thereon, a cable suitably connected with the shaft, an operating lever, a ratchet and pawl connection between the lever and the shaft, a pawl for locking the shaft against the reverse movement, and suitable means to limit the winding of the cable upon the shaft in order to prevent the setting of the brakes with sufficient force to slide the wheels.

3. The combination with a car, of brake operating mechanism mounted thereon, a cable connected with said mechanism, and suitable means to prevent the setting of the



brakes with sufficient force to slide the car wheels, comprising a stop on the cable, and a stationary part adapted to be engaged by the stop for the purpose set forth.

870,708. WHEEL. CHARLES ADAMS-RANDALL, New York, N. Y. Filed Feb. 21, 1906. Serial No. 302,311.



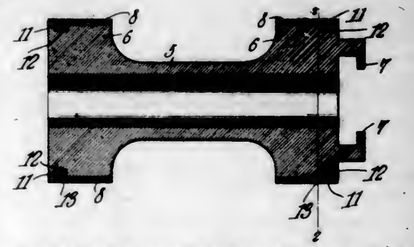
1. In a wheel, the combination of a hub and spoke portion, the latter having a rim to which the outer ends of the spokes are secured and also provided with seats, an outer independent tire portion also provided with seats opposite those in the rim of the spoke portion, resilient means interposed between the rim and tire and terminally held in the seats, and devices secured to the tire portion and embracing and freely movable over the opposite sides of the spoke portion and inclosing the resilient means and the rim of the said spoke portion.

2. In a wheel, the combination of a hub and spoke portion having a rim to which the outer ends of the spokes are secured and provided with seats arranged closely together, an outer independent rim and tire portion also provided with corresponding seats and separated from the inner rim by an intervening space, resilient means interposed between the inner and outer rims and held terminally in the said seats, annular sides or covers secured to the outer rim and movable therewith and inclosing the resilient means, and loose mechanical connecting devices secured to the outer and inner rims and operative thereby.

3. In a wheel, the combination of a hub and spoke portion or section having a rim to which the outer ends of the spokes are secured, and provided with seats arranged closely together side by side, an outer independent rim and tire portion also provided with corresponding seats and separated from the inner rim by an intervening space, resilient means interposed between the inner and outer rim and held in the said seats, annular sides or covers secured to the outer rim and movable with the latter and inclosing the resilient means, and a swiveled connecting link loosely secured respectively at each end to the outer and inner rims.

4. In a wheel, the combination of a hub having a peripheral annular member provided with seats arranged closely together side by side, an independent outer rim surrounding the hub portion and also provided with seats in its inner circumferential surface opposite the seats formed in the hub portion, said rim being held in normal position by resilient devices interposed between the same and the hub portion and terminally held within the seats, cover devices or side plates secured to the outer rim and movable therewith and also movably embracing the opposite sides of the hub portion of the wheel, and a swiveled link device secured at its terminals to the outer rim and the hub portion respectively.

870,709. METAL STEAM-PACKING RING. WILFRED BAKER, Aberdeen, S. D. Filed Mar. 6, 1907. Serial No. 360,857.



1. A piston having oppositely disposed heads, split packing rings of the same width as the heads surrounding the latter and each having its abutting faces provided with a lap joint, that portion of the rings between the opposite ends thereof being uninterrupted to form a continuous bearing surface and a retaining ring carried by each head and provided with a lap joint, the lap joints of the packing and retaining rings being disposed in staggered relation.

2. A piston having an enlarged head provided with an annular seating groove, a split packing ring having a continuous bearing surface surrounding the head and of the same width of the latter, an annular flange extending inwardly from the packing ring and seated in said groove, and a retaining ring interposed between the flange and the adjacent wall of the groove and bearing against one side of the flange.

3. A piston having a head provided with an annular seating groove, a packing ring surrounding the head and having its abutting ends provided with a lap joint, an annular flange extending inwardly from the ring and seated in said groove, and a retaining ring interposed between the flange and the adjacent wall of the groove and having its abutting ends provided with a lap joint, the lap joint of the retaining ring and packing ring being disposed in staggered relation.

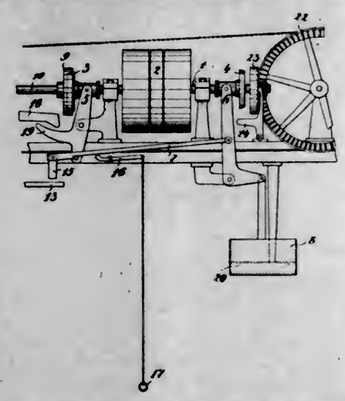
4. A piston having a seating groove, a packing ring surrounding the piston and having its abutting ends provided with a lap joint, a flange spaced inwardly from one edge of the packing ring and extending in said groove, and an expansible retaining ring seated in said groove and having its abutting ends provided with a lap joint, said lap joints being disposed in staggered relation.

5. A piston provided with a circumferential annular groove, a packing ring surrounding the piston and having one end thereof provided with a longitudinal lip adapted to engage a corresponding recess formed in the adjacent end of the ring, an annular flange formed on said ring and seated in the groove, and an expansible retaining ring interposed between the flange and the adjacent wall of the groove and having its abutting ends provided with a lap joint, the lap joint of the retaining ring being disposed in advance of the joint of the packing ring.

6. A piston having an annular groove formed therein, a packing ring surrounding the piston and having one end thereof provided with a longitudinal lip adapted to engage a recess formed on the adjacent ring and provided with an annular flange seated in said groove, one end of said flange being extended longitudinally beyond the lip for engagement with the adjacent end of the flange, and an expansible retaining ring interposed between the annular flange and the adjacent wall of the groove and having its split end disposed in advance of the meeting faces of the annular flange.

7. A piston having an enlarged head provided with an annular seating groove, a split packing ring of the same width as the head surrounding the latter, one end of the ring being provided with a longitudinal lip adapted to engage a corresponding recess formed in the face of said ring, an annular flange formed integral with the packing ring and seated in the groove in the piston head, one end of the flange being extended longitudinally beyond the lip and having its terminal inclined or beveled for engagement with the correspondingly inclined terminal of the adjacent end of the flange, and a split retaining ring interposed between the flange and the adjacent wall of the seating groove and provided with over-lapping ends, the meeting ends of the retaining ring and flange being disposed one in advance of the other.

870,710. AUTOMATIC UNLOADING AND DEPOSITING DEVICE. CLEMENS VON BECHTOLSHEIM, Munich, Germany. Filed Oct. 2, 1905. Serial No. 281,096.



1. A mechanism of the class described comprising a driving shaft, a traveler, a hoisting mechanism carried by the traveler, a traveler shifting mechanism, a coupling for effecting connection between the hoisting mechanism and the driving shaft, a coupling for effecting connection between the shifting mechanism and the driving shaft, a connection between the couplings embodying a releasable detent, and means automatically shifting one of said couplings, when the detent is released.

2. A mechanism of the class described comprising a driving shaft, a traveler, a hoisting mechanism carried by the traveler, a pair of couplings one for connecting with the hoisting mechanism, and the other for the traveler driving mechanism, a lever for shifting one of said couplings, a lever for shifting the other coupling, a detent connecting the levers, and means for shifting the traveler coupling upon the release of the detent.

3. A mechanism of the class described comprising a driving shaft, a traveler, a hoisting mechanism carried by the traveler, a pair of couplings one for connecting with the hoisting mechanism, and the other for the traveler driving mechanism, a lever for shifting one of said couplings, a lever for shifting the other coupling, a detent connecting the levers, and a weight for shifting the traveler coupling upon the release of the detent.

4. A mechanism of the class described comprising a driving shaft, a traveler, a hoisting mechanism carried by the traveler, a pair of couplings one for connecting with the hoisting mechanism, and the other for the traveler driving mechanism, a lever for shifting one of said couplings, a lever for shifting the other coupling, a detent connecting the levers, a weight for shifting the traveler coupling upon the release of the detent, said weight being formed as a vessel, and a disk working in said vessel to retard the movement of the vessel.

5. A mechanism of the class described comprising a driving shaft, a traveler, a hoisting mechanism carried by the traveler, a pair of couplings one for connecting with the hoisting mechanism, and the other for the traveler driving mechanism, a lever for shifting one of said couplings, a lever for shifting the other coupling, a detent connecting the levers, means for shifting the traveler coupling upon the release of the detent, and means for retarding the movement of said shifting means.

6. A mechanism of the class described comprising a drive shaft, a traveler, a hoisting mechanism carried by the traveler, a traveler shifting mechanism, a coupling for effecting connection between the hoisting mechanism and the driving shaft, a coupling for effecting connection between the shifting mechanism and the driving shaft, a connection between the couplings embodying a releasable detent, means for shifting one of said couplings upon the release of the detent, and means operated by the traveler to restore the connection between the couplings.

7. A mechanism of the class described comprising a drive shaft, a traveler, a hoisting mechanism carried by the traveler, a traveler shifting mechanism, a coupling for effecting connection between the hoisting mechanism and the driving shaft, a coupling for effecting connection between the shifting mechanism and the driving shaft, a connection between the couplings embodying a releasable detent, operated by the hoisting mechanism when the latter reaches a certain position, means for shifting one of said couplings upon the release of the detent, and means operated by the traveler to restore the connection between the couplings.

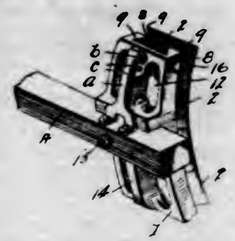
8. A mechanism of the class described comprising a driving shaft, a traveler, a hoisting mechanism, a coupling for effecting connection between the hoisting mechanism and the driving shaft, a coupling for effecting connection between the traveler driving mechanism and the driving shaft, a connection between the couplings embodying a releasable detent operated by the hoisting mechanism when the latter reaches a certain position, and means for automatically shifting the traveler coupling upon release of the detent.

9. A mechanism of the class described comprising a driving shaft, a traveler, a hoisting mechanism carried by the traveler, a pair of couplings one for connecting with the hoisting mechanism, and the other for the traveler driving mechanism, a lever for shifting one of said couplings, a lever for shifting the other coupling, a detent connecting the levers, a pendulum carried by the detent and engaged during the hoisting, manually operated means for releasing the detent, and means for shifting the traveler coupling upon release of the detent.

10. A mechanism of the class described comprising a driving shaft, a traveler, a hoisting mechanism carried by the traveler, a pair of couplings one for connecting with the hoisting mechanism, and the other for the traveler driving mechanism, a lever for shifting one of said couplings, a lever for shifting the other coupling, a detent connecting the levers, automatic means for releasing the detent, manually operated means for releasing the detent, and means for shifting the traveler coupling upon release of the detent.

11. A mechanism of the class described comprising a driving shaft, a traveler, a hoisting mechanism carried by the traveler, a pair of couplings one for connecting with the hoisting mechanism, and the other for the traveler driving mechanism, a lever for shifting one of said couplings, a lever for shifting the other coupling, a detent connecting the levers, an arm extending from the lever which shifts the hoisting coupling, an arm moving with the traveler and adapted to engage the coupling lever arm to move the coupling lever, so that the latter may be engaged by the detent, and means for shifting the traveler coupling upon release of the detent.

870,711. BRAKE-BLOCK. WALTER O. BLAIR and MARCELLUS J. SCANLAN, Keystone, S. D. Filed Feb. 15, 1907. Serial No. 357,530.



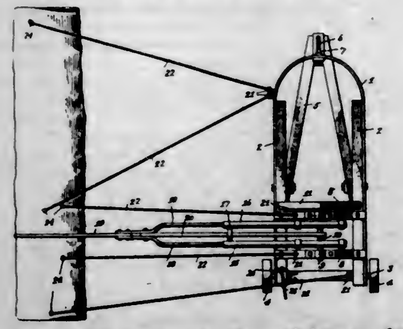
1. A holder for brake blocks adapted to carry friction shoes upon its front face and having its rear face provided intermediate its ends with an enlarged integral section adapted for attachment to a brake beam, reinforcing ribs extending centrally and longitudinally from said section to the ends of the holder, said holder having openings formed therethrough on both sides of said ribs.

2. A holder for brake blocks adapted to carry friction shoes upon its front face and having its rear face provided intermediate its ends with an enlarged section comprising spaced integral flanges adapted for attachment to a brake beam, reinforcing ribs extending centrally and longitudinally from said section to the ends of the holder, said holder having openings formed therethrough on both sides of said ribs.

3. A holder for brake blocks adapted to carry friction shoes upon its front face and having its rear face provided with a brake beam attaching section and central longitudinal reinforcing ribs extending therefrom, one of said ribs being provided with transverse openings, a brace attachable to the brake beam and provided with openings at one end adapted to be alined with one of said openings in said rib, and a removable pin adapted for insertion to lock the same.

4. A device of the character described comprising a holder having a front face formed with a dovetailed recess open at one end for the reception of a conformable friction shoe, and having a rear face provided intermediate its ends with an enlarged integral section adapted for attachment to a brake beam, reinforcing ribs extending centrally and longitudinally from said section to the ends of the holder, said holder having openings formed therethrough on both sides of said ribs.

870,712. DRAG-SAW. DANIEL F. CAMPBELL, Eureka, Cal. Filed Jan. 26, 1907. Serial No. 354,266.



1. In a drag-saw, a pivoted bifurcated frame, a forked trail pivoted at its open end between the members of said frame, means for relatively adjusting said frame and said trail, and a reciprocative saw blade mounted on said frame.

2. In a drag-saw, a pivoted bifurcated frame, a forked trail pivoted at its open end between the members of said frame, a nut carried by said frame, a screw hinged to said trail and engaging said nut, and a reciprocative saw blade carried by said frame.

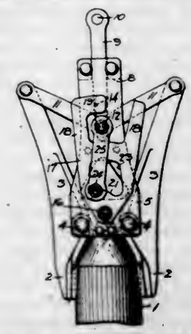
3. In a drag-saw, a saw blade, means for reciprocating said blade, a rotatable shaft, an eccentric disk on said shaft, a tubular guide attached to said disk, and a guide-rod movable in said tubular guide and connected with said blade.

4. In a drag-saw, a rotatable shaft, a crank-arm on said shaft, a saw, a pitman connecting said saw with said crank-arm, an eccentric disk on said shaft, a tubular guide connected with said disk, and a guide-rod movable in said tubular guide and connected with said saw.

5. In a drag-saw, a pivoted frame, a trail pivoted to said frame, means for relatively adjusting said frame and said trail, a rotatable shaft on said frame, an eccentric disk on said shaft, a tubular guide connected with said disk, a guide-rod movable in said tubular guide, a saw blade attached to said guide-rod, and means for reciprocating said blade.

6. In a drag-saw, a pivoted bifurcated frame, arches mounted on the members of said frame, a crank-shaft journaled on the crowns of said arches, a saw blade, a pitman connecting the crank of the shaft with said blade, eccentric disks on said shaft on opposite sides of the crank, tubular guides connected with said disks, and guide-rods movable in said tubular guides and connected with said blade.

870,713. GRIPPING-TONGS. ANDREW CHRISTIANSON, Butler, Pa. Filed Dec. 22, 1906. Serial No. 349,181.



1. Lifting mechanism comprising in combination, work engaging members, a supporting member on which said work engaging members are mounted, links arranged to actuate said work engaging members, suspending means having movement independently of said supporting member, means movable to two positions and arranged in one position to connect the suspending means and supporting member and in the other position to disconnect the same, and connections actuated by the weight of the suspending means on relative movements between said suspending means and the supporting member and arranged to positively move said connecting means alternately to the two positions.

2. Lifting mechanism comprising in combination, work engaging members, a supporting member on which said work engaging members are mounted, links arranged to actuate said work engaging members, suspending means having movement independently of said supporting member, means carried by the supporting member and movable to two positions and arranged in one position to connect the suspending means and supporting member and in the other position to disconnect the same, and connections from the suspending means and actuated by the weight of the latter on relative vertical movements between the same and the supporting member and arranged to posi-

tively move said connecting means alternately to its two positions.

3. Lifting mechanism comprising in combination, gripping members, a support on which said grippers are pivotally mounted, links connected to said grippers, suspending means connected to said links and having movement independently of the gripper support, means movable to two positions and arranged in one position to connect the suspending means and gripper support and in the other position to disconnect the same, and connections actuated by the weight of the suspending means on relative vertical movements between the same and the gripper support and arranged to positively move said connecting means alternately to its two positions.

4. Lifting mechanism comprising in combination, gripping members, a frame to which said grippers are pivotally connected, a suspending member having movement independently of said frame, links connecting said suspending member and grippers, a movable member having two positions and arranged in one position to connect the suspending member and frame and in the other position to disconnect the same and provided with cam faces, and connections actuated by the weight of the suspending member on relative vertical movements between the same and the frame and arranged to contact with said cams and thereby positively move said movable member alternately to its two positions.

5. Lifting mechanism comprising in combination, grippers, a supporting frame on which said grippers are pivotally mounted, a suspending member having movement relatively to said frame, actuating connections between the suspending member and grippers, a swinging member mounted on the frame and movable to two positions and arranged in one position to connect the suspending member and frame and in the other position to disconnect the same, and connections actuated by the weight of the suspending member on relative vertical movements between the same and the frame and arranged to positively move said swinging member alternately to its two positions.

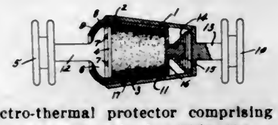
6. Lifting mechanism comprising in combination, work engaging levers, a frame on which said levers are pivotally mounted, toggle links connected to the outer ends of said levers, suspending means connected to said links, a movable piece mounted on the frame and having two positions and arranged in one position to connect the frame and suspending means and in the other to disconnect the same, and means actuated by the weight of the suspending means on relative vertical movements between the same and the frame and arranged to positively move said movable piece alternately to its two positions.

7. Lifting mechanism comprising in combination, gripping levers, a frame on which said levers are pivotally mounted, suspending means having movement independently of said frame, actuating connections between suspending means and gripping levers, a movable member having two positions and arranged in one of said positions to connect the suspending means and frame, and in the other position to disconnect the same, and connections including the cam faces and actuated by the weight of the suspending means on relative vertical movements between the same and the frame and arranged to positively move said movable member alternately to its two positions.

8. Lifting mechanism, comprising in combination, work engaging levers, a frame on which said levers are pivotally supported, links connected to the outer ends of the levers, suspending means to which the inner ends of the links are connected, a swinging member mounted on the frame and arranged to engage the suspending means, and means actuated from the links for positively swinging said piece to alternately engage and disengage the suspending means.

9. Lifting mechanism comprising in combination, work engaging levers, a frame on which said levers are pivotally mounted, links connected to the outer ends of the levers, suspending means connected to the inner ends of the links, a swinging member mounted on the frame and arranged to engage the suspending means, cam faces on said swinging piece, and a member actuated by the movement of the suspending means with relation to the frame and arranged to engage said cam faces and alternately swing said piece to engage and disengage the suspending means.

870,714. ELECTROTHERMAL PROTECTOR. FRANK B. COOK, Chicago, Ill. Filed Feb. 15, 1907. Serial No. 357,580.



1. An electro-thermal protector comprising a metallic cup, heating means contained within the cup, another metallic cup in which the first mentioned cup is inserted and secured therein by heat-susceptible cementing material, and a coil spring placed within the second mentioned cup and making electrical connection with both of the said cups whereby the circuit through the protector is kept closed when the cemented joint opens.

2. An electro-thermal protector comprising two metallic cup-shaped portions, one within the other, heat-susceptible cementing material holding the cups together, heat-producing means within the inner cup for softening the said cementing material, and means making electrical connection with both of the said cups whereby the circuit through the protector is maintained closed when the cups are separated.

3. An electro-thermal protector comprising two conically shaped metallic cups, one placed within the other so that the conical surfaces fit each other and make electrical connection with each other, heat-susceptible cementing material securing the said cups together, heating means within the interior cup for softening the cementing material upon abnormal current conditions, and a coil spring placed within the exterior cup whereby electrical connection between the said cups is maintained after the protector has operated.

4. In an electrical protector of the character described, two metallic surfaces bearing against each other, a thin film of heat-susceptible non-conducting cementing material placed between the said metallic surfaces and cementing same together without materially affecting the electrical contact between the two surfaces, and means for heating the said cementing material upon abnormal current conditions to allow the said metallic surfaces to separate.

5. An electrical protector comprising metallic cup-shaped portions, one placed within the other and normally held together by heat-susceptible cementing material, means for heating the cementing material upon abnormal current conditions, and a spring within the external cup, placed under tension whereby the said cups are separated when the said cementing material is softened.

6. An electrical protector comprising metallic cup-shaped portions one placed within the other and normally held together by heat-susceptible cementing material, means for heating the cementing material upon abnormal current conditions, and means within the external cup whereby electrical connection is maintained between the said cups after the cemented joint is opened.

7. An electro-thermal protector comprising heat-producing means, an openable metallic joint, and heat-susceptible non-conducting cementing material within the joint, all in series in the circuit, the said cementing material being applied within the joint in a film so thin as to not materially affect the conductivity of the said circuit.

8. In an electrical protector of the character described, a conically shaped metallic cup, a heat-producing element of homogeneous resistance material placed within the cup under pressure and insulated from the sides thereof, a second cup within which the first is placed and normally cemented therein, a knob on the inner end of the first mentioned cup, and a coil spring within the second mentioned cup, one end of which is squeezed into the second mentioned cup and the other end of which is secured to the said knob, whereby the circuit through the protector is maintained after the cups have separated upon the operation of the device.

9. In a protector of the character described, a conically shaped metallic cup portion, an insulating shell within the cup portion, a homogeneous resistance body, a contact plate, and a terminal member all in series within the said insulating shell, the said resistance body making electrical connection with the inner end of the said cup, the larger end of the said cup being formed over to securely hold the portions therein in position under pressure, a second conically shaped metallic cup portion placed over the first said cup portion and cemented thereto by heat-susceptible cementing material, suitable terminals for the device for connecting same in the circuit to be protected, and a coil spring placed within the said exterior cup between the end portions of the said cups whereby the circuit through the protector is maintained closed after the protector operates.

10. A self-contained electrical protector unit of the character described, comprising heating means and an openable metallic joint normally held against opening by heat-susceptible non-conducting cementing material, all in series in the circuit, and means within the device whereby the circuit through the protector is maintained after the said cemented joint has opened.

11. An electrical protector of the character described, comprising an openable joint normally held against opening by heat-susceptible non-conducting cementing material, means for softening the said cementing material upon abnormal current conditions in the device, and means within the device adapted to maintain a circuit through the protector after same has operated.

12. An electrical protector of the character described, comprising an openable joint in series in the circuit, normally held against opening by a film of heat-susceptible non-conducting cementing material which is also in series in the circuit, means for heating the said cementing material upon abnormal electrical conditions, and a coil spring in the device placed under tension whereby the said cemented joint is opened upon abnormal heating.

13. An electrical protector of the character described, comprising heat-producing means and an openable joint normally held against opening by heat-susceptible non-conducting cementing material which is included in series in the circuit, and means for opening the said joint when same is heated, for purposes substantially as described.

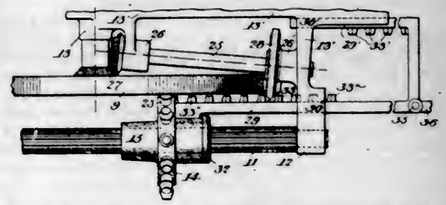
14. A heat-cartridge of the longitudinally operable type comprising two metallic shell portions fitted one within the other and normally held against separation by heat-susceptible non-conducting cementing material, heating means within the device for heating the said cementing material upon abnormal current conditions in the device, and means for pulling the said shell portions apart when the cementing material is heated.

15. A heat-cartridge of the longitudinally operable type comprising two metallic shell portions fitted one within the other and normally held against separation by heat-susceptible non-conducting cementing material, heating means within the device for heating the said cementing material upon abnormal current conditions in the device, means for pulling the said shell portions apart when the cementing material is heated, and means within the protector for maintaining a closed circuit through the protector after same has operated.

870,715. VARIABLE-SPEED GEARING. EDWARD P. COWLES, Warren, Ohio. Filed Dec. 31, 1902. Serial No. 137,369.

1. In a variable speed gearing, the combination of a gear having a plurality of series of engaging surfaces all of the same pitch and arranged at different distances from the axis of the gear, a pinion meshing with said gear, power devices for connecting said gear and pinion with a motor and with an element to be driven, and means actuated by the gear for shifting the pinion into engagement with either series of said surfaces on the gear while engaged therewith and while the motor and connecting devices are in operation.

2. In a variable speed gearing, the combination of a gear having a plurality of series of engaging surfaces all of the same pitch and arranged at different distances from the axis of the gear, each series starting from a common line lying in a plane including the axis of the gear, and forming a segment of parallel rows adjacent said line, a pinion meshing with said gear, power devices for connecting said gear and pinion with a motor and with an element to be driven, and means for shifting the pinion into engagement with either series of engaging surfaces on the gear while passing said segment of parallel rows without disengaging it from the gear and while the motor and connecting devices are in operation.



3. In a variable speed gearing, the combination of a rotatable disk having in one face a plurality of series of pockets arranged in concentric rows and means connecting all of said concentric rows on the same radii, whereby a pinion continuously engaging said disk may be moved from one of said rows to another, a pinion engaging said pockets in the disk, power devices for connecting said disk and pinion with a motor and with an element to be driven, and means for adjusting said pinion from one of said concentric rows of pockets in the disk to another to vary the speed of the driven element.

4. In a variable speed gearing, the combination of a driving shaft, a driven shaft, a disk connected to one of said shafts and having in one face a series of pockets of the same pitch and arranged in concentric rows, a pinion connected to the other of said shafts and adapted to engage the pockets in said disk, and means actuated by one of said shafts for shifting the pinion transversely of the disk and into engagement with any desired row of pockets in said disk, to vary the speed of the driven shaft, without disconnecting said disk and pinion or any of the power devices connected with either of them.

5. In a variable speed gearing, the combination of a driving shaft, a driven shaft, a disk connected to one of said shafts and having in one face a series of pockets arranged in concentric rows, a pinion connected to the other of said shafts to move longitudinally thereof and rotate therewith, said pinion engaging the pockets in the disk, and means actuated by one of said shafts for adjusting the pinion longitudinally of the shaft with which it is connected to cause it to engage any desired row of pockets in the disk without disconnecting either said disk and pinion or disengaging any of the power devices.

6. In a variable speed gearing, the combination of a gear having a plurality of series of pockets arranged in concentric rows and supplemental pockets arranged in spiral rows that intersect and connect said concentric rows, a pinion meshing with said gear, power devices for connecting said gear and pinion with a motor and an element to be driven, and means for shifting the pinion into engagement with the pockets of either concentric row of pockets on the gear, said spiral rows of pockets permitting such adjustment and giving an appreciable length of time therefor while the pinion and gear are in engagement and the motor and connecting devices in operation.

7. In a variable speed gearing the combination of a rotatable disk having a plurality of series of pockets arranged in concentric rows and also a series of pockets arranged in spiral rows and leading from the center of the disk to the outermost circular row of pockets, said spiral rows connecting the several circular rows, a pinion meshing with said disk, power devices for connecting said disk and pinion with a motor and an element to be driven, means for moving the pinion into engagement with said spiral rows of pockets in the disk to shift it to and from the center of the disk while engaged therewith, and means for holding the pinion stationary at the center of the disk.

8. In a variable speed gearing, the combination of a rotatable disk having on one face a central pocket, a series of

pockets arranged in concentric rows about said central pocket, and additional pockets arranged in spiral rows connecting said central pocket and concentric rows, a pinion meshing with the pockets in said disk, power devices for connecting said disk and pinion with a motor, and an element to be driven, and means for causing the pinion to engage the spiral rows of pockets in the disk and move to or from the center of the disk, a tooth on the pinion engaging the central pocket of the disk when in alinement therewith and holding the pinion relatively stationary.

9. In a variable speed gearing, the combination of a rotatable disk having on one face a central pocket, a series of pockets arranged in concentric rows about said central pocket, and a series of pockets arranged in spiral rows and connecting said central pocket with the aforesaid circular rows, a pinion engaging the pockets in the disk, power devices for connecting the disk and pinion with a motor and with an element to be driven, and means for shifting the pinion transversely of the disk into engagement with either circular row of pockets therein or with the central pocket, said spiral rows of pockets permitting such adjustment on opposite sides of the center of the disk whereby the direction of rotation of the driven part may be reversed.

10. In a variable speed gearing, the combination of a rotatable disk having in one face a series of pockets arranged in concentric rows, a pinion engaging said pockets in the disk, power devices for connecting said disk and pinion with a motor and an element to be driven, means for shifting the pinion transversely of the disk into engagement with either of said concentric rows of pockets, and means for automatically varying the speed of said pinion during its passage from one of said rows to another to prevent jar or shock as it engages either row of pockets on the disk.

11. In a variable speed gearing, the combination of a gear having on one face a series of pockets arranged in concentric rows, the pockets in each row starting from a common line lying in a plane including the axis of the disk and forming a segment of parallel rows adjacent said line, and having additional pockets arranged in spiral rows extending across said segment and connecting the aforesaid circular rows, a pinion engaging the pockets in said disk, power devices for connecting the disk and pinion with a motor and with an element to be driven, and means for shifting the pinion into engagement with said spiral rows of pockets in the disk to adjust it from one circular row thereon to another as it passes across said segment.

12. In a variable speed gearing, the combination of a rotatable disk, having in one face a series of pockets arranged in concentric rows, and having a plurality of parallel grooves connecting alined pockets in adjacent rows and forming a segment of parallel grooves extending from the center of the disk to the outer row of pockets therein, a pinion having teeth adapted to enter said pockets in the disk, and means for shifting said pinion to and from the center of the disk, when the teeth thereon are in engagement with pockets connected by the aforesaid parallel grooves.

13. In a variable speed gearing, the combination of a rotatable disk having on one face a series of pockets arranged in rows concentric with a central pocket, a groove or channel connecting said central pocket with alined pockets in each of the concentric rows, and a plurality of shorter grooves or channels extending parallel to the one aforesaid and connecting alined pockets in the several rows and forming a segment of parallel grooves, a pinion having teeth adapted to enter said pockets in the disk, and means for shifting said pinion toward and from the center of the disk when in engagement with pockets connected by said parallel grooves.

14. In a variable speed gearing, the combination of a rotatable disk, having on one face a series of pockets arranged in concentric rows, a pinion adapted to engage said pockets on the disk, and means for causing said pinion to automatically move transversely of the disk and into successive engagement with the different rows of pockets without disconnecting said pinion and disk, or any of the power devices connected therewith.

15. In a variable speed gearing, the combination of a rotatable disk having on one face a series of pockets arranged in concentric rows, a pinion adapted to engage said pockets, and means for automatically shifting the pinion transversely of the disk at each revolution thereof, whereby the pinion may be caused to successively engage each row of pockets on the disk.

16. In a variable speed gearing, the combination of a rotatable disk, having on one face a series of pockets arranged in concentric rows, a pinion adapted to engage said pockets on the disk, means for adjusting the pinion transversely of the disk, to cause it to engage either of the rows of pockets thereon, a rack bar connected to the pinion to move laterally therewith, and a cam geared to the disk and engaging said rack to prevent lateral movement of the pinion except when the disk is in a particular relation to the pinion.

17. In a variable speed gearing, the combination of a disk having on one face a series of pockets arranged in concentric rows, a pinion adapted to mesh with the pockets on said disk, means for shifting the pinion transversely of the disk into engagement with either row of pockets, a rack bar connected to the pinion to move transversely of the disk therewith, and a cam geared to the disk and engaging said rack, said cam having a gap or notch formed therein and alining periodically with the engaging tooth of the rack to permit the pinion to be intermittently adjusted transversely of the disk.

18. In a variable speed gearing, the combination of a disk having on one face a series of pockets arranged in concentric rows, a pinion adapted to mesh with the pockets on said disk, means for shifting the pinion transversely of the disk into engagement with either row of pockets, a rack bar connected to the pinion to move transversely of the disk therewith, and a cam geared to the disk and engaging said rack, said cam having a gap or notch formed therein and alining periodically with the engaged tooth of the rack to permit the pinion to be intermittently adjusted transversely of the disk, said rack having a return bend adapted to engage the cam when the pinion passes the center of the disk and the traversing segment of the disk is on the opposite side of said center.

19. In a variable speed gearing, the combination of a disk having on one face a series of pockets arranged in concentric rows, a pinion adapted to mesh with said pockets on the disk, means for shifting the pinion transversely of the disk, including a rack or toothed bar, a cam geared to the disk, and engaging said rack or toothed bar, said cam having a peripheral gap or notch formed therein and permitting lateral movement of the rack and pinion when in alinement with the rack, and a dog or pawl pivotally connected to the cam, and extending into the peripheral gap therein, into the path of the rack.

20. In a variable speed gearing, the combination of a rotatable disk, having on one face a series of engaging features arranged in concentric rows, a pinion adapted to engage said engaging features on the disk, and means for causing said pinion to automatically move transversely of the disk and into successive engagement with the different rows of engaging features without disconnecting said pinion and disk, or any of the power devices connected therewith.

21. In a variable speed gearing, the combination of a rotatable disk having on one face a series of engaging features arranged in concentric rows, a pinion adapted to engage said engaging features, and means for automatically shifting the pinion transversely of the disk at each revolution thereof, whereby the pinion may be caused to successively engage each row of engaging features on the disk.

22. The combination of a wheel having a plurality of circular lines of concentric engaging features, a gear adapted to mesh with said engaging features and movable diametrically across the said wheel, and means for moving the gear, said means being actuated by the movement of the wheel.

23. The combination of a wheel, having a plurality of concentric rows of engaging features thereon, said engaging features including a radial feature, a gear meshed with said engaging features, and means for moving the gear radially along the wheel.

24. The combination of a face gear having multiple rows of engaging features, a gear meshed therewith, a slide having connection with the gear, to move the gear across the face of the first named gear, and means for actuating the slide, said means being actuated by the movement of the first named gear.

25. The combination of a multiple gear, a second gear coacting therewith and movable across the face thereof, a slide in connection with the second gear, and means actuated from the first named gear for moving the slide in either direction.

26. The combination of a multiple gear, a gear in mesh therewith and movable across the face thereof, and means for shifting the second named gear in either direction, said means being operated from the first named gear.

27. In a variable speed gearing, the combination of a rotatable disk having in one face a plurality of series of engaging features arranged in concentric rows and means connecting all of said concentric rows on the same radii, whereby a pinion continuously engaging said disk may be moved from one of said rows to another, a pinion engaging said engaging features in the disk, power devices for connecting said disk and pinion with a motor and with an element to be driven, and means for adjusting said pinion from one of said concentric rows of engaging features in the disk to another to vary the speed of the driven element.

28. In a variable speed gearing, the combination of a driving shaft, a driven shaft, a disk connected to one of said shafts and having in one face a series of engaging features of the same pitch and arranged in concentric rows, a pinion connected to the other of said shafts and adapted to engage the engaging features in said disk, and means actuated by one of said shafts for shifting the pinion transversely of the disk and into engagement with any desired row of engaging features in said disk, to vary the speed of the driven shaft, without disconnecting said disk and pinion or any of the power devices connected with either of them.

29. In a variable speed gearing, the combination of a driving shaft, a driven shaft, a disk connected to one of said shafts and having in one face a series of engaging features arranged in concentric rows, a pinion connected to the other of said shafts to move longitudinally thereof and rotate therewith, said pinion engaging the engaging features in the disk, and means actuated by one of said shafts for adjusting the pinion longitudinally of the shaft with which it is connected to cause it to engage any desired row of engaging features on the disk without disconnecting either said disk and pinion or disengaging any of the power devices.

870,716. PENCIL-HOLDER. JAMES L. DUNN, Montpelier, Cal. Filed Sept. 27, 1906. Serial No. 336,506.



In combination with a pencil, a holder comprising a wire coil placed on and having its convolutions engaging and compressing the pencil, one of the intermediate convolutions being bent to form an open-looped spring clasp member extending longitudinally of the pencil and pressed toward the same to coact therewith in clamping the pencil in a pocket or the like receptacle, said clasp member having its sides diverging to a point intermediate its ends, and converging from said point to its outer end, said outer end being outturned to facilitate the engagement of said clasp member with the pocket or receptacle.

870,717. BROOM. WILLIAM FANCKBONER, Schoolcraft, Mich. Filed Sept. 20, 1906. Serial No. 335,480.



1. In a broom, the combination of a handle; suitable broom fiber arranged upon and secured thereto; a downwardly expanding spring extension for said handle embedded in said fiber, said extension being formed of wire, the ends of the wire being secured to the handle; a cross piece having slots in the ends thereof arranged to engage the sides of said extension, rigidly secured upon the end of the said handle; a brace formed of a pair of diverging wire loops passed through the fiber so as to embrace the fiber on both sides thereof, secured to said handle; and a wire band wrapped about the said fiber and brace, the ends of said band being wrapped and passed through the fiber and engaged over the band on the opposite side, the portions of the said band passing through the fiber being arranged to engage the said handle extension, for the purpose specified.

2. In a broom, the combination of a handle; suitable broom fiber arranged upon and secured thereto; a downwardly expanding spring extension for said handle embedded in said fiber; a brace formed of a pair of diverging wire loops passed through the fiber so as to embrace the fiber on both sides thereof, secured to said handle; and a wire band wrapped about the said fiber and brace, the ends of said band being wrapped and passed through the fiber and engaged over the band on the opposite side, the portions of the said band passing through the fiber being arranged to engage the said handle extension, for the purpose specified.

3. In a broom, the combination of a handle; suitable broom fiber arranged upon and secured thereto; a downwardly expanding spring extension for said handle embedded in said fiber, said extension being formed of wire, the ends of the wire being secured to the handle; a cross piece having slots in the ends thereof arranged to engage the sides of said extension rigidly secured upon the end of the said handle; and a wire band wrapped about the said fiber, the ends of said band being overlapped and passed through the fiber and engaged over the band on the opposite side, the portions of the said band passing through the fiber being arranged to engage the said handle extension, for the purpose specified.

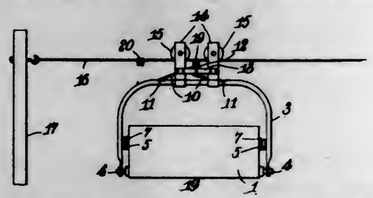
4. In a broom, the combination of a handle; suitable broom fiber arranged upon and secured thereto; a brace formed of a pair of diverging wire loops passed through the fiber so as to embrace the fiber on both sides thereof, secured to said handle; and a wire band wrapped about the said fiber and brace, the ends of said band being over-

lapped and passed through the fiber and engaged over the band on the opposite side, for the purpose specified.

5. In a broom, the combination of a handle; suitable broom fiber arranged upon and secured thereto; a downwardly expanding spring extension for said handle embedded in said fiber; a wire band wrapped about the fiber; and a staple-like fastener arranged through the fiber to embrace said band and the lower end of said handle extension, the ends of said fastener being clamped about the band on the opposite side, for the purpose specified.

6. In a broom, the combination of a handle; suitable broom fiber arranged upon and secured thereto; a downwardly expanding spring extension for said handle embedded in said fiber, said extension being formed of wire, the ends of the wire being secured to the handle; and a cross piece having slots in the ends thereof arranged to engage the sides of the said extension rigidly secured upon the end of the handle, as specified.

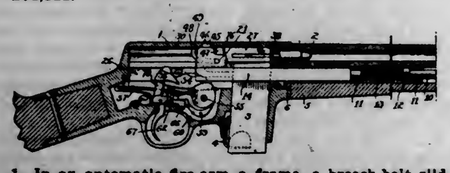
870,718. MANURE-CARRIER. JEREMIAH C. FITZGERALD, Kilbourn, Wis., assignor of one-half to William Blume, Portage, Wis. Filed Apr. 18, 1907. Serial No. 368,924.



1. In an aerial tramway, a cable provided with a stop, a carrier mounted thereon, a roller journaled in said carrier and provided with a trip, a hollow bail suspended from the carrier, and curved near each end and provided with an opening and a slot, a car pivotally secured to the lower ends of said bail, a latch projecting through the slot in the bail and provided at its ends with shoulders in each end of position for engaging with one of said shoulders and holding the car upright, and a cord from said roller extending through said openings and engaging with one of said latches for releasing the car when said trip engages with said stop.

2. In an aerial tramway, a suspended cable provided with a stop, a sheave carrier mounted thereon, a roller journaled in the carrier, provided with a radially arranged trip in position for being moved into engagement with said stop, a hollow bail suspended from said carrier, having two openings in its intermediate portion and provided with a slot adjacent to each end, a car pivotally secured near its lower edges to the ends of said bail, the upper edges of the ends of said car being provided with a recessed track, a weight in each end of said bail, a pin from each weight projecting from one of said slots in position for engaging with said recessed track, and a cord from each weight through said openings in the bail and wound upon said roller in the sheave carrier.

870,719. AUTOMATIC FIREARM. CHARLES FREEMAN, Los Angeles, Cal. Filed Aug. 17, 1905. Serial No. 274,522.



1. In an automatic fire-arm a frame, a breech-bolt slidably mounted on said frame and being recessed for the greater part of its length, a locking-block pivoted therein and having a vertical locking movement against the frame, a firing pin mounted in said locking-block and extending forwardly through the breech-bolt, a momentum-block coacting with said firing pin to withdraw it from contact with the breech-block, before the unlocking movement begins.

2. In an automatic fire-arm, a frame, a hammer pivoted in said frame, a sear pivoted in said frame, a trigger mounted in said frame, a member pivoted on said trigger to engage the rear end of the sear when the parts are in their normal closed position, and means for cocking the hammer and throwing the pivoted member out of engagement with the sear.

3. In an automatic fire-arm, a frame, a hammer mounted in said frame, a sear pivoted in said frame, a trigger, a member pivoted on said trigger so as to engage the rear end of the sear when the parts are in their normal closed position, a reciprocating momentum-block mounted in the frame, contacting with the hammer to cock the same and with the pivoted member upon the trigger to throw the trigger out of engagement with the sear.

4. In an automatic fire-arm, a frame, a hammer mounted in said frame, a sear pivoted in said frame, a trigger, a member pivoted on said trigger so as to engage the rear end of the sear when the parts are in their normal closed position, a reciprocating momentum-block mounted in the frame contacting with the hammer to cock the same and with the pivoted member upon the trigger to throw the trigger out of engagement with the sear, and intermediate means between a cartridge in the barrel and the momentum-block whereby a limited amount of the total energy derived by the explosion is imparted to the momentum-block.

5. In an automatic fire-arm, a breech-bolt recessed longitudinally, a locking-block in said recess and provided with lugs for coacting with an abutment on the breech-bolt for stopping the latter when the locking-block is in locked position, and a firing pin carried bodily by the locking-block.

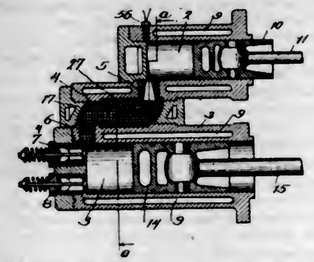
6. In an automatic fire-arm, a breech-bolt, a locking-block engaging the breech-bolt and controlling the operation of the breech-bolt, a firing pin carried by the locking-block, the forward end of the breech-bolt being perforated to receive the end of the firing pin, and means for retracting the firing pin in the locking-block before the locking-block is unlocked.

7. In a fire-arm, a breech-bolt recessed the greater portion of its length, a locking-block lying in said recess and mounted to swing in a vertical plane, a firing pin carried by the locking-block, the forward end of the breech-bolt having a perforation for receiving the end of the firing pin, and means for retracting the firing pin free from the perforation before the locking-block is swung down from its locked position.

8. In an automatic fire-arm, a frame, a barrel fixed on the frame, a breech bolt slidably mounted on said frame and being recessed for the greater part of its length, a locking block pivoted therein and having a vertical locking movement against the frame, a firing pin mounted in said locking block and extending forwardly through the breech bolt, a momentum block coacting with said firing pin to withdraw it from contact with the breech block before the unlocking movement begins, the momentum block extending forward under the barrel, and means mounted on the barrel for slidably engaging the forward end of the momentum block and keeping it in alinement with the frame.

9. In an automatic fire arm, a frame, a barrel on said frame, a hammer mounted in said frame, a sear pivoted in said frame, a trigger, a member pivoted on said trigger so as to engage the rear end of the sear when the parts are in their normal closed position, a reciprocating momentum block mounted in the frame contacting with the hammer to cock the same and with the pivoted member upon the trigger to throw the trigger out of engagement with the sear, intermediate means between a cartridge in the barrel and the momentum block whereby a limited amount of the total energy derived by the explosion is imparted to the momentum block, the momentum block having a forward extension, an operating spring mounted upon said extension, and means mounted on the barrel for slidably engaging the forward end of the momentum block.

870,720. INTERNAL-COMBUSTION ENGINE. ARTHUR J. FRITH, New York, N. Y. Filed Apr. 17, 1905. Serial No. 255,861.



1. In an internal combustion engine, the combination with a cylinder and a combustion chamber, of a regenerator in communication with said cylinder and said combustion chamber, means for admitting a charge to said cylinder, a piston in said cylinder, a piston in said combustion chamber, means connecting said pistons for causing them to so move that the charge taken into said cylinder shall be compressed therein and passed in its compressed state through said regenerator into said combustion chamber, expand in said combustion chamber against the piston therein and then be substantially all expelled from said combustion chamber through said regenerator into said cylinder and expand in said cylinder prior to its exhaust therefrom.

2. In an internal combustion engine, the combination with a pair of cylinders of unequal size, each provided with a movable working piston, and the smaller constituting a combustion chamber, of a regenerator connecting said cylinders, an air inlet and an exhaust valve in said larger cylinder, and means for imparting relative movements to said working pistons such that the charge of air taken in shall reach substantially its state of maximum compression prior to its passage through the regenerator into the smaller cylinder from which it shall be returned through the regenerator and reach substantially its state of maximum expansion in the large cylinder prior to its exhaust therefrom.

3. In an internal combustion engine, the combination with a pair of cylinders, each provided with a movable piston, and a regenerator connecting said cylinders, of means for introducing fuel and igniting it, means for operating the pistons to compress air in one of said cylinders, force it through the regenerator into the other cylinder during combustion and causing the gases of combustion to return through the regenerator to the first named cylinder and expand therein.

4. In an internal combustion engine, the combination with a pair of cylinders of unequal size having their working ends connected by a regenerator, a piston in said smaller cylinder, of means for forcing a compressed charge from the larger cylinder through the regenerator into the smaller cylinder after its substantially maximum compression and during combustion, and back through the regenerator into the larger cylinder after combustion and partial expansion and permitting it to expand in said larger cylinder.

5. In an internal combustion engine, the combination of a pair of cylinders having pistons adapted to work therein, one of said cylinders constituting a combustion chamber, of a regenerator in continuously open communication with and connecting the working ends of said cylinders, means for admitting fuel and air, and connections between said pistons causing the volume included between said pistons to periodically increase and decrease and to cause substantially all of the gases of combustion to be expelled from said combustion chamber through said regenerator into said other cylinder during the time when the combined volume of both cylinders increases to its maximum.

6. In an internal combustion engine, the combination with a cylinder, of a regenerator in communication with said cylinder on one side and a combustion chamber on the other side, means for admitting air to said cylinder, compressing it therein and forcing it in its compressed state through said regenerator into said combustion chamber, means for introducing fuel and igniting it, and means for expelling the gases from the combustion chamber after ignition to compel them to return through said regenerator and expand in said cylinder.

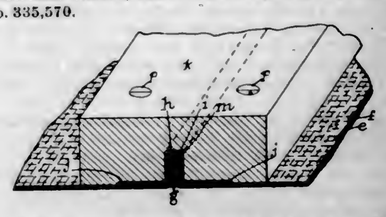
7. In an internal combustion engine, the combination with a pair of cylinders, each provided with a movable working piston, one of said cylinders constituting the compression cylinder and the other the combustion chamber, of means for supplying moisture to the charge early in the compression, a regenerator connecting said cylinders, and means for operating said pistons to force the compressed charge through the regenerator into the combustion chamber allowing the gases to partially expand in said combustion chamber, return through said regenerator and further expand in said compression cylinder.

8. In an internal combustion engine, the combination with two cylinders each provided with a piston and in communication with each other through a regenerator, of means for admitting a charge containing air into one of said cylinders, means for operating the piston to compress the charge, therein and pass it through the regenerator into said other cylinder for combustion, and means for controlling the relative movements of the pistons in said cylinders so that the maximum displacement of the last named or combustion cylinder shall be less than the original volume of said charge.

9. In an internal combustion engine, the combination with a pair of cylinders connected by a regenerator and provided with working pistons of unequal displacements, the cylinder having the piston of larger displacement being provided with inlet and exhaust valves and constituting the compression cylinder and the other constituting the combustion cylinder, cranks connected with said pistons so related that the charge taken in, compressed and passed through the regenerator into the combustion chamber shall be expelled from said combustion chamber through said regenerator into said compression cylinder while said products of combustion are expanding to their maximum volume.

10. In an internal combustion engine, the combination with a cylinder having a movable piston therein and a regenerator connected therewith, of means for introducing a compressed charge through said regenerator into said cylinder the original volume of which charge exceeds the maximum displacement of said piston, and means for allowing said charge to expand against a second working piston while it is being expelled from said cylinder back through said regenerator.

870,721. CAR-ROOF. WILLIAM N. GARRETT, Amherst, Nova Scotia, Canada, assignor of one-half to Harold H. Robertson, Canton, Mass. Filed Sept. 21, 1906. Serial No. 335,570.

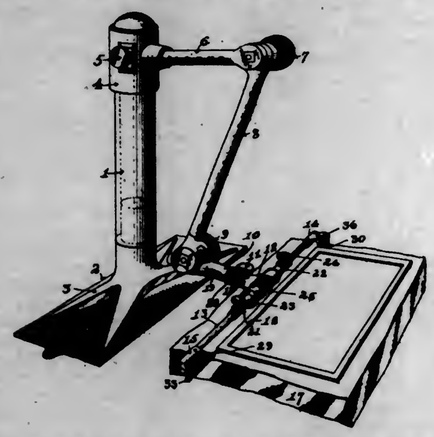


1. In a car roof, in combination, a ridge pole provided in its sides with longitudinally extended grooves and with mortises, roofing sheets of the character described having their inner ends extended into said grooves and provided with up-turned side flanges, metal caps or covering strips provided with recesses into which the upturned flanges of adjacent roofing sheets extend, battens of fibrous material recessed on their under side to fit snugly over said caps and force the sides of said caps into contact with the upturned flanges on said sheets, and provided at their inner

ends with tenons to extend into the mortises in the said ridge pole, and means to secure said battens in fixed position, substantially as described.

2. In a car roof, in combination, a plurality of roofing sheets having upturned side flanges, metallic caps fitted over the upturned flanges of adjacent roofing sheets and provided with side flanges resting on said sheets, battens of fibrous material grooved or recessed on their under side to fit snugly over the said caps to force the upturned flanges into contact, and means to secure said battens in fixed positions and force the side flanges on the cap into contact with adjacent roofing sheets, substantially as described.

870,722. PRINTING-FILM HOLDER. SAMUEL W. GURST, Buffalo, N. Y., assignor to Diamond Shading Film Company, Buffalo, N. Y., a Corporation of New York. Filed Nov. 8, 1906. Serial No. 341,955.



1. A standard composed of a single weighted column and a base plate rigidly secured thereto, a vertically adjustable sleeve thereon, lever arms pivoted thereto, means carried by said lever arms for holding a print frame and means for locking said lever arms to establish the working position of a frame in any desired plane.

2. A standard composed of a single weighted column and a base plate rigidly secured thereto, a vertically adjustable sleeve thereon, lever arms pivoted thereto, means carried by said lever arms for holding a print frame and means for locking said lever arms to establish the working position of a frame in any desired plane and micrometical means for perfecting the adjustment.

3. A standard, a vertically adjustable sleeve thereon, lever arms pivoted thereto, means carried by said lever arms for holding a print frame and means for locking said lever arms to establish the working position of a frame in any desired plane and a swivel joint for squaring the work or working at different angles in the desired plane.

4. A standard composed of a single weighted column and a base plate rigidly secured thereto, and adjustable sleeve thereon, levers connected with said sleeve, pivots for carrying a print frame carried by said levers, means for locking said levers, and means for adjusting the axis of said pivots in the plane of the work.

5. A standard, an adjustable sleeve thereon, pivoted levers connected to said sleeve, means for locking said levers, a yoke carried by said levers, a rod carried by said yoke, pivots for holding a print frame carried by said rod, and means for moving said rod axially and locking the same to extend laterally the scope of emplacement of the frame.

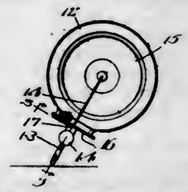
6. A weighted single standard rigidly mounted upon a portable base, a sleeve adjustable on said standard, means for clamping the same to said standard, pivoted lever-arms carried by said sleeve, means for clamping said arms together, a yoke carried by said arms, a rod carried by said yoke, pivoted brackets carried by said rod, means for clamping said rod in said yoke, and pivot points carried by said brackets for engaging a film frame.

7. A standard, a sleeve adjustable on said standard, means for clamping the same to said standard, pivoted lever-arms carried by said sleeve, means for clamping said arms together, a yoke carried by said arms, a rod carried by said yoke, pivot brackets carried by said rod, means for clamping said rod in said yoke, pivot points carried by said brackets, and micrometical devices for imparting movement of adjustment to said rod axially and transversely respectively.

8. A standard, a sleeve adjustable on said standard, means for clamping the same to said standard, pivoted lever-arms carried by said sleeve, means for clamping said arms together, a yoke carried by said arms, a rod carried by said yoke, pivot brackets carried by said rod, means for clamping said rod in said yoke, pivot points carried by said brackets, and a hinge and means for clamping the same interposed between said yoke and its adjacent lever arm whereby a film may be moved over an arc of a circle in the plane of application of the film.

9. A standard, a sleeve adjustable on said standard, means for clamping the same to said standard, pivoted lever-arms carried by said sleeve, means for clamping said arms together, a yoke carried by said arms, a rod mounted slidably in said yoke and set screws for clamping the same, whereby a film may be moved from side to side without disturbing the adjustment of said lever arms, and film-frame pivots carried by said rod.

870,723. TALKING-MACHINE NEEDLE. FREDERICK D. HALL, Chicago, Ill. Filed July 9, 1906. Serial No. 325,211.



1. A reproducing needle formed from vegetable fiber, said fiber comprising a laminated structure with layers of different degrees of hardness.

2. A reproducing needle formed from vegetable fiber, said fiber comprising a laminated structure with layers of different degrees of hardness, one end of said needle terminating in an angularly disposed portion.

3. A reproducing needle formed from vegetable fiber having a thin shell on one side thereof, comprising a tough outer portion, the balance of said needle comprising a portion of a less degree of hardness.

4. A reproducing needle formed from vegetable fiber having a thin shell on one side thereof, comprising a tough outer portion, the balance of said needle comprising a portion of a less degree of hardness, a section of said latter portion being cut away leaving the thin shell forming an angularly disposed point adapted to follow the undulations in the disk record.

5. A reproducing needle formed from layers of vegetable fiber of varying degrees of hardness.

6. A reproducing needle formed from layers of vegetable fiber of varying degrees of hardness, one end of said needle being cut away to form an angularly disposed point adapted to follow the undulations of the record disk.

7. A reproducing needle formed from bamboo fiber, the outer shell of said bamboo forming one side of said needle.

8. A reproducing needle formed from bamboo fiber, the outer shell of said bamboo forming one side of said needle, a portion of said fiber being cut away longitudinally, forming an angularly disposed point adapted to follow the undulations in the record disk.

9. A reproducing needle formed from the outer shell of bamboo fiber, of a substantially rectangular cross-section, one end of said needle being cut away longitudinally, and the resulting end being cut transversely, forming an angularly disposed point adapted to follow the undulations of the sound record.

10. A reproducer for talking machines comprising a needle formed from a vegetable growth and having an angular cross-section, the operative portion of said needle consisting of the edges formed between adjacent sides and the end of the needle.

11. A reproducing needle comprising a strip of wood, of a triangular cross-section, the operative portion of said needle being the edges formed by the meeting of adjacent sides and the end of the needle.

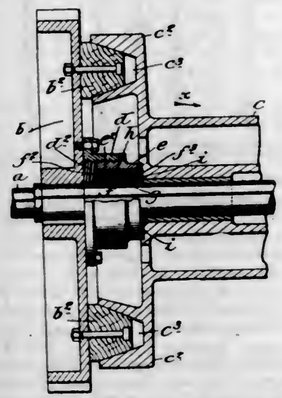
12. A reproducing needle comprising a wooden pin, of an angular cross-section cut off at the end and adapted to enter within and bear against the sides of the grooves in a record disk.

13. In a talking machine, the combination with a reproducer, of a record disk, and a reproducing needle formed from a vegetable growth and having an angular cross-section, the operative portion of said needle consisting of the edges formed between adjacent sides and the end.

14. In a talking machine, the combination with a reproducer, of a record disk, and a reproducing needle formed from wood, of an angular cross-section cut off at the end and adapted to enter within and bear against the sides of the groove in the record disk.

15. In a talking machine, the combination with a reproducer, of a record disk, and a reproducing needle formed from bamboo fiber, the outer shell of said bamboo forming one side of said needle.

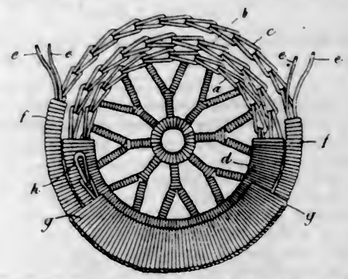
870,724. HOISTING APPARATUS. OSCAR K. HOLST, Tompkinsville, N. Y. Filed Aug. 21, 1907. Serial No. 389,446.



1. In an apparatus of the class described, a shaft, a drive wheel secured thereto, a drum mounted on said shaft and movable longitudinally thereof and provided with a head having a deep annular groove, an annular friction device secured to said wheel and adapted to fit in said groove, a hub secured to said wheel and through which said shaft passes, said hub being provided with an interior thread, a threaded sleeve mounted in said hub, another sleeve mounted on said shaft within said first named sleeve and movable longitudinally on said shaft, one of said sleeves being provided with an inwardly and the other with an outwardly directed flange, a spring placed between said flanges, and means for limiting the longitudinal movement of the supplemental sleeve on said shaft.

2. In an apparatus of the class described, a shaft, a drive wheel secured thereto, a drum mounted on said shaft and movable longitudinally thereof and provided with a head having a deep annular groove, an annular friction device secured to said wheel and adapted to fit in said groove, a hub secured to said wheel and through which said shaft passes, said hub being provided with an interior thread, a threaded sleeve mounted in said hub, another sleeve mounted on said shaft within said first named sleeve and movable longitudinally on said shaft, one of said sleeves being provided with an inwardly and the other with an outwardly directed flange, a spring placed between said flanges, and means for limiting the longitudinal movement of the supplemental sleeve on said shaft, said drum being also provided with a washer on which the supplemental sleeve is adapted to bear.

870,725. BUTTON. IRENE KALLIWODA, Sopron, Austria-Hungary. Filed Nov. 29, 1905. Serial No. 289,621.



1. A button of cord and the like having in combination with a central portion an inner support, radial stitches covering said inner support and outer support and radial stitches covering said outer support and partly the radial stitches covering said inner support.

2. A button of cord and the like having in combination with a central portion an inner support, embroidery stitches covering said inner support, an outer support and loop stitches covering said outer support and partly the embroidery stitches covering the inner support.

3. A button of cord and the like having in combination with a central portion an inner support, embroidery stitches covering said inner support, a row of stitches upon the said embroidery stitches, an outer support and loop stitches covering the said outer support and the said row of stitches and partly the embroidery stitches covering the inner support.

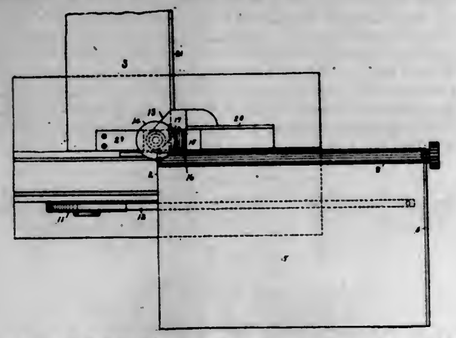
4. A button of cord and the like having in combination with a central portion of any desired make an inner support, comprising two rows of stitches surrounding said central portion, radial stitches covering said two rows of stitches, a third row of stitches surrounding the said two rows of stitches and forming an outer support and loop stitches, covering the said outer support and partly the embroidery stitches covering the inner support.

5. A button of cord and the like having in combination with a central portion two rows of stitches surrounding said central portion and forming an inner support, embroidery stitches covering said inner support, a third row of stitches surrounding said inner support and forming an outer support, embroidery stitches covering said outer support and loop stitches covering said outer support and partly the embroidery stitches covering said inner support, substantially as described.

870,726. STAMP-AFFIXING MACHINE. SAMUEL C. KINDIG, Baltimore, Md., assignor of one-half to William Wittler, Baltimore, Md. Filed June 6, 1906. Serial No. 320,374.

1. In a stamp-affixing machine, the combination of a base, a stamp carriage having lugs on its lower surface and a guide on one edge, two rollers revolubly mounted on said carriage between which the sheet of stamps passes, springs to hold the said rollers together, a plunger, an escapement lever pivoted at its lower end to the base and

having a diagonal slot in its upper end for engagement with said lugs, whereby when the plunger is operated the escapement lever will be reciprocated and the carriage allowed to move a predetermined distance.



2. In a stamp-affixing machine, the combination of a base, a stamp carriage having lugs on its lower surface, two rollers carried by said carriage, an envelop rest having a guide to determine the distance the sheet of stamps is to project beyond the said rollers, a plunger, means to moisten each stamp before it is carried under the plunger, an escapement lever pivoted at its lower end to the base and having a diagonal slot in its upper end for engagement with said lugs, whereby when the plunger is operated the escapement lever will be reciprocated and the carriage allowed to move a predetermined distance.

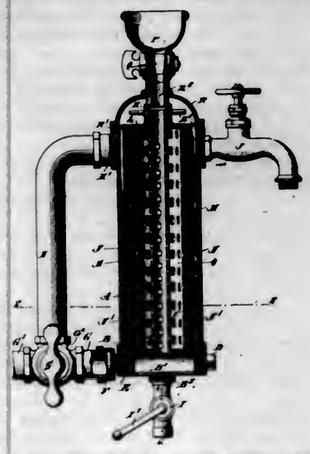
3. In a stamp-affixing machine, the combination of a base, a carriage having lugs on its lower surface, a plunger to force the stamps upon the envelops, two knives below said plunger to cut the stamps from the sheet when the plunger descends, an escapement lever pivoted at its lower end to the base and having a diagonal slot in its upper end for engagement with the said lugs, whereby when the plunger is operated the escapement lever will be reciprocated and the carriage allowed to move a predetermined distance, a water receptacle having a roller mounted therein and adapted to moisten each stamp before it passes under the plunger, and a finger to keep the stamps against the said roller as they pass over it.

4. In a stamp-affixing machine, the combination of a base, a carriage slidably mounted on said base and having a number of lugs on its lower surface and carrying a flat table having a guide projecting upwardly at one side to guide the sheet of stamps between the rollers, a drum pivoted to the said base and having a spring therein normally under tension, a band connected by one end to the said drum and by the other end to the said carriage, two rollers revolubly mounted on said carriage, an envelop rest having a guide for the envelops and a guide to determine the distance the sheet of stamps is to project beyond the said rollers, a plunger, an escapement lever pivoted at its lower end to the base and having a diagonal slot in its upper end for engagement with the said lugs and operated by the plunger to advance the carriage a predetermined distance after each stamp has been affixed, a water receptacle having a roller mounted therein and adapted to moisten each stamp before it passes under the plunger, and a finger to keep the stamps against said roller as they pass over it.

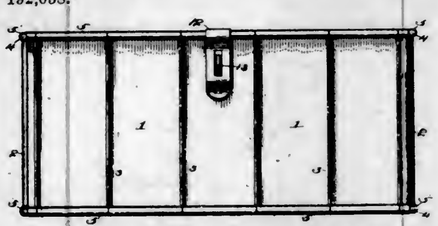
870,727. METHOD OF CLEANING FILTERS. GEORGE M. KNEUPER, New York, N. Y., assignor of one-third to George Kneuper and one-third to Kate Kneuper. Filed June 1, 1906. Serial No. 319,673.

1. The method of cleaning filters, which consists in sending therethrough a current of a washing liquid in the direction opposite to that in which the filtration was effected, and periodically obstructing the outlet to give said current a pulsating action.

2. The method of cleaning filters, which consists in sending therethrough a current of a washing liquid in the direction opposite to that in which the filtration was effected, and alternately opening and closing the outlet to give said current an intermittent action.



870,728. SHEET-METAL PACKING-CASE. ALFRED T. KRUSE, Defiance, Ohio, assignor, by mesne assignments, to The American Steel Package Company, Defiance, Ohio, a Corporation of Ohio. Filed Feb. 4, 1904. Serial No. 192,058.



1. A sheet-metal packing-case, consisting of suitable sides and ends suitably secured at the corners of the case, a series of outwardly-extending ribs or flanges formed therewith, a beading formed at the upper and lower edges thereof and inclosing a wire, a bottom suitably secured to said sides and ends and provided with a series of ribs or flanges and openings intermediate said ribs or flanges, a lid or cover provided at its rear with hinge-straps which take over the wire secured within the top beading of the case, supporting-plates mounted and interposed between said sides and ends, an upwardly-extending flange formed about said supporting-plates and secured to said sides and ends, a series of openings formed within said supporting-plates, and annular downwardly-extending flanges formed about said series of openings.

2. In a sheet-metal packing-case, the combination with suitable sides and ends bent to form flanged joints at the corners of the case, and a beading formed at the upper and lower edges thereof and inclosing a wire; of a lid or cover, secured at its rear by means of hinge-straps which take over the wire secured within the top beading of the case, a beading formed about the edges of said lid or cover and inclosing a wire, and means for securely holding and locking said lid or cover within and between the top beading of said sides and ends of the case when the same is closed.

3. In a sheet-metal packing-case, the combination with sides and ends suitably secured at the corners of the case, a bottom suitably secured thereto, a series of substantially U-shaped outwardly-extending ribs or flanges formed therein, and a beading formed at the upper and lower edges thereof and inclosing a wire; of a lid or cover, secured at its rear by means of hinge-straps which take over the wire secured within the top beading of the case, a beading formed about the edges of said lid or cover and inclosing a wire, a series of ribs or flanges formed in said lid or cover, and means for securely holding and locking said lid or cover within and between the top beading of said ends and sides of the case when the same is closed.

4. In a sheet-metal packing-case, the combination with sides and ends suitably secured at the corners of the case, a series of substantially U-shaped outwardly-extending ribs or flanges formed therein, and a beading formed at the upper and lower edges thereof and inclosing a wire; of a bottom secured to the said sides and ends by having its edges bent over and about the said beading, formed at the lower edges thereof, to form a second beading about said lower edges of the case.

5. In a sheet-metal packing-case, a wall formed of a single blank of sheet-metal having a series of recesses cut along its margin, opposite where the ribs or flanges are to be formed, and then crimped into a series of U-shaped ribs or flanges, and a beading formed by the marginal edges thereof and abutting against the ends of said ribs or flanges.

6. A sheet-metal packing-case consisting of sides, ends and bottom having the edges thereof bent over and about a wire to form a beading, and a series of oppositely-disposed ribs or flanges formed in said sides and bottom and carried up to or abutting against said beading for the purpose of bracing and strengthening said beading.

7. In a sheet-metal packing-case, the combination with sides and ends having the edges thereof bent over and about a wire to form a beading, and outwardly-extending ribs or flanges formed in said sides and ends; of a bottom secured to said sides and ends by having its edges bent over and about said beading, and ribs or flanges formed in said bottom in alinement with the ribs or flanges of said sides.

8. In a sheet-metal packing-case, the combination with sides provided with a beading at the base, and a series of ribs or flanges formed therein and carried up to or abutting against said beading at the base; of a bottom secured thereto and provided with a series of ribs or flanges abutting against said beading at the base and formed in alinement with said ribs or flanges at the sides.

9. A sheet-metal packing-case, consisting of suitable sides and ends each formed of a single blank of sheet-metal having a series of recesses cut along its margin, opposite where the ribs or flanges are to be formed, and then formed into a series of U-shaped outwardly-extending ribs or flanges, with a beading at the upper and lower edges thereof resting against the ends of said ribs or flanges.

10. A sheet-metal packing-case, consisting of suitable sides and ends, each formed of a single blank of sheet-metal having a series of recesses cut along its margin, a series of U-shaped ribs or flanges formed therein opposite said series of recesses, and a beading formed by the upper and lower edges thereof and abutting against the ends of said ribs or flanges.

11. In a sheet-metal packing-case, the combination with suitable sides and ends suitably secured at the corners of the case, and a beading formed by the upper edges thereof and inclosing a wire; of a lid or cover secured at its rear by means of hinge-straps which take over the wire inclosed by said beading, a beading inclosing a wire formed about the edges of said lid or cover, and adapted to shut down inside and in the same plane with the beading formed by the upper edges of said sides and ends of the case whereby a second strengthening-beading is formed within adjacent to and supporting said first mentioned beading.

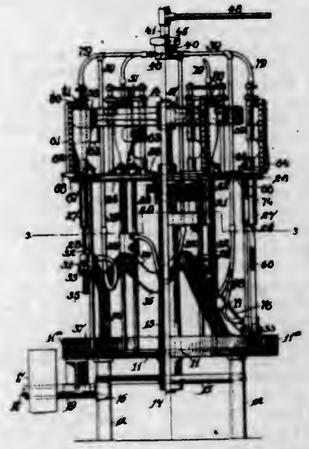
870,729. BARREL-FOLLOWER. CHARLES KUHEIM, Kansas City, Mo. Filed Oct. 15, 1906. Serial No. 338,936.

In a device of the class described, the combination with a barrel having a removable head, of a screw block, a screw carried by said block and engaging said head, arms carried by and projecting outwardly from said block with their free ends projecting over the barrel sides, and inwardly and upwardly turned hook members on the outer ends of said arms having pointed tips adapted to engage



and anchor in the outer surface of the barrel, for the purpose set forth.

870,730. BOTTLE-WASHING MACHINE. PHILIP D. LAIBLE, Newark, N. J. Filed Oct. 19, 1906. Serial No. 339,657.



1. A bottle washing machine comprising a bottle holding means, a rotating circular carrier for the bottle holding means, means for spinning the bottle while being rotated, means for supplying water to the exterior of the bottle during its rotation, means for supplying water to the interior of the bottle during its rotation, a brush arranged to reciprocate inside the bottle during its rotation, means to reciprocate the inside brush means for ejecting the bottle at the completion of the rotation, and automatic means for shutting off the water supply, the reciprocating means withdrawing the brush from the bottle when the bottle is ejected.

2. A bottle washing machine comprising a bottle holding means, brushes on the exterior of the bottle, brushes reciprocating on the interior of the bottle, means to reciprocate the inside brush means for rotating the bottle holding means, means for ejecting the bottle, means for withdrawing the brush from the bottle before the bottle is ejected, mechanism for supplying water to the inside and outside of the bottle, automatic means for shutting off the water supply, and manually operated means for adjusting the point of shut off.

3. A bottle washing machine comprising a shaft, a ring on the shaft, a bottle holding means on the ring, a second ring supporting the bottle on the inside, means for supplying water to the exterior and interior of the bottle, a reciprocating brush in the bottle, means to reciprocate the inside brush a latch for withdrawing the brushes

from the exterior of the bottle, means for withdrawing the brush from the interior of the bottle, a hook arranged to swing to eject the bottle when the brushes are withdrawn, and automatic means for actuating the hook.

4. A bottle washing machine comprising a circular frame provided with bottle holding means, a shaft to rotate the frame, means for scrubbing the bottle while it is being rotated, a circular trough under the frame, hollow posts supporting the trough and the machine for removing the water from the machine.

5. A bottle washing machine comprising a rotating frame, a bottle holding means on the frame, a reciprocating brush to enter the bottle, means to reciprocate the inside brush a brush on the outside of the bottle, a brush bearing on the bottom of the bottle, a pipe feeding water to the last mentioned brush, a pipe supporting the reciprocating brush and feeding water thereto, a hook to engage the bottle to eject it, mechanism for automatically actuating the hook means for shutting off the water supply when the bottle is ejected, means for withdrawing the brush on the outside of the bottle, and means for withdrawing the reciprocating brush when the bottle is ejected.

6. In a bottle washing machine, a bottle holder comprising a frame, a set of rolls for holding the neck of a bottle, a pair of supports, an adjustable roller on one support, a right angled lever on the other support, a brush on the lever, a hook on the lever, a lug on the lever, and a lock to hold the elements in engagement with a bottle.

7. In a bottle washing machine, a means for holding an inverted bottle, comprising a support, a pair of posts, an adjustable roller on one post, a brush and a hook swinging on the other post, and a lever to operate the brush and the hook.

8. In a bottle washing machine, a means for holding an inverted bottle comprising a support, a pair of posts, a roller on one post, means for adjusting the roller, a brush and a hook swinging on the other post, a lever to operate the brush and the hook, a roller on the lever, and rollers on the support for engaging the neck of a bottle.

9. In a bottle washing machine, a means for holding an inverted bottle comprising a support, a roller on one post, means for adjusting the roller, a brush and a hook swinging on the other post, a lever to operate the brush and the hook, a second lever to operate the first lever in one direction and be operated by it in the other direction, and a lug on each lever to cause them to be tripped.

10. In a bottle washing machine, a means for holding an inverted bottle comprising a support, a roller on one post, means for adjusting the roller, a brush and a hook swinging on the other post, a lever to operate the brush and the hook, a second lever to operate the first lever in one direction and be operated by it in the other direction, a lug on each lever to cause them to be tripped, a brush spanning the posts, and a pipe feeding the brushes.

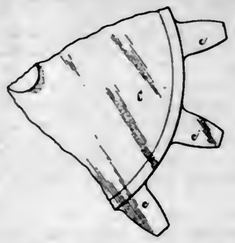
11. A bottle washing machine comprising a circular frame provided with bottle holding means, cleaning means on the machine, a rotary carrier provided with bottle holders, means on the machine to rotate the bottle holders, and means for operating the bottle holding means on the machine to remove a bottle from the holders to the bottle holding means.

12. A bottle washing machine comprising a circular frame provided with bottle holding means, a pivoted hook to eject the bottle from the machine, a stop on the machine to engage the hook and cause it to assume its normal position, a brush pivoted in the bottle holding means to follow the hook, a carrier arranged to rotate adjacent to the frame having bottle holders arranged to rotate therein, means on the machine to rotate the carrier on the holders, the retreating of the hook of the machine, and the movement of the brush being adapted to remove a bottle from the bottle holder to the bottle holding means of the machine.

13. In a bottle washing machine, a carrier comprising arms having bottle holders, means to retain bottles in the holders, a detent on the carrier, a lever to engage the detent, and means for causing an intermittent rotary motion of the carrier.

14. In a bottle washing machine, a carrier comprising arms having bottle holders on the ends, circular strips to retain bottles in the holders, the bottle holders having cut-away portions to allow the introduction of the ejector for the bottle, means for driving the carrier with an intermittent rotary motion, and means for normally holding the carrier in a fixed position.

870,731. SEPARATING-GRATE FOR THRESHING-MACHINES. FRANK F. LANDIS, Waynesboro, Pa. Filed June 20, 1902. Serial No. 112,470.



1. In a threshing machine, the combination, with the cylinder, of a separating grate comprising a lower section composed of longitudinal sides and transverse connecting bars, and an upper section mounted thereon composed of bars arranged with their upper edges in line with and immediately beneath and close to the points of the cylinder teeth and extending in the direction of the travel of the straw, substantially as set forth.

2. The combination with the cylinder of a threshing machine, of a separating grate comprising a lower portion having side pieces and transverse connecting webs, and an upper portion mounted on said lower portion and connected therewith at its lower end having a supporting bar at its said lower end and longitudinally extending curved bars, the lower edges of which are supported above and free from the upper edges of the transverse bars of said lower portion, substantially as set forth.

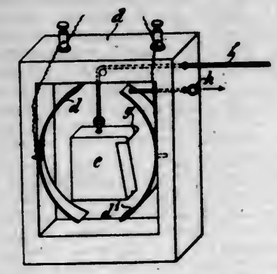
3. A separating grate for threshing machines comprising a lower portion having longitudinal sides and transverse connecting webs formed as an integral structure, and an upper portion consisting of a transverse supporting bar at one end and longitudinally extending curved bars each of which is mounted at one end on said supporting bar, said supporting bar being mounted on said lower portion and supporting said upper portion with its longitudinal bars free from said lower portion, substantially as set forth.

4. The combination, with the cylinder, of a separating grate for threshing machines, comprising a lower portion formed curved to correspond substantially with the cylinder and having transverse bars, and an upper portion having bars extending in line with the travel of the straw across and above the plane of said transverse bars, said upper bars being arranged closely adjacent to the points of the cylinder teeth and formed with free ends, substantially as set forth.

5. The combination, with the cylinder, of a separating grate for threshing machines, comprising a lower portion curved nearly concentric with the cylinder and having longitudinally extending sides and transverse deflecting plates mounted between said sides, and an upper portion mounted thereon and having continuous bars correspondingly curved and arranged at intervals throughout the width of said lower portion and directly in the path of the circumferential rows of teeth on the cylinder, substantially as set forth.

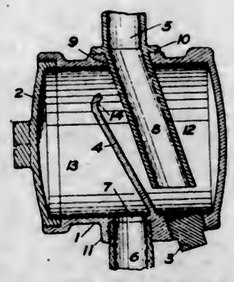
6. A separating grate for threshing machines composed of an under or lower grate formed of bars transverse to the travel of the straw and an upper grate mounted thereon composed of curved bars extending in the direction of the travel of the straw and arranged in line with and closely adjacent to the circumferential rows of teeth on the cylinder, substantially as set forth.

870,732. BURGLAR-ALARM. HERMANN R. LASSEN, Hamburg, Germany. Filed May 21, 1907. Serial No. 374,850.



In a device for burglar alarm, the combination, a frame, two flat springs vertically affixed by the middle in the frame opposite to each other with their ends bent inwardly and put in connection with a circuit, a weight movably suspended by a thread between the said two springs being adapted to close the circuit between the upper and the lower ends of the said springs, a ledge on the said weight being adapted to catch and hang on one of the upper edges of the springs and close the circuit for causing a bell to ring continuously, and the means to relieve the spring of the weight consisting in a rod which is attached to the spring, substantially as described.

870,733. ANTISIPHON-TRAP. JOHN C. LAUTH, Rochester, N. Y., assignor to A. Y. McDonald & Morrison Mfg. Company, Dubuque, Iowa, a Corporation of Iowa. Filed Aug. 16, 1904. Serial No. 220,981.

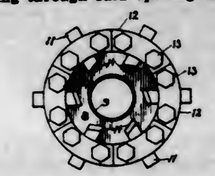


1. A casing having an integral, internal transverse diaphragm divided into two compartments except at the top, an inlet pipe leading into one of said compartments and down to near the bottom thereof, an outlet opening in the bottom of the other compartment, and a pipe leading from said opening.

2. A cylindrical casing having an integral, internal, transverse diaphragm extending entirely across it except at the top and thereby dividing the casing into two compartments, an inlet pipe extending through the casing and to near the bottom of one of the compartments, a screw plug in the casing in line with said inlet pipe, an outlet pipe leading from the bottom of the casing on the other side of said diaphragm, and a screw cap on the end of said casing.

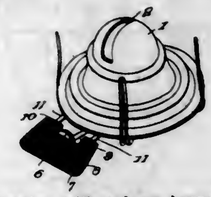
870,734. BOILER-TUBE-SCARFING MACHINE. CHAS. H. MEYERS and EDWARD LOUDENSLAGER, Columbus, Ohio. Filed May 29, 1905. Serial No. 262,839.

In a device of the kind described, the combination with a body provided with radial spaced grooves and threaded recesses between the grooves, of a curved plate arranged over each groove provided with spaced apertures registering with the threaded recess of the body, and cap-screws extending through said opening into said threaded



recesses, for locking said plates to each side over said groove.

870,735. MATCH-STRIKING DEVICE. LEON W. MINER-STEVENS, Biglake, Wash. Filed Mar. 12, 1907. Serial No. 362,020.



1. The combination with a lamp burner, its wick tube and wick raising and lowering device with its finger disk, of a forked plate embracing said disk and of such thickness as to expose the upper and lower portion of the periphery of said disk, and means for securing said plate to the burner.

2. The combination with a lamp burner, its wick tube and wick raising and lowering spindle with its finger disk, of a forked plate embracing said disk and extending obliquely with reference thereto and of such thickness as to permit the disk to project above and below the faces of the plate, and means for connecting said plate to the burner.

3. The combination with a lamp burner, its wick tube, and its wick raising and lowering finger disk, of a forked serrated plate embracing said disk and of such thickness as to permit the disk to project above and below the faces of the plate, rods secured to the forked extremities of said plate, and means for securing said rods to the burner.

4. The combination with a lamp burner, its wick tube, a spider connected to the burner and surrounding said wick tube, and a wick raising and lowering finger disk, of a forked serrated plate embracing said disk, rods connected to the forked extremities of the said plate, the ends of said rods extending into the arms of the spider and held therein and provided with clips securing said arms at their bases to the burner.

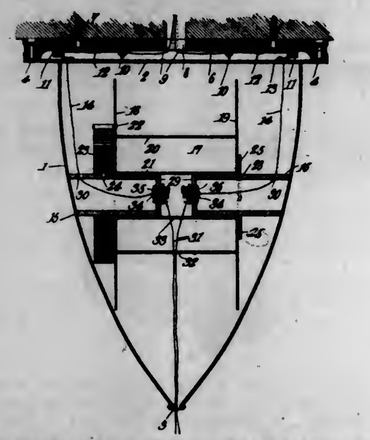
870,736. ELECTRIC FIXTURE. HARRY R. MITCHELL, North Yakima, Wash. Filed Feb. 23, 1907. Serial No. 358,881.

1. In an electric fixture, an insulating sleeve, a plate rotatably mounted thereon and connected to a movable electric conductor, another plate mounted directly on the insulating sleeve and in rubbing contact with the rotatable plate and in electrical connection with a fixed conductor, a removable head carried by the said insulating sleeve, and a spring interposed between said removable head and the fixed plate.

2. In an electric fixture, a fixed insulating sleeve, a rotatable plate mounted thereon and constituting the terminal of an electric circuit, another plate mounted upon said sleeve in contact with the first-named plate and constituting the terminal of a fixed electric circuit, a removable head for said sleeve having legs extending therethrough and bent to hold said head in place, and a spring interposed between the outer edge of said head where it extends beyond the sleeve and said fixed plate.

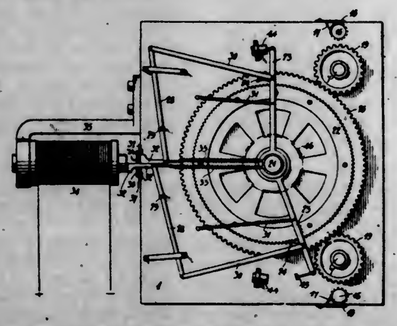
3. An electric fixture comprising a reel, flexible con-

ductors designed to be rolled thereon, hollow supports for said reel entering the same from the two ends and having their inner ends contiguous but out of contact, fixed terminals for an electric circuit mounted on said contiguous ends of the reel support, and movable terminals for the flexible conductors also mounted upon said inner ends of the reel support and making contact with the fixed terminals.



4. An electric light fixture comprising a suitable casing, a spring-controlled reel therein, gravity clutch devices for said reel, fixed supports for the reel entering the same from opposite ends and having their contiguous ends separated, fixed plates upon the said contiguous ends of the reel support connected to the terminals of an electric circuit, and movable plates in contact with the fixed plates and also supported by the contiguous ends of said reel support and connected to the terminals of a flexible cord conductor designed to be rolled upon said reel.

870,737. STREET AND STATION INDICATOR. CHAS. A. MYERS, Niagara Falls, N. Y. Filed Nov. 8, 1906. Serial No. 342,542.



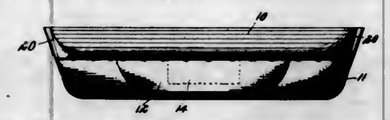
1. In combination with the driving element of a station indicator, an electro-magnet, independently-operated armatures, means actuated by the respective armatures and coacting with the driving element to move the latter in reverse directions, and means to lock either of the armatures against movement and release the other for movement by the electro-magnet, substantially as described.

2. In combination with the driving gear of a station indicator and a ratchet wheel revoluble with said gear, rocking arms having pawls to engage opposite sides of the ratchet wheel, an electro-magnet, independently-operated armatures connected to the respective rocking arms to actuate the latter, and means to lock either of the armatures against movement and release the other for movement by the electro-magnet, substantially as described.

3. In combination with the driving gear of a station indicator and a ratchet wheel revoluble with said gear, rocking arms having pawls to engage opposite sides of the ratchet wheel, an electro-magnet, independently-operated armatures connected to the respective rocking arms to move the latter in one direction, springs to move said rocking arms in the reverse direction, and means to lock either of the armatures against movement and release the other for movement by the electro-magnet, substantially as described.

4. In combination with the driving gear of a station indicator and a ratchet wheel revoluble with said gear, rocking arms having pawls to engage opposite sides of the ratchet wheel, an electro-magnet, independently-operated armatures connected to the respective rocking arms to move the latter in one direction, springs to move said rocking arms in the reverse direction, means to lock either of the armatures against movement and release the other for movement by the electro-magnet, plungers carried by said rocking arms, and fixed cylinders, each open at one end for the reception of one of said plungers to cushion the strokes of said rocking arms, substantially as described.

870,738. BOAT. CHARLES H. MYERS, Buffalo, N. Y. Filed Dec. 23, 1904, Serial No. 238,117. Renewed Aug. 1, 1906. Serial No. 328,761.



1. In a boat, the combination with a body member having a bottom and a chamber depending below said bottom, of a keel member secured to the body and located below the bottom thereof, said keel member having a pocket that receives the depending chamber.

2. In a boat, the combination with a body member having a bottom and a chamber depending below said bottom, of a keel member secured to the body and located below the bottom thereof, said keel member having a pocket between its ends that receives the depending chamber and being furthermore provided with air chambers located on opposite sides of the pocket.

3. In a boat, the combination with a body member having a bottom and a central chamber depending below the bottom and opening into the interior of the boat, of a keel member fitted against the bottom and having a flange secured thereto, said keel member having a central open-topped pocket that receives the chamber and having inclosed air chambers located in longitudinal alinement with the pocket.

4. In a boat, the combination with a body member having a bottom, of a plurality of keel members secured side by side to and longitudinally of said bottom, said keel members having tops that fit against the bottom and being furthermore provided with air chambers.

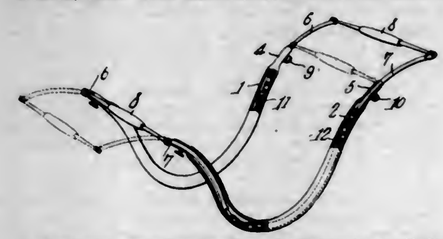
5. In a boat, the combination with a body member having a bottom and an open-topped chamber depending below said bottom and communicating with the interior of the body member, of a centrally disposed keel member secured longitudinally to the central portion of the bottom and having a pocket that receives the chamber, air chambers formed in the opposite end portions of the keel member, and other keel members secured to the bottom on opposite sides of the central member, said latter keel members also having air chambers.

6. In a boat, the combination with a body member having a bottom, of a keel member secured to the bottom, said keel member having an intermediate open-topped pocket, and inclosed air chambers located beneath the bottom of the body member and on opposite sides of the pocket.

7. A boat, comprising a body member having a bottom, a chamber depending below said bottom and having an open top within the body, said chamber being of less length than the body member, and a keel associated with the chamber and disposed beneath the bottom.

8. A boat, comprising a body member having a bottom, a chamber depending below said bottom and having an open top within the body, said chamber being of less length than the body member, and a keel located longitudinally of the body beneath the bottom and having a portion cut away to receive the chamber.

870,739. ADJUSTABLE AND REVERSIBLE HANDLE FOR BABY-CARRIAGES. JAMES J. MCINTYRE, Ironton, Ohio, assignor of one-half to Frank L. McCauley, Ironton, Ohio. Filed Mar. 21, 1907. Serial No. 363,575.



1. A pair of reversible handles adapted to be applied to a vehicle, embodying a substantially rigid conductor, a handle mounted to operate longitudinally thereof at each end, and a connector guided by the conductor and attached to the said handles for causing simultaneous movement thereof.

2. A handle attachment for vehicles embodying a substantially rigid conductor adapted to extend longitudinally of the vehicle, handles arranged at the opposite ends of said conductor and having guiding portions coöperating with the latter, means for producing simultaneous movement of the handles, and devices coöperating with the guiding portions of the handles for retaining the latter in different adjusted positions.

3. A handle attachment for vehicles embodying a pair of substantially rigid tubes, a handle at each end thereof having shanks guided to operate axially of the respective tubes, and flexible connections attached to the inner ends of the corresponding shanks of the handles and arranged to operate longitudinally of the respective tubes.

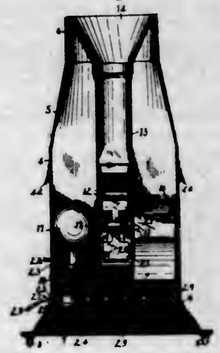
4. A handle attachment for vehicles embodying a pair of tubes having reduced axially extending guiding portions formed at their opposite ends, handles at the opposite ends of the tubes each having a pair of shanks fitted to operate longitudinally in the guiding portions of the tubes, and connections between the inner ends of the corresponding shanks of the two handles and operating longitudinally of the tubes for causing simultaneous movement of the handles.

5. A handle attachment for vehicles embodying a pair of tubes having reduced ends, handles having shanks fitted to slide in the reduced ends of the tubes, set screws for securing the handles at the desired adjusted position, and a flexible element inclosed by and adapted to operate longitudinally of each tube and having its ends connected to the inner ends of the corresponding handle shanks for causing simultaneous movement of the handles.

6. A handle attachment for vehicles embodying a pair of tubes arc-shaped to form a depression to receive the vehicle body and having guiding portions at their ends, handles having shanks coöperating with the guiding portions of the tubes and arranged to operate longitudinally at the opposite ends of the latter, and a chain inclosed within and adapted to operate longitudinally of each tube, the chains being attached to the inner ends of the corresponding handle shanks to cause their simultaneous operation.

7. A handle attachment for vehicles embodying a pair of tubes having an arc-shape to extend beneath the vehicle body, the ends of the tubes having reverse curves, handles for the opposite ends of the tubes having shanks curved to correspond to the curve of the tube ends and guided to operate longitudinally of the tubes, and a flexible element guided to operate longitudinally within each tube and connecting the proximate ends of the respective handle shanks for causing simultaneous adjustment of the handles.

870,740. HAIR-DRYING APPARATUS. EVANDER MCIVER and JOHN WIDUA, Chicago, Ill.; Margaret McIver administratrix of said Evander McIver, deceased. Filed Jan. 11, 1907. Serial No. 351,739.



1. A drying apparatus including a casing having air inlets, an air confining chamber arranged in said casing, an air-conduit arranged in said casing, communicating with said chamber and having a flaring outlet of relatively large area, means for creating a current of air in said conduit, and means for heating the air in said casing.

2. A drying apparatus including a casing having air inlets, an air confining chamber in said casing, an air conduit leading from the chamber to the exterior of the casing and terminating in an expanded opening of relatively large area, a fan located in said passage, means for operating said fan, and means for heating the air in said casing.

3. A drying apparatus including a casing, an air confining chamber, an air conduit leading from the chamber to the exterior of the casing and having an outwardly flaring outlet of relatively large area, a fan situated in the air conduit, a motor for actuating the blower, and means for heating the air in said casing.

4. A drying apparatus comprising an outer casing, having air inlets, an air conduit arranged in said casing, an air confining chamber, communicating with said casing and with said conduit, and a fan arranged in said conduit.

5. A drying apparatus comprising an outer casing adapted to admit air at its lower end, an air-conduit arranged in said casing, a fan mounted in said conduit, and tubular branch conduits communicating with said air-conduit and diverging therefrom.

6. In a device of the class described the combination with a casing having an air inlet at the base thereof, a shelf supported in the casing, a heater beneath the shelf, a motor on said shelf, a fan thereon and above said inlet, a receptacle in the top of said casing at one side thereof, a flue within the casing extending from the fan upwardly to said receptacle and means for deflecting air from the inlet into the fan.

7. In a device of the class described the combination with a main casing having an air inlet at the base thereof, a shelf in said casing extending from the front to a point over said inlet, a heater beneath the shelf, a motor supported on said shelf, a fan on said motor, a fan casing therefor opening towards the rear wall of the main casing, a deflector above said opening, a receptacle in the top of said main casing adjacent the rear side thereof and a flue extending upwardly from the fan casing to the receptacle.

8. In a device of the class described the combination with a casing having an air inlet at the base thereof, of a

shelf in said casing, a motor on said shelf, a fan on said motor, a flue contained within the casing and extending upwardly from said fan, a plate adapted to direct a current of air into said flue, a receptacle at the top of said flue and a heater beneath said shelf.

9. In a device of the class described, the combination with an outer casing having an air inlet at the base, of a fan casing supported above said inlet, a fan therein, a motor adapted to operate said fan, a flue leading upwardly from the fan casing to the top of the outer casing, means in the upper end of said flue for connecting a flexible hose and a heater in the bottom of the casing adapted to heat the air before admission to the fan.

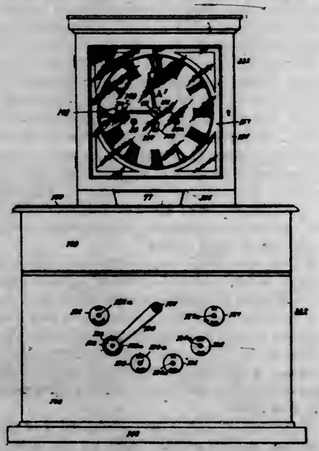
870,741. SKEE-STIRRUP. CARL NORDLANDER, Norway, Mich. Filed Feb. 4, 1907. Serial No. 355,674.



1. A skee stirrup comprising a toe plate, a heel plate provided with a plurality of orifices, a shank plate upon which the heel plate is adjusted, and a spring having a lug to engage orifices in the heel plate to hold the latter adjusted upon the shank plate.

2. A skee stirrup comprising a toe plate, a toe strap disposed beneath the same, a shank plate and a heel plate locking spring secured in position beneath the toe plate, and a heel plate adjustable on the shank plate and held in position by the locking spring.

870,742. RECORDING APPARATUS. HARRY B. PALMER, New York, N. Y., assignor to George E. Sly, New York, N. Y. Filed Nov. 15, 1904. Serial No. 232,802.



1. Recording apparatus comprising recording mechanism normally *in statu quo* but operatable to make any one of a plurality of records substantially at a common point on a record-receiving medium, and time-controlled selective mechanism in selective control of the recording movements of the recording mechanism to selectively determine its record.

2. Time-controlled recording apparatus comprising recording mechanism normally *in statu quo* but operatable to make any one of a plurality of records substantially at a common point on a record-receiving medium, and selective means for determining the record-making movements of such recording mechanism.

3. Time-controlled recording apparatus comprising recording mechanism normally *in statu quo* but operatable to make any one of a plurality of records substantially at a common point on a record-receiving medium, and automatic selective means for automatically selectively determining the movements of such recording mechanism.

4. Recording apparatus comprising a plurality of separately movable recording devices normally *in statu quo* time-controlled selective means coöperative with the recording devices to selectively control their actuation, and a common actuative means arranged to actuate all the recording devices subject to selection of the time-controlled selective means.

5. Recording apparatus comprising a plurality of separately movable recording devices normally *in statu quo*, and arranged to mark their records substantially at a common record-receiving point and time-controlled selective means coöperative with the recording devices to selectively control their actuation.

6. Recording apparatus comprising recording devices normally *in statu quo*, time-controlled selective actuating means coöperative therewith, and common actuative means arranged to actuate all the recording devices subject to selection of the time-controlled selective means.

7. Time-controlled recording apparatus comprising recording devices normally *in statu quo*, automatic selective means coöperative therewith, and common actuative means arranged to actuate all the recording devices subject to selection by the automatic selective means.

8. Recording apparatus comprising electrically controllable recording mechanism normally *in statu quo* but operatable to make any one of a plurality of records, time-controlled electrical selective means in controlling selective coöperation with the recording mechanism to selectively determine its record, and one electric circuit controller arranged to actuate the recording mechanism to print all its records subject to selective control of the selective means.

9. Recording apparatus comprising electrically controllable separately movable recording devices, time-controlled electrical selective means selectively determining the actuation of the recording devices, and a common electric circuit controller arranged to actuate all the recording devices subject to selection by the selective means.

10. Recording apparatus comprising electrically controllable separately movable normally stationary recording devices, time-controlled electrical selective means selectively determining the actuation of the recording devices, and a common electric circuit controller arranged to actuate all the recording devices subject to selection by the selective means.

11. Recording apparatus comprising separately movable electrically controllable record-marking devices, record-controlling conductors in controlling relation to the record-marking devices, one or more sources of electric current in circuit with the controlling conductors, time-controlled selective circuit-controlling means in selective control of the record-controlling conductors, and a common actuative circuit controller in control of all the record-controlling conductors subject to selection by the selective circuit-controlling means.

12. Recording apparatus comprising separately movable electrically controllable record-marking devices, record-controlling conductors in controlling relation to the record-marking devices, one or more sources of electric current in normally open circuit with the controlling conductors, time-controlled selective circuit-controlling means in selective control of the record-controlling conductors, and a common circuit-closing device arranged to close the circuit of any one or more of the record-controlling conductors subject to selection by the selective circuit-controlling means.

13. Recording apparatus comprising separately movable electrically controllable record-marking devices and electrical conductors in control thereof and in circuit with one or more sources of electric current, time-controlled selective circuit-controlling means in selective control of the circuits of the said conductors, and auxiliary circuit controlling means located substantially at a common controlling point and also controlling such conductors but subject to selection by the time-controlled selective circuit-controlling means.

14. Recording apparatus comprising separately movable electrically controllable record-marking devices and electrical conductors in control thereof and in circuit with one or more sources of electric current, time-controlled selective circuit-controlling means in selective control of the circuits of the said conductors, and manually operatable auxiliary circuit controlling means located substantially at a common controlling point and also controlling such conductors but subject to selection by the time-controlled selective circuit-controlling means.

15. Recording apparatus comprising separately movable recording devices arranged to mark their records substantially at a common point on a record-receiving medium, separate actuative electro-magnets for the recording devices, one or more sources of electricity in communication with the actuative magnets, and time-controlled circuit-selective means in selective control of the actuative magnets.

16. Recording apparatus comprising separately movable recording devices, separate actuative magnets coöperative therewith and communicating with one or more sources of electricity, time-controlled selective circuit-controlling means in selective control of the actuative magnets, and auxiliary circuit-controlling means located at a common controlling point and in control of the actuative magnets subject to selection of the time-controlled circuit-controlling means.

17. Recording apparatus comprising separately movable recording devices, separate actuative magnets coöperative therewith and communicating with one or more sources of electricity, time-controlled selective circuit-controlling means in selective control of the actuative magnets, and manually controllable auxiliary circuit-controlling means located at a common controlling point in control of the actuative magnets subject to selection of the time-controlled circuit-controlling means.

18. Time-controlled recording apparatus comprising separately movable recording devices pivotally mounted to strike substantially at one common striking or record-marking location, and time-controlled positioning means for holding a record receiving medium at such common record-marking location of the recording devices, and selective means in selective control of the recording devices.

19. Recording apparatus comprising means for holding a record receiving medium, recording devices pivotally mounted to move separately into striking or record-marking positions substantially co-incident, actuative means for the record-marking devices, and time-controlled selective means in selective control of the recording devices.

20. Recording apparatus comprising separately movable normally stationary recording devices movable into substantially co-incident striking or record-marking positions, and time-controlled selective actuative means coöperative therewith.

21. Recording apparatus comprising separately movable recording devices arranged to mark their records substantially at a common point on a record-receiving medium, and separate time-controlled actuative magnets for such recording devices.

22. Recording apparatus comprising recording devices separately movable to substantially co-incident striking or record-marking positions and separate time-controlled actuative magnets in actuative coöperation with the separately movable devices.

23. Recording apparatus comprising two sets of recording devices normally in *statu quo*, the devices of each set being movable to substantially co-incident striking or record-marking positions, means for actuating the recording devices, and time-controlled selective means in selective control of the actuation of the recording devices.

24. Recording apparatus comprising two sets of recording devices, each recording device of either set being separately movable from its normal position into a record-marking or striking position substantially co-incident with the record-marking or striking positions of the other recording devices of its own set, actuative means in actuative coöperation with the recording devices, and time-controlled selective means in selective control of the actuative means to selectively determine the actuation of one recording device of each set.

25. Recording apparatus comprising two sets of recording devices, each recording device of either set being separately movable from its normal position into a record-marking or striking position substantially co-incident with the record-marking or striking positions of the other recording devices of its own set and adjacent to the substantially co-incident or common striking positions or position of the recording devices of the other set, actuative means in actuative coöperation with the recording devices, and time-controlled selective means in selective control of the actuative means to selectively determine the actuation of one recording device of each set.

26. Recording apparatus comprising two sets of recording devices normally in *statu quo*, the devices of one set being formed to record the hours and the devices of the other set being formed to record the minutes and the devices of either set being separately movable into a substantially common record-marking position adjacent to the substantially common record-marking position of the record-marking devices of the other set, actuative means in actuative coöperation with the recording devices, and time-controlled selective means selectively controlling the actuation of the recording devices to effect at a given instant selective actuation of one recording device of the hour set and one recording device of the minute set.

27. Recording apparatus comprising recording mechanism normally stationary but operatable to mark a record upon a record receiving medium, and record-actuative means operatable by such record receiving medium to actuate the recording mechanism to mark the record thereon when such record receiving medium is placed in its record receiving position.

28. Recording apparatus operatable to mark a record upon a record receiving medium and comprising electrical actuative means including a controlling switch operatable by the record receiving medium when placed in record receiving position.

29. Time recording apparatus including recording mechanism normally stationary but operatable to mark any one of a plurality of time records upon a record receiving medium, time-controlled selective means selectively determining the record of the recording mechanism and actuative means coöperative with the record receiving medium and with the recording mechanism so as to be operated by the record-receiving medium and to actuate the recording mechanism subject to the selective means when such record receiving medium is placed in its record receiving position.

30. Recording apparatus operatable to mark any one of a plurality of records upon a record receiving medium and comprising electrical actuative means including a controlling switch operatable by the record receiving medium when placed in record receiving position, and also comprising time-controlled selective means in selective control of the actuative means to selectively determine the record marked upon the record receiving medium.

31. Recording apparatus for marking a record on a record receiving medium and comprising electrically operatable recording mechanism normally in *statu quo* but operatable to make any one of a plurality of records, electrical actuative means in actuative coöperation with the recording mechanism and operatable by the record receiving medium when placed in record receiving position, and time-controlled electrical selective mechanism coöperative with the actuative means to selectively determine the record of the recording mechanism.

32. Recording apparatus for marking a record on a record receiving medium and comprising a plurality of separately movable recording devices arranged to mark their records substantially at a common point on the record-receiving medium, actuative means therefor operatable by the record receiving medium when placed in record receiving position, and time-controlled selective means cooperative with the actuative means to selectively control the actuation of the recording devices.

33. Recording apparatus for marking a record on a rec-

ord receiving medium and comprising separately movable electrically operatable recording devices and time-controlled electrical selective actuative means in selective actuative coöperation with the recording devices and operatable by the record receiving medium when placed in record receiving position.

34. Time-controlled recording apparatus for marking a record on a record receiving medium and comprising record marking means actuatable by placing the record receiving medium in one of several record receiving positions, and time-controlled positioning means for determining such record receiving position of the record receiving medium.

35. Time-controlled recording apparatus for marking a record on a record receiving medium and comprising time-controlled record marking means actuatable by placing the record receiving medium in one of several record receiving positions, and time-controlled positioning means for determining such record receiving position of the record receiving medium.

36. Time-controlled recording apparatus for marking a record on a record receiving medium and comprising record marking means operatable by placing the record receiving medium in its record receiving position, time-controlled positioning means for determining, with respect to a given coördinate direction, such record receiving and actuative position of the record receiving medium and also positioning means for determining such record receiving and actuative position of the record receiving medium with regard to another coördinate direction.

37. Time-controlled recording apparatus for marking a record on a record receiving medium and comprising record marking means operatable by placing the record receiving medium in its record receiving position, time-controlled positioning means for determining, with respect to a given coördinate direction, such record receiving and actuative position of the record receiving medium and also manually operatable positioning means for determining such record receiving and actuative position of the record receiving medium with regard to another coördinate direction.

38. Time-controlled recording apparatus comprising, in combination, time-controlled record marking means including a record marking ribbon, automatic electrical ribbon-feeding means for feeding the record marking ribbon and means for reversing the feeding direction of such electrical ribbon-feeding means.

39. Time-controlled recording apparatus comprising, in combination, time-controlled record marking means including a record marking ribbon, automatic electrical ribbon-feeding means for feeding the record marking ribbon and automatic means for reversing the feeding direction of such electrical ribbon-feeding means.

40. Time-controlled recording apparatus including time-controlled electrically operatable record marking type, a record marking ribbon coöperative therewith, electrical ribbon-feeding means for feeding the record marking ribbon, and common circuit-controlling means for effecting actuation of the record marking type and the electrical ribbon-feeding means.

41. Time-controlled recording apparatus comprising time-controlled record printing means including a record marking ribbon arranged to print a record on a record receiving medium, and ribbon-feeding means for feeding the record marking ribbon, the record printing means and the ribbon-feeding means being both actuatable by the placing of a record receiving medium in record receiving position.

42. A recording apparatus comprising record printing means including a record marking ribbon adapted to print a record on a record receiving medium, and ribbon-feeding means for feeding the record marking ribbon and actuatable by placing the record receiving medium in its record receiving position.

43. A time-controlled recording apparatus comprising time-controlled record printing means including a record marking ribbon adapted to print a record on a record receiving medium, and ribbon-feeding means for feeding the record marking ribbon and actuatable by placing the record receiving medium in its record receiving position.

44. A time-controlled recording apparatus comprising time-controlled record printing means including a record marking ribbon adapted to print a record on a record receiving medium, and electrical ribbon-feeding means for feeding the record marking ribbon and actuatable by placing the record receiving medium in its record receiving position.

45. Time-controlled recording apparatus comprising time-controlled record printing means including a record marking ribbon arranged to print a record upon a record receiving medium, electrically controllable ribbon-feeding means for feeding the record marking ribbon, and a controlling circuit in control of the ribbon-feeding means and controllable by the act of placing the record receiving medium in its record receiving position.

46. Time-controlled recording apparatus comprising time-controlled record printing means including a record marking ribbon arranged to print a record upon a record receiving medium, the printing means being actuatable by the record receiving medium when placed in its record receiving position, and automatic ribbon-feeding means for feeding the record marking ribbon after each printing operation.

47. Time-controlled recording apparatus comprising record printing means and a record marking ribbon coöperative therewith to print a record upon a record receiving medium, the printing means being actuatable by the record receiving medium when placed in its record receiving position, and automatic ribbon-feeding means also actuatable by introduction of the record receiving medium into its record receiving position to feed the record marking ribbon after each printing operation.

48. Time-controlled recording apparatus comprising record printing means and a record marking ribbon coöperative therewith to print a record upon a record receiving medium, the printing means being actuatable by the record receiving medium when placed in its record receiving position, and automatic ribbon-feeding means actuatable by withdrawal of the record receiving medium from its record receiving position to feed the record marking ribbon after each printing operation.

49. Recording apparatus comprising record marking means, actuative means therefor operatable by placing a record receiving medium one of several in record receiving positions, and a chronometer in control of such actuative means to determine the record receiving position of the record receiving medium in which the same shall effect operation of the said actuative means for the record marking means.

50. Recording apparatus comprising electrically actuatable record marking means, a source of actuative electricity in communication with the record-marking means, and circuit-controlling means governing actuation of the record marking means and operatable by placing a record receiving medium in record receiving position, and a chronometer in control of the circuit-controlling means to determine the record receiving position of the record receiving medium in which the same shall operate such circuit-controlling means to actuate the record marking means.

51. Recording apparatus comprising electrically actuatable record-marking means, a source of actuative electricity communicating therewith through suitable electric transmission means operatable to actuate the record-marking means by a record-receiving medium when placed in record-receiving position, and time-controlled governing means in governing coöperation with the said electric transmission means to determine the record-receiving position of the record-receiving medium in which the same shall operate the electric transmission means to effect actuation of the record-marking means.

52. Recording apparatus comprising electrically actuatable record-marking means, a source of actuative electricity therefor communicating therewith through suitable circuit-controlling means operatable to actuate the record-marking means by placing a record-receiving medium in record-receiving position and time-controlled governing means in governing coöperation with the said circuit-controlling means to determine the record-receiving position of the record-receiving medium in which the same shall operate such circuit-controlling means to actuate the record-marking means.

53. Recording apparatus comprising electrically actuatable record-marking means, a source of actuative electricity communicating therewith through suitable circuit-controlling means operatable by placing a record-receiving medium in any one of a plurality of different record-receiving positions, and time-controlled means in governing relation to such circuit-controlling means to change at periodic times such operative record-receiving positions of the record-receiving medium.

54. Recording apparatus comprising electrically actuatable record-marking means, a source of actuative electricity therefor communicating therewith through suitable circuit-controlling means operatable by placing a record-receiving medium in any one of a plurality of different record-receiving positions determining locations of the records in a plurality of respective spaces on such medium and corresponding to successive intervals of time, and time-controlled means in governing relation to such circuit-controlling means to change at periodic times, demarcating the aforesaid successive intervals, such operative record-receiving positions of the record-receiving medium.

55. Recording apparatus comprising electrically actuatable record-marking means, a source of actuative electricity therefor communicating therewith through suitable circuit-controlling means operatable by placing a record-receiving medium in any one of a plurality of different record-receiving positions determining locations of the records on such receiving medium in respective spaces thereon corresponding to successive days of the week, and time-controlled means in governing relation to such circuit-controlling means to change once each day such operative record-receiving positions of the record receiving medium.

56. Recording apparatus comprising electrically actuatable record-marking means, a source of actuative electricity communicating therewith through suitable circuit-controlling means operatable to actuate the record-marking means by placing a record-receiving medium in record-receiving position and also through time-controlled circuit-controlling means determining the record which shall be made by the record-marking means when actuated at any given instant, and further time-controlled means in governing relation to the first said circuit-controlling means to determine the record-receiving position of the record-receiving medium in which the record-marking means shall be actuated.

57. Recording apparatus comprising electrically actuatable record-marking means, a source of actuative electricity communicating therewith through suitable circuit-controlling means operatable to actuate the record-marking means by placing a record-receiving medium in record-receiving position and also through time-controlled circuit-controlling means determining the record which shall be made by the record-marking means when actuated at any given instant, and further time-controlled means in governing relation to the first said circuit-controlling means to determine, with respect to a given coördinate direction, the record-receiving position of the record-receiving medium in which the record-marking means shall be actuated, and means for determining such actuative record-receiving position of the record-receiving medium with respect to another coördinate direction.

58. Recording apparatus comprising electrically actuatable record-marking means, a source of actuative electricity communicating therewith through suitable circuit-controlling means operatable to actuate the record-marking means by placing a record-receiving medium in record-receiving position and also through time-controlled circuit-controlling means determining the record which shall be made by the record-marking means when actuated at any given instant, and further time-controlled means in governing relation to the first said circuit-controlling means to determine, with respect to a given coördinate direction, the record-receiving position of the record-receiving medium in which the record-marking means shall be actuated, and manually operative means for determining such actuative record-receiving position of the record-receiving medium with respect to another coördinate direction.

59. Recording apparatus comprising electrically actuatable record-marking means and a source of actuative electricity therefor communicating therewith through suitable current transmission means controllable to actuate the record-marking means by either one of a plurality of circuit-controlling devices operatable by introduction of a record-receiving medium into either one of a plurality of respective record-receiving positions, and time-controlled means in control of the circuit-controlling devices to determine which of such devices shall be operated by introduction of the record-receiving medium and thereby to determine the record-receiving position thereof.

60. Recording apparatus comprising electrically actuatable record-marking means, a source of actuative electricity communicating therewith through an actuative circuit continuously open except when the record-marking means is actuated to mark a record, and circuit-closing means in control of the actuative circuit and operatable, by introduction of a record-receiving medium into record-receiving position, to close such circuit and actuate the record-marking means.

61. Recording apparatus operatable to mark any one of a plurality of records and comprising electrical actuative circuits for marking such various records respectively and continuously open except when closed to actuate the apparatus to mark a record, a circuit-closing switch in control of the actuative circuits and operatable by the record-receiving medium when placed in record-receiving position, and the recording apparatus also comprising time-controlled selective means in selective control of the actuative circuits to selectively determine the record which they shall mark upon the rocord-receiving medium.

62. Recording apparatus comprising electrically actuatable record-marking means selectively actuatable to mark any one of a plurality of records, selective actuative electric circuits in actuative coöperation with the record-marking means to actuate the same to mark its various records, a clock movement, a commutator operated by the clock movement and in selective control of the actuative circuits, and a common auxiliary circuit-controlled device in control of all the selective actuative electric circuits.

63. Recording apparatus comprising electrically actuatable record-marking mechanism selectively actuatable to mark any one of a plurality of records indicating hours and to mark any one of a plurality of records indicating minutes, an hour set of actuative electric circuits in actuative coöperation with the record-marking mechanism to actuate the same to mark its various hour-indicating records, a minute set of actuative electric circuits in actuative coöperation with the record marking mechanism to actuate the same to mark its minute-indicating records, a clock movement, and hour and minute commutators operated by the clock movement and selectively controlling the hour and minute sets of actuative circuits respectively.

64. Recording apparatus comprising electrically actuatable recording mechanism selectively actuatable to mark any one of a plurality of records indicating hours and any one of a plurality of records indicating minutes, an hour and a minute set of selective actuative electric circuits in selective actuative coöperation with the recording mechanism to selectively actuate its various hour-indicating and minute-indicating records respectively, positioning means for determining the record-receiving position of a record-receiving medium, selective positioning circuits in selective control of the positioning means to selectively determine the record-receiving position in which the record-receiving medium shall be located by such positioning means, a clock movement, hour and minute commutators operated by the clock movement and selectively controlling the hour and minute sets of actuative circuits respectively, and another commutator also operated by the clock movement and selectively controlling the selective positioning circuits which in turn control the positioning mechanism.

65. Recording apparatus comprising electrically actuatable recording mechanism selectively actuatable to mark any one of a plurality of records indicating hours and any

one of a plurality of records indicating minutes, an hour set and a minute set of selective actuative electric circuits in selective actuative coöperation with the recording mechanism to selectively actuate its various hour-indicating and minute-indicating records respectively, day-positioning means for locating a record-receiving medium in various record-receiving positions corresponding to days of the week, selective positioning circuits in selective control of the positioning means to selectively determine the record-receiving position in which the record-receiving medium shall be located by such positioning means, a clock movement, hour and minute commutators operated by the clock movement and selectively controlling the hour and minute sets of actuative circuits respectively and a day-commutator also operated by the clock movement and selectively controlling the selective positioning circuits which in turn control the day-positioning mechanism.

66. Time-controlled recording apparatus for marking a record on a record-receiving medium and comprising electrically controllable positioning means for locating the record-receiving medium in position to receive its record, a source of actuative electricity communicating with the positioning means through suitable electric transmission means, and means for controlling such electric transmission means to control the positioning means so as to vary and determine the record-receiving position of the record-receiving medium.

67. Recording apparatus for marking a record on a record-receiving medium and comprising electrically controllable time-controlled positioning means for locating the record-receiving medium in position to receive its record, a source of actuative electricity communicating with the positioning means through suitable electric transmission means, and a master chronometer in control of such electric transmission means to control the positioning means so as to vary and determine the record-receiving position of the record-receiving medium.

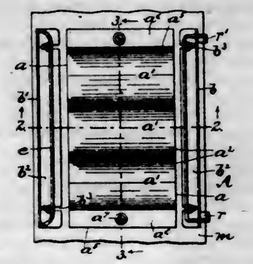
68. Recording apparatus for marking a record on a record receiving medium and comprising electrically controllable positioning means for locating the record-receiving medium in position to receive its record, a source of actuative electricity communicating with the positioning means through suitable electric transmission means, and means for controlling such electric transmission means to control the positioning means so as to vary and determine the record-receiving position of the record-receiving medium.

69. Recording apparatus comprising positioning means for determining the record-receiving position of a record-receiving medium, selective positioning circuits in selective control of the positioning means to selectively determine the record-receiving position in which the record-receiving medium shall be located by such positioning means, a clock movement, and a commutator operated by the clock movement and selectively controlling the selective positioning circuits which in turn control the positioning mechanism.

70. Recording apparatus comprising day-positioning means for locating a record-receiving medium in various record-receiving positions corresponding to days of the week, selective positioning circuits in selective control of the positioning means to selectively determine the record-receiving position in which the record-receiving medium shall be located by such positioning means, a clock movement, and a day-commutator operated by the clock movement and selectively controlling the selective positioning circuits which in turn control the day-positioning mechanism.

71. Recording apparatus comprising positioning means for determining the record-receiving position of a record-receiving medium, selective positioning circuits in selective control of the positioning means to selectively determine the record-receiving position in which the record-receiving medium shall be located by such positioning means, a clock movement, a commutator operated by the clock movement and selectively controlling the selective positioning circuits which in turn control the positioning mechanism, and record-marking mechanism also controllable by the clock movement and arranged to mark a record on the record-receiving medium when such medium is located in its record-receiving position.

870,743. BOBBIN-HOLDER. JAMES PEARSON, Central Falls, R. I. Filed Apr. 17, 1907. Serial No. 368,641.

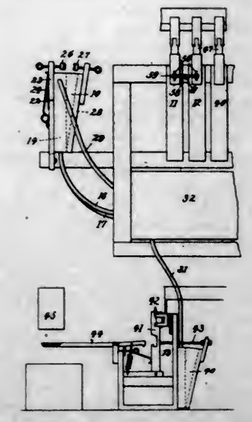


1. As an improved article of manufacture a bobbin-holder of the character described, the same comprising a suitably mounted body member having open seats for supporting bobbins therein, front and rear frame members for limiting the endwise play of the bobbins, fixed and movable guards extending in horizontal planes and adapted when in use to lie above and transversely of the respective end portions of the bobbins, and means operatively connected with said movable guard member for maintaining it both in the operative and inoperative positions.

2. In a bobbin-holder of the character described, the combination with a base, and a body member *a* secured thereto provided with a plurality of open parallel V-shaped seats for supporting bobbins therein, of stationary independent front and rear laterally separated vertical frames extending longitudinally of and disposed with respect to said body member, a fixed guard *e* secured to the rear frame, a swinging guard *f* pivoted to said front frame, and means for automatically locking it in the normal operative position.

3. In a device of the character described provided with a suitably mounted bobbin-supporting body *a* and front and rear stationary frames adjustably positioned with respect to said body, a swinging resilient guard pivoted in one of said frames, a stop for limiting the rearward movement of the guard, and a recess into which a member of the guard is adapted to spring so as to lock it in the normal operative position to prevent the bobbins from becoming accidentally unseated.

870,744. STOP MECHANISM FOR SELF-PLAYING MUSICAL INSTRUMENTS. BENJAMIN C. PECK, New York, N. Y., assignor to Roth & Engelhardt, New York, N. Y., a Firm. Filed Apr. 23, 1907. Serial No. 369,769.



1. In a device of the character described, a bellows having a pair of ducts, and a valve adapted to be sucked against one and also against the other of said ducts, substantially as specified.

2. In a device of the character described, a bellows having a pair of ducts that communicate with the interior of such bellows, combined with a valve adapted to be sucked against one and also against the other of said ducts, substantially as specified.

3. In a device of the character described, a bellows having a fixed board, a pair of ducts within the same, and a chamber that communicates with said ducts and the interior of the bellows, combined with a valve adapted to be sucked against one and also against the other of said ducts, substantially as specified.

4. In a device of the character described, a bellows having a pair of ducts, a communicating chamber, and a laterally vibrating tongue within said chamber which projects across said ducts, substantially as specified.

5. In a device of the character described, a bellows having a pair of ducts, an intermediate valve, an air inlet, and means for opening said inlet upon the collapse of the bellows, substantially as specified.

6. In a device of the character described, a bellows having a pair of ducts, an intermediate valve, an air inlet, a clack-valve controlling the same, and a pair of abutments for opening said valve upon the collapse of the bellows, substantially as specified.

7. In a device of the character described, a bellows having a pair of ducts, and means for establishing communication between both of said ducts and the interior of the bellows by a simultaneous exhaust of air from both ducts and for disconnecting either of said ducts from said interior of the bellows by an exhaust of air from said duct unaccompanied by a simultaneous exhaust of air from the other duct, substantially as specified.

8. In a device of the character described, a bellows having a pair of ducts, an intermediate valve, an air inlet, means for opening said inlet upon the collapse of the bellows, a switch, and means controlled by the air inlet for opening said switch, substantially as specified.

9. In a device of the character described, a first bellows having a pair of ducts, an intermediate valve, an air inlet, means for opening said inlet upon the collapse of the bellows, a second bellows controlled by the air inlet, and an electric switch having a movable member adapted to be actuated by said second bellows, substantially as specified

10. In a device of the character described, a pair of primary pneumatics, a first bellows, a hammer operated thereby, a second bellows, a switch operated thereby, means for operatively connecting the pneumatics with the first bellows, and means for operatively connecting said pneumatics with the second bellows, substantially as specified.

11. In a device of the character described, a pair of primary pneumatics, a pair of bellows, a pair of hammers operated thereby, means for operatively connecting the pneumatics with the bellows, and means for locking said bellows against simultaneous movement, substantially as specified.

12. In a device of the character described, a pair of primary pneumatics, a pair of first bellows, a pair of hammers operated thereby, a second bellows, a switch operated thereby, means for operatively connecting the pneumatics with the pair of first bellows, means for locking said bellows against simultaneous movement, and means for operatively connecting the pneumatics with the second bellows, substantially as specified.

13. In a device of the character described, a pair of bellows, a pair of hammers operated thereby, hooks secured to the bellows, and a two-arm lever centrally pivoted between the bellows and arranged in the path of said hooks, substantially as specified.

14. In a device of the character described, a duct-bridge having a pair of adjoining openings, a switch, a pair of hammers, means controlled by the openings for opening the switch by the simultaneous uncovering of both such openings, and means controlled by the openings for operating the hammers by the separate uncovering of such openings, substantially as specified.

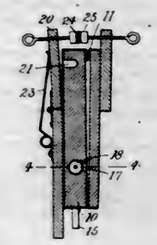
15. In a device of the character described, a duct-bridge having a pair of adjoining openings, auxiliary bellows having a pair of ducts controlled by said openings, a valve adapted to be sucked against either of said ducts, a switch, and means controlled by said bellows for opening the switch, substantially as specified.

16. In a device of the character described, a duct-bridge having a pair of adjoining openings, a hammer, means for actuating the hammer, a switch, means for opening the switch, means for operatively connecting said openings to the hammer-actuating means, and separate means for connecting said openings to the switch-opening means, substantially as specified.

17. In a device of the character described, a duct-bridge having a pair of openings, a pair of pneumatics connected thereto, a pair of bellows controlled by the pneumatics, a pair of hammers actuated by said bellows, an auxiliary bellows also controlled by the pneumatics, and a switch controlled by said auxiliary bellows, substantially as specified.

18. In a device of the character described, a duct-bridge having a pair of openings, a pair of pneumatics connected thereto, a pair of bellows controlled by the pneumatics, a pair of hammers actuated by the bellows, an auxiliary bellows also controlled by the pneumatics, an additional pneumatic controlled by the auxiliary bellows, a switch, and a bellows for opening the switch connected to the additional pneumatics, substantially as specified.

870,745. PNEUMATIC VALVE FOR SELF-PLAYING MUSICAL INSTRUMENTS. BENJAMIN C. PECK, New York, N. Y., assignor to Roth & Engelhardt, New York, N. Y., a Firm. Filed Apr. 26, 1907. Serial No. 370,485.



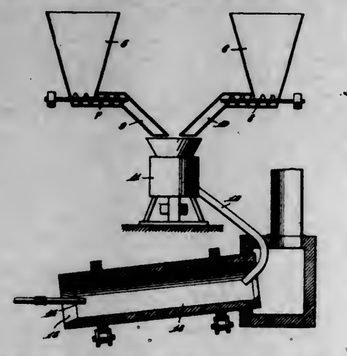
1. In a device of the character described, a bellows having a pair of suction ducts, an intermediate chamber, and a laterally movable plunger within said chamber adapted to close either one of said ducts, substantially as specified.

2. In a device of the character described, a bellows having a pair of suction ducts, and an intermediate chamber, combined with a plunger laterally movable within said chamber and composed of a stem and a pair of packed disks at the ends of said stem, substantially as specified.

3. In a device of the character described, a bellows having a fixed board, a pair of suction ducts within the same, and a chamber that communicates with said ducts and with the interior of the bellows, combined with a laterally movable plunger within said chamber adapted to be sucked against either one of said ducts, substantially as specified.

4. In a device of the character described, a bellows having a pair of suction ducts, an intermediate chamber that communicates with said ducts and with the interior of the bellows, a laterally movable plunger within said chamber, an air inlet, a valve controlling the same, and a pair of abutments for opening said valve upon the collapse of the bellows, substantially as specified.

870,746. METHOD OF MAKING SODIUM SULFATE. JOHN D. PENNOCK, Syracuse, N. Y., assignor to The Solvay Process Company, a Corporation of New York. Filed May 25, 1906. Serial No. 318,604.



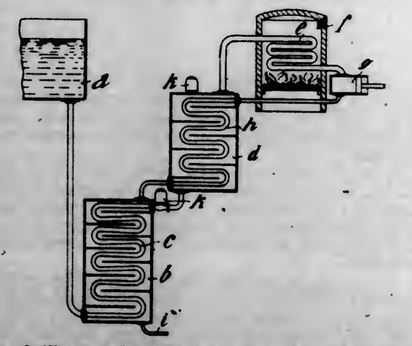
1. The method of making sodium sulfate, which consists in mixing niter cake and a sodium compound having an alkaline reaction, in approximately reacting proportions, and heating the mixture to effect reaction, substantially as described.

2. The method of making sodium sulfate, which consists in mixing niter cake and a sodium compound having an alkaline reaction, in approximately reacting proportions, and heating the mixture to a temperature above 125° C. to effect reaction, substantially as described.

3. The method of making sodium sulfate, which consists in grinding together niter cake and a sodium compound having an alkaline reaction, in approximately reacting proportions, thereby producing an intimate reacting mixture, and then heating said mixture to effect reaction, substantially as described.

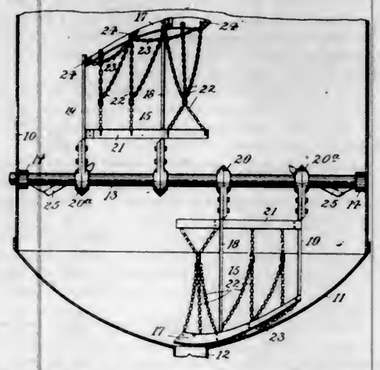
4. The method of making sodium sulfate, which consists in mixing niter cake and fished salts from the manufacture of salt in approximately reacting proportions, and heating the mixture to effect reaction, substantially as described.

870,747. BOILING AND DISTILLING APPARATUS. RUDOLF PLANCKH, Graz-Eggenberg, Austria-Hungary. Filed Jan. 7, 1907. Serial No. 351,242.



In a boiling and distilling apparatus, the combination of a tank *a*, a tube fixed at the bottom of this tank, a serpentine pipe *c* the lower end of which is connected with the lower end of the said tube, a casing enveloping the said serpentine pipe *c*, a casing *d* connected with the upper end of the said serpentine pipe *c* by a tube, a serpentine pipe *h* in the said casing *d* connected by its lower end to the upper part of the casing *b*, a superheater *f* containing a tube *e* connected with the upper part of the casing *d*, and a suitable compressing device connected by a tube with tube *e* and with the upper part of the said serpentine pipe *h*, substantially as shown and described.

870,748. STIRRER FOR MASH-TUBS. OTTO SELG, New York, N. Y., assignor to The Selg Brewery Apparatus Co., a Corporation of New York. Filed Aug. 30, 1907. Serial No. 390,724.



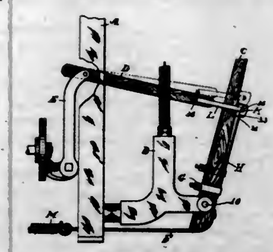
1. In a device of the character described, a mash tub having a curved bottom, combined with a shaft, a pair of central blades extending therefrom in opposite directions, and a pair of end blades extending therefrom in a common direction and set at an angle to the central blades, substantially as specified.

2. In a device of the character described, a shaft, a leaf inclined out of plane with the axis of such shaft, a cross-bar, arms that secure the leaf and cross-bar to the shaft, and chains connecting said leaf and cross-bar, substantially as specified.

3. In a device of the character described, a shaft, a leaf inclined out of plane with the axis of such shaft, eyes projecting from the leaf, a first chain engaging the eyes, a cross-bar, arms that secure the leaf and cross-bar to the shaft, and second chains connecting said leaf and cross-bar, substantially as specified.

4. In a device of the character described, a mash tub having a curved bottom, combined with a shaft, a tilted curved leaf inclined out of plane with the axis of such shaft, a cross-bar, means for securing the leaf and cross-bar to the shaft, and chains connecting said leaf and cross-bar, substantially as specified.

870,749. PICKER-STICK ATTACHMENT. HOMER E. TAPLIN, Lowell, Mass. Filed Nov. 10, 1906. Serial No. 342,859.



1. In a loom, a picker staff, an elastic back piece one end of which is attached thereto in such manner that the other end will be normally in contact with the back of the picker staff, straps pivoted to the free end of the back piece and to the sweep stick, and the sweep stick as described.

2. In a loom, a picker staff, an elastic back piece attached thereto, a head carried by the back piece and held yieldingly thereby against the back of the picker staff, straps pivoted to the head and to the sweep stick, and the sweep stick as described.

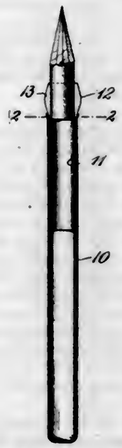
3. In a loom, a picker staff, an elastic back piece, an adjustment band which holds adjustably said back piece to the picker staff, a head carried by the back piece, straps pivoted to the head and to the sweep stick, and the sweep stick as described.

4. In a loom, a picker staff, an adjustment band carried thereby, a back piece comprising a thin strip of elastic material held at one end by said band, a head carried by the other end of the back piece, straps pivoted to the head and to the sweep stick, and the sweep stick as described.

5. In a loom, a picker staff, an adjustment band carried thereby, a back piece comprising a thin strip of elastic wood held at one end by said band, a head carried by the other end of the back piece, straps pivoted to the head and to the sweep stick, and the sweep stick as described.

6. In a loom, a picker staff, an adjustment band carried thereby, a back piece comprising a thin strip of elastic wood held at one end by said band, a head made of fiber carried by the other end of the back piece, straps pivoted to the head and to the sweep stick, and the sweep stick as described.

870,750. PENCIL-HOLDER. FREDERICK R. WELLES, New York, N. Y. Filed June 12, 1907. Serial No. 378,518.



A pencil holder comprising an outer tubular holding element having a cylindrical bore, and an inner tubular clamping element having a cylindrical portion accurately fitted to said bore, said clamping element having a swelled portion near its outer end with which the end of the outer tubular element is adapted to engage, and split for a short distance only at the end at which is the swelled portion, whereby to form contracting jaws.

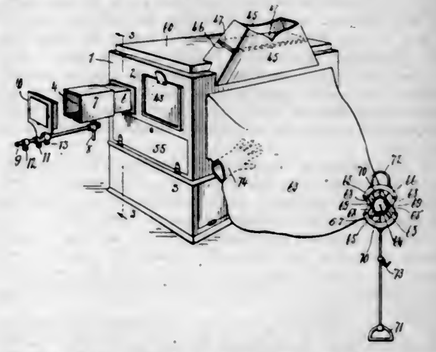
870,751. PRINTING AND DEVELOPING DARK CABINET. THEODORE A. WELSH, Philadelphia, Pa. Filed July 3, 1905. Serial No. 268,291.

1. In a device of the character described the combination of a cabinet, said cabinet having an aperture formed therein, a plate holder, a card holder, means for adjusting said card holder, said cabinet having an open panel, a bag to cover said panel, and means for permitting the insertion of the hand in said bag, substantially as described.

2. In a device of the character described the combination of a cabinet, said cabinet having an aperture formed therein, a plate holder, a card holder, means for adjusting said card holder, said cabinet having an open panel, a bag to cover said panel, a glove formed in said bag and said bag having an opening formed therein for permitting the insertion of the hand, substantially as described.

3. In a device of the character described the combination of a cabinet, said cabinet having an aperture formed therein, a plate holder, a card holder, means for adjusting said card holder, said cabinet having an open panel, a bag to cover said panel, a hood on said cabinet, and a non-actinic glass in said hood, substantially as described.

4. In a device of the character described the combination of a cabinet, said cabinet having an aperture formed therein, a plate holder, a card holder, a bracket carrying said card holder upon which said card holder is adjustable vertically, a rack upon which said bracket is slidably mounted, a track on which said rack is slidably mounted and set-screws for holding the parts in a fixed position, substantially as described.



5. In a device of the character described the combination of a cabinet, said cabinet having an aperture formed therein, a plate holder, a card holder, a bracket carrying said card holder, a rack upon which said bracket is slidably mounted and stops on said rack to limit the movement of said bracket, substantially as described.

6. In a device of the character described the combination of a cabinet, said cabinet having an aperture formed therein, a plate holder, a card holder, a bracket carrying said card holder, and means for adjusting said bracket, said card holder having curved flanges for directing the card into the same, substantially as described.

7. In a device of the character described the combination of a cabinet, said cabinet having an aperture formed therein, a plate holder, a card holder, a bracket carrying said card holder, and means for adjusting said bracket, said card holder having a slot formed in the back of the same for the admission of a card, substantially as described.

8. In a device of the character described the combination of a cabinet, said cabinet having an aperture formed therein, a plate holder, a card holder, a bracket carrying said card holder, said card holder having a groove formed therein to receive a card, and grooves formed therein to receive a mat to cover said card, substantially as described.

9. In a device of the character described the combination of a cabinet, said cabinet having an aperture formed therein, a card holder, a plate holder, means for supporting said plate holder on the outside of the cabinet and telescoping tubes to connect said plate holder with the said aperture formed in the cabinet, substantially as described.

10. In a device of the character described the combination of a cabinet, said cabinet having an aperture formed therein, a card holder, a plate holder, a rod on which said plate holder is slidably mounted, means for adjusting said rod vertically, stops on said rod to limit the movement of said plate holder and set-screws for securing the parts in fixed positions, substantially as described.

11. In a device of the character described the combination of a cabinet, said cabinet having an aperture formed therein, a plate holder, a card holder, means for adjusting said card holder, said cabinet having an open panel, a bag to cover said panel, and a compartment in said cabinet accessible from the interior and from the exterior of said cabinet, substantially as described.

12. In a device of the character described the combination of a cabinet, said cabinet having an aperture formed therein, a plate holder, a card holder, means for adjusting said card holder, said cabinet having an open panel, a bag to cover said panel, and a compartment formed in the lower part of said cabinet for receiving waste chemicals, substantially as described.

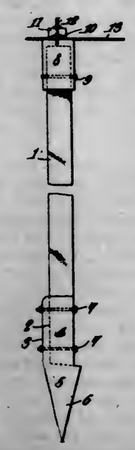
13. In a device of the character described the combination of a cabinet, said cabinet having an aperture formed therein, a plate holder, a card holder, means for adjusting said card holder, said cabinet having an open panel, a bag to cover said panel, a tray on top of said cabinet, a tube in said tray entering said cabinet and a cover for said tray, substantially as described.

14. In a device of the character described, the combination of a cabinet, said cabinet having an aperture formed therein, a plate holder, a card holder, means for adjusting said card holder, said cabinet having an open panel a bag to cover said panel, said bag having an opening formed therein, an elastic band to close said opening, and an upper curved member and a lower curved member pivoted together and secured to said elastic band, substantially as described.

15. In a device of the character described, the combination of a cabinet, said cabinet having an aperture formed therein, a plate holder, a card holder, means for adjusting said card holder, said cabinet having an open panel, a bag to cover said panel, said bag having an opening formed therein, an elastic band in said opening, two members secured to said elastic band, a foot piece connected to one of said members and a hand piece on said other member, substantially as described.

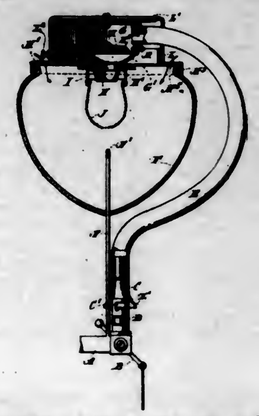
16. In a device of the character described the combination of a cabinet, said cabinet having an aperture formed therein, a plate holder, a card holder, means for adjusting said card holder, said cabinet having an open panel, a bag to cover said panel, a curtain located adjacent said open panel and means for holding said curtain normally in a closed position, substantially as described.

870,752. CLOTHES-LINE PROP. FRANCIS M. WHITE, Newkirk, Okla. Filed Feb. 4, 1907. Serial No. 355,652.



A prop comprising a cap having a socket, a body having one end extending into and secured within the socket, a transverse bead integral with and outstanding from the cap, said bead being rounded transversely, a clamping block having a recess in one face conforming with the contour of the bead, and means extending through the block and into the bead for clamping a plurality of lines between the block and bead, said block and bead being disposed to kink those portions of the line therebetween.

870,753. INCANDESCENT GAS-LAMP. OSCAR WIENDERHOLD, Jersey City, N. J. Filed Mar. 8, 1906. Serial No. 303,942.



1. The combination with a burner tip having a screw thread formed thereon, of a mantle holder provided with a flange cut and bent to form a spiral adapted to fit said screw thread.

2. The combination with a burner tip having an external screw thread, of a mantle holder provided with an inwardly projected flange cut and bent to form a spiral adapted to fit said screw thread.

3. The combination of the arm or bracket, the mixing tube, the lower end of which is supported on said bracket, the body of said tube being bent laterally, a regenerative chamber connected with the upper end of the mixing tube and located vertically above the lower end of said tube, a burner tip connected with said chamber, a globe support surrounding said chamber, and a globe carried by said support and projecting into the bend of the mixing tube.

4. The combination with the gas bracket or arm having a cock and an upwardly-extending pilot branch tube connected with the gas arm on the supply side of said cock, a mixing tube connected with the gas arm on the delivery side of said cock, a burner connected with the delivery end of said mixing tube, a globe holder, a mantle holder connected with the burner and a globe carried by said globe holder and inclosing the upper portion of the pilot branch tube.

5. The combination of the gooseneck tube, the globe-support carried thereby, the globe depending from said support, and the pilot burner tube extending upward through the globe.

870,754. PYROGRAPHIC BURNER. ALVIN M. WILLIAMS, West Orange, N. J. Filed Mar. 30, 1907. Serial No. 365,568.

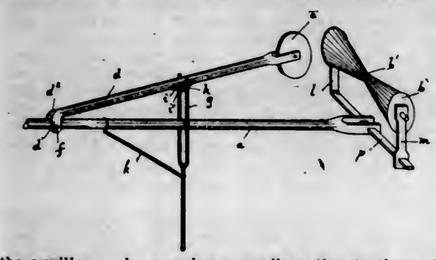


In a pyrographic burner, the combination of a lug having a reduced end, a shell telescopically receiving said reduced end, and a band separate and independent of the lug arranged on said reduced end and adapted to bear for the whole length of its inner surface only on the said shell.

870,755. TROLLEY-POLE GUIDE. LEWIS A. ALLEN, Passaic, N. J. Filed Aug. 14, 1907. Serial No. 388,497.

1. In a device of the character described, the combination of a main trolley pole, an auxiliary pole attached thereto, a trolley wheel upon the end of the said auxiliary pole, a lever upon said main trolley pole to support the said auxiliary pole, and a roller upon the main trolley pole, substantially as shown and described.

2. In a device of the character described, the combination of a main trolley pole having a roller mounted thereon, an auxiliary pole attached to the main trolley pole, a lever upon the main trolley pole having an arm supporting



the auxiliary pole, a spring normally acting to throw the said lever and means for holding the lever against the action of the spring, substantially as shown and described.

870,756. CABLE CASH-CARRIER. GEORGE A. AMSDEN, Springfield, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J., a Corporation of New Jersey. Filed Apr. 3, 1905. Serial No. 253,459.



1. In a cable carrier, rails on which the carrier is adapted to travel and arranged vertically, a traveling cable, and means at the sub-stations for holding the carrier until it is gripped to the cable.

2. In a cable carrier, rails on which the carrier is adapted to travel and arranged vertically, a traveling cable, and means at the sub-stations for drawing the rails inward to hold said carrier until it is gripped to the cable.

3. In a cable carrier, rails on which the carrier is adapted to travel and arranged vertically, a traveling cable, and yielding means at the sub-stations for drawing the rails inward to hold said carrier until it is gripped to the cable.

870,757. CABLE CASH-CARRIER. GEORGE A. AMSDEN, Springfield, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J., a Corporation of New Jersey. Filed Apr. 3, 1905. Serial No. 253,460.

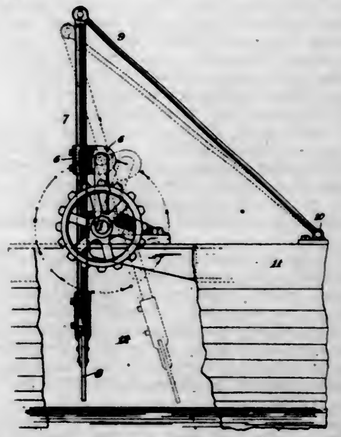
1. In a cable carrier, rails on which the carrier is adapted to travel and arranged vertically, a traveling cable, and means at the sub stations independent of the rails for engaging the carrier after it has been placed upon the track and holding the same at the sub station from falling until it is gripped to the cable.

2. In a cable carrier, rails on which the carrier is adapted to travel and arranged vertically, a traveling cable, and fingers projecting into the line of travel of the carrier at the sub stations and independent of the rails for engaging the carrier and holding the same at the sub station until it is gripped to the cable.



3. In a cable carrier, rails on which the carrier is adapted to travel, a traveling cable, and means at the sub-stations independent of the rails for engaging the carrier after it has been placed upon the track and holding the same at the sub station from falling until it is gripped to the cable.

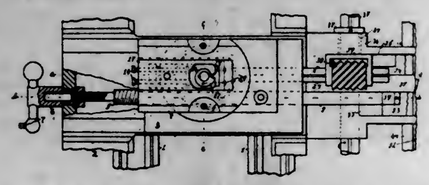
870,758. BOAT-PROPELLING DEVICE. WHITING ARNOLD, Mandarin, Fla. Filed July 31, 1907. Serial No. 386,344.



1. The combination with a floating vessel, of a driving shaft provided with a crank, means for rotating said shaft, a bar pivotally connected with the crank, a paddle on the lower end of said bar, and a stay rod pivoted at its lower end to the vessel and at its upper end to the upper end of the bar carrying the paddle, substantially as set forth.

2. The combination with a vessel, of a driven shaft having a crank with two arms, means for rotating said shaft, a sleeve mounted pivotally on the crank between the arms, a bar passing through said sleeve and secured thereon, a paddle on the lower end of the bar and a stay rod pivoted to the upper end of the paddle carrying bar and to the vessel, substantially as set forth.

870,759. **RELIEVING MECHANISM FOR ENGINE-LATHES.** HANS BAMBALCK, Hamilton, Ohio, assignor to The Hamilton Machine Tool Company, Hamilton, Ohio, a Corporation of Ohio. Filed Feb. 3, 1906. Serial No. 299,292.



1. In a lathe, a carriage, a tool carrier thereon, a driven shaft, means mechanically connected therewith for reciprocating the carrier, a driving shaft, spiral gears engaging the driven shaft therewith, and means constructed and arranged to be actuated by the movement of the carriage for shifting one of said gears longitudinally in relation to the other.

2. In a lathe, the combination of a driving shaft, a carriage provided with a tool carrier, a driven shaft carried by the carriage and adapted to be actuated at a predetermined speed by the driving shaft, means mechanically connected therewith for reciprocating the tool carrier, and means constructed and arranged to be actuated by the movement of the carriage for varying the speed of the driven shaft.

3. In a lathe, the combination of a driving shaft, a carriage movable parallel therewith and provided with a tool carrier, a driven shaft carried by the carriage, means mechanically connected with the driven shaft for reciprocating the tool carrier in synchronism therewith, gears connecting the driving with the driven shaft, and means constructed and arranged to be actuated by the movement of the carriage for changing the speed of one of said shafts in relation to the other.

4. In a lathe, the combination of a carriage provided with a tool carrier, a driving shaft, a driven shaft actuated thereby and movable with the carriage, connections with the driven shaft for moving the tool carrier, and means constructed and arranged to be actuated by the movement of the carriage for changing the speed of the driven in relation to that of the driving shaft.

5. The combination of a tool carrier, a driven shaft, means actuated thereby adapted to reciprocate said carrier, a driving shaft, spiral gears adapted to transmit motion therefrom to the driven shaft, and means adapted to move one of said gears longitudinally in relation to the other to effect a variation in the relative speeds of the shafts.

6. In a lathe, the combination of a driving shaft, spiral gears arranged to be actuated thereby, a carriage provided with a tool carrier, means actuated by said spiral gears from the driving shaft for reciprocating the tool carrier at a predetermined rythm, and means constructed and arranged to be actuated by the movement of the carriage for changing the relative position of the spiral gears in parallel planes, whereby the rythm of movement of the tool carrier is varied.

7. In a lathe, the combination of a carriage provided with a tool carrier, and with a driven shaft, a driving shaft, spiral gears connecting the driven shaft therewith, means actuated by the driven shaft for reciprocating the tool carrier in synchronism with the driving shaft, and means constructed and arranged to be actuated by the movement of the carriage for changing the relative position of the gears in parallel planes, whereby the movement of the carrier will be changed in relation to the speed of the driving shaft.

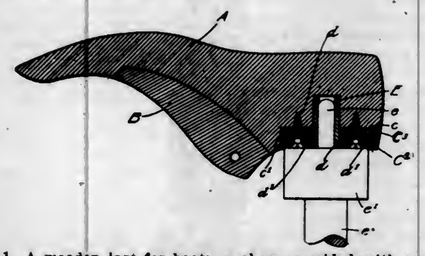
8. In a lathe, the combination of a carriage provided with a tool carrier, a driving shaft, spiral gears actuated thereby, means mechanically connected with said gears for moving the tool carrier, and means constructed and arranged to be actuated by the movement of the carriage for changing the relative speed of said gears.

9. In a lathe, a carriage provided with a tool carrier and with a driven shaft, means mechanically connected with the driven shaft for reciprocating the carrier, a driving shaft, spiral gears engaging the driven shaft therewith, and means constructed and arranged to be actuated by the movement of the carriage for shifting one of said gears longitudinally in relation to the other said gear.

10. In a lathe, a carriage, a driving shaft parallel therewith, a spiral gear splined thereon and movable with the carriage, a guide connected to the lathe bed and adjustable in different angles to said shaft, a slide movable therein with the carriage, a spiral gear carried thereby parallel with the guide and engaging with the former gear, a driven shaft splined therein and carried with the carriage, a tool holder, and connections from the driven shaft to move the tool holder.

11. In a lathe a driving shaft, a lathe carriage movable parallel therewith, a short spiral gear splined on said shaft and movable with the carriage, a driven shaft carried with the carriage, a long spiral gear splined thereon and engaging with the said short gear, a guide secured to the lathe bed and adjustable in different angles to the driving shaft, a slide movable therein with the carriage, a connection from said slide to the long spiral gear, said slide being adapted to move the long gear longitudinally on the driven shaft for maintaining it in a line parallel with the guide.

870,760. REINFORCED LAST FOR BOOTS AND SHOES. WINTHROP D. BAKER, Brockton, Mass., assignor to Protector Last Reinforcing Company, Brockton, Mass., a Corporation of Massachusetts. Filed July 5, 1907. Serial No. 382,138.



1. A wooden last for boots or shoes provided with a recess at the comb portion and with a protective cushioning plate fitted in said recess, said cushioning plate comprising an outer layer of fibrous substantially incompressible material and an under layer of cushioning material, substantially as described.

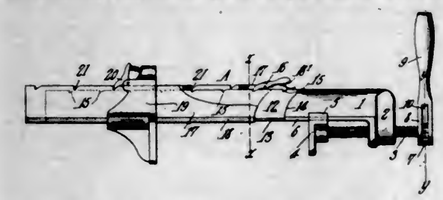
2. A protective comb-plate for wooden lasts comprising an outer layer of fibrous substantially incompressible material and an under layer of cushioning material secured thereto and having its sides and rear end shaped to conform with the sides and rear of a last at the comb portion thereof, substantially as described.

3. A last provided at its comb portion with a protective cushioning plate comprising an outer layer of fibrous substantially incompressible material and an under layer of cushioning material and means for attaching said protective plate to the comb of a last, substantially as described.

870,761. GLUING-CLAMP. ANDREW C. BENSON, Camden, Ark. Filed June 1, 1907. Serial No. 376,778.

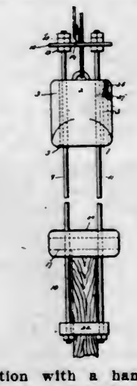
1. In a clamp the combination with a body and a tongue extending therefrom; of a sleeve slidably mounted upon the tongue, the outer faces of the sleeve being in alinement with the corresponding faces of the body, means upon the sleeve for engaging the tongue to lock the sleeve against movement in one direction, and jaws adjustably mounted upon the body and sleeve respectively.

2. In a clamp the combination with a bar comprising a body, a tongue extending from the body, and guide flanges disposed longitudinally upon the body and tongue; of a sleeve slidably mounted upon the tongue and engaging the flanges thereon, the outer faces of said sleeve being in alinement with the corresponding faces of the body, said sleeve having longitudinal guide flanges, means carried by



the sleeve for engaging the tongue to lock the sleeve against movement in one direction, and jaws adjustably mounted upon the flanges of the body and sleeve respectively.

870,762. PILE-DRIVER. FRED BURGE, New Haven, Conn. Filed July 25, 1907. Serial No. 385,488.

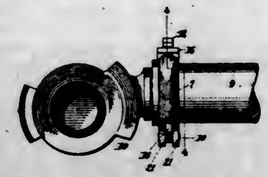


1. The combination with a hammer having vertical holes, rods extending through said holes on which the hammer may slide, a plate to which the upper ends of the rods are attached, and a pair of plates connecting pairs of rods at the bottom, substantially as described.

2. In a pile-driver, the combination with four vertical rods of a hammer having vertical holes adapting it to ride on said rods, an anvil also mounted on said rods, a plate to which the upper ends of the rods are attached and a pair of plates connecting pairs of rods at the lower ends, substantially as described.

3. In a pile driver, the combination with vertical rods of a hammer having vertical holes adapting it to ride on said rods, said hammer formed with a vertical groove on opposite sides and blocks adapted to be entered into said grooves and secured to said block, substantially as described.

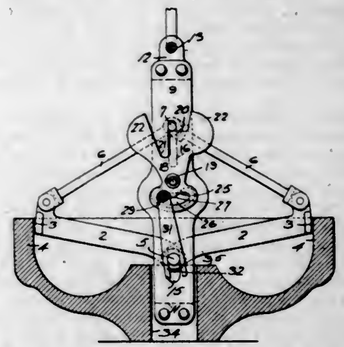
870,763. HOSE-BAND. FRANK W. CHAFFEE, Albany, N. Y. Filed Nov. 6, 1906. Serial No. 342,189.



1. A hose-band comprising parts 7, 8 having at their outer ends respectively rigid integral locking members for firmly locking one of said ends upon the other and at their inner ends means for connecting said parts together and comprising on one part a tongue 17 and outwardly projecting lug 18 having transverse studs 19 and on the other part a recess to receive said tongue and fingers 21 to straddle said lug and pass upon and engage said studs; substantially as set forth.

2. A hose-band comprising parts 7, 8 having at their outer ends respectively rigid integral locking members for firmly locking one of said ends upon the other and at their inner ends means for connecting said parts together and comprising on one part a tongue 17 and outwardly projecting lug carrying a transverse pin and on the other part a recess to receive said tongue and a curved part to pass between said pin and its band member and extend outwardly in hook fashion from the band and along the outer side of said pin; substantially as set forth.

870,764. GRIPPING-TONGS. ANDREW CHRISTIANSON, Butler, Pa. Filed Dec. 22, 1906. Serial No. 349,180.



1. Lifting mechanism comprising in combination work engaging members, supporting means and actuating means therefor, suspending means having vertical movement independently of said supporting and actuating means, means movable to two positions and arranged in one position to connect the suspending means to the supporting means and in the other position to connect the suspending means to the actuating means, and connections actuated by the weight of the suspending means on relative vertical movement between the same and the supporting and actuating means and arranged to positively move said connecting means alternately to its two positions.

2. Lifting mechanism comprising in combination work engaging members, a supporting member therefor, links arranged to actuate said work engaging members, suspending means having vertical movement independently of said supporting member and links, a member movable to two positions and arranged in one position to connect the suspending means to the supporting member and in the other position to connect the suspending means to the links, and connections actuated by the weight of the suspending means on relative vertical movements between itself and the links and supporting member and arranged to positively move said movable member alternately to its two positions.

3. Lifting mechanism comprising in combination, work engaging levers, a supporting member to which said work engaging levers are pivotally secured, links connected to said levers, suspending means having vertical movement independently of said supporting member and links, means connected to the suspending means and movable to two positions and arranged in one position to connect the suspending means and supporting member and in the other position to connect the suspending means and links, and connections actuated by the weight of the suspending means on relative vertical movements between the same and the supporting member and arranged to positively move said connecting means alternately to its two positions.

4. Lifting mechanism comprising in combination, gripping levers, a support to which said levers are pivotally connected, links connected to said levers, suspending means having movement independently of said links and supporting member, a member provided with cam faces and movable to two positions and arranged in one position to connect the suspending means and supporting member and in the other position to connect the suspending means and links, and connections actuated by the weight of the suspending means on relative vertical movements between the same and the supporting member and arranged to engage the cam faces on the movable member and thereby positively move the same alternately to its two positions.

5. Lifting mechanism comprising in combination, gripping levers, a supporting member to which said levers are pivotally secured, toggle links connected to said levers, suspending means for movement independently of said links and supporting member, a movable member connected to the suspending means and having two positions and arranged in one position to connect the suspending means and supporting member and in the other position to connect the suspending means and links, and connections actuated by relative vertical movements of the suspending means and supporting member and arranged to positively move said movable member alternately to its two positions.

6. Lifting mechanism comprising in combination, gripping members, a supporting member to which said grippers are pivotally connected, toggle links connected to the grippers, a suspending frame, and means for alternately connecting said suspending frame to the joint of the toggle links and to the gripper supporting member.

7. Lifting mechanism comprising in combination, gripping levers, a pivotal member for said levers, links connected to said levers, a suspending frame having movement independently of said links and pivotal member, a movable piece connected to the frame and having two positions and arranged in one position to connect the suspending frame and links and in the other position to disconnect the same, and a connecting member between said movable member and the pivotal member and arranged on relative movements between the suspending frame and pivotal member to positively move the movable member alternately to its two positions.

8. Lifting mechanism comprising in combination, gripping members, a supporting member to which the same are pivotally connected, links connected to said grippers, a suspending frame having movement independently of the gripper supporting member and links, a movable member arranged to alternately connect and disconnect the links to said suspending frame, and means actuated from the gripper supporting member for actuating said movable member.

9. Lifting mechanism comprising in combination, gripping members, a supporting member to which the same are pivotally connected, links connected to said gripping members, a suspending frame having movement independently of said links and gripper supporting member, a member mounted on said suspending frame and movable into and out of engagement with the links, and means actuated by the raising and lowering of the mechanism for moving said member.

10. Lifting mechanism comprising in combination, work engaging levers, links connected with said levers, a suspending frame, pivotal and sliding connections between said suspending frame and said levers and free ends of said links, and means for alternately connecting said frame to the pivotal points of the levers and to the links.

11. Lifting mechanism comprising in combination work engaging levers, links connected to said levers, a suspending frame, pivotal and sliding connections between said suspending frame and said levers and the free ends of said links, a movable member for alternately connecting the free ends of the links to said frame and disconnecting the same therefrom, and automatic means for actuating said movable member.

12. Lifting mechanism comprising in combination, work engaging levers, links connected to said levers, a suspending frame, pivotal and sliding connections between said frame and said levers and free ends of said links, a movable member on said frame, and means actuated by the movement of the levers with reference to the suspending frame for moving said member to alternately connect and disconnect the free ends of the links and said frame.

13. Lifting mechanism comprising in combination, work engaging levers, a member to which the inner ends of said levers are pivotally connected, links connected to the outer ends of said levers, a member to which the free ends of the links are pivotally connected, a suspending frame having a sliding connection with the pivotal members of the levers and links, and automatically actuated means for alternately connecting said frame to said pivotal members.

14. Lifting mechanism comprising in combination, work engaging levers, a member to which the inner ends of said levers are pivoted, links connected to the outer ends of said levers, a member to which the free ends of the links are pivotally connected, a suspending frame having a sliding connection with the pivotal members of the levers and links, a movable piece on the frame, and automatically acting means for alternately moving the same into and out of the path of one of said pivotal members.

15. Lifting mechanism comprising in combination, work engaging levers, a member to which the inner ends of said levers are pivoted, links connected to the outer ends of said levers, a pivotal member for the free ends of the links, a suspending frame having a sliding connection with the pivotal members of the levers and links, a movable piece mounted on the frame, and means actuated from the pivotal member of the levers for moving said piece into and out of the path of movement of the pivotal piece of the links.

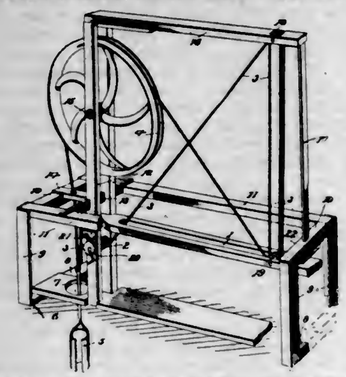
16. Lifting mechanism comprising in combination, work engaging levers, a pivotal member to which the inner ends of the levers are connected, links connected to the outer ends of said levers, a pivotal member to which the free ends of the links are connected, a suspending frame provided with vertical slots of different lengths for receiving the pivotal members of the levers and links, a movable piece mounted on the frame and arranged to intercept the longer of said slots, and means actuated from the other pivotal member for moving said piece.

17. Lifting mechanism comprising in combination, work engaging levers, a pivotal member to which the inner ends of said levers are connected, links connected to the outer ends of the levers, a pivotal member to which the free ends of the links are connected, a suspending frame provided with vertical slots for receiving said pivotal members, the slots for the pivotal members of the links being longer than those for the pivotal members of the levers, a movable piece mounted on the frame, and means actuated from the pivotal member of the links for moving said piece alternately into and out of the path of the pivotal member of the links.

18. Lifting mechanism comprising in combination, work engaging levers, a pivotal member to which the inner ends of the levers are connected, links connected to the outer ends of the levers, a pivotal member to which the free ends of the links are connected, a suspending frame having vertical movement independent of said pivotal members, a swinging piece mounted on the frame, cam faces formed on said piece, and an actuating member engaging said cam faces and connected to the pivotal member of the levers.

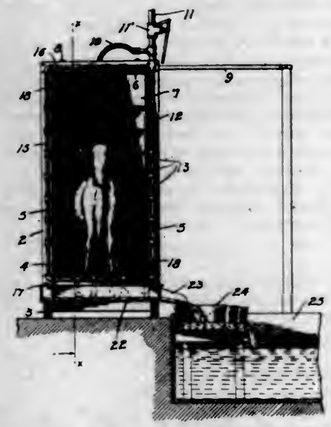
870,765. WELL-DRILLING MACHINE. GEORGE W. DOSS, Erick, Okla. Filed June 18, 1907. Serial No. 379,627.

In a machine of the character specified, the combination of a base having an opening to correspond with the well to be drilled, spaced uprights rising from said base, a bull-wheel mounted upon the upper portions of said spaced uprights, an operating lever having one end passed between said uprights and fulcrumed thereto and formed with a longitudinal slot, an upper longitudinal timber, pulleys applied to said longitudinal timber and the operating lever, a windlass, and an operating rope having a spudding tool connected with one end and having its opposite end wound upon the said windlass, and said rope being passed over the



bull-wheel and around the pulleys applied to the said longitudinal timber and operating lever.

870,766. APPARATUS FOR TREATING CATTLE. JAMES B. EATON, Fargo, N. D. Filed Feb. 8, 1907. Serial N. 356,370.



1. The combination, with a crate having open ends and gates therefor to permit an animal to be driven in at one end and out at the other, and a series of pipes provided in the bottom and top and each side wall of said crate, the top and bottom pipes extending transversely a distance equal to the breadth of the animal and the side wall pipes extending vertically a distance equal substantially to the height of the animal and all of said pipes extending substantially from end to end of said crate, and each pipe having a series of perforations through which a liquid solution may be projected in a small jet or stream against the animal in the crate, the perforations in each pipe being arranged in continuous rows and a supply pipe connecting said perforated pipes, substantially as described.

2. The combination, with a crate having open ends and gangways therefor and gates for closing said ends, of a series of perforated pipes provided in the top and bottom and side walls of said crate and through which a germicidal liquid solution may be projected against an animal within the crate, the perforations in each pipe being formed therein at different angles to the pipe, whereby the streams will be directed at different angles and a supply pipe connected with said perforated pipes.

3. The combination, with a crate having a stationary floor and open ends and gates therefor; a series of pipes provided one above another in the side walls of said crate and extending substantially from end to end thereof, a series of similar pipes provided in the top and bottom of the said crate, a supply pipe communicating with said side and top and bottom pipes, a series of pipes arranged vertically on said gates at the ends of the crate and having flexible connections with said supply pipe and all of said pipes having series of perforations through which comparatively small jets or streams of a germicidal liquid solution may be projected against the animal in the crate, substantially as described.

4. The combination with a crate, having open ends and gates for closing them, of perforated pipes provided in the side walls, top and bottom of said crate and on said end gates, the perforations in each pipe being bored to cause the streams to be projected therefrom at different angles, whereby a number of small jets or streams of the liquid contained in the pipes will strike all parts of the animal at the same time with a continuous flow, the streams being under sufficient pressure to wash the hair from the center of the stream where it strikes the animal, and permit the liquid to penetrate instantly to the skin.

5. The combination, with a crate having open ends and gates therefor, of perforated pipes provided in the walls, and the top and the bottom of said crate, the perforations in said pipes being formed in continuous rows and those in the same pipe being bored at different angles, whereby the streams will be correspondingly spread upon leaving the pipes, a supply pipe connected with said perforated pipes and communicating with a source of germicidal solution, and a pan arranged beneath said crate whereto the solution is directed, and a vat or tank having suitable straining vessels and a spout connecting with said pan, substantially as described.

6. The combination, with a crate having open ends and sliding gates therefor, of a series of perforated pipes mounted in the walls of said crate and on said gates, a supply pipe, flexible pipes connecting said gate pipes with said supply pipe and said supply pipe having a quick opening valve and through which a germicidal fluid is admitted to said perforated pipes, for the purpose specified.

7. The combination, with a crate having open ends, and gates therefor, to permit an animal to be driven in at one end and out at the other, and said crate having a stationary floor, of a series of pipes mounted in rows in the side walls, the top and the bottom of said crate, said pipes having perforations at intervals therein arranged to direct streams of a germicidal fluid at different angles upon the animal in the crate, and a supply pipe connected with said perforated pipes, substantially as described.

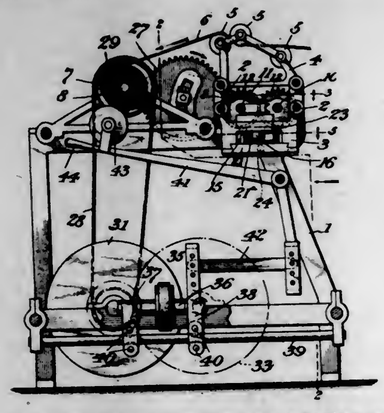
8. The combination, with a crate having open ends, and gates for closing said ends, of a series of pipes arranged one above another horizontally in the side walls of said crate, said pipes each having a series of perforations through which a germicidal fluid may be projected against the animal in the crate, a supply pipe connected with said perforated pipes and valves provided in the upper pipes of the series whereby the admission of the fluid thereto may be cut off in treating small or young animals.

9. The combination, with a crate having open ends and gates therefor, of a series of perforated pipes provided in the top and bottom and side walls of said crate, and on said end gates, the side wall pipes being arranged one above another and extending to a point above the level of the back of the animal in the crate, and the width of the rows of pipes in the top and bottom of the end gates of said crate corresponding substantially to the width of the animal in the crate, the perforations in said pipes being formed therein at different angles to one another, whereby the streams will be spread or deflected, and a supply pipe connected with said pipes.

870,767. SPOOLING-MACHINE. ROBERT J. EMORY, Newark, N. J., assignor to Robert J. Emory & Company, Newark, N. J., a Copartnership. Filed Feb. 11, 1907. Serial No. 356,879.

1. In spooling apparatus, traverse mechanism comprising a reciprocating carriage, a pair of constantly rotating feed screws adapted to impart movements in opposite di-

rections to said carriage, a double half nut slidably mounted on said carriage between said screws, a slide mounted on said carriage and independently movable in lines parallel to the carriage movement, devices on said slide for shifting said double half nut at predetermined points in the carriage travel, to move it out of engagement with one of said screws and into engagement with the other, and means for holding said double half nut in engagement with one of said feed screws between said predetermined points.



2. In spooling apparatus, traverse mechanism comprising a reciprocating carriage, a pair of constantly rotating feed screws adapted to impart movements in opposite directions to said carriage, a double half nut slidably mounted on said carriage between said screws, a slide mounted on said carriage and independently movable in lines parallel to the carriage movement, devices on said slide for shifting said double half nut at predetermined points in the carriage travel to move it out of engagement with one of said screws and into engagement with the other, and adjustable stops to limit the movement of said slide with said carriage.

3. In spooling apparatus, the combination with a traverse carriage and guides on which said carriage is arranged to move to and fro, of two oppositely-threaded and constantly-rotated feed screws to impart movement to the carriage, a slide mounted on the carriage and independently movable longitudinally thereof, two half nuts mounted on said carriage and shiftable transversely thereof, to bring one or the other half nut into engagement with the corresponding feed screw, stops to limit the movement of said slide, and devices mounted on said slide for shifting said half nuts after the engagement of the slide with either of the stops which limit its movement.

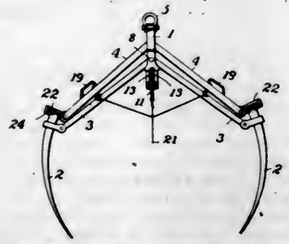
4. In spooling apparatus, the combination with a traverse carriage and guides on which the carriage is arranged to move to and fro, of carriage-operating mechanism comprising two oppositely-threaded feed screws and two half nuts arranged to coöperate therewith, only one of said half nuts being susceptible of engagement with its coöperating feed screw at any time, a support for said half nuts mounted on said carriage and arranged for sliding movement transversely thereof, said support having a boss formed thereon, a slide mounted on said carriage and susceptible of longitudinal movement relatively to the carriage, said slide having a blade or lug adapted normally to engage said boss and prevent lateral movement of the support for said half nuts, stops to limit the movement of said slide with said carriage, and devices mounted on the slide and operative upon the boss after the engagement of the slide with either of its stops to shift laterally the support for the half nuts and move one of said half nuts out of engagement with the corresponding feed screw and to move the other half nut into engagement with the other feed screw.

5. In spooling apparatus, the combination with a traverse carriage and guides therefor, of carriage propelling mechanism adapted to impart movement to the carriage in either of two opposite directions, and reversing mechanism for the carriage comprising a slide mounted on the carriage and susceptible of longitudinal movement relatively thereto, a member also mounted on the carriage and arranged for movement transversely thereof, stops to limit the movement of the slide, and devices mounted on the slide and operative after engagement of the slide with either of its stops to impart lateral movement to the said member.

6. In spooling apparatus, the combination with a spindle and driving mechanism therefor, of traverse mechanism comprising a carriage, means adapted to reciprocate said carriage, a slide mounted on the carriage but susceptible of limited independent movement in the direction of the carriage travel, means actuated by the independent movement of the slide for reversing the direction of the carriage travel, said traverse mechanism being driven by the spindle driving mechanism at a rate proportional to the rate of rotation of the spindle, and speed-changing devices controlled by the accumulation of material on the spool whereby the rate of rotation of the spindle and the rate of movement of the traverse mechanism are both gradually decreased from the beginning to the end of the spooling operation.

7. In spooling apparatus, the combination with a spindle, of a traverse mechanism coöperating therewith, said traverse mechanism comprising a carriage, means adapted to reciprocate said carriage, a slide mounted on the carriage and capable of independent movement longitudinally thereof, means actuated by the independent longitudinal movement of the slide to reverse the direction of the carriage travel, means for driving said spindle and traverse mechanism comprising a rotating driving member, means for varying the speed of rotation of said member controlled by the accumulation of material on the spool, a driving connection between said spindle and said driving member, a gear carried by said spindle, an idler gear in mesh therewith, and a driving gear carried by said traverse mechanism and in mesh with said idler.

870,768. DROP-TINE GRAPPLING-FORK. JOHN FARRELL, Newton, N. J. Filed Dec. 29, 1906. Serial No. 350,032.



1. The herein described grappling fork, comprising a head piece formed of a single casting having a longitudinally extending slot or opening therein, the upper end of said slot being expanded laterally beyond the sides of the body thereof, tine supporting bars pivotally connected with said head piece on opposite sides of the slot therein, a slide adapted to reciprocate in said slot in the head piece, and having its sides grooved to receive the sides of said slot, thrust bars connecting the slide and tines, a toggle adapted to hold the slide stationary at the lower end of the slot in the head piece to lock the tines in closed position, and means for releasing said lock.

2. The herein described grappling fork, comprising a head piece, two pairs of oppositely arranged tines, supporting bars extending from the tines and pivotally connected with said head piece, a slide mounted on the head piece, thrust bars connecting said slide with the tines, a toggle connecting the slide and head piece and adapted

to hold the slide stationary when the tines are closed, a spring pressed pin mounted in the slide and engaging one member of the toggle when the tines are closed, and means for releasing said toggle.

3. The herein described grappling fork, comprising a head-piece, two pairs of oppositely arranged tines, supporting bars extending from the tines and pivotally connected with the head-piece, a slide on the head-piece, thrust bars connecting the slide with the tines, a toggle connecting the slide and head-piece and adapted to hold the slide stationary when the tines are closed, a latch on the slide for engaging the toggle when the tines are closed, and means for releasing said toggle.

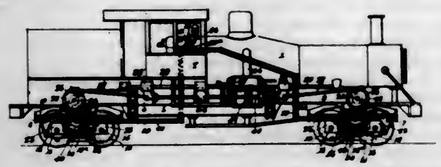
4. The herein described grappling fork, comprising a head-piece, two pairs of oppositely arranged tines, supporting bars extending from the tines and pivotally connected with the head-piece, a slide on the head-piece, thrust bars connecting the slide with the tines, a toggle connecting the slide and head-piece and adapted to hold the slide stationary when the tines are closed, a spring acting to move said toggle into position to hold the slide stationary, a spring latch engaging the toggle when the tines are closed, and means for releasing the toggle.

5. The herein described grappling fork, comprising a head-piece, two pairs of oppositely arranged tines, supporting bars extending from the tines and pivotally connected with the head piece, a slide on the head piece, connections between said slide and the tines, a toggle connecting the slide and head piece, a spring surrounding the axis of the connection between the toggle and the head piece and acting to move the toggle into position to retain the tines in closed position, and means for releasing the toggle.

6. The herein described grappling fork, comprising a head piece, two pairs of oppositely arranged tines, supporting bars extending from the tines and pivotally connected with said head piece, a slide mounted on the head piece, thrust bars having their ends pivotally connected with said slide and the tines, a toggle connecting the head piece and slide and adapted to lock the slide against movement on the head piece when the tines are closed, and a trip rope connected with said toggle and with the thrust bars.

7. The herein described grappling fork, comprising a head piece, two pairs of oppositely arranged tines, supporting bars extending from the tines and pivotally connected with the head piece, a slide on the head piece, thrust bars each having one end pivotally connected with said slide and at its other end a sleeve that surrounds a portion of the adjacent pair of tines, one of the inner faces of said sleeve being roughened, a wedge in each sleeve on the opposite side of the tine member therein from said roughened face, a toggle connecting the head piece and slide and adapted to lock the slide against movement when the tines are closed, and means for releasing said toggle.

870,769. LOCOMOTIVE. JOHN E. FRIERMOOD, Everett, Wash. Filed July 12, 1906. Serial No. 325,913.



1. In a geared locomotive, the combination with the engine frame and axles, of driving mechanism carried by the frame, and gearing between the driving mechanism and axles, said gearing comprising flexibly connected units disposed transversely of the locomotive and carried by the frame and axles respectively.

2. In a geared locomotive, the combination with the engine frame and axles, of driving mechanism carried by the frame, a gear carried by an axle, an intermediate transverse shaft comprising flexibly connected sections one carried by the engine frame and the other by the axle, and intermediate gears mounted on the respective sections of the shaft and geared respectively to the driving mechanism and to the axle gear.

3. In a geared locomotive, the combination with a pair of axles, a truck frame carried by the axles and vertically movable thereon, an engine frame supported by the truck frame, driving mechanism carried by the engine frame, an axle gear fixed to one of the axles, a support carried by the axles independently of the truck frame to permit movement of the truck frame independently of the support, a gear mounted on said support and meshing with the axle gear, and a flexible connection between the driving mechanism and the gear mounted on the support.

4. In a geared locomotive, the combination with a pair of axles, a truck frame vertically movable thereon, an engine frame carried by the truck frame, a driving shaft on the engine frame, an axle gear on one of the axles, a support mounted independently of the truck frame on the axles to permit the frame to move independently of the support, an intermediate shaft comprising flexible sections one journaled in the engine frame and the other in said support, and intermediate gears mounted on the respective sections of the intermediate shaft and geared respectively to the driving shaft and axle gear.

5. In a geared locomotive, the combination with an engine frame, truck frames, and axles, of driving mechanism carried by the engine frame, axle gears carried by adjacent axles, and an intermediate gear shiftable to engage either axle gear and arranged to be driven by the driving mechanism.

6. In a geared locomotive, the combination with an engine frame, truck frames, and axles, of driving mechanism, axle gears of different diameters carried by adjacent axles, and an intermediate gear arranged to be operated by the driving mechanism and shiftable into engagement with either axle gear.

7. In a geared locomotive, the combination with an engine frame, truck frames, and axles, of driving mechanism carried by the engine frame, axle gears carried by adjacent axles, an intermediate gear also carried by said axles and shiftable to engage either axle gear, and a flexible connection between the driving mechanism and the intermediate gear.

8. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism mounted on the engine frame, axle gears mounted on adjacent axles, a shaft having flexibly connected sections one supported by the engine frame and the other from the axles, gearing connecting one of the shaft sections with the driving mechanism, and an intermediate gear mounted on the other shaft section and shiftable into engagement with either of the axle gears.

9. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism mounted on the engine frame, axle gears of different diameters mounted on adjacent axles, an intermediate gear supported from said axles independently of the engine frame or truck frames and shiftable into engagement with either axle gear, and gearing between the driving mechanism and the intermediate gear, said gearing including a shaft having flexibly connected sections one of said sections being carried by the engine frame.

10. In a geared locomotive, the combination with an engine frame, truck frames, and axles, of axle gears carried by adjacent axles, a support extended between and carried by said axles, a journal box slidable on said support, a shaft journaled in said box, an intermediate gear mounted on the shaft and movable with the box to engage either of the axle gears, and a connection between the intermediate gear and the driving mechanism.

11. In a geared locomotive, the combination with an engine frame, truck frames, and axles, of driving mechanism carried by the engine frame, axle gears of different diameters mounted on adjacent axles, a support extending between and carried by said axles, a journal box slidable on the said support, a shaft comprising flexibly connected sections one of which is journaled in the engine frame and the other in the journal box, gearing between said shaft

and the driving mechanism, and an intermediate gear mounted on one of the shaft sections and shiftable with the journal box to engage either of the axle gears.

12. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism mounted on the frame, and means for gearing the driving mechanism alternately to different axles.

13. In a geared locomotive, the combination with an engine frame, truck frames, and axles, of driving mechanism mounted on the engine frame, and fluid operated means for throwing the driving mechanism into and out of gear with an axle.

14. In a geared locomotive, the combination with an engine frame, truck frames, and axles, of driving mechanism carried by the engine frame, gearing between the driving mechanism and one of the axles said gearing including a flexible connection to accommodate the relative movement of the engine frame and the driven axle and also including two gears one of which is carried by an axle, and means for throwing said gears into and out of gear.

15. In a geared locomotive, the combination with an engine frame, truck frames, and axles, of driving mechanism mounted on the engine frame, an axle gear fixed to one of the axles, and gearing between the driving mechanism and said axle gear, said gearing including a flexible connection accommodating the relative movement of the engine frame and axle and also including a gear shiftable into and out of mesh with the axle gear.

16. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism, an axle gear fixed to one of the axles, a support carried by said axle, and gearing between the driving mechanism and the axle gear, said gearing including a gear wheel shiftable on the support to engage the axle gear.

17. In a geared locomotive, the combination with an engine frame, truck frames, and axles, of driving mechanism mounted on the engine frame, a support extending between adjacent axles and carried thereby independently of the truck frame, an axle gear fixed to one of said axles, and gearing between the driving mechanism and the axle gear, said gearing including a flexible connection accommodating the relative movement of the engine frame and axles and also including a gear shiftable on the support to engage or disengage the axle gear.

18. In a geared locomotive, the combination with an engine frame, cab, truck frames and axles, of driving mechanism, gearing between the driving mechanism and an axle, and fluid-operated gear controlling mechanism including a manually-operated device located in the cab of the locomotive.

19. In a geared locomotive, the combination with an engine frame, truck frames and axles, of driving mechanism, gearing between the driving mechanism and an axle, gear controlling means supported by the axle, and a manually-operated member controlling the operation of said means and supported from the engine frame.

20. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism, gearing between the driving mechanism and an axle, and fluid-operated gear controlling mechanism operative to cause the connection or disconnection of the driving mechanism and axle.

21. In a geared locomotive, the combination with the engine frame, cab, truck frames, and axles, of driving mechanism, gearing between the driving mechanism and one of the axles, fluid-operated means supported from adjacent axles to move the gearing into and out of gear, and means located in the locomotive cab and controlling the operation of said fluid-operated means.

22. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism, gearing between the driving mechanism and an axle, and fluid-operated means controlling the operative connection between the driving mechanism and axle, said means including a cylinder, a piston therein, and a controlling valve for the motive fluid.

23. In a geared locomotive, the combination with a cab, engine frame, truck frames, and axles, of driving mechanism, gearing between the driving mechanism and an axle, and means controlling the operative connection between the driving mechanism and said axle, said means including a cylinder supported from the axle, a piston in the cylinder, and a valve controlling the supply of motive fluid to the cylinder and located in the locomotive cab.

24. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism, gearing between the driving mechanism and one of the axles and including a shiftable member, and fluid-operated means for shifting said member.

25. In a geared locomotive, the combination with an engine frame, truck frames, and axles, of driving mechanism, gearing between the driving mechanism and one of the axles and including a gear wheel shiftable into and out of gear, and fluid-operated means for shifting said gear wheel.

26. In a geared locomotive, the combination with a cab, engine frame, truck frames, and axles, of driving mechanism, gearing, between the driving mechanism and an axle, including a shiftable gear wheel, fluid-operated mechanism for shifting the gear wheel, and a valve located in the locomotive cab and controlling the supply of motive fluid to the fluid-operated shifting mechanism.

27. In a geared locomotive, the combination with an engine frame, truck frames, and axles, of driving mechanism, gearing between the driving mechanism and one of the axles and including a shiftable gear wheel, fluid-operated means supported from the axle and operative to shift the gear wheel, and a fluid controlling valve supported from the engine frame.

28. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism, an axle gear fixed to one of the axles, gearing between the driving mechanism and the axle gear and including a shiftable gear wheel supported from adjacent axles and movable into and out of mesh with the axle gear, and fluid-operated means for shifting said gear.

29. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of a support extending between and carried by adjacent axles, an axle gear fixed to one of the axles, driving mechanism, and gearing connecting the driving mechanism with an axle and including a gear wheel shiftable on the support to engage and disconnect the axle wheel, and fluid-operated mechanism also mounted on the support and operative to shift the gear wheel.

30. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism, an axle gear, gearing between the driving mechanism and axle, including a gear wheel shiftable into and out of mesh with the axle gear, a spring retaining the gear wheel in one position, and fluid-operated means for moving said gear wheel to another position in opposition to the spring.

31. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism, gearing connecting the driving mechanism to the axle, an element shiftable to bring the gearing into gear, and means including a toggle for shifting said element.

32. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism, gearing between the driving mechanism and an axle and including a shiftable element, and a fluid-operated toggle for shifting said element.

33. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism, gearing between the driving mechanism and an axle and including a shiftable element, a spring yieldingly retaining said element in one position, and a toggle for moving said element in opposition to the spring.

34. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism, gearing between the driving mechanism and an axle and including a shiftable element, a spring yieldingly retaining said element in one position, and a fluid-operated toggle for moving such element in opposition to the spring.

35. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism, gearing between the driving mechanism and an axle, including a shiftable gear wheel, a shaft carrying said wheel, a shiftable journal box for said shaft, and a toggle operative to shift the journal box.

36. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism, an axle gear, intermediate gearing including a gear wheel shiftable into and out of mesh with the axle gear, a shaft for the shiftable gear wheel, a shiftable journal box for said shaft, and a fluid-operated toggle for moving the box.

37. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism, gearing intermediate of the driving mechanism and an axle and including a member shiftable into and out of operative position, a toggle for shifting said member, a rocker operating the toggle, and fluid-operated means for moving the rocker.

38. In a geared locomotive, the combination with an engine frame, truck frames, and an axle, of a support extending between and supported by the adjacent axles, driving mechanism, gearing between the driving mechanism and an axle, said gearing including an axle gear fixed to the axle and an intermediate gear shiftable into and out of engagement with the axle gear, said shiftable gear being mounted on the support extended between the axles, a rocker also mounted on said support, and a toggle arranged to shift the gear and operated by the rocker.

39. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of a support extending between adjacent axles and carried thereby independently of the truck frames, driving mechanism carried by the engine frame, an axle gear fixed to one of the axles, gearing interposed between the driving mechanism and the axle gear and including an intermediate gear wheel shiftable into and out of operative position, a shaft for the shiftable gear wheel, journal boxes supporting said shaft and shiftable on the support which extends between the axles, a rocker also mounted on the support and operatively connected to the journal boxes to shift the same, a cylinder mounted on the support, means for supplying motive fluid thereto, and a piston movable in the cylinder and connected to the rocker to operate the same.

40. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism carried by the engine frame, an axle gear fixed to one of the axles, a support extending between and carried by adjacent axles, sliding journal boxes, a rocker and a cylinder all carried by said support, a shaft mounted in the journal boxes, gearing between the driving mechanism and the axle gear and including a gear wheel mounted on the shaft and shiftable therewith to engage and disconnect the axle gear, a toggle arranged to move the journal boxes to shift the gear wheel, a connection between said toggle and the rocker, a piston mounted to reciprocate in the cylinder and connected to the rocker, and means for supplying motive fluid to the cylinder.

41. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism, and fluid-operated mechanism for throwing the driving mechanism into operative relation with different axles alternately.

42. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism, gearing, and fluid-operated means for establishing conection between the driving mechanism and either of two axles through the medium of said gearing.

43. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of axle gears of different diameters fixed to adjacent axles, an intermediate gear adapted to engage either of said axle gears, fluid-operated mechanism for shifting the intermediate gear, and gearing between the intermediate gear and the driving mechanism.

44. In a geared locomotive, the combination with the cab, engine frame, truck frames, and axles, of axle gears of different diameters fixed to adjacent axles, driving mechanism, gearing for connecting the driving mechanism with either axle gear and including a gear wheel shiftable into engagement with either axle gear, fluid-operated mechanism for shifting the intermediate gear, and a controlling valve located in the locomotive cab and controlling the operation of the gear shifting mechanism.

45. In a geared locomotive, the combination with an engine frame, truck frames, and axles, of driving mechanism carried by the engine frame, gearing adapted to connect the driving mechanism to either of two axles, and fluid-operated gear controlling mechanism.

46. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism carried by the engine frame, gearing for connecting the driving mechanism with either of two adjacent axles, a support extending between said axles and carried thereby, fluid-operated gear controlling means carried by said support, and a controlling valve for said means.

47. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of axle gears carried by adjacent axles, a gear wheel shiftable to engage either axle wheel, a support extending between and carried by the axles, means mounted on said support for shifting the gear wheel, and an operative connection between said gear wheel and the driving mechanism.

48. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism, axle gears of different diameters fixed to adjacent axles, a support extending between and carried by said axles, a gear wheel carried by said support and shiftable to engage either axle wheel, fluid-operated means carried by said support to shift the gear wheel, and an operative connection between the shiftable gear wheel and the driving mechanism.

49. In a geared locomotive, the combination with an engine frame, truck frames, and axles, of axle gears fixed to adjacent axles, a support extending between said axles and carried thereby, a gear wheel shiftable on said support to engage either axle wheel, a rocker also carried by the support and movable to shift the gear wheel, and means for operating the rocker.

50. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism, gearing including a shiftable element movable to cause an operative connection to be established between the driving mechanism and either of two axles, and toggle mechanism for moving said shiftable member in opposite directions.

51. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of axle gears fixed to adjacent axles, an intermediate gear shiftable to engage either axle gear, toggle mechanism for shifting said intermediate gear, and driving mechanism for said gear.

52. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of axle gears fixed to adjacent axles, an intermediate gear shiftable to engage either axle gear, toggles for shifting said intermediate gear, and operating means common to said toggles.

53. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of axle gears fixed to adjacent axles, an intermediate gear shiftable to engage either axle gear, toggles for moving the intermediate gear in opposite directions, and a rocker connected to said toggles.

54. In a geared locomotive, the combination with an engine frame, truck frames, and axles, of axle gears fixed to adjacent axles, an intermediate gear shiftable to engage either axle gear, driving mechanism for the intermediate gear, and a fluid-operated toggle for shifting said gear.

55. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of axle gears fixed to adjacent axles, an intermediate gear shiftable to engage either axle gear, driving means for the intermediate gear, toggles for shifting the intermediate gear, a rocker for operating the toggles, and fluid-operated means for moving the rocker.

56. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism, gearing for connecting the driving mechanism to either of two axles, said gearing including a shiftable mem-

ber, means yieldingly retaining said member in an intermediate position, and means for positively moving said member in either direction from said position.

57. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of axle wheels carried by adjacent axles, an intermediate gear wheel shiftable to engage either axle wheel, means for yieldingly retaining the gear wheel in an intermediate position and out of operative relation with both axle wheels, and means for shifting the gear wheel into engagement with either axle gear.

58. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of axle gears carried by adjacent axles, an intermediate gear shiftable to engage either axle gear, means yieldingly retaining the shiftable gear in an intermediate position, and fluid-operated means for shifting the intermediate gear in either direction to engage an axle gear.

59. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of axle gears carried by adjacent axles, an intermediate gear shiftable to engage either axle gear, a rocker movable to shift the intermediate gear, counter active springs coacting with the rocker to throw the intermediate gear into disconnected position, and fluid-operated means for moving the rocker to shift the intermediate gear into engagement with either of the axle gears.

60. In a geared locomotive, the combination with the engine frame, truck frames, and axles, of driving mechanism, gearing adapted to connect the driving mechanism with either of two axles, and gear controlling mechanism including a cylinder, a piston therein, means for leading motive fluid to the opposite ends of the cylinder, and a controlling valve movable to permit the motive fluid to be supplied to either end of the cylinder and exhausted from the opposite end thereof or to place both ends of the cylinder in communication with the exhaust.

61. In a geared locomotive, the combination with the engine frames, axles, and truck frames movable relative to the axles and supporting the engine frame, of driving mechanism mounted on the engine frame, a shaft disposed transversely of the locomotive and comprising flexibly connected sections operatively related to the driving mechanism and an axle respectively.

62. In a geared locomotive, the combination with the engine frame, axles, and truck frames movable relative to the axles and supporting the engine frame, of driving mechanism mounted on the engine frame and including a driving shaft disposed transversely of the locomotive adjacent to one of the truck frames, and a second shaft also disposed transversely of the locomotive and having flexibly connected sections, one of which is geared to the driving shaft and the other of which is geared to an axle.

63. In a geared locomotive, the combination with the engine frame, truck frames and axles, of a shaft disposed transverse to the locomotive and comprising flexibly connected sections, driving mechanism mounted on the engine frame and arranged to drive said shaft, and variable gearing whereby the axles of the locomotive may be driven at relatively high or low speed through the medium of the transverse shaft.

64. In a geared locomotive, the combination with an engine frame, truck frames and axles, of transverse driving shafts mounted on the engine frame over the truck frames, driving mechanism mounted on the engine frame and arranged to operate the driving shafts, and gearing between each of said driving shafts and an axle.

65. In a geared locomotive, the combination with the engine frame, truck frames and axles, of driving mechanism on the engine frame, transverse driving shafts located adjacent to the opposite ends of the engine frame and arranged to be driven by the driving mechanism, gearing between each driving shaft and an axle, and means for throwing the gearing into and out of gear.

66. In a geared locomotive, the combination of an engine frame, truck frames and axles, of driving mechanism on the engine frame, transverse driving shafts likewise mounted on the engine frame, separate sets of gearing connecting the respective shafts to different axles, and means for changing the speed of said gearing.

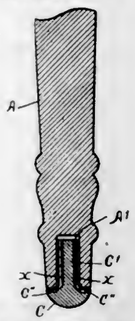
67. A geared locomotive including axles, truck frames supported by the axles and movable relative thereto, an engine frame supported by the truck frames, driving mechanism mounted on the engine frame, gearing between the driving mechanism and an axle, said gearing being mounted independently of the adjacent truck frame to prevent racking of the gearing by the vibration of said truck frame, and means for shifting an element of said gearing to disconnect said axle and to operatively connect a different axle to the driving mechanism.

68. A geared locomotive including axles, truck frames, springs supporting the truck frames from the axles and permitting movement of said frames relative to the axles, an engine frame carried by the truck frames, said truck frames having limited movement relative to the engine frame, driving mechanism mounted on the engine frame, and gearing, the elements of which gearing are supported from the engine frame and axles exclusively to prevent racking of the gearing by the vibration of a truck frame and said gearing including units disposed transversely of the locomotive and relatively movable to accommodate the relative movement of the engine frame and axles.

69. In a geared locomotive, the combination with an engine frame, truck frames, and axles, of driving mechanism, and means for operatively connecting the driving mechanism with different axles alternately.

70. In a geared locomotive, the combination with an engine frame, truck frames, and axles, of driving mechanism, and means for operatively connecting the driving mechanism with different axles alternately, said means being arranged to drive one axle at a greater speed than the other.

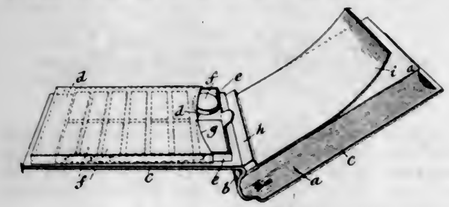
870,770. RUBBER TIP AND MEANS FOR SECURING IT. HARRIS FULLER, Stockbridge, Ga. Filed Mar. 20, 1907. Serial No. 363,347.



In combination, a furniture leg provided with a longitudinal opening at its lower end, and a rubber tip therefor comprising a knob of hemi-spherical shape formed with an integral pintle projecting from the upper side thereof and received in the opening aforesaid, the upper side of the knob being formed with a groove concentric of the pintle and said side being in close contact with the lower end of the leg except where the groove above mentioned is located, said groove forming a space receiving adhesive material, and the pintle being formed with a plurality of longitudinal grooves at intervals providing spaces in which an adhesive substance is received, the smooth portions of the pintle located between the grooves thereof being in close adhesive contact with the sides of the opening in which said pintle is received.

870,771. PAINTING-BOOK. RAYMOND H. GARMAN, Chicago, Ill. Filed Dec. 10, 1906. Serial No. 347,184.

1. In a painting book, the combination with assembled leaves of a connected binding and cover; and an attached portion adapted to be swung outward when the book is open, and to be folded and closed with the book when desired; said portion adapted to receive and support bodies of paint in position for use in the book when desired.



2. In a painting book, the combination with assembled leaves of a connected binding and cover; and an attached portion adapted to be swung outward when the book is open and to be folded on the inside of the cover and closed within the book, when desired; said portion provided with a chamber adapted to receive a tray of paints, substantially as described.

3. In a painting book, the combination with assembled leaves of a connected binding and cover, and an attached portion adapted to be swung outward when the book is open, and to be folded inward and closed within the book when desired, said portion having up-turned flanges to form a tray in the nature of a box adapted to receive and support bodies of paint, substantially as described.

4. In a painting book, the combination with assembled leaves of a connected binding and cover; and an attached portion adapted to be swung outward when the book is open, and to be swung inward and hold bodies of paint within the book when the parts are folded and the book closed, substantially as described.

5. In a painting book, the combination with assembled leaves of a connected binding and cover; an attached portion adapted to be swung outward when the book is open, and to be folded inward and closed within the book when desired; said portion having up-turned flanges to form a tray in the nature of a box adapted to receive bodies of paint, and up-turned flanges on the cover of the book in position and of size to telescope with the flanges on said tray when the parts are folded in position to close the book, substantially as described.

6. In a painting book, the combination with assembled leaves of a connected binding and cover; an attached portion adapted to receive and support bodies of paint for use in said book, and adapted to be swung outward when desired to bring said bodies of paint in exposed position for use, and to be folded inward and closed with said book when desired, substantially as described.

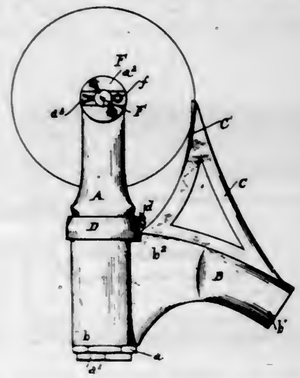
7. In a painting book, the combination with assembled leaves of a connected binding and cover, and a box within the book adapted to contain paints for use in said book, formed in part by the cover of the book, and in part by an attached portion adapted to be folded outward to bring said paints accessible for use, and to again be folded inward, and closed with the book when desired, substantially as described.

8. In a painting book, the combination with assembled leaves of a connected binding and cover; and an attached portion adapted to receive and support paints for use in said book, and to be swung outward when desired to bring said paints in exposed position for use, and to be folded inward and close within said book when desired, and paint bodies attached to said folding portion, substantially as described.

9. In a painting book, the combination with assembled leaves of a connected binding and cover, and an attached portion adapted to receive and support bodies of paint for use in said book, and to be swung outward when desired to bring said bodies in exposed position for use, and adapted to be folded inward when desired, and attached movable means for holding said folding portion in position for closure of the book.

10. In a painting book, the combination with assembled leaves of a connected binding and cover; an attached portion adapted to receive and support paint bodies for use in said book, and to be swung outward when desired to bring said paint in exposed position for use, and to be folded inward and closed within the book when desired, and means for holding paint brushes in position on said folding portion, substantially as described.

870,772. TROLLEY. CLARENCE A. GOUTY, Springfield, Ill. Filed June 8, 1907. Serial No. 377,984.

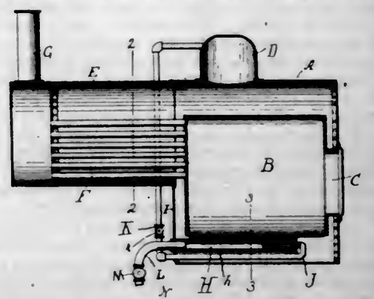


1. In a trolley, the means adapted for vertical adjustment of the trolley-wheel and also adapted to exclude dirt from the bearing of the harp; comprising an arch having a tubular part, a harp fitting on the upper end of the tubular part of the arch, a tubular shank screwing into the body of the harp, nuts fitting on said tubular shank, and a collar fitting on said harp and inclosing the upper end of the tubular part of the arch.

2. In a trolley, the combination of an arch having a slotted tubular part and a segmental channel, a harp having a shank turnable within the tubular part of the arch, and a spring secured on the shank of the harp and having members of equal tension fitting in the slots of the tubular part of the arch.

3. In a trolley, the combination of an arch having a slotted tubular part and a segmental channel, a guard mounted on said arch, a harp adapted to turn on the tubular part of the arch, a shank adapted for vertical adjustment of the harp relative to the guard on the shank, a collar adjustable on the harp and turnable in the channel of the arch, and a spring secured on the shank of the harp and having members of equal tension fitting in the slots of the tubular part of the arch.

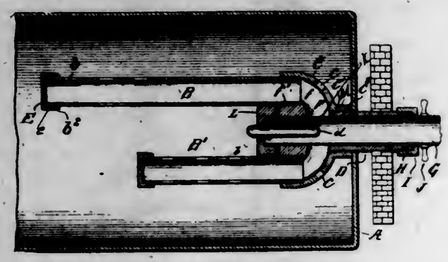
870,773. BOILER-CLEANER. ISAAC C. GRAY, Logansport, Ind., assignor of one-half to Philip Voorhees, Logansport, Ind. Filed Mar. 18, 1907. Serial No. 363,045.



The combination with the boiler furnace, a fire box located in said furnace, and a boiler provided with boiler

tubes; of a boiler cleaning tube provided with a double set of inclined ports arranged oppositely one another, a steam jet pipe having its rear end turned at an angle to the body of the same, and the nozzle thereof entering the boiler cleaning tube, a valve, and a siphon tube secured to the forward end of the boiler cleaning tube and outside of the boiler head.

870,774. BOILER-CLEANER FOR STEAM-ENGINES. ISAAC C. GRAY, Logansport, Ind., assignor of one-half to Philip Voorhees, Logansport, Ind. Filed July 22, 1907. Serial No. 384,905.



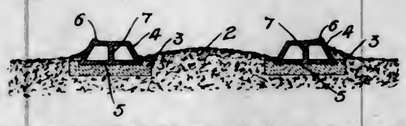
1. The combination with a steam boiler a steam pipe provided with a lower horizontal jet portion located in the bottom of the boiler; of a double tubular casting, long and short cleaning tubes having their ends engaging the double tubular casting, a revoluble blow-off valve tube, the inner portion being located within the boiler and within the double tubular casting and the other half portion projected outside of the boiler, a short tubular piece interposed between the revoluble blow-off valve tube and the neck of the double tubular casting.

2. The combination with a steam boiler a steam pipe provided with a lower horizontal jet portion located in the bottom of the boiler, a double tubular casting, long and short cleaning tubes having the ends engaging the double tubular casting, a revoluble blow-off valve tube, the inner portion being located within the boiler and the other portion projected outside the boiler, a short tubular piece interposed between the revoluble blow-off valve tube and the neck of the double tubular casting, said double tubular casting having a central opening through which the blow off valve extends, and a cap closing the inner end of the blow-off valve tube through which the steam pipe extends to form a jet in said blow-off valve tube.

3. The combination with a steam boiler a steam pipe provided with a lower horizontal jet portion located in the bottom of the boiler, a double tubular casting, long and short cleaning tubes having the ends engaging the double tubular casting, a revoluble blow-off valve tube, the inner portion being located within the boiler and the other portion projected outside, a short tubular piece interposed between the revoluble blow-off valve tube and the neck of the double tubular casting, said tubular casting having a central opening through which the blow-off valve tube extends; a cap closing the end of said tube through which the steam pipe extends to form a jet in said blow-off valve tube, of a packing box secured to the outer end of the short tubular piece and surrounding the outer end of the revoluble blow-off valve tube, and a hand wheel secured to the outer end of the revoluble blow-off valve tube, substantially as described and for the purposes set forth.

4. In a steam boiler the combination of a double tubular casting, a short and a long cleaner tube connected thereto, a revoluble blow-off valve tube in said casting, all located in the bottom of the boiler, a steam jet pipe entering said blow-off valve tube and means exterior of the boiler for turning said blow-off valve tube so as to make communication between it and each cleaner tube alternately.

870,775. ROADWAY FOR AUTOMOBILES. LESLIE S. HACKNEY, St. Paul, Minn. Filed Nov. 2, 1906. Serial No. 341,779.



1. An automobile track comprising a roadway, a wheel track laid therein and composed of a series of foundation blocks and hollow tile blocks supported thereon and said tile blocks having concave surfaces whereon the wheels roll, substantially as described.

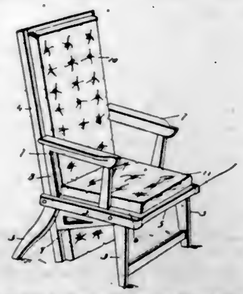
2. A track for automobiles comprising a roadway, foundation blocks embedded in said roadway, tile blocks mounted on said foundation blocks and having concave upper surfaces raised above the level of said roadway, the outer edges of said tile blocks forming guides for the wheels, substantially as described.

3. An automobile track comprising a roadway, a series of concrete blocks embedded therein on each side of said roadway, hollow tile tapered from the base toward the top and having their lower portions embedded in the top of said foundation blocks, and the outer edges of the tops of said tile being raised above their inner portions to form guides for the wheels, substantially as described.

4. A track comprising a roadway, a series of foundation blocks embedded therein, hollow tile having their lower portions embedded in the top of said foundation blocks, and the outer edges of the tops of said tile being raised above their inner portions to form guides for the wheels.

5. A track comprising a roadway, foundations laid therein in parallel rows, and blocks composed of hollow tile mounted on said foundations to form a continuous track, the upper portions of said blocks being raised above the level of the roadway and forming a wheel track, substantially as described.

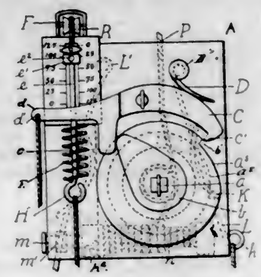
870,776. COMBINED CHAIR AND COUCH. JAMES M. HAMILTON, Meriden, Conn. Filed July 1, 1907. Serial No. 381,632.



A combined chair and couch comprising side frames, legs, a back pivoted between said side frames and extending inward beyond the pivotal point, a seat frame pivoted to said side frames and adapted to be turned therein, said seat frame comprising arms and a back support therefor, and inclined braces adapted to bear against the back below its pivotal point when the back is in the raised position, substantially as described.

870,777. FIRE-ESCAPE. FRANCIS W. HARKINS, Chicago, Ill. Filed Aug. 6, 1902. Serial No. 118,634.

1. A fire escape consisting of a frame that supports the other parts, of a catch pivoted to the frame and provided with a handle for manipulation, of an axle having bearings in the sides of the frame, designed to be used as a windlass, and having fixed to it a notched wheel adapted at each rotation to receive the catch and thereby to arrest the axle and hold it until released by the lowering of the handle of the catch, substantially as described.



2. A fire escape consisting of a frame that supports the other parts, of a spring provided with a striker and its buffer, of a catch pivoted to the frame and provided with a handle adapted to be struck and depressed by the buffer of the striker on the elongation downwards of the spring, of an axle having bearings in the sides of the frame, designed to be used as a windlass, and having fixed to it a notched wheel adapted at each rotation to receive the catch, and having fixed to it also a cam adapted at each rotation of the axle to secure the engagement of catch and notched wheel, substantially as described.

3. A fire escape consisting of a frame that supports the other parts, of a spring provided with striker and its buffer, of a catch pivoted to the frame and provided with a handle adapted to be struck and depressed by the buffer of the striker on the elongation downward of the spring, of an axle having bearings in the sides of the frame, designed to be used as a windlass and having fixed to it a notched wheel adapted at each rotation to receive the catch, of a spring guard adapted at each rotation of the axle to secure the engagement of catch and notched wheel, substantially as described.

4. In a fire escape a rope, an axle round which the rope is wound, a catch adapted to be forced into engagement with a notched wheel rigidly fixed to the axle and a spring provided with a striker adapted to release the catch and thus free the wheel, in combination with a notched wheel adapted to be engaged by the notch, and with striker, substantially as described.

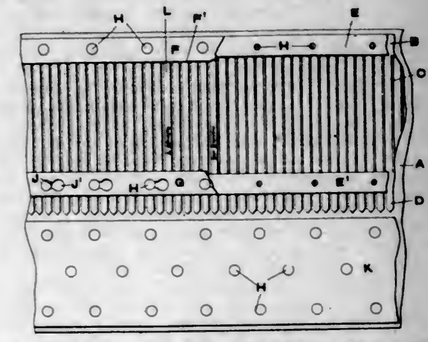
5. In a fire escape a rope, an axle round which the rope is wound, a catch adapted to be forced into engagement with a notched wheel rigidly fixed to the axle and to thus stop the wheel, and a means of releasing the catch and thus freeing the wheel and its connected axle, in combination with a notched wheel adapted to be engaged by the catch, substantially as described.

6. In a fire escape a rope, a brake, an axle round which the rope is wound, a catch adapted to be forced into engagement with a notched wheel rigidly fixed to the axle and to thus stop the wheel, a friction wheel fixed also upon the axle, by whose friction with the brake, the shock of the arrest of axle is reduced, a spring provided with a striker adapted to release the catch and thus free the wheel, in combination with a notched wheel adapted to be engaged by the catch, and with striker, substantially as described.

7. A fire-escape consisting of a frame that supports the other parts, of a catch pivoted on the frame and provided with a handle for manipulation, of an axle having bearings in the sides of the frame, designed to be used as a windlass and having rigidly fixed to it a notched wheel adapted at each rotation to receive the catch, and of a spring guard whereby the certain engagement of catch and notch are secured, substantially as described.

8. In a fire-escape a rope, an axle round which the rope is wound, a catch adapted to be forced into engagement with a notched wheel rigidly fixed to the axle and to thus stop the wheel, and a spring provided with an adjustable striker borne on its index rod, adapted to release the catch and thus free the wheel, in combination with a notched wheel, adapted to be engaged by the catch and with striker, substantially as described.

870,778. TYPE-CARRYING BELT FOR ADDRESSING-MACHINES. FRANK A. HARRISON, Sackville, New Brunswick, Canada. Filed Jan. 22, 1906. Serial No. 297,110.



1. In a device of the class described, a belt, a metal strip having spaced transverse ribs, mounted thereon, flexible strips superimposed on the edges of said metallic strip, cut-down linotypes disposed between said transverse ribs, and means for maintaining the linotypes in position.

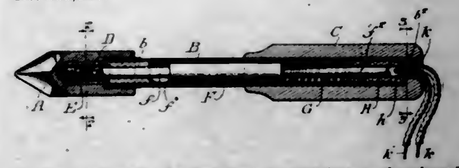
2. In a device of the class described, a belt, a flexible metal strip having spaced transverse ribs mounted thereon, leather strips mounted on each side of said metal strip, linotypes disposed between said transverse ribs, and adjustable means for holding said linotypes in position.

3. In a device of the class described, a belt, a corrugated flexible strip mounted on one half of said belt, address bearing linotypes mounted in said corrugations, means for maintaining said linotypes in position, and a flexible plain strip of leather or other suitable material mounted on the other half of said belt.

4. In a device of the class described, a belt of canvas or other suitable material, a flexible brass strip having spaced transverse ribs, mounted on said strip, address bearing linotypes disposed between said ribs, flexible teeth opposite said linotypes, flexible strips of leather adjacent the ends of said linotypes, and flexible metal strips superimposed on said leather strips adapted to hold the linotypes in position.

5. In a device of the class described, a belt, a transversely ribbed metallic strip mounted thereon, linotypes disposed between said ribs, flexible leather strips mounted adjacent the edges of said linotypes, flexible integral teeth disposed opposite the inner end of said linotypes, a fixed retaining strip mounted at one end of said linotypes, and a removable retaining strip mounted at the other end of said linotypes.

870,779. ELECTRIC SOLDERING-IRON. WILLIAM G. HARTWIG, Chicago, Ill. Filed Mar. 21, 1907. Serial No. 363,547.



1. An electrically heated tool comprising a chambered head, a tubular sleeve connected to said head and provided with a handle, a sleeve of insulating material within said head, a body of high resistance material within said insulating sleeve, and a plunger passing through said

insulating sleeve and serving to force said body of high resistance material against said head, said plunger being provided with an offset part to limit the extent of its movement.

2. An electric soldering iron comprising a chambered soldering head, a tubular stem connected to said head and provided with a handle, an open-ended insulating sleeve arranged within said chambered soldering head, a body of high resistance material within said insulating sleeve, a metallic conductor passing through said insulating sleeve and means for causing said conductor to normally hold said body of high resistance material against said soldering head.

3. An electric soldering iron comprising a chambered soldering head, a tubular sleeve connected to said soldering head and provided with a handle, an open-ended insulating sleeve within said tubular sleeve and extending into the chamber of the soldering head, a body of high resistance material within said insulating sleeve and bearing against said soldering head, an insulating sleeve within the outer end of said tubular sleeve, a metallic plunger arranged within said insulating sleeves and means for causing said plunger to force said body of high resistance material against the soldering head.

4. A soldering iron comprising a soldering head, a tubular sleeve connected to said soldering head, a sleeve of insulating material within said tubular sleeve, high resistance material within said insulating sleeve and bearing against the soldering head and a spring-actuated plunger engaging said high resistance material.

5. An electric soldering iron comprising a soldering head constituting one of the terminals of the electric circuit, a body of carborundum crystal bearing against said soldering head, an insulating sleeve surrounding said body of carborundum and a metallic conductor engaging said body of carborundum and constituting the other terminal of said circuit.

6. An electric soldering iron comprising a chambered soldering head, a tubular sleeve screw-threaded to said soldering head, an open-ended insulating sleeve within said tubular sleeve and within the chamber of the soldering head, a body of high resistance material within said insulating sleeve, a metallic plunger bearing against said body of high resistance material and a spring for holding said plunger into contact with said body of high resistance material and for forcing said body against the soldering head.

7. An electric soldering iron comprising a soldering head, a stem connected to said soldering head, a tubular insulating sleeve, a body of high resistance material within said insulating sleeve and a spring-actuated plunger bearing against said body of high resistance material and having a stop or shoulder to limit its movement.

8. An electric soldering iron comprising a soldering head, a tubular stem for said soldering head, a body of high resistance material bearing against said soldering head, a spring-actuated plunger bearing against said body of high resistance material and insulating sleeves at the inner and outer ends of said spring-actuated plunger.

870,780. CHIMNEY CONSTRUCTION. WILLIAM C. HAYS, Berkeley, Cal. Filed May 10, 1906. Serial No. 316,071.

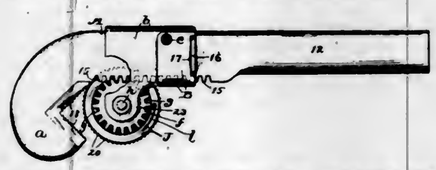


1. A bonding or locking device of metal to be formed of small flat metal plates secured by stiff twisted wires, which clutch the plates and extend around the terra cotta flue lining, which plates are adapted to extend horizontally at suitable heights into the joints of brick work or masonry which surrounds the flue lining.

2. In combination, a flue lining, a wire extending around the said lining, locking devices connected at intervals to the said wire, the said locking devices being adapted to extend into the joints of brick-work or masonry which may surround the said lining.

3. In combination, a flue lining, a wire extending around the said lining, the said wire being provided with loops at intervals therein, locking devices consisting of plates secured in the said loops, the said plates and loops projecting outwardly from the said flue lining and being adapted to engage the brick-work or masonry which may surround the said flue lining.

870,781. PIPE-WRENCH. GEORGE HECKLING, Cleveland, Ohio. Filed May 15, 1906. Serial No. 316,948.

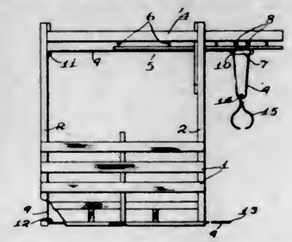


1. In a pipe-wrench, the combination, with the shank provided with two corresponding parallel racks arranged longitudinally of the shank, which shank terminates at its forward end in a work-gripping jaw; a sleeve mounted on and movable endwise of the shank and normally in its forward position; means acting to retain the sleeve in its normal position; two corresponding pinions meshing with the racks and borne by the sleeve, and a rotatable jaw adapted to coöperate with the first-mentioned jaw in gripping the work and having its central portion interposed between the pinions, said rotatable jaw being arranged with its axis coincident with the axes of the pinions and larger diametrically than the pinions, of a pin extending through the rotatable jaw adjacent the periphery of the pinions and occupying the adjacent portion of the space between adjacent teeth of each pinion.

2. A pipe-wrench comprising the following:—a shank which has a recess extending a suitable distance longitudinally of the shank, which shank terminates at the forward end of the recess in a work-gripping jaw and terminates at the rear end of the recess in a handle-forming portion; a sleeve mounted on and movable endwise of the recessed portion of the shank, which sleeve is normally in its forward position; means acting to retain the sleeve in its forward position; a rotatable jaw borne by the aforesaid sleeve and adapted to coöperate with the first-mentioned jaw in gripping the work, and means whereby the rearward movement of the sleeve during the work-gripping operation of the jaws is prevented, and the said sleeve being formed in two sections suitably secured together and straddling the shank from opposite sides respectively, one of the sleeve-sections straddling the other sleeve-section and provided with slots arranged at and transversely of opposite sides respectively of the shank, and the last-mentioned sleeve-section being provided with laterally and outwardly projecting flanges engaging and extending through the said slots.

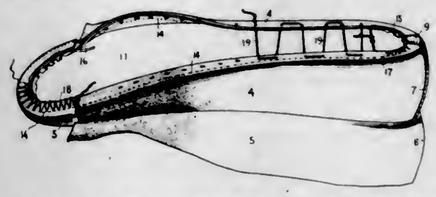
870,782. WAGON-LOADING DEVICE. GUNDER H. HEFTA, Leeds, N. D. Filed June 17, 1907. Serial No. 379,330.

The combination with a wagon box or rack having vertically extended posts and a transversely extended rail supporting beam rigidly secured to said posts and extending transversely of said box or rack and projecting at one side thereof, of a rail extending below and rigidly supported from the intermediate and projecting end portions of said beam, a carriage mounted to travel on said rail, a hoisting cable attached at one end to said carriage, extended over a guide on said carriage, thence over upper and lower guides on one of the extended posts at the opposite side of said box or rack and provided at its extended lower end with a device to which a draft animal may be hitched,



and a cable or fork suspended below said carriage by a looped portion of said hoisting cable, substantially as described.

870,783. BOOT OR SHOE. FRANK W. HOMAN, Swampscott, Mass. Filed May 12, 1906. Serial No. 316,439.



1. A boot or shoe comprising an upper and an outsole, the outsole having an extended skived edge integral therewith surrounding the tread surface, the edge of the upper and the skived edge of the outsole stitched together and turned over upon the inner surface of the sole and a fastening cord or thread passing through the inturned edge of the upper and outsole on opposite sides and extending across the inner face of the sole.

2. A boot or shoe comprising an upper and a sole, the sole having relatively thick tread surface and a stitch receiving edge surrounding the relatively thick tread surface, the edge of the upper and the stitch receiving edge of the sole united by stitching and turned inward upon the inner face of the sole with the stitching substantially within the edge of the thick tread surface and a retaining cord securing said edges across said sole by lacing said edges together and a slip sole overlapping said stitched edges.

3. A boot or shoe comprising an upper and a sole, the sole having a relatively thick tread surface, a comparatively thinner stitch receiving edge surrounding the relatively thick tread surface and an upper layer, the edge of the upper and the stitch receiving edge of the sole united by stitching and turned inward upon the inner face of the upper layer, the stitching lying substantially within the edge of the sole and a retaining cord lacing said edges together across said sole.

4. A boot or shoe comprising an upper and a sole, the sole having a relatively thick tread surface, and a comparatively thinner stitch receiving edge surrounding the relatively thick tread surface, the edge of the upper and the stitch receiving edge of the sole united by stitching and turned inward upon the inner face of the sole, the stitching lying substantially within the edge of the sole, a retaining cord lacing said edges together across said sole and a slip sole secured to said sole having its edges overlapping and extending beyond the line of stitching between the aforesaid edges whereby the stitching is made invisible from the exterior.

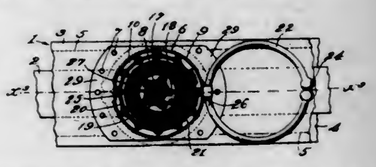
5. A boot or shoe comprising an upper, sole and lining, the sole having an extended stitch receiving edge surrounding the tread surface, the edge of the upper and the stitch receiving edge of the sole united by stitching entirely around the sole and turned inward upon the inner face of the sole and the lining stitched to the edge of the sole around the toe portion only, said lining being free and unattached about the remainder of its lower edge, whereby the lining may be free to overlap and cover the seam formed by stitching the upper and sole together.

6. A boot or shoe comprising an upper, sole and lining, the sole having an extended stitch receiving edge surrounding the tread surface, the edge of the upper and the stitch receiving edge of the sole united by stitching entirely around the sole and turned inward upon the inner face of the sole and the lining stitched to the edge of the sole around the toe portion only, said lining being free and unattached about the remainder of its lower edge, whereby the lining may be free to overlap and cover the seam formed by stitching the upper and sole together and a slip sole in said shoe having its edges overlapping said free edges of the lining.

7. A boot or shoe comprising an upper and a sole, the sole having an extended edge surrounding the tread surface, the edge of the upper and the extended sole edge secured together by stitching and turned over upon the inner surface of the sole, puckering cords extending about the heel and toe portions for crimping these portions of the edge of the sole and upper, and a lacing cord extending across the inner surface of the sole lacing together the inturned edges of the upper and sole between the toe and heel.

8. A boot or shoe comprising an outsole having a thinned edge turned upward and inward over the thicker portion of said outsole, an upper stitched to said thinned edge having the stitches buried and out of sight, the edges of the upper and the thinned edges of the sole on opposite sides being secured together across the upper face of the outsole by lacing, and an insole having its edges projecting over and lying down upon the said stitched edges.

870,784. DOG-COLLAR. GEORGE HUFF, Tropico, Cal. Filed Oct. 1, 1906. Serial No. 337,031.



1. A dog collar band, a take-up thereon, and a line carried by the take-up.

2. A dog-collar, a take-up thereon, a line carried by the take-up, and means on the free end of the line to detachably fasten said free end of the line to the take-up.

3. A dog-collar, a case thereon, a spool in the case, means to rotate the spool, and a line extending into the case and having one end fastened to the spool.

4. A dog-collar, a case thereon, a spool in the case, a knob outside the case to turn the spool, and a line fastened to the spool and extending through the case.

5. A dog collar, a case thereon provided with a depression, a spool in the case, a knob on the spool outside the case, a line on the spool extending outside the case, and an open ring on the line, the same being provided with knobs to engage in the depression in the case for detachably holding the ring stationary relative to the collar when the line is wound on the spool.

6. A dog-collar, a shell open at the bottom and provided with a base flange and with holes, one in its top and one in its side; a base plate in the bottom of the shell and provided with a hole coaxial with the hole in the top of the shell, a spool extending through said coaxial holes, means to fasten the spool in the base plate, means to rotate the spool, and a line attached to the spool and extending through the side hole to the outside of the case.

7. The combination with a dog collar of a shell provided with a flanged base, a plate fitted in the base of the shell, said shell and plate being centrally perforated; a spool in said perforations and provided with an enlarged head;

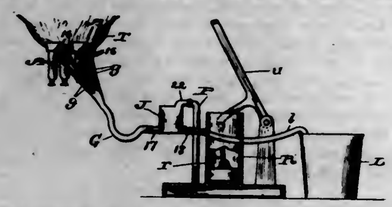
means for holding the spool in the base plate, and a line on said spool and extending through the shell.

8. The combination with a dog-collar of a shell provided with a flanged base, a plate fitted in the base of the shell, said shell and plate being centrally perforated; a spool in said perforations and provided with an enlarged head, a screw for holding the spool in the base plate, and a line on said spool and extending through the shell.

9. A dog-collar, a hollow shell flared at the base and flanged to fit the collar, a plate inside the flared portion, said shell and plate being provided with central holes; a spool having a head and being reduced in diameter to enter said holes, means securing the spool in the base plate, rivets through the flange and collar, and a line extending through the case and attached to the spool.

10. A dog-collar provided with a metal strap and a covering therefor, a shell having a flanged base, a plate in such base, a spool having a head and extending through the shell and plate and adapted to rotate therein, rivets through the flange and metal strap, and a line extending through the shell and fastened to the spool.

870,785. MILKING APPARATUS. MIA E. JACQUES, Buffalo, N. Y. Filed Aug. 11, 1906. Serial No. 330,165.



1. In milking apparatus, the combination, with a teat-cup having an interior chamber provided with an outlet, which cup is provided at and centrally of the bottom of the said chamber with a tubular depending member having its lower portion screw-threaded internally, said cup having an expansible elastic bag arranged centrally of the said chamber and depending into suitable proximity to the bottom of the chamber and open at the upper end, which bag has such dimensions relative to the teat to which it is to be applied that the bag requires to be expanded to receive the teat and will extend below the teat when applied, said bag being provided at its upper end and externally with a lip which closes the aforesaid chamber around the upper end of the bag and is attached to the surrounding wall of the said chamber, and means whereby suction is created and relieved alternately within the aforesaid outlet, of an endwise shiftable stem extending downwardly from within and attached to the bag and provided at its upper end with a head which is arranged within and forms the bottom of the interior chamber of the bag, said stem being provided interiorly of its upper end with a passage-way which extends longitudinally of the upper portion of the stem and communicates at its upper end with the bag-chamber and has its lower end below or in communication with the first-mentioned chamber according as the stem is in its lower or upper position; a screw screwed into the aforesaid internally threaded depending member of the cup and operatively connected with the aforesaid stem, and a washer snugly embracing the stem within the upper portion of the said internally threaded depending member of the cup and arranged to close the lower end of the aforesaid passage-way in the lower position of the stem.

2. In milking apparatus, the combination, with a teat-cup having an interior chamber provided with an outlet, which cup is provided at and centrally of the bottom of the said chamber with a tubular depending member, said cup having an expansible elastic bag arranged centrally of the said chamber and depending into suitable proximity to the bottom of the chamber and open at its upper end, which bag has such dimensions relative to the teat to which it is to be applied that the bag requires to be expanded to receive the teat and will extend below the teat when applied, said bag being provided at its upper end and externally with a lip which closes the aforesaid chamber around the upper end of the bag and is attached to the surrounding wall of the said chamber, and means whereby suction is created and relieved alternately within the aforesaid outlet, of an endwise shiftable stem extending downwardly from within and attached to the bag and provided at its upper end with a head which is arranged within and forms the bottom of the interior chamber of the bag, said stem being provided interiorly of its upper end with a passage-way which communicates at one end with the interior chamber of the bag and has its lower end below or in communication with the first-mentioned chamber according as the stem is in its lower or upper position; means for actuating the stem, and a washer snugly embracing the said stem within the upper portion of the aforesaid depending tubular member of the cup and arranged to close the lower end of the aforesaid passage-way in its lower position.

3. In milking apparatus, the combination, with a teat-cup having an interior chamber provided with an outlet, which cup is provided with an expansible elastic bag arranged centrally of the said chamber and depending into suitable proximity to the bottom of the chamber and open at its upper end, which bag has such dimensions relative to the teat to which it is to be applied that the bag requires to be expanded to receive the teat and will extend below the teat when applied, said bag being provided at its upper end and externally with a lip which closes the aforesaid chamber around the upper end of the bag and is attached to the surrounding wall of the said chamber, and means whereby suction is created and relieved alternately within the aforesaid outlet, of means for controlling communication between the aforesaid chamber and the interior chamber of the bag below the bag.

4. In milking apparatus, means for holding the lower and milk-discharging portion of the teat or teats submerged in milk discharged from the teat or teats during the milking operation; means for conducting milk from the teat-submerging milk, and means whereby a constant flow of milk from the teat or teats is established during the milking operation.

5. In milking apparatus, means for holding the lower and milk-discharging portion of the teat or teats submerged in milk discharged from the teat or teats during the milking operation; means for conducting milk from the teat-submerging milk, and means whereby a pressure externally of and against the teat or teats to discharge milk therefrom is created and relieved alternately.

6. In milking apparatus, means for holding the lower and milk-discharging portion of a teat submerged in milk discharged from the teat during the milking operation; means for conducting milk from the teat-submerging milk, and apparatus whereby suction upon the teat-submerging milk is not only created and relieved alternately but pressure externally of and against the teat to discharge milk therefrom is created and relieved alternately.

7. In milking apparatus, the combination, with a receptacle for receiving milk, and teat-cups provided each with an interior chamber having a milk-outlet and an expansible elastic bag which is arranged within the said chamber and depends into suitable proximity to the bottom of the chamber, which bag is open at its upper end and attached to the surrounding wall of the said chamber and requires to be expanded to receive the teat, of an intermediate milk-receiving chamber interposed between the aforesaid receptacle and the teat-cups and provided at the bottom with a milk-inlet and a milk-outlet communicating with the said receptacle and first-mentioned chamber respectively; a valve controlling the passage of milk through the milk-inlet and arranged to open by suction created within the intermediate chamber; a valve controlling communication between the intermediate chamber and the milk-outlet and arranged to be held closed during the creation of suction in the said chamber and free to open upon the relief of the said suction, and means whereby suction is created and relieved alternately within the intermediate chamber.

8. In milking apparatus, the combination, with a receptacle for receiving milk, and teat-cups provided each with an interior chamber having a milk-outlet and an expansible elastic bag which is arranged within the said chamber and depends into suitable proximity to the bottom of the chamber, which bag is open at its upper end and requires to be expanded to receive the teat, of an intermediate milk-receiving chamber interposed between the aforesaid receptacle and the teat-cups and provided with a milk-inlet and a milk-outlet communicating with the said receptacle and first-mentioned chamber respectively, which chamber has an auxiliary perforation establishing communication between the said chamber and the said inlet; a valve controlling the passage of milk through the milk-inlet and arranged to open by suction created within the intermediate chamber; a valve controlling communication between the intermediate chamber and the milk-outlet and arranged to be held closed during the creation of suction in the said chamber and free to open upon the relief of the said suction, and means whereby suction is created and relieved alternately within the intermediate chamber.

870,786. PROCESS OF OBTAINING PURE COPPER. LUCIEN JUMAU, Paris, France. Filed July 19, 1906. Serial No. 326,844.

1. The herein described process for obtaining pure copper, which consists in precipitating the precious metals from a solution of a salt of copper by treating said solution with a sulfite at a raised temperature under substantially atmospheric pressure, separating the solution from the precious metals thus precipitated, and subjecting said separated solution to heat and pressure in the presence of a sulfite.

2. The herein described process for obtaining pure copper, which consists in precipitating the precious metals from a solution of a salt of copper by treating said solution with a sulfite at a raised temperature under substantially atmospheric pressure, separating the solution from the precious metals thus precipitated, treating said separated solution with a sulfite, and subjecting said solution and sulfite to heat and pressure for precipitating metallic copper.

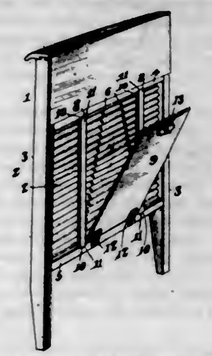
3. The herein described process for obtaining pure copper, which consists in precipitating the precious metals from a solution of a salt of copper by treating said solution with a sulfite at a raised temperature under substantially atmospheric pressure, separating the solution from the precious metals thus precipitated, treating said separated solution with a sulfite, subjecting said solution and sulfite to heat and pressure for precipitating metallic copper, and transforming the copper thus precipitated into pure massive copper.

4. The herein described process for obtaining pure copper, which consists in precipitating the precious metals from a solution of a salt of copper by treating said solution with sulfite of hydrogen at a raised temperature under substantially atmospheric pressure, separating the solution from the precious metals thus precipitated, treating said separated solution with sulfite of hydrogen, and subjecting said solution and sulfite of hydrogen to heat and pressure for precipitating metallic copper.

5. The herein described process for obtaining pure copper, which consists in precipitating the precious metals from a solution of a salt of copper by treating said solution with a sulfite at a temperature of approximately 170° C. under substantially atmospheric pressure, separating the solution from the precious metals thus precipitated, treating said separated solution with a sulfite, subjecting said solution and sulfite to heat and pressure for precipitating metallic copper, and transforming the copper thus precipitated into pure massive copper.

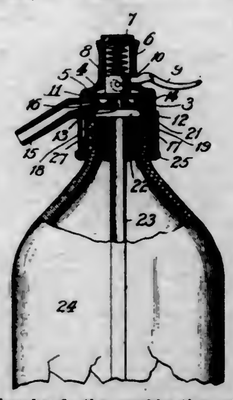
870,787. SELF-SOAPING WASHBOARD. JOHN KOONTZ, Paducah, Ky., assignor of one-half to James Wellie, Paducah, Ky. Filed Feb. 11, 1907. Serial No. 356,861.

1. In a wash board, the combination of side bars, upper and lower cross bars connecting the side bars, a rubbing surface supported by the said bars and provided with an intermediate perforated portion extending from the top to the bottom of the rubbing surface, intermediate longitudinal bars located at opposite sides of the said perforated portion of the rubbing surface and spaced from the side bars and connected at their terminals with the upper and lower cross bars, a door of a width and length co-extensive with the width and length of the intermediate perforated portion of the rubbing surface and hinged at one end to one of the cross bars, and a catch arranged at the other end of the closure for engaging the other cross bar, said door occupying the space between the intermediate bars.



2. In a wash board, the combination of side bars, upper and lower cross bars connecting the side bars and provided with alined recesses, a rubbing surface supported by the said bars and provided with an intermedate perforated portion, intermediate longitudinal bars located at opposite sides of the perforated portion of the rubbing surface and having their terminals fitted in the said recesses and interlocked with the upper and lower cross bars and spaced from the side bars, a door fitting within and covering the space inclosed by the longitudinal and cross bars and hinged to the lower cross bar, and a catch arranged at the free edge of the closure for engaging the upper cross bar, said door occupying the space between the intermediate bars.

870,788. SIPHON-HEAD. FRANK B. LOMAX, Chicago, Ill., assignor to George Lomax, Chicago, Ill. Filed Feb. 4, 1907. Serial No. 355,746.



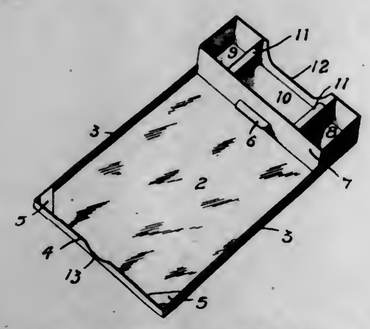
1. In a siphon-head, the combination of a cylindrical body having a top with a spring-housing upon it, formed entire of one piece of metal, the inner surface of said top forming a rigid annular shoulder about said housing, a spring in said housing, a plunger provided with an operating lever, against which plunger said spring is confined, a spout-block in said body with its spout projecting through the same, a disk-valve covering said block and seating against said shoulder and against the center of which said plun-

ger bears, packing on the bottom of said block, and means for clamping together said shoulder and packing and the valve and block between them.

2. In a siphon-head, the combination of a cylindrical body having a top with a spring-housing upon it, said body, top and housing being formed entire of one piece of metal, and the inner surface of the top forming an annular shoulder about said housing, a spring in said housing, a plunger provided with an operating lever, against which plunger said spring is confined, a spout-block in said body with its spout projecting through the same, a disk-valve covering said shoulder and against the center of which said plunger bears, a flanged apertured packing-bulb at the bottom of said block, and means for clamping together said shoulder and packing and the valve and block between them.

3. In a siphon-head, the combination of a cylindrical body having a top with a spring-housing upon it, said body, top and housing being formed entire of one piece of metal, and the inner surface of the top forming an annular shoulder about said housing, a spring in said housing, a plunger provided with an operating lever, against which plunger said spring is confined, a spout-block in said body with the spout projecting through the same, a disk-valve covering said block and seating against said shoulder, and against the center of which said plunger bears, packing in the bottom of said block, and a divided nut screwing into the open end of said body for the purpose set forth.

870,789. ORDER-BLANK HOLDER. PLATT W. LYON, Minneapolis, Minn. Filed June 17, 1907. Serial No. 379,413.



1. An order blank holder comprising a flat back plate, side flanges mounted on the longitudinal edges of said plate, an end flange connecting said side flanges at one end of said plate, a wall connecting said side flanges near the opposite end of said plate, the space between said flanges on said plate being adapted to receive order blanks, corner plates provided at one end of said holder and between which corner plates and said bottom plate the corners of the blanks are slipped, and means on said wall for overhanging the opposite ends of the blanks, substantially as described.

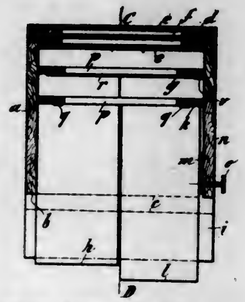
2. An order blank holder comprising a back plate having side and end flanges thereon between which the order blanks are placed, an envelop receptacle provided at one end of said holder and having parallel walls extending transversely of said holder and cross walls between which and said parallel walls the envelops are held, and flanges provided on said cross walls and adapted to overhang the bunch of envelops, substantially as described.

3. An order blank holder comprising a back plate and side and end flanges therefor, plates provided at the corners of said flanges and between which and said bottom plate the blanks are held, walls extending transversely of said back plate, a flange mounted on one of said walls and adapted to overhang the end of the blank, cross walls connecting said first named walls and forming therewith a series of compartments, one of said compartments being adapted to contain envelops, and flanges mounted on said cross walls and arranged to overhang the envelops in said compartment.

4. An order blank holder comprising a back plate, side and end flanges provided on said plate, a wall connecting said side flanges near one end of said plate, the space between said wall and the contiguous end of said plate being adapted to receive envelops, corner plates provided at the opposite end of said holder and between which corner plates and the bottom plate the corners of the blanks are slipped, substantially as described.

5. An order blank holder comprising a back plate, means provided on the edges of said plate and between which means order blanks are placed, retaining devices adapted to overhang the corners of the blanks at one end of said plate, a cross wall near the opposite end of said plate, a flange mounted thereon and adapted to overhang one end of the blanks and a compartment being provided between said cross wall and the end of said plate and adapted to receive envelops placed one above another therein.

870,790. PHOTOGRAPHIC VIGNETTER. PHILÉMON MAKEEFF, Le Locle, Switzerland. Filed Nov. 27, 1906. Serial No. 345,381.



1. A photographic vignetting device, comprising a box open at one of its extremities in order to permit of inserting therein a plate holder, and closed at its other extremity by a ground glass, a movable dark shutter, and two screen holders in said box, each fixed to a sliding plate which is adapted to move such holder toward and from the open end of the box, such sliding plates extending to the outside so as to be adjustable therefrom.

2. A photographic vignetting device having means for mounting a plate holder, and a shutter, and between the two a slidable screen holder movable toward and from such mounting means, and means extending to the exterior of the device for sliding said holder.

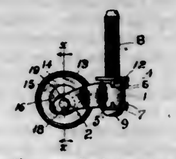
3. A photographic vignetting device having means for mounting a plate holder, and a shutter, and between the two a pair of screen holders adapted to move toward and from such mounting means, and means for adjusting such holders.

4. A photographic vignetting device having means for mounting a plate holder, and a shutter, and between the two a pair of screen holders adapted to be moved toward and from such mounting means, and means for adjusting such holders, such adjusting means extending to the exterior of the device so that they may be operated therefrom.

5. A photographic vignetting device having means for mounting a plate holder, and a shutter, and between the two a pair of movable screen holders, and means for adjusting such holders toward and from such mounting means comprising slides arranged side by side and extending to the rear of the device.

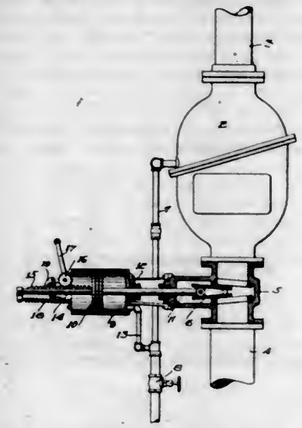
870,791. FURNITURE-CASTER. CHARLES F. MOSMAN, Bridgeport, Conn., assignor to The Burns, Silver & Co., Bridgeport, Conn., a Corporation of Connecticut. Filed May 31, 1907. Serial No. 376,607.

A furniture caster, comprising a forked frame, a pintle suitably secured to said frame, a wheel having a central web apertured to form an enlarged circular traversing surface concentric with the periphery of said wheel, and a roller having a diameter materially less than that of



said apertured portion and journaled loosely between the forked ends of said frame in position to bear against said surface.

870,792. ATTACHMENT FOR SPRINKLER SYSTEMS. JAMES MCALEAR, St. Paul, Minn. Filed Nov. 18, 1905. Serial No. 287,993.



1. A sprinkler system having sprinkler heads and containing a fluid pressure, a water inlet valve and means whereby when said system is charged with fluid pressure the said inlet valve will surely and positively be opened.

2. The combination with a sprinkler system and the water inlet valve, of means for automatically opening said valve when air pressure is admitted to the water distributing pipes, substantially as described.

3. The combination, with a sprinkler system having a water inlet valve and a drip pipe valve, and means for locking said inlet valve in its open position, of mechanism whereby when said drip pipe valve is opened to drain the system and said locking means is released said inlet valve will be automatically closed, substantially as described.

4. The combination, with a sprinkler system having a water inlet valve and a drip pipe valve and means for locking said water inlet valve in its open position, of mechanism whereby when said drip pipe valve is opened and said locking means is released said water inlet valve will be automatically closed by atmospheric pressure.

5. The combination with a dry pipe sprinkler system and its water inlet valve, and a drip pipe having a suitable valve, of a cylinder having a piston connected with said inlet valve, and a branch pipe leading from said drip pipe to said cylinder on one side of said piston, substantially as described.

6. The combination with a sprinkler system and its water inlet valve, of means whereby said valve will be automatically opened when pressure is admitted to the sprinkler heads, and manually-operated means for closing said valve, substantially as described.

7. The combination with a sprinkler system and its valve, of means whereby said valve will be opened automatically when pressure is admitted to the sprinkler heads, and mechanism for opening or closing said valve by hand.

8. The combination with a sprinkler system and the inlet valve, of a cylinder closed at one end and open at the other and having its piston connected with said valve, and said system having a drip pipe and valve, and a branch pipe leading from said drip pipe to the closed end of said cylinder between said drip pipe valve and the system, substantially as described.

9. The combination with a sprinkler system and its valve, and means whereby said valve will be automatically opened when pressure is admitted to sprinkler heads, and means for locking said valve in its open position.

10. The combination with a sprinkler system and the water inlet valve and the steam drip pipe having a valve, of a cylinder having its piston connected with said valve, and a pipe leading from said cylinder to the system drip pipe, and a rack and pinion mechanism having a suitable dog connected with said piston, substantially as described.

11. In a dry pipe sprinkler system, the combination with a casing having ports for connection to the system and to the water supply, and also having an auxiliary port leading to the atmosphere, of main and auxiliary valves, the latter closing said auxiliary port and being held normally in its closed position by the pressure in the system, and the former controlling the admission of water to the system, mechanism actuated by the opening of said auxiliary valve for releasing said main valve, mechanism for locking said auxiliary valve in its closed position when said casing is relieved of pressure, a water inlet valve, and means whereby said inlet valve will be opened and said auxiliary valve will be released by its locking mechanism when pressure is admitted to said casing.

12. The combination with a valve casing having a drip pipe and valve and ports for connection with the water supply and sprinkler system, and an auxiliary port leading to the atmosphere, of main and auxiliary valves, the former normally closing said water supply port and the latter closing said auxiliary port, the port leading to the sprinkler system being open to admit pressure to said casing, and said auxiliary valve being held in its closed position by said pressure when the system is in use, mechanism for locking said auxiliary valve in its closed position when said casing is relieved of pressure, a lever mechanism connecting said auxiliary valve and said main valve, a water inlet valve, a cylinder connected with said valve drip pipe and having its position attached to the stem of said inlet valve, and operative connections provided between said piston and said auxiliary valve locking mechanism, substantially as described.

13. The combination with a valve casing having a drip pipe and valve and ports for connection with the water supply and with the sprinkler system and an auxiliary port leading to the atmosphere, of main and auxiliary valves, the former normally closing said water supply port and the latter closing a port leading to the atmosphere, the port leading to the sprinkler system being open to admit pressure to said casing, and said auxiliary valve being held when the system is in use by said pressure in its closed position, mechanism for locking said auxiliary valve in its closed position when said casing is relieved of pressure, a compound lever mechanism connecting said auxiliary valve and said main valve, a water inlet valve, a cylinder connected with said valve drip pipe and having its piston attached to the stem of said inlet valve, and a lever mechanism connecting said piston and said auxiliary valve-locking mechanism, substantially as described.

14. The combination with a casing having ports communicating respectively with the water supply and with the sprinkler system, of main and auxiliary valves, said main valve normally closing said inlet port and said auxiliary valve closing a port leading to the atmosphere, the port leading from said casing to the sprinkler system being open and said auxiliary valve being normally held on its seat by the pressure within said casing, mechanism for locking said auxiliary valve in its closed position when the pressure is relieved in said casing, a compound lever mechanism connecting said auxiliary valve and said main valve, a water inlet valve and mechanism for automatically opening said water inlet valve and releasing said auxiliary valve when pressure is admitted to said casing, substantially as described.

15. The combination with a valve casing having inlet and discharge ports for connection with the water supply and the sprinkler system and an auxiliary port leading to the atmosphere, of main and auxiliary valves, said discharge port being open, a lever mechanism connecting said main and auxiliary valves and arranged to lock said main valve in its closed position, and means projecting through the wall of said casing for adjusting said mechanism to regulate the pressure on said main valve, substantially as described.

16. In a sprinkler system valve, the combination with a casing having a main inlet port, of a valve arranged to close said port, a lever mechanism for locking said valve in its closed position, a rod connected with said lever mechanism and having a threaded end projecting through the wall of said casing, a suitable stuffing box for said rod, and a nut provided on said threaded end and whereby the pressure of said lever mechanism on said valve can be increased or decreased, substantially as described.

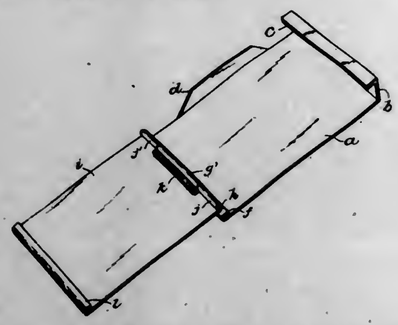
17. A dry pipe sprinkler system containing fluid under pressure and having a water inlet valve and means whereby when the sprinkler heads are closed and said fluid pressure is admitted to the distributing pipes said inlet valve will be automatically opened.

18. A sprinkler system having a water inlet valve and means whereby when pressure is admitted to the distributing pipes upon the closing of the sprinkler heads said inlet valve will be positively operated, substantially as described.

19. A dry pipe sprinkler system having sprinkler heads and containing air under pressure, a water inlet valve, and means whereby when said system is charged with air pressure and the sprinkler heads are closed the said inlet valve will surely and positively be opened.

20. A sprinkler system having sprinkler heads and containing a fluid pressure, a water inlet valve, and means for admitting water to said system when the pressure falls below a predetermined point, and means whereby when said system is charged with fluid pressure the said inlet valve will surely and positively be opened, substantially as described.

870,793. MANIFOLDING-PAD HOLDER. PERRY A. MCCASKEY, Alliance, Ohio, assignor to The McCaskey Register Company, Alliance, Ohio, a Corporation of Ohio. Original application filed Dec. 31, 1906, Serial No. 350,273. Divided and this application filed May 27, 1907. Serial No. 375,873.



1. A pad holder comprising a back plate provided at an end thereof with two lips extending from the end over portions of the plate, an upturned foot-piece between the lips, and a cover hinged to the foot-piece.

2. A pad holder comprising a back plate having a plurality of turned-up portions at one end thereof, two of the portions being turned over and forming lips extending over portions of the plate, and another portion extending higher than the lips and turned over and forming a hinging member, and a cover hinged to the hinging member.

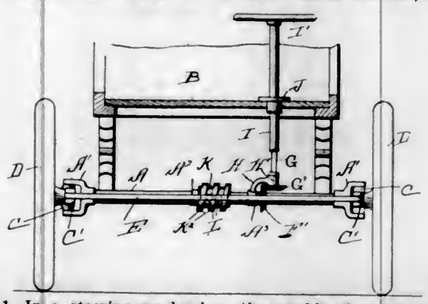
3. A duplicating pad holder comprising a back plate having on one end thereof an integral foot-piece and also two integral turned-over portions forming lips at the ends of the foot-piece, a cover hinged to the top of the foot-piece, a head-piece on the opposite end of the back plate, and a lip on the head-piece.

4. A duplicating pad holder comprising a back plate having on one end thereof an integral foot-piece and also a turned-over portion forming an integral lip, a cover hinged to the top of the foot-piece, a head-piece on the opposite end of the back plate, and a flange on a side edge of the back plate.

5. The combination of a pad holder comprising a back plate with lips on opposite ends thereof and a flange on one side thereof, a pad under one of the lips and having a back board extending under the other one of the lips, a transfer-sheet holder comprising a plate held adjacent to the back board, and a transfer sheet attached to the transfer-sheet holder to extend over the top of the pad against the flange.

6. In a pad holder, the combination with a back-plate having an upturned foot-piece, of a cover hinged to the foot-piece and having a turned-over portion on the hinged part thereof forming a lip extending partially over the cover towards the free end thereof, and a lip on the free end of the cover, substantially as described.

870,794. STEERING MECHANISM. HARRY E. NORRIS, Arnold, Ohio. Filed Dec. 12, 1906. Serial No. 347,487.



1. In a steering mechanism, the combination with the connecting bar of the wheel axles, of a plate secured to said bar provided with outwardly projecting sleeves, pins mounted in said sleeves carrying anti-friction rollers and a worm-wheel carried by the main axle meshing with said rollers for the purpose described.

2. In a steering mechanism, the combination with the connecting bar of the wheel axles, of a plate secured to said bar provided with spaced sleeves, pins mounted in said sleeves provided with rollers, a worm-gear carried by the main axle meshing with said rollers and means for rotating said gear, for the purpose described.

3. In a steering mechanism, the combination with the main axle provided with forwardly projecting apertured lugs of a shaft mounted in said lugs provided with a worm-gear, rollers carried by the connected bar of the wheel, axle meshing with said gear and means for rotating said gear for the purpose described.

4. In a steering mechanism, the combination with a worm gear provided with a flange rib carried by the main axle, of grooved rollers carried by the connecting bar of the wheel, axles adapted to fit over said ribs of the gear, and means for rotating said gear for the purpose described.

5. The combination with a bar connecting the wheel-axles, of anti-friction rollers carried by said bar and a worm-gear carried by the main axle adapted to engage said rollers for the purpose described.

6. In a steering mechanism, the combination with a bar connecting the wheel axles, of anti-friction rollers carried by said bar, a worm wheel mounted in the main axle meshing with said rollers and means for operating said worm wheel for the purpose described.

7. In a steering mechanism, the combination with the connecting bar, of the wheel axles, of spaced anti-friction rollers carried by said bar and a worm wheel carried by the main axle, the rib of which extends between said rollers for the purpose described.

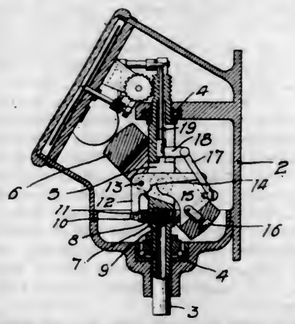
8. In a steering mechanism, the combination with wheel-axles provided with arms mounted in the ends of the main axle of a bar connecting said arms carrying anti-friction rollers, a worm gear mounted on the main axle meshing with said rollers and means for rotating said worm gear for the purpose described.

9. In a steering mechanism, the combination with the main axle of apertured lugs projecting out from said axle, a shaft mounted in said lugs provided with a gear at one end, an arm secured to said axle carrying a shaft provided with a gear meshing with said gear, a wheel connected to said shaft, a worm-gear fixed on the shaft mounted in the apertured lugs and spaced rollers carried by the bar connecting the axles meshing with said worm gear.

10. In a steering mechanism, the combination with the connecting bar, of the wheel axles, of a plate secured on said bar provided with outwardly projecting spaced sleeves, pins mounted in said sleeves provided with grooved rollers, a worm-gear carried by the main axle having a flanged rib working between said rollers and means for rotating said worm-gear for the purpose described.

11. In a steering mechanism, the combination with an axle provided with yokes at its ends, of wheel axles mounted in said yokes provided with forwardly projecting arms, a bar connecting said arms, a plate secured on said bar provided with spaced sleeves, pins mounted in said sleeves, grooved rollers mounted on said pins, lugs formed on said axle, a shaft mounted in said lugs provided with a bevel-gear wheel, a worm gear fixed on said shaft, the spiral ribs of which are provided with outwardly projecting flanges working in the grooves of the rollers and a bevel gear carried by the axle meshing with said bevel-gear for the purpose described.

870,795. SPEED-INDICATOR. EDD C. OLIVER, Minneapolis, Minn., assignor to Harry E. Pence, Minneapolis, Minn. Filed Nov. 13, 1906. Serial No. 343,238.



1. In a speed indicating device, the combination, with a rotating spindle, of a weight centrally pivoted thereon and having a cam surface, a spring, a lever bearing on said spring and on said cam surface, the effective leverage of the spring on the cam varying with the speed of rotation.

2. In a speed indicating device, the combination, with a rotating spindle, of a ring pivoted thereon, the center of mass of said ring remaining substantially at the center of rotation during the oscillation of said ring, a cam mounted on said ring, a compression spring, a lever mechanism for transmitting the pressure of said spring to said cam, the effective leverage of the spring on the cam varying with the speed of rotation.

3. In a speed indicating device, the combination, with a rotating-spindle, of a weight pivoted thereon and having a cam surface, a lever having one arm in engagement with said cam surface, and a spring in engagement with the other arm of said lever, the tension of said spring increasing with the speed of rotation, substantially as described.

4. In a speed indicating device, the combination, with a rotating spindle, of a weight centrally pivoted thereon and having a cam surface, a bell crank having one arm in engagement with said cam surface, a compression spring in engagement with the other arm of said bell crank, means for adjusting said spring, and the compression of said spring increasing with the speed of rotation.

5. The combination, with a rotating spindle having a slot therein, of a ring centrally pivoted on said spindle and having a cam surface, an indicating device, a bell crank pivoted on said spindle and having one arm projecting through said slot and in engagement with said cam surface and a coil spring fitting within a socket in said spindle having one end in engagement with the other arm of said bell crank, substantially as described.

6. In a speed indicating device, the combination, with a rotating spindle, of a ring pivoted thereon, a cam mounted on said ring, a compression spring arranged at an angle to the axis of said spindle a means for transmitting the pressure of said spring to said cam, the effective leverage of the spring on the cam varying with the speed of rotation, substantially as described.

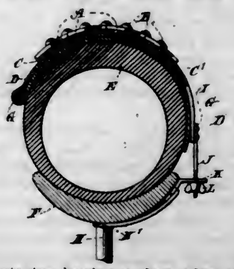
7. In a speed indicating device, the combination, with a rotating spindle, of a weight pivoted thereon having a cam surface, a lever pivoted at a point intermediate to its ends and having one arm in engagement with said cam surface, a spring arranged to engage the other arm of said lever, the distance between the bearing point of said spring on said lever and the pivot of the lever remaining constant while the distance between the pivot of said lever and the point of contact of the other arm with said cam varies with the speed of rotation, substantially as described.

8. In a speed indicating device, the combination, with a rotating spindle, of a weight pivoted thereon and having a cam surface, a coil spring and a lever device bearing on said spring and on said cam surface.

9. In a speed indicating device, the combination, with a rotating spindle, of a weight pivoted thereon and having a cam surface, a compression spring, and a single lever arranged to transmit the motion of said cam to said spring.

10. In a speed indicating device, a rotating spindle in combination with a weight pivoted thereon, said weight having a cam surface, a lever arranged to engage said surface, and be actuated by the movement of said weight and cam, and means for yieldingly holding said lever in engagement with said surface.

870,796. TIRE-PROTECTOR. RUSSELL PARKER, New York, N. Y. Filed Nov. 22, 1905. Serial No. 288,545.



1. A tire protector having a free edge with a limiting device to restrict its diameter, the other edge being unrestrained to allow the protector to be slipped over the tire and to be drawn tight at individual points, and a number of holders extending from the other edge of the protector and adapted for connection with the wheel.

2. A tire protector having a free edge with a limiting device to keep it from expanding, the other edge being unrestrained, and a number of adjustable contractile holders connected with said loose edge.

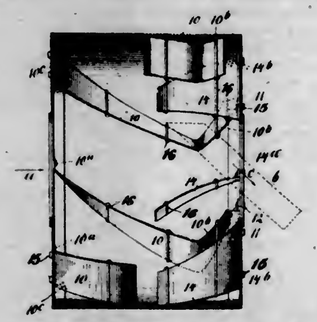
3. A tire protector having a free edge with a limiting device to keep it from expanding, and a number of adjust-

able contractile holders extending from the other edge of the protector.

4. The combination with the rim and the tire, of a protector strip on the tread portion of the tire, one edge of said strip being spaced and disconnected entirely from the adjacent portion of the rim, a limiting device at said edge, and holders extending to the wheel from the other edge of the protector.

5. The combination with the rim and the tire, of a protector strip on the tread portion of the tire, a limiting device at one edge of said strip, which edge is spaced and disconnected from the adjacent portion of the rim, and a series of holders or fasteners extending to the wheel on the other side of the tire.

870,797. CONCRETE-MIXER. ARTHUR W. RANSOME, New York, N. Y. Filed Nov. 17, 1906. Serial No. 343,821.



1. A rotary drum mixer, having advancing flanges in the drum extending substantially from end to end thereof, and return flanges engaging the inner walls of the drum between the advancing flanges and extending from the discharge end of the drum toward, but terminating short of the receiving end.

2. A rotary drum mixer, having interior advancing flanges in the drum extending substantially from end to end thereof, said flanges engaging the walls of the drum and interior return flanges engaging the walls of the drum between the advancing flanges and extending from the discharge end of the drum toward, but terminating short of the receiving end, the return flanges having greater width than the advancing flanges and tapering from the discharging toward the receiving end of the drum.

3. A rotary drum mixer, having advancing and return flanges, in the drum extending along the inner walls diagonally respectively from the end portions of the drum, towards the opposite ends thereof, the advancing flange clearing the inner end of the return flange and reaching beyond the same substantially to the opposite or discharge end of the drum.

4. A rotary drum mixer, having advancing and return flanges, in the drum extending along the inner walls diagonally respectively from the end portions of the drum towards the opposite ends thereof, the advancing flange clearing the inner end of the return flange and reaching beyond the same substantially to the opposite or discharge end of the drum and formed thereat with a lifting pocket.

5. A rotary drum mixer, having advancing and return flanges, both engaging the inner walls of the drum and extending diagonally from the respective end portions of the drum, towards the opposite ends thereof, the advancing flange clearing the inner end of the return flange and reaching beyond the same substantially to the opposite or discharge end of the drum and means for removably securing the flanges to the side walls of the drum.

6. A rotary drum mixer, having advancing and return flanges, both engaging the inner walls of the drum and extending diagonally from the respective end portions of the drum, towards the opposite ends thereof, the advancing flange clearing the inner end of the return flange and reaching beyond the same substantially to the opposite or discharge end of the drum, and provided thereat with an offset or bend extending toward the return flange and forming a lifting pocket.

7. A rotary drum mixer for concrete and similar wet plastic materials, having a relatively stationary mixing flange in the drum lying in a plane substantially radial of the same and forming a corner or crevice with an end wall of the same, the mixer having a passage at said corner or crevice allowing the circulation of water through said corner to prevent accumulations of concrete therein.

8. A rotary drum mixer for concrete and similar wet plastic materials, having a relatively stationary diagonal mixing flange in the drum in a radial plane thereof and with one end of the flange juxtaposed and secured to, but spaced from the corresponding end of the drum, to allow circulation of water past the said end of the flange and prevent accumulations of concrete between said end of the flange and the end of the drum.

9. A rotary drum mixer for concrete and similar wet plastic materials, having a diagonal mixing flange in the drum with one end juxtaposed to, but spaced from the corresponding end of the drum to allow circulation of water past the said end of the flange and prevent accumulations of concrete at this point, and a bracket spanning the space between said ends of the flange and drum and fastened to said ends of the flange and drum to hold the flange in place.

10. A rotary drum mixer for concrete and similar wet plastic materials, having a diagonal mixing flange in the drum with a lifting pocket at one end, said pocket being juxtaposed to, but spaced from the adjacent end of the drum to allow circulation of water between the pocket and the end of the drum and prevent accumulations of concrete at this point.

11. A rotary drum mixer for concrete and similar wet plastic materials having a mixing flange with its end juxtaposed to, but spaced from one end of the drum to allow circulation of water past the said end of the flange, and a second mixing flange projecting from said end of the drum and having a passage through it adjacent to said end.

12. A rotary drum mixer for concrete and similar wet plastic materials, having a mixing flange extending diagonally from one end of the drum to a point adjacent to the other end, the first end of the flange having a passage through it and the second end of the flange being formed with a lifting pocket spaced from the adjacent end of the drum to form a passage between it and the drum.

13. A rotary drum mixer for concrete and similar wet plastic materials, having a diagonal mixing flange, with a lifting pocket at one end, said pocket being juxtaposed to, but spaced from the adjacent end of the drum for the purpose specified, and a bracket spanning the space between the lifting pocket and the end of the drum and pocket and to the said end of the drum to hold the lifting pocket in place.

14. A rotary drum mixer, having advancing and return flanges, both engaging the inner walls of the drum and extending diagonally from the respective end portions of the drum, towards the opposite ends thereof, the advancing flange clearing the inner end of the return flange and reaching beyond the same substantially to the opposite or discharge end of the drum and formed thereat with a lifting pocket spaced from the adjacent end of the drum to provide a washing passage.

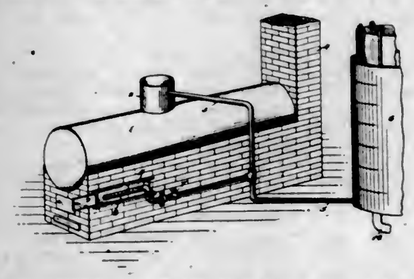
15. A rotary drum mixer, having advancing and return flanges, both engaging the inner walls of the drum and extending diagonally from the respective end portions of the drum, towards the opposite ends thereof, the advancing flange clearing the inner end of the return flange and reaching beyond the same substantially to the opposite or discharge end of the drum and formed thereat with a lifting pocket spaced from the adjacent end of the drum to provide a washing passage, the return flange being perforated adjacent to the discharging end of the drum and the advancing flanges being perforated adjacent to the receiving end.

16. In a concrete mixer, a rotary drum having a flange secured to its inner wall and extending therefrom in substantially a radial direction, said flange having one end connected to an end wall of the drum and provided adjacent thereto with an opening for the passage of water.

17. A rotary drum mixer having a plurality of diagonal advancing flanges in the drum extending substantially parallel and substantially from end to end of the drum, each flange having at the discharge end of the drum a lateral offset forming a lifting pocket, all of such pockets facing alike the direction of rotation of the drum and diagonal return flanges engaging the inner walls of the drum between the lifting pockets, the return flange being disposed oppositely to the advancing flanges.

18. A rotary drum mixer for concrete and similar wet plastic materials having advancing and return flanges both engaging the inner walls of the drum and extending diagonally from the respective end portions of the drum toward the opposite ends thereof, the advancing flange clearing the inner end of the return flange and reaching beyond the same substantially to the opposite or discharge end of the drum, and the mixer having passages at the ends of the flanges adjacent to the ends or heads of the drum, such passages allowing the circulation of water substantially as described to prevent accumulations of concrete in the drum.

870,798. OIL-GAS GENERATOR. ANDREW J. RISKEY, Troy, N. Y. Filed Feb. 19, 1907. Serial No. 358,220.



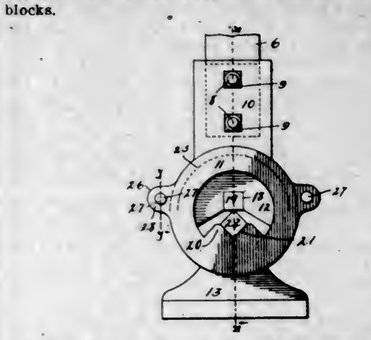
The combination with a fire-pot of a kerosene tank, mounted thereon, a fire grate disposed beneath the tank and having bars lying parallel with the length of the fire pot, said gasolene tank having a vapor dome projecting from its upper circumference, a gasometer tank to cooperate with the said dome, a pipe connecting said dome and the gasometer tank thereby forming communication therebetween, a valve controlled pipe fastened to the sides of the fire pot, having one of its ends connected to the said pipe, forming communication therewith, while its other end is provided with a burner, said burner being swiveled to the said valve-controlled pipe, said fire pot having an elongated horizontal opening, a sliding closure therefor, said opening having flanges to receive the closure for guiding the same, said burner mounted to be swung into and out of the fire pot, through the said opening and when swunk into the fire pot, lies above the fire grate and at right angles to the bars thereof.

870,799. BEARING. FRANK W. SCHOENBERGER, Columbus, Ohio. Filed July 5, 1907. Serial No. 382,197.

1. In a device of the character described, the combination with a pair of bearing-members having sockets formed therein, of a pair of hardened blocks adapted to engage with each other, and either of said blocks being adapted to fit into either of said sockets.

2. In a device of the character described, the combination with a pair of bearing members having sockets formed therein, of a pair of hardened angular blocks adapted to engage with each other, and either of said angular blocks being adapted to fit into either of said sockets.

3. A bearing comprising a pair of bearing members, each of said bearing members having a socket formed therein, an angular block seated in one of said sockets, and a second angular block seated in the other of said sockets, one of said angular blocks presenting one of its edges to one of the sides of the other of said angular blocks.

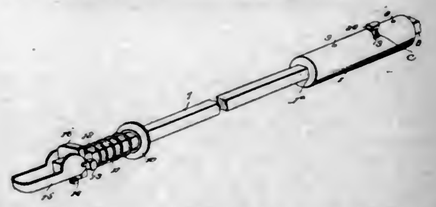


4. A bearing comprising a pair of bearing members, each of said bearing members having a socket formed therein, an angular block seated in one of said sockets, and a second angular block seated in the other of said sockets, one of said angular blocks presenting one of its edges to one of the sides of the other of said angular blocks, and said blocks being adapted to be substituted for each other.

5. In a device of the character described, the combination with a bearing ring, of a bearing boss, both said bearing ring and said bearing boss having sockets formed therein, angular blocks seated in said sockets, one of said bearing blocks presenting its edge to one of the sides of the other of said bearing blocks.

6. In a device of the character described, the combination with a bearing ring, of a bearing boss, both said bearing ring and said bearing boss having sockets formed therein, angular blocks seated in said sockets, one of said bearing blocks presenting its edge to one of the sides of the other of said bearing blocks, said blocks being adapted to be substituted for each other.

870,800. FLUE-CUTTER. GILBERT SORENSON, Casselton, N. D. Filed Mar. 23, 1907. Serial No. 364,077.



1. A flue cutter, embodying a stock formed with an eccentrically located socket and a segmental slot communicating therewith, the socket being provided with a contracted mouth leading from the slot, and a cutter provided with a round head adapted to fit in said socket and formed with a marginal recess and adapted to register with the contracted mouth so as to permit the cutter to be slipped in and withdrawn from the socket.

2. A flue cutting tool, embodying a stock and a cutter secured thereto, said cutter being provided with an offset and angularly disposed end adapted to form a guide resting against the end of a flue in the cutting operation, as and for the purpose set forth.

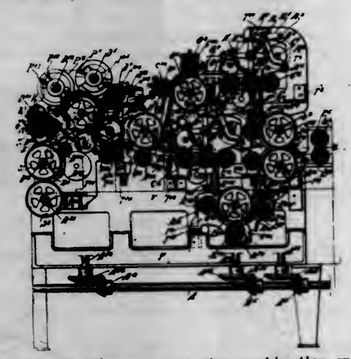
3. A flue cutting tool, comprising a stock adapted to fit within the flue, a cutter secured to said stock, end bars secured to said stock, one of said bars being adapted for use in turning the stock, a washer adapted to fit on the other bar, a spring encircling said bar and adapted to bear against said washer, a follower slidingly mounted on the

bar back of the spring and bearing thereagainst, and an eccentric lever fulcrumed on the bar and adapted to bear against said follower to force it against the spring.

4. A flue cutting tool, comprising a stock adapted to fit within the flue, a cutter secured to said stock, end bars secured to said stock, one of said bars being adapted for use in turning the stock, a washer adapted to fit on the other bar, a spring encircling said bar and adapted to bear against said washer, a follower slidingly mounted on the bar back of the spring and bearing thereagainst, and an eccentric lever fulcrumed on the bar and adapted to bear against said follower to force it against the spring, said follower being formed with oppositely extending studs and the eccentric lever being formed with two members bearing against said studs.

5. A flue cutting tool comprising a stock adapted to fit within a flue, a cutter secured to said stock, bars secured to the ends of said stock, a washer slidingly mounted on one of said bars, a spring encircling the bar back of the washer, a follower slidingly mounted on the bar back of the spring and provided with oppositely extending studs, a collar mounted on the bar back of the follower and adapted to be held at different adjustments on said bar, and a forked eccentric lever fulcrumed on said collar and provided with two eccentrics engaging said studs.

870,801. PAPER-BAG MACHINE. CHARLES B. STILWELL, Wayne, Pa., assignor to Union Paper Bag Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 16, 1902. Serial No. 119,942. Renewed June 7, 1907. Serial No. 377,700.



1. In a paper bag machine, the combination with feed rolls E^9 e^9 of two independent sets of mechanism for feeding forward and acting upon bag blanks, movable switching guides E^{12} e^{12} each operating in one position to engage the blank coming through the feed rolls and direct it into one of the separate sets of mechanism aforesaid, and means acting to shift the guides as described and so that they respectively engage successive blanks and direct them alternately into the separate feed mechanisms aforesaid.

2. In a paper bag machine, the combination with feed rolls E^9 e^9 of two independent sets of mechanism for feeding forward and acting upon bag blanks, movable switching guides E^{12} e^{12} each operating in one position to engage the blank coming through the feed rolls and direct it into one of the separate sets of mechanism aforesaid, cams E^9 e^8 secured on the shafts of the feed rolls E^9 e^9 and connections from said cams to the guides whereby they are operated to alternately engage successive blanks fed through the feed rolls and direct them into the separate sets of feeding and directing mechanism.

3. In a paper bag machine, the combination with two independent devices or sets of mechanism for forming folds on bag blanks; of feed mechanism acting to alternately deliver successive blanks to the separate folding mechanism, feed mechanism leading from each said folding mechanisms to a common feed mechanism, said feeds being arranged to deliver blanks alternately, a common feed mechanism arranged to successively receive the alternately delivered folded blanks and to feed them forward with accelerated speed and mechanism for performing further operations upon the folded blanks connected to receive said folded blanks from the common feed.

4. In a paper bag machine the combination with two independent devices or sets of mechanism for forming diamond folds on bag blanks, of feed mechanism acting to alternately deliver successive blanks to the separate folding mechanisms feed mechanisms leading from each said folding mechanisms to a common feed mechanism said feeds being arranged to deliver diamond folded blanks alternately, a common feed mechanism arranged to successively receive the alternately delivered folded blanks and to feed them forward with accelerated speed and mechanism for forming the final folds of the bags connected to receive said diamond folded blanks from the common feed.

5. In a paper bag machine, the combination with two independent devices or sets of mechanisms for forming folds on bag blanks, of feed mechanism acting to alternately deliver successive blanks to the separate folding mechanism, feed mechanisms leading from each said folding mechanisms to a common feed mechanism, said feeds being arranged to deliver blanks alternately, a common feed mechanism arranged to successively receive the alternately delivered folded blanks and to feed them forward and mechanism for performing further operations upon the folded blanks connected to receive said folded blanks from the common feed.

6. In a paper bag machine the combination of two independent devices or sets of mechanism for forming diamond folds on paper bag blanks, of relatively high speed feed and switching mechanism arranged to deliver alternate blanks to the separate folding devices, mechanism for forming the final folds on the diamond folded blanks moving with relatively high speed to the diamond folding devices and arranged to receive the blanks alternatively from said diamond folding devices.

7. In a paper bag machine the device for opening the end of a tubular blank consisting of suction rolls through which the blanks are passed in combination with separate air valves acting to cut off the suction from the rolls at determined and different points in their revolutions.

8. In a paper bag machine the device for opening the ends of tubular blanks consisting of suction rolls, one or both having formed in it two or more air chambers, each communicating with the surface of the roll through perforations and means whereby the suction is successively cut off from said chambers as the rolls revolve.

9. In a paper bag machine the device for opening the ends of tubular blanks consisting of suction rolls, one or both having formed in it two or more air chambers, each communicating with the surface of the roll through perforations and means whereby the suction is successively cut off from said chambers as the rolls revolve and means whereby the suction is cut off from one roll in advance of the other.

10. In a paper bag machine, the device for opening the ends of tubular blanks consisting of suction rolls, one or both having formed in it or them a series of air chambers each communicating with the surface of the roll through perforations, in combination with a suction conduit, means whereby the air chambers are connected and disconnected with the suction conduit as the rolls revolve, an air inlet and means whereby the air chambers are successively connected with said inlet as they reach a determined point in the revolution of the roll.

11. In a paper bag machine, the combination of suction rolls for opening the ends of bellows folded tubular blanks having a series of air chambers formed in them communicating with their faces through perforations with means for cutting off the suction from said chambers at determined and different points in the revolution of the rolls, gripping fingers moving with the rolls and means for moving said fingers in to engage the corners of the blank and out to disengage said corners at definite points in the revolution.

12. In a paper bag machine, the combination with opening rolls adapted to act on the ends of blanks passing through them of gripping fingers J^3, stud shafts J^4 having bearings in the rolls and to which the fingers are attached, crank levers J^5 secured to the inner ends of said shafts, and situated in cavities G^8 of the rolls, longitudinally extending shafts J, having crank levers secured to them, bent pins J^2 connecting the crank levers on the stud shafts with those on the longitudinal shafts and means for oscillating the longitudinal shafts as the rolls revolve.

13. In a paper bag machine, the combination with rolls for distending the mouth ends of bellows folded tubular blanks as said blanks are fed between them, of fingers K K, not moving with the rolls but adapted to enter the bellows folds immediately above the point where the blanks are engaged by the rolls and means for advancing and retracting said fingers to and from operative position.

14. In a paper bag machine, the combination with distending rolls adapted to open the ends of bellows folded blanks fed between them, of a segmental feed roll acting intermittently in connection with one of the distending rolls to engage the distended end of the blank and feed said blank forward over said distending roll.

15. In a paper bag machine, the combination with distending rolls adapted to open the ends of bellows folded mechanism of a shaft Q rotating with varying speeds for spreading the distended end of the blank into a diamond fold and a segmental feed roll acting intermittently with one of the distending rolls to engage the distended end of the blank and feed said blank forward over said distending roll.

16. In a paper bag machine, the combination with distending rolls adapted to open the ends of bellows folded blanks fed between them, of an oscillating tucker operating to define the transverse fold of the diamond fold acting over one of said rolls and feed mechanism acting to draw the opened blanks away over the other of the distending rolls.

17. In a paper bag machine, the combination with distending rolls adapted to open the ends of bellows folded blanks fed between them of an oscillating tucker operating to define the transverse fold of the diamond fold acting over one of said rolls and a feed roller acting together with the other of the distending rolls to draw the opened blanks away from the tucker.

18. In a paper bag machine, the combination with distending rolls adapted to open the ends of bellows folded blanks fed between them of folding wings acting to press in and down the outer sides of the distended blanks as they emerge from the distending rolls and means for feeding the blanks forward under said wings and over one of said rolls.

19. In a paper bag machine, the combination with distending rolls adapted to open the ends of bellows folded blanks fed between them of an oscillating tucker operating to define the transverse fold of the diamond fold acting over one of said rolls, folding wings acting to press in and down the sides of the distended blanks as they emerge from the distending rolls said wings acting over the tucker and means for feeding the blanks forward under said wings and away from the tucker.

20. In a paper bag machine, the combination with distending rolls adapted to open the ends of bellows folded blanks fed between them of an oscillating tucker operating to define the transverse fold of the diamond fold acting over one of said rolls, folding wings acting to press in and down the sides of the distended blanks as they emerge from the distending rolls said wings acting over the tucker and a segmental feed roll acting with the distending roll over which the tucker does not move to engage the distended blanks at one side and feed them forward under the wing folders and away from the tucker.

21. In a paper bag machine, the combination with mechanism for spreading open the ends of bellows folded bag blanks in the formation of diamond folds thereon of wing folders acting on the sides of the distended ends to press them in and down and edge defining plates separate from the wing folders moving in against the edges of the diamond as the wing folders act upon its sides to regulate the alinement of the side folds.

22. In a paper bag machine, the combination with distending rolls acting to spread open the ends of bellows folded bag blanks fed between them of wing folders acting on the delivery side of the rolls to press in and down the sides of the distended blanks as they are led from between the distending rolls and edge defining plates separate from the wing folders operated to move in against the lateral edges of the distended blank as the wing folders move down to regulate the alinement of the side folds of the diamond fold formed on the blanks.

23. In a paper bag machine, the combination with means for spreading out the ends of bellows folded bag blanks in the formation of diamond folds thereon of wing folders pivoted at one edge and operative to press in and down the side folds of the diamond, pivoted levers L^4 L^4 actuated by cams and coupled to actuate the wing folders and edge defining plates L^7 secured to the levers L^4 and arranged to act against the lateral edges of the diamonds as the wing folders press in the sides.

24. In a paper bag machine, the combination with feed mechanism of retractable fingers movable from and to a position where they define the rear final fold of the bag, mechanism for operating said fingers, clamping devices whereby the bag is clamped against the fingers when they are in operative position and for a determined period, a folder acting against the under side of the blank to fold its slack and the rear flap of the diamond over the fingers aforesaid and feed mechanism acting to receive the blank after it is released from the fingers.

25. In a paper bag machine, the combination with feed mechanism of retractable fingers movable from and to a position where they define the rear final fold of the bag, mechanism for operating said fingers, clamping devices whereby the bag is clamped against the fingers when they are in operative position and for a determined period, a rotary folder acting against the under side of the blank to fold its slack and the rear flap of the diamond over the fingers aforesaid and feed mechanism acting to receive the blank after it is released from the fingers.

26. In a paper bag machine, the combination with feed mechanism of retractable fingers movable from and to a position where they define the rear final fold of the bag, mechanism for operating said fingers, clamping devices whereby the bag is clamped against the fingers when they are in operative position and for a determined period, a rotary folder rotating with varying speeds and acting against the under side of the blank to fold its slack and the rear flap of the diamond over the fingers aforesaid and feed mechanism acting to receive the blank after it is released from the fingers.

27. In a paper bag machine, the combination with feed mechanism of a shaft Q over which the diamond folded blanks are fed, clamping fingers Q^8 Q^8 extending over said shaft and having intermittent movement towards and away from said shaft, retractable fold defining fingers moving from and to a position over the clamping fingers and against which said clamping fingers clamp the blanks for a determined period causing a slack in the rear portion of the advancing blank, and a folder Q' rotating with the shafts Q and timed to engage the slack and fold it with the rear flap of the diamond over the fold defining fingers.

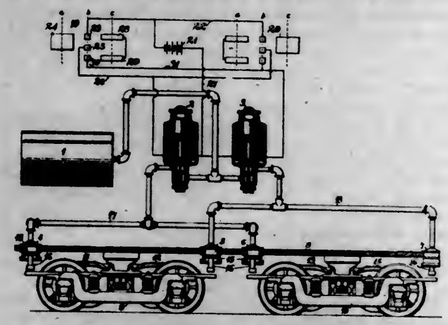
28. In a paper bag machine, the combination with feed mechanism of a shaft Q rotating with varying speeds over which the diamond folded blanks are fed, clamping fingers Q^8 Q^8 extending over said shaft and having an intermittent movement towards and away from said shaft, retractable fold defining fingers moving from and to a position over the clamping fingers and against which said clamping fingers clamp the blanks for a determined period causing a slack in the rear portion of the advancing blank and a folder Q' rotating with the shaft Q and timed to engage the slack and fold it with the rear flap of the diamond over the fold defining fingers.

29. In a paper bag machine, the combination of pasting and creasing devices acting to apply paste to diamond folded bag blanks and to crease the same on the lines of the final folds, with clamping fingers over which the creased blanks are fed, retractable fold defining fingers acting to engage the blanks on the line of the rear final

folds and to hold them for a determined period against the clamping fingers, and a folder moving over the fingers and acting to fold the slack of the blank and the rear flap of the diamond over the defining fingers.

30. In a paper bag machine, the combination with feed mechanism of clamping and retractable fold defining fingers arranged to engage and hold for a determined period the diamond folded blanks on the line of the final fold, a folder acting to fold the slack of the blank and the rear flap of the diamond over the defining fingers, feed and presser rolls arranged to receive the partly folded blank from the folder and compact the rear final fold, means for further feeding and pressing the blanks over which the front of the blanks are fed and a reciprocating tucker acting to press the blank into engagement with said devices.

870,802. VEHICLE CONTROL SYSTEM. NORMAN W. STORER, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 3, 1906. Serial No. 294,430.



1. The combination with a vehicle frame or body, one or more supporting trucks pivotally secured to said frame or body and severally provided with a plurality of pairs of truck wheels, and one or more propelling motors mounted on the truck or trucks, of means for adjusting the point of application to the truck of the resultant force produced by the weight of the frame or body.

2. In a vehicle, the combination with one or more trucks and driving motors therefor, of means for maintaining a substantially equal distribution of weight upon the several pairs of truck wheels during starting, said means comprising means for shifting the point of application of the weight of the vehicle ahead of the center of the truck.

3. In a vehicle, the combination with a pair of carrying trucks and driving motors therefor, of means for automatically applying downward pressure upon the trucks at points ahead of the normal point of application of the weight of the vehicle body upon the trucks.

4. The combination with a vehicle, a pair of carrying trucks therefor, and driving motors for said trucks, of means for automatically exerting a downward pressure upon the trucks ahead of the supporting points, said means comprising a plurality of fluid-pressure actuated members supported by the vehicle body.

5. The combination with a vehicle, a pair of trucks therefor, and driving motors for said trucks, of means for automatically exerting a downward pressure upon the trucks ahead of the supporting points, said means comprising a plurality of fluid-pressure cylinders supported by the vehicle body, pistons therefor, rods actuated by said pistons to engage the trucks and means for admitting fluid-pressure to the forward cylinders for the respective trucks as the driving motors are started in either direction.

6. The combination with a vehicle, a pair of trucks therefor, a plurality of electric driving motors mounted on said trucks and controlling means for said driving motors, of means for automatically exerting downward pressure upon the trucks ahead of the supporting points, said means comprising a plurality of fluid-pressure actuated members supported by the vehicle body.

7. The combination with a vehicle, a pair of trucks therefor, a plurality of electric driving motors mounted on said trucks and controlling means for said driving motors, of means for automatically exerting downward pressure upon the trucks ahead of the supporting points, said means comprising a plurality of fluid-pressure cylinders supported by the vehicle body, pistons therefor and rods actuated by said pistons to engage the trucks, and means for admitting fluid pressure to the forward cylinders for the respective trucks as the driving motors are started in either direction.

8. The combination with a vehicle, a pair of trucks therefor, a plurality of electric driving motors mounted on said trucks and controlling means for said driving motors, of means for automatically exerting downward pressure upon the trucks ahead of the supporting points, said means comprising a plurality of fluid-pressure cylinders supported by the vehicle body, pistons therefor and rods actuated by said pistons to engage the trucks, and means for admitting fluid-pressure to the forward cylinders for the respective trucks as the driving motors are started in either direction, said means comprising electrically controlled selective valves the action of which is dependent upon the position occupied by the controlling means.

9. In a vehicle, the combination with a pair of trucks, and driving motors therefor, of means for applying downward pressure to each end of each truck, and means for governing the application of such pressure in accordance with the direction of movement of the vehicle.

10. In a vehicle, the combination with a pair of trucks, and driving motors therefor, of means for applying downward pressure to each truck either forward or back of its center, and a governing device for directing the application of such pressure to the forward portions of the trucks for either direction of movement.

11. The combination with a vehicle frame or body, one or more four-wheeled supporting trucks pivotally secured thereto, and one or more propelling motors mounted on the truck or trucks, of means for shifting forward the point of application to the truck of the resultant force produced by the weight of the frame or body.

12. The combination with a vehicle frame or body, one or more four-wheeled supporting trucks pivotally secured thereto, and one or more electric propelling motors mounted on the truck or trucks, of electrically controlled means dependent upon the direction of the motor rotation for automatically shifting forward the point of application to the truck of the resultant force produced by the weight of the frame or body while starting the vehicle.

13. The combination with a frame or body, and one or more four-wheeled trucks pivotally secured thereto, of a plurality of propelling motors mounted upon the truck or trucks, and means for adjusting the relation between the force exerted by the weight of the frame or body upon the truck or trucks and the tractive efforts exerted by the motors when starting the vehicle.

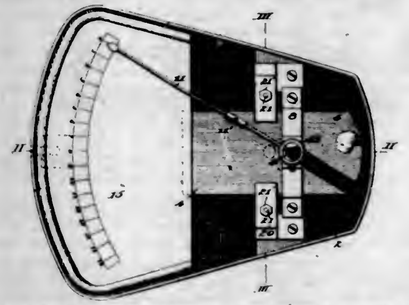
14. The combination with a vehicle frame or body, and one or more self-adjusting trucks therefor, of one or more propelling motors supported by each truck, and electrically controlled means for equalizing the tractive efforts of the pairs of truck wheels while starting the vehicle.

15. The combination with a vehicle frame or body, and one or more self-adjusting trucks therefor, of one or more propelling motors supported by the truck or by each of a plurality of trucks, and electrically controlled means for equalizing the tractive efforts of the pairs of truck wheels while starting the vehicle.

870,803. ELECTRICAL MEASURING INSTRUMENT. CHARLES B. THWING, Philadelphia, Pa. Filed Jan. 25, 1907. Serial No. 354,033.

1. In an electrical measuring instrument, a permanent magnet, an armature movable in the field of said magnet, and means responding to changes in temperature for automatically varying the reluctance of the magnetic circuit to compensate for variations in the resistance of the electric circuit of the armature due to changes of temperature in the atmosphere surrounding the galvanometer.

2. In a movable coil galvanometer, a permanent magnet, and a coil movable in the magnetic field of said magnet, and means responding to changes of temperature for automatically varying the reluctance of the magnetic circuit to compensate for variations in the resistance of the electric circuit of said coil due to changes of temperature in the atmosphere surrounding the galvanometer.



3. In an electrical measuring instrument, a magnet having poles adapted to be moved towards or from each other, a coil movable in the magnetic field between said poles, and means for automatically varying the distance between said poles in order to vary the strength of the magnetic field to compensate for variations in the resistance of the electric circuit due to changes of temperature in the atmosphere surrounding the instrument.

4. In an electrical measuring instrument, a one-piece magnet having spring terminals or poles adapted to be moved towards or from each other, a coil movable in the magnetic field between said terminals or poles, and means for automatically varying the distance between said poles in order to vary the strength of the magnetic field to compensate for variations in the resistance of the electric circuit due to changes of temperature in the atmosphere surrounding the instrument.

870,804. LIFE-SAVING SUIT. MAX A. TIECK, Denver, Colo. Filed Sept. 29, 1906. Serial No. 336,673.



A device of the class described comprising a garment having a pair of back pockets extended conjointly over substantially the entire area of the rear side of the garment and a pair of side pockets disposed respectively beneath the arms, said side and back pockets being connected for communication one with another, and a pump permanently connected with one of the pockets for inflating all of said pockets.

870,805. IRONER'S CABINET. LOUIS R. TRAGER, Springfield, Ill. Filed Jan. 25, 1906. Serial No. 297,893.



1. The combination of a cabinet adapted to contain a folding ironing board and having a hinged top, a folding ironing board fitting within the cabinet and a connecting device connecting the ironing board with the top of the cabinet in such manner that the raising of the top from its closed horizontal position and turning it to its open horizontal position causes the ironing board to assume a horizontal position on top of the cabinet and reverse movement of the door restores the ironing board to its position within the cabinet.

2. Ironing-board sections having cuts in their adjacent ends, hinge plates fitting in said cuts and having extensions upon which the ironing-board sections bear when said sections are extended, and pivots situated in said sections and passing through said plates; in combination with a cabinet adapted to contain said ironing-board sections and provided with a hinged top with which one of said ironing-board sections is connected, and a frame mounted within said cabinet and adapted to support one of said ironing-board sections when they are extended and revoluble to a limited extent by the weight of said ironing-board sections when they are folded together.

3. The combination of a cabinet provided with a compartment adapted to contain a folded ironing board, inclined bars in said compartment for supporting the ironing board, a top hinged to said cabinet, ironing-board sections connected by hinges, a revoluble frame within the compartment of the cabinet containing the ironing board, a brace connected with one member of the ironing board and having a hook engaging the revoluble frame, a socket on the cabinet in which said brace fits, and rods connecting one member of the ironing board with the hinged top of the cabinet.

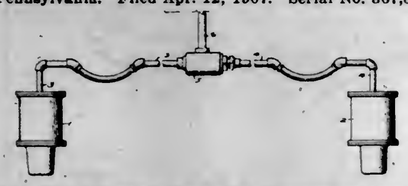
4. The combination of ironing-board sections, hinge plates connecting said sections, a channeled block provided with a stop and secured on one of said sections, a cabinet having a compartment adapted to contain the folded ironing-board sections, a top hinged on said cabinet, a rod having a hinge connection with said top, and a connecting rod connected with said first named rod and having a transverse pin having limited travel in the channel of the plate on the ironing board section; all so constructed and arranged as to permit limited turning of the cabinet top before it begins to withdraw the ironing board from the compartment in the cabinet.

5. The combination of ironing-board sections having a hinge connection with each other, a cabinet, and a frame mounted within the cabinet and adapted to support one of said ironing-board sections when they are extended and revoluble to a limited extent by the weight of said ironing-board sections when they are folded together.

6. The combination of a cabinet, a top hinged on said cabinet, ironing-board sections having a hinge connection with each other, a connecting device connecting one of said ironing-board sections with said top, and a frame mounted within said cabinet and adapted to support one of

said ironing-board sections when they are extended and revoluble to a limited extent by the weight of said ironing-board sections when they are folded together.

870,806. FLUID-PRESSURE BRAKE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Apr. 12, 1907. Serial No. 367,809.



1. In a fluid pressure brake, the combination with two brake cylinders, a common source of fluid pressure supply, and a branch pipe connecting said source to each brake cylinder, of means for closing communication through a branch pipe to one brake cylinder on excessive leakage therefrom.

2. In a fluid pressure brake, the combination with two brake cylinders, a common source of fluid pressure supply, and a branch pipe connecting said source to each brake cylinder, of a double check valve device for closing communication to one brake cylinder on excessive leakage therefrom.

3. In a fluid pressure brake, the combination with a plurality of brake cylinders, a common source of fluid pressure supply, and two branch pipes for supplying fluid to said brake cylinders, of a double check valve device for controlling communication through said branch pipes to the brake cylinders.

4. In a fluid pressure brake, the combination with a plurality of brake cylinders, a common source of fluid pressure supply, and two branch pipes for supplying fluid to said brake cylinders, of a double check valve device for closing communication through a branch pipe to one brake cylinder, on excessive leakage therefrom, and means for normally maintaining open communication to both branch pipes.

5. In a fluid pressure brake, the combination with a plurality of brake cylinders, a common source of fluid pressure supply, and two branch pipes for supplying fluid to said brake cylinders, of means for closing communication through a branch pipe to one brake cylinder on excessive flow of fluid thereto, and means tending to resist the closing of said communication under slight variations of fluid pressure.

6. In a fluid pressure brake, the combination with a plurality of brake cylinders, a common source of fluid pressure supply, and two branch pipes for supplying fluid to said brake cylinders, of a double check valve for controlling communication between said source of supply and said branch pipes and adapted on preliminary movement from its normal position to restrict one communication and enlarge the other.

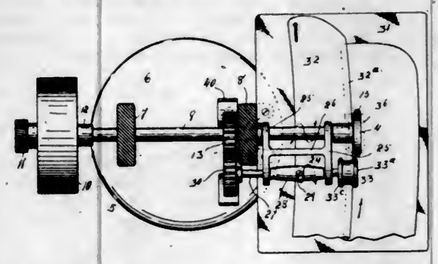
7. In a fluid pressure brake, the combination with two brake cylinders, of a common source of fluid pressure supply and two branch pipes for supplying fluid to said brake cylinders, of means subject to the opposing pressures in said brake cylinders for controlling communication thereto.

8. A double check valve device comprising a casing containing a double head valve piston and having an inlet port intermediate the piston heads, and an outlet port communicating with each check valve and controlled by the respective piston heads.

9. A double check valve device comprising a casing containing a double head valve piston having opposite seats, said casing having a common inlet between the piston heads communicating with an outlet port controlled by each piston head and opening to the respective check valve.

10. A double check valve device comprising a casing containing a double head valve piston having opposite seats, said casing having a common inlet between the piston heads communicating with an outlet port controlled by each piston head and opening to the respective check valve, and means for normally maintaining the check valve in open position.

870,807. SEAM-DAMPENER. HENRY A. TWIGG, Denver, Colo. Filed Sept. 16, 1904. Serial No. 224,731.



1. In a seam damper, the combination with a suitable frame, a table plate mounted thereon, an operating shaft journaled in the frame, a feed wheel mounted on said shaft, a moistening belt surrounding the feed wheel and located above the table plate, another feed wheel located below the table plate and coöperating with the first named feed wheel, the table plate being slotted to permit the cooperation of the two wheels, means for moistening the belt, and means for guiding the collars that pass between the two feed wheels, said means consisting of a yieldingly retained rotary device acting on the collar and having a tendency to move it in a direction opposite the movement given by the feed wheels, substantially as described.

2. In a machine of the class described, the combination with a table plate and means for simultaneously feeding and moistening the collar along a line of its seam, the collar being supported on the table plate, of a yieldingly-retained rotary guide having flanges which straddle the seam of the collar, the said guide acting on the collar in opposition to the feeding means.

3. The combination with a table plate for supporting the collar, and rotary means for feeding the latter, of a yieldingly retained rotary guide engaging the collar on opposite sides of the seam and rotating in opposition to the rotary feed means, substantially as described.

4. The combination with a suitable frame, and a table plate mounted thereon and having a slot, a feed wheel mounted on the shaft above the slot, another feed wheel mounted on the shaft below the table plate and projecting into the slot, the two wheels coöperating to cause the collar to travel in a given direction, a moistening belt passing around the upper feed wheel, means for applying moisture to the said belt, and a yieldingly retained guide wheel having flanges straddling the seam of the collar and having a tendency to move the latter in a direction opposite the movement given by the feed wheels.

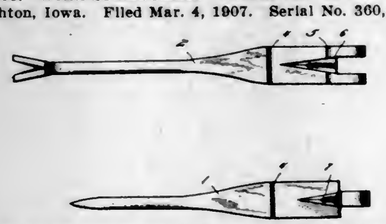
5. The combination with a suitable frame of a table plate, a main shaft journaled in said frame, a wheel made fast to one end of the shaft, another wheel mounted in the same plane above the shaft, a moistening belt passing around the two wheels, a spring-held frame pivotally mounted on the said shaft, another shaft journaled in the said frame, a gearing connection between the two shafts, and a rotary guide mounted on the shaft carried by the pivoted frame and adapted to engage the collar while resting on the table plate for the purpose set forth.

6. The combination with a suitable frame and a table mounted thereon and provided with a slot, two feed wheels located respectively above and below the table plate and adapted to engage the collar on opposite sides, a moistening belt engaging one of the said wheels, means for moistening the said belt, and means for guiding the collar as it is carried over the table by the feed wheels, said means consisting of a yieldingly-retained rotary device acting on the collar and having a tendency to move it in a direction opposite the movement given by the feed wheels.

7. The combination with a suitable frame and a table plate mounted thereon, of a main shaft journaled therein and having a feed wheel at one extremity, a water tank mounted on the frame and having a receptacle at one end communicating with the body of the tank, a wheel journaled on the tank and dipping into the water receptacle thereof, a moistening belt passing around the two wheels, a second shaft journaled below the first named shaft and geared thereto, a feed wheel mounted on the second shaft and coöperating with the first named feed wheel, a water receptacle into which the lower feed wheel dips, a spring-held oscillating frame mounted on the first named shaft, a third shaft journaled in the said frame, a gearing connection between the third and first shafts, and a rotary guide mounted on the third shaft and engaging the article to be ironed, the latter being supported by the table plate,

8. In a seam dampener, the combination with a table plate and rotary means for feeding and dampening the collar while resting on the table plate, of a yieldingly-retained oscillating frame, a rotary guide mounted on the frame and engaging the collar, and means for rotating the guide in a direction having a tendency to retard the travel of the collar under the influence of the rotary feed.

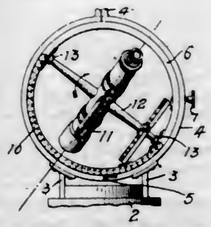
870,808. WIRE-STRETCHER. WILLIAM A. VANDERWILT, Ashton, Iowa. Filed Mar. 4, 1907. Serial No. 360,466.



1. A wire stretcher comprising a pair of members pivoted together, one of said members having a longitudinal groove, and the other member a projecting tongue adapted to engage said groove, said tongue and groove being U-shaped near the pivot and diminishing and becoming V-shaped towards its terminal, substantially as described.

2. A device of the class described comprising two members, pivoted together, one of said members having a longitudinal recess therein, the other member having a projecting tongue adapted to engage said recess, and a second recess formed across said first-named recess, substantially as and for the purpose described.

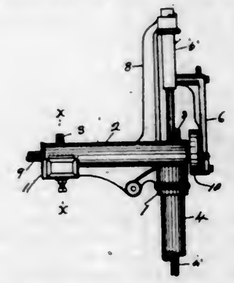
870,809. SURVEYING INSTRUMENT. CLINTON L. WALKER, Piedmont, Cal. Filed Mar. 30, 1907. Serial No. 365,534.



1. The combination, with a transit having a fixed ring, of a second ring rotatably mounted within said first named ring and concentric therewith and bearing a suitable scale graduated in degrees and minutes and readable from zero to the right and to the left, the graduations of said inner ring being adapted to be set opposite a fixed mark on the outer ring according to the inclination desired, and a telescope having bearings in said rotatable ring and whereby angles can be read in a plane inclined to the horizontal, substantially as described.

2. The combination, with a transit, of a fixed outer ring having a zero mark thereon, an inner ring rotatably mounted and concentric with said outer ring, means for clamping said inner ring, said inner ring having a scale graduated in degrees and minutes and readable from zero to the right and to the left around said ring, the graduations of said inner ring being adapted to be set opposite the zero mark of said outer ring when the inner ring is rotated, and a telescope having an axis journaled in said inner ring and adapted to be swung by the rotation of said inner ring to a plane inclined to the horizontal, substantially as described.

870,810. SHAFT-BEARING. FRANK T. ZIMMERMAN, Auburn, Ind. Filed Sept. 24, 1906. Serial No. 335,852.



1. A shaft bearing comprising a removable open-top boxing for the lower face of the shaft; a supporting casing for the said boxing and said shaft, having a lateral opening through which the boxing can be removed or inserted without disturbing the shaft; a vertically adjustable pillow block supporting the said boxing and adapted for a limited vertical adjustment; and means for vertically adjusting the pillow block to compensate for wear and to preserve the alinement of the shaft.

2. In a shaft bearing a supporting open top boxing removably mounted in the shaft casing and having a limited vertical adjustment therein; a chambered shaft casing; a supporting pillow block for the said boxing having a vertical flange upon its outer face; and a vertical screw engaging the said block and adapted to impart to the said block and said boxing a vertical adjustment for the purpose described.

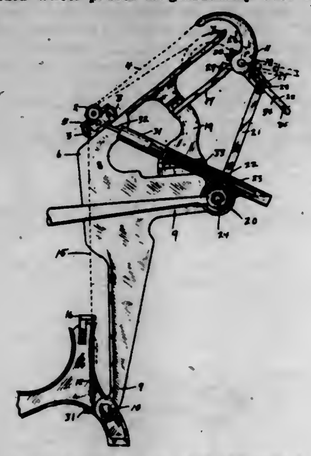
870,811. PLATE PRINTING-PRESS. WALLACE P. ALLEN, Milwaukee, Wis. Filed Mar. 11, 1907. Serial No. 361,700.

1. In a printing press of the class described, the combination of an ink distributing roller, an operating wheel connected with said roller, a driving belt adapted to engage the periphery of said wheel and means connected with the press for keeping said belt taut as the roller and operating wheel passes over it.

2. In a printing press of the class described, the combination of a roller carriage, two parallel ink distributing rollers carried by said carriage and adapted to bear directly upon the ink disk and typeform, a third distributing roller centrally located between and adapted to bear upon both of said first named rollers, an operating wheel connected with said centrally located roller, a driving belt adapted to engage the periphery of said wheel, means connected with the press for keeping said belt taut and in operating contact with said wheel as the latter passes longitudinally over it.

3. In a printing press of the class described, the combination of a roller carriage, two parallel ink distributing rollers carried by said carriage and adapted to bear directly upon the ink disk and typeform, a third distributing roller centrally located between and adapted to bear upon both of said first named rollers, a sprocket wheel

connected with said centrally located roller, a sprocket chain adapted to engage the periphery of said wheel, means connected with the press for keeping said sprocket chain taut and in operative contact with said sprocket wheel as said wheel passes longitudinally over it.

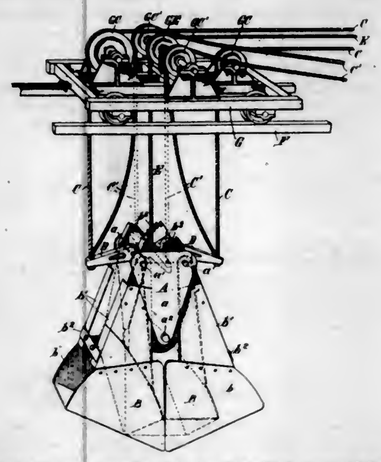


4. In a printing press of the class described a plurality of ink distributing rollers, a carriage for retaining said rollers in their proper operative relation to each other and the surface over which they are adapted to move, means connected with the press for moving said carriage and rollers upwardly and downwardly over the ink disk and form, an operating wheel connected with one of said rollers, a driving belt adapted to engage the periphery of said wheel, a spiral spring connected with the lower end of said belt and adapted to take up the slack in said belt as said rollers move in the opposite direction from said spring, a swinging lever connected with the upper end of said belt and adapted to move upwardly and take up the slack in said belt as the carriage moves in the opposite direction from said lever, and means connected with the press for moving said lever, substantially as described.

5. In a printing press of the class described, a plurality of ink distributing rollers, a carriage for retaining said rollers in their proper operative relation to each other and the surface over which they are adapted to move, means connected with the press for moving said carriage and rollers upwardly and downwardly over the ink disk and form, an operating wheel connected with one of said rollers, a driving belt adapted to engage the periphery of said wheel, a spiral spring connected with the lower end of said belt and adapted to take up the slack in said belt as said rollers move in the opposite direction from said spring, a swinging lever connected with the upper end of said belt and adapted to move upwardly and take up the slack in said belt as the carriage moves in the opposite direction from said lever, means connected with the press for moving said lever, means for changing the adjustment of the connecting link between the operating member of said press and said belt operating lever and means connected with the opposite side of said belt operating lever for adjusting and limiting the movement to said lever toward the roller supporting carriage.

6. In a printing press of the class described, a plurality of ink distributing rollers, a carriage for retaining said rollers in their proper operative relation to each other and the surface over which they are adapted to move, means connected with the press for moving said carriage and rollers upwardly and downwardly over the ink disk and form, an operating wheel connected with one of said rollers, a driving belt adapted to engage the periphery of said wheel, a spiral spring connected with the lower end of said belt and adapted to take up the slack in said belt as said rollers move in the opposite direction from said spring, a swinging lever connected with the upper end of said belt and adapted to move upwardly and take up the slack in said belt as the carriage moves in the opposite direction from said lever, means connected with the press for moving said lever, means for changing the adjustment of the connecting link between the operating member of said press and said belt operating lever means connected with the opposite side of said belt operating lever for adjusting and limiting the movement to said lever toward the roller supporting carriage, and means for limiting the expansion of the spring connected with the lower end of said roller actuating belt.

870,812. GRAB-BUCKET AND OPERATING MECHANISM. HERMAN P. ANDRESEN, Chicago, Ill., assignor of one-half to David J. Evans, Chicago, Ill. Filed Nov. 5, 1906. Serial No. 342,087.



1. The improvements herein described, comprising, in combination, a grab bucket composed of a frame, separated pivots thereon, scoops mounted on said pivots respectively, scoop opening and closing means including suitable cables, certain of said cables rising from a point or points distant from the vertical axis of the bucket and laterally movable but otherwise relatively fixed quartering sheaves for said cables; whereby the bucket may be opened and closed and turned by manipulating said cables, substantially as described.

2. The improvements herein described, comprising, in combination, a grab bucket, a laterally movable support, a plurality of cable sheaves mounted thereon, and bucket operating cables, passing over said sheaves two of said cables being attached to and extending from a single point on said bucket, distant from the vertical axis thereof, and passing over separate sheaves on said support, for turning or twisting the bucket, substantially as described.

3. The improvements herein described, comprising a grab bucket, in combination with opening, and closing hoisting-cables therefor and suitable laterally movable, but otherwise relatively fixed, cable carriers or sheaves quarteringly arranged above the bucket, and at least two of said cables extending from a single point on the bucket over two of said sheaves, substantially as and for the purpose specified.

4. The improvements herein described, comprising a plurality of cable sheaves, in combination with a laterally movable, non-rotative support for said sheaves, a grab bucket, cables whereby said bucket is suspended from said sheaves and said sheaves, said cables and said bucket being so related, that said bucket may be turned by slackening and tensioning said cables, substantially as described.

5. The improvements herein described, comprising a laterally movable support, in combination with a cable sheave centrally mounted thereon, other sheaves also mounted thereon and spaced about the first mentioned or central sheave, a grab bucket, a central operating cable whereon the bucket is suspended from said central sheave and a pair of operating cables each on its own sheave and extending to a single, non-central point upon the bucket, whereby said cables aid the suspension of said bucket and by which the bucket may be turned or twisted, substantially as described.

6. The improvements herein described, comprising a laterally movable support, in combination with a central cable sheave mounted thereon, other sheaves also mounted thereon and spaced about the first mentioned or central sheave, a grab bucket, a central operating cable whereon the bucket is suspended from said central sheave, and two pairs of operating cables, each pair extending from a single, non-central point upon the bucket whereby the bucket is suspended from said spaced sheaves, substantially as described.

7. The improvements herein described comprising a frame, in combination with widely separated pivots thereon, substantially triangular scoops mounted on respective pivots and adapted to close beneath said frame, and suitable scoop opening and closing means including hoisting cables, substantially as described.

8. The improvements herein described, comprising a grab bucket composed of a frame, in combination with scoops having their upper ends pivotally attached to said frame, the pivotal axes of the scoops being separate thereon, and suitable scoop operating means provided upon said frame, beneath said pivots, substantially as described.

9. The improvements herein described comprising a frame, in combination with separate scoop pivots thereon, two scoops having their upper ends fixed upon respective pivots, scoop-closing means connecting said scoops beneath said frame and hoisting and operating cables for opening and closing said scoops and hoisting the device as a whole, substantially as described.

10. The improvements herein described, comprising a frame, in combination with bucket portions, independently pivoted on said frame and widely separated thereon, but adapted to close together at the bottom to complete a grab bucket, means for opening said bucket and differential winding and hoisting means extending between and connecting said scoops beneath said frame, substantially as described.

11. The improvements herein described, comprising a grab bucket, having opening and closing members, in combination with means for sustaining and hoisting said bucket and a cable adapted to aid in sustaining and hoisting said bucket, the lower end of said cable being attached to the bucket at a point distant from the vertical axis thereof, whereby relatively lateral tension may be exerted to rotate the bucket on said axis, substantially as described.

12. The improvements herein described, comprising a grab bucket having opening and closing members, in combination with a central operating cable, pairs of non-central operating cables, a suitable laterally movable support and sheaves thereon, one for each of said cables, substantially as described.

13. The improvements herein described, comprising a grab bucket, composed of a frame, in combination with rigid scoops having their upper ends pivoted thereon, a winding or closing mechanism inclosed within and by said scoops, opening cables attached to respective scoops, and another operating cable attached to said closing means, substantially as described.

14. The improvements herein described, comprising a frame, in combination with scoops separately and distantly pivoted apart thereon, closing or winding means on said frame beneath the scoop pivots, an operating cable for each scoop and an operating cable common to said scoops, connected to the same and said frame through the medium of said winding means, substantially as described.

15. The improvements herein described, comprising a frame, in combination with a winding mechanism thereon, scoops pivoted on said frame above said winding mechanism, an operating cable extending between the pivots of the scoops and attached to said operating means and other operating cables connected to respective scoops, substantially as described.

16. The improvements herein described, comprising a frame, in combination with scoop closing or winding means in the lower part of said frame, single member scoops adapted to close beneath said frame and having their upper ends distantly pivoted separately thereon at points widely apart and above said winding means and suitable operating cables connected with said winding means and said scoops, substantially as described.

17. The improvements herein described, comprising a frame, in combination with closing or winding means thereon, scoops adapted to close beneath said winding means and separately pivoted to said frame at different points above said winding means and suitable equalizing means joining said scoops, substantially as described.

18. The improvements herein described, comprising a frame, in combination with single member scoops adapted to close beneath said frame and having widely separated upper ends pivotally mounted upon said frame, opening cables connected to respective scoops and a closing cable suitably connected to both scoops at points within the same, substantially as described.

19. The improvements herein described, comprising a frame, in combination with scoops separately pivoted on said frame and adapted to close beneath the same, an equalizer connecting said scoops, opening cables, compound leverage devices connecting the same with respective scoops and a closing cable connected with both scoops, substantially as described.

20. The improvements herein described, comprising a frame, in combination with shafts therein, scoops arranged on respective shafts and adapted to close beneath said frame, equalizing means connecting the upper ends of said scoops, scoops opening arms or levers, a winding mechanism mounted in said frame beneath said shafts and connected with said scoops and suitable hoisting cables, substantially as described.

21. The improvements herein described, comprising a frame, in combination with a differential winding mechanism thereon, scoops pivoted on said frame above the winding mechanism and adapted to close together beneath the winding mechanism, substantially as described.

22. The improvements herein described, comprising a frame, in combination with a differential winding mechanism thereon, the scoops pivoted on said frame above said winding mechanism and adapted to close together beneath said winding mechanism, an equalizer connecting said scoops and compound leverage devices connected with said scoops for opening the same, substantially as described.

23. The improvements herein described, comprising a suitable trolley, in combination with a central sheave thereon, other sheaves quartered about the same on the trolley, a grab bucket, pairs of cables extending from said bucket over the quartered sheaves on the trolley and a central cable extending from the bucket over said central sheave, substantially as described.

24. The improvements herein described, comprising a frame, in combination with scoops having their upper ends pivoted thereon, differential closing means on the frame beneath the scoop pivots, suitable opening cables connected with respective scoops and a closing cable connected with said closing means, substantially as described.

25. The improvements herein described, comprising two scoops, each a single rigid member, in combination with means pivotally joining the upper ends of said scoops, a suitable equalizer, scoop opening cables connected with respective scoops and a central closing cable connected with both scoops at points below the upper ends thereof, substantially as described.

26. The improvements herein described, comprising two scoops, each a single rigid member, in combination with means pivotally joining the upper ends of said scoops, a suitable equalizer, pairs of scoops opening cables connected with respective scoops and a central closing cable connected with both scoops at points below the upper ends thereof, substantially as described.

27. The improvements herein described, comprising two scoops, each a single rigid member, in combination with means pivotally joining the upper ends of said scoops, a suitable equalizer and non-coincident sheaves, one for each cable, said scoop opening cables connected with respective scoops and a central closing cable connected with both scoops at points below the upper ends thereof, substantially as described.

28. The improvements herein described comprising a frame, in combination with substantially triangular scoops, an equal number of pivotal shafts in said frame whereon the upper ends of the scoops are mounted, said scoops being adapted to close beneath said frame, scoop closing means provided in the frame beneath said shafts and opening and closing cables attached to said scoops and to said closing means respectively, substantially as described.

29. The improvements herein described, comprising a frame, in combination with a plurality of shafts therein, substantially triangular scoops, each mounted on one of said shafts, such pivotal shafts and the upper ends of said scoops being widely separated, a winding mechanism arranged in said frame beneath said shafts for closing said scoops and hoisting cables attached to said winding mechanism and to respective scoops, substantially as described.

30. In a device of the class described, a substantially triangular frame, in combination with a pair of scoops having their upper ends pivoted therein, differential closing means on said frame beneath the scoop pivots, an arm rigidly connected to each said scoop, a pair of cables attached to the outer end of each said arm and adapted to open said scoop and turn the same on its vertical axis, and a combined closing and hoisting cable connected to said differential closing means, substantially as described.

31. In a device of the class described, a suitable frame, in combination with a pair of scoops having their upper ends pivoted therein, equalizing means connecting the upper ends of said scoops, differential closing means on said frame, an arm rigidly connected to each said scoop, a pair of cables attached to each said arm and adapted to open said scoop and to turn the same on its vertical axis and a hoisting cable, connected to said differential closing means, substantially as described.

32. In a device of the class described, a suitable frame, in combination with a pair of shafts mounted in said frame, co-acting scoops having their upper ends mounted on respective shafts, differential closing means inclosed by said scoops beneath said shafts, opening cables suitably connected with respective scoops, and a central cable connected with and actuating said differential closing means, substantially as described.

33. In a device of the class described, a suitable frame, in combination with a pair of shafts mounted in said frame, co-acting scoops mounted on said shafts, equalizing means connecting said scoops, differential closing means mounted upon said frame, suitable opening cables connected with respective scoops, and a closing cable connected with said closing means, substantially as described.

34. In a device of the class described, a suitable frame, in combination with a pair of shafts mounted in said frame, co-acting scoops mounted on said shafts, differential closing means, a pair of cables connected with each said scoop and adapted to open the same and to turn the device as a whole, and a closing cable connected to said closing means, substantially as described.

35. In a device of the class described, a suitable frame, in combination with a pair of shafts mounted in said frame, a pair of co-acting scoops mounted on said shafts, intermeshing segmental gears on said shafts, differential closing means upon said frame, opening cables and a closing cable, substantially as described.

36. In a device of the class described, a suitable frame, in combination with a pair of shafts mounted in said frame, a pair of co-acting scoops mounted on said shafts, an arm rigidly secured to each said shaft, suitable opening cables connected with said arms, differential closing means mounted upon said frame and a suitable hoisting cable connected therewith, substantially as described.

37. In a device of the class described, a suitable frame, in combination with a pair of shafts mounted in said frame, a pair of co-acting scoops mounted on respective shafts, an arm rigidly secured to each said shaft, a pair of cables attached to each arm and adapted to open respective scoops and to turn the device as a whole, differential closing means mounted upon said frame, and a closing cable, substantially as described.

38. In a device of the class described, a suitable frame, in combination with a pair of scoops pivoted on said frame, equalizing means connecting said scoops, a movable support above said frame, a cable sheave centrally mounted thereon, differential scoop closing means mounted in said frame, a hoisting cable attached to said closing means and passing over said sheave, other sheaves mounted upon said support and arranged quartering about said central sheave, an arm rigidly secured to each said scoop and a pair of cables attached to each said arm and passing over separate sheaves upon said support, substantially as and for the purpose described.

39. The improvements herein described, comprising a laterally movable support, in combination with three sheaves mounted thereon, a grab bucket having a central closing cable extending over the middle sheave on said support and two cables extending over the other sheaves and attached to the members of said bucket for opening the same, substantially as described.

40. The improvements herein described, comprising a grab bucket composed of scoops, in combination with a closing mechanism, a central scoop closing cable, scoop opening cables attached to respective scoops and suitably positioned sheaves for said cables, substantially as described.

41. The improvements herein described comprising a frame, in combination with substantially triangular scoops, an equal number of pivotal shafts whereby the upper ends of the scoops are attached to said frame, said scoops being adapted to close beneath said frame, scoop closing means and opening and closing cables attached to said scoops and to said closing means respectively, substantially as described.

42. The improvements herein described, comprising a frame, in combination with substantially triangular scoops each pivoted to the frame by a single shaft, such pivotal shafts being widely separated, a winding mechanism for closing said scoops and hoisting cables attached to said winding mechanism and respective scoops, substantially as described.

43. In a device of the class described, a substantially triangular frame, in combination with a pair of scoops having their upper ends pivoted therein, differential closing means beneath the scoop pivots, an arm rigidly connected to each said scoop, a pair of cables attached to the outer end of each said arm and adapted to open said scoop and turn the same on its vertical axis, and a combined closing and hoisting cable connected to said differential closing means, substantially as described.

44. In a device of the class described, a suitable frame, in combination with a pair of shafts mounted in said frame, a pair of co-acting scoops mounted on said shafts, intermeshing segmental gears on said shafts, differential closing means, opening cables and a closing cable, substantially as described.

45. In a device of the class described, a suitable frame, in combination with a pair of shafts mounted in said frame, a pair of co-acting scoops mounted on said shafts, an arm rigidly secured to each said shaft, suitable opening cables connected with said arms, differential closing means and a suitable hoisting cable connected therewith, substantially as described.

46. In a device of the class described, a suitable frame, in combination with a pair of scoops pivoted on said frame, equalizing means connecting said scoops, a movable support above said frame, a cable sheave centrally mounted thereon, differential scoop closing means mounted in said frame, a hoisting cable attached to said closing means and passing over said sheave, other sheaves mounted upon said support and arranged quartering about said central sheave, an arm secured to each said scoop and a pair of cables attached to each said arm and passing over separate sheaves upon said support, substantially as and for the purpose described.

47. The improvements herein described, comprising a frame, in combination with scoops separately pivoted on said frame and adapted to close beneath the same, opening cables, compound leverage devices connecting the same with respective scoops and a closing cable connected with both scoops, substantially as described.

48. The improvements herein described, comprising a frame, in combination with a differential winding mechanism thereon, the scoops pivoted on said frame above said winding mechanism and adapted to close together beneath said winding mechanism, and compound leverage devices connected with said scoops for opening the same, substantially as described.

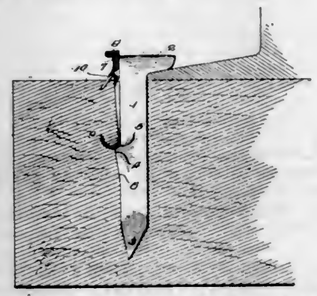
49. The improvements herein described, comprising two scoops, each a single rigid member, in combination with means pivotally joining the upper ends of said scoops, scoop opening cables connected with respective scoops and a central closing cable connected with both scoops at points below the upper ends thereof, substantially as described.

50. The improvements herein described, comprising two scoops, each a single rigid member, in combination with means pivotally joining the upper ends of said scoops, pairs of scoop-opening cables connected with respective scoops and a central closing cable connected with both scoops at points below the upper ends thereof, substantially as described.

51. The improvements herein described, comprising two scoops, each a single rigid member, in combination with means pivotally joining the upper ends of said scoops, and non-coincident sheaves, one for each cable, said scoop opening cables connected with respective scoops and a central closing cable connected with both scoops at points below the upper ends thereof, substantially as described.

52. In a device of the class described, a rigid frame, in combination with a pair of scoops having their upper ends directly pivoted upon said frame, differential closing means beneath the scoop pivots, an arm extending from each said scoop, an opening cable for each arm, and a combined closing and hoisting cable connected to said differential closing means, substantially as described.

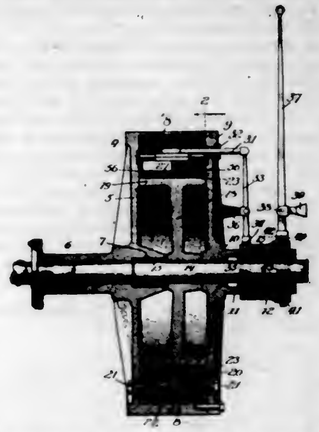
870,813. SPIKE. THOMAS BOOTH, Boise, Idaho. Filed June 22, 1907. Serial No. 380,332.



The combination of a spike, and a key designed to be driven at one side of the spike and formed with an outwardly deflected prong.

870,814. POWER-TRANSMITTER. FRANK DE COLIGNY, Chicago, Ill. Filed Apr. 24, 1907. Serial No. 369,961.

1. In a power-transmitter of the character described, the combination of a hollow drive-wheel on its shaft, a driven-wheel on its shaft supported within said drive-wheel, a partition forming intercommunicating oil-chambers between said wheels and containing a valved port, means for operating the valve of said port, a spring-pressed abutment supported to contact with the rim of said driven-wheel, spring-pressed abutments supported on the driven-wheel to contact with said partition, and cams in the inner chamber, into the path of which said abutments on the driven-wheel extend, for the purpose set forth.



2. In a power-transmitter of the character described, the combination of a hollow drive-wheel on its shaft, a driven wheel on its shaft supported within said drive-wheel, an annular partition forming intercommunicating oil-chambers between said wheels and containing a valved port, means for operating the valve of said port, a spring-pressed abutment containing a passage and supported in the communication between said chambers to contact with the rim of said driven-wheel, spring-pressed abutments supported on the driven wheel to contact with said partition, and cams in the inner chamber, into the path of which said abutments on the driven wheel extend, for the purpose set forth.

3. In a power-transmitter of the character described, the combination of a hollow drive-wheel on its shaft, a driven-wheel on its shaft supported within said drive-wheel, a partition forming intercommunicating oil-chambers between said wheels and containing a valved port, means for operating the valve of said port, a spring-pressed abutment supported to contact with the rim of said driven-wheel, spring-pressed abutments supported on the driven-wheel to contact with said partition, cams in the inner chamber, into the path of which the abutments on the driven-wheel extend, and cams on the driven-wheel in the path of said first-named abutment, for the purpose set forth.

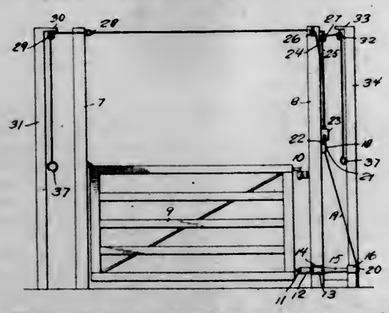
4. In a power-transmitter of the character described, the combination of a hollow drive-wheel on its shaft, a driven-wheel on its shaft supported within said drive-wheel, an annular partition forming intercommunicating oil-chambers between said wheels and containing a port, a slide-valve supported in guides at the sides of said port and provided with a stem extending through the drive-wheel, lever-mechanism connected with said valve for operating it, a spring-pressed abutment supported to contact with the rim of said driven-wheel, spring-pressed abutments supported on the driven-wheel to contact with said partition, and cams in the inner chamber, into the path of which said abutments on the driven-wheel extend, for the purpose set forth.

5. In a power-transmitter of the character described, the combination of a hollow drive-wheel on its shaft, a driven-wheel on its shaft supported within said drive-wheel, an annular partition forming intercommunicating oil-chambers between said wheels and containing a port, a slide-valve supported in guides at the sides of said port and provided with a stem extending through the drive-wheel, a sleeve on the driven-shaft longitudinally movable thereon, a lever fulcrumed between its ends and connected at its opposite ends respectively with said stem and sleeve,

and an operating-lever having a yoke-connection with said sleeve for shifting it, a spring-pressed abutment supported to contact with the rim of said driven-wheel, spring-pressed abutments supported on the driven-wheel to contact with said partitions, and cams in the inner chamber, into the path of which said abutments on the driven-wheel extend, for the purpose set forth.

6. In a power-transmitter of the character described, the combination of a hollow drive-wheel on its shaft, a driven-wheel on its shaft supported within said drive-wheel and having a rim contacting with the sides thereof, spring-pressed abutments pivotally supported in recesses in said driven-wheel, an annular partition in said drive-wheel forming therein an inner and an outer chamber and containing an opening and a valved port, an abutment pivotally supported in said opening and containing a passage through which said chambers intercommunicate, cams in said inner chamber for engaging said abutments, and means for operating said valve, for the purpose set forth.

870,815. GATE. GEORGE A. COLVIN, Arago, Oreg. Filed Mar. 4, 1907. Serial No. 360,388.



1. The combination of a pair of posts; a lever pivoted intermediate its ends to one of said posts; a gate directly connected with one end of said lever; a rocking member carried by said post and connected with the opposite end of said lever; a member slidably mounted on said rocking member; and separate means connected with said sliding member for positively effecting the movement of said rocking member in one direction or the other to open and close the gate.

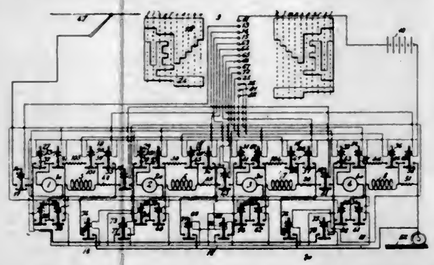
2. The combination of a pair of posts; a gate movable between said posts; a lever pivoted to one of said posts and connected at one end to said gate; a rocking member carried by said last mentioned post and operatively connected with the opposite end of said lever; a member slidably mounted on said rocking member; and separate means disposed on opposite sides of the gate and connected with said sliding member for positively effecting the movement of said rocking member in one direction or the other, to open or close the gate.

3. The combination of a pair of gate posts; a gate hinged at its upper end to one of said posts; a horizontally movable lever carried by said post and connected at one end to the lower end of said gate; a rocking frame pivoted to said post and connected to the opposite end of said lever; and means for actuating said rocking frame, to cause said lever to open and close said gate.

4. The combination of a pair of gate posts; a gate hinged at its upper end to one of said posts; a horizontally movable lever carried by said post and connected at one end to the lower end of said gate; a rocking frame comprising an upper member pivoted to said post, a lower member including a pair of spaced bars, and a flexible connection between said upper and lower member, the opposite end of said lever having a portion slidably engaged between said spaced bars; and separate means connected to the upper member of said frame for rocking the same in one direction or the other, to cause said lever to open and close said gate.

5. The combination of a pair of gate posts; a gate hinged at its upper end to one of said posts; a horizontally movable lever carried by said post and connected at one end to the lower end of said gate; a rocking frame comprising an upper member pivoted to said post, a lower member including a pair of spaced bars, and a flexible connection between said upper and lower member, the opposite end of said lever having a portion slidably engaged between said spaced bars; slidably mounted means disposed on opposite sides of the gate and connected with said sliding member for tilting said frame in one direction or the other, to cause said lever to open to swing the gate inwardly or outwardly into open position, and to close the same.

870,816. VEHICLE-MOTOR-CONTROL SYSTEM. WILLIAM COOPER, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Jan. 3, 1906. Serial No. 294,422.



1. In a vehicle, the combination with one or more trucks and means for driving the truck wheels in pairs, of means for decreasing the torque exerted upon the leading pair of wheels of each truck during starting.

2. In an electric vehicle, the combination with one or more carrying trucks and electric motors for driving the respective pairs of truck wheels, of means for relatively reducing the torque exerted by the forward motor on each truck during starting.

3. In an electric vehicle, the combination with one or more carrying trucks and an electric motor for driving each pair of truck wheels, of means for automatically reducing the relative torque exerted by the forward motor on each truck during starting.

4. The combination with a plurality of electric vehicle motors, field magnet windings therefor, of means for relatively and automatically reducing the magnetization produced by said field magnet windings in the forward motor of each truck.

5. The combination with an electric vehicle, two trucks therefor, four similar motors equally disposed on said trucks, of means for relatively reducing the torque of the forward motor on each truck while the motors are connected in series relation.

6. The combination with an electric vehicle, two trucks therefor, four similar motors equally disposed on said trucks, of means for relatively and automatically reducing the torque of the forward motor on each truck while the motors are connected in series relation.

7. The combination with a plurality of electric driving motors equally disposed upon vehicle trucks and controlling means for said motors, of means for relatively and automatically decreasing the field magnetization of the forward motor on each truck.

8. The combination with a plurality of electric driving motors equally disposed upon vehicle trucks and controlling means for said motors, of means for relatively and automatically decreasing the field magnetization of the forward motor on each truck while the motors are connected in series relation.

9. The combination with four electric driving motors equally disposed on two vehicle trucks and controlling means for said motors, of means for automatically completing a resistance circuit in parallel with the field magnet winding of the forward motor on each truck.

10. In an electric vehicle, the combination with one or more trucks and an electric driving motor for each pair of wheels, of means for relatively and automatically reducing the torque of the forward motor on each truck during the starting period that is dependent upon a reduction of the magnetizing current in the field magnet circuits of said forward motors.

11. In an electric vehicle, the combination with a plurality of electric motors, field magnet windings therefor and controlling means which determine the motor circuit relations, of means for relatively reducing the torque exerted by the forward motor on each vehicle truck during the starting period.

12. In an electric vehicle, the combination with a plurality of electric motors, field magnet windings therefor and controlling means which determine the motor circuit relations, of means for relatively reducing the current flowing through the field magnet windings of the forward motor on each truck during the starting period.

13. In an electric vehicle, the combination with a plurality of electric motors, field magnet windings therefor and controlling means which determine the motor circuit relations, of a plurality of resistance shunt circuits for the several field magnet windings in which interrupting devices are located and means for closing the shunt circuit for the forward motor on each vehicle truck.

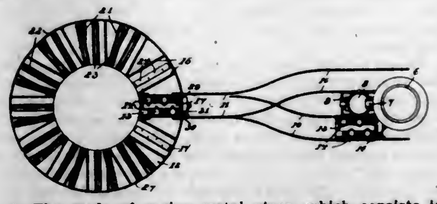
14. The combination with a vehicle truck, a pair of driving motors located thereon, field magnet windings therefor and means for determining the direction of the motion imparted to the truck, of means for automatically transferring a shunt resistane from the field magnet winding of one motor to the field magnet winding of the other motor when the direction of truck motion is reversed.

15. In an electric vehicle, the combination with one or more trucks, a plurality of electric motors equally distributed thereon, field magnet windings for the several motors and means for controlling the motor circuit arrangement that comprises a plurality of independent, electrically-operated switches, of means for relatively reducing the torque on the forward motor on each vehicle truck during the starting period.

16. In an electric vehicle, the combination with one or more trucks, a plurality of electric motors equally distributed thereon, field magnet windings for the several motors and means for controlling the motor circuit arrangement that comprises a plurality of independent, electrically-operated switches, of means for relatively reducing the current flowing through the field magnet windings of the forward motor on each truck during the starting period.

17. In an electric vehicle, the combination with one or more trucks, a plurality of electric motors equally distributed thereon, field magnet windings for the several motors and means for controlling the motor circuit arrangement that comprises a plurality of independent, electrically-operated switches, of a plurality of resistance shunt circuits for the several field magnet windings in which interrupting devices are located and means for closing the shunt circuit of the forward motor on each truck.

870,817. ART OF CASTING PIPES. EDGAR A. CUSTER, Philadelphia, Pa. Filed Apr. 22, 1907. Serial No. 369,489.



1. The mode of casing metal pipes, which consists in introducing molten metal in equal portions simultaneously into a permanent unyielding material mold at uniform constancy with respect to pressure and velocity as to metal portions poured into the mold to provide as a resultant product a pipe perfect in formation and free from blow and sand holes and other imperfections.

2. The mode of casting metal pipes, which consists in introducing molten metal, in equal portions, simultaneously under a uniform constancy with respect to velocity and pressure into a permanent unyielding material mold, freeing gases and volatile matter from the molten metal, while being cast around a perforated core in the mold, so as to produce as a resultant product, a pipe perfect in formation and free from surface imperfections.

3. The mode of casting pipes, which consists in simultaneously pouring molten metal in equal portions into a permanent mold through a plurality of gates dividing the mold into equal portions with respect to the quantity of metal contained therein and causing the meeting of such pourings in the mold at uniform pressures and velocities to provide as a resultant product a pipe perfect in formation.

4. The mode of casting pipes, which consists in melting the metal, introducing the same into means arranged to pour the same simultaneously through gates of an unyielding permanent mold, in equal proportions and at like pressures and velocities thereby to obtain uniform distributions from different points within the mold of the molten metal to effect thereby a pipe perfect in formation.

5. The mode of casting pipes, which consists in providing a permanent mold of unyielding material, with a plurality of gates at determinate points, melting the metal and discharging into a receptacle, pouring the molten metal simultaneously from the receptacle into gates of the mold, in definite quantities and at like velocities and pressures, and in conjunction with the smooth surface of the mold producing a pipe perfect in formation and which after removal from the mold is ready for use.

6. The mode of casting pipes, which consists in providing a permanent mold of unyielding material having a plurality of gates at determinate points thereof, melting the metal and discharging into receptacles, pouring the molten metal simultaneously from the receptacles through the gates of the mold, and in definite proportions, and at like velocities and pressures, to effect by such uniformity in pressures and velocities, in conjunction with the smooth unyielding surface of the mold a pipe perfect in formation free from cracks, blow and sand holes as well as shot formations on the surface thereof.

7. The mode of casting pipes, which consists in providing a permanent mold of unyielding material having a plurality of gates at determinate points, melting the metal and placing it in receptacles, pouring the molten metal simultaneously in the same horizontal plane from the receptacles into the gates of the mold, in equal portions, and with the same velocities and pressures, to effect by such uniformity in pressures and velocities, in conjunction with the smooth or even and unyielding surface of the mold, a pipe perfect in formation.

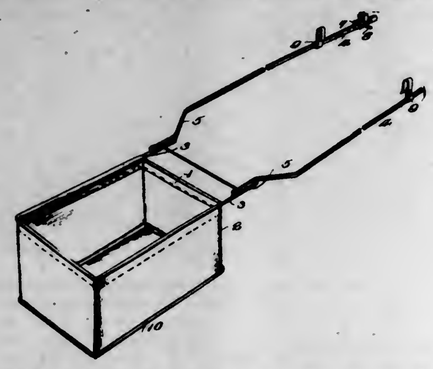
8. The mode of casting pipes, which consists in running at different points into a permanent unyielding material two-part mold, provided with an internal perforated core interposed between the cope and drag thereof, molten metal in unison, and in equal portions and like pressures and velocities, liberating gases into the body of the perforated core and surface of the cope away from the body of molten metal assuming form in the mold, and then removing the formed pipe.

9. The mode of casting pipes, which consists in pouring molten metal into a permanent unyielding mold and liberating the gases in different directions from the body of molten metal to leave the pipe when cast in form free from exterior imperfections and ready for use upon cooling.

870,818. FEED-BAG. JAY M. DARROW, Asherville, Kans. Filed May 24, 1907. Serial No. 375,480.

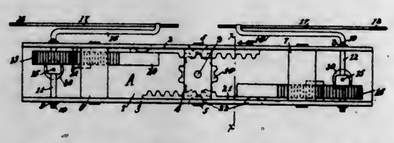
In a feed bag, the combination of a frame, a feed bag applied to the frame, a pair of extensions projecting from the

frame, supporting bars hinged to the extensions, each of the supporting bars being provided with a series of openings, arms carried by the extensions and engaging the supporting bars to limit the swinging movement thereof, hook members applied to intermediate portions of the support-



ing bars, a second set of hook members provided with sleeves loosely receiving the extremities of the supporting bars, and pins passing through the sleeves and engaging selected ones of the series of openings in the supporting bars to hold the said hook members in an adjusted position.

870,819. SHUTTER OPERATOR OR WORKER. ARMANDO DEL VALLE, New York, N. Y. Filed May 13, 1907. Serial No. 373,203.



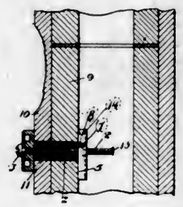
1. A device for operating shutters comprising a centrally located vertical gear; two horizontal end gears, two racks for transmitting motion from the central gear to the end gears one of said racks being in mesh on the top and the other on the bottom of the central gear, a handle secured to the shaft of the central gear, crank like ends on the shafts of the end gears and slotted plates to retain the ends of said shafts.

2. A device for operating shutters comprising a frame, a horizontal shaft centrally located in the frame, a gear mounted on the shaft, a handle pivoted on the end of the shaft, a pin on the inside of the handle and a disk behind the pin and provided with holes for engaging the pin to lock the handle and a spring secured to the shaft and pressing against the handle to normally lock it; two horizontal gears at the ends of the frame, two racks in mesh respectively on the top and bottom of the central gear to transmit motion therefrom to the end gears, guides for the racks; crank like ends on the shafts of the end gears and slotted plates to retain the ends of said shafts.

870,820. TOGGLE-BOLT. ALVIRUS L. ELLIS, Chicago, Ill. Filed Dec. 22, 1902. Serial No. 136,202.

1. In a toggle bolt, the combination with a threaded pin, of a toggle consisting of a plate having its edges bent up, a nut threaded upon said pin and pivotally supported by the bent-up edges of said toggle, said toggle having an opening opposite the nut through which the pin may pass, and a removable head for said pin, whereby the outer end of said pin may be inserted through the article it is desired to support after the toggle has been placed in position in the support.

2. In a toggle bolt, the combination with a pin having a suitable head, of a toggle movable along said pin, and a clamp supported by said toggle at one side of the axis of said pin, whereby it is adapted to clutch said pin at any desired position, substantially as described.



3. In a toggle bolt, the combination with a suitable pin, of a toggle movable upon said pin, and a clutch carried by said toggle and adapted to grip said pin at any desired position, substantially as described.

4. In a toggle bolt, the combination with a suitable pin, of a toggle and a clutch pivoted to said toggle and slidable upon said pin, said clutch being adapted to grip said pin at any desired position and thereby retain said toggle against movement on said pin, substantially as described.

5. In a toggle bolt, the combination with a suitable pin, of a toggle, and a plate pivoted to said toggle and having a hole out of alinement with the axis of its pivot through which said pin passes, said plate being adapted to grip said toggle to said pin at any desired position, substantially as described.

6. In a toggle bolt, the combination with a suitable pin, of a toggle having an aperture through which said pin is adapted to pass, and a plate pivoted to said toggle and having a hole out of alinement with the axis of its pivot through which said pin extends, said plate being adapted to grip said toggle to said pin at any desired position, substantially as described.

7. In a toggle bolt, the combination with a suitable pin, of a toggle having a hole through which said pin may pass, a plate threaded upon said pin and pivoted to said toggle, the axis of said pivot being out of alinement with the longitudinal axis of said pin, said plate being adapted to secure said toggle to the bolt at any desired position, substantially as described.

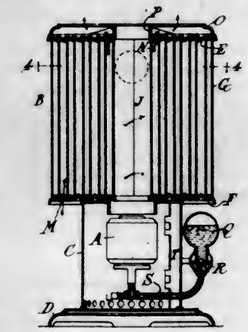
8. A toggle bolt comprising a suitable pin, a plate threaded upon said pin and having a rebent portion, and a toggle pivoted to said plate by a pin which has a bearing in the rebent portion of said plate, substantially as described.

9. In a toggle bolt, the combination with a screw threaded pin provided with a suitable head, of a toggle comprising a plate bent up at its edges and provided with a hole for said pin, a pivot supported between the bent up edges of said plate and a plate screw threaded to said pin and having a rebent portion which is hooked upon said pivot, substantially as described.

10. In a toggle bolt, the combination with a suitable pin, a toggle having a hole through which said pin may pass, a pivot supported by upbent edges of said toggle, a plate threaded upon said pin and having a rebent portion which is hooked upon said pivot, and a stop to limit the movement of said toggle about its pivot, substantially as described.

11. In a toggle bolt, the combination with a threaded pin, of a toggle made from a single sheet metal plate, having side members and provided with an opening in its face, through which the threaded pin may pass, a nut threaded upon said pin, a pivot extending between and carried by said side members at a point to one side of the center of gravity of said toggle and associated with said nut to adapt said toggle to oscillate about said nut and bring the opening in said toggle in alinement with said threaded pin.

870,821. HEATER. MILAN W. HALL, New York, N. Y., assignor of two-thirds to George Holt Fraser, Brooklyn, N. Y. Filed Jan. 2, 1904. Serial No. 187,466.

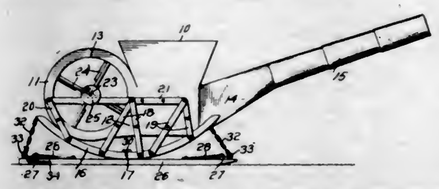


1. An air heater comprising in combination a hydrocarbon burner, a central vertical combustion chamber open at the bottom to admit products of combustion from the burner, a flue extending spirally around said combustion chamber and at its inner end in communication with said chamber, a discharge pipe in communication with the outer end of said flue and adapted for communication with a chimney so that the products of combustion do not pass into the room to be heated, a spiral conduit for the air to be heated extending alongside the spiral flue for the products of combustion and having inlets at the bottom of the outer end of the spiral and outlets at the top of the inner end, whereby the air enters at the bottom, passes around the spiral in an opposite direction to the products of combustion and is heated thereby and is discharged at the top.

2. An air heater comprising in combination a source of heat, and an interchanger formed of spirally grooved top and bottom plates E and F and sheets of metal G extending between said plates to form two spiral conduits H and L and a central flue J in communication with the former, the products of combustion being admitted to said central flue and discharged at the outer end of said conduit H, and said plates E and F being apertured, respectively, at the lower outer end and upper inner end of the conduit L to permit the passage of air therethrough, the air being admitted at the outer end and discharged at the center.

3. An air heater comprising in combination a hydrocarbon burner, a central vertical combustion chamber above said heater, a spiral passage surrounding said chamber and connected in communication at its inlet end with said combustion chamber, the upper end of said combustion chamber being adapted to be closed by a vessel which receives heat directly therefrom, and a spiral air conduit extending alongside and intermediate of the convolutions of the spiral flue.

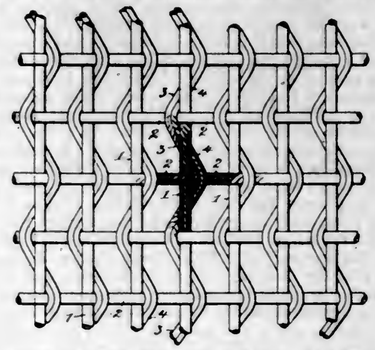
870,822. HAY-BLOWER. ALBERT HALVORSON, Rice Lake, Wis. Filed Mar. 14, 1907. Serial No. 362,371.



1. The combination with a blower of the class described, of a rocking frame for supporting the blower, a drag for supporting the frame, said frame being adapted to be rocked upon the drag, and chains connecting the frame and drag for holding the frame in its rocked position.

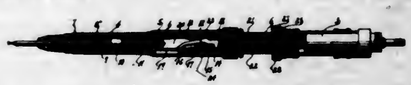
2. The combination with a blower of the class described, of a drag including side sills, a rocking frame supporting the blower and having its rockers supported upon the side sills of the drag and adapted to rock thereon, notched brackets secured upon the said side sills, a rod connecting the rockers of the rocking frame and adapted to seat at times in the notches in the brackets, and chains connected with the ends of the rockers of the rocking frame and with the ends of the side sills of the drag whereby the rocking frame may be held at various adjustments.

870,823. ART OF WEAVING. WILLIAM HANNAH, Paterson, N. J. Filed July 25, 1905. Serial No. 271,132.



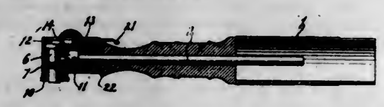
A process of weaving gauze or similar fabrics which consists in stretching a series of warp threads and in stretching a series of converging binding threads, two for each warp thread, one on each side and joining a little below the warp thread, then loosening one of said binding threads and tightening the other and raising the tight thread whereby the loose thread is drawn under the warp thread and the binding threads are elevated to a plane above that of the warp threads then passing a woof thread between the warp and binding threads, then shifting the woof thread to its proper place and securing it by the binding threads, then loosening the tight binding thread and tightening the formerly loose binding thread whereby the two binding threads are raised as before except on the other side of said warp thread, and passing the woof thread, and securing the same as above set forth.

870,824. HANDPIECE FOR DENTAL ENGINES. JAMES F. HARDY, New York, N. Y., assignor to Consolidated Dental Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Mar. 9, 1906. Serial No. 305,055.



In a dental hand piece, the combination with a rotary spindle, a casing inclosing the spindle consisting of telescoping sections, the spindle having an extended bearing centrally along one of said casing sections and the other casing section being removable over the tool carrying end of the spindle, a chuck located within the spindle and constructed to expand and contract, a sliding bar located within the spindle, a rocking lever housed within the sliding bar and fulcruming on the interior of the spindle for operating the sliding bar, movable means mounted in the spindle intermediate of said bar and chuck for operating the latter, a sleeve surrounding the said sliding bar and provided with an inclined faced dog and extending into engagement with the rocking lever within the sliding bar, arms extending along the exterior of one of the casing sections and engaged with said sliding sleeve and a collar surrounding the casing and connected with the said arms for operating them and hence the sleeve carrying dog and lever.

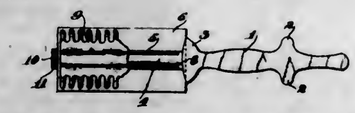
870,825. ANGLE ATTACHMENT FOR DENTAL HANDPIECES. JAMES F. HARDY, New York, N. Y., assignor to Consolidated Dental Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Aug. 29, 1906. Serial No. 332,440.



1. The combination with suitable tool supporting mechanism and tool driving mechanism, of a tool retaining dog seated on said support to be moved toward and away from the tool along the tool support, said dog having an integral spring portion at its free end in position to engage the tool support to hold the locking dog in locking adjustment.

2. The combination with a hand piece containing a tool driving spindle and a tool support, of a tool holding sleeve removably seated in the tool support in position to be rotated by the tool operating spindle, the tool shank and the sleeve being provided with flattened engaging surfaces to prevent the tool from rotating relative to the sleeve, a dog slidably seated in the tool support and constructed to engage the tool and hold it against longitudinal displacement with its flattened surface in engagement with the flattened surface of the sleeve and having an integral spring portion adapted to engage the tool support for locking the dog in its holding position.

870,826. SAFETY-RAZOR. HORACE L. HENRY and WALTER ALTHOFF, Geneva, N. Y. Filed Feb. 23, 1906. Serial No. 302,373.



1. In a razor, the combination of a frame having a handle provided with a gripping lug, a mortised shoulder, a slitted body, a threaded shoulder at the end, and a longitudinal groove; with a double serrated guard engaging said groove; a double-edged blade secured in said slitted body and mortise; and a cap engaging the threaded shoulder to lock the blade and guard in position.

2. In a razor, the combination of a frame having a handle, and a longitudinally and diametrically slitted body provided with a longitudinal recess; with a double-edged blade secured in and extending through the slitted body; a double serrated guard engaging the recess and a cap engaging the end of the body to secure the blade and guard thereto.

3. The combination of a blade holder slitted diametrically throughout its length, a longitudinal recess in said holder; a double blade secured in said slit; a double guard secured by the recess, and means for securing both to the holder.

4. As a new article of manufacture, a razor comprising a holder, provided with a diametrical longitudinal slit, and a longitudinal recess; a blade inserted in said slit; a guard engaging said recess, and means for securing both to said holder.

5. As a new article of manufacture, a razor frame comprising a handle and a cylindrical blade holder provided with an axial slot through its diameter and having formed therein a peripheral recess parallel to the axis of said blade holder to engage a blade guard; and means for compressing the sides of the blade holder.

6. As a new article of manufacture, a razor frame comprising a handle portion and a blade holding portion, said blade holding portion having an axial slit through its diameter and also a longitudinal peripheral recess therein adapted to engage a blade guard substantially parallel to the slit.

7. As a new article of manufacture, a razor frame comprising a handle portion and a blade holding portion, said blade holding portion being slitted diametrically for substantially its whole length and having formed therein a plurality of longitudinal oppositely disposed recesses adapted to engage a blade guard substantially parallel to the slit.

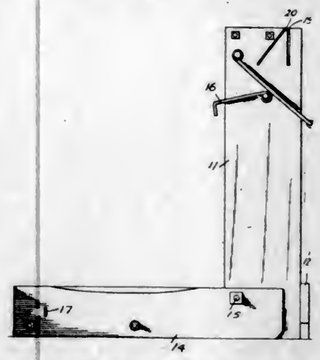
8. A razor frame comprising a handle and a holder slitted diametrically substantially for its whole length to hold a razor blade between its two sides, and having a plurality of longitudinal oppositely disposed recesses parallel to the slit, to hold a blade guard, and means for holding the sides of the blade holder together.

9. A razor comprising a handle; a blade holder in prolongation of the same, slitted diametrically and longitudinally for substantially its whole length and provided with a longitudinal recess substantially parallel to the slit; a blade inserted in the slit, and a blade guard engaging said recess.

10. As a new article of manufacture, a razor frame having a handle portion and a blade holder portion formed integral therewith; said blade holder portion being provided with an axial slit through its diameter and a longitudinal peripheral recess therein parallel to the slit; and means for holding a razor blade in the slit.

11. A razor frame comprising a handle; a blade holder integral therewith and forming a prolongation thereof, and slitted longitudinally through its diameter and provided with means for holding a blade in the slit, and means for holding a blade guard in contact with the blade.

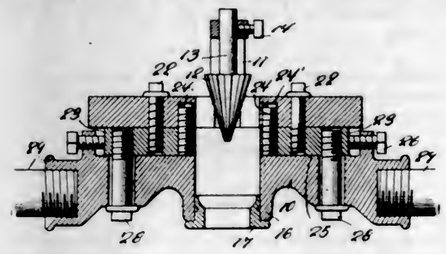
870,827. SAW-HOLDER. JAMES B. HILL, Quitman, LA. Filed Apr. 11, 1907. Serial No. 367,600.



1. A device of the class described comprising a saw-supporting member including spaced vertical sides and top and bottom blocks interposed between the same; a seat member pivoted to the lower end of the saw-supporting member and foldable towards and from the same; an eye secured to each side of the seat member; and a hook pivoted to each side of the saw-supporting member and adapted for engagement with the corresponding eye, to hold the seat member in folded position against the saw-supporting member.

2. A device of the class described comprising a saw-supporting member including spaced vertical sides and top and bottom blocks interposed between the same; a seat member pivoted to the lower end of the saw-supporting member and foldable towards and from the same, said member including a block and a pair of boards secured to the side edges thereof, said block being adapted to extend between the sides of the saw-supporting member when the two members are folded together; an eye secured to each side of the seat member; a hook pivoted to each side of the saw-supporting member and adapted for engagement with the corresponding eye, to hold the seat member in folded position against the saw-supporting member; and a handle connected to the sides of the saw-supporting member.

870,828. DIE-STOCK. SEVERIN JORGENSEN, Arcata, Cal. Filed Aug. 13, 1906. Serial No. 330,379.



A device of the type set forth comprising a stock formed with a central opening and with spaced parallel longitudinal upstanding guides on each side of said opening, beds mounted for sliding adjustment on each side of said opening, adjusting screws mounted at the ends of said beds, and adapted to engage the same to adjust them inwardly with relation to said opening, said beds having openings extending vertically therethrough, screws projected through said stock and engaged in said last named openings to hold said beds at selected positions to which they may be adjusted, cutting dies pivotally mounted on said beds and having a plurality of cutting faces, said dies being mounted for pivotal adjustment so as to present selected faces over said openings, said dies having sockets extending from the underneath surfaces thereof and screw posts threaded into said beds and designed for engagement in selected ones of said sockets to hold said dies at selected positions to which they may be adjusted.

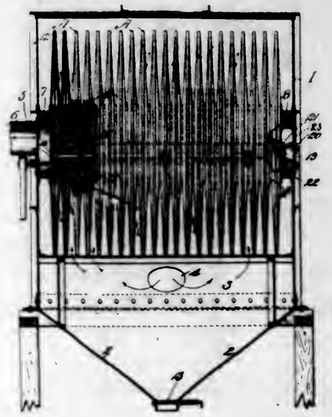
870,829. MANUFACTURE OF CAMPHENE. FRITZ KOCH, London, England. Filed Nov. 24, 1906. Serial No. 344,874.

A process for manufacturing camphene free from chlorin consisting of heating together pinene hydrochlorid, calcium oxid and phenol, distilling off the camphene so formed, and separating phenol therefrom by shaking out in aqueous alkaline solution.

870,830. DUST-ARRESTER. HENRY LECHTENBERG, Quincy, Ill., assignor to Central Iron Works, Quincy, Ill., a Corporation. Filed Oct. 25, 1906. Serial No. 340,476.

1. A dust arrester comprising a casing, providing a dust receiving chamber, formed with a dust inlet orifice at the bottom, an air inlet at the rear end of the casing, an air outlet at the forward end of the casing, a hopper beneath the casing, an interior rear ring surrounding the air inlet, an interior forward ring surrounding the air outlet, a suction pipe leading from the air outlet, and a series of screens supported between the rings, each screen consisting of a pair of central rectangular members spaced apart and in alinement with the rings, a border, converging arms extending from the rectangular members to the border and screen material covering the space between the rectangular members and the border.

2. A dust arrester comprising a casing, providing a dust receiving chamber formed with a dust inlet orifice at the bottom, an air inlet at the rear end of the casing, an air outlet at the forward end of the casing, a hopper beneath the casing, an interior rear ring surrounding the air inlet, an interior forward ring surrounding the air outlet, a suction pipe leading from the air outlet, a series of screens supported between the rings each screen consisting of a pair of central rectangular members spaced apart and in alinement with the rings, a border, converging arms extending from the rectangular members to the border, and screen material covering the space between the rectangular members and the border, strips attached to the rectangular members and extending longitudinally of the series of screens, hammers pivoted between the paired rectangular members, and a driven shaft extending through the series of screens, and having cams adapted to engage the hammers.

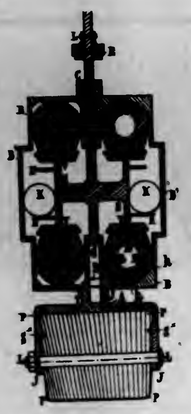


3. A dust arrester comprising a casing, providing a dust receiving chamber formed with a dust inlet orifice at the bottom, an air inlet at the rear end of the casing, an air outlet at the forward end of the casing, a hopper beneath the casing, an interior rear ring surrounding the air inlet, an interior forward ring surrounding the air outlet, a suction pipe leading from the air outlet, a series of screens supported between the rings each screen consisting of a pair of central rectangular members spaced apart and in alinement with the rings, a border, converging arms extending from the rectangular members to the border, and screen material covering the space between the rectangular members and the border, strips attached to the rectangular members and extending longitudinally of the series of screens, hammers pivoted between the paired rectangular members, and a driven shaft extending through the series of screens, and having cams adapted to engage the hammers.

4. A dust arrester comprising a casing, providing a dust receiving chamber formed with a dust inlet orifice at the bottom, an air inlet at the rear end of the casing, an air outlet at the forward end of the casing, a hopper beneath the casing, an interior rear ring surrounding the air inlet, an interior forward ring surrounding the air outlet, a suction pipe leading from the air outlet, a series of screens supported between the rings each screen consisting of a pair of central rectangular members spaced apart and in alinement with the rings, a border, converging arms extending from the rectangular members to the border, and screen material covering the space between the rectangular members and the border, a valve box adjacent to the air inlet having a cover-valve, and an adjustable screw stem adapted to work through the bottom of the valve box and against the cover-valve for controlling the latter.

5. A dust arrester comprising a casing, providing a dust receiving chamber formed with a dust inlet orifice at the bottom, an air inlet at the rear end of the casing, an air outlet at the forward end of the casing, a hopper beneath the casing, an interior rear ring surrounding the air inlet, an interior forward ring surrounding the air outlet, a suction pipe leading from the air outlet, a series of screens supported between the rings each screen consisting of a pair of central rectangular members spaced apart and in alinement with the rings, a border, converging arms extending from the rectangular members to the border, and screen material covering the space between the rectangular members and the border, a door hinged to the casing at the air inlet, a valve-box having a cover-valve and mounted in the door, and an adjustable screw-stem adapted to work through the bottom of the valve-box and against the cover-valve for controlling the latter.

870,831. ELASTIC WHEEL. RAYMOND M. A. LEPS, Bordeaux, France. Filed May 21, 1906. Serial No. 318,008.



1. In a vehicle-wheel, the combination, with the hub and the central supporting-disk having laterally-disposed flanges at its periphery, of annular cheeks arranged about the peripheral portion of said disk and between which the same slides, boxes carried by said cheeks and inclosing said flanges, and cushioning devices interposed between said flanges and the boxes.

2. In a vehicle-wheel, the combination, with the hub, of a central supporting-disk having flanges extending laterally therefrom in opposite directions at its periphery, annular cheeks between which said disk is arranged to slide at its peripheral portion, boxes carried by said cheeks, and cushioning devices interposed between said lateral flanges of the disk and the opposite walls of said boxes.

3. In a vehicle-wheel, the combination, with the hub, of a supporting-disk carried by said hub and provided at points near its edge with annular flanges extending laterally therefrom at both faces of the disk, annular cheeks between which said disk is arranged to slide at its periphery, boxes carried by said checks and inclosing said flanges, and resilient devices interposed between said flanges and the opposite walls of said boxes.

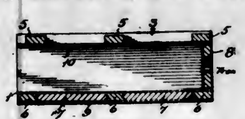
4. In a vehicle-wheel, the combination, with the hub, of a supporting-disk, annular cheeks between which said disk slides at its periphery, cushioning devices interposed between said cheeks and said disk, balls interposed between the opposing surfaces of said cheeks and said disk, and a tread-surface carried by said cheeks.

5. In a vehicle-wheel, the combination, with the hub, of a supporting-disk or web having at its periphery laterally-extending supports, annular cheeks disposed about the peripheral portion of said disk and between which the same is arranged to slide, boxes carried by said cheeks, cushioning devices interposed between said supports and said boxes in such a manner as to cushion the edgewise movement of the disk, and balls interposed between said supports and said boxes whereby the relative lateral play of said boxes and said cheeks is prevented.

6. In a vehicle-wheel, the combination of a supporting-disk having at its periphery a series of supports extending laterally in opposite directions from the faces of said disk, annular lateral flanges carried by said supports, annular cheeks between which the disk is slidable at its peripheral portion, boxes carried by said cheeks and inclosing said supports and flanges, cushioning devices interposed between said flanges and the opposite walls of said boxes, and antifriction devices interposed between said supports and the upright side-walls of said boxes.

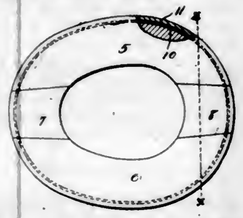
7. In a vehicle-wheel, the combination of a supporting-disk, annular cushioning-shoulders carried by said disk near the periphery of the same, annular cheeks between which said disk is arranged to slide at its peripheral portion, and cushioning devices interposed between said cheeks and said disk, said cushioning devices permitting the inner edges of said cheeks to abut against said cushioning-shoulders of the disk in the event of a hard jolt or shock.

870,832. CLOSET-TANK. FRANK H. LINDENBERG, Columbus, Ohio. Filed Jan. 22, 1906. Serial No. 297,154.



In a closet tank, the combination with a metallic tank, of a skeleton wooden frame which incloses said tank and an outer metallic shell which extends around the front and ends of the skeleton frame, said skeleton frame forming a closure for the space between the tank and the shell about the upper and lower edges of said tank to thereby provide a dead air space between the outer shell and the tank to prevent sweating.

870,833. CLOSET-SEAT. FRANK H. LINDENBERG, Columbus, Ohio. Filed Dec. 31, 1906. Serial No. 350,141.



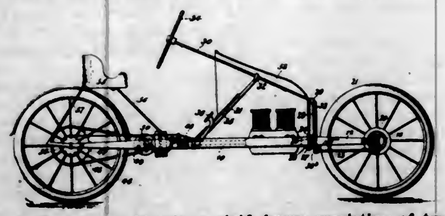
1. A closet seat comprising side sections, means for forcing said side sections away from each other, and an endless band surrounding said side sections.

2. A closet seat comprising a pair of side sections having grooved outer edges, an endless band which is received in said grooved outer edges, and means for forcing said sections away from each other.

3. A closet seat comprising a pair of side sections having grooved outer edges, an endless band adapted to be received in said grooves, and a wedge section adapted to force said side sections away from each other, said wedge section having a grooved outer end which is also adapted to engage said band.

4. A closet seat composed of a plurality of sections, wedge members adapted to force said sections away from each other, said sections and said wedges having a groove formed therein, and an endless metallic band adapted to lie in said groove and to bind all of said sections together.

870,834. MOTOR-BICYCLE. FORREST P. LINDLEY, New York, N. Y. Filed Jan. 12, 1907. Serial No. 352,040.



1. In a motor bicycle, a rigid frame consisting of two parallel bars and a forwardly tapering portion rigidly connected to the front ends of the bars, combined with a pin secured in the narrow front end of the tapering portion, a steering wheel pivotally supported on said pin, a driving wheel journaled between the parallel bars, a motor supported on said bars, connections between the motor and driving wheel, and steering mechanism supported by said bars and connected to the steering wheel.

2. In a motor bicycle, a rigid frame consisting of a pair of substantially parallel bars and a tapering front portion connected to said bars, combined with a pin secured in the narrow front end of the tapering portion, a steering wheel pivotally supported on said pin to turn horizontally thereon, a driving wheel journaled between said parallel bars, and steering devices supported by said bars and connected to the steering wheel.

3. In a motor bicycle a rigid frame consisting of two parallel bars and a forwardly tapering portion rigidly connected to the front ends of the bars, combined with a pin secured in the narrow front end of the tapering portion, and a steering wheel pivotally supported on the pin to turn horizontally thereon with its front portion projecting beyond the frame and its rear portion within the tapering portion of the frame.

4. In a motor bicycle, a rigid frame having a rear portion formed of a pair of substantially parallel bars and a tapering front portion rigidly connected to said bars, combined with a pin secured in the narrow front end of the tapering portion, a collar pivotally supported on the pin to turn horizontally thereon, a steering wheel journaled on said ring, a driving wheel journaled between said parallel bars, and means for turning said ring and steering wheel on the said post.

5. In a motor bicycle, a rigid frame comprising a triangularly shaped front portion and two parallel bars extending rearwardly from the front portion, a driving wheel journaled between said bars, a steering wheel connected to the front portion to rotate and turn laterally therein, a motor supported on said parallel bars, connections between the motor and driving wheel, a seat supported by said bars over the driving wheel, a steering rod connected to the steering wheel and extending rearwardly in proximity to the seat and a hand wheel on the rear end of the said rod.

6. In a motor vehicle, the combination with a frame, of a pin secured therein, ball cups on the ends of the pin, a ring having oppositely disposed cones which project into the cups, balls between the cones and cups, a steering wheel journaled on the ring, and steering devices supported by the frame and connected to said ring.

7. In a motor vehicle, the combination with a frame, of a pin secured therein and having threaded ends, ball cups screwed on the ends of the pin and adjustable thereon, a ring having oppositely disposed cones which project into said cups, balls between the cones and cups, a steering wheel journaled on the ring, and steering devices supported by the frame and connected to the ring.

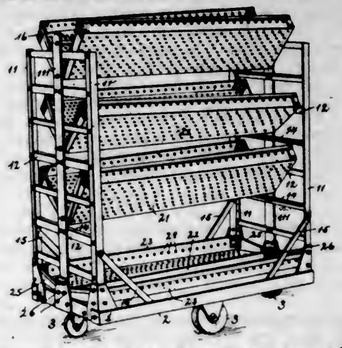
8. In a motor vehicle, the combination with the frame, of a pin secured therein, a ring pivoted on the ends of the pin and extending laterally therefrom on each side, a steering wheel journaled on said ring, an arm connected to said ring and extending rearwardly therefrom, a steering rod supported on the frame and provided with a hand-wheel, and connections between the said rod and arm.

870,835. TRUCK. CHARLES H. LOEW, Lakewood, Ohio. Filed Oct. 5, 1906. Serial No. 337,536.

1. A truck comprising a framework, a series of perforated shelves hinged therein and means for keeping the shelves in position when raised, comprising a projection on the framework adapted to be brought into frictional contact with the side of the shield.

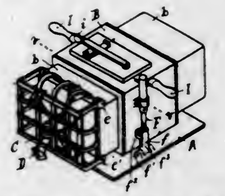
2. A truck comprising middle end uprights, two shelves hinged at their inner meeting edges on pivots supported in said uprights, supports for the shelves when in horizontal positions, and a swelling on each upright for frictionally holding the shelves raised at an angle.

3. A truck comprising a frame composed of bottom bars and corner and middle end uprights, a series of sets of two shelves each hinged at their inner meeting edges to the middle end uprights, bars for supporting each set of shelves in line horizontally with each other, and means



for supporting the shelves of each set when raised on their hinges at angles to the horizontal.

870,836. FLOOR-SURFACER. CASPER W. MILES, Anderson township, Hamilton county, Ohio. Filed Mar. 25, 1907. Serial No. 364,470.



1. In a mechanism of the character indicated, a plate adapted to rest against the face of the work, an electric motor hinged thereto on a line parallel with the axis of the armature shaft, a rotary tool carried by said armature shaft, and means for adjusting said motor on said hinge relative to said plate.

2. In a mechanism of the character indicated, an electric motor, a rotary cutter-head having fan-shaped arms to drive dirt and obstructions from the path of the knives, a plate to contact with the work, and adjusting mechanism adapted to adjust said plate to and from the axis of said cutter.

3. In a mechanism of the character indicated, an electric motor, a rotary tool mounted upon the armature shaft of said motor, said tool being so shaped as to create an air current to blow the cuttings and dirt from the path of the knives, an open-work guard embracing said tool, said guard being hinged to one side of the motor frame and locked to said frame at its opposite side, a plate to contact with the work and mechanism for adjusting said plate to and from the axis of rotation.

4. In a mechanism of the character indicated, an electric motor, a rotary tool mounted on the armature shaft of said motor, a plate contacting with the work, mechanism to adjust said plate to and from the axis of said armature-shaft, a handle-bar connected at one end of said motor and provided with handles at its opposite or free end, and means located near the free end of said handle-bar to actuate said adjusting mechanism.

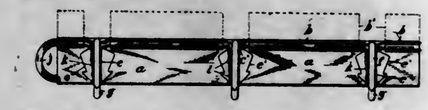
5. In a mechanism of the character indicated, a plate adapted to rest against the face of the work, a motor frame hinged to said plate, a rotary tool mounted upon an axle parallel with said hinge, and actuated by said motor, means for adjusting said motor on said hinge relative to said plate.

6. In a mechanism of the character indicated, a plate adapted to rest against the face of the work, a motor carried by and adjustable to and from said plate, and a rotary cutter carried and driven by said motor.

7. In an article of the character indicated, a plate comprising a frame and a series of rollers journaled thereto, said rollers to contact with the work and normally hold the plate slightly away from the work, a motor carried by said plate and adjustable relative thereto, and a rotary cutter carried and driven by said motor.

8. In a mechanism of the character indicated a plate adapted to contact with the work, a motor carried by said plate, a rotary tool driven by said motor and carried by and adjustable relative to said plate, a handle-bar adapted to guide said tool from a standing position and carrying at its free end mechanism for shifting said tool.

870,837. TEMPORARY BINDER. LUCENA M. MORDEN, Waterbury, Conn. Filed June 1, 1906. Serial No. 319,679.



1. In a temporary binder, the combination, with a longitudinally extending base, of complemental ring-sections supported transversely upon the base, one section of each ring secured immovably upon the base and projecting over one edge of the same, and the other section of each ring being pivoted upon the base to rock transversely, a cam-shaft extended along the edge of the base beneath such movable ring-sections, cams upon the shaft operating to close and lock such movable sections, and a spring arranged and operated to open the movable sections when the cam is turned to release the same.

2. In a temporary binder, the combination, with a base having cam-shaft sockets along one edge and a series of pivot-bearings projected upward therefrom, of a series of ring-sections pivoted movably upon the said bearings, a shaft journaled in the sockets and having a cam to move each of such pivot sections, and complemental ring-sections united to the pivot and held immovably upon the base, forming a series of closed rings with the pivot-sections when the cam is operated.

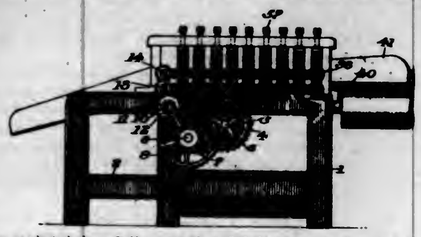
3. In a temporary binder, the combination, with a sheet-metal base having a series of integral transverse ears bent upward from the base to form pivot-bearings and having locking lugs thereon, of ring-sections pivoted movably upon the ears, complemental ring-sections held stationary upon the base by engagement with the pivots and with the locking lugs, and means for moving the pivot-sections to and from the stationary sections.

4. In a temporary binder, the combination, with a sheet-metal base having a series of integral transverse ears bent upward from the base to form pivot bearings and having locking lugs thereon, of ring-sections pivoted movably upon the ears, complemental ring-sections held stationary upon the base by engagement with the pivots and locking lugs, wire springs secured upon the upturned ears and operating to hold the pivot-sections normally open and means for moving the pivot-sections toward the stationary sections.

5. In a temporary binder, the combination, with a sheet-metal base having cam-shaft sockets along one edge, and an upturned flange at the opposite edge, with a series of ears bent upwardly from the base to form pivot-bearings, of a series of ring-sections pivoted movably upon the said bearings, a shaft journaled in the sockets and having a cam to move each of such pivot-sections, and complemental ring-sections held stationary upon the base by engagement with the pivot and contact with the base and its flange.

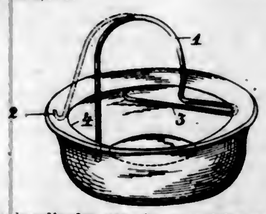
870,838. FIBER-SEPARATING MACHINE. VICTORIO A. DE PERINI, Rio de Janeiro, Brasil. Filed Mar. 4, 1907. Serial No. 360,570.

In a device of the character described, a frame, a plurality of rollers supported thereon and arranged in pairs, one of each pair of rollers having vertical movement, vertically movable springs of different pressure resisting movement of the rollers of adjoining pairs, and means



for maintaining full operative driving connection between the rollers throughout their movement.

870,839. LOOSE HANDLE FOR VESSELS. LARS A. PETERSON, Stockholm, Sweden. Filed Jan. 10, 1907. Serial No. 351,670.



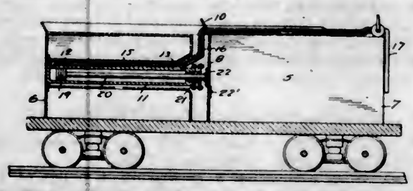
1. A loose handle for vessels comprising a single piece of wire with one end bent into the shape of a hook to engage the rim of a vessel and with the other end bent into a cross-piece adapted to engage said rim at points outside of the middle line drawn from the hook through the vessel.

2. A loose handle for vessels consisting of a single continuous piece of wire having one end bent into a hook and the other end to a cross-piece, the intermediate part forming a spring connection substantially as described.

3. A loose handle for vessels consisting of a single continuous piece of wire having one end bent into a hook and the other end to a cross-piece the intermediate part being suitably bent so as to form a proper handle.

4. A loose handle for vessels consisting of a single continuous piece of wire bent so as to form a cross-piece at one end and a hook at the other end with resilient connecting part, said hook and the ends of said cross-piece being properly bent to grasp the inner rim of a vessel.

870,840. LOCOMOTIVE-TENDER. MILTON E. PETTY, Chicago, Ill. Filed Apr. 24, 1907. Serial No. 370,033.

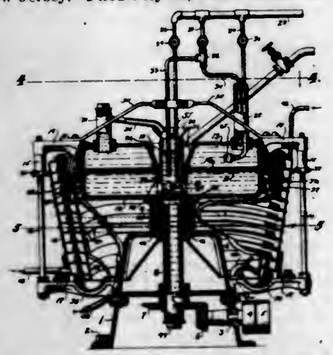


1. The combination with a tender, of a follower arranged for sliding movement in the coal pit of the tender, a cylinder arranged within the tender rearwardly of the follower, a piston arranged for movement in the cylinder and having its rod connected with the follower whereby the follower will be moved with the piston, steam supply pipes leading to each end of the cylinder, a steam main forming a junction with the two pipes, and a valve arranged at the junction of the pipes and designed for operation to admit steam into either of the steam supply pipes.

2. The combination with a tender, of a follower arranged for sliding movement in the coal pit of the tender, the follower comprising a back plate and facing boards secured upon the front face of the back plate, a cylinder arranged within the tender rearwardly of the follower, a piston arranged for movement in the cylinder, the rod of the piston being connected with the follower whereby the follower will be moved with the piston, steam supply pipes leading to each end of the cylinder, a steam main forming a junction with the two pipes, and a valve arranged at the junction of the pipes and designed for operation to admit steam into either of the steam supply pipes.

3. The combination with a tender, of a follower formed of hinged sections one of which is free to swing forwardly, said follower being arranged for sliding movement in the coal pit of the tender, the follower comprising a back plate and facing boards secured upon the front face of the back plate, a cylinder arranged within the tender rearwardly of the follower, a piston arranged for movement in the cylinder, the rod of the piston being connected with the follower whereby the follower will be moved with the piston, steam supply pipes leading to each end of the cylinder, a steam main forming a junction with the two pipes, and a valve arranged at the junction of the pipes and designed for operation to admit steam into either of the steam supply pipes.

870,841. PASTEURIZING APPARATUS. LEROY S. PROUTS, Canton, Ohio, assignor to The Miller Pasteurizing Machine Company, Canton, Ohio, a Corporation of New Jersey. Filed July 30, 1906. Serial No. 328,466.



1. In a pasteurizing apparatus of the class described, the combination of a rotating chamber, a stationary chamber located above the rotatable one, stand pipes secured to the upper chamber, said stand pipes formed of different heights, means for heating the liquid within the chambers, and means for circulating the liquid as between the chambers, and pasteurizing plates spaced from each other, substantially as and for the purpose specified.

2. In a pasteurizing apparatus, a rotatable casing, a pasteurizing plate carried thereby, a fixed casing, a pasteurizing plate secured to said casing, a steam pipe leading to and communicating with the chamber inclosed by the fixed casing, and pasteurizing plate and a steam pipe leading to and communicating with the chamber inclosed by the rotatable casing and pasteurizing plate and an injector located between the rotatable and non-rotatable chambers, substantially as and for the purpose specified.

3. In a pasteurizing apparatus of the class described, a rotatable pasteurizing plate, a chambered casing located thereunder, and rotatable therewith, a stationary pasteurizing plate secured to a stationary chambered casing, said stationary pasteurizing plate and casing adjustable to and from the rotatable pasteurizing plate and its chamber and means for conveying liquid from the rotatable chamber to the non-rotatable one, and means for heating liquid in both chambers, substantially as and for the purpose specified.

4. In a pasteurizing apparatus of the class described, a suitable supporting frame, a rotatable casing, a rotatable pasteurizing plate secured thereto, a stationary chambered casing having fixed thereto, a pasteurizing plate, stand pipes secured to the stationary casing, said stand pipes formed of different heights, steam pipes leading to the non-rotatable and rotatable chambers respectively and a siphon located intermediate the non-rotatable and rotatable chambers, substantially as and for the purpose specified.

5. In a pasteurizing apparatus of the class described, a suitable supporting frame, a rotatable casing, a rotatable pasteurizing plate secured thereto, a stationary chambered casing having fixed thereto, a pasteurizing plate, stand pipes secured to the stationary casing, said stand pipes formed of different heights, steam pipes leading to the non-rotatable and rotatable chambers respectively, and a siphon located intermediate the non-rotatable and rotatable chambers, and a cooling plate located around and adjacent the pasteurizing plates and a liquid receiving trough, substantially as and for the purpose specified.

6. In a pasteurizing apparatus of the class described, the combination of a frame, supporting rods carried by the frame, nuts adjustably connected to the supporting rods, means for adjusting the nuts, a stationary casing provided with arms, said arms carried by the adjustable nuts, a pasteurizing plate secured to the stationary casing, a rotatable casing, a pasteurizing plate secured to said rotatable casing, means for heating liquid in the stationary casing and rotatable casing and means for circulating the liquid, substantially as and for the purpose specified.

7. In a pasteurizing apparatus of the class described, the combination of a suitable frame, a rotatable casing, and a rotatable pasteurizing plate carried thereby, said casing and pasteurizing plate mounted upon a hollow shaft, passages leading from the chamber between the pasteurizing plate and casing, and a removable cap secured to the bottom or lower end of the hollow shaft, a stationary casing having secured thereto a pasteurizing plate, means for adjusting the stationary casing and pasteurizing plate, and means for heating liquid in the stationary and rotatable chambers, and means for conveying liquid upon the rotatable pasteurizing plate, substantially as and for the purpose specified.

8. In a pasteurizing apparatus of the class described, the combination of a suitable frame, a rotatable casing, and a rotatable pasteurizing plate carried thereby, said casing and pasteurizing plate mounted upon a hollow shaft, passages leading from the chamber between the pasteurizing plate and casing, and a removable cap secured to the bottom or lower end of the hollow shaft, a stationary casing having secured thereto a pasteurizing plate, means for adjusting the stationary casing and pasteurizing plate, and means for heating liquid in the stationary and rotatable chambers, means for conveying liquid upon the rotatable pasteurizing plate, and means for conveying liquid from the rotatable chamber to the non-rotatable one, substantially as and for the purpose specified.

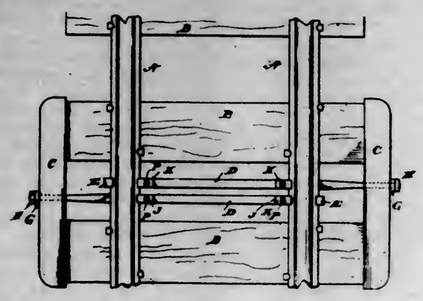
9. In a pasteurizing apparatus of the class described, the combination of a suitable frame, a rotatable casing, a rotatable pasteurizing plate carried thereby, said casing and pasteurizing plate mounted upon a hollow shaft, a stationary casing and a stationary pasteurizing plate connected thereto, means for feeding liquid between the pasteurizing plates and cooling plates spaced from each other, substantially as and for the purpose specified.

10. In a pasteurizing apparatus of the class described, a suitable supporting frame, a rotatable casing, a rotatable pasteurizing plate secured thereto, a stationary chambered casing having fixed thereto a pasteurizing plate, means for feeding liquid to the rotatable casing and stationary casing, means for feeding liquid between the pasteurizing plates and cooling plates spaced from each other, substantially as and for the purpose specified.

870,842. ANTI-RAIL-SPREADING DEVICE AND GAGE. ZACHARIAH L. PIERCE, Hanna City, Ill. Filed Oct. 29, 1906. Serial No. 340,959.

1. In an anti-rail spreader, the rails, two companion bars each having engagement with both rails, and each

having one of its ends extending outside the track the extended ends being at opposite sides of the track, a member at each side of the track having fixed relation with the ties on which the track is laid, and means on the extended end of each bar for engaging one of the said members.



2. In combination with a track a bar connecting its rails, one end extending outside the track at one side and engaging the rail at that side, means carried solely on the extended end by which to adjust the bar lengthwise for alining the track, a fixed member for receiving the thrust of said means, the opposite end of the bar having engagement with the other rail.

3. In combination with the rails, a bar connecting them, one end having engagement with one of the rails, and having its opposite free end extending beneath and beyond the other rail and having engagement with the latter, means carried by the said free extended end of the bar for adjusting the bar in the direction of its length, a fixed member for receiving the thrust of said adjusting means.

4. In combination with the rails, of a bar engaging one of them and having means attached thereto for engaging the other rail for holding the rails a fixed distance apart, the said bar having means at one end by which to pull it in the direction of its length to shift both rails, a member for receiving the thrust of such means, and a companion bar positioned in the vicinity of the first and likewise having attachment with the rails and extending in the opposite direction from the first, means thereon for pulling the bar in the direction of its length, and in a direction opposite to the pull of the first said bar, and a member for receiving the thrust of the said means, the bars adapted for shifting the track on its ties by loosening the shifting means on one of them and tightening the means on the other.

5. In combination with the rails of a railway track, a pair of bars each engaging both rails said bars extending outside of the track, one at each side thereof, a member at each side of the track through each of which one of the said bars extends, and means upon the end of each bar and contacting with the outside surface of the member for shifting the track in a transverse direction as described.

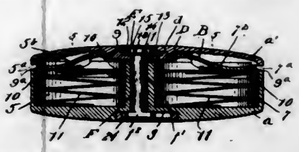
6. In combination with the rails of a railway track, a pair of bars, one end of each extending outside the track the other end of each said bar extending to the rail farthest removed from the outside end of said bar, the same inclosing the outer flange-portion of that rail, each said bar having means for inclosing the inside flange-portions of both the rails, a member through which each of the outside ends extends and other means in connection with the same members for imparting longitudinal shifting movement to each said bar and the rails for the purposes named.

7. In a railway track, the combination of the rails thereof, a member at each side of the track in rigid relation to the ties, a bar located substantially at right angles to the length of the track and having attachment to the rails of the track for holding said rails in rigid relation, and means on the ends of each bar outside the first said means for imparting transverse shifting movement to the track through one of said bars by tightening said means, after first loosening the means on the end of the opposite bar.

8. In combination with the rails, a pair of bars beneath the same and extending substantially at right angles thereto, an upturned member at the free end of each of the bars for engaging the flange of the outside of each rail, a member on each bar inside each rail for engaging the inside flange of the rails, a thrust-plate having rigid relation with the ties at each side of the track and through each of which one or more bars extends, and means in connection with the bars outside of the thrust-plate and by means of which, together with said thrust-plate, the bars are shifted in a longitudinal direction to impart transverse movement to the track.

9. In combination with the rails of the companion bars D having the upturned ends E thereon for engaging the base of the rails, the members J and K on the bars also for engaging the rails, the thrust plates C each having one end of one of the bars extending therethrough, and the nuts G H on said bars outside the members to bear against said members for the purposes set forth.

870,843. PORTABLE BANK. JOHN B. POORE, Scranton, Pa. Filed Dec. 14, 1906. Serial No. 347,844.



1. In a portable bank, a casing comprising a cylindrical body portion and a cover, said body portion having a circular series of coin compartments and having coin slots in its side walls at the upper ends of said compartments, a sheet metal coin retainer secured to the central portion of said cover, said retainer having radial spring arms extending over said compartments and into proximity to said slots, and means connected with the central portion of the cover for securing the cover to the body portion.

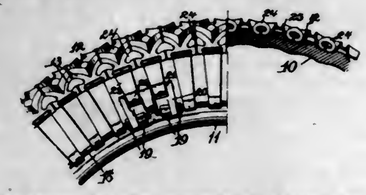
2. A portable bank comprising a cylindrical body portion and a cover, said body portion having a slot extending therethrough near its center and a series of coin compartments, and having coin slots in its side walls at the upper ends of said compartments, said cover having an opening therein, a hollow cap fitting within said opening and having a keyhole slot, a locking bolt having a head at its upper end fitting within said cap, and having its shank extending through said slot in the body of the casing, said bolt having an elongated head at its lower end, a cap at the lower end of said opening extending over the elongated head of the bolt, a coin retainer having arms adapted to extend over said compartments, and a disk arranged to clamp said first mentioned cap and the retainer to the cover and to hold the upper end of said bolt within the cap.

3. In a portable bank, a casing comprising a cylindrical body portion having a slot extending therethrough and having a recess at the lower end of said slot, a cap extending over said recess, fastening screws extending from said cap through the body of the casing, a cover adapted to extend over the coin compartments and also to inclose the heads of said screws, a coin retainer attached to the cover, and a locking-bolt, also attached to the cover and having a head adapted to enter said recess.

870,844. ARMOR FOR TIRES. GEORGE POWELL, Newark, N. J. Filed Dec. 3, 1906. Serial No. 346,020.

1. An armor for tires comprising a series of metal plates having projections on their outside faces, links connecting the plates longitudinally and transversely, the links having projections for engaging the road and on the same side as the plates, and means for securing the edges of the armor to a tire.

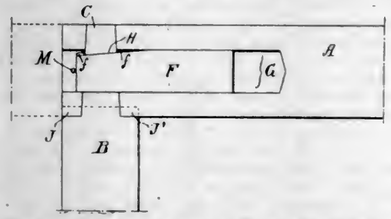
2. An armor for tires comprising rows of metal plates having projections thereon, the outside rows of plates having slots in their edges, links, having projections thereon, for securing the plates and rows of plates together, links secured in the slots of the plates, the links having their free ends slotted, and a binding medium passing through the slots of the links.



3. An armor for tires comprising a series of plates of sheet metal formed with indentations on the back and projections on the front, links connecting the plates, the links having projections on one face, links secured to the edges of the armor and having their free ends slotted, wires passing through the slotted ends of the links, and tension devices on the ends of the wires.

4. An armor for tires comprising a series of sheet metal plates formed with indentations on the back and projections on the front, links connecting the plates and having projections thereon, links secured to the edges of the armor, the links having their free ends slotted, wires passing through the slotted ends of the links, plates connected to the edges of the armor, and nuts bearing on the plates and receiving the ends of the wires to attach the armor to a tire.

870,845. SQUARE. CHARLES M. PRAUL, Atlantic City, N. J., assignor to Henry K. Fort, Haddonfield, N. J. Filed Aug. 3, 1906. Serial No. 329,032.



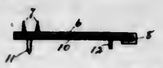
1. The combination of a square having a blade, a tongue on said blade, a blade having a recess formed in the surface thereof conforming in shape with said tongue, a key, said tongue and said latter blade having formed therein a recess extending across the face of the same and adapted to receive said key.

2. The combination of a square having a blade, a tongue on said blade, said tongue having its side edges beveled, a blade having a recess formed in the surface thereof having dove-tail edges to conform with said tongue, a key, said tongue and said latter blade having formed therein a recess extending across the face of the same and adapted to receive said key.

3. The combination of a square having a blade, a tongue formed on the same, said tongue having a recess formed across the face of the same, a blade having a recess formed therein to receive said tongue, said latter blade having a recess formed therein having dove-tail edges, a key adapted to slide in the latter recess and lock the parts together, substantially as described.

4. The combination of a square having a blade, a tongue formed on the same, said tongue having a recess formed across the face of the same, a blade having a recess formed therein to receive said tongue, said latter blade having a recess formed therein having dove-tail edges, a key having beveled edges adapted to slide in the latter recess, and said key being larger at one end than at its other end, substantially as described.

870,846. DOOR-SECURER. WILLIAM E. RAINES, Salt Lake City, Utah, assignor of one-half to William W. Nutting, Salt Lake City, Utah. Filed Mar. 11, 1907. Serial No. 361,843.

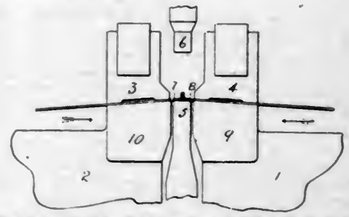


1. A door securer comprising a fixed plate attachable to a door casing, an open loop at the outer end of said plate, and another plate rotatably attachable to the edge of a door, and whose outer end is adapted to engage said open loop, as described.

2. A door securer comprising a plate for the door casing, pins on said plate to secure it to said casing, an open loop at the outer end of said plate, a shorter plate for the edge of the door, a pin on said shorter plate to rotatably secure said plate to the door, the end of said shorter plate being adapted to engage said loop, as herein set forth.

3. A door securer comprising a plate for the door casing, pins on said plate to secure it to said casing, an open loop at the outer end of said plate, a shorter plate for the edge of the door, a pin on ssid shorter plate to rotatably secure said plate to the door, the outer end of said shorter plate being adapted to engage said loop, and a stop pin on said rotatable plate, to limit the movement of said plate as specified.

870,847. METHOD OF MAKING A JOINT IN THIN FLAT MATERIAL. ADOLPH F. RIETZEL, Lynn, Mass., assignor to Thomson Electric Welding Company, Lynn, Mass., a Corporation of Maine. Filed Oct. 15, 1903. Serial No. 177,139.



1. The herein described process of forming a joint in thin metal, consisting in pressing the upturned margins or borders of material into contact with one another by pressure applied to the clamping or holding devices, so as to cause them to be in contact throughout substantially the whole plane surface of said upturned portion and applying a lateral condensing or compressing force while they are in a heated condition, as and for the purpose described.

2. The herein described process of forming a joint in thin metal, consisting in securing the metal in suitable clamps, bringing the edges of the metal into contact, passing an electric current from one to the other of said clamps so as to heat the edges in contact, moving one clamp toward the other to cause the heated edges to turn up and to come into contact on their plane surfaces and then applying a lateral compressing or condensing force.

3. The herein described method of forming a joint in thin metal, consisting in abutting the edges of the parts, heating the edges and contiguous parts applying pressure to cause the heated abutted margins or borders to turn up and at the same time bring the turned-up portions together and then consolidating the joint by any suitable condensing force applied transversely to the line of said pressure.

4. The herein described process of forming a joint in thin metal, consisting in heating abutted metal edges and parts contiguous thereto, applying pressure to cause the heated margins or borders to turn up and at the same time bring the turned up portions into surface contact throughout their approximated plane surfaces and then folding down the approximated metal and welding the three superposed layers together.

5. The herein described process of forming a joint in thin metal, consisting in passing a heating electric current through abutted metal edges and parts contiguous thereto, applying pressure to cause the heated margins or borders to turn up and at the same time bring their surfaces into contact, and then folding down the approximated metal and welding the three superposed layers together.

6. The herein described process of forming joints in thin metal, consisting in abutting the surfaces of heated upturned margins or borders, bending the two abutted margins down to one side, and completing the union by a mechanical force to form a triple lap joint.

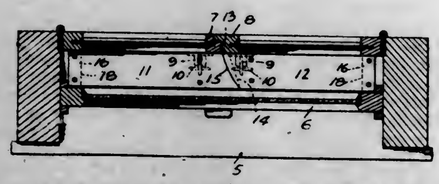
7. The herein described process of forming joints in thin metal by electrically welding abutted metal edges together, continuing the welding pressure to turn up the heated margins or borders and bring their contiguous faces into abutment, folding down said turned up borders and welding the three superposed layers of material together to form a triple lap joint.

8. The herein described process of forming joints in thin metal by welding abutted metal edges together, continuing the welding pressure to turn up the heated margins or borders and bring their contiguous faces into abutment and then applying a laterally acting condensing or compressing force to the heated parts.

9. The herein described process of forming a joint in thin metal, consisting in abutting the edges, passing an electric current across the joint to heat the edges and border, applying pressure in a line transverse to the meeting line thus welding the edges and deforming the heated metal to cause the faces of the borders or margins contiguous to the meeting line to meet, and then applying a laterally acting condensing or welding force to the heated parts.

10. The herein described method of forming a joint in thin metal, consisting in bringing the borders or margins together at an angle, passing a heating electric current across the joint, applying edgewise pressure to cause the heated metal to buckle and then applying a laterally acting, condensing or welding force to the heated parts.

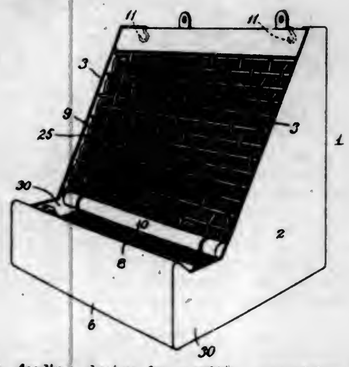
870,848. SHUTTER LATCH-GUARD. THOMAS L. ROSS, China Grove, N. C. Filed May 14, 1907. Serial No. 373,669.



1. In a shutter latch guard, the combination with a window frame, a sash mounted therein, shutters hinged to the frame, and latches carried by the shutters, of brackets secured to each of the shutters and having inwardly right angularly extended portions, and plates riveted to the said portions of the brackets upon each shutter, the plates being overlapped at their meeting ends and being extended substantially to the hinged edges of the shutters and being of such width as to extend from the shutters to the lower rail of the sash within the frame.

2. In a shutter latch guard, the combination with a window frame, a sash mounted therein, shutters hinged to the frame, and latches carried by the shutters, of brackets secured to each of the shutters and having inwardly right angularly extended portions, and plates riveted to the said portions of the brackets upon each shutter, the plate upon one shutter having its end adjacent the free edge of the shutter terminated slightly short of the said edge and curved so as to pass the corresponding edge of the other shutter, the plate upon the other shutter having its end corresponding to the curved end of the last mentioned plate extended beneath the same and beyond the free edge of its corresponding shutter, the plates being extended substantially to the hinged edges of the shutters and being of such width as to extend from the shutters to the lower rail of the sash within the frame.

870,849. FEEDING DEVICE FOR POULTRY. FREDERICK W. RUGGLES, Hudson, Mass. Filed Feb. 16, 1907. Serial No. 357,603.

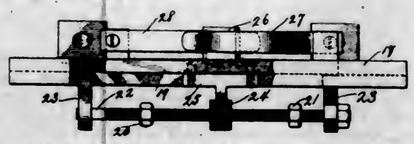


1. A feeding device for poultry, comprising a feed reservoir having a side opening, a movable screen suspended from a point adjacent the upper end of said opening and when in use maintained by the contents of the reservoir as an inclined front of said opening to automatically maintain itself against said contents of the reservoir, and to support said contents upon one side, but permitting the removal of said contents.

2. A feeding device for poultry, comprising a feed reservoir having a side opening, a weighted pivoted screen suspended from a point adjacent the upper end of said opening, and when in use maintained by the contents of the reservoir as an inclined front of said opening to automatically maintain itself against the contents of the reservoir, and to support said contents upon one side, but permitting the removal of said contents.

3. A feeding device for poultry, comprising a feed reservoir, a side opening being formed in said reservoir, a pivoted screen suspended from a point adjacent the upper end of said opening, and when in use maintained by the contents of the reservoir as an inclined front to said opening to automatically maintain itself against the contents of the reservoir, and means upon the front of the opening of said reservoir independent of said screen to prevent the scattering of the grain by the poultry.

870,850. SPOOLING-MACHINE. THOMAS DE C. RUTH, Newark, N. J., assignor to Robert J. Emory & Company, Newark, N. J., a Copartnership. Filed Oct. 1, 1906. Serial No. 336,928.



1. In a spooling machine, the combination with a reciprocatory traverse bar, of mechanism for imparting movement to the traverse bar and devices for reversing the direction of movement of the traverse bar at each end of its range of movement, said reversing devices comprising a slide, an arm carried by the traverse bar and engaging the slide, adjustable stops to limit the movement of the slide, and means carried by the slide for shifting the position of said arm after movement of the slide has been arrested by either of the stops therefor.

2. In a spooling machine, the combination with a reciprocatory traverse bar, of mechanism for imparting movement to the traverse bar and devices for reversing the direction of movement of the traverse bar at each end of its range of movement, said reversing devices comprising a slide, adjustable stops to limit the movement of the slide, an arm carried by the traverse bar and extending toward the slide, and devices mounted on slide and engaged by said arm whereby movement is imparted to the slide from said arm and whereby said arm is shifted after the slide engages each of the stops to limit its movement.

3. In a spooling machine, the combination with a reciprocatory traverse bar, or of mechanism for imparting movement to the traverse bar, said mechanism including two continuously operative driving elements, one adapted to impart movement to the traverse bar in one direction and the other adapted to impart movement to the traverse bar in the opposite direction, and shiftable connections between said driving elements and the traverse bar so arranged that the connections with one of said driving elements only can be in operative position at a given time, and devices for reversing direction of movement on the traverse bar at each end of its range of movement, said devices comprising a slide, adjustable stops to limit the movement of the slide, a lug carried by the slide, a pair of bent springs extending in opposite directions and engaging the lug on both sides of the arm extending from said traverse bar toward said slide and adapted to engage said springs, whereby said arm is shifted at the engagement of said slide with each of said stops and the traverse bar is rocked to throw into operation the connections between the traverse bar and one of the driving elements and throw out of operation the connection between the traverse bar and the other driving element.

870,851. COMBINATION INSTRUMENT. CARL SCHNEIDER, Jersey City, N. J., assignor to International Electrical Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Nov. 4, 1905. Serial No. 285,810.

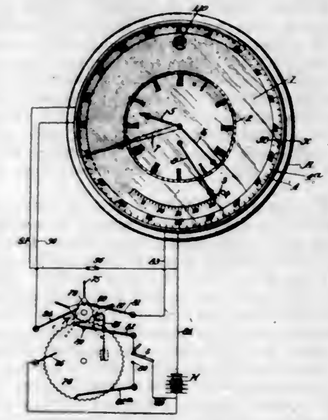


1. A combination instrument having two branches hinged together, both of the said branches having longitudinally adjustable needle points arranged to be extended into and withdrawn from operative position, one of the said needle points having a cam surface and one of the said branches having a longitudinally adjustable pencil arranged to be clamped in its extended or withdrawn position by the needle point having the cam surface.

2. A combination instrument having two branches hinged together, both of the branches having longitudinally adjustable needle points arranged to be extended into and withdrawn from operative position, one of the said needle points having a cam surface and one of the branches being further provided with a longitudinally adjustable pencil, and a presser plate controlled by the needle point having the cam surface, for clamping and releasing the pencil.

3. A combination instrument having two branches hinged together, one of the said branches having a spring pressed longitudinally adjustable needle point arranged to be extended into and withdrawn from operative position and the other of said branches comprising an upper portion and a lower portion pivoted to the upper portion, said lower portion having one of its arms provided with a pen and its other arm provided with a longitudinally adjustable pencil and a longitudinally adjustable needle point having a cam surface, for clamping the pencil in its extended or withdrawn position.

870,852. SPEED-INDICATOR AND DISTANCE-RECORDER. RALPH SHIPMAN, Sunbury, Pa. Filed Nov. 15, 1906. Serial No. 343,623.



1. An apparatus for indicating the average speed of a vehicle or other device while moving a given unit of distance comprising a time-operated member, an indicator, mechanism for adjusting said indicator according to the relative position of said member and for resetting said member in an initial position, and means for actuating said mechanism each time the vehicle or device whose speed is to be indicated moves a given distance.

2. A speed indicating apparatus comprising suitable timing mechanism, a member movable thereby, an indicator, mechanism for adjusting said indicator according to the relative position of said member and for resetting said member in an initial position, and means for actuating said mechanism each time the device whose speed is to be measured moves a given distance.

3. A speed indicating apparatus comprising a time operated member, an indicator, a float lever, links connecting the arms of said lever with said member and indicator respectively, and means for moving the pivotal point of said lever to a given position and for resetting said member in an initial position each time the device whose speed is to be measured moves a given distance.

4. In a speed indicating mechanism, a time operated clutch member, a second clutch member, an indicator, a movable support, a lever pivoted on said support, links connecting the opposite arms of said lever with said second clutch member and said indicator, respectively, and means operated by the mechanism whose speed is to be measured for moving said second clutch member to a given position and then engaging it with the time operated member.

5. In a speed indicating mechanism, a time operated clutch-member, a second clutch member movable into and out of engagement therewith, an indicator, a swinging arm, a lever pivoted on said arm, links connecting the opposite arms of said lever with said second clutch member and said indicator, respectively, and means actuated by the machine whose speed is to be measured for moving said arm to a given position each time the vehicle moves a given distance.

6. In a speed indicating mechanism, a time operated clutch member, a second clutch member movable into and out of engagement therewith, an indicator, a swinging

arm, a lever pivoted on said arm, links connecting the opposite arms of said lever with said second clutch member and said indicator, respectively, and means for releasing the clutch members after the arm has reached a given position.

7. In a speed indicating mechanism a time operated clutch member, a second clutch member movable into and out of engagement therewith, an indicator, a swinging arm, a lever pivoted on said arm, links connecting the opposite arms of said lever with said second clutch member and said indicator, respectively, and means for returning the clutch member to its initial position.

8. In a speed indicator mechanism a time operated clutch member, a second clutch member adjustable into and out of engagement therewith, a pivoted indicator, a movable support, a centrally pivoted lever carried by said support, links connecting the opposite arms of said lever with said adjustable clutch member and said indicator respectively, a resetting device adapted to adjust the support to a given position each time said device is operated, and means for actuating said device each time the device whose speed is to be measured travels a given distance.

9. In a speed indicator mechanism a time operated clutch member, a second clutch member adjustable into and out of engagement therewith, a pivoted indicator, a crank for operating said indicator, a movable support, a centrally pivoted lever carried by said support, links connecting the opposite arms of said lever with said adjustable clutch member and said crank, respectively, a resetting device adapted to adjust the support to a given position each time said device is operated, and means for actuating said device each time the device whose speed is to be measured travels a given distance.

10. In a speed indicator mechanism, a time operated clutch member, a second clutch member adjustable into and out of engagement therewith, an indicator pivoted concentrically with said adjustable clutch member, a movable support, a centrally pivoted lever carried by said support, links connecting the opposite arms of said lever with said adjustable clutch member and said indicator respectively, a resetting device adapted to adjust the support to a given position each time said device is operated, and means for actuating said device each time the device whose speed is to be measured travels a given distance.

11. In a speed indicator mechanism, a time operated clutch member, a second clutch member adjustable into and out of engagement therewith, an indicator pivoted concentrically with said adjustable clutch member, a crank for operating said indicator, a movable support, a centrally pivoted lever carried by said support, links connecting the opposite arms of said lever with said adjustable clutch member and said crank, respectively, a resetting device adapted to adjust the support to a given position each time said device is operated, and means for actuating said device each time the device whose speed is to be measured travels a given distance.

12. In a speed indicator mechanism, a time operated clutch member, a second clutch member adjustable into and out of engagement therewith, a pivoted indicator, a movable support, a centrally pivoted lever carried by said support, links connecting the opposite arms of said lever with said adjustable clutch member and said indicator respectively, a resetting device adapted to adjust the support to a given position and then release the clutch members and move the adjustable clutch member to a given position, each time said device is operated, and means for actuating said device each time the device whose speed is to be measured travels a given distance.

13. In a speed indicator mechanism a time operated clutch member, a second clutch member adjustable into and out of engagement therewith, a pivoted indicator, a crank for operating said indicator, a movable support, a centrally pivoted lever carried by said support, links connecting the opposite arms of said lever with said adjustable clutch member and said crank, respectively, a resetting device adapted to adjust the support to a given position and then release the clutch member and move the adjustable clutch member to a given position each time said device is operated, and means for actuating said device each time the device whose speed is to be measured travels a given distance.

14. In a speed indicator mechanism, a time operated clutch member a second clutch member adjustable into and out of engagement therewith, a pivoted indicator having a crank connected thereto, an adjustable support, a centrally pivoted lever on said support, links connecting the arms of said lever with said adjustable clutch member and said crank respectively, a reciprocating resetting device having converging cam surfaces adapted to engage a part on said support and move said support to a given position and then release the clutch members when the resetting device is moved in one direction, said device being also adapted to return the adjustable clutch member to an initial position when the resetting device moves in the opposite direction.

15. In a speed indicator mechanism, a time operated clutch member, a second clutch member adapted to be driven thereby, an indicator, connections between said latter clutch member and the indicator whereby one may move without disturbing the other, and mechanism adapted to move the indicator while the clutch members are engaged and to then reset said second clutch member to a given initial position.

16. In a speed indicator mechanism, a time operated clutch member, a second clutch member adapted to be driven thereby, an indicator, connections between said latter clutch member and the indicator whereby one may move without disturbing the other, mechanism adapted to move the indicator while the clutch members are engaged and to then reset said second clutch member to a given initial position, and means for holding the indicator stationary while said second clutch member is being moved to its initial position.

17. In a speed indicator mechanism a time operated clutch member, a second clutch member and an indicator, all movable about a common axis, a brake for said indicator, a float lever, connections between the arms of said lever and said indicator and second clutch member respectively, permitting said latter member and indicator to move independently, mechanism adapted when operated to first move the pivotal point of the lever to a given position with respect to the common axis of the clutch members and indicator, then to release the clutch members and apply the brake to the indicator, and then to return said second clutch member to a given position, and means for operating said mechanism each time the device whose speed is to be indicated moves a given distance.

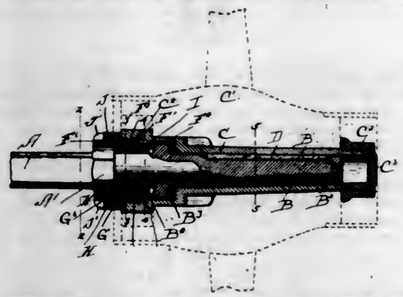
18. A speed indicator mechanism comprising a constantly driven clutch member, an adjustable clutch member movable into and out of engagement therewith, a slide adapted to disengage said clutch members when moved in one direction and to set said adjustable member backward to an initial position when moved in the opposite direction, said adjustable member and slide having coöperating cam surfaces whereby the clutch members are automatically disengaged after said members have been engaged for a given time, while the slide is stationary.

19. A speed indicator mechanism comprising an indicator, a shaft or sleeve upon which said indicator is mounted, a brake for said indicator shaft, a time operated clutch member and an adjustable clutch member movable about the same axis as the indicator shaft, said adjustable clutch member being arranged between the time operated member and the indicator shaft and being provided with a collar, a reciprocable slide between said collar and the adjustable clutch member and normally cut out of engagement therewith, means for moving said slide into position to disengage the clutch members and apply the brake to the indicator shaft when the slide is moved in one direction, a temporary bed and means for holding said bed under the slide while the latter is moving in the opposite direction, and a shoulder or projection connected with said adjustable clutch member and adapted to be engaged by the slide when the slide moves in the latter direction.

20. A speed indicating mechanism for vehicles comprising an indicator, a time operated clutch member and a second clutch member movable into and out of engagement therewith, connections between the latter clutch member and the indicator permitting one to move without the other, and means for adjusting the position of the indicator according to the position of said second clutch member comprising a reciprocable slide, in combination with a magnet for operating said slide, a circuit for said magnet, and a circuit closing device operated by the movement of a vehicle wheel each time the wheel makes a stated number of revolutions.

21. A speed indicating mechanism for vehicles comprising an indicator, a time operated clutch member and a second clutch member movable into and out of engagement therewith, connections between the latter clutch member and the indicator permitting one to move without the other, and means for adjusting the position of the indicator according to the position of said second clutch member comprising a reciprocable slide, in combination with a magnet for operating said slide, a circuit for said magnet, a circuit closing device operated by the movement of a vehicle wheel each time the wheel makes a stated number of revolutions, and circuit connections whereby the circuit may be closed a greater or less number of times during a given number of revolutions of the wheel.

870,853. AXLE-WHEEL COUPLING. JOHN H. SNUGGS, Jackson, Mich. Filed July 28, 1906. Serial No. 328,176.



1. The combination with an axle skein provided with a flanged collar, the flanges of the collar extending inwardly, of a split nut arranged on said skein provided with tongues fitting under the flange of the collar, said nut being provided with an annular groove, a packing washer arranged in said groove, and a box arranged over said skein secured to said nut.

2. The combination with an axle skein provided with a flanged collar, of a split nut arranged on the skein provided with tongues arranged under the flange of the collar a box secured on said skein by said nut, and means for locking the sections of the nut together for the purpose described.

3. The combination with an axle skein provided with a collar, of a split nut arranged on said skein bearing against said collar, a box provided with a threaded end adapted to fit on said nut, and a sleeve arranged on said nut for the purpose described.

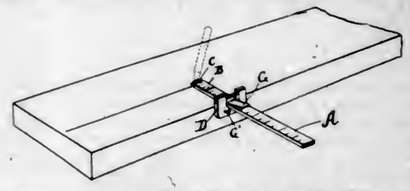
4. The combination with an axle skein provided with a flanged collar, of a split nut arranged on said skein provided with outwardly projecting tongues fitting under said flanged collar, a sleeve arranged on said nut and a box arranged on said skein provided with a threaded end working on said nut, for the purpose described.

5. The combination with an axle having an octagonal enlargement provided with an axle skein, having a collar formed thereon, of a split nut arranged on said skein adjacent said collar provided with an octagonal recess a box having an internally threaded end fitting on said nut, and a sleeve mounted on said nut for the purpose described.

6. The combination with an axle provided with an axle skein having a flanged collar formed thereon, of a split nut arranged on said collar provided with tongues adapted to fit under the flange of the collar and provided with annular groove, a packing secured in said groove, a flange formed on said nut having notches formed therein, a sleeve arranged on said nut provided with tongues fitting in said notches, and a box arranged on said skein having an internally threaded end working on said nut adapted to engage said sleeve, for the purpose described.

7. The combination with an axle skein, provided with a flanged collar, of a nut provided with tongues fitting under the flange of the collar, a flange formed on said nut provided with notches, a tapering sleeve fitting over said nut provided with tongues fitting in the notches of the flange, and a box working on said nut adapted to engage said sleeve, for the purpose described.

870,854. ATTACHMENT FOR CARPENTERS' SQUARES. MORRIS S. SOBER, McLoud, Okla. Filed May 15, 1906. Serial No. 316,902.



In combination, a block having a recess in one of its edges, a pin extending across the opened end of the recess, a plate approximately L-shaped, the free end of the stem of the L being bent to embrace the pin, the foot of the L, extending to one side of the block and a rule positioned between the plate and the block to be clamped to the block by the plate.

870,855. PROCESS TO FACILITATE THE SHELLING OF PEAS AND THE LIKE. FRANK STAINES, Melbourne, Victoria, Australia. Filed May 18, 1906. Serial No. 317,527.

1. An improved process to facilitate the shelling of peas and the like, consisting of heating the pods containing the peas in a fluid at a moderate temperature, thereby expanding the air in the pod without causing its escape, and putting it under tension, then subjecting a portion of the pod to pressure, thereby splitting the pod and ejecting the peas by means of the escaping air.

2. An improved process to facilitate the shelling of peas and the like, consisting of subjecting the pods containing the peas to a moderate increase of temperature, thereby expanding the air in the pod and putting it under tension, then subjecting one end of the pod to pressure, thereby increasing the air pressure within and splitting the pod and ejecting the peas by means of the escaping air.

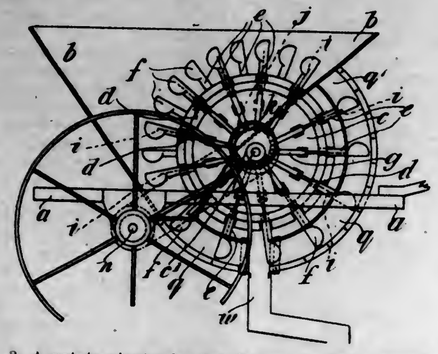
3. An improved process to facilitate the shelling of peas and the like, consisting of subjecting the pods containing the peas to a temperature in the neighborhood of 120°, thereby expanding the air in the pod and putting it under tension without causing it to escape, then subjecting one end of the pod to pressure between rollers increasing the air pressure within the pod whereby the portion of the pod remote from the rollers will be split open and the peas ejected by the escaping air.

870,856. POTATO-PLANTER. WILLIAM W. TAVERNER, Upper Ballinderry, and ARTHUR GREGG, Belfast, Ireland. Filed Apr. 3, 1907. Serial No. 366,073.

1. A potato planter having, in combination, a rotatable wheel with a series of cups thereon, a potato holder projecting into each cup and radially disposed on the wheel, means for guiding the said holders and a centrally situated cam for operating the holders.

2. A potato planter having, in combination, a rotatable wheel with a series of cups thereon, a potato holder projecting into each cup and radially disposed on the wheel,

means for guiding the said holders and a centrally situated cam which is adapted to cause the holders to first retain the potatoes in the cups and then subsequently release the same.



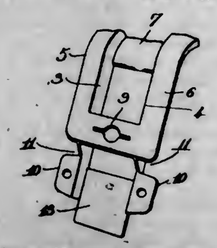
3. A potato planter having, in combination, a wheel, a shaft, means for rotating the shaft, a series of cups radially disposed on the circumference of the wheel, a needle projecting into each cup, a rod connected with each needle and a stationary cam adapted to operate the rods and needles to cause the latter to first pierce the potato in the cup and then release the same.

4. A potato planter having, in combination, a wheel, a shaft, means for rotating the shaft, a series of cups radially disposed on the circumference of the wheel, a needle projecting into each cup, a rod connected with each needle, a roller on the inner end of the rod and a stationary grooved cam adapted to engage the said roller.

5. A potato planter having, in combination, a potato hopper, a wheel arranged at the bottom of the hopper, a shaft for rotating same, means for revolving the shaft, a series of cups radially disposed on the circumference of the wheel, a pipe connected with the hopper said pipe having an opening at its underside, a needle projecting into each cup, radially disposed rods for operating the needles and a fixed cam.

6. A potato planter having, in combination, a frame mounted on wheels, an axle for the wheels, a clutch on the axle, means for operating the clutch, a clutch wheel, a chain driven by the clutch wheel, a shaft driven by the chain, two wheels mounted on the shaft, a series of cups radially mounted on each wheel, needles projecting into the cups and a cam for operating the needles, said cam being fixed and centrally situated with reference to the cups.

870,857. SADDLETREE. GEORGE J. THEOBALD, Boston, Mass. Filed Aug. 1, 1906. Serial No. 328,663.



In a saddle-tree, side arms forming a space between them for the back strap, a turret bridge connecting said side arms, flanges extending outwardly and laterally from the upper edges of said side arms, said flanges terminating at the turret bridge, skirt rests 10 extending laterally from the arms beyond the turret bridge, said skirt rests being on a lower plane than the flanges and the space between said rests and the flanges being open, a skirt supported by said skirt rest and having fingers underlying said flanges, and a box through which the back strap passes secured to said skirt rests.

870,858. TELEGRAPH-POLE. FREDERICK H. TIDNAM, Oklahoma, Okla. Filed July 9, 1907. Serial No. 382,867.



1. A cement telegraph pole, comprising a body having a conical-shape, hollow, central portion, producing sides of the body of the same thickness throughout their lengths, said body provided with an integral, conical cap of uniform thickness, a metallic framework embedded in said body, said framework comprising a plurality of longitudinally-extending primary members, horizontal, annular, auxiliary members engaging said primary members, and clamps connecting each two primary and auxiliary members at their crossing point, said clamps comprising horizontal and vertical body portions, the vertical body portion outwardly bulged, said outwardly-bulged portion constituting a groove, the primary member positioned in said groove, and said horizontal body portion provided with annular lugs surrounding the auxilliary member.

2. A post, comprising a hollow, cement body, a metallic framework embedded in said body, said framework comprising primary longitudinally-extending members, auxiliary, annular members engaging said longitudinally-extending members intermediate their ends, and clamps positioned upon said primary and auxiliary members at their crossing point and securing said members together, each clamp extending parallel with a primary member and an auxiliary member, the clamp provided with portions extending beyond the crossing point of the two members and reinforcing the same.

3. A pole, comprising a body provided with a conical tapering, hollow, inner portion, the sides of said body of the same thickness throughout its length, said body provided with a conical cap, a metallic, reinforcing framework embedded in said body, said framework comprising longitudinally-extending wires, annular wires engaging said longitudinally-extending wires intermediate their ends, and means securing said longitudinally-extending and annular wires together at each of their junction or crossing points.

4. A composite pole or post, comprising a hollow cement body and a metallic framework embedded in the sides of said body, said framework comprising annular members and longitudinally-extending, parallel members, and connecting means at the crossing point of each annular and longitudinal member and reinforcing the same a distance beyond the crossing point, whereby the strength of the framework is greatly increased.

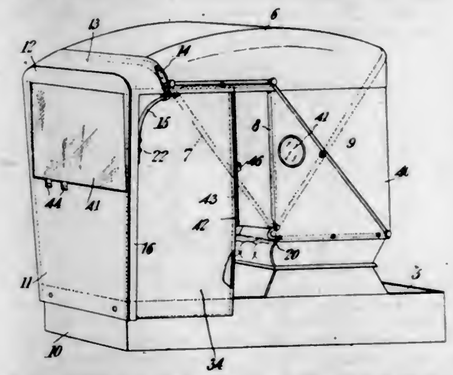
5. A composite post, comprising a hollow body having a reinforcing framework embedded in said body, said framework comprising a tapering cylindrical structure formed of a series of longitudinally-extending wires, and binding and spacing means for said longitudinally-extending wires comprising a plurality of annular wires and clamps.

6. A composite pole or post, comprising a plastic body and a metallic framework embedded in said body, said framework comprising longitudinally-extending members, each member having portions at its ends bent back parallel to the body of the member, and fastening means positioned between the body of the members and their parallel portions and securing said fastening means to the longitudinally-extending members.

7. A composite pole or post, comprising a plastic body and a framework embedded in said body, said framework comprising annular members and longitudinally-extending members, and means connecting said annular and longitudinally-extending members at their crossing points and reinforcing said members a distance beyond the crossing points, whereby the strength of the framework is greatly increased.

8. A composite pole or post, comprising a plastic body and a framework embedded in said body, said framework comprising vertical members, horizontal members engaging said vertical members, and clamping means positioned upon said vertical and horizontal members at their crossing points and securing said members together, each clamping means extending parallel with a vertical member and a horizontal member and provided with portions extending beyond the crossing point of said two members and reinforcing the same.

870,859. STORM-SHIELD AND BUGGY-TOP. ALBERT L. TRABUE, Mays, Ind. Filed May 20, 1907. Serial No. 374,698.

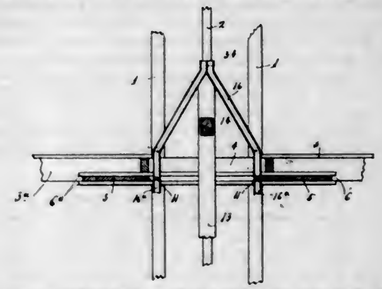


1. The combination with a vehicle having a folding top including top and side bows, the front side bow being removable and provided with a threaded extension for engagement with a corresponding socket formed in the adjacent top bow, of a storm shield detachably secured to the vehicle and provided with a hood for engagement with the vehicle top, an arm extending laterally from the shield, and a fastening device adapted to pierce the arm and engage the socket in the top bow when the movable side bow is detached.

2. The combination with a vehicle having a folding top including top and side bows, one of the side bows being removable and adapted to engage a socket formed in the adjacent top bow, a storm shield detachably secured to the vehicle and provided with a hood for engagement with the vehicle top, a supporting arm extending laterally from the storm shield and having an opening formed therein and adapted to register with the socket in the top bow when the removable side bow is detached, and a fastening device engaging the opening and socket for securing the shield in position on the vehicle.

3. The combination with a vehicle having a folding top including top and side bows one of the side bows being removable and provided with a reduced extension adapted to engage a socket formed in the adjacent top bow, arms extending laterally from the shield and provided with means for engagement with one of the side bows, said arms being provided with openings adapted to register with the sockets in the top bow when the removable side bow is detached, clamping screws extending through the openings in the arms and engaging the sockets, roller carrying curtains mounted for rotation on the frame, and attaching straps carried by the opposite ends of the hood and adapted to engage the arms for clamping the hood in engagement with the vehicle top.

870,860. FLOOR-GATE-ACTUATING DEVICE FOR ELEVATORS. ELGIN O. UNGAR, Minneapolis, Minn., assignor of one-half to Frank D. Guertin, Minneapolis, Minn. Filed July 20, 1906. Serial No. 327,025.



1. The combination with an elevator car and a floor gate, of cam bars on said car operative on said gate to open and close the same, including a pivoted cam bar section movable, at will, into a position to leave the said gate standing open after the car has passed the same, substantially as described.

2. The combination with an elevator car and a two part floor gate, of reversely diverging upper and lower cam bars on said car, operative on said gate sections to open and close the same, said cam bars having pivoted intermediate sections adapted to be moved into and out of line to connect and disconnect the corresponding members of said cam bars, substantially as described.

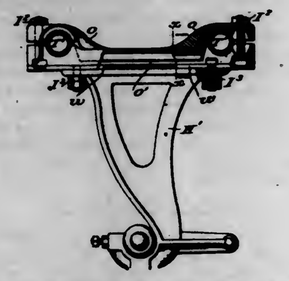
3. The combination with an elevator car and a floor gate made up of sliding sections, of the upper downwardly diverging cam bars 16 and the lower upwardly diverging cam bars 17 carried by said car and provided with the pivoted intermediate sections 16^a and 17^a respectively, the said bars being duplicated on the opposite sides of the car and arranged for action on the projections of the gate sections to open and close the same, connections whereby the four pivoted sections 16^a may be simultaneously moved into and out of line with the corresponding lower pivoted sections 17^a, and means whereby said four lower pivoted sections 17^a may be simultaneously moved into and out of line with the corresponding upper pivoted section 16^a, substantially as described.

870,861. MEANS FOR SUPPORTING SHAFTING. EDWARD WESTON, Newark, N. J. Filed May 13, 1902. Serial No. 107,080½.

1. Means for supporting string pieces in a factory building, embracing a two-part clamp provided with means for holding said parts together and securing the string pieces between them; in combination with additional means for securing the clamp directly to one of the lower members of the roof-trusses, substantially as described.

2. Means for supporting hangers of different size in a factory building from parallel string pieces, embracing a two-part clamp provided with means at its opposite ends for clamping the hanger to the string-pieces, the lower half

of said clamp being provided with oblong slots adapted to secure the heads of bolts when affixed to such hanger, substantially as described.



3. Means for supporting shafting from the lower members of the roof-trusses of a factory building, embracing two-part clamps provided with semi-cylindrical clamping parts, bolts, and nuts adapted to support parallel string pieces beneath said trusses; in combination with pairs of two-part separable clamps adapted in turn to grip or clamp the before-mentioned string pieces, the lower halves of the latter clamps being provided with oblong slots; together with hangers having bolts extending through the before-mentioned slots and adapted to secure them adjustably therein, substantially as described.

4. Means for supporting shafting in a building, embracing pairs of string pieces; means for adjustably supporting said string-pieces in pairs beneath the lower members of the roof-trusses of the building; additional means adjustably secured to said string-pieces in pairs for supporting shaft hangers, the arrangement being such that any line of supported shafting may be adjusted both longitudinally and laterally with relation to the floor space of the building, substantially as described.

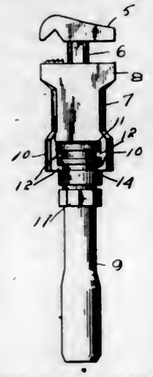
5. Means for supporting shafting in a building, embracing parallel lines of string pieces and means for adjustably securing the opposite ends of said string-pieces to the lower members of the roof-trusses; in combination with detachable and adjustable clamps secured in pairs to the stringers, and hangers supported by said clamps, the arrangement being such that any line of supported shafting may be adjusted both longitudinally and laterally with relation to the floor space of the building, substantially as described.

6. Means for supporting shafting in a building, embracing parallel lines of string pieces and means for adjustably securing said string pieces to the lower members of the roof-trusses; in combination with clamps secured in pairs to the stringers, said clamps being adjustable thereon and so constructed as to support different sized hangers, the entire arrangement being such that any line of shafting may be adjusted both longitudinally and laterally with relation to the floor space of the building and different sized hangers may be adopted at the will of the user, substantially as described.

870,862. WRENCH. GEORGE B. CRISPIN and ROLA F. WRIGHT, Charleston, Ill. Filed Apr. 6, 1907. Serial No. 366,735.

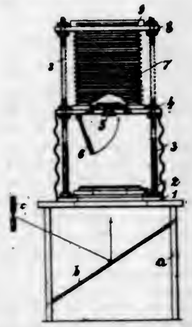
1. A wrench comprising a jaw having a screw-threaded shank, a slide provided with a jaw, and having a longitudinal opening through which the shank is adapted to extend, and having an enlarged inner end 10 with an opening therethrough from side to side, with two ribs and grooves at the sides of said opening and an interiorly threaded hollow handle to receive said shank, the forward end of the handle being provided with annular grooves and ribs to coöperate with the like specified features on the inner end of the slide, substantially as and for the purposes set forth.

2. A wrench comprising a jaw having a screw-threaded shank, a slide provided with a jaw, and having a longitudinal opening through which the shank is adapted to extend, and having an enlarged inner end 10 with an opening therethrough from side to side, with two ribs and grooves at the sides of said opening and an interiorly threaded hollow handle to receive said shank, the forward end of the handle being provided with annular grooves and



ribs to coöperate with the like specified features on the inner end of the slide, the inner portion of the handle being also provided with an integral polygonally faced enlargement, as and for the purpose set forth.

870,863. APPARATUS FOR THE PRODUCTION OF PICTURES, PATTERNS, AND THE LIKE BY PHOTOGRAPHIC METHOD. EDUARD BACHMANN, Seebach, near Zurich, Switzerland, assignor to Neu-Graphic A. G., Oerlikon, near Zurich, Switzerland. Filed Mar. 22, 1906. Serial No. 307,402.



1. In an apparatus of the class described, the combination with a camera, of a movable support for a ground figure to be photographed, and means for moving such support determined successive distances with relation to the camera to permit repeated, sharply adjoining, more or less interwoven or disconnected photographic impressions to be taken thereof upon a single sensitive surface.

2. An apparatus for the production of pictures comprising a support for a ground figure, means for photographing said figure, means for moving the support in relation to the photographic means so as to photograph said figure in various positions and a scale for determining the movement of the ground figure.

3. An apparatus for the production of pictures comprising a support for a ground figure, means for moving this support along a determined line, means for sharply bounding such part of the ground figure to be exposed to the action of the light and means for photographing said part so exposed upon different places of a single sensitive plate in any desired arrangement for the purpose to produce from a fractional, irregular and imperfect ground

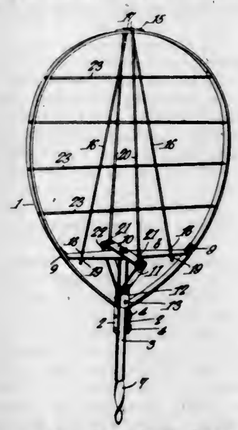
figure a great number of complete regular and manifold pictures.

4. An apparatus for the production of pictures comprising means for taking a photographic reproduction of a ground figure or a part thereof upon a single sensitive plate, a frame provided with an aperture, and a disk fitting in said aperture and adapted to rotate therein, said disk having a central opening partly covered by a mask, and partly by the ground figure held on the mask, substantially as described.

5. An apparatus for the production of pictures and the like, comprising a frame provided with an aperture, a disk provided with a rim fitting in said aperture, means for rotating the disk on the frame, a mask fixed on this disk and covering the greater part of the central opening of the disk, and means for holding the ground figure on this mask.

6. An apparatus for the production of pictures and the like, comprising a frame provided with an aperture, a disk having a rim adapted to rotate in this aperture, a mask fixed in this disk and having a circular sector, the radii of this sector serving to limit the part of the ground figure to be photographed.

870,864. TRELLIS. CLARENCE I. J. BARKER, David City, Nebr. Filed Feb. 26, 1907. Serial No. 359,341.



1. A trellis composed of an elastic frame, inelastic connections between the sides of the frame, and other inelastic connections arranged at approximately right angles to the first-named connections and provided with adjustable means for putting them under longitudinal strain.

2. A trellis comprising an elastic, elliptical frame, inelastic wires connecting the sides of the frame through its smaller diameter, and other inelastic wires extending through the frame on its longer diameter and provided with means for putting the longitudinal wires on the frame under strain.

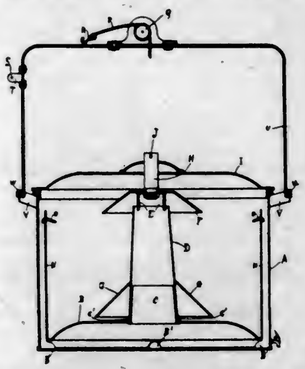
3. A trellis composed of an elliptical frame of spring metal, cross wires connecting the sides of the frame on the smaller diameter thereof, a cross bar near one end of the frame parallel with the cross wires, other wires connected to one end of the frame and extending along its longer diameter and passing through the cross bar at points near its connection with the sides of the frame, and adjusting nuts on said longitudinal wires for putting them under longitudinal strain.

4. A trellis comprising an elliptical frame, a post to which one end of the frame is secured and which extends for a distance along the longer diameter of the frame, a cross bar connected to the upper end of said post and to the sides of the frame, cross wires connected to the sides of the frame parallel with the cross bar, longitudinal wires connected to the upper end of the frame and passing through the cross bar at points equi-distant from its point of connection with the post, and nuts applied to said longitudinal wires and adapted to put them under longitudinal strain.

5. A trellis comprising an elliptical frame of elastic material, cross wires connected to the sides thereof through its smaller diameter, a cross bar connected to the sides of the frame near its lower end, a post to which the lower end of the frame is secured and having its upper end secured to said cross bar, a supplemental frame connected to the post at right angles to the cross bar, wires connected to the top of the main frame and passing through the cross bar and there receiving straining nuts, and other wires connected to the top of the main frame and passing through the supplemental frame at points equi-distant from the post and there receiving straining nuts.

6. A trellis comprising an elastic frame, inelastic cross wires therein and a cross bar near its lower end, a post to which the lower end of the frame is connected and which, in turn, is connected to the cross bar, a supplemental frame connected to the post and extending at right angles to the cross bar, straining wires connected to the upper end of the main frame and also connected at their lower ends of the cross bar and supplemental frame by straining nuts, and an auger point fast on the lower end of the cross bar and adapted to be inserted in the ground.

870,865. WASHBOILER. JAMES H. BROWNLEE, Philadelphia, Pa. Filed Feb. 12, 1907. Serial No. 356,968.



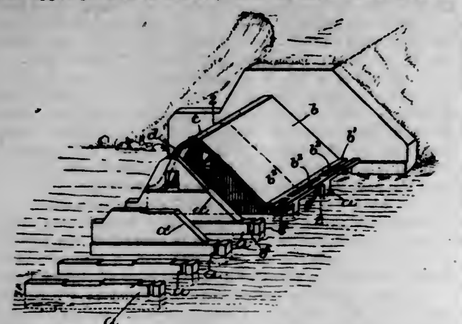
The herein described combination of a boiler a false bottom adapted to fit therein and form a water space there beneath, the flanges of said false bottom having openings for the inflow of the water to said spaces, a tubular projection extending from the top of the false bottom, a standpipe fitted upon said projection so as to revolve thereon, stirrers projecting from the bottom of the standpipe, a plurality of vertical brackets secured to the upper extremity of the standpipe, a hood secured to said brackets and spaced from the top of the standpipe, a shank attached to the hood and having a hole therein for the application of a wrench for revolving the standpipe and a cover hinged to said boiler provided with an orifice through which the standpipe may extend.

870,866. METHOD OF BUILDING DAMS. WILLIAM L. CHURCH, Newton, Mass. Filed July 25, 1907. Serial No. 385,448.

1. The method hereinbefore described of building a dam, the same consisting in building a skeleton base composed of a series of isolated piers separated by unobstructed water courses, then building on said skeleton base above the said water courses, the upper works of the dam, and then completing the base by successively closing the spaces between the piers below the upper works.

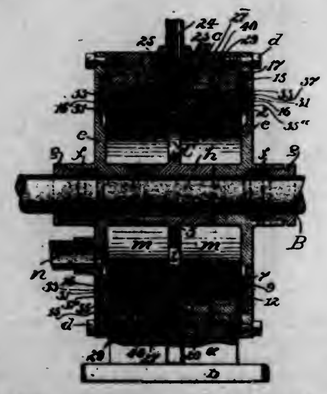
2. The method hereinbefore described of building a dam, the same consisting in building a skeleton base composed

of a series of isolated piers extending crosswise of the dam, and separated by unobstructed water courses, then extending said piers upwardly to form buttresses, then building the upper portion of the deck and the crest of the dam on



said piers and buttresses, leaving the water courses unobstructed, and then completing the base by successively adding extensions to the deck, said extensions closing the spaces between the piers.

870,867. IMPACT AND REACTION MOTOR. CHESTER COMSTOCK, Brooklyn, N. Y. Filed Nov. 24, 1902, Serial No. 132,583. Renewed Mar. 24, 1906. Serial No. 307,921.



1. An impact motor comprising a casing, a shaft, a rotating member carried thereby and means for rotating said member both by impact and reaction of a propulsive agent thereupon, said means consisting of a series of rings affixed to said casing, and a series of rings affixed to said member, all of which rings have corresponding recesses in their adjacent surfaces forming thereby steam courses, and semi-partitions between each two rings whereby the force of the propulsive agent is alternated from one series of rings to the other.

2. An impact motor comprising a casing, a shaft, a rotating member carried thereby, and means for rotating said member by alternated direct and reacting impacts of a propulsive agent thereupon, said means consisting of a plurality of members affixed to said casing and a plurality of members affixed to said member, all of which members have corresponding recesses in their adjacent surfaces forming thereby steam courses, and semi-partitions between each two members whereby the course of the propulsive agent is deflected and thereby alternated from one series of members to the other.

3. An impact motor comprising a casing, a shaft, a member carried thereby and means for rotating said member by alternated direct and reacting impacts of a propulsive agent thereupon, said means consisting of a series of rings affixed to said casing and a series of rings affixed to said member, all of said rings having corresponding recesses in their adjacent surfaces forming thereby rows of steam courses, and semi-partitions located in each of said rows whereby the course of the propulsive agent is deflected and thereby alternated from one series of the rings to the other series.

4. An impact motor comprising a casing, a shaft, a rotating member carried thereby and means for rotating said member by alternated direct and reacting impacts of a propulsive agent thereupon, said means consisting of a series of rings affixed to said casing and a series of rings affixed to said member, all of which rings have corresponding inclined recesses in their adjacent surfaces thereby forming steam courses and semi-partitions between the rings whereby the course of the propulsive agent is deflected and caused to alternate from one series of rings to the other series.

5. An impact motor comprising a casing, a shaft, a wheel carried thereby and means for rotating said wheel both by impact and reaction of a propulsive agent thereupon, said means consisting of a series of rings affixed to the casing and a series of rings affixed to said wheel, all of said rings having corresponding recesses in their adjacent surfaces forming thereby a series of steam courses, and semi-partitions between the rings whereby the course of the propulsive agent is deflected so as to alternate from one series of rings to the other.

6. An impact motor comprising a casing, a shaft, a rotating member carried thereby and means for rotating said member both by impact and reaction of a propulsive agent, said means consisting of a series of rings affixed to said casing, and a series of rings affixed to said member, said last mentioned rings being coincident with and lateral to the central plane of rotation of said member and having corresponding recesses in their adjacent surfaces forming thereby steam courses, and semi-partitions between said rings whereby the course of the propulsive agent is deflected and alternated from one series of rings to the other.

7. An impact motor comprising a casing, a shaft, a rotating member carried thereby and means for rotating said member both by impact and reaction of a propulsive agent, said means consisting of a series of rings affixed to said casing, and a series of rings affixed to said member, said last mentioned rings being coincident with and lateral to the central plane of rotation of said member and having corresponding inclined recesses in their adjacent surfaces forming thereby steam courses, and semi-partitions between said rings whereby the course of the propulsive agent is deflected and alternated from one series of rings to the other.

8. An impact motor comprising a casing, a shaft, a rotating member carried thereby and means for rotating member by alternated direct and reacting impacts of a propulsive agent thereupon, said means consisting of a series of rings affixed to said casing and a series of rings affixed to said member, said last mentioned rings being coincident with and on opposite sides of the central plane of rotation of the wheel and having corresponding recesses in their adjacent surfaces forming thereby steam courses, and semi-partitions between said means whereby the course of the propulsive agent is deflected and alternated from one series of rings to the other.

9. An impact motor comprising a casing, shaft, a rotating member carried thereby and means for rotating said member by alternated direct and reacting impacts of a propulsive agent thereupon, said means consisting of a series of rings affixed to said casing and a series of rings affixed to said member, said last mentioned rings being coincident with and on opposite sides of the central plane of rotation of the wheel and having corresponding inclined recesses in their adjacent surfaces forming thereby steam courses, and semi-partitions between said means whereby the course of the propulsive agent is deflected and alternated from one series of rings to the other.

10. An impact motor comprising a casing, a shaft, a rotating member carried thereby and means for rotating

said member by alternated direct and reacting impacts of a propulsive agent thereupon, said means consisting of a series of rings affixed to said casing and a series of rings affixed to said member, said last mentioned rings being coincident with and lateral to the central plane of rotation of the wheel and having corresponding recesses in their adjacent surfaces forming thereby steam courses, and semi-partitions between said means whereby the course of the propulsive agent is deflected and alternated from one series of rings to the other.

11. An impact motor comprising a casing, a shaft, a rotating member carried thereby and means for rotating said member by alternated direct and reacting impacts of a propulsive agent thereupon, said member consisting of a series of rings affixed to said casing and a series of rings affixed to said member, all of said rings having corresponding recesses in their adjacent surfaces forming thereby steam courses, and semi-partitions between the rings and disposed in alternation in opposite directions in the course whereby the travel of the propulsive agent is deflected and alternated from one series of rings to the other.

12. A cylinder having impact recesses upon its periphery and a casing having coöperative impact pockets upon its inner periphery and at its ends, a hollow cylinder having impact recesses upon its periphery and a casing having coöperative recesses upon its inner periphery and upon its ends, means for enabling the exhaust steam to exhaust at each end into the hollow of said cylinder, and an exhaust port communicating with said hollow.

13. An impact motor comprising a casing, a shaft, a member carried thereby, means for rotating said member by alternated direct and reacting impacts of a propulsive agent thereupon, said means constituting a series of rings carried by the casing and a series of rings carried by a movable member, the rings of the two series having corresponding recesses in their adjacent surfaces forming thereby steam courses, semi-partitions between each two rings whereby the force of the propulsive agent is alternated from one series of rings to the other, outer movable rings having ports corresponding to said chambers and stationary rings on the end of said casing each forming means for final impingement of the charges thereupon.

14. An impact motor comprising a casing, a shaft, a member carried thereby, means for rotating said member by alternated direct and reacting impacts of a propulsive agent thereupon, said means constituting a series of rings carried by the casing and a series of rings carried by a movable member, the rings of the two series having corresponding recesses in their adjacent courses forming thereby steam courses, semi-partitions between each two rings whereby the force of the propulsive agent is alternated from one series of rings to the other, outer movable rings having ports corresponding with said chambers and stationary rings on the ends of the casing having recesses therein, each formed with an inclined and a straight wall.

15. An impact-motor comprising a casing, a shaft, a wheel rigid with the shaft, means for rotating said wheel by impact of charges of an expansible propulsive agent thereupon, said means being constituted of a series of rings rigid with the casing and a series of rings movable with the wheel, the rings of the two series having corresponding pockets in their adjacent surfaces, forming thereby chambers, alternating semi-partitions extending into said chambers, outer movable rings having ports corresponding with the chambers, and stationary rings on the ends of the casing each formed with means for final impingement of the charges thereupon.

16. An impact-motor comprising a casing, a shaft, a wheel rigid with the shaft, means for rotating said wheel by impact of charges of an expansible propulsive agent therenpon, said means being constituted of a series of rings rigid with the casing and a series of rings movable with the wheel, the rings of the two series being coincident with and lateral to the central plane of rotation of the wheel, and having corresponding pockets in their adjacent surfaces, forming thereby chambers, alternating semi-partitions extending into said chambers, outer movable rings having ports corresponding with the chambers, and stationary rings on the ends of the casing having pockets therein each formed with an inclined wall and a straight wall.

17. An impact-motor comprising a casing, a shaft, a wheel rigid with the shaft, means for rotating said wheel by impact of charges of an expansible propulsive agent thereupon, said means being constituted of a series of rings rigid with the casing and a series of rings movable with the wheel, the rings of the two series being coincident with and on opposite sides of the central plane of rotation of the wheel, and having corresponding pockets in their adjacent surfaces, forming thereby chambers, alternating semi-partitions extending into said chambers, outer movable rings having ports corresponding with the chambers, and stationary rings on the inner ends of the casing having pockets therein each formed with an inclined wall and a straight wall.

18. An impact-motor comprising a casing, a shaft, a wheel rigid with the shaft, means for ortating said wheel by impact of charges of an expansible propulsive agent thereupon, said means being constituted of a series of rings rigid with the casing and a series of rings movable with the wheel, the rings of the two series being coincident with and lateral to the central plane of rotation of the wheel, and having corresponding inclined pockets in their adjacent surfaces, forming thereby chambers, alternating semi-partitions extending into the chambers on opposite sides thereof, outer movable rings having ports corresponding with the chambers, and stationary rings on the inner ends of the casing having pockets therein each constituted of an inclined wall and a straight wall.

19. An impact-motor comprising a casing, a shaft, a wheel rigid with the shaft, means for rotating said wheel by impact of charges of an expansible propulsive agent thereupon, said means being constituted of a series of rings rigid with the casing and a series of rings movable with the wheel, the rings of the two series being coincident with and on opposite sides of the central plane of rotation of the wheel, and having corresponding pockets in their adjacent surfaces, forming thereby chambers, alternating semi-partitions extending into said chambers from opposite sides thereof, outer movable rings having ports corresponding with the chambers, and stationary rings on the inner ends of the casing having pockets therein each constituted of an inclined wall and a straight wall.

20. An impact motor comprising a casing, a shaft, a drum rotatably mounted thereon and means for rotating said drum both by impact and reaction of a propulsive agent thereupon, said means consisting of a series of rings affixed to said casing, and a series of rings affixed to said drum, all of which rings having corresponding recesses in their adjacent surfaces forming thereby steam courses, and semi-partitions between each two rings whereby the force of the propulsive agent is alternated from one series of rings to the other.

21. In an impact motor, the combination with a rotatable member and an opposed member, of a passage between said rotatable and said opposed members for a propulsive agent, and a plurality of impact surfaces alternating upon said rotatable member and said opposed member comprising a series of impact surfaces substantially tangential of said rotatable member, and a succeeding series of impact surfaces radially of said rotatable member.

22. In an impact motor, the combination with a rotatable member and an opposed member, of a plurality of impact rings affixed to said opposed member, a plurality of impact rings affixed to said rotatable member and staggered relatively to said impact rings on said opposed member, a plurality of partition rings interposed between said impact rings on said opposed member and projecting into working contact with said impact rings on said rotatable member, and a plurality of partition rings interposed between said impact rings on said rotatable member and projecting into working contact with said impact rings on said opposed member, said impact rings provided with impact surfaces substantially tangential of said rotatable member.

23. An impact motor comprising a casing, a shaft a drum rotatably mounted thereon, and means for rotating said drum by alternated direct and reacting impacts of a

propulsive agent thereupon, said means consists of a plurality of members affixed to said drum, all of which members have corresponding recesses in their adjacent surfaces forming thereby steam courses, and semi-partitions between each two members whereby the course of the propulsive agent is deflected and thereby alternated from one series of members to the other.

24. An impact motor comprising a casing, a shaft, a drum rotatably mounted thereon and means for rotating said drum by alternated direct and reacting impacts of a propulsive agent thereupon, said means consisting of a series of rings affixed to said casing and a series of rings affixed to said drum, all of said rings having corresponding recesses in their adjacent surfaces forming thereby rows of steam courses, and semi-partitions located in each of said rows whereby the course of the propulsive agent is deflected and thereby alternated from one series of the rings to the other series.

25. In an impact motor, the combination with a rotatable member and an opposed member, of a series of impact rings affixed to said opposed member, a series of impact rings affixed to said rotatable member, said impact rings having impact surfaces substantially tangential to said rotatable member, and current diverting partition rings interposed between said impact rings in part affixed to said opposed member, and in part affixed to said rotatable member.

26. In an impact motor, the combination of a substantially cylindrical casing, heads inclosing said casing, a rotatable member mounted within said casing to rotate in bearings in said heads, a cylindrical lining for said casing, an annular chamber formed between said casing and said lining, and rings affixed to the inner surface of said lining and provided with a plurality of ports substantially tangential to said rotatable member and a plurality of impact surfaces upon its inner surface substantially tangential to said rotatable member, a plurality of impact rings affixed to the inner surface of said lining and provided with impact surfaces upon their inner surfaces substantially tangential to said rotatable member, a plurality of impact rings affixed to said rotatable member and staggered with relation to said impact rings on said opposed member, and provided upon their outer surfaces with impact surfaces, partition rings disposed between said impact rings on said opposed member and projecting into working contact with said impact rings on said rotatable member, partition rings disposed between said impact rings on said rotatable member projecting into working contact with said impact rings on said opposed member, a partition ring or rings affixed to said rotatable member remote from said ported ring, said last named partition ring or rings provided with spirally directed ports, impact rings provided with substantially radial impact surfaces and affixed to said heads opposite said spirally directed ports, communication from said radial impact surfaces to an exhaust, and a supply communicating with said annular chamber and ports in said ported ring.

27. In an impact motor the combination with a rotatable member and a stationary member, of a passage for a propulsive agent the path of which is transverse to the direction of travel of the rotatable member, a plurality of escape orifices in said rotatable member from said passage directed backwardly of the direction of motion of said rotatable member, and a plurality of impact surfaces on said opposed member radial of said rotatable member and disposed before said orifices and so arranged as to alternate the flow from one side to another along the passageway.

28. An impact motor comprising a casing, a shaft, a drum rotatably mounted thereon, and means for rotating said drum by alternated direct and reacting impacts of a propulsive agent thereupon, said means consisting of a series of rings affixed to said casing and a series of rings affixed to said drum, all of which rings have corresponding inclined recesses in their adjacent surfaces thereby forming steam courses and semi-partitions between the rings whereby the course of the propulsive agent is deflected and caused to alternate from one series of rings to the other series.

29. A hollow cylinder having rings upon its periphery and forming impact pockets and a casing also provided with rings forming coöperative impact pockets upon its inner periphery, means for enabling the exhaust steam to escape into the hollow of said cylinder, and an exhaust port communicating with said hollow.

30. A cylinder having impact pockets upon its periphery, and a casing having coöperative impact pockets upon its inner periphery and at its ends.

31. A hollow cylinder having rings upon its periphery forming impact pockets, and a casing provided with rings forming coöperative impact pockets upon its inner periphery, means for enabling the exhaust steam to escape at each end into the hollow of said cylinder, and an exhaust port communicating with said hollow.

32. A cylinder having impact pockets upon its periphery and jets upon each end, and a casing having coöperative impacts upon its inner periphery and at its ends.

33. A hollow cylinder having impact pockets upon its periphery and jets upon each end and a casing having cooperative impact pockets upon its inner periphery and at each end, means for enabling the exhaust steam to escape at each end into the hollow of the cylinder, and an exhaust port communicating with said hollow.

34. An impact motor comprising a casing, a wheel rotatably mounted thereon and means for operating said wheel both by impact and reaction of a propulsive agent thereupon, said means consisting of a series of rings affixed to the casing and a series of rings affixed to said wheel, all of said rings having corresponding recesses in their adjacent surfaces forming thereby a series of steam courses, and semi-partitions between the rings whereby the course of the propulsive agent is deflected so as to alternate from one series of rings to the other.

35. An impact motor comprising means for transmitting power and means for operating said means both by impact and reaction of a propulsive agent, said second means consisting of a series of rings affixed to one member and a series of rings affixed to another member, said last mentioned rings being coincident with and lateral to the central plane of rotation of said members and having corresponding recesses in their adjacent surfaces forming thereby steam courses, and semi-partitions between said rings whereby the course of the propulsive agent is deflected and alternated from one series of rings to the other.

36. An impact motor comprising rotatably mounted means for transmitting power, and means for rotating said means both by impact and reaction of a propulsive agent, said second means consisting of a series of rings affixed to one member, and a series of rings affixed to a member, said last mentioned rings being coincident with and lateral to the central plane of rotation of said members and having corresponding recesses in their adjacent surfaces forming thereby steam courses, and semi-partitions between said rings whereby the course of the propulsive agent is deflected and alternated from one series to the other.

37. An impact motor comprising a power transmission means rotatably mounted and means for rotating said transmission means by alternated direct and reacting impacts of a propulsive agent thereupon, said second means consisting of a series of rings affixed to one member and a series of rings affixed to another member, said last mentioned rings being coincident with and on opposite sides of the central plane of rotation of the wheel and having corresponding recesses in their adjacent surfaces forming thereby steam courses, and semi-partitions between said means whereby the course of the propulsive agent is deflected and alternated from one series of rings to the other.

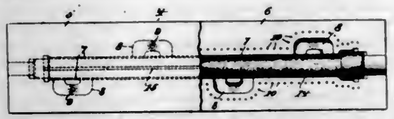
38. An impact motor comprising rotatably mounted power transmission means, and means for rotating said transmission means by alternated direct and reacting impacts of a propulsive agent thereupon, said second means consisting of a series of rings affixed to one member and a series of rings affixed to another member, said last mentioned rings being coincident with and on opposite sides of the central plane of rotation of the wheel and having corresponding inclined recesses in their adjacent surfaces forming thereby steam courses, and semi-partitions between said means whereby the course of the propulsive agent is deflected and alternated from one series of rings to the other.

39. An impact motor comprising rotatably mounted power transmitting means and means for rotating said means by alternated direct and reacting impacts of a propulsive agent thereupon, said second means consisting of a series of rings affixed to one member, and a series of rings affixed to another member, said last mentioned rings being coincident with and lateral to the central plane of rotation of the wheel and having corresponding recesses in their adjacent surfaces forming thereby steam courses, and semi-partitions between said means whereby the course of the propulsive agent is deflected and alternated from one series of rings to the other.

40. An impact motor comprising power transmission means, and means for operating the same by alternated direct and reacting impacts of a propulsive agent thereupon, said means consisting of a series of rings affixed to one and of rings affixed to another member, all of said rings having corresponding recesses in their adjacent surfaces forming thereby steam courses, and semi-partitions between the rings and disposed in alternation in opposite directions in the course whereby the travel of the propulsive agent is deflected and alternated from one series of rings to the other.

41. A cylinder having impact pockets upon its periphery and jets upon each end, a casing provided with rings forming coöperative impact pockets upon its inner periphery, means for enabling the exhaust steam to escape at each end into said cylinder, and an exhaust port communicating with said cylinder.

870,868. MOLD FOR CASTING PIPES. EDGAR A. CUSTER, Philadelphia, Pa. Filed Apr. 22, 1907. Serial No. 369,490.



1. A mold, consisting of a cope and a drag, each composed of a permanent unyielding material and each having a depression and a series of openings arranged adjacent to the depressions of both cope and drag, said openings adapted to permit of the expansion of the metal adjacent to said depressions.

2. A mold, consisting of a cope and a drag, each composed of a permanent unyielding material, and each having a depression and a series of openings arranged adjacent to the depressions of both cope and drag and said cope provided with a channel.

3. A mold, consisting of a cope and a drag, each composed of a permanent unyielding material and each having a depression, a series of openings and pockets, inert matter introduced into said pockets to permit in conjunction with the openings of said cope and drag of the free expansion of the metal adjacent to said depressions, during the casting of an article in said mold.

4. A mold, consisting of a cope and a drag, each composed of a permanent unyielding material and each having a depression, a series of openings arranged adjacent to said depression and pockets radiating therefrom, inert material mounted in said pockets, and said cope provided with a channel arranged in the depression thereof.

5. A mold, consisting of a cope and a drag, each composed of a permanent unyielding material and each having a depression, a series of openings arranged adjacent to said depression and pockets radiating therefrom, inert material mounted in said pockets, and said cope provided with a channel arranged in the depression thereof, and pour-holes extending through said cope.

6. A mold, consisting of a cope and a drag, each composed of a permanent unyielding material and each having a depression, a series of openings arranged adjacent to said depression and pockets radiating therefrom, inert material mounted in said pockets, and said cope provided with a channel arranged in the depression thereof, pour-holes extending through said cope and said drag provided with gates registering with the pour-holes of said cope.

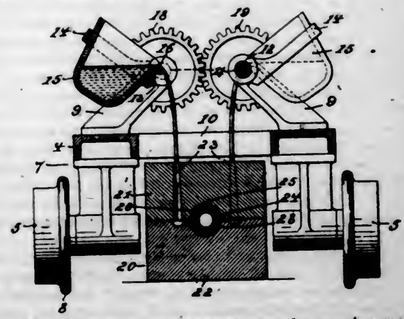
7. The combination, in a mold, consisting of a cope, and a drag, each composed of a permanent unyielding material and each having a semi-circular depression, a core, consisting of a perforated hollow unyielding body having a coating composed of a gritty material, said cope provided with pour holes at determinate distances apart, and said drag provided with gates adapted to register with the pour-holes of said cope.

8. The combination, in a mold, consisting of a cope and a drag, each consisting of a permanent unyielding material and each having a semi-circular depression, said cope provided with a channel located in the highest portion of the depression thereof, and forming a harbor for liberated gases, a core, consisting of a perforated hollow unyielding body adapted to form a receiving chamber for gases, said core, provided with an exterior coating of gritty material, said cope provided with pour-holes and said drag provided with gates adapted to register with the pour-holes of said cope.

9. The combination, in a mold, consisting of a cope and a drag, each consisting of a permanent unyielding material and each having a semi-circular depression and a series of openings located adjacent thereto, said cope provided with a channel and pour-holes and said drag provided with gates adapted to register with the pour-holes of said cope, and a core, consisting of a perforated hollow unyielding body having a coating of a gritty substance surrounding the same, and said hollow perforated core forming a receiving chamber for liberated gases.

10. The combination, in a mold, consisting of a cope and a drag, each consisting of a permanent unyielding material and each having a semi-circular depression, a series of openings located adjacent thereto, and pockets adapted to contain inert material, both the openings and inert material adapted to compensate for expansion of the metal of the cope and drag of said mold, said cope provided with a channel and pour-holes, and said drag provided with gates adapted to register with the pour-holes of said cope, and a core, consisting of a perforated hollow unyielding body having a coating of a gritty substance surrounding the same, and said hollow perforated core forming a receiving chamber for liberated gases.

870,869. APPARATUS FOR HOLDING AND POURING METAL INTO MOLDS FOR CASTING-MACHINES. EDGAR A. CUSTER, Philadelphia, Pa. Filed Apr. 26, 1907. Serial No. 370,444.



1. The combination, in an apparatus for pouring molten metal, of a mold, a ladle adapted to contain molten metal having a spout and means for supporting the ladle so as to hold and maintain said spout in substantially a fixed position with respect to said mold and with the pouring point for the metal at about the point of support of said ladle.

2. The combination, in an apparatus for pouring molten metal, of a mold, ladles adapted to contain molten metal having discharge spouts, and means for supporting said

ladles and holding the spouts in the same horizontal plane and in substantially fixed position with respect to said mold in the discharge of the metal from said ladle.

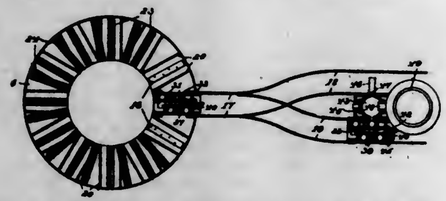
3. The combination, in an apparatus for pouring molten metal, of a mold, a ladle adapted to receive molten metal having a spout, a support for said ladle, and means for holding and actuating said support to maintain the spout of such ladle in substantially a fixed position with respect to said mold at and during the discharge of the metal therefrom.

4. The combination in an apparatus for pouring molten metal, of a mold, two series of ladles, each having a spout, means for supporting each of said ladles so that the spouts thereof at and during discharge of the metal are held in substantially a fixed position with respect to said mold.

5. In an apparatus of the character described, a movable truck, bearings supported thereby, shafts and supports carried by said bearings, ladles each having a spout, said ladles adapted to receive molten metal carried by said supports and held with their spouts in the longitudinal central axis of said shafts at and during discharge of the metal therefrom.

6. In an apparatus of the character described, a base, bearings supported by the same, shafts carried by said bearings, ladles, each having a spout carried by said shafts, said ladles adapted to receive molten metal and to be held with their spouts in the longitudinal central axis of said shafts at and during discharge of the metal therefrom.

870,870. APPARATUS FOR CASTING METAL PIPES. EDGAR A. CUSTER, Philadelphia, Pa. Filed May 3, 1907. Serial No. 371,677.



1. An apparatus for casting metal pipes, consisting of a permanent unyielding material two part mold, means for introducing molten metal in equal portions simultaneously into said mold at uniform pressures and velocities, and means to remove the cast structure from said mold.

2. An apparatus for casting metal pipes, consisting of a permanent unyielding mold provided with a cope and a drag, means for introducing molten metal in equal portions simultaneously into said mold, a core, means for permitting of the freeing of gases or volatile matter from the metal in the mold during casting of the structure and means to remove the cast structure from the mold.

3. An apparatus for casting metal pipes, consisting of a permanent unyielding metal mold provided with a cope and a drag, means for introducing molten metal in equal portions, in unison, and at uniform pressures and velocities into both cope and drag of said mold, an internal perforated core, means for permitting of the freeing of gases or volatile matter during the running of the metal in the casting operation and means to remove the cast structure.

4. In an apparatus of the character described, the combination with a movable table having a plurality of pairs of track grooves and arranged to support intermediate of each pair of track grooves a mold, consisting of a drag and a cope of permanent unyielding material, stationary means for receiving molten metal, and movable means for conveying the molten metal from the stationary means to said table and arranged to be held by one of the pair of track grooves thereof in proper operative position over a mold, substantially as and for the purposes described.

5. In an apparatus of the character described, the combination with a movable table arranged to support a plurality of molds, each consisting of a drag and a cope of permanent unyielding material, and each cope having a plurality of pour-holes, a stationary ladle for receiving molten metal, a truck, a plurality of pouring ladles adapted to receive molten metal and to be conveyed by said truck to said table and over one of the molds thereof, and means for tilting the pouring ladles to simultaneously discharge the molten metal into and through the pour holes of the cope of the mold.

6. In an apparatus of the character described, the combination with a movable table having a plurality of pairs of track-grooves and said table arranged to support intermediate of each pair of track-grooves a radially disposed mold, consisting of a drag and a cope of permanent unyielding material, a stationary tiltable ladle for receiving molten metal, two sets of pouring ladles adapted to be charged with molten metal from said stationary ladle, a truck, means supported by said truck to hold each set of pouring ladles in a certain position thereon, means connecting the supporting means of each set of pouring ladles with each other to permit of the simultaneous discharge of the molten metal into a mold, when said truck is held in position on said table by one of the pairs of grooves thereof.

7. In an apparatus of the character described, the combination with a table having a plurality of pairs of track-grooves and said table arranged to support a plurality of molds, each consisting of a drag and a cope of permanent unyielding material, a stationary tiltable ladle, a trackway substantially surrounding said ladle and extending into a single track terminating at said table, means for imparting to said table a step-by-step movement in one direction to bring a mold and each pair of track-grooves successively opposite said single track, a truck movably mounted on said track and adapted to be held in proper operative position over a mold of said table by a pair of the track-grooves thereof, pouring ladles adapted to be charged with molten metal by said stationary ladle, means for supporting said pouring ladles with their spouts uniformly in a horizontal plane with respect to each other, and means for simultaneously tilting said pouring ladles.

8. In an apparatus of the character described, the combination with a table having a plurality of pairs of track-grooves and said table arranged to support a plurality of molds, each consisting of a drag and a cope of permanent unyielding material, a stationary tiltable ladle adapted to receive molten metal, a trackway arranged adjacent to said ladle and terminating at said table, means for imparting to said table a step-by-step movement in one direction to bring a mold and each pair of track-grooves successively opposite said track, a truck movably mounted on said track and carrying shafts adapted when shifted on said table to be held in proper operative position over a mold by a pair of said track-grooves, pouring ladles, each having a spout carried by said truck-shafts, said ladles adapted to receive molten metal from said stationary ladles and to be held with their spouts in the longitudinal central axis of said shafts, at and during discharge of the metal therefrom into a mold of said table.

9. In an apparatus of the character described, the combination with an annular table having a plurality of pairs of track grooves and said table arranged to support intermediate of each pair of track-grooves a radially disposed mold, consisting of a drag and a cope of permanent unyielding material, a truck adapted to be shifted on said table and to be held in proper operative position over a mold, by a pair of track-grooves thereof, ladles adapted to contain molten metal having discharge spouts, and means for supporting said ladles on said truck and for holding the spouts thereof in the same horizontal plane and in a substantially fixed position with respect to said mold, at and during the discharge of metal into the same.

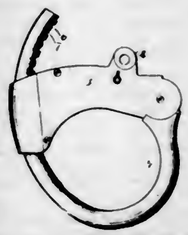
10. In an apparatus of the character described, the combination with an annular table having a plurality of pairs of track-grooves and said table arranged to support intermediate of each pair of track-grooves a radially arranged mold, consisting of a drag and a cope of permanent unyielding material, a stationary tiltable ladle adapted to receive molten metal, a trackway arranged adjacent to said ladle and terminating at said table, means for imparting a step-by-step movement to said table in one direction to bring a mold and each pair of track-grooves successively opposite said track, a truck movably mounted on said track and having supports carrying pouring ladles adapted to receive molten metal from said stationary ladle and to be held in proper position over a mold by a pair of the track-grooves of said table, the spouts of said pouring ladles adapted to be held by the supports of said truck in substantially fixed position to a mold of said table, at and during discharge of the metal therefrom.

11. In an apparatus of the character described, the combination with an annular table having a plurality of pairs of track-grooves and said table arranged to support intermediate of each pair of track-grooves a radially arranged mold, consisting of a drag and a cope of permanent unyielding material, a stationary tiltable ladle adapted to receive molten metal, a trackway arranged adjacent to said ladle and terminating at said table, means for imparting a step-by-step movement to said table in one direction to bring a mold and each pair of track-grooves successively opposite said track, a truck movably mounted on said track and having supports carrying pouring ladles adapted to receive molten metal from said stationary ladle and to be held in proper position over a mold by a pair of the track-groves of said table, the spouts of said pouring ladles adapted to be held by the supports of said truck in substantially fixed position to a mold of said table, at and during discharge of the metal therefrom and means for removing and placing the copes of said molds on said table and from the same back onto the respective drags thereof.

12. An apparatus of the character described, consisting of a permanent mold of unyielding material having a plurality of gates at determinate points thereof, means for introducing molten metal in equal portions, simultaneously in the same horizontal plane through the gates of said mold and with like pressures and velocities, a core, and means to permit of removal of the cast structure from the mold perfect in outline or shape, ready for use, without further finishing.

13. An apparatus of the character described, consisting of a permanent mold of unyielding material having a plurality of gates at determinate points thereof, means for introducing molten metal in equal portions simultaneously in the same horizontal plane through the gates of said mold and with like pressures and velocities, a perforated unyielding material core, means for freeing volatile matter and gases from the metal during casting into a structure, and means to permit of removal of the cast structure perfect in outline or shape, ready for use, after cooling, and without further finishing thereof.

870,871. SHACKLE. WILLIAM G. EGGLETON, Waterbury, Conn., assignor to The Mattatuck Mfg. Co., Waterbury, Conn., a Corporation. Filed Aug. 15, 1907. Serial No. 388,707.



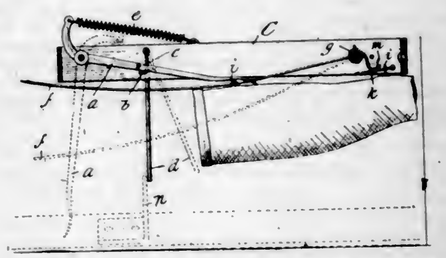
1. In a device of the class mentioned the combination with the case thereof, of an arm hinged thereto and formed with reversely arranged locking notches, a pair of spring dogs pivoted in the case and adapted to engage with said notches, and means for turning said dogs.

2. In a device of the class mentioned, the combination with the case thereof, of an arm hinged thereto and formed with reversely arranged locking notches, a pair of spring dogs mounted in the case and adapted to engage with said notches, a pair of levers mounted in the case and respectively adapted to move said dogs, and means for turning said levers, substantially as described.

3. In a device of the class mentioned, the combination with the case thereof, of an arm hinged thereto and formed with reversely arranged locking notches, a pair of spring dogs pivoted in the case and adapted to engage with said notches, a pair of levers mounted in said case and respectively engaging with said dogs, and a pair of tumblers mounted in the case and respectively engaging with said levers, substantially as described.

4. In a device of the class mentioned, the combination with the case thereof, of an arm hinged thereto and formed with reversely arranged locking notches, a pair of spring dogs pivoted in the case and adapted to engage with said notches, a pair of levers mounted in the case and adapted respectively to engage with said dogs, a pair of tumblers mounted in said case and adapted to engage with said levers, one of said tumblers provided with a pin, and a spring latch adapted to engage with said pin whereby one of said dogs may be held out of engagement with said arm, substantially as described.

870,872. MAIL-BAG CATCHING AND DELIVERING DEVICE. LEWIS J. EVANS, Kirkwood, N. Y. Filed Dec. 26, 1906. Serial No. 349,429.



1. A mail bag holder, comprising a support for the bag, locking means for holding the bag in normal position, and means for ejecting the bag from the holder by a two fold or sweeping action and means for guiding said bag during its ejectment from the holder, substantially as described.

2. A mail bag holder to be fixed adjacent the track comprising supporting means, means for locking the bag in an elevated position adapted to be operated by a part on the car and means for imparting to the bag a downward and forward movement to the moving car on the release of the locking mechanism, substantially as described.

3. A mail bag holder, comprising a supporting frame, supports for the front and rear portions of the bag carried thereby, releasing means and means for imparting to the bag a downward and forward movement while the bag is being guided, substantially as described.

4. A mail bag holder comprising a supporting frame, a mail bag held therein in an elevated position, means for depressing and impelling forward said bag and tripping means, substantially as described.

5. A mail bag holder supported without the car; a second holder within the car, means for discharging the bag from the holders and a trip on the car for actuating both discharge mechanisms, substantially as described.

6. In combination with a car, a chute to receive the bag and direct it into the top of the car, said chute being located on the car top and being reversible to act when the car is running in either direction, substantially as described.

7. In combination with a car having an opening in its top and a reversible chute centrally pivoted over the opening and shiftable into inclined position in either one direction or the other and means for locking the said chute or frame in either of its inclined positions, substantially as described.

8. In combination the supporting frame, the reversible chute frame, the ears on the top of the car and the holding rod passing through the said ears over the end of the frame, said frame being reversible, substantially as described.

9. In combination with a support without the car and fixed adjacent the track, a bag holding frame and means whereby the said frame may be reversed and holding and impelling mechanism carried by the said frame for holding and delivering the bag to the moving car, said mechanism operating in either position of the said frame, substantially as described.

10. In combination with a support without the car, a frame pivoted thereon to depend therefrom and turn in a horizontal plane to be reversed in position and bag holding and impelling mechanism carried by the said frame to act with a car running in either direction, substantially as described.

11. In combination a suitable support, a frame pivoted thereto, mechanism carried by the frame for holding and delivering a bag and the retainers pivoted to the support and adapted to embrace the frame, substantially as described.

12. In combination with a car, a chute having an inlet opening at the upper part of the car and an outlet at a lower point for the escape of rain and snow, and a grating in the said chute, to direct the mail bag into the car, substantially as described.

13. In combination with a car, a chute having an inlet at the upper part of the car, and a lower outlet for the elements and a grating extending in inclined position across the chute, and a door normally closed and arranged to open automatically under the impact of the mail bag through which door the said bag is discharged into the car, substantially as described.

870,873. COOKING UTENSIL. LORENZO G. FAGERSTEN, Chicago, Ill. Filed May 9, 1907. Serial No. 372,716.



1. In a cooking utensil, a food-containing receptacle, a jacket surrounding and secured to the food-containing receptacle in such a manner as to form a hermetically sealed inclosure about the food-containing receptacle, and a heat-storing material contained within said inclosure, said material having a high specific heat and being capable of being raised to a high temperature at normal pressure.

2. In a cooking utensil having a food containing space, a hermetically sealed inclosure surrounding said space, and a heat-storing material located in said inclosure, said heat storing material having a high specific heat and being capable of being raised to a temperature above the boiling point of water at normal pressure.

3. In a cooking utensil, a food-containing receptacle having a flange at its upper end, a larger receptacle also having a flange at the open end, means for securing said flanges together with the receptacles held in telescoped relation to each other, so as to form a hermetically sealed inclosure about the food-containing receptacle, and a heat-storing material contained within said inclosure, said material having a high specific heat and being capable of being raised to a temperature higher than the boiling point of water at normal pressure.

4. A cooking utensil having a food-containing space, a hermetically sealed inclosure surrounding said space, a heat-storing material located in said space, said material having a high specific heat and being capable of being raised to a temperature higher than the boiling point of water at normal pressure.

5. A cooking utensil having a food-containing space, a hermetically sealed inclosure surrounding said space, and a crystallized heat-storing material containing a large amount of water of crystallization arranged in said inclosure.

6. In a cooking utensil, a food-containing receptacle, a jacket surrounding it, and a solid hydrated crystallized heat-storing material located between said receptacle and jacket.

7. In a cooking utensil, a food-containing receptacle, a larger receptacle surrounding it, and a solid crystallized heat-storing material having a large amount of water of crystallization located between said receptacles.

8. In a cooking utensil, a food-containing receptacle, a larger receptacle surrounding it, and a quantity of calcium chlorid crystals, having a large amount of water of crystallization contained in the space between said receptacles.

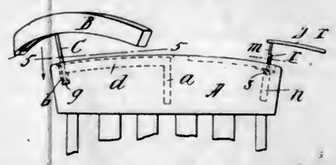
9. A cooking utensil having a food-containing space, a hermetically sealed inclosure surrounding said space, and a crystallized heat-storing material containing a large amount of water of crystallization and having a low-melting point arranged in said inclosure.

10. In a cooking utensil, a food containing receptacle; a larger receptacle surrounding it; and a crystallized heat-storing material arranged in a space between said receptacle; said heat storing material containing a large amount of water of crystallization, having a low melting point and being capable of being raised to a temperature above the boiling point of water without losing its water of crystallization.

11. In a cooking utensil, a food containing receptacle, a larger receptacle surrounding it, a quantity of calcium chlorid crystals containing water of crystallization and a quantity of zinc chlorid contained in the space between said receptacles.

12. A cooking utensil having a food containing space, a hermetically sealed inclosure surrounding said space, a crystallized heat storing material containing water in the form of water of crystallization arranged in said inclosure, and a quantity of deliquescent material also arranged within said inclosure.

870,874. COMBINED CHAIR AND GARMENT-SUPPORT. JOHN F. FAIRBANKS, Springfield, Mass. Filed June 7, 1907. Serial No. 377,766.



1. The combination with a chair-back having a centrally located upwardly opening socket, and having another socket near the end thereof, of a coat-hanger provided with a depending stem adapted to be sunk in the central socket and also to be supported in the other socket.

2. The combination with a chair-back having an intermediately located upwardly opening socket and having another upwardly opening socket of less depth towards the end of the back, of a garment hanger provided with a depending stem adapted to be sunk in the intermediate socket, permitting the hanger to have a disposition closely relative to the upper edge of the chair back, and also to have a supporting engagement in the other socket for maintaining the hanger elevated above the chair back.

3. The combination with a chair-back having a garment hanger movably supported at an upper edge portion thereof, adapted for a disposition along, and closely against, the back, and to have a position removed from the chair-back edge, of a second garment supporter conformed to the shape of the chair back edge, adapted to be fitted thereagainst, and to cover the first named hanger and means for supporting the second hanger in a position non-coincident with the chair back edge.

4. The combination with a curved chair-back having an intermediately located upwardly opening socket, and having another socket near the end thereof, of a curved coat-hanger having a channeled under edge, adapted to fit over the upper edge of the chair back and provided with a depending stem adapted to be sunk in the intermediately located socket, and also to be supported in the other socket.

5. The combination with a chair-back having an intermediately located upwardly opening socket therein, and having a channel within its upper edge connecting the said socket and leading therefrom towards the end of the chair back, and having a slotted plate covering and forming a contracted mouth for said channel, of a garment hanger provided with a depending stem having an inverted head, said stem and head being adapted to be disposed in said socket and said head adapted for a sliding engagement in said channel.

6. The combination with a chair-back having an intermediately located upwardly opening comparatively deep socket and having another upwardly opening socket of less depth near one end of the chair back, and provided with a channel having a contracted slot like opening continuous from one socket to the other, of a garment supporter having a depending stem provided with a lower end enlargement engaged in the said channel, said stem and head adapted to be sunk in the first named socket, and to have a supporting engagement at a greater height in the second named socket.

7. The combination with a chair-back having an intermediately located upwardly opening socket and having an under cut upwardly opening channel within its upper edge leading from said socket towards the end of the chair back, of a garment hanger having a depending stem and provided with a lower end enlargement engaged in said under cut channel,—said garment support being jointed to the upper extremity of the stem for an oscillatory movement relatively thereto.

8. The combination with a chair-back having an intermediately located upwardly opening socket and having another upwardly opening socket of less depth towards the end of the chair back, of a garment hanger having a depending stem to the upper end of which the garment hanger is jointed for an oscillatory movement.

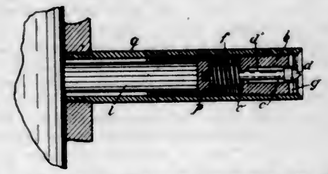
9. The combination with a chair back of a stem and means whereby the stem may have variously positioned supporting engagements with the chair back and said stem having at its upper end oppositely located trunnions, a coat hanger and a joint plate secured to the under edge thereof and connecting the trunnion provided portion of the stem therewith, said plate comprising a partially cylindrical curved portion and a slot extended from one side of the curved portion for the accommodation of the stem neck and for permitting a degree of oscillation of the coat hanger on the stem.

10. The combination with a chair back having an upwardly opening groove within the upper edge thereof and having a socket therein within the length of said groove portion, of a pants hanger comprising a bar and a depending stem, engaged in said socket and vertically movable therein and means for supporting the pants hanger stem in an elevated position in the socket.

11. The combination with a chair back having a socket upwardly opening at the chair back edge near an end of the latter, of a pants hanger comprising a bar having a slot along the length thereof and opening to one end thereof, and a stem engaged in said socket, and means for supporting the said stem in a raised position in the socket.

12. The combination with a chair back having an upwardly opening socket in the upper edge thereof, covering which is a plate having an opening therein smaller than the socket and made with an edgewise located niche, of a pants hanger comprising a bar and a depending stem having a lower end enlargement engaged in said socket and having at its side a rib the lower end of which terminates above the lower end of the stem, for the purpose set forth.

870,875. CANDLESTICK-LUBRICATOR. EDWIN L. FAUL, New York, N. Y., assignor to William J. Faul Co., New York, N. Y., a Corporation of New York. Filed Apr. 30, 1907. Serial No. 371,178.

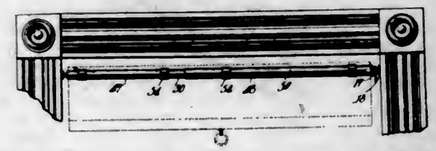


1. A candlestick lubricator, comprising an interiorly screw-threaded tube, an exteriorly screw-threaded plug fitted therein; a recessed bore in the plug; a stem fitted into the bore of the plug; a piston loosely fitted into the tube set on the stem, a head on the other end of the stem, fitted into the recessed portion of the bore, and a spring set on the stem between the piston and the plug.

2. A candlestick lubricator, comprising an interiorly screw-threaded tube, and an exteriorly screw-threaded plug fitted therein; a bore in the plug; a stem fitted in the bore of the plug; a piston set on the stem, a conically shaped head on the other end of the stem fitted into the recessed portion of the bore, and a spring set on the stem between the piston and the plug.

3. A candlestick lubricator, comprising an interiorly screw-threaded tube and an exteriorly screw-threaded plug, slotted on one end fitted therein; a bore in the plug; a stem fitted to the bore of the plug; a head on one end of the stem and a piston on its other end, the head being adapted to recede into the bore of the plug when the piston is drawn out, and a spring set on the stem between the piston and the plug.

870,876. SHADE-ROLLER. ALLISON H. FLEMING, Fairmont, W. Va. Filed June 14, 1907. Serial No. 378,997.



1. In a spring shade roller, a rod formed of extensibly related sections, means for rigidly clamping said sections in adjusted position, a winding spring, and a sheath formed of telescopic sections covering the spring and rod and forming a support on which the shade may be wound.

2. In a spring shade roller, an extensible rod, a sleeve rigidly secured to the rod, a disk revoluble on the rod, a sleeve secured to the disk, a winding spring arranged between the two sheaves and connected at one end to the inner sleeve and at the outer end to the disk, and a pair of cylindrical telescopic sheaths extending over the sleeves, the rod and the spring and forming a winding surface for the shade.

3. In a spring shade roller, an extensible rod, a sleeve secured to one end of the rod, a disk revolubly mounted on the rod, an outer sleeve secured to the disk, a winding spring having one end secured to the inner sleeve and its opposite end to said disk, a pair of cylindrical

telescopic sheath members fitting over the sleeves, the spring and the rod and forming a winding surface for the shade, means for locking the sheath members together for simultaneous rotative movement, and means for locking one of said sheath members to the outer sleeve.

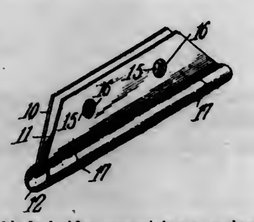
4. In a spring shade roller, an extensible rod, a spring, a sleeve encircling the spring, an end disk carrying said sleeve and to which one end of the spring is secured, a ratchet wheel on the rod, ratchet dogs carried by the disk and engaging said wheel, a pair of tongues projecting from the sleeve, a pair of cylindrical sheath members extending over the rod and the spring and provided with interlocking ribs, a ring or flange carried by one of the sheath members and provided with notches or recesses for the reception of the tongues, and an inwardly extending annular flange carried by the other sheath member and supported by the rod.

5. In combination, a stationary rod, an outer sleeve revolubly mounted thereon, a second sleeve secured to the rod, a spring between the two sleeves, a sheath supported by the outer sleeve, end pins projecting from the rod, brackets arranged for the reception of said pins, and interengaging cams arranged between one of the brackets and the rod and tending to separate the same to thereby clamp the brackets in place.

6. In combination, a stationary rod, a pair of spaced sleeves, one secured to the rod and the other revoluble thereon, a spring between the sleeves, a sheath carried by the outer sleeve, end pins projecting from the rod, a pair of bracket members arranged for the reception of the pins, a cam journaled on one of the bracket members, and a second cam carried by the adjacent end of the rod and with which the journaled cam engages to thereby clamp the brackets in supporting position.

7. A window shade roller having a rod, a pair of brackets for the support of the ends of the rod, one of said brackets having an elongated sleeve, a cam sleeve mounted thereon, a cam carried by one end of the rod and engaging the cam sleeve, both cam members having end shoulders and each provided with a recess for the reception of the shoulder of the other, and an operating handle carried by the cam sleeve.

870,877. RAZOR-BLADE HOLDER. ALLISON H. FLEMING, Fairmont, W. Va. Filed July 26, 1907. Serial No. 385,741.



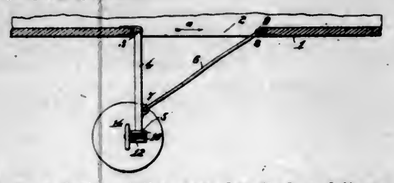
1. A razor blade holder comprising a spring clip having a curved back and integral leaves, the back having solid ends and being split between said ends to form outwardly bent spring tongues for frictional engagement with the walls of a socket or similar support.

2. A razor blade holder comprising a pair of leaves and an integral spring back connecting them, the back and adjacent portions of the leaves being transversely slit and the metal of the back between the two slits being cut away to form a pair of spring tongues.

3. A razor blade holder comprising a spring clip having a pair of outwardly bent socket wall binding tongues, said tongues terminating short of both ends of the holder.

870,878. MAIL-POUCH-DELIVERY DEVICE. HENRY W. GRAFF, Chicago, Ill. Filed Aug. 31, 1907. Serial No. 390,881.

1. In a mail pouch delivery device, an arm arranged upon a car, in combination with a transfer device adapted to be secured to the pouch which is to be delivered and comprising a portion for attaching the device to the arm on the car, means depending therefrom for securing the pouch and an upwardly extending ring and an inclined arm for engaging said ring to remove said transfer device and the pouch from the car arm, in the manner and for the purpose specified.



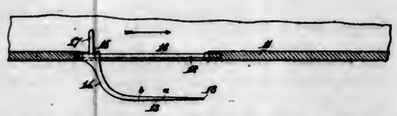
2. In a device of the class described, a delivery arm having a socket arranged thereon, in combination with a transfer device adapted to be secured to a mail pouch and comprising a block adapted to fit within said socket, means for securing the pouch thereto and a ring extending upwardly from said block, and a receiving arm adapted to engage said ring to remove said transfer device and the mail pouch from said delivery arm, substantially as described.

3. In a device of the class described, a delivery arm having a socket arranged thereon, in combination with a transfer device comprising a block adapted to fit within said socket, means for securing a mail pouch thereto and a ring extending upwardly from said block, a spring operable to prevent accidental displacement of said block and a receiving arm adapted to engage said ring, as and for the purpose specified.

4. In a device of the class described, a delivery arm having a socket arranged thereon, said socket having parallel side walls and an upwardly and rearwardly inclined bottom, a transfer device comprising a block adapted to fit within said socket and shaped to conform thereto, means for securing a mail pouch to said block and a ring extending upwardly therefrom, and a receiving arm adapted to engage said ring, as and for the purpose specified.

5. In a device of the class described, a delivery arm having a socket arranged thereon, said socket having parallel side walls and an upwardly and rearwardly inclined bottom, a transfer device comprising a block adapted to fit within said socket and shaped to conform thereto, means for securing a mail pouch to said block and a ring extending upwardly therefrom, a spring arranged in said socket and adapted to normally engage said block to prevent accidental displacement thereof, and a receiving arm adapted to engage said ring, as and for the purpose specified.

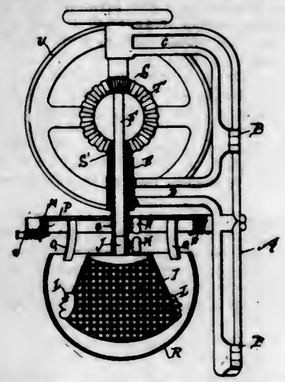
870,879. MAIL-POUCH-CATCHING DEVICE. HENRY W. GRAFF, Chicago, Ill. Filed Sept. 9, 1907. Serial No. 391,951.



1. In a device of the class described, a crane having a socket arranged on the end thereof, in combination with a transfer device adapted to be secured to a mail pouch and comprising a block adapted to fit within said socket, means for securing the pouch thereto and a ring extending upwardly from said block, and a catching arm arranged upon a car and comprising a forwardly and downwardly inclined straight portion, adapted to engage said ring and an inwardly extending portion, substantially as described.

2. In a device of the class described, a crane having a socket, arranged at the end thereof, in combination with a transfer device comprising a portion adapted to fit within said socket, a ring extending upwardly therefrom and means for attaching the mail pouch thereto, and a catching device pivotally arranged upon a car and adapted to be extended therefrom to catch the transfer device and pouch, said catching device comprising an arm having a straight portion which is forwardly and downwardly inclined to engage said ring, when in extended position, and a curved portion extending inwardly through the car, substantially as described.

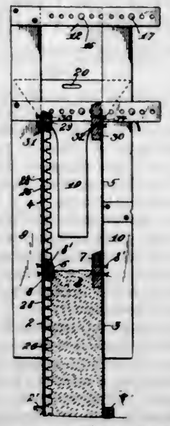
870,880. CULINARY UTENSIL. HARRY F. HALL, Philadelphia, Pa. Filed Oct. 29, 1906. Serial No. 340,046.



1. In combination with an apparatus of the character described, a beater consisting of a frame having a laced wire center, said frame adapted to be revolved by the spindle of the machine, stirrers projecting from the edges of the beater, and a spherical shaped receptacle in which the beater is adapted to revolve, as and for the purpose set forth.

2. In a machine of the character described, a standard, a holder supported by said standard, means for attaching and detaching said ring from the holder, hangers projecting downward from the ring, a spherical shaped receptacle secured to the hangers, a laced wire beater adapted to revolve within the receptacle, stirrers projecting from the edges of the beater, and means for revolving said beater, as specified.

870,881. METHOD OF AND APPARATUS FOR MAKING WALLS. WILLIAM D. HAM, Knoxville, Tenn. Filed Nov. 20, 1906. Serial No. 344,306.



1. A method which consists in adhesively applying tiles to a mold and then introducing cement into the mold to unite with the tiles.

2. A method involving the use of a mold which consists in separably applying a facing to the mold by a suitable adhesive, then setting up the mold and then supplying the same with cement to make a wall having said facing attached thereto.

3. A method involving the use of a mold which consists in applying paste to the mold, laying tiles against the pasted surface, then setting up the mold and finally supplying the mold with cement material to make a wall.

4. A method which consists in adhesively applying simultaneously several tiles to a mold and then uniting cement with the tiles.

5. A mold having paste-receiving openings.

6. A mold having perforations to receive paste.

7. A mold comprising two opposite sections, one of which has means for retaining paste.

8. A mold provided with a rigid portion, said rigid portion having means for receiving paste for the purpose of uniting a facing to said rigid portion.

9. A mold comprising a rigid portion provided with perforations through which paste can be passed to unite a wall facing temporarily to the mold or through which water may be passed to separate said facing from the rigid portion of the mold.

10. A mold comprising two opposing sections, at least one of which is rigid, such rigid section having a plurality of perforations.

11. A spacing device including two legs each having a pair of strips attached thereto, the strips of one leg being adapted to move longitudinally with respect to the other strips for securing adjustment, and means coöperative with the strips for holding the legs in an adjusted position.

12. A spacing device including two legs each having two pairs of strips attached thereto at points separated longitudinally with respect to the legs, the respective pairs of strips of one leg being adapted to move longitudinally relatively to the respective strips of the other leg, and all the strips having perforations, and bolts extending through registering perforations of the respective strips at opposite sides of one of said legs for maintaining the adjustment.

13. A spacing device including two legs each having two pairs of strips attached thereto at points separated longitudinally with respect to the legs, the respective pairs of strips of one leg being adapted to move longitudinally relatively to the respective strips of the other leg, and all the strips having perforations, bolts extending through registering perforations of the respective strips at opposite sides of one of said legs for maintaining the adjustment, other bolts extending through said legs having clamping means at their inner ends, and means operative against the outer ends of said other bolts for moving the clamping means into effective relations.

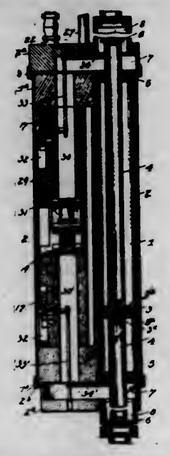
14. A mold comprising two sides each consisting of superposed sections, blocks inside the mold, extending across the joints between the sections of the sides, and means for separably connecting the blocks with the sides.

15. A mold involving two opposite sides each consisting of superimposed sections, blocks within the mold extending across the joints between the sections thereof, and wires for separably connecting the blocks with said sides.

870,882. MEANS FOR PUMPING WATER UNDER HYDRAULIC POWER. JOSEPH D. HOBBS, Mediapolis, Iowa. Filed Feb. 15, 1906. Serial No. 301,250.

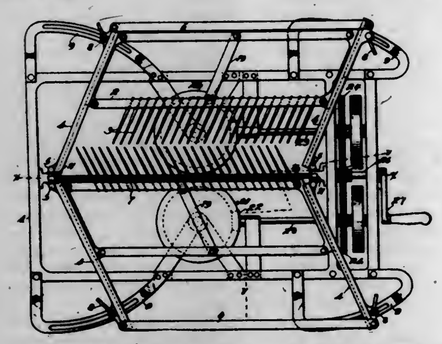
In combination, a pumping cylinder, a pumping piston therein having its piston rod extending through the heads of said cylinder, pressure piston heads on the ends of said piston rod, pressure cylinders in which the said heads operate, a valve block having a central cylindrical valve chamber, said valve chamber having an inlet port leading to each pressure cylinder and an exhaust port, a rocking valve carrying member in said cylindrical valve chamber, segmental valves yieldingly carried by said member, a piston rod connected with said member, pistons on the ends of said rod, cylinders in which said pistons work, upper and lower valve chambers having inlet and exhaust ports, a

pair of connected valves controlling said ports and movable projections adapted to be operated by the pressure pis-



ton heads and connections between said projections and the connected valves, substantially as described.

870,883. SAW-FILING DEVICE. CHARLES F. HOBSON, St. Helena, Cal. Filed Dec. 12, 1906. Serial No. 347,444.



1. In a saw-filing device, the combination of a suitable saw-support, two-jointed file-frames with file-holding means, each of said file-frames being substantially in the form of a parallelogram having its sides pivotally connected to its ends, one of said frames arranged on one side of the saw-support and the other frame arranged on the other side, adjustable guides in which the ends of said articulated saw-frames are slidably mounted, said guides being hinged at their inner ends and connected by links at their outer ends and provided with locking means, each articulated saw-frame being angularly adjustable in unison with its guides, and means for reciprocating said file frames, said last-named means including a bevel gear mounted on a vertical axis beneath each saw-frame, a pitman connecting each gear and a respective frame, and driving-connections with said gears to impart an alternating reciprocating motion to said file frames, substantially as described.

2. In a saw-filing device, the combination with saw sharpening means, of a saw-vise vertically-slidable relative thereto, a bracket engaging said vise, a screw passing through the bracket and journaled in said support, a bevled gear fixed to the screw, and a journaled rod having a gear to mesh with the gear on the screw for vertically adjusting said vise.

870,884. COMPUTING TAPE-MEASURE. EMIL F. HOLINGER, McKeesport, Pa. Filed Aug. 3, 1907. Serial No. 386,961.



1. A computing measure consisting of a plurality of tapes each having one free end, arranged side by side, and having markings thereon arranged to be read in connection with each other in different relative positions of the tapes; substantially as described.

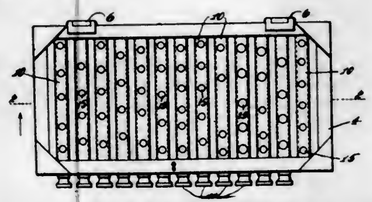
2. A computing tape-measure, having a plurality of tapes arranged side by side and having each one free end, at least one of said tapes having markings thereon corresponding to known data, and the other tape or tapes having markings thereon corresponding to the data to be obtained, and arranged to be read in different longitudinal relation to the first-named tape or tapes; substantially as described.

3. A computing measure having at least two independently movable tapes arranged side by side and having each one free end, said tapes having markings thereon arranged to be read in connection with each other in different longitudinal relations of the tapes; substantially as described.

4. A computing measure having at least two independent tapes each of which has one free end, a separate winding spring for each tape, and an inclosing casing for the springs and tapes, having a cut-away portion to expose the tapes to the pressure of the fingers; substantially as described.

5. A computing measure having at least two independently movable tapes each of which has one free end and having markings thereon arranged to be read in connection with each other in different longitudinal relations of the tapes, and a common carrier for all the tapes; substantially as described.

870,885. EXHIBITING DEVICE FOR COINS. ARCHER M. HUNTINGTON, New York, N. Y. Filed June 28, 1907. Serial No. 381,361.

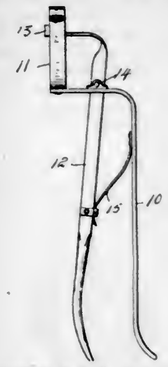


1. An exhibiting device for coins and the like comprising a transparent tube, bearings in which it is mounted to turn on its axis, and transparent means within the tube for holding a coin fixed in place in the interior of said tube with its axis at right angles to the axis of said tube so that the entire surface of both sides of said coin may be visible by rotating said tube.

2. An exhibiting device for coins and the like, consisting of a transparent tube, a coin therein, a supporting means for the coin consisting of transparent resilient material tending to press the coin at right angles to the axis of the tube, bearings for said tube whereby said tube may be rotated in said bearings.

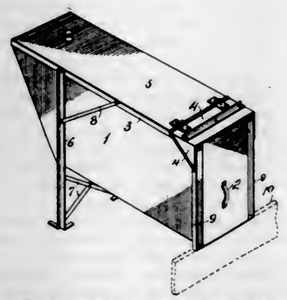
3. An exhibiting device for coins or the like consisting of a transparent tube of glass, a coin therein, a transparent resilient sheet of celluloid within said tube folded with its edges toward each other, a portion of said celluloid pressing against the surface of the coin, axial supports for said tube at both its ends, a case containing said supports and tube and a finger piece secured to the tube and extending without the case whereby the tube may be rotated from outside the case.

870,886. WRENCH. EVERELL A. JOHNSON, Mohave City, Ariz. Filed July 20, 1906. Serial No. 327,048.



A wrench comprising a stationary handle-bar having its forward end portion slotted and bent at a right angle to the body portion and provided on its angular extremity with an open jaw extended in a plane parallel to the handle-bar and closed at its sides and ends, combined with a second handle-bar extended through the slot of the angular part of the stationary bar and pivoted on the said angular part, the said second bar itself having its forward end projected downward at a right angle to its body portion and provided on its extremity with a jaw extended into the open jaw, intermediate of its ends, constituting dual jaws of the said open jaw with both of which the intermediate jaw on the pivoted bar is adapted to coöperate.

870,887. GARBAGE-RECEPTACLE. TORBETT H. JOHNSTON, Kansas City, Mo. Filed Feb. 23, 1907. Serial No. 358,870.

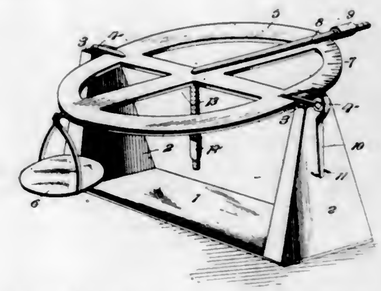


1. In a garbage receiving mechanism, the combination with a rectangular vessel having an open top and a perforate bottom, and having one vertical and one inclined end, of two bundles, one secured to the outer side of one end, and the other secured transversely to opposite sides within said vessel, a frame in and out of which the vessel is slidable horizontally, and a cover hinged to the frame and adapted to cover the open top of the said vessel.

2. The combination with a fence having an opening, of a supporting frame having an open top and an open end which is supported by the fence, the frame having an open bottom, a garbage receptacle horizontally slidable in and out of said frame through said fence opening, the garbage receptacle having an open top and a perforate bottom, and a cover hinged to the frame and adapted to cover the open top of the garbage receptacle.

3. The combination with a supporting frame comprising a rectangular, horizontal top portion provided with horizontal oppositely disposed longitudinal inwardly extending flanges, front and rear supports secured to the top portion, the top portion having an opening, of a garbage receptacle having an open top and perforate bottom and provided with longitudinal flanges on opposite sides adapted to slide on the flanges of the frame, and a cover hinged to the frame and adapted to cover the opening in the top portion and also the open top of the garbage receptacle, the garbage receptacle having one vertical and one inclined end, and having a handle secured to the outer side of the vertical end.

870,888. WEIGHING DEVICE. GROVER G. KANABLE, Rose Farm, Ohio. Filed Feb. 21, 1907. Serial No. 358,704.



1. A weighing device consisting of a base, spaced standards rising from said base, a disk provided with journals at diametrically opposite points mounted in the upper ends of said standards whereby the disk is mounted between said standards to rock in a vertical plane, means for supporting the articles to be weighed from said disk at a point equidistant from said journals, a balance arm pivotally mounted at one end at the center of the disk to swing over the face of said disk on the opposite side of said journals from the article holding means, and a weight adjustably mounted on the free end of said arm.

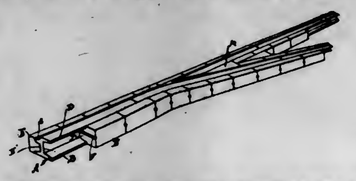
2. In a weighing device, the combination of spaced standards, a disk journaled between said standards to rock in a vertical plane about a diametrical axis, means for supporting the articles to be weighed from said disk at a point equidistant from said journals and at one side of the diameter, a balance arm pivoted at the center of the disk to swing over the face thereof on the opposite side of the diameter, and a depending arm secured to the center of the disk and extending at right angles to the face thereof, said last named arm being provided with an adjustable weight, as and for the purpose set forth.

3. In a weighing device, the combination of spaced standards, a disk journaled between said standards to rock in a vertical plane about a diametrical axis, means for supporting the articles to be weighed from such disk at a point equidistant from such journals and at one side of the diameter, a balance arm pivoted at the center of the disk to swing over the face thereof on the opposite side of the diameter, and a depending arm secured to the center of the disk and extending at right angles to the face thereof.

4. A weighing device consisting of a base, spaced standards rising from said base and provided in their upper ends with recesses, knife edge journals mounted in said recesses, a disk to which said journals are secured and from which they project outwardly in diametrically opposite position, whereby the disk is mounted between said standards to rock in a vertical plane, means for supporting the articles to be weighed from said disk at a point equidistant from said journals and at one side of the diameter, a balance arm pivotally mounted at one end at the center of the disk to swing over the face of the disk on the opposite side of said diameter, one of said standards being provided with spaced pins, and a finger secured to the disk at one of the journals and extending outwardly and downwardly over the outer side of the adjacent

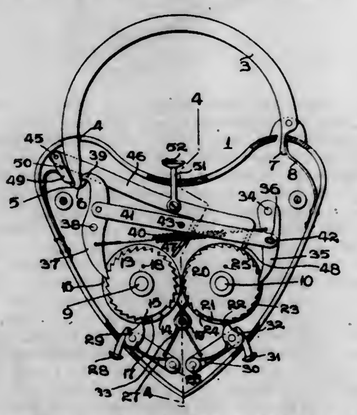
standard with its lower end mounted between said pins, as and for the purpose set forth.

870,889. PAVING-BLOCK. ALEXANDER KELLEY, Wilmington, Del. Filed Jan. 23, 1907. Serial No. 353,595.



In combination with the rails of a street railway a paving block having a tongue formed therewith adapted to fit between the flanges of the rail and a groove formed in its end adapted to coöperate with a similar groove in an adjacent block and a rod to pass through said grooves as specified.

870,890. KEYLESS PADLOCK. JOHN KRUSE, St. Louis, Mo. Filed Oct. 30, 1906. Serial No. 341,319.

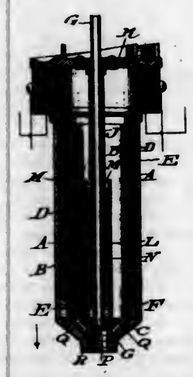


1. A padlock, constructed with a housing, a shackle carried thereby, means arranged on the interior of the housing for engaging one end of the shackle, a plurality of spring controlled disks arranged for rotation on the interior of the housing, in the edges of which are formed notches, means whereby said disks are rotated, a lever for releasing the shackle engaging means, fingers integral with said lever and adapted to pass into the notches in the disks, and means arranged on the interior of the housing and operated from the exterior thereof for releasing the disks to allow them to return to their normal positions after having been rotated; substantially as specified.

2. A padlock, constructed with a housing, a shackle carried thereby, means arranged on the interior of the housing for engaging one end of the shackle, a plurality of sleeves arranged for rotation in the housing, ratchet wheels arranged on said sleeves, coiled springs arranged on the sleeves for rotating the same in a certain direction, detents engaging the teeth of the ratchet wheels for holding them against the rotating action of the coiled springs, means operated from the exterior of the housing for engaging said ratchet wheels to rotate the sleeves, disks carried by the sleeves, in the peripheries of which disks are formed notches, and means arranged on the interior of the housing for actuating the shackle engaging means, and a portion of which actuating means engages in the notches in the disks; substantially as specified.

3. A padlock, constructed with a housing, a shackle carried thereby, an adjustable combination mechanism arranged on the interior of the housing, means operated from the exterior of the housing for actuating said combination mechanism, pawls arranged on the interior of the housing for engaging portions of the combination mechanism, one of which pawls is provided with a hook at one end for engaging the shackle when closed, means operated from the exterior of the housing for releasing the shackle when the combination mechanism has been moved to the proper position, and means operated from the exterior of the housing for releasing the pawls after the shackle has been released.

870,891. AUTOMATIC GAS-CONTROLLER. JOSEPH C. LANDES, Collegeville, Pa. Filed Feb. 15, 1907. Serial No. 357,499.



1. In an automatic gas controller, an exterior casing and an interior casing forming a chamber, a float in communication with a gas supply, having its side wall in said chamber between said casings, and closed at its upper end, a sealing medium in said chamber, the lower end of said float being adapted to dip into said medium, a member carried by said float exteriorly of said chamber and a gravitating electrode normally carried by said member.

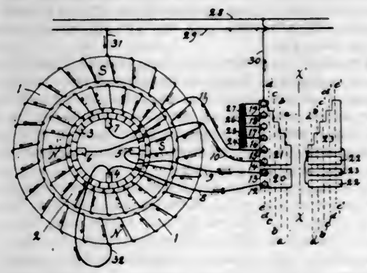
2. In an automatic gas controller, a casing, a burner, a gas supplying pipe passing through said casing and adapted to support said burner, a movable pipe telescopically fitted on the first named pipe with its lower end movable in a sealing medium, a movable member of an electrically-circuit forming and breaking device connected with said movable pipe and a gravitating electrode supported by said member.

3. In an automatic gas controller, a casing, a float therein, a burner, a gas supplying pipe for said burner, a movable pipe fitted on said supplying pipe, and having said float connected with it, a chamber around said pipes ports leading into said casing, a sealing medium in said chamber, the lower end of said movable pipe being adapted to dip into said medium and a gravitating electrode movable with said pipe.

4. In an automatic gas controller, a casing, a float therein, a gas supplying pipe, a movable pipe telescopically fitted on said supplying pipe, a gravitating member of an electrically-circuit, forming and breaking device connected with said movable pipe, a plurality of chambers in said casing, and sealing materials in said chambers, the lower end of said float and the lower end of said movable pipe being adapted to dip respectively in said chambers.

5. In a gas controller, an exterior casing and an interior casing forming a chamber, a float in communication with a gas supply, having its side wall in said chamber between said casings, and closed at its upper ends, a sealing medium in said chamber, the lower end of said float being adapted to dip into said medium, a member carried by said float exteriorly of the chamber, a gravitating electrode normally carried by said member, and a trap forming a primary receiver for the gas connected with the exterior casing.

870,892. ALTERNATING-CURRENT MOTOR. ROBERT LUNDELL, New York, N. Y. Filed Sept. 26, 1905. Serial No. 280,118.



1. An alternating current motor comprising the combination of a field-magnet connected to a source of alternating current supply, an armature having coils connected to a commutator, two sets of stationary brushes bearing upon the commutator and placed 90 electrical degrees apart; means for connecting said brushes in pairs to an outside circuit for the purpose of short circuiting certain groups of armature coils and for introducing outside currents into the other armature coils not short-circuited and additional means for changing the positions of the short-circuited groups of armature coils relative to the axis of the field flux, for the purpose of reversing the direction of rotation.

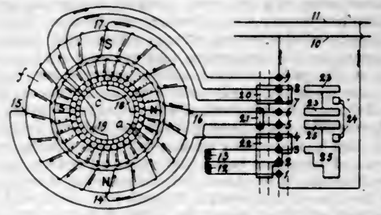
2. An alternating current motor comprising the combination of a field-magnet connected to a source of alternating current supply, an armature having coils connected to a commutator, two sets of brushes bearing upon the commutator, one set being placed at points corresponding to the neutral points of a direct current machine, while the other set of brushes is displaced 90 electrical degrees from the first mentioned set; means for connecting the brushes which are 90 electrical degrees apart together in pairs, either in a right-hand or in a left-hand direction according to the desired direction of rotation, and additional means for connecting one of the above mentioned sets of brushes to an outside circuit.

3. A single phase alternating current motor comprising the combination of a field-magnet having an energizing winding, an armature the coils of which are connected to a commutator; two sets of brushes upon the commutator, one set being placed at points corresponding to the neutral points of a direct current machine while the other set of brushes is displaced 90 electrical degrees from the first mentioned set; means for connecting said sets of brushes together in pairs to an outside circuit for the purpose of short-circuiting certain groups of armature coils and for introducing outside currents into the other armature coils not short-circuited, and additional means for interchanging the positions of the short-circuited and the non-short-circuited groups of armature coils, for the purpose of reversing the direction of rotation.

4. A single phase alternating current motor comprising a stationary field magnet having an energizing winding, an armature the coils of which are connected to a commutator with two sets of brushes bearing upon said commutator, one set of brushes connecting with the armature coils which are directly under the field poles and the other set connecting with the armature coils which are about midway between the field poles; in combination with a controller having means for connecting one set of brushes to an outside circuit and additional means for connecting the two different sets of brushes together in pairs—either in a right-hand or a left-hand direction—for the purpose of short-circuiting certain groups of armature coils and for reversing the direction of rotation.

5. A single phase alternating current motor comprising a stationary field-magnet connected to a source of alternating current supply, an armature having coils connected to a commutator, two sets of brushes bearing upon the commutator, one set of brushes connecting with the armature coils which are directly under the field poles and the other set connecting with the armature coils which are about midway between the field poles; in combination with a controller having means for connecting one set of brushes in series with the field winding, and additional means for connecting the two different sets of brushes together in pairs—either in a right-hand or in a left-hand direction—for the purpose of short-circuiting certain groups of armature coils and for reversing the direction of rotation.

870,893. ALTERNATING-CURRENT MOTOR. ROBERT LUNDELL, New York, N. Y. Filed Nov. 27, 1905. Serial No. 289,178.



1. An alternating current motor comprising a stator having an energizing winding, a rotor having coils connected to a commutator, brushes upon the commutator for short-circuiting certain groups of rotor coils at an angle of about forty-five electrical degrees to the stator-field and for introducing outside currents into the other rotor coils not short-circuited; in combination with means for shifting the polarities of the stator, for the purpose of reversing the direction of rotation, substantially as described.

2. An alternating current motor comprising a stator connected to a source of alternating current supply, a rotor having coils connected to a commutator; in combination with means for short-circuiting certain groups of rotor coils located at an angle of about forty-five electrical degrees to the stator-field, and additional means for shifting the polarities of the stator in order to reverse the rotor, substantially as described.

3. An alternating current motor comprising a stator having a distributed energizing winding, a rotor having coils connected to a commutator, wide brushes extending about 90 electrical degrees for short-circuiting certain groups of rotor coils at an angle of about forty-five electrical degrees to the stator-field and for introducing outside currents into the other rotor coils not short-circuited; in combination with a controller having circuit connections leading to points or terminals in the distributed stator winding located at about 90 electrical degrees from each other and means for shifting the polarities of the stator, substantially as described.

4. An alternating current motor comprising a stator having an energizing winding, a rotor having coils connected to a commutator, stationary brushes upon the commutator for short-circuiting certain groups of rotor coils at an angle of about forty-five electrical degrees to the stator-field and for introducing outside currents into the other rotor coils not short-circuited; in combination with means on the stator for nullifying the rotor-flux and the self-induction of the rotor, and additional means for shifting the relative positions of the rotor- and the stator-polarities, for the purpose of reversing the direction of rotation, substantially as described.

5. An alternating current motor comprising the combination of a stator having an energizing winding, a rotor having coils connected to a commutator, brushes upon the commutator for short-circuiting certain groups of rotor coils and for introducing outside currents into the other rotor coils not short-circuited, means for shifting

the polarities of the stator and additional means for overcoming the self-induction of the rotor, substantially as described.

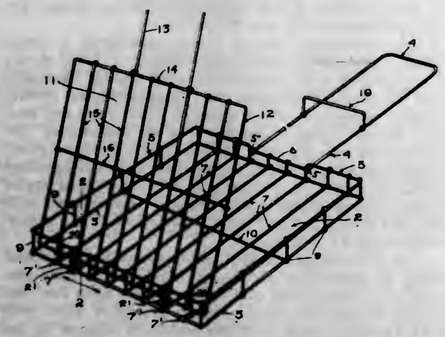
6. An alternating current motor comprising the combination of a stator having a distributed energizing winding, a rotor having coils connected to a commutator, brushes upon the commutator for short-circuiting certain of the currents utilized to propel the rotor and for introducing into the rotor other propelling currents from an outside source of supply, and means for short-circuiting equipotential points in the stator winding, for the purpose of nullifying the rotor-flux and the self-induction of the rotor, substantially as described.

7. An alternating current motor comprising the combination of a stator having a distributed energizing winding, a rotor having coils connected to a commutator, brushes upon the commutator for short-circuiting certain groups of rotor coils and for introducing outside currents into the other rotor coils not short-circuited, a starting switch or controller having circuit connections to the motor and to a source of alternating current supply, and means on the controller for connecting together two equipotential points in the stator winding, substantially as described.

8. An alternating current motor having a rotor which is propelled by the combined effects of short-circuited induced currents and currents from an outside source of supply and a stator having a distributed winding with two sets of terminals located 90 electrical degrees apart; in combination with means for introducing outside currents into the stator winding through one set of said terminals and additional means for short-circuiting the other set of terminals at will, substantially as described.

9. An alternating current commutator motor provided with wide brushes extending approximately 90 electrical degrees and arranged to short-circuit certain of the currents utilized to propel the rotor and also to introduce into the rotor other propelling currents from an outside source of supply; in combination with a stator winding provided with means for shifting the polarities of the stator and additional means for overcoming the self-induction of the rotor, substantially as described.

870,894. TOASTER OR BROILER. HARRY O. MACDOUGALL, Watertown, N. Y. Filed Feb. 16, 1907. Serial No. 357,677.



1. A device of the class described, comprising a wire basket having a clear open top and an open wire bottom, a looped handle formed on the inner end of said basket, a flat wire cover adapted to fit into the open side of said basket, a series of loops formed integrally with certain of the bottom wires of said basket for use in hinging the outer end of said cover to the outer end of said basket, a series of detented or corrugated parts formed integrally with certain other bottom wires of said basket adapted to effect the adjustment of said cover to different positions in said basket, a handle formed on the inner end of said cover, and means for adjusting said cover handle to different positions, substantially as described.

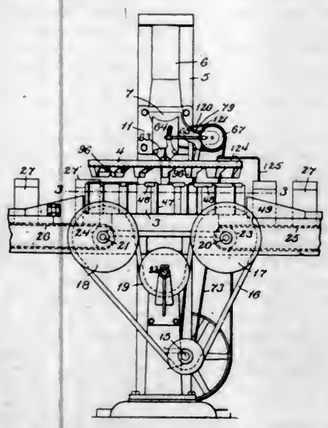
2. A toaster, comprising a basket grid made of wire, a wire cover adapted to fit into said basket, a pair of hinge-loops formed integrally with two of the bottom wires of said basket adapted to connect said cover to said basket, a pair of detented or corrugated adjusting parts disposed between said hinge-loops and adapted to effect a hinged adjustment with the end of said cover for the several positions within and parallel to the bottom of said basket, and means for adjusting the free end of said cover, substantially as described.

3. A toaster or broiler, comprising a wire basket having a handle projecting from the inner end and having one open side, a wire cover to close the open side of said basket and having a handle on its inner end adapted to register substantially with the handle of said basket, and means for adjustably hinging said cover to the outer end of said basket, substantialy as described.

4. In a toaster or broiler, the combination with a wire basket and a wire cover or lid adapted to fit therein, of a pair of hinge-loops carried by said basket adapted to operatively connect or join said cover or lid to the outer end of said basket, and a pair of detented parts for adjusting the connected end of said cover or lid to different positions in and parallel to the top and bottom of said basket, substantially as described.

5. A toaster, comprising a basket, a cover hinged at its outer end to the outer end of said basket, and a pair of detented or corrugated parts formed with the outer end of said basket adapted to effect the adjustment of the hinged end of said cover to a number of different positions, substantially as described.

870,895. BOX-FILLING MACHINE. ALBION L. F. MITCHELL, Hyde Park, Mass., assignor of one-half to Charles W. Aiken, Hackensack, N. J. Filed Mar. 12, 1906. Serial No. 305,721.



1. A box-filling machine comprising a carrier having box-engaging means adapted to impart a progressive movement to a plurality of boxes, means adapted to be rendered operative by a box engaged with the carrier for causing material to be fed into another box, and means operated by such other box when filled for deflecting therefrom the material being fed.

2. A box-filling machine comprising a carrier having box-engaging means adapted to impart a progressive movement to a plurality of boxes, and means adapted to be rendered operative wholly by a single box engaged with the carrier for causing material to be fed into a preceding box.

3. A box-filling machine comprising a carrier having box-engaging means adapted to impart a progressive movement to a plurality of boxes, means adapted to be rendered operative by a box engaged with the carrier for causing material to be fed into a preceding box, and means operated by a filled box for deflecting to a following one the material being fed.

4. A box-filling machine comprising a carrier having box-engaging means adapted to impart a progressive movement to a plurality of boxes, a supply conduit, means for opening and partially closing the outlet to said conduit, and connections adapted to be actuated by a single one of the boxes for setting said means in operation while another box is coming into position to receive the material discharged from said conduit.

5. A box-filling machine comprising a carrier having box-engaging means adapted to impart a progressive movement to a plurality of boxes, a supply conduit, means for opening and partially closing the outlet to said conduit, connections adapted to be actuated by one of the boxes for setting said means in operation while another box is coming into position to receive the material discharged from said conduit, and a deflector operated by a filled box for directing into the succeeding box the material being discharged.

6. A box-filling machine comprising a carrier having box-engaging means adapted to impart a progressive movement to a plurality of boxes, a supply conduit, intermittent mechanism, automatically rendered inoperative after each cycle, for opening and partially closing the outlet of said conduit, leaving the outlet partly open at all times for the constant escape of the contents of the conduit, and means adapted to be actuated by a box engaged with the carrier for setting said mechanism in operation.

7. A box-filling machine comprising a carrier having box-engaging means adapted to impart a progressive movement to a plurality of boxes, a supply conduit, means for increasing and diminishing the quantity supplied by said conduit while permitting a continuous supply, driving mechanism for said means including automatically-disconnectible clutch members, and means adapted for operation by a box engaged with the carrier for causing connection of the clutch members.

8. A box-filling machine comprising a carrier having box-engaging means adapted to impart a progressive movement to a plurality of boxes, a conduit for supplying charges of material to the boxes, a gate for the conduit outlet, an actuator for the gate constructed to open the same and reduce the opening to its minimum in one cycle, driving means for said actuator including disconnectible clutch members, one of which is continuously movable, said clutch members being automatically separated at the end of each cycle of the gate-actuator, and means operated by the boxes for causing connection of the clutch members.

9. A box-filling machine comprising a carrier having box-engaging means adapted to impart a progressive movement to a plurality of boxes, a conduit for supplying charges of material to the boxes, a gate for the conduit outlet, a crank connected to the gate for opening the same and reducing the opening thereof to its minimum in one revolution, a rotary driver for the crank including disconnectible clutch members one of which is continuously driven, said members being automatically uncoupled at each revolution of the gate-actuating crank, and devices operated by the boxes for causing connection of the clutch members.

10. A box-filling machine comprising a carrier having box-engaging means adapted to impart a progressive movement to a plurality of boxes, means for supplying charges of material to the boxes, driving means for the carrier automatically rendered inoperative for moving the boxes one at a time into juxtaposition with said supplying means, connections operated by one unfilled box for causing discharge of material into another unfilled box from the supplying means, and connections operated by the latter box when filled for causing the carrier to be conected with said driving means and thereby moved.

11. A box-filling machine comprising a carrier having box-engaging means adapted to impart a progressive movement to a plurality of boxes, means for supplying charges of material to the boxes, driving means for the carrier automatically rendered inoperative for moving the boxes one at a time into juxtaposition with said supplying means, connections operated by an unfilled box for causing discharge of material from the supplying means, and connections operated by a filled box for causing the carrier to be connected with said driving means and thereby moved, and for deflecting from said box the material issuing from said supplying means.

12. A box-filling machine comprising a carrier having box-engaging means adapted to impart a progressive movement to a plurality of boxes, means for supplying charges of material to the boxes, driving means for the carrier automatically rendered inoperative for moving the boxes one at a time into juxtaposition with said supplying means, connections operated by an unfilled box for causing discharge of material from the supplying means, and connections operated by a filled box for causing the carrier to be connected with said driving means and thereby moved, and for deflecting to the following unfilled box the material issuing from said supplying means.

13. A box-filling machine comprising a carrier having box-engaging means adapted to impart a progressive movement to a plurality of boxes, means for supplying charges of material to the boxes, a driver, separable connections between the driver and carrier for moving the latter step-by-step, and automatically rendered inoperative upon each movement of the carrier bringing an unfilled box into juxtaposition with the supplying means, means governing the rate of discharge of material from the supplying means, an actuator adapted for operation by one unfilled box to put said discharge-governing means in operation to increase and then diminish, without wholly stopping, the supply of material, and connections operated by another box when filled for connecting the driver with the carrier to advance the later.

14. A box-filling machine comprising a carrier having box-engaging means adapted to impart a progressive movement to a plurality of boxes, means for supplying charges of material to the boxes, a driver, separable connections between the driver and carrier for moving the latter step-by-step, and automatically rendered inoperative upon each movement of the carrier bringing an unfilled box into juxtaposition with the supplying means, means governing the rate of discharge of material from the supplying means, an actuator adapted for operation by an unfilled box to put said discharge-governing means in operation to increase and then diminish the supply of material, connections operated by a filled box for connecting the driver with the carrier to advance the latter, and other connections simultaneously operable by the filled box for deflecting from the opening thereof the flowing material.

15. A box-filling machine comprising a carrier having box-engaging means adapted to impart a progressive movement to a plurality of boxes, means for supplying charges of material to the boxes, a driver, connections including a separable clutch between the driver and carrier for advancing the latter and moving the boxes successively up to said supplying means, automatic means for disconnecting the clutch as each box is so moved, discharge-governing means for said supplying means, an actuator for said discharge-governing means, a separable clutch adapted to connect said actuator with the driver for operation thereby, the said actuator being constructed to increase and then diminish the discharge and finally disconnect its clutch at each operation, instrumentalities operated by an unfilled box to cause connection of the latter clutch, and instrumentalities operated by a filled box for causing connection of the carrier-operating clutch.

16. In a box-filling machine, the combination of a box carrier, a driving shaft, a supply conduit, mechanism for advancing the carrier, a gate for the discharge outlet of said conduit, an actuator for operating said gate to vary the area of the conduit outlet, clutches between the driving shaft and the carrier mechanism and gate actuator respectively, each automatically disconnectible upon operation of the carrier and gate-actuator, and independent means operated by an unfilled and a filled box respectively, for causing connection of the respective clutches.

17. A box-filling machine comprising a supply conduit, a carrier having box-engaging means, actuating means for advancing the carrier intermittently to bring the boxes successively adjacent said conduit to receive material dis-

charged therefrom, mechanism for enlarging and diminishing the discharge opening of the conduit including driving and driven clutch members, means movable with the driven clutch member for disconnecting the same from the other member after each actuation of said mechanism, and means operated by a box for causing connection of the clutch members.

18. A box-filling machine comprising a supply conduit, a carrier having box-engaging means, actuating means for advancing the carrier intermittently to bring the boxes successively adjacent said conduit to receive material discharged therefrom, mechanism for enlarging and diminishing the discharge opening of the conduit including driving and driven clutch members, a cam movable with the driven clutch member, an abutment in the path of said cam engaged thereby after each actuation of said mechanism to separate the clutch members, and connections operated by a box for disengaging the cam and abutment.

19. A box-filling machine comprising a supply conduit, a carrier having box-engaging means, actuating means for advancing the carrier intermittently to bring the boxes successively adjacent said conduit to receive material discharged therefrom, mechanism for enlarging and diminishing the discharge opening of the conduit including driving and driven clutch members, a cam movable with the driven clutch member, an abutment in the path of said cam engaged thereby after each actuation of said mechanism to separate the clutch members, and a trigger located for engagement by a box moved by the carrier and connected with the abutment for disengaging the same from the cam.

20. A box-filling machine comprising a supply conduit, a carrier having box-engaging means, actuating means for advancing the carrier intermittently to bring the boxes successively adjacent said conduit to receive material discharged therefrom, mechanism for enlarging and diminishing the discharge opening of the conduit including driving and driven clutch members, a cam and a locking projection movable with the driven clutch member, abutments in the path of said cam and locking projection respectively, adapted to be engaged thereby after each actuation of said mechanism to separate the clutch members, and devices arranged for actuation by a box engaged with the carrier and connected to disengage said abutments from the cam and locking projection.

21. A box-filling machine comprising a supply conduit, a carrier having box-engaging means, actuating means for advancing the carrier intermittently to bring the boxes successively adjacent said conduit to receive material discharged therefrom, mechanism for enlarging and diminishing the discharge opening of the conduit including driving and driven clutch members, a cam and a locking shoulder movable with the driven clutch member, an abutment in the path of the cam for engagement thereby to separate the clutch members, a stop in the path of said locking shoulder for engagement thereby after separation of the clutch members, means tending to connect said members, and connections adapted for actuation by a box to disengage said abutment and stop and permit connection of the clutch.

22. A box-filling machine comprising a supply conduit, a carrier having box-engaging means, actuating means for advancing the carrier intermittently to bring the boxes successively adjacent said conduit to receive material discharged therefrom, mechanism for enlarging and diminishing the discharge opening of the conduit including driving and driven clutch members, a cam and a locking shoulder movable with the driven clutch member, an abutment in the path of the cam for engagement thereby to separate the clutch members, a stop in the path of said locking shoulder for engagement thereby after separation of the clutch members, a trigger mounted for actuation by a box and connected to disengage said abutment from the cam, and an arm moved thereby to separate the stop from the locking shoulder, whereby the clutch members may be connected and the said mechanism set in operation.

23. In combination with supplying means arranged to deliver charges of material into boxes and a box carrier adapted to engage and advance a series of boxes successively thereto, a conduit or spout intermediate the supplying means and a box receiving material therefrom, a weighing platform on which each box is supported while receiving material, and connections between said platform and spout for shifting the latter when a box is filled to deflect the material into a succeeding box, whereby the latter receives a preliminary charge before reaching the weighing platform.

24. In combination with supplying means arranged to deliver charges of material into boxes and a box carrier adapted to engage and advance boxes successively thereto, a conduit intermediate the supplying means and a box receiving material therefrom, connections operated by the box when sufficiently filled for shifting said conduit to deflect the issuing material from the filled box into a following unfilled box, whereby the latter is partially charged before reaching the weighing platform, and means tending to restore said conduit to normal position.

25. In a box-filling machine, a carrier adapted to engage and advance boxes, a support on which the boxes are successively moved and yieldingly held so as to be depressed by a loaded box, and positive means movable simultaneously with the carrier for raising said support after removal therefrom of a box and before a succeeding box is placed thereon.

26. In a box-filling machine, a carrier adapted to engage and advance boxes, a support on which the boxes are successively moved and yieldingly held so as to be depressed by a loaded box, and a cam movable with the carrier for positively and rapidly elevating the support upon removal therefrom of a box.

27. In a box-filling machine, a carrier having a plurality of engaging means adapted to engage and advance boxes, a support on which the boxes are successively moved and yieldingly held so as to be depressed by a loaded box, and a plurality of cams arranged adjacent the respective box-engaging means for positively and quickly elevating the support as each box is removed therefrom.

28. In a box-filling machine, means for supplying charges of material to boxes, a carrier for advancing boxes thereto and stopping, weighing means supporting the box and charge of material therein constructed and arranged to weigh the same, and connections directly engaged with and actuated by said weighing means, when a predetermined weight of charge is delivered to the box, to cut off the supply of material and cause the carrier to be started.

29. In a box-filling machine, a support adapted to hold boxes while being loaded, a lever carrying the support, weighted means engaging the lever to hold the support elevated and disconnectible therefrom by the weight of a loaded box, and provisions for adjusting the extent of said bearing whereby the sensitiveness of the apparatus may be varied.

30. In a box-filling machine, a support adapted to hold boxes while being loaded, a lever carrying the support, an extension on an arm of the lever, and weighted means bearing on a limited portion of said extension, the latter being movable under the influence of a loaded box for disengagement from said weighing means, and a stop on the lever for said extension adjustable to vary the amount of movement necessary to effect such disengagement.

31. The combination of a box-carrier, supplying means including a shiftable spout, driving mechanism for moving the carrier intermittently to bring a succession of boxes to receive material delivered from the spout, a weighted beam located to support boxes when receiving material and arranged to be depressed by the weight of a loaded box, and a link connected with the beam and spout for shifting the latter to deflect material when the beam is depressed.

32. The combination of a box-carrier, supplying means including a shiftable spout, driving mechanism for moving the carrier intermittently to bring a succession of boxes to receive material delivered from the spout, a weighted beam located to support boxes when receiving material and arranged to be depressed by the weight of a loaded box, a link connected with the beam and spout for shifting the latter to deflect material when the beam is depressed, and mechanism actuated by depression of the beam for setting the carrier in motion to replace a loaded by an unloaded box.

33. In a machine of the character described, a supply conduit, a gate for governing the discharge outlet thereof comprising coöperating members pivotally mounted below the outlet to swing toward and from each other, gearing connecting them to move together, and means for moving said members, constructed to leave always an opening between them.

34. In a machine of the character described, a supply conduit, a gate for governing the discharge outlet thereof comprising coöperating members pivotally mounted to swing toward and from each other, intermeshing segment gears connected to said members, one of them having a slot curved on an arc of which the radius is equal to the length of the pitman, and a crank and pitman adjustably connected with one of said gears in said slot for actuating them.

35. In a box-filling machine, a carrier, means for supplying material, mechanism for moving the carrier intermittently to bring boxes successively into receiving position adjacent said supplying means and stopping, weighing means comprising a support for the boxes beneath the supplying means, weight-controlled to hold the support and box elevated until the weight of material in the box reaches a predetermined amount, and connections adapted to be engaged and operated directly and positively by the support when depressed for causing the carrier to be set in motion.

36. In a box-filling machine, a carrier, a supply conduit, means including a clutch for driving the carrier intermittently to bring boxes successively into receiving position adjacent said conduit, provisions for automatically disconnecting said clutch after each advance of the carrier, a yielding weighing support for the boxes while in receiving position, and means operated directly by depression of said support for displacing into inoperative position said clutch-disconnecting provisions.

37. In a box-filling machine, a carrier, a supply conduit, means including clutch members for driving the carrier intermittently to bring boxes successively into receiving position adjacent said conduit, a spring tending to retain the clutch members connected, means movable into and out of position to be engaged by a cam portion of one of the members to overcome said spring and separate the clutch members after each actuation of the carrier, a yieldable weighing support for the boxes while in receiving position, and connections operated by depression of said support for removing said clutch-disconnecting means and permitting the spring to connect the clutch.

38. In a box-filling machine, a carrier, means for supplying material, mechanism for moving the carrier intermittently to bring boxes successively into receiving position adjacent said supplying means and stopping, weighing means comprising a support for the boxes beneath the supplying means, weight-controlled to hold the support and box elevated until the weight of material in the box reaches a predetermined amount, an endwise-movable rod beneath said support adapted to be engaged and moved by the latter when depressed by the weight of a loaded box, and connections between said rod and the carrier-driving mechanism for setting the latter in operation upon movement of the rod.

39. In a machine of the character described, a head or carrier having a plurality of box-engaging portions, means for supplying charges of material to boxes, a shield above the carrier having a guiding funnel or chute over each of the box-engaging portions, and a brush coöperating with the shield to remove therefrom material deposited thereon.

40. In a machine of the character described, a head or carrier having a plurality of box-engaging portions, means for supplying charges of material to boxes, a shield above the carrier having a guiding funnel or chute over each of the box-engaging portions, the carrier and shield being movable to advance chutes and boxes successively to the supplying means, and a stationary brush engaging the shield to brush off material deposited thereon between the chutes.

41. In a machine of the character described, in combination with the filling mechanism and a box-supporting platform, a movable carrier having outwardly-extending blades or plates secured thereto and adapted to engage boxes brought to the platform in proximity to the carrier and push them forward.

42. In a machine of the character described, in combination with the filling mechanism and a box-supporting platform, a movable carrier having outwardly-extending blades or plates secured thereto and adapted to engage boxes brought to the platform in proximity to the carrier and push them forward, and fingers projecting from the carrier each adapted to extend on the opposite side of a box from a blade and to embrace the box.

43. In a machine of the character described, in combination with the filling mechanism and a box-supporting platform, a movable carrier, plates extending out from the periphery of the carrier and being of substantially the same height, and fingers extending from the upper part of the carrier, each parallel with one of the plates.

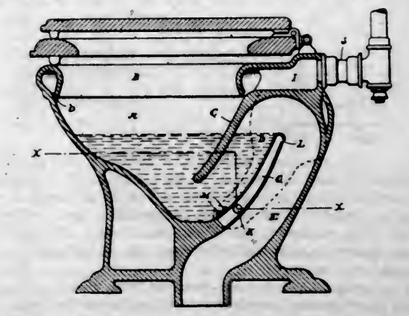
44. In a machine of the character described, means for supplying material, weighing means, a carrier for advancing boxes to said weighing means in position to receive material from said supplying means, and driving means for advancing the carrier and box, constructed with provisions for backing off the carrier sufficiently to free the box after the box has been brought to the weighing means.

45. In a machine of the character described, means for supplying material, weighing means, a carrier for advancing boxes to said weighing means in position to receive material from said supplying means, and driving means for the carrier constructed to advance the box and then retract the carrier sufficiently to free the box, comprising a revoluble stud and a follower connected to the carrier and having slots inclined to the path of movement thereof.

46. In a machine of the character described, means for supplying material, weighing means, a carrier for advancing boxes to said weighing means in position to receive material from said supplying means, and driving means for the carrier constructed to advance the box and then retract the carrier sufficiently to free the box, comprising a revoluble stud and a follower connected to the carrier and having slots inclined inwardly and rearwardly from the periphery thereof, into which the stud is adapted to enter.

47. In a machine of the character described, means for supplying material, weighing means, a rotary carrier for advancing boxes to said weighing means in position to receive material from said supplying means, and driving means for the carrier constructed to advance the box and then retract the carrier sufficiently to free the box, comprising a revoluble stud and a disk connected to the carrier and having slots inclined with respect to its radii and direction of motion, into which the stud is adapted to enter.

870,896. WATER-CLOSET. PATRICK H. MOOHAN, Trenton, N. J., assignor of one-half to L. Roden, Philadelphia, Pa. Filed Jan. 27, 1906. Serial No. 298,089.

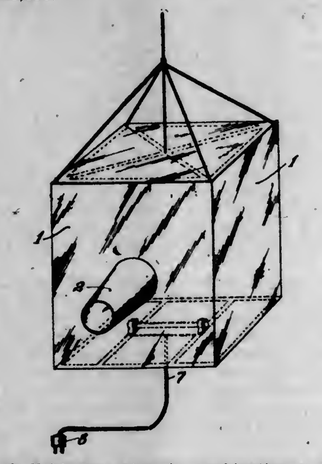


1. In a device of the character described, a bowl having an uptake and downtake, the former leading into the latter and a partition separating the same, said partition being provided with an uptake discharging in the top of the

downtake of the bowl, and supply downtakes arranged to either side of the uptake in the partition and in communication therewith near the bottom thereof.

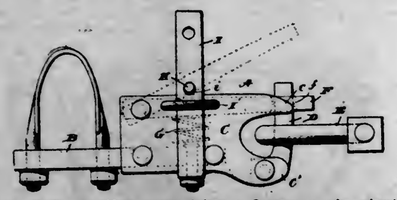
2. In a device of the character described, a bowl having an uptake and a downtake, the former leading into the latter and a partition separating the same, said partition being provided with an uptake discharging in the top of the downtake of the bowl, and supply downtakes arranged to either side of the uptake in the partition, said downtakes in the partition communicating near their bottom with the uptake in the bowl.

870,897. FLASH-LIGHT APPARATUS. WILLIAM M. MURPHY, New York, N. Y., assignor to George Archibald Brucker, New York, N. Y. Filed July 27, 1907. Serial No. 385,890.



A flash light apparatus, in combination a closed rectangular smoke bag of suitable material provided with a valve on one of its sides; a metal frame, to keep the aforesaid bag extended at the top, provided with means to support the bag; a metal frame to keep the aforesaid bag extended at the bottom provided with two spring yokes which may be connected to any electrical circuit, a portable fuse adapted to engage both the aforesaid yokes.

870,898. HORSE-DETACHER. JOHN R. MCDANILL, Aubrey, Tex. Filed May 13, 1907. Serial No. 373,495.



1. A thill coupling comprising a frame, a pin pivotally mounted therein, a spring actuated plate movably mounted in the frame and provided with a portion adapted to engage the upper end of said pin to normally hold the same in a substantially upright position, a catch for holding said plate in engagement with said pin, and means for releasing said catch.

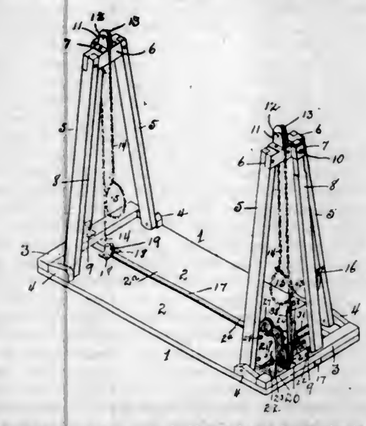
2. A thill coupling comprising a base plate and separated side plates, a pin pivotally mounted between the forward ends of said side plates, a top plate pivotally mounted between said side plates and provided with a portion adapted to engage the free end of said pin, a spring interposed between said top and base plates, and means for holding said top plate in engagement with said pin.

3. A thill coupling comprising a base plate, and separated side plates, a pin pivotally mounted between the forward ends of said side plates, a top plate pivotally mounted between said side plates and provided with a portion adapted to engage the free end of said pin, a spring interposed between said top and base plates, a catch adapted to overlie said top plate and hold the same in engagement with said pin, and means for releasing said catch.

4. A thill coupling comprising a base and separated side plates, a pin pivotally mounted between the forward ends of said plates, a spring actuated plate pivotally mounted between the side plates and provided with a portion therein adapted to engage the free end of said pin, a catch pivotally secured to one of said side plates and arranged to overlie said spring actuated plate, and a spring member secured to the other of said side plates and provided with an aperture adapted to engage the free end of said catch.

5. A thill coupling comprising a base plate and separated side plates, a pin pivotally mounted between the forward ends of said side plates, a top plate pivotally mounted between said side plates and provided with a portion adapted to engage the free end of said pin, a spring interposed between said top plate and base plates, a catch pivotally secured to one of said side plates and adapted to overlie said top plate and hold the same in engagement with said pin, and a spring plate secured to the other of said side plates and provided with a portion adapted to be engaged by the free end of said catch.

870,899. WAGON-ELEVATOR. EDWARD H. OVERHOLT, Galesburg, Ill. Filed Oct. 6, 1906. Serial No. 337,778.



1. A wagon elevator including a base, bars pivoted thereto at each end thereof and adapted to fold longitudinally thereof in either direction, and a single means traversing said bars and base for supporting one end of a wagon.

2. A wagon elevator including a base, independently foldable bars pivoted thereto at each end thereof, and a single means traversing said bars for supporting one end of a wagon.

3. A wagon elevator including a platform, bars pivoted thereto at each end thereof and adapted to fold longitudinally thereof in either direction, and means traversing said bars and platform for supporting one end of a wagon.

4. A wagon elevator including an elongated base upon which a wagon is adapted to be drawn transversely thereof, bars pivoted at each end of the base and adapted to fold in directions toward or from the sides of the wagon, and means traversing said bars for supporting one end of a wagon.

5. A wagon elevator including an elongated base upon which a wagon is adapted to be drawn transversely thereof, bars pivoted at each end of the base and adapted to fold in directions toward or from the sides of the wagon, and means traversing said bars for supporting one end of a wagon.

6. In wagon elevators including a platform, derrick members pivoted thereto at each end thereof and adapted to fold longitudinally thereof in either direction.

7. In a wagon elevator, a base, converging bars pivoted thereto at each end thereof and adapted to fold thereon and therefrom, means for holding said bars in upright positions, and a single means traversing said bars for elevating one end of a wagon.

8. In a wagon elevator, a base, converging bars pivoted thereto at each end thereof and adapted to fold thereon and therefrom, standards hinged to said base and keepers for engaging them with said bars to normally support them in upright positions.

9. In a wagon elevator, a base, converging bars pivoted thereto at each end thereof and adapted to fold thereon and therefrom, standards hinged at the ends of said base, keepers for removably engaging their upper ends with said bars, pulleys positioned at the upper ends of the bars, a drum, and a chain fixed thereto, its extremities traversing said pulleys.

10. In a wagon elevator, a base, converging bars pivoted thereto at each end thereof and adapted to fold thereon and therefrom, standards hinged at the ends of said base, keepers for removably engaging their upper ends with said bars, pulleys positioned at the upper ends of the bars, a drum, a chain fixed thereto, its extremities traversing said pulleys, and means for driving said drum from either side of the platform.

11. In a wagon elevator, a base, converging bars pivoted thereto and adapted to fold thereon and therefrom, means for normally supporting them in upright positions, pulleys positioned at the upper ends of the bars, a drum, a chain fixed thereto, its extremities traversing said pulleys, and a multiplying gear driving said drum.

12. In a wagon elevator, a base, converging bars pivoted thereto and adapted to fold thereon and therefrom, means for normally supporting them in upright positions, pulleys positioned at the upper ends of the bars, a drum, a chain fixed thereto, its extremities traversing said pulleys, and a multiplying gear driving said drum, said gear including clutch members.

13. In a wagon elevator, a base, converging bars pivoted thereto and adapted to fold thereon and therefrom, means for normally supporting them in upright positions, pulleys positioned at the upper ends of the bars, a drum, a chain fixed thereto, its extremities traversing said pulleys, and a multiplying gear driving said drum and including clutch members and a brake.

14. In an elevator, the combination with a base, of folding bars pivoted thereto at each end thereof, pulleys positioned on said bars, a winding drum mounted on said bars, and a hoisting chain fixed to said drum and adapted to traverse said pulleys.

15. A gear for wagon elevators including clutch members, means for throwing them into and out of engagement, a ratchet wheel, a pawl adapted to engage the teeth thereof, a brake shoe adapted to contact said teeth, and a lever uniting said shoe and pawl.

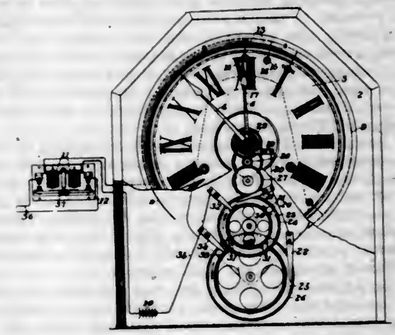
16. In combination in a device of the character described, a base, a derrick comprising a plurality of sections adapted to fold thereon and therefrom, other means hinged to the base for normally supporting said derrick sections in upright positions and a keeper fixed to said means whereby said hinge means may be detached from said sections.

17. In a device of the character described and in combination, a base, a derrick supported thereby, said derrick comprising sections located at the ends of the base, means hinged at said base for normally supporting said derrick in a substantially vertical position, and means fixed to said derrick whereby the supporting means may be slidably secured thereto.

18. In a device of the character described and in combination, a base including parallel longitudinal members spaced apart, pulleys uniting said members, a derrick comprising converging bars, the members of said derrick pivoted to said base to fold one upon the other, pulleys surmounting said derrick, means for retaining said derrick members in normally upright positions, a drum, a chain fixed thereto its ends adapted to traverse said last named pulleys and its median portions to traverse the pulleys on the base, and means for imparting motion to said drum.

19. In a device of the character described and in combination, a base including parallel longitudinal members spaced apart, pulleys uniting said members, a derrick comprising converging bars, the members of said derrick pivoted to said base to fold one upon the other, pulleys positioned on said derrick, means for retaining said derrick members in normally upright positions, a drum, a chain fixed thereto, its ends adapted to traverse said last named pulleys and its median parts to traverse the pulleys on the base, means for imparting movement to said drum, means for stopping said motion, and means for throwing said starting and stopping means in and out of gear.

870,900. TIME-CONTROLLED CIRCUIT-CLOSING DEVICE. CARL A. PALMGREN and ARTHUR H. YOUNG, Chicago, Ill. Filed Feb. 16, 1907. Serial No. 357,668.



1. Time-controlled circuit closing mechanism comprising a clock, a normally open electric circuit having contacts arranged to be closed by a hand of the clock at definite times, and a plurality of controlling members geared to the clock work to rotate in different time periods, and contact devices controlled by said members, the contact devices controlled by each member being in series with the contacts controlled by the clock hand, but in multiple with the contacts controlled by the other member or members; substantially as described.

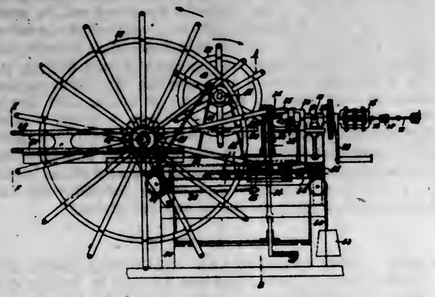
2. The combination of a clock movement, a normally open electric circuit having a plurality of contact devices in the path of movement of a hand of the clock, a cooperating contact device on the hour hand, a controlling member geared to the clock movement to make a complete revolution each twenty-four hours, a second controlling member geared to make a complete rotation each seven days, and contact devices controlled by each of the controlling members, the devices controlled by each member being in series with the contacts controlled by the clock hand, and in multiple with the contacts controlled by the other member; substantially as described.

870,901. MACHINE FOR THE MANUFACTURE OF WIRE-NETTING OR LATTICED FENCES WITH BARS OF ALL DESCRIPTION. JOSEPH PEIGNON, Nantes, France. Filed Sept. 21, 1904. Serial No. 225,356.

1. In a device of the class described a plurality of wire-reels arranged in double pairs, a differential tension regulating device for receiving the wires from each pair of reels, a twisting device to which the wires pass from each tension regulator, means for feeding bars to the wires, and means for rotating the twisters and tension regulators first in one direction and then in the other.

2. In a device of the class described a plurality of wire-

reels arranged in double pairs, a differential tension regulating device for receiving the wire from each pair of reels, a twisting device to which the wires pass from each tension regulator, means for feeding bars to the wires, and means for rotating the twisters and tension regulators.



3. In a device of the class described, a plurality of wire-reels arranged in double pairs, a differential tension regulating device for receiving the four wires from each double pair of reels, a twisting device to which the wires pass from each tension regulator, means for feeding bars to the wires and means for rotating the twisters and tension regulators of adjacent double pairs of reels simultaneously in different directions.

4. In a device of the class described, a plurality of wire-reels arranged in double pairs, a differential tension regulating device for receiving the four wires from each double pair of reels, a twisting device to which the wires pass from each tension regulator, means for feeding bars to the wires, and means for rotating the twisters and tension regulators of adjacent double pairs of reels simultaneously in different directions and then reversely.

5. In a device of the class described a plurality of wire-reels arranged in double pairs, a differential tension regulating device for receiving the wires from each pair of reels, a twisting device to which the wires pass from each tension regulator, means for feeding bars to the wires, means for tightening the wire upon the bars, and means for rotating the twisters and tension regulators first in one direction and then in the other.

6. In a device of the class described, a plurality of wire-reels arranged in double pairs, a differential tension regulating device for receiving the wire from each pair of reels, a twisting device to which the wires pass from each tension regulator, means for feeding bars to the wires, means for tightening the wire upon the bars, and means for rotating the twisters and tension regulators.

7. In a device of the class described, a plurality of wire-reels arranged in double pairs a differential tension regulating device for receiving the wire from each pair of reels, a twisting device to which the wires pass from each tension regulator, means for feeding bars to the wires, means for tightening the wire upon the bars, and means for rotating the twisters and tension regulators of each adjacent pair of wire-reels simultaneously in different directions.

8. In a device of the class described, a plurality of wire-reels arranged in double pairs, a differential tension regulating device for receiving the four wires from each double pair of reels, a twisting device to which the wires pass from each tension regulator, means for feeding bars to the wires, means for tightening the wire upon the bars, and means for rotating the twisters and tension regulators of adjacent double pairs of reels simultaneously in different directions and then reversely.

9. In a device of the class described, a support, a shaft pivoted at the center to the support, a wire-reel revolubly mounted upon either end of the shaft, an axle having two reels similarly arranged located adjacent to the shaft and reels first mentioned, twisting devices and a flexible connection between the twisting devices and the reel-shafts whereby the latter will under certain conditions be vibrated upon the pivot points.

10. In a device of the class described, a support two horizontal shafts hinged at the center to the support at different levels, a wire-reel revolubly mounted upon either end of each shaft, a securing nut upon the outer end of each shaft, a spring interposed between the adjacent reel and the nut, a lever secured to each shaft adjacent to its pivot, a pulley on one lever and a ring on the other, a chain having wire-guide links passing over the pulley of one lever and through the ring of the other, a weight on the end of the chain and twisting mechanism connected with the other end of the chain.

11. In a device of the class described, a support, two horizontal shafts pivoted to the support at different levels, a wire-reel revolubly mounted upon either end of each shaft, a lever secured to each shaft adjacent to its pivot, a chain passing vertically through the ends of both levers, a weight on the lower end of the chain, and twisting mechanism connected with the other end of the chain.

12. In a device of the class described, a differential tension regulator comprising a rectangular frame, two sets of rollers, one set located at either end to receive and deliver two sets of wires each, and two regulating grooved wheels over the peripheries of which the wires run from the rollers at one end to the rollers at the other end each revolubly mounted upon a shaft pivotally secured at an end to the frame by suitable springs.

13. In a device of the class described, a differential tension regulator comprising a rectangular frame, two sets of rollers, one set located at either end to receive and deliver the wires, and two regulating grooved wheels over the peripheries of which the wires run each revolubly mounted upon a shaft supported in the frame between the other rollers in such manner as to be capable of movement in any direction when the wire tension of any one wire varies from that of the others.

14. In a device of the class described, a plurality of wire-reels arranged in double pairs, a differential tension regulating device for receiving the wire from each pair of reels, a twisting device to which the wires pass from each tension regulator, means for feeding bars to the wires, means for intermittently moving the finished web onward and drawing out the wire to be twisted, and means for rotating the twisters and tension regulators first in one direction and then in the other.

15. In a device of the class described, a plurality of wire-reels arranged in double pairs, a differential tension regulating device for receiving the wire from each pair of reels, a twisting device to which the wires pass from each tension regulator, means for feeding bars to the wires, means for intermittently moving the finished web onward and drawing out the wire to be twisted, and means for rotating the twisters and tension regulators.

16. In a device of the class described, a plurality of wire-reels arranged in double pairs, a differential tension regulating device for receiving the four wires from each double pair of reels, a twisting device to which the wires pass from each tension regulator, means for feeding bars to the wires, means for intermittently moving the finished web onward and drawing out the wire to be twisted, and means for rotating the twisters and tension regulators of adjacent double pairs of wire-reels simultaneously in different directions.

17. In a device of the class described, a plurality of wire-reels, divided into sets, means for varying the planes of rotation of the reels of each set, a differential tension regulating device for receiving the wires from each set of reels, a twisting device to which the wires pass from each tension regulator, means for feeding bars to the wires, and means for rotating the twisters and tension regulators first in one direction and then in the other.

870,902. IGNITION-PLUG FOR HYDROCARBON-MOTORS OR EXPLOSION-ENGINES. EDWARD J. PENNINGTON, New York, N. Y. Filed Aug. 7, 1907. Serial No. 387,390.

1. In an electric ignition plug, the combination of a positive and negative element each provided with threads, those on the positive element being right and those on the negative left handed, or vice versa, substantially as set forth.



2. In an electric ignition plug, the combination of positive and negative elements concentrically arranged as described, each provided with threads, those on the positive being right and those on the negative left handed, or vice versa, substantially as set forth.

3. An electric ignition plug having a combustion chamber, combined with reversely threaded positive and negative elements concentrically arranged as described, said combustion chamber having inlets and outlets of aggregate area less than that of the chamber itself, substantially as set forth.

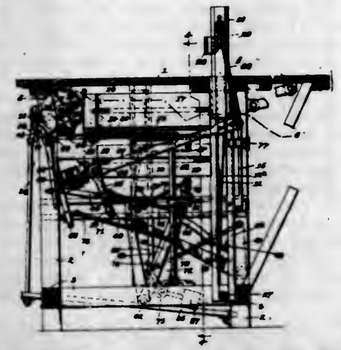
4. An electric ignition plug having a series of combustion chambers provided with holes for the egress of gases and exploded mixture having an area aggregating less than that of the combustion chambers, combined with reversely threaded positive and negative elements concentrically arranged, substantially as set forth.

5. In an electric ignition plug having a series of combustion chambers, reversely threaded positive and negative elements, said combustion chambers having holes for the egress of gases and exploded mixture of an area aggregating less than that of said combustion chambers, substantially as set forth.

6. In an electric ignition plug, a main casting or frame, an insulating body forming a combustion chamber between said casting and body, and reversely threaded positive and negative elements concentrically arranged, a gap being formed betwen the said elements, substantially as set forth.

7. In an electric ignition plug, a main casting or frame adapted to be screwed into the cylinder, an insulating body forming a combustion chamber between said casting and body, reversely threaded positive and negative elements concentrically arranged so as to form a gap between the said elements, and baffle plate inclosing the end of said casting, the said combustion chamber being provided with openings leading to the cylinder, substantially as set forth.

870,903. PAPER-FOLDING MACHINE. CHARLES L. RICE, Chippewa county, Minn. Filed June 10, 1907. Serial No. 378,230.



1. In a folding machine, the combination of a fixed wall forming one member of a folding slot; a flexible apron arranged adjacent thereto; means for placing said apron under a yielding tension; and a folding-blade adapted to work between the wall and the apron.

2. In a machine for folding papers, the combination of a fixed wall; an apron secured adjacent to one end thereof, said apron extending alongside of the wall; means for maintaining the apron in a stretched condition; and a folding-blade passing down between the apron and the wall.

3. In a machine for folding papers, the combination of a fixed wall; an apron secured adjacent to one end of said wall and extending alongside of one face thereof; a spring serving to keep said apron taut; and a folding-blade adapted to work between said fixed wall and the apron.

4. In a machine for folding papers, the combination of a fixed wall; an apron having one end secured adjacent to one end of the wall; a fixed support arranged adjacent to the other end of the wall and over which the apron is drawn; means for placing said apron under tension; and a folding-blade adapted to pass between the apron and the fixed wall.

5. In a machine for folding papers, the combination of a fixed wall provided with a slot or opening therein for the passage of a folder transversely to the wall; a pair of aprons arranged adjacent to the face of the wall upon opposite sides of the slot or opening therein; means for placing said aprons under tension; a folder adapted to pass down between said aprons and the wall; and a second folder adapted to pass at right angles to the path of movement of the first folder and to carry each folded paper through the slot in the wall.

6. In a machine for folding papers and the like, the combination of a fixed member provided with a slot or opening therein; a pair of aprons lying adjacent to one face of said fixed member and upon opposite sides of the slot therein; a folder-blade adapted to pass in between said aprons and the fixed member; a second folder-blade adapted to pass through the slot in the fixed member; and a receiver for the folded papers located beneath the slot and in the path of movement of the second folder-blade.

7. In a machine for folding papers, the combination of folding mechanism; and a receiver for the folded papers, said receiver comprising a swinging member carrying an abutment plate, a pair of curved arms extending outwardly therefrom, means for holding said member toward the folding mechanism, and a push-plate adapted to transfer the folded paper from the position in which it was left by the folder against the abutment-plate or the previously-folded, transferred paper.

8. In a machine for folding papers, the combination of folding mechanism; an open frame arranged adjacent to the folding mechanism and against which the folded paper is deposited, the opening in the frame being slightly less than the dimensions of the folded paper; a swinging frame arranged adjacent to the open frame; means for urging the swinging frame toward the open frame; supporting members carried by the swinging frame; and a push-plate adapted to force the folded papers through the opening in the fixed frame and onto the supporting members carried by the swinging frame.

9. In a machine for folding papers, the combination of folding mechanism; a fixed frame arranged adjacent to the folding mechanism against which the folded paper is adapted to be deposited, said fixed frame having an opening therein of a size slightly less than that of the folded paper; a swinging frame; means for urging said swinging frame toward the fixed frame; a pair of curved arms extending outwardly from the swinging frame beneath the fixed frame; and a push-plate adapted to be projected against the folded paper and to carry the same through the opening in the fixed frame and onto the arms carried by the swinging frame.

10. In a machine for folding papers, the combination of folding mechanism; a fixed frame arranged adjacent thereto, said frame being provided with an opening slightly less in size than the folded paper; a swinging frame arranged in rear of the fixed frame; a pair of curved arms extending outwardly from the swinging frame at a point immediately below the fixed frame; a series of pick-up weights connected to the swinging frame; a push-plate adapted to force the papers through the opening in the fixed frame, and to deposit them upon the arms of the swinging frame; and means for periodically operating said push-plate.

11. In a machine for folding paper, the combination of a bed; a supporting column passing through an opening

formed therein; a bolt secured to the lower end of said column; means for securing longitudinal adustment of the bolt, whereby the inclination of the column may be varied; a slide mounted within the column; and a folder-blade carried by the slide.

12. In a machine for folding papers, the combination of a main operating shaft; a pair of winged cams carried thereby; a folding-blade adapted to form the first fold in a paper; another folding-blade adapted to form the third fold in the paper; a push-plate; connections intermediate said parts and one of the cams for operating said members in unison and positively in both directions; a folder-blade for forming the second fold in the paper; a fourth folder-blade for forming the fourth fold in the paper; connections intermediate said parts and the second cam, for operating said blades in unison and positively in both directions; and a receiver or stacker for the folded papers, into which the papers are projected by the push-plate.

13. In a machine for folding papers, the combination of a suitable bed or frame for supporting the parts; a main operating shaft provided with a pair of cams; a blade for forming the first fold in a paper; a blade for forming the third fold in the paper; a push-plate; connections intermediate said parts and one of the cams for moving said parts in unison; a blade for forming the second fold in the paper; a blade for forming the fourth fold in the paper; connections intermediate said parts and the second cam for operating the parts in unison and while the first and third folding-blades and the push-plate are at rest and in their retracted positions; a swinging frame arranged to one side of the path of travel of the fourth folding-blade and adapted to receive the papers moved thereon by the push-plate; and means for counterbalancing said frame as it is swung outwardly by the increasing number of folded papers deposited thereon.

14. In a machine for folding papers, the combination of folding mechanism; a member located adjacent thereto, said member having an opening therein of a size slightly less than that of the folded paper; a movable abutment or holder for the folded papers; a push-plate adapted to force the folded papers through the opening and onto the holder; and a series of pick-up weights connected to the movable abutment and serving as the load upon the abutment increases to be successively brought into action and to thereby substantially counterbalance the abutment.

15. In a folding machine, the combination of a fixed member forming one wall of a folding slot; a flexible apron arranged adjacent to said member and forming the opposite wall of the folding slot; means for maintaining said apron under tension; a folding blade adapted to work between the fixed member and the apron; and a roughened surface located adjacent to the lower portion of the fixed member and serving to hold the folded paper as the blade is withdrawn from between the folds of the paper, substantially as described.

16. In a folding machine, the combination of a fixed member forming one wall of a folding slot; a flexible apron standing adjacent to said member and substantially coextensive therewith, said apron forming the opposite wall of the folding slot; and yielding means for normally holding said apron in a stretched condition.

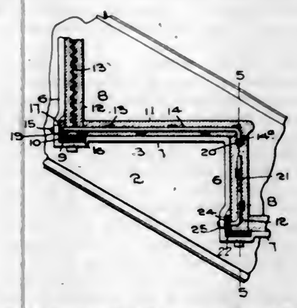
17. In a folding machine, the combination of a fixed member forming one wall of a folding slot, said member being provided with a slot or opening; a pair of flexible aprons standing adjacent to the fixed member upon opposite sides of the slot, each of said aprons being substantially coextensive with that portion of the fixed member with which it coacts; a folder for carrying the paper between said fixed member and the aprons; and a second folder acting to force the folded paper through the opening and to form a second fold therein.

870,904. PICKER-STAFF FOR WEAVING-LOOMS. ABEL ROSSIGNOL, Voiron, France. Filed Feb. 2, 1906. Serial No. 299,148.

A loom picker-staff consisting of a bar of wood of suitable strength, weight and thickness, slotted longitudinally and having leather inserted and fastened in the slots for the purpose set forth.



870,905. STAIR CONSTRUCTION. EDWARD E. SCHACHNER, Denver, Colo. Filed May 14, 1907. Serial No. 373,588.



1. In a stair structure the combination with suitable supporting means of steps formed of treads and risers composed of molded plastic substance and fastening means fixed therein by embedment and arranged to detachably secure them to each other.

2. In a stair structure the combination with suitable supporting means of steps formed of treads and risers composed of molded plastic substance and fastening means fixed therein by embedment and arranged to detachably secure them to each other and to the said supporting means.

3. In a stair structure the combination with suitable supporting means of steps formed of treads and risers each composed of molded plastic substance, reinforced by embedded metallic sheets and rods interwoven with the latter, adapted to secure the said treads and risers to each other and to the said supporting means.

4. In a stair structure the combination with suitable supporting means, of steps formed of treads and risers each composed of molded plastic substance, the said treads having rods fixed therein by embedment whose protruding extremities are adapted to detachably secure each tread to the adjoining risers and the steps to the supporting means.

5. In a stair structure, the combination with suitable supporting means of steps formed of treads and risers each composed of molded plastic substance, the said treads having rods fixed therein by embedment one of whose extremities are arranged to project through registering apertures in the adjoining riser and the supporting means, while their opposite ends being bent in angular relation to the main body, protrude below the lower surface of the tread and project into corresponding bores in the subjacent risers.

6. In a stair structure, the combination with suitable supporting means, of steps formed of treads and risers each composed of molded plastic substance, the said treads having rods fixed therein by embedment one of whose extremities protrude beyond the lower surface of the treads and are arranged to coöperate with means on the subjacent riser to detachably secure the treads and risers to each other.

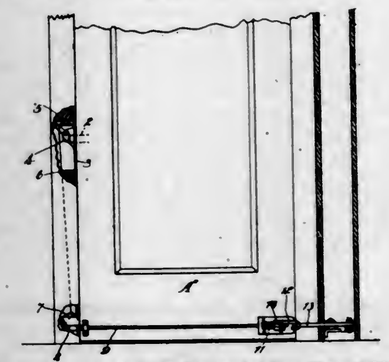
7. In a stair structure the combination with parallel stringers connected by transverse supports, of treads and risers composed of molded plastic substance, upon the said supports, the said treads having metallic rods fixed therein by embedment one extremity of which extends through apertures in the adjoining superposed riser and the adjacent support and are secured by nuts screwed thereon, while their opposite ends project beyond the lower surface of the said treads and are connected with the respective subjacent risers.

8. In a stair structure the combination with suitable supporting means, of steps formed of treads and risers each composed of molded plastic substance, the said treads having rods fixed therein by embedment and protruding beyond their lower surface and the said risers having means to connectedly engage the said protruding parts.

9. In a stair structure, the combination with suitable supporting means of steps formed of treads and risers each composed of molded plastic substance, the said treads having rods, fixed therein by embedment and protruding beyond the lower surface and the said risers having bores arranged to admit the protruding parts.

10. In a stair structure, the combination with suitable supporting means, of steps formed of treads and risers each composed of molded plastic substance, the said treads having rods fixed therein by embedment and protruding beyond their lower surface and the said risers having upon their upper ends means to connectedly engage the said protruding parts, and means securing their opposite ends to the supporting means.

870,906. DOOR-MANIPULATOR. FRANZ SCHMITZ, San Francisco, Cal. Filed July 1, 1907. Serial No. 381,656.



1. In a door manipulating mechanism, the combination with a door having a spring-latch, a cam-lever fulcrumed in line with said latch, means for holding the lever out of normal engagement with the latch, a cord connected to the lever, a bell-crank lever disposed near the lower end of the door, said cord being connected to one arm of the bell-crank lever, a push-bar horizontally disposed and connected to the other arm of the bell-crank lever, and having its outer or free end disposed near the line of the door opposite to the hinge side of the latter, a rod slidably mounted on the lower part of the door in line with the outer end of the push-bar, and a bell-crank lever and operating connections by which the rod is caused to engage the bar and retract the latch.

2. In a door manipulating mechanism, the combination with the spring latch thereof of a spring pressed latch retracting cam, and a bell-crank lever with which the cam is connected within the door-casing, a push bar connected with the opposite end of the bell-crank lever, a rod slidable transversely on the door and in line with the bar, a lever fulcrumed to the door and engaging the end of the rod, a second lever fulcrumed in the wall, a link connecting the two levers, an operating crank arm at a distant point, and cords and intermediate connections whereby the levers are moved to disengage the latch and open the door.

3. In a door manipulating apparatus, a latch retracting cam lever, a bell-crank lever with which it is connected within the door-casing, a slide connecting with the other arm of the bell-crank lever, a spring retracted slidable rod movable transversely on the lower part of the door, a fulcrumed lever engaging the end of the rod, a horizontally fulcrumed lever within the wall having one arm projecting, and a link connecting said arm with the rod actuating lever, a vertically fulcrumed lever, and a link connecting said lever with the horizontal lever, a crank lever located at the distant point, and cords connecting with opposite ends of the vertically fulcrumed lever.

4. The combination with a hinged door and a frame to which said door is hinged, of guides on the door, a horizontal rod slidable in said guides said rod having one end terminating near the line of the door, opposite to the hinged side thereof, a horizontally slidable member on the door frame having an outer free end disposed in line with the adjacent end of said rod, complementary bell-crank mechanism for actuating the slidable rod whereby the adjacent ends of the rod and member are brought into direct contact and the member is longitudinally moved, a slidable latch for the door and an actuating cam-lever therefor, and a bell-crank mechanism and connections between the slidable member and the latch-operating cam lever.

870,907. BUTTON. EDGAR SHANTZ, Rochester, N. Y. Filed Mar. 3, 1904. Serial No. 196,270.



1. As a new article of manufacture, a button comprising a button-head formed of pearl or other fragile substance, and having a socket opening in its rear face and increasing inwardly in size, and a metallic shank having one end cast within said socket, substantially as and for the purpose described.

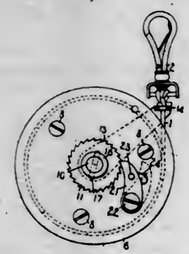
2. As a new article of manufacture, a button comprising a button-head formed of pearl or other fragile substance, and having a socket opening in its rear face and increasing inwardly in size, and a metallic shank composed of metal cast under pressure, said shank having one end cast within the socket, substantially as and for the purpose specified.

3. In combination, a button-head formed of pearl or other fragile substance, and having a socket opening in its rear face, and a metallic stem having one end cast within the socket and having the portion thereof projecting beyond the rear face of the head formed of greater size than the finished button-shank to be produced therefrom, substantially as and for the purpose set forth.

870,908. ATTACHMENT FOR AUTOMOBILES. ZALMON G. SHOLES, New York, N. Y. Filed Dec. 14, 1906. Serial No. 347,765.

1. In an attachment for automobiles the combination of a flexible stay including a device for connecting the stay at one end with the top of an automobile, the length of the stay adapting it to extend from said top forward and downward to the framework of the automobile, a drum to which the stay is secured at its other end, a support on which the drum is mounted, said support including a part formed to fit on and be made fast to said framework, a spring tending to turn the drum and to wind the stay on the drum, and means operative on the drum and

coöperative with said support and framework to prevent the drum from being turned by the action of the top on the stay when the attachment is in use.



2. In an attachment for automobiles the combination of a flexible stay including a device for connecting the stay at one end with the top of an automobile, the length of the stay adapting it to extend from said top forward and downward to the framework of the automobile, a drum to which the stay is secured at its other end, an axle on which the drum is mounted, said axle being formed at one end to fit on and be made fast to said framework, a spring tending to turn the drum and to wind the stay on the drum, and means operative on the drum and cooperative with said axle and framework to prevent the drum from being turned by the action of the top on the stay when the attachment is in use, said means including a device on the outer end of the axle and a complementary device on the adjacent head of the drum.

3. In an attachment for automobiles, the combination of a flexible stay, a drum to which the stay is secured at one end, an axle on which the drum is mounted, a disk fast on said axle, a detent mounted on the drum and cooperative with different parts of said disk to prevent the drum from being turned by the stay, and means operative to retain the stay properly coiled on the drum when the stay is not in use.

4. In an attachment for automobiles, the combination of a flexible stay, a drum to which the stay is secured at one end, an axle on which the drum is mounted, a spring tending to rotate the drum and to wind the stay on the drum, a disk fast on said axle and having teeth, a detent mounted on the drum and coöperative with said disk to prevent the drum from being turned by the stay when the detent is engaged with any of the teeth of said disk, and means operative to limit the rotation of the drum by the spring.

5. In an attachment for automobiles, the combination of a flexible stay, a drum to which the stay is secured at one end, an axle on which the drum is mounted, a disk fast on said axle, a detent mounted on the drum and cooperative with different parts of said disk to prevent the drum from being turned by the stay, the detent being movable to an inoperative position, means for holding the detent in said position, and means operative to retain the stay properly coiled on the drum when the stay is not in use.

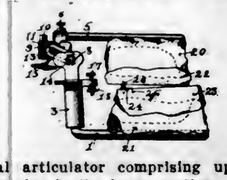
6. In an attachment for automobiles, the combination of a flexible stay, a drum to which the stay is secured at at one end, an axle on which the drum is mounted, a spring tending to rotate the drum and to wind the stay on the drum, a disk fast on said axle, a detent mounted on the drum and coöperative with different parts of said disk to prevent the drum from being turned by the stay, the detent being movable to an inoperative position, means for holding the detent in said position, and means operative to limit the rotation of the drum by the spring.

7. In an attachment for automobiles, the combination of a flexible stay, a drum to which the stay is secured at one end, an axle on which the drum is mounted, a guide through which the stay passes, said guide being fast on the axle, a spring tending to rotate the drum and to wind the stay on the drum, a toothed disk fast on said axle, and a detent mounted on the drum and coöperative with each tooth of said disk to prevent the drum from being turned by the stay.

8. In an attachment for automobiles, the combination of a flexible stay, a drum to which the stay is secured at one end, an axle on which the drum is mounted, a guide through which the stay passes, said guide being fast on the axle, a spring tending to rotate the drum and to wind the stay on the drum, a toothed disk fast on the axle, a detent mounted on the drum and coöperative with each tooth of said disk to prevent the drum from being turned by the stay, said detent being movable to an inoperative position, and means for holding the detent in said position.

9. In combination with the top of an automobile, an attachment comprising a drum, a flexible stay secured at one end to the drum, a spring tending to wind the stay on the drum, and means to prevent the drum from being turned by the stay when the attachment is in use, the drum being mounted on a part of the framework of the automobile, and the top and stay being provided with holding-devices adapted to be engaged with and disengaged from one another.

870,909. DENTAL ARTICULATOR. GEORGE B. SNOW, Buffalo, N. Y. Filed Aug. 8, 1906. Serial No. 329,691.



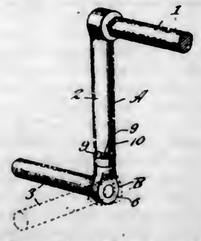
1. A dental articulator comprising upper and lower sections, joint pins in the lower section, slotted links interposed between the two sections to complete the joints, and gripping sockets in the upper section into which said links are journaled.

2. In a dental articulator, the combination with two sections jointed together by means of slotted connections, of a spring having both ends fixed in sockets axial with the joints of one of said sections and detachably secured at an intermediate point to the other of said sections.

3. A gage pin for ascertaining the inclination of the condyle path, having projections above and below adapted to penetrate the articulating surfaces of the upper and lower trial plates.

4. The combination with a dental articulator comprising upper and lower sections, joint pins in the lower section, slotted links interposed between the two sections to complete the joints, gripping sockets in the upper section into which said links are journaled of a gage pin for measuring the amount of condyle displacement consisting of a thin body to be attached to the wax rim of one trial plate and a spur adapted to penetrate the surface of the opposing trial plate.

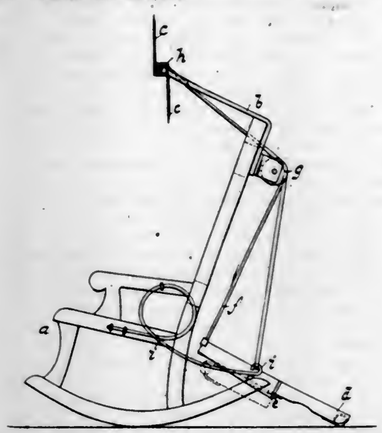
870,910. HANDLE. WILLIAM SPLITTGERBER, Wayne, Nebr. Filed Mar. 8, 1907. Serial No. 361,321.



1. The combination of a crank arm composed of sections, one section being provided with a socket, the wall of the socket having a quadrant slot and an aperture spaced therefrom, and the other section being provided with a shank having tapped openings adapted to register one with the slot and the other with the aperture, and fastening means adapted to be received in the openings of the shank and the slot and aperture of the socket for loosely or rigidly connecting the sections together.

2. The combination of a crank arm composed of two sections, one section being provided with a quadrant slot and with an aperture spaced from the slot, the other section having a shank provided with tapped openings adapted to register one with the slot and the other with the aperture, an interchangeable fastening adapted to extend through the slot and enter the opening of the shank registering therewith or to engage in the other opening and aperture, and a handle secured to one of the sections.

870,911. FAN ATTACHMENT FOR ROCKING-CHAIRS. DAVID J. STEIN, Butzbach, Germany. Filed Feb. 27, 1907. Serial No. 359,619.

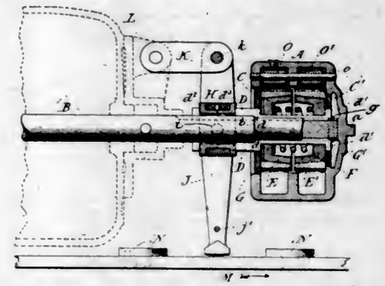


A combined rocker and fan, a shaft for the fan, cords or connections oppositely wound about the shaft, a spring connected to one of the cords and an actuating lever connected to the other cord, said lever having an arm pivoted to the rear end of the main part of the lever, said pivoted arm being adapted to be swung backward into line with the lever so as to rest on the floor back of the chair and to be folded forward under the main part of the lever to be out of action, said lever being located back of the chair and mounted on a shaft on the rear portions of the runners of said chair, so that the fan will be rotated upon the backward movement of the chair by the lever and upon the forward movement by the spring.

870,912. MECHANICAL CLUTCH. JOHN D. TAYLOR, Edgewood Park, Pa., assignor to The Union Switch and Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Dec. 5, 1906. Serial No. 346,395.

1. In a clutch mechanism, the combination of a rotatable casing, a shaft extending into said casing, a pair of oppositely arranged cones connected to said shaft to turn therewith, a pair of circular ratchets having conical bores to receive the respective cones and ratchet teeth on their peripheries, the teeth of one ratchet being oppositely disposed to those of the other ratchet, oppositely disposed pawls carried by the casing and engaging the respective ratchet teeth, means for normally holding both cones in engagement with the ratchets, and means for moving either of said cones out of engagement with its ratchet.

2. In a clutch mechanism, the combination with two oppositely disposed cones, a shaft, keys mounted in key-ways in the shaft and cones and slidable therein, said keys having shoulders to engage the respective cones, a pair of circular ratchets having conical bores to receive the respective cones and having teeth on their peripheries, a spring interposed between the cones and normally forcing them into the bores of the ratchets, and means for moving the keys to disengage either cone from its ratchet.



3. In a clutch mechanism, the combination with two oppositely disposed cones, a shaft, keys mounted in key-ways, in the shaft and cones and slidable therein, said keys having shoulders to engage the respective cones, a pair of circular ratchets having conical bores to receive the respective cones and having teeth on their peripheries, a spring interposed between the cones and normally forcing them into the bores of the ratchets, means for preventing lateral movement of the ratchets under the influence of the spring, and means for moving the keys to disengage either cone from its ratchet.

4. In a clutch mechanism, the combination with two oppositely disposed cones, a shaft, keys mounted in key-ways in the shaft and cones and slidable therein, said keys having shoulders to engage the respective cones, a pair of circular ratchets having conical bores to receive the respective cones and having teeth on their peripheries, a spring interposed between the cones and normally forcing them into the bores of the ratchets, means for preventing lateral movement of the ratchets under the influence of the spring, means for adjusting the tension of the spring, and means for moving the keys to disengage either cone from its ratchet.

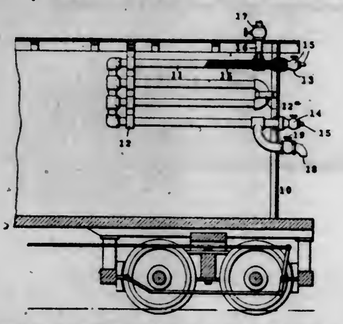
5. In a clutch mechanism, the combination with two oppositely disposed cones, a shaft, keys mounted in key-ways in the shaft and cones and slidable therein, said keys having shoulders to engage the respective cones, a pair of circular ratchets having teeth on their peripheries and circular bores to receive the respective cones, a spring normally forcing the cones into the bores of the ratchets, an endwise movable bar, separated dogs on said bar, a lever pivoted at one end to a fixed support and its other end extending in the path of movement of said dogs, and connections between the lever and the keys.

6. In a clutch mechanism, the combination with two oppositely disposed cones, a shaft, keys mounted in key-ways in the shaft and cones and slidable therein, said keys having shoulders to engage the respective cones, a pair of circular ratchets having teeth on their periphery and circular bores to receive the respective cones, a spring normally forcing the cones into the bores of the ratchets, an endwise movable bar, two dogs eccentrically pivoted on said bar with a space between them, means for adjusting said dogs to vary the space between them, a lever pivoted at one end to a fixed support and its other end extending in the path of movement of said dogs, and connections between the lever and the keys.

870,913. REFRIGERATING CARS. CHARLES C. TROWBRIDGE, New York, N. Y. Filed Aug. 3, 1906. Serial No. 328,981.

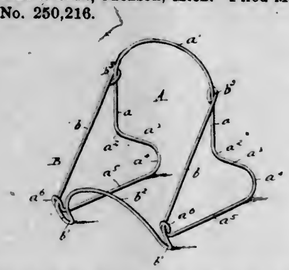
In combination with a chamber, a cooling device therefor comprising a coil closed at both ends, a smaller coil passing between the first named coil terminating exterior of the chamber at both ends, controlling valves arranged on the exterior portions of the smaller coil, a charge of cryohydrate in the space between the first named coil and

the smaller coil, an inlet pipe leading from the exterior of the casing and communicating with the first named coil, a valve for controlling said inlet pipe, an outlet pipe



communicating with the first named coil and terminating exterior of the chamber and a valve for controlling the outlet pipe.

870,914. DISPLAY-EASEL. JAMES E. TWITCHELL, Detroit, Mich., assignor, by mesne assignments, to J. B. Timberlake & Sons, Jackson, Mich. Filed Mar. 15, 1905. Serial No. 250,216.



1. A display easel having in combination two elements, each formed of a piece of suitably bent wire between which the article to be displayed is held, one being a base element and the other a rear element having a rest portion extending upward from the base element, each of the said elements being provided on each side with a movable connection uniting it with the other, whereby they are adjustable with reference to each other and are united by two connections on each side, the upward extending rest portion of the rear element being intermediate the two connections at each side and the rear element being formed with intermediate bends arranged to constitute stops or rests with which the connections of the other element therewith engage to hold the parts securely in desired positions, substantially as set forth.

2. A display easel having in combination two elements, each formed of a piece of suitably bent wire, one being a base element by which the lower edge of the article is supported, and the other a rear element against which the article rests, each of the said elements being formed with intermediate bends and each being provided on each side with a movable connection uniting it with the other, whereby the elements are adjustable with reference to each other and are united by two connections on each side, the said intermediate bends constituting rests with which the said connections engage to hold the elements securely in different positions of adjustment, substantially as set forth.

3. An easel comprising in combination two elements, each formed of a single piece of bent wire, one element constituting a front support for the article having parallel sides, and the other having parallel sides and an upward extending rest constituting a rear support for the article, the said parallel sides and upward extending rest of the rear element being arranged at an angle to each other, the ends of the parallel sides of the first element being looped about the sides of the upward extending rest of the second element and adjustable therealong, substantially as set forth.

4. An easel comprising in combination two elements, each formed of a single piece of bent wire, one element constituting a front support for the article having parallel sides, and the other having parallel sides and an upward extending rest constituting a rear support for the article, the said parallel sides and upward extending rest of the rear element being arranged at an angle to each other, the sides of the upward extending reat portion being formed with intermediate bends a^3, and the ends of the parallel sides of the first element being looped about the sides of the upward extending rest of the second element and adjustable therealong, substantially as set forth.

5. An easel comprising in combination two elements, each formed of a single piece of bent wire, one element constituting a front support for the article having parallel sides and provided with front table rests, and the other having parallel sides and an upward extending rest constituting a rear support for the article and being formed with rear table rests, the said parallel sides and upward extending rest of the rear element being arranged at an angle to each other, the ends of the parallel sides of the first element being looped about the sides of the upward extending rest of the second element and adjustable therealong, and there being stops or rests for holding the elements of the easel securely, with reference to each other, in the different positions to which they may be adjusted.

6. A display easel having in combination two elements A and B, each formed of a single piece of wire, and each having a side bar on each side of the easel, the element A being formed with rear table rests and the element B with front table rests, and the side bars of the elements on each side of the easel being united with each other by two sliding connections, one of said connections being carried by each bar, substantially as set forth.

7. A display easel having in combination two elements A and B, each formed of a single piece of wire, the element A having approximately vertical legs and approximately horizontal arms, and the element B having approximately horizontal arms with feet or table rests at their front ends, the arms of the element B having a sliding union with the approximately horizontal arms of the element A and also a sliding union with the approximately vertical arms of the element A.

8. A display easel having an element A in combination with an element B, the element A having vertical legs a connected together at the top, forward extending arms a^5, bends a^4, and eyes a^6, and the element B having side bars b connected together at their front ends, and passing through the eyes a^6, and having eyes b^3 fitted to the vertical legs of the element A, substantially as set forth.

9. A display easel having an element A in combination with an element B, the element A being formed with lower arms a^5, legs a connected together at the top, bends a^4, bars or arms a^3 between the bends a^4 and the legs a, and the element B being joined by two sliding connections to the element A, one uniting it to the lower arms a^5 and the other to the parts situated above the arms a^5, substantially as described.

10. A display easel having an element A and an element B, the element A having legs a, a connecting loop a', forwardly extending side bars a^5, and backwardly extending loops a^4, and the element B having side bars b connected together at the front and joined to the arms a^5 of the element A by a sliding connection, and also joined by a sliding connection to the parts of the element A situated above the arms a^5, substantially as set forth.

11. A display easel having in combination elements A and B, the element B having side bars b formed with table engaging feet or rests b', and a cross bar b^5 connecting the feet or rests and serving as a stop for the article on the easel, and the element A having approximately horizontal side parts a^3, and vertical parts a, a^2, the elements A and B being united by sliding connections two on each side, substantially as set forth.

12. In a display easel, the combination of a rear element formed of wire having an upwardly extending back support for the article to be displayed, comprising uprights which at their lower ends extend rearwardly and downwardly to form table rests and then extend forwardly, and a front element formed of wire having parallel side bars arranged at their rear ends to engage with the downward and rearward extending portions of the rear element.

13. In a display easel, the combination of a rear element formed of wire having an upwardly extending back support for the article to be displayed, comprising uprights which at their lower ends extend rearwardly and downwardly to form table rests and then extend forwardly, and a front element formed of wire having parallel side bars with which the forward extending parts of the rear element engage by a sliding connection, and arranged at their rear ends to engage with the downward and rearward extending portions of the rear element.

14. A display easel having two elements engaging adjustably with each other, each element having a connection-making device and a guide, the connection-making device of each element being adapted to engage with the other element at any point along the guide thereof, the elements being so shaped that in some positions of adjustment the line of direction of one guide at the point of engagement with one connection making-device is at an angle with the line of direction of the other guide at its point of engagement with the other connection-making device.

15. A display easel having two elements engaging adjustably with each other, each element having a connection-making device and a guide, the connection-making device of each element being adapted to engage with the other element at any point along the guide thereof, and the elements being so shaped that in some positions of adjustment the line of direction of one guide at the point of engagement with one connection-making device is at an angle with the line of direction of the other guide at its point of engagement with the other connection-making device, one of said elements being provided with means for fixing the union of the two elements in a position of adjustment.

16. A display easel having two elements engaging adjustably with each other, each element having a connection-making device and a guide, the connection-making device of each element being adapted to engage with the other element at any point along the guide thereof, the guide of one of the elements having at some point along its length a change of direction.

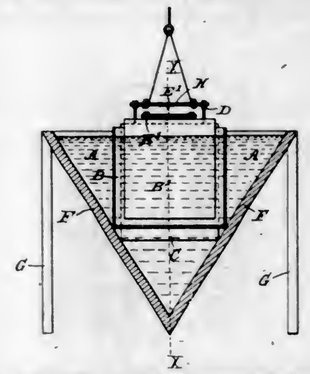
17. A display easel having two elements engaging adjustably with each other, each element having a connection-making device and a guide, the connection-making device of each element being adapted to engage with the other element at any point along the guide thereof one element being so shaped that a straight line from one end of its guide to its connection-making device is at an angle with the line of direction of the said guide at some point therealong.

870,915. PROCESS OF MANUFACTURING ARSENIC COMPOUNDS OF LEAD. CORNELIUS D. VREELAND, Montclair, N. J. Filed Feb. 5, 1906. Serial No. 299,434.

1. The process of manufacturing arsenic compounds of lead which consists of the formation of a soluble salt of lead by electrolysis in the presence of a soluble compound of arsenic and the simultaneous precipitation of the lead thereby as an arsenic compound of lead.

2. The process of manufacturing arsenic compounds of lead which consists in placing a body of metallic lead in a solution of an electrolyte which under the influence of the electric current will separate into a solvent of lead at the anode and dissolve the lead therefrom, and in precipitating the lead thus brought into solution with a soluble compound of arsenic.

3. The process of manufacturing arsenic compounds of lead which consists in immersing a suitable cathode in a solution of an alkaline hydroxid contained within a porous receptacle, immersing said porous receptacle in a vessel containing a solution of an electrolyte which under the influence of the electric current will separate into a solvent of lead, immersing in said electrolyte an anode consisting of a body of lead or of a compound thereof, passing an electric current through the circuit, and introducing into the anode compartment a soluble compound of arsenic.



4. The electrolytic process of manufacturing arsenic salts of lead which consists in immersing the cathode in a solution of an alkaline hydroxid contained in a porous receptacle, immersing said porous receptacle in a vessel containing an anode of lead or of a compound thereof and an electrolyte which under the influence of the electric current will separate into a solvent of lead, and introducing into said anode compartment a solution of a compound of arsenic.

5. The process of manufacturing arsenic compounds of lead which consists in immersing a mass of iron in a solution of an alkaline hydroxid contained in a porous receptacle, immersing said porous receptacle in an electrolyte which when subjected to an electric current will produce a solvent of lead, immersing in the electrolyte a mass containing lead, connecting the mass of lead or compound of lead to the positive pole of a source of electrical energy, connecting the mass of iron to the negative pole, and precipitating the dissolved lead by means of a soluble compound of arsenic.

6. The process of manufacturing arsenic compounds of lead which consists in immersing a cathode of iron in a solution of an alkaline hydroxid contained in a porous receptacle, immersing said porous receptacle in a vessel containing an anode of lead and a solution of a salt which when electrolyzed will produce a solvent of lead, passing a current of electricity through the circuit and precipitating the lead salt thus formed by means of a soluble compound of arsenic.

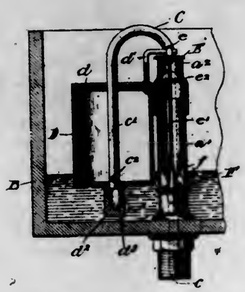
7. The process of manufacturing arsenic compounds of lead which consists in immersing a cathode of iron in a solution of an alkaline hydroxid contained in a porous receptacle, immersing said porous receptacle in a vessel containing an anode of lead and an electrolyte which under the influence of the current will separate into a solvent of lead, passing a current of electricity through the circuit, and precipitating the lead salt thus formed by means of a soluble salt of arsenic.

8. The process of manufacturing arsenic compounds of lead which consists in immersing a cathode of iron in a solution of an alkaline hydroxid contained in a porous receptacle, immersing said porous receptacle in a vessel containing an anode of lead and a solution of a salt which when electrolyzed will produce a solvent of lead, passing a current of electricity through the circuit, and precipitating the lead salt thus formed by means of a soluble salt of arsenic.

870,916. AUTOMATIC FLUSHING-VALVE. EARL G. WATROUS, Chicago, Ill. Filed Aug. 9, 1901. Serial No. 71,544.

1. An automatic flushing device comprising, in combination with a tank, a main siphon therein for discharging

water from the tank, a valve adapted to govern the inlet or shorter leg of the siphon, an open top can or float governing said valve and adapted to be filled with water when the water in the tank reaches a predetermined level, and a second siphon which is stationary and coöperates with the main siphon and such can for draining the latter of water after it has opened the valve; substantially as described.



2. An automatic flushing device comprising, in combination with a tank, a siphon therein for discharging the water from the tank and having an overflow opening, a valve for said opening, a valve adapted to close communication between the tank and siphon when the tank is filling with water and a float device for operating said valve opening one valve when closing the other; substantially as described.

3. An automatic flushing device comprising, in combination with a tank, a main siphon with its shorter leg openable into a tank and adapted to automatically and periodically discharge water therefrom, a valve arranged to control said leg of the siphon, a can or float connected to and adapted to control said valve, into which can water flows after the movement of such can is arrested by the closing of the valve, and means for emptying the can after the valve has been opened comprising a second fixed siphon connected to the main siphon and unconnected to but coöperating with said can, which is movable relatively to such second siphon; substantially as described.

4. An automatic flushing device comprising, in combination with a tank, a main siphon therein for discharging the water therefrom, a valve controlling communication between the siphon and tank, and a can open at its top and operatively connected to said valve, a second siphon fixed to and communicating with the main siphon and depending in such can for emptying the same, such can having a relative movement with respect to such second siphon and being guided thereby, whereby when the can becomes submerged and descends owing to flow of water therein after a predetermined water level is reached in the tank, the valve is opened and the water in the tank is discharged by action of the main siphon and the water in the can is discharged by action of the second siphon; substantially as described.

5. An automatic flushing device comprising, in combination with a tank, a main stationary siphon arranged therein, a valve controlling communication between the tank and siphon, a can or float operatively connected to said valve, and a second siphon connected to and communicating with the long leg of the main siphon, such second siphon communicating with such can for draining it of water after a flushing operation; substantially as described.

6. An automatic flushing device comprising, in combination with a tank, a siphon therein, a valve controlling communication between the tank and siphon, a can or float connected to said valve for operating it, and a second siphon on whose shorter leg the can is guided in its movement and which serves to drain the can after each flushing operation; substantially as described.

7. An automatic flushing device comprising, in combination with a tank, a siphon therein, a valve controlling communication between the tank and siphon, a can or float connected to said valve for operating it, a second siphon whose shorter leg depends into said can, and a socket depending from the bottom of the can and adapted to receive the lower end of said siphon leg as the can rises; substantially as described.

8. An automatic flushing device comprising, in combination with a tank, a siphon arranged therein, a valve controlling communication between the tank and siphon, a can or float arranged adjacent to and at one side of the siphon and having a lateral arm, a connection between the arm and valve extending longitudinally through the siphon, means independent of the siphon for guiding the can, and a second siphon coöperating with the can whereby the latter is drained after being filled with water at the flushing operation, said last named siphon being controlled by the movements of the can; substantially as described.

9. An automatic flushing device comprising, in combination with a tank, a siphon therein, a valve controlling communication between the tank and siphon, a can or float having a bottom opening and also having a socket registering with said bottom opening, an operative connection between the can and valve, and a second siphon having its shorter leg extending into the can and entering said socket; substantially as described.

10. An automatic flushing device comprising, in combination with a tank, a siphon therein, a valve controlling communication between the tank and siphon, a can or float open at its upper end and having a bottom opening, a bridge arranged across such open upper end of the can and provided with a guide opening or hole, a depending socket registering with such bottom opening, and a second siphon whose shorter leg is received by said guide opening and socket; substantially as described.

11. An automatic flushing device comprising, in combination with a tank, a siphon for discharging water therefrom, a second siphon in the tank communicating with the first siphon above its point of inlet, and a can or float into which the second siphon extends and which controls both of said siphons, said siphons being stationary and the can movable; substantially as described.

12. An automatic flushing device comprising, in combination with a tank, a main siphon for discharging water therefrom, a second siphon stationarily arranged in the tank and communicating with the main siphon, a can or float into which the second siphon extends and which governs its lower end, and an overflow device formed in the main siphon and controlled by said can; substantially as described.

13. An automatic flushing device comprising, in combination with a tank, a main siphon for discharging water therefrom and provided with an overflow opening, a can or float, a second siphon stationarily arranged within the tank for draining the can, and valves operatively connected with each other and with the can for governing respectively the overflow opening and the main siphon; substantially as described.

14. An automatic flushing device comprising, in combination with a tank, a siphon with its shorter leg in the tank, and provided with an overflow opening at the top end of such leg, a siphon valve controlling said leg of the siphon, an overflow valve controlling said overflow opening, a can or float operatively connected to said valve and over whose top the water flows after its movement is arrested by the closing of the siphon valve, and a second siphon stationarily arranged in the tank and coöperating between the first siphon and the can for draining the latter after it has operated said valves, said second siphon being controlled in its opening and closing by the can in its movements.

15. An automatic flushing device comprising, in combination with a tank, a siphon for discharging the water from the tank, a siphon-valve governing the siphon leg within the tank, and a second siphon stationarily arranged in the tank and connected with said first named siphon, and means for controlling said valve, comprising a can opening at its outer end and operatively connected with the siphon valve, said second siphon extending into the can and controlled by the latter in its movement.

16. An automatic flushing device comprising, in combination with a tank, a siphon having one leg within the tank and provided with an overflow opening at the top end of such leg, a siphon valve controlling said leg, an overflow valve controlling said opening, a connection between the valves so that when one is open the other is closed, and an open can or float operatively connected to said valves and over whose top the water flows after its movement is arrested by the closing of the siphon valve; substantially as described.

17. The combination of the tank B, large siphon A, small siphon C having its longer leg extending through and fixed in the long leg of the siphon A, the can D into which the short leg of the siphon depends, and the valve F moving vertically with the can D and independently of the small siphon and seating against the lower end of the short leg of the siphon A; substantially as described.

18. The combination of the tank B, large siphon A, small siphon C having its long leg extending through and fixed in the long leg of the siphon A, the can D guided upon and receiving the short leg of the siphon C, and the valve F carried by the can D and seating against the lower end of the short leg of the siphon A; substantially as described.

19. The combination of the tank B, the large siphon A, the small siphon C having its long leg extending through and fixed in the long leg of the siphon A, the can guided upon and receiving the short leg of the siphon C and provided with the depending socket d^3 to accommodate the lower end of said leg of the siphon C, an arm d' on the can, a connecting rod e' between said arm and a valve F coöperating with the lower end of the short leg of the siphon A; substantially as described.

20. The combination of the tank B, large siphon A, small siphon C having its long leg extending through and fixed in the long leg of the siphon A, the can D into which the short leg of the siphon C depends, and the valve F carried by the can D and coöperating with the lower end of the short leg of the siphon A and provided with the guide wings f fitting therein; substantially as described.

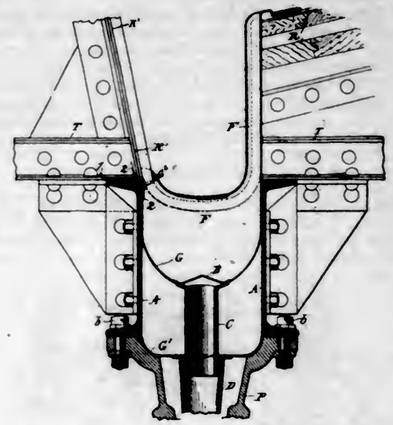
21. In combination with a tank, a siphon A having its long leg a extending through the tank and its short leg a' communicating with the tank, a second siphon C having its long leg c entering the leg a of siphon A, and having a hole c^2 near the end of its short leg, an open ended can or float D having a bridge d provided with an opening and also having a bottom opening and a socket d^3 registering with said bottom opening, an arm d' on the can, a connecting rod e' operated by said arm, and a valve F carried by said rod and adapted to be seated on the open end of the leg a' of the siphon A, said can being adapted to move up and down on the leg c' of the siphon C and operate valve F and also to control said hole c^2; substantially as described.

22. In combination with a tank, a siphon A having its long leg a extending through the tank and its short leg a' communicating with the tank and provided with an overflow opening a^2, a valve E controlling the said opening, a valve F controlling said short leg, a connecting rod e' extending through such short leg and secured to both said valves, and a can or float D having an arm d' connected to said valve E; substantially as described.

870,917. FACTORY BUILDING. EDWARD WESTON, Newark, N. J. Filed Nov. 2, 1901. Serial No. 81,201.

1. A building of the "saw-tooth" type provided with roof-gutters located in the valleys between the roof sections; and supplemental gutters located beneath said roof-gutters; in combination with means located beneath the lower edges of the illuminating areas for conveying the condensed moisture from the inside of such areas to the gutters, substantially as described.

2. A building of the "saw-tooth" type provided with roof-gutters located in the valleys between the roof sections; in combination with supplemental gutters located beneath said roof-gutters, and means for conveying the condensed moisture from the inner surfaces of the illuminating areas into the roof-gutters; together with hollow pillars or posts for conveying all of the water from said gutters to drainage pipes in the body of the building, substantially as described.



3. A building of the "saw tooth" type having the roof thereof supported by hollow pillars or posts; in combination with roof-gutters constructed in sections with their ends overlapping, said gutters being sustained between channel irons sustained at their opposite ends upon the hollow pillars or posts and with their lower surfaces all in a common plane, the arrangement being such that each section of the roof is provided with means for draining it and so proportioned as to effectually drain it at all times, substantially as described.

4. A building of the "saw-tooth" type having the roof-trusses thereof supported on parallel channel irons or beams sustained at their ends by hollow pillars or posts; in combination with sectional roof-gutters supported between the inner faces of said channel irons and provided with nozzles or openings for discharging the water into the hollow pillars; together with drainage pipes into which the hollow pillars discharge such water, substantially as described.

5. A building of the "saw tooth" type having the roof trusses thereof supported on channel irons or beams carried by hollow pillars or posts; in combination with sectional roof-gutters and supplemental gutters supported also by the channel irons or beams and adapted to receive any over-flow or drip from the roof-gutters, substantially as described.

6. A building of the "saw tooth" type having the roof thereof supported upon channel irons or beams carried by hollow pillars or posts; in combination with sectional roof-gutters and supplemental gutters also supported by the channel irons or beams and adapted to receive any over-flow or drip from the roof-gutters, said supplemental gutters being located wholly within the building, substantially as described.

7. A building having the roof-trusses thereof supported on parallel channel irons or beams sustained at their ends by hollow pillars or posts; in combination with roof-gutters supported between the inner faces of said channel irons; together with drip-gutters, one for each roof-gutter, supported by the lower flanges of said channel irons, both of said sets of gutters being provided with nozzles or openings adapted to discharge the collected water directly into the hollow pillars or posts, substantially as described.

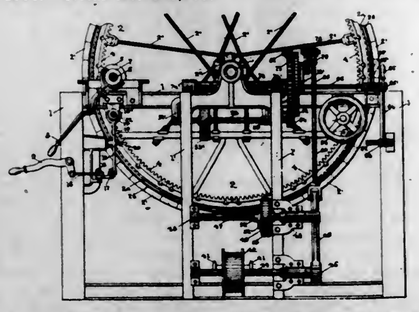
8. A building having hollow supporting pillars and a series of duplex channel irons secured to the upper ends thereof; together with roof-trusses sustained upon the upper surfaces of the channel irons, and gutters secured between the inner faces thereof, substantially as described.

9. A building having hollow supporting pillars and a series of duplex channel irons secured to the upper ends

thereof; together with roof-trusses sustained upon the upper surfaces of the channel irons, and outer and supplemental gutters secured between the faces of said channel irons, substantially as described.

10. A building having hollow supporting pillars and a series of duplex channel irons secured to the upper ends thereof; together with roof-trusses sustained upon the upper surfaces of the channel irons, and sectional gutters secured between the inner faces thereof; in combination with supplemental gutters secured below the first-named gutters and adapted to prevent the accumulation of condensed moisture within the building, substantially as described.

870,918. PRINTING-DRUM. FRED A. WHITMORE, Philadelphia, Pa., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed May 11, 1906. Serial No. 316,285.



1. A printing drum for tapestry carpet warps, etc., mounted to rotate on a central stationary shaft or axis, which is rigidly supported at one end on a stationary frame, and is supported at its other end by movable supports.

2. A printing drum for tapestry carpet warps, etc., mounted to rotate on a central stationary shaft or axis, which is rigidly supported at one end on a stationary frame, and is supported at its other end by movable supports comprising pivoted inclined rods, which may be moved out of operative position.

3. A printing drum for tapestry carpet warps, etc., mounted to rotate on a central stationary shaft or axis, which is rigidly supported at one end on a stationary frame, and has on its other end a vertically moving block mounted in a second block which is supported by movable supports, and said second block and movable supports, and means for raising and lowering the first mentioned block.

4. A printing drum for tapestry carpet warps, etc., comprising a periphery or rim, having teeth upon its inner surface through which said drum is automatically rotated by a driven pinion, and having a hub loosely mounted on a central stationary shaft or axis, and rods connecting the rim with the hub and supporting the rim, and said rods adjustable as to their length.

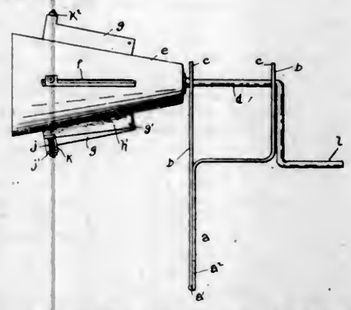
5. The combination with a printing drum for tapestry carpet warps, etc., having teeth thereon, and centrally supported, of a shaft, a pulley loose on said shaft, and clutch mechanism for clutching said pulley to said shaft, and brake mechanism for said shaft operated simultaneously with said clutch mechanism, and a pinion loose on said shaft and meshing with the teeth on the drum, and clutch mechanism for clutching said pinion to said shaft, to cause the rotation of the printing drum through the rotation of said shaft, and to unclutch said pinion from said shaft, to allow of the rotation of the printing drum independently of said shaft.

6. In a printing drum for tapestry carpet warps, etc., having a color carriage, the combination with the color carriage, and means for communicating a reciprocating movement thereto, of friction mechanism to act at each extreme end of travel of the color carriage, said friction mechanism comprising a friction band extending around a friction wheel, and said friction wheel loosely mounted on a rock shaft forming a part of the driving mechanism of the color carriage, and having a lug thereon, which is adapted to be engaged by a projection on a collar fast on said shaft, and also a second lug thereon which is adapted to be engaged by said projection.

7. In a printing drum for tapestry carpet warps, etc., having a color carriage, the combination with the color carriage, and means for operating the same, comprising a pinion, a segment gear, a connector to a crank, and said crank, and a gear having cam projections thereon, of a pinion meshing with said gear, and loose on a driven shaft, and said shaft, and a clutch for clutching said pinion to said driven shaft, a pin connected with said clutch, and extending in the path of the cams on said gear, and operated by said cams on the rotation of said gear, to unclutch said pinion on said driven shaft at the end of each movement of the color carriage.

8. In a printing drum for tapestry carpet warps, etc., having a color carriage, the combination with the color carriage, and means for operating the same, comprising a pinion, a segment gear, a connector to a crank, and said crank, and a gear having cam projections thereon, of a pinion meshing with said gear, and loose on a driven shaft, and said shaft, and a clutch for clutching said pinion to said driven shaft, a pin connected with said clutch and extending in the path of the cams on said gear, and operated by said cams on the rotation of said gear, to unclutch said pinion on said driven shaft at the end of each movement of the color carriage, and connections intermediate said pin and a hand lever, and said hand lever, to move said pin out of the path of its operating cams.

870,919. MACHINE FOR SHELLING CORN. JOSEPH A. WILKINSON, Hiawatha, Kans. Filed June 12, 1907. Serial No. 378,470.

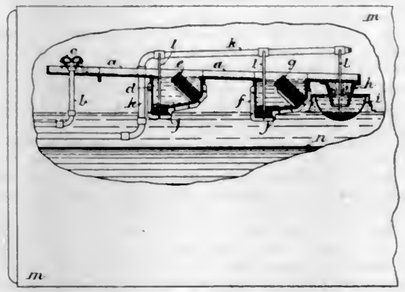


1. A machine for shelling corn, having a rotatable shaft, a hollow shelling cone, closed at its smaller end, which has connection with said shaft, the side walls of said cone having radial slots, radial wing projections at one side of said slots secured to the cone, shelling blades fitting in said slots having outward extending portions secured to said wing projections and inward extending portions for action upon the corn, and a supporting frame formed of an integral piece of metal having a doubling bend at its bottom, and upward extending branches lying close together, one of said branches having a laterally bent portion provided with an upward bend to provide separated journal bearings for said shaft, one of said branches having integral lateral perforated projections at its lower end.

2. A machine for shelling corn having a rotatable shaft, a hollow shelling cone secured thereto at one end, the side walls of such cone being provided with radial slots located intermediately of the ends of the cone and extending a substantial part of the length thereof, radial wing projections carried by the cone at one side of such slots, shelling blades fitting in such slots and having outer portions extending beyond the cone, pivoted at their rear ends to said wing projections, and having a yieldable connection at their forward ends with the wing projections.

3. A machine for shelling corn having a rotatable shaft, a hollow shelling cone secured at one end thereto, the side walls of such cone being provided with radial slots located intermediately of the ends of the cone and extending a substantial part of the length thereof, radial wing projections carried by the cone at one side of such slots, such wing projections having each a laterally projecting lug at its forward end provided with an aperture, shelling blades fitting in said slots, having outer portions extending beyond the cone pivoted at their rear ends to said wing projections and having at their forward ends laterally projecting lugs, bolts carried by the lugs of said blades and having sliding engagement with the apertures of the lugs of said wing projections, and coiled springs upon said bolts.

870,920. WATER HEATER AND PURIFIER. JOHN E. WOOD, Nottingham, England. Filed May 27, 1907. Serial No. 375,930.



1. The combination of a tray, a series of settling chambers intermediate between its ends arranged at intervals apart, means for breaking up or spraying the water as it is fed into the boiler, arranged at one end of the tray, means for purifying the water in each settling chamber, and a settling chamber at the discharge end of the tray.

2. The combination of an inclined tray formed of a series of sections over which the water flows in a thin sheet, a settling chamber located between adjoining sections, means for feeding water to the head end of the tray, and means for spraying or breaking up the water as it is fed.

3. The combination of an inclined tray, and a series of settling tanks intermediate between its ends and arranged at intervals apart, each of said tanks being formed with a depressed portion or trough in its bottom to receive the impurities in the water.

4. The combination of a feed water pipe with a hood or cowl for breaking up the feed water, an inclined tray, a settling tank with a trough at one end, a purifier and a blow off pipe arranged in the steam space of a steam generator substantially as herein set forth.

5. The combination of a feed water pipe with a hood or cowl for breaking up the water, an inclined tray in sections, two settling tanks with troughs at one end, a coarse purifier or scrubber in one settling tank, a fine purifier or scrubber in the other tank, and a blow off pipe with branch connections, arranged in the steam space of a steam generator substantially as herein set forth.

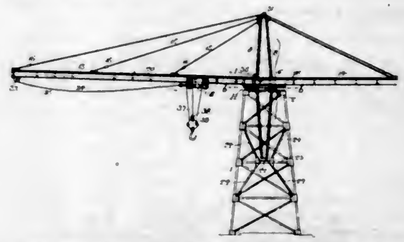
6. The combination of a feed water pipe, with a cowl or hood, an inclined tray settling tanks with troughs at one end, purifiers or scrubbers in such tanks arranged with one part above the level of the tray, a conical baffle at the delivery end of the tray, a hemispherical settling tank from which the water flows into the generator, a blow-off pipe and branch connections between the blow-off pipe and settling tanks, arranged in the steam space of a steam generator substantially as herein set forth.

870,921. MANUFACTURE OF OPEN-HEARTH STEEL. ANSON W. ALLEN, Philadelphia, Pa. Filed Apr. 3, 1906. Serial No. 309,726.

1. The method herein described of making open hearth steel which consists in introducing into a basic open hearth furnace iron oxid and burnt lime, heating the same to a state approaching incipient fusion, then introducing the molten pig iron containing phosphorus and retaining on the bath the bulk of the slag until the final stages of the heat, thus obtaining a reaction which eliminates the phosphorus from the iron.

2. The herein described method of making open-hearth steel, which consists in introducing iron oxid and burnt lime to the bottom of a basic open-hearth furnace, heating the furnace until the iron oxid begins to sweat or show signs of incipient fusion, then pouring molten pig iron containing phosphorus upon the surface of the initial charge to obtain a reaction for eliminating the phosphorus from the iron, and for retaining the slag or the bulk thereof on the surface of the bath until the final stage of the heat to permit the slag to give up its iron to the bath.

870,922. DERRICK. JACOB S. ALLEN, Jr., Philadelphia, Pa. Filed July 13, 1907. Serial No. 383,601.



1. The combination, in a derrick, of a tower, a mast stepped in said tower, a boom carried by said mast and having its outer end raised above the horizontal, a thrust bearing ring carried by said mast, and anti-friction rollers therefor carried by the tower.

2. The combination, in a derrick, of a tower, a mast stepped in the same, a shoe for said mast, and cross struts at the angles of said tower extending to said shoe.

3. The combination, in a derrick, of a tower, a mast made of channel sections connected by a flat web stepped in the same, a shoe for said mast, cross struts at the angles of said tower extending to said shoe, a bearing ring for said mast, and anti-friction rollers therefor.

4. The combination, in a derrick, of a tower, a plate carried by the top of the same, a mast stepped in said tower, a bearing wheel carried by said mast, and rollers for engagement with said bearing wheel carried by said plate.

5. The combination, in a derrick, of a tower, a plate carried by the top of the same, a mast stepped in said tower, a thrust bearing wheel carried by said mast, journal carrying arms carried by said plate, and rollers for engagement with said wheel carried by said arms.

6. The combination, in a derrick, of a tower, a mast stepped therein, said mast comprising channel sections and a flat sheet secured to said channel sections by angle pieces, a boom carried by said mast, and tension rods secured to the head of said mast and said boom.

7. The combination, in a derrick, of a tower, a mast stepped therein, said mast comprising channel sections and a flat sheet secured to said channel sections by angle pieces, front and rear booms carried by said mast, and tension rods secured to the head of said mast and said boom, the front boom having its outer end disposed above the horizontal.

8. The combination, in a derrick, of a tower, a mast stepped in said tower, a thrust bearing wheel carried by said mast, and anti-friction rollers for said wheel carried by the tower.

9. The combination, in a derrick, of a tower, a mast stepped in the same, a shoe for said mast, and cross struts above and below said shoe and extending from the same to the angles of said tower.

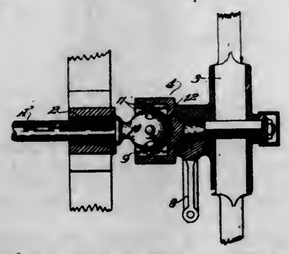
10. The combination, in a derrick, of a tower, a mast of structural metal sections stepped in said tower, a sectional bull wheel carried by said mast, a sectional thrust bearing wheel carried by the mast below said bull wheel, and rollers carried by the tower for engagement with said wheel.

11. The combination with the tower of a derrick, of a mast stepped therein and supporting a boom, said mast comprising a plurality of channel sections and a flat plate disposed between and secured to the same and lying at right angles to the web of the channel sections.

12. The combination with the tower of a derrick, of a mast stepped therein and supporting a boom, said mast comprising a plurality of channel sections and a flat plate tapering from the center towards its ends disposed between and secured to said channel sections and lying at right angles to the web of the same.

13. The combination with the tower of a derrick, of a mast stepped in the same and supporting a boom, said mast comprising a plurality of channel sections and a flat plate disposed between and secured to said sections, said flat plate being in line with the boom and serving to resist compressive stress due to the load carried by the boom.

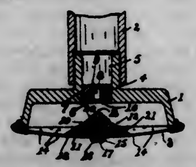
870,923. DRIVE-SHAFT CONNECTION. CARL ATKINS, San Francisco, Cal. Filed Mar. 12, 1907. Serial No. 361,952.



1. The combination of a socket-member having an internal gear, the teeth of which are convexed from end to end in a direction substantially parallel with the axis of said member and a drive-member provided with pin-teeth to engage said gear and turnable to carry its axis into and out of line with the axis of said socket-member without interfering with the driving functions.

2. In a transmission mechanism, a universal-joint comprising a socket-member having an internal-gear, the teeth of which are convexed on their wearing surfaces in a direction substantially parallel with the axis of said socket member, a ball fitting said socket and having pin-teeth engaging the teeth of said internal-gear.

870,924. HEAD FOR SHOWER-BATHS, &c. WILLIAM ATTLESEY, Cincinnati, Ohio. Filed Mar. 14, 1906. Serial No. 305,939.



1. A head for shower baths or the like having an ingress-opening and comprising a deflector whose axis is coincident with the axis of said ingress-opening and provided with an egress-opening in line with said ingress-opening, said head also having side egress-apertures, said deflector being opposite said ingress-opening and having sloping sides for directing the flow of water toward said side egress-apertures, and said sloping sides having an annular interruption therein, substantially as described.

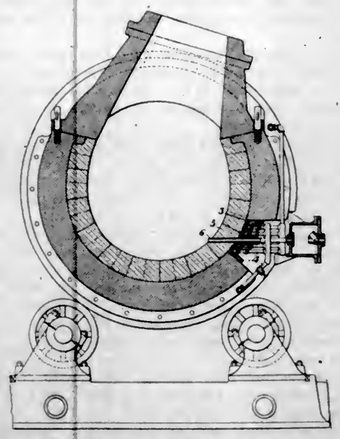
2. In a head for shower baths or the like, the combination with a base, a removable plug having an ingress-opening therein and arranged for substitution of other plugs having different sized ingress-openings, a cap having a deflector provided with sloping sides, the said cap having egress-openings between said deflector and outer edge of the cap, substantially as described.

3. In a head for shower baths or the like, the combination with a base, a removable plug having an ingress-opening therein and arranged for substitution of other plugs having different sized ingress-openings, a cap having a deflector provided with sloping sides, the said cap having egress openings between said deflector and outer edge of the cap, said deflector having an aperture, and a releasable egress plug having an aperture and arranged for substitution of other plugs having different sized apertures, the said apertures in said egress-plug, deflector and ingress-plug having coincident longitudinal axes, substantially as described.

4. In a head for shower baths or the like, the combination of a base, a removable plug therefor having an ingress-opening merging into a recess at each end of said ingress opening, said recesses having outwardly flaring walls, said plug being arranged for substitution of other plugs having different sized ingress-openings, a cap for said base having sidewardly disposed egress-apertures, and an interior deflector for said cap having sloping sides and an egress-opening opposite said ingress-opening, said ingress-opening and egress-opening being spaced apart in the interior of said head, substantially as described.

5. In a head for shower baths or the like, the combination of a base, a removable plug therefor having an ingress-opening merging into a recess having an annular sloping wall in the interior of said head, a cap for said base having sidewardly disposed egress-apertures, an interior deflector for said cap having a central egress-opening, said deflector and egress-opening being opposite said recess and ingress-opening and spaced from the latter in the interior of said head, said sloping wall having an annular interruption, substantially as described.

870,925. CONVERTER. RALPH BAGGALEY, Pittsburg, Pa. Filed Oct. 30, 1906. Serial No. 341,338.



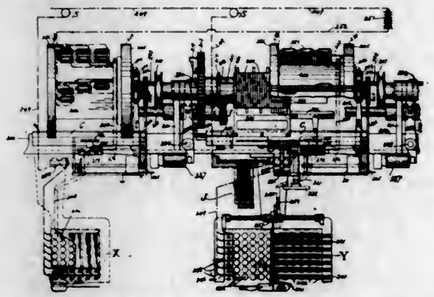
1. A copper converter composed of a refractory lining, heavy metal blocks forming the exterior walls, and a water-cooled twyer block inset into the metal blocks and against the outer surface of said lining adjacent to and around the twyer orifice; substantially as described.

2. A copper converter composed of a refractory lining and having metal blocks forming the exterior walls, a twyer block forming a backing for said lining adjacent to the twyer entrance, a plurality of separate cooling passages in said block, and means for individually controlling the circulation through the different passages; substantially as described.

3. In a copper converter, a basic lining having a twyer entrance formed through the central portion of a single, solid, lining block, and a water-cooled block exteriorly of the said lining block and forming a backing for the same; substantially as described.

4. A copper converter composed of heavy metal exterior walls, and a basic lining, said lining having a larger block through the central portion of which a twyer orifice is formed, and a water-cooled block applied to the exterior of the lining adjacent to the twyer; substantially as described.

870,926. COMPOSING MECHANISM FOR PRINTING-BAR, MATRIX-MAKING, AND TYPE-SETTING MACHINES. ERL V. BEALS, Boston, Mass. Filed Feb. 21, 1898. Serial No. 671,170.



1. A plurality of composing mechanisms upon which operators may work independently of each other, a reproducing mechanism, and means whereby the said composing mechanisms are adapted to and do control said reproducing mechanism.

2. A plurality of composing mechanisms upon which operators may work independently of each other, each including a key-board and a mechanical line selectively governed thereby, a reproducing mechanism and provisions whereby the said composing mechanisms are adapted to control said mechanism for reproducing the matter represented by said lines.

3. The series of fingerboard composing mechanisms for controlling the assembling of matrices or types, consisting of a plurality of complete fingerboards, and a series of line-composing devices operated thereby, each of said series being adapted to control independently and at one time only a single matrix or type-assembling device.

4. The series of fingerboard composing mechanisms for controlling the assembling of matrices or types, means whereby said series is connected with and enabled to control a single assembling device, and means whereby only one of said composing mechanisms at a time can operate said assembling device.

5. The series of fingerboard composing mechanisms for controlling the assembling of matrices or types, means whereby said series is connected with and enabled to control a single assembling device, and means whereby any one of said composing mechanisms may be independently and temporarily connected with said assembling device.

6. In a mechanism for controlling the assembling of matrices or types a series of fingerboard mechanisms, a series of line-composing devices, intermediate mechanism whereby each line-composing device is independently controlled and operated by its own fingerboard keys, electric circuits whereby all the line-composing devices are operatively connected with a single matrix or type assembling mechanism, and a circuit interrupting device adapted to contact one of said line-composing devices only at a time with said matrix or type-assembling mechanism.

7. The combination with a series of fingerboard mechanisms and the electric circuits whereby they are connected with a single mechanism for assembling matrices or types, of an interrupting device, a series of circuit-breaking devices one for each fingerboard mechanism, said circuit-breaking devices being included in said circuits, magnets controlled by said circuit-breaking devices, and means operated by said magnets for controlling said interrupting device whereby each of said fingerboard mechanisms is independently and separately connected, one only at a time, with the magnets of the matrix or type assembling mechanism.

8. The combination with a multiple series of matrix or type assembling rings, each series being slidingly mounted on a rotatable support, of a series of mechanisms for revolving said multiple series of rings, clutches for setting in action said mechanisms, a series of magnets included in electric circuits for operating said clutches, a series of circuit-breaking devices included in said circuits for controlling said magnets, and an interrupting device electrically connected with said circuits and automatically controlling the revolving of said multiple series in such manner that one only of said series of rings can be revolved at a time to effect the assembling of a line of matrices or types.

9. The combination of a plurality of simultaneously operative key-board devices and a single type or matrix assembling mechanism operated thereby.

10. The combination of a plurality of simultaneously operative key-board devices, a single type or matrix assembling mechanism, and intermediate connecting devices.

11. A series of matrices or types and their proper assembling mechanism in combination with a plurality of simultaneously operative key-board devices.

12. A series of matrices or types and their proper assembling mechanism, a plurality of simultaneously operative key-board devices, and means for causing said key-board devices to sequentially operate said assembling mechanism.

13. A single matrix or type assembling mechanism and a plurality of simultaneously operative key-board devices in combination with means controlled from said key-board devices for sequentially operating said assembling mechanism.

14. The combination with a series of matrix and type-selecting devices adapted to be set in the same or different positions by a key-board mechanism, of a series of circuit-breakers controlled thereby for the assembling of matrices or types.

15. The combination with a series of matrix or type selecting rings provided on their outer peripheries with lugs adapted to be set in the same or different radial positions, of a series of circuit-breakers actuated by said lugs for the assembling of matrices or types.

16. The combination with the series of fingerboard mechanisms adapted to respectively control a single mechanism for assembling matrices or types, of an interrupting device adapted to prevent said fingerboard mechanisms from interfering the one with another in controlling the operation of said matrix or type assembling machine.

17. The combination with a plurality of line composing mechanisms and a circuit for electrically connecting the same with a matrix or type assembling mechanism, of means for automatically closing said circuit at the conclusion of the composition of a line.

18. The combination of a series of line-composing mechanism and electric circuits for connecting the same with a single matrix or type assembling mechanism, of a series of circuit closing devices interposed in said circuits, each circuit-closing device closing its circuit at a particular point at the conclusion of the composition of a line.

19. In a composing mechanism the combination with a series of matrix or type assembling rings of a series of circuit breakers operated by said rings to control the assembling of matrices or types and a justifying mechanism cooperating with said rings to effect the justification of a line.

20. A machine of the character described, comprising a plurality of independent composing mechanisms each including a dummy line adapted to be set up according to the will of the operator, a single duplicating mechanism adapted to coact with said dummy lines, and means whereby said dummy lines can be placed in operative relation to said duplicating mechanism only one at a time.

21. A machine of the character described, comprising a single duplicating mechanism, a plurality of composing mechanisms, and intervening mechanism adapted to coact with said composing mechanism for effecting the actuation of the duplicating mechanism.

22. A machine of the character described, comprising a plurality of series of actuators adapted to be set in any predetermined relation, and a duplicating mechanism adapted to co-act with and be controlled by each of said series of actuators.

23. A machine of the character described, comprising an electro-magnetic duplicating mechanism, in combination with a selective line of actuators, and electrical transferring mechanism co-acting with said actuators and said duplicating mechanism.

24. In a multiple fingerboard system for controlling the assembling of matrices or types, a series of fingerboard mechanisms, a multiple series of rings adapted to be set and threaded on arbors in varying positions by mechanisms controlled by finger keys to act on and control a single matrix or type assembling mechanism, and means whereby any one of said series of rings may independently act on and control the said assembling mechanism when the latter is free from the control of the other fingerboard mechanisms of the series.

25. A composing mechanism for controlling the assembling of matrices or types, comprising a multiple fingerboard system whereby a multiple series of matrix or type selecting rings may be independently operated at the same or different times, each by a distinct set of finger-keys, means for connecting the said multiple fingerboard system with a single assembling device, and means whereby any one series of said multiple series of rings may, after being set by the finger-keys, to be temporarily exclusively connected with said single assembling device to control the operation of the same.

26. A machine of the character described comprising a mechanical line composed of a plurality of successively selected actuators arrangeable into alinement in predetermined relation, with one actuator for each character and duplicating mechanism controlled by said actuators.

27. A machine of the character described comprising a composing mechanism including a plurality of keys, and a mechanical line of actuators successively arrangeable into alinement according to the order of selection of said keys with one actuator for each character, and a duplicating mechanism controlled by said line of actuators.

28. A machine of the character described comprising a composing mechanism including a plurality of keys, and a line of actuators each of which is under the domination of all of said keys, and mechanism whereby said actuators may select a series of things according to their own selection and arrangement.

29. A machine of the character described comprising a composing mechanism including a plurality of keys, and a line of rotary actuators movable about a common axis and successively positioned in a line by said keys, and by which things may be subsequently selected according to the order of selection of said actuators, when said line is complete.

30. A machine of the character described comprising a plurality of keys, a series of rotary actuators each of which is adapted to be positioned in order in predetermined relation to a fixed line by any one of said keys.

31. A machine of the character described comprising a plurality of keys, a series of rotary actuators each bearing an operative projection, and one or more selectors in operative relation to each of the keys and adapted to set each actuator in a predetermined position.

32. A machine of the character described comprising key-actuating mechanism having a plurality of keys, and composing mechanism controlling the key-actuating mechanism and including a line of actuators each of which is under the control of all of said keys and electro-magnetic selecting mechanism for positioning said actuators successively in alinement.

33. A machine of the character described comprising a line of actuators normally free to rotate, and selecting mechanism for positioning said actuators in succession; whereby when said actuators are positioned they constitute a dummy line of matter.

34. A machine of the character described comprising a line of rotatable actuators, means for rotating said actuators, and means for stopping said actuators in succession at any predetermined points in their rotation and positioning them against further rotative movement.

35. A machine of the character described comprising a plurality of rotatable axially movable actuators, a fixed member, and mechanism for stopping each actuator at any point in its rotation, and moving it into engagement with said fixed member whereby it is held against further rotation.

36. A machine of the character described comprising a series of parts successively prearrangeable according to the will of the operator into a line, and selecting mechanism including a plurality of keys, and intervening devices by which each of said keys controls the position of each one of said parts in the line.

37. A machine of the character described comprising a plurality of rotary actuators, a cylindrical support, and mechanism for setting said actuators in operative position on said support, said mechanism including a plurality of stops, and a key corresponding to each stop.

38. A machine of the character described comprising a plurality of rotary actuators, each having a projection, and a plurality of stops each adapted to set each actuator in a predetermined position.

39. A machine of the character described comprising a plurality of rotary actuators, each having a projection, and a plurality of slides arranged about the axis of said actuators, and each adapted to set any one of said actuators.

40. A machine of the character described comprising a mechanical line of actuators normally in an inactive position, a plurality of keys for placing said actuators in active position, means whereby each actuator is under the control of all of said keys and means for resetting said actuators to reactive position.

41. A machine of the character described comprising a mechanical line of actuators there being one actuator for each character represented in the line and electro-magnetic mechanism for successively setting said actuators into a line including a plurality of keys, and a branch circuit for each key.

42. A machine of the character described comprising an electro-magnetic composing mechanism including a key-board, magnetic selectors and electrical connections between them, an electro-magnetic duplicating mechanism, and electrical connections between said mechanisms.

43. A machine of the character described comprising a mechanical line of successively prearrangeable parts, a series of members, and mechanism whereby said parts cause the actuation of said members in predetermined order, after said parts have all been successively arranged.

44. A machine of the character described comprising a mechanical line of selective elements, with one element for each character or thing represented in the line selector mechanism and an escapement mechanism for locating said elements in the selected positions.

45. In a device for controlling the assembling of matrices or types, a series of matrix or type-selecting rings provided with means for actuating mechanism whereby characters and spaces are assembled to form a composed line.

46. In a mechanism for controlling the assembling of matrices or types a series of matrix or type-selecting rings provided with devices adapted to be set in the same or different radial positions and subsequently secured upon a rotatable sleeve or arbor to act upon mechanism for assembling characters and spaces to form a composed line.

47. A series of matrix or type selecting rings mounted on a rotatable sleeve or arbor and provided with devices set in predetermined radial positions in combination with mechanism actuated thereby for controlling the assembling of matrices or types.

48. A series of matrix or type selecting rings provided with devices adapted to be set in the same or different radial positions, composing keys and intermediate mechanism operated thereby for setting said rings, a justifying mechanism coöperating with said rings, and means actuated by the rings for controlling the assembling of matrices or types.

49. A series of matrix or type selecting rings loosely mounted on a revolving arbor and provided on their peripheries with lugs adapted to be set in the same or different radial positions, a series of movable stop-arms mounted in a suitable support encircling said rings, a series of magnets for actuating said stop-arms to arrest said rings by contact with their longest lugs, means controlled by the composing keys for energizing said magnets, and an escapement mechanism for transferring said rings in their stopped positions onto a stationary but rotatable sleeve or arbor, means for securing said rings on said arbor, and means for revolving said arbor with its set rings to cause the latter to act upon a series of circuit-breakers for controlling the assembling of matrices or types.

50. The combination of a revolving arbor, a series of matrix or type selecting rings mounted thereon, and a friction device carried by said arbor and adapted to contact with one or more of said rings to cause the same to be frictionally revolved by said arbor.

51. In a mechanism for controlling the assembling of matrices or types, a series of type selecting rings loosely mounted on a revolving arbor and provided on their outer peripheries with lugs of different lengths adapted to be set in the same or different radial positions, and on their inner peripheries with notches, in combination with a stationary but rotatable sleeve or arbor provided with longitudinal ribs adapted to enter said notches when said rings are transferred onto said stationary arbor and thereby hold said rings in fixed positions thereon, and an escapement mechanism controlled by the composing keys for effecting the transfer of the rings from one arbor to the other.

52. As a means for indicating to the operator any errors made during the composition of a line, a series of rings each bearing on its periphery all the different characters used in printing in an order common to all of said rings, said series being adapted to be variably arranged by the composing keys so as to present at a common line characters and spaces corresponding to those of the matrices or types to be subsequently assembled in line.

53. A series of matrix or type selecting rings mounted on a suitable support and provided with devices adapted to be set in the same or different radial positions, each ring bearing on its outer periphery all the different characters used in printing, and said rings, when set, presenting at a common transverse line, a fac-simile of the composed line to be finally produced.

54. The matrix or type selecting ring for use in a composing device, said ring being provided with means for actuating mechanism whereby a character or space is assembled in the formation of a line.

55. The matrix or type selecting ring for use in a composing device, said ring being provided with notches in its inner periphery, and on its outer periphery with means for actuating mechanism whereby a character or space is assembled in the formation of a line.

56. The matrix or type selecting ring provided with notches in its inner periphery and bearing on its outer periphery representations of all of the different characters used in printing.

57. In a mechanism for controlling the assembling of matrices or types, a matrix or type selecting ring provided with lugs for actuating mechanism whereby a character or space is assembled in the formation of a line.

58. In a mechanism for controlling the assembling of matrices or types, the combination with the magnets for arresting the rotation of the matrix or type selecting rings, of the stop-arms 231, actuated by said magnets, reciprocating arms 291 and 292, secured to toothed rings loosely mounted on a sleeve 269 frictionally secured to a revolving shaft, said arms 291 and 292 being adapted to be stopped in various radial positions by said arms 231, means for reciprocating the arms 291 and 292 in opposite directions, consisting of springs 297, a grooved ring 272 splined on a sleeve 269 and provided on each side with a tooth adapted to engage the adjacent toothed ring, a cam-wheel and lever for laterally sliding the grooved ring 272, and means for rotating said cam-wheel, a worm 268 secured to the sleeve 269, a shaft 266 provided with a worm-wheel engaging said worm 268 and having at its opposite end a gear, a rack driven by said gear, and a registering pointer carried by said rack, and means for releasing said pointer at the conclusion of the composition of a line.

59. The combination with a series of matrix or type selecting rings temporarily set on a sleeve or arbor, of means for automatically returning said rings from said sleeve or arbor to their primary position after the composed line has been assembled.

60. A device for automatically returning the matrix or type-selecting rings from their temporarily set position on a sleeve or arbor to their primary position, said device consisting in a yoke embracing said rings, a sliding escapement-bar connected therewith, a driving shaft provided with a clutch, intermediate mechanism between said shaft and the escapement-bar for actuating the latter, and means for automatically operating the clutch to effect the movement of the escapement-bar.

61. The combination with the matrix or type selecting rings slidingly mounted on a suitable support, of an escapement mechanism connected with said rings whereby they may be moved laterally on their support, a device to be operated by hand for releasing the escapement mechanism and controlling the sliding of the escapement-bar thereof.

62. In a mechanism for controlling the assembling of matrices or types, the combination of the matrix or type selecting rings, the escapement mechanism connected therewith, a fingerboard mechanism for operating said escapement mechanism, and the hand-operated device for releasing said escapement mechanism and controlling the movement of the escapement-bar thereof.

63. The combination with a series of matrix or type selecting rings slidingly mounted on a suitable support and provided with lugs 52, of a sliding stop-bar adapted to intercept said lugs and thereby arrest the revolution of said rings to aline the same, and a hand-operated device connected with said stop-bar to actuate the same and simultaneously release the escapement mechanism connected with said rings.

64. The combination with the rotatable sleeve or arbor onto which the matrix or type-selecting rings are threaded, of a locking device for holding said series in a fixed position to receive the rings when set by the composing keys.

65. In an interrupting device for a multiple fingerboard system, a revolving arm, a commutator connected therewith and interposed in an electric circuit, a clutch-pulley operating said commutator, a shipper-rod for operating said clutch-pulley, means for operating said shipper rod, a series of insulated pieces or sections with which said revolving arm successively contacts, and electric circuit-connections between said insulated pieces, the several fingerboard mechanisms, and the commutator.

66. In a composing mechanism the combination with a shaft adapted to be continuously revolved and provided with a friction device, of a series of matrix or type composing rings mounted on said shaft and adapted to be acted upon successively by said friction device to cause them to be rotated, and a series of stop-arms operated by the composing keys for arresting the revolution of said rings in certain predetermined positions.

67. The combination with a composing key-board, of a series of magnets electrically connected with said key-board, a series of matrix or type-selecting rings, stop-arms actuated by said magnets for setting said rings one at a

time, and escapement mechanism for transferring said rings in their set positions onto a stationary but rotatable sleeve or arbor, means for releasing said escapement mechanism at the conclusion of the composition of a line, means for securing said rings on said arbor, means for revolving said arbor with its set rings, a series of circuit-breakers operated by said revolving rings for controlling the assembling of matrices or types, and means for automatically returning said rings from said sleeve or arbor to their primary position after the line has been assembled.

68. The combination of a revolving arbor provided with a friction device, a series of matrix or type selecting rings loosely mounted thereon and provided on their inner peripheries with notches and on their outer peripheries with lugs 52, and a sliding stop-bar interposed in the path of revolution of said lugs, whereby said rings are arrested in a position to permit them to be threaded onto a stationary but rotatable sleeve or arbor provided with longitudinal ribs adapted to enter said notches, said stop-bar during the composing of a line being drawn back to permit one or more of said rings to be frictionally revolved by said first-mentioned arbor, and means for successively arresting said revolving rings one at a time with their lugs 52 in the same or different radial positions.

69. The combination with a composing key-board, of a series of magnets electrically connected with said key-board, a series of matrix or type selecting rings, stop-arms actuated by said magnets for setting said rings one at a time, an escapement mechanism for transferring said rings in their set positions onto a stationary but rotatable sleeve or arbor, means for securing said rings on said arbor, means for revolving said arbor with its set rings, and a series of circuit-breakers controlling the assembling of matrices or types, said circuit-breakers being operated by said rings.

70. The combination with reciprocating arms controlling the action of the registering pointer, of stop-arms for arresting said reciprocating arms in various radial positions, said stop-arm being connected with the stop-arm which set the matrix or type selecting rings, and means controlled by a key-board mechanism for actuating said stop-arm.

71. In a registering device, the combination with a stop-arm 231, of the reciprocating arms 291 and 292, provided with spring-pressed tips adapted to yield in one direction only.

72. The combination with a composing key-board, of a series of matrix or type selecting rings, stop-arms actuated by the key-board mechanism for setting said rings one at a time, mechanism for transferring said rings in their set positions onto a stationary but rotatable sleeve or arbor, means for securing said rings on said arbor, means for revolving same on said arbor with its set rings, and means for controlling the assembling of matrices or types operated by said rings.

73. In a key-board mechanism, a series of circuit closing and breaking devices each having its movable portion composed of two sections, one of conducting and the other of non-conducting material, and insulated contact strips interposed in electric circuits connecting said keyboard with mechanism for controlling the assembling of matrices or types.

870,927. ELECTROTHERAPEUTIC INSTRUMENT. BENJAMIN Y. BOYD, Chicago, Ill. Filed Jan. 18, 1907. Serial No. 352,849.

1. An electro-therapeutic instrument comprising a galvanic battery, an insulating cylinder inclosing said battery and constituting a handle for the instrument by which it may be grasped without bringing the hand into the circuit, a stem adapted for insertion in a mucous cavity of the body projecting from the cylinder having two poles, positive and negative, insulated from each other, whereby the current must pass through an object of treatment to complete the circuit, and suitable connections for transmitting current from the battery to the poles.

2. An electro-therapeutic instrument comprising a galvanic battery, an insulating cylinder inclosing said battery and forming a handle by which the instrument may be grasped without bringing the hand into the circuit, a stem projecting from the cylinder and having three poles, one of different polarity from the other two, each insulated from the others, whereby the current must pass through an object of treatment to complete the circuit, and suitable connections for transmitting current from the battery to the poles.



3. An electro-therapeutic instrument provided with a stem adapted for insertion in a mucous cavity of the body having a transverse member with the poles at either end thereof insulated from each other, whereby the current must pass through an object of treatment to complete the circuit, and with means for supplying current to said poles.

4. An electro-therapeutic instrument provided with a stem having an electrode at the base thereof, and also having a transverse member having the poles at the ends thereof, one pole being connected with the electrode at the base and the other insulated therefrom, whereby the current must pass through an object of treatment to complete the circuit, and with means for supplying current to said poles.

5. In a device of the class described, the combination with the stem provided with the plurality of poles, of the insulating casing to which it is attached forming a handle by which the instrument may be grasped without bringing the hand into the circuit, the cell in the casing having one terminal adjacent the stem, the induction coil adjacent the other terminal, an interrupter, and suitable connections between said elements whereby a faradic current may be induced to pass between the poles and through the portion of the body being treated.

6. In a device of the class described, the combination with the cylindrical insulating casing constituting a handle by which the instrument may be grasped without bringing the hand into the circuit and provided with the stem at one end having the plurality of poles, of the cell in said casing, the induction coil also inclosed therein, the spiral spring interrupter interposed between the cell and the induction coil, and suitable connections between said elements whereby a faradic current may be induced to pass between the poles and through the portion of the body being treated.

7. An electro-therapeutic instrument comprising a galvanic battery, an insulating cylinder inclosing said battery, an insulating stem projecting from the cylinder and having an insulating portion at its end extending substantially transversely thereto, two poles, positive and negative, located at the ends of said transverse portion and insulated from each other, whereby the current must pass through an object of treatment to complete the circuit, and suitable connections for transmitting current from the battery to the poles.

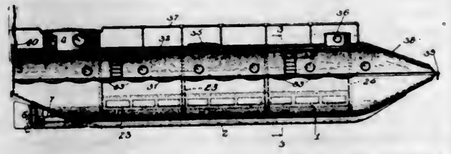
8. In a device of the class described, the combination with the cylindrical insulating casing forming a handle by which the instrument may be grasped without bringing the hand into the circuit of the stem carrying the plurality of electrodes at one end, the induction coil at the other end, the battery interposed between said stem and coil, suitable connections between said elements whereby a faradic current may be induced to pass between the poles and through the portion of the body being treated, said connections including the strips 13 and 14 extending the length of the tube, and adapted when the stem and induction coil are in the proper position to connect the electrodes with the induction coil terminals.

9. In a device of the class described, the combination with the cylindrical insulating casing forming a handle by which the instrument may be grasped without bringing the hand into the circuit of the cap carrying the stem with the plurality of electrodes closing one end, the cap carrying the induction coil closing the other end, the cell interposed between the stem and the induction coil, and suitable connections between said elements whereby a faradic current may be induced to pass between the poles and through the portion of the body being treated, said connections including a yielding spring contact between the ends of the cell and an adjacent terminal of the induction coil apparatus.

10. In a device of the class described, the combination with the cylindrical insulating casing forming a handle by which the instrument may be grasped without bringing the hand into the circuit having one end closed by the cap carrying the stem provided with the plurality of poles, of the cap carrying the induction coil closing the other end, the cell in the casing having one terminal adjacent the stem and the other adjacent the induction coil, an interrupter, and suitable connections between said elements whereby a faradic current may be induced to pass through the poles and through the portion of the body being treated, said connections being adapted to be completed only when the cap carrying the induction coil is in a certain angular position.

11. As a new and useful article of manufacture, an electrode for rectal insertion, consisting of the insulating stem and transverse portion, with the poles at the ends of said transverse portion, and suitable insulated connections to said poles.

870,928. LIFE-BOAT. ROBERT A. BROWN, Chicago, Ill. Filed Mar. 9, 1907. Serial No. 361,434.

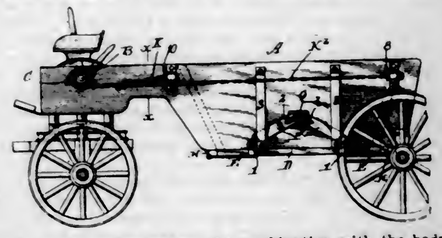


1. A life boat comprising a closed outer shell, a car journaled within said shell on an axis disposed longitudinally of said shell and being free to rotate with respect to the outer shell, said outer shell being of non-circular transverse section below the axis of said car and being closer to said car at each side of the axis thereof and near the middle of the bottom than at intermediate points, and ballast compartments formed at each side of the middle in the space between the car and hull, the inner surfaces of said compartments being of substantially circular transverse section and concentric with the axis of said car and said compartments being spaced apart to allow the car to hang close to the outer hull between them.

2. A life boat comprising a substantial cigar-shaped outer hull, a car within the hull and relatively rotatable therein on an axis disposed longitudinally of the hull, the bottom of said hull being of non-circular transverse section, being flat in the middle and sharply turned at each side to meet the sides of the hull, and a separate closed water-tight compartment formed in said hull at each side of said car below the axis thereof, the inner walls of said compartments being close to and concentric with the path of said car and said compartments being spaced apart to allow the car to hang close to the outer hull between them.

3. A life boat, comprising a closed outer sheet metal hull of ovate transverse section, a car within the hull and relatively rotatable therein on an axis disposed longitudinally of the hull, the bottom of said car being of substantially circular transverse section, the bottom of the hull being closer to said car at the middle of its bottom and at each side of its axis than at intermediate points, water-tight ballast compartments formed within the hull at each side of the middle of its bottom, and arranged to give longitudinal stiffness to said bottom, the shell of the hull being close to the path of the car above the axis thereof, and longitudinal stiffening members secured outside of the hull at points above the axis of the car.

870,929. DUMPING-WAGON. ARTHUR CAMERON, Jackson, Mich. Filed Feb. 18, 1907. Serial No. 357,990.



1. In a dumping wagon, the combination with the body comprising a load receptacle and a swinging bottom door therefor, of means connecting the door with the body and permitting the door to swing downwardly and outwardly and also to rise alongside the body; hanger-chains or cables suspended outside the load receptacle from points above the bottom level thereof and flexibly attached to end portions of the door, these hanger cables being slack when the bottom doors are closed and of a length for compelling the door while being opened as by a load in dumping to rise outside the body during the concluding portion of its opening action; and means for closing the door and for permitting it to open at will.

2. In a dumping wagon, the combination with the body comprising a load receptacle and swinging bottom doors therefor, of means connecting the doors with the body and permitting the doors to swing downwardly and outwardly and also to rise alongside the body; hanger-chains or cables suspended outside the load receptacle from points above the bottom level thereof and flexibly attached to end portions of the doors, these hanger cables being slack when the bottom doors are closed and of a length for compelling the doors while being opened as by a load in dumping to rise outside the body during the concluding portion of its opening action; and means for closing the doors and for permitting them to open at will.

3. In a dumping wagon, the combination with the body comprising a receptacle for having swinging bottom doors, of means connecting the doors with the body and permitting them to have a combined laterally outward swing and also a bodily upward movement during the concluding portion of their said opening movement; suspended hanger-chains or cables secured upon the wagon at points above the closed bottom level of the load receptacle and flexibly attached to the doors below their said points of suspension, the chains for said doors being outside of the load receptacle and respectively opposite the front and back ends thereof, said hanger-chains or cables being also of a length to hang slack when the doors are closed and to compel the doors while being opened as by a load in dumping, to rise outside the body during the aforesaid concluding portion of their opening movement; and door closing chains or cables connected with

the doors and extended forward to and connected with suitable reversible winding and unwinding means.

4. In a dumping wagon, the combination of the body comprising a load receptacle having swinging bottom doors, of means connecting the swinging doors with the body and permitting the doors to have a lateral swing and also to rise alongside the body; suspended hanger-chains attached to the doors for compelling them to rise during the concluding portion of their laterally outward swing; door closing chains or cables also connected with the doors; and means for operating the door closing chains or cables, the said door closing chains or cables having relatively crossed portions forward and in rear of the load receptacle and united with the hanger chains or cables at points above the doors.

5. In a dumping wagon, the combination with the body comprising a load receptacle having a swinging bottom door, of a connection between the door and body consisting of links supported for combined swing and end movement alongside the body and articulated connections between the links and the outer edge portion of the door.

6. In a dumping wagon, the combination with the body comprising a load receptacle, and a swinging bottom door therefor, of connection between the outer edge portion of the bottom door and the body and consisting of a pair of links hung to swing about the axis of a pivot pin on a side of the body and having longitudinal slots receiving such pivot pin whereby the links are also capable of end movement; and jointed connections between the outer ends of the links and the outer edge portions of the bottom doors.

7. In a dumping wagon, the combination with the body comprising a load receptacle, and a swinging bottom door therefor, of a link movement alongside the body and comprising links arranged for swinging and end movements on a plane parallel with the side of the body, suspended hanger-chains or cables attached to the wagon body and depending toward and attached to the door ends outside the ends of the load receptacle, and means for closing the door.

8. In a dumping wagon, the combination with the body comprising a load receptacle and swinging bottom doors therefor, of means for hinging the doors; door closing chains extending along opposite sides of the wagon, each chain along one side of the wagon being connected with a bottom door toward the opposite side thereof whereby the chains relatively cross at each end of the box or load receiving receptable; a pair of hanger chains at each end of the load receptacle and attached to the wagon at points above the bottom doors, the pair of hanger chains at each end of the load receiving receptacle being arranged to converge toward the two crossing door closing chains at such end, and to respectively connect with one and the other of said door closing chains above the level of the doors when the latter are closed.

870,930. DAM. WILLIAM L. CHURCH, Newton, Mass. Filed July 3, 1907. Serial No. 382,105.

1. In combination, a substantially vertical penstock, and means for preventing the admission of water-displacing bodies of air with the water entering the penstock.

2. In combination, a substantially vertical penstock, and means for preventing the gyration of water at and above the receiving end of the penstock.

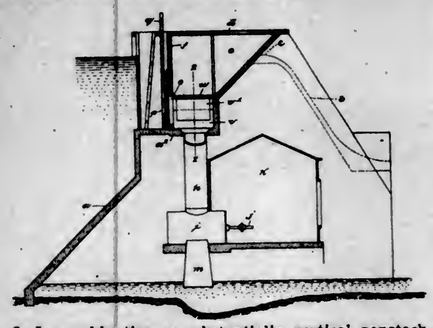
3. In combination, a substantially vertical penstock, and baffle plates arranged to prevent a gyratory movement of the water entering the penstock.

4. In combination, a substantially vertical penstock and a platform located above the receiving end of the penstock.

5. In combination, a substantially vertical penstock, a platform located above the receiving end of the penstock, and baffle plates affixed to and projecting downwardly from the platform.

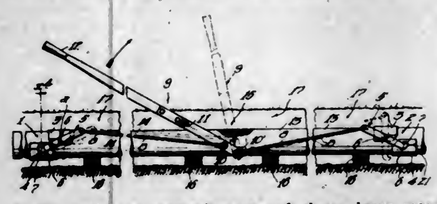
6. In combination, a substantially vertical penstock and a floating platform located above the receiving end of the penstock, and baffle plates annexed to and projecting downwardly from the platform.

7. In combination, a substantially vertical penstock and a platform located above the receiving end of the penstock, and baffle plates attached to the penstock or forebay and extending across the intake of the penstock.



8. In combination, a substantially vertical penstock, a floating platform located above the receiving end of the penstock, baffle plates affixed to and projecting downwardly from the platform, and fixed baffle plates alternating with the plates on the platform.

870,931. DEVICE FOR PULLING PIPE-SECTIONS TOGETHER. ALEXANDER CLAIBORNE, Dolgeville, Cal., assignor, by mesne assignments, to Tallerday Manufacturing Company, Dolgeville, Cal., a Corporation of California. Filed Aug. 27, 1906. Serial No. 332,292.



1. Two pairs of reversely-arranged shoes, lever means pivotally connecting the shoes of one pair, lever means pivotally connecting the shoes of the other pair, operating means for one of said lever means, operating means for the other of said lever means, and a lever pivotally connected with both of said operating means, the pivots of said lever being spaced apart to fulcrum said operating means one against the other.

2. A pair of reversely arranged shoes, lever means pivotally mounted on one of said shoes and detachably pivoted to the other of said shoes, means for operating said lever means, another pair of shoes, lever means pivotally mounted on one of the shoes of said other pair and detachably pivoted to the other shoe of said other pair, means for operating said other lever means, and a lever pivotally connected with both of said operating means, the pivots of said operating means being spaced apart on said lever to fulcrum the one against the other.

3. A pipe clamp comprising a pair of shoes, each provided with pivots on its opposite sides, and lever means engaging said pivots and connecting said shoes to draw the same in opposite directions toward a common axis.

4. A pair of semicylindrical shoes, and lever means pivotally connecting said shoes to draw them in opposite directions toward a common axis.

5. A pair of semicylindrical hollow shoes, each provided with pivots on its opposite sides, and lever means connecting the pivots of the two shoes to draw said shoes together toward a common axis.

6. A pair of semicylindrical shoes each provided with pivots on its opposite sides, lever means pivoted on the pivots of one of said shoes and provided with a hook to detachably engage the pivots of the other shoe for the purpose of drawing the shoes toward a common axis.

7. A pair of semicylindrical hollow shoes, each provided with pivots on its opposite sides, lever means connecting the pivots of the two shoes to draw said shoes together toward a common axis, a lever, and connecting rods pivotally connecting the lever with said lever means.

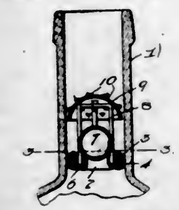
8. A shoe for a pipe clamp comprising a flexible sheet metal strap and a leather lining therefor.

9. A pipe clamp shoe comprising a metal strap looped at the ends, bars in said loops and provided with pivots projecting through said loops, and lever means connecting said pivots.

10. A pipe clamp shoe comprising a perforated metal strap bent to form loops, bars in said loops, each provided with a pivot projecting through a perforation in its loop.

11. A pipe clamp shoe comprising a curved strap bent at its ends from the outside inward to form loops, and bars in said loops provided with pivots extending outward through the strap.

870,932. NON-REFILLING ATTACHMENT FOR BOTTLES. EDWIN J. CLAYTON, Philadelphia, Pa. Filed Apr. 6, 1907. Serial No. 366,768.

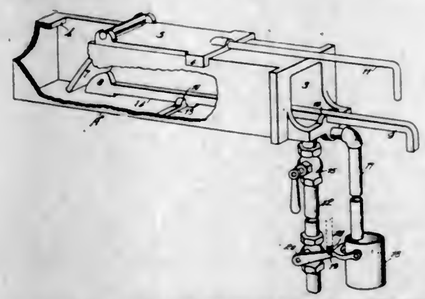


1. A non-refilling attachment for bottles embodying a valve seat, a valve cage, a valve coöperating with said seat and mounted in the cage, and a flexible ring encircling the valve seat and serving to hold the cage and seat together and also serving as a retainer for holding the device as a whole in the bottle neck.

2. A non-refilling attachment for bottles embodying a combined valve seat and retainer, a valve cage connected with said seat and comprising a cap having perforations and overlying projections, and a valve coöperating with said seat and mounted within the cage.

3. A non-refilling attachment for bottles embodying a ring of concavo-convex shape in cross section, a valve cage having the bars thereof projecting across the concaved periphery of said ring, a flexible band encircling the ring and the projecting ends of the cage bars, and a valve cooperating with said ring and mounted within the cage.

870,933. OIL-BURNER. CHARLES C. CLEVELAND, San Francisco, Cal. Filed Mar. 20, 1907. Serial No. 363,393.



1. An oil burner having in combination a box-like structure, open at the top and at one end, a movable cover-plate for the open top of the box, a movable damper-plate carried by the cover-plate and regulating the air-draft, said damper-plate having its lower end terminating short of the bottom of the box, and an oil-pipe delivering into the box at a point between the open end thereof and the damper-plate.

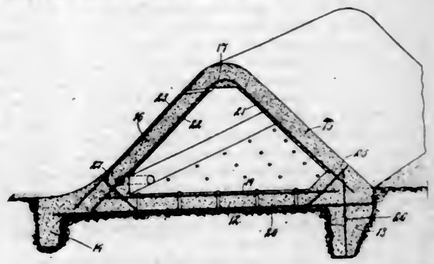
2. An oil burner comprising a box-like-structure, open at the top and at one end and provided with a movable cover for the open top, a damper-plate carried by the cover and regulating the air draft, an oil pipe delivering into the box at a point between the open-end of the box and said damper, and a baffle in the bottom of the box between the point where the oil enters the box and said damper.

3. An oil burner comprising a box-like-structure, open at the top and at one end and provided with a movable cover for the open top, a damper-plate carried by the cover and regulating the air draft, an oil pipe delivering into the box at a point between the open-end of the box and said damper, a baffle in the bottom of the box between the point where the oil enters the box and said damper, and means independent of said cover for regulating the damper.

4. An oil burner comprising a box-like-structure, open at the top and at one end and provided with a movable cover for the open top, a damper-plate carried by the cover and regulating the air draft, an oil pipe delivering into the box at a point between the open-end of the box and said damper, a baffle in the bottom of the box between the point where the oil enters the box and said damper, and means including a wedge-member engageable with the damper to tilt the latter to increase or decrease the air draft opening.

5. An oil burner comprising a box having an opening at one end for the admission of air and having an opening on top for the outlet of burning gases, a sliding cover for said last-named opening, said box closed at the rear and having an overhanging ledge proximate thereto, a damper-member carried by said sliding cover, an oil feed pipe, said damper coöperating with said rear end wall and said overhanging ledge whereby the current of air induced underneath said damper is deflected by said closed rear end and said overhanging ledge horizontally toward the front of the box.

870,934. DAM. HOWARD L. COBURN, Boston, Mass. Filed July 19, 1905. Serial No. 270,369.



1. A dam comprising an impervious deck slab rising from suitable foundations and inclined in the direction of flow of stream, an oppositely inclined slab or apron meeting the deck slab to form the crest of the dam, the said apron being of a strength and standing at an angle to prevent the overturning of the deck by the weight of water resting thereon, said deck and apron forming an unobstructed interior.

2. A dam consisting of a slab or deck of impervious material, inclined in the direction of the flow of the stream, engaged at its lower edge with the foundation of the dam, and an oppositely inclined slab supporting the upper edge of the deck and forming an apron for easing the overflowing water down to the bed of the stream and a strut to transfer the thrusts brought upon it by the weight of the deck and its superimposed load of water to the foundation, said deck and apron forming an unobstructed interior.

3. A dam consisting of a deck slab of concrete having its lower edge locked into the foundation bed so as to prevent the passage of water thereunder, its upper edge supported by a suitable continuous strut transmitting the pressures to the foundation or bed, said deck slab being

so reinforced by rods running vertically as to resist all bending stresses due to the superimposed load of water without the assistance of any intermediate supports between the bottom and top edges thereof, said strut being of a strength and standing at an angle to resist water pressure against the deck without internal bracing.

4. A dam consisting of a base, an inclined deck and an oppositely inclined apron, both rising from the said base and meeting at the crest to form a self-supporting structure, the said deck and apron being constructed of concrete or other suitable material, and forming an unobstructed interior.

5. A dam consisting of a slab or deck of concrete or other suitable material extending continuously across the channel of the stream from abutment to abutment, supported at its lower edge by the bed or foundation into which it is locked and prevented from overturning under action of the water pressure by a continuous strut rising from the base and meeting the upper edge of the deck to form a crest, said deck slab being suitably reinforced to resist bending or buckling between its supported edges, said deck and apron forming an unobstructed interior.

6. A hollow dam comprising an inclined deck, an oppositely inclined strut or apron meeting the deck at the crest of the dam, and inclined reinforcing members in the said deck and apron extending from the base to the crest of the dam, the members in the deck being arranged to resist bending stresses due to water pressure on the outer surface of the deck, while the members in the apron are arranged to resist bending and crushing stresses due to the pressure of the deck against the apron, the said reinforcing members compensating for the absence of internal supports within the space covered by the dam.

7. A hollow dam comprising an inclined deck, an oppositely inclined strut or apron meeting the deck at the crest of the dam, said parts being free from supports within the space covered by the dam, a series of inclined reinforcing members located in the deck in relatively close proximity to its inner face, and two series of inclined reinforcing members located in the apron, one near the inner face and the other near the outer face thereof, the reinforcing members of both deck and apron extending from base to crest crosswise of the deck and apron.

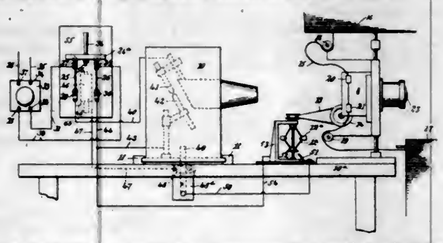
8. A hollow dam comprising an inclined deck, an oppositely inclined strut or apron meeting the deck at the crest of the dam, and a floor or foundation integral with the deck and apron, inclined reinforcing members in the deck and apron, extending from the base to the crest of the dam and arranged to compensate for the absence of internal supports for the deck and apron within the space covered by the dam, and transverse reinforcing rods in the floor extending crosswise of the dam, said members being arranged to compensate for the absence of internal supports by preventing deflection of the floor due to the load on the edge portions thereof, and to prevent the base of the structure from spreading.

9. A hollow dam comprising an inclined deck, an oppositely inclined strut or apron meeting the deck at the crest of the dam, and a floor or foundation integral with the deck and apron, inclined reinforcing members in the deck and apron extending from the base to the crest of the dam and arranged to compensate for the absence of internal supports for the deck and apron within the space covered by the dam, and two series of reinforcing rods in the floor, one series located near the upper face and the other near the lower face, and the rods of both series extending crosswise of the floor.

870,935. AUTOMATIC SWITCH-GOVERNOR. LEONARD COLSON and CHARLES GEBAUER, New York, N. Y.; said Colson assignor to said Gebauer. Filed June 25, 1907. Serial No. 380,814.

1. The combination of a moving picture projector, an electric lamp movable relatively to said projector, and means controllable by the position of said lamp relatively to said projector for lighting and extinguishing said lamp.

2. The combination of a stereopticon, a projector disposed adjacent to said stereopticon, a lamp movable relatively to said projector and to said stereopticon so as to be used with either said projector or said stereopticon at the will of the operator, a switch to be opened and closed by movements of said lamp, electric mechanism connected with said switch for lighting and extinguishing said lamp, a governor co-acting with said projector, and a contact to be opened and closed by said governor, the action of said contact being dependent upon the speed of said governor, said contact being connected with said electric mechanism for lighting and extinguishing said lamp.



3. The combination of a projector for moving pictures, a stereopticon, a lamp common to said projector and said stereopticon, said lamp being movable relatively thereto, speed-controlled mechanism connected with said projector for extinguishing said lamp when the speed of said speed-controlled mechanism drops below a predetermined limit, and means controllable by said lamp for preventing said speed-controlled mechanism from extinguishing said lamp when said lamp is used exclusively with said stereopticon.

4. The combination of a movable electric lamp, a circuit for energizing the same, an electrically-operated switch for opening said circuit, thereby deënergizing said lamp, a circuit connected with said switch for opening the latter, mechanism controllable by the position of said lamp for opening said last-mentioned circuit, and a picture projector to be illuminated by said lamp.

5. The combination of a picture projector, an electric lamp movable relatively to said picture projector for illuminating the same, a circuit connected with said lamp for energizing the latter, and means controllable by movements of said lamp for breaking said circuit.

6. The combination of a projector, a speed-controlled governor connected therewith, a contact connected with said governor and opened and closed by variations in the speed thereof, and an electric lamp in communication with said contact and controllable thereby for illuminating said projector.

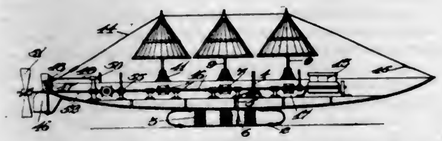
7. The combination of a lamp, a picture projector provided with a movable film and with means for actuating said film, and mechanism including a speed governor connected with said means and controllable by movements thereof for extinguishing said lamp.

8. The combination of a picture projector provided with means for supporting a movable film, a governor connected with said projector and having a speed related to that of said film, a lamp for illuminating said film, and means controllable by the speed of said governor for extinguishing said lamp whenever the speed of said film drops below a predetermined limit.

9. The combination of a picture projector provided with means for supporting a movable film, a governor connected with said projector having a speed related to the speed of said film, an electric lamp movable relatively to said projector for illuminating said film, a circuit for energizing said lamp, mechanism controllable by movements of said lamp for opening and closing said circuit, and a contact connected with said governor and controllable by movements thereof for opening and closing said circuit.

870,936. AERIAL MACHINE. BARTHOLOMEW CONNOLLY, Tonopah, Nev. Filed Apr. 1, 1907. Serial No. 365,768.

1. In an aerial machine, a main frame having vertically guided and movable stems, wings carried upon the upper ends of the stems, said wings including upper closed cone-shaped structures, and a lower portion formed with opening and closing shutters, means for reciprocating said stems and wings, said means including crank shafts, connections between said shafts and the wing stems and a motor.



2. In an aerial apparatus, a main frame or structure, vertically guided and slidable stems, wings carried upon the upper ends of the stems, said wings consisting of cone-shaped ribs with a crown-piece, with which the upper ends of the ribs are connected, and bands to which the lower ends are connected, a closed covering for the upper portion of the cone, and hinged leaves or shutters forming a closure for the lower portion of the cone, said shutters being adapted to open and close by the reciprocations of the stems.

3. In an aerial apparatus, a main frame or structure, vertically guided reciprocating stems, wings carried at the upper ends of said stems, said wings composed of a permanently closed covering for the upper portion of the cone, and hinged shutters comprising the lower portion of the cone and capable of alternately opening and closing by the reciprocations of the stems.

4. In an aerial machine, vertically reciprocating and guided stems having conical crowns fixed in the upper ends, ribs divergent therefrom and rings disposed in pairs around the lower periphery and intermediate between said periphery and the crown, said rings being assembled in pairs adapted to clamp and secure the ribs between them, a permanently closed covering between the crown and the first of the rings, shutters hinged to the ribs between the intermediate and lower rings, stops secured to the ribs against which stops the shutters are closable when the wings are drawn downwardly, said shutters being opened automatically when the wings are moved upwardly, and stops limiting the opening movement of the shutters.

5. In an aerial apparatus, a main frame, a motor, transversely journaled shafts driven from the motor, said shafts having cranks upon the outer ends, vertical stems having cone-shaped wings carried upon the upper ends, cross-heads carried by the stems, guides for said cross-heads, said guides consisting of I-shaped flanged bars fixed vertically to the frame and in line with the reciprocation of the stems.

6. In an aerial apparatus, a main frame, vertically guided and reciprocating stems, conically shaped wings carried by said stems and having a permanent covering for the upper part of the cone, and hinged opening and closing shutters for the lower part, tubular rods extending upwardly parallel with the stems, sleeves or guides carried by the stems, and openings in the closed covering through which the rods pass, transverse rods connected with said vertical rods above the line of movement of the wings, and guys or braces extending therefrom to the main structure.

7. In an aerial machine, a main frame having revoluble crank shafts journaled transversely thereon, said shafts having cranks at the outer ends, vertically guided reciprocable stems having conically shaped wings carried thereon, with opening and closing shutters, a motor, longitudinally journaled shafts with beveled gearing whereby the transverse shafts are revolved in unison and in one direction, clutches within the length of the transverse shafts and upon each side of the central driving shaft, means whereby said clutches may be engaged or partially disengaged to vary the rate of speed of the wings upon either side of the apparatus.

8. In an aerial machine, a main frame, transverse crank shafts journaled thereon, vertically guided and reciprocable stems connected with the crank shafts, cone-shaped wings carried by said stems and operable thereby, a driving shaft extending centrally and longitudinally through the apparatus and gears by which it is connected to drive the crank shafts, clutches within the crank shafts upon each side of the driving shaft, means for engaging or disengaging the clutches, said means including levers connected with one member of the clutch, said levers having knuckle joints, connections between said levers and an operating mechanism whereby the levers may act to engage and disengage the clutches at either end of the shafts.

9. In an aerial machine, a frame and vertically guided reciprocable wing-carrying stems, crank shafts journaled upon the frame and operatively connected with the wing stems, mechanism by which the said crank shafts are revolved in unison, friction clutches in the crank shafts upon either side of the center, knuckle-jointed levers connecting with the clutch members to disengage one and engage the other, a longitudinally journaled shaft having pinions thereon, bars connecting the knuckle-jointed levers having racks thereon engaged by the pinions of the turnable shaft whereby the clutches upon one side may be partially or wholly disengaged, and the clutches upon the other side maintained in engagement.

10. In an aerial machine, a frame or body, raising and propelling mechanism carried thereby, a means for relieving the shock of alighting, said means including a sub frame, springs interposed between it and the main frame, means for elevating the sub-frame to cause it to compress the springs and thereby increase the ability of the springs to resist compression, said springs adapted to expand and impart an upward impetus to assist in raising the machine.

11. In an aerial apparatus, a main frame, raising and propelling apparatus carried thereby, an elastic sub frame, means for increasing the tension of the sub-frame and its ability to resist concussion, said sub-frame adapted to expand and give an upward impetus which will assist in raising the machine from the ground.

12. In an aerial machine, a main frame, raising and propelling mechanism carried thereby, an elastic sub frame, means for increasing the tension of the said frame and its ability to resist concussion, said means consisting of a lever fulcrumed upon the main frame, a segment carried by the lever, and a flexible connection between the segment and the bottom of the sub frame.

13. In an aerial machine, a main frame with raising and propelling apparatus carried thereon, an elastic sub frame, a lever fulcrumed to the main frame, a segment carried by said lever, a flexible connection between the segment and the bottom of the elastic frame whereby the latter may be compressed, a holding latch, and means for disengaging said latch to allow the elastic frame to act in unison with the raising mechanism of the apparatus.

870,937. TREATMENT OF IRON OR STEEL FOR PREVENTING OXIDATION OR RUSTING. THOMAS W. COSLETT, Birmingham, England. Filed Apr. 9, 1907. Serial No. 367,154.

1. The treatment of iron or steel or articles composed or having a surface of iron or steel, consisting in subjecting the same to the action of a dilute solution of ordinary phosphoric acid whereby a deposit is effected thereon of phosphate of iron for the purposes specified.

2. In the treatment of iron or steel or articles composed or having a surface of iron or steel, a compound consisting of a dilute solution of ordinary phosphoric acid substantially as and for the purposes specified.

3. In the treatment of iron or steel or articles composed or having a surface of iron or steel, a compound consisting of a dilute solution of ordinary phosphoric acid with the addition of a substance adapted to control or regulate the chemical reactions, substantially as and for the purposes specified.

4. In the treatment of iron or steel or articles composed or having a surface of iron or steel, the solution or com-

position consisting of ordinary phosphoric acid, iron and water, in or about the proportions hereinbefore stated.

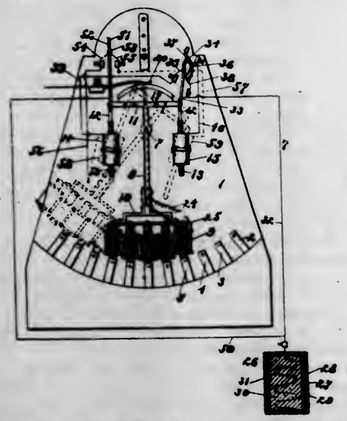
5. A protective covering for iron or steel or articles composed or having a surface of iron or steel comprising, as an essential constituent, normal ferric and ferrous phosphate of iron, for the purposes specified.

6. Iron or steel or articles composed or having a surface of iron or steel furnished with a coating or deposit of phosphate of iron, substantially as hereinbefore described for the purposes specified.

7. In the treatment of iron or steel or articles composed or having a surface of iron or steel, effecting a coating or deposit thereon of phosphate of iron by passing an electric current through a dilute solution of ordinary phosphoric acid.

8. In the treatment of iron or steel or articles composed or having a surface of iron or steel, effecting a coating or deposit thereon of phosphate of iron by passing an electric current through a dilute solution of ordinary phosphoric acid with the addition of a substance adapted to control or regulate the chemical reactions.

870,938. ALTERNATING-CURRENT GENERATOR. GEORGE H. COVE, Roxbury, Mass., assignor of one-half to Frank R. Kimball, Boston, Mass. Filed May 7, 1906. Serial No. 315,676.



1. An alternating current generator, comprising a series of fixed magnets having their poles arranged alternately and set in an arc, and a pendulum arranged to oscillate over said alternately arranged magnet poles and provided adjacent said magnets with an electro magnet, the opposite terminals of whose windings are connected in the circuit on which said alternating current is to be impressed.

2. An alternating current generator, comprising a pendulum provided at its swinging end with an electro magnet, circuit wires leading from the terminals of said magnet, a series of fixed magnets set in an arc and arranged successively with opposite polarity to lie in the path of said pendulum, independent electro magnetic means for oscillating said pendulum, and a source of current supply for said electro magnetic means.

3. An alternating current generator, comprising a pendulum provided at its swinging end with an electro magnet, circuit wires leading from the terminals of said magnet, a series of fixed magnets set in an arc and arranged successively with opposite polarity to lie in the path of said pendulum, electro magnets and their movable cores, connected to said pendulum at the opposite sides of the latter, a source of current supply therefor, and an automatic switch operated by the swinging of the pendulum, to shift the current from one of said sides to the other.

4. An alternating current generator, comprising two series of fixed magnets arranged in the arc of a circle, each series having successive magnets arranged with reverse polarity, a swinging electro magnet for each of said series, electro magnetic means for oscillating said swinging electro magnets, and automatic switching mechanism for cutting off the current from the electro magnetic actuating means of one of said swinging magnets at the end of its swing, when the other swinging magnet is at the center of its swing.

5. An alternating current generator, comprising a series of fixed magnets set in the arc of a circle and having successive opposite polarity, a pendulum provided with electro magnetic means for cutting the magnetic fields of said fixed magnets, means for automatically swinging said pendulum, and means including a second set of fixed magnets and a second pendulum provided with similar electro magnetic means, for producing alternations of current during the interval when said first-mentioned pendulum is at rest at the end of its oscillation.

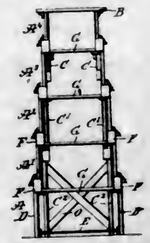
870,939. LIFTING-JACK. WILLIAM M. COX, Belleville, Ill. Filed Jan. 26, 1907. Serial No. 354,288.



1. In a lifting jack, a standard, runners mounted thereon, a hand lever pivotally connected with one runner, a stud on the lower runner provided with a laterally-projecting lug, and a link pivoted to the hand lever, said link having a key-hole slot for engaging the stud on the lower runner.

2. In a lifting jack, a standard, runners mounted thereon, a spring-actuated clamping device on the upper runner, a lever pivoted to the said runner a connecting link pivoted to the lever and provided with a key-hole slot at its lower end, and a stud on the lower runner having a laterally-projecting lug adapted to enter the slot in the lower end of the link.

870,940. FOLDING STEP-LADDER. ALBERT DAHL, New York, N. Y. Filed June 28, 1907. Serial No. 381,224.



1. A folding step ladder comprising single tread sections slidable one on the other, the tread of the sections being at the lower ends thereof, means for fastening the said tread sections in place when in extended position, a leg hingedly connected with the top tread section and made in sections slidable one on the other, and means for fastening the said leg sections in place when extended.

2. A folding step ladder comprising a bottom section provided at its upper end with inwardly extending bearings, a plurality of single tread sections, each having sides, a tread connecting the sides with each other at the lower ends thereof, and bearings held on the upper ends of the said sides and extending inwardly, to be engaged by the sides of the adjacent section.

3. A folding step ladder comprising a bottom section provided at its upper end with inwardly extending bearings, a plurality of single tread sections each having sides, a tread connecting the sides with each other at the lower ends thereof, bearings held on the upper ends of the said sides and extending inwardly to be engaged by the sides of the adjacent section, the section adjacent the said bottom section having its sides slidable in the said bearings of the bottom section, and a locking device for locking each side in position in the corresponding bearing.

4. A folding step ladder comprising a bottom section provided at its upper end with inwardly extending bearings, a plurality of single tread sections each having sides, a tread connecting the sides with each other at the lower ends thereof, bearings held on the upper ends of the said sides and extending inwardly to be engaged by the sides of the adjacent section, the section adjacent the said bottom section having its sides slidable in the said bearings of the bottom section, and a locking device for locking each side in position in the corresponding bearing, the said locking device being in the shape of a U-shaped pin engaging registering apertures in a bearing and the corresponding side slidable thereon.

5. A folding step ladder having single tread sections, each section having sides, a tread connecting the sides with each other at the lower portions thereof, and bearings secured on the upper ends of the sides and extending inwardly toward each other, the bearings of one tread section being slidingly engaged by the sides of the next following tread section, and the bearings of one section forming a stop for the tread of the next tread section below.

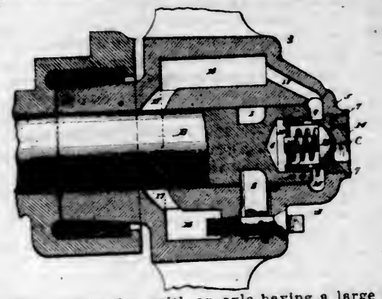
6. A folding step ladder having single tread sections, each section having sides, a tread connecting the sides with each other at the lower portions thereof, bearings secured on the upper ends of the sides and extending inwardly toward each other, the bearings of one tread section being slidingly engaged by the sides of the next following tread section, and the bearings of one section forming a stop for the tread of the next tread section below, and fastening pins for locking the sections in an extended or folded position.

7. A folding step ladder having single tread sections, each section having sides, a tread connecting the sides with each other at the lower portions thereof, bearings secured on the upper ends of the sides and extending inwardly toward each other, the bearings of one tread section being slidingly engaged by the sides of the next following tread section, and the bearings of one section following tread section, and the bearings of one section forming a stop for the tread of the next tread section below, folded position, and means for locking the said fastening pins in place.

8. In a folding step ladder, a plurality of sections, bearings at the upper ends of the sections and in which the sides of the section above slides, said bearings having angular flanges fitting in grooves in said sides, and tread irons secured to the lower ends of the sides of the sections and extending into the bearings and provided with flanges fitting in grooves of the sides of the section next below.

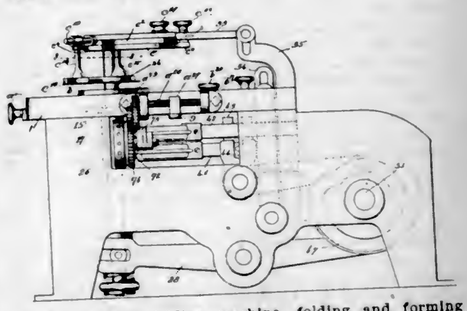
870,941. AXLE-LUBRICATOR. ALFRED B. DAY, Knoxville, Tenn. Filed June 13, 1907. Serial No. 378,791.

1. The combination, with an axle having a recess formed in its end and a wheel hub provided with chambers for holding lubricant and with a screwthreaded opening in its outer end, of a valve attachment, comprising a spring-seated valve and a cage or holder therefor which is provided with a screwthreaded head adapted for insertion in the opening in the hub, the inner portion of the cage projecting inside the hub of the wheel and provided with lateral openings for the passage of lubricant, as described.



2. The combination, with an axle having a large recess in its end and a wheel hub having lubricant passages and chambers and provided at its outer end with an enlarged opening coincident with the recess in the axle, of a valve attachment, comprising a cage adapted for insertion in said opening and with a radial flange adapted to abut the portion of the hub surrounding the opening, said cage projecting, when in place, into the recess in the axle, and a spring-pressed valve seated outwardly in such cage, as shown and described.

870,942. VAMP-FOLDING MACHINE. GEORGE F. DUNN, Brockton, Mass., assignor, by mesne assignments, to Boston Machine Works Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 28, 1903. Serial No. 174,843.



1. In a vamp folding machine, folding and forming mechanism, and means to adjust the same widthwise and lengthwise.

2. In a vamp folding machine, folding and forming mechanism, and means to simultaneously adjust the same widthwise and lengthwise.

3. In a vamp folding machine, coöperating folding members, including a vamp edge engaging device having a substantially U-shaped working edge, conforming to the folded edge of the vamp, the sides of said device being adjustable longitudinally for changing the length of the working edge.

4. In a vamp folding machine, a former, having a substantially U-shaped working edge, conforming to the folded edge of the vamp, said former being longitudinally adjustable along the sides or legs of the U, for conforming to different sizes of vamps.

5. In a vamp folding machine, a folder, having a substantially U-shaped working edge, conforming to the folded edge of the vamp, said former being longitudinally adjustable along the sides or legs of the U, for conforming to different sizes of vamps.

6. In a vamp folding machine, a receiving table having

an edge contour corresponding in shape to the folded edge of the vamp, a former adapted to rest on the blank and table and having a forming edge corresponding to the shape of the latter, a folder adapted to operate in the space embraced by said former and table, means to lengthen said former, and means to lengthen said folder.

7. In a vamp folding machine, a receiving table having an edge contour corresponding in shape to the folded edge of the vamp, a former adapted to rest on the blank and table and having a forming edge corresponding to the shape of the latter, a folder adapted to operate in the space embraced by said former and table, and means to simultaneously lengthen and widen said folding means.

8. In a vamp folding machine, a receiving table having an edge contour corresponding in shape to the folded edge of the vamp, a former adapted to rest on the blank and table and having a forming edge corresponding to the shape of the latter, a folder adapted to operate in the space embraced by said former and table, and means to simultaneously lengthen and widen said former.

9. In a vamp folding machine, a receiving table having an edge contour corresponding in shape to the folded edge of the vamp, a former adapted to rest on the blank and table and having a forming edge corresponding to the shape of the latter, a folder adapted to operate in the space embraced by said former and table, and means to simultaneously lengthen and widen said supporting table.

10. In a vamp folding machine, forming mechanism, folding mechanism, and a supporting table having an edge contour corresponding to a folded vamp and composed of a plurality of independent parts having their upper surfaces lying substantially in the same plane, and means for moving certain of said parts for lengthening the table to different sizes of vamps.

11. A vamp folding machine, having a work supporting table made up of a plurality of independent parts, and automatic means for adjusting said parts for different lengths and widths.

12. In a vamp folding machine, a work supporting table having an edge shaped to correspond to a folded vamp, said edge being composed of a plurality of independently movable parts, including longitudinally movable top-pieces for the sides of the vamp and a separate intermediate piece, and hand operated means for independently adjusting said top-pieces.

13. In a vamp folding machine, a former having its forming blades longitudinally adjustable for different sizes of vamps, power mechanism for operating said former, and hand operated mechanism for adjusting said blades longitudinally independently of said power mechanism.

14. In a vamp folding machine, a former provided with forming blades, expansible and longitudinally adjustable, power mechanism for operating said former, means for coupling said blades to said power mechanism for simultaneous expansion and lengthening thereof, and means for coupling said blades to said power mechanism solely for expansion.

15. In a vamp folding machine, a folder having folding blades composed of a plurality of parts arranged for expansion and also for lengthening, power mechanism for operating said parts, and means for coupling said power mechanism thereto for operating said parts for either or both movements as desired.

16. In a vamp folding machine, a work supporting table, having a U-shaped recess with outwardly curved ends for receiving a circular vamp, said table at the sides and ends of said recess being movable with relation to the rest of the table, and means for adjusting the same longitudinally.

17. In a vamp folding machine, a work supporting table, having a U-shaped recess with outwardly curved ends for receiving a circular vamp, said table at the sides and ends of said recess being movable with relation to the rest of the table, and means for adjusting said table laterally for increasing the width of said recess.

18. In a vamp folding machine, a work supporting table having at one end a recess corresponding to the shape of the vamp, said table being composed of a plurality of relatively movable parts for adjusting the table to different vamps, and means for maintaining the receiving surface of said table flat and continuous in all its adjustments adjacent said recess.

19. In a vamp folding machine, a work supporting table having a U-shaped recess with outwardly curved ends for receiving a circular vamp, said table comprising a plurality of independently movable parts including opposite top-plates at the sides of said recess, and means for simultaneously separating said top-plates and moving them lengthwise with relation to the rest of the table.

20. In a vamp folding machine, a folder whose edge conforms to the shape of a circular vamp and comprising central folding blades and laterally extending side blades, independently movable, and means for moving said side blades longitudinally of said central blade.

21. In a vamp folding machine, a folder whose edge conforms to the shape of a circular vamp and comprising central folding blades and laterally extending side blades, independently movable, means for expanding said central and side blades, and means for simultaneously moving said side blades longitudinally.

22. In a vamp folding machine, a former having its forming portions composed of a plurality of independently movable parts shaped internally to correspond to a circular vamp, the rear portions thereof each having an outward forming-curve, and means for moving said rear portions longitudinally of the former.

23. In a vamp folding machine, a former having its forming portions composed of a plurality of independently movable parts shaped internally to correspond to a circular vamp, the rear portions thereof each having an outward forming-curve, and means for moving said rear portions longitudinally of the former independently of the forward-forming portions.

24. In a vamp folding machine, a former having its forming portions composed of a plurality of independently movable parts shaped internally to correspond to a circular vamp, the rear portions thereof each having an outward forming-curve, and means for simultaneously moving said rear portions laterally and longitudinally of the former.

25. In a vamp-folding machine, a vamp-edge-engaging device having a substantially U-shaped working edge with flaring ends, conforming to the recess in a short vamp, said device being adjustable in length along the sides or legs of the U.

26. In a vamp-folding machine, a former having a substantially U-shaped working edge with flaring ends, conforming to the recess in a short vamp, said former being adjustable in length along the sides or legs of the U, and means for folding the edge of the vamp around said former.

27. In a vamp-folding machine, a folder having a substantially U-shaped working edge with flaring ends, conforming to the recess in a short vamp, said folder being adjustable in length along the sides or legs of the U, and a former around which said folder folds the edge of the vamp.

28. In a vamp-folding machine, a vamp-supporting table having a substantially U-shaped working edge with flaring ends, conforming to the recess in a short vamp, said table being adjustable in length along the sides or legs of the U, and means coöperating with said table for folding the edge of the vamp.

29. In a vamp-folding machine, a vamp-edge-engaging device having a substantially U-shaped working edge conforming to the recess in a vamp, said device composed of halves having a working movement toward and from each other, each half being adjustable in length.

30. In a vamp-folding machine, a vamp-edge-engaging member having a working movement and adjustable in length, adjusting connections arranged to follow the working movement of said member, and means operating on said connections for adjusting the length of said member.

31. In a vamp-folding machine, a vamp-edge-engaging member having a working movement and adjustable in length, a reciprocatory element for imparting said working movement, and a device carried by and adjustable on said element and connected to impart said length-adjustment.

32. In a vamp-folding machine, a plurality of vamp-edge-engaging devices coöperating to fold the edge of the vamp and having substantially U-shaped working edges with flaring ends, conforming to the recess in a short vamp, said devices having sliding sections for adjusting them in length, and means connecting said sliding sections in the respective devices for causing the adjusting movements of said sections to occur in common.

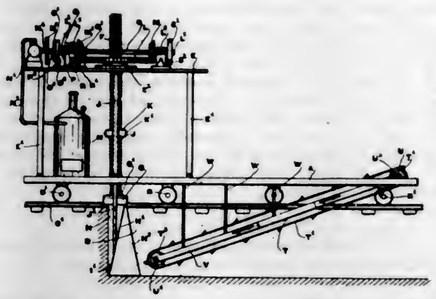
33. In a vamp-folding machine, a former, a folder, and a vamp-supporting table, all having sliding sections for varying their length, mechanism connected with the slidable section in one of said devices for adjusting the same, and connections from said section to the slidable sections in the other devices for producing similar adjusting movements in the last-said sections.

34. In a vamp-folding machine, a vamp-supporting table and a folder, each having an adjustable section, said folder having a working movement over the table edge and a movement into and out of the plane of said table-edge, and a connection between the sliding sections of said folder and table having provisions for imparting the contracting adjusting movement of the folder to the table, and the adjusting movement of the folder-section to the table-section and for permitting the expanding working movement of the folder with respect to the table.

35. In a vamp folding machine, a receiving table having an edge contour corresponding in shape to the folded edge of the vamp, a former adapted to rest on the blank and table and having a forming edge corresponding to the shape of said edge contour, a folder coöperating with said former and table, and adjusting means to lengthen said former.

36. In a vamp folding machine, a receiving table having an edge contour corresponding in shape to the folded edge of the vamp, a former adapted to rest on the blank and table and having a forming edge corresponding to the shape of said edge contour, a folder coöperating with said former and table, and adjusting means to lengthen said folder.

870,943. EXCAVATOR. JAMES P. FARRELLY, Winnipeg, Manitoba, Canada. Filed Mar. 6, 1907. Serial No. 360,919.



1. In an excavator, the combination with the supporting platform, of a cutting blade, means for slowly forcing said blade downwardly and means for rapidly raising said blade.

2. In an excavator, the combination with the lower platform supported on trucks, and an upper platform supported from the rear end of the lower platform by posts, of a tapered cutting blade, having forwardly extending side faces, a vertical threaded shaft bolted to the cutting blade, the said shaft passing upwardly through the platform, a nut on the shaft, the said nut being secured rigidly to, and centrally on the upper platform, a bevel wheel on the shaft and bearing on the upper face of the nut, pinions mounted on the upper platform and meshing with the bevel wheel, a prime mover, means for throwing either of the pinions into active engagement with the main shaft of the prime mover, and means to prevent rotation of the shaft, as and for the purpose specified.

3. In an excavator, the combination with the lower platform supported on trucks, and an upper platform supported from the rear end of the lower platform by posts, of a tapered cutting blade having forwardly extending side faces, a vertically threaded shaft bolted to the upper face of the blade and extending beyond the upper platform, a nut on the shaft the said nut being rigidly and centrally secured to the upper face of the elevated platform, a bevel wheel on the shaft and bearings on the upper face of the nut, stub shafts mounted in bearings, formed in standards secured to the upper platform, pinions on the shafts adapted to mesh with the bevel wheels, a prime mover means for throwing the pinions, individually, into or out of engagement with the main shaft of the prime mover, and means to prevent rotation of the threaded shaft, as and for the purpose specified.

4. In a device of the class described, the combination with the threaded shaft, of a tapered cutting blade, said blade consisting of front, back and end faces, formed from boiler plates, riveted the one to the other, and reinforced centrally by cross braces, the said end plates extending forwardly and forming at the lower end cutting edges, and having further a sharpened hardened cutting edge bolted between the lower edges of the front and back faces, forming the cutting edge proper, as and for the purpose specified.

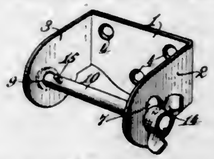
5. In an excavator, the combination with the supporting platform, of a cutting blade and means for imparting a slow downward and a relating quick return movement thereto as and for the purpose specified.

6. In an excavator, the combination with a vertically reciprocating shaft, of a cutting blade secured to the lower end thereof and vertical guideways located to each side of the cutting blade designed to operate therein as and for the purpose specified.

7. In a device of the class described, a cutting blade having an inclined outer face and formed of sheet metal and having interior cross braces, and a cutting edge of hardened metal secured to the lower end thereof as and for the purpose specified.

8. In a device of the class described, a cutting blade formed of sheet metal and having an inclined outer face and having interior cross braces, a cutting blade of hardened metal secured to the lower end thereof and supplemental cutting blades extending forwardly from each side of the main blade as and for the purpose specified.

870,944. CLOTHES-LINE STRETCHER. CYRUS R. FISH, Denver, Colo. Filed Feb. 21, 1907. Serial No. 358,589.

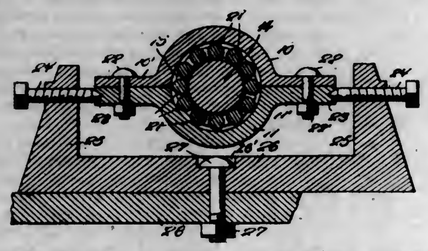


A clothes line stretcher consisting of a supporting bracket provided with a pair of suspension arms each having an opening, one of the openings having a rectangular portion, a winding shaft mounted in the openings of said arms and provided with a flattened portion adapted to take in the rectangular portion of the opening thereby locking the shaft, said shaft further provided with a screw-threaded portion terminating in said flattened portion, and a thumb-nut attached to said screw-threaded portion.

870,945. SHAFT-HANGER. HENRY C. FLOYD, Beulahville, Va. Filed Nov. 22, 1906. Serial No. 344,667.

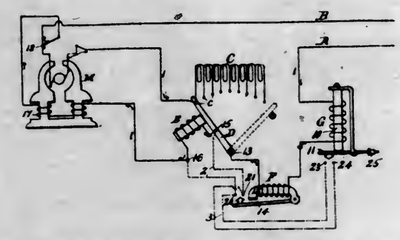
The hereindescribed shaft hanger comprising a flat horizontal foundation plate, a supporting plate having a broad flat bottom in contact with the upper surface of the foundation plate, said plates being provided with bolt holes in vertical registry and that of the supporting plate being counterbored at its upper end, a center bolt in said holes securing said plates together and with the bolt head seated within said counterbore and whereon the supporting plate

may move in a horizontal plane with respect to the foundation plate, said supporting plate being provided with inwardly inclined uprights at opposite sides of the center bolt, oppositely disposed conical ended screws projecting through and adjustably secured in said uprights and in alinement with each other, the uprights and screws lying



substantially within the length of the bottom of the supporting plate, and a shaft bearing pivotally and adjustably supported upon the said screw ends, the axis of the shaft opening of the bearing being at right angles to the line of the screws.

870,946. CONTROLLING MECHANISM FOR ELECTRIC CIRCUITS. TAYLOR T. FOGEL, Reading, Pa., assignor of two-thirds to Alfred J. Mason, Reading, Pa. Filed May 1, 1907. Serial No. 371,261.



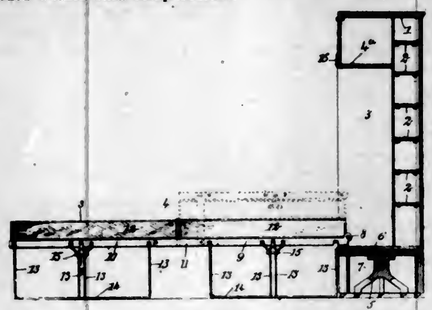
1. In combination with a switch arm, and an electro magnet arranged to normally hold the same in circuit-closing position and to release the same when deënergized, a short circuit and an underload magnetic shunting device whereby said short circuit is closed upon fail of the service current to cut out said electro magnet.

2. An automatic rheostat for electric machinery, comprising a resistance with a switch for cutting the same out or in, an electro magnet for normally holding the switch in closed position and releasing the same when deenergized, a magnetic shunting device normally in circuit with said electro magnet, and a short circuit which is closed by said shunting device in case of underload.

3. An automatic rheostat for electric machinery, comprising a resistance with a switch for cutting the same out or in, an electro magnet for normally holding the switch in closed position and releasing the same when deenergized, an overload magnetic shunting device and an underload magnetic shunting device both normally in circuit with said electro magnet, a short circuit adapted to be closed by said overload shunting device, and a short circuit adapted to be closed by said underload shunting device.

870,947. COMBINED BOOKCASE AND FOLDING BED. WILLIAM FREEDMANN, New York, N. Y. Filed May 15, 1907. Serial No. 373,730.

1. The combination of a book-case having a compartment formed at the rear thereof, said book-case being provided with a pedestal on which it is revolubly mounted, and a box-base surrounding the pedestal, disconnected therefrom and from the book-case, and a bed composed of two sections pivotally connected together, adapted to be folded within said compartment.



2. The combination of a book-case having a compartment and a locker thereabove at the rear of the case, a pedestal revolubly supporting the book-case, a box-base disconnected from the pedestal and the book-case and inclosing the pedestal, and a bed composed of two sections pivotally connected together, with one of said sections pivoted to the book-case in said compartment, whereby the two sections may be folded one upon the other and swung into said compartment.

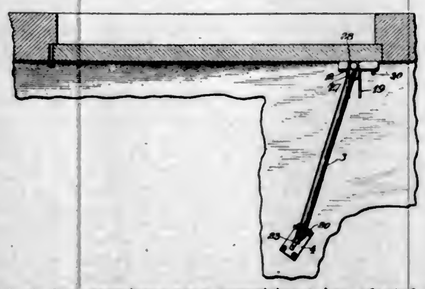
3. The combination of a book-case having a compartment, a bed composed of an inner and outer section, means pivotally connecting the inner section to the book-case at the front of said compartment, links pivotally connecting the two sections of the bed together, legs pivotally attached and connected together at the side of each section, and pivoted stops for limiting the outward pivotal movement of said legs.

4. A folding bed composed of two sections, foldable one upon the other, and legs pivotally attached to the opposite sides of each section, foldable thereunder transversely of the bed.

5. An article of furniture comprising a pedestal, a body revolubly mounted on said pedestal having a compartment, a bed foldable within said compartment, and a box-base disconnected from both the pedestal and body and surrounding and inclosing the pedestal.

6. A folding bed composed of two sections foldable one upon the other, legs pivotally attached to the opposite sides of each section and foldable thereunder transversely of the bed, each leg being composed of side-bars connected together at their free ends by a foot-bar, and stops movable into the path of the side-bars of the legs to limit the outward movement thereof.

870,948. DOOR-SECURER. EMIEL R. FUCHS, New York, N. Y. Filed Jan. 28, 1907. Serial No. 354,520.



1. A door securing means comprising a bar adapted to rest against the door, an abutment on the floor against which the lower end of said bar is set, an abutment secured to the door, means for moving said bar into and out of engagement with said latter abutment, and means for raising said bar out of engagement with the floor abutment and for holding it upon the door when the latter reaches a predetermined point in its inward movement.

2. A door securing means comprising a bar adapted to rest against the door, an abutment on the floor against which the lower end of said bar is set, an abutment secured to the door, means for moving said bar into and out of engagement with said latter abutment, and beveled surfaces secured to the door adapted to engage said bar to thereby lift it out of engagement with the floor abutment when the door reaches a predetermined point in its inward movement.

3. A door securing means comprising a bar adapted to rest against the door, an abutment on the floor against which the lower end of said bar is set, an abutment secured to the door, means for moving said bar into and out of engagement with said latter abutment, said bar being disposed in a vertical plane at an acute angle to the plane of the door, a pin projecting from said bar, and beveled surfaces secured to the door and adapted to engage said pin to thereby lift the bar out of engagement with the floor abutment when the door reaches a predetermined point in its inward movement.

4. A door securing means comprising a bar adapted to rest against the door, a floor socket in which said bar is stepped constituting an abutment to resist the thrust of the bar, an abutment secured to the door, means for moving said bar into and out of engagement with said latter abutment, means secured to the door for lifting the bar out of the floor socket when the door reaches a predetermined point in its inward movement, and a pivoted block secured in the floor socket adapted to bear against said bar as it is raised out of the socket.

5. A door securing means comprising a bar adapted to rest against the door, an abutment on the floor against which the lower end of said bar is set, an abutment secured to the door, a lock also secured to said door, said lock comprising a bolt with which said bar engages and cover plates so disposed as to provide a channel between them for the bar as the door is being opened or closed, and means for blocking said channel to limit the upward movement of the bar.

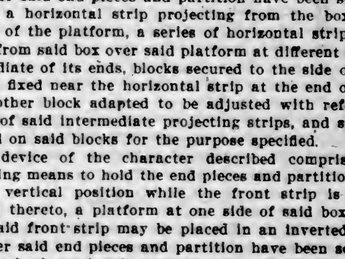
6. A door securing means comprising a bar adapted to rest against the door, an abutment on the floor against which the lower end of said bar is set, an abutment secured to the door, a lock also secured to said door, said lock comprising a bolt with which said bar engages and cover plates so disposed as to provide a channel between them for the bar as the door is being opened or closed, means for blocking said channel to limit the upward movement of the bar, and a guide plate extending across said channel to prevent the bar from falling forward.

7. A door securing means comprising a bar adapted to rest against the door, an abutment on the floor against which the lower end of said bar is set, an abutment secured to the door, a lock also secured to said door said lock comprising a bolt with which said bar engages and a cover plate so disposed as to provide a channel for the bar as the door is being opened or closed, and a deflecting block at the upper end of said channel to prevent the bar from contacting with the door.

870,949. TRUNK-TRAY FORM. WALTER S. GILSON, Benton Harbor, Mich. Filed Feb. 21, 1907. Serial No. 358,682.

1. A device of the character described comprising a box, having means at one end to hold one end piece of a tray in vertical position, said box provided with a series of vertical slots near the other end thereof for holding the other end piece at different positions, and adjustable means for holding the partition vertically intermediate of the end pieces.

2. A device of the character described, comprising a box having a spring secured to its bottom near one end and adapted to hold one end piece of a tray in vertical position against the end of said box, the latter provided with a series of vertical slots near the other end thereof for holding the other end piece of the tray at different positions, and adjustable means for holding the partition vertically intermediate of said end pieces.



3. A device of the character described comprising a box having means at one end to hold one end piece of a tray in vertical position, said box provided with means near the other end thereof for holding the other end piece at different positions, a series of horizontal strips arranged across the top of said box, vertical strips secured to the inner surfaces of the sides of said box in line with said horizontal strips, and an adjustable plate carrying a spring adapted to hold the partition of the tray against one of said horizontal strips and the vertical strips in line therewith.

4. A device of the character described comprising a box having means at one end to hold one end piece of a tray in vertical position, said box provided with means near the other end thereof for holding the other end piece at different positions, a series of horizontal strips arranged across the top of said box, vertical strips secured to the inner surfaces of the sides of said box in line with said horizontal strips, a plate arranged to slide in grooves in the sides of the box and carrying a spring adapted to bear against the partition and hold it against one of said horizontal strips, and the vertical strips in line therewith, and means to secure said plate in proper position relative to each of said horizontal strips.

5. A device of the character described comprising a box having means to hold the end pieces and partition of a tray in vertical position, while the front strip is being fastened thereto, a platform at one side of said box upon which said front strip may be placed in an inverted position after said end pieces and partition have been secured thereto, and means on said box for supporting one of said end pieces and said partition while the back strip of the tray is being fastened in place.

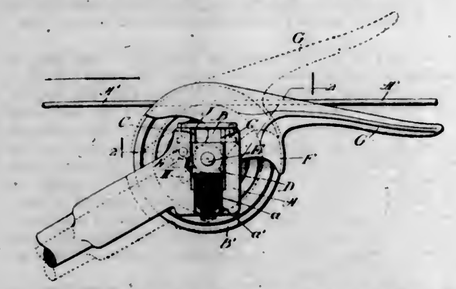
6. A device of the character described comprising a box having means to hold the end pieces and partition of a tray in vertical position while the front strip is being fastened thereto, a platform at one side of said box upon which said front strip may be placed in an inverted position after said end pieces and partition have been secured thereto, a horizontal strip projecting from the box over one end of the platform, a series of horizontal strips projecting from said box over said platform at different points intermediate of its ends, blocks secured to the side of said box, one fixed near the horizontal strip at the end of said box, another block adapted to be adjusted with reference to each of said intermediate projecting strips, and springs mounted on said blocks for the purpose specified.

7. A device of the character described comprising a box having means to hold the end pieces and partition of a tray in vertical position while the front strip is being fastened thereto, a platform at one side of said box upon which said front strip may be placed in an inverted position after said end pieces and partition have been secured thereto, a horizontal strip projecting from the box over one end of the platform, a series of horizontal strips projecting from said box over said platform at different points intermediate of its ends, blocks secured to the side of said box, one fixed near the horizontal strip at the end of said box and another block adapted to be adjusted with reference to each of said intermediate projecting strips, each of said blocks being triangular in cross section, and springs mounted on the upper face of the projecting portions of said blocks for the purpose specified.

8. A device of the character described comprising a box having means to hold the end pieces and partition of a tray in vertical position while the front strip is being secured to the peaked ends thereof, and a trough-shaped platform secured to the side of said box and adapted to receive said front strip when inverted for the purpose specified.

9. A device of the character described comprising a box having means to hold the end pieces and partition of a tray in vertical position while the front strip is being secured to the ends thereof, a platform secured to the side of said box and adapted to receive said front strip inverted after the end pieces and partition have been fastened thereto, the means for holding the partition in the box including a horizontal strip arranged across the top of said box and extending out over the platform whereby it also forms a support for one side of said partition when removed from said box, a horizontal strip projecting from the box over the platform at one end thereof, and means to hold the partition and one end piece respectively against said horizontal projecting strips.

870,950. TROLLEY. WALTER P. GISSKE, Los Angeles, Cal. Filed Apr. 10, 1907. Serial No. 367,454.



1. A pair of plates or arms having lugs contacting with rollers fastened in a fork for the purpose of transmitting a circular movement to said plates or arms, when said plates or arms are raised vertically by shaft on which they are mounted.

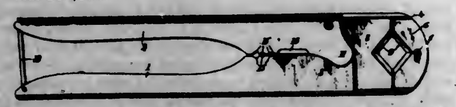
2. A pair of arms mounted on a shaft operated vertically by coiled springs and circularly by roller pressed lugs projecting from hubs of said arms.

3. A fork containing rollers on the inside thereof controlling the movement of arms mounted on a trolley wheel shaft, said shaft being limited in its upward movement by plates fastened over ways in said fork, said ways containing sliding blocks in which said shaft is loosely mounted.

4. The combination with a trolley harp, provided with guideways and spring actuated blocks in said guideways; rollers journaled in said harp and a plurality of plates in operative relation to said rollers, said plates being adapted to be forced upwardly when the trolley wheel is disengaged from the wire.

5. A plurality of plates provided with lugs, in combination with a trolley harp, provided with rollers against which said lugs are adapted to impinge and means to impart upward travel to said plates.

870,951. TOOL. GEORGE H. GOODHOLM and JACOB A. TRAIN, Lindsborg, Kans. Filed Mar. 12, 1907. Serial No. 361,934.



1. In a tool of the character described, cutting blades having opposed cutting edges, means providing for a limited pivotal movement of one of said blades, and a hand lever operable to force the other blade toward the pivoted blade.

2. In a tool of the character described, cutting blades arranged in the same plane having opposed V-shaped cutting edges, means providing for a limited pivotal movement of one of said blades, and means for slidably forcing the other blade toward the pivoted blade.

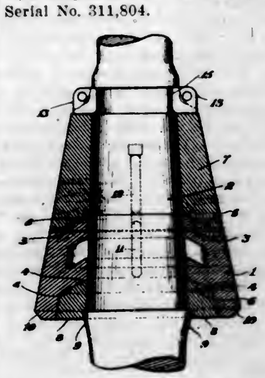
3. In a tool of the character described, a lever of sheet metal bent to form a slotted head closed at the opposite edges with said slot passing continuously through the head, a cutting blade secured within the slot of the head, a second blade opposed to the first slidable within the slot of the head, and a sheet metal lever having a cam pivoted in the slot of said head operable to force said slidable blade toward the other blade.

4. In a tool of the character described, a lever having a slotted head, a cutting blade pivoted in the slot of said head, a second cutting blade opposed to the first and slidable within the slot of said head, and a second lever pivoted to the head and having a cam projecting in the slot thereof operable to force said second cutting blade toward the pivoted blade.

5. In a tool of the character described, a lever having a slotted head, a cutting blade pivoted in the slot of said head, a second cutting blade opposed to the first and slidable within the slot of said head, a second lever pivoted to the head and having a cam projecting in the slot thereof operable to force said second cutting blade toward the pivoted blade, and means for locking the levers together.

6. In a tool of the character described, a lever having a slotted head constructed of sheet metal, a cutting blade pivoted within the slot of the head, a second blade opposed to the first slidable within the slot of said head, and a sheet metal lever having a cam pivoted to said head and operable to force said slidable blade toward the pivoted blade.

870,952. CRUSHER-HEAD FOR GYRATORY ORE-CRUSHERS. CHARLES W. GUTTZEIT, High Bridge, N. J., assignor to Taylor Iron and Steel Company, High Bridge, N. J., a Corporation of New Jersey. Filed Apr. 14, 1906. Serial No. 311,804.



1. In a gyratory crusher head a crushing member and a supporting shaft therefor, and means to secure said member upon said shaft, said means being constructed and arranged to permit free lateral expansion and contraction of said member while holding it at all times firmly with respect to said shaft.

2. In a gyratory crusher head a crushing member having securing faces arranged at an angle to its supporting shaft, and means to engage said faces to hold said member firmly with respect to said shaft while permitting free lateral expansion and contraction of said head.

3. In a gyratory crusher head a supporting shaft and a crushing member having securing faces arranged at an angle to said shaft, and supporting and clamping members respectively engaging said faces in such manner that said crushing member is permitted free expansion and contraction while being held at all times firmly against bodily movement with respect to said shaft.

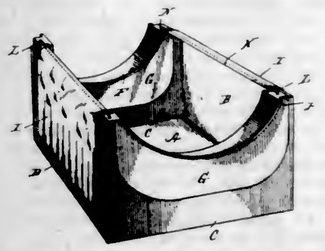
4. In a gyratory crusher head a supporting shaft and a crushing member having annular faces arranged at an angle to said shaft, a supporting member, and a clamping member each having annular faces corresponding to those upon the crusher head, and arranged to engage the latter faces respectively and to permit free expansion and contraction of said crushing member while holding it at all times against bodily movements with respect to said shaft.

5. As an article of manufacture a crushing member for a gyratory crusher head having at its ends annular securing faces arranged at an angle to its axis.

6. In a gyratory crusher a supporting shaft, a supporting ring secured to said shaft and a clamping sleeve slidably mounted on said shaft, but secured against rotation thereon, and a crushing member mounted between said ring and sleeve and so held thereby as to be free to expand and contract while being at all times held against bodily movement with respect to said shaft.

7. In a gyratory crusher head a supporting shaft having an annular neck or groove, a crushing member and a supporting member therefor, a clamping member for holding said crushing member against longitudinal movement on said shaft, and having a crushing face, and a clamping ring movably secured within said neck or groove above and to hold said clamping member against longitudinal movement on said shaft.

870,953. CELLAR FOR AXLE-BOXES. FRANK B. HARRISON, Toledo, Ohio. Filed Mar. 22, 1907. Serial No. 363,811.



1. The combination with an axle box cellar having a bottom, end walls, and side walls, of guards at the sides; and springs for forcing the same upwardly.

2. The combination with an axle box cellar, of end guards, side guards of textile material, and springs for forcing said guards upwardly.

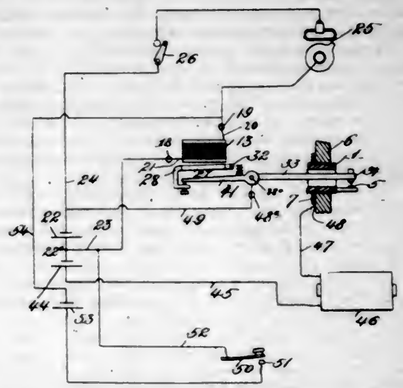
3. The combination with an axle box cellar having a bottom, side walls and end walls, of end guards; side guards connected to the end guards; and springs for the purpose set forth.

4. The combination with a cellar having a bottom, side walls and end walls, of end guards each having wings located each side of an end wall; and a spring beneath each end guard.

5. The combination with a cellar having a bottom, side walls and end walls, of side guards of textile material for excluding dust and dirt from the axle bearing at the sides thereof, and means for supporting said guards.

870,954. ELECTRICAL SPARKING DEVICE FOR EXPLOSIVE-ENGINES. WILLIAM B. HAYDEN, New York, N. Y. Filed June 12, 1906. Serial No. 321,394.

1. An electrical sparking device for explosive engines, comprising a two-fold electrical source, a pair of electrodes one of which is movable, an electro-magnetic device for operating said movable electrode to contact with the other electrode, circuit-forming means between said electro-magnetic device and one of the electric sources of said two-fold source, means for separating the electrodes, circuit-forming means between said electrodes and said two-fold electrical source, another electrical source, and circuit-forming means between said device and the last mentioned electrical source.



2. An electrical sparking device for explosive engines, comprising a two-fold electrical source, a pair of electrodes, one of which is movable, an electro-magnetic device independent of the engine frame for operating said movable electrode to contact with the other electrode, circuit connections independent of the engine frame and between said electro-magnetic device and one of the electrical sources of said two-fold source, means for separating the electrodes, circuit connections between said electrodes and said two-fold electrical source, another electrical source, circuit connections between said device and the last-mentioned electrical source, and a non-vebrating coil interposed in said circuit forming means between the electrodes and said two-fold electrical source.

3. An electrical sparking device for explosive engines comprising a bridged two-fold electrical source, another electrical source independent of said two-fold electrical source, a pair of electrodes, sparking circuit connections between said electrodes and said two-fold electrical source, means for causing the contact of the electrodes, thereby closing the sparking circuit, circuit connections between said means and one of the sources of said two-fold source, a circuit-making and breaking device in said last-mentioned circuit connections, circuit connections between said means and said other source of electrical energy, and a circuit-making and breaking device in said last-mentioned circuit connections.

4. An electrical sparking device for explosive engines comprising a bridged two-fold electrical source, another electrical source independent of said two-fold source, a pair of electrodes, sparking circuit connections between said electrodes and said two-fold electrical source, means for causing the contact of the electrodes, thereby closing the sparking circuit, circuit connections independent of the engine frame and between said means and one of the sources of said two-fold source, a circuit-making and breaking device in said last-mentioned circuit connections, circuit connections between said means and said other source of electrical energy, a circuit-making and breaking device in said last-mentioned circuit connections, and a non-vibrating coil in said sparking circuit connections.

5. An electrical sparking device for explosive engines, comprising a hollow plug provided with a fixed electrode, a rock-shaft mounted in said plug, projecting from one side thereof and having means to prevent leakage through that side of the plug through which the shaft extends, an arm carried by the rock shaft a movable electrode connected to said rock-shaft and coöperating with said fixed electrode, an armature, a magnet coöperating with the armature, means carried by the plug and engaging the said arm for normally retaining the two electrodes out of contact, circuit connections coöperating with the magnet leading to a single electrical source, circuit connections

coöperating with the electrodes and leading to a two-fold electrical source, and circuit connections coöperating with the magnet leading to an electrical source independent of the other sources.

6. An electrical sparking device for explosive engines comprising a sparking circuit embodying two electrodes and further comprising a non-vibrating coil, a two-fold source of electrical energy in the sparking circuit a main circuit for causing the contact of the electrodes, said main circuit independent of the engine frame and connected to one of the sources of said two-fold source, and a starting circuit for causing the initial contact of the electrodes, said starting circuit independent of the engine frame and communicating with another electrical source.

7. An electrical sparking device comprising a sparking circuit embodying two electrodes, a two-fold electrical source in the sparking circuit a main circuit for causing the contact of the electrodes, said main circuit independent of the engine frame and communicating with one of the sources of said two-fold source, and a starting circuit for causing the initial contact of the electrodes, said starting circuit independent of the engine frame.

8. An electrical sparking device for explosive engines comprising a hollow plug provided with a fixed electrode, a rock-shaft mounted in one side of said plug and having its inner end formed with a head bearing against the wall of the plug and constituting a means to prevent leakage through said wall, an arm carried by the rock shaft, a movable electrode carried by said shaft and coöperating with the fixed electrode, an armature, a magnet coöperating with the armature, means coöperating with the armature for rocking said shaft, means carried by the plug and engaging the said arm for normally holding the electrodes out of contact.

9. An electrical sparking device for explosive engines comprising a hollow plug provided with a fixed electrode, a rock-shaft mounted in one side of said plug and having its inner end formed with a head bearing against the wall of the plug and constituting a means to prevent leakage through said wall, an arm carried by the rock shaft a movable electrode carried by said shaft and coöperating with the fixed electrode, an armature, a magnet coöperating with the armature, means coöperating with the armature for rocking said shaft, means carried by the plug and engaging the said arm for normally holding the electrodes out of contact, circuit-forming connections coöperating with the magnet and independent of the engine bed, and circuit-forming means coöperating with said electrodes.

10. An electrical sparking device for explosive engines comprising a hollow plug provided with a fixed electrode, a rock-shaft mounted in one side of said plug and having its inner end formed with a head bearing against the wall of the plug and constituting a means to prevent leakage through said wall, an arm carried by the rock shaft, a movable electrode carried by said shaft and coöperating with the fixed electrode, an armature, a magnet coöperating with the armature, means coöperating with the armature for rocking said shaft, means carried by the plug and engaging the said arm for normally holding the electrodes out of contact, circuit-forming means coöperating with said electrodes, and circuit-forming connections coöperating with the magnet and independent of the engine frame.

11. An electrical sparking device for explosive engines comprising a hollow plug carrying a fixed electrode, a rock-shaft mounted in said plug and having a head upon one end thereof adapted to bear against the plug and act as a means to prevent leakage, said shaft projecting laterally from the plug, an arm carried by the rock shaft a movable electrode carried by said shaft and coöperating with said fixed electrode, an armature, an arm carried thereby and provided with a lifting screw, a magnet coöperating with the armature, means carried by the shaft and adapted to be engaged by said screw for rocking the shaft when the magnet is energized, and means carried by the plug and engaging the said arm for normally holding the electrodes apart.

12. An electrical sparking device for explosive engines comprising a hollow plug carrying a fixed electrode, a rock-shaft mounted in said plug and having a head upon one end thereof adapted to bear against the plug and act as a means to prevent leakage, said shaft projecting laterally from the plug, an arm carried by the rock shaft, a movable electrode carried by said shaft and coöperating with said fixed electrode, an armature, an arm carried thereby and provided with a lifting screw, a magnet coöperating with the armature, means carried by the shaft and adapted to be engaged by said screw for rocking the shaft when the magnet is energized, means carried by the plug and engaging the said arm for normally holding the electrodes apart, circuit-forming connections coöperating with the magnet and independent of the engine frame, and circuit-forming connections coöperating with the electrodes.

13. An electrical sparking device for explosive engines comprising a hollow plug carrying a fixed electrode, a rock-shaft mounted in said plug and having a head upon one end thereof adapted to bear against the plug and act as a means to prevent leakage, said shaft projecting laterally from the plug, an arm carried by said rock shaft, a movable electrode carried by said shaft and coöperating with said fixed electrode, an armature, an arm carried thereby and provided with a lifting screw, a magnet coöperating with the armature, means carried by the shaft and adapted to be engaged by said screw for rocking the shaft when the magnet is energized, means carried by the plug and engaging the said arm for normally holding the electrodes apart, circuit-forming connections coöperating with the electrodes, and circuit-forming connections coöperating with the magnet and independent of the engine frame.

14. In an explosive engine, the combination with the engine frame, of an electrical sparking device supported by said frame and comprising a fixed and a movable electrode, a magnetic device for intermittently actuating said movable electrode to contact with the fixed electrode, a two-fold electrical source, means for coupling said sources together, circuit wire connections leading from one of said sources to said magnetic device, a circuit wire leading from said connections to said movable electrode, circuit wire connections leading from said coupling means to said magnetic device, and circuit wire connections leading from the other of said sources to the engine frame.

15. In an explosive engine, the combination with the engine frame, of an electrical sparking device supported by said frame and comprising a fixed and a movable electrode, a magnetic device for intermittently actuating said movable electrode to contact with the fixed electrode, a two-fold electrical source, means for coupling said sources together, circuit wire connections leading from one of said sources to said magnetic device, a circuit wire leading from said connections to said movable electrode, circuit wire connections leading from said coupling means to said magnetic device, circuit wire connections leading from the other of said sources to the engine frame, and a non-vibrating coil interposed in said last mentioned circuit wire connections.

16. In an explosive engine, the combination with the engine frame, of an electrical sparking device supported by said frame and comprising a fixed and a movable electrode, a magnetic device for actuating the movable electrode to contact with the fixed electrode, two sources of electrical energy, means for coupling said sources together, another source of said electrical energy independent of the double source, circuit wire connections between one of the sources of said double source and said magnetic device, a circuit wire connection leading from said circuit wire connections to the movable electrode, circuit wire connections leading from said coupling means to said magnetic device, circuit wire connections leading from the other source of said double source to the engine frame, and circuit wire connections between said independent source and the connections between the single source of said double source and the magnetic device.

17. In an explosive engine, the combination with the engine frame, of an electrical sparking device supported by the frame and comprising a fixed and a movable electrode, an electro-magnetic device for intermittently causing the contact of the electrodes, a two-fold electrical source, means for coupling said sources together, a circuit wire leading from said coupling means to said magnetic device, a circuit wire leading from one of said sources to said magnetic device, a circuit making and breaking device in said last mentioned circuit wire, a circuit wire leading from said last mentioned circuit wire to said movable electrode, and circuit wire connections leading from the other source of said two-fold sources to the engine frame.

18. In an explosive engine, the combination with the engine frame, of an electrical sparking device supported thereby and comprising a pair of electrodes, means for intermittently contacting the electrodes, a two-fold source of electrical energy, circuit wire connections between one of the sources of said two-fold source and said means, circuit-making and breaking means in said connections, a circuit wire leading from said connections to one of said electrodes, circuit connections leading from the other source of said two-fold source to the engine frame, another source of electrical energy, and circuit connections between said last mentioned source and the circuit connections between the means for contacting the electrodes and one of the sources of said two-fold source.

870,955. COMBINATION FORK AND RAKE. ROBERT T. HAZZARD, Jamestown, N. Y. Filed May 21, 1906. Serial No. 317,894.



1. A combination tool consisting of a digging fork, a rake attached to and extending at right angles from the under side of the fork head, and teeth on said rake having rearwardly curved lower ends to form a fulcrum for said fork, substantially as shown and for the purpose specified.

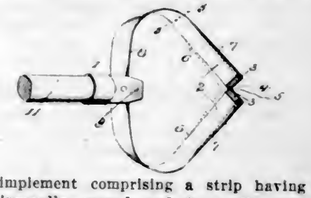
2. A combination tool consisting of a handle 3, a digging fork 1 on said handle, extensions 8 on the head of said fork, a rake 5 attached to the under side of said fork head at right angles thereto, and teeth 6 on said rake curved rearwardly at their lower ends to act as a fulcrum for said fork, substantially as and for the purpose specified.

870,956. BOTTLE. DON J. HIGGINBOTHAM, Rialto, Fla. Filed Aug. 4, 1906. Serial No. 329,195.



A bottle comprising the neck portion with an external surrounding groove, a flexible stopper mounted in the neck and extending above the groove, a glass stopper having a roughened periphery, and a transverse groove in the upper surface, said groove serving to permit of the glass cork being inserted within the neck and below its upper surface so as to form a space, said glass cork being also provided at its upper end with a surrounding beveled edge so as to form a channel between it and the interior of the neck of the bottle, sealing means serving to contact with said space, transverse groove and said channel, substantially as specified.

870,957. CULTIVATING-TOOL. HUGH R. HILTON, Port Allegany, Pa. Filed Mar. 11, 1907. Serial No. 361,857.



1. An implement comprising a strip having its end portions inwardly curved and forwardly converged to provide a body and blades, the latter terminating upon opposite sides of a medial line in cutting edges which are flared.

2. An implement comprising a strip having its end portions inwardly curved and forwardly converged to provide a body and blades, the latter terminating upon opposite sides of a medial line in cutting edges which are flared, the under side of said blades being hollow and both the front and rear edges of the blades being sharpened.

3. An implement consisting of a strip having its end portions inwardly curved and forwardly converged and terminating in flared cutting edges, the inner corners of the blades touching and said blades adapted to have a lateral springing movement to enable the flared cutting edges to operate by a shear action and the said blades to clear themselves of trash.

4. An implement comprising a strip having its end portions inwardly curved and forwardly converged to provide a body and blades which are in different planes, and a blade applied centrally to the said body and projecting in the same direction as the converged blades and in line with the space formed between said converged blades.

5. An implement formed of a strip having its end portions inwardly curved and forwardly converged to provide a body and blades, the latter terminating in diverged cutting edges and the blades having both their front and rear edges sharpened and the said body having its forward edge sharpened, and a blade projected forward from said body in the same direction as the aforesaid converged blades.

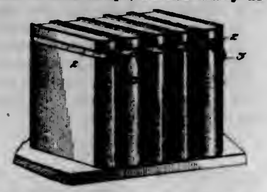
6. An implement comprising a strip having its end portions inwardly curved and forwardly converged to provide a body and blades, the latter being hollow upon their lower surfaces and terminating in flared cutting edges, both the front and rear edges of the blades being sharpened and the forward edge of said body being sharpened.

870,958. BOOK-HANDLE. ROBERT HINCKLEY, Washington, D. C. Filed Aug. 8, 1907. Serial No. 387,645.

1. Combined with a book, a flexible handle comprising a loop and strips, the latter being fastened to the sides and back of the book at or near the top thereof, and the handle projecting out from its back, substantially as set forth.

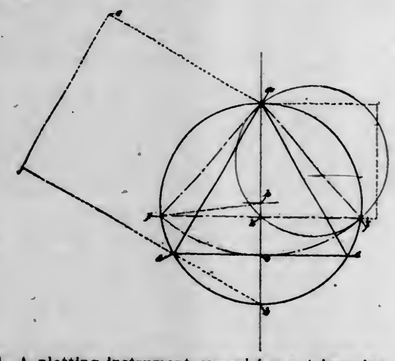
2. Combined with a book, a flexible handle comprising a loop and strips, the latter being attached to the sides and back of the book at or near the top thereof, and the handle projecting out from its back and extended to form a book mark, substantially as set forth.

8. Combined with a book, strips attached to the sides and back of the book at or near the top thereof, and a handle secured to said strips, substantially as set forth.



4. Combined with a book, strips attached to the sides and back of the book at or near the top thereof, a handle secured to said strips, and a book mark attached to said handle, substantially as set forth.

870,959. INSTRUMENT FOR USE IN DETERMINING THE FUNCTIONS OF CIRCLES. ARTHUR S. H. HITCHINGS, Rio de Janeiro, Brazil. Filed Dec. 21, 1905, Serial No. 292,746. Renewed June 19, 1907. Serial No. 379,798.

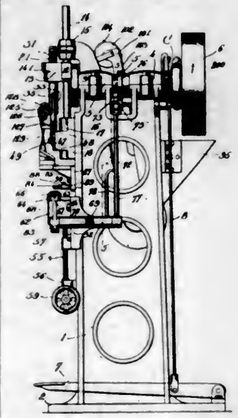


1. A plotting instrument comprising a triangular plate composed of two right angle triangles having coinciding vertical sides and having their bases in the same straight line, the acute angle adjacent to the base of the one triangle being that angle contained between the diameter of a given circle, and a line equal to one fourth the circumference of said circle and drawn from one end of said diameter to intersect the circumference of the circle, the acute angle adjacent to the base of the other triangle being that angle contained between the diameter of the said circle and a line equal to the square root of the area of the circle drawn from one end of said diameter and intersecting the circumference of the circle, said triangular plate having a slot along the line representing the coinciding vertical sides of the triangles, the ends of the slot being provided with projections coincident with said line.

2. A plotting instrument comprising a triangular plate composed of two right angle triangles having coinciding vertical sides and having their bases in the same straight line, the bases and the hypotenuses of the triangles representing functions of a given circle, and the plate being provided with a slot along the line representing the coinciding vertical sides of the triangles, the ends of the slot being provided with projections coincident with said line.

970,960. APPARATUS FOR APPLYING EXPANSIBLE RINGS TO BOBBINS. FRED C. HODGMAN, Hopedale, Mass., and ELLA H. BAILEY, Waterbury, Conn., administratrix of Charles L. Bailey, deceased, assignors to Draper Company, Hopedale, Mass., a Corporation of

1. In apparatus of the class described, a hopper to receive expansible rings in bulk, setting means to engage one ring at a time and force it onto a bobbin, a raceway between said means and the hopper, an instrumentality to convey the rings from the hopper to the raceway, and means to positively present the rings singly from the raceway to the action of the setting means.



2. In apparatus of the class described, a hopper to receive expansible rings in bulk, a feed raceway, an instrumentality to convey the rings from the hopper and deposit them on the raceway, means to position the rings during their travel on the said raceway, a ring-expander, means to transfer rings one by one from the raceway into coöperation with said expander, and means to engage the rings so positioned and force them singly into place on the bobbin.

3. In apparatus of the class described, a hopper to receive expansible rings in bulk, a stationary ring guide and expander, means to convey rings thereto from the hopper, a transferrer to engage the rings one by one and positively place them on the guide and expander in readiness to be set, and a reciprocating setting device to force the rings singly past the expander and onto the bobbin.

4. In apparatus of the class described, in combination, means to engage an expansible ring and to expand and set the same on a bobbin, and means to automatically present the rings one by one into position to be so engaged.

5. In apparatus of the class described, in combination, means to engage an expansible ring and set the same on a bobbin, said means including a stationary expander and a reciprocating setting member, and means to present the rings one by one to coöperate with the expander in readiness to be set.

6. In apparatus of the class described, in combination, a stationary expander and guide for the rings, means to clamp a bobbin with its butt against the end of the guide, means to position expansible rings one by one on the guide and in coöperation with the expander, and setting means to force the rings along the guide and expander and onto the butt of the bobbin.

7. In apparatus of the class described, in combination, a stationary cylindrical ring-guide having a longitudinally-extended expander to enter between the ends of and expand a ring, means to present the rings one by one to said guide and expander, a bobbin-clamping device to clamp a bobbin with its butt against the end of the guide, and a reciprocating plunger to engage the rings one by one and force them over the guide and expander onto the butt of the bobbin.

8. In apparatus of the class described, in combination, an upright, stationary cylindrical guide, an attached, longitudinally extended expander tapered at its upper end, and means to engage a split ring and force it over the guide with the expander between and separating the ends of the ring, to thereby apply the ring to a bobbin alined with the guide.

9. In apparatus of the class described, in combination, a cylindrical guide having a longitudinal rib attached thereto and tapered at its upper end, to enter between the ends of a split ring and expand the same when pushed over the guide, a reciprocating plunger having a non-continuous, annular foot to engage a ring and push it over the guide, to thereby set the ring on a bobbin butted against the lower end of said guide.

10. In apparatus of the class described, an upright, cylindrical ring guide and an adjacent, longitudinally extended expander to enter between the ends of a split ring and expand the same, a feed raceway connected with the upper end of the guide, a fin to direct the rings from the end of the raceway to the guide, means to position the rings on the raceway to coöperate with the fin, and a transferrer to engage one ring at a time and move it, while coöperating with said fin, into position on the guide.

11. In apparatus of the class described, an upright, cylindrical ring guide and an adjacent, longitudinally extended expander to enter between the ends of a split ring and expand the same, said guide having an upturned, curved neck provided with a ring-directing fin, an inclined feed raceway connected to said neck, means to position rings on the raceway to coöperate with the fin, a transferrer to move the rings singly along the neck to the guide while the moving ring is in coöperation with the fin, and means to release the rings on the raceway one by one to be engaged by the transferrer.

12. In apparatus of the class described, an upright ring-guide having an attached expander tapered at its upper end to enter between and separate the ends of a split ring, said guide having a curved neck provided with a fin in the plane of and terminating at the tapered end of the expander, an inclined raceway connected with the neck and along which the rings move, a primary fin to enter externally the space between the ends of the rings, said fin leading to the neck fin, means to permit rings to pass one by one to said primary fin, a rotatable member to engage the rings as they pass and turn them into position to be engaged by the primary fin, and a transferrer to engage the rings controlled by the primary fin and force them one by one over the neck onto the guide, the neck fin at such time passing between the ends of the ring being transferred.

13. In apparatus of the class described, in combination, a fixed ring-guide and expander, means to clamp a bobbin with its butt against the lower end of the guide, means to position split rings one by one on the guides, a reciprocating plunger to engage a positioned ring and force it over the guide and expander onto the butt of the bobbin, and means to vary the effective stroke of said plunger on successive descents, whereby a plurality of rings can be applied to the bobbin butt at a predetermined distance apart.

14. In apparatus of the class described, in combination, a fixed ring-guide and expander, means to clamp a bobbin with its butt against the lower end of the guide, means to position split rings one by one on the guide, a reciprocating plunger to engage a positioned ring and force it over the guide and expander onto the butt of the bobbin, and means to vary the effective stroke of said plunger on successive descents, whereby a plurality of rings can be applied to the bobbin butt at a predetermined distance apart, said means comprising two coöperating controlling cams, a device to effect intermittent rotation of one cam, to change the relation of their high and low points, and a spring to act upon the plunger and maintain the cams in coöperation.

15. In apparatus of the class described, a reciprocating head, a setting plunger mounted therein and having a rigidly-attached controlling-cam, a coöperating cam concentric with the plunger and rotatable in the head, engagement of the high points of the two cams imparting a greater descent, and engagement of their low points imparting a less descent, to the plunger, means to turn the rotatable cam step by step on successive descents of the plunger, and a spring to lift the plunger in the head when the cams are set for the short stroke.

16. In apparatus of the class described, a reciprocating head having a constant stroke, a ring-setting plunger carried thereby, means to move the plunger relatively to the carrier on successive strokes, to thereby vary the effective stroke of the plunger, means to automatically present split rings one by one in the path of the plunger, and a combined guide and expander to guide and spread each ring as it is driven down by the plunger combined with means to automatically hold a bobbin with its butt against the guide, to receive one or more rings upon its butt.

17. In apparatus of the class described, ring-setting means, a raceway to feed rings thereto, a hopper to receive split rings in bulk, an endless conveyer to lift the rings from the hopper and deliver them onto the upper end of the raceway, a longitudinal fin above the raceway, to enter exteriorly between the ends of and position the rings, a double let-off mechanism to permit rings to pass singly to said fin and move longitudinally beneath it when controlled thereby, and a rotating wiper adjacent the leading end of the fin to turn the rings into position to be controlled by said fin.

18. In apparatus of the class described, ring-setting means, a raceway to feed rings thereto, a hopper to receive split rings in bulk, an endless conveyer to lift the rings from the hopper and deliver them onto the upper end of the raceway, a longitudinal fin above the raceway, to enter exteriorly between the ends of and position the rings, a double let-off mechanism to permit rings to pass singly to said fin and move longitudinally beneath it when controlled thereby, and a rotating wiper adjacent the leading end of the fin to turn the rings into position to be controlled by said fin, combined with a transferrer to engage each ring as it reaches the end of the fin and move such ring positively into position to be set.

19. In apparatus of the class described, ring-setting means, a raceway to feed rings thereto, a hopper to receive split rings in bulk, an endless conveyer to lift the rings from the hopper and deliver them onto the upper end of the raceway, a longitudinal fin above the raceway, to enter exteriorly between the ends of and position the rings, a double let-off mechanism to permit rings to pass singly to said fin and move longitudinally beneath it when controlled thereby, and a rotating wiper adjacent the leading end of the fin to turn the rings into position to be controlled by said fin, combined with a transferrer to engage each ring as it reaches the end of the fin and move such ring positively into position to be set, and a second fin to pass between the ends of the ring from the interior thereof and maintain the ring in proper position during transfer.

20. In apparatus of the class described, ring-setting means, a raceway to feed rings thereto, a hopper to receive split rings in bulk, an endless conveyer to lift the rings from the hopper, an inclined trough onto which the rings are dropped by the conveyer and from which they drop onto the adjacent end of the raceway, a return chute to conduct back to the hopper rings failing to fall onto the raceway, a double let-off to separate the rings and permit them to pass one by one along a portion of the raceway, means to act upon said separated rings and position them with their openings in a predetermined line, and a transferrer to engage singly the positioned rings and move them positively into position to be set.

21. In apparatus of the class described, means, including a stationary combined guide and expander, to apply or set split rings upon the butt of a bobbin, a tip-support beneath the guide, and means to automatically lift said support to clamp a bobbin between it and the guide during each operation of the ring-setting means.

22. In an apparatus for applying expansible rings to the annularly-grooved butts of bobbins, a fixed guide and expander, a reciprocating plunger to engage rings one by one and force them over said guide and expander onto a bobbin-butt, a tip-support beneath the guide, means to automatically lift it to clamp the bobbin between it and the guide at each descent of the plunger, and means to vary automatically the effective stroke of the plunger on successive strokes, whereby a plurality of rings can be set on each bobbin butt in the grooves thereof.

23. In apparatus of the class described, means to set rings on the butt of a bobbin, said means including a fixed ring-guide, a vertically adjustable tip-support beneath the guide, and a yieldingly-controlled cam to lift the tip-support, and thereby clamp a bobbin between it

and the guide, at each operation of the setting means, vertical adjustment of the tip-support providing for varying lengths of bobbins.

24. In apparatus of the class described, an upright cylindrical guide, a ring-expander extending longitudinally of the guide and supporting the same, said expander having a beveled upper end to enter between the ends of a split ring to expand the same, and a reciprocating, tubular setting plunger slotted to clear the expander and adapted to force a ring downward over the guide and expander and onto the butt of a bobbin held beneath the guide.

25. In apparatus of the class described, an upright cylindrical guide, a ring-expander extending longitudinally of the guide and supporting the same, said expander having a beveled upper end to enter between the ends of a split ring to expand the same, and a reciprocating, tubular setting plunger slotted to clear the expander and adapted to force a ring downward over the guide and expander and onto the butt of a bobbin held beneath the guide, combined with means to automatically present the rings one by one to the guide in readiness to be engaged by the plunger and with the ends of the ring positioned to be spread by the expander.

26. In apparatus of the class described, an upright cylindrical guide, a ring-expander extending longitudinally of the guide and supporting the same, said expander having a beveled upper end to enter between the ends of a split ring to expand the same, and a reciprocating, tubular setting plunger slotted to clear the expander and adapted to force a ring downward over the guide and expander and onto the butt of a bobbin held beneath the guide, combined with means to automatically present the rings one by one to the guide in readiness to be engaged by the plunger and with the ends of the ring positioned to be spread by the expander, and means to clamp a bobbin beneath the guide in position to receive the rings.

27. In apparatus of the class described, an upright cylindrical guide, a ring-expander extending longitudinally of the guide and supporting the same, said expander having a beveled upper end to enter between the ends of a split ring to expand the same, a feed raceway to deliver rings to be set, means to transfer the rings one by one from the raceway to the guide and expander, and a reciprocating, tubular setting plunger adapted to force a ring over the guide and expander and slotted to clear the expander and adjacent portion of the raceway while closely embracing the guide.

28. In apparatus of the class described, a reciprocating plunger to set the rings, a fixed guide and expander, to sustain and expand a ring during its movement by the plunger, a tip-support for the bobbin, and spring-acting means to act through said tip-support and clamp the bobbin between it and the guide during the operation of the setting plunger.

29. In apparatus of the class described, a reciprocating plunger to set the rings, a fixed guide and expander, to sustain and expand a ring during its movement by the plunger, a projection on the bottom of the guide, to center the butt of the bobbin, a vertically-movable tip-support, spring-acting means to move it to clamp the bobbin between it and the guide, and a rest or gage to position the tip of the bobbin on the tip-support.

30. In apparatus of the class described, means to expand and to apply split rings one by one to the butt of a bobbin, including a fixed cylindrical guide, a centering projection on the lower end thereof, a tip-support below and movable toward and from the guide, spring-acting means to intermittingly elevate the tip-support to clamp the bobbin between it and the guide, and a vertically and horizontally-adjustable rest or gage to position the bobbin on the tip-support.

31. In apparatus of the class described, a cylindrical guide having an attached ring-expander and through which the guide is fixedly supported, an inclined feed raceway connected at its lower end with and supported wholly by said guide, a reciprocating setting plunger having a tubular end to engage a ring and force it over the guide and expander onto a bobbin, said plunger end being slotted to clear the expander and raceway, and means to transfer rings one by one from the raceway and into the path of the tubular end of the plunger.

32. In apparatus of the class described, means, including a fixed guide, to force expansible rings one by one onto the butt of a bobbin, an inclined feed raceway connected at its lower end with and supported wholly by the guide, means to supply the raceway with rings, and means to effect the movement of the rings one by one along the lower part of the raceway to the guide in readiness to be set.

33. In apparatus of the class described, in combination, a cylindrical guide, a longitudinally extended expander tapered at its upper end, and means to engage a split ring and force it over the guide with the expander between and separating the ends of the ring, to thereby apply the ring to a bobbin abutted against the end of the guide.

34. In apparatus of the class described, in combination, a fixed, upright web, a cylindrical guide connected with and supported by the web, the upper edge of the latter being beveled adjacent the guide, and a reciprocating setting plunger to engage a split ring on the guide and force it along the same onto a bobbin alined with the guide, the beveled portion of the web entering between and separating the ends of the ring to expand the same.

35. In apparatus of the class described, in combination, a stationary ring expander and a cylindrical guide over which the expanded ring is forced onto a bobbin, a reciprocating plunger to engage a split ring and force it over the guide and expander, and means to cause the effective stroke of the plunger to vary in length in a predetermined cycle, whereby a plurality of rings may be applied successively to a bobbin.

36. In apparatus of the class described, an inclined feed raceway along which split-rings are adapted to travel, a longitudinal guide fin above the raceway, to enter exteriorly between the ends of the rings and position the same, means to let off the rings one by one as they near the fin, and a rotating, toothed roll adjacent the latter, to turn the rings into position to be controlled by the fin, the clearance between adjacent teeth of said roll permitting a positioned ring to slide past the roll along the raceway.

37. In apparatus of the class described, an inclined, cylindrical feed raceway along which split-rings are adapted to slide, a longitudinal guide-fin adjacent the raceway, to exteriorly enter between the ends of the rings and position the same as they travel, means to let off the rings one by one as they approach the upper end of the fin, and a broad flexible, toothed roll having teeth to lightly engage and turn rings as they move past the roll, to position them with respect to the fin, the clearance between adjacent teeth permitting a ring in cooperation with the fin to slide past said roll and along the raceway.

38. In apparatus of the class described, an inclined feed raceway for split-rings, and let-off mechanism comprising an oscillating shaft parallel to the raceway, and an escapement device near each end of the said shaft, the upper of said devices letting off the rings one by one from the series above it, combined with means between said escapement devices to position the rings with their openings alined, the lower escapement device releasing one by one the rings so alined.

39. In apparatus of the class described, an inclined feed raceway for split-rings, and let-off mechanism comprising an oscillating shaft parallel to the raceway, and two escapement devices on the shaft, each having a stop and a separating rib, to permit the escape of the endmost ring of a group at each operation of the escapement, combined with means located between said escapement devices to position the rings on the raceway with their openings in alinement.

40. In apparatus of the class described, setting means to force split-rings one by one onto the butt of a bobbin, a feed raceway for the rings, means to position the rings thereon with their openings in alinement, and means to positively move the rings one by one from the raceway into position to be acted upon by the setting means.

41. In apparatus of the class described, setting means to engage rings and force them onto a bobbin, a feed raceway for and on which are strung the rings, and means to transfer the rings from the raceway into position to be acted upon by the setting means.

42. In apparatus of the class described, setting means to engage rings and force them onto a bobbin, a feed raceway for the rings, a hopper to receive the rings in bulk, an instrumentality to convey the rings from the hopper and string them onto the raceway, and means to engage and positively transfer the rings singly from the raceway into position to be acted upon by the setting means.

43. In apparatus of the class described, in combination, means to position a bobbin, means to engage a ring and set the same on a bobbin, and separate means to automatically and positively present rings one by one into position to be set.

44. In apparatus of the class described, in combination, a stationary ring-guide adapted to have rings threaded thereon, means to hold a bobbin in alinement therewith, and setting means to engage a ring positioned on the guide and push the ring thereover onto the bobbin.

45. In apparatus of the class described, in combination, a stationary ring-guide adapted to have rings threaded thereon, means to hold a bobbin in alinement therewith, setting means to engage a ring positioned on the guide and push the ring thereover onto the bobbin, and means to present rings one by one in position on said guides.

46. In apparatus of the class described, in combination, a cylindrical ring-guide, means to position a bobbin against the end of and coaxially with the guide, a reciprocating setting-plunger to push rings over the guide and onto a bobbin, and means to automatically vary the effective stroke of the plunger in a predetermined sequence, to thereby set a plurality of rings on the bobbin separated by predetermined intervals.

47. In apparatus of the class described, in combination, means to set rings on the butt of a bobbin, said means including a fixed ring-guide, a vertically-movable tip-support below it, and means to lift said tip-support to thereby clamp a bobbin between it and the guide at each operation of the setting means.

48. In apparatus of the class described, in combination, a reciprocating plunger to set the rings, a fixed guide for the ring during its movement by the plunger, a tip-support for the bobbin, and yielding means to act through the tip-support and clamp the bobbin between it and the guide during the setting operation of the plunger.

49. In apparatus of the class described, in combination, means, including a fixed guide adapted to have rings threaded thereon, to push rings one by one onto the butt of a bobbin, a feed raceway connected at its lower end with the guide, and means to effect the movement of the rings one by one along the lower part of the raceway to the guide in readiness to be set.

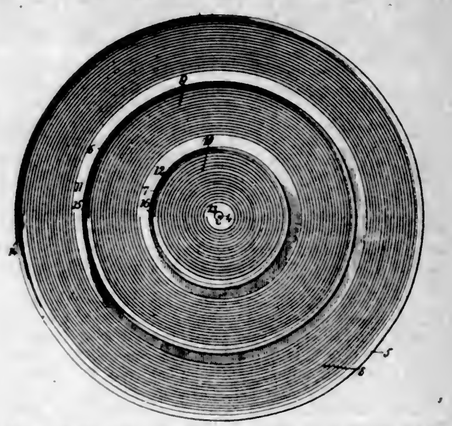
50. In apparatus of the class described, in combination, means, including a fixed guide, to push rings one by one onto the butt of a bobbin, a feed raceway connected at its lower end with and supported wholly by the guide, means to supply the raceway with rings, and means to effect movement of the rings one by one along the lower part of the raceway to the guide in readiness to be set.

51. In apparatus of the class described, in combination, a stationary, cylindrical guide over which the ring is forced onto a bobbin, a reciprocating plunger to engage a ring and force it over the guide onto the bobbin, and means to cause the effective stroke of the plunger to vary in length in a predetermined cycle, whereby a plurality of rings may be applied successively to a bobbin.

870,961. MULTOGRAM RECORD. AUGUST HOFFMAN, New York, N. Y. Filed Jan. 7, 1907. Serial No. 351,140.

1. A multogram record, comprising a revoluble member provided with a plurality of record tracks in acoustical registry with each other and further provided with raised portions disposed intermediate said record tracks.

2. A multogram record, comprising a member provided with a plurality of record tracks, and further provided with a raised portion disposed intermediate said record tracks for protecting the latter from injury.



3. A multogram record, comprising a revoluble disk provided with record tracks, and further provided with raised portions disposed intermediate said record tracks.

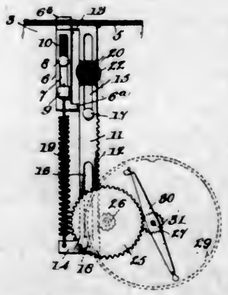
4. A multogram record, comprising a revoluble disk provided with annular beads integral therewith and disposed concentrically, and further provided with record tracks disposed intermediate of said annular beads.

5. A multogram record, comprising a revoluble disk provided with a plurality of record tracks disposed concentrically, and further provided with an annular bead disposed intermediate said record tracks.

870,962. MANUFACTURE OF A NEW MATERIAL SUITABLE FOR USE IN DENTISTRY. OTTO HOFFMANN, Charlottenburg, Germany. Filed May 20, 1905. Serial No. 261,461.

The process for obtaining a new material suitable for use in dentistry, which consists in stirring aluminium phosphate together with a phosphoric acid solution containing alumina hydrate, to form a plastic mass, substantially as described.

870,963. ALARM-BOX ATTACHMENT. LEE G. HOLDEN, Portland, Oreg. Filed Mar. 12, 1906. Serial No. 305,681.



1. The combination with a door for an alarm or similar box, of a latch bar carried by said door, a straight sliding bar mounted on said door, means for operating same, a mechanical alarm, means so coöperating between said alarm and said sliding bar as to continuously ring said alarm upon the downward movement of said sliding bar, means provided on said sliding bar and said latch bar co-

operating to trip said latch bar at the end of the downward stroke of said sliding bar, means for returning said latch bar and sliding bar to their normal positions upon the release of the sliding bar and means to continue the sounding of said alarm after said latch bar has been released, substantially as described.

2. The combination with a door for an alarm or similar box, of a spring controlled latch bar carried by said door and provided at its lower end with a lateral lug, a spring controlled sliding bar mounted on said door, and means for operating same, said sliding bar being provided at its upper end with a lateral lug in vertical alinement with said latch bar lug, mechanical alarm mechanism so constructed and coöperating with said sliding bar as to be operated thereby upon said sliding bar's movement in either direction, whereby said alarm is continuously sounded a predetermined length of time prior to the unlatching of said door and after same has been unlatched, substantially as described.

3. The combination with a door for an alarm or similar box, of a latch bar carried by said door, a straight rack bar slidingly mounted on said door, and directly connecting means between said latch bolt and rack bar to directly move said latch bolt by said rack bar from the normal, a revolving clapper and bell therefor, gearing interposed between said clapper and rack bar, and means for returning said operating parts to their normal positions when moved therefrom, substantially as described.

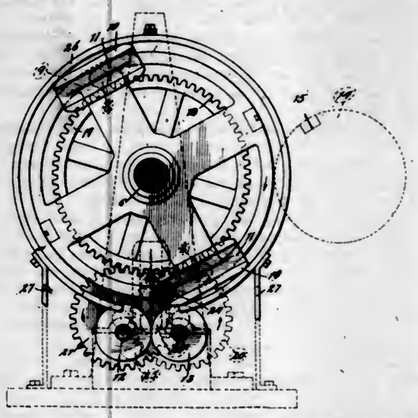
4. The combination with a door for an alarm or similar box, of a spring controlled sliding latch bar carried by said door and provided at its lower end with a lateral lug, a spring controlled substantially straight sliding bar mounted on said door, and means for operating same, said sliding bar being provided on one edge at the upper end thereof with a lateral lug in vertical alinement with said latch bar, and on the opposite edge thereof with rack teeth, a bell and revolving clapper therefor, gearing interposed between said clapper and the rack teeth of said sliding bar, and means for returning said operating parts to their normal positions when moved therefrom.

5. The combination with a door for an alarm or similar box, of a slotted sliding latch bar and rigid studs disposed in said slot for guiding same, a slotted rack bar and guiding studs therefor, said latch bar being provided with a lateral lug at its lower end and said rack bar being provided at its upper end with a lateral lug in alinement with said latch bar lug, and also provided at its lower end with a lateral lug, a spring interposed between the upper portion of said latch bar and one of its guiding lugs and tending to hold said latch bar in its uppermost position, a spring interposed between said lower lug on said rack bar and one of said rigid guiding studs and tending to hold said rack in its uppermost position, a mechanical alarm, gearing interposed between said alarm and said rack bar, and means for forcing said rack bar downwardly, whereby said alarm is continuously sounded a predetermined time in advance of the unlatching of said door and is also sounded after said door has been unlatched and during the return of the parts to their normal position, substantially as described.

870,964. ROTARY FOLDING MECHANISM FOR PRINTING-PRESSES. HANS P. HUSBY, Chicago, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed May 31, 1907. Serial No. 376,513.

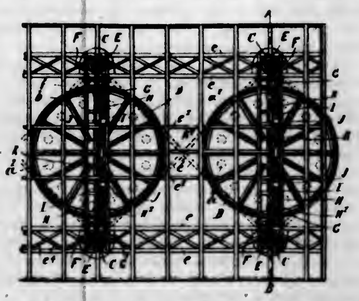
1. The combination with a folding cylinder, a shaft carried thereby, a folding blade mounted on said shaft, and a cross-head at each end of said shaft exterior to the folding cylinder and provided with a groove, of rotating members at each end of said cylinder, a stud carried by each of said rotating members and adapted to enter and engage the groove upon said cross-head to operate said folding blade as the cylinder rotates, and folding rollers coacting with said folding blade.

2. The combination with a folding cylinder, a shaft carried thereby, a folding blade mounted on said shaft, and a cross-head at each end of said shaft exterior to the folding cylinder and provided with a groove, of rotating members at each end of said cylinder, a stud carried by each of said rotating members and adapted to enter and engage the groove upon said cross-head to operate said folding blade as the cylinder rotates, a guide adapted to bear on the cross-head upon one side of said machine and hold said folding blade out of operative position when not engaged by said studs, and folding rollers coacting with said folding blade.



3. The combination with a folding cylinder, a folding blade carried thereby and folding rollers coacting with said folding blade, of a cross-head connected with said folding blade at one end of the cylinder and provided with a groove, a rotating member, a stud carried thereby and adapted to enter and engage said groove to rock said blade into operative position as the cylinder rotates, a cross-head connected with said folding blade upon the other side of said cylinder and provided with a groove, a rotating member, and a pin carried by said rotating member adapted to enter and engage the groove on said second-named cross-head and to rock the said folding blade out of operative position as the cylinder rotates.

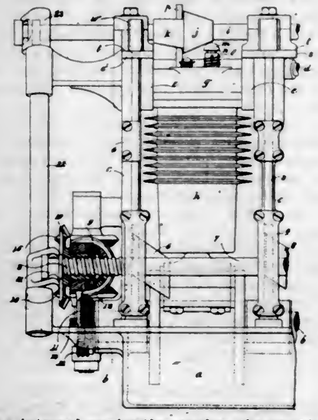
870,965. TIDE OR WAVE MOTOR. JOHN HUTCHINGS, London, England. Filed Dec. 4, 1905. Serial No. 290,238. Renewed Sept. 13, 1907. Serial No. 392,762.



1. An apparatus of the character described, comprising a foundation element, mooring members arranged below said element, a plurality of hollow supporting columns extending through said element and into said members, wedges for securing the columns to said members, a buoyant member, regulating buoys connected with said columns, flexible connections between said regulating buoys and said buoyant member, counterweights within said columns to counterbalance the weight of the buoyant member, a frame structure supported by the columns, flexible connections between the counterweights and said buoyant member, pulleys supported by said frame and over which said flexible connections travel, and power-generating devices connected with said pulleys and operated by the rise and fall of said buoyant member.

2. In an apparatus of the character described, the combination with a foundation element, mooring members arranged below said element and vertical members extending through said element and into said mooring members, of a counterweighted buoyant member interposed between said vertical members, power-generating devices operated by the rise and fall of said buoyant member, buoys connected with the vertical members, and flexible connections between the buoys and said buoyant member.

870,966. INTERNAL-COMBUSTION ENGINE. THOMAS S. JAMES, Chiswick, and THOMAS H. WILSON, London, England. Filed Jan. 10, 1907. Serial No. 352,439.



1. In an internal combustion engine, the combination of a cylinder support, a crank shaft, a cylinder movable towards and away from the crank shaft, adjustable abutments to take the thrust due to the explosion, means for adjusting the abutments and thereby the cylinder in order to vary the size of the combustion chamber.

2. In an internal combustion engine, the combination of a cylinder support, a crank shaft, a cylinder movable towards and away from the crank shaft, adjustable abutments, and gearing actuated by the crank shaft of the engine for adjusting the abutments and thereby the cylinder for the purpose of varying the size of the combustion chamber.

3. In an internal combustion engine, the combination of a cylinder support, a crank shaft, a cylinder movable towards and away from the crank shaft, means for moving the cylinder towards the crank during the exhaust stroke to expel the spent gases, means to bring the cylinder back against its abutments, adjustable abutments to take the thrust due to the explosion, means for adjusting the abutments and thereby the cylinder in order to vary the size of the combustion chamber.

4. In an internal combustion engine, the combination of a cylinder support, a crank shaft, a cylinder movable towards and away from the crank shaft, means for moving the cylinder towards the crank during the exhaust stroke to expel the spent gases, means to bring the cylinder back against its abutments, said means for moving the cylinder towards the crank comprising a cam operating on the cylinder through the spindle of the exhaust valve, and so shaped that one part thereof has a constant throw to effect the movement of the cylinder, and another part has a variable throw for operating the exhaust valve, said exhaust valve and its spindle, adjustable abutments to take the thrust due to the explosion, and means for adjusting the abutments and thereby the cylinder to vary the size of the combustion chamber.

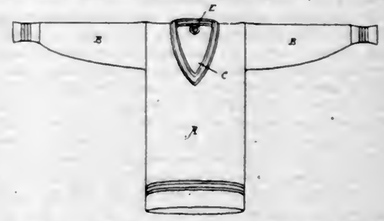
5. In an internal combustion engine, the combination of a cylinder support, a crank shaft, a cylinder, a cam for moving the cylinder towards the crank during the exhaust stroke, adjustable abutments for taking the thrust due to the explosion, a cam for returning the cylinder to said abutments and means for adjusting the abutments and thereby the cylinder in order to vary the size of the combustion chamber.

6. In an internal combustion engine, the combination of a cylinder support, a crank shaft, a cylinder, a cam for moving the cylinder towards the crank during the exhaust stroke, adjustable abutments for taking the thrust due to the explosion, a cam for returning the cylinder to said abutments, said cams being axially adjustable, means for adjusting them, and means for adjusting the abutments and thereby the cylinder in order to vary the size of the combustion chamber.

7. In an internal combustion engine, the combination of a cylinder support, a crank shaft, a cylinder, a cam for moving the cylinder towards the crank during the exhaust stroke, adjustable abutments for taking the thrust due to the explosion, a cam for returning the cylinder to said abutments, said cams being axially adjustable, means for adjusting the cams, means for adjusting the abutments, and gearing operated by the crank shaft, to simultaneously operate the means for adjusting the cams and the abutments.

8. In an internal combustion engine, the combination of a cylinder support, a crank shaft, a cylinder, a cam for moving the cylinder towards the crank during the exhaust stroke, adjustable abutments for taking the thrust due to the explosion, a cam for returning the cylinder to said abutments, said cams being axially adjustable, means for adjusting them, means for adjusting the abutments, said means consisting of gearing operated by the crank shaft, through a clutch, a spindle movable axially by the gearing, and sliding cams and bars operatively connecting the spindle to the abutments.

870,967. GARMENT. ELMER E. JENNE, Ilion, N. Y. Filed Mar. 26, 1904. Serial No. 200,128.

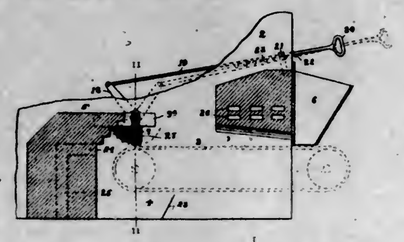


1. A garment of the sweater type having a V-shaped neck opening and provided with neck portion attaching means at the rear of the neck opening and at the inner face of the sweater back, in combination with a removable reversible neck portion consisting of an elongated band adapted to fit within the sweater and extend up through said neck opening around the neck of the wearer, the free ends of said band lapping over the chest closing said neck opening and extending below the same within the sweater, said band at about the center of its length and to one side of the center of the width thereof being provided with means to coöperate with said attaching means of the sweater whereby said band can be reversed and attached at the back to vary the distance the band extends up around the neck.

2. A sweater, in combination with a removable reversible neck portion composed of an elongated band fitted within the sweater and extending up through the neck opening thereof around the neck of the wearer and having its free ends lapped within the sweater beneath the front or chest portion thereof, said band at the intermediate portion of its length provided with attaching means removably securing said band to the front face of the sweater back, said band provided with means for removably secur-

ing said overlapping ends together, substantially as described and shown.

870,968. FUEL-RETARDING MEMBER FOR FURNACES. GEORGE L. JUNOR, Pittsburg, Pa. Filed Jan. 30, 1905. Serial No. 243,237.



1. In a furnace in which the fuel is caused to travel within the combustion chamber, the combination of a fuel support, a fuel retarding device, means for adjusting said retarding device, to vary the distance between it and said fuel support and for securing it in its adjusted position.

2. In a furnace in which the fuel is caused to travel within the combustion chamber, the combination of a fuel support, a hollow fuel retarding device, means for circulating a cooling agent through said retarding device, means for adjusting said retarding device, to vary the distance between it and said fuel support, and for securing it in its adjusted position.

3. In a furnace in which the fuel is caused to travel within the combustion chamber, the combination of a fuel support, a hollow fuel retarding device provided with journals arranged at one side of its axial line, means for circulating a cooling agent through said retarding device, said cooling agent being introduced through one of said journals, and means for adjusting said retarding device, to vary the distance between it and said fuel support, and for securing it in its adjusted position.

4. In a furnace in which the fuel is caused to travel within the combustion chamber, a fuel support, a fuel retarding device having its extremities supported from the side walls of said furnace, means for adjusting said fuel retarding device to vary the interval between the lower surface of the same and said fuel support and means for securing the fuel retarding device in its adjusted position.

5. In a furnace in which the fuel is caused to travel, a fuel-support, an adjustable fuel-retarding member located above said support, means for adjusting said member relative to said fuel-support, and means for locking the same in the desired position.

6. In a furnace in which the fuel is caused to travel within the combustion chamber, a fuel support, a fuel retarding member mounted above and adjacent to the rear of said fuel support, trunnions at the extremities of said member journaled in the walls of said furnace, means for locking said member in its operative position and means for varying the interval between said member and said fuel support.

7. In a furnace in which the fuel is caused to travel within the combustion chamber, the combination of a fuel support, a fuel retarding member supported, when in its operative position, at an interval above said fuel support, means for securing said member in its operative position and means for adjusting said member to vary the interval between the same and said fuel support.

8. In a furnace in which the fuel is caused to travel within the combustion chamber, the combination of a fuel support, an adjustable fuel retarding member supported above said fuel support and independently thereof, means for adjusting the position of said member relative to said fuel support and means for securing said member in the desired position.

9. In a furnace in which the fuel is caused to travel within the combustion chamber during combustion, the combination of a fuel support, a member pivotally supported above said fuel support and independently thereof and adapted to unyieldingly retard the travel of the fuel on said fuel support and means for varying the distance between said member and said fuel support, for the purposes described.

10. In a furnace in which the fuel is caused to travel within the combustion chamber during combustion, a fuel support and a pivoted member supported at an interval above said fuel support and adapted to unyieldingly retard the travel of the fuel on said fuel support, for the purposes described.

11. In a furnace in which the fuel is caused to travel within the combustion chamber during combustion, the combination of a fuel support, and a member pivotally supported by its extremities at an interval above said fuel support and adapted to unyieldingly retard the travel of the fuel on said fuel support, for the purposes described.

12. In a furnace in which the fuel is caused to travel within the combustion chamber during combustion, a fuel support, and a member pivotally supported by its extremities from the side walls of the furnace at an interval above said fuel support and adapted to unyieldingly retard the travel of the fuel on said fuel support, for the purposes described.

13. In a furnace in which the fuel is caused to travel within the combustion chamber during combustion, a fuel support and a water cooled fuel retarding member having trunnions whereby said member is pivotally supported at an interval above said fuel support, one of said trunnions being hollow to form a water passage communicating with the interior of said member, for the purpose described.

14. In a furnace in which the fuel is caused to travel within the combustion chamber during combustion, a fuel support, and a water cooled member having trunnions at the ends thereof and supported at an interval above said fuel support and adapted to unyieldingly retard the travel of the fuel on said fuel support and means for maintaining a current of water through said member, for the purposes described.

15. In a furnace in which the fuel is caused to travel within the combustion chamber during combustion, a fuel support, a water cooled member provided with trunnions whereby it is supported at an interval above said fuel support and adapted to unyieldingly retard the travel of the fuel on said fuel support, and means for passing a current of water through said trunnions, for the purposes described.

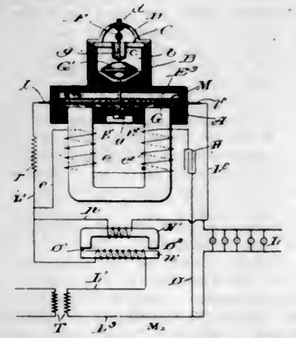
16. In a furnace in which the fuel is caused to travel within the combustion chamber during combustion, a fuel support and a water cooled fuel retarding member having trunnions whereby said member is pivotally supported at an interval above said fuel support, said member being provided with water channels from bottom to top thereof, for the purpose described.

870,969. PIANO-PROTECTING PAD. KATHERINE M. KEOWEN, New York, N. Y. Filed Mar. 18, 1907. Serial No. 363,090.



The combination of a piano protecting pad, of a height substantially equal to the front panel of the piano, and having a recess at its lower edge adapted to receive the pedals of the piano, and annealed sheet metal clips, each having one end thereof rigidly secured to the upper edge of the sheet and having the opposite end thereof adapted to engage with the piano adjacent the upper edge of the front panel thereof, said clips being readily bent to facilitate their use in connection with pianos of different forms.

870,970. ALTERNATING-CURRENT METER. ROBERT C. LANPHIER, Springfield, Ill. Filed Sept. 8, 1904. Serial No. 223,693.



1. In a mercury motor watt meter for alternating currents, the combination with a rotary conductor through which the main current passes to translating apparatus, of a body of mercury in which said conductor is immersed, a magnet in the field of which said conductor is located, a coil for energizing said magnet located in shunt relatively to said conductor, and means for counteracting the self-induction of said coil and thereby bringing the magnetic field in phase with the line pressure.

2. In a mercury motor watt meter for alternating currents, the combination with a rotary conductor through which the main current passes to translating apparatus, of a body of mercury in which said conductor is immersed, a magnet in the field of which said conductor is located, a coil for energizing said magnet located in a shunt across the line, and means for impressing an electro-motive force on said coil so as to bring the magnetic field in phase with the line pressure.

3. In a mercury motor watt meter for alternating currents, the combination with a rotary conductor through which the main current passes to translating apparatus, of a body of mercury in which said conductor is immersed, a magnet in the field of which said conductor is located, a coil for energizing said magnet located in a shunt across the line, and a condenser in series with said coil.

4. In a mercury motor watt meter for alternating currents, the combination with a rotary conductor through which the main current passes to translating apparatus, of a magnet in the field of which said conductor is located, a coil for energizing said magnet located in a shunt across the line, a body of mercury in which said conductor is immersed, and means for counteracting the self-induction of said coil and so as to bring the magnetic field in phase with the line pressure.

5. In a mercury motor meter for alternating currents, the combination with a rotary conductor through which the main current passes to translating apparatus, of a body of mercury in which said conductor is immersed, a magnet in the field of which said conductor is located, a coil for energizing said magnet, a condenser in series with said coil, both said coil and said condenser being located in a shunt across the line, and means operating as the load increases to increase the current passing through said conductor at a greater rate than the load increases.

6. In a mercury motor meter for alternating currents, the combination with a rotary conductor through which the main current passes to a translating device, of a body of mercury in which said conductor is immersed, a magnet in the field of which said conductor is located, a coil for energizing said magnet, a condenser in series with said coil, both said coil and condenser being located in a shunt across the line, and means for shunting around said rotary conductor a portion of the current, such portion gradually decreasing as the load increases.

7. In a mercury motor meter for alternating currents, the combination with a rotary conductor through which the main current passes to a translating device of a body of mercury in which said conductor is immersed, a magnet in the field of which said conductor is located, a coil for energizing said magnet located in a shunt across the line, means for counteracting the self-induction of said coil and thereby bringing the magnetic field in phase with the line pressure, and an inductive shunt around said rotary conductor.

8. In a mercury motor meter for alternating currents, the combination with a rotary conductor through which the main current passes to a translating device, of a body of mercury in which said conductor is immersed, a magnet in the field of which said conductor is located, a coil for energizing said magnet located in a shunt across the line, means for counteracting the self-induction of said coil and thereby bringing the magnetic field in phase with the line pressure, and a transformer having its secondary coil in shunt with said rotary conductor and its primary coil in the main line.

9. In a mercury motor meter for alternating current, the combination with a rotary conductor through which the main current passes to a translating device, of a body of mercury in which said conductor is immersed, a magnet in the field of which said conductor is located, a coil for energizing said magnet located in a shunt across the line, a condenser in series with said coil and means operating as the load increases to increase the current passing through said conductor at a greater rate of increase than that of the load.

10. In a mercury motor meter for alternating currents, the combination with a rotary conductor through which the main current passes to a translating device, of a body of mercury in which said conductor is immersed, a magnet in the field of which said disk is located, a coil for energizing said magnet located in a shunt across the line, a condenser in series with said coil, and an inductive shunt around said rotary conductor.

11. In a mercury motor meter for alternating currents, the combination with a rotary conductor through which the main current passes to translating apparatus, of a body of mercury in which said conductor is immersed, a magnet in the field of which said conductor is located, a coil for energizing said magnet located in a shunt across the line, and means operating as the load increases to increase the driving torque upon said conductor at a greater rate than the current increases.

870,971. DEVICE FOR CUTTING KEY-SEATS OR THE LIKE. CONRAD LINDSTROM, El Campo, Tex. Filed Nov. 24, 1906. Serial No. 344,872.

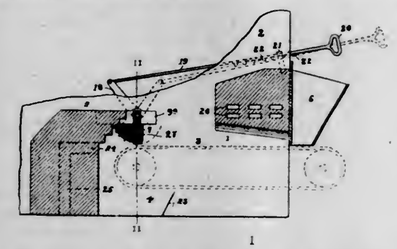
1. A portable device for cutting key seats comprising a block formed with a longitudinal chisel guide slot, means for locking the block to the work, and a blow actuated hand chisel having a transverse front end cutting edge and a removable projecting shoe whereby the depth of the cut can be gaged by employing shoes of different depth, substantially as described.

2. A portable device for cutting key seats comprising a block having a longitudinal chisel guiding slot, means to lock the block to the work, and a blow operated hand chisel having a transverse cutting edge at one corner of its working end and a projecting rounded shoe on the opposite side of the chisel from said edge and arranged rearwardly of a plane transverse of the chisel and including said edge, substantially as described.

3. A portable device for cutting key seats in hubs, shafts, or the like, comprising an elongated block throughout its length having a longitudinal chisel guiding slot and an opposite inclined longitudinal wedge receiving slot, a

ing said overlapping ends together, substantially as described and shown.

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2. In a furnace in which the fuel is caused to travel within the combustion chamber, the combination of a fuel support, a hollow fuel retarding device, means for circulating a cooling agent through said retarding device, means for adjusting said retarding device, to vary the distance between it and said fuel support, and for securing it in its adjusted position.

3. In a furnace in which the fuel is caused to travel within the combustion chamber, the combination of a fuel support, a hollow fuel retarding device provided with journals arranged at one side of its axial line, means for circulating a cooling agent through said retarding device, said cooling agent being introduced through one of said journals, and means for adjusting said retarding device, to vary the distance between it and said fuel support, and for securing it in its adjusted position.

4. In a furnace in which the fuel is caused to travel within the combustion chamber, a fuel support, a fuel retarding device having its extremities supported from the side walls of said furnace, means for adjusting said fuel retarding device to vary the interval between the lower surface of the same and said fuel support and means for securing the fuel retarding device in its adjusted position.

5. In a furnace in which the fuel is caused to travel, a fuel-support, an adjustable fuel-retarding member located above said support, means for adjusting said member relative to said fuel-support, and means for locking the same in the desired position.

6. In a furnace in which the fuel is caused to travel within the combustion chamber, a fuel support, a fuel retarding member mounted above and adjacent to the rear of said fuel support, trunnions at the extremities of said member journaled in the walls of said furnace, means for locking said member in its operative position and means for varying the interval between said member and said fuel support.

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13. In a furnace in which the fuel is caused to travel within the combustion chamber during combustion, a fuel support and a water cooled fuel retarding member having trunnions whereby said member is pivotally supported at an interval above said fuel support, one of said trunnions being hollow to form a water passage communicating with the interior of said member, for the purpose described.

14. In a furnace in which the fuel is caused to travel within the combustion chamber during combustion, a fuel support, and a water cooled member having trunnions at the ends thereof and supported at an interval above said fuel support and adapted to unyieldingly retard the travel of the fuel on said fuel support and means for maintaining a current of water through said member, for the purposes described.

15. In a furnace in which the fuel is caused to travel within the combustion chamber during combustion, a fuel support, a water cooled member provided with trunnions whereby it is supported at an interval above said fuel support and adapted to unyieldingly retard the travel of the fuel on said fuel support, and means for passing a current of water through said trunnions, for the purposes described.

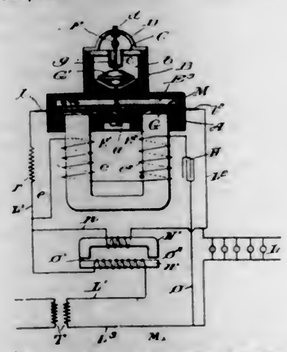
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2. In a mercury motor watt meter for alternating currents, the combination with a rotary conductor through which the main current passes to translating apparatus, of a body of mercury in which said conductor is immersed, a magnet in the field of which said conductor is located, a coil for energizing said magnet located in a shunt across the line, and means for impressing an electro-motive force on said coil so as to bring the magnetic field in phase with the line pressure.

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6. In a mercury motor meter for alternating currents, the combination with a rotary conductor through which the main current passes to a translating device, of a body of mercury in which said conductor is immersed, a magnet in the field of which said conductor is located, a coil for energizing said magnet, a condenser in series with said coil, both said coil and condenser being located in a shunt across the line, and means for shunting around said rotary conductor a portion of the current, such portion gradually decreasing as the load increases.

7. In a mercury motor meter for alternating currents, the combination with a rotary conductor through which the main current passes to a translating device of a body of mercury in which said conductor is immersed, a magnet in the field of which said conductor is located, a coil for energizing said magnet located in a shunt across the line, means for counteracting the self-induction of said coil and thereby bringing the magnetic field in phase with the line pressure, and an inductive shunt around said rotary conductor.

8. In a mercury motor meter for alternating currents, the combination with a rotary conductor through which the main current passes to a translating device, of a body of mercury in which said conductor is immersed, a magnet in the field of which said conductor is located, a coil for energizing said magnet located in a shunt across the line, means for counteracting the self-induction of said coil and thereby bringing the magnetic field in phase with the line pressure, and a transformer having its secondary coil in shunt with said rotary conductor and its primary coil in the main line.

9. In a mercury motor meter for alternating current, the combination with a rotary conductor through which the main current passes to a translating device, of a body of mercury in which said conductor is immersed, a magnet in the field of which said conductor is located, a coil for energizing said magnet located in a shunt across the line, a condenser in series with said coil and means operating as the load increases to increase the current passing through said conductor at a greater rate of increase than that of the load.

10. In a mercury motor meter for alternating currents, the combination with a rotary conductor through which the main current passes to a translating device, of a body of mercury in which said conductor is immersed, a magnet in the field of which said disk is located, a coil for energizing said magnet located in a shunt across the line, a condenser in series with said coil, and an inductive shunt around said rotary conductor.

11. In a mercury motor meter for alternating currents, the combination with a rotary conductor through which the main current passes to translating apparatus, of a body of mercury in which said conductor is immersed, a magnet in the field of which said conductor is located, a coil for energizing said magnet located in a shunt across the line, and means operating as the load increases to increase the driving torque upon said conductor at a greater rate than the current increases.

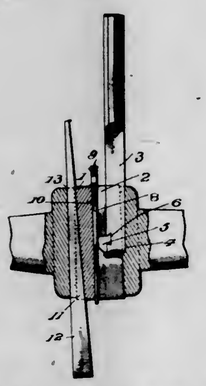
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2. A portable device for cutting key seats comprising a block having a longitudinal chisel guiding slot, means to lock the block to the work, and a blow operated hand chisel having a transverse cutting edge at one corner of its working end and a projecting rounded shoe on the opposite side of the chisel from said edge and arranged rearwardly of a plane transverse of the chisel and including said edge, substantially as described.

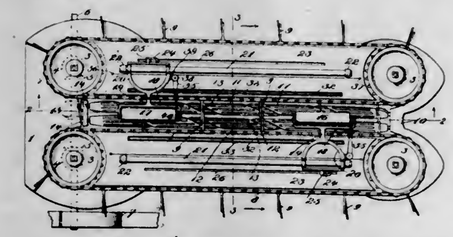
3. A portable device for cutting key seats in hubs, shafts, or the like, comprising an elongated block throughout its length having a longitudinal chisel guiding slot and an opposite inclined longitudinal wedge receiving slot, a

clamping or chucking wedge to enter said slot, and a hand chisel adapted to work in said guiding slot and having a transverse cutting edge, said block being of uniform size throughout its length, whereby the block can be chucked within hub bores of different diameters or can be clamped and chucked longitudinally on and parallel with shafts of different diameters by a yoke having a clamping screw engaging said wedge.



4. A portable device for cutting key seats in hubs, shafts, or the like, comprising an elongated cylindrical block of uniform dimensions throughout its length, whereby the block can be clamped and chucked longitudinally on and parallel with shafts of different sizes, or within hub bores of different diameters, clamping or chucking means for said block, said block formed with a longitudinal chisel guiding slot, and a hand chisel adapted to work in said slot.

870,972. SAUSAGE-LINKING MACHINE. ALLAN F. LITTLE, Kansas City, Mo. Filed Oct. 4, 1906. Serial No. 337,447.



1. A sausage linking machine having a pair of rotatable and longitudinally-slotted hollow spiral twister rolls, and means above and below said rolls for discharging air thereon and therethrough thereby cleaning them.

2. A sausage linking machine having a pair of rotatable, hollow twister rolls each having a spiral passage and provided with slots.

3. A sausage linking machine having a plurality of rotatable and slotted twister rolls, and means arranged above and below the rolls for discharging air therethrough so as to clean them.

4. A sausage linking machine having a sausage twisting means embodying a rotatable link holding-down element, and means for reciprocating said element longitudinally of the machine.

5. A sausage linking machine a pair of twister rolls, means for rotating the said rolls in the same direction and a pair of alternately-operating holding-down rolls arranged in operative relation with respect to said twister rolls.

6. A sausage linking machine having a pair of twister rolls, means for rotating said twister rolls in the same direction, a pair of alternately-operating holding-down rolls arranged in operative relation with respect to said twister rolls, and means for discharging a cleansing medium upon the rolls to remove foreign matters.

7. In a machine of the character described the combination of linking jaws, a pair of twister rolls, a pair of holding-down rolls, and means for moving said holding-down rolls alternately to operative position with respect to said twister rolls.

8. In a machine of the character described, the combination of linking jaws, a pair of rotatable twister rolls, a pair of holding-down rolls, means for moving said holding-down rolls alternately to operative position with respect to the twister rolls during the operation of the latter, and means arranged in operative relation with respect to the twister and holding-down rolls for discharging a cleansing medium thereon to remove foreign substances during the operation of said rolls.

9. A machine of the character described having a pair of rotatable holding-down rolls alternately reciprocating in opposite directions, combined with rotatable spiral twister rolls arranged below the holding-down rolls and coöperating therewith, and traveling linking devices arranged in pairs and adapted to extend into said twister rolls.

10. A machine of the character described having a pair of rotatable link holding-down rolls reciprocating alternately in opposite directions, combined with rotatable spiral twister rolls arranged below and coöperating with said holding-down rolls, traveling linking jaws arranged in pairs and adapted to extend into the spiral rolls, and means arranged in operative relation with respect to the holding-down rolls and twister rolls for discharging air upon the rolls during the operation thereof thereby removing foreign matters without discontinuing the operation of the machine.

11. A machine of the character described having a pair of spiral rolls, holding-down rolls associating therewith, pivoted supports for said holding-down rolls, means for alternately moving said holding-down rolls in opposite directions, and a support for said elements.

12. A machine of the character described having a pair of rotatable spiral link twister rolls, rotatable holding-down rolls arranged above the spiral rolls and coöperating therewith, pivoted supports for said holding-down rolls, means for alternately reciprocating said holding-down rolls in opposite directions, and means arranged in operative relation with respect to said rolls for discharging a cleansing medium thereon without discontinuing the operation of the machine.

13. A machine of the character described having a pair of spiral twister rolls, means for moving the said rolls in the same direction, rotatable holding-down rolls arranged over the twister rolls and coöperating therewith, pivoted supports for said holding-down rolls, means for alternately reciprocating said holding-down rolls in opposite directions causing thereby the rotating of said rolls, means arranged in operative relation with respect to said twister and holding-down rolls for discharging a cleansing medium thereon to remove foreign bodies without discontinuing the operation of the machine, and linking devices coöperating with said twister and holding-down rolls.

14. A machine of the character described having a plurality of rotatable and reciprocatory holding-down rolls, pivoted supports for said rolls to allow of one of the rolls being moved out of the path of the other of the rolls, means for reciprocating the rolls thereby causing the rotation thereof, means for moving one roll out of the path of the other roll during the reciprocation of the rolls, a pair of spiral twister rolls arranged below the holding-down rolls and coöperating therewith, means for moving said spiral rolls in the same direction, and linking devices cooperating with said rolls.

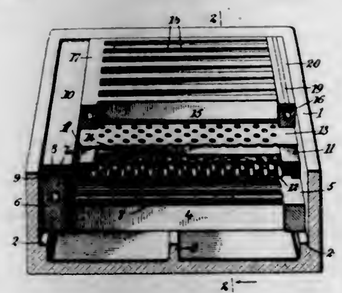
15. A machine of the character described having reciprocatory holding-down rolls, pivoted supports for said rolls, means for reciprocating the rolls, means for moving one roll out of the path of the other during the reciprocation of the rolls, a pair of spiral rolls associating with said holding-down rolls, means for moving said spiral rolls in the same direction, and means for discharging a cleansing medium upon the rolls to remove foreign matters therefrom.

16. A machine of the character described having reciprocatory holding-down rolls, pivoted supports for said rolls, means for reciprocating the rolls, means for moving one roll out of the path of the other during the reciprocation of the rolls, a pair of spiral rolls associating with said holding-down rolls, means for moving said spiral rolls in the same direction, and means for discharging a cleansing medium upon said rolls thereby removing foreign matters therefrom, and traveling jaws associating with the spiral and holding-down rolls.

17. A sausage linking machine having a pair of rotatable slotted hollow spiral twister rolls and means arranged in operative relation with respect to said rolls for discharging a cleansing medium thereon and therethrough to remove foreign matters therefrom without discontinuing the operation of the machine, and rotatable and reciprocatory holding-down means arranged in operative relation with respect to said rolls.

18. A sausage linking machine having a pair of rotatable hollow twister rolls each having a spiral passage and further provided with slots, linking jaws adapted to travel through said passage, and link holding-down means arranged in operative relation with respect to said rolls.

870,973. STORAGE BATTERY. HOMER E. R. LITTLE, New York, N. Y. Filed Jan. 17, 1907. Serial No. 352,712.



1. The combination of a cell, electrodes therein, a liquid halogen derivative, and a solution of a zinc salt of less specific gravity superposed thereon in said cell, said halogen derivative being a solvent for the radical element of the salt, whereby when the cell is charged the zinc is deposited on one of the electrodes and the radical element of the salt taken in solution by the halogen derivative, and when the cell is discharged, the zinc and the radical element taken in solution by the halogen derivative are again combined.

2. The combination of a cell, electrodes therein, carbon tetra-chlorid, and a solution of a zinc salt of less specific gravity superposed thereon in said cell, the carbon tetra-chlorid being a solvent for the radical element of the salt, whereby when the cell is charged, the zinc is deposited on one of the electrodes and the radical element of the salt taken in solution by the carbon tetra-chlorid, and when the cell is discharged, the zinc and the radical element taken in solution by the carbon tetra-chlorid are again combined.

3. The combination of a cell, an electrode horizontally disposed therein, composed of end-bars connected together by side-bars, one of said end-bars having an extended portion with a conductor connected therewith, a second electrode arranged in said cell above the first and consisting of end-bars connected together by cross-bars, a conductor connected with said second electrode, and two perforated plates having a fibrous material therebetween interposed between said electrodes for mechanically assisting in the separation of the liquids employed in the cell.

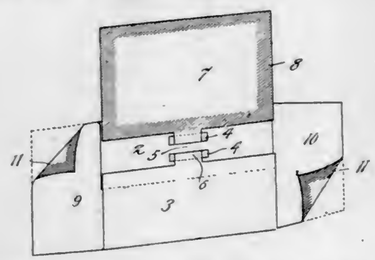
4. The combination of a cell, electrodes therein, carbon tetra-chlorid in the bottom of the cell in contact with one of said electrodes, and a solution of zinc bromid superposed on the carbon tetra-chlorid and in contact with the other electrode whereby when the cell is charged the zinc from the zinc bromid is deposited on the upper electrode and the bromin from the zinc bromid is taken in solution by the carbon tetra-chlorid, and when the cell is discharged the zinc deposited on the upper electrode combines with the bromin taken in solution to again form zinc bromid.

5. The combination of a cell, electrodes therein, carbon tetra-chlorid in the bottom of the cell in contact with one of said electrodes, a solution of zinc bromid superposed on the carbon tetra-chlorid in contact with the other electrode, and means interposed between the electrodes for mechanically assisting in the separation of the two liquids, whereby when the cell is charged, the zinc from the zinc bromid is deposited on the upper electrode and the bromin from the zinc bromin is taken in solution by the carbon tetra-chlorid, and when the cell is discharged, the zinc deposited on the upper electrode combines with the bromin taken in solution to again form zinc bromid.

6. The combination of a cell, a carbon electrode horizontally disposed therein, composed of end-bars connected together by side-bars, one of said end-bars having an extended portion, a conductor embedded in said extended portion, an electro-plating in contact therewith, an insulation surrounding the electro-plating, a second electrode arranged above the first in contact with said insulation and consisting of end-bars connected together by crossbars, a conductor embedded in said second electrode, and electro-plating in contact therewith.

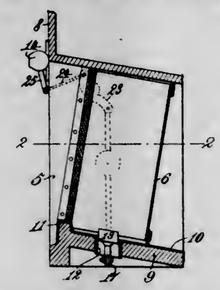
7. The combination of a cell, a carbon electrode horizontally disposed therein comprising end-bars connected together by crossbars, one of said end-bars having an extended portion, a conductor embedded in said portion, electro-plating covering said extended portion in contact with said conductor, an insulation covering said electro-plating, a rubber cap fitting over said insulation, a second electrode consisting of end-bars connected together by crossbars arranged above the first electrode and in contact with said rubber cap, a conductor embedded in said second electrode, electro-plating in contact with said conductor, and a layer of fibrous material interposed between said electrodes.

870,974. ENVELOP. JOHN LORD, Fall River, Mass. Filed Feb. 9, 1907. Serial No. 356,635.



A safety envelop comprising upper and lower flaps, parallel slots formed in the upper flap, and an intermediate band or strap between said slots, an address member connected to the lower flap by a tab and passed through under the strap or band, said address member being gummed down to said upper and lower flap with its lower edge terminating below the upper edge of the envelop, and end flaps gummed inside the envelop to said upper and lower flaps.

870,975. REGISTERING APPARATUS. SAMUEL K. LOWMAN, Hagerstown, Md., assignor to Jones Cold Store Door Co., Hagerstown, Md., a Corporation of Maryland. Filed June 22, 1907. Serial No. 380,351.



1. The combination of an inclined run-way having a ledge at the front side of the same to break adhering cakes of ice, a single block, the upper surface of which is normally located above the corresponding portion of said run-way and said corresponding portion being smooth, said block being operable by the individual cakes of ice, a register, and connections between the block and the register for operating the latter.

2. The combination of a run-way, a sleeve mounted in the run-way, a block movable in said sleeve and having a stem, the sleeve being provided with a perforated cross-bar through the perforation in which said stem is movable, a lever connected with the stem, a rod connected with and operable by the lever, said rod having a weight connected therewith, a second lever to which said rod is connected, a second rod connected with the second lever, and a register provided with an operating arm to which said second rod is connected.

870,976. CHIMNEY-COWL. MARTIN LUDWIG, Albany, Oreg. Filed July 18, 1907. Serial No. 384,355.

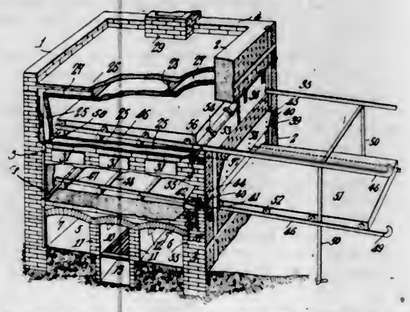


1. The improved chimney cowl formed from a metal blank having side notches 3 and an end notch 4, the intervening projecting portions being rounded, whereby they are adapted when the blank is folded on the lines 3—5 and 4—5 as indicated, to lie parallel and close together, thus forming the vane or tail of the cowl as shown and described.

2. The combination with a rotatable support constituting a post and a three armed spider mounted thereon, of the cowl proper having openings in the side and a series of openings in the vane or tail portion whereby the same may be attached to the spider and its inclination changed at will as and for the purpose specified.

870,977. BAKING-OVEN. CHARLES E. LYST, Elwood, Ind., assignor of one-half to Joe G. Field, Elwood, Ind. Filed May 3, 1907. Serial No. 371,655.

1. A structure of the character described having a fire box therein, non-communicating heat distributing conduits at opposite sides of the fire box and extending in rear thereof, said fire box opening at its sides into the conduits, superposed baking chambers above the conduits and fire box, flues above and below the upper baking chamber, said upper and lower flues communicating at one end through an end flue and said lower flues communicating at their other end with one end of the conduits, the longitudinal centers of said upper and lower flues and the conduits being disposed along planes extending transversely of the baking chambers, a carrier within each baking chamber, and means for directing each carrier into position outside of the baking chamber.



2. In a structure of the character described the combination with a baking chamber, and means for heating the same; of a door normally disposed by gravity in shut position, mechanism for swinging the door to open it, means for locking said mechanism to hold the door in raised or partly raised position, inclined rails within the baking chamber and extending through and beyond the door, a carrier mounted to travel by gravity upon the rails, a shaft extending through the rails, means for rotating the shaft, means upon the shaft for holding the carrier against movement, and means for locking the shaft.

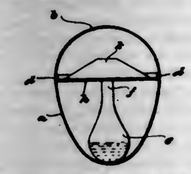
3. In a structure of the character described the combination with a baking chamber, and means for heating the same; of a door normally disposed by gravity in shut position, a gear carried by the pivot of said door, revoluble manually actuated means for operating said gear, and means for locking the gear against rotation to lock the door in raised or partly raised position.

4. In a structure of the character described the combination with an oven having an open end and a closure for said end; of inclined rails within the oven and extending through and beyond said end, a wheel supported carrier mounted upon the rails, means in the path of the carrier for holding it against movement upon the rails, and manually operated means for removing said holding means from the path of the carrier.

5. In a structure of the character described the combination with an oven having an open end and a closure for said end; of inclined rails within the oven and extending through and beyond said end, a wheel supported carrier mounted upon the rails, a shaft revolubly mounted within the oven, holding fingers extending therefrom, manually operated means for swinging said holding means into or out of the path of the carrier, and a locking device for said means.

870,978. PUZZLE. EDMUND C. MACARTNEY, Philadelphia, Pa., assignor of one-half to William D. Wegefarth, Philadelphia, Pa. Filed Jan. 31, 1907. Serial No. 354,999.

1. A puzzle comprising an egg-shaped two-part shell and a regulating device comprising a bulb-shaped receptacle terminating in a hollow stem and adapted to rest at the pointed end of the egg said stem being slotted at its upper extremity, a disk carried by the stem and adapted to snugly fit the egg interior, means equipped with communicating chambers superposed upon said disk whereof one of said chambers has communication with the aforesaid slotted tube, and fluid balancing means as mercury for the regulating device.

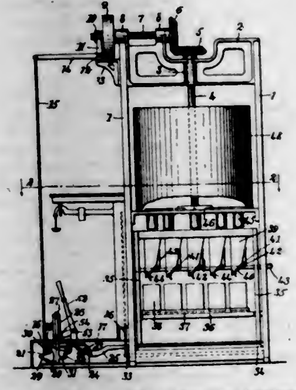


2. A puzzle comprising an egg-shaped two-part shell having designated thereon a representation of a compass that acts as a guide, and means within the shell comprising a regulating device with a mobile balancing medium for manipulating the egg so as to stand it upon its end.

3. A puzzle comprising an egg-shaped two-part shell having designated thereon a representation of a compass that acts as a guide, a bulb-shaped receptable terminating in a hollow stem and adapted to rest at the pointed end of the egg, said stem being slotted at its upper extremity, a disk carried by the stem and engaging the interior walls of the shell, a structure superposed upon said disk having communicating chambers whereof one of said chambers has communication with the said slotted tube said partitions being so arranged as to register with the four points of the compass, and a fluid balancing medium as mercury.

4. A puzzle comprising an egg-shaped two-part shell having delineated thereon certain characters in the nature of a guide or key serving to assist in solving the puzzle and means within the shell comprising a regulating device with a mobile balancing medium for manipulating the egg so as to stand it upon its end.

870,979. WEIGHING-MACHINE. GEORGE H. MALLETT, Copake, N. Y. Filed Apr. 6, 1907. Serial No. 366,676.



1. The combination, with a hopper having a bottom provided with a plurality of screened discharge apertures, of a rotating shaft arranged within said hopper and provided on its lower end with agitating arms, a scale, pockets supported on said scale arranged below said apertures and provided with hinged doors, and weight-controlled mechanism adapted to stop the rotation of said shaft.

2. The combination with a hopper having a bottom provided with screened discharge apertures, of a rotating shaft arranged within said hopper and provided with agitating arms, a scale, pockets arranged below said apertures supported on said scale, and a plurality of receptacles on said scale below said pockets.

3. The combination, with a hopper having a bottom provided with screened discharge apertures, of a rotating shaft arranged within said hopper and having on its lower end a plurality of radial arms, pockets arranged below the discharge apertures of the hopper, means for closing the lower portion of said pockets, a scale, and a rack mounted on said scale and adapted to support said pockets.

4. The combination, with a hopper having a bottom provided with a plurality of screened discharge apertures, of a rotating shaft arranged within said hopper and having its lower end provided with radial arms, a plurality of pockets arranged below said discharge apertures, with their lower ends extending in parallel lines, means for opening and closing the lower portion of said pockets, a scale, and a rack mounted on said scale and supporting said pockets.

5. The combination, with a hopper having a bottom provided with a plurality of screened discharge apertures, of a rotating shaft provided on its lower end with radial arms arranged within said hopper, discharge spouts connected with said apertures, a scale, a frame mounted on said scale, pockets supported on said frame and provided with hinged doors having closing mechanism connected therewith, and a reciprocating bar provided with laterally extending arms adapted to open said doors in unison.

6. The combination, with a hopper having its bottom provided with a plurality of discharge apertures, of a rotating shaft provided on its lower end with radial arms arranged within said hopper pockets arranged below said apertures, a scale, a frame mounted on said scale, supporting said pockets, and provided with a shelf arranged below the lower portion of said pockets and adapted to support a plurality of vessels, and weight-controlled mechanism connected with said scale adapted to stop the rotation of said shaft.

7. The combination, with a hopper having a bottom provided with a plurality of screened discharge apertures, of a rotating shaft arranged within said hopper and provided on its lower end with radial arms, a scale, a frame mounted on said scale and provided with a shelf adapted to support a tray with a plurality of receptacles, pockets mounted on said frame below said discharge apertures, provided with inclined doors hinged to the lower portion of said pockets and with springs adapted to close said doors, and a reciprocating bar provided with laterally extending arms adapted to open the doors of said pockets in unison.

8. In a machine of the character described, the combination of a hopper having a bottom provided with a plurality of screened apertures, a rotating shaft arranged within said hopper and provided on its lower end with radial arms discharge spouts connected with said apertures, pockets operatively connected with said discharge spouts, a scale, a frame mounted on said scale supporting said pockets, a pivoted actuating lever connected with said scale, a trip lever connected with said actuating lever, clutch mechanism connected with said trip lever, and a drive shaft connected with the clutch mechanism.

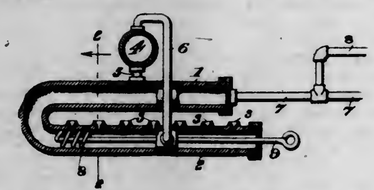
9. The combination of a hopper having its bottom provided with a plurality of screened discharge apertures, a rotating shaft arranged within said hopper and provided on its lower end with radial arms, a plurality of pockets arranged below said discharge apertures, a scale, a frame mounted on said scale and supporting said pockets, a drive shaft connected with the first-named shaft and provided with a clutch, and weight-controlled mechanism connected with said clutch and scale.

10. The combination of a hopper having a bottom provided with screened discharge apertures, a rotating shaft arranged within said hopper and provided on its lower end with radial arms adapted to bear against the bottom of said hopper, pockets arranged below the discharge orifices, a scale, a frame mounted on the platform of said scale and supporting said pockets, an actuating lever connecting with said scale, a trip lever connecting with said actuating lever, a rod, a drive shaft connected with said first-named shaft and provided with a clutch, a connecting rod pivotally connected with said clutch and trip lever, and a rectifying lever arranged in operative relation with said connecting rod and trip lever.

11. The combination of a hopper having its bottom provided with a plurality of screened discharge apertures, a rotating shaft arranged within said hopper and provided on its lower end with radial arms pockets arranged below

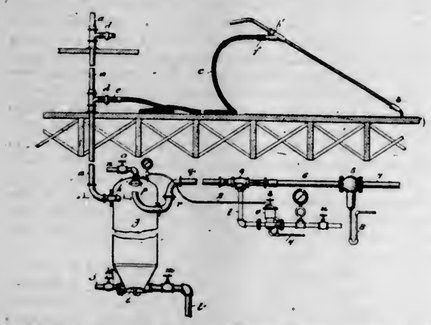
said discharge apertures, a scale, a frame mounted on said scale and supporting said pockets, a pivoted actuating lever connected with said scale, a bell crank trip lever connected with the actuating lever, a drive shaft having clutch mechanism connected therewith, a connecting rod pivotally attached to a lever of the clutch mechanism having its lower end extending through a casing and provided with a supporting lug, and a rectifying lever adapted to lift said connecting rod and one of the arms of said trip lever.

870,980. CRUDE-OIL BURNER. ARTHUR D. MARCOTTE, Church Point, La. Filed Nov. 23, 1906. Serial No. 344,713.



The improved burner comprising a U-shape tube arranged horizontally with one leg over the other, the lower leg being provided with gas nipples and with a sliding cleaner, a second tube 4 arranged over the U-shape one and a small tube 6 connecting said second tube with the lower branch of the U-shape tube, as shown and described.

870,981. VACUUM CLEANING SYSTEM. FRANK J. MATCHETTE and RICHARD RADDATZ, Milwaukee, Wis.; said Raddatz assignor to said Matchette. Filed Jan. 15, 1906. Serial No. 296,089.



1. In a vacuum cleaning system, the combination of a suction pipe, vacuum producing means in connection with said pipe, and an automatic governor actuated by variations of vacuum in the apparatus to automatically control the action of the vacuum producing means.

2. In a vacuum cleaning system, a dust separator, a portable suction head in operative connection therewith, vacuum producing means connected with said separator and normally acting to produce a vacuum therein, and an automatic governor actuated by variations of vacuum in said separator for automatically controlling the operation of the vacuum producing means.

3. In a vacuum cleaning system, a dust separator, a portable suction head in operative connection therewith, a valve to control the operative condition of said suction head, vacuum producing means connected with said separator, and an automatic governor actuated by variations of vacuum in the separator for automatically starting and stopping the operation of the vacuum producing means to cause the latter to maintain a predetermined vacuum in the separator.

4. In a vacuum cleaning system, the combination of a suction pipe, vacuum producing means in connection with said pipe, an automatic governor actuated by variations in degree of vacuum in the apparatus and controlling the operation of the vacuum producing means to maintain a predetermined vacuum, and a check valve for preventing back flow of air into the apparatus when the vacuum producing means is inoperative.

5. In a vacuum cleaning system, the combination of a suction pipe, a valve controlling the admission of air to said pipe, vacuum producing means in connection with said pipe, and means operated by variations in degree of vacuum in the apparatus to cause the vacuum producing means to be operative when the vacuum falls to a predetermined pressure and to automatically stop the operation of the vacuum producing means when the predetermined vacuum has been attained.

6. In a vacuum cleaning system, the combination of a suction pipe, a portable suction head flexibly connected to said pipe, a valve for controlling the operative condition of said suction head, vacuum producing means in connection with said pipe, and an automatic governor operated by variations in degree of vacuum within the apparatus and controlling the operation of the said vacuum producing means.

7. In a vacuum cleaning apparatus, the combination with a suction pipe and valve controlled air inlets connected with said pipe for controlling the points of admission of air to the pipe, of means for exhausting air from said pipe, and a governor connected with said suction pipe and with the air exhausting means, said governor being responsive to the actuation of the vlave controlled inlet and in turn controlling the operation of said air exhausting means, substantially as described.

8. In a vacuum cleaning apparatus, the combination with a suction pipe and a valve for controlling the admission of air to said pipe, of means for exhausting air from said pipe, a low pressure or vacuum reservoir with which said suction pipe and air exhausting means have communication, and a governor connected with said reservoir and said air exhausting means, said governor being actuated by variations of pressure exerted thereon through said reservoir, and in turn automatically controlling the operation of said exhausting means, substantially as described.

9. In a vacuum cleaning apparatus, the combination of a suction main having a valve controlled inlet connection, an aspirator communicating with and adapted to exhaust air from said main and having a fluid pressure supply connection, and an automatic governor adapted to open and close said pressure supply connection according to variations of vacuum in the system, substantially as described.

10. In a vacuum cleaning apparatus, the combination of a suction main provided with valve controlled inlet connections, vacuum producing means communicating with and adapted to exhaust air from said main, and an automatic governor constructed and arranged to stop and start the vacuum producing means according to variations of vacuum in the system, substantially as described.

11. In a vacuum cleaning apparatus, the combination of a suction main having valve controlled inlet connections, an aspirator communicating with and adapted to exhaust air from said main, a fluid pressure supply connected with said aspirator, an automatic governor constructed and arranged to close and open the fluid pressure supply to the aspirator according to variations of vacuum in the system, and a check valve arranged to prevent back flow of air into said main, substantially as described.

12. In a vacuum cleaning apparatus, the combination of a suction main, an aspirator communicating therewith and having a fluid pressure supply connection, and an auxiliary separator connected with the discharge of the aspirator and having a liquid trapped discharge connection and a separate gaseous fluid discharge, substantially as described.

13. In a vacuum cleaning apparatus, the combination of a suction main, an aspirator communicating with said main and having a fluid pressure supply connection, an automatic governor connected with the vacuum side of the system and controlling the supply of the fluid pressure medium to the aspirator, and means for adjusting the governor to open and close said pressure supply connection under different degrees of vacuum, substantially as described.

14. In a vacuum cleaning apparatus, the combination of a suction main, a low pressure reservoir into which said main discharges, an aspirator connected with said reservoir and having a pressure supply connection, and a separator connected with the discharge of said aspirator, substantially as described.

15. In a vacuum cleaning apparatus, the combination of a suction main, a low pressure reservoir connected with said main, an aspirator connected with said reservoir and having a pressure supply connection, a check valve arranged to prevent back flow of air into said reservoir, and an automatic governor connected with the suction side of the system and controlling the pressure supply to the aspirator, substantially as described.

16. In a vacuum cleaning apparatus, the combination of a suction main, a low pressure reservoir connected with said main, an aspirator connected with said reservoir and having a pressure supply connection, a check valve arranged to prevent back flow of air into said reservoir, an automatic governor for controlling the pressure supply to the aspirator, and a separator connected with the discharge of the aspirator, substantially as described.

17. In a vacuum cleaning apparatus, the combination of a suction main provided with a valve controlled inlet connection, vacuum producing means communicating with said main and adapted to exhaust air therefrom, an automatic governor adapted to stop and start the vacuum producing means according to variations of vacuum in the system, and a check valve arranged to prevent back flow of air into said main, substantially as described.

18. In a vacuum cleaning apparatus, the combination of a suction main having a valve controlled inlet connection, a low pressure reservoir connected with said main, vacuum producing means connected with said reservoir and adapted to exhaust air therefrom, an automatic governor adapted to stop and start the vacuum producing means according to variations of vacuum in the system, and a check valve arranged to prevent back flow of air into said reservoir, substantially as described.

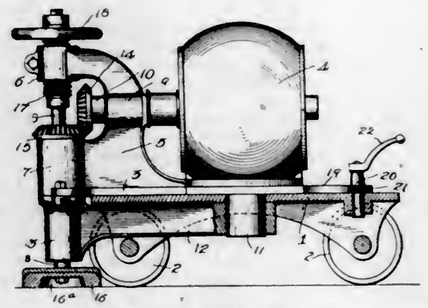
19. In a vacuum cleaning apparatus, the combination of a suction main, a portable cut-off valve having a flexible connection with said main, vacuum producing means adapted to exhaust air from said main, and an automatic governor operated by variations of vacuum in the apparatus and controlling the operation of said vacuum producing means, substantially as described.

20. In a vacuum cleaning apparatus, the combination of a suction main, a portable cut-off valve having a flexible connection with said main, vacuum producing means communicating with said main and adapted to exhaust air therefrom, an automatic governor adapted to stop and start the vacuum producing means according to variations of vacuum in the system, and a check valve arranged to prevent back flow of air into said main, substantially as described.

21. In a vacuum cleaning apparatus, the combination of a suction main having a valve controlled inlet connection, a low pressure reservoir connected with said main, an aspirator communicating with and adapted to exhaust air from said reservoir and having a fluid pressure supply connection, an automatic governor for controlling the pressure supply to the aspirator, and a separator connected with the discharge of the aspirator, substantially as described.

22. In a vacuum cleaning apparatus, the combination of a suction main, a low pressure reservoir in communication therwith, means for exhausting air from said main and reservoir, automatic means operated by variations of pressure in the apparatus and controlling the operation of said air exhausting means, means for preventing back flow of air into the apparatus when said air exhausting means is inoperative, and portable means for controlling the operation of said automatic controlling means at a distance therefrom, substantially as described.

870,982. FLOOR-SURFACING MACHINE. GEORGE S. MATHEWS, Kansas City, Mo., assignor of one-fourth to Henry C. Manke and one-fourth to John F. Pelletier, Kansas City, Mo. Filed May 1, 1906. Serial No. 314,717.



1. In a machine of the character described, the combination, with a truck having a main platform, of a supplemental platform or table pivotally mounted on the platform of said truck, a shaft, carrying a grinding member, mounted on said supplemental platform, a pivoted arm arranged below the truck platform and also having a bearing for said shaft extending down near to the surface to be worked and means to drive said shaft.

2. In a machine of the character described, the combination, with a truck having a main platform, of a supplemental platform or table pivotally mounted on the platform of said truck, the pivot lug for said supplemental platform extending through the main platform, a pivoted arm mounted on said lug below said main platform a shaft, carrying a grinding member, mounted on said supplemental platform and having a bearing in said pivoted arm extending down near to the surface to be worked, and means to drive said shaft.

3. In a machine of the character described, the combination, with a truck having a main platform, of a supplemental platform or table pivotally mounted on the platform of said truck, a shaft, carrying a grinding member, mounted on said supplemental platform, means to drive said shaft and means to oscillate said supplemental platform comprising a gear pivoted on the truck platform and engaging a rack on said supplemental platform.

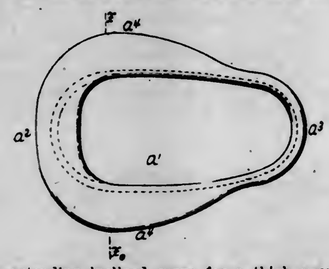
4. In a machine of the character described, the combination, with a truck having a main platform, of a supplemental platform or table pivotally mounted on the platform of said truck, a shaft, carrying a grinding member, mounted on said supplemental platform, means to drive said shaft and means to oscillate said supplemental platform, comprising a gear pivoted on the truck platform and engaging a rack on said supplemental platform, said rack having stops at each end thereof, and means to rotate said gear.

870,983. [WITHDRAWN.]

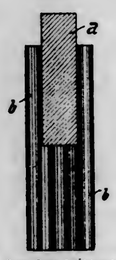
870,984. BED-PAN. CHRISTIAN W. MEINECKE, Jersey City, and DANIEL HOGAN, Hoboken, N. J., assignors to Whitall Tatum Company, New York, N. Y., a Corporation of New Jersey. Filed Sept. 7, 1906. Serial No. 333,699.

A bed pan with a vertical side and rear wall and having a recessed front portion, an outwardly extended flange above and extended beyond said recessed portion, said

flange inclined towards the said recessed portion and curved to fit the back and buttocks of the user, and an upwardly extending inclined curve for a thigh support for said user.

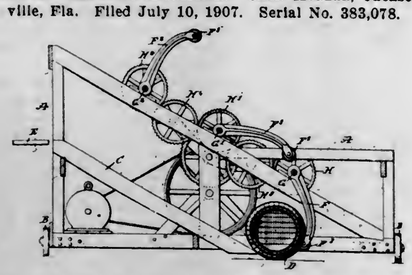


870,985. CARBON ELECTRODE FOR GALVANIC ELEMENTS. WILHELM MÖLLENBAUCK and WILHELM DIELMANN, Dusseldorf, Germany, assignors to Hermann Peltzer, Dusseldorf, Germany. Filed Oct. 23, 1906. Serial No. 340,177.



A carbon electrode for dry batteries composed of circularly grouped carbon members firmly embedded into the ordinary depolarizing matter, and forming a central cavity, and of a removable carbon contact plug adapted to fit into said cavity and to come in close contact with said carbon members, substantially as described and for the purpose set forth.

870,986. LIFTING-MACHINE. CARL MOLLER, Jacksonville, Fla. Filed July 10, 1907. Serial No. 383,078.



1. A machine for lifting packages comprising an incline for the packages to travel on, and sets of revoluble arms operating in conjunction with each other, said arms being arranged in different vertical planes and having their axes arranged in a plane approximately parallel to the said incline, the lowermost arm being adapted to engage the package on the ground or floor and push the same up the incline, the next following arms successively engaging the package immediately previous to the preceding arm releasing the package.

2. A machine for lifting packages comprising an incline for the packages to travel on, and a set of revoluble arms operating in conjunction with each other, said arms being arranged in different vertical planes and having their axes arranged in a plane approximately parallel to the said incline, the lowermost arm being adapted to engage the package on the ground or floor and push the same up the incline, the next following arms successively engaging the package immediately previous to the preceding arm releasing the package, the uppermost arm being arranged to move the package up the last portion of the incline and to push the package off the upper terminal of the incline.

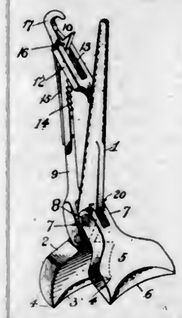
3. A machine for lifting packages comprising a framework, an incline thereon, a series of shafts journaled on the framework and extending in a plane approximately parallel to the said incline, a gearing for rotating the said shafts in unison, and pairs of arms secured to the said shafts and arranged relatively one to the other, to successively act on the package and push the same up the said incline.

4. A machine for lifting packages comprising a framework, an incline thereon, a series of shafts journaled on the framework and extending in a plane approximately parallel to the said incline, a gearing for rotating the shafts in unison, and pairs of arms secured to the said shafts and provided at their free ends with friction rollers, the said pairs of arms being arranged relatively one to the other to successively act on the package and push the same up the said incline.

5. A machine for lifting packages comprising a framework, an incline therein, a series of shafts journaled on the framework and extending in a plane approximately parallel to the said incline, a gearing for rotating the said shafts in unison, a motor mounted on the said framework, a driving gear connecting the said motor with the said gearing, and pairs of arms secured to the said shafts and arranged relatively one to the other to successively act on the package and push the same up the said incline.

6. A machine for lifting packages, comprising a frame having an incline, a plurality of shafts mounted in the frame approximately parallel with the incline, means for operating the shafts, and a pair of arms on each shaft, the arms of one shaft being out of alinement with the arms of the adjacent shaft.

870,987. CAR-MOVER. JOHN S. MULLENIX, Bradford, Ohio, assignor of one-half to Nate Iddings, Bradford, Ohio. Filed Jnne 15, 1907. Serial No. 379,244.



1. In a car moving device a lever having a rail engaging head, a rail-engaging jaw pivoted upon the lever, and a push bar pivotally connected with the lever adjacent to the jaw.

2. In a car moving device a lever having a rail-engaging head, a rail-engaging gravity jaw pivoted upon the lever, and a push bar pivotally connected with the lever intermediate the head and the jaw.

3. In a car moving device a lever having a rail-engaging head, a rail-engaging gravity jaw pivoted upon the lever, a push bar pivotally connected with the lever and having a terminal notch, and a hook member adjustably engaging the free end of the push bar.

4. In a car mover a lever having a rail-engaging head, a rail-engaging gravity jaw pivoted upon the lever, a push bar pivotally connected with the lever and having a terminal notch and a plurality of ratchet teeth, a slotted plate slidable upon the push bar and having a terminal hook, and a spring connected with the push bar and engaging the hooked plate to hold the latter in operative engagement with the ratchet teeth.

5. In a car moving device a lever having a rail-engaging head, a rail-engaging gravity jaw pivoted upon the lever, a push bar pivotally connected with the lever and having a terminal notch constituting a seat, a hook member adjustably connected with the push bar, and a pin extending transversely through the push bar and constituting a stop to limit the movement of the hook member upon the push bar.

6. In a car moving device a lever having a head provided with a transversely disposed, curved or arcuate sharp engaging edge, a gravity jaw pivoted upon the lever and having an engaging edge similar to that of the head, a push bar pivotally connected with the lever, and means for connecting the free end of said push bar with a car body.

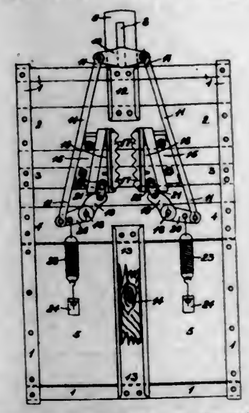
7. In a car moving device a lever having a head provided with a rail gripping edge, a gravity jaw pivoted upon the lever and having a rail gripping edge, means for limiting the swinging movement of the jaw in an upward direction, a push bar connected pivotally with the lever intermediate the head and the jaw, and means for connecting the free end of the push bar with a car body.

870,988. BUTTONHOLE-STRIP. LOUISE S. NEWCOMB, New York, N. Y. Filed Nov. 3, 1906. Serial No. 341,827.



As a new article of manufacture, a continuous ready made button-hole strip, consisting of a continuous strip of fabric formed from a single piece of material folded longitudinally to form two plies at the free edge of the strip and four plies at the fastening edge thereof, and a continuous series of separated long, narrow loops of button-hole stitching passing through the two plies of the fabric near one edge of the strip and through all four plies of the fabric near the other edge of the strip and located wholly in said strip of fabric.

870,989. SAFETY BRAKE MECHANISM FOR MINE CAGES AND SKIPS. JOHN OWENS, Maraisburg, Transvaal. Filed Jan. 29, 1907. Serial No. 354,731.



1. In a safety brake mechanism of the nature indicated, the combination with the vehicle and runners of inclined guides fixed to the vehicle at the sides of the runners, a pair of serrated wedge shaped brake blocks arranged in said guides and movable therein towards and away from the runners, an eccentric for each brake block revolubly carried by the vehicle and adapted to engage the underside of the brake blocks to raise them into contact with the runners, links pivoted to the eccentrics, each formed with an elongated slot, a pin fixed to each brake block which engages one of said elongated slots, a lever connected to each eccentric, and connections between said levers and the winding rope for depressing the eccentrics when the weight of the cage is on the rope to cause the brake blocks to run clear of the runners.

2. In a safety brake mechanism of the nature specified, the combination with the vehicle of inclined guides fixed to the vehicle and runners at the sides of the runners, a pair of serrated wedge shaped brake blocks arranged in said guides and movable therein towards and away from the runners, an eccentric for each brake block revolubly carried by the vehicle and adapted to engage the underside of the brake blocks to raise them into contact with the runners, links pivoted to the eccentrics, each formed with an elongated slot, a pin fixed to each brake block which engages one of said elongated slots, a lever connected to each eccentric, connections between said levers and the winding rope for depressing the eccentrics when the weight of the cage is on the rope to cause the brake blocks to run clear of the runners, and springs connected with the levers for accelerating the motion of the levers and eccentrics in the event of breakage of the winding rope.

3. In a safety brake mechanism of the nature indicated, in combination, the vehicle, the runners 14 the drawbar 7 connected with the winding rope, the guides 6 for the drawbar, the rods 11 connected to each end of the drawbar, the inclined brake block guides 15, the wedge shaped brake blocks 16 and the serrated plates 17 detachably fixed to the brake blocks 16, the eccentrics 19 revolubly carried by the vehicle and adapted to engage the underside of the brake blocks, the links 21 pivoted at one extremity to the eccentrics 19 and at the other extremity constructed with a slot, the pins 22 fixed to the brake blocks 16 and engaging the slots in the links 21, the levers 20 connected to and actuating the eccentrics 19 and having fixed to their outer extremities the rods 11 for raising the levers and lowering the eccentrics and brake blocks when the weight of the vehicle is on the winding rope, the springs 23 connected to the levers 20, and the brackets 24 to which the other extremities of the springs are fixed.

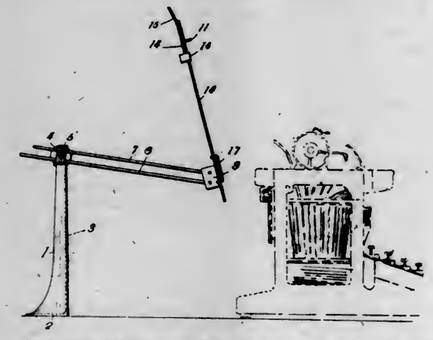
870,990. PENCIL-ERASER. BERNARD A. PAYSON, Tyrconnell, Ontario, Canada. Filed Jan. 12, 1907. Serial No. 352,031.



The herein described pencil eraser comprising a sleeve fitted to the end of a pencil and provided with oppositely

disposed longitudinal slots, oppositely disposed upwardly projecting hooks on one side of each of said slots, a rubber eraser tip, means connected to said tip near the inner end thereof and projecting beyond the sleeve to form finger holds for adjusting the tip, and said means engaging the hooks of the sleeve, substantially as described.

870,991. COPY-HOLDER. HARRY E. PENNEY, Columbus, Ohio. Filed Feb. 2, 1907. Serial No. 355,471.



1. A copy holder, comprising a standard, a copy holding plate, upper and lower rods, pivotally connected at one end to the rear of the plate, and a clamp revolubly mounted on the standard and with which said rods have a sliding connection.

2. A copy holder, comprising a standard, a copy holding plate, upper and lower rods, pivotally connected at one end to the said plate, and a T-clamp mounted to turn in said standard and provided with a tightening nut, said T-clamp being provided with a head formed with grooves in which said rods are slidingly mounted, said clamp being adapted to bind said rods to the standard.

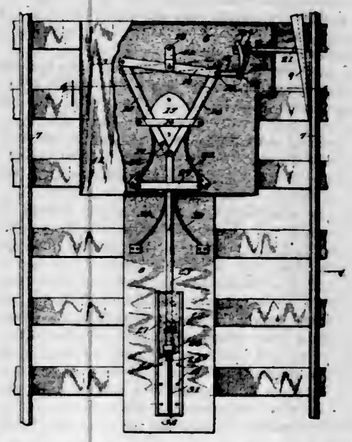
3. A copy holder, comprising a standard, a clamp mounted on said standard, a copy holding plate, rods to which said plate is pivotally connected, said rods being slidingly mounted on said clamp, the latter being adapted to bind the rods to the standard, one of said rods being formed with a stop, whereby to limit the sliding movement of the rods in one direction.

4. A copy holding plate, provided with opposite facing hooks, one of which is stationary, and the other of which is laterally adjustable, the laterally adjustable hook being provided at one end with a stop and the plate being formed on its rear face with bearings in which said hook is mounted to slide, the stop being adapted to abut against one of said bearings, and the stationary hook consisting of a length of wire doubled upon itself at an intermediate point and secured at such point to the rear of said plate, one end of said wire being bent around the side edge of the plate to form the hook and the other end of said wire extending upwardly and inwardly around the upper edge of the plate, whereby to form a leaf holding crook.

870,992. RAILWAY-SWITCH. JOSEPH F. REESE and COURT L. MINER, Lucerne, Ind., assignors of one-third to Beryl A. Conrad, Royal Center, Ind. Filed Mar. 6, 1907. Serial No. 360,805.

1. In a railway switch, the combination with a switch point, of a pair of inclined thrust bars connected to the point and arranged to throw the same in opposite directions and having sockets in their ends, a plunger adapted to enter either socket and actuate either bar, and means carried by the car to advance the plunger.

2. In a railway switch, the combination with a switch point, of a lever connected thereto, a pair of thrust bars connected to opposite ends of the lever and adapted to swing the same in opposite directions, a plunger arranged to strike either bar and advance the same, and means carried by the car to operate the plunger.



3. In a railway switch, the combination with a switch point, of a lever connected thereto and arranged to throw the switch either way, a pair of sliding thrust bars connected at one end to opposite ends of the lever and inclined toward each other with one or the other of their opposite ends in position to receive the impact of the plunger, a plunger slidable toward said bars and adapted to strike the end in said position, and means carried by the car to advance said plunger.

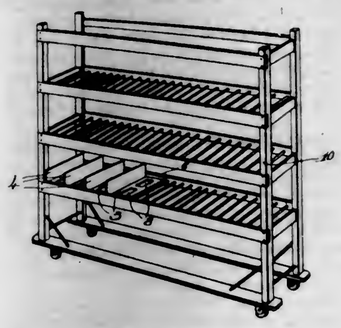
4. In a railway switch, the combination with a switch point, of a lever connected thereto and arranged to throw the switch either way, guides arranged at an angle to each other in front of the lever, thrust bars connected to opposite ends of the lever and slidable oppositely in the guides to bring one or the other of their free ends to a certain point, a plunger slidable toward said point and arranged to strike the end of the thrust bar thereat, to advance said bar and swing the lever, means on the car to advance the lever, and means to retract the lever after it is advanced.

5. In a railway switch apparatus, the combination of a trip carried by the car, a plunger slidable in the roadbed and arranged to be struck and advanced by the trip, means to retract the plunger, throw rods connected with the switch, said rods inclining in opposite directions from the plunger, and means for guiding the plunger, said means being yielding to permit the plunger to move in the direction of length of the throw rods.

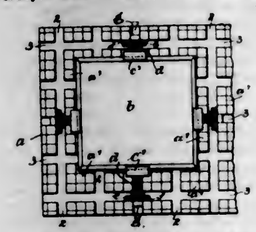
6. In a railway switch, the combination with a switch point, of a box located between the rails and having a sliding cover, a plunger slidable in the box and pivotally connected to the cover, springs bearing against opposite sides of the plunger, a lever fulcrumed between the rails and connected to the switch point and arranged to throw the same either way, thrust bars connected to opposite ends of the lever and inclined toward each other and toward the end of the plunger and arranged to stand respectively in line therewith according to the position of the switch, means carried by the car to advance the plunger and cause the same to strike and advance one or the other of the thrust bars, and means to retract the plunger.

870,993. SHOE-PROTECTOR FOR SHOE-RACKS. FRED L. RICHARDSON, Rockland, Mass. Filed Apr. 4, 1907. Serial No. 366,396.

A shoe protector for shoe racks comprising a bottom member having ventilating apertures therein, a side member rising from one side only thereof, and two end members of less height than the side member.



870,994. PRINTING-PLATE HOLDER. CHARLES F. ROCKSTROH, New York, N. Y., assignor to Rockstroh Manufacturing Company, Orange, N. J., a Corporation of New Jersey. Filed Dec. 8, 1905. Serial No. 290,873.



1. The combination with an integrally formed plate foundation having series of grooves therein provided with an undercut shouldered side wall, of a register hook having its base in one of said grooves, said register hook being provided with means for longitudinal adjustment and a spring actuated tumbler for engaging under the shoulder of said side wall for retaining the hook within the groove.

2. In combination with an integrally formed supporting bed for printing plates, having grooves with undercut and shouldered sides and walls downwardly extending from the undercut portions, a clamp device for engaging and holding printing plates to said bed having a spring actuated tumbler adapted to come under the shouldered portions of the said groove.

3. In combination with an integrally formed supporting bed for printing plates having grooves and undercut and shouldered sides and walls downwardly extending from the undercut portions, a clamp device for engaging and holding printing plates to said bed, comprising an elongated body portion with a clamping jaw, a revoluble screw stem, means for fixing the position of said screw stem in a transverse groove to that occupied by the elongated body for moving said body lengthwise of said groove, and a spring actuated tumbler adapted to come under the shouldered portions of the said groove for retaining the clamp device within the groove.

4. In combination with an integrally formed supporting bed for printing plates having grooves and undercut and shouldered sides and walls downwardly extending from the undercut portions, a clamp device for engaging and holding printing plates to said bed, comprising an elongated body portion with a clamping jaw, a revoluble screw stem, means for fixing the position of said screw stem in a transverse groove to that occupied by the elongated body for moving said body lengthwise of said groove, and a spring actuated member apertured and interiorly threaded to receive said revoluble screw stem by which it is carried, said spring actuated member being adapted to come under the shouldered portions of said groove for retaining the clamp device in position.

5. A clamp mechanism for holding a printing plate to a grooved bed or foundation, consisting of the clamp and a spring actuated tumbler device adapted to engage in a groove in the bed and thereby secure the clamp to the bed, substantially as specified.

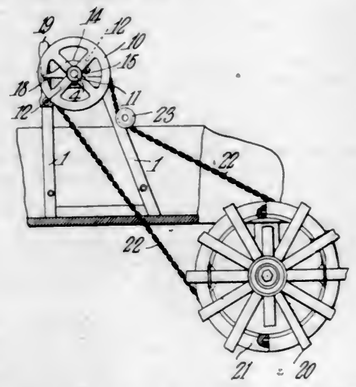
6. A clamp device for holding a printing plate to a grooved bed or foundation, said clamp device comprising a body portion longitudinally apertured and interiorly threaded and adapted to pass freely down into a slot or groove of the bed, and having a jaw formed on the upper surface and placed transversely to the body and undercut on its advancing edge so as to take a bearing over the inclined edge of a printing plate, a revoluble screw stem passing through the screw threaded aperture in the body portion and adapted by its rotation to move the body longitudinally along in a groove or slot in the bed in either direction, and a spring actuated tumbler for retaining the clamp device in the groove.

7. A clamp device for holding a printing plate to a grooved bed or foundation, comprising a body portion longitudinally apertured and interiorly threaded and adapted to pass freely down into a slot or groove in the bed, and having a jaw on the upper surface placed transversely to the body, a revoluble screw stem passing through the screw threaded aperture in the body portion and adapted by its rotation to move the body longitudinally along in a groove in the bed in either direction, and a spring actuated member longitudinally apertured and interiorly threaded to receive the said revoluble screw stem by which it is carried, said spring actuated member being adapted to retain the clamp device within a groove in the bed or foundation.

8. A clamp device for use in the grooves of a bed for holding printing plates thereto, the same consisting of a body portion having a jaw, a means for moving the same lengthwise, a stop device against which such movement is effected, a pivoted tumbler for holding the clamp device to the bed and a spring acting thereon to move the tumbler to one side into operative position.

9. A clamp device for use in the grooves of a bed for holding printing plates thereto, comprising a body portion having a jaw, a means for moving the same lengthwise, a stop device against which such movement is effected, a laterally swinging shoulder engaging member, and a separate spring acting thereon to operate said laterally swinging shoulder engaging member.

870,995. POWER ATTACHMENT FOR SPRAY-PUMPS. JACOB RODGERS, Wolf Creek, Ky., assignor of one-half to Charles M. Smith, Andyville, Ky. Filed May 23, 1906. Serial No. 318,410.



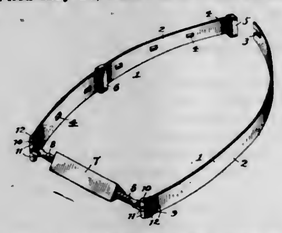
1. An attachment of the character described comprising a shaft, a spring controlled dog revoluble therewith, a wheel loosely mounted on the shaft, means upon the wheel for engaging the dog, means for rotating the wheel, and means movable into the path of the dog for shifting

the dog out of engagement with said engaging means and positively holding the shaft against rotation.

2. An attachment of the character described comprising standards, a shaft rotatably mounted thereon, a wheel loosely mounted upon the shaft, a laterally projecting device upon the wheel, a spring-controlled dog pivotally connected to and rotatable with the shaft, the pivot of the dog extending transversely of the plane of movement thereof, an offset head upon the dog normally projecting into the path of the laterally extending device to permit continuous rotation of the shaft and wheel in unison, and manually operated means for shifting the head out of the path of said device to hold the shaft against movement during the rotation of the wheel.

3. An attachment of the character described comprising standards, a shaft rotatably mounted thereon, a wheel loosely mounted upon the shaft, a laterally extending pin upon the wheel, a spring-controlled dog pivotally mounted upon and rotatable with the shaft, the pivot of said dog extending transversely of the plane of movement thereof, an offset head upon the dog and movable into the path of the pin to permit the rotation of the wheel and shaft in unison, a stop lip upon the dog, and manually operated means for engaging the dog to shift the head from the path of the pin to hold the shaft against movement and permit independent rotation of the wheel.

870,996. ICE-CREAM SCRAPER. WILLIAM ROSS, Troy, N. Y. Filed May 17, 1906. Serial No. 317,413.



1. A device of the class described, comprising a band, and a rotatable scraper proper adjustably connected to the ends of said band to expand and contract the band, said scraper being polygonal in cross-section to provide a series of scraping edges.

2. A device of the class described, comprising a series of band sections the contiguous ends of which are adapted to overlap; means for holding the lapped ends in such relation, and a scraper proper adjustably connected to the other ends of said sections to expand and contract the same.

3. A device of the class described, comprising a scraper proper, and means connected thereto for holding the same, in applied position in a can, said holding means being adjustable to adapt the device to cans of varying sizes, the scraper proper being adjustably connected to the holding means to expand and contract the same, whereby the holding means are caused to frictionally engage the walls of the can to hold the device therein.

4. A device of the class described, comprising a band, a scraper proper associated therewith, and means for varying the diameter of said band to adapt the device to cans of varying sizes, said scraper being adjustably connected to the band to cause the latter to frictionally engage the walls of the can.

5. A device of the class described, comprising a band, and a scraper proper associated therewith, said scraper proper being adjustably connected to the band to expand and contract the same, whereby the band is caused to frictionally engage the walls of the can to hold the device therein.

6. A device of the class described, comprising a band formed of sections adjustable relatively to each other, and a scraper proper adjustably connected to the ends of said band and adapted to expand and contract the latter, whereby the sections of the band are caused to frictionally engage the walls of a can to hold the device therein.

7. A device of the class described, comprising a band formed of sections the contiguous ends of which are lapped and adjustable relatively to each other, and a scraper proper adjustably connected to the other ends of the sections of said band and adapted to expand and contract the latter, whereby the sections of the band are caused to frictionally engage the walls of the can to hold the device therein.

8. A device of the class described, comprising a band formed of sections the contiguous ends of which are lapped and adjustable relatively to each other, means for holding the contiguous ends of said sections in lapped relation, and a scraper proper adjustably connected to the other ends of the sections of said band and adapted to expand and contract the latter, whereby the sections of the band are caused to frictionally engage the walls of a can to hold the device therein.

9. A device of the class described, comprising a band, and a rotatable scraper proper adjustably connecting the ends thereof, said scraper proper acting to expand and contract said band to cause the latter to frictionally engage the walls of a can to hold the device therein.

10. A device of the class described, comprising a band, screw-threaded shanks connected to the ends thereof, and a scraper proper connected to said shanks and rotatable thereon, whereby the ends of said band are adjusted relatively to each other, said scraper proper being polygonal in cross-section to provide a series of scraping edges.

11. A device of the class described, comprising a band, screw-threaded shanks pivotally connected to the ends thereof, and a scraper proper connected to said shanks and rotatable thereon, whereby the ends of said band are adjusted relatively to each other.

12. A device of the class described, comprising a band formed of sections the contiguous ends of which are arranged in lapped relation, screw-threaded shanks pivotally connected to the other ends of said band, and a scraper proper connected to said shanks and rotatable thereon, whereby the ends of said band are adjusted relatively to each other.

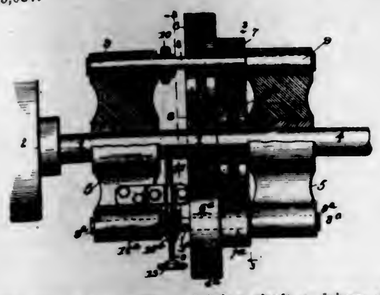
13. A device of the class described, comprising a band, shanks pivotally connected to the ends thereof and screw-threaded in opposite directions, and a scraper proper having a bore the ends of which are screw-threaded in opposite directions and connected to said screw-threaded shanks, whereby by the rotation of said scraper proper the ends of said band are adjusted relatively to each other.

14. A device of the class described, comprising a band formed of sections the contiguous ends of which are lapped and adjustable relatively to each other, shanks pivotally connected to the ends of said band and screw-threaded in opposite directions, and a scraper proper having a bore the ends of which are screw-threaded in opposite directions and connected to said screw-threaded shanks, whereby by the rotation of said scraper proper the ends of said band are adjusted relatively to each other.

15. A device of the class described, comprising a band formed of sections the contiguous ends of which are lapped and adjustable relatively to each other, means for holding the contiguous ends of said sections in lapped relation, shanks connected to the ends of said band and screw-threaded in opposite directions, and a scraper proper having a bore the ends of which are screw-threaded in opposite directions and connected to said screw-threaded shanks, whereby by the rotation of said scraper proper the ends of said band are adjusted relatively to each other.

16. A device of the class described, comprising a band formed of sections the contiguous ends of which are lapped and adjustable relatively to each other, pivotal pins carried by the ends of said band, shanks pivotally connected to said pins and screw-threaded in opposite directions, and a scraper proper having a bore the ends of which are screw-threaded in opposite directions and connected to said screw-threaded shanks, whereby by the rotation of said scraper proper the ends of said band are adjusted relatively to each other.

870,997. CHANGE-SPEED APPARATUS. ADELBERT SAUER, Pittsburg, Pa. Filed Jan. 31, 1907. Serial No. 355,037.



The combination, with a driving shaft a driven shaft alined therewith, countershafts on opposite sides of these two shafts and gears of different diameters which operatively connect the several shafts as described, of rotatable eccentric bearings for the countershafts, fixed supports in which the main shafts and the bushings are mounted, and means for rotating the bushings for adjusting the countershafts laterally, the same consisting of worm wheels keyed on the bushings and a transverse rotatable shaft arranged in suitable bearings and having worms engaging the worm wheels in the manner described.

870,998. FIRE-ESCAPE. RICHARD SCHAPLER, Frankfort-on-the-Main, and CARL WASSER, Nüremberg, Germany. Filed Dec. 27, 1904. Serial No. 238,320¼.



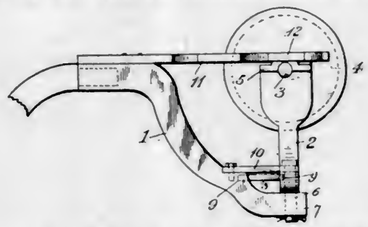
1. In fire escapes or masts, a fixed supporting member, a sliding member, means for causing the movement of said sliding member, a second sliding member capable of movement with reference to the first sliding member flexible means for connecting the upper extremity of the fixed supporting member with the lower extremity of the second sliding member after first passing around the lower extremity of the first sliding member, and flexible means for the connection of the lower extremity of the second sliding member with the upper extremity of the fixed supporting member after first passing over the upper extremity of the first sliding member.

2. In fire escapes or masts, a fixed supporting tube, a sliding tube within said fixed tube, and a second sliding tube within said first sliding tube, a flexible member connecting the top of the fixed tube with the bottom of the second sliding tube after first passing around the bottom of the first sliding tube and a flexible member connecting the lower end of the second sliding tube with the top of the fixed tube after first passing over the top of the first sliding tube substantially as described.

3. In fire escapes or masts, a fixed supporting tube, a sliding tube within said fixed tube, and a second sliding tube within said first sliding tube, a flexible member connecting the top of the fixed tube with the bottom of the second sliding tube after first passing around the bottom of the first sliding tube and duplicate flexible members one passing on each side of the second sliding tube and connecting the lower end of the second sliding tube with the top of the fixed tube after first passing over the top of the first sliding tube substantially as described.

4. In fire escapes or masts members constituted of a number of parts capable of sliding within each other, flexible means for connecting the upper extremities of the one of said parts with the lower extremities of the adjacent part said flexible means passing around the lower extremity of an intermediate part, and flexible means for connecting the top of one part to the bottom of an adjacent part, said flexible means passing over the top of an intermediate part, mechanism for regulating the extension or contraction of said members substantially as described.

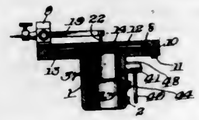
870,999. TROLLEY-HARP. SAMUEL T. SIMMONS, Columbus, Ohio. Filed Apr. 16, 1906. Serial No. 311,974.



1. A device of the character described, comprising a pole-head, a fork bearing the trolley-pulley, having a pivotal or swiveling connection with said head, a yielding or resilient connection between said head and said fork, means for the retention of said yielding or resilient member in position, and a guard secured to said head, having forwardly projecting arms with their free-end portions outstanding laterally from each other and the trolley and resting upon the axle-housings of the trolley pulley.

2. A device of the character described, comprising a pole-head, a fork bearing the trolley pulley, having a pivotal or swiveling connection with said head, a yielding or resilient connection between said head and said fork, means for the retention of said resilient member in position, and a guard having a central rearward extension secured to said pole-head, and lateral forwardly extending arms forming intermediately of their ends reëntrant angular portions effective to rest upon the axle-housings of the trolley pulley axle, the forward end portions of said arms diverging from each other and away from and laterally of said trolley-pulley.

871,000. SOUND-REPRODUCING HEAD. CURTIS A. SMITH, Elgin, Ill. Filed Feb. 28, 1906. Serial No. 303,393.



1. A pivotal support for a stylus arm having a member provided with a plurality of axially extending parallel spring fingers and means for engaging the ends of said member.

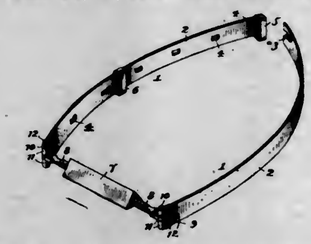
2. In combination with a sound reproducing head having a tube running from the diaphragm chamber, a mute consisting of a tubular body movably mounted in said tube and adapted to be moved to project into said dia-

the dog out of engagement with said engaging means and positively holding the shaft against rotation.

2. An attachment of the character described comprising standards, a shaft rotatably mounted thereon, a wheel loosely mounted upon the shaft, a laterally projecting device upon the wheel, a spring-controlled dog pivotally connected to and rotatable with the shaft, the pivot of the dog extending transversely of the plane of movement thereof, an offset head upon the dog normally projecting into the path of the laterally extending device to permit continuous rotation of the shaft and wheel in unison, and manually operated means for shifting the head out of the path of said device to hold the shaft against movement during the rotation of the wheel.

3. An attachment of the character described comprising standards, a shaft rotatably mounted thereon, a wheel loosely mounted upon the shaft, a laterally extending pin upon the wheel, a spring-controlled dog pivotally mounted upon and rotatable with the shaft, the pivot of said dog extending transversely of the plane of movement thereof, an offset head upon the dog and movable into the path of the pin to permit the rotation of the wheel and shaft in unison, a stop lip upon the dog, and manually operated means for engaging the dog to shift the head from the path of the pin to hold the shaft against movement and permit independent rotation of the wheel.

870,996. ICE-CREAM SCRAPER. WILLIAM ROSS, Troy, N. Y. Filed May 17, 1906. Serial No. 317,413.



1. A device of the class described, comprising a band, and a rotatable scraper proper adjustably connected to the ends of said band to expand and contract the band, said scraper being polygonal in cross-section to provide a series of scraping edges.

2. A device of the class described, comprising a series of band sections the contiguous ends of which are adapted to overlap, means for holding the lapped ends in such relation, and a scraper proper adjustably connected to the other ends of said sections to expand and contract the same.

3. A device of the class described, comprising a scraper proper, and means connected thereto for holding the same in applied position in a can, said holding means being adjustable to adapt the device to cans of varying sizes, the scraper proper being adjustably connected to the holding means to expand and contract the same, whereby the holding means are caused to frictionally engage the walls of the can to hold the device therein.

4. A device of the class described, comprising a band, a scraper proper associated therewith, and means for varying the diameter of said band to adapt the device to cans of varying sizes, said scraper being adjustably connected to the band to cause the latter to frictionally engage the walls of the can.

5. A device of the class described, comprising a band, and a scraper proper associated therewith, said scraper proper being adjustably connected to the band to expand and contract the same, whereby the band is caused to frictionally engage the walls of the can to hold the device therein.

6. A device of the class described, comprising a band formed of sections adjustable relatively to each other, and a scraper proper adjustably connected to the ends of said band and adapted to expand and contract the latter, whereby the sections of the band are caused to frictionally engage the walls of a can to hold the device therein.

7. A device of the class described, comprising a band formed of sections the contiguous ends of which are lapped and adjustable relatively to each other, and a scraper proper adjustably connected to the other ends of the sections of said band and adapted to expand and contract the latter, whereby the sections of the band are caused to frictionally engage the walls of the can to hold the device therein.

8. A device of the class described, comprising a band formed of sections the contiguous ends of which are lapped and adjustable relatively to each other, means for holding the contiguous ends of said sections in lapped relation, and a scraper proper adjustably connected to the other ends of the sections of said band and adapted to expand and contract the latter, whereby the sections of the band are caused to frictionally engage the walls of a can to hold the device therein.

9. A device of the class described, comprising a band, and a rotatable scraper proper adjustably connecting the ends thereof, said scraper proper acting to expand and contract said band to cause the latter to frictionally engage the walls of a can to hold the device therein.

10. A device of the class described, comprising a band, screw-threaded shanks connected to the ends thereof, and a scraper proper connected to said shanks and rotatable thereon, whereby the ends of said band are adjusted relatively to each other, said scraper proper being polygonal in cross-section to provide a series of scraping edges.

11. A device of the class described, comprising a band, screw-threaded shanks pivotally connected to the ends thereof, and a scraper proper connected to said shanks and rotatable thereon, whereby the ends of said band are adjusted relatively to each other.

12. A device of the class described, comprising a band formed of sections the contiguous ends of which are arranged in lapped relation, screw-threaded shanks pivotally connected to the other ends of said band, and a scraper proper connected to said shanks and rotatable thereon, whereby the ends of said band are adjusted relatively to each other.

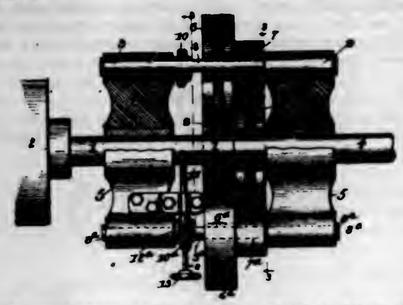
13. A device of the class described, comprising a band, shanks pivotally connected to the ends thereof and screw-threaded in opposite directions, and a scraper proper having a bore the ends of which are screw-threaded in opposite directions and connected to said screw-threaded shanks, whereby by the rotation of said scraper proper the ends of said band are adjusted relatively to each other.

14. A device of the class described, comprising a band formed of sections the contiguous ends of which are lapped and adjustable relatively to each other, shanks pivotally connected to the ends of said band and screw-threaded in opposite directions, and a scraper proper having a bore the ends of which are screw-threaded in opposite directions and connected to said screw-threaded shanks, whereby by the rotation of said scraper proper the ends of said band are adjusted relatively to each other.

15. A device of the class described, comprising a band formed of sections the contiguous ends of which are lapped and adjustable relatively to each other, means for holding the contiguous ends of said sections in lapped relation, shanks connected to the ends of said band and screw-threaded in opposite directions, and a scraper proper having a bore the ends of which are screw-threaded in opposite directions and connected to said screw-threaded shanks, whereby by the rotation of said scraper proper the ends of said band are adjusted relatively to each other.

16. A device of the class described, comprising a band formed of sections the contiguous ends of which are lapped and adjustable relatively to each other, pivotal pins carried by the ends of said band, shanks pivotally connected to said pins and screw-threaded in opposite directions, and a scraper proper having a bore the ends of which are screw-threaded in opposite directions and connected to said screw-threaded shanks, whereby by the rotation of said scraper proper the ends of said band are adjusted relatively to each other.

870,997. CHANGE-SPEED APPARATUS. ADELBERT SAUER, Pittsburg, Pa. Filed Jan. 31, 1907. Serial No. 355,037.



The combination, with a driving shaft a driven shaft alined therewith, countershafts on opposite sides of these two shafts and gears of different diameters which operatively connect the several shafts as described, of rotatable eccentric bearings for the countershafts, fixed supports in which the main shafts and the bushings are mounted, and means for rotating the bushings for adjusting the countershafts laterally, the same consisting of worm wheels keyed on the bushings and a transverse rotatable shaft arranged in suitable bearings and having worms engaging the worm wheels in the manner described.

870,998. FIRE-ESCAPE. RICHARD SCHAPLER, Frankfort-on-the-Main, and CARL WASSER, Nüremberg, Germany. Filed Dec. 27, 1904. Serial No. 238,320.



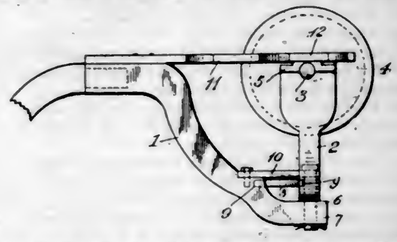
1. In fire escapes or masts, a fixed supporting member, a sliding member, means for causing the movement of said sliding member, a second sliding member capable of movement with reference to the first sliding member flexible means for connecting the upper extremity of the fixed supporting member with the lower extremity of the second sliding member after first passing around the lower extremity of the first sliding member, and flexible means for the connection of the lower extremity of the second sliding member with the upper extremity of the fixed supporting member after first passing over the upper extremity of the first sliding member.

2. In fire escapes or masts, a fixed supporting tube, a sliding tube within said fixed tube, and a second sliding tube within said first sliding tube, a flexible member connecting the top of the fixed tube with the bottom of the second sliding tube after first passing around the bottom of the first sliding tube and a flexible member connecting the lower end of the second sliding tube with the top of the fixed tube after first passing over the top of the first sliding tube substantially as described.

3. In fire escapes or masts, a fixed supporting tube, a sliding tube within said fixed tube, and a second sliding tube within said first sliding tube, a flexible member connecting the top of the fixed tube with the bottom of the second sliding tube after first passing around the bottom of the first sliding tube and duplicate flexible members one passing on each side of the second sliding tube and connecting the lower end of the second sliding tube with the top of the fixed tube after first passing over the top of the first sliding tube substantially as described.

4. In fire escapes or masts members constituted of a number of parts capable of sliding within each other, flexible means for connecting the upper extremities of the one of said parts with the lower extremities of the adjacent part said flexible means passing around the lower extremity of an intermediate part, and flexible means for connecting the top of one part to the bottom of an adjacent part, said flexible means passing over the top of an intermediate part, mechanism for regulating the extension or contraction of said members substantially as described.

870,999. TROLLEY-HARP. SAMUEL T. SIMMONS, Columbus, Ohio. Filed Apr. 16, 1906. Serial No. 311,974.



1. A device of the character described, comprising a pole-head, a fork bearing the trolley-pulley, having a pivotal or swiveling connection with said head, a yielding or resilient connection between said head and said fork, means for the retention of said yielding or resilient member in position, and a guard secured to said head, having forwardly projecting arms with their free-end portions outstanding laterally from each other and the trolley and resting upon the axle-housings of the trolley pulley.

2. A device of the character described, comprising a pole-head, a fork bearing the trolley pulley, having a pivotal or swiveling connection with said head, a yielding or resilient connection between said head and said fork, means for the retention of said resilient member in position, and a guard having a central rearward extension secured to said pole-head, and lateral forwardly extending arms forming intermediately of their ends reëntrant angular portions effective to rest upon the axle-housings of the trolley pulley axle, the forward end portions of said arms diverging from each other and away from and laterally of said trolley-pulley.

871,000. SOUND-REPRODUCING HEAD. CURTIS A. SMITH, Elgin, Ill. Filed Feb. 28, 1906. Serial No. 303,393.



1. A pivotal support for a stylus arm having a member provided with a plurality of axially extending parallel spring fingers and means for engaging the ends of said member.

2. In combination with a sound reproducing head having a tube running from the diaphragm chamber, a mute consisting of a tubular body movably mounted in said tube and adapted to be moved to project into said dia-

phragm chamber, and means for moving and adjusting said mute at different distances from the vibrating diaphragm, said means extending through the walls of said tube and adapted to be manipulated from the exterior thereof.

3. In combination with a sound reproducing head, a mute consisting of a tube mounted in the passage for the escape of the sound, and an eccentric in engagement with said tube and operable to advance said tube towards and with draw it from the diaphragm.

4. In combination with a sound reproducing head, a mute consisting of a tube mounted in the opening for the escape of the sound, a shaft carrying an eccentric, said tube being operably connected with said eccentric and means for limiting the revolutions of the shaft.

5. In a sound reproducing head a stylus arm having angular projections, a spring fulcrum consisting of two pieces whose inner portions are split at right angles, the inner end of the divisions formed thereby contacting with and engaging the faces of said angular projections.

6. In sound heads for sound reproducing machines, pieces carried in adjustable assembly with said sound head the inner portion of said pieces being split in sections, a stylus arm and projections carried upon each side of said stylus arm for engaging said sections.

7. A support for stylus arms in sound reproducing machines, comprising a plurality of axially extending fingers, means for frictionally engaging and bending said fingers to produce tension and a stylus arm.

8. A fulcrum for stylus arms in sound reproducing machines consisting of two pieces each with a plurality of fingers to engage the stylus arm.

9. A fulcrum for stylus arms in sound reproducing machines consisting of two pieces the ends of which are divided into a plurality of fingers, means upon the stylus arm for engaging said fingers, and means for connecting said pieces with the sound head.

10. A sound box comprising rear and side walls, a diaphragm therein, a sound box tube projecting from said rear wall and a sound modifier consisting of a tube movable within said sound box tube and adjustable into and out of close proximity to said diaphragm and means carried by said sound box and exterior thereof to adjust said sound modifier.

871,001. BENCH-PLANE. ERNEST W. SMITH, Grand Marais, Mich. Filed July 5, 1907. Serial No. 382,245.

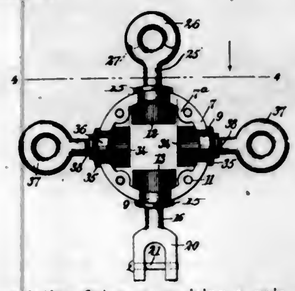


1. A plane comprising a stock, a frog adjacent the throat thereof, a bit-carrying frame pivoted on the frog, a worm-wheel mounted in the frame and having a toothed hub, a worm and its shaft mounted in the frame, means for turning the worm-shaft, a bit having a longitudinal slot provided with a rack meshing with the toothed hub, a slotted cap on the bit, a screw extending from the aforesaid hub and having its head seating in the slot of the cap, and clamping means for the cap.

2. A plane comprising a stock, a frog adjacent the throat thereof provided with an undercut recess, a bit-carrying frame pivoted on the frog and having a guide-rib extending into the undercut portion of the aforesaid recess, and means for clamping the bit to the frame.

871,002. INSULATING-FIXTURE. LOUIS STEINBERGER, New York, N. Y. Filed Nov. 5, 1906. Serial No. 342,008.

1. An insulating fixture comprising a pair of annular metallic members provided with arches, and apertures, and further provided with lugs disposed adjacent to said apertures, for the purpose of strengthening said annular metallic members, rivets extending through said apertures and holding said annular members together, the arrangement of said annular members being such that the arches of one annular member mate the arches of the other annular member, thus forming eyes, bolts extending into said eyes, and means for insulating said bolts from said annular members.



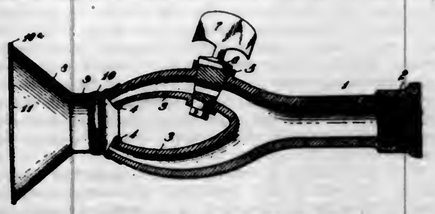
2. An insulating fixture comprising a pair of annular metallic members provided with arches, said annular metallic members being further provided with lugs extending internally thereof for the purpose of strengthening said annular metallic members, fastening members securing the lugs of one of said annular members to the lugs of the other annular member for the purpose of holding said annular members together, and eye-bolts extending through said arches and insulated therefrom.

3. An insulating fixture comprising a pair of annular metallic members provided with arches and so disposed that said arches of one annular member mate the arches of the other annular member, said annular members being provided with lugs disposed internally thereof and further provided with holes extending through said lugs, and fastening members extending through said lugs for the purpose of securing said annular members together, sleeves of insulating material mounted within said arches, and metallic suspension members provided with portions connected with said sleeves of insulating material.

4. An insulating fixture comprising a ring made in halves, eye-bolts extending radially into said ring and disposed intermediate said halves, sleeves of insulating material extending through said eye-bolts, and metallic members extending into said sleeves and thus insulated from said ring.

5. The combination of a divided ring made in halves, said halves being provided with oppositely disposed arches and further provided with apertures, fastening members extending through said apertures for the purpose of connecting said halves together, sleeves of insulating material encircled by said arches and held in position thereby, and bolts provided with portions extending into said sleeves.

871,003. HOSE-NOZZLE. WILLIAM A. TEALL, Eau Claire, Wis. Filed May 31, 1906. Serial No. 319,561.

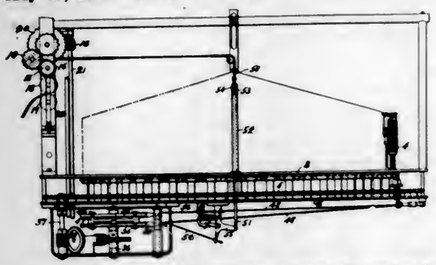


1. A nozzle, comprising a tube having spaced jet arms projecting therefrom, and a spray cap detachably engaged with and supported by both arms and furthermore having a common chamber that receives the discharge from both arms, said chamber having a foraminous discharge wall.

2. In a hose nozzle, the combination with convergently disposed branch jet arms having the discharged ends spaced apart and provided with enlargements, of a spray cap supported by and detachably mounted on the arms, said cap having a neck that surrounds and is engaged with the discharge ends of both arms, said neck having an interior seat that receives the outer sides of the enlargements and said cap having a foraminous wall.

3. A nozzle comprising a tube having spaced integral branch arms, a turning plug located in one of the arms for cutting off the flow of liquid therethrough, a flared spray cap having a neck that is detachably engaged on and supported by the outer ends of the branch arms, and a screen extending across the outer flared end of the cap.

871,004. BRAIDING-MACHINE. FERDINAND THUN, Wyomissing, Pa., assignor to Textile Machine Works, Wyomissing, Pa., a Corporation of Pennsylvania. Filed May 11, 1906. Serial No. 316,237.



1. A braiding machine having a take-off mechanism and an operating mechanism therefor comprising means for varying the speed of the take-off during different periods of the braiding operation.

2. In a braiding machine for forming alternately flat and tubular braid the combination of a switch mechanism, a take-off mechanism, and a switch operating mechanism arranged to simultaneously change the speed of the take-off mechanism.

3. In a braiding machine for forming alternately flat and tubular braid the combination of a switch mechanism, a take-off mechanism, a movable spreader-rod, and a switch operating mechanism arranged to simultaneously operate said spreader rod and to change the speed of the take-off mechanism.

4. In a braiding machine for forming alternately flat and tubular braid the combination of a switch mechanism, a movable spreader-rod and a switch operating mechanism arranged to simultaneously operate said spreader-rod and switch mechanism.

5. In a braiding machine having a variable speed take-off, an operating mechanism therefor comprising a variable speed drive-shaft, an intermediate shaft having different-sized gears engaging said drive-shaft, and a clutch mechanism comprising a rotary cam wheel and clutch operating lever substantially as set forth.

6. A braiding machine having a variable speed take-off and an operating mechanism therefor comprising a change-controlling cam wheel arranged in gear with the braiding mechanism substantially as set forth.

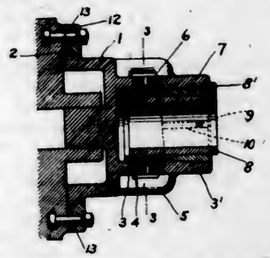
7. A braiding machine having a variable speed take-off and an operating mechanism therefor comprising a pair of relatively adjustable change-controlling cam wheels arranged in gear with the braiding mechanism substantially as set forth.

8. In a braiding machine for forming alternate flat and tubular braid, a spreader mechanism comprising a vertically movable spreader rod, a guide column therefor, and spreader fingers pivotally carried by said rod and connected to said column so as to be operated by the movement of the rod, substantially as set forth.

9. In a braiding machine for forming alternate flat and tubular braid, the combination of a take-off mechanism, a switch mechanism, a spreader mechanism, and means for simultaneously operating said switch and spreader mechanisms substantially as set forth.

10. In a braiding machine for forming alternate flat and tubular braid, the combination of a variable-speed take-off mechanism, a switch mechanism, a spreader mechanism, and means for simultaneously changing the speed of the take-off and operating said switch and spreader mechanisms, substantially as set forth.

871,005. CHUCK MECHANISM. ADAM TINDEL, Philadelphia, Pa., assignor to Tindel-Morris Company, Eddystone, Pa., a Pennsylvania Corporation. Filed Apr. 4, 1907. Serial No. 366,371.



1. A chuck mechanism comprising a ferrule having a recess and a tapered surface, a nut seated in said recess, a split sleeve having a screw thread engaged by said nut and a tapered surface engaged by the tapered surface of said ferrule, a split sleeve within the aforesaid split sleeve, and means whereby said inner sleeve is held against inward movement with said first named sleeve.

2. A chuck mechanism having a base with a ferrule thereon, said ferrule being divided by a recess and having the divided parts thereof connected by an outwardly swelled member, a nut revoluble in said recess, a compressible sleeve movable longitudinally in said ferrule by means of said nut, means for preventing said sleeve from revolving in said ferrule, and a second compressible sleeve within said first sleeve, said second sleeve having means for engaging said ferrule and holding it against inward movement with said first sleeve.

3. A chuck mechanism comprising, in combination with a seat, holding members secured thereto, a base engaged in revoluble relation to said seat by said holding members, a ferrule on said base, a nut seated within said ferrule, a compressible sleeve movable longitudinally in said ferrule by means of said nut, and a second compressible sleeve within said first named sleeve, said second sleeve having a lug or lugs for engaging said ferrule.

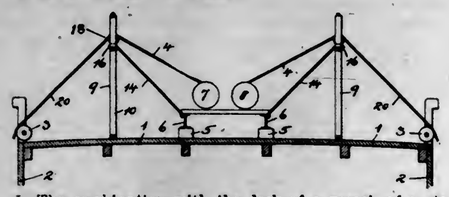
871,006. CORK-EXTRACTOR. ROBERT O. TOAN, Jackson, Mich. Filed Jan. 23, 1907. Serial No. 353,675.



A cork extractor comprising a blade of elliptical form in cross section presenting opposite convex faces and having its lower end tapered correspondingly from opposite sides to provide an introducing point, said blade being of uniform width above said introducing point and provided with opposite parallel unbroken or continuous, longitudinal sharpened edges extending to the introducing point, laterally extending shoulders formed upon the sides of the

blade at the juncture of the introducing point with the lower ends of the sharpened edges, and extending outward beyond said point and edges, and a handle at the upper end of the blade.

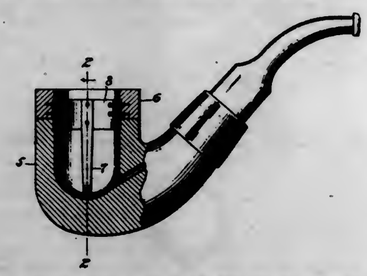
871,007. MEANS FOR OPERATING OYSTER-DREDGES. WILLIAM C. TODD, Chance, Md. Filed Dec. 8, 1906. Serial No. 346,850.



1. The combination with the deck of a vessel, of a stationary horizontal beam secured thereto; a stationary upright frame having inclined spreading legs whose feet are secured to the deck; a brace rod one end of which is secured to one leg of said frame and the other end to said stationary beam and holding the frame always in fixed position; a hoisting drum on the deck at one side of the said frame; a long roller at the other side of the frame; a pulley-block suspended from the top of said frame and free to have swinging movement between said legs and permanently supported in an elevated position higher than both the drum and said roller; and a dredge rope extending from the hoisting drum upward to the swinging pulley-block and thence downward to the said long roller.

2. The combination with the deck of a vessel of a long roller secured at the side of the vessel; a hoisting drum on the deck; a stationary upright frame having inclined spreading legs and positioned in a vertical plane between the said roller and hoisting drum; a pendent pulley-block free to swing between said spreading legs and permanently supported in an elevated position higher than both the roller and drum, and a dredge-rope passing from the said drum upward to the swinging pulley-block and thence downward to the said long roller.

871,008. TOBACCO-PIPE. EMILE VALLANCE, New York, N. Y. Filed Apr. 4, 1906. Serial No. 309,809.



In a tobacco pipe, a rotatable section on the top of the bowl, said section having a ring secured to the inner wall thereof and projecting into the bowl, and a blade consisting of a strip of material having its ends secured to the ring, and extending into the bowl, said strip being bent to conform with and to rest against the inner surface of the bowl, said strip being arranged perpendicular to the plane of the ring and having its flat faces in contact with the inner surface of the bowl.

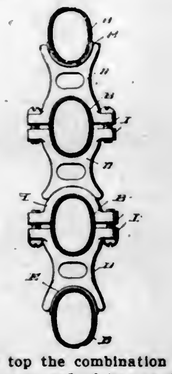
871,009. COLLAR STUD, BUTTON, OR THE LIKE. JULES VARET, Camden Road, London, England. Filed July 6, 1905. Serial No. 268,333.

The combination of a stud or button having a screw threaded part and a handle or holder therefor constructed to be capable of passing through a button hole and having at one end a screw threaded part arranged to engage with



the threaded part of the stud or button, substantially as described.

871,010. SEPARATOR FOR CARRIAGE-TOP BOWS. ARTHUR H. VEAZIE, Rochester, N. Y., assignor of one-half to John P. Faber, Rochester, N. Y. Filed Apr. 24, 1907. Serial No. 370,103.



1. In a carriage top the combination of a plurality of bows, a separator composed of two parts, each part hollowed out at each end to partially encircle the said bows and provided with perforated flanges on their opposing ends and suitable fastening means passing through the said perforations, substantially as described.

2. In a carriage top the combination of a plurality of bows, a separator composed of two integral parts, each part hollowed out on its ends to partially embrace the said bows, and each part having perforated flanges on their opposing ends, fastening means passing through said flanges, and an independent wear plate on one of said bows to receive the hollowed out portion of one of said parts, substantially as described.

3. In a carriage top the combination of a pair of bows, a separator comprising an integral metallic plate hollowed out at each end to receive the bows, and having a pair of metallic perforated flanges at one end, means with which said flanges coöperate to fasten said plate to one of said bows, and an independent wear plate on the other bow substantially co-extensive with the hollowed out portions to receive said separator and thereby prevent the chafing of the covers of said bow, substantially as described.

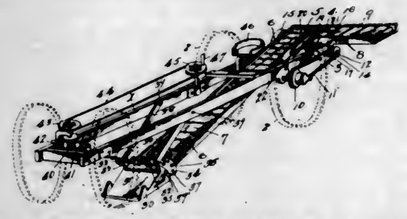
4. In a carriage top the combination of a plurality of bows, a separator comprising a plurality of integral metallic plates, each plate hollowed out at each end to receive said bows and provided with integral perforated metallic flanges on their opposing ends, means passing through said flanges and securing said plates to one of said bows, and independent wear plates on two of said bows to receive the outer ends of said plates, substantially as described.

5. In a carriage top the combination of four bows, a separator composed of three integral metallic plates hollowed out at each end and provided with perforated metallic flanges, a half ring also provided with perforated flanges, means passing through the flanges on the opposing ends of two of said plates, to fasten the same to one of said bows, and means passing through the flanges on the end of the third plate and those on the said half ring to fasten the same to another bow, and the parts being so disposed that the hollowed out portions on the extreme ends of two of said plates receive the other two bows, while the half ring is received in the hollowed out portion of the third plate, substantially as described.

6. In a carriage top the combination of four bows, three integral metallic plates, a half ring and two independent wear plates, the first and second of said plates provided with flanges, hollowed out portions and means to fasten them end to end to one of said bows, while the third plate and half ring are provided with like means to fasten them to a second bow, said first and third plates being also provided with hollowed out extreme ends to receive the said two independent wear plates attached to the other two bows and said second plate provided with a hollowed out end to receive said half ring, substantially as described.

7. In a carriage top the combination of four bows, three integral metallic plates, a half ring and two independent wear plates, the first and second of said plates provided with flanges, hollowed out portions and means to fasten them end to end to one of said bows, while the third plate and half ring are provided with like means to fasten them to a second bow, said first and third plates being also provided with hollowed out extreme ends to receive the said two independent wear plates attached to the other two bows and said second plate provided with a hollowed out end to receive said half ring, and a strap to bind all the said parts together, substantially as described.

871,011. DITCHING-MACHINE. GEORGE WARNE, Omaha, Nebr. Filed Mar. 8, 1907. Serial No. 361,224.



1. In a machine of the character described, the combination with the main framework, and an elevator therein; of the digging mechanism comprising a plow and moldboard, a pivotal connection between the elevator frame and the plow, perforated sector plates on the latter passing astride said frame, bolts removably taking through the perforations into the frame, and means for raising and lowering the plow.

2. In a machine of the character described, the combination with the main framework, and an elevator therein; of the digging mechanism comprising a plow and moldboard, a pivotal connection between the elevator frame and the plow, perforated sector plates on the latter passing astride said frame, bolts removably taking through the perforations into the frame, links pivotally connecting the main framework and the plow beam, and means for raising and lowering the plow.

3. In a machine of the character described, the combination with the main framework, an elevator whose frame is movably supported at its rear end by the framework so that it may slide longitudinally therein, and means for driving the elevator; of the digging mechanism pivoted to the lower end of the elevator frame, means for setting the digging mechanism at various angles to the frame, and means for raising and lowering the digging mechanism.

4. In a machine of the character described, the combination with the main framework, an elevator whose frame is movably supported at its rear end therein, and means for driving the elevator; of the digging mechanism pivoted to the lower end of the elevator frame, means for setting the digging mechanism at various angles to the frame, links pivotally connecting the main framework with the digging mechanism at other points than where the elevator is pivoted thereto, and means for raising and lowering the digging mechanism.

5. In a machine of the character described, the combination with the main framework, the digging mechanism, links pivotally connecting said framework and mechanism, and an elevator whose frame is attached to said mechanism; of a windlass on the framework, means for turning it from the driver's seat, and chains connecting the windlass and the digging mechanism.

6. In a machine of the character described, the combination with the main framework, uprights therein, a rod connecting them, a roller thereon, an elevator whose frame rests on the roller, and digging mechanism at the front end of the elevator; of a double-faced sprocket wheel journaled on said rod, connections between one face thereof and one of the main wheels, an idle pulley journaled on the elevator frame, and a sprocket chain connecting it with another pulley on the upper shaft of the elevator and leading intermediately over the other face of said double-faced sprocket.

7. In a machine of the character described, the combination with the main framework, uprights therein, a rod connecting them, a roller thereon, an elevator whose frame rests on the roller, digging mechanism at the front end of the elevator, and means for adjusting the angle of the elevator frame to the main framework and its position longitudinally therein; of a double-faced sprocket wheel journaled on said rod, connections between one face thereof and one of the main wheels, an idle pulley journaled on the elevator frame, and a sprocket chain connecting it with another pulley on the upper shaft of the elevator and leading intermediately over the other face of said double-faced sprocket.

8. In a machine of the character described, the combination with the main framework, a roller supported thereby, an elevator resting at its rear end on said roller, an idle pulley in the elevator frame, a sprocket chain connecting it with another pulley on the upper shaft of the elevator, digging mechanism at the front end of the elevator, and a lateral carrier on the main framework beneath the rear end of the elevator; of a countershaft journaled in the main framework, gears connecting it with one shaft of the lateral carrier, a sprocket engaging said chain on the elevator, connections between this sprocket and the countershaft, and connections between the latter and one main wheel.

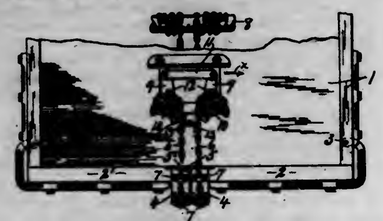
9. In a machine of the character described, the combination with the main framework, a roller supported thereby, an elevator resting at its rear end on said roller, an idle pulley in the elevator frame, a sprocket chain connecting it with another pulley on the upper shaft of the elevator, digging mechanism at the front end of the elevator, and a lateral carrier on the main framework beneath the rear end of the elevator; of a countershaft journaled in the main framework and having a fly wheel, gears connecting this shaft with the lateral carrier, a sprocket wheel engaging said chain on the elevator, connections between this sprocket and the countershaft, a ratchet on the countershaft, and connections between the ratchet and one main wheel.

10. In a machine of the character described, the combination with the main framework, an elevator therein, digging mechanism carried thereby, and a lateral carrier on said framework; of a countershaft journaled in the framework and having a fly wheel, connections between this shaft and the carriers in the elevator and in said lateral carrier, a ratchet wheel on the countershaft, and connections between the ratchet wheel and one main wheel.

871,012. DUMP-WAGON. DAVID S. WATSON, ELMER BUSHNELL, and JAMES F. SANDERSON, Canastota, N. Y., assignors to Watson Wagon Company, Canastota, N. Y., a Corporation of New York. Filed Oct. 16, 1906. Serial No. 339,229.

1. In combination with the swinging bottom doors of a dump wagon, chains adjusted under the meeting edges of the doors, rocking equalizing members connected for simul-

taneous action and to which said chains are attached, and a tie connecting the chains between the equalising members and doors.



2. In combination with the swinging bottom doors of a dump wagon, a pair of rocking elements connected for simultaneous action, cables attached to said elements and passed under the meeting edges of the doors, and a tie connecting the chains between the rocking elements and doors.

3. In combination with the swinging bottom doors of a dump box, chains adjusted under the meeting edges of the doors, movable elements to which the ends of the chains are attached, and a tie connecting said chains between the movable elements and doors.

4. In combination with the swinging bottom doors of a dump box and operating chains therefor, movable anchors for the rear ends of cables, and a tie connecting said cables between the anchors and doors.

5. In combination with the swinging bottom doors of a dump wagon and their operating cables passed under the meeting edges of the doors, movable anchors for the rear ends of the cables, and a tie extending diagonally between and connecting said cables.

6. In combination with the swinging bottom doors of a dump wagon and their operating cables passed under the meeting edges of the doors, an equalizer connected to the cables, and a flexible tie connecting said cables between the equalizer and doors.

871,013. MINER'S DRILL. GEORGE F. WEISS, Springfield, Ill., assignor to The Black Diamond Coal-Drill and Tool Co., Springfield, Ill., a Corporation of Illinois. Filed Feb. 5, 1907. Serial No. 355,961.



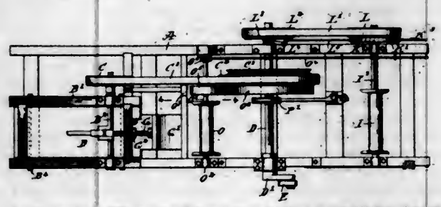
1. In a miner's drill the combination of shell members, a grooved circular plate intermediate of and secured to the shell members, a grooved wheel turning within the shell members, and balls fitting in the grooves of the grooved wheel and the intermediate plate.

2. In a miner's drill the combination of connected shell members, a shaft turning and sliding within the shell members, a pinion secured on said shaft and having a clutch member, a pinion loose on said shaft and having a clutch member matching the clutch member of the first named pinion, and plates contiguous to the ends of said shaft and movable to lie across the path thereof.

3. In a miner's drill the combination of a shell, oscillative plates mounted on the shell, a shaft slidable and turnable in the shell, a pinion fixed on the shaft and having a clutch member, a pinion loose on the shaft and having a clutch member matching the clutch member of the first named pinion, and differential gear wheels within the shell coöperating with said pinions respectively.

4. In a miner's drill the combination of a shell, an intermediate plate fixed within the shell, a spur wheel turning within the shell between the intermediate plate and one side of the shell, a shaft turnable within and slidable across the shell, a pinion fixed on said shaft and having a clutch member, a pinion loose on said shaft and turning between the intermediate plate and one side of the shell and having a clutch member matching the clutch member of the first named pinion, said intermediate plate serving to prevent sliding of said last named pinion.

871,014. WELL-DRILLING MACHINE. NELSON D. WELLS, Tulsa, Ind. Ter. Filed Apr. 21, 1906. Serial No. 312,983.



1. A well-drilling machine comprising a walking beam, a drill-rope, a spool for the same, a crank-shaft for connection with the walking-beam, a spudding device actuated from the said crank-shaft and connected with the said drill-rope, a brake mechanism connected with the said spool, to hold the latter against turning, and a driving device for unwinding the drill rope from the said spool, connected with the said crank-shaft, the said driving device having a clutch operating in conjunction with the said brake mechanism.

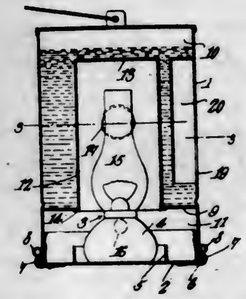
2. A well drilling machine, comprising a walking beam, a crank shaft for connection with the walking beam, a friction wheel on the crank shaft, a spool for a hoist rope, a friction disk on the spool, said spool being movable toward and from the crank shaft whereby to move the friction disk into and out of contact with the friction wheel, a spool for a drill rope, a connection between said spool and the crank shaft for operating said spool, a brake mechanism on the spool shaft, and a link connection between the brake mechanism and the hoist rope spool, whereby the operation of the braking mechanism will move the hoist rope spool toward and from the crank shaft.

3. A well drilling machine, comprising a walking-beam, a crank shaft for connection with the walking-beam, a spool for a hoisting rope, means for connecting the spool to the crank shaft, a spool for a drill rope, a connection between said spool and the crank shaft for operating said spool, a brake mechanism in connection with the spool, and a link connection between the brake mechanism and the hoisting rope spool, whereby the operation of the braking mechanism will operate the means for connecting the hoisting rope spool with the crank shaft.

4. A well drilling machine, comprising a walking-beam, a crank shaft for connection with the walking beam, a friction wheel on the crank shaft, a spool for a hoisting rope, a friction disk on the spool, said spool being movable toward and from the crank shaft whereby to move the friction disk into and out of contact with the friction wheel, a spool for a drill rope, a connection between said spool and the crank shaft for operating said spool, braking mechanism on the spool shaft, and means whereby the operation of the braking mechanism will move the hoist rope spool toward and from the crank shaft.

871,015. DRINKING-FOUNT FOR POULTRY. PETER M. WICKSTRUM, Lincoln, Nebr. Filed Jan. 26, 1907. Serial No. 354,325.

1. A drinking fount for stock comprising a body portion having a water compartment therein and a drinking opening at one side thereof, a heating drum projecting upwardly into the water compartment, and a hood arranged within the water compartment at a point between the heating drum therein and the drinking opening and extending downwardly to a point below the level of the said opening.



2. A drinking fount for stock comprising a body portion having a substantially closed water compartment formed in the upper portion thereof and provided with a suitably arranged drinking opening, a heating drum projecting upwardly into the said water compartment, horizontal flues connecting the walls of the body and the drum at a point below the top of the latter, and a heating lamp having its chimney discharging into the said drum above the level of the said flues.

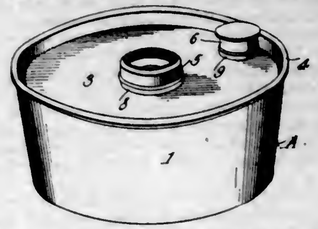
3. A drinking fount for stock comprising a body portion having a partition extending horizontally therein and provided with a drinking opening above the partition, a heating drum supported on the partition and projecting upwardly into the water space formed above the partition, and a hood arranged within the body at a point between the drinking opening thereof and the heating drum, the said hood being secured at the top and sides to the inside of the body and having its lower edge extending below the level of the bottom of the drinking opening.

4. A drinking fount for stock comprising a body portion having a partition arranged horizontally therein to form a water compartment in its upper portion, a heating drum supported on the partition and projecting upwardly into the water compartment, a bottom adapted to fit the body below the partition and detachably secured thereto the said bottom having an upwardly extending ring thereon having its axis arranged in alinement with the heating drum, radially extending flues leading from the upper portion of said drum to the vertical sides of the body and serving to reinforce the drum relatively to the body, and a heating device arranged within the heating drum and seated within said ring and supported in coöperative relation with the heating drum by the detachable bottom.

5. A drinking fount for stock comprising a body having a drinking opening and an air inlet opening, a horizontal annular partition arranged in the body between the openings, a drum supported on the partition with its upper end closed, a hood disposed over the drinking opening, short flues extending outwardly through the drum and body, a removable lamp supporting bottom having a rim and fitted into the body, a bead on the body with which the rim engages, and spring clamps on the bottom for engaging the bead of the body for removably holding the bottom in place.

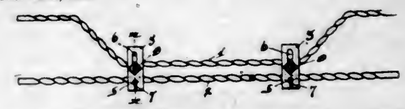
871,016. INCUBATOR OR BROODER LAMP. PETER M. WICKSTRUM, Lincoln, Nebr. Filed Feb. 4, 1907. Serial No. 355,665.

An incubator or brooder lamp composed of an oil reservoir pressed into pan shape and having a horizontally extending peripheral rim, a top having a depressed central portion to form a water receptacle and having upturned sides fitting within the sides of the oil reservior, the upper edges of the said sides being provided with a hook-shaped rim lapped about the rim of the reservoir to form a sealed joint, said cover having flanges swaged upwardly from the depressed portion of the cover, burner and filler collars engaging within said flanges and having peripheral beads thereon coöperating with the upper edges of the respective flanges to position the collars and form solder dams at the upper side of the cover, solder applied to the



joint between each flange and its respective collar from the under side of the cover, and a burner threaded into the upper end of one of the collars.

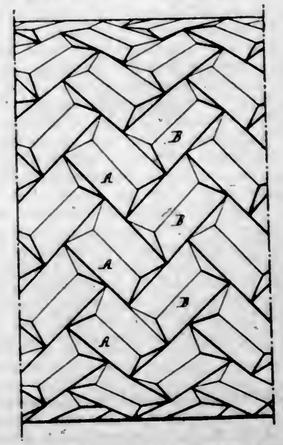
871,017. MEANS FOR SUPPORTING REINFORCING-RODS FOR CEMENT STRUCTURES. ALBERT WITTE, Cincinnati, Ohio, assignor of one-half to Albert James Redway, Cincinnati, Ohio. Filed July 31, 1906. Serial No. 328,613.



1. A unitary spaced structural element for reinforcing concrete, comprising a bar arranged in a horizontal plane, in combination with spacing plates arranged vertically and in pairs, said plates being provided with slots, clamping means passing through said slots and beneath the bar securing the bar between the plates, substantially as described.

2. A unitary spaced structural element for reinforcing concrete, comprising a series of parallel bars, in combination with spacing plates arranged in pairs, said plates being provided with orifices, clamping means passing through said orifices and beneath the bars securing the bars between the plates and in spaced positions from each other, substantially as described.

871,018. ROLL FOR SUGAR-CANE MILLS. HUGH W. AITKEN and WILLIAM MACKIE, Glasgow, Scotland. Filed Apr. 2, 1907. Serial No. 365,937.



1. A crushing roll for sugar cane mills having upon its surface figures tetrahedroid in form, their ends triangular,

their side trapezoidal, arranged at equal and opposite angles to each other.

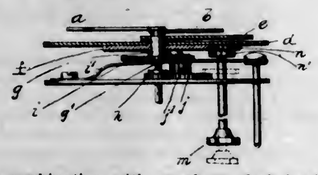
2. A crushing roll for sugar cane mills having upon its surface figures tetrahedroid in form, their ends triangular, their sides trapezoidal, arranged at equal and opposite angles to each other and so that the ends of each figure abut upon the sides of adjacent figures.

3. A crushing roll for sugar cane mills having upon its surface figures tetrahedroid in form, their ends triangular, their sides trapezoidal, arranged at equal and opposite angles to each other and so that the ends of each figure abut upon the sides of adjacent figures, contiguous ends of adjacent figures at right angles to each other being merged.

4. A crushing roll for sugar cane mills having upon its surface figures tetrahedroid in form, their ends triangular, their sides trapezoidal, arranged at equal and opposite angles to each other, contiguous ends of adjacent figures at right angles to each other being merged.

5. A crushing roll for sugar cane mills having upon its surface figures tetrahedroid in form, their ends triangular, their sides trapezoidal, arranged at equal and opposite angles to each other, contiguous ends of some adjacent figures at right angles to each other being merged.

871,019. CLOCK. FRANK R. ALFORD, Winsted, Conn., assignor to The Wm. L. Gilbert Clock Company, Winsted, Conn., a Corporation of Connecticut. Filed Oct. 29, 1906. Serial No. 340,992.



1. The combination with an alarm clock having hour, minute and second hands and an alarm-set-indicator located in front of the dial, of independent means for setting the time-hands and the alarm-indicator, but one of said setting means being operative at a time and a common actuating device for said setting means.

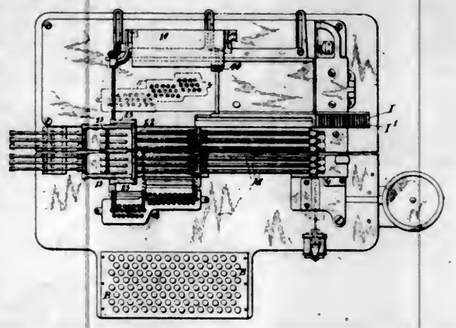
2. The combination with an alarm clock having hour, minute and second hands and an alarm-set-indicator located in front of the dial, of a longitudinally movable shaft, and independent means mounted on said shaft operative one at a time for setting said time-hands and said alarm-indicator.

3. The combination with an alarm clock having hour, minute and second hands and an alarm-set-indicator located in front of the dial, of a cam-wheel located underneath the dial and connected with said indicator, a minute-wheel connected with the time-train, the periphery of said minute-wheel extending outside of the periphery of said cam-wheel, a longitudinally movable shaft, and pinions mounted on said shaft, one of said pinions being adapted for engagement with said cam-wheel and the other for engagement with said minute-wheel, substantially as described and for the purposes set forth.

4. The combination with an alarm clock having a minute-hand staff, an hour-hand rotatable about said staff, an alarm-set-indicator located in front of the dial and mounted to rotate about said staff, a cam-wheel located underneath said dial and having a sleeve on which said indicator is mounted, a second-hand staff and a second-hand carried thereby, independent means operative one at a time for setting the time-hands and the alarm-indicator, and a common actuating device for said setting means.

871,020. COMPOSING-MACHINE. LEICESTER ALLEN, New York, N. Y., assignor to Pearson Typo-Bar Company, New York, N. Y., a Corporation of Maine. Filed Sept. 6, 1906. Serial No. 333,445.

1. In an automatic calculating mechanism for justifying a line of type and the like, the combination of a chart, means to move the chart proportionately to the length of the line as it is being set, an indicator for the chart, and means to move the indicator in accordance with the number of words in the line.



2. In an automatic calculating mechanism for justifying a line of type and the like, a chart having tabulated thereon such combinations of spaces as may be employed to fill out different lengths in the line, means to move the chart proportionately to the length of the line as it is being set, an indicator for the chart, and means to move the indicator in accordance with the number of words in the line.

3. In an automatic calculating mechanism for justifying a line of type and the like, the combination of a drum having tabulated upon its periphery such combinations of spaces as may be employed to fill out different lengths in the line, means to turn the drum proportionately to the length of the line as it is being set, a perforated screen for the drum, and means to move the perforated screen in accordance with the number of words in the line.

4. In a type setting machine, the combination of a drum, means to rotate the drum proportionately to the length of the line of type as it is set, an indicator for the drum, and means to move the indicator parallel to the axis of the drum in accordance with the number of words in the line.

5. In a type setting machine, the combination of a drum having tabulated upon its periphery such combinations of spaces as may be employed to fill out different lengths in the line, means operatively connected with the type setting mechanism to rotate the cylinder proportionately as the type is set, a word magazine, and an indicator for the drum adapted to move parallel to the axis thereof and operatively connected with the word magazine so that its movement is controlled by the number of words in the magazine.

6. In a type setting and casting machine, the combination of a drum having tabulated upon its periphery such combinations of spaces as may be employed to fill out different lengths in the lines, a plurality of casting bars corresponding to different length spaces; operative connections between the casting bars and the drum to rotate the drum, a word magazine having a separate channel for each word, an indicator for the drum adapted to move parallel to the axis thereof, and operative connections between the magazine and the indicator whereby the indicator is moved each time the magazine is advanced to receive a new word.

7. In a type setting machine, the combination with a rotating drum and a member upon the machine the movements of which are to be registered by the drum, of a spring actuated gear normally held in check by said member, operative connections between the gear and drum whereby the gear may move in one direction actuated by its spring without moving the drum but in the other direction only by moving the drum correspondingly, means to gage the first movement of the gear, and means to move the gear back to its first position.

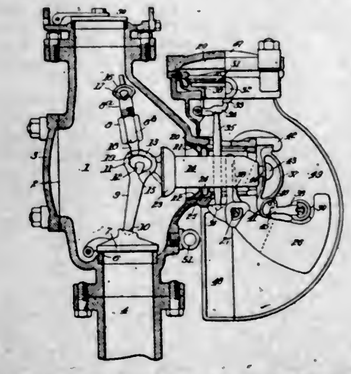
8. In a type setting machine, the combination with a rotating drum and a member upon the machine the movements of which are to be registered by the drum, of a spring actuated gear normally held in check by said member, a ratchet and pawl connection between the gear and drum whereby the gear may move in one direction actuated by its spring without moving the drum but in the other direction only by moving the drum correspondingly, means to gage the first movement of the gear, and means to move the gear back to its first position.

9. In a type setting machine, the combination with a rotating drum and a member upon the machine the movements of which are to be registered by the drum, of a spring actuated gear adapted to have a predetermined movement in one direction under the actuation of its spring, means to move the gear back into its first position, a second gear meshing with the first gear and loose upon the drum shaft, a stop pawl between the second gear and said member, a ratchet wheel secured to the shaft, and a pawl upon the second gear coöperating with the ratchet wheel.

10. In a type setting machine, the combination with a rotating drum and a member upon the machine the movements of which are to be registered by the drum, of a spring actuated gear adapted to have a predetermined movement in one direction under the actuation of its spring, means to move the gear back into its first position, a second gear meshing with the first gear and loose upon the drum shaft, a stop pawl between the second gear and said member, two ratchet wheels secured to the shaft and having oppositely facing teeth, a push pawl for one ratchet wheel, a check pawl for the other ratchet wheel, both pawls being pivoted upon the second gear, and means to hold the check pawl out of engagement with its ratchet wheel during the first movement of said spring actuated gear.

11. In a type setting machine, the combination with a plurality of movable members corresponding to different type and space units, and a drum to register the movements of said members, of a spring actuated gear for each member normally held in check by that member, operative connections between the gear and drum whereby the gear may move in one direction actuated by its spring without moving the drum but in the other direction only by moving the drum correspondingly, means to gage the first movement of the gear, and means to move the gear back into its first position.

871,021. FIRE-EXTINGUISHER SYSTEM. WILLIAM G. ALLEN and FRANK G. FEELEY, Akron, Ohio. Filed May 11, 1906. Serial No. 316,406.



1. A valve for automatic fire-extinguisher systems, comprising a casing having an inlet connected with a water supply and an outlet in communication with the system, a valve disk for normally closing said inlet, a sliding member, a toggle-device comprising two members, one of which is pivotally mounted at one end in the casing and arranged to have longitudinal play on its pivot and engaging at its opposite end said sliding member and the other member pivotally mounted on said sliding member and arranged to have longitudinal movement on its pivot and engaging at its opposite end said valve-disk, a pivoted weight-lever adapted by its movement in one direction to effect the movement of said sliding-member, and means controlled by air pressure in the systems for holding said weight normally suspended.

2. A valve for automatic fire-extinguisher systems comprising a casing having an inlet connected to a water-supply and an outlet in communication with the system, a valve-disk for normally closing said inlet, a toggle-device for holding said valve-disk to its seat, a sliding-member operatively connected with said toggle device, a pivoted weight lever adapted by its movement in one direction to effect the movement of said sliding device, means controlled by air pressure in the system for holding said weight normally suspended and means for holding the sliding member from movement operative to release the same by the movement of the weight.

3. A valve for automatic fire-extinguisher systems comprising a casing having an inlet connected to a water supply and an outlet in communication with the system, a valve-disk for normally closing said inlet, a toggle device for holding said valve to its seat, a sliding member having an operative connection with said toggle device, a pivoted weight lever constructed and arranged to effect the movement of the sliding device, an air chamber in communication with the system, a movable member in said chamber controlled by said air pressure, means interposed between said movable member and the weight lever for holding the latter suspended, and means for holding the sliding member from movement operated by the weight-lever.

4. A valve for automatic fire-extinguisher systems, comprising a casing having an inlet connected to a water-supply and an outlet in communication with the system, a valve-disk normally closing said inlet, a toggle-device for holding said valve-disk to its seat, a sliding-member having an operative connection with said toggle-device, an air-chamber in communication with the system, a disk in said air-chamber normally held to its seat by air-pressure, a pivoted lever engaging said disk, a pivoted weight lever for actuating said sliding-member, a stem interposed between said weight lever and the first-mentioned lever whereby the former is held suspended while said air-disk is seated, and means for holding the sliding-member from movement operated to release the same by the movement of the weight-lever.

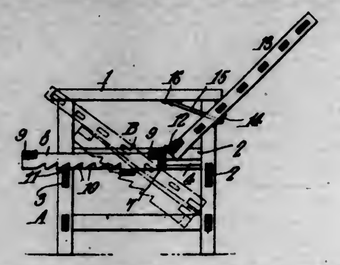
5. A valve for automatic fire-extinguisher systems, comprising a casing having an inlet connected to a water supply and an outlet having communication with the system, a valve-disk normally closing said inlet, a toggle device for holding said valve on its seat, a sliding member having an operative connection with said toggle device, a pivoted weight-lever arranged to effect the movement of the sliding member, means controlled by air-pressure in the system for holding said weight suspended, and means normally preventing movement of the sliding-member comprising two members loosely connected, one of said members being pivotally attached to the weight lever and the other adapted when the device is set to engage a fixed portion of the valve casing and disposed in such a position as to prevent movement of the sliding-member.

871,022. RECLINING-CHAIR. MARK ANTHONY, Streator, Ill. Filed Feb. 21, 1907. Serial No. 358,676.

1. A chair comprising a frame, a back, movable connections between the back and frame, a seat hingedly connected to the back, and projections thereon slidably mounted upon the frame, said frame being reduced at one end to permit the projections to pass therethrough and the seat and back to fold and to rest within the frame.

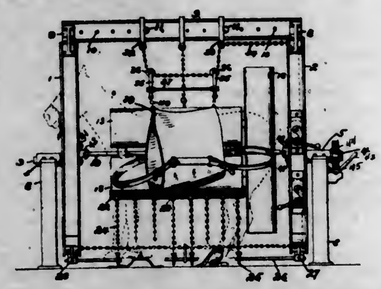
2. A chair comprising a frame having longitudinally grooved side rails, one wall of each groove being cut away at one end of the groove to form an outlet, a back, hangers connecting the back and frame, a seat movably connected to the back and slidably mounted within the frame, means for holding the seat in adjusted position, and projecting devices upon the seat and movably mounted within the

grooves, said devices being removable through the outlets of the grooves to permit the seat to be folded upon the



back, said back and seat when folded being insertible between and below the side rails.

871,023. VETERINARY OPERATING-TABLE. FRANK G. ATWOOD, New Haven, Conn. Filed Oct. 17, 1905. Serial No. 283,105.



1. In an apparatus of the character described, the combination with a movable table; of a bar connected therewith; a rest cushion, and hinged clamp means for separably securing said cushion to said bar.

2. In an apparatus of the character described, the combination with a movable table; of a bar connected therewith; a rest cushion; an auxiliary supporting device; means for connecting the same with said rest cushion; and hinged clamp means for separably securing said rest cushion and auxiliary supporting device to said bar.

3. In an apparatus of the character described, the combination with a movable table; of a bar connected therewith; a rest cushion; a hinged plate connected with said rest cushion; and means for rigidly securing said hinged plate in its closed position.

4. In an apparatus of the character described, the combination with a movable table; of a rest cushion connected therewith and having a bar fixed thereto; a bar separably connected with said table substantially parallel with said rest cushion; and a shiftable connection between said bars.

5. In an apparatus of the character described, the combination with a movable table; of a rest cushion connected therewith and having a bar fixed thereto; a bar separably connected with said table substantially parallel with said rest cushion; and a plurality of chains connecting said bars.

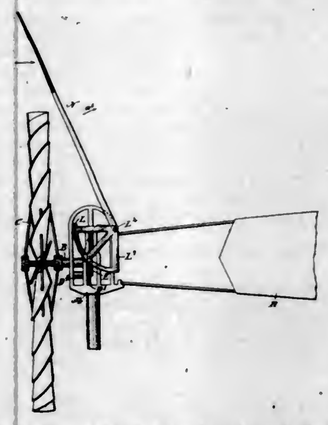
6. In an apparatus of the character described, the combination with a movable table; of a rest cushion connected therewith and having a bar fixed thereto; a bar separably connected with said table substantially parallel with said rest cushion; and a flexible connection between said bars.

7. In an apparatus of the character described, the combination with a movable table; of a rest cushion connected therewith and having a bar fixed thereto; a bar separably connected with said table substantially parallel with said rest cushion; and a flexible connection between said bars slidably secured thereto.

8. In an apparatus of the character described, the combination with a movable table; of a bar connected therewith; a rest cushion connected therewith; a bar separably connected with said table substantially parallel with said rest cushion; a bar fixed to said cushion; rings shiftable on said bars; and a flexible connection between said rings.

9. In an apparatus of the character described, the combination with a movable table; of a rest cushion connected therewith; a bar separably connected with said table; a bar fixed to said cushion; rings shiftable on each of said bars; means for securing said rings in any of their intermediate positions; and a connection between the rings on one of said bars with the rings upon the other of said bars.

871,024. WIND-MOTOR. JAMES W. BEATES, Denver, Colo. Filed Nov. 6, 1906. Serial No. 342,231.



1. A wind motor having a stroke changing device comprising a swing arm, a cross head movable on the said arm, a screw rod having a right hand and a left hand thread thereon, nuts carried by the screw rod, means for connecting the nuts with said cross head, and means controlled by the velocity of the wind for actuating said screw rod.

2. A wind motor having a stroke changing device comprising a swing arm, a cross head movable on said swing arm, a screw rod having a right hand and a left hand thread thereon, nuts carried by the screw rod, means for connecting the nuts with said cross head, a vane controlled by the pressure of the wind, and a driving connection between the said vane and the screw rod.

3. The combination with a wind motor, its driving gear, and a pump rod, of a stroke changing device comprising a swing arm connected with the pump rod, a cross head movable on the said arm, a screw rod having a right hand and a left hand thread thereon, bearings on the frame of the motor in which the screw rod is mounted to turn, nuts carried by the screw rod, links connecting the nuts with said cross head, a vane under pressure of the wind, and means for turning the screw rod from said vane to change the position of the cross head on the swing arm according to the velocity of the wind.

4. The combination with a wind motor, its driving gear, and the pump rod, of a variable mechanism interposed between the driving gear of the motor and the pump rod, the said variable mechanism comprising a swing arm, a cross head movable on the swing arm, a screw rod, bearings on the motor frame in which said screw rod is mounted to turn, means actuated by the movement of the screw rod and connected with the said cross head to move the same on the said swing arm, a vane under pressure of the wind, and a driving connection between the said vane and the screw rod.

5. The combination with a wind motor, its driving gear and the pump rod actuated by the motor, of a variable mechanism interposed between the driving gear of the motor and the pump rod, a vane under pressure of the wind, a rock shaft carrying said vane, means connected with the rock shaft for controlling the said variable mechanism in one direction, a cam secured on said rock shaft, and a spring actuated device engaging said cam for returning the rock shaft and vane and actuating the said variable mechanism in a reverse direction.

6. A wind motor having a stroke changing device comprising a swing arm, a cross head mounted to slide on said swing arm, a screw rod having a right hand and a left hand thread thereon, nuts carried by said screw rod, connections between the said nuts and the cross head, a pinion on the said screw rod, a rock shaft, a segmental gear wheel carried by said rock shaft and in mesh with the said pinion, and a device under pressure of the wind and connected with the said rock shaft.

7. A wind motor having a stroke changing device comprising a swing arm, a cross head mounted to slide on the said swing arm, a screw rod having a right hand and a left hand thread thereon, nuts carried by said screw rod, connections between the nuts and the said cross head, a pinion on the said screw rod, a rock shaft, a segmental gear wheel carried by said rock shaft and in mesh with the said pinion, a device under pressure of the wind and connected with the said rock shaft, and a spring pressed device connected with the said rock shaft for imparting a return movement thereto.

8. A wind motor having a stroke changing device comprising a swing arm, a cross head mounted to slide on the said swing arm, a screw rod having a right hand and a left hand thread thereon, nuts carried by said screw rod, connections between the nuts and the said cross head, a pinion on the said screw rod, a rock shaft, a segmental gear wheel carried by said rock shaft and in mesh with said pinion, a device under pressure of the wind and connected with the said rock shaft to turn the same in one direction, a spring controlled block, bearings on the frame of the motor in which said block is mounted to slide, and a cam on the rock shaft for moving said block against the tension of its spring, the said block under tension of its spring imparting a return movement to the cam and rock shaft.

9. A wind motor having a stroke-changing device comprising a swing arm, a pump rod with which said swing arm is connected, a cross head mounted to slide on the said swing arm, a screw rod having a right hand and a left hand thread thereon and carrying nuts, links connecting the nuts with the said cross head, a pinion on the said screw rod, a rock shaft carrying a segmental gear wheel in mesh with the said pinion, and a vane under pressure of the wind and connected with the said rock shaft.

10. A wind motor having a stroke-changing device comprising a swing arm, a pump rod with which the swing arm is connected, a cross head mounted to slide on the said swing arm, a screw rod having a right hand and a left hand thread thereon and carrying nuts, links connecting the nuts with the said cross head, a pinion on the said screw rod, a rock shaft carrying a segmental gear wheel in mesh with the said pinion, a vane under pressure of the wind and connected with the said rock shaft, and a spring-pressed device connected with the said rock shaft for imparting a return movement thereto.

11. A wind motor having a stroke-changing device comprising a swing arm, a pump rod with which the swing arm is connected, a cross head mounted to slide on the said swing arm, a screw rod having a right hand and a left hand thread thereon and carrying nuts, links connecting the nuts with the said cross head, a pinion on the said screw rod, a rock shaft carrying a segmental gear wheel in mesh with the said pinion, a vane under pressure of the wind and connected with the said rock shaft, a cam on the said rock shaft, and a spring-pressed block engaging the said cam.

12. The combination with a wind wheel, its shaft, a pinion on said shaft, and a gear wheel in mesh with said pinion, of a pitman connected with said gear wheel, a cross head connected with said pitman, a swing arm extending through said cross head and on which the latter is mounted to slide, the said swing arm being fulcrumed at one end, a device connected with the other end of the swing arm to be actuated thereby, and a vane controlled mechanism for changing the position of the cross head on the swing arm.

13. The combination with a wind motor, its shaft and mechanism actuated by the wind motor, of a stroke changing device interposed between the motor shaft and the said mechanism for changing the stroke of the latter, the said stroke changing device comprising a cross head, means connecting said cross head with the motor shaft, a swing arm extending through said cross head and on which the latter is mounted to slide, the said swing arm being fulcrumed at one end and connected at its other end with the mechanism actuated by the motor, and a vane controlled mechanism connected with the cross head for changing the position of the latter on the swing arm.

14. A wind motor having a stroke changing device comprising a swing arm, a cross head movable on the said arm, a rod, bearings in which the rod is mounted to turn, means actuated by the movement of the rod and connected with the cross head to move the same on the swing arm and means controlled by the velocity of the wind for actuating said rod.

15. A wind motor having a stroke changing device comprising a swing arm, a cross head mounted to slide on said swing arm, a rock shaft, mechanism actuated by the rock shaft for moving the cross head on said swing arm, and a device under pressure of the wind and connected with the said rock shaft.

16. A wind motor having a stroke changing device comprising a swing arm, a cross head mounted to slide on said swing arm, a vane under pressure of the wind, a rock shaft carrying said vane, mechanism actuated by the rock shaft for moving the cross head on said swing arm, and means connected with the rock shaft, for imparting a return movement thereto.

871,025. GARMENT-FASTENER. MARY BOYLAN, New York, N. Y. Filed Aug. 28, 1906. Serial No. 332,316.

1. A hook and eye comprising a hook having attaching portions and diverging eye engaging members, offsets for preventing disengagement of the hook from the eye, resilient branched eyes engaging within the offsets, said hook having inclined edges for spreading the eyes to engage the hook.

2. A hook comprising a shank having attaching means at one end, and oppositely disposed eye engaging members at the other end, offsets for preventing lateral disengagement, resilient branched eyes adapted to engage said divergent members, said latter members having inclined surfaces whereby to contract the branched eyes towards each other under strain.

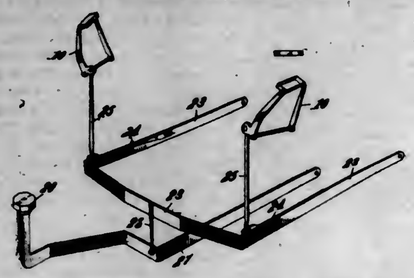
3. The combination with an eye member comprising two resilient loops transverse to the engaging plane, of a T-hook member adapted to engage said eyes, said hook member having inclined surfaces for contracting the loops toward each other under strain.

871,026. TYPE-WRITER. EDWARD D. BREWER, Atlanta, Ga. Filed Oct. 1, 1906. Serial No. 336,896.

1. In a typewriting machine, a pair of spaced banks of type bars, the type of one bank being duplicates of those of the other, a single set of key levers, pivotally mounted U-shaped intermediate levers connected to the type bars, and means for connecting said U-shaped levers to the key levers.

2. In a typewriting machine, a pair of spaced banks of type bars bearing duplicate type, intermediate pivotally mounted U-shaped levers connected to those type bars of both banks which bear corresponding type, a single set of

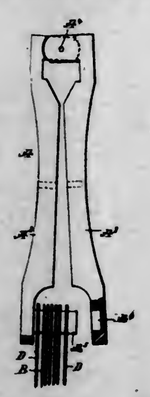
key levers, and means for connecting the key levers to the central portions of said U-shaped levers.



3. In a typewriting machine, a pair of banks of type bars, the type of one being duplicates of those of the other, pivotally mounted U-shaped bars arranged in a common horizontal plane, each bar being connected to the type bars bearing corresponding type in both banks, a single set of key levers arranged in a horizontal plane below the U-shaped levers, and means for connecting the key levers to the U-shaped levers.

4. In a typewriting machine, a pair of banks of type bars, the type of one being duplicates of the other, pivotally mounted U shaped bars all arranged in a common horizontal plane, each bar being connected to the type bars bearing corresponding type in both banks, a single set of key levers arranged in a horizontal plane below the U-shaped levers, each of the key-levers being bent to form a portion that is parallel with the cross bars of the U-shaped levers and links extending from such portions of the key levers to the central portions of the cross bars of the U-shaped levers to thereby secure uniformity of movement of the latter.

871,027. HEDDLE-FRAME FOR LOOMS. GILBERT BRISSON, Lewiston, Me. Filed Feb. 14, 1907. Serial No. 357,286.



1. A harness provided with a heddle holder made in sections hinged together, and provided with a supporting bar for the heddles, connected with one of the sections and movable therewith.

2. A harness provided with a heddle holder made in sections hinged together, one of the sections being provided with a supporting bar adapted to be engaged at its free end by the other section when the sections are in a closed position, and means for locking the hinged sections in a closed position.

3. A harness provided with a heddle holder made in sections hinged together at one end, one of the sections being provided at the free end with a supporting bar for receiving the eyes of the heddles, the other section being provided with a socket for receiving the free end of the said supporting bar.

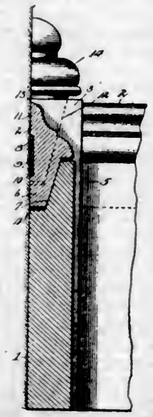
4. A harness provided with a heddle holder made in sections hinged together at one end, one of the sections being provided at the free end with a supporting bar for receiving the eyes of the heddles, the other section being provided with a socket for receiving the free end of the said supporting bar, and a screw for fastening the sections together.

5. A harness provided with holders made in sections hinged together and having a supporting bar, heddles having eyes at the ends for engaging the said supporting bar, connecting wires having eyes engaging the said supporting bar and having the heddles between them, and means for locking the hinged holder sections in a closed position.

6. A harness provided with a heddle holder made in sections hinged together, one of the sections being provided with a supporting bar adapted to be engaged at its free end by the other section when the sections are in a closed position.

7. A harness provided with a heddle holder made in sections hinged together, the free ends of the sections being spaced apart when the sections are in a close position to retain the eyes of the heddles between the said free ends, and a supporting bar on the said holder for receiving and supporting the eyes of the heddles and extending across the space between the free ends of the said holder sections.

871,028. BASE-BOARD. AUGUSTUS M. BRYAN, Corsicana, Tex. Filed July 14, 1906. Serial No. 326,234.

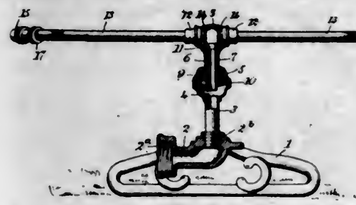


1. The combination of a baseboard provided with a socket at its top edge, a molding provided with a portion shaped to fit the said socket, and a spring fixed on the molding and arranged to bear against the wall to which the baseboard is attached for causing the said portion to frictionally engage the wall of the socket.

2. The combination of a baseboard having a top recess extending longitudinally thereof at the top edge and provided with an inclined front wall, a molding provided with a longitudinal tongue of wedge shape to fit in the said recess, and a plurality of springs attached to the molding and adapted to bear on the wall to which the baseboard is secured and be compressed for frictionally engaging the said tongue with the wall of the socket.

3. The combination of baseboards disposed at an angle to each other, a corner post arranged between the ends of the baseboards and projecting above the top edges thereof and having a vertically extending socket, strips of molding detachably secured to the baseboards and disposed below the top of the corner post, and a removable piece fitted into the socket of the said post and extending above the top end thereof.

871,029. SPRINKLER. GUADALUPE BUELNA and ALFRED R. POETT, Santa Barbara, Cal. Filed June 13, 1906. Serial No. 321,492.



1. In a sprinkler, a base, an elbow connected to the center thereof, a short, vertical pipe threaded into the elbow, a cup supported at the upper end of the pipe, a dished cap over the cup, a lead bearing in the top of the cup, a "T" having a vertical spindle rotatable in the cap and having a brass collar at the lower end thereof bearing on the lead in the cap, a pinion seated in a recess in the "T" over the stem thereof, a collar threaded into each end of the T, arms having reversely curved ends passing through the collars, a pinion fixed to the opposed ends of the arms and in mesh with the pinion seated in the "T," and nozzles carried at the outer ends of the arms.

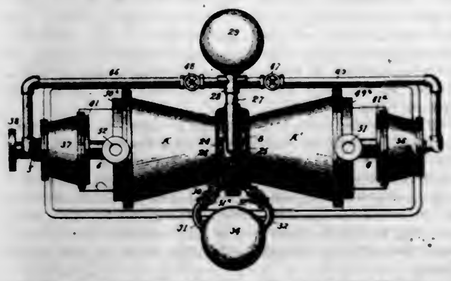
2. In a sprinkler, the combination of a support through which water is adapted to be conducted, a "T" rotatably mounted on said support, a stem carried by the T, a lead bearing about the stem, means fixed at the end of the stem for pressing on the bearing and preventing the withdrawal of the "T," a pinion rotatably mounted in the "T," arms having pinions fixed at the opposed ends meshing with the pinion in the "T," said arms having reversely bent ends, and nozzles carried by said reversely bent ends, for the purpose described.

3. A sprinkler comprising arms each having a curved outer end lying in the same plane as its respective arm, a pinion fixed to the inner end of each arm, a revoluble member in which said arms are journaled and inclosing said pinions, and a pinion revolubly seated within said member and meshing with the pinions fixed to said arms.

4. A sprinkler comprising arms, a revoluble member in which said arms are journaled, a pinion fixed to the inner end of each arm and inclosed within said member, and a pinion rotatably mounted within said member and meshing with the pinions fixed to said arms.

5. A sprinkler comprising a base, a T vertically and revoluble supported on said base, collars threaded in the opposite ends of said T, an arm journaled in each collar, a pinion fixed to the inner end of each arm within the T, and a pinion seated within the T and meshing with the pinions fixed to the arms.

871,030. ROTARY COMBUSTION-ENGINE. FRANZ BURGER, Fort Wayne, Ind., assignor of three-fourths to Henry M. Williams, Fort Wayne, Ind. Filed Dec. 17, 1903. Serial No. 185,508.



1. The combination with a shaft, of two turbines connected therewith, a combustion chamber communicating with both turbines, means for supplying compressed gas to said chamber, and means for directing the gas to either one of the turbines so that either one will operate as a motor while the other will operate as an air compressor supplying air to said combustion chamber, substantially as set forth.

2. The combination with a shaft, of two turbines connected therewith, a divided combustion chamber communicating with both turbines, means for delivering fuel to either compartment of said chamber, and means for delivering air to either compartment of said chamber, substantially as set forth.

3. The combination with a shaft, of two turbines connected to said shaft, a combustion chamber between the opposing ends of the turbines communicating with both, a partition in said chamber, means for delivering fuel under pressure to said chamber on either side of the partition, and means for delivering air under pressure to said chamber on either side of said partition, substantially as set forth.

4. The combination with a shaft, of two turbines connected to said shaft, a combustion chamber between the opposing ends of the turbines communicating with both, a perforated partition in said chamber, means for closing the perforations in said partition, means for delivering fuel under pressure to said chamber on either side of the partition, and means for delivering air under pressure to said chamber on either side of said partition, substantially as set forth.

5. In a reversible turbine engine, the combination with a shaft, of two tapered turbines connected to said shaft with their smaller ends opposing each other, the moving vanes of one turbine extending at angles reverse to those of the other, a combustion chamber between the opposing ends of the turbines communicating with both, a partition in said combustion chamber means for admitting fuel under pressure to either side of the partition, and means for admitting air under pressure to either side of said partition, substantially as set forth.

6. In a reversible turbine engine, the combination with a shaft, of two tapered turbines connected to said shaft with their smaller ends opposing each other, the moving vanes of one turbine extending at angles reverse to those of the other, a combustion chamber between the opposing ends of the turbines communicating with both, a perforated partition in said combustion chamber, means for closing the perforations in said partition, means for admitting fuel under pressure to either side of the partition, and means for admitting air under pressure to either side of said partition, substantially as set forth.

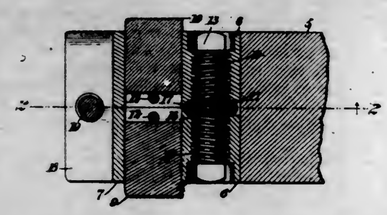
7. The combination with a shaft, of two turbines connected to the shaft, a combustion chamber between the two turbines and communicating therewith, means for supplying compressed air and gas to the combustion chamber, and means for directing the gas to either one of the turbines so that either one will operate as a motor while the other operates as an air compressor supplying compressed air to the combustion chamber.

8. In a reversible turbine engine, the combination of a shaft, two turbines connected to said shaft, the moving vanes of one turbine extending at angles reverse to those of the other, a combustion chamber between the opposing ends of the turbines communicating with both, a perforated partition in said chamber, a pair of gas compressing turbines on the shaft, means for conveying gas from one gas compressing turbine to one side of said partition, means for conveying gas from the other gas compressing turbine to the other side of said partition, and means for supplying air under pressure to either side of said partition, substantially as set forth.

871,031. BORING-BAR. WILLIAM CHASE, Jr., Indianapolis, Ind. Filed Aug. 16, 1905. Serial No. 274,411.

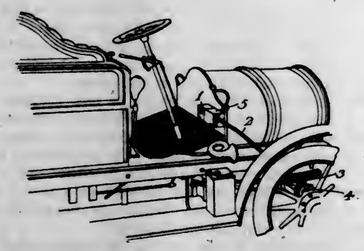
1. A boring tool, comprising a bar provided with a transverse slot and a slit leading from the bottom of the slot out through the end of the bar, the top wall of the slot being round and the bottom wall inclined inwardly and outwardly from each side to the slit, blocks in the

slot of the bar and of a shape corresponding to that of the said slot and having slots to receive tools, one of the blocks being provided with a right hand threaded aperture and the other with a left hand threaded aperture, tools in the slots of the blocks, means for securing the tools in said slots, a right and left hand screw working in the apertures of the blocks, means for preventing longitudinal movement of the screw, and a screw working loosely in an opening of the bar at one side of the slit and engaging a threaded socket at the opposite side of the said slit.



2. A boring tool, comprising a bar having a transverse slot adjacent to its lower end, blocks fitting in the slot of the bar and each slotted to receive a tool and formed with a threaded opening, the thread of the opening of one block being right hand and the thread of the opening in the other block left hand, a right and left hand screw working in the openings of the blocks and provided with an annular groove between the two sets of threads, rods secured in the bar and engaging the groove of the screw at opposite sides thereof, and means for securing the blocks in the slot of the bar.

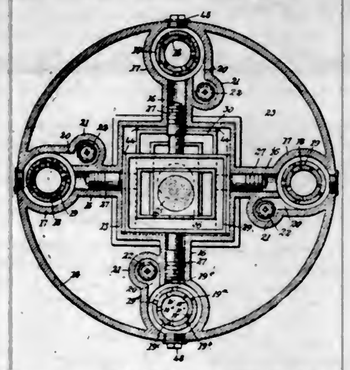
871,032. MEANS TO RECORD THE SPEED OF AUTOMOBILES. WILLIAM A. CHEESEBRO, Los Angeles, Cal., assignor, by direct and mesne assignments, of one-third to David E. Lyons and one-third to William H. Sheasby, Los Angeles, Cal. Filed Jan. 25, 1906. Serial No. 297,845.



1. The combination with a drum, means for rotating the drum, and means for carrying a record sheet upon the drum, of a drive shaft, a governor on said drive shaft, a grooved support carried by the drive shaft, said support having a longitudinal movement on the shaft, a record marker carrying rod slidingly supported in bearings and having a fork on its inner end which engages the grooved support connected with the governor, a marker supporting bracket mounted on the marker carrying rod, a record marker secured to said bracket, and a spring rigidly secured at one end to the marker carrying rod and coiled around the latter with its free end resting upon the projecting end of the holding bracket.

2. In a speed recording device of the character herein described, means to prevent tampering with the record made on the record paper comprising a drum having brads projecting therefrom, irregularly disposed around the periphery of the drum in combination with record paper having openings therein adapted to register with and receive the radial brads on the rotating drum.

871,033. CLUTCH. PAUL DANIEL, New York, N. Y. Filed Mar. 11, 1907. Serial No. 361,846.



1. A clutch, comprising a driving member and a driven member, one of said members comprising a casing adapted to contain a fluid, a rectangular guiding wall supported therein, radially disposed cylinders extending outward from said wall, pistons operating within said cylinders, and members slidably mounted within said rectangular wall and in engagement with opposite sides thereof for operating said pistons.

2. A clutch comprising a casing, a rectangular wall supported therein, cylinders extending outward from said wall, pistons operating within said cylinders, and members slidably mounted within said rectangular wall and movable in directions at right angles to each other for operating said pistons.

3. A clutch comprising a rectangular wall having a cylinder extending outward from each of the four sides thereof, and two members slidably mounted within said wall and movable in directions at right angles to each other, each of said members engaging with two opposite sides of the rectangular wall and having two pistons carried thereby to operate within the cylinders of the other oppositely disposed walls.

4. A clutch comprising a rectangular wall having a cylinder extending outward from each side thereof, two rectangular frames slidably mounted within said wall and movable in directions at right angles to each other, pistons carried by the opposite sides of each of said frames, a crank, and a block within each of said frames, whereby upon the rotation of said crank the frames are simultaneously operated to move all of said pistons.

5. A clutch comprising a driving member and a driven member, one of said members comprising a casing adapted to contain a liquid, a rectangular wall within said casing and adapted to confine the liquid within the space between said casing and wall, and cylinders extending outwardly from the sides of said wall, and the other of said members comprising two frames slidably mounted within said rectangular wall and movable in directions at right angles to each other, pistons carried by said frames and mounted within said cylinders, and a crank extending through both of said frames and operatively connected thereto, whereby as said crank is rotated in respect to the casing, said frames are moved laterally and all of said pistons reciprocated.

6. In combination, a cylinder, a piston operatively mounted therein, a valve casing in communication with said cylinder, said casing being provided with a series of openings, a valve mounted within said valve casing and having a series of openings corresponding to the openings of the valve casing, and means for operating said valve to bring any desired number of the openings therein into registry with the corresponding openings of the valve casing.

7. In combination, a cylinder, a piston operatively mounted therein, a valve casing in communication with said cylinder, said casing being provided with a series of

openings of gradually increasing size, a valve mounted within said valve casing and having a series of openings corresponding to the openings of the valve casing, and means for operating said valve to bring any desired number of the openings therein into registry with the corresponding openings of the valve casing.

8. In combination, a cylinder, a piston operatively mounted therein, a valve casing in communication with said cylinder and having a series of ports of different sizes, the variation in size being uniform, a valve having ports corresponding to the ports in the valve casing, and means for operating the valve to bring any desired number of ports of the valve into communication with the corresponding ports of the valve casing.

9. In combination, a cylinder, a piston operatively mounted therein, a valve casing in communication with said cylinder and having a plurality of ports therein, said ports being of different sizes, and the variation in size being uniform, a hollow valve plug within said casing and having ports corresponding to the ports of the valve casing and having a series of openings independent of the casing, and means for rotating said valve plug to bring any desired number of the first-mentioned ports into communication with the corresponding ports of the valve casing.

10. In combination, a driving member, a driven member, a plurality of cylinders carried by one of said members, a plurality of pistons carried by the other of said members, and a plurality of valves for controlling the flow of fluid through said cylinders, each of said valves comprising a casing having a plurality of ports therein of different sizes, the variation in the size of said ports being uniform, and a valve plug within said casing and having ports corresponding to the ports of the valve casing, and the valve plug being provided with a plurality of openings adjacent one end thereof independent of the casing, and means for rotating said valves simultaneously.

11. In combination, a driving member, a driven member, a plurality of cylinders carried by one of said members, a plurality of pistons carried by the other of said members and operating within said cylinders, means for automatically admitting fluid to each of said cylinders, means for controlling the escape of fluid from each of said cylinders, and means for simultaneously operating each of said outlet controlling means.

12. In combination, a driving member, a driven member, a plurality of cylinders carried by one of said members, a plurality of pistons carried by the other of said members, and a plurality of valves for controlling the flow of fluid through said cylinders, each of said valves comprising a hollow valve plug, a casing surrounding said valve plug but of shorter length than said plug, said plug and casing being provided with registering openings of varying sizes, and the valve plug being provided with a plurality of openings adjacent one end thereof and independent of said casing.

13. In combination, a driving member, and a driven member, one of said members having a rectangular guiding wall, a plurality of cylinders connected thereto, and means for controlling the flow of fluid through said cylinders, and the other of said members comprising a crank within said guiding wall, a plurality of pistons operating within said cylinders, and means contacting with said guiding wall and operated by said crank for effecting the reciprocation of said pistons.

871,034. SIGHT FOR FIREARMS. EVAN W. EVANS, Greenwood, British Columbia, Canada. Filed Feb. 28, 1907. Serial No. 359,714.

1. In sights for fire arms, a rear sight tubular in form with an outer flange on its rear face, the rear surfaces of said sight and flange being roughened on its rear face, and a front sight with a V-shaped opening at its top on the rear face of which is attached a Y-shaped piece of material.

2. In sights for fire arms, a rear sight tubular in form with an outer flange on its rear face, the rear surfaces of said sight and flange being roughened, and a front sight with a V-shaped opening at its top on the rear face of which is attached a piece of light colored metal.



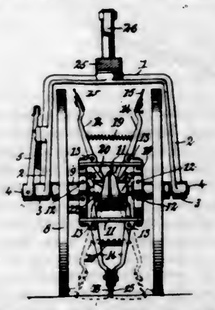
3. In sights for fire arms, a rear sight tubular in form with an outer flange on its rear face, the rear surfaces of which flange and sight are of a dull color, and a front sight with a V-shaped opening at its top having a light colored surface on its rear face.

4. In sights for fire arms, a rear sight having a rough surface on its rear face, and a front sight having a V-shaped opening longitudinally of the rifle-barrel, and a Y-shaped piece of light colored material inlaid in the rear face of the front sight, and made to register with the V in the sight.

5. In sights for fire arms, a rear sight tubular in form with an outer flange on its rear face the rear surface of which is roughened, and a front sight having a V-shaped opening and a piece of light colored metal inlaid in the rear face of the front sight and made to register with the V.

6. A sight for fire arms having a V-shaped opening and in the rear of the sight a Y-shaped piece of light colored material attached to register with the bottom of the V in the sight, the said Y-shaped piece of light colored material not extending to the top of the sight.

871,035. COTTON-CHOPPER. GEORGE M. HEAD, Marianna, Ark., assignor to himself, and William McCaleb, Bluffs, Ill. Filed Jan. 12, 1907. Serial No. 351,965.



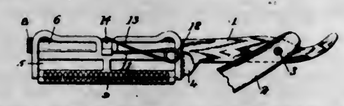
1. In an implement of the class described, in combination, a frame, wheels carried thereby, a plurality of hoe-arms pivotally mounted in pairs in a position folded together, hoes carried by said hoe-arms, means for holding said hoes back to back adjacent to each other and forcing the same into the earth as said wheels rotate, and means for forcing said hoes apart after penetrating the earth.

2. In an implement of the class described, in combination, a frame, an axle, wheels supported rotatably on said axle and having hubs, hoe-arms pivotally mounted between said hubs and having toes projecting inwardly toward said axle, springs connecting said hoe-arms, hoes carried by said hoe-arms, and a cam mounted on said axle and engaging said toes, said cam coöperating with said springs to allow said hoes to penetrate the earth in an adjacent position and forcing the same apart while in the earth.

3. In an implement of the class described, in combination, a frame, an axle carried thereby, a pair of wheels rotatably mounted on said axle and having enlarged hubs, hoe-carriers connecting said hubs, hoe-arms pivotally mounted on said carriers, hoes carried by said hoe-arms, springs connecting said hoe-arms, said hoe-arms having toes projecting toward said axle, a cam mounted on said

axle between said hubs and adapted to engage said toes, a lever attached to said axle for adjusting the position of said cam, and means for locking said lever to said frame in a plurality of positions.

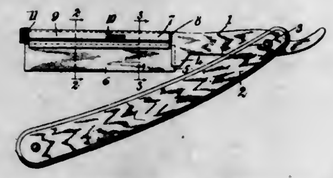
871,036. SAFETY-RAZOR. LEONARD HEUSER, New York, N. Y. Filed Jan. 14, 1907. Serial No. 352,152.



1. A razor guard comprising a main frame having a bearing bar, and retaining lips arranged at the ends of said bar, a spring comprising an arm fixedly attached at its end to the central portion of said main frame, a spiral loop formed integrally with said arm, and an arm formed integral with said loop, provided with a hook end adapted to engage the back of a razor blade and exert a vertical and lateral pressure thereon.

2. A razor guard comprising a main frame having a bearing bar, and retaining lips arranged at the ends of said bar, a spring comprising an arm fixedly attached to the central portion of the main frame and provided with a loop, and an arm extending from said loop and provided with a hooked end adapted to engage the back of a razor blade and exert a vertical and lateral pressure thereon.

871,037. RAZOR. LEONARD HEUSER, New York, N. Y. Filed Mar. 6, 1907. Serial No. 360,822.



1. A razor comprising a shank provided with a recessed heel, a sectional stem having a stub section, a blade having its heel engaging said recess, a sleeve fixedly attached to the back of said blade and engaging said stem, and means for detachably securing said stem and sleeve together.

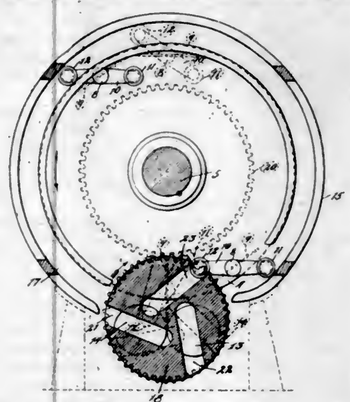
2. A razor comprising a shank provided with a recessed heel, an angular stub stem, a detachable section having a threaded engagement with said stub stem, and a heel having a slotted recess, a blade having its end engaging the recess of said heel, a sleeve fixedly attached to the back of said blade and engaging said stem, and means for detachably securing said sleeve and stem together.

3. A razor comprising a shank provided with a stem and a heel having a recess formed therein, a blade adapted to engage at its end with the recess, a sleeve attached to the back of said blade engaging said stem, and a stem section having a threaded engagement at its inner end with the stem of said shank.

871,038. FOLDING APPARATUS FOR PRINTING-PRESSES. HANS P. HUSBY, Chicago, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 29, 1907. Serial No. 365,304.

1. A rotary folding device comprising a rotary carrier, a folding blade carried thereby, and a rotating guide adapted to operatively engage said folding blade when said folding blade is in normal position and while moving in the same direction, and by itself to move said folding blade into folding position and back again into normal position and discharge the same from operative contact with said rotating guide with said folding blade in normal position.

2. A rotary folding device comprising a rotary carrier, a folding blade carried thereby, coacting folding rollers, and a rotating member provided with a guide adapted to operatively engage said folding blade when said folding blade is in normal position and while moving in the same direction, and by itself to move said folding blade into folding position and back again into normal position and discharge the same from operative contact with said rotating guide with said folding blade in normal position.



3. The combination with a rotating carrier, a folding blade carried thereby, and a tumbling lever connected with said folding blade, of a rotating member, and a guide on said rotating member adapted to engage the lead end of said tumbling lever when said folding blade is in normal position, and by itself to operate said folding blade, to return the same into normal position and discharge said tumbling lever from said guide with said folding blade in normal position.

4. The combination with a rotating carrier, a folding blade carried thereby, and a tumbling lever connected with said folding blade, of a rotating member, a guide on said rotating member adapted to engage the lead end of said tumbling lever when said folding blade is in normal position, and by itself to operate said folding blade, to return the same into normal position and discharge said tumbling lever from said guide with said folding blade in normal position, and means adapted to coact with said folding blade to complete the fold.

5. The combination with a rotary carrier, a folding blade carried thereby, and coacting folding rollers, of a tumbling lever connected with said folding blade, a rotating member, a guide on said rotating member adapted to engage said tumbling lever while said folding blade is in normal position and while traveling in the same direction therewith and by its bearing on said tumbling lever to move said folding blade into folding position and back again into normal position and to discharge said tumbling lever with the folding blade in normal position.

6. The combination with a rotary carrier, a folding blade carried thereby, coacting folding rollers, and means for retaining said folding blade in a normal position when not operating, of a tumbling lever connected with said folding blade, a rotating member, a guide on said rotating member adapted to engage said tumbling lever while said folding blade is in normal position and while traveling in the same direction therewith and by its bearing on said tumbling lever to move said folding blade into folding position and back again into normal position and to discharge said tumbling lever with the folding blade in normal position.

7. The combination with a rotary carrier, a folding blade carried thereby and folding rollers coacting therewith, of a tumbling lever connected with said folding blade, a rotating member, and a guide on said rotating member adapted to engage the lead end of said tumbling lever when said folding blade is in normal position to operate said folding blade to return the same into normal position and discharge said tumbling lever from said guide with said folding blade in normal position.

8. The combination with a rotary carrier, a folding blade carried thereby, and coacting folding rollers, of a rotating member, a guide on said rotating member extending inwards from its periphery, and means connected with said folding blade adapted to be engaged by said guide when said folding blade is in normal position to operate said folding blade, withdraw the said folding blade from operative position into normal position and be discharged from said guide with said folding blade in normal position.

9. The combination with a rotary carrier, a folding blade carried thereby and coacting folding rollers, of a tumbling lever connected with said folding blade, a rotating member, a guide on said rotating member extending inwards from its periphery and adapted to engage the lead end of said tumbling lever when said folding blade is in normal position to operate said folding blade and discharge said tumbling lever from said guide when said folding blade is again in normal position from the same end of said guide by which the tumbling lever was first engaged.

10. The combination with a rotary carrier, a folding blade carried thereby and coacting folding rollers, of a tumbling lever connected with said folding blade, a rotating member, a guide on said rotating member tangential to a circle concentric with and of less diameter than said rotating member and adapted to engage the lead end of said tumbling lever when said folding blade is in normal position, operate said folding blade and discharge said tumbling lever from said guide with said folding blade in normal position.

11. The combination with a rotary carrier, a folding blade carried thereby and coacting folding rollers, of a tumbling lever connected with said folding blade, a rotating member, a plurality of guides on said rotating member tangential to a circle concentric with and of less diameter than said rotating member and adapted to engage the lead end of said tumbling lever when said folding blade is in normal position, operate said folding blade and discharge said tumbling lever from said guides with said folding blade in normal position.

12. The combination with a rotary carrier, a folding blade carried thereby and coacting folding rollers, of a tumbling lever connected with said folding blade, a rotating member, a plurality of guides on said rotating member having their longitudinal lines, projected, so disposed as to form an equilateral polygon concentric with said rotating member and adapted to engage the lead end of said tumbling lever with said folding blade in normal position to operate said folding blade, restore it to normal position and discharge said tumbling lever with said blade in normal position.

13. The combination with a rotary carrier, a folding blade carried thereby and coacting folding rollers, of a tumbling lever connected with said folding blade, a rotating member, three guides on said rotating member having their longitudinal lines, projected, so disposed as to form an equilateral triangle concentric with said rotating member and adapted to engage the lead end of said tumbling lever with said folding blade in normal position to operate said folding blade, restore it to normal position and discharge said tumbling lever with said blade in normal position.

14. The combination with a rotary carrier, a folding blade carried thereby and coacting folding rollers, of a rotating member, a guide on said rotating member extending inwards from its periphery and tangential to a circle concentric with and of less diameter than said rotating member, and means connected with said folding blade adapted to be engaged by said guide with said folding blade in normal position to operate said folding blade and to be discharged from said guide with said folding blade again in normal position.

15. The combination with a rotary carrier, a folding blade carried thereby and coacting folding rollers, of a tumbling lever connected with said folding blade, a rotating member, a guide on said rotating member adapted to engage said tumbling lever when the folding blade is in normal position and while traveling in the same direction, to move said folding blade into operative position and out of operative position into normal position and to discharge said tumbling lever from the engaging end of said guide while traveling in the same general direction therewith and with the folding blade in its normally inoperative position.

16. The combination with a rotary carrier, a folding blade carried thereby and coacting folding rollers, of a tumbling lever connected with said folding blade, a rotating member, a plurality of slots on said rotating member adapted to engage the lead end of said tumbling lever while traveling in the same direction and move said folding blade into and out of operative position and to release said tumbling lever with said folding blade in normal position from the same end of the slot with which said tumbling lever was first engaged.

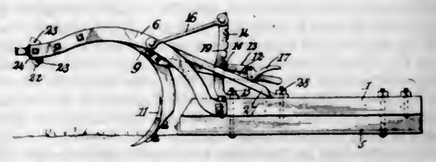
17. The combination with a rotary carrier, a folding blade carried thereby, coacting folding rollers, a tumbling lever connected with said folding blade, and a guide bearing on said tumbling lever and adapted to hold said tumbling lever and folding blade in normal position when not operating, of a rotating member, a slot on said rotating member adapted to engage said tumbling lever as said tumbling lever leaves said guide with said folding blade in normal position and while traveling in the same direction therewith and by its bearing on said tumbling lever as said folding cylinder rotates to move said folding blade into folding position and back again into normal position and to discharge said tumbling lever when in normal position to again enter said guide.

18. The combination with a rotary carrier, a folding blade carried thereby, and a tumbling lever connected with said folding blade, of a rotary member and a guide on said rotary member adapted to engage the lead end of said tumbling lever and guide the folding knife into and out of folding position and to discharge the engaged end of said tumbling lever from the same end of said guide by which said tumbling lever was engaged.

19. A folding device having a rotary carrier, a folding blade carried thereby, a tumbling lever connected with said folding blade, and a moving guide adapted to engage said tumbling lever when said folding blade is in normal position and by itself to move said folding blade into and out of folding position and to discharge said tumbling lever with the folding blade in normal position.

20. The combination with a rotary carrier, a folding blade carried thereby and a tumbling lever connected with said folding blade, of a moving guide adapted to engage said tumbling lever and guide the folding blade into and out of folding position and to discharge the engaged end of said tumbling lever from the same end of said guide by which said tumbling lever was engaged.

871,039. IRRIGATING OR DITCHING PLOW. MARTIN JACKSON, Mabton, Wash. Filed Mar. 20, 1907. Serial No. 363,415.

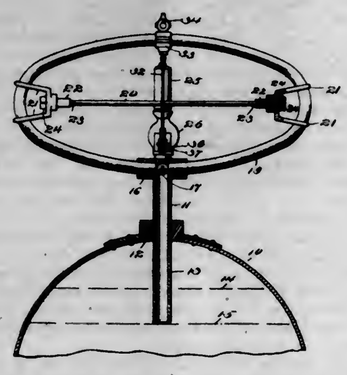


1. In a plow of the class described, in combination, a substantially triangular platform adapted to rest upon the earth, a hoe mounted forwardly thereof and adapted to form a furrow before said platform, and a keel on the under side of said platform, extending longitudinally thereof and running in the furrow formed by said hoe.

2. In a plow of the class described, in combination, a platform adapted to run upon the earth, thills attached thereto, a hoe-bar pivotally attached to said thills forwardly, and means for adjusting and locking said hoe-bar with respect to said platform.

3. In a plow of the class described, in combination, a platform adapted to run upon the earth, a keel projecting downwardly from the under side thereof, a pair of thills attached to said platform forwardly, a hoe-bar attached to said thills and carrying a hoe, and means for adjusting said hoe-bar.

871,040. LOW-WATER ALARM. WILLIAM LOUDON, Seattle, Wash. Filed Oct. 6, 1906. Serial No. 337,832.



1. In a device of the class described, a tubular ellipse, means arranged to form communication between the steam generator and the interior of the ellipse, means extending along the major axis of and rigidly connecting the opposite ends of the ellipse against longitudinal expansion, a signal mounted adjacent the ellipse, and a rod extending along the minor axis of the ellipse and rigidly connected at one end to the ellipse and at its opposite end to the signal to actuate the same.

2. In a device of the class described, a hollow column arranged for connection with a steam generator, an ellipse comprising a pipe having spaced ends in communication with the hollow column, a signal offset from and in communication with the column adjacent to the spaced ends of the ellipse, and means whereby the expansion of the ellipse actuates the signal.

3. In a device of the class described, a hollow column provided at its lower end with means for connecting with a steam generator, a tubular ellipse having spaced ends connected and in communication with the column at its upper end, a tubular off-set in communication with the hollow column at its upper end, a whistle mounted upon the off-set, and means connected with the ellipse whereby the expansion of the ellipse actuates the whistle.

4. In a device of the class described, a column arranged for connection with a steam generator, a tubular ellipse in communication with the column, a signal connected and communicating with the column, a rod rigidly connecting the ellipse along its major axis, a rod connected with the upper portion of the ellipse and disposed along the minor axis of the ellipse but free from connection with the lower portion and provided with means for embracing the rigid rod, and means connecting the last-mentioned rod with and to actuate the signal.

5. In a device of the class described, a tubular column provided with means at its lower end for connection with a steam generator, a tubular ellipse having spaced ends communicating with the column at its upper end, a tubular off-set communicating with the column at its upper end, a steam whistle mounted upon the tubular off-set, a rod extending along the major axis of the ellipse and rigidly connecting its opposite ends, a rod embracing the rigid rod and extending along the minor axis of the ellipse and connected with the ellipse at its upper side, and means connecting the last-mentioned rod with and to actuate the steam whistle.

871,041. BOTTLE-STOPPER. JACOB A. MOLLER, Jr., New York, N. Y. Filed Dec. 16, 1905, Serial No. 292,088. Renewed May 2, 1907. Serial No. 371,453.



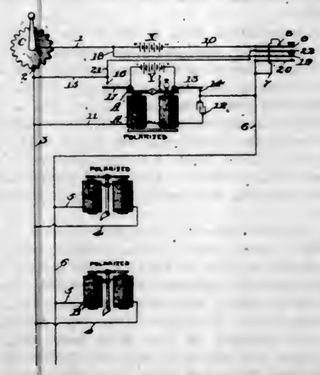
1. A bottle closure comprising a hollow base having a flange for engaging the outside of the neck of a bottle, and a tubular member provided with a cork jacket for entering the neck of the bottle, said base being provided with upwardly projecting ears, and a spherical stopper having an opening therethrough adapted to register with the opening of the neck, and a handle for swinging the stopper.

2. A bottle closure comprising a hollow base having a flange for engaging the outer surface of the neck of a bottle, said base being provided with upwardly projecting ears, a spherical stopper having an opening therein adapted to register with the opening in the neck, and a handle for swinging the stopper whereby to move said opening into and out of register with the opening in the neck.

3. A bottle closure, comprising a hollow base having flanges for engaging the inner and outer surfaces of the neck of a bottle, said base being provided with upwardly projecting ears, a spherical stopper having an opening therethrough adapted to register with the opening of the neck, and a handle for swinging the stopper.

4. In a bottle closure, a spherical stopper having an opening extending through from front to rear and provided at its upper portion with a handle forming a permanent portion of the stopper, a hollow support open at the top, ears extending upward from the said support at its open end, pivotal connections between the said ears and the stopper, and a neck removably secured in the said support below the said stopper, which neck is adapted to enter the neck of a bottle, and a jacket for the stopper neck.

871,042. TELEPHONE-EXCHANGE. SAMUEL A. NORSTROM, Chicago, Ill., assignor to Casper L. Redfield, Chicago, Ill. Filed July 13, 1905. Serial No. 269,440.



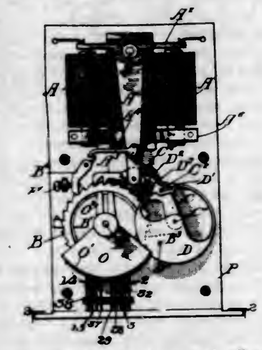
1. The combination with a magnet provided with connections by which electrical impulses may be sent through said magnet, of automatically operating means by which each such impulse through said magnet is followed by a second impulse sent in the opposite direction through the magnet, the duration of said second impulse being sufficient to destroy the residual magnetism in said magnet but insufficient to cause its operation in the opposite direction.

2. The combination with a polarized magnet adapted to be operated in opposite directions by currents flowing in opposite directions through it, and a battery and connections for sending impulses in one direction through said magnet, of automatically operating means by which each such impulse is followed by a battery impulse in the opposite direction but of a duration insufficient to cause a magnet movement in the opposite direction.

3. The combination with a polarized magnet, a battery, and means by which impulses in a given direction are sent from said battery through said magnet, of a second magnet, and means by which upon completing an impulse through the first magnet said second magnet will cause a brief impulse of the kind described to flow in the opposite direction through the first mentioned magnet.

4. The combination with a polarized magnet, a battery, and connections by which impulses in a given direction are sent from said battery through said magnet, of a second magnet and a condenser bridged across said connections, means by which the discharge of said condenser will cause said second magnet to close an electrical connection of very short duration, and means by which such closure will send a brief impulse in the opposite direction through the first mentioned magnet.

871,043. TELEPHONE-EXCHANGE. SAMUEL A. NORSTROM, Chicago, Ill., assignor to Casper L. Redfield, Chicago, Ill. Filed Aug. 23, 1905. Serial No. 275,340.



1. The combination with a central office, a party line, and a series of local stations connected to the party line, of switching mechanisms at the stations adapted to be advanced by impulses sent from the central office, means by which all switching mechanisms automatically stop at the end of a predetermined number of steps, and means controlled from the central office for causing the switching mechanisms of selected stations to move beyond their normal stopping points.

2. The combination with a series of switching mechanisms located at a series of stations, and means for simultaneously advancing them, of means forming part of each switching mechanism by which all are automatically stopped at a predetermined point, and means controlled from a distance for causing selected switching mechanisms to move beyond their stopping points.

3. The combination with a switching mechanism adapted to be normally stopped at a predetermined point in its advance movement, and means for causing its advance beyond its normal stopping point, of a telephonic connection arranged to be closed by such extra movement.

4. The combination with a switching mechanism adapted to be normally stopped at a predetermined point in its advance movement, and means for causing it to advance beyond its normal stopping point, of an emergency signaling connection closed by the switching mechanism at its normal stopping point, and a telephonic connection closed by a movement beyond the normal stopping point.

5. In a switching mechanism, the combination with a ratchet wheel having one tooth removed, a driving pawl, and a holding pawl, of a special pawl normally out of engagement with said wheel while being advanced, and means for causing said special pawl to engage said wheel so that the driving pawl can advance the ratchet wheel with its toothless part beyond the holding pawl.

6. In a switching mechanism, the combination with a ratchet wheel and a driving pawl therefor, of a special pawl, and means controlled by the movement of the ratchet wheel for holding said special pawl either in or out of engagement with said wheel.

7. The combination with a ratchet wheel, and a driving pawl therefor, of a special pawl, a locking device for holding said special pawl either in or out of engagement with said wheel, and means for controlling the operation of the locking device by the movement of the driving pawl.

8. The combination with a ratchet wheel having one tooth removed, a driving pawl, and a holding pawl, of a special pawl for enabling the driving pawl to move the toothless part of the ratchet wheel past the holding pawl, and means controlled by the movement of the driving pawl for controlling the engagement or non-engagement of said special pawl.

9. The combination with a ratchet wheel having one tooth removed, a driving pawl, and a holding pawl, of a special pawl for enabling the driving pawl to move the toothless part of the ratchet wheel past the holding pawl, a locking device for holding the special pawl in or out of engagement with the wheel, and means for operating said locking device by the movement of said driving pawl.

10. The combination with a ratchet wheel having one tooth removed, a driving pawl, and a holding pawl, of a special pawl for enabling the driving pawl to move the toothless part of the ratchet wheel past the holding pawl, means for controlling the engagement or non-engagement of said special pawl by the movement of the driving pawl, and a locking device carried by the ratchet wheel and arranged to hold the special pawl in the position determined by the driving pawl.

11. In the switching mechanism of a telephone exchange, the combination with a movable ratchet wheel, of a pawl-locking device carried by said wheel, and a pawl arranged to be held in either of two positions by said locking device.

12. In the switching mechanism of a telephone exchange, the combination with a movable ratchet wheel, of a pawl-locking device carried by said wheel and adjustable with respect thereto.

13. The combination with a movable ratchet wheel, of an adjustable pawl-locking device, and means for securing said device at any desired position on said wheel.

14. The combination with a switching mechanism, a magnet for operating it, and an electric circuit by which impulses may be sent through said magnet, of a condenser located in a normally open bridge between the branches of said circuit, and means by which said bridge is temporarily closed once during each forward movement of said switching mechanism.

15. The combination with a switching mechanism, and a propelling magnet therefor, of a circuit for operating said magnet, and means associated with said circuit for neutralizing the residual magnetism of said magnet at the termination of each operation thereof.

16. The combination with a ratchet wheel, a magnet for advancing it, and a spring for returning it to normal position when released, of a telephonic connection closed by the compression of the retractile spring on the advance of the wheel and broken by the return of said wheel to its normal position.

17. The combination with a ratchet wheel, and means for advancing it, of two contact springs provided with connections to said wheel for returning it to normal position when released, and telephonic connections closed by the compression of said springs upon the advance of said wheel.

18. The combination with a ratchet wheel, and means for advancing it, of contact springs closed by the forward movement of said wheel, automatic means for normally stopping said wheel before said springs are closed, and

special means for causing said wheel to move beyond its normal stopping point.

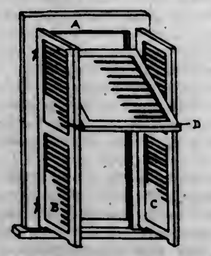
19. The combination with a series of ratchet wheels, magnets for simultaneously advancing them, and automatically operating means for normally stopping said wheels at a predetermined point in their advance, of means for moving selected wheels beyond their normal stopping points, and means whereby the magnets used for advancing the wheels serve also for selecting desired wheels for further advance.

20. The combination with a party line consisting of two conductors leading to a series of local stations, of a switching mechanism at each station permanently connected in bridge of said conductors, a telephone receiver at each station normally connected in bridge of said conductors, circuit making and breaking devices in said last named bridges and located on each side of said receivers, means by which upon operating said switching mechanism by impulses sent over said line the last named bridges will be broken on both sides of said receivers, and means by which upon advancing the switching mechanisms beyond a predetermined point the bridges for said receivers will be again closed.

21. The combination with a party line consisting of two conductors leading to a series of local stations, of a switching mechanism at each station, a telephone receiver at each station normally connected in a closed bridge of said conductors, means by which upon operating said switching mechanisms said bridges will be opened on both sides of the receivers, and means by which upon any of said switching mechanisms being advanced beyond a predetermined point the bridges at such stations will be closed on both sides of the receivers thereat.

22. The combination with a series of stations normally in telephonic connection with a party line, a switching mechanism at each station and means controlled from a central office for operating said switching mechanisms to simultaneously break all telephonic connections and subsequently to reëstablish the telephonic connections of selected stations, of emergency devices at each station so arranged that an unselected station may signal the central office while two selected stations are in telephonic connection with each other, and means by which such emergency devices are inoperative until the selective operation is completed.

871,044. AWNING-BLIND. GARDNER W. PEARSON, Lowell, Mass. Filed Sept. 19, 1907. Serial No. 393,658.



1. An awning blind comprising two outside blinds hung to the window casing on vertical pivots and extended at right angles to said casing, combined with an auxiliary blind or shield detachably attached at its top between said outside blinds and detachably attached near its bottom to the outer edges of said outside blinds.

2. An awning blind comprising two outside blinds hung to the window casing on vertical pivots and extended at right angles to said casing, combined with an auxiliary blind or shield provided with spindles which project on each side near its top and rest upon the upper hinges of said outside blinds, and provided with means whereby it is detachably attached near its bottom to the outer edges of said outside blinds.

3. An awning blind comprising two outside blinds hung to the window casing on vertical pivots and extended at right angles to said casing, combined with a folding auxiliary blind or shield detachably attached at its top between said outside blinds and detachably attached near its bottom to the outer edges of said outside blinds.

4. An awning blind comprising two outside blinds hung to the window casing on vertical pivots and extended at right angles to said casing, combined with an auxiliary blind or shield detachably attached at its top between said outside blinds and provided near its bottom with curved clamping fingers on each side which extend around the outer edges and along the outside of the frames of said outside blinds.

5. An awning blind comprising two outside blinds hung to the window casing on vertical pivots and extended at right angles to said casing, combined with an auxiliary blind or shield provided with spindles which project on each side near its top and rest upon the upper hinges of said outside blinds, and provided near its bottom with curved clamping fingers on each side which extend around the outer edges and along the outside of the frames of said outside blinds.

6. An awning blind comprising two outside blinds hung to the window casing on vertical pivots and extended at right angles to said casing, combined with an auxiliary blind or shield provided with spindles which project on each side near its top and rest upon the upper hinges of said outside blinds, and provided with means whereby it is detachably attached near its bottom to the outer edges of said outside blinds, and buffers adjustably attached to the sides of the auxiliary blind.

7. An awning blind comprising two outside blinds hung to the window casing on vertical pivots and extended at right angles to said casing, combined with an auxiliary blind or shield detachably attached at its top between said outside blinds and provided near its bottom with curved clamping fingers on each side adapted to clasp successively the outer edges of the frames of said outside blinds.

8. In clamping mechanism for an awning blind, a bolt which comprises a straight portion which is slidably and rotatably attached to the blind, a clamping finger at one end thereof, an elbow at the other end of the straight portion, and a screw threaded end which extends from the elbow, combined with a guide plate attached to the blind and provided with a curved guide slot to receive the screw threaded end of the bolt, and a thumb nut carried by the screw threaded end of the bolt.

9. An awning blind comprising two outside blinds hung to the window casing on vertical pivots and extended at right angles to said casing, combined with an auxiliary blind or shield provided with spindles which project on each side near its top and rest upon the upper hinges of said outside blinds, and provided near its bottom with slidable clamping bolts which are capable of partial rotation and are independently capable of being operated to hold in place said outside blinds.

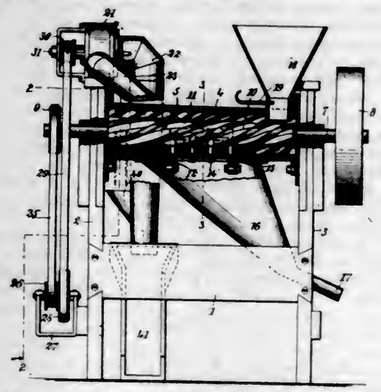
10. An auxiliary blind or shield provided with means at its top whereby it may be detachably attached near the inner edges of the ordinary blinds, and with means at its bottom whereby it may be detachably attached near the outer edges of the ordinary blinds when they are swung out from the window casing.

11. An auxiliary blind or shield provided with means at its top whereby it may be detachably attached near the inner edges of the ordinary blinds, and with means at its bottom whereby it may be detachably attached near the outer edges of the ordinary blinds when they are swung out from the window casing, and adjustable means for fitting said auxiliary blind to ordinary blinds of different widths.

12. An awning blind comprising two outside blinds hung to the window casing on vertical pivots and extended at right angles to said casing, combined with an auxiliary blind or shield provided with spindles which project on each side near its top and rest upon the upper hinges of said outside blinds, and provided with bolts on each side near its bottom each of which comprises a straight portion which is slidably and rotatably attached to the blind, a clamping finger at one end thereof, an elbow at the other end of the straight portion, and a screw threaded end which extends from the elbow, a guide plate attached to the blind and provided with a curved guide slot to receive the screw threaded end of the bolt, a thumb nut carried by the screw threaded end of the bolt, and buffers adjustably attached to the sides of the auxiliary blind.

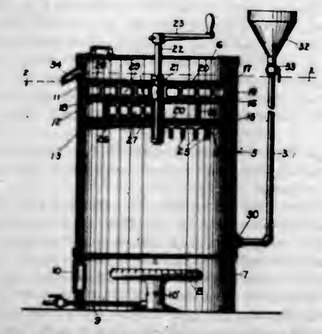
13. In clamping mechanism for an awning blind, a bolt which comprises a straight portion which is slidably and rotatably attached to the blind, a clamping finger at one end thereof, an elastic sleeve thereon, an elbow at the other end of the straight portion, and a screw threaded end which extends from the elbow, combined with a guide plate attached to the blind and provided with a curved guide slot to receive the screw threaded end of the bolt, a collar and a thumb nut carried by the screw threaded end of the bolt at opposite sides of the guide plate.

871,045. RETHRESHER AND POLISHER FOR COFFEE. EUDORO C. PRIETO, Cipaquira, Colombia. Filed Dec. 29, 1905. Serial No. 293,871.



A machine of the class described, comprising, in combination, a barrel having a roughened inner surface, a rotatable drum having helical ribs mounted therein and adapted to advance grain in said barrel, a grating presenting longitudinally-disposed bars in the wall of said barrel and arranged circumferentially with respect to the axis thereof, a blower, means for guiding a current of air through said grating, an outlet opening in said barrel, a chute communicating with said outlet opening, and means for delivering an air-blast at said chute.

871,046. BEESWAX SEPARATOR AND PURIFIER. GEORGE B. SAVAGE, Oak Grove, Cal. Filed Oct. 3, 1906. Serial No. 337,221.



1. A device of the class described, comprising a purifying receptacle having a fluid inlet at the bottom and a fluid outlet adjacent the top thereof; a plurality of removable screens each of a different mesh mounted transversely in said receptacle adjacent the top thereof; agitating and scraping means mounted in said receptacle adjacent said screens; and means to operate said agitator means.

2. A device of the class described, comprising a purifying receptacle having a fluid inlet at the bottom and a fluid outlet at the top; a fluid pressure tank connected to inlet of said purifying receptacle; a plurality of screens in said purifying receptacle; agitating and scraping means mounted in said receptacle; and means to operate said agitator means.

3. A device of the class described, comprising a purifying receptacle having a fluid inlet at the bottom and a fluid outlet at the top; a fluid pressure tank connected to the inlet of said purifying receptacle; a plurality of screens removably secured in said purifying receptacle; agitating and scraping means revolubly mounted in said receptacle; and means to operate said agitator means.

4. A device of the class described, comprising a purifying receptacle having a fluid inlet at the bottom and a fluid outlet at the top; a fluid pressure tank connected to the inlet of said purifying receptacle; pressure tank controlling means; a plurality of removable screens of varying meshes secured in said receptacle; agitating and scraping means revolubly mounted in said receptacle; and means to rotate said agitator means.

5. A device of the class described, comprising a purifying receptacle having a fluid inlet at the bottom and a fluid outlet at the top; a fluid pressure tank connected to the inlet of said receptacle; pressure tank controlling means; a plurality of removable screens of varying meshes secured in said receptacle adjacent the top thereof; a revoluble shaft mounted in bearings secured in said receptacle; agitating and scraping arms rigidly secured to said shaft; and means to rotate said shaft.

6. A device of the class described, comprising a purifying receptacle having a fluid inlet at the bottom and a fluid outlet at the top; a fluid pressure tank connected to the inlet of said receptacle; pressure tank controlling means; a plurality of removable screens of varying meshes adjacent each other secured in the top of said receptacle; a revoluble shaft mounted in bearings secured in said receptacle; radially projecting agitating and scraping arms rigidly secured to said shaft, an agitator arm rotating directly beneath each of the removable screens, and means to rotate said shaft.

7. A bees-wax separator and purifier, comprising a cylindrical receptacle having inlet and outlet means secured thereto; heating means located adjacent the bottom of said receptacle; a water pressure tank located above said receptacle communicating with said inlet means; a plurality of removable screens of varying meshes located in the top of said receptacle, said screens being equally spaced apart, the screen of the finest mesh being located above the others; a revoluble shaft mounted in bearings secured in said receptacle; a plurality of radially extending agitator arms secured to said shaft, a pair of said arms being located directly beneath each of said screens and adapted to contact therewith; and means to rotate said shaft.

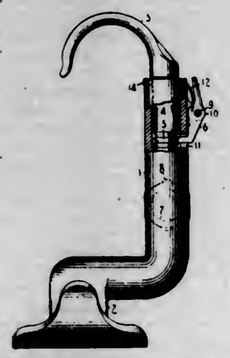
871,047. FASTENING FOR VEHICLE-TOP BOWS. ZALMON G. SHOLES, New York, N. Y. Filed Feb. 2, 1907. Serial No. 355,346.

1. Means including a clamp for securing the bows of a vehicle-top together and to the body of the vehicle, said clamp comprising a lower fixed jaw adapted to be fastened to the body of the vehicle, an upper jaw movable both vertically and angularly, and automatic means for locking the movable jaw at a proper distance from the fixed jaw.

2. Means including a clamp for securing the bows of a vehicle-top together and to the body of the vehicle, said clamp being composed of a post adapted to be fastened to the body of the vehicle, a lower fixed jaw on said post, an upper movable jaw mounted on the post; and automatic means for locking the movable jaw to the post.

3. Means including a clamp for securing the bows of a

vehicle-top together and to the body of the vehicle, said clamp being composed of a tubular post adapted to be fastened to the body of the vehicle, a lower fixed jaw on said post, an upper movable jaw having a stem fitting in said post, and automatic means for locking said stem to the post.



4. The combination with the bows of a vehicle-top of means, including a clamp and a series of spacing devices, for securing the bows together and to the body of the vehicle, said clamp comprising a lower fixed jaw adapted to be fastened to the body of the vehicle, an upper movable jaw, and automatic means including ratchet-teeth and a pawl for locking the movable jaw at a proper distance from the fixed jaw.

5. Means including a clamp for securing the bows of a vehicle-top together and to the body of the vehicle, said clamp being composed of a post adapted to be fastened to the body of the vehicle, a lower fixed jaw on said post, an upper movable jaw mounted on the post, and automatic means including ratchet-teeth and a pawl for locking the movable jaw to the post.

6. Means including a clamp for securing the bows of a vehicle-top together and to the body of the vehicle, said clamp being composed of a tubular post adapted to be fastened to the body of the vehicle, a lower fixed jaw on said post, an upper movable jaw having a stem fitting in said post, and automatic means including ratchet-teeth and a pawl for locking the movable jaw to the post.

7. Means including a clamp for securing the bows of a vehicle-top together and to the body of the vehicle, said clamp being composed of a tubular post adapted to be fastened to the body of the vehicle, a lower fixed jaw on said post, an upper movable jaw having a stem fitting in said post, and automatic means including ratchet-teeth and a pawl for locking the movable jaw to the post, the ratchet-teeth being on said stem and the pawl being mounted on the post.

8. Means including a clamp for securing the bows of a vehicle-top together and to the body of the vehicle, said clamp being composed of a post adapted to be fastened to the body of the vehicle, a lower fixed jaw on said post, an upper jaw mounted on the post and movable both vertically and angularly, and means for locking the movable jaw to the post.

9. Means including a clamp for securing the bows of a vehicle-top together and to the body of the vehicle, said clamp being composed of a tubular post adapted to be fastened to the body of the vehicle, a lower fixed jaw on said post, an upper jaw having a stem fitting in said post and movable both vertically and angularly, and means for locking said stem to the post.

10. Means including a clamp for securing the bows of a vehicle-top together and to the body of the vehicle, said clamp comprising a lower fixed jaw adapted to be fastened to the body of the vehicle, an upper jaw movable both vertically and angularly, and automatic means including ratchet-teeth and a pawl for locking the upper jaw at a proper distance from the fixed jaw.

11. Means including a clamp for securing the bows of a vehicle-top together and to the body of the vehicle, said clamp being composed of a post adapted to be fastened to the body of the vehicle, a lower fixed jaw on said post, an upper jaw mounted on the post and movable both vertically and angularly, and automatic means including ratchet-teeth and a pawl for locking the movable jaw to the post.

12. Means including a clamp for securing the bows of a vehicle-top together and to the body of the vehicle, said clamp being composed of a tubular post adapted to be fastened to the body of the vehicle, a lower fixed jaw on said post, an upper jaw having a stem fitting in said post and movable both vertically and angularly, and automatic means including ratchet-teeth and a pawl for locking said stem to the post.

13. Means including a clamp for securing the bows of a vehicle-top together and to the body of the vehicle, said clamp being composed of a tubular post adapted to be fastened to the body of the vehicle, a lower fixed jaw on said post, an upper jaw having a stem fitting in said post and movable both vertically and angularly, and automatic means including ratchet-teeth and a pawl for locking said stem to the post, the ratchet-teeth being on said stem and the pawl being mounted on the post.

14. Means including a clamp for securing the bows of a vehicle-top together and to the body of the vehicle, said clamp comprising a lower fixed jaw adapted to be fastened to the body of the vehicle, an upper jaw movable both vertically and angularly, means for locking the upper jaw at a proper distance from the fixed jaw, and means for keeping the upper jaw in an inoperative position towards and from which it is movable angularly.

15. Means including a clamp for securing the bows of a vehicle-top together and to the body of the vehicle, said clamp being composed of a post adapted to be fastened to the body of the vehicle, a lower fixed jaw on said post, an upper jaw mounted on the post and movable both vertically and angularly, means for locking the movable jaw to the post, and means for keeping the upper jaw in an inoperative position towards and from which it is movable angularly.

16. Means including a clamp for securing the bows of a vehicle-top together and to the body of the vehicle, said clamp comprising a lower fixed jaw adapted to be fastened to the body of the vehicle, an upper jaw movable both vertically and angularly, automatic means including ratchet-teeth and a pawl for locking the upper jaw at a proper distance from the fixed jaw, and means for keeping the upper jaw in an inoperative position towards and from which it is movable angularly.

17. Means including a clamp for securing the bows of a vehicle-top together and to the body of the vehicle, said clamp being composed of a post adapted to be fastened to the body of the vehicle, a lower fixed jaw on said post, an upper jaw mounted on the post and movable both vertically and angularly, automatic means including ratchet-teeth and a pawl for locking the movable jaw to the post, and means for keeping the upper jaw in an inoperative position towards and from which it is movable angularly.

18. Means including a clamp for securing the bows of a vehicle-top together and to the body of the vehicle, said clamp being composed of a tubular post adapted to be fastened to the body of the vehicle, a lower fixed jaw on said post, an upper movable jaw having a round stem fitting in said post and having on it ratchet-teeth extending around the stem, and a pawl mounted on the post and engaged with said ratchet-teeth.

19. Means including a clamp for securing the bows of a vehicle-top together and to the body of the vehicle, said clamp being composed of a tubular post adapted to be fastened to the body of the vehicle, a lower jaw fixed on said post, an upper movable jaw having a round stem fitting in said post and having on it ratchet-teeth extending around the stem, a pawl mounted on the stem and engaged with said ratchet-teeth, and means for keeping the upper jaw in an inoperative position towards and from which it is movable angularly.

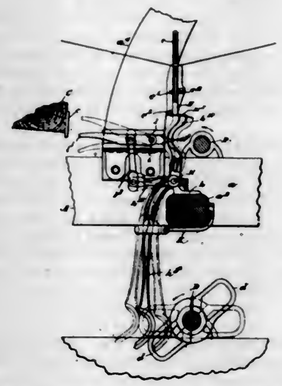
20. The combination with the bows of a vehicle-top of means, including a clamp and a series of spacing-devices, for securing the bows together, said series of spacing-devices comprising bolts having cupped heads, and nuts on which are protuberances conforming to the cavities in the heads, each of said bolts extending through one of the bows, and the heads and nuts being arranged to fit together in order, and to be held together by the clamp when the bows are secured in the clamp.

21. Means including a clamp and a bolt for securing the bows of a vehicle-top together, said bolt being coöperative with the clamp and other bolts, and having a cupped head, and a nut on which is a protuberance conforming to the cavity in the head of another similar bolt.

22. A series of spacing-devices for use on the bows of vehicle-tops, said series of devices including a bolt adapted to be inserted in and to extend through one of the bows and having a cupped head, and a nut on which is a protuberance conforming to the cavity in the head of another similar bolt.

23. A series of spacing-devices for use on the bows of vehicle-tops, said series of devices including bolts adapted to be inserted in and to extend through the bows, some of said bolts having cupped heads, and some having nuts on which are protuberances made to fit in the cavities in said cupped heads.

871,048. WARP STOP-MOTION. EARL A. THISSELL, Lowell, Mass. Filed Jan. 31, 1907. Serial No. 355,045.



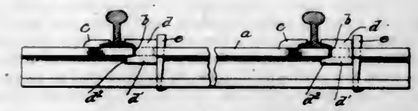
1. In a loom, the combination of a shipper, a lay, a cam shaft, a cam secured on said shaft, a vibrator actuated positively in one direction by said cam, yielding means for operating said vibrator in the other direction, a slide, a finger pivoted thereon and raised by the positive movement of said vibrator into the path of said lay and normally withdrawn by the non-positive movement of said vibrator, a lever engaging said shipper, a link directly connecting said slide and said lever, and a drop normally supported by an unbroken warp-thread and arranged and adapted to fall in the path of and to arrest the non-positive movement of said vibrator when said warp-thread is broken.

2. In a loom, the combination of a shipper, a lay, a drop normally supported by an unbroken warp-thread, a cam shaft, a cam secured on said shaft, a vibrator actuated positively in a backward direction by said cam and in a forward direction by a spring and adapted and arranged to be stopped in its forward movement by a fallen drop, a slide, a finger pivoted on said slide and raised by the positive movement of said vibrator into the path of said lay and withdrawn from said path by the forward movement of said vibrator, a lever engaging said shipper and a link directly connecting said slide and said lever.

3. In a loom, the combination of a vibrator-shaft having arms rigidly secured thereto, a vibrator-blade secured to said arms, suitable bearings for said shaft, a spiral spring surrounding said shaft and connecting one of said bearings to said shaft, to rock said shaft in one direction, another arm carried by said shaft, a cam shaft, a cam carried by said last-named shaft and bearing against said last-named arm, to rock said vibrator-shaft in the other direction, a drop normally supported by an unbroken warp-thread and adapted to fall in the path of said vibrator-blade when said warp-thread is broken and to arrest the movement of said vibrator-shaft due to said spring, a slide, a finger pivoted on said slide and raised by the cam-actuated movement of said vibrator-shaft and lowered by the spring-actuated movement of said vibrator-shaft, a lay adapted in its backward movement to strike said raised finger and to move said slide, a shipper, a lever engaging said shipper and a link directly connecting said slide and said lever.

4. In a loom, the combination of a shipper, a lay, a drop normally supported by an unbroken warp-thread, a cam shaft, a cam secured on said shaft, a vibrator having a rock-shaft, suitable bearings for said rock-shaft, a spiral spring surrounding said rock-shaft and connecting one of said bearings to said rock-shaft, to rock said rock-shaft in one direction, a pendent arm loose on said rock-shaft and provided with a clutch counterpart, another clutch counterpart fast on said rock-shaft and engaging said first-named counterpart when said cam strikes said pendent arm, to rock said rock-shaft in the other direction, a slide, a finger pivoted on said slide and raised by the cam actuated movement of said rock-shaft and lowered by the spring-actuated movement of said rock-shaft and struck by the lay when the last-named movement of said rock-shaft is arrested by the fall of said drop, a lever engaging said shipper and a link directly connecting said slide and said lever.

871,049. METALLIC RAILWAY-TIE. JAMES C. THOMPSON, Salem, Va. Filed June 1, 1907. Serial No. 376,870.



1. In combination with a railway-tie having longitudinal lateral flanges along its upper edge, these flanges being provided with shoulders facing toward the same end of the tie, a rail clip fastened to the tie adjacent to each pair of shoulders and facing in the same direction as the shoulders face, a removable clamp or clip slidingly mounted on the tie adjacent to each pair of shoulders, each of these clips being provided with depending flanges and forwardly projecting lugs, and means for forcing these slidable clips toward the rail and locking them in place, the said lugs being adapted to engage under the oppositely projecting shoulders of the tie.

2. In combination with a railway-tie having longitudinal flanges along its upper as well as its lower edge, the upper flanges being enlarged laterally to form endwisely facing shoulders *b*, a clip adjacent to each pair of shoulders and facing in the same direction, a slidable clip on the tie adjacent to each pair of shoulders and facing in the opposite direction, each clip being provided with depending side flanges having formed on them forwardly projecting lugs adapted to engage under the oppositely projecting shoulders *b*, and vertical locking wedges or keys driven down behind each slidable clip and extending down through both flanges of the tie.

871,050. CHRISTMAS-TREE SUPPORT. JACOB VOGT, New Rochelle, N. Y. Filed May 13, 1907. Serial No. 373,271.

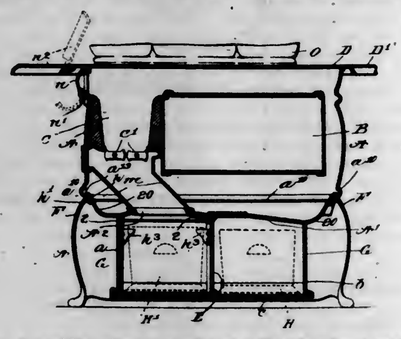
As an improved article of manufacture, a section for a Christmas tree support formed of a bar of metal bent into an acute angle with one member forming the base and

the other member forming an inclined brace extending upwardly and inwardly from the outer end of the base, the



ends of said bar being bent and sharpened to form spurs on the free ends of said members.

871,051. COOKING-STOVE. ARTHUR W. WALKER, Malden, Mass. Filed Oct. 19, 1906. Serial No. 339,608.



1. A cooking stove comprising a fire chamber having a grate and an oven, interchangeable coal hods, one located under said oven and the other under said grate, the coal hod located under the oven being protected from receiving ashes from the grate and adapted to contain coal to be supplied to the grate, the coal hod under the grate being adapted to receive ashes from the grate.

2. A cooking stove comprising a fire chamber and grate, an oven, and a base divided to present a space below the grate and below the oven, combined with two coal-hods, one adapted to hold fresh coal and the other to receive ashes directly from the grate, the coal holding hod being shielded from the entrance of ashes therein and from the direct action of the heat of the coal being consumed on the grate, thus preventing the coal in the coal-hod being heated to such an extent as to lose some of its beneficial gases before the coal is applied to the grate.

3. A cooking stove comprising an oven, a fire chamber, a hod-receiving space located below the oven and divided to present two hod-receiving chambers, one communicating with the grate, and two coal-hods one in each of said chambers.

4. A cooking stove comprising an oven, a fire chamber, a hod-receiving space located below the oven and divided to present two hod-receiving chambers, one communicating with the grate, and two coal-hods one in each of said chambers, and doors to close said chambers.

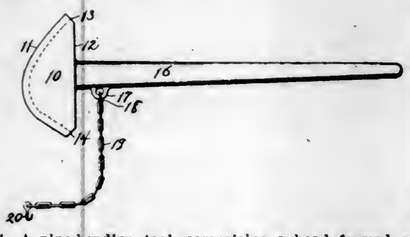
5. A cooking stove comprising a body having at its lower end a bead, said bead crossing the ends and rear side of the stove in the same line, the bottom of the bead presenting an inturned shoulder, a bottom plate suspended from the lower end of the body, the shoulder of the bead resting directly on the upper edge of the base, the bottom plate being concealed within the base.

6. In a stove, a body part containing an oven and having a bead running at the lower end of said body, the bead having a downturned flange, a bottom sustained by the body, and positioned by the flange, and a base on the top of which the bead of said body rests.

7. In a cooking stove, a body part having an out-turned bead the lower part of which presents a practically horizontally sustained foot, a bottom plate and a base sustaining said body part, the top edge of the base being of a size to underlie said foot.

8. A cooking stove comprising an oven, a fire chamber, a grate, a hod-receiving base, a tipping shelf mounted on the stove at the side of the stove between said oven and said space, and two coal-hods adapted to be set in the space of said base raising the shelf affording ready access to the coal-hods.

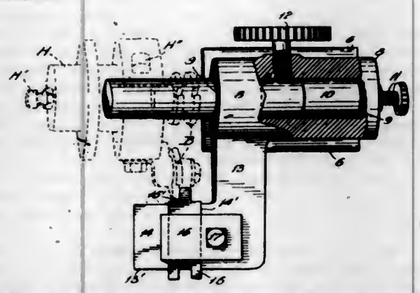
871,052. PIPE-BENDING TOOL. FRED A. WALLACE, Des Moines, Iowa, assignor of one-half to E. O. Wallace, Des Moines, Iowa. Filed Jan. 21, 1907. Serial No. 353,726.



1. A pipe-bending tool, comprising a head formed with a longitudinally-curved and transversely V-shaped work-engaging surface, a handle fixed to said head diametrically of the work-engaging surface, the greatest dimension of said head being transversely of said handle, an eye formed on said handle adjacent the head, a chain pivoted at one end to said eye, and a hook on the opposite end of said chain.

2. A pipe-bending tool, comprising a head plane on one margin and curved on the margin opposite thereto, the curved margin of said head formed with a groove V-shaped in cross-section, a handle formed on said head and extending at right angles to the plane margin thereof, the greatest dimension of said head being transversely of said handle, an eye formed on said handle adjacent said head, a chain pivoted at one end to said eye, and a hook on the opposite end of said chain.

871,053. CUTTER-HEAD SETTER. JOHN W. WINNINGHAM, Seattle, Wash. Filed Jan. 11, 1907. Serial No. 351,845.



1. In a device of the character described, the combination with a mandrel, a support for the mandrel, an arm integral with said support and provided with a seat for a gage, and means to clamp a gage to said arm, of means for adjustably moving said mandrel longitudinally relatively to the support, and means to secure the mandrel in various set positions.

2. In a device of the character described, the combination with a mandrel, a standard having a socket with an inclined axis and an extended base, an arm extending laterally from the socket and provided with a seat for a gage which is arranged in the same angle of inclination with the axis of the socket; said seat also terminating in an abutment perpendicular to said axis, an adjustment screw extending longitudinally into said socket, a set screw extending transversely into the socket, and means to clamp a gage to said seat.

3. In a device of the character described, the combination with a mandrel, a standard having a socket with a horizontally inclined axis and an extended base, an arm extending laterally from the socket and provided with a seat for a gage which terminates in an abutment perpendicular to said axis, an adjustment screw extending longitudinally into said socket, a set screw extending transversely into the socket, and means to clamp a gage to said seat.

4. In a device of the character described, the combination with a mandrel, a standard provided with an extended base and a socket for the mandrel, said socket having its axis inclined from the plane of said base, a gage holder, an adjustable end bearing for the mandrel extending axially into the socket, and means to secure the mandrel against said end bearing and also against rotary motion.

5. In a device of the character described, the combination with a mandrel, a standard provided with an extended base and a socket for the mandrel, said socket having its axis inclined from the plane of said base, a gage holder formed integral with the standard, and an adjustable end bearing for the mandrel extending axially into the socket.

6. In combination with a mandrel, a support therefor, an arm integral with said support formed with a gage seating-face and a gage engaging shoulder at right angles thereto, and means to clamp the gage, said means overlying the gage and being secured to said arm.

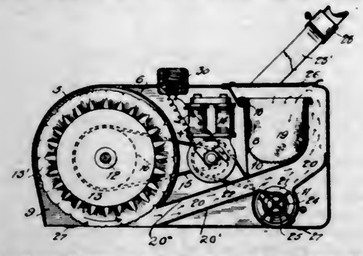
7. In combination with a support, a mandrel adjustably secured to said support, an arm rigid with said support having a depressed horizontal gage seating face, and means on said arm to secure the gage in position.

8. In combination with a support, a mandrel therein, means engaging one end of said mandrel for adjusting the same lengthwise, an arm rigidly connected to said support and having a flat horizontally disposed gage seating-face, and means to clamp a gage on top of said seating face.

9. In combination with a support, having a socket therein formed with a closed end, a mandrel in said socket, a set screw extending through said closed end of the socket and engaging said mandrel, a flat gage seating face carried by said support adapted to have a gage seated thereon, and a clamping plate to overlie the gage and secure the same to said gage seating-face.

10. In combination with a support having a socket therein a mandrel extending in the socket, means to adjust said mandrel lengthwise, an arm on the support, said arm being formed with a depressed flat gage-seating face forming a shoulder against which one side of the gage abuts, and a clamping plate engaging the top of the gage and the opposite side of the gage.

871,054. SWEEPING DEVICE. RUSSELL M. BAKER, Seattle, Wash. Filed Dec. 28, 1906. Serial No. 349,779.



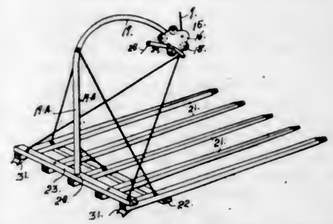
1. A carpet sweeper embodying a casing, two spaced inclined walls in said casing forming a passage therebetween, the upper of said walls being turned upwardly, a shelf spaced from said upturned end, a partition extending between said shelf and said upper wall, a dirt receptacle supported from said shelf and said upturned end, a brush, and a fan each in communication with said passage, and means for driving said brush and fan.

2. A carpet sweeper comprising a casing, an inclined lower and an inclined upper wall in said casing, said lower wall being secured to the rear end of the casing and having an arc-shaped depression forming a fan compartment, said upper wall forming a passage in conjunction with the lower wall and having its rear end upturned and spaced from said rear end of the casing, a supporting element carried by the casing and spaced from said upturned end, a dirt receptacle supported from said upturned end and said supporting element, a fan in said fan compartment, a brush, and means for actuating said fan and brush.

3. A carpet sweeper comprising a casing, inclined walls forming a passage therebetween, one of said walls forming a continuation of the said passage in conjunction with the rear end of the casing, a brush at the lower end of said passage, a fan located intermediate the length of said passage and having communication with the latter, and a dirt receptacle at the upper end of said passage and communicating therewith.

4. A carpet sweeper comprising a casing, a lower inclined wall, an upper inclined wall spaced from said lower inclined wall, a partition extending from the lower end of the upper wall to the casing top to form a brush compartment, the rear end of said upper wall being upturned, a second partition secured to said upper wall and said casing top at points between said upturned end and said first named partition to form a dirt compartment in conjunction with said upturned end, a brush in the brush compartment, and a fan communicating with the space between said inclined walls.

871,055. BUCK-RAKE HAY-FORK. GEORGE R. BOULDING, Wells, Nev. Filed Feb. 9, 1907. Serial No. 356,565.



1. A fork of the class described comprising a toothed structure adapted to support the load and provided with a rearwardly located upright, and a forwardly curved arm which when the teeth of the fork are in a horizontal position, has its forward extremity directly downwardly and located considerably in advance of the center of gravity of the fork, a block movably located on said arm and with which the hoisting rope or cable is connected, the said block being provided with a locking trigger adapted to automatically assume a position to hold the block at the forward and downward extremity of the curved arm, and means for actuating the trigger to release the movable block for the purpose set forth.

2. A hay fork provided with a suspension block movably mounted thereon and normally free to change position as the center of gravity of the load changes, and a trigger having a U-shaped extremity for locking the block in a predetermined position.

3. A hay fork provided with a curved arm and a suspension block movable on the arm and normally free to change its position as the center of gravity of the load changes, the said block being provided with rollers to facilitate the movement of the block on the arm.

4. A hay fork provided with a curved arm, a suspension block movable on the arm and normally free to change its position as the center of gravity changes, and a trigger having a U-shaped extremity for locking the block in a predetermined position on the arm.

5. A hay fork provided with a curved arm and a suspension block movable on the arm and normally free to change its position as the center of gravity changes, and a trigger for locking the block on the arm, the locking action of the trigger being automatic when the block is at a predetermined position on the arm.

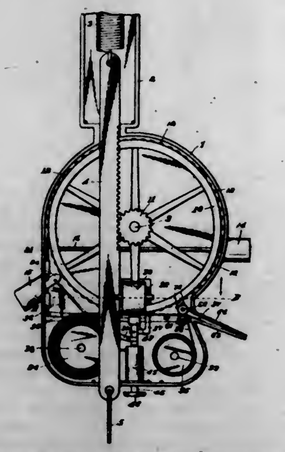
6. A hay fork provided with a curved suspension arm, and a block movable on the arm and normally free to change its position as the center of gravity of the fork and its load changes, the said block being provided with anti-friction devices to facilitate the movement of the block on the arm.

7. A hay fork provided with a curved suspension arm, and a block movable on the arm and normally free to change its position as the center of gravity changes, the said block being provided with sheaves engaging the arm above and below to facilitate freedom of movement.

8. A hay fork provided with a head having teeth adapted to receive the load from the rake, the rear extremity of the head being provided with anchoring devices to prevent the rearward movement of the head of the fork in response to the push of the rake as the load is placed upon the fork head, substantially as described.

9. A hay fork provided with teeth for supporting the load, a curved suspension arm occupying a position considerably above the teeth in order to make room for the load, and a block movably mounted upon the curved arm and with which block the hoisting cable is connected, the block being provided with means for locking it at the lower and forward extremity of the arm while hoisting the load, the locking means being adapted to be actuated to release the block whereby the latter is allowed to shift its position upon the curved arm to permit the dumping of the load, and then again change its position on the said arm after the load is dumped to conform to the changed position of the fork, substantially as described.

871,056. WEIGHING-SCALE. BENJAMIN F. CRARY, Kansas City, Mo. Filed Dec. 4, 1905. Serial No. 290,191.



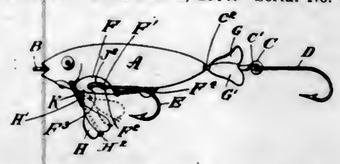
1. In a weighing scales of the kind specified, the combination of an incasement, an upward extending neck 2, an outward extending sleeve 14 integral with the incasement, a horizontal rod longitudinal of the incasement carrying push button and coil spring in sleeve 14 a bell-crank engaged by its opposite end, a sleeve 15, a push rod carrying push button and coil spring supported in said sleeve, and a vertical rod dependently carried by said bell-crank, the lower end adapted to engage and disengage said push rod.

2. In a weighing scales of the kind specified the combination of an incasement, outwardly projecting sleeves, and a paper discharging guide integral with the incasement, a vertical sleeve mounted in the lower inside of the incasement, a printing plunger and a coil spring engaging said sleeve, a ratchet wheel, an outward and upward extending arm carried by the plunger and adapted to engage and disengage said ratchet wheel, a vertically disposed rod, a lever 50 the lower end thereof engaging the printing plunger, and the upper end supporting vertical rod and a push rod adapted to be engaged by the upper end of said vertically disposed rod.

3. In weighing scales of the character described, the combination of the incasement, a vertical sleeve 43 in the lower portion thereof, a helical spring therein, a printing plunger passing through the spring and the sleeve, a push-rod a lever 58 the upper end engaging said push rod, a horizontal rod 60, one end engaging lever 58, the opposite end adapted to engage and disengage the printing plunger, substantially as described.

4. In a weighing scales of the kind specified, the combination of an incasement, a rack bar, a horizontal shaft, a printing wheel and a pinion mounted on the shaft, the pinion engaging the rack bar, paper carrying rollers and paper guide rollers; one of said guide rollers provided with a plurality of extending lugs, its companion provided with a circumferential groove, perforated slips of paper carried by the paper roller 34, and discharged by the said guide rollers, substantially as described.

871,057. ARTIFICIAL BAIT. WILLIAM E. DAVIS, Morristown, N. J. Filed Feb. 2, 1907. Serial No. 355,868.



1. In a device of the character described, the combination with the body of the bait of a plurality of spinners at the forward part thereof and resilient connecting pieces connecting the said spinners with the body.

2. In a device of the character described, the combination with the body of the bait of a plurality of spinners and resilient connecting pieces connecting the said spinners with the body.

3. The combination with the body of a bait provided with curved slots of a plurality of hooks secured to the said body and passing through said curved slots and a spring adapted to press the said hooks into the ends of the slots.

4. The combination with the body of a bait of a hook secured thereto, movable spring pressed studs adapted to pass through the eye of the hook and means exterior to the body portion for retracting said studs.

5. The combination with the body of a bait of a spinner composed of a plurality of bent spoons secured together and having a middle aperture, a shank connected to the body of the bait passing through said aperture, a hook at the outer end of said shank and a flange extending laterally at said outer end, said flange being formed of a piece of sheet metal, a portion of which is bent around the shank for the purpose of securing the flange thereto and is located behind the spinner.

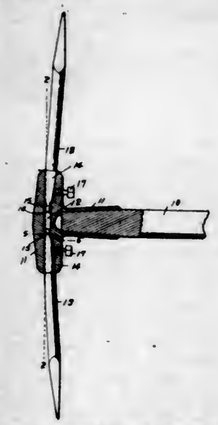
6. In a device of the character described the combination with a body portion of a spinner, a resilient piece connecting the same to the body portion projecting at an angle to the said body portion, the spinner being mounted to permit oscillation of the said resilient portion.

7. The combination with the body of the bait of a spinner composed of a plurality of bent spoon shaped blades, a portion of the inner edge of one blade extending over a like portion of another blade the two blades united, and a pin extending between the overlapping portions.

8. In a device of the character described the combination of a body portion, a spinner, a connection between said spinner and body portion having means forming a part of said connection for permitting oscillation of the spinner and for holding it normally at an angle to the said central portion.

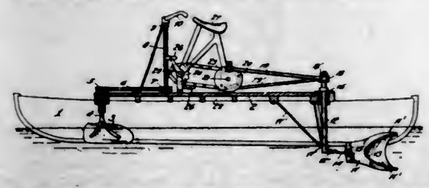
9. In a device of the character described the combination of a body portion, a spinner, and a connection between the spinner and the body portion which holds the said spinner normally at an angle thereto and permits oscillation of the same.

871,058. MINER'S PICK. WILLIAM DONALDSON and ELMER E. DONALDSON, Moingona, Iowa. Filed Jan. 10, 1906. Serial No. 295,428.



A miner's pick, comprising a head having a handle socket formed on its under side and having a transverse slot through its central portion and two tapered openings extended from the ends of the head toward said transverse slot and flattened openings extending from the tapered openings to the interior of the transverse slot and two detachable pick points, each having a round tapered end portion with a flattened portion at the inner end of each tapered end portion, said pick points inserted in the tapered openings with the flattened portions thereof projected through the flattened openings and into the transverse slot, said head shaped to protect the adjacent ends of the pick points and to completely cover them, said pick points being so arranged within the head that they may be jointly driven from the head by a wedge passed through the transverse slot.

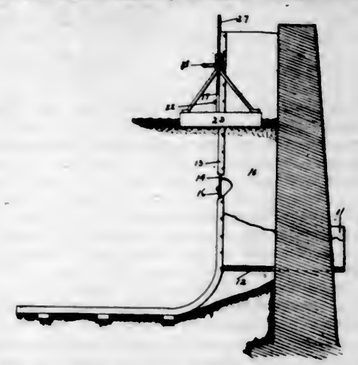
871,059. PROPELLER. FREDERICK A. DOUSE, Seattle, Wash. Filed Sept. 4, 1906. Serial No. 333,091.



1. In a device of the class described, a supporting body, a vertical post mounted upon said body, means carried by said body for oscillating said post, an arm comprising a horizontal plate extending rearwardly of said post and increasing in width towards its rear end, a flexible blade extending rearwardly of said arm, means for rigidly connecting said blade to said arm at its free end, said blade being bifurcated at its free end to form spaced lobes, and a flexible membrane connecting said lobes.

2. In a device of the class described, a supporting body, a vertical post carried by said body and provided with a rearwardly extending bracket at its lower end, means carried by said body for oscillating said post, a plate connected to said bracket and increasing in width at its free end, a flexible vertical blade rigidly connected at one end to said plate and bifurcated to form spaced lobes at its free end, and a flexible membrane extending between said lobes.

871,060. AUTOMATIC WATER-REGISTER. HOWARD L. FAIRALL, HARRY K. FAIRALL, and JACOB KUNZMANN, Highland, Cal. Filed July 17, 1906. Serial No. 326,935.



1. In a device of the class described, a floating frame, a weir gate adjustably connected with the frame, and a floating indicator adjacent to the weir gate.

2. In a device of the class described, the combination with a stationary spillway with curved guides at the sides thereof, a weir gate formed of a series of plates hinged together, said plates slidingly mounted in the said guides, and means for vertically adjusting the weir gate.

3. In a device of the class described, a vertically movable weir gate formed with an opening, a floating frame connected therewith, a scale connected with the weir gate, and a floating indicator adjacent to the scale.

4. In a device of the class described, a stationary spillway, a vertically movable weir gate formed with an opening connected with said spillway, a floating frame connected with the weir gate, a scale connected with the weir gate and a floating indicator adjacent to the scale.

5. In a device of the class described, the combination of a stationary spillway, guides at the sides thereof extended downwardly below the spillway and curved inwardly at their lower ends and a flexible weir gate having an opening therein slidingly mounted in said guides and means for vertically adjusting the weir gate.

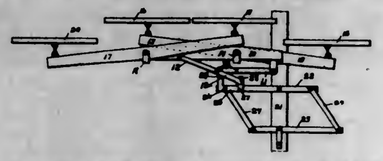
6. In a device of the class described, the combination of a stationary spillway, guides at the sides thereof, curved downwardly and inwardly from the lower end of the spillway, a weir gate comprising a top plate with an opening therein and a series of plates hinged to the bottom of the top plate all slidingly mounted in the said guides and means for vertically adjusting the weir gate.

7. In a device of the class described, the combination of a vertically adjustable weir gate having an opening therein, a floating frame for supporting the weir gate, a tubular scale fixed to the weir gate, a float within the tubular scale and an indicator carried by the float.

8. In a device of the class described, a stationary spillway, guides at the inner sides thereof, a weir gate slidingly mounted in the guides and comprising an upper plate formed with an opening and a series of plates hinged to the lower edge of the upper plate, a screw threaded rod fixed to the top of the weir gate, an open-ended tube fixed to the weir gate with its bottom below the opening thereof and having a slot in its inner side, a float mounted in said tube, an indicator connected with the float and projected through the slot, two floats at the sides of the spillway, two cross bars supported by the floats and a hand wheel rotatably mounted between the

cross bars and having a screw threaded opening to receive the screw threaded rod.

871,061. DRAFT-EQUALIZER. JAMES J. FORD, FRED HOLLISTER, and MARK HOLLISTER, Jr., Fort Dodge, Iowa. Filed June 18, 1906. Serial No. 322,632.



1. In a draft equalizer, the combination of an evener bar, links pivoted to the ends thereof and extended toward the center thereof and rearwardly, one of said links being spaced apart from and to which it is attached, a lever pivoted to said links, a double-tree pivoted to the evener bar at a point spaced apart from one end of the evener bar and a second double-tree pivoted to the other end portion of the evener bar at a point outside of the point where the link is attached to the evener bar a short distance from its end, the inner end of each double-tree standing at about the center of the other double-tree.

2. The combination of a relatively short evener bar, a link pivoted near one end thereof, and extended rearwardly and toward the center of the evener bar, a second link pivoted a short distance from the other end of said evener bar, and extended rearwardly and toward the center of the evener bar, a lever pivoted to the rear ends of said links, a double-tree pivoted to the evener bar at a point between its center and the inner end of the evener bar, a second double-tree pivoted to the evener bar, near its other end, at a point outside of the point where the link is pivoted, said double-trees so arranged that the inner end of each stands at about the center of the other.

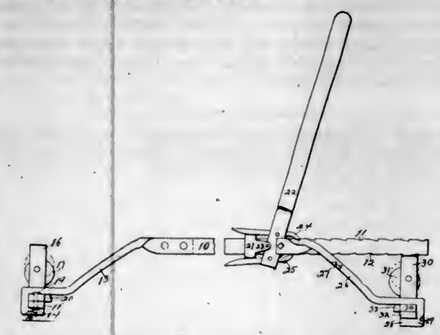
3. In a draft equalizer, the combination of an evener bar, a double-tree pivoted near one end of the evener bar, a second double-tree pivoted near the other end of the evener bar, the inner end of each of said double-trees standing at about the center of the other double-tree, a link pivoted to one end of the evener bar and extended toward the center thereof, substantially parallel therewith and provided with an opening between its ends, a link pivoted near the other end of the evener bar, extended rearwardly and toward the center of the evener bar, a link section pivotally and detachably connected with the rear end thereof, an equalizing lever having a body portion substantially parallel with the evener bar and having a long arm extended forwardly therefrom and pivotally and detachably connected with the first mentioned link, and also having an arm on its other end extended forwardly, and pivotally and detachably connected with the said link section, said body portion formed with an opening near the point where the said link section is attached to it, and a cross bar designed to be attached to a vehicle tongue and supported at right angles thereto, said cross bar pivotally connected with said equalizing lever at a point adjacent to the long arm thereof.

871,062. BELT-CLAMPING TOOL. BENJAMINE T. FRITTS, Des Moines, Iowa. Filed Feb. 19, 1907. Serial No. 358,190.

1. In a device of the class described, a bar, an arch on said bar, a roller eccentrically journaled in said arch, a transverse bar pivoted on said arch and a jaw on said transverse bar in opposition to said roller.

2. In a device of the class described, an arch, a roller eccentrically journaled in said arch, a bar pivoted on said arch and a jaw on said bar in opposition to said roller.

3. In a device of the class described, a bar, a yoke on said bar, an arch on said yoke, a roller eccentrically journaled in said arch, a bar pivoted at one end on said arch and extending transversely thereof, a jaw on the latter bar in opposition to said roller, a lever on the first bar, a clamp on the lever, and ratchet and pawl connections between said bar and lever.



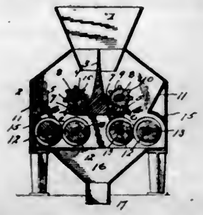
4. In a device of the class described, a bar, a yoke thereon, an arch carried by said yoke, a roller eccentrically journaled in said arch, a bar pivoted on said arch, a jaw mounted on said bar, a lever on the first bar and a clamp carried by said lever.

5. In a device of the class described a yoke bar, a clamp in the yoke of said bar, a lever on said yoke bar, yoke arms on said lever, an arch on said yoke arms, a roller journaled eccentrically in said arch, a bar pivoted in said arch, a jaw on said bar in opposition to said roller, and ratchet and pawl connections between said yoke bar and lever.

6. In a device of the class described, a yoke bar formed with hooks on the extremities of its arms, an arch in and fixed to said hooks, a roller journaled eccentrically in said arch, a bar pivoted at one end on one end of said arch and extending through said hooks, and a jaw on said bar in opposition to said roller.

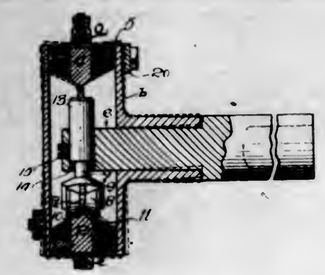
7. In a device of the class described, a ratchet bar, a collar loosely mounted thereon, a forked lever straddling said bar and fulcrumed to said collar, pawls pivoted in said lever on opposite sides of the bar, said pawls extending across said collar, clamping means on said bar and clamping means carried by said lever.

871,063. STONE-CRUSHER. EMERY C. HODGES, Bloomington, Ill. Filed May 3, 1906. Serial No. 315,082.



In a stone crusher, the combination with a housing having a hopper entrance, of a tapering partition having its upper terminal at the foot of the hopper portion and terminating at the lower end in a concaved crusher plate extended horizontally on both sides to form curved crusher beds, the edges of the bed being provided with overhanging lips, said crusher beds provided with pyramidal teeth, crusher rolls journaled above the crusher beds and provided with corresponding co-acting crusher teeth, pairs of pulverizer rolls provided with intermeshing ridges journaled beneath the overhanging lips of the crusher beds and rotated at different rates of speed, deflecting plates depending from the walls of the housing and overhanging the pulverizer rolls, the housing having an inclined bottom terminating in a delivery chute.

871,064. THREE-POINT CONTACT-TROLLEY TIMER FOR INTERNAL-COMBUSTION MOTOR-CARS. GEO. M. HURLEY, Los Angeles, Cal. Filed Apr. 4, 1907. Serial No. 366,442.



1. An annular insulating-ring having an annular interiorly-projecting beveled lip provided at intervals with one or more contact points projecting slightly beyond the terminus of the lip, an arbor, a trolley mounted on said arbor and arranged to travel about said projecting lip at different times to engage the contact faces on said lip.

2. An arbor, a base revolubly mounted on said arbor, an insulating ring on said base having an interior annular bevel lip, whose edge is flat, said ring being provided with contact-points projecting beyond the face of said flat edge, an arm on said arbor, and a V-shaped roller carried by said arm and engaging the flat edge of the lip.

3. An arbor, a base revolubly mounted on said arbor, an insulating ring on said base having an interior annular bevel lip, whose edge is flat, said ring being provided with contact points projecting beyond the face of said flat edge, an arm on said arbor, a V-shaped trolley carried by said arbor and engaging the flat edge of the lip, and means for normally holding said trolley in engagement with said lip.

4. An arbor, a base revolubly mounted on said arbor, an insulating ring on said base having an interior bevel lip whose edge is flat, said lip being provided with contact points projecting beyond the face of said flat edge, an arm on said arbor, a trolley carried by said arbor and arranged to engage the said lip and travel around the flat face of the same, a spring for normally holding said trolley in engagement with said lip, and a casing for said spring, said casing being secured to said arbor.

5. An arbor, a base revolubly mounted on said arbor, an insulating ring on said base having an interior bevel lip whose edge is flat, said lip being provided with contact-points projecting beyond the face of said flat edge, an arm on said arbor terminating in a yoke, a trolley journaled in said yoke, and arranged to engage the flat face of said bevel, a spring for normally holding said trolley in engagement with said flat face, a casing for said spring, and means for securing said casing in said arbor.

6. An arbor, a base revolubly mounted on said arbor, an insulating ring on said base having an interior bevel lip whose edge is flat, said lip being provided with contact-points projecting beyond the face of said flat edge, a casing carried by said arbor, said casing having a slot, a spring in said casing, an arm provided with a lug carried by said arbor and arranged to fit said casing, said lug being arranged to slide in the slot of said casing, a trolley mounted on said arm and arranged to engage said flat edge of said lip, and means for removably securing said casing in said arbor.

7. A three-point contact trolley-timer for internal combustion motor-cars, comprising an arbor, an insulating-ring having a V-shaped lip, contacts having V-shaped ends, and a V-shaped trolley yieldingly mounted on said arbor to run on said V-shaped lip and adapted to contact at any of the three contact-points on said V-shaped contacts, substantially as and for the purpose set forth.

8. An arbor, a base revolubly mounted thereon, an insulating ring on said base having an interior annular beveled lip, contact points in the face of said lip, an arm on said arbor, and a V-shaped roller carried by said arm and engaging the edge of the lip.

9. An arbor, a base revolubly mounted on said arbor, an insulating ring on said base having an interior annular beveled lip and provided with contact points in the face of said lip, an arm on said arbor, a V-shaped trolley carried by said arbor and engaging the lip, and means for normally holding said trolley in engagement with said lip.

10. An arbor, a base revolubly mounted on said arbor, an insulating ring on said base having an interior beveled lip and provided with contact points in said lip, a trolley carried by said arbor and arranged to engage said lip and contact points, a spring for normally holding said trolley in engagement with said lip, and a casing for said spring secured to said arbor.

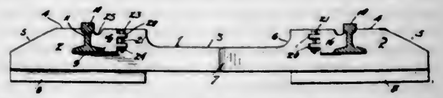
11. An arbor, a base revolubly mounted on said arbor, an insulating ring upon said base having an interior beveled lip provided with contact points, an arm on said arbor terminating in a yoke, a trolley carried by said yoke and arranged to engage said lip and contact points, a spring for normally holding said trolley in such engagement, a casing for said spring, and means for securing said casing in said arbor.

12. An arbor, a base revolubly mounted on said arbor, an insulating ring on said base having an interior beveled lip provided with contact points, a casing carried by said arbor and provided with a slot, a spring in said casing, an arm provided with a lug carried by said arbor and arranged to fit said casing and to slide in the slot thereof, a V-shaped trolley mounted in said arm and arranged to engage said lip and contact points, and means for movably securing said casing in said arbor.

13. A three point contact trolley timer for internal combustion motor cars, comprising an arbor, an insulating ring having a beveled lip, correspondingly beveled contacts in said lip, and a V-shaped trolley yieldingly mounted on said arbor to run on said beveled lip and adapted to con tact at any of the contact points.

14. A trolley timer, comprising an insulating ring having an internal lip, contacts in said lip, and a V-shaped trolley yieldingly mounted to run on said lip and contact with said contacts at a plurality of points.

871,065. METALLIC RAILWAY-TIE. ALBERT L. MOORHEAD, Telluride, Colo. Filed Mar. 22, 1907. Serial No. 363,846.



1. A metallic railway tie comprising a cast metal body having large end blocks united by a reduced connecting portion, said end blocks having seats in their upper faces for the reception of track rails and upon their lower or bottom faces longitudinally extending depending ribs to prevent them from slipping or creeping.

2. A metallic railway tie comprising a body cast in one piece and having large end blocks of substantially rectangular form united by an integral reduced connecting portion having a recessed top and recessed vertical sides, said end blocks having flat vertical side faces and flat horizontally disposed top faces with downwardly and outwardly beveled outer ends, said end blocks being also formed in their flat top faces with transversely extending rail seats, said end blocks having flat bottom faces disposed in the plane of the bottom face of the reduced connecting portion of the tie and longitudinally extending downwardly tapered ribs formed integral with said end blocks upon their flat bottom faces, substantially as set forth.

3. The combination of a metallic railway tie having adjacent to its ends transverse rail seats of slightly less depth than the height of the track rails, the outer walls of said seats being shaped to fit the outer faces of the heads, webs and base flanges of the rails, the inner walls of said seats being inclined transversely of the tie and

having grooves, the inner walls of which are also inclined, track rails arranged in said seats and engaged with their outer walls, wedge blocks in said seats and having their outer faces shaped to fit the bottom of the head and the inner faces of the webs and base flanges of the rails, the inner faces of said blocks being inclined and formed with longitudinally extending tongues to enter said grooves in the inner walls of said seats, said tongues being formed at the small end of the blocks with a longitudinal series of vertically alining apertures and said blocks being formed in their top faces with longitudinally extending grooves or channels to receive the flanges of car wheels and locking pins passed vertically through said apertures in the tongues and formed with heads to engage the side faces of the tie, substantially as shown and described.

4. The combination with a metallic railway tie having end blocks united by a reduced central portion, said end blocks having longitudinally extending depending ribs upon their bottom faces and transversely extending rail seats in their top faces, said rail seats being of slightly less depth than the height of the track rails and having their outer walls shaped to engage the outer faces of the track rails, the inner faces of said walls being inclined and formed with transverse grooves, track rails arranged in said seats and engaged with their outer walls, wedge blocks arranged in said seats and having their outer faces shaped to engage the inner faces of the track rails, said blocks having grooves in their tops to receive the flanges of car wheels, said blocks also having their inner faces inclined and formed with longitudinally extending tongues to enter the grooves in the inner walls of said seats, said tongues being formed with a longitudinal series of apertures adjacent to the small ends of said wedge blocks, and locking pins passed through said apertures and engaged with one of the side faces of the tie, substantially as shown and described.

5. The combination of a metallic railway tie having upon its top adjacent to its ends transverse rail seats formed with outer walls to engage the outer faces of track rails and with inner walls inclined transversely of the tie and provided with grooves, track rails in said seats and having their outer faces engaged with the outer walls of said seats, metallic wedge blocks driven into said seats and having outer faces to engage the inner faces of the track rails, the inner faces of said blocks being formed with tongues to enter said grooves, said tongues having at their small ends a longitudinal series of vertical apertures and locking pins passed through said apertures in the tongues and engaged with the side faces of the tie to adjustably retain said blocks in said seats, substantially as shown and described.

871,066. METHOD OF PREPARING SODIUM SULFATE AND COMPOUNDS OF LEAD. ALEXANDER S. RAMAGE, Detroit, Mich. Original application filed May 15, 1907, Serial No. 373,715. Divided and this application filed Sept. 21, 1907. Serial No. 393,985.

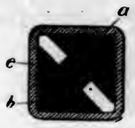
1. The method which consists in reacting on lead sulfate with an alkali metal carbonate and hydroxid to produce basic lead carbonate, acidifying the resulting solution by sulfuric acid to eliminate the lead, and separating sodium sulfate.

2. The method which consists in reacting on lead sulfate with an alkali metal carbonate and hydroxid to produce basic lead carbonate, acidifying the resulting solution by sulfuric acid to eliminate the lead, neutralising and purifying the solution, and separating sodium sulfate by refrigeration.

3. The method which consists in reacting on lead sulfate with an alkali metal carbonate and hydroxid to produce basic lead carbonate, bringing the resulting solution into contact with chamber sulfate, thereby acidifying said solution and eliminating lead therefrom and abstracting acid from said chamber sulfate, neutralising and purifying the solution, and separating sodium sulfate by refrigeration.

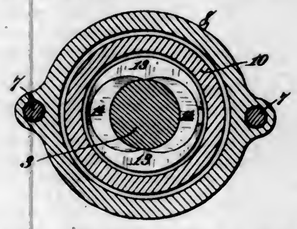
4. The method which consists in reacting on lead sulfate with an alkali metal carbonate and hydroxid to produce basic lead carbonate, bringing the resulting solution into contact with chamber sulfate, thereby acidifying said solution and eliminating lead therefrom and abstracting acid from said chamber sulfate, converting said sulfate into basic carbonate of lead, neutralizing and purifying the solution, and separating sodium sulfate by refrigeration.

871,067. APPARATUS FOR ALINING CONDUIT-SECTIONS. JOSEPH T. RICE, West Hoboken, N. J., assignor to King, Rice and Ganey, Weehawken, N. J., a Firm. Filed Mar. 11, 1907. Serial No. 361,859.



An improved device for alining conduit sections comprising two strips each forming approximately a right-angle triangle, said strips being in opposed relation to afford a unified rectangular form, and said strips having opposed inclined meeting ride-ways which co-act in the movement of said strips in opposite directions and at right-angles to the planes of the hypotenuse or meeting surfaces of the strips.

871,068. PACKING FOR PISTON-RODS. AUGUST C. SCHAEFER, Oelwein, Iowa, assignor of one-half to Walter P. Chrysler, Oelwein, Iowa. Filed Mar. 1, 1907. Serial No. 360,063.



1. A piston rod packing comprising at least two small segments and at least two large segments, the larger segments having substantially spherical recesses and the smaller segments fitting in said recesses, the packing presenting interiorly a substantially continuous wall and being exteriorly of cone form.

2. A piston rod packing comprising at least two small segments and at least two large segments, the larger segments having recesses to receive the smaller segments, and the ends of the larger segments being squared off and separated from each other to provide clearance spaces, the segments mating to present internally a substantially continuous wall and being externally of conical form.

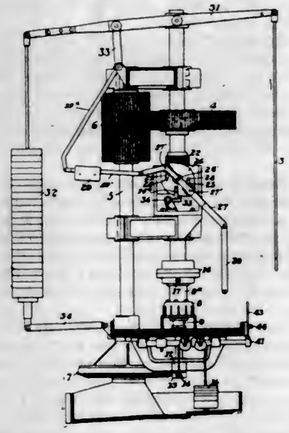
3. The combination of a cylinder, a piston rod extending through said cylinder, a divided conical packing around the said rod the reduced end of the packing facing the cylinder, fixed means against which the packing abuts when under the operation of steam pressure, and a follower cone between the cylinder and packing to receive the latter.

4. The combination of a cylinder, a piston rod extending through said cylinder, a divided conical packing around the said rod the reduced end of the packing facing the cylinder, fixed means against which the packing abuts when under the operation of steam pressure, a follower cone between the cylinder and packing to receive the latter, and a spring to act against the follower cone to prevent the packing moving with the rod during exhaust.

5. The combination of a cylinder, a piston rod projecting through the head of the cylinder, a divided conical packing surrounding the rod, a follower cone to receive said packing, and a vibrating cup provided with a bushing surrounding the rod and against which said packing abuts.

6. The combination of a cylinder, a piston rod projecting through the head of the cylinder, a divided conical packing surrounding the rod, a follower cone to receive said packing, a vibrating cup provided with a bushing surrounding the rod and against which said packing abuts, a coiled push spring surrounding the rod and acting against the cylinder and follower cone respectively, and a gland inclosing the vibrating cup and held to the cylinder in a steam-tight manner.

871,069. VERTICAL TAPPING-MACHINE. RICHARD SCHOLZ, Lorain, Ohio, assignor to The National Tube Company, Pittsburg, Pa., a Corporation of New Jersey. Filed June 12, 1906. Serial No. 321,353.



1. A tapping machine having a vertically movable tap spindle, a driving gear vertically movable with said spindle, a feed screw secured to and rotated by the spindle, a split feed nut for the screw, mechanism for clamping the sectional nut on said screw and means in the vertical path of movement of said driving gear and connected to the nut clamping mechanism and arranged to be operated by the gear for actuating the clamping mechanism to release the spindle; substantially as described.

2. In a tapping machine the combination of a spindle adapted for carrying a tap, a driving gear wheel movable with the spindle, a detachable feed mechanism for the spindle, with a tap, means supporting the underside of the tap and means for holding said support in contact with the tap; substantially as described.

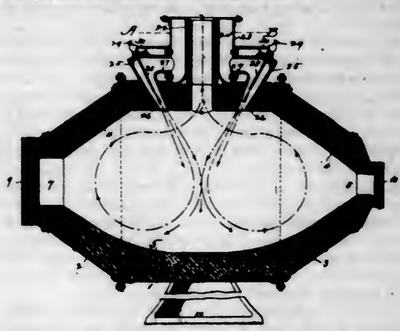
3. In a tapping machine, the combination of a vertically movable spindle adapted for carrying a tap, a driving gear wheel movable with the spindle, with a tap, a rotatable support on which said tap is mounted while tapping the coupling and yielding means connected with and carrying the support; substantially as described.

4. In a tapping machine, a rocker shaft having coupling supporting arms, means for moving the shaft into its operative position and positive means for holding said shaft in such position; substantially as described.

5. In a tapping machine, a vertically movable tap, a cap for the tap to rest on, a vertically movable stem carrying the cap and counterweights for said stem; substantially as described.

6. In a tapping machine, a vertically movable tap, a cap for the tap to rest on, a vertically movable stem on which the cap is rotatably mounted, means for limiting the movement of the stem and counterweights for the stem and cap; substantially as described.

871,070. FURNACE. EDWARD H. SCHWARTZ, Chicago, Ill., assignor to The Hawley Down Draft Furnace Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 16, 1903. Serial No. 139,312.



1. A furnace comprising a tiltable body and burners discharging into the furnace flame jets which converge and are combined into a single flame, such flame being directed towards and arranged to impinge the hearth of the furnace and the walls of such furnace being arranged to divide the flame into separate flames and to cause the same to move laterally towards opposite ends of the furnace.

2. A furnace comprising a tiltable body and burners discharging flame into the furnace, the flame being directed towards the hearth of the furnace and the walls of such furnace being arranged to cause the flame to rotate in a vertical plane in two similar circles.

3. A furnace comprising a tiltable body and burners discharging flame into the furnace, the burners being convergingly arranged and the flame being directed towards the hearth of the furnace which is arranged to divide such flame into two rotating flames.

4. A furnace comprising a tiltable body providing a chamber having a cylindrical central portion and a truncated conical end, and burners arranged convergingly in the top of the furnace and arranged to project flame towards the hearth of the furnace, said conical end of the furnace causing the flame to rotate.

5. A furnace comprising a tiltable body having a top outlet for the products of combustion, and burners entering the furnace on either side of the outlet and discharging flame into the furnace, the interior walls of the furnace being arranged to cause the flame to rotate in the furnace in two similar circles before exit through the outlet.

6. A furnace comprising a tiltable body having a top outlet for the products of combustion, and burners entering the furnace on either side of the outlet and arranged convergingly whereby the flame jets therefrom converge or focus at a point below such outlet, the combined flame jet being directed towards the hearth of the furnace which is arranged to divide such flame into two flames rotating on either side of such focal point.

7. A furnace comprising a tiltable body having end openings for charging and pouring respectively and also having a top opening for products of combustion, and burners located on either side of the top opening and arranged to discharge flame towards the hearth of the furnace, the interior walls of the furnace being arranged to cause the flame to rotate before exit through the top opening.

8. A furnace comprising a tiltable body having an outlet and provided with an extension communicating with the outlet, a casing forming an air heating chamber around said extension, an air supply pipe communicating with said chamber, burners arranged in said furnace and communicating with and receiving heated air from said chamber, and a fuel pipe for supplying fuel to said burners.

9. A furnace comprising a furnace body provided with openings at opposite ends for charging and pouring re-

spectively and also provided with a vent opening, and burners discharging flame into the furnace and so inclined as to cause the flame to impinge the hearth, said hearth being inclined over its central portion upwardly to cause the flame to move laterally toward opposite ends of the furnace.

10. A furnace comprising a furnace body substantially barrel-shaped and provided with openings at opposite ends for charging and pouring respectively and also provided with a vent opening at the upper or longer side of said body, and burners entering the furnace body at a point adjacent said vent opening and discharging flame into the furnace the longer axis of the furnace body being substantially horizontal.

11. A furnace comprising a furnace body substantially barrel-shaped and provided with openings at opposite ends for charging and pouring respectively and also provided with a vent opening, and a burner entering the furnace body at a point adjacent said vent opening and discharging flame into the furnace the longer axis of the furnace body being substantially horizontal.

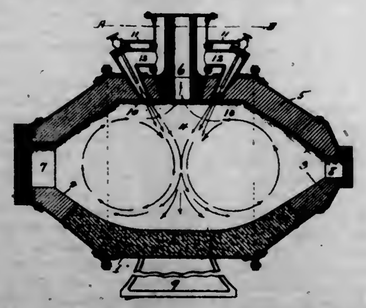
12. A furnace comprising a tiltable furnace body provided with openings at opposite ends for charging and pouring respectively and also provided with a vent opening, and a burner for discharging flame into the furnace the longitudinal or horizontal axis of the furnace exceeding its transverse axis.

13. A furnace comprising a tiltable furnace body provided with openings at opposite ends for charging and pouring respectively and also provided with a vent opening, said furnace body having a hearth upwardly inclined at its ends, and burners discharging flame into the furnace toward the middle point of the hearth and arranged within the vertical planes of such ends.

14. A furnace comprising a furnace body provided with openings at opposite ends for charging and pouring respectively and also provided with a vent opening, said furnace body having a hearth upwardly inclined at its ends, being substantially barrel-shaped with the longer axis substantially horizontal and a plurality of burners convergingly arranged to direct flame toward the middle point of the hearth.

15. A furnace comprising a tiltable furnace body having a barrel-shaped chamber with inclined ends forming a hearth, whose ends are inclined toward the middle portion and burners convergingly arranged to direct the flame towards the central portion of the hearth, said inclined ends of the hearth being arranged to divide said flame into two separate and rotating flames.

871,071. METHOD OF MELTING. EDWARD H. SCHWARTZ, Chicago, Ill., assignor to The Hawley Down Draft Furnace Company, Chicago, Ill., a Corporation of Illinois. Original application filed Jan. 16, 1903, Serial No. 139,312. Divided and this application filed Mar. 9, 1903. Serial No. 146,909.



1. The method of melting or treating materials with heat which consists in combining a plurality of flame jets into a single flame which is projected at substantially right angles to the material and in direct contact therewith, and causing such flame to divide into two separate flames rotatively in a vertical plane in contact with the material; substantially as described.

2. The method of melting or treating materials with heat which consists in introducing through the top of a furnace chamber a plurality of downwardly directed flame jets which meet and combine into a single flame; causing such flame to impinge directly against the material and to thereupon divide into two separate flames rotating in a vertical plane in contact with the material and thence to pass outwardly from the furnace at a point adjacent the inlet of the flame-jets without interference therewith; substantially as described.

3. The method of melting or treating materials with heat within a furnace chamber which consists in banking up the material at one side of the hearth proper, and introducing into such chamber a plurality of flame jets directed against the hearth and caused to rotate in a vertical plane in contact with the banked up material which will be melted and will flow in a comparatively thin stream onto the hearth and be acted upon by the direct flame jets; substantially as described.

4. The method of melting materials in a furnace, which method consists in combining a plurality of flames into a single flame projected substantially at right angles to the hearth of the furnace, causing such single flame to divide into two separate flames rotating in opposite directions, and removing the products of combustion from the furnace at a point adjacent the points of entrance of the flame or fuel.

5. The method of melting materials in a furnace, which method consists in combining a plurality of flames into a single flame projected substantially at right angles to the hearth of the furnace, causing such single flame to divide into two separate flames rotating in a vertical plane and in opposite directions, and removing the products of combustion from the furnace at a point between the points of entrance of the flame or fuel.

6. The method of melting or treating materials with heat consisting in combining a plurality of flame jets into a single flame which is directed downwardly substantially at right angles to the material, and causing such flame to divide into two separate flames whirling in a vertical plane and in a circle in contact with the material by impingement thereon and by movement at right angles thereto; substantially as described.

7. The method of melting or treating materials with heat consisting in combining a plurality of flame jets into a single flame which is directed downwardly substantially at right angles to the material, causing such flame to divide into two separate flames whirling in a vertical plane and in a circle in contact with the material, and removing the products of combustion at a point adjacent the entrance of the flame jets; substantially as described.

871,072. SCARF-HOLDER. CHARLES W. SEIDENSPINNER, Woodhaven, N. Y. Filed Jan. 20, 1906. Serial No. 296,989.



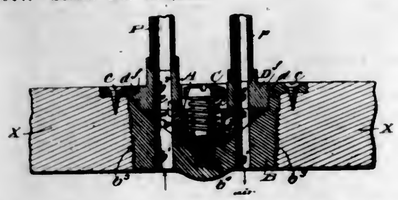
1. A scarf holder comprising parallel members adapted to engage the edge of a mantle, said members having oppositely disposed angled portions parallel to and spaced from each other.

2. A device of the kind described comprising two U-shaped members, provided with oppositely angled portions, the angled portions being parallel to each other, the angled portion of one member being connected to the other member.

3. A device of the kind described consisting of U-shaped members having end portions bent at right angles thereto, the angled portion of one member engaging the body portion of the other member to the rear of the angled portion thereof.

4. A device of the kind described formed of a single strand of wire which is bent intermediate its ends and each end bent downwardly and rearwardly, one end being bent upwardly, rearwardly, and forwardly, and its extreme end bent downwardly and formed into an eye which encircles the opposite end, and the said opposite end being bent rearwardly and forwardly, and its extreme end bent into an eye which encircles the said upwardly extending portion of the opposite end.

871,073. BEER-TAPPER. RICHARD B. SPIKES, Bisbee, Ariz., assignor of one-third to Marine C. Spires and one-third to Henry D. Hall, Bisbee, Ariz. Filed May 1, 1907. Serial No. 371,215.



1. A beer tapper, comprising a bung casing with ports, a rotary interlocking coupling with ports, a rotary valve with ports, all of said ports being straight and parallel to the axis of the valve, a spring for holding the rotary valve against the ported bung casing, said spring being arranged on the outer side of the valve and concentric thereto and a clutch device connecting the rotary valve and interlocking coupling.

2. A beer tapper, comprising a bung casing with ports, a rotary interlocking coupling with ports, a rotary valve with ports, all of said ports being straight and parallel to the axis of the valve, a central stem for the valve, a spring surrounding said stem on the outer side of said valve and pressing the valve against the ported bung casing, and a clutch device connecting the rotary valve and interlocking coupling.

3. A beer tapper comprising a bung casing with air and beer ports, a rotary interlocking coupling with air and beer ports, an intermediate rotary valve with air and beer ports, all of said ports being straight and parallel to the axis of the valve, and all of the air ports being equidistant from the axis of the valve, and all of the beer ports equidistant from the axis of the valve, a spring for pressing said valve upon its seat, and a clutch device for connecting the coupling to the valve for turning it.

4. A beer tapper comprising a bung casing with air and beer ports and a conical seat, a rotary interlocking coupling with air and beer ports, an intermediate conical rotary valve with air and beer ports, all of said ports being straight and parallel to the axis of the valve, and all of the air ports being equidistant from the axis of the valve, and all of the beer ports being equidistant from the axis of the valve, a spring for pressing the valve on its conical seat, and clutch devices for connecting the coupling to the valve for turning it.

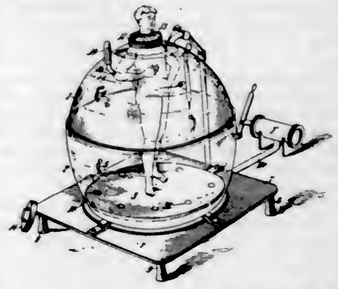
5. A beer tapper, comprising a ported bung casing, a ported valve arranged in the casing, a bolt connected to the bung casing and extending centrally through the valve, a spring arranged about said bolt and pressing down upon the valve and a coaxial coupling inclosing the upper end of said bolt and interlocking with the bung casing.

6. A beer tapper, comprising a ported bung casing, a ported valve arranged in the casing, a bolt connected to the bung casing and extending centrally through the valve, a spring arranged about said bolt and pressing down upon said valve and an annular and coaxial coupling surrounding the upper end of said bolt and interlocking with the bung casing.

7. A beer tapper, comprising a bung casing having a conical seat and an air and beer port opening through the same, a conical valve having a corresponding conical seat and ports, a bolt connected to the bung casing and passing through the center of the valve, a spring wound around the bolt and pressing upon the valve and an annular coupling bearing air and beer pipes and interlocking devices for rotarily connecting it to the bung casing.

8. A beer tapper, comprising a bung casing having a cylindrical recess with conical valve seat having air and beer ports opening therethrough, a conical valve with corresponding ports, a central bolt passing through the valve and fixed to the bung casing, a spring arranged about the bolt to press the valve upon its seat, an annular coupling surrounding said bolt and having air and beer pipes attached, interlocking devices for connecting the coupling to the bung casing, and a clutch device for connecting the coupling to the valve.

871,074. BATH APPARATUS. JOSEPH B. STOCKTON, John Day, Oreg., assignor of two-fifths to Thomas P. Stockton, Mount Vernon, Oreg. Filed Oct. 15, 1906. Serial No. 339,122.



1. In an apparatus of the character described, the combination with the two part receptacle comprising an upper section having an inwardly extended air feed tube, a head opening and a closure member therefor, the lower section having an open supporting base, the two sections having means for making an air tight connection; of a bottom portion detachably fitted over the bottom of the lower section and supported on the inside thereof, means for clamping said bottom in position, said bottom having a pendent tubular neck and a pump detachably connected to the said pendent neck, all being arranged substantially as shown and described.

2. An apparatus for the purposes described, consisting of the following parts in combination; a two part receptacle, comprising an upper and a lower section, the two sections having interlocking threaded flanges, the upper section having an air feed tube, a head opening and a closure member therefor, the lower member having an open base, a solid bottom support on which the said lower section seats, means for firmly clamping it on the said support, a flat bottom adapted to fit within the said bottom section, the latter having an inwardly projected rim, on which the solid bottom rests and means for closing the said bottom down air tight on the said flanges.

871,075. REINFORCED STEEL BEAM. ERIC SWENSSON, Minneapolis, Minn., assignor to Minneapolis Steel & Machinery Company, Minneapolis, Minn., a Corporation. Filed June 17, 1907. Serial No. 379,362.

1. A reinforced steel beam comprising, in combination, an I-section formed of upper and lower angle-irons laced together, a steel wiring surrounding said I-section, and a concrete filling, substantially as described.

2. A reinforced steel beam comprising, in combination, an I-section formed of upper and lower angle-irons laced together, a steel wiring of varying pitch surrounding said

I-section, and a concrete filling, substantially as described.



3. A reinforced steel beam comprising, in combination, an I-section formed of upper and lower angle-irons laced together, and steel wiring surrounding said I-section, said steel wiring being held to its proper pitch and place by longitudinal spacing bars, rods or wires, and a concrete filling, substantially as described.

4. A reinforced steel beam comprising in combination an I-section formed of upper and lower angle-irons laced together, the angle-irons at the top of the beam being smaller than those at the bottom of the beam, a steel wiring surrounding said I-section and a concrete filling, substantially as described.

5. A reinforced steel beam comprising, in combination, an I-section formed of upper and lower angle-irons laced together, the angle-irons at the top of the beam being smaller than those at the bottom of the beam, a steel wiring surrounding said I-section said steel wiring being held to its proper pitch and place by longitudinal spacing bars, rods, or wires, and a concrete filling, substantially as described.

6. A reinforced steel beam comprising in combination an I-section formed of upper and lower angle-irons laced together, a system of rods parallel to and near to the lower angle-irons, a steel wiring surrounding said I-section, said wiring being held in place by longitudinal spacing bars, rods, or wires, and a concrete filling, substantially as described.

7. A reinforced steel beam comprising, in combination, an I-section formed of upper and lower angle-irons, one pair above, one pair below, diagonal lacing straps connecting said pairs of angle-irons, a system of rods parallel to and near to the lower angle-irons, said rods being of different lengths as required by the bending moment under which the beam is calculated to act, said rods also being rigidly fastened to the lower angle-irons, a steel wiring surrounding said I-section and said rods, said steel wiring being held to its proper pitch and place by lonigtudinal spacing bars, rods, or wires, and a concrete filling, substantially as described.

871,076. REINFORCED STEEL COLUMN. ERIC SWENSSON, Minneapolis, Minn., assignor to Minneapolis Steel & Machinery Company, Minneapolis, Minn., a Corporation. Filed June 17, 1907. Serial No. 379,363.



1. A reinforced steel column, comprising, in combination, an I-section formed of oppositely arranged angle-irons laced together, a steel wiring surrounding said I-section, and a concrete filling, substantially as described.

2. A reinforced steel column comprising, in combination, an I-section formed of oppositely arranged angle-irons laced together, a steel wiring surrounding said I-section, said steel wiring being held to its proper place and pitch by longitudinal spacing bars, rods, or wires, and a concrete filling, substantially as described.

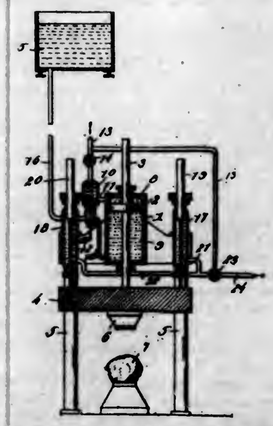
3. A reinforced steel column comprising, in combination, an I-section formed of two pairs of oppositely arranged angle-irons, diagonal lacing straps connecting said pairs of angle-irons, a system of longitudinal rods on both sides of the I-section, extending the entire length of the column and being rigidly fastened to the I-section, a steel wiring surrounding said I-section and said rods and a concrete filling, substantially as described.

871,077. GUARD FOR EYEGLASSES. ALFRED W. ANTHOINE, Lewiston, Me. Original application filed Feb. 25, 1907, Serial No. 359,040. Divided and this application filed Sept. 27, 1907. Serial No. 394,876.



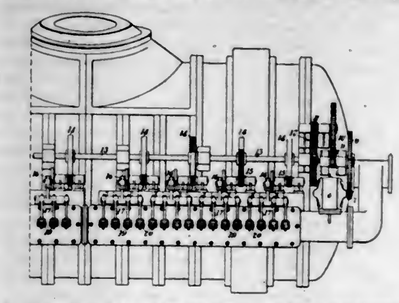
In an eye glass mount, the combination with a nose guard support having a socket therein and a pivot post, of a nose guard having a projecting tongue adapted to take into said socket and a hole adapted to receive said post, said socket being somewhat greater than said tongue, whereby the guard may have a limited rotary motion around said post and a limited rocking motion upon said post.

871,078. HYDRAULIC PRESS. WILAND ASTFALCK, Tegel, near Berlin, Germany. Original application filed Oct. 19, 1906, Serial No. 339,704. Divided and this application filed Apr. 16, 1907. Serial No. 368,476.



The combination of a single cylinder having a press chamber and a supply chamber, a main piston reciprocating in both of said chambers, connection between opposite ends of the cylinder providing communication between the press chamber and the supply chamber permitting the reciprocation of the piston to and from pressing position to cause fluid to pass alternately from one of said chambers to the other, a return cylinder having its piston connected to said main piston, and means whereby high pressure fluid is alternately admitted to the press chamber and to the return cylinder to cause pressure to be exerted on the fluid in the press chamber when the main piston has reached pressing position and to cause the piston of the return cylinder to return the main piston from pressing position.

871,079. MEANS FOR INCREASING THE AIR-BLAST OF CONVERTERS AND FURNACES. RALPH BAGGALEY, Pittsburg, Pa., CHARLES M. ALLEN, Lo Lo, Mont., and EDWARD W. LINDQUIST, Chicago, Ill, assignors, by direct and mesne assignments, to Pittsburgh and Montana Copper Company, Pittsburg, Pa., a Corporation of West Virginia. Filed May 13, 1905. Serial No. 260,212.



1. A smelter having a series of twyers, slag-removing means therefor operating independently of each other, and an actuator common to all of said means, substantially as described.

2. A smelter having a series of twyer orifices, slag-removing means for the orifices, and an actuator common to the slag-removing means for successively operating the same, substantially as described.

3. A smelter having a series of twyers, punches for the twyers operating independently of each other, and actuating means common to all the punches, substantially as described.

4. A smelter having a series of twyer orifices, punches for the twyers, and actuating means common to all the punches for successively actuating them, substantially as described.

5. Means for increasing the air-blast of converters and furnaces, which consists in the combination with such converter or furnace having twyer-orifices, of punching-bars extending thereinto, and automatic means for operating said punching-bars periodically; substantially as described.

6. A smelter having twyer orifices, punching bars working in the orifices and connected in groups, and an actuator common to all the groups for operating them successively and periodically, substantially as described.

7. Means for increasing the air-blast of converters and furnaces, which consists in the combination with such converter or furnace having twyer-orifices, of punching-bars extending thereinto, operating mechanism connected with the punching-bars for reciprocating them, and a holding device adapted to permit longitudinal adjustment of the bars to compensate for their burning off; substantially as described.

8. Blast apparatus including a twyer having its orifice contracted in diameter at its inner end, and a punching-bar working in the twyer and having its front end portion of a diameter to work freely through the contracted portion of the twyer orifice, the punching-bar being normally disposed with its forward end in rear of the contracted portion of the orifice to prevent obstructing the twyer, substantially as described.

9. Blast apparatus including a twyer having the inner end of its orifice contracted in diameter, a wind box, a tube leading from the wind box into the twyer orifice and constituting a lining therefor, and a punching-bar working through the wind box, the tube and the twyer orifice and having its forward end of a diameter less than that of the contracted portion of the twyer, said bar being normally located with its forward end in rear of the contracted portion of the twyer to prevent choking thereof, substantially as described.

10. Means for increasing the air-blast of converters and furnaces, which consists in the combination with such converter or furnace having twyer-orifices, of punching-bars extending thereinto, and means for removing scale from the bars; substantially as described.

11. Means for increasing the air-blast of converters and furnaces, which consists in the combination with such converter or furnace having twyer-orifices, of punching-bars extending thereinto, operating mechanism connected to the twyer-orifices with the punching-bars for reciprocating them, and means for removing scale from the bars; substantially as described.

12. Means for increasing the air-blast of converters and furnaces, which consists in the combination with such converter or furnace having twyer-orifices, of punching-bars extending thereinto, means for removing scale from the bars, and a receptacle at the twyer-orifices to receive the detached scale; substantially as described.

13. Means for increasing the air-blast of converters and furnaces, which consists in the combination with such converter or furnace having twyer-orifices, of punching-bars extending thereinto, and cutting or scraping devices to remove scale from the bars; substantially as described.

14. Means for increasing the air-blast of converters and furnaces, which consists in the combination with such converter or furnace having twyer-orifices, of punching-bars extending thereinto, and plugs having cutting edges to remove scale from the bars; substantially as described.

15. Means for increasing the air-blast of converters and furnaces, which consists in the combination with such converter or furnace having twyer-orifices, of punching-bars extending thereinto, and plugs extending transversely across the twyer-orifices having cutting edges to remove scale from the bars; substantially as described.

16. Means for increasing the air blast of converters and furnaces, which consists in the combination with such converter or furnace having twyer orifices, of punching-bars extending thereinto; scale-removing devices for the bars and means for cooling, contracting and removing such scale by an application of a cooling medium; substantially as described.

17. Blast apparatus having automatic means to prevent clogging of the twyer orifices by chilled slag or matte, substantially as described.

18. Blast apparatus having a series of independent twyer-punching bars, and power-actuated means common to the bars for successively operating the same, substantially as described.

19. Blast apparatus having a series of independent twyer-punching bars, and power-actuated means common to the bars for successively and periodically operating them, substantially as described.

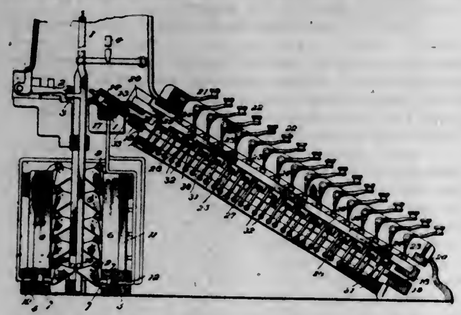
20. Blast apparatus having a series of independent twyer-punching bars, and means common to all of the bars for successively operating them, each bar being associated with the operating means by a detachable connection which is accessible for disconnecting any bar independently of the other bars, substantially as described.

21. Blast apparatus having a series of independent twyer-punching bars, a continuously operating motor, and means controlled by the motor for periodically and successively actuating the bars, substantially as described.

871,080. KEYBOARD MECHANISM FOR PERFORATING-MACHINES. JOHN S. BANCROFT, Philadelphia, Pa., assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Oct. 29, 1903, Serial No. 179,048. Renewed May 20, 1905. Serial No. 262,902.

1. In a perforating mechanism such as described the combination of the following elements to wit:—two series of punch bars in parallel relation; a plurality of pistons and cylinders, one for each punch bar, disposed in planes transverse to and intersecting the punch-bars; and a series of bell-cranks, one for each punch bar, coupled with said pistons.

2. In a perforating machine such as described, the combination with the series of punch bars, of actuating devices therefor comprising two groups of pistons and cylinders disposed on opposite sides of the punch bars and at an angle thereto, and a bell crank-lever intermediate each piston and its punch bar.



3. In a perforating machine such as described, the combination with the punch bars of actuating devices therefor comprising a group of cylinders formed in a block, a plate closing the rear ends of said cylinders, bearings supported upon the block, pistons, and bell crank levers mounted in said bearings and each engaging a pin or shoulder on one of the punch bars, and being engaged by one of said pistons.

4. In a perforating machine such as described, the combination with the series of punch bars and the individual motors therefor, of the series of control valves, one for each motor, a key bank, and an actuating mechanism intermediate said key-bank and the series of valves, provided with a series of permutation devices.

5. In a perforating machine such as described provided with a series of punch bars, a series of individual motors and a valve for each motor, and in combination therewith a keybank provided with a series of keys, and an actuating mechanism or system intermediate the keys and valves comprising a series of permutation bars, one for each key, a series of valve actuating bars, one for each valve, and a series of interponents, the latter arranged intermediate the valve actuating and permutation bars and between oppositely located shoulders thereon.

6. In a perforating machine such as described the combination of the following elements, to wit: a series of punch-bars; a motor and valve for each punch bar; control means for the measuring mechanism acted upon by the punch bars; a series of actuators, one for each valve; a series of keys; a series of permutation bars; and a series of interponents intermediate the permutation bars and the valve actuators.

7. In a perforating machine such as described the combination of the following elements, to wit: a plurality of punch bars; a control member for the measuring mechanism operatively connected with the punch bars; a motor device for the punch bars provided with individual control means; a plurality of actuating devices or bars for said control means; a plurality of permutation bars each provided with selecting shoulders or arms; and a plurality of interponent bars intermediate the actuating devices for the punch-bar control means and said permutation bars.

8. In a perforating machine such as described the combination of the following elements, to wit; a plurality of punch-bars divided into two groups; a control member for the measuring devices and paper feed, operatively connected to one of said groups of punch-bars; a motor for each punch-bar provided with a control valve; a plurality of actuators, one for each valve; a series of keys; a plurality of permutation bars, one for each key provided with selecting shoulders, and a plurality of interponents intermediate said permutation bars and valve actuators.

9. In a keyboard mechanism for perforating machines such as described the combination of the following elements to wit; a plurality of control valves; an inclined series of actuator bars; a transverse series of pivoted interponent bars; a plurality of inclined permutation bars; and a series of finger keys, each connected to one of the permutation bars.

10. In a keyboard mechanism for perforating machines such as described provided with a series of punch-bars divided into two groups the one representing position and the other position and space-value, and a controlled device for the measuring mechanism coupled with the group of space-value punch bars and in combination therewith the following elements, to wit; a plurality of motors, one for each punch bar; a valve for each motor provided with an actuator bar; a series of permutation bars; a series of interponents, each engaging one of the valve actuator bars; and a plurality of selecting shoulders applied to each permutation bar in position to engage an interponent coupled with the positioning punch bar group and another coupled with the positioning and space value group of punch bars.

11. In a keyboard mechanism for perforating machines such as described, the combination of the following elements, to wit; a series of parallel longitudinally movable actuator bars each furnished with an engaging shoulder, and comprising a plurality of groups distinguished by the difference in the height or projection of their engaging shoulders; a series of longitudinally movable permutation bars parallel with the actuator bars and provided with selecting shoulders of different height or degree of projection; and two series of laterally movable interponent bars located between and extending laterally of the permutation and actuator bars and in different planes.

12. In a keyboard mechanism for perforating machines such as described the combination of the following elements, to wit; a series of parallel longitudinally reciprocating actuator bars provided with engaging shoulders in two planes; a series of longitudinally reciprocating permutation bars parallel with the actuator bars and provided with selecting shoulders in two planes; and two series of interponent bars extending in different planes transversely of and intermediate the permutation and actuator bars.

13. In a perforating machine such as described, the combination of the following elements, to wit; a series of punch-bars; controlling devices for the line measuring mechanism coupled with a group of said punch-bars; a motor for each punch-bar; a series of control valves, one for each motor; a keybank; and actuating devices for transmitting motion from each key to two control valves of which one pertains to the group of punch bars coupled with the measuring mechanism.

14. In a perforating machine such as described the combination of the following elements, to wit; a series of punch bars; controlling devices for a line measuring mechanism coupled to a group of said punch-bars; a series of motors, one for each punch-bar; a valve for each motor; a keybank; and connections intermediate the keys and said series of valves for simultaneously actuating a plurality of said valves including one of the series connected with the group of punch-bars coupled with the measuring mechanism.

15. In a perforating machine provided with a plurality of punches each coupled with a motor and in combination therewith, a plurality of valves, one for each motor, an actuating device for each valve and a series of keys controlling each actuating device.

16. A pneumatic keyboard, comprising a series of depressible keys, a series of subjacent and parallel actuating bars operated upon by the keys, a valve chamber or air trunk arranged outside the bank of keys, and valves in the valve chamber or air trunk connected to and operated by said bars.

17. A pneumatic keyboard comprising a bank of keys and a marginal air trunk or valve chamber outside the range of the bank of keys, two series of valves in the air trunk or valve chamber and means for simultaneously operating one valve of each series by each of the keys.

18. A pneumatic keyboard, comprising a series of depressible keys, a series of subjacent parallel actuating bars operated upon by the keys, an air trunk arranged outside the bank of keys and having a plurality of outlets and valves connected to the actuating bars and controlling said outlets.

19. A pneumatic keyboard, comprising a series of depressible keys, a series of subjacent parallel actuating bars operated upon by the keys, an air trunk or valve chamber arranged outside the bank of keys, valves arranged in the air trunk or valve chamber and operated by the actuating bars, and means for returning said actuating bars.

20. A pneumatic keyboard, comprising a series of depressible keys, a series of subjacent parallel actuating bars operated upon by the keys, an air trunk or valve chamber arranged along the margin of and outside the bank of keys, valves arranged in the air trunk or valve chamber and a detachable cover for the trunk or chamber.

21. In a pneumatic keyboard, the combination of a keybank, an air-pressure chamber contiguous thereto, a series of valves independent of the keys and each controlling an outlet from said air-pressure chamber, and means for simultaneously and selectively operating a plurality of said valves by the depression of a single key.

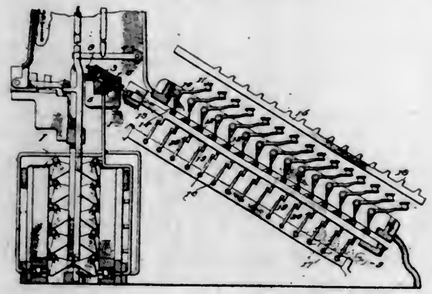
22. In a key actuated mechanism, the combination of two series of actuating bars and means for selectively operating any bar of one series simultaneously with any bar of the other series, said bars being adapted to actuate movable parts contiguous thereto.

23. In a pneumatic keyboard, the combination of a valve, a plurality of keys, and means connecting said valve with said keys, whereby the valve may be operated by any of said keys.

24. In a pneumatic keyboard the combination of a series of control valves, a plurality of keys, and means connecting said valves and keys so that any one or more of the valves may be operated by any key.

25. In a pneumatic keyboard provided with a plurality of punches each coupled with a separate control valve and in combination therewith a plurality of keys and means for coupling two or more of said valves with individual keys.

871,081. KEYBOARD MECHANISM FOR PERFORATING AND OTHER MACHINES. JOHN S. BANCROFT, Philadelphia, Pa., assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Original application filed Oct. 29, 1903, Serial No. 179,048. Divided and this application filed Jan. 8, 1907. Serial No. 351,391.



1. A pneumatic keyboard, comprising a series of depressible keys, two series of subjacent actuating bars arranged crosswise in relation to each other, a bar of each series being arranged to be operated upon by each key, a marginal air trunk arranged outside the bank of keys and valves in the air trunk connected to and operated by the bars.

2. A pneumatic keyboard, comprising two crossed series of actuating bars with valves operated thereby and a bank of keys superposed over the bars, each key being arranged to operate upon a bar of each series.

3. In a key actuated mechanism, a bank of keys and subjacent actuating bars each having a plurality of lateral arms or projections adapted to receive the thrust of the keys, said bars being adapted to actuate movable parts contiguous thereto.

4. In a keyboard mechanism the combination of the following elements, to wit; a keybank provided with a plurality of series of keys; a series of valves one for each series of keys; a series of actuating bars, one for each valve, and means for coupling the keys of each series with one of the actuating bars.

5. In a keyboard mechanism the combination of the following elements, to wit; a series of valves; a series of actuating bars, one for each valve; and a keybank provided with a plurality of series of keys, each series coupled with a valve actuating bar to operate the latter.

6. In a keyboard mechanism, the combination of the following elements, to wit; a series of valves located within a pressure chamber; a series of oscillatory actuating bars, one for each valve; a keybank provided with a plurality of keys; and means for coupling said keys with said oscillatory valve actuating bars.

7. In a keyboard mechanism provided with two series of valves and a keybank for controlling said valves and in combination therewith the following elements, to wit; two series of actuating bars arranged in crosswise relation and in different planes below the keybank; and means whereby each key is coupled with an actuating bar of each series.

8. In a keyboard mechanism the combination of the following elements, to wit; a plurality of series of valves; two series of actuating bars, one bar for each valve; a keybank provided with a plurality of series of keys; means for connecting each series of keys with a separate actuating bar of one series; and means for selectively coupling the individual keys of the several series with the actuating bars of the other series.

9. In a keyboard mechanism the combination of the following elements, to wit; two series of valves each of the latter provided with an actuating bar, the bars of the two series being disposed in cross wise relation; a keybank provided with a plurality of series of keys, each series coupled with an actuating bar of one series of valves; and a plurality of series of permutation bars, one for each series of keys, adapted to selectively engage any one or more of the actuating bars of the other series of valves.

10. In a keyboard mechanism the combination of the following elements, to wit; a keybank provided with a plurality of series of columns of keys; two series of actuating bars located beneath said keybank, one series disposed in parallel with the columns of keys and the other transversely thereto; a series of valves, one for each actuating bar, located in a valve chamber or air trunk beyond the keybank; and means for coupling each series or column of keys to one series of actuating bars and the individual members of each series of keys to the other series of actuating bars.

11. In a keyboard mechanism the combination of the following elements, to wit; a keybank provided with a plurality of series of keys in parallel relation; a series of valves, one for each series of keys; a series of valve actuating bars, one for each series of keys; coupling devices intermediate each series of keys and its valve actuating bar; a second series of actuating bars in crosswise relation to the first named series and each provided with a valve; and means for selectively and separately coupling the keys with individual actuating bars of the second series.

12. A pneumatic keyboard, comprising a series of depressible keys, a series of subjacent and parallel rock-shafts operated upon by the keys, an air-trunk arranged outside of the bank of keys, and valves in the trunk connected to and operated by the rock-shafts.

13. A pneumatic keyboard, comprising a series of depressible keys, a series of subjacent and parallel rock-shafts having crank-arms arranged beneath the keys, an air trunk arranged outside the bank of keys and valves arranged in the trunk connected to and operated by the rock-shafts.

14. A pneumatic keyboard comprising a series of depressible keys, a series of subjacent parallel rock-shafts operated upon by the keys, an air-trunk arranged outside the

bank of keys and having a plurality of outlets and valves fixed to the rock-shafts and controlling said outlets.

15. A pneumatic keyboard, comprising a series of depressible keys, a series of subjacent parallel rock-shafts operated upon by the keys, an air-trunk arranged outside the bank of keys, valves arranged in the trunk and operated by the rock-shafts, and springs for turning the rock-shafts.

16. In a pneumatic keyboard, the combination of a valve, a series of keys, and means connecting said valve with said keys whereby the valve may be operated by any key of the series.

871,082. SAFETY-RAZOR. ISAAC N. BRIGHAM, Melrose Park, Ill., assignor to The Electro Automatic Safety Razor Company, Orange, Cal., a Corporation of California. Filed Apr. 22, 1907. Serial No. 369,496.



1. In a power driven safety razor, a housing provided with guide ways, a razor blade, clamping plates located upon opposite sides of the razor blade, one of said clamping plates provided with a longitudinal slot, a power shaft provided with a detachable driving head, said driving head provided with a pintle adapted for engagement with the elongated slot, means for clamping the razor blade and plates together and the housings provided with guard fingers, substantially as and for the purpose specified.

2. In a power driven safety razor, the combination of a driving shaft, a casing provided with guide ways and curved guard fingers, a razor blade and clamping plates, said razor blade located intermediate the clamping plates, and means for imparting reciprocating movement to the razor blade and clamping plates, substantially as and for the purpose specified.

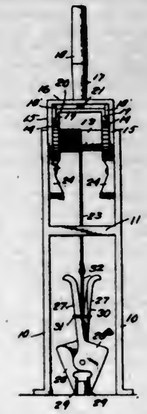
3. In a power driven safety razor, the combination of a casing provided with guide ways and guard fingers, a razor blade, clamping plates, said razor blade located between said clamping plates, said razor blade provided with apertures, clamping bolts provided with portions adapted to fit the apertures in the razor blade and means for imparting a reciprocating movement to the razor blade, substantially as and for the purpose specified.

4. In a power driven safety razor, a motor, a casing connected to said motor and provided with guard fingers, said casing provided with guide ways, a razor blade, clamping plates located upon opposite sides of the razor blade and guided by the guide ways of the casing, and means for imparting a reciprocating movement to the razor blade and clamping plates, substantially as and for the purpose specified.

5. In a safety razor, the combination of a casing provided with guard fingers and guide ways, a razor blade, clamping plates, means for clamping the razor blade and clamping plates together, said clamping plates provided with recesses at their ends, substantially as and for the purpose specified.

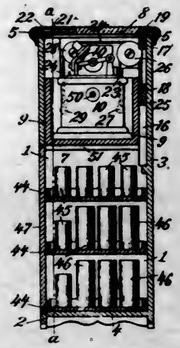
871,083. JACK. JOHN I. BROWN, Marion, Iowa, assignor of one-half to Joseph Rubek, Marion, Iowa. Filed May 6, 1907. Serial No. 372,216.

A jack of the class described comprising a frame, a shaft journaled in the frame, a winding drum fixed upon the shaft for rotation therewith, a cable connected with the drum and adapted to be wound thereon, a grip device connected with the cable at the free end thereof, ratchet heads fixed at the ends of the drum, a pawl frame loosely connected with the shafts and adapted to be oscillated thereabout with the shaft as an axis, said frame comprising side members, a connecting member, a handle connected with the connecting member, guides mounted upon the side members, pawls slidably received in the guides, a cross piece connecting the pawls at their upper ends, a



spring interposed between the cross piece and the connecting member of the pawl frame and adapted to hold the pawls at all times in engagement with the ratchet heads, the said side members having corresponding edges of cam formation, and pawls pivoted in position to rest normally in engagement with the ratchet heads and having cam portions for engagement by the cam edges of the side members of the pawl frame.

871,084. DISAPPEARING-TABLE CABINET. WILLIAM H. CARROLL, Jersey City, N. J. Continuation of application Serial No. 302,722, filed Feb. 24, 1906. This application filed Dec. 5, 1906. Serial No. 346,465.



1. A disappearing-table cabinet, comprising an open-topped box, a table movable within the box, a cover adapted to close the box, a slide hinged to the cover and adapted to move with the open cover along a vertical wall of the box, and connections between the table and slide adapted to raise the table as the slide and open cover are lowered in the box, substantially as described.

2. A disappearing-table cabinet, comprising an open-topped box, a table movable within the box, a cover adapted to close the box, a slide hinged to the cover and adapted to move with the open cover along a vertical wall of the box, and flexible connections between the table and slide adapted to raise the table as the slide and cover are lowered in the box, substantially as described.

3. A disappearing-table cabinet, comprising an open-topped box, a substantially level table movable up and down within the box, a cover adapted to close the box, a slide hinged to the cover and adapted to move with the open cover along a vertical wall of the box, and connections between the table and slide adapted to raise the table as the slide and open cover are lowered in the box, substantially as described.

4. A disappearing-table cabinet, comprising an open-topped box, a substantially level table movable up and down within the box, a cover adapted to close the box, a slide hinged to the cover and adapted to move with the open cover along a vertical wall of the box, and flexible connections between the table and slide adapted to raise the table as the slide and open cover are lowered in the box, substantially as described.

5. A disappearing-table cabinet comprising a box, a table movable within the box, a cover adapted to close the box, said box having a slide made in two parts adapted for independent and simultaneous movements, and connections between the table and one part of the slide and between the cover and the other part of the slide, whereby a range of movement of the box cover greater than the movement of the table is assured while opening and closing the box, substantially as described.

6. A disappearing-table cabinet, comprising an open-topped box, a table movable within the box, a cover adapted to close the box, a slide made in wo parts including one part hinged to the cover and a subjacent part, said two-part slide being adapted to move with the open cover along a vertical wall of the box, and connections between the table and the subjacent part of the slide for raising the table as the two-part slide and open cover are lowered in the box; said two-part slide permitting a range of vertical movement of the open cover greater than the vertical movement of the table, substantially as described.

7. A disappearing-table cabinet, comprising an open-topped box having at its upper part a stop projecting within its chamber, a table movable within the box below said stop, a cover adapted to close the box, a slide coupled to the cover and adapted to move with the open cover along a vertical wall of the box, and connections between the table and slide adapted to raise the table to the upper box stop as the slide and open cover are lowered in the box, substantially as described.

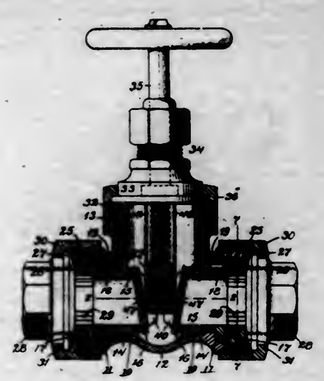
8. In a disappearing-table cabinet, the combination with an open-topped box having grooves at its opposite end walls, of a table movable within the box, a slide movable in the grooves, a cover coupled to the slide and adapted to close the box and movable with the slide in said grooves, and cords or wires connected to the table and slide and adapted to raise the table as the slide and cover are lowered in the box, substantially as described.

9. In a disappearing-table cabinet, the combination with an open-topped box having an upper stop and provided with grooves at opposite end walls, of a substantially level table movable in the box below the stop, a slide movable in the grooves, a cover coupled to the slide and adapted to close the box and movable with the slide in said grooves, and cords or wires connected to the table and slide and adapted to raise the table to the stop as the slide and cover are lowered in the box, substantially as described.

871,085. GATE-VALVE. CHARLES A. CLAFLIN, Medford, Mass. Filed May 7, 1906. Serial No. 315,501.

1. A gate-valve comprising a casing having a valve chamber, and openings at opposite ends of the chamber, said openings being enlarged at their outer portions to form shoulders, seat sleeves detachably inserted in said openings, and having flanges bearing on said shoulders, the inner ends of said sleeves constituting beveled or inclined valve seats which project into the valve chamber, means for detachably securing the seat sleeves to the casing, means for positively locking said sleeves against being turned in said openings, and a disk carrier movable between said seats, and provided with valve disks adapted to engage the seats.

2. A gate-valve comprising a casing having a valve chamber, and openings at opposite ends of the chamber, said openings being enlarged at their outer portions to form shoulders, seat sleeves detachably inserted in said openings, and having flanges at their outer ends bearing on said shoulders, and beveled inner ends forming opposed valve seats, the casing and sleeves being provided with means for preventing the rotation of the sleeves in the casing, annular seat-retainers detachably engaging the enlarged outer portions of the openings, and bearing on said flanges to prevent outward displacement of the seat sleeves, a disk carrier movable between the valve seats, and valve disks mounted to tip or rock universally on said carrier.



3. A gate-valve comprising a casing having a valve chamber, and openings at opposite ends of the chamber, said openings being enlarged at their outer portions to form shoulders, seat sleeves removably inserted in said openings, and having flanges at their outer ends bearing on said shoulders, annular seat retainers detachably engaged with the enlarged outer portions of the openings, and bearing on said flanges, said retainers being surrounded by the portions of the casing in which the enlarged outer portions of the openings are formed, and tail-pipes also detachably engaged with the casing, and having faces adapted to bear upon the portions of the casing surrounding the seat sleeves.

4. A gate-valve comprising a casing having a valve chamber, and openings at opposite ends of the chamber, said openings being enlarged at their outer portions to form shoulders, the enlarged portions having internal screw threads, while the external portions of the casing surrounding said enlarged portions have external screw threads, seat sleeves removably inserted in said openings and having flanges at their outer ends bearing on said shoulders, annular seat retainers externally threaded to engage the said internal threads, and bearing on said flanges, and tail-pipes having internally threaded coupling nuts engaged with said external threads, and faces adapted to bear upon the portions of the casing surrounding the seat sleeves.

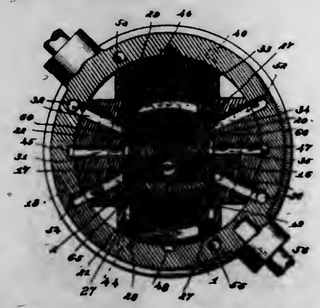
5. A gate-valve comprising a casing having a valve chamber and opposed valve seats therein, a disk carrier movable between said seats, valve disks adapted to rock universally on said carrier, and means for confining the disks in rocking engagement with the carrier, said means including coupling members adjustably connected with the carrier, and complemental coupling members on said valve disks.

6. A gate-valve comprising a casing having a valve chamber and opposed valve seats therein, a disk carrier movable between said seats, and provided with oppositely-projecting threaded studs having nuts with annular flanges, and valve disks adapted to rock on the carrier, and provided with wings having outwardly-projecting ears engaging said flanges.

7. A gate-valve comprising a casing having a valve chamber and opposed valve seats therein, guides on the

wall of said chamber, a disk carrier movable between said seats and provided with oppositely-projecting threaded studs, valve disks mounted to rock universally on the carrier and provided with outwardly-projecting ears, and valve-holding and guiding nuts engaged with said studs, and provided with annular inwardly-projecting flanges engaging the ears on the valve-disks, and with outwardly-projecting shoulders engaging said guides to prevent accidental detachment of said valve disk-holding and guiding nuts.

871,086. ENGINE. WILLIAM O. DUNTLEY, Chicago, Ill., and GEORGE H. HAYES, Philadelphia, Pa., assignors, by mesne assignments, to Chicago Pneumatic Tool Company, a Corporation of New Jersey. Filed June 19, 1901. Serial No. 65,128.



1. An engine or motor comprising two piston chambers separated by a partition or diaphragm having a central opening to accommodate a crank pin, separate and physically independent pistons operating in said chambers and having means for admitting and releasing fluid pressure to and from each other, and a crank pin loosely engaged and driven by said pistons and passing through said diaphragm opening; substantially as described.

2. An engine or motor comprising two piston chambers, ports and passages leading thereto and therefrom for admission and exhaust of pressure, separate and physically independent pistons therein for governing said ports and passages and acting as cut-off valves for each other, and crank mechanism loosely engaged and driven by said pistons; substantially as described.

3. An engine or motor comprising a plurality of piston chambers with communicating passages, a plurality of pistons, one for each chamber, and arranged to govern said passages whereby said pistons act as cut-off valves for each other, and a single crank pin extending through all the pistons and driven thereby; substantially as described.

4. An engine or motor comprising a plurality of independent and flat double acting pistons working in separate chambers and each acting as a cut-off valve for the other, each piston being provided with a central transverse slot of a width slightly greater than the diameter of the crank pin, and a crank pin working in said slots and loosely engaged thereby; substantially as described.

5. An engine or motor comprising a plurality of independent pistons movable in chambers arranged in different but parallel planes and at right angles to each other, said pistons being double acting and arranged to act as cut off valves for each other, and a crank pin or shaft extending through the pistons and loosely engaging the same; substantially as described.

6. An engine or motor comprising a plurality of flat pistons movable in separate chambers having intercommunicating ports and passages, said pistons having on their opposite sides means for governing said ports and passages whereby said pistons act as valves for each other, and a crank pin or shaft actuated by said pistons; substantially as described.

7. An engine or motor comprising two flat pistons movable in separate chambers arranged in parallel planes but at right angles to each other, each chamber having on its opposite sides ports or passages communicating with the ends of the other chamber, said pistons having recesses on their opposite sides for governing said ports and each having a central slot, and a crank pin loosely received by the slot of the pistons and driven by the movements of such pistons; substantially as described.

8. An engine or motor comprising a plurality of physically independent pistons movable at right angles to each other and in parallel planes and provided with central transverse slots, separate piston chambers with ports and passages leading thereto and therefrom for admission and exhaust of pressure, said pistons being adapted to govern said ports and passages and acting as cut-off valves for each other, and a crank pin or shaft loosely working in said slots; substantially as described.

9. An engine or motor comprising a plurality of physically independent pistons movable at right angles to each other and in parallel planes and provided with transverse slots, chambers arranged for said pistons and having ports and passages leading to and from said chambers and governed by said pistons, one of the said pistons acting as a cut off valve for another piston, and a crank pin or shaft loosely working in said slots; substantially as described.

10. An engine or motor comprising a plurality of pistons working in separate chambers and each having a central transverse slot, a crank pin or shaft, and a plurality of separate bushings loosely and rotatably arranged on said pin, one bushing for each piston and each bushing substantially corresponding in length to the width of its piston, said slots in the pistons having a width substantially equal to the outside diameter of the bushings, whereby each bushing has a rolling frictional engagement with its piston; substantially as described.

11. An engine or motor comprising a plurality of pistons working in separate chambers and provided with slots, a crank pin or shaft working in said slots, and a plurality of separate bushings loosely arranged on said pin to rotate thereon, one bushing for each piston; substantially as described.

12. An engine or motor comprising a plurality of pistons working in separate chambers which are arranged in parallel planes but at right angles to each other, said pistons each having a transverse central slot, a crank pin or shaft working in all of said slots and a plurality of separate bushings one for each slot and arranged on said pin to rotate thereon and thereby afford rolling contact with the slot; substantially as described.

13. An engine or motor comprising a plurality of flat pistons operating in separate piston chambers and provided with continuous edges except for recesses on two opposite sides, piston chambers arranged for said pistons and having in two opposite side walls ports and passages governed by the recesses in said pistons, and means for converting the reciprocating movement of the pistons; substantially as described.

14. An engine or motor comprising a plurality of flat pistons operating in separate substantially rectangular chambers, each consisting of a framework with continuous edges unbroken except for side recesses and having an open center, chambers in which the pistons work and having in its walls ports and passages governed by said pistons and means for converting the reciprocating movement of the pistons; substantially as described.

15. An engine or motor comprising a casing having a plurality of chambers each having on its opposite sides three ports, a feed port, an exhaust port and a port to another chamber, pistons traveling in said chambers and having recesses on two opposite edges to govern said ports and also having a transverse slot, and a crank whose shaft or pin works in the slots of the piston; substantially as described.

16. An engine or motor comprising a casing having a plurality of chambers communicating at the center, pistons working therein, a plate closing the top of the casing and having an oil hole extending therethrough for discharging oil to the central portions of the pistons and casing and a plug or closure for said hole; substantially as described.

17. An engine or motor comprising a casing containing a plurality of chambers, pistons therein, a top and bottom head for said casing, one of said heads being outwardly pressed to form a crank bearing and a crank having a disk which bears in said bearing and a pin which coöperates with said pistons; substantially as described.

18. An engine or motor comprising a casing containing a plurality of chambers, pistons therein, a top and bottom head for said casing, the bottom head being centrally depressed to form a socket or bearing, a flanged bushing fixed in said bearing but not filling such socket, a crank disk arranged to rotate in said bushing and substantially filling such socket, and a crank pin mounted on said disk and coöperating with the pistons; substantially as described.

19. An engine or motor comprising a casing containing a plurality of chambers, pistons therein, top and bottom heads for said casing for closing said chambers, one of said heads being centrally depressed to form a bearing, a crank disk arranged to rotate in said bearing and provided with an oil port to carry oil from the center of said chambers to the crank bearing, and a crank pin coöperating with said pistons; substantially as described.

20. An engine or motor comprising an outer ring having a ring port, a block 2, having two piston chambers each with two feed ports communicating with the ring port, two ports communicating with the exhaust and two cylinder ports and passages, one at each end, communicating with a third series of two ports communicating with the next or neighboring chamber, said cylinder ports and passages extending through the said outer ring and into an adjacent chamber; substantially as described.

21. An engine or motor comprising a plurality of chambers, flat pistons working therein, each piston comprising a continuous frame having a central cross-bar provided with a slot, ports and passages leading to and from said chambers and governed by said pistons, and a crank whose pin works in the slots of the pistons; substantially as described.

22. An engine or motor comprising chambers 13 and 14 separated by the partition 15 except for a central opening 16 to accommodate a crank pin, flat pistons 17 and 18 in said chambers respectively and having slots 65 and 66 respectively, a crank disk 60 having a crank pin 62 working in said slots and separate bushings 63 and 64 arranged on said pin with their parting line in the plane of the said partition; substantially as described.

23. An engine comprising an outer ring 1 having a ring feed port, a block 2 having piston chambers and also ports and passages communicating with said ring port and with an exhaust, pistons in said chambers, a crank coöperating with said pistons, a top head 3 secured to the ring 1, a bottom head 8 having a vertical flange 9, a housing 11, bolts 10 for securing said housing and head 8 to the ring 1 and gearing arranged within said housing and actuated by said crank; substantially as described.

24. An engine comprising an outer ring 1 having a ring feed port, a block 2 having piston chambers 13 and 14 each having two feed ports communicating with the ring port, chamber 13 having on one side its feed port 30 and on the opposite side the feed port 34 while chamber 14 has similar ports 38 and 42, chamber 13 also having exhaust ports 32 and 36 and chamber 14 exhaust ports 40 and 44, said ring having the four passages 45, 46, 47, and 48, passages 45 and 47 communicating with chamber 14 and 46 and 48 with chamber 13, ports and passages 31 and 35 connecting ports and passages 45 and 47 with chamber 13 and passages 39 and 43 connecting ports and passages 39 and 43 with chamber 14, and two flat pistons working in said chambers and provided with two recesses on two opposite flat edges for governing said ports; substantially as described.

25. A reversible engine or motor comprising a casing having a plurality of piston chambers in different parallel planes and also having two ring ports communicating with said chambers, valve mechanism for connecting either one or the other of said ring ports with the motive fluid supply or with the atmosphere, pistons movable in said chambers and means for transmitting the motion of said pistons; substantially as described.

26. A reversible engine or motor comprising a casing containing a plurality of piston chambers in different parallel planes and provided with two ring ports communicating with said chambers and terminating in ports in close proximity to each other, valve mechanism for governing said ports and connecting one or the other thereof either with the supply of motive fluid or with the atmosphere, accordingly as the engine is to be run in the one direction or the other, and pistons movable in said chambers; substantially as described.

27. A reversible engine or motor comprising a casing having a plurality of piston chambers and also having the ring ports 51 and 88, the ring port 51 having a passage 92 leading outwardly and the ring port 88 having a similar port and passage 89, a cock having a way 93 and a groove 94 and adapted to govern said ports and passages 89 and 92, and pistons working in said chambers; substantially as described.

28. A reversible engine or motor comprising an outer ring or casing having a ring port on its upper and lower faces, ports and passages communicating with said ring ports from the exterior of the casing or with a supply of motive fluid, a reversing valve for said ports and passages, a block or cylinder located within said outer ring and containing a plurality of piston chambers working in different planes and having ports and passages communicating with said ring ports and also communicating with each other, and pistons working in said chambers and acting both as pistons proper and as valves governing the ports leading to an adjacent chamber; substantially as described.

29. A reversible engine or motor comprising an outer ring or casing having a ring port on its upper and lower faces, passages communicating with said ring ports and extending outwardly and being adapted to be put into communication with either the supply of motive fluid or with the atmosphere, a valve mechanism controlling said passages and adapted to put either one or the other of said ring ports in communication with the supply of motive fluid, a block or cylinder having a plurality of piston chambers communicating with each other and with said ring ports, pistons working in said chambers and acting both as pistons proper and as cut off valves, a top plate or head secured to said outer ring and forming the top wall of the upper ring port, and a lower plate or head secured to said outer ring and forming a wall of the lower ring port; substantially as described.

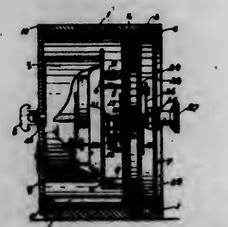
30. An engine or motor comprising an outer ring having ring ports on its upper and lower faces, means for connecting one or the other of said ring ports with the supply of motive fluid and the other ring port with the atmosphere, a block or cylinder within said outer ring and containing piston chambers arranged in different planes and communicating with each other and also with said ring ports, pistons working in said chambers and operating both as pistons and as cut off valves, a top plate or head secured to the outer ring and closing the top of the uppermost chamber and also the top of the upper ring port, a disk or lower head secured to the bottom of the outer ring and closing the lowermost chamber and also the lower side of the lower ring port, crank bearings in said lower head, and a crank mounted in said bearings and having a pin coöperating with said pistons; substantially as described.

31. An engine or motor comprising a casing containing two piston chambers at right angles to each other, each chamber having on its opposite sides central ports leading to the opposite ends of the other chamber and having on each side of such central ports oppositely arranged supply and exhaust ports, reciprocating pistons traveling in said chambers, each piston being provided on each of its opposite sides with two recesses, two of which when the piston is near one end of its travel connect a supply and an exhaust port on opposite sides of the piston chamber with the two central ports leading to the opposite ends of the other piston chamber, and the other two of which when the piston is near the other end of its travel connect the other supply and exhaust ports reversely with the ends of such other piston chamber, and means for transmitting the motion of the pistons with a difference of one-fourth of a cycle between them in their reciprocating movements; substantially as described.

32. An engine or motor comprising a casing containing

two piston chambers, each chamber having two central ports out of longitudinal alinement with each other leading to the opposite ends of the other chamber and having in longitudinal alinement with each of said central ports and on each side thereof reversely arranged supply and exhaust ports, reciprocating pistons traveling in said chambers, each piston being provided with two pairs of recesses, the recesses of each pair being in longitudinal alinement with each other and the pairs of recesses being respectively in longitudinal alinement with the two central ports and the supply and exhaust ports on each side of each central port, two of said recesses, when the piston is near one end of its travel, connecting a supply port with one central port leading to one end of the other piston chamber and an exhaust port with the other central port leading to the other end of the other piston chamber, and the other two of said recesses, when the piston is near the opposite end of its travel, connecting the other supply port and other exhaust port reversely with the ends of such other piston chamber, and means for transmitting the motion of the pistons with a difference of one-fourth of a cycle between them in their reciprocating movement; substantially as described.

871,087. WORKMAN'S CLOCK. CHARLES L. GOUGHNOUR, Canton, Ohio. Filed Nov. 9, 1906. Serial No. 342,649.



1. In a workman's clock, the combination of a suitable casing and a clock located within the casing, a dial head carrying a dial, a shaft journaled in the dial head and provided with a dial hand and a counterbalance disk, said disk provided with pins spaced from each other and the hour hand of the clock located between the spaced pins and an inner or computing dial, said inner and computing dial divided into divisions and sub-divisions and a dial arm connected to and rotatable with the computing dial, substantially as and for the purpose specified.

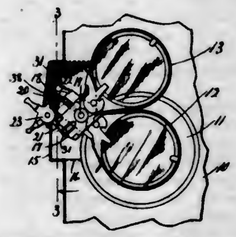
2. In a workman's clock the combination of a suitable casing, inner and outer dials, the inner dial rotatable, said inner and outer dials divided into divisions and subdivisions each numbered from 0 to 11 respectively, a shaft provided with a dial hand, and a disk, said disk provided with pins spaced from each other, an hour hand operatively connected with the clock mechanism and located between the spaced pins, a rod loosely mounted upon the shaft carrying the dial hand and disk, and a dial arm, substantially as and for the purpose specified.

3. In a workman's clock the combination of clock mechanism and an hour hand operated by said clock mechanism, a shaft provided with a dial hand and a disk, said disk provided with pins spaced from each other and the clock hour hand located between the pins, two dials located concentrically with reference to each other, one of the dials fixed and the other rotatable, means for rotating the rotatable dial, an index arm rotatable with the rotatable dial, substantially as and for the purpose specified.

4. In a workman's clock, the combination of an outer case, and an inner clock case, said inner clock case provided with clock mechanism, an hour hand connected to the clock mechanism, a shaft provided with a dial hand, and a disk, pins spaced from each other and the clock hour hand located between the pins, a gravity rod loosely mounted upon the shaft carrying the dial and the dial hand, a fixed dial and a rotatable dial and means for rotating the dial independent of the clock mechanism, substantially as and for the purpose specified.

5. In a workman's clock of the class described, the combination of clock mechanism, an hour hand secured to the clock mechanism, a dial head, a shaft journaled in the dial head, said shaft provided with a dial hand, a counterbalance disk, said disk provided with spaced pins and the clock hour hand located between the pins carried by the disk, an inner dial rotatable independent of the clock mechanism and an outer fixed dial located concentrically with the inner dial, said inner and outer dials divided into divisions and sub-divided into decimals, substantially as and for the purpose specified.

871,088. SIGNAL-LANTERN. WILLIAM S. HAMM, Lakeside, Ill. Filed May 6, 1907. Serial No. 372,090.



1. In a device of the kind described, in combination, an oscillating frame-arm, an oscillatable actuating member, an arm carried by such member and being in sliding engagement with the frame-arm.

2. In a device of the kind described, in combination, an oscillating frame-arm, an oscillatable actuating member, an arm carried by such member and being in sliding engagement with the frame-arm, and a controlling arm projecting from the oscillatable member.

3. In a device of the kind described, in combination, a pair of oscillatable frame-arms, a pair of oscillatable actuating arms one in sliding engagement with each of the frame-arms, a reciprocable stop-block located between the actuating arms and movable by each into the path of the other.

4. In a device of the kind described, in combination, a pair of oscillatable frame-arms, a pair of oscillatable actuating arms one in sliding engagement with each of the frame-arms, each having a hub, a reciprocable stop-block located between the hubs and having beveled ends for engagement therewith.

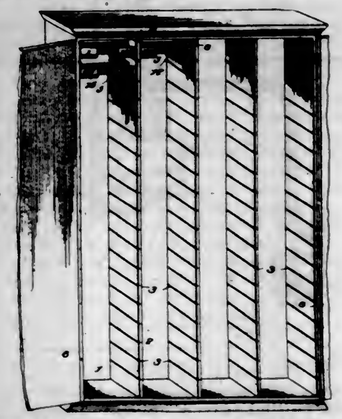
5. In a device of the kind described, in combination, a pair of oscillatable frame-arms, a pair of oscillatable actuating arms one in sliding engagement with each of the frame-arms, a reciprocable stop-block located between the actuating arms and movable by each into the path of the other, and a spring normally holding the block in central position.

6. In a device of the kind described, in combination, a pair of oscillatable frame-arms, a pair of oscillatable actuating arms one in sliding engagement with each of the frame-arms, a reciprocable stop-block located between the actuating arms and movable by each into the path of the other, and a spring-arm having a fixed anchorage and engaging the block to hold it normally in central position.

7. In a device of the kind described, in combination, a pair of oscillatable frame-arms, a case covering the journaled ends thereof, a pivot external of the casing and carrying a pair of hubs, an actuating arm projecting from each hub through the casing and slidingly engaging one of the frame-arms, means for turning the hubs, and a stop-block located between the hubs and movable by each into engagement with a shoulder on the other.

8. In a device of the kind described, in combination, a pair of oscillatable frame-arms, a pair of oscillatable actuating arms, connection between each of the oscillating arms and one of the frame-arms, a reciprocable stop-block located between the actuating arms and movable by each into the path of the other.

871,089. DRUGGIST PRESCRIPTION-FILE. ISAAC HOTALING and WALTER A. JACOBS, Albany, N. Y.; said Jacobs assignor to said Hotaling. Filed Feb. 23, 1907. Serial No. 358,932.



1. In a device of the character described, the combination of a tray comprising an end and sides, and a spring clip carried by the tray and normally pressing toward the bottom thereof, the said spring clip serving as a means for connecting the sides and ends of the tray.

2. In a device of the character described, the combination of a tray comprising sides and an end, the sides carrying extensions bearing against the end, and a spring clip secured to the end and also serving as a means for fastening the before mentioned extensions to the end.

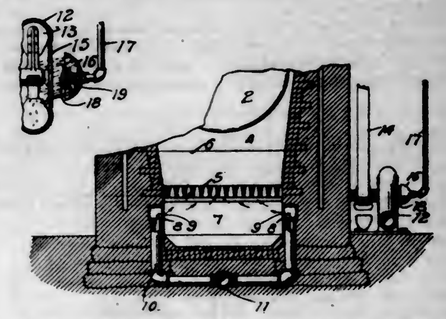
3. In a device of the character described, the combination of a tray comprising sides and an end, the said sides carrying extensions fitting against the end, and a U-shaped spring clip, the opposite arms of which are secured to the end of the tray and also serve as a means for securing the before mentioned side extensions to the said end.

4. In a device of the character described, the combination of a tray comprising an end and sides, the said sides carrying extensions bearing against the end, and a spring clip comprising arms which are coiled at a point adjacent the end, extend downwardly along one face of the end, pass through the end and the said extensions, and then extend downwardly on the opposite face of the end.

5. In a device of the character described, the combination of a filing case formed with a series of spaced partitions provided with corresponding guide ways, a series of filing trays provided with outstanding flanges fitting within the guide ways, each of said trays comprising an end and sides, and a spring clip carried by each of the trays and serving as a means for fastening the sides to the end.

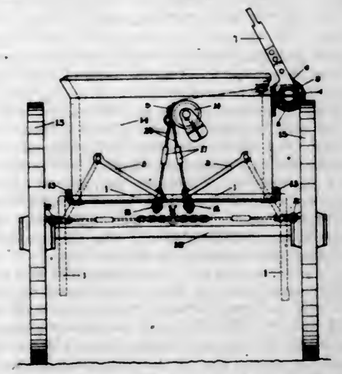
871,090. SMOKE-CONSUMING FURNACE. FRANK E. KELLY, Minneapolis, Minn., assignor of one-half to Frederick Kees, Minneapolis, Minn. Filed Oct. 4, 1906. Serial No. 337,403.

1. The combination, with a furnace grate and its fire box, of plenum boxes arranged in the side walls of said fire box on each side of the grate and below the level of the same and extending from end to end of said fire box, said plenum boxes having a series of perforations in their side walls opening into said fire box, a pipe extending under said fire box and having branch pipes extending laterally to the sides of the fire box and upwardly into the middle portion of said plenum boxes, a blast fan connected with said first named pipe, and means for delivering water into the path of said fan, whereby it will be atomized and the moisture laden currents of air discharged through the perforations in said plenum boxes into said fire box, substantially as described.



2. The combination, with a furnace and its grate, of a blast fan having a discharge opening leading into the fire box, a curved deflector arranged opposite and near the intake opening of said fan, a water supply pipe extending through said deflector and a second oppositely curved deflector arranged in front of said water pipe and against which second deflector the water is discharged and directed therefrom against the curved wall of said first named deflector and from thence delivered in a thin sheet into the path of said fan.

871,091. DUMPING-WAGON. REGINALD N. LOWRY, Allegheny, Pa., assignor of one-half to Charles A. Paxson, Kansas City, Mo. Filed Aug. 22, 1906. Serial No. 331,649.



1. In combination with a dumping wagon, a discharging opening, a closure for said opening hinged longitudinally of the wagon at or near the edge of the opening, a swinging support contacting said closure, the axes of the closure and swinging support being separate and parallel, and means for swinging and holding said support.

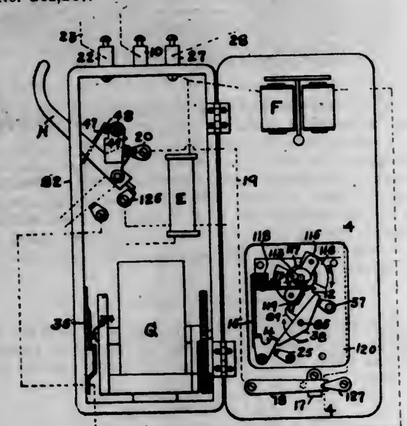
2. In combination with a dumping wagon, a discharging opening, a pair of doors for closing said opening hinged longitudinally of the wagon at or near the edge of the opening, supports for the doors arranged to slide on the doors towards and away from the hinge axes when they are opening and closing, and means for operating the supports.

3. In combination with a dumping wagon, a discharging opening, a pair of doors for closing said opening hinged longitudinally of the wagon at or near the edge of the opening, supports for the doors arranged to slide or roll on the doors towards and away from the hinge axes when they are opening and closing, and means for operating and guiding the supports.

4. In combination with a dumping wagon, a discharging opening, a pair of doors for closing said opening, hinged longitudinally of the wagon, and means for operating said doors through a rolling or sliding contact with and transversely of the doors.

5. In combination with a dumping wagon, a discharging opening, a closure for said opening, hinged longitudinally of the wagon, an operating and supporting device having a transversely sliding or rolling connection with the closure.

871,092. SELECTING DEVICE FOR TELEPHONE-EXCHANGES. FRANK A. LUNDQUIST, Chicago, Ill. Original application filed Aug. 8, 1903, Serial No. 168,694. Divided and this application filed Jan. 16, 1905. Serial No. 241,247.



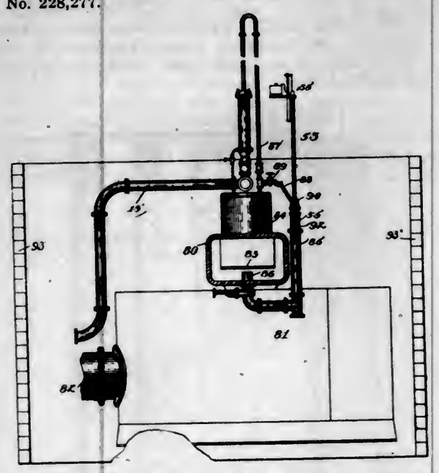
1. In a selecting device, a dial provided with numbers on its face, a pointer movable by hand to any position on said dial, means for automatically returning said pointer to its normal position, means for making a series of electrical contacts by the movement of said pointer, two lines or courses over which electrical impulses may be sent, means whereby said electrical contacts will cause as many electrical impulses to be sent over one of said lines as was indicated on the dial by the primary movement of said pointer, and means whereby one additional electrical impulse will be automatically sent over the other line after the impulses have ceased over the first line.

2. In a selecting device, a numbered dial and a pointer therefor, means whereby said pointer may be moved by hand to any position on said dial and be automatically returned to its normal position, means for automatically sending as many electrical impulses over a given course as are indicated on the dial by the manual movement of said pointer, and means for automatically sending one additional impulse over a different course after the impulses have ceased over the first course.

3. A numbered dial, a pointer adapted to be moved to any position on said dial, automatic devices for returning said pointer to a normal position, means controlled by the movement of said pointer for sending a series of electrical impulses over a given course, a switch, and means for operating said switch by the movement of said pointer so as to send an additional electrical impulse over a second course.

4. The combination with a numbered dial, a pointer and automatic devices for moving said pointer over said dial, of a line over which electrical impulses may be sent by the movement of said pointer, a switch located in said line, a second line adjacent to said switch, and means controlled by the terminal portion of a movement of said pointer whereby said switch is moved so as to transfer an impulse following a series of impulses from the first line to the second line.

871,093. WEIR AND TIDE GAGE. LAURENSE C. EISENHUT, New York, N. Y., assignor of one-half to Gilbert Elliott, Brooklyn, N. Y. Filed Oct. 13, 1904. Serial No. 228,277.



1. A chart-drum having resilient walls, said walls having closely abutting edges at one side of the drum, an eccentric for springing one of the edges out of its normal or abutted position, and a sheet metal bearing upon the inside of the said edge and surrounding said eccentric whereby the same may return the said edge to its normal position.

2. In a weir gage the combination with a float, of a movable chart drum, a frame work provided with horizontal bearings and vertical grooves, a shaft mounted in said bearings, a rack bar carried by said float and shiftable in one of said grooves, a gear wheel fast on said shaft and in mesh with said rack bar, a tool to record upon said chart, a rack bar carrying said tool and shiftable in one of said grooves, a plate movable in another of said grooves, a gear wheel carried by said plate and in mesh with the tool carrying rack bar, and an interchangeable pinion carried by said shaft and in mesh with the gear wheel on said plate.

3. In a water gage the combination with a float actuated recording device, of a float tube carried thereby and having a conoidal end, a float in said tube and connected to said recording device, and a stand pipe having a conoidal seat adapted to receive the said end of the float tube.

4. In a water gage the combination with a stand pipe having a conoidal seat at its end, of a recording device, a float and a float tube carrying the same, and a conoidal plug upon said float tube adapted to fit said seat.

5. In a water gage, the combination of a connection for a stand pipe and a recording instrument embodying a tube effective when in communication with said stand pipe and comprising a conical seat on one of them, and a conical plug on the other of them.

6. In a stream flow gage the combination with a stand pipe open to the stream, of a float therein, a rotary drum adjacent to the stand pipe and adapted to carry a chart sheet, means to rotate the drum, a scribing instrument, a vertically reciprocatable slide for carrying the same and provided with a rack bar, a rack bar reciprocatable by the float, and a train of gear between the said rack bars, a reciprocatory plate carrying one of said gears and one of them being interchangeable whereby the movable gear may be placed in mesh with interchangeable gears of various radii.

7. In a water gage the combination with a water actuated float, of means to carry a chart sheet, a scribing instrument, a reciprocating slide for carrying the same and provided with a rack bar, a rack bar reciprocatable by the said float, a train of gear between said rack bars, and a plate reciprocatable on a line parallel to the line of reciprocation of said slide and carrying one of said gears, and another of them being interchangeable, and means for removably securing said interchangeable gear to said plate.

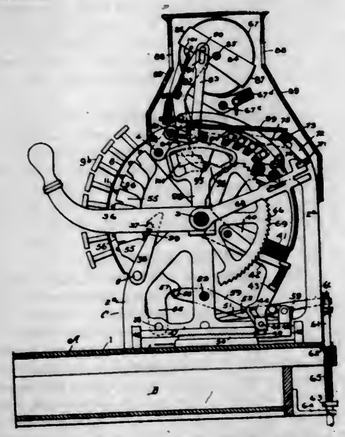
8. In a water gage the combination with a float, of means for carrying a chart, a scribing instrument, a reciprocatable rack bar connected to said instrument, a rack bar reciprocatable by the said float, a train of gear between said rack bars, one gear of said train being interchangeable, and a slide carrying one of them.

9. In a water gage the combination with means to carry a chart sheet, of a recording tool, a rack bar for actuating said tool, a float, a train of gear actuated by said float, and a reciprocatory plate carrying one gear of said train.

10. In a water gage the combination with means to carry a chart sheet, of a recording tool, a rack bar for actuating said tool, a float, a train of gear actuated by said float, a reciprocatory plate carrying one gear of said train, and another gear of said train being interchangeable.

11. The combination with a recording tool and a train of gear for actuating the same, of a rack bar reciprocatable in ways and in mesh with a gear of said train, a float, a float tube, a float rod connected to said float and extending out of said tube, a guide for the float at the top of the tube, an arm fast to said rack bar and connected to said float rod for moving therewith in its longitudinal movement but swiveled for permitting independent angular movement of the said rod on its axis.

871,094. MULTIPLE-DRAWER CASH-REGISTER. HENRY S. HALLWOOD, Columbus, Ohio, assignor to The International Register Company, Columbus, Ohio, a Corporation of Ohio. Filed Nov. 3, 1906. Serial No. 341,897.



1. In a cash register, an accounting device, a series of oscillating yokes for operating said device, a normally locked oscillatory hand lever for operating said yokes, a series of amount setting elements for controlling said yokes, a series of special transaction setting elements and a series of clerks' setting elements, interlocking mechanism between the amount and the special transaction setting elements compelling a certain sequence of operation thereof, interlocking mechanism between the special transaction and the clerks' setting elements compelling a certain sequence of operation thereof, a plurality of cash drawers, one for each clerk's setting element, connections between each clerk's setting element and the corresponding cash drawer and between each clerk's setting element and the oscillatory hand lever, whereby the operation of any one of said clerks' setting elements will release the hand lever and its corresponding cash drawer.

2. In a cash register, a series of amount setting elements, a series of clerks' setting elements and special transaction setting elements, interlocking mechanism between the amount and the special transaction setting elements compelling a certain sequence of operation thereof, interlocking mechanism between the special transaction and the clerks' setting elements compelling a certain sequence of operation thereof, a plurality of cash drawers, one for each clerk's setting element, connections between each clerk's setting element and the corresponding cash drawer and between each clerk's setting element and the oscillatory hand lever, whereby the operation of any one of said clerks' setting elements will release the hand lever and its corresponding cash drawer, and a recording device adapted to produce a record showing which clerk's setting element has been operated.

3. In a cash register, a series of amount setting elements, a series of clerks' setting elements and a special transaction setting element, interlocking mechanism between the amount and the special transaction setting elements compelling a certain sequence of operation thereof, interlocking mechanism between the special transaction and the clerks' setting elements compelling a certain sequence of operation thereof, a plurality of cash drawers, one for each clerk's setting element, connections between each clerk's setting element and the corresponding cash drawer, whereby the operation of any of said clerks' setting elements will release its corresponding drawer, and means for producing a record showing which drawer has been released the amount and the character of the transaction.

4. In a cash register, a normally locked oscillatory hand lever a plurality of cash safes, a keyboard mechanism comprising groups of value keys, department keys and clerks' keys, there being a clerk's key for each cash safe, interlocking mechanisms between said groups of keys which compel the operation of the keys in said groups in a predetermined sequence only, and means under control of each key in the clerks' group for disclosing the cash safe corresponding thereto and for releasing the hand lever.

5. In a cash register, a normally locked oscillatory hand lever a plurality of cash drawers, a keyboard mechanism comprising groups of value keys, department keys and clerks' keys, there being a clerk's key for each cash drawer, interlocking mechanisms between said groups of keys which compel the operation of the keys in said groups in a predetermined sequence only, and means under control of each key in the clerks' group for releasing the cash drawer corresponding thereto and for releasing the hand lever.

6. In a cash register, a plurality of cash drawers, a keyboard mechanism comprising groups of value keys, department keys and clerks' keys, there being a clerk's key for each cash drawer, interlocking mechanisms between said groups of keys which compel the operation of the keys in said groups in a predetermined sequence only, means under control of each key in the clerks' group for releasing the cash drawer corresponding thereto, and a recording device that is adapted to produce a record showing what drawer has been used.

7. In a cash register, a plurality of cash safes, a plurality of normally operative value setting elements, a plurality of normally inoperative department setting elements, a plurality of normally inoperative clerks' setting elements, interlocking mechanism between the value setting elements and the department setting elements requiring the operation of a value setting element before a department setting element can be operated, interlocking mechanism between the department setting elements and the clerks' setting elements, requiring the operation of a department setting element before a clerk's setting element can be operated, and connections between each of said clerk's setting elements, and its corresponding cash safe, whereby the operation of a clerk's setting element will release the safe belonging thereto.

8. In a cash register, a plurality of cash drawers, a group of normally operative value keys, a group of normally inoperative department keys, a group of normally inoperative clerks' initial keys, interlocking mechanism between the value keys and the department keys requiring the depression of a value key before a department key can be operated, interlocking mechanism between the department keys and the clerks' initial keys, requiring the operation of a department key before a clerk's initial key can be depressed, and connections between each of said

clerks' initial keys and its corresponding cash drawer, whereby the operation of a clerk's initial key will release the drawer belonging thereto.

9. In a cash register, a plurality of cash drawers, a group of normally operative value keys, a group of normally inoperative department keys, a group of normally inoperative clerks' initial keys, interlocking mechanism between the value keys and the department keys requiring the depression of a value key before a department key can be operated, interlocking mechanism between the department keys and the clerks' initial keys, requiring the operation of a department key before a clerk's initial key can be depressed, connections between each of said clerk's initial keys and its corresponding cash drawer, whereby the operation of a clerk's initial key will release the drawer belonging thereto, and a recording device that is adapted to produce a record showing which drawer has been released.

10. In a cash register, groups of value, department and initial keys, said department and initial keys being normally locked, means operated by any key of the value groups for unlocking the keys of the department group, means operated by any key of the department group for unlocking the keys of the initial group, a plurality of cash drawers, one for each of the keys of the initial group, and connections between each key of the initial group and its corresponding cash drawer, whereby the operation of an initial key will release its corresponding cash drawer.

11. In a cash register, a normally locked main actuating member, groups of value, department and initial keys, said department and initial keys being normally locked, means operated by any key of the value groups for unlocking the keys of the department group, means operated by any key of the department group for unlocking the keys of the initial group, a plurality of cash drawers, one for each of the keys of the initial group, connections between each key of the initial group and its corresponding cash drawer, whereby the operation of an initial key will release its corresponding cash drawer, connections between each key of the initial group and the main actuating member for unlocking the latter upon the operation of an initial key, and means for preventing the subsequent release of a second cash drawer until after the main operating lever is returned to normal position.

12. In a cash register, groups of value, department and initial keys, said department and initial keys being normally locked, means operated by any key of the value groups for unlocking the keys of the department group, means operated by any key of the department group for unlocking the keys of the initial group, a plurality of cash drawers, one for each of the keys of the initial group, connections between each key of the initial group and its corresponding cash drawer, whereby the operation of an initial key will release its corresponding cash drawer, and a recording device that is adapted to produce a record showing which drawer has been released.

13. In a cash register, the combination of a plurality of groups of keys, one of said groups being normally operative, means for rendering the other groups of keys normally inoperative means operated by any of said operative keys for rendering the adjacent group of keys operative, means under control of the last mentioned group for rendering the next adjacent group operative, a plurality of cash safes, and means under control of one of said groups of keys for opening any cash safe desired.

14. In a cash register, the combination of a plurality of groups of keys, one of said groups being normally operative, mechanism for rendering the other groups of keys normally inoperative means operated by any of said operative keys for rendering the adjacent group of keys operative, means under control of the last mentioned group for rendering the next adjacent group operative, a plurality of cash drawers and means under control of the group of keys that was last rendered operative for opening any cash drawer desired.

15. In a cash register, the combination of a plurality of groups of keys, one of said groups being normally operative, mechanism for rendering the other groups of keys normally inoperative means operated by any of said operative keys for rendering the adjacent group of keys operative, means under control of the last mentioned group for rendering the next adjacent group operative, a plurality of cash safes, means under control of one of said groups of keys for opening any cash safe desired, and a recording device that is adapted to produce a record showing which drawer has been released.

16. In a cash register, the combination of three distinct groups of keys, the first group being normally unlocked and the second and third groups normally locked, means controlled by the keys of the first group for unlocking the keys of the second group, means controlled by the keys of the second group for unlocking the keys of the third group, a plurality of cash safes, said safes corresponding in number to the keys of the said third group and connections between each of the keys of the third group and a corresponding cash safe, whereby the operation of one of the keys of said third group will release its cash safe.

17. In a cash register, a normally locked oscillatory hand lever a plurality of normally unexposed cash safes, a plurality of groups of keys representing values, departments and clerks, means for preventing the operation of said keys except in a predetermined order of sequence and means under control of the clerks' keys for exposing any cash safe desired and for releasing the hand lever.

18. In a cash register, a normally locked oscillatory hand lever a plurality of normally locked cash drawers, a plurality of groups of keys representing values, departments and clerks, means for preventing the operation of said keys except in a predetermined order of sequence and means under control of the clerks' keys for unlocking any cash drawer desired and for releasing the hand lever.

19. In a cash register, a plurality of normally unexposed cash safes, a plurality of groups of keys representing values, departments and clerks, means for preventing the operation of said keys except in a predetermined order of sequence, means under control of the clerks' keys for exposing any cash safe desired, and a recording device that is adapted to produce a record showing what safe has been exposed.

20. In a cash register, a plurality of cash drawers, banks of normally depressible value keys, a bank of normally undepressible department keys, said bank including a normally depressible no sale key, a bank of normally undepressible clerks' initial keys, interlocking mechanism for rendering the no sale key inoperative if a value key is depressed, and means connecting each cash drawer with a corresponding initial key, whereby said drawer will be released when its initial key is operated.

21. In a cash register, a plurality of cash drawers, a bank of keys containing normally undepressible department keys and a normally depressible no sale key, a bank of normally undepressible clerks' initial keys, interlocking mechanism for rendering the clerks' initial keys depressible when the no sale key or department key is depressed, and means connecting each cash drawer with a corresponding initial key, whereby said drawer will be released when its initial key is operated.

22. In a cash register, a plurality of cash drawers, a bank of keys containing normally undepressible department keys and a normally depressible no sale key, a bank of normally undepressible clerks' initial keys, interlocking mechanism for rendering the clerks' initial keys depressible when the no sale key or a department key is depressed, means connecting each cash drawer with a corresponding initial key, whereby said drawer will be released when its initial key is operated, and a recording device that is adapted to produce a record showing what safe has been exposed.

23. In a cash register, a bank of keys, means for locking said keys in their operated positions, a normally locked operating member, a plate that is movable upon the depression of any one of said keys, connections between said plate and the operating member for unlocking the latter when a key is depressed, and means carried by said plate for preventing the subsequent operation of any other key in the bank.

24. In a cash register, a bank of keys, means for locking said keys in their operated positions, a normally locked operating member, a plate that is movable upon the depression of any one of said keys, connections between said plate and the operating member for unlocking the latter when a key is depressed, and detent hooks carried by said plate for preventing the subsequent operation of any other key in the bank.

25. In a cash register, a bank of keys, means for locking said keys in their operated positions, a normally locked operating member, a plate that is movable upon the depression of any one of said keys, connections between said plate and the operating member for unlocking the latter when a key is depressed, and detent hooks carried by said plate opposite each key for preventing the subsequent operation of any other key in the bank, and for coupling the plate and the depressed key together.

26. In a cash register, a key board, indicating devices, connections between said key board and said indicating devices whereby the said devices are set to indicate the characters on the operated keys, a flash for concealing said indicating devices, means for throwing said flash out of its operative position so that the indicators may be exposed, a pivoted plate for holding said flash in its inoperative position, and means for moving said plate so as to release the indicator flash and to permit it to be moved to its operative position.

27. In a cash register, a key board, indicating devices, connections between said key board and said indicating devices whereby the said devices are set to indicate the characters on the operated keys, a pivoted flash for concealing said indicating devices, means for throwing said flash out of its operative position so that the indicators may be exposed, a pivoted plate for holding said flash in its inoperative position, a main operating lever, and means for moving said plate so as to release the indicator flash and to permit it to be moved to its operative position, said means being under control of the main operating lever.

28. In a cash register, a key board, indicating devices, connections between said key board and said indicating devices whereby the said devices are set to indicate the character on the operated keys, a normally locked main operating lever, a flash for concealing said indicating devices, means for throwing said flash out of its operative position so that the indicators may be exposed, a pivoted plate for holding said flash in its inoperative position, and a cam connected with the main operating lever, said cam controlling said plate so as to release the indicator flash and to permit it to be moved to its operative position.

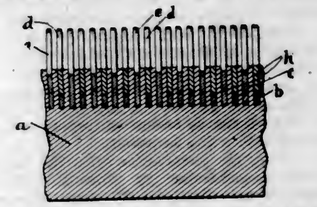
29. In a cash register, a key board, indicating devices, connections between said key board and the indicating devices for setting the latter to indicate the characters of the keys, a flash for concealing said indicators, a normally locked operative member, means connected by said operative member for moving the flash to its inoperative position whereby the indicators will be exposed, a plate for holding said flash in its inoperative position, a cam connected with said main operating lever, and means on said cam for moving the plate away from said flash so that the latter may be brought to its operative position.

30. In a cash register, a bank of keys, a main operating lever, a latch for normally locking said operating lever, a plate movable upon the depression of any key in said bank, means carried by said plate for moving the latch and unlocking the main operating lever, means carried by said plate for coupling the key thereto whereby said key is compelled to move with the said plate, and means for locking the key when it is depressed to an extent sufficient to unlock the main operating lever.

31. In a cash register, a bank of keys, a main operating lever, a latch for normally locking said operating lever, a plate movable upon the depression of any key in said bank, means carried by said plate for moving the latch and unlocking the main operating lever, means carried by said plate for coupling the key thereto whereby said key is compelled to move with the said plate, means for locking the key when it is depressed to an extent sufficient to unlock the main operating lever, an alarm gong, and means for sounding said alarm gong substantially at the moment when the main operating lever is released, and also at substantially the moment when said main operating lever is returned to its normal position.

32. In a cash register, a bank of keys, a main operating lever, a latch for normally locking said operating lever, a plate movable upon the depression of any key in said bank, means carried by said plate for moving the latch and unlocking the main operating lever, detent hooks carried by said plate for coupling the key thereto whereby said key is compelled to move with the said plate, said detent hooks locking out the undepressed keys, means for locking the key when it is depressed to an extent sufficient to unlock the main operating lever, an alarm gong, and means for sounding said alarm gong substantially at the moment when the main operating lever is released, and also at substantially the moment when said main operating lever is returned to its normal position.

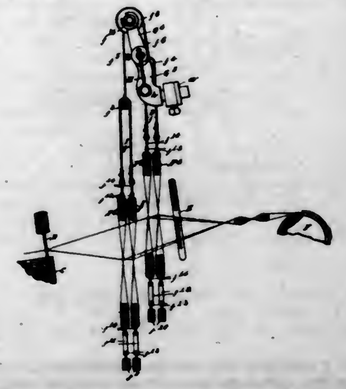
871,095. NEEDLE-BED FOR STRAIGHT-FRAME AND CIRCULAR-KNITTING MACHINES. HERMANN A. KLEMM, New York, N. Y., assignor of one-half to James D. Leys, Yonkers, N. Y. Continuation of application Serial No. 334,849, filed Sept. 17, 1906. This application filed Aug. 29, 1907. Serial No. 390,625.



1. A needle bed having in alternation long and short needle grooves and filling pieces in the long grooves opposite the parts of the short grooves traversed by the butts of the short needles.

2. A needle bed for knitting machines having long and short needle grooves for the reception of long and short needles, said needle grooves being arranged in sets or pairs comprising one long and one short groove, a narrow dividing wall arranged on the bed for separating each long and short needle in each set or pair of needles, and a wider wall separating the needles comprised in each set or pair, and filling pieces adapted to fit in between the narrow and wide walls, whereby the narrow walls are reinforced or strengthened.

871,096. HARNESS-LOOSENER OF LOOMS. OREN A. SAWYER, Lowell, Mass., assignor to Earl A. Thissell, Lowell, Mass. Filed Dec. 28, 1906. Serial No. 349,873.



1. The combination in a loom, of harnesses, each comprising an upper and a lower harness-shaft and flexible

heddles connecting said shafts, a saddle-roll, flexible connections between said saddle-roll and each of said harnesses and means of supporting and raising or lowering said saddle-roll, to tighten or loosen said harnesses.

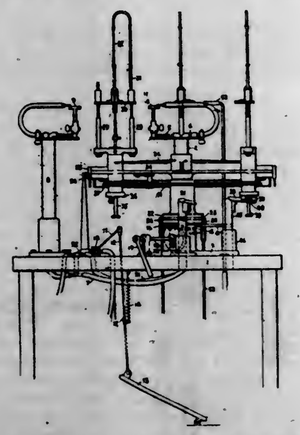
2. The combination in a loom, of a frame, stands, each formed in two parts, one of which parts is stationary on said frame and the other of which parts is movable in said stationary part, said movable parts being rigidly connected to each other, a saddle-roll supported on said movable parts, harnesses, each comprising an upper and a lower harness-shaft and flexible heddles connecting said shafts, and flexible connections between said harnesses and said saddle-roll, to vary the tension of said connections and harnesses by changing the position of said saddle-roll.

3. The combination in a loom, of a frame, stands, each formed in two parts, one of which is stationary on said frame, a shaft journaled in said stationary parts, the other parts of said stands being rigidly secured to said shafts, a saddle-roll journaled in said last named stand-parts, harnesses, each comprising an upper and a lower harness-shaft and flexible heddles connecting said shaft, and flexible connections between said harnesses and said saddle-roll, to vary the tension of said harnesses by the turning of said shaft.

4. In a loom, the combination with the harnesses and the flexible harness-connections by which the said harnesses are caused to move reciprocally with relation to each other, of a saddle-roll with which the said harness-connections are connected, and which is held in the normal or working position thereof, with the harness-connections taut, by the strain applied through the said harness-connections, and adapted to be shifted from such position into a position to loosen the harnesses.

5. In a loom, the combination with the harnesses, the flexible harness-connections by which the said harnesses are caused to move reciprocally with relation to each other, and a saddle-roll with which the said harness-connections are connected, of a pivotally-mounted support for the said saddle-roll having a normal working position in which it is held by the strain applied through the said harness-connections acting effectively at one side of the pivotal axis, and movable to the other side of the said axis to thereby relax the harness-connections and loosen the harnesses.

871,097. SEALING-IN MACHINE. MARK H. BRANIN, Newark, N. J., assignor to General Electric Company, a Corporation of New York. Filed May 11, 1906. Serial No. 316,401.



1. In a machine for making incandescent lamps, the combination with a movable frame, a heater, and a movable support for the lamp bulb mounted on the frame and brought within range of the heater by the movement of the frame, of means for controlling the pressure within the bulb in any position of the support.

2. In a machine for making incandescent lamps, the combination with a movable frame, a heater, and a movable support for the lamp bulb mounted on the frame and brought within range of the heater by the movement of the frame, of means for controlling the pressure within the bulb when the frame is in a predetermined position.

3. In a machine for making incandescent lamps, the combination with a rotatable frame, a heater, and a rotatable support for the lamp bulb mounted on the frame and brought within range of the heater by the movement of the frame, of means for supplying compressed air to said bulb during the entire rotation of the support, and a predetermined part of its revolution.

4. In a machine for making incandescent lamps, the combination with a rotatable frame, a heater, and a rotatable support for the lamp bulb mounted on the frame and brought within range of the heater by the movement of the frame, of means for carrying compressed air to said bulb in any part of the rotation of the support and during a predetermined part of the revolution thereof.

5. In a machine for making incandescent lamps, the combination with a rotatable frame, a heater, and a rotatable support for the lamp bulb mounted on the frame and brought within range of the heater by the movement of the frame, of a pipe adapted to be connected to the tubulature carried by said support, and means for connecting said pipe in any position of the support to a controlling means carried by the frame.

6. In a machine for making incandescent lamps, the combination with a rotatable frame, a heater and a rotatable support for the lamp bulb mounted on the frame and brought within range of the heater by the movement of the frame, of a pipe adapted to be connected to the tubulature carried by the support, and an annular port in the frame connected to a source of fluid under pressure in registry with said pipe in every position of the support.

7. In a machine for making incandescent lamps, the combination with a rotatable frame, a heater, and a rotatable support for the lamp bulb mounted on the frame and brought within range of the heater by the movement of the frame, of a pipe carried by the support and adapted to be connected to the tubulature, means for connecting said pipe to a supply pipe on the frame in every position of the support, and means for connecting said supply pipe to a source of fluid under pressure during a predetermined part of the movement of the frame.

8. In a machine for making incandescent lamps, a vertical standard, a frame rotatable thereon, a rotary head carried by the frame, supports for lamp-parts on said head, a stop for arresting the rotation of said head, and means for simultaneously adjusting said frame and said stop vertically.

9. In a machine for making incandescent lamps, a hollow vertical standard, a pipe extending therethrough, a burner carred by the standard and connected to said pipe, a frame rotatable on the standard, a plurality of rotary heads carried by the frame, stops for arresting rotation of said heads in definite positions, means for simultaneously adjusting said frame and said stops vertically, and a second burner mounted in horizontal alinement with the burner in said standard.

10. In a machine for making incandescent lamps, a standard, a burner carried thereby, a frame rotatable on the standard, supports for lamp-parts carried by the frame, means for adjusting the frame axially upon said standard, and means operative in any adjusted position of the frame for carrying compressed air to said supports.

11. In a machine for making incandescent lamps, a standard, a frame rotatable thereon, a plurality of heads carried by the frame, means for rotating said heads, means for adjusting said frame axially upon said standard, and means for carrying compressed air to said rotary heads in any adjusted position of the frame.

12. In a machine for making incandescent lamps, a standard, a frame rotatable thereon, a plurality of heads carried by said frame, supports for lamp-parts carried by said heads, means for rotating each of said heads, means for carrying compressed air to each of said heads during a predetermined part of its revolution, and a burner to heat the lamp-parts.

13. In a machine for making incandescent lamps, a standard, a frame rotatable thereon, a plurality of heads carried by said frame, supports for lamp-parts carried by said heads, a rotary member for each of said heads, means for driving said members, a clutch connecting each of said members in driving relation to one of said heads, stops for operating said clutches, means for carrying compressed air to each of said heads during the rotation thereof, and a burner to heat the lamp-parts.

14. In a sealing-in machine, a standard, a frame rotatable thereon, a plurality of heads carried by the frame, means for rotating said heads, means on each of said heads for supporting a bulb and stem in position for sealing, a burner to heat the parts, and means for carrying compressed air to the tubulature of a bulb supported on each of said heads.

15. In a sealing-in machine, a standard, a frame rotatable thereon, means for adjusting the frame axially of said standard, a plurality of heads carried by the frame, means for rotating said heads, stops for arresting rotation of the heads in definite positions, means on each of said heads for supporting a bulb and stem in position for sealing, a burner to heat the parts, and means for carrying compressed air to the tubulature of a bulb supported on each of said heads.

REISSUES.

12,717. DOOR AND FRAME THEREFOR FOR OPENING AND CLOSING AIR-TIGHT CHAMBERS. S. PRICE STEVENSON, Chester, Pa. Filed Mar. 10, 1904. Serial No. 197,602. Original No. 697,689, dated Apr. 15, 1902, Serial No. 68,250.

1. A door for air-tight compartments consisting of rigid stiles united by rails susceptible of torsion, a flexible inner sheathing, a flexible outer sheathing having a rim projecting beyond the stiles and rails, and a compressible gasket secured to said projecting rim on the door, in combination with elastic hinges and a latch; said hinges and latch being so proportioned as to exert equal pressure upon the gasket in all parts between the rim of the door and a casing surrounding the door-opening, as set forth.

2. In a door for air-tight compartments, rigid stiles united by rails susceptible of torsion, and a flexible inner sheathing attached to said stiles and rails, in combination with a flexible outer sheathing also secured to said stiles and rails, and provided with a rim projecting beyond the stiles and rails, adapted to overlap and by flexure apply closely to the casing of the door-opening, substantially as set forth.

3. The combination with a door provided with a gasket; of a door frame and casing arranged to be adjustably applied to the door opening of a refrigerating chamber, and consisting of jambs, lintel and sill edgewise rigid, but susceptible of torsional flexure; and a casing secured to said frame and adapted to contact with the gasket on said door, substantially as set forth.

4. In a frame for doors of air-tight compartments, stiles and a lintel and a sill rigid in lengthwise direction and torsionally flexible, in combination with a torsionally-flexible casing attached to the front of said frame and adapted to be adjusted by torsion to fit deviations from a flat plane of a door applied thereto, substantially as set forth.

5. In a combined air-tight door and frame for refrigerating and like chambers, a door having rigid stiles, rails connecting with said stiles, susceptible of torsional flexure, an inner sheathing susceptible of torsional flexure, an outer sheathing projecting beyond the stiles and rails, also torsionally flexible, and a frame having all parts rigid in the direction of their depth, a casing secured to said frame, a gasket applied to said outer sheathing to contact with said casing, in combination with elastic hinges; and, a latch, proportioned and arranged to press said door upon said gasket uniformly in all parts against said casing, with continuous pressure, as and for the purpose set forth.

6. The combination with a door frame casing liable to variably deviate from a flat plane; of a door arranged to be rigid edgewise and having torsionally-flexible faces; and elastic hinges and fasteners arranged to apply the door edges in contact with said frame, substantially as set forth.

7. A torsionally-flexible door provided with a gasket; in combination with flexible resilient hinges and fasteners arranged to convert the momentum of the door in closing into a constant elastic force to maintain pressure upon said gasket, substantially as set forth.

8. A door-way frame, a flexible door fitted to overlap the front margin of said frame, elastic hinges applied to the edge of said door, an automatic fastening applied to the opposite edge of the door, and arranged to elastically enforce contact between the margin of the frame and the margin of the door, substantially as set forth.

9. A torsionally-flexible door for air-tight apartments, formed of rigid stiles and rails, an inner and outer torsionally-flexible sheathing secured thereto, said outer sheathing projecting as a rim beyond the stiles and rails and provided with a compressible gasket adapted to contact closely with the casing of a door-frame, substantially as set forth.

10. A door frame, having rigid edges and a torsionally-flexible casing, in combination with a door having an edgewise-rigid margin, and torsionally-flexible faces, one of which faces overlaps the face of the casing, and a gasket applied to said overlapping face, substantially as set forth.

11. A door having an edgewise rigid margin, and flexible faces, one of which faces projects beyond said margin, in combination with a gasket applied to said projecting face, and elastic hinges attached to said door adapted to elastically connect the door with a door frame, substantially as set forth.

12. A door having an edgewise rigid margin and flexible faces, one of which faces projects beyond said margin, and a gasket applied to said projecting face; in combination with a locking-latch adapted to automatically engage a keeper and hold the gasket under compression against a door-frame casing, substantially as set forth.

13. A frame for doors of air-tight inclosures embracing torsionally-flexible jambs and a lintel rigid in lengthwise direction adapted to be adjustably applied to an opening in a wall, and a casing attached to the front of said frame adapted to support the bearings of extending hinges, as shown and described.

14. A frame for doors of air-tight compartments embracing a lintel a sill and torsionally-flexible jambs, and a broad front casing adapted to support extended hinges arranged to swing the door clear of the lintel of the door way opening, when opened at right angles, substantially as set forth.

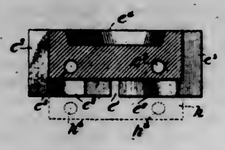
15. In a frame for doors of air-tight compartments, stiles and a lintel, a sill rigid in lengthwise direction and torsionally flexible, in combination with a torsionally flexible casing attached to the front of said frame, and adapted to be adjusted by torsion to fit deviations from a flat plane of the wall to which it is applied, substantially as set forth.

12,718. CAP FOR SHEET-PILING. EDWARD A. BERN, Chicago, Ill. Filed Aug. 7, 1907. Serial No. 387,569. Original No. 834,866, dated Oct. 30, 1906, Serial No. 291,633.

1. A cap for sheet-metal piling, comprising a block having recesses on one face on each diameter, each recess corresponding in shape to the transverse section of a pile, and

a second block having projections adapted to enter the recesses.

2. A cap for sheet-metal piling, comprising an upper block having recesses on one face corresponding in shape to the transverse section of a pile, and a lower block having a plain face adapted to rest on the pile and provided on its opposite face with projections entering the recesses in the upper block.

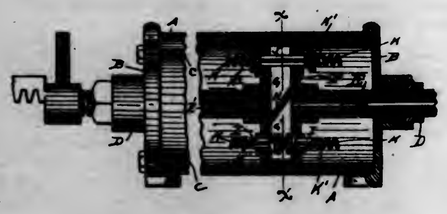


3. A cap for sheet-piling, comprising a block having two recesses in one face thereof, said recesses being disposed at an angle to each other and each of said recesses conforming substantially to the cross section of a pile.

4. A cap for sheet piling, comprising a block having guides at its sides, and having two recesses in its lower face, said recesses being disposed at an angle to each other and each of said recesses conforming substantially to the cross section of a pile.

5. A cap for interlocking sheet piling, comprising a block having a recess extending completely across one face thereof, said recess being of such form as to embrace the end of a pile being driven and the interlocking part of the previously driven pile.

12,719. WATER-MOTOR. PETER T. COFFIELD, Dayton, Ohio, assignor to P. T. Coffield & Son, Dayton, Ohio, a Firm. Filed July 28, 1906. Serial No. 328,272. Original No. 806,779, dated Dec. 12, 1905, Serial No. 183,119.

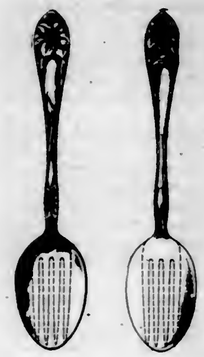


1. In a water motor, a cylinder, a piston divided into two non-communicating chambers, hollow rods communicating with said chambers, double-puppet inlet valves and double-puppet exhaust valves mounted in said piston, in combination with springs adapted to impart to said valves their final movements after being unseated, thereby reversing the travel of the piston.

2. In a water motor, a cylinder, having inclosing heads, a piston divided into two non-communicating chambers, hollow piston rods communicating with said chambers, balance exhaust valves lying on the outside of one of said chambers and seating against the outer sides of the piston, said exhaust valves being connected to a common stem and having extensions beyond the valves, balance inlet valves located within the other chamber, said inlet valves having stems projected on each side beyond the piston, coil springs carried upon the stems of said exhaust and inlet valves and adapted to impart the final movement to the valves after said valves have been given their initial movement by the contact of their stems with the cylinder heads, substantially as set forth.

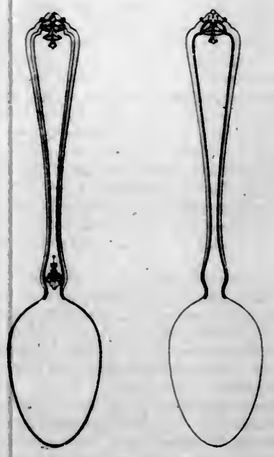
DESIGNS.

38,878. SPOON, FORK, OR SIMILAR ARTICLE. FREDERICK HABENSACK, Sag Harbor, N. Y., assignor to Fahys Watch Case Company, New York, N. Y., a Corporation of New York. Filed Sept. 21, 1907. Serial No. 393,887. Term of patent 7 years.



The ornamental design for the handle of a spoon, fork or similar article, as shown.

38,879. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. CHARLES OSBORNE, New York, N. Y., assignor to Whiting Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Sept. 4, 1907. Serial No. 391,406. Term of patent 14 years.



The ornamental design for a handle for a spoon, fork or similar article, as shown.

38,880. BACK FOR MIRRORS, BRUSHES, OR SIMILAR ARTICLES. HENRIK HILLBOM, Wallingford, Conn., assignor to R. Wallace & Sons Mfg. Co., Wallingford, Conn., a Corporation of Connecticut. Filed Sept. 6, 1907. Serial No. 391,734. Term of patent 7 years.



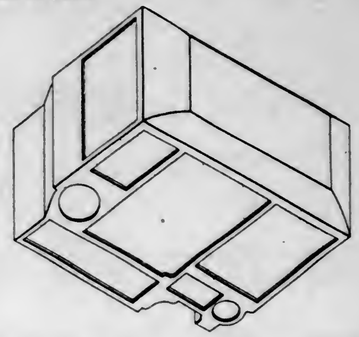
The ornamental design for a back for a mirror, brush or similar article, as shown.

38,881. HAND-BAG. HENRY GROSSMAN, New York, N. Y. Filed Sept. 7, 1907. Serial No. 391,830. Term of patent 7 years.



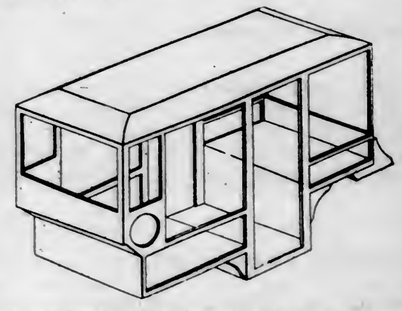
The ornamental design for a hand-bag as shown.

38,882. VEHICLE-BODY. CHARLES CRETORS, Chicago, Ill. Filed Dec. 27, 1906. Serial No. 349,743. Term of patent 14 years.



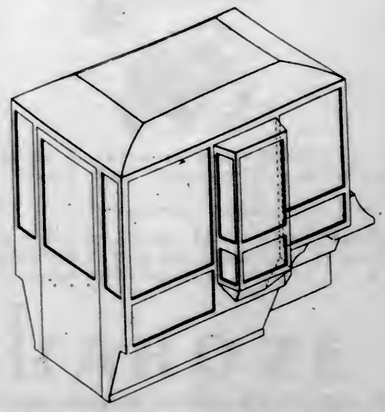
The ornamental design for a vehicle body, as shown.

38,883. VEHICLE-BODY. CHARLES CRETORS, Chicago, Ill. Filed Dec. 27, 1906. Serial No. 349,744. Term of patent 14 years.



The ornamental design for a vehicle body, as shown.

38,884. VEHICLE-BODY. CHARLES CRETORS, Chicago, Ill. Filed Dec. 27, 1906. Serial No. 349,745. Term of patent 14 years.



The ornamental design for a vehicle body, as shown.

TRADE-MARKS

PUBLISHED NOVEMBER 12, 1907.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 3,462. (CLASS 68. PUBLICATIONS.) PERRY MASON COMPANY, Boston, Mass. Filed Apr. 28, 1905.

THE YOUTH'S COMPANION

Particular description of goods.—Story-Papers and Periodical Magazines.

Ser. No. 5,208. (CLASS 51. MALT PREPARATIONS NOT OTHERWISE CLASSIFIED.) THE FARGO BOTTLING WORKS CO., Fargo, N. D. Filed May 11, 1905.



Particular description of goods.—Non-Intoxicating Beer.

Ser. No. 5,414. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) SIEGEL COOPER & CO., Chicago, Ill. Filed May 13, 1905.



Particular description of goods.—Wheat-Flour, Rye-Flour, Graham Flour, Buckwheat-Flour, and Pancake-Flour.

Ser. No. 7,220. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) Moos & Co., New York, N. Y. Filed June 2, 1905. Used ten years.

LAROZE

Particular description of goods.—Olive-Oil, Peas, Mushrooms, Carrots, Lima Beans, Macedoine of Vegetables, Spinach, Peppers, String-Beans, Cepas, Artichokes, Brussels Sprouts, Beets, Sorrel, Asparagus, Cherries in Marschino, Capers, and Olives.

Ser. No. 8,094. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) RAFAEL S. BESTON, New York, N. Y. Filed June 14, 1905. Used ten years.



The background being blue.

Particular description of goods.—Canned Bartlett Pears.

Ser. No. 9,337. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JACOB CARTUN, Philadelphia, Pa. Filed June 28, 1905. Used ten years.



Particular description of goods.—Whisky.

Ser. No. 9,338. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JACOB CARTUN, Philadelphia, Pa. Filed June 28, 1905. Used ten years.

LATOUR-FRERES & CIE

Particular description of goods.—Brandy.

Ser. No. 9,818. (CLASS 70. STATIONERY NOT OTHERWISE CLASSIFIED.) BLEISTIFTFABRIK VORMALS JOHANN FABER, ACTIEN-GESELLSCHAFT, Nuremberg, Bavaria, Germany. Filed July 6, 1905.

JOHANN FABER.

Particular description of goods.—Lead-Pencils, Colored Pencils, Copying-Pencils, Pencils with Movable Leads, Erasing-Rubber, and Penholders.

Ser. No. 9,819. (CLASS 70. STATIONERY NOT OTHERWISE CLASSIFIED.) BLEISTIFTFABRIK VORMALS JOHANN FABER, ACTIEN-GESELLSCHAFT, Nuremberg, Bavaria, Germany. Filed July 6, 1905.

„ADONIS"

Particular description of goods.—Lead-Pencils, Colored Pencils, Copying-Pencils, Slate-Pencils, Pencils with Movable Leads, and Erasing-Rubber.

Ser. No. 9,820. (CLASS 70. STATIONERY NOT OTHERWISE CLASSIFIED.) BLEISTIFTFABRIK VORMALS JOHANN FABER, ACTIEN-GESELLSCHAFT, Nuremberg, Bavaria, Germany. Filed July 6, 1905.

„JUPITER"

Particular description of goods.—Lead-Pencils, Colored Pencils, Copying-Pencils, Slate-Pencils, Pencils with Movable Leads.

Ser. No. 10,899. (CLASS 52. PACKING-HOUSE PRODUCTS.) THE SOUTHERN COTTON OIL COMPANY, Jersey City, N. J., New York, N. Y., Savannah, Ga., and Gretna, La. Filed July 27, 1905.

SNOWDRIFT

Particular description of goods.—A Mixture Having for Its Essential Ingredients a Vegetable Oil and an Animal Fat.

Ser. No. 12,932. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) STE. DE LA DISTILLERIE DU SUPREME FECAMP, Fécamp, France. Filed Sept. 23, 1905.



The ribbon is red with a green border, the capital letters are green, the seal red, the background of the rectangular label cream-colored, and the interior panel gold damaskeened.

Particular description of goods.—Liqueurs or Cordials.

Ser. No. 14,810. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ATMORE & SON, Philadelphia, Pa. Filed Nov. 20, 1905. Used ten years.

KEYSTONE MINCE MEAT

Particular description of goods.—Mince-Meat.

Ser. No. 14,811. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ATMORE & SON, Philadelphia, Pa. Filed Nov. 20, 1905. Used ten years.

ATMORE'S SEEDLESS RAISINS CELEBRATED MINCE MEAT

Particular description of goods.—Mince-Meat.

Ser. No. 16,344. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) PADDOCK & FOWLER COMPANY, New York, N. Y. Filed Jan. 20, 1906.

VICTOR BRAND

Particular description of goods.—Raisins.

Ser. No. 20,169. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ALBERT RUSSELL WHITE, Philadelphia, Pa. Filed June 2, 1906.

ALTERNATES

The smaller letters being printed in red.

Particular description of goods.—Proprietary Medicines for the Treatment of Coughs and Colds.

Ser. No. 20,195. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) STRAUSS, FRITZ & CO., Cincinnati, Ohio. Filed June 11, 1906.

PLANET

Particular description of goods.—Whisky.

Ser. No. 20,419. (CLASS 68. PUBLICATIONS.) GLEN AGASSIZ BERNARD, Seattle, Wash. Filed June 19, 1906. Used ten years.



Particular description of goods.—Printed Books, Pamphlets, and Magazines.

Ser. No. 20,494. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) EMILE BRUNOR, New York, N. Y. Filed June 22, 1906.

The cross is red.



Particular description of goods.—Peroxid of Hydrogen, Sulfur, Ammonia, Epsom Salts, Methyl Alcohol, Borax, Boracic Acid, Carbonate of Ammonia, Bicarbonate of Soda, Rochelle Salts, Alum, Magnesia, Cream of Tartar, Chalk in an Unmanufactured Condition, Chlorate of Potash, Hydrochloric Acid, Oxalic Acid, Camphor, Carbolic Acid, Bedbug-Poison, Sulfur-Spring Salts, Oil of Wintergreen, and Creosote.

Ser. No. 20,587. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) THE OLD BLEACH LINEN COMPANY, LIMITED, Randalstown, Ireland. Filed June 26, 1906.

OLD BLEACH

Particular description of goods.—Linen Piece Goods.

Ser. No. 21,904. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) SUSQUEHANNA SILK MILLS, New York, N. Y. Filed Sept. 4, 1906.

Orchid

Particular description of goods.—Silk Piece Goods.

Ser. No. 21,958. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) BOOTT MILLS, Lowell, Mass. Filed Sept. 7, 1906. Used ten years.

NORFOLK

Particular description of goods.—Bleached and Unbleached Cotton Piece Goods.

Ser. No. 21,966. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) BOOTT MILLS, Lowell, Mass. Filed Sept. 7, 1906.



Particular description of goods.—Bleached and Unbleached Cotton Piece Goods.

Ser. No. 21,980. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) BOOTT MILLS, Lowell, Mass. Filed Sept. 7, 1906.



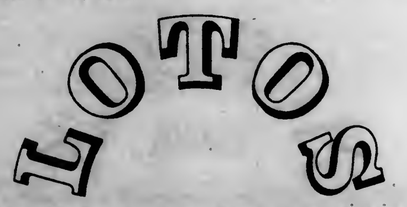
Particular description of goods.—Cotton Piece Goods.

Ser. No. 22,272. (CLASS 15. OILS AND GREASES NOT INCLUDED IN CLASSES 6, 16, AND 50.) FELICIA V. MORSE, Canton, Mass. Filed Sept. 24, 1906.



Particular description of goods.—Lubricants and Lubricating Material, Comprising Black Lead, Plumbago, or Graphite.

Ser. No. 22,470. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) BOOTT MILLS, Lowell, Mass. Filed Oct. 3, 1906.



Particular description of goods.—Cotton Piece Goods.

Ser. No. 22,551. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) VINCENZO DEL GAIZO, Naples, Italy. Filed Oct. 5, 1906.



Particular description of goosd.—Tomato-Sauce.

Ser. No. 22,673. (CLASS 71. TOBACCO PRODUCTS.) GLOBE TOBACCO COMPANY, Detroit, Mich. Filed Oct. 13, 1906. Used ten years.



Particular description of goods.—Smoking-Tobacco, Chewing-Tobacco, Cigars, and Cigarettes.

Ser. No. 23,813. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) EMILE BRUNOR, New York, N. Y. Filed Dec. 6, 1906.

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Particular description of goods.—Cod-Liver Oil, Iron and Manganese Peptonate, Compound Celery Nervine, Rhubarb and Soda Mixture, Kidney Cure, Aromatic Cascara, Fluid Extract Ergot, Corn Cure, Rhinitis Tablets, Cholera-Tablets, Antibilious Pills, Perfumes, Tablets of Pepsin, Soda-Mint Tablets, Cachous, Iron Pills, Laxative Quinin, Toothache-Drops, Sarsaparilla, Liver-Pills, Beef, Wine, and Iron, Kola Wine, Camphorated Chalk, Camomile Flowers, Licorice-Powder, Iron, Quinin, and Strychnin, Violet, Ammonia, Toothache-Gum, Senna-Leaves, Camphor-Ice, Calisaya Bark, Tincture of Valerian, Tincture Iron, Liniment, Chalk Mixture, Syrup Rhubarb, Syrup Squills, Syrup of Ipecac, Hair-Oil, Camphor Liniment, Camphorated Oil, Chloroform Liniment, Hoffmann's Anodyne, Tincture Myrrh, Syrup of Tolu, Brown Mixture, Tincture Opium, Medicinal Teas, Bay-Rum, Tincture Larkspur, Tincture Fishberries, Sedlitz-Powders, Carbolated Petroleum-Jelly, Fig-Syrup, Sandalwood-Oil Capsules, Compound Tincture Benzoin, Elixir Bismuth and Pepsin, Neuralgia Powders, Tablets, and Wafers, Collodion, Neutralizing-Cordial, Quinin Pills, Tablets, and Capsules.

Ser. No. 24,881. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE SPECIFIED.) WESTERN LEATHER MFG. CO., Chicago, Ill. Filed Jan. 24, 1907.



Particular description of goods.—Leather Machine-Cases, Obstetric Bags, Emergency-Bags, Pocket Vial-Cases, Saddle-Bags, Veterinary Medicine Cases and Bags, and Similar Physicians' Leather Cases.

Ser. No. 25,190. (CLASS 41. KNITTED, NETTED, AND LACE GOODS.) A. C. STALEY MFG. CO., South Bend, Ind. Filed Feb. 7, 1907. Used ten years.



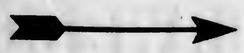
Particular description of goods.—Knitted Underwear.

Ser. No. 25,206. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) LIBBY, MCNEILL & LIBBY, Chicago, Ill. Filed Feb. 8, 1907.



Particular description of goods.—Marmalades, Jellies, Jams, Fruit Sauces, Fruit Preserves, Mince-Meat, Gherkins, Pickled Chow-Chow, Catsup, Chutney, Worcestershire Sauce, Prepared Mustard, Apple-Butter, Olives and Stuffed Olives, Piccalilli Relish, and Pickled Onions.

Ser. No. 25,379. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) NORTH COAST DRY KILN CO., Seattle, Wash. Filed Feb. 18, 1907.



Particular description of goods.—Hoisting Machinery, Embracing Donkey-Blocks, Team-Blocks, Head-Line Blocks, Return-Line Blocks, Snatch-Blocks, Dog-Hooks, Swivel-Line Hooks, Swivels, Block-Hooks, Chocker-Hooks, Grab-Hooks, and Swamp-Hooks.

Ser. No. 25,705. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) WM. KELLY MILLING COMPANY, Hutchinson, Kans. Filed Mar. 2, 1907.

The shield being yellow, the circle blue, and the seal red.



Particular description of goods.—Wheat-Flour.

Ser. No. 26,406. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) EARLE G. HARRELL, Camilla, Ga. Filed Apr. 2, 1907.

CAMTHOLATUM

Particular description of goods.—A Remedy for the Relief of Catarrh, Hay-Fever, Pneumonia, Sore Throat, Croup, Earache, Rheumatism, Insect-Bites, Piles, Sore Eyes, Chapped Hands.

Ser. No. 26,448. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) BOAS, RODRIGUES ET CIE., Paris, France. Filed Apr. 4, 1907.

B.R.C

Particular description of goods.—Acetylene and Oil Lighting Apparatus.

Ser. No. 27,378. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) FRANK FIEBEGER, Akron, Ohio. Filed May 15, 1907.

SOLID COMFORT

Particular description of goods.—Heating-Furnaces.

Ser. No. 27,838. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) FRANCIS A. PATRICK, Palestine, Tex. Filed June 1, 1907.



THE CHILD'S FRIEND

Particular description of goods.—A Remedy for Diseases of the Bowels.

Ser. No. 28,447. (CLASS 71. TOBACCO PRODUCTS.) ALLMENS DISTILLING COMPANY, Kansas City, Mo. Filed June 28, 1907.

ALL MENS

Particular description of goods.—Cigars.

Ser. No. 28,566. (CLASS 8. DETERGENTS.) S. A. MACDONALD CO., Los Angeles, Cal. Filed July 2, 1907.

WASH-E-Z-Y

Particular description of goods.—Washing-Tablets.

Ser. No. 28,640. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) M. D. SLIMMER & COMPANY, Chicago, Ill. Filed July 8, 1907.

OXOLINIC

Particular description of goods.—Acid Compounds for Laundry Sours.

Ser. No. 28,754. (CLASS 47. CONFECTIONERY.) ABRAHAM B. SCHOFF, Philadelphia, Pa. Filed July 12, 1907. Used ten years.

BARRY

Particular description of goods.—Candy.

Ser. No. 28,940. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) GARRETT-WILLIAMS CO., Baltimore, Md. Filed July 22, 1907.

OLD 49

Particular description of goods.—Whisky.

Ser. No. 28,946. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) LIZZIE E. VAN WYCK REMIN, New York, N. Y. Filed July 22, 1907. Used ten years.

PROPHYLACTIC

Particular description of goods.—Tooth-Powders and Tooth-Pastes.

Ser. No. 28,989. (CLASS 70. STATIONERY NOT OTHERWISE CLASSIFIED.) HUGH ARNOLD, Kansas City, Mo. Filed July 22, 1907.

TRIUMPH

Particular description of goods.—Bank-Checks.

Ser. No. 29,128. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) FREDERICK EDWARD VESEY BAINES, Blackheath, England. Filed July 31, 1907.

APEX

Particular description of goods.—Machines for Sharpening Pencils.

Ser. No. 29,314. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) RALPH W. ASHCROFT, New York, N. Y. Filed Aug. 9, 1907.

MARK TWAIN

Particular description of goods.—Whisky.

Ser. No. 29,315. (CLASS 71. TOBACCO PRODUCTS.) RALPH W. ASHCROFT, New York, N. Y. Filed Aug. 9, 1907.

MARK TWAIN

Particular description of goods.—Smoking-Tobacco.

Ser. No. 29,345. (CLASS 6. CHEMICALS NOT OTHER WISE CLASSIFIED.) HIPPOLYTE DEPERDUSSIN, Paris, France, assignor to Firm The Pasteur Vaccine Company Limited, London, England. Filed Aug. 12, 1907.



Particular description of goods.—Germicides and Disinfectants.

Ser. No. 29,369. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) MERCER DRUG COMPANY, Trenton, N. J. Filed Aug. 12, 1907.

NORWEGOL

Particular description of goods.—A Liquid Preparation Composed of Extract of Cod-Liver Oil, Extract of Beef, Extract of Malt, Hypophosphites of Lime, Iron, Soda, Potash, and Manganese, Wild Cherry, Glycerin, and Sherry-Wine.

Ser. No. 29,397. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) MORGAN & WRIGHT, Detroit, Mich. Filed Aug. 15, 1907.

CATAPLARO

Particular description of goods.—Rubber Wheel-Tires.

Ser. No. 29,400. (CLASS 35. BELTING, HOSE, AND MACHINERY PACKING.) MORGAN & WRIGHT, Detroit, Mich. Filed Aug. 15, 1907.



Particular description of goods.—Rubber-Sheet Machinery Packing.

Ser. No. 29,410. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) THE PRINTZ BIEDERMAN CO., Cleveland, Ohio. Filed Aug. 15, 1907.



Particular description of goods.—Ladies' and Misses' Coats, Capes, Jackets, Dresses, Dress-Skirts, and Dress-Waists.

Ser. No. 29,445. (CLASS 35. BELTING, HOSE, AND MACHINERY PACKING.) F. REDDAWAY & CO., LIMITED, Pendleton, England. Filed Aug. 17, 1907.



Particular description of goods.—Certain Belting.

Ser. No. 29,448. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) BEN. WERTHEIMER & CO., New York, N. Y. Filed Aug. 17, 1907.

Wertheimer's

Particular description of goods.—Bonnet and Hat Frames.

Ser. No. 29,449. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) B. S. FLERSHEIM MERCANTILE CO., Kansas City, Mo. Filed Aug. 19, 1907.

Old Kingdom

Particular description of goods.—Bitters and Medicinal Cordials.

Ser. No. 29,472. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) ELLET-KENDALL SHOE COMPANY, Kansas City, Mo. Filed Aug. 19, 1907.

SHIELD BRAND
F K S CO
ESTABLISHED 1907

Particular description of goods.—Leather Boots, Shoes, and Leggings for Men, Women, and Children.

Ser. No. 29,475. (CLASS 14. METALS, UNWROUGHT AND PARTLY WROUGHT.) JONAS & COLVER, LIMITED, Sheffield, England. Filed Aug. 20, 1907.

NOVO

Particular description of goods.—Steel and Iron.

Ser. No. 29,476. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) JONAS & COLVER, LIMITED, Sheffield, England. Filed Aug. 20, 1907.

NOVO

Particular description of goods.—Machine-Knives, Tools Used in Machines, Twist-Drills, Mining-Drills, Rock-Boring Drills, Wood-Boring Drills, Milling-Cutters, Slotting-Cutters, Shaping-Cutters, Turning-Cutters, Wood-Cutters, Bone-Cutters, Wheel-Cutters, Dividing-Cutters, Fluting-Cutters, Grooving-Cutters, and Shear-Blades, All Being Parts of Machinery.

Ser. No. 29,522. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) CHARLES J. ULRICI, New York, N. Y. Filed Aug. 22, 1907.

"CEREBROLINA"

Particular description of goods.—A Medicinal Cordial Wine.

Ser. No. 29,532. (CLASS 71. TOBACCO PRODUCTS.) RALPH W. ASHCROFT, New York, N. Y. Filed Aug. 23, 1907.



Particular description of goods.—Smoking-Tobacco.

Ser. No. 29,533. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) RALPH W. ASHCROFT, Brooklyn, N. Y. Filed Aug. 23, 1907.



Particular description of goods.—Whisky.

Ser. No. 29,535. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) SCANDINAVIAN FUR & LEATHER CO., New York, N. Y. Filed Aug. 23, 1907.



Particular description of goods.—Leather Lap-Robes and Leather Boots.

Ser. No. 29,553. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) DOMESTIC SCIENCE MFG. CO., Boston, Mass. Filed Aug. 23, 1907.

I.P.HYDE

Particular description of goods.—Flavoring Extracts.

Ser. No. 29,554. (CLASS 20. CUTLERY NOT INCLUDED IN CLASS 61, AND EDGE-TOOLS.) HYDE MANUFACTURING CO., Southbridge, Mass. Filed Aug. 23, 1907. Used ten years.

Domestic Science

Particular description of goods.—Certain Cutlery and Edge-Tools.

Ser. No. 29,564. (CLASS 20. CUTLERY NOT INCLUDED IN CLASS 61, AND EDGE-TOOLS.) THE AMERICAN AXE & TOOL CO. INC., Glassport, Pa. Filed Aug. 24, 1907.

ATCO

Particular description of goods.—Grass-Hooks, Axes, Hatchets, Broadaxes, and Adzes.

Ser. No. 29,652. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) TEXAS STAR FLOUR MILLS, Galveston, Tex. Filed Aug. 28, 1907.

TIDAL WAVE

Particular description of goods.—Wheat-Flour.

Ser. No. 29,714. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) ALFRED DEWSBURY, Walsall, England. Filed Sept. 3, 1907.

DEWRALEX

Particular description of goods.—Bridle-Bits, Stirrups, Spurs, Buckles, Rings, Terrets, Hames, D's, Swivels, Chains, All Made of Nickel or Nickel Alloy.

Ser. No. 29,715. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) THORNTON & CHESTER MILLING COMPANY, Buffalo, N. Y. Filed Sept. 3, 1907.



Particular description of goods.—Wheat-Flour.

Ser. No. 29,748. (CLASS 20. CUTLERY NOT INCLUDED IN CLASS 61, AND EDGE-TOOLS.) STANLEY RULE & LEVEL COMPANY, New Britain, Conn. Filed Sept. 4, 1907. Used ten years.

STANLEY

Particular description of goods.—Planes, Hand-Operated Shapers Provided with Cutting Edges, Hand-Operated Scrapers Provided with Cutting Edges, and Countersinks.

Ser. No. 29,752. (CLASS 12. MASONRY MATERIALS.) MASON CITY BRICK & TILE COMPANY, Mason City, Iowa. Filed Sept. 4, 1907. Used ten years.

MASONCITY

Particular description of goods.—Drain-Tile, Sewer-Pipe, Bricks, and Hollow Building-Blocks.

Ser. No. 29,781. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) ANGER BAKING COMPANY, New York, N. Y. Filed Sept. 6, 1907. Used ten years.

ANGER BAKING CO.

Particular description of goods.—Egg-Noodles and Macaroni.

Ser. No. 29,796. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) MAX M. SCHWARCZ & CO., New York, N. Y. Filed Sept. 7, 1907.

Max M. Schwarcz & Co.

Particular description of goods.—Women's Cloaks, Skirts, and Suits Made of Textile Material and All Being Outer Garments.

Ser. No. 29,833. (CLASS 68. PUBLICATIONS.) FARBENFABRIKEN OF ELBERFELD CO., New York, N. Y. Filed Sept. 9, 1907.

CLINICAL EXCERPTS.

Particular description of goods.—A Medical Magazine.

Ser. No. 29,856. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) WILLIAM D. DALGLEISH, Glenbrook, Conn. Filed Sept. 10, 1907.

REVELATION

Particular description of goods.—Gold Paste to be Used in Decorating Crockery, Earthenware, and Porcelain.

Ser. No. 29,870. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) YANKEE SHIRT CO., New York, N. Y. Filed Sept. 11, 1907.

THE YANKEE

Particular description of goods.—Men's Outer Shirts Provided with Both Stiff and Soft Bosoms.

Ser. No. 29,900. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) HIBBARD, SPENCER, BARTLETT & COMPANY, Chicago, Ill. Filed Sept. 12, 1907.

H.S.P. & CO.
REV-O-NOC

Particular description of goods.—Washing-Machines for Laundry Purposes and Parts Thereof.

Ser. No. 29,917. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) LORING Q. WHITE COMPANY, Brockton, Mass. Filed Sept. 12, 1907.



Particular description of goods.—Leather Boots and Leather Shoes.

Ser. No. 29,920. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) JOHN B. JOHNSON, Kansas City, Mo. Filed Sept. 12, 1907.

MAKHARA

Particular description of goods.—A Hair-Tonic.

Ser. No. 29,959. (CLASS 5. ADHESIVES.) HAZEN-BROWN CO., Brockton, Mass. Filed Sept. 13, 1907.

FOLDITE

Particular description of goods.—Rubber-Cements, Leather-Cements, and Adhesive Pastes.

Ser. No. 29,960. (CLASS 5. ADHESIVES.) HAZEN-BROWN CO., Brockton, Mass. Filed Sept. 13, 1907.

FOLD
HAZENITE
HOLDER

Particular description of goods.—Rubber-Cements, Leather-Cements, and Adhesive Pastes.

Ser. No. 29,971. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) WRIGHT'S INDIAN VEGETABLE PILL COMPANY, New York, N. Y. Filed Sept. 14, 1907.



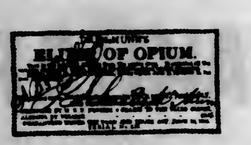
Particular description of goods.—A Remedy for Indigestion.

Ser. No. 29,973. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) WRIGHT'S INDIAN VEGETABLE PILL COMPANY, New York, N. Y. Filed Sept. 14, 1907.



Particular description of goods.—A Remedy for Gonorrhea, Gleets, Strictures, and Analogous Complaints of the Organs of Generation.

Ser. No. 29,974. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) WRIGHT'S INDIAN VEGETABLE PILL COMPANY, New York, N. Y. Filed Sept. 14, 1907.



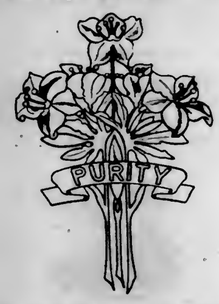
Particular description of goods.—A Remedy to Produce Sleep and Composure, to Relieve Pain and Irritation, Nervous Excitement, and Morbid Irritability of Body and Mind, and to Allay Convulsive and Spasmodic Actions.

Ser. No. 29,975. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) WRIGHT'S INDIAN VEGETABLE PILL COMPANY, New York, N. Y. Filed Sept. 14, 1907.



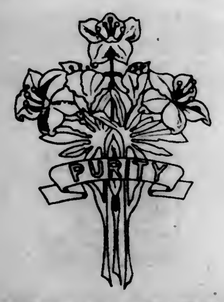
Particular description of goods.—A Remedy for Worms.

Ser. No. 29,985. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) P. PASTENE & Co., Boston, Mass. Filed Sept. 16, 1907.



Particular description of goods.—Macaroni.

Ser. No. 29,987. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) P. PASTENE & Co., Boston, Mass. Filed Sept. 16, 1907.



Particular description of goods.—Peppers, Artichokes, and Dry Mushrooms.

Ser. No. 30,004. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) THE COMMERCIAL SHIRT CO., New York, N. Y. Filed Sept. 16, 1907.



Particular description of goods.—Outer Shirts Made of Textile Material.

Ser. No. 30,016. (CLASS 14. METALS, UNWROUGHT AND PARTLY WROUGHT.) GEORGE W. VANDUZEN, Cincinnati, Ohio. Filed Sept. 16, 1907.



Particular description of goods.—Brass Castings.

Ser. No. 30,028. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) JEFFERY-DEWITT COMPANY, Newark, N. J. Filed Sept. 17, 1907.

Reliance

Particular description of goods.—Spark-Plugs.

Ser. No. 30,040. (CLASS 4. ABRASIVE AND POLISHING MATERIALS NOT INCLUDED IN CLASSES 8 AND 16.) THE T. W. ARMSTRONG CO., New York, N. Y. Filed Sept. 18, 1907.

MONARCH

Particular description of goods.—Abrasive Metal-Polishes.

Ser. No. 30,042. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) MEIGS & COMPANY INC., Springfield, Mass. Filed Sept. 18, 1907.

ZENITH

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 30,043. (CLASS 61. JEWELRY AND SOLID AND PLATED PRECIOUS-METAL WARE.) CROSSMAN COMPANY, New York, N. Y. Filed Sept. 18, 1907.



Particular description of goods.—Brooches, Lorgnette-Chains, Neck-Chains, Necklaces, Pendants, Scarf-Pins, Ear-Screws, Finger-Rings, and Bracelets.

Ser. No. 30,088. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) SMITH HOGG & Co., New York, N. Y. Filed Sept. 19, 1907.



Particular description of goods.—Cotton Piece Goods.

Ser. No. 30,089. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) SMITH HOGG & Co., New York, N. Y. Filed Sept. 19, 1907.

MINNEBAMA

Particular description of goods.—Cotton Piece Goods.

Ser. No. 30,090. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) SMITH HOGG & Co., New York, N. Y. Filed Sept. 19, 1907.



Particular description of goods.—Cotton Piece Goods.

Ser. No. 30,091. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) SMITH HOGG & Co., New York, N. Y. Filed Sept. 19, 1907.

FLAT-IRON

Particular description of goods.—Cotton Piece Goods.

Ser. No. 30,092. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) SMITH HOGG & Co., New York, N. Y. Filed Sept. 19, 1907.



Particular description of goods.—Cotton Piece Goods.

Ser. No. 30,093. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) SMITH HOGG & Co., New York, N. Y. Filed Sept. 19, 1907.

FIRESIDE

Particular description of goods.—Cotton Piece Goods.

Ser. No. 30,110. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) WAYNE SHOE MANUFACTURING COMPANY, Fort Wayne, Ind. Filed Sept. 20, 1907.



The diamond-shaped figure and border-line to the same being printed in green.

Particular description of goods.—Leather Shoes.

Ser. No. 30,111. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) WAYNE SHOE MANUFACTURING COMPANY, Fort Wayne, Ind. Filed Sept. 20, 1907.



The heart-shaped figure being printed in red.

Particular description of goods.—Leather Shoes.

Ser. No. 30,112. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) WAYNE SHOE MANUFACTURING COMPANY, Fort Wayne, Ind. Filed Sept. 20, 1907.



The side sectors being printed in red.
Particular description of goods.—Men's Leather Shoes.

Ser. No. 30,113. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) WAYNE SHOE MANUFACTURING COMPANY, Fort Wayne, Ind. Filed Sept. 20, 1907.



The side sectors being printed in red.
Particular description of goods.—Boys' Leather Shoes.

Ser. No. 30,137. (CLASS 58. GAMES AND TOYS, AND SPORTING GOODS NOT OTHERWISE CLASSIFIED.) THE M. LINDSAY RUBBER MANUFACTURING COMPANY, New York, N. Y., and Washington, D. C. Filed Sept. 21, 1907.

RUBBER BUBBLES

Particular description of goods.—Inflatable and Collapsible Toys Made of Rubber.

Ser. No. 30,147. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) SOLOMON LEVINSON, Seattle, Wash. Filed Sept. 21, 1907.

KING SOLOMON

Particular description of goods.—Stomach-Bitters.

Ser. No. 30,156. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) TILTON & KEELER, New York, N. Y. Filed Sept. 23, 1907.



Particular description of goods.—Cotton Piece Goods.

Ser. No. 30,168. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) NORTON & CURD COFFEE CO., Louisville, Ky. Filed Sept. 23, 1907.

SINCERITY



Particular description of goods.—Coffees.

Ser. No. 30,171. (CLASS 3. VEGETABLE.) DE STEARINE KAARSENFABRIEK GOUDA, Gouda, Holland. Filed Sept. 23, 1907.

CALARIA

Particular description of goods.—Pitch.

Ser. No. 30,179. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) THE BENNETT COMPANY, Omaha, Nebr. Filed Sept. 24, 1907.



Particular description of goods.—Baking-Powder.

Ser. No. 30,192. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ARISTOTELES ALVARADO, New York, N. Y. Filed Sept. 24, 1907.



Particular description of goods.—Remedies for Coughs and Colds.

Ser. No. 30,201. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) SUSQUEHANNA SILK MILLS, New York, N. Y. Filed Sept. 25, 1907.

Orentala

Particular description of goods.—Silk Piece Goods and Silk-Mixed Piece Goods.

Ser. No. 30,202. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) SUSQUEHANNA SILK MILLS, New York, N. Y. Filed Sept. 25, 1907.

Inda

Particular description of goods.—Silk Piece Goods and Silk-Mixed Piece Goods.

Ser. No. 30,216. (CLASS 52. PACKING-HOUSE PRODUCTS.) THE SOUTHERN COTTON OIL COMPANY, Jersey City, N. J.; New York, N. Y.; Savannah, Ga., and Gretna, La. Filed Sept. 26, 1907.

NEUTRALINA

Particular description of goods.—A Mixture Having for Its Essential Ingredients a Vegetable Oil and an Animal Fat.

Ser. No. 30,217. (CLASS 71. TOBACCO PRODUCTS.) MORRIS HILLER LIPMAN, New York, N. Y. Filed Sept. 26, 1907.



Particular description of goods.—Cigars.

Ser. No. 30,218. (CLASS 71. TOBACCO PRODUCTS.) MORRIS HILLER LIPMAN, New York, N. Y. Filed Sept. 26, 1907.



Particular description of goods.—Cigars.

Ser. No. 30,231. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill. Filed Sept. 26, 1907.

SWEETHEART

Particular description of goods.—Canned Vegetables.

Ser. No. 30,232. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill. Filed Sept. 26, 1907.



Particular description of goods.—Canned Vegetables.

Ser. No. 30,233. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill. Filed Sept. 26, 1907.



Particular description of goods.—Canned Vegetables.

Ser. No. 30,234. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill. Filed Sept. 26, 1907.

BISMARK

Particular description of goods.—Canned Vegetables.

Ser. No. 30,235. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill. Filed Sept. 26, 1907.

CREAM OF THE PRAIRIE

Particular description of goods.—Canned Vegetables.

Ser. No. 30,236. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill. Filed Sept. 26, 1907.

Pride of Illinois

Particular description of goods.—Canned Vegetables.

Ser. No. 30,239. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill. Filed Sept. 26, 1907.

SWEET MAGNOLIA

Particular description of goods.—Canned Vegetables.

Ser. No. 30,240. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill. Filed Sept. 26, 1907.

CAPE JASMINE

Particular description of goods.—Canned Vegetables.

Ser. No. 30,244. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill. Filed Sept. 26, 1907.

WESTERN BEAUTY

Particular description of goods.—Canned Vegetables.

Ser. No. 30,246. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill. Filed Sept. 26, 1907.

JOAN of ARC

Particular description of goods.—Canned Vegetables.

Ser. No. 30,247. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill. Filed Sept. 26, 1907.



Particular description of goods.—Canned Vegetables.

Ser. No. 30,248. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill. Filed Sept. 26, 1907.



Particular description of goods.—Canned Vegetables.

Ser. No. 30,249. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill. Filed Sept. 26, 1907.

Faithful

Particular description of goods.—Canned Vegetables.

Ser. No. 30,250. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill. Filed Sept. 26, 1907.

MOSAIC

Particular description of goods.—Canned Vegetables.

Ser. No. 30,267. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) EDWIN C. BURT COMPANY, Brooklyn, N. Y. Filed Sept. 27, 1907.



Particular description of goods.—Leather Boots, Shoes, and Slippers.

Ser. No. 30,291. (CLASS 53. SACCHARINE FOODS NOT INCLUDED IN CLASS 47.) HALPEN, GREEN & CO., Philadelphia, Pa. Filed Sept. 30, 1907.



Particular description of goods.—Table-Syrup.

Ser. No. 30,303. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) A. F. BECKMANN & CO., New York, N. Y. Filed Sept. 30, 1907.

GOLD ROCK

Particular description of goods.—Canned Fruits, Canned Vegetables, Vinegar, and Pickles.

Ser. No. 30,304. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) A. F. BECKMANN & CO., New York, N. Y. Filed Sept. 30, 1907.

CROWN ASTER

Particular description of goods.—Canned Fruits, Canned Vegetables, Pork and Beans, Jams, Preserves, Marmalades.

Ser. No. 30,315. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE CAPEWELL HORSE NAIL COMPANY, Hartford, Conn. Filed Sept. 30, 1907.



Particular description of goods.—Horseshoe-Nails.

Ser. No. 30,332. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) STROHMEYER & ARPE COMPANY, New York, N. Y. Filed Oct. 2, 1907.



Particular description of goods.—Olive-Oil.

Ser. No. 30,333. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) STROHMEYER & ARPE COMPANY, New York, N. Y. Filed Oct. 2, 1907.



Particular description of goods.—Salad-Oil.

Ser. No. 30,354. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) HANNAH & HOGG, Chicago, Ill. Filed Oct. 2, 1907.

Silver Thistle

Particular description of goods.—Olive-Oil.

Ser. No. 30,356. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) WEST END WINE & SPIRITS CO., Boston, Mass. Filed Oct. 2, 1907.

WHITE DAISY

Particular description of goods.—Gin.

Ser. No. 30,358. (CLASS 56. CANES, PARASOLS, AND UMBRELLAS.) KRAUT & FINVER BROS., New York, N. Y. Filed Oct. 2, 1907.

The Adrea

Particular description of goods.—Umbrellas and Parasols.

Ser. No. 30,384. (CLASS 48. DAIRY PRODUCTS.) G. W. SIMPSON & CO., Boston, Mass. Filed Oct. 3, 1907.

TOPAZ CREAMERY

Particular description of goods.—Butter and Cream.

Ser. No. 30,396. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) THE ESMOND MILLS, Enfield, R. I. Filed Oct. 3, 1907.

BUNNY

Particular description of goods.—Blankets.

Ser. No. 30,398. (CLASS 58. GAMES AND TOYS, AND SPORTING GOODS NOT OTHERWISE CLASSIFIED.) GEO. BORGFELDT & CO., New York, N. Y. Filed Oct. 3, 1907.



Particular description of goods.—Tennis-Balls.

Ser. No. 30,406. (CLASS 2. MINERAL.) THE UNITED STATES GRAPHITE COMPANY, Saginaw, Mich. Filed Oct. 3, 1907.



Particular description of goods.—Silver-Lead or Plumbago Foundry-Facings and Pulverized Graphite, [Not Crude.]

Ser. No. 30,410. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) THE W. W. HARPER CO., Zanesville, Ohio. Filed Oct. 3, 1907.

GOVERNOR

Particular description of goods.—Coffee.

Ser. No. 30,413. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) W. D. BRACKETT & Co., Boston, Mass. Filed Oct. 4, 1907.



Particular description of goods.—Boots and Shoes Made of Leather.

Ser. No. 30,431. (CLASS 35. BELTING, HOSE, AND MACHINERY PACKING.) THE B. F. GOODRICH COMPANY, Akron, Ohio. Filed Oct. 5, 1907.

PINNACLE

Particular description of goods.—Belting Made Wholly or Partly of Rubber or Having Rubber Incorporated Therewith.

Ser. No. 30,488. (CLASS 58. GAMES AND TOYS, AND SPORTING GOODS NOT OTHERWISE CLASSIFIED.) TEDDY BEAR CARD CO., Erie, Pa. Filed Oct. 8, 1907.



Particular description of goods.—Card Games.

Ser. No. 30,491. (CLASS 54. SEA FOODS.) GEO. W. LOWDEN, Savannah, Ga. Filed Oct. 8, 1907.

FOREST CITY

Particular description of goods.—Canned Oysters.

Ser. No. 30,493. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) R. T. DAWSON & Co., Baltimore, Md. Filed Oct. 8, 1907.

POCAHONTAS

Particular description of goods.—Whisky.

Ser. No. 30,494. (CLASS 47. CONFECTIONERY.) NESTLÉ & ANGLO-SWISS CONDENSED MILK CO., Cham, Switzerland. Filed Oct. 8, 1907.

MILKMAID BRAND



Particular description of goods.—Cocoa with Milk and Chocolate with Milk.

Ser. No. 30,499. (CLASS 65. MUSICAL INSTRUMENTS AND TALKING MACHINES AND SUPPLIES THEREFOR.) THE CABLE COMPANY, Chicago, Ill. Filed Oct. 9, 1907.

Carola

Particular description of goods.—Organs, Pianos, Automatic Piano-Players, and Self-Playing Pianos.

Ser. No. 30,500. (CLASS 65. MUSICAL INSTRUMENTS AND TALKING-MACHINES AND SUPPLIES THEREFOR.) THE CABLE COMPANY, Chicago, Ill. Filed Oct. 9, 1907.

Elbac

Particular description of goods.—Organs, Pianos, Automatic Piano-Players, and Self-Playing Pianos.

Ser. No. 30,508. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) EASTMAN KODAK CO., Rochester, N. Y. Filed Oct. 9, 1907. Used ten years.

EASTMAN

Particular description of goods.—Photographic Flash-Light Materials, Photographic Developing and Hardening Powders and Solutions, Photographic-Negative Reducers, and Photographic Chemical Solutions and Compounds.

Ser. No. 30,513. (CLASS 71. TOBACCO PRODUCTS.) LUCY J. MENDEZ, Brooklyn, N. Y. Filed Oct. 9, 1907.



Particular description of goods.—Cigars.

Ser. No. 30,515. (CLASS 37. PAPER AND PAPER MANUFACTURES NOT OTHERWISE CLASSIFIED.) JAMES R. CROMPTON & BROTHERS, LIMITED, Elton Paper Mills, near Bury, England. Filed Oct. 9, 1907.

ELTONBURY

Particular description of goods.—Wall-Papers, Velvet Crape-Paper, and Toilet-Paper.

Ser. No. 30,530. (CLASS 8. DETERGENTS.) CHARLES EDWIN MCKENNA, Providence, R. I. Filed Oct. 10, 1907.

MACK'S



SOAP.

Particular description of goods.—Soap.

Ser. No. 30,533. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) FASHION PUBLICITY COMPANY, New York, N. Y. Filed Oct. 10, 1907.

RET-I-KUL

Particular description of goods.—Boots, Shoes, Slippers, and Sandals Made of Leather in Whole or in Part.

Ser. No. 30,542. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) CORTWRIGHT COMPANY, New York, N. Y. Filed Oct. 11, 1907.



Particular description of goods.—Whisky.

Ser. No. 30,544. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) CORTWRIGHT COMPANY, New York, N. Y. Filed Oct. 11, 1907.



Particular description of goods.—Whisky.

Ser. No. 30,573. (CLASS 58. GAMES AND TOYS, AND SPORTING GOODS NOT OTHERWISE CLASSIFIED.) A. J. REACH COMPANY, Philadelphia, Pa. Filed Oct. 12, 1907.

Recreation

Particular description of goods.—Base-Balls.

TRADE-MARKS

REGISTERED NOVEMBER 12, 1907.

66,091. LIVER REMEDIES. ALTHEA REMEDY COMPANY, Fort Wayne, Ind.
Filed May 2, 1907. Serial No. 27,000. PUBLISHED SEPTEMBER 10, 1907.

66,092. WRITING AND PRINTING PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed July 22, 1907. Serial No. 28,973. PUBLISHED SEPTEMBER 10, 1907.

66,093. ARTIFICIAL LEATHER. BOSTON ARTIFICIAL LEATHER COMPANY, New York, N. Y.
Filed January 26, 1907. Serial No. 24,921. PUBLISHED SEPTEMBER 10, 1907.

66,094. PASTE FOR SOFTENING HORSES' HOOFS. GEORGE H. CARTER, Plymouth, Pa.
Filed August 7, 1907. Serial No. 29,271. PUBLISHED SEPTEMBER 10, 1907.

66,095. LEATHER BOOTS AND SHOES. THE COURTNEY SHOE CO., St. Louis, Mo.
Filed July 8, 1907. Serial No. 28,680. PUBLISHED SEPTEMBER 10, 1907.

66,096. CERTAIN METAL ARTICLES. COVERT MFG. CO., Watervliet, N. Y.
Filed May 5, 1905. Serial No. 4,343. PUBLISHED SEPTEMBER 3, 1907.

66,097. LAXATIVE CANDY. THE DAVIS CHEMICAL COMPANY, Denver, Colo.
Filed July 31, 1907. Serial No. 29,130. PUBLISHED SEPTEMBER 10, 1907.

66,098. REMEDY FOR HEADACHE AND NEURALGIA. LUDWIG G. B. ERB, New York, N. Y.
Filed July 30, 1907. Serial No. 29,111. PUBLISHED SEPTEMBER 10, 1907.

66,099. SUPPOSITORIES. JAMES STANLEY FALCK, Washington, D. C.
Filed August 9, 1907. Serial No. 29,317. PUBLISHED SEPTEMBER 10, 1907.

66,100. REMEDY FOR THE TREATMENT OF LEPROYS. TOMÁS SELLÉS FORCAT, New York, N. Y.
Filed June 12, 1907. Serial No. 28,062. PUBLISHED SEPTEMBER 10, 1907.

66,101. REMEDY FOR THE TREATMENT OF SYPHILIS. TOMÁS SELLÉS FORCAT, New York, N. Y.
Filed June 12, 1907. Serial No. 28,063. PUBLISHED SEPTEMBER 10, 1907.

66,102. PREPARATION OF BISMUTH. H. K. MULFORD COMPANY, Philadelphia, Pa.
Filed August 10, 1907. Serial No. 29,335. PUBLISHED SEPTEMBER 10, 1907.

66,103. WHISKY. HOLLENBACH, DIETRICH & CO., Reading, Pa.
Filed July 22, 1907. Serial No. 28,934. PUBLISHED SEPTEMBER 10, 1907.

66,104. GAMBIER. L. LITTLEJOHN & CO., New York, N. Y.
Filed July 18, 1907. Serial No. 28,867. PUBLISHED SEPTEMBER 10, 1907.

66,105. CERTAIN MUSICAL INSTRUMENTS. CHARLES MEISEL, New York, N. Y.
Filed March 31, 1906. Serial No. 18,410. PUBLISHED SEPTEMBER 10, 1907.

66,106. CONSUMPTION REMEDIES. THE MUTUAL DRUG COMPANY, Cleveland, Ohio.
Filed July 25, 1907. Serial No. 29,036. PUBLISHED SEPTEMBER 10, 1907.

66,107. WHISKY. NEW KENSINGTON DISTILLING CO., New Kensington, Pa.
Filed July 20, 1907. Serial No. 28,919. PUBLISHED SEPTEMBER 10, 1907

66,108. CERTAIN MEDICINE. JOHN RUTGERT 'PLANTEN, New York, N. Y.
Filed August 3, 1907. Serial No. 29,205. PUBLISHED SEPTEMBER 10, 1907.

66,109. CERTAIN PHARMACEUTICAL PREPARATIONS. THE POMPEIAN MFG. CO., Cleveland, Ohio.
Filed August 6, 1907. Serial No. 29,258. Published SEPTEMBER 10. 1907.

66,110. ANTISEPTIC POWDER. GEORGE K. PRATT, New Orleans, La.
Filed August 7, 1907. Serial No. 29,281. PUBLISHED SEPTEMBER 10, 1907.

66,111. LADIES' LEATHER BOOTS AND SHOES. STEWART & CO., Baltimore, Md.
Filed July 10, 1907. Serial No. 28,708. PUBLISHED SEPTEMBER 10, 1907.

66,112. BAKING-POWDER. ST. LOUIS COFFEE AND SPICE MILLS, St. Louis, Mo.
Filed June 17, 1907. Serial No. 28,161. PUBLISHED SEPTEMBER 10, 1907.

66,113. BAKING-POWDER AND BICARBONATE OF SODA. WABASH BAKING POWDER COMPANY, Wabash, Ind.
Filed December 19, 1906. Serial No. 24,131. PUBLISHED SEPTEMBER 10, 1907.

66,114. MEDICINAL PREPARATION FOR PURIFYING THE BLOOD. YERBA YUTU REMEDY COMPANY, Los Angeles, Cal.
Filed July 12, 1907. Serial No. 28,755. PUBLISHED SEPTEMBER 10, 1907.

66,115. GINGER-ALE. AMERICAN BEVERAGE CO., Atlanta, Ga.
Filed June 12, 1907. Serial No. 28,060. PUBLISHED SEPTEMBER 10, 1907.

66,116. ROOT-BEER. AMERICAN BEVERAGE CO., Atlanta, Ga.
Filed June 12, 1907. Serial No. 28,061. PUBLISHED SEPTEMBER 10, 1907.

66,117. SPOOL-COTTON, SEWING-COTTON, AND THREAD. THE AMERICAN THREAD COMPANY, Jersey City, N. J.
Filed August 14, 1907. Serial No. 29,382. PUBLISHED SEPTEMBER 10, 1907.

66,118. SPOOL-COTTON, SEWING-COTTON, AND THREAD. THE AMERICAN THREAD COMPANY, Jersey City, N. J.
Filed August 14, 1907. Serial No. 29,383. PUBLISHED SEPTEMBER 10, 1907.

66,119. SPOOL-COTTON, SEWING-COTTON, AND THREAD. THE AMERICAN THREAD COMPANY, Jersey City, N. J.
Filed August 14, 1907. Serial No. 29,384. PUBLISHED SEPTEMBER 10, 1907.

66,120. MANGLES. THE AMERICAN WRINGER COMPANY, New York, N. Y.
Filed December 15, 1906. Serial No. 24,041. PUBLISHED SEPTEMBER 10, 1907.

66,121. CLOTHES-WRINGERS AND MANGLES. THE AMERICAN WRINGER COMPANY, New York, N. Y.
Filed December 15, 1906. Serial No. 24,043. PUBLISHED SEPTEMBER 10, 1907.

66,122. BENCH-WRINGERS. THE AMERICAN WRINGER COMPANY, New York, N. Y.
Filed December 15, 1906. Serial No. 24,045. PUBLISHED SEPTEMBER 10, 1907.

66,123. CLOTHES-WRINGERS. THE AMERICAN WRINGER COMPANY, New York, N. Y.
Filed December 15, 1906. Serial No. 24,048. PUBLISHED SEPTEMBER 10, 1907.

66,124. CLOTHES-WRINGERS. THE AMERICAN WRINGER COMPANY, New York, N. Y.
Filed December 15, 1906. Serial No. 24,049. PUBLISHED SEPTEMBER 10, 1907.

66,125. CLOTHES-WRINGERS. THE AMERICAN WRINGER COMPANY, New York, N. Y.
Filed December 15, 1906. Serial No. 24,050. PUBLISHED SEPTEMBER 10, 1907.

66,126. CLOTHES-WRINGERS. THE AMERICAN WRINGER COMPANY, New York, N. Y.
Filed December 15, 1906. Serial No. 24,051. PUBLISHED SEPTEMBER 10, 1907.

66,127. CLOTHES-WRINGERS. THE AMERICAN WRINGER COMPANY, New York, N. Y.
Filed December 15, 1906. Serial No. 24,052. PUBLISHED SEPTEMBER 10, 1907.

66,128. CLOTHES-WRINGERS. THE AMERICAN WRINGER COMPANY, New York, N. Y.
Filed December 15, 1906. Serial No. 24,053. PUBLISHED SEPTEMBER 10, 1907.

66,129. CLOTHES-WRINGERS. THE AMERICAN WRINGER COMPANY, New York, N. Y.
Filed December 15, 1906. Serial No. 24,054. PUBLISHED SEPTEMBER 10, 1907.

66,130. CLOTHES-WRINGERS. THE AMERICAN WRINGER COMPANY, New York, N. Y.
Filed December 15, 1906. Serial No. 24,057. PUBLISHED SEPTEMBER 10, 1907.

66,131. CLOTHES-WRINGERS. THE AMERICAN WRINGER COMPANY, New York, N. Y.
Filed December 19, 1906. Serial No. 24,153. PUBLISHED SEPTEMBER 10, 1907.

66,132. GINGER-ALE AND ROOT-BEER. MARK D. BATCHELDER, Peoria, Ill.
Filed January 28, 1907. Serial No. 24,972. PUBLISHED SEPTEMBER 10, 1907.

66,133. FLANGES FOR PIANO-ACTIONS. FREDERICK C. BILLINGS, Milwaukee, Wis.
Filed July 29, 1907. Serial No. 29,101. PUBLISHED SEPTEMBER 10, 1907.

66,134. ADDING AND LISTING MACHINES. BURROUGHS ADDING MACHINE CO., Detroit, Mich.
Filed March 31, 1906. Serial No. 18,383. PUBLISHED SEPTEMBER 10, 1907.

66,135. IRONING-BOARDS. H. L. CAVANAGH & SONS, Chicago, Ill.
Filed December 6, 1906. Serial No. 23,817. PUBLISHED SEPTEMBER 10, 1907.

66,136. MINERAL WATER. DIE ACTIENGESELLSCHAFT APOLLINARIS BRUNNEN, Neuenahr, Germany.
Filed November 4, 1905. Serial No. 14,308. PUBLISHED SEPTEMBER 10, 1907.

66,137. CIGARS. GUSTAV A. MOEBS & Co., Detroit, Mich.
Filed August 1, 1907. Serial No. 29,161. PUBLISHED SEPTEMBER 10, 1907.

66,138. CIGARS. GUSTAV A. MOEBS & Co., Detroit, Mich.
Filed August 1, 1907. Serial No. 29,162. PUBLISHED SEPTEMBER 10, 1907.

66,139. HAMMOCKS. HERMAN L. HOHLFELD, Philadelphia, Pa.
Filed June 27, 1907. Serial No. 28,434. PUBLISHED SEPTEMBER 10, 1907.

66,140. SEWING-MACHINE HEADS AND ATTACHMENTS. ALBERT G. MASON, Cleveland, Ohio.
Filed December 29, 1906. Serial No. 24,325. PUBLISHED SEPTEMBER 10, 1907.

66,141. PRECIOUS STONES AND JEWELRY FOR PERSONAL WEAR. JOSHUA W. MAYER, New York, N. Y.
Filed July 9, 1907. Serial No. 28,688. PUBLISHED SEPTEMBER 10, 1907.

66,142. CERTAIN MUSICAL INSTRUMENTS. CHAS. MEISEL, New York, N. Y.
Filed January 11, 1906. Serial No. 16,129. PUBLISHED SEPTEMBER 10, 1907.

66,143. SMOKING AND CHEWING TOBACCO. PENN TOBACCO Co., Wilkes-Barre, Pa.
Filed August 12, 1907. Serial No. 29,356. PUBLISHED SEPTEMBER 10, 1907.

66,144. SOAP. THE PROCTER & GAMBLE COMPANY, Ivorydale and Cincinnati, Ohio, and Kansas City, Kans.
Filed September 25, 1905. Serial No. 12,948. PUBLISHED SEPTEMBER 10, 1907.

66,145. CIGARETTE-PAPER. S. RUBY & Co., Chicago, Ill.
Filed April 13, 1906. Serial No. 18,768. PUBLISHED SEPTEMBER 10, 1907.

66,146. COAL-TAR CEMENT. WARREN-EHRET COMPANY, Philadelphia, Pa.
Filed June 22, 1907. Serial No. 28,322. PUBLISHED SEPTEMBER 10, 1907.

66,147. CHAMPAGNE. WERLE & Co., Rheims, France.
Filed August 5, 1907. Serial No. 29,226. PUBLISHED SEPTEMBER 10, 1907.

66,148. CHAMPAGNE. WERLE & Co., Rheims, France.
Filed August 5, 1907. Serial No. 29,227. PUBLISHED SEPTEMBER 10, 1907.

66,149. CHAMPAGNE. WERLE & Co., Rheims, France.
Filed August 5, 1907. Serial No. 29,228. PUBLISHED SEPTEMBER 10, 1907.

66,150. CHAMPAGNE. WERLE & Co., Rheims, France.
Filed August 5, 1907. Serial No. 29,229. PUBLISHED SEPTEMBER 10, 1907.

66,151. CHAMPAGNE. WERLE & Co., Rheims, France.
Filed August 5, 1907. Serial No. 29,230. PUBLISHED SEPTEMBER 10, 1907.

66,152. CHAMPAGNE. WERLE & Co., Rheims, France.
Filed August 5, 1907. Serial No. 29,231. PUBLISHED SEPTEMBER 10, 1907.

66,153. WOODEN LADDERS, STEP-LADDERS, AND FLAGPOLES. JOHN A. WESTON, Newark, N. J.
Filed June 5, 1907. Serial No. 27,896. PUBLISHED SEPTEMBER 10, 1907.

66,154. LUBRICATING-OILS. GALENA-SIGNAL OIL COMPANY, Franklin, Pa.
Filed July 14, 1905. Serial No. 10,311. PUBLISHED SEPTEMBER 10, 1907.

66,155. CERTAIN CLOTHING. L. GREIF & BRO., Baltimore, Md.
Filed July 2, 1907. Serial No. 28,560. PUBLISHED SEPTEMBER 10, 1907.

66,156. NEWSPAPER. WILLIAM R. HEARST, New York, N. Y.
Filed May 14, 1906. Serial No. 19,496. PUBLISHED SEPTEMBER 18, 1906.

66,157. NEWSPAPER. WILLIAM R. HEARST, New York, N. Y.
Filed May 14, 1906. Serial No. 19,502. PUBLISHED SEPTEMBER 18, 1906.

66,158. TEXTILE COLLARS AND SHIRTS. JOHN V. FARWELL COMPANY, Chicago, Ill.
Filed May 23, 1907. Serial No. 27,616. PUBLISHED SEPTEMBER 10, 1907.

66,159. CERTAIN MUSICAL INSTRUMENTS. C. MEISEL, New York, N. Y.
Filed July 14, 1905. Serial No. 10,294. PUBLISHED SEPTEMBER 10, 1907.

66,160. CERTAIN CLOTHING. MENDEL, WEINSTOCK & COMPANY, Louisville, Ky.
Filed January 5, 1907. Serial No. 24,467. PUBLISHED SEPTEMBER 10, 1907.

66,161. CERTAIN OILS AND LUBRICANTS. THE MODOC COMPANY, Chester, Pa.
Filed December 4, 1906. Serial No. 23,760. PUBLISHED SEPTEMBER 10, 1907.

66,162. SHIRT-WAISTS, SHIRT-WAIST SUITS, AND WRAPPERS. PARKER & THOMES Co., Portland, Me.
Filed August 13, 1906. Serial No. 21,523. PUBLISHED FEBRUARY 12, 1907.

66,163. PORTLAND CEMENTS. SAML. B. BOWEN, Philadelphia, Pa.
Filed August 7, 1907. Serial No. 29,278. PUBLISHED SEPTEMBER 10, 1907.

66,164. DRESS-SHIELDS. THE C. E. CONOVER Co., New York, N. Y.
Filed April 10, 1907. Serial No. 26,609. PUBLISHED SEPTEMBER 10, 1907.

66,165. COFFEE. THE C. S. MOREY MERCANTILE COMPANY, Denver, Colo.
Filed August 7, 1907. Serial No. 29,266. PUBLISHED SEPTEMBER 10, 1907.

66,166. CANNED SALMON AND CANNED OYSTERS. CHARLES HEWITT & SONS Co., Des Moines, Iowa.
Filed July 22, 1907. Serial No. 28,949. PUBLISHED AUGUST 27, 1907.

66,167. CERTAIN CEREAL FOODS. CHARLES HEWITT & SONS Co., Des Moines, Iowa.
Filed August 12, 1907. Serial No. 29,363. PUBLISHED SEPTEMBER 10, 1907.

66,168. TOMATO-SAUCE. VINCENZO DEL GAIZO, Naples, Italy.
Filed October 2, 1906. Serial No. 22,439. PUBLISHED JULY 23, 1907.

66,169. BREAD. EAGLE ROLLER MILL COMPANY, New Ulm, Minn.
Filed August 13, 1907. Serial No. 29,370. PUBLISHED SEPTEMBER 10, 1907.

66,170. DRIED, FRESH, AND PRESERVED FRUITS AND VEGETABLE OILS. CHRISTIAN ECKARDT, Hamburg, Germany.
Filed December 31, 1906. Serial No. 24,353. PUBLISHED SEPTEMBER 10, 1907.

66,171. DRIED, FRESH, AND PRESERVED FRUITS AND VEGETABLE OILS. CHRISTIAN ECKARDT, Hamburg, Germany.
Filed December 31, 1906. Serial No. 24,354. PUBLISHED SEPTEMBER 10, 1907.

66,172. CANNED FRUITS AND VEGETABLES. THE FRANKLINVILLE CANNING Co., Franklinville, N. Y.
Filed August 7, 1907. Serial No. 29,270. PUBLISHED SEPTEMBER 10, 1907.

66,173. CANNED TOMATOES. HOLLINGSWORTH & Co., Augusta, Ga.
Filed August 10, 1907. Serial No. 29,331. PUBLISHED SEPTEMBER 10, 1907.

66,174. CANNED VEGETABLES AND FRUIT. THE HOLMES KEELER & SELLECK Co., Norwalk, Conn.
Filed February 7, 1906. Serial No. 16,808. PUBLISHED SEPTEMBER 10, 1907.

66,175. CANNED VEGETABLES AND FRUIT. THE HOLMES KEELER & SELLECK Co., Norwalk, Connecticut.
Filed February 7, 1906. Serial No. 16,809. PUBLISHED SEPTEMBER 10, 1907.

66,176. CERTAIN CEREAL FOODS. JOHNSON EDUCATOR FOOD COMPANY, Boston, Mass.
Filed January 21, 1907. Serial No. 24,804. PUBLISHED SEPTEMBER 10, 1907.

66,177. CANNED, DRIED, AND FRESH FRUITS AND OLIVE-OIL. MAYWOOD PACKING Co., Corning, Cal.
Filed March 21, 1906. Serial No. 18,093. PUBLISHED SEPTEMBER 10, 1907.

66,178. BREAD AND CAKES. ROBERT M. MORTON, Detroit, Mich.
Filed March 5, 1907. Serial No. 25,775. PUBLISHED SEPTEMBER 10, 1907.

66,179. FOOD-PRESERVATIVES. FRANZ MRÁZ, Prague, Austria-Hungary.
Filed February 28, 1907. Serial No. 25,660. PUBLISHED SEPTEMBER 10, 1907.

66,180. POWDERED YEAST. ROBERT O. MURPHEY, New York, N. Y.
Filed April 16, 1906. Serial No. 18,842. PUBLISHED SEPTEMBER 10, 1907.

66,181. CANNED FISH. NORTHWESTERN FISHERIES COMPANY, Seattle, Wash.
Filed February 20, 1907. Serial No. 25,464. PUBLISHED APRIL 9, 1907.

66,182. CANDY. NOVELTY CANDY Co., New York, N. Y.
Filed August 9, 1907. Serial No. 29,322. PUBLISHED SEPTEMBER 10, 1907.

66,183. AGRICULTURAL AND HORTICULTURAL SEEDS. PETER HENDERSON & Co., New York, N. Y.
Filed April 8, 1905. Serial No. 827. PUBLISHED SEPTEMBER 10, 1907.

66,184. EMERY-WHEELS. THE SAFETY EMERY WHEEL COMPANY, Springfield, Ohio.
Filed August 9, 1907. Serial No. 29,320. PUBLISHED SEPTEMBER 10, 1907.

66,185. TEAS. VINCENT SANFORD, Toledo, Ohio.
Filed November 2, 1905. Serial No. 14,221. PUBLISHED SEPTEMBER 10, 1907.

66,186. DRESSINGS FOR CANVAS, LEATHER, AND RUBBER BELTS. SAWYER BELTING COMPANY, Cleveland, Ohio.
Filed August 15, 1907. Serial No. 29,396. PUBLISHED SEPTEMBER 10, 1907.

66,187. WHEAT-FLOUR. HORACE E. SHERMAN, Boston, Mass.
Filed August 5, 1907. Serial No. 29,208. PUBLISHED SEPTEMBER 10, 1907.

66,188. COFFEE AND TEA. ST. LOUIS COFFEE AND SPICE MILLS, St. Louis, Mo.
Filed June 17, 1907. Serial No. 28,162. PUBLISHED SEPTEMBER 10, 1907.

66,189. SPICES AND FLAVORING EXTRACTS. ST. LOUIS COFFEE AND SPICE MILLS, St. Louis, Mo.
Filed June 17, 1907. Serial No. 28,163. PUBLISHED SEPTEMBER 10, 1907.

66,190. WHEAT-FLOUR. THOMPSON MILLING COMPANY, Lockport, N. Y.
Filed July 31, 1907. Serial No. 29,148. PUBLISHED SEPTEMBER 10, 1907.

66,191. BLACKING AND DRESSING FOR BOOTS, SHOES, AND LEATHER. C. G. DE TONNANCOUR, Montreal, Quebec, Canada.
Filed September 20, 1905. Serial No. 12,804. PUBLISHED SEPTEMBER 10, 1907.

66,192. [WITHDRAWN.]

66,193. CORN-STARCH. WABASH BAKING POWDER COMPANY, Wabash, Ind.
Filed December 19, 1906. Serial No. 24,132. PUBLISHED SEPTEMBER 10, 1907.

66,194. CATSUP AND FLAVORING EXTRACTS. WABASH BAKING POWDER COMPANY, Wabash, Ind.
Filed December 19, 1906. Serial No. 24,133. PUBLISHED SEPTEMBER 10, 1907.

66,195. COAL-TAR CEMENT. WARREN-EHRET COMPANY, Philadelphia, Pa.
Filed July 3, 1907. Serial No. 28,595. PUBLISHED SEPTEMBER 10, 1907.

66,196. SPOOL-COTTON, SEWING-COTTON, AND THREAD. THE AMERICAN THREAD COMPANY, Jersey City, N. J.
Filed August 14, 1907. Serial No. 29,381. PUBLISHED SEPTEMBER 10, 1907.

66,197. CERTAIN SURGICAL GOODS. THE DAVIS-BRIDAHAM DRUG COMPANY, Denver, Colo.
Filed March 16, 1907. Serial No. 26,002. PUBLISHED SEPTEMBER 10, 1907.

66,198. RAZORS AND RAZOR-BLADES. R. KORKEMAS & Co., New York, N. Y.
Filed April 18, 1907. Serial No. 26,775. PUBLISHED SEPTEMBER 10, 1907.

66,199. METAL CASTERS. WILLIAM GEORGE MEIN, London, England.
Filed September 26, 1905. Serial No. 13,040. PUBLISHED SEPTEMBER 10, 1907.

66,200. WAGONS AND CARRIAGES. HARRIE G. MOORE, Kansas City, Mo., assignor to Big Four, Kansas City, Mo., a Firm.
Filed September 29, 1906. Serial No. 22,393. PUBLISHED SEPTEMBER 10, 1907.

66,201. SUSPENDERS. PARAGON SUSPENDER COMPANY, Atlanta, Ga.
Filed July 31, 1907. Serial No. 29,133. PUBLISHED SEPTEMBER 10, 1907.

66,202. SIZING PLASTIC MATERIAL. NORMAN PELLOW Grand Rapids, Mich.
Filed July 17, 1907. Serial No. 28,850. PUBLISHED SEPTEMBER 10, 1907.

66,203. HAND CHEMICAL FIRE-EXTINGUISHERS. HARRY E. SAFFORD, Allegheny, Pa.
Filed July 23, 1907. Serial No. 28,997. PUBLISHED SEPTEMBER 10, 1907.

66,204. STOVES, RANGES, AND FURNACES AND PARTS THEREOF. SUMMIT FOUNDRY CO., Geneva, N. Y.
Filed June 5, 1907. Serial No. 27,893. PUBLISHED SEPTEMBER 10, 1907.

66,205. CANNED CORN. WATKINS PACKING CO., Odessa, Del.
Filed July 3, 1907. Serial No. 28,580. PUBLISHED AUGUST 13, 1907.

66,206. KNITTED UNDERWEAR. CARLETON DRY GOODS COMPANY, St. Louis, Mo.
Filed June 26, 1905. Serial No. 9,024. PUBLISHED APRIL 16, 1907.

66,207. LAWN-MOWERS. PETER HENDERSON & Co., New York, N. Y.
Filed April 8, 1905. Serial No. 825. PUBLISHED SEPTEMBER 10, 1907.

66,208. FLAVORING EXTRACTS. A. SCHILLING & Co., San Francisco, Cal.
Filed December 21, 1905. Serial 15,551. PUBLISHED MAY 15, 1906.

66,209. FOLDING STORM-FRONTS FOR VEHICLES. GEORGE E. SEIDEL, Richmond, Ind.
Filed July 5, 1907. Serial No. 28,606. PUBLISHED SEPTEMBER 10, 1907.

66,210. CERTAIN ELECTRICAL INSTRUMENTS. STROMBERG-CARLSON TELEPHONE MFG. COMPANY, Rochester, N. Y.
Filed May 22, 1905. Serial No. 6,260. PUBLISHED SEPTEMBER 10, 1907.

66,211. CERTAIN TOILET PREPARATIONS. MARY C. WHELAN, Washington, D. C.
Filed July 26, 1907. Serial No. 29,053. PUBLISHED SEPTEMBER 10, 1907.

LABELS

REGISTERED NOVEMBER 12, 1907.

13,869.—*Title:* "GOOD HEALTH." (For Coffee.) EDWIN J. GILLIES & Co., New York, N. Y. Filed September 19, 1907.

13,870.—*Title:* "ROBALO." (For Cigars.) R. & A. ABRAMS, New York, N. Y. Filed September 21, 1907.

13,871.—*Title:* "MEXICAN COMMERCE." (For Cigars.) PEDRO P. MARTINEZ, Dallas, Tex. Filed October 9, 1907.

13,872.—*Title:* "EXTENSO." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed October 11, 1907.

13,873.—*Title:* "ESTEMENTO." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed October 11, 1907.

13,874.—*Title:* "LAVA SOUP." (For a Remedy in Stomach Troubles.) JOHN J. RUEGG, Clifton, N. J. Filed September 23, 1907.

13,875.—*Title:* "DERMA VIVA." (For Toilet Preparations.) DERMA VIVA CO., Chicago, Ill. Filed July 29, 1907.

13,876.—*Title:* "QUICKHEAL." (For Ointments for External Use for Subduing Inflammation.) ELIZABETH DOOLITTLE, Salina, Kans. Filed September 25, 1907.

PRINTS

REGISTERED NOVEMBER 12, 1907.

2,151.—*Title:* "ANONA CHOCOLATES." (For Chocolates.) RUSSELL AND CO., Cambridge, Mass. Filed October 15, 1907.

2,152.—*Title:* "SWASTIKA AND BID BACKS, FIVE HUNDRED PLAYING CARDS." (For Playing-Cards.) THE UNITED STATES PLAYING CARD COMPANY, Norwood, Ohio. Filed September 28, 1907.

2,153.—*Title:* "54 INITIAL PLAYING CARDS." (For Playing-Cards.) THE UNITED STATES PLAYING CARD COMPANY, Norwood, Ohio. Filed October 4, 1907.

2,154.—*Title:* "OUR PLATFORM." (For a Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed September 30, 1907.

2,155.—*Title:* "SWASTIKA." (For Game-Cards.) SAMUEL ROY BEAL, Adrian, Mich. Filed September 30, 1907.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

JUNGE v. HARRINGTON.

Decided February 4, 1907.

1. INTERFERENCE—CONSTRUCTION OF THE ISSUE.

While applications are pending in this Office the claims thereof will be construed as broadly as the ordinary meaning of the language employed will permit.

2. SAME—SAME.

The party who first presents claims should not later be heard to urge limitations upon the terms thereof which might readily have been expressed therein had it been intended that they should be so restricted.

APPEAL from Examiners-in-Chief.

TRAVELING-GRATE FURNACE.

Mr. Edward A. Lawrence for Junge.

Messrs. Poole & Brown for Harrington.

MOORE, *Assistant Commissioner, now Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief affirming the decision of the Examiner of Interferences and awarding priority of invention to Junge upon the following issue:

1. In a furnace in which the fuel is caused to travel within the combustion-chamber, the combination of a fuel-support, a fuel-retarding device, means for adjusting said retarding device, to vary the distance between it and said fuel-support, and for securing it in its adjusted position.

2. In a furnace in which the fuel is caused to travel within the combustion-chamber, the combination of a fuel-support, a hollow fuel-retarding device, means for circulating a cooling agent through said retarding device, means for adjusting said retarding device to vary the distance between it and said fuel-support, and for securing it in its adjusted position.

3. In a furnace in which the fuel is caused to travel within the combustion-chamber, the combination of a fuel-support, a hollow fuel-retarding device provided with journals arranged at one side of its axial line, means for circulating a cooling agent through said retarding device, said cooling agent being introduced through one of said journals, and means for adjusting said retarding device to vary the distance between it and said fuel-support, and for securing it in its adjusted position.

Harrington, the senior party, has taken no testimony and relies upon his record date, September 28, 1904, as his date of conception and constructive reduction to practice. Junge alleges in his preliminary statement that he conceived the invention in May, 1903, disclosed it to others in June, 1903, and reduced it to practice in February, 1904.

Junge shows in the drawings of his application involved in this interference two specific forms of apparatus embodying his invention. Figures 12 and 13 show a vertically-sliding retarding device provided with a conduit for a cooling medium located over the rear end of a traveling grate. The retarding device is supported by one arm of a bell-crank lever and is adapted to be maintained in adjusted positions by a segment-and-pawl-controlled lever connected with the other member of the bell-crank lever.

Figs. 1 and 2 illustrate a pivoted water-cooled retarding device similarly located and adapted to be held in adjusted position by lugs or projections on a rod connected with an arm upon the retarding device.

The testimony shows, and it is not disputed, that a retarding device like that shown in Figs. 12 and 13 of his apparatus was installed by Junge in a furnace at the plant of Edward E. Rieck Company in February, 1904, and that retarding devices like that illustrated in Figs. 1 and 2 were placed in furnaces in the same place in March and June, 1904, and successfully operated. Inasmuch as these dates are all prior to Harrington's date of conception, the sole question to be determined is whether either of these devices constituted a reduction to practice of the invention by Junge.

It is contended in behalf of Harrington that the counts of the issue must be given a limited construction in view of the prior art as illustrated by patents to McKenzie, No. 679,240, and Coxe, No. 510,569. It is urged that in view of these patents the "means for adjusting said retarding device to vary the distance between it and said fuel-support" must be construed to include positive means for retaining it in its adjusted position and not merely means for raising and supporting the retarding device at different elevations.

The Examiner of Interferences and the Examiners-in-Chief concurred in finding that this limitation should not be read into the claims in issue and, further, that even if the claims were construed to have this limitation the devices installed by Junge in the Edward E. Rieck's furnaces constituted reduction to practice of the invention.

The conclusions of the lower tribunals as to both points are in my opinion correct.

In addition to the reasons given by the Examiners-in-Chief for refusing to place a limited construction upon the issue it is noted that the record shows that the claims in issue were first presented by Harrington. He should not now be heard to urge limitations upon the terms of such claims which might readily have been expressed therein had it been intended that they should be so restricted. In general while applications are pending in this Office the claims thereof will be construed as broadly as the ordinary meaning of the language employed will permit, for reasons stated in my decisions in *ex parte Cuter*, (123 O. G., 655,) *Briggs* v. *Lillie* v. *Cooke* v. *Jones and Taylor*, (116 O. G., 871,)

Podlesak and Podlesak v. *McInnerney*, (123 O. G., 1989,) and *Lovejoy* v. *Cady*, (123 O. G., 654.)

The testimony clearly shows that the retarding devices installed by Junge in the furnaces of the Edward E. Rieck Company each had "means for adjusting the retarding device" and that the pivoted devices put in operation in March and June, 1904, contained all the features called for by the terms of the issue.

These devices not only embodied the subject-matter of the issue when broadly construed, but also when read with the limitations sought to be imposed by Harrington. It is clear from the testimony of Junge (Q. 49) and Daniels (Q. 44) that the operating-lever for the sliding retarding device installed in February, 1904, was provided with a latch adapted to engage in any one of a series of notches in a quadrant for the purpose of adjusting the height of the retaining device above the grate, and therefore constituted a reduction to practice of counts 1 and 2 of the issue. In the pivoted retarding devices of March and June, 1904, the "reach-rod" for tilting the retarding device was provided with a series of notches adapted to engage a fixed lug on the boiler for the purpose of providing any desired adjustment in the elevation of the retarding device over the grate. (Junge, Q. 7[illegible] Daniels, Q. 62; Slean, X-Q. 36.)

It appears that the original "reach-rod" used with the pivoted retarding devices was broken and when a new rod was substituted but three notches were placed upon it—one for holding it at its lowest point, another for holding it at its highest point, and an intermediate notch holding it near its highest point. It is urged by Harrington that this fact indicates that there was no intent to provide means for adjusting the working height of the retarding device above the grate. Daniels (RD. Q. 28) and Junge (X-Q. 111) testify that it was found that with the uniform character of fuel being used the intermediate adjustments of the retarding device were unnecessary at the time the new lever was substituted. These notches could, moreover, be easily added at any time. In view of the fact that the device as originally constructed and used embodied all the features of the invention the subsequent omission of some of the intermediate notches based upon the knowledge of the requirements of the furnace does not cast doubt upon the original intent to provide for various adjustments.

The evidence clearly warrants the conclusion that Junge reduced the invention stated in all the counts of the issue to practice in the pivoted type of retarding device installed in March, 1904, which is prior to the date of conception accorded to Harrington by the filing of his application September 28, 1904.

The decision of the Examiners-in-Chief is affirmed.

EX PARTE THE SAMUEL WINSLOW SKATE MFG. CO.

APPLICATION FOR REGISTRATION OF LABEL.

Decided June 6, 1907.

LABEL—REGISTRABILITY.

The use of a paraph under certain words of a label which is otherwise devoid of artistic merit is not sufficient to render the label registrable.

ON APPEAL.

LABEL FOR SKATES.

Mr. Hartley H. Bartlett for the applicant.

MOORE, *Commissioner:*

This is an appeal from the action of the Examiner refusing to register a label intended to be used upon skates and entitled "Winslow's Skates The Best Ice and Roller Skates."

Registration was refused by the Examiner for the reason that the label is not an artistic production.

The letter "s" at the end of the words "Winslow's" and "Skates" has a continuation forming a paraph or underscoring of the words. Neither this feature nor the form of the letters used is novel or involves more than the skill of the printer. The production of the label is believed to involve no originality or creative power of the mind and in my opinion the Examiner's action was correct in refusing registration on the ground that the label is not an artistic production. (*Ex parte Baldwin*, 98 O. G., 1706; *ex parte Houghton*, 99 O. G., 1623; *ex parte The Clark Cast Steel Cement Company*, 99 O. G., 2968; *ex parte Booth*, 101 O. G., 219; *ex parte Ambrosia Chocolate Company*, 122 O. G., 3011.)

The decision of the Examiner is affirmed.

PYM v. HADAWAY.

PATENT INTERFERENCE.

Decided July 11, 1907.

1. INTERFERENCE—RULE 130.

Rule 130 does not confer upon a party the absolute right to contest his opponent's right to a claim, but allows him to do so only when the objections urged against his opponent's right to make the claim do not apply with equal force to his own case.

2. SAME—LIMIT OF APPEAL FROM DECISION ON PRIORITY.

The bringing of motions or the taking of petitions to the Commissioner will not stay the running of the limit of appeal from a decision on priority.

ON MOTION.

TACK-PULLER AND NAIL-DRIVER.

Messrs. Parker & Burton and *Mr. George H. Maxwell* for Pym.

Mr. Benj. Phillips and *Messrs. Phillips, Van Everen & Fish* for Hadaway.

MOORE, *Commissioner:*

This is a motion by Pym that the limit of appeal from the decision of the Examiner of Interferences rendered December 19, 1906, which expired January 8, 1907, be extended to include an appeal to the Board of Examiners-in-Chief filed June 24, 1907.

The record shows that in response to an order to show cause why judgment should not be rendered against him under Rule 114 Pym brought a motion to dissolve, alleging all the grounds for dissolution provided by Rule 122. Pym's motion to dissolve was finally denied by the Commissioner and judgment rendered against him under the provisions of Rule 114 for failure of the allegations of his preliminary statement to overcome Hadaway's record date. Thereafter Pym brought motions to set aside said judgment and for leave to take testimony to show that Hadaway had no right to make the claims in issue, contending that the claims as read upon Hadaway's structure comprised merely an aggregation, while as read upon Pym's structure formed true combinations. This motion having been finally decided adversely to Pym by the

Commissioner on appeal, Pym brought a motion that jurisdiction be restored to the Examiner of Interferences in order that he might contest the question of Hadaway's right to make the claim in issue under the provisions of Rule 130. This motion was denied by the Assistant Commissioner in a decision rendered June 6, 1907, upon the ground that the matters desired to be urged before the Examiner of Interferences related to the non-patentability of the issue with respect to both parties, which is not a question of priority that can properly be raised under Rule 130.

It is contended in behalf of Pym that his failure to file an appeal from the final decision of the Examiner of Interferences was because he understood that the clause of Rule 130 which provides that—

> where the patentability of a claim to an opponent is *material* to the right of a party to a patent, said party may urge the non-patentability of the claim to his opponent at final hearing before the Examiner of Interferences as a basis for the decision upon priority of invention and upon appeals from such decision—

conferred upon him an absolute right to be heard upon the question of Hadaway's right to make the claims and that he therefore believed he had no reason to file an appeal to the Examiners-in-Chief until after the decision of the Commissioner finally denying him this right under the circumstances of this case.

This contention is believed to be untenable. The decision of the Primary Examiner affirming Hadaway's right to make the claims and holding that the objections urged against Hadaway's right to make the claims applied with equal force to Pym's case, which was rendered December 15, 1906, and from which there was no appeal, gave Pym sufficient notice that the grounds upon which he desired to contest Hadaway's right to make the claims were not material to the question of priority and could not be urged at the final hearing under Rule 130. Appeal from the final decision of the Examiner of Interferences should therefore have been taken within the limit of appeal. It is well settled that the bringing of motions or the taking of petitions to the Commissioner will not stay the running of the limit of appeal from a decision on priority. The presentation of motions by Pym in the endeavor to obtain a decision by the Examiner of Interferences upon a question which could not properly be urged before him does not therefore constitute a sufficient excuse for the delay in taking an appeal from the final decision of the Examiner of Interferences.

The motion is denied.

EHRET v. STAR BREWERY COMPANY.

TRADE-MARK INTERFERENCE.

Decided October 12, 1907.

1. TRADE-MARK—ABANDONMENT—SUBSEQUENT RIGHTS OF OTHERS.

If the word "Star" or the representation of a star as a trade-mark for beer has become public property, an applicant is not entitled to the registration of a mark for the same class of goods consisting of two superimposed equilateral triangles forming a six-pointed star, with a monogram of the letters "G. E." in the center thereof, unless his mark differs from a mere star to such an extent that the simultaneous use of the same would not be likely to cause confusion in the mind of the public.

2. SAME—IDENTITY.

A mark consisting of a six-pointed star having in the center thereof a monogram of the letters "G. E." *Held* to so nearly resemble a mark in prior use by another, consisting of a six-pointed star surrounded by two concentric circles, between which are the words "The Celebrated Star Lager Beer," as to be likely to cause confusion in the mind of the public.

ON APPEAL.

TRADE-MARK FOR LAGER-BEER.

Messrs. Goepel & Goepel for Ehret.

Mr. Wallace A. Bartlett and *Mr. Fenelon B. Brock* for Star Brewery Company.

MOORE, *Commissioner:*

This is an appeal from a decision of the Examiner of Interferences awarding to the Star Brewery Company priority of adoption and use of "the representation of a star" as a trade-mark for lager-beer.

The mark shown in Ehret's application consists of two superimposed equilateral triangles forming a six-pointed star, with a monogram of the letters "G. E." in the center thereof. The mark shown in the certificate of registration of the Star Brewery Company is a six-pointed star surrounded by two concentric circles, between which are the words "The Celebrated Star Lager Beer." The essential feature of the registered mark is stated to be the word "Star" or the representation of a star.

The Star Brewery Company's registration is dated December 5, 1893, and it is alleged therein that the registrant is the successor to Hartmann Bros., by whom this mark was registered February 27, 1877, Serial No. 4,402.

Ehret's mark was registered June 9, 1896, Serial No. 28,360. He applied for registration under the act of 1905 on April 19, 1905, Serial No. 2,273, and it is this application that is involved in the present interference.

Ehret took no testimony-in-chief. The Star Brewery Company took testimony which it was alleged was not for the purpose of establishing a date of adoption and use, but merely for the purpose of perpetuating the testimony of certain witnesses who were growing old. Ehret then took rebuttal testimony. This testimony does not purport to rebut any testimony taken by the Star Brewery Company, but was taken for the purpose of showing that the mark as actually used by that company consisted of a star with either an inner or an outer circle, or both, and that persons other than the present contestants had for many years used trade-marks for beer in which a star was a prominent feature.

The Examiner of Interferences held that as the Star Brewery Company was a registrant the only question to be decided was Ehret's right to register his mark, that it was immaterial whether the Star Brewery Company used circles with the star or not, as they were mere embellishments, that as the Star Brewery Company was a registrant the use of a star as a trade-mark by other brewers was immaterial, and that as Ehret had taken no testimony to show adoption and use prior to the date of registration of the Star Brewery Company priority of adoption and use must be awarded to the latter.

Section 7 of the act of 1905 provides in part as follows:

> That in every case of interference or opposition to registration he (the Commissioner) shall direct the Examiner in charge of interferences to determine the right of registration to such a trade-mark.

Since the Star Brewery Company is a registrant, it is evident that the only question to be determined in this proceeding is the right of Ehret to register his mark. Since Ehret took no testimony to establish a date of adoption and use, but relied on his registration of June 9, 1896, as *prima facie* evidence of ownership as of that date, the Examiner of Interferences was clearly right in deciding priority of adoption and use in favor of the Star Brewery Company, since its registration is dated December 5, 1893.

It is contended by Ehret, however, that the evidence which he presented in rebuttal shows that the Star Brewery Company never held the exclusive right to the use of a star as a trade-mark for beer, as the mark which it actually used was a star and a circle. It is further contended that this evidence shows that for a number of years many brewers have used trade-marks an essential feature of which was a star and that as the Star Brewery Company made no effort to stop such use it has by its laches lost any right that it might have had to claim the exclusive use of a star broadly.

It is not seen that these contentions, even if well taken, affect Ehret's right to register. If a star as a trade-mark for beer has by reason of the laches of the Star Brewery Company become public property, then Ehret is not entitled to the exclusive use of such a mark nor to register the same. Not being entitled to register a mere star, Ehret could not register the mark shown in his application unless this mark differs from a mere star to such an extent that the simultaneous use of the same would not be likely to cause confusion in the mind of the public.

In *ex parte Flint and Walling Mfg. Co.*, (85 O. G., 148) a trade-mark consisting of a pictorial symbol of a star with a windmill in the center was refused registration in view of a registered mark the essential features of which were the letters "U S" and the word-symbol "Star" or the representation of a star. In *ex parte Swan and Finch Co.* (100 O. G., 682) a trade-mark described as a red star was refused registration in view of a prior mark consisting of a star inclosing the letter "G." In *Galena Oil Co.* v. *W. P. Fuller & Co.* (101 O. G., 1611) it was held that a five-pointed star is the equivalent of a six-pointed star as a trade-mark. In *Hutchinson* v. *Blumberg* (51 O. G., 829) it was held that a trade-mark consisting of the word "Star" and the symbol of a star was infringed by the use of a star and a crescent, even though in the one case the star was five-pointed and in the other six-pointed and the stars were printed in different colors.

In view of these decisions it is held that Ehret is not entitled to registration, whether the Star Brewery Company is entitled to the exclusive use of a mere star or such a mark is public property.

As to Ehret's contention that the mark actually used by the Star Brewery Company consisted of a star and a circle, it is apparent from a consideration of all the record that such a mark has been used by the company since a date prior to the date of Ehret's registration. Since this is true and since, in view of the decisions above cited, Ehret's mark must be held to so nearly resemble this composite mark as to be likely to cause confusion, Ehret must be denied registration under that portion of section 5 of the act of 1905 which provides that a trade-mark which so nearly resembles a known trade-mark owned and in use by another and appropriated to merchandise of the same descriptive properties as to be likely to cause confusion in the mind of the public shall not be registered.

The decision of the Examiner of Interferences is affirmed.

EX PARTE GRANGER & COMPANY.

APPLICATION FOR REGISTRATION OF TRADE-MARK.

Decided August 21, 1907.

TRADE-MARKS—ANTICIPATION.

Held that the trade-mark "Royal Blend" for coffee is anticipated by a registered mark comprising a Maltese cross surmounted by a crown and bearing the word "Royal." *Held* also that the word "Blend" for coffee is merely descriptive of the merchandise, and its presence as part of the mark does not confer any arbitrary or distinguishing significance upon the mark sought to be registered.

ON APPEAL.

TRADE-MARK FOR COFFEE.

Mr. George C. Shoemaker for the applicant.

BILLINGS, *Acting Commissioner:*

This is an appeal from the action of the Examiner of Trade-Marks refusing the registration of the mark "Royal Blend" for coffee upon the ground that the term "Blend" is descriptive of the character of the goods and the word "Royal" is anticipated in each of the following registered trade-marks for coffee:

McEwan, 16,160, January 8, 1889; Chase & Sanborn, 17,743, April 8, 1890; Washburn, 27,596, January 7, 1896; Wolfe, McMillan & Co., 32,260, December 20, 1898.

The term "Blend" is clearly descriptive as indicating a coffee comprising a mixture of two or more coffees of different characteristics and does not, therefore, confer any arbitrary or distinguishing feature upon the trade-mark claimed by the applicant.

Each of the trade-marks cited includes the word "Royal" as an essential feature, and the use of this word by the applicant would apparently indicate that the coffee produced or sold by it comprised a blend which included coffee that had become known as "Royal."

In the registration of Wolfe, McMillan & Co. the essential features of the trade-mark are said to consist "in a descriptive representation of the Maltese cross having radiating streamers between its arms and surmounted by a representation of a crown having trefoil points and bearing the word 'Royal.'" The name by which the coffee bearing this trade-mark would be known is "Royal," and it is clear that the use of the mark "Royal Blend" by the applicant would cause confusion in the mind of the public and tend to deceive purchasers who were familiar with the coffee of the registrant Wolfe, McMillan & Co.

Similar considerations indicate the confusion which would be likely to exist between the applicant's mark and each of the other registrations above referred to.

The decision of the Examiner of Trade-Marks is affirmed.

DAVIS v. KENNARD.

PATENT INTERFERENCE.

Decided October 22, 1907.

INTERFERENCE — PRELIMINARY STATEMENT — AMENDMENT — CARRYING BACK DATE OF REDUCTION TO PRACTICE.

The junior party to an interference permitted to amend his preliminary statement by carrying the date of the production of two full-sized devices from a date subsequent to the opponent's filing date, on which the opponent alone relies for reduction to practice, to a date prior thereto, where the motion to amend was brought only thirteen days after the filing of the original statement and before any testimony was taken and where it appears from affidavits filed that prior to the execution of his first preliminary statement he examined such records and consulted with such persons as would in his opinion enable him to secure all the necessary facts.

APPEAL on motion.

BUILDING CONSTRUCTION.

Mr. Ernest W. Marshall and *Messrs. Bradford & Hood* for Davis.

Messrs. Smith & Frazier for Kennard.

BILLINGS, *Assistant Commissioner:*

This is an appeal by Davis from the decision of the Acting Examiner of Interferences denying his motion for leave to amend his preliminary statement.

The preliminary statement of Davis was filed July 23, 1907. His motion to amend his preliminary statement was filed thirteen days later, on August 5, 1907. The only change appellant desires to make in his preliminary statement is the insertion of the allegation that in July, 1905, he produced two full-sized complete usable building-blocks embodying the essential features of all the counts of the interference. Kennard alleges no reduction to practice, save a constructive reduction to practice by the filing of his application February 19, 1906. If the amendment of the preliminary statement of Davis is permitted, it may have the effect of enabling him to carry his reduction to practice from a subsequent date to a date prior to Kennard's filing date.

It appears from the affidavits in support of the motion that Davis executed and delivered his original preliminary statement to his attorney in July 22, 1907, and that said attorney left the same night for Washington, where the preliminary statement was filed on July 23, 1907.

The affidavits of Davis and his wife are to the effect that during the night of July 22, after the preliminary statement had left his possession, Davis told his wife of the preliminary statement he had executed and reviewed with her the history of the invention; that she then recalled that her husband had made a journey to Indianapolis in July, 1905, and after his return told her he had constructed two full-sized hollow building-blocks; that she had forgotten this fact until her memory was refreshed by this conversation, and that Davis had also forgotten about these facts, but recalled them distinctly upon his memory being thus refreshed.

This showing concerning the business trip to Indianapolis and the work of Davis on vitrified hollow tiles is corroborated by the affidavit of the stenographer of Davis. It also appears that Davis communicated these facts to his attorney upon his next interview with him during the following week and that the motion to amend followed promptly.

The motion was denied by the Acting Examiner of Interferences on the ground that Davis had not shown that the facts discovered on July 22 could not have been discovered before the execution of his preliminary statement by careful and diligent search or consultation with persons likely to be familiar therewith.

Davis in his affidavit does state that he made careful examination of such records as were in his possession or accessible to him, that he consulted with the persons whom he thought likely to have any knowledge of the development of his invention, and that he wrote to persons with whom he could not personally consult. This showing is criticised by the Acting Examiner of Interferences on the ground that the names of the parties he claims to have consulted are not given; also for the reason that it does not appear that he had consulted with his wife or stenographer prior to July 22 or that if he had done so he could not have discovered the facts prior to the execution of his original preliminary statement.

While the showing would have been more complete if this matter had been set forth in the affidavits, it is believed to be sufficient under the circumstances of this case. (*Whitney* v. *Gibson*, 86 O. G., 1983.) The motion to amend was brought with great promptness and prior to the taking of any testimony, so that Kennard's interests will not be injured except by the proven facts. To deny the motion may result in the issue of an invalid patent to one who is not the prior inventor. This case is similar to that of *Silver* v. *Eustis*, (98 O. G., 2361,) in which it was held:

> In the present case Eustis states in his affidavit that he had forgotten the date of his earliest conception and reduction to practice. The affidavits of Kellogg and Chamberlain corroborate that of Eustis, so that if the facts alleged are true they prove that Eustis conceived the invention, disclosed it to others, and reduced to practice at a time prior to that set forth in his original statement. Should the Office refuse to permit the amendment to the statement, it might result in the allowance of a patent to one who is not the prior inventor. Justice demands that the possibility of such a result be removed so far as it can be done without injury to others. In this case Silver will not be injured except as the true state of facts will injure him. He will not be misled, nor will the expenses of the proceeding be increased.

The decision of the Acting Examiner of Interferences is reversed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 7, 1907.

J. Meyer & Company, their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of P. Raguet Fils & R. Vignes, of Troyes, France, for registration of a trade-mark and a trade-mark registered to J. Meyer & Company, of New York, N. Y., and it appears from the record of the case that the registrant, J. Meyer & Company, cannot be located.

Notice is therefore hereby given to said J. Meyer & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 4, 1907.

McCulloch & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Alart & McGuire, of 66 Madison street, borough of Manhattan, New York, N. Y., for registration of a trade-mark

and a trade-mark registered to McCulloch & Company, of 88 Water street, New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said McCulloch & Company having been returned undelivered, notice is hereby given to the said McCulloch & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 18, 1907.

Reade Manufacturing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The Hewitt Brothers Soap Company, of Dayton, Ohio, for registration of a trade-mark and a trade-mark registered to the Reade Manufacturing Company, of Chicago, Ill., and it appears from the record of the case that the registrant, Reade Manufacturing Company, or its attorneys of record cannot be located.

Notice is therefore hereby given to said Reade Manufacturing Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 14, 1907.

The Saint Paul Roller Mill Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Ralston Purina Company, of Eighth and Gratiot streets, St. Louis, Mo., for registration of a trade-mark and a trade-mark registered to The St. Paul Roller Mill Company, of St. Paul, Minn. and the notice of said declaration mailed by the Patent Office in the usual manner to the said The St. Paul Roller Mill Company having been returned undelivered, notice is hereby given to the said The St. Paul Roller Mill Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 16, 1907.

John A. Uhland, his assigns or legal representative, take notice:

An interference has been declared by this Office between an application of the Anti-Cori-Zinc Chemical Company, of St. Louis, Mo., for registration of a trade-mark and a trade-mark registered to John A. Uhland, of Denver, Colo., and it appears from the record of the case that the registrant, John A. Uhland, cannot be located.

Notice is therefore hereby given to said John A. Uhland, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 26, 1907.

Mayer Sam & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Palace Clothing Company, of 709-711 Kansas avenue, Topeka, Kans., for registration of a trade-mark and a trade-mark registered to Mayer Sam & Company, of 24 West One Hundred and Twenty-fifth street, New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Mayer Sam & Company having been returned undelivered, notice is hereby given to the said Mayer Sam & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 29, 1907.

Robert George, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The American Shoe Polish Company, of Chicago, Ill., for registration of a trade-mark and a trade-mark, No. 146,682, dated August 16, 1887, registered to Robert George, of Chicago, Ill. The notice of said declaration mailed by the Patent Office in the usual manner to the said Robert George at his known address, Chicago, Ill., has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the said Robert George, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 31, 1907.

The Kittredge Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Business Magazine Company, of Knoxville, Tenn., for registration of a trade-mark and a trade-mark registered to The Book-keeper Publishing Company, Limited, of 61 Fort street, Detroit, Mich., and a trade-mark registered to The Kittredge Company, of 800 Broad street, Newark, N. J., and 79 Reade street New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said The Kittredge Company having been returned undelivered, notice is hereby given to The Kittredge Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.
[BY AUTHORITY OF CONGRESS.]

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ISSUE OF NOVEMBER 19, 1907.

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Designs	12	No. 38,885 to No. 38,896, inclusive.
Trade-Marks	139	No. 66,212 to No. 66,350, inclusive.
Labels	17	No. 13,877 to No. 13,893, inclusive.
Prints	5	No. 2,156 to No. 2,160, inclusive.
Reissues	4	No. 12 720 to No. 12,723, inclusive.
Total	847	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	2	.....	New Hampshire	2	.....
Arizona Territory	2	.....	New Jersey	28	7
Arkansas	7	.....	New Mexico Ter't'y	.....	.....
California	28	2	New York	111	54
Colorado	9	3	North Carolina	4	1
Connecticut	16	2	North Dakota	2	.....
Delaware	.....	.....	Ohio	62	3
District of Columbia	1	1	Oklahoma Territ'y	2	.....
Florida	1	.....	Oregon	2	.....
Georgia	.....	1	Panama	.....	.....
Hawaii Territory	.....	.....	Pennsylvania	56	14
Idaho	1	.....	Philippine Islands	.....	.....
Illinois	69	10	Rhode Island	4	1
Indian Territory	1	.....	South Carolina	1	.....
Indiana	14	.....	South Dakota	1	.....
Iowa	12	2	Tennessee	2	1
Kansas	4	.....	Texas	5	4
Kentucky	11	.....	Utah	3	.....
Louisiana	1	1	Vermont	3	1
Maine	6	2	Virginia	1	5
Maryland	8	3	Washington	5	.....
Massachusetts	54	8	West Virginia	2	2
Michigan	15	3	Wisconsin	7	1
Minnesota	9	4	Wyoming	1	.....
Mississippi	2	.....	U. S. Army	.....	.....
Missouri	18	7	U. S. Navy	.....	.....
Montana	.....	.....			
Nebraska	4	1	Total to citizens of the United States	600	144
Nevada	1	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	3	2	Netherlands	.....	.....
Belgium	1	.....	Newfoundland	.....	.....
Brazil	.....	.....	New South Wales	.....	.....
British West Indies	.....	.....	New Zealand	1	.....
Canada	7	1	Norway	1	.....
Cape Colony	.....	.....	Persia	.....	.....
Chile	.....	.....	Queensland	.....	.....
China	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	1	.....	Scotland	.....	.....
Denmark	1	.....	South Australia	.....	.....
Ecuador	.....	.....	Spain	.....	.....
England	21	7	Sweden	1	.....
France	12	3	Switzerland	1	1
Germany	27	3	Transvaal, South Africa	.....	.....
Haiti	1	.....	Turkey	1	.....
Ireland	.....	.....	Western Australia	.....	.....
Italy	3	.....			
Japan	.....	.....	Total to citizens of foreign countries	82	17
Java	.....	.....			
Mexico	.....	.....			

Notice.

Beginning with this date and number of the OFFICIAL GAZETTE, all patents having five claims or less are printed in full. Where patents have more than five claims each, only five claims are printed, and the number of claims omitted is indicated in each case. This plan will be followed in each succeeding number of th GAZETTE. All the specifications and claims will be printed in the patents and library edition in large type.

Attorneys.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., November 14, 1907.

This Office has been advised by the Secretary of the Interior of the disbarment of the following attorneys from practice before the Department or any Bureau thereof: Azro L. Blake, Lake Placid and Massena, N. Y., October 30, 1907; William J. Miller, 375 Bleecker street, New York, N. Y., November 1, 1907.

W. F. WOOLARD,
Chief Clerk.

Examiners' Letters and Amendments.

Examiners are directed to recite in each letter in an application the date of the action by the applicant to which it is a reply, and applicants are requested to indicate in their actions on an application the date of the last Office letter.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business November 18, 1907.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
303	XVII. Linotyping; Printing; Matrix-Making; Nut and Bolt Locks; Clutches.	Oct. 29	Oct. 10	198
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Toilet; Signals; Garment-Supporters.	Oct. 25	Aug. 21	710
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Oct. 23	Sept. 17	280
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Measuring Instruments; Wind-Wheels; Engraving.	Oct. 19	Oct. 16	336
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Towers; Iron Structures.	Oct. 17	Oct. 14	249
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Oct. 14	Sept. 27	312
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electricity, Medical and Surgical; Electric Signaling; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas and Canes.	Oct. 11	Aug. 22	314
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants and Flowers.	Oct. 10	Sept. 19	296
147	XXIX. Coopering; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking-Tools; Woodworking; Fire-Escapes; Ladders.	Oct. 10	Sept. 10	354
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Oct. 8	Oct. 2	219
172	XXXI. Alcohol; Charcoal and Coke; Ammonia, Water, and Wood Distillation; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Oils, Fats, and Glue; Water Purification; Mineral Oils.	Oct. 7	Sept. 19	279
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Fishing and Trapping; Stationery; Stone-Working; Educational Appliances.	Oct. 7	Sept. 17	463
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Leather Manufactures; Nailing and Staping; Whips and Whip Apparatus; Harness.	Oct. 3	Sept. 5	369
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Oct. 2	Sept. 26	344
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Presses; Tobacco; Store-Service; Pneumatics.	Oct. 2	Sept. 3	357
327	XVIII. Steam-Engines; Steam-Boilers; Steam-Engine Valves; Steam and Vacuum Pumps; Injectors and Ejectors.	Oct. 2	Aug. 8	354
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Oct. 2	July 25	472
378	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Oct. 1	Sept. 26	375
222	X. Carriages and Wagons	Oct. 31	Sept. 3	548
153	XXX. Lamps and Gas-Fittings; Fluid-Pressure Regulators; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Sept. 30	Sept. 24	264
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Sept. 27	Aug. 31	294
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Sept. 27	Aug. 27	391

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Sept. 26	Sept. 19	361
167	V. Bookbinding; Harvesters; Jewelry; Music.	Sept. 26	Aug. 31	379
322	XII. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Sept. 24	Aug. 30	646
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Sept. 20	July 1	538
238	XIX. Furnaces; Stoves and Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel.	Sept. 19	Aug. 9	491
142	IX. Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage; Air and Gas Pumps.	Sept. 18	Sept. 6	256
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Sept. 14	Aug. 1	541
312	VII. Games and Toys; Mechanical Motors; Paper Manufactures; Velocipedes; Optics.	Sept. 12	Sept. 9	371
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heat-Engine Plants.	Sept. 12	Aug. 26	623
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Sept. 10	Aug. 22	545
308	XV. Bread, Pastry, and Confection Making; Coating; Laminated Sheets and Fabrics; Fuel; Glass; Hydraulic Lime and Cement; Paper-Making; Paving; Plastics; Plastic Block and Earthenware Apparatus; Plastic Compositions; Photography.	Sept. 9	Sept. 5	584
107	XXXVII. Electricity, Conductors; Electric Lighting; Electricity, General Applications.	Sept. 7	July 11	680
307	XIV. Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal-Ware Making; Tools; Wire-Working; Compound Tools.	Aug. 26	July 8	250
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Aug. 24	July 24	626
280	XL. Deposit and Collection Receptacles; Special Receptacles and Packages; Check-Controlled Apparatus; Fine Arts; Paper Receptacles; Package and Article Carriers; Wooden Receptacles; Baggage; Lighting-Fixtures; Cloth, Leather, and Rubber Receptacles.	Aug. 14	June 28	952
109	XVI. Telegraphy; Telephony	Aug. 6	June 10	660
105	XXVI. Electricity, Generation; Electric Heating and Rheostats; Electric Railways; Motive Power.	Aug. 5	July 15	487
321	XXXIX. Water Distribution; Baths and Closets.	July 24	June 19	786
352	XLI. Railway Draft Appliances; Railway-Ties and Fasteners; Railway-Rails and Joints; Resilient Tires and Wheels.	July 11	May 21	1231

Total number of applications awaiting action 18,785

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS.			
	Trade-Marks	Nov. 8	Oct. 26	279
	Designs	Nov. 9	Oct. 8	48
	Labels and Prints			

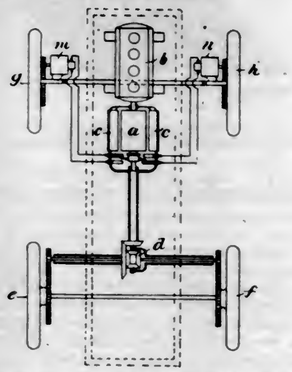
Delivery of Patent.

The patent will be delivered or mailed on the day of its date to the attorney of record, if there be one; if not, to the patentee; or, if the attorney so request, to the patentee or assignee of an interest therein.

PATENTS

GRANTED NOVEMBER 19, 1907.

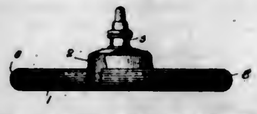
871,098. MEANS FOR DRIVING MOTOR ROAD-VEHICLES. MARTIN ALBRECHT, Friedberg, Germany, assignor to Felten & Guilleaume-Lahmeyerwerke Actien-Gesellschaft, Frankfort-on-the-Main, Germany. Filed Feb. 20, 1907. Serial No. 358,468.



1. In a motor car, the combination of a plurality of independent driving wheels, a prime motor *b*, an electric generator, differential gearing connected with one element of said generator, and with two of the driving wheels, and electric motors adapted to be energized by said generator and arranged to drive others of said wheels.

2. In a motor car, the combination of two parallel axles, a plurality of driving wheels independently mounted on each axle, a prime motor *b*, an electric generator, a differential gear mechanically connected with one member of said generator, means mechanically connecting said gearing with the wheels on one axle, and electrically operated means in circuit with said generator and adapted to drive the wheels on the other axle.

871,099. STAND FOR INK-BOTTLES. HUGH J. BAKER, Ambridge, Pa. Filed June 19, 1907. Serial No. 379,743.

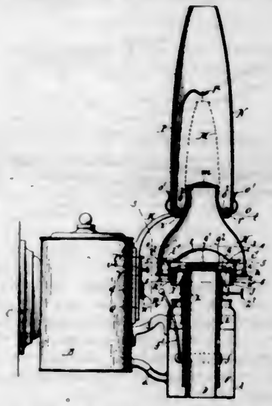


1. An ink-stand support made of a flexible material and consisting of a receptacle-like structure having peripheral rim, a cup carried centrally of said structure, and radially disposed ribs connecting said cup with said rim.

2. An ink stand support fabricated from flexible material and consisting of a receptacle-like structure having a rim, and a cup carried centrally of said rim.

871,100. OIL-BURNER FOR LAMPS AND STOVES. FREDERICK A. BAYNES, Buffalo, N. Y. Filed Mar. 12, 1906. Serial No. 305,501.

1. A burner comprising a tubular wick, an inner air tube arranged within the wick and extending practically to its upper end so as to cover the inner side of the wick, an outer wick tube surrounding the wick and terminating below the upper end of the wick so as to expose the outer side of the wick, and a generator screen having an upwardly dished foraminous central part which is arranged above the bore of said inner tube and a laterally projecting foraminous flange which is arranged transversely on the upper end of said wick, substantially as set forth.



2. A burner comprising a tubular wick, an inner air tube arranged within the wick and extending practically to its upper end so as to cover the inner side of the wick, an outer wick tube surrounding the wick and terminating below the upper end of the wick so as to expose the outer side of the same, a generator screen arranged transversely on the upper end of the wick and extending over said tubes beyond the outer side of the outer tube, a dome having a central opening in its bottom in which said wick, tubes and screen are arranged, and means for detachably securing said screen at its edge to said bottom, substantially as set forth.

3. A burner comprising a tubular wick, an inner air tube arranged within the wick and extending practically to its upper edge, an outer wick tube surrounding the wick and terminating below the upper edge of the wick, a generator screen arranged above said wick and tubes and extending laterally beyond the outer side of the outer tube, a dome having a central opening in its bottom which receives said wick, tubes and screen, and means for securing said screen at its edge to said bottom, consisting of a socket arranged on said bottom and having a flange against which one side of said screen bears, a circular clamping member having a flange bearing against the opposite side of said screen and a pin and hook connecting said socket and clamping member, substantially as set forth.

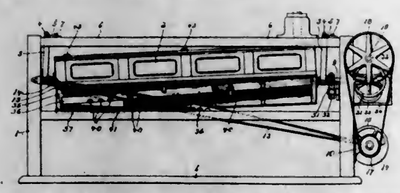
4. A burner comprising a tubular wick, an inner air tube arranged within the wick and extending practically to its upper edge, an outer wick tube surrounding the wick and terminating below the upper edge of the wick, a generator screen arranged over said wick and tubes and projecting laterally beyond the outer side of the outer tube, a dome arranged above said wick, tubes and screen, a bottom for said dome having a central opening in which said wick, tubes and screen are arranged, a cylindrical wall projecting upwardly from the edge of said opening

and having an internal flange which bears against the upper side of said screen and a cylindrical hood secured within said wall and having an internal flange which bears against the underside of said screen, substantially as set forth.

5. A burner comprising a tubular wick, an inner air tube arranged within the wick and extending practically to its upper end so as to cover the inner side of the wick, an outer tube surrounding the wick and terminating below the upper end of the wick so as to expose the outer side of the wick, a generator screen arranged on the upper end of the wick, a dome arranged above said wick and tubes, a bottom for said dome having a central opening which receives the upper ends of said wick, screen and tubes, and a circular spreader arranged in the dome above said wick, tubes and screen and extending laterally beyond the screen and separated at its edge from the inner side of the dome by an annular passage which connects the spaces in the lower and upper parts of the dome, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

871,101. GRADER. GEORGE A. BELL, Aurora, Ill. Filed June 24, 1907. Serial No. 380,587.



1. In a grader, the combination with a supporting frame, of a sieve box, trunnions on said box, hangers pivotally attached at one end of the frame, supporting bars secured to the hangers and provided with bearings to receive the trunnions, means for moving the hangers to vibrate the box longitudinally, and means for rocking the box on its trunnions.

2. In a grader, the combination with a supporting frame, of a sieve box, hangers pivotally attached at their lower ends to said box to support the same, bearings for the upper ends of said hangers adjustably secured to the frame, a shaft extending transversely of the frame, an eccentric on said shaft and an eccentric rod pivotally attached to the box at one end and to the eccentric at its opposite end.

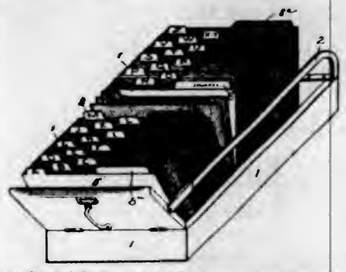
3. In a grader, the combination with a supporting frame, of a sieve box, a shaft extending transversely of the frame, an eccentric on said shaft, an eccentric rod pivotally attached at one end to the box and at its opposite end to the eccentric, means for supporting the box adapted to permit the longitudinal vibration thereof and to cause the box to put a pressure upon the eccentric in one direction of its movement, and a balance wheel on the shaft having a weighted side at the same side of the shaft on the large side of the eccentric.

4. In a grader, the combination with a supporting frame, of a sieve box, a shaft extending transversely of the frame, an eccentric on said shaft, an eccentric rod pivotally attached at one end to the box and at its opposite end to the eccentric, hangers pivotally attached at their lower ends to said box to suspend the same in the frame, bearings for the upper ends of said hangers adapted to be adjusted longitudinally of the frame to cause the box to press longitudinally upon the eccentric rod toward the eccentric, and balance wheels provided with a weight at one side adjustably secured to said shaft with the major portions of the weights lying at opposite sides of a plane extending through the axis of the shaft and the axis of the eccentric.

5. In a grader, the combination with a supporting frame, of a sieve box, a trunnion secured to each end of said box, supporting bars provided with bearings to receive the trunnions, hangers pivotally attached to the ends of said supporting bars, bearings on the frame for said hangers, means for vibrating the box longitudinally, an arm secured to one of the trunnions, and means engaging said arm to move the same and rock the box on its trunnions.

[Claims 6 to 11 not printed in the Gazette.]

871,102. INDEX-FILING SYSTEM. JOHN E. BLAINE, Jr., Cincinnati, Ohio, assignor to Globe-Wernicke Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Nov. 13, 1906. Serial No. 343,243.

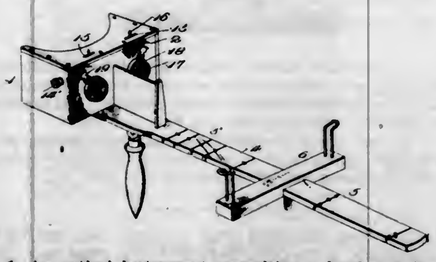


1. A series of index cards distinguished by having projecting indicating tabs, the said projecting tabs occupying a space in one portion of the retaining compartment, combined with a series of folders in groups for each index card, said folders being provided with indexing tabs occupying a position opposite to that of the tabs of their respective indexing cards, substantially as described.

2. A series of index cards distinguished by having projecting indicating tabs, the said projecting tabs occupying a space in one portion of the retaining compartment, combined with a series of folders in groups for each index card, said folders being provided with indexing tabs occupying a position opposite to that of the tabs of their respective indexing cards, and a series of miscellaneous folders provided with indexing tabs occupying a position in the portion of the compartment occupied by the indexing tabs of the index cards, substantially as described.

3. A filing system of the character described comprising a series of index cards with indexing tabs occupying a position in one portion of the retaining compartment, a series of miscellaneous folders provided with indexing tabs in line with the tabs of the indexing cards, and a series of other folders having indexing tabs occupying a position in the other portion of the retaining compartment opposite to that of the tabs of the indexing cards, whereby the filing and inspection of any particular folder or paper contained therein may be accomplished without loss of time, substantially as described.

871,103. OPTICAL INSTRUMENT. EPHRAIM C. BRIDGE, Chariton, Iowa. Filed Apr. 26, 1907. Serial No. 370,476.

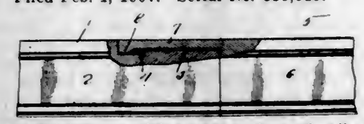


1. An optical instrument comprising a hood, a pair of lenses mounted in the hood, means for moving the lenses toward and away from each other, a point extending up through the hood in line with the axis of each lens,

whereby the relation of the lenses to the eyes of the patient can be determined, and a beam extending out from the hood carrying a slide adapted to support testing cards, a scale on the beam arranged in accordance with the strength of the lenses, and a second scale on the side of the beam arranged in accordance with the strength of lens necessary to correct the patient's vision.

2. An optical instrument comprising a hood, a pair of blocks mounted in the front of the hood, a pair of prismatic spherical lenses mounted in the blocks, a rod provided with right and left hand screw threaded portions mounted in the hood and adapted to engage correspondingly screw threaded portions on the blocks, one end of said rod extending through the hood and provided with a turning button whereby by the turning of the red the blocks carrying the lenses may be moved toward and away from each other, the whole constituting a means whereby the muscles of the eyes of a patient may be exercised.

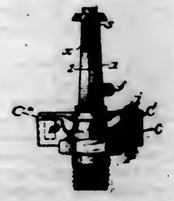
871,104. RAIL-JOINT. MORIS H. BRINK, Blairsville, Pa., assignor of one-half to John B. Carson, Blairsville, Pa. Filed Feb. 1, 1907. Serial No. 355,315.



1. A rail joint comprising two sections of rails having confronting ends, the head of one of said rails having a dove tail groove having the bottom thereof at its inner end terminating in a recess, the other of said rails having its head provided with an outwardly extending tongue having beveled sides and adapted to slide into the groove, and a depending lug or enlargement carried by the outer end of said tongue and adapted to engage in the said recess, said lug or enlargement being of a less length than said recess to permit of a slight longitudinal movement of said rails, substantially as described.

2. A rail joint consisting of two sections of rails, the head of one of said rails having a dove-tail groove formed therein terminating at its inner end in a recess, a tongue carried by the head of the other of said rails and adapted to fit in said groove, said tongue having the sides beveled, and a depending lug or enlargement carried by said tongue and adapted to engage in said recess.

871,105. AUTOMATIC SPRINKLER. CHARLES E. BUELL, North Plainfield, N. J., assignor to General Fire Extinguisher Company, New York, N. Y., a Corporation of New York. Filed May 18, 1897. Serial No. 637,116.



1. An automatic sprinkler having a valve closing its outlet, a fusible fastening for said valve, and a removable cartridge in an opening in said sprinkler body at one side of the valve and adapted to exert a tipping pressure on the valve when acted upon by heat, substantially as described.

2. An automatic sprinkler having a valve closing its outlet, a fusible fastening for said valve, a projection on the valve at one side thereof in operative relation to a thermally ignited charge, and a removable primer in operative relation to said thermally ignited charge, substantially as described.

3. An automatic sprinkler having its outlet held normally closed by a fusible fastening, a projection on the valve at one side thereof and in operative relation to a thermally ignited charge, and at the other side thereof a projection from the said valve to a thermally expanded charge, the said thermally ignited and expanded charges being adapted to exert pressure for lifting said valve when acted upon by heat, substantially as described.

4. A removable cartridge for an automatic sprinkler comprising a firing mechanism actuated by a spring which is held under tension by an easily fusible material, substantially as described.

5. A removable cartridge for an automatic sprinkler comprising a tube filled with powder, a friction plunger held in place in the bottom of said powder filled tube by a spring, said spring being held under tension by solder and the whole inclosed in a casing adapted to be secured to a sprinkler, substantially as described.

871,106. HARNESS. EDWARD G. BURKHARDT, Oakland, Cal., assignor to Main-Winchester-Stone Company, Oakland, Cal., a Corporation of Nevada. Filed Feb. 9, 1907. Serial No. 356,600.

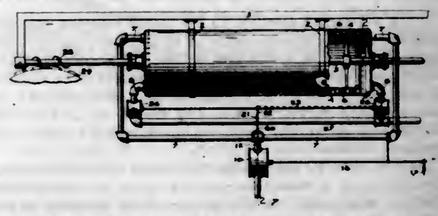


1. In a harness, a breeching strap having a portion adapted to rest upon the hips of a horse and having its ends crossed to underlie the belly of the horse and terminating in means formed for engagement with the tips of the shafts.

2. In a harness, a breeching strap having a portion adapted to rest upon the hips of a horse and having its ends crossed to underlie the belly of the horse and terminating in thimbles adapted to fit over the tips of the shafts.

3. In a harness, a breeching strap having a portion adapted to rest upon the hips of a horse and having its ends crossed to underlie the belly of the horse and terminating in means formed for engagement with the tips of the shafts, and a crupper strap secured to the portion of the breeching strap adapted to overlie the hips of the horse.

871,107. REVERSING MECHANISM FOR TURBINES. HANS P. CHRISTENSEN, San Francisco, Cal. Filed Aug. 12, 1907. Serial No. 388,099.



1. In an apparatus of the character described, the combination, with a turbine having an inlet and an outlet at each end, of inlet pipes leading to the said inlets, a supply pipe for the pressure fluid, connected with said inlet pipes, a valve and means for moving said valve to open either of said connections and close the other, valves controlling the outlets at the ends of the turbine, and means, actuated by the pressure fluid when the first-named valve is so operated, to close one of said latter valves and open the other, substantially as described.

2. In an apparatus of the character described, the combination of a turbine, a pipe for supplying the pressure fluid, a chamber connected with said pipe, conduits leading therefrom to the respective ends of the turbine, a valve movable over the ends of said conduits to close either end and open the other, pistons in the respective conduit, movable by the pressure fluid escaping from said chamber,

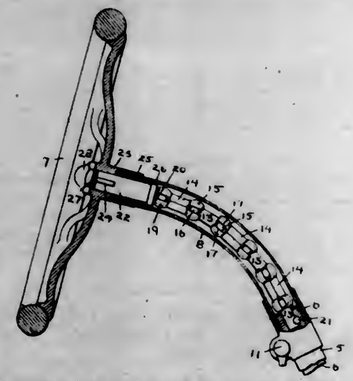
exhaust pipes leading from the respective ends of the turbine, valves controlling said exhaust pipes, a rock shaft for operating said valves in unison, and a connection between rock shaft and each of said pistons, whereby the movement of either piston operates said rock shaft, substantially as described.

871,108. TRANSMISSION-GEAR FOR MOTOR-LORRIES AND OTHER VEHICLES. ADOLPHE CLÉMENT, Levallois-Perret, France. Filed Mar. 16, 1905. Serial No. 250,468.



In a motor vehicle, an axle C for the driven wheels, a differential gear mounted outside of the axle, a longitudinal driving shaft T connected to the driving pinion of the differential gear by a universal joint S' and connected to the main shaft by a universal joint S, and a pair of stays H H' connected to said axle near its ends and converging to the center of the vehicle and connected by a universal joint I J to the frame of the vehicle.

871,109. STEERING MECHANISM FOR MOTOR-CARS. GEORGE H. COATES, Worcester, Mass. Filed Mar. 28, 1904. Serial No. 200,264.



1. In a steering mechanism for motor vehicles, the combination with a rotating shaft, of an inclosing case for said shaft consisting of a straight section and a curved section capable of rotating about an axis coincident with the axis of said straight section, a joint between said straight section and said curved section, and means for locking said curved section at any point in its movement about said straight section.

2. In a steering mechanism for motor vehicles, the combination with a rotatable steering shaft, of an inclosing case for said shaft, consisting of a fixed straight section and a curved section provided with a sleeve inclosing the upper end of the straight section, whereby said curved section is capable of rotation about the axis of said straight section, and means for tightening said sleeve on said straight section.

3. In a steering mechanism for motor vehicles, the combination with a rotating shaft, of an inclosing case for said shaft consisting of a straight section and a curved section, and a split sleeve connected with said curved section and detachably attached to the upper end of said straight section.

4. In a steering mechanism for motor vehicles, the combination with a steering wheel and rotating shaft, of an inclosing case for said shaft consisting of a straight section and a section supporting said wheel, with the axis of said wheel at an oblique angle to the axis of said straight section, a swiveled joint connecting said sections and means carried by said oblique section for locking it to said straight section in any position of said swiveled joint.

5. In the steering mechanism of a motor vehicle, the combination with a rotating shaft having a flexible section, of an inclosing case having a straight section and a curved section inclosing the flexible section of the shaft, a sleeve attached to one end of the curved section of the case and inclosing the end of the straight section of the case, a steering wheel journaled at the opposite end of said curved section and connected with said flexible shaft.

[Claims 6 to 10 not printed in the Gazette.]

871,110. MECHANICAL MOVEMENT. WILLIAM R. COMINGS, London, England. Filed June 14, 1906. Serial No. 321,601.



1. The combination of two members relatively movable, an interlocking member organized to lock the members together and prevent relative movement until the exertion of a certain predetermined force, whereupon such member will shift and permit the relative movement of the members, and two separate adjustable means for varying the amount of said force required to effect said release.

2. The combination of two members relatively movable, an interlocking member organized to lock the members together and prevent relative movement until the exertion of a certain predetermined force, whereupon such means will release and permit the relative movement of the members, and means for adjusting the engagement of the locking member with one of the members to thereby vary the amount of the force necessary to effect the release.

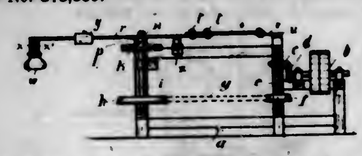
3. The combination of two members relatively movable, an interlocking member organized to lock the members together and prevent relative movement until the exertion of a certain predetermined force, whereupon such means will release and permit the relative movement of the members, means for adjusting the engagement of the locking member with one of the members to thereby vary the amount of the force necessary to effect the release, and resilient means for retaining the locking member in locking position.

4. The combination of two members relatively movable, an interlocking member organized to lock the members together and prevent relative movement until the exertion of a certain predetermined force, whereupon such means will release and permit the relative movement of the members, means for adjusting the engagement of the locking member with one of the members to thereby vary the amount of the force necessary to effect the release, resilient means for retaining the locking member in locking position, and means for adjusting the tension of the resilient member.

5. The combination of two members having a relative sliding movement, and an interlocking member organized to lock the members together and prevent relative movement until the exertion of a predetermined force, whereupon such member will shift and permit the relative sliding movement of the members, one of said members being provided with a shoulder, an adjustable stop portion carried by one of said members for varying the amount of engagement of the locking member by the shouldered portion.

[Claims 6 to 23 not printed in the Gazette.]

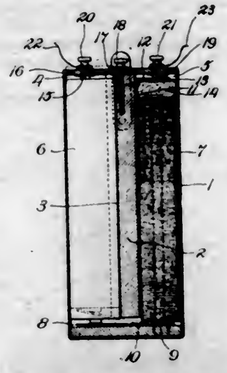
871,111. WOOD-POLISHING MACHINE. OTTO DANDE, Königsberg, Germany. Filed May 24, 1907. Serial No. 375,559.



1. A wood polishing machine comprising in combination with the frame, the crank driving mechanism, a connecting-rod attached to the latter, a crank transmission mechanism actuated by said crank driving mechanism, a slotted rod firmly attached to said connecting-rod and connected with said crank transmission mechanism, the polishing tool (*w*) attached to the free end of said slotted rod, two chambers to supply said tool with the polishing medium and provided for the purpose with a regulating device, and a weight provided on said slotted rod to regulate the polishing pressure of said tool, all for the purpose of effecting an elliptical movement of said tool.

2. A wood polishing machine comprising in combination with the frame, the crank driving mechanism, a connecting-rod attached to the latter, a crank transmission mechanism actuated by said crank driving mechanism, a cross member of said frame provided with a hole, a bolt inserted in the latter hole, a slotted rod pivoted to said connecting-rod and connected with said crank transmission mechanism as well as with said bolt, the polishing tool (*w*) attached to the free end of said slotted rod, two chambers to supply said tool with the polishing medium and provided for this purpose with a regulating device, and a weight provided on said slotted rod to regulate the polishing pressure of said tool, all for the purpose of effecting a rectilinear movement of said tool.

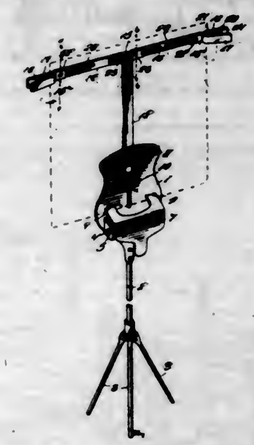
871,112. INDIVIDUAL ELECTRIC GAS-LIGHTER. WILLIAM K. DAVIDSON, Boston, Mass. Filed Mar. 4, 1907. Serial No. 360,306.



1. As an article of manufacture, a portable gas-lighter attachment consisting of an inclosing case having a central longitudinal bracing block in the form of an insulating partition forming with the adjacent portions of the case opposite approximately cylindrical pockets, a contact spring secured in the lower end of said case and projecting at its opposite end into said respective pockets, a spark coil in one of said pockets having one terminal secured to said spring, a contact spring projecting above said coil secured to said case, the opposite terminal of said coil being fastened to said last mentioned spring, the free end of said first mentioned spring being bent normally upward, a dry battery in the pocket opposite said coil and normally held forcibly downward against the tension of said upwardly bent spring, and a cover of insulating material secured at the open end of said case and provided with opposite binding posts contacting respectively with said battery and with said overhanging contact spring of the coil.

2. As an article of manufacture, a portable gas-lighter attachment consisting of a case having a central wooden partition bracing the longitudinal middle of the case and dividing the latter into opposite pockets, a dry battery in one pocket and a spark coil in the other, the coil being irremovably sealed in its pocket at the upper end, and contact means connecting the inner terminals of said battery and coil, including spring-ejecting means for rendering the battery readily removable without disturbing the case, and a cover removably secured at the open end of said case and provided at its opposite ends with contact closing devices and binding posts connecting respectively with the adjacent ends of the battery and coil.

871,113. MUSIC-RACK. ALBERT DE LONG, Sr., Shamokin, Pa. Filed Dec. 22, 1906. Serial No. 349,032.



In a music rack, a vertically slotted frame provided on its lower front portion with a spring-actuated clamp and having a guide on its rear upper portion, a vertical extension slidably mounted in said guide and provided with a stud movable in the slot in the frame, a nut on the stud, lateral extensions pivoted to the vertical extension, each provided with a lug adapted to engage in an opening in the vertical extension, and spring clamps carried by the lateral extensions and adjustable longitudinally thereon.

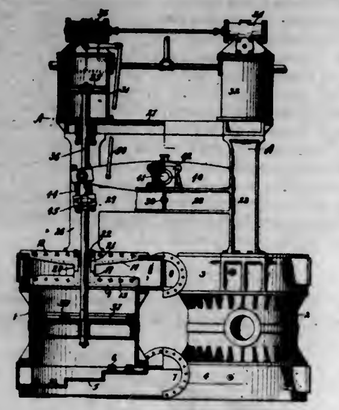
871,114. TWIN AIR-PUMP. WILLIAM A. DENWETT, New York, N. Y., assignor to Marshall T. Davidson, Brooklyn, N. Y. Filed Jan. 25, 1904. Serial No. 190,556.

1. The combination with the air and steam cylinders and their piston rods, of inner heads for the air cylinder provided with discharge valves and outer sectional heads for the air cylinders arranged to coact with the inner heads to form an air-tight closure whereby access may be gained to the pistons within the cylinders without the removal of the piston rods.

2. The combination with the air and steam cylinders and their piston rods, of inner sectional heads for the air cylinders provided with air discharge valves and outer sectional heads arranged to coact with the said inner sectional heads to form an air-tight closure for the cylinders whereby access may be gained to the pistons within the cylinders without removing or uncoupling the piston rods.

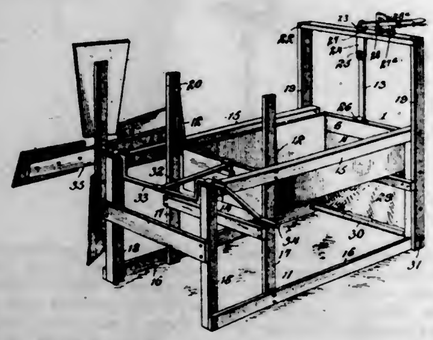
3. The combination with the air and steam cylinders and their piston rods, of inner sectional heads for the air cylinders and outer sectional heads for said cylinders, the said outer sectional heads having their hubs interlocked

with the hubs of the inner sectional heads to form an air-tight closure whereby access may be obtained to the pis-



tons within the cylinders without removing or uncoupling the piston rods.

871,115. COTTON-SEED SEPARATOR. MONTIEVILLE M. EDWARDS, Abbott, Tex. Filed Sept. 15, 1906. Serial No. 334,731.

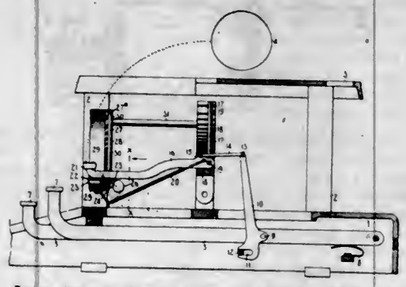


1. In a machine of the class described, the combination of a frame having spaced sides and provided at the bottom with a transverse member located at the rear end of the machine, a vibratory sifter having front and side walls and provided with a rear end gate hinged at the top and arranged to open at the bottom, a flexible transverse shield extending across the rear end of the frame and secured at its lower free edge to the said transverse member and connected at its upper edge with the bottom of the sifter adjacent to the lower edge of the end gate, an adjusting lever disposed transversely of the frame and connected with the rear end of the sifter adjacent to the hinged edge of the end gate for raising and lowering the said sifter, and means for securing the lever in its adjustment.

2. In a machine of the class described, the combination of a vibratory sifter provided at one end with an end gate hinged at the top and provided at the bottom with a fastening device, and a coiled spring connected with the end gate for automatically opening the same when the said end gate is free to swing upwardly.

3. In a machine of the class described, the combination of a frame, a vibratory body, operating mechanism connected with one end of the body for actuating the same, a vertically adjustable plate or member connected with the other end of the body, an adjusting lever mounted on the frame and connected with the plate or member for raising and lowering the same, and means for securing the lever in its adjustment.

871,116. TYPE-WRITING MACHINE. JACOB FELBEL, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Mar. 15, 1905. Serial No. 250,222.



1. In a typewriting machine, the combination with a type bar and actuating mechanism therefor, of a type rest normally pressed away from the printing point by said type bar, said type rest comprising a two-arm lever, one arm whereof is contactive with the type bar, and means connected with the other arm of said lever and tending to counteract the type bar, said means being independent of the type bar actuating mechanism.

2. In a typewriting machine, the combination of a movable pivoted type rest, stops limiting the movement of said rest in either direction of its travel, and means for swinging said type rest from one limiting stop to the other.

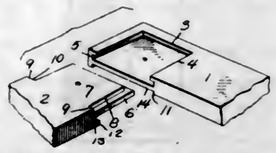
3. In a typewriting machine, the combination of a type rest comprising a pivoted lever having a pad on one arm thereof and a counterweight on the other arm thereof, stops adapted to contact with the arms of said type rest, and means for causing movement of said type rest between said stops.

4. In a typewriting machine, the combination of a type rest support, movable individual type rests pivotally mounted on said support, stops limiting the rotary movement of said type rests, and means for swinging said type rests from one stop to the other.

5. In a typewriting machine, the combination of a slotted type rest support, individual type rests pivoted in the slots of said support, limiting stops on said support, and means for causing movement of said rests between said stops.

[Claims 6 to 21 not printed in the Gazette.]

871,117. SQUARE. SAMUEL C. FINNEY, Breadysville, Pa. Filed Mar. 27, 1907. Serial No. 364,766.

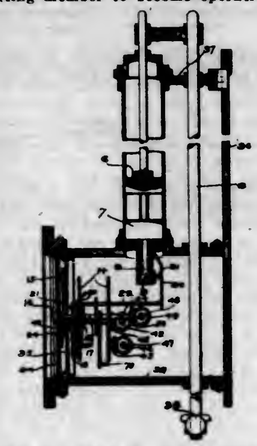


In a square, the combination of the two portions thereof; one of which has a rectangular grooved recess; while the other portion is provided with a main and supplemetal tongue to be received by said grooved recess, and means for fastening the portions together.

871,118. DAMPER-REGULATOR. WALTER R. FORBUSH, Newton, Mass. Filed Mar. 20, 1907. Serial No. 363,332.

1. In a damper regulator, the combination with a damper-actuating member of a pneumatic check to retain said member in inoperative position, and time mechanism to release the check thereby to allow the damper actuating member to become operative.

2. In a damper regulator, the combination with a damper-actuating member of a pneumatic check to retain said member in inoperative position, and an adjustable time mechanism to release the check thereby to allow the damper-actuating member to become operative.



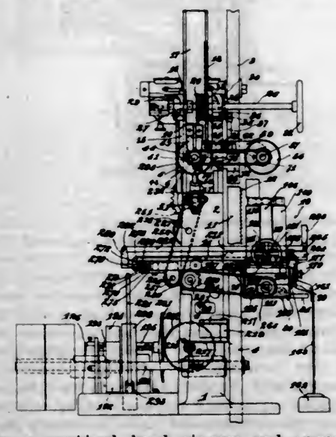
3. In a damper regulator, the combination with a damper-actuating member of a cylinder, a piston therein connected to said member, and time mechanism to control the movement of the piston and thereby to control the operation of the damper-actuating member.

4. In a damper regulator, the combination with a damper-actuating member of a cylinder, a piston therein having a port, a check valve to control said port, and automatic means for controlling the operation of the check valve.

5. In a damper regulator, the combination with a damper-actuating member of a cylinder, a piston therein having a port, a check-valve to control said port, and time mechanism for controlling the operation of the check valve.

[Claim 6 not printed in the Gazette.]

871,119. BAND SAWING-MACHINE. LOUIS J. HANHART, Cincinnati, Ohio, assignor to J. A. Fay & Egan Company, Cincinnati, Ohio, a Corporation of West Virginia. Filed Mar. 27, 1905. Serial No. 252,245.



1. In a combined band rip-saw and re-sawing machine, the combination, with a table, of band re-sawing feeding rolls, means for adjusting the same sidewardly above said table, a band rip-sawing feeding roll, means for adjusting the same up and down above said table in the path of adjustment of said re-sawing-feeding rolls, means for permitting removal of said rip-sawing feeding roll out of the path of adjustment of said re-sawing feeding rolls, and means for permitting removal of said re-sawing feeding rolls from above said table.

2. In a combined band rip and re-sawing machine, the combination of band-saw wheels arranged for having a band-saw blade take thereabout, a band rip sawing feeding-in roll in advance of the band-saw blade position, an adjustable ram therefor to rear of the band-saw blade position, a band-saw guide thereon, band re-sawing feeding rolls having rotary axes extending up and down in front of said band-saw blade position and under and in vertical plane with said feeding-in roll, and a releasable arm connecting said first-named feeding-roll with said ram, the release of said arm permitting said ram to be lowered into horizontal plane with said last named feeding rolls for adjusting said band-saw guide to a position below the top of said re-sawing feeding rolls.

3. In a combined band rip-sawing and re-sawing machine, the combination, with band-saw wheels arranged for having a band-saw blade take thereabout and a table, of band re-sawing feeding rolls, means for adjusting the same sidewardly above said table, a ram, a band rip-sawing feeding-in roll in advance of the band-saw blade position and a band rip-sawing feeding-out roll in rear of said band-saw blade position and a band-saw guide mounted on and moving with said ram, means for adjusting said ram up and down for bringing said feeding-in roll within the range of adjustment of said band re-sawing feeding rolls, means for permitting removal of said feeding-in roll out of the range of adjustment of said re-sawing feeding rolls, and means for permitting removal of said re-sawing feeding rolls from above said table.

4. In a combined band rip and re-sawing machine, the combination of band-saw wheels arranged for having a band-saw blade take thereabout, a band rip-sawing feeding-in roll in advance of the band-saw blade position, an adjustable ram therefor to rear of the band-saw blade position, a band rip-sawing feeding-out roll on said ram in rear of the band-saw blade position, band re-sawing feeding rolls having rotary axes extending up and down in front of said band-saw blade position and vertically under said first-named feeding roll, and a releasable arm connecting said first-named feeding-roll with said ram, the release of said arm permitting said ram and the feeding-out roll thereon to be lowered into horizontal plane with said re-sawing feeding rolls, and a band-saw guide mounted on said ram common to said first-named feeding-roll and said last-named feeding-rolls.

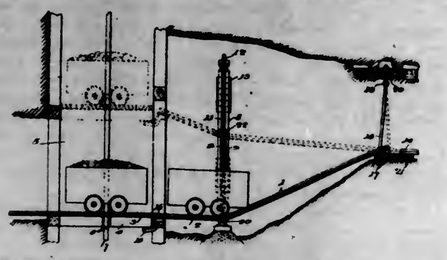
5. In a combined band rip and re-sawing machine, the combination of band-saw wheels arranged for having a band-saw blade take thereabout, a table, a band rip-saw feed-device comprising a ram adjustable up and down above said table, a feeding-in roll in advance of the band-saw blade position, a feeding-out roll to rear of the band-saw blade position, said feeding rolls having sidewardly extending rotary axes and a band rip sawing feeding device comprising feeding rolls having rotary axes extending up and down and located above said table, means for shifting said last-named feeding rolls under the level of said table, a releasable arm on which said feeding-in roll is mounted having releasable connection with said ram for permitting adjustment of said ram into horizontal plane with said re-sawing feeding rolls, and a band-saw guide common to both said classes of feeding rolls mounted on said ram.

[Claims 6 to 14 not printed in the Gazette.]

871,120. AUTOMATIC LIFTING MECHANISM. GRANT HOLMES, Danville, Ill., assignor to Robert Holmes & Brothers, Danville, Ill., a Corporation of Illinois. Filed May 18, 1907. Serial No. 374,476.

1. A lifting mechanism of the character described comprising a pivoted track section, a weight connected to one end thereof and adapted to elevate the same, means for lowering said track section against the action of said weight and a longitudinally movable support for the other end of said track section.

2. In a lifting mechanism of the character described, the combination, with a movable track section, and a vertically reciprocating member near one end thereof, of means for elevating one end of said track section, a part carried by said track section and extending into the path of said vertically movable member and adapted to be engaged thereby on the downward movement thereof.



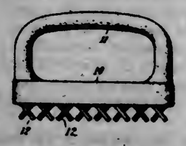
3. In a lifting mechanism of the character described, the combination, with a movable track section, and a vertically reciprocating member near one end thereof, of a weight connected to said track section and adapted to elevate the same, and a part carried by said track section and extending into the path of said vertically movable member and adapted to be engaged thereby on the downward movement thereof.

4. In a lifting mechanism of the character described, the combination, with a movable track section, and a vertically reciprocating member near one end thereof, of upright members on the opposite sides of said track section, pulleys mounted near the upper end of said upright members, cables connected at one end to said track section extending over said pulleys and provided at the other end with weights, and a projection carried by one end of said track section and extending into the path of said reciprocating member.

5. In a lifting mechanism of the character described, the combination, with a movable track section, and a vertically reciprocating member near one end thereof, of upright members extending on opposite sides of said track section, guideways on the inner faces of said upright members, an axle extending transversely of said track section and having its ends in engagement with said guideways, a pulley mounted near the upper end of said upright members, cables secured to said axle near the opposite ends thereof extending upwardly and over said pulleys and provided at their opposite ends with weights, and a projection carried by said track section and extending into the path of said reciprocating member.

[Claims 6 to 11 not printed in the Gazette.]

871,121. MASSAGE IMPLEMENT. FERNAND E. D'HUMY, Englewood, N. J. Filed Feb. 12, 1907. Serial No. 357,027.



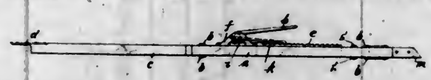
1. A massage implement having an operative surface composed of a multiplicity of flexible slanting fingers distributed over a field or area, and having free ends both convergent and divergent so as to exert a combined pinching and spreading action when pressed upon the skin.

2. A massage implement comprising a base and a multiplicity of soft rubber fingers repeated in numerous rows in both dimensions so as to cover a field or area, and slanted in different directions to said base.

3. A massage implement comprising a base and a series of slanting rubber fingers thereon provided with free ends converged to increase their adhesion to the skin.

4. A massage implement comprising a base and a series of slanting rubber fingers thereon having fillets on their inner sides at the roots.

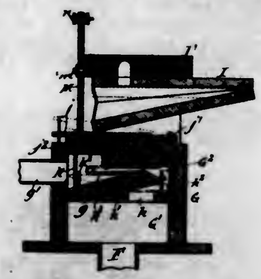
871,122. TIMBER-JACK. NATHAN S. KINGSLEY, West Gouldsboro, Me. Filed Aug. 16, 1907. Serial No. 388,774.



1. In combination in a timber jack, a pair of side-bars; a pole-prop mounted free to slide between said side-bars; a pole-plate mounted upon the working end of said pole-prop; a pair of toothed plates one of which is mounted upon said pole-prop between the latter and each of said side-bars, the teeth of said plates projecting above the top of said side-bars and pole-prop; a pair of standards one of which is mounted on each of said side-bars; a locking bail mounted free to swing in said standards, the free end of said bail being adapted to engage said teeth; a pawl formed with laterally-extending ears adapted to engage said teeth; and an operating lever supported by said standards and attached to said pawl for actuating the same.

2. In combination in a timber jack, a pair of side-bars; a pole-prop mounted free to slide between said side-bars; a pole-plate mounted upon the working end of said pole-prop and having its free end curved and formed with a chisel edge; a pair of toothed plates one of which is mounted upon said pole-prop between the latter and each of said side-bars; a pair of standards one of which is mounted upon each of said side-bars; a locking bail mounted free to swing in said standards, the free end of said bail engaging the teeth of both said plates; a pawl the free end of which is forked and formed with laterally-extending ears, each of said ears engaging the teeth of one of said plates; and an operating lever supported by said standards and attached to said pawl for actuating the same.

871,123. CUT-OFF FOR PNEUMATIC MUSICAL INSTRUMENTS. EUGENE DE KLEIST, North Tonawanda, N. Y. Filed Jan. 13, 1906. Serial No. 295,915.



1. A cut-off for pneumatic musical instruments, comprising a case containing two chambers connected by a passage, one of said chambers having an air-inlet and the other an air outlet, a cut-off valve controlling said passage, a pneumatic for opening said valve, retaining means for holding said valve open, and a second pneumatic controlling said retaining means, substantially as set forth.

2. A cut-off for pneumatic musical instruments, comprising a case containing two chambers connected by a passage, one of said chambers having an air inlet and the other an air outlet, a cut-off valve controlling said passage, a pneumatic for opening said valve, a locking lever for holding said valve open, and a second pneumatic controlling said locking lever, substantially as set forth.

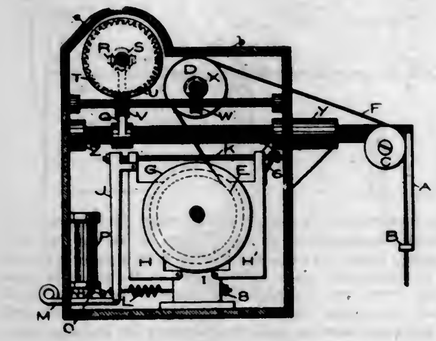
3. A cut-off for pneumatic musical instruments, comprising a case containing two chambers connected by a passage, one of said chambers having an air inlet and the other an air outlet, a cut-off valve controlling said passage, a pivoted arm arranged outside of said chambers and acting upon said valve to open the same, a pneumatic acting on said arm, a locking lever coöperating with said arm, and a second pneumatic controlling said locking lever, substantially as set forth.

4. A cut-off for pneumatic musical instruments, comprising a case containing two chambers connected by a passage, one of said chambers having an air inlet and the other an air outlet, a cut-off valve controlling said passage, a pivoted arm arranged outside of said chambers, a rod interposed between said arm and the cut-off valve, a valve-opening pneumatic having its removable board arranged to act on said arm, a locking lever coöperating with said arm, and a second pneumatic having its movable board connected with said locking lever, substantially as set forth.

5. A cut-off for pneumatic musical instruments, comprising a case containing two chambers connected by a passage, one of said chambers having an air inlet and the other an air outlet, a cut-off valve controlling said passage, a pivoted arm acting on said valve to open the same, a pneumatic acting on said arm, a locking lever for said arm pivoted to swing at an angle thereto, the lever when in position to unlock the arm being arranged to bear against the side thereof, and a second pneumatic connected with said lever, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

871,124. SOUNDING APPARATUS. OTTO M. KNOBLOCK and JAMES DUSHANE, South Bend, Ind. Filed Jan. 2, 1906. Serial No. 294,331.



1. In a sounding apparatus, a winding reel, a friction disk connected therewith, and a brake acting upon said disk, a sounding wire wound on said reel and a sinker carried by said wire in combination with means to alternately set said brake upon said friction disk as soon as the sinker touches the bottom.

2. In a sounding apparatus, a winding reel, a wire wound thereon, electrically operated means for braking said reel, and a contact carried by said wire for automatically controlling the operation of said braking means.

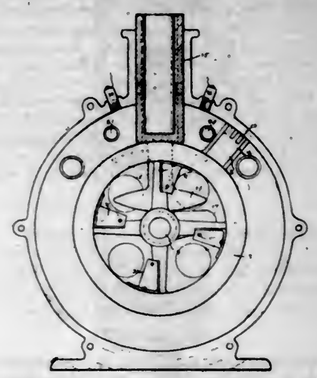
3. In a sounding apparatus, a winding reel, a wire wound upon said reel, means for braking said reel, and a sinker carried by said wire and provided with means for automatically controlling the operation of the braking means.

4. In a sounding apparatus, a winding reel, a wire wound upon said reel, a brake therefor, a sinker carried by said wire, and means carried by said sinker for controlling said brake.

5. In a sounding apparatus, a winding reel, a wire wound upon said reel, an electrically operated brake for said reel, a sinker, and contacts carried by said sinker for controlling said brake.

[Claims 6 to 15 not printed in the Gazette.]

871,125. ROTARY ENGINE. WILLIAM LAUBER, Milwaukee, Wis., assignor of one-seventh to Louis Reimer, one-seventh to John Hrdlicka, one-seventh to William Arndt, one-seventh to Henry Patske, one-seventh to Elmer Wangerin, and one-seventh to Charles Borchert, Milwaukee, Wis. Filed Apr. 15, 1907. Serial No. 368,153.



1. In a rotary engine, the combination of a casing provided with a cylindrical chamber having reduced end portions, a shaft extending axially through the cylindrical chamber, a drum mounted on the shaft, with its end portions substantially fitting the end portions of the chamber and provided with packing rings, a piston mounted upon the middle portion of the drum and fitting the larger portion of the chamber, a gate mounted in suitable guides within the chamber and adapted to move radially into and out of contact with the drum, cam actuated gate supporting posts at the respective ends of the drum, and cams mounted on the shaft in a position to actuate said posts.

2. In a rotary engine the combination with a casing provided with reduced end portions and a rotary shaft extending therethrough, a drum mounted on the shaft with its end portions fitting the reduced portions of the casing, and a piston on the drum,—of a reciprocating gate mounted in suitable guides in the casing and provided with inwardly projecting radial posts at each end of the drum and within the casing, and cams on the shaft at the respective ends of the drum arranged to actuate said posts outwardly to permit the passage of the piston.

3. A rotary engine comprising a cylindrical chamber provided with a suitable valved admission port, an axially disposed shaft in the chamber, a piston supported therefrom and fitting said chamber, and a retractable gate normally in the path of the piston,—said gate having inwardly projecting radial posts and the shaft being provided with cams adapted to move said posts outwardly to retract the gate, to clear the piston once during each revolution.

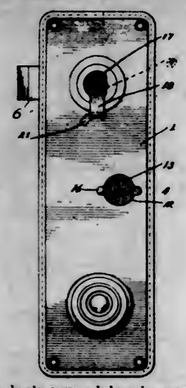
4. A rotary engine comprising a cylindrical chamber provided with a suitable valved admission port, an axially disposed shaft in the chamber, a piston supported therefrom and fitting said chamber, and a retractable gate normally in the path of the piston,—the gate being provided with inwardly projecting radial posts and the shaft being provided with cams adapted to move said posts outwardly to retract the gate, to clear the piston once during each revolution, together with another cam mounted on the shaft and arranged to control the flow of motive fluid through the valved admission port.

871,126. INDICATOR-LOCK. OSWALD LOCKETT, Chicago, Ill. Filed Dec. 22, 1902. Serial No. 136,149.

1. In an indicator lock, the combination with a lock having a key-hole, an indicator and a shield covering said key-hole and operatively related to said indicator for moving the latter when the key-hole is uncovered, substantially as described.

2. An indicator lock comprising in combination an indi-

cator, a knob structure directly engaging and actuating the indicator in one direction, and means directly engaging and actuating the indicator in the opposite direction, and projecting externally of the lock, substantially as described.



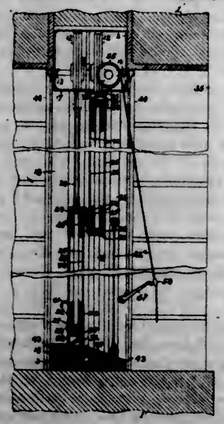
3. An indicator lock comprising in combination an indicator, a knob structure directly and intermittently engaging said indicator and moving it in one direction, and means directly engaging and moving the indicator in the opposite direction, and projected and actuated externally of the lock, substantially as described.

4. An indicator lock comprising in combination an indicator, a knob structure provided with a projection directly engaging and actuating the indicator in one direction, and means manipulated externally of the lock actuating the indicator in the opposite direction, substantially as described.

5. An indicator lock comprising in combination an indicator, a knob structure, a lug projecting therefrom, directly engaging and actuating the indicator in one direction, means retracting said lug from contact with the indicator, and means actuating said indicator in the opposite direction and intermittently covering and uncovering the key-hole of the lock, substantially as and for the purpose described.

[Claims 6 to 13 not printed in the Gazette.]

871,127. METALLIC WINDOW CONSTRUCTION. EDMUND H. LUNKEN and CHARLES M. CONKLIN, Cincinnati, Ohio, assignors, by direct and mesne assignments, to The Lunken Steel Window Co., a Corporation of Ohio. Filed Nov. 22, 1906. Serial No. 344,643.



1. In fire-proof window construction, the combination with the side finishing plate, of a top finishing plate having a movable connection for engaging the top end of the side finishing plate, substantially as described.

2. In fire-proof window construction, in combination with the sill, a removable finishing plate for said sill, and means for removably securing the lower ends of the side finishing plate to the sill finishing plate, substantially as described.

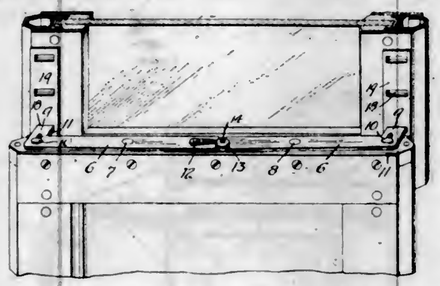
3. In fire-proof window construction, in combination with the sill, a removable finishing plate provided with upturned ends for said sill, and means for removably securing the lower ends of the side finishing plate to the sill finishing plate.

4. In fire-proof window construction, a main frame consisting of side members, sill and top cross-piece, the side members provided with sash guides, and a removable finishing plate for the top cross-piece, substantially as described.

5. In fire-proof window construction, a main frame comprising a sill, top cross-piece, and side members suitably secured together, and a removable finishing plate adapted to be applied to each of the side, top, and bottom members of the main frame, substantially as described.

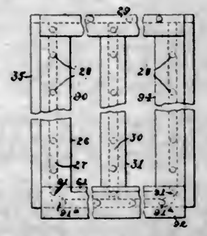
[Claims 6 to 51 not printed in the Gazette.]

871,128. SASH-LOCK. EDMUND H. LUNKEN and CHARLES M. CONKLIN, Cincinnati, Ohio, assignors, by direct and mesne assignments, to The Lunken Steel Window Co., a Corporation of Ohio. Filed Jan. 25, 1907. Serial No. 354,031.



In combination in a sash lock, locking levers pivotally connected intermediate of their length to the meeting rail extending along the same and having each a portion at one end to engage the upper sash, means at the opposite ends of the levers for holding them against movement, said means comprising an eccentric engaging the levers and moving their meeting ends transversely of the said rail, substantially as described.

871,129. FIREPROOF WINDOW CONSTRUCTION. EDMUND H. LUNKEN and CHARLES M. CONKLIN, Cincinnati, Ohio, assignors, by direct and mesne assignments, to The Lunken Steel Window Co., a Corporation of Ohio. Original application filed Nov. 22, 1906, Serial No. 344,643. Divided and this application filed Feb. 15, 1907. Serial No. 357,541.



1. In fire proof window construction, a sash comprising facing strips, a U-shaped frame of one piece between said strips on three sides, forming a channel, a glass pane removably seated in the channel, and a removable spacing bar closing the remaining side.

2. In fire proof window construction, a sash comprising facing strips, a U-shaped frame of one piece between said strips on three sides, forming a channel, a glass pane removably seated in the channel, and a removable spacing bar closing the remaining side, and rivets passing through the facing strips and U-shaped frame and permanently holding said parts together.

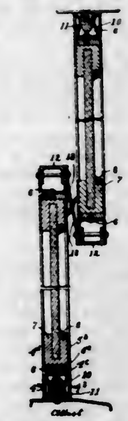
3. In fire proof window construction, a sash comprising inner and outer frames, said frames composed of two horizontally and two vertically disposed members, spacing pieces between them, the lower corners of which are bent at right angles, one of each of said members opposite to each other, being secured to both legs of one of the angle corner pieces.

4. In fire proof window construction, a sash comprising facing strips with an interposed spacing member, the strips extending on one of its sides beyond the spacing member and a removable sash guide bar being located in the channel formed by the said extended edges of the facing strips.

5. In fire proof window construction, a sash comprising facing strips with an interposed spacing member, the strips extending on one of its sides beyond the spacing member and a yielding sash guide bar located in the channel formed by the said extended edges of the facing strips.

[Claims 6 to 13 not printed in the Gazette.]

871,130. FIREPROOF WINDOW CONSTRUCTION, (LATERALLY-INSERTED GLASS.) EDMUND H. LUNKEN and CHARLES M. CONKLIN, Cincinnati, Ohio, assignors, by direct and mesne assignments, to The Lunken Steel Window Co., a Corporation of Ohio. Filed Mar. 20, 1907. Serial No. 363,490.



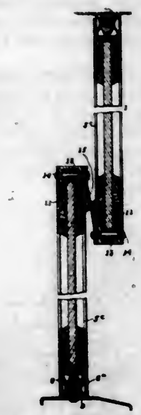
1. In fire-proof window construction, a sash frame comprising main frame members secured together at the corners and having outer channeled edges, and an inwardly extending flange, a removable frame composed of angle bars secured to the main frame and forming with the said inwardly extending flange of the main frame, a glass receiving channel, and glass having its edges held by said channel, substantially as described.

2. In fire-proof window construction, a main frame composed of bars suitably connected at the corners, and having outer parallel flanges connected by a transverse web, and an inner flange, angle bars having one flange detachably secured to said web and the other spaced from the inner flange to form a glass receiving channel, substantially as described.

3. In fire-proof window construction, a main frame composed of bars suitably connected at the corners, and having outer parallel flanges connected by a transverse web, and an inner flange, angle bars having one flange detachably secured to said web and the other spaced from the inner flange to form a glass receiving channel, grooved packing bars located in said channels, and a glass having its edges seated in the grooves in the packing bars, substantially as described.

4. In fire-proof window construction, a sash frame comprising main frame members having mitered corners, said members having outer flanges connected by a transverse web, and an inner flange, an inner frame consisting of angle bars also having mitered corners, said bars having each one of its flanges removably secured to the main frame and its other flange spaced from the said inner flange to form inner channels, mitered wood strips seated in said channels and having glass receiving grooves and glass having its edges held in said grooves, substantially as described.

871,131. FIREPROOF WINDOW CONSTRUCTION. EDMUND H. LUNKEN and CHARLES M. CONKLIN, Cincinnati, Ohio, assignors, by direct and mesne assignments, to The Lunken Steel Window Co., a Corporation of Ohio. Filed Mar. 22, 1907. Serial No. 363,887.



1. A metal sash having three of its sides composed of metal channel bars and its other side of plane parallel bars extending between the webs of the channel bars, all of said bars having their meeting edges welded together, substantially as described.

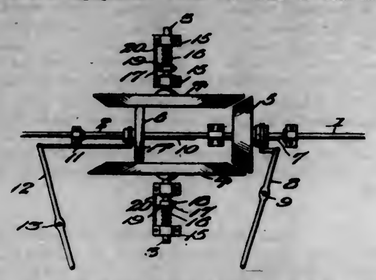
2. A sash frame having its sides and one end composed of double channeled bars or members, parallel plane members connecting the flanges or webs of said side bars at the other end, and a removable bar between said plane parallel members, substantially as described.

3. A metal sash having its sides and one end composed of double channel bars or members welded together at the corners, parallel plane members connecting the flanges or webs of said side members at the other end and welded thereto, and a bar removably held between said plane members, substantially as described.

871,132. CHANGEABLE-SPEED GEARING. EBENEZER H. MANNING, Elkhart, Ind. Filed Nov. 21, 1906. Serial No. 344,479.

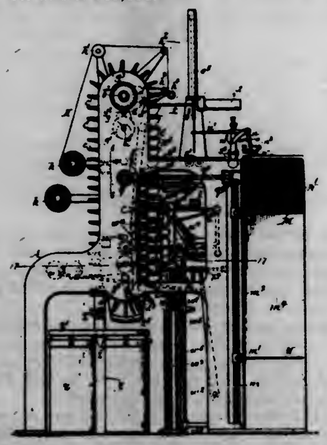
In a changeable speed gearing, a main drive shaft and a main driven shaft supported in longitudinal and axial alinement, pairs of spaced bearings erected adjacent to and at opposite sides of the main driven shaft, fixed connecting portions or webs connecting said bearings in pairs, shafts supported for rotation in said bearings at opposite sides of and aproximately at right angles to the main driven shaft, friction wheels or disks mounted upon the inner ends of said shafts and having unobstructed inner faces, collars mounted adjustably upon the wheel carrying shafts and having laterally extending guide portions trav-

eling in contact with the fixed portions or webs connecting the bearings, springs coiled upon the shafts between the collars and the outermost bearings, and impelling the shafts in an inward direction toward each other, a friction pinion slidably engaging the main drive shaft and adapted for engagement with the rims of the friction



wheels, a transmission wheel mounted slidably upon the main driven shaft and supported in engagement with the faces of the oppositely disposed friction wheels, and means for effecting adjustment of the transmission wheel diametrically across the faces of the friction wheels.

871,133. AUTOMATIC MAILING-MACHINE. BARTON S. MOLYNEUX, Buffalo, N. Y., assignor to Molyneux Auto-Mailing Machine Company, Buffalo, N. Y., and Pierre, S. D., a Corporation of South Dakota. Filed Jan. 22, 1903, Serial No. 140,172. Renewed Mar. 30, 1907. Serial No. 365,604.



1. In a machine of the character described, the combination of a plurality of holders, a wrapper feeder constructed to place a wrapper in said holders so that the same extends continuously from one holder to another, and an article feeder for placing an article in that part of the wrapper within each holder, substantially as set forth.

2. In a machine of the character described, the combination of a movable holder, a wrapper feeder for placing a wrapper in said holder, an article feeder for placing an article in said holder, a sealing mechanism for uniting the ends of the wrapper, and means for moving said holder successively to said wrapper and article feeders and to said sealing mechanism, substantially as set forth.

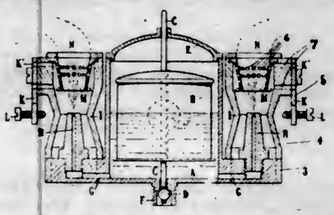
3. In a machine of the character described, the combination of a movable holder, a wrapper feeder for placing a wrapper in said holder, an article feeder for placing an article in said holder, a sealing mechanism for uniting the ends of the wrapper, an addressing mechanism for applying an address to said wrapper, and means for moving said holder successively to said wrapper and article feeders and to said sealing and addressing mechanisms, substantially as set forth.

4. In a machine of the character described, the combination of a plurality of holders, a pusher arranged opposite the holders, and a wrapper feeder arranged to deliver a continuous wrapper-band between said holders and said pusher, substantially as set forth.

5. In a machine of the character described, the combination of a movable holder, a wrapper feeder for placing a wrapper in said holder, an article feeder for placing an article in said wrapper, a gumming device for applying an adhesive material to said wrapper, and means for moving said holder successively to said wrapper and article feeders and to said gumming device, substantially as set forth.

[Claims 6 to 36 not printed in the Gazette.]

871,134. CARBURETER. JOSEPH G. P. M. MONNIER and ANTOINE M. MORIN, Boulogne-sur-Seine, France. Filed Mar. 13, 1906. Serial No. 305,839.



1. In a carbureter, an atomizing-chamber having a conical shape at its lower end, and an air-inlet at its bottom, a nozzle extending through the lower conical portion, and an inverted hollow apertured mixing cone having an open lower end situated over the nozzle, said atomizing-chamber having auxiliary air-inlet ports in its side opposite said mixing cone.

2. In a carbureter, a nozzle, an open-ended cone-shaped member surrounding the nozzle and having air inlet ports in its lower end, an inverted apertured hollow mixing cone having an open lower end which is slightly smaller than the upper end of the cone-shaped member and which is situated closely adjacent thereto, a casing surrounding said cone-shaped member and mixing cone, said casing being provided with air inlet ports opposite the mixing cone, and a valve to control the admission of air to said ports.

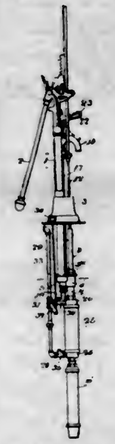
871,135. PUMP. PHILIP A. MYERS, Ashland, Ohio, assignor to F. E. Myers and Brother, Ashland, Ohio, a Copartnership. Filed May 15, 1907. Serial No. 373,711.

1. In a pump of the character described, the combination, with a water pumping cylinder, an air pumping cylinder connected thereto, pistons for said cylinders, and a common discharge for the air and the water, of a by-pass connecting the opposite ends of said air pumping cylinder, and means for controlling the passage of fluid through the same.

2. In a pump of the character described, the combination, with a water pumping cylinder, an air pumping cylinder connected thereto and having an air inlet, pistons for said cylinders, and a common discharge for the air and the water, of a by-pass connecting the opposite ends of said air pumping cylinder, and means for simultaneously closing said air inlet and opening said by-pass.

3. In a pump of the character described, the combination, with a connecting pipe, a water pumping cylinder connected thereto, an air pumping cylinder interposed in said connecting pipe, and pistons for said cylinders, of a by-pass connected to said air pumping cylinder near the opposite ends thereof, an air inlet pipe connected to said by-pass, and means for cutting off said by-pass from one end of said cylinder and connecting the air inlet pipe with the other end of said cylinder.

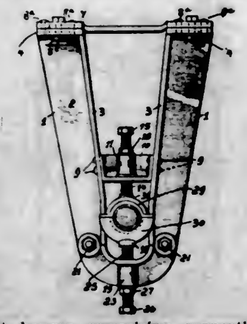
4. In a pump of the character described, the combination, with a connecting pipe, a water pumping cylinder connected thereto, an air pumping cylinder interposed in said connecting pipe, hollow caps closing the ends of said air pumping cylinder and adapted to receive the adjacent ends of said connecting pipe, and pistons for said cylinders, of a by-pass connected to said caps beyond the limits of movement of the piston in said air pumping cylinder, and means for simultaneously closing said air inlet and opening said by-pass.



5. In a pump of the character described, the combination, with a connecting pipe, a cylinder connected thereto, a bucket adapted to reciprocate in said cylinder, a second cylinder of greater capacity than said first-mentioned cylinder connected to said connecting pipe above said first-mentioned cylinder, a bucket within said second cylinder, and means for operating the buckets of said cylinders in unison, of a pipe connected to said second cylinder near the bottom thereof, and means for connecting said pipe either with the open air or with the upper end of said second cylinder.

[Claim 6 not printed in the Gazette.]

871,136. SHAFT-HANGER. ELMER E. MCINTYRE, Pittsburg, Pa. Filed Oct. 18, 1905. Serial No. 283,276.

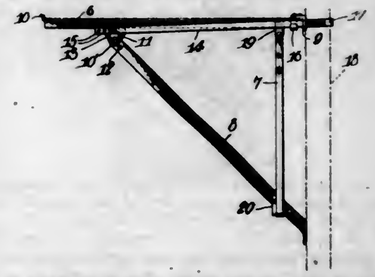


1. A shaft hanger comprising supporting legs each formed from a single plate and bent upon itself longitudinally to constitute a web and with the free edges of the members of said web bent at right angles in opposite directions to form lateral longitudinal flanges, and said web members bent at right angles at one end to form oppositely extending bearings, a tie plate connecting the bearings of said legs, a bearing support connecting the legs at their other ends, a cross head connected between said legs intermediate their ends and having a central apertured boss, a screw adjustably mounted in said boss, and a two part journal box supported between said screws.

2. A shaft hanger comprising supporting legs each formed from a single plate and bent upon itself longitudinally to constitute a web and with the free edges of the members of said web bent at right angles in opposite directions to form lateral longitudinal flanges, and said web members bent at right angles at one end to form bearings, a tie plate connecting the end bearings of said legs, a bearing support connecting the legs at their other ends, a cross head connected between said legs intermediate their ends, a journal bearing, and means for adjustably supporting said journal bearing between said cross head and bearing support.

3. A shaft hanger comprising supporting legs each formed from a single plate and bent upon itself longitudinally to constitute a web and with the free edges of the members of said web bent at right angles in opposite directions to form lateral longitudinal flanges and said web member bent at right angles to form oppositely extending bearings, a tie plate connecting the bearings of said legs, and a bearing support connecting the legs at their free ends.

871,137. BRACKET. DAVID MCINTYRE, Detroit, Mich. Filed Apr. 8, 1907. Serial No. 367,041.



1. In a scaffold bracket, in combination, a platform bar, a brace bar pivotally connected thereto, and a clamping device at the inner end of the platform bar connected to the brace bar and operated by the swing thereof.

2. In a scaffold bracket, in combination, a platform bar, a brace bar pivotally connected thereto, and a clamping rod slidable along the platform bar and having a hook at the inner end and connected at the outer end to the brace bar.

3. In a scaffold bracket, in combination, a platform bar having at its inner end a head extending laterally on both sides, a brace bar pivotally connected to the platform bar near the outer end thereof, and a clamping rod connected at its outer end to the brace rod and having at its inner end a hook opposite said head, which hook may be turned to either side.

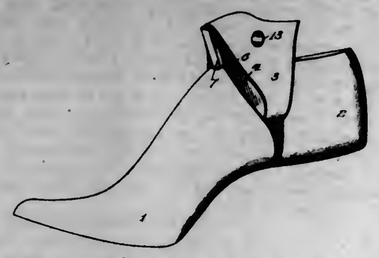
4. In a scaffold bracket, in combination, a platform bar having a head at its inner end and a depending ear near its outer end, a brace bar pivoted between its ends to said ear, and a rod slidable along the platform bar and connected at its outer end to the upper end of the brace bar and having at its inner end a hook opposite said head.

5. A scaffold bracket comprising a platform bar, a brace bar pivoted near its upper end thereto and having a stop near its lower end, a clamping device at the inner end of the platform bar, connected to the upper end of the brace bar and operated by the swing thereof, and a strain loop pivoted to the platform bar and engageable with the stop.

871,138. COLLAPSIBLE LAST. FRANCIS J. NUGENT, Rochester, N. Y. Filed Dec. 29, 1904. Serial No. 238,846.

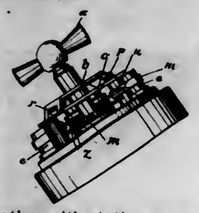
The combination with a divided last composed of two or more sections having abutting faces, of a channel in one of said faces, and a rib coöperating therewith and arranged on the corresponding face of the other section, a

slotted bottom in said channel inclined relatively to the face of the section, and a projection on the rib extending



through the bottom and having a head engaging in rear thereof.

871,139. ELECTRICAL SWITCH. FRANZ ORZEL, Frankfort-on-the-Main, Bockenheim, Germany, assignor to The Firm of Voigt & Haeffner, Aktiengesellschaft, Frankfort-on-the-Main, Bockenheim, Germany. Filed Dec. 19, 1904. Serial No. 237,517.



1. The combination with stationary switch contacts, of movable contacts, a disk connected to said movable switch contacts and movable therewith, a stationary disk, and means for moving said movable contacts, the said disks being spring-pressed together, and having engaging projections and depressions having inclined surfaces in both directions of the travel of said movable disk.

2. The combination with a rotatably mounted tube, of a handle for rotating the same, a second tube inclosing the aforesaid tube, movable contacts carried by said second tube, a torsional spring connected at one end to said handle and at the other end to said second tube, a disk fixed to said second tube, a stationary disk, said disks being spring pressed together and provided with engaging projections and depressions, and stationary contacts adapted to engage with said movable contacts, substantially as described.

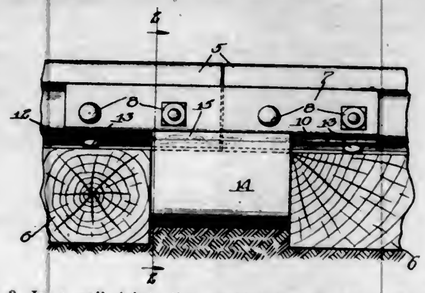
3. The combination with stationary switch contacts, of rotatably mounted contacts adapted to engage therewith from either direction, a rotatably mounted handle, a torsional spring connected at one end to said handle and at the other end to said rotatable contacts, a disk fixed to said contacts, and a stationary disk, said disks being spring-pressed together and provided with engaging projections and depressions, having inclined surfaces in both directions of the travel of the rotatable contacts.

4. The combination with a rotatably mounted tube, of a handle for rotating the same, a second tube inclosing the aforesaid tube, movable contacts carried by said second tube, a torsional spring passing through the first mentioned tube and secured to the top end of the same, a disk fixed to said second tube, a stationary disk, said disks being spring pressed together and provided with engaging projections and depressions, and stationary contacts adapted to engage with said movable contacts, substantially as described.

871,140. RAIL-JOINT. ALPHONSO T. PALMER, Clyde, Ill. Filed Feb. 1, 1907. Serial No. 355,232.

1. In a rail joint, the combination of the rails, fish plates, an elastic clamp passing under the rails, said clamp being provided with jaws having engagement with the fish plates on each side of the web, and a support for the rail integral with the clamp.

2. In a rail joint, the combination of the rails, fish plates, a continuous elastic clamp passing under the rails, said clamp being provided with jaws having engagement with the fish plates on each side of the web, and a support for the rail integral with the clamp.



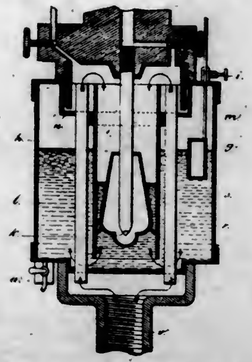
3. In a rail joint, the combination of the rails, fish plates, an elastic clamp, the body portion thereof passing under and being spaced from the rail, the ends of the clamp having engagement with the fish plates on each side of the web, and a support for the rail within the clamp, said support being integral with the clamp and located adjacent the end thereof.

4. In a rail joint, the combination of the rails, fish plates, an elastic clamp passing under and spaced from the rails, said clamp being provided with jaws, said jaws having engagement with the fish plates on each side of the web, and means integral with and located within the clamp for supporting the rail.

5. In a rail joint, the combination of the rails, fish plates, an elastic clamp passing under and spaced from the rails, said clamp being provided with integral inwardly projecting portions for supporting the rail, and elastic jaws on the clamp beyond the projecting portions, said jaws having engagement with the fish plates on each side of the web.

[Claims 6 to 8 not printed in the Gazette.]

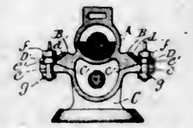
871,141. APPARATUS FOR AUTOMATICALLY LIGHTING GAS-LAMPS. KARL PANK, Königs Wusterhausen, Germany. Filed July 25, 1906, Serial No. 327,673. Renewed Sept. 26, 1907. Serial No. 394,713.



1. Apparatus for automatically lighting gas lamps comprising a gas supply inlet; an outer chamber furnished with a bottom and a cover and adapted to contain liquid; an inner chamber projecting downwardly from said cover and likewise adapted to contain liquid; a pipe or pipes that pass through said bottom and cover and that connect said gas inlet with the interior of said inner chamber; within said inner chamber a receptacle for a liquid seal; a burner tube provided at its lower end with an orifice adapted to be sealed by said seal; a plunger adjustably mounted within said outer chamber and adapted to be immersed a greater or less extent in said liquid; and upon last mentioned chamber, means for securing said plunger in position when the desired adjustment has been effected.

2. In apparatus for automatically lighting gas lamps through variation of gas pressure, a float receptacle containing a liquid seal; a chamber or chambers containing liquid wherein said float receptacle is floated; an adjustable plunger adapted to be immersed to a greater or less extent in last mentioned liquid to vary the level thereof; and means for adjusting said plunger and for securing it in position when adjusted.

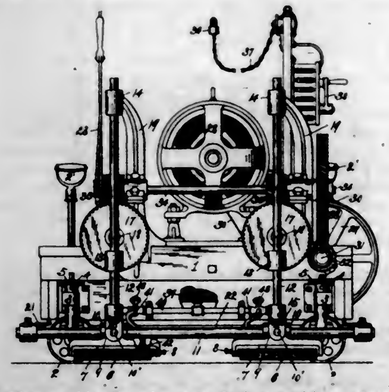
871,142. ADJUSTABLE SLIDEWAY. GEORGE S. POWER, Passaic, N. J., assignor to Wickes Brothers, Saginaw, Mich., a Corporation of Michigan. Filed Dec. 13, 1906. Serial No. 347,588.



1. The combination, with the bed of a slideway provided with inwardly beveled tracks, of a marginal guide extending over each of said tracks, a plurality of rotatable adjusting members consisting of bolts passing through each of said guides each bolt having relatively eccentric portions one of which passes through and is journaled at a fixed point in said guide and the other of which is journaled at a fixed point in said slideway, and a carriage sliding between said tracks and guides.

2. The combination, with the bed of a slideway provided with tracks, of a marginal guide for each of said tracks, and a plurality of adjusting bolts each provided with an eccentric shoulder engaging with said guide and with a trued shank engaging with the bed of the slideway, means for turning said bolts, and means for holding them in position.

871,143. SURFACING AND POLISHING MACHINE. JOHN H. PRUGH, Toledo, Ohio. Filed May 13, 1907. Serial No. 373,307.



1. The combination in a surfacing-machine, of a plurality of abrading-members mounted at one side of the machine, a member slidingly carrying the abrading members and adapted to guide the movements thereof, and mechanism for imparting opposed unitary movements to the members.

2. The combination in a surfacing-machine, of a plurality of gravity abrading-members mounted at one side of the machine, said members being free to have rocking or vertical movements, an element guiding the reciprocatory movements of the abrading members, and mechanism for imparting opposed simultaneous reciprocating movements to the members.

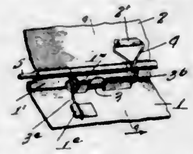
3. In a surfacing-machine, an abrading-member, an arm vertically rising from and having pivotal connection with said member, means forming a fulcrum for the upper end of said arm, a horizontal element guiding the movements of said members, and mechanism coöperating with the arm to impart a swinging movement to the arm and a reciprocating movement to the abrading-member.

4. In a surfacing-machine, a vertically-disposed arm mounted for swinging and free vertical movements, an abrading-member carried at the lower end of said arm, a guide-rod carrying the abrading-member to permit it to have sliding and universal movements relative thereto, and mechanism for imparting a swinging movement to the arm to effect a reciprocation of the abrading-member.

5. In a surfacing-machine, an abrading-member, an arm vertically rising from said member, fulcrum means for the upper end of the arm, a revoluble element slidingly embracing the arm intermediate its ends, and mechanism for revolving said element.

[Claims 6 to 21 not printed in the Gazette.]

871,144. EYEGLASS OR SPECTACLE CASE. FRANK A. REINHARD, East Weymouth, Mass., assignor to American Optical Company, a Corporation of Massachusetts. Filed Dec. 12, 1905. Serial No. 291,417.



1. A spring lid box or case, comprising the body and cover hinged together, a loop or link attached to the cover, and a helically coiled spring extending within a pocket or sheath formed from the rear part or edge of the body, said spring attached at one end to said loop and bearing at its other end against the base of the box or case.

2. A spring-lid box or case, comprising a body and cover hinged together, a portion of said cover pressed inwardly to form an eye, a loop or link attached at one end to said eye, a lip or tongue struck up from the body portion and a helically coiled spring attached at one end to the loop and at the other end to the lip or tongue.

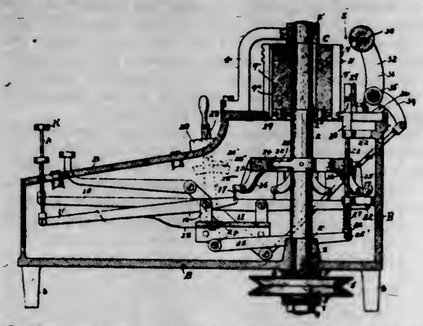
3. A spring-lid box or case, comprising a body and cover hinged together, a portion of said cover pressed inwardly to form an eye, a lip or tongue struck up from the body portion, a helically coiled spring attached at one end to the lip or tongue, and means connecting the other end of said spring with said eye.

4. A spring-lid box or case, comprising a body and cover hinged together, a portion of said cover pressed inwardly to form an eye, a loop or link attached at one end to said eye, a lip or tongue struck up from the body portion, a helically coiled spring attached at one end to the loop and at the other end to the lip or tongue, and a sheath or pocket formed from the body of the case for containing said spring.

871,145. MECHANISM FOR PRODUCING CHARACTER IMPRESSIONS. FRANCIS H. RICHARDS, Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation, a Corporation of New Jersey. Filed Nov. 20, 1901. Serial No. 82,977.

1. The combination with a rotatable carrier and means for imparting a continuous rotary movement thereto, of a plurality of slides mounted in guide-ways on the carrier to have a shifting movement relatively thereto in the direction of the carrier-axis and each of which slides is provided with a selective device; selective mechanism for ar-

resting the rotary movement of the carrier when the selected slide is alined with the point at which the selected device on the slide is to be ultimately set; and means for then shifting the selected slide in its said guideway to thereby position the selected device at said point.



2. The combination with a rotatable carrier and means for imparting a continuous rotary movement thereto, of a plurality of slides mounted in guide-ways on the carrier to have a shifting movement relatively thereto in the direction of the carrier-axis and each of which slides is provided with a plurality of selective devices; selective mechanism for arresting the rotary movement of the carrier when the selected slide is alined with the point at which the selected device on the slide is to be ultimately set; and means for then shifting the selected slide in its said guide-way to thereby position the selected device at said point.

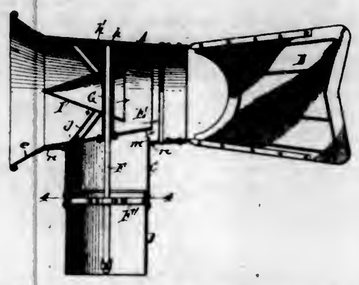
3. The combination with a rotatable carrier and means for imparting a continuous rotary movement thereto, of a plurality of slides mounted in guide-ways on the carrier to have a shifting movement relatively thereto in the direction of the carrier-axis and each of which slides is provided with a plurality of selective devices; selective mechanism for arresting the rotary movement of the carrier when the selected slide is alined with the point at which the selected device on the slide is to be ultimately set; means for then shifting the selected slide in its said guide-way to thereby position the selected device at said point; and means for locking all the slides when these are out of alinement with said point and for releasing the selected slide when the latter is alined with the point.

4. The combination with a rotatable carrier and means for imparting a continuous rotary movement thereto, of a plurality of slides mounted in guide-ways on the carrier to have a shifting movement relatively thereto in the direction of the carrier-axis and each of which slides is provided with a plurality of selective devices; selective mechanism for arresting the rotary movement of the carrier when the selected slide is alined with the point at which the selected device on the slide is to be ultimately set; means for then shifting the selected slide in its said guide-way to thereby position the selected device at said point; means for locking all the slides when these are out of alinement with said point and for releasing the selected slide when the latter is alined with the point; a device coöperative with the set device; and means for effecting the coöperation of said coöperative device with the set device.

5. The combination with a rotatable carrier; and means for imparting a continuous rotary movement thereto; of a plurality of slides mounted in guide-ways on the carrier to have a shifting movement relatively to the carrier in the direction of the carrier-axis and each of which slides is provided with a plurality of selective devices; a stop arm rigid with said shaft; settable stop pins for engaging with said stop arm and thereby arresting the rotary movement of the shaft and the carrier; a locking ring with which all of said slides engage when the latter are out of alinement with the point at which the selected device is to ultimately set; a slide adjuster with which each slide in succession engages as it passes its alining position with said point; and means for actuating the slide adjuster variable distances to thereby bring any selected device to the point at which it is to be set.

[Claims 6 to 15 not printed in the Gazette.]

871,146. VENTILATOR. JOSEPH C. ROTH, West Seneca, and JOHN H. WELSHOFER, Buffalo, N. Y. Filed Mar. 8, 1906. Serial No. 304,869.



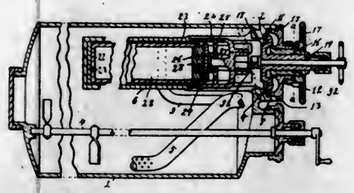
1. A ventilator comprising a casing having a neck or passage at its lower side, an open ended tube arranged lengthwise in the casing and extending across said neck or passage, a portion of said tube being separated from the surrounding casing, a hollow spreading cone arranged axially in said tube and open at its rear end, and a flue or flues connecting the interior of said cone with the space between said tube and the casing, substantially as set forth.

2. A ventilator comprising a shaft, a rotary casing mounted on the shaft and provided at its lower side with a neck or passage, an open-ended tube arranged lengthwise in the casing, an upright sleeve secured within said tube around the shaft, and a spreader arranged in said tube and secured upon said sleeve, substantially as set forth.

3. A ventilator, comprising a casing having a neck or passage at its lower side, a raised guard rim arranged in the casing at the upper end of said neck and a drain opening in the bottom of the casing, and an open-ended tube arranged lengthwise in the casing and extending across said neck or passage, substantially as set forth

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871,147. CHEMICAL FIRE-EXTINGUISHER. WILLIAM H. SHAFER, Cincinnati, Ohio. Filed May 16, 1906. Serial No. 317,104.



1. The combination of a removable jacket adapted to inclose a jar, a cage removably secured to the jacket, a stem adjustably threaded in the cage, and a stopper swiveled on the stem for closing the jar.

2. The combination of a jar holder secured within a tank, a jacket adapted to be removably emplaced therein and provided with a removable cage a jar within the jacket, a stem adjustably secured within the cage and provided with a stopper, and means for actuating the stem from the exterior of the tank.

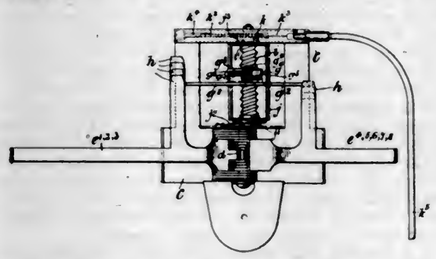
3. The combination of a pressure tank provided with a charging opening and with a jar holder, a jacket adapted to be inserted through said opening and emplaced within the holder a jar emplaced within the jacket, a cage removably secured on the jacket, and a stem adjustably secured in the cage and provided with a stopper, for the purpose specified.

4. The combination of a pressure tank provided with a charging opening, an overflow pipe and with a filling and discharge pipe, a jar holder secured within the tank in registration with said opening, an arm hinged on the tank, a closure swiveled thereon and movable thereby into registration with the opening and adapted to close the opening by a partial turn thereof, and a valve adjustable on said closure and adapted to close said opening at a point thereunder.

5. The combination of a pressure tank provided with a charging opening, a jar holder secured therein in registration with said opening, a cage removably supported within the holder and provided with an adjustable stem, a stopper on said stem, a jar removably emplaced within the cage, an arm hinged at a fixed point, a closure carried thereby and adapted to close said opening, and a key mounted in the closure and arranged to detachably engage with said stem for removing the stopper from the jar.

[Claims 6 to 10 not printed in the Gazette.]

871,148. CONTRIVANCE FOR TURNING THE LEAVES OF A PAMPHLET OR BOOK. BENSON SHARP, county of Middlesex, England. Filed Apr. 14, 1905. Serial No. 255,613.



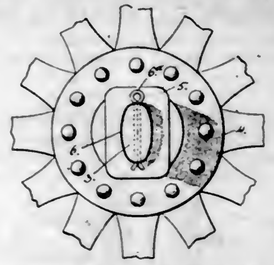
1. A mechanism for turning the leaves of a book or pamphlet comprising arms pivotally mounted on a frame, such arms having fingers which project each a small distance further than that of the arm which follows in sequence, links pivotally secured to the end of the arms, clips attached to the ends of the links, an operating member engaging successively with the projecting tips of the above mentioned fingers, a screw on which said operating member is mounted said screw being located above and parallel with the pivot of the arms, and means for rotating said operating member.

2. A mechanism for turning the leaves of a book or pamphlet comprising arms pivotally mounted on a frame, such arms having fingers which project each a small distance further than that of the arm which follows in sequence, a two fingered operating member adapted to engage successively with the projecting tips of the fingers on the arms, a screw in which said operating member is mounted, said screw being located above and parallel with the pivot of the arms, and means for rotating said operating member through an angle automatically limited to 180 degrees on each actuation.

3. In a mechanism for turning the leaves of a book or pamphlet, an operating member, arms engaged by said member, said arms being attached severally to the leaves, a screw, a divided nut attached to the said operating member and embracing said screw, and means for disengaging said nut from said screw.

4. In a mechanism for turning the leaves of a book or pamphlet, a series of arms pivotally mounted on a common vertical axis in a compact manner, and all lying in the same horizontal plane and links carrying clips for the attachment of the extremities of the arms to the several leaves, the pivoted ends of such arms having each a U shaped section, the surface of each section which is intermediate to the extreme members of the series, being embraced by and embracing, the ones next in sequence, the lengths of the clip-carrying links being each greater or less than the one next in sequence.

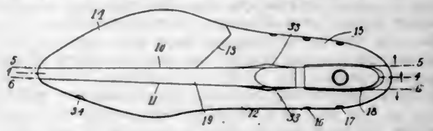
871,149. AXLE FOR PIT-CARS. JOHN E. SMITH, Elizabeth, Pa. Filed May 17, 1907. Serial No. 374,205.



1. In combination, an axle having a pair of cylindrical spindles each of which terminates in a reduced oval shaped end, each of said oval shaped ends having an uninterrupted periphery, and rectangular washers having oval shaped openings, said washers fitted upon the reduced ends of the spindles and adapted to engage the hubs of the wheels when mounted upon the spindles.

2. In combination, an axle having cylindrical spindles each of which terminates in a reduced oval-shaped end, each of said ends having a vertically-extending opening, the periphery of each of said ends being smooth and uninterrupted throughout, rectangular washers having oval shaped openings, said washers fitted upon the oval-shaped ends of said spindles and adapted to engage the hubs of the wheels when mounted upon the spindles, and cotter pins extending through the openings in the oval-shaped ends for maintaining the washers upon said ends.

871,150. CONTRACTING LAST. JOSEPH J. SMITH, New York, N. Y. Filed Dec. 8, 1906. Serial No. 346,851.



1. A last comprising a middle-piece composed of a removable fore-part and a heel-part inclosing a cavity between them, separate side-pieces united at their heel-parts to the heel-part of the middle-piece and including a laterally-adjustable fore-part section, and means connecting said section and the heel-portion of the last and occupying said cavity.

2. A last composed of a body portion, and a laterally-adjustable fore-part section having a supporting joint with the body portion comprising complemental salient and reëntrant portions.

3 A last composed of a body portion, and a laterally-adjustable fore-part section divided from said body portion by a substantially V-shaped cleft whose faces form a supporting joint between the body portion and fore-part section.

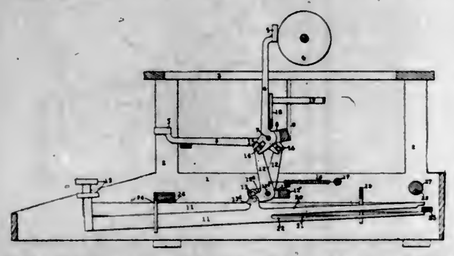
4. A last composed of a body portion, an adjustable fore-part section having a supporting joint with said body portion composed of complemental salient and reëntrant members, and a guiding connection between said body and fore-part section which ties them together and permits lateral movement of the fore-part section.

5. A last composed of a body portion, and a laterally-adjustable fore-part section divided from the body portion by a cleft slanted at an angle to the path of said section, which cleft provides a clearance when the fore-part section is forced inwardly and provides a supporting joint between

the parts in their normal relation, together with a transverse sliding guide-connection between said body portion and fore-part section.

[Claims 6 to 13 not printed in the Gazette.]

871,151. TYPE-WRITING MACHINE. BURNHAM C. STICKNEY, Elizabeth, N. J. Filed Feb. 12, 1902. Serial No. 93,693.



1. In a typewriting machine, the combination with a system of type bars of a system of keys, a system of levers between the keys and the type bars, each of said levers having a yielding construction, and a stop common to said levers for limitidg the yielding action thereof while permitting the keys to carry the types to the printing point.

2. In a typewriting machine, the combination with a series of type bars of a series of keys, a series of levers between the keys and the type bars, the fulcrum portion of each of said levers having a yielding construction, and a stop common to said levers for limiting the yielding action thereof.

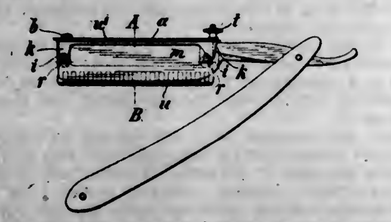
3. In a typewriting machine, the combination with a type of a key, a lever between the key and the type, the fulcrum portion of said lever comprising two members one whereof is yielding, and a stop with which the other of said members contacts for limiting the yielding movement of the first of said members.

4. In a typewriting machine, the combination with a series of type bars of a series of keys, a fulcrum bar, a series of levers between the keys and the type bars, the fulcrum portion of each of said levers being cleft to form tines, one whereof is mounted upon or in contact with said fulcrum bar, and a stop wherewith the other of said tines may contact.

5. In a typewriting machine, the combination with a series of type bars of a series of keys, a series of levers between the keys and the type bars, each of said levers comprising a body portion and a portion cleft to form times, a fulcrum whereon one tine of each lever bears, and a stop wherewith the other tine of each lever contacts.

[Claims 6 to 45 not printed in the Gazette.]

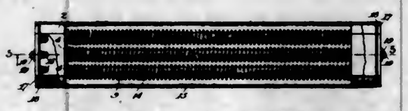
871,152. RAZOR-GUARD. GERHARD TITTMANN, Foche, near Solingen, Germany. Filed Apr. 30, 1907. Serial No. 371,115.



1. A razor, a clamp engaging the same, a guard holder slidable upon the clamp, means for rotatably securing the guard holder at one end of the clamp, and means for locking the guard holder against either side of the razor, substantially as specified.

2. A razor, a clamp engaging the same, a pin near one end of the clamp, a slotted guard-holder engaging the pin and rotatable on the same, and means for locking the guard-holder against either side of the razor, substantially as specified.

871,153. ELECTRIC HEATER. HUGH M. WICKER, Brooklyn, N. Y. Filed Jan. 26, 1907. Serial No. 354,252.



1. A heating unit for electric heaters, comprising insulating heads, coil-supporting elements, the ends of which enter sockets in said heads, coils mounted on said supports, a housing for said unit, end-plates for said housing, and a tie-rod traversing one of the said coil-supporting elements and extending through said end-plates and serving to bind all of the elements of the unit together.

2. A heating unit for electric heaters comprising insulating heads having sockets in their opposed inner faces and reversely placed chambers in their outer faces, composite coil-supporting elements of metal tubes and asbestos sleeves having their ends entered in said sockets, coils mounted on said supporting elements, binding posts mounted in said insulating heads on opposite sides of said coils with their outer ends entering said chambers, and a tie-rod traversing one of said coil-supporting elements and serving to bind the heads, tubes, and coils together.

3. A heating unit for electric heaters comprising insulating heads, binding posts mounted in said heads, coil-supporting elements connecting said heads, coils mounted on said supporting elements, a housing extended from end to end of and completely inclosing the unit, end plates for said housing, and a tie-rod traversing the structure from end to end and serving to bind the end plates, housing, heads, and coil supporting elements together.

4. A heating unit for electric heaters comprising insulating heads having open chambers in their outer faces provided with leading-in notches, binding posts entering said chambers, coil-supporting elements entering sockets in the inner opposed faces of said heads, coils mounted on said elements, an inclosing housing having coincident leading-in notches extending from end to end of said unit, end plates having an insulating lining closing said chambered heads, and a tie-rod traversing the structure and serving to bind the end plates, housing, insulating heads, and coil-supporting elements together.

5. A heating unit for electric heaters comprising insulating heads having open chambers in their outer faces provided with leading-in notches, binding posts entering said chambers, tubular coil-supporting elements entering sockets in the inner opposed faces of said heads, coils mounted on said elements, an inclosing housing having coincident leading-in notches extending from end to end of said unit, end plates having an insulating lining closing said chambered heads, and a tie-rod traversing one of the tubular coil-supporting elements and serving to bind the end plates, housing, insulating heads, and coil-supporting elements together.

[Claim 6 not printed in the Gazette.]

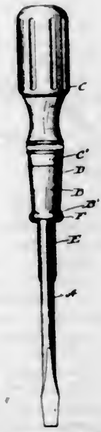
871,154. SCREW-DRIVER. GEORGE E. WOOD, Plantsville, Conn. Filed Jan. 17, 1905. Serial No. 241,444.

1. In a device of the character described, a wooden handle having a tapered inner end, a ferrule fitted to and supported upon said tapered portion, a shank, a longitudinal rib or flange thereon standing beyond the surface of said shank, the greatest diameter of said shank at said ribbed portion being less than the smallest diameter of the ferrule, a central bore in the handle portion arranged to receive the shank, the rib thereof cutting into the material of the handle at the side of said bore, and an abutment on said shank of greater diameter than the diameter of that part of the shank projecting into the handle, said abutment taking a bearing against and covering the inner extremity of said ferrule.



2. In a device of the character described, a wooden handle having a tapered inner end, a ferrule fitted to and supported upon said tapered portion, a shank, a longitudinal rib or flange thereon standing beyond the surface of said shank, the greatest diameter of said shank at said ribbed portion being less than the smallest diameter of the ferrule, a central bore in the handle portion arranged to receive the shank, the rib thereof cutting into the material of the handle at the side of said bore, and an abutment on said shank of greater diameter than the diameter of that part of the shank projecting into the handle, said abutment taking a bearing against and covering the inner extremity of said ferrule and forming a flush joint therewith.

871,155. INSULATING DEVICE. GEORGE E. WOOD, Plantsville, Conn. Filed Feb. 28, 1905. Serial No. 247,802.



1. A hand tool comprising the combination of a handle having an exposed grip portion of non-conducting material, a metal shank carried by the handle, a metal socket surrounding a portion of the handle adjactnt the shank, and having an annular flange or projection and a rubber insulating member surrounding the socket and parts of the shank and handle, and having an annular recess or groove to receive the annular flange or projection of the socket, substantially as described and for the purpose specified.

2. A hand tool, comprising the combination of a handle having an exposed grip portion of non-conducting material, a metal shank carried by the handle, a metal socket surrounding a portion of the handle adjactnt the shank and having an annular flange or projection, a rubber insulating member surrounding the socket and parts of the shank and handle, an annular recess or groove within the rubber insulating member to receive the annular flange or projection of the socket, the handle proper being cut back or recessed adjacent to the rear edge of the socket to permit the surface of the insulating member to lie flush with the adjacent exposed surface of the grip when the parts are assembled.

871,156. EXPLOSIVE HAND-SHELL. NIELS W. AASEN, Drøbak, Norway, assignor to Rheinische Metallwaren- und Maschinenfabrik, Düsseldorf-Derendorf, Germany. Filed May 27, 1907. Serial No. 375,969.



1. In a hand explosive shell, the combination, with the body of the shell receiving the explosive charge, and a steering shaft, connected with said body, of a firing pin slidably supported within said shaft and a fuse located with its percussion cap in the path of said firing pin.

2. In a hand explosive shell, the combination, with the body of the shell receiving the explosive charge, of a sleeve detachably mounted on said body, a steering shaft mounted in said sleeve, a firing pin slidably supported within said sleeve, and a fuse located with its percussion cap in the path of said firing pin.

3. In a hand explosive shell, the combination, with the body of the shell receiving the explosive charge, and a steering shaft, connected with said body, of a firing pin slidably supported within said shaft means to lock said firing pin in its retracted position, and a fuse located with its percussion cap in the path of said firing pin.

4. In a hand explosive shell, the combination, with the body of the shell receiving the explosive charge, of a sleeve having a bayonet connection with said body, a steering shaft mounted in said sleeve, a firing pin slidably supported within said sleeve, and a fuse located with its percussion cap in the path of said firing pin.

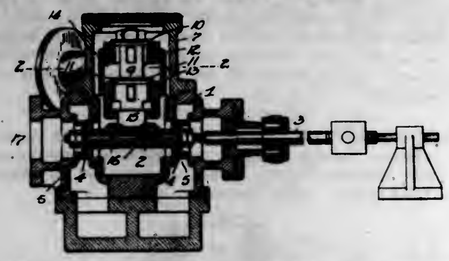
5. In a hand explosive shell, the combination, with the body of the shell receiving the explosive charge, and a steering shaft connected with said body, of a firing pin slidably supported within said shaft, a hook and loop connection engaging said firing pin and normally locking the same, a string adapted to be held by the operator and to bring said loop and hook connection out of engagement, and a fuse located with its percussion cap in the path of said firing pin.

[Claims 6 and 7 not printed in the Gazette.]

871,157. VALVE MECHANISM FOR STEAM-STEERING. JACOB R. ANDREWS, Bath, Me. Filed Mar. 27, 1907. Serial No. 364,950.

1. In steam steering or other apparatus the combination of a reversing or controlling valve and its casing, a

check or stop valve controlling the supply of steam to said reversing valve, and means for transmitting mechanically the movement of the reversing or controlling valve to the check valve, said check valve closing automatically to cut off steam from the reversing valve when the latter returns to neutral position, substantially as described.



2. In steam steering or other apparatus, the combination of a reversing or controlling valve and its casing, a balanced check or stop valve and means for operating the same mechanically from the movement of the reversing valve, said check valve acting to cut off steam from said reversing valve, substantially as described.

3. In steam steering or other apparatus, the combination of a reversing or controlling valve and its casing, a check or stop valve for controlling the steam supply to said reversing valve, and a mechanical power transmitting connection between the said reversing valve and the check valve for imparting motion to the check valve.

4. In steam steering or other apparatus, the combination of a reversing or controlling valve and its casing, a check or stop valve for controlling the supply of steam to the reversing valve, and the cam inclines on the reversing valve for operating the check valve, substantially as described.

5. In steam steering or other apparatus, the combination of a reversing or controlling valve and its casing, a check or stop valve having a portion contacting directly with a portion of the reversing valve to be operated thereby, said check valve controlling the supply of steam to the reversing valve, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

871,158. BANJO ATTACHMENT. ELWIN J. BABBITT, Petoskey, Mich. Filed May 29, 1906. Serial No. 319,245.



1. An attachment for stringed instruments, comprising a body-portion, and separate sets of string pegs on the body-portion, one set of said pegs projecting horizontally or sidewise, from the body-portion, and the other set of said pegs projecting from the underside of the body-portion, at an angle to the aforesaid set of pegs.

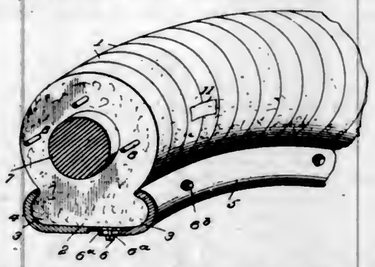
2. An attachment for the stringed instruments, comprising a body-portion, means for securing the body-portion in place, adjustable means whereby the body-portion may be secured with its top side in level plane with the upper side of its support, and two sets of string pegs on the body-portion, one set of said pegs projecting horizontally or sidewise from the body-portion, and the other set of said pegs projecting from the under side of the body-portion, at an angle to the aforesaid set of pegs.

3. A banjo attachment comprising a body-portion, means for securing the body-portion to the banjo neck, adjustable means whereby the outer side of the body-portion may be supported level with the plane of the fret-side of said neck, and separate sets of string pegs on the body portion, one set of pegs projecting horizontally or sidewise, from the body-portion, and the other set of said pegs projecting from the under side of the body-portion, at an angle to the aforesaid set of pegs.

4. The combination with a banjo, of an attachment comprising a body-portion, means whereby to support its top side level with the plane of the fret-side of the banjo neck, and separate sets of string pegs on the body-portion, one set of said pegs projecting horizontally or sidewise, from the body-portion, and the other set of said pegs projecting from the under side of the body-portion, at an angle to the aforesaid set of said pegs.

5. The combination in a banjo attachment, of a body-portion constructed with a reduced or smaller outer end, securing means, two sets of string-pegs on the body-portion, one set of said pegs projecting at an angle to the other set of pegs, a plate on the side edge of the body-portion adjacent to the banjo neck, the plate constructed with openings therethrough, and the banjo-neck constructed with sockets, said openings in the plate and sockets in the banjo neck adapted to receive the string-pegs, bushings rotatably secured on the inner ends of the string-pegs, and means adapted to hold the bushings against turning action.

871,159. TIRE. WINTHROP D. BAKER, Brockton, Mass. Filed July 16, 1906. Serial No. 326,421.

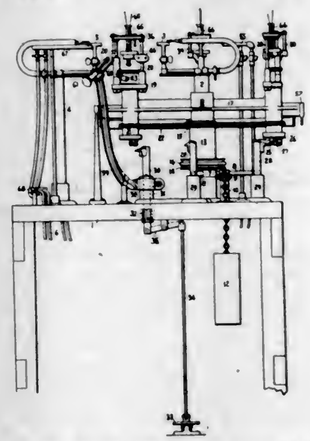


1. A resilient tire constructed in ring-like sections, each of which is provided with a base enlargement producing retaining lugs adapted for reception in the rim of a wheel, a rubber core threaded through said sections, tie wires also threaded through said sections and adapted to secure said sections together, a wheel rim constructed in sections mounted to slide transversely with relation to each other and adapted to grip the retaining lugs of the tire sections, and bolts extending transversely from one section of the rim to the other and through the base enlargement of the tire sections, whereby to bind the two sections of the rim together and to assist in holding the tire sections in the rim.

2. A resilient tire constructed in ring-like sections, a rubber core threaded through said sections, and tie wires also threaded through said sections, the ends of said tie wires being joined together, and said sections being formed at the joins with recesses adapted to expose the said joins of the tie wires, and blocks secured in said recesses and adapted to cover the said joins.

3. A resilient tire constructed in ring-like sections, a rubber core threaded through said sections, tie wires also threaded through said sections, the ends of said tie wires being joined together, two adjacent sections at the joins of said tie wires being cut away to expose said joins, and blocks adapted to be held in said cut away portions and designed to close said cut away portions over the joins, as and for the purpose set forth.

871,160. STEM-MAKING MACHINE. MARK H. BRANIN, Newark, N. J., assignor to General Electric Company, a Corporation of New York. Filed Mar. 26, 1906. Serial No. 308,021.



1. In a stem-making machine, a holder for the glass tube, a support for the ends of the leading-in wires extending through the tube, means for adjusting said support with reference to said holder to vary the length of the wires extending through the tube, and a heater for softening the glass.

2. In a stem-making machine, a rotary head, driving mechanism therefor, a holder for the glass tube carried by said head, a support for the ends of the leading-in wires extending through the tube also carried by said head, means for adjusting said support with reference to said holder to vary the length of the wires extending through the tube, devices for locking the support in any adjusted position, and a heater for softening the glass.

3. In a stem-making machine, a rotatable frame, a plurality of rotary heads carried thereby, driving mechanism therefor, a holder for the glass tube carried by each head, a support for the ends of the leading-in wires extending through the tube carried by each head, means for adjusting said support with reference to said holder to vary the length of the wires extending through the tube, a heater for softening the glass, and a pinching device for effecting the seal.

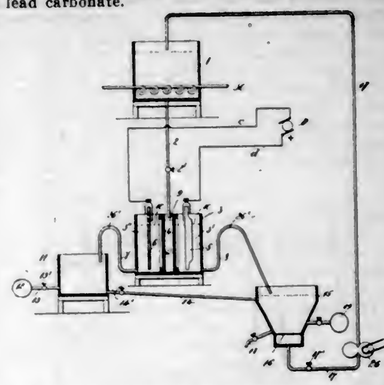
4. In a stem-making machine, a holder for the glass tube, means for adjusting the distance between the ends of the leading-in-wires extending through the tube, and a heater for softening the glass.

5. In a stem-making machine, a holder for the glass tube, means for supporting the leading-in wires with their ends extending beyond the end of the tube and in a definite relation thereto, means for adjusting the distance between the ends of the wires, and a heater for softening the glass.

[Claims 6 to 15 not printed in the Gazette.]

871,161. ART OF PRODUCING PIGMENTS BY ELECTROLYSIS. EDWIN D. CHAPLIN, Boston, Mass., assignor to International Lead Companies, a Voluntary Association. Filed Feb. 3, 1906. Serial No. 299,237.

1. As an improvement in the art of producing white lead by electrolysis, the process herein described which consists in electrolytically dissolving metallic lead in an aqueous solution of a non-alkaline salt in the presence of a soluble chlorate salt and converting the resulting lead oxychlorid nito lead carbonate.



2. As an improvement in the art of producing white lead by electrolysis, the process herein described which consists in electrolytically dissolving metallic lead in an aqueous solution of a non-alkaline salt in the presence of a soluble chlorate salt, thereby producing an alkaline hydrate and lead oxychlorid, withdrawing and mixing said lead oxychlorid and said alkaline hydrate to precipitate lead hydrate, and then carbonating said lead hydrate to produce lead carbonate.

3. As an improvement in the art of producing white lead by electrolysis, the process herein described which consists in electrolytically dissolving lead in an aqueous solution of a non-alkaline salt in the presence of a soluble chlorate salt, thereby producing lead oxychlorid, withdrawing said lead oxychlorid and converting the same into lead hydrate and then carbonating said lead hydrate to produce lead carbonate.

4. As an improvement in the art of producing white lead by electrolysis, the process herein described which consists in electrolytically dissolving lead in an aqueous solution of a non-alkaline salt in the presence of a soluble chlorate salt, thereby producing a solution of a soluble acid salt of lead, and then converting said soluble acid salt of lead into lead carbonate.

5. As an improvement in the art of producing white lead by electrolysis, the process herein described which consists in electrolytically dissolving lead in an aqueous solution of a non-alkaline salt in the presence of a soluble chlorate salt, thereby producing an alkaline hydrate and a solution of soluble acid salt of lead, withdrawing and mixing said soluble acid salt of lead and said alkaline hydrate to precipitate lead hydrate and then carbonating said lead hydrate to produce lead carbonate.

[Claim 6 not printed in the Gazette.]

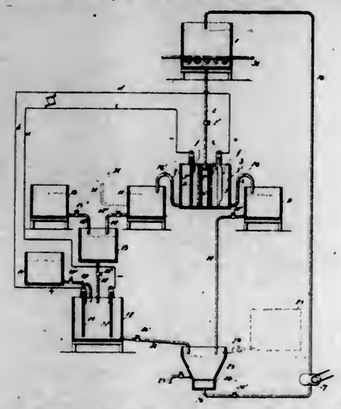
871,162. ART OF PRODUCING PIGMENTS BY ELECTROLYSIS. EDWIN D. CHAPLIN, Boston, Mass., assignor to International Lead Companies, a Voluntary Association. Filed Feb. 3, 1906. Serial No. 299,238.

1. As an improvement in the art of producing lead chromate by electrolysis, the process herein described which consists in electrolytically producing from metallic lead a soluble acid salt of lead and converting said soluble acid salt of lead into lead chromate.

2. As an improvement in the art of producing lead chromate by electrolysis, the process herein described which consists in electrolytically dissolving metallic lead in the presence of a soluble chlorid salt, converting the resulting lead chlorid into lead oxychlorid, and producing lead chromate from said lead oxychlorid.

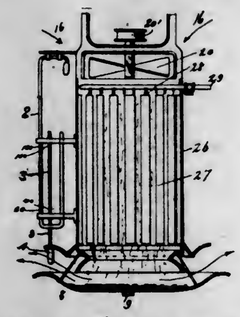
3. As an improvement in the art of producing lead chromate by electrolysis, the process herein described which consists in electrolytically dissolving metallic lead in the presence of a soluble chlorid of an alkaline base, thereby

producing an alkaline hydrate and lead chlorid, converting said lead chlorid into lead oxychlorid, withdrawing said alkaline hydrate and lead oxychlorid into separate receptacles, electrolytically producing a mixture of chromate



and bichromate of an alkaline base from said alkaline hydrate, and treating said lead oxychlorid with said mixture to produce lead chromate.

871,163. HYGROMETER FOR HUMIDIFYING AND AIR-MOISTENING APPARATUS. STUART W. CRAMER, Charlotte, N. C. Filed July 23, 1906. Serial No. 327,428.



1. A hygrometer comprising two thermometers, one of which thermometers is provided with an uncovered bulb; in combination with means for saturating a current of air which is applied to the surface of said uncovered bulb, and means for producing the current of air.

2. A hygrometer comprising a dry bulb thermometer and a wet bulb thermometer, the latter thermometer having an uncovered bulb; in combination with means for producing and supplying a finely attenuated spray of water to a current of air of requisite psychrometric wet bulb temperature and to which current of air said wet bulb is exposed, and means for producing the current of air.

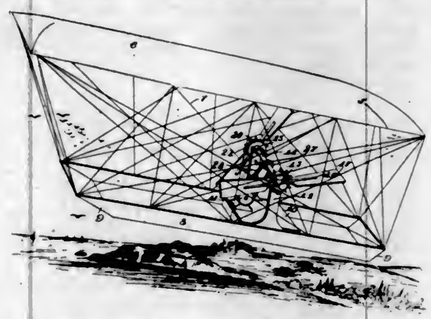
3. In an instrument for indicating humidity, a dry bulb thermometer and a wet bulb thermometer, means for supplying a finely attenuated spray of water, and means for commingling air with said spray and directing said commingled air and spray upon said wet bulb.

4. In a humidifier, a dry bulb thermometer and a wet bulb thermometer, means for directing the air as it enters the humidifier across the surface of the bulb of the dry bulb thermometer, and means for directing the current of moistened and cooled air across the surface of the bulb of the wet bulb thermometer.

5. In a humidifier, a dry bulb thermometer and a wet bulb thermometer, the bulb of the dry bulb thermometer arranged in the path of and exposed to the air entering the humidifier, and the bulb of the wet bulb thermometer arranged in the path of and exposed to the moistened and cooled air issuing from the humidifier.

[Claim 6 not printed in the Gazette.]

871,164. AIR-SHIP. AMOS C. ELLSWORTH, Newport, Vt. Filed Apr. 3, 1906. Serial No. 309,622.



1. In aerial vessels, the combination with an aeroplane, of a gas receiver secured to the upper surface thereof, a car suspended from the aeroplane, standards secured to the car, an operating shaft journaled in the standards and extending transversely of the car, feathering propeller blades carried by the shaft and mounted for rotation in a vertical plane on each side of the car, cams mounted for rotation on the operating shaft and provided with terminal finger pieces, tappets secured to the blades and adapted to engage the cams for varying the angles of the blades, and means engaging the finger pieces for locking the cams against rotation.

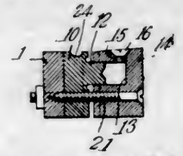
2. In aerial vessels, an aeroplane, a gas receiver secured thereto, a car suspended from the aeroplane, standards secured to the car, a shaft journaled in the standard and extending transversely of the car, feathering blades carried by the shaft and mounted for rotation in a vertical plane on each side of the car, collars mounted for rotation on the shaft and provided with cam faces, tappets carried by the blades and adapted to engage the cam faces for varying the angle of the blades, finger pieces projecting laterally from the collars, and pins extending transversely across the standards and engaging the finger pieces for locking the collar against rotation.

3. In aerial vessels, the combination with an aeroplane, of a gas receiver secured thereto, a car suspended from the aeroplane, an operating shaft provided with terminal heads, feathering blades mounted for rotation in said heads, cams mounted for rotation on the operating shaft, tappets carried by the blades and adapted to engage the cams, stop-pins secured to the heads for limiting the movement of the tappets, and means for locking the cams against rotation.

4. In aerial vessels, the combination with an aeroplane, of a gas receiver secured thereto, a car suspended from the aeroplane, an operating shaft extending transversely of the car and provided with terminal heads, feathering propelling blades mounted for rotation in the heads, collars mounted for rotation on the operating shaft and each provided with a cam face, tappets carried by the blades and adapted to engage the cam faces, pins carried by the heads for limiting the movement of the tappets, finger pieces extending laterally from the periphery of the collars, and means engaging the finger pieces for locking the collars against rotation.

5. In aerial vessels, the combination with an aeroplane, of a relatively flat gas receiver secured to the upper surface thereof, a car suspended from the aeroplane and having its opposite ends inclined or beveled, standards secured to the car and provided with terminal bearings, an operating shaft journaled in said bearings and provided with enlarged heads, feathering blades carried by the heads and mounted for rotation in a horizontal plane on each side of the car, collars mounted for rotation on the operating shaft and each provided with a cam face, tappets secured to the blades and adapted to engage the cams, pins carried by the heads for limiting the movement of the tappets, finger pieces extending laterally from the periphery of the collars, locking pins extending transversely through openings in the standards and adapted to engage the adjacent finger pieces for locking the collar against rotation, and means for operating the shaft.

871,165. SPINDLE-LUBRICATOR. WILLIAM FIELDING, Lewiston, Me. Filed Mar. 18, 1907. Serial No. 363,076.



1. In a device of the class specified, a two part collar board having spindle bearing recesses, the sections of the collar board having interfitting ribbed and grooved portions constituting a lubricant reservoir.

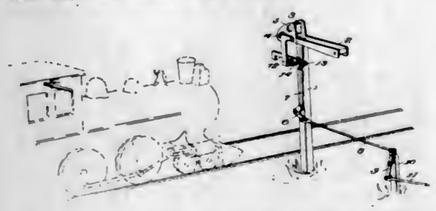
2. In a device of the class specified, a two part collar board notched to form spindle bearings, one section of the collar board having a groove constituting a lubricant reservoir, and the other section having a rib that fits partly within said groove.

3. In a device of the class specified, a two part collar board notched to form spindle bearings, one of the sections of the collar board being provided with a projecting rib, the outer face of which has inclined recesses, the opposite section of the collar board having a rib receiving groove that constitutes a lubricant reservoir.

4. In a device of the class specified, a two part collar board notched to form spindle bearings, one section of the collar board having a projecting rib, the outer face of which has obliquely disposed grooves, the opposite section of the collar board having a rib receiving groove constituting a lubricant reservoir, lugs projecting from the face of the rib and closing the ends of the groove, and means for adjusting the sections relatively to each other to take up wear.

5. In a device of the class specified, a two part collar board, the upper face of one of the collar board members being provided with a longitudinal groove, and the other member being inclined in the direction of such groove, substantially as and for the purpose specified.

871,166. RAILWAY SIGNAL AND SAFETY APPLIANCE. GEORGE W. GERLACH, Cumberland, Iowa. Filed Mar. 28, 1907. Serial No. 364,990.



1. In railway safety appliances, the combination of a valve controlling the brakes, a second valve controlling the throttle, connecting means between the two valve stems, a trip shaft for operating one of the valves, a lever having an operative connection with the trip shaft, and a trip for engaging the lever.

2. In railway safety appliances, the combination of a valve controlling the brakes, a second valve controlling the throttle, gearing connecting the valve stems, a lever for operating the valves, and a trip for engaging the lever.

3. In railway safety appliances, the combination of an air valve controlling the brakes, a cylinder, a second valve controlling the admission of air to the cylinder, a piston mounted within the cylinder, a throttle lever controlled by the piston, gearing connecting the two valves, a lever for opening the valves, and a trip for engaging the lever.

4. In railway safety appliances, the combination of a valve controlling the brakes, a second valve controlling the throttle, means for simultaneously operating the valves, a trip shaft for operating one of the valves, a crank arm carried by the trip shaft, a trip lever having an operative connection with the crank arm, and a trip for actuating the trip lever.

5. In railway safety appliances, the combination of a valve controlling the brakes, a second valve controlling the throttle, a gear wheel adjustably mounted upon the stem of one of the valves, a second gear wheel mounted upon the stem of the second valve, the first mentioned gear wheel being designed to be moved into and out of engagement with the second mentioned gear wheel, and a trip mechanism for actuating the first mentioned valve.

[Claims 6 and 7 not printed in the Gazette.]

871,167. FISHING-REEL. EDWARD L. GILMORE, Youngstown, Ohio, assignor of one-half to David F. Anderson, Youngstown, Ohio. Filed Sept. 28, 1906. Serial No. 336,549.



1. In a fishing reel comprising a frame and rotatable spool mounted therein, the combination of a brake member carried by the spool for coöperation with the frame, and a plunger applied to the frame and operable to engage with and disengage from the brake member to control the operation of the latter.

2. In a fishing reel, the combination with the spool, of a centrifugally operable brake for said spool, and means for controlling the centrifugal action of the brake.

3. In a fishing reel, the combination with the spool, of a centrifugally operable brake for said spool, and means applied to the reel for varying at will the centrifugal action of the brake.

4. In a fishing reel, the combination with the spool, of a centrifugally operable brake for said spool, and manually operable means co-acting with the brake for varying the centrifugal braking action thereof.

5. In a fishing reel, the combination with the spool, of a brake for retarding the movement of said spool and manually controlled means for varying the pressure of said brake.

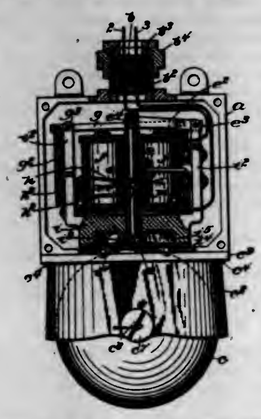
[Claims 6 to 10 not printed in the Gazette.]

871,168. ELECTRIC BELL. HENRY J. HEENEY, Boston, Mass., assignor to Holtzer Cabot Electric Company, a Corporation of Massachusetts. Filed Feb. 12, 1906. Serial No. 300,591.

1. In an electric bell, the combination with an electromagnet; an armature, and a striker operated thereby; of an inclosed casing for said electro magnet, armature and striker; a gong supported outside of the casing in the field of impact of said striker; a diaphragm forming a part of the wall of said casing, and being interposed between said striker and said gong; and means for preventing said diaphragm from vibrating.

2. In an electric bell, the combination with an electromagnet and a longitudinally movable striker operated thereby; of a casing to contain said electro magnet and striker; a cover for said casing; a washer interposed between said cover and said casing to constitute a watertight seal; electric conductors to energize the said electro magnet; a flexible member provided with openings for said conductors; means for compressing said flexible mem-

ber to hermetically seal the same around said conductors; a gong outside of the casing in the path of impact of said striker; a diaphragm forming part of the wall of the casing and interposed between said striker and said gong; and means for preventing said diaphragm from vibrating.



3. In an electric bell, the combination with an electromagnet, an armature and a striker operated thereby; of an inclosed casing for said parts; a gong supported outside of the casing in the field of impact of said striker; a diaphragm forming a part of the wall of said casing and being interposed between said striker and said gong; means for preventing said diaphragm from vibrating; and means for adjusting the position of said gong with relation to said diaphragm.

4. In an electric bell, the combination with an inclosed case provided with a diaphragm in one wall; of striking mechanism inclosed in said case; a hood-shaped supporting member connected with the wall of said case of which said diaphragm forms a part; a clamping member supported in said supporting member; and a circular gong provided with an opening slightly out of alinement with its center, said supporting member extending through said opening in said gong.

5. An inclosed casing; a bell-striker and operating means contained therein; a diaphragm forming part of the wall of said casing; a fixed part within the casing lying in contact with the diaphragm near the middle thereof; and a bell outside the casing close to, but not in contact with, the diaphragm.

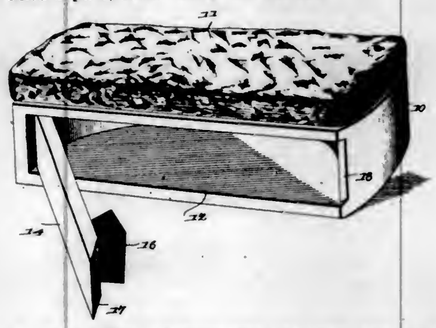
[Claim 6 not printed in the Gazette.]

871,169. PNEUMATIC TIRE. FREDERIC C. HOOD, Boston, Mass. Filed June 11, 1906. Serial No. 321,229.



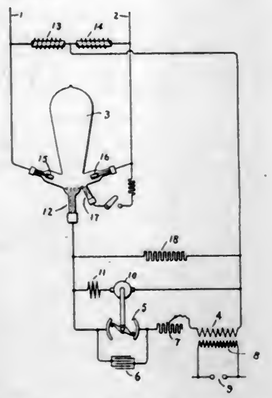
In combination, a rim having a substantially flat surface and a permanent retaining flange on one side, a removable flange on the opposite side, inwardly extending projections having inclined faces at the junctions of the flanges and rim, said projections serving to brace said flanges, bolts passing across the face of the rim and through said projections and connecting the permanent and removable flanges, and a resilient tire seated on said rim and confined between said flanges, said tire having transverse grooves to receive the bolts and corner recesses to receive the lugs, substantially as described.

871,170. COMBINATION BLACKING-BRUSH. CHARLES W. JONES and WILBER L. MEREDITH, Oskaloosa, Iowa. Filed Sept. 6, 1904. Serial No. 223,483.



A device of the character described comprising a block having a polisher immovably connected to one of its faces and a recess in one of its sides, said recess constituting a receptacle for a box and having a continuous curved wall extending from one end to the other of the recess and constituting a deflector for facilitating the removal of the box, a lid hinged within and adapted to close the recess, said lid being adapted to swing upon its pivot and to be retained in closed position by the fingers of the hand of an operator when using the polisher, and a dauber upon one face of the lid and adapted to extend into the recess when closed, said block having a notch adjacent the recess and said lid having a beveled end adapted to lap the notch.

871,171. VAPOR-RECTIFIER SYSTEM. OSIAS O. KRUH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 13, 1907. Serial No. 362,173.



1. The combination of a load circuit subject to back flow of energy, a vapor rectifier supplying current thereto, and an auxiliary path for current operatively connected to protect said rectifier from the current back flow of said load circuit.

2. The combination of a load circuit subject to back flow of current, a vapor rectifier supplying energy thereto, and a non-inductive resistance connected in shunt with said load circuit for protecting said rectifier from the back flowing current of said load.

3. The combination of an induction coil, an interrupter in circuit with one winding of said coil, a mercury rectifier supplying energy through said interrupter to said coil, and a substantially non-inductive path in shunt with said interrupter and coil.

4. The combination of an induction coil having sparking terminals, a vapor rectifier supplying current to the primary winding of said coil, and a path of low inductance forming a shunt path for oscillations occurring in said primary.

5. The combination of a load circuit including a primary of an induction coil, a vapor rectifier connected to said circuit, and a non-inductive resistance in shunt with said load circuit.

[Claims 6 to 8 not printed in the Gazette.]

871,172. MANIFOLD PAPER AND PROCESS OF PRODUCING THE SAME. ERNEST E. LINFOOT, Philadelphia, Pa. Filed Aug. 8, 1906. Serial No. 329,702.



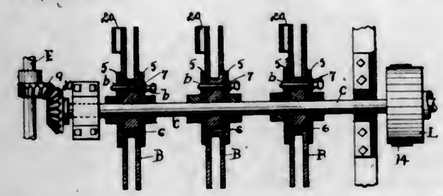
1. An impression sheet having the surface of its impression coating of different reflective capacity in different regions, said regions being separated by distinctive lines manifested by the coating being less opaque throughout the extent of said lines, than in adjoining regions of said coating, substantially as set forth.

2. An impression sheet having the surface of its impression coating of different reflective capacity in different regions, said regions being separated by distinctive lines manifested by the coating throughout the extent of said lines, being of different opacity from the adjoining regions of the coating, substantially as set forth.

3. The process of providing an impression sheet with contrasting surfaces in different regions which consists in providing said sheet with a coating of impression material of uniform temperature, then subjecting a selected region of said coating to a higher temperature, substantially as set forth.

4. The process of providing an impression sheet with contrasting surfaces in different regions, which consists in providing said sheet with a coating of impression material of uniform temperature, then subjecting a selected region of said coating to a higher temperature, and then maintaining said coating at an abnormal temperature for a predetermined time after being subjected to said higher temperature, substantially as set forth.

871,173. MEANS FOR TRIMMING AND CONTROLLING CURTAINS AND SCENIC DROPS. FRANK S. MADIGAN, Cleveland, Ohio. Filed Dec. 17, 1906. Serial No. 348,261.



1. In theatrical curtains, a curtain and a series of independently mounted reels rotatable for adjustment and connected with said curtain to trim the same.

2. Mechanism for trimming and operating stage curtains and the like comprising a plurality of rotary devices and separate cables leading therefrom to the curtain, said devices having independent rotation for trimming the curtain and provided with mechanism adapted to lock them together for joint rotation in raising and lowering the curtain, and means for rotating said devices when locked together.

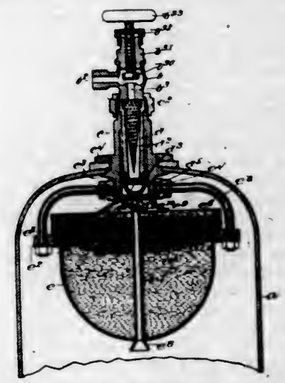
3. A curtain or the like for a stage and means to trim the same comprising a shaft and a series of reels independently rotatable thereon, a cable from each reel to said curtain and a separate lock for each reel and means to rotate the said shaft and reels together.

4. A curtain or like device for stage use, a rotatable shaft, a series of independently mounted trimming devices on said shaft and separately adjustable, and means to fix the said devices rigidly with the shaft.

5. Trimming mechanism for stage curtains and the like comprising a main shaft and a counter shaft adapted to be thrown into and out of operating connection therewith, and a series of independently mounted reels on said counter shaft having separate rotary adjustments.

[Claims 6 to 9 not printed in the Gazette.]

871,174. CARBONATOR. EDWARD E. MURPHY, Chelsea, Mass., assignor to Puffer Manufacturing Company, a Corporation of Maine. Filed Jan. 15, 1904. Serial No. 189,186.



1. In a carbonator, the combination with a closed chamber provided at the top with a spraying device consisting of a disk having a series of inclined openings and a cup-shaped member having an opening through the middle; and a mixing receptacle suspended below said spraying device, said receptacle being open at the top and closed at the bottom and being substantially hemispherical in shape and substantially larger in diameter than the spraying device, to receive the water admitted through the spraying device; and a coarse strainer across the top of the receptacle, substantially as described.

2. In a carbonator, a receptacle provided at the top with a spraying device having inclined openings and a cup-shaped member having an opening through the middle, whereby a cone-shaped spray is obtained; a mixing receptacle suspended within the main receptacle below said spraying device, said mixing receptacle being substantially hemispherical in shape and closed at the bottom and open at the top the opening at the top being substantially larger in diameter than the spraying device; and a pipe projecting upward through said mixing receptacle and provided at the top with a conical deflector and one or more lateral ducts or passages, substantially as described.

871,175. GARMENT-HANGER. EDWARD K. MYERS, Preston, Iowa. Filed Feb. 26, 1907. Serial No. 359,388.

1. A garment supporter including a body portion having its upper edge curved downwardly in opposite directions from the center thereof, a block rigidly secured to the body portion and having its upper edge curved to conform to the curvature of said body portion, a spring actuated clamping member pivotally connected with the block, and a suspension hook having one end thereof bent laterally to form a loop, and its opposite end extended through the block and embedded in the adjacent face of the body portion.

2. A garment supporter including a body portion, a block rigidly secured to the body portion, a spring actuated clamping member pivotally connected with the block, a handle extending laterally from the movable clamping member, and a suspension hook having one end thereof provided with a laterally extending socket and its opposite end extended through an opening in the block and the terminal thereof bent at right angles to the vertical plane of the block and embedded in the body portion.

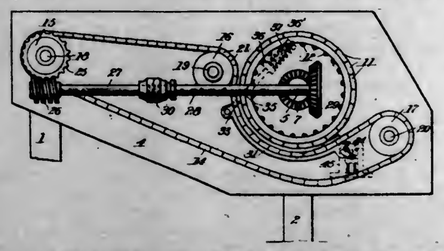


3. A garment supporter including a body portion, a spring pressed clamping member pivotally mounted on the body portion, a handle extending laterally from the clamping member and having its intermediate portion curved upwardly, and a suspension hook secured to the body portion and provided with a terminal socket, an intermediate portion of the suspension hook being bent in the direction of and curved to conform to the hanger.

4. A garment supporter including a body portion, a longitudinal bar secured to the lower edge of the body portion, a spring pressed clamping member mounted on the body portion and having its lower edge terminating short of the adjacent lower edge of the body portion, a strip of yieldable material secured to the bar and inner face of the clamping member, respectively, a handle extending laterally from the movable clamping member, and a suspension hook secured to the body portion and having its free end extended laterally to form a terminal loop.

5. A garment supporter including a body portion having its upper edge curved downwardly in opposite directions on each side of the center thereof, a longitudinal bar secured to the lower edge of the body portion, a block rigidly secured to the upper end of the body portion, a spring pressed clamping member pivotally connected with the block and movable to operative positions between said block and longitudinal bar, a strip of yieldable material secured to the bar and inner face of the clamping member, respectively, a handle extending laterally from the clamping member and having its intermediate portion curved outwardly, and a suspension hook having one end thereof bent to form a terminal loop and its opposite end extended through an opening in the block and bent laterally for engagement with the body portion, the intermediate portion of the suspension hook being bent to conform to the curvature of the handle.

871,176. FEED-GRINDER. ELMER E. MCCARGAR, Lincoln, Nebr., assignor of one-fourth to Edgar H. Merriam, Council Bluffs, Iowa, and one-fourth to Robert F. Smith, Omaha, Nebr. Filed Aug. 11, 1906. Serial No. 330,246.



1. A feed grinder comprising a frame, a cylinder rotatably mounted in the frame, an endless apron mounted in the frame for coöperation with the cylinder, guides mounted in the frame beneath the cylinder to guide the apron, a spring actuated rod connecting one end of each guide, a shaft rotatably mounted in the opposite end of each guide and provided with cranks for engagement with the apron to move the latter toward and away from the cylinder upon rotation of said shaft, and means for operating the cylinder and apron.

2. A feed grinder comprising a rotatable cylinder provided with removable knife slats, a traveling apron provided with removable knife slats, and means for yieldably and adjustably supporting the apron beneath the cylinder.

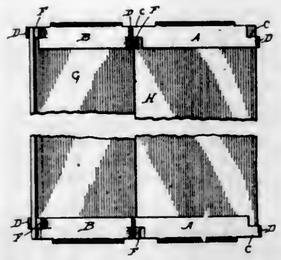
3. A feed grinder comprising a rotatable cylinder provided with knife slats, a traveling apron provided with knife slats, means for yieldably supporting the apron at one side of the cylinder, and means at the opposite side of the cylinder to adjust the apron toward and away from the cylinder.

4. A feed grinder comprising a rotatable cylinder provided with removable knife slats, a traveling apron provided with removable knife slats, oppositely disposed guide members arranged beneath the cylinder each provided with a curved groove to receive the edges of the apron, means at one end of each guide member to yieldably support it, and means at the opposite ends of the guide members to adjust them toward and away from the cylinder.

5. A feed grinder comprising a rotatable cylinder provided with removable knife slats, a traveling apron provided with removable knife slats, oppositely disposed guide members arranged beneath the cylinder each provided with a curved groove to receive the edges of the apron, means at one end of each guide member to yieldably support it, means at the opposite ends of the guide members to adjust them toward and away from the cylinder, and means for moving the cylinder at a higher speed than the apron.

[Claims 6 to 12 not printed in the Gazette.]

871,177. INTERLOCKING MEANS FOR SHEET-PILING. GEORGE E. NYE, Chicago, Ill., assignor to National Interlocking Steel Sheeting Company, Chicago, Ill., a Corporation of Illinois. Filed July 22, 1907. Serial No. 384,973.



1. Interlocking means for sheet piling comprising a U-shaped member adapted to receive the end of the web of a channel bar and provided at the ends of its flanges with lateral projections, the projections of one of said flanges engaging the outer faces of the flanges of said channel bar to hold said member against lateral displacement thereon, and said projections of the other flange being adapted to engage the flanges of adjacent channel bars.

2. Interlocking means for sheet piling comprising members having recesses receiving the ends of the webs of channel bars, projections on said members engaging the outer faces of the flanges of said channel bars to hold same against relative lateral movement, and means on said members engaging the outer faces of the flanges of adjacent channel bars to hold same against lateral movement relatively to the first named bars.

3. Interlocking means for sheet piling comprising in combination members provided with recesses to receive the ends of the webs of channel bars, projections on the members engaging the outer faces of the flanges of the contained channel bars to hold the latter against lateral movement relatively to the member engaging the same, laterally adjacent channel bars being disposed in engagement with each other, and means on said members coacting with the flanges of said channel bars to maintain all channel bars in the wall in proper relative position.

871,178. SHEET-PACKING. JAMES OSTRANDER, Indianapolis, Ind. Filed June 21, 1906. Serial No. 322,688.



1. A sheet packing comprising an intermediate portion having on each face oppositely arranged projections which are less compressible than the intermediate portion.

2. A sheet packing comprising a main portion having on one face projections which are less compressible than the main portion.

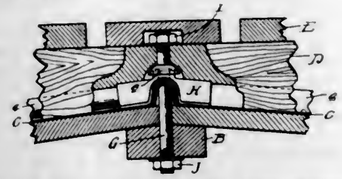
3. In a sheet packing the combination with an intermediate compressible portion, of portions of less compressible material arranged opposite each other on the opposite faces of the intermediate portion.

4. In a sheet packing the combination with a main compressible portion, of portions of less compressible material arranged on one face of the main portion.

5. A sheet packing comprising an intermediate compressible portion and a facing of projecting portions forming adjacent closed figures of less compressible material, the projections on the opposite sides of the intermediate portion being arranged opposite each other.

[Claims 6 to 12 not printed in the Gazette.]

871,179. CAR-ROOF. SPENCER OTIS, Chicago, Ill., assignor to Hutchins Car Roofing Company, Detroit, Mich., a Corporation of Michigan. Filed May 14, 1906. Serial No. 316,844.

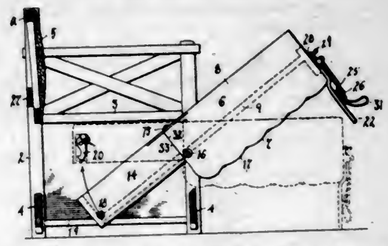


1. In a car roof, the combination with the roof boards and the ridge purlin, of the roof sheets having flanged engagement with each other, a running board supporting saddle, a bolt passing through said saddle, roof boards, sheets and ridge purlin, and rigidly clamping the same together, a metallic cap having cross channels for engaging the flanged joints of the sheets and apertured for the passage of said bolt, and a flange adjustable in relation to one end of said bolt for covering the joint with said cap.

2. In a car roof, the combination with roof sheets having a flanged engagement with each other, roof boards, a ridge purlin, and the running board supporting saddle, of a bolt comprising detachable sections passing through said sheets, boards, saddle and purlin, and rigidly clamping the same together, a metallic cap having cross channels for embracing the flanges of the sheets, said cap being centrally apertured for the passage of said bolt, an apertured annular flange on said cap, and a down-turned annular flange on one section of said bolt embracing said cap flange, for the purpose described.

3. In a car roof, the combination with the roof boards, roof sheets, ridge purlin, and running board supporting saddle, of a metallic cap covering intersecting joints in the sheets, and a bolt formed in two sections, one of said sections passing through said purlin, roof boards, sheets, and cap, and the other section having a down-turned screw threaded cap engaging the end of said first section, said second section passing through the saddle, whereby said purlin, roof boards, sheets, caps, and saddle are rigidly clamped together.

871,180. COMBINED BED AND COUCH. DAVID T. OWEN, Cleveland, Ohio, assignor to The D. T. Owen Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 5, 1906. Serial No. 320,328.



1. In a combined bed and couch, a couch frame, a combined seat and bed frame having a seat portion and a bed bottom respectively arranged upon opposite sides thereof and pivoted to swing from one inverted position to another within said couch frame, fixed legs at the free side of said bed frame, and a separate couch back pivoted to swing upon said couch frame and adapted to overlap and conceal said legs when the bed frame is folded.

2. In a combined bed and couch, a couch frame, a combined couch seat and bed frame pivoted on said couch frame and adapted to be inverted, a locking member for said couch seat adapted to engage a part of said couch frame, and a hand strap attached to said member adapted to effect both unlocking and raising of said seat and bed frame.

3. In a combined bed and couch, a couch frame and a bed frame pivotally mounted therein, a spring locking member for said bed frame, a hand strap connected with said member, fixed legs for said bed frame, and a swinging couch back upon said couch frame adapted to overlap and conceal said legs and locking member.

4. In a combined bed and couch, a couch frame and a bed frame comprising two bed sections pivotally connected and one of said sections having a separable pivot connection with said couch frame, supporting members on said couch frame for said bed section, fixed legs on said bed frame, and a couch back pivoted on said couch frame and adapted to overlap said legs when the bed frame is folded.

5. In a combined bed and couch, a main frame having pivot rests at its ends and a swinging spring mattress frame having pivot members removably mounted in said rests, said spring mattress frame consisting of two sections hinged together to fold one upon the other, and a set of rests fixed upon said main frame at different elevations to support the free ends of said lower section when folded and unfolded and adapting said lower member to be inverted and swung outward to give access to the interior of said main frame.

[Claims 6 to 9 not printed in the Gazette.]

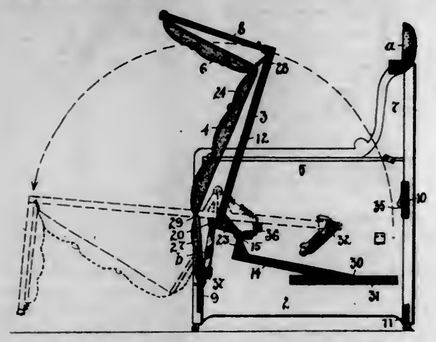
871,181. COMBINED BED AND COUCH. DAVID T. OWEN, Cleveland, Ohio, assignor to The D. T. Owen Company, Cleveland, Ohio, a Corporation of Ohio. Filed Oct. 8, 1906. Serial No. 337,861.

1. In a combined bed and couch, a couch seat cover comprising an upholstered spring frame with a front spring edge braced against inward movement at its center and spring pressed from below to maintain a straight horizontal line.

2. In a combined bed and couch, a main support and a bed-frame in two parts pivotally engaged therewith, said bed-frame parts pivotally connected to unfold on the same plane and to fold upon each other on different planes, a spring bottom for each bed-frame part, a mattress adapted to rest upon said bed bottom and to fold therewith, and rests for the free ends of said bed-frame when in folded and unfolded positions.

3. In a combined bed and couch, a main support and a two part bed frame having primary pivot connections with said support and secondary pivot connections with each other whereby said bed-frame parts are adapted to unfold

to the same horizontal plane and also to fold upon each other with a space between for a mattress and bedding, spring bottom sections for said bed frame, a mattress for said spring bottom, rests for the free ends of said bed-frame when in folded and unfolded positions, and a separate couch seat cover adapted to be freed from said bed-frame when unfolded.



4. In a combined couch and bed, a two part frame having a shouldered hinge connection and a pivot support for said frame adapting one of said parts to be inverted and whereby the other part is folded and unfolded, a spring bottom for said parts combining to make a spring seat for the couch and a spring bottom for the bed, rests for said frame when folded and unfolded, and a separate couch seat cover adapted to be removed from said spring bottom.

5. In a combined bed and couch, a main support and a two part bed-frame having a primary pivot connection with said support and secondary pivot connections with each other located at one side of the said primary pivot, a spring bottom for said bed-frame and a brace centrally between the ends of said bed-frame adapted to take up the strain of said spring bottom at said pivot connections.

[Claims 6 to 16 not printed in the Gazette.]

871,182. HAIR-DRYING IMPLEMENT. JENS A. PAASCHE, Chicago, Ill. Filed Mar. 1, 1907. Serial No. 359,971.



1. A hand-held implement comprising a handle, an air-heating chamber, a fluid container in said air-heating chamber; a burner in said chamber; and means for supplying fluid to said fluid-containing member and fuel to said burner, said supplying means extending through said handle.

2. A hand-held implement comprising a tubular stem, an air-heating chamber fixed upon one end of said stem, a handle, said stem extending through said handle, a fluid container in said chamber, and a means for heating said container.

3. The combination, with a cylindrical chamber having an outlet at one end and an air induction opening at the other, of a heating coil located in said chamber and communicating with said outlet, and a heating device for said heating coil.

4. A hand-held implement comprising a tubular stem; a handle mounted upon said stem; an air-heating chamber fixed at one end of said stem; a fluid-container in said chamber; a device for heating said fluid container, and supply means for said fluid container and said heating device, extending through said stem and said handle.

5. A hand-held implement comprising a handle, a tubular stem extending through said handle, a cylindrical air-heating chamber having an air outlet at one end and an air induction opening at its other end, said chamber being secured to said stem at the end having said air induction openings, a heating coil in said chamber, a tube extending through said stem and said handle and connected to said heating coil, a burner in said chamber for heating said heating coil, and a fluid supply tube extending through said stem and said handle and communicating with said burner.

[Claim 6 not printed in the Gazette.]

871,183. BOTTLE. JOHN C. REEVES, Huntsville, Ark. Filed May 13, 1907. Serial No. 373,430.



1. A bottle provided with an outlet passage, the outer portion of the said passage being enlarged, and a frangible neck being located at the junction of the passage with the enlarged portion and housed within the said enlarged portion whereby it is protected from injury.

2. A bottle provided with an outlet passage having the outer portion thereof enlarged, a frangible neck being located at the junction of the passage with the enlarged portion and a knob being provided which caps the frangible neck and projects within the enlarged portion of the outlet passage.

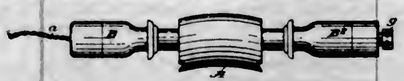
3. A bottle provided with an outlet passage having the outer portion thereof enlarged to form a cork receiving chamber, a frangible neck being located at the junction of the outlet passage and the cork receiving chamber and projecting within the latter whereby it is protected from injury.

4. A bottle provided with an outlet passage having the outer portion thereof enlarged to form a cork receiving chamber, a frangible neck being located at the junction of the passage with the cork receiving chamber and a knob being provided which caps the fragile neck and projects within the cork receiving chamber whereby it is protected from injury.

5. A bottle comprising a neck having an inlet passage formed in one side thereof and also provided with an outlet passage, a frangible neck surrounding the outlet passage, and a knob capping the frangible neck and closing the passage.

[Claim 6 not printed in the Gazette.]

871,184. TREEING-IRON. CHARLES W. RICHARDS, Needham, Mass., assignor, by direct and mesne assignments, to The Plant Company, Boston, Mass., a Corporation of Maine. Filed Aug. 16, 1906. Serial No. 330,764.



1. An electrically heated treeing iron, comprising a hollow iron portion and handles at opposite ends thereof, a series of resistance coils arranged in said hollow portion, leading-in contacts secured to one of the handles of said iron, a switch mounted upon the opposite handle of said iron, a plurality of circuits between said leading-in contacts and said switch, including respectively the series of resistance coils, and means for operating said switch to control the circuits through said resistance coils, whereby the heat of the iron may be readily regulated.

2. An electrically heated treeing iron, comprising a hollow iron portion and handles at opposite ends thereof, combined with a series of resistance coils arranged in said hollow portion and connected in series, leading-in contacts secured to one of said handles, a series of stationary switch contacts and a movable switch contact secured to the other of said handles, circuit connections between said leading-in contacts and one terminal of the series of resistance coils and the movable switch contact, and circuit connections between the intermediate connections and the other terminal of the resistance coils and the stationary switch contacts, and means for moving said movable switch contact successively into engagement with said stationary switch contacts, whereby the heat of the iron may be readily regulated.

871,185. DEEP-WELL PUMP. GEORGE C. RICHARDS, Berkeley, Cal., assignor to The Western Mill & Machine Co., a Corporation of California. Filed July 18, 1906. Serial No. 326,680.



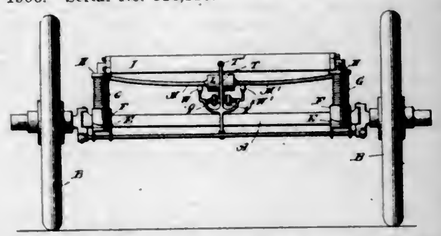
1. In a pump, the combination of a barrel and a plunger therein, said plunger comprising a tubular section, a valve cage connected with the lower end of the section, an annular shoe below the cage, said shoe having an upper end abutting the end of the cage and having its remaining portion forming a vertical prolongation of said cage, a threaded interior sleeve union connecting the said lower shoe and cage, an annular shoe above the upper end of said section, a separate threaded interior sleeve union connecting said last-named shoe with said section, and a sucker-rod connected with the last-named sleeve-union.

2. In a pump, the combination of a pump-barrel and plunger, said plunger comprising a tubular section, a sucker-rod connected with the upper end of the section, a valve-cage connected with the lower-end thereof, said valve-cage having an interiorly threaded portion, an annular valve-seat fitting said threaded portion, an annular shoe below the cage, and a threaded inside sleeve-union connecting said shoe and cage and supporting said valve-seat in position.

3. In a pump, the combination of a pump-barrel, a plunger consisting of a cylindrical section, a sucker-rod connected with the upper end of said section, a valve-cage connected with the lower end of the section, a valve in said cage, an annular shoe below the cage and having its upper end abutting the lower end thereof, the adjacent ends of said cage and shoe being interiorly threaded, and an exteriorly threaded sleeve-union connecting the said threaded ends of the sleeve and shoe and being made separate from the cage.

4. In a pump, the combination of a pump-barrel, a plunger consisting of a cylindrical section, a sucker-rod connected with the upper end of said section, a valve cage connected with the lower-end of the section, a valve in said cage, an annular shoe below the cage, the adjacent ends of said cage and shoe being interiorly threaded, an exteriorly threaded sleeve-union connecting the said threaded ends of the sleeve and shoe, a key-member carried by said union, and a valve-cage supported below and normally independent of the plunger and having a key-way engageable by said key, whereby said last-named cage may be removed from the well with the plunger.

871,186. PNEUMATIC EQUALIZER FOR VEHICLES. CHAIM ROSENZWEIG, New York, N. Y. Filed Apr. 28, 1906. Serial No. 314,117.



1. In a vehicle having a steering portion, the combination of two members arranged one above the other, hollow cushions interposed between said members at each side of the carriage, and means controlled by the movement of the steering portion of the vehicle for admitting fluid to the cushions on one side of the carriage or the other whereby such side may be raised relatively to the other side.

2. In a vehicle having steering wheels and a steering gear for controlling them, the combination of a valve controlled by said steering gear, hollow cushions on each side of the carriage, and connections which control the supply of the fluid to the cushions on one side of the carriage or the other according to the position given to said valve by the steering gear.

3. In a vehicle the combination of two members arranged one above the other, of a bearing plate movable relatively to the lower member and having its upper surface concaved transversely of the carriage, a housing shaped to conform to said concave surface, and a cushion interposed between said housing and the upper member.

4. In a vehicle the combination of two members arranged one above the other, a bearing plate movable relatively to the lower member, a spring for holding said bearing plate in a central position, and a cushion interposed between said bearing plate and the upper member.

5. In a vehicle the combination of two members arranged one above the other, hollow cushions interposed between said members on each side of the vehicle, a valve casing having connections leading to the cushions on opposite sides of the carriage, a hollow guide located within said casing and divided into two chambers, said guide being provided with openings adapted to lead into the casing, valves mounted to slide along said guide and normally covering the said openings, the said valves being adapted to close the connection from the valve casing to the cushions on the respective sides of the vehicle, and means for admitting a fluid into either one of the chambers of the valve guide.

[Claims 6 to 9 not printed in the Gazette.]

871,187. SLIPPER. OSCAR S. SAUNDERS, Brockton, Mass. Filed June 21, 1905. Serial No. 266,285.

A slipper having its front portion open and provided with a continuous extension surrounding the vamp space

and having the quarters extending past the edges of said vamp extension, a removable vamp fitting the vamp space of the slipper and having its edges normally spaced therefrom and having an upper reduced extension adapted to underlap the extension of the quarters, the vamp extension and the inner extensions of the quarters having eyelets



along their edges, the vamp extension being devoid of eyelets and a continuous lace adjustably connecting the vamp and said vamp extension to admit of varying the width and length of the slipper and also adapted to be passed through the inner extensions of the quarters to secure the same over the reduced extension of the vamp.

871,188. PROCESS FOR PHOTOGRAPHIC TONING AND MOUNTING. HARRY SCHMIDT, Council Bluffs, Iowa. Filed Nov. 20, 1906. Serial No. 344,325.

1. The herein described process consisting in developing a gelatin emulsion photographic paper print, dipping the print in clear warm water, applying it directly to a glass plate and squeezing out the air and water between the print and plate and permitting the print to dry on and adhere to the plate.

2. The herein described process consisting in developing a gelatin emulsion photographic paper print, dipping the same in clear warm water to soften the gelatin, applying the print thus treated to a glass plate and forcing out the water and air between the plate and print and finally permitting the print to dry on the plate.

3. The herein described process of mounting a gelatin emulsion photographic paper print consisting in developing the paper, softening the gelatin of the print, applying it to a glass plate and pressing it closely against the latter, and permitting it to dry on said plate.

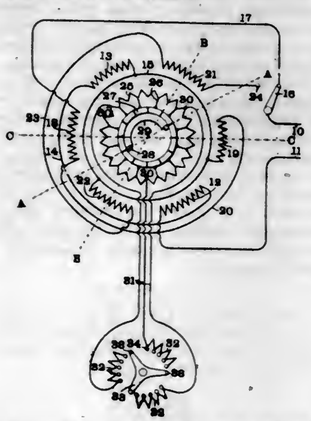
4. The herein described process of mounting a gelatin emulsion photographic paper print which consists in developing the paper, softening the gelatin of the print, applying it to a glass plate and pressing it closely against the same to force out the water and air between the plate and print, and permitting the print to dry on the plate.

871,189. ALTERNATING-CURRENT MOTOR. LEO SCHULER, St. Louis, Mo., assignor to Wagner Electric Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 22, 1904. Serial No. 204,373.

1. In a motor, the combination with a member provided with a circuit for producing definite poles therein, of a second member provided with a main conductor, an auxiliary conductor for said second member and adapted to coöperate with said main conductor, and means for cutting said auxiliary conductor into or out of effective operation to shift the poles of said second member relative to the poles of said first named member.

2. In a motor, the combination with a member provided with a circuit for producing definite poles therein, of a second member provided with a main conductor, an auxiliary conductor for said second member and adapted to coöperate with said main conductor, and means for cutting said auxiliary conductor into or out of effective operation to shift the poles of said second member from one side to the other of the poles of said first named member.

3. In a motor, the combination with a member provided with a circuit for producing definite poles therein, of a second member provided with a main conductor, an auxiliary conductor for said second member of different magnetic effect from said main conductor and adapted to coöperate with said main conductor, and means for cutting said auxiliary conductor into or out of effective operation to shift the poles of said second member relative to the poles of said first named member.

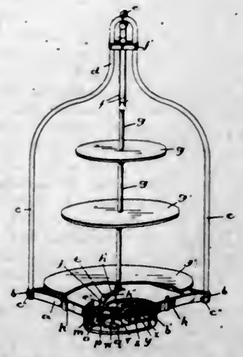


4. In a motor, the combination with a member provided with a circuit for producing definite poles therein, of a second member provided with a main conductor, an auxiliary conductor for said second member of less magnetic effect than said main conductor and adapted to coöperate with said main conductor, and means for cutting said auxiliary conductor into or out of effective operation to shift the poles of said second member relative to the poles of said first named member.

5. In a motor, the combination with a member provided with a circuit for producing definite magnetic poles therein, of a second member having a main conductor, auxiliary conductors for said second member adapted to coöperate with said main conductor, and means for cutting one of said auxiliary conductors into effective operation and another of said auxiliary conductors out of effective operation to shift the poles of said second member relative to the poles of said first named member.

[Claims 6 to 12 not printed in the Gazette.]

871,190. DISPLAY DEVICE. WILLIAM J. SHORTILL, Markdale, Ontario, Canada. Filed Apr. 5, 1907. Serial No. 366,547.



1. A display device consisting of a supporting means, a flexible twisting member connected to the supporting means, an oscillating standard suspended from the flexible twisting member, and supported at its lower end on a bearing forming part of the supporting means, a rocking lever moving the oscillating standard alternately in opposite directions, and means for actuating the rocking lever.

2. A display device consisting of a supporting means, a flexible twisting member connected to the supporting means, an oscillating standard suspended from the flexible twisting member, and supported at its lower end on a bearing forming part of the supporting means, a rocking lever moving the oscillating standard alternately in opposite directions, and means for actuating the rocking lever, said means cosisting of pallet arms fulcrumed to the rocking lever, a rotatable scape wheel engaging with the pallets, and means to rotate the scape wheel.

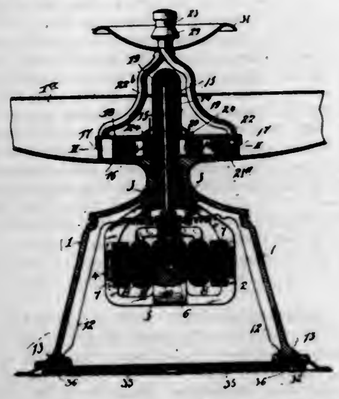
3. A display device comprising a supporting means, a flexible twisting member connected to the supporting means, an oscillating standard suspended from the flexible twisting member, a bearing for the lower end of oscillating standard, an impulse member for the pendulum arm, a standard, an impulse member for the pendulum arm, a rocking lever fulcrumed to the supporting means having a forked end to engage with the impulse member, and means for actuating the rocking lever.

4. A display device comprising, a supporting means, a flexible twisting member connected to the supporting means, an oscillating standard suspended from the flexible twisting member, a bearing for the lower end of the oscillating standard, a pendulum arm connected to the oscillating standard, an impulse member for the pendulum arm, a rocking lever fulcrumed to the supporting means having a forked end to engage with the impulse member, and means for actuating the rocking lever, said means consisting of pallets connected to the rocking lever, a scape wheel engaging with the pallets, and a motor mechanism to actuate the scape wheel.

5. A display device consisting of a supporting means, a flexible twisting member connected to the supporting means, an oscillating standard suspended from the flexible twisting member and supported at its lower end on a bearing forming part of the supporting means, a rocking lever alternately moving the oscillating standard in opposite directions, means for actuating the rocking lever, and a governor adjustable on the flexible twisting member.

[Claims 6 to 11 not printed in the Gazette.]

871,191. ELECTRICALLY-OPERATED FOUNTAIN. ARTHUR D. SOUTHAM, Hartford, Conn. Filed Aug. 4, 1906. Serial No. 329,157.



1. An electric fountain comprising a basin, a central tubular plug detachably connected to said basin at the bottom thereof and extending to a point above the normal water level thereof, its lower end carrying a depending motor frame below the basin, a motor shaft extending upward through said tubular plug and carrying at its lower end within the motor frame the motor armature, a rotary pump within the basin, means connecting said pump to the motor shaft above the tubular plug, a nozzle, and means for delivering the fluid from the pump to said nozzle.

2. An electric fountain comprising a basin, a central tubular plug detachably connected to said basin at the bottom thereof, its lower end carrying a depending motor frame below the basin, a motor shaft extending upward through said tubular plug and carrying at its lower end within the motor frame the motor armature, a rotary pump within the basin, means connecting the said pump to the motor shaft above the tubular plug, a nozzle, and means for delivering the fluid from the pump to said nozzle.

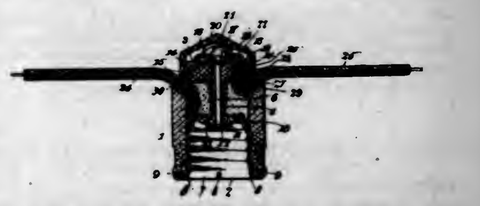
3. An electric fountain comprising a basin, a central tubular plug detachably connected to said basin at the bottom thereof, its lower end carrying a depending motor frame below the basin, a motor shaft extending upward through said tubular plug and carrying at its lower end within the motor frame the motor armature, a rotary pump within the basin, means connecting the said pump to the motor shaft above the tubular plug, a nozzle, means for delivering the fluid from the pump to said nozzle, and a bearing formed on the lower part of the armature-supporting frame and adapted to receive the lower end of the armature shaft.

4. An electric fountain comprising a basin, a central tubular plug detachably connected to said basin at the bottom thereof, its lower end carrying a depending motor frame below the basin, a motor shaft extending upward through said tubular plug and carrying at its lower end within the motor frame the motor armature, a rotary pump within the basin, means connecting the said pump to the motor shaft above the tubular plug, a nozzle, means for delivering the fluid from the pump to said nozzle, a bearing formed on the lower part of the armature-supporting frame and adapted to receive the lower end of the armature shaft, and means for maintaining a supply of lubricant around the motor shaft above and below the armature.

5. An electric fountain comprising a basin, a central tubular plug detachably connected to said basin at the bottom thereof and extending to a point above the normal water level thereof, its lower end carrying a depending motor frame below the basin, a motor shaft extending upward through said tubular plug and carrying at its lower end within the motor frame the motor armature, a rotary pump within the basin, means connecting said pump to the motor shaft above the tubular plug, a nozzle, means for varying the discharge from the nozzle, whereby said nozzle may be used as a governor device.

[Claims 6 to 9 not printed in the Gazette.]

871,192. OUTDOOR RECEPTACLE. JAMES S. STEWART, New York, N. Y., assignor to Annie Stewart, New York N. Y. Filed June 6, 1906. Serial No. 320,400.



1. A lamp receptacle for out-door wiring, comprising a housing in the form of a cup with a central boss or protuberance, a shell having a wire extension drawn into said housing and having a button bearing against said protuberance, and a central stud connection for the lamp extending through said protuberance.

2. A lamp receptacle for out-door wiring, comprising a housing in the form of an open ended porcelain cup with a central boss or protuberance, a pair of connection wires passed through holes in said housing, a central stud connection from one of said wires through said boss or pro-

tuberance and a threaded shell having a button bearing against said protuberance.

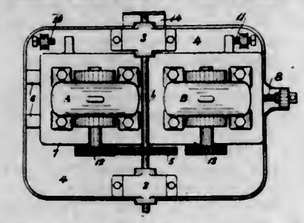
3. A lamp receptacle for out-door wiring, comprising a housing having a pair of holes for the wires or connections, said wires being embedded in cement, and a fuse chamber having connections for one of said wires.

4. A lamp receptacle for out-door wiring, comprising a housing containing a central boss or protuberance, a stem in said protuberance constituting a central stud terminal for the lamp, and a recess or groove in said protuberance for the entrance of cement around said stem.

5. A lamp receptacle for out-door wiring, comprising a vitreous housing open at its lower end and having a central boss or protuberance, a threaded shell cemented into said housing and having a button bearing against said protuberance, and a central stud terminal extending through said protuberance.

[Claims 6 and 7 not printed in the Gazette.]

871,193. ARRANGEMENT FOR MOTOR-DRIVES. EMMETT W. STULL, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed June 30, 1906. Serial No. 324,132.



1. In combination with mechanism to be driven, a plurality of motors, and unitary means whereby any one of said motors may be moved into proper position to drive said mechanism and the others moved out of such position.

2. In combination with mechanism to be driven, a platform carrying a plurality of motors, and means for moving said platform to put any one of the motors in driving connection with the mechanism to be driven.

3. In combination, mechanism to be driven, a plurality of electric motors, a single motor controller and means for moving any one of said motors into driving relation with the mechanism to be driven, and simultaneously connecting said motor to the controller.

4. In combination, mechanism to be driven, a platform, a plurality of electric motors mounted on said platform, a motor controller, and means for moving said platform to simultaneously connect any one of said motors mechanically to the mechanism to be driven and electrically to the controller.

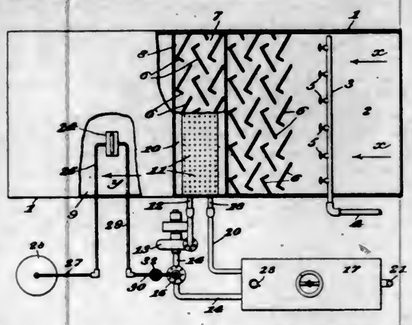
5. In combination, mechanism to be driven, a plurality of electric motors, and means whereby said motors may be connected to the mechanism to be driven only one at a time.

[Claims 6 to 12 not printed in the Gazette.]

871,194. HUMIDITY-REDUCING APPARATUS. RICHARD H. THOMAS, Chicago, Ill. Filed Oct. 23, 1905. Serial No. 284,006.

1. An apparatus of the character described having a drying chamber adapted for the passage of air, means for supplying a drying agent to said chamber for abstraction of moisture from such air and means, controlled from the degree of moisture or dryness of the air discharged from said chamber and connected with said supplying means to regulate the supply of such drying agent to said drying chamber.

2. An apparatus of the character described having a drying chamber adapted for the passage of air in a horizontal direction, means to laterally deflect the air through said chamber, means at the upper part of said chamber, for discharging a supply of drying agent thereto, whereby such drying agent is permitted to fall through the air passing through the drying chamber in a direction transverse to the direction of the flow of air through said chamber, and means at the base of said drying chamber for discharging such drying agent therefrom.



3. An apparatus of the character described having a drying chamber adapted for the passage of air in a horizontal direction, inclined devices in said chamber and adapted to laterally deflect the air flowing through the same, a device at the upper part of said chamber for discharging a supply of drying agent thereto, whereby such drying agent is permitted to fall through the air passing through the drying chamber in a direction transverse to the direction of the flow of air circulating through said chamber, a trough at the base of the drying chamber to receive the drying agent thus supplied, and means for withdrawing the drying agent from said trough.

4. An apparatus of the character described having a drying chamber provided with vertically extended laterally inclined baffle plates between which is produced a circuitous passage for air horizontally directed through said chamber, a device at the upper part of said chamber for discharging a supply of drying agent thereto, whereby said drying agent is permitted to fall through the air passing between the baffle plates in a direction transverse to the direction of the flow of said air, and means at the base of the drying chamber for discharging such drying agent therefrom.

5. An apparatus of the character described comprising a drying chamber adapted for the passage of air, means for supplying a drying agent to said chamber for abstraction of moisture from such air and comprising a pumping device, a supply receptacle with which the pumping device has connection, means for heating said receptacle, a connection extended from the drying chamber to the supply receptacle for the return of the drying agent from said chamber to the receptacle, a hygrostat exposed to the air discharged from the drying chamber and actuated from variations in the degree of dryness or humidity thereof and means, operated by the hygrostat and controlling the supply of drying agent from said receptacle through the pumping device to the drying chamber.

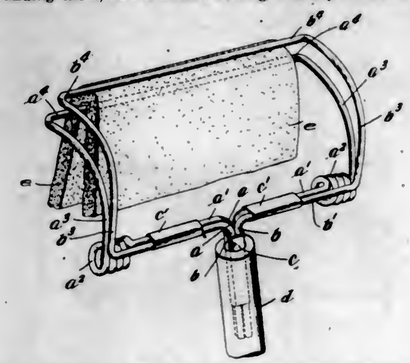
[Claim 6 not printed in the Gazette.]

871,195. PAINT-REMOVER. MAXIMILIAN TOCH, New York, N. Y. Filed Oct. 23, 1906. Serial No. 340,143.

The new paint remover, consisting of a solution of naphthalene in acetate of amyl, amylic alcohol, crude wood alcohol, and wood turpentine, substantially as hereinbefore described.

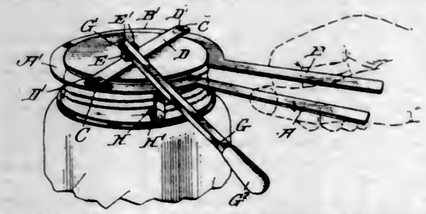
871,196. WALL-CLEANER. SARAH F. VAUGHAN, Worcester, Mass. Filed June 11, 1906. Serial No. 321,130.

In a wall cleaner, the combination of two separate members each formed from a single integral piece of resilient wire each comprising a jaw, a pair of curved arms supporting said jaw, a pair of bars extending inwardly from said arms and meeting at the center and terminating in a pair of parallel ends, the four ends of the two separate members being connected together by a metallic band surrounding them, and a handle having a cavity in which said



ends and band are held, said bars also being held together by similar metallic bands and one of said members having a coiled spring therein and forming an integral part thereof.

871,197. COMBINATION FRUIT-JAR OPENER, TIGHTENER, AND PRESSER. WILLIAM ABEL, Jr., North Amherst, Ohio. Filed Mar. 4, 1907. Serial No. 360,534.



1. In a device of the kind described comprising clamping jaws carrying a link, a lever pivotally and slidably mounted on said link, and a pressing roller carried by said lever.

2. In a device of the kind described, the combination with a pair of pivoted jaws connected together by a link, of a lever pivotally and slidably mounted on said link, and a presser roller carried by said lever for the purpose described.

3. In a device of the kind described, the combination with a pair of curved jaws pivotally connected together provided with handles, of a link connecting said jaws, a lever pivotally mounted on said link, and a bracket secured to said lever carrying a presser roller for the purpose described.

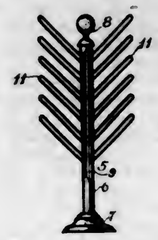
4. A device of the kind described comprising a pair of clamping jaws pivotally connected together, a link connecting said jaws, and a lever loosely mounted on said link carrying a presser roller having a beveled rim for the purpose described.

5. A device of the kind described, comprising a pair of handles provided with curved jaws pivotally connected together, a link loosely mounted on said jaws, a plate pivotally mounted on said link provided with upwardly projecting apertured ends, a pin secured in said ends, a lever loosely mounted on said pin and a presser roller carried by said lever.

[Claims 6 and 7 not printed in the Gazette.]

871,198. VEILING-DISPLAY STAND. EMILIE S. AIKEN, Boston, Mass. Filed Sept. 21, 1906. Serial No. 335,559.

1. As an article of manufacture, a display stand comprising two standards fastened together and a U-shaped wire attached to each of said standards with its free ends inserted therein, each of said standards being adapted to receive its respective U-shaped wire in either of two pairs of holes, the centers of each of said pairs of holes being in vertical and horizontal lines, respectively.

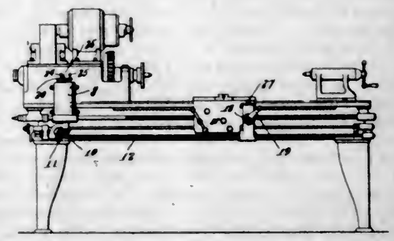


2. As an article of manufacture, a display stand comprising two standards fastened together, each of said standards consisting of a tube provided with holes therein said holes being arranged in pairs their centers being in alternately vertical and horizontal lines, and a U-shaped wire with its free ends inserted in one of said pairs of holes.

3. As an article of manufacture, a display stand comprising two standards fastened together, each of said standards consisting of a tube, a top and a base, said tube, base and top being joined together by a rod having screw-threaded engagement with said top and base, whereby said top and base are clamped to said tube, said tube provided with holes arranged in pairs, their centers being in alternately vertical and horizontal lines, and a U-shaped wire with its free ends inserted in one of said pairs of holes.

4. As an article of manufacture, a display stand comprising two standards fastened together and a plurality of U-shaped wires attached to each of said standards, respectively, the free ends of said wires inserted in holes provided in said standards, said holes being arranged in pairs, their centers being alternately vertical and horizontal lines.

871,199. CONTROLLER FOR ELECTRICALLY-OPERATED MACHINE-TOOLS. JOHN R. BACK, Worcester, Mass., assignor to F. E. Reed Co., Worcester, Mass., a Corporation of Massachusetts. Filed May 1, 1906. Serial No. 314,648. Renewed Sept. 30, 1907. Serial No. 395,184.



1. The combination with an electrically operated tool, of a controller therefor having an adjustable stopping device for regulating the speed at which the tool is operated comprising a plate having perforations, pins adapted to be inserted in said perforations, and a stop for engaging the pins, a shaft for operating said stopping device, and a controller handle connected with said shaft.

2. The combination with a machine tool, of a motor for operating said tool, a controller for the motor having a stop, and an adjustable stopping device for said stop to regulate the position of the stop and the speed at which the motor will operate the tool comprising a plate having

perforations, pins adapted to be inserted in said perforations, and a stop for engaging the pins, said stopping device comprising a shaft connected with the controller, and a handle connected with the shaft.

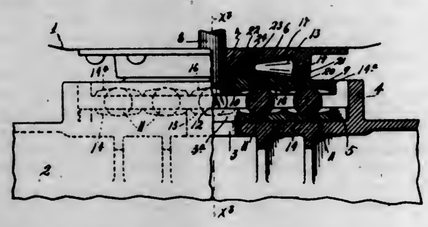
3. The combination with a motor operated machine tool and a controller therefor having a main shaft, and adjustable means for limiting the position of the shaft, of a shaft for operating said main shaft, a controller-handle, and a shaft on which said handle is mounted operatively connected with the second shaft.

4. The combination of a motor operated machine tool with a controller therefor having a main shaft, adjustable means for limiting the position of the shaft during the cutting operation, removable means for stopping the reverse motion of the shaft in such position as to turn off the power, a shaft for operating said main shaft, a controller handle, and a shaft on which said handle is mounted operatively connected with the second shaft.

5. The combination with a motor operated machine tool, of a controller therefor having a main shaft, adjustable means for limiting the position of the shaft during the cutting operation, adjustable means for limiting the position of the shaft during the reverse, a shaft for operating said main shaft, a handle, and a shaft on which said handle is mounted operatively connected with the second handle.

[Claims 6 to 14 not printed in the Gazette.]

871,200. ANTIFRICTION LATERAL-MOTION CENTER-BEARING. JOHN C. BARBER, Chicago, Ill. Filed July 26, 1906. Serial No. 327,936.

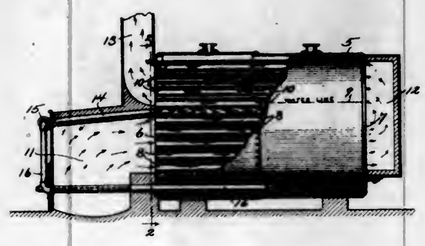


1. In a lateral motion center bearing, the combination with upper, lower and intermediate bearing members, said upper and intermediate bearing members having a pivotal movement with respect to each other, and said intermediate and lower bearing members having a traveling movement transversely of the truck, of relatively long and short bearing rollers interposed between said intermediate and lower bearing members, said relatively short rollers being located one in front and the other in the rear of the pivotal axis of the center bearing, substantially as described.

2. In a lateral motion center bearing, the combination with upper, lower and intermediate bearing members, said upper and intermediate bearing members having a pivotal movement with respect to each other, and said intermediate and lower members having a traveling movement with respect to each other transversely of the truck, of relatively long and short bearing rollers interposed between said intermediate and lower bearing members and engaging concaved seats therein, said long bearing rollers being arranged on opposite sides of the pivotal axis of the center bearing, and said short rollers being located one in front and the other in the rear of the pivotal axis of said center bearing, substantially as described.

3. In a lateral motion center bearing, the combination with upper, lower and intermediate bearing members and a pintle passed therethrough, said upper and intermediate bearing members having a pivotal movement with respect to each other, and said intermediate and lower bearing members having a traveling movement with respect to each other transversely of the truck, of relatively long and short bearing rollers interposed between said intermediate and lower bearing members and engaging concaved seats therein, said long bearing rollers being arranged on opposite sides of the said pintle, and said short rollers being located one in front and the other in the rear of said pintle, substantially as described.

871,201. SUPERHEATING-BOILER. GEORGE Y. BONUS, Chicago, Ill. Filed Jan. 21, 1905. Serial No. 242,169.



1. In a boiler, a single compartment having a plurality of fire flues passing therethrough, a portion of said flues being below the water line and a portion being above the water line, a fire box located outside of said compartment at one end thereof and communicating with said flues below the water line, a header arranged at the front end of said fire box having communication with the lower side of said compartment and a plurality of tubes connecting said header and said compartment a short distance below the water line serving as a lining for the fire box.

2. In a boiler, a single compartment having a plurality of fire flues passing entirely therethrough, a fire box located outside of said compartment at one end thereof and communicating with said fire flues, a header arranged at the front end of said fire box having communication with the lower side of said compartment and a plurality of tubes connecting said header and said compartment a short distance below the water line serving as a lining for the fire box.

3. In a boiler, a single compartment having a plurality of fire flues passing entirely therethrough, a fire box located outside of said compartment at one end thereof and communicating with said fire flues, a header arranged at the front end of said fire box having communication with the lower side of said compartment and a plurality of inclined parallel tubes connecting said header and said compartment a short distance below the water line serving as a lining for said fire box.

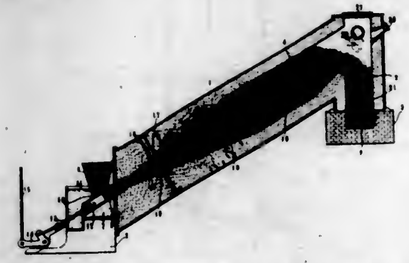
4. In a boiler, a single compartment having a plurality of fire flues passing entirely therethrough, some of said flues located below the water line and some above the water line, a fire box located outside of said compartment at one end thereof and communicating with said fire flues below the water line, a return chamber outside of said compartment at the other end thereof communicating with all of said fire flues, a header arranged at the front end of said fire box having communication with the lower side of said compartment and a plurality of tubes connecting said header and said compartment a short distance below the water line serving as a lining for the fire box.

5. In a boiler, a single compartment for water and steam having a plurality of fire flues passing horizontally and entirely therethrough, some of said flues located below the water line and some above the water line, a fire box at one end and outside of said compartment communicating with said flues below the water line, a return chamber at the other end and outside of said compartment communicating with all of said fire flues, a header arranged at the front end of said fire box having communication with the lower side of said compartment and a plurality of tubes connecting said header and said compartment a short distance below the water line serving as a lining for the fire box.

[Claims 6 and 7 not printed in the Gazette.]

871,202. PROCESS OF GENERATING GAS. GEORGE W. BULLEY, New York, N. Y. Filed Dec. 12, 1906. Serial No. 347,451.

1. The process of generating a gas from a carbonaceous mass comprising green fuel, a coked portion and an intermediate partly coked portion, which consists in confining said mass with a closed retort, progressively moving said mass through said retort, applying an air blast to said mass at said partly coked portion, and then causing the resultant gas to pass directly through the coked portion of said mass.



2. The process of generating a gas from a carbonaceous mass which consists in confining said mass within a retort, progressively moving said mass through said retort past a seat of combustion provided intermediate the ends thereof, subjecting said mass to an air blast above said seat of combustion, and then causing the gas generated at the seat of combustion to infiltrate through the highly heated partly coked portion of said carbonaceous mass produced at said seat of combustion.

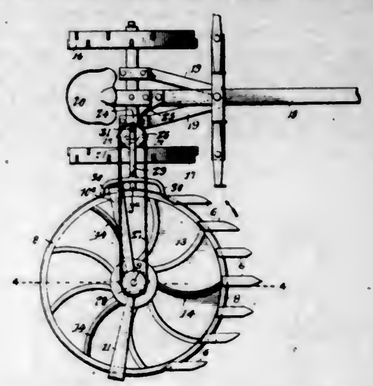
3. The process of generating gases of different characteristics from carbonaceous material which consists in progressively feeding carbonaceous material in a closed retort, forming a seat of incomplete combustion for the carbonaceous material intermediate the ends of the retort, causing the resultant gas to infiltrate directly through coke in a highly heated condition formed at the seat of incomplete combustion, withdrawing the gas from one portion of said retort, causing the remaining gas to further infiltrate through said highly heated coke, and withdrawing the resultant gas from another portion of said retort.

4. The process of generating gases of different characteristics from carbonaceous material, which consists in confining said material within a closed retort, progressively feeding fresh carbonaceous material into said retort, forming a seat of incomplete combustion for said material intermediate the ends of the retort, subjecting said material to an air blast at said intermediate portion, causing the resultant gas to infiltrate through coke in a highly heated condition formed at the seat of incomplete combustion, withdrawing a portion of the gas from the upper portion of the retort, causing the remaining gas to infiltrate through another bed of coke in a highly heated state, and withdrawing the resultant gas from the retort at a location below the point of withdrawal of the first mentioned gas.

5. The process of generating a gas which consists in confining a carbonaceous mass in a closed retort, conducting a green fuel through a water seal and progressively feeding the same into said retort, forming a seat of incomplete combustion intermediate the ends of said retort, forcing air therein above said seat of incomplete combustion and then causing the gas generated at the seat of incomplete combustion to infiltrate directly through coke in a highly heated state produced at said seat of combustion.

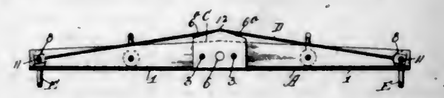
871,203. MOWING-MACHINE. JOHN H. BURHOP, Pyatt, Ark. Filed Aug. 9, 1905. Serial No. 273,395.

In a machine of the class described, the combination of a wheeled frame provided with a laterally projecting bar or member, a cutting apparatus having a rotary cutter and tiltably mounted on the bar or member at a point beyond the wheeled frame, and a forked operating lever



connected with the tiltable cutting apparatus at opposite sides of the bar or member.

871,204. DRAFT DEVICE. ARTHUR CAMERON, Jackson, Mich. Filed Nov. 6, 1906. Serial No. 342,268.



1. A channel bar for the purpose set forth, a combined strut and bearing member secured within the middle portion of the channel bar; a truss rod under tension having its middle portion engaging the combined strut and bearing member, and having its end portions secured within the end portions of the channel bar and provided at its terminals with heads forming bearings which are fitted within the channel bar and secured in place therein by bolts extending through said head and through opposite flange portions of the channel bar.

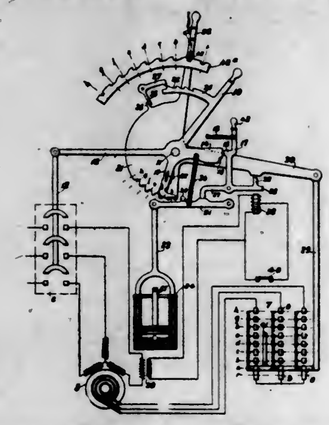
2. The combination with a channel bar for the purpose set forth, of a block fitted and secured within the channel of said bar intermediate of the ends of the latter and forming a bearing for a bolt and strengthening the middle portion of the channel bar, said block being also formed to project above the channel of the bar to form a strut bearing for a tension rod; and a tension rod secured at its ends within the end portions of the channel bar and having its middle portion engaging and held against lateral strain by a portion of the strut block which projects out from the channel, the said block and sides of the channel bar being respectively provided with registering bolt holes 6 and 5.

3. The combination with a channel bar for the purpose set forth, of a tension rod; a strut secured to the middle portion of the channel bar; a tension rod engaging the strut and having its end portions provided with heads; loops embracing end portions of the channel bar, and bolts engaging and holding said loops and passing through the flange portions of the channel bar and through the heads with which the truss rod is provided at its terminal portions.

4. The combination with a channel bar for a doubletree or swingletree, of a tension rod having its end portions secured within the end portions of the channel of said bar, and its middle portion raised above such channel; and a combined strut and bearing consisting of a block fitted between the inner sides of the channel bar and strengthening the same and having a portion projecting upward ont from the channel and having a seat for the middle portion of the tension bar, the block being bolted within the channel bar by transverse bolts, and also hav-

ing a bolt hole formed between its ends and registering with corresponding bolt holes with which the sides or flanges of the channel bar are provided.

871,205. CONTROLLING MECHANISM. HERBERT W. CHENEY, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed June 28, 1906. Serial No. 323,789.



1. In combination, an alternating current motor, a current-admitting switch in the primary circuit thereof, a resistance in the secondary circuit thereof, means for varying said resistance, and means for tripping the current-admitting switch if the resistance-varying means is moved too rapidly.

2. In combination, an alternating current motor, a current-admitting switch in the primary circuit thereof, a resistance in the secondary circuit thereof, means for varying said resistance, and means for tripping the current-admitting switch if the resistance-varying means is moved too slowly.

3. In combination, an alternating current motor, a current-admitting switch in the primary circuit thereof, a resistance in the secondary circuit thereof, means for varying said resistance, and means for tripping the current-admitting switch if the resistance-varying means is allowed to remain for more than a predetermined time in other than its position of lowest resistance.

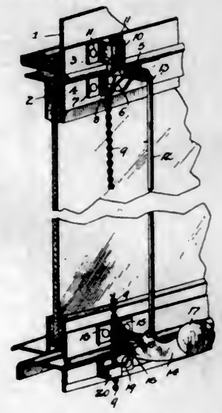
4. In combination, an induction motor, a current-admitting switch therefor, a resistance in the secondary circuit of the motor, means for varying said resistance, and means for tripping the current-admitting switch if the resistance-varying means is moved either too rapidly or too slowly.

5. In combination, an induction motor, a switch for admitting current to the primary member thereof, a starting resistance in the circuit of the secondary member thereof, means for gradually cutting out said resistance, and means for tripping the current-admitting switch if the resistance-varying means is moved at less than a predetermined speed.

[Claims 6 to 33 not printed in the Gazette.]

871,206. LOCKING MECHANISM FOR SWINGING WINDOWS. CHARLES M. CONKLIN and EDMUND H. LUNKIN, Cincinnati, Ohio, assignors to The Lunkin Steel Window Co., a Corporation of Ohio. Filed Mar. 6, 1907. Serial No. 360,864.

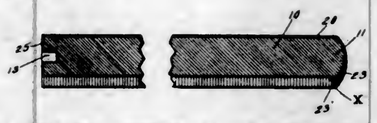
1. In combination in locking mechanism for swinging windows, an upper latch pivoted intermediate of its length, having a latch tooth at its outer end, and having an inwardly extending end for connection with a lower latch device, a lower latch pivotally connected at its outer end with the swinging frame, a rod extending from the inner end of the upper latch to an intermediate portion of the lower latch, and an operating connection for the upper latch, substantially as described.



2. In combination in locking mechanism for swinging windows, an upper latch pivoted intermediate of its length having a latch tooth at its outer end, and an extended inner end, a lower pivoted latch, and a connection from the inwardly extending end of the upper latch to the lower latch, substantially as described.

3. In combination in locking mechanism for swinging windows, a latch for the lower part of the window pivotally mounted, a pivoted latch for the upper part of the window, a catch piece for the lower latch, an operating connection for the upper latch, and a guide for the said operating connection, said catch piece and guide being carried by a block secured to the main frame, substantially as described.

871,207. TABLE-TOP. JAMES W. CONNATY and WILLIAM E. RENO, Indianapolis, Ind. Filed Oct. 15, 1906. Serial No. 339,003.

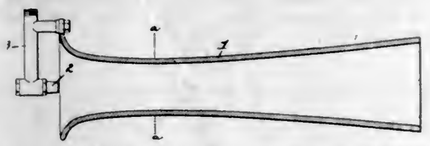


1. A table top comprising a comparatively thin core, and a sheet metal cover the main body of which is coextensive with the core and three edges of which are turned downwardly and projected beyond the thickness of the core with the tip of such downwardly turned edge inwardly turned at a comparatively sharp angle and engaging the underside of the core, whereby the cover may be slipped upon the core, substantially as described.

2. A table top comprising a comparatively thin core, and a sheet metal cover the main body of which is coextensive with the core and three edges of which are turned downwardly and projected beyond the thickness of the core with the tip of such downwardly turned edge inwardly turned at a comparatively sharp angle and engaging the underside of the core, and the fourth edge of which is turned downwardly over the adjacent edge of the core and turned inwardly into a groove formed in said adjacent edge, whereby the cover may be slipped upon the core, substantially as described.

871,208. JET-BLOWER. ALFRED COTTON, Newark, N. J. Filed Apr. 16, 1906. Serial No. 311,817.

1. A jet blowing apparatus comprising a nozzle provided with an inwardly curved contracted entrance or throat and with a divergent portion extending from said throat to the outlet end, the wall of said divergent portion being outwardly curved on a longitudinal line to secure a decreasing increase of cross-sectional area for equal increments of length throughout the divergent portion of the nozzle, and a conveyer having an inwardly curved contracted throat, a converging portion adjoining the throat and a divergent portion extending from the inner end of the converging portion of the conveyer to the outlet end thereof, the interior wall of said conveyer being formed on inwardly curved lines whereby the interior of the conveyer and the nozzle will be curved longitudinally from end to end and will be circular in cross section at all points.



2. A jet blowing apparatus comprising a nozzle having an inwardly curved contracted entrance or throat and a divergent portion extending from the said throat to the outlet of the nozzle, the wall of said diverging portion being concave on a longitudinal line and so curved that there will be a decreasing increase in cross-sectional area of the nozzle for equal increments of length, whereby the degree of expansion will be substantially equal throughout the divergent portion of the nozzle; in combination with a conveyer having an inwardly curved contracted entrance or throat, an inwardly converging part extending inward from the throat and a diverging portion extending outward from the inner end of the converging portion.

3. A jet blowing apparatus comprising a nozzle having an inwardly curved contracted entrance or throat and a divergent portion extending from the said throat to the outlet of the nozzle, the wall of the said divergent portion being concave on a longitudinal line and so curved that there will be a decreasing increase in cross-sectional area of the nozzle for equal increments of length whereby the degree of expansion will be substantially equal throughout the divergent portion of the nozzle, in combination with a conveyer.

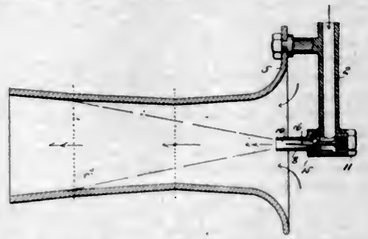
4. A nozzle for a jet blowing apapratus having an inwardly curved contracted entrance or throat and a divergent portion extending from said throat to the outlet of the nozzle, the wall of said divergent portion being concave on a longitudinal line and so curved that there will be a decreasing increase in cross-sectional area of the nozzle for equal increments of length, whereby the degree of expansion will be substantially equal throughout the divergent portion of the nozzle.

5. A jet blowing apparatus comprising a conveyer, a nozzle having an inwardly curved contracted entrance or throat, and a divergent portion extending from said throat to the outlet of the nozzle, the wall of said diverging portion being concave on a longitudinal line and so curved that the degree of steam expansion will be substantially equal throughout the divergent portion of the nozzle, a core extending longitudinally into said nozzle, said core being tapered from the contracted throat to its forward end.

[Claims 6 and 7 not printed in the Gazette.]

871,209. JET BLOWING APPARATUS. ALFRED COTTON, Newark, N. J. Filed Jan. 16, 1907. Serial No. 352,541.

1. A jet blowing apparatus comprising a nozzle whose internal diameter gradually increases from its inlet to its outlet, the smallest diameter of said nozzle being so proportioned with respect to the largest diameter thereof that fluid under a certain pressure entering said nozzle will expand to approximately atmospheric pressure before it leaves said nozzle, in combination with a conveyer open at its ends and formed with an inwardly contracted entrance throat and whose interior gradually converges for a short distance from its throat and then gradually enlarges toward its outlet, the smallest diameter of said conveyer being located at such a point in the length of the conveyer that the jet from the nozzle will travel beyond said point of smallest diameter before it has enlarged sufficiently to impinge upon the inner surface of the conveyer, said conveyer being arranged axially in line with the longitudinal center line of the nozzle, and the nozzle being outside of said conveyer adjacent to its inlet, whereby the air currents will move inward and entirely surround the nozzle, and means for changing the proportional areas of the inlet and outlet of said nozzle by varying the capacity of the inlet thereof, for the purpose set forth.



2. A jet blowing apparatus comprising a nozzle whose internal diameter gradually increases from its inlet to its outlet, the smallest diameter of said nozzle being so proportioned with respect to the largest diameter thereof that fluid under a certain pressure entering said nozzle will expand to approximately atmospheric pressure before it leaves said nozzle, in combination with a conveyer open at its ends and formed with an inwardly contracted entrance throat and whose interior gradually converges for a short distance from its throat and then gradually enlarges toward its outlet, the smallest diameter of said conveyer being located at such a point in the length of the conveyer that the jet from the nozzle will travel beyond said point of smallest diameter before it has enlarged sufficiently to impinge upon the inner surface of the conveyer, said conveyer being arranged axially in line with the longitudinal center line of the nozzle, and the nozzle being outside of said conveyer adjacent to its inlet, whereby the air currents will move inward and entirely surround the nozzle, automatically operating pressure controlled means for changing the proportional areas of the inlet and outlet of said nozzle by varying the capacity of the inlet thereof, for the purpose set forth.

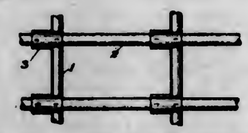
3. A jet blowing apapratus comprising a plurality of nozzles arranged in rows, each nozzle in each row being an equal distance from the adjoining nozzles of all the rows, the nozzles at the periphery of the group being half the distance in transverse direction from the walls of the conveyer that the nozzles are from each other, means of supplying fluid under pressure to said nozzles and a conveyer having upper and lower internal walls arranged in transverse section at a tangent to the surfaces of the jets from the upper and lower rows of nozzles, the side walls of said conveyer in transverse section being tangent to the surfaces of the jets from the end nozzles, the corners of said conveyer in transverse section being rounded on arcs struck from points axially in line with the centers of said end nozzles, whereby the jets from the nozzle will impinge upon the walls of the conveyer and upon each other in the same transverse plane.

4. A jet blowing apparatus comprising a plurality of nozzles arranged in rows, each nozzle in each row being an equal distance from the adjoining nozzles of all the rows the nozzle at the periphery of the group being half the distance in transverse direction from the walls of the conveyer that the nozzles are from each other, means for supplying fluid under pressure to said nozzles, and a conveyer having upper and lower internal walls arranged in transverse section at a tangent to the surfaces of the jets from the upper and lower rows of nozzles, the side walls of said conveyer being in transverse section tangent to the surfaces of the jets from the end nozzles, the corners of

said conveyer being rounded in transverse section on arcs struck from points axially in line with the centers of said end nozzles, the inlet end of said conveyer flaring outwardly from a point near its inlet end, said conveyer from the inner end of said flaring part gradually converging for a portion of its length and then gradually enlarging towards its outlet end, whereby the jets from all the nozzles will impinge upon the walls of the conveyer and upon each other in the same transverse plane.

5. A jet-blowing apparatus comprising a nozzle whose internal diameter gradually increases from its inlet to its outlet, the smallest diameter of said nozzle being so proportioned with respect to the largest diameter thereof that fluid under a certain pressure entering said nozzle will expand to approximately atmospheric pressure before it leaves said nozzle, in combination with a conveyer open at its ends and formed with an inwardly contracted entrance throat and whose interior gradually converges for a short distance from its throat and then gradually enlarges towards its outlet, the smallest diameter of said conveyer being located at such a point in the length of the conveyer that the jet from the nozzle will travel beyond said point of smallest diameter before it has enlarged sufficiently to impinge upon the inner surface of the conveyer, said conveyer being arranged axially in line with the longitudinal center line of the nozzle, and the nozzle being outside of said conveyer adjacent to its inlet, whereby the air currents will move inward and entirely surround the nozzle.

871,210. CONNECTING AND SPACING CLIP. ROBERT A. CUMMINGS, Beaver, Pa. Filed July 25, 1906. Serial No. 327,719.



1. A connector for crossing metal members, comprising a clip provided with a loop and two limbs projecting therefrom, said loop being arranged to embrace one of the crossing members and said limbs being provided in their side edges with openings arranged to engage and retain the other crossing member.

2. A connector for crossing metal members, comprising a metal clip provided with a loop to embrace one of the crossing members and having two limbs provided with edge notches to receive the other crossing member, and tongues at the edges of said notches to retain said member.

3. A connector for crossing metal members, comprising a clip formed of resilient material bent to provide a loop to embrace one of the crossing members and having limbs provided with notches or openings in their edges at right angles to the central loop for engaging and retaining the other crossing member.

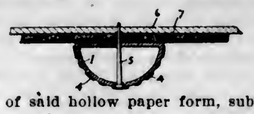
4. A connector for crossing metal members, comprising a metal clip having a central portion for engaging one of the crossing members and two divergent resilient limbs provided with openings at right angles to the central portion for receiving and retaining the other crossing member.

5. A connector for crossing metal members, comprising a flat metal clip having a central portion for engaging one of the crossing members and having divergent resilient limbs provided with openings or notches in their edges at right angles to the central portion for receiving and retaining the other crossing member.

[Claims 6 to 11 not printed in the Gazette.]

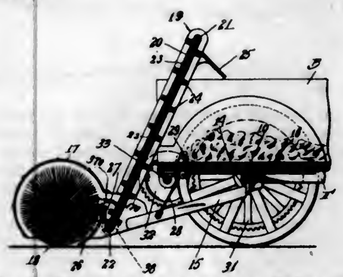
871,211. WALL AND CEILING DECORATION. GEORGE W. DUNN, Newport, Ky. Filed Feb. 1, 1906. Serial No. 299,058.

In a wall and ceiling decoration, a hollow form of paper material, with a flat base, attaching nails passing through said hollow form, and projecting beyond said flat base to take through the plaster and into the lath of the wall, with heavy relief work of plaster material secured to the



outer surface of said hollow paper form, substantially as described.

871,212. STREET-SWEEPER. WILFRED DUPRE, Worcester, Mass., assignor of forty-eight fiftieths to Hugh H. O'Rourk, Worcester, Mass. Filed Mar. 11, 1904. Serial No. 197,683.



1. The combination with a sweeping device, of an inclined endless conveyer, a plate pivoted at a point above the lower end of the conveyer and depending from its pivots, and yielding means for forcing the lower edge of the plate into engagement with the lower end of the conveyer.

2. The combination of a sweeping device, a conveyer comprising movable slats, and a plate yieldingly mounted and extending downwardly from above into engagement with the conveyer, thereby forming a pocket with the conveyer for the reception of sweepings.

3. The combination of a sweeping brush, a conveyer, a movable plate normally engaging the conveyer, and means for resiliently forcing the plate toward the conveyer; the conveyer and plate forming a pocket for the reception of sweepings, the conveyer having means for engaging the plate, pushing it outwardly from the conveyer, and passing through the pocket from the bottom to remove the sweepings from the pocket.

4. In a sweeping and delivering mechanism, the combination of the brush, a plate for gathering the material swept up by the brush, an endless conveyer having slats, and a spring-actuated pivoted plate normally in position to engage the slats and adapted to be moved back thereby to permit the passage of said slats.

5. In a sweeping and elevating mechanism, the combination of a cart, a sweeping mechanism mounted upon and supported entirely by said cart, and comprising arms detachably pivoted to the cart, a housing carried by the arms, a conveyer-frame extending up from the housing, a conveyer mounted therein, a brush in the housing, a plate for gathering the material swept up by the brush, a swinging plate normally in position for engaging the conveyer, and gearing for operating the brush and conveyer from the cart wheels.

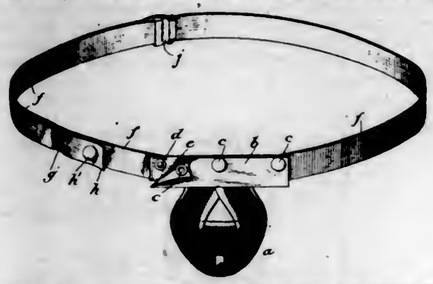
[Claim 6 not printed in the Gazette.]

871,213. SUSPENSORY. MAX ECKMANN, Blue Island,, Ill. Filed Dec. 21, 1906. Serial No. 348,927.

1. In a suspensory, the combination of a bag and a belt for suspending the same, said belt having a buckle for adjusting the operative length of the belt, and said belt also having a slide through which one end of the belt may be passed, and a fastening device for holding said end after the same has been doubled back upon itself.

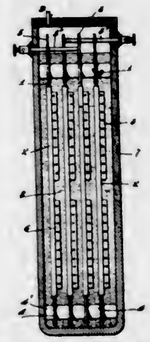
2. In a suspensory, the combination of a bag and a belt for suspending the same, said belt having a slide and two

ends adapted to slip through the same, a buckle for adjustably securing one end of the belt upon itself, and a fas-



tener for permanently securing the other end of the belt upon itself.

871,214. REVERSIBLE GALVANIC BATTERY. THOMAS A. EDISON, Llewellyn Park, N. J., assignor to Edison Storage Battery Company, Orange, N. J., a Corporation of New Jersey. Filed Oct. 31, 1900. Serial No. 34,994.



1. In a reversible galvanic cell, an alkaline solution; an electrode consisting of an insoluble metallic perforated inclosing pocket, and a finely divided insoluble active material tightly packed in such inclosing pocket; and a second electrode, substantially as set forth.

2. In a reversible galvanic cell, an alkaline solution; and an electrode therein comprising an insoluble electrode plate, a series of insoluble metallic perforated inclosing pockets carried by said plate, and an insoluble active material tightly packed in said pockets; and a second electrode, substantially as set forth.

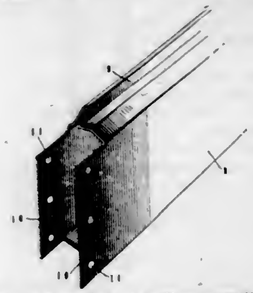
3. A reversible balvanic cell, comprising an alkaline solution, a positive element composed of finely divided cadmium in filamentary form and a suitable negative electrode, substantially as set forth.

4. A reversing galvanic cell, comprising an alkaline solution, and an electrode consisting of a nickel plate, a perforated receptacle thereon, finely divided cadmium in said receptacle, and a second electrode, substantially as set forth.

871,215. SASH CONSTRUCTION. EDMUND M. ERB, Jersey City, N. J., assignor to Robert M. Dixon, East Orange, N. J. Filed Sept. 17, 1906. Serial No. 334,972.

1. In sash construction, a rail provided with end flanges, a stile formed of a hollow metallic member a portion of which is depressed and folded back upon other portions thereof, said folded-back portion being extended beyond the ends of the stiles and inserted between the flanges of the rail, and means for securing said extended portions to said flanges.

2. In sash construction, a hollow metallic rail having portions thereof removed from its upper and lower end portions to form lateral flanges, a stile comprising a hollow metallic member a portion of which is depressed and folded back upon other portions thereof, said folded-back portions being extended beyond the ends of the stile and inserted between the flanges of the rail, and means whereby said extended portion and said flanges may be secured together.



3. In sash construction, a hollow metallic rail having portions thereof removed from its upper and lower end portions to form lateral flanges, a stile comprising a hollow metallic member a portion of which is depressed and folded back upon other portions thereof to form a longitudinally-extending recess therein, said folded-back portion being extended beyond the end of the stile and inserted between the flanges of the rail, said flanges and said extended portion having registering openings, and means extending through said openings adapted to secure said parts together.

4. In sash construction, in combination, a rail provided with end flanges, a stile comprising a hollow metallic member a portion of which is depressed and folded back upon other portions thereof, said folded-back portion being extended beyond the end of the stile and inserted between the flanges of the rail, the outer surface of said stile and the outer surfaces of said flanges coming flush with each other, and means extending between said extended portion and said flanges for securing said parts together.

5. In sash construction, a rail formed with end flanges, a stile comprising a hollow metallic member, said stile having inwardly-offset integral end extensions adapted to be embraced by the flanges of said rail, and means for securing said inwardly-offset portion and said flanges together.

871,216. WINDOW CONSTRUCTION. EDMUND M. ERB, Jersey City, N. J., assignor to Robert M. Dixon, East Orange, N. J. Filed Sept. 17, 1906. Serial No. 334,973.

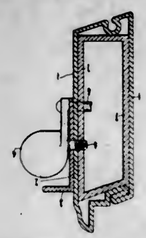


In closures for windows or like structures, in combination, a stationary member, a movable member, a circular recess having a contracted mouth provided in one of said members, a hollow flexible member located within said recess and extending without the same, and a split tube of resilient material lying within the portion of said flexible member within said recess and adapted to retain the same in tight engagement with the wall of said recess.

871,217. SASH CONSTRUCTION. EDMUND M. ERB, Jersey City, N. J., assignor to Robert M. Dixon, East Orange, N. J. Filed Jan. 10, 1907. Serial No. 351,650.

1. A sash frame comprising, in combination, a hollow metallic member, a reinforcing member seated therein and engaging the inner walls thereof, a plate located exteriorly

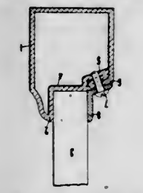
of said first-mentioned member, and means extending through said plate and said members adapted to secure said plate in position thereon.



2. A metallic sash frame the bottom rail of which is comprised by a hollow metallic member having a hollow reinforcing member seated therein and in tight engagement with the inner walls thereof, a lifting plate carrying sash releasing devices located exteriorly of said rail, and clamp screws extending through said plate and threaded into said rail and into said reinforcing member.

3. A sash frame having a bottom rail comprised by a hollow metallic member having driven therein a hollow reinforcing member the exterior walls of which are in close fitting engagement with the interior walls of said first-mentioned member, a lifting plate carrying sash releasing devices located exteriorly of said first-mentioned member, and clamp screws extending through said plate and tapped into said members.

871,218. SASH CONSTRUCTION. EDMUND M. ERB, Jersey City, N. J., assignor to Robert M. Dixon, East Orange, N. J. Filed Jan. 10, 1907. Serial No. 351,651.



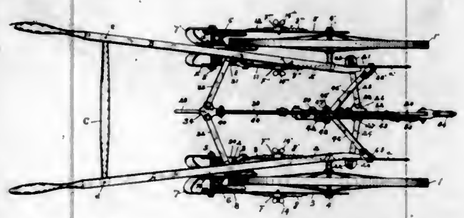
1. A sash rail formed by a hollow metallic member having an integral shoulder against which the glass seats, a portion of the metal comprising said member being bent and lapped, an angle binding strip seated upon said lapped portion, and screws extending through said binding strip and tapped into said lapped portion.

2. A sash rail formed by a hollow metallic member having an integral shoulder against which the glass seats, a portion of the metal comprising said member being bent rearwardly upon itself and then bent forwardly upon itself to form a reinforce of triple thickness, a member adapted to engage the glass and hold the same against said shoulder, and means extending through said member and said reinforce for holding the former in fixed position upon the latter.

871,219. EXPANSION-PLOW. JOHN T. FOULKE, Richmond, Ind. Filed Mar. 20, 1907. Serial No. 363,351.

1. In an expansible plow, the combination of a frame comprising two relatively adjustable side sections, a pair of longitudinally movable blocks disposed respectively intermediate the forward and rearward portions of said sections, two pairs of actuating links pivoted at their inner ends to the blocks and at their outer ends to the frame sections and so disposed that movement of said blocks in opposite directions causes the frame sections to approach or separate in parallelism, and single actuating means for moving said blocks simultaneously.

2. In an expansible plow, the combination of a frame comprising two relatively adjustable side sections, a draft bar intermediate and independent of said frame sections, a pair of blocks slidable longitudinally on said bar, two pairs of actuating links pivoted at their inner ends to the blocks and at their outer ends to the frame sections and so disposed that movement of said blocks in opposite directions causes the frame sections to approach or separate in parallelism, and single actuating means for moving said blocks simultaneously.



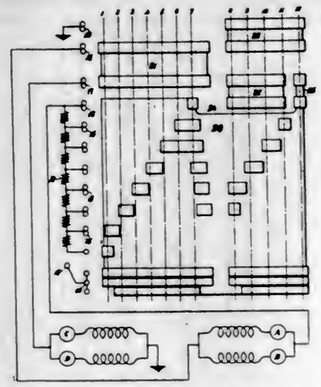
3. In an expansible plow, the combination of a frame comprising two relatively adjustable side sections, a draft bar intermediate and independent of said frame sections, a pair of blocks slidable longitudinally on said bar, two pairs of actuating links pivoted at their inner ends to the blocks and at their outer ends to the frame sections and so disposed that movement of said blocks in opposite directions causes the frame sections to approach or separate in parallelism, an operating lever mounted on the draft bar, a secondary lever pivotally supported intermediate its length by said bar, a link connecting the operating lever and one of the blocks, a link connecting said block with the secondary lever at one side of the pivot of the latter, and a link connecting the remaining block with the secondary lever at the other side of the pivot.

4. In an expansible plow, the combination of a frame comprising two relatively adjustable side sections, a draft bar intermediate and independent of said frame sections, a pair of blocks slidable lognitudinally on said bar, an operating lever mounted on the draft bar, a secondary lever pivotally supported intermediate its length by said bar, a link connecting the operating lever and one of the blocks, a link connecting said block with the secondary lever at one side of the pivot of the latter, a link connecting the remaining block with the secondary lever at the other side of the pivot, two pairs of actuating links pivoted at their inner ends to the blocks and at their outer ends to the lower portions of the frame sections, and a third pair of links pivoted at their inner ends to the operating lever and at their outer ends to the upper portions of the frame sections.

5. In an expansible plow, the combination of a frame comprising two relatively adjustable side sections, a draft bar intermediate and independent of the frame sections, a pair of blocks slidable longitudinally on said bar, an operating lever mounted on the draft bar, a secondary lever pivotally supported intermediate its length by said bar, a link connecting the operating lever and one of the blocks, a link connecting said block with the secondary lever at one side of the pivot of the latter, a link connecting the remaining block with the secondary lever at the other side of the pivot, two pairs of actuating links pivoted at their inner ends to the blocks and at their outer ends to the lower portions of the frame sections, and a third pair of links pivoted at their inner ends to the base of the operating lever, crossing, and pivoted at their outer ends to the upper portions of the frame section.

871,220. CONTROLLER. THOMAS GILMORE, Jr., Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Oct. 31, 1906. Serial No. 341,399.

1. A controller of the series-parallel type, having a resistance regulating section and series-parallel sections, and connections whereby in the final parallel position of the controller the motors to be controlled are connected to the current collecting device through only the resistance regulating section of the controller.

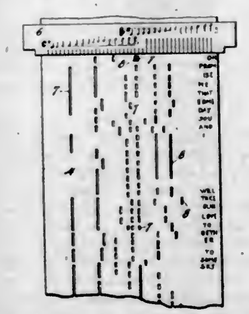


2. A series-parallel controller of the drum type, comprising a resistance regulating section, and sections for connecting the controlled motors in series and in parallel, one of the parallel connecting sections projecting into a recess in one end of the resistance regulating section, contact fingers coöperating with said various sections, and connections whereby in the final parallel positions of the controller only one contact finger carries the full current.

3. In combination, a plurality of motors, and a series-parallel controller of the drum type, comprising contact fingers, a resistance regulating section, sections for connecting the motors in series and in parallel, and an extension from one end of the resistance regulating section which in the final parallel position of the controller engages with a plurality of contact fingers to connect the different motors in parallel independently of said parallel connecting sections.

4. In combination, a plurality of electric motors, and a series-parallel controller of the drum type, comprising contact fingers, a resistance regulating section, and series and parallel connecting sections, the resistance regulating section having an extension adjacent to said parallel connecting section and carrying contacts, the whole being so connected and arranged that in certain of the parallel positions of the controller the parallel connecting section coöperates with certain contact fingers to connect the motors in parallel, while in the final parallel position of the controller the contacts on said extension coöperates with the same contact fingers to connect the motors in parallel.

871,221. MUSIC-SHEET. DANIEL H. HAYWOOD, New York, N. Y. Filed Jan. 18, 1904. Serial No. 189,429.

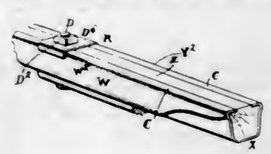


1. A music sheet for mechanically played musical instruments having perforations for playing an accompaniment and superficial longitudinal dashes of varying length indicative of occurrences and time-values of the notes of the solo part with reference to which said accompaniment is arranged.

2. A music sheet for mechanically played musical instruments having perforations for playing an accompaniment and superficial longitudinal dashes of varying length and in different longitudinal lines on the sheet, indicative of occurrences, pitch and time-values of the notes of the solo part with reference to which said accompaniment is arranged.

3. In a self-playing musical instrument, the combination with a tracker and a musical scale mounted adjacent thereto, of a music sheet having perforations for playing an accompaniment, and superficial longitudinal dashes of varying length and in different longitudinal lines on the perforate portion of the sheet indicative of occurrences and time values of the notes of the solo part with reference to which said accompaniment is arranged, said longitudinal dashes arranged to register with the notation of the musical scale.

871,222. REACH FOR VEHICLES. HENRY HIGGIN, Newport, Ky., assignor to The Higgin Manufacturing Company, Newport, Ky., a Corporation of West Virginia. Filed Oct. 12, 1906. Serial No. 338,628.

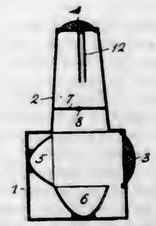


1. A perch composed of a metal plate bent to form a three sided tube and having its fourth side partially closed by flanges, bent from the sides of the tube, leaving an open slit, and a wooden filler in said tube, said filler having a ridge thereon, fitting in said slit, substantially as described.

2. A perch composed of a metal plate bent to form a three-sided tube and having its fourth side partially closed by flanges bent inwardly from the sides of said tube and a wooden filler in said tube having a ridge thereon fitting between said flanges, said flanges and ridge forming a flat surface, substantially as described.

3. A perch composed of a metal plate bent to form a three sided tube and having flanges bent inwardly from its sides, leaving a slit, a woden filler in said tube, having a ridge fitting in said slit, the end portions of said perch, including both the wood and metal portions, being compressed and bent, substantially as described.

871,223. HEADLIGHT FOR LOCOMOTIVES. CHARLES P. JOHNSON, Eureka, Kans. Filed Feb. 16, 1907. Serial No. 357,645.



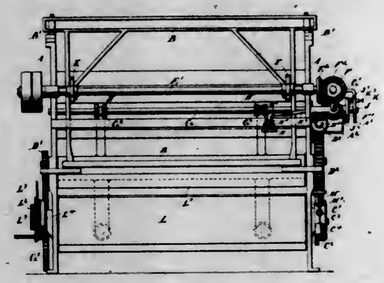
1. In a device of the character described, a case having a lens in its front wall and an extension terminating a suitable distance above said lens, a transparency in said extension and adapted to stand across or to be turned on edge therein, and a hood for covering said transparency when the latter stands on edge.

2. In a device of the character described, a case having a lens in its front wall and an extension terminating a suitable distance above said lens, a transparency in said extension and adapted to stand across or to be turned on edge therein, and a vertically movable hood for covering said transparency when the latter stands on edge.

3. In a device of the character described, a case having a lens in its front wall and an upright extension terminating a suitable distance above said lens, an adjustable colored transparency mounted on stub-shafts in said extension, and means for locking said transparency in its operative and inoperative positions, respectively across the extension or on edge therein.

4. In a device of the character described, the combination of a case having an upward extension, lenses in the front wall of the case and the upper end of the extension, reflectors in the case aranged in line with the lenses, a colored adjustable transparency in the extension, and a vertically adjustable hood within the extension for covering the transparency when the latter is turned on edge.

871,224. LOOM. FRANK JOHNSON, New York, N. Y. Filed Aug. 28, 1906. Serial No. 332,320.



1. In a loom of the character set forth, a warp-beam, a brake thereon, an electrically actuated releasing-means for said brake, a step by step let-off device, an electric circuit in which said releasing-means is located, and a controller operated by a moving portion of the loom for making and breaking said circuit.

2. In a loom, a warp-beam, warp wires, a brake on said beam, means for holding said wires under tension, an electrically-actuated releasing-means for said brake, an electric circuit in which said releasing-means is located, and a step by step let-off device constructed to resist the tendency of said beam to rotate when said brake is released.

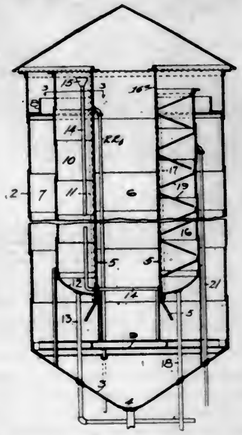
3. In a loom of the character set forth, a warp-beam, a brake thereon, an electrically actuated releasing-means for said brake, a feed-roller geared to said warp-beam, an electrically operated feeding device for said roller, an electric circuit in which said releasing-means and feeding device are located, and a controller for making and breaking such circuit.

4. In a loom of the character set forth, a warp-beam, a brake thereon, an electrically actuated releasing-means for said brake, a feed-roller geared to said warp-beam, an electrically operated feeding device for said roller, a shaft for operating the heddles, an electric circuit in which said releasing-means and feeding device are located and a controller operated by the revolutions of said shaft for making and breaking such circuit.

5. In a loom of the character set forth, a warp-beam, a feed-roller geared to said warp-beam, a worm-wheel on said roller, a worm in mesh with said worm-wheel, a ratchet-wheel on said worm, a pawl arranged to engage said ratchet-wheel, a lever in which said pawl is mounted, an electro-magnet for moving said lever, an electric circuit in which said electro-magnet is located and a controller operated by a moving portion of the loom for making and breaking such circuit.

[Claim 6 not printed in the Gazette.]

871,225. WATER-SOFTENER. LLEWELLYN W. JONES, Sewickley, Pa., assignor to Pittsburgh Filter Manufacturing Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Dec. 3, 1906. Serial No. 346,017.



1. In water softening apparatus, the combination of a tank, baffle plates extending across said tank and forming a down-take conduit between the same, and a solution tank secured to the wall of one of said baffles.

2. In water softening apparatus, the combination of a tank, baffle plates extending across the said tank and forming a down-take conduit between the same, and a solution chamber secured to the outside wall of one of the baffles.

3. In water softening apparatus, the combination of a suitable tank, baffle plates extending across said tank and forming a down-take conduit between the same, and a trough shaped solution chamber secured to the outside wall of one of said baffle plates.

4. In water softening apparatus, the combination of a tank, baffle plates extending across said tank and forming a down-take conduit between the same, a trough shaped solution tank secured to the outside wall of one of said baffles, said baffle forming one of the walls of said solution tank.

5. In water softening apparatus, the combination of a tank, baffle plates extending across said tank and forming a down-take conduit between the same, a solution chamber, and a re-action chamber secured to one of said baffle plates.

[Claims 6 to 8 not printed in the Gazette.]

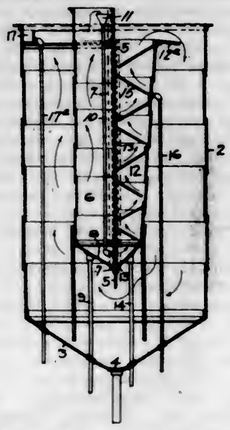
871,226. WATER-SOFTENER APPARATUS. LLEWELLYN W. JONES, Sewickley, Pa., assignor to Pittsburgh Filter Manufacturing Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Jan. 23, 1907. Serial No. 353,681.

1. In water softening apparatus, the combination of a tank, a single baffle plate dividing said tank into two compartments, and a reaction chamber in said tank on one side of said baffle, said reaction chamber communicating at its upper end with said tank.

2. In water softening apparatus, the combination of a tank, a single baffle plate dividing said tank into two compartments, and a reaction chamber secured to one side of said baffle plate and communicating at its upper end with the down-take compartments of said tank.

3. In water softening apparatus, the combination of a suitable tank, a single baffle plate dividing said tank into down-take and up-take compartments, a semi-conical re-action chamber secured to one side of said baffle plate, said reaction chamber communicating at its upper end with said down-take compartment of said tank.

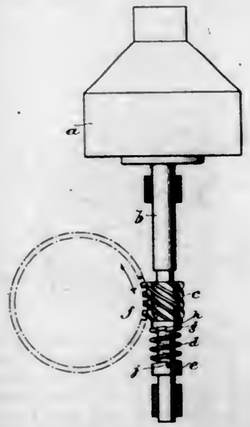
4. In water softening apparatus, the combination of a suitable tank, a single baffle plate dividing said tank into a down-take and an up-take compartment, a trough shaped reaction chamber secured to one side of said baffle plate communicating at its upper end with the down-take compartment of said tank.



5. In water softening apparatus, the combination of a suitable tank, a single baffle plate dividing said tank into down-take and up-take compartments, a reaction chamber on one side of said baffle plates communicating at its upper end with said down-take compartment and a solution chamber on the other side of said baffle plate in said uptake compartment, said solution chamber communicating with said reaction chamber.

[Claims 6 to 8 not printed in the Gazette.]

871,227. GEARING. BIRGER LJUNGSTRÖM, Stockholm, Sweden, assignor to Aktiebolaget Separator, Stockholm, Sweden, a Company. Filed July 26, 1905. Serial No. 271,293.



1. In combination, a rotatable device, a driven gear, and a driving gear for the same, one of said gears being mounted to move along its support and a resilient connection between said gear and its support.

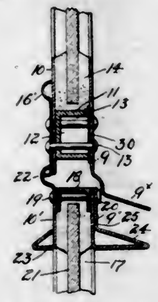
2. In combination with a rotatable device, a driven gear and a driving gear, one of said gears being mounted upon its support so as to move around and along said support and a resilient connection between said gear and its support.

3. In combination, a shaft or spindle, a gear mounted to move along said spindle, a resilient connection between said gear and the spindle, and a driving gear meshing with the last mentioned gear.

4. In combination, a rotating spindle, a collar, fixed on the spindle there being a notch on the rear and a notch on the collar and a spiral spring, one end in the gear notch the other in the spindle collar notch.

5. In combination a rotating spindle, a collar fixed on the spindle there being a notch on the gear and a notch on the collar and a spring one end in the gear notch, the other in the spindle collar notch.

871,228. METALLIC WINDOW CONSTRUCTION. EDMUND H. LUNKEN and CHARLES M. CONKLIN, Cincinnati, Ohio, assignors, by direct and mesne assignments, to The Lunken Steel Window Co., a Corporation of Ohio. Filed Jan. 25, 1907. Serial No. 354,030.



1. In combination in a fire-proof window, inner and outer frame members, spacing means comprising the transversely extending parts arranged at different distances from the edges of said frame members and between the same, and the glass held between the frame members, substantially as described.

2. In combination in a fire-proof window, a frame made up of inner and outer frame members in rigid relation to each other, spacing members comprising transversely extending parts arranged therebetween, and at a distance apart with a dead air space between the said spacing parts, and the glass carried by the frame, substantially as described.

3. In combination in fire-proof windows, the inner and outer frame members, adapted to carry the glass therebetween, and spacing means between the said members comprising a channeled bar at or near each edge of the frame to which the inner and outer frame members are secured, the interior of said channel members being free, substantially as described.

4. In combination, in a fire-proof window, the inner and outer members of the frame, spacing members therebetween comprising a U-shaped frame composed of a channeled member and the glass carried by the frame, substantially as described.

5. In combination in fire-proof windows, the inner and outer frame members, the glass held thereby and arranged with its edge therebetween, and a reinforcing or backing member overlying the frame member adjacent the edge of the glass, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

871,229. FIREPROOF WINDOW CONSTRUCTION. EDMUND H. LUNKEN and CHARLES M. CONKLIN, Cincinnati, Ohio, assignors, by direct and mesne assignments, to The Lunken Steel Window Co., a Corporation of Ohio. Filed Mar. 14, 1907. Serial No. 362,423.

1. In fire proof window construction, a sash comprising inner and outer frames, one of said frames having an inwardly struck portion bearing against the other frame and secured thereto, and a glass pane seated in the channel formed between said frames, substantially as described.

2. In fire proof window construction, a sash comprising inner and outer frames, one of said frames having on three sides inwardly struck portions secured to the other

frame, a glass pane seated in the channels formed by said frames, and a removable bar for the insertion and removal of the glass, substantially as described.



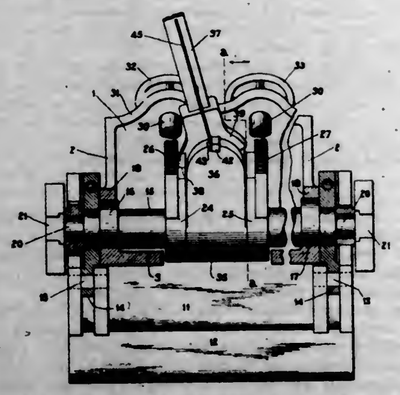
3. In fire proof window construction, a sash comprising inner and outer frames, one of said frames having on three sides inwardly struck portions secured to the other frame, and forming channels for receiving the edge of the glass pane, and on the other side a plane strip leaving a space for the insertion of the glass, and a removable bar between said frames for retaining the glass in place, substantially as described.

4. In fire proof window construction, a sash comprising inner and outer frames composed of strips welded together at the corners, one of said frames having inwardly struck portions spacing it from the other frame and forming channels a glass pane seated in said channels, and means for securing said frames together, substantially as described.

5. In fire proof window construction, a sash comprising inner and outer frames, the bars or strips of one of said frames having approximately centrally arranged ribs or flanges secured to the face of the other frame and forming the interior glass receiving channels and exterior guide channels, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

871,230. VENEER-CUTTING MACHINE. LOUIS G. MERRITT, Lockport, N. Y. Filed Oct. 5, 1905. Serial No. 281,392.



1. In a veneer cutting machine, the combination with a pressure-plate, of means for moving said pressure-plate comprising separate means for controlling and operating said plate to give a slow and measured movement, and further means for giving the said pressure-plate a comparatively quick movement the extent of which is determinable by either of said first operating means.

2. In a veneer cutting machine, the combination with a pressure-plate, of means for giving said pressure-plate slow and measured movements or comparatively quick movements toward or from different working positions, said means comprising independent elements to impart and control the slow and measured movements, and a further element for effecting the quick movements the extent of which is determined by said first-mentioned elements.

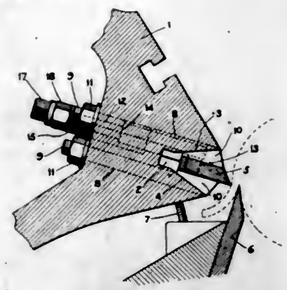
3. In a veneer cutting machine, the combination of a pressure-plate, means comprising separate elements adapted to move said pressure-plate toward or from the work from different positions with respect thereto with slow and measured movements, and means for moving said plate from one of said positions to another thereof with a comparatively quick movement.

4. In a veneer-cutting machine, in combination, a pressure-plate, a plurality of means for moving said pressure-plate to and from the work with a slow and measured adjusting movement, means for connecting said pressure-plate to any of said moving means at various adjusted positions thereof, and means for moving said pressure-plate to and from the work with a comparatively quick clearing movement.

5. In a veneer-cutting machine, in combination, a pressure-plate, a plurality of means for moving said pressure-plate to and from the work with a slow and measured adjusting movement, means for locking said pressure-plate to said moving means at various adjusted positions thereof, said last-mentioned means being also adapted upon disconnection from said first-mentioned moving means to give said pressure-plate a comparatively quick clearing movement to and from the work.

[Claims 6 to 26 not printed in the Gazette.]

871,231. VENEER-CUTTING MACHINE. LOUIS G. MERRITT, Lockport, N. Y. Filed October 5, 1905 Serial No. 281,393.



1. In a veneer cutting machine, in combination, a pressure plate, a pressure plate support, a wedge-shaped member adapted by a movement relative to said pressure plate to spring a portion thereof in a vertical direction, and a second wedge-shaped member upon the opposite side of said pressure plate adapted in conjunction with said first-mentioned member to clamp said plate in any position to which the same is sprung.

2. In a veneer-cutting machine, in combination, a pressure-plate, a pressure-plate support, and a plurality of wedge-shaped members arranged upon either side of said plate, said wedge-shaped members being adapted to be operated to clamp said plate in a fixed position.

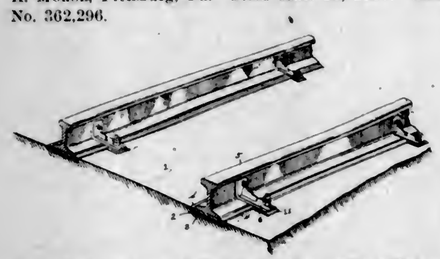
3. In a veneer-cutting machine, in combination, a pressure-plate support, a pressure-plate arranged therein and adapted normally to assume a horizontal position, and a plurality of wedge-shaped members some of which are arranged above and others in the support of said pressure-plate, each one of said wedge-shaped members being adapted to be operated to distort the horizontal contour of said plate.

4. In a veneer-cutting machine, in combination, a support, a plurality of wedge-shaped members arranged in said support, and a pressure-plate arranged within said support and interposed between certain of said wedge-shaped members and adapted to be clamped in a fixed position thereby.

5. In a veneer-cutting machine, in combination, a support, a pressure-plate arranged in said support, and a plurality of serially-arranged wedges interposed in the support of said pressure-plate, either of said wedges in the series being adapted to be operated to clamp said pressure-plate in a fixed position against the wedges of another of said series.

[Claims 6 to 21 not printed in the Gazette.]

871,232. RAILWAY-TRACK CONSTRUCTION. EDWIN K. MORSE, Pittsburg, Pa. Filed Mar. 14, 1907. Serial No. 362,296.

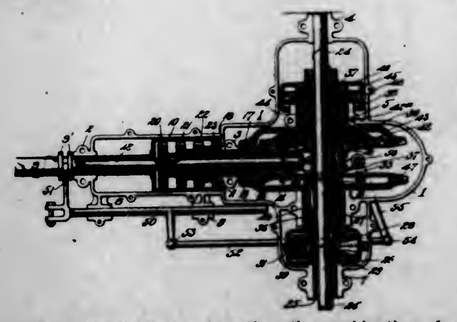


1. In a railway track, the combination with a flat concrete road bed surface having parallel channels in said surface, of cushioning material in said channels, plates closing said channels and supported upon the cushioning material, rails resting upon and along said plates, and angle clamps attached to said rails and bolted to said concrete road bed, substantially as described.

2. In a railway track, the combination of a flat concrete road bed having longitudinal channels, bolts fixed in said concrete road bed adjacent to said channels, rails mounted on cover plates snugly fitting in said channels, fibrous belting inclosed within said channels beneath said cover plates, and slotted angle clamps attached to said rails and engaged by the aforesaid bolts, substantially as and for the purposes set forth.

3. In a rail fastening, the combination with the rail, and bolts fixed in the road bed, of angle clamps adapted to be bolted to the web of the rail and having slots to engage the said fixed bolts, substantially as described.

871,233. CHANGEABLE-SPEED GEARING. ALBERT L. MUREN, Belleville, Ill. Filed Oct. 25, 1906. Serial No. 340,541.



1. In a changeable speed gearing, the combination of a driven shaft, a longitudinally shiftable clutch member having an internal gear and a sleeve whereby it is mounted on said shaft and having driving connection therewith, a plurality of sleeved gear members, either of which is adapted to coöperate with the internal gear of said shiftable clutch member, and means for driving said gear members singly, substantially as set forth.

2. In a changeable speed gearing, the combination of a driven shaft, a driving clutch member having an internal gear and a sleeve whereby it is mounted on the shaft, shiftable longitudinally of said shaft and having driving connection therewith, a plurality of sleeved gear members surrounding the sleeve of said driving clutch member and adapted to coöperate with the internal gear thereof, and means for driving said gear members singly, substantially as set forth.

3. In a changeable speed gearing, the combination of a driven shaft, a driving clutch member having an internal gear and a sleeve whereby it is mounted on the shaft, shiftable longitudinally of said shaft and having driving connection therewith, a plurality of sleeved gear members surrounding the sleeve of said driving clutch member, and means for driving said gear members singly; the inner one of said gear members and the sleeve of said driving clutch member being provided with clutch means, substantially as set forth.

4. In a changeable speed gearing, the combination of a driven shaft, a driving clutch member having an internal gear and a sleeve whereby it is mounted on the shaft, shiftable longitudinally of said shaft and having driving connection therewith, a plurality of sleeved gear members surrounding the sleeve of said driving clutch member, means for driving said gear members singly, a clutch member carried by the inner one of said gear members, a clutch member carried by the sleeve of said driving clutch member and arranged for engagement with the clutch member of the said inner gear member, substantially as set forth.

5. In a changeable speed gearing, the combination of a driven shaft, a driving clutch member shiftable longitudinally of said shaft and having driving connection therewith, a plurality of gear members surrounding said driving clutch member, means for driving said gear members singly, a clutch wheel carried by one of said gear members, and an internal gear clutch member carried by said driving clutch member and arranged for engagement with said clutch wheel, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

871,234. METHOD OF PRODUCING HALF-TONE PLATES. CHARLES H. MCINTOSH, Montreal, Quebec, Canada. Filed Feb. 21, 1907. Serial No. 358,600.



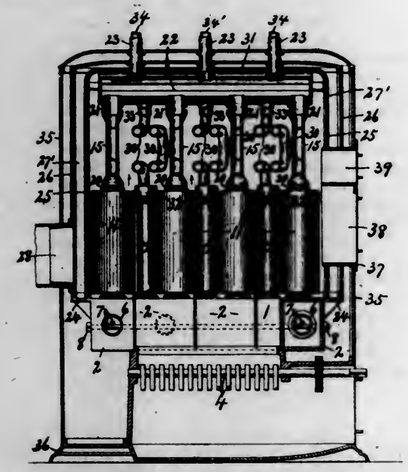
1. A method of producing half tone plates, consisting in first fully exposing a plate covered with a sensitive film to the object to be photographed through an intervening prepared screen and producing a "screen negative", then exposing a plate covered with a sensitive film to the object to be photographed without having any intervening screen and producing a "plain negative", then stripping the screen negative of said object having all high lights, middle tones and shadows clearly shown from its plate, then superimposing the said "screen negative" on the "plain negative" and registering the lines of the object photographed of the one negative with the other, then preparing a metal plate, then printing the negatives so arranged on to said metal plate and finally submerging said prepared plate in a bath and etching, as specified.

2. A method of producing half tone plates, consisting in first fully exposing a wet photographic plate to the object to be photographed through an intervening glass screen having lines arranged throughout its surface and developing the same and producing the screen or half tone enga-

tive, then fully exposing a wet photographic plate to the object to be photographed without any intervening screen and developing said plate after exposure and producing the plain negative properly and clearly showing all details of the picture, then stripping the film of said "plain negative" from its plate and laying it on a transparent printing base, then stripping the film of the "screen negative" from its plate and laying it over the film forming the "plain negative" and registering the lines of the object photographed on the two films, then preparing the metal plate, then printing the object photographed on the negatives on to the metal plate and finally etching by submersion, as specified.

3. In a method of producing half tone plates, the superimposition of the fully exposed "screen negative" on the fully exposed "plain negative" and the registration of the lines of the object photographed of the one negative with the lines of the other and the subsequent printing of the object photographed from the negatives so arranged, as specified.

871,235. HEATER. JAMES E. PECK, Syracuse, N. Y. Filed Aug. 21, 1905. Serial No. 275,090.



1. In a hot water heater, a water base composed of hollow sections arranged side by side and constituting a part of the combustion chamber and having inter-communicating passages, a series of upright water legs, each rising from one of the base sections, and separate hollow castings each connecting the upper end of one of the water legs at one side of the combustion chamber with the upper end of the opposite water leg at the opposite side of the combustion chamber, said castings having fire passages therethrough.

2. In a heater, a rectangular base composed of hollow sections arranged side by side forming a part of a combustion chamber and having inter-communicating passages, means for clamping said sections together, a return flow pipe leading to one of the sections, separate upflow pipes leading from said section, and separate one piece hollow castings connecting the upper end of the upflow pipes at one side of the combustion chamber with those at the opposite side of the combustion chamber, each of said castings being provided with transverse fire passages, and separate upflow pipes each leading from the water passage of one of said castings.

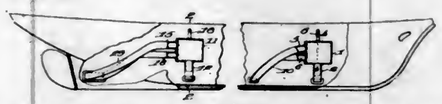
3. In a heater, a water base composed of separate hollow sections arranged side by side forming a part of a combustion chamber and having inter-communicating water passages, tie bolts passed through said passages for drawing the sections together, separate comparatively large water legs rising from said sections, additional comparatively small water legs rising from some of said base sections at opposite sides of the combustion chamber, and additional pipes leading from the upper ends of the smaller legs laterally across the combustion chamber, and a return flow pipe leading to one of the base sections.

4. In a hot-water heater, a water base composed of separate hollow sections forming a combustion chamber and having inter-communicating passages, means to clamp the sections together, in combination with water-legs rising from said sections at opposite sides of the combustion chamber, and one piece hollow castings connecting the upper ends of opposite legs across the combustion chamber.

5. In a hot-water heater, a water-base and upright water-legs rising therefrom and forming therewith a combustion chamber and separate cross conduits each connecting the upper end of one leg at one side with one of the legs at the opposite side of said chamber.

[Claims 6 to 12 not printed in the Gazette.]

871,236. VESSEL-PROPELLING MEANS. GIUSEPPE PINO, Genoa, Italy. Filed May 10, 1906. Serial No. 316,125.



1. A boat hull provided with thrust chambers, vertical passages leading from said chambers to the bottom of said hull and communicating with the surrounding water, horizontal passages leading from said chambers to the sides of said hull and communicating with the surrounding water, valves for the outer terminals of said passages permitting ingress and preventing egress of water to said chambers, downwardly inclined conduits leading rearwardly from said chambers and communicating with the surrounding water, and air inlets communicating with said thrust chambers and the outer air.

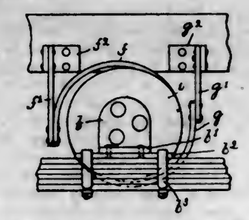
2. A boat hull provided with thrust chambers, vertical passages leading from said chambers to the bottom of said hull and communicating with the surrounding water, horizontal passages leading from said chambers to the sides of said hull and communicating with the surrounding water, valves for the outer terminals of said passages permitting ingress and preventing egress of water to said chambers, downwardly inclined conduits provided with branches connecting with said chambers at different vertical planes and leading rearwardly therefrom and communicating with the surrounding water at points adjacent the bottom of said hull, valves for said branches whereby upper or lower branches may be thrown into or out of communication with said chambers, and air inlets communicating with said thrust chambers and the outer air.

3. A boat hull provided with thrust chambers, passages leading from said chambers to the bottom of said hull and communicating with the surrounding water, passages leading from said chambers to the sides of said hull and communicating with the surrounding water, means for permitting ingress and preventing egress of water to said chambers, and rearwardly extending conduits communicating with said chambers at different vertical planes and communicating with the surrounding water at points adjacent the bottom of said hull.

4. A boat hull provided with thrust chambers, passages leading from said chambers to the bottom of said hull and communicating with the surrounding water, means for permitting ingress and preventing egress of water to and from said chambers through said passages, and rearwardly extending conduits communicating with said chambers at different planes and communicating with the surrounding water.

5. A boat hull provided with thrust chambers, passages leading from said chambers to the sides of said hull and communicating with the surrounding water, means for permitting ingress and preventing egress of water to and from said chambers through said passages, and discharge conduits communicating with said chambers at different planes and communicating with the surrounding water.

871,237. SHOCK-ABSORBER FOR VEHICLES. DUNCAN ROBINSON, Brookline, Mass. Filed Dec. 12, 1906. Serial No. 347,458.



1. In a shock absorber for vehicles, the combination of a circularly movable spring controlled ring connected with the running-gear, a pair of volute springs attached thereto at opposite sides of its center, and means connecting the outer ends of said springs with the vehicle body, substantially as described.

2. In a shock absorber for vehicles, the combination of a hub connected with the running-gear, a plurality of radially disposed springs engaging it, a circularly movable ring inclosing said hub and springs, to which the outer ends of said springs are attached, a pair of volute springs attached to said ring at opposite sides of its center and means connecting the outer ends of said volute springs with the vehicle body, substantially as described.

3. In a shock absorber for vehicles, the combination of a stationarily supported hub connected with the running-gear and having a plurality of seats and shoulders, a plurality of C-springs fitting said seats having extensions abutting against said shoulders, a circularly movable ring inclosing said hub and springs, to which the outer ends of said springs are attached, a pair of volute springs attached at their inner ends to said ring at opposite sides of its center, and means for connecting the outer ends of said volute springs with the vehicle body, substantially as described.

4. In a shock absorber for vehicles, the combination of a non-rotating hub connected with the running-gear, a plurality of springs engaging it, a circularly movable ring to which the outer ends of said springs are attached, and means connected with the vehicle body and operated by both the up and down movements thereof, relative to its running-gear, for turning said ring in the same direction from its normal position against the action of said springs, substantially as described.

5. In a shock absorber for vehicles, the combination of a circularly movable spring-controlled ring connected with the running-gear, and means operated by both the up and down movements of the vehicle body, relative to its running-gear, for turning said ring in the same direction from its normal position against the action of its controlling springs, substantially as described.

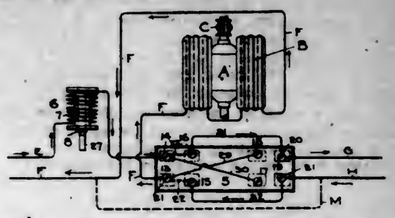
[Claims 6 to 8 not printed in the Gazette.]

871,238. DEVICE TO DISCLOSE SHUNTING OF THE CIRCUITS AROUND ELECTRIC METERS. WILLIAM L. SAUNDERS, Denver, Colo., assignor of two-thirds to Daniel K. Hickey, Denver, Colo. Filed June 27, 1905. Serial No. 267,279.

1. The combination with an electric meter of suitable means adapted to reverse the connections between the service wires and the leading in wires at each interruption of the current.

2. The combination with an electric meter of means interposed between the leading-in and service wires and adapted to reverse the connections between the said service wires and leading in wires at each interruption of the current.

3. The combination with an electric meter of a terminal changing switch interposed between the leading-in and the service wires and adapted to reverse the connections between the said service wires and leading in wires at each interruption of the current.

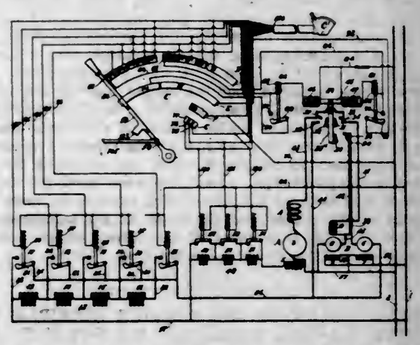


4. The combination with an electric meter of an electrically actuated switch interposed between the leading-in and the service wires and adapted to reverse the connections between the said service wires and leading in wires at each interruption of the current.

5. The combination with an electric meter of a switch comprising a base having a plurality of contact points at each end and interposed between the leading-in and service wires of the circuit, a lever fulcrumed thereon and having a corresponding number of contacts at each end adapted to engage those on the base, a solenoid arranged above said base, and means on said lever and the solenoid-core to cause the former to reverse its position each time the solenoid is de-energized.

[Claims 6 to 8 not printed in the Gazette.]

871,239. SYSTEM OF MOTOR CONTROL. WILLIAM F. SCHNEIDER, Norwood, Ohio, assignor to The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Nov. 11, 1905. Serial No. 286,961.



1. In combination, an electric motor, a supply circuit, means for connecting the motor with the supply circuit, a converter in circuit with the motor and with the supply circuit to assist in supplying said motor, and electro-magnetically operated means for breaking the converter circuit.

2. In combination, an electric motor, a supply circuit, means for connecting the motor with the supply circuit, a converter in circuit with the motor and with the supply circuit, a solenoid operated switch for connecting the converter to, and disconnecting the converter from, the motor and the supply circuit, and means for controlling said switch.

3. In combination, an electric motor, a supply circuit, a converter, electro-magnetically operated means for connecting the converter with the supply circuit and with the motor and for disconnecting it from both, a rheostat in the converter circuit, and electro-magnetically operated means for controlling said rheostat.

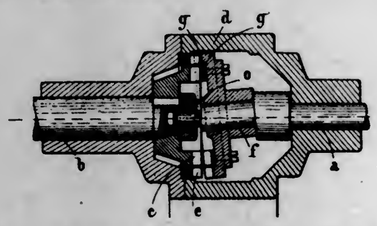
4. In combination, an electric motor, a supply circuit, means for connecting the motor with the supply circuit, a

converter in circuit with the motor and with the supply circuit, a rheostat in the supply circuit, electro-magnetically operated means for controlling said rheostat, and electro-magnetically operated means for breaking the converter circuit at an intermediate speed of the motor.

5. In combination, an electric motor, a supply circuit, means for connecting the motor with the supply circuit, a variable resistance in the supply circuit, a converter in circuit with the motor and with said supply circuit, solenoid operated switches for controlling the variable resistance, a solenoid operated switch for breaking the converter circuit at an intermediate speed of the motor, and means for controlling said switches.

[Claims 6 to 39 not printed in the Gazette.]

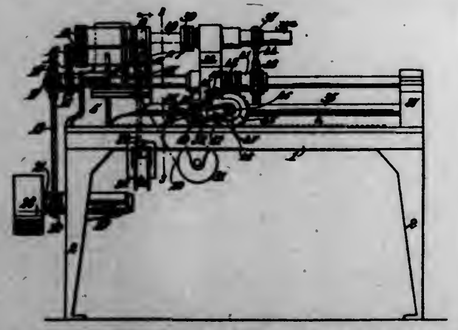
871,240. REDUCING-GEAR. GASTON SCHOEDELIN and FERNAND SCHOEDELIN, Paris, France. Filed Aug. 30, 1906. Serial No. 332,572.



1. In a reducing gear, the combination with a driving shaft, having an inclined part, and a driven shaft, of a bevel wheel mounted on the inclined part of the driving shaft and a second wheel on the driven shaft, the axis of which coincides with that of the driving shaft, the wheel upon the inclined part of the driving shaft being adapted in rolling upon the second wheel to describe a cone and means to control the rotation of the driving gear, substantially as and for the purpose specified.

2. In a reducing gear, the combination with a driving shaft having an inclined part, and a driven shaft, of a bevel wheel, mounted upon the inclined part of the driving shaft and a toothed wheel mounted upon the driven shaft, the axis of both said shafts coinciding with each other, a case inclosing the said gear, a toothed crown arranged in the same plane as the driven wheel and solid with the gear case, a supplementary wheel connected with the driving wheel, the teeth of the latter being adapted to mesh with those of the crown and the teeth of the supplementary wheel to mesh with those of the driven wheel, substantially as and for the purpose specified.

871,241. MACHINE FOR FORMING FLEXIBLE TUBING. SALVATORE SCOGNAMILLO, New York, N. Y. Filed Feb. 27, 1905. Serial No. 247,529.



1. In a machine of the class set forth, the combination with devices for feeding components of tubing, of a longitudinally slidable and rotatable mandrel disposed to receive said components, a guide means, a carriage movable longitudinally on the guide means and supporting an upper rotating spindle, the latter having means to removably engage one end of the mandrel, an operating shaft for the carriage provided with a worm, means for progressively feeding the carriage and operatively controlled by the worm, and means for causing a cessation of movement of the carriage.

2. A machine for forming tubing having devices for feeding and shaping components of tubing, a longitudinally shiftable mandrel on which the parts of the tubing are assembled, a carriage having rotatable means for engaging one end of the mandrel, a guide rod on which the carriage moves, and mechanism for feeding the carriage longitudinally over the machine and operative to disengage the carriage and cause a cessation of movement of the mandrel.

3. In a machine of the class set forth, the combination with devices for feeding components of tubing having a fixed position, of a longitudinally slidable and rotatable mandrel to receive the said components, a guide rod, a carriage movable on the guide rod and having a rotatable member engaging one extremity of the mandrel, and mechanism for feeding the carriage longitudinally over the machine and operating the said member, the mechanism being under manual control to disengage the carriage and cause a cessation of movement of the parts thereof.

4. In a machine of the class set forth, the combination of a bed having a rack thereon, devices for feeding and shaping the component parts of tubing having a fixed position, a longitudinally movable and rotatable mandrel to receive the said components, a guide rod, and a carriage movable on the guide rod and having a spindle and carrying gear means and a rotatable support, the gear means engaging the rack and the spindle, and the support engaging one extremity of the mandrel.

5. In a machine of the class set forth, the combination with a bed having a rack thereon, devices for feeding and shaping tubing components having a fixed position on the bed, a guide rod, a carriage movable on the guide rod and having operating devices including a pinion to engage the rack, means for throwing the pinion into and out of engagement with the rack, and a mandrel detachably associated with the carriage and longitudinally shifted and rotated by the latter, the mandrel being disposed in operative position to the tubing components and feeding devices to receive the several components, and also removably held at one extremity by a part of the carriage.

871,242. TOILET-CASE. ALBERT SEBALD, Weiden, Germany. Filed July 12, 1906. Serial No. 325,892.

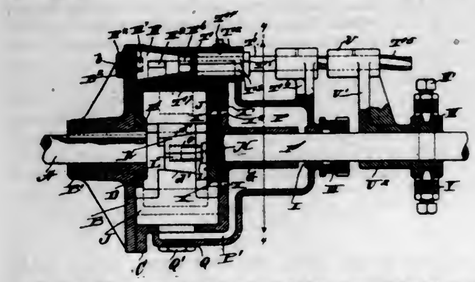


1. In combination, a casing provided with open top and bottom portions, a lid for said top portion, a brush, means carried by said brush for removably securing the same to the bottom of said casing to close the same, and a partition dividing said casing into upper and lower compartments adapted to receive cleaning utensils.

2. In combination, a casing provided with an open bottom portion, a utensil for said casing, means carried by said utensil for removably securing the same to the bottom of said casing to close that portion thereof, and a partition dividing said casing into upper and lower compartments.

871,243. FLUID-PRESSURE CLUTCH. EDWARD G. SHORTT, Carthage, N. Y., assignor to Ryan-Hopkins Machine Company, a Corporation of Illinois. Filed Aug. 27, 1906. Serial No. 332,255.

1. A fluid pressure clutch mechanism comprising a rotatable fluid containing casing having two compartments with a valve-regulated passageway communicating between the same, a hollow rotatable piston mounted eccentrically within one of said compartments and having relief port communication with the other compartment, and a series of movable compression blades carried by said piston, as set forth.



2. A fluid pressure clutch mechanism comprising a rotatable fluid containing casing having two compartments with a valve-regulated passageway communicating between the same, a hollow rotatable piston mounted eccentrically within one of said compartments and having relief port communication with the other compartment, said piston having radial slots, a series of reciprocating compression blades mounted in said slots, and means for moving the blades, as set forth.

3. A fluid pressure clutch mechanism comprising a rotatable fluid containing casing having two compartments with a valve-regulated passageway communicating between the same, a hollow rotatable piston mounted eccentrically within one of said compartments and having continuous relief port communication with the other compartment, a series of movable compression blades carried by said piston, and a single movable member within said piston, and continuously in contact with each of the blades, as set forth.

4. A fluid pressure clutch mechanism comprising a rotatable fluid containing casing having two compartments with a valve-regulated passageway communicating between the same, a hollow rotatable piston mounted eccentrically within one of said compartments and having continuous relief port communication with the other compartment, a series of movable compression blades carried by said piston, and a single movable member within said piston and coöperating with the surrounding wall of the compartment, in which the piston is located, and said blades, to cause the latter to be reciprocated, as set forth.

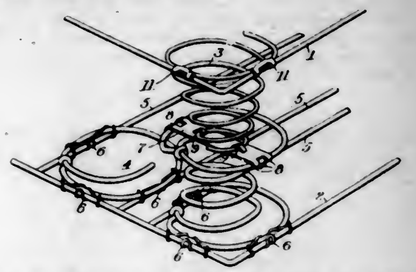
5. A fluid pressure clutch mechanism comprising a rotatable fluid containing casing having two compartments with a valve-regulated passageway communicating between the same, a hollow rotatable piston mounted eccentrically within one of said compartments and having continuous relief port communication with the other compartment, a series of movable compression blades carried by said piston, and a single spring-pressed member bearing against the inner end of said blades, as set forth.

[Claims 6 to 19 not printed in the Gazette.]

871,244. SPRING-CUSHION WORK. WATSON R. SMITH and MACY A. PHELPS, Jackson, Mich., assignors to Jackson Cushion Spring Company, Jackson, Mich. Filed Nov. 9, 1906. Serial No. 342,695.

1. A spring cushion comprising a frame, supporting wires, a set of springs mounted upon the supporting wires, means for connecting the said springs to the supporting wires, another set of springs arranged upon the aforesaid set of springs, and clips each having inner and outer fingers at each end to connect opposite sides of the upper convolutions of the first named set of springs and each also provided with tongues intermediate its ends to connect the lower convolutions of the second set of springs to connect the two sets together.

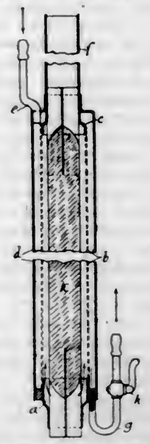
2. A spring cushion comprising a frame, a set of lower spring members of relatively large wire mounted upon said frame, plates having loops bent from their ends for inclosing the upper convolutions of said spring members from one side and with loops in the ends whereby tongues are released for inclosing the said convolutions from the opposite sides and with clips intermediate the ends of the plate whereby oppositely extending tongues are produced, and a set of upper spring members of relatively small wire with the lower convolutions thereof engaging the intermediate tongues of said plate.



3. A spring cushion comprising a support, a lower spring member of relatively heavy wire connected at one end to said support, a plate bearing over the upper convolution of said lower spring member and with loops at the ends engaging said upper convolutions and with oppositely extending tongues intermediate the ends of said plate, and an upper spring member of relatively small wire and engaging said intermediate tongues by its lower convolution.

4. A spring cushion comprising a support, a lower spring member connected at one end to said support, a plate bearing over the upper convolution of said lower spring member and with loops at the ends engaging said upper convolution and with oppositely extending tongues intermediate the ends of said plate, and an upper spring member engaging said intermediate tongues by its lower convolution.

871,245. MEANS FOR IMPREGNATING LIQUIDS WITH GAS. HEINRICH STROH, Heilbronn, Germany. Filed Nov. 9, 1906. Serial No. 342,696.



1. The apparatus for impregnating liquids with gas, which comprises an annular gas chamber in an enlarged portion of a pipe between a solid outer jacket and a wire gauze which latter forms a central water chamber as set forth.

2. The apparatus for impregnating liquids with gas which comprises a water pipe combined with a wire gauze enlargement and an external jacket over said wire gauze,

an ingress nozzle and an egress nozzle connected to said jacket, as set forth.

3. The apparatus for impregnating liquids with gas which comprises a water pipe combined with a wire gauze enlargement, central plug in the interior of the wire gauze, an external jacket over said wire gauze, an ingress nozzle and an egress nozzle connected to said jacket as set forth.

4. The apparatus for impregnating liquids with gas which comprises a water pipe combined with a wire gauze enlargement, a double pointed central plug in said wire-gauze, a cross-shaped centering holder at each end of said plug, an external jacket over said wire gauze, an ingress nozzle and an egress nozzle connected to said jacket as set forth.

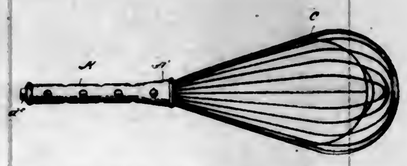
871,246. COMBINED SCRUBBER AND MOP. FRANK S. THOMAS, New York, N. Y., assignor to R. M. Ford, New York, N. Y. Filed Apr. 14, 1906. Serial No. 311,755.



In a combined scrubber and mop, the combination of a handle, a head at the lower end of the handle, a scrubber carried by the head, a bail pivotally connected to the head and designed to be swung under the same or upwardly along the handle, an outwardly projecting rib extending longitudinally along the handle, the said rib being formed of a single strip of material having the end portions thereof extended laterally and embedded in the handle, the lower end thereof extending entirely through the handle and projecting beyond the opposite side of the same, a sleeve slidably mounted upon the handle and formed with an interior longitudinal groove to receive the before mentioned rib and prevent rotation of the sleeve upon the handle, the downward movement of the sleeve being limited by the before mentioned lower end of the rib which extends through the handle and projects beyond the opposite face of the same, and a notch being formed in the lower edge of the sleeve which is designed to engage with the upper extremity of the rib and hold the sleeve in an elevated position when the said sleeve has been moved upwardly beyond the rib and turned to throw the before mentioned groove therein out of registry with the rib and the notch into engagement with the upper end thereof, a bracket projecting from the sleeve, a shaft journaled in the bracket and provided with a mop cloth engaging member, and a mop cloth connecting the bail and shaft.

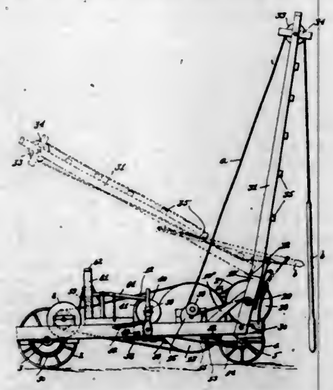
871,247. EGG-BEATER. WALTER H. TOMLINSON, Chicago, Ill. Filed Oct. 28, 1905. Serial No. 284,818.

1. In an egg beater, the combination with a handle having a flaring end, a plurality of wire loops the ends of which extend within said flaring end of the handle, a conical block arranged within the flaring end of the handle for clamping the ends of the wire loops against the interior of the handle, a bolt extending throughout the length of the handle and connected at one end to said block so as to cause the block to move positively into or out of its clamping position and the other end of the bolt projecting beyond the end of the handle and having thereon a shoulder for engagement with the exterior of the handle.



2. In an egg beater, the combination with a tubular handle having a flaring end, a plurality of wire loops the ends of which extend within said flaring end of the handle, a conical block arranged within said flaring end and adapted to clamp the ends of the wire loops against the interior of the handle, a bolt having screw-threads at one end which engage with corresponding screw-threads on said block, the other end of said bolt projecting beyond the opposite end of the handle and being provided with a head which engages with the exterior of the handle when the bolt is turned to draw the conical block into its clamping position.

871,248. WELL-DRILLING APPARATUS. WILLIAM H. ULLMAN, Stafford, and MILES OKEY, Zanesville, Ohio. Filed Apr. 13, 1907. Serial No. 368,109.



1. A well drilling apparatus comprising a truck, upright legs secured to the front end thereof and over the front axle, a bull wheel shaft journaled in said legs, a derrick pivotally mounted on said legs and adapted to swing downward and be received by a rear part of the truck, a main driving shaft mounted in said truck frame, means for driving said bull wheel shaft therefrom, means for giving reciprocation to the drill therefrom and means to drive the truck therefrom.

2. A well drilling apparatus comprising a truck, upright legs secured to the front thereof, a bull wheel shaft journaled in said legs over the front axle, a derrick pivotally mounted on said legs, a main driving shaft journaled in said truck frame, a normally loose belt connecting said latter shaft with the bull wheel shaft and tightening means therefor, the same consisting of a member adapted to bear on said belt, a lever on which said member is carried and manual means for actuating said lever.

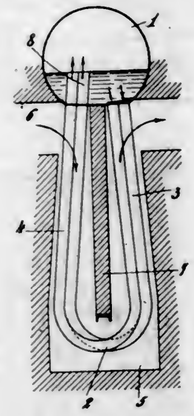
3. A well drilling apparatus comprising a truck, upright legs secured to the front end thereof, a bull wheel shaft journaled in said legs and over the front axle, bull wheels on said shaft one being provided with a brake and the other adapted to receive a belt, a main driving shaft, a belt pulley thereon, a normally loose belt passing over said pulley and said second bull wheel and means for tightening said belt at option, the same consisting of a roller adapted to be pressed against said belt, a lever on which said roller is mounted and manual means for operating said lever.

4. A well drilling apparatus comprising a truck, upright legs mounted in the front end thereof, a derrick mounted on said legs, a bull wheel shaft journaled in said legs bull wheels thereon, a main driving shaft journaled in said truck frame, a belt pulley on said latter shaft, a belt normally loose passing over said pulley and one of said bull wheels, manually operated means for tightening said belt at option, and means on said main driving shaft for giving reciprocation to the drill.

5. A well drilling apparatus comprising a truck, bull wheels and a derrick suitably mounted at the front end thereof and over the front axle, a main driving shaft journaled in said truck frame, a normally inoperative connection for driving said bull wheels from said shaft, means for making operative said connection at will, and means on said shaft for reciprocating the drill.

[Claims 6 to 13 not printed in the Gazette.]

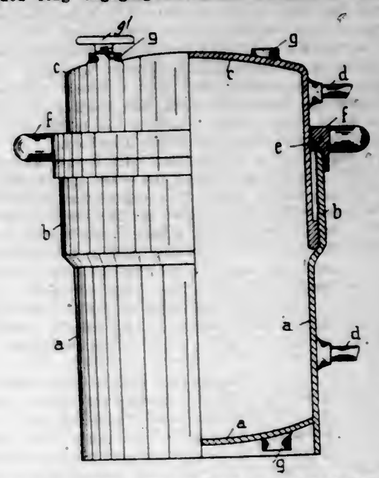
871,249. STEAM-BOILER. EUGENE L. J. WERA, Liege, Belgium. Filed Sept. 26, 1906. Serial No. 336,253.



A boiler comprising a reservoir of water and of steam, tubes of U shape connected with this reservoir and having arms of unequal length, the longer of the arms terminating at the level of the water of the reservoir, and partitions arranged between the arms of each tube in such a way that the hot gases, encountering first the longer arm shall circulate parallel with this arm, then meeting the shorter arm shall circulate likewise parallel with the latter.

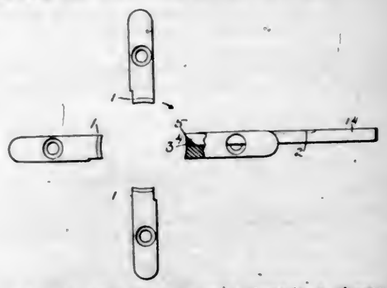
871,250. APPARATUS FOR PREPARING AND STORING BOILED HAMS. LOUIS WIRTH, Hanover, Germany. Filed Apr. 18, 1907. Serial No. 368,945.

Apparatus for the purpose set forth comprising a receptacle consisting of an outer member, screw-threaded on the interior thereof, an inner chamber having at its open end an externally screw-threaded flange on the exterior thereof adapted to engage the interior screw-threads of the inner member, said members being provided with apertures for the discharge of air from the interior of the receptacle, means for closing said apertures, a packing ring having contact with the external face of the inner member and with the edge of the outer member and a screw-threaded ring engaging external threads on the outer



member for holding said packing in place, substantially as described.

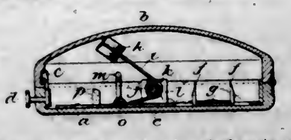
871,251. DIE. ALFRED H. WORREST, Lancaster, Pa. Filed July 31, 1906. Serial No. 328,608.



1. In a device for cutting screw threads, a chaser having longitudinal ridges and a beveled operating end, and provided with means for holding said end to the working circle, with said ridges approximately at a right angle to the tangent at the cutting point, the outwardly projecting edges of said longitudinal ridges being opposed to the rotation of the stock being threaded for the purpose set forth.

2. In a device for cutting screw threads, a chaser in combination with a die which is provided with leading threads and channeled to serve as a guide for said chaser, the teeth of the operating end of the latter being arranged to project slightly beyond the said leading threads, which threads follow the thread-grooves cut by the teeth of said chaser, substantially as set forth.

871,252. JOKE-BOX. GEORGE E. AMES, Chicago, Ill. Filed Nov. 14, 1906. Serial No. 343,349.



1. A joke box having a cover hinged thereto and a catch for holding the cover closed and provided with a cap holder and with a spring actuated hammer arranged to be restrained by engagement with the closed cover and to be

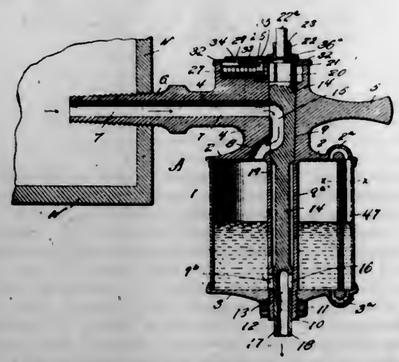
released with the cover by disengagement of the cover holding catch, substantially as described.

2. In a joke box the combination with a case having a cover and a catch for holding the cover closed, of cap exploding mechanism contained in the case and comprising a cap holder, a spring actuated hammer, arranged to be restrained by the closed cover, and a detent releasable from outside the case for setting and holding the hammer back while a cap is being placed on the holder and the cover is being closed, substantially as described.

3. In a joke box the combination with a case having a hinged cover, a catch for holding the cover closed, and an exposed catch-releasing piece, of a cap holder within the case, a hammer pivotally mounted in the case in position to strike a cap on said holder, a spring tending to throw the hammer towards the cap holder, and a detent releasable from outside the case for holding the hammer back against the tension of the spring while a cap is being placed on the holder and the cover is being closed, the cover being adapted when closed to restrain the hammer when it is released by the detent, substantially as described.

4. In a joke box the combination with a case having a hinged cover, a spring catch for holding the cover closed, and an exposed catch-releasing piece, of a metal base plate secured in said case and provided with a cap holding spur, a hammer consisting of a spring arm provided at one end with a head and coiled at the other end around a rod which is mounted on said base plate, and a hooked detent projecting through a transverse slot in said plate and movable therein into and out of engagement with the hammer arm, the shank of said detent projecting outside of the case when the detent is caught over the hammer arm, substantially as described.

871,253. MEASURING-FAUCET. CHARLES W. BAUMAN, Columbus, Ohio. Filed Feb. 20, 1906. Serial No. 302,140.



1. A liquid measuring and dispensing device, comprising a measuring vessel having a tubular plug-casing extending through it and provided near its lower end with a port opening into the vessel, and having an upper head and casing provided with an inlet passage 7 and a passage 8 opening into the vessel, and a double faucet plug mounted in the said casing, having a longitudinally disposed channel in its upper portion arranged to connect the said passages 7 and 8 when the plug is turned in one position, and provided near its lower end with a longitudinal draw-off passage arranged to communicate with the port near the lower end of the plug-casing, substantially as set forth.

2. A liquid measuring and dispensing device comprising a measuring vessel having a bottom plate with an opening, a head provided with a plug opening and having a tubular casing extending down through the opening in the bottom plate, means engaging the lower end of the said tubular casing for clamping the head and plate together, and a double faucet plug in said head and casing having inlet and outlet passages, and the said head and tubular casing having inlet and outlet ports arranged to register with the passages of the plug.

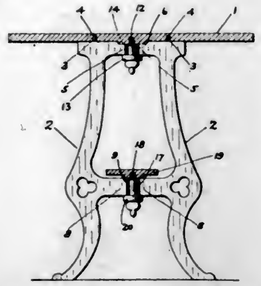
3. A liquid measuring and dispensing device, comprising a measuring vessel having a head and casing provided with a plug opening, liquid passages and a recess, both the liquid passages and the recess communicating with the plug opening, a plug seated in the said opening and provided with suitable inlet and outlet ports and having at its upper end ratchet teeth and a lug, a pawl in the recess arranged to engage with the ratchet teeth, and a register also seated in the recess and arranged to be operated by the said lug, substantially as set forth.

4. In a measuring vessel the combination with a shell, and upper head and bottom plates having passages, of a gage glass between said head and bottom plates and in connection at top and bottom with said passages and means for connecting the said head and bottom plates and clamping the gage glass between them, substantially as described.

5. In a liquid measuring and dispensing apparatus, the receiving vessel comprising a shell with open ends, heads at the opposite ends of the shell for closing it, a tubular casing carried by one of the heads and extending through the other, means engaging with the said tubular casing for holding the heads towards each other, and a turning plug controlling both the inlet and the outlet openings of the said vessel, the said plug being mounted in said tubular casing and being removable therefrom without necessitating the removal of either of the heads of the measuring vessel.

[Claims 6 to 8 not printed in the Gazette.]

871,254. COLLAPSIBLE TABLE. GEORGE BENJAMIN, Philadelphia, Pa., assignor of one-half to Frances A. Tygert, Philadelphia, Pa. Filed Oct. 24, 1906. Serial No. 340,262.

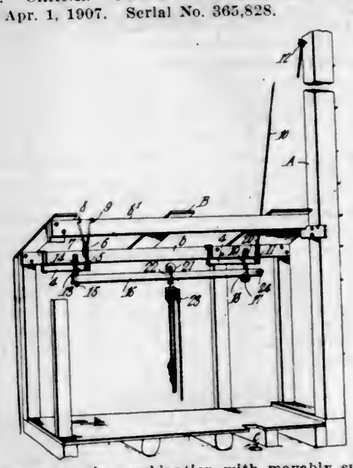


1. A collapsible table comprising a plurality of legs having top and body projections thereon, said projections being radially disposed in the assembled position of said legs, a flexible strap fixed to each of said top projections, and a flexible strap fixed to each of said body projections, said straps forming sockets in the assembled position of said legs, a top supported by said legs a screw disposed in the socket formed by said strap connecting the top projections, said screw clamping said top projections to said table top, a screw disposed in the socket formed by the strap connecting the body projections, and means co-operating with said screw for clamping said body projections together.

2. A collapsible table comprising a plurality of legs having inwardly extending projections near their upper ends, and hinged together at their inner edges, in combination with a top having a projecting member on the under side thereof, said member being adapted to rest on the upper edges of said projections when the legs are extended horizontally at an angle to each other, and a screw engaging in said member and having a flange for engaging said projections to clamp the legs to the top.

3. A collapsible table comprising a plurality of legs having inwardly extending projections hinged together at their inner edges so that when the legs are extended they form a socket with the legs disposed radially thereto, a top having a portion which rests on the upper edges of said projections, and a clamp screw having a flange which engages said projections, and a stem which passes through said socket and is threaded into said top portion, whereby said projections are clamped between said top and flange to connect the legs to the top.

871,255. CRANE. GEORGE W. BRAGG, Marietta, Ohio. Filed Apr. 1, 1907. Serial No. 365,828.



1. In a crane the combination with movably supported guide rails, and a carriage upon each of said rails; of a supporting rail suspended from and pivotally connected to one of the carriages, a roller bearing for said supporting rail and suspended from the other carriage, and a hoist movable upon the supporting rail.

2. A crane comprising movably and adjustably supported guide rails, a carriage mounted to travel upon each of said rails, a roller bearing suspended from one of the carriages, a supporting rail supported by and pivotally connected to the other carriage, said rail being movably mounted upon the bearing, means for limiting the movement of said rail upon the bearing, and a hoist movably mounted upon the supporting rail.

3. In a crane the combination with adjustably and movably supported guide rails; of a supporting rail suspended from and movable longitudinally of the guide rails, and a hoist movably mounted upon the supporting rail.

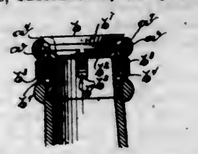
4. In a crane the combination with laterally movable guide rails, and adjustable supports for said rails; of a supporting rail suspended from and movable longitudinally of the guide rails independently of the lateral movement of said guide rails, and a hoist movably mounted upon the supporting rail.

5. In a crane the combination with laterally movable guide rails, and flexible means for adjustably supporting said rails; of a carriage upon each of the rails, a supporting rail movable with and pivotally connected at one end to one of the carriages, one end of said rail being supported by and movable longitudinally in relation to the other carriage, and a hoist movably mounted upon the supporting rail.

[Claim 6 not printed in the Gazette.]

871,256. HOSE-NOZZLE. JOHN P. BUCKLEY, Dayton, Ohio. Filed Nov. 30, 1906. Serial No. 345,653.

1. In a hose nozzle, a main nozzle member, a deflector member capable of longitudinal movement only, located at the discharge end of said nozzle member and concentric therewith, having an opening of less diameter than that of the main nozzle member, said deflector member being offset in its relation to the nozzle member to form a passage intermediate said nozzle member and deflector member, having its general direction at an inclination to the axis of the nozzle bore, substantially as specified.



2. In a hose nozzle as described, a main nozzle member, a non-revoluble deflector member, having a central discharge orifice therein, a seat in said nozzle member upon which said deflector member is adapted to rest, means for adjusting said deflector member to and from said seat, substantially as specified.

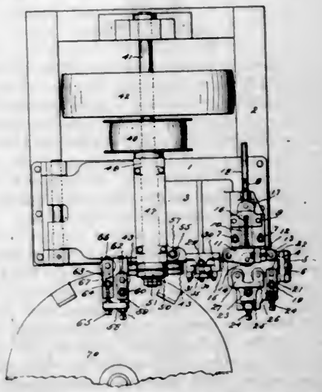
3. In a hose nozzle as described, a main nozzle member, a non-revoluble, longitudinally adjustable deflector member having a flaring exterior, and a concentric opening therein, means for adjusting the deflector member to and from the nozzle member to regulate the opening intermediate said parts, substantially as specified.

4. In a hose nozzle as described, a main nozzle member, having a central bore, a seat formed in said bore, a deflector member located within the discharge end of said nozzle, having a flaring exterior and an opening concentric with the central bore of the nozzle member; said deflector member adapted to normally rest upon said seat, and independent means to adjust said deflector member longitudinally to and from said seat, substantially as specified.

5. In a hose nozzle as described, a main nozzle member, a non-revoluble deflector member located adjacent to the discharge end of said nozzle member, but separated therefrom, said deflector member being of less diameter than the bore of the nozzle and adapted to interrupt the exterior portion of the stream of water and direct it at an angle to the main stream, and having an opening therein for the passage of the said main stream, substantially as specified.

[Claims 6 to 11 not printed in the Gazette.]

871,257. SCALING-MACHINE. GEORGE J. CAPEWELL, Hartford, Conn., assignor to The Capewell Horse Nail Company, Hartford, Conn., a Corporation of Connecticut. Filed Feb. 15, 1906. Serial No. 301,249.



1. A scaling machine having rolls for crimping rod in one plane, rolls for crimping rod at right angles thereto, a feed roll with a groove for receiving rod, and a feed roll with a flange for holding rod in the groove, substantially as specified.

2. A scaling machine having rolls for guiding rod, rolls for crimping rod in one plane, rolls for crimping rod in another plane, a feed roll with a groove for receiving rod, and a feed roll with a flange for holding rod in the groove, substantially as specified.

3. A scaling machine having rolls for crimping rod back and forth, a feed rool formed of a pair of disks with a groove in its periphery, and a feed roll formed with a flange, the periphery of which is adapted to run in the groove between the disks of the other feed roll, substantially as specified.

4. A scaling machine having rolls for crimping rod back and forth, a feed roll supported by fixed bearings and having a pair of disks with a groove between them, and a feed roll supported by oscillatory bearings and having a single flange, the periphery of which is adapted to run in the groove between the disks of the other feed roll, substantially as specified.

5. A scaling machine having rolls for crimping rod back and forth, a feed roll supported by fixed bearings and having a pair of disks with a groove between them, a feed roll supported by oscillatory bearings and having a single flange, the periphery of which is adapted to run in the groove between the disks of the other feed roll, a spring for lifting the oscillatory bearings, and a bolt and nut for holding down the oscillatory bearings, substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

871,258. WELL-TUBING. JAMES M. CRISWELL, Pullman, W. Va. Filed Apr. 30, 1907. Serial No. 371,046.



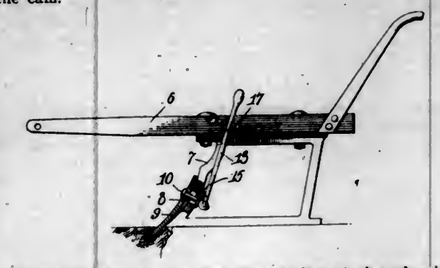
1. In an apparatus of the class set forth, a packer having an upstanding tube connected thereto, a stuffing box within the upper end of the tube, a fixed jar head or collar on the interior of the tube near its upper end, this jar head forming the bottom of the stuffing box, and a discharge tube having a perforated extension, said extension depending slidably through said stuffing box into said packer tube and provided at its lower end with an exterior jar head or collar, for the purposes set forth.

2. In an apparatus of the class set forth, a packer having an upstanding tube connected thereto, a stuffing box within the upper end of the tube, a fixed jar head or collar on the interior of the tube near its upper end, this jar head forming the bottom of the stuffing box, and a discharge tube having a perforated extension, said extension depending slidably through said stuffing box into said packer tube and provided at its lower end with an exterior jar head or collar, said discharge tube being provided with an exterior stop collar at a point above the stuffing box, for the purpose set forth.

871,259. PLOW-POINT FASTENER. JOHN J. DORMAN, Red Springs, N. C. Filed Apr. 8, 1907. Serial No. 367,040.

1. The combination with a plow stock and point, of a bolt connecting the same and hooked at the end, and a cam bearing between the stock and the hook and adapted to be turned to tighten or loosen the bolt.

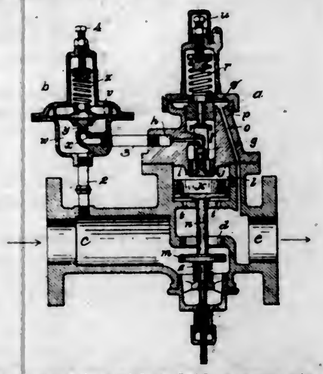
2. The combination with a plow stock and point, of a bolt connecting the same and hooked at the end, a lever having a cam engaged in the hook, to tighten or loosen the bolt, and a spring in compression between the stock and the cam.



3. The combination with a slotted plow stock and point, of a bolt connecting the point and extending through the slot and having a hooked end behind the stock, a lever having a laterally extending cam portion at its lower end extending through the hook, a spring in compression between the stock and said laterally-extending portion of the lever, and means to hold the lever in adjusted position.

4. The combination with a plow stock and point, of a bolt connecting the same and hooked at the inner end, a cam extending across within the hook, and a spring in compression between the cam and the stock, the spring having forks between which the bolt passes.

871,260. PRESSURE REGULATOR AND REDUCER. HAROLD P. DYER, Cleveland, Ohio, assignor to The Dyer Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 15, 1907. Serial No. 383,727.



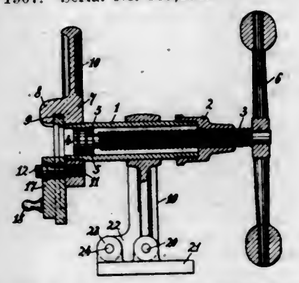
1. The combination with a fluid pressure pipe, of a reducing valve therein operative by both the initial and delivery pressure to normally maintain a certain delivery pressure, a passage for initial pressure and a passage for delivery pressure, to operate said reducing valve, a self-closing valve in said initial pressure passage arranged to be opened by the initial pressure, and means for closing the said reducing valve upon the closing of said self-closing valve, substantially as set forth.

2. The combination with a fluid pressure pipe, of a reducing valve therein operative by both the initial and delivery pressure to normally maintain a certain delivery pressure, a passage for initial pressure and a passage for delivery pressure, to operate said reducing valve, a valve in said initial pressure passage provided with means for keeping it closed save when the initial pressure is above a certain degree, and means for keeping said reducing valve closed while said passage valve is closed, substantially as set forth.

3. The combination with a fluid pressure pipe, of a spring-closed main valve between the initial and delivery ends of said pipe, means controlled by both the initial and delivery pressure operatively connected with said main valve for operating it to normally maintain a certain pressure in the delivery end of said pipe, a conduit between said means and the initial pressure end of said pipe whereby said means are operative, and a self-closing valve adapted to be opened by the initial pressure for controlling the passage of initial pressure through said conduit, substantially as set forth.

4. The combination with a fluid pressure pipe, of a spring-closed main valve between the initial and delivery ends of said pipe, means controlled by both the initial and delivery pressure operatively connected with said main valve for operating it to normally maintain a certain pressure in the delivery end of said pipe, a conduit between said means and the initial pressure end of said pipe whereby said means are operative, a valve in said conduit having a spring for closing it, and means whereby a certain degree of initial pressure is operative to open said last named valve, substantially as set forth.

871,261. PRESS FOR MOLDING SUPPOSITORIES, &c. HUBERT ENDEMANN, Vienna, Austria-Hungary. Filed Apr. 22, 1907. Serial No. 369,681.



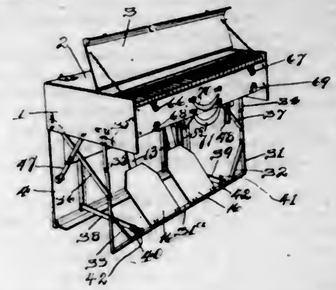
1. In a press for molding suppositories and the like, the combination with the cylinder of a disk pivoted to a point on the front end of its side or wall, and means for stopping the disk in the positions given it, the said disk, of somewhat more than twice the diameter of the cylinder, having a circular orifice of somewhat larger diameter than the bore of the cylinder, other circular orifices of smaller diameter, and a solid portion of such extent as to be adapted to cover the mouth of the cylinder, substantially as and for the purpose described.

2. In a press for molding suppositories and the like, the combination with the cylinder of a collar movably screwed to the front end of the cylinder, and a disk pivoted to the collar, the said disk, of somewhat more than twice the diameter of the cylinder, having a circular orifice of somewhat larger diameter than the bore of the cylinder, other circular orifices of smaller diameter, and a solid portion of such extent as to be adapted to cover the mouth of the cylinder, and the collar having at a point 180° distant from the pivot a grooved projection, and the edge of the disk projecting into the groove, substantially as and for the purpose described.

871,262. FOLDING REED-ORGAN. HOMO FABER, Chicago, Ill. Filed July 16, 1906. Serial No. 326,429.

1. In a folding musical instrument, a case therefor, said case comprising a cover hinged to the back thereof and a bottom piece also hinged to said back and adapted to be opened downwardly, and, when open, to extend vertically and form a support for said case, and a jointed frame forming folding supports adapted when said bottom is in closed position, to be contained within said case.

2. In a folding musical instrument, a case therefor, said case comprising a cover hinged to the back of said case, and a bottom piece also hinged to said back and adapted to be opened downwardly, and, when open, to extend vertically and form a support for said case, other folding supports comprising jointed legs adapted when said bottom is in closed position, to be contained within said case, and means adapted, when said folding supports are extended, to lock said bottom and said folding supports together, so as to prevent the folding of said folding supports.



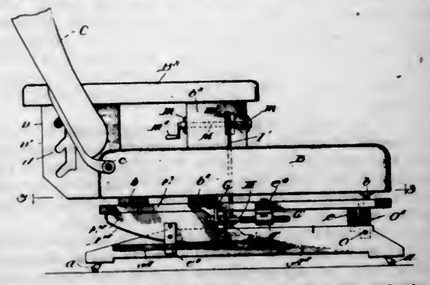
3. In a folding musical instrument, the combination of a case containing the mechanism and key-board of said instrument, said case comprising a longitudinally-divided cover hinged to the back of said case, the parts of said cover being also hinged together, and a bottom piece hinged to said back and adapted to be opened downwardly, and, when open, to extend vertically and furnish a rear support for said case, and other folding supports having the pedals of the instrument attached thereto and adapted, when said bottom is in closed position, to be contained within said case.

4. In a portable musical instrument, a case for said instrument, said case comprising a cover hingingly secured along one of its edges to the back of said case, said cover being divided longitudinally into two parts, said parts being hinged together whereby the cover as a whole may be raised or part of the cover may be closed while the other part of said cover is raised and turned back to form a music rest, and a bottom hinged along one of its edges to the back and adapted to be dropped to a vertical position, and to form, when in said vertical position, a support for said instrument, and a folding brace pivotally secured at one of its ends to the case and at its other end to said bottom.

5. In a folding organ, a case for said organ, an organ action and keys within said case, a reservoir-bellows for said action, pumping-bellows combined therewith, and spring-pressed locking means adapted to hold said reservoir-bellows in compressed position when said case is closed, said means being adapted to be released by the act of operating the pumping-bellows.

[Claims 6 to 22 not printed in the Gazette.]

871,263. RECLINING-LOUNGE. JOHN FLINDALL, Chicago, Ill. Filed May 5, 1906. Serial No. 315,270.



1. In a lounge chair, the combination of a platform, rockers beneath said platform, a screw-threaded shaft operatively connecting the seat and the platform, a crank shaft within grasp of the occupant of the lounge chair,

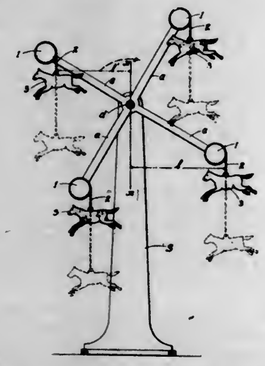
and means for connecting said crank shaft with said screw shaft for rotating the latter.

2. In a lounge chair, the combination with a base, of a platform mounted upon said base so as to rock, a seat adjustably supported upon said platform, a screw-threaded shaft operatively connecting said seat and platform, a crank shaft within grasp of the occupant of the lounge chair, and means for connecting said crank shaft with said screw shaft for rotating the latter.

3. In a lounge chair, the combination with a base, of a platform, rockers interposed between said platform and base, a seat adjustably mounted upon said platform, a screw-threaded shaft operatively connecting said seat and platform, a counter-shaft, means for rotating said screw-threaded shaft from said counter-shaft, a crank shaft, and means for rotating said countershaft from said crank shaft.

4. In a lonnge chair, a platform, rockers beneath one end of the platform, a support beneath the other end of the platform, a seat slidably mounted on said platform, a screw-threaded shaft operatively connecting said seat and platform, and means including a crank shaft within grasp of the occupant of the lounge chair for rotating said shaft to produce a relative movement between the seat and the platform.

871,264. TOY AND OTHER DEVICE. CHARLES H. FOSTER, St. Louis, Mo. Filed Feb. 2, 1907. Serial No. 355,433.



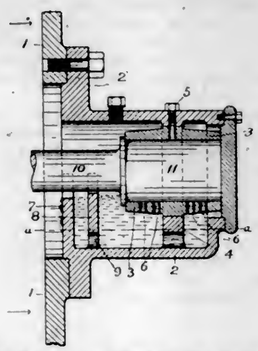
1. A toy or other device comprising a member rotatable vertically about a fixed axis, a series of weights distributed on said member at unequal lever-arm lengths from said axis whereby initial rotation is imparted to the member, and means for varying the lever-arm lengths of the several weights after such initial rotation whereby a permanent inequality in said lengths is maintained and the rotation of the member made continuous.

2. A toy or other device comprising a vertically rotatable member, a series of formations thereon disposed about the center of rotation of said member, weighted cords wound in the same direction about said formations, and adapted to unwind under the action of the weights, the member having rotation imparted thereto during such unwinding.

3. A toy or other device comprising a rotatable member, a series of spindles projecting therefrom, cords wound about said spindles in the same direction, weights at the free ends of the cords, the latter being adapted to unwind under the action of the weights, and the member having rotation imparted thereto during such unwinding.

4. A toy or other device comprising a rotatable member, a series of spindles disposed at equal radial distances thereon from the axis of rotation thereof, and cords carrying weights wound about said spindles in the same general direction, the member responding to the overbalancing action of that portion of the weights suspended from the longer lever-arms.

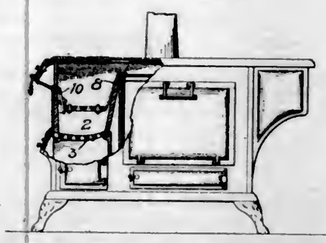
871,265. JOURNAL-BEARING. WILLIAM J. FRANCKE, Bridgeport, Conn. Filed Mar. 28, 1907. Serial No. 365,132.



1. A casing adapted to contain lubricating oil and secured in proper position adjacent to a steam chest, the lower portion of said casing having a vertical partition wall whereby the casing is divided into narrow and large compartments, the narrow compartment at its upper portion communicating with a suitable overflow outlet while said partition wall has an opening at the bottom whereby communication is established between the two compartments, and a shaft journaled within said large compartment and with the lower portion of its journal in a plane below the top of said wall.

2. In a journal bearing, the combination of a casing having inner and outer vertical walls separated by a narrow space the inner wall provided with an opening at the bottom and having a height greater than the height of the outer wall, a journal box secured within said casing and extending below the level of said outer wall and provided with oil ducts in its lower portion, and the shaft journaled within said box.

871,266. AUXILIARY GRATE FOR STOVES AND RANGES. LOUISE GERTENBACH, Dubuque, Iowa. Filed Oct. 17, 1906. Serial No. 339,367.

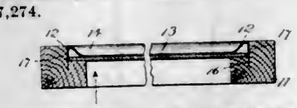


1. The combination, with a stove or range, of an auxiliary grate comprising overlapping plates 4 and 5 having longitudinal slots therein, bolts 6 and 7 passing through the slots in the overlapping ends of said plates and adjustably securing them together, rear hangers 8 adapted to rest at their upper ends upon the rear wall of the fire box and having slotted horizontal lower portions through which the bolts on one side of said plates extend, and said plates 4 and 5 having upwardly turned lugs 9 at their forward edges and slotted hangers adjustably connected with said lugs and having upper portions adapted to rest on the forward wall of the fire box whereby the said grate can be adjusted to accommodate itself to the stove in which it is placed, substantially as described.

2. The combination, with a stove or range, of an auxiliary grate comprising plates overlapping one another, and means adjustably securing them together, rear hangers

adapted to rest at their upper ends upon the rear wall of the fire box and having lower portions adjustably connected to said plates, and said plates having upwardly turned lugs at their forward edges and hangers adjustably connected with said lugs and having upper portions adapted to rest on the forward wall of the fire box, whereby the grate can be adjusted to accommodate itself to the stove in which it is placed.

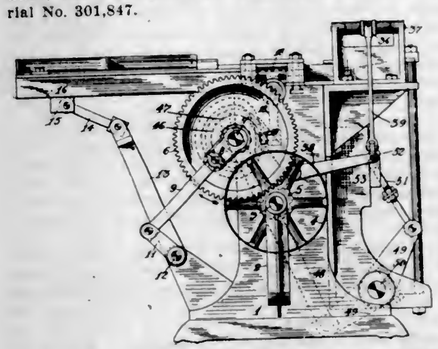
871,267. WINDOW-PANE FASTENER. JOACHIM GIARDINO, Guttenberg, N. J. Filed Apr. 9, 1907. Serial No. 367,274.



1. The combination with a frame and a pane of glass fitting the frame, of a fastener comprising a metallic strip having a straight wall or part, projecting points formed as a part of the wall and entering the wood of the frame so that the wall will be supported and rest against the wood part of the frame, and an outer and downward extending yielding part having the lower edge thereof engaging the surface of the pane of glass and holding the same rigidly in the frame.

2. The combination with a window frame having the usual bars or strips recessed to provide a straight part lengthwise of said strips and a pane of glass supported in the recessed portion of the bars or strips, of a metallic fastener comprising a metallic strip having a straight part or wall which rests against the straight part or wall of the bars or strips of the frame and having sharpened projecting points integral with the wall which enter the wood of the frame, and an outward and downward projecting integral curved yielding part having its outer edge engaging the surface of the glass to be held in the frame.

871,268. CAN-BODY-FORMING MACHINE. JAMES A. GRAY, San Francisco, Cal. Filed Feb. 19, 1906. Serial No. 301,847.



1. In a can body forming machine, means for supporting sheet-metal body blanks, oppositely placed oscillating dies, means for simultaneously oscillating said dies alternately in opposite directions against the blanks, and oppositely placed coöperating stationary dies; all of said dies having shaping faces arranged so that upon the first stroke of the oscillating dies in relatively opposite directions they form right-angled opposing bends at the edges of the blanks; while upon the following or return stroke they press the previously bent edges between themselves and the stationary dies, so as to form acute-angular oppositely bent edges.

2. In a can body forming machine, a support for sheet metal body blanks, two dies operated alternately in opposite directions, and having separate square and angular shoulders, and two stationary dies having angular surfaces all constructed and arranged so that the movable dies operating simultaneously against the exposed edges of the blank first bend the said edges to a right angle, and on the return stroke bend them to an acute angle.

3. In a can body former, a support for body blanks, stationary dies having respectively under cut and upper cut inclined surfaces, movable dies each having a square shoulder and an inclined shoulder, and means for operating the movable dies, said movable dies being so arranged relatively to the stationary dies that oppositely disposed right angular bends are simultaneously formed at both edges of the blank by the square shoulders of the movable dies, which right angular bends are changed to acute angular by the inclined shoulders of said movable dies.

4. In a can body forming machine, a support for body blanks, a shaft having cam disks, pivoted bell crank levers operated in opposite directions by said cam disks, a die carried by each of said levers and having a square shoulder and an inclined shoulder, and stationary dies having respectively upper and lower inclined faces; all constructed and arranged so that the square shoulders form opposite right angular bends in the blank at the respective up and down strokes of said dies, and the angular shoulders change such bends to acute angular upon the return stroke.

5. In a can body forming machine, a mandrel or horn having a hinged section, folding wings, blank feeding means and a seam closer carrying one or more projecting arms; said seam closer being adapted to bear upon the adjacent edge hooks of the can body upon the horn before said projecting arms expand said horn and interlock said hooks, and then to close the seam.

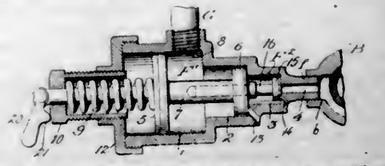
871,269. TURN-BUTTON. JOHN A. GREGG, Burlington, Iowa. Filed Dec. 10, 1906. Serial No. 347,192.



1. A turn button comprising a horizontal arm, a depending vertical arm, said arms being formed with an opening at the intersection of lines passed longitudinally through the center of each arm, a single inwardly projecting lug extending from the inner surface of said opening to lie in alinement with said vertical arm, and a screw to secure said button in position, said screw being of less diameter than said opening and being normally engaged at its highest point by said lug.

2. A turn button comprising a horizontal arm and a depending vertical arm arranged at right angles to the horizontal arm and central of the length thereof, said arms being formed with an opening at a point at the intersection of lines passed through the center of each arm.

871,270. PRESSURE-RETAINING AND QUICK-RELEASE VALVE FOR AIR-BRAKES. MARTIN GRIFFIN, St. Marys, Pa., assignor of one-third to A. M. Lane, St. Marys, Pa., and one-third to J. H. Weaver, Philadelphia, Pa. Filed Apr. 3, 1906. Serial No. 309,691.



1. In an automatic air-brake system, the combination with the train-pipe, auxiliary reservoir, brake-cylinder, and triple valve, of means maintaining an exhaust from the triple valve to the atmosphere during running operation of the triple valve or during an absence of braking-pressure in the brake-cylinder, means automatically operative below a predetermined abnormal train-line pres-

sure for stopping said exhaust and maintaining pressure in the brake-cylinder upon a release operation of the triple valve occurring after admission of pressure to the brake-cylinder, and means operative at or above said predetermined train-line pressure for releasing said pressure from the brake-cylinder.

2. In an automatic air-brake system, the combination with the train-pipe, auxiliary reservoir, brake-cylinder, and triple valve, of a retaining valve controlling the exhaust and automatically operative to close or stop the same upon a release operation of the triple valve occurring after admission of pressure to the brake-cylinder, means operative by an abnormal or excessive train-line pressure for releasing said valve or opening said exhaust, and means operative independent of train-line pressure for maintaining an open exhaust during running operation of the triple valve or in the absence of braking pressure in the brake-cylinder.

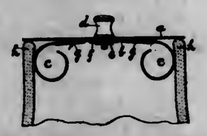
3. In an automatic air-brake system, the combination with the train-pipe, auxiliary reservoir, brake-cylinder, and triple valve, of an automatic pressure-retainer having a chamber provided with an inlet-port, a release-port, and a leakage-port, said inlet-port being in communication with the exhaust from the brake-cylinder, a valve normally closing said release-port and operative to open the same only at an abnormal train-line pressure, and a supplementary valve controlling said leakage-port and adapted to close the same only upon a release operation of the triple valve occurring after charging the brake-cylinder.

4. In an automatic air-brake system, the combination with the train-pipe, auxiliary reservoir, brake-cylinder, and triple valve, of an automatic pressure-retainer having a chamber provided with an inlet-port, a release-port, and a leakage-port, said inlet-port being in communication with the exhaust from the brake-cylinder, a valve normally closing said release-port and operative to open the same only at an abnormal train-line pressure, and a supplementary controlling valve for said leakage-port operated to open said port by leakage exhaust while the brake-cylinder is uncharged and operated to close said port by exhaust from the brake-cylinder when charged.

5. A pressure-retaining and release device, comprising a valve-casing having a chamber arranged for communication with the exhaust port of a triple valve, said chamber being provided with an exhaust or release-port and a relatively smaller leakage-port, a retaining valve for said release-port normally closing the same and operative to open said port at a predetermined train-line pressure, and a valve for said leakage-port normally permitting an escape therethrough but operative to close the same when pressure is retained by said retaining valve.

[Claims 6 to 15 not printed in the Gazette.]

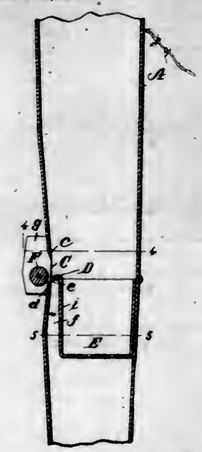
871,271. COVER FOR JUGS, TEAPOTS, AND LIKE VESSELS. SILAS HALL, Morecambe, England. Filed May 11, 1907. Serial No. 373,100.



1. The combination, with a flat cover plate having a central hole, of a spring retaining-plate having longitudinal guide and stiffening ribs at its middle part, a nut arranged between the said ribs so that it cannot be revolved, and a thumbscrew which passes through the said hole and engages with the said nut.

2. The combination, with a cover plate, of a fastening plate provided with longitudinal guide and stiffening ribs at its middle part and having spring scrolls at its ends for engaging with the vessel, a nut engaging with the said ribs, and a screw which engages with the said nut and secures the two said plates together.

871,272. ORGAN-PIPE. WILLIAM E. HASKELL, Brattleboro, Vt., assignor to Estey Organ Company, Brattleboro, Vt., a Corporation of Vermont. Filed June 24, 1905. Serial No. 266,838.



1. A metallic organ pipe open at its top and having a mouth and characterized by having a body the diameter of which at the top is smaller than the major diameter in the plane of the mouth, and the diameter of which at the middle is larger than said major diameter at its mouth.

2. A metallic organ pipe having a mouth and characterized by having its top approximately one-fifth smaller in diameter than it is at the major diameter in the plane of the mouth, by having its middle approximately one-fifth larger in diameter than it is at said major diameter at its mouth, and by diverging gradually from the mouth to the middle and by converging gradually from the middle to the top.

3. A metallic organ pipe characterized by having its upper and lower lips beveled at their outer faces to a sharp edge, having a languid beveled at its front to a sharp edge, the bottom of said languid being at substantially the level of the top of the lower lip, and said pipe having a draft bridge in front of the lower portion of the mouth.

4. A metallic organ pipe characterized by having a mouth the width of which is approximately one-fifth the circumference of the pipe at the mouth, and the height of which is approximately two-sevenths of its width, and a draft bridge in front of the lower portion of the mouth whose diameter is substantially four-fifths the height of the mouth.

5. A metallic organ pipe having a windway, a mouth, and a metallic cup open at its top, closed at its bottom, and fitting closely within the pipe, said cup constituting the bottom of the pipe and having its open top at said mouth, a throat being left between the front of the cup and the front of the pipe for the passage of wind to the windway.

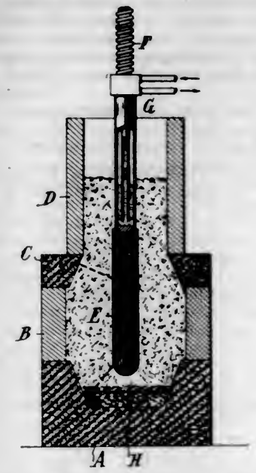
[Claim 6 not printed in the Gazette.]

871,273. ELECTRIC FURNACE AND METHOD. PAUL L. T. HÉROULT, La Praz, France, assignor to Societe Electro-Metallurgique Francaise, Froges, Isère, France. Filed May 3, 1907. Serial No. 371,692.

1. An electric furnace having a pair of electrodes, a conductor adapted to form part of the path of the current between said electrodes, and means for shifting said conductor to vary the length of the part of the path formed thereby.

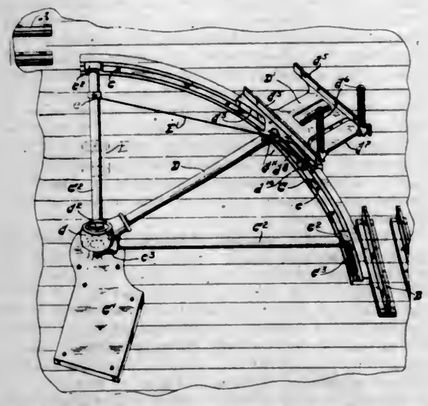
2. An electric furnace having a pair of fixed electrodes, and a false electrode adapted to form part of the path of the current through the charge, and adjustable to vary the length of such part.

3. An electric furnace having a base of conducting material, a feeding shaft, a ring electrode at the base of said shaft, and a false electrode passing through said shaft and the charge to form part of the path of the current from the ring electrode to the base, and adjustable to vary the length of said part.



4. Means for regulating the operation of an electric furnace consisting of a false or dummy electrode without electrical connections adapted to form part of the path of the current between the electrodes of the furnace, and to be shifted so as to vary the length of such part.

871,274. KEG-HANDLING MECHANISM. ADOLPH G. HUPPEL, New York, N. Y. Filed Aug. 3, 1906. Serial No. 329,011.



1. Keg-handling mechanism, comprising a track disposed on the arc of a circle; and a member movably mounted upon said track and adapted to receive a keg at one end and transfer the same to the other end of said track.

2. Keg-handling mechanism, comprising a track disposed on the arc of a circle; an arm pivotally mounted at one end at the center of such circle; and a rack mounted upon the free end of such arm and movable upon said track, said rack being adapted to receive and transfer a keg.

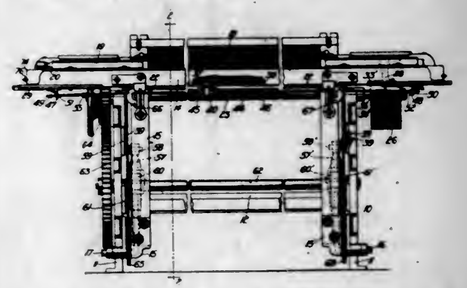
3. Keg-handling mechanism, comprising an inclined track disposed on the arc of a circle; and a member movably mounted upon said track and adapted to receive a keg at one end and transfer the same to the other end of said track.

4. Keg-handling mechanism, comprising an inclined track disposed on the arc of a circle; an arm pivotally mounted at one end at the center of such circle; and a rack mounted upon the free end of such arm and movable upon said track, said rack being adapted to receive and transfer a keg.

5. Keg-handling mechanism, comprising an inclined track disposed on the arc of a circle; a member movably mounted upon said track and adapted to receive a keg at one end and transfer the same to the other end of said track; and means normally positioning said member at the highest portion of said track.

[Claims 6 to 19 not printed in the Gazette.]

871,275. PICKER MECHANISM FOR LOOMS. RICHMOND H. INGERSOLL, Biddeford, Me. Filed May 17, 1907. Serial No. 374,259.



1. In a loom, a lay, two picker slides adapted to slide in ways on opposite sides of said lay, a shuttle arranged to slide in a raceway on said lay between said picker slides, a member movable longitudinally of said lay, springs connecting said member to said picker slides, and locks adapted to alternately lock and release said picker slides.

2. In a loom, a lay, two picker slides adapted to slide in ways on opposite sides of said lay, a shuttle arranged to slide in a raceway on said lay between said picker slides, a member movable longitudinally of said lay, springs connecting said member to said picker slides, mechanism adapted to impart a reciprocatory motion to said member, and locks adapted to alternately lock and release said picker slides.

3. In a loom, a lay, two picker slides adapted to slide in ways on opposite sides of said lay, a shuttle arranged to slide in a raceway on said lay between said picker slides, a member movable longitudinally of said lay, springs connecting said member to said picker slides, mechanism adapted to impart a reciprocatory motion to said member, locks adapted to lock said picker slides against the action of their respective springs, and means actuated by said member to operate said locks alternately to release said picker slides.

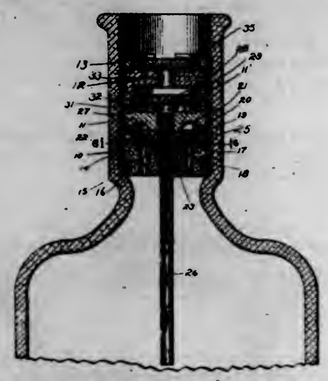
4. In a loom, a lay, two picker slides adapted to slide in ways on opposite sides of said lay, a shuttle arranged to slide in a raceway on said lay between said picker slides, a member movable longitudinally of said lay, springs connecting said member to said picker slides, mechanism adapted to impart a reciprocatory motion to said member, locks adapted to lock said picker slides against the action of their respective springs, and a rod engaging said locks at its opposite ends moved by said member alternately in opposite directions to operate said locks alternately to release said picker slides.

5. In a loom, a lay, pivots therefor, means to rock said lay, two picker slides adapted to slide in ways on said lay, locks to prevent said slides from moving, mechanism adapted to trip said locks and allow said slides to be moved, a belt supported upon said lay a portion of said belt extending longitudinally of said lay, mechanism to impart a reciprocatory motion to said belt, springs fast to said picker

slides and means for connecting said springs to said belt, whereby said slides are moved by said springs alternately in opposite directions.

[Claims 6 to 8 not printed in the Gazette.]

871,276. NON-REFILLABLE BOTTLE. ALEXANDER JAMESON, Indianapolis, Ind., assignor to Las Noble, trustee, Indianapolis, Ind. Filed Jan. 14, 1907. Serial No. 352,221.



1. A device of the class described, comprising a plurality of separable members having intermediate connections permitting common rotation, a liquid valve arranged between two of said members, an air valve arranged between two of said members, and an outer member provided with means by which it may be turned in one direction only.

2. A device of the class described, comprising an inner member 10 having liquid passages therethrough, and a valve seat at its upper end, a member 11 arranged in the line of member 10 and having a valve chamber, a valve cone 21, a valve adapted to seat upon the upper end of the member 10 and having a central opening receiving the valve cone, whereby the valve will slide upon the cone toward its seat, the said several members having an air vent passage therethrough, an air valve closing the outer end of said air passage, and means for protecting said air valve against manipulation from the exterior.

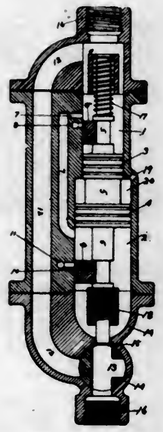
3. A device of the class described, comprising an inner member 10 having liquid passages therethrough, and a valve seat at its upper end, a member 11 arranged in the line of member 10 and having a valve chamber, a valve cone 21 entering the member 10 with a non-circular portion, a valve adapted to seat upon the upper end of the member 10 and having a central opening receiving the valve cone, whereby the valve will slide upon the cone toward its seat, the said several members having an air vent passage therethrough, an air valve closing the outer end of said air passage, and means for protecting said air valve against manipulation from the exterior.

4. A device of the class described, comprising an inner member 10 having liquid passages therethrough, and a valve seat at its upper end, a member 11 arranged in the line of member 10 and having a valve chamber, a valve cone 21 entering the member 10 with a non-circular portion, a valve adapted to seat upon the upper end of the member 10 and having a central opening receiving the valve cone, whereby the valve will slide upon the cone toward its seat, the said several members having an air vent passage therethrough, an air valve closing the outer end of said air passage, a member 12 arranged at the outer end of member 11 and having an air valve chamber within which the air valve plays, and means whereby said member 12 may be turned in one direction only.

5. A device of the class described, comprising an inner member 10 having liquid passages therethrough, and a valve seat at its upper end, a member 11 arranged in the line of member 10 and having a valve chamber, a valve cone 21 entering the member 10 with a non-circular portion, a valve adapted to seat upon the upper end of the member 10 and having a central opening receiving the valve cone, whereby the valve will slide upon the cone toward its seat, the said several members having an air vent passage therethrough, an air valve closing the outer end of said air passage, a member 12 arranged at the outer end of member 11 and having an air valve chamber within which the air valve plays, a cap member 13 provided with means by which it may be turned in one direction only, and a pair of oppositely extending fingers adapted to pass between adjacent ends of and beneath screw threads formed in the bottle neck.

[Claim 6 not printed in the Gazette.]

871,277. PRESSURE-REDUCING VALVE. ANDREW T. JOHNSON, Tonopah, Nev. Filed Mar. 6, 1907. Serial No. 360,997.



1. An automatic pressure-reducing valve, comprising a casing consisting of two cylinders of unequal diameters so situated with reference to each other that their centers form a continuous straight line and having ports and connections for the admission and escape of expansive medium, a duct or passage for said expansive medium leading from said small cylinder to said large cylinder, a slide valve situated in said small cylinder operating so as to open and close said duct or passage, and movable means situated in said small and large cylinders and forming an air-tight partition between them automatically operated by varying and resulting pressures on opposite sides thereof and connected with said slide valve to control the movements thereof.

2. An automatic pressure-reducing valve, comprising a casing consisting of two cylinders of unequal diameters so situated with reference to each other that their centers form a continuous straight line and having port and connection at each end for the admission and escape of expansive medium, a movable means situated in said cylinders and serving as an air-tight partition between them and operated by the varying and resulting pressures against the opposite sides of said movable means or partition, a duct or means of communication between said cylinders opening on opposite sides of said movable means or partition for the passage of expansive medium into said large cylinder, and a slide valve situated in said small cylinder, the same being connected to said movable means and operated thereby so as to open and close said duct or means of communication.

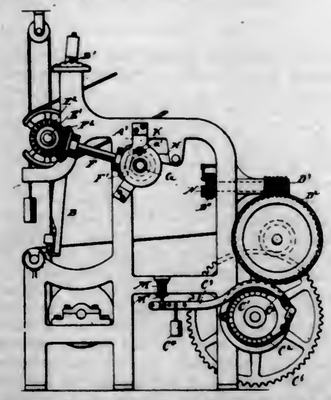
3. An automatic pressure-reducing valve, comprising a casing consisting of two cylinders of unequal diameters so situated with reference to each other that their centers form a continuous straight line and having port and connection for the admission and escape of expansive medium at each end, a movable means serving as an air-tight partition between said cylinders said movable means consisting of two pistons of unequal diameters and a piston rod, each piston being immovably mounted upon said rod and reciprocating air-tight in the cylinder of like size, a duct or means of communication between said cylinders opening on opposite sides of said movable means for the passage of expansive medium into said large cylinder, and a slide valve situated in said small cylinder, the same being connected with said piston rod and operated by the varying and resulting pressures against the opposite sides of said pistons so as to open and close said duct or means of communication.

4. An automatic pressure-reducing valve, situated in the crossover pipe of a train-line, comprising a casing consisting of two cylinders of unequal diameters so situated with reference to each other that their centers form a continuous straight line and having port and connection for admission and escape of compressed air at each end said smaller cylinder being situated next to the train line, a movable means reciprocating in said cylinders and serving as an air-tight partition between them, said movable means consisting of pistons of unequal diameters and a piston rod, each piston being immovably mounted upon said rod and operating air-tight in the cylinder of like size, a duct or means of communication between said cylinders opening on opposite sides of said movable means for the passage of compressed aid into said large cylinder, and a slide valve situated in said small cylinder, the same being joined to said piston rod and operated by the varying and resulting pressures against the opposite sides of said pistons so as to open and close said duct or means of communication.

5. An automatic pressure-reducing valve, comprising a casing consisting of two cylinders of unequal diameters, so situated with reference to each other that their centers form a continuous straight line and having port and connection at each end for the admission and escape of expansive medium, a duct or passage for expansive medium leading from said small cylinder to said large cylinder, a slide valve operating in said small cylinder so as to open and close said duct or passage, an exhaust port leading from said large cylinder to atmosphere, a slide valve situated in said large cylinder and operating so as to open and close said exhaust port, and movable means reciprocating in said cylinders and forming an air-tight partition between them, said movable means being automatically operated by different pressures on opposite sides thereof and connected with said slide valves and controlling the movements thereof.

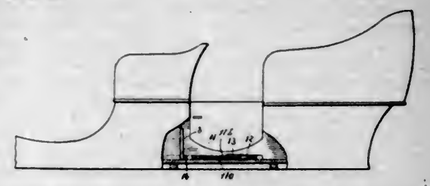
[Claims 6 to 14 not printed in the Gazette.]

871,278. BRAKE MECHANISM FOR LOOM WARP-BEAMS. FRANK JOHNSON, New York, N. Y. Filed Feb. 26, 1907. Serial No. 359,357.



In a loom of the character set forth, a warp-beam, a brake thereon, an electrically actuated releasing-means for said brake, an electric circuit in which said releasing-means is located, and a controller operated by a moving portion of the loom for making and breaking said circuit.

871,279. FOOT-REST FOR VEHICLES. WILLIAM H. KEYES, Chicago, Ill. Filed Sept. 14, 1906. Serial No. 334,639.

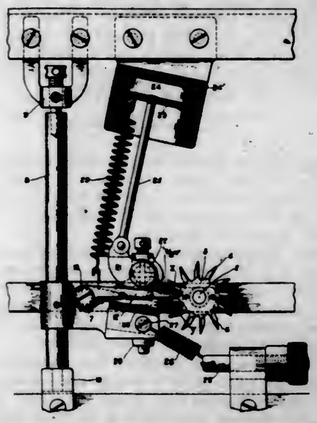


1. A foot-rest consisting of a rectangular frame, a plurality of adjustable members mounted on said frame and arranged in parallel series, each series composed of a front board hinged on the frame, and complementary boards hingedly connected with each other and with the front board, and means on said frame for holding the rear board of each series in its adjusted position.

2. A foot-rest consisting of a rectangular frame, a plurality of adjustable members mounted on said frame and arranged in parallel series, each series composed of a front board hinged on the frame, and complementary boards hingedly connected with each other and with the front board, means on said frame for holding the rear board of each series in its adjusted position, and means for locking two of said boards in a common plane.

3. A foot-rest consisting of a rectangular frame, a fixed vertical member secured to said frame, a plurality of adjustable members mounted on said frame and arranged in independent parallel series, each series composed of a front board hinged on the frame and complementary boards hingedly connected with each other and with the front board, means for locking said members on said vertical board, and means on said frame for holding said members in their adjusted position.

871,280. CARRIAGE ESCAPEMENT MECHANISM. WELLINGTON P. KIDDER, Boston, Mass., assignor to Parker Machine Company, Buffalo, N. Y., a Corporation of New York. Filed June 24, 1905. Serial No. 266,813.



1. In a typewriting machine, the combination with a power driven carriage, of a rack carried thereby, a shaft carrying a feed pinion and an escapement wheel, the former of which meshes with said rack, escapement mechanism comprising a fixed and a movable dog coöperating

with said escapement wheel to afford a feed of the carriage, and a member resting in contact with the movable dog adapted yieldingly to oppose the movement thereof when the same is thrown into engagement with the escapement wheel.

2. In a typewriting machine, the combination with a power driven carriage provided with the usual feed rack, of a shaft carrying a feed pinion and an escapement wheel, the former of which meshes with said rack, a rocker member carrying the escapement mechanism comprising a fixed and a movable dog adapted to coöperate with the escapement wheel to afford a feed of the carriage, and a member held in contact with the movable dog adapted yieldingly to resist the movement thereof when the same is thrown into engagement with the escapement wheel, said member being also adapted to arrest the movable dog without impact or concussion at the end of its movement.

3. In a typewriting machine, the combination with a power driven carriage provided with the usual feed rack, of a shaft carrying a feed pinion and an escapement wheel, the former of which meshes with said rack, a rocker member, escapement mechanism comprising a fixed and a movable dog mounted on said rocker member, said escapement mechanism coöperating with the escapement wheel to afford a feed of the carriage, and a cam member held in contact with the movable dog adapted yieldingly to resist the movement of the movable dog when the same is thrown into engagement with the escapement wheel and to arrest the same without impact or concussion at the end of a letter spacing movement.

4. In a typewriting machine, the combination with a power driven carriage having the usual feed rack, of a shaft carrying a feed pinion and an escapement wheel, the feed pinion being in mesh with the rack, escapement mechanism comprising a fixed dog and a swinging dog which coöperate with the escapement wheel to afford a feed of the carriage, a rocker member carrying said feed dogs, and a wiper cam engaging the movable dog adapted to yieldingly oppose the movement thereof when the same is swung into engagement with the escapement wheel and also adapted to arrest the movement of said dog at the end of a letter spacing movement of the carriage.

5. In a typewriting machine, the combination with a power driven carriage, of a rack carried thereby, a shaft carrying a feed pinion and an escapement wheel, the feed pinion being in mesh with the rack, escapement mechanism comprising a fixed dog and a swinging dog adapted to coöperate with the escapement wheel to afford a feed of the carriage, a rocker member carrying said feed dogs, a wiper cam pivotally mounted upon said rocker member and held in impositive engagement with the movable dog, said cam being adapted yieldingly to resist the movement of the movable dog when the same is swung into engagement with the escapement wheel, a dashpot, and a connection between said cam and the piston of said dashpot.

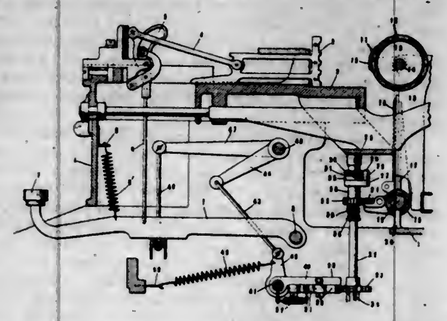
[Claim 6 not printed in the Gazette.]

871,281. TYPE-WRITING MACHINE. WELLINGTON P. KIDDER, Boston, Mass., and CHARLES W. SPONSEL, Hartford, Conn., assignors to Parker Machine Company, Buffalo, N. Y., a Corporation of New York. Filed Oct. 20, 1906. Serial No. 339,799.

1. In a typewriting machine, the combination with the carriage of a rack carried thereby, a feed-pinion meshing with said rack, a shaft detachably connected with said pinion, and means for automatically effecting a disconnection between said pinion and said shaft while the carriage is being returned to initial position.

2. In a typewriting machine, the combination with the carriage and its rack of a feed-pinion meshing with said rack, a shaft carrying said pinion, pawl and ratchet mechanism for effecting a connection between said pinion and said shaft, and means for automatically rendering said pawl and ratchet mechanism inoperative while the carriage is being returned to its line-commencing position.

3. In a typewriting machine, the combination with the carriage and its rack of a feed-pinion meshing with said rack, a shaft carrying said pinion, a pawl and a ratchet wheel which constitute a connecting means between said feed-pinion and said shaft, and means for effecting a disconnection between said pawl and said ratchet wheel during the return of the carriage towards initial position.

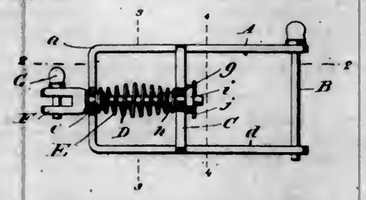


4. In a typewriting machine, the combination with the carriage and its rack of a feed-pinion meshing with said rack, a shaft for said pinion, a pawl and a ratchet wheel which normally co-act to effect a connection between said shaft and said pinion, and means for automatically effecting a disconnection between said pawl and said ratchet wheel during the return of the carriage towards initial position.

5. In a typewriting machine, the combination with the carriage and its feed rack of a feed-pinion meshing with said feed rack, a shaft upon which said pinion is mounted, a pawl and ratchet mechanism which connects said pinion with said shaft, and means for carrying the operative elements of said pawl and ratchet mechanism out of engagement with each other during the return of the carriage to initial position.

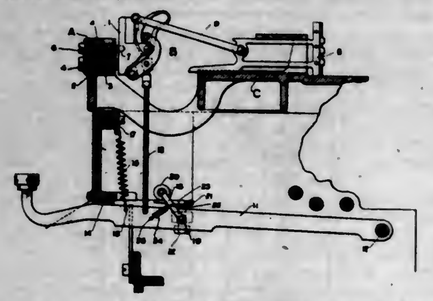
[Claims 6 to 45 not printed in the Gazette.]

871,282. SPRING DRAFT ATTACHMENT. RICHARD G. KRUEGER, Cresco, Iowa. Filed June 26, 1907. Serial No. 380,900.



The herein described spring draft attachment comprising a U-shaped body having a longitudinal-central aperture in its cross-bar, and a circular collar surrounding said aperture at the inner side of the cross-bar and also having alined apertures in its longitudinal bars adjacent to the free ends thereof, a pin removably arranged in the latter apertures of the body, a cross-head having recesses in its ends receiving the longitudinal bars of the body and also having a longitudinal-central aperture, and a circular collar on its side adjacent to the cross-bar of the body, surrounding said aperture, a draft bar, of circular form in cross-section, arranged to be moved endwise and turned on its axis in the apertures in the cross-bar and cross-head and having a bifurcated and apertured head at its outer end, a pin removably arranged in said apertures of the head, a collar secured on the draft bar at the inner side of the cross-head, and a coiled spring surrounding the draft bar and interposed between the cross-bar of the body and the cross-head and having its end coils loosely surrounding the circular collars on said cross-bar and cross-head.

871,283. TYPE-WRITER. WILLIAM A. LORENZ, Hartford, Conn., assignor to Parker Machine Company, Buffalo, N. Y., a Corporation of New York. Filed Sept. 11, 1905. Serial No. 277,915.



1. In a typewriting machine, in combination, a platen, a bracket adapted to carry the printing devices, a shank upon said bracket and extending into the frame of the machine, means for adjusting said bracket with respect to the platen, and means operating upon said shank to fasten said bracket in position after adjustment.

2. In a typewriting machine, in combination, a platen, a bracket adapted to carry the printing devices, a shank upon said bracket and extending into the frame of the machine, means for adjusting said bracket with respect to the platen, and screw threaded means operating upon said shank to fasten said bracket in position after adjustment.

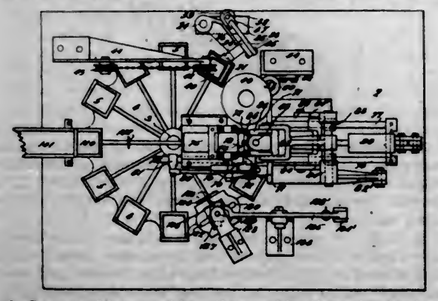
3. In a typewriting machine, in combination, a platen, a bracket adapted to carry the printing devices, a shank upon said bracket extending into the frame of the machine, screw threaded means operating in the frame of the machine for adjusting said bracket with respect to the platen, and a clamping screw operating upon said shank to fasten said bracket in position after adjustment.

4. In a typewriting machine, in combination, a platen, a bracket adapted to carry the printing devices, said bracket being provided with a shank extending into the frame of the machine and engaging said bracket to adjust the same with respect to the platen, and means operating in said shank adapted to clamp said bracket against such adjusting means.

5. In a typewriting machine, in combination, a platen, a bracket adapted to carry the type actuating devices, said bracket being provided with a shank extending into the frame of the machine, screw threaded means extending through the frame of the machine and engaging said bracket to adjust the same with respect to the platen, and means for clamping said bracket against said screw threaded adjusting means.

[Claims 6 to 23 not printed in the Gazette.]

871,284. PACKING-MACHINE. EDWARD C. LOVELL, Bristol, Eng. Filed Aug. 29, 1906. Serial No. 332,425.



1. In a packing machine, the combination of a horizontally disposed rotatable wheel provided with a series of bag pockets, means for intermittently rotating the wheel, means for placing bags in the pockets of the wheel, means for filling the bags in the pockets, means for shaking the bags during the filling thereof, means for pressing down the contents of the bags, means for effecting the first folding operation of the bags, gumming means carried by said folding means, means for preventing distortion of the sides of the bag opposite that being folded during such folding, folding and pressing means for completing the folding and closing of the bag, means for removing the filled bag from the pocket wheel, and means for discharging the bag from the machine.

2. In a packing machine, the combination with a table, of a wheel rotatably mounted upon the table and provided with a series of open ended pockets for receiving bags to be filled, means for filling the bags, means for rotating the wheel step by step for bringing the pockets serially adjacent to the filling means, said table adjacent to the filling means being provided with an opening, a support in said opening for the bag being filled, and means for vibrating said support during the filling operation.

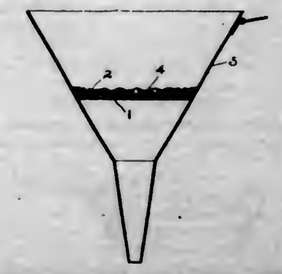
3. In a packing machine, the combination with a table, of a wheel rotatably mounted upon the table and provided with a series of open ended pockets for receiving bags to be filled, means for filling the bags, means for rotating the wheel step by step for bringing the pockets serially adjacent to the filling means, said table adjacent to the filling means being provided with an opening, a support in said opening for the bag being filled, and means for vibrating said support during the filling operation, and comprising a support, a lever connected to said support, and a toothed disk engaging said lever.

4. In a packing machine, the combination with bag holding means, of bag filling means, and means for closing the bags and comprising a flaring support for the sides of the portion of the bag to be folded, a reciprocatory shoe for engaging one side of the bag and effecting the first fold, means for reciprocating the shoe, means for tipping the shoe for pressing down the fold effected thereby, a reciprocatory shoe for effecting a second fold, means for reciprocating said shoe, means for tipping the shoe for pressing down the second fold, and means for pressing down the sides after the second fold.

5. In a packing machine, the combination with bag holding means, of bag filling means, and means for closing the bags and comprising a flaring support for the sides of the portion of the bag to be folded, a reciprocatory shoe for engaging one side of the bag and effecting the first fold, means for reciprocating the shoe, means for tipping the shoe for pressing down the fold effected thereby, a reciprocatory shoe for effecting a second fold, means for reciprocating said shoe, means for tipping the shoe for pressing down the second fold, means for pressing down the sides after the second fold and comprising a pair of pivoted plates, springs for normally spreading these plates apart, means for reciprocating the plates, and means for swinging the plates toward each other.

[Claims 6 to 10 not printed in the Gazette.]

871,285. FILTER. THOMAS C. MARTIN, Cleveland, Ohio. Filed Feb. 14, 1907. Serial No. 357,406.



1. A filter, comprising an annular frame, filtering material permanently secured to said frame to form a space

between the said frame and said filtering material from which space liquid to be filtered may pass through said material.

2. A filter, comprising an annular frame, flexible filtering material attached to said frame at intervals thereabout to permit filtration between said points of attachment, and extending beyond the outer periphery thereof to form an annular flap.

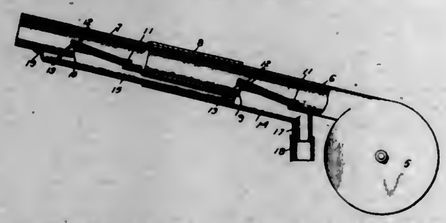
3. A filter, comprising a pliable ring, flexible filtering material secured to said ring, said material extending over the space bounded by said ring, and beyond the outer periphery of said ring to form an annular flap.

4. A filter, comprising a ring, flexible filtering material permanently secured to said ring at intervals around the same, said material extending over the space bounded by said ring, and beyond the outer periphery of said ring to form an annular flap.

5. A filter, comprising a flat pliable metal ring having integral attaching spurs located at intervals therearound, flexible filtering materials secured to said ring by means of said spurs, said material extending over the space bounded by said ring, and beyond the outer periphery of said ring to form an annular flap.

[Claims 6 to 10 not printed in the Gazette.]

871,286. GRAIN-SAVING DEVICE FOR PNEUMATIC STACKERS. JOSEPH W. MATOUSEK, Dresden, Kans. Filed Jan. 9, 1907. Serial No. 351,517.



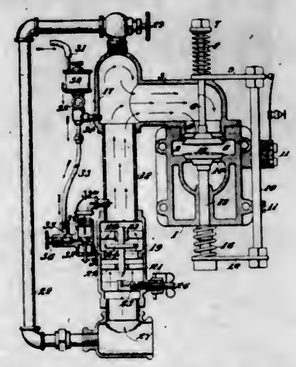
A pneumatic stacker comprising a blower, a stacker tube leading from the blower and comprised of a pair of stacker tube sections, one of the said sections being fixed with respect to the blower, the other section being telescopically engaged over the outer end of the said fixed section, a trough section secured at its upper edges to opposite sides of the fixed section and thereby positioned beneath the said section, the forward portion of the said trough section being spaced at its upper edges with respect to the fixed stacker tube section to which it is secured, a trough section secured throughout the entire length of its upper edges to the movable stacker tube section and thereby positioned beneath the same, the trough section upon the fixed stacker tube section being open at its forward end, a spout leading from the said trough section at its rear end, the forward end of the trough section upon the movable stacker tube section being closed and the said trough section being telescopically received in the trough section upon the fixed stacker tube section, the two tube sections being provided each with an opening, and fingers secured at their ends within the tube adjacent the rear edges of the corresponding openings, said fingers being extended forwardly in an inclined plane above the said respective openings and having their forward ends turned downwardly.

871,287. FRYING-PAN. HENRY L. MENDAL, Cincinnati, Ohio. Filed July 1, 1907. Serial No. 381,704.



In a covered frying pan a body part provided with a projecting flange and adapted to fit into the fire box of the stove, a rim projecting upwardly from said flange, apertures in the rim, and other apertures in the body portion opening into the fire box, the apertures in the rim and body being placed opposite to each other as for the purposes set forth.

871,288. GAS-SATURATING DEVICE. JOHN B. MERWIN, St. Louis, Mo. Filed Feb. 18, 1907. Serial No. 357,968.



1. An apparatus of the character described comprising a chamber, an air and gas inlet passage opening into said chamber, means for admitting water into said passage to saturate the gas, a chamber in which the water and gas are mixed and means for admitting air into the said last-named chamber, substantially as specified.

2. An apparatus of the character described comprising a passageway, an enlarged chamber located on said passageway, means for admitting water into said passageway, an enlarged chamber located on said passageway, and a valve controlled delivery chamber beyond the said enlarged chamber, substantially as specified.

3. An apparatus of the character described comprising a pipe, means for admitting gas into said pipe, a baffle plate in said pipe, means for admitting water into said pipe, an enlarged chamber located on said passageway, and a valve controlled delivery chamber beyond the said enlarged chamber, substantially as specified.

4. An apparatus of the character described, comprising a passageway, means for admitting gas and water into said passageway, an enlarged chamber located on said passageway a delivery chamber having inelt and outlet passages, a valve controlling each of said passages, and a single controlling device for operating all of said valves, substantially as specified.

871,289. DISPLAY-SIGN. JOSEPH MOSES, Toronto, Ontario, Canada. Filed Dec. 24, 1906. Serial No. 349,304.



1. A display sign, comprising a strip of material having characters formed on one side and extending beyond the edges thereof and stencil cuttings through the central portion thereof delineating reverse characters, substantially as described.

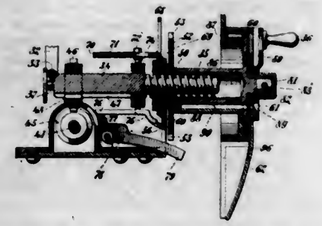
2. A display sign, comprising a backing or base of suitable light material and having characters formed on one side thereof extending beyond the edges thereof and stencil cuttings therethrough delineating characters reading in a reverse manner to the aforesaid characters, substantially as described.

3. A display sign, comprising a backing or base forming a dark back ground and having characters of a light color extending thereacross and beyond the edges thereof and stencil cuttings therethrough delineating characters arranged to read in a reverse manner to the aforesaid characters, as and for the purpose specified.

4. A display sign, comprising a backing or base of dark color on one side and light color on the other having means extending therefrom for securing said backing in position, and characters of a light color extending across and beyond the edges of said dark back ground, said backing having stencil cuttings therethrough delineating characters reading correctly in a forward manner from the light colored side thereof, substantially as described.

5. A display sign, comprising a backing or base of dark color on one side and light color on the other having an inwardly extending end for securing said sign in position, and reinforcing braces forming part with said backing and suitably secured at the inner ends, and light colored characters extending across and beyond the edges of said backing, the upper and lower portions forming part therewith, said characters reading correctly forward, said backing having stencil cuttings therethrough delineating characters reading correctly forward from the light colored side of said base and contrasting therewith, substantially as described.

871,290. PREPAYMENT GAS-METER. NILS D. NELSON, New York, N. Y. Filed July 27, 1906. Serial No. 327,990.



1. A meter, a valve for controlling the flow of gas through the same, a connected worm (35) and stem (34) adapted to have a longitudinal movement and to control the position of said valve, and said stem having a longitudinal groove 47, a gear-wheel 46 mounted on said stem and having a key 48 in said groove, a worm 45 in mesh with said gear wheel, mechanism operable by the passage of gas from the meter and connected with said worm 45 for rotating the same and said gear-wheel and connected worm and stem, a nut 50 engaging said worm 35 for compelling it and its stem 34 to travel longitudinally toward their initial position when they are thus rotated, means for holding said nut stationary while said connected worm and stem are traveling toward their initial position, and means for manually rotating said nut and thereby compelling the same to effect the direct reverse travel of said connected stem and worm without rotation for opening said valve; substantially as set forth.

2. A meter, a valve for controlling the flow of gas through the same, a connected worm and stem adapted to have a longitudinal movement and to control by its position the position of said valve, mechanism operable by the passage of gas from the meter and engaging said stem for rotating said stem and worm, a nut engaging said worm for compelling said stem and worm to travel longitudinally toward their initial position when they are thus rotated, means for manually rotating said nut and thereby compelling the same to effect the direct reverse travel of said stem and worm without rotation for opening said valve, and means actuated by the travel of said stem for locking said nut against rotation when the mechanism has been actuated to its predetermined capacity; substantially as set forth.

3. A meter, a valve for controlling the flow of gas through the same, a connected worm and stem adapted to have a longitudinal movement and to control by its position the position of said valve, mechanism operable by the passage of gas from the meter and engaging said stem for rotating said stem and worm, a nut engaging said worm for compelling said stem and worm to travel longitudinally toward their initial position when they are thus rotated, means for manually rotating said nut and thereby compelling the same to effect the direct reverse travel of said stem and worm without rotation for opening said valve, an index on which the gas purchased is indicated, a hand for said index, a cam-plate connected with said hand for moving the same, and a pin carried by said stem in engagement with said cam for acting on the latter during the travel of said stem; substantially as set forth.

4. A meter, a valve for controlling the flow of gas through the same, a connected worm and stem adapted to have a longitudinal movement and to control by its position the position of said valve, mechanism operable by the passage of gas from the meter and engaging said stem for rotating said stem and worm, a nut engaging said worm for compelling said stem and worm to travel longitudinally toward their initial position when they are thus rotated, means for manually rotating said nut and thereby compelling the same to effect the direct reverse travel of said stem and worm without rotation for opening said valve, an index on which the gas purchased is indicated, a hand for said index, a cam plate connected with said hand for actuating the same and being mounted to turn on the arc of a circle and having an oblique slot, and a pin carried by said stem in said slot for acting against said cam during the travel of said stem; substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

871,291. SHUTTLE. DAVID L. NORRIS, Westminster, S. C. Filed Aug. 2, 1906. Serial No. 328,882.



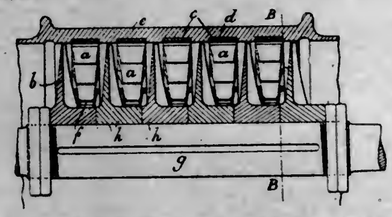
1. In a shuttle, a shuttle-body having a thread passage, an open slot leading thereto, a delivery eye, and a slot 8 leading into the delivery eye adjacent the rear vertical wall thereof and inclining upwardly and forwardly therefrom, combined with a threading device for guiding the thread into said slot 8, said shuttle-body being cut away on its side adjacent both edges of the slot 8 but to a greater extent on the front side of said slot than on the other thereby to form a shoulder 35 which prevents the thread from leaving the delivery-eye.

2. In a shuttle, a shuttle-body having a thread passage, an open slot leading thereto, a delivery eye, and a slot 8 leading to the delivery eye adjacent the rear vertical wall thereof and inclined upwardly and forwardly from said eye, the outer side of the shuttle-body being cut away adjacent both sides of said slot but to a greater extent on the front side thereof than on the other, combined with a

threading device having a flat head provided with a substantially straight thread-directing edge extending in the direction of the open slot but situated at one side thereof, a substantially straight edge portion which stands angularly to the thread-directing edge and merges thereinto, and a parti-cylindrical edge portion which guides the thread into the inclined slot.

3. In a shuttle, a shuttle-body having a thread passage, a narrow open slot leading thereto, and a delivery eye communicating therewith, combined with a threading device having a flat thread-guiding member provided with a substantially straight thread-directing edge extending in the general direction of the open slot, but situated at one side thereof, a substantially straight edge 11 extending angularly to the thread-directing edge, the remaining portion of the periphery of said head being parti-circular and constituting a guiding edge around which the thread is drawn as it is fed to the delivery eye.

871,292. TURBINE COMPRESSOR, PUMP, AND THE LIKE. CHARLES A. PARSONS and ALFRED Q. CARNEGIE, Newcastle-upon-Tyne, England; said Carnegie assignor to said Parsons. Filed Aug. 2, 1905. Serial No. 272,437.



1. A turbine compressor or pump having fixed guide blades of non-radial form, and moving blades arranged alongside the non-radial fixed guide blades and having a different direction from that of the fixed blades in respect to the radius.

2. A turbine compressor or pump having moving blades disposed along the shaft of the pump, and non-radial fixed blades reaching inwardly between the moving blades said moving blades having a different direction from that of the fixed blades in respect to the radius, substantially as described.

3. A turbine compressor or pump having fixed guide blades of non-radial form, said blades being wider at the periphery than at the central part.

4. A turbine compressor or pump having in combination rows of moving blades, fixed spiral guide blades arranged alongside and alternately with said moving blades and said moving blades having a different direction from that of the fixed blades in respect to the radius.

5. A turbine compressor or pump having in combination rows of moving blades, rows of fixed blades alternating with and arranged alongside of said moving blades, said fixed blades being curved spirally inwards in the direction of rotation of the moving blades and said moving blades having a different direction from that of the fixed blades in respect to the radius.

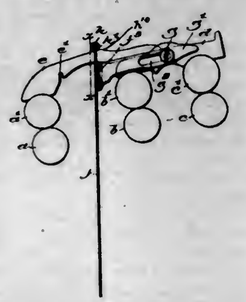
[Claims 6 to 8 not printed in the Gazette.]

871,293. TOP-ROLL SADDLE AND STIRRUP. CLARENCE A. PIERCE, Manchester, N. H. Filed Apr. 26, 1906. Serial No. 313,728.

1. In top rolls, a front saddle, a back saddle, a stirrup and a device attached to said back saddle and connected with and locking said stirrup thereto, the front saddle being movable through said stirrup while the latter occupies its locked position with relation to the back saddle.

2. In top rolls, a back saddle, a stirrup having an opening therethrough and an offset portion, an adjustable finger connected with said back saddle and engaging the off-set portion of the stirrup, and a front saddle having its tail end extended through the opening in said stirrup.

3. In top rolls, a back saddle, a front saddle and a stirrup having a tongue, and a device connected with the back saddle and shaped to co-act with the tongue of the stirrup to form a locking device to prevent the escape of the front saddle from the stirrup while adjusting the front top roll.

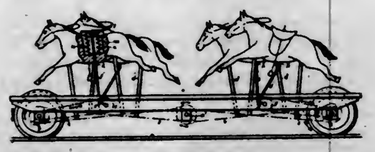


4. The combination with a back roll saddle and a front roll saddle longitudinally adjustable thereon, of a stirrup having a tongue and resting on the upper side of the front roll saddle, combined with means connected with the back roll saddle and engaging said tongue to prevent the movement of said stirrup with the top roll saddle as the latter is being adjusted on the back roll saddle.

5. A back roll saddle, a front roll saddle movable thereover, a stirrup having a tongue and sustained by said front roll saddle, combined with an adjustable finger connected with the back roll saddle and engaging the tongue of the stirrup to prevent the movement of said stirrup with the top roll saddle when the top roll is being adjusted.

[Claims 6 to 8 not printed in the Gazette.]

871,294. VEHICLE FOR RECREATION OR AMUSEMENT. THOMAS W. POTTS, Fulham, London, England. Filed June 17, 1907. Serial No. 379,442.



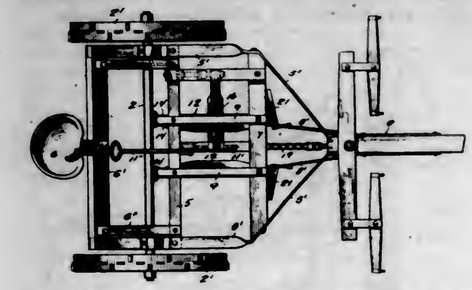
1. In a vehicle of the class described, a wheeled frame provided with a crank axle, a support connected with said crank, a horse mounted on the support provided with a movable seat, and driving mechanism for propelling the vehicle when the horse and saddle are actuated.

2. In a vehicle of the class described, a wheeled frame provided with a crank axle, a support connected with said crank, a horse on the support provided with a recess, springs in said recess, a seat on said springs, and driving mechanism connected with the saddle and with said axle for propelling the vehicle when the horse and saddle are actuated.

3. In a vehicle of the class described, a wheeled frame provided with a crank axle, a chain wheel on the axle and a support connected with the crank, a horse on the support provided with stirrups and a plunger, a shaft in the frame under the horse provided with a crank and a chain wheel, a chain on said chain wheels, and a connecting rod from said crank to the plunger.

4. In a vehicle of the class described, a wheeled frame provided with a crank at its ends for said wheels and a crank at the middle, supports connected at their ends with said cranks, a slotted foot board in the frame, pairs of rods from each support through said slots, a horse on each pair of supports, a vertically movable saddle on each horse, and means for propelling the vehicle forward when the horse and saddle are actuated.

871,295. COTTON-CHOPPER. WALTER L. ROSE, Wadesboro, N. C. Filed Nov. 16, 1905. Serial No. 287,600.



1. In a cotton chopper, a wheeled supporting frame, downwardly depending guide supports on said frame, slideways extending transversely across the frame and supported on the said downwardly depending supports, a heavy laterally reciprocating beam mounted to bear on its ends upon the said slideway, a cotton chopping hoe depending from said beam, and mechanism for reciprocating said beam and its hoe as the supporting frame is moved along the row.

2. In a cotton chopper, a wheeled supporting frame, downwardly depending guide supports on said frame, a hoe supporting frame mounted to be shiftable up and down on said vertical guide supports, a chopping hoe mounted on said hoe supporting frame to reciprocate laterally thereon, and mechanism engaging with a wheel of the apparatus for reciprocating said hoe as the supporting frame is moved along the row.

3. In a cotton chopper, a wheeled supporting frame, downwardly depending guide supports on said frame, a hoe frame mounted to be shiftable up and down on said supporting frame, runners on the bottom of said hoe frame, extending parallel to the pole of the chopper, a chopping hoe mounted on said hoe supporting frame to reciprocate laterally thereon, mechanism engaging with a wheel of the chopper for reciprocating the said hoe as the supporting frame is moved along the row and mechanism for raising or lowering said hoe-supporting frame in the vertical guides.

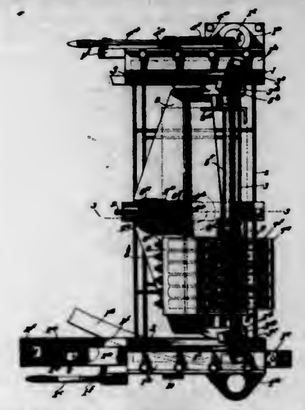
4. In a cotton chopper, a wheeled supporting frame, downwardly depending guide supports on said frame, a hoe frame mounted to be shiftable up and down on said supporting frame, runners on the bottom of said hoe frame extending parallel to the pole of the chopper, a scraper at the forward end of each of said runners, a chopping hoe mounted on said hoe supporting frame to reciprocate laterally thereon, and mechanism engaging with the wheel of the chopper for reciprocating the said hoe as the supporting frame is moved along the row.

5. In a cotton chopper, a wheeled supporting frame, downwardly depending front and rear supporting bars on either side of said frame forming vertical guides, a hoe frame having forwardly and rearwardly projecting lugs adapted to engage on either side of each of said supporting bars, runners on the bottom of said frame extending parallel to the pole of the chopper, transverse guides mounted upon the hoe supporting frame, a hoe carrying bar the ends of which having sliding engagement with said guides, a hoe attached to and projecting below said bar, mechanism engaging with a wheel of the chopper for reciprocating said hoe-carrying bar along the transverse guides and mechanism for raising or lowering the hoe-supporting frame in the vertical guides.

[Claims 6 to 8 not printed in the Gazette.]

871,296. BARK-PEELING MACHINE. JAMES J. RUSSELL and ARTHUR J. BAYLEY, Milwaukee, Wis. Filed Feb. 28, 1907. Serial No. 359,937.

1. In combination, an adjustable frame, a series of arms pivotally mounted on said frame, scraper-heads adjustably connected to said arms, a tilting frame, and springs interposed between said frame and the said arms; with a lever and a spring-link connecting said lever to said tilting frame for causing the tilting frame to hold the arms and scrapers in operative position.



2. In combination, an oscillating frame, a series of arms pivoted thereon, scrapers adjustably mounted on said arms, a tilting frame pivoted beside the arms and springs interposed between the tilting frame and said arms; with a rocking lever, and a spring connection between said lever and the tilting frame for causing said frame to yieldingly press the scrapers against the log.

3. In combination, a sliding frame, an oscillating frame pivoted thereon, a series of scraper arms pivoted on the oscillating frame, scrapers mounted on said arms, a tilting frame, rods connecting the arms to said tilting frame, springs interposed between the arms and tilting frame, and means whereby the tilting frame may be caused to move and hold the scrapers in operative positions.

4. In combination, a sliding frame, an oscillating frame pivoted thereon, a series of scraper arms pivoted on the oscillating frame, scraper-heads adjustably mounted on the said arms, a tilting frame pivoted on the oscillating frame, rods connecting the arms to said frame, and springs interposed between the arms and frame; with a rocking lever, and a spring-link connecting said lever to the tilting frame whereby the tilting frame may be caused to move and hold the scrapers in operative positions.

5. In a bark-peeling machine, the combination of an adjustable main frame, a transversely movable sliding frame thereon, an oscillating frame on said sliding frame, a tilting frame on said oscillating frame, a series of arms pivoted on the oscillating frame, scraper heads on said arms, spring connections between the tilting frame and the scraper arms, a lever for actuating the tilting frame, and a spring connection between said lever and the tilting frame.

[Claims 6 to 11 not printed in the Gazette.]

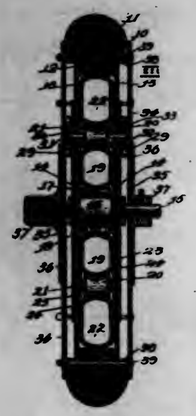
871,297. VEHICLE-WHEEL. NICHOLAS SCHENK, St. Louis, Mo. Filed June 29, 1906. Serial No. 324,066.

1. A vehicle wheel comprising a hub, a rim, inflated tubes located between the hub and the rim and roller bearings between the tubes, substantially as specified.

2. A vehicle wheel comprising a rim, a tire located upon the rim, a hub mounted loosely within the rim, inflated cushions located between the hub and the rim and roller bearings located between the tubes, and tube and hub, substantially as specified.

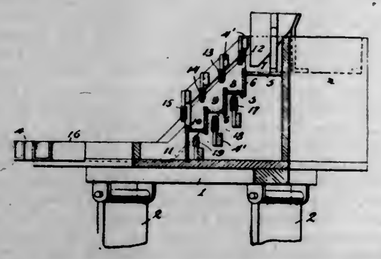
3. A vehicle wheel comprising a hub, a pneumatic tube located upon the hub, roller bearings located upon the pneumatic tube, a second pneumatic tube located upon the roller bearings, a rim located upon the outer pneumatic tube, and means for imparting motion to the rim when the hub is placed in revolution, substantially as specified.

4. A device of the class described comprising a wheel having a rim and hub disconnected, a pneumatic cushion located between the rim and hub, a series of plates located on each side of the tube, two of the plates connected to the rim and the remainder of the plates connected to the hub and so arranged as to permit the same to operate in



telescopic form, contact-plates connected to the rim, small wheels located between the contact-plates and carried by the plates supported to the hub whereby motion is imparted to the rim by the operation of the hub and shaft, and a plurality of outer plates for incasing the entire mechanism of the wheel, substantially as specified.

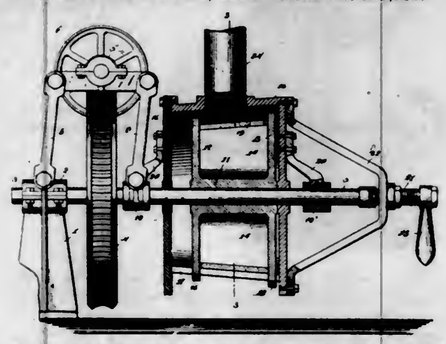
871,298. MAGNETIC SEPARATOR. ALFRED SCHWARZ, New York, N. Y. Filed Feb. 1, 1906. Serial No. 298,978.



1. In a magnetic separator the combination of a table having riffles thereon arranged successively in different horizontal planes, means for feeding the material to be treated to the uppermost riffle, electromagnets disposed above and below said riffles, and means for energizing and deënergising said magnets successively alternately above and below the riffles from the uppermost to the lowermost to effect the transportation of the magnetic particles from one riffle to the next lowermost.

2. In a magnetic separator the combination of a table having riffles thereon arranged successively in different horizontal planes, means for feeding the material to be treated to the uppermost riffle, electromagnets having their polar faces substantially over and in proximity to the outer edge of said riffles, electromagnets having their polar faces in proximity to the under side of said riffles, and means for energising and deënergizing said magnets successively alternately above and below the riffles from the uppermost to the lowermost to effect the transportation of the magnetic particles from one riffle to the next lowermost.

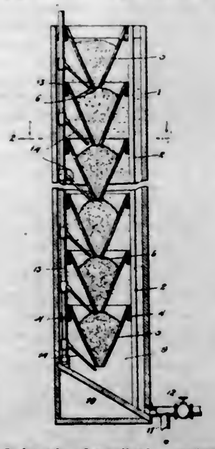
871,299. TAILINGS-DISCHARGE VALVE. ALFRED SCHWARZ, New York, N. Y., assignor to Schwarz Engineering Company, New York, N. Y., a Corporation of New York. Filed Feb. 1, 1906. Serial No. 298,980.



1. In a tailings discharge valve the combination of a casing having an opening therein at its lower side, a shaft passing longitudinally through said casing, a valve secured to said shaft, said valve comprising a plurality of compartments formed by transverse end walls joined by intermediate webs, means for charging material into said compartments, and means for rotating the valve to discharge the contents thereof through said opening, said rotating means comprising a worm wheel keyed on said shaft and a worm meshing with said wheel, and a pivotal support for said worm.

2. In a tailings discharge valve the combination of a casing having an opening therein at its lower side, a shaft passing longitudinally through said casing, a valve secured to said shaft, said valve comprising a plurality of compartments formed by transverse end walls joined by intermediate webs, said walls and webs having packing strips secured thereto, means for shifting said valve longitudinally of the casing, means for charging the material into said compartments, and means for rotating the valve to discharge the contents thereof through said opening, said rotating means comprising a worm wheel keyed on said shaft and a worm meshing with said wheel, and a pivotal support for said worm.

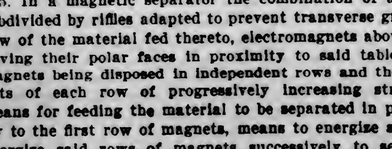
871,300. PROCESS OF LEACHING ORES. ALFRED SCHWARZ, New York, N. Y., assignor to Schwarz Engineering Company, New York, N. Y., a Corporation of New York. Filed Feb. 1, 1906. Serial No. 298,982.



1. The method herein described consisting in causing the ore to descend by gravity in a continuous stream through a series of vertically disposed hoppers having graduated discharge orifices, said hoppers being submerged in a quiescent leaching solution.

2. The method of leaching ores consisting in causing the ore to descend by gravity through a series of hoppers submerged in a quiescent solvent, and introducing air into said solvent in the presence of the falling stream of ore.

871,301. MAGNETIC SEPARATOR. ALFRED SCHWARZ, New York, N. Y. Filed Apr. 7, 1906. Serial No. 310,445.



1. In a magnetic separator the combination of a table subdivided by riffles adapted to prevent transverse gravital flow of the material fed thereto, electro-magnets above and having their polar faces in proximity to said table, said magnets being disposed in independent rows, means to feed the material to be separated in proximity to the first row of magnets, means to energize and deënergize said rows of magnets successively to separate a given mass of magnetic particles from the non-magnetic and to transport the former from riffle to riffle in response to magnetic attraction, and means to receive the separated masses.

2. In a magnetic separator the combination of a table subdivided by riffles adapted to prevent transverse gravital flow of the material fed thereto, electromagnets disposed in independent rows above and with their polar faces in proximity to said table, means to feed the material to be separated in proximity to the first row of magnets, means to energize and deënergize said rows of magnets successively to separate a given mass of magnetic particles from the non-magnetic and to transport the former from riffle to riffle in response to magnetic attraction, and means to cause the non-magnetic particles to travel along the riffles.

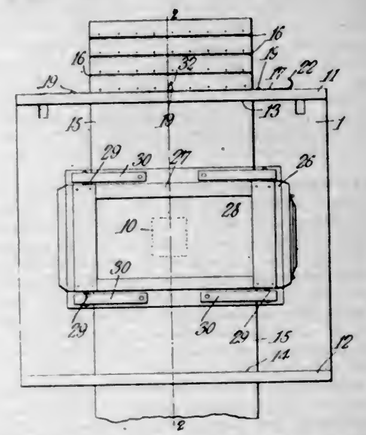
3. In a magnetic separator the combination of a table subdivided by riffles adapted to prevent transverse gravital flow of the material fed thereto, electromagnets arranged relatively to said table and disposed in rows running parallel with and above the riffles, means for feeding the material to be separated in proximity to the first row of magnets, means to energize and deënergize said rows of magnets successively to separate a given mass of magnetic particles from the non-magnetic and to transport the former from riffle to riffle in response to magnetic attraction, and means to cause the non-magnetic particles to travel along the riffles.

4. In a magnetic separator the combination of a table subdivided by riffles adapted to prevent transverse gravital flow of the material fed thereto, means to reciprocate said table, a stationary frame, magnets secured to said frame and disposed in independent rows above the table, means for feeding the material to be separated in proximity to the first row of magnets, means to energize and deënergize said rows of magnets successively to separate a given mass of magnetic particles from the non-magnetic and to transport the former from riffle to riffle by magnetic attraction, and means to receive the separated masses.

5. In a magnetic separator the combination of a table subdivided by riffles adapted to prevent transverse gravital flow of the material fed thereto, electromagnets above and having their polar faces in proximity to said table, said magnets being disposed in independent rows and the magnets of each row of progressively increasing strength, means for feeding the material to be separated in proximity to the first row of magnets, means to energize and deenergize said rows of magnets successively to separate a given mass of magnetic particles from the non-magnetic and to transport the former from riffle to riffle in response to magnetic attraction, and means to receive the separated masses.

[Claims 6 and 7 not printed in the Gazette.]

871,302. MULTIPLYING-BACK FOR CAMERAS. WINFIELD C. SECKLER, Marianna, Ark. Filed Mar. 9, 1907. Serial No. 361,509.



1. In a multiplying attachment for cameras, the combination with a suitable support adapted to be attached to a camera back and having guideways thereon, of a slide for the sensitized medium mounted to operate longitudinally of said guideways and adjustable in a direction transversely thereto, and a device for maintaining the slide is in different positions of adjustment transversely of said guideways, and for locking the slide in different positions of adjustment transversely of the guideways.

2. In a multiplying back for cameras, the combination with a suitable support adapted to be attached to a camera and having guideways thereon, of a slide for the sensitized material mounted to operate longitudinally of said guideways and capable of adjustment in a direction transversely thereto, and a retaining device coöperating with the said slide for guiding the latter in different paths arranged parallel to the guideways and capable of maintaining the slide in a given angular relation to the guideways, and means for locking the said device in cooperative relation to the slide.

3. In a multiplying back for cameras, the combination with a suitable support adapted to be attached to a camera, of a slide for the sensitized medium having a series of guiding portions arranged in parallelism, and a device on the support of a length approximately equal to the range of movement of the slide and adapted to coöperate with said guiding portions for insuring movement of the slide in a series of paths arranged in parallel relation and serving to maintain the slides in a given angular relation to the path of movement.

4. In a multiplying attachment for cameras, the combination with a suitable support adapted to be attached to a camera and having guideways thereon, of a slide for the sensitized medium mounted to operate longitudinally of said guideways and having a series of guiding grooves extending parallel to the guideways and suitably spaced transversely thereof, a bar coöperating with said grooves for guiding the slide in a plurality of paths arranged in parallel relation and means for locking said bar in cooperative relation with one of said grooves.

5. In a multiplying attachment for cameras, the combination with a suitable support adapted to be attached to a camera and having guideways thereon, of a slide adapted to carry a sensitized medium mounted to operate longitudinally of the guideways and having a series of suitably spaced guiding grooves formed thereon, and a

locking member having devices for locking it in and out of coöperative relation with said grooves for guiding the slide in different paths extending parallel to the guideways.

[Claims 6 to 9 not printed in the Gazette.]

871,303. BUTTON-TUFT. DILMAN B. SHANTZ, Berlin, Ontario, Canada. Filed Jan. 6, 1906. Serial No. 294,050.

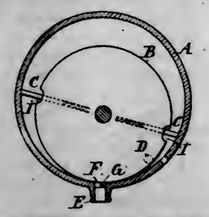


1. As an article of manufacture, a button comprising a solid one-piece button body provided with an undercut recess, a serrated disk adapted to be locked in said recess, a tuft material adapted to be engaged by said disk, windings of thread engaged by the serrations of said disk.

2. In combination with a button body and tuft-material, a disk peripherally serrated, windings of thread engaging in said serrations and passing over the crown of the disk, said tuft-material superposed on said disk and said windings and engaged by said serrations, and means for securing said disk to said button body.

3. In combination with a button body and tuft-material, a disk peripherally serrated, windings of thread engaging in said serrations and passing over the crown of the disk, said tuft-material superposed on said disk and said windings, a recess and an annular seat in said button body and said corrugations expanded within said annular seat.

871,304. APPARATUS FOR SUCKING DUST FROM UPHOLSTERED FURNITURE, &c. OVE DE FINE SKIBSTED, Copenhagen, Denmark. Filed Aug. 30, 1906. Serial No. 332,562.

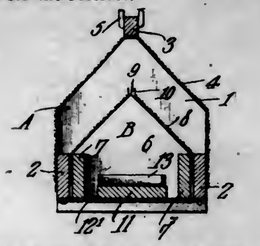


1. In a suction device, the combination of a casing, a drum rotatably eccentric in the casing, inlet and outlet openings for the casing, the drum having radial slots therein, vanes arranged to reciprocate in said slot, the slots in the drum having enlarged mouth portions on both sides of the vanes at their outer ends, for receiving lubricant and causing the same to be drawn into the slots on reciprocation of the vanes.

2. In a suction device, the combination of a casing, a drum rotatable eccentrically in the casing, inlet and outlet openings for the casing, the drum having radial slots therein, vanes radially movable in said slots, the slots in the drums having enlarged portions at their outer ends for receiving lubricant, one of the side walls of the casing having an opening normally closed by the side wall of the drum, but registering with the said recessed portion of the slots in the drum, whereby lubricant will be sucked in the drum through the side opening and into the recessed portions of the slots.

871,305. INSECT-TRAP. JOHN W. SPURRIER, Hattiesberg, Miss. Filed Aug. 6, 1907. Serial No. 387,335.

1. In a trap the combination with a cage; of a receiver detachably mounted within and constituting a closure for the bottom of the cage, said receiver opening into the cage, and means extending transversely of and constituting a support for the receiver.



2. In a trap the combination with a cage; of a receiver detachably mounted within and constituting a closure for the bottom of the cage, said receiver opening into the cage, a bait holder within the receiver, and means connected to the cage and constituting retaining means for the receiver and bait holder.

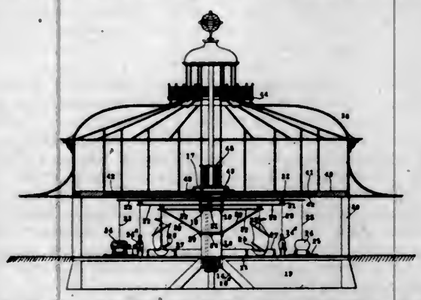
3. In a trap the combination with a cage, and a receiver extending and opening into the cage; of a tray mounted to swing within the receiver and constitute a partial closure therefor.

4. In a trap the combination with a cage, and a receiver extending and opening into the cage; of a tray mounted to swing within the receiver and constitute a partial closure therefor, and means for holding the tray against movement.

5. In a trap the combination with a cage; of a receiver detachably mounted therein and having an outlet opening into the cage, a panel mounted to swing within the receiver, there being inlet openings at opposite sides of the panel, and a bait holder upon and movable with the panel.

[Claim 6 not printed in the Gazette.]

871,306. MERRY-GO-ROUND. WINFIELD S. THURLOW, Boston, Mass. Filed Nov. 24, 1906. Serial No. 344,854.



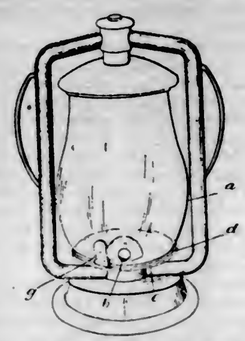
1. A structure of the kind described, comprising a hollow post or pillar, vertical driving shafts arranged therein, plural series of arms turning around the pillar, the series of arms being of different lengths, operative driving connections between the arms and the aforesaid shafts, and movable objects carried by the arms.

2. A structure such as described, comprising a hollow pillar, vertical driving shafts supported therein, rings turning on the pillar and geared to the shafts, and a series of arms projecting outward from each ring, the several series being of different lengths, and each series carrying movable objects.

3. A structure such as described, comprising a hollow post or pillar, vertical driving shafts arranged therein, plural series of arms turning around the pillar, the series of arms being of different lengths, operative driving connections between the arms and the aforesaid shafts, a series of concentric platforms carried by the arms, and movable objects on the platforms.

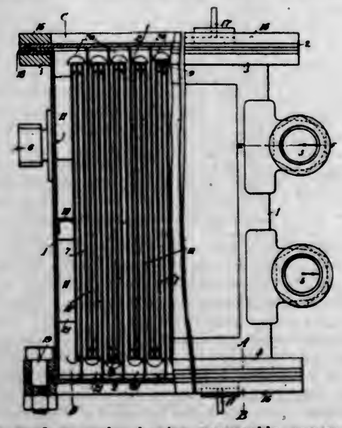
4. A structure such as described, comprising a hollow post or pillar, vertical driving shafts arranged therein plural series of arms turning around the pillar, the series of arms being of different lengths, operative driving connections between the arms and the aforesaid shafts, a series of concentric platforms suspended from and carried by the several arms, and objects on the platforms, said objects being moved independently of the platforms.

871,307. LANTERN. JAMES R. M. TISDALE, Beaverton, Ontario, Canada. Filed Dec. 19, 1906. Serial No. 348,605.



In a lantern, in combination, a chimney having an opening therethrough in the inward curve at the lower end thereof and an annular rim projecting outwardly therefrom at the lower edge thereof, an open spring wire ring embracing said chimney above said annular rim and retained thereon by said rim, and a broad lip rigidly secured to said spring ring and bent to conform to the contour of the said chimney and adapted to close the opening therein and be moved circumferentially around said chimney to uncover said opening, substantially as described.

871,308. SURFACE COOLER. WALTER VASSEL, Charlottenburg, Germany, assignor to The Firm of Rud. A. Hartmann, Berlin, Germany. Original application filed Sept. 28, 1905, Serial No. 280,479. Divided and this application filed Mar. 22, 1906. Serial No. 307,531.

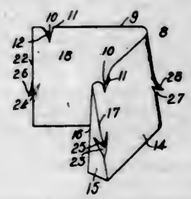


1. A surface cooler having removable covers on both sides and comprising a plurality of parallel and narrow pockets placed side by side and of uniform width which alternately face the two covers respectively and are made of thin sheet metal, in combination with a plurality of ribbed partition plates of sheet metal cut out at the one edge and slightly bent at the opposite edge and adapted to be inserted in the several pockets of the said surface cooler to form two separate serpentine passages.

2. A surface cooler comprising a rectangular frame with two partitions ribs within and four tubular connections without on two opposite sides, removable covers on both sides of said rectangular frame, a thin sheet metal plate bent in a zigzag-line within said rectangular frame and secured with its edges on the other two opposite sides thereof, so that a plurality of parallel and narrow pockets of uniform width are formed, which alternately face the two covers, the end pieces of said zigzag sheet metal plate being secured on the partition ribs of said rectangular frame, in combination with a plurality of partition plates made of thin sheet metal, provided with a plurality of parallel ribs on both sides, cut out at the one edge and slightly bent at the opposite edge, these partition plates being adapted to be inserted in the alternating pockets to their bottoms and to bear with their bent edges on said two covers respectively, whereby two separate serpentine passages are formed in the surface cooler.

3. In a surface cooler, the combination with a vertical rectangular frame with two partition ribs within and four tubular connections without on two opposite sides, of removable covers on both sides of said vertical rectangular frame, a thin sheet metal plate bent in a zigzag-line within said vertical rectangular frame and secured with its edges on the upper and lower insides thereof, so that a plurality of parallel and narrow pockets of uniform width are formed, which alternately face said two covers, the end pieces of said zigzag sheet metal plate being secured on the partition ribs of said vertical rectangular frame, and a plurality of partition plates made of thin sheet metal, provided with a plurality of horizontal ribs on both sides, cut out at the one edge and slightly bent at the opposite edge, these partition plates being adapted to be inserted in the alternating pockets to their bottoms and to bear with their bent edges on said two covers respectively, whereby two separate serpentine passages are formed in the surface cooler.

871,309. METALLIC PROTECTOR FOR THE HEELS OR SOLES OF BOOTS AND SHOES. JOHN H. VINTON, Boston, Mass. Filed July 15, 1907. Serial No. 383,873.



1. A metallic protector for the heels or soles of boots and shoes comprising a strip of metal wedge-shaped in cross section and having a cutting edge, said strip bent transversely thereof to form a V and having a cut extending longitudinally of said protector from said cutting edge.

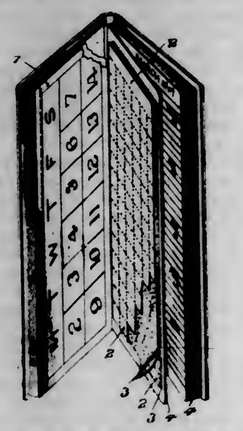
2. A metallic protector for the heels or soles of boots and shoes comprising a strip of metal wedge-shaped in cross section and having a cutting edge, said strip bent transversely thereof to form a V and having a cut extending longitudinally of said protector from said cutting edge, the metal upon opposite sides of said cut being turned outwardly and inwardly from the outer and inner faces of said protector, respectively, and forming barbs.

3. A metallic protector for the heels or soles of boots and shoes comprising a strip of metal wedge-shaped in cross section and having a cutting edge, said strip bent transversely thereof to form a V, and having a cut in one of its edges extending longitudinally of said protector, whereby a portion of said metal adjacent to said cut is forced outwardly beyond the face of said metal to form a barb.

4. A metallic protector for the heels or soles of boots and shoes comprising a strip of metal wedge-shaped in cross section and having a cutting edge, said strip bent transversely thereof to form a V said protector having a

plurality of edges formed by the intersection of two faces at an angle to each other and a plurality of cuts in said edges and extending into said faces, whereby the metal adjacent to said cuts is forced outwardly beyond said faces to form barbs.

871,310. MEMORANDUM-BOOK. MARTIN J. WADE, Iowa City, Iowa. Filed Mar. 2, 1907. Serial No. 360,198.



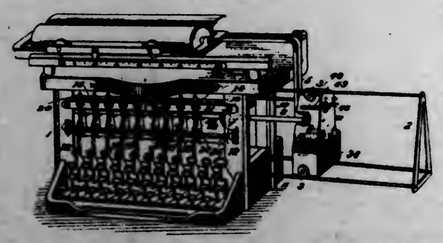
1. A book comprising a calendar and an adhesive sheet or sheets scored to form sections of such size as to be capable of being applied to a particular date or dates on the calendar.

2. In combination with a memorandum book or diary, a calendar therein, and adhesive sections also within the book and of such size as to be capable of being applied to a particular date or dates on the calendar.

3. In combination with a memorandum book or diary, a calendar therein, composed of a series of separate sheets, an adhesive sheet or sheets scored to form separable sections, and sheets of paraffin paper to prevent the adhesive sheets adhering to each other and to the memorandum sheets.

4. The combination with a calendar, of an adhesive sheet or sheets scored to form sections of such size as to be capable of being applied to a particular date or dates on the calendar.

871,311. CALCULATOR FOR TYPE-WRITING MACHINES. ELMER V. WILLIAMS, San Pedro, Cal., assignor of one-half to Luke Kelly, San Pedro, Cal. Filed Feb. 20, 1906. Serial No. 302,121.



1. The combination with a typewriting machine, having a traveling carriage, of a frame and a traveling calculator, actuating means for the calculator carried thereby, means for normally restraining such actuating means, means fixedly mounted relative to the frame of the typewriting machine for releasing such restraining means when the calculator is brought into proper relation thereto, and means actuated by depressing any numeral key of the typewriter for controlling the extent of operation of the calculator.

2. The combination with a typewriting machine, having a traveling carriage, of a frame and a traveling calculator, spring-impelled actuating means for the calculator, means for holding the calculator mechanism as against such actuating means, means having a fixed relation to the typewriter frame for releasing such holding means, means also having a fixed relation to the typewriter frame for cooperating with the calculator, and means actuated by any numeral key of the typewriter for permitting such latter means to coöperate with the calculator while the holding means is released.

3. The combination with a typewriting machine, having a frame and a traveling carriage, of a calculator movable with said carriage, spring-impelled actuating means for the calculator, means for holding the calculator mechanism as against such actuating means, means having a fixed relation to the typewriter frame for releasing such holding means, means also having fixed relation to the typewriter frame for coöperating with the calculator, means actuated by the numeral keys of the typewriter for permitting such latter means to coöperate with the calculator while the holding means is released, and means for limiting such cooperation, such latter means being different for each numeral key of the typewriter.

4. The combination with a typewriting machine having a frame and a traveling carriage, of a calculator, movable with said carriage, having several separate digit wheels and separate trains of actuating gearing for each digit wheel, escapement means normally restraining each train, means having fixed relation to the typewriter frame for releasing such escapement means, a controller shaft mounted on the typewriter having a gear-wheel in line with such releasing means, said gear-wheel being in sliding engagement with a corresponding gear-wheel of each train of gearing, means normally holding such controller shaft to prevent the rotation of any train of gearing whose escapement is released by said releasing means, and means actuated by the numeral keys of the typewriter for releasing the controller shaft holding means.

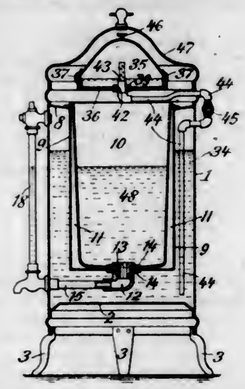
5. The combination with a typewriting machine having a frame and a traveling carriage, of a calculator, movable with said carriage, having several separate digit wheels and separate trains of actuating gearing for each digit wheel, escapement means normally restraining each train, means having fixed relation to the typewriter frame for releasing such escapement means, a controller shaft mounted on the typewriter having a gear wheel in line with such releasing means, said gear-wheel being in sliding engagement with a corresponding gear-wheel of each train of gearing, means normally holding such controller shaft to prevent the rotation of any train of gearing whose escapement is released by said releasing means, means actuated by the numeral keys of the typewriter for releasing the controller shaft holding means, and means also actuated by such keys for limiting the rotation of such controller shaft.

[Claims 6 to 21 not printed in the Gazette.]

871,312. COFFEE-URN. WALTER J. WILLIAMS, New York, N. Y. Filed Feb. 9, 1907. Serial No. 356,620.

1. An urn comprising an outer closed jacket or boiler, a liquid coffee reservoir therein, a drip coffee percolator separate from the boiler and discharging into said reservoir, valve-controlled pipe connections between the boiler and percolator, a main constantly connected water supply pipe opening to the boiler, a valve in said main supply pipe, a float in the boiler, and means connecting said float to the main supply pipe valve and normally closing said valve when the percolator pipe valve is closed and opening said main pipe valve to automatically maintain water supply to the boiler after the percolator pipe valve is opened to allow hot water to pass from the boiler to and through the percolator to the liquid coffee reservoir, substantially as described.

2. An urn comprising an outer closed jacket or boiler, a liquid coffee reservoir therein, a drip coffee percolator separate from the boiler and discharging into said reservoir, valve-controlled pipe connections between the boiler and percolator, a main constantly connected water supply pipe opening to the boiler, a valve in said main supply pipe, a guide in the boiler, a float movable on said guide, wheel gearing coupled to the valve stem, and a system of levers coupling said gearing to the float and normally closing said main supply pipe valve when the percolator pipe valve is closed and opening said main pipe valve to automatically maintain water supply to the boiler after the percolator pipe valve is opened to allow hot water to pass from the boiler to and through the percolator to the liquid coffee reservoir, substantially as described.



3. An urn comprising an outer closed jacket or boiler, a liquid coffee reservoir therein, a drip coffee percolator separate from the boiler and discharging into said reservoir, valve-controlled pipe connections between the boiler and percolator, a main constantly connected water supply pipe opening to the boiler, a valve in said main supply pipe, a float in the boiler, and means connecting said float to the main supply pipe valve and normally closing said valve when the percolator pipe valve is closed and opening said main pipe valve to automatically maintain water supply to the boiler after the percolator pipe valve is opened to allow hot water to pass from the boiler to and through the percolator to the liquid coffee reservoir, said reservoir having an external jacket providing an air-space and preventing cooling of the liquid coffee in the reservoir during renewal of water supply to the boiler, substantially as described.

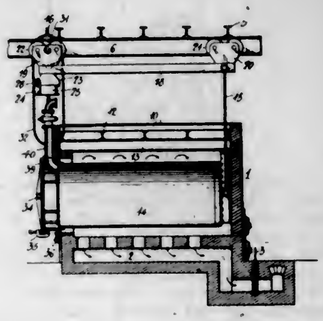
4. An urn comprising a main closed jacket or boiler, a liquid coffee reservoir therein, a percolator separate from the boiler and adapted to discharge into said reservoir, and pipe connections extending from within the boiler and terminating in a perforated nozzle sustaining the percolator and discharging therein, said percolator being made of non-textile material and in two separable parts, one part having a perforated wall through which the liquid coffee drips to the reservoir and also having a collar adapted for seating upon the pipe nozzle, substantially as described.

5. An urn comprising the main closed jacket or water boiler 1, an inner jacket 9, a liquid coffee reservoir 10 within the jacket 9 which provides an air chamber 11 around said reservoir, and liquid coffee outlets including a hollow plug 13 passing through the parts 9, 10, a pipe coupling 12 connected to the plug 13, pipes 15, 16 connected to coupling 12, a faucet 17 on the pipe 15, and a gage 18 on the pipe 16, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

871,313. CHARCOAL-RETORT. WILLIAM A. T. WILLINK, Brooklyn, N. Y., assignor, by mesne assignments, of four-fifths to Cuba Manufacturing Company, a Corporation of Cuba. Filed June 7, 1907. Serial No. 377,748.

1. In a charcoal retort, the combination with a furnace having a slot lengthwise through its top, of a track arranged above and extending in front of the furnace, carriages adapted to travel upon the track, a retort, supporting rods connected with the retort and with the said carriages, the said rods being less in diameter than the width of the slot, and means for closing the unoccupied portion of the slot, substantially as described.



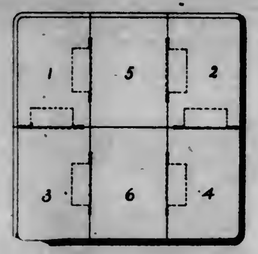
2. In a charcoal retort, the combination with a furnace having a slot lengthwise through its top, of a track arranged above and extending in front of the furnace, carriages adapted to travel upon the track, a retort, a plurality of supporting rods connected with the retort and with the said carriages, part of the said plurality of rods being threaded, mechanism constructed and arranged to engage the said threads whereby one end of the retort may be raised and lowered, the said rods being less in diameter than the width of the slot, and means for closing the unoccupied portion of the slot, substantially as described.

3. In a charcoal retort, the combination with a furnace having a slot lengthwise through its top, of a track arranged above and extending in front of the furnace, carriages adapted to travel upon the track, a retort having a mouth-frame projecting beyond the front of the furnace, a plurality of supporting rods connected with the said retort and with the said carriages, part of the said plurality of rods being threaded and having their connection with the mouth-frame of the retort normally outside the furnace, mechanism constructed and arranged to engage the threads whereby the front of the retort may be raised and lowered, and means for closing the unoccupied portion of the slot, substantially as described.

4. In a charcoal retort, the combination with a furnace having a slot lengthwise through its top, of a track arranged above and extending in front of the furnace, carriages adapted to travel upon the track, a retort having a mouth-frame projecting beyond the front of the furnace, a plurality of supporting rods connected with the said retort and with the said carriages, a pair of the said plurality of rods being threaded and having their connection with the mouth-frame of the retort normally outside the furnace, mechanism constructed and arranged to engage the threaded rods whereby the front of the retort may be raised and lowered, and means for closing the unoccupied portion of the slot, substantially as described.

5. In a charcoal retort, the combination with a furnace having a slot lengthwise through its top, of a track arranged above and extending in front of the furnace, carriages adapted to travel upon the track, a retort having a mouth-frame projecting beyond the front of the furnace, a single supporting rod connected with the rear of the retort and normally within the furnace, the said rod passing through the said slot and being connected with one of the carriages, a pair of threaded rods connected with the mouth-frame of the retort normally outside the furnace, mechanism suspended from one of the carriages and constructed to engage the threaded rods whereby the front end of the retort may be raised and lowered, and means for closing the unoccupied portion of the slot, substantially as described.

871,314. SECTIONAL TABLE-PAD. OSCAR WINTER, Philadelphia, Pa. Filed Feb. 11, 1907. Serial No. 356,765.

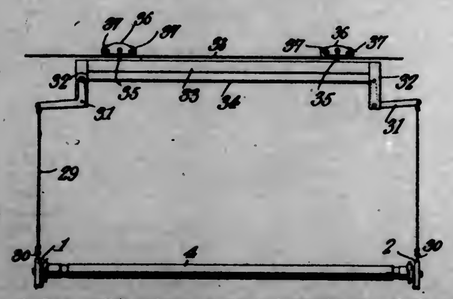


1. A protecting cover for tables, comprising separable sections, each section being composed of an interior flat piece of rigid material, covered on both sides with a covering of soft yielding material, and locking elements inset in the edges of the rigid material of each section and adapted to detachably engage with locking elements on the edge of another section to hold the sections together edge to edge with their flat surfaces in the same plane.

2. A protecting cover for tables, comprising separable sections, each section being composed of an interior flat piece of rigid material, covered with a covering of soft yielding material, and locking elements comprising a back plate having curved and resilient projections, secured to the edges of the rigid material of a section and adapted to detachably engage with locking elements inset into the edges of the rigid material of another section, comprising upper, lower and end walls forming a hollow socket in which is secured a member for the engagement of the resilient projections of the locking means attached on the edge of said first named section, to hold the sections together edge to edge with their flat surfaces in the same plane.

3. A protecting cover for tables comprising central sections each composed of a piece of rigid material, covered with heat resisting material, and incased in a covering of soft yielding material, the covering on one side of the sections passing from section to section to permit the folding of the sections, one upon another; of separable end sections each composed of a piece of rigid material, covered with heat resisting material, and incased in a covering of soft yielding material; and locking elements inset in certain of the edges of the rigid material of the central folding sections, and the separable end sections and adapted to detachably engage with locking elements on other edges of the sections, to hold the sections together, edge to edge, with their flat surfaces in the same plane.

871,315. QUILTING-FRAME. ALBERT WITTWER, Nemaha township, Richardson county, Nebr. Filed Apr. 12, 1907. Serial No. 367,739.



1. In a quilting frame, reels for carrying the cloth and finished quilt, each provided with ratchet teeth, a pawl and a pawl-carrier supported by the reel, the said pawl-carrier being constructed to engage the frame when the reel is mounted therein to hold the pawl against rotation, and to be disengaged from the frame with the reel when the latter is removed from the frame.

2. In a quilting frame, means for supporting the same comprising another frame, bell-crank levers mounted thereon, connections from one lever to the other for causing the levers to move in synchronism, connections from each lever to the quilting frame, and rollers carried by the supporting frame and arranged to move upon a supporting track.

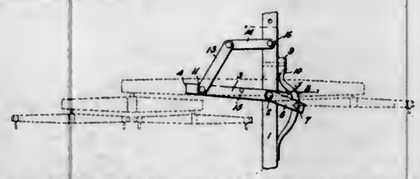
3. In a quilting frame, a reel composed of two parts hinged together along one edge, one provided with a longitudinal groove and the other with a longitudinal matching tongue.

4. In a quilting frame, a cylindrical reel composed of two parts hinged together along one edge, one part having a longitudinal groove and the other part having a longitudinal tongue with projecting teeth or spikes and arranged to coact with the groove of the first-named part.

5. In a quilting frame, a two-part reel having a headed stud on one part, a perforation in the other part, and a sliding member on the perforated part arranged to engage the headed stud on the other part when the two parts of the reel are brought together.

[Claim 6 not printed in the Gazette.]

871,316. THREE OR FOUR HORSE HITCH. FRANKLIN G. ALVORD, Estelle, Okla. Filed May 16, 1907. Serial No. 374,088.



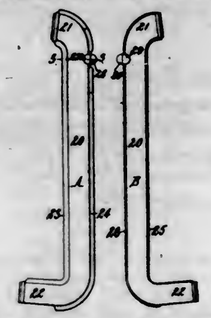
1. A draft-equalizer comprising a tongue, a primary lever pivoted thereon, a secondary lever pivotally attached thereto at one of its ends, a double bowed spring carried by the other end of the secondary lever in such manner as to adapt it to slide longitudinally along the tongue and to be impinged upon by one end of the primary lever, a lug carried by the tongue to limit the longitudinal movement of the slidable spring, and means residing in the other end of said primary lever whereby the main draw-bar may be attached to the primary lever at varying distances from the tongue.

2. A draft-equalizer comprising a tongue, a primary lever having long and short arms pivoted thereto, adjustable means carried by the long arm for atacking the main draw-bar thereto, a pair of auxiliary links also attached to the long arm and to the tongue whereby the swing of the primary lever is limited, a secondary lever pivotally movable about the pivot of the primary lever, a double bowed spring pivotally mounted in the outer end of the secondary lever in such manner as to hold the spring against the tongue while permitting a sliding movement thereabout, and a lug carried by the tongue for limiting the rearward movement of the spring.

3. A draft-equalizer comprising a primary lever adapted for pivotal connection to the tongue of a farm implement in such manner as to provide long and short arms thereto; a pressure-absorbing spring slidable longitudinally on the tongue and adapted to be impinged upon by the short arm of the primary lever, a secondary lever pivoted at one end to the tongue and retaining said pressure-absorbing spring by a pivot in the other end thereof; and an adjustable means carried by the long arm of said primary lever whereby an evener-bar may be connected on to said primary lever.

4. A draft-equalizer comprising a primary link lever adapted for pivotal connection to the tongue of a farm implement in such manner as to provide long and short arms thereto, a pressure-absorbing spring slidable longitudinally upon the tongue, a secondary link-member pivoted at one end to the tongue and at its other end to the pressure-absorbing spring whereby the said spring is retained in slidable connection with the tongue and adapted to be impinged upon by the shorter end of the said primary link-lever.

871,317. LANTERN-TUBE. CHARLES L. BETTS, New York, N. Y., assignor to R. E. Dietz Company, New York, N. Y. Filed Mar. 23, 1907. Serial No. 364,053.



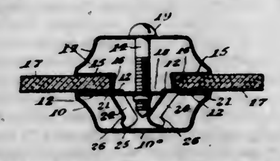
1. A sheet metal tube composed of half tubes which are joined lengthwise on the inner and outer sides of the tubes and are provided at their contiguous edges each with a boss which has its outer flat portion arranged transversely to the joint and extending sidewise beyond the joint along the outer flat portion of the boss of the companion half tube, substantially as set forth.

2. A sheet metal tube composed of half tubes which are joined lengthwise on the inner and outer sides of the tube and are provided at their contiguous edges each with a transverse boss and a lip which extends transversely from the boss along the boss and lip of the companion half tube, substantially as set forth.

3. A sheet metal tube composed of half tubes which are joined lengthwise on the inner and outer sides of the tube and are provided at their contiguous edges each with a lip which is arranged transversely to the joint and extends transversely along the lip of the companion half tube, said lips being provided with coincident openings for the reception of the bail, substantially as set forth.

4. A lantern tube composed of half tubes which are joined lengthwise on the inner and outer sides of the tube and are provided at their outer edges with overlapping portions which project across the joint and are provided with coincident openings for the reception of the bail, and which have said overlapping portions secured together by an eyelet, substantially as set forth.

871,318. FASTENER FOR METALLIC SASH-BARS. GUSTAVUS A. BISCHOFF, Chicago, Ill. Filed Jan. 14, 1907. Serial No. 352,178.

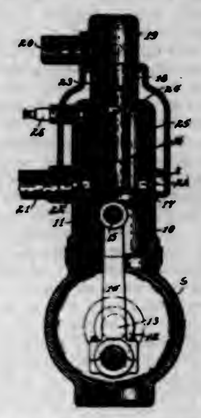


1. A fastener for metallic sash bars consisting of an apertured plate having its ends angled to form apexes on a line with said aperture and provided with means projected beyond one of its surfaces to support it, and a screw-bolt in screw engagement with the aperture of said plate.

2. A fastener for metallic sash bars consisting of an apertured plate having yielding means projected beyond one of its surfaces to support it, and a bolt adapted to engage the plate in said aperture.

3. A fastener for metallic sash bars consisting of an apertured plate having its ends angled to form apexes on a line with said aperture and provided with yielding supports projected beyond one of its surfaces to support it, and a bolt in screw engagement with the aperture of the plate.

871,319. GAS-ENGINE. PERCY R. RUSSELL, New York, N. Y. Filed Feb. 20, 1906. Serial No. 301,990.



1. In an explosive engine, a cylinder having a chambered extension, a hollow piston working in the cylinder and provided with a chambered extension working in the cylinder extension, the piston extension having its free end closed and being provided with a lateral port normally closed by the wall of the cylinder extension, a side port at the end of the cylinder extension arranged to open to the port in the piston extension at one end portion of the piston stroke, said piston extension ports being arranged to open to the cylinder when the piston is at the other end of its stroke, and a closed crank case opening into the cylinder, the piston being open to said extension providing a passage through the piston by means of the ports in such extension.

2. In an explosion engine, a cylinder having a chambered extension at one end the said extension having an enlarged chamber at its free end, an admission port in said enlarged chamber, a hollow piston working in the cylinder and provided with a closed chambered extension operating in the said cylinder extension, one or more side ports in the piston extension normally closed by the walls of the cylinder extension, but arranged to open to the cylinder at one limit of the piston stroke and to open to the said enlarged cylinder extension chamber at the other limit of the piston stroke, and a closed crank case opening into the cylinder, the piston being open to said extension providing a passage, through the piston by means of the ports in such extension.

3. In an explosion engine, a cylinder having a chambered extension, a hollow piston working in the cylinder and provided with a chambered extension working in the cylinder extension, the piston extension having its free end closed and being provided with a lateral port normally closed by the wall of the cylinder extension, a side port at the end of the cylinder extension arranged to open to the port in the piston extension at one end portion of the piston stroke, said piston extension ports being arranged to open to the cylinder when the piston is at the other end of its stroke, a closed crank case opening into the cylinder, the piston being open to said extension providing a passage through the piston by means of the ports in such extension, the cylinder being provided with exhaust ports normally covered by the piston but uncovered at the end of its active stroke when the said extension ports are opened to the cylinder.

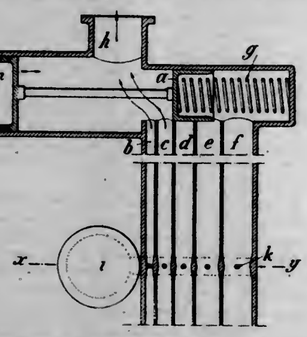
4. In an explosive engine, a cylinder having a chambered extension at one end, the said extension having

an enlarged chamber at its free end, an admission port in said enlarged chamber, a piston working in the cylinder and provided with a closed chambered extension operating in the said cylinder extension, one or more side ports in the piston extension normally closed by the walls of the cylinder extension, but arranged to open to the cylinder at one limit of the piston stroke, and to open to the said enlarged cylinder extension chamber at the other limit of the piston stroke, the cylinder being provided with exhaust ports normally covered by the piston but uncovered by the piston at the end of its active stroke when the said extension ports are opened to the cylinder, and a closed crank case opening into the cylinder, the piston being open to said extension providing a passage through the piston by means of the ports in such extension.

5. In an explosive engine, the combination with a cylinder, a closed crank case opening to the cylinder at one end, a reduced chambered extension on the other end of the cylinder provided with an enlarged chamber at its outer end, an admission port for said latter enlarged chamber, a chambered piston working in the cylinder and provided with a chambered extension working in said cylinder extension, the piston extension having its free end closed and provided with one or more lateral ports adjacent said end that are alternately open to the cylinder at one end of the stroke and to the said enlarged chamber at the other end of the stroke, the cylinder being provided with exhaust ports normally covered by the piston but uncovered at the end of its active stroke when the said extension ports are opened to the cylinder.

[Claims 6 and 7 not printed in the Gazette.

871,320. CARBURETER. LÉON BOLLÉE, Le Mans, France. Filed Aug. 3, 1903. Serial No. 168,007.



1. A vaporizer for liquid hydrocarbons, comprising a number of hydrocarbon-inlets, a separate air-inlet to each hydrocarbon-inlet, a common outlet-pipe and means for cutting off one or more of the pairs of hydrocarbon-inlets and air-inlets simultaneously as described.

2. A vaporizer for liquid hydrocarbons, comprising a number of inlets for hydrocarbon and means at all times to supply a constant flow to each inlet, an air supply to each said inlet, an outlet for the vaporized mixture and a throttle valve between the individual inlets and the outlet adapted to cut off or open more or fewer of the combined air and hydrocarbon inlets, substantially as described.

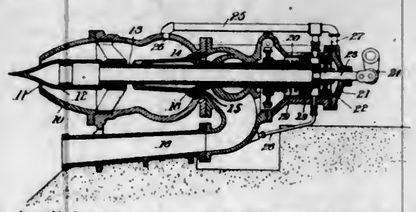
3. A vaporizer for liquid hydrocarbons, comprising an outlet pipe, a throttle valve opening thereto, a body part containing a plurality of chambers, a separate passage from each chamber to the throttle valve and an air supply and a hydrocarbon supply to each chamber, the throttle valve being adapted to cut off more or fewer of the chambers from the outlet pipe, substantially as described.

4. A carbureting apparatus comprising a casing, a combustible mixture outlet therefrom, a plurality of carbureters communicating with the casing, and means in said casing adapted to progressively uncover the outlets from the carbureters, substantially as set forth.

5. A carbureting apparatus comprising a casing, a combustible mixture outlet therefrom, a plurality of carbureters communicating with the casing, and a valve in said casing adapted to progressively uncover the outlets from the carbureters, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

871,321. RELIEF MECHANISM FOR HYDRAULIC NOZZLES. ELMER F. CASSEL, Seattle, Wash. Filed July 31, 1906. Serial No. 328,589.



1. A relief mechanism of the character described comprising an inclosed chamber, a device for regulating the flow of fluid through said chamber, a device for regulating the pressure in said chamber, means for controlling the operation of said flow regulating device, means adjacent the first mentioned means for controlling the operation of said pressure regulating device, and means for introducing an incompressible fluid under pressure between the means for controlling the flow regulating device and the means for controlling the pressure regulating device, the pressure upon said fluid being varied in proportion to the variations in pressure in said chamber.

2. A relief mechanism of the character described comprising a nozzle, a valve located inside the nozzle to regulate the flow of fluid through the latter, means for operating said valve, a second valve located in said nozzle to regulate the pressure in the latter, means for controlling said valve and located adjacent said valve operating means, and means for introducing an incompressible fluid under pressure between the means for controlling the flow regulating valve and the means for controlling the pressure regulating valve, the pressure upon said fluid being varied in proportion to the variations in pressure in said chamber.

3. A relief mechanism of the character described comprising a nozzle, a regulating valve thterefor provided with a piston, a relief valve also provided with a piston, and means for introducing an incompressible fluid under pressure between said pistons the pressure upon said fluid being varied in proportion to the variations in pressure in said nozzle.

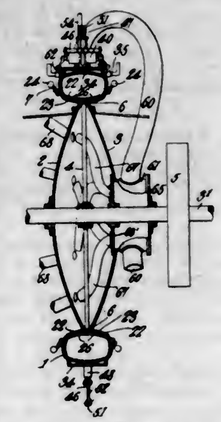
4. A relief mechanism of the character described comprising an inclosed chamber, a device for regulating the flow of fluid through said chamber, a device for regulating the pressure in said chamber, means for controlling the operation of said flow regulating device, means adjacent the first mentioned means for controlling the operation of said pressure regulating device, and means for conducting fluid under pressure from said chamber and introducing the same between the means for controlling the flow regulating device and the means for controlling the pressure regulating device, the pressure upon said fluid being varied in proportion to the variations in pressure in said chamber.

5. A relief mechanism of the character described comprising a nozzle, a regulating valve therefor provided with a piston, a relief valve also provided with a piston, and means for introducing fluid under pressure from said nozzle between said pistons.

[Claims 6 to 17 not printed in the Gazette.]

871,322. ROTARY ENGINE. JAMES L. CLAYLAND, Fort Smith, Ark. Filed Apr. 5, 1907. Serial No. 366,585.

1. In a rotary explosion engine, a cylinder, a piston arranged therein and provided with a projecting wing, a movable abutment, and means for introducing and discharging an explosive charge outside the abutment, the latter acting by impact on the projecting piston wing to effect rotative movement of the piston.



2. In a rotary explosion engine, a cylinder having an explosion space or chamber, in one wall thereof, a swinging abutment movable into and from the chamber, a revoluble piston having a projecting wing, on which the abutment acts by impact, and means for introducing an explosive charge into such chamber.

3. In a rotary explosion engine, a cylinder having an explosion chamber in one wall thereof, a swinging abutment movable into such chamber, a revoluble piston, and a piston wing including a roller on which the abutment acts by impact to effect rotative movement of the piston.

4. In a rotary explosion engine, a cylinder having an explosion chamber, and provided with an annular expansion or working space, a swinging abutment movable into and from the chamber, and a revoluble piston having a projecting wing against which the abutment acts by impact on the initial explosion, the abutment thereafter serving as the stationary wall of the expansion space.

5. In a rotary explosion engine, a cylinder having an explosion chamber, a swinging abutment movable into and from said chamber, said abutment having a projecting wing, a dash pot pocket into which said wing may move, a revoluble piston, and a wing carried by the piston and against which the abutment acts on its initial movement, the abutment thereafter serving as the stationary wall of an expansion space.

[Claims 6 to 16 not printed in the Gazette.]

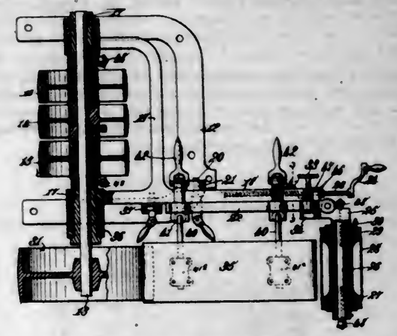
871,323. SANDING AND POLISHING MACHINE. DE LASKI T. CLEMONS, Hornell, N. Y. Filed Aug. 1, 1906. Serial No. 328,694.

1. In a sanding machine, the combination with a sanding or abrading belt and means for driving the same, of one or more pneumatic rollers and a pneumatic pad over which said belt runs.

2. In a sanding machine, the combination with a main frame and a driving shaft journaled therein, of a pulley carried by said shaft, an adjustable frame, a pneumatic roller or pulley mounted thereon, means for securing said adjustable frame to said main frame in different positions of adjustment to vary the working position of said pneumatic roller or pulley, an adjustable bracket mounted on said main frame, a second pneumatic roller or pulley carried by said bracket, and means for securing said bracket to said main frame in different positions of adjustment.

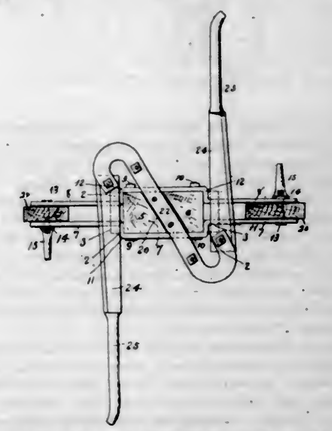
3. In a sanding machine, the combination with a sanding or abrading belt and a driving pulley for the same, of a pneumatic roller over which said belt runs, an adjustable pivoted frame so as to form an extension thereof and a slide adjustably mounted on said frame and by which slide said roller is operatively supported.

4. In a sanding machine, the combination with a sanding or abrading belt and a driving pulley for the same, of a pneumatic roller over which said belt runs, an adjustable pivoted frame, a slide adjustably mounted on said frame, and a bracket pivotally and adjustably attached to said slide and having a bearing spindle for said roller.



5. In a sanding or abrading machine, the combination with a pivotally mounted adjustable frame, of a pneumatic roller supported by said frame, a pneumatic pad adjustably mounted on said frame, a second adjustably supported roller, a sanding belt running over said rollers and pad, and a driving pulley for said belt.

871,324. WEDGE-MAKING MACHINE. HENRY R. COCHRAN, Camden, Ark. Filed May 27, 1907. Serial No. 376,009.

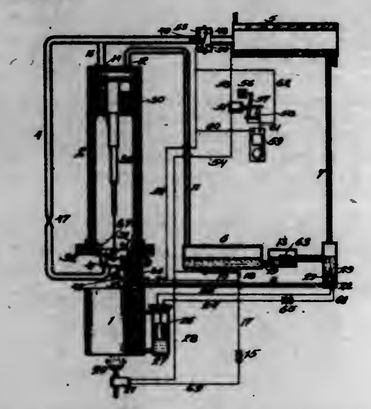


1. A wedge making machine consisting of an upright post, provided at its upper end with recesses 2, producing projections 3; a vertical slot 4, cut downwardly in the upper end of said post, thus leaving projections 5 and 6, one on each side of said slot; a lower bearing 16, having its U shaped part seated in said slot, its ends 18 and 19, turned up; a wedge 20, driven down in said slot 4, its upper end remaining a little above the upper surfaces or projections 5 and 6; an upper bearing 22, secured on the upper end of said wedge, said bearing being held apart by bolts and nuts 23; knives 24, hinged in the extreme ends of said bearings; clamping arms 7 and 8, secured to the projections 5 and 6, their ends extending beyond the edges of said posts; threaded bolts, passing horizontally through the extreme ends of said clamping arms; clamping nuts, screwing on the threaded ends of said bolts, said arms adapted to clamp and hold a block while operated on by

said knives, substantially as shown and described and for the purposes set forth.

2. A wedge making machine consisting of an upright post 1, provided with a vertical slot 4, cut downwardly in the upper end of said post; a lower bearing 16, having ends 18 and 19, turned up and secured to said post by means of a wedge driven in said slot; an upper bearing 22, secured on the upper end of said wedge; bolts and nuts 23, holding said bearings apart; knives 24, hinged between the extreme ends of said bearings; clamping arms 7 and 8, secured to the upper end of said post, their ends extending beyond the edges thereof; threaded bolts, extending horizontally through the extreme ends of said clamping arms, and clamping nuts screwing on the threaded ends of said bolts, said arms adapted to clamp and hold a block while operated on by said knives, substantially as shown and described and for the purposes set forth.

871,325. REFRIGERATING APPARATUS. CLYDE J. COLEMAN, New York, N. Y. Filed Oct. 1, 1902. Serial No. 125,546.



1. In a refrigerating apparatus, the combination with a source of motive medium of a compressor having a piston and a sealed casing for the same, valve mechanism for admitting the motive medium to such casing to actuate such piston and for exhausting the motive medium therefrom comprising intake and exhaust valves and cams arranged to co-act with the respective stems of such valves to move the valves and swinging weighted levers to accelerate the movement of the cams, and actuating means for such cams actuated by the piston, such cam-actuating means and the valve mechanism and valve-actuating means being sealed in such casing.

2. In a refrigerating apparatus, the combination with a source of motive medium of a compressor having a piston and a sealed casing for the same, valve mechanism for admitting and exhausting the motive medium to such casing to actuate such piston comprising intake and exhaust valves and weight-actuated means coöperative with the valves to cause quick opening and closing movements thereof, and means for actuating such valve mechanism from the piston, such actuating means and the valve mechanism being sealed in such casing.

3. In a refrigerating apparatus, the combination with means for dynamically expanding a motive medium, of a compressor having a casing and a piston therein, and a pump for feeding the motive medium to the dynamic expanding means, the pump having a piston controlled by the compressor piston through an opening which forms a sealed connection between the pump casing and compressor casing, and the pump casing also having sealed connections with a source of motive medium and with the dynamic expanding means, and the dynamic expanding means having a sealed connection with the compressor casing.

871,326. BOAT-PROPELLING MECHANISM. MARTIN DAMZIN, Detroit, Mich. Filed Jan. 22, 1907. Serial No. 353,474.



1. In a boat propeller, the combination with journal-blocks provided with clamping means, of shafts mounted in said blocks provided with spaced sleeves, paddles mounted in said sleeves and operating means connected to the lower ends of said paddles, for the purpose described.

2. In a boat propeller, the combination with journal-blocks provided with clamping means, of shafts mounted in said blocks provided with sleeves carrying set-screws, paddles mounted in said sleeves crank arms mounted on said gunwales and rods connected to the lower ends of said paddles connected to crank-arms, for the purpose described.

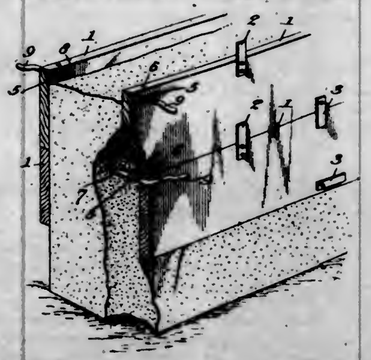
3. The combination with a boat, of shafts mounted on said boat, stems adjustably mounted on said shafts, blades pivotally mounted on said stems, caps secured on the lower ends of the stems and operating means adjustably connected to said caps for the purpose described.

4. The combination with a boat, of shafts mounted on the gunwales of said boat, paddles adjustably mounted on said shafts, cranks mounted on said gunwales and arms carried by said cranks, carrying adjustable rods connected to the lower ends of said paddles, for the purpose described.

5. The combination with a boat, of journal blocks secured to the gunwales of the boat, shafts mounted in said blocks provided with sleeves, stems adjustably mounted in said sleeves, feathering blades hinged on said stems and operating means connected to the lower end of the stems, for the purpose described.

[Claims 6 to 11 not printed in the Gazette.]

871,327. APPARATUS FOR CONSTRUCTING WALLS OF CONCRETE. CHARLES DIETRICHS, Little Ferry, N. J. Filed Nov. 17, 1906. Serial No. 343,806.

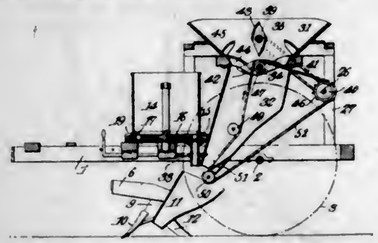


1. The combination, in apparatus of the character specified, of oppositely-arranged mold members, hooks pivoted on said mold members and adapted to swing in a plane perpendicular to said mold members, and a link adapted to be engaged by said hooks to hold the mold members in position.

2. In apparatus of the character specified, the combination with oppositely-arranged mold members of hooks pivotally mounted on said mold members to swing in a plane perpendicular to said mold members, said hooks each having the engaging portion of the hook extending inwardly between the mold members and having the handle portion extending outwardly beyond the mold members, and a link adapted to be engaged by said hooks and held between said mold members.

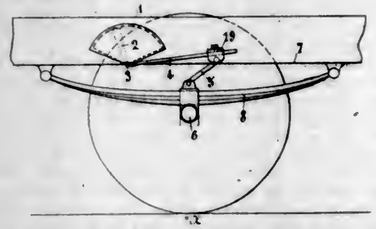
3. In apparatus of the character specified, the combination with oppositely-arranged mold members of pivoted hooks carried by said mold members and arranged to swing in a plane perpendicular to said mold members, said hooks having their engaging portions formed on circular arcs with the hook pivots as centers, and a link adapted to be engaged by said hooks.

871,328. CORN-PLANTER AND FERTILIZER-DROPPER. WILLIAM J. DOWNS, Fragrant, Ky. Filed Jan. 31, 1907. Serial No. 355,118.



An implement of the character indicated comprising a frame mounted upon an axle, a superposed hopper mounted upon the frame, a plurality of shafts journaled within the hopper and being operatively connected with the axle to rotate at different rates of speed, macerators carried by the shafts, blades mounted upon the inner sides of the hopper, and a chain actuated by the axle and passing through the hopper and chute thereof.

871,329. SHOCK-ABSORBER FOR MOTOR-CARS. ARTHUR DUTRIEUX, Le Quesnoy, France. Filed July 16, 1906. Serial No. 326,471.



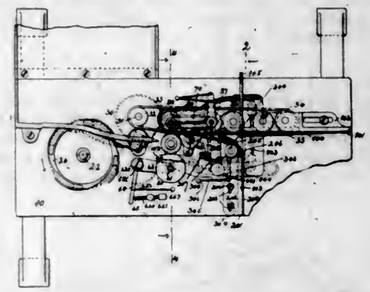
1. In combination with the supporting spring and body of a vehicle, a sector-shaped chamber on said body, a swinging pallet in said chamber having a number of passages therein, a yielding plate secured to said pallet near its center of movement and provided with holes opposite some of said passages but closed opposite others, and means connecting said spring to said pallet whereby the latter is caused to swing in correspondence with the bending of the former, substantially as described.

2. In combination with the supporting spring and body of a vehicle, a sector-shaped chamber on said body, a shaft passing through the chamber near the center of its arc-shaped wall, an operative connection between said shaft and said spring, a perforated pallet on said shaft, a yielding plate secured against one face of said pallet and an adjusting screw passing through the wall of said chamber back of said shaft, said chamber having a by-pass canal cut in its wall around said shaft and across the inner end of said screw, substantially as described.

3. In combination with the supporting spring and body of a vehicle, a sector-shaped chamber on said body, a swinging pallet within said chamber, a shaft for said pallet projecting out of the chamber, a lever on said shaft, and a connecting piece adjustably secured to said lever at one end and to a portion of said spring at its other end, substantially as described.

4. In a device of the class described, a sector-shaped chamber, a swinging pallet within the same, a yielding plate fixed against one face of said pallet, a safety valve in said pallet and a spring controlling said valve, substantially as described.

871,330. CANCELING AND POSTMARKING MACHINE. MARTIN V. B. ETHRIDGE, New York, N. Y. Filed June 1, 1905, Serial No. 263,237. Renewed Sept. 12, 1907. Serial No. 392,568.



1. In a machine of the class described, comprising an upright belt, a separator consisting of a rough cloth, a movable carrier therefor and means comprising a series of links and levers by which the act of feeding the letters to the belt automatically draws the cloth toward the belt.

2. In a machine of the class described, comprising an upright belt, a separator consisting of a rough cloth, a movable carrier therefor, and means whereby the act of pressing the letters against the belt automatically draws the cloth toward it.

3. In a machine of the class described, comprising an upright belt, a separator consisting of a rough cloth provided with a stiffening plate, a movable carrier therefor and means comprising a series of links and levers by which the act of feeding the letters to the belt automatically draws the cloth toward the belt.

4. In a machine of the class described, comprising an upright belt, a separator consisting of a rough cloth provided with a stiffening plate, a movable carrier therefor and means whereby the act of pressing the letters against the belt automatically draws the cloth toward it.

5. In a machine of the class described, comprising an upright belt, a flexible vertical guide mounted substantially parallel to the belt and having a rough surface on the side toward the belt in combination with means for moving the guide to and from the belt, consisting of a parallel motion, one lever of which is actuated from the belt and the other lever of which is secured to the guide.

[Claims 6 to 29 not printed in the Gazette.]

871,331. DEVICE FOR PICKING UP LODGED OR BATTERED-DOWN GRAIN. EWALD W. FRAASCH, Bellingham, Minn. Filed Mar. 29, 1907. Serial No. 365,328.

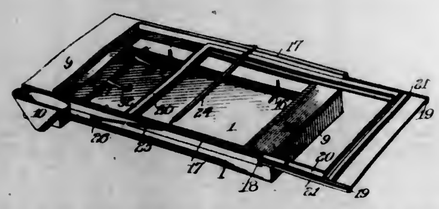


1. The combination of the rear and front platform sills 1 and 2; pick-up finger, consisting of a piece of angle steel 5, having an upward bend 8, provided with a perforation 9; a horizontal extension 5', provided with perfora-

tions 10 and 11; a rear extension provided with perforations 6 and 7; bolts and nuts 6^1 and 7^1, securing said rear extension to the rear and front platform sills, respectively; guard projection 3, fitting into said perforation 9; spring wire 12, secured in perforations 10 and 11, running thence backwardly and upwardly to a point immediately over said guard projection 3, substantially as shown and described and for the purposes set forth.

2. In combination with a harvester platform, a pick-up finger, consisting of a bar of steel having a rear horizontal part 5; an upward bend 8, and forward projection 5^1, said rear part provided with perforations 6 and 7, said upward bend 8 provided with perforation 9, said forward extension with perfortaions 10 and 11, and a spring wire secured to the front end of said finger, extending upwardly and backwardly, the rear part of said bar secured to the under side of said platform, guard projection 3, secured in said perforation 9, substantially as shown and described and for the purposes set forth.

871,332. APPARATUS FOR DEVELOPING PHOTOGRAPHIC PLATES. AUGUSTINE GAFFNEY, Rochester, N. Y., assignor, by mesne assignments, to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Jan. 23, 1903. Serial No. 140,256.



1. In an apparatus for developing photographic plates, the combination with a tray and a reservoir having an open side extending across the tray and leading into the latter, of a retaining bar extending over said open side and adapted to engage a plate holder arranged on the tray and yielding connections between its ends and the tray.

2. In an apparatus for developing photographic plates, the combination with a tray and reservoirs having open sides arranged in opposition to each other at opposite sides of the tray, of stops between the tray and reservoirs, means for supporting a plate holder centrally over the tray and a closure for the latter.

3. The combination with a tray, a reservoir connected thereto and a filing device leading into the reservoir and movably connected thereto whereby it may be maintained in an upright position irrespective of the relative position of the reservoir, of means for securing a plate holder on the tray.

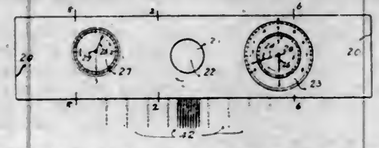
4. The combination with a tray, a reservoir connected thereto at one side, and a funnel arranged at one end of the reservoir and revolubly mounted thereon and provided with a passage leading into the latter and located in proximity to the tray, of means for securing a plate holder to the tray.

5. The combination with a tray, reservoirs located at the ends thereof and stops between the latter and the tray, of supports arranged in the tray and adapted to engage the edges of a plate, means for securing a plate holder on the tray and a closure for the latter.

[Claims 6 to 18 not printed in the Gazette.]

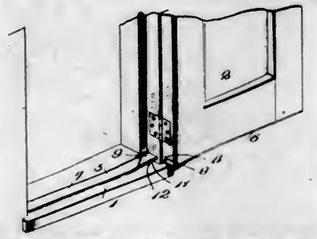
871,333. SPACING INSTRUMENT. GANDOLFO GIAMBRA, Paterson, N. J. Filed July 30, 1906. Serial No. 328,316.

In a spacing instrument, a plurality of spacing fingers, and means for separating and drawing said fingers together in unison, in combination with a graduated dial indicating hands adapted to move over the face of said dial, and means operatively connecting the spacing fingers



and the hands on the dial, so that they all work together substantially as set forth.

871,334. WEATHER-STRIP. FRANK GIBBON, Pocatello, Idaho. Filed May 15, 1907. Serial No. 373,781.



1. The combination with a door and its sill, of a pair of weather strips, one carried by the door and the other by the sill, and each having a yieldable horizontal flange adapted to engage the corresponding flange upon the other, and means independent of said strips for supporting the inner end of one of said strips, whereby they will be caused to engage with and guide each other, substantially as set forth.

2. The combination with a door and its sill, of a pair of weather strips, one carried by the door and the other by the sill, and each having a yieldable horizontal flange adapted to engage the corresponding flange upon the other, the ends of said strips being bent angularly, and supports for holding said angularly bent inner ends of the strips whereby they will engage with and guide each other, substantially as set forth.

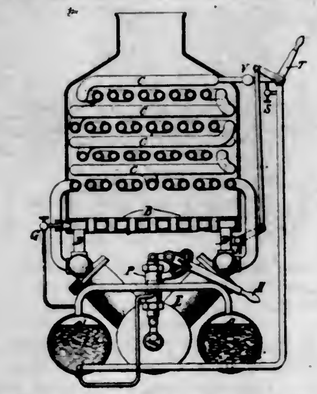
3. The combination with a door and its sill each formed with a longitudinally extending groove, of a pair of angle strips, one carried by the door and the other by the sill, the strip upon said sill having a flange to enter said groove and a flange to rest upon the top of the sill when the door is open, the other strip having a flange to enter the groove in the door and a flange to take under the flange upon the top of said sill and inclined supports upon the door and sill for holding the inner ends of said strips whereby they will engage with and guide each other, substantially as set forth.

4. The combination with a door and its sill, each having a longitudinal groove, of a pair of angle strips each having a substantially vertical flange to enter one of said grooves and a substantially horizontal flange, one strip being carried by the door and the other by the sill, staples for retaining the substantially vertical flanges of the strips in said grooves and an inclined support arranged upon the sill beneath the inner end of the horizontal flange of the strip upon said sill, for the purpose set forth.

5. The combination with a door and its sill, each having a longitudinal groove, of a pair of angle strips each having a substantially vertical flange to enter one of said grooves and a substantially horizontal flange, one strip being carried by the door and the other by the sill, staples for retaining the substantially vertical flanges of the strips in said grooves, and inclined supports arranged upon the door and sill, one beneath the inner end of the horizontal flange of the sill strip, and the other above the horizontal flange of the door strip for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

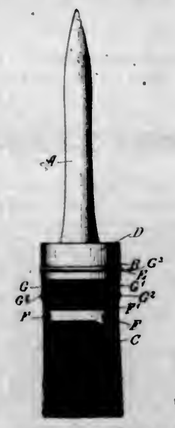
871,335. APPARATUS FOR GENERATING AND UTILIZING POWER IN ENGINES AND SELF-PROPELLED VEHICLES. MILAN W. HALL, New York, N. Y., assignor of one-tenth to George H. Fraser, Brooklyn, N. Y. Filed Oct. 5, 1901. Serial No. 77,658.



1. A reservoir for hydrocarbon liquid, a heater vaporizing and heating said liquid, a burner therefor, an engine, means feeding said liquid to said heater, means compressing said liquid, means communicating between said heater and said burner, means controlling the feed from said reservoir to said heater, independent means controlling said feed, means for feeding from said heater to said burner independently of said engine, and means for feeding from said reservoir to said burner independently of said heater.

2. A reservoir for hydrocarbon liquid, an engine, a pump operated by said engine and applying pressure to the liquid in said reservoir, and a hand means for operating said pump for feeding said reservoir adapted to be adjusted and set for regulating said pump.

871,336. BRUSH. HARVEY W. HASCY, Hempstead, N. Y. Filed May 8, 1907. Serial No. 372,591.

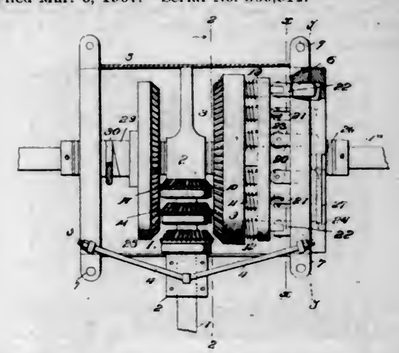


1. A brush comprising bristles, a handled head chambered to receive the bristles and provided with an annular groove in its chamber, a bridle surrounding the bristles in advance of the head and provided with rearwardly extending lugs, and arms pivotally connected with said lugs and extending into said chamber, said arms being provided with projections arranged to enter said groove.

2. A brush comprising bristles, a handled head chambered to receive the bristles, a bridle surrounding the bristles in advance of the head and provided with rearwardly extending lugs, and arms pivotally connected with said lugs and extending into said chamber at opposite sides of the head.

3. A brush comprising bristles, a handled head chambered to receive the bristles, a bridle surrounding the bristles in advance of the head and arms pivotally connected at their forward ends with the bridle, said arms projecting into said chamber at opposite sides of the head.

871,337. CHANGEABLE-SPEED GEARING. JESSE G. HAWLEY and CHARLES D. HAWLEY, Stratford, Conn. Filed Mar. 6, 1907. Serial No. 360,911.



1. The combination of a drive shaft, a driven shaft, a series of gear elements on the drive shaft and mounted for driving connection therewith, a series of gear elements all of which are movable with the driven shaft, and means for connecting said last named gear elements successively with the first named gear elements and for maintaining the gears one after another in mesh.

2. The combination of a drive shaft, high, intermediate, and low speed gear elements on said drive shaft, a driven shaft, a series of concentric gear rings mounted on and movable with the driven shaft, means for causing the successive engagement of said rings with the low speed gear element, intermediate speed gear element, and high speed gear element of the drive shaft, in turn and for holding each of the speed gear elements in mesh after another has been caused to mesh, and means for clutching the low and intermediate speed gear elements to the drive-shaft, said clutching means permitting said last named gear elements to over-run.

3. The combination of a drive shaft, a series of bevel pinions mounted on said shaft, a driven shaft mounted at substantially right angles to the drive shaft, a series of gear rings mounted on the driven shaft to move therewith and longitudinally adjustable on such shaft, means for moving said gear rings one after the other into engagement with said bevel pinions and for holding the previously meshed gears in engagement after a succeeding engagement has been effected, and means for clutching sundry of said bevel pinions to the drive shaft, said clutching means permitting the clutched pinions to over-run.

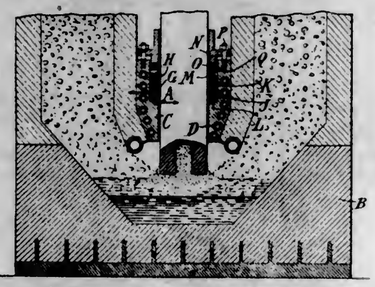
4. The combination of a drive shaft, a series of bevel pinions mounted thereon, a driven shaft, a series of bevel gear rings of different diameters mounted on said driven shaft to turn therewith and movable relatively on the shaft, and means for effecting a meshing engagement of the respective bevel gear rings with the bevel pinions in succession without disengaging any gear.

5. The combination of a drive shaft, high, intermediate, and low speed bevel pinions mounted on said shaft, the intermediate and low speed pinions having a clutching engagement with said shaft and adapted to turn free thereon when moved faster than the shaft itself in the forward rotation of the latter, the high speed pinion being fast on the shaft, a driven shaft, a series of concentrically mounted bevel gear rings on said driven shaft and mounted to turn therewith but independently movable longitudinally there-

of, said rings being located in registry with the respective bevel pinions of the drive shaft, a cam mounted to turn on said driven shaft, means interposed between said gear rings and said cams for effecting the meshing engagement of one gear ring after the other with the respective pinions in turn, such means being actuated by said cam the arrangement being such that the continued movement of the disk in one direction will effect the successive engagement of the gears without disengaging any gear.

[Claims 6 to 9 not printed in the Gazette.]

871,338. ELECTRIC FURNACE. PAUL L. T. HÉROULT, La Praz, France, assignor to Societe Electro-Metallurgique Francaise, Froges, France. Filed Apr. 21, 1906. Serial No. 313,022.



1. The combination in an electric furnace, of an electrode, a stuffing box surrounding the electrode at the point where it enters the furnace, and means for making a contact with said electrode comprising divided rings of conducting material adapted to surround the electrode, the adjacent rings having contacting faces which are wedge-shape so that the pressing of the adjacent rings together makes a more intimate contact between them, and also a more intimate contact of one ring with the electrode.

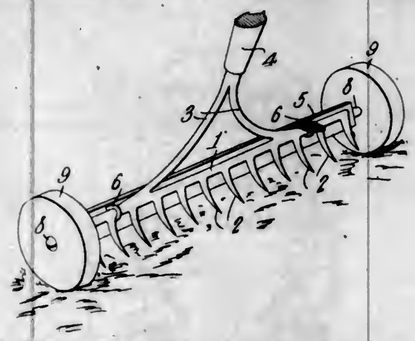
2. A contact for an electrode comprising divided rings G and H made up of a series of separate blocks G' H' of carbon adapted to surround the electrode, the ring G having an upper conical face J and the ring H having a lower conical face K in engagement therewith, so that the pressing of the adjacent rings together makes a more intimate contact between them, and also a more intimate contact of one ring with the electrode.

3. The combination in an electric furnace, of an electrode, a stuffing box surrounding the electrode at the point where it enters the furance, and means for making a contact between said furnace and said electrode comprising divided rings G and H made up of a series of carbon blocks G' and H' adapted to surround the electrode, the ring G having an upper conical face J and the ring H having a lower conical face K in engagement therewith, the inner face L of the lower wall of the stuffing box being correspondingly conical, a copper ring M above said carbon rings, a ring Q of packing material above said copper ring, and a gland N for exerting pressure upon said packing ring and thereby upon said copper and carbon rings, said gland having a flange R protecting the packing ring Q from the heat of the electrode.

871,339. HAND-RAKE ATTACHMENT. FREDERICK F. HORN, Colorado Springs, Colo. Filed Mar. 7, 1907. Serial No. 361,137.

1. An attachment for hand rakes embodying a flat plate having journals projecting longitudinally from its opposite ends, rollers mounted to turn on said journals, and devices for securing the rake in coöperative relation with one of the flat sides of the plate and having its prongs projecting downwardly beyond one of its longitudinal edges.

2. The combination with a scraper embodying a horizontal plate, and supporting devices thereon arranged to coöperate with the ground, of a rake having a cross piece provided with prongs extending downwardly below one of the scraping surfaces of said plate, and devices coöperating with said cross piece for securing the latter in coöperative relation with said scraper.

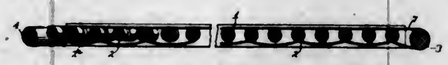


3. The combination with a supporting member, having journals formed at its ends, and rollers mounted on said journals, of a rake embodying a cross piece having depending prongs thereon, and staples coöperating with said cross piece for securing the latter in coöperative relation with said supporting member.

4. The combination with a plate, and supporting rollers journaled on its ends, of a rake having prongs projecting downwardly beyond one edge of said plate, means for securing said rake in coöperative relation with said plate, and a scraping surface formed on the plate opposite to the rake prongs and extending parallel to the axis of the rollers.

5. The combination with a plate having an edge adapted to serve as a scraper and provided with journals extending longitudinally from opposite ends thereof, and supporting rollers mounted on said journals, of a rake embodying a cross piece having prongs extending downwardly therefrom below the lower edge of said plate, and staples straddling said cross piece and extending through said plate for securing the rake in coöperative relation with the forward surface thereof.

871,340. CONVEYER SYSTEM. FRANK C. HEDINA, North St. Paul, Minn. Filed June 5, 1907. Serial No. 377,329.

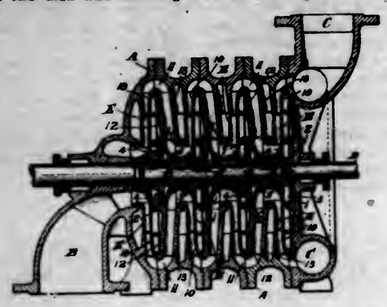


1. In a carrier system, the combination with a multiplicity of carrier rollers, of an endless belt, the upper portion of which is carried over and wound completely around certain of the said rollers, and the lower portion of which is carried under and wound completely around certain of the other rollers, substantially as described.

2. A carrier system, the combination with a multiplicity of carrier rollers and end rollers, said rollers having grooves in their intermediate portions, of an endless driving belt, the upper portion of which is passed over all of the said rollers and is wound around certain thereof, and the lower portion of which belt is carried under and wound around certain of the other rollers, substantially as described.

871,341. CENTRIFUGAL AND TURBINE PUMP AND THE LIKE. CARL H. JAEGER, Leipzig, Germany, assignor to International Steam Pump Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 14, 1907. Serial No. 352,128.

1. A centrifugal, turbine, or similar pump or motor having an impeller provided with a balancing disk facing the impeller inlet, and a casing wall on the opposite side of the disk from the impeller inlet closing the space behind the disk and forming a shaft bearing.

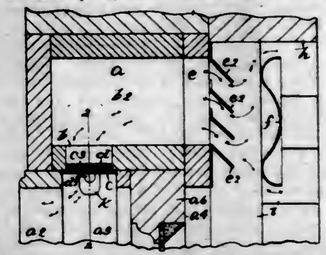


2. A centrifugal, turbine, or similar pump or motor having an impeller provided with a balancing disk facing the impeller inlet, the adjacent faces of said impeller inlet and disk forming a continuous curve, and a casing wall on the opposite side of the disk from the impeller inlet closing the space behind the disk and forming a shaft bearing.

3. A multi-stage centrifugal, turbine, or similar pump or motor having a plurality of impellers, the second and subsequent impellers being provided with balancing disks opposite the impeller inlets, in combination with casing or partition walls between the successive impellers extending to the shaft and forming shaft bearings between the disks and preceding impellers.

4. In a multi-stage centrifugal, turbine, or similar pump or motor, the combination with impellers E having the curved inlets and curved counter-balance disks *e* facing the inlets, of partition walls 12 forming shaft bearings and closing the chambers between the disks and the preceding impeller chambers.

871,342. VENTILATOR. GEORGE KABUREK, Jersey City, N. J. Filed July 11, 1907. Serial No. 383,242.



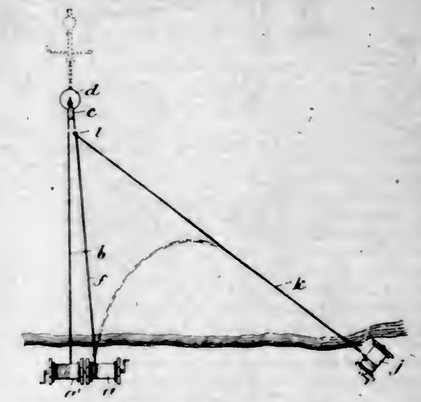
1. A ventilator, comprising a window frame provided with upper and lower sash and runs therefor, a hollow top member in communication with the outer air and with the interior of a building through an opening in said lower sash run, a plurality of inclined plates at the exterior communication of said top member and a deflector plate adjacent said inclined plates.

2. A ventilator, comprising a window frame provided with upper and lower sash and runs therefor, a hollow top member in communication with the outer air and with the interior of a building through an opening in said lower sash run, means for controlling said opening and means for preventing said lower sash from closing said opening.

3. A ventilator, comprising a window frame provided with upper and lower sash and runs therefor, a hollow top member in communication with the outer air and with the interior of a building through an opening in said lower sash run, means for controlling the passage of air through said opening and bumpers adjacent to said opening to prevent the closure thereof by said lower sash when raised.

4. A window frame, comprising side and top members, upper and lower sashes, runs for each of said sashes, said lower sash run being provided with an opening in communication with the outer air and means for preventing said lower sash from closing said opening.

871,343. APPARATUS FOR CONTROLLING FISHING-NETS. ISAAC A. KETCHAM, New York, N. Y. Filed Nov. 24, 1906. Serial No. 344,818.



1. The combination with a fishing net an operating cable secured to said net and means for drawing the same into the sea, of an intake cable secured at or near the forward end of said net and means for operating said cable to draw said net to the beach, substantially as described.

2. The combination with a fishing net, a cable secured thereto and means for operating said cable in one direction, of independent means for drawing said net to the beach, substantially as described.

3. The combination with a fishing net, a cable secured to said net, and means for operating said cable in one direction comprising a pulley anchored in the sea and a windlass, of an independent cable secured to said net, and means for actuating said cable to draw the net to the beach, substantially as described.

4. The combination with a fishing net, a cable secured to said net, a windlass engaging one end of said cable a corresponding windlass engaging the other end of said cable, and a pulley anchored in the sea engaging with said cable, of an independent cable secured to said net at or near the forward end of the net and a windlass attached to said cable, whereby said net may be drawn upon the beach, substantially as described.

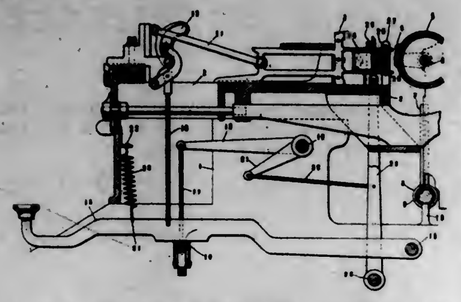
871,344. TYPE-WRITING MACHINE. WELLINGTON P. KIDDER, Boston, Mass., assignor to Parker Machine Company, Buffalo, N. Y., a Corporation of New York. Filed Apr. 25, 1906. Serial No. 313,529.

1. In a typewriting machine, the combination with an inking ribbon, of means for supporting the same in a position removed from the printing point so as to expose the writing, and means for rendering the ribbon slack during the projection of the type bars to the printing point.

2. In a typewriting machine, the combination with means for supporting the inking ribbon in a position away from the printing point so as to expose the writing, and means operated by the key levers for rendering the ribbon slack during the thrust of a printing instrumentality to impression.

3. In a typewriting machine, the combination with means for normally supporting the inking ribbon in a position removed from the platen so as to expose the writing, of means operated by the key levers and engaging the ribbon in the vicinity of the printing point for rendering the

same slack during the projection of the type bars toward the platen.

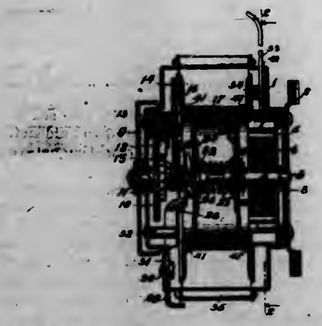


4. In a typewriting machine, the combination with means for supporting an inking ribbon in a position normally removed from and disclosing the printing point, of means operated through a connection with the universal bar for rendering the ribbon slack during the thrust of a printing instrumentality to impression.

5. In a typewriting machine, the combination with an inking ribbon, of means for supporting the same in a position removed from the platen so as to expose the writing, and means engaging the ribbon in proximity to the printing point and operated through a connection with the universal bar adapted for rendering the same slack during the projection of the type bars against the platen.

[Claims 6 to 32 not printed in the Gazette.]

871,345. FISHING-REEL. EDWARD E. KLEINSCHMIDT, New York, N. Y. Filed Apr. 5, 1905. Serial No. 253,927.



1. In a fishing reel the combination of a line spool, a shaft, friction disks having loose bearings on said shaft and normally engaging said spool, and means for moving said disks longitudinally of the shaft to thereby release them from the spool.

2. In a fishing reel the combination of a line spool, a shaft, friction disks having loose bearings on said shaft and normally engaging said spool, means to rotate said shaft and thereby the spool when the line is to be wound, and means to move said disks into and out of engagement with the spool.

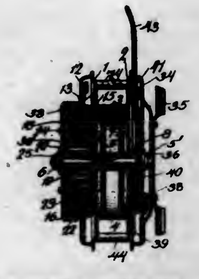
3. In a fishing reel the combination of a line spool, a shaft, sleeves having a loose bearing on said shaft, friction disks secured to said sleeves and normally engaging said spool, and means to shift one of said sleeves longitudinally of the shaft to thereby release the disks from engagement with the spool.

4. In a fishing reel the combination of a line spool, a shaft, sleeves having a loose bearing on said shaft, friction disks secured to said sleeves and normally engaging said spool, a train of reducing gears connected to said shaft, one of said gears being secured to one of said sleeves, and means to shift said latter sleeve longitudinally of the shaft to release the disks from engagement with the spool.

5. In a fishing reel the combination of a line spool, a shaft, sleeves having a loose bearing on said shaft, friction disks secured to said sleeves and normally engaging said spool, a train of reducing gears connected to said shaft including a pinion having a loose bearing on the shaft and rigidly secured to one of said sleeves, a flange secured to said pinion, and a throw-off lever the movement of which in one direction will shift the pinion and its attached sleeve to thereby release the friction disks from engagement with the spool.

[Claims 6 and 7 not printed in the Gazette.]

871,346. FISHING-REEL. EDWARD E. KLEINSCHMIDT, New York, N. Y. Filed July 24, 1906. Serial No. 327,514.



1. In a fishing reel the combination of a line spool, a spring adapted when unwinding to rotate said spool in a direction to draw in the line, and means intermediate said spring and spool to automatically disconnect them to permit the spool to continue to rotate by reason of its inertia when the spring is completely unwound.

2. In a fishing reel the combination of a line spool, a shaft on which said spool is mounted, a spring adapted to rotate said shaft and spool in a direction to draw in the line, and means connecting one end of said spring with the shaft to hold the former stationary when the spring is being wound and to automatically disconnect the spring and shaft to permit the spool to continue to rotate by reason of its inertia when the spring is completely unwound.

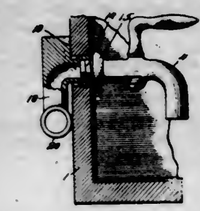
3. In a fishing reel the combination of a line spool, a shaft on which said spool is mounted, a spring adapted to rotate said shaft and spool in a direction to draw in the line, and a yielding clutch connecting one end of said spring and said shaft to hold the former stationary when the spring is being wound and to automatically disconnect the spring and shaft to permit the spool to continue to rotate due to its inertia when the spring is completely unwound.

4. In a fishing reel the combination of a line spool, a spring adapted to rotate said spool in one direction, a casing inclosing said spring and to which it is connected at one end, a shaft on which said spool is mounted, a collar having a loose bearing on said shaft and to which the other end of said spring is connected, means for rotating said casing to thereby wind the spring, and means between said collar and shaft adapted to hold the former stationary when the spring is being wound and which will permit the shaft and spool to continue to rotate when the spring is completely unwound.

5. In a fishing reel the combination of a line spool, a spring adapted to rotate said spool, a shaft on which said spool is mounted, a collar having a loose bearing on said shaft to which one end of the spring is connected, said collar constituting a clutch member adapted to engage said shaft to prevent movement of the collar when the spring is being wound, and to cause a rotation of the shaft and spool when the spring is unwinding, and to permit of the continued rotation of said shaft and spool due to their inertia when the spring is completely unwound.

[Claims 6 to 18 not printed in the Gazette.]

871,347. WASHTUB-FITTING. OTTO H. KLESSIG, Houghton, Mich. Filed Jan. 19, 1907. Serial No. 353,170.



1. As a new article of manufacture, a coupling comprising a horizontal, hollow portion provided with threaded ends, an auxiliary, vertical, hollow portion integral with and positioned intermediate the ends of said horizontal portion, a horizontal faucet-carrying hollow portion integral with and intermediate the ends of said auxiliary portion, and thereby producing a bearing portion upon the outer end of the auxiliary portion, and said faucet-carrying portion provided with a threaded end.

2. A coupling comprising a horizontal primary portion, a vertical auxiliary portion integral with said primary portion, and a faucet-carrying portion integral with said auxiliary portion intermediate its ends and positioned at right-angles to said primary and auxiliary portions.

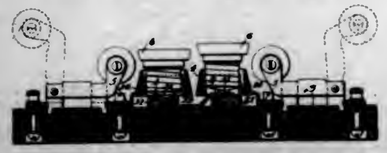
3. A coupling comprising a primary, hollow portion, an auxiliary, hollow portion secured at right-angles to said primary portion, and a hollow supporting-portion secured at right-angles to and intermediate the ends of said auxiliary portion.

4. A coupling comprising a primary portion, an auxiliary portion, a faucet-carrying portion secured to said auxiliary portion, and a bearing rib or enlarged portion formed upon said auxiliary portion.

5. A coupling, comprising a horizontal, hollow portion, a vertical, hollow portion integral with said horizontal portion intermediate its ends, a horizontal, hollow faucet-supporting portion integral with said vertical portion intermediate its ends, a bearing rib or enlarged portion formed near the outer end of said auxiliary portion and upon the same side with said faucet-carrying portion.

[Claims 6 to 12 not printed in the Gazette.]

871,348. PANEL-BOARD. HUBERT KRANTZ, Brooklyn, N. Y. Filed July 6, 1905. Serial No. 268,310.



1. In a panel board, the combination of fuse plug receptacles, with underlying bus-bars in direct contact with a terminal of each of a number of said receptacles.

2. In a panel board, the combination of fuse plugs and receptacles with an underlying bus-bar in direct contact with a terminal of each of certain of said receptacles, and a branch line piece leading into and directly contacting with the fuse plug contained in said receptacles.

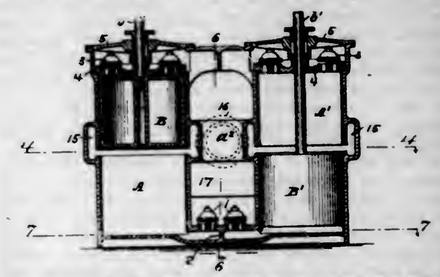
3. In a panel board, the combination of bus-bars with a fuse plug receptacle comprising a metal shell, said receptacle surmounting one of said bus-bars, a fuse-plug within said shell and providing a terminal spaced away from said shell, a branch line piece in contact with said fuse-plug terminal, and an extension from another bus-bar terminating below the shell of said receptacle and in direct contact therewith.

4. In a panel board, a pair of bus-bars, cross-bars in part underlying one of said bus-bars in direct contact therewith and extending over the other bus-bar and insulated therefrom, and fuse-plug receptacles in direct contact with said cross-bars.

5. In a panel board, the combination with bus-bars of diverse polarity, of cross-bars extending from contact therewith and terminating above the opposite bus-bar and insulated therefrom, safety fuse devices mounted directly over said cross-bar terminations and having terminals exposed and making direct contact therewith, safety fuse devices also mounted upon said bus-bars and having terminals exposed and making direct contact with the underlying bus-bars, and branch line pieces extending into said devices and making direct contact with their other terminals.

[Claims 6 to 13 not printed in the Gazette.]

871,349. AIR-PUMP. GEORGE DE LAVAL, East Orange, N. J., assignor to The Blake & Knowles Steam Pump Works, New York, N. Y., a Corporation of New Jersey. Filed May 28, 1906. Serial No. 319,131.



1. A pump having two double acting valveless suction pump cylinders with a common delivery chamber formed by the space between the cylinders and front and rear inclosing walls.

2. A pump having two double acting valveless suction pump cylinders with a common delivery chamber formed by the space between the cylinders and front and rear inclosing walls, and a common suction chamber between the cylinders.

3. A pump having two double acting valveless suction pump cylinders with a common delivery chamber formed by the space between the cylinders and front and rear inclosing walls, a common suction chamber between the cylinders, a central suction connection on one side of the pump, and a delivery connection on the opposite side of the pump.

4. The combination with two double acting valveless suction pumps having common delivery and suction chambers between the cylinders formed by the space between the cylinders and front and rear inclosing walls, of a beam above the cylinders connecting the pump rods, and one or more direct acting steam cylinders above the beam for operating the pump.

5. The combination with two double acting valveless suction pumps having common delivery and suction chambers between the cylinders formed by the space between the cylinders and front and rear inclosing walls, of a beam above the cylinders connecting the pump rods, an entablature above the beam, and one or more direct acting steam cylinders mounted directly on the entablature.

[Claim 6 not printed in the Gazette.]

871,350. PERCUSSION-DRILL, &c. BRADFORD H. LOCKE, New York, N. Y. Filed Nov. 23, 1906. Serial No. 344,734.

1. In a machine of the character described, the combination of a shell or casing, an internally grooved cylinder mounted to rotate therein, an end thrust ball bearing at the forward end of said cylinder, a lateral ball bearing at the rear end of said cylinder, an adjustable bearing at the rear end of said cylinder to prevent excessive movement from the forward thrust bearing, a spirally grooved piston

within the cylinder, a ball coupler engaging the piston and the cylinder, a piston shaft and a spring to drive the piston shaft in one direction.

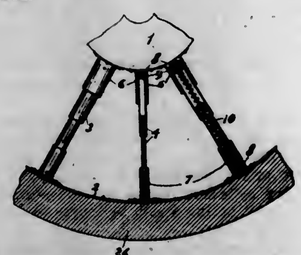


2. In a machine of the character described, the combination of an internally grooved rotating cylinder, an externally, spirally grooved piston mounted to reciprocate in said cylinder, a ball coupler adapted to engage the cylinder and the piston and a shell or casing inclosing the cylinder and piston, said piston having a return channel for the ball coupler communicating at its forward end with the chamber forward of the piston, whereby the air compressed in the chamber in front of the piston drives the ball coupler backward through said channel.

3. In a machine of the character described, the combination of an internally grooved rotating cylinder, an externally, spirally grooved piston, a ball coupler engaging the cylinder and piston, said piston having a longitudinal return channel for the ball coupler, a shell or casing inclosing the cylinder and piston and a plunger carried by the head of the shell or casing and entering the return channel in the piston to drive the coupler rearwardly through said channel.

4. In a machine of the character described, the combination of an internally grooved rotating cylinder, an externally, spirally grooved piston, a ball coupler engaging the piston and the cylinder, said piston having a longitudinal return channel for the coupler, a shell or casing inclosing the cylinder and piston and a plunger carried by the head end of the shell or casing and entering said return channel, said plunger having a longitudinal bore communicating with the chamber in front of the piston, whereby a blast of air is driven through the bore of the plunger into the return channel to drive the coupler rearwardly through the same.

871,351. RESILIENT VEHICLE-WHEEL. CHARLES J. MALINGS, Elyria, Ohio. Filed July 30, 1906. Serial No. 328,802.



1. A resilient vehicle-wheel, consisting of a hub and rim portion provided with a series of guide-lugs, and a series of telescoping spring-resisted spokes pivotally-mounted and secured within said guide-lugs.

2. A resilient vehicle-wheel comprising a hub and rim portion, a series of guide-lugs secured thereto, a series of telescoping spokes pivotally-mounted and secured within said guide-lugs, and a series of coiled springs mounted within and inclosed by said spokes.

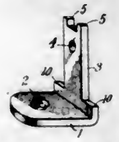
3. A wheel, comprising a hub and rim portion, a series of guide-lugs secured thereto, a series of telescoping main and guide-spokes pivotally-mounted within said guide-lugs, and a series of coiled springs mounted and inclosed by said main spokes.

4. A wheel, consisting of a hub and rim portion, a series of guide-lugs secured thereto, and a series of telescoping spring-resisted main spokes and guide-spokes pivotally-mounted within said guide-lugs, said guide-spokes being mounted intermediate said main spokes.

5. A wheel, consisting of a hub and rim portion, a series of guide-lugs secured thereto, and a series of telescoping guide-spokes and spring-resisted main spokes pivotally-mounted within said guide-lugs, said guide-spokes being arranged in pairs and mounted intermediate said main spokes.

[Claims 6 to 18 not printed in the Gazette.]

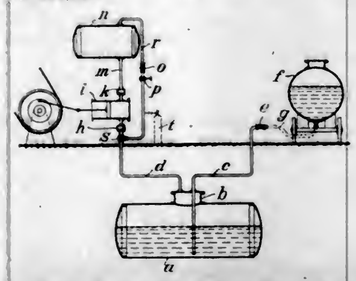
871,352. SPRING BINDING-POST. HORACE G. MARTIN, Rutherford, N. J. Filed Oct. 27, 1905. Serial No. 284,600.



1. A spring binding post comprising, in combination, a base member having a standard extending from one side thereof and perforated near its top, a stop movable freely on the standard and provided with outwardly extending finger pieces, a spring intermediate to the base and the stop, and means at the top of the standard to prevent the stop from being disengaged therefrom, as set forth.

2. A spring binding post comprising, in combination, a perforated base member having shoulders at one side, a standard rising from between the shoulders, the standard being perforated near its top, with outwardly extending studs adjacent thereto, a stop having a slot to receive the standard, said stop being movable freely thereon and provided with outwardly extending finger pieces, and a coil spring around the standard between the said shoulders and the stop, as set forth.

871,353. STORAGE AND TRANSFERENCE OF INFLAMMABLE LIQUIDS. CARL MARTINI and HERMANN HÜNEKE, Hanover, Germany. Filed Mar. 22, 1907. Serial No. 363,932.

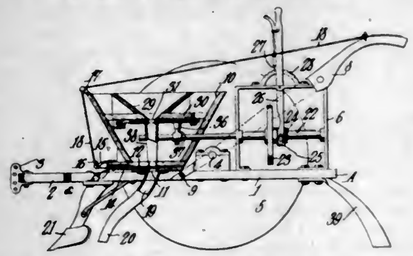


1. In a device of the character described, the combination of a storage receptacle for inflammable liquids located below the level of the ground, a liquid-conveying pipe leading from the bottom thereof, a gas pipe leading from the top thereof, and a three-way cock in said pipe above the surface of the ground, the said gas pipe branching from the three-way cock, one branch leading to a suction pump and the other to a gas-pressure bottle and a gas-storage receptacle, which latter is also connected directly to the discharge end of the pump, substantially as described.

2. In a device of the character described, the combination of a storage receptacle, a liquid-conveying pipe leading from the lower part of the receptacle, a gas pipe leading from the upper part of the receptacle, a gas-storage tank, a pump having its inlet connected with the gas pipe and its outlet with the said tank, a discharge pipe leading from the tank to the gas pipe at a point between the pump and the receptacle, and adjustable means for connecting the gas pipe either with the pump inlet or with the discharge pipe of the tank.

3. In a device of the character described, the combination of a storage receptacle, a liquid-conveying pipe leading from the lower part of the receptacle, a gas pipe leading from the upper part of the receptacle, a gas-storage tank, a pump having its inlet connected with the gas pipe and its outlet with the said tank, a discharge pipe leading from the tank to the gas pipe at a point between the pump and the receptacle, a reducing valve in said discharge pipe, and adjustable means for connecting the gas pipe either with the pump, for the withdrawal of gas from the receptacle, or with the discharge pipe of the tank, for the passage of compressed gas to the receptacle from the tank.

871,354. PLANTER. JOHN C. MORGAN, Polk county, N. C. Filed Mar. 12, 1907. Serial No. 361,955.



1. The combination with a portable receptacle having an outlet; of a supplemental hopper detachably mounted within the receptacle and having an outlet, a valve normally closing the outlet, and mechanism operated by the movement of the machine for actuating the valve at predetermined periods.

2. In a machine of the character described the combination with a portable receptacle having an outlet; of a supplemental hopper detachably mounted upon the receptacle and having an outlet, a valve for normally closing the outlet of the hopper, means for conducting material from said outlet to the outlet of the receptacle, and rotatable means operated by the movement of the machine for actuating the valve at predetermined periods.

3. In a machine of the character described the combination with a supporting disk and a receptacle having an outlet; of a supplemental hopper within the receptacle and having an outlet, an oscillatory valve for said outlet, rotatable means for actuating the valve, and a friction element engaging with and adjustable upon the disk for actuating said rotatable device.

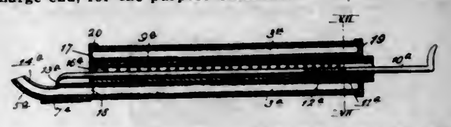
4. In a machine of the character described the combination with a supporting disk and a receptacle having an outlet; of a supplemental hopper detachably mounted within the receptacle and having an outlet, a spring controlled valve for closing said outlet, a shaft, means movable therein for actuating the valve, and a friction element feathered upon the shaft and engaging with and slidable upon the supporting disk.

5. In a machine of the character described the combination with a portable receptacle having an outlet, dropping mechanism, and means operated by the movement of the receptacle for operating said mechanism; of a spring pressed slide normally closing the outlet, flexible means connected to the slide for drawing it away from the outlet.

[Claim 6 not printed in the Gazette.]

871,355. RIFLE-LOADER. ERNEST E. MORLAN, Garden City, Mo. Filed Sept. 4, 1906. Serial No. 333,193.

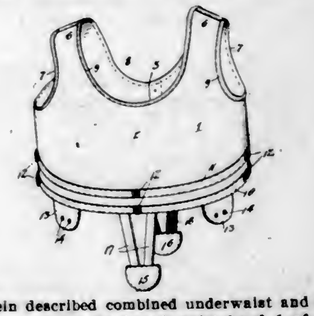
1. A device of the character described, consisting of a magazine for holding a supply of cartridges, having a curved and slotted discharge end, means near said discharge end for preventing the cartridges from accidentally falling therethrough, and means for forcing the foremost cartridge into the cartridge-chamber of a rifle said means having a curved forward end arranged in the slotted discharge end, for the purpose described.



2. A device of the character described consisting of a magazine for holding a supply of cartridges and having a slotted discharge end, means near said discharge end for preventing the cartridges from accidentally falling therethrough, a plunger having a curved forward end in the slotted discharge end for forcing the foremost cartridge into the cartridge-chamber of a rifle, and resilient means for retracting said plunger.

3. A device of the character described, consisting of a hollow shaft, a magazine consisting of a plurality of tubes rotatably mounted upon said shaft, a discharge tube with which the magazine tubes are adapted to successively register, means for holding the foremost cartridge in the discharge tube, a plunger extending through the hollow shaft and adapted to engage the foremost cartridge, and a spring for retracting said plunger.

871,356. GARMENT-SUPPORTER. MINNIE M. MCLEOD, Como, Miss. Filed Apr. 9, 1907. Serial No. 367,142.



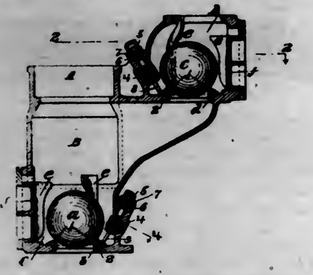
The herein described combined underwaist and garment supporter comprising the broad waist band 1 of substantially uniform width having a vertical separation at its rear, means for closing said separation, shoulder straps at the top of the waist band, the reinforcing and button-carrying bands 10, 11, arranged around the bottom portion of the waist band, garment supporting buttons secured to said reinforcing bands, the hose supporting tabs 13 depending from the bottom of the waist band at points intermediate its front and sides, the eyelets 14 formed in said tabs for the attachment of hose-supporters, the front and rear diaper supporting tabs 15, 16, the diverging bands 17 connecting the front tab 15 to the bottom of the front of the waist band, and the diverging elastic bands 18 having their lower ends secured to the rear tab 16 and their upper ends secured to the separated rear ends of the waist band whereby the latter may be widely opened to permit it to be easily applied to or removed from the wearer, substantially as and for the purposes specified.

871,357. PUMP. CHARLES L. NEWCOMB, Holyoke, Mass., assignor to International Steam Pump Company, New York, N. Y., a Corporation of New Jersey. Filed June 7, 1906. Serial No. 320,518.

1. In a pump, the combination with a removable valve seat, of holding studs passing through the valve chamber wall, nuts held stationary in the inner chamber wall and threaded to receive the studs, and check nuts on the studs outside the chamber.

2. In a pump, the combination with a removable valve seat, of holding studs passing through the valve chamber wall, nuts held stationary in the inner chamber wall and

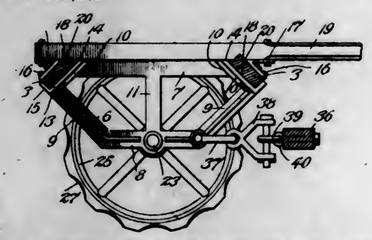
threaded to receive the studs, check nuts on the studs outside the chamber, and star washers between the check nuts and chamber wall for packing and locking the studs.



3. The combination with the circular valve chamber C, of the valve *a* and valve seat *b*, hand hole plate *f* carrying valve guide *c*, and valve seat holding studs extending through the chamber wall and adjustable for holding and releasing the valve seat.

4. The combination with a removable valve seat, of stud bolts 3, nuts 4 held in pockets in the chamber wall, cap nuts 5 outside the chamber wall, and star washers 6 for packing the stud bolts and locking the bolts and cap nuts.

871,358. LAND ROLLER AND PACKER. BURTON H. PECK, near Lexington, Oreg. Filed Feb. 27, 1906. Serial No. 303,271.



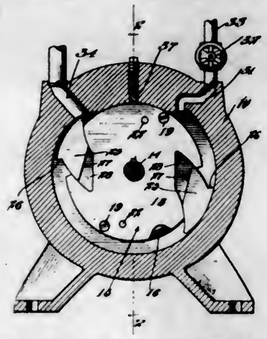
1. An implement of the character described comprising angular end hangers provided at their upper front and rear corner portions with sockets, an intermediate hanger, provided at its upper front and rear corner portions with seats, frame bars engaging said sockets and seats and fastened to the hangers, bracket pieces bolted with the bars to the seats, a tongue resting upon the central hanger and fastened to said brackets, an axle supported by the hangers, and packing wheels carried by the axle.

2. An implement of the character described comprising two pivotally connected sections, each embodying a frame carrying packing wheels, tongues attached to the frames, a rod pivotally connecting the tongues to maintain them in parallel relation, and a draw bar pivotally connected at its ends to the frame and at its center to the pivotal connection between the frames.

3. An implement of the character described comprising a pair of sections, each embodying a frame composed of longitudinal bars and end and intermediate brackets, packing wheels mounted upon the frames, a pivot bolt coupling the inner end brackets of the frame, a draw bar, means pivotally connecting said bar with said bolt and the intermediate brackets of the frames, tongues secured to the centers of the frames and projecting forwardly therefrom, and a rod pivotally connecting the free ends of said tongues to maintain them in parallel relation.

4. An implement of the character described comprising angular end and intermediate hangers, each hanger being formed with top and bottom bars and inclined arms connecting the bars, the said end and intermediate hangers being respectively provided at their upper front and rear corner portions with sockets and obliquely disposed seats, front and rear frame bars engaging said sockets and resting upon the seats, said bars being secured to the hangers and held in an inclined position, angular bracket pieces secured with the bars to the seats, and a tongue resting upon the central hanger and secured to the said bracket pieces.

871,359. ROTARY ENGINE. CLAIBORNE W. PUCKETT, Kern, Cal. Filed Jan. 28, 1907. Serial No. 354,415.



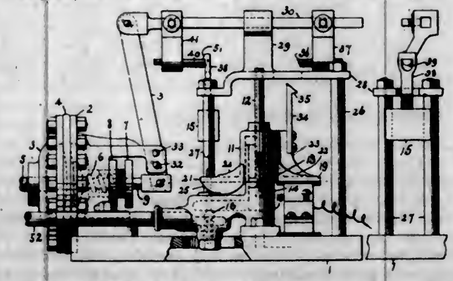
1. In a rotary fluid engine, a cylinder; a piston in said cylinder; swing pistons mounted on said piston adapted to open outwardly in the direction of rotation of the piston; cams on said swing piston engaging with each other to force one or the other of the swing pistons always into its operative position; means to feed fluid under pressure into the cylinder behind the swing pistons; and means to exhaust said fluid.

2. In a rotary fluid engine, a cylinder; a piston rotatively mounted in said cylinder; swing pistons mounted on said piston; cams on said swing pistons engaging with each other to force one or the other of the swing pistons always in its operative position; shoulders on said swing pistons adapted to present a square face to the fluid; means to feed the fluid under pressure into the cylinder behind the swing pistons; and means to exhaust the fluid.

3. In a rotary fluid engine, a cylinder; a piston rotatively mounted in said cylinder; swing pistons mounted on said piston adapted to open outwardly in the direction of piston rotation; cams on said swing pistons adapted to engage each other to force one or the other of the swing pistons into its operative position; shoulders on said swing pistons adapted to present a square face to the fluid; means to feed the pressure fluid into the cylinder behind the swing pistons; and means to exhaust the fluid.

4. In a rotary fluid engine, a hollow rotary piston provided with a plurality of swing pistons therein, said swing pistons being provided with cam faces which abut against each other and are adapted to force one or the other of the swing pistons outwardly from said rotating piston.

871,360. ELECTRIC AND PNEUMATIC GOVERNOR. WILLIAM K. RANKIN and THOMAS F. KELLY, Philadelphia, Pa., assignors to John E. Reyburn, Philadelphia, Pa. Filed Feb. 11, 1907. Serial No. 356,767.



1. In an electric and pneumatic governor, the combination with a fluid pressure diaphragm and a fixed cylinder.

of a movable cylinder having an integral foot and movable carbons attached thereto, a suspension member for the cylinder and carbons and a resilient catch, horizontally operative to automatically engage the suspension member.

2. In an electric and pneumatic governor, the combination with a fluid pressure diaphragm, a weight, having a suspension member with an eye and a fixed cylinder, of a movable cylinder, having an integral lifting foot for the weight, and a horizontally operative catch with resilient means and whereby the catch automatically enters the eye when the weight is elevated.

3. In an electric and pneumatic governor, the combination with a fluid pressure diaphragm and a fixed vertical cylinder, of a movable cylinder composed of aluminium, inclosing the fixed cylinder and vertically guided, thereby the movable cylinder having a rigid means of support, an integral foot carrying carbons and an integral foot adapted to elevate a weight.

4. In an electric and pneumatic governor, horizontally operative and resiliently yielding catches, flattened tops therefor, and means to insure the flat top to always be uppermost.

5. In an electric and pneumatic governor, the combination with a fluid pressure diaphragm, a fixed and a movable cylinder and a weight, of horizontally operative resilient catches supported in arms movable by the diaphragm, and means whereby the catches engage and support the movable cylinder and the weight, substantially as set forth.

876,361. AIR-INTAKE REGULATOR FOR CARBURETERS. FREDERICK C. REINEKING, Jersey City, N. J. Filed Mar. 29, 1907. Serial No. 365,340.

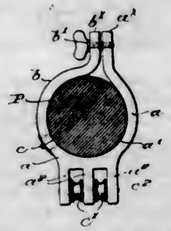


In air intake regulators for carbureters a vertical tube, a horizontal diaphragm near the top of said tube, a spider at the top of said tube, a vertical rod rigidly attached to said diaphragm, said rod free to work vertically in said spider, a second horizontal diaphragm rigidly attached to said rod near the bottom of said rod, said lower diaphragm being larger in area than said upper diaphragm, a taper cap in the bottom of said tube, said lower diaphragm fitting loosely inside said taper cap, a spider at the lower end of said taper cap, said rod being free to work vertically in said spider, an air intake pipe opening into said vertical tube intermediate said diaphragms.

871,362. PULLEY-HOLDER FOR CURTAIN-POLES. DICKRAN M. SARKISIAN, Malden, Mass. Filed May 8, 1907. Serial No. 372,562.

1. In a pulley-holder for curtain poles, an annular, narrow body comprising two members hinged together and having separable ends and adapted to embrace the pole, a pulley-sustaining extension on and in the plane of the body, and a clamping screw to directly connect the separable ends of the body and clamp the latter on the pole.

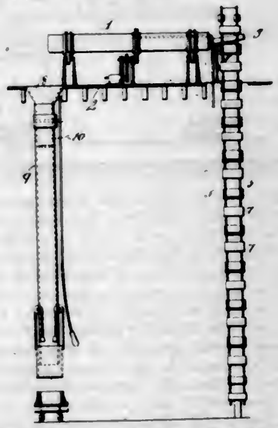
2. In a pulley-holder for curtain poles, a two-part annular body adapted to embrace the pole, a hinge permanently connecting the two parts of the body, a detachable clamping connection between and positively coöperating with both the separable ends of said parts after the body has been applied to the pole, to clamp the body on the pole, and a pulley-sustaining extension on one of said parts independent of the hinge.



3. In a pulley-holder for curtain poles, an annular body comprising two members hinged together and adapted when opened to be applied to the pole, laterally separated ears extended from one member, pulleys rotatably mounted between the ears, and a screw connection between the separable ends of the hinged body members, to hold them together and clamp the body on the pole.

4. In a pulley-holder for curtain poles, a body composed of two curved members hinged together and adapted to embrace the pole, the separable ends of said members being extended radially and opposite each other, a clamping screw to connect the said extended portions and clamp the members upon the pole, and a pulley-sustaining extension on one of the body members.

871,363. CONCRETE MIXING AND MOLDING APPARATUS. CHARLES R. SCHMIDT, Baltimore, Md. Filed Mar. 12, 1907. Serial No. 361,914.



1. A continuous mixing and molding apparatus, comprising a mixing tank located on an elevated platform, a plurality of endless conveyers arranged and adapted to convey the different ingredients of a concrete mixture, in different proportions to the mixing tank, a chute extending downwardly from the platform and a grid or riddle arranged at the upper end of said chute.

2. A continuous mixing and molding apparatus, comprising a mixing tank, a plurality of endless conveyers arranged and adapted to convey the ingredients of the concrete mixture to the mixing tank in different proportions, a vertical chute through which the mixture is dropped into the molds, said chute being provided with a valved measuring chamber, and a vibrating grid or riddle substantially as described.

3. In an apparatus for filling molds, a vertical chute for delivering material to molds from a height, said chute being provided with a measuring chamber, means for regulating the capacity of said chamber, and a vibrating grid or riddle, substantially as described.

871,364. BOTTLE-CLOSURE. CHARLES R. SCHMIDT, Baltimore, Md. Filed June 29, 1907. Serial No. 381,459.

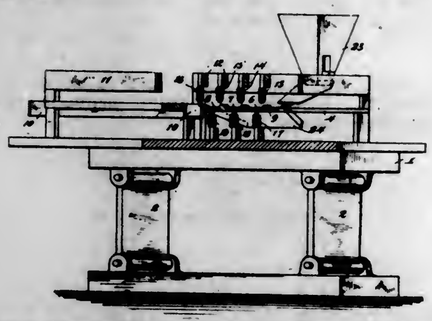


1. A bottle closure comprising a metallic disk having an upturned edge extending directly upwards from the disk and downturned teeth and an elastic disk engaged by the downturned teeth.

2. A bottle closure comprising a metallic disk having an upturned edge extending directly upward from the disk and an elastic disk, said metallic disk having teeth formed on its edge and said teeth extending downwardly and clasping the edge of the elastic disk.

3. The combination with a bottle neck having a shoulder on its inner surface and an angular shoulder above said first named shoulder of an elastic disk seating on the first named shoulder and a metallic disk bearing on the elastic disk and having an upturned edge extending directly upwards from the disk and engaging said angular shoulder and downturned teeth engaging the elastic disk.

871,365. MAGNETIC SEPARATOR. ALFRED SCHWARZ, New York, N. Y. Filed Feb. 1, 1906. Serial No. 298,977.



1. In a magnetic separator the combination of a table having a riffle board supported thereon, electromagnets above and having their polar faces in proximity to said board, said magnets being disposed in independent rows, means to feed the material to be separated in proximity to the first row of magnets, means to energize and deënergize said rows of magnets successively to separate a given mass of magnetic particles from the non-magnetic and to transport the former across the table by alternately attracting and releasing the same so as to fall within the fields of successive rows of magnets, rows of electromagnets below and having their polar faces in proximity to the under side of said board, and means to energize and deënergize said magnets alternately above and below the riffle board.

2. In a magnetic separator the combination of a table having a riffle board supported thereon, electromagnets above and having their polar faces in proximity to the upper side of said board, electromagnets below and having their polar faces in proximity to the under side of said board, said magnets being disposed in rows so that a lower row is in a vertical plane between the vertical planes of contiguous rows of upper magnets, and means to energize and deënergize said magnets alternately above and below said board.

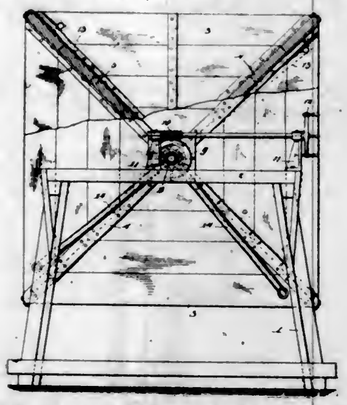
3. In a magnetic separator the combination of a board on which the described separation is effected, electromagnets above and having their polar faces in proximity to the upper side of said board, electromagnets below and having their polar faces in proximity to the under side of said board, said magnets being disposed in rows and those of the lower bank being weaker than those of the upper bank.

4. In a magnetic separator the combination of a table having a riffle board supported thereon, electromagnets above and having their polar faces in proximity to the upper side of said board, electromagnets below and having their polar faces in proximity to the under side of said board, said magnets being disposed in rows, and a commutator controlling said magnets in such manner as to develop magnetic fields of force in successive rows of the upper magnets alternately with those of the lower magnets.

5. In a magnetic separator the combination of a table having a riffle board supported thereon, electromagnets above and having their polar faces in proximity to the upper side of said board, electromagnets below and having their polar faces in proximity to the under side of said board, said magnets being disposed in rows, a commutator divided into sections corresponding to the number of rows of magnets in both banks, a controlling circuit for each row of magnets connected to a corresponding commutator section, said circuits being so arranged as to alternately and successively energize the magnets in the rows of the upper and lower banks.

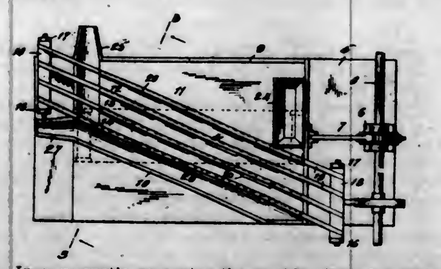
[Claim 6 not printed in the Gazette.]

871,366. TAILINGS-SETTLER. ALFRED SCHWARZ, New York, N. Y., assignor to Schwarz Engineering Company, New York, N. Y., a Corporation of New York. Filed Feb. 1, 1906. Serial No. 298,979.



A settling tank of the character described comprising side walls, diagonal partition walls joining the same to provide open-topped compartments, a hollow shaft upon which said tank is mounted, pipes leading from each compartment to said shaft to carry off the fluid contents, a stationary pipe located in said shaft, said stationary pipe having an opening on the upper side thereof for the purpose described, and means to rotate said tank.

871,367. MAGNETIC SEPARATOR. ALFRED SCHWARZ, New York, N. Y. Filed Apr. 7, 1906. Serial No. 310,446.



1. In a magnetic separator the combination of a table, a series of magnets having their poles disposed in proximity to the upper side of said table, means for imparting a relatively reciprocating movement between said table and magnets, means for imparting a jarring movement to said magnets at predetermined times to dislodge the magnetic particles therefrom, means for feeding the material to said table, and means to receive the separated products.

2. In a magnetic separator the combination of a table and means to reciprocate the same, a series of magnets having their poles disposed in proximity to the upper side of said table, means to impart a jarring movement to said magnets at predetermined times, means for feeding the material to said table, and means to receive the separated products.

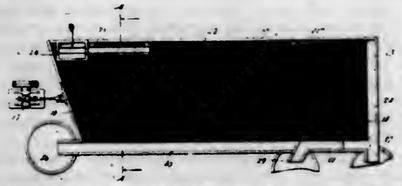
3. In a magnetic separator the combination of a table and means to reciprocate the same, a pivotally mounted frame, a series of magnets secured to said frame having their poles disposed in proximity to the upper side of said table, means to impart a jarring movement to said frame and magnets at predetermined times, means for feeding the material to said table, and means to receive the separated products.

4. In a magnetic separator the combination of a table having riffles thereon, rows of magnets extending longitudinally of said riffles and having their poles disposed in proximity to the upper side of the table over the riffles, means for imparting a relatively reciprocating movement between said table and magnets, means for imparting a jarring movement to said magnets at predetermined times to dislodge the magnetic particles therefrom, means for feeding the material to said table, and means to receive the separated products.

5. In a magnetic separator the combination of a table having riffles thereon extending diagonally across the table, a series of magnets having their poles disposed in proximity to the upper side of said table, means for imparting a relatively reciprocating movement between said table and magnets, means for imparting a jarring movement to said magnets at predetermined times to dislodge the magnetic particles therefrom, means for feeding the material to said table, and means to receive the separated products.

[Claim 6 not printed in the Gazette.]

871,368. METHOD OF CONCENTRATING ORES. ALFRED SCHWARZ, New York, N. Y. Filed Oct. 27, 1906. Serial No. 340,863.

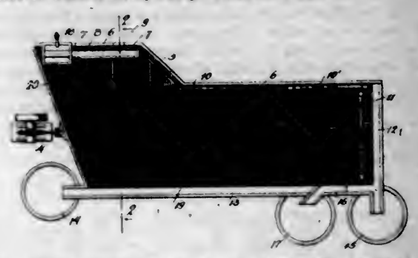


The process of concentrating ores consisting in sizing the ore and flowing each size in a pulp current over bodies of liquid restrained from movement in places in the direction of gravital flow, inclosing the values in the quiescent liquids, and differentially agitating the whole to promote settling and to convey the settled values in directions other than that of gravital flow, and gravitally washing away the gangue.

871,369. ORE-CONCENTRATING TABLE. ALFRED SCHWARZ, New York, N. Y. Filed Dec. 26, 1906. Serial No. 349,471.

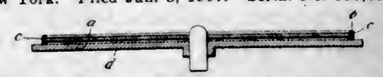
1. A concentrating table having corrugations, said corrugations being sufficiently small in transverse section to create zones of liquid substantially quiescent in planes transverse to the corrugations, said zones being of sufficient extent to receive the metallic values and protect the same from transverse currents of wash liquid, means for differentially reciprocating the table, and means for supplying wash water thereto.

2. An ore concentrating table having its surface unbroken except for a series of corrugations of such dimensions as to be insufficient to break the continuity of the flow of water and small enough to provide zones of water substantially quiescent in directions transverse of the corrugations, means for causing a flow of water over said table toward the tailings discharge side thereof, and means to differentially reciprocate said table.



3. An ore concentrating table transversely inclined and having its surface unbroken except for a series of corrugations discharging at the foot of the table, said corrugations being so proportioned in transverse section as to create proportionately greater surface contact with the particles of values than those of the gangue of the particular mesh of ore being treated, thereby establishing greater preponderating frictional contact with the values, and means to impart a differential reciprocating movement to said table.

871,370. SOUND-REPRODUCING RECORD-DISK. WILLIAM I. SHERWOOD, New York, N. Y., assignor to Phonographic Music Co., Brooklyn, N. Y., a Corporation of New York. Filed Jan. 3, 1907. Serial No. 350,613.



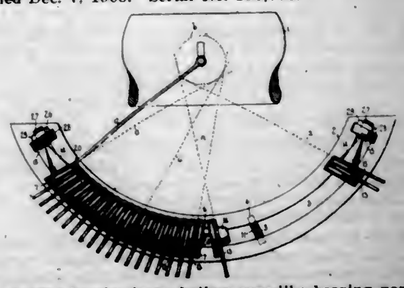
1. A sound reproducing record disk having a peripheral ring of soft material softer than the record disk.

2. A sound reproducing record disk having a soft peripheral ring removably applied thereto and being softer than the record disk.

3. A sound reproducing record disk having a soft peripheral ring provided with a recess in its inner periphery receiving the edge of the disk said ring being softer than the record disk.

4. A sound reproducing record disk having an edging softer than the disk itself.

871,371. TYPE-WRITING MACHINE. ARTHUR W. SMITH, New York, N. Y., assignor to Yost Writing Machine Company, Ilion, N. Y., a Corporation of New York. Filed Dec. 7, 1905. Serial No. 290,776.



1. A type bar having a hollow cone-like bearing portion projecting laterally from its side near its pivotal end and constructed to enter and also to receive similar cone-like bearings on contiguous type bars.

2. A type bar having a hollow cone-like bearing portion projecting laterally from its side near its pivotal end and

having a cylindrical bearing portion projecting oppositely from the cone-like portion.

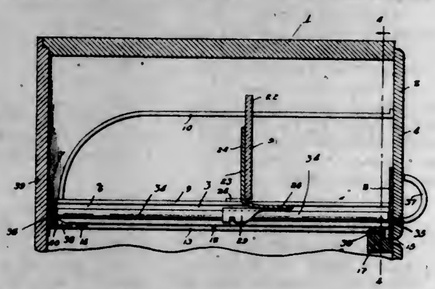
3. A type bar having a portion projecting from it near its pivotal end, said projecting portion being provided with an inside and an outside bearing part near its end, the bearings in said part being oppositely disposed and outside of the plane of rotation of the type bar.

4. A type bar having a portion projecting from it near its pivotal end, said projecting portion being provided with an inside and an outside bearing part near its outer end, said type bar having a cylindrical bearing portion projecting from it oppositely from the first-named portion.

5. A type bar having a hollow cone-like projecting portion near its pivotal end, the apex of the cone being provided with a rounded bearing tip.

[Claims 6 to 45 not printed in the Gazette.]

871,372. FILING-CABINET. OSCAR L. SOLIE, Sioux Falls, S. D. Filed Apr. 27, 1907. Serial No. 370,675.



1. A filing device comprising a frame or casing, a drawer, a follower in the latter, and means for locking said follower to the casing.

2. A filing device comprising a frame or casing, a drawer, a follower in the latter, means for locking the follower to said drawer, means for locking the follower to said casing, and means for actuating both of said locking means.

3. A filing device comprising a frame or casing, a drawer, a follower in the latter, means for locking the follower to said drawer, means for locking the follower to said casing and means for simultaneously throwing one of said locking means into operation and the other out of operation.

4. A filing device comprising a frame or casing, a drawer, a follower in the latter, means for locking the follower to said drawer, means for locking the follower to said casing and a cam or eccentric device for actuating both of said locking means.

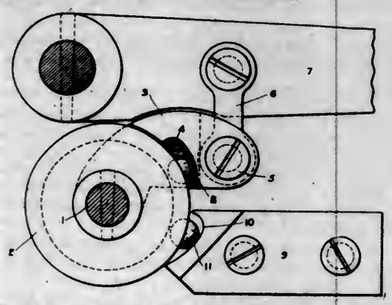
5. A filing device comprising a frame or casing, a drawer, a follower in the latter, a locking member for frictionally clamping the follower to the drawer, a swinging locking member carried by the follower for engagement with said casing and a cam or eccentric device for simultaneously operating said locking members.

[Claims 6 to 25 not printed in the Gazette.]

871,373. RIBBON-FEEDING MECHANISM FOR TYPE-WRITERS. CHARLES W. SPONSEL, Hartford, Conn., assignor to Parker Machine Company, Buffalo, N. Y., a Corporation of New York. Filed Aug. 18, 1905. Serial No. 274,652.

1. In a typewriting machine, in combination, rotatably mounted ribbon-feeding means, means adapted to rotate said first-mentioned means, means free from either of the above-mentioned means adapted to form a connection therebetween, a stationary member, and means free from said supporting member and carried thereby adapted to frictionally engage said ribbon-feeding means to prevent a reverse movement thereof during the operation of said second-mentioned means.

2. In a typewriting machine, in combination, rotatably mounted ribbon-feeding means, means adapted to rotate said first-mentioned means, means free from either of the above-mentioned means adapted to form a connection therebetween, a bracket provided with a cam groove, and means operating in said cam groove and carried thereby adapted to frictionally engage said ribbon-feeding means to prevent a backward movement thereof.



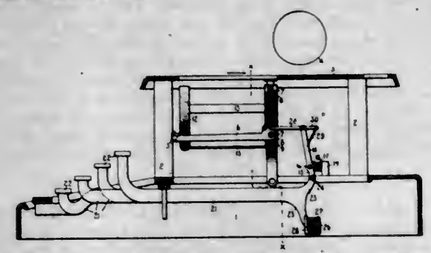
3. In a typewriting machine, in combination, means adapted to feed the ribbon, a member positioned thereon provided with an annular groove, movable means rotatably mounted upon said ribbon-feeding means adapted to be actuated to operate said ribbon feeding means, said last named means being provided with a cam groove, means free from said last-mentioned means and also free from said ribbon-feeding means adapted to form a frictional connection therebetween, a bracket provided with a cam groove, and means free from said bracket and operating in said annular groove to frictionally prevent a backward movement of said ribbon-feeding means through an engagement with the walls of the cam groove in said bracket.

4. In a typewriting machine, in combination, a shaft adapted to feed the ribbon, an annular member provided with a concentric groove positioned upon said shaft, a movable member journaled upon said shaft and provided with a cam groove arranged adjacent the groove in said annular member, means free from both of said members and interposed therebetween to form a frictional connection whereby a movement of said second-mentioned means will operate to cause a movement of said shaft and thereby feed the ribbon, a bracket provided with a cam groove arranged adjacent the groove in said annular member, movable means free from said bracket and also free from said annular member adapted to form a frictional connection therebetween to prevent a backward movement of said ribbon-carrying shaft, and means for operating said second-mentioned member.

5. In a typewriting machine, in combination, a ribbon feeding shaft, an annular member provided with a peripheral groove fixed upon said shaft, an arm journaled at one end upon said shaft having a cam portion arranged adjacent the peripheral groove of said annular member, an actuating rocker lever to which the opposite end of said arm is pivotally attached, a fixed bracket having a cam portion arranged adjacent the groove of said annular member, a ball located in said groove adapted to engage the cam portion of said arm to form an actuating connection therebetween, and a second ball located in said groove and engaging the cam portion of said bracket to prevent a reverse rotation of said annular member.

871,374. TYPE-WRITING MACHINE. BURNHAM C. STICKNEY, Elizabeth, N. J., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 6, 1903. Serial No. 151,334.

1. In a front strike writing machine, the combination of a series of rearwardly striking type-bars, a series of upstanding levers connected thereto, a series of key-bearing forwardly extending levers pivoted at their rear ends to said up-standing levers, angular arms on the rear ends of said key-levers, and bearings for the ends of said arms, the arms being disconnected from but adapted to press against said bearings.



2. In a front strike writing machine, the combination of a series of rearwardly striking type-bars, a series of key-bearing levers extending forwardly beneath the type-bars and each having ramified arms at its rear end, connections between one set of arms and the type-bars and by means of which the key levers receive their support at their rear ends, and bearings for the other set of arms.

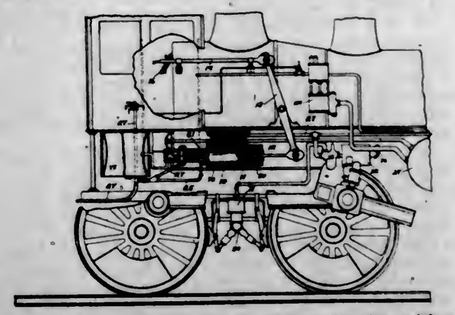
3. In a front strike writing machine, the combination of a series of rearwardly striking type-bars, a series of upstanding levers in rear of the type-bars, a series of levers each having ramified arms at its rear end, one set of arms being pivoted directly upon the ends of said up-standing levers, the other set of arms being free, and bearings for the free set of arms.

4. In a front strike writing machine, the combination of a series of rearwardly striking type-bars, a series of upstanding levers of the first order mounted in rear of said type-bars, links connecting said levers to said type-bars, key-bearing levers extending forwardly beneath the type-bars and having at their rear ends upwardly extending arms which are pivoted directly to the lower arms of said up-standing levers, downwardly extending arms upon said key-levers, and a transverse fulcrum bar for said downwardly extending arms.

5. In a front strike writing machine, the combination of a series of rearwardly striking type-bars, a series of upstanding levers in rear of said type-bars, each of said levers being fulcrumed between its ends, links connecting said levers and said type-bars, and forwardly extending key-levers connected to the lower arms of said up-standing levers, the movement of the points of connection between the key levers and the lower arms of the upstanding levers being fore and aft of the machine.

[Claims 6 to 24 not printed in the Gazette.]

871,375. AUTOMATIC LOCOMOTIVE-CONTROLLER. JOHN E. STIEGELMEYER, Indianapolis, Ind., assignor to Automatic Train Control Company, Indianapolis, Ind., a Corporation of Indiana. Filed Feb. 11, 1907. Serial No. 356,890.



1. In a locomotive controller, the combination with a throttle valve, means for automatically closing the same, and air brake mechanism comprising a brake cylinder and pressure means for normally actuating the brake mechanism, of a source of supplemental pressure for also actuating the brake mechanism, and means controlled by the throttle closing means for connecting the supplemental pressure container with the brake mechanism.

2. In a locomotive controller, the combination of a throttle valve; an air-brake system comprising the brakes, the brake cylinder, pressure containing means, and means for admitting from said container to the brake-cylinder; a supplemental pressure container, a cylinder connected to the brake system, a piston in said cylinder, connections between said piston and the throttle valve for automatically closing said valve, and means controlled by said piston for automatically connecting the supplemental pressure container with the brake cylinder.

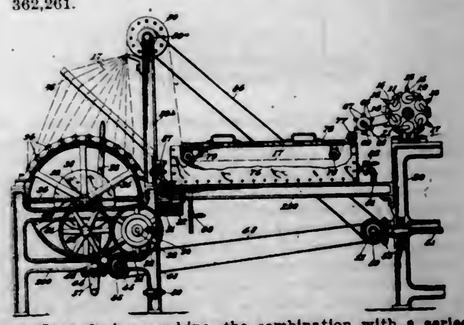
3. In a locomotive controller, the combination of a throttle valve; an air-brake system comprising the brakes, the brake cylinder, pressure containing means, and means for admitting from said container to the brake-cylinder; a supplemental pressure container, a cylinder connected to the brake system, a piston in said cylinder, connections between said piston and the throttle valve for automatically closing said valve, and pressure controlled means controlled by said piston for automatically connecting the supplemental pressure container with the brake cylinder.

4. In a locomotive controller, the combination of a throttle valve; an air-brake system comprising the brakes, the brake cylinder, pressure containing means, and means for admitting from said container to the brake-cylinder; a supplemental pressure container, a cylinder connected to the brake system, a piston in said cylinder, connections between said piston and the throttle valve for automatically closing said valve, a valve normally closing communication between the supplemental pressure container and the brake cylinder, a balanced valve for moving said valve, and a valve controlled by the movement of the piston for retaining or releasing the pressure upon one side of said balanced valve.

5. In a locomotive controller, the combination, with a throttle valve and means for automatically closing same, of air brake mechanism comprising a brake cylinder, an air brake train line, a reservoir, and a triple valve between said reservoir and brake cylinder, of a supplemental reservoir communicating with the first-mentioned reservoir, and means controlled by the throttle valve closing means for controlling communication between the supplemental reservoir and first-mentioned reservoir.

[Claims 6 to 10 not printed in the Gazette.]

871,376. DYEING MACHINERY. JACOB SULZBACH, College Point, N. Y. Filed Mar. 14, 1907. Serial No. 362,261.



1. In a dyeing machine, the combination with a series of independent dye distributers and means for bringing these serially into the working position at regularly recurring intervals, of a series of wipers comprising a wiper for each distributer and means for moving these into and out of the working position concurrently with the movement of the respective distributers, and means for passing the material under treatment through the working position of said distributers and wipers.

2. In a dyeing machine, the combination with a series

of color receptacles, an adjustable color distributer for each receptacle, means for moving said series for bringing the distributers alternately into working position, means for moving the material under treatment to the working position at faster speed than the movement of the receptacles and their distributers.

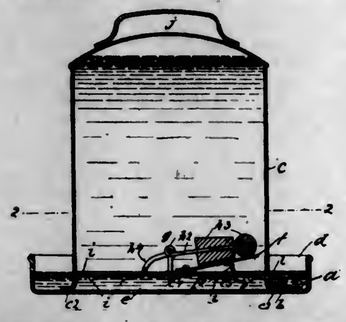
8. In a dyeing machine, the combination with a series of color receptacles, an adjustable color distributer for each receptacle, means for moving said series for bringing the distributers alternately into working position, means for moving the material under treatment to the working position at faster speed than the movement of the receptacles and their distributers, a wiper for each distributer, and means for bringing these into working position.

4. In a dyeing machine, the combination with a series of the dye distributers, a carrier for said wipers, a train of driving means to the distributers for intermittently moving these serially into the working position, means for moving the material connected to said driving means and so constructed and timed that the material under treatment will be moved continuously and at a greater speed than the movement of the distributers.

5. In a dyeing machine, the combination with a bottle carrier embodying a rotatable frame having a number of bottle receptacles, a series of bottles located in said receptacles and each having a neck, dye distributing material located in each of said necks, means for adjusting the flow of dye from said necks, means for rotating the bottle carrier step by step, a series of wipers one for each of the dye distributers, a carrier for said wipers, a train of one to one gearing connecting the bottle carrier with the wiper carrier, and means for moving the material under treatment to the working position of said distributers and wipers.

[Claims 6 to 12 not printed in the Gazette.]

871,377. POULTRY-FOUNTAIN. WILLIAM SWAGLER and WILLIAM L. VOLZ, Brooklyn, N. Y. Filed July 23, 1906. Serial No. 327,267.

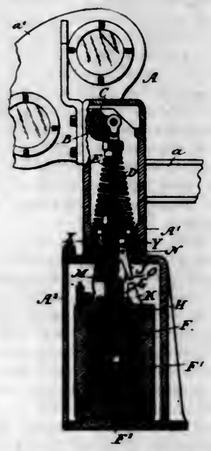


1. A fountain of the class described, comprising a pan or receiver and a closed can or receptacle having a raised bottom provided with an opening, and a valve pivoted to said bottom inside of said can and adapted to close said opening, said valve being provided with a finger which passes through said opening and bears on the bottom of the pan when the can is placed therein and raises said valve, and the side walls of the can or receptacle below the bottom thereof being provided with a port or passage.

2. A fountain of the class described, comprising a pan or receiver and a closed can or receptacle having a raised bottom provided with an opening, and a valve pivoted to said bottom inside of said can and adapted to close said opening, said valve being provided with a finger which passes through said opening and bears on the bottom of the pan when the can is placed therein and raises said valve, and the side walls of the can or receptacle below the bottom thereof being provided with ports or passages, and means for locking the can or receptacle to the bottom of the pan or receiver.

3. A fountain of the class described, comprising a pan or receiver and a closed can or receptacle having a raised bottom provided with an opening, and a valve pivoted to said bottom inside of said can and adapted to close said opening, said valve being provided with a finger which passes through said opening and bears on the bottom of the pan when the can is placed therein and raises said valve, and the side walls of the can or receptacle below the bottom thereof being provided with ports or passages, and means for locking the can or receptacle to the bottom of the pan or receiver, said can or receptacle being also provided with a pivoted float adapted to bear on the valve when the can or receptacle is inverted and filled.

871,378. RAILWAY-SIGNAL. LOUIS H. THULLEN, Edgewood, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Mar. 18, 1905. Serial No. 250,760.



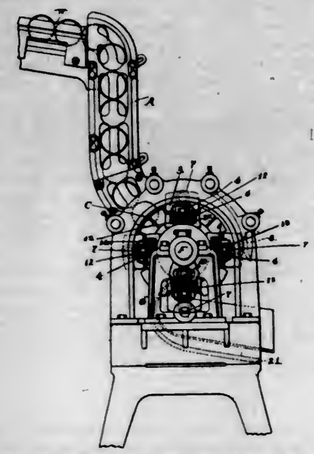
1. The combination in a railway signal, of a signal device, an electric motor comprising a plunger and coil for moving said signal device, a catch carried by the plunger, a stop with which the catch engages when the signal device is moved otherwise than by its motor, and means also operated by the coil for moving said catch out of the path of the stop when the signal device is to be moved by the motor.

2. The combination in a railway signal, of a signal device, an electric motor comprising a hollow plunger and coil for moving said signal device, a catch, a stop with which said catch engages upon a movement of the signal device other than by its motor, and means within the plunger operated by the coil for moving said catch out of the path of the stop when said signal device is to be moved by the motor.

3. In a railway signal, the combination of a coil, a plunger operatively connected to the signal device of the railway signal, and adapted to be attracted into the coil, a catch pivoted to said plunger, a fixed stop, and catch operating means for moving said catch out of the path of the stop when said plunger is magnetically attracted into the coil.

4. In a railway signal, the combination of a coil, a plunger operatively connected with the signal device of the railway signal and adapted to be attracted into the coil, a catch pivoted to said plunger, a fixed stop adapted when it engages said catch to prevent movement of the signal device, and catch operating means comprising a member composed of magnetic material, and adapted to be moved by the coil, the said member being moved in the direction of the coil by magnetic attraction, and in the opposite direction by a spring, said member to move the catch out of the path of the stop when magnetically attracted, and to move the catch into the path of the stop when it is moved in the opposite direction.

871,379. CAN-HEADING MACHINE. NELSON TROYER, Portland, Oreg. Filed Dec. 16, 1905. Serial No. 291,999.



1. In an apparatus for heading cans, the combination of duplicate supports, segmental molds carried thereby, one of the parts of said molds being hinged and the other part of the same mold being adapted to first receive the can body and head, a horizontal-slidable support for the hinged half-mold, means for advancing the hinged half mold to register with the companion half-mold and to cause it to close upon the can body, and means for advancing the half-molds in unison.

2. In a can heading machine, the combination of duplicate supports, inner and outer half molds carried thereby, the outer half-mold being hinged and the inner half-mold being adapted to first receive the can body and head, a horizontal slide to which the outer half-mold is hinged, means for placing a can body in the inner half-mold, said inner half-mold having a counterbored chamber, means for moving the outer half mold to register with the inner half-mold, and to close upon the can body, and means for advancing the half molds in unison to place the head upon the can body.

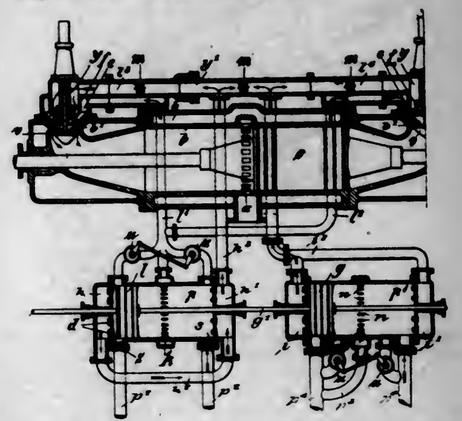
3. In a can heading machine, duplicate supports, inner and outer half molds carried thereby, cams by which the inner halves of molds are moved to and from each other, means by which can bodies are placed in said inner half molds, counter-sunk chambers in the molds and means for placing can heads therein and in line with the can bodies, cams by which the outer half molds are advanced longitudinally to register with the inner halves, and other cams to close the outer halves of the molds upon the inner halves, said first named cams then moving the molds to place the heads simultaneously upon opposite ends of the body.

4. In a can heading machine, the combination of duplicate supports, inner and outer half molds carried thereby, plates by which each half mold is carried, rollers on studs fixed to the plates, and cams at opposite ends of the machine with which the rollers engage to first hold the inner half molds to receive the can bodies and heads, the outer half molds being then moved to register with the inner half molds, and the opposed half molds being finally advanced together to place the heads upon opposite ends of the can body.

5. In a can heading machine, the combination of duplicate supports, inner and outer half molds carried thereby, roller-carrying plates upon which the half molds are borne, said outer half molds adapted to move at right angles with the companion inner half mold, limiting stops on the plates, and fixed cams with which each of the rollers engage, and by which the inner half molds are first held to receive can bodies and can heads, then the outer half molds are moved to register with the companion inner half molds to allow the half molds to be closed about the can bodies and heads, and to force the heads upon the ends of the bodies.

[Claims 6 to 18 not printed in the Gazette.]

871,380. TWO-TIME COMBUSTION-ENGINE. ERNST TUCKERMANN, Rath, near Dusseldorf, Germany. Filed Aug. 17, 1906. Serial No. 330,944.



1. In a two cycle explosive engine, a working cylinder, an air pump separate therefrom, and a piston within said pump, combined with means for delivering low-pressure scavenging air from the pump to the working cylinder during the initial part of the pump piston stroke, and means for delivering charge air from the pump to the working cylinder during the final part of said stroke, substantially as specified.

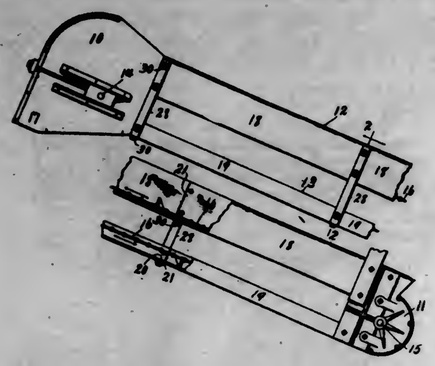
2. In a two cycle explosive engine, a working cylinder, a scavenging air chamber and a mixing chamber, combined with an air pump separate from the working cylinder and having peripheral air openings, means for connecting said openings with the scavenging air chamber, and means for connecting the pump cylinder ends with the mixing chamber, substantially as specified.

3. In a two-cycle explosive engine, a scavenging air chamber and a mixing chamber, combined with an air pump cylinder having peripheral air openings, a gas pump cylinder having peripheral gas openings and a gas supply pipe, means for connecting the air openings with a scavenging air chamber, means for connecting the gas openings with the gas supply pipe, and means for connecting the ends of the air and gas cylinders with the mixing chamber, substantially as specified.

871,381. SHEET-METAL CONVEYER. GUSTAVE WENZELMANN, Galesburg, Ill. Filed Aug. 17, 1906. Serial No. 330,961.

1. In a conveyer, the combination of a plurality of sheet metal conveyer sections having the ends of adjacent sections overlapped, means for uniting the side walls of the adjacent sections comprising straps overlying the overlapped portions of the side walls of the adjacent sections, matching perforations in the straps and overlapped portions of the side walls outwardly extended countersunk bosses in the overlapped portions of the side walls around the said perforations, said straps being recessed in the inner faces thereof to receive the said countersunk bosses, bolts passed through the said matching perforations and having the heads thereof seated in the countersinks of the inner overlapped portions of the side walls, and nuts on said bolts at the outside of the said straps, and means for uniting the bottom portions of the adjacent sections comprising matching perforations in the overlapped portions thereof, outwardly extended countersunk bosses in said

overlapped portions around said perforations, bolts passing through said perforations and having the heads thereof seated in the countersinks of the inner overlapped portion and nuts on said bolts at the outside of said overlapped portions.



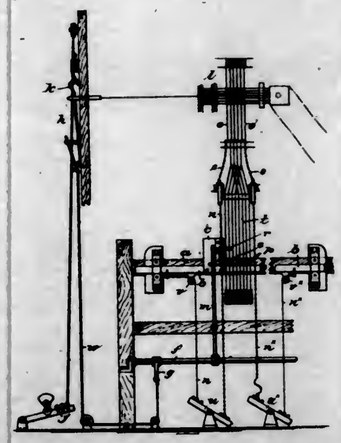
2. In a conveyer, the combination of a plurality of sheet metal conveyer pan sections having the ends of adjacent sections overlapped, corresponding sheet metal return bottom sections beneath the conveyer pan sections having the ends of adjacent sections overlapped, means for uniting the side walls of the conveyer pan and return bottom sections comprising straps connecting the conveyer pan sections and the return bottom sections, and overlying the overlapped portions of the side walls of the adjacent conveyer pan sections and overlying the overlapped portions of the side walls of the adjacent return bottom sections, matching perforations in the straps and overlapped portions of the side walls of the conveyer pan sections and return bottom sections, outwardly extended countersunk bosses in the overlapped portions of the side walls of the conveyer pan sections and return bottom sections around the said perforations therein, the said straps being recessed in the inner faces thereof to receive the said countersunk bosses therein, bolts passed through the said matching perforations in the overlapped portions of the side walls of the conveyer pan sections and the overlying strap, and bolts passed through the said matching perforations in the overlapped portions of the side walls of the return bottom section and the overlying strap, and nuts on said bolts at the outside of said straps, and means for uniting the overlapped bottom portions of the conveyer pan sections and return bottom sections comprising matching perforations in said overlapped portions, outwardly extended countersunk bosses in said overlapped portions around said perforations, bolts passed through said perforations and having the heads thereof seated in the countersinks of the inner overlapped portion and nuts on said bolts at the outside of the outer overlapped portion.

3. In a conveyer, the combination of sheet metal sections, straps connecting said sections, matching perforations in the sheet metal sections and the straps, correspondingly extended countersunk bosses in the sheet metal sections and the straps, bolts passing through said perforations and having the heads thereof seated in the countersinks of the sheet metal sections and countersunk nuts on said bolts bearing against the strap and overlying the bosses thereof.

4. In a conveyer, the combination of a sheet metal conveyer pan and return bottom, straps connecting the conveyer pan and return bottom, matching perforations in the conveyer pan and straps and in the return bottom and straps, outwardly pressed portions in said strap around the perforations therein, outwardly pressed portions in the sheet metal conveyer pan and return bottom around the perforations thereof extending into the outwardly pressed portions of the strap, bolts passing through the said perforations and having the heads thereof seated in the recesses of the outwardly pressed portions of the conveyer pan and return bottom, and countersunk nuts on said bolts bearing against the straps and containing the bosses of the straps formed by the outwardly pressed portions of the straps in the countersinks thereof.

5. In a conveyer, the combination of a conveyer pan built of sheet metal sections and a return bottom built of corresponding sheet metal sections, each of said sections of conveyer pan and return bottom being provided with portions which overlap portions of the adjacent sections, straps connecting the conveyer pan and return bottom and overlying the overlapped portions of the sections, matching perforations in the overlapped portions of the conveyer sections and the strap and in the overlapped portions of the return bottom and the strap, correspondingly extended countersunk bosses around said perforations in the overlapped portions of the conveyer sections and the strap and in the overlapped portions of the return bottom sections and strap, bolts passing through said perforations and having the heads thereof seated in the countersinks of the inner overlapped portions of the conveyer section and return bottom section and countersunk nuts on said bolts bearing against the straps and containing the bosses on the straps in the countersinks thereof.

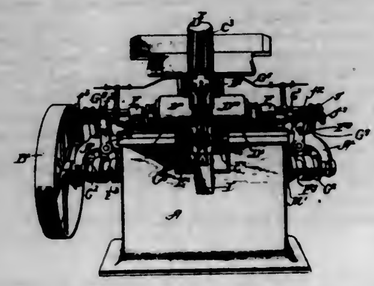
871,382. LOOM FOR WEAVING PILE FABRICS. CHARLES B. WHITE, Manchester, England. Filed Feb. 4, 1905. Serial No. 244,080.



1. In a loom for weaving pile or loop designs, a loop forming wire movable laterally to and also parallel to the warps, jacquard mechanism for operating and controlling the movement of such loop forming wire, means connecting said jacquard mechanism and the wire by which said wire is moved directly transversely to the warps, supplemental hooks and griff bars for operating the wire parallel to the warps, a cam for reciprocating such supplemental hooks and griff bars, and a connection between the supplemental hooks and griff bars and the jacquard mechanism for throwing said supplemental hooks and griff bars in and out action, substantially as described.

2. In a loom for weaving pile or loop designs, a loop forming wire movable both laterally to and parallel to the warps, jacquard mechanism for operating and controlling the movement of such loop forming wire, a flexible connection between said jacquard mechanism and the wire adapted to move such wire transversely of the warps, a slack length in said flexible connection, supplemental hoks and griff bars for operating the wire parallel to the warps, a cam for reciprocating said supplemental hooks and griff bars, and a connection between the supplemental hooks and griff bars and the jacquard mechanism arranged to throw said supplemental hooks and griff bars into and out of action, substantially as described.

871,383. CAN-HEADING MACHINE. JOHN L. ALLEN, Chicago, Ill. Filed Jan. 29, 1906. Serial No. 298,379.



1. In a machine for fixing flanged can heads to the bodies thereof, the combination with a can body support, of a hollow chuck constructed to receive a can head and apply it to a can in said support, said chuck being provided at its inner open side with a shoulder, means for shifting said shoulder radially inwardly prior to the delivery of a can head to the chuck, means for locking the can head against said shoulder as the chuck is moved towards the carrier to apply the can head to a can in said carrier, and means for moving said shoulder outwardly prior to the retraction of the chuck.

2. In a machine for fixing flanged can heads to the bodies thereof, the combination with a can body support, of a hollow chuck constructed to receive a can head and movable toward and from said support, said chuck embracing an expansible and contractible ring having a shoulder facing away from the carrier, and means for locking a can head with its flange against said shoulder as the can head is moved by said chuck towards a can body in said support.

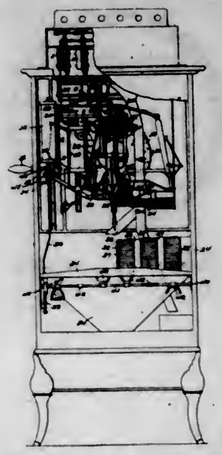
3. In a machine for fixing flanged can heads to the bodies thereof, the combination with a carrier and support, of two opposing hollow chucks movable towards and from an interposed can body on the carrier, each chuck comprising a contractible and expansible ring adapted to be passed over the end of the can body, means for contracting the chuck rings before they are passed over said can bodies, means whereby can heads are delivered to said chucks, and means for pressing and holding can heads against annular, interior shoulders of said contractible and expansible rings while the chucks are moving towards the can.

4. In a machine for fixing flanged can heads to the bodies thereof, the combination with a carrier and support, of two opposing hollow chucks movable towards and from an interposed can body on the carrier, each chuck comprising a contractible and expansible ring adapted to be passed over the end of the can body, means contracting the chuck rings, acting to contract them before they are forced over the can body, means whereby can heads are delivered to said chucks, means for pressing and holding the can heads against annular interior shoulders of said chuck rings while the chuck is moving towards the can, and means acting thereafter to expand said chuck rings prior to the retractive movement of the chuck.

5. In a machine for fixing flanged heads to can bodies, the combination with an intermittently rotative carrier and support provided with pockets to receive can bodies, of two opposing chucks movable towards and from an interposed can supported on the carrier, each chuck comprising a contractible chuck ring adapted to be passed over the end of the can body, means for closing said chuck ring prior to passing it over the can body, means whereby a can head is fed to said chuck, means acting to lock said head against the contracted ring whereby, when the chuck is moved inwardly the head is pressed upon the can body, and means acting thereafter to expand said ring preparatory to the retractive movement of the chuck.

[Claims 6 to 27 not printed in the Gazette.]

871,384. VENDING-MACHINE. ROBERT D. H. ANDERSON, Cincinnati, Ohio. Filed Jan. 16, 1907. Serial No. 352,515.



1. In a vending machine, a plurality of merchandise receptacles, an actuating lever, means interposed between said lever and each of said receptacles whereby a depression of the former discharges an article of merchandise from one of the latter, mechanism for releasing said lever, a plurality of premium receptacles, a revoluble disk having perforations therein, a plurality of plungers associated with said disk, means for releasing one of said plungers, and means intermediate said plungers and said premium receptacles whereby a premium article is discharged from the latter upon the entrance of the released plunger in a perforation in said disk.

2. In a vending machine, a plurality of merchandise hoppers, means for discharging merchandise from said hoppers, a plurality of premium hoppers, a revoluble perforated disk, a plurality of plungers associated with said disk for entrance in said perforations thereof, means for releasing one of the plungers, and means operated by the entrance of said plungers in said disk perforations to discharge premiums from said premium hoppers.

3. In a vending machine, a plurality of merchandise hoppers, means for discharging merchandise from said hoppers, a revoluble perforated disk actuated by the operation of said discharging means, premium hoppers, and discharging means for said premium hoppers normally engaged with the unperforated parts of said disk and adapted when entering the perforations thereof to operate said premium discharging means.

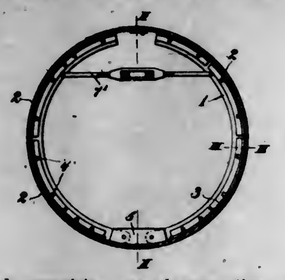
4. In a vending machine, a plurality of merchandise hoppers, means for discharging merchandise from said hoppers, a revoluble perforated element actuated by the operation of said discharging means, plungers adapted to enter said perforations of said element, premium hoppers, slides controlling the discharge of the latter, and pivoted levers connected at their ends to said plungers and to said slides.

5. In a vending machine, merchandise hoppers, discharging means therefor, premium hoppers, discharging means therefor, and means set in operation by actuation of said merchandise discharging means for controlling said premium discharging means, said third named means, normally abutting and retaining said premium discharging means against discharging position.

871,385. MOLD. JACOB B. BLAW, Pittsburg, Pa., assignor to Blaw Collapsible Steel Centering Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Feb. 16, 1907. Serial No. 357,628.

1. A mold comprising spaced supporting ribs having lateral flanges and a shell comprising a plurality of plates

abutting behind the ribs, together with wedging means for releasably securing the plates to the lateral flanges.



2. A mold comprising spaced supporting ribs having lateral flanges and a shell comprising a plurality of plates abutting behind the ribs and provided with inturned flanges adjacent the edges of the lateral flanges, together with wedging means for securing the inturned flanges to the lateral flanges.

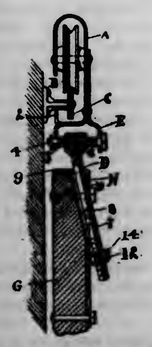
3. A mold comprising spaced supporting ribs having lateral flanges and a shell comprising a plurality of plates abutting behind the ribs and provided with perforated inturned flanges adjacent the edge of the lateral flanges, together with wedges adapted to pass through the perforations and engage the lateral flanges.

4. A mold comprising spaced supporting ribs having inwardly projecting flanges and a shell comprising a plurality of plates abutting behind the ribs, together with clamping means adapted to move the edges of the plates in a direction radial of the mold and hold them against the ribs.

5. A mold comprising spaced circumferential supporting ribs having lateral flanges, a shell consisting of plates abutting along their vertical edges at the backs of the ribs, and having members with projecting perforated legs adjacent the vertical edges of the plates and removable holding members adapted to pass through the said perforations and engage the said lateral flanges, whereby the plates are locked detachably to the ribs.

[Claim 6 not printed in the Gazette.]

871,386. DOOR-HANGER. JOHN H. BURKHOLDER, Ashland, Ohio, assignor to F. E. Myer & Bro., Ashland, Ohio, a Copartnership. Filed Dec. 31, 1906. Serial No. 350,132.



1. A door hanger comprising a roller carrier, a shaft mounted on said carrier and extending transversely of the direction of travel thereof, and a door supporting member carried by said shaft and means for laterally adjusting the same thereon.

2. A door hanger comprising a roller carrier, a threaded shaft rotatably mounted in said carrier and extending transversely thereof, and a door supporting member suspended from said shaft and means for adjusting the same thereon.

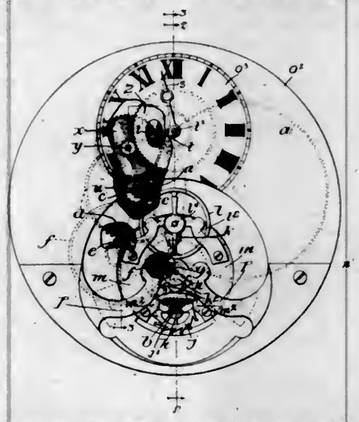
3. A door hanger comprising a roller carrier, a threaded shaft rotatably mounted in the lower part of said carrier and extending transversely thereof, and a suspensory member having a threaded head mounted on said shaft and laterally adjustable thereon.

4. A door hanger comprising a roller carrier, a threaded shaft rotatably mounted therein, a door supporting member having a threaded aperture engaging said shaft, and means to adjustably engage said member with a door.

5. A door hanger comprising a roller carrier, a threaded shaft rotatably mounted therein and extending transversely of the direction of travel of said carrier, a door supporting member having a threaded aperture adapted to engage said shaft, and means for engaging said member with a door.

[Claims 6 to 10 not printed in the Gazette.]

871,387. WATCH. JOSEPH BURTIN, Charquemont, France. Filed May 24, 1905. Serial No. 261,975.



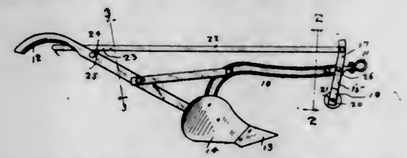
1. A watch movement comprising in combination, a barrel pinion, a main arbor driven from said pinion, stationary parts in which said arbor is mounted, a ring mounted on said main arbor, a balance wheel bridge mounted on said ring, a balance wheel provided with an arbor and an impulse pin, said arbor being mounted in said plate and balance bridge concentrically with respect to said main arbor, an escapement lever provided with an arbor, an escapement lever bridge mounted on said ring, said escapement lever arbor being mounted in said escapement bridge and said ring, said escapement lever being provided with a fork engaging said impulse pin and having pallets, an escapement wheel adapted to coöperate with said pallets and concentrically disposed with respect to said main arbor, an arbor for said escapement wheel, an escapement pinion mounted on said escapement arbor, a supporting bridge mounted on said ring, said escapement arbor being mounted in said supporting and escapement bridges, and a circular stationary rack provided with peripherally disposed teeth adapted to engage said escapement pinion, said rack being concentrically disposed with respect to said main arbor and located within the path of bodily movement of said escapement pinion.

2. A watch movement comprising in combination, a barrel pinion, a main arbor driven from said pinion, fixed bearings for said arbor a ring mounted on said main arbor, a balance wheel carried by said ring, an escapement lever carried by said ring and coöperating with said balance wheel, an escapement wheel carried by said ring and coöperating with said escapement lever, an escapement pinion for said escapement wheel, and a stationary rack meshing with said escapement pinion and located inside the path of bodily movement of said escapement pinion.

3. A watch movement comprising in combination, a barrel pinion, a main arbor driven from said pinion, fixed bearings for said arbor an operating member carried by said main arbor, escapement and balance mechanisms mounted on said operating member, and stationary means operatively associated with and located inside the path of bodily movement of the escapement mechanism.

4. A watch or clock movement comprising in combination, a main arbor, fixed bearings therefor, means for driving said arbor, an operating member carried by said arbor, movement mechanism mounted on said operating member, and stationary means operatively associated with said mechanism to drive the same when said member is operated.

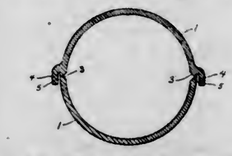
871,388. PLOWING-UNDER ATTACHMENT FOR PLOWS. THOMAS J. CHURCHILL, Boardman, Conn. Filed Aug. 5, 1907. Serial No. 387,069.



1. A plow attachment comprising a roller, an arm for attachment to a plow beam, bearings on said arm, one of which extends outward to the arm a greater distance than the other, and a roller journaled in said bearings, substantially as described, for the purpose specified.

2. An attachment of the character described comprising a double arm for attachment to a plow beam, the parts of said arm being provided with outwardly extending bearings, one of said bearings extending outward farther than the other, a roller journaled in said bearings, and means for adjusting the arms to raise and lower the roller.

871,389. DRAIN-PIPE. EDWIN J. COCHRAN, Sterling, Ill. Filed Sept. 7, 1907. Serial No. 391,829.



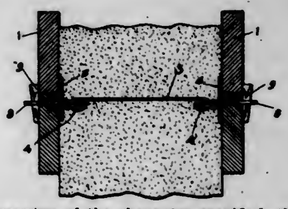
1. A device of the class named, comprising a plurality of pipe sections, provided at alternate ends with annular rims; a pair of longitudinal grooves on the inner side walls of said sections; and a pair of longitudinal flanges on the outer walls of said sections, spaced apart therefrom, and adjacent to said grooves on the inner walls of the sections, substantially as described.

2. A drain pipe, comprising a plurality of sections, provided at alternate ends with annular flanges; a pair of longitudinal grooves on the inner side walls of said sections; a pair of longitudinal flanges on the outer walls of said sections, adjacent to said grooves; and means for locking said sections of pipe together, on the upper side thereof, substantially as shown and set forth.

3. A drain pipe, comprising a plurality of sections, provided with a pair of longitudinal grooves on the inner side walls thereof; annular flanges on alternate ends of said sections, each of such flanges being separated into two parts along the line of said grooves; and a pair of longitudinal flanges on the outer walls of said sections, adjacent to said grooves, and spaced apart from the wall of the pipe, substantially as shown and described.

4. In a device of the class named, a plurality of pipe sections, each provided on its inner side walls with a pair of longitudinal grooves; annular rims on alternate ends of said sections, each of such rims being separated along the lines of said grooves into two parts; longitudinal flanges on the outer walls of said sections, spaced apart therefrom, and adjacent to said grooves; projections extending outwardly from the upper side of each of said annular rims; and means for securing such projections to the end of the next adjacent section of pipe, substantially as shown and for the purpose named.

871,390. DEVICE FOR MOLDING CONCRETE AND OTHER PLASTIC MATERIALS. CHARLES DIETRICHS, Little Ferry, N. J. Filed Apr. 20, 1907. Serial No. 369,271.



1. In apparatus of the character specified, the combination of a tie rod having a length less than the thickness of the wall to be constructed, and devices for engagement with the ends of the tie rod adapted to grip the side pieces of a mold, said devices each comprising a clamping plate for contact with the inner face of the mold member, a tie rod engaging member pivoted on said clamping plate, and means coöperating with said tie rod engaging member to clamp a mold member against said clamping plate.

2. In apparatus of the character specified, the combination of a tie rod having a length less than the thickness of the wall to be constructed and having its ends bent for engagement with hooks, and devices comprising hooks for engagement with the ends of said tie rod and means for clamping mold members, each of said devices comprising a clamping plate for engagement with the face of a mold member, a member pivoted on said clamping plate and having a hook for engagement with one end of the said rod, and means coöperating with said pivoted member to hold the said member in engagement with the tie rod and to clamp a mold member against said clamping plate.

3. A clamping device for the members of a concrete mold, comprising a clamping plate, a tongue rotatably secured to said plate, said tongue being slotted at a distance from the clamping plate to receive a wedge and adapted at the other end to interlock with a stay rod, and a wedge for engagement with said slotted tongue to clamp the mold member and hold the tongue in engagement with the stay rod.

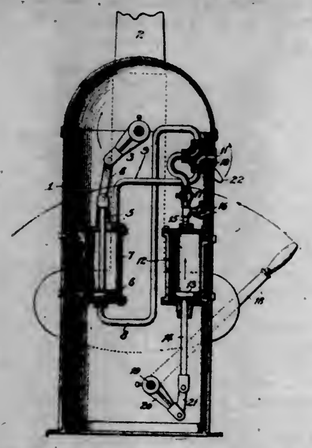
4. A combined clamp and tie rod securing device for concrete molds, comprising a clamping plate, a pivoted tongue carried by the plate, said tongue having a hook at one end to engage a tie rod and the plate having a portion adapted to close the hook when the device is in clamping position, and means coöperating with said tongue and said plate to clamp a mold together.

5. The combination with a tie rod having an eye at the end, of a device for gripping the tie rod and clamping the side members of a concrete mold, said device comprising a plate adapted to form an abutment for the mold members and having a lip disposed at an angle thereto, a member pivotally mounted on said lip and having at one end a hook adapted to engage the eye at one end of the tie rod and having a slot at the other end, and a wedge arranged in said slot and adapted to jam the mold members against the abutment plate.

871,391. PNEUMATIC GATE. WILLIAM P. ELLIOTT and WILLIAM P. ELLIOTT, Jr., La Grange, Ill. Filed July 26, 1907. Serial No. 385,676.

1. In a pneumatic gate, the combination of a post carrying a swinging gate-arm, an air-cylinder containing a piston having its rod connected with said arm for swinging it, air-pipes leading into said cylinder at opposite sides of the piston, an air-pump on the post containing a piston

on a piston-rod, a pump-operating lever fulcrumed on the post and provided with a crank-arm extending from its fulcrum, said crank-arm having a link-connection with the piston-rod of the pump, a pipe leading from the discharge-end of the pump-cylinder and containing an intake check-valve and a second check-valve, and a valve-device for controlling communication with said pipe of said air-pipes and of said air-pipes with the atmosphere.



2. In a pneumatic gate, the combination of a post carrying a swinging gate-arm, an air-cylinder on the post containing a piston having a crank-arm connection between its rod and said gate-arm for swinging it, air-pipes leading into said cylinder at opposite sides of the piston, an air-pump comprising a cylinder supported on the post and containing a piston on a piston-rod, a pump-operating lever fulcrumed at one end on the post and provided with a crank-arm extending from its fulcrum, said crank-arm having a link-connection with the piston-rod of the pump, a pipe leading from the discharge-end of the pump-cylinder and containing an intake check-valve and a second check-valve, and a valve-device having an exhaust-port and interposed between the pump-discharge pipe and said air-pipes.

871,392. PRESERVED WOOD AND PROCESS OF MAKING SAME. CARLETON ELLIS, Larchmont, N. Y. Filed June 25, 1907. Serial No. 380,706.

1. The process of preserving wood which consists in impregnating wood with carbolate of copper dissolved in oily material.

2. The process of preserving wood which consists in impregnating wood with carbolate of copper dissolved in creosote oil.

3. As an article of manufacture, wood impregnated with organic oil carrying dissolved copper carbolate.

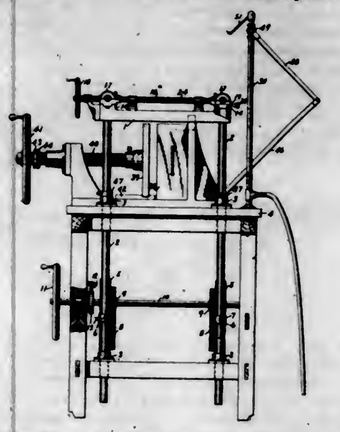
4. As an article of manufacture, wood impregnated with copper carbolate dissolved in an oil.

5. As an article of manufacture, wood impregnated with copper carbolate dissolved in creosote oil.

871,393. APPARATUS FOR ASSEMBLING STORAGE BATTERIES. LOUIS H. FLANDERS, Wilkinsburg, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Feb. 12, 1904. Serial No. 193,353.

1. In apparatus for uniting storage battery plates having extended terminal lugs, the combination with a holder for said plates and means for compressing the same in said holder, of one or more pairs of bars having recesses in the upper sides thereof and toothed edges adapted to be brought into engagement around the said lugs to clamp them in position and form molds.

2. In apparatus for uniting storage battery plates having extended terminal lugs, the combination with a holder for said plates and means for compressing the same in said holder, of one or more pairs of bars having recesses in the upper sides thereof and toothed edges adapted to be brought into engagement around the said lugs to clamp them in position and form molds and means for bringing into engagement the two bars of each of said pairs.



3. In apparatus for uniting storage battery plates having extended terminal lugs, the combination with a holder for said plates and means for compressing the same in said holder, of one or more pairs of bars having recesses in the upper sides thereof and toothed edges adapted to be brought into engagement around the said lugs to clamp them in position and form molds, means for bringing into engagement the two bars of each of said pairs and means for raising and lowering said bars and for supporting the same in any desired position.

4. In apparatus for uniting storage battery plates having extended terminal lugs, the combination with a holder for said plates and means for compressing the same in said holder, of one or more pairs of bars having recesses in the upper sides thereof and toothed edges adapted to be brought into engagement around the said lugs to clamp them in position and form molds, means for bringing into engagement the two bars of each of said pairs, means for raising and lowering said bars and for supporting the same in any desired position and means for heating said bars when in a raised position.

5. In apparatus for uniting storage battery plates having extended terminal lugs, the combination with a holder for said plates and means for compressing the same in said holder, of one or more pairs of bars having recesses in the upper sides thereof and toothed edges adapted to be brought into engagement around the said lugs to clamp them in position and form molds, means for bringing into engagement the two bars of each of said pairs, means for raising and lowering said bars and for supporting the same in any desired position, means for heating said bars when in a raised position and means for automatically turning off the heat when said bars are lowered.

[Claims 6 to 19 not printed in the Gazette.]

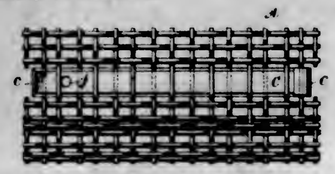
871,394. BRAKE-SHOE. JOSEPH D. GALLAGHER, Glenridge, N. J., assignor to Edward H. Fallows, trustee, New York, N. Y. Filed Apr. 3, 1907. Serial No. 366,227.

1. A brake shoe comprising a wearing body and having at or adjacent to the back thereof a wire mesh and metal strap, substantially as described.

2. A brake shoe comprising a wearing body, a wire mesh at or adjacent to the back thereof, and a metal strap located between the strands of said wire mesh, substantially as described.

3. A brake shoe comprising a wearing body, a wire mesh back, and a metal strap provided with an opening therein for the passage of a key-bolt, substantially as described.

4. A brake shoe comprising a wearing body, a wire mesh back, and a metal strap having upturned or bent ends, substantially as described.



5. A brake shoe comprising a wearing body, wire mesh at or adjacent to the back thereof, and a metal strap having beveled edges, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

871,395. EXPLOSIVE. GEORGE W. GENTIEU, Peoria, Ill. Filed Mar. 14, 1906. Serial No. 305,970.

A compressed granular explosive consisting of an intimate mixture of ammonium picrate 25%, potassium nitrate 52%, sulfur 10%, charcoal 3%, and hydrocellulose 10%.

871,396. PROJECTILE. GEORGE W. GENTIEU, Peoria, Ill. Filed Apr. 12, 1906. Serial No. 311,219.



1. In an explosive projectile, the combination of a shell provided with a substantially cylindrical chamber therein, a mass of explosive in said chamber and plugs along the lateral walls of the chamber projecting into the mass of explosive for the purpose specified.

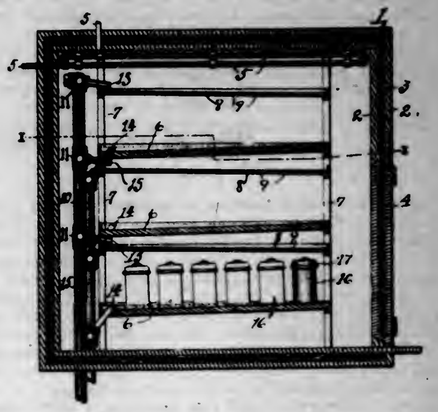
2. In an explosive projectile, the combination of a shell provided with a substantially cylindrical chamber therein, a mass of explosive in said chamber and a plurality of threaded plugs extending through the wall of the magazine chamber and projecting into the mass of explosive for the purpose specified.

3. In an explosive projectile, the combination of a shell provided with a substantially cylindrical chamber therein, a plurality of solid, undivided substantially cylindrical blocks of explosive compressed in said chamber, and a plurality of plugs having a threaded connection with the wall of the chamber and projecting into the blocks of explosive for the purpose specified.

871,397. REFRIGERATING APPARATUS. JOHN J. GLAUSER, Pittsburg, Pa., assignor to The Edward E. Rieck Company, Pittsburg, Pa., a Corporation. Filed Mar. 22, 1904. Serial No. 199,347.

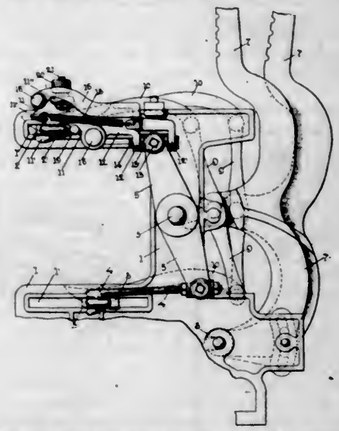
1. In refrigerating apparatus, a compartment, a plurality of inclined perforated distributing shelves, adapted to produce a downward flow of refrigerating liquid, located within said compartment, inlets for said refrigerating liquid located at the higher sides of said distributing shelves, storage shelves for the reception of articles to be refrigerated, one of said storage shelves being located beneath each distributing shelf and means for draining the liquid from said compartment.

2. In refrigerating apparatus, a compartment, inclined perforated distributing shelves fixed in said compartment and adapted to produce a downward drip of refrigerating liquid, inlets for said liquid at the higher sides of said shelves, means for exposing the articles to be refrigerated beneath said distributing shelves to said drip and means



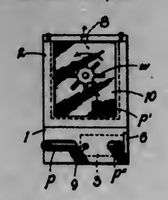
for draining said liquid from said compartment, substantially as described.

871,398. LOOM SHEDDING MECHANISM. ALBERT A. GORDON, Jr., Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Nov. 22, 1905. Serial No. 288,510.



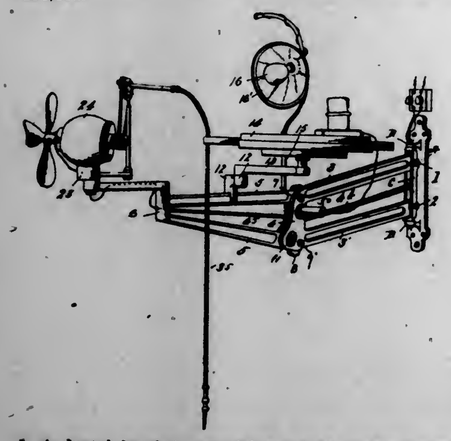
In a dobby shedding mechanism having a rocking lever, and two lifter bars operated by said lever, the combination with said rocking lever and one of the lifter bars, of a jointed connection having an operating handle, and pivotally attached at one end to one end of the rocking lever, and at its other end to one end of a lifter bar, and comprising two parts hinged together, and having their hinged connection in a plane below their attached ends, when the connection is extended, and abutting surfaces to limit the movement of the two parts of said connection in one direction, and a spring attached at one end to one of said parts, and at its other end to the other of said parts, and exerting a tension in a plane above the plane of the hinged joint, when the connection is extended, and a stud on one part adapted to engage said spring, and change the position of the plane of tension of said spring, and cause it to exert a tension in a plane below the plane of the hinged joint, when the parts are moved towards each other, and a bar connecting said hinged connection at the front of the dobby with a hinged connection at the rear of the dobby, said bar being pivotally attached at each end.

871,399. TOY. DAVID S. GREEN, St. Louis, Mo. Filed May 9, 1907. Serial No. 372,670.



A toy comprising two legs or members disposed at an angle to each other, and one above the other and having independent chambers formed therein, outlet ports leading from the chambers, the outlet port of the lower leg being located in the front wall thereof, a passage-way formed at the juncture of the two legs, a blowing pipe leading through the front wall of the lower leg at one side and establishing communication with one end of the passage-way aforesaid, an extension pipe leading from the opposite end of the passage-way into the chamber of the upper leg, a pin-wheel mounted in said chamber in the path of the current escaping from said pipe extension, a second blowing pipe passed through the front wall of the chamber of the lower leg, at the opposite side from the first pipe, and the blowing ends of the blowing pipes being separated sufficiently to permit independent blowing, the front wall of the upper leg-chamber being provided with a transparent panel for observing the rotation of the pin-wheel, the parts operating substantially as and for the purpose set forth.

871,400. COMBINATION DENTAL BRACKET. GEORGE HALL, Lima, Ohio. Filed Jan. 18, 1906. Serial No. 296,608.

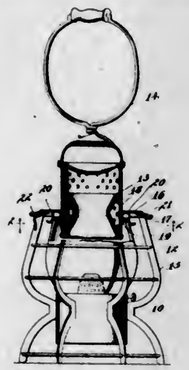


1. A dental bracket comprising a base, a vertical hollow frame member pivoted thereto capable of lateral swinging movement, horizontal parallel frame arms having their ends engaged in the hollow vertical member and bolts passing through said vertical member to secure the arms therein, the outer ends of the frame arms terminating in a hollow box, bracket arms pivoted in said hollow box, the converging ends of the bracket arms terminating in a supporting head, the lowermost parallel frame bar provided at its outer end with a ratchet head, a wheel pivoted in the lowermost bracket arm, a pawl on the axle of said wheel to engage the ratchet head, and a spring to hold the pawl in proper engagement therewith.

2. A dental bracket comprising a base, a vertical frame member pivoted thereto, horizontal frame arms having their ends engaged in the vertical member, the outer ends of the frame arms terminating in a hollow box, bracket arms pivoted in said hollow box, the converging ends of the bracket arms terminating in a supporting head, and pawl and ratchet mechanism on the frame bars and bracket arms to hold the members in adjustable relation.

3. A dental bracket comprising a base, a vertical frame member pivoted thereto, horizontal frame arms having their ends engaged in the vertical member, the outer ends of the frame arms terminating in a hollow box, bracket arms pivoted in said hollow box, the converging ends of the bracket arms terminating in a supporting head and a motor support arranged on said head, pawl and ratchet mechanism on the frame bars and bracket arms to hold the members in adjustable relation, and a table pivotally mounted upon the bracket arms.

871,401. LANTERN. WILLIAM S. HAMM, Lakeside, Ill. Filed Oct. 11, 1906. Serial No. 338,454.



1. In a lantern, in combination, a well, a dome, a guard-frame uniting the well and dome, a globe seated upon the well, and a spring actuated cap slidable engaging the exterior of the dome and bearing upon the upper edge of the globe.

2. In a lantern, in combination, a well, a dome, a guard-frame uniting the well and dome, a globe seated upon the well, its upper end being open and inclosing the lower end of the dome, an annular cap encircling and sliding upon the dome, and springs re-acting between the dome and the cap to urge the latter against the upper edge of the dome.

3. In a lantern, in combination, a well, a dome, an annular flange projecting laterally from the dome, a frame fixed to the well and hinged to the flange, a globe seated upon the well, its upper end inclosing the lower portion of the dome, an annular cap slidably mounted upon the dome, and springs re-acting between the flange and the cap to force the latter against the upper edge of the globe.

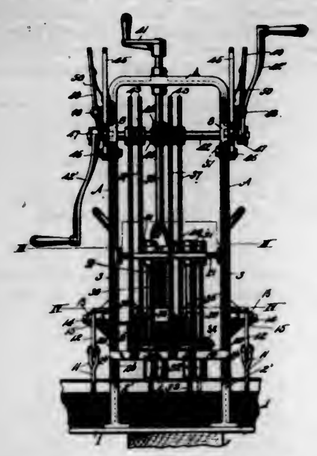
4. In a lantern, in combination, a well, a dome, a flange projecting radially from the dome, a guard frame uniting the flange and well, a globe seated on the well, and a spring actuated holder for the upper end of the globe located exteriorly of the dome.

5. In a lantern, in combination, a well, a dome, a frame connecting the well and dome, a globe rising above the well, and a spring actuated holder for the upper end of the globe carried by and exterior to the dome.

871,402. MACHINE FOR BORING RAILWAY-TIES. ALEXANDER H. HANDLAN, Jr., St. Louis, Mo. Filed Apr. 1, 1907. Serial No. 365,823.

1. In a drilling machine of the character described, the combination of a frame, having bosses provided with pivot pins, eccentrics having handles and mounted upon the pivot pins, suspension bars supported by the eccentrics, a pair of gripping claws pivoted to the suspension bars, a plurality of bit carrying rods supported by said frame, means for rotating said rods, and means for feeding said rods longitudinally while being rotated, substantially as set forth.

2. In a drilling machine of the character described, the combination of a frame, a plurality of bit carrying rods supported by said frame, means for feeding said rods, a drive shaft, mechanism operated by said drive shaft for rotating said bit carrying rods, and means, in which the ends of the drive shaft are mounted, movably connected to said frame and by which said shaft is held either in co-operation or out of coöperation with said feeding means, substantially as set forth.



3. In a drilling machine of the character described, the combination of a frame, a plurality of bit carrying rods supported by said frame, means for feeding said rods, a drive shaft for coöperation with said feeding means, a pair of supporting arms pivoted to said frame and in which said drive shaft is journaled so as to be movable to and from said feeding means, latches carried by said arms and arranged for engagement with said frame, and means coöperating with said drive shaft for rotating said bit carrying rods, substantially as set forth.

4. In a drilling machine of the character described, the combination of a frame, a plurality of bit carrying rods movably supported by said frame, a carrier to which said rods are fitted, a feed rod operable in said carrier, a drive shaft for coöperation with said feed rod, means for supporting said drive shaft, and by which it is supported in engagement with and out of engagement with said feed rod, and means coöperating with said drive shaft for rotating said bit carrying rods, substantially as set forth.

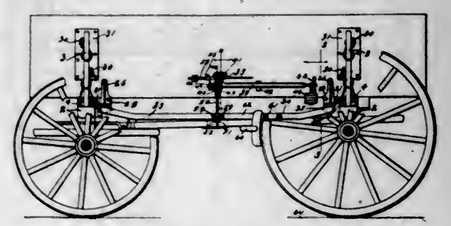
5. In a drilling machine of the character described, the combination of a frame, a carrier mounted in the frame, means for reciprocating the carrier, set plates supported by the carrier and adjustable thereon, bit carrying rods suspended from the carrier and loosely fitted in the set plates, guide plates supported by said frame beneath the carrier and through which the bit carrying rods extend and correspondingly adjustable to the set plates and means for rotating said bit carrying rods; substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

871,403. VEHICLE-WEIGHER. JAMES R. HARRISON, Peoria, Ill. Filed Nov. 23, 1906. Serial No. 344,739.

1. In a vehicle weigher, the combination with the bolsters and the load carrying frame thereon, of a lifting member terminating in a downwardly projecting bearing adapted to bear on a part of the bolster, a stud adjacent the said bearing extending laterally from the side of the lifting member, and a guard on the bolster embracing said stud to hold the lifting member in place on the bolster.

2. In a vehicle weigher, the combination with the bolsters, the load carrying frame and the standards on the bolsters at each side of the load carrying frame, of lifting devices pivotally mounted on the bolsters and adapted to engage the load carrying frame for raising the load carrying frame from the normal position to the load weighing position, and a removable superstructure on each bolster intermediate of the standards for supporting the load carrying frame in the normal position, said superstructure being provided with means at each end for engaging the standards whereby the superstructure is held in place on the bolster.



3. In a vehicle weigher, the combination with the bolsters, the load carrying frame and the standards on the bolsters at each side of the load carrying frame, of lifting devices pivotally mounted on the bolsters and adapted to engage the load carrying frame for raising the load carrying frame from the normal position to the load weighing position, and a removable superstructure on each bolster intermediate of the standards for supporting the load carrying frame in the normal position, said superstructure being provided with notches at the ends for engaging the standards to hold said superstructure in place on the bolster.

4. In a vehicle weigher, the combination with the bolsters, the load carrying frame and the standards on the bolsters at each side of the load carrying frame, of lifting devices adapted to engage the load-carrying frame for lifting the said load carrying frame from the normal position to the load weighing position, and a wedge member at the inner side of and adjacent the base of each standard for forcing the load carrying frame away from the standards.

5. In a vehicle weigher, the combination with the bolsters, the load carrying frame, and the standards on the bolsters at each side of the load carrying frame, of a superstructure on each bolster intermediate of the standards, a bearing plate at each end of the superstructure on the under face thereof, a cut-away place in the superstructure above each bearing plate, and lifting members extending into said cut-away places and fulcrumed on the said bearing plates for raising the load carrying frame off the superstructure.

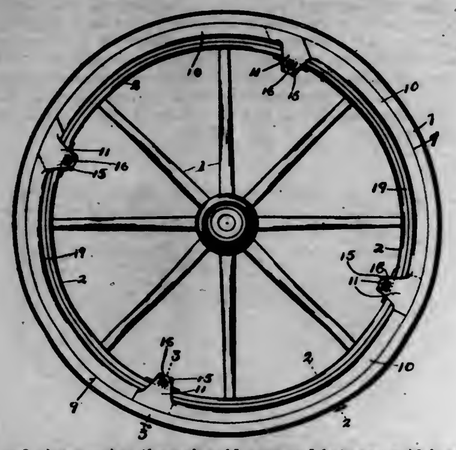
[Claims 6 to 23 not printed in the Gazette.]

871,404. TIRE. WILLIAM A. HELLER, Akron, Ohio. Filed Feb. 9, 1907. Serial No. 356,587.

1. The combination with a wheel of a pneumatic tube arranged on the rim thereof and a casing arranged to inclose said pneumatic tube, said casing comprising a bottom or tread portion, a side portion formed integral therewith, a side portion detachably secured to said tread portion and consisting of a number of independent plates, ears formed on said detachable plates and on the integral side plate, lugs formed on the rim of said wheel and pins passing through said ears and between said lugs, substantially as described and for the purpose set forth.

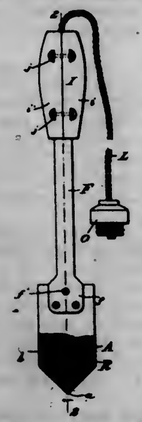
2. The combination with a wheel of a pneumatic tube arranged on the rim thereof and a casing arranged to inclose said pneumatic tube, said casing comprising a bottom or tread portion, a side portion formed integral at one edge thereof, a flange formed integral at the opposite edge, a detachable side portion arranged to fit within said flange,

ears formed on the detachable side portion and on the integral side portion, lugs formed on the rim of said wheel



and pins passing through said ears and between said lugs, substantially as described.

871,405. ELECTRICALLY-HEATED SOLDERING-IRON. HARRY HERTZBERG and MAURICE J. WOHL, New York, N. Y., assignors to Abbot Augustus Low, Horseshoe, N. Y. Filed Feb. 11, 1907. Serial No. 356,802.



1. In a device of the class described, an external body or mass of heat-absorbing metal, a flat core therein, and a bare metal resistance wire or ribbon coiled in a single layer or winding on said core and inclosed within said body or mass of metal, said wire or ribbon being in mechanical contact throughout its length with said mass of heat-absorbing metal and insulated electrically therefrom, whereby the heat developed in said resistance is absorbed directly by the mass of metal.

2. In a device of the class described, an external hollow body or mass of heat-absorbing metal, a core of insulating material therein, a bare metal resistance wire or ribbon coiled in a single layer or winding on said core and inclosed therewith inside of said body or mass of metal, said resistance wire or ribbon being in mechanical contact throughout its length and on its respective sides with the body or mass of heat-absorbing metal, and thin layers of heat transmitting and electrical insulating material between said wire or ribbon and the aforesaid mass of metal within which the wire or ribbon is inclosed.

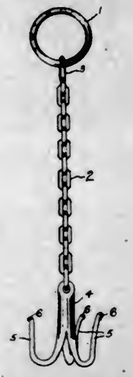
3. In a device of the class described, an external hollow body or mass of heat-absorbing metal, a thin flat core of insulating material, and an electrical resistance wire or ribbon wrapped on said core and inclosed therewith within said body or mass of metal, said wire or ribbon being in mechanical contact throughout its length with said body or mass of heat-absorbing metal.

4. In a device of the class described, an external hollow body or mass of heat-absorbing metal, an electrical resistance inclosed within said body or mass of metal and in mechanical contact therewith throughout the length of said resistance, and thin layers of mica intermediate of the resistance and said metallic mass, said mica layers being in direct contact with the respective sides of said electrical resistance and with said mass of heat-absorbing metal.

5. In a device of the class described, a metallic resistance, an external hollow body or mass of heat-absorbing metal inclosing said metallic resistance and in close mechanical contact therewith, and thin layers of interposed electrical insulating material in direct contact with said resistance and with said mass or body of metal.

[Claims 6 to 8 not printed in the Gazette.]

871,406. ANIMAL-FETTER. BURTON HOLLINSHEAD, Fulton, Ill. Filed May 29, 1907. Serial No. 376,227.



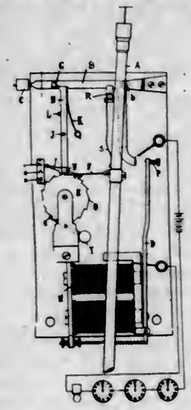
1. A device of the class named, comprising a central block; a plurality of radially disposed hooks secured thereto, and provided on their ends with knobs; and means for flexibly attaching said block to a ring in the nose of the animal, substantially as shown and described.

2. A device of the class named, comprising a block 4; a plurality of hooks 5, extending radially from one end of said block, and provided at their ends with small knobs 6; and a short chain 2, attached to that end of the block 4 opposite to said hooks, and adapted to be removably secured at its free end to a ring in the nose of an animal, substantially as shown and set forth.

871,407. ELECTRIC CLOCK. FRANK HOPE-JONES, London, England. Filed Mar. 20, 1906. Serial No. 307,021.

1. In an electric clock mechanism, a gravity propelling lever, a spring catch adapted to support the said lever, a freely supported pendulum, a pawl on said pendulum, a releasing wheel operated by said pawl, said wheel adapted to direct the said pawl periodically against the spring catch in order to release the lever, means for transmitting impulses to the pendulum by the fall of the said lever, a battery, an electromagnet, an armature on said magnet, said armature adapted to make contact with the gravity propelling lever and restore it to its initial position, an electric circuit through the clock mechanism, the magnet, the battery, and a series of dials, and means for automatically indicating the approaching exhaustion of the battery, substantially as set forth.

2. In an electric clock mechanism, a counterweighted propelling lever, a spring catch adapted normally to support said lever, a freely supported pendulum, a bifurcated pawl on said pendulum having one branch adapted to engage the releasing wheel and the other branch adapted to engage a stop on the spring catch and release the propelling lever, a releasing wheel operated by said pawl and adapted periodically to direct it against the stop of the spring catch, means for transmitting an impulse, on the fall of the said lever, through a spring to the pendulum, a battery, an electromagnet, an armature adapted to make electric contact with the said propelling lever and raise it to its initial position, a bell adjustable to sound at a prolongation of contact, and an electric circuit through the mechanism and a dial system, substantially as set forth.

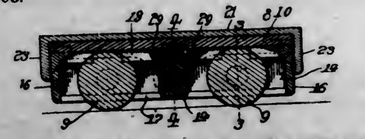


3. In combination with an electric clock mechanism, the lever B, a spring catch supporting said lever, means for periodically releasing and returning the lever, the wheel T on said lever, the pendulum A, the arm U on said pendulum, and the spring arm X adjustable on the pendulum, so arranged as to receive and transmit the pressure of the lever B on contact with the wheel.

4. In combination with an electric clock mechanism of the type set forth, the releasing wheel E, the pivoted member *f*, the spring catch N, the bifurcated pawl F having a blade at one angle adapted to engage with the releasing wheel E, and a blade at another angle adapted to engage with the spring catch N, substantially as set forth.

5. In combination with an electric clock mechanism of the type set forth, means for indicating approaching failure of battery strength, comprising the electric bell *c* the weighted bell hammer *d*, the electromagnet *j*, the armature *k* attached to the bell hammer and the coil *i* in circuit with the battery, the whole so arranged that the normal duration of contact in the clock mechanism when the battery is in normal operation will be insufficient to overcome the inertia of the bell mechanism; but on approaching exhaustion of the battery current and consequent prolongation of the period of contact, the magnet *j* will be energized sufficiently long to attract the armature *k* and ring the bell, substantially as described.

871,408. SIDE BEARING FOR RAILWAY-CARS. JOHN JACOB, Chicago, Ill., assignor of one-half to Edwin S. Woods, Chicago, Ill. Filed Jan. 10, 1906. Serial No. 295,403.



1. In a roller bearing, a casing provided with an elongated roller chamber, a roller removably mounted in said chamber and provided with trunnions, flanges on the side walls of the casing adapted for engagement by said trunnions, a wear plate removably fitted within said chamber, and arranged to confine said roller in said chamber.

2. In a roller bearing, a casing provided with an elongated roller chamber, a roller removably mounted in said chamber and provided with trunnions, flanges on the side walls of the casing adapted for engagement by said trunnions, a wear plate removably fitted within said chamber and arranged to confine the roller in the chamber, and means for locking the wear-plate in place.

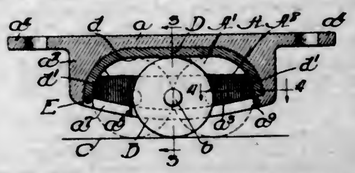
3. In a roller bearing, a chambered casing, a roller removably mounted therein provided at its ends with trunnions, said casing being provided with an opening to receive the roller and with notches at the sides of the opening through which the trunnions of the roller pass when the roller is inserted into and removed from the casing, flanges on the side walls of the casing adapted for engagement by said trunnions, and a wear plate removably fitted in said casing and constructed and arranged to confine the roller in the casing.

4. In a roller bearing, a chambered casing, a roller removably mounted therein provided at its ends with trunnions, said casing being provided with an opening to receive the roller and with notches at the sides of the opening through which the trunnions of the roller pass when the roller is inserted into and removed from the casing, flanges on the side walls of the casing adapted for engagement by said trunnions, and a wear plate removably fitted within said casing and having a part so disposed relatively to said notches as to prevent the trunnions from passing through the notches when the wear plate is in place.

5. In a roller bearing, a chambered casing, a roller removably mounted therein provided at its ends with trunnions, said casing being provided with an opening through which the roller passes when inserted into and removed from the casing, flanges on the side walls of the casing on which the trunnions are adapted to rest and roll, a wear plate adapted to be removably fixed in said casing between the roller and the wall of the casing located opposite to said opening and arranged to confine the roller in the casing, and means for locking said wear plate in place.

[Claims 6 to 21 not printed in the Gazette.]

871,409. ROLLER-BEARING. JOHN JACOB, Chicago, Ill., assignor of one-half to Edwin S. Woods, Chicago, Ill. Filed Feb. 11, 1907. Serial No. 356,779.



1. In a roller bearing, an integral casing provided with an elongated roller chamber, a roller removably mounted in said chamber and provided with trunnions, flanges on the side walls of the casing adapted for engagement by said trunnions, a wear-plate removably fitted within said chamber, and arranged to confine said roller in said chamber.

2. In a roller bearing, an integral casing provided with an elongated roller chamber, a roller removably mounted in said chamber and provided with trunnions, flanges on the side walls of the casing adapted for engagement by said trunnions, a wear-plate removably fitted within said chamber, and arranged to confine the roller in the chamber, and means for locking the wear-plate in place.

3. In a roller bearing, a chambered integral casing, a roller removably mounted therein provided at its ends with trunnions, said casing being provided with an opening to receive the roller and with notches at the sides of the opening through which the trunnions of the roller pass when the roller is inserted into and removed from the

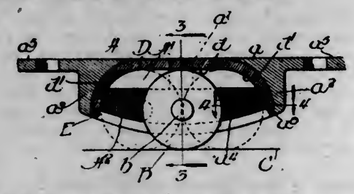
casing, flanges on the side walls of the casing adapted for engagement by said trunnions, and a wear-plate removably fitted in said casing and constructed and arranged to confine the roller in the casing.

4. In a roller bearing, a chambered integral casing, a roller removably mounted therein provided at its ends with trunnions, said casing being provided with an opening to receive the roller and with notches at the sides of the opening through which the trunnions of the roller pass when the roller is inserted into and removed from the casing, flanges on the side walls of the casing adapted for engagement by said trunnions, and a wear-plate removably fitted within said casing and having a part so disposed relatively to said notches as to prevent the trunnions from passing through the notches when the wear-plate is in place.

5. In a roller bearing, a chambered casing, a roller removably mounted therein provided at its ends with trunnions, said casing being provided with an opening through which the roller passes when inserted into and removed from the casing, flanges on the side walls of the casing on which the trunnions are adapted to rest and roll, a wear-plate adapted to be inserted endwise into said casing through said opening and to be located between the roller and the wall of the casing opposite to said opening and arranged to confine the roller in the casing, and means for locking said wear-plate in place.

[Claims 6 to 14 not printed in the Gazette.]

871,410. ROLLER-BEARING. JOHN JACOB, Chicago, Ill., assignor of one-half to Edwin S. Woods, Chicago, Ill. Filed Feb. 11, 1907. Serial No. 356,780.



1. In a roller bearing, a casing formed to provide an elongated roller chamber open at one side, a roller therein provided with trunnions and extending through said open side of the chamber for contact with a bearing exterior to the casing, and a wear-plate removably fitted within the chamber between the roller and the wall of the casing opposite to said opening, said latter wall being provided with an opening through which the roller is inserted into the chamber at a time when the wear-plate is removed from the chamber, whereby said wear-plate, when in place, confines the roller in the chamber.

2. In a roller bearing, a casing formed to provide an elongated roller chamber open at one side, a roller therein provided with trunnions and extending through said open side of the chamber for contact with a bearing exterior to the casing, and a wear-plate removably fitted within the chamber between the roller and the wall of the casing opposite to said opening of the casing, said latter wall being provided with an opening through which the roller is inserted into the chamber at a time when the wear-plate is removed from the chamber, whereby said wear-plate, when in place, confines the roller in the chamber, the intermediate part of said wear-plate occupying said latter opening.

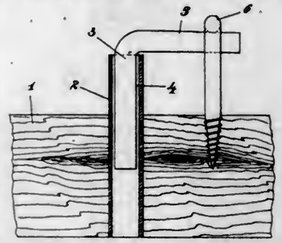
3. In a roller bearing, a casing formed to provide an elongated roller chamber open at one side, a roller therein provided with trunnions and extending through said open side of the chamber for contact with a bearing exterior to the casing, and a wear-plate removably fitted within the chamber between the roller and the wall of the casing opposite to said opening and curved at its ends towards said opening to constitute stops at the end of the chamber for said roller, said latter wall being provided with an opening through which the roller is inserted into the chamber at a time when the wear-plate is removed from the chamber, whereby said wear-plate, when in place, confines the roller in the chamber.

4. In a roller bearing, a casing formed to provide an elongated roller chamber open at one side, a roller therein provided with trunnions and extending through said open side of the chamber for contact with a bearing exterior to the casing, and a wear-plate removably fitted within the chamber between the roller and the wall of the casing opposite to said opening, said latter wall being provided with an opening through which the roller is inserted into the chamber at a time when the wear-plate is removed from the chamber, whereby said wear-plate, when in place, confines the roller in the chamber, and means for removably locking the wear-plate in the casing.

5. In a roller bearing, a casing formed to provide a downwardly opening, horizontal, elongated roller chamber, a roller therein projecting through the lower open side thereof and provided at its ends with trunnions, tracks on the side walls of the casing on which said trunnions are adapted to rest and roll, said roller having vertical movement relatively to the tracks and a wear-plate removably fitted within the chamber between the top wall thereof and the roller, said top wall being provided with an opening through which the roller is inserted into and removed from the chamber, and the wear-plate constituting means for confining the roller in said chamber.

[Claims 6 to 12 not printed in the Gazette.]

871,411. SOAP-FRAME. GEORG A. JACOBI, Darmstadt, Germany. Filed Aug. 22, 1907. Serial No. 389,624.



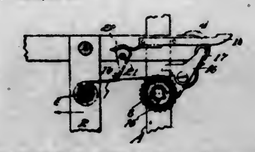
1. An air vent for soap frames comprising an outlet in the upper part of the frame and a stopper for closing this outlet, the cross section of the said stopper being less than the internal cross section of the outlet.

2. An air vent for soap frames comprising an outlet in the upper part of the frame a stopper for this outlet of smaller cross section than the internal cross section of the outlet and a means for securing the stopper in its place.

3. An air vent for soap frames comprising an outlet in the upper part of the frame a rod of iron of lesser cross section than the outlet and bent at right angles and a means for securing the rod in its place.

4. An air vent for soap frames comprising an outlet in the upper part of the frame, a rod of iron bent at right angles and of smaller cross section than the outlet, and a hook holding the horizontal limb of the bent iron rod in its place.

871,412. SHEET-DELIVERY APPARATUS. CLARENCE L. JOHNSTON, San Francisco, Cal., assignor of one-half to Horace P. Brown, Alameda, Cal. Filed Jan. 10, 1906. Serial No. 295,390.



1. In a sheet delivery apparatus, the combination of a reciprocating carriage, two curtains, each having a terminal supported by the carriage, one of said curtains having its other terminal secured to one side of and independent of the carriage and the other curtain having its corresponding terminal secured to the opposite side of and independent of the carriage, and mechanism to wind up one curtain and correspondingly unwind the other on the reciprocation of the carriage, said curtains arranged to deliver a sheet from the curtain which is being wound up onto the curtain which is being unwound and spring-pressed sheet-stops in the path of said winding and unwinding mechanism.

2. In a sheet delivery apparatus, the combination of two sets of curtains, a support for one terminal of each curtain of one set, a support for one terminal of each curtain of the other set, and means operative between said supports for winding up one set of curtains and correspondingly unwinding the other set, said winding mechanism operative to deliver a sheet alternately from a curtain of one set to a curtain of the other set and spring-pressed sheet-stops in the path of said winding and unwinding mechanism.

3. In a sheet delivery apparatus, the combination of two spring-controlled rollers, each having a curtain mounted thereon, a carriage for said rollers, supports for the free ends of the curtains and between which supports the carriage is reciprocal, said carriage and spring rollers operative to deliver a sheet from one of said curtains to the other means for maintaining a sheet flat on the curtains, and sheet-stop means in the path of the carriage.

4. In a sheet delivery apparatus, two rollers, a curtain having a terminal attached to one roller and a terminal attached to the other, and means for alternately winding the curtain off of one roller onto the other.

5. In a sheet delivery apparatus, two rollers, a curtain having one terminal attached to one roller, and the other terminal attached to the other roller, means for unwinding the curtain from one roller onto the other, and spring actuated means for rewinding the curtain onto the first roller and off of the second roller.

[Claims 6 to 68 not printed in the Gazette.]

871,413. HOOK AND EYE OR THE LIKE. MARY J. KEANE, New York, N. Y. Filed Aug. 4, 1906. Serial No. 329,194.



1. A hook or the like, formed of a bent strip having a multiplicity of integral flexible prongs, all of which extend in the same direction between the ends of the strip.

2. A hook or the like, formed of a bent strip, having a multiplicity of flexible prongs formed integrally therewith, such prongs being extended in the same direction from one side of the strip between the ends thereof.

3. A hook formed of a bent strip having integral flexible prongs, arranged at the front of the hook near the bend of its bill, and at the rear of the hook on each side thereof, all of said prongs extending from the strip in the same direction.

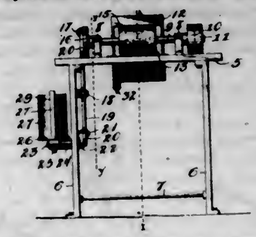
4. As a new article of manufacture, a flexible strip having a series of integral flexible prongs, all extending in the same direction and irregularly spaced for the purposes set forth.

5. As a new article of manufacture, a flexible strip having a series of integral flexible prongs all extending in the same direction and irregularly spaced to leave a selected portion free from prongs when the strip is bent to form a hook.

[Claim 6 not printed in the Gazette.]

871,414. CLEANING-MACHINE. ERNEST C. KECKELEY and ANDREW KOSSMANN, Columbus, Ohio. Filed Mar. 22, 1906. Serial No. 307,365.

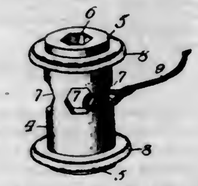
In a cleaning machine, the combination with a supporting frame, of a shaft journaled in said frame, a table mounted upon said shaft, cans mounted upon said table, a crank secured to the shaft, a link pivoted intermediate its ends and having slotted ends, a wrist pin carried by the crank and adapted to engage in one of the slotted ends of



the link, a rotative shaft, a disk mounted upon said rotative shaft, and a wrist pin carried by said disk and adapted to engage in the other slot at the end of the link.

871,415. WRENCH. JOHN KELLY, Chicago, Ill. Filed Aug. 12, 1907. Serial No. 388,123.

1. As a new article of manufacture, a wrench comprising a tubular body having about it a plurality of nut-



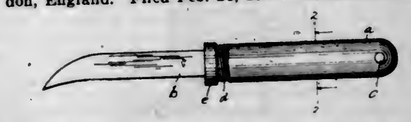
sockets forming gripping-points, and provided with end-flanges and heads on its ends containing nut-sockets and a cord, or the like, on the barrel.

2. In combination, a wrench comprising a barrel provided with an end nut-socket co-axial therewith, and a cord, or the like, on the barrel, for the purpose set forth.

3. In combination, a wrench comprising a barrel provided with an end nut-socket co-axial therewith, and having nut-sockets about it forming gripping-points, and a cord, or the like, on the barrel, for the purpose set forth.

4. In combination, a wrench comprising a cylindrical body provided with a head containing a nut-socket co-axial with said body, and a circumferential series of openings forming nut-sockets and gripping-points, and a cord, or the like, secured to the barrel, for the purpose set forth.

871,416. SHOEMAKER'S KNIFE. FELIX KLEEMANN, London, England. Filed Feb. 26, 1907. Serial No. 359,482.

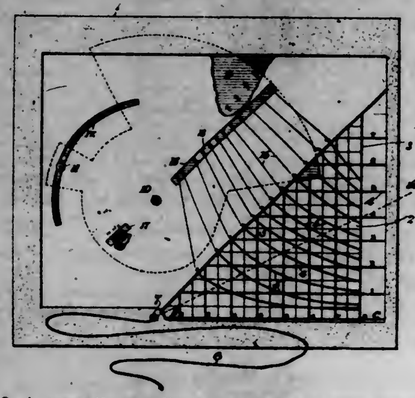


A knife, the handle of which is composed of two similar parts provided with a longitudinal chamber, one part of the handle being provided with a plurality of longitudinally arranged holes, a blade the shank of which is adapted to fit in said chamber the end of which is provided with a hook member adapted to fit in said holes whereby the blade may be adjusted longitudinally of the handle, and means for securing the separate parts of the handle together.

871,417. CUT-ESTIMATOR. OTIS A. KENYON, New York, N. Y. Filed Nov. 20, 1906. Serial No. 344,206.

1. A computing appliance comprising a sheet having a portion ruled with a series of ordinates and abscissæ, the location of which is marked or denominated, and a series of hyperbolas, the parameters of which are also marked or denominated, and means pivoted at the intersection of

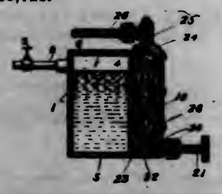
the axes of said hyperbolas for intersecting said ordinates and hyperbolas with a line corresponding to a diagonal of the drawing to be reproduced, whereby the vertical dimension of the reproduction desired is indicated by the intersection of the said diagonal with an abscissa, and the area is indicated by the intersection of the diagonal with a hyperbola.



2. A computing appliance comprising a sheet having a portion with ordinates and hyperbolas thereon, means for intersecting said ordinates and hyperbolas with a line corresponding to a diagonal of the drawing to be reproduced, and means movable with respect to the sheet to denominate each of said hyperbolas with different price values whereby the cost of the reproduction is indicated for different rate charges.

3. A computing appliance comprising a sheet having a triangular transparent portion ruled with a series of ordinates and abscissa, and a series of equilateral hyperbolas, said hyperbolas having the bases of said ordinates and abscissa as coördinate axes, said coördinate axes passing through an apex of said triangular transparent portion of the sheet and means pivoted at said apex of the triangular portion for intersecting said ordinates and hyperbolas with a line corresponding to a diagonal of the drawings to be re-produced.

871,418. MULTIPLE FORCE-FEED SIGHT-LUBRICATOR. ALMON P. KLUMPH, Elyria, Ohio, assignor of one-half to Ed. Leber, Elyria, Ohio. Filed Oct. 19, 1906. Serial No. 339,713.



1. In a force feed lubricator, the combination with a casing, means dividing said casing into a plurality of oil compartments, oil feed pipes, a plurality of oil feed chambers in the casing connecting the oil feed pipes and the compartments, and means for controlling the feed from the compartments to the oil feed chambers.

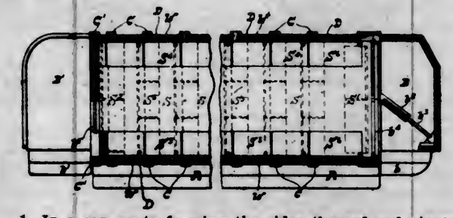
2. In a force feed lubricator, the combination with a casing, there being a plurality of oil compartments therein adapted to contain different kinds of oil, a plurality of feed pipes, a plurality of oil feed chambers in each compartment and having a connection therewith and with the oil feed pipes, means for controlling the feed from the compartments to the oil feed chambers, and a single source of pressure connected to one of said compartments, communication being provided between all of the compartments.

3. In a force feed lubricator, the combination with a casing, there being a plurality of oil feed chambers in the casing and a plurality of oil compartments having communication with said chambers, a sight opening for each compartment whereby the amount of oil therein may be determined, means for controlling the feed from said compartments to the oil chambers and sight openings for each oil feed chamber whereby the amount of feed may be determined.

4. In a force feed lubricator the combination with a tank adapted to contain two kinds of oil, a partition separating the oils and forming two compartments, sight feed chambers therein and a sight opening for each compartment to determine the amount of oil therein.

5. In a force feed lubricator, the combination with a casing, having a plurality of oil feed chambers therein and oil compartments, means for forcing the oil from the oil compartments to the oil feed chambers and to the bearings to be lubricated, and controlling valves for each oil feed chamber.

871,419. CONVERTIBLE STREET-CAR. GEORGE J. KNOLL, Cleveland, Ohio. Filed Oct. 23, 1905. Serial No. 283,905.



1. In a car, seats forming the sides thereof and pivoted to turn in a horizontal direction, substantially as described.

2. In a car, seats forming the sides thereof and pivoted to turn in a horizontal direction and windows slidably contained in said seats, substantially described.

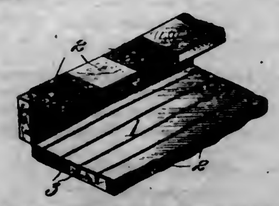
3. In a car, seats forming the sides thereof and pivoted to turn in a horizontal direction, window guides on said seats and windows slidably contained in said seats, substantially described.

4. In a car, seats forming the sides thereof and pivoted to turn in a horizontal direction, window guides on said seats, windows slidably contained in said seats, posts and window guides on said posts, substantially described.

5. In a convertible car, a seat comprising two end sections adapted to be transversely and longitudinally arranged, and an auxiliary section adapted to connect said end sections when transversely arranged.

[Claims 6 to 61 not printed in the Gazette.]

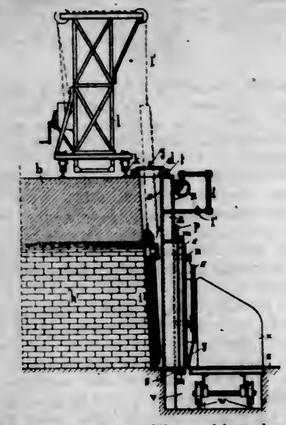
871,420. FLEXIBLE PARQUETRY. ALOIS KOHOUT and FREDERICK KOHOUT, St. Louis, Mo., assignors to Henry F. Vogel, St. Louis, Mo. Filed Feb. 19, 1907. Serial No. 358,246.



1. Parquetry comprising a backing sheet and blocks having grooves at their rear sides and secured to said backing sheet in a common plane so that the backing sheet spans more than two blocks; intermediate portions of the backing sheet being inserted or tucked into the grooves of the blocks.

2. Parquetry comprising a flexible backing sheet and blocks having grooves at their rear sides and secured to said backing sheet in a common plane so that the backing sheet spans more than two blocks; intermediate portions of the backing sheet being inserted or tucked into the grooves of the blocks.

871,421. COKE-OVEN DOOR. HEINRICH KOPPERS, Essen-on-the-Ruhr, Germany. Filed Nov. 10, 1906. Serial No. 342,822.

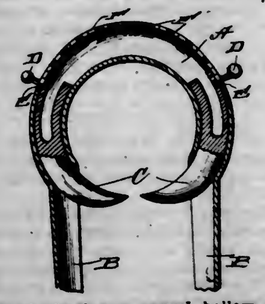


1. A coke oven provided with a coking chamber, a door-frame, an intervening ante-chamber which is open at the top, a fire shield in the ante-chamber engaging the coking chamber, a door engaging the door-frame, and a movable lid adapted to close the top of the ante-chamber, substantially as specified.

2. A coke oven provided with a coking chamber, a door-frame, an intervening flaring ante-chamber which is open at the top, a fire shield in the ante-chamber engaging the coking chamber, a door engaging the door-frame, and a movable lid adapted to close the top of the flaring ante-chamber, substantially as specified.

3. A coke-oven provided with a coking chamber having a flaring antechamber, a fire shield received thereby, a casing in front of the antechamber, a door engaging the casing, a lid adapted to close the top of the ante-chamber, and a liquid seal for said lid, substantially as specified.

871,422. HAIR-PIN. JOSEPH T. LEONARD, Sidney, Ohio. Filed June 27, 1907. Serial No. 381,034.

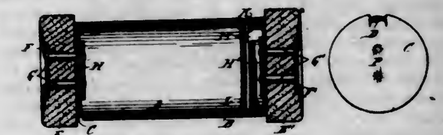


1. A hair pin having a curved hollow shell portion, spurs mounted to have sliding movement therein, a handle fixed to each spur passing through a slot in said shell portion, an integral portion of said handle adapted to engage offsets in said slot whereby the spurs may be held in adjusted positions, as set forth.

2. A hair pin having a curved hollow shell portion, spurs mounted to have sliding movement therein, the inner end of each spur being resilient, a handle fixed to said resilient portion and extending through a slot in said shell and adapted to engage offsets in the marginal edge of said slot, the resilient portion of the spur adapted to hold the handle in an adjusted position, as set forth.

3. A hair pin having a curved hollow shell portion, spurs mounted to have sliding movement therein, the inner end of each spur being split and made of a resilient material, a handle fitted in a threaded aperture in the resilient end of each spur, a collar, said shell portion provided with elongated slots with offsets formed in the marginal edges thereof adapted to receive said collar, the latter being held in the offsets by the resilient portion of the spur, as set forth.

871,423. CARRIER FOR PNEUMATIC-DESPATCH-TUBE APPARATUS. ISAAC W. LITCHFIELD, Boston, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J., a Corporation of New Jersey. Filed Jan. 29, 1906. Serial No. 298,306.



1. In a carrier for pneumatic despatch tube apparatus, two cylindrical telescoping members, said members rotatable one within the other, each having a corresponding peripheral opening therein, said openings coöperative upon rotation of said members, and means for maintaining a clearance between the curved surfaces of the inner and outer telescoping members.

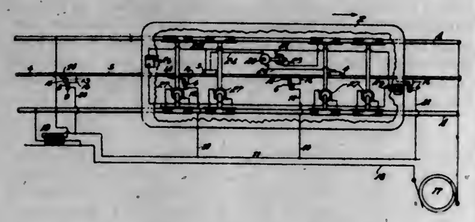
2. In a carrier for pneumatic despatch tube apparatus, two cylindrical telescoping members, the outer end of each member being closed and carrying a buffer attached thereto, said members rotatable one within the other, each having a corresponding peripheral opening therein, said openings coöperative upon rotation of said members, a plate carrying a projection and rigidly mounted between the closed end of the inner member and the buffer attached thereto, and stops on the open end of the outer member adapted to engage said projection thereby limiting the rotation of the members to the opening and closing of the openings therein.

3. In a carrier for pneumatic despatch tube apparatus, two cylindrical telescoping members, the outer end of each member being closed and carrying a buffer attached thereto, said members rotatable one within the other, each having a corresponding peripheral opening therein, said openings coöperative upon rotation of said members, a plate carrying a projection and rigidly mounted between the closed end of the inner member and the buffer attached thereto, stops on the open end of the outer member adapted to engage said projection thereby limiting the rotation of the members to the opening and closing of the openings therein, a circular recess or groove in one member, and a projection or guide in the other member adapted to coöperate with said recess thereby normally preventing separation of the members.

4. In a carrier for pneumatic despatch tube apparatus, two cylindrical telescoping members, the outer end of each member being closed and carrying a buffer attached thereto, said members rotatable one within the other, each having a corresponding peripheral opening therein, said openings coöperative upon rotation of said members, a plate carrying a projection and rigidly mounted between the closed end of the inner member and the buffer attached thereto, stops on the open end of the outer member adapted to engage said projection thereby limiting the rotation of the members to the opening and closing of the openings therein, a circular recess or groove in one member, a projection or guide in the other member adapted to coöperate with said recess thereby normally preventing

separation of the members, and means for separating said members upon disengagement of said projection with said stops.

871,424. SURFACE ELECTRIC RAILWAY. TIMOTHY MAHONEY, San Francisco, Cal. Filed July 6, 1906. Serial No. 325,013.



1. A third-rail system comprising a pair of track-rails, a sectional conducter-rail, a car traversing the track-rails and provided with alternating-current-equipment, switch-magnet-coils connected in series with adjacent sectional rails, said coils having a large reactance to oppose the passage of alternating currents, a source of alternating current supply, switch mechanism operated by said switch-magnet-coils to close a circuit between said source of alternating current-supply and the rail sections, and means carried by the car for supplying said magnet-coils with a direct exciting current.

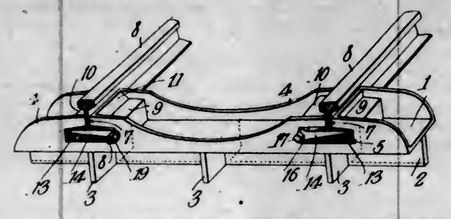
2. A third-rail system comprising in combination a pair of track rails at least one of which is electrically continuous, a car provided with alternating-current equipment traversing said track-rails, a sectional conductor rail, brushes on the car engaging sections of said conductor rail, solenoids connected in series with adjacent rail sections, said solenoids having a large reactance to oppose the passage of alternating currents, an alternating-current conductor, a source of alternating currents connected with said conductor and the track-rails, a series of transformers arranged along the line of track and having their primary coils connected between said conductor and said continuous rail, a series of feed-wires connected to the secondary circuits of said transformers, and switch members operated on excitation of said solenoids to close the circuit between one of said feed-wires and a respective rail-section, and a source of direct current supply carried by the car for exciting said solenoids.

3. In an electric railway system, the combination of a trackway having electrically continuous rails, a source of alternating currents connected to a supply conductor and with said rails, a sectional rail having the ends of adjacent sections connected through switch magnets whose reactances oppose the passage of alternating currents, feeders connected with said supply conductor, and means actuated by said awitch magnets for connecting said feeders with said sectional rail sections.

4. In an electric railway system, the combination of a trackway having electrically continuous rails, a source of alternating currents connected to a supply conductor and with said rails, a sectional rail having the ends of adjacent sections connected through switch magnets whose reactances oppose the passage of alternating currents, feeders connected with said supply conductor, means actuated by said switch magnets for connecting said feeders with said sectional rail sections, and a car adapted to traverse said trackway provided with an alternating current equipment and having a direct current source to energise said switch-magnets.

5. In an electric railway system, a switch mechanism comprising an insulating casing having telescoping sections, an insulating disk supported upon the lower section and held by the upper section, a solenoid coil supported upon said disk, fixed contacts secured respectively in the upper part of each section, and a solenoid core arranged to make contact with said fixed contacts.

871,425. RAILROAD-TIE. WILLIAM C. MAYO and JOHN HOULEHAN, El Paso, Tex., assignors of one-third to George Edwin Briggs, El Paso, Tex. Filed Feb. 16, 1907. Serial No. 357,678.



1. A metal tie comprising a base having integral longitudinally and transversely extending webs depending therefrom, and side walls upstanding from the longitudinal edges of said base, said walls having rail receiving apertures therein.

2. A metal tie comprising a base having integral longitudinally and transversely extending webs depending therefrom, side walls upstanding from the longitudinal edge of said base, said walls having rail receiving apertures therein, and transversely extending angular webs connecting the walls and constituting continuations of the walls of the openings.

3. A metal tie comprising a base having integral longitudinally and transversely extending webs depending therefrom, side walls upstanding from the longitudinal edges of said base, said walls having rail receiving apertures therein, the lower walls of said openings being disposed above the base to form guard flanges, and a cushioning block interposed between said guard flanges and upon the base, said block being insertible through one of said openings.

4. A metal tie comprising a base having integral longitudinally and transversely extending webs depending therefrom, side walls upstanding from the longitudinal edge of said base, said walls having rail receiving apertures therein, transversely extending angular webs connecting the walls and constituting continuations of the walls of the openings, the lower walls of said openings being disposed above the base to form guard flanges, and a cushioning block insertible through one of said openings and beneath the transversely extending webs, said block being retained by the guard flanges.

5. A metal tie comprising a base having integral longitudinally and transversely extending webs depending therefrom, side walls upstanding from the longitudinal edge of said base, said walls having rail receiving apertures therein, transversely extending angular webs conclined portion, and means for exerting an upward pressure walls of the openings, one of said transversely extending webs having an inclined portion, a rail engaging wedge insertible through one of the openings and beneath the inclined portion, and means for exerting an upward pressure upon a rail within the openings to force said wedge against the inclined portion.

[Claims 6 to 20 not printed in the Gazette.]

871,426. APPAREL. RANCHFORD B. MELANSON and GEORGE R. PEARE, Lynn, Mass., assignors of one-third to Mark A. Piper, Lynn, Mass. Filed June 27, 1905. Serial No. 267,239.

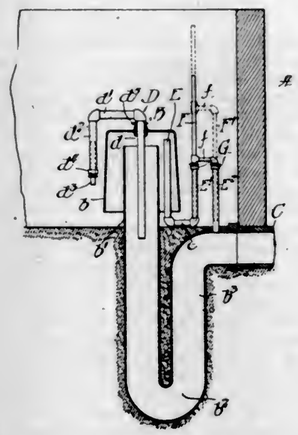
1. In combination, an upper garment having its lower edge folded, a nether garment provided with a sectional waist-band and having an elastic strap connecting its sections, the said waist-band portion being adapted to be placed within the folds of the upper garment, and a belt adapted to retain the lower edge of the upper garment and the waistband of the nether garment in position.

2. In combination, an upper garment the lower edge of which is folded upon itself to form upwardly opening and downwardly opening pockets, a nether garment the waistband of which is provided with a downwardly opening pocket, the said waistband being adapted to be placed within the downwardly opening pocket of the upper garment, and a belt comprising an inner portion and an outer portion, the inner portion being adapted to be placed within the upwardly opening pocket of the upper garment, the



outer portion being on the outside of the said pockets, and being provided with upwardly extending retainers which engage with the pocket of the waistband of the nether garment.

871,427. CONTROLLING DEVICE FOR DEEP-SEAL SIPHONS. SIDNEY W. MILLER, Chicago, Ill. Filed Oct. 8, 1906. Serial No. 337,961.



1. An auxiliary or blow-off trap for siphons adapted to extend at one end into the siphon, the outlet end of the trap being adapted to move endwise relatively to the siphon and to the inlet end of the trap for the purpose of varying the depth of seal of said trap.

2. An auxiliary or blow-off trap for siphons, the outlet end of which has an endwise adjustment relatively to the siphon and to the inlet end of the trap, and means providing a tight joint between the outlet end of said trap and the part in which it slides.

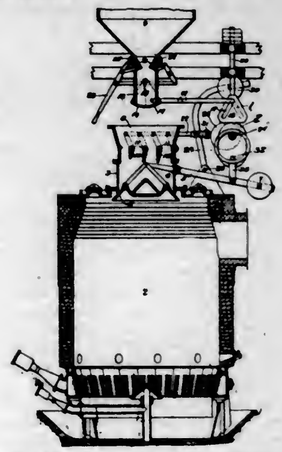
3. An auxiliary or blow-off trap for deep seal siphons embracing, in combination with its outlet leg an extension pipe having telescopic connection therewith constructed to vary the depth of seal of the blow-off trap.

4. An auxiliary or blow-off-trap for siphons embracing, in connection with its outlet leg, an extension pipe having telescopic connection therewith, and means providing a close joint between the telescoping members.

5. In an auxiliary or blow-off trap for siphons, the combination with the outlet leg thereof and a drain pipe through which the outlet leg of the trap is adapted to drain, of adjustable extension pipes for said outlet leg of the trap and drain pipe provided with a cross-connection movable with said extension pipes.

[Claims 6 to 19 not printed in the Gazette.]

871,428. FEEDING APPARATUS FOR GAS-PRODUCERS. WILLIAM R. MILLER, Pittsburg, Pa., assignor to The Forter Miller Engineering Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Dec. 5, 1905. Serial No. 290,342.



1. The combination with a fuel-consuming structure having a hopper provided with a lower emptying valve and upper receiving valves, of a superimposed vessel provided with bottom-closing valves, and co-acting cam-devices for operating all of said valves, substantially as set forth.

2. The combination with a fuel-consuming structure having a hopper provided with a lower emptying valve and upper receiving valves, of a superimposed vessel provided with bottom-closing valves, and co-acting cam-devices for opening said bottom-closing valves and lower emptying valve during the closed period of the receiving valves, substantially as set forth.

3. In a gas producer, the combination with a hopper having a charging bell, and superimposed receiving valves, of an upper charging hopper having a valve-controlled bottom, and co-acting cam-devices for opening and closing said bell, receiving valves, and valve-controlled bottom, whereby a charge of fuel may be successively delivered from the upper hopper upon the receiving valves; from said valves to the bell; and from the bell to the interior of the producer, substantially as set forth.

4. In a gas producer, the combination with a hopper having a charging bell, and superimposed receiving valves, of an upper charging hopper having a valve-controlled bottom, co-acting means arranged to operate said valves, and cam devices for actuating said valve-operating means so designed that a charge of fuel may be successively delivered from the upper hopper upon the receiving valves; from said valves to the bell; and from the bell to the interior of the producer, substantially as set forth.

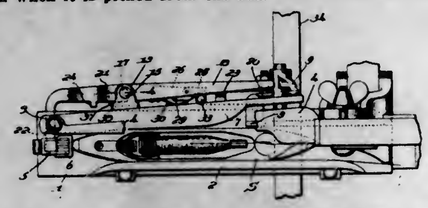
5. The combination with a fuel consuming structure having an emptying valve discharging into the interior of the structure, of a stationary superimposed vessel provided with vertically pendent swinging bottom closing valves, upper inwardly and outwardly adjustable flow controlling gates, and co-acting cam devices for operating all of said valves and means for adjusting the flow controlling gates.

[Claims 6 to 9 not printed in the Gazette.]

871,429. SHUTTLE-CHECKING MEANS FOR LOOMS. MYRON MOREY, Milford, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Mar. 11, 1907. Serial No. 361,677.

1. A loom having, in combination, a lay provided with a shuttle-box, a binder, means moved directly and positively by or through impact of the incoming shuttle into engage-

ment with the binder to exert additional pressure upon the shuttle through the binder, and a separate instrumentality operating after the lay has passed front center to release the shuttle from such pressure before its movement is begun when it is picked from the box.



2. In a loom, in combination, a lay provided with a shuttle-box, a binder for the latter, a vibrating picker-stick and a picker thereon, means actuated by impact of the incoming shuttle on the picker to exert additional pressure on the shuttle during final outward movement of the picker, and an instrumentality to release the shuttle from such pressure by backward movement of the lay before the shuttle is picked, said instrumentality including a member mounted on the lay and a coöperating member mounted on a stationary support.

3. A loom having, in combination, a lay, a shuttle-box, a binder, separate means directly and positively moved by impact of the incoming shuttle and into direct engagement with the binder to immediately apply additional pressure to the shuttle, and an instrumentality to act upon said means and release the shuttle from such pressure by or through backward movement of the lay before the shuttle is picked.

4. In a loom, in combination, a lay provided with a shuttle-box, protector mechanism including a binder, a pressure-producing member pivotally mounted on the lay and coöperating with the binder, means to directly and positively move said member by or through impact of the incoming shuttle and immediately apply additional pressure thereto, and an instrumentality acting automatically upon said member on the backward stroke of the lay to diminish the action of the pressure-producing member upon the binder before the shuttle is moved to be picked.

5. In a loom, in combination, a lay provided with a shuttle-box, and a binder, pressure-producing means including a swinging member to coöperate with the binder and operatively moved by or through the incoming shuttle as it nears the end of its stroke, a shiftable fulcrum for said member, and means to shift said fulcrum on the backward stroke of the lay before the shuttle is picked, to change the position of the swinging member and diminish the pressure exerted thereby upon the shuttle.

[Claims 6 to 9 not printed in the Gazette.]

871,430. ARTIFICIAL TOOTH. JOSEPH MORRIS, North Wales, Pa., assignor to The Dental Protective Supply Company of the United States, Chicago, Ill., a Corporation of Illinois. Filed Sept. 15, 1905. Serial No. 278,611.



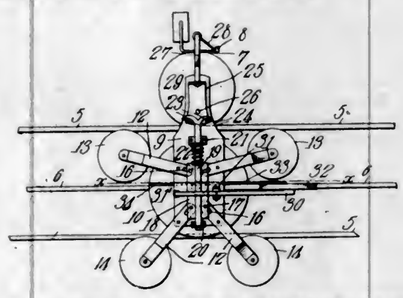
1. An artificial tooth comprising a body of porcelain, a backing of composition material containing a metal oxid, and one or more fastening devices embedded in said composition material, substantially as described.

2. An artificial tooth comprising a body of porcelain, a backing composed of mingled porcelain and metal oxid, and one or more fastening pins embedded in said backing, substantially as described.

3. An artificial tooth comprising a body of porcelain, a backing composed of mingled porcelain and aluminium oxid, and one or more fastening pins embedded in said backing, substantially as described.

4. An artificial tooth comprising a porcelain face, a cutting member backing the cutting edge of said face, a body member backing the major portion of said face, a body of porcelain and metal oxid inset in said body member, all of said parts being fused together, and one or more pins anchored in said composition member, substantially as described.

871,431. MEANS FOR COLLECTING AND DELIVERING MAIL. WILLIAM H. MOZINGO, Hurdland, Mo., assignor of one-half to Harley J. Mozingo, Pulaski, Iowa. Filed June 10, 1907. Serial No. 378,222.



1. In a system of the character described, two tracks arranged one above the other, a truck or carriage, a drive wheel mounted upon the carriage and engaging one track, guide wheels engaging the drive wheel track in opposition thereto, elastic means for holding the drive wheel and opposing wheels in contact with the track, a trolley wire arranged to one side of the main track, a trolley wheel movable into and out of engagement with the trolley wire in a plane at right angles to the plane cutting the supporting tracks, and an electric motor also mounted upon the carriage for actuating the drive wheel and receiving current from the trolley conductor through the trolley wheel.

2. In an apparatus of the character described, a suitable frame, a drive wheel and motor therefor mounted upon said frame and arranged to engage a supporting track, pivoted arms mounted on said frame and carrying rollers arranged to engage the track in opposition to the drive wheel, a sliding member engaging the pivoted arms to move them to and from the track, a spring tending to hold the rollers in egagement with the track, and a pivoted plate carried by the frame and acting on the arms supporting the rollers in opposition to the spring to move said rollers out of engagement with the track.

3. In a system of the character described, two aerial tracks arranged one above the other, a truck or carriage, a drive wheel on said truck and arranged to travel on one of the tracks, an idler wheel arranged to travel on the other track, a pair of rollers arranged to engage the drive wheel track in opposition to said drive wheel, another pair of rollers arranged to engage the idler track in opposition to said idler, a movable member engaging all the roller supports, a spring tending to move the rollers into engagement with their respective tracks, a pivoted member engaging the spring-controlled member and movable around its pivot in either direction to move the spring-controlled member, a ring or eye carried by said pivoted member, and a fixed catch in the line of travel of the truck or carriage and located to enter the eye and stop the carriage.

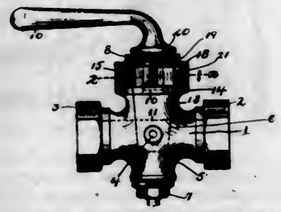
4. In a system of the character described, two aerial tracks arranged one above the other, a truck or carriage, a drive wheel on said truck and arranged to travel on one of the tracks, an idler wheel arranged to travel on the other track, a pair of rollers arranged to engage the drive wheel track in opposition to said drive wheel, another pair of rollers arranged to engage the idler track in opposition to said idler, a movable member engaging all the roller supports, a spring tending to move the rollers into engagement with their respective tracks, a pivoted member engaging

the spring-controlled member and movable around its pivot in either direction to move the spring-controlled member, a ring or eye carried by said pivoted member, a fixed catch in the line of travel of the truck or carriage and located to enter the eye and stop the carriage, an electric motor on the carriage for actuating the drive wheel, a trolley wire arranged to one side of the vertical plane cutting the tracks, a pivoted arm movable in a plane at right angles to the plane cutting the tracks, a spring tending to move said arms in one direction, a trolley wheel in said arm, and another arm engaging said trolley wheel and arranged to be engaged by a fixed member along the line of way in the path of said arm.

5. In a system of the class described, fixed catch hooks along the line of way, each hook being provided with a shoulder at its free end, tracks also arranged along the line of way, a truck or carriage movable on said tracks, a ring or eye on said carriage arranged to receive a catch hook, and a gravity latch carried by said eye and arranged to engage the headed end of the catch hook to prevent the eye from escaping therefrom on the reverse movement of the carriage.

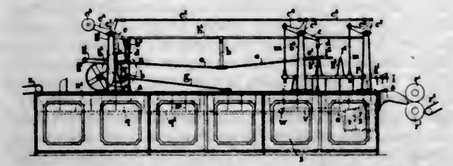
[Claims 6 and 7 not printed in the Gazette.]

871,432. STOP AND WASTE COCK. WILLIAM V. MCNAMARA, Cleveland, Ohio, assignor to Bernard H. Jansen, Cleveland, Ohio. Filed July 15, 1905. Serial No. 269,854.



In a stop and waste cock the combination of a valve casing having a neck portion, a seat formed on said neck portion, a semi-circular flange formed on said neck portion, the end walls of said flange constituting stops at the ends of said seat, a valve plug arranged to fit into said casing, said valve plug being angular in cross section at its upper end and having a socket formed therein, a handle arranged to fit in the socket in the valve plug, a cap provided with an angular opening, a screw extending through said cap and into the socket in the valve plug so as to secure said cap and said handle to the valve plug and a laterally shiftable quadrant shaped plate arranged between said screw and the end wall of the flange on the valve casing, substantially as described and for the purpose set forth.

871,433. WOOL-WASHING MACHINE. WILLIAM MCNAUGHT, Rochdale, England. Filed Sept. 20, 1905. Serial No. 279,217.



1. A textile washing machine, comprising a washing trough, a main propelling frame extending over the delivery end as well as over the main portion of said trough, an auxiliary frame at the delivery end only, said frames comprising bars fitted with prongs, and means for operating said frames alternately for the purpose hereinbefore set forth.

2. A textile washing machine, comprising a washing trough, a main propelling frame, comprising a number of bars fitted with prongs, said bars extending through the whole of the trough and an additional number of similar bars at the delivery end only, an auxiliary frame at the delivery end only and comprising bars fitted with prongs, the bars of the two frames being adapted to pass between one another, and means for operating said frames alternately.

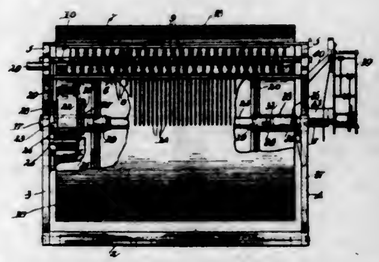
3. In a textile washing machine comprising a washing trough and a propelling frame consisting of bars fitted with prongs, an auxiliary frame at the delivery end only, a perforated inclined delivery surface and a divided chamber beneath said surface substantially as and for the purpose set forth.

4. In a textile washing machine comprising a washing trough and a propelling frame consisting of bars fitted with prongs, an auxiliary frame at the delivery end only, a perforated inclined delivery surface, a divided chamber beneath said surface, an inclined bottom to said chamber and a sluice door, substantially as and for the purpose hereinbefore described.

5. In a textile washing machine a washing trough, means for propelling the wool through said trough, means for delivering the wool therefrom, a perforated inclined delivery surface and a divided chamber beneath said surface substantially as and for the purpose hereinbefore set forth.

[Claim 6 not printed in the Gazette.]

871,434. RECORDER. ERNEST A. OAKES and PETER A. COONEY, Chicago, Ill. Filed July 26, 1906. Serial No. 327,880.

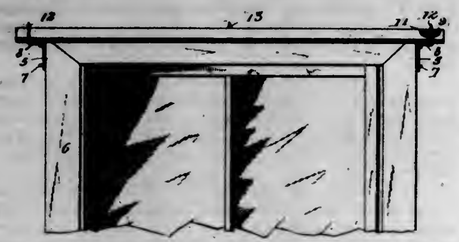


1. In a recorder, in combination, a supporting frame; a chart-supporting drum mounted in said frame; means for supporting a plurality of electromagnets in said frame; said magnets being arranged in a plurality of rows and the magnets of one row staggered with relation to those of the other row a shaft; a plurality of bell-crank levers on said shaft, there being one lever for each electromagnet, one arm of each lever extending horizontally, and the other vertically, the horizontal arms of alternate levers extending in opposite directions; an armature upon the horizontal arm of each lever; a marking device upon each vertically extending arm; and means tending to move said levers to withdraw said marking devices from said drum, and said armatures from said electromagnets.

2. In a recorder in combination, a supporting frame, a shaft mounted therein; means for driving said shaft; a sleeve upon said shaft; a drum upon said sleeve having a hub; a pin upon said sleeve; a clutch collar splined to the shaft adjacent said pin and provided with a notch adapted to be engaged by said pin; and means for moving said notched collar into and out of engagement with the said pin.

3. In a recorder in combination, a supporting frame, a shaft mounted therein; means for driving said shaft; a sleeve upon said shaft; a drum upon said sleeve having a hub; a pin upon said sleeve; a clutch collar splined to the shaft adjacent said pin and provided at one end with a notch adapted to be engaged by said pin, and having at the other end a peripheral groove; and a clutch lever engaging in said groove.

871,435. CURTAIN-ROD SUPPORT. GEORGE W. PALMER, Gardena, Cal. Filed Mar. 1, 1907. Serial No. 359,980.



The combination with a curtain pole having an opening, of a support comprising a stem having a projecting arm, and an upstanding member on the arm passing through the opening of the pole and having a pointed end projecting beyond the pole engageable with the curtain to hold the same.

871,436. PIPE-WRENCH. ROY PARMELEE, Chicago, Ill., assignor to Parmelee Wrench Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 21, 1905. Serial No. 279,437.



1. A pipe wrench comprising a hand portion, a girth fulcrumed thereon and adapted to engage the handle portion with its free end, and means for preventing disengagement of the girth from the pipe or the like operated upon, consisting of a head movable longitudinally of the handle and arranged to engage the girth on either side of a plane passing through the longitudinal axis of the handle and at right angles to the longitudinal axis of the pipe.

2. A pipe wrench comprising a handle portion, a girth fulcrumed thereon and adapted to engage the handle portion with its free end, and means for preventing disengagement of the girth from the pipe or the like operated upon consisting of a head movable longitudinally of the handle having projecting bearing portions on either side of its longitudinal axis and adapted to engage said girth on either side of a plane passing through the longitudinal axis of the handle and at right angles to the longitudinal axis of the pipe.

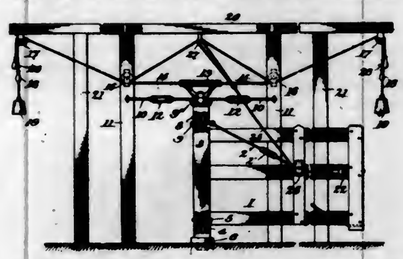
3. A pipe wrench comprising a handle, a sectional girth fulcrumed thereon and adapted to engage the handle portion with its free end, and means for preventing disengagement of the girth from the pipe or the like operated upon comprising a head movable longitudinally of the handle and having projecting bearing portions arranged to engage and press against one section of the girth on either side of a plane passing through the longitudinal axis of the pipe, the engaged section of the girth having projecting portions or ribs which are contacted by said projecting portions of the head.

4. A pipe wrench comprising a handle, a girth fulcrumed thereon and adapted to engage the handle portion with its free end, and means for preventing disengagement of the girth from the pipe or the like operated upon, comprising a head arranged to be projected against said girth to move the same on its fulcrum and provided with a shank or stem sliding longitudinally on the handle, and a sleeve around the handle and coöperating with said head, whereby the girth is locked to the pipe.

5. A pipe wrench comprising a handle, a girth fulcrumed thereon and adapted to engage the handle with its free end, and means for preventing disengagement of the girth from the pipe or the like operated on, comprising a head arranged to be projected against said girth and provided with a shank or stem sliding longitudinally on the handle, said handle having a longitudinal groove receiving said shank, and a sleeve around the handle and cooperating with said head.

[Claims 6 to 11 not printed in the Gazette.]

871,437. AUTOMATIC GATE. WILLIAM S. POINDEXTER, Louisa, Va. Filed Mar. 6, 1907. Serial No. 360,904.

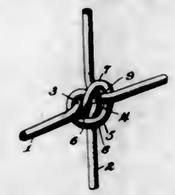


1. The combination with four auxiliary posts united by a top rail the inner posts provided with pulleys secured to the same near their upper ends; of a gate provided with a diagonal brace rod, and a turnbuckle for raising and lowering the gate, a spring latch secured to the forward end of the gate, a pulley secured to the inner batten of the gate, a cord passed under the pulley one of its ends secured to the inner end of the latch, and the other end passed through a staple secured to the top rail of the auxiliary posts, a base for the main gate upright having a large socket therein terminating in a smaller socket, a grooved plate seated in the larger socket, ball bearings seated in the grooves in the plate, a cap having perforations at its lower end through which is passed an eyebolt for securing it to the upright, and a collar carried by the cap having perforated short arms for receiving the free ends of brace rods secured to the adjacent auxiliary posts, the cap being revoluble within the collar.

2. The combination with four auxiliary posts united by a top rail, the inner posts provided with pulleys secured to the same near their upper ends, of a gate provided with a diagonal brace rod and turnbuckle for raising and lowering the gate, a spring latch secured to the forward end of the gate, a pulley secured to the inner batten of the gate, a cord passed under the pulley having one of its ends secured to the inner end of the latch, and the other end passed through a staple secured to the top rail of the auxiliary posts, a base for the main gate upright having a large socket therein terminating in a smaller socket, a grooved plate seated in the larger socket, ball bearings seated in the grooves in the plate, a cap having perforations at its lower end through which is passed an eyebolt for securing it to the said upright, a collar carried by the cap having perforated short arms for receiving the free ends of brace rods secured to the adjacent auxiliary post the cap being revoluble within the collar; and a peripherally grooved wheel located on an extension of the cap, a weighted operating wire secured to the wheel and passing over and under pulleys secured to the adjacent auxiliary posts and to the ends of the top rail thereof.

3. The combination with four auxiliary posts united by a top rail the inner posts provided with pulleys secured to the same near their upper ends, of a gate provided with a diagonal brace rod and turnbuckle for raising and lowering the gate, a spring latch secured to the forward end of the gate, a pulley secured to the inner batten thereof, a cord passed under the pulley having one of its ends secured to the inner end of the latch, and the other end passed through a staple secured to the top rail of the auxiliary posts, a plate a cap having perforations at its lower end through which is passed an eyebolt for securing it to the upright, a collar carried by the upper part of the cap having perforated short arms for receiving the free ends of brace rods secured to the adjacent outer auxiliary posts a peripherally grooved wheel located on an extension of the cap, weighted operating wires secured to the wheel and passing over and under pulleys secured to the adjacent auxiliary posts and ends of the top rail thereof; and a post supporting base, an inverted Π-shaped plate having grooves therein, ball bearings seated within said grooves and an upper and lower socketed post supporting receptacle.

871,438. FENCE-TIE. GILBERT PRARIE, Adrian, Mich., assignor of one-fourth to E. G. Siggers, Washington, D. C. Filed June 30, 1906. Serial No. 324,201.



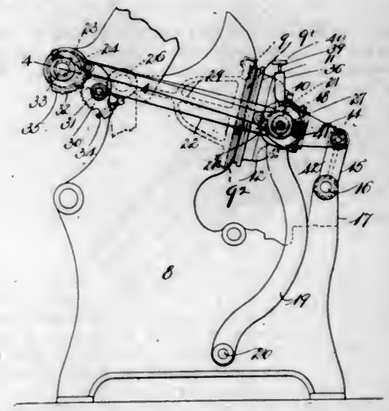
1. The combination with a line wire, and a stay wire crossing the line wire, of a wire tie consisting of a substantially circular body portion encircling the crossed portions of the line and stay wires, and engaging the rear face of the stay wire above and below the line wire and the front of the line wire at one side of the stay wire, the terminals of the wire tie crossing the line wire above and below the same and extended to points at the opposite side of the stay wire and forming a crotch, which receives and frictionally engages the stay wire, said crotch being located at the line wire and the stay wire being confined in the crotch by the circular body portion of the tie.

2. The combination with a line wire and a stay wire, said wires being crossed and forming upper and lower angles, of a fence tie constructed of a single piece of wire and consisting of a body portion engaging the rear face of the stay wire above and below the line wire and engaging the front face of the line wire at one side of the stay wire, the terminals of the wire being located at the opposite side of the stay wire, one of the terminals being extended downwardly and forwardly beneath the line wire and into the lower angle and frictionally engaging the stay wire at the side and front thereof, and the other terminal of the tie being extended upwardly and rearwardly over the line wire and fitting in the upper angle and engaging the stay wire at the side and rear thereof.

3. In a fence wire tie or lock, the combination with the crossed line and stay wires having oppositely bent or bowed portions where they cross each other, and a tie wire made of a single piece encircling the bowed portions of the line and stay wires, the ends of the tie being brought respectively under and over the line wire at one side of the stay wire, one terminal extending backward and engaging the side and rear of the stay wire, above the line wire, and the other terminal extending forward and engaging the side and front of the stay wire below the line wire.

4. In a wire fence, the combination with the crossed wires, of a staple having its loop contacting the line-wire, its legs passing in rear of the stay-wire and thence converging with one crossing over and one crossing under the line-wire and the terminals thereof embracing opposite sides of the line-wire and lying within the contiguous space formed by the crossed wires and the major portion of the other leg.

871,439. PLATEN-THROW-OFF MECHANISM FOR PRINTING-PRESSES. GEORGE W. PROUTY, Boston, Mass., assignor to The Imperial Art Press Co., a Corporation of Maine. Filed Feb. 26, 1907. Serial No. 359,410.



1. In a printing press, a type-bed, a platen, radius arms upon which said platen is pivotally supported, a rocking member, a shaft extending through said rocking member and journaled therein, said shaft terminating at its opposite ends in eccentric extensions, links pivotally connected at one end to said platen and at the other end thereof to said eccentric extensions, and means to rotate said shaft, whereby said platen is moved toward or away from said type-bed.

2. In a printing press, a type-bed, type fast thereto, a platen, an arm pivotally connected to said platen, a movable member, a shaft extending through and journaled in said movable member, eccentric extensions on said shaft, draw-bar links connecting said eccentric extensions to said platen, and means to rotate said shaft embodying a link pivotally connected at one end to said arm and at the other end to said shaft rotating means, the pivots of said link being located in alinement with the pivot of said arm when said platen contacts with said type.

3. In a printing press, a type-bed, a platen, radius arms upon which said platen is pivotally supported, a rocking member, a shaft extending through said rocking member and journaled therein, said shaft terminating at its opposite ends in eccentric extensions, links pivotally connected at one end to said platen and at the other end thereof to said eccentric extensions, a gear fast to one of said eccentric extensions, a second gear meshing into said first-named gear and journaled to rotate on one of said draw-bar links, and means to rotate said gears, whereby said shaft is rotated and said draw-bar links cause said platen to be moved toward or away from said type-bed.

4. In a printing press, a type-bed, a platen, radius arms upon which said platen is pivotally supported, a shaft extending through said platen, a rocking member, a shaft extending through said rocking member and journaled therein, said rocking member shaft terminating at its opposite ends in eccentric extensions, draw-bar links pivotally connected at one end to said platen shaft and at the other end thereof to said eccentric extensions, and means to rotate said rocking member shaft, whereby said platen is moved toward or away from said type-bed.

5. In a printing press, a type-bed, a platen, radius arms upon which said platen is pivotally supported, a shaft

extending through said platen, a rocking member, a shaft extending through said rocking member and journaled therein, said rocking member shaft terminating at its opposite ends in eccentric extensions, draw-bar links pivotally connected at one end to said platen shaft and at the other end thereof to said eccentric extensions, a gear fast to one of said eccentric extensions, a second gear meshing into said first-named gear and journaled to rotate on one of said links, and means to rotate said gears, whereby said platen may be moved toward or away from said type-bed.

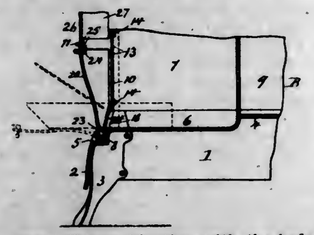
[Claims 6 to 8 not printed in the Gazette.]

871,440. HINGED RECEPTACLE. JAMES V. REED, Yonkers, N. Y., assignor to The J. B. Williams Company, Glastonbury, Conn., a Corporation of Connecticut. Filed Dec. 24, 1906. Serial No. 349,265.



A box constructed of thin resilient metal and formed with a deep end portion, 8, at its upper edge, a cover tightly fitting the box, and a hinge fixed to the inner surfaces of the box and cover having its pintle located at the base of the end portion, the latter being cut away to receive the hinged part fixed to said cover and compressible to permit the cover to close thereover.

871,441. RANGE. WILLIAM REID, Geneva, N. Y. Filed July 29, 1907. Serial No. 386,112.



1. In a range, the combination with the body comprising a base-plate having one end-portion depressed and forming the bottom of the ash-pit, and the depressed portion terminating in a channel, of a drop-door seated in said channel and having suitable hinged connections thereat.

2. In a range, the combination with the body comprising a base-plate having one end-portion depressed and forming the bottom of the ash-pit, and the end of the plate being deflected downwardly and formed thereat with a channel U-shaped in cross-section, of a suitably hinged drop-door having its hinged end shaped correspondingly and seated in the channel.

3. In a range, the combination of a base comprising side- and end-sills and a plate mounted upon said sills, the body supported upon said base-plate and provided with an opening in one end, an ash-pit disposed at said end and having its bottom extending to the opening, and a drop-door supported on the bottom of the ash-pit as set forth.

4. In a range, the combination of a base comprising side- and end-sills, one end-sill provided in its top with a recess extending throughout the greater portion of the length thereof, a plate mounted on the sills and having one end portion depressed to form the bottom of the ash-pit, the free edge of the depressed portion being formed with a longitudinal channel disposed in the recess of the end-sill, and a drop-door having a suitable hinged connection with the range-body and seated in the said channel as set forth.

5. In a range, the combination with a base comprising an end-sill formed in the top with a recess extending a greater portion of its length, of an ash-pit having its bottom disposed above the bottom of the recess, and a drop-door supported in the recess and adapted to be swung to substantially a horizontal position to lie in a plane with the bottom of the ash-pit for the purpose set forth.

[Claims 6 to 11 not printed in the Gazette.]

871,442. TROLLEY-POLE ATTACHMENT. ROBERT P. REVER, Newark, N. J., assignor, by direct and mesne assignments, of two-fifths to Everett Irving Rever, Newark, N. J., and one-fifth to Francis Van Winkle, Brooklyn, N. Y. Filed Nov. 26, 1906. Serial No. 345,001.



1. In a trolley pole attachment the combination of lower, middle and upper members, said lower and middle members being hinged together at their adjacent ends and the middle and upper members being hinged together in a plane at right angles to that of said lower hinging, an upper lateral projection upon the middle member and a corresponding lateral projection upon the lower member said projections having slots arranged in a plane transverse to the plane of bending of their members, a lower lateral projection upon the middle member and a corresponding projection upon the upper member said projections having slots arranged in a plane transverse to the plane of bending of their members, and leaf springs in said slots.

2. In a trolley pole attachment, the combination of lower, middle and upper members, the lower and the middle members being hinged together and the middle and upper members also hinged but in a plane at right angles to that of said lower hinging, upper projections upon opposite sides of the middle member in a plane transverse to the plane of bending of the upper hinge joint and having outwardly opening radial slots, lower projections upon opposite sides of the middle member in a plane transverse to the plane of bending of the lower hinge joint and having outwardly opening radial slots, leaf springs in said sets of alined slots, and means securing each spring in one slot while leaving it free in the alined slot.

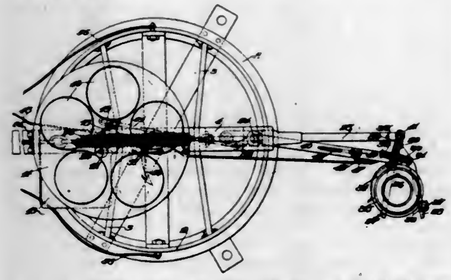
3. In a trolley pole, the combination of members arranged end to end and jointed or hinged together, said members having laterally projecting spring-seats and both the upper and lower members having at their outer ends telescopic-connection portions, springs in said spring-seats, pole sections telescopically receiving the said outer ends of said jointed members, cross-pins securing telescopic connections against disconnection, and a trolley wheel carried by the upper pole section.

4. In a trolley pole attachment, the combination of lower, middle and upper members, said lower and middle members being hinged together at their adjacent ends, and the middle and upper members being hinged together in a plane at right angles to that of said lower hinging, spring seats upon the upper end of the middle member and upon the upper end of the lower member in alinement with each other and in a plane transverse to the plane of bending of said members, other alined spring seats upon the lower end of the upper and middle members in a plane at right angles to the plane of bending of said members, springs arranged in said seats whereby one set of springs overlaps or extends past the other set upon the middle member, and means for securing said springs in place.

5. In a trolley pole attachment, the combination of members hinged end to end to swing in a prescribed plane and having on opposite sides of the joint thus formed lateral projections providing longitudinally alined slots disposed in a plane transverse to the plane of bending of the joint, a plurality of leaf springs arranged flatwise together in said slots, and means securing each spring in fixed position in one projection its other end being free to slide in the other projection.

[Claims 6 and 7 not printed in the Gazette.]

871,443. TARGET-TRAP. JONATHAN B. RICHARDSON, Santa Margarita, Cal. Filed Mar. 22, 1906. Serial No. 307,388.



1. In a target trap the combination of a base, a turntable mounted thereon, a frame on the turntable and turnable therewith, a rotary magazine on the frame, a throwing-arm, a setting-arm, target-grip mechanism on the throwing-arm, and a single cord connected with the setting-arm to set the trap and to spring it.

2. In a target trap the combination of a suitable support, a throwing-arm, a setting-arm, target-grip mechanism on the throwing-arm, a rotary target-magazine having a plurality of pockets, means for singly positioning the targets with respects to said grip means, and a single cord with suitable connections with said grip mechanism to operate the latter to grip the target, set said arm and release said arm to throw the target.

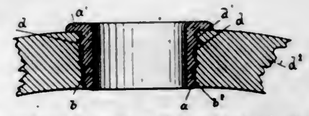
3. In a target trap, the combination of a suitable support, a spring-actuated throwing-arm, target grip mechanism on the throwing-arm a rotary, target-magazine having a plurality of pockets open at the bottom, a bottom-plate on which the targets in the pockets are normally supported, said plate having an opening through which the targets may drop, a support for receiving the dropped targets, means to permit the dropping of but one target at a time through said opening, means to give said magazine a step by step movement, and means to actuate the throwing-arm and target-grip-mechanism.

4. In a target trap the combination with a suitable support, of a spring-actuated-throwing-arm, a spring-actuated setting-arm, a target-grip, a crank-shaft pivoted on the throwing-arm and rigidly connected with the target-grip, a latch-member on the setting-arm and engageable with the crank-shaft, and means to oscillate said setting arm.

5. In a target trap the combination of a suitable support, a spring-actuated-throwing-arm, a crank-shaft journaled on the arm, a target-grip fixed to said shaft and turnable therewith, said grip comprising coacting grip-members, a target support, and means engageable with said crank to oscillate the throwing-arm and engage said grip members with a target on said support.

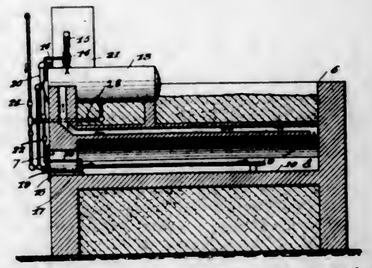
[Claims 6 to 29 not printed in the Gazette.]

871,444. BUNG-BUSHING. GEORGE H. RICKE, Cincinnati, Ohio, assignor, by direct and mesne assignments, to The Miller Bung Bush Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Feb. 20, 1906. Serial No. 302,105.



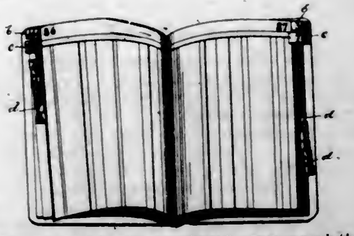
A bung bushing having series or sets of partial screw threads lying laterally around the periphery of the bushing, the threads of one series at their ends partly overlapping the threads of the adjacent series, the partial screw threads where they overlap, lying closely together, and the space between the threads where they do not overlap recessed to form pockets for the wood, as set forth.

871,445. HEATING DEVICE FOR BAKERS' OVENS. ARTHUR ROBE, Corona, Cal. Filed Aug. 10, 1905. Serial No. 273,690.



In a baker's oven, an oven proper, a tank located outside of said oven, a water coil within the oven, water circulation pipes connecting the respective ends of the coil and the water tank, a valve located in one of said pipes, a water-supply pipe connected with the pipe last mentioned at a point between the valve and the tank, a valve in said water supply pipe, a base or holder adapted to rest on the floor of the oven, a steam pipe supported thereby and connected with the tank, an oil supply pipe, and a burner connected with said steam and oil pipes.

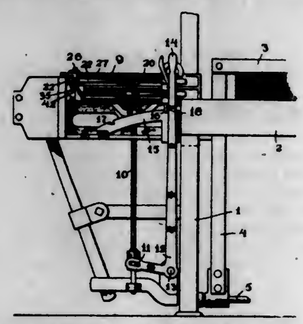
871,446. INDEX FOR BOOKS. WILLIAM H. ROBERTSON, Rector, Ark. Filed Apr. 26, 1907. Serial No. 370,531.



An indexed book having numbered pages, consisting of a series of unit-index-tabs attached to the upper portion of the vertical margin of all the leaves that carry the numbers ending in 3 and 4, a like series of unit-index-tabs

attached to the pages that carry numbers ending in 7 and 8; such tabs being attached to their respective pages in a line immediately below the line of the tabs that are numbered 3 and 4, and a series of decimal-index-tabs attached to the decimal pages, substantially as shown and for the purpose set forth.

871,447. WEFT-REPLENISHING MECHANISM FOR LOOMS. FRANK P. ROGERS, Worcester, Mass. Filed Oct. 25, 1906. Serial No. 340,500.



1. In a loom, a lay, a movable shuttle box having a multiplicity of operative cells, in different horizontal planes, an opening in the top of the uppermost of said cells provided with a removable cover, for the removal of a shuttle from said upper most cell, an opening in one of the lower cells for the insertion of a shuttle, and means for moving said shuttle box.

2. In a loom, a lay, a vertically reciprocating shuttle box having a multiplicity of operative cells, means for reciprocating said shuttle box, an opening in the top of said shuttle box for the removal of a shuttle from the uppermost cell, and a removable cover for said opening.

3. In a loom, a lay, a shuttle box having a multiplicity of operative cells, in different horizontal planes, the uppermost of said cells provided with an opening in its top for the removal of an exhausted shuttle, one of the lower of said cells provided with an opening for the insertion of a full shuttle, and means for rendering said upper and lower cells inoperative during said removal and insertion.

4. In a loom, a lay, a movable shuttle box having two cells one above the other, the upper of said cells provided with an opening in its top for the removal of a shuttle, a shuttle binder for said upper cell, means for moving said shuttle binder out of contact with the shuttle in said upper cell, and means for bringing either of said cells into alinement with the raceway of the lay at will.

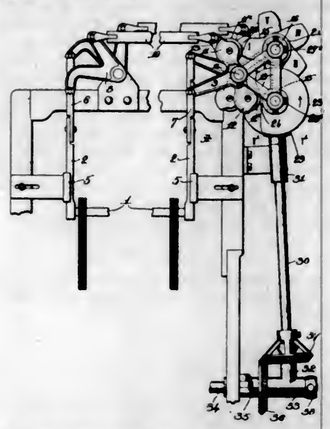
5. In a loom, a lay, a movable shuttle box having two cells one above the other, means for bringing either of said cells into alinement with the raceway of the lay at will, a shuttle binder for the uppermost cell, a hinged cover for the top of the uppermost cell, and means carried by the cover for relieving the pressure of the shuttle binder simultaneously with the raising of the cover.

[Claims 6 to 12 not printed in the Gazette.]

871,448. HARNESS-MOTION FOR LOOMS. CHARLES F. ROPER, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Aug. 27, 1906. Serial No. 332,081.

1. In a harness-motion for looms, in combination, a harness-frame, a rocking transmitter operatively connected therewith and provided with cam-followers above and below its fulcrum, respectively, and two actuating cams rotated in unison in opposite directions and coöperating with the followers to rock the transmitter and thereby effect reciprocation of the harness-frame, the followers being substantially opposite the axes of rotation of their coöperating cams and at the same side thereof.

2. In a harness-motion for looms, in combination, a harness-frame, a rocking transmitter operatively connected therewith and having arms oppositely extended from its fulcrum and provided with cam-followers, two actuating cams rotated in unison in opposite directions and respectively coöperating with the followers, to rock the transmitter and thereby effect reciprocation of the harness-frame, each cam having a high portion and a low portion, the distance between the axes of rotation of the cams being sufficient to permit the high portion of one cam to sweep past and close to the low portion of the other cam, and vice versa.



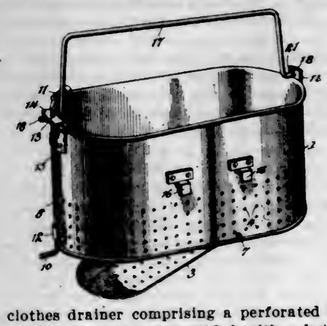
3. In a harness-motion for looms, in combination, a harness-frame, a transmitter, an overhead connection between it and the harness-frame, and means to rock the transmitter and thereby reciprocate said harness-frame, said means including two cams each having concentric high and low portions and rotated in unison in opposite directions, to act wholly at one side of their centers in alternation upon the transmitter above and below its fulcrum, respectively, to rock said transmitter about its fulcrum and thereby effect reciprocation of the harness-frame, said cams being set relatively so that the high portion of one sweeps past and close to the low portion of the other, and vice versa.

4. In a harness-motion for looms, a rocking transmitter having arms oppositely extended from its fulcrum and each provided with a follower, two actuating cams to act in alternation upon the followers and rock the transmitter, the distance between the centers of rotation of the cams being less than the combined length of their high portions, and means to rotate the cams in unison in opposite directions, the coöperating points between the cams and the followers being wholly at one side of the centers of rotation of said cams and respectively above and below the fulcrum of the transmitter.

5. In a harness-motion for looms, a plurality of reciprocating harness frames, a rocking transmitter operatively connected with each frame, said transmitters having a common fulcrum, two actuating cams to coöperate with and rock each transmitter, each pair of cams coöperating with their transmitter at the same side of and substantially opposite the centers of rotation of the cams, and above and below the fulcrum of the transmitter respectively, and means to rotate the cams of each pair in unison and in opposite directions.

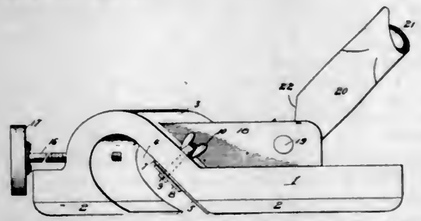
871,449. CLOTHES-DRAINER. FRANKLIN P. SAGER, Maplewood, Ohio. Filed Aug. 23, 1906. Serial No. 331,790.

1. A clothes drainer comprising a receptacle, a bail having terminal arms, opposite ears secured to the receptacle and recessed or cut away to provide upwardly projecting hooks having transversely disposed bills, said bills being located above the upper edges of the receptacle and having inclined lower edges extending downwardly toward and coöperating with the said upper edges of the receptacle to confine the terminal arms of the bail in the hooks, said arms being adapted to be sprung into and out of engagement with the hooks by a lateral movement of the bail.



2. A clothes drainer comprising a perforated body having side and end walls and provided with a bottom bead, a tiltable bottom arranged within the body and having its side and end edges spaced from the walls of the said body, transversely alined eyes arranged at the lower face of the bottom, an eccentrically disposed pivot arranged transversely across the bottom and passed through the eyes and dividing the bottom into unequal portions and having its terminals bent upwardly at the side edges of the bottom bead, and a vertical locking rod located at the bottom head, and a vertical locking rod located at one end of the body and extending from the upper to the lower edge thereof and provided at its lower end with means for supporting the larger portion of the tiltable bottom.

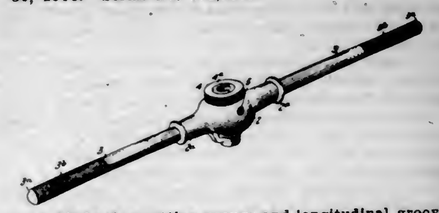
871,450. FLOOR-FINISHING DEVICE. WILLIAM SHEARS, Sault Ste. Marie, Mich. Filed Feb. 24, 1906. Serial No. 302,731.



1. A tool of the character described embodying a block having an upward extension near one end and also provided with a recess beneath the extension extending throughout the length of the latter, the bottom of the block upon opposite sides of the recess being provided with an anti-friction contact surface, a scraping blade disposed adjacent the rear wall of the recess, means including a clamping plate disposed against the outer face of the plate to hold the latter against displacement, a screw disposed out of alinement with said plate for engagement with the blade to concave the scraping edge of the latter, a buffer carried by the block, and an operating handle secured to the block.

2. A tool of the class described embodying a block having an upward extension and also provided with a recess beneath the extension, the bottom of the block upon opposite sides of the recess being provided with an anti-friction contact surface, a scraping blade disposed adjacent the rear wall of the recess, means including a clamping plate disposed against the outer face of the blade to hold the latter against displacement, means disposed out of alinement with said plate for engagement with the blade to concave the scraping edge of the latter, and an operating handle secured to the block.

871,451. SCREW-CUTTING DIE AND HOLDER THEREFOR. ALBERT J. SMART, Greenfield, Mass. Filed Oct. 30, 1906. Serial No. 341,285.



1. A die having cutting prongs and longitudinal grooves on its outer surfaces running from end to end, combined with a stock for receiving the die, means forming a coöperative part of the stock for moving the die longitudinally, said die and said stock having engaging surfaces effective to produce adjustment of the die prongs when the die is moved longitudinally, and means carried by the stock for engaging the longitudinal grooves, substantially as shown and described.

2. A holder comprising a body portion having an internally threaded chamber and a central passage having a conical seat, a closure cap for said chamber having a central passage and provided with a conical seat, combined with a resilient die having cutting prongs held within said stock, and having conical end portions to coöperate with said conical seats, together with means carried by the stock and coöperatively engaging the die between the conical ends thereof for reinforcing the cutting prongs of the die, substantially as shown and described.

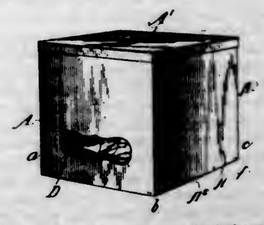
3. A holder, comprising a body portion having an internally threaded chamber and a central passage having a conical seat, a closure cap for said chamber having a central passage and provided with a conical seat, said conical seats being of equal taper, combined with a resilient die reversibly held within the stock and having conical portions to coöperate with said conical seats, and a work guide at one side face of the holder, substantially as shown and described.

4. A die holder comprising a body portion having an internally threaded chamber and a central passage, a screw cap for said body portion, combined with a resilient die reversibly held within the stock, said screw cap and said body portion having provisions for engaging the die to adjust the same, and a work guide at one side face of the holder, substantially as shown and for the purposes described.

5. A die holder comprising a body portion having an internally threaded chamber and a central passage provided with a conical seat, a screw cap for said body portion having a threaded hub to project into the body portion and having a central aperture provided with a conical seat and an adjustable and reversible die having sections engaging the conical seats and a work guide at one side face of the holder, substantially as shown and for the purposes described.

[Claims 6 to 9 not printed in the Gazette.]

871,452. BOX. JAMES E. SMITH, Baltimore, Md. Filed Dec. 15, 1906. Serial No. 347,935.



1. A box having its sides composed of sheet material and provided with a bottom, and an inner casing having its

sides parallel with the sides of the box and spacing devices located between the box and casing separating the casing from the box, the upper edges of one of said parts being provided with flaps bent toward the other of said parts whereby the space between them is closed, substantially as described.

2. A box having its sides composed of sheet material and provided with a bottom, and an inner casing having its sides parallel with the sides of the box and spacing devices located between the box and casing, separating the casing from the box, one of said parts being provided at its upper edges with flaps extending over the space between the casing and the box, substantially as described.

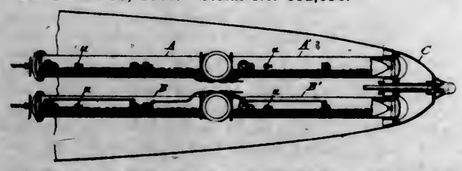
3. A box having its sides composed of sheet material and provided with a bottom, and an inner casing having its sides parallel with the sides of the box, spacing devices located in the corners of the box, between the box and casing, separating the box and casing, the upper edges of one of said parts having flaps provided with horizontal portions extending over the space between the box and casing, and vertically disposed portions engaging the sides of the other of said parts to assist in spacing the casing uniformly in relation to the sides of said box, substantially as described.

4. A box having its sides composed of sheet material and provided with a bottom, and an inner casing having its sides parallel with the sides of the box, spacing devices located in the corners of the box between the box and the casing, providing a space between the box and casing, the upper and lower edges of one of said parts having flaps provided with horizontal portions extending over and under the space between the box and casing and vertically disposed portions engaging the sides of the other of said parts to assist in spacing the casing uniformly in relation to the sides of said box, substantially as described.

5. A box having its sides composed of sheet material, the sides being flexibly united at the corners, a rigid bottom, an inner casing for said box the four sides of the same being united in a manner similar to that of the sides of the box, and detachable corner spacing devices for spacing the casing when placed inside of the box whereby the walls of the said casing are held a distance apart from the sides of the box, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

871,453. TANDEM TORPEDO-TUBE. LAWRENCE Y. SPEAR, Milton, Mass., assignor to Electric Boat Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 15, 1907. Serial No. 352,353.



1. The combination with a plurality of torpedo tubes arranged in tandem relation, of firing mechanism associated with the forward tube, means for establishing a firing passage from an after tube through the forward tube, and firing mechanism associated with that after tube, whereby a plurality of torpedoes may be discharged in rapid succession, substantially as described.

2. The combination with two torpedo tubes arranged in tandem relation, of firing mechanism associated with both of said tubes, and means for establishing a firing passage from the after tube through the forward tube, whereby torpedoes may be discharged from both of said tubes in rapid succession, substantially as described.

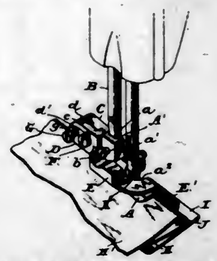
3. The combination with two torpedo tubes arranged in tandem relation, of firing mechanism associated with the after tube, and means for establishing a firing passage from the after tube through the forward tube, whereby the torpedo may be fired directly from the after tube, substantially as described.

4. The combination with two torpedo tubes arranged in tandem relation, of firing mechanism associated with both of said tubes, means for establishing a firing passage from the after tube through the forward tube and a torpedo guide extending through said tubes and passage, substantially as described.

5. The combination with two torpedo tubes arranged in tandem relation, of a valve chamber between said tubes, a valve in said chamber provided with valve operating mechanism, firing mechanism associated with both of said tubes and interlocks between the firing mechanisms and the valve operating mechanism, whereby the firing of the forward torpedo unlocks the valve and the opening of the valve unlocks the firing mechanism of the torpedo.

[Claims 6 to 11 not printed in the Gazette.]

871,454. COMBINED PRESSER-FOOT AND GUIDE FOR SEWING-MACHINES. GEORGE J. STEVENS, London, England, assignor, by mesne assignments, to American Attachment Company, Portland, Me., a Corporation of Maine. Filed Oct. 13, 1902. Serial No. 127,165.



1. In combination with a presser foot, a guide supported by said presser foot, extending across its top and having a depending flange on the needle side of the presser foot, thereby providing a vertical guiding face for the cloth, means for adjusting said guide vertically and laterally.

2. In combination with a presser foot, a guide secured to one side of the same extending across its top and vertically upon its other side and provided with a vertical recess to receive the bulge on the cloth, and having an opening in its horizontal portion for the passage of the needle substantially as described.

3. In combination with a presser foot having a horizontal extension, a guide having a slot, a screw F for holding the guide to the extension to allow the same vertical adjustment and a screw G passing through the guide and bearing against the extension to adjust the guide laterally substantially as described.

871,455. AUTOMATIC SWITCH-THROWING DEVICE. GEORGE R. STUART, Owensboro, Ky. Filed Mar. 5, 1907. Serial No. 360,706.



1. The combination with a switch, of a disk mounted to one side of said switch provided with an L-shaped slot, of a bar working in said slot connected to the switch points, levers mounted on the track, to each side of the switch, and links connecting said levers to said disk.

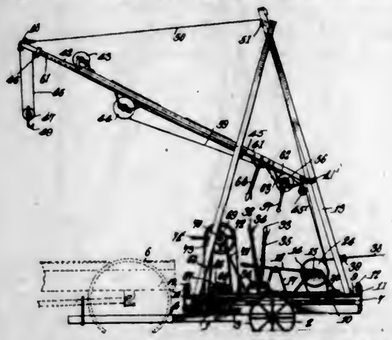
2. The combination with a switch provided with pivoted points connected by a bar, of a bar connected to said bar provided with an angled end, a target provided with a disk having an L-shaped slot formed therein arranged to one side of said switch, said bar carrying an anti-friction roller working in said slot, and means arranged on the track for operating the said disk.

3. The combination with pivoted switch points connected together by a bar, of a target arranged to one side of said points, a disk secured on said target provided with an L-shaped slot, a bar journaled in the cross-bar connected to the bar connecting the switch-points at one end, and slidably mounted in the slot of the disk, shafts mounted on the track to each side of the switch carrying levers, and links connecting said levers to said disk, for the purpose described.

4. The combination with switch points, of a disk mounted on a shaft to one side of said points provided with an L-shaped slot, a bar working in said slot connected to said point, shafts mounted on said track to each side, levers carried by said shaft, links connecting said levers to said disk, levers pivoted to the sides of the tie carrying links connected to crank-arms formed on said shafts, and tripping means carried by the train for operating said levers.

5. The combination with pivoted switch points connected together by a bar, of a target carrying a disk provided with an L-shaped slot, a bar connected to said bar provided with an angled end carrying an anti-frictional roller, said roller working in said slot of the disk, pins projecting up from said disk, shafts provided with crank-arms mounted on the track, levers carried by said shaft, links connecting said levers and pins, and weighted levers mounted on the ties connected to the crank-arms by links, and tripping mechanism carried by the train for opening and closing said switch.

871,456. SHOCK-LOADING APPARATUS. ROE TANNER, Attica, Ohio. Filed Jan. 18, 1907. Serial No. 352,978.



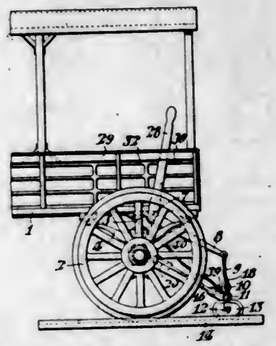
1. In a loading apparatus, a truck, a turn-table supported upon the truck, a derrick and hoisting apparatus upon the turn-table and a friction brake means including a foot-lever to prevent the table from turning.

2. In a loading apparatus, a truck, a turn-table supported upon the truck, a derrick rising from the turn-table, a boom connected with the derrick, guide pulleys mounted upon the apparatus, a double drum supported for rotation upon the turn-table, friction means to control the rotation of the drum, a draft element wound upon one section of the drum and guided between the pulleys, and a hoisting element wound in an opposite direction upon the other section of the drum and connected with the free end of the boom and carrying a block.

3. In a loading apparatus, a carrying truck, a turn-table supported upon the truck, a derrick rising from the turn-table and having a boom, guide pulleys journaled upon the apparatus, a double drum supported for rotation, friction means to control the rotation of the double drum, a shaft extending slidably and loosely through the latter and carrying a single drum, means for adjusting said shaft, clutch means for connecting the single with the double drum, a brake wheel, clutch means to connect the brake wheel with the single drum, a flexible element wound upon the latter and guided over the derrick to the free end of the boom, a hoisting element wound upon one section of the double drum and extending over guiding members upon the boom, and a draft element wound in the opposite direction to the hoisting element upon the outer section of the double drum and guided between the pulleys.

4. A hoisting apparatus comprising a turn table mounted upon a truck, a derrick mounted upon said turn table, a boom supported by the derrick, guide rollers journaled upon said boom, a hollow telescopic member passing between said guide rollers, tackle operated from the turn table and passing through said hollow member and depending from the ends thereof and tackle operated from the turn table and connected with said boom.

871,457. ELECTRICALLY-PROPELLED VEHICLE. RUSSELL THAYER, Philadelphia, Pa. Filed Apr. 4, 1907. Serial No. 366,433.



1. In an electrically propelled vehicle, the combination with means providing an adjustable electrical connection between the vehicle and a stationary conductor; comprising a frame pivoted to said vehicle and arranged for lateral movement with respect thereto; reversible electrical contacts pivoted on said frame in operative relation with said conductor; and, a rock shaft carried by said vehicle and connected to withdraw said electrical contacts from said stationary conductor, substantially as set forth.

2. In an electrically propelled vehicle, the combination with means providing an adjustable electrical connection between the vehicle and a stationary conductor; comprising a frame pivoted to said vehicle and arranged for lateral movement with respect to the vehicle; links pivotally connecting said frame with the axle of said vehicle arranged to maintain said frame parallel therewith; electrical contacts carried by said frame in operative relation with said conductor; and, a rock shaft carried by said vehicle and connected to withdraw said electrical contacts from said stationary conductor, substantially as set forth.

3. In an electrically propelled vehicle, the combination with means providing an adjustable electrical connection between the vehicle and a stationary conductor; comprising a frame pivoted to said vehicle and arranged for lateral movement with respect to the vehicle; links comprising bars of non-conducting material provided at their opposite ends with clevises pivotally connecting said frame with the axle of said vehicle and arranged to maintain said frame parallel therewith; electrical contacts carried by said frame in operative relation with said conductor; and, a rock shaft carried by said vehicle and connected to withdraw said electrical contacts from said stationary conductor, substantially as set forth.

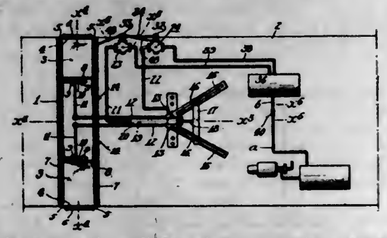
4. In an electrically propelled vehicle, the combination with means providing an adjustable electrical connection between the vehicle and a stationary conductor; comprising a frame; electrical contacts carried by said frame; a yoke secured to the axle of said vehicle; a leaf hinged to said yoke, having its axis parallel with said axle; and links pivotally connecting said frame and said leaf, arranged to swing in planes radial with respect to the horizontal axis of said leaf, substantially as set forth.

5. In an electrically propelled vehicle, the combination with means providing an adjustable electrical connection

between the vehicle and a stationary conductor; comprising a frame pivoted to said vehicle; electrical contacts journaled on said frame; a rock shaft; a lever arm on said rock shaft; whose free end is connected with said frame; and a hand lever arranged to rock said shaft, and accessible from said vehicle, substantially as set forth.

[Claims 6 to 15 not printed in the Gazette.]

871,458. AUTOMATIC MAIL-BAG EJECTOR. RAY G. THORNHILL and CHARLES C. THOMPSON, Los Angeles, Cal. Filed Apr. 22, 1907. Serial No. 369,712.



1. An automatic mail bag ejector comprising a pair of delivery boxes arranged to discharge on each side of the car, plungers in the boxes, a pair of pivoted arms having slotted extensions, a connection between each arm and its associated plunger, a cross head engaging the slotted extensions, a piston rod carrying said cross head, a cylinder, a piston therein carrying said piston rod, a compressed air supply, valve mechanism for controlling the supply of compressed air to said cylinder, and means operated by a trip on the track for controlling said valve mechanism.

2. An automatic mail bag ejector comprising a pair of delivery boxes arranged to discharge on each side of the car, trap doors in the floor of the car permitting the bags to be placed in the delivery boxes, plungers in the boxes, a pair of pivoted arms having slotted extensions, a conection between each arm and its associated plunger, a cross head engaging the slotted extensions, a piston rod carrying said cross head, a cylinder, a piston therein carrying said piston rod, a compressed air supply, valve mechanism for controlling the supply of compressed air to said cylinder, and means operated by a trip on the track for controlling said valve mechanism.

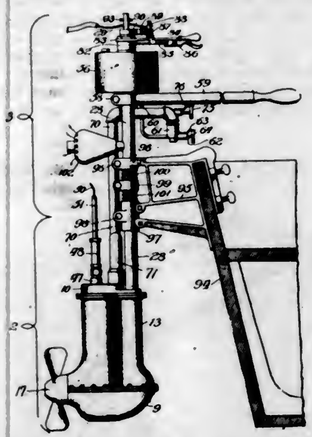
3. An automatic mail bag ejector comprising a pair of delivery boxes arranged to discharge on each side of the car, trap doors in the floor of the car permitting the bags to be placed in the delivery boxes, plungers in the boxes, spring pressed doors normally closing the outer ends of the delivery boxes, a pair of pivoted arms having slotted extensions, a connection between each arm and its associated plunger, a cross head engaging the slotted extensions, a piston rod carrying said cross head, a cylinder, a piston therein carrying said piston rod, a compressed air supply, valve mechanism for controlling the supply of compressed air to said cylinder, and means operated by a trip on the track for controlling said valve mechanism.

4. An automatic mail bag ejector comprising a pair of delivery boxes arranged to discharge on each side of the car, plungers in the boxes, a pair of pivoted arms having slotted extensions, a connection between each arm and its associated plunger, a cross head engaging the slotted extensions, a piston rod carrying said cross head, a cylinder, a piston therein carrying said piston rod, a compressed air supply, valve mechanism for controlling the supply of compressed air to said cylinder, means operated by a trip on the track for controlling said valve mechanism, a reservoir between said compressed air supply and the valve mechanism, and means between said reservoir and the air supply for automatically preventing air from flowing back from the reservoir if the pressure of the supply falls below that of the reservoir and for draining air slowly from the supply into the reservoir when the pressure of the reservoir falls below that of the air supply.

5. An automatic mail bag ejector comprising a pair of delivery boxes arranged to discharge on each side of the car, plungers in the boxes, a pair of pivoted arms having slotted extensions, a connection between each arm and its associated plunger, a cross head engaging the slotted extensions, a piston rod carrying said cross head, a cylinder, a piston therein carrying said piston rod, a pair of valves each having an operating arm, a link connecting said arms, a pipe extending from one end of said cylinder to one valve, a pipe extending from the other end of the cylinder to the other valve, a reservoir, and a pipe extending from each valve to the reservoir, one of said latter arms being longer than the other and adapted to be operated by a trip device on the track.

[Claim 6 not printed in the Gazette.]

871,459. BOAT-PROPELLING MECHANISM. THOMAS THORSEN, Menomonie, Wis., assignor to, Submerged Electric Motor Company, Menomonie, Wis., a Corporation of Wisconsin. Filed Mar. 1, 1907. Serial No. 360,113.



1. In combination, a combined submergible gas-engine and boat-propeller, a stem forming the carrying medium therefor, a bracket removably attachable to the stern of a boat and on which said stem is rotatably supported, a cushioning support for the stem on the bracket, and a tiller connected with the stem.

2. In combination, a combined submergible gas-engine and boat-propeller, a stem forming the carrying medium therefor, a bracket removably attachable to the stern of a boat and on which said stem is rotatably supported, and a spring medium supporting said stem on the bracket and forming a vibration-absorbing cushion.

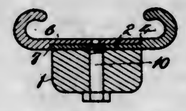
3. In combination, a combined submergible gas-engine and boat-propeller, a stem forming the carrying medium therefor, a bracket removably attachable to the stern of a boat and provided with collars in which said stem is journaled, a collar secured on the stem between said bracket-collars, and springs confined about the stem between the collar secured thereon and said bracket-collars.

4. In combination, a combined submergible gas-engine and boat-propeller, a tubular stem forming the carrying medium therefor, and into which the engine exhausts, a muffler on said stem, and a bracket removably attachable to the stern of a boat and on which said stem is rotatably supported.

5. In combination, a combined submergible gas-engine and boat-propeller having a stem forming the carrying medium therefor, a gasoline-supply tank, an adjustable electrical contact-device supported on said stem for controlling the operation of the sparking-plug of the engine, and a bracket removably attachable to the stern of a boat and on which said stem is rotatably supported.

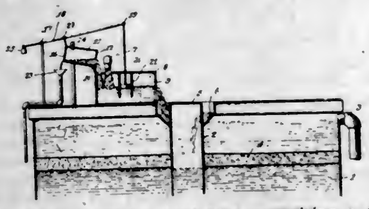
[Claims 6 to 10 not printed in the Gazette.]

871,460. RIM FOR VEHICLE-WHEELS. ERNEST D. VALENTINE, Akron, Ohio. Filed Aug. 17, 1906. Serial No. 331,048.



A separable rim for vehicle tires comprising as one of its elements an annular band of suitable width, provided along one side with tire-engaging means and further provided with a relatively wide shallow rabbet in its outer surface, a plurality of pins positioned within said rabbet and extending outwardly therefrom a distance not exceeding the depth of said rabbet, a second element arranged to coöperate with said first element to constitute in connection therewith a tire-retaining rim consisting of an annular band having a tire-engaging means along one side with a rabbet cut in its under face corresponding in contour and size to the rabbet in said first element and adapted to fit therein, said second element being further provided with a plurality of slots formed in the rabbeted portion thereof, said slots being partially obliquely and partially circumferentially formed and so positioned as to receive the pins on said first element and form a detachable interlocking engagement therewith, and a threaded pin arranged to engage in a threaded opening in said first element, said pin being provided with a projecting end arranged to enter an opening appropriately positioned in said second element whereby said elements are secured against unintentional dislodgment.

871,461. WATER-PURIFYING APPARATUS. CHARLES P. VAN GUNDY, Catonsville, Md. Filed Feb. 26, 1907. Serial No. 359,427.



1. A water purifying apparatus comprising a mixing box, a discharge therefrom, variable according to the volume of water therein, a water supply thereto, a chemical supply, a movable chemical holder having a vertical slot therein, and connections to move said holder to vary the supply of chemical to said box according to the supply of water in said box.

2. A water purifying apparatus comprising a mixing box, a water supply thereto, a chemical supply, a movable chemical holder, said holder having a vertical slot, devices connected with said holder and arranged to be controlled by the supply of water in the box for varying the output of chemical to said box, and a return pipe adjacent said holder arranged to receive the excess of chemical.

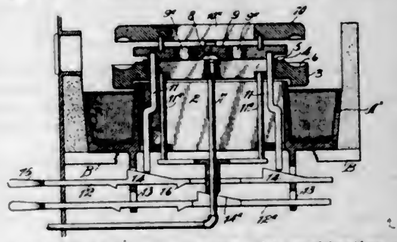
3. A water purifying apparatus comprising a mixing box, having a variable discharge, a water supply thereto, a chemical supply, a tilting chemical holder having vertical slots therein at its opposite ends, one of said slots being adapted to deliver to said box and the other to a return pipe, and connections for tilting said holder variably according to the volume of water in said mixing box.

4. A water purifying apparatus comprising a mixing box, a vertical discharge slot therein, a water supply thereto, a chemical supply, a tilting chemical holder, vertical slots therein at the opposite ends, one of said slots being arranged to deliver into said box, means for adjusting the width of said latter slot and connections for variably tilting said holder according to the volume of water in the box.

5. A water purifying apparatus comprising a mixing box, a variable discharge therefrom, a water supply thereto, a chemical supply, a movable chemical holder, having a variable discharge into said box, a float in said box and connections between said float and said chemical holder to move the latter so as to discharge variable quantities of chemical according to the position of said float.

[Claims 6 to 11 not printed in the Gazette.]

871,462. OIL-BURNER. WILLIAM H. VAN MARTER, Petaluma, Cal. Filed Feb. 8, 1907. Serial No. 356,366.



1. In an oil burning apparatus, the combination of a base having a central opening and suitable walls forming a surrounding channel, a structure superposed upon the base and having a central opening, said structure having oil grooves or channels formed around it with an intervening edge over which the oil flows from one channel to the other, an oil pipe connecting with one of said channels, superposed deflectors movable towards and from said structure each of said deflectors having a part which overhangs one of said channels, and means whereby the deflectors raise and lower in unison to allow air to pass between their overhanging portions and the oil channel.

2. In an oil burning apparatus, a trough-shaped base having an open center, a superposed part having channels upon its upper surface, one of said channels being bounded by an inner lip, and a central opening substantially registering with the opening of the base, means for delivering oil into said channels, a deflector closable upon the inner lip of the oil channel, guided rods extending downwardly from the deflector through the opening in the base, and means whereby said rods and the deflectors may be raised or depressed to regulate the discharge of air over the oil channels.

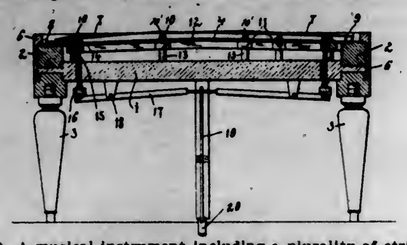
3. In an apparatus for burning oil, a base having a peripheral trough and a central air opening, a part having oil-receiving grooves or channels upon its upper surface, and an air-opening registering with that of the base, one or more deflectors located above the channeled portion and closable thereon, independently guided rods supporting respectively the deflectors and the channeled portion, means by which said rods and the attached parts may be independently raised to provide air passages between said parts.

4. In an oil burning apparatus, the combination of a base having an open-center and double walls forming an annular trough, a part disposed over the open-center of the base, said part having an opening in its center and having its upper surface formed with inner and outer oil channels connecting by an edge over which the oil flows from one channel to the other, parallel deflectors disposed over said part, one of said deflectors having an edge which overhangs one of said channels and the other deflector having an edge which overhangs the other channel, said part having a lip bounding the inner edge of the innermost channel and upon which lip one of said deflectors is adapted to close, and means for supplying oil and air to said channels.

871,463. MUSICAL INSTRUMENT. FERDINAND WAGNER, New York, N. Y. Filed Mar. 4, 1907. Serial No. 360,516.

1. A musical instrument including a plurality of strings located in different planes, a corresponding number of

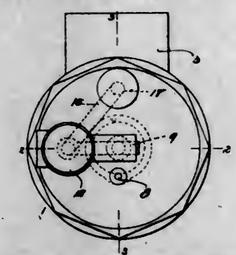
dampers located in different planes and normally free of said strings, and operating means for said dampers.



2. A musical instrument including a plurality of strings located in different planes, a corresponding number of independently adjustable dampers located in different planes, and normally free of said strings, and operating means for said dampers.

3. A musical instrument including a plurality of strings located in different substantially horizontal planes, a rail transverse to said strings and carrying under each string a damper adjustable independently of the other dampers, and operating means for said dampers.

871,464. CARBURETER. CARL C. WALTER, Philadelphia, Pa. Filed Sept. 7, 1905. Serial No. 277,373.



1. A carbureter provided with a fluid fuel feeding piston and its cylinder, an air valve having a stem provided with a retarding piston, a cylinder coöperating with the end of the valve stem and having connections to the first mentioned cylinder, a cylinder coöperating with the retarding piston, and means for creating variable pressure in the last mentioned cylinder, substantially as described.

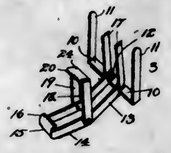
2. The combination in a carbureter of a piston and cylinder and their connections for spraying fluid fuel, an air valve, a second cylinder, connections between the first and second cylinders, and a piston connected with the air valve and arranged in the second cylinder and adapted to operate the first mentioned piston, substantially as described.

3. In a carbureter the combination of a fluid fuel feeding cylinder, a piston having a retracting spring, connections to said cylinder, connections from said cylinder including a spraying device, an air valve, and a vented cylinder coöperating with the stem of the air valve and communicating with said piston, substantially as described.

4. The combination of a gas engine, a pump driven thereby, a carbureter provided with a fluid fuel feeding piston and cylinder and a spraying device an air valve, a cylinder for the stem of the air valve and having connection with the cylinder of the oil feeding piston, a piston and cylinder for retarding the opening of the air valve, connections between the last mentioned cylinder and the pump, and a device for venting the last mentioned connections, substantially as described.

871,465. ADJUSTABLE SCAFFOLD-TRESTLE. HARRY J. WHIPPERMAN, Dixon, Ill. Filed Sept. 25, 1906. Serial No. 336,099.

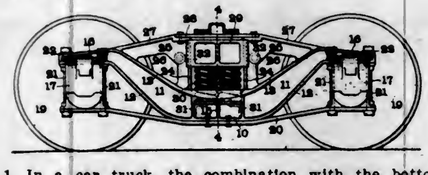
1. In combination with an upright and a horizontal beam, a bracket comprising jaws pivotally secured together and engaging the upright, and a base portion with upright arms pivotally secured to said jaws to support the beam, substantially as shown and described.



2. In combination with an upright and a horizontal beam, a bracket comprising a base portion to support said beam having upright arms, a U-shaped clip secured to said base portion, and jaws comprising a U-shaped member pivotally secured to said clip, and another U-shaped member pivotally secured to the first-named U-shaped member, both of said U-shaped members having teeth to engage the upright aforesaid, substantially as shown and described.

3. In combination with an upright and a horizontal beam, a bracket comprising a base portion to support said horizontal beam, a clip secured to said base portion, and jaws pivotally secured together and pivotally secured to the clip, said jaws being provided with teeth to engage said upright, substantially as shown and described.

871,466. CAR-TRUCK. HERBERT W. WOLFF, St. Louis, Mo., asignor to Wolff Truck Frame Company, Augusta, Me., a Corporation of Maine. Filed June 26, 1907. Serial No. 380,880.



1. In a car truck, the combination with the bottom member and truck column of a side frame, of tie beams formed integral with and inclined upwardly from said bottom member, a T-flange on the upper edge of said tie beams and extending over said bottom member, a spring seat formed in said bottom member and depressed below said T-flange, and strut members connecting the outer ends of said tie beams and the upper ends of said truck columns.

2. In a car truck, the combination with the bottom member and truck column of a side frame, of tie beams formed integral with and inclined upwardly from said bottom member, oil box extensions formed integral with said tie beams and inclined outwardly from their juncture therewith, a T-flange on the upper edge of said tie beams and extending over said bottom member, a spring seat formed in said bottom member and depressed below said T-flange, and strut members extending from the upper ends of said truck columns to the juncture of said tie beams and oil box extensions.

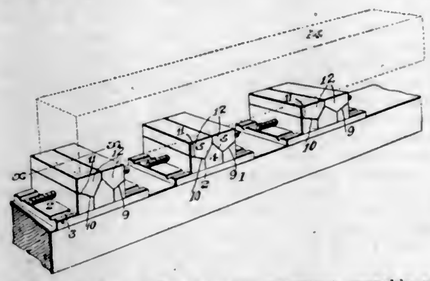
3. In a car truck, the combination with the bottom member and truck columns of a side frame, of tie beams formed integral with and inclined upwardly from the said bottom member, oil box extensions formed integral with said tie beams, a T-flange on the upper edge of said tie beams and extending over the said bottom member to the upper edge of said oil box extensions, a spring seat formed in said bottom member and depressed below the said T-flange, and strut members connecting the upper ends of the said truck columns with the juncture of said tie beams and oil box extensions.

4. In a car truck, the combination with the bottom member and truck columns of a side frame, of tie beams formed integral with and inclined upwardly from said bottom member, a T-flange on the upper edge of said tie beam and extending over said bottom member, said T-flange being expanded and thickened at its central part over the said bottom member, a spring seat formed in said bottom member and depressed below the expanded and thickened portion of said T-flange, and strut members connecting the upper ends of said truck columns with said tie beams.

5. In a car truck, the combination with the bottom member and truck columns of a side frame, of tie beams formed integral with and inclined upwardly from said bottom member, oil box extensions formed integral with said tie beams and inclined downwardly and outwardly from their juncture therewith, a T-flange on the upper edge of said tie beams and extending to the upper edge of the said oil box extensions, and strut members extending between said tie beams and truck columns, the upper edges of said strut members lying in a substantially straight line with the upper edges of said oil box extensions.

[Claim 6 not printed in the Gazette.]

871,467. KEEL-BLOCK FOR SHIPS. THOMAS H. ALCORN, Philadelphia, Pa. Filed Oct. 4, 1906. Serial No. 337,334.



1. In a device of the character described, movable supports, blocks carried by said supports, and means in engagement with the supports for operating said supports whereby said blocks are lowered and for returning said supports to their normal position.

2. In a device of the character described, movable supports, blocks carried thereby, and means connected with the supports for moving the same whereby said blocks are lowered.

3. In a device of the character described, a stationary support, movable side supports adjacent said stationary support, blocks carried by said supports, and means in engagement with said movable supports for moving the same whereby said blocks are lowered.

4. In a device of the character described, a stationary support, movable side supports, means for moving said side supports, blocks carried by said supports and adapted to be lowered when said side supports are moved and guides for said side supports.

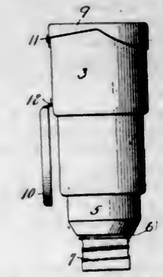
5. In a device of the character described, a stationary support, a movable support adjacent said stationary support, a block carried by said supports, and means connected with said movable supports for operating the same with respect to each other, so that said block is lowered.

[Claims 6 to 17 not printed in the Gazette.]

871,468. TELEPHONE-MOUTHPIECE. ANNA BEBOUT, St. Louis, Mo. Filed Jan. 28, 1907. Serial No. 354,552.

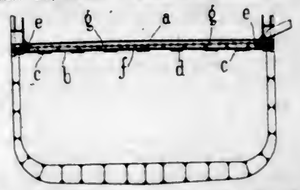
1. A collapsible individual mouth piece for telephones comprising a plurality of sections, the mouth section being such a length that the other sections may be housed within the same, connections between the sections permitting such housing, and closures hinged at opposite ends of the mouth section.

2. A collapsible individual mouth piece formed of a plurality of sections, one end section being shaped to fit the mouth and the other end section being removable and having a screw threaded reduced portion, a screw threaded sleeve on the reduced portion, projecting beyond the same, and an aseptic cloth held to the reduced portion by the sleeve.



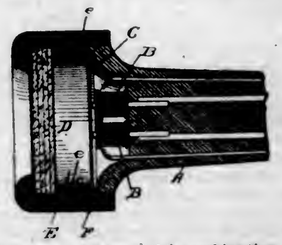
3. In combination with a collapsible pocket mouth piece for telephones, having a concave receiving end, a cap or closure secured to the outer section of the instrument, adapted to fit over said receiving end and having a flange constructed to overlap the concave portion and effectively close the same; said instrument also having a suitable closure for its outer end.

871,469. AUTOMATIC COALING APPARATUS FOR BUNKERS, &c. AUGUST BLIEDUNG, Hamburg, Germany. Filed Mar. 16, 1907. Serial No. 362,666.



In a coaling apparatus, a deck, a chamber beneath the deck and having lower openings, rollers within the chamber, a chain engaging the rollers and arranged in a plane parallel to the deck, and buckets carried by the chain, substantially as specified.

871,470. TELEPHONE-RECEIVER. HIRAM E. BOOTH, Salt Lake City, Utah. Filed Sept. 8, 1902. Serial No. 122,517.



1. In a telephone receiver, the combination of a vibratory diaphragm, means for causing said diaphragm to vibrate for the purpose of producing sound waves, and a porous and non-vibratory diaphragm arranged to receive the sound waves propagated by the vibratory diaphragm, with an air space between, said last mentioned diaphragm consisting of front and back disks with interposed fibrous material.

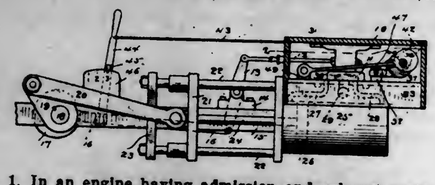
2. A telephone receiver comprising a suitable casing, an electro-magnet, a vibratory diaphragm arranged in front of said magnet, and an auxiliary diaphragm arranged in front of said vibratory diaphragm, with an air space between, said auxiliary diaphragm consisting of front and

back sheets of perforated material with interposed fibrous material.

3. A telephone receiver comprising a suitable casing, an electro-magnet, a vibratory diaphragm arranged in front of said magnet, and a porous and non-vibratory diaphragm arranged in front of said vibratory diaphragm, with an air space between, said last mentioned diaphragm being composed of non-magnetic material having a multitude of fine openings and with interposed fibrous and porous material.

4. A telephone receiver comprising a suitable casing, an electro-magnet, a vibratory diaphragm arranged in front of said magnet, and an auxiliary diaphragm arranged in front of said vibratory diaphragm, with an air space between, said auxiliary diaphragm being less vibratory than the said diaphragm in front of said magnet and consisting of a suitable number of perforated sheets of hard material with interposed fibrous material.

871,471. LEAD-CONTROLLING MECHANISM FOR STEAM-ENGINES. WARREN L. BRAMAN, Ellington, Conn., assignor of one-half to Rollo W. Braman, Torrington, Conn. Filed Apr. 9, 1907. Serial No. 367,153.



1. In an engine having admission and exhaust ports, a main valve for both of said ports, regulating valves having extensions under the main valve, and mechanism for manually adjusting said regulating valve to control the lead.

2. In an engine having admission and exhaust ports, a main valve for both of said ports, regulating valves having extensions and mounted to slide under the main valve, and mechanism for manually reciprocating said regulating valves and controlling the lead.

3. In an engine having admission and exhaust ports, a main valve for both of said ports, regulating valves having extensions under the main valve, a shaft having means whereby it may be manually oscillated, and connections between the regulating valves and said shaft whereby said regulating valves may be adjusted.

4. In an engine having admission and exhaust ports, the combination with a main valve, of regulating valves having extensions under the main valve, a shaft, connections intermediate said shaft and the regulating valve whereby the latter may be moved toward or from each other by oscillation of said shaft, a lever, and connections intermediate said lever and shaft.

5. In an engine, the combination with a steam chest having admission and exhaust ports, a main valve for both of said ports, regulating valves having extensions under the main valve and operating in connection with the ports of the steam chest for the purpose set forth, a shaft journaled in the steam chest, eccentrics on said shaft, and straps and connections between said eccentrics and the regulating valves, whereby they are moved in opposite directions by oscillations of the shaft.

[Claims 6 to 9 not printed in the Gazette.]

871,472. METALLIC RAILWAY CROSS-TIE. FRANK P. BRINING, Philadelphia, Pa., assignor of one-half to Robert F. Whitmer, Philadelphia, Pa. Filed Mar. 19, 1907. Serial No. 363,282.

1. The combination in a metallic cross tie, of a channeled body portion having its flanges turned down, and reinforced channel members having their flanges turned up and directly secured to the flanges of the channel body portion, substantially as described.

2. The combination in a metallic cross tie, of a body portion bent to form a channel and recessed to form pockets, with inverted channel members secured to the end of the body portion and forming sides of the pockets, substantially as described.



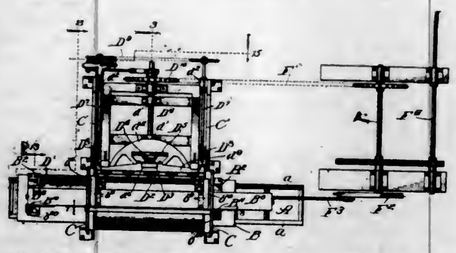
3. The combination in a metallic cross tie, of a body portion formed of a channel bar depressed to form pockets at each end, reinforcing channel members secured to each end of the bar, the flanges of the channel members being upturned and extending on each side of the pockets and riveted to the body portion of the tie, with a cushion block mounted in the pockets, substantially as described.

4. The combination in a metallic cross tie, of a body portion formed of a flat plate notched at each side near each end and bent to form flanges, the portions of the plate reduced in width being bent to form pockets at each side, with reinforcing members secured to each end of the tie and forming the side walls of the pockets, substantially as described.

5. The combination in a metallic cross tie, of a body portion formed of a channel member cut away at each side near each end, two channel reinforcing members secured to each end of the tie and forming, with the body portion, pockets for the reception of cushion blocks, blocks mounted in the ties, the body portion being perforated on its upper surface, with clamps for the rails passing through the perforations and hooked to the body portion, said clamps extending over the base flanges of the rail, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

871,473. VENEER-CUTTING MACHINE. AARON BROSIUS, Evansville, Ind., assignor of one-half to Louis F. Nonnast, Chicago, Ill. Filed Feb. 4, 1907. Serial No. 355,706.



1. In a veneer-cutting machine, the combination of a stay-log, a laterally shiftable longitudinally reciprocating knife and knife-support, and a laterally shiftable guide for the knife-support.

2. In a veneer-cutting machine, the combination of a stay-log, a knife-carriage guide, a knife-carriage mounted thereon, a knife-support mounted on said knife-carriage, and a shiftable guide for said knife-support.

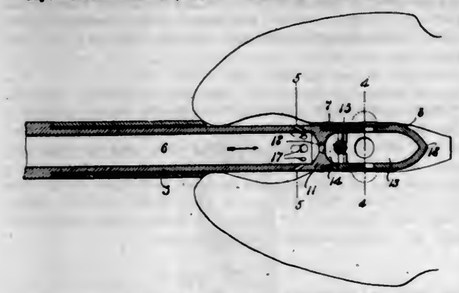
3. In a veneer-cutting machine, the combination of a stay-log, a knife-carriage guide, a knife-carriage mounted thereon, a laterally shiftable knife-support carried by the knife-carriage, and a latterally shiftable guide for said knife-support.

4. In a veneer-cutting machine, the combination of a stay-log, a knife-carriage guide, a knife-carriage mounted thereon, a knife-support pivotally joined to the knife-carriage below the plane of said stay-log, a knife carried by said support, and a laterally shiftable guide for said knife-support with which said knife-support is connected at a distance from said pivot.

5. In a veneer-cutting machine, the combination of a horizontal knife-carriage-guide, a knife-carriage mounted thereon, a horizontal stay-log carriage guide at right angles to said knife-carriage guide, a stay-log carriage mounted on said stay-log carriage guide, a vertically reciprocating stay-log, a knife-support pivotally joined to said knife-carriage, a knife carried by said support, and a laterally shiftable guide connected with said support above said knife.

[Claims 6 to 28 not printed in the Gazette.]

871,474. SYRINGE. WILLIAM T. BUCKNER, Shelbyville, Ky. Filed Jan. 21, 1907. Serial No. 353,323.



1. A syringe including a tubular member having a discharge orifice, a piercing member carried by one end of the tubular member, a source of fluid supply, and a readily puncturable jacket covering the perforated end of the tubular member and bearing against the piercing member.

2. A syringe including a tubular member having a longitudinal liquid passage and provided with a discharge orifice communicating with said passage and opening through the side walls of the tubular member, and a readily puncturable jacket normally covering the discharge orifice and a portion of tubular member and movable longitudinally of the latter.

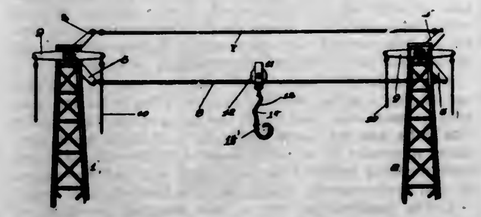
3. A syringe including a tubular member having a discharge orifice, a source of fluid supply, and a readily puncturable jacket normally closing the discharge orifice and movable longitudinally on said tubular member.

4. A syringe including a tubular member having a discharge orifice, a source of fluid supply communicating with said member, an expansible member surrounding the walls of the tubular member, and a readily puncturable jacket forming a housing for the expansible member and normally covering the discharge orifices.

5. A syringe including a tubular member having a discharge orifice, a source of fluid supply communicating with said member, an expansible member carried by the tubular member, and a valve for controlling the flow of liquid from the tubular member to the expansible member.

[Claims 6 to 10 not printed in the Gazette.]

871,475. MAIL-TRANSFER DEVICE. HENRY B. BURKE, Windber, Pa. Filed Nov. 8, 1906. Serial No. 342,481.



In a mail transferring device, the combination with tracks, of bridges spanning said tracks, shafts journaled in said bridges, bell-cranks carried centrally of said shafts and between said tracks, cables connecting the respective arms of said bell-cranks, a trolley mounted upon one of said cables, and means located at said bridges to raise and lower said cables.

871,476. COMBINED TOOL. JAMES H. CHANEY, Stanton, Tenn., assignor of two-thirds to William E. De Witt, Philadelphia, Pa. Filed Apr. 3, 1905. Serial No. 253,454.



1. A combined tool comprising two bars or members pivoted together and having handles at one side of their pivot, and at the opposite side thereof diverging pointed prongs projecting at substantially a right angle to said members.

2. A combined tool comprising in combination two bars or members pivoted together and having handles at one side of their pivot, and at the opposite side, prongs having convex surfaces and projecting at substantially a right angle thereto.

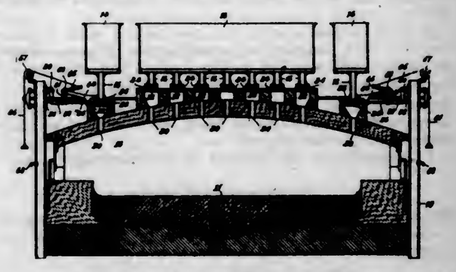
3. A combined tool comprising two bars or members pivoted together and having handles at one side of their pivot and at the opposite side prongs projecting at substantially a right angle thereto, one surface of which is convex and the opposite surface flat.

4. A combined tool comprising two bars or members pivoted together and having handles at one side of their pivot and at the opposite side thereof, prongs and serrated surfaces between said prongs and pivot.

5. A combined tool comprising two bars or members pivoted together and having handles at one side of their pivot and at the opposite side, prongs projecting at substantially a right angle thereto, and serrated surfaces between said prongs and pivot.

[Claims 6 and 7 not printed in the Gazette.]

871,477. METHOD OF FEEDING REVERBERATORY FURNACES. HENRY L. CHARLES, Salt Lake City, Utah, assignor of one-half to Fritz Augustus Heinze, Butte, Mont. Filed Mar. 26, 1907. Serial No. 364,580.



1. The within described method of feeding ores into reverberatory furnaces consisting in dropping the same over the hearth in small charges at frequent intervals.

2. The within described method of feeding ores into reverberatory furnaces consisting in dropping the same over the hearth in small charges at frequent intervals and at various places.

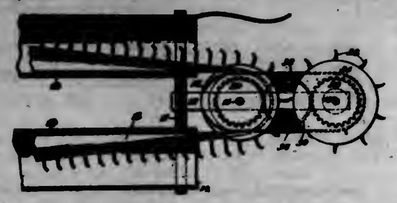
2. The within described method of feeding ores into reverberatory furnaces consisting in dropping the same over the hearth through a series of small holes located in the roof of the furnace.

4. The within described method of feeding ores into reverberatory furnaces consisting in feeding raw silicious ores between the calcined ores and the edges of the hearth.

5. The within described method of feeding ores into reverberatory furnaces consisting in dropping raw silicious ores around the edges of the hearth and the calcined ores in small quantities over the inner portion of the hearth.

[Claims 6 to 10 not printed in the Gazette.]

871,478. COTTON-PICKER. HENDERSON P. CHILDRESS, New York, N. Y. Filed Mar. 23, 1906. Serial No. 307,651.



1. In a cotton picker, the combination with a rotary support, of transversely disposed sets of teeth pivotally mounted on the support, each tooth of each set having independent swinging movements, and means for maintaining the teeth in projecting relation during a portion of their rotation, said means permitting the independent movement of each tooth to an inoperative position independently of the other teeth.

2. In a cotton picker, the combination with a rotary support, of transversely disposed pivots mounted on the support, independently swinging teeth loosely journaled on the pivots, and means engaging the teeth for yieldingly maintaining them in projecting relation during a portion of their rotation, said means permitting the independent movement of each tooth to an inoperative position independently of the other teeth.

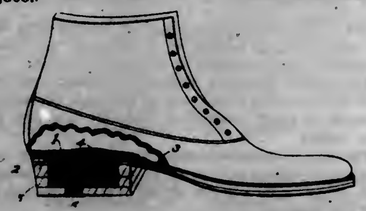
3. In a cotton picker, the combination with a rotary drum comprising a peripheral wall and heads located at the ends of the wall, of a pivot device passing through the wall and secured to the heads, said heads being fastened to the wall by said pivot device, and a plurality of independently swinging teeth journaled on the pivot device.

4. In a cotton picker, the combination with a drum comprising a tubular peripheral wall having a transverse series of openings therethrough, and heads detachably located at the ends of the peripheral wall, of pivots passing through the peripheral wall and the openings thereof, said pivots having their ends secured to the heads, and said heads being fastened to the peripheral wall by the pivots, and a plurality of independently swinging teeth located in the openings of the peripheral wall and journaled on the pivots.

5. In a cotton picker, the combination with a rotary support, of a plurality of annular rows of independently swinging teeth mounted on the support and disposed side by side, each tooth being pivoted between its ends, and means engaging the inner portion of each tooth during a portion of its rotation to maintain the outer portion of the same in projecting relation.

[Claims 6 to 27 not printed in the Gazette.]

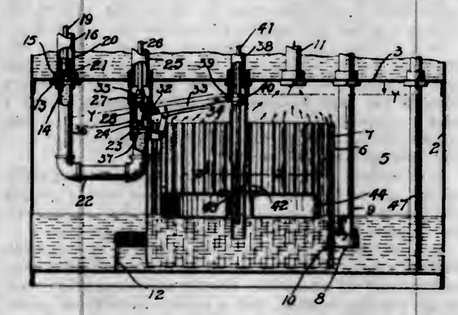
871,479. ELECTROGENIC BODY DEVICE. ALBERT R. COOPER, Findlay, Ohio. Filed Feb. 14, 1907. Serial No. 357,305.



1. A device of the character described, comprising the combination of a shoe, a galvanic pair, a galvanic cell in the interior of the heel of the shoe, means of electrical connection between said galvanic pair and said galvanic cell, and means of electrical connection between the terminals of said galvanic cell, which means consists of a circuit formed of the human body and the earth, wherein, when the shoes are upon the feet and the wearer is standing upon the ground, one foot is in contact with a terminal of said cell in the interior of one shoe, and the opposite foot is in contact with suitable conductors extending through the sole of the shoe thereon, and these conductors are in contact with the earth therebelow, and the earth completes the circuit by contact with the other terminal of said cell at the bottom of the shoe heel.

2. In a device of the character described, the combination of a shoe, a galvanic pair in the interior of the said shoe, a galvanic cell consisting of an insulated cavity in the interior of the shoe heel and an electro-excitant composed of copper, carbon, and acetic acid, means of electrical connection between said galvanic pair and said galvanic cell, and means of electrical connection between the terminals of said galvanic cell, which means consists of a circuit formed of the human body and the earth, wherein, when the shoes are upon the feet and the wearer is standing upon the ground, one foot is in contact with a terminal of said cell in the interior of one shoe, and the opposite foot is in contact with suitable conductors extending through the sole of the shoe thereon, and these conductors are in contact with the earth therebelow, and the earth completes the circuit by contact with the other terminal of said cell at the bottom of the shoe heel.

871,480. CARBURETER. HARRY B. CORNISH, Minneapolis, Minn., assignor of one-half to P. Peterson, Glenwood, Minn. Filed Mar. 4, 1907. Serial No. 360,593.



1. A carbureter comprising a wall having a series of ducts formed thereon and open at their upper and lower ends, the outer walls of said ducts being provided with ports, and the lower portion of said ducts being normally immersed in a body of oil, and means outside said wall for delivering air under pressure to said ducts through said ports whereby it will be thoroughly carbureted upon its discharge from said ducts, substantially as described.

2. The combination, with a wall having a series of ducts therein and open at the top and bottom, and provided with ports in their walls, a hollow ring inclosing said wall and communicating with said ports, a pipe connected with said ring and through which air under pressure is admitted thereto, and the lower portions of said walls being normally immersed in gasolene whereby the air passing through said ducts and mingling with the oil therein will be carbureted, substantially as described.

3. A carbureter comprising a cylinder open at each end and having a series of ducts formed in its walls and also open at each end, said ducts having ports in their outer side walls and the lower portion of said ducts being normally immersed in oil, and means outside said wall and inclosing said cylinder for delivering air under pressure to said ports whereby it will be carbureted in said ducts.

4. The combination, with a tank adapted to contain a supply of gasolene, of a wall suspended therein and having a series of ducts with open upper and lower ends, the lower ends of said ducts being normally immersed in the oil in said tank, said ducts having ports in their outer walls, and means inclosing said wall for admitting air under pressure to said ports whereby it will be carbureted in said ducts.

5. The combination, with a tank having a horizontal partition dividing it into an upper storage or gasolene chamber and a lower carbureting chamber, of a wall provided in said carbureting chamber and having a series of vertical ducts formed therein and open at their upper and lower ends into said carbureting chamber, and said ducts having ports in their outer walls, an air trunk inclosing the ducts and communicating with said ports, and with a source of air pressure, and the lower portion of said wall being immersed in gasolene in said chamber whereby the air flowing upwardly through said ducts will be carbureted, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

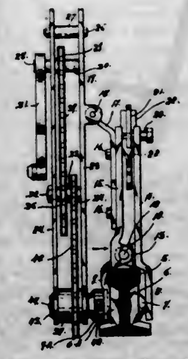
871,481. VEHICLE-WHEEL. RICHARD F. CORWIN, Grand Rapids, Mich. Filed Oct. 22, 1906. Serial No. 340,103.



1. In a vehicle wheel, a metallic casing open at the inner periphery and having flanges projecting inward and small bolts passing through them, a felly between said flanges and having large holes therethrough to receive the small bolts, a pneumatic tube within the inclosure formed by the felly and the metallic casing, and an intermediate fabric casing woven of elastic warp and non-elastic woof and placed around the pneumatic tube within the metallic casing.

2. In a vehicle wheel, a metallic casing open at the inner periphery and having inwardly projecting flanges, small bolts through the flanges, a felly between the flanges and having large holes for the free passage of the bolts, a pneumatic tube within the opening formed by the felly and the metallic casing, a fabric casing woven with elastic warp and non-elastic woof and placed around the pneumatic tube within the metallic casing, and a tire around the outer periphery of the metallic casing.

871,482. COMBINED MACHINE-WRENCH AND CLAMP. CHARLES J. COULTER, Longmont, Colo. Filed Mar. 18, 1907. Serial No. 363,093.



1. A combined machine wrench and clamp, comprising clamping jaws pivotally connected, one jaw being bifurcated to straddle the bolt while the other jaw is adapted to engage the head thereof, the clamping jaws being provided with arms projecting above the pivot, and a lever having a fulcrum connected with one arm and upon which the other arm moves freely, the said lever having a wedge shaped projection adapted to pass between the arms of the clamping jaws whereby the latter are forced into operative engagement with the adjacent part, and a wrench to whose frame the clamp is hinged, substantially as described.

2. A combined wrench and clamp, the wrench having a frame in which is journaled a socket head, means mounted on the frame for rotating the said head, the clamp mechanism comprising jaws pivotally connected, one jaw being adapted to engage the bolt head and the other jaw being adapted to straddle the threaded extremity of the bolt, one of the clamping jaws being freely movable, and a lever provided with a wedge shaped member suitably fulcrumed and adapted to pass between the arms of the jaws for clamping purposes, the wrench and clamping mechanism being hinged together, substantially as described.

3. In a wrench mechanism, the combination of a frame, a hollow shaft or hub journaled in the frame, a wrench member having a spindle engaging the said shaft, a locking means mounted on the spindle extremity remote from the wrench member and engaging said shaft, the shaft and spindle being arranged to rotate in unison, the opening in the shaft increasing in size from the wrench head outwardly to allow the latter a considerable degree of oscillation for the purpose of adjustment, and suitable means mounted on the frame for rotating the shaft and spindle, substantially as described.

4. The combination of wrench mechanism having a frame, a head journaled therein, and means for rotating the socket head, and clamping mechanism composed of two jaws pivotally connected and provided with arms extending beyond the pivot, the said arms being relatively movable, a wedge shaped member journaled between the upper extremities of the said arms for separating the arms to impart the clamping movement to the jaws, one of the arms being hinged to the frame of the wrench, and a hinge connecting the wrench and clamping mechanism, substantially as described.

5. The combination of a clamp having jaws adapted to straddle the parts to be connected by a bolt, a wedge shaped member journaled between the upward extremities of the clamp for separating the arms to impart the clamping movement to the jaws, one of the jaws being arranged to engage the head of the bolt, and a machine wrench hinged to the clamp whereby the wrench member is allowed to swing toward and away from the nut to be applied to the bolt, substantially as described.

871,483. FOLDING BABY-CARRIAGE. ISAAC N. DANN and GEORGE E. DANN, New Haven, Conn., assignors to The Rattan Mfg. Co., New Haven, Conn., a Corporation. Filed July 8, 1907. Serial No. 382,613.



1. A folding baby carriage comprising side bars, axle frames pivoted thereto, axles formed integral with said frames, a transverse brace connected with the sides and extending beneath the axle frames, handle bars connected with the side bars, arms connected to the arm supporting

braces and to the handle bars, and a yoke connected with the handle bars and extending beneath the transverse brace and over the axle frames, substantially as described.

2. A folding baby carriage comprising side bars, axle frames pivoted thereto, axles formed integral with said frames, a transverse brace connected with the sides and extending beneath the axle frames, handle bars connected with the side bars, arms connected to the arm supporting braces and to the handle bars, a yoke connected with the handle bars and extending beneath the transverse brace and over the axle frames, and means for locking the axle frames in their open position, substantially as described.

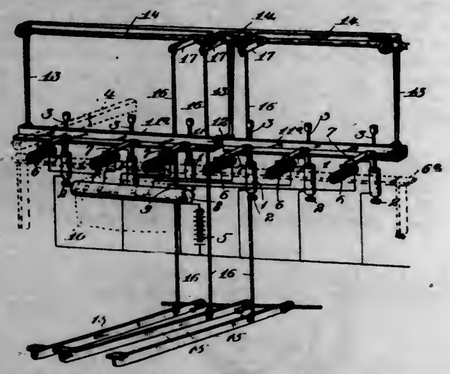
3. In a folding baby carriage, the combination with the side bars thereof, folding axle frames connected therewith, the rear ends of said side bars curved upward, handle bars pivoted to the upwardly curved rear ends of the side bars, arms connected with the handle bars, braces supporting said arms, and a seat supported from said arms, substantially as described.

4. In a folding baby carriage, the combination with the side bars thereof, of handle bars pivoted thereto, springs secured to said side bars and extending upwardly and forwardly therefrom, arm braces pivoted to the forward ends of said springs, and arms connected with said braces and with the handle bars.

5. In a folding baby carriage, the combination with the side bars thereof, of folding axle frames connected therewith, handle bars pivoted to the rear of said side bars, arms pivoted to said handle bars, braces supporting the forward ends of said arms, a stay rod between the side bars near their rear ends, a latch bar mounted on said stay rod and formed with integral inwardly turned notched ends, and a locking bar adapted to be engaged by the ends of the latch bar, the ends of the locking bar extending into engagement with said braces.

[Claims 6 to 10 not printed in the Gazette.]

871,484. ELECTROMECHANICAL POWER-GOVERNOR. GEORGE H. DAVIS, West Orange, N. J. Filed Feb. 13, 1906. Serial No. 300,046.



1. In means of the character described, the combination of a solenoid or electromagnet an actuator under the influence thereof, a contact maker and breaker for the circuit thereof, a resistance in the circuit, a freely suspended governor carrying a contact associated with the resistance, and a lever connected to the governor for moving the same to vary the relation of the resistance and contact.

2. In means of the character described, the combination of a series of solenoids or electromagnets arranged in groups, an individual actuator controlled by each solenoid, resistance coils arranged in corresponding groups, and connected, one in series with each solenoid, a governor common to the several solenoids, contact springs individual to the several resistance coils, connected, one to each solenoid, and operatively connected to the governor, and means for operating said governor to vary the relation of the contacts to the resistance coils of any group.

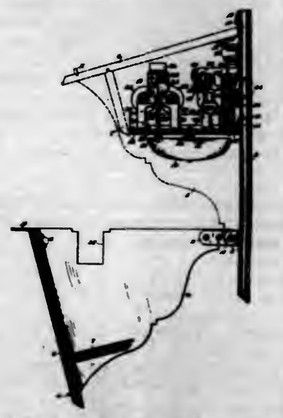
3. In means of the character described, the combination of a series of solenoids or electromagnets, actuators individual to and under the influence thereof, means for making and breaking the circuits thereof, resistances in said circuits, a flexible governor common to the several solenoids or electromagnets, contact springs individual to the several resistances operatively connected to the governor, and means associated with said governor for operation of different parts thereof to vary the relation of the contacts and resistances within the scope of the part or parts operated.

4. In means of the character described, the combination of a series of solenoids or electromagnets, actuators individual to and under the influence thereof, means for making and breaking the circuits thereof, resistances in said circuits, a plural part governor common to the several solenoids or electromagnets, contact springs individual to the several resistances operatively connected to the governor, and means associated with said governor for independent operation of the different parts thereof to vary the relation of the contacts and resistances within the scope of the part or parts operated.

5. In means of the character described, the combination of a series of solenoids or electromagnets arranged in groups, actuator elements under the influence thereof, a governor common to the solenoids or electromagnets, and means operated by the governor for causing the solenoids or electromagnets of any group to act with differing force on the respective actuator elements.

[Claims 6 to 8 not printed in the Gazette.]

871,485. TELEPHONE WALL SET. WILLIAM W. DEAN, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed June 15, 1903. Serial No. 161,529.



1. In a telephone wall set, the combination with a backboard, of a shelf secured thereto, a box-like cover fitting over said shelf and hinged at one edge to permit it to be opened to expose the shelf and parts thereon exposed upon four sides, said shelf forming one wall of the space inclosed by the cover when closed, a bell mechanism mounted on the inner side of said shelf and the gong of the bell on the outside of the same, whereby when the cover is closed the bell magnets and coöperating parts are inclosed and the gong remains outside, substantially as described.

2. In a telephone wall set, the combination with a support, of a shelf secured thereto, a box-like cover fitting over said shelf and hinged at its lower edge to permit it to swing down to expose said shelf, said shelf forming the lower wall or side of the space inclosed by the cover when closed, a bell mechanism having its magnets mounted in the upper side of said shelf and its gong on the lower side whereby when the cover is closed the bell magnets and coöperating parts are inclosed and the gong is on the outside, substantially as described.

3. In a telephone wall set, the combination with a support, of a shelf secured to said support, said shelf consisting of a sheet metal plate having a portion of its inner edge bent at right angles to form a means of securing the same to the support, a box-like cover fitting over said shelf and hinged at its lower edge to permit it to swing down to expose said shelf, said shelf forming the lower wall of the space inclosed by the cover when closed, and a bell mechanism having its magnets mounted on the upper side of said shelf and its gong on the lower side whereby when the cover is closed the bell magnets and operating parts are inclosed and the gong is on the outside, substantially as described.

4. In a telephone wall box, the combination with a supporting back, of a shelf secured to and projecting from said back and forming a portion of the inclosure for the box, telephone apparatus mounted upon said shelf, a cover consisting of a top piece, a front piece and side pieces secured together, said cover fitting closely over said shelf to inclose the working parts of the set when closed and being bodily removable therefrom to expose said parts, whereby said parts are accessible from the front, top and sides, substantially as described.

5. In a telephone wall box, the combination with a supporting back, of a shelf secured to and projecting from said back; working parts of the telephone upon said shelf, a cover consisting of a top, side pieces and a front piece, all rigidly secured together; said cover fitting closely over said shelf to inclose the working parts of the set when closed and being bodily removable to expose the said parts, whereby said parts are exposed on four sides, said shelf forming the bottom wall of the space so inclosed by the cover, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

871,486. FISH-BAIT. LOUIS DEBROISSE, South Bellingham, Mass. Filed Aug. 2, 1907. Serial No. 386,832.

1. A composition of matter for use as fish bait, comprising a glutinous substance, castor oil, Epsom salt, and a suitable binder.

2. The herein described composition of matter for use as fish bait, consisting of water, 8.5 parts, glutinous substance 3 parts, castor oil 2.5 parts, Epsom salt 4 parts, and binder 4 parts; the said composition being reduced to the consistency of thick paste and converted into portions of convenient shape.

3. As an article of manufacture, a tough and elastic fish bait comprising a glutinous substance, castor oil and Epsom salt.

4. As an article of manufacture, a tough and elastic fish bait comprising a glutinous substance, oil, and a substance for giving savor to the glutinous substance and oil.

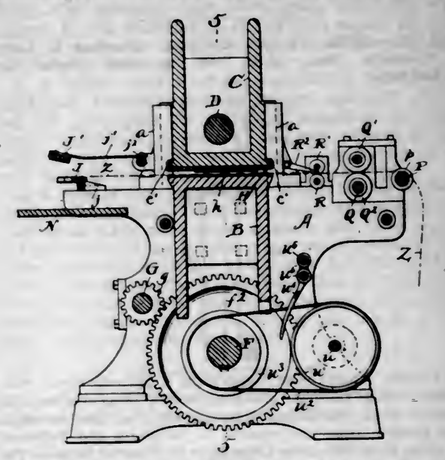
5. As an article of manufacture, a tough and elastic fish bait comprising a glutinous substance, oil, a suitable binder, and a substance for giving savor to the whole.

[Claims 6 to 8 not printed in the Gazette.]

871,487. MACHINE FOR MAKING PAPER-BOX BLANKS. JOHN W. DENMEAD, Akron, Ohio, assignor to The K. D. Box and Label Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 21, 1904. Serial No. 208,992.

1. In a machine for making paper box blanks, the combination of an impressing device, an intermittent feed therefor, a continuous feed to the intermittent feed, said continuous feed comprising a pair of gripping rollers and means for rotating one of them, a rock shaft, a pair of arms carried thereby, a shaft carried by said arms on which one of said rollers is mounted, a third arm secured to the rock shaft, a lever, and a link connecting the same with said third arm whereby the actuation of the lever varies the grip of said rollers.

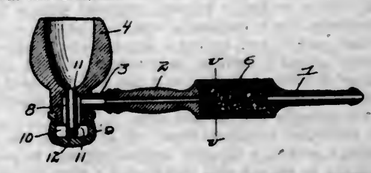
2. In a machine for making paper box blanks, the combination of a suitably guided head, a shaft mounted therein, eccentric extensions for said shaft, bars journaled on said extensions for operating the head, a lever secured to one of said extensions for rocking said shaft, and means for locking said lever in various positions.



3. In a machine for making paper box blanks, the combination of a suitably guided head, a shaft mounted therein, eccentric extensions for said shaft, bars journaled on said extensions, a lever secured to one of said extensions for rocking said shaft, a locking segment carried by the head, a locking pawl carried by said lever, a main shaft, a pair of eccentrics thereon around which the lower ends of said bars take, and means for operating said main shaft.

4. In a machine for making paper box blanks the combination with a suitably guided head, reciprocating means for said head, a shaft journaled in said head and said reciprocating means, the respective bearings for the shaft therein being relatively eccentric, and means for rotating the shaft and holding it in different positions.

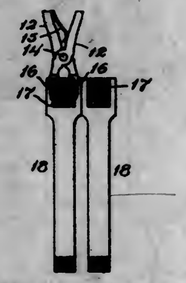
871,488. TOBACCO-PIPE. ALBERT E. DIETER and GUSTAV H. SANDER, Dayton, Ohio. Filed Nov. 10, 1906. Serial No. 342,818.



In a tobacco pipe, a bowl having an extension with openings of two diameters therein, the opening of larger diameter extending from a point below the bottom of the bowl to the extreme end of said extension and forming a draft chamber, and the opening of less diameter extending from the bottom of the bowl to the upper end of the opening of greater diameter, a cap united to the end of said extension and providing an enlarged chamber below the chamber in the extension, a tube projected into the opening of less diameter in the extension and forming a communication between the bottom of the bowl and the chamber in the cap, said tube having notches in its opposite sides extending from the lower end of the tube upwardly a substantial distance, a pipe stem consisting of three sections, one of which projects into the extension from the bowl of the pipe and communicates with the chamber therein which is formed by the opening of larger diameter, the other section of the pipe stem being connected with said first mentioned section and having an enlarged recess on its outer end, and the third section

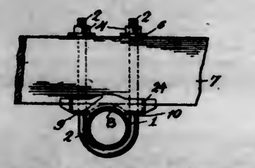
of said pipe stem having an enlarged recess, adapted to receive absorbent material and to be projected into the recess in the end of the second-mentioned section of the stem, as herein shown and described.

871,489. COMB-FRAME LIFTER. CHARLES E. DOW, Plymouth, Mass. Filed Jan. 28, 1907. Serial No. 354,383.



A comb frame lifter comprising a pair of levers connected by a fulcrum pin and having longer arms and shorter arms, the longer arms constituting handles, while the shorter arms are reduced in thickness and flattened to form wide thin jaws adapted to be inserted between the sides of the top bars of adjacent comb frames, each jaw having at its inner edge an inwardly projecting shoulder adapted to abut against the upper edge of the top bar between the two jaws, and limit the depth of insertion of the jaws between the frames.

871,490. INSULATOR-PIN MOUNTING. JOHN D. E. DUNCAN, New York, N. Y. Filed Jan. 21, 1907. Serial No. 353,176.



1. In insulator pin mountings, a metallic insulator pin provided with a socket, a support provided with a flange and transverse ribs to engage an arm, and having a lug to engage said socket, and having a bracket and a plurality of resilient gripping saddles to conform to said pin, a plurality of U-bolts encircling said pin adjacent said saddles and straps coöperating with said bolts to elastically engage the opposite side of said arm.

2. In insulator pin mountings, an insulator pin provided with a socket, a support having portions to engage an arm a lug to engage said socket and a plurality of resilient gripping saddles to engage said pin and U-bolts encircling said pin to hold the same and said saddles upon said arm.

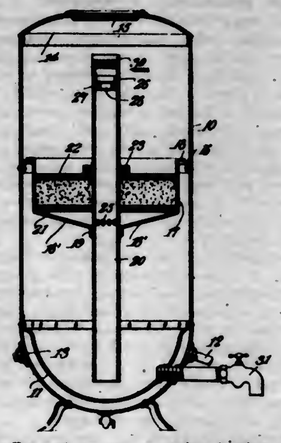
3. In insulator pin mountings, a plurality of saddles curved to conform to an insulator pin and provided with means to engage an arm, and with a lug to engage said pin and hold it in longitudinal alinement, and U-bolts to hold said pin and saddles upon said arm.

4. An insulator pin support formed of sheet metal having upon its face one or more saddles, a flange at its upper portion to coöperate with the cross arm, and a bracket at the lower end of the support to form a seat for the insulator pin.

5. In insulator pin mountings, a support provided on its face with a plurality of integral saddles and with means to coöperate with means carried by the pin to maintain longitudinal alinement of the insulator pin, said support being also provided with means to coöperate with the cross arm to insure alinement therewith.

[Claims 6 to 8 not printed in the Gazette.]

871,491. COFFEE-POT. JOHN S. DUNLAP, Chicago, Ill. Filed Sept. 12, 1906. Serial No. 334,300.



1. In a coffee pot or urn, a casing having an inturned flange, a percolator casing having an outwardly extending flange resting on the casing flange, said percolator having a closed bottom and being provided with foraminous disks, a circulating tube extending through the percolator and having openings above said closed bottom, a valve seat arranged at the upper portion of said tube, there being discharge openings above the valve seat, a weighted valve adapted to the seat, and a plug for closing the top of the tube.

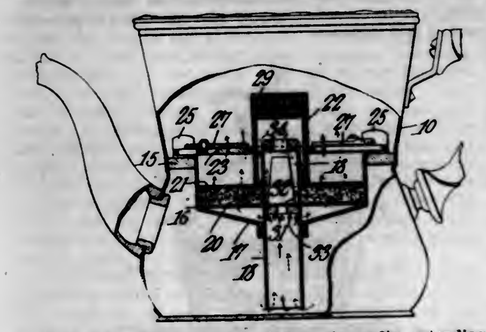
2. In a coffee pot or urn, a casing, a percolator detachably secured within the casing and having a closed bottom, said percolator dividing said casing into upper and lower chambers, a tube through which the liquid may pass directly from the lower to the upper chamber, a valve for closing the tube at a point above the percolator, said valve being opened by excess pressure in the lower chamber, there being an opening to permit the passage of the liquid from the tube through the percolator and into the upper chamber when the pressure is normal.

3. In a coffee pot or urn, a percolator having a closed bottom, said percolator dividing said pot or urn into upper and lower chambers, a tube extending from the lower portion of the lower chamber into the upper chamber, a valve arranged to open on excess pressure in the lower chamber and permit the direct passage of the liquid from the lower to the upper chamber without passing through the percolator, there being a passage for directing the liquid through the contents of the percolator as it flows in the direction of said upper chamber under normal pressure.

4. In a coffee pot or urn, a casing, a percolator having a closed bottom, said percolator dividing the casing into upper and lower chambers, there being a liquid passage through which the liquid is directed through the contents of the percolator when traveling under normal pressure from the lower to the upper chamber, and a normally closed valved passage between the upper and the lower chamber, the valve being arranged to open on excess pressure in said lower chamber to permit direct passage of said liquid into the upper chamber without passing through said percolator.

871,492. COFFEE-POT. JOHN S. DUNLAP, Chicago, Ill. Filed Mar. 14, 1907. Serial No. 362,390.

1. In a coffee pot or urn, a detachable percolator having a closed bottom and dividing the interior of the pot into upper and lower chambers, a stationary support projecting inward from the wall of the pot and supporting said percolator, means for locking the percolator to the support, and a tube carried by the closed bottom of the percolator and bodily removable therewith, said tube forming the sole passage for the water and infusion from the lower to the upper chamber, and vice versa.



2. A coffee pot or urn having an inwardly extending flange, a detachable percolator supported by the flange and having a closed bottom which in connection with said flange divides the pot into upper and lower chambers, a tube pendent from the casing of the percolator and forming the sole passage for the liquid in both directions, and means for locking the percolator to said flange.

3. A coffee pot or urn having an inwardly extending flange, a percolator casing supported thereby and having a tapered bottom, an open ended tube extending through said tapered bottom, a valve seat above the tapered bottom, a tapered valve mounted on the seat, a pair of foraminous disks for confining the coffee in the casing, a threaded tube bearing against the upper disk, a locking bar having a threaded opening for the reception of said threaded tube, said bar having notched ends, lugs projecting from the flange and entering the notches, and cam levers pivoted to the locking bar and arranged to fit under said lugs.

4. In a device of the class specified, a percolator arranged to divide the coffee pot into upper and lower chambers, a tube forming a connecting passage between said upper and lower chambers, and a valve arranged within said tube, said valve being arranged to unseat through movement of the pot from horizontal position to permit equalization of pressure in the upper and lower chambers.

5. A coffee pot having an inwardly extending flange, a percolator casing supported thereby and having a tapered bottom, an open ended tube depending from the tapered bottom of the percolator casing, a valve seated above the tapered bottom, a plurality of pairs of foraminous disks for confining the coffee in the casing, a filtering disk interposed between each pair of foraminous disks, and means for locking the percolator casing in engagement with the flange.

[Claims 6 and 7 not printed in the Gazette.]

871,493. RAILWAY-TRACK STRUCTURE. ROBERT E. EINSTEIN, St. Louis, Mo. Filed June 25, 1906. Serial No. 323,252.



1. A railway track structure comprising a hard center provided with flangeways, continuous track rails embracing said hard center, guide rails which are spaced away from the track rails by filling pieces, and devices passing through all of said members to connect them securely together; substantially as described.

2. A track structure comprising a hard center and continuous track rails which embrace and support said hard center, said hard center being of approximately diamond shape and having all of its side edges straight and uniform; substantially as described.

3. A track structure comprising a hard center of approximately diamond shape provided with flangeways, and track rails embracing said hard center and being continuous for the entire length of said hard center, the side edges of said hard center being free from curves; substantially as described.

4. A railway track structure comprising a hard center, track rails which embrace and support said hard center and are continuous for the entire length of the hard center, flangeways formed in the upper surface of the hard center, guide rails, and means for connecting all of said members together; substantially as described.

5. A railway frog comprising a hard center of approximately diamond shape which is provided with flangeways, continuous track rails which embrace said hard center and support same, guide-rails, filling pieces interposed between said track rails and guide rails, fastening devices passing through all of said members, a riser interposed between the track rails at the heel of the frog, and a block interposed between the track rails at the crotch of the frog; substantially as described.

871,494. BRUSH. WALTER D. FOSS, Wooster, Ohio. Filed July 18, 1906. Serial No. 326,669.

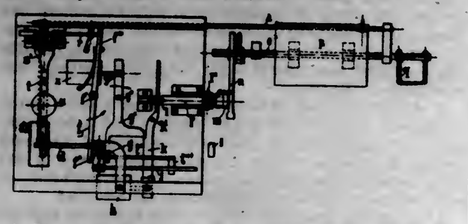


In a flat brush, the combination with a handle-base having a rabbet extending entirely around its periphery, of a ferrule surrounding said rabbet portion and fitted thereto, bristles having their root ends contained within said ferrule, and a solid binding wedge having corrugated sides and an integral centering and securing prong, said wedge being attached to the bottom of said handle-base and lying wholly above the lower inwardly extended edge of said ferrule, said ferrule having its upper edge turned in so as to be dovetailed to said rabbet portion of the handle-base and its lower edge likewise turned in whereby the bristles on opposite sides of said wedge are caused to converge, the ferrule being also provided with a plurality of integral transverse webs, the central web having an aperture therethrough to receive and form a bearing for said centering prong carried by the binding-wedge, all substantially as described and for the purposes set forth.

871,495. PROCESS OF MAKING MERCURY SALVES AND OINTMENTS. FRANZ FUHRMANN, Berlin, Germany, assignor to Kirchhoff & Neirath Berlin American Commercial Company, Berlin, Germany, a Firm. Filed Aug. 31, 1905. Serial No. 276,619.

The process herein described of producing salves and ointments containing metallic mercury in a state of finest subdivision, which consists in mixing an organic mercury compound with an ointment-base and a carbonate and then splitting off the metallic mercury by treating the mixture so as to distribute the liberated metallic mercury in a minute state throughout the ointment-base.

871,496. PROTECTION OF RAILWAY-TRAINS. ABEL R. A. GÉRARD, Pontgivart, near Reims, France. Filed May 1, 1906. Serial No. 314,639.



1. In a system for protecting railway trains, a line divided into blocks or sections by a plurality of stations or posts, each of such stations comprising a signal device normally set in danger position, a locking device whereby each such signal is locked in safety position, means operated by the train in passing each station to release the locking means at such station, an electrical contact device at each station also operable by the train, and electrical connections between said contact device and a station at the rear for returning the locking mechanism at the latter station into such position as to lock the signal at such station in safety position, and to return the contact device at the former station to its initial position.

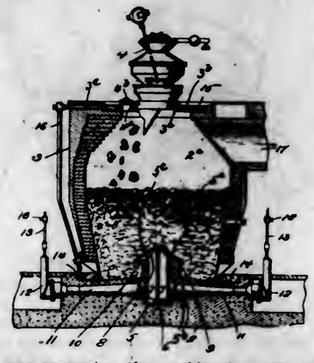
2. In a railway signaling apparatus, a line divided into blocks or sections by a plurality of signal-stations, a signal at each station normally set in danger position, means for locking each signal in safety position, a contact device at each station, electrical connections between each contact device and the locking mechanism of a station in the rear whereby such locking mechanism is returned into position to lock the signal of such station in the rear in safety position, and a single means whereby the locking mechanism at each station and the corresponding contact device are simultaneously operated by the passing of the train.

3. In a railway signaling system, a line divided into blocks or sections by a plurality of signal-stations, a signal at each station normally in danger position, means to lock each such signal in safety position, a gravity-operated contact device at each station, a latch for controlling said contact device, electrical connections between each contact device and the locking mechanism of a station in the rear whereby when contact is made the signal at the last-named station may be manually set into position to indicate safety and locked in such position, means for simultaneously releasing the locking mechanism at each station and the contact device, and a device operated by the train in passing which operates said means.

4. In a railway signaling system, a line divided into blocks or sections by a plurality of signal-stations, a signal at each station normally set to indicate danger, means for locking each signal in safety position, a gravity-operated contact device at each station, electrical connections between each contact device and the locking mechanism of a station in the rear whereby the signal at such station may be set and locked in safety position, electrical connections whereby the contact device at the first-mentioned station is returned to its initial position, and mechanism at each station whereby on the passing of a train the locking mechanism and the contact device at said station are simultaneously released.

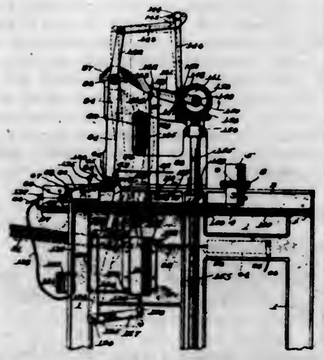
871,497. GAS-GENERATOR. SAMUEL C. GORSUCH, Braddock, Pa. Filed July 12, 1907. Serial No. 383,431.

1. A gas generator comprising a base, a body portion mounted thereon and constituting a generating chamber, a vertically-disposed cylinder mounted in the base and projecting into the generating chamber, a series of partitions mounted within and of greater length than said cylinder, said partition forming a plurality of chambers within said cylinder and further having the top edge thereof inclined downwardly, an angular member fixed to the cylinder and having the laterally-extending portion thereof provided with openings, a conical cover mounted upon a part of the partitions and laterally-extending portion of said member, the inclination of the top edge of each of the partitions being greater than the inclination of said conical cover, a supply pipe communicating with each of said chambers.



2. In a gas generator, the combination with the generating chamber thereof, of an injector extending into said chamber and comprising a vertically-disposed cylinder divided by a plurality of partitions into a series of chambers, said partitions of greater length than said cylinder and having the top edge thereof inclining downwardly, an angular member secured to said cylinder and having the laterally-extending portion thereof formed with a series of openings, a conical cover for said cylinder, said cover resting upon a portion of the partitions and a part of said laterally-extending portion of said member, the inclination of said cover being less than the inclination of the top edge of the partitions, and a supply pipe communicating with each of said chambers.

871,498. PAPER-FEEDING MACHINE. ALVARO B. GRAHAM, Chicago, Ill. Filed Dec. 31, 1903. Serial No. 187,371.



1. In a sheet delivery mechanism, the combination of a suction cup for the rear corner of the paper, an arm carrying the suction cup and having a rising and falling movement given thereto, a slide carrying the arm, an L lever for reciprocating the slide, and means for moving the L lever and initially raising the cup with the corner of the sheet of paper held against its acting edge at the commencement of the inward movement of the slide and continuing the upward movement carrying therewith the corner of the sheet with the continued inward or forward movement of the slide until the limit of such movement is reached and then breaking the vacuum of the cup releasing the corner of the sheet for the sheet to be carried forward after the release of its corner from the cup and during the return movement of the cup to normal position, substantially as described.

2. In a sheet delivery mechanism, the combination of a suction cup for the rear corner of the paper, an arm having the suction cup attached to its forward end and having a rising and falling movement given thereto, a slide carrying the arm, an L lever for reciprocating the slide, a primary presser foot engaging the corner of the sheet of paper adjacent to the suction cup and having a pivotal attachment at its rear end to a fixed point, a lifter arm adjacent to the arm carrying the presser foot and pivotally attached at its rear end to the slide, a cam on the lifter arm, and a roller on the arm of the presser foot for the movements of the slide to raise and lower the presser foot, in proper relation to the movement of the suction cup for releasing and holding the corner of the sheet of paper, substantially as described.

3. In a sheet delivery mechanism, the combination of a suction cup for the rear corner of the paper, an arm having the suction cup attached to its forward end and having a rising and falling movement given thereto, a slide carrying the arm, an L lever for reciprocating the slide, a primary presser foot engaging the corner of the sheet of paper adjacent to the suction cup and having a pivotal attachment at its rear end to a fixed point, a lifter arm adjacent to the arm carrying the presser foot and pivotally attached at its rear end to the slide, a cam on the lifter arm, a roller on the arm of the presser foot, and a spring engaging the arm carrying the presser foot, for the movements of the slide to raise and lower the presser foot in proper relation to the movement of the suction cup for releasing and holding the corner of the sheet of paper, substantially as described.

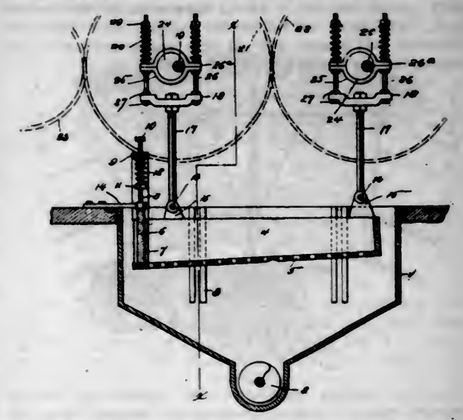
4. In a sheet delivery mechanism, the combination of a suction cup for the rear corner of the paper, an arm having the suction cup attached to its forward end and having a rising and falling movement given thereto, a slide carrying the arm, an L lever for reciprocating the slide, an arm pivotally attached at its rear end and extending forward of the arm carrying the suction cup and carrying a presser head, and means for lifting the arm and the presser head said means actuated from the forward movement of the slide at the completion of the forward throw of the suction cup for releasing the paper from the presser head, substantially as described.

5. In a sheet delivery mechanism, the combination of a suction cup for the rear corner of the paper, an arm carrying the suction cup at its forward end and having a rising and falling movement given thereto, a slide carrying the arm, an L lever for reciprocating the slide, an arm carrying a presser foot adjacent to the suction cup and having its rear end pivotally attached to a fixed point, a lifter arm adjacent to the presser foot arm and having its rear end pivotally attached to the slide, a cam on the lifter arm, a roller on the presser foot arm, an arm adjacent to the arm carrying the suction cup and having its rear end pivotally attached to a fixed point and having an inclined rearward extension engaged to the free end of the lifter arm and carrying at its free end a presser head, and a connection between the presser head arm and the suction cup arm causing the suction cup arm to rise and fall with the movements of its carrying slide, substantially as described.

[Claims 6 to 37 not printed in the Gazette.]

871,499. COAL-WASHER. DANIEL H. GRAY and GEORGE S. GRAY, Dunbar, Pa. Filed June 25, 1907. Serial No. 380,775.

1. In a coal-washer, the combination with a jig, of a gate normally supported by said jig, a cross head for guiding said gate and supporting said gate when said jig is lowered, means for cushioning the upward movement of said gate, means for reciprocating said jig, comprising revoluble shafts, eccentrics mounted thereon, and provided with oppositely projecting arms, rods extending through said arms, cross heads secured to the lower ends of said rods, rods suspended from said cross heads, coiled springs surrounding the rods which extend through said arms, the ends of said springs being confined as described.



2. In a coal-washer, the combination with a jig and a washer carried thereby, of a gate supported in said washer, means for limiting the downward movement of said gate, means for reciprocating said jig, and for automatically opening said gate, said means consisting of rods connecting with said washer, cross heads carried by said rods, upwardly extending rods carried by said cross heads, spring pressed eccentric straps carried by said upwardly extending rods, and eccentrics for raising and lowering said straps.

3. In a coal-washer, the combination with a jig, and a gate normally carried thereby, of revoluble shafts, eccentrics mounted upon said shafts, connections between said eccentrics and said jig, yielding devices for permitting the jig to drop below its normal limit of downward movement to open said gate, and yielding devices for closing said gate, when the jig is raised.

4. In a coal washer, the combination with a tank and conveyer mounted therein, of a jig suspended within the tank, a gate normally carried thereby, rotatable shafts arranged above the tank, eccentrics carried by said shafts, connections between said eccentrics and said jigs, yielding devices for permitting the jig to drop below the normal limit of its downward movement to open said gate, and yielding devices for closing said gate when the jig is raised.

5. In a coal washer, the combination with a tank and a conveyer mounted therein, a jig suspended within the tank, a gate normally carried thereby, rotatable shafts arranged above the tank, eccentrics carried by said shafts, connections between said eccentrics and said jigs, yielding devices for permitting the jig to drop below the normal limit of its downward movement to open said gate, yielding devices for closing said gate when the jig is raised, and means carried by the tank for limiting the upward movement of the gate.

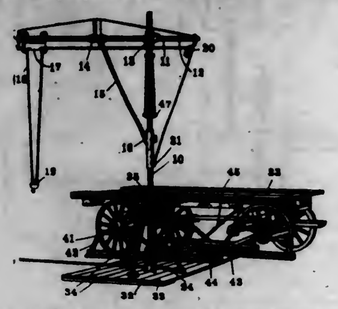
[Claim 6 not printed in the Gazette.]

871,500. PORTABLE FIELD-DERRICK. ARTEMUS N. HADLEY, Indianapolis, Ind. Filed Jan. 18, 1904. Serial No. 189,619.

1. In a loading apparatus, the combination with a mast and lifting apparatus carried thereby, of a self-supporting support for said mast adapted to project beneath a vehicle and over which the vehicle may run, and means for detachably connecting said support to the vehicle whereby it may be transported.

2. In a loading apparatus, the combination with a support adapted to extend beneath a wagon and rest upon the ground, of a mast supported on said support, lifting apparatus carried by said mast, and means carried by the support for engagement with the wagon, whereby the weight of the wagon may be applied to the support to prevent the same from tipping.

3. In a loading apparatus, the combination with a suitable support adapted to extend beneath a wagon, of a mast carried thereby, a lifting apparatus carried by said mast, and braces carried by the support, and means for throwing said braces upward into engagement with the wagon, for the purpose set forth.

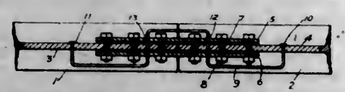


4. In a loading apparatus, the combination with a suitable support, and a substantially vertical mast rotatably mounted thereon, of a pair of cam-collars 27 and 29 surrounding said mast and supporting the same for the purpose set forth.

5. In a loading apparatus, the combination with a suitable support and a substantially vertical mast mounted thereon, and capable of both angular and axial movement thereon, means for normally producing axial movement of the mast upon rotary movement thereof, and means for adjusting the vertical angle of the mast.

[Claims 6 and 7 not printed in the Gazette.]

871,501. BOND FOR RAILS. CHARLES Y. HAILE and GEORGE M. HUGUS, Uniontown, Pa. Filed May 17, 1907. Serial No. 374,251.



1. In a bond for rails, the combination with the confronting ends of two rails connected by splice bars, bolts and nuts, of a bond passing through said splice bars and the webs of said rails and having its terminals at the webs of said rails, a portion of said bond extending upon both sides of said rails.

2. The combination with a rail joint comprising rails, splice bars, bolts and nuts, of a bond passing through the webs of said rails and said splice bars, and having its terminals at the webs of said rails.

3. The combination with rails having their ends secured together by splice bars, of a bond passing through said bars, and the webs of said rails having their ends connected to said rails.

4. The combination with rails connected by splice bars, of a bond passing through said splice bars and connecting with said rails.

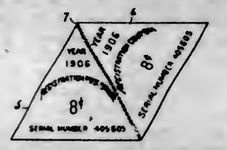
5. The combination with rails, and means for fastening said rails together, of a bond connecting with said rails and extending through said fastening means.

871,502. REGISTRATION-STAMP. SOPHUS J. HALSE, Milwaukee, Wis. Filed Nov. 23, 1906. Serial No. 344,690.

1. A registration stamp having a registration coupon connected thereto with identical identification marks on the registration stamp and its coupon.

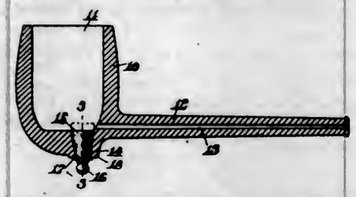
2. A registration stamp having a registration coupon attached thereto with a line of perforations separating them, there being identical identification marks on the registration stamp and its coupon.

3. A registration stamp of triangular form and a registration coupon of similar form connected thereto with a line of perforations separating them, there being like serial numbers on the registration stamp and its coupon.



4. An adhesive registration stamp having a coupon with like identification marks, the stamp when detached from the coupon being adapted to be placed upon mail matter and indicating that such mail matter is to be registered and the coupon being exchangeable for a registration receipt for the mail matter bearing the registration stamp identified thereby.

871,503. PIPE. CHARLES C. HASKELL, Bournedale, Mass. Filed July 3, 1907. Serial No. 381,977.



1. A tobacco pipe having a tobacco receptacle provided with an opening through the bottom, and a smoke orifice, in combination with a plug fitting said opening and adapted for movement therein to cover and uncover the end of said smoke orifice, and means for preventing the removal of said plug from said opening.

2. A tobacco pipe having a tobacco receptacle provided with an opening through the bottom, and a smoke orifice, in combination with a plug fitting said opening and adapted for movement therein to cover and uncover the end of said smoke orifice, and a pin extending through said plug adapted to engage with the bowl when the upper end of said plug is moved beyond said smoke orifice to prevent further movement in that direction.

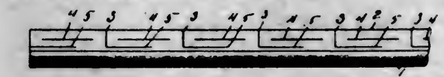
3. A tobacco pipe having a tobacco receptacle provided with a conical opening through the bottom the lesser diameter of which is at the outer end, and a smoke orifice, in combination with a conical plug adapted to fit said opening provided with means at its outer end for moving said plug inwardly, and means for limiting said inward movement.

4. A tobacco pipe having a tobacco receptacle provided with a conical opening through the bottom the lesser diameter of which is at the outer end, and a smoke orifice, in combination with a conical plug adapted to fit said opening provided with means at its outer end for moving said plug inwardly, and a pin for limiting said inward movement.

5. A tobacco pipe having a tobacco receptacle provided with an opening through the bottom with exterior lateral depressions communicating with said opening, and a smoke orifice, in combination with a plug fitting said opening and adapted for movement therein to cover and uncover the end of said smoke orifice, and projections on said plug adapted to enter said lateral depressions when said plug is moved inwardly.

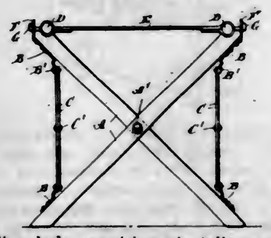
871,504. REINFORCING-BAR. MAX HAUPT, Homestead, Pa. Filed Jan. 18, 1907. Serial No. 352,890.

1. A reinforcing bar for concrete construction, comprising a main tension bar having an integral laterally-projecting longitudinal flange slitted transversely for a portion of its width and also slitted longitudinally for a portion of its length at intervals throughout its length and having the portions bounded by said slits bent laterally out of plane with the remainder of the web to form shearing arms, said laterally bent portions of the flange being slitted longitudinally, the said slits terminating short of the ends of the shearing arms, and having the material on each side of said slits laterally deflected to form an opening within the shearing arm.



2. A reinforcing bar for concrete construction, comprising a main tension bar and a laterally-projecting integral flange angularly-slitted at intervals throughout its length, the material bounded by said angular slits being bent laterally out of plane with the remainder of the flange to form shearing arms, said shearing arms slitted longitudinally intermediate their ends and having the portions on opposite side of the slits deflected laterally in opposite directions.

871,505. FOLDING BED. RAYMOND L. HERMAN, New York, N. Y., assignor, by mesne assignments, to Emil Herman, New York, N. Y. Filed June 8, 1906. Serial No. 320,702.



1. A folding bed comprising pivotally connected pairs of legs, springs extending lengthwise of said legs and having their upper ends secured to said legs, while the lower ends of the springs are free to move toward and from the legs, braces pivotally connected with the movable portions of said springs to swing about axes perpendicular to those of the legs and also pivotally connected with each other, and a top carried by said legs.

2. A folding bed comprising pivotally-connected pairs of legs, springs secured to said legs, braces pivotally connected with each other and with said springs, and a top carried by said legs.

3. A folding bed comprising pivotally-connected pairs of legs, springs secured to said legs and movable in a direction transverse to the pivots, braces pivotally connected with said springs to swing about axes perpendicular to those of the legs and also pivotally connected with each other, and a top carried by said legs.

4. A folding bed comprising legs, springs the upper ends of which are secured to the said legs while the lower ends of the springs are free to move transversely of the bed, braces pivotally connected with the lower portions of said springs to swing about axes extending transversely of the bed, and also pivotally connected with each other, and a top carried by said legs.

871,506. RESILIENT TIRE. ISAAC W. HODGSON, Minneapolis, Minn., assignor of one-half to Edgar J. Hodgson, Minneapolis, Minn., and one-fourth to Philip W. Herzog, St. Paul, Minn. Filed Oct. 12, 1906. Serial No. 338,652.

1. A resilient tire comprising an inner rim, a plurality of tread sections, links arranged in a plane approximately parallel to the plane of the connected tread sections and yieldingly connecting the tread sections in an endless series around said rim with freedom for movements in the plane of the wheel and transversely thereof, and a multiplicity of coiled springs compressed between the said rim and tread sections and exerting outward pressure thereon, substantially as described.



2. In a resilient tire, the combination with an inner rim, of a multiplicity of tread sections and interlocking devices yieldingly connecting the same, and a multiplicity of coiled springs compressed between the said rim and tread sections and exerting outward pressure thereon, under which outward pressure the said interlocking devices are held engaged, but which interlocking devices are capable of easy separation when relieved from spring pressure thereon, substantially as described.

3. In a resilient tire, the combination with an inner rim, of a plurality of yieldingly connected tread sections, ball and socket devices applied to said tread sections, and coiled springs compressed between said rim and one member of each ball and socket device, whereby the said tread sections are mounted for universal rocking movement, substantially as described.

4. In a resilient tire, the combination with a rim, of a plurality of yieldingly connected individual tread sections having inturned flanges at the sides of the tire, springs interposed between said rim and said tread sections, and laterally yielding annular guard plates secured to the sides of said rim and frictionally engaging with the flanges of said tread sections, substantially as described.

5. In a resilient tire, the combination with an inner rim, of a plurality of individual tread sections and links flexibly connecting the same, springs compressed between said rim and said tread sections, individual pliable facings applied to the outer faces of said tread sections, and anchor straps passed through said facings and secured to the respective tread sections, substantially as described.

[Claim 6 not printed in the Gazette.]

871,507. ANTHRACHRYSONE DERIVATIVES. BENNO HOMOLKA, Frankfort-on-the-Main, and JOSEF EBERE, Höchst-on-the-Main, Germany, assignors to Farbwerke, vorm. Meister, Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Nov. 27, 1906. Serial No. 345,413. (Specimens.)

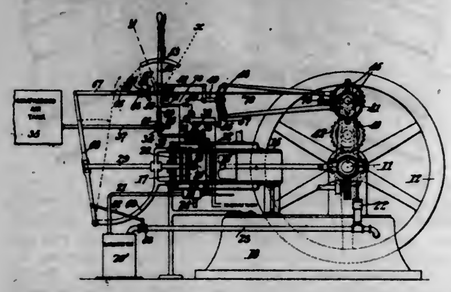
1. The process herein described of making nitrogenous derivatives of anthraquinone, which consists in causing formaldehyde and an amin to act on anthrachrysone, it being immaterial in which order the three bodies are brought together.

2. As a new product, a nitrogenous derivative of anthraquinone, obtained by the interaction of anthrachrysone, formaldehyde and an amin, said product being an orange crystalline powder, insoluble in water, hardly soluble in the usual organic solvents; not fusible without decomposition and dissolving in dilute caustic alkalies to an orange, in dilute mineral acids to a yellow solution.

871,508. GAS-ENGINE. JOHN HOULEHAN and WILLIAM C. MAYO, El Paso, Tex. Filed Sept. 10, 1906. Serial No. 334,002.

1. In an internal combustion engine having a power cylinder provided with an explosion chamber and means for introducing the explosive mixture and exhausting the

burned gases, a compressed air reservoir, means for establishing and cutting off communication between the said reservoir and the explosion chamber of the engine, a movable member forming the rear wall of the explosion chamber, and means for adjusting said movable member to cut off communication between the explosion chamber and the intake and exhaust means.



2. In an internal combustion engine having a cylinder provided with an explosion chamber and with intake and exhaust means, a movable piston forming the rear wall of the explosion chamber and adjustable to a position to cut off communication between the cylinder and the intake and exhaust means, a compressed air reservoir, means connecting said reservoir with the cylinder, a valve in said connection, a normally idle operating means for the valve, and mechanism for simultaneously moving the piston and setting the valve-operating means in motion.

3. In an internal combustion engine having a cylinder and an adjustable explosion chamber head therein, a compressed air reservoir, connecting means between said cylinder and the reservoir provided with a valved passage controlling communication between the cylinder and said reservoir, a normally idle mechanism for operating the valve in the valved passage, and a single operating lever for adjusting the head and at the same time connecting the valve-operating mechanism to a movable part of the engine.

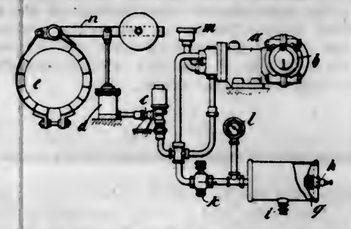
4. The combination with an internal combustion engine having an adjustable explosion chamber head movable to cut off communication between the cylinder of the engine and the intake and exhaust means, of an auxiliary air port in the cylinder, a valve for controlling said port, a valve-operating mechanism normally disconnected from the engine for operating said valve, a compressed air reservoir with which said valved air port communicates, a lever and mechanisms under the control of said lever for adjusting the explosion chamber head, adjusting the valve mechanism, and connecting said valve mechanism to the engine.

5. An internal combustion engine including an explosive-agent supply pipe, a valve therein, an electric igniter, an electric circuit connected therewith and having spaced terminals, a lever, a contact carried thereby and arranged to engage said terminals when the lever is in one position and movable to break the igniter circuit and to close the valve, an auxiliary air port in the cylinder, an air reservoir, communicating means between the air reservoir and the auxiliary port, a valve in said communicating means, a normally idle valve-operating mechanism for said valve, and means under the control of said lever for connecting the valve-operating mechanism to a movable part of the engine.

[Claims 6 and 7 not printed in the Gazette.]

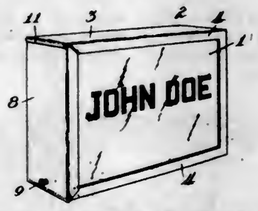
871,509. COMPRESSED-AIR BRAKE. FRANZ JORDAN, Köthen, Germany. Filed Mar. 30, 1907. Serial No. 365,494.

In electrically driven lifting apparatus, in combination, a braking device, a brake cylinder therefor, an electromagnetically actuated valve regulating the supply of a pressure agent to the brake cylinder, and a centrifugal



weight governor controlling the electric circuit of said valve, substantially as and for the purposes described.

871,510. SIGN. WILLIAM M. KERR, Stamford, Conn. Filed July 20, 1906. Serial No. 326,976.



1. A sign structure including in combination a design-carrying slide, a casing for holding said slide, a portion of said casing having a lip constructed and arranged to receive and hold the said design-carrying slide and another portion thereof being narrower so as to permit the design-carrying slide to be slid past into and out of engagement with the lip, a flange upon the said casing, and a cap plate constructed and arranged to fit closely over the narrow portion of the casing and over the end of the slide and also having a part adapted to fit closely beneath said flange.

2. A sign structure including in combination a design-carrying slide, a casing for holding said slide, a portion of said casing having a lip constructed and arranged to receive and hold the said design-carrying slide and another portion thereof being narrower so as to permit the design carrying slide to be slid past into and out of engagement with the lip, a flange upon the said casing, a cap plate constructed and arranged to fit closely over the narrow portion of the casing and over the end of the slide and also having a part adapted to fit closely beneath said flange, and a fastening device for holding the cap and casing together.

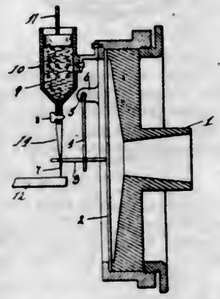
3. A sign structure including in combination a design-carrying slide, a rectangular casing having upon three sides an inwardly projecting lip and the fourth side being narrowed so as to permit the slide to be slid into and out of position beneath the said lip, a raised flange on said fourth side at the edge of the casing, a cap plate having a lip corresponding to the flange upon the casing and having an end adapted to fit closely beneath the said flange, said cap plate being also constructed and arranged to fit closely over the fourth side and over the end of the slide, and means for fastening said cap plate and casing together.

4. A sign structure including in combination a design-carrying slide, a casing for holding said slide, a portion of said casing having a lip constructed and arranged to receive and hold the said design-carrying slide and also having a narrower portion of such width as to permit the design-carrying slide to be slid past it into and out of engagement with the lip, said narrower portion also having a finger hole for use in withdrawing the slide, and a cap plate constructed and arranged to fit closely over the narrow portion of the casing and over the end of the

slides so as to render the casing proof against the elements.

5. A sign structure including in combination a design-carrying slide, a rectangular casing having upon three sides an inwardly projecting lip and the fourth side being narrowed so as to permit the said design-carrying slide to be slid into and out of position within the said lip, said fourth side being also provided with a finger hole for use in withdrawing the slide, a raised flange on said fourth side at the edge of the casing, a cap plate having a lip corresponding to the lip upon the casing and having an end adapted to fit closely beneath the said flange, said cap plate being constructed and arranged to fit closely over said fourth side and over the end of the design-carrying slide, and means for fastening said cap plate and casing together.

871,511. PRODUCTION OF SOUND-RECORDS. ISIDOR KITSEE, Philadelphia, Pa. Filed May 17, 1907. Serial No. 374,213.



1. The method of reproducing sound waves in permanent records, which consists in causing a fluid, opaque to the rays of light, to be deposited in accordance with the vibrations of a diaphragm actuated by said sound waves on a material transparent to said rays of light.

2. The method of producing sound records, which consists in causing to be deflected the flow of a fluid opaque to the rays of light, in accordance with the vibrations of a diaphragm, and causing the so deflected opaque fluid to be deposited on a solid surface transparent to said rays of light.

3. The method of producing sound records, which consists in causing a material, colored so as to be opaque to the rays of light to be deposited on a transparent surface, in accordance with the vibrations of a phonographic diaphragm, and causing then to be produced a photographic copy of said deposited material.

4. The method of producing sound records without actual contact of a stylus connected to the diaphragm, which consists in causing said stylus to guide the orifice of a reservoir containing an opaque fluid, causing said fluid to be deposited on the surface of a transparent material, and causing the so produced record to be reproduced with the aid of the photogravure process.

871,512. SWEEPING-MACHINE. JOSEPH LEDWINKA, Philadelphia, Pa., assignor to Russell Thayer, Philadelphia, Pa. Filed June 28, 1906. Serial No. 323,859.

1. The combination with vertical standards; of arms pivotally supported on said standards; a frame carried by the free ends of said arms; a brush wheel mounted to rotate in said frame; a countershaft in said frame; a motor operatively related to said countershaft; and, means arranged to adjustably vary the length of said arms, substantially as set forth.

2. The combination with vertical standards; of arms pivotally supported on said standards; a frame carried by the free ends of said arms; a brush wheel mounted to rotate in said frame; a countershaft in said frame; a motor operatively related to said countershaft; and, means arranged to raise and lower said arms with respect to said vehicle, comprising a sectoral plate mounted for vertical reciprocation on one of said standards and carrying a rack; and, a gear wheel operatively connected with said rack, substantially as set forth.



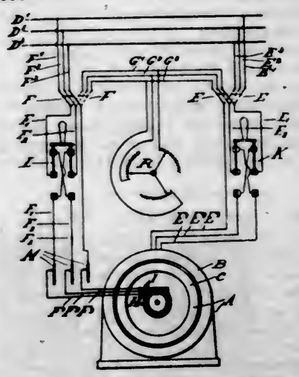
3. The combination with vertical standards; of arms pivotally supported in rotary bearings on said standards; worm gear sectors rigidly connected with said rotary bearings; worms rigidly connected with a common shaft and respectively in operative relation with said sectors; sectoral plates arranged to support said arms, carried by respective sleeves mounted to reciprocate on said standards and provided with racks; gear wheels rigidly connected with a common shaft and respectively in operative relation with said racks; a worm in operative relation with the last named shaft; a frame carried by the free ends of said arms; a brush wheel mounted to rotate in said frame; a countershaft in said frame; and, a motor operatively related to said countershaft, substantially as set forth.

4. The combination with vertical standards; of arms pivotally supported on said standards and comprising longitudinally adjustable members; a frame carried by the free ends of said arms; a brush wheel mounted to rotate in said frame; and, a motor operatively related to said brush wheel, substantially as set forth.

5. The combination with vertical standards; of an arm supported on said standards, arranged to oscillate vertically and horizontally; a frame carried by the free ends of said arm; a brush wheel mounted to rotate in said frame; and, a motor operatively connected with said brush wheel, substantially as set forth.

[Claims 6 to 17 not printed in the Gazette.]

871,513. ALTERNATING-CURRENT MOTOR. CARL A. LOHR, Schenectady, N. Y. Filed Sept. 7, 1905. Serial No. 277,336.



1. In combination with an alternating current rotary field motor having a stator and a rotor, said stator having a number of poles different from the number of poles of said rotor, means for electrically connecting at will said stator or said rotor to a source of electricity.

2. In combination with an alternating current rotary field motor having a stator and a rotor, said stator having a number of poles different from the number of poles of said rotor, means for electrically connecting at will said stator or said rotor to a source of electricity, means for

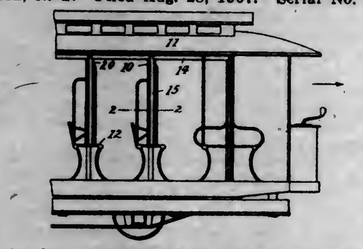
closing the windings of said rotor upon themselves, when said stator is connected to said source of electricity, and means for closing the windings of said stator upon themselves when said rotor is connected to said source of electricity.

3. In combination with an alternating current rotary field motor having a stator and a rotor, said stator having a number of poles different from the number of poles of said rotor, means for electrically connecting at will either said stator or said rotor alone, or said stator and said rotor simultaneously to a source of electricity.

4. In combination with an alternating current rotary field motor having a stator and a rotor, said stator having a number of poles different from the number of poles of said rotor, means for connecting said stator and said rotor simultaneously to the same source of electricity.

5. In combination with an alternating current motor having two members, a stator and a rotor, means for producing a synchronous speed by simultaneously supplying alternating currents to both members of said motor, means for producing an asynchronous speed having only one of said members supplied by alternating currents and separate means for deriving said synchronous speed by weakening one of the rotary fields which produce said synchronous speed.

871,514. STREET-CAR. WILLIAM P. MICHEL, New York, N. Y. Filed Aug. 28, 1907. Serial No. 390,420.



1. A street car provided with a handle, and a shield that partly encompasses the handle and is movable relatively thereto, substantially as specified.

2. A street car provided with a handle, and a shield pivoted to the handle and partly encompassing the same, substantially as specified.

3. A street car provided with a handle, collars loosely mounted thereon, and a shield secured to the collars, substantially as specified.

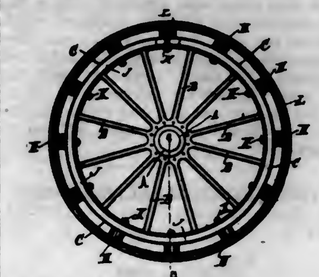
4. A street car provided with a handle, a shield that partly encompasses the handle, and means for rotating the shield upon the handle, substantially as specified.

5. A street car provided with a handle, a shield that partly encompasses the handle, means for rotating the shield upon the handle, and means for locking the shield relatively to the handle, substantially as specified.

871,515. VEHICLE-WHEEL. WILLIAM G. MULLEN, Pomona, Cal., assignor of one-half to John A. Henjum, Pomona, Cal. Filed June 19, 1906. Serial No. 322,471.

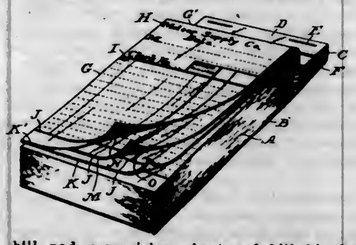
1. The new or improved vehicle wheel consisting of a hub, spokes, felly and inner tire, said tire having radial tubes screwed into and firmly held therein, an outer metallic tire whereinto radial and inwardly projecting pins are fastened, part of each of which pins pass through each of the said tubes, and the outer part of which pins pass through soft india rubber pads situated between the inner and outer metallic tires, the inner end of each pin being provided with screw nuts for securely fastening the outer tire, the inner tire, the felly, and pads together, the outer tire having a casing of soft vulcanized india rubber investing it on the tread and at the edges, and held in place by tension wires passing circularly through the soft india rubber casing, substantially as hereinbefore described, and shown upon the annexed drawings.

2. The new or improved vehicle wheel consisting of the combination of a hub, spokes connecting the hub and felly, a felly, an inner tire, said inner tire having radial tubes screwed into and held therein, an outer metallic tire tightened over the felly, radial tubes and pins, said pins fastened into the outer tire and passing through soft rubber pads, thence through the tubes held in the inner tire, tightened nuts upon the inner ends of these pins, rubber



pads, an outer tire consisting of a casing of soft vulcanized rubber attached to the outer metallic tire and having wires passing through it circularly, said wires being tightened and brazed, and when brazed holding in place the outer soft rubber casing or tire, all operating in the manner and for the purposes hereinbefore described.

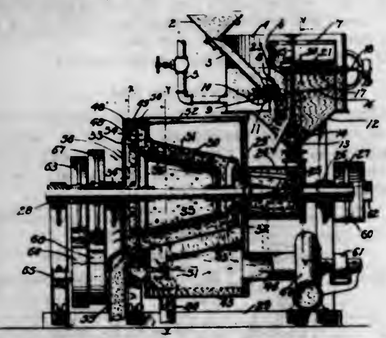
871,516. MANIFOLDING BILL PAD OR BOOK. PERRY A. MCCASKEY, Alliance, Ohio, assignor to The McCaskey Register Company, Alliance, Ohio, a Corporation of Ohio. Original application filed Feb. 13, 1907, Serial No. 357,180. Divided and this application filed May 31, 1907. Serial No. 376,640.



1. A bill pad comprising sheets of bill blanks, each sheet having on one side thereof two bill headings and rulings arranged on parts thereof remote one from the other to form two bill blanks, one blank being on one end portion of the sheet with the heading thereof towards the opposite end of the sheet, and the other blank being on the opposite end portion of the sheet, the sheet having weakened lines above the first-mentioned blank and also above and below the second mentioned blank, and a stub connected to the second mentioned blank at the weakened line that is at the top thereof, said sheet having on the reverse side on the middle portion thereof a bill heading and ruling to form a bill blank, and transfer substance on the end portions thereof, the heading being adjacent to said first-mentioned weakened line.

2. A bill pad comprising sheets of bill blanks, each sheet having a stub at one end thereof, a weakened line at an end of the stub, a bill section connected at one end thereof to the stub at the weakened line and having a weakened line at the opposite end thereof, the section having on one side thereof a bill heading and ruling and on the other side thereof a coating of transfer substance, the heading being adjacent to the weakened line of the stub, a second bill section connected at one end thereof to the first-mentioned section at the weakened line thereof and having a weakened line at the opposite end thereof, said second bill section having on the side thereof that is reverse to the side that has the first-mentioned bill heading and ruling also a bill heading and ruling, the heading being adjacent to the weakened line that is at said opposite end of said second section, and a third bill section connected at one end thereof to said second section at the weakened line thereof, said third section having a bill heading and ruling on the side of the sheet that has said first mentioned heading and ruling, said third section having transfer substance on the reverse side thereof, said heading of said third section being adjacent to the weakened line of said second section, said second section being folded under said first-mentioned section, and said third section folded over between said first and second sections.

871,517. WHEAT-WASHING MACHINE. JAMES MCDANIEL, Minneapolis, Minn. Filed Oct. 27, 1906. Serial No. 340,865.



1. In a wheat-washing machine, the combination, with a tank adapted to contain a supply of water, of a corrugated roller operating in said tank near the surface of the water, means for revolving the roller at a high speed and said roller producing eddies or currents in the water and causing it to circulate in the tank, a curved plate or guard located above said roller and extending across the same from side to side, a narrow passage being formed between said guard and roller through which the imperfectly threshed grain is conducted by said eddies or currents, a spout arranged to deliver the grain in said tank below said roller and a guard plate located within said tank beneath said roller.

2. In a wheat-washing machine, the combination, with a water tank and a grain delivery spout leading thereto, of a spirally arranged plate located within said tank, a revolving roller, a guard plate overhanging said roller and between which plate and roller the imperfectly threshed grain is guided by the current of water caused by the motion of said roller, substantially as described.

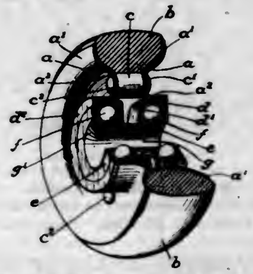
3. In a wheat-washing machine, a cylindrical chamber having a series of stationary plates arranged in a circle within said chamber and spaced from its periphery and from one another, the space inclosed by said plates having a grain discharge opening and the space within said chamber outside of said plates having a waste opening, a series of beater blades arranged to revolve in said chamber, and means for discharging grain in an annular stream into said chamber against said plates, the grain moving when it enters said chamber at substantially the same speed as said beaters, substantially as described.

4. In a wheat-washing machine, the combination, with a drum having a cylindrical chamber therein, of a series of plates mounted in said chamber and spaced from the periphery thereof and separated from one another sufficiently to allow water and fine refuse material to pass between them, but too near together to allow the passage of grain, means for delivering grain into the space inclosed by said plates and directing it against them whereby the water clinging to the surface of the kernels will be thrown off against the plates, and blades mounted within said chamber and arranged to sweep past said plates and create a blast of air through them and extending only partially across said chamber whereby an unobstructed space will be provided at one end thereof into which the grain is directed from said plates, substantially as described.

5. In a wheat-washing machine, the combination, with a shaft, of drums mounted therein, the outer one having a series of perforations and the inner one having a series of peripheral wings and operating at a higher speed than the other one, a stationary casing inclosing said drums and provided with a series of interiorly arranged gutters in position to receive a portion of the water thrown through said perforated drum, a chamber whereto the grain is delivered from between said drums in a revolving annular stream, a series of plates spaced from one another and from the periphery of said chamber, and against which plates the grain is directed and deflected and the surface water thrown off, the space between said plates and the periphery of said chamber communicating with said gutters and having a waste discharge opening, and blades mounted on said shaft and arranged to revolve past said plates and create currents of air between them, substantially as described.

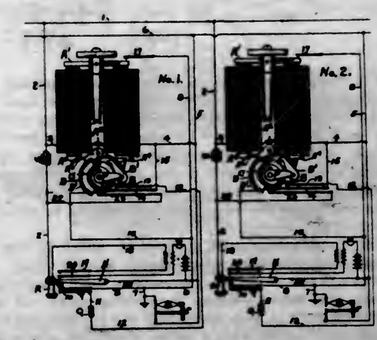
[Claims 6 to 14 not printed in the Gazette.]

871,518. WHEEL. WILLIAM NICE, Jr., Ogontz, Pa., assignor to Pressed Steel Manufacturing Company, Atco, N. J., a Corporation. Filed May 3, 1907. Serial No. 371,576.



A wheel having reversely curved web faces, rivets for spacing and holding said faces, a tire engaged by said faces, substantially Z-shaped race rings engaged within said webs, thimble rings within said race rings, balls engaged in said race rings by said thimble rings, and a bushing having expanded ends for holding said thimble rings in said race rings.

871,519. PARTY-LINE TELEPHONE-EXCHANGE. SAMUEL A. NORSTROM, Chicago, Ill., assignor to Casper L. Redfield, Chicago, Ill. Filed July 14, 1905. Serial No. 269,590.



1. The combination with the switching mechanisms of a series of stations on a party line, of means by which

said switching mechanisms may be simultaneously advanced from their normal positions, means by which selected ones of said switching mechanisms are moved so as to be out of step with those not selected, and means by which the stations at which the switching mechanisms are out of step will be placed in telephonic connection with the line while other stations are excluded from such telephonic connection.

2. The combination with a series of switching mechanisms, and means for giving them a simultaneous advance step by step from normal position, of means by which selected ones of said switching mechanisms may be moved so as to displace them from being in step with the other switching mechanisms, and telephonic connections controlled by the positions into which said switching mechanisms are moved.

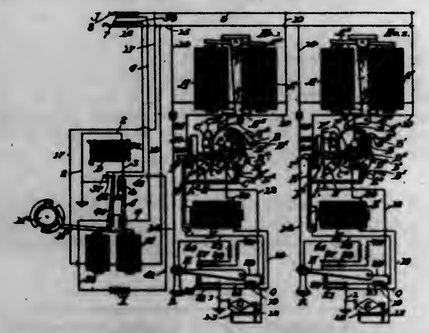
3. The combination with a party line having a series of local stations thereon, and means controlled from a central office for causing the simultaneous advance of all switching mechanisms, of means also controlled from the central office for causing selected ones only of said switching mechanisms to return to normal position.

4. The combination with a party line, a series of switching mechanisms connected thereto, and means for causing the simultaneous advance of all of said switching mechanisms, of electrical connections closed by the different switching mechanisms in succession, and means by which upon an electrical impulse being sent through a closed connection, the switching mechanism which closed it will be automatically returned to its normal position.

5. The combination with a series of switching mechanisms, and means for advancing them simultaneously step by step from normal position, of means controlled from a central office for displacing a selected one of said switching mechanisms so that it will not be in step with the other switching mechanisms.

[Claims 6 to 8 not printed in the Gazette.]

871,520. TELEPHONE-EXCHANGE. NILS E. NORSTROM, Chicago, Ill., assignor to Casper L. Redfield, Chicago, Ill. Filed Aug. 21, 1905. Serial No. 275,024.



1. The combination with a party line terminating in a jack adapted to receive a plug, and a series of local stations connected to the party line, of a switching mechanism at each station, means by which impulses sent over said line will cause the simultaneous advance of all switching mechanisms, and means by which the removal of a plug from said jack will send an extra impulse over the line and cause the switching mechanisms to make one extra advance step.

2. The combination with a ratchet wheel having one tooth removed, a driving pawl, and a holding pawl, of a special pawl, and a magnet for causing said special pawl to engage said wheel so that the driving pawl can drive the toothless part of said wheel past the holding pawl.

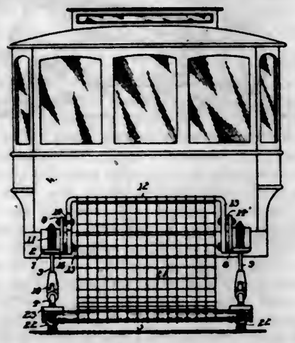
3. The combination with a series of ratchet wheels each having one tooth removed, and a driving and a holding pawl for each wheel, of a special pawl for each wheel, a magnet for each special pawl, and means for sending an impulse simultaneously through all of said magnets.

4. The combination with a series of ratchet wheels, means for advancing them, and a holding device for each wheel, each of said wheels having one tooth removed so that the toothless part cannot normally pass the holding device, of a secondary holding device and an actuating magnet therefor for each wheel, each of said secondary holding devices serving when actuated to permit the associated wheel to be moved so as to carry the toothless part beyond the first mentioned holding device, and means for sending an impulse simultaneously through said actuating magnets.

5. In the local station mechanism of a party line exchange a telephonic connection, a magnet for closing said connection, a catch for holding the connection in a closed condition, a ratchet wheel having a normal position of rest, and means by which upon advancing said wheel from its normal position it will release said catch so as to permit the telephonic connection to open.

[Claims 6 to 9 not printed in the Gazette.]

871,521. CAR-FENDER. GEORGE R. OWINGS, Pittsburg, Pa., assignor of two-eighths to Louis H. Wentz, two-eighths to Charles J. Bosau, and one-eighth to John S. Gillespie, Pittsburg, Pa. Filed Mar. 7, 1907. Serial No. 361,042.



1. In a car fender, the combination of a forwardly extending vertically movable frame, mechanism for holding the frame depressed, a netting or basket connected to the holding mechanism and to the forwardly extending frame and operating when a weight is placed upon it to exert a pull upon the holding mechanism sufficient to release the frame, and frame raising means operative when the frame is released.

2. The combination of a forwardly extending vertically movable guard frame, a trip frame above and rearward from the front portion of the guard frame, means for raising the guard frame, means operated by the trip frame for holding the guard frame depressed and for releasing the same, and a netting secured to the guard frame and to the trip frame and operating when a weight is placed thereon to so move the trip frame as to release the guard frame.

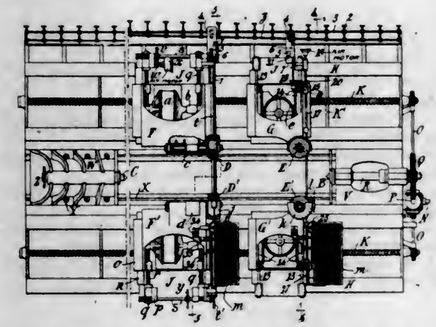
3. The combination of a vertically movable forwardly extending guard frame, rods extending upwardly therefrom, springs adapted to raise the rods and frame, a trip frame above and rearward from the front portion of the guard frame, devices operated by the trip frame for holding the rods depressed and for releasing the same, and a netting secured to the front portion of the guard frame and to the trip frame and operating when a weight is placed thereon to so move the latter as to release the rods.

4. The combination of a vertically movable forwardly extending guard frame, rods extending upwardly from the frame, brackets on the car through which the rods extend, springs confined between the upper ends of the rods and the brackets, a trip frame above and rearward from the front portion of the guard frame, rod holding and releasing devices operated by the trip frame, and a netting secured to the forward portion of the guard frame and to the trip frame and adapted when a weight is placed thereon to so move the trip frame as to release the rods and permit the springs to raise the guard frame.

5. The combination of a vertically movable upwardly extending guard frame, rods extending upwardly therefrom, springs for raising the rods and frame, a ball-shaped trip frame above and rearwardly from the front portion of the guard frame, rod engaging devices actuated by the trip frame and adapted when the latter is oscillated backwardly to hold the rods depressed and the guard frame in lowered position, and a netting secured to the forward portion of the guard frame, and to the trip frame and adapted when a weight is placed thereon to oscillate the guard frame forwardly and release the rods.

[Claims 6 to 9 not printed in the Gazette.]

871,522. LATHE FOR MARBLE OR THE LIKE. JOHN R. PEIRCE, New York, N. Y., assignor to Royden Marble Machinery Company, New York, N. Y., a Corporation of New Jersey. Filed Apr. 13, 1907. Serial No. 367,931.



1. A machine for working marble including in combination means for engaging the ends of a column and rotating it, rounding cutters adapted to engage said column, means for moving said rounding cutters longitudinally of said column to cut it round throughout its length as it rotates, means for causing said rounding cutters to be simultaneously and automatically moved transversely to vary the diameter at different points in the length of the column, manual adjusting means to produce a determined diameter at any desired point in their longitudinal travel, fluting cutters, means for moving them longitudinally, means for simultaneously and automatically moving them transversely, means for adjusting them for a determined diameter at any point, and means for moving each class of cutters beyond an end of the column to permit the other class to travel from end to end of the column.

2. A machine for working marble including in combination means for engaging the ends of a column and rotating it, rounding cutters adapted to engage said column, means for moving said rounding cutters longitudinally of said column to cut it round throughout its length as it rotates, means for causing said rounding cutters to be simultaneously and automatically moved transversely to vary the diameter at different points in the length of the column, manual adjusting means to produce a determined diameter at any desired point in their longitudinal travel, fluting cutters, means for moving them longitudinally, means for simultaneously and automatically moving them transversely, means for adjusting them for a determined diameter at any point, and means for moving each class of cutters beyond an end of the column to permit the other class to travel from end to end of the column, said rounding cutters consisting of rapidly rotating carborundum wheels having axes parallel to the axis of the column, and said fluting cutters consisting of rapidly rotating carborundum wheels having axes perpendicular to the axis of the column.

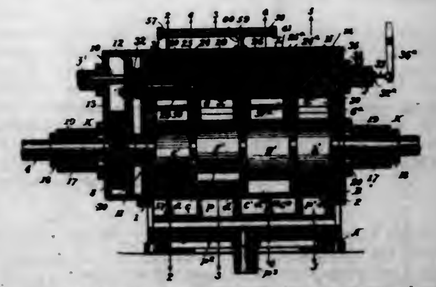
3. A machine for working marble including in combination means for engaging the ends of a column and rotating it, rounding cutters adapted to engage said column, means for moving said rounding cutters longitudinally of said column to cut it round throughout its length as it rotates, means for causing said rounding cutters to be simultaneously and automatically moved transversely to vary the diameter at different points in the length of the column, manual adjusting means to produce a determined diameter at any desired point in their longitudinal travel, fluting cutters, means for moving them longitudinally, means for simultaneously and automatically moving them transversely, means for adjusting them for a determined diameter at any point, and means for moving each class of cutters beyond an end of the column to permit the other class to travel from end to end of the column, said rounding cutters consisting of rapidly rotating carborundum wheels having axes parallel to the axis of the column, and said fluting cutters consisting of rapidly rotating carborundum wheels having axes perpendicular to the axis of the column, and motors for said cutters mounted in substantially fixed relation thereto and partaking of the several movements thereof.

4. A machine for working marble including in combination means for engaging the ends of a column and rotating it, a pair of rounding-cutter carriages at opposite sides of the column, a rounding cutter and an operating motor therefor carried by each of said carriages; a similarly arranged pair of fluting-cutter carriages, a fluting cutter and an operating motor therefor carried by each of said carriages, means for moving each of said four carriages longitudinally, and means for simultaneously and automatically moving the opposite carriages of each pair toward or away from each other, means for manually adjusting the opposite carriages of each pair toward or away from each other, means for supporting the carriages permitting the rounding-cutter carriages to be moved longitudinally beyond one end of the column and the fluting-cutter carriages beyond the other end.

5. A machine for working marble including in combination means for rotating a column, a rounding cutter consisting of a rapidly rotating carborundum wheel with its axis parallel to that of the column and adapted to engage said column and to be moved longitudinally thereof to cut it round throughout its length as it rotates, and a fluting cutter on the same side of the machine and consisting of a rapidly rotating carborundum wheel with its axis transverse to the column also adapted to be moved longitudinally in engagement with said column.

[Claims 6 to 21 not printed in the Gazette.]

871,523. ROTARY GAS-ENGINE. JAMES POLLOCK, Wilkes-Barre, and WALTER F. LEIBENGUTH, Dorranceton, Pa. Filed May 17, 1907. Serial No. 374,229.



1. In a rotary gas engine, a cylinder, a pair of parallel piston shafts extending therethrough and geared together, a pair of coöperating semi-circular pistons upon said shafts, a reservoir, means for compressing gas into said

reservoir, and a rotary valve geared to one of said shafts and having ports arranged to admit gas from said reservoir into said cylinder twice during each revolution of the piston shafts.

2. In a rotary gas engine, a cylinder having several explosion compartments, a pair of parallel shafts extending through said compartments and geared together, a pair of coöperating semi-circular pistons on said shafts in each compartment, the pairs of pistons in said compartments being arranged in different angular positions on the shafts, means for storing a supply of gas under pressure, and a rotary valve geared to one of said shafts and having ports arranged to admit gas from said storage means to the explosion compartments of the engine, successively, twice during each revolution of the shafts.

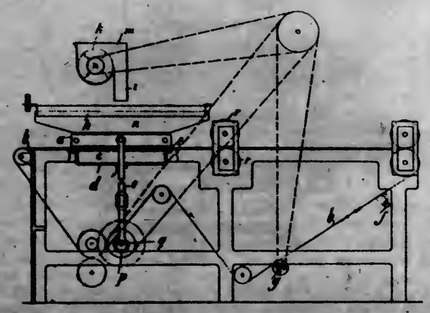
3. In a rotary gas engine, a cylinder having an explosion compartment and a compression compartment, a pair of parallel shafts extending through said compartments and geared together, a pair of coöperating semi-circular pistons on said shafts in each of said compartments, a storage reservoir for gas connected to the exhaust port of said compression compartment, and a rotary valve geared to one of said shafts and having ports arranged to admit gas from said reservoir to said explosion compartment twice during each revolution of the shafts.

4. In a rotary gas engine, a cylinder having several explosion compartments and a compression compartment, a pair of parallel shafts extending through said compartments and geared together, a pair of coöperating semi-circular pistons on said shafts in each compartment, the pairs of pistons in the explosion compartments being arranged in different angular positions on the shafts, a storage reservoir for gas connected to the exhaust port of said compression compartment, and a rotary valve geared to one of said shafts and having ports arranged to admit gas from said reservoir to said explosion compartments, successively, twice during each revolution of the shafts.

5. In a rotary gas engine, a cylinder having a plurality of explosion compartments and a plurality of compression compartments, a pair of parallel shafts extending through said compartments and geared together, a pair of coöperating semi-circular pistons on said shafts in each compartment, the pairs of pistons in the explosion compartments being arranged in different angular positions on the shafts, a storage reservoir for gas connected to the exhaust port of each compression compartment, and a rotary valve geared to one of said shafts and having ports arranged to admit gas from said reservoir to said explosion compartments, successively, twice during each revolution of the shafts.

[Claims 6 to 8 not printed in the Gazette.]

871,524. PROCESS OF AND APPARATUS FOR MANUFACTURING ARTIFICIAL STONE. LEO PULVERMANN, Hamburg, Germany. Filed Sept. 21, 1906, Serial No. 335,564. Renewed Aug. 17, 1907. Serial No. 389,077.



1. The hereinbefore described method of manufacturing artificial stone consisting in dehydrating, felting and molding a mixture of asbestos, hydraulic cement and a small quantity of water by using the filtering properties of the asbestos of the mixture to assist in the retaining of all the solids of the mixture while permitting the escape of the waste water.

2. Filtering apparatus for the purpose specified comprising a filter-cloth, means for moving the filter-cloth, a mold adapted to bear upon the filter-cloth, and a dehydrating chamber in communication with the mold.

3. Filtering apparatus for the purpose specified, comprising an endless filter cloth adapted to be moved periodically, a mold adapted to bear upon the filter cloth and to be raised therefrom, and a dehydrating chamber in communication with the mold.

4. Filtering apparatus for the purpose specified, comprising an endless filter cloth adapted to be moved periodically, a mold adapted to bear upon the filter cloth and to be raised therefrom, and a rubber frame adapted to form a tight joint between the mold and the filter cloth.

5. Filtering apparatus for the purpose specified, comprising an endless filter cloth adapted to be moved periodically, a mold adapted to bear upon the filter cloth and to be raised therefrom, a dehydrating chamber and a filter plate placed between the latter and the filter cloth.

[Claims 6 to 10 not printed in the Gazette.]

871,525. COMPOSITION FOR REMOVING PAINT OR VARNISH. SAMUEL P. SADTLER, Philadelphia, Pa., assignor to Edwin Johnson, Pittsburg, Pa. Filed Nov. 18, 1903. Serial No. 181,618.

1. A composition for removing paint or varnish containing acetone oil, benzol, and another solvent.

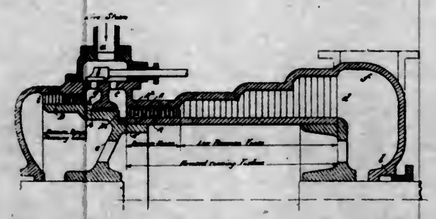
2. A composition for removing paint or varnish containing acetone oil, benzol, and a mixing agent.

3. A composition for removing paint or varnish containing acetone oil, benzol, and alcohol.

4. A composition for removing paint or varnish containing acetone oil, benzol, toluol, and a mixing agent.

5. A composition for removing paint or varnish containing acetone oil, toluol, and a mixing agent.

871,526. REVERSIBLE TURBINE. MATTHEW H. P. R. SANKEY, London, England, assignor to Melms, Pfeaninger and Sankey Limited, London, England, a Corporation. Filed Sept. 4, 1906. Serial No. 333,143.

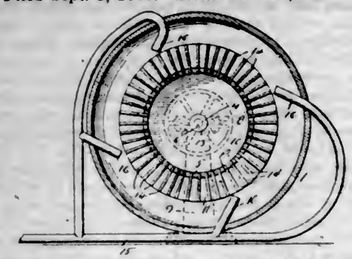


1. In an elastic fluid turbine having a forward driving turbine and a reversing turbine mounted upon a common shaft within the same casing, the combination of an action and reaction forward driving turbine with a combined action-reaction reversing turbine of the drum type having a diameter substantially equal to that of the said forward driving turbine.

2. In a turbine rotor the combination of a spider, a plurality of sets of blades supported thereby, and an annulus adjacent to each set, and carried by said spider.

3. In a turbine rotor the combination of a spider, a drum supported at one of its ends by said spider, blades for forward driving carried by said drum, a reversing set of blades also supported by the spider and a plurality of annuli formed on the spider and adapted to counterbalance the axial thrusts for both directions running.

871,527. ROTARY ENGINE. EDWARD SCOTT, Pittsburg, Pa. Filed Sept. 3, 1907. Serial No. 391,104.



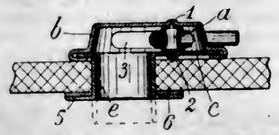
1. A rotary engine comprising a circular casing provided with an exhaust opening and a central hub, of a shaft support within said hub, a rotary piston on said shaft provided with radial pins to receive the impact of the motive fluid.

2. A rotary engine comprising a circular casing provided with an exhaust opening and a central hub, of a shaft supported within said hub, a rotary piston on said shaft provided with radial pins to receive the impact of the motive fluid, said pins being arranged in rows in staggered relation.

3. A rotary engine comprising a circular casing provided with an exhaust opening, and a central shaft bearing, of a shaft supported in said bearing, a rotary piston on said shaft within the casing pins projecting from the periphery of the piston and arranged in rows, and a supply pipe for motive fluid provided with inlets to project the motive fluid against said pins.

4. A rotary engine comprising a circular casing provided with an exhaust opening, and a central shaft bearing, of a shaft supported in said bearing, a rotary piston on said shaft within the casing pins projecting from the periphery of the piston and arranged in rows, and a supply pipe for motive fluid provided with inlets to project the motive fluid against said pins, said inlets being located at equal distances apart to equalize the force of the impact against the pins.

871,528. FASTENER. JOHANN SENN, Berne, Switzerland. Original application filed Sept. 16, 1905, Serial No. 278,691. Divided and this application filed Sept. 13, 1906. Serial No. 334,461.

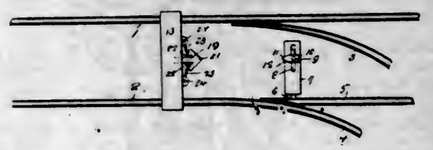


1. A fastening for lacings, comprising a shank for securing the fastening to an article of apparel, said shank having an eccentrically located flange, an externally-smooth, laterally-apertured cap attached to said flange throughout its periphery, said cap and flange having registering indentations located to one side of the shank and a roller journaled in said indentations.

2. A fastening for lacings, comprising a hollow shank having an eccentric flange provided with an indentation, located eccentrically with respect to the shank, an externally-smooth cap provided with lateral apertures and an indentation registering with the indentation of the flange, said cap being secured to the flange throughout its periphery, a roller rotatably mounted in the registering indentations, and means for securing said shank to an article of apparel; said cap-apertures being adapted to permit a lace to move in contact with said roller.

871,529. SWITCH. ARCHIE SMITH, Chester, W. Va. Filed July 29, 1907. Serial No. 386,032.

1. The combination with a switch throwing device located between the rails of a track, of means suspended from a car for actuating said device, said means comprising an arm provided with a plurality of contacting surfaces, means connected with said arm for lowering it, a spring-controlled rod depending from the bottom of the car, and means for pivoting the rear end of the arm to the lower end of the rod.



2. The combination with a switch throwing device located between the rails of a track, of an actuating means for said device suspended from a car, said means comprising an arm having a plurality of contacting surfaces, a duplex means for lowering said arm, angularly-disposed members connected with said duplex means and with said arm, a spring-controlled rod depending from the bottom of the car, and means for pivoting the rear end of the arm to the lower end of the rod.

3. The combination with a switch throwing device located between the rails of a track, of an actuating means for said device suspended from a car, said means comprising an arm extending in a longitudinal direction with respect to the track, vertically-extending duplex actuating members connected with said arm for lowering it, a spring-controlled rod depending from the car bottom for elevating said arm, and means for pivoting the rear end of the arm to the lower end of the rod.

871,530. CABINET AND DISPLAY-RACK FOR NECKTIES. LOUIS M. SPEER, Cowanshannoc, Pa. Filed Feb. 1, 1907. Serial No. 355,298.

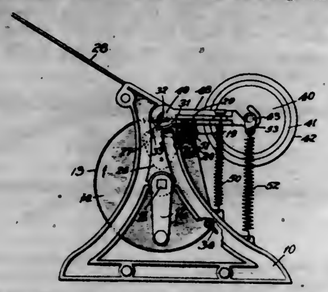


A cabinet of the class described consisting of an oblong casing, a pivot pin extending into the cabinet centrally thereof, a rack bar swinging upon said pivot and having a plurality of laterally extending pins spaced apart and with a resilient stop at its free end adapted to bear alternately against the ends of the cabinet to hold the bar frictionally in position longitudinally of the cabinet, and a stop disposed in the path of the bar to hold the same in position at right angles to the cabinet.

871,531. MULTICOPYING-MACHINE. AMOS C. STALEY, Chicago, Ill. Filed May 13, 1907. Serial No. 373,407.

1. In a multi-copy machine, a cylinder-segment, a printing roller arranged to be frictionally driven thereby, provided with a continuous coating of gelatinous composition, means for yieldingly holding said printing roller in position to intersect the peripheral path of said cylinder seg-

ment and means for returning the printing roller to invariable position when freed by the cylinder-segment.



2. In a multi-copy machine, a rotatable printing roller comprising a core and a relatively thick coating of elastic gelatinous composition, a rotatable pressure element intermittently coacting therewith to frictionally drive said roller, means for maintaining a pressure between the said coacting elements yielding to permit bodily repression of the printing roller, and means for restoring the printing roller to invariable position when intermittently freed by the coacting pressure element.

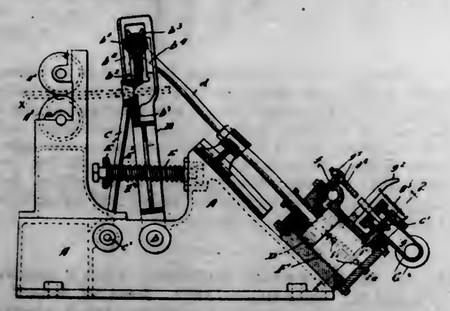
3. In a multicopy machine, the combination of a frame, a cylinder segment mounted for rotation therein, means for rotating said segment, a printing roller provided with a peripheral coating of elastic gelatinous composition, bearing members for said roller yieldingly mounted on the frame to normally position the printing roller to intersect peripherally the path of the cylinder segment, means for directing paper between the cylinder segment and printing roller, and paper gripping means carried by said segment.

4. In a multi-copy machine, a driving cylinder segment, a coöperating printing roller, provided with a thick peripheral body of elastic gelatinous composition, yieldingly positioned to intersect peripherally the path of the cylinder segment, and a gripper carried by the segment arranged when closed to extend inwardly in the segment from an edge of its periphery, for coaction with the printing roller to move it to operative position.

5. In a multi-copy machine, a printing roller having an elastic peripheral coating of gelatinous composition, a yielding support for said roller, wherein said roller is removably mounted, and a pressure-resisting element intermittently coacting with said printing roller to drive the same, providing a segmental surface for frictionally driving the printing roller.

[Claim 6 not printed in the Gazette.]

871,532. FLYING SHEARS FOR ROD OR BAR MILLS. WILLIAM H. STANTON, Chicago, Ill. Filed Sept. 3, 1907. Serial No. 391,048.



1. In a swinging shear for rod or bar mills, the combination with the feed rolls, swinging shear frame, furnished with cutters, and a spring for returning the swinging shear frame to position, of an operating cylinder and piston, and an exhaust or release valve for setting the shear in operation, said cylinder being furnished with a by-pass to cushion and arrest the stroke of the piston after the shear has severed the rod or bar and to enable said shear frame spring to restore the swinging shear frame to position, substantially as specified.

2. In a swinging shear for rod or bar mills, the combination with the feed rolls, swinging shear frame, furnished with cutters, and a spring for returning the swinging shear frame to position, of an operating cylinder and piston, an exhaust or release valve for setting the shear in operation, said cylinder being furnished with a by-pass to cushion and arrest the stroke of the piston after the shear has severed the rod or bar and to enable said shear frame spring to restore the swinging shear frame to position, and a hand lever for operating said release valve, substantially as specified.

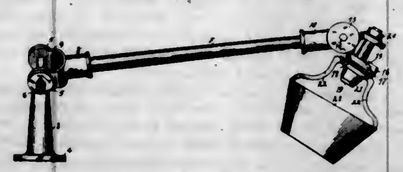
3. In a swinging shear for rod or bar mills, the combination with the feed rolls, swinging shear frame, furnished with cutters, and a spring for returning the swinging shear frame to position, of an operating cylinder and piston, an exhaust or release valve for setting the shear in operation, said cylinder being furnished with a by-pass to cushion and arrest the stroke of the piston after the shear has severed the rod or bar and to enable said shear frame spring to restore the swinging shear frame to position, a hand lever for operating said release valve, and a spring for closing the same, substantially as specified.

4. In a swinging shear for rod or bar mills, the combination with the feed rolls, swinging shear frame furnished with cutters and a spring for returning the swinging shear frame to position, of an operating cylinder and piston, an exhaust or release valve for setting the shear in operation, said cylinder being furnished with a by-pass to cushion and arrest the stroke of the piston after the shear has severed the rod or bar and to enable said shear frame spring to restore the swinging shear frame to position, a hand lever for operating said release valve, a spring for closing the same, and a stop for limiting the opening movement of the release valve, substantially as specified.

5. In a swinging shear for rod or bar mills, the combination with the feed rolls, swinging shear frame furnished with cutters and a spring for returning the swinging shear frame to position, of an operating cylinder and piston, an exhaust or release valve for setting the shear in operation, said cylinder being furnished with a by-pass to cushion and arrest the stroke of the piston after the shear has severed the rod or bar and to enable said shear frame spring to restore the swinging shear frame to position, a hand lever for operating said release valve, and an adjustable stop for limiting the opening movement of the release valve, substantially as specified.

[Claim 6 not printed in the Gazette.]

871,533. SPINDLE-SHAPER GUARD. FRANK STREICH, Joliet, Ill., assignor to Champion Machinery Company, Joliet, Ill. Filed Aug. 31, 1906. Serial No. 332,862.



1. A guard, comprising a standard, an arm pivotally mounted on said standard and a cage supported on the outer end of the arm and adapted to be rotated upon its axis.

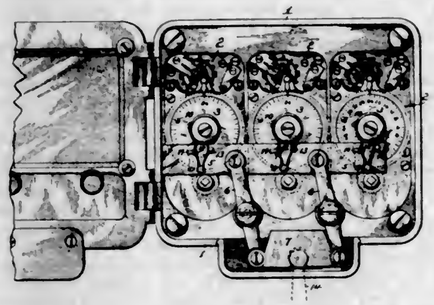
2. A guard, comprising a standard, an arm pivoted to said standard, a sleeve movably attached to said arm, a spindle carried in said sleeve, and a cage mounted on said spindle.

3. A guard, comprising a standard, an arm pivoted to said standard, a sleeve pivotally attached to said arm, a spindle journaled in said sleeve, a cage mounted to rotate with said spindle and means for adjusting said cage about its axis.

4. A guard, comprising a standard, an arm pivoted to said standard, a sleeve pivotally attached to said arm, frictional means for adjusting said sleeve upon its pivot, a spindle rotatably mounted in said sleeve, a cage attached to said spindle, means for adjusting said cage about its axis, and means for retaining said cage in adjusted position.

5. A guard, comprising a standard, an arm pivoted on said standard, a sleeve pivotally attached to said arm, frictional means for adjusting said sleeve upon its pivot, a spindle rotatably mounted in said sleeve, a cage attached to said spindle, means for adjusting said cage about its axis, and a yielding detent for retaining said cage in adjusted position.

871,534. TIME-LOCK. WARREN H. TAYLOR, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed July 30, 1907. Serial No. 386,307.



1. In a time lock, the combination of a time movement, and devices operated thereby for releasing the bolt work of the lock, the said devices including a part constructed to yield in the event the free movement of any of the parts between the time movement and the bolt work be blocked.

2. In a time lock, the combination of a plurality of time movements and devices operated thereby for releasing the bolt work of the lock, the said devices including a device for each time movement, constructed to yield or give and permit of the continued operation of the time movements, in the event the free movement of any of the parts between the time movements and the bolt work be blocked.

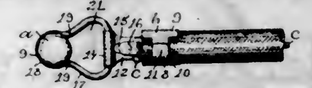
3. In a time lock the combination of a plurality of time movements each having a front dial carrying a tripping pin, a movement bar common to all of said time movements, and yielding means on said movement bar adapted to be engaged by the tripping pins on the dials to move said bar in a direction to release the bolt work.

4. In a time lock, the combination of a plurality of time movements each carrying a tripping pin, a bolt work unlocking device, a movement bar common to all the time movements, means for transmitting motion from the movement bar to the bolt work unlocking device, and yielding parts on the movement bar adapted to be engaged by the tripping pins of the several time movements to move said bar in a direction to release the bolt work.

5. In a time lock, the combination with a plurality of time movements each having a tripping pin, of a movement bar common to all the time movements and a yielding lug for each tripping pin, carried by the said movement bar the said lugs adapted to be engaged by the pins whereby the bar is moved in a direction to release the bolt work.

[Claims 6 to 9 not printed in the Gazette.]

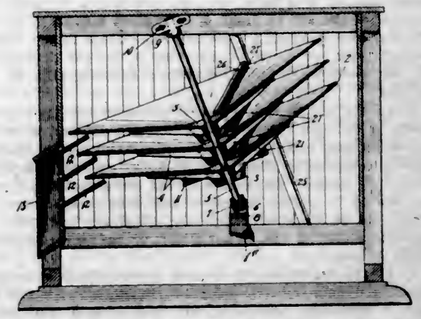
871,535. ELECTRIC-WIRE CONNECTION. FREDERICK B. THATCHER, Providence, R. I. Filed Jan. 31, 1907. Serial No. 355,036.



1. An electric wire terminal consisting of a member constructed of sheet metal and shaped to have a semi-cylindrical portion in one side of which is a slot and from the other side of which extends a strap passing through the slot, a tongue extending outward from the semi-cylindrical portion and shaped to have a transverse tubular end and a hook-shaped portion, and a loop member constructed of spring wire bent to form a semi-circular end, a contracted portion adjacent the semi-circular end, an opening for inserting a binding post connection through the loop and adapted to be secured in the tubular end of the terminal member.

2. An electric wire terminal b consisting of a member 8 constructed from a sheet metal blank shaped and bent to form a semi-cylindrical portion 9 in one side of which is a slot 10 and from the other side of which extends a strap 11, a tongue 12 doubled on itself and shaped to form a transverse tubular end 14, a rivet 15 securing the doubled-over parts of the tongue together, a hook-shaped portion 15 formed on the end of the tongue, and a loop member 17 constructed of spring wire bent centrally to form a semi-circular end 18, then outward at an angle to form the contracted rounded shoulders 19 19, then inwards toward each other to form the straight portions 20 20 adapted to be held in the tubular end 14 of the member 8 and forming an opening 21, as described.

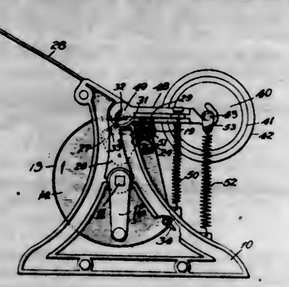
871,536. SEED-SEPARATOR. EDWARD THOMPSON, Minneapolis, Minn. Filed May 4, 1906. Serial No. 315,176.



1. In a separator of the kind described, the combination with a rotatively mounted inverted smooth faced conical disk having a central opening and an oblique axis of rotation, the said conical disk being so set that its lowermost portion inclines outward and downward from its axis of rotation, and its uppermost portion inclines inward and downward toward its axis of rotation, whereby said disk during its rotation will discharge the round smooth seed at its lower peripheral portion, and the relatively flat seeds and other substances will be carried upward and discharged through the central opening of said disk, by the action of gravity.

2. In a separator of the kind described, the combination with a rotatively mounted inverted smooth faced conical disk having a central opening and an oblique axis of rotation, the said disk being so set that its lowermost portion inclines outward and downward from its axis of rotation, and its uppermost portion inclines inward and downward toward its axis of rotation, and a brush working over the upper portion of said disk, whereby the round seeds will be discharged at the lower peripheral portion

ment and means for returning the printing roller to invariable position when freed by the cylinder-segment.



2. In a multi-copy machine, a rotatable printing roller comprising a core and a relatively thick coating of elastic gelatinous composition, a rotatable pressure element intermittently coacting therewith to frictionally drive said roller, means for maintaining a pressure between the said coacting elements yielding to permit bodily repression of the printing roller, and means for restoring the printing roller to invariable position when intermittently freed by the coacting pressure element.

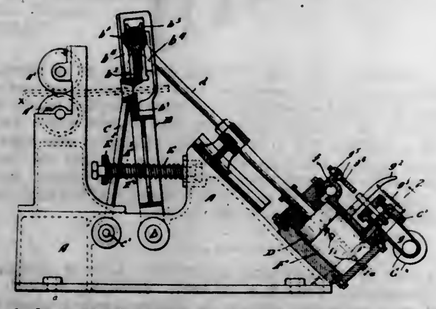
3. In a multicopy machine, the combination of a frame, a cylinder segment mounted for rotation therein, means for rotating said segment, a printing roller provided with a peripheral coating of elastic gelatinous composition, bearing members for said roller yieldingly mounted on the frame to normally position the printing roller to intersect peripherally the path of the cylinder segment, means for directing paper between the cylinder segment and printing roller, and paper gripping means carried by said segment.

4. In a multi-copy machine, a driving cylinder segment, a coöperating printing roller, provided with a thick peripheral body of elastic gelatinous composition, yieldingly positioned to intersect peripherally the path of the cylinder segment, and a gripper carried by the segment arranged when closed to extend inwardly in the segment from an edge of its periphery, for coaction with the printing roller to move it to operative position.

5. In a multi-copy machine, a printing roller having an elastic peripheral coating of gelatinous composition, a yielding support for said roller, wherein said roller is removably mounted, and a pressure-resisting element intermittently coacting with said printing roller to drive the same, providing a segmental surface for frictionally driving the printing roller.

[Claim 6 not printed in the Gazette.]

871,532. FLYING SHEARS FOR ROD OR BAR MILLS. WILLIAM H. STANTON, Chicago, Ill. Filed Sept. 3, 1907. Serial No. 391,048.



1. In a swinging shear for rod or bar mills, the combination with the feed rolls, swinging shear frame, furnished with cutters, and a spring for returning the swinging shear frame to position, of an operating cylinder and piston, and an exhaust or release valve for setting the shear in operation, said cylinder being furnished with a by-pass to cushion and arrest the stroke of the piston after the shear has severed the rod or bar and to enable said shear frame spring to restore the swinging shear frame to position, substantially as specified.

2. In a swinging shear for rod or bar mills, the combination with the feed rolls, swinging shear frame, furnished with cutters, and a spring for returning the swinging shear frame to position, of an operating cylinder and piston, an exhaust or release valve for setting the shear in operation, said cylinder being furnished with a by-pass to cushion and arrest the stroke of the piston after the shear has severed the rod or bar and to enable said shear frame spring to restore the swinging shear frame to position, and a hand lever for operating said release valve, substantially as specified.

3. In a swinging shear for rod or bar mills, the combination with the feed rolls, swinging shear frame, furnished with cutters, and a spring for returning the swinging shear frame to position, of an operating cylinder and piston, an exhaust or release valve for setting the shear in operation, said cylinder being furnished with a by-pass to cushion and arrest the stroke of the piston after the shear has severed the rod or bar and to enable said shear frame spring to restore the swinging shear frame to position, a hand lever for operating said release valve, and a spring for closing the same, substantially as specified.

4. In a swinging shear for rod or bar mills, the combination with the feed rolls, swinging shear frame furnished with cutters and a spring for returning the swinging shear frame to position, of an operating cylinder and piston, an exhaust or release valve for setting the shear in operation, said cylinder being furnished with a by-pass to cushion and arrest the stroke of the piston after the shear has severed the rod or bar and to enable said shear frame spring to restore the swinging shear frame to position, a hand lever for operating said release valve, a spring for closing the same, and a stop for limiting the opening movement of the release valve, substantially as specified.

5. In a swinging shear for rod or bar mills, the combination with the feed rolls, swinging shear frame furnished with cutters and a spring for returning the swinging shear frame to position, of an operating cylinder and piston, an exhaust or release valve for setting the shear in operation, said cylinder being furnished with a by-pass to cushion and arrest the stroke of the piston after the shear has severed the rod or bar and to enable said shear frame spring to restore the swinging shear frame to position, a hand lever for operating said release valve, and an adjustable stop for limiting the opening movement of the release valve, substantially as specified.

[Claim 6 not printed in the Gazette.]

871,533. SPINDLE-SHAPER GUARD. FRANK STREICH, Joliet, Ill., assignor to Champion Machinery Company, Joliet, Ill. Filed Aug. 31, 1906. Serial No. 332,862.



1. A guard, comprising a standard, an arm pivotally mounted on said standard and a cage supported on the outer end of the arm and adapted to be rotated upon its axis.

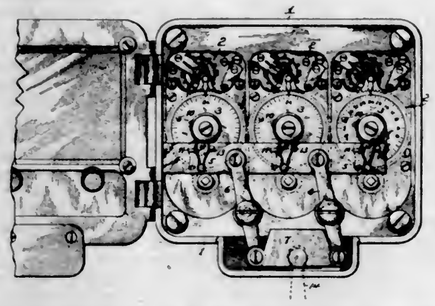
2. A guard, comprising a standard, an arm pivoted to said standard, a sleeve movably attached to said arm, a spindle carried in said sleeve, and a cage mounted on said spindle.

3. A guard, comprising a standard, an arm pivoted to said standard, a sleeve pivotally attached to said arm, a spindle journaled in said sleeve, a cage mounted to rotate with said spindle and means for adjusting said cage about its axis.

4. A guard, comprising a standard, an arm pivoted to said standard, a sleeve pivotally attached to said arm, frictional means for adjusting said sleeve upon its pivot, a spindle rotatably mounted in said sleeve, a cage attached to said spindle, means for adjusting said cage about its axis, and means for retaining said cage in adjusted position.

5. A guard, comprising a standard, an arm pivoted on said standard, a sleeve pivotally attached to said arm, frictional means for adjusting said sleeve upon its pivot, a spindle rotatably mounted in said sleeve, a cage attached to said spindle, means for adjusting said cage about its axis, and a yielding detent for retaining said cage in adjusted position.

871,534. TIME-LOCK. WARREN H. TAYLOR, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed July 30, 1907. Serial No. 386,307.



1. In a time lock, the combination of a time movement, and devices operated thereby for releasing the bolt work of the lock, the said devices including a part constructed to yield in the event the free movement of any of the parts between the time movement and the bolt work be blocked.

2. In a time lock, the combination of a plurality of time movements and devices operated thereby for releasing the bolt work of the lock, the said devices including a device for each time movement, constructed to yield or give and permit of the continued operation of the time movements, in the event the free movement of any of the parts between the time movements and the bolt work be blocked.

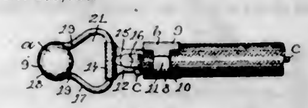
3. In a time lock the combination of a plurality of time movements each having a front dial carrying a tripping pin, a movement bar common to all of said time movements, and yielding means on said movement bar adapted to be engaged by the tripping pins on the dials to move said bar in a direction to release the bolt work.

4. In a time lock, the combination of a plurality of time movements each carrying a tripping pin, a bolt work unlocking device, a movement bar common to all the time movements, means for transmitting motion from the movement bar to the bolt work unlocking device, and yielding parts on the movement bar adapted to be engaged by the tripping pins of the several time movements to move said bar in a direction to release the bolt work.

5. In a time lock, the combination with a plurality of time movements each having a tripping pin, of a movement bar common to all the time movements and a yielding lug for each tripping pin, carried by the said movement bar the said lugs adapted to be engaged by the pins whereby the bar is moved in a direction to release the bolt work.

[Claims 6 to 9 not printed in the Gazette.]

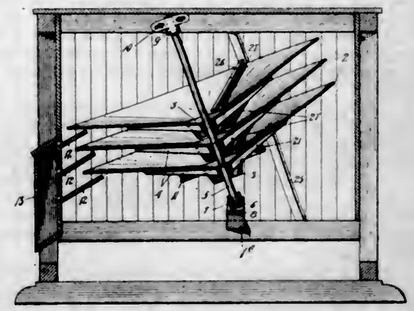
871,535. ELECTRIC-WIRE CONNECTION. FREDERICK B. THATCHER, Providence, R. I. Filed Jan. 31, 1907. Serial No. 355,036.



1. An electric wire terminal consisting of a member constructed of sheet metal and shaped to have a semi-cylindrical portion in one side of which is a slot and from the other side of which extends a strap passing through the slot, a tongue extending outward from the semi-cylindrical portion and shaped to have a transverse tubular end and a hook-shaped portion, and a loop member constructed of spring wire bent to form a semi-circular end, a contracted portion adjacent the semi-circular end, an opening for inserting a binding post connection through the loop and adapted to be secured in the tubular end of the terminal member.

2. An electric wire terminal *b* consisting of a member S constructed from a sheet metal blank shaped and bent to form a semi-cylindrical portion 9 in one side of which is a slot 10 and from the other side of which extends a strap 11, a tongue 12 doubled on itself and shaped to form a transverse tubular end 14, a rivet 15 securing the doubled-over parts of the tongue together, a hook-shaped portion 15 formed on the end of the tongue, and a loop member 17 constructed of spring wire bent centrally to form a semi-circular end 18, then outward at an angle to form the contracted rounded shoulders 19 19, then inwards toward each other to form the straight portions 20 20 adapted to be held in the tubular end 14 of the member S and forming an opening 21, as described.

871,536. SEED-SEPARATOR. EDWARD THOMPSON, Minneapolis, Minn. Filed May 4, 1906. Serial No. 315,176.

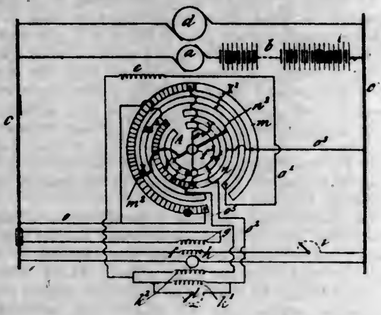


1. In a separator of the kind described, the combination with a rotatively mounted inverted smooth faced conical disk having a central opening and an oblique axis of rotation, the said conical disk being so set that its lowermost portion inclines outward and downward from its axis of rotation, and its uppermost portion inclines inward and downward toward its axis of rotation, whereby said disk during its rotation will discharge the round smooth seed at its lower peripheral portion, and the relatively flat seeds and other substances will be carried upward and discharged through the central opening of said disk, by the action of gravity.

2. In a separator of the kind described, the combination with a rotatively mounted inverted smooth faced conical disk having a central opening and an oblique axis of rotation, the said disk being so set that its lowermost portion inclines outward and downward from its axis of rotation, and its uppermost portion inclines inward and downward toward its axis of rotation, and a brush working over the upper portion of said disk, whereby the round seeds will be discharged at the lower peripheral portion

of said disk, and the relatively flat seeds and other substances will be carried upward by said disk and discharged through the central opening thereof, by the action of gravity and of the said brush, substantially as described.

871,537. VOLTAGE-REGULATOR. MAX J. E. TILNEY, South Kensington, England. Filed Oct. 17, 1905. Serial No. 283,100.



1. In the regulation of electric circuits having varying loads, a dynamo-electric machine and an automatic regulator controlling the field of the said machine and actuated by a motor having three field coils which normally neutralize each other and are so related with each other and the circuit that an increase or decrease of the circuit load produces a movement of the regulator which correspondingly varies the voltage of the dynamo electric machine, and at the same time restores the equilibrium of the motor field; substantially as described.

2. In the regulation of electric circuits having varying loads, an automatic regulator actuated by a motor having three sets of field coils, one set carrying a definite proportion of the circuit load, a second set wound to oppose the first and carrying a current proportional to the circuit voltage, and the third set carrying a current determined by the position of the regulator; substantially as described.

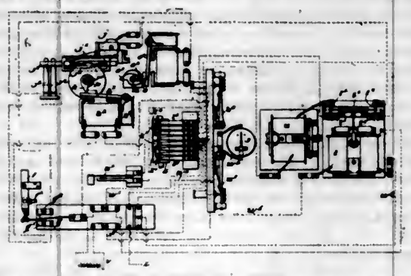
3. In the regulation of electric circuits having varying loads, a dynamo electric machine, a regulator, a motor actuating said regulator, said motor having a field magnet system comprising three sets of coils, one set connected to carry a definite proportion of the circuit load, a second set wound to oppose the first and connected across the circuit to be regulated, and the third set connected to opposite sides of the dynamo-electric machine; substantially as described.

4. In the regulating of electric circuits having varying loads, a dynamo-electric machine connected with the circuit, a regulator controlling the field of said machine, a motor actuating said regulator, said motor having a field magnet system comprising three sets of coils, one set connected to carry a definite proportion of the circuit load, a second set wound to oppose the first set and connected across the circuit to be regulated, and the third set carrying a current which varies in direction and magnitude with the voltage of the dynamo-electric machine; substantially as described.

5. In the regulating of electric circuits having varying loads, a dynamo-electric machine connected across the circuit, a regulator controlling the field of said machine, a motor actuating said regulator said motor having a field magnet system comprising three sets of coils, one set carrying a definite proportion of the circuit load, a second set wound to oppose the first and connected across the load circuit, and a third set wound in two sections, one adapted to assist and the other to oppose the first set of field coils, said sections being alternatively connected to opposite sides of the dynamo-electric machine by the regulator; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

871,538. APPARATUS FOR INSURING SAFETY OF TRAFFIC ON SINGLE LINES OF RAILWAY. EDWARD TYER, Dalston, London, England. Filed Nov. 15, 1905. Serial No. 287,429.



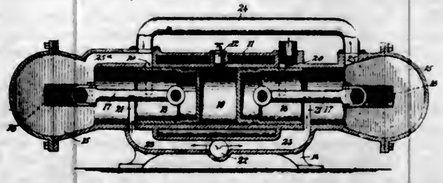
1. Apparatus for working single lines of railway on the staff or tablet system, comprising a tablet magazine, an operating spindle geared therewith, an absolute locking magnet controlling said spindle, a local circuit including said magnet, a relay and line circuit controlling said local circuit from the distant station, and a commutator operating to throw the batteries of the home and distant stations out of unison when the operating spindle is turned to release a tablet; substantially as described.

2. Apparatus for working single lines of railway on the staff or tablet system, comprising a tablet magazine, an operating spindle geared therewith, an absolute locking magnet controlling said spindle, a local circuit including said magnet, a relay and line circuit, a commutator operating to reverse the polarity of the station battery with respect to the line, a permissive locking magnet, and a second spindle controlled thereby and operating when released to turn the commutator; substantially as described.

3. In apparatus of the character herein described, a telltale device comprising two operating shafts, a mechanically released detent controlling one of said shafts, an electrically released detent controlling the other shaft, a disk adapted to be turned in one direction by the rotation of one shaft and in the opposite direction by the rotation of the other shaft, and an indicating device geared with said disk; substantially as described.

4. Apparatus for working single lines of railway on the staff or tablet system, comprising at each station an absolute locking magnet and a permissive locking magnet, and means whereby the circuit of the absolute locking magnet at the distant station is broken during permissive working; substantially as described.

871,539. MULTIPLE-PISTON INTERNAL-COMBUSTION ENGINE. CLARENCE E. VAN AUKEN, Yonkers, N. Y., assignor, by mesne assignments, to Van Auken Motor and Machine Works, a Corporation of New York. Filed Jan. 7, 1905. Serial No. 240,005.



1. An internal combustion engine having a double cylinder, closed chambers communicating, respectively, with each end thereof, opposed pistons operating in the end portions of the cylinder, means connecting the pistons to permit them to move in unison, the cylinder having an inlet port, an exhaust port in each of the opposite end portions, and additional ports adapted to communicate respectively with the said chambers, the inlet and exhaust ports being uncovered by the pistons when in their outer positions and the said additional ports being uncovered by the pistons when in their inward positions, means placing said additional ports in communication with the source of combustible mixture, and walls forming passages from the said closed chambers to the inlet port.

2. An internal combustion engine having a double cylinder, closed chambers communicating, respectively, with each end thereof, opposed pistons operating in the end portions of the cylinder, means connecting the pistons to permit them to move in unison as they reciprocate in opposite directions, the cylinder having an inlet port and an exhaust port, one being located adjacent each end portion, and having additional ports adapted to communicate, respectively, with the said chambers, the inlet and exhaust ports being uncovered by the pistons when in their outer positions and the said additional ports being uncovered by the pistons when in their inner positions, means placing said additional ports in communication with the source of combustible mixture, walls forming a passage from one of said closed chambers around the adjacent cylinder end to the inlet port, and a transfer conduit extending from said passage at a point adjacent to the inlet port to the opposite chamber.

3. An internal combustion engine having a double cylinder, closed chambers communicating, respectively, with each end thereof, opposed pistons operating in the end portions of the cylinder, means connecting the pistons to maintain them in unison as they reciprocate, the cylinder having an inlet port and an exhaust port in its respective end portions and having additional ports adapted to communicate, respectively, with the said chambers, the inlet port and the exhaust port being uncovered by the pistons when in their outer positions and the said additional ports being uncovered by the pistons when in their inner positions, a conduit leading from each of said closed chambers around the adjacent cylinder ends to the inlet port, and means placing the additional ports in communication with the source of combustible mixture consisting in a conduit passing between said ports and having an inlet opening intermediate its ends whereby equally to supply the said chambers.

4. An internal combustion engine having a double cylinder provided with an inlet port, opposed pinions therein, closed compressor chambers respectively at the ends of the cylinders, the engine having an inlet port for each compressor chamber uncovered by the pistons at the end of their inward strokes, means placing said inlet ports in equal communication with the source of fuel mixture whereby to secure maximum fuel charges in said chambers, and means placing both compressor chambers in communication with the inlet port of the working cylinder.

5. An internal combustion engine having a double cylinder provided with an inlet port adjacent one end thereof, an exhaust port adjacent the opposite end thereof, pistons located therein and connected for operation in unison in opposite directions, closed compressor chambers respectively at the ends of the cylinder, said engine having inlet ports for each compressor chamber uncovered by the pistons at the end of their inward strokes, means for delivering a fuel mixture to each of said chambers in equal proportions, and means placing both compressor chambers in communication with the inlet port of the working cylinder.

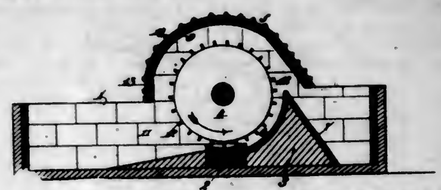
871,540. WASHING OR BEATING ENGINE. SOLOMON R. WAGG, Appleton, Wis. Filed Mar. 13, 1906. Serial No. 305,857.

1. In a Holland engine, a back fall independent of the bed plate of the engine and having a curved and an inclined side, and an abrasive stone working face for the respective sides.

2. In a Holland engine, the combination with a roll and bed plate, a back fall having a curved and an inclined side, and an abrasive stone facing for the respective sides, the facing of the curved side of the back fall having one end contiguous and arranged below the top of the bed plate and in the rear thereof.

3. In a Holland engine, a curb having its inner surface faced with stone.

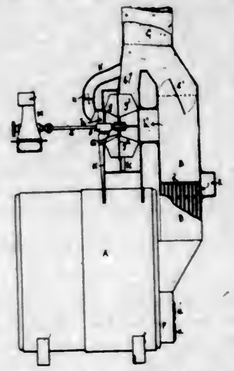
4. In a Holland engine, a curb having its inner surface faced with abrasive stone and one lower edge portion thereof inclined toward the roll.



5. In a Holland engine, in combination with the roll, a curb having its inner surface faced with stone, and a back-fall having its curved and inclined sides also faced with stone.

[Claims 6 to 22 not printed in the Gazette.]

871,541. AIR-DRAFT SYSTEM FOR STEAM-BOILERS. WILLIAM C. WALLACE, Tenafly, N. J., assignor of one-half to John Brown & Company, Limited, Sheffield, England. Filed July 7, 1906. Serial No. 325,140.



1. The combination of a furnace having an air heater in the smoke flue with a duplex fan, flue connections whereby one part of the fan applies suction draft to the gases in the smoke flue above the air heater, and with air connections whereby the other part of the fan forces fresh air to the heater and thence to the furnace, said fan comprising a duplex chamber and a fixed partition and revolving blades and a dividing partition revolving with them.

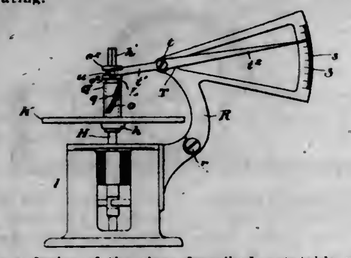
2. The combination of a furnace having an air heater in the smoke flue with a duplex fan, flue connections whereby one part of the fan applies suction draft to the gases in the smoke flue above the air heater, and with air connections whereby the other part of the fan forces fresh air to the heater and thence to the furnace, said fan comprising a duplex chamber and a fixed partition and revolving blades and a dividing partition revolving with them, this dividing partition overlapping the edge of the fixed partition on the fresh air side.

3. The combination of a furnace having an air heater in the smoke flue with a duplex fan, and flue connections to apply suction draft to the gases in the smoke flue above the air heater, and to force fresh air to the heater and thence to the furnace, and a by-pass pipe leading from the smoke flue and opening to the fresh air inlet to the fan and provided with a damper.

871,542. HEMOGLOBINOMETER. ROBERT L. WATKINS, New York, N. Y. Filed Apr. 11, 1906. Serial No. 311,365.

1. In a device of the class described, two contrasting color members adapted to be adjusted relatively to each other so as to expose variable parts of each member, means for rotating the members, and means for indicating the

relative adjustment of the members while said members are rotating.



2. In a device of the class described, rotatable members of contrasting colors, one member being adjustable relative to the other, means for adjusting one member without arresting the members, and means independent of the color members for indicating the relative adjustment of said members.

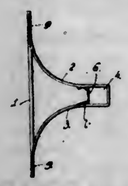
3. In a device of the class described, rotatable members of contrasting colors, said members being in contact and one of them being adjustable relative to the other, means for adjusting one member without arresting the members, and means for indicating the said adjustment.

4. In a device of the class described, rotatable members of contrasting colors, one member having a plurality of slots and the other member being provided with wings which are movable in said slots.

5. In a device of the class described, rotatable members contrasting in color, normally revolving at the same speed, and adjustable relative to one another, means for securing such adjustment while the members are in motion, and means for indicating the relative adjustment of said members.

[Claims 6 to 11 not printed in the Gazette.]

871,543. CURTAIN POLE AND BRACKET. JENNIE WATSON, Allegheny, Pa. Filed May 21, 1907. Serial No. 374,896.



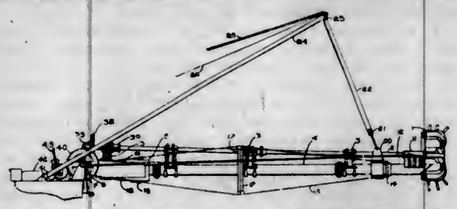
1. The combination with a curtain pole, of brackets each formed from a single piece of metal bent to provide a vertical portion and with supports terminating in a housing for the ends of the pole, a member hinged to one of said supports, a resilient tongue stamped from the other of said supports and yieldably engaging the hinged member for retaining the curtain pole in said housing.

2. A curtain pole bracket constructed from a single piece of metal bent to form a vertical portion and supports terminating in housings adapted to receive the end of a curtain pole, members hinged to one portion of said housings, spaced clefts in the other of said supports and forming resilient tongues for bearing against the hinged members for retaining the curtain pole in said housings.

871,544. DREDGE. JOHN B. WEBBER, Jr., Toledo, Ohio, assignor to Alexander Backus, Toledo, Ohio. Filed Apr. 22, 1907. Serial No. 369,441.

1. A hydraulic dredge having a suction pipe, a rotary head, a driving shaft therefor, a pivotal mounting for the shaft and pipe, and a thrust bearing for the shaft adjacent the mounting.

2. A hydraulic dredge comprising a suction pipe, brackets forming a pivotal mounting for the pipe, a rotary head having its axis extending longitudinally of the pipe, and driving means for the head including a shaft extending through the pivotal mounting.



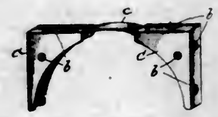
3. A hydraulic dredge comprising a rotary head, a suction pipe having a pivotal mounting, a sleeve engaged by the mounting, and driving means for the head including a shaft mounted in the sleeve.

4. A hydraulic dredge comprising a boat, a plurality of brackets mounted on the boat, a suction pipe, a pivotal mounting for the pipe, and an alining shaft extending through the brackets and the mounting.

5. A hydraulic dredge comprising a rotary head, a continuous driving member, and a manually operated connector to control the transmission to the head.

[Claim 6 not printed in the Gazette.]

871,545. VEHICLE-TIRE. RAY A. WHITE and HARRY R. L. WHITE, Chicago, Ill. Filed June 25, 1906. Serial No. 323,192.



1. In a device of the class described the combination with a tire body of a plurality of transverse lugs thereon and an individual reinforcing member in each lug.

2. In a device of the class described the combination with a tire body of a plurality of lugs on the tread surface thereof and an individual reinforcing member molded in each lug and recessed on its inner side to receive the tire material.

3. A vehicle having outwardly directed lugs on its tread surface and an apertured reinforcing member bonded in each lug.

4. In a vehicle tire the combination with a tire body having a plurality of outwardly directed lugs thereon, of a hollow reinforcing member molded in each lug.

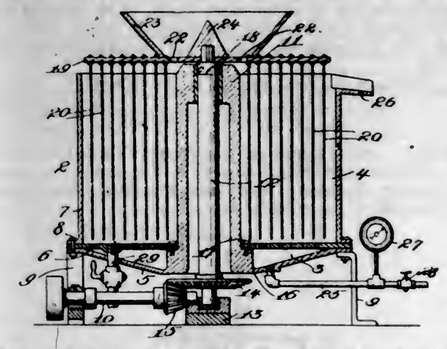
5. In a device of the class described, the combination with a tire body of a plurality of lugs on the tread surface thereof, and a hollow reinforcing member molded in each lug and shaped on its inner face to conform to the curvature of the tire.

[Claims 6 to 8 not printed in the Gazette.]

871,546. CONCENTRATOR. CALVIN H. WILKIE, Douglas, Ariz. Filed Apr. 20, 1907. Serial No. 369,359.

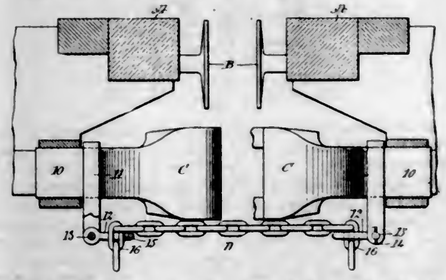
1. In a concentrator, a tank comprising a bottom, a perforated diaphragm, and a shell suitably connected together, the diaphragm and bottom being separated to provide a pressure chamber, and the diaphragm and shell constituting together a separating chamber, said bottom having an imperforate tube rising therefrom, extending through, and supporting the central portion of the diaphragm, a shaft extending through the tube, means connected with one end of the shaft for rotating the same, a cone fitted to the other end of the shaft, an agitating head rotative with the shank and located between the cone and tube, and agitating devices connected with the head and extending into said separating chamber.

2. In a concentrator, a tank comprising a bottom, a perforated diaphragm, and a shell suitably connected together, the bottom having an imperforate tube extending upward therefrom, through and supporting the central portion of the diaphragm, a shaft extending through the tube, driving means connected with the lower end of the shaft, a head connected with the upper portion of the shaft and provided with pendent agitating devices extending into the shell, a cone fitted to the upper end of the



shaft, and a hopper fastened to the head and extending around the cone, the head having openings between the cone and hopper for the entrance of material into the shell.

871,547. CONNECTING DEVICE FOR DISABLED RAILWAY-CARS. ROBERT P. WILLIAMS, Santa Barbara, Cal. Filed Feb. 8, 1907. Serial No. 356,378.



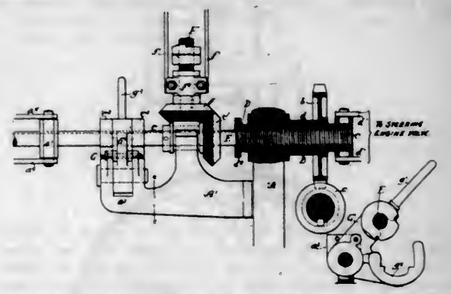
1. An emergency coupling, comprising a yoke having a body portion adapted to rest upon the drawhead and arms depending upon each side of the drawhead, a chain, and a crab in connection with the arms of the yoke and provided with a slot for receiving a link of the chain.

2. An emergency coupling, comprising a yoke having a body portion adapted to rest upon the draw head, and arms adapted to depend upon each side of the draw head, said arms having openings through the ends thereof, a chain crab substantially U-shape in construction and having openings in the arms thereof adapted to register with the openings of the yoke arms, and a pin traversing said openings, said crab having a slot in the body portion thereof, and a chain adapted to be received by the slot.

3. An emergency coupling, comprising a yoke whose body portion is adapted to rest upon the draw head, and the arms thereof to depend upon each side of the draw head, said arms having openings therethrough, a chain crab having openings adapted to register with the openings of the arms, a pin traversing the registering openings, and a chain for engagement by the crab.

871,548. ATTACHMENT FOR STEERING-GEAR. JOHN D. WILLIAMSON, Jr., Philadelphia, Pa., assignor to Williamson Bros. Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 9, 1907. Serial No. 372,734.

1. Mechanism for controlling the valve of a steering engine, including a shaft, means for turning said shaft to operate the valve, and means for longitudinally moving the shaft to similarly operate said valve, with a device for preventing turning of the shaft when the device for longitudinally moving it is in use and vice versa, and means for automatically returning the shaft to its normal position after it has been operated substantially as described.



2. The combination in mechanism for operating the valve of an engine including a longitudinally movable structure connected to said valve, a shaft having a threaded portion engaging said structure, a device for turning said shaft, and a second device for longitudinally moving the shaft, with means for holding said shaft at will to prevent either its longitudinal movement or its rotation as desired, and means for automatically returning the shaft to its normal position after it has been operated substantially as described.

3. The combination of a shaft having supporting means constructed to permit of its rotation, and also of its longitudinal movement, a steering mechanism operated by said shaft, means for longitudinally moving the shaft, and other means for turning said shaft, with means for holding said shaft at will to prevent either its rotation or its longitudinal movement, and means for automatically returning the shaft to its normal position after it has been operated substantially as described.

4. The combination of a shaft having supporting means arranged to permit of its rotation, and also of its longitudinal movement, a steering mechanism operated by said shaft, means for longitudinally moving the shaft, and other means for turning said shaft, with means for holding the shaft at will to prevent either its rotation or its longitudinal movement, said means consisting of an abutment on the shaft, and a piece constructed to engage said abutment in either of two positions, substantially as described.

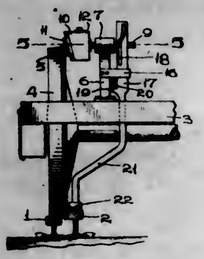
5. The combination of a shaft having a supporting structure constructed to permit of its rotation and also of its longitudinal movement, a steering mechanism operated by said shaft, means for turning the shaft and other means for longitudinally moving it, a collar of irregular form fixed to the shaft, and a lever mounted so that either of its arms may be brought into engagement with said collar, one of said arms being constructed to prevent longitudinal movement of the shaft and the other to prevent its rotation, substantially as described.

871,549. AUTOMATIC CAR-WHEEL-FLANGE GREASER. MENDAL W. WILLSON, St. Louis, Mo., assignor of one-third to James R. Walker and one-third to Lewis P. Leathers, St. Louis, Mo. Filed Jan. 7, 1907. Serial No. 351,146.

1. In a car wheel flange greaser, a grease container mounted to move to and from the flange of a car wheel, there being an opening in the front wall of said container, a vertically disposed roller journaled for rotation in said opening, and a spring actuated follower plate arranged within the container for moving the grease therein toward the roller.

2. In a car wheel flange greaser, a grease container mounted to move to and from the flange of a car wheel, there being an opening in the front wall of said container, a vertically disposed roller journaled for rotation in said

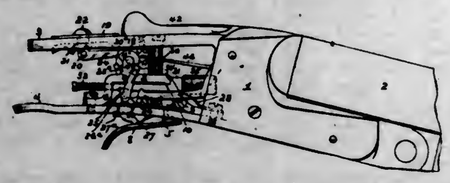
opening, a spring actuated follower plate arranged within the container for moving the grease therein toward the roller, and means actuated by contact with a guard rail adjacent the track rail for shifting the container laterally.



3. In a car wheel flange greaser, a grease container mounted to move to and from the flange of a car wheel, there being an opening in the front wall of said container, a vertically disposed roller journaled for rotation in said opening, a spring actuated follower plate arranged within the container for moving the grease therein toward the roller, and means whereby said container is shifted laterally to cause the roller to contact with the inside of the car wheel flange.

4. In a device of the class described, a horizontally disposed bearing, and a bar arranged for operation therethrough, means actuated by contact with a guard rail adjacent the track rail for shifting the bar laterally through the bearing, a grease container fixed on the outer end of the bar, a vertically disposed contact roller journaled in the outer wall of the container, a follower plate arranged within the container, and an expansive coil spring positioned behind the follower plate for normally forcing the same toward the roller.

871,550. FIREARM. ALFRED H. WORREST, Lancaster, Pa. Filed Aug. 10, 1906. Serial No. 330,036.



1. In a multi-barreled fire-arm, the combination with firing means for both barrels, alternating means, a single trigger for controlling the firing means and alternating means, and trigger-controlled actuating means for the firing means and alternating means, of a device operative by the recoil to positively engage said actuating means and lock the firing means and the alternating means and prevent the operation of the firing and alternating means by the trigger.

2. In a multi-barreled fire arm, the combination with means for firing the barrels and a single trigger for releasing both firing means, of a plunger actuated by the trigger to release a single firing means when said plunger is moved by the trigger, and a locking bolt operative by the recoil of the gun to engage the plunger and prevent the return thereof for a short period.

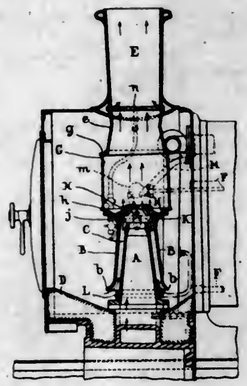
3. In a multi-barreled fire arm, the combination with means for firing the barrels, of a single trigger to release both firing means, a plunger moved by the trigger to release a single firing means at a time, and a locking bolt operated by the recoil of the gun to temporarily lock the plunger and compel it to complete its movement.

4. In a multi-barreled fire arm, the combination with means for firing the barrels, of a single trigger to release both firing means, a plunger moved by the trigger to release a single firing means at a time, and a weighted spring held locking bolt operated by the recoil of the gun to engage the plunger and temporarily lock the plunger.

5. In a multi-barreled fire arm, the combination with means for firing the barrels, of a single trigger to release both firing means, a plunger moved by the trigger to release a single firing means at a time, devices permitting the positioning of either firing means to be operated by the plunger, and a locking bolt operative by the recoil of the gun to engage the plunger and temporarily lock the same.

[Claims 6 to 19 not printed in the Gazette.]

871,551. SMOKE-BOX OF LOCOMOTIVE-ENGINE AND SIMILAR BOILERS. SAMUEL S. YOUNGHUSBAND, Darlington, England. Filed July 25, 1906. Serial No. 327,664.



1. In ejector apparatus for effecting the removal of the ashes from the smoke-box of a locomotive boiler, the combination of a blast pipe, a petticoat pipe surrounding the blast pipe at a distance therefrom, and a smoke-box inclosing the two pipes and having a hopper-shaped floor, the blast pipe being mounted on the lower part of the floor, whereby the cinders are caused to collect about the lower end of the petticoat pipe and the cinders thus collected are caused to pass between the two pipes by the action of the blast and become disintegrated before being finally ejected, substantially as specified.

2. In ejector apparatus for effecting the removal of the ashes from the smoke-box of a locomotive boiler, the combination of a blast pipe, a petticoat pipe surrounding the blast pipe at a distance therefrom, a smoke-box inclosing the two pipes and having a hopper-shaped floor, and a perforated steam pipe at the lower end of the blast pipe, whereby a supplementary forced draft is brought into operation at the lower end of the petticoat pipe for assisting in causing the cinders to pass between the two pipes and become disintegrated before being ejected, substantially as specified.

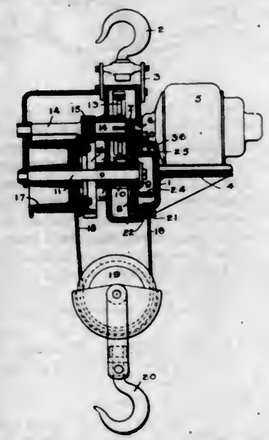
3. In ejector apparatus for effecting the removal of the ashes from the smoke-box of a locomotive boiler, the combination of a blast pipe, a petticoat pipe surrounding the blast pipe at a distance therefrom, and provided at its upper end with a number of perforations connected with an annular conduit formed in the said upper end whereby an additional forced blast is brought into operation at the upper end of the petticoat pipe for assisting in causing the cinders to pass between the two pipes and become disintegrated before being ejected, substantially as specified.

4. In ejector apparatus for effecting the removal of the ashes from the smoke-box of a locomotive boiler, the combination of a blast pipe, a petticoat pipe surrounding the blast pipe at a distance therefrom, and a perforated water pipe at the upper end of the petticoat pipe for insuring the complete extinction of the cinders which have been disintegrated between the two pipes, before being finally ejected substantially as specified.

5. Ejector apparatus comprising a blast pipe, a petticoat pipe surrounding the blast pipe at a distance therefrom and provided with a perforated annular tray at its upper end, a downwardly projecting chimney portion, a circular cage connecting the upper end of the petticoat pipe with the chimney portion, and a smoke-box having a hopper-shaped floor, the blast pipe being arranged in the center of the said floor so that the cinders are caused to collect around the blast pipe and be disintegrated between the two pipes and ejected substantially as specified.

[Claims 6 to 9 not printed in the Gazette.]

871,552. SAFETY-BRAKE FOR HOISTING DEVICES. GEORGE A. ARMINGTON, Wickliffe, Ohio. Filed Jan. 15, 1907. Serial No. 352,381.



1. In a hoisting device, a drum, means through which said drum is driven, a brake band adapted to frictionally engage said means, a rod connected with one end of said brake band, a strut arm connected to said rod, a cable attached at one of its ends to said drum and at its other end to said strut arm, and means for arresting the motion of said rod for the purpose specified.

2. In a hoisting device, a drum, a gear through which said drum is driven, a flange on said gear, a brake band adapted to frictionally engage said flange, a rod connected with one end of said brake band, a strut arm connected to said rod, a cable attached at one of its ends to said drum and at its other end to said strut arm, and means for arresting the motion of said rod, for the purpose specified.

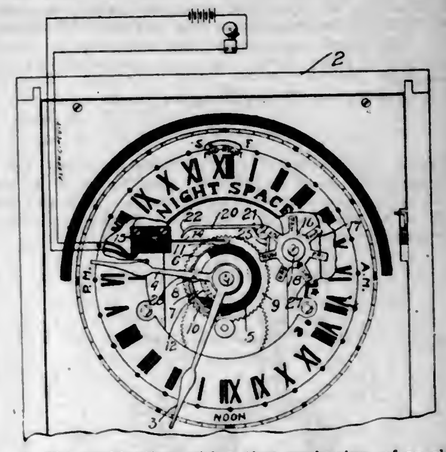
3. In a hoisting device, a driven member, a coiled brake band for frictionally engaging said member, stationary stops, means on said brake band for engaging with said stops, a hoisting cable, and connections between said hoisting cable and said brake band.

4. In a hoisting device, a casing, a driven gear in said casing, a flange on said gear, a coiled brake band for frictionally engaging said flange, stationary stops projecting from the casing, means on said brake band for engaging with said stops, a hoisting cable, and connections between said hoisting cable and said brake band.

5. In a hoisting device, a driven member, a coiled brake band for frictionally engaging said member, a projection on one end of said brake band, a second projection intermediate the ends of said brake band, stationary stops between said projections, a hoisting cable, and connections between said hoisting cable and the brake band, whereby the weight of the load on the cable will normally tighten said band, the construction being such that when the member is driven in one direction, one of said projections will engage with its stop to loosen the band and when the member is driven in the opposite direction, the other projection may engage with its stop to again loosen the band sufficiently to permit the load to be lowered without unnecessary friction.

[Claims 6 to 10 not printed in the Gazette.]

871,553. ELECTRIC TIME-ALARM. FREDERICH J. ARNDT, Minneapolis, Minn., assignor to American Bank Protection Co., Minneapolis, Minn. Filed Aug. 1, 1906. Serial No. 328,710.



1. The combination, with a time mechanism, of an electric circuit, a primary circuit closer having brushes normally insulated from one another and a rotary disk having insulating and conducting surfaces with which said brushes alternately engage, the length of said conducting surface determining the time during which the circuit is closed through said time mechanism, and a secondary circuit closer including a pivoted spring arranged to bear on said brushes and adapted to close the circuit by day at predetermined intervals and when the circuit is broken through said primary circuit closer.

2. The combination, with a time mechanism, of an electric circuit, a primary circuit closer having brushes normally insulated from one another, and a rotary disk having insulating and conducting surfaces with which said brushes alternately engage, the length of the conducting surface determining the time during which the circuit is closed through said time mechanism, the circuit closing device having a uniform regular movement during six days of the week and an abnormal movement on the seventh day, and means actuated from the hour hand post for operating said circuit closing device and imparting a normal and abnormal movement thereto, substantially as described.

3. The combination, with a time machanism, of an electric alarm circuit, a primary circuit closer arranged to close the circuit through said mechanism by night and open it by day, an arm connected with the hour hand post a revolving device having means representing the days of the week and located in the path of said arm and actuated thereby one step with each revolution of said hand, and means controlled by the movement of said revolving means for closing said alarm circuit through said time mechanism once with every revolution of said revolving means or every seventh day.

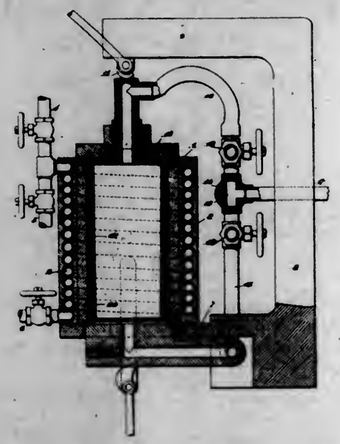
4. The combination, with a time mechanism, of an electric alarm circuit, a primary circuit closer comprising a rotary disk having insulating and conducting surfaces and brushes forming the terminals of said alarm circuit arranged to bear on said insulating and conducting surfaces, the length of said conducting surface determining the time during which the circuit is closed through said time mechanism, said disk being adjustable to permit the hour in which the circuit is first closed through said mechanism to be varied, and a secondary circuit closer ar-

ranged to close the circuit by day at predetermined intervals and when the said circuit is broken through said primary circuit closer.

5. The combination, with a time mechanism, of an electric alarm circuit, a primary circuit closer arranged to close the circuit through said mechanism by night and open it by day, a star wheel located near the hour hand post and having a series of prongs representing the days of the week and engaged by means on said post and moved one step with each revolution of the hour hand, and means controlled by the movement of said star wheel for closing the alarm circuit through said time mechanism at predetermined intervals during the day, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

871,554. METHOD OF DUPLICATING SOUND-RECORDS. JONAS W. AYLSWORTH, East Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Dec. 6, 1905. Serial No. 290,540.



1. A process of duplicating sound records which includes introducing within a hollow matrix a tubular blank of impressionable material, introducing within the blank a hollow flexible expander, exhausting the air from the matrix and from the expander and expanding the blank outwardly into engagement with the matrix, substantially as set forth.

2. A process of duplicating sound records which includes introducing within a hollow matrix a tubular blank of impressionable material, introducing within the blank an expander, exhausting the air from the matrix and at the same time preventing the expansion of the expander, and then expanding the blank outwardly into engagement with the matrix by means of the said expander, substantially as set forth.

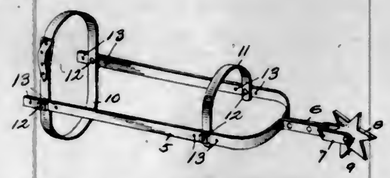
3. A process of duplicating sound records which includes introducing within a hollow matrix a tubular blank of impressionable material, introducing within the blank a hollow flexible expander, exhausting the air from the matrix and from the expander and admitting air into the expander to expand the blank into engagement with the matrix, substantially as set forth.

4. A process of duplicating sound records which includes introducing within a hollow matrix a tubular blank of impressionable material, introducing within the blank a hollow flexible expander, exhausting the air from the matrix and from the expander, and forcing the air under pressure into the expander to expand the blank into engagement with the matrix, substantially as set forth.

5. A process of duplicating sound records which includes introducing within a hollow matrix a tubular blank of material which may be softened by heat, introducing within the blank a hollow flexible expander, exhausting the air from the matrix and from the expander, heating the matrix to soften the blank and expanding the blank outwardly into engagement with the matrix, substantially as set forth.

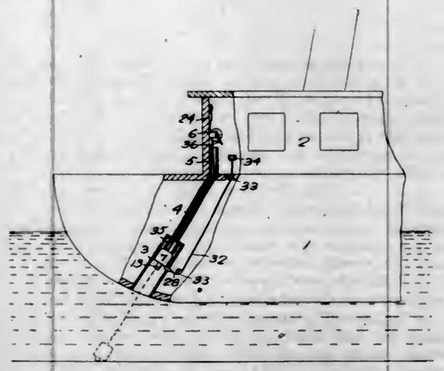
[Claims 6 and 7 not printed in the Gazette.]

871,555. ANIMAL-MUZZLE. CHARLEY E. BALLARD, Guthrie Center, Iowa. Filed June 20, 1907. Serial No. 379,942.



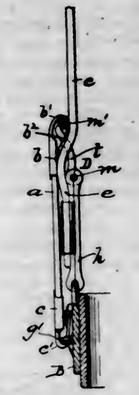
An animal muzzle comprising a pair of oppositely-disposed cheek-bars, having their forward ends bent inwardly into contact with each other, the extremities of said bent portions being perforated and bent outwardly, away from each other; a bolt fitted in said perforations; a multi-pointed pricking device rotatably mounted upon said bolt between the outwardly bent extremities of said cheek-bars; a neck strap connecting said cheek-bars at their rear ends; and a nose strap connecting said cheek-bars adjacent the inwardly bent portions thereof.

871,556. SHOAL-INDICATOR. WILLIAM BANGS, Fort Fred Steele, Wyo. Filed Mar. 25, 1907. Serial No. 364,467.



A device of the type set forth, comprising the combination with a vessel, of a well, a reel, a cable connected to said reel and having two insulated electric wires therein, a battery, wires leading from said battery to said reel and having electrical connection with respect to the first named wires, an electrical arm included in said battery wires, a lead carried upon the end of said cable and including a fixed contact member and a movable contact member, said first named wires having respective connection with said members, a projected stem carried by said movable contact member, a push button carried by said stem, a spring for holding said movable member normally out of engagement with said stationary member, a sliding catch projected through said well and designed for engagement with said lead to sustain the same in said well, means for withdrawing said catch from said well, a spring for forcing said catch into said well, and springs arranged in the upper end of said well and adapted to bear upon said lead.

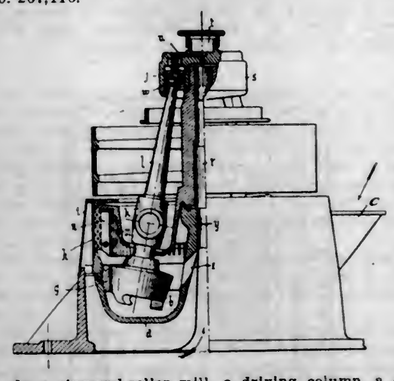
871,557. COMBINED STRAP AND PROTECTOR FOR HARNESS-BUCKLES, &c. WILLIAM E. BARBER, Hope Valley, R. I. Filed Sept. 11, 1906. Serial No. 334,144.



1. As an improved article of manufacture the herein described combined strap and buckle protector, the same consisting of a comparatively short flexible body portion having each end thereof terminating in a hook-shaped clip, one of which is perforated and adapted when in use to be interposed between the usual buckle-bar and the adjacent or front side of the strap from which the buckle is suspended and to receive in said perforation the tongue of the buckle.

2. The combined strap and buckle protector herein described, the same comprising a short flexible body portion having its lower end adapted to be detachably connected to one of the members of a harness, and having its upper part apertured and bent rearwardly, so that when in use said part is adapted to lie between the bar of a buckle and the adjacent face of the strap from which the buckle is suspended and at the same time receive the buckle's tongue through said aperture, substantially as hereinbefore described.

871,558. RING-AND-ROLLER MILL. EMIL BARTHELMESS, Neuss, Germany. Filed June 26, 1905. Serial No. 267,116.

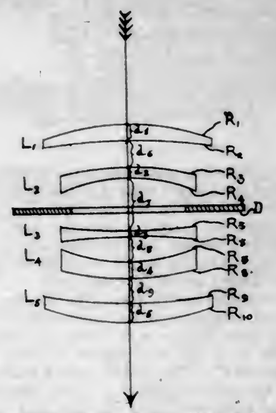


1. In a ring-and-roller mill, a driving column, a cover mounted on said column and having depressions therein, fan-blades mounted substantially at the periphery of said cover and forming a wall, roller- or pendulum-shafts extending through slots in the depressed parts of said cover, bearings for said shafts arranged directly above said cover and in said depressions, and grinding bodies or rollers mounted on said shafts directly below said cover.

2. In a ring-and-roller mill, a driving column, a cover mounted on said column and having depressions therein, roller- or pendulum-shafts extending through slots in the depressed parts of said cover, bearings for said shafts arranged directly above said cover and in said depressions, and grinding bodies or rollers mounted on said shafts directly below said cover.

3. In a ring-and-roller mill, a bearing-head, a driving-column carrying said bearing-head, roller-shafts having upper spherical ends working in said bearing-head, lower bearings for said shafts, a cross-piece on said driving column, knife-edges engaging said cross-piece and buffer-springs between said lower bearings and said cross-piece.

871,559. PHOTOGRAPHIC LENS. CONRAD BECK and HORACE C. BECK, London, England. Filed May 7, 1907. Serial No. 372,309.



1. A compound photographic lens spherically, chromatically and astigmatically corrected, consisting of two positive and three negative lenses, all separated by air spaces, two of which air spaces are of the shape of a positive lens and two of which are of the shape of a negative lens, the two more powerful of the three negative lenses being meniscus shaped and being made of a glass with greater dispersive power than that used in the positive lenses, the curvature of the positive lenses facing the negative lenses being very slight.

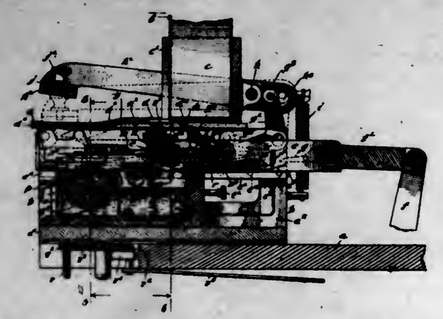
2. A compound photographic lens spherically, chromatically and astigmatically corrected, consisting of two positive and three negative lenses, all separated by air spaces, two of which air spaces are of the shape of a positive lens and two of which are of the shape of a negative lens, the lenses being arranged in two combinations, with a diaphragm between them, one combination consisting of a meniscus positive lens and a meniscus negative lens, the latter having a higher dispersion and a higher refractive index than the meniscus positive lens, the other combination consisting of a meniscus positive lens and two negative lenses, one at least of which latter is meniscus, both of which have a higher refractive index than the meniscus positive lens, and one of which has a higher dispersion and the other approximately the same or a lower dispersion than the meniscus positive lens, substantially as described.

871,560. ADDRESSING-MACHINE. CHARLES A. BELKNAP, New York, N. Y., assignor to Standard Addressing Machine Company, New York, N. Y., a Corporation of New York. Filed Jan. 30, 1907. Serial No. 354,797.

1. In an addressing machine, the combination of a frame provided with guide-rails, a carriage guided on said rails, an impression-roll on the carriage, card-guides, bearing balls between the carriage and the rails, card-forwarding means mounted on the carriage, and a platen against which said roll acts.

2. In an addressing machine, the combination of a

frame provided with guide-rails, a carriage guided on said rails, an impression-roll on the carriage, card-guides, bearing balls between the carriage and the rails, ball-retaining strips between the opposed surfaces of the guide-rails and carriage and having openings to receive the balls, card-forwarding means mounted on the carriage, and a platen against which said roll acts.



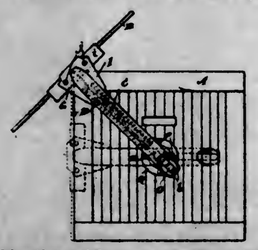
3. In an addressing machine, the combination of a frame provided with guide-rails, a carriage guided on said rails, an impression-roll on the carriage, card-guides, bearing balls between the carriage and rails, said carriage and rails having longitudinal grooves forming raceways for the balls, card-forwarding means mounted on the carriage, and a platen against which said roll acts.

4. In an addressing machine, the combination of a frame provided with card-guides, guide-rails, means adapted to bear on both sides of a card and for making an imprint through it, a carriage guided on said guide-rails and actuating said imprint means, card-forwarding means mounted on the carriage, bearing balls between the carriage and the guide-rails, said carriage and rails having longitudinal grooves forming race-ways for the balls, and ball-retaining strips between the opposed surfaces of the guide-rails and the carriage.

5. In an addressing machine, the combination of card-guides constructed to engage opposite portions of the cards and to prevent displacement except in the direction of feeding movement of the cards, a carriage, a card catcher pivoted on the carriage, means acting directly on the card catcher for throwing it into engagement with the edges of the cards, and means separate therefrom and acting directly on the card catcher for positively disengaging the catcher from a card.

[Claims 6 to 24 not printed in the Gazette.]

871,561. DEVICE FOR HOLDING THE LIDS OF BOXES, CASES, AND SIMILAR RECEPTACLES IN PLACE. ALFRED D. BENTLEY, Toronto, Ontario, Canada. Filed Feb. 23, 1906. Serial No. 302,429.



1. The combination with a receptacle, and the lid therefor, of a sleeve provided with a longitudinal slot, attached at its upper end to each end of said lid; a spring within said sleeve and attached thereto and to pivoting means attached to each end of said receptacle, and which pivoting means must operate in the longitudinal slot in said sleeve, and whereby said sleeve is pivoted to said receptacle and in such a manner that it may have a combined longitudinal and swinging movement, under the influence of said spring which exerts only a contracting force and so constantly dominates said lid so as to keep it close against the receptacle.

2. The combination with a receptacle, and the lid therefor, of a sleeve provided with a longitudinal slot, attached at its upper end to each end of said lid; a spring within said sleeve and attached thereto and to a disk attached to each end of said receptacle; a stud secured to said disk and operating in said longitudinal slot in said sleeve, whereby said sleeve is pivoted to said receptacle and in such manner that it may have a combined longitudinal and swinging movement under the influence of said spring which exerts only a contracting force and so constantly dominates said lid so as to keep it close against the receptacle.

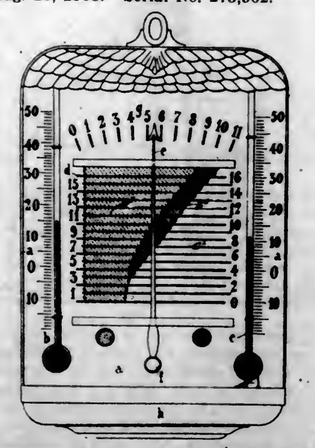
3. The combination with a receptacle, and the lid therefor, of a sleeve provided with a longitudinal slot, and having its lower end partially closed and having its upper end flared outward; an angle plate secured to each end of said lid and to which the upper end of said sleeve is secured; a spring within said sleeve and attached thereto and to a disk attached to each end of said receptacle; a stud secured to said disk and operating in said longitudinal slot in said sleeve, whereby said sleeve is pivoted to said receptacle and in such a manner that it may have a combined longitudinal and swinging movement under the influence of said spring which exerts only a contracting force and so constantly dominates said lid so as to keep it close against the receptacle.

4. A device of the class described, comprising a sleeve provided with a longitudinal slot and being constructed at its upper end with an attaching-portion or head; a disk; a stud secured thereto or formed a part thereof and operating in said longitudinal slot, and a spring within said sleeve and attached thereto and to said stud.

5. A device of the class described, comprising a sleeve provided with a flared upper end and also provided with a longitudinal slot throughout the major portion of its length; an angle-plate to which the upper end of said sleeve is secured; a disk; a stud secured thereto or formed a part thereof and operating in said longitudinal slot, and a spring within said sleeve and attached thereto and to said stud.

[Claims 6 and 7 not printed in the Gazette.]

871,562. APPARATUS FOR ASCERTAINING THE PROBABILITY OF FROST. LUCIEN H. BERNEL, otherwise known as BERNEL BOURETTE, Paris, France. Filed Aug. 10, 1905. Serial No. 273,562.



1. An apparatus for indicating the probability of frost, and adapted for use with the wet and dry thermometers of a psychrometer comprising a base having horizontal lines numbered to correspond with the divisions of the dry thermometer, a scale above the horizontal lines numbered to correspond with the divisions of the wet thermometer, and a pointer pivoted to the base below the horizontal lines, the free end of the pointer coöperating with the scale above the horizontal lines, the space covered by the horizontal lines being divided into zones, one of said zones including intersections of the pointer and the horizontal lines corresponding to the divisions of the wet and dry thermometers which occurring together would indicate the certainty of frost, another including intersections showing the probability of frost, and a third including intersections showing the certainty of no frost.

2. An apparatus for indicating the probability of frost, and adapted for use with the wet and dry thermometers of a psychrometer, comprising a base having horizontal lines numbered to correspond with divisions of the dry thermometer, and a scale above the lines indicating divisions of the wet thermometer, and a needle pivoted to the base for coöperating with the scale, the portion of the base having the horizontal lines being divided into zones, said zones including respectively the intersections of the needle and the horizontal lines corresponding to the divisions of the wet and dry thermometers, which occurring together would indicate the certainty of frost, the probability of frost, and the certainty of no frost.

3. An apparatus for indicating the probability of frost, and adapted for coöperation with the dry and wet thermometers of a psychrometer, comprising a table having graduated horizontal lines, a scale above the horizontal lines, a needle pivoted on the base and coöperating with the scale, the table being divided into zones in such a way that if the meeting point of the horizontal lines, the number of which is the one indicated by the dry thermometer, and of the needle, the end of which is on the number of the scale indicated by the wet thermometer, falls in one or the other zones, the apparatus indicates that there will be sure frost, probability or not of frost.

871,563. RAIL WITH TRIPLE HEAD. ANDRÉ V. P. M. BEATHIER, Constantinople, Turkey. Filed Feb. 24, 1906. Serial No. 302,809.



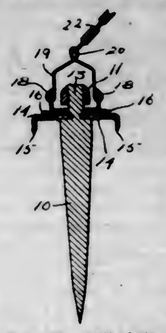
1. The combination with the three headed rail of a sleeper intended to support the rail of a ground piece constituting the intermediary between the rail and the sleeper and having such a form as to fit the outlines of the hollow of the rail which bears upon the ground plate, of two grooves provided in the sleeper and adapted to receive the two lower heads of the rail, the ground plate preventing the contact between these two heads and the sleeper, substantially as and for the purpose set forth.

2. The combination with the three headed rail and a sleeper, of a ground plate and grooves provided in the sleeper, of attaching means between the ground plate and the sleeper.

3. The combination with the three headed rail, the sleeper provided with grooves, the ground plate of attaching means between the rail and the sleeper, these means traversing one of the lower webs of the rail.

871,564. TETHER-PIN. GILMAN E. BROWN, Sandown, N. H. Filed Jan. 28, 1907. Serial No. 354,533.

A tether-pin provided with horizontally extended radial arms at its upper end, the free end portions or terminals of the arms being bent down at right angles to the arms to engage the ground, a neck at the upper end of the pin, a head upon the neck, a washer plate on the neck above the said arms, riveted thereto and bent downward between the arms, a bail-plate pivotally engaged with said



neck, a ball pivoted to the bail-plate, and a tether connected to the ball as shown and described.

871,565. TRENCHING-HOE. EVERETT B. CAHOON, Akron, Ohio. Filed Aug. 15, 1907. Serial No. 388,657.

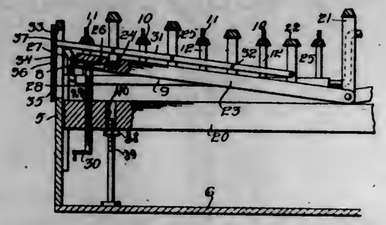


1. A device of the character described comprising a handle, a member fixedly secured in the end thereof having a transverse slot through the free end thereof and further provided with a threaded opening extending to said slot through which may be passed a holdfast device, a cross-bar mounted in said slot provided with a plurality of openings at each end thereof, a downwardly slightly crescent-shaped cutting blade detachably secured to one end of said cross-bar by holdfast devices passed through a portion of said openings, and an inwardly-inclined rearwardly-curved crescent-shaped cutting blade detachably secured to the opposite end of said cross-bar.

2. A device of the character described comprising a handle, a member fixedly secured in the end of said handle having a transverse slot and further provided with means for frictionally engaging a member positioned in said slot, a cross-bar mounted in said slot having one end thereof bent and provided with a plurality of slotted openings at each end thereof, a downwardly-extending cutting blade mounted on each end of said bar and detachably secured thereto by means of holdfast devices.

3. A device of the character described comprising a handle, a member fixedly secured in the end thereof having a transversely-arranged slot near the free end thereof, means carried by said member for fixedly securing a cross-bar carried by said member, a cross-bar shiftably mounted in said slot provided with a plurality of openings adjacent each end thereof, a cutting blade secured to each end of said cross-bar, and holdfast devices extending through the openings in the ends of said bar for detachably securing said blades to said bar.

871,566. SHAKING MECHANISM FOR SEPARATORS. FRANK CHIPERA and THOMAS CHIPERA, Breckenridge, Minn. Filed Aug. 16, 1906. Serial No. 330,851.



1. A shaking mechanism comprising a bed, a series of spaced parallel rake bars supported therein for reciprocating movement, means for reciprocating said rake bars, a second series of rake bars disposed alternately between the bars of said first named series and adapted to be held stationary, and means for simultaneously adjustably moving said last named bars to vary the transverse angular plane thereof as a series with relation to said first named bars.

2. A shaking mechanism comprising a bed, a series of spaced parallel rake bars supported therein for reciprocating movement, means for reciprocating said rake bars, a second series of rake bars disposed alternately between the bars of first named series and adapted to be held stationary, means for effecting a simultaneous vertical adjustment of said last named bars, and independent means for simultaneously adjustably moving said last named bars to vary the transverse angular plane thereof as a series with relation to said first named bars.

3. A shaking mechanism comprising a bed, a series of spaced parallel rake bars supported therein, means for reciprocating said rake bars, a second series of rake bars, disposed alternately between the bars of said first named series and adapted to be held stationary, means for simultaneously adjustably moving said last named bars to vary the angular plane thereof as a series with relation to said first named bars, and means for guiding said last named bars individually in a vertical plane of movement during the action of said adjusting means.

4. A shaking mechanism comprising a bed, a series of spaced parallel rake bars supported therein for reciprocating movement, means for reciprocating said rake bars, a transverse pivoted beam, a second series of rake bars supported from said beam and disposed alternately between the bars of first named series, and means for moving said beam to selected positions about its pivot.

5. A shaking mechanism comprising a bed, a series of spaced parallel rake bars supported therein for reciprocating movement, means for reciprocating said rake bars, a transverse pivoted beam, standards pivoted at their lower ends to said beam at points between said rake bars, rake bars supported on said standards, a transverse bar having pivotal connection along its body portion with each of said standards, said bar having a projecting end, means for moving said beam to selected positions and means for guiding the movement of the projecting end of said transverse bar in a vertical plane during the action of said adjusting means.

871,567. LOADING-HATCHWAY FOR SHIPS. JEP CLOSTER, Apenrade, Germany. Filed June 19, 1905. Serial No. 266,082.



In a ship's hatch or cargo-port the combination with the end transverse flanges, of longitudinal flanges each of the upper edges whereof have at their middle parts a higher part arranged parallel to the ship's deck, while the other parts of the said lateral flanges are sloping on both sides from these higher parts towards the extreme transverse flanges of the hatch and of a transverse platform arranged on and rigidly secured to the said higher parallel parts of the side flanges of the hatch, substantially as and for the purpose set forth.

871,568. CONCRETE-FLOOR STRUCTURE. FRED H. DANIELS, Worcester, Mass. Filed June 2, 1906. Serial No. 319,841.



1. A concrete floor structure having beams, and a metal reinforcement having both compression and tension members, the same consisting of upper flexible reinforcements embedded in the concrete and extending over the beams, and lower flexible reinforcements tied to the upper reinforcements at the central portion of the floor span, substantially as described.

2. A concrete floor structure having metal beams embedded in the concrete beams which extend below the intermediate portions of the floor structure, and a metal reinforcement for said concrete structure having both compression and tension members, the same consisting of upper flexible metal reinforcements embedded in the concrete and extending over the beams, and lower flexible reinforcements tied to the upper reinforcements at the central portion of the floor spans, and having their end portions carried downwardly into the concrete beams, substantially as described.

3. A concrete floor structure having metal beams embedded in the concrete beams which extend below the intermediate portions of the floor, supporting members resting on the metallic beams, and a metal reinforcement for said concrete structure having both compression and tension members, the same consisting of upper flexible reinforcements extending over the upper edges of the supporting members and near the floor surface at such points, and lower reinforcements tied to depressed portions of the upper reinforcements at the central portions of the floor spans, substantially as described.

871,569. NECKTIE. CHARLES W. T. DAVIES, New York, N. Y. Filed Mar. 6, 1907. Serial No. 360,957.



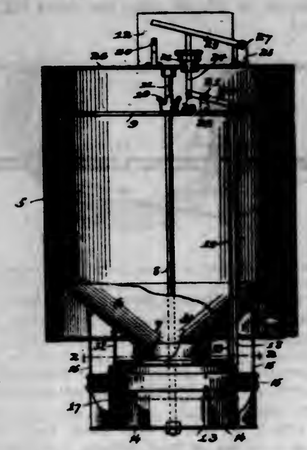
1. A necktie having an elastic, self-adjusting neckband, tying ends, and retainers located at the junction of the neckband and tying ends.

2. A necktie having a closed elastic self-adjusting neckband, tying ends, and retainers located at the junction of the neckband and tying ends.

3. A necktie having a neckband equipped with an elastic member connected thereto by stitching applied lengthwise of the neckband and elastic member when the elastic member is under tension, tying ends, and retainers located at the junction of the neckband and tying ends.

4. A necktie having an elastic self-adjusting neckband, tying ends, and hooks located at the junction of the neckband and tying ends.

871,570. CARBID-FEEDING DEVICE. AUGUSTINE DAVIS, Chicago, Ill., assignor to Davis Acetylene Company, Elkhart, Ind., a Corporation of South Dakota. Filed June 4, 1906. Serial No. 320,058.

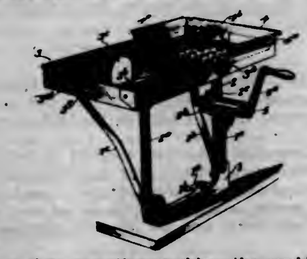


1. The combination with a carbid feed hopper having a discharge throat and a rotary feed disk mounted horizontally below the lower end of said throat, of a sleeve loosely surrounding said throat, means mounted on and externally of said hopper for moving said sleeve into either operative or inoperative position when the hopper is closed, and connections between said actuating means and said sleeve.

2. The combination with a carbid-feed hopper having a discharge throat and a rotary feed-disk mounted horizontally below the lower end of said throat, of a sleeve loosely surrounding said throat, an actuating lever mounted on and externally of the carbid-hopper, and connections between said lever and said sleeve whereby the latter may be raised above the annular space between the lower end of said discharge-throat and feed-disk.

3. The combination with a carbid-feed hopper having a discharge-throat and a rotary feed-disk mounted horizontally below the lower end of said throat, of a sleeve loosely surrounding said throat, an actuating lever mounted on and externally of the carbid-hopper, and lever and link connections between said lever and said sleeve whereby, upon depressing said actuating lever, said sleeve may be raised above the annular space between the lower end of said discharge-throat and feed-disk.

871,571. SHAKING-SIEVE. JOHN F. DELANY, Colona, Ill. Filed Jan. 18, 1907. Serial No. 352,981.



1. In a sieve operating machine, the combination of a base, a hopper-shaped pan, spring uprights and inclined braces supporting the pan on the base, a knocker-cam adapted to engage one of the spring uprights at a point below the pan, and means for rotating said knocker.

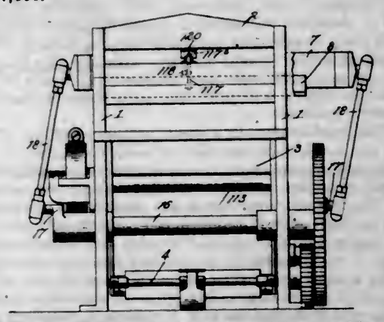
2. In a sieve operating machine, the combination of a base, a pan having a hopper-shaped bottom, upright springs and inclined braces supporting the pan on the base, and means for vibrating said pan; with a removable sieve adapted to be placed in the pan.

3. In a sieve operating machine, the combination of a base, a hopper-shaped pan, spring uprights and inclined braces supporting the pan on the base, a knocker-cam adapted to engage one of the spring uprights at a point below the pan, and means for rotating said knocker; with a removable pan-like sieve adapted to be placed in the hopper.

4. In a sieve operating machine, the combination of a base, provided with a standard; a rotatable shaft journaled in said standard, a knocker on said shaft, a hopper having a discharge opening at one side, upright springs connected to the base and hopper, one of said springs engaging the knocker, and inclined brace springs also connected to the base and hopper.

5. In a sieve operating machine, the combination of a base, provided with a standard; a rotatable shaft journaled in said standard, a knocker on said shaft, a hopper having a discharge opening at one side, upright springs connected to the base and hopper, one of said springs engaging the knocker, and inclined brace springs also connected to the base and hopper; with a removable pan-like sieve adapted to be placed in the hopper, and means for preventing rattling of the sieve in the hopper.

871,572. PAPER-CUTTING MACHINE. TALBOT C. DEXTER, Pearl River, N. Y. Filed Aug. 7, 1907. Serial No. 387,400.



1. The combination in a paper cutting machine, of a paper holding clamp comprising two vertically movable parts or members, power operating mechanism for one of said parts or members, manually operated mechanism for the other part or member, and a gravity coupling hook freely journaled upon one member and adapted to engage the other member.

2. In a paper cutting machine, the combination of the upper and lower clamping bars or members, independent operating means for said clamping bars or members, a coupling hook freely journaled upon one of said members and adapted to automatically engage the other of said members, and a controlling bracket arm projecting from the machine frame and adapted to engage said hook for moving it into released or uncoupled position.

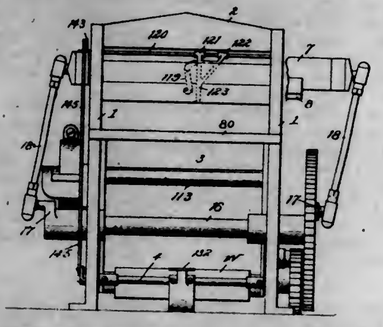
3. In a paper cutting machine, the combination of the upper and lower clamping bars or members arranged to move vertically toward and away from the pile upon the supporting table, a vertically arranged hook freely journaled upon the upper bar or member, a latching shoulder upon the lower bar or member with which said hook is adapted to engage, and a controlling arm mounted upon the machine frame above said hook and adapted to engage the hook when the clamp bars or members are in their elevated position to move said hook into released position.

4. In a paper cutting machine, the combination of the upper and lower clamping bars or members, a coupling hook pivotally mounted upon the upper member and adapted to engage the lower members, and means upon the upper member adapted to hold the hook in disengaged position.

5. In a paper cutting machine, the combination of the

upper and lower clamping bars or members, a coupling hook pivotally mounted upon the upper member and adapted to engage the lower member, and a spring clip mounted upon the upper member and adapted to engage the hook and retain it in released position.

871,573. PAPER-CUTTING MACHINE. TALBOT C. DEXTER, Pearl River, N. Y. Filed Aug. 24, 1907. Serial No. 389,986.



1. The combination, in a paper cutting machine, of a paper holding clamp comprising two vertically movable parts or members, independent operating means for each of said parts or members, a gravity coupling hook pivotally mounted upon one of said members normally engaging the other of said members, and manually operated means adapted to engage said hook and move it into released or uncoupled position.

2. The combination, in a paper cutting machine, of the upper and lower clamping bars or members, means for operating said clamping bars or members, a coupling hook pivotally mounted upon one of said members and movable upon its pivot transversely of the machine, a pin or lug upon the other of said members with which said hook engages, and a manually operated bracket arm movable transversely of the machine to engage and uncouple said hook.

3. In a paper cutting machine, the combination of the upper and lower clamping bars or members, means for operating said clamping bars or members, a coupling hook pivotally mounted upon one of said members and normally engaging the other of said members, and a bracket arm suspended from a point above the clamping bars or members and projecting downwardly in operative relation to said hook.

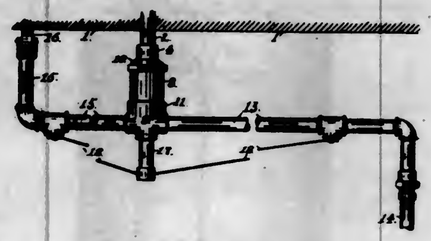
4. In a paper cutting machine, the combination of the upper and lower clamping bars or members movable vertically in the machine frame, a coupling hook pivotally mounted upon one of said members for normally engaging the other of said members, a heel portion projecting from said hook, a bracket arm supported above said clamping bars or members and projecting downwardly into operative relation with said heel portion, and of sufficient length to engage said heel portion when the clamping members are in lowered position, and means for moving said bracket arm transversely of the machine for uncoupling said hook.

5. In a paper cutting machine, the combination of the upper and lower clamping bars or members, operating means for said clamping bars or members, a coupling hook mounted upon one of said members and normally engaging the other of said members, a transversely movable rod or bar mounted in the machine frame and supporting a depending bracket arm in operative relation to said hook, and a manually operated device for actuating said rod or bar.

[Claims 6 to 8 not printed in the Gazette.]

871,574. VEHICLE-WASHER. MICHAEL H. DORGAN, Mayfield, Cal. Filed Mar. 19, 1906. Serial No. 306,698.

1. In a vehicle washer, a fixed water supply pipe, a fixed bearing adjacent thereto a hollow member swiveled to said supply pipe, a water branch extending from one side of said hollow member, and a rigid strain relieving arm extending from the opposite side of said hollow member and terminating in an upwardly extending bearing portion adapted to contact with the under side of said fixed bearing.



2. In a vehicle washer, a fixed water supply pipe, a fixed bearing adjacent thereto a hollow member swiveled to said supply pipe, a water branch extending from one side of said hollow member, and a rigid strain relieving arm extending from the opposite side of said hollow member and having a roller traveling against the under side of said fixed bearing.

3. In a vehicle washer, a fixed water supply pipe depending from a ceiling or fixed support, a hollow member swiveled to said supply pipe, a water branch extending laterally from one side of said hollow member, a rigid strain-relieving arm extending laterally from the opposite side of said hollow member and terminating in an upwardly extending portion provided with a roller traveling against the under side of said fixed support.

4. In a vehicle washer the combination of a swivel-coupling suspended from the ceiling and comprising a stationary inner member formed with an inlet neck and an outlet throat each joining the body with a bearing shoulder, an outer revoluble member consisting of a shell section having a top flange seated directly on the neck shoulder of the inner member, and a carrying section fitted to the lower end of the shell section and having a seat bearing on the throat shoulder of the inner member, a water branch fitted to one side of the carrying section, and a rigid strain-relieving arm fitted to the opposite side of the carrying section and having a roller traveling against the ceiling to counteract the side strain of the branch on said swivel coupling.

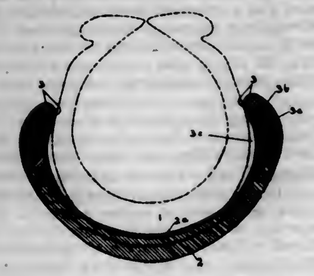
5. In a vehicle washer, the combination of a suspension swiveled coupling comprising a stationary inner member formed with an inlet neck and an outlet throat, each joining the body with a sloping bearing shoulder, and an outer revoluble member consisting of a shell section having an inclined flange seated directly on the sloping neck shoulder of the inner member, and a carrying section fitted to the lower end of the shell section and having an inclined seat bearing directly on the sloping throat shoulder of the inner member.

871,575. TIRE-PROTECTOR. WILLIAM T. DORGAN, Peoria, Ill., assignor to William J. Wickes and Arthur D. Eddy, Saginaw, Mich. Filed Feb. 11, 1907. Serial No. 356,841.

1. A tire protector comprising a sheath of suitable material, approximately semi-circular in cross-section, the edges of said sheath being formed with a bead of elongated cross-section, said bead being curved on its inner surface and adapted to grip the tire with the edge of the bead.

2. A tire protector comprising a sheath of suitable material, approximately semi-circular in cross section, the edges of said sheath being formed with a bead having a core of fibrous material embedded therein, said bead being curved on its inner surface and adapted to grip the tire with the edge of the bead.

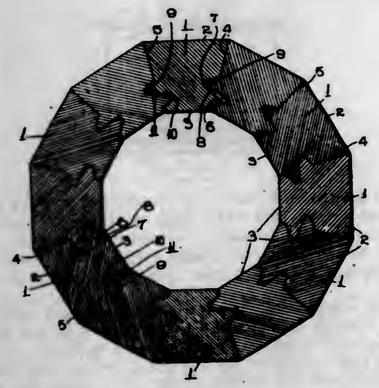
3. A tire protector comprising a tread portion, elongated beads formed integral with the tread portion and adapted to grip the sides of the tire with the edges of the beads.



4. A tire protector comprising a sheath of suitable material, approximately semi-circular in cross-section, the edges of said sheath being formed with a bead of elongated cross-section, said bead being made of less flexible material than the tread, and curved on its inner surface and adapted to grip the tire with the edge of the bead.

5. A tire protector comprising a tread portion, a bead on each edge thereof, said beads having their inner faces recessed, the edges of the beads adapted to grip the tire.

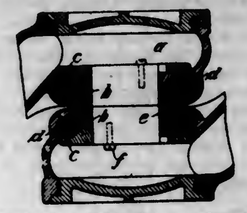
871,576. COLUMN-JOINT. CHARLES DRAYER, St. Louis, Mo. Filed Apr. 3, 1906. Serial No. 309,717.



In a column of the class described, a series of uniform sections fitted together, the sides of which sections are formed on diverging lines, there being longitudinally extending grooves formed in the side faces of each section, corresponding ribs formed integral with and extending longitudinally on the side faces of each section, one face of each groove being a continuation of one of the faces of the adjacent rib, and the wide faces thus obtained occupying planes approximately at right angles to the side faces of the sections; the bottoms of the grooves, and the outer ends of the ribs, being formed with corresponding faces having a predetermined width, and the outer ends of the ribs terminating in the planes occupied by the side faces of the strip from which the section is formed, substantially as specified.

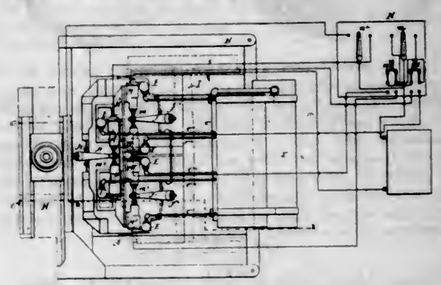
871,577. JOINTED METAL PIPE. JULIUS DUNKEL, Langfuhr, near Danzig, Germany. Filed May 25, 1907. Serial No. 375,734.

An adjustable connection for train pipes and the like embodying a pipe member, and a gland removably fitted in said pipe member and capable of relative rotary and axial movements, and provided with transversely curved complemental grooves, and a packing ring circular in cross section adapted to be compressed between and centered by



the said grooves when said pipe member and gland are moved axially by fluid pressure in said pipe member.

871,578. CONTROLLING MECHANISM FOR CLUTCHES. ARCHIBALD H. EHLE, Philadelphia, Pa., assignor to Burnham, Williams & Company, Philadelphia, Pa. Filed Sept. 12, 1905. Serial No. 278,127.



1. The combination of a shaft, a clutch sleeve thereon, means for shifting the said sleeve, air cylinders controlling the shifting mechanism, magnetic valve mechanism for controlling the admission of air to the said cylinders, and a controller having a switch lever thereon controlling the magnetic valves, substantially as described.

2. The combination of a shaft, two clutch sleeves thereon, means for shifting said clutch sleeves, air cylinders controlling the movement of said means, magnetic valves for controlling the admission of air to the said cylinders, and a switch for controlling the magnetic valves, with cut-outs, for throwing either one or both of the clutch sleeves, under the control of the switch, substantially as described.

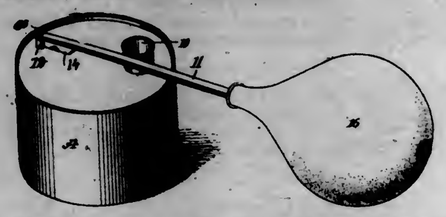
3. The combination of a shaft, two clutch sleeves mounted on the shaft, rock shafts for moving said clutch sleeves, arms on the said rock shafts, air cylinders, plungers in said cylinders, rods connecting the plungers of each pair of cylinders and connected to an arm of the rock shaft, magnetic valves controlling the admission of air to the said cylinders, a switch lever for controlling the magnetic valves, and cut-outs, for throwing either one or both of the clutch sleeves, under the control of the switch, substantially as described.

4. The combination of a shaft, clutch-sleeves mounted on said shaft, rock shafts for the clutch sleeves, arms on each rock shaft, a pair of air cylinders, each pair having a plunger rod and each rod being connected to an arm of a rock shaft controlling a clutch sleeve, a magnetic air valve for each cylinder, a controller, two cut-outs, and wires leading from the controller to the magnetic valves, the cut-outs being so arranged that either one or both of the clutch sleeves between the driving shafts and the intermediate clutch shaft can be operated, substantially as described.

871,579. ATOMIZER. WILLIAM J. ENGLISH, Cohoes, N. Y. Filed Feb. 19, 1907. Serial No. 358,180.

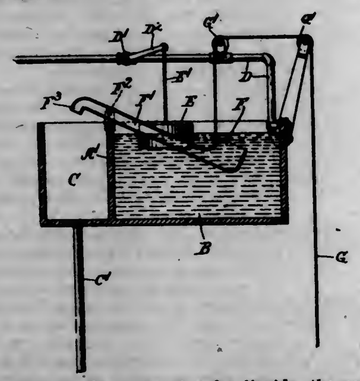
1. An atomizer, consisting of a closed vessel having in its top adjacent to one side a circular opening from which

leads an inwardly extending slot, and provided with a filling spout adjacent to the opposite side, a vertical tube in the vessel and projecting through the circular opening of the top a short distance above the same, a horizontal tube extending across the top of the vessel and secured to the filling spout, the horizontal tube being of greater diameter than the vertical tube and having one end engaging the projecting end of the vertical tube with the end of the said vertical tube extending partially across the end of the horizontal tube, and a triangular bracket secured to said tubes at their adjacent ends and fitting in the slot of the top and serving to assist in holding the tubes in position.



2. The combination with a closed vessel having in its top a circular opening from which leads a slot, of a spray device comprising a horizontal tube, a vertical tube having its upper end extending partially across the end of the horizontal tube, and a triangular bracket secured to the adjacent ends of the tubes, said bracket fitting in the slot of the top of the vessel with its inclined edge engaging the end of said slot, whereby the tubes are held in position with the vertical tube extending into the vessel and the horizontal tube extending across said vessel.

871,580. LIQUID-MEASURING APPARATUS. PETER C. FORRESTER, Tacoma, Wash. Filed Jan. 7, 1907. Serial No. 351,080.



1. In a measuring apparatus for liquids, the combination of a supply tank with means for keeping a fixed supply of water therein a discharge receptacle to receive the liquid as measured and a pivoted measuring device bridging the space between the supply tank and the discharge receptacle and adapted to tilt in one direction so as to receive a measured amount of liquid from the supply tank and in the other direction to discharge the same into the discharge receptacle.

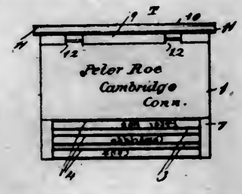
2. In a measuring apparatus for liquids, the combination of a supply tank with means for keeping a fixed supply of water therein a discharge receptacle to receive the liquid as measured and a pivoted measuring device bridging the space between the supply tank and the discharge receptacle and adapted to tilt in one direction so as to be submerged in the liquid of the supply tank and in the other direction so as to discharge a measured quantity of liquid into the discharge receptacle.

3. In a measuring apparatus for liquids, the combination of a vessel having a partition dividing the same into a supply tank and a discharge receptacle, means for keeping a fixed supply of liquid in the supply tank, a tilting dipper pivoted on said partition with its filling end adapted to extend into the supply tank and having a discharge passage way therethrough adapted to discharge into the discharge receptacle, and means for tilting said dipper.

4. In a measuring apparatus for liquids, the combination of a supply tank with means for keeping a fixed supply of water therein, a discharge receptacle to receive the liquid as measured, and a pivoted measuring device bridging the space between the supply tank and the discharge receptacle and comprising a dipper having a discharge way through the handle thereof adapted to tilt in one direction so as to receive a measured amount of liquid from the supply tank and in the other direction to discharge the same into the discharge receptacle.

5. In a measuring apparatus for liquids, the combination of a supply tank with means for keeping a fixed supply of water therein, a discharge receptacle to receive the liquid as measured, and a pivoted measuring device bridging the space between the supply tank and the discharge receptacle and comprising a dipper having a discharge way through the handle thereof adapted to tilt in one direction so as to be submerged in the liquid of the supply tank and in the other direction so as to discharge a measured quantity of liquid into the discharge receptacle.

871,581. PRINTING-CARD. ERNEST H. FREY, Cleveland, Ohio. Filed June 10, 1907. Serial No. 378,128.



1. A printed card, and a metal holder and printing plate mounted thereon, said holder being secured to the card and the printing plate detachably secured to the holder.

2. A printed card, and a metal holder secured thereto at one side and a printing plate detachably secured to said holder.

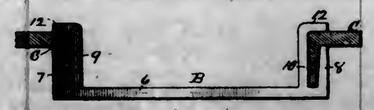
3. In combination, a printed card having a printing space, a metal holder mounted on said card in said printing space and a printing plate mounted upon said holder.

4. A printed card having a printing space, a plate holder secured to one side thereof at one edge, a printing plate detachably secured to said holder and raised upon the face of the card, and a metal strip secured to the opposite edge of the card, said strip raising said edge to the level of the printing surface of said printing plate.

5. In a card index, the combination with the printed card, of a metal holder secured to one side thereof, at one edge, a printing plate mounted in said holder and raised above the face of the card, and a metal strip secured to the opposite edge of the card, said metal strip being raised to correspond to the exact height of the printing plate above the card.

[Claims 6 to 12 not printed in the Gazette.]

871,582. SHEET-PILING. LUTHER P. FRIESTEDT, Chicago, Ill. Filed May 5, 1904. Serial No. 206,484.



1. In a beam-section, an integral plate or web member, said member having edge flanges and interlocking flanges

set inward from said edge flanges with an interlocking space for the engagement of the corresponding flanged edges of adjoining beam-sections.

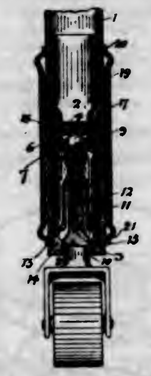
2. In a beam-section, an integral plate-member having edge flanges and interlocking flanges spaced apart therefrom and all located on the same side of said plate-member and adapted to receive the flanged edges of a joining beam-section.

3. In a beam-section, an integral channel plate member having, in addition to the usual flanged edges, interlocking flanges set inward therefrom and located on the same side therewith and adapted to receive the flanges of adjoining beam-sections in interlocked engagement.

4. In a beam-section, an integral plate member having double flanges formed on one side thereof, the inside interlocking flanges being of a greater width than the flanges adjacent thereto and adapted to engage corresponding flanged edges of adjoining beam-sections.

5. In a beam-section, an integral plate-member of the channel type provided with interlocking flanges located on the same side and adjacent to the usual edge flanges of said plate-member and positioned to engage the flanges of adjoining duplicate beam-sections.

871,583. CASTER. GAIUS C. FULLER, Cleveland, Ohio. Filed Mar. 28, 1906. Serial No. 308,401.



1. In a furniture caster, the combination of a socket having a contracted portion intermediate the ends thereof and an enlarged body portion extending beyond said contracted portion and above and below the same, a stop or bearing plate in said contracted portion, and a caster pintle having a rounded end positioned to engage said stop, substantially as specified.

2. In a furniture caster, the combination of a socket having, intermediate the ends thereof, a bearing plate or stop, a caster pintle adapted to engage said bearing plate or stop, and a leg or carrier in which said socket is fitted and engaging the upper and lower portions of said socket on both sides of said plate or stop, substantially as specified.

3. In a furniture caster, the combination of a socket having a seat therein, a stop or bearing plate fitting in said seat, and a pintle engaging said plate or stop, the wall of the socket being slotted for the insertion of said stop or plate into its seat, substantially as specified.

4. In a furniture caster, the combination of a tubular socket, the upper and lower ends of which are of the same diameter and having intermediate said ends a contracted portion, a stop in said contracted portion, a pintle in said socket the upper end of which engages said stop, the bore of the socket being contracted immediately below the stop to cause the wall thereof to engage the upper end of the pintle to center the same, substantially as specified.

5. A socket for caster pintles comprising a hollow body having a seat therein for a stop, the wall of the socket being slotted for the insertion of said stop, substantially as specified.

[Claims 6 to 14 not printed in the Gazette.]

871,584. FIRE-GRATE. CHARLES M. GRAHAM, Dunedin, New Zealand. Filed Aug. 28, 1905. Serial No. 276,114.



In open grates the combination of a clamp bracket; a screw for clamping the bracket to the upper part of a grate; a plate hinged to the clamp bracket; a chain attached at one end to the hinged plate, and passing through a hole at the top of the plate; a hook upon the screw of the clamp bracket adapted to engage the links of the chain; and a shutter hinged to the bottom of the plate substantially as set forth.

871,585. COMBINATION-TOOL. CHRISTOPHER J. HAEBERLI, Buffalo, N. Y. Filed Feb. 21, 1906. Serial No. 302,241.



1. A tool of the type described, comprising two pivotally connected members having each a handle and a jaw, each jaw having a flat nipping-portion, a concaved gripping-portion in rear of said nipping-portion, a longitudinal shearing-blade projecting beyond a line coincident with the face of said nipping-portion and having its edges in a plane parallel with said nipping-portions, and a longitudinal depression adapted to receive the shearing-blade of its cooperating jaw.

2. A tool of the type described, comprising two pivotally connected members having each a handle and a jaw, said jaws having concaved gripping-portions in their meeting faces, and longitudinal shearing-blades in rear of said gripping-portions having outer free ends and their edges in a plane parallel with the meeting faces of the jaws on which they are formed.

3. A tool of the type described comprising two pivotally connected members having each a handle and a jaw, said jaws having flat nipping-portions adapted to contact when the jaws are closed and longitudinal shearing-blades in rear of said nipping-portions extending beyond a line coincident with the nipping-portions of the jaws on which they are formed with their edges in a plane parallel with the corresponding nipping-portions, each jaw having a longitudinal depression to receive the shearing-blade of the co-acting jaw.

4. A tool of the type described, comprising two crossed

pivotally connected members widened at their points of crossing and having the front edges of said widened portions beveled, each member having a handle and a jaw, said jaws having flat nipping-portions, concaved gripping portions, and longitudinally disposed shearing-blades between said gripping-portions and the beveled edges of the widened portions of said members.

871,586. CARRIER. JOHN HALL, Fresno, Cal. Filed Mar. 19, 1907. Serial No. 363,251.



1. In a carrier, a distributing box, a conveyer adapted to carry material from said box, a hopper for directing material into said box and at an angle therewith, a second hopper at an angle with said first hopper, and means for directing the material from said hoppers to said conveyer.

2. In a carrier, a distributing box, conveyers adapted to carry material from said box, a hopper for directing material into said box and at an angle therewith, a second hopper at an angle with said first hopper, and means for directing material from said hoppers to each of said conveyers.

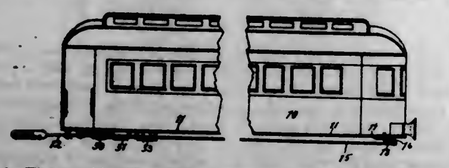
3. In a carrier, a distributing box having adjustable openings near the ends thereof, conveyers adapted to carry material from said openings, an inclined hopper for directing material into said box, a second oppositely inclined hopper, means for directing material from said hoppers to each of said openings.

4. In a carrier, a distributing box, a conveyer adapted to carry material from said box, a second conveyer adapted to carry material from said box, a hopper for directing material into said box, and a distributing incline between said conveyers for directing material to both said conveyers.

5. In a carrier, a distributing box having openings at opposite ends thereof belt conveyers adapted to remove material through said openings, a hopper for directing material into said box, distributing inclines between said openings and adjusting means at said openings.

[Claims 6 to 8 not printed in the Gazette.]

871,587. STREET-CAR SIGNAL. GEORGE S. HENNINGER, Linton, Ind. Filed Apr. 4, 1907. Serial No. 366,365.



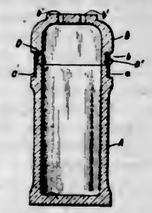
1. The combination with a car, of a signal arm pivoted under the car, a spring for holding it normally under the car, and means for actuating it so as to cause it to extend rearwardly from the car.

2. The combination with a car, of a signal arm mounted under the car and adapted when operated to extend rearwardly from the car, a rod pivoted to it extending to the front of the car for operating said switch, mechanism adapted to be operated by the motorman at the front end of the car for actuating said rod, and a spring for returning the parts to their unoperated position.

3. The combination with a car, of a signal arm mounted under the end of the car and adapted to extend rearwardly from the car when operated, a rod for actuating said arm that extends to the front end of the car, means at the front end of the car to enable the motorman to operate said rod, an electric bell mounted under the rear end of the car, and a switch for controlling said bell that is closed by the actuating movement of said rod, whereby the bell will ring when the signal arm extends rearwardly.

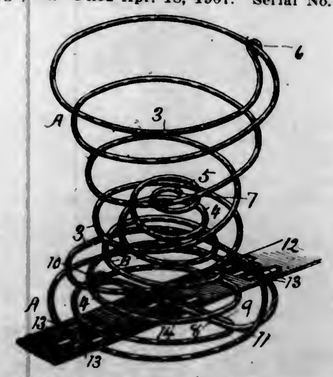
4. The combination with a car, of a signal arm mounted under the end of the car and adapted to extend rearwardly from the car when operated, a rod for actuating said arm that extends to the front end of the car, means at the front end of the car to enable the motorman to operate said rod, an electric lamp mounted on said signal arm, and a switch for controlling said lamp that is closed by the actuating movement of said rod, whereby the lamp will shine when the signal arm extends rearwardly.

871,588. SALT-SHAKER. LOUIS HINSBERGER, New York, N. Y. Filed June 18, 1907. Serial No. 379,605.



The salt shaker described comprising two inner parts of glass constituting the whole inner surface, matching tightly together edge to edge, rabbeted and the uppermost perforated, two rings of metal sunk in the respective rabbets, means for engaging each permanently with its proper glass part and means for engaging the metal parts with each other by a partial revolution and disengaging as required, all substantially as herein specified.

871,589. SPRING STRUCTURE. WILBUR K. HITCHCOCK, Chicago, Ill. Filed Apr. 18, 1907. Serial No. 368,906.

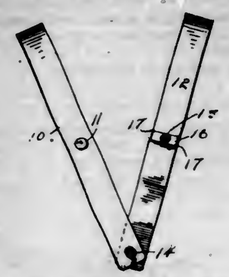


1. A compound spiral spring formed of one piece of wire and consisting of an outer and longer spring and an inner and shorter spring, said wire being directed from the terminus of the basal coil of the inner spring substantially diametrically across the base of said spring, then wrapped about the opposite side of said basal coil and directed back parallel to itself to the terminus of the basal coil of the larger spring.

2. A compound spiral spring formed of one piece of wire and consisting of an outer and longer spring and an inner and shorter spring, said wire being directed from the terminus of the basal coil of the inner spring substantially diametrically across the base of said spring, then wrapped about the opposite side of said basal coil and directed back parallel to itself across said basal coil just behind the terminus thereof, and finally merging into the terminus of the basal coil of the outer spring.

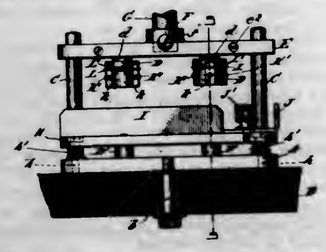
3. In a spring structure, the combination with a support, of a compound spiral spring formed of one piece of wire and consisting of an outer and longer spring and an inner and shorter spring, said wire being directed from the terminus of the basal coil of the inner spring substantially diametrically across the base thereof, and then returned parallel to itself to the terminus of the basal coil of the outer spring, and fastening devices embracing such parallel portions and entering the support.

871,590. PLACKET-CLOSURE. JOHN A. HOLLY, Port au Prince, Haiti. Filed Oct. 13, 1906. Serial No. 338,837.



A placket closure comprising two members consisting of thin strips of steel pivotally connected at their lower ends, one member being provided centrally with an eyelet, and the other strip having notched edges, a band surrounding the latter strip, engaged in said notches and provided with a split stud adapted to be brought into register with and engage the said eyelet to secure the two members in closed position.

871,591. ATTACHMENT FOR SETTING-PRESSES. GEO. A. HOLMES, Newton, Mass. Filed July 10, 1907. Serial No. 383,030.



1. In a gang-die attachment for setting presses, the combination of a base plate, means for attaching the base plate to a press bed, lower die members on the base plate, guides mounted on the base plate, an upper plate guided by and reciprocating on said guides and provided with upper die members, and means for attaching said upper plate to an actuating plunger.

2. In a gang-die attachment for setting presses, the combination of a base plate, means for attaching the base plate to a press bed, lower die members on the said plate, a work holding plate yieldingly supported on the base plate having apertures registering with the lower die members, guides mounted on the base plate, an upper plate guided by and reciprocating on said guides and provided with upper die members, and means for attaching said upper plate to an actuating plunger.

3. In a gang-die attachment for setting presses, the combination of a base plate, means for attaching the base plate to a press bed, lower die members on the said plate, a work holding plate yieldingly supported on the base plate and having apertures registering with the lower die members, guides mounted on the base plate, an upper plate guided by and reciprocating on said guides and provided with upper die members, means for attaching said upper plate to an actuating plunger, and rear and end gages adjustably mounted on the work holding plate.

4. In a gang-die attachment for setting presses, the combination of a base plate, means for attaching the base plate to a press bed, lower die members on the base plate, guides mounted on the base plate, an upper plate mounted to reciprocate on said guides and provided with upper die members, the said upper die members provided each with a plurality of laterally placed clips, and a clip girdle consisting of a spring embracing the clips and die member and means for attaching said upper plate to an actuating plunger.

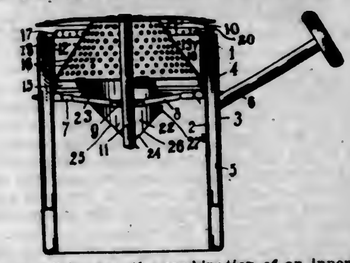
871,592. COAL-CUTTING MACHINE. AUSTIN HOPKINSON, Manchester, England. Filed Jan. 30, 1907. Serial No. 354,819.



1. In chain heading coal cutting machines, a movable chain frame, a prime mover coöperating therewith but supported independently of said frame, and feed gear comprising two oppositely screw-threaded and oppositely rotating shafts engaging the chain frame and means for driving the shafts to traverse the frame alternatively in one direction or the other, substantially as described.

2. In chain heading coal cutting machines, a movable chain frame, a prime mover coöperating therewith but supported independently of said frame and feed gear comprising two oppositely screw-threaded and oppositely rotating shafts engaging the chain frame, means for driving the shafts to traverse the frame alternatively in one direction or the other, and means operating automatically to reverse the direction of the feed, substantially as described.

871,593. OIL-BURNER. WILLIAM R. JEAVONS, Cleveland, Ohio. Filed Mar. 5, 1907. Serial No. 360,694.



1. In an oil burner, the combination of an inner and an outer wick tube, a wick between said tubes, an air spreader extending above and across the tops of said tubes and wick and forming with the same a narrow passageway for air from the interior of the burner, there being an air space provided above the spreader and said spreader having a portion extending inwardly in a horizontal direction from above the wick and being provided in such portion with a series of perforations arranged to discharge air from the narrow passageway below the spreader directly to the outer portion of the air space above the spreader, substantially as specified.

2. In an oil burner, the combination of an inner and an outer wick tube, a wick therebetween, a vertically extending ring within the upper portion of the inner wick tube and forming with the upper end of said tube a space or chamber, a spreader plate extending above and across the tops of said wick tubes and ring and forming with the same a narrow passageway for air from the interior of the burner, said spreader plate extending inwardly in a horizontal direction from above said wick and having a series of perforations in the outer portion thereof arranged to

discharge air from the passageway directly to the space above said spreader plate, substantially as specified.

3. In an oil burner, the combination of an inner and an outer wick tube, the inner wick tube being provided with an outwardly flaring upper end, a vertically extending ring within the upper portion of the inner wick tube and spaced therefrom, there being an enlarged space or chamber provided by and between the flared upper end of said inner wick tube and the adjacent vertical portion of said ring, said ring having perforations communicating with the space between itself and the inner wick tube to supply air in limited quantity to said space, substantially as specified.

4. In an oil burner, the combination of an inner and an outer wick tube, a wick, a vertically extending ring within the inner wick tube, there being a space provided between said inner wick tube and said ring providing an air way to the base of the wick, said ring having a flange projecting inwardly from substantially the plane of the top of the inner wick tube, said flange having perforations to supply air from the interior of the inner wick tube therethrough and above the plane of the top of the inner wick tube, substantially as specified.

5. In a burner, the combination of an inner and an outer wick tube, a spreader extending across the upper ends of said tubes and spaced therefrom, and a vertically extending ring within and spaced from the inner wick tube to form therewith an air passage, said ring being provided with an inwardly directed flange at the upper end thereof, the knee formed by the junction of the ring and flange being in substantially the same plane as the top of the inner wick tube, substantially as specified.

[Claims 6 to 15 not printed in the Gazette.]

871,594. ROCK-DRILL. EDWARD N. JONES, Victor, Colo. Filed Feb. 28, 1907. Serial No. 359,722.



1. A rock drill comprising a main cylinder, a hammer piston therein, a drill chuck in which the drilling tool is mounted to slide and to turn with the said chuck, a pawl on the said drill chuck, a loosely mounted ratchet wheel engaged by the said pawl, an auxiliary cylinder connected by an admission port and by an exhaust port with the said main cylinder, an auxiliary piston in the said auxiliary cylinder, and means for connecting the piston with the said ratchet wheel to turn the latter.

2. A rock drill, comprising a main cylinder, a hammer piston therein, a drill chuck in which the drilling tool is mounted to slide and turn with said chuck, a pawl on the chuck, a ratchet wheel surrounding the chuck and with which the pawl engages, an auxiliary cylinder arranged at right angles to the main cylinder and in communication therewith, an auxiliary piston in said auxiliary cylinder, and a loose connection between the piston and the ratchet wheel.

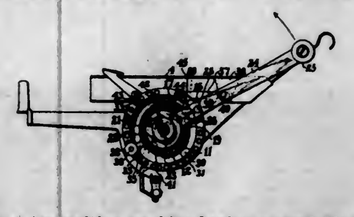
3. A rock drill comprising a main cylinder, a hammer piston in the cylinder, a drill chuck in which the drilling tool is mounted to slide and turn with the chuck, a pawl carried by the chuck, a ratchet wheel engaged by the pawl and provided with a pin or lug, an auxiliary cylinder arranged at right angles to the main cylinder and in communication therewith, and a piston in the auxiliary cylinder and provided with an opening into which the pin or lug of the ratchet wheel projects.

4. A rock drill, comprising a main cylinder, a hammer piston in the cylinder, a drill chuck in which the drilling tool is mounted to slide and turn therewith, an auxiliary cylinder provided with exhaust ports and to the ends of which exhaust ports of the main cylinder lead, a reciprocating piston in the cylinder and controlling the exhaust ports thereof and the exhaust ports of the main cylinder leading thereto, and means for operating the chuck from the auxiliary piston.

5. A rock drill, comprising a main cylinder having a working chamber and an exhaust chamber, a motive agent supply connection in communication with the working chamber, a hammer piston working in the said chambers and provided with a chamber having a port at its forward end, an auxiliary cylinder communicating with the working and exhaust chambers, a piston in the auxiliary cylinder, a drill chuck, and means for rotating the chuck from the auxiliary piston.

[Claim 6 not printed in the Gazette.]

871,595. TYPE-WRITING MACHINE. CHARLES E. KELLEY, Waterbury, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 14, 1907. Serial No. 362,361.



1. In a typewriting machine having a revoluble platen, the combination with a toothed-wheel connected to the platen to revolve therewith, of an arm mounted for revolution with said toothed-wheel, a pawl upon said arm and movable independently thereof and normally out of engagement with said toothed-wheel, and a platen-oscillator distinct from said arm and having means to move said pawl into engagement with said toothed-wheel, and to act through said pawl to rotate the wheel.

2. In a typewriting machine having a revoluble platen, the combination with a toothed-wheel connected to the platen to revolve therewith, of an arm mounted for revolution with said toothed-wheel, a pawl upon said arm and movable independently thereof and normally out of engagement with said toothed-wheel, a platen-oscillator distinct from said arm and having means to move said pawl into engagement with said toothed-wheel, and to act through said pawl to rotate the wheel, and means for maintaining mechanically the engagement of the pawl and wheel, during the excursion of said platen-oscillator away from and back to normal position.

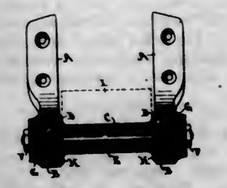
3. In a typewriting machine having a revoluble platen, the combination with a toothed-wheel connected to the platen to revolve therewith, of an arm mounted for revolution with said toothed-wheel, a pawl upon said arm and movable independently thereof and normally out of engagement with said toothed-wheel, a crank distinct from said arm and mounted for revolution with said arm and wheel, a spring for holding said crank stationary and said pawl disengaged during the usual line-spacing movements of the platen, means for enabling a turning movement of the crank to carry said pawl into engagement with said wheel, means for mechanically maintaining the engagement of the pawl and wheel during the excursion of said crank away from and back to normal position, and a stop for limiting the initial stroke of the crank.

4. In a typewriting machine having a revoluble platen and a platen axle, the combination with a toothed wheel fixed upon said axle, of a crank loosely supported to swing about said axle, an arm confined between said crank and wheel and loose upon said axle, a pawl pivoted to said arm and also pivoted to said crank at a point more remote from said axle than said arm-pivot, a pin projecting from said pawl, a fixed part having a notch into which said pin is pressed by a spring both to hold the pawl away from the wheel, and also to hold the crank stationary during the usual line-by-line revolution of the platen, said crank being effective to force said pin out of said notch and to engage the pawl with the wheel, and said fixed part having a circular guiding surface concentric with said axle to engage said pin to lock the pawl to the wheel, and a stop to limit the initial stroke of the crank.

5. In a typewriting machine having a revoluble platen and platen axle, the combination with a toothed wheel fixed upon said axle, of a crank loosely supported to swing about said axle, an arm confined between said crank and wheel and loose upon said axle, a pawl pivoted to said arm, and also pivoted to said crank at a point more remote from said axle than said arm-pivot, a pin projecting from said pawl, a fixed part having a notch into which said pin is pressed by a spring both to hold the pawl away from the wheel, and also to hold the crank stationary during the usual line-by-line revolution of the platen, said crank effective to force said pin out of said notch and to engage the pawl with the wheel, and said fixed part having a circular guiding surface concentric with said axle to engage said pin to lock the pawl to the wheel, and a stop to limit the initial stroke of the crank, said spring being fixed in the path of said pin opposite said notch, to engage the pin and press it into the notch.

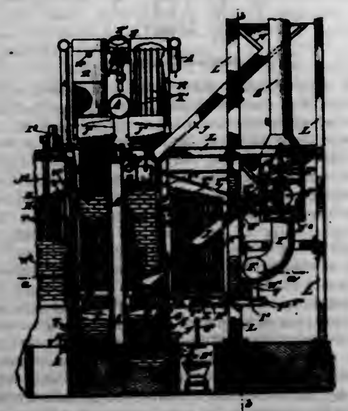
[Claims 6 to 12 not printed in the Gazette.]

871,596. ANTIFRICTION REIN-GUIDE. CHARLES KINNEY, Elmira Heights, and ELI P. HARRIS, Horseheads, N. Y. Filed July 14, 1906. Serial No. 326,241.



A rein guide comprising a pair of brackets adapted to be attached to a wagon front adjacent an opening therein, said brackets having right and left sockets formed thereon, a spindle passing through said sockets and screw-threaded at each end, ball bearing cones secured upon the spindle within the sockets, a flanged roller mounted on said bearings, and nuts on the ends of the spindle outside the sockets.

871,597. COMBUSTION APPARATUS. JOSEPH M. W. KITCHEN, East Orange, N. J. Filed May 31, 1906. Serial No. 319,584.



1. In a combustion apparatus having a combustion chamber and two sides, and combined therewith, a coal burning device having two chain grates supplied with fuel from hoppers located at the sides of said apparatus and conveying fuel towards the center of said chamber, said hoppers, a combustion pit at the center of said chamber of large vertical depth and lined with heat refractory material, a shaking and dumping grate for said pit, an ash pit below said combustion pit, means for inducing a draft in said combustion chamber, means for forcing a draft through the fuel in said combustion pit, means for introducing steam under said fuel in said combustion pit, and means for forcing air for combustion in divided currents over said chain grates toward said combustion pit.

2. In a combustion apparatus having a front and two sides and a combustion chamber, the combination of means for securing free access to all parts of the fuel mass from the front of said apparatus, means for the introduction of fuel on both sides of said apparatus and for coking said fuel and for moving the said fuel towards the center of said apparatus, a grate at said center comprising means for shaking and dumping said fuel, means for diffusedly introducing air for combustion around the periphery of the combustion chamber of the said apparatus, means for preventing the escape of gaseous products of combustion through the means for introducing air, means for controlling the supply of air thus introduced, and means for protecting from excessive heat the means for air introduction.

3. In a combustion apparatus, the combination of a combustion chamber having an elongated vertically disposed run of sufficient height to secure the combustion of coal-dust and of volatilized gases before said dust and gases are brought into contact with heat absorbing surfaces and before said dust can be carried out of said combustion chamber, a mechanically acting fuel feeding grate, means for feeding fine fuel into said chamber from a high level, means for securing the diffusion of said fine fuel in the atmosphere of said chamber and over said grate, said grate being located at a low level of said chamber, said elements acting in harmony with the force of gravity in securing the said distribution of fuel in the passage of said fuel from the high level from which said fuel is fed, and means for forcibly introducing air for combustion under and above said grate and for drawing gases over the heating surfaces of a boiler.

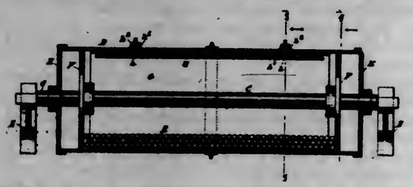
4. In a combustion apparatus having a front and two sides and a combustion chamber, first, means for storing fuel at the two sides of said apparatus, second, means for drawing fuel from the two sides of said apparatus towards the center of said combustion chamber and for volatilising said fuel, a combustion pit at said center surrounded at the sides of said pit by heat refractory fuel retaining walls, means for preventing the loss of fuel by sifting through said second named means, means for separating said fuel from the second named means and for securing its entrance into the said pit, a grate in said pit, means for shaking and dumping said grate, means for forcibly introducing air for combustion under said grate through said pit and over the several named means and for drawing gases over the heating surfaces of a boiler.

5. In a combustion apparatus having a combustion chamber, the combination of means for drawing fuel from a side of said apparatus and for volatilizing said fuel and for discharging said fuel into a place of combustion, said place of combustion providing for the maintenance of a thick bed of fuel and for the shaking and dumping of said fuel, means for forcing a draft through said thick bed of fuel, means for feeding fine fuel diffusedly into the atmosphere of said combustion chamber and over the fuel being drawn to said place of combustion and over said thick bed of fuel by the action of gravity operating on said fine fuel in descending from a fuel feeder highly located to the lower part of said combustion chamber, and through deflection and through the aid of air forcibly introduced at the side of said combustion chamber, said highly located fuel feeder, means for producing a forced draft above and below said bed of fuel comprising means for forcibly introducing air at the side of the combustion chamber, means for producing an induced draft in said apparatus, means for distributing the air introduced equably in said combustion

chamber, and means for securing an equable horisontal diffusion of the heating gases over all levels of the heating surfaces of a boiler.

[Claims 6 to 31 not printed in the Gazette.]

871,598. METHOD OF GRAINING METALLIC LITHOGRAPHIC PLATES. CHARLES M. KNEPPLER, New York, N. Y., assignor to Louis E. Kneppler, New York, N. Y. Filed June 13, 1907. Serial No. 378,692.



1. The method hereinbefore described of producing metallic lithographic plates, consisting in subjecting the inner surface to the action of abrading material while said plate is in a curved form, and then flattening said plate.

2. The method hereinbefore described of treating metallic lithographic plates, consisting in first curving said plate, subjecting the inner surface of said plate to the action of graining material, and finally flattening said plate.

871,599. PROCESS OF CONVERTING ELEMENTS INTO THE COLLOIDAL STATE. HANS KUZEL, Baden, near Vienna, Austria-Hungary. Filed Nov. 20, 1906. Serial No. 344,333.

1. The herein described process of converting metals and metalloids into the colloidal state, consisting in first comminuting the elements and then treating the same alternately with dilute solutions of an acid character and then with dilute solutions of a non-acid character.

2. The herein described process of converting metals and metalloids into the colloidal state, consisting in first comminuting the elements and then treating the same under heat and agitation alternately with dilute solutions of an acid character, and then dilute solutions of a non-acid character.

3. The herein described process of converting metals and metalloids into the colloidal state, consisting in first comminuting the elements and then treating the same under heat and agitation alternately with dilute solutions of an acid character, and then dilute solutions of a non-acid character, and between such treatments washing with pure imbibition liquid.

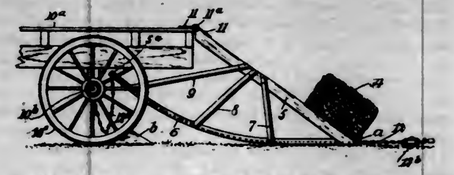
871,600. PROCESS OF MAKING ZINC FORMALDEHYDE HYDROSULFITE. HANS LABHARDT, Mannheim, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Oct. 2, 1906. Serial No. 337,104.

The process of producing easily soluble zinc formaldehyde hydrosulfite by causing formaldehyde, zinc dust and sulfur dioxid to act on one another at a temperature below fifty degrees centigrade.

871,601. LOADING ATTACHMENT FOR WAGONS. EDWARD LAUFFR, Antelope, Cal. Filed July 5, 1907. Serial No. 382,379.

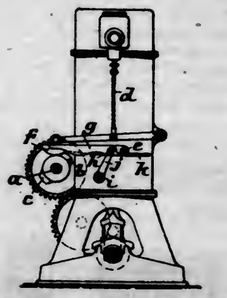
1. A bale loader, comprising a rectangular frame, a guide trough thereon, and braces extending from the sides of the frame into engagement with the guide trough, in combination with a wagon, whereon the ends of the frame are hinged, and a flexible connection extended from the wagon rearwardly through the guide trough.

2. A bale loader, comprising a rectangular frame formed of two side bars, and two cross bars at the respective ends of said side bars, a bent guide trough parallel with the side bars and centrally secured by one end on a respective cross bar, said guide trough being spaced from the other cross bar, and a plurality of braces diagonally extended from the frame side bars into engagement with the guide trough, in combination with a wagon, hinges detachably connecting the sides of the wagon with the respective ends of the side bars, and a flexible connection secured by one end on the wagon and thence extended rearwardly through the trough.



3. A bale loader, comprising a rectangular frame formed of two side bars, and two cross bars at the respective ends of said side bars, an angle iron guide trough having arcuate form, held parallel with the side bars and centrally on one of said cross bars, and a plurality of brace bars extended from opposite sides of the guide trough diagonally and secured by their outer ends on the frame side bars, whereby the other end of the guide trough is spaced from the remaining cross bar, in combination with a wagon, separable hinges secured on the sides of the wagon and on the ends of the frame side bars, a flexible connection extended from the rear axle of the wagon into connection with one end of the guide trough and thence through said trough, the remaining end of the flexible connection having means for connecting a draft animal therewith.

871,602. MECHANISM FOR CHANGING A FOUR-STROKE CYCLE-MOTOR INTO A TWO-STROKE CYCLE-MOTOR. SAMUEL LÖFFLER, Witkowitz, Austria-Hungary. Filed Mar. 26, 1906. Serial No. 308,163.



1. In a mechanism for changing a four-stroke cycle motor into a two-stroke cycle motor the combination with a rod adapted to operate a valve of the machine, of two cam projections arranged in different planes, a lever arranged between the said rod and one of the cam projections, a second lever arranged in the plane of the other cam projection and means for shifting this second lever between the last mentioned cam projection and the said rod, substantially as described and for the purpose set forth.

2. In a mechanism for changing a four-stroke cycle motor into a two-stroke cycle motor the combination with a rod adapted to operate a valve of the machine, of two cam projections arranged in different planes, a lever arranged between the said rod and one of the cam projections, a second lever arranged in the plane of the other cam projection and having a prolongation, with which it is held against a fixed part, and of means for shifting this second lever between the last mentioned cam projection and the said rod, substantially as described and for the purpose set forth.

871,603. BRUSH. FRANK H. LUMBARD, Chicago, Ill. Filed Mar. 30, 1907. Serial No. 365,543.

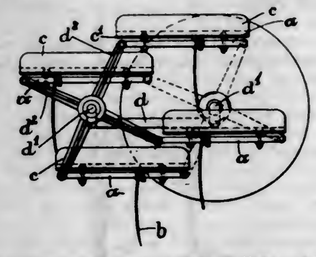


1. A brush-ferrule, comprising in an integral structure, a bristle-socket, a handle-socket, and an imperforate division diaphragm, one of said sockets being inclosed by a double-wall having a bead edge, and the other socket inclosed by a wall-edge of a single thickness.

2. A brush-ferrule, comprising an integral structure, consisting of a brush-socket, a handle-socket, and a solid diaphragm on a line between said sockets, the brush-socket being inclosed by a double wall having a binding bead edge adapted to be compressed inward in securing the bristles firmly in place.

3. A brush-ferrule of integral structure, comprising a brush-socket, a hand-socket, and a division diaphragm, the brush-socket being inclosed by a double wall having a bead edge and the handle-socket by a wall of a single thickness, the bristles, and a clamping wedge-piece inserted in the butt ends of said bristles.

871,604. SIDE-DELIVERY RAKE, SWATH-TURNER, AND OTHER LIKE IMPLEMENT OR MACHINE. WILLIAM E. MARTIN, Stamford, England. Filed May 4, 1907. Serial No. 371,899.



1. The combination with a side delivery rake, swath turner or like agricultural implement having a plurality of rakes, means for retaining them in a vertical position, means for moving the rakes around a central rod by which they are carried, and a bar fixed to and above the top of each rake head, of a concave face to said bar, to turn the crop forward and prevent it gathering on the rake head, substantially as set forth.

1. The combination with a side delivery rake, swath turner or like agricultural implement having a plurality of rakes, means for retaining them in a vertical position, means for moving the rakes around a central rod by which they are carried, and a bar fixed to the top of each rake head, a concave face to said bar, to turn the crop forward and prevent it gathering on the rake head, and a projecting end to said bar carried beyond the rearward bearings to prevent the crop gathering on said bearings, substantially as set forth.

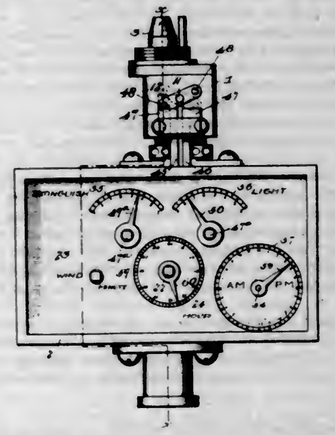
3. The combination with a side delivery rake, swath turner or like agricultural implement having a plurality of rakes, means for retaining them in a vertical position, and means for moving the rakes around a central rod, of an angle iron bolted to the rake head and a concave plate riveted to said angle iron, substantially as shown and described.

4. The combination with a side delivery rake, swath turner or like agricultural implement having a plurality of rakes, means for retaining them in vertical position, a central rod by which the rakes are carried, and means for moving the rakes around the rod, of a depressed portion in the central rod located below the ends on which the rakes are supported, substantially as set forth.

5. The combination with a side delivery rake, swath turner or like agricultural implement having a plurality of rakes, means for retaining them in a vertical position, a central rod by which the rakes are carried, a toothed wheel on said rod for moving the rakes around the rod, a main axle and a socket for supporting one end of the central rod on the main axle, of means for raising, lowering and fixing said socket in certain positions and suitable gearing for communicating motion from the main axle to the toothed wheel on the said rod in any position in which said socket may be fixed, substantially as set forth.

[Claim 6 not printed in the Gazette.]

871,605. GAS LIGHTING AND EXTINGUISHING DEVICE. AUGUST MEYER, Baltimore, Md., assignor to Automatic Gas Lighting Company, Baltimore, Md., a Corporation of Delaware. Filed Nov. 4, 1905, Serial No. 285,891. Renewed Apr. 4, 1907. Serial No. 366,432.



1. A lighting and extinguishing device comprising a burner having main and pilot passages therethrough and inlet openings for the admission of gas to the passages, a valve in said burner adapted to open or close one or the other of said openings, a clockwork mechanism-casing connected with the burner, a clockwork mechanism in said casing, an adjustable lighting, and an adjustable extinguishing cam within the casing, a shaft for each cam suitably mounted in the casing, a cam-engaging-device longitudinally movable on each shaft, connections between the shafts and the time mechanism whereby the said shafts and the cam-engaging-devices are revolved with the shafts, means for holding the cam-engaging-devices in close engagement with the cam surfaces of the cams, and connections between the cam-engaging-devices and the valve in the burner, whereby and in conjunction with the cams, the valve is operated at pre-determined times, substantially as set forth.

2. A lighting and extinguishing device comprising a burner having main and "pilot" passages and openings for the admission of gas to the passages, means for opening and closing one or the other of said openings, in combination with a clockwork mechanism having an adjustable lighting, and an adjustable extinguishing cam, a shaft for each cam, a cam-engaging device co-acting with each cam, connections between the shafts and the time mechanism whereby the same and the cam-engaging devices are revolved together, means for holding the cam-engaging devices in close engagement with the cam surfaces of the cams, and connections between the cam-engaging devices and the opening and closing devices in the burner, whereby and in conjunction with the cams, said opening and closing devices are operated at predetermined times.

3. A lighting and extinguishing device comprising a burner having main and "pilot" passages and inlet openings for the admission of gas to the passages, devices adapted to open or close one or the other of said openings, a clockwork mechanism, and adjustable lighting, and an adjustable extinguishing cam, each having an operating cam surface adapted to effect a comparatively slow opening and closing movement to the opening and closing devices of the burner, whereby one of the lights is relighted before the other is extinguished, a rotating cam-engaging device for each cam, connections between the cam-engaging devices and the opening and closing devices of the burner, whereby and in conjunction with the cams, said opening and closing devices of the burner are operated at predetermined times, substantially as and for the purpose set forth.

4. A lighting and extinguishing device comprising a burner having main and "pilot" passages therethrough, and inlet openings for the admission of gas to the passages, opening and closing devices controlling said openings, a rock-shaft carried by the burner and connected with the devices for controlling the gas passages, an adjustable lighting, and an adjustable extinguishing cam, a cam-engaging device for each cam, operative connections between the cam-engaging devices and a rock-shaft in the burner, in combination with a clockwork mechanism actuating the cam-engaging device, and through them operating the opening and closing devices in the burner.

5. A lighting and extinguishing device comprising a burner having main and "pilot" passages and inlet openings for the admission of gas to said passages, opening and closing devices controlling said opening, a rock-shaft carried by the burner and connected with the devices for controlling the gas passages, an adjustable lighting, and an adjustable extinguishing cam, a cam-engaging device for each cam longitudinally movable with relation to each cam, a bell-crank lever acting in conjunction with each cam-engaging device, and a rod pivoted to each lever adapted to operate through suitable devices upon the opening and closing devices of the burner, in combination with a clockwork mechanism actuating the cam-engaging devices and through them operating the opening and closing devices of the burner, substantially as described.

871,606. CEILING CONSTRUCTION. VALENTINE MOESLEIN, Weehawken, N. J. Filed Nov. 28, 1905. Serial No. 289,460.



1. A building construction, comprising a floor having floor beams, and a filling of plastic material between the beams, metal laths beneath the said floor and the said floor beams and supported by the plastic filling, each of said laths having at each side thereof a flange adapted to be embedded in the plastic material, the flanges of the adjacent laths abutting and having lateral struck-up lugs for locking with the plastic material, the surface of the said laths between the flanges being provided with depending struck-up keys, said keys being arranged in pairs, the members of the pairs being curved toward each other.

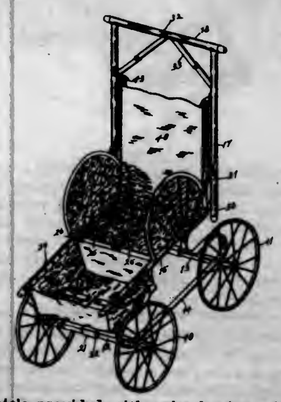
2. A building construction, comprising a floor having floor beams, and a filling of plastic material between the beams, metal laths beneath the said floor and the said floor beams and supported by the plastic filling, each of said laths having at each side thereof a flange adapted to be embedded in the plastic material, the flanges of the adjacent laths abutting, the surface of the said laths between the flanges being provided with depending struck-up keys, said keys being arranged in pairs, the members of the pairs being curved towards each other, and means for anchoring the laths to the plastic filling.

871,607. PACKING-NUT FOR WATER AND OIL GAGES. JOHN E. MONTGOMERY, Yost, Utah. Filed Aug. 10, 1906. Serial No. 330,029.



In a device of the kind described, the combination with a pair of pipe elbows, having enlarged threaded ends provided with recesses having beveled walls surrounding the bore of the elbows, of a glass tube having its ends arranged in said recesses, packing rings secured around said ends in said recesses, and a nut working on said threaded enlarged end having annularly inwardly projecting tongues, provided with beveled edges and cut away portions adapted to fit said recesses and engage said packing rings, for the purpose described.

871,608. FOLDING GO-CART. FRANK B. MORELAND, Indianapolis, Ind. Filed May 9, 1907. Serial No. 372,798.



1. A vehicle provided with axles having midway joints, clasps for holding the members of the axles straight when desired, a seat with a joint midway between the sides thereof so it can be folded upward, and a handle with a joint midway between the sides thereof so it can be folded, said handle being pivoted at the lower end thereof to the frame of the vehicle so that the handle can be folded forward, whereby the vehicle can be collapsed by forcing the sides thereof towards each other.

2. A vehicle with axles provided with midway joints, clasps for holding the same, a frame mounted upon said axles, a seat formed of two members pivoted at their sides to the frame and in the middle to each other so that they will fold upward, a flexible foot support, a flexible back, and a handle pivoted at its lower end to the frame so it can fold forward and to the top bar thereof jointed midway so it may be collapsed, substantially as set forth.

3. A vehicle with axles provided with midway joints, clasps for holding the same, a frame mounted upon said axles, a seat formed of two members pivoted at their sides to the frame and in the middle to each other so that they will fold upward, a flexible foot support, a flexible back, a handle pivoted at its lower end to the frame so it can fold forward and to the top bar thereof jointed midway so it may be collapsed, substantially as set forth, slotted bars pivoted at their upper ends to the side bars of the handle, and clamps for holding the upper end of the back in connection with said slotted bars, whereby the back may be held in a position for use while sitting erect or reclining.

871,609. SHUTTER-OPERATOR. RUDOLPH MOSKAU, Jersey City, N. J. Filed Dec. 11, 1906. Serial No. 347,332.



1. In a shutter operator, the combination of a spindle adapted to be extended through the wall of a building, a handle within the building, and located on said spindle, means for locking the handle at any angle within ninety degrees, a beam *m*, outside of the building and fixed to said spindle, pins R at the respective ends of said beam connecting rods, having at one pair of ends transverse slots, through which said pins pass, for reciprocating said rods, and having a longitudinal slot through which said spindle passes to act as a support and guide for said rods; and said rods each having at the other pair of ends, a transverse slot X*a*, and each having a longitudinal slot S*a*, cranks W, rotary with and for rotating the respective blinds and each crank having a radial slot W*a*, cranks K whose axes of rotation are eccentric to the axes of rotation of said blinds, and having crank pins D, one of which passes through one of the slots X*a* and through one of the slots W*a*, and the other crank pin D, passing through the slots X*a* and W*a*, the relative proportions, distances apart, and sizes of the above named elements being such that when the said connecting rods move longitudinally away from each other by the action of the said spindle, the pins D will rotate the blinds to any angle between a fully closed position of the blinds and a fully open position.

2. In a shutter operator the combination of a spindle, means for rotating said spindle, rods P controlled by said spindle, hinge spindles B, cranks W attached thereto and having radial slots, and cranks K pivoted eccentrically to the spindles B and having pins D, said rods P having longitudinal slots through which pass said pivots K*a*, and having transverse slots through which pass said crank pins D respectively, which also pass through said radial slots.

3. In a shutter operator, the combination of a rotary butt H, a spindle B attached thereto, a crank W radiating from said spindle and having a radial slot, a crank K, a pivot K*a* therefor, a crank pin D for said crank K passing through the slot in the crank W, a rod P, a screw T screwed into the rod P, and an extension S attached to said screw T, and having a longitudinal slot S*a* through which passes the pivot K*a*, and having a transverse slot X*a* through which passes the pin D, said rod P, being manually movable longitudinally past the pivot K*a* for moving the crank pin D radially inward along the crank W and at the same time away from the extension S along a slot X*a* through an arc of 180 degrees about the center of the pivot K*a*.

4. In a shutter operator the combination of a spindle A for passing through the wall of a house under the central portion of the window, means for turning said spindle to, and holding the same at different angles, a beam fixed to the spindle and adapted to be located on the outside of the house, pins R at the respective ends of said beam, rods P, end pieces J therefor, each having a longitudinal slot through which passes said spindle A, which acts as a support and guide for end pieces J, and each end piece having a transverse slot through which passes one of the pins R, the rods P being movable apart relatively by the action of the pins R, rotary hinge butts, and means between said butts and the outer ends of said butts for causing said butts to rotate by the movements of said rods.

871,610. BOOK-CLIP AND LEAF-SUPPORT. WALTER C. NASH, Miami, Ohio. Filed Apr. 10, 1907. Serial No. 367,404.



1. A supporting-clip for books comprising a horizontal body portion or bar having each of its opposite ends downwardly and then upwardly turned with a suitable space between said downwardly and upwardly turned portions, such space being adapted to receive or pocket the fore lower edges of the book covers and the body portion being adapted to support the fore lower edges of the leaves above the shelf.

2. A supporting-clip for books comprising a longitudinal bar or body portion having each of its integral opposite outer ends downwardly turned in parallel lines and then upwardly turned with a suitable space or pocket between said oppositely turned parallel portions, and said extreme outer upwardly turned parallel portions extending above the level of the body portion and made of resilient material.

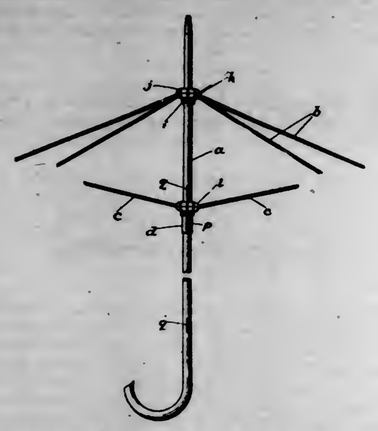
3. A supporting-clip for books comprising a longitudinal bar of two telescopic members, such bar having each of its outer opposite ends downwardly turned below its level and then each extended upwardly beyond its level with a suitable interval or space between said downwardly and upwardly turned portions, the upwardly turned extensions being under resilient tension to properly clasp the covers of the book and the said bar being adapted to support the fore portion of the closed leaves of the book above the shelf on which the book stands.

4. A supporting-clip for books comprising a body portion having each of its opposite ends made tubular part way and then downwardly and then upwardly turned below and above its level, respectively, such body portion being made in three parts one of which is the middle part having downwardly-extending leg or vertical projection terminating in the same horizontal plane with the downwardly-turned end portions of the other two opposite end members and such middle portion being laterally extended from said vertical projection into and telescopically engaging the other two members for longitudinal adjustment to suit thick books.

871,611. UMBRELLA. ALFRED NELSON, Philadelphia, Pa., assignor to Alexander F. Hetherington, Philadelphia, Pa. Filed Sept. 13, 1906. Serial No. 334,425.

1. In an umbrella, the combination with a stick, of a rib casing composed of upper and lower members provided respectively with semi-spherical complementary recesses and mutually alining slots, the upper rib casing member having a shank encircling the stick and the lower rib casing member having a shank encircling the shank of the upper rib casing member and riveted thereto and to the stick, a brace casing composed of upper and lower members provided respectively with semi-spherical complementary recesses and mutually alining slots, the upper brace casing member having a vertically slotted shank slidable upon the stick and the lower brace casing member having a shank

encircling the upper part only of the shank of the upper brace casing member and riveted thereto, ribs extending through the slots of the rib casing and having heads resting within the rib casing, and braces extending through the slots of the brace casing and having heads resting within the brace casing, substantially as described.



2. In an umbrella, the combination with the stick, of a rib casing composed of upper and lower members provided respectively with semi-spherical complementary recesses and mutually alining slots, the upper rib casing member having a shank encircling the stick and the lower rib casing member having a shank encircling the shank of the upper rib casing member and riveted thereto, a brace casing composed of upper and lower members provided respectively with semi-spherical complementary recesses and mutually alining slots, the upper brace casing member having a vertically slotted shank slidable upon the stick and the lower brace casing member having a shank encircling the shank of the upper brace casing member and riveted thereto, ribs extending through the slots of the rib casing and having heads resting within the rib casing, and braces extending through the slots of the brace casing and having heads resting within the brace casing, substantially as described.

871,612. STERILIZING-TABLET. VINCENT B. NESFIELD, Ealing, London, England. Filed Jan. 2, 1904. Serial No. 187,564.

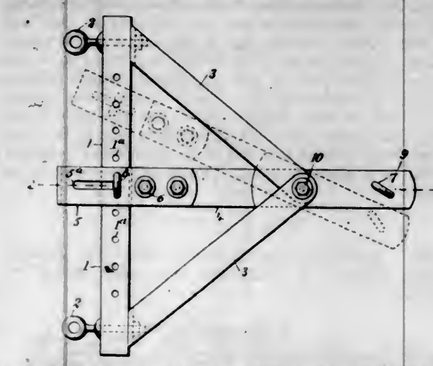


1. A sterilizing tablet composed of an outer protective coating, a layer of two substances, which, when dissolved, will react upon each other and evolve chlorin, a core containing a neutralizing agent for said chlorin, and a soluble layer separating the two last named components, substantially as described.

2. A sterilizing tablet composed of an outer coating of sugar, a layer of bleaching powder and tartaric acid, a layer of gelatin inside of said first named layer, and a core of sodium sulfite, substantially as described.

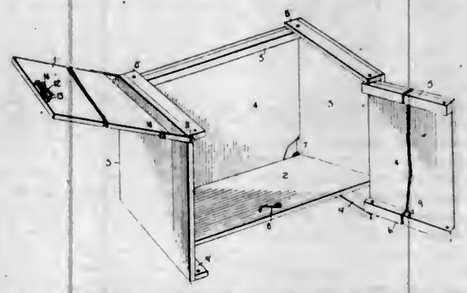
871,613. ADJUSTABLE TONGUE. JAMES P. NESTE, Lake Mills, Iowa. Filed Oct. 6, 1906. Serial No. 337,722.

The combination with a tongue provided on one end with a rearwardly extending yoke having its ends secured to said tongue, and provided with a longitudinal slot, a cross bar arranged within said yoke and provided with a series of apertures, braces secured to said cross bar and tongue,



and a locking pin engaging the apertures of said yoke and cross bar.

871,614. COLLAPSIBLE BOX. HARMON T. NEWBY, Marion, Ind. Filed Dec. 27, 1906. Serial No. 349,669.



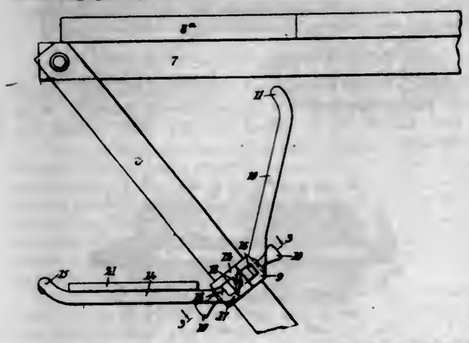
A collapsible box comprising side and end walls, the latter being extended above and below the plane of the upper and lower edges of the side walls, cleats attached to, and extending longitudinally of, the inner faces of the side walls at their upper and lower edges, inwardly projecting cleats attached to and extending transversely of the box at the upper and lower edges of the end walls to overlap the ends of the first-named cleats, vertical pintles extended through the overlapping ends of the cleats for pivotally connecting the walls of the box, a bottom hinged at one side edge to the adjacent lower side cleat and adapted to fold upward against the inner face of the corresponding side wall of the box between the cleats, means for fixing the bottom in operative position, a cover for the box arranged to close between the end cleats, links terminally pivoted to one end of the cover and the adjacent end wall of the box for movably connecting the cover therewith, the cover being adapted to fold downward upon the outer face of the end wall to which it is attached, and means for fixing the cover in operative position.

871,615. BRACKET. LAWRENCE NOLAN, New York, N. Y. Filed Apr. 27, 1907. Serial No. 370,643.

1. A bracket, comprising a body portion provided with a horn and with an aperture, another horn provided with a tongue for entering said aperture, and a thumb-screw for engaging said tongue and holding said second-mentioned horn rigid in relation to said body portion.

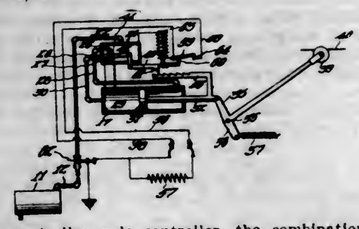
2. A bracket, comprising a body portion provided with a horn integral therewith, means for securing said body portion upon a supporting member, a horn provided with a tongue for engaging said body portion, and means for connecting said tongue and said body portion together.

3. The combination of a supporting member adapted to rest obliquely while in position, a body portion provided with means whereby it may be connected with said member, said body portion being further provided with means for engaging a tongue, and a horn provided with a tongue to be engaged by said last-mentioned means, said tongue



and said last-mentioned horn being inclined relatively to each other at such an angle that when said tongue is in position relatively to said body portion, said horn becomes horizontal.

871,616. TROLLEY-POLE CONTROLLER. CLARENCE NORLAND, Los Angeles, Cal. Filed Nov. 19, 1906. Serial No. 344,084.



1. In a trolley pole controller, the combination of a compressed air reservoir; an air cylinder having a piston operatively connected to the trolley pole; a valve chamber connected to said reservoir; connections from the opposite ends of said air cylinder to said valve chamber, said valve chamber having an exhaust port therein; a valve in said chamber adapted to connect either end of said air cylinder to exhaust; mechanism connected to said piston and mechanism connected to said valve and co-acting therewith for shifting said valve, whereby fluid pressure in the air cylinder is changed from one end to the other when the trolley wheel accidentally leaves the feed wire; and electrically operated means for holding said co-acting mechanism out of engagement when the trolley wheel is on the feed wire and current is flowing down the trolley pole.

2. A trolley pole controller for use with an overhead feed wire, comprising mechanism actuated by fluid pressure to move the trolley wheel into contact or out of contact with the feed wire; mechanism for shifting the fluid pressure from holding the trolley wheel in contact with the feed wire to cause the wheel to move below the feed wire when the wheel rises above the feed wire; and electric mechanism for controlling said shifting mechanism when the wheel is in contact with the feed wire.

3. A trolley controller for use with an overhead feed wire, comprising a trolley controller actuated by fluid pressure exerted in one direction to maintain the trolley wheel in contact with the feed wire and when exerted in the other direction to lower the trolley wheel below the feed wire; mechanism for shifting the direction of said fluid pressure when the wheel rises above the feed wire; and electric mechanism for controlling said shifting mechanism when the wheel is in contact with the feed wire.

4. A trolley controller for use with an overhead feed wire, comprising a trolley controller actuated by fluid pressure exerted in one direction to maintain the trolley wheel in contact with the feed wire and when exerted in the other direction to lower the trolley wheel below the feed wire; a valve for shifting the direction of said fluid pressure; mechanism secured to said valve and mechanism connected to the trolley pole base which when co-acting causes said valve to shift said fluid pressure; and a solenoid magnet operatively connected to the mechanism secured to the valve whereby when said magnet is energized said mechanism secured to the valve and to the trolley pole base cannot co-act.

5. In a trolley controller for use with an overhead feed wire in which fluid pressure when exerted in one direction holds the trolley wheel in contact with the feed wire and when exerted in the other direction lowers the wheel below the feed wire; mechanism for shifting the direction of said fluid pressure comprising a valve; a dog operatively secured thereto; a rack operatively secured to the trolley pole base, said rack being adapted to be engaged by the dog and to shift the valve when the trolley wheel accidentally leaves the feed wire; and electric mechanism for holding said dog out of engagement with said rack when the electric mechanism is energized.

[Claim 6 not printed in the Gazette.]

871,617. IMPLEMENT TO ARREST THE FLOW OF WATER ON SIDEHILLS. JENS C. OESTERGAARD, Burbank, Cal. Filed Feb. 11, 1907. Serial No. 356,679.



1. An implement, comprising a forward and rear member, the front member provided with a set of furrow making shares; a set of furrow filling shares on the rear member arranged to follow in the furrows made by the shares on the front member, the members pivotally secured together; and means to throw the rear shares into and out of the furrows.

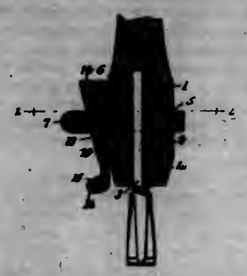
2. An implement to make checked furrows, comprising a front member and a rear member pivotally secured together; shares on the front member adapted to throw the soil on either side thereof and make furrows; shares on the rear member adapted to follow in the furrow made by the shares on the front member, and fill the furrows made by the front member at intervals; handles pivotally secured at their front ends to the front member and pivotally connected with the rear end of the rear member.

3. A mutilated furrow-making implement, comprising a forward and a rear member pivotally connected together; shares on the front member projecting forwardly and downwardly and being convex on their front faces; a like number of shares on the rear member projecting downwardly therefrom and being concave on their front faces; handles pivotally secured at their front ends to the front member and workably secured to the rear end of the rear member.

871,618. DRILL-CHUCK. GAYLORD A. ORR, Cripple Creek, Colo. Filed Mar. 12, 1907. Serial No. 361,907.

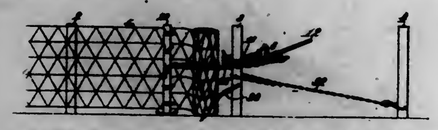
1. In a drill chuck, in combination, a head having a bore extending longitudinally therein and having a transverse slot, said slot having a recess formed on one side thereof, a link disposed in said slot and presenting an eye through which the drill shank may be passed upwardly, a block received in said recess and in said eye, and a wedge received in the said eye beyond said block and adapted to wedge said block against said shank, said link having shoulders formed at one end thereof adapted to seat in the

ends of said slot to limit the inward movement of said link.



2. In a drill chuck, in combination, a head having a bore formed therein and a transverse slot, said slot having a recess formed therein, a link received in said slot and having an eye through which a drill shank may pass upwardly in said bore, a block received in said recess, and a wedge seating in the end of said slot beyond said block, adapted to wedge said block against said drill shank and the end of said eye against said drill shank, said link having an enlarged end on the side of said bore opposite said block and adapted to jam in the end of said slot.

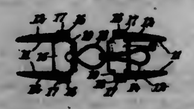
871,619. WIRE-FENCING-STRETCHING DEVICE. WILLIAM M. OWEN, Bessemer, Ala. Filed May 28, 1907. Serial No. 376,176.



1. A stretching device comprising two companion members, one of which is supported by and is turnable on the other and one of said members having teeth and the other having a pawl to engage said teeth, a hook carried by one of said members, a chain provided with a hook, carried by the other of said members, and a clamping device for holding the stretching device in position, said clamping device consisting of two curved jaws pivotally connected to one of the members of the stretching device, and a bolt, said bolt being jointed to one of said jaws and having a threaded portion extending through the other jaw, the threaded portion being provided with a nut exteriorly of said last mentioned jaw.

2. A stretching device comprising two superimposed companion members, one of which is turnable with respect to the other, the lower member having peripheral teeth and also having a chain terminating in a hook, connected therewith and the upper member having a detent to engage said teeth and also having a plurality of staff or pole receiving sockets on its upper side said upper member also having a peripheral hook.

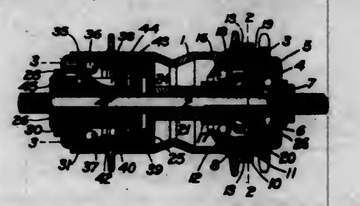
871,620. FASTENER. DENNIS W. PALMER, Hermon, Me. Filed June 11, 1907. Serial No. 378,383.



1. A fastener consisting of a U-shaped wire member composed of cross-piece and side arms, with the free ends of said side arms bent upon themselves to provide piercing prongs having pointed ends, and a sheet metal crossbar embracing both side arms and the cross-piece and having projecting catches adapted to engage with said pointed prongs.

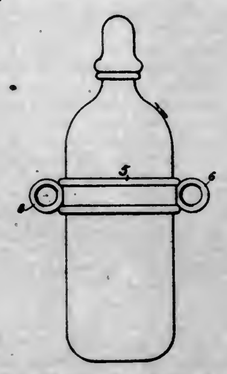
2. A blank of sheet material for forming the cross piece of a fastener, consisting of a body portion having projecting tabs at opposite sides contiguous to one end thereof, and projections disconnected from each other at their outer ends and arranged at opposite sides intermediate the length of the blank, said blank having an aperture substantially centrally located between said tabs and projections for the purpose described.

871,621. BACK-PEDALING COASTER-BRAKE. JOHN N. PARKS, Rochester, N. Y., assignor to David L. Whittier, Elmira, N. Y. Filed Feb. 23, 1905. Serial No. 247,042.



In a back pedaling coaster brake, the combination of a hub, a block adapted to be held non-rotary and having longitudinal slots therein, one or more brake blocks having tongues resting in said slots and having inclined inner faces, a brake actuator adapted to engage said inclined faces at one end to expand said one or more brake blocks against the hub for braking and having also a series of inclined faces on the other end and parts movable along said inclined faces, a driver adapted on reverse rotation thereof to engage said movable parts and to move them along said inclined faces on the brake actuator to move it longitudinally and without rotation, and thereby to expand said brake blocks against the hub upon back pedaling, and an automatic clutch between the driver and the hub for forward driving.

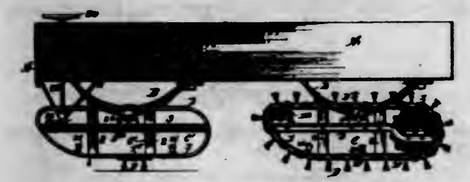
871,622. HOLDER FOR NURSING-BOTTLES. JANE E. PETTEE, New York, N. Y. Filed July 24, 1907. Serial No. 385,248.



A nursing bottle holder consisting of a flexible elastic belt provided with attaching loops or rings at the opposite sides thereof, all substantially as and for the purpose specified.

871,623. VEHICLE RUNNING AND PROPELLING GEAR. CHARLES E. PHILLIPS, Bremerton, Wash. Filed Mar. 20, 1907. Serial No. 363,375.

1. An improved vehicle gearing comprising a rigid guide frame arranged in a vertical plane and having a thickened rim as specified, and an endless track comprising a series of units which are flexibly connected and provided with parts adapted for contact with the ground, and with devices which overlap the inner edge of the aforesaid rim, whereby said units are held in place on the frame and adapted to slide thereon in the manner specified.



2. In a vehicle gearing of the class indicated, the combination with a guide frame arranged in a vertical plane and having a rim which is beveled on the inner side, of an endless track composed of a series of units including parts adapted for contact with the ground and having on the upper sides inwardly projected and undercut portions which embrace the angular side edges of the rim of the frame, substantially as described.

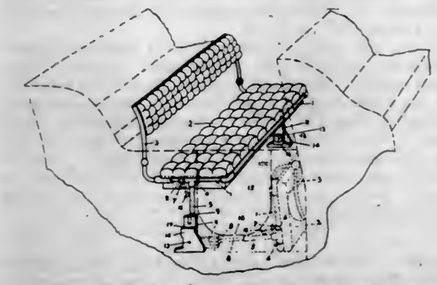
3. The combination with a frame arranged in a vertical plane and having a rim composed of a metal bar having its side edges beveled, and an endless track composed of a series of units each of which consists of a top frame and a foot or bearer for contact with the ground, the said top frame comprising two bars which are spaced apart and each provided with opposite inwardly projecting claws adapted to engage the beveled edges of the aforesaid rim, and which are rounded on their inner sides, as and for the purpose specified.

4. The combination with a frame arranged in a vertical plane, of an endless track composed of a series of units, which include a frame that is slidably connected with the vertical frame and includes a foot or bearing proper for contact with the ground, and a spring bearing for such foot which permits it to oscillate vertically, substantially as described.

5. In a vehicle gearing, a bearer composing a part of an endless traveling track, the same consisting of an upper portion adapted for attachment to a guide and for sliding contact therewith, and a lower portion consisting of a bar having a vertical slot, a foot adapted for contact with the ground, a bolt arranged in the aforesaid slot and connected with the foot by a universal joint, and a spring interposed between the said bar and foot, as shown and described.

[Claims 6 to 12 not printed in the Gazette.]

871,624. VEHICLE-SEAT. JAMES B. PITCHER, Saginaw, Mich. Filed Sept. 28, 1906. Serial No. 336,595.



1. A seat for vehicles comprising a frame extending across the vehicle, hinged legs for supporting the frame, means for releasably maintaining the legs in upright position, the frame adapted to slide horizontally relative to the legs, and means for releasably retaining the frame in its adjusted position relative to the legs.

2. A seat for vehicles comprising a frame, legs for supporting the frame, the frame having a horizontally slidable connection with the legs, and means engaging both legs and seat frame for retaining the frame in its adjusted position relative to the legs.

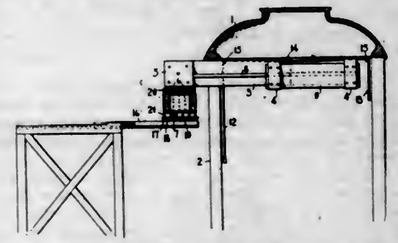
3. A seat for vehicles comprising a frame, legs for supporting the seat, sleeves carried by the legs for slidably connecting the seat therewith to permit an adjustment of the seat in a plane perpendicular to the plane of the legs, and means for retaining the seat in its adjusted position relative to the sleeves.

4. An auxiliary seat for vehicles comprising a frame, separable telescopic members for supporting the frame at opposite ends, one of said telescopic members being pivotally secured to the respective ends of the frame, to permit either end of the frame to be swung vertically.

5. A seat for vehicles comprising a frame, separable telescopic members for supporting the frame, one of the members at each end being pivotally and slidingly secured to the frame, and set collars connected and rotatable relative to the pivotal members to retain the seat in adjusted position relative to the pivotal members.

[Claims 6 to 13 not printed in the Gazette.]

871,625. MAIL-BAG CATCHING AND DELIVERY MECHANISM. PIERRE A. POCHÉ, Ponchatoula, La. Filed Sept. 6, 1907. Serial No. 391,738.



1. In a mail-bag catching and delivering mechanism, the combination, of a housing disposed within the interior of the mail-car directly opposite the door; a rail slidably carried by the housing; bag-supporting means carried by said rail at its forward end; and separate means for projecting said rail outwardly through the car door, and for retracting it into the interior of the car.

2. In a mail-bag catching and delivering mechanism, the combination, of a grooved housing disposed within the interior of the mail-car directly opposite the car door; a rail slidable in the grooves in said housing; bag-supporting means carried by said rail at its forward end; and separate operating cables connected with said rail for projecting the same outwardly through the car door, and for retracting it into the interior of the car.

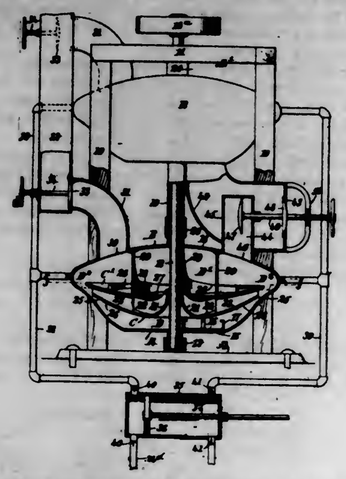
3. In a mail-bag catching and delivering mechanism, the combination of a projectable rail carried by the car and movable backwards and forwards through the car door; a plate secured to said rail at its forward end; and a series of spaced depending rods secured at their upper ends to said plate, the lower end of each rod being bent laterally to form a finger.

4. In a mail-bag catching and delivering mechanism, the combination of a projectable rail carried by the mail-car and movable backwards and forwards through the car door; a pair of plates secured to opposite sides of said rail at the forward end thereof; and a series of spaced depending rods secured at their upper ends to each plate, and having their lower ends bent laterally to form fingers, the corresponding rods of said plates alining with each other and having their fingers projecting in opposite directions towards the ends of the car.

5. The combination, in a mail-bag catching and delivering mechanism, of a projectable rail carried by the mail-car and movable backwards and forwards through the car door; bag-supporting means carried by said rail; a truck disposed at the receiving station and movable into and out of operative position; and means carried by said truck for removing a bag from said supporting means.

[Claims 6 to 9 not printed in the Gazette.]

871,626. TURBINE AIR-COMPRESSOR. ENOS C. POLLARD, Seattle, Wash. Filed July 20, 1906. Serial No. 327,022.



1. A turbine air compressor, comprising a vessel, a rotor provided with vanes within the vessel, a shaft for rotating the rotor and to which said rotor is secured, and independent means for passing a current of water through the vessel during the operation of the rotor.

2. A turbine air compressor, comprising a vessel, means for supplying water to the vessel, a vaned rotor within the vessel, means for operating said rotor, which rotor is provided with ducts, valved inlets and outlets for the vessel, and a fixed director plate located within the vessel above the rotor and adapted to receive water from the rotor and direct the water back thereto and independent means for passing water through the vessel.

3. In a turbine air compressor, the combination with the vessel of a means for supplying water to the lower portion thereof, said vessel being provided with a valved inlet in its lower portion and a valved outlet in its upper portion, a shaft mounted to revolve in said vessel, a rotor secured to said shaft, provided with marginal annular ports and with vanes upon its upper surface, and a director plate secured to the vessel and located above the rotor, which director plate is provided with a central opening and with spiral vanes extending from its outer marginal portion to the said opening.

4. A turbine air compressor, comprising a vessel, means for supplying water to the vessel and for extracting water therefrom, the vessel being provided with a valved inlet in its bottom and a valved outlet at its upper portion, a shaft mounted to revolve in the said vessel, a rotor secured to the said shaft, having a conical upwardly extending central portion, a series of vanes upon its upper surface, said vanes being alternately long and short, all the vanes extending to the outer peripheral portion of the rotor, the inner vanes stopping at the conical central section thereof, and a director plate secured to the said vessel and located close to and above the rotor, said director plate being provided with a central opening and with spiral vanes extending from the outer peripheral portion of the plate to the said opening.

871,627. BOX-FASTENER. LOUIS B. PRAHAR, New York, N. Y. Filed May 9, 1907. Serial No. 372,683.

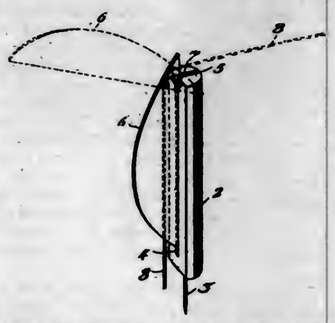
1. In a latch section for box fasteners and the like, a body member having a portion thereof struck out, forming an opening in the said body, the struck out portion forming a bearing member, and a latch member carried by the bearing member.

2. As an improved article of manufacture, a bearing plate for the latch section of a box, or like fastening, consisting of a single piece of metal having the material between its ends struck up, forming an opening therein and



an integral pivot member opposite the opening and spaced from the face of said plate.

871,628. ADVERTISING TOY. OSCAR P. REINKE, De Kalb, Mo. Filed May 3, 1907. Serial No. 371,609.



1. An advertising toy comprising a dart, a sign panel secured to the dart, and a controlling cord secured to the sign panel.

2. An advertising toy comprising a dart, provided with a groove, a sign panel pivotally secured to the dart and adapted to have a portion thereof normally positioned within the groove, and a controlling cord secured to the sign panel at a point above the pivot.

3. An advertising toy comprising a dart provided with a groove, and a sign panel secured to the dart, a portion of the sign panel being adapted to normally occupy said groove.

871,629. DISCHARGING PASTE. KARL REINKING, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation of Germany. Filed Feb. 1, 1905. Serial No. 243,747.

1. As a new article of manufacture a discharging paste containing an anhydrous hydrosulfite, glycerin and less than ten per cent. of water.

2. As a new article of manufacture a discharging paste containing an anhydrous hydrosulfite, glycerin, wheat starch and dextrin and less than ten per cent. of water.

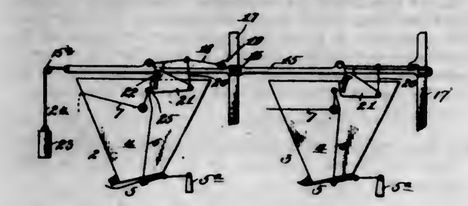
3. As a new article of manufacture a discharging paste containing forty-four parts of glycerin thickening (composed of three parts of wheat-starch, nine parts of dextrin and forty-eight parts of glycerin), eleven parts of caustic soda solution (containing forty-one per cent. of NaOH), thirty parts of sodium hydrosulfite and fifteen parts of glycerin.

871,630. DISCHARGE-CONTROLLING MECHANISM FOR WEIGHING-MACHINES. HENRY RICHARDSON, New York, N. Y. Filed Nov. 7, 1905, Serial No. 286,254. Renewed Apr. 6, 1907. Serial No. 366,839.

1. The combination of a movably mounted controlling-member, a plurality of locking means therefor, and a plurality of weighing machines, each adapted to operate a locking means into its controlling-member releasing position.

2. The combination of a movably mounted controlling-member, a plurality of locking means therefor, a plurality of weighing machines, each arranged to operate a locking means into its controlling-member releasing position, the

said controlling-member, when all the locking means are released, being arranged to be advanced, and means for returning said controlling-member to its original position.



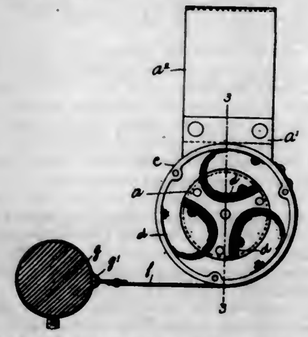
3. The combination of a movably mounted controlling-member, a plurality of locking means therefor, a plurality of weighing machines, each arranged to operate a locking means into its controlling-member releasing position, the said controlling-member, when all the locking means are released, being arranged to be advanced, and a weight connected with said controlling-member for returning it to its original position.

4. The combination of a movably mounted controlling-member, a plurality of toggles constituting locking means for said member, and a plurality of weighing machines for moving the toggles to their inoperative positions.

5. The combination of a movably mounted controlling member, a plurality of locking means therefor, each having a by-pass device, a plurality of weighing mechanisms each involving a bucket and a shiftable member, devices for supplying the buckets with streams of material, and valves for controlling the streams, said valves serving when they have cut off the supply streams to operate the shiftable members and cause the latter to act against the respective by-pass devices and move the locking means into inoperative positions.

[Claims 6 to 10 not printed in the Gazette.]

871,631. SHOCK-ABSORBER FOR VEHICLES. DUNCAN ROBINSON, Brookline, Mass. Filed Apr. 15, 1907. Serial No. 368,233.



1. In a shock absorber for vehicles, a circularly movable spring-controlled member, a strap attached thereto, means for connecting one of said parts with the vehicle body, and means for connecting the other part with the running gear, said member being so disposed with respect to the point of attachment of the strap, that upon both up and down movements of the body the strap is pulled to turn said spring-controlled member in the same direction from its normal position against the action of its controlling-springs, substantially as described.

2. In a shock absorber for vehicles, a circularly movable spring-controlled member supported upon the vehicle body, a strap attached thereto which is connected with the running gear, said member being so disposed with respect to the point of attachment of the strap, that upon both up and down movements of the body the strap is pulled to turn the member in the same direction from its normal position against the action of its controlling-springs, substantially as described.

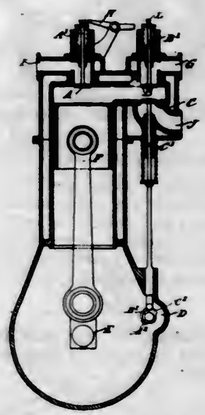
3. In a shock absorber for vehicles, a circularly movable spring-controlled ring, a strap attached thereto which is connected with the running gear, and means connecting said ring with the body, and so disposing it with respect to the point of attachment of the strap, that upon both up and down movements of the body the strap is pulled to turn the ring in the same direction from its normal position against the action of its controlling-springs, substantially as described.

4. In a shock absorber for vehicles, a circularly movable spring controlled ring supported upon the vehicle body, a strap connecting said ring with the running gear at a point whereby both up and down movements of the ring operate to pull the strap and turn the ring in the same direction from its normal position against the action of its controlling-springs, substantially as described.

5. In a shock absorber for vehicles, a circularly movable spring-controlled member supported upon the vehicle body, means connecting it with the running gear at a point whereby both up and down movements of said body and also a horizontal movement of said body relative to the running gear operate to turn said member in the same direction from its normal position against the action of its controlling-springs, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

871,632. INTERNAL-COMBUSTION ENGINE. ARTHUR ROLLASON, Long Eaton, England. Filed May 2, 1907. Serial No. 371,520.



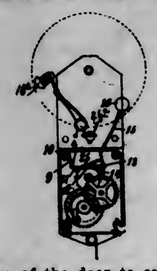
1. In a six-stroke cycle internal combustion engine having an additional scavenging valve, a combustion chamber or clearance space having part thereof placed towards one side of the cylinder out of line with the piston and inlet valve, substantially as described.

2. In a six-stroke cycle engine such as referred to in the preceding claim, a clearance space placed to one side of the cylinder and having the exhaust valve and an additional scavenging valve oppositely disposed therein, substantially as described.

871,633. AUTOMATIC ALARM. GIOACIO ROSSI, Genoa, Italy. Filed Mar. 14, 1905. Serial No. 250,104.

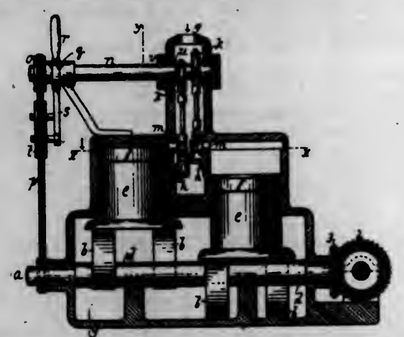
The combination with a door and its lock, of an alarm comprising a bell ringing device, a clock work for actuating the same, a pawl for normally keeping the said device out of action, a cord connected with said pawl, means connected with the cord and adapted to be operated by the introduction of a key in the lock to cause the cord to operate the pawl to release the bell ringing device, a second cord

also connected with the pawl and a spring bracket connected with the said second cord and adapted to be oper-



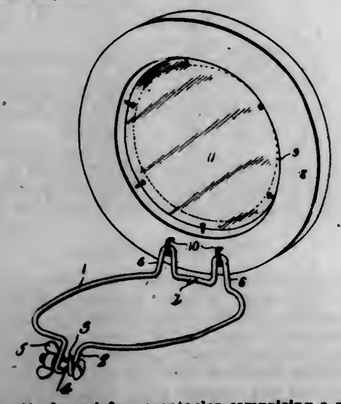
ated by the opening of the door to cause the said second cord to actuate the pawl.

871,634. ENGINE. JOSEPH ROTHCHILD, Brooklyn, N. Y., assignor of two-fifths to Robert Buchanan, Brooklyn, N. Y., one-fifth to Robert H. Burns, Queens, N. Y., and two-fifths to Pierre P. Pullis, Brooklyn, N. Y. Filed Jan. 31, 1907. Serial No. 355,062.



An engine having a piston and shafts located eccentrically to the axis of the piston and having cams fixed thereto, said piston and cams being made to act or contact directly one upon the other to avoid employment of any slipping or other friction connection and driving or uniting gears connected to and made to directly actuate each shaft.

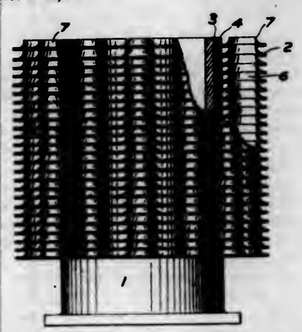
871,635. ATTACHMENT FOR BARRELS. JAMES H. ROTHROCK, Lock Haven, Pa. Filed Jan. 10, 1907. Serial No. 351,627.



1. An attachment for receptacles comprising a ring having upstanding loops, means for clamping the ring upon the receptacle, a prong upon the ring for engaging the receptacle to prevent displacement, and a cover connected to and disposed to swing upon the loops.

2. An attachment for receptacles comprising a ring having upstanding loops, means for clamping the ring upon the receptacle, a prong upon the ring for engaging the receptacle surrounded thereby, a cover having a transparent portion, and means for connecting the cover to the loops to permit swinging of said cover upon the loops.

871,636. MEANS FOR COOLING HEATED SURFACES. JAMES H. SAGER, Rochester, N. Y. Filed Jan. 19, 1905. Serial No. 241,906.



1. In a cooling device the combination with the body to be cooled, of ringlike flanges, encircling said body and attached thereto, at intervals, each of said flanges having one or more perforations that register with those in the adjacent flanges, and also having tubes around said perforations, respectively, each of which tubes projects toward a perforation in an adjacent flange.

2. In a cooling device the combination with the body to be cooled, of ringlike flanges, encircling said body and attached thereto, at intervals, each of said flanges having one or more perforations that register with those in the adjacent flanges, and also having tubes around said perforations, respectively, each of which tubes enters a perforation in an adjacent flange, whereby flues are formed through said flanges.

3. In a cooling device the combination with the body to be cooled, of ringlike flanges, encircling said body and attached thereto, at intervals, each of said flanges having one or more perforations that register with those in the adjacent flanges, and also having tubes around said perforations, respectively, each of which tubes projects towards a perforation in an adjacent flange, but leaves a passage for air between it and such flange.

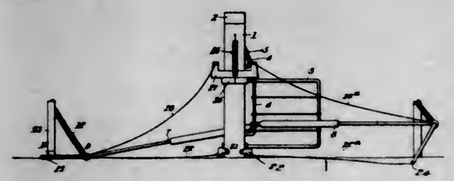
4. In a cooling device the combination with the body to be cooled, of ringlike flanges adapted to encircle said body and having each a portion adapted to lie against the surface of said body; and rings adapted, respectively, to engage said last mentioned portions of said flanges, and thereby to lock said flanges to said body at intervals.

5. In a cooling device the combination with the body to be cooled, of ringlike flanges adapted to encircle said body and having each a portion adapted to lie against the surface of said body; and unbroken rings adapted, respectively, to fit so snugly over said last mentioned portions of said flanges as to require to be driven over them, and thereby to lock said flanges to said body at intervals.

[Claims 6 and 7 not printed in the Gazette.]

871,637. GATE. CHRISTOPH SCHÄFER, Mellville, N. D. Filed Apr. 20, 1907. Serial No. 369,241.

1. A gate having a latch for locking it closed, a latch for locking it open, means operated by an approaching vehicle for releasing the first named latch, means including push rods directly connected to the gate for opening the same in either direction and also operated by said vehicle, means for releasing said last named latch operated by said vehicle after it has passed through the gateway, and means to automatically close said gate when released.



2. The combination, with a hinge post, of a gate hinged thereto, a latch mounted on said hinge post for locking said gate closed, a latch for locking it open, means operated by an approaching vehicle for releasing the first named latch, means connected to the gate for opening the same and also operated by said vehicle, means for releasing said last named latch operated by said vehicle after it has passed through the gateway and means to automatically close said gate when released.

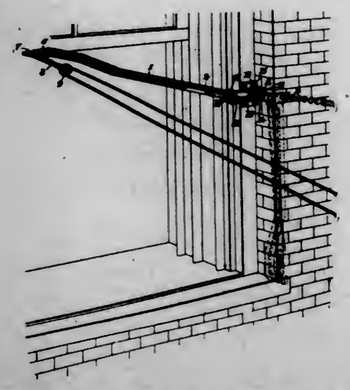
3. A gate having a latch for locking it closed, a latch for locking it open, means operated by an approaching vehicle for releasing the first named latch, means including telescopic push rods directly connected to the gate for opening the same and also operated by said vehicle, means for releasing said last named latch operated by said vehicle after it has passed through the gateway, and means to automatically close said gate when released.

4. The combination, with a gate post, of a gate hinged to said post, a latch for locking said gate closed, a rocking shaft having a crank and a crank arm extending in opposite directions, a push rod connecting said crank and gate, and means of connection between said crank arm and latch whereby said gate is released and opened when said shaft is turned.

5. The combination, with a gate post, of a gate hinged thereto, a latch for locking said gate closed, a latch for securing said gate open, a rocking shaft having a crank and a crank arm extending in opposite directions, a telescopic push rod connecting said crank and gate and means of connection between said crank arm and first named latch whereby said gate is released and opened when said shaft is turned in one direction, and means of connection between said crank and said second named latch whereby the gate is released and permitted to close when said shaft is turned in the opposite direction.

[Claims 6 to 11 not printed in the Gazette.]

871,638. CLOTHES-LINE BRACKET. JOHN D. SCHMIDT, New York, N. Y. Filed Mar. 22, 1907. Serial No. 363,813.



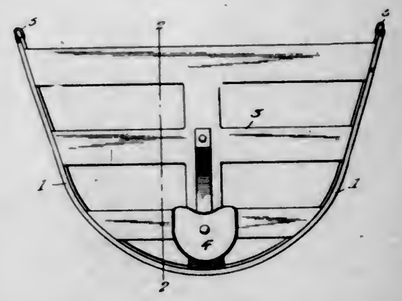
1. A clothes line support, comprising a suitable bracket, a pintle pivotally mounted thereon and adapted to move in a horizontal plane, an arm pivotally mounted upon said pintle and adapted to move in a vertical plane, and means carried by said arm and adapted to engage said bracket to prevent vertical movement of the arm when it is moved horizontally to one of its limiting positions.

2. A clothes line support, comprising a bracket, a pintle pivotally connected to said bracket and adapted to move in a horizontal plane, and an arm mounted upon said pintle and adapted to move in a vertical plane, said bracket being provided with a recess and said arm being provided with a lug adapted for insertion within said recess to prevent vertical movement of the arm after having been moved horizontally to one of its limiting positions.

3. A clothes line support, comprising a bracket, a pintle pivotally mounted thereon and adapted to move in a horizontal plane, a locking pin adapted for insertion within recesses in said bracket and said pintle for locking said pintle against horizontal movement, an arm pivotally mounted upon said pintle and adapted to move in a vertical plane, and a lug carried by said arm and adapted to enter a recess in the bracket and hold the arm against vertical movement when the pintle is locked against horizontal movement by said pin.

4. A clothes line support, comprising an arm having at its free end an outwardly-turned portion provided with a notch, a hub at its opposite end, a pintle with which the hub removably engages, means for preventing the accidental detachment of the hub from the pintle, a block to which the pintle is attached, a bracket comprising a main plate having a notch in its edge, plates extended outward from the main plate and to which said block is pivoted, the said last-named plates and the block being perforated, a locking pin passing through the perforations, and a lug on the inner side of the hub, for engagement in the notch of the main plate.

871,639. ROAD-SCRAPER. EDWARD P. SCHOLL, Mount Sterling, Ill. Filed Feb. 19, 1907. Serial No. 358,333.



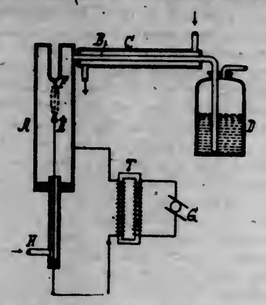
An ingathering scraper comprising a bowed scraping blade having a lower scraping edge, said blade being downwardly and outwardly inclined from its upper to its scraping edge.

871,640. PROCESS OF MAKING NITRITES. OTTO SCHÖNHERR and WILLIAM GAUS, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Oct. 16, 1906. Serial No. 339,189.

1. The process of producing nitrites which consists in treating gases containing nitrogen trioxid with a hereinbefore defined absorbing medium and in maintaining the gases, until they are treated with the absorbing medium at a temperature at which practically no oxidation of the nitrogen trioxid takes place.

2. The process of producing nitrites which consists in treating gases containing nitrogen trioxid with caustic

soda solution and in maintaining the gases until they are treated with the caustic soda solution at a temperature



at which practically no oxidation of the nitrogen trioxid takes place.

871,641. NUT-LOCK. CHARLES SCHRECK, Lancaster, Pa. Filed Apr. 26, 1907. Serial No. 370,464.

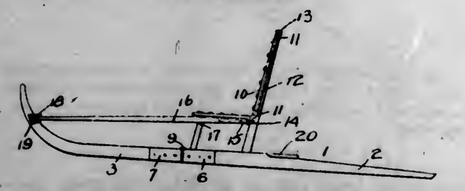


1. The combination with a bolt having a longitudinal groove, of a nut having annular recesses at the opposite ends thereof, one of said recesses having a toothed wall, and a locking member consisting of a torsion spring provided at the ends thereof with resilient tongues lying within the recesses at the ends of the nut, and resiliently engaging the walls of said recesses.

2. A longitudinally grooved bolt, a nut engaging the bolt and having annular recesses at the ends thereof, and a locking member comprising a body slidably engaging the groove of the bolt and provided at the ends thereof with arms having oppositely extending terminal springs engaging the walls of the recesses.

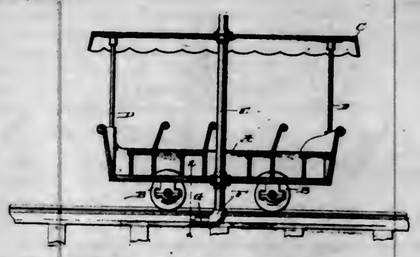
3. A longitudinally grooved bolt, a nut engaging said bolt and provided at the ends thereof with annular recesses, one of which is provided with a circumferential series of ratchet teeth, and a locking member comprising a body slidably engaging the groove in the bolt and provided with laterally extending arms having terminal oppositely extending tongues engaging the walls of the recesses in the ends of the nut.

871,642. SLED. IVAR SELLSTONE, Brockton, Mass. Filed May 25, 1907. Serial No. 375,706.



A sled of the type set forth, comprising runners formed in sections pointed at their meeting ends and provided with hinge leaves, hinge pins engaged through said leaves, the front section serving as steering sections and being connected by a cross piece, a chair mounted on the rear sections and including a horizontal cross piece, a vertical rock shaft journaled in said cross piece and carrying a handle at its upper end and a crank arm at its lower end and a centrally located longitudinal arm having pivotal connection with said first named cross piece and formed at its rear end with a slot surrounding said crank arm.

871,643. PLEASURE-RAILWAY. LORENZO D. SHAW, Glen Echo, Md. Filed Sept. 19, 1907. Serial No. 393,637.

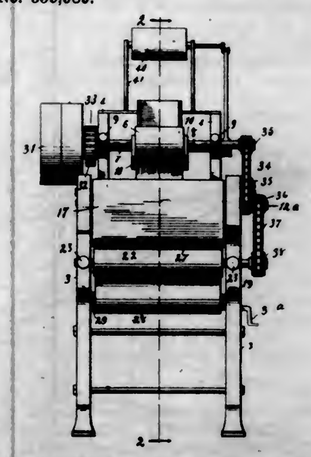


1. The combination of a vehicle adapted to convey passengers and to pass over a body of water; and a pipe carried by the vehicle, the lower end of the pipe extending downwardly so as to pass into the water while the upper end of the pipe terminates at a point above the roof or cover of the vehicle.

2. The combination of a vehicle adapted to transport passengers; and a vertically disposed pipe carried thereby, the upper end of the pipe extending through the roof of the vehicle and being open, the lower end of the pipe extending down below the bottom of the car, and provided with a forwardly projecting mouthpiece whereby as the vehicle passes over a body of water the mouthpiece will gather the water and force the same upwardly through the pipe to a point above the roof of the vehicle.

3. The combination of an inclined track the lower end of which passes into a body of water, and extends therethrough adjacent to its surface; a car adapted to transport passengers mounted on the tracks; and a vertically disposed pipe carried by the car, the upper end of the pipe extending through the cover or roof of the car and being open, the lower end of the pipe extending down below the bottom of the car and provided with a mouthpiece, whereby as the car passes over the body of water the mouthpiece will gather the water and force the same upwardly through the pipe to a point above the roof or cover the car.

871,644. LOAF-FORMING MACHINE. EDGAR W. SMITH, Joliet, Ill., assignor to Champion Machinery Company, Joliet, Ill., a Corporation of Illinois. Filed Mar. 1, 1907. Serial No. 359,989.



1. In a dough-molding machine, a pair of feed rollers arranged to compress a lump of dough, a pair of involuting rolls arranged to receive the dough from the feed rollers, a movable guiding apron of napped material arranged opposite said involuting rolls, an endless conveyer traveling in a plane at right angles to said guiding apron, and a fixed compression plate co-acting with said endless conveyer.

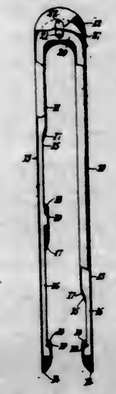
2. In a dough-molding machine, a pair of feed rollers arranged to compress a lump of dough, a pair of involuting rolls arranged to receive the dough from the feed rollers, and revolving in the same direction, a vertically disposed guiding apron of napped material arranged opposite said involuting rolls, an endless conveyer traveling in a horizontal plane, a fixed compression plate, and an adjustable compression plate, arranged on opposite sides of said conveyer, substantially as described.

871,645. MACHINE FOR PRINTING MEASUREMENTS ON PIECES OF MATERIAL. PETER SPERLING, Neunkirchen, Germany. Filed Jan. 15, 1906. Serial No. 296,157.



An improved machine for printing measurements on pieces of cloth or other material, comprising in combination with the sprocket-wheel for the type-chain for the hundred types, a toothed-wheel mounted on the axle of the sprocket-wheel, a ratchet-wheel mounted on the axle of the sprocket-wheel, a detent-lever engaging with the toothed-wheel, a pawl-lever engaging with the ratchet-wheel, a fork fixed to the axle of the measuring-drum, serving as pivot for the levers, a disk fixed to the frame of the machine provided on its inner surface with an eccentric guide-groove for the end of the pawl-lever and with an eccentric guide-groove for the end of the detent-lever, said latter groove being composed of two halves of different diameter, connected by inclines, substantially as described and shown and for the purpose set forth.

871,646. HAIR-PIN. GEORGE H. SPRAY, New York, N. Y., assignor of one-half to John Anderson, Brooklyn, N. Y. Filed Mar. 8, 1907. Serial No. 361,207.

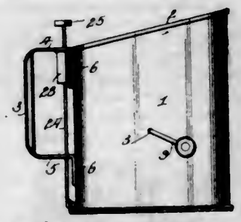


1. A device of the class described, comprising two members, one of which constitutes an outer hollow sheath having a sharp point and an elongated opening in the side thereof, and the other of said members having a cutaway portion corresponding to the opening in the sheath or outer member and being located within said outer member and longitudinally movable but laterally immovable in respect thereto, said members being so formed adjacent the ends of the opening and cutaway portions as to present a barb or projection when the members are in one position, and to protect or conceal said barb or projection when the members are moved longitudinally in respect to each other.

2. A device of the class described, comprising two members, one of said members forming a sheath or casing and the other of said members closely fitting within said first mentioned member and longitudinally movable but laterally immovable in respect thereto, one of said members being provided with a barb or projection integral with and rigid in respect thereto, and the other of said members having an inclined portion located adjacent said barb or projection, whereby the barb or projection is exposed when the members are in one position in respect to each other and protected by said inclined portion when the members are in the opposite position in respect to each other.

3. A device of the class described, comprising two members, one of which is provided with a barb projection rigid in respect thereto, and the other of said members having an inclined portion located adjacent said barb or projection, said members being held against lateral movement but being longitudinally movable in respect to each other to protect the barb projection by the inclined surface or to bring the barb or projection to an operative position.

871,647. SIEVE. GEORGE W. STENZ, Ashland, Wis. Filed May 25, 1907. Serial No. 375,672.



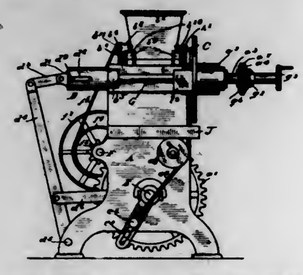
The herein described sifter comprising a body open at its lower end and having a handle on one side, a screen in said body, a revoluble beater in said body to coact with said screen, a pair of wings forming closures for the body, each having a hinged connection with the body and provided with a lug near such hinged connection, an operating rod for said wings having fork arms respectively connected to the lugs of such wings, a casing in the angle between the handle and the body, said operating rod passing through the handle and the said casing, and provided with a stop element in said case, and a spring in said casing, concealed and guarded thereby and bearing between the said stop element and one end of the said casing and acting upon the rod to cause the latter to normally maintain the wings in closed position.

871,648. DOUGH-DIVIDER. FRANK STREICH, Joliet, Ill., assignor, by mesne assignments, to Champion Machinery Company, Joliet, Ill., a Corporation of Illinois. Filed Apr. 9, 1906. Serial No. 310,712.

1. In a dough dividing machine, a hopper, feeding means arranged in said hopper, a cylinder adapted to receive the dough from said feeding means, a reciprocating piston arranged in said cylinder, an oscillating member having dough measuring chambers, means for oscillating said member, means for reciprocating said piston, and adjustable means for measuring the dough admitted to said chambers.

2. In a machine of the class described, a cylinder adapted to receive the material to be operated on, a hollow reciprocating piston arranged in said cylinder and means within said piston whereby a yielding pressure on the material is effected.

3. In a machine of the class described, a cylinder adapted to receive the material to be operated on, a hollow reciprocating piston removably mounted in said cylinder, a block slidably arranged in said piston and a spring between said block and the piston.

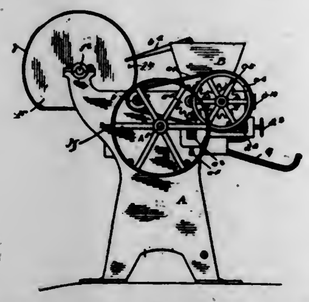


4. In a dough machine, a hopper, feed rollers mounted in said hopper, a chamber adapted to receive from said rollers portions of the dough to be operated on, a plunger slidably arranged in said chamber, a block arranged in said plunger, means for adjusting the stroke of said plunger, and cushioning means for said block.

5. In a dough machine, a chamber adapted to receive portions of the material to be operated on, a piston slidably arranged in said chamber, a lever and cushioning means between said lever and said piston.

[Claims 6 to 10 not printed in the Gazette.]

871,649. LONG-LOAF-MOLDING MACHINE. FRANK STREICH, Joliet, Ill., assignor, by mesne assignments, to Champion Machinery Company, Joliet, Ill., a Corporation of Illinois. Filed Apr. 19, 1906. Serial No. 312,647.



1. In a dough molding machine, a supporting frame, a hopper, means for feeding the dough from the hopper, means for flattening the dough, and a drum having a transverse recess in its periphery, and means coöperating with said drum for coiling the pieces of dough into cylindrical form.

2. A dough molding machine comprising a supporting frame, a hopper, means for intermittently feeding lumps of dough to the hopper, rollers adapted to feed the lumps from the hopper, a belt traveling below said rollers and adapted to coöperate with said rollers in flattening the lumps, a drum and a roller coöperating with said belt in coiling the flattened lumps, said drum adapted to release the lumps from said roller and belt, and means for operating said rollers, belt and drum.

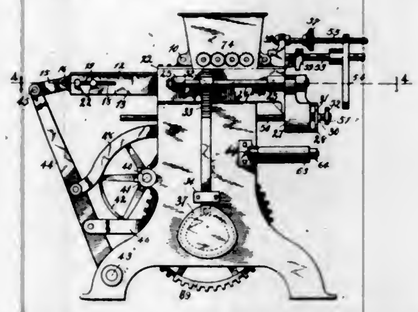
3. In a dough molding machine, a hopper, rollers adapted to feed the dough from said hopper, an endless belt arranged to coöperate with one of said rollers to flatten the dough, and a drum having a portion of its periphery adapted to frictionally engage the dough and having a portion adapted to provide a pocket to receive the dough and release it from frictional engagement.

4. In a dough molding machine, a hopper, rollers adapted to feed the dough from the hopper, an endless belt traveling below said rollers, means for pressing the upper course of said belt toward one of said rollers whereby a piece of dough may be flattened between the belt and said rotatable roller, means coöperating with said belt for coiling up the flattened pieces of dough, said means adapted to release the pieces when coiled, and means coöperating with said belt for maintaining the piece in its coiled condition.

5. In a dough molding machine, a hopper, rollers adapted to feed the dough from said hopper, an endless belt arranged below said rollers, means for driving said belt, a roller mounted below under the upper course of said belt and below one of the feed rollers, a friction roller and a drum, said drum and friction roller arranged and adapted to coöperate with said belt in coiling the dough presented thereto, and said drum adapted to release the dough from contact therewith.

[Claim 6 not printed in the Gazette.]

871,650. DOUGH-DIVIDER. FRANK STREICH, Joliet, Ill., assignor to Champion Machinery Company, Joliet, Ill. Filed Aug. 31, 1906. Serial No. 332,861.



1. In a machine for dividing plastic substances, a hopper, feed-rollers mounted in said hopper, a chamber communicating with said hopper, and a reciprocating plunger mounted in said chamber.

2. In a machine for dividing plastic substances, a hopper, feeding means arranged in said hopper, a chamber communicating with said hopper, and reciprocating means mounted in said chamber, said means consisting of a hollow plunger, a block slidably arranged in said plunger, and a spring arranged between said block and the end wall of the plunger.

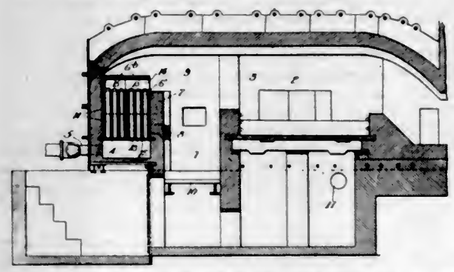
3. In a machine for dividing plastic substances, a hopper, feeding means arranged in said hopper, a chamber communicating with said hopper, a hollow plunger slidably mounted in said chamber, a block slidably arranged in said plunger, means limiting the movements of said block, and cushioning means between said block and the end wall of said plunger.

4. In a machine for dividing plastic substances, a hopper, feeding means rotatably mounted in said hopper, a chamber communicating with said hopper, a hollow plunger slidably mounted in said chamber and having its walls slotted, a block slidably arranged in said plunger, and means engaging said block and slots for limiting the movements of said plunger.

5. An apparatus for the purpose specified including a receptacle for the material to be operated upon, a compression chamber, a follower adapted to reciprocate within said chamber, a plurality of movable auxiliary receptacles adapted to intermittently communicate with said compression chamber, means for varying the capacity of said auxiliary receptacles, means for simultaneously moving said auxiliary receptacles into and out of communication with said compression chamber, feeding mechanism, and a conveyer for the finished product.

[Claims 6 to 10 not printed in the Gazette.]

871,651. FURNACE. WILLIAM STUBBLEBINE, Coraopolis, Pa. Filed July 8, 1907. Serial No. 382,685.



1. In a furnace of the character described, the combination, with the fire box, the working chamber and means to deliver an air blast below the grate in said fire box, of a recuperator arranged at the end of the fire box and separated therefrom by a wall which does not extend to the roof of said fire box, and means to deliver air and gas through said recuperator to said fire box over said wall.

2. In a furnace of the character described, the combination, with the fire box, the working chamber and means to deliver an air blast below the grate in said fire box, of a recuperator arranged at the end of said fire box and separated therefrom by a wall, spaced apart sets of bricks in said recuperator having vertical passages through which an air blast is delivered over said wall into the fire box and means to draw gas from the fire box in the spaces between said sets of bricks and to deliver said gas over said wall into said fire box again.

3. In a furnace of the character described, the combination, with the fire box, the working chamber and means to deliver an air blast below the grate in said fire box, of a recuperator arranged at the end of said fire box and separated therefrom by a wall, diverging spaced apart sets of bricks in said recuperator having vertical passages through which an air blast is delivered over said wall into the fire box, and means to draw gas from the fire box into the spaces between said sets of bricks and to deliver said gas over said wall into said fire box again.

4. In a furnace of the character described, the combination, with the fire box, the working chamber and means to deliver an air blast below the grate in said fire box, of a recuperator arranged at the end of said fire box and separated therefrom by a wall, and diverging spaced apart sets of bricks in said recuperator having vertical passages through which an air blast is delivered over said wall into the fire box, said wall having flared openings leading to the flared spaces between said sets of bricks through which gas in drawn to be delivered again over said wall.

5. In a furnace of the character described, the combination, with the fire box, the working chamber and means to deliver an air blast below the grate in said fire box, of a recuperator arranged at the end of said fire box and separated therefrom by a wall, spaced apart sets of bricks in said recuperator having vertical passages, the top bricks having horizontal passages whereby an air blast is delivered over said wall into the fire box, and means to draw gas from the fire box into the spaces between said sets of bricks to be delivered again to said fire box over said wall.

[Claims 6 and 7 not printed in the Gazette.]

871,652. AIR-PURIFIER. FRANK A. WARD, Los Angeles, Cal. Filed Aug. 23, 1906. Serial No. 331,787.



1. In an apparatus of the character described, a wall of dielectric material, a point-bearing electrode arranged upon one side of said wall and having its points in contact therewith, a smooth perforated electrode in close contact with the other side of said wall, and a source of alternating currents connected to said electrodes.

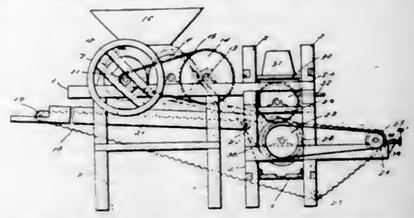
2. In an apparatus of the character described, a tube of dielectric material, a point-bearing electrode arranged within said tube and having its points in contact therewith, a smooth perforated sheet metal tubular electrode surrounding the outside of said dielectric tube and in close contact therewith, and a source of alternating currents connected to said electrodes.

3. In an apparatus of the character described, a tube of dielectric material, a point-bearing electrode arranged within said tube and having its points in contact therewith, a smooth perforated sheet metal tubular electrode surrounding the outside of said dielectric tube and in close contact therewith, and a transformer having its secondary coil connected to said electrodes and its primary coil to a source of electrical supply.

4. In an apparatus of the character described, a cylinder of dielectric material, a point-bearing electrode arranged within said tube and comprising a metallic rod carrying a plurality of spaced metallic disks having points upon their peripheries in contact with said cylinder, a smooth cylindrical metallic electrode formed with perforations and surrounding the exterior of the dielectric cylinder and in close contact therewith, and a transformer having its secondary coil connected to said electrodes, and its primary coil to a source of electrical supply.

5. In an apparatus of the character described, a cylinder of dielectric material, a point-bearing electrode arranged within said tube and comprising a metallic rod carrying spaced metallic disks having points upon their peripheries in contact with said cylinder, a smooth cylindrical metallic electrode formed with perforations and surrounding the exterior of the dielectric cylinder and in close contact therewith, a transformer having its secondary coil connected to said electrodes and its primary coil to a source of electrical supply, and a casing inclosing said transformer and electrodes and provided with screened openings.

871,653. FRUIT-PRESS. SAMUEL E. WARREN, Eureka, Cal. Filed Nov. 21, 1906. Serial No. 344,478.

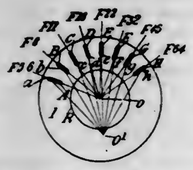


A fruit presser comprising a frame provided with an inclined trough having rearwardly cut-away ends with rows of notches therein, and a weighted sliding adjusting frame, bars projecting outward from the frame, presser rollers arranged one above the other and journaled respectively in the sliding adjusting frame and said bars, a roller on the ends of the bars, an adjustable roller in said notches, and intermediate rollers journaled on the frame, a belt passing through said trough over the adjustable roller and over the roller of said bars and also over the intermediate rollers and between the presser rollers, angular brackets secured to the ends of the bars provided with adjusting screws, a scraper secured to the inner ends of the adjusting screws and serving to contact with the belt, substantially as specified.

871,654. APPLIANCE FOR ADJUSTING AND WORKING IRIS DIAPHRAGMS OF PHOTOGRAPHIC CAMERAS. ALFRED WATKINS and CHARLES G. WOODHEAD, Hereford, England. Filed Mar. 14, 1905. Serial No. 250,063.

1. In combination with an iris diaphragm, a movable member connected therewith which is displaced by equal

amounts when the area of the iris aperture is varied at a constant rate.



2. In combination with an iris diaphragm, a movable member connected therewith, and means connecting the diaphragm and movable member, whereby the area of the iris aperture is doubled or halved, according to the direction of movement, for equal displacements of the movable member.

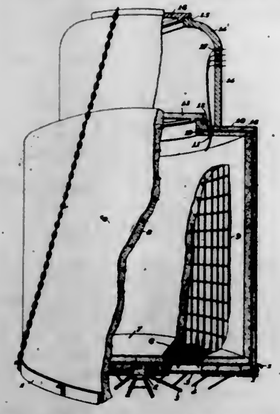
3. The combination of an iris diaphragm, a rotating member actuating the iris leaves, and means connecting the actuating member with the iris leaves, whereby equal displacements of the said actuating member double or halve the iris area, according to the direction of rotation of the actuating member, substantially as described.

4. In an iris diaphragm, which is actuated by a movable member, an iris leaf having its effective edge shaped to alter the iris area by doubling or halving, according to the direction of motion of the actuating member, when the said actuating member is displaced by equal amounts.

5. The herein described improvement in diaphragm mechanism, comprising means for varying the area of the diaphragm opening, a rotatable operating element therefor, and means whereby equal angular movements of said operating element will effect equal division of multiplication of said area, for the purpose specified.

[Claim 6 not printed in the Gazette.]

871,655. REINFORCED VAULT. EDWARD J. WINSLOW, Chicago, Ill. Filed Oct. 17, 1905. Serial No. 283,114.



1. A water-proof vault comprising a main underlying chamber of substantially cylindrical shape and provided with a centrally located hatch-way in the top thereof, said hatch-way being provided with a removable cover, and a relatively high subsidiary cylindrical dome superposed upon said chamber and covering the aforesaid hatch-way, and grouted hermetically onto said chamber, said dome provided with a top man hole and a removable cover therefor.

2. A water-proof vault comprising an underlying chamber and a top hatch-way provided with a removable cover, said hatch-way being protected by a superposed impervious dome having a top man hole, said chamber providing suitable conduit apertures leading into said dome, and the latter providing suitable exit apertures, whereby an electrical conductor may pass from within the chamber into and through the dome to the exterior of said vault.

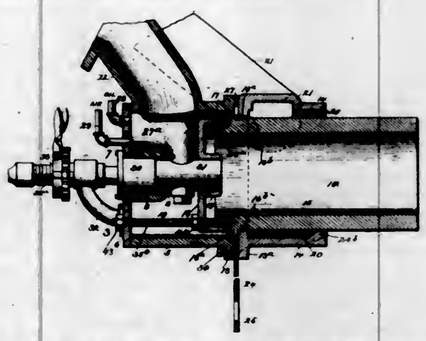
3. A water-proof vault of cementitious material comprising a main chamber adapted to be buried deeply underground safely containing electrical batteries, said main chamber being provided adjacent its bottom with a plurality of protruding members adapted to be engaged by a suitable elevating means, whereby the vault may be hoisted, a means arranged to reinforce said members to said chamber and distribute the hoisting strains to prevent the rupture of said chamber, and a superposed smaller chamber through which the conductors from said batteries will pass, and openings into said smaller chamber and from thence into said larger chamber for the admission of a person.

4. A water-proof vault comprising an underlying main chamber provided with a substantially flat top, a hatchway having a circumscribing raised hoop located in said top, said main chamber being provided adjacent its bottom with a plurality of protruding members adapted to be engaged by a suitable elevating means, whereby the vault may be hoisted, a means arranged to reinforce said members to said chamber and distribute the hoisting strains to prevent the rupture of said chamber, and a superposed dome resting upon said top in water-proof union therewith and covering said hatch-way.

5. A water-proof vault comprising an underlying main chamber provided with a substantially flat top having a man hole therethrough, said main chamber being provided adjacent its bottom with a plurality of protruding members adapted to be engaged by a suitable elevating means, whereby the vault may be hoisted, a means arranged to reinforce said members to said chamber and distribute the hoisting strains to prevent the rupture of said chamber, and a superposed dome having a like opening and covering the former, said top providing conductor orifices leading into said dome and the latter providing exit orifices for said conductors such orifices extending through the side wall of said dome.

[Claims 6 to 14 not printed in the Gazette.]

871,656. HYDROCARBON-BURNER FOR FURNACES. BURT L. WORTHEN, Tucson, Ariz., assignor, by direct and mesne assignments, to The Kemp Hydro-Carbon Furnace Company, a Corporation of New York. Filed Nov. 12, 1904. Serial No. 232,485.



1. A hydrocarbon burner, comprising a casing, forming an air-chamber and flanged at one end, another casing forming a separate air-chamber and flanged at its adjacent end, the two flanges being secured together, a combustion-chamber within the second-named chamber, with the walls thereof less in external diameter than the internal diameter of the walls of said second-named chamber, the inner end of the combustion-chamber having a head formed with an opening, a burner-tube fitted within this opening, means for supplying air to each of the air chambers, having controlling devices, and means for closing the interior of the said second-named casing on removing the said tube and combustion-chamber.

2. A hydrocarbon burner, comprising a casing, forming an air-chamber, and flanged at one end, another casing forming a separate air-chamber and flanged at its adjacent end, the two flanges being secured together, a combustion-chamber within the second-named chamber, with the walls thereof less in external diameter than the internal diameter of the walls of said second-named chamber, the inner end of the combustion-chamber having a head provided with an opening, a burner-tube within this opening, means for supplying air to each of the air-chambers, having controlling devices, and a gate working in an opening formed within said flanges for closing the interior of the said second-named casing on removing the said tube and combustion-chamber.

3. A hydrocarbon burner, comprising a casing, forming an air-chamber, a second casing united thereto, forming a second air-chamber, a combustion-chamber within the said second air-chamber, with the walls thereof less in external diameter than the internal diameter of the walls of said second-named air-chamber, the inner end of said combustion-chamber having a head formed with an opening, a burner-tube fitted within this opening and communicating with the combustion-chamber, an air main, and air supply pipes leading therefrom to each of the air-chambers, said pipes each having a controlling valve, and means for closing the interior of the second-named casing on removing said burner-tube and combustion-chamber.

4. A hydrocarbon burner, comprising a casing, forming an air-chamber, a second casing united thereto, forming a second air-chamber, a combustion-chamber within the said second air-chamber, with the walls thereof less in external diameter than the internal diameter of the walls of said second-named air-chamber, the inner end of said combustion-chamber having a head formed with an opening, a burner-tube fitted within this opening and communicating with the combustion-chamber, an air main, and air supply pipes leading therefrom to each of the air-chambers, said pipes each having a controlling valve, and a sliding gate for closing the interior of the second-named casing on removing said burner-tube and combustion-chamber.

5. A hydrocarbon burner, comprising a casing provided at one end with a removable head, and having a flange at its other end, another casing having a flange at its adjacent end, said flanges being secured together, and said second-named casing also having an inner flange, a combustion-chamber having the walls thereof less in external diameter than the internal diameter of the walls of the second-named chamber, said inner flange closing the space between the two said walls, a burner tube leading to the combustion-chamber, means for supplying each of the casings with air, means for securing the walls of the combustion-chamber to said removable head, and a device for closing the interior of the second-named casing on removing the combustion-chamber and burner-tube.

871,657. BUSTLE. EMILY H. WRIGHT, Port Washington, N. Y. Filed Jan. 31, 1907. Serial No. 354,995.



1. As a new article of manufacture, a bustle consisting of a body made of a stiff material and of an approximately spherical curvature, the body having inwardly extending apertured projections for forming vents, and attaching devices at the points of the said body.

2. As a new article of manufacture, a bustle comprising a body made of stiff material of a uniform thickness, and of an approximately spherical curvature and crescent shape, the stiff material consisting of papier-mâché reinforced by a textile fabric, and apertured projections permanently arranged on the inner face of said body.

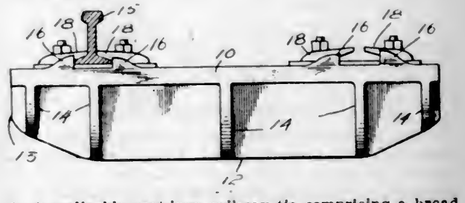
3. As a new article of manufacture, a bustle comprising a body made of stiff material of a uniform thickness, and of an approximately spherical curvature and crescent shape, the stiff material consisting of papier-mâché reinforced by a textile fabric, the body having apertured projections on its inner face and depressions on its outer face opposite the projections.

4. As a new article of manufacture, a bustle comprising a body made of stiff material of a uniform thickness and of an approximately spherical curvature and crescent shape, the said stiff material being formed of several paper layers, and a reinforcing piece of a textile fabric interposed between the paper layers, the body being apertured and provided with corrugations following its peripheral edge.

5. As a new article of manufacture, a bustle comprising a body made of stiff material of a uniform thickness and of an approximately spherical curvature and crescent shape, the outer portion of the body being corrugated, the corrugations following the peripheral edge of the body.

[Claim 6 not printed in the Gazette.]

871,658. METALLIC RAILWAY-TIE. LEWIS M. WRIGHT, Fountain, Colo. Filed Jan. 31, 1907. Serial No. 355,167.



1. A malleable cast-iron railway tie comprising a broad flat-top body, having a depending web extending centrally from end to end, and the bottom of the body on each side of the webs being concaved.

2. A malleable cast-iron railway tie comprising a broad flat-top body, having a depending web extending centrally from end to end, transverse webs extending from the sides of the top inward to the first mentioned web and the bottom of the body between the transverse webs and the central web on each side of the latter being concaved.

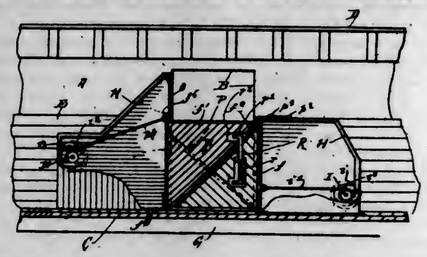
3. A malleable cast-iron railway tie having a broad flat-top and tabs or lugs formed on the sides of the top at points on the sides of the line for the support of the rails, and sound-deadening shims arranged on the said lines and engaged by the said lugs to hold them in place.

4. A malleable cast-iron railway tie comprising a broad flat-top body having a depending web extending centrally from end to end, transverse webs extending from the sides of the top inwardly and inclined from their upper edges inward to the longitudinal web, the bottom of the body being concaved on each side of the longitudinal web.

871,659. GRAIN-DOOR FOR CARS. JOHN E. ABBOTT, Port Huron, Mich. Filed Sept. 20, 1906. Serial No. 335,471.

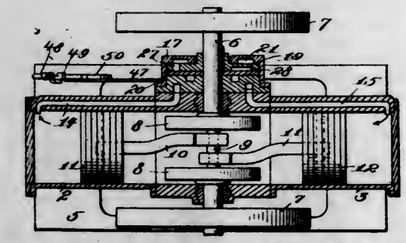
The combination with side-wall and door-casing of a box car, of a grain door comprising two right-angled, triangular sections adapted to close together across the doorway along their oblique edges, a pocket for the lower section, means on the outside of the car for drawing the lower section back into said pocket, a pocket for the upper section, means for tilting said upper section on its lower corner back into said pocket, and a cross-brace hinged at its lower end to the floor and side wall extendible across the doorway transverse to the oblique, meeting margins of the two

sections, adapted to be folded back flush with the mouth of the lower section pocket, and a swinging apron closing the



mouth of the upper section pocket when said upper section is lying within said pocket.

871,660. ROTARY VALVE. CHARLES M. ANDREWS, Caryville, Tenn., assignor of one-half to Charles M. Moore, Caryville, Tenn. Filed May 17, 1907. Serial No. 374,161.

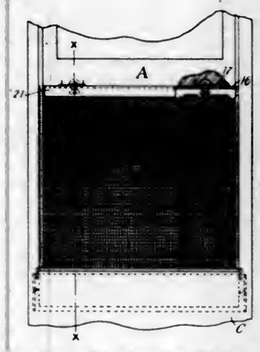


1. In combination with a double-acting engine having passages leading to the cylinders of the engine, of a boxing having an inner and outer section secured to each other, said outer section having an annular chamber, a supply pipe in communication with said chamber, said inner section having an upper and lower semi-circular passage terminating at opposite ends in openings, said section further provided with a semi-circular passage-way terminating in openings intermediate the said semi-circular passages, a rotatable disk mounted between the sections and having a quadrant form opening, said disk further provided with a quadrant form cavity directly opposite the said quadrant form opening, a rotary valve member mounted between said disk and the inner section and having circumferentially arranged pairs of openings adapted to register with the quadrant form opening and cavity in the disk and with the openings in the inner section, and a pipe forming communication with the inner quadrant form passage-way in the inner section.

2. In valve mechanism, the combination of a boxing having two oppositely extending passages, ports leading into the respective passages, a passage intermediate the two oppositely extending passages, a supply means in communication with the innermost passage, a rotatable valve member having a quadrant form port and cavity therein adapted to register with either of the ports formed by the passages, said boxing further provided with an annular passage-way forming communication with the quadrant form opening in the valve member, and exhaust means in communication with said annular passage-way.

871,661. WINDOW-SCREEN. AXEL B. ARCTANDER, St. Paul, Minn. Filed Nov. 30, 1906. Serial No. 345,705.

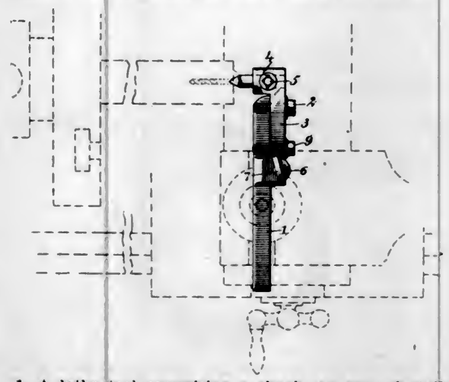
1. The combination with a window frame and sash slidable therein, of a sill plate formed with a longitudinally extending slot, a tension roller supported below said slot, a screen carried by said roller and passing through said slot, a plate slidably supported at the lower edge of said sash, means carried by said plate for detachably supporting the free edge of said screen and flanges extending downwardly from the front and rear sides of said plate to a point below the screen supporting means, for the purpose set forth.



2. The combination with a window frame and sash slidable therein, of a sill plate formed with a longitudinally extending slot, a box supported below said plate and formed with inclined inner grooves in its end walls, the lower ends of said grooves having squared portions, a tension roller having its ends constructed to pass through said grooves and into the squared portions thereof, a screen carried by said roller and passing through the slot in said sill plate, and a detachable connection between the free edge of said screen and said sash.

3. The combination with a window frame and a slidable sash supported therein, of a metal sill plate formed with a longitudinally extending slot, a box supported below said plate, said box being formed with an inclined groove in its end wall, and a squared portion at the lower end of said groove, a tension roller supported below said slot, the roller end fitting in the squared end of the groove, a spring shaft for said roller provided with an opening registering with an opening in the adjacent end of the roller, a key fitting in said openings, a screen carried by said roller and extending through said slot, and a detachable connection between the free end of said screen and said sash.

871,662. LATHE-TOOL. JULIUS P. AYLESWORTH, Endeavor, Pa. Filed Nov. 24, 1906. Serial No. 344,864.

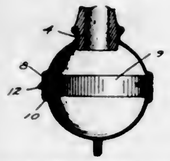


1. A lathe tool comprising a shank, an arm pivotally attached to the shank having means for clamping a device in the outer end thereof, and a screw carried by the shank pressing on the arm, said arm being so balanced on its pivot as to normally engage the screw.

2. A lathe tool comprising a shank, an arm pivotally connected to the shank having an aperture passing transversely therethrough eccentric to its pivotal connection, means for clamping a tool in the aperture and means for holding the arm against movement with respect to the shank.

3. A lathe tool comprising a shank, an arm pivotally connected to the shank having an aperture passing transversely therethrough eccentric to its pivotal connection, means for clamping a tool in the aperture, and means removed from said pivotal connection for clamping the arm in adjusted position.

871,663. BATH-TUB SHOWER ATTACHMENT. FRANCIS E. BALL, Chicago, Ill. Filed Nov. 14, 1906, Serial No. 343,416. Renewed Sept. 11, 1907. Serial No. 392,370.



1. A device of the class described comprising a hollow body composed of a pair of relatively rotatable sections having overlapping flanges connecting the sections and provided with openings adapted to be brought into and out of register by relative rotation of the sections.

2. A device of the class described comprising a hollow body composed of a pair of relatively rotatable sections having overlapping flanges connecting the sections, each of said flanges being provided with a slot and with a series of perforations adapted to be brought into register with the slot and perforations made in the companion flange.

3. A device of the class described comprising a hollow body consisting of an upper section having a spigot receiving mouth and a lower section provided with a projecting lug, said sections having overlapping flanges provided with openings adapted to be brought into and out of register by relative rotation of the sections.

871,664. BAG AND FASTENING. THOMAS L. BEAM, Lake City, Colo. Filed Jan. 16, 1907. Serial No. 352,543.

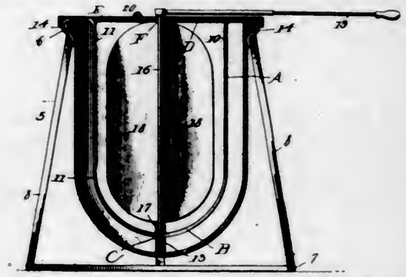


1. A bag having a body, and a frame consisting of sections jointed together and attached to the mouth of said body, said frame sections being formed of wire and having coils formed therein constituting eyelets, and a cord passing through the eyelets and adapted to close the mouth of said bag.

2. A bag having a body of flexible material and a frame attached at the mouth thereof, consisting of sections hinged together, said frame sections being formed of wire twisted to form coils constituting eyelets, said eyelets being disposed opposite each other, and registering when the bag is closed, flaps attached to the edges of the mouth of said bag and overlapping each other to form a closure therefor, and a lacing passing through said eyelets.

3. A bag having a body adapted to open by a hinge movement, a pair of main flaps attached to opposite edges at the mouth of said bag and overlapping each other, meas for attaching said main flaps together, and side flaps attached to the other edges of said bag and projecting beyond the side edges of said main flaps.

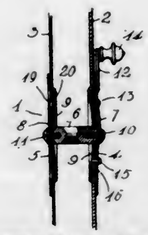
871,665. KETTLE. HARRIET C. BENEFIEL, Vandalia, Ill. Filed Apr. 22, 1907. Serial No. 369,548.



1. In a cooker, the combination with a receptacle, of a support removably disposed therewithin, said support including yokes having curved portions and upwardly extending legs, a socket block engaged in the curved portions and extending downwardly to rest against the bottom of the receptacle, bridge pieces secured to the legs at the upper ends thereof, a shaft revolubly engaged in the bridge pieces and seated at its lower end in the socket block, a handle for the shaft, said yoke legs being removably engaged with the receptacle and wings carried by the shaft.

2. In a cooker, the combination with a receptacle, of a support removably disposed therewithin, said support including yokes having curved portions and upwardly extending legs, a socket block engaged in the curved portions and extending downwardly to rest against the bottom of the receptacle, bridge pieces secured to the legs at the upper ends thereof, a shaft revolubly engaged in the bridge pieces and seated at its lower end in the socket block, a handle carried by the shaft, said yoke legs being engaged over the edge of the receptacle at their upper ends, and wings carried by the shaft.

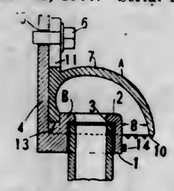
871,666. VALVE FOR STERILIZERS. SAMUEL BINGHAM, Rochester, N. Y. Filed June 7, 1906. Serial No. 320,592.



A sterilizer comprising a boiler and an inner vessel having their walls provided with oppositely facing, perforated valve seats, one of said seats being provided with a pin, a perforated valve on each seat having an angular aperture at its center and one of them provided with a slot through which said pin projects, a stem through said seats, the ends of which are angular and fit in the angular apertures of said valves, screws in the ends of said stem for holding said valves toward each other upon said oppositely facing seats, and a handle secured to the outer valve, whereby the valves may be rotated to cause the perforations of one of them and its seat to register when the pin stands at one

end of the slot and the perforations of the other valve and its seat to register when the pin stands at the other end and all of said perforations to be out of register when the pin stands intermediate the ends of said slot.

871,667. PIPE-CAP. WILLIAM H. BLOOD, Jr., Wellesley, Mass. Filed Mar. 22, 1907. Serial No. 363,829.



1. A device of the class described comprising in combination, an upright conduit, an annular collar having a substantially smooth bore telescoping the end thereof and adapted to be readily slipped into said relation, a hood overlying said collar, and means comprising an ear extending upwardly in the direction of said conduit for simultaneously securing the hood to said collar and the latter to a support.

2. A device of the class described comprising in combination, an upright conduit, an annular collar telescoping the end of said conduit, said collar having a vertically extending ear provided with an orifice overlying the end of said conduit for a bolt securing said collar to a support whereby the strains from said bolt will tend to urge said collar directly onto said conduit, and a detachable hood overlying said collar and having its lower front rim spaced away from the opposite portion of the collar whereby an intervening space between said parts is provided, said hood having a vertically extending lug provided with an orifice adapted to be brought into alinement with the orifice in said ear whereby a bolt may be passed through said alined orifices to secure said collar and hood together.

3. A pipe cap comprising in combination, an annular collar adapted to be engaged with a cable conduit, said collar having a rounded upper edge and being provided at its rear with an ear extending upwardly in parallelism with the conduit whereby it may be secured to an adjacent support, and a hood secured to the collar by means of a complementary vertically extending lug, the front portion of the rim of said hood being spaced away and entirely free from said collar or extensions thereof and being below the upper rounded edge thereof.

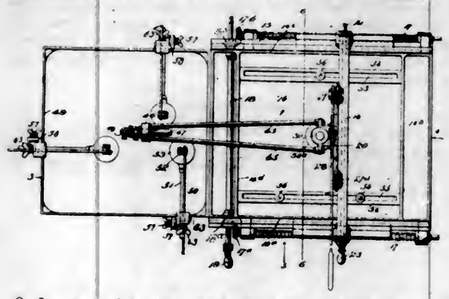
4. A pipe cap comprising in combination, a collar adapted to be secured to a cable conduit and at its rear providing an ear extending upwardly in the direction of said conduit and having overlying the end of the latter an orifice adapted to receive a screw for securing the same to an adjacent support, and a hood having a vertically extending extension adapted to be engaged by said screw, whereby upon tightening the same the hood and collar will be clamped together and secured to the support.

5. A pipe cap comprising in combination, a collar adapted to be loosely telescoped over the extreme end of a cable conduit and having a vertically extending rear ear provided adjacent its end with an orifice overlying the end of the conduit adapted to receive a screw for securing the same to an adjacent support, and a hood surmounting said collar and having a bifurcated lug adapted to straddle the shank of said screw and be thereby positioned against displacement upon tightening the screw.

[Claims 6 to 9 not printed in the Gazette.]

871,668. SCULPTURING-MACHINE. AUGUSTO BONTEMPI, New York, N. Y. Filed Nov. 19, 1904. Serial No. 233,525.

1. In a sculpturing machine, the combination of the main marginal frame, a tool-carriage slidable on said frame in straight lines longitudinally, transversely and perpendicularly to the main frame, a tool-holder carried by the tool-carriage, a tracer-arm extending therefrom and a tracer mounted in the outer end of the tracer arm in such manner as to be constrained in its movements to an exact reproduction of the movements of the tool-holder.



2. In a sculpturing machine, the combination of a frame, a tool holder adjustable on the frame, a tracer connected with the tool-holder so as to move in exact parallelism therewith, a means for feeding the said tool-holder in the plane of and perpendicular to the frame and a plurality of feet also on the frame whereby the frame is supported on the work.

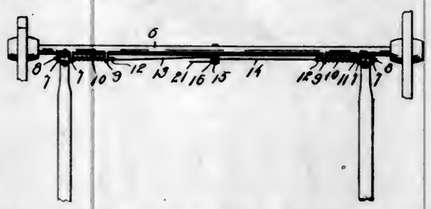
3. In a sculpturing machine, the combination of a frame, a sculpturing tool adjustable on the frame, a tracer also on the frame to reproduce in outline the movements of the tool-holder, and screw operated means for feeding the said tool on the machine and a plurality of feet for supporting the frame on the work.

4. In a sculpturing machine, the combination of a frame, a tool holder, mechanically operated means for feeding the tool holder on the machine and a three pointed supporting device for supporting the machine on the work in a certain definite relation with the surface of the finished sculpture.

5. In a sculpturing machine, the combination of a frame, a tool holder having screw feed thereon, and a plurality of conical feet shiftable in straight lines on the frame whereby the frame may be supported on the work in such a manner as to have the said conical feet in contact with the finished sculpture.

[Claims 6 to 24 not printed in the Gazette.]

871,669. HORSE-RELEASER. OLLIE D. BROCKETTE, Aubrey, Tex. Filed June 20, 1907. Serial No. 379,943.



The combination with an axle tree, of pins mounted at the ends thereof for axial sliding movement, springs for forcing said pins outwardly, a centrally located pin carried by said axle tree and projecting forwardly therefrom, a spool on said last named pin, spaced annular flanges circumscribing said spool, and affording three independent spool divisions, ropes connected to said first named pins and to said spool at relatively opposite points in two of said divisions and a pull rope having its end connected with said spool in the remaining division.

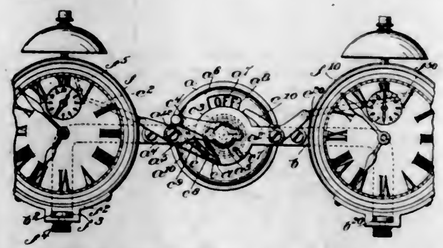
871,670. TABLE-RACK. RINALDO CALBECK, Pratt, Kans. Filed Aug. 10, 1906. Serial No. 330,099.

1. A rack for tables comprising an upright standard having a series of horizontal openings formed in opposite sides thereof, the said horizontal openings in one side alternating with those upon the opposite side, downwardly extending openings leading from the base of each of the horizontal openings and the outer wall of each of the downwardly extending openings being inclined to form a cam surface, the before mentioned upright being also formed with vertical slots communicating with both the horizontal openings and downwardly extending openings, and table supporting members comprising heads designed to enter the downwardly extending openings and engaging the cam surfaces, the alternate arrangement of the horizontal openings in the upright standard preventing the legs of the tables upon opposite sides of the standard from interfering with each other.



2. A rack for tables comprising an upright standard having a series of horizontal openings formed in opposite sides thereof, the said horizontal openings in one side alternating with those upon the opposite side, vertical openings being provided within the standard and communicating with the horizontal openings, and table supporting members carried by the tables and formed with heads designed to enter the horizontal openings to hold the tables against the standard and engage the vertical openings, the alternate arrangement of the horizontal openings in the upright standard preventing the legs of the tables upon opposite sides of the standard from interfering with each other.

871,671. TIME CONTROLLING DEVICE. CHARLES E. CAMPBELL, Lynn, Mass. Filed Sept. 22, 1905, Serial No. 279,649. Renewed Sept. 26, 1907. Serial No. 394,712.

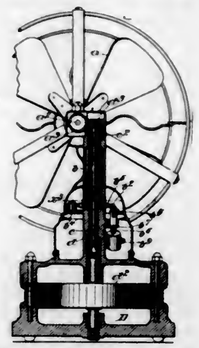


1. A switch controlling device, comprising a support, a rotary electric switch having an operating shaft mounted on said support; a motor and a stop therefor loosely mounted with relation to the switch operating shaft, a pawl and ratchet connection between said switch shaft and the motor and its stop, a clock mechanism, and a retaining pawl coöperating with the motor stop and adapted to be released by the clock mechanism, whereby the switch may be automatically operated at a predetermined time or manually operated independently of the motor and its stop.

2. A switch controlling device, comprising a support, a rotary switch having an operating shaft mounted on said support, a bracket connected with said support, a clock mechanism arranged upon said bracket, a sleeve loosely mounted on the switch shaft and having a ratchet and pawl connection therewith, an actuating handle for the switch shaft independent of said sleeve, a motor connected with said sleeve and adapted to rotate said switch shaft through the ratchet and pawl connection, and a retaining device for said sleeve and its attached motor adapted to be tripped by the action of the clock mechanism whereby the switch may be automatically operated at a predetermined time or manually operated independently of the motor and its tripping mechanism.

3. The combination with a support, of a rotary electric switch mounted thereon, an alarm clock also mounted thereon, an actuating member loosely mounted on the rotary part of said switch and having a ratchet and pawl connection therewith, a spring connected at one end with said actuating member and at the other end with said support, a handle for turning said actuating member with relation to said rotary portion, a stop on said loosely mounted actuating member, a pawl coöperating with said stop and having a part projecting towards and into the path of the alarm winding handle of the clock, and a handle for turning the rotary portion of the switch independently of said actuating member and its stop mechanism.

871,672. ROTARY FAN. CHARLES E. CAMPBELL, Lynn, Mass. Filed Apr. 16, 1906. Serial No. 311,884.



1. The combination with a rotary fan; of a motor the body portion of which is stationary; a bearing for said fan rotatably mounted with relation to said motor whereby said fan may be revolved; and a driving connection between the motor shaft and the fan shaft whereby the reactionary effect of the air resistance causes the rotation of the fan shaft bearing in the direction of the air current produced by the fan.

2. The combination with a rotary fan; of a motor; a bearing member for the motor shaft upon which the fan shaft bearing member is rotatably mounted; and a driving connection between said shafts whereby the reactionary effect of the resistance of the air causes the fan shaft bearing to rotate in the direction of the air current produced by the fan.

3. The combination with a rotary fan and its shaft; of a rotary bearing for said shaft; a motor shaft; a driving connection between said motor shaft and said fan shaft whereby the reactionary effect of the air resistance causes the fan shaft bearing to rotate in the direction of the air current produced by the fan; and means for retarding the speed of rotation of said fan shaft bearing member.

4. The combination with a motor; of a driving shaft connected with the rotary member thereof; a vertical bearing for said driving shaft; a sleeve mounted to rotate on the outside of said vertical bearing; a fan having a bearing connected with said sleeve; gears connecting the driving shaft of the motor with the fan shaft to cause the rotation of the fan shaft, and also by the reaction of the air the rotation of the fan shaft bearing in the direction

of the air current; and a retarding device coöperating with the sleeve, substantially as described.

5. The combination with a rotary fan; of a motor the body portion of which is stationary; a bearing for said fan rotatably mounted with relation to said motor, whereby said fan may be revolved as well as rotated; a positive driving connection between the motor shaft and the fan shaft whereby the reactionary effect of the air resistance causes the rotation of the fan shaft bearing in the direction of the air current produced by the fan; and means for adjusting the angle at which the fan shaft stands with relation to the driving shaft without disconnecting one shaft from the other.

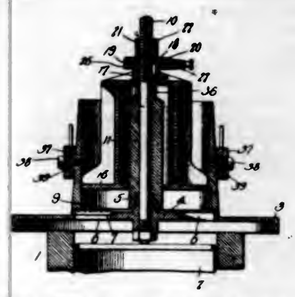
871,673. CLOTHES-SUPPORTER. ALVIN J. CAVANA, Eldora, Iowa. Filed Dec. 12, 1906. Serial No. 347,490.



1. In a clothes supporter, the combination with a suitable support, and a pair of horizontally spaced vertically extending guides arranged in fixed relation thereon, of a pair of lazy tongs having their arms arranged in parallel vertical planes and pivotally attached at their upper inner ends to a relatively fixed portion of the support, the lower inner ends of the lazy tongs being provided with a cross bar which extends transversely thereof and has a sliding engagement with the forward surfaces of the vertical guides, and means for limiting the extension movement of the lazy tongs embodying a shelf rigidly attached to the support at a point substantially midway of the length of the guides and arranged to coöperate with the upper side of the cross bar which connects the lower inner ends of the lazy tongs, the shelf being maintained at a fixed distance below the tops of the lazy tongs.

2. In a clothes supporter, the combination with a suitable support, and a pair of parallel vertically extending guides fixed thereon, of a pair of lazy tongs arranged in parallel vertical planes mounted to move horizontally relatively to the guides, a cross bar pivotally connecting the upper inner end of the lazy tongs, bolts extending through the guides and coöperating with the said cross bar to provide a relatively fixed axis for the upper inner ends of the lazy tongs, a second cross bar connecting the lower inner ends of the lazy tongs and extending transversely across and connecting the vertical guides, the lower cross bar having a sliding engagement with the said guides, and means for limiting the extension movement of the lazy tongs embodying a shelf fixed between the vertical guides and extending at right angles thereto at a point midway between the upper and lower cross bars when the lazy tongs are in folded position, the shelf being arranged at a fixed distance from the plane of the tops of the lazy tongs and at a variable distance from the plane of the bottoms thereof.

871,674. BONE-CUTTING MACHINE. WILLIAM M. CONNER, Cincinnati, Ohio. Filed July 2, 1906. Serial No. 324,485.



1. In a bone cutting machine, a knife support, a hopper rotatable on the support, and provided with a pocket permitting the knives to be reached without separating the hopper and the knife support, and a plunger working in the hopper.

2. In a bone cutting machine, a knife support carrying knives, a hopper provided with a pocket permitting the knives to be reached, a screw extending from the knife support, and through the hopper, a plunger working in the hopper and a nut working on the screw, and moving the plunger.

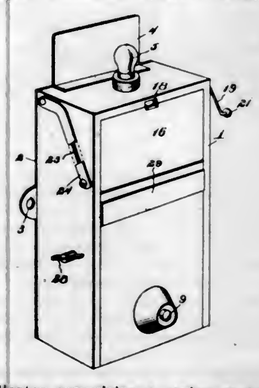
3. In a bone cutting machine, a knife plate provided with a central elevation, a hopper grooved at its lower edge and surrounding and resting upon the central elevation, and radial knives carried by the plate and extending below the edge of the hopper.

4. In a bone cutting machine, a knife plate provided with a central elevation, with radial slots extending to the edge of the central elevation and with horizontal seats in the central elevation to one side of the slots; radial knives seated in the seats, and having their outer ends alined with the periphery of the central elevation; and a hopper grooved at its outer edge to surround and to rest upon the central elevation.

5. In a bone cutting machine, the combination of a rotary hopper, a fixed screw, a nut on the screw, and a rotating follower having a flanged cross-head, said nut abutting the follower and having a flange engaging the flange of the cross-head, thereby preventing relative axial movement between the nut and the follower, when the nut moves on the screw in either axial direction.

[Claims 6 to 13 not printed in the Gazette.]

871,675. OFFICE-INDICATOR. HENRY P. DAVIS, Hot Springs, Ark. Filed Dec. 29, 1906. Serial No. 350,068.



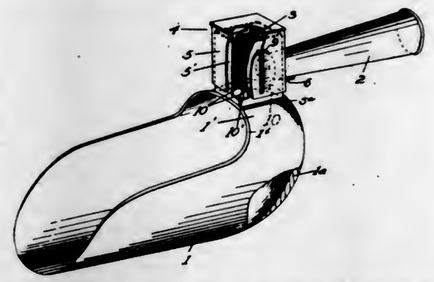
1. An indicator comprising a casing, a door hinged to the front of said casing, a lever within the casing connected at one end to a push button mounted in a spring socket, the opposite end of said lever being connected to the door, a crank lever, a door latch operated thereby, a card holder within the casing, an electric light bulb above the casing, and electrical connections whereby the electric light is lighted when the push button is operated, substantially as described.

2. In an indicator, a casing provided with a normally closed front door, an indicator card within the casing, a push button, connections between said push button and door, an indicator bell, and an electric light, and connections between said push button, electric light, and bell set into operation by pushing the button, substantially as described.

3. An office indicator comprising a casing, a door hinged thereto, a press button, connections between said button and door, a card holder, said casing having a slot in line with said card holder, a lever for covering said slot, an electric light, a bell, and electric connections operated by pushing the button to ring the bell and light the electric light.

4. An office indicator comprising a casing containing a card holder, a door hinged to the casing, a push button, a socket therefor, a spring in the socket, a lever connected to said push button at one end and to the door at the other end, a contact plate in the path of the lever, a switch, a button for operating said switch, a bell, an electric light, and electrical connections for ringing the bell, and lighting the electric light when the button is pushed, substantially as described.

871,676. AUTOMATIC PORTABLE WEIGHING-SCOOP. WILLIAM G. DAVIES, Seattle, Wash. Filed Apr. 22, 1907. Serial No. 369,683.



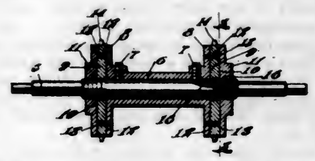
1. A device of the type set forth comprising a scoop having a laterally extending portion at its top, a scale having a casing formed of telescoping sections which are angular in cross section, one of said sections being fixed to said laterally extending portion of the scoop, and a hand part fixed to the other section of the scale casing, for the purpose specified.

2. A device of the type set forth comprising a scoop having a laterally extending portion connecting its side walls and formed with a flange, a scale having a casing formed of telescoping sections one of which is formed with a flange secured beneath the flange of said laterally extending portion of said scoop, and a hand part fixed to the other section of said casing.

871,677. SPROCKET. FREDERICK C. DAWES and JAMES W. FORREST, Los Angeles, Cal. Filed July 1, 1907. Serial No. 381,742.

1. In a sprocket construction, a sleeve; a flange on either end of said sleeve; sprockets adapted to bear against said flanges; and means to detachably secure said sprockets on said flanges.

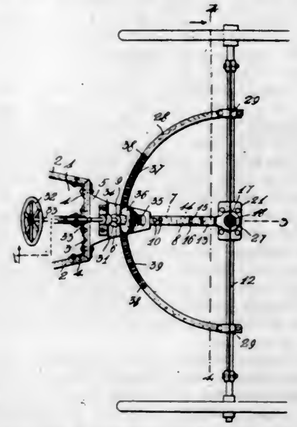
2. In a sprocket construction, a shaft; flanges rigidly spaced upon and secured to said shaft; sprockets adapted to bear against said flanges, said sprockets being provided with recesses therein; lugs on said flanges adapted to engage said recesses in said sprockets; and nuts in screw threaded engagement with said shaft, said nuts adapted to hold said sprockets in rigid engagement with said flanges.



3. In a sprocket construction, a shaft; a sleeve rigidly mounted on said shaft; a flange on either end of said sleeve, said flanges being provided with projecting pins on their outer faces; sprockets adapted to bear against the outer faces of said flanges, said sprockets being provided with recesses adapted to be engaged by the pins in said flanges; and nuts in screw threaded engagement with said shaft adapted to bear against the outer faces of said sprockets and hold said sprockets in engagement with said flanges.

4. In a sprocket construction, a shaft provided with a longitudinal groove therein; a sleeve mounted on said shaft and provided with set screws adapted to bear in the groove in said shaft, said sleeve being further provided with a flange on either end; projecting pins on the outer faces of said flanges; sprockets adapted to bear against the outer faces of said flanges, said sprockets being provided with recesses adapted to be engaged by said pins, said sprockets being further provided with lugs adapted to enter the longitudinal groove in said shaft; and nuts in screw threaded engagement with said shaft adapted to bear against the outer faces of said sprockets and hold said sprockets in engagement with said flanges.

8791,678. STEERING-GEAR. DAVID M. DEARING, Jackson, Mich., assignor of one-half to Louis F. Boos, Jackson, Mich. Filed Feb. 19, 1906, Serial No. 301,892. Renewed Apr. 1, 1907. Serial No. 365,858.



1. A steering gear for vehicles comprising a frame having a reach bar thereon, a front steering axle, a pivoting and cushioning device for said axle upon the front of said reach bar, a guide, and a semi-circular bar engaged with said guide and having its ends connected to said axle at equi-distant points from its pivot.

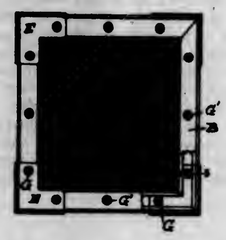
2. A steering gear for vehicles comprising a reach frame or bar, a front axle, a cushioning and pivoting device for said axle rotatable in the forward end of said reach bar or frame, a roller upon the latter, and a semi-circular steer-

ing bar engaged with said roller and having its ends attached to said axle, substantially as described.

3. A steering gear for vehicles comprising a frame, a union attached to the forward end of the same, a reach bar attached to the forward end of said union, a front axle, a cushioning and pivoting device for said axle, rotatably mounted in the forward end of said reach bar, guide rollers mounted in a recess in said union, a semi-circular bar engaged with said guide rollers and having its ends attached to said axle, and a rack plate secured upon the upper face of said bar, substantially as shown and described.

4. A steering gear for vehicles comprising a frame, a reach bar, a union connected to the latter and said frame, a front axle pivotally mounted upon the forward end of said reach bar, a guide in said union, a semi-circular bar engaged with said guide and having its ends attached to said axle, rack teeth upon the upper face of said bar, a shaft journaled in bearings upon said union, and a toothed gear upon said shaft and engaged with said rack teeth, substantially as described.

871,679. WINDOW-SCREEN. EUGENE FEIGHERY, Newport, Ky. Filed June 25, 1906. Serial No. 323,274.



1. In a window screen the combination of frame pieces consisting of metallic channels; wire securing pieces consisting of metallic channels adapted to enter the frame channels and draw the wire cloth therein; a member in each frame channel adapted to coöperate with an edge of the corresponding wire securing piece and secure the cloth thereto by turning it up over said edge; and means for securing the wire securing pieces in the frame channels, substantially as specified.

2. In a window screen, the combination of frame pieces consisting of metallic channels, said frame pieces being secured together with the open portion of the channels flush with the wire cloth; wire securing pieces adapted to enter the channels and provided with means for securing the wire cloth; and engaging members on the inner and outer walls of the channels, adapted to engage the wire securing pieces to prevent spreading of the channels, substantially as specified.

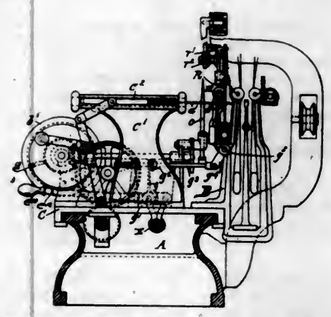
3. In a window screen, the combination of channel frame pieces A having their inner edges turned inwardly and provided with lips a^2; wire securing pieces B having their inner edges provided with lips b engaging lips a^2; and means for securing pieces A and B together, substantially as specified.

4. In a window screen, the combination of channel frame pieces A having both of their edges turned inwardly and provided with lips a^2; wire securing pieces B having both their edges provided with lips b engaging lips a^2; and means for securing piece B within pieces A, substantially as specified.

5. In a window screen, the combination of channel frame pieces A having inwardly turned edges to form spaces a^2, said edges being provided with lips a^2; wire securing pieces B having their edges provided with lips b engaging lips a^2; corner braces C and D having continuous flanges c' and d' entering spaces a^2 and engaging lips b respectively; and means for securing pieces B within channel pieces A, substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

871,680. WARP-DRAWING MACHINE. MILLARD F. FIELD, Winthrop, and EDGAR F. HATHAWAY and CHARLES D. LANNING, Boston, Mass., assignors to American Warp-Drawing Machine Company, Boston, Mass., a Corporation of Maine. Filed May 16, 1904. Serial No. 208,105.



1. In a warp-drawing machine, a loom-reed, supports upon which the reed may readily move longitudinally by the action of the reed-opener, and a rotary spiral reed-opener, the blade of which gradually increases in thickness from the edge which first enters the reed-dent to the part which holds the splits separated during the drawing-in operation.

2. In a warp-drawing machine, a loom-reed, supports upon which the reed may readily move longitudinally by the action of the reed-opener, and a rotary spiral reed-opener the blade of which extends through an arc not greater than 360 degrees of a circle.

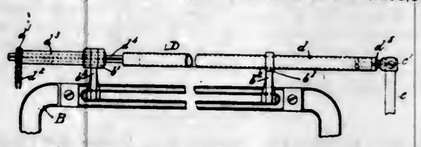
3. In a warp-drawing machine, a loom-reed, a rotary spiral reed-opener, the blade of which extends through an arc not greater than 360 degrees of a circle, and gradually increases in thickness from its entering edge to the portion which holds the splits separated during the drawing-in operation.

4. In a warp-drawing machine, a loom-reed, a reciprocating drawing-in needle, a rotary reed-opener and a fixed needle-guide, located between the front of the reed and a vertical plane passing through the axis of the reed-opener.

5. In a warp-drawing machine, a loom-reed, a reciprocating drawing-in needle, a guide for the needle fixed upon the needle carriage in proximity to the reed, a rotary spiral reed-opener, and means to withdraw the opener from the reed and simultaneously lock the driving mechanism.

[Claims 6 to 29 not printed in the Gazette.]

871,681. SHIFTER-ROD FOR POWED-DRIVEN MACHINES. MILLARD F. FIELD, Winthrop, and EDGAR F. HATHAWAY, Boston, Mass., assignors to American Warp-Drawing Machine Company, Boston, Mass., a Corporation of Maine. Filed May 16, 1904. Serial No. 208,142.



1. In a power driven machine provided with a shifter to apply and withdraw the power, and means to independently adjust operative parts therein, a rotatable shifter-bar which has a swivel connection with the power shifter, and a longitudinally sliding connection with the said means for adjusting other parts of the machine.

2. In a warp-drawing machine, shifting devices for the driving mechanism, a warp-holding frame, means to move the frame longitudinally, and a rotatable shifting-bar which has a swivel connection with the said shifting devices, and a longitudinally sliding connection with said warp-frame moving means.

3. In a warp-drawing machine, the combination of a warp-holding frame, means to adjust said frame at right angles to the path of reciprocation of the drawing-in device, shifting devices for the driving mechanism of the warp-drawing machine, a shifting-bar adapted to be rotated in its bearings, which bar has a swivel connection with the shifting devices, and a longitudinally sliding connection with the adjusting means for the warp-holding frame.

4. In a power driven machine means provided with a shifter to apply and withdraw the power, and means independently to adjust the operative parts therein, a slidable and rotatable bar operatively connected to actuate the shifter and said adjusting means.

5. In a warp drawing machine the combination with means for adjusting the position of the warp threads relatively to the drawing needle, means for applying power to said machine and manual means for controlling said power applying means and said adjusting means.

[Claims 6 to 36 not printed in the Gazette.]

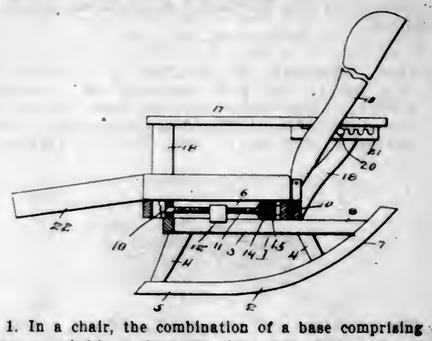
871,682. LAWN-SPRINKLING DEVICE. JOHN P. FISHBURN, Los Angeles, Cal. Filed Oct. 15, 1906. Serial No. 338,988.



1. In a device of the character described, the combination of a sprinkler-head support, comprising a vertical portion bent intermediate its ends and provided with an integral, horizontal extension, a spring-collar provided at one end with a flattened portion, said flattened portion integral with the horizontal extension and the opposite end of said spring-collar left free, a sheet-metal sprinkler head provided with a depending neck terminating at its lower end in an outwardly flared portion, producing an integral, horizontal, annular flange, the neck positioned within the spring-collar, means clamping the spring-collar upon said neck, said spring-collar of less width than the length of said neck, a coupling-collar provided with an inwardly-extending, annular flange, positioned upon said neck between the spring-collar and the outwardly-extending, horizontal flange of the neck, the inwardly-extending flange of the coupling-collar engaging the neck and normally resting upon the outwardly-extending flange of the neck, said coupling-collar being capable of a slight longitudinal movement upon said neck between the spring-collar and the horizontal annular flange of the neck, and a washer in said coupling-collar, said spring-collar limiting the longitudinal movement of the coupling collar upon said neck for preventing displacement of the washer.

2. In a device of the character described, the combination with a sprinkler-head support, provided with a collar, of a sprinkler-head provided with a depending neck terminating at its lower end in an integral, outwardly-extending, annular flange, the neck positioned within said collar, said collar of less width than the length of said neck, a coupling-collar provided with an inwardly-extending, annular flange, positioned upon said neck between said first-mentioned collar and the outwardly-extending horizontal flange of the neck, the inwardly-extending flange of the coupling-collar engaging and normally resting upon the outwardly-extending flange of said neck, said coupling-collar being capable of a slight longitudinal movement upon said neck between said first-mentioned collar and the flange of the neck, and a washer in said coupling-collar, said first-mentioned collar limiting the longitudinal movement of the coupling-collar upon said neck for preventing displacement of the washer.

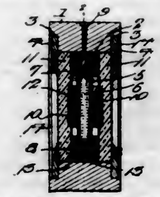
871,683. CHAIR. JOHN FLINDALL, Chicago, Ill. Filed Nov. 30, 1906. Serial No. 345,766.



1. In a chair, the combination of a base comprising a frame carried by rockers, the sides of the frame extending rearwardly into engagement with the rockers, and a seat slidably mounted upon the frame, the rearwardly extending portions of the sides of the frame serving the double function of forming braces for the rockers and a guideway upon which the seat slides.

2. In a chair, the combination of a seat, a back pivoted to said seat, and a base, comprising a pair of rockers, flattened portions on the extremities of said rockers, standards on said rockers, and side pieces mounted on said standards extending horizontally rearward and secured to the flattened portions of said rockers.

871,684. SPIRIT PLUM AND LEVEL DEVICE. WILLIAM FOSTER and THEODORE L. SCHENCK, Butler, Pa. Filed June 14, 1907. Serial No. 379,023.



1. An instrument of the class described comprising a stock having an opening, a transparent indicating element, an annular protractor holding the element in the opening of the stock, glass plates closing the ends of the opening, and cushioning members disposed between the plates and element.

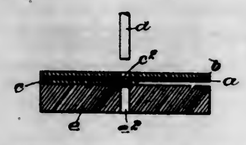
2. An instrument of the class described, comprising a stock having an opening, a transparent indicating element of circular form, a protractor arranged around the element, transparent plates closing the ends of the opening, pieces of elastic material held between the element and plates, and means for holding the plates removably in position.

3. An instrument of the class described comprising a stock having an opening, a hollow transparent member containing a body of liquid, an annular protractor in which the member is mounted, retaining rings fitted in the opening and engaging on opposite sides of the protractor, transparent disks fitted in the ends of the openings and respectively engaging the rings, and outside retaining rings secured to the stock and respectively engaging over the said disks.

4. An instrument of the class described comprising a stock having an opening, a hollow circular member of glass containing a body of liquid, an annular protractor disposed around the member, rings fitted in the opening and engaging the opposite sides of the protractor, means on the stock for preventing rotative movement of the protractor, transparent plates cupped in their opposed faces,

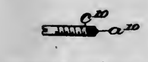
blocks of rubber arranged respectively in the cups of the plates and held between the latter and member, and rings secured to the stock for holding the plates respectively in position.

871,685. PROCESS OF APPLYING A COATING OF ONE METAL TO THE SURFACE OF ANOTHER METAL. ANTON FREIER, Boston, Mass., assignor to Holtzer Cabot Electric Company, a Corporation of Massachusetts. Filed May 13, 1907. Serial No. 373,209.



The herein described process of applying a coating of one metal to the surface of another metal which consists in causing a sheet of the coated metal to adhere to a sheet of different metal and punching a piece out of the compound sheet thus formed, and at the same operation forcing the punched out piece into an opening formed in the piece of metal to be coated, substantially as described.

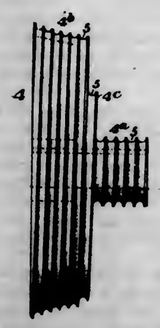
871,686. PLATINUM CONTACT. ANTON FREIER, Boston, Mass., assignor to Holtzer Cabot Electric Company, a Corporation of Massachusetts. Filed May 13, 1907. Serial No. 373,210.



1. A platinum contact consisting of a contact member provided with a tip having a thin surface coating of platinum united to a support of different metal, the compound tip thus formed being frictionally secured in an opening in the contact member, with the edge of the platinum coating within the opening.

2. As an article of manufacture, a metallic member provided with an opening, and a connected part formed of two metals joined together and fitted tightly in the opening with the edges of both metals within the opening and the surface formed of one of said metals projecting outward from the surface of the metallic member.

871,687. HOISTING-GEAR FOR GLASS-DRAWING APPARATUS. ROBERT L. FRINK, Belle Vernon, Pa., assignor to Window Glass Machine Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Mar. 8, 1906. Serial No. 304,883.



1. In glass drawing apparatus, a drawing device, a rope or cable connected thereto, and a winding drum for said rope or cable having its winding surfaces of a definitely increasing radius, the change in which is proportional to the change in temperature of the glass being drawn; substantially as described.

2. In glass drawing apparatus, a hoisting drum having an initial winding portion of relatively small radius, a main winding portion of gradually increasing radius, and an intermediate portion of rapidly increasing radius; substantially as described.

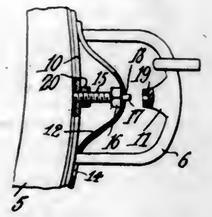
3. In glass drawing apparatus, a winding drum having an initial winding portion of relatively small radius, a main winding portion of curved conical form of gradually increasing radius, and an intermediate portion of rapidly increasing radius; substantially as described.

4. In glass drawing apparatus, a winding drum, gearing for actuating the drum, such gearing having a clutch-controlled member, a friction brake for said member, and a governor for controlling the friction brake; substantially as described.

5. In glass drawing apparatus, the combination with a winding drum, gearing for operating the drum, a friction brake for the gearing, and a governor operated by the gearing and controlling the brake; substantially as described.

[Claim 6 not printed in the Gazette.]

871,688. HAME AND TRACE CONNECTION. AMOS A. GALT, Edgar, Nebr. Filed May 20, 1907. Serial No. 374,708.



1. The combination with a hame, of a staple secured thereto and provided with a lateral projection, a trace tug adjustable vertically of the staple, a spring bearing against the projection for locking the trace tug on either side of the projection, and means bearing against the spring for locking the latter in engagement with said projection.

2. The combination with a hame, of a staple secured to the hame and provided with a lateral projection having a depression formed therein, a trace tug adjustable vertically of the staple, a spring bearing against the projection for locking the trace tug on either side of the projection, and means piercing the spring and seated in the depression for locking the spring in engagement with said projection.

3. The combination with a hame, of a staple secured to the hame and provided with a lateral projection, a trace tug adjustable vertically of the staple, a yieldably locking member bearing against the projection for locking the trace tug on either side of the projection, and means bearing against the locking member for supporting the latter in engagement with said projection.

4. The combination with a hame, of a staple secured to the hame and provided with an intermediate lateral projection, a trace tug adjustable vertically of the staple, a spring engaging the opposite legs of the staple and bearing against the projection for locking the trace tug on either side thereof, and means bearing against the spring for holding the latter in engagement with the projection.

5. The combination with a hame, of a staple secured to the hame, a trace tug adjustable vertically of the staple, a yieldably locking member engaging the opposite legs of the staple and bearing against the intermediate portion thereof for locking the trace tug in adjusted position on said staple, and means interposed between the hame and locking member for forcing the latter in engagement with the staple.

[Claims 6 to 8 not printed in the Gazette.]

871,689. SURGICAL APPLIANCE. PHILIP GANZHORN, Chicago, Ill. Filed May 22, 1907. Serial No. 375,135.



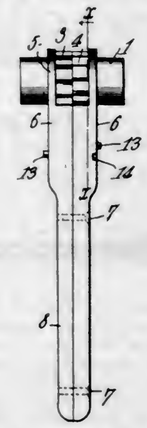
1. A surgical appliance comprising a split tube, a cap adapted to fit over one end of the tube, and fastenings between the tube and cap.

2. A surgical appliance comprising a split tube having eyelets in the end, on opposite sides of the split, a cap adapted to fit over said end, and having eyelets which may be registered with said eyelets, and a lace extending through the eyelets in both of said parts.

3. A surgical appliance comprising a tube having a pair of eyelets in one end, a cap adapted to fit over said end and having a series of pairs of eyelets each pair of which may be registered with the pair in the tube, and a lace extending through the registered eyelets.

4. A surgical appliance comprising a split tube having a pair of eyelets at each end, on opposite sides of the split, a cap having a series of pairs of eyelets along the same and adapted to fit over one end of the tube, and a lace extending through eyelets in the cap and through the eyelets in each end of the tube.

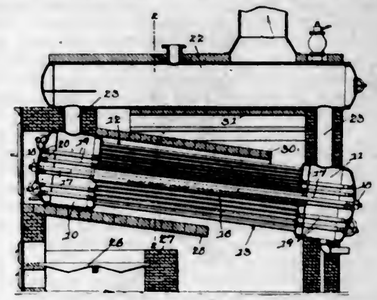
871,690. WRENCH. FRED GEHNER, Garrison, N. D. Filed Aug. 6, 1907. Serial No. 387,339.



In a wrench the combination with oppositely disposed detachably connected similar handle sections, spaced holding plates extending from said sections, each section having a longitudinal bore extending into one end thereof, the wall of each bore having an angular slot, a spring pressed pawl within the bore of each section, and an outstanding portion upon each pawl movable within the angular slot; of a head revolubly mounted within the plates, and integral ratchets surrounding the head and interposed between and bearing against the inner faces of the plates, the teeth of said ratchets being oppositely pitched and disposed to be engaged by the respective pawls.

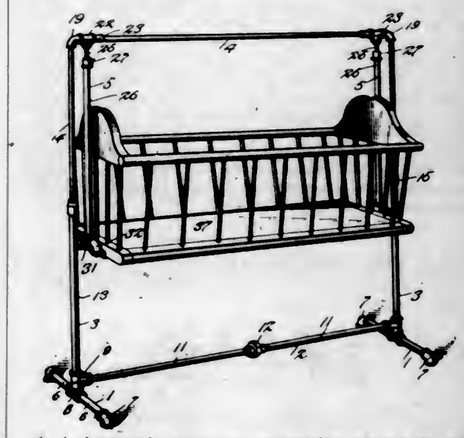
871,691. BOILER. MILFORD T. GOSS, Chicago, Ill. Filed July 18, 1906. Serial No. 326,785.

In a steam boiler, a furnace, end drums supported by the furnace walls, upper and lower baffles extending rearward from below the bottom and above the top of the forward drum, the inner heads of the drums forming tube sheets, said tube sheets being provided with centrally disposed openings having flanged walls, a water tube of large diameter disposed centrally of the boiler and riveted to the flanges, said tube serving to reinforce the tube sheets and to connect the drums, baffle plates built inward from the opposite sides of the furnace walls into contact with the sides of said water tube, braces connecting the tube sheets to the outer heads of the drums, a pair of banks of



water tubes connecting the end drums and spaced from each other by the central baffle plate, the tubes of the upper bank being of smaller diameter than those of the lower bank, and a bolt extending through the large water tube and connected to the outer heads of the drums, substantially as specified.

871,692. HAMMOCK. WILLIAM GRAY, Springfield, Mo. Filed May 6, 1907. Serial No. 372,276.



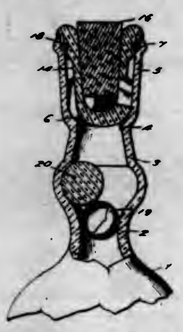
1. A hammock supporter comprising adjustable side bars, an upper cross bar removably connected to the side bars, hangers revolubly supported on the upper cross bar, said hangers comprising slidably connected sections, and a spring resisting independent movement of the sections in opposing directions.

2. A hammock supporter comprising side bars including independent sections, means for clamping said sections in adjusted position, an upper cross bar, a sleeve having threaded connection with each side bar and with the adjacent ends of the upper cross bar, and hangers revolubly supported on the sleeve, said hangers comprising slidably connected sections, and a spring resisting movement of the respective sections in opposing directions.

3. A hammock supporter comprising side bars including independent sections, means for clamping said sections in adjusted position, an upper cross bar, a sleeve having threaded connection with each side bar and with the adjacent ends of the upper cross bar, hangers revolubly supported on the sleeve, said hangers comprising slidably

connected sections, a spring resisting movement of the respective sections in opposing directions, and hammock supporting plates carried by the hangers.

871,693. NON-REFILLABLE BOTTLE. PAULLI HARDER, Maspeth, N. Y. Filed May 10, 1907. Serial No. 374,022.



1. A non-refillable bottle comprising a reduced neck portion, an enlarged portion above the reduced portion, and an enlarged mouth, a hollow rubber ball valve seated in the reduced neck portion, a solid glass ball adapted to rest upon the hollow ball, a baffle comprising a flange, a rim below the flange, said rim being provided with an annular groove, and oppositely disposed projections, a reduced neck below the rim, and a series of U-shaped flanges provided with intermediate apertures, said baffle adapted to be permanently connected to the bottle mouth, and a cork or stopper fitted in the baffle.

2. A non-refillable bottle comprising a reduced neck portion having ball valves seated therein, a baffle fitted to the mouth of the bottle and provided with U-shaped radial flanges and intermediate apertures, said baffle having a reduced neck portion above the apertures.

3. A non-refillable bottle comprising a reduced neck portion, a valve therein, a baffle permanently secured to the bottle mouth, said baffle having U-shaped radial flanges and intermediate apertures, and a cork fitted in the baffle, substantially as described.

871,694. RING SPINNING AND TWISTING APPARATUS. JOEL HAYDEN, Jr., Boston, Mass. Filed Apr. 3, 1906. Serial No. 309,667.



1. The combination with a spinning ring having a flange at each end and an annular extension extending outwardly therefrom intermediate the same, of a ring holder supporting the outer end of said extension and provided with clips engaging therewith to permit slight horizontal movement of the ring.

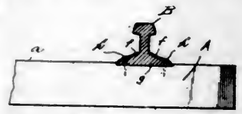
2. The combination with a spinning ring having a flange at each end and an annular extension weighted at its periphery extending outwardly therefrom intermediate the same, of a ring holder supporting the outer end of said extension and provided with clips engaging therewith to permit slight horizontal movement of the ring.

3. The combination with a spinning ring having a flange at each end and an annular extension extending outwardly therefrom intermediate its end flanges and a weighted member at the periphery thereof having radial grooves therein, of a ring holder adapted to support said weighted member provided with clips engaging said grooves.

4. The combination with a spinning ring having a flange at each end and an annular extension extending outwardly therefrom intermediate its end flanges and a weighted member at the periphery thereof, of a ring holder adapted to support said weighted member and provided with clips engaging therewith and permitting slight horizontal movement of said member upon the upper face of said holder.

5. The combination with a spinning ring having a flange at each end and an annular extension extending outwardly therefrom intermediate its end flanges and a weighted member at the periphery thereof having radial grooves therein on either side of said weighted member, of a ring holder provided with clips adapted to engage the grooves on one side of said member.

871,695. RAILWAY-TIE. EDWARD HENRY, Belcherville, Tex. Filed Dec. 5, 1906. Serial No. 346,483.



A railway-tie comprising an outer metallic shell, substantially rectangular in cross section, and a body or core of wood, the shell having integral tongues at its opposite ends cut out of the shell on the lines where the rails cross the ties, permitting the flanged base of the rails to rest on the wood or core, the said tongues with their inner edges against the web of the rail being turned back on the upper sides of said rail flanges and spikes driven into the wood at the outer edges of the tongues, with the heads of the spikes over-lapping the same and securing the tongues on the flanges of the rails to keep the latter down in place and the two rails from spreading.

871,696. IGNITING-TAPE AND PROCESS OF PRODUCING SAME. ARTHUR T. HERR, Denver, Colo., assignor to The "Rapid Fire" Fuse Igniter Company, Denver, Colo. Filed May 6, 1907. Serial No. 371,974.



1. The herein described process of forming an igniting device consisting in applying an inflammable coating to one surface of a strip of material, also applying a coating of adhesive material to a portion of the same surface of the strip, and forming the said strip into a tube with the inflammable coating innermost and with the portion having the adhesive coating overlapping whereby the tubular form is maintained and finally flattening the device thus formed.

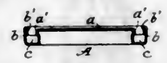
2. An igniting tape composed of a strip of material coated on one surface with an inflammable substance and having an edge overlapping portion or part coated with an adhesive substance, the said strip being spirally wound to conceal the inflammable substance whereby the portion containing the adhesive substance is made to overlap the body of the strip on the outside, the device being flattened for the purpose set forth.

3. An igniting tape composed of a strip of material coated on one side with an inflammable substance and also having a portion of the same surface coated with adhesive material and spirally wound to protect the inflammable coated surface.

4. An igniting device composed of a strip of material coated on one surface with an inflammable substance and also having a portion of the same surface coated with adhesive material, the same being spirally wound to protect the inflammable coated surface and flattened for the purpose set forth.

5. A process of forming an igniting device, consisting in applying an inflammable coating to one surface of a strip of material and applying an adhesive coating to a portion of the same surface, forming the said strip into a tube and applying to the exterior of the latter a waterproof coating.

871,697. CLOSURE FOR BOTTLES, JARS, &c. MAURICE HOFHEIMER, Baltimore, Md., assignor to The Crown Cork and Seal Company, Baltimore, Md., a Corporation of Maryland. Filed Dec. 14, 1905. Serial No. 291,708.



1. A bottle closure for inside or throat sealing, having an upwardly extended central circular boss, peripherally enlarged at its top, and an upwardly extended annular flange provided at its top with an edge turned inwardly upon itself, substantially as and for the purposes specified.

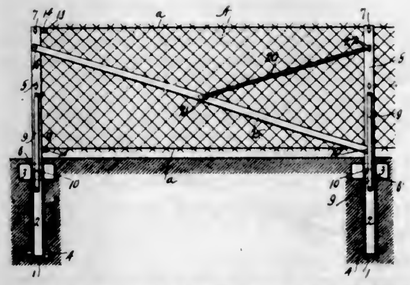
2. A bottle closure for inside or throat sealing, having an upwardly extended circular flange, and an upwardly extended circular boss peripherally enlarged at its top, substantially as described.

3. A bottle closure for inside or throat sealing, having an upwardly extended central circular boss, and an upwardly extended annular flange terminating at its top in a circumferential edge, and with the coincident surfaces of the flange and boss separated by an annular recess or space affording access for an annular setting tool, and also free access for the tip of an opener operating as a lever when overlying the edge of the flange, substantially as described.

4. A bottle closure for inside or throat sealing, having an upwardly extended circular boss, and an upwardly extended annular flange provided at its top with an inwardly and downwardly turned reinforced edge, substantially as described.

5. The combination with a jar or bottle having a throat of suitable contour, of an inside or throat closure provided with a circular upwardly extended central boss, and an upwardly extended annular flange having its circumferential edge and outer surface in tightly closing contact with the coincident surface of the bottle and appropriately located with relation to the circular surface of the boss, to afford a recess or space for the free reception of a setting tool and for receiving the tip of a lever opener when engaged with the side of the boss with its shank overlying the flange and the lip of the bottle, substantially as described.

871,698. FENCE CONSTRUCTION. JOHN HOHULIN, SAMUEL HOHULIN, and TIMOTHEUS HOHULIN, Goodfield, Ill. Filed Mar. 27, 1906. Serial No. 308,219.



1. In a fence post, a base bent into form from a single piece of material having converging side portions which lie parallel for a short distance at their upper ends, a plate connecting the parallel portions of the base and extending beyond the same on opposite sides, a pair of uprights connected with and extending up from the upper ends of the base, and a pair of braces connected at their upper ends with the uprights and having their lower ends connected with the base and also with the lower ends of the uprights.

2. In a fence post, a base bent into form from a single piece of material having converging side portions which lie parallel for a short distance at their upper ends, means connecting the parallel portions of said base, a pair of uprights connected at their lower ends to the upper ends of the base and bent outwardly therefrom, and braces connected at their upper ends with the uprights intermediate their ends and having their lower ends engaging the ends of the outwardly bent portions of the uprights and at their extremities secured to the base below all connection of the uprights therewith.

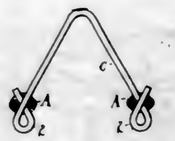
3. In a fence post, a base bent into form from a single piece of material having converging side portions which lie parallel for a short distance at their upper ends, a plate connecting the parallel portions of the base and extending beyond the same on opposite sides, a plate secured in the lower portion of the base, a pair of uprights connected to and extending up from the upper ends of the base, means connecting and retaining said uprights spaced apart, comprising tubular members interposed between the uprights in combination with bolts, and braces connected at their upper ends to the uprights and having their lower ends connected to the base.

4. In a fence post, a base bent into form from a single piece of material having converging side portions, means connecting the upper ends of said base, a pair of uprights connected to and extending up from said base, means connecting and retaining said uprights spaced apart comprising tubular members interposed between said uprights in combination with bolts passing through said uprights and tubular members, and a stretcher connected to the upper end of said post by means of the uppermost bolt connecting said uprights.

5. The combination of a plurality of posts, comprising bases and locking plates attached thereto and adapted to enter the soil, uprights attached to and extending up from said bases, a brace comprising a pair of bars extending from the upper end of one post to the lower end of the other post, and a cable connected at one end to the upper end of one of said posts and at its opposite end to one of said brace bars.

[Claim 6 not printed in the Gazette.]

871,699. CONCRETE REINFORCEMENT. CARL HORIX, East Cleveland, Ohio. Filed Nov. 23, 1906. Serial No. 344,675.



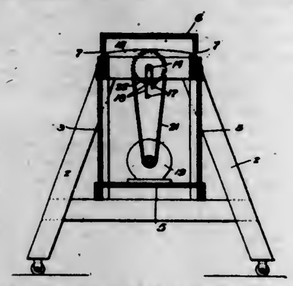
1. As a new article of manufacture, a concrete reinforcement comprising a series of tensile members and shear members extending from one tensile member to another in a continuous wire at right angles to said tensile members and having a single engagement with each member, the said shear members bent to substantially ∧ shape between the said tensile members and standing alone at their top.

2. As a new article of manufacture, a reinforcement for concrete floors, roofing and the like, consisting of a series of twisted tensile members and continuous shear members connecting said tensile members at right angles across the said series of members and projecting in substantially ∧ shape upward from one tensile member to another and said projections disconnected at their top.

3. As a new article of manufacture, a concrete reinforcement having a series of parallel tensile cables formed of twisted wire and shear members running from one tensile cable to the other at right angles thereto and

traversing the space above said cables from one to the other in substantially ∧ shape.

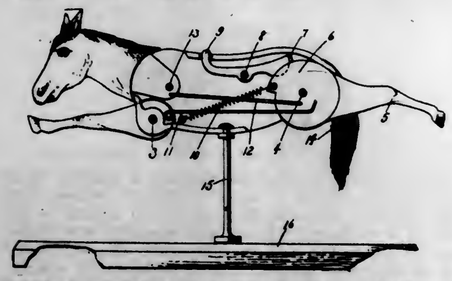
871,700. CARPET-CLEANING MACHINE. ROBERT B. HUTCHISON, Pittsburg, Pa., assignor of one-half to Alfred H. Thurston, New York, N. Y. Filed Nov. 22, 1905. Serial No. 288,571.



1. In a carpet cleaning apparatus, the combination of a main rectangular framework embodying a hollow casing, upwardly arched transverse supporting bars extending across the upper portion of the casing with intervening clearance spaces, a longitudinally arranged shaft arranged transversely of and below said bars and provided with flexible beating devices adapted to play upwardly between the bars against the article to be treated, a motor geared with said shaft, a fan within the casing adapted to carry off refuse material and also geared with said shaft, a vertically arranged arresting screen arranged adjacent to the suction side of said fan, and a vertically adjustable cover for the casing with intervening entrance and exit openings, substantially as set forth.

2. In a carpet cleaning apparatus, the combination with the casing and carpet cleaning means inclosed therein, of a covering top therefor adapted to be raised and lowered thereon to provide an entrance and an exit slot, pivotally mounted sectors provided with straps arranged to support and actuate said top, and means for locking said sectors at the desired position, substantially as set forth.

871,701. TOY. JOSEPH F. JACKERT, Garfield, N. J. Filed Mar. 16, 1907. Serial No. 362,702.



1. In a toy the combination with a body representing an animal, of a head pivoted thereto, front and hind legs, a spring connected with the hind legs, rods connecting the hind legs with the head and with the fore legs and a latch adapted to hold the hind legs against the action of the spring.

2. The combination of a support, a figure mounted thereon, the limbs of the figure being pivotally mounted, a connection between the limbs, a spring secured to the body and to one of the limbs, said spring being adapted to move the limbs, and a latch carried by the body for engagement with one of the limbs to hold the limbs in normal position.

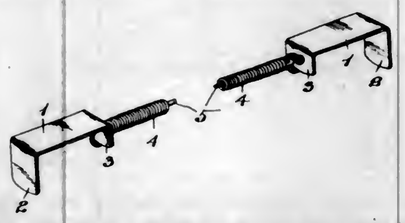
871,702. NON-REFILLABLE BOTTLE. HARRY C. JOHNSON and OSCAR STEIDEL, Washington, D. C. Filed May 10, 1907. Serial No. 372,905.



1. The improvement in non-refillable bottles herein described, comprising the bottle having its neck contracted toward its lower end forming a seat for a sealing valve and spread above said seat for the play of the sealing valve and its coöperating ball, a sealing valve in the form of a ball and operating in the neck of the bottle and toward and from the seat at the lower end of said neck, a stop ball in the bottle neck and above the ball valve and made of a diameter less than the bore of the upper portion of the neck of the bottle, whereby it may roll therein when the bottle is tilted, and stop projections in the bottle neck above the stop ball and adapted to prevent the seating of the latter, the diameter of the ball valve plus that of the stop ball being greater than the greatest interior diameter of the neck of the bottle, substantially as set forth.

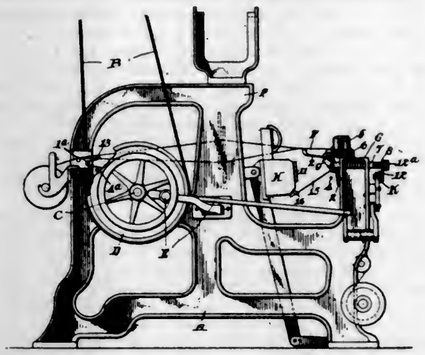
2. A bottle having its neck provided with a chambered portion curving on gradual lines from end to end and terminating at its lower end in a valve seat and communicating at its upper end with the upper portion of the bottle neck and having in the latter at a considerable distance from the enlarged or chambered portion inwardly projecting stop projections, a ball valve operating in the chambered portion of the neck and movable to and from the seat at the lower end of said chambered portion, and a stop ball above the ball valve and resting thereon when the bottle is in upright position and adapted to roll when the bottle is inverted into the reduced portion of the bottle neck and abut the stop projection therein, the said stop ball being of less diameter than such portion of the neck whereby it may operate therein when the bottle is tilted to dispense its contents.

871,703. COMBINED CURTAIN-PROTECTOR AND SHAM HOLDER. MARION KEITH, St. Louis, Mo. Filed July 11, 1907. Serial No. 383,338.



A device of the class described, comprising a pair of hooks, a coil of wire having its ends secured to said hooks, and a section of tape passing through the coil of wire and having its ends secured to the hooks.

871,704. EMERGENCY STOP-MOTION FOR NARROW-FABRIC LOOMS. SOLOMON KENDRICK, Rochester, N. Y., assignor to Vogt Manufacturing and Coach Lace Company, Rochester, N. Y., a Corporation of New York. Filed Jan. 26, 1907. Serial No. 354,335.



1. In a device of the character described, the combination with the shipper, of a baton, the tripping mechanism, means operable upon the actuation of said tripping mechanism for throwing said shipper, and means directly operated by the baton to reset said tripping mechanism, substantially as described.

2. In a device of the character described, the combination with the shipper, of a baton, the tripping mechanism, means operable upon the actuation of said tripping mechanism for throwing said shipper, and means directly operated by the baton in its rearward movement to reset said tripping mechanism, substantially as described.

3. In a device of the character described, the combination with the shipper, of a baton, the tripping mechanism, means adapted to be operated by the forward movement of the baton to throw said shipper upon the actuation of said tripping mechanism, and means directly operated by the baton in its rearward movement to reset said tripping mechanism, substantially as described.

4. In a device of the character described, the combination with the shipper, of a bar for operating said shipper arranged adjacent thereto, a baton, a swinging member on said bar normally held upward out of the path of travel of the baton, mechanism for tripping said swinging member, and means operated by the rearward movement of the baton for resetting said tripping mechanism, substantially as described.

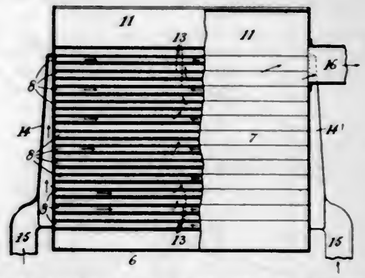
5. In a device of the character described, the combination with the shipper, of an operating bar therefor arranged at right angles to said shipper, a baton, a swinging member supported on one end of said bar and normally held out of the path of travel of the baton, mechanism for tripping said swinging member whereby the baton will strike said member, when tripped, on its forward movement and will drive said bar against the shipper, a spring arranged to return said bar to the normal position, and means operated by the rearward movement of the baton for returning said swinging member to its normal position, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

871,705. APPARATUS FOR DRYING CHARCOAL. ROBERT S. KENT, Brooklyn, N. Y. Filed Feb. 4, 1907. Serial No. 355,600.

1. In an apparatus for drying charcoal, the combination with a horizontally corrugated wall forming reëntrant angles the walls of which have ventilating outlets therethrough and form with a downwardly flowing body of char horizontal ventilating passages, of means for circulating a gaseous drying medium part way through said ventilating passages and out through said ventilating outlets.

2. In an apparatus for drying charcoal, the combination with a horizontally corrugated wall forming reëntrant angles the walls of which have substantially central ventilating outlets therethrough and form with a downwardly flowing body of char horizontal ventilating passages, of means for circulating a gaseous drying medium part way through said ventilating passages and out through said ventilating outlets.



3. In an apparatus for drying charcoal, the combination with a horizontally corrugated wall forming reëntrant angles the walls of which have ventilating outlets therethrough and form with a downwardly flowing body of char horizontal ventilating passages, of means for circulating a gaseous drying medium part way through said ventilating passages from both ends thereof and out through said ventilating outlets.

4. In an apparatus for drying charcoal, the combination with a horizontally corrugated wall forming reëntrant angles the walls of which have substantially central ventilating outlets therethrough and form with a downwardly flowing body of char horizontal ventilating passages, of means for circulating a gaseous drying medium part way through said ventilating passages from both ends thereof and out through said ventilating outlets.

5. In an apparatus for drying charcoal, the combination with a pair of opposed horizontally corrugated walls each forming reëntrant angles the walls of which have ventilating outlets therethrough and form with two downwardly flowing streams of char two series of horizontal ventilating passages, of means for circulating a gaseous drying medium part way through said ventilating passages of both series and out through said ventilating outlets.

[Claims 6 to 8 not printed in the Gazette.]

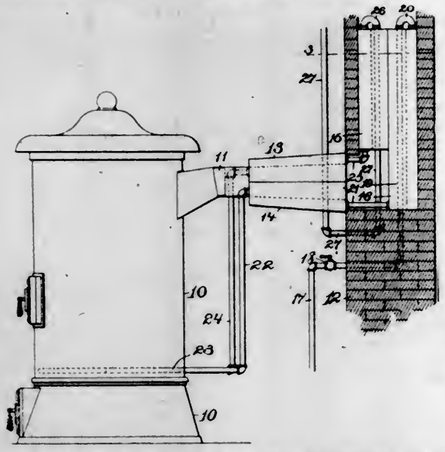
871,706. WATER-HEATER. DAVID L. KLINE and MARTHA D. KLINE, Newark, N. J. Filed Mar. 25, 1907. Serial No. 364,251.

1. A heater comprising a pair of members arranged at an approximate right angle, each member consisting of separable chambers, one member arranged to embrace the flue pipe of a heater, the other member being installed in the flue of a chimney, and both members being arranged to form a flue through them, pipes connecting the chambers of the members, a pipe to conduct water to one of the members, and a pipe to conduct the water from the heater.

2. A heater comprising a pair of members arranged at an approximate right angle, each member consisting of a pair of chambers forming a flue between them, a pipe connecting each of the chambers of one of the members with a chamber of the second member, a pipe conducting water from one of the chambers of the second member through the heater, and returning to the other chamber of the second member, a pipe supplying water to the heater and passing into one of the chambers of the first member, and a pipe passing from the other chamber of the first member to conduct water from the heater.

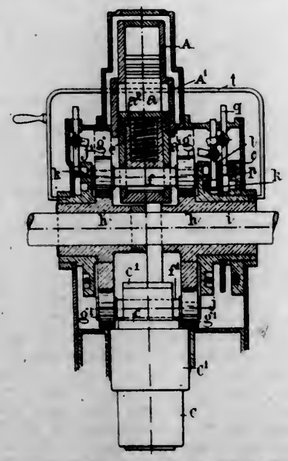
3. A water heater comprising a pair of members, one member consisting of a pair of chambers to form a flue between them, one of the chambers being longer than the

other to form a support for the member and to permit the passage of gas into the flue between them, a second member comprising a pair of chambers to embrace the flue pipe of the heater, a pipe conducting water from each chamber of the first member to each of the chambers of the second member, a pipe conducting water to one of the chambers of the first member, a pipe conducting water from the other chamber of the first member, and a pipe connecting the chambers of the second member.



4. A water heater comprising a pair of members, one of the members comprising a pair of chambers to form a flue between them, a second member comprising a pair of chambers to embrace the flue pipe of a heater, one of the chambers of the first member being longer than the other to form a support for the member, and to permit the passage of gas into the flue between them, a pipe connecting each of the chambers of one member with one of the chambers of the other member, a pipe conducting water to one of the chambers of the first member, a pipe conducting water from the other chamber of the first member, and a pipe connecting the chambers of the second member.

871,707. HYDROCARBON-MOTOR. EUGÈNE KOCH, Lyon, France. Filed May 31, 1907. Serial No. 376,651.

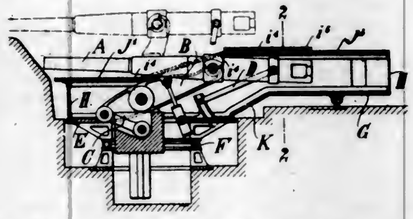


1. In a motor the combination with radially disposed cylinders pistons working therein rollers carried in pairs by the rods of said pistons, a motor shaft and a cam on said shaft having a plurality of bosses thereon continuously engaged by said rollers, of inlet and exhaust valves to said cylinders and double pathed cams adapted to act on said valves whereby admission and exhaust to and from each cylinder takes place only after a double stroke of said pistons substantially as described.

2. In a motor the combination with radially disposed cylinders pistons working therein, rollers carried in pairs by the rods of said pistons, a motor shaft and a cam on said shaft having a plurality of bosses thereon continuously engaged by said rollers, of inlet and exhaust valves to said cylinders means for igniting the charge in said cylinders, and double pathed cams adapted to control said igniting means and to act on said valves whereby admission and exhaust to and from each cylinder take place only after a double stroke of said pistons substantially as described.

3. In a motor the combination with radially disposed cylinders arranged concentrically in pairs, pistons working in said cylinders, rollers carried in pairs by the rods of said pistons, a motor shaft located at the point of intersection of the axes of said cylinders, and a cam on said shaft having three bosses thereon, continuously engaged by said rollers of inlet and exhaust valves for said cylinders double pathed cams adapted to act on said valves whereby admission and exhaust to and from said cylinders take place only after a double stroke of the pistons, means for igniting the charge in said cylinders and a double pathed cam controlling said igniting means substantially as described.

871,708. DISAPPEARING GUN-CARRIAGE. JOHANNES KRONE, Essen-on-the-Ruhr, Germany, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Filed Apr. 30, 1907. Serial No. 371,060.



1. A disappearing gun carriage having an armor deck formed to lie below and to lie above the gun barrel when the latter is in loading position, said gun carriage and armor deck being rotatably mounted.

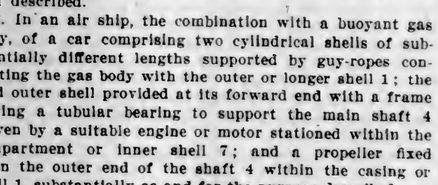
2. A disappearing gun carriage having an armor deck formed to lie below and to lie above the gun barrel when the latter is in loading position, and with an inclined part connecting the parts lying above and the parts lying below; and means for mounting said gun carriage and armor deck in such manner as to adapt them to be rotated about a common axis.

3. The combination with a disappearing gun barrel and its carriage, of an armor deck having a horizontal part mounted to lie above the gun barrel when the latter is in loading position, a horizontal part mounted to lie below the gun barrel, when the barrel is in the same position, and an inclined part connecting both horizontal parts; and means for mounting said gun carriage in operative relation with said armor deck in such manner as to adapt them to be rotated about the same vertical axis.

871,709. COMBINED GRADING AND BORDERING MACHINE. AUGUST H. KROSCHEL, Los Angeles, Cal., assignor of one-half to Friedrich Eichenhofer and one-half to N. A. Ross, Los Angeles, Cal. Filed Feb. 14, 1907. Serial No. 357,398.

1. A leveling machine comprising a frame, carrying means for the frame, a scraper mounted to revolve on a horizontal axis and carried by the frame in front of the carrying means, and means for operating the scraper.

2. A leveling machine comprising a frame, carrying means for the frame, a scraper mounted to revolve on a horizontal axis and carried by the frame in front of the carrying means, and means for raising and lowering the scraper relative to the frame.



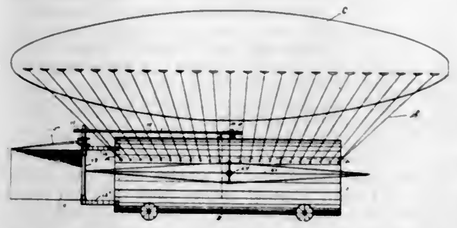
3. A frame, three supports therefor, a scraper pivotally connected to the frame in front of the supports, locking means for holding the scraper in scraping position, and means for raising and lowering the scraper while said locking means are locked.

4. A frame, supporting means for said frame, a scraper pivotally connected to said frame in front of the supporting means, automatic means for holding the scraper in scraping position, and means for raising and lowering the scraper.

5. A frame, supporting means for the frame, levers pivoted to the frame in front of said supporting means, a scraper pivoted to said levers to revolve on a horizontal axis, means for locking the scraper in scraping position, and means for raising and lowering said levers.

[Claims 6 to 14 not printed in the Gazette.]

871,710. AIR-SHIP. GEORGE W. LANE, St. Louis, Mo. Filed Oct. 29, 1906. Serial No. 341,023.



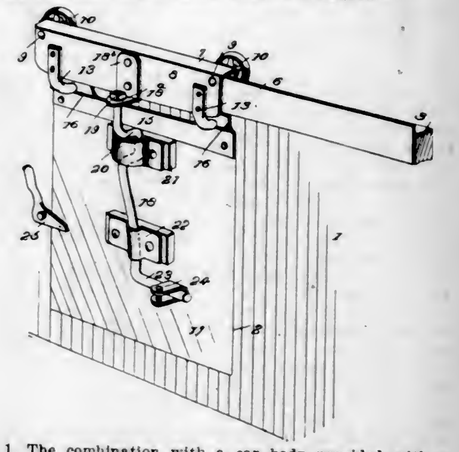
1. The combination, in an air-ship, of a buoyant gas body or envelop, with a car comprising two cylindrical shells of substantially different lengths supported by guy-ropes connecting the gas body with the outer or longer shell 1; the inner or short shell 7 supported on partitions 8 within the long shell 1, substantially as set forth and described.

2. In an air ship, the combination with a buoyant gas body, of a car comprising two cylindrical shells of substantially different lengths supported by guy-ropes connecting the gas body with the outer or longer shell 1; the said outer shell provided at its forward end with a frame having a tubular bearing to support the main shaft 4 driven by a suitable engine or motor stationed within the compartment or inner shell 7; and a propeller fixed upon the outer end of the shaft 4 within the casing or shell 1, substantially as and for the purpose described.

3. In an air-ship, the combination with a buoyant gas body, of a car comprising two cylindrical shells of substantially different lengths supported by guy-ropes connecting the gas body with the outer or longer shell; partitions 8 to support the short shell or passenger compartment 7 within the long shell 1; the said shell 7 provided at its forward end with a window, and a tapered portion 11 to deflect the air current through the ducts formed between the two shells 1 and 7, substantially as set forth.

4. In an air-ship, the combination of a car body comprising two cylindrical shells of substantially different lengths; the inner or short shell 7 supported upon partitions 8 within the long shell 1; a suitable engine or motor stationed within the inner shell 7 and adapted to drive a propeller mounted upon the drive shaft within the outer shell or casing 1; a transverse shaft 24 suitably mounted in the upper middle section of the car body and extending a suitable distance beyond the outside of the shell 1; a guide-plane 23 mounted one on each end of the shaft 24, outside the shell 1, and adapted to be inclined so that their plane surfaces form a resistance to the air as the ship is propelled forward, according as it is desired to cause the ship to ascend or descend.

871,711. CAR-DOOR. GEORGE W. LEAVITT, Pittsburg, Kans. Filed Nov. 5, 1906. Serial No. 342,118.



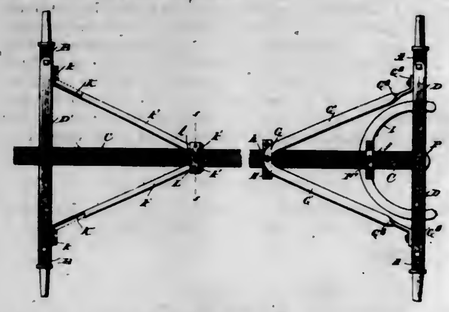
1. The combination with a car body provided with a door-way and an elevated track above the door-way, of a hanger mounted to travel on said track and provided with downwardly and inwardly extending arms 13, a door suspended from said arms and movable laterally thereon, a shifting rod journaled on the door and suspended at its upper end from the hanger, said shifting rod being provided with a cam and the door being formed with a bearing plate within which said cam works, and a latch adapted to hold the door within the doorway.

2. The combination with a car body provided with a door-way and an elevated track above the door way, of a hanger mounted to travel on said track and provided with downwardly and inwardly extending arms, a plate 15 provided at its ends with apertures by which it is mounted to slide laterally on said arms, a door secured at its upper edge to said plate and suspended therefrom, a bracket 18b secured to the hanger between the arms thereof and provided with an outwardly extending ledge, a shifting rod provided at its upper end with a head by which it is suspended from said ledge, said rod being mounted to turn and journaled at its lower end on the outer side of the door, said rod being formed intermediate of its ends with a cam, a bearing plate secured to the outer side of the door and within which said cam works as the rod is turned, and a latch secured to the car body and adapted to engage the outer side of the door to hold the same within the doorway.

871,712. REACH-COUPLING FOR RUNNING-GEARS. GUSTAV W. LOEFFLER, Tampa, Fla. Filed Mar. 30, 1907. Serial No. 365,471.

1. In a vehicle running gear the combination of the front axle, front and rear bolsters and reach pole, upper and lower fifth wheel irons, the upper fifth wheel iron having a rear extension beneath the reach, a strap iron sur-

rounding the reach and secured to the rear extension of the upper fifth wheel iron, a strap secured to the upper fifth wheel circle iron, and to the reach, and a V shaped brace secured at its apex to the rear strap iron, and at its free ends to the front bolster.



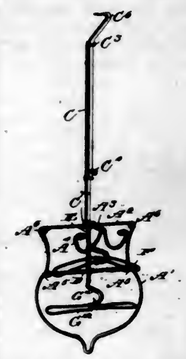
2. In a vehicle running gear the combination of the front axle, front and rear bolsters, and reach pole, upper and lower fifth wheel circle irons, the upper circle iron having a rear extension fitting beneath the reach pole, a strap iron fitting over the reach pole and secured to the rear extension of the upper circle iron, a bent strap iron secured at its forward end to the upper circle iron, a curved brace rod secured at its rear end to the bent strap iron and the upper circle iron, and at its front end to the front axle by a king bolt.

3. In a vehicle running gear the combination of front and rear axles, front and rear bolsters, and a reach pole, upper and lower fifth wheel circle irons, the upper iron secured to the front bolster and the lower circle iron secured to the front axle, the upper circle having a central enlargement and an integral rear extension fitting beneath the reach pole, said rear extension having laterally projecting lugs, a front strap iron inclosing the reach pole and secured to the upper circle iron, a bent strap secured to the under face of the upper circle iron and provided with a central channel, the lower fifth wheel circle iron working within said channel, a curved brace plate secured at its front end to the front axle by a king bolt, and at its rear end to the lower face of the front strap iron by a bolt which secures the upper circle iron, and front strap iron together, a rear strap iron inclosing the reach pole and secured at its lower end to the aforesaid laterally projecting lugs of the rear extension of the upper circle iron, and V shaped brace secured at its apex to the rear strap iron, and at its front ends to the front bolster, and a pin passing through the front strap iron and upper circle iron.

4. In a vehicle running gear the combination of front and rear axles, front and rear bolsters, and a reach pole, angle iron rear hounds, the forward ends of which are bent to form forward projections, abutting the sides of the reach, a plate secured to the upper horizontal web of the angle iron hounds, a bent strap plate fitting beneath the reach and into the angle of the angle iron hounds at their forward extensions, and a pin passing through the upper plate, reach and lower bent strap iron.

871,713. HAT AND COAT HANGER. ALBERT A. LOTT, and ROBERT C. STEIN, Birmingham, Ala. Filed Aug. 7, 1907. Serial No. 387,482.

1. A coat hanger, substantially as herein described, consisting of a main frame of wire having side bars provided midway between their ends with eyes and having a top bar formed in sections projecting inwardly from the upper ends of the side bars, wires bent between their ends in the eyes of the side bars and twisted together toward the middle of the main frame and having their extended ends twisted to form an upwardly extending portion having an eye through which the side sections of the top bar of the main frame are passed, the latter being then twisted and bent to form hat holders and the free ends of the wires within the main frame being twisted together and bent to form coat holders, substantially as and for the purpose set forth.



2. A hanger comprising a main frame having side bars and a top bar composed of side sections extending inwardly from the side bars, wires within the main frame and comprising a cross connection between the side bars of said main frame, and an upright connection between the cross connection and the top bar, the said upright connection being provided with an eye, and the sections of the top bar being passed through said eye and twisted together and extended to form hat holders, and a coat support carried by the wires within the main frame, substantially as set forth.

3. A coat hanger comprising a main frame having side bars provided between their ends with eyes and a top bar made in sections and having eyes at the juncture of the side bars and the top bar, the sections of the top bar being twisted together and extended to form a hat holder, wires within the main frame and twisted into connection with the eyes of the side bars thereof forming a cross connection between the side bars and an upright connection between said cross connection and the top bar having at its upper end an eye through which the sections of the top bar are carried, and a coat holder supported by the cross connection, substantially as set forth.

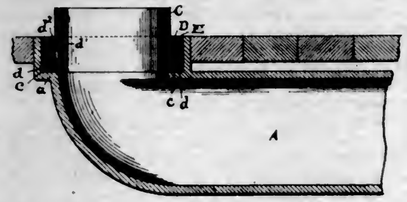
4. A hanger comprising a main frame having a top bar and side bars provided midway between their ends with eyes and a pair of wires held between their ends in said eyes and twisted together toward their juncture at the middle of the main frame and thence twisted together to form a lower coat support, an upright connection with the top bar of the main frame, and an upper coat support, all substantially as and for the purpose set forth.

5. A coat hanger having a main frame provided with a top bar and side bars, a cross connection between the side bars and an upright connection between the cross connection and the top bar of the main frame, coat supports carried by said cross connection and said upright connection, and a suspending device composed of sections adjustable along each other whereby to vary its length, the upper section having a hook to engage with a picture molding and the lower section having a double-pronged hook to engage with the top bar of the main frame on opposite sides of the upright connection therewith, all substantially as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

871,714. JOINT FOR WASTE-PIPES. HENRY J. LUFF, Cleveland, Ohio. Filed Mar. 10, 1906. Serial No. 305,207.

1. In waste pipe connections, a lower pipe having a horizontal seat, a vertical flange about said seat, and an upper pipe having a flange at its bottom resting on said seat, a collar about said upper pipe over the flange thereon, a solder joint in the angle between the bottom of said collar and the flange on said upper pipe, and a filling of non-absorbent material over said solder joint and between said collar and the said vertical flange of the lower pipe.



2. In waste pipe connections, a joint comprising a lower pipe having a flat seat about its upper end and an upper pipe having a flange on its lower end resting upon said seat, in combination with a collar about said upper pipe over said flange and a soldered joint filling the angle about the bottom of the said collar and the flange on which it rests, said collar standing apart from said upper pipe near its upper portion.

3. The combination of a pipe having a horizontal flanged seat, a lead pipe with a lateral flange resting upon said seat and a collar about said lead pipe resting on said flange and having an annular space inside adapted to accommodate buckling in the lead pipe.

4. A pipe having a horizontal seat with a flange about the same and a lead pipe having a flange resting upon said seat, in combination with a collar about said lead pipe having an annular space inside to provide for buckling in said pipe, and sealing material filling the space between said collar and the flange about said horizontal seat.

5. As a new article of manufacture, a collar for lead waste-pipes having an annular enlargement inside in its upper half and a plain band shape in its lower half below said enlargement and of the same cross section in said lower half.

[Claim 6 not printed in the Gazette.]

871,715. METALLIC WINDOW CONSTRUCTION. EDMUND H. LUNKEN and CHARLES M. CONKLIN, Cincinnati, Ohio, assignors, by direct and mesne assignments, to The Lunken Steel Window Co., a Corporation of Ohio. Filed Oct. 30, 1906. Serial No. 341,297.



1. In fire-proof window construction, the combination of a main frame, a swinging frame centrally pivoted thereto, said pivots being located to one side and inwardly toward the interior of the building, and stop strips fitting against and secured to the interior face of one frame and overlying that of the other, the arrangement of the whole permitting of a complete half-revolution of the swinging frame, substantially as described.

2. In fire-proof window construction, the combination of a main frame, a swinging frame pivoted therein centrally of its height, said pivots being located to one side and inwardly toward the interior of the building, stop strips fitting against and secured to the interior face projecting inwardly in respect to the window opening, and secured to the lower half of the main frame, and stop strips fitting against and secured to the interior face projecting outwardly in respect to the window opening, and secured to the upper half of the swinging frame, the arrangement of the whole permitting of a complete half-revolution of the swinging frame, substantially as described.

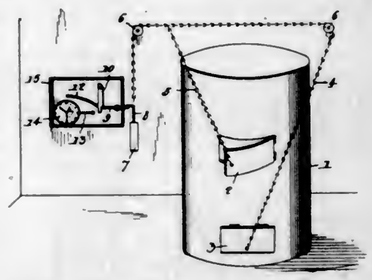
3. In combination, in fire-proof windows, a main frame, a swinging frame, a pivotal connection between them, comprising a pintle secured to the interior face of one frame and lying in a socket secured to the interior face of the other frame, a removable cap piece for holding the pintle in the socket, a stop strip fitting against and secured to the interior face of one member of the frame and overlying that of the other substantially as described.

4. In combination in fire-proof windows, a main frame, a swinging frame, a pivotal connection between them located centrally of the window opening and comprising a pintle secured to the interior face of the swinging frame, and lying in the socket secured to the interior face of the main frame, a removable cap piece for holding the pintle in the socket, whereby, when the swinging frame is completely reversed, it may be removed or replaced entirely within the room, a stop strip fitting against and secured to the interior face of one member of the frames, and overlying that of the other, substantially as described.

5. In fire-proof windows, a main frame, a swinging frame, stop strips fitting against and extending from the interior face of one frame across the crevice between the frames, said stop strip being channeled, and a strip fitting against the interior face of the opposing frame having its edge arranged to engage said channel, substantially as described.

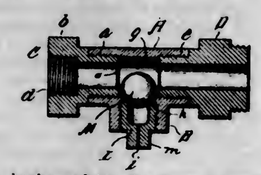
[Claims 6 to 16 not printed in the Gazette.]

871,716. DAMPER-REGULATOR. BENJAMIN F. LUTZ, Lititz, Pa. Filed Dec. 14, 1905. Serial No. 291,773.



In combination with a furnace and its draft and fuel or check doors, a draft regulator embracing guide rolls, and a flexible connection having one end attached to the draft door, said flexible connection also having a like branch connection with the fuel or check door intermediate of said guide rolls, a counter-balance weight connected to one end of said connection and provided with an engaging hook, a horizontal supporting lever, engaged at its forward end with said hook for sustaining said weight, a pivoted detent hung at its upper end and having a shoulder at its lower end engaged with the rear end of said lever for the retention of said lever in weight-supporting position, said detent being adapted to swing by gravity to engaging position and having at its lower end an upwardly curved trip-arm serving as a weight for the retention of said lever in effective position, and actuating mechanism having a tripping lever adapted to engage said trip-arm for swinging said detent to released position.

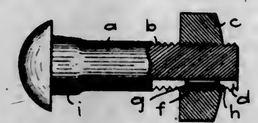
871,717. SAFETY ATTACHMENT FOR AIR-BRAKE SYSTEMS. CHARLES E. LYTER, Harrisburg, Pa. Filed Aug. 17, 1907. Serial No. 389,065.



1. An air brake safety attachment comprising a pipe adapted for connecting a train line pipe and having a laterally extending tubular branch, an adjustable plug fitting in said branch and formed with an aperture therethrough, and a ball valve adapted to close said aperture.

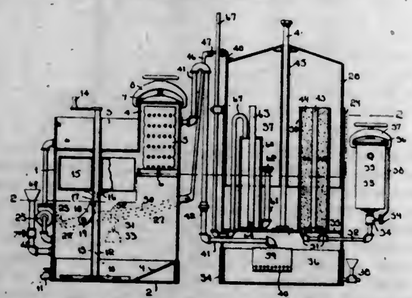
2. An air brake safety attachment comprising a pipe adapted for connecting a train line pipe and having a tubular branch, an adjustable plug for said branch formed with an aperture therethrough, and a ball normally resting on said plug and adapted to cut off the flow of air through the train line pipe, and permit a retarded flow of air through the plug.

871,718. NUT-LOCK. ATHOL B. MACKLIN, Ottawa, Ontario, Canada. Filed Mar. 20, 1907. Serial No. 363,434.



A lock-nut including in combination a bolt having a longitudinal recess therein with an inclined rear wall, means on the bolt preventing rotation thereof, and a locking-pin operating in the recess, and comprising a smooth central cylindrical portion adapted to engage the edges of the threads on the nut, and a head at each end of the cylindrical portion, each said head having, on one side thereof, a flat, circular face terminating in a sharp edge and, on the other side thereof, a flaring face, each said head being adapted to extend between the bolt-threads the entire depth thereof.

871,719. ACETYLENE-GAS GENERATOR. CARL E. MALMBORG, Galesburg, Ill., assignor of one-half to Otto E. Prytz and John A. Rundqvist, Galesburg, Ill. Filed Nov. 8, 1906. Serial No. 342,589.

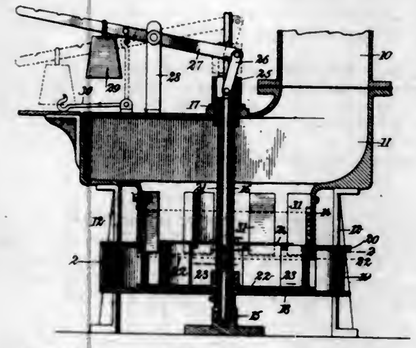


1. In an acetylene gas generating apparatus, a closed generator tank having a carbid holder above the water level therein, a water supply for said generator tank having a controlling valve, a displacer, and a lever connected to said displacer and said valve to simultaneously operate them, in combination with gas storage means having a movable element operated by variations of gas pressure, said movable element being connected to and operating said lever.

2. In an acetylene gas generating apparatus, a closed generator tank having a carbid holder above the water level therein, a water supply for said generator tank having a controlling valve, a displacer, and a lever connected to said displacer and said valve to simultaneously operate them, in combination with gas storage means having a movable element operated by variations of gas pressure, said movable element being connected to and operating said lever, and means to vary the load of the lever.

3. In an apparatus of the character described, a closed generator tank, a water supply receptacle upon the top of said tank, a pipe leading from said receptacle to said generator tank, a valve in said pipe, a carbid holder supported in the generator tank above the level of the water therein, a rock shaft, an arm thereon, a body in said generator tank adapted to be submerged to elevate the water therein in contact with the carbid in said holder, a link connecting said body to the arm on said rock shaft, a lever upon the outer end of said rock shaft, a link connecting said lever to said valve, a shiftable weight upon said lever, a storage tank, a movable bell in said storage tank to receive the gas generated in said generator tank, and a rod connecting said bell and said lever, substantially as shown and for the purposes set forth.

871,720. WATER-TURBINE. FRANK MATTAUSCH and WILLIAM T. MATTAUSCH, Lincoln, and JOHN F. SCHLOSSSTEIN, Cochrane, Wis. Filed Apr. 12, 1906. Serial No. 311,259.



1. A turbine comprising a pen stock having a tubular outlet, a shaft journaled coaxially with the outlet, a circular web secured to the lower end of the shaft, an annular series of vanes at the periphery of the web and encircling the outlet, a sleeve slidable on the shaft and provided with an enlargement at its upper end, a circular gate on the end of the sleeve, an annular series of directing vanes at the periphery of the gate, said vanes comprising each a portion concentric with the shaft and a portion inclined inwardly therefrom, stop-waters secured to the tubular outlet, links pivoted to the enlargement of the sleeve, a bracket on the pen stock, a lever pivotally mounted on the bracket and having one end secured to the links, and a weight on the opposite end for balancing the gate said gate being of a diameter greater than the end of the outlet whereby to close the same when the gate is elevated and said stop-waters being slotted whereby to permit the passage of the directing vane.

2. A turbine comprising a pen stock having a tubular outlet, a shaft journaled coaxial with the outlet, a circular web secured to the lower end of the shaft, an annular series of vanes at the periphery of the web and encircling the outlet, a sleeve slidable on the shaft, a circular gate on the end of the sleeve and normally resting within the vanes, an annular series of directing vanes at the periphery of the gate, said vanes comprising each a portion concentric with the shaft, and a portion inclined inwardly therefrom, stop-waters secured to the tubular outlet, and means connected with the sleeve whereby to lift the gate, said gate being of a diameter greater than the opening of the outlet whereby to close the same when the gate is elevated, and said stop-waters being slotted whereby to permit the passage of the directing vane.

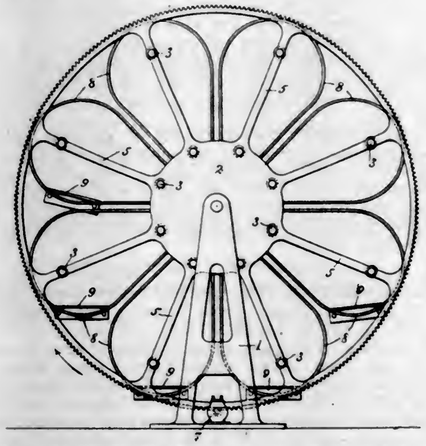
3. A turbine comprising a penstock having a tubular outlet, a shaft journaled coaxial with the outlet, a circular web secured to the lower end of the shaft, an annular series of vanes at the periphery of the web and encircling the outlet, a sleeve slidable on the shaft, a circular gate on the end of the sleeve and normally resting within the vanes, an annular series of directing vanes at the periphery of the gate, stop-waters secured to the tubular outlet, and means connected with the sleeve whereby to lift the gate, said gate being of a diameter greater than the opening of the outlet whereby to close the same when the gate is elevated, and said stop-waters being slotted whereby to permit the passage of the directing vanes.

871,721. PROCESS OF MAKING A PRINTING-PLATE BY PHOTO-ENGRAVING. ARCHAG P. MILLER, Winthrop, Mass., assignor to Charles Frederick Sharkey, Somerville, Mass. Filed Jan. 30, 1907. Serial No. 354,916.

The process of making a printing plate by photo-engraving, which consists of, first, treating the wet negative with a solution of glue, second, drying, third, treating with a solution of collodion, fourth, drying, fifth, stripping the film therefrom, sixth, turning the same, seventh, fixing the same to a plateglass, eighth, photographing from the plateglass upon a sensitized metal plate, and, finally etching the plate with an acid, substantially as shown and described.

871,722. AMUSEMENT DEVICE. WILLIAM J. MILLICAN, New York, N. Y. Filed Apr. 16, 1907. Serial No. 368,510.

1. In an amusement device, the combination of a wheel, a car carried by the wheel, and means for directing the car through the hub of the wheel.



2. In an amusement device, the combination of a wheel, a car carried by the wheel, means for rotating the wheel, and means for directing the car through the hub of the wheel as the wheel is rotated.

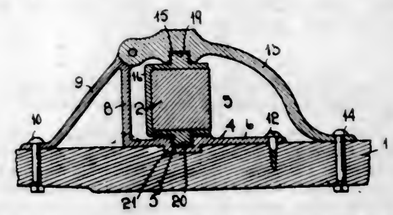
3. In an amusement device, the combination of a wheel, a car carried by the wheel, means for rotating the wheel, and means for directing the car substantially diametrically through the hub of the wheel as the wheel is rotated.

4. In an amusement device, the combination of a wheel having opposed loops, a car slidably mounted on said loops, and means for rotating the wheel whereby the car travels through the hub thereof on said loops.

5. In an amusement device, the combination of a wheel composed of two circular side frames spaced apart and rigidly connected together, directly opposed loops carried by said frames converging toward the center of the wheel, a car slidably mounted on said loops, and means for rotating the wheel whereby the car repeatedly slides through the hub thereof on said loops.

[Claims 6 to 10 not printed in the Gazette.]

871,723. DOUBLETREE-FASTENER. CALVIN J. MINTON, Gage, Okla. Filed Dec. 31, 1906. Serial No. 350,171.



1. A fastening device for double-trees comprising a base plate having a socket formed therein, means for securing said plate to the tongue, an upwardly-projecting arm formed on said base plate, a securing bar pivotally connected to the upper end of said upwardly-projecting arm, said securing bar having a socket to aline with the socket in said base plate, means for detachably connecting the securing arm to the tongue, a clip secured to the double-tree and having oppositely-projecting studs to engage the sockets in the base plate and securing bar of the fastener.

2. A fastener for double-trees comprising a base plate having a socket therein, a boss formed on the under side of said plate to engage a recess in the tongue, an upwardly-projecting right-angular arm formed on one edge of said base plate, a brace formed on said arm and secured to the tongue, a securing bar pivotally connected at one end to the upper end of said angular arm, a bolt to secure the downwardly-projecting end of said securing bar to the tongue, a clip arranged on and secured to the double-tree and oppositely-projecting studs formed on the outer sides of the upper and lower plates of said clip to engage the sockets in the base plate and in the securing bar of the fastener.

3. A double-tree fastener comprising a base plate having an upwardly-projecting arm, a bar pivotally connected at one end to the free end of said arm, means for connecting the free end of said bar to the tongue, a U-shaped clip for embracing the double-tree and having oppositely-disposed studs on the outer faces of its legs to engage the sockets in said base plate and pivoted bar.

871,724. ELECTRIC WARP STOP-MOTION FOR LOOMS. JOHN W. MORAN, Adams, Mass. Filed Mar. 29, 1907. Serial No. 365,379.



The herein described improved device for wiping the casing tube of an electrical warp stop motion for looms, the same comprising shafts supported for rotation adjacent to the ends of the casing tube, band pulleys upon said shafts, an endless band supported upon said band pulleys and carrying a wiper, bevel pinions mounted loosely upon one of the shafts and equipped with clutch members, a clutch sleeve mounted slidably upon and for rotation with said shaft intermediate the bevel pinions and adapted for alternate engagement with the clutch members of the

latter, a driven shaft, a bevel pinion upon said shaft constantly engaging the loose bevel pinions, a shipping lever having a bifurcated end engaging the clutch sleeve, a suitably supported reversing lever engaging the shipping lever and having a slot for the passage of the wiper carrying band, lever engaging knots upon the wiper carrying band constituting stops for actuating the reversing lever, and an arcuate spring catch engaging said reversing lever to hold the latter in adjustable position at the ends of its movements in opposite directions.

871,725. HASP. JACK C. MORGAN, Frankfort, Ky. Filed Apr. 24, 1907. Serial No. 370,106.

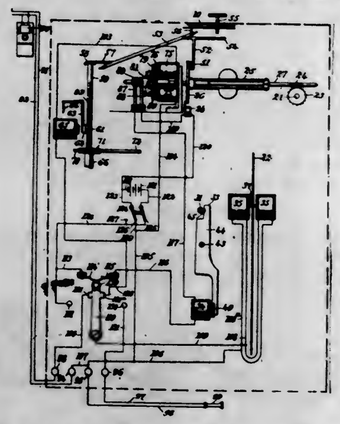


1. A hasp formed with a staple receiving opening, a finger arranged to engage the opening in the staple after application of the hasp, and a latch carried by the hasp and offset to seat within the staple opening adjacent the end of the finger, said offset portion being approximately equal in length to the length of the opening.

2. A hasp having a staple receiving opening, a finger projecting into said opening and adapted to enter the staple after application of the hasp, and a latch member secured to the hasp, said member comprising a spring bar fixed at one end to the hasp and formed adjacent the opposite end with an offset portion adapted to engage the end of the finger, said offset portion being approximately equal in length to the length of the staple opening in the hasp and having its lower surface on a plane with the lower surface of the hasp.

3. A hasp having a staple receiving opening, a finger projecting into said opening, and a latch comprising a spring bar secured to the hasp and bent adjacent the staple opening to offset a portion of said bar within the opening.

871,726. TELEGRAPHONE SYSTEM. GEORGE MORIN, Habana, Cuba. Filed Jan. 30, 1907. Serial No. 354,822.



1. In a system of the character described, the combination of a movable recording member, means for actuating the same, magnets movable in relation to the general position occupied by said recording member for the purpose of impressing a record thereupon, and sound wave controlled mechanism for stopping and starting said last-mentioned mechanism independently of movements of said movable recording member.

2. In a system of the character described, the combination of a movable record-receiving member, mechanism for impressing a record thereupon, motor mechanism for propelling said recording member, and electrically operated mechanism controllable at will by sounds at a distance for stopping and starting, relatively to said recording member, said means for impressing said record thereupon.

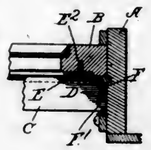
3. In a system of the character described, the combination of a relay, sound wave controlled mechanism connected with said relay for actuating the same, and means connected with said relay and controllable thereby for forming a record surface.

4. In a system of the character described, the combination of a telegraphone provided with a record member, means for impressing upon said record member a sound record, feed mechanism connected with said means for carrying the position thereof relatively to said record member, and sound wave controlled mechanism connected with said feed mechanism for stopping and starting the latter.

5. In a system of the character described, the combination of a telegraphone, means for actuating the same, and mechanism controllable from a distance by sound waves for throwing said telegraphone into and out of action at will.

[Claims 6 to 13 not printed in the Gazette.]

871,727. WINDOW-FASTENER. MURDOCK MORRISON, Chicago, Ill. Filed Jan. 28, 1905. Serial No. 243,032.



1. In combination with the sashes and sash cord of a window or the like, a hinged stop secured to one of the sashes and adapted to be turned so as to stand in the path of the other sash, said stop having an engaging part formed so as to engage with and slide upon the window cord.

2. In combination with the sashes of a window or the like, a hinged stop secured to one of such sashes and adapted to be turned so as to stand in the path of the other, and a hook on such stop to extend around the window cord.

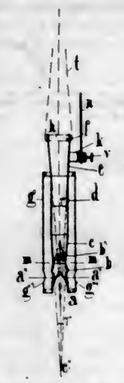
3. In a window, the combination of an upper and a lower sash, a stop hinged to hte upper sash at a distance above the meeting rail and adapted either to be turned into the path of the lower sash or to be folded over the upper sash to allow the lower sash to pass, and a hook formed on the end of said stop and adapted to extend about the window cord.

871,728. BURNER FOR HEATING AND LIGHTING. ANTOINE MOUNEYRAT, Paris, France. Filed Aug. 28, 1906. Serial No. 332,361.

1. A gas burner comprising an injector, an outer casing having air inlets therein, and an interior casing isolated from the exterior casing, said interior casing consisting of a cylindrical portion surrounding the injector and having air inlet openings therein said cylindrical portion being of approximately the same height as the injector, a short truncated cone connected to the cylindrical portion, a longer inverted truncated cone connected to the first cone, a long cylindrical portion connected to the second cone, and an inverted truncated cone connected to said cylindrical portion.

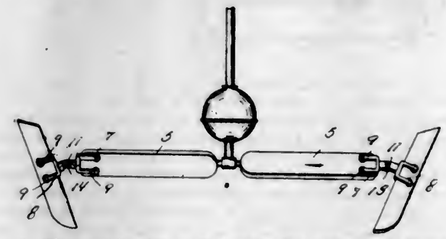
2. A gas burner comprising an injector, an outer casing having air inlets therein, and an interior casing isolated from the exterior casing, said interior casing consisting of a cylindrical portion surrounding the injector and having air inlet openings therein said cylindrical portion being of approximately the same height as the injector, a short truncated cone connected to the cylindrical portion, a longer inverted truncated cone connected to the first cone,

a long cylindrical portion connected to the second cone, an inverted truncated cone connected to said cylindrical



portion and a short cylindrical portion connected to the last mentioned cone.

871,729. ELECTRIC FAN. WILLIAM C. MCCHORD, Jr., Springfield, Ky. Filed June 14, 1906. Serial No. 321,688.



1. The combination with a main fan blade, of a supplemental fan blade arranged for attachment to the main fan blade.

2. The combination with a main fan blade, of a supplemental fan blade arranged for adjustable connection with the main fan blade.

3. The combination with a main fan blade, of a supplemental fan blade arranged for attachment to the main fan blade at various angles.

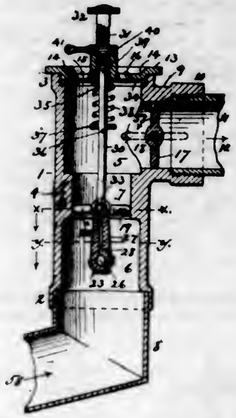
4. The combination with a main fan blade, of a supplemental blade, and a bracket detachably connecting the said blades.

5. The combination with a main fan blade, of a supplemental blade, and a bracket adjustably connecting the said blades.

[Claim 6 not printed in the Gazette.]

871,730. CARBURETER. JAMES A. MCHARDY, Providence, R. I., assignor to Standard Carbureter Company, Providence, R. I., a Corporation of Rhode Island. Filed July 24, 1906. Serial No. 327,541.

1. In a carbureter, the combination of a case or body portion, a carbureting chamber, an air chamber, a spraying chamber which chambers are within said case or body, means for conducting gasolene to the spraying chamber, an air pipe to conduct atmospheric air to the air chamber, a discharge pipe to conduct the mingled gasolene vapor and air from the carbureting chamber, an air valve mounted in the spraying chamber adapted to rotate on a pivot rod which extends diametrically across the spraying chamber, a throttle valve located in the discharge pipe of the carbureter and rotatably mounted on a pivot rod which extends diametrically across said discharge pipe of the carbureter, a V-shaped lever secured at its apex to the pivot rod of the throttle valve on the outer side of the case or body, a lever arm secured on the pivot rod of the air valve on the outer side of said case or body, a link bar pivotally connected at its ends respectively to said lever arm and to one end of said V-shaped lever, and a rod pivotally connected to the other end of said V-shaped lever.



2. In a carbureter, the combination of a circular spraying chamber, a circular air valve having a permanent air passage through it which valve has a diameter equal to that of the chamber, a gasolene-discharge pipe extending through said valve aperture into said chamber, a needle valve adapted to open and close said discharge pipe, a diametrically-arranged pivot rod upon which said air valve is mounted in said chamber, and means for rotating said air valve, said valve being so arranged that its solid part opposite to said air passage therein when said valve is moved to open position comes into contact with the needle valve to limit the rotation of the valve to 90°.

871,731. COMBINATION SKIRT TRIMMER AND MARKER. ETTA N. MCKELVEY and IRA E. ELLS, East Liverpool, Ohio. Filed Jan. 18, 1907. Serial No. 352,975.



1. In combination, a standard, a clip adjustably mounted upon the standard, means carried by the clip for clamping a pair of shears, and means also carried by the clip for holding a piece of chalk.

2. In combination, a standard, a clip adjustably mounted upon the standard, and a pair of slidable clamping members carried by the clip, the said clamping members

being formed with companion jaws for engaging a pair of scissors.

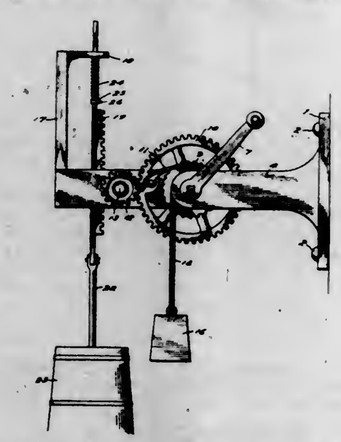
3. In combination, a standard, a clip adjustably mounted upon the standard, a pair of relatively movable clamping members carried by the clip, the said clamping members carrying companion jaws for engaging a pair of scissors, and a set screw locking the clip in position and also engaging the clamping members.

4. In combination, a standard, a clip adjustably mounted upon the standard, a second standard carried by the clip, a member loosely mounted upon the second standard, and a pair of spring actuated gripping arms carried by the said member and provided with means for engaging a piece of chalk.

5. In combination, a standard, a clip mounted upon the standard, a second standard carried by the clip, a plate pivotally connected to the second standard, spring actuated gripping arms pivoted to the plate, and clips carried by the gripping arms for engaging a piece of chalk.

[Claims 6 and 7 not printed in the Gazette.]

871,732. CHURN. ALBERT M. MCKOY, Stonewall, Ind. Ter. Filed May 1, 1907. Serial No. 371,336.



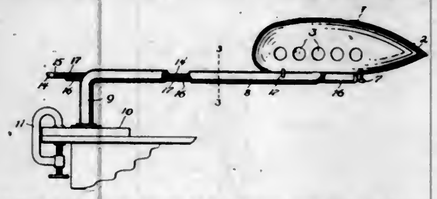
1. A churn operating mechanism comprising a frame, a winding drum connected to the frame, a rope or cable connected to the drum and provided with a weight, a gear wheel on the drum shaft, a shaft mounted in the frame and provided with a pinion engaging the gear wheel, a mutilated gear on said shaft, a rack bar engaged by said mutilated gear, a dasher rod secured to said rack bar, a spring for depressing the rack bar and dasher rod, and means for preventing the rotation of the drum during the downward movement of the rack bar and dasher.

2. In a churn operating mechanism, the combination of a rack bar connected to the churn dasher, a spring for moving the rack bar downward, a drum, a cable connected to the drum and provided with a weight, means for winding the weight up toward the drum, and connections whereby the weight will raise the rack bar, and means for preventing the rotation of the drum during the downward movement of the rack bar.

3. In a churn operating mechanism, the combination of a rack bar, a spring for forcing the rack bar downward, gravity devices for moving the rack bar upward, and means for preventing the rotation of the gravity devices during the downward movement of the rack bar.

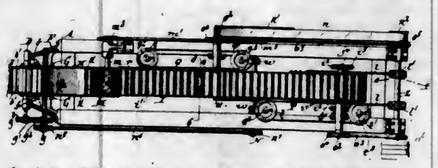
871,733. SLEEVE-IRON. SUSIE MCLAUGHLIN, Philadelphia, Pa. Filed Nov. 30, 1903. Serial No. 183,175.

In an ironing device, a hollow iron, a hollow arm to which the same is secured, said arm and iron extending in parallel planes, said arm being elongated and secured to a post extending at a right angle thereto, and at the juncture thereof being formed with an opening, in combi-



nation with a burner arranged within the iron, and means for feeding fuel thereto, said means extending through said arm and the opening thereof.

871,734. MACHINE FOR TRIMMING STRING-BEANS AND OTHER ARTICLES. WILLIAM B. PHINNEY, Westfield, N. Y., assignor of one-fourth to Ralph A. Quale, Silver Creek, N. Y., and one-fourth to Herbert W. Allen, Buffalo, N. Y. Filed Feb. 19, 1906. Serial No. 301,761.



1. A machine for trimming string beans and other articles comprising a movable carrier, a plurality of pockets pivoted on said carrier so as to be capable of tilting transversely to the line of movement of the carrier, means for tilting the pockets, a cutter which is arranged at the depressed end of the pockets and to which the articles are presented by said pockets, and means for limiting the movement of the articles in the pockets toward said cutter, substantially as set forth.

2. A machine for trimming string beans and other articles comprising an endless belt, a plurality of trough shaped pockets pivoted on said belt so as to be capable of tilting transversely to the line of movement of the belt, means for tilting the pockets, a cutter which is arranged at the depressed ends of the pockets and to which the articles are presented by said pockets, and means for limiting the movement of the articles in the pockets toward said cutter, substantially as set forth.

3. A machine for trimming string beans and other articles comprising an endless belt, a plurality of open ended trough shaped pockets arranged transversely and pivoted on the belt, means for tilting the pockets transversely, a cutter which is arranged at the depressed ends of the pockets and to which the articles are carried by said pockets, and means for limiting the transverse sliding movement of the articles in said pockets, substantially as set forth.

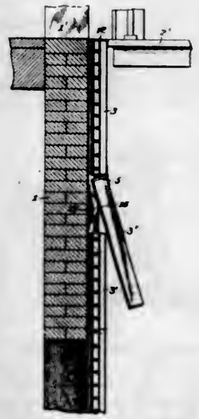
4. A machine for trimming string beans and other articles, comprising an endless carrier, a plurality of open ended trough shaped pockets arranged transversely and pivoted on the carrier, means for tilting the pockets successively in opposite directions, cutters arranged on opposite sides of the path of said pockets and adjacent to the depressed ends thereof, and operating to successively trim off the ends of the articles projecting beyond the ends of the pocket, and means for limiting the transverse sliding movement of the articles in said pockets, substantially as set forth.

5. A machine for trimming string beans and other articles comprising an endless belt, a plurality of open ended trough shaped pockets arranged transversely and pivoted centrally on the belt, means for tilting the pockets first toward one side of the belt and then toward the other side of the belt, a rotary cutter for severing one end of the articles arranged adjacent to the depressed end of

the pockets when tilted in one direction, another rotary cutter for severing the other end of the articles arranged adjacent to the depressed end of the pockets when tilted in the opposite direction, and means for limiting the transverse movement of said articles in said pockets, substantially as set forth.

[Claims 6 to 19 not printed in the Gazette.]

871,735. DOOR FOR ELEVATOR-SHAFTS. JOSEPH RASHKIN, New York, N. Y. Filed June 14, 1905. Serial No. 265,145.



1. The combination with an elevator shaft having a door opening in the wall thereof and an elevator car movable in the shaft, of a door supported to slide in said shaft between the wall of the latter and the car, a bar carried by the upper edge of the door and movable therewith and means for arresting and rigidly supporting the bar in register with the building-floor whereby said bar will provide a fixed bridge between the car-floor and the building-floor.

2. In combination with an elevator shaft having a door-opening in the wall thereof, and an elevator movable in said shaft, of a door supported to slide in said shaft between the wall thereof and the elevator and being movable downwardly from its normal closed position opposite the door-opening to a position with its upper edge substantially flush with the door-sill, the said door being provided at its upper edge with an angle plate the horizontal flange of which forms part of the upper edge of the door and the vertical flange of which is extended at its opposite ends beyond the sides of the door, and means for engaging with the said end extensions of the angle-plate for supporting the door in its lowered position.

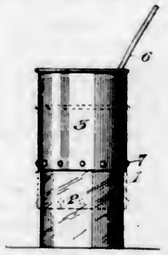
3. The combination with an elevator shaft having a door-opening in the wall thereof, and an elevator movable in said shaft, of a door supported to slide in said shaft between the wall thereof and the elevator and being movable downwardly from its normal closed position opposite the door-opening to a position with its upper edge substantially flush with the door-sill, the said door being provided at its upper edge with an angle plate the horizontal flange of which forms part of the upper edge of the door and the vertical flange of which is extended at its opposite end beyond the sides of the door, a metallic filling or bridge-plate resting upon the horizontal flange of said angle-plate and being of sufficient width to substantially fill the space between the door-sill and the elevator, and means for engaging with the said end extensions of the angle-plate for supporting the door in its lowered position.

4. In combination with an elevator shaft having a door-opening in the wall thereof, and an elevator movable in said shaft, of a door supported to slide in said shaft between the wall thereof and the elevator and being movable downwardly from its normal closed position opposite the door-opening to a position with its upper edge substantially flush with the door-sill, the said door being provided at its upper edge and on the opposite corners thereof with two angle-plates arranged with the horizontal flange of one resting upon that of the other, the said upper horizontal flange forming a filling or bridge-plate for occupying the space between the door-sill and the elevator, and the vertical flange of the lower angle-plate being extended at its opposite ends beyond the sides of the door, and means for engaging with the said end extensions of the lower angle-plate to support the door in its lowered position.

5. The combination with an elevator shaft having a door opening in the wall thereof and an elevator car movable in said shaft, of a door supported to slide in said shaft between the wall of the latter and the car, a bar carried by the upper edge of the door and movable therewith, and means for arresting the movement of the bar when in register with the building floor whereby the bar will provide a fixed bridge between the car floor and the building floor said means being located below the bar and acting independently of the carrying cables for the doors.

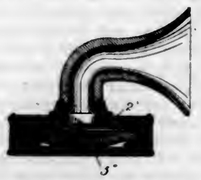
[Claims 6 to 9 not printed in the Gazette.]

871,736. FEED-CHOPPER. JOHN F. RAYMOND, Scottsbluff, Nebr. Filed Nov. 7, 1906. Serial No. 342,412.



A food chopping block comprising a solid base, a tubular casing or curb telescoping thereon, and pins for detachably securing the curb and block together at different points of adjustment; substantially as specified.

871,737. TELEPHONE-TRANSMITTER. ELIAS E. RIES, New York, N. Y. Original application filed June 23, 1900, Serial No. 21,322. Divided and this application filed Jan. 11, 1904. Serial No. 188,633.



1. In a telephone transmitter, two plate electrodes and a liquid included in an electric circuit between them, such elements being sufficiently near together to cause variations in the extent of the wetted surface by capillary action when an electrode is operated in accordance with the sound waves to be transmitted.

2. In a telephone transmitter, two plates or electrodes and a film of liquid included in a circuit between them and adapted to vary the resistance of the circuit through capillary action when a plate is vibrated, as and for the purpose described.

3. In a telephone transmitter, two plate electrodes separated from one another by a narrow space which gradually diminishes towards the edge and an interposed liquid, said electrodes being sufficiently close together to cause

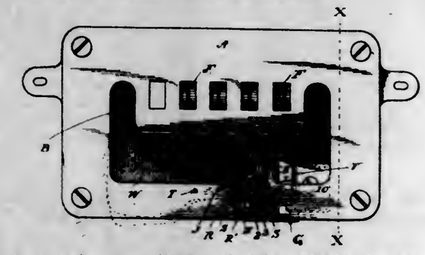
variations of resistance in an electric circuit by variations of wetted surface due to capillary action.

4. In a telephone transmitter, electrodes normally separated from one another, and a connecting film or body of liquid adapted to vary the resistance of the circuit by capillary action when the instrument is subjected to the influence of sound waves.

5. A telephone transmitter having electrodes separated by a capillary space graduated or varying in its dimensions so as to cause an amplification of effect and a liquid contained in said space, as and for the purpose described.

[Claims 6 to 9 not printed in the Gazette.]

871,738. METER. DANIEL E. SCRAFFORD, Peoria, Ill. Filed Feb. 6, 1905. Serial No. 244,393.



1. A meter comprising registering wheels, devices for imparting motion to said wheels, a cam revoluble upon a vertical axis and provided with a channel having a spiral portion and a vertical portion connecting the highest and lowest parts of said spiral portion, a pivoted horizontal lever alongside the cam, having a lateral projection fitting in said channel and a weighted end to be raised by the cam, and means whereby the downward movement of said weighted end actuates said devices.

2. A meter comprising registering wheels, devices for imparting motion to said wheels, a two-part cam mounted upon a vertical shaft and having between its parts an endless channel made up of a spiral part and a vertical part connecting the highest and lowest portions of the spiral part, a weighted horizontal lever pivoted alongside said cam, a roller mounted upon one side of the lever and projecting into said channel, and means whereby the descent of the weighted lever, when the roller reaches the vertical portion of the cam channel, actuates said devices.

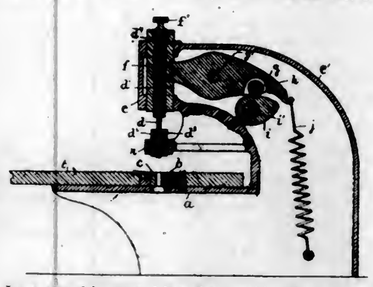
3. A meter comprising a series of registering wheels, a reciprocating member for imparting a step-by-step movement thereto, a lever connected at one end to the said member, the lever being weighted at the opposite end and fulcrumed between its ends, an upper and lower cam portion near the end of the lever which has connection with the reciprocating member, said cam portions being mounted on a vertical axis, the adjacent faces of the cam portions having an irregular passage between them and a vertical passage connecting therewith substantially as described and shown and normally narrower than the said irregular passage, and a member on the lever within the irregular passage the cam adapted to depress the lever to raise the weighted end thereof and then permit the latter to fall for the purposes described when the vertical passage of the cam arrives at the lever-member.

4. A meter comprising registering wheels, a reciprocating member adapted to impart a step-by-step movement to said wheels, a lever weighted at one end and connected at the other to the said reciprocating member and fulcrumed between its ends, a cam for depressing the lever at one end to raise the weighted end and then liberate it abruptly, said cam comprising two portions, an upper and a lower, there being a substantially horizontal passage and a substantially vertical passage for the cam for operating the lever, one of said passages being normally narrower than the other, a vertical axis for said cam and means for imparting a continuous movement to the cam while the reciprocating member through the lever receives an intermittent movement.

5. A meter comprising registering wheels adapted for a step-by-step movement, a reciprocating member for imparting such movement, a gravity lever in connection with such member, a double cam comprising an upper and a lower portion, a roller on the lever for entering between the said cam portions, the opening between the cams being irregular in form and having an abrupt vertical opening substantially as shown and described, the width of said vertical opening being normally narrower than the irregular opening, the upper portion of the cam being adapted for slight rotary movement on its axis for opening the vertical opening by the passage of the roller therethrough, and also adapted to close after the passage of said roller for the purposes described.

[Claims 6 to 10 not printed in the Gazette.]

871,739. PUNCHING-MACHINE. EDWARD SOUTHWORTH, Portland, Me. Filed June 17, 1907. Serial No. 379,361.

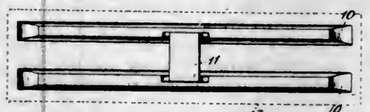


1. In a punching machine the combination of a die and punch, a cylindrical stripper for said punch having on its outside surface a spiral groove, an arm having a vertical recess through which said stripper passes and an internal projection in said recess for engaging said spiral groove.

2. In a punching machine the combination of a die and punch, a cylindrical stripper for said punch having on its outside surface a spiral groove, an arm having a vertical recess through which said stripper passes and a set screw in said arm having its end adapted to engage the said groove.

3. In a punching machine, the combination of a vertical moving punch holder having a cylindrical opening extending downward from the upper end a punch shank adapted to slip into said opening from the upper end, a punch proper on the lower end of said punch shank a plug adapted to fit in the upper end of said cylindrical opening to hold the punch shank therein and a die adapted to cooperate with the punch proper.

871,740. BRAKE-SHOE. FRANK R. SPEAR, Chicago, Ill. Filed July 3, 1907. Serial No. 381,974.



1. A reinforcing and strengthening back for brake shoes consisting of a malleable iron frame having a plurality of rods or bars connected together and all made in one casting, said rods or bars having beveled sides and ends.

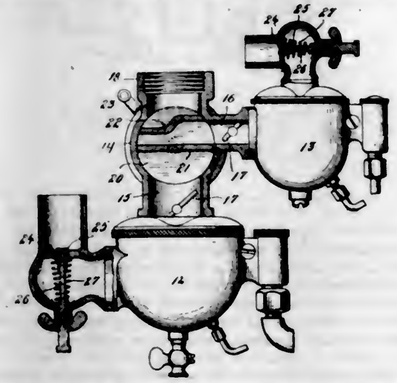
2. A reinforcing and strengthening back for brake shoes consisting of a malleable iron frame having a plurality of rods or bars connected together at their ends, and a bridge connecting said rods or bars between their ends and adapted to form the attaching lug for the brake shoes and all made in one casting, said rods or bars having beveled sides and ends.

3. A reinforcing and strengthening back for brake shoes consisting of a malleable iron frame having a plurality of rods or bars connected together and offset between their ends and all made in one casting.

4. A reinforcing and strengthening back for brake shoes consisting of a malleable iron frame having a plurality of rods or bars connected together and all made in one casting.

5. A reinforcing and strengthening back for brake shoes consisting of a malleable iron frame having a plurality of rods or bars offset between their ends and connected by a bridge adapted to form the attaching lug and by cross pieces on opposite sides of said bridge and having on one side thereof projecting lugs and all made in one casting.

871,741. DOUBLE CARBURETER FOR EXPLOSIVE-ENGINES. THOMAS L. STURTEVANT, Quincy, and THOMAS J. STURTEVANT, Wellesley, Mass., assignors to Sturtevant Mill Company, Portland, Me., a Corporation of Maine. Filed Mar. 14, 1907. Serial No. 362,313.



1. The combination with a plurality of carbureters or vaporizers, of a union having an outlet and provided with a chamber and with separate passages leading from said carbureters to the chamber of said union, and a valve in the said chamber of said union, said valve having separate passages therethrough and being adapted to be moved to different positions to cause the outlet passage from the chamber of said union to be placed in communication with either or both of the said passages from the carbureters.

2. The combination with a plurality of carbureters or vaporizers, of a union having an outlet and provided with a chamber and with separate passages leading from said carbureters to the chamber of said union, and a valve in the said chamber of said union, said valve having separate passages therethrough and being capable of being moved to different positions to cause the outlet passage from the said chamber of said union to be placed in communication with either or both of the passages from the carbureters, the passages in said union leading from the chamber thereof to the chambers of the carbureters being provided with regulating means.

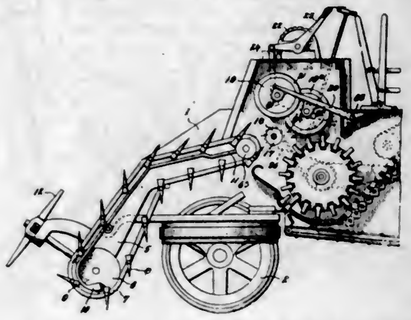
3. The combination with a plurality of carbureters or vaporizers of different sizes, of a union having an outlet and provided with a chamber and with separate passageways of different sizes leading from said carbureters to said chamber, and a valve in said chamber having separate passageways of different sizes therethrough, and which valve is adapted to be placed in communication with either or all of the different sized passageways from said carbureters to said chamber.

4. The combination with a plurality of carbureters or vaporizers of different sizes, of a union having a chamber, an outlet and separate passageways of different sizes from said carbureters into said chamber, and a valve in said chamber having separate passages of different sizes therethrough, and which valve is adapted to be placed in communication with either or all of the different sized passageways from said carbureters to said chamber, the passages in said union leading from the chamber thereof to the chambers of the carbureters being provided with regulating means.

5. The combination with a plurality of carbureters or vaporizers of different sizes, of a union provided with a chamber and with separate passageways of different sizes, and at right angles to each other, leading from said carbureters or vaporizers to said chamber, and a valve in the said chamber of said union and which valve serves to control or regulate the quantity of fuel mixture delivered to the engine.

[Claims 6 to 11 not printed in the Gazette.]

871,742. BAND-CUTTER AND FEEDER. GEORGE W. TICE, Riley Center, Mich., assignor of one-half to Allen K. Tice, Larimore, N. D. Original application filed Nov. 23, 1905, Serial No. 288,763. Divided and this application filed Sept. 11, 1906. Serial No. 334,122.



1. In a machine of the class described, a spreading roller, a support mounted for movement toward and from said roller, a feed roller carried by said support, a driving connection from the spreading roller to the feed roller, and means disposed relative to said connection and controlled by the continued movement of said support to automatically regulate the speed of rotation, stop and reverse one of said rollers in its relative movement to the other.

2. In a machine of the class described, a spreading roller, a support mounted for movement toward and from said roller, a feed roller carried by said support and provided with a friction driving disk, a friction wheel bearing upon said disk and carrying a clutch member, a gear driven from the spreading roller and having a hub, and a centrifugally operated clutch member slidably mounted upon said hub and rotated by said gear to engage the clutch member upon the friction wheel shaft.

3. In a machine of the class described, a threshing cylinder, driven band cutters disposed adjacent thereto, a spreading roller having oppositely disposed blades thereon, a pivoted arm for supporting said band cutters, a gearing extending from said spreading roller to one of the band cutters for driving the same at a relatively different speed and means controlled by the travel of said arm to regulate the speed of rotation of said cutter.

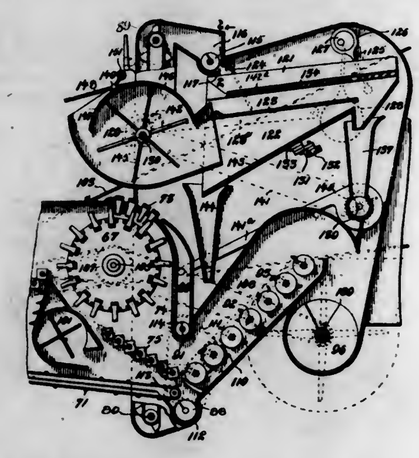
4. In a machine of the class described, a threshing cylinder, driven band cutters disposed adjacent thereto, a spreading roller having oppositely disposed blades thereon, a pivoted arm for supporting said band cutters, a gearing extending from said spreading roller to one of said band cutters for driving the same at a relatively different speed, a feeding rake adapted to deliver to said roller and band cutters, and means for driving said rake from said band cutters.

5. In a machine of the class described, a threshing cylinder, driven band cutters disposed adjacent thereto, a spreading roller having oppositely disposed blades thereon, a pivoted arm for supporting said band cutters, a gearing extending from said spreading roller to one of said band cutters for driving the same at a relatively different speed, a feeding rake adapted to deliver to said roller and band

cutters, means for driving said rake from said band cutters, a reel carried at the lower end of said rake, and means for driving said reel from said rake.

[Claims 6 to 12 not printed in the Gazette.]

871,743. GRAIN-SEPARATOR. GEORGE W. TICE, Riley Center, Mich., assignor of one-half to Allen K. Tice, Larimore, N. D. Original application filed Nov. 23, 1905, Serial No. 288,763. Divided and this application filed Sept. 20, 1906. Serial No. 335,392.



1. In a machine of the class described, a machine casing, a cleaner mechanism, a pivoted hanger at one end of said casing and connected to said mechanism, an eccentrically mounted circular bearing at the opposite end of said mechanism, a hanger pivoted at its upper end upon said bearing and at its lower end to said mechanism, and means to automatically shift said bearing upon its axis in the inclination of the casing.

2. In a machine of the class described, a machine casing, a cleaning mechanism, a pivoted hanger disposed at one end thereof, an eccentrically mounted circular bearing disposed at its opposite end, a strap pivoted on said bearing and having a hanger pivoted to said mechanism, means to automatically shift said bearing upon its axis, and means independent of the eccentric bearing for vibrating said mechanism.

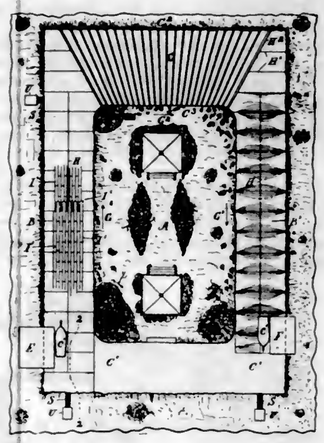
3. In a machine of the class described, a cleaning mechanism, a pivotally mounted link at one end thereof, a weighted eccentric disposed at its opposite end, a strap extending from said eccentric to said cleaner, a driving shaft provided with an eccentric, and a pitman extending from said driving shaft to the cleaner.

4. In a machine of the class described, a cleaning mechanism, a pivotally mounted link at one end thereof, a weighted eccentric disposed at the opposite end, a strap extending from said eccentric to said cleaner, a driving shaft provided with an eccentric, a pitman extending from said driving shaft to the cleaner, and a crank arm pivotally mounted at one end upon the casing of the machine and at the opposite end upon the casing of the cleaner to effect a lateral movement during the longitudinal travel thereof.

5. In a machine of the class described, a machine casing, a cleaning mechanism, a pivoted hanger disposed at one end thereof, a relatively fixed eccentrically mounted circular bearing disposed at its opposite end, a strap pivoted upon said bearing and to said mechanism, means for vibrating said mechanism, and means to automatically shift said bearing upon the inclination of the casing.

[Claims 6 to 8 not printed in the Gazette.]

871,744. AMUSEMENT APPARATUS. THEOPHILUS VAN KANNEL, New York, N. Y. Filed Mar. 9, 1907. Serial No. 361,477.



1. In an amusement apparatus, the combination, with a pliable floor, of a series of adjacent pivoted beams supporting the floor with a lifter-socket below the inner end of each beam, a lifter-rod movable vertically under the said socket, and means for reciprocating the lifter rod attached directly and positively to the lower end of the rod, to actuate the rod positively both upward and downward.

2. In an amusement apparatus, the combination, with a pliable floor, of a series of adjacent pivoted beams supporting the floor, a lifter-rod movable vertically under the end of each beam, a bell-crank connected with each lifter-rod, and a series of bars connected to the said bell-cranks and reciprocated to lift the rods progressively.

3. In an amusement apparatus, the combination, with a pliable floor, of a series of adjacent pivoted beams supporting the floor, a lifter-rod movable vertically under the end of each beam, a bell-crank connected with each lifter-rod, such bell-cranks forming a group under each wave length of the floor, and a plurality of bars connected to the bell-cranks of each group and operated successively to lift the rods progressively to produce a wave-motion of the floor.

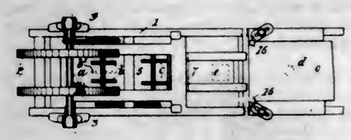
4. In an amusement apparatus, the combination, with a pliable floor, of a series of adjacent pivoted beams supporting the floor, a lifter-rod movable vertically under the end of each beam, reversely arranged bell-cranks supporting such lifter-rods in pairs, whereby the loads upon such rods are balanced, and means for progressively operating the bell-cranks to produce a wave-motion of the floor.

5. In an amusement apparatus, the combination, with a pliable floor, of a series of adjacent pivoted beams supporting the floor, a group of such beams supporting each wave length of the floor, a lifter-rod movable vertically under the end of each beam, a plurality of pairs of reversely arranged bell-cranks supporting the lifter-rods of each group in pairs, and a plurality of bars each connected to a pair of the reversely disposed bell-cranks in each group and such bars reciprocated progressively to produce a wave-motion of the floor.

[Claims 6 to 27 not printed in the Gazette.]

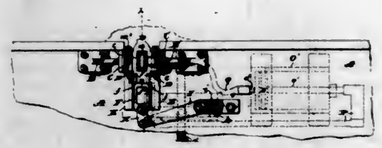
871,745. LABELING-MACHINE. FREDERICK W. WILD, Jr., Baltimore, Md., assignor to Burt Machine Company, a Corporation of Delaware. Filed May 17, 1907. Serial No. 374,144.

In a labeling machine adapted to secure one label or wrapper over another, devices to apply cement to a can body where the same is to be covered by a label and to a portion of the can body laterally beyond the label, combined with a multiplicity of label supports arranged one



beyond the other longitudinally of the machine, substantially as specified.

871,746. MACHINE FOR FEEDING CARDS OR PAPER. JACOB P. WRIGHT, Akron, Ohio, assignor to The Diamond Match Company, New York, N. Y., a Corporation of Illinois. Filed Jan. 17, 1902, Serial No. 90,174. Renewed Mar. 18, 1907. Serial No. 362,895.



1. In a card feeding machine, the combination of a chute having ledges at opposite edges of the bottom thereof for the support of cards, suction means for drawing down the body of the lowermost card intermediate said edges, a feeder provided with a support for the underside of the depressed portion of the card and with means to engage the card and move it edgewise from the chute, and means for actuating said feeder at pre-determined intervals in respect to the operation of the suction means, substantially as described.

2. In a card feeding machine, the combination of means for supporting a stack of cards by two opposite edges only, suction means for drawing down the body of the lowermost card intermediate said edges, a feeder provided with a support for the underside of the depressed portion of the card and with means to engage the card and move it edgewise from the chute, and means for actuating said feeder at predetermined intervals in respect to the operation of the suction means, substantially as described.

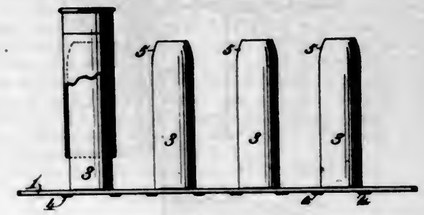
3. In a card feeding machine, the combination of a chute having card-supporting ledges at opposite ends thereof, walls upon one side of the chute which extend to the level of said ledges, walls upon the opposite side of the chute which over the ledges are separated therefrom by a slight space, and which, between the ledges, descend to the level of the latter, means for drawing down the lowermost card, and means for moving said card laterally, substantially as described.

4. In a card feeding machine, the combination of means for supporting a stack of cards by two opposite edges only, suction means for drawing down the body of the lowermost card intermediate its edges, a feeder having a support for the underside of the depressed portion of the card, a finger adapted to pass over such depressed portion, and means to engage the card and move it edgewise from beneath the stack, and means for actuating said feeder at pre-determined intervals in respect to the operation of the suction means, substantially as described.

5. In a card feeding machine, the combination of means for supporting a stack of cards by opposite edges thereof, means for drawing down the lowermost card, a feeder bar to engage and move the lowermost card laterally, and shoulders inclined away from the stack of cards over which the card is carried by the movement of the feeder bar and by which the card is held from returning with the feeder bar, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

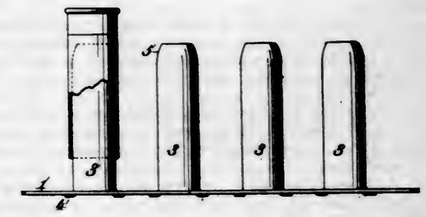
871,747. METHOD FOR RESHAPING AND RESTORING CARTRIDGE-SHELLS. WILLIAM T. ALSOP, Owensboro, Ky. Filed Dec. 18, 1905. Serial No. 292,339.



1. The method of reshaping and restoring a shell having fusible material in the body thereof, consisting in supporting the shell to hold it in shape while under the subjection of action of heat to distribute the stiffening material throughout the body and subsequently cooling the shell while so supported.

2. The method of reshaping and restoring a shell saturated with fusible stiffening material, consisting in supporting the shell interiorly so as to hold it in shape while subjecting it to the action of heat to distribute the stiffening material throughout the shell, and subsequently cooling the shell while so supported.

871,748. APPARATUS FOR RESHAPING AND RESTORING SHELLS. WILLIAM T. ALSOP, Owensboro, Ky. Original application filed Dec. 18, 1905, Serial No. 292,339. Divided and this application filed June 13, 1906. Serial No. 321,584.



A reshaping and restoring device of the class specified, consisting of a metal base and a plurality of cylindrical tubular metal supports of equal length projecting from said base and provided with upper conoidal reduced terminals.

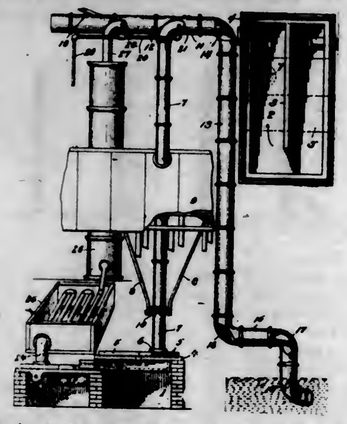
871,749. GAS-CONDENSER. HENRY AUCHU, Emporium, Pa. Filed Mar. 19, 1907. Serial No. 363,252.

1. The combination with a gas discharging stack, of a conducting and absorbing pipe located at and connected with the top of said stack and extended in straight lines laterally and vertically downward, the sections of said extension being united by curved connections, and a water supply connected to the upper portion of said absorbing pipe and having a capacity less than that of said pipe.

2. The combination with a gas discharging stack, of a conducting pipe located at and connected with the top of said stack and comprising straight sections connected at their intersections and extending laterally and vertically downward from said stack, the downward section of said pipe being of greater length than the lateral section thereof, and a water supply connected to the upper portion of said pipe and having a capacity less than that of the pipe.

3. The combination with a gas discharging stack, of a conducting and absorbing pipe located at and connected with the top of said stack, said pipe comprising straight

sections connected at their intersections and disposed at an angle to each other, a water supply at the upper portion



of said pipe and having a capacity less than the pipe, and a blast jet connected with the upper portion of said stack.

871,750. STRIPPING PAINT AND VARNISH REMOVER AND PROCESS OF MAKING SAME. PETER T. AUSTEN and FREDERICK J. MAYWALD, New York, and FRANCIS X. GOVERS, Owego, N. Y. Filed Apr. 16, 1907. Serial No. 368,486.

1. A stripping paint and varnish remover comprising a plurality of paint-softening solvents and sufficient proteid in one such solvent to give the remover a salve-like consistency.

2. A stripping paint and varnish remover comprising a plurality of paint-softening solvents, one of said solvents being a neutral volatile solvent, and sufficient proteid matter dissolved in another solvent to give the remover a salve-like consistency.

3. A stripping paint and varnish remover comprising a plurality of paint-softening solvents and sufficient casein dissolved in one such solvent to give the remover a salve-like consistency.

4. A stripping paint and varnish remover comprising a plurality of paint-softening solvents, one of said solvents being a neutral volatile solvent, and sufficient casein dissolved in another solvent to give the remover a salve-like consistency.

5. A stripping paint and varnish remover comprising a plurality of paint-softening solvents one of said solvents being acid in character and one being a neutral volatile solvent, and sufficient dissolved colloid to give the remover a semi-solid consistency.

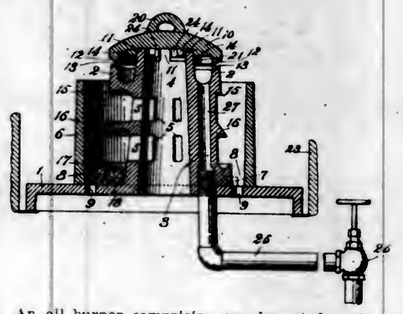
[Claims 6 to 33 not printed in the Gazette.]

871,751. AIR-CARBURETING OIL-BURNER. WILLIAM N. BEST, Los Angeles, Cal., assignor to John H. Best and Ezra Best, Quincy, Ill. Filed Feb. 17, 1903. Serial No. 143,851.

1. An oil burner comprising an inner tubular member provided with an annular oil cup having an external lip, for directing air from the cup, and an outer tubular member forming an exterior air passage surrounding said cup and lip, said inner tubular member being provided with an oil distributing and deflecting surface arranged below said lip.

2. An oil burner comprising an oil cup, a tubular support for said cup formed with an interior air passage and with lateral perforations, a heat absorbing and transmitting wall surrounding the tubular support with an intervening air passage, an oil deflecting flange on the tubular support below the oil cup, and means for supplying oil to the oil cup.

3. An oil burner comprising an oil cup, a tubular support therefor formed with an interior passage, a removable deflecting cap over said cup and the interior passage, and a removable ring on the tubular support and between said cap and cup, to regulate the supply of air through the interior passage.

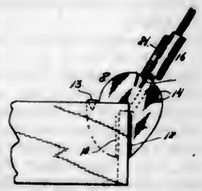


4. An oil burner comprising an elongated upright body forming a tube open at each end thereof having walls perforated at different points along the length thereof and a passage extending longitudinally through the wall of the body; means for feeding oil to said passage at the lower end thereof, there being an oil receiving cup communicating with the top of said passage; a cap at the top of said body, there being passages through the wall of said body adjacent to said cap and above the oil cup, said oil cup being formed as an annular groove extending around the wall of the body at the top end thereof and positioned to allow the oil to flow from said cup down the sides of the body; an extension formed integral with the wall of said body extending around the outside thereof in position to interrupt the downward flow of the oil from said cup, and an extension extending around the base of said body and forming a cup adapted to receive oil from the first-mentioned extension.

5. An oil burner comprising a substantially tubular body, the upper end of which is recessed to form openings and the wall of which is perforated and the exterior provided with an annular oil-cup between the perforations and the top, an oil receptacle at the bottom, and a distributing surface intermediate the cup and the receptacle, and a cap above the body and the cup.

[Claims 6 to 12 not printed in the Gazette.]

871,752. LID-SUPPORTER AND PRICE-TAG HOLDER. FRANK CANFIELD, Denver Colo., assignor, by direct and mesne assignments, of three-fourths to Alfred W. Weil, one-eighth to Nathan Q. Tanquary, and one-eighth to Hamilton Armstrong, Denver, Colo. Filed Feb. 23, 1906. Serial No. 302,378.

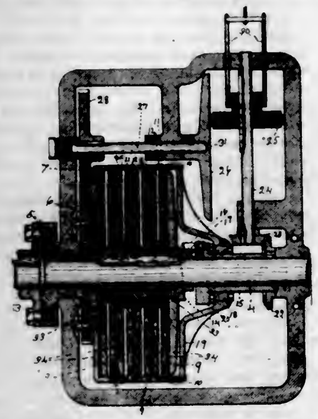


1. A lid supporting device provided with a vertically disposed slot having flanges projecting in opposite directions from the slot, the flanges being integral with the plate, the upper part of the plate being provided with slots corresponding in direction to the radii of the circle in which the hinged lid of the box moves, and a clasp adapted to be applied to the end of the box lid and having a lip adapted to engage a radial slot of the plate for the purpose set forth.

2. A lid supporting device having a vertical slot open at the bottom to receive the rear wall of a box, the upper part of the plate being provided with radially disposed slots, the forward part of the plate having a hook-shaped tooth adapted to engage the upper end wall of the box when the plate is applied, and a clasp adapted to engage the lid of the box and enter a slot of the plate for the purpose set forth.

3. The combination of a plate slotted to engage a wall of a box, the upper edge of the plate being provided with recesses open at the top, the said recesses being radially disposed with reference to the center of motion of the hinged lid of the box, and a tag holder adapted to be mounted on said lid and provided with means for engaging said plate substantially as described.

871,753. VARIABLE-SPEED DRIVING MECHANISM. NILS CHRISTENSON, Lynn, Mass., assignor to Calvin B. Tuttle, Lynn, Mass.; Anna M. Tuttle and Helen M. Marsh administratrices of said Calvin B. Tuttle, deceased. Filed Feb. 25, 1904. Serial No. 195,156.



1. The combination with a driving and driven member, of a friction clutch, the clutch comprising non-fluid members, carried by the driving and driven members respectively, and means actuated by the driving member and at a speed lower than the speed of the driving member and means to operate said first means for causing a frictional engagement of the non-fluid clutch members.

2. In a variable speed device, the combination with driving and driven members and a non-fluid friction clutch, the driving and driven elements of which are carried by the driving and driven members respectively, of a clutch operating mechanism comprising an element connected with and traveling at speed slower than the speed of the driving member, the traveling element normally engaging one of the clutch elements and operating by means of relative movement between itself and clutch element for actuating the clutch and for suspending and restoring frictional engagement between the clutch elements.

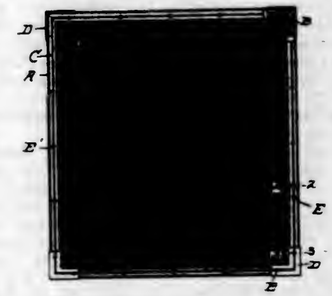
3. The combination with a driving and a driven member, of a non-fluid friction clutch comprising a driving and driven element carried by the driving and driven members respectively, a traveling member driven from the driving member and co-acting with one of the clutch elements for varying the amount of friction between the elements, and means for varying and maintaining the amount of speed difference between the traveling member and driving member, the clutch being operated by the relative movement of the traveling member and the co-acting clutch element to increase and decrease and suspend and restore the frictional engagement of the clutch elements.

4. The combination of a driving member, a driven member, friction clutch means between the members comprising a friction element connected and rotating with the driven element, a cam surface carried by the friction element, a thrust element rotatable about the axis of said friction element and coacting with the cam surface thereon, and means to rotate and preserve speed difference between said thrust element and the driving member.

5. The combination of a driving element, a driven element, friction clutch means operatively connecting the members, such means comprising a friction element connected with the driven member, a cam surface carried by the friction element, a thrust element rotatable about the axis of said friction element and co-acting with the cam surface thereon, means to rotate said thrust element from the driving member, and means to vary at will the speed of rotation of said thrust element.

[Claims 5 to 37 not printed in the Gazette.]

871,754. WINDOW-SCREEN. EUGENE FEIGHERY, Newport, Ky. Original application filed June 25, 1906, Serial No. 323,274. Divided and this application filed Dec. 21, 1906. Serial No. 348,933.



1. In a window screen, the combination of frame pieces consisting of a metallic strip provided with upturned edges forming a channel; wire securing pieces consisting of a metallic strip having upturned edges forming a channel, adapted to enter the frame and draw the wire cloth therein; a rib in the back of the channel adapted to contact with an edge of the locking piece to turn the edge of the wire cloth up over the edge of the locking piece; and means for securing the wire securing pieces in the frame channels, substantially as specified.

2. In a window screen, the combination of frame pieces consisting of a metallic strip provided with upturned edges forming a channel; wire securing pieces consisting of a metallic strip having upturned edges forming a channel, adapted to enter the frame and draw the wire cloth therein; a rib in the back of the channel adapted to contact with the inner edge of the locking piece to turn the edge of the wire cloth up over the edge of the locking piece; and means for securing the wire securing pieces in the frame channels, substantially as specified.

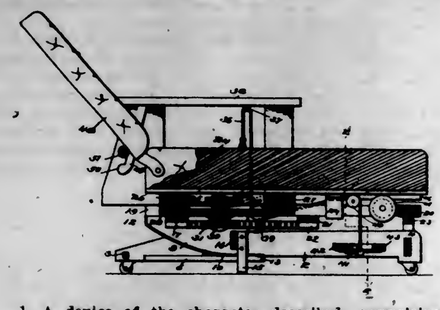
3. In a window screen, the combination of a channel frame piece A having a rib a^2; a wire securing piece C having an inturned edge provided with a lip c adapted to engage rib a^2; and means for securing piece C in piece A, substantially as specified.

4. In a window screen, the combination of channel frame pieces A having inturned edges a forming spaces a'; rib a^2 in the backs of pieces A; corner braces consisting of an angular plate having flanges adapted to enter spaces a'; wire securing pieces C having inturned edges provided with lips c adapted to engage ribs a^2; and means for securing pieces C in pieces A, substantially as specified.

5. In a window screen, the combination of channel frame pieces A having inturned edges a forming spaces a'; ribs a^2 in the backs of pieces A; corner braces consisting of an angular plate having continuous flanges adapted to enter spaces a'; wire securing pieces C having inturned edges provided with lips c adapted to engage ribs a^2; and means for securing pieces C in pieces A; substantially as specified.

[Claim 6 not printed in the Gazette.]

871,755. CHAIR. JOHN FLINDALL, Chicago, Ill. Filed Jan. 24, 1907. Serial No. 353,841.



1. A device of the character described, comprising a frame, rockers supporting one end thereof, a stationary member normally supporting the opposite end, a reciprocating seat mounted on said frame, means for reciprocating said seat horizontally on the frame and simultaneously throwing the weight of the seat entirely upon the rockers, grooved wheels at one end of said seat for guiding and supporting said end, a track for said wheels, a pivotally mounted back secured to the said seat, and means for holding said back in position.

2. A device of the character described, comprising a frame, rockers supporting one end thereof, a stationary member normally supporting the opposite end, a reciprocating seat, guiding catches depending from said seat for guiding the movement of said seat, a track and wheel for assisting the guiding of said seat, a rack and gears for reciprocating said seat horizontally on the frame and simultaneously throwing the weight of the seat entirely upon the rockers, and means for operating said gears.

3. A device of the character described, comprising a frame, rockers supporting one end thereof, a reciprocating seat mounted on said rockers, means for reciprocating said seat horizontally on the frame and simultaneously throwing the weight of the seat entirely upon the rockers, and a rubber cushion secured to said frame for supporting the front end of said seat when in its lowered position.

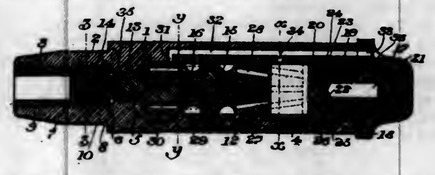
4. A device of the character described, comprising a support, rockers mounted thereon, a reciprocating seat mounted on said rockers, means for reciprocating said seat, a cord loosely engaging said support at a plurality of points and said seat near the front end thereof for rocking the seat, a device on one end of said rope for securing the same, and a slotted plate engaging said device.

5. A device of the character described, comprising a frame, rockers for supporting said frame at one end, and a stationary member for normally supporting the frame at the opposite end, a horizontal reciprocating seat mounted upon said frame, a horizontally positioned rack secured to said frame, a plurality of gears secured to said seat, one of said gears meshing with said rack, a worm meshing with the other of said gears for reciprocating said seat, and means for rocking said seat and simultaneously shifting the weight of the seat entirely upon the rockers.

[Claims 6 to 10 not printed in the Gazette.]

871,756. VALVELESS PNEUMATIC TOOL. FREDERICK S. GRAHAM, Philadelphia, Pa., assignor of one-third to Ralph M. Seaman and one-third to Charles A. Struntz. Filed Nov. 9, 1906. Serial No. 342,714.

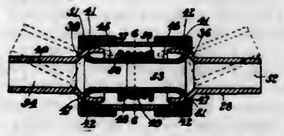
1. In a pneumatic tool, a casing having its forward end cut away adapting the same to be held by a vise, and its extreme forward end tapered, a differential piston therein having a rear head of uniform diameter, an intermediate head of reduced diameter, and a striker of less diameter than said latter head, an annular groove in said rear head controlling admission of motive fluid to advance the piston, an annular groove in said rear head controlling admission of motive fluid to return the piston, passages extending angularly from said first groove through the rear end of said rear head, passages extending from said second groove through the forward end of said rear head, inlet and exhaust ports and passages in said casing controlled by said rear head, an inlet piece engaging said casing, and exhaust passages therethrough communicating with the exhaust passage of said casing.



2. In a pneumatic tool, a casing, a differential piston therein having a rear head of uniform diameter, an intermediate head of reduced diameter, and a striker of less diameter than said latter head, an annular groove in said rear head controlling admission of motive fluid to advance the piston, an annular groove in said rear head controlling admission of motive fluid to return the piston, passages extending angularly from said first groove through the rear end of said rear head, passages extending from said second groove through the forward end of said rear head, inlet and exhaust ports and passages in said casing controlled by said rear head, an inlet piece engaging said casing, and exhaust passages therethrough communicating with the exhaust passage of said casing and having their outer ends provided with a curved wall for deflecting the exhausting motive fluid.

3. In a pneumatic tool, a casing having its forward end cut away adapting the same to be held by a vise, and its extreme forward end tapered, a differential piston therein having a rear head of uniform diameter, an intermediate head of reduced diameter, and a striker of less diameter than said latter head, an annular groove in said rear head controlling admission of motive fluid to advance the piston, an annular groove in said rear head controlling admission of motive fluid to return the piston, passages extending angularly from said first groove through the rear end of said rear head, passages extending from said second groove through the forward end of said rear head, inlet and exhaust ports and passages in said casing controlled by said rear head, an inlet piece engaging said casing, and exhaust passages therethrough communicating with the exhaust passage of said casing and having their outer ends provided with a curved wall for deflecting the exhausting motive fluid.

871,757. FLEXIBLE PIPE-JOINT. ARTHUR L. GREENLAW, Malden, Mass., assignor of one-half to Wesley W. Blair, Newtonville, Mass. Filed Apr. 16, 1906. Serial No. 311,854.



1. In a flexible pipe joint, the combination of a casing, pipe members each provided with a flaring end extending within said casing and having a concentric seat on its inner face, a cap secured to either end of said casing provided with a seat for one of said flaring ends, an imperforate tubular connector interposed between and extending from one to the other of said flaring ends and terminating at each end in an annular bearing surface seated upon said concentric seat, and means for forcing each of said flaring ends to its seat.

2. In a flexible pipe joint, the combination of a casing, pipe members each provided with a ball-shaped end located partially within said casing and having a concentric seat on its inner face, a cap secured to either end of said casing provided with a seat for a ball-shaped end, a divided imperforate tubular connector interposed between and extending from one to the other of said ball-shaped ends and terminating at each end in an annular bearing surface seated upon said concentric seat, and means for forcing the outer ends of said divided connector against the interior face of said ball-shaped ends.

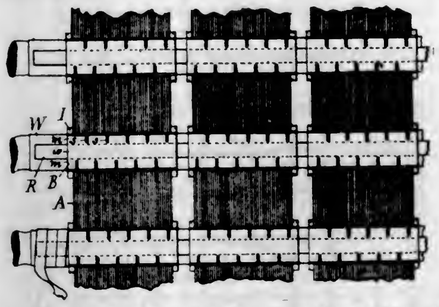
3. In a flexible pipe joint, the combination of a casing, pipe members each provided with a ball-shaped end located partially within said casing and having a concentric seat on its inner face, a cap secured to either end of said casing provided with a seat for a ball-shaped end, a telescopic tubular connector interposed between said ball-shaped ends and terminating at each end in an annular bearing surface seated upon said concentric seat, and means for forcing the ends of said telescopic connector against the interior surface of said ends.

4. In a flexible pipe joint, the combination of a casing, pipe members each provided with a ball-shaped end located partially within said casing and having a concentric seat on its inner face, a cap secured to either end of said casing provided with a seat for a ball-shaped end, a telescopic tubular connector each end of which is provided with a flaring mouth and an annular seat fitting the interior face of all ball-shaped ends, and means for forcing the ends of said telescopic connector against the interior surface of said ends.

5. In a flexible pipe joint, the combination of a casing, pipe members each provided with a ball-shaped end located partially within said casing and having a concentric seat on its inner face, a cap secured to either end of said casing provided with a seat for a ball-shaped end, two tubular members telescopically connected together each provided with an annular flange, and a spring interposed between said flanges and adapted by pressure upon said flanges to move said tubular members outwardly.

[Claims 6 to 12 not printed in the Gazette.]

871,758. BRIDGING-BLOCKS FOR DYNAMO-ELECTRIC MACHINES. EDWARD HEITMANN, Montclair, and FREDERICK W. YOUNG, East Orange, N. J., assignors to Crocker-Wheeler Company, Ampere, N. J., a Corporation of New Jersey. Filed Oct. 18, 1906. Serial No. 339,437.



1. The combination of a slotted dynamo-electric machine element, windings located in the slots, and cast iron bridging blocks insulated from the element and consisting of parallel contacting members joined by thin webs, substantially as described.

2. The combination of a slotted dynamo-electric machine element, windings located in the slots, and cast iron bridging blocks located in the slots above the windings, substantially as described.

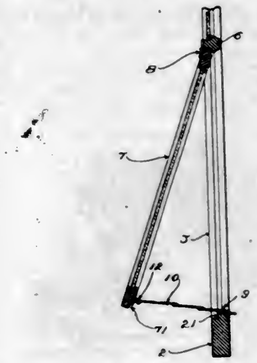
3. The combination of a slotted dynamo-electric machine element, windings located in the slots, and bridging blocks of magnetic material located in the slots above the windings, the contacting edges of which are transversely slotted, substantially as described.

4. The combination of a slotted dynamo-electric machine element, windings located in the slots, and transversely slotted cast iron bridging blocks located in the slots above the windings, substantially as described.

5. The combination of a slotted dynamo-electric machine element, windings located in the slots, and bridging blocks of magnetic material consisting of parallel contacting members transversely slotted and joined by thin webs, substantially as described.

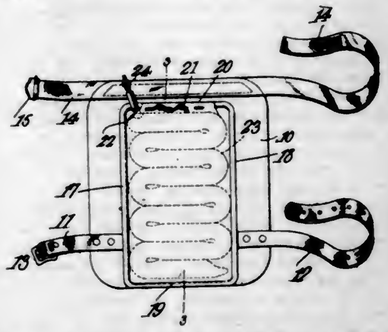
[Claims 6 to 10 not printed in the Gazette.]

871,759. STORM-WINDOW FASTENER. GEORGE B. LEE, Providence, R. I., assignor to The D-S-B. Company, Providence, R. I., a Corporation of Rhode Island. Filed Oct. 3, 1906. Serial No. 337,186.



The combination with a window sash and a casing therefor, of a bar or wire hung by one end to the said sash and comprising a single length provided with a series of eyes or loops, a pin or stud set in the said casing and which is encircled by one of the said eyes or loops to hold the sash open, and back of which the said bar or wire is laid when the sash is closed, and a second pin or stud, adjacent the first, and which is encircled by an eye or loop of the bar or wire after the latter has been laid at the back of the first pin or stud, to thereby lock the sash in the closed position.

871,760. PNEUMATIC KNEE-PAD. WILLIAM LONG, Sheridan, Ind., assignor of one-half to John C. Newby, Sheridan, Ind. Filed July 27, 1906. Serial No. 328,116.

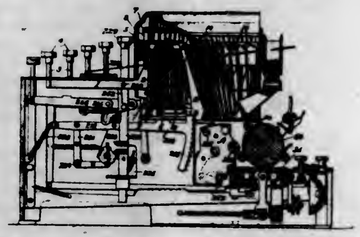


1. A knee pad comprising an outer section and an inner section, the outer section being of much greater area than the inner section and extending at the top and sides in the form of flanges, attaching bands or straps connected to said flanges, the two sections forming an intermediate pocket, and a pneumatic cushion disposed between the sections, said cushion being in the form of an elongated tube bent into the form of a series of superposed coils

that extend transversely of the pad and are free to separate from each other to permit flexing of the knee joint.

2. A knee pad comprising an inner section having outwardly turned edge portions, and an outer section of greater area than the inner section, the two sections being secured together and arranged to form an intermediate pocket, an upper strap secured to the upper flange formed by the extension of the outer section, lower straps secured to the side flanges formed by the extension of the upper section, and a pneumatic pad disposed between the sections and in the form of a tube bent into superposed convolutions that are transverse with respect to the pad and are free to separate to permit flexing of the knee joint.

871,761. ADDING ATTACHMENT FOR TYPE-WRITERS, JASON C. LOTTERHAND, New York, N. Y., assignor to John T. Langhorne, St. Louis, Mo., and Walter B. Manny, New York, N. Y. Original application filed Jan. 17, 1901, Serial No. 43,599. Divided and this application filed Apr. 27, 1901. Serial No. 57,797.



1. The combination with the transversely movable paper-carriage and the regular type-keys and printing devices of a typewriter, of a supplemental series of adding keys arranged to actuate the printing devices of the corresponding type-keys, an adding mechanism, and locking connections arranged to be operated by the adding keys and constructed to oppositively lock together the printing and adding devices in adding and insure under all conditions the adding together of the amounts printed by the operation of said keys, substantially as described.

2. In an adding typewriter, the combination with the transversely movable paper-carriage and the regular type-keys, and printing devices of the typewriter, of a supplemental series of adding keys, means arranged to be shifted upon the downward movement of the adder keys for positively locking together said keys and the printing devices of the corresponding type-keys in adding, but so as to leave the latter normally free to be operated independently of the adding keys, and an adding mechanism and connections operated by the adding keys and constructed to insure the adding together of the amounts printed by the operation of said keys, substantially as described.

3. In an adding typewriter, the combination, with the transversely movable paper-carriage and the regular type-keys and printing devices of the typewriter, of a supplemental series of adding keys means to lock the adding keys positively with the corresponding type-keys to cause the latter to actuate their printing devices when the adding keys are operated, but leaving them normally free to independently actuate their printing devices when the adding devices are not operated, and an adding mechanism operated by the adding keys to add together the amounts printed by the operation of said keys, substantially as described.

4. In an adding typewriter, the combination, with the transversely movable paper-carriage and the regular type-keys and printing devices of the typewriter, of a supplemental series of adding keys, automatic locking devices to positively connect the adder keys with and to severally depress the corresponding type-keys to actuate their printing devices, but leaving the type-keys normally free to be depressed independently of the adding keys, to actuate said printing devices, and an adding mechanism operated by the adding keys to add together the amounts printed by the operation of said keys, substantially as described.

5. In an adding typewriter, the combination, with the transversely movable paper-carriage and the regular type-keys and printing devices of the typewriter, of a supplemental series of adding keys, means for automatically and positively locking the adding keys to the corresponding type-keys when the adding keys are operated, to compel said keys to move in unison during the operation of the adding keys, and an adding mechanism operated by the adding keys to add together the amounts printed by the operation of said keys, substantially as described.

[Claims 6 to 63 not printed in the Gazette.]

871,762. GOGGLES. EMIL B. MEYROWITZ, New York, N. Y., assignor to The Meyrowitz Manufacturing Company, a Corporation of New Jersey. Filed July 5, 1906. Serial No. 324,718.

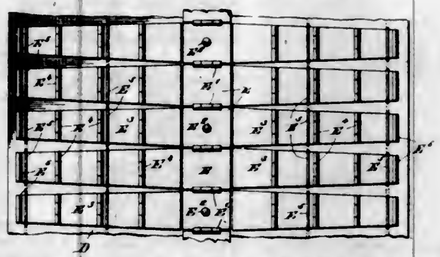


1. A protector for the eyes comprising individual eye pieces connected by a band adapted to encircle the head of the wearer, and having fastening means whereby they are freely detachably connected between the eyes of the wearer.

2. A protector for the eyes comprising individual eye pieces connected by a band adapted to encircle the head of the wearer, and having a hook and eye connection whereby they are freely detachably connected between the eyes of the wearer.

3. A protector for the eyes comprising separate eye pieces having a band fixed thereto, and having means by which they can be freely hooked or separated in front of the face.

871,763. TIRE. MADELEINE M. MILLS, New York, N. Y. Filed Sept. 28, 1906. Serial No. 336,593.



1. A tire protector composed of a number of metal units flexibly connected together to form a backbone and numerous ribs extending at right angles thereto, said ribs tapering from the backbone to their extremities, the flexible connection between the units being arranged to permit the rib units to move at right angles to the backbone, and the backbone units to move only at right angles to said ribs.

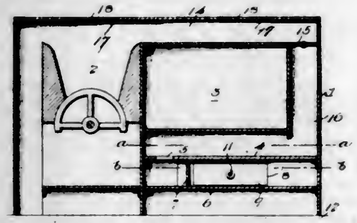
2. A metal tire protector comprising a backbone and lateral ribs at right angles thereto, said backbone and ribs being made up of a series of metal units connected end to end, the connections between the units being such that the backbone may bend only at right angles to the ribs, and the ribs at right angles to the backbone.

3. A tire protector comprising a backbone made up of a series of metal units hinged together end to end to permit relative movement of the units only on lines transverse to the length of the backbone, and a series of transverse ribs extending on opposite sides of said backbone, said ribs being independent of each other, and being made up of metal units hinged together to permit relative movement in lines transverse to the length of the ribs.

4. A tire protector comprising a backbone made up of a series of metal units connected together end to end to permit relative movement of the units only in lines transverse to the length of said backbone, and transverse ribs on opposite sides of said backbone composed of metal units connected together end to end to permit relative movement of the units in lines transverse to the length of said ribs, said ribs tapering from the backbone to their outer ends, means for connecting said ribs to the backbone, the protector as a whole being adapted to be spread out flat with all of its parts in substantially the same plane, and being also adapted to conform to the shape of a pneumatic vehicle-tire.

5. In a double tube tire, the combination of the inflatable inner tube and the shoe, with a removable protector interposed loosely between the shoe and the said tube, said protector comprising a backbone, and lateral ribs extending at right angles thereto, said backbone and ribs being made up of a series of metal units connected end to end, the connections between the units being such that the backbone may bend only at right angles to the ribs, and the ribs at right angles to the backbone.

871,764. COOKING STOVE OR RANGE. ELIE J. MONEUSE, New York, N. Y., assignor of one-fourth to Henry Hammond, Washington, D. C. Filed Jan. 30, 1907. Serial No. 354,885.

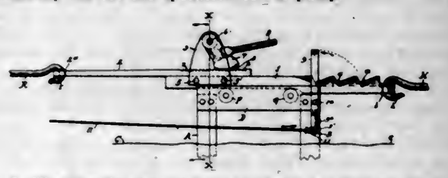


1. In cooking-stove or range, the combination with the oven, spaced from the bottom of the stove or range to form a heat-space below the oven, a horizontal division-plate dividing said heat-space into two longitudinal flues, one above the other, said division-plate being provided with an elongated opening extending transversely thereof, from near its rear edge and near the fire-box, and a retarder or baffle-plate, in the lower flue extending from the rear of the stove.

2. In a cooking-stove or range, the combination with the oven, spaced from the bottom of the stove to form a heat-space below the oven, a horizontal division-plate dividing said heat-space into two longitudinal flues, one above the other, said division-plate being provided with an elongated opening extending transversely thereof from near its rear edge and near the fire-box, a retarder or baffle-plate arranged in the lower flue to extend from the rear of the stove, and dampers for controlling and regulating the flow of heat through the flues, and around the oven.

871,765. ADJUSTABLE GRIP FOR SURFACE PUMP-RODS FOR OIL-WELLS. HARRY MCBRIER and JOHN MCGARVEY, Roll, Ind. Filed Oct. 20, 1905. Serial No. 283,700.

1. The combination of a pump rod, a power rod, connecting means for said rods intermediate the pump and the power station, and means associated with said connecting means whereby the same may be held stationary at will to stop the operation of the pump or released to automatically restore the operation of the pump.



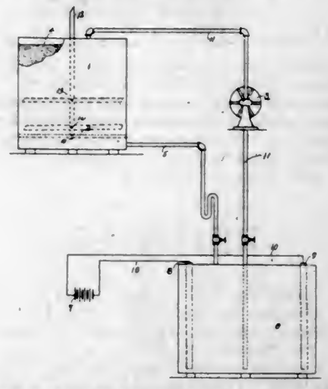
2. The combination of a line rod for an oil well pump, a power line rod, connecting devices therefor intermediate the pump and the power station, means associated with said connecting devices for stopping the operation thereof and the pump, and means connected with the aforesaid means whereby to operate the same from the power station.

3. In oil well surface rod connecting mechanism, the combination of a stationary support, rod members movably mounted thereon and one of said members being notched, a retaining member pivoted upon said support and provided with means to maintain it normally out of engagement with said notched member, and means connected with said pivoted member and operable from a distance whereby the same may be swung into engagement with and hold said notched member from reciprocation at will.

4. The combination of a stationary support, antifriction devices mounted thereon, surface rod members supported for reciprocation on said anti-friction devices, and one of said members being notched, a cam grip whereby said members may be adjustably connected, a link pivoted to said support below the plane of the rollers, and means connected with said pivoted link whereby the link may be swung into and held in engagement with the aforesaid notched member to prevent the operation thereof at will.

5. In a pump rod mechanism, the combination of co-operating members, means for rigidly connecting said members for actuation of the pumping mechanism, means arranged for coöperation with one of said members and thereby holding both of said members stationary for preventing operation of the said pumping mechanism, and means normally holding the last mentioned means out of coöperation with the members controlled thereby.

871,766. PROCESS FOR EXTRACTING GOLD AND SILVER FROM ORES. GILBERT GURNEY, Berkeley, Cal. Filed May 23, 1904. Serial No. 209,370.



1. The process of extracting the values from sulfid ores, which consists in first subjecting at normal temperature and without pressure the raw ores to the action of a solution containing the higher or perchlorid of a metal of two or more valencies, together with a chlorid of an alkali metal and a free mineral acid, and afterwards precipitating the values from the resultant solution.

2. The process of extracting the values from sulfid ores which consists in first subjecting at normal temperature, and without pressure the raw ores to the action of a solution containing ferric chlorid, sodium chlorid, and hydrochloric acid, and afterwards precipitating the values from the resultant solution by electrolytic action.

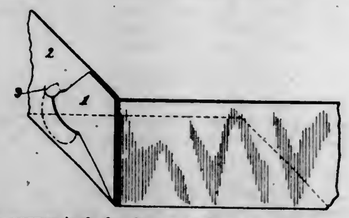
3. The process of extracting the values from sulfid ores which consists in the following steps: first, submerging the raw ores in a solution containing the higher or perchlorid of a metal of two or more valencies, together with the chlorid of an alkali metal and a free mineral acid; second, agitating the mass; third, drawing off the resultant liquid into a precipitating vat; fourth, precipitating the metals in said vat.

4. The process of extracting the values from sulfid ores which consists in the following steps: first, submerging the raw ores in a solution containing the higher or perchlorid of a metal of two or more valencies, together with a chlorid of an alkali metal and a free mineral acid; second, agitating the mass; third, drawing off the resultant liquid into a precipitating vat; fourth, precipitating the metals in said vat by electrolytic action.

5. A cyclic process for treating sulfid ores consisting of the following steps: subjecting the raw ores to the action of a solution containing the higher or perchlorid of a metal of two or more valencies, together with the chlorid of an alkali metal and a free mineral acid, whereby the metals in the ores are converted into chlorids; drawing off the resultant liquid into a precipitating vat; precipitating the metals from their chlorids in said vat, whereby the chlorin ions liberated will regenerate said higher or perchlorid of said metal of two or more valencies; then pumping the regenerated solution back into the agitating tank for use on fresh ores and then continuing the process as already described.

[Claim 6 not printed in the Gazette.]

871,767. FOLDING PAPER BOX. CHARLES F. RAYNAUD, San Francisco, Cal. Filed Feb. 23, 1906. Serial No. 302,531.



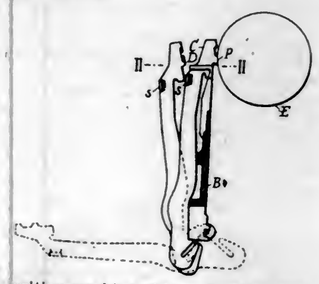
In a corner-lock for boxes and covers, the combination of a member having a tongue, a shoulder or hook upon one side of said tongue and a second member having first, an arc-shaped slit to receive the main body of the tongue, and secondly a slit formed on a double reversed curve; said second slit intersecting the arc-shaped slit and lying on both sides of one end of said slit.

REISSUES.

12,720. TYPE-WRITER. CLARK T. BROWN, New York, N. Y. Original No. 843,997, dated Feb. 12, 1907, Serial No. 297,554. Application for reissue filed Sept. 5, 1907. Serial No. 391,538.

1. In a writing machine, the combination with a platen, of a guide with a flaring slot in proximity to the printing point of the platen, and a series of type-bars mounted to strike into the slot, in each of which the back and face have a combined width at a point adjacent to the head and between the head and type-bar pivot sufficient when the type-bar is in the guide to prevent the entrance and wedging of a second type-bar, substantially as described.

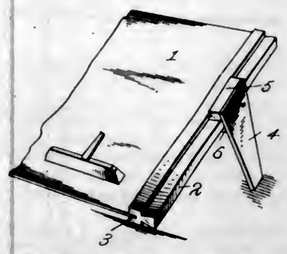
2. In a writing machine, the combination with a platen, of a guide with a flaring slot in proximity to the printing-point of the platen, and a series of type-bars mounted to strike into the slot, the back of each type-bar having a width at a point adjoining the head and clear of the guide sufficient when the type-bar is in the guide to prevent the entrance and wedging of a second type-bar, substantially as described.



3. In a writing machine, the combination with a platen, of a guide with a flaring slot in proximity to the printing point of the platen, and a series of type-bars mounted to strike into the slot, the back of each type-bar having a width at a point adjoining the head and between the head and type-bar pivot sufficient when the type-bar is in the guide to prevent the entrance and wedging of a second type-bar, substantially as described.

4. In a writing machine, the combination with a platen, of a guide with a flaring slot in proximity to the printing point of the platen, and a series of type-bars mounted to strike into the slot, in each of which the back and face have a combined width at a point adjacent to the head and clear of the guide sufficient when the type-bar is in the guide to prevent the entrance and wedging of a second type-bar, substantially as described.

12,721. BOOK-REST AND THE LIKE. ARTHUR ENGLEFIELD, Longford, near Gloucester, England. Original No. 847,052, dated Mar. 12, 1907, Serial No. 292,449. Application for reissue filed July 5, 1907. Serial No. 382,421.



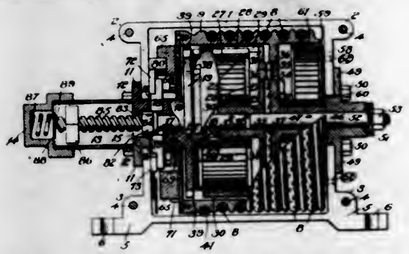
1. In a device of the character described, the combination of a book supporting board or member, having a continuous guide member along one edge, and a bracket or leg having an approximately transverse guiding groove movably engaging the guide member of the book supporting board or member.

2. In a device of the character described, the combination of a book supporting member having a dovetailed fillet forming a guide member along one edge, and a bracket or leg having an approximately transverse dovetail groove movably engaging the dovetail of said fillet.

3. In a device of the character described, the combination of a book-supporting member, a dovetailed member having a groove on one side adapted to receive one edge of said book-supporting member and an arm having a groove adjacent to and parallel with one end thereof, said groove being adapted to receive said dovetailed member for the purpose described.

4. In a device of the character described, the combination of a supporting member, a dovetailed member suitably secured to one edge of said supporting member and an arm having a groove adjacent to and parallel with one end thereof, said groove being adapted to receive said dovetailed member for the purpose described.

12,722. TROLLEY-RETRIEVER. ALFRED W. KNUTSON, Brookfield, Ill., assignor, by direct and mesne assignments, to The Trolley Supply Company, Canton, Ohio, a Corporation. Original No. 711,428, dated Oct. 14, 1902, Serial No. 110,126. Application for reissue filed Aug. 19, 1907. Serial No. 389,319.



1. In a trolley-retriever, a case, a slot in the side of said case, a rotatable reel in said case, a spiral groove on said reel, said groove being formed shallower at one end than elsewhere, and a rope entering in said slot and winding in said groove generally free from the case but impinging it opposite the shallow part of the groove.

2. In a trolley-retriever, a case, a reel in said case, a spiral groove on said reel, said groove being formed shallower at one end than elsewhere, and a slot in the case opposite to and as long as the reel.

3. In a trolley-retriever, a case, a reel in said case, a spiral groove on said reel, and a slot in the case opposite to and as long as the reel, and a rope entering said slot and winding in said groove.

4. In a trolley-retriever, a reel, there being a spiral groove on said reel and said groove being formed shallower at one end than elsewhere.

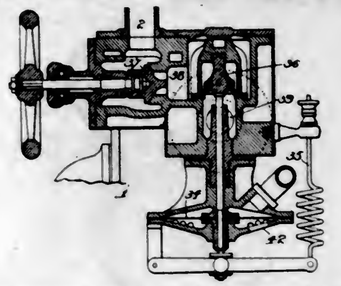
5. In a trolley-retriever, a case, a rotatable reel on a shaft in said case, a spring acting to rotate said reel, a spring-actuated rotatable retriever-head on an independent shaft in said case, and means for alternately locking said head against rotation and for engaging it with said reel, said locking and engaging being respectively effected by the shifting of said head on its axis.

[Claims 6 to 30 not printed in the Gazette.]

12,723. PUMPING APPARATUS. AUGUSTE C. E. RATEAU, Paris, France, assignor to Rateau Turbine Company, Chicago, Ill., a Corporation of West Virginia. Original application filed Dec. 15, 1902, Serial No. 135,191. Divided and this application filed May 26, 1903. Serial No. 158,791. Original No. 765,994, dated July 26, 1904. Application for reissue filed July 20, 1906. Serial No. 327,099.

1. In a pumping apparatus of the character described, a steam-turbine and its shaft, and a main centrifugal pump located on and operated by the turbine-shaft, in combination with an obturator interposed in the steam-inlet of the turbine, and means controlled by the velocity of the discharge from the main pump for governing said obturator.

2. In a pumping apparatus of the character described, a steam-turbine and its shaft, a main centrifugal pump located on and driven by said shaft, a delivery-pipe into which said pump discharges, an obturator interposed in the steam-inlet, a flexible membrane in operative connection with said obturator, one face of said membrane being in communication with the external atmosphere, and a Pitot tube extending from above the other face of said membrane into the delivery-pipe from the main pump and arranged to convey varying-pressures in said delivery-pipe to the membrane, whereby the governing of the obturator is controlled by the discharge from the main pump.



3. In a pumping apparatus of the character described, a steam turbine and its shaft, and a centrifugal fluid-impeller located on and operated by the turbine-shaft, in combination with an obturator interposed in the steam-inlet of the turbine and means controlled by the momentum of the fluid current acted upon by the said impeller for governing said obturator.

4. The combination with a fluid-impelling apparatus and a motor connected to drive the same, of a governor apparatus for said motor, having a movable controlling part, and means for subjecting said controlling part to pressure varying with the momentum of the fluid current, whereby the speed of said motor is regulated according to the variations in such pressure.

5. The combination with a centrifugal fluid impeller, of a motor connected to drive said impeller, a governor for said motor having a controlling part adapted to be acted on by fluid pressure, and a Pitot tube connected to subject said controlling part to varying pressures produced by the impact of the moving current of fluid, whereby said motor is governed according to changes in the velocity of said fluid discharge.

[Claim 6 not printed in the Gazette.]

DESIGNS.

38,885. CIGAR-BAND. THOMAS W. COLE, Chicago, Ill. Filed June 11, 1906. Serial No. 321,301. Term of patent 7 years.



The ornamental design for a cigar-band substantially as shown.

38,886. PAPER-CUTTER. MAURICE SWITZER, New York, N. Y. Filed Oct. 1, 1907. Serial No. 395,468. Term of patent 3½ years.



The ornamental design for a paper cutter as shown.

38,887. STOCKING-DARNER. EMILY W. THAYER, Saxtons River, Vt. Filed May 29, 1907. Serial No. 376,453. Term of patent 14 years.



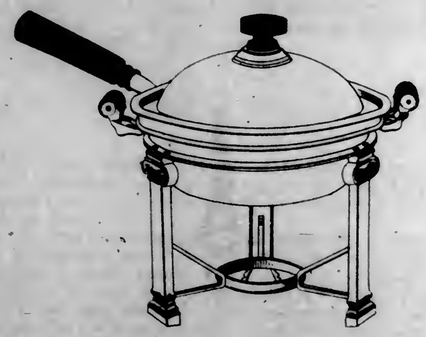
The ornamental design for a stocking darner, as shown.

38,888. DISH. WILLIAM L. EVANS, Bridgeton, N. J. Filed Aug. 24, 1907. Serial No. 390,058. Term of patent 14 years.



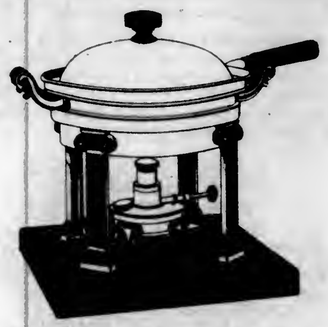
The ornamental design for a dish, as shown.

38,889. CHAFING-DISH. LIONEL STRASSBURGER and CHARLES NELSON, Brooklyn, N. Y., assignors to S. Sternau & Company, New York, N. Y., a Copartnership. Filed July 17, 1907. Serial No. 384,288. Term of patent 7 years.



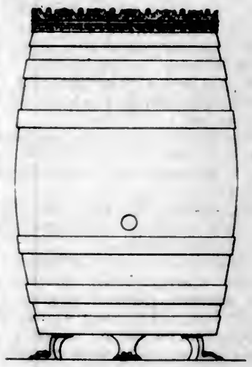
The ornamental design for a chafing dish as shown.

38,890. CHAFING-DISH, STAND AND LAMP. LIONEL STRASSBURGER and CHARLES NELSON, Brooklyn, N. Y., assignors to S. Sternau & Company, New York, N. Y., a Copartnership. Filed May 4, 1907. Serial No. 371,935. Term of patent 7 years.



The ornamental design for a chafing dish, stand and lamp, as shown.

38,891. LIQUID-DISPENSING KEG. HARRY S. CORNISH, New York, N. Y. Filed Aug. 6, 1907. Serial No. 387,362. Term of patent 7 years.



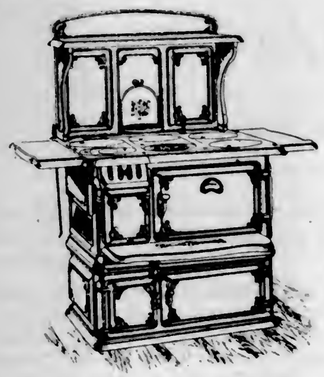
The ornametal design for liquid dispensing keg as shown.

38,892. WATER-HEATER. JAMES J. LAWLER, Mount Vernon, N. Y. Filed Aug. 24, 1907. Serial No. 390,057. Term of patent 14 years.



The ornamental design for a water heater as shown.

38,893. STOVE. JAMES C. HOSFORD, Malden, Mass., assignor to Magee Furnace Co., Boston, Mass., a Corporation. Filed Oct. 7, 1907. Serial No. 396,355. Term of patent 7 years.



The ornamental design for a stove as shown.

38,894. STOVE. JAMES C. HOSFORD, Malden, Mass., assignor to Magee Furnace Co., Boston, Mass., a Corporation. Filed Oct. 14, 1907. Serial No. 397,458. Term of patent 7 years.



The ornamental design for a stove as shown.

38,895. GAS HEATING-STOVE. JOSEPH BECVAR, Collinwood, Ohio. Filed Oct. 14, 1907. Serial No. 397,461. Term of patent 14 years.



The ornamental design for a gas heating stove, as shown.

38,896. HEATING AND COOKING STOVE. WILLIAM THOMPSON, Kalamazoo, and GEORGE W. COPE, Detroit, Mich., assignors to Kalamazoo Stove Co., Kalamazoo, Mich. Filed Sept. 23, 1907. Serial No. 394,251. Term of patent 14 years.



The ornamental design for a heating and cooking stove, substantially as shown.

TRADE-MARKS

PUBLISHED NOVEMBER 19, 1907.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 628. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) THE B. F. GOODRICH COMPANY, Akron, Ohio. Filed Apr. 6, 1905.



Particular description of goods.—Aprons, Air-Mattresses, Air-Pillows, Bands, Bellows-Disks, Blankets, Bottle-Stoppers, Bumpers for Trip-Hammers, Bumpers for Planers, Bumpers for Looms, Bumpers for Agricultural Implements, Bumpers for Channeling-Machines, Bumpers for Steam-Drills, Bumpers for Ore-Crushers, Bumpers for Wagons, Bumpers for Doors, Bumpers for Furniture, Bung-Bushings, Bicycle Frame-Protectors, Bicycle Handle-Covers, Basins, Bottle-Disks, Bowls, Buckets, Bathing-Caps, Boots, Coffin-Strips, Cushions, Cuspidors, Crutch-Tips, Chair-Tips, Curtains, Cane-Tips, Carpeting, Cups, Coats, Caps, Diapers, Diaphragms, Drinking-Cups, Embalming-Pillows, Emergency-Bands for Pneumatic Tires, Engravers' Rubber, Frictioned Tire-Tape, Gas-Bags, Gloves, Hammer-Cushions, Hats, Hat-Covers, Heels, Inflators, Jackets, Luggage-Holders, Luggage-Straps, Leggings, Mats, Mackintoshes, Ornamenting-Bags, Pads, Patches for Pneumatic Tires, Pedal-Rubbers, Pillows, Powder-Blowers, Pressure-Bands for Tires, Plant-Sprinklers, Pulley-Filling, Repair-Plugs for Pneumatic Tires, Rubber Thread, Rubber-Thread Bands, Screw-Tips, Sheave-Filling, Sheets, Sponge-Rubber, Sponge-Bags, Sponge-Cases, Springs, Shaft-Rubbers, Suits, Shoes, Test-Tube Covers, Thin-Rubber Surgeons' Gloves and Sleeves, Tires for Bicycles, Automobiles, and Other Vehicles, Tread-Bands for Tires, Trouser-Guards, Type-Writer Feet, Tack-Tips, Trousers, Umbrella-Rings, Valve-Buttons, Valve-Balls, Valve-Stems, Window-Cleaner Rubbers, Made Partly or Wholly of Rubber or Having Rubber Incorporated Therewith.

Ser. No. 5,542. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) WRIGHT & TAYLOR, Louisville, Ky. Filed May 13, 1905. Used ten years.

CONE SPRING

Particular description of goods.—Whisky.

Ser. No. 9,264. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE COOK & BERNHEIMER CO., New York, N. Y. Filed June 27, 1905. Used ten years.

Manhattan

Particular description of goods.—Whiskey.

Ser. No. 9,265. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE COOK & BERNHEIMER CO., New York, N. Y. Filed June 27, 1905. Used ten years.

Province

Particular description of goods.—Whisky.

Ser. No. 9,305. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE COOK & BERNHEIMER CO., New York, N. Y. Filed June 28, 1905.

Long and Short

Particular description of goods.—Whisky.

Ser. No. 12,079. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) "LE RIPOLIN," (SOCIÉTÉ ANONYME FRANÇAISE DE PEINTURES LAQUÉES ET D'ENDUITS SOUS-MARINS, PROCÉDÉS LEFRANC & BRIEGLEB RÉUNIS,) Paris, France. Filed Aug. 29, 1905.

RIEPS

Particular description of goods.—Submarine Composition Paint.

Ser. No. 14,812. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ATMORE & SON, Philadelphia, Pa. Filed Nov. 20, 1905. Used ten years.



Particular description of goods.—Plum-Pudding.

Ser. No. 17,225. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) JAMES E. RIGGS, Lincoln, Nebr. Filed Feb. 21, 1906.



The "swastika" is red.

Particular description of goods.—A Remedy for Skin Diseases.

Ser. No. 21,956. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) BOOTT MILLS, Lowell, Mass. Filed Sept. 7, 1906. Used ten years.

MIDDLESEX

Particular description of goods.—Bleached and Unbleached Cotton Piece Goods.

Ser. No. 21,959. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) BOOTT MILLS, Lowell, Mass. Filed Sept. 7, 1906. Used ten years.

BOSTON NEW MILLS

Particular description of goods.—Cotton Piece Goods.

Ser. No. 21,967. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) BOOTT MILLS, Lowell, Mass. Filed Sept. 7, 1906. Used ten years.

WARWICK

Particular description of goods.—Unbleached and Bleached Cotton Piece Goods.

Ser. No. 22,950. (CLASS 54. SEA FOODS.) ROSENSTEIN BROTHERS INC., New York, N. Y. Filed Oct. 27, 1906.



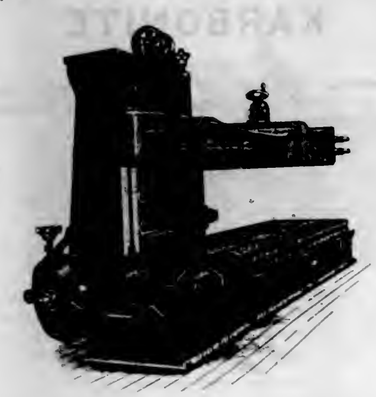
Particular description of goods.—Dried, Pickled, or Otherwise Preserved Fish.

Ser. No. 24,214. (CLASS 52. PACKING-HOUSE PRODUCTS.) HIGH GRADE LARD COMPANY, Baltimore, Md. Filed Dec. 22, 1906.

Shortine

Particular description of goods.—A Substitute for Lard.

Ser. No. 24,275. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) THE DETRICK & HARVEY MACHINE CO. OF BALTIMORE CITY, Baltimore, Md. Filed Dec. 26, 1906. Used ten years.



Particular description of goods.—Open-Side Planers.

Ser. No. 24,382. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE R. T. FRENCH COMPANY, Rochester, N. Y. Filed Jan. 2, 1907.



Particular description of goods.—Mustard.

Ser. No. 24,840. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) NESTLÉ & ANGLO-SWISS CONDENSED MILK CO., Cham, canton of Zug, Switzerland. Filed Jan. 22, 1907.

MILKMAID BRAND



Particular description of goods.—Coffee with Milk.

Ser. No. 25,204. (CLASS 14. METALS, UNWROUGHT AND PARTLY WROUGHT.) FOLLANSBEE BROTHERS COMPANY, Pittsburg, Pa. Filed Feb. 8, 1907.

HONOR

Particular description of goods.—Tin and Terne Plates.

Ser. No. 25,877. (CLASS 63. MEASURING AND SCIENTIFIC APPARATUS, APPLIANCES, AND INSTRUMENTS.) THE IMPERIAL DRY PLATE COMPANY, LIMITED, London, England. Filed Mar. 9, 1907.



Particular description of goods.—Photographic Plates Chemically Prepared, Photographic Sensitized Paper, and Photographic Sensitized Films.

Ser. No. 27,069. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) B. MANISCHEWITZ, Cincinnati, Ohio. Filed May 2, 1907. Used ten years.

לשנה תבאה בירושלים

Particular description of goods.—Matzos or Unleavened Bread.

Ser. No. 27,125. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) E. MARTIN & CO., San Francisco, Cal. Filed May 4, 1907. Used ten years.

MILLER'S EXTRA

Particular description of goods.—Whisky.

Ser. No. 27,165. (CLASS 23. HAND-TOOLS NOT OTHERWISE CLASSIFIED.) FAYETTE R. PLUMB, INCORPORATED, Philadelphia, Pa. Filed May 6, 1907. Used ten years.



Particular description of goods.—Hammers, Picks, Boat-Hooks, Log-Hooks, Sledges, Masons' Reels, Flatters, Set-Hammers, Tire-Sets, Punches Which Do Not Have a Cut-

ting Edge, Pincers Without a Cutting Edge, Nippers Without a Cutting Edge, Tongs, Mauls, Rail-Tongs, Tie-Tongs, Skidding-Tongs, Wrenches, Crowbars, Shackle-Bars, Track-Bars, Mattocks, Grub-Hoes, and the Following Rock-Drill-Sharpening Tools—viz., Dollies, Bottom-Spreaders, Top-Spreaders, and Sowa.

Ser. No. 27,209. (CLASS 13. MEATL MANUFACTURES NOT OTHERWISE CLASSIFIED.) WEED CHAIN TIRE GRIP COMPANY, New York, N. Y. Filed May 7, 1907.



Particular description of goods.—Chain Tire-Grips for Vehicle-Wheels.

Ser. No. 27,850. (CLASS 63. MEASURING AND SCIENTIFIC APPARATUS, APPLIANCES, AND INSTRUMENTS.) EASTMAN KODAK CO., Rochester, N. Y. Filed June 3, 1907. Used ten years.

EASTMAN

Particular description of goods.—Photographic Films, Photographic Paper, (Printing and Backing,) Photographic Plates, Photographic-Film-Cutting Boards, Photographic-Camera Stands, Photographic Embossing-Boards, Photographic Developing and Printing Apparatus, Photographic-Film-Developing Clips and Solutions, Photographic Cameras.

Ser. No. 28,033. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) FISCHER BROS., Seattle, Wash. Filed June 11, 1907.

MAX-I-MUM

Particular description of goods.—Lye, Sodium Chlorid, and Gloss-Starch.

Ser. No. 28,034. (CLASS 53. SACCHARINE FOODS NOT INCLUDED IN CLASS 47.) FISCHER BROS., Seattle, Wash. Filed June 11, 1907.

MAX-I-MUM

Particular description of goods.—Honey, Syrup, Molasses, Sorghum, Maple-Sugar, and Sugar.

Ser. No. 28,036. (CLASS 54. SEA FOODS.) FISCHER BROS., Seattle, Wash. Filed June 11, 1907.

MAX-I-MUM

Particular description of goods.—Clams, Clam-Nectar, Clam-Chowder, Minced Clams, Canned Crabs, Canned Fish, Canned Lobsters, Canned Oysters, Fish-Balls, Dried Fish, Salt Fish, Smoked Fish, and Canned Shrimps.

Ser. No. 28,172. (CLASS 35. BELTING, HOSE, AND MACHINERY PACKING.) NEW YORK BELTING AND PACKING COMPANY, LTD., New York, N. Y. Filed June 17, 1907.

KARBONITE

Particular description of goods.—Machinery Packing Made of a Compound of India-Rubber With or Without Metallic Insertions.

Ser. No. 28,422. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) J. H. ALLEN & COMPANY, St. Paul, Minn. Filed June 27, 1907.

"Dainty"

Particular description of goods.—Coffee and Tea.

Ser. No. 28,727. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) SCANDINAVIAN FUR & LEATHER CO., New York, N. Y. Filed July 11, 1907.



Particular description of goods.—Fur, Leather, and Cloth Automobile Coats, Wraps, Robes, and Hats, Cloth Automobile-Shirts, and Fur and Leather Gloves.

Ser. No. 28,779. (CLASS 48. DAIRY PRODUCTS.) WILLIS J. ELDRIDGE, Aurora, Ohio. Filed July 13, 1907. Used ten years.

JERSEY FACTORY BRAND

Particular description of goods.—Cheese.

Ser. No. 28,782. (CLASS 48. DAIRY PRODUCTS.) WILLIS J. ELDRIDGE, Aurora, Ohio. Filed July 13, 1907. Used ten years.

XXXX CHEESE

Particular description of goods.—Cheese.

Ser. No. 29,041. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) THE COX BLODGETT DRY GOODS COMPANY, Wichita, Kans. Filed July 25, 1907.



Particular description of goods.—Ginghams, Cambrics, Damasks, Linings, Tickings, Denims, Muslins, Bed-Blankets, Prints, Crash, Percales, Shirtings, Linens, Flannelets, Outings, Bed-Comforters, Chambray, Cotton Flannels.

Ser. No. 29,510. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ROBERT J. WISEMAN, Lewiston, Me. Filed Aug. 21, 1907.



Particular description of goods.—A Preparation of Castor-Oil.

Ser. No. 29,530. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) HENRY MERRILL TILSTON, Chicago, Ill. Filed Aug. 23, 1907.

PALMONOID

Particular description of goods.—Ointments.

Ser. No. 29,536. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) HOOD RUBBER CO., Boston, Mass. Filed Aug. 23, 1907.



Particular description of goods.—Rubber Footwear and Rubber Tires for Motor-Vehicles.

Ser. No. 29,550. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) EPHRAIM S. WELLS, Jersey City, N. J. Filed Aug. 23, 1907.

ROUGH ON

Particular description of goods.—Poisons or Exterminators of Rats, Mice, Squirrels, Chipmunks, Weasels, Skunks, Hares, Rabbits, Porcupines, Beavers, Muskrats, Gophers, Moles, Bats, Crows, Sparrows, and other Noxious Birds and Animals, Poisons, Exterminators, and Repellents of Bedbugs, Potato-Bugs, Bees, Wasps, Hornets, Flies, Mosquitos, Fleas, Ants, Ticks, Lice, Roaches, Water-Bugs, Gnats, Moths, Beetles, and other Insects, Bugs, and Vermin, and Upon Disinfectants.

Ser. No. 29,583. (CLASS 54. SEA FOODS.) JASPER WYMAN & SON, Millbridge, Me. Filed Aug. 26, 1907.

HUNTER BRAND



Particular description of goods.—Canned Clams.

Ser. No. 29,724. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) SIMON LEVI COMPANY, Los Angeles, Cal. Filed Sept. 3, 1907.

SANTA YSABEL BRAND

Particular description of goods.—Peeled Green Chili, Dried Chili, Dried Prunes, Dried Figs, Dried Apricots, Dried Peaches, Dried Nectarines, Dried Pears, Dried Plums, Dried Apples, and Dried Currants.

Ser. No. 29,742. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) BLANKE-BAER CHEMICAL CO., St. Louis, Mo. Filed Sept. 3, 1907.



Particular description of goods.—Ginger-Ale.

Ser. No. 29,746. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) STANLEY RULE & LEVEL COMPANY, New Britain, Conn. Filed Sept. 4, 1907. Used ten years.

STANLEY

Particular description of goods.—Iron Tool-Handles.

Ser. No. 29,761. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) KEEN & REVILLE, New York, N. Y. Filed Sept. 5, 1907.

AIREDALE BRAND

Particular description of goods.—Mohairs and Sicilians.

Ser. No. 29,792. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) JOHN HOUSTON, Wellston, Ohio. Filed Sept. 7, 1907.

The Great Destroyer.

Particular description of goods.—A Medicinal Remedy for Purifying the Blood, for Gastric and Nasal Catarrh, Ulcers on the Bowels, Diseases Peculiar to Females, and Consumption and other Lung Affections.

Ser. No. 29,810. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) JOHN HOFFMANN & SONS CO., Milwaukee, Wis. Filed Sept. 9, 1907.

ECHO FARM

Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 29,858. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) THE GERMAN-AMERICAN COFFEE CO., New York, N. Y. Filed Sept. 10, 1907.



BIRD BRAND

Particular description of goods.—Coffee.

Ser. No. 29,913. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) CHARLES P. GIERALTOWSKI, Chicago, Ill. Filed Sept. 12, 1907.

LECITROPHINE

Particular description of goods.—Tonics.

Ser. No. 29,931. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE DONALDSON-SHULTZ CO., Baltimore, Md. Filed Sept. 13, 1907.

COLONIAL

Particular description of goods.—Pickles, Catsup, and Vinegar.

Ser. No. 29,989. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) A. J. BATES CO., Webster, Mass. Filed Sept. 16, 1907.

BONDED

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 30,031. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) JACOB SULZBACH, New York, N. Y. Filed Sept. 17, 1907.

Under the Mistletoe

Particular description of goods.—Ribbons.

Ser. No. 30,038. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) OLD KENTUCKY MFG. CO., Paducah, Ky. Filed Sept. 18, 1907. Used ten years.

B.A.THOMAS'

Particular description of goods.—A Remedy for Hog-Cholera, Swine Plague, Thumps, and as a Worm-Expeller and Germ-Destroyer.

Ser. No. 30,041. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE EATON, COLE & BURNHAM CO., Bridgeport, Conn. Filed Sept. 18, 1907. Used ten years.

CEM

Particular description of goods.—Hose-Nozzles.

Ser. No. 30,050. (CLASS 51. MALT PREPARATIONS NOT OTHERWISE CLASSIFIED.) THE NEW SOUTH BREWERY & ICE CO., Middlesboro, Ky. Filed Sept. 18, 1907.

PINNACLE

Particular description of goods.—Beer.

Ser. No. 30,051. (CLASS 61. MALT PREPRARTIONS NOT OTHERWISE CLASSIFIED.) THE NEW SOUTH BREWERY & ICE CO., Middlesboro, Ky. Filed Sept. 18, 1907.

PINNACLE

Particular description of goods.—Medicinal Malt Extracts.

Ser. No. 30,105. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE DERMATONE COMPANY, Chicago, Ill. Filed Sept. 20, 1907.

BTONIC

Particular description of goods.—Certain Medicines Used in the Treatment of Eczema and Skin Diseases.

Ser. No. 30,120. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) ADOLPH NAHASS, Boston, Mass. Filed Sept. 21, 1907.

VICTORIA

Particular description of goods.—Belts for Personal Wear, Girdles, and Sashes.

Ser. No. 30,143. (CLASS 69. SMOKERS' ARTICLES NOT INCLUDED IN CLASS 71.) BRAUNSTEIN & CIE., Paris, France. Filed Sept. 21, 1907.



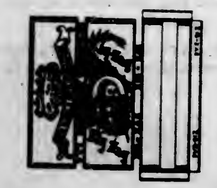
Particular description of goods.—Cigarette-Paper.

Ser. No. 30,144. (CLASS 69. SMOKERS' ARTICLES NOT INCLUDED IN CLASS 71.) BRAUNSTEIN & CIE., Paris, France. Filed Sept. 21, 1907.



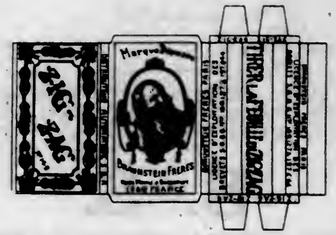
Particular description of goods.—Cigarette-Paper.

Ser. No. 30,145. (CLASS 69. SMOKERS' ARTICLES NOT INCLUDED IN CLASS 71.) BRAUNSTEIN & CIE., Paris, France. Filed Sept. 21, 1907.



Particular description of goods.—Cigarette-Paper.

Ser. No. 30,146. (CLASS 69. SMOKERS' ARTICLES NOT INCLUDED IN CLASS 71.) BRAUNSTEIN & CIE., Paris, France. Filed Sept. 21, 1907.



Particular description of goods.—Cigarette-Paper.

Ser. No. 30,159. (CLASS 68. PUBLICATIONS.) S. S. MCCLURE COMPANY, New York, N. Y. Filed Sept. 23, 1907.

McCLURE'S MAGAZINE

Particular description of goods.—A Monthly Publication.

Ser. No. 30,177. (CLASS 48. DAIRY PRODUCTS.) THE BENNETT COMPANY, Omaha, Nebr. Filed Sept. 24, 1907.

BENNETT'S



Particular description of goods.—Butter.

Ser. No. 30,178. (CLASS 53. SACCHARINE FOODS NOT INCLUDED IN CLASS 47.) THE BENNETT COMPANY, Omaha, Nebr. Filed Sept. 24, 1907.

BENNETT



Particular description of goods.—Maple-Syrup.

Ser. No. 30,197. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) SAMUEL F. STOLL, Kansas City, Mo. Filed Sept. 25, 1907.

Nerve-I-Tone

Particular description of goods.—Medicinal Tablets.

Ser. No. 30,227. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) BIELEFELD & SPAHN, New York, N. Y. Filed Sept. 26, 1907.

B. & S.

Particular description of goods.—Leather Shoes.

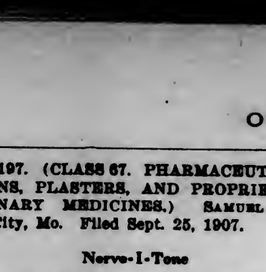
Ser. No. 30,252. (CLASS 17. WOOD MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE BEAGLE HAME WORKS, Freeland, Pa. Filed Sept. 27, 1907. Used ten years.

BEAGLE

Particular description of goods.—Wooden Hames.

Ser. No. 30,253. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) BELL-WART MANUFACTURING COMPANY, New York, N. Y. Filed Sept. 27, 1907.

SHAKE-IN-YOUR-SOX



Particular description of goods.—Antiseptic Foot-Powder.

Ser. No. 30,256. (CLASS 64. MEDICAL AND SURGICAL APPARATUS, APPLIANCES, AND INSTRUMENTS.) DAVID MARSHALL HITCH, Philadelphia, Pa. Filed Sept. 27, 1907.

Saniphore

Particular description of goods.—A Tooth-Brush Steriliser.

Ser. No. 30,270. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) FRIEND & MARKS, Milwaukee, Wis. Filed Sept. 28, 1907.

JUNIOR

Particular description of goods.—Coats, Vests, Trousers, and Overcoats.

Ser. No. 30,273. (CLASS 18. AGRICULTURAL AND DAIRY MACHINERY AND PARTS OF SUCH MACHINERY.) A. B. FARQUHAR COMPANY, LIMITED, York, Pa. Filed Sept. 28, 1907.

"SUCCESS" JR.

Particular description of goods.—Potato-Diggers.

Ser. No. 30,295. (CLASS 2. MINERAL.) THE UNITED STATES GRAPHITE CO., Saginaw, Mich. Filed Sept. 30, 1907.

MORENO

Particular description of goods.—Silver-Lead or Plumbago Foundry-Facings and Pulverized Graphite, (Not Crude.)

Ser. No. 30,298. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) I. NEWMAN & SONS, New Haven, Conn. Filed Sept. 30, 1907.

P. N.

Particular description of goods.—Corsets.

Ser. No. 30,299. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) I. NEWMAN & SONS, New Haven, Conn. Filed Sept. 30, 1907.

Laureate

Particular description of goods.—Corsets.

Ser. No. 30,326. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) WILLIAM F. WYLDE, Ponca, Okla. Filed Oct. 1, 1907.

Sencol

Particular description of goods.—Flavoring-Syrups for Beverages.

Ser. No. 30,338. (CLASS 54. SEA FOODS.) STROHMEYER & ARPE COMPANY, New York, N. Y. Filed Oct. 2, 1907.

DERBY — CLUB

Particular description of goods.—Canned Sardines, Sprats, Anchovies, Herrings, Mackerel, and Fish-Balls.

Ser. No. 30,339. (CLASS 54. SEA FOODS.) STROHMEYER & ARPE COMPANY, New York, N. Y. Filed Oct. 2, 1907.

PARSIFAL

Particular description of goods.—Canned Sardines, Sprats, Anchovies, Herrings, Mackerel, and Fish-Balls.

Ser. No. 30,340. (CLASS 54. SEA FOODS.) STROHMEYER & ARPE COMPANY, New York, N. Y. Filed Oct. 2, 1907.



Particular description of goods.—Canned Sardines, Sprats, Anchovies, Herrings, Mackerel, and Fish-Balls.

Ser. No. 30,351. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ALICE S. BLACK, Montclair, N. J. Filed Oct. 2, 1907.



Particular description of goods.—A Toilet Balm.

Ser. No. 30,353. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) F. KORBEL & BROS., San Francisco, Cal. Filed Oct. 2, 1907.

Particular description of goods.—Whisky.

Ser. No. 30,363. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) L. CANDEE & CO., New Haven, Conn. Filed Oct. 2, 1907. Used ten years.

FAIRY.

Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 30,387. (CLASS 58. GAMES AND TOYS, AND SPORTING GOODS NOT OTHERWISE CLASSIFIED.) JULIUS P. STADERMAN, Buffalo, N. Y. Filed Oct. 3, 1907.

CUPID'S COASTER

Particular description of goods.—Inclined-Slide Amusement Devices.

Ser. No. 30,415. (CLASS 68. PUBLICATIONS.) HARRY B. DARLING, Washington, D. C. Filed Oct. 4, 1907.



Particular description of goods.—Printed Books, Pamphlets, Catalogues, Bulletins, Circulars, Charts, Posters, Advertising-Cards, Diaries, and Calendars.

Ser. No. 30,426. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) LEE BROOM & DUSTER COMPANY, Lincoln, Nebr. Filed Oct. 5, 1907.



Particular description of goods.—Brooms, Whisks, Brushes, and Dusters.

Ser. No. 30,428. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) LEE BROOM & DUSTER COMPANY, Lincoln, Nebr. Filed Oct. 5, 1907.

UZIT

Particular description of goods.—Brooms.

Ser. No. 30,429. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) LEE BROOM & DUSTER COMPANY, Lincoln, Nebr. Filed Oct. 5, 1907.

THRIFTY

Particular description of goods.—Brooms.

Ser. No. 30,434. (CLASS 35. BELTING, HOSE, AND MACHINERY PACKING.) DETROIT OAK BELTING CO., Detroit, Mich. Filed Oct. 5, 1907.

KING

Particular description of goods.—Leather Belting.

Ser. No. 30,438. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) NATHANIEL JOHNSTON & SONS, Bordeaux, France. Filed Oct. 5, 1907.



Particular description of goods.—Olive-Oil.

Ser. No. 30,454. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) RIDENOUR BAKER GROCERY CO., Kansas City, Mo. Filed Oct. 7, 1907.

F.F.O.G.

Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 30,456. (CLASS 51. MALT PREPARATIONS NOT OTHERWISE CLASSIFIED.) THE VA. BREWING CO., Roanoke, Va. Filed Oct. 7, 1907.



Particular description of goods.—Malt Extract.

Ser. No. 30,460. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) E. T. SMITH COMPANY, Worcester, Mass. Filed Oct. 7, 1907.

CONSTITUTION

Particular description of goods.—Canned Fruits, Canned Berries, and Canned Vegetables.

Ser. No. 30,473. (CLASS 52. PACKING-HOUSE PRODUCTS.) JACOB DOLD PACKING COMPANY, Buffalo, N. Y. Filed Oct. 7, 1907.

"ERLIRIPE"

Particular description of goods.—Fresh Meats.

Ser. No. 30,479. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) BELKNAP HARDWARE & MFG. CO., Louisville, Ky. Filed Oct. 7, 1907.



Particular description of goods.—Cooking and Heating Stoves and Ranges.

Ser. No. 30,517. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE SHERWIN-WILLIAMS CO., Cleveland, Ohio. Filed Oct. 9, 1907.

Metalastic

Particular description of goods.—Mixed Paints, Pigments Used for Paints, Stains, and Paint-Oils.

Ser. No. 30,518. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) HENRY SOLOMON WELLCOME, London, England. Filed Oct. 9, 1907.

VANA

Particular description of goods.—Medicated Wines.

Ser. No. 30,522. (CLASS 68. PUBLICATIONS.) CHICAGO HERALD COMPANY, Chicago, Ill. Filed Oct. 10, 1907.

THE CHICAGO RECORD-HERALD.

Particular description of goods.—A Newspaper Published Every Day in the Week Except Sunday.

Ser. No. 30,527. (CLASS 52. PACKING-HOUSE PRODUCTS.) INTERSTATE PACKING CO., East End, Minn. Filed Oct. 10, 1907.



Particular description of goods.—Lard.

Ser. No. 30,531. (CLASS 54. SEA FOODS.) EDWIN SHIVELL, Boston, Mass. Filed Oct. 10, 1907.

Rainbow

Particular description of goods.—Sardines, Salmon, and Herrings and Mackerel, Kippered and Otherwise Treated.

Ser. No. 30,536. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) WOOLSON SPICE COMPANY, Toledo, Ohio. Filed Oct. 10, 1907.

ATLAS

Particular description of goods.—Spices.

Ser. No. 30,540. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) FRANKLIN MANUFACTURING CO., Franklin, Tenn. Filed Oct. 11, 1907.



Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 30,546. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE PEOPLES CHEMICAL CO. INC., Providence, R. I. Filed Oct. 11, 1907.



The cross being printed in red.
Particular description of goods.—A Medicinal Tonic.

Ser. No. 30,566. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) CHARLES M. HART, Brooklyn, N. Y. Filed Oct. 12, 1907.

HARPOON



Particular description of goods.—Compounds for the Extermination of Vermin, Such as Roaches, Bedbugs, &c.

Ser. No. 30,608. (CLASS 48. DAIRY PRODUCTS.) SHEFFIELD FARMS-SLAWSON-DECKER CO., New York, N. Y. Filed Oct. 15, 1907. Used ten years.

SHEFFIELD

Particular description of goods.—Milk and Cream.

TRADE-MARKS

REGISTERED NOVEMBER 19, 1907.

66,212. CAUSTIC SODA. CHANCE & HUNT, LD., Oldbury, England.
Filed August 29, 1905. Serial No. 12,076. PUBLISHED SEPTEMBER 17, 1907.

66,213. CERTAIN JEWELRY AND PRECIOUS-METAL WARE. DURAND & Co., Newark, N. J.
Filed June 12, 1907. Serial No. 28,070. PUBLISHED SEPTEMBER 17, 1907.

66,214. CALCULATING-MACHINES. HANS WALTER EGLI Zurich, Switzerland.
Filed June 18, 1907. Serial No. 28,234. PUBLISHED SEPTEMBER 17, 1907.

66,215. POWDERED GRANULAR SOAP. RICHARD ELLIS, New York, N. Y.
Filed June 12, 1907. Serial No. 28,072. PUBLISHED SEPTEMBER 17, 1907.

66,216. CERTAIN CHEMICALS AND ANTISEPTICS. LUDWIG Q. B. ERB, New York, N. Y.
Filed July 2, 1907. Serial No. 28,572. PUBLISHED SEPTEMBER 17, 1907.

66,217. AROMATIC SYNTHETIC LIQUID BASE FOR USE IN VIOLET PERFUMES. HAARMANN DE LAIRE SCHAEFER Co., Maywood, N. J.
Filed March 19, 1907. Serial No. 26,069. PUBLISHED SEPTEMBER 17, 1907.

66,218. CANNED FRUITS AND VEGETABLES. JAMES M. HOUSTON GROCER COMPANY, St. Louis, Mo.
Filed April 15, 1905. Serial No. 1,730. PUBLISHED JANUARY 30, 1906.

66,219. ELECTRIC LAMPS OF ALL KINDS. KÖRTING & MATHIESEN AKTIENGESELLSCHAFT, Leutzsch, Germany.
Filed May 14, 1906. Serial No. 19,512. PUBLISHED OCTOBER 9, 1906.

66,220. SOAP. LOS ANGELES OLIVE GROWERS ASSOCIATION, Los Angeles, Cal.
Filed April 30, 1907. Serial No. 27,030. PUBLISHED SEPTEMBER 17, 1907.

66,221. CIGARS. PETER MOHR, Belleville, Ill.
Filed July 12, 1907. Serial No. 28,763. PUBLISHED SEPTEMBER 17, 1907.

66,222. BIFOCAL LENSES. OPTICAL SPECIALTIES COMPANY, Boston, Mass.
Filed July 8, 1907. Serial No. 28,637. PUBLISHED SEPTEMBER 17, 1907.

66,223. SPRING-WATER. JOSEPH E. PATTERSON, Wilkes-Barre, Pa.
Filed August 1, 1907. Serial No. 29,170. PUBLISHED SEPTEMBER 3, 1907.

66,224. OINTMENT. ROBINSON BROS. & COMPANY INCORPORATED, Portland, Me., and Malden, Mass.
Filed July 12, 1907. Serial No. 28,752. PUBLISHED SEPTEMBER 10, 1907.

66,225. CIGARS, CIGARETTES, CHEROOTS, SMOKING-TOBACCO, AND CHEWING-TOBACCO. DAVID S. SAQUI, New York, N. Y.
Filed May 25, 1907. Serial No. 27,657. PUBLISHED SEPTEMBER 17, 1907.

66,226. WHISKY. L. & A. SCHARFF, St. Louis, Mo.
Filed June 26, 1905. Serial No. 9,108. PUBLISHED SEPTEMBER 10, 1907.

66,227. LEATHER BOOTS AND SHOES. COSBY SHOE CO. INCORPORATED, Lynchburg, Va.
Filed August 8, 1907. Serial No. 29,298. PUBLISHED SEPTEMBER 17, 1907.

66,228. LEATHER BOOTS AND SHOES. COSBY SHOE CO. INCORPORATED, Lynchburg, Va.
Filed August 8, 1907. Serial No. 29,299. PUBLISHED SEPTEMBER 17, 1907.

66,229. LEATHER BOOTS AND SHOES. COSBY SHOE CO. INCORPORATED, Lynchburg, Va.
Filed August 8, 1907. Serial No. 29,300. PUBLISHED SEPTEMBER 17, 1907.

66,230. LEATHER BOOTS AND SHOES. COSBY SHOE CO. INCORPORATED, Lynchburg, Va.
Filed August 8, 1907. Serial No. 29,301. PUBLISHED SEPTEMBER 17, 1907.

66,231. HARNESS, HORSE-COLLARS, SADDLES, AND WHIPS. HARPHAM BROS. CO., Lincoln, Nebr.
Filed May 27, 1907. Serial No. 27,675. PUBLISHED SEPTEMBER 17, 1907.

66,232. CANVAS HOSE. HENRY J. M. HOWARD, Washington, D. C.
Filed March 21, 1907. Serial No. 26,122. PUBLISHED SEPTEMBER 17, 1907.

66,233. FURNITURE AND PIANO POLISHES. HARVEY B. INGHAM, Waverly, N. Y.
Filed May 31, 1907. Serial No. 27,797. PUBLISHED SEPTEMBER 17, 1907.

66,234. LEATHER BOOTS AND SHOES. KERENS SHOE Co., St. Louis, Mo.
Filed August 5, 1907. Serial No. 29,242. PUBLISHED SEPTEMBER 17, 1907.

66,235. CASES AND SATCHELS FOR MUSICAL INSTRUMENTS. MAULBETSCH & WHITTEMORE COMPANY, Newark, N. J.
Filed June 6, 1907. Serial No. 27,910. PUBLISHED SEPTEMBER 17, 1907.

66,236. PAINTS. NORTHERN MANUFACTURING COMPANY, Bangor, Me.
Filed August 19, 1907. Serial No. 29,473. PUBLISHED SEPTEMBER 17, 1907.

66,237. CERTAIN BELTING, HOSE, AND MACHINERY PACKING. REVERE RUBBER COMPANY, Boston, Mass.
Filed July 31, 1907. Serial No. 29,135. PUBLISHED SEPTEMBER 17, 1907.

66,238. PAINTS. SCHOELLKOPF, HARTFORD & HANNA COMPANY, Buffalo, N. Y.
Filed August 8, 1907. Serial No. 29,294. PUBLISHED SEPTEMBER 17, 1907.

66,239. PAPER BAGS. SCHORSCH & Co., New York, N. Y.
Filed July 19, 1907. Serial No. 28,877. PUBLISHED SEPTEMBER 17, 1907.

66,240. GAS AND ELECTRIC LIGHT FIXTURES. SHAPIRO & ARONSON, New York, N. Y.
Filed August 23, 1907. Serial No. 29,541. PUBLISHED SEPTEMBER 17, 1907.

66,241. WHIP STOCK OR MATERIALS, WHIPS, AND WHIP-LASHES. THE WARREN FEATHERBONE CO., Three Oaks, Mich.
Filed April 20, 1906. Serial No. 18,937. PUBLISHED SEPTEMBER 17, 1907.

66,242. PLAITED FIBROUS PACKING. THE WILPACO PACKING COMPANY, New York, N. Y.
Filed July 6, 1907. Serial No. 28,627. PUBLISHED SEPTEMBER 17, 1907.

66,243. CLOTHES-WRINGERS. THE AMERICAN WRINGER COMPANY, New York, N. Y.
Filed December 15, 1906. Serial No. 24,042. PUBLISHED SEPTEMBER 17, 1907.

66,244. WRINGERS AND PARTS THEREOF. THE AMERICAN WRINGER COMPANY, New York, N. Y.
Filed December 15, 1906. Serial No. 24,044. PUBLISHED SEPTEMBER 17, 1907.

66,245. CLOTHES-WRINGERS. THE AMERICAN WRINGER COMPANY, New York, N. Y.
Filed December 15, 1906. Serial No. 24,046. PUBLISHED SEPTEMBER 17, 1907.

66,246. BRUSHES. THE DAVIS-BRIDAHAM DRUG COMPANY, Denver, Colo.
Filed March 16, 1907. Serial No. 26,003. PUBLISHED SEPTEMBER 17, 1907.

66,247. CORK COVERINGS FOR WALLS AND CEILINGS. HEINRICH DOLMETSCH, Stuttgart, Germany.
Filed March 22, 1907. Serial No. 26,149. PUBLISHED SEPTEMBER 17, 1907.

66,248. CERTAIN RUBBER GOODS. ENTERPRISE RUBBER CO., Boston, Mass.
Filed April 17, 1907. Serial No. 26,756. PUBLISHED AUGUST 27, 1907.

66,249. RUBBER ERASERS. EBERHARD FABER, New York, N. Y.
Filed August 6, 1907. Serial No. 29,254. PUBLISHED SEPTEMBER 17, 1907.

66,250. KNAPSACKS OF WOVEN MATERIAL. THE MILLS EQUIPMENT CO. LTD., Westminster, England.
Filed March 4, 1907. Serial No. 25,743. PUBLISHED SEPTEMBER 17, 1907.

66,251. ELECTRIC VIBRATORY MASSAGE-MACHINES. MOON VIBRATOR COMPANY, Chicago, Ill.
Filed August 5, 1907. Serial No. 29,237. PUBLISHED SEPTEMBER 17, 1907.

66,252. SEWING-MACHINE NEEDLES. NATIONAL SEWING MACHINE COMPANY, Belvidere, Ill.
Filed July 31, 1907. Serial No. 29,132. PUBLISHED SEPTEMBER 17, 1907.

66,253. BUILDING BRICKS OR BLOCKS. THE OHIO MINING & MANUFACTURING CO., New York, N. Y., and Shawnee, Ohio.
Filed May 15, 1907. Serial No. 27,401. PUBLISHED SEPTEMBER 17, 1907.

66,254. MEDICATOR OR INHALER. RAMEY MEDICATOR COMPANY, Asbury Park, N. J.
Filed July 19, 1907. Serial No. 28,908. PUBLISHED SEPTEMBER 17, 1907.

66,255. ICE-CREAM FREEZERS. RICHMOND CEDAR WORKS, Richmond, Va.
Filed August 17, 1907. Serial No. 29,437. PUBLISHED SEPTEMBER 17, 1907.

66,256. CARTRIDGES, POWDER, AND SMOKELESS POWDER. SÄCHSISCHE PULVERFABRIKEN G. KRANTZ & Co., Bautzen, Germany.
Filed July 16, 1907. Serial No. 28,824. PUBLISHED SEPTEMBER 17, 1907.

66,257. WASHING-MACHINES. SPEARS & RIDDLE CO., Wheeling, W. Va.
Filed June 20, 1907. Serial No. 28,268. PUBLISHED SEPTEMBER 17, 1907.

66,258. TOOTH-BRUSHES. GUSTAVE STRASSBURGER, New York, N. Y.
Filed August 16, 1907. Serial No. 29,428. PUBLISHED SEPTEMBER 17, 1907.

66,259. INDIA-RUBBER, GUTTA-PERCHA, AND OTHER VULCANIZABLE GUMS. GEO. A. ALDEN & Co., Boston, Mass.
Filed July 2, 1906. Serial No. 20,710. PUBLISHED SEPTEMBER 17, 1907.

66,260. SPOOL-COTTON, SEWING-COTTON, AND THREAD. THE AMERICAN THREAD COMPANY, Jersey City, N. J.
Filed August 20, 1907. Serial No. 29,484. PUBLISHED SEPTEMBER 17, 1907.

66,261. KIDNEY, LIVER, AND BLOOD REMEDIES. BODY BUILDERS MEDICINE COMPANY, Binghamton, N. Y.
Filed June 13, 1906. Serial No. 20,246. PUBLISHED SEPTEMBER 17, 1907.

66,262. ALTERATIVE IODIN COMPOUND. BONETTI FRÈRES, Paris, France.
Filed June 7, 1906. Serial No. 20,133. PUBLISHED SEPTEMBER 17, 1907.

66,263. MEDICINAL TABLETS. JAMES T. BUTLER, Abington, Pa.
Filed August 6, 1907. Serial No. 29,259. PUBLISHED SEPTEMBER 17, 1907.

66,264. OPEN-SIDE PLANERS. THE DETRICK & HARVEY MACHINE CO. OF BALTIMORE CITY, Baltimore, Md.
Filed November 26, 1906. Serial No. 23,592. PUBLISHED JANUARY 15, 1907.

66,265. CERTAIN MEDICINE. WILLIAM D. DUNCAN, Ottawa, Ill.
Filed August 21, 1907. Serial No. 29,505. PUBLISHED SEPTEMBER 17, 1907.

66,266. CERTAIN MEDICINE. THE FERRUGINOID CO., New York, N. Y.
Filed August 15, 1907. Serial No. 29,406. PUBLISHED SEPTEMBER 17, 1907.

66,267. TOILET PREPARATION FOR THE MUSTACHE OR HAIR. THOMAS HETHERINGTON, Philadelphia, Pa.
Filed August 16, 1907. Serial No. 29,415. PUBLISHED SEPTEMBER 17, 1907.

66,268. PERFUMES. THOMAS HETHERINGTON, Philadelphia, Pa.
Filed August 16, 1907. Serial No. 29,416. PUBLISHED SEPTEMBER 17, 1907.

66,269. STYLOGRAPHIC FOUNTAIN-PENS. J. KEARNEY & Co., Liverpool, England.
Filed August 20, 1907. Serial No. 29,488. PUBLISHED SEPTEMBER 17, 1907.

66,270. MENTHOL ICE. KELLOGG & HITCHCOCK CO., Syracuse, N. Y.
Filed August 22, 1907. Serial No. 29,514. PUBLISHED SEPTEMBER 17, 1907.

66,271. CERTAIN MEDICINE. ROBERT HASELL MCKOY, Wilmington, N. C.
Filed July 26, 1907. Serial No. 29,049. PUBLISHED SEPTEMBER 17, 1907.

66,272. REMEDY FOR VENEREAL DISEASES. ROSS OSWALD MCELROY, New York, N. Y.
Filed August 9, 1907. Serial No. 29,321. PUBLISHED SEPTEMBER 17, 1907.

66,273. FERTILIZERS. THE MOUNTAIN COPPER COMPANY LIMITED, London, England, and San Francisco, Cal.
Filed December 14, 1905. Serial No. 15,413. PUBLISHED SEPTEMBER 17, 1907.

66,274. HEADACHE REMEDIES IN LIQUID AND TABLET FORM. THE NEURALGYLINE COMPANY, Wheeling, W. Va.
Filed June 10, 1907. Serial No. 28,004. PUBLISHED SEPTEMBER 17, 1907.

66,275. PREPARATIONS FOR THE REMOVAL OF HAIR AND BLEMISHES FROM THE SKIN. CHARLES S. RICH, New York, N. Y.
Filed August 17, 1907. Serial No. 29,439. PUBLISHED SEPTEMBER 17, 1907.

66,276. BITTERS. JOSEPH L. ROSENFIELD, Pueblo, Colo.
Filed July 25, 1907. Serial No. 29,033. PUBLISHED SEPTEMBER 17, 1907.

66,277. STOCK-POWDERS. CLARENCE C. SAUNDERS, Celina, Tex.
Filed August 19, 1907. Serial No. 29,459. PUBLISHED SEPTEMBER 17, 1907.

66,278. REMEDIES FOR STOMACH TROUBLES. CHARLES J. ULRICI, New York, N. Y.
Filed August 22, 1907. Serial No. 29,521. PUBLISHED SEPTEMBER 17, 1907.

66,279. CERTAIN WOOD MANUFACTURES. VENESTA LIMITED, London, England.
Filed August 17, 1907. Serial No. 29,443. PUBLISHED SEPTEMBER 17, 1907.

66,280. SEWING-MACHINES AND PARTS. WHITE SEWING MACHINE CO., Cleveland, Ohio.
Filed August 8, 1907. Serial No. 29,288. PUBLISHED SEPTEMBER 17, 1907.

66,281. CERTAIN FOODS. BLOCK-HORN PRESERVING CO., Kansas City, Mo.
Filed July 26, 1907. Serial No. 29,048. PUBLISHED SEPTEMBER 17, 1907.

66,282. COCOA. BROWNELL & FIELD COMPANY, Providence, R. I.
Filed August 12, 1907. Serial No. 29,350. PUBLISHED SEPTEMBER 17, 1907.

66,283. CANNED FRUITS AND VEGETABLES EXCEPT CANNED CORN. THE BURT OLNEY CANNING CO., Oneida and Albion, N. Y.
Filed July 17, 1907. Serial No. 28,831. PUBLISHED SEPTEMBER 17, 1907.

66,284. CERTAIN FOOD PREPARATIONS. CHARLES HEWITT & SONS CO., Des Moines, Iowa.
Filed July 22, 1907. Serial No. 28,948. PUBLISHED SEPTEMBER 3, 1907.

66,285. CHEESE. OSCAR M. CREGO, New York, N. Y.
Filed July 29, 1907. Serial No. 29,122. PUBLISHED SEPTEMBER 17, 1907.

66,286. CERTAIN NON-ALCOHOLIC BEVERAGES. FRANZ J. DOHRN, White Plains, N. Y.
Filed July 26, 1907. Serial No. 29,056. PUBLISHED SEPTEMBER 17, 1907.

66,287. TEAS AND COFFEES. DRAKE & COMPANY, Easton, Pa.
Filed July 17, 1907. Serial No. 28,834. PUBLISHED SEPTEMBER 17, 1907.

66,288. WHEAT-FLOUR. DULUTH-SUPERIOR MILLING CO., Duluth, Minn.
Filed October 29, 1906. Serial No. 22,981. PUBLISHED SEPTEMBER 17, 1907.

66,289. WHISKY, BRANDY, AND GIN. EISEMAN & COMPANY, New York, N. Y.
Filed May 13, 1907. Serial No. 27,330. PUBLISHED SEPTEMBER 17, 1907.

66,290. PURE WHEAT-FLOUR. FARWELL & RHINES, Watertown, N. Y.
Filed February 5, 1907. Serial No. 25,150. PUBLISHED SEPTEMBER 17, 1907.

66,291. WHISKY. GARRETT-WILLIAMS COMPANY, Baltimore, Md.
Filed July 13, 1906. Serial No. 20,914. PUBLISHED OCTOBER 23, 1906.

66,292. BREAD AND CRACKERS. GEO. H. CROSS CO., St. Johnsbury, Vt.
Filed July 31, 1907. Serial No. 29,129. PUBLISHED SEPTEMBER 17, 1907.

66,293. CORDIALS. THE GOLDEN HILL DISTILLING CO., Columbus, Ohio.
Filed August 8, 1907. Serial No. 29,306. PUBLISHED SEPTEMBER 17, 1907.

66,294. WHISKY. THE GOLDEN HILL DISTILLING CO., Columbus, Ohio.
Filed August 8, 1907. Serial No. 29,307. PUBLISHED SEPTEMBER 17, 1907.

66,295. MACARONI. GASPARE G. GRECO, New Orleans, La.
Filed August 8, 1907. Serial No. 29,297. PUBLISHED SEPTEMBER 17, 1907.

66,296. GINGER-ALE. JACOB HOUSE & SON, Buffalo, N. Y.
Filed August 8, 1907. Serial No. 29,289. PUBLISHED SEPTEMBER 17, 1907.

66,297. GIN. JAPHET & Co., Houston, Tex.
Filed August 8, 1907. Serial No. 29,291. PUBLISHED SEPTEMBER 17, 1907.

66,298. VODKA. JOHN BARTH COMPANY, Milwaukee, Wis.
Filed July 22, 1907. Serial No. 28,930. PUBLISHED SEPTEMBER 17, 1907.

66,299. WHISKY. THE LAZARUS-NASSAUER CO., Cairo, Ill.
Filed August 8, 1907. Serial No. 29,287. PUBLISHED SEPTEMBER 17, 1907.

66,300. NAIL-BRUSHES. CHARLES LOONEN, Paris, France.
Filed May 9, 1906. Serial No. 19,389. PUBLISHED JANUARY 8, 1907.

66,301. CERTAIN SEA FOODS. MENZEL & Co., New York, N. Y.
Filed May 19, 1905. Serial No. 6,105. PUBLISHED SEPTEMBER 17, 1907.

66,302. VINEGARS AND PICKLES. OAKLAND VINEGAR AND PICKLE CO., Saginaw, Mich.
Filed August 12, 1907. Serial No. 29,359. PUBLISHED SEPTEMBER 17, 1907.

66,303. COFFEE. T. LLOYD OWENS, Savannah, Ga.
Filed August 7, 1907. Serial No. 29,272. PUBLISHED SEPTEMBER 17, 1907.

66,304. CHAMOIS-SKINS. PENNSYLVANIA TANNING COMPANY, Great Bend, Pa.
Filed January 17, 1906. Serial No. 17,163. PUBLISHED JUNE 11, 1907.

66,305. PRESERVED FISH. POWELL BROS. & Co., London, England.
Filed July 12, 1907. Serial No. 28,751. PUBLISHED AUGUST 27, 1907.

66,306. BREAD. R. C. PROUDFIT BAKING COMPANY, Chicago, Ill.
Filed August 5, 1907. Serial No. 29,234. PUBLISHED SEPTEMBER 17, 1907.

66,307. [WITHDRAWN.]

66,308. WHISKY. ROSENFIELD BROS. & Co., Chicago, Ill.
Filed August 8, 1907. Serial No. 29,286. PUBLISHED SEPTEMBER 17, 1907.

66,309. ALL KINDS OF CANDY. SCHRADERS, New York, N. Y.
Filed July 29, 1907. Serial No. 29,092. PUBLISHED SEPTEMBER 17, 1907.

66,310. NATURAL MINERAL WATER. SCHULTES AGOST, SZINYE-LIPOCZI SALVATORFORRÁS VÁLLALAT, Eperjes, Austria-Hungary.
Filed June 18, 1907. Serial No. 28,231. PUBLISHED SEPTEMBER 17, 1907.

66,311. COCOA, CHOCOLATE, AND CANDY. STOLLWERCK BROS., New York, N. Y.
Filed June 30, 1906. Serial No. 20,666. PUBLISHED APRIL 16, 1907.

66,312. LARD COMPOUND. T. M. SINCLAIR & Co., LTD., Cedar Rapids, Iowa.
Filed August 2, 1907. Serial No. 29,179. PUBLISHED SEPTEMBER 17, 1907.

66,313. CERTAIN MEDICINES. THE TRUNK BROS. DRUG COMPANY, Denver, Colo.
Filed May 20, 1907. Serial No. 27,536. PUBLISHED SEPTEMBER 17, 1907.

66,314. NERVE-TONIC. HOWARD L. WALDO, Troy, N. Y.
Filed March 21, 1907. Serial No. 26,137. PUBLISHED SEPTEMBER 17, 1907.

66,315. HAIR TONIC AND INVIGORATOR. JOSEPH P. WARD, Fort Worth, Tex.
Filed May 8, 1907. Serial No. 27,237. PUBLISHED SEPTEMBER 17, 1907.

66,316. CANNED FRUITS AND VEGETABLES. WAYNE COUNTY CANNING CO. LTD., Marion, N. Y.
Filed August 12, 1907. Serial No. 29,358. PUBLISHED SEPTEMBER 17, 1907.

66,317. WHEAT-FLOUR. WHALEY MILL & ELEVATOR CO., Gainesville, Tex.
Filed May 24, 1907. Serial No. 27,760. PUBLISHED SEPTEMBER 17 1907.

66,318. SHEARS AND SCISSORS. The Acme Shear Company, Bridgeport, Conn.
Filed August 21, 1907. Serial No. 29,509. PUBLISHED SEPTEMBER 17, 1907.

66,319. EXPANSION-JOINTS. Alberger Condenser Company, New York, N. Y.
Filed August 12, 1907. Serial No. 29,346. PUBLISHED SEPTEMBER 17, 1907.

66,320. COTTON PIECE GOODS. Arnhold, Karberg & Co., New York, N. Y.
Filed November 4, 1905. Serial No. 14,266. PUBLISHED OCTOBER 2, 1906.

66,321. LADIES' JABOTS MADE OF NETTED AND LACE FABRICS. Boehm & Levine, New York, N. Y.
Filed July 31, 1907. Serial No. 29,127. PUBLISHED SEPTEMBER 17, 1907.

66,322. COTTON PIECE GOODS. Boott Mills, Lowell, Mass.
Filed September 7, 1906. Serial No. 21,969. PUBLISHED SEPTEMBER 17, 1907.

66,323. COTTON PIECE GOODS. Boott Mills, Lowell, Mass.
Filed September 7, 1906. Serial No. 21,970. PUBLISHED SEPTEMBER 17, 1907.

66,324. THREAD-CUTTING DIES. The Connecticut Tool Company, Bridgeport, Conn.
Filed April 15, 1907. Serial No. 26,709. PUBLISHED SEPTEMBER 17, 1907.

66,325. CERTAIN CLOTHING. Dacotah Manufacturing Co., St. Paul, Minn.
Filed November 10, 1906. Serial No. 23,251. PUBLISHED SEPTEMBER 17, 1907.

66,326. CONCRETE-MIXING MACHINERY. Eureka Machine Co., Lansing, Mich.
Filed May 8, 1907. Serial No. 27,240. PUBLISHED SEPTEMBER 17, 1907.

66,327. GONGS AND PARTS THEREOF, EXCEPT ELECTRIC GONGS. J. G. Brill Company, Philadelphia, Pa., assignor to The J. G. Brill Company, a Corporation of Pennsylvania.
Filed June 7, 1907. Serial No. 27,970. PUBLISHED SEPTEMBER 17, 1907.

66,328. RAILWAY STREET-SPRINKLERS. J. G. Brill Company, Philadelphia, Pa., assignor to The J. G. Brill Company, a Corporation of Pennsylvania.
Filed June 7, 1907. Serial No. 27,971. PUBLISHED SEPTEMBER 17, 1907.

66,329. BUCKLES. Jacob & Brown, New York, N. Y.
Filed August 17, 1907. Serial No. 29,444. PUBLISHED SEPTEMBER 17, 1907.

66,330. STEEL INGOTS AND BARS, DRAW-PLATES, AND WORTLES. Paul Richard Kuehnrich, Sheffield, England.
Filed July 7, 1906. Serial No. 20,773. PUBLISHED SEPTEMBER 17, 1907.

66,331. MARINE GASOLENE-ENGINES. Kumberger & Vreeland, New York, N. Y.
Filed August 1, 1907. Serial No. 29,167. PUBLISHED SEPTEMBER 17, 1907.

66,332. ELECTRICALLY-HEATED SOLDERING-IRONS, SAD-IRONS, AND BRANDING-IRONS. Abbot Augustus Low, Brooklyn, N. Y.
Filed August 13, 1907. Serial No. 29,372. PUBLISHED SEPTEMBER 17, 1907.

66,333. DRY BATTERIES. The George A. Lutz Co., New York, N. Y.
Filed August 17, 1907. Serial No. 29,442. PUBLISHED SEPTEMBER 17, 1907.

66,334. ALLOY CASTINGS. Magnus Metal Company, New York, N. Y.
Filed August 5, 1907. Serial No. 29,245. PUBLISHED SEPTEMBER 17, 1907.

66,335. PLOWS. Harrie G. Moore, Kansas City, Mo., assignor to Big Four, Kansas City, Mo., (a Firm.)
Filed August 20, 1907. Serial No. 29,479. PUBLISHED SEPTEMBER 17, 1907.

66,336. CANDIES COMPOSED OF OR CONTAINING CHOCOLATE. National Candy Company, Jersey City, N. J., and St. Louis, Mo.
Filed August 16, 1907. Serial No. 29,422. PUBLISHED SEPTEMBER 17, 1907.

66,337. AUTOMOBILES. Oesterreichische Daimler-Motoren-Gesellschaft Gesellschaft mit beschränkter Haftung, Vienna, Austria-Hungary.
Filed May 10, 1907. Serial No. 27,273. PUBLISHED SEPTEMBER 3, 1907.

66,338. METAL ANIMAL-TIES. Oneida Community Limited, Oneida and Niagara Falls, N. Y.
Filed December 5, 1906. Serial No. 23,785. PUBLISHED SEPTEMBER 17, 1907.

66,339. RIBBONS. Wm. Openhym & Sons, New York, N. Y.
Filed July 26, 1907. Serial No. 29,046. PUBLISHED SEPTEMBER 17, 1907.

66,340. HOSIERY. Paramount Knitting Company, Chicago, Ill.
Filed August 10, 1907. Serial No. 29,338. PUBLISHED SEPTEMBER 17, 1907.

66,341. HOSIERY. Paramount Knitting Company, Chicago, Ill.
Filed August 10, 1907. Serial No. 29,340. PUBLISHED SEPTEMBER 17, 1907.

66,342. SAWS. Quality Saw & Tool Works, Incorporated, Springfield, Mass.
Filed July 27, 1907. Serial No. 29,069. PUBLISHED SEPTEMBER 17, 1907.

66,343. SARDINES. Edwin Shivell, Melrose and Boston, Mass.
Filed August 17, 1907. Serial No. 29,441. PUBLISHED SEPTEMBER 17, 1907.

66,344. SUSPENDERS, BELTS, GARTERS, HOSE-SUPPORTERS, AND SLEEVE-BANDS. Towner K. Webster, Jr., New York, N. Y.
Filed July 22, 1907. Serial No. 28,953. PUBLISHED SEPTEMBER 17, 1907.

66,345. SUSPENDERS, BELTS, GARTERS, HOSE-SUPPORTERS, AND SLEEVE-BANDS. Towner K. Webster, Jr., New York, N. Y.
Filed July 22, 1907. Serial No. 28,954. PUBLISHED SEPTEMBER 17, 1907.

66,346. SUSPENDERS, BELTS, GARTERS, HOSE-SUPPORTERS, AND SLEEVE-BANDS. Towner K. Webster, Jr., New York, N. Y.
Filed July 22, 1907. Serial No. 28,955. PUBLISHED SEPTEMBER 17, 1907.

66,347. SUSPENDERS, BELTS, GARTERS, HOSE-SUPPORTERS, AND SLEEVE-BANDS. Towner K. Webster, Jr., New York, N. Y.
Filed July 22, 1907. Serial No. 28,956. PUBLISHED SEPTEMBER 17, 1907.

66,348. MERCERIZED COTTON PIECE FABRICS. Clarence Whitman & Co., New York, N. Y.
Filed August 5, 1907. Serial No. 29,236. PUBLISHED SEPTEMBER 17, 1907.

66,349. CERTAIN CUTLERY. Wyeth Hardware & Manufacturing Co., St. Joseph, Mo.
Filed August 10, 1905. Serial No. 11,496. PUBLISHED SEPTEMBER 17, 1907.

66,350. WINES. Royé Labaume & Co., Beaune, France.
Filed September 28, 1906. Serial No. 22,368. PUBLISHED SEPTEMBER 17, 1907.

LABELS

REGISTERED NOVEMBER 19, 1907.

13,877.—*Title:* "DENNIS KEARNEY." (For Cigars.) Symons-Kraussman Co., New York, N. Y. Filed October 23, 1907.

13,878.—*Title:* "CANDIDATE CLUB." (For Whisky.) Philip Goldberg, New York, N. Y. Filed October 21, 1907.

13,879.—*Title:* "CHOCO-SODO." (For Hot Chocolate.) Runkel Brothers, Incorporated, New York, N. Y. Filed September 27, 1907.

13,880.—*Title:* "SEVEN DAY COFFEE, THE NATIONAL BEVERAGE." (For Coffee.) Seven Day Coffee Company, New York, N. Y. Filed October 18, 1907.

13,881.—*Title:* "ORTEGA'S SELECTED PEELED GREEN CHILES." (For Peeled Green Chilies.) Emile C. Ortega, Los Angeles, Cal. Filed October 18, 1907.

13,882.—*Title:* "MILADI." (For Candy.) Douglas Candy Company, St. Joseph, Mo. Filed October 19, 1907.

13,883.—*Title:* "ORIGINAL JOLLY FELLOWS PEPSIN GUM." (For Chewing-Gum.) William J. Paul, Pittsburg, Pa. Filed October 23, 1907.

13,884.—*Title:* "PAIN KING." (For a Cough Cure.) F. B. Clark & Company, Harrisburg, Pa. Filed October 21, 1907.

13,885.—*Title:* "OLD LOG CABIN." (For a Liquid Medical Compound for Coughs and Colds.) Samuel W. Williams, Harriman, Tenn. Filed October 23, 1907.

13,886.—*Title:* "GRIPPURA, (GERM-DESTROYER.)" (For a Proprietary Medicine.) Alexander Crichton, Castleton, Ontario, Canada. Filed October 16, 1907.

13,887.—*Title:* "CUTI-VITA SALVE." (For a Salve.) F. B. Clark & Company, Harrisburg, Pa. Filed October 21, 1907.

13,888.—*Title:* "PURITA NEVER-GREY HAIR TONIC." (For Hair-Tonic.) A. C. H. Purita Co., Buffalo, N. Y. Filed October 21, 1907.

13,889.—*Title:* "DR. I. H. LEWKO'S ANTISEPTIC TOOTH POWDER." (For Tooth-Powder.) I. H. Lewkowicz, Sharon, Pa. Filed October 17, 1907.

13,890.—*Title:* "DR. I. H. LEWKO'S ANTISEPTIC TOOTH PASTE." (For Tooth-Paste.) I. H. Lewkowicz, Sharon, Pa. Filed October 17, 1907.

13,891.—*Title:* "DR. I. H. LEWKO'S ANTISEPTIC TOOTH WASH." (For a Tooth-Wash Preparation.) I. H. Lewkowicz, Sharon, Pa. Filed October 17, 1907.

13,892.—*Title:* "IN-SEN-ZUM, MAKES HOME SWEET HOME SWEETER." (For an Incense Preparation.) Louis V. Aronson, Newark, N. J. Filed October 18, 1907.

13,893.—*Title:* "SAMSON." (For Dress Goods Known in the Trade as Galatea.) Burton Brothers & Co., New York, N. Y. Filed August 7, 1907.

PRINTS

REGISTERED NOVEMBER 19, 1907.

2,156.—*Title:* "BRONCHO BUSTING DESIGN." (For Breakfast Food.) Cream of Wheat Co., Minneapolis, Minn. Filed August 5, 1907.

2,157.—*Title:* "LET ME TELL YOU SOMETHING—." (For Flour.) Washburn Crosby Company, Minneapolis, Minn. Filed October 7, 1907.

2,158.—*Title:* "NAPOLEON." (For Medicinal and Toilet Preparations.) The H. B. Claflin Company, New York, N. Y. Filed October 3, 1907.

2,159.—*Title:* "MEN'S AND BOYS' APPAREL." (For Men's and Boys' Apparel.) H. C. Lytton, Chicago, Ill. Filed October 17, 1907.

2,160.—*Title:* "U. S. S. PEACEMAKER, THE GREAT GAME OF NATIONS." (For a Game.) Curtis Dunham, New York, N. Y. Filed October 18, 1907.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE WENTZEL.

APPLICATION FOR PATENT.

Decided November 5, 1907.

1. ABANDONMENT OF APPLICATION—FINAL ACTION ON FORM AND MERITS—APPEAL ON MERITS TOO LATE.

Where the Examiner finally rejected the claims of an application and also made final certain objections to such claims on July 3, 1906, and a petition upon the formal matters was taken on August 2, 1906, which was decided by the Commissioner on August 27, 1906, an appeal to the Examiners-in-Chief filed August 24, 1907, is filed without the period of one year allowed for prosecution, which dates from the final rejection and not from the decision of the Commissioner on the petition.

2. SAME—DELAY SLIGHT—UNAVOIDABLE.

Where delay beyond the year allowed for action is slight and the application prior to such delay had been prosecuted vigorously and in good faith and the applicant had reason to suppose that his action was filed in time, the delay may be regarded as unavoidable.

ON PETITION.

EDGE-BLACKING MACHINE.

Messrs. Crosby & Gregory for the applicant.

MOORE, *Commissioner:*

This is a petition from the action of the Primary Examiner refusing to forward an appeal to the Examiners-in-Chief on the ground that the application is abandoned.

On July 3, 1906, the Examiner finally rejected certain claims and also made his formal objections to certain claims final. Applicant took a petition on August 2, 1906, to the Commissioner from the Examiner's ruling on the formal matters, which petition was granted in a decision of the Commissioner dated August 27, 1906. No further action was taken until August 24, 1907, when applicant filed an appeal to the Examiners-in-Chief upon the finally-rejected claims.

This appeal the Examiner refused to forward on the ground that through appellant's failure to file it within one year from the final rejection of July 3, 1906, the case had become abandoned.

Petitioner contends that the petition of August 2, 1906, was a proper action in the case, that under Rule 134 it was necessary to settle all preliminary questions before an appeal could be taken on the merits, and that he was entitled to one year from the Commissioner's decision of August 27, 1906, upon the petition in which to file his appeal. In support of this contention he cites the case of *ex parte Thomas*, (124 O. G., 623,) where appeal to the Examiners-in-Chief was permitted more than a year after the final rejection of the claims. In that case, however, certain formal objections were raised for the first time when the claims were placed under final rejection. Subsequently the applicant made an action directed to said informalities, concerning which the Commissioner said:

> This action was responsive to the requirements of the case, and manifestly the applicant is entitled to a year from the Examiner's action of April 6, 1905, repeating certain of the objections, in which to take a petition or to cure the said objections. In the absence of any rule or practice to the contrary the applicant should likewise be allowed this year in which to take his appeal to the Examiners-in-Chief or to cancel the rejected claims and put his case in condition for allowance.

That decision merely held that applicant was entitled to a year from the final action of the Examiner upon the informalities in which "to take a petition or to cure said informalities" and in which to take his appeal to the Examiners-in-Chief. It did not hold that applicant has a year from the decision on the petition in which to appeal, nor does it support petitioner's contention to this effect.

In the present case the final action on both the informalities and the merits were made in the same Office letter. Consequently even under the above decision the applicant would be entitled to but one year from the date of said letter in which to take his appeal.

In *ex parte Walton* (120 O. G., 659) it was held an amendment curing formal defects filed after final rejection of the claims will not save the case from becoming abandoned where appeal is not taken within a year from the final rejection.

The principle that should govern in these matters is believed to be correctly stated in *ex parte Severy*, (97 O. G., 2745,) where it was said:

> All of the rules must be construed together, and when so construed the Examiner clearly has authority to finally reject the claims before all formal matters are settled, and such final rejection has as much force as if there were no controversy as to formal matters. It is merely necessary that the formal matters be disposed of before an appeal is forwarded. This subordination of formal defects to matters of merits is for the purpose of facilitating the prosecution of the case upon its merits and is believed to be founded upon good reason and to work to the interest of parties having business before the Office. The question of main interest is the merits, and the postponement of formal matters is for the purpose of preventing delay in reaching a conclusion upon that question. To permit the postponement of such matters to result in delays in settling questions of merits would be to defeat the very purpose for which the rule was adopted.

To allow more than one year in which to appeal to the Examiners-in-Chief after the case is in condition

both for petition as to informal matters and appeal as to the merits would do violence to said principle.

In the present case the delay in filing the appeal beyond a year after the final action on the informalities and the merits is slight. This case heretofore has been prosecuted vigorously and in good faith. Petitioner undoubtedly had some reason to suppose that he was filing his appeal within the statutory time. The circumstances are such as to warrant the holding in this case that the application is not abandoned, and the Examiner is accordingly directed to forward the appeal.

The petition is granted.

EX PARTE VANCE SHOE COMPANY.

APPLICATION FOR REGISTRATION OF TRADE-MARK.

Decided July 17, 1907.

TRADE-MARKS—ACTION OF THE EXAMINER—POINTING OUT DISTINCTIONS BETWEEN APPLICANT'S MARK AND PREVIOUSLY-REGISTERED MARKS.

While it is proper for an applicant to cite previous registration for the purpose of showing that his mark should be registered, it is not necessary for the Examiner of Trade-Marks to explain why these marks were registered.

ON PETITION.

TRADE-MARK FOR LEATHER BOOTS AND SHOES.

Mr. H. E. Dunlap for the applicant.

BILLINGS, *Assistant Commissioner:*

This is a petition that the Examiner of Trade-Marks be directed to clearly point out the distinction which he makes between the mark sought to be registered and the registered trade-marks No. 61,951 and No. 61,930.

It appears from the record that the Examiner refused to register the applicant's trade-mark on the ground that the distinguishing feature thereof, the word "Dresden," is a mere geographical term. The applicant, while admitting that the word "Dresden" in and of itself is geographical, contends that the background upon which the word is printed forms an essentially distinguishing feature of the trade-mark, and therefore urges that the mark as a whole should be registered. The Examiner adhered to his first ruling and cited in support thereof the decisions of the courts and of the Commissioner controlling such cases.

It is not believed that the Examiner should be required to give his reasons why certain marks are registered. The decisions rendered by the courts and by the Commissioner which are published in the OFFICIAL GAZETTE announce the principles which control the registration of trade-marks. A mark which is sought to be registered is either passed upon favorably or adversely by the Examiner of Trade-Marks in accordance with his construction of the principles announced in the decisions published. If there be error in the decision of the Examiner refusing to register a trade-mark, the applicant has his remedy by appeal.

While it is proper for an applicant to cite previous registrations in his argument for the purpose of showing that his mark also should be registered, it is not believed to be necessary to good practice to require the Examiner to explain the reasons why these marks were registered. In this particular case, however, the Examiner has in his statement given his reasons why in his opinion trade-marks Nos. 61,951 and 61,930 were registered, which reasons are quite clearly distinguishable from the reasons given by him for refusing the registration of this case.

The petition would have been denied; but inasmuch as the Examiner has given his reasons for the registration of these marks in his answer the petition is dismissed.

EX PARTE DANFORD.

APPLICATION FOR PATENT.

Decided October 3, 1907.

EXAMINATION OF APPLICATIONS—SUFFICIENCY OF DISCLOSURE—PRACTICE.

Where no reason is given for the use of certain ingredients of the article of manufacture which are set forth in the specification and the Examiner is of the opinion that such ingredients have a deleterious effect or no effect at all, he should not refuse to act upon the merits of the case, but should reject the claim for this reason.

ON PETITION.

ARTIFICIAL STONE.

Messrs. Munn & Co. for the applicant.

BILLINGS, *Assistant Commissioner:*

This is a petition from the action of the Primary Examiner refusing to examine the case on its merits on the ground that no explanation has been given of the reason for using the ingredients set forth in the specification.

It would appear from the statement of the Primary Examiner that his ground for refusing to act on the case is that the composition which applicant uses either has no effect at all or a deleterious one. This is a question of the merits, and the claim should have been rejected on this ground in order that applicant, if he so desires, might take an appeal to the Examiners-in-Chief.

The petition is granted to the extent indicated.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

BURSON v. VOGEL.

Decided April 2, 1907.

1. INTERFERENCE—PRELIMINARY STATEMENT—ALLEGATIONS—RESTRICTION OF PROOF.

Where the preliminary statement of a party alleges that an "experimental" device was constructed in January, 1901, and no date of reduction to practice is given, such party will not be restricted to the date of his application for his reduction to practice where no objection was made to the statement on the ground that it was indefinite. (*Hammond* v. *Basch*, 24 App. D. C., 469; 115 O. G., 804, distinguished.)

2. SAME—EVIDENCE—PRIVATE DIARY IN SHORTHAND.

An inventor after having testified in regard to his conception and the work done thereon produced a shorthand diary and read a number of entries from the diary showing dates and memoranda of work done. Of this evidence the court said: "Burson is a man over seventy years of age and appears to have kept a diary for fifty years in which he made a daily record of events. There is nothing in the appearance of this diary to excite suspicion. The dates follow consecutively. It is true that the record is in shorthand after the Pittman system; but it appears that interpretation thereof could be made with sufficient certainty by one skilled in that method. * * * We see no substantial difference between this and the ordinary use of memoranda by a witness to refresh his memory."

3. SAME—REDUCTION TO PRACTICE—REPRODUCTION OF ORIGINAL MACHINE.

A device which was experimented with and afterward laid aside and partly dismantled and which when produced in evidence did not have all of the original parts, some of the important parts being replacements, *Held* not to constitute a reduction to practice, the evidence tending to show the identity of the parts replaced and the original parts not being satisfactory.

4. SAME—REDUCTION TO PRACTICE—CRUDE MACHINE—SUBSEQUENT IMPROVEMENTS.

A machine may be crude in construction, but if it contains all the essential elements of the invention of the issue and in its operation successfully demonstrates its practical efficacy and utility reduction to practice is accomplished. (*Coffee* v. *Guerant*, 68 O. G., 279; 3 App. D. C., 497, 499; *Norden* v. *Spalding*, 114 O. G., 1828; 24 App. D. C., 286, 290; *Gallagher* v. *Hien*, 115 O. G., 1330; 25 App. D. C., 77, 82; *Lowrie* v. *Taylor*, 118 O. G., 1681; 27 App. D. C., 522, 526.) The mere fact that mechanical improvements may be suggested and made in the course of operation that tend to perfect the operation of the machine and increase its practical efficiency, while retaining the essential elements of the invention which it puts in practice, does not impair the effect of the original demonstration of utility, if established satisfactorily.

5. SAME—CONCEPTION OF INVENTION—IDEA OF MEANS NECESSARY.

The mere idea that there ought to be an arrangement to strip a stocking from a board or form on which it was mounted and return the board to the one who placed the stockings thereon and the illustration of this idea by the originator thereof by stripping a stocking from a form by the passage thereof between his hand and the edge of a table does not amount to a conception of an invention. No mechanism was described by which the desired result could be obtained. Invention consists of the conception of the idea and of means for putting it in practice and producing the desired result. Until the latter conception is complete and ready to be put in some practical form there is no available conception of the invention within the meaning of the patent law. (*Mergenthaler* v. *Scudder*, 81 O. G., 1417; 11 App. D. C., 264, 276.)

6. SAME—CONCEALMENT OR SUPPRESSION AFTER REDUCTION TO PRACTICE.

The failure to file an application for more than two years after reduction to practice where the machine was put into actual use in a factory the policy of the management of which was not to patent machines used for their own work is not such a concealment or suppression of the invention as will subordinate the inventor's rights to one who, claiming conception in July, 1900, reduced it to practice in April, 1901, but did not file an application until May, 1902, and did not arrange to manufacture the same until June, 1903.

7. PUBLIC USE—QUESTION NOT CONSIDERED IN AN INTERFERENCE.

The question whether the invention in issue was placed in public use by one of the parties to an interference is not one which can be raised in an interference proceeding, but is one for the consideration of the Commissioner of Patents on the final allowance of the patent.

Mr. George W. Rea for the appellant.

Mr. Edgar M. Kitchin and *Mr. Edward T. Fenwick* for the appellee.

SHEPARD, *J.:*

This is an interference proceeding involving priority of invention of an improvement in singeing-machines.

The issue is embraced in twenty-two counts which show forth in a machine for singeing stockings, a combination of rollers, the ending-point of which is in proximity to the initial point, whereby the articles to be singed, mounted on stretching-boards, are continuously advanced from the starting-point to the ending-point, and in their journey pass between gas, or singeing jets; and a stripping device whereby the further motion of the board effects the withdrawal of the article stretched upon it, and returns the board to the point, where, having another article attached, it may be fed again to the machine for singeing and stripping.

For the sake of brevity, the following counts 1, 2, 11, 14, and 22, are extracted as fairly representing the issue:

1. A finishing-machine embodying stripping means, the articles to be treated being mounted on supports so as to be acted on by said means.

2. In combination with means for treating tubular fabrics supported from within upon suitable formers, of means for carrying the said formers with the articles to be treated through the said treating means, and means for stripping the said articles from the formers.

11. In combination with singeing means, of means for carrying the supports holding the articles to be singed through the said singeing means, means for returning the supports and means for stripping the said articles from their supports on their return movement.

14. In combination with means for singeing stockings or like articles mounted upon supports, of means for carrying the supports with the articles thereon through said singeing means, means for changing the direction of movement of the supports after they have passed through the singeing means, and means for returning the supports.

22. In combination with means for singeing stockings or like articles mounted upon supports, of means for carrying the articles through the singeing means, an inclined belt located in the path of movement of the said supports for changing the direction of movement thereof, means for returning the supports to a point adjacent to the feed end of the machine, and means for stripping the articles from their support.

The application of Vogel was filed May 28, 1902, and that of Burson April 17, 1903.

In his preliminary statement, Vogel alleged conception July 2, 1900, drawings made July 7, 1900, disclosure to others July 8, 1900; and that he embodied the invention in a full-sized machine which was completed about April 6, 1901, and operated successfully April 9, 1901. He also alleged the manufacture of machines for sale after September 22, 1903, under contract with manufacturers entered into April, 1903.

Burson alleged conception in August, 1899, sketches December, 1899, but no model; and disclosure to others December 27, 1899. He also alleged that he constructed one experimental machine in January, 1901, and has since had constructed two machines containing the invention in controversy.

The Examiner of Interferences awarded priority to Burson. On appeal to the Examiners-in-Chief, that decision was reversed; and they were affirmed by the Commissioner, with final award to Vogel. From this decision Burson has appealed.

A preliminary question must be disposed of before passing to a consideration of the evidence relating to conception and reduction to practice of the invention of the issue.

The appellee contends that the allegation in the preliminary statement of Burson, to the effect that he constructed an experimental machine in January, 1901, does not amount to an allegation of a reduction to practice, and, hence, in respect of that machine and the two other machines thereafter constructed, to which no date is given, limits Burson to the date of his application as his first reduction to practice. We cannot concur in this view of the effect of the statement. It is not so precise as it might have been, and if exception had been taken to it on that ground, *in limine*, its amendment might possibly have been compelled; at any rate, if unamended, after exception, the limitation of its averments now insisted upon might reason-

ably be imposed. Neither of the two decisions adverse to Burson is rested upon such limitation.

We do not regard the case, under the circumstances, as falling under the rule applied in *Hammond* v. *Basch*, (115 O. G., 804; 24 App. D. C., 469, 473.) In that case the statement alleged the construction of a "model" in May, 1900, and this was followed by the specific allegation of actual reduction to practice in February, 1901, through the completion and use of a full-size, operative device. The invention was a simple one, and the evidence tended to show actual reduction to practice of the alleged model. But in view of the specific allegation of later reduction to practice in the statement, which remained unamended, it was held that the date thereof could not be carried back of the time alleged. In taking his testimony, the opposing party had the right to assume that the model was what it was alleged to be, and nothing more. Here the party, after stating that he had made no model, alleged the construction of an experimental machine on a certain date, and did not follow it with an allegation of a later date of actual reduction to practice. An experimental machine—and the first construction of a complicated device usually is—may be, according to the evidence relating to its construction and use, a mere unsuccessful and, therefore, an abandoned experiment, or, though crude in its construction, may furnish a satisfactory demonstration of its utility. If, therefore, the evidence shall show that this experimental machine was successfully operated, Burson ought to have the benefit of it as of the date alleged. He cannot, of course, have the benefit of an earlier date than that alleged, no matter what his evidence may show. (*Lowrie* v. *Taylor*, 118 O. G., 1681; 27 App. D. C., 522, 523, and cases cited.)

Without reviewing the evidence at length, we think it sufficient to show that Burson had a conception of the invention and disclosed it to others as early as the first of July, 1900. His own testimony as to this is corroborated, and the entries in his diary, with this corroborating evidence, fix dates. As the recitals in this diary seem to have been rejected by the Commissioner, we think it proper to say that we cannot agree with his conclusions. Burson is a man over seventy years of age and appears to have kept a diary for fifty years in which he made a daily record of events. There is nothing in the appearance of this diary to excite suspicion. The dates follow consecutively. It is true that the record is in shorthand after the Pittman system; but it appears that interpretation thereof could be made with sufficient certainty by one skilled in that method. Having testified in regard to his conception and the work done therein, he read a number of entries from the diary showing dates and memoranda of work done. We see no substantial difference between this and the ordinary use of memoranda by a witness to refresh his memory. While such testimony, uncorroborated by other witnesses, is not sufficient proof of the conception of an invention, we think it has sufficient corroboration in the testimony of Ziock, the superintendent of the factory, and Westberg, a carpenter, who worked on all of the machines of Burson.

Under the ordinary burden of proof imposed upon a junior party, we do not think the evidence sufficient to show that the experimental machine was successfully reduced to practice. It was evidently experimented with, but was afterward laid aside and partly dismantled. When produced as an exhibit it had all of the necessary parts, but the important ones in this controversy were replacements. We are not satisfied with the evidence tending to show that the parts replaced were identical with those that had been removed. It was given some five years after the fact, and lacks certainty. The reduction to practice by the use of the experimental machine—No. 1—is, however, of no practical importance under the allegation of its construction in 1901. The proof shows, we think, that machines 2 and 3 were being constructed in December, 1900, and January, 1901, and were completed and tried during the latter month. This evidence, we think, shows a successful reduction to practice, at least during the early spring of 1901.

The Examiners-in-Chief held that the evidence relating to these two later machines was not sufficient to show reduction to practice, and held that Burson must be confined, therefore, to the date of filing his application. They base their conclusion upon the evidence of Burson, who said, with apparent candor, that machine 2 required—

> considerable changing and bettering of different parts all of which changes, of course, stopped the operation of the machine while said changes were being made. The machine which is called No. 3 was better constructed and ran better but there were some changes and some interruptions in its work for some considerable time.

They say:

> If these machines had in January, 1901, the construction which they now have, they were of course reduction to practice as defined in the issue, but the testimony does not satisfy us that they were in the condition which they now are, at that date, or that they were successful in operation at that time.

This conclusion ignores the further fact, testified to by Burson, that these changes were made in the line of better workmanship, and that substantially all the parts of the first construction were retained. The resemblance between the new machines, and their resemblance to the first experimental machine, indicate the presence in the former of the essential elements of the issue; and the evidence of the two witnesses before referred to is to the same effect.

A machine may be crude in construction, but if it contains all the essential elements of the invention of the issue, and in its operation successfully demonstrates its practical efficacy and utility, reduction to practice is accomplished. (*Coffee* v. *Guerant*, 68 O. G., 279; 3 App. D. C., 497, 499; *Norden* v. *Spalding*, 114 O. G., 1828; 24 App. D. C., 286, 290; *Gallagher* v. *Hien*, 115 O. G., 1330; 25 App. D. C., 77, 82; *Lowrie* v. *Taylor*, 118 O. G., 1681; 27 App. D. C., 522, 526.) The mere fact that mechanical improvements may be suggested and made in the course of operation, that tend to perfect the operation of the machine and increase its practical efficiency, while retaining the essential elements of the invention which it puts in practice, does not impair the effect of the original demonstration of utility, if established satisfactorily. Having found that Burson's evidence sufficiently established his conception about July 1, 1900, and reduction to practice, as early at least as March 1, 1901, the burden was shifted to Vogel, the senior applicant.

The Examiner of Interferences awarded him July 8, 1900, as his date of conception. The Examiners-in-Chief held his evidence insufficient and restricted him, both in respect of conception and reduction to practice, to his filing date. The Commissioner, agreeing with them in their conclusions as regards Burson's claims to conception and reduction to practice, did not consider it necessary to pass upon Vogel's evidence, as his earlier filing date entitled him to the award of priority.

Vogel testified to his conception of the invention on July 8, 1900, and that he made a sketch showing the same on that date. No witness was produced who saw this sketch, and the only witness introduced to corroborate Vogel was one Loerding. His testimony was to the effect that a few days after July 4, 1900, Vogel came to witness who was at work on a machine singeing stockings, and said the machine was not complete; that there ought to be an arrangement to strip the stocking and return the board to the man who put them on. He then, by using his hands and the edge of the table removed a stocking and the board remained in his hand. No mechanism was described by which the desired result could be obtained. Invention consists of the conception of the idea and of means for putting t in practice and producing the desired result. Until the latter conception is complete and ready to be put in some practical form, there is no available conception of the invention within the meaning of the patent law. (*Mergenthaler* v. *Scudder*, 81 O. G., 1417; 11 App. D. C., 264, 276; *Funk* v. *Haines*, 285, 288.) Failing to establish the earlier date of conception, the next date is that of April, 1901, at which time also it would seem that Vogel embodied his completed idea in a machine and reduced it to practice. Whether it amounted to a complete reduction to practice is, however, immaterial because of the conclusion reached in respect of Burson's claim to earlier conception, which also antedates Vogel's alleged date, and to reduction to practice.

There was very great delay on the part of Burson in filing his application for a patent, but it does not appear that he suppressed or intended to conceal knowledge of his invention after its reduction to practice. The Burson Knitting Company was engaged in the manufacture of stockings and other knit goods on a large scale, and used the stripping-machines in the course thereof. Burson testified that it was the policy of the company not to patent machines used in work in its own factory. This is, perhaps, not an unusual practice on the part of manufacturers of products by the use of machines. Whether so or not it does not amount to such a concealment of the invention, after reduction to practice, as to subordinate his right to a later discoverer, under the rule governing in *Mason* v. *Hepburn*, (84 O. G., 147; 13 App. D. C., 86, 95.) (See *Trissell* v. *Thomas*, 109 O. G., 809; 23 App. D. C., 219, 223.) Moreover, Vogel, claiming to have conceived the invention July 8, 1900, did not construct a machine for use until April, 1901. Having constructed it and used it in manufacture in April, 1901, he delayed application for patent until May 28, 1902; and it was not until June, 1903, that he made an arrangement with a manufacturer to build machines and put them on the market.

Whether Burson's use of his machine in his factory for more than two years before applying for a patent, amounted to such public use within the meaning of section 4886, Revised Statutes, as to bar his right to a patent, is not a question which can be raised in this case which involves priority of invention as between him and Vogel. The question is one for the consideration of the Commissioner on the final allowance of a patent.

Burson having been shown, as we view the evidence, to have been the first to conceive the invention, as well as to reduce it to practice, is entitled to the award of priority. The decision of the Commissioner must therefore be reversed. It is so ordered, and the clerk will certify this decision to the Commissioner of Patents as the law requires. Reversed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., November 14, 1907.

Levy, Diamant, Oppenheimer & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Ainsworth Shoe Company, of 209-211 St. Clair street, Toledo, Ohio, for registration of a trade-mark and a trade-mark registered to Levy, Diamant, Oppenheimer & Company, of 107 Battery street, San Francisco, Cal., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Levy, Diamant, Oppenheimer & Company having been returned undelivered, notice is hereby given to the said Levy, Diamant, Oppenheimer & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 31, 1907.

The Kittredge Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Business Magazine Company, of Knoxville, Tenn., for registration of a trade-mark and a trade-mark registered to The Book-keeper Publishing Company, Limited, of 61 Fort street, Detroit, Mich., and a trade-mark registered to The Kittredge Company, of 800 Broad street, Newark, N. J., and 73 Reade street, New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said The Kittredge Company having been returned undelivered, notice is hereby given to The Kittredge Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 29, 1907.

Robert George, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The American Shoe Polish Company, of Chicago, Ill., for registration of a trade-mark and a trade-mark, No. 46,682, dated August 16, 1887, registered to Robert George, of Chicago, Ill. The notice of said declaration mailed by the Patent Office in the usual manner to the said Robert George at his known address, Chicago, Ill., has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the said Robert George, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six

consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 26, 1907.

Mayer Sam & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Palace Clothing Company, of 709-711 Kansas avenue, Topeka, Kans., for registration of a trade-mark and a trade-mark registered to Mayer Sam & Company, of 24 West One Hundred and Twenty-fifth street, New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Mayer Sam & Company having been returned undelivered, notice is hereby given to the said Mayer Sam & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 22, 1907.

Adams Packing Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Edward C. Flaccus, of Wheeling, W. Va., for registration of a trade-mark and a trade-mark registered to the Adams Packing Company, of Indianapolis, Ind., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Adams Packing Company having been returned undelivered, notice is hereby given to the said Adams Packing Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 16, 1907.

John A. Uhland, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of the Anti-Cori-Zine Chemical Company, of St. Louis, Mo., for registration of a trade-mark and a trade-mark registered to John A. Uhland, of Denver, Colo., and it appears from the record of the case that the registrant, John A. Uhland, cannot be located.

Notice is therefore hereby given to said John A. Uhland, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 14, 1907.

The Saint Paul Roller Mill Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Ralston Purina Company, of Eighth and Gratiot streets, St. Louis, Mo., for registration of a trade-mark and a trade-mark registered to The St. Paul Roller Mill Company, of St. Paul, Minn., and the notice of said declaration mailed by the Patent Office in the usual manner to the said The St. Paul Roller Mill Company having been returned undelivered, notice is hereby given to the said The St. Paul Roller Mill Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 12, 1907.

Reade Manufacturing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The Hewitt Brothers Soap Company, of Dayton, Ohio, for registration of a trade-mark and a trade-mark registered to the Reade Manufacturing Company, of Chicago, Ill., and it appears from the record of the case that the registrant, Reade Manufacturing Company, or its attorneys of record cannot be located.

Notice is therefore hereby given to said Reade Manufacturing Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 7, 1907.

J. Meyer & Company, their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of P. Raguet Fils & R. Vignes, of Troyes, France, for registration of a trade-mark and a trade-mark registered to J. Meyer & Company, of New York, N. Y., and it appears from the record of the case that the registrant, J. Meyer & Company, cannot be located.

Notice is therefore hereby given to said J. Meyer & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 4, 1907.

McCulloch & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Alart & McGuire, of 66 Madison street, borough of Manhattan, New York, N. Y., for registration of a trade-mark and a trade-mark registered to McCulloch & Company, of 88 Water street, New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said McCulloch & Company having been returned undelivered, notice is hereby given to the said McCulloch & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

[BY AUTHORITY OF CONGRESS.]

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Labels	12—No. 13,894 to No.	13,905, inclusive.
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Total	705	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	1	.....	New Jersey	22	6
Arizona Territory	1	.....	New Mexico Ter't'y	.....	.....
Arkansas	1	.....	New York	79	44
California	19	4	North Carolina	2	.....
Colorado	6	.....	North Dakota	3	.....
Connecticut	13	1	Ohio	38	11
Delaware	1	.....	Oklahoma	3	.....
District of Columbia	6	1	Oregon	2	.....
Florida	.....	.....	Panama	.....	.....
Georgia	1	.....	Pennsylvania	48	10
Hawaii Territory	1	.....	Philippine Islands	.....	.....
Idaho	.....	1	Rhode Island	3	3
Illinois	60	9	South Carolina	2	.....
Indiana	20	.....	South Dakota	2	.....
Iowa	14	1	Tennessee	.....	2
Kansas	4	1	Texas	9	2
Kentucky	6	5	Utah	.....	1
Louisiana	3	1	Vermont	1	.....
Maine	.....	2	Virginia	3	2
Maryland	11	1	Washington	8	.....
Massachusetts	45	6	West Virginia	5	.....
Michigan	16	2	Wisconsin	13	.....
Minnesota	8	.....	Wyoming	.....	.....
Mississippi	.....	.....	U. S. Army	1	.....
Missouri	13	7	U. S. Navy	.....	.....
Montana	3	.....			
Nebraska	8	.....	Total to citizens of the United States	510	123
Nevada	.....	.....			
New Hampshire	3	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	4	.....	Netherlands	.....	.....
Belgium	.....	.....	Newfoundland	.....	.....
Brazil	.....	.....	New South Wales	1	.....
British West Indies	.....	.....	New Zealand	1	.....
Canada	10	.....	Norway	.....	.....
Cape Colony	.....	.....	Persia	.....	.....
Chile	.....	.....	Queensland	.....	.....
China	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	1	.....	Scotland	1	.....
Denmark	.....	.....	South Australia	.....	.....
Ecuador	.....	.....	Spain	.....	.....
England	10	3	Sweden	2	.....
France	4	.....	Switzerland	6	.....
Germany	16	7	Transvaal, South Africa	.....	.....
Haiti	.....	.....	Victoria	1	.....
Ireland	2	.....	Western Australia	.....	.....
Italy	.....	.....			
Japan	.....	.....	Total to citizens of foreign countries	60	10
Java	.....	.....			
Mexico	1	.....			

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 22, 1907.

Adams Packing Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Edward C. Flaccus, of Wheeling, W. Va., for registration of a trade-mark and a trade-mark registered to the Adams Packing Company, of Indianapolis, Ind., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Adams Packing Company having been returned undelivered, notice is hereby given to the said Adams Packing Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

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EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 16, 1907.

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EDWARD B. MOORE, *Commissioner.*

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business November 19, 1907.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
303	XVII. Linotyping; Printing; Matrix-Making; Nut and Bolt Locks; Clutches.	Nov. 5	Oct. 19	185
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Toilet; Signals; Garment-Supporters.	Nov. 5	Aug. 30	634
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Oct. 30	Sept. 19	249
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Towers; Iron Structures.	Oct. 23	Oct. 21	233
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Oct. 23	July 26	454
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Oct. 22	Oct. 4	315
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Measuring Instruments; Wind-Wheels; Engraving.	Oct. 21	Oct. 16	337
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Fishing and Trapping; Stationery; Stone-Working; Educational Appliances.	Oct. 19	Sept. 26	437
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants and Flowers.	Oct. 17	Sept. 24	289
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Oct. 15	Oct. 12	219
147	XXIX. Coopering; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking-Tools; Woodworking; Fire-Escapes; Ladders.	Oct. 15	Sept. 12	389
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electricity, Medical and Surgical; Electric Signaling; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas and Canes.	Oct. 15	Aug. 30	322
172	XXXI. Alcohol; Charcoal and Coke; Ammonia, Water, and Wood Distillation; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Oils, Fats, and Glue; Water Purification; Mineral Oils.	Oct. 14	Sept. 30	277
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus; Harness.	Oct. 11	Sept. 10	354
332	X. Carriages and Wagons.....	Oct. 10	Sept. 11	544
152	XXX. Lamps and Gas-Fittings; Fluid-Pressure Regulators; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Oct. 9	Sept. 25	246
322	XII. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Oct. 9	Sept. 5	624
327	XVIII. Steam-Engines; Steam-Boilers; Steam-Engine Valves; Steam and Vacuum Pumps; Injectors and Ejectors.	Oct. 9	Aug. 10	290
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Oct. 8	Oct. 1	358
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Oct. 7	Oct. 3	388
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Oct. 3	Sept. 3	280
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Presses; Tobacco; Store-Service; Pneumatics.	Oct. 2	Sept. 3	322

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
167	V. Bookbinding; Harvesters; Jewelry; Music.	Oct. 2	Aug. 31	383
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Oct. 1	Aug. 27	374
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Oct. 1	July 8	541
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Sept. 30	Sept. 18	353
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Sept. 30	Aug. 9	539
308	XV. Bread, Pastry, and Confection Making; Coating; Laminated Sheets and Fabrics; Fuel; Glass; Hydraulic Lime and Cement; Paper-Making; Paving; Plastics; Plastic Block and Earthenware Apparatus; Plastic Compositions; Photography.	Sept. 24	Sept. 5	560
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Sept. 21	Sept. 3	547
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heat-Engine Plants.	Sept. 21	Aug. 26	645
238	XIX. Furnaces; Stoves and Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel.	Sept. 19	Aug. 9	478
142	IX. Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage; Air and Gas Pumps.	Sept. 18	Sept. 16	241
107	XXXVII. Electricity, Conductors; Electric Lighting; Electricity, General Applications.	Sept. 16	July 19	668
312	VII. Games and Toys; Mechanical Motors; Paper Manufactures; Velocipedes; Optics.	Sept. 12	Sept. 9	402
307	XIV. Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal-Ware Making; Tools; Wire-Working; Compound Tools.	Sept. 9	July 8	251
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Aug. 24	July 25	659
280	XL. Deposit and Collection Receptacles; Special Receptacles and Packages; Check-Controlled Apparatus; Fine Arts; Paper Receptacles; Package and Article Carriers; Wooden Receptacles; Baggage; Lighting-Fixtures; Cloth, Leather, and Rubber Receptacles.	Aug. 22	July 12	939
109	XVI. Telegraphy; Telephony.....	Aug. 14	June 10	668
321	XXXIX. Water Distribution; Baths and Closets.	Aug. 7	June 22	793
105	XXVI. Electricity, Generation; Electric Heating and Rheostats; Electric Railways; Motive Power.	Aug. 5	July 15	482
352	XLI. Railway Draft Appliances; Railway-Ties and Fasteners; Railway-Rails and Joints; Resilient Tires and Wheels.	July 16	June 10	1234

Total number of applications awaiting action 18,503

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS.			
	Trade-Marks.....	Nov. 18	Nov. 1	219
	Designs.....	Nov. 11	Oct. 16	45
	Labels and Prints.....	.....	.....	....

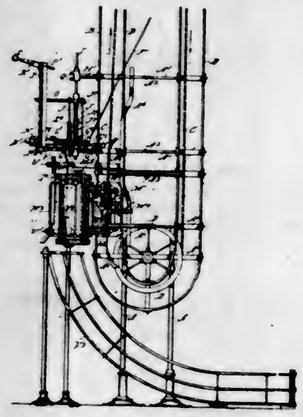
Notice.

Coupons unless properly filled out will not be accepted in payment for copies of publications.

PATENTS

GRANTED NOVEMBER 26, 1907.

871,768. CABLE CARRIER APPARATUS. GEORGE A. AMSDEN, Lowell, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J., a Corporation of New Jersey. Filed Nov. 27, 1905. Serial No. 289,200.



1. In a cable carrier apparatus, a track or way, an endless propelling cable adapted to be moved continuously along the line of said track or way, a carrier connected with said cable and movable along said track or way and having a clamp adapted to engage the receptacle or article to be conveyed, a pivoted holder for holding the receptacle or article and located out of the path of travel of said traveling clamp, mechanism operated by said carrier for swinging said holder into a position to coöperate with said traveling clamp, and means for opening said clamp as the carrier approaches said holder whereby said receptacle or article is engaged by said clamp and conveyed from said holder.

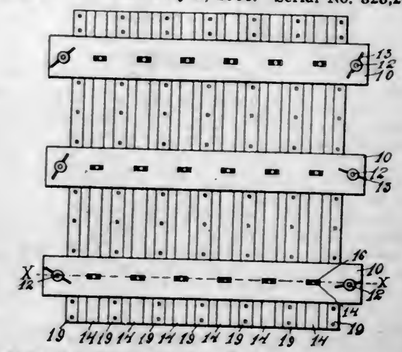
2. In a cable carrier apparatus, a track or way, an endless propelling cable adapted to be moved continuously along the line of said track or way, a carrier connected with said cable and movable along said track or way and having a clamp adapted to engage the receptacle or article to be conveyed, a pivoted holder for holding the receptacle or article and located out of the path of travel of said traveling clamp, mechanism operated by said carrier for swinging said holder into a position to coöperate with said traveling clamp, means for automatically locking said holder in the path of said traveling clamp, and means for opening said clamp as the carrier approaches said holder whereby said receptacle or article is engaged by said clamp and conveyed from said holder.

3. In a cable carrier apparatus, a track or way, an endless propelling cable adapted to be moved continuously along the line of said track or way, a carrier connected with said cable and movable along said track or way and having a clamp adapted to engage the receptacle or article to be conveyed, a pivoted holder for holding the receptacle or article and located out of the path of travel of said traveling clamp, mechanism operated by said carrier for swinging said holder into a position to coöperate with said traveling clamp, means for automatically locking said holder in said coöperating position, means for opening said clamp as the carrier approaches said holder whereby said receptacle or article is engaged by said clamp and conveyed from said holder, and hand-operated means for releasing and swinging said holder out of the path of traveling clamp, and automatic means for locking said holder in a non-operating position.

4. In a cable carrier apparatus, a track or way, an endless propelling cable adapted to be moved continuously along the line of said track or way, a carrier connected with said cable and movable along said track or way and having a clamp adapted to engage the receptacle or article to be conveyed, a pivoted holder for holding the receptacle or article and located out of the path of travel of said traveling clamp, mechanism arranged in different positions whereby a given carrier automatically releases a given holder to pick up a receptacle but not when passing others, and means for opening said clamp as the carrier approaches said given holder whereby said receptacle or article is engaged by said clamp and conveyed from said holder.

5. In a cable carrier apparatus, a track or way, an endless propelling cable adapted to be moved continuously along the line of said track or way, a carrier connected with said cable and movable along said track or way and having a clamp adapted to engage the receptacle or article to be conveyed, a rack or holder adapted to receive said receptacle or article, means for opening said clamp as the carrier approaches said rack or holder to permit the picking up of said receptacle, and automatic means for releasing said receptacle or article from said clamp, whereby said receptacle or article is received by said rack or holder.

871,769. VENEER-CLAMP. ALFRED A. ANDERSON, Jamestown, N. Y. Filed July 9, 1906. Serial No. 325,217.



1. A veneer clamp comprising a bar, holding means on said bar for the wood to be veneered, a bar each side of said first bar, flexible material, extending between said side bars, and means to compress said bars and flexible material together to clamp the veneer on the wood.

2. A veneer clamp comprising a series of bars, attaching means on said bars for the wood to be veneered, a second series of bars alternating said first series, flexible material attached to and extending between said second series, and means for compressing said first series and said flexible material to form a multiple clamp.

3. A veneer clamp comprising a series of bars movable

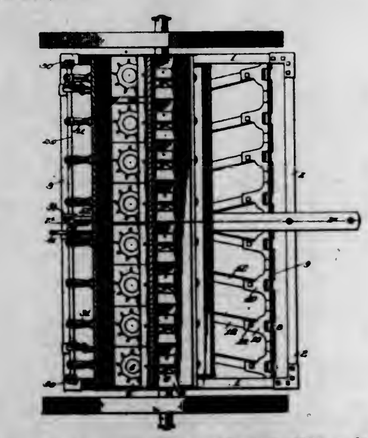
sidewise, attaching means on said bars for the wood to be veneered, a second series of bars movable sidewise and alternating said first series, flexible material attached to and extending between said second series, and means for compressing the two series together to form a compound multiple clamp.

4. A veneer clamp comprising upper and under supports and means of compression for said supports, a bar on said upper supports and means for attaching thereto the wood to be veneered, a bar on said under supports each side of said upper bar, and cloth attached to and extending between said under bars to compress the veneer on to the wood to be veneered.

5. A veneer clamp comprising upper and under supports and means for compressing said supports together, a bar on one of said supports to receive the wood to be veneered, a bar on the other support each side of the said first bar, flexible fibrous material attached to and extending between said bars on the second support, and strips beneath said flexible material to reduce the space between said bars, substantially as and for the purpose specified.

[Claims 6 to 12 not printed in the Gazette.]

871,770. GRAIN-DRILL. ALBERT ARMITAGE, Fairport, and WILLIAM P. THISTLETHWAITE, Macedon, N. Y., assignors to Ontario Drill Company, Despatch, N. Y., a Corporation of New York. Filed Apr. 24, 1905. Serial No. 257,053.



1. In a grain drill, the combination with a frame and a transversely extending draw shaft thereon, of heads on the shaft, having arms extending rearwardly from the heads and at an angle other than a right angle to the shaft straight bars secured to said arms and tools supported on the bars.

2. In a grain drill, the combination with a frame and a transversely extending draw shaft thereon, of heads on the shaft, having arms extending rearwardly from the heads and at an angle to the shaft, bars secured to the arms and being arranged so that those at one side of the center of the shaft converge toward those at the other side and tools on the bars.

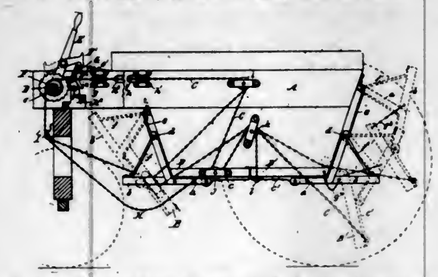
3. In a grain drill, the combination with a frame and a transversely extending draw shaft thereon, of heads disposed equidistantly on said shaft having ends extending rearwardly at an angle other than a right angle, bars attached to said ends, said bars at one side of the center of the shaft converging toward those at the other side and tools mounted on the rear sides of the bars.

4. In a grain drill, the combination with a frame, a draw bar thereon and a head pivoted on the bar, of a rearward extension on the head composed of top and side portions, disposed at an angle to each other, an L-shaped tool bar fitting said angle and secured to the extension and a tool on the bar.

5. In a grain drill, the combination with a frame, a draw bar thereon and a head pivoted on the bar, of an angular tool bar comprising top and side portions connected to the head and a tool secured to the side portion of the bar having a projection extending over the top thereof.

[Claims 6 to 14 not printed in the Gazette.]

871,771. DUMP-WAGON. WILLIAM ATKINS, Auburn, N. Y. Filed Mar. 12, 1906. Serial No. 305,630.



1. In a dump-wagon, a wagon-body having bottom drop-doors, mechanism to raise said doors comprising a drum journaled on the wagon-body, a ratchet wheel on the drum, a dog to engage therewith, a pivoted link connected to said dog, a lever, and a hooked pawl to engage the link.

2. In a dump-wagon, a wagon-body having bottom drop-doors, mechanism to raise said doors comprising a drum journaled on the wagon-body, a ratchet wheel on the drum, a dog to engage therewith, a pivoted link connected to said dog, a spring attached to the wagon-body and the link, a lever, and a hooked pawl on the lever to engage the link.

3. In a dump wagon, a wagon body, a drop door for said body, elbow shaped arms having the portion on one side of said elbow secured to said door, straight bars secured to said elbow arms and extending beyond the said door, and braces connecting the unsecured ends of said bars, substantially as described.

4. In a dump wagon, a wagon body, a drop door for said body, elbow shaped arms having the portion on one side of the elbow secured to the door with the other part projecting beyond the door, straight bars secured to said elbow arms and extending beyond said door, braces connecting the unsecured ends of said bars and a guide on the wagon body, said construction including means at the point of the junction of the braces and elbow shaped arms for engaging said guides, substantially as described.

5. In a dump-wagon, a wagon-body having a bottom drop-door, hinged connections between the wagon-body and drop-door comprising elbow shaped arms, bars projecting beyond the wagon-body and to which the elbow shaped arms are bolted, and braces between said bars and the upper end of the elbow shaped arms.

[Claims 6 and 7 not printed in the Gazette.]

871,772. SEALING FOR ELECTRIC APPARATUS. JAMES R. BAKER, Arlington, N. J., assignor to Cooper Hewitt Electric Company, New York, N. Y., a Corporation of New York. Filed Mar. 31, 1905. Serial No. 253,100.

1. A seal for vacuum apparatus, consisting of a plug fitting within the seal-off cavity, and means for securing the same in position.

2. A seal for vacuum apparatus, consisting of a rigid plug fitting within the seal-off cavity, and means for securing the same in position.

3. The combination with the seal-off projection of an inclosing chamber for apparatus, of a rigid body held within the seal-off cavity.

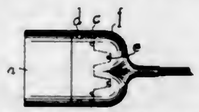
4. The combination with the seal-off projection of an inclosing chamber for apparatus, of a body held within the seal-off cavity.



5. The combination with the seal-off of a mercury vapor apparatus, of a shock-resisting body located within the seal-off cavity, and a wire passing through the wall of the vessel and holding the same in position.

[Claim 6 not printed in the Gazette.]

871,773. SHOVEL. ALBERT E. BAUM, Waterloo, Iowa. Filed Mar. 25, 1907. Serial No. 364,259.

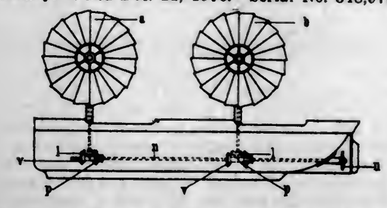


1. A shovel having a shank-piece provided with a detachable blade, said blade having projections, and said shank-piece having slots, said projections registering with and being secured within said slots.

2. A shovel having a shank-piece provided with a detachable blade, said blade having projections, and said shank-piece having slots for the reception of said projections, said projections then being secured to said shank-piece to prevent displacement of said blade in any direction.

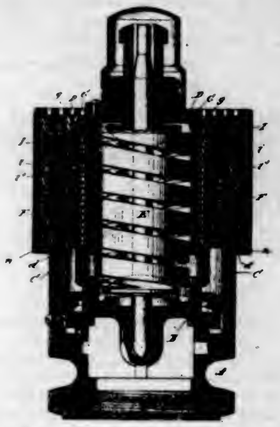
3. A shovel having a shank-piece, and a detachable blade having projecting tongues covering the parts of the under side of the shank-piece most exposed to wear, and means for detachably securing said blade to said shank-piece.

871,774. SHIP PROPULSION. PAUL H. BELITZ, Stettin, Germany. Filed Dec. 21, 1906. Serial No. 348,974.



The combination with a vessel of pairs of wind motors placed side by side, a transverse shaft supporting each pair of motors and revolved thereby, vertical shafts adapted to transmit motion from the said transverse shafts, a plurality of horizontal shafts in operative connection with the vertical shafts and a propeller on the end of each horizontal shaft.

871,775. MUFFLER. FREDERICK C. BLANCHARD and ERNEST B. CROCKER, Bridgeport, Conn., assignors to The Consolidated Safety Valve Company, a Corporation of Connecticut. Filed July 22, 1907. Serial No. 384,898.



1. In a muffler, a shell provided with an inlet and an outlet and a muffling element, inclosed in and substantially filling the shell, consisting of layers of apertured sheet metal laid parallel to the course of gases passing from the inlet to the outlet and formed with shelves standing out at an angle from the layers of sheet metal.

2. In a muffler, a shell provided with an inlet and an outlet and a muffling element, inclosed in and substantially filling the shell, consisting of layers of apertured sheet metal laid parallel to the course of gases passing from the inlet to the outlet and formed with shelves standing out at an angle from the sheet metal layers, the shelves also inclined to the axis of the shell.

3. In a muffler, a shell provided with an inlet and an outlet and a muffling element, inclosed in and substantially filling the shell, and consisting of a helically coiled apertured metal sheet formed with shelves standing out at an angle from the sheet, the axis of the coil substantially parallel to the course of the gases passing from the inlet to the outlet.

4. In a muffler, a shell provided with an inlet and an outlet and a muffling element, inclosed in and substantially filling the shell, and consisting of a helically coiled apertured metal sheet formed with shelves standing out at an angle from the sheet, the axis of the coil substantially parallel to the course of gases passing from the inlet to the outlet, the said shelves also inclined to the axis of the coil.

5. In a muffler, a shell provided with an inlet and an outlet and a muffling element, inclosed in and substantially filling the shell, consisting of layers of apertured sheet metal laid parallel and formed with shelves standing out an angle from the sheet metal layers.

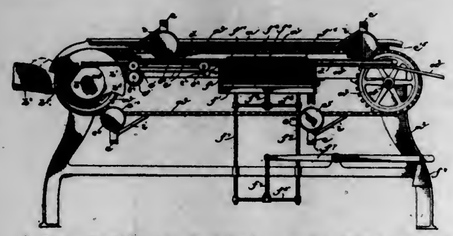
[Claims 6 to 8 not printed in the Gazette.]

871,776. LABELING-MACHINE. EDITH E. L. BOYER, Dayton, Ohio. Filed Oct. 16, 1905. Serial No. 283,038.

1. In a machine as described, article feeding and label applying devices, an oscillating frame, an endless paste belt mounted in said frame, a paste receptacle, a paste roller located therein and transmitting a coating of paste to said endless belt, substantially as specified.

2. In a machine as described, article feeding and label applying devices, an endless paste belt, a paste reservoir means for transmitting to said belt a coating of paste, means to permit the raising and lowering of a portion of said endless bent whereby a greater or less portion of the belt will be brought into contact with the article to be pasted, substantially as specified.

3. In a machine as described, a main frame, feeding, and pasting devices, label applying devices, a traveling carrier, article engaging devices on said carrier, comprising a frame member, lateral projections thereon, ways in the main frame, into which said lateral projections extend, rollers, the shaft of which are mounted in said projecting portions, cam surfaces in said ways to cause said rollers to approach or recede from each other, substantially as specified.

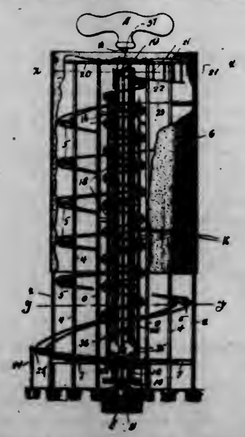


4. In a machine as described, a main frame, ways in said frame, paste and label applying devices, article engaging device comprising a main frame, portions thereon projecting into said ways in the main frame, rollers, the shafts of which are mounted in the respective projecting portions, a disk of tenacious material secured to one of said rollers and a laterally compressible disk secured to the other roller, and means for moving said rollers in their relation to each other, substantially as specified.

5. In a machine as described, a main frame, ways in said frame, paste and label applying devices, article engaging devices comprising a main frame, projecting portions thereon, extending into said ways, a block severed from but forming an extension of one of said projecting portions, rollers, the shafts of which are mounted in said projecting portions, the shaft of one of said rollers being secured to and longitudinally movable with said block, cam surfaces on the main frame to engage and move said block, substantially as specified.

[Claims 6 to 11 not printed in the Gazette.]

871,777. AMUSEMENT DEVICE. WILLIAM J. BROWNE, Pittsburg, Pa. Filed Mar. 27, 1907. Serial No. 364,805.



1. In an amusement device, the combination with a foundation, of metallic standards supported thereby and circumferentially arranged in sets, a housing supported by some of said standards, a grooved pulley revolubly mounted upon said foundation, a plurality of circumferentially arranged standards carried thereby, a spiral track or screw carried by said standards, a spiral gravity track way supported by sets of standards and having its ends terminating in close proximity to the upper and lower ends of said spiral track or screw, a track suspended from the top of said device, and having its ends terminating adjacent to the upper ends of said spiral track ways, a car or chariot adapted to be elevated by the track way or screw and descend upon said gravity track way, and means arranged adjacent to said spiral track way or screw for guiding the upward movement of said car or chariot.

2. In an amusement device, the combination with a foundation, of standards supported thereby, a housing carried by said standards, a plurality of circumferentially arranged standards mounted for rotation upon said foundation, a spiral track or screw carried by said standards, a spiral track supported by the first mentioned standards and having its ends terminating adjacent to the upper and lower ends of said track or screw, a car or chariot adapted to be elevated by said track or screw, means mounted adjacent to said circumferentially arranged standards for guiding the upward movement of said car or chariot, and means for transferring said car or chariot from said track or screw to said gravity track.

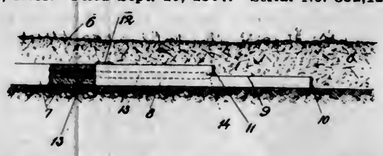
3. In an amusement device, the combination with a foundation, of standards carried thereby, a housing supported by said standards, a plurality of circumferentially arranged standards mounted for rotation upon said foundation, a spiral track carried by said standards, a gravity track supported by the first mentioned standards and having its ends terminating adjacent to the ends of said spiral track, a car or chariot adapted to be elevated by said spiral track, means to guide the elevation of said car or chariot, and means to transfer said car or chariot from the upper end of said spiral track and said gravity track.

4. An amusement device consisting of a foundation, standards supported thereby, a housing inclosing the upper part of said standards, a spiral gravity track supported by said standards, a spiral track or screw mounted for rotation within said gravity track, a car or chariot adapted to be elevated by said spiral track or screw, means to guide the elevation of said car or chariot, and means to transfer said car or chariot from said spiral track or screw to said gravity track.

5. An amusement device embodying circumferentially arranged standards, a housing partially inclosing said standards, a spiral track or screw mounted for rotation within said standards, a gravity track supported by said standards, and surrounding said spiral track or screw, a car or chariot adapted to be elevated by said spiral track or screw, means to guide the elevation of said car or chariot, means to transfer said car or chariot from said spiral track or screw to said gravity track, and means to rotate said spiral track or screw.

[Claims 6 to 15 not printed in the Gazette.]

871,778. CEMENT-PIPE MOLD. ELLIS W. BUSER, Dawson, Nebr. Filed Sept. 10, 1907. Serial No. 392,128.

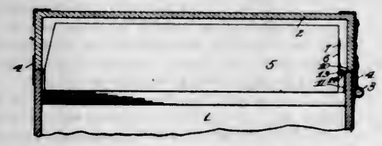


1. A pipe mold comprising front and rear sections connected together, and formed of side pieces and open at top and bottom, the front section having space for the lower part of the pipe and the rear section having space for the upper part of the pipe, and a core supported within the rear section.

2. A pipe mold adapted to be drawn along lengthwise for continuous operation, and comprising side boards having space therebetween at the front end for the lower half of the pipe and at the rear end for the upper half of the pipe, forming front and rear sections, a cross piece between the boards at the front end of the rear section, and a core extending lengthwise in the rear section and supported at its front end on said cross piece.

3. A pipe mold comprising side boards reduced at the middle to form front and rear sections, the front section being half the height of the rear section, whereby the lower half of the pipe may be molded in the front section and the upper half in the rear section, a cross piece at the front end of the rear section, and a core fixed at its front end to the cross piece and extending rearwardly therefrom through the rear section.

871,779. TRUNK-TRAY HINGE. JOHN J. CANNAN, Rochester, N. Y. Filed Aug. 5, 1905. Serial No. 272,870.



1. The combination with a trunk, a cover therefor, a tray and supports within the trunk below the upper edge thereof, of a hinge forming a pivotal connection between the tray and trunk embodying a member secured to the side of the tray and a second member pivoted to the first above the bottom of the tray having downwardly-depending legs straddling the edge of the trunk, the inner leg being longer than the outer and arranged to rest against the side of the tray said member being pivotally connected to the first member on the side of its longer leg to guide the legs of the last mentioned hinge member into cooperative relation with the edge of the trunk when the tray is inserted within the latter.

2. The combination with a trunk, a hinged cover for the trunk, and a trunk tray, of a hinge secured to the tray and embodying a member adapted to straddle the upper edge of the trunk and to be held thereto by the engagement of the edge of the cover therewith.

871,780. NON-REFILLABLE BOTTLE. EDWARD M. CARD, Middlefield, Conn. Filed Oct. 6, 1905, Serial No. 281,688. Renewed Apr. 20, 1907. Serial No. 369,407.

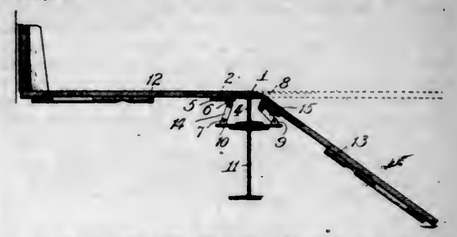


1. A bottle having a neck provided with a passage, and having a valve chamber at the inner end of the neck, a valve seat formed in the chamber, and a valve operable in the latter and provided with a compressible head adapted to close upon the seat and of greater diameter than the passage.

2. A bottle having a neck provided with a passage, and having a valve chamber at the inner end of the neck, a valve seat within the chamber and a compressible disk valve designed to rest upon the seat within the chamber and of greater diameter than the passage.

3. A bottle having a neck provided with a passage, a web disposed in the bottle at the inner end of the neck and spaced from the latter to form a chamber, said web being provided with an opening, and a compressible valve disposed in the chamber for closing said opening, said valve being of greater diameter than the passage in the neck.

871,781. DUMP-CAR. WILLIAM A. CASWELL, Chicago, Ill., assignor to National Dump Car Company, a Corporation of Maine. Filed Dec. 31, 1906. Serial No. 350,200.



1. A car of the class described, having a flat and level floor composed of doors and flexible plates connected to the doors, the movement of the doors being permitted by the bending of the plates.

2. In a car of the class described, a pair of doors connected by a flexible plate, the doors and plate forming a smooth uninterrupted floor from one side of the car to the other.

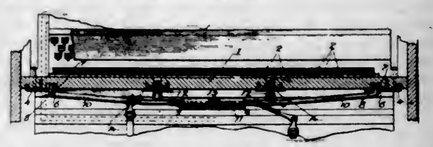
3. In a car of the class described, a pair of doors spaced apart at the center and connected by a flexible plate so countersunk in the doors as to provide a smooth unbroken floor from one side of the car to the other.

4. In a car of the class described, a pair of doors connected by a flexible plate, and a saddle having a curved surface adapted to co-act with the metal plate.

5. In a car of the class described, a pair of doors each connected to the body of the car and connected to each other by a flexible plate.

[Claims 6 to 8 not printed in the Gazette.]

871,782. PIANO. MELVILLE CLARK, Chicago, Ill. Filed Aug. 1, 1906. Serial No. 328,654.



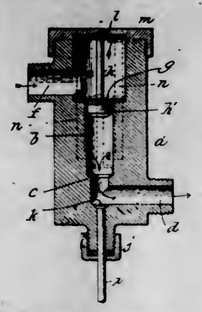
1. In a piano, in combination with the key table, anchor plates engaged in the under side of the table near the opposite ends; truss rods hooked into said anchor plates; symmetrically disposed strut posts projecting from the under side of the table over which said truss rods respectively extend toward the middle; means for connecting and straining the truss rods.

2. In a piano, in combination with the key-table and the manual keys mounted thereupon, truss-rods anchored at their remote ends in the under side of the key-table near the ends of the latter; means connecting their proximate ends adapted for drawing them together, and strut-posts projecting from the under side of the key-table against whose lower ends the truss-rods bear, said strut-posts having threaded seats in the key-table and adapted to be screwed into and out of them to change their protrusion against the truss-rods.

871,783. GAS-PIPE SAFETY DEVICE. IRVIN L. CLEVELAND, Fremont, Ohio. Filed Apr. 25, 1907. Serial No. 370,306.

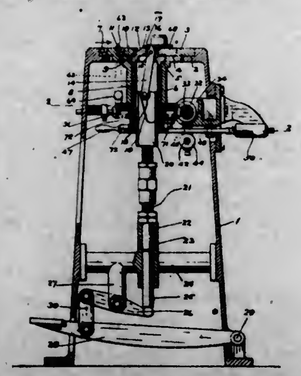
1. In a safety device of the class set forth, a casing having a vertical gas passage divided into an upper and lower chamber by a transverse diaphragm, an inlet passage leading its full diameter into the upper chamber at a point above its bottom, and an outlet leading out of the lower end of the lower chamber, this lower chamber being provided with a valve seat at its lower end, a valve adapted to

seat against said seat and provided with a stem passing loosely up through said diaphragm and having a floating controlling disk attached to the upper end of said stem, said disk being adapted to normally rest below and to move up and down entirely across said inlet passage, said casing being provided with a series of passages extending from the upper end of the upper chamber down into the lower chamber at a point above the valve seat, these passages opening into said upper chamber at various points in the circumference thereof, and a push pin working up through the bottom of the casing for the purpose set forth.



2. In a safety device of the class set forth, a casing having a vertical gas passage divided into an upper and a lower chamber by a transverse diaphragm, an inlet passage opening its full diameter into the upper chamber at a point above the diaphragm, and an outlet leading out of the lower end of the lower chamber, this lower chamber being provided with a valve seat at its lower end, a valve seated against said seat and provided with a stem passing loosely up through said diaphragm and having a floating controlling disk attached to the upper end of said stem, said disk being adapted to move up and down across said inlet passage and to normally rest below the same when the valve is seated, said casing being provided with a series of downtake passages extending from the upper end of the upper chamber down into the lower chamber to a point above the valve seat, the inlet ends of these passages being connected to said upper chamber at various points in the circumference thereof.

871,784. CHAIN-MAKING MACHINE. ZORESTER B. COBB and ROBERT F. SCOTT, Philadelphia, Pa., assignors to Edwin Harrington, Son & Co., Inc., Philadelphia, Pa. Filed Oct. 1, 1906. Serial No. 336,836.



1. In a machine of the class described, a revoluble device having means for holding a blank, means coacting with said device for bending said blank in revolving it in one direction, and automatic mechanism whereby said device is revolved alternately in opposite directions.

2. In a machine of the class described, a revoluble device having means for holding a blank, means coacting with said device for bending said blank in revolving it in one direction, mechanism for revolving said device alternately in opposite directions, and means for automatically reversing the movements of said device.

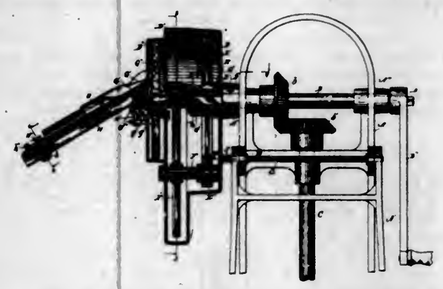
3. In a machine of the character described, a stationary table, a blank holding device revoluble therein, a revoluble shaft, mechanism whereby said shaft revolves said device, means including clutching devices for driving said shaft in opposite directions, and means for automatically engaging and disengaging the respective clutching devices alternately to revolve said holding device in alternate directions.

4. In a machine of the character described, a revoluble blank holding mechanism, a revoluble shaft, gearing whereby said shaft is engaged with and revolves said mechanism, devices normally loose on said shaft for revolving it in opposite directions, clutching mechanisms for alternately engaging the respective devices to said shaft, and means for engaging said clutching mechanisms alternately.

5. In a machine of the class described, a revoluble blank holding device, a worm wheel fixed thereto, a shaft, a worm on said shaft engaging said worm wheel, devices for revolving said shaft in opposite directions, clutches for alternately engaging and disengaging the respective devices with relation to said shaft, mechanism connecting the clutches so that each is disengaged by the engagement of the other, and mechanism operated by said worm wheel for shifting the clutch operating mechanism.

[Claims 6 and 7 not printed in the Gazette.]

871,785. GRINDING-MACHINE. EUGENE COOK, Kalamazoo, Mich. Filed Nov. 16, 1905. Serial No. 287,685.



1. The combination of a standard; a power-shaft arranged transversely thereon, a projecting bearing for said shaft having a spirally arranged groove therein; a casing D having an outwardly projecting annular sleeve-like flange thereon, adapted to receive the said projecting bearing, said flange having an inwardly projecting pin arranged thereon to engage the said spiral groove; a bearing in said casing arranged in alinement with the said flange thereon; a gear E′ having a hub E mounted in said bearing in said casing, said hub being arranged to receive the end of said crank shaft; a shaft F arranged in the lower portion of said casing; a pinion E″ thereon arranged to mesh with said gear E′; a gear F′ mounted on said shaft F; a grinding wheel shaft G; a bearing in said casing for the inner end thereof; a grinding wheel mounted on said shaft G; and a casing G″ for said grinding wheel secured upon the side of said casing D, having a bearing for the outer end of said grinding wheel shaft, all coacting for the purpose specified.

2. The combination of a standard; a power-shaft; a projecting bearing for said shaft, having a spirally arranged groove therein; a casing having an outwardly projecting annular sleeve-like flange thereon adapted to receive the said projecting bearing, said flange having an inwardly projecting pin thereon arranged to engage the said spiral groove; a bearing in said casing arranged in

alinement with the said flange thereon; a driven gear mounted in said bearing in said casing, arranged to receive the end of said crank-shaft; a grinding wheel shaft; a bearing in said casing for the inner end thereof; a grinding wheel mounted on said shaft; a train of multiplying gear connecting said driven gear to said grinding wheel, arranged in said casing; and a casing D″ for said grinding wheel secured upon the side of said casing D, having a bearing for the outer end of said grinding wheel shaft, said casing having an opening in the side thereof, all coacting for the purpose specified.

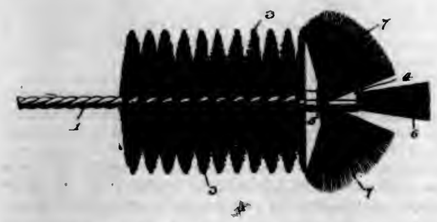
3. The combination of a standard; a power shaft; a projecting bearing for said shaft, having a spirally arranged groove therein; a casing having an outwardly projecting annular sleeve-like flange thereon adapted to receive the said projecting bearing, said flange having an inwardly projecting pin thereon arranged to engage the said spiral groove; a bearing in said casing arranged in alinement with the said flange thereon; a driven gear mounted in said bearing in said casing, arranged to receive the end of said crank shaft; a grinding wheel; and a train of multiplying gear connecting said driven gear to said grinding wheel, arranged in said casing, all coacting for the purpose specified.

4. The combination of a standard; a power shaft; a casing; a driven gear adapted to receive the end of said power shaft, arranged in said casing; means for detachably securing said casing to said standard; a grinding wheel, and a train of multiplying gears also mounted in said casing for connecting said grinding wheel to said driven gear, for the purpose specified.

5. The combination with a casing, of a driven gear arranged therein; a shaft F arranged in the lower portion of said casing; a pinion E″ arranged to mesh with said driven gear; a gear F′ mounted on said shaft F; a grinding wheel shaft G; a bearing in said casing for the inner end thereof; a grinding wheel mounted on said shaft G; and a casing D″ for said grinding wheel, secured upon the side of said main casing, having a bearing for the outer end of the grinding wheel shaft and a hinged cover portion, for the purpose specified.

[Claim 6 not printed in the Gazette.]

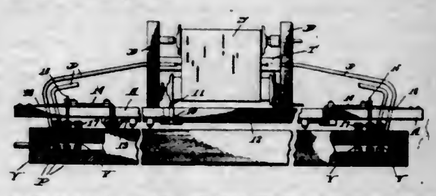
871,786. BOTTLE-BRUSH. HARRY COOPERMAN, Philadelphia, Pa. Filed Jan. 30, 1906. Serial No. 298,599.



1. In a brush, a core, a tube having an opening in the side wall thereof, bristles projecting through said opening and from between the inner wall of the tube and the outer face of the core, on one side of said opening; and bristles projecting through said opening and from between the inner wall of the tube and the outer face of the core on the other side of said opening, whereby the mass of bristles is caused to assume a flaring, spiral-like form, substantially as described.

2. In a brush, a core, a tube having an opening in the side wall thereof, bristles projecting through said opening and from between the inner wall of the tube and the outer face of the core, on one side of said opening; bristles projecting through said opening and from between the inner wall of the tube and the outer face of the core on the other side of said opening, whereby the mass of bristles is caused to assume a flaring, spiral-like form, and a bunch of bristles extending out through one end of the tube, substantially as described.

871,787. NARROW-MUSIC-SHEET ATTACHMENT FOR MUSICAL INSTRUMENTS. THOMAS DANQUARD, New York, N. Y., assignor to Autopiano Company, New York, N. Y., a Corporation of New York. Filed May 26, 1905. Serial No. 262,423.



1. In a music playing device, the combination of primary pneumatics, the puppets controlled thereby and means for holding in inoperative position the puppets corresponding to notes beyond the range of the music sheet which it is desired to use.

2. In a music playing device, the combination of primary pneumatics, the puppets controlled thereby, two sets of connections for holding in inoperative condition the puppets corresponding to the bass and treble notes respectively which are beyond the range of the music sheet which it is desired to use, and means for operating said sets of connections from a single setting handle.

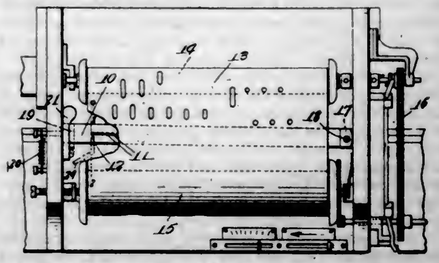
3. In a music playing device, the combination of primary pneumatics, the puppets controlled thereby, a locking plate, means for normally holding up the locking plate and means for moving the locking plate down into engagement with the puppets corresponding to notes which are beyond the range of a music sheet which it is desired to use.

4. In a music playing device, the combination of primary pneumatics, puppets controlled thereby, a locking plate, means for normally holding the locking plate out of operative position, a rock-shaft connected to move the locking plate and a setting handle for tipping the rock-shaft to operate the plate to hold the puppets from operating, which correspond to notes beyond range of the music sheet which it is desired to use.

5. In a music playing device, the combination of primary pneumatics, puppets controlled thereby, a locking plate for certain of the puppets, a spring normally holding the locking plate out of operative position, a rock-shaft for setting the locking plate, a slide wire and a setting handle for operating the slide wire.

[Claims 6 to 12 not printed in the Gazette.]

871,788. MODULATING ATTACHMENT FOR AUTOMATIC MUSICAL INSTRUMENTS. THOMAS DANQUARD, New York, N. Y., assignor to Autopiano Company, New York, N. Y., a Corporation of New York. Filed July 24, 1905. Serial No. 270,935.



1. In an automatic musical instrument, the combination of a movable tracker having a series of channels and a supplemental channel, means for moving the tracker from normal position, and means whereby the supplemental channel is normally closed, but is opened when the tracker is moved from normal position.

2. In an automatic musical instrument, the combination

of a tracker having a series of channels and a supplemental channel, means for moving the tracker from normal position, and a valve which is closed when the tracker is in normal position for cutting off the supplemental channel.

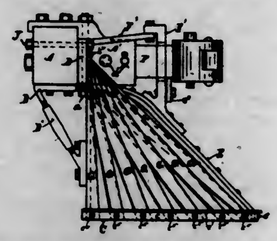
3. In an automatic musical instrument, the combination with the wind-chest, main wind-trunk, and action of a tracker having a series of channels and a supplemental channel, means for closing the supplemental channel when the tracker is in normal position, a regulating device controlled from the supplemental channel and comprising a primary pneumatic, valves operable by the primary pneumatic, an operating pneumatic controlled by said valves, and a shut-off valve controlled from said operating pneumatic and normally cutting off direct wind connection between the wind chest and the main wind trunk leading to the action, but which is opened to provide direct wind connection for striking desired accented notes.

4. In an automatic musical instrument, the combination of a tracker having a series of channels "skewed" relatively to the line of travel of the music sheet, and having a supplemental channel with regulating devices controlled from the supplemental channel to admit direct pressure for striking notes which it is desired to accent.

5. In an automatic musical instrument, the combination of a tracker having a series of channels "skewed" relatively to the line of travel of the music sheet, and having a supplemental channel, a primary pneumatic controlled from the supplemental channel, and an operating pneumatic controlled from the primary pneumatic to open a direct wind-way connection for striking notes which it is desired to accent.

[Claims 6 to 13 not printed in the Gazette.]

871,789. LOCOMOTIVE-PILOT. HARRY J. DEAN, Meadville, Pa. Filed Apr. 12, 1907. Serial No. 367,883.



1. In a locomotive pilot, a pilot-plate composed of two sections, adapted to be secured to the bumper-beam of a locomotive on each side of the draw-bar casting, a bottom frame suspended from said pilot plates, a nose-piece secured in the front of said bottom-frame and to the draw-bar casting, and slats secured to the pilot plates by means of ears on the upper ends thereof, and to the bottom frame by means of horizontal bolts or rivets, substantially as described.

2. In a locomotive pilot, pilot plates adapted to be secured to the bumper-beam of a locomotive, on each side of the draw-bar casting, a bottom frame suspended therefrom by supporting bars, a nose-piece secured in the point of the bottom frame, and adjustably secured to the draw-bar casting, slats secured to said pilot plates and to the bottom frame, and adjustable braces under the bumper-beam and backs of the supporting bars, substantially as set forth.

3. In a locomotive pilot, a pilot plate composed of two sections, adapted to be secured to the bumper-beam of a locomotive on each side of the draw-bar casting, vertical supporting bars depending therefrom, a triangular bottom frame secured to said supporting bars, a nose-piece secured to the point of said triangular frame, and adjustably secured to the draw-bar casting, slats adapted to be secured to the pilot plates and to the front sides of said triangular frame, and adjustable braces between the under side of the bumper-beam and the rear side of the supporting bars, substantially as set forth.

4. In a locomotive pilot, a triangular bottom frame composed of a continuous band of metal, a flange along the upper edge of the two front sides thereof, and braces leading from the central portion of each front side to the central portion of the rear side of said frame, substantially as set forth.

5. In a locomotive pilot a triangular bottom frame composed of a continuous metal band, having a slot or groove on the upper side thereof adjacent to the two front sides thereof, substantially as set forth.

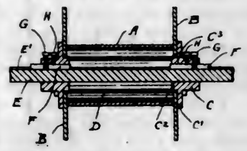
[Claims 6 to 9 not printed in the Gazette.]

871,790. PAINT AND VARNISH REMOVER. JOHN F. DICKSON, Binghamton, N. Y. Filed Mar. 8, 1907. Serial No. 361,376.

1. A paint and varnish remover containing acetone, benzol, toluol and pulverized alum, in substantially the proportions specified.

2. A paint and varnish remover consisting of one part of pulverized alum and three parts of a mixture consisting of 8 parts of acetone, two parts of benzol and two parts of toluol, substantially as specified.

871,791. SAND-LINE REEL FOR DEEP-WELL-DRILLING MACHINERY. HOMER D. FIDLER, Muncie, Ind. Filed May 9, 1907. Serial No. 372,727.



1. The combination of a reel-shaft having a key-seat therein, a sand-line reel comprising a pair of hubs having grooves therein to register with the said key-seat, annular side plates adapted to reside with their faces against the said hubs, a drum having its ends finished so as to engage the interior faces of said side-plates, bolts positioned inside of said drum to pass through said side-plates and the said hubs and to tighten and retain the said hubs, side-plates and drum rigidly together the set screws H and G in the said hubs to pass into the said grooves therein, a pair of keys each having the aperture F^1 and the depression F^2 adapted to receive said set-screws respectively, substantially as described.

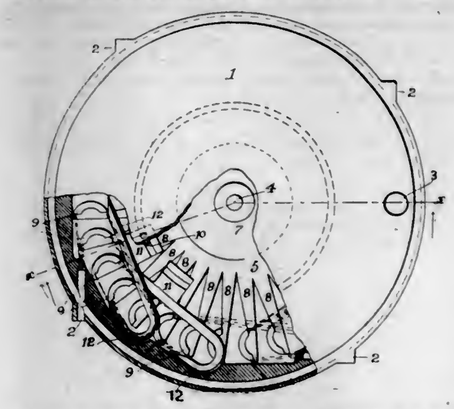
2. In a device of the kind described the combination of a reel-shaft having a key-seat therein, a sand-line reel having its hubs provided with grooves to register with the said key-seat, set-screws in said hubs, keys to engage said grooves and key-seat each of said keys having a depression and an aperture therein to receive said set screws in the manner and for the purpose substantially as set forth.

871,792. TURBINE-ENGINE. WILLIAM J. FRANCKE, Bridgeport, Conn. Filed Mar. 5, 1907. Serial No. 360,664.

1. In an elastic fluid turbine, a casing having inlets and an exhaust, a wheel carrying peripheral buckets, and return buckets of U-shape adjustably secured to the casing sides and disposed to have one end lie adjacent said first named buckets.

2. In combination with a casing having inlets and an outlet, a wheel carrying double peripheral buckets, and return buckets on opposite sides of said wheel supported from the casing sides.

3. In an elastic fluid turbine, the combination of a suitable casing provided with steam inlets and an exhaust, a double wheel journaled within said casing, the inclined buckets carried in pairs on opposite sides of said wheel, and the inclined return buckets secured to the casing sides on opposite sides of the side faces of the wheel and so located as to receive the exhaust steam from the lower ends of the wheel buckets and deliver the said steam into the upper ends of succeeding wheel buckets.

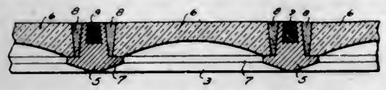


4. In an elastic fluid turbine, the combination of a suitable casing provided with inlets and an exhaust, a wheel carrying at its periphery double arcuately disposed inclined buckets which receive the fluid tangentially at the periphery of the wheel and exhaust it tangentially nearer the center of the wheel, and the double inclined return buckets which receive the exhaust steam from the wheel buckets and deliver the same to the outer extremities of the wheel buckets at the periphery of the wheel.

5. In combination with a casing having an inlet and an exhaust, a wheel composed of two disks, buckets on said disks, said disks being formed with spokes having their backs extended to form the inner sides of said buckets.

[Claims 6 to 19 not printed in the Gazette.]

871,793. ILLUMINATING-TILE. JAMES B. FRENCH, Chicago, Ill. Filed May 19, 1906. Serial No. 317,714.

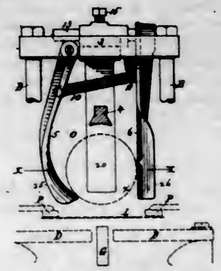


An illuminating tile comprising a grating having straight, intersecting cross-bars inclosing light apertures and extending upward and provided with ledges along their lower faces, lights supported by said ledges, spaced from said cross-bars and flush with the upper surfaces thereof, a filling of cement between each light and the surrounding parts of the grating, said grating being provided with straight, intersecting grooves in the upper face thereof, said grooves being of increased width below the tops thereof, and a filling of soft metallic friction material entirely filling said grooves and extending in straight, intersecting lines so as to completely surround each of said lights.

871,794. BOTTLE-GUIDE FOR LABELING-MACHINES. HORATIO GATES, Worcester, Mass. Filed Apr. 24, 1903. Serial No. 154,181.

1. A bottle guide for labeling machines, comprising a pair of depending plate jaws, supported at their upper ends above the position of the bottle and bottle-forcing means, their inner faces adapted for receiving and supporting the bottle, and for directing its presentation to the label delivering devices, means for forcing the bottle from between said jaws, and means for permitting a yielding motion thereof as the bottle passes from the ends of the jaws.

2. The combination, with means for presenting and affixing a label, and a bottle-pushing device; of bottle-guiding jaws depending from an overhead support, one of said jaws having a straight inner face, and the other a curved face between which a bottle can lie suspended parallel with said straight face.



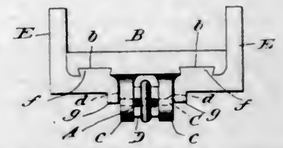
3. A bottle guide independent of the paste-applying devices, and having a directing jaw face, a swinging jaw with an inwardly curved face, a stationary supporting-head on which said jaw is pivoted, and means for yieldingly pressing said swinging jaw toward the bottle.

4. The combination of a stationary head-frame having means for adjustably supporting an end-gage and provided with hinging lugs, an end-gage supported on said head-frame, bottle guides depending from said head frame and hinging lugs respectively, their lower ends adapted for embracing the sides of the bottle, and means for affording yielding resilient action of said guide.

5. In a labeling machine guide, the combination, of a vertical faced stationary guide-jaw, and an inwardly curved swinging jaw between which the bottle can lie supported in proper alined relation, and means for yieldably pressing said curved jaw inward towards the stationary guide jaw.

[Claims 6 to 15 not printed in the Gazette.]

871,795. SAWMILL LOG-DOG. GEORGE GRANT and WILLIAM T. NEWTON, New Orleans, La. Filed Aug. 30, 1907. Serial No. 390,785.



1. A dog for the purpose described, comprising a body arranged to receive a pin for connecting the body to means for moving the body, the said pin removably arranged in the body, and means detachably connected with the body and arranged to prevent displacement of the pin from the body.

2. A dog for the purpose described, comprising a body arranged to receive a pin for connecting the body to means for moving the body, the said pin removably arranged in the body, and a jaw detachably connected with the body and arranged to prevent displacement of the pin from the body.

3. A dog for the purpose described, comprising a body arranged to receive a pin for connecting the body to means for moving the body, the said pin removably arranged in the body, and a jaw detachably connected through a co-operating, tapered tongue and groove, of dovetail form in cross-section, to the body and arranged to prevent displacement of the pin from the body.

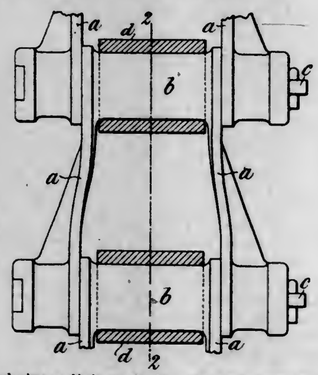
4. A dog for the purpose described, comprising a body having a depending lug in which is a transverse aperture, a pin for connecting the body to means for moving the body, removably arranged in the said transverse aperture, and a jaw detachably connected with the body and having a portion arranged to close the end of the aper-

ture and thereby prevent removal of the pin while the jaw is on the body.

5. A dog for the purpose described, comprising a body having a depending lug in which is a transverse aperture, and also having a groove of dovetail form in cross-section disposed in the direction in which the dog is to be moved and tapered toward the rear, a pin removably arranged in said aperture, and a detachable jaw having a rearwardly tapered tongue disposed in the groove of the body and also having a portion arranged to close the end of the aperture and thereby prevent removal of the pin while the jaw is on the body.

[Claims 6 and 7 not printed in the Gazette.]

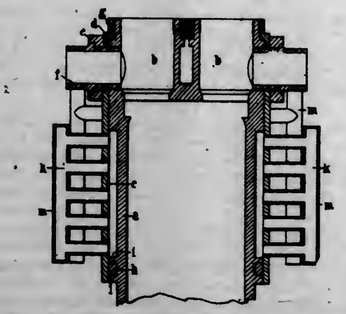
871,796. CHAIN. HENRY M. GRAY, Duffield, England. Filed July 1, 1907. Serial No. 381,752.



1. In chains a link made in one piece consisting of side plates connected together by a tubular head and a roller surrounding the tubular head.

2. In chains a link made in one piece consisting of side plates connected together by a tubular head, a roller surrounding the tubular head and made in segments and means for connecting the segments to each other.

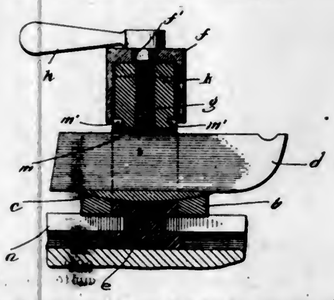
871,797. COOLING SYSTEM FOR INTERNAL-COMBUSTION ENGINES. GUSTAVUS GREEN, Bexhill, England, assignor of one-fourth to Francis Pelham Clinton Hope and one-fourth to Joseph Miller, Bexhill, county of Sussex, England. Filed Sept. 15, 1905. Serial No. 278,597.



1. In an internal combustion engine the combination with the cylinder of a water jacket, a radiator connected with the same and projecting beyond the surface of said jacket, said radiator comprising sets of adjacent channels for the circulation of the water communicating with the upper and lower parts of the jacket, and confined to the space immediately around the sides of the jacket, and being distributed around the same in such manner as to efficiently utilize the available cooling space round the jacket.

2. In an internal combustion engine the combination with the cylinder and water jacket, of pipes adjacent to said jacket connected to the jacket near their ends and at intermediate points and arranged longitudinally of said cylinder in such manner as to efficiently utilize for cooling apparatus the space available immediately around the jacket, and to form channels for the circulation and cooling of the water.

871,798. TOOL-POST. CARL C. HARRIS, Orange, Mass. Filed Nov. 20, 1906. Serial No. 344,240.



1. A tool post comprising a standard provided with a slot of uniform width open at the top, a nut guided for vertical movement in said slot, a tool clamping screw engaging said nut and a perforated cap-piece threaded onto said standard, said screw having a shoulder adapted to bear on said cap-piece.

2. A tool-post comprising a standard provided with a slot, the upper portion of which is of no greater width than the lower, tool-receiving portion, a nut guided for vertical movement in said slot, a cap-piece in external screw-threaded engagement with said standard and having an opening in its top, a tool clamping screw passing through said opening and engaging said nut, and actuating means carried by said screw above the top of said cap-piece.

3. A tool-post comprising a standard provided with a slot, the upper portion of which is of no greater width than the lower, tool-receiving portion, a nut guided for vertical movement in said slot, a cap-piece adjustably mounted on said standard, a tool-clamping screw passing through said cap-piece and engaging said nut, and a handle projecting laterally from said screw above said cap-piece.

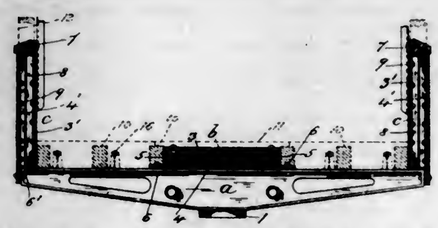
4. In a tool-post, the combination of a standard slotted from the top and having external screw threads, a hollow cap-piece engaging said screw-threads, a nut mounted within the cap-piece and adapted to be engaged thereby, and a tool clamping screw passing through the cap-piece and nut.

5. A tool-post comprising a vertically adjustable member, a clamping member adjustably mounted on the first named member, and a protecting piece having means for engaging the lower end of the first mentioned member and movably supported thereby, said protecting piece covering the end of the tool clamping member and serving to protect the tool therefrom.

[Claim 6 not printed in the Gazette.]

871,799. CAR-UNDERFRAME. CLARENCE H. HOWARD and CHARLES T. WESTLAKE, St. Louis, Mo., assignors to Cast Steel Platform Company, St. Louis, Mo., a Corporation of Delaware. Filed Aug. 12, 1907. Serial No. 388,198.

1. A car underframe of the class described, comprising two body-bolsters, a middle longitudinal sill consisting of a shallow rectangular box-shaped girder extending the entire length of and beyond the car-body, and adapted to be fixed flatwise to the said bolsters, a buffer-beam fixed to each end of the said sill, two opposite side longitudinal members consisting respectively, of a rectangular box-shaped girder analogous to the said sill and arranged flatwise in the plane of the side of the said body, the said member being adapted to be fixed to the ends of the said bolsters and to engage the belt-rail of the said body, substantially as described.

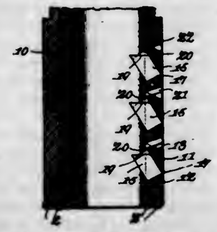


2. A car underframe of the class described, comprising two body-bolsters, a middle longitudinal sill consisting of a shallow rectangular box-shaped girder extending the entire length of and beyond the car-body, the said sill having lateral outward bottom flanges and adapted to be fixed flatwise thereat to the said bolsters, a buffer-beam fixed to each end of the said sill, two opposite side longitudinal members consisting respectively, of a rectangular box-shaped girder analogous to the said sill and arranged flatwise in the plane of the side of the said body, the said member having an outward bottom flange and adapted to be fixed thereat to the ends of the said bolsters, and having an inner top flange adapted to engage the belt-rail of the said body, substantially as described.

3. In a car underframe of the class described, the combination with the body-bolsters, of a shallow rectangular box-shaped sill adapted to be fixed flatwise to the said bolsters and consisting of a top plate, a bottom plate of greater width than the top plate, and two opposite Z-shaped bars adapted to connect the said plates together at and adjacent to their corresponding side edges, the said plates and bars extending the entire length of the sill, substantially as described.

4. In a car underframe of the class described, the combination with the body-bolsters, of a shallow rectangular box-shaped sill adapted to be fixed flatwise on the said bolsters and consisting of a top plate, and a bottom plate of greater width than the top plate, the said plates extending the entire length of the sill, and the longitudinal edge portions of the top plate being adapted to form a Z-shape with the body of said plate and fixed thereat to the corresponding edge portions of the bottom plate, substantially as described.

871,800. EARTH-DRILL. GROVE C. JACKSON, Kingwood, W. Va. Filed July 30, 1906. Serial No. 328,425.

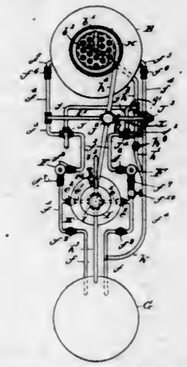


1. The combination with a tubular drill and a support in the wall thereof having an inclined upper face; of a bit detachably mounted within the wall and upon the support, said bit being tiltable inwardly from the wall and upon the support, and means integral with the bit for limiting the inwardly-tilting movement of the bit.

2. A tubular drill having an opening therein with its upper end inclined downwardly and inwardly and intersected by a kerf, a bit fitting in the opening to tilt therein with its upper end inclined upwardly and inwardly and provided in its inner edge with a notch from the rear of which rises a shoulder having its upper face inclined upwardly and outwardly, and a key fitted in the kerf with its inner end received in the notch of the bit, the inner end of the key being disposed in the path of the shoulder of the bit to limit inward tilting of the latter.

3. A tubular drill having an opening therein, one wall of said opening being inclined, a bit tiltably mounted within the opening and bearing upon and engaging the bottom wall thereof, and a key secured within the opposite wall of the opening and disposed to limit the tilting movement of the bit.

871,801. FEED-WATER HEATER. JAMES W. JANTZEN, Lowell, Mass. Filed Apr. 14, 1906. Serial No. 311,646.



1. The combination of a boiler having a fire-box or furnace and having a chimney or smoke-stack, a heater located within said chimney or stack, a water-tank on a lower level than said heater, direct and return water-connections between said tank and heater, to maintain a constant circulation of water from said tank to said heater and back to said tank, a feed-pipe connecting said tank and said boiler, means of forcing water from said tank to said boiler, and an overflow connected with said direct connection and discharging above said heater.

2. The combination of a boiler having a fire-box or furnace and having a chimney or smoke-stack, a heater located within said chimney or stack, a water-tank on a lower level than said heater, direct and return water-connections between said tank and heater to maintain a constant circulation of water from said tank to said heater and back to said tank, a feed-pipe connecting said tank to said boiler, a connection between said return-pipe and said boiler, suitable valves and a feed-pump, whereby water may be forced from said tank directly to said boiler or from said tank through said heater to said boiler.

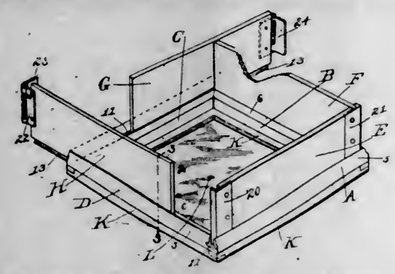
3. The combination in a steam-fire engine of a boiler having a fire-box or furnace and having a chimney or smoke-stack, a heater located within said chimney or stack, a supply tank, a main pump, a water-connection or pipe between said main pump and said tank, a feed-pump, pipes connecting said feed-pump to said tank, heater and boiler and an overflow to maintain a constant head or pressure of water in said supply-tank.

4. In a steam fire-engine, the combination of a boiler, having a fire box and chimney, a gravity system of heating water consisting of a tank, a heater arranged in said chimney, single direct and duplicate return water-connections between said tank and heater, two main-pumps, two feed-pumps, pipes connecting said feed-pumps with said main pumps and with said return connections, pipes to connect each feed-pump separately with said boiler, pipes connecting said return connections with each other, and valves arranged in said pipes and connections, to enable either or both of said feed-pumps to throw water

from said tank to said heater or from said main-pumps to said boiler at two different places.

5. The combination in a steam-fire engine of a boiler having a fire-box or furnace and having a chimney or smoke-stack, a heater located within said chimney or stack, a supply-tank, a main-pump, a water-connection or pipe between said main pump and said tank, a feed-pump, pipes connecting said feed-pump to said tank and boiler, an outer tank surrounding said first tank and receiving the discharge of said overflow, another overflow for said outer tank to limit the pressure of water therein, and a pipe connecting said outer tank to said feed-pump.

871,802. MARKET-BOX DISPLAY-CASE. HENRY J. JOHNSON and THOMAS J. LARKIN, Lowell Mass. Filed Feb. 1, 1907. Serial No. 355,342.



In a market box display case, a top framework comprising a side A in which is a longitudinal T shaped groove open at one end, a box side E provided at its top with a projecting metal rib which rests in the groove in side A and is provided at each end with angle irons, a side D in which is a T shaped groove open at one end, a box side H provided at its top with a projecting metal rib which rests in the groove in side D and carries at its exposed end a spring hinge, a side C provided with a T shaped groove open at one end, a box side G provided at its top with a projecting metal rib which rests in the groove in side C and provided at its exposed end with a spring hinge, a side B in which is a T shaped groove which is open at one end and at its other end enters the groove in side A, a box side F provided at its top with a projecting metal rib which rests in the groove inside A and plain at both ends, and a hinged glass cover as described.

871,803. SALT-SHAKER. FRANK KENDALL, Grant Park, Ill. Filed Jan 8, 1906. Serial No. 295,016.

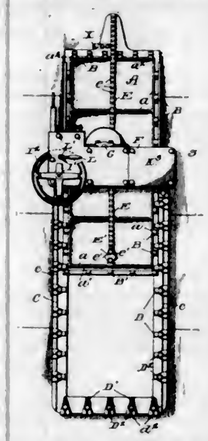


1. A salt shaker comprising a receptacle having a perforated cap, a receiver for absorbent material within said receptacle having a side wall formed of reticulated material and having a perforated top within the receptacle and below and spaced from said perforated cap.

2. A salt shaker comprising a receptacle having a perforated cap, a receiver for absorbent material removably held within said receptacle, said receiver having the portions of the walls thereof which lie in contact with the salt formed of reticulated material, and having its top perforated and positioned within the receptacle and below and spaced from said perforated cap.

3. A salt shaker comprising a receptacle having a perforated cap, a receiver for absorbent material consisting of a frusto conical member having its side walls formed of reticulated material, its larger open end being removably seated about a circular raised portion formed on the bottom of the receptacle, its smaller upper end being perforated and positioned below and spaced from said perforated cap.

871,804. APPARATUS FOR ELECTRICALLY OPERATING WATER-TIGHT BULKHEAD-DOORS. ROBERT H. KIRK, Cleveland, Ohio, assignor to The "Long Arm" System Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 22, 1905. Serial No. 256,975.



1. An electric apparatus for the operation of watertight bulkhead doors and hatches aboard ship, comprising an electric motor and gearing driven thereby for operating the door, means for completing the circuit through said motor from a distance, hand operated mechanism for completing the circuit through said motor in either direction and dominating the distant control, a spring adapted to resist the thrust on said gearing, and mechanism operated upon the yielding of said spring for automatically cutting off the current from said motor when the load on the motor exceeds a predetermined limit, substantially as described.

2. An electric apparatus for the operation of watertight bulkhead doors and hatches aboard ship, comprising an electric motor and gearing driven thereby for operating the door, means for completing the circuit through said motor from a distance, hand operated mechanism for completing the circuit through said motor in either direction and dominating the distant control, and means for automatically cutting off the current from said motor and for breaking the circuit for the distant control when the load on the motor exceeds a predetermined limit, substantially as described.

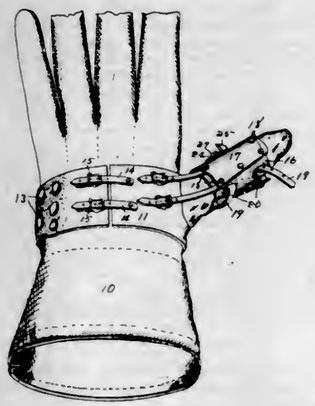
3. An electric apparatus for the operation of watertight bulkhead doors and hatches aboard ship, comprising an electric motor and gearing driven thereby for operating the door, means for completing the circuit through said motor from a distance, hand operated mechanism for completing the circuit through said motor in either direction and dominating the distant control, a spring adapted to resist the thrust on said gearing, and mechanism operated upon the yielding of said spring for automatically cutting off the current from said motor when the load on the motor exceeds a predetermined limit, and a signal circuit for making a signal at the distant point, with means for automatically closing said signal circuit when the door reaches the closed position, substantially as described.

4. An electric apparatus for the operation of watertight bulkhead doors and hatches aboard ship, comprising an electric motor and gearing driven thereby for operating the door, means for completing the circuit through said motor from a distance, hand operated mechanism for completing the circuit through said motor in either direction and dominating the distant control, and means for automatically cutting off the current from said motor and for breaking the circuit for the distant control when the load on the motor exceeds a predetermined limit, and a signal circuit for making a signal at the distant point, with means for automatically closing said signal circuit when the door reaches the closed position, substantially as described.

5. An electric apparatus for the operation of watertight bulkhead doors and hatches aboard ship, comprising an electric motor and gearing driven thereby for operating the door, a solenoid circuit, a solenoid, and a controller operated thereby for completing the circuit through said motor from a distance, hand operated mechanism for completing the circuit through said motor in either direction and dominating the solenoid control, and means for automatically cutting off the current from said motor and for breaking the circuit through the solenoid when the load on the motor exceeds a predetermined limit, substantially as described.

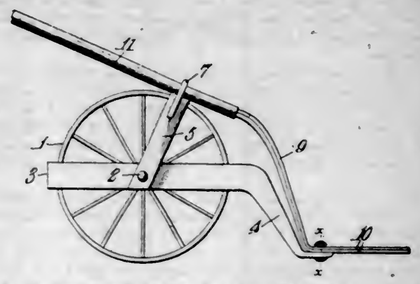
[Claims 6 to 78 not printed in the Gazette.]

871,805. HUSKING-GLOVE. SIGVART KVAM, Minneapolis, Minn. Filed Jan. 25, 1907. Serial No. 354,086.



The combination with a glove of a palm shield formed of a single narrow piece of material, designed to pass around the palm of the glove, and provided with an opening through which the thumb of the glove may project, adjusting straps on the back of said palm shield for adjusting the palm shield to fit the wearer's hand, a thumb shield designed to pass around the thumb of the glove, adjusting straps on said thumb shield to adjust it to fit the thumb piece, adjusting straps connecting the thumb shield with the back of the palm shield for adjusting the thumb shield relative to the palm shield, a metal plate fixed to the thumb shield, and formed with a longitudinal slot, and also with a series of openings adjacent to the slot, a husking peg comprising a body portion having a screw opening therein, and a projection designed to be placed in any one of said row of openings, a husking peg formed on said body portion, and a set screw passed through the body portion of the husking peg and through the slot in the metal plate for adjusting the husking peg toward or from the palm shield, said row of openings designed to permit the husking peg to be set at different angles relative to the metal plate.

871,806. IMPLEMENT FOR CUTTING GRASS. JEREMIAH G. LEEP, Vevay, Ind. Filed Aug. 21, 1907. Serial No. 389,527.

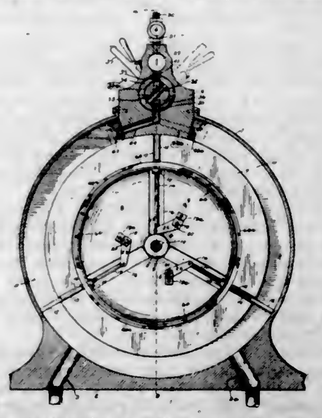


1. An implement of the character described comprising a frame, a single wheel therein and supporting the same, cutting blades pivotally mounted upon and extending forward from the frame, handles connected to and extending rearwardly from the blades, and a guide above the wheel and upon the frame.

2. An implement of the character described comprising a frame, a single supporting wheel mounted therein, shanks pivotally connected to the front end of the frame, cutting blades extending forward therefrom, handles extending rearwardly from the shank, a guide upon the frame and above the wheel, said guide constituting a rest for the handles, and a retaining member above the guide and handles.

3. An implement of the character described comprising a frame, a single supporting wheel mounted therein, said frame having a downwardly and forwardly extending front portion, shanks pivotally mounted upon said portion, cutting blades extending forward therefrom, handles extending rearwardly from the shanks, a yoke secured upon the frame and extending over the wheel, the upper portion of said yoke being enlarged and constituting a rest and guide for the handles, and a retaining member above the yoke, said member and yoke forming handle receiving sockets at the sides of the yoke.

871,807. ROTARY ENGINE. JAY E. LEHMAN, Canton, Ohio. Filed Mar. 20, 1907. Serial No. 363,359.



1. In a rotary-engine, a case, a rotatable cylinder therein, a piston on the cylinder, annular channels having correspondingly varying depths in the end walls of the case, an endwise-movable non-rotatable screw in the cylinder having its ends abutting the bottoms of the channels, and means connecting the screw with the piston whereby the piston is operated by the endwise movement of the screw.

2. In a rotary engine, a case, a rotatable cylinder therein, a piston on the cylinder, an endwise-movable non-rotatable screw in the cylinder, correspondingly varying annular faces on the walls of the case abutting the ends of the screw, and means connecting the screw with the piston whereby the piston is operated by the endwise movement of the screw.

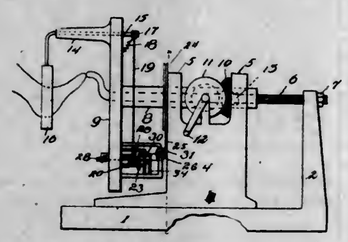
3. In a rotary-engine, a case, a rotatable cylinder therein, a piston on the cylinder, an endwise-movable non-rotatable screw in the cylinder, an annular channel in the case abutting the screw and adapted to move it endwise, and means connecting the screw with the piston whereby the piston is operated by the endwise movement of the screw.

4. In a rotary-engine, a case, a valve thereon, a rotatable cylinder in the case, an annular channel of varying depth in the end of the cylinder, an endwise-movable non-rotatable screw in the case having its end abutting the bottom of the channel, means connecting the screw with the valve whereby the valve is operated one way by the endwise movement of the screw and means acting to operate the valve the other way.

5. In a rotary-engine, a case, a valve thereon, a rotatable cylinder in the case, an endwise-movable non-rotatable screw in the case, a varying annular face on the cylinder abutting the end of the screw and adapted to move it endwise, means connecting the screw with the valve whereby the valve is operated one way by the endwise movement of the screw and means acting to operate the valve the other way.

[Claims 6 to 18 not printed in the Gazette.]

871,808. DESIGN-DRAFTING MACHINE. ALOIS LORANT, Budapest, Austria-Hungary. Filed Jan. 21, 1904. Serial No. 190,090.

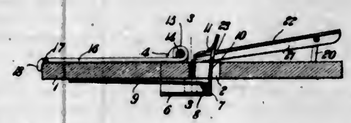


1. In a device of the type set forth, a carriage, a disk supported revolubly from said carriage, means for simultaneously rotating and reciprocating said disk, a style pivotally supported from said disk, a record sheet carried by the disk, with means for actuating the sheet, a rotary cutter bearing upon said record sheet a connection between said style and cutter whereby movements of the former with relation to its pivotal support will be communicated to the latter, and means for rotating said cutter.

2. In a device of the type set forth, a simultaneously rotatable and reciprocatory disk, a style movably supported from the disk, a rotary cutter movably supported on the disk, means whereby movements of the style independent of said disk will be communicated to said cutter, a record sheet, with means for causing same to travel past said cutter in contact therewith, and means whereby rotation of the disk will revolve said cutter.

3. In a device of the type set forth, a carriage, an element supported revolubly from said carriage, means for imparting simultaneous rotary and longitudinal movement to said element, a pattern style yieldably supported from said element, a record sheet carried by said element, means for imparting continuous movement in one direction to said record sheet during the movement of said element, a rotary cutter carried by said element and disposed in contacting relation to said record sheet, a connection between said pattern style and said cutter whereby movements of the former as controlled by the object to be copied will be transmitted to the latter, and means for rotating said cutter.

871,809. ANIMAL-TRAP. KNOX R. MARKS, Abingdon, Ill. Filed Mar. 30, 1907. Serial No. 365,574.



1. In a trap the combination with a base; of a cross strip disposed upon one face thereof and having end portions embracing and clamped upon the base, and a spring actuated jaw movably connected to said strip.

2. In a trap the combination with a base; of a cross strip disposed upon one face of the base having its end portions embracing and clamped upon opposite faces thereof, a spring actuated jaw movably connected to said strip, a trigger, and a locking tongue movably mounted within the cross strip and disposed to engage the trigger.

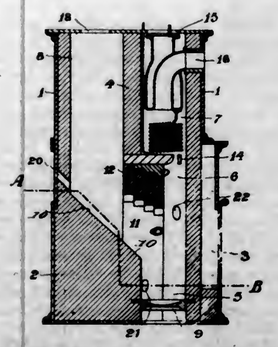
3. In a trap the combination with a base; of a cross strip disposed upon one face thereof and having its end portions embracing and clamped upon opposite edges of the base, a spring actuated jaw movably connected to the cross strip, a locking tongue movably connected to said strip and projecting through the base, and a jaw retaining trigger supported by the base and disposed to be engaged by the tongue.

4. In a trap the combination with a base having recessed edges; of a cross strip disposed upon one face of the base and having end portions seated within the recesses and embracing the base, a spring actuated jaw carried by the cross-strip, and means for holding the jaw set.

5. In a trap the combination with a base having a recessed edge; of a cross strip disposed upon one face of the base and having end portions embracing opposite edges of the base, one of said portions being disposed within the recesses, said cross strip having a channeled portion, a locking tongue extending through the base, an actuating strip integral with the tongue and projecting from the channeled portion, a holding pin engaging the locking tongue and constituting a fulcrum therefor, said channeled portion constituting means to prevent displacement of the actuating strip, a trigger disposed to be engaged by the tongue, and a spring actuated jaw movably connected to the cross strip.

[Claims 6 to 10 not printed in the Gazette.]

871,810. PRODUCER-GAS PLANT. GEORGE L. MORTON, Sutton Coldfield, England. Filed Jan. 21, 1907. Serial No. 353,207.



1. In a gas producer plant, a bituminous producer having a sealed fuel container and a generating chamber out of vertical line but meeting at a point well above the primary grate, with a radiating arch above the fuel entry at this point, and with upper twyers introduced near the space in the vicinity of the said arch for the purpose as stated.

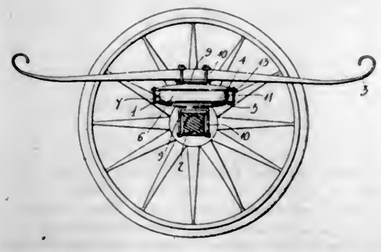
2. In a gas producer plant, a producer comprising an outer casing, an inner firebrick lining and air space between the lining and the said casing, the firebrick lining being divided by a central wall into two main chambers, one comprising a generator, conversion chamber and a carbon trap, while the other comprises a fuel container; the said division wall having an opening about which the fuel container finishes with a sloping bed, and said wall having above said opening a radiating arch.

3. In a gas producer plant, the combination of an outer casing an inner divided lining, an air space between said lining and said casing, a grate near the bottom of the producer, a primary air supply near the side grate, a radiating arch well above the grate and an additional air supply between said grate and said arch, the said dividing lining forming chambers, one comprising a generator and the other a fuel chamber and at the point of meeting of the two chambers the said arch is formed.

4. In a gas producer having a generator, a fuel container and a conversion chamber, the combination of a radiating arch at the point of entry of the raw fuel into the generating and conversion chambers, with deflecting protuberances on the wall of the producer for forming the hottest zone at a point above the level of the grate.

5. In a gas producer, a bituminous producer having a generating space, conversion chamber and carbon trap at the same vertical plane, a fuel container in an adjacent vertical plane with a divisional firebrick wall, the said generating chamber and fuel container communicating by an opening in the said dividing wall at the bottom of the fuel container, the said container having a sloping bed and the said opening having a radiating arch projecting well into the generating space, the producer further having supplemental twyers well above the grate.

871,811. PNEUMATIC CUSHION. WILLIAM C. MCCULLOUGH, Bucyrus, Ohio. Filed July 13, 1906. Serial No. 326,129.

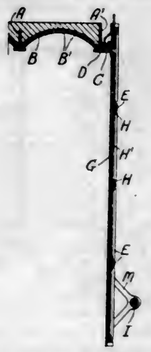


In combination with a vehicle axle and a body-supporting spring, the herein described cushioning device comprising the pair of holders, each having an integral projection on its outer side, at its center, formed with an attaching flange, one of said attaching flanges secured on the axle and the other secured to the center of the underside of the spring, one of said holders having end guide lugs provided with guide openings, and the other having projections operating in said guide openings, and a cushioning body between the said holders.

871,812. FOUNDRY DRYING-STOVE. DANIEL MCNEILL, Glenorkney, Meadow Lea, Manitoba, Canada. Filed May 23, 1907. Serial No. 375,312.

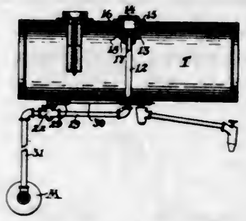
1. In a foundry drying stove, the combination of a roof beam formed with a sand trough, and a door having fixed thereon a dip plate extending into said sand trough as described to form a joint or seal.

2. In a foundry drying stove, the combination of a roof having a beam formed with a sand trough, a door having



fixed thereon a dip plate, said door being formed with a hinged panel to provide for ingress and egress as described.

871,813. TANK. WILLIAM H. MCNUTT, New York, N. Y., assignor to The Non-Explosive Safety Naphtha Container Company, New York, N. Y., a Corporation of South Dakota. Filed Dec. 12, 1906. Serial No. 347,399.



1. A safety device for tanks comprising an outlet member leading from the top portion of the tank, a cock in said outlet member having a rotary plug with a transverse bore, a coil spring between said plug and the cock frame tending to move the plug to the open position, an arm on said plug, and an inflammable cord between said plug arm and the tank retaining the plug in the closed position, whereby rupture of the cord from ignition thereof will permit the spring to swing the plug to open position.

2. A safety device for tanks comprising an outlet member leading from the tank, a cock in the outlet member having a rotary plug, a coil spring connected between the plug and the cock frame tending to move the plug to safety position, and an inflammable cord connected with the plug to retain it in operative position, whereby rupture of the cord from ignition will permit the spring to swing the plug to open position.

871,814. MEASURE. CHARLES W. NEWTON, Kansas City, Mo. Filed Oct. 29, 1906. Serial No. 341,151.

1. A gage or measure of the character described, comprising a base, a revolubly mounted platform thereon, a graduated upright upon said base, a clamp slidably mounted upon said upright, a graduated pointer or bar slidable in said clamp at right angles to said upright, and a set screw for causing the clamp to hold the pointer in its vertical and laterally adjusted positions.

2. A gage or measure of the character described, comprising a base consisting of an upright body formed with a vertical bore and with radiating legs, one of said legs being extended and formed with a socket, a graduated upright secured in said socket, a foot platform having a depending pivot mounted to rotate in the bore of said

2. In a rotary engine, a case, a rotatable cylinder therein, a piston on the cylinder, an endwise-movable non-rotatable screw in the cylinder, correspondingly varying annular faces on the walls of the case abutting the ends of the screw, and means connecting the screw with the piston whereby the piston is operated by the endwise movement of the screw.

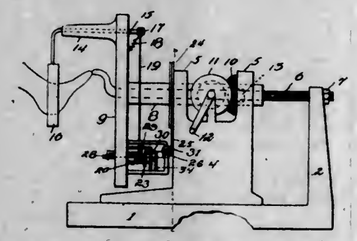
3. In a rotary-engine, a case, a rotatable cylinder therein, a piston on the cylinder, an endwise-movable non-rotatable screw in the cylinder, an annular channel in the case abutting the screw and adapted to move it endwise, and means connecting the screw with the piston whereby the piston is operated by the endwise movement of the screw.

4. In a rotary-engine, a case, a valve thereon, a rotatable cylinder in the case, an annular channel of varying depth in the end of the cylinder, an endwise-movable non-rotatable screw in the case having its end abutting the bottom of the channel, means connecting the screw with the valve whereby the valve is operated one way by the endwise movement of the screw and means acting to operate the valve the other way.

5. In a rotary-engine, a case, a valve thereon, a rotatable cylinder in the case, an endwise-movable non-rotatable screw in the case, a varying annular face on the cylinder abutting the end of the screw and adapted to move it endwise, means connecting the screw with the valve whereby the valve is operated one way by the endwise movement of the screw and means acting to operate the valve the other way.

[Claims 6 to 18 not printed in the Gazette.]

871,808. DESIGN-DRAFTING MACHINE. ALOIS LORANT, Budapest, Austria-Hungary. Filed Jan. 21, 1904. Serial No. 190,090.

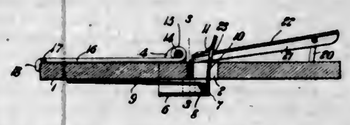


1. In a device of the type set forth, a carriage, a disk supported revolubly from said carriage, means for simultaneously rotating and reciprocating said disk, a style pivotally supported from said disk, a record sheet carried by the disk, with means for actuating the sheet, a rotary cutter bearing upon said record sheet a connection between said style and cutter whereby movements of the former with relation to its pivotal support will be communicated to the latter, and means for rotating said cutter.

2. In a device of the type set forth, a simultaneously rotatable and reciprocatory disk, a style movably supported from the disk, a rotary cutter movably supported on the disk, means whereby movements of the style independent of said disk will be communicated to said cutter, a record sheet, with means for causing same to travel past said cutter in contact therewith, and means whereby rotation of the disk will revolve said cutter.

3. In a device of the type set forth, a carriage, an element supported revolubly from said carriage, means for imparting simultaneous rotary and longitudinal movement to said element, a pattern style yieldably supported from said element, a record sheet carried by said element, means for imparting continuous movement in one direction to said record sheet during the movement of said element, a rotary cutter carried by said element and disposed in contacting relation to said record sheet, a connection between said pattern style and said cutter whereby movements of the former as controlled by the object to be copied will be transmitted to the latter, and means for rotating said cutter.

871,809. ANIMAL-TRAP. KNOX R. MARKS, Abingdon, Ill. Filed Mar. 30, 1907. Serial No. 365,574.



1. In a trap the combination with a base; of a cross strip disposed upon one face thereof and having end portions embracing and clamped upon the base, and a spring actuated jaw movably connected to said strip.

2. In a trap the combination with a base; of a cross strip disposed upon one face of the base having its end portions embracing and clamped upon opposite faces thereof, a spring actuated jaw movably connected to said strip, a trigger, and a locking tongue movably mounted within the cross strip and disposed to engage the trigger.

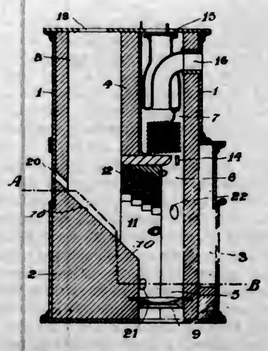
3. In a trap the combination with a base; of a cross strip disposed upon one face thereof and having its end portions embracing and clamped upon opposite edges of the base, a spring actuated jaw movably connected to the cross strip, a locking tongue movably connected to said strip and projecting through the base, and a jaw retaining trigger supported by the base and disposed to be engaged by the tongue.

4. In a trap the combination with a base having recessed edges; of a cross strip disposed upon one face of the base and having end portions seated within the recesses and embracing the base, a spring actuated jaw carried by the cross-strip, and means for holding the jaw set.

5. In a trap the combination with a base having a recessed edge; of a cross strip disposed upon one face of the base and having end portions embracing opposite edges of the base, one of said portions being disposed within the recesses, said cross strip having a channeled portion, a locking tongue extending through the base, an actuating strip integral with the tongue and projecting from the channeled portion, a holding pin engaging the locking tongue and constituting a fulcrum therefor, said channeled portion constituting means to prevent displacement of the actuating strip, a trigger disposed to be engaged by the tongue, and a spring actuated jaw movably connected to the cross strip.

[Claims 6 to 10 not printed in the Gazette.]

871,810. PRODUCER-GAS PLANT. GEORGE L. MORTON, Sutton Coldfield, England. Filed Jan. 21, 1907. Serial No. 353,207.



1. In a gas producer plant, a bituminous producer having a sealed fuel container and a generating chamber out of vertical line but meeting at a point well above the primary grate, with a radiating arch above the fuel entry at this point, and with upper twyers introduced near the space in the vicinity of the said arch for the purpose as stated.

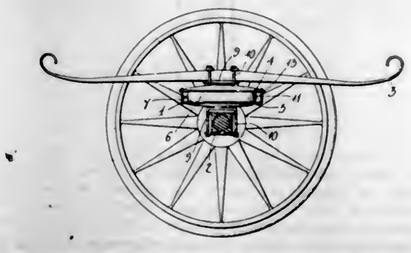
2. In a gas producer plant, a producer comprising an outer casing, an inner firebrick lining and air space between the lining and the said casing, the firebrick lining being divided by a central wall into two main chambers, one comprising a generator, conversion chamber and a carbon trap, while the other comprises a fuel container; the said division wall having an opening about which the fuel container finishes with a sloping bed, and said wall having above said opening a radiating arch.

3. In a gas producer plant, the combination of an outer casing an inner divided lining, an air space between said lining and said casing, a grate near the bottom of the producer, a primary air supply near the side grate, a radiating arch well above the grate and an additional air supply between said grate and said arch, the said dividing lining forming chambers, one comprising a generator and the other a fuel chamber and at the point of meeting of the two chambers the said arch is formed.

4. In a gas producer having a generator, a fuel container and a conversion chamber, the combination of a radiating arch at the point of entry of the raw fuel into the generating and conversion chambers, with deflecting protuberances on the wall of the producer for forming the hottest zone at a point above the level of the grate.

5. In a gas producer, a bituminous producer having a generating space, conversion chamber and carbon trap at the same vertical plane, a fuel container in an adjacent vertical plane with a divisional firebrick wall, the said generating chamber and fuel container communicating by an opening in the said dividing wall at the bottom of the fuel container, the said container having a sloping bed and the said opening having a radiating arch projecting well into the generating space, the producer further having supplemental twyers well above the grate.

871,811. PNEUMATIC CUSHION. WILLIAM C. MCCULLOUGH, Bucyrus, Ohio. Filed July 13, 1906. Serial No. 326,129.



In combination with a vehicle axle and a body-supporting spring, the herein described cushioning device comprising the pair of holders, each having an integral projection on its outer side, at its center, formed with an attaching flange, one of said attaching flanges secured on the axle and the other secured to the center of the underside of the spring, one of said holders having end guide lugs provided with guide openings, and the other having projections operating in said guide openings, and a cushioning body between the said holders.

871,812. FOUNDRY DRYING-STOVE. DANIEL MCNEILL, Glenorkney, Meadow Lea, Manitoba, Canada. Filed May 23, 1907. Serial No. 375,312.

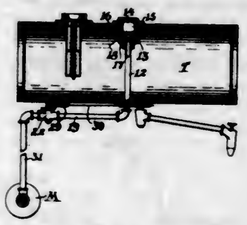
1. In a foundry drying stove, the combination of a roof beam formed with a sand trough, and a door having fixed thereon a dip plate extending into said sand trough as described to form a joint or seal.

2. In a foundry drying stove, the combination of a roof having a beam formed with a sand trough, a door having



fixed thereon a dip plate, said door being formed with a hinged panel to provide for ingress and egress as described.

871,813. TANK. WILLIAM H. MCNUTT, New York, N. Y., assignor to The Non-Explosive Safety Naphtha Container Company, New York, N. Y., a Corporation of South Dakota. Filed Dec. 12, 1906. Serial No. 347,390.



1. A safety device for tanks comprising an outlet member leading from the top portion of the tank, a cock in said outlet member having a rotary plug with a transverse bore, a coil spring between said plug and the cock frame tending to move the plug to the open position, an arm on said plug, and an inflammable cord between said plug arm and the tank retaining the plug in the closed position, whereby rupture of the cord from ignition thereof will permit the spring to swing the plug to open position.

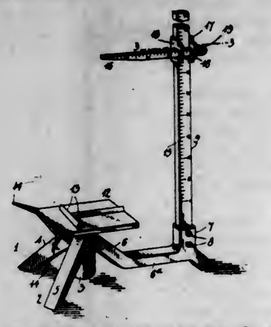
2. A safety device for tanks comprising an outlet member leading from the tank, a cock in the outlet member having a rotary plug, a coil spring connected between the plug and the cock frame tending to move the plug to safety position, and an inflammable cord connected with the plug to retain it in operative position, whereby rupture of the cord from ignition will permit the spring to swing the plug to open position.

871,814. MEASURE. CHARLES W. NEWTON, Kansas City, Mo. Filed Oct. 29, 1906. Serial No. 341,151.

1. A gage or measure of the character described, comprising a base, a revolubly mounted platform thereon, a graduated upright upon said base, a clamp slidably mounted upon said upright, a graduated pointer or bar slidable in said clamp at right angles to said upright, and a set screw for causing the clamp to hold the pointer in its vertical and laterally adjusted positions.

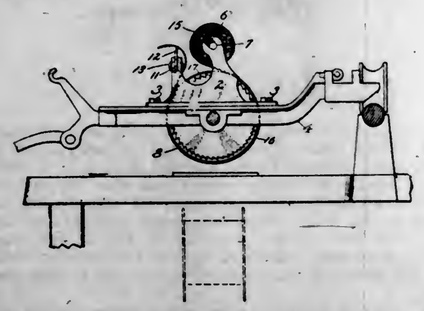
2. A gage or measure of the character described, comprising a base consisting of an upright body formed with a vertical bore and with radiating legs, one of said legs being extended and formed with a socket, a graduated upright secured in said socket, a foot platform having a depending pivot mounted to rotate in the bore of said

body, a clamp slidable upon said upright, and a graduated pointer or bar slidable in said clamp.



3. A gage or measure of the character described, comprising a base consisting of an upright body formed with a vertical bore and with radiating legs, one of said legs being extended and formed with a socket, a graduated upright secured in said socket, a foot platform having a depending pivot mounted to rotate in the bore of said body, a pointer upon said platform, a three sided clamp surrounding said upright and slidable thereon, a graduated pointer or bar slidable in the apertured parallel sides of said clamp, and a set screw in said clamp adapted to engage said upright, substantially as shown and described.

871,815. TYPE-WRITER ATTACHMENT. JOSEPH OETTINGER, Missoula, Mont. Filed Jan 21, 1907. Serial No. 353,279.

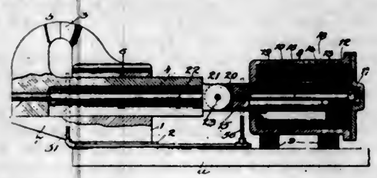


The combination with a typewriter frame and a rotative platen, of a pair of terminal bracket supports removably secured to the typewriter frame at opposite ends of the platen, said supports being provided respectively with a journal bearing and with a slot, a paper-roll-supporting-axle removably mounted in said journal bearings to rotate in a direction the reverse of that of the platen, and a knife removably mounted in said slots, the paper-roll-supporting-axle and the knife being in such close contiguity as to confine the paper, drawn from the paper-roll-supporting-axle and carried about the platen under the knife, in contact substantially with the entire periphery of the platen.

871,816. VISE. JOHN E. OSMER, Chicago, Ill. Filed June 24, 1907. Serial No. 380,434.

1. In a vise, in combination, a complete motor structure comprising a cylinder, a piston, and a piston rod attached to said piston; a supporting member formed separate from and located forwardly of said motor structure; a stationary jaw on said supporting member; and a movable jaw having a stem slidably mounted in said supporting member, said stem and said piston rod being separably connected together.

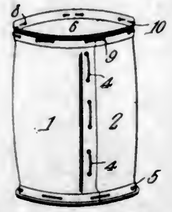
2. In a vise, in combination, a vise structure comprising a support; a stationary jaw on said support; a movable jaw having a stem slidably mounted in said support, said stem being of hollow construction; a cylinder; a piston in said cylinder; a piston rod attached to said piston; a rod extending through the stem of said movable vise jaw and attached to the forward end of said stem; a connection between the rear end of said rod and the forward end of said piston rod; and a valve mechanism for said cylinder.



3. In a fluid-pressure-actuated vise, in combination, a vise structure comprising a movable vise jaw having a ably mounted stem; a motor structure comprising a piston rod; and means for discharging the exhaust pressure fluid upon said stem and said piston rod.

4. In a fluid-pressure-actuated vise, in combination, a cylinder; a piston in said cylinder; a piston rod attached to said piston; a movable vise jaw attached to said piston rod; a pressure chest connected with a source of pressure fluid supply and with said cylinder; a valve mechanism in said pressure chest; and an exhaust pipe leading from sai dpressure chest to a point near said piston rod and to a point near the stem of said vice jaw and adapted to discharge the exhaust pressure fluid upon said rod and said stem.

871,817. HOOPLESS BARREL. JOHN C. PARKER, Brockport, and CHARLES A. PARKER, Poughkeepsie, N. Y. Filed Aug. 30, 1906. Serial No. 332,712.

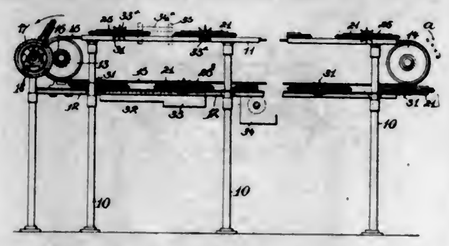


1. A barrel comprising oppositely disposed body sections having lapping edges, fastening devices extending through the lapping portions of the sections, said sections having flared ends constituting seats, heads disposed upon the seats and having annular flanges fitting snugly within the flared portions and curved portions engaging the ends of the sections, and fastening devices extending through the flanges and section ends.

2. A receptacle comprising body sections having lapped edges formed with registering apertures, fastening devices extending through the apertures, the ends of the sections being flared to form seats, heads upon the seats and surrounded by the ends of the body sections, an annular flange upon each head fitting snugly against the flared portions of the body sections, said flanges having edge portions lapping and engaging the ends of the body sections, and separate fastening devices extending through the ends of the body sections and the flanges of the heads.

871,818. MATCH-DIPPING APPARATUS. WILLIAM H. PARKER, Passaic, N. J., assignor to Dixie Match Company, Memphis, Tenn., a Corporation of New Jersey. Filed Oct. 23, 1906. Serial No. 340,194.

1. A match dipping apparatus comprising an endless chain of clamps, each clamp being adapted to grip a coil of matches, and automatic means for tipping over the coils with relation to the chain of clamps to present opposite ends of the matches.



2. A match dipping apparatus comprising an endless chain of connected frames, clamps carried by the frames to grip match coils, and automatic means for tipping over the clamps with relation to the chain of clamps at a predetermined point during the travel of the apparatus.

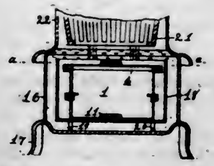
3. A match dipping apparatus comprising a series of clamps linked together in a chain, each clamp being constructed to suspend a match coil, means for tipping over or reversing the coil with relation to the chain to present opposite ends of the matches, and automatic means for opening the clamps to deposit the coil.

4. A match dipping apparatus, comprising a series of spring pressed clamps, each arranged to grip a match coil and suspend it with opposite sides and the opposite ends of the matches exposed, and automatic means for opening the clamps against the pressure of the springs.

5. A match dipping apparatus comprising a series of frames arranged in the form of a chain, tracks spaced apart in an upper and lower series, rollers on the frames to follow the tracks, coil clamps mounted in the frames so as to expose the opposite ends of the matches held in the coils, and means for reversing the frames, clamps, and coils.

[Claims 6 to 8 not printed in the Gazette.]

871,819. PORTABLE OVEN. WILLARD J. PERRY, Weyauwega, Wis. Filed July 28, 1906. Serial No. 328,193.

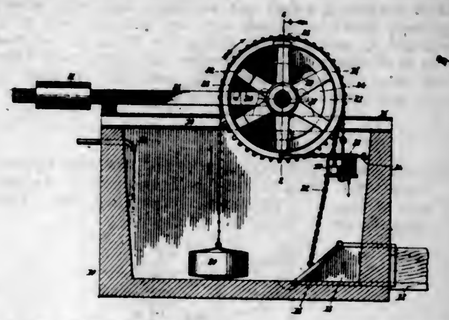


1. In a portable oven, consisting of a bottom, two ends, and a back, a cover therefor arranged for sliding forward and backward upon the oven ends, consisting of a sheet of metal having a wire around the same upon its lower side for stiffening said sheet, and for guiding the cover in its sliding movement across the oven, substantially as described.

2. In a portable oven, consisting of a bottom, two ends, and a back, a cover therefor arranged for sliding forward and backward upon the oven ends, consisting of a sheet of metal having a wire around the same upon its lower side for stiffening said sheet, and for guiding the cover in its sliding movement across the oven, and a handle, to be grasped by the operator for sliding said cover, formed of said wire by bending it outward from the sheet, substantially as set forth.

3. A portable oven adapted for use in the ash pit of a sitting room heating stove, consisting of a bottom, two ends, a top and a back, all properly secured together, the latter part extending from one side of the oven to the other and from the bottom only part way to the top, and the front of the oven being entirely open.

871,820. INTERMITTENT DISCHARGE TANK OR RESERVOIR. CLYDE POTTS, Newark, N. J. Filed June 24, 1907. Serial No. 380,444.



1. An intermittent discharge-tank or reservoir having an inlet, a discharge at its lower end and a valve for said discharge, combined with an automatic mechanism for operating said valve comprising a shaft, a rotary member thereon having suspended from one side thereof a weight and from the other side a float, a rotary member free on said shaft, means for limiting its movement in one direction, means connecting said free rotary member with said valve so that it may open the same on one of its movements, a cam fast on said shaft, and an arm carrying a dog to be engaged by said cam during the filling of the tank and to thereafter engage said free rotary member and effect the movement of the same for opening said valve; substantially as set forth.

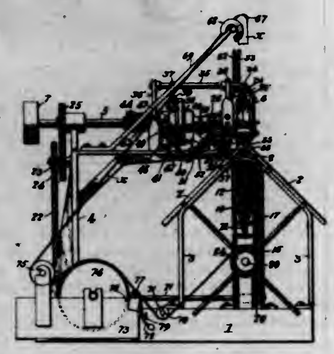
2. An intermittent discharge-tank or reservoir having an inlet, a discharge at its lower end and a valve for said discharge, combined with an automatic mechanism for operating said valve comprising a shaft, a sprocket wheel rigid thereon having upon it a chain carrying on its respective depending ends a weight and a float, a rotary member free on said shaft, means for limiting its movement in one direction, means connecting said free rotary member with said valve so that it may open the same on one of its movements, a cam fast on said shaft, and an arm carrying a dog to be engaged by said cam during the filling of the tank and to thereafter engage said free rotary member and effect the movement of the same for opening said valve; substantially as set forth.

3. An intermittent discharge-tank or reservoir having an inlet, a discharge at its lower end and a valve for said discharge, combined with an automatic mechanism for operating said valve comprising a shaft, a rotary member thereon having suspended from one side thereof a weight and from the other side a float, a wheel free on said shaft and having a laterally extending rim provided at a definite point with a recess, means for limiting the movement of said wheel in one direction, means connecting said wheel with said valve so that it may open the same on one of its movements, a cam fast on said shaft and set within said wheel-rim and having a recess along a portion of its periphery with a shoulder at the end thereof, and an arm carrying a dog having a head disposed between the said rim and said cam and to be engaged by said shoulder during the filling of the tank and to thereafter enter said recess and engage said wheel and effect the movement of the latter in a direction to open said valve; substantially as set forth.

4. An intermittent discharge-tank or reservoir having an inlet, a discharge at its lower end and a valve for said discharge, combined with an automatic mechanism for operating said valve comprising a shaft, a rotary member thereon having suspended from one side thereof a weight and from the other side a float, a wheel free on said shaft and having a laterally extending rim provided at a definite point with a recess, means for limiting the movement of said wheel in one direction, means connecting said wheel with said valve so that it may open the same on one of its movements, a cam fast on said shaft and set within

said wheel-rim and having a recess along a portion of its periphery with a shoulder at the end thereof, and an arm swiveled on said shaft and projecting outwardly therefrom to create a weight and carrying a dog having a head disposed between the said rim and said cam and to be engaged by said shoulder during the filling of the tank and to thereafter enter said recess and engage said wheel and effect the movement of the latter in a direction to open said valve; substantially as set forth.

871,821. MACHINE FOR APPLYING BINDING-STRIPS TO BOOKS. WILLIAM H. REISNER, SEWELL C. SWARTZ, and WILLIAM T. HAMILTON, Hagerstown, Md. Filed Jan. 18, 1907. Serial No. 352,946.



1. In a machine for applying binding strips to the backs of books, the combination of an inverted V-shaped table to support a book in partly opened relation, means for feeding the books longitudinally of said table and simultaneously applying the strip to the backs thereof, and means for severing the strip at appropriate intervals.

2. In a machine for applying binding strips to the backs of books, the combination of an inverted V-shaped table to support a book in partly opened relation, coacting feed rollers for advancing the books longitudinally of said table and simultaneously applying the strip to the backs thereof, and means for severing the strip at appropriate intervals.

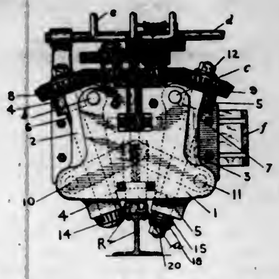
3. In a machine for applying binding strips to the backs of books, the combination of an inverted V-shaped table to support a book in partly opened relation, coacting concave and convex feed rollers adjacent the intersection of the table sides for advancing the books longitudinally of said table and simultaneously applying the strip to the backs thereof, and means for severing the strip at appropriate intervals.

4. In a machine for applying binding strips to the backs of books, the combination of means for supplying the pasted strip, an inverted V-shaped table, feed rollers located at the apex of said table for advancing the books and applying the strip to the backs thereof, a knife for cutting the strip at the edge of the book, mechanism for actuating said knife, and means controlled by the presence of a book between the feed rolls to render the knife actuating mechanism inoperative.

5. In a machine for applying binding strips to the backs of books, the combination of means for supplying the pasted strip, an inverted V-shaped table, two sets of feed rolls located at the apex of said table for advancing the books and applying the strip to the backs thereof, a reciprocating knife between the sets of rolls for cutting the strip at the rear edges of the books, mechanism for actuating said knife and means controlled by the presence of a book between the front feed rolls to render the knife actuating mechanism inoperative.

[Claims 6 to 11 not printed in the Gazette.]

871,822. APPLIANCE FOR FIXING AND CUTTING OFF THE UPPER OR WEARING PORTIONS OF COMPOUND TRAMWAY-RAILS. EDGAR RHODES, Scholes, near Leeds, England. Filed Feb. 9, 1907. Serial No. 356,649.



1. In a fixing and cutting off appliance for the purpose specified, the combination with a pair of driving gears of a pair of downwardly converging rotary shafts attached respectively thereto and respectively provided at their lower ends with a downwardly tapered supporting and propelling roller having a roughened periphery adapted to contact with one of the flat sides of the top portion of a compound tramway rail, and a disk cutter of substantially the same diameter as said roller, having a peripheral cutting edge to contact with the depending flange of such top portion at the opposite side of the rail, substantially as hereinbefore described.

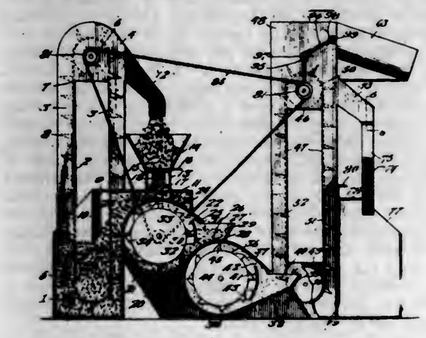
2. In a fixing and cutting-off appliance for the purpose specified, the combination of a pair of pivoted arms having bearings for a pair of rotatable shafts, means for driving such shafts, means for pressing their lower ends toward each other, a pair of downwardly converging shafts mounted in said bearings and furnished respectively with a supporting and propelling roller having a roughened periphery adapted to contact with one side of the top portion of a compound tramway rail and with a disk cutter of substantially the same diameter as said roller having a peripheral cutting edge to contact with the depending flange of said top portion at the opposite side of the rail, and means whereby said cutter is caused to rotate with its said shaft by frictional contact, substantially as hereinbefore described.

3. In a cutting-off appliance for the purpose specified, the combination of a pair of pivoted arms having bearings for a pair of rotatable shafts, means for driving such shafts, means for pressing their lower ends toward each other, a pair of downwardly converging shafts mounted in said bearings one of them furnished with a supporting and propelling roller having a roughened periphery adapted to contact with one side of the top portion of a compound tramway rail and the other shaft constructed with a fast collar and a reduced screw-threaded protruding portion at its lower end, a disk cutter of substantially the same diameter as said roller, contacting frictionally with the lower side of said fast collar, a loose collar keyed to the shaft and contacting frictionally with the lower side of the cutter, and a clamping nut contacting with the lower side of the loose collar, substantially as hereinbefore described.

871,823. TOY. HENRY M. ROBINSON, Washington, D. C. Filed Dec. 19, 1906. Serial No. 348,600.

1. A toy constructed to represent a grinding mill and including a series of material containing compartments, each of said compartments being closed against the adjacent compartment, and means operative in each compartment to stimulate the delivery of material from one compartment to the adjacent compartment.

2. A toy constructed to represent a grinding mill and including a plurality of material containing compartments, said compartments being closed against each other and open to expose the material and means respectively arranged in each compartment to indicate an actual delivery of material from one compartment to the other.



3. A toy constructed to represent a grinding mill and including a plurality of material containing compartments, each of said compartments being closed against the other, and open hoppers in communication with each compartment, and means arranged to indicate a delivery from each hopper to the next succeeding compartment.

4. A toy constructed to represent a grinding mill and including a plurality of material containing compartments, each of said compartments being closed against the other, and hoppers in communication with each compartment, and means arranged to indicate a delivery from each hopper to the next succeeding compartment, each of said hoppers being open at the upper end to expose the material to view in the apparent delivery from one compartment to the other.

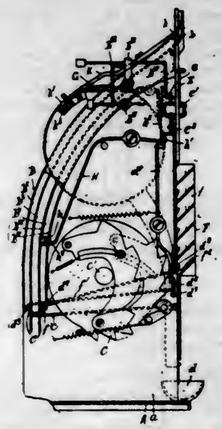
5. A toy constructed to represent a grinding mill and comprising a feeding compartment, a grinding compartment and an elevator arranged between the feeding compartment and grinding compartment, a receptacle receiving material from the elevator and arranged to simulate the delivery of said material to the grinding compartment, an end closed chamber separating the receptacle and grinding compartment, said chamber opening into the feeding compartment and being closed against the grinding compartment, whereby material delivered to said receptacle is apparently fed into the grinding compartment but actually delivered to the feeding compartment.

[Claims 6 to 21 not printed in the Gazette.]

871,824. COIN-OPERATED VENDING-MACHINE. JOHN A. RULE, Cincinnati, Ohio. Filed Dec. 10, 1906. Serial No. 347,166.

1. In a coin operated vending machine, the combination of a means for releasing a vending apparatus, a coin chute, a change receptacle, a means for causing a coin in the chute to actuate the means for releasing the vending apparatus, means for moving the change receptacle; means for directing coins of different denominations into the coin chute; an index arm and a means of connecting it with the change receptacle and with the means of directing the coins into the chute, whereby when the coin of larger denomination is directed into the chute, by the setting of the arm it locks the change receptacle, and when the arm is set to direct coins of both denominations into the chute, it unlocks the change receptacle.

2. In a coin operated vending machine the combination of a swinging arm for releasing the vending apparatus; a coin chute divided into ways for receiving coins of different denominations, levers for regulating the locking of the swinging arm and extending below the ways in the chute; a movable change receptacle, an auxiliary chute movable to direct coins into the ways of the main chute; a hub, an index arm mounted upon the hub, means for connecting the hub and the change receptacle, and the hub and the auxiliary chute, whereby when the index arm is set to direct coins of larger denomination only into the chute, the change receptacle is locked, and when it is set to direct either the large or small coins into the chute, the receptacle is unlocked.



3. In a coin operated vending machine a coin chute divided into ways for directing coins of various denominations to the releasing mechanism of a vending machine, an arm mounted adjacent to the chute for entering the ways for coins of lesser denomination; a change receptacle, a means for directing coins of different denominations into the main chute; an index hand, a means for connecting the index hand with the arm, and a means of connecting the index hand with the change receptacle, and a means for connecting the index hand with the means for directing coins into the chute, whereby when the index hand is set for vending articles only of the value of the larger coin, the change receptacle is locked and the arm is swung into the chute to divert coins of lesser denomination from the releasing mechanism of the vending apparatus.

4. In a coin operated vending machine, a coin chute for receiving coins of various denominations and directing them to a releasing mechanism for a vending machine, said releasing mechanism, a change receptacle, said coin chute having a deposit slot for the coins, a means for connecting the change receptacle and the deposit slot, whereby the slot is limited in size so as not to receive a larger coin when the change receptacle is empty.

5. In a coin operated vending machine the combination of a coin chute, a releasing mechanism for a vending apparatus, means for directing a coin in the chute to the releasing mechanism, a cylindrical change receptacle mounted to rotate, change compartments in the receptacle so located that when released the weight of the coins moves the change receptacle, a change chute with which the compartments are made to register, and a releasing mechanism for the change receptacle operated by the releasing mechanism of the vending machine.

[Claims 6 to 13 not printed in the Gazette.]

871,825. PROJECTILE FOR RIFLED FIREARMS. LUDWIG SCHUPMANN, Aix-la-Chapelle, Germany. Filed Sept. 7, 1906. Serial No. 333,592.

1. A pointed projectile having its forward cylindric part provided with a set of helical grooves, its body to the rear of such part not provided with said grooves and adapted to fit the rifled bore of the gun in which the projectile is to be used, to alter by the effect of said grooves the inclination of the longitudinal axis of the projectile to the horizontal plane during the course of the projectile.

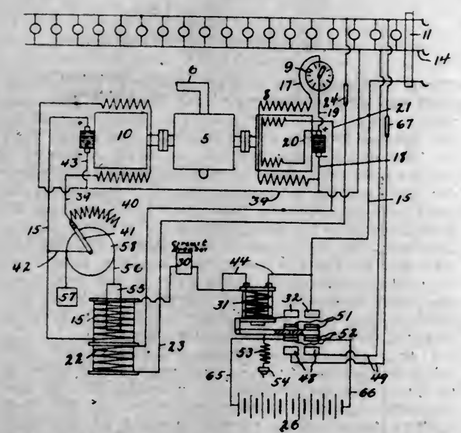
2. A pointed projectile having its forward cylindric part provided with a set of helical grooves, its body to the rear of such part not provided with said grooves and adapted to fit the rifled bore of the gun in which the pro-

jectile is to be used, and at or near its rear end provided with a set of helical grooves, to alter by the effect of said grooves the inclination of the longitudinal axis of the



projectile to the horisontal plane during the course of the projectile.

871,826. ELECTRIC TRAIN-LIGHTING SYSTEM. WALTER SCRIBNER, Columbus, Ohio. Filed Jan. 12, 1907. Serial No. 351,924.



1. In a train lighting system, the combination with a plurality of cars, of a set of storage batteries carried upon each of said cars, a main lamp circuit which extends through the cars, a battery charging dynamo, and automatic switches adapted to connect the storage batteries of each car in parallel on to the main lamp circuit of said cars and also adapted to automatically and simultaneously connect the said battery charging dynamo in series with the storage batteries and disconnect said batteries from the lamp circuit.

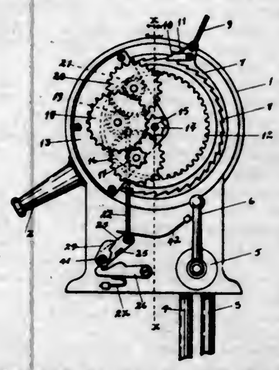
2. In a train lighting system, the combination with a main lamp circuit, of a compound wound lamp lighting dynamo, a shunt wound battery charging dynamo, a plurality of sets of storage batteries, a plurality of automatic switches adapted to connect said storage batteries in series with the battery charging dynamo or to connect said batteries in parallel on to the lamp circuit.

3. In a train lighting system, the combination with a main lamp circuit, of a compound wound lamp lighting dynamo, a shunt wound battery charging dynamo, a plurality of sets of storage batteries, a plurality of automatic switches adapted to connect said storage batteries in series with the battery charging dynamo or to connect said batteries in parallel on to the lamp circuit, and an automatic current controlling device located in the field circuit of the battery charging dynamo and adapted to be actuated by variations of current in the lamp circuit.

4. In a train lighting system, the combination with a main lamp circuit, of a compound wound lamp lighting dynamo, a shunt wound battery charging dynamo, means for driving said dynamos, a plurality of sets of storage batteries, automatic switches comprising movable contact points, mechanical means for holding said contact points in such position as to connect each of said sets of batteries in parallel to the lamp circuit, and electrical means adapted to automatically connect all of said sets of storage batteries in series with the battery charging dynamo.

5. In a train lighting system, the combination with a plurality of cars, of a main lamp circuit which extends through all of said cars, of a plurality of sets of storage batteries, a battery charging circuit which extends through all of said cars, a constant potential lamp lighting dynamo, a variable potential battery charging dynamo, and an automatic current regulator which controls the strength of the field of the battery charging dynamo, said current regulator being provided with a plurality of windings, one of said windings being in circuit with the constant potential dynamo and the other of said windings being in circuit with the variable potential dynamo whereby said current regulator will be controlled both by variations of current in the lamp circuit and by variations of current in the battery charging circuit.

871,827. LIQUID-MEASURING DEVICE. GEORGE O. SEELEY, Grand Rapids, Mich. Filed Jan. 22, 1907. Serial No. 353,503.



1. In a device of the class described, the combination of a chamber having inlet and outlet openings; a motor, suitably mounted upon a shaft, in said chamber; a valve controlling the flow of liquid to said chamber and provided with a spring for keeping said valve normally closed; a ratchet-wheel loosely mounted upon said motor shaft and having an annular gear-wheel attached thereto; a rotatable disk loosely mounted upon said motor shaft and provided with a spring-pressed pawl to engage said ratchet-wheel while said disk is resuming its initial position; a tension device to normally cause the rotation of said disk in one direction; means, comprising a rod, link, and rock-shaft, connecting said disk and said valve whereby the valve is opened by the rotation of the disk in one direction; a driving-gear on said motor shaft; a system of gearing intermediate the said driving-gear and said ratchet-wheel; and a locking-device coöperating with said connecting means whereby the said valve is kept open until the said disk has resumed its initial position; all coacting for the purposes specified.

2. In a device of the class described, the combination of a chamber having inlet and outlet openings; a spring-pressed valve controlling the flow of liquid to said chamber; a motor in said chamber; a ratchet-wheel having an annular gear-wheel attached thereto; a rotatable disk adapted to move in unison with said ratchet-wheel in one direction; means connecting said disk with said valve, whereby the said valve is opened by the rotation of the disk; a driving-gear operated by said motor; means intermediate the said driving-gear and said ratchet-wheel for transmitting motion from the former to the latter; and a locking-device coöperating with said connecting means whereby the said valve is kept open until the said disk has resumed its initial position; all coacting for the purpose specified.

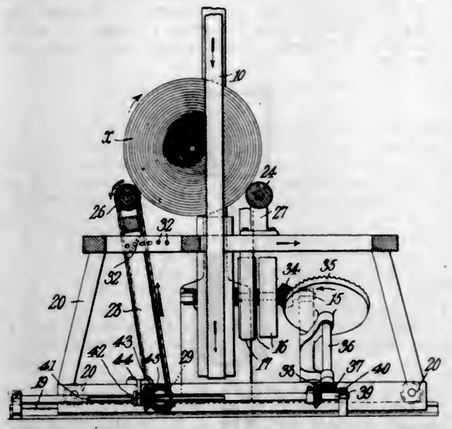
3. In a device of the class described, the combination of a chamber having inlet and outlet openings; a self-closing valve controlling the flow of liquid to said chamber; a motor in said chamber; a ratchet-wheel having an annular gear-wheel attached thereto; a rotatable disk adapted to move in unison with said ratchet-wheel in one direction; means connecting said disk with said valve, whereby the valve is opened by the rotation of the disk in one direction; a driving-gear operated by said motor; means intermediate the driving-gear and said ratchet-wheel for transmitting motion from the former to the latter; and means coöperating with said connecting means whereby the said valve is kept open until the said disk has resumed its initial position; for the purpose specified.

4. In a device of the class described, the combination of a chamber having inlet and outlet openings; a motor in said chamber; a self-closing valve controlling the flow of liquid to said chamber; a ratchet-wheel; a rotatable disk adapted to move in unison with said ratchet-wheel in one direction; means connecting said disk with said valve whereby the opening and closing of the valve is controlled by the rotation of the disk; means intermediate the motor and the ratchet-wheel for transmitting motion from the former to the latter; and a locking-device coöperating with said connecting means whereby the valve is kept open until the disk has resumed its initial position.

5. In a device of the class described, the combination of a chamber having inlet and outlet openings; a motor in said chamber; a self-closing valve controlling the flow of liquid to said chamber; a rotatable disk; means connecting said disk with said valve whereby the valve is opened by the rotation of the disk; means intermediate the motor and the disk for transmitting motion from the former to the latter; and a locking-device for keeping said valve open until the disk has resumed its initial position.

[Claims 6 and 7 not printed in the Gazette.]

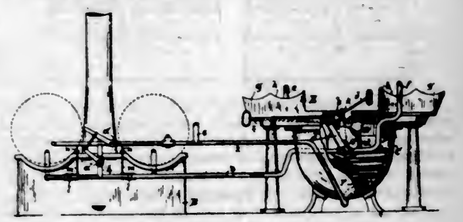
871,828. ROTARY ROLL-CUTTING ATTACHMENT. ARTHUR E. SEXTON, Los Angeles, Cal. Filed Aug. 8, 1906. Serial No. 329,764.



1. In apparatus for cutting rolls of paper, a saw, a paper roll carrier, means for rotating said roll carrier, and means for so positioning and feeding the saw and carrier relatively to each other that the saw shall always cut toward the axis of the roll while the kerf is caused to recede from the limit of the cutting area.

2. The combination with a band saw, of an operating shaft therefor, a movable work carriage, a pair of rollers on said carriage and adapted to receive a roll of material to be cut, a sprocket wheel on one of said rollers, a shaft arranged near the base of the carriage, a sprocket wheel on said shaft, a link belt connecting the two sprocket wheels, a bevel gear on the shaft, a counter shaft mounted in fixed bearings at one side of the carriage and having an elongated key way, a bevel gear mounted on the counter shaft and intermeshing with the first bevel gear, a bracket on said carriage and serving to hold the bevel gear and the counter shaft from movement independent of the carriage, and means for connecting the counter shaft to the saw operating shaft.

871,829. BARREL-PITCHING EQUIPMENT. PHILIP SHERRER, Cleveland, Ohio. Filed Feb. 28, 1905. Serial No. 247,820.



1. A pitching equipment for coating casks comprising the combination of steam super-heating furnace, a spraying contrivance, a double walled pitch-melting kettle with pump combined, and a system of pipes conveying superheated steam from said furnace to said kettle and from the kettle to said spraying contrivance as shown and for the purpose set forth.

2. In a barrel pitching equipment, the combination of an independent steam super-heating furnace, a spraying contrivance, a jacketed kettle and pump combined, a pipe leading from said furnace to said kettle, a pipe leading from the kettle to said spraying contrivance, an intermediate pipe between the two first named pipes and suitably located lever-connected valves whereby direct or indirect communication can be established between said superheater and spraying contrivance.

3. In a pitching equipment, the combination with a pitch kettle of a duplex barrel support, and a pump having the operating lever provided with a swiveled handle, at one side of said pump, and a three way cock with lever and handles at the other side of said pump, enabling the establishment of open relation between said pump and the nozzles thereof from either side of said barrel support, substantially as shown and for the purpose set forth.

4. In a pitching equipment, the combination with the pitch kettle of a duplex barrel support, and a pump having a lever with a swiveled handle whereby said pump may be operated from either side of said kettle, in the manner and as and for the purpose set forth.

5. A pitching equipment for coating casks comprising the combination of a steam-super-heating furnace, a spraying contrivance, a kettle equipped to melt pitch by steam heat, an ejector for the pitch depending into said kettle and a system of pipes conveying superheated steam from said furnace to said kettle and from the kettle to the spraying contrivance.

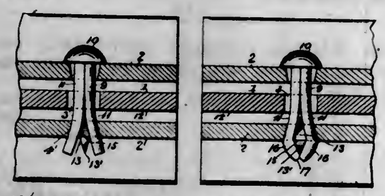
[Claims 6 and 7 not printed in the Gazette.]

871,830. METAL JOINT. JACOB J. SOUDER, Washington, D. C. Filed Mar. 11, 1907. Serial No. 361,850.

1. A metal joint comprising opposite members provided with openings to receive a bolt, the opening in one of said member having a conical wall, a bolt provided with a solid head and separable members extending through the conical walled opening, and a wedge whose width is approximately equal to the diameter of said conical opening, resting between said members of the bolt and extend-

ing into said opening and having the ends of the members bent inward, over and approximately covering the wedge.

2. A metal joint comprising opposite members provided with openings to receive a bolt, the opening in one of said members having a conical wall, a bolt provided with a solid head and members separable to the head and extending through said conical opening, and a wedge whose width is approximately equal to the diameter of said conical opening, resting between said members of the bolt and extending into said opening and having the ends of the members bent inward, over and approximately covering the wedge.



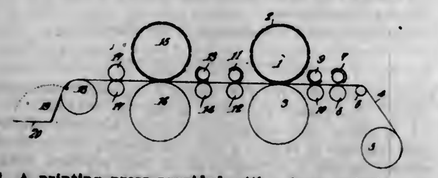
3. A metal joint comprising opposite members provided with openings to receive a bolt, the opening in one of said members having a conical wall, a bolt provided with a solid head and separable members extending through the conical walled opening, and a wedge whose width is approximately equal to the diameter of said conical opening, and having a head extending beyond the edges of the body of the wedge and forming shoulders thereon, said wedge extending into said latter opening between said members to the shoulders on the wedge, and having the ends of the members bent inward, over and approximately covering the head of the wedge.

4. A metal joint comprising a rail having bolt openings therein, plates on opposite sides of the rail provided with openings of less diameter than the openings in the rail, a bolt provided with a solid head and separable members extending through the plates and the rail, and a wedge whose width is approximately equal to the diameter of said opening, resting between the members of the bolt and extending into the opening in one of said plates and separating said members in the opening in the rail and having the ends of the members beyond the plate bent inward, and over and approximately covering the outer end of the wedge.

5. A metal joint comprising a rail having bolt openings therein, plates on opposite sides of the rail provided with openings of less diameter than the openings in the rail a bolt provided with a solid head and separable members extending through said plates and the rail, and a wedge having a head extending beyond the edges of the body of the wedge and forming shoulders thereon, and said wedge extending into the opening in one of the plates between said members of the bolt to the shoulders on the wedge, with said shoulders resting on the plate beyond the wall of the opening and having the ends of the members bent inward over and approximately covering the head of the wedge.

[Claim 6 not printed in the Gazette.]

871,831. PRINTING-PRESS. EDWARD L. STONE, Roanoke, Va. Filed Apr. 23, 1907. Serial No. 369,814.



1. A printing press provided with a large printing roll having a complete series of individually different imprinting surfaces, of nonchangeable matter or matter from which many imprints are to be taken, and another small printing roll or rolls having a single printing surface arranged to make like impressions in each of the individually different imprints from the large roll, the printing surface on the small roll or rolls being readily changeable.

2. In a printing press, a large printing roll having a series of individually different imprinting surfaces, of nonchangeable matter or matter from which many imprints are to be taken, and arranged to impress the same in regular series on an imprint-receiving web, and a small roll or rolls carrying a single readily changeable imprinting surface and timed to make like imprints in each of the individually different imprints of the large roll.

3. A calendar printing press comprising a large roll carrying upon its surface a yearly series of monthly calendar plates and including only such matter as is common to all calendars, and a small roll carrying upon its surface other matter to be imprinted in conjunction with each impression of the large roll corresponding to a monthly calendar sheet, the matter upon the large roll being of a comparatively permanent character and the matter upon the small roll being readily accessible for frequent changes.

4. A calendar printing press comprising a large roll having thereon as many printing plates as there are sheets to be printed for a yearly calendar and a small roll carrying other matter to be printed upon said calendar sheets and timed to make an imprint for each of the individual plates on the large roll, the printing plates on the large roll being of a comparatively permanent character and not readily changeable and the matter on the small roll being readily accessible and changeable.

5. A calendar printing press comprising a large roll having a series of individually different calendar plates corresponding in number to the number of sheets for a yearly calendar and containing only those portions to be printed in a certain color, a small roll or rolls containing imprinting surfaces of matter extraneous to the calendar imprint and designed to print in one color only, another large roll containing a series of plates corresponding in number to the first-mentioned series and designed to print the missing parts of the first-mentioned series in another color, and another small roll or rolls containing extraneous matter to be printed in conjunction with the first-mentioned extraneous matter but in another color.

[Claim 6 not printed in the Gazette.]

871,832. BEER-RECLAIMING MACHINE. FRANK C. H. STRASBURGER, Chicago, Ill., assignor to Bottlers Machinery Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 8, 1906. Serial No. 294,980.

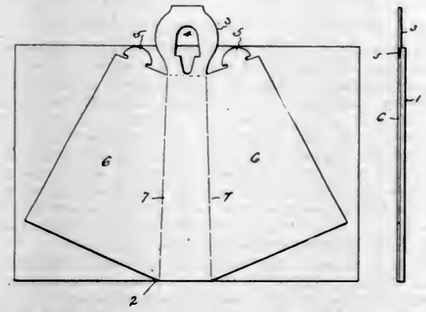


1. The combination of a pressure bottling system comprising a liquid supply vat, a filling machine, a pipe connecting the vat to the filling machine, a tank for receiving waste liquid from broken and defective bottles, a pressure chamber connected to said tank, an air pipe communicating with the chamber, a delivery pipe connecting the chamber with the filling machine supply pipe, valves in the connection between the tank and chamber, in the delivery pipe and in the air pipe, a rod connected to all of said valves, and a lever connected to said rod for operating all of the valves simultaneously.

2. The combination of a pressure bottling system comprising a liquid supply vat, a filling machine, a supply pipe connecting the vat to the filling machine, a pressure chamber to receive waste liquid from broken and defective bottles and having an outlet at the bottom thereof, a ball valve within the chamber for said outlet, a valved delivery pipe connected to the outlet and to the pressure bottling system, and means for discharging the liquid from the chamber through the outlet and delivery pipe into the bottling system.

3. The combination of a liquid receiving tank, a pressure chamber having an outlet at the bottom thereof, a pipe connecting the tank with the chamber and extending down in the chamber adjacent to the bottom thereof, a valve in said pipe, a ball valve within the chamber for said outlet, a delivery pipe connected to the outlet, a valve in said delivery pipe, an air pipe connected to the chamber, a three-way valve in said air pipe having one port to exhaust to the atmosphere while the pipe connecting the tank and chamber is open, a rod connected to the valves in the pipe connecting the tank and chamber, in the delivery pipe and in the air pipe, and a lever connected to said rod for operating the valves simultaneously, substantially as described.

871,833. EASEL AND HANGER. CHARLES G. TAYLOR, Hartford, Conn. Filed June 14, 1907. Serial No. 379,102.

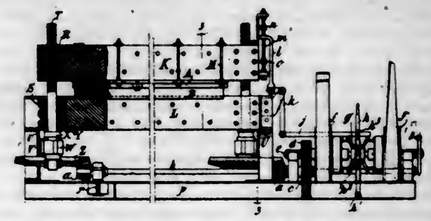


1. A card support formed from a single piece of material having folding wings, tongues extending therefrom and a tab with a loop, by means of which the device may be hung or by means of which the tongues may be engaged for holding the wings when folded out, substantially as specified.

2. A card having a body for the attachment of the matter to be displayed, and a support attached to the body said support having wings which normally lie against the back of the body but which may be bent out at an angle thereto, and a loop which may be used for hanging the card when the wings are flat and may be used for locking the wings when they are folded out, substantially as specified.

871,834. SHEET-METAL-WORKING MACHINE. THEODORE VOGT, Hoboken, N. J. Filed Feb. 6, 1907. Serial No. 356,072.

1. A sheet metal working machine of the class described, including in combination a lower beam L, a supporting frame therefor, a pair of operating shafts T normally supported from said frame and guided through said beam L, an upper beam K carrying nuts through which said shafts T are threaded, and means for rotating said shafts to bring the upper beam down upon the lower one, said shafts having collars X adapted to operate on the under side of the beam L when an upward action is exerted on the beam K by the work and thus take up the strain of the operation without transmission of any substantial part thereof to the frame or bearings.

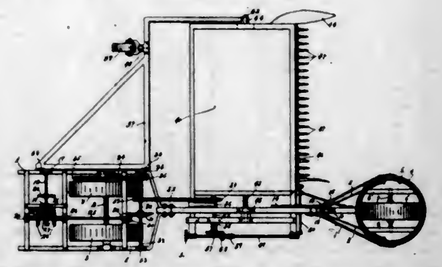


2. A machine of the class described, including in combination a pair of beams each comprising a pair of channel irons bolted together with their flanges projecting inward, nuts R included between said channels at the ends of the upper beam, guides S included between said channels at the ends of the lower beam, and operating shafts passing through said guides S and threaded through said nuts R for drawing said beams together or separating them.

3. In a machine of the class described, a movable beam K, a shaft for moving said beam, and a clutch for rotating said shaft in eithe rdirection, a rod *m* moving with said beam, a pair of adjustable stops *n*, o carried by said rod, and a member *l* adapted to be engaged by one or the other of said stops as the beam is raised or lowered to a determined limit and to be moved in one or the other direction thereby, and means for operating the clutch by the movement of said member *l*.

4. A machine of the class described, including in combination a pair of beams adapted to be moved toward each other, a jaw adapted to be fastened to the under side of the upper beam and having a pair of ribs C with a groove between them, and a jaw B' adapted to be carried on the lower member and having a socket G adapted to carry round rods of various radii in position to force the work into the groove of the upper jaw.

871,835. HARVESTER. GEORGE P. WACEK, Olivia, Minn. Filed July 5, 1907. Serial No. 382,269.



1. In a harvester, the combination with a main frame having a steering wheel in front and a traction wheel at the rear, of a supplemental frame hinged to one side of said main frame and provided at its extended portion with a supporting wheel and forwardly projecting arm, and a grain platform supported by the intermediate portion of said main frame and the forwardly extended arm of said supplemental frame, substantially as described.

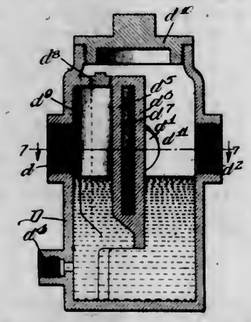
2. In a harvester, the combination with a main frame having a steering wheel in front and a traction wheel at the rear, of a supplemental frame hinged to one side of the rear portion of said main frame and provided at its outer portion with a supporting wheel and a forwardly projecting arm, and a grain platform pivotally supported at its ends by the intermediate portion of the said main frame

and the forwardly projecting arm of said supplemental frame, substantially as described.

3. In a harvester, the combination with a main frame having a steering wheel in front and a traction wheel at the rear, of a supplemental frame hinged to one side of the intermediate portion of said main frame, and provided with a forwardly projecting arm at its free end, a caster wheel applied to and supporting the outer portion of said supplemental frame, a sickle-equipped grain platform supported by the intermediate portion of said main frame and the forwardly projecting arm of said supplemental frame itself, a shaft mounted on the inner end of the said platform, and driving connections from said traction wheel to said shaft, substantially as described.

4. In a harvester, the combination with a main frame having a steering wheel in front and a traction wheel at the rear, of a supplemental frame hinged to one side of the intermediate portion of said main frame, and provided with a forwardly projecting arm at its free end, a caster wheel applied to and supporting the outer portion of said supplemental frame, a sickle-equipped grain platform pivotally supported by the intermediate portion of said main frame and the forwardly projecting arm of said supplemental frame itself, a shaft mounted on the inner end of the said platform and driving connections from said traction wheel to said shaft, substantially as described.

871,836. TRAP OR WATER SEAL. JAMES J. WADE, Chicago, Ill. Filed Sept. 15, 1906. Serial No. 334,780.



1. In a trap, the combination of a vertically-disposed cylindric body-portion provided with a plurality of intake openings, main and supplemental chambers, an air space between the two chambers, said space communicating with the atmosphere at each side, an offtake or sewer pipe opening leading from the supplemental chamber, means extending below the water level to divide the two chambers and form a water seal, and plugs or closures for the tops of said main and supplemental chambers, the plug or closure for the supplemental chamber being separate from the plug or closure for the main chamber, substantially as set forth.

2. In a trap, the combination of a hollow body-portion, an inclosed vertical wall formed integral with said body portion and extending below the water level to form a water seal, a plurality of intake openings leading to the main chamber formed by said vertical wall, an offtake or sewer opening leading from the supplemental chamber formed by said wall, and removable closure for entering both of said chambers at the tops thereof, the closure for the supplemental chamber being closed by the closure for the main chamber.

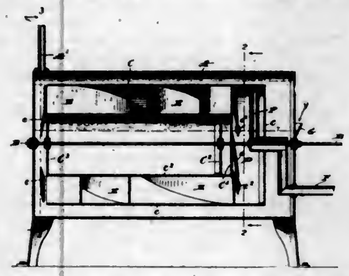
3. In a trap, the combination of a hollow body-portion, a vertically-disposed double wall formed integral therewith and extending below the water level to form a water seal, intake and offtake openings communicating with the main and supplemental chambers formed by said double wall, said double wall providing an air space between the two chambers, and separate plugs or closures for the tops of the main and supplemental chambers.

4. In a trap, the combination of a hollow body-portion, a vertically-disposed and inclosed double wall therein, formed integral therewith, providing an air space closed at the top and bottom, but open to the atmosphere at each side of the trap, said wall extending below the water level to form a water seal, intake and offtake openings communicating with the main and supplemental chambers formed by said double wall, and means for entering the trap.

5. In a trap, the combination of a hollow body-portion provided with an integral portion extending below the water level to form a water seal and providing main and supplemental chambers, said integral portion having an air space therein, a plurality of bosses providing a plurality of openings leading to the main chamber, a single boss providing a single opening communicating with the supplemental chamber, all said bosses located in the same horizontal plane and formed integral with the main body-portion, and removable closures for the tops of said main and supplemental chambers, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

871,837. ROTARY BLOWER. HERMAN WALTHER, Davenport, Iowa. Filed Mar. 27, 1907. Serial No. 364,820.



1. In a device of the character described, a high pressure chamber adapted to contain a supply of liquid, a drum journaled within the high pressure chamber and partially submerged in the liquid contained therein, a plurality of pumping chambers extending longitudinally of said drum and terminating short of the front wall thereof, the opposite ends of said pumping chambers being extended laterally in opposite directions, means for admitting air to the forward end of the drum, and means establishing a communication between the forward end of the drum and the inlet end of each of said pumping chambers at some distance from the extremity thereof.

2. In a device of the character described, a high pressure chamber adapted to contain a supply of liquid, a drum journaled therein and partially submerged in the liquid, a plurality of pumping chambers extending longitudinally of said drum and terminating short of the front wall thereof, the opposite ends of said pumping chambers being extended laterally in opposite directions, means for admitting air to the forward end of the drum, and pipes connecting the inlet end of each of the pumping chambers at some distance from the end thereof with the forward end of the drum.

3. In a device of the character described, a high pressure chamber adapted to contain a supply of liquid, a drum journaled therein and partially submerged in the liquid, a plurality of pumping chambers extending longitudinally of said drum and terminating short of the front wall thereof, the opposite ends of said pumping chambers being extended laterally in opposite directions and the laterally extending portion of each of said chambers overlapping the laterally extending portion of the adjacent chamber for an appreciable portion of its length, means for admitting air to the forward end of the drum, and a plurality of U-shaped tubes secured to the inlet ends of said pumping chambers, one of the arms of each of said tubes being arranged to extend upwardly into the pumping chambers and the other arm being arranged to lie alongside of said pumping chamber and communicate with the forward end of the drum.

4. In a device of the character described, a high pressure chamber adapted to contain a supply of liquid, a drum journaled therein and partially submerged in the liquid, a plurality of pumping chambers extending longitudinally of said drum and terminating short of the front wall thereof, the inlet and outlet ends of said pumping chambers being extended laterally in opposite directions, the inlet ends of said chambers being provided with means affording a communication with the forward end of the drum after said ends have become submerged in the liquid contained therein, and the outlet ends of said chambers being provided with apertures affording communication with the high pressure chamber, and means for admitting air to the front end of the drum.

5. In a device of the character described, a casing adapted to contain a supply of liquid, a drum journaled within said casing and partially submerged in the liquid contained therein, a plurality of pumping chambers extending longitudinally of said drum, the opposite ends of said pumping chambers being extended in opposite directions, a low pressure chamber with which the ends of the said pumping chambers are arranged to be successively brought into communication, and means establishing a communication between the low pressure chamber and the inlet ends of each of said pumping chambers at some distance from the extremity thereof.

871,838. TILE CONSTRUCTION. JOHN F. WARWICK, Chicago, Ill. Filed Mar. 16, 1907. Serial No. 362,653.



1. A tile construction comprising pairs of tile having oppositely disposed recesses adapted to form a series of channels, a series of outwardly extending ribs on the sides opposite said recesses forming channels therebetween, and a tapered key fitting within said channel holding said tiles in place.

2. A tile construction comprising pairs of tile having oppositely disposed semi-cylindrical recesses adapted to form a series of tubular channels, a series of outwardly extending ribs on the sides opposite said recesses forming channels therebetween, and a tapered key fitting within said channel holding said tiles in place.

3. A tile construction comprising pairs of tile having oppositely disposed semi-cylindrical recesses adapted to form a series of tubular channels, a pair of outwardly extending ribs oppositely disposed to said recess forming with the ribs on the adjacent tile an angularly disposed channel, and interlocking means for holding said tile in place.

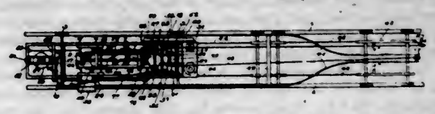
4. A tile construction comprising pairs of tile having oppositely disposed semi-cylindrical recesses adapted to form a series of tubular channels, a pair of outwardly extending ribs oppositely disposed to said recess, forming with the ribs on the adjacent tile a channel at right angles to said tubular channel, and interlocking means for holding said tile in place.

5. A tile construction comprising pairs of tile having oppositely disposed semi-cylindrical recesses adapted to form a series of tubular channels, a pair of outwardly extending ribs oppositely disposed to said recess, forming with the ribs on the adjacent tile a channel at right angles to said tubular channel, and a key adapted to fit within said channel and to lock said tiles securely in place.

[Claims 6 to 8 not printed in the Gazette.]

871,839. EXCAVATOR. WILLIAM WATSON, Portland, Oreg. Filed Oct. 27, 1906. Serial No. 340,882.

1. In an excavator, the combination of a digger or excavating tool and a shovel coöperatively connected and having a common bodily movement, driving mechanism for driving the digger or excavating tool independently of the bodily movement of both and for moving both bodily from the operating or loading to the unloading position.



2. In an excavator, the combination of a digger or excavating tool and a shovel coöperatively connected and having a common bodily movement, said shovel being provided with a dumping mechanism, a driving mechanism for driving said excavating tool and for moving both bodily from the operating or loading to the dumping position.

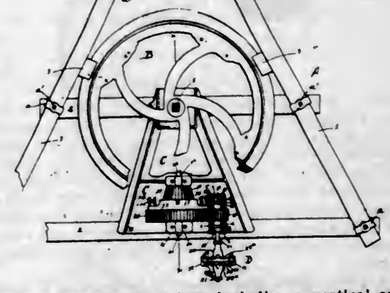
3. An excavator comprising in combination a shovel, a dumping mechanism therefor, an auger-like excavating tool rotatably mounted in said shovel and adapted to be moved bodily therewith, and driving mechanism for driving the excavating tool independently of the bodily movement of both and for moving both tool and shovel bodily from the loading to the discharging positions.

4. An excavator comprising in combination a shovel, a dumping mechanism therefor, an auger-like excavating tool rotatably mounted in said shovel and adapted to be moved bodily therewith, driving mechanism for driving the excavating tool independently of the bodily movement of both and for moving both tool and shovel bodily from the loading to the discharging positions, and a slideway adapted to be moved into and out of position for receiving the discharged load from said shovel.

5. An excavator comprising in combination a shovel provided with an automatic dumping mechanism, an auger-like excavating tool rotatably mounted therein, a driving mechanism for driving said excavating tool and for moving both shovel and tool bodily from the loading to the unloading position, and mechanism for moving said excavator forwardly and backwardly as the work progresses, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

871,840. HORSE-POWER. GUSTAVE WENZELMANN, Galesburg, Ill. Filed Sept. 12, 1905. Serial No. 278,090.



1. In a horse-power, a base including a vertical axle, a master-wheel fulcrumed thereon, a main shaft seated in journal-box pillows integral with said base, and line shafting journaled in boxes adjustably secured to the base.

2. In a horse-power, a master-wheel supporting base, a vertical axle integral therewith, a master-wheel mounted thereon, an integral journal box pillow, a second pillow intermediate said pillow and axle, line shaft boxes, means integral with the base for supporting them, means for adjusting and securing them thereto, a main shaft, a master-pinion thereon in gear with the master-wheel, and means for adjusting it relatively thereto.

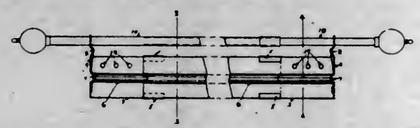
3. In a horse-power, and in combination, a base provided with a vertical axle, a master-wheel, adjustable means carried by the base for guiding said wheel, and means carried by said adjustable means for limiting the vertical movements of the wheel.

4. In a horse-power, a master-wheel supporting base, a vertical axle integral therewith, an integral journal-box pillow at one side of the base, a second pillow intermediate said pillow and axle, line-shaft boxes, means integral with the base for supporting them, and means for adjusting them and securing them thereto.

5. In a horse-power, a base provided with a vertical axle, integral horizontal shaft-bearings, and horizontal supports having plane surfaces, and ovaled-face journal boxes mounted on said supports, adapted to rock thereon.

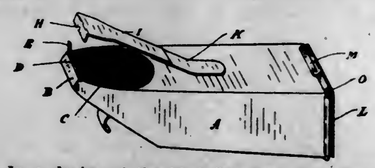
[Claims 6 to 8 not printed in the Gazette.]

871,841. EXTENSION WINDOW SHADE AND CURTAIN HANGER. WILLIAM WERTMAN, Danville, Pa. Filed Mar. 25, 1907. Serial No. 364,268.



In a curtain rod and shade roller holder, the combination with a metal bracket comprised of two sections each containing a plurality of holes adapted to be engaged with sustaining means, said sections being movable longitudinally to each other and having interconnecting ribs and grooves and partially enveloping portions on the edges thereof, of integral arms on one end of each of said sections extending outwardly at right angles thereto, stiffening ribs formed in each arm, said ribs being continuous with those in the bracket-sections, the upper front portion of each arm being adapted to receive a curtain rod and the lower front portion of each arm being adapted to receive a shade roller.

871,842. DEVICE FOR PICKING CHERRIES AND LIKE SMALL FRUITS. JAMES WEST, Jackson township, Wells county, Ind. Filed July 26, 1906. Serial No. 327,896.



1. In a device of the kind described, the combination with a box-shaped receptacle having its one end ensmalled into a nose-shaped closure and having an aperture thereat in one side of the receptacle, of a straight-edge blade secured adjacent the said aperture, and a shear-blade yieldingly disposed apart from the said straight-edge blade and the said aperture, normally sustained out of engagement, and a spring-latched door hingedly secured to and adapted to close the opposite end of the receptacle, substantially as set forth.

2. A device of the kind described, comprising a receptacle substantially square in cross-section and having a grip-lug thereon the forward end of the receptacle being ensmalled into a nose-shaped closure and having an aperture thereat and its rear end being of enlarged dimension, there being a straight edge blade with tines at each end thereof secured at the said nose-shaped closure and a spring-sustained shear blade to simultaneously engage the straight edge blade and close said aperture, and a spring-latched door hingedly secured to the rear end of said receptacle, substantially as set forth.

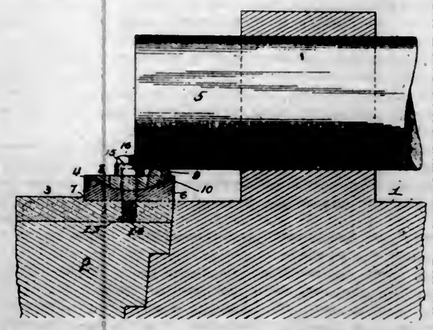
871,843. SCREEN FOR WINDOWS AND DOORS. JOHN G. WIMMER, Milwaukee, Wis. Filed Dec. 3, 1906. Serial No. 346,024.

In a device of the described class the combination of a suitable frame preferably of wood, a metallic frame secured at its respective ends to the opposing vertical sides of said first named frame and at an angle to the front and rear surfaces of said frame, a screen secured in close contact with one surface of said first named frame and extending from the lower bar thereof to a point below the upper bar, a second screen secured to the opposite side of said first named frame and extending from the upper bar of the first named frame to the lower edge of



said metallic frame and a third screen extending from the lower edge of said metallic frame upwardly along the surface of and secured at its upper edge to the upper edge of said metallic frame and means for securing said metallic frame and screens at intervals to said first named screen, all substantially as and for the purpose specified.

871,844. ADJUSTABLE BOLT-BEARING FOR VAULT AND SAFE DOOR JAMBS. JAMES H. WILLIAMS, Philadelphia, Pa., assignor to Remington and Sherman Company, Philadelphia, Pa. Filed Nov. 28, 1906. Serial No. 345,505.



1. A device of the character described, comprising a base block having a laterally concave outer face, an outer block having an inner laterally convex face, and means for clamping the blocks together at various adjustments of the outer block laterally on the base block.

2. A device of the character described, comprising a base block having a laterally concave outer face, an outer block having a laterally convex inner face and provided with slots and clamping screws located in the slots in the outer block and in openings in the base block to clamp the blocks together.

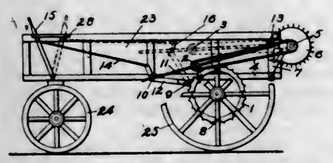
3. In a device of the character described, the combination with a jamb bar, of a block thereon having a laterally concave outer face, an outer block having a laterally convex inner face, the outer block having slots, and the inner block having openings registering with said slots, and clamping screws located in said slots and openings and screwed into the jamb bar.

4. In a device of the character described, the combination with a jamb bar, of a block thereagainst having a laterally concave outer face, an outer block having a laterally convex inner face, the outer block having slots and the inner block having openings registering with said slots, clamping screws passing through said slots and openings and screwed into the jamb bar, heads on the outer ends of the screws having curved inner faces, and washers on the screws between the outer block and the screw heads and having concave outer ends to receive the screw heads.

5. In a device of the character described, the combination of a fixed block and a superimposed movable block, one having a concave engaging face and the other having a convex engaging face, and means for securing said blocks together and to the jamb of a safe or vault.

[Claim 6 not printed in the Gazette.]

871,845. MANURE-SPREADER. DALTON K. WILSON, Waterloo, Iowa, assignor to The William Galloway Company, Waterloo, Iowa, a Corporation. Filed June 25, 1907. Serial No. 380,745.



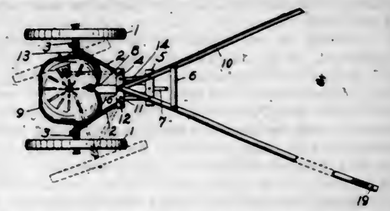
1. In a manure spreader, the combination of a wagon-box supported on carrying-wheels, a beater-drum secured to a shaft rotatably supported at one end of said wagon-box, a driven sprocket-wheel secured to said shaft, a driving sprocket-wheel secured to one of the carrying-wheels, an idler-pulley rotatable on a vertically- and horizontally-adjustable shaft, a sprocket-chain about said idler and said driven sprocket-wheel, and means for raising and lowering said idler and sprocket-chain out of and into operative engagement with said driving sprocket-wheel.

2. In a manure spreader, the combination of a wagon-box supported on carrying-wheels, a beater-drum secured to a shaft rotatably supported at one end of said wagon-box, a driven sprocket-wheel secured to said shaft, a driving sprocket-wheel secured to one of said carrying-wheels, a lever pivoted at one end to said wagon-box, a sleeve-bearing attached to said lever, a shaft horizontally adjustable in said sleeve-bearing, means for adjustably securing said shaft in said sleeve-bearing, an idler-pulley rotatable on said shaft, a sprocket-chain about said idler and said driven sprocket-wheel, and means for raising and lowering said lever to cause said sprocket-chain to be separated from or to enter into operative engagement with said driving spocket-wheel.

871,846. RIDING ATTACHMENT FOR HARROWS. DALTON K. WILSON, Waterloo, Iowa, assignor to The William Galloway Company, Waterloo, Iowa. Filed July 5, 1907. Serial No. 382,230.

1. A device of the character described, consisting of the combination with a pair of carrying wheels rotatably mounted on an axle, of a frame having forwardly projecting arms adapted to be secured to a harrow, bearings on said axle and bearings in said frame, rock-levers each of which has its front end pivotally mounted in a bearing in said frame, and its rear end in a bearing on said axle, the rear ends of said rock-levers being spaced more widely apart in their bearings than are their forward ends in their bearings.

2. A device of the character described, consisting of the combination with a pair of carrying wheels rotatably mounted on an axle, of a frame having forwardly extending arms adapted to be secured to a harrow, said frame being pivotally connected to said axle, a recessed bearing-seat secured to said axle, and a lever pivoted to said frame, whose rear end is adapted to be detachably seated in said recessed seat.



3. A device of the character described, consisting of the combination with a pair of carrying wheels rotatably mounted on an axle, of a frame having forwardly projecting arms adapted to be secured to a harrow, bearings on said axle and bearings in said frame, rock-levers each of which has its front end pivotally mounted in a bearing in said frame, and its rear end in a bearing in said axle, and means for detachably securing said frame to said axle.

4. A device of the character described, consisting of the combination with a pair of carrying wheels rotatably mounted on an axle, of a frame having forwardly projecting arms adapted to be secured to a harrow, bearings on said axle and bearings in said frame, rock-levers each of which has its front end pivotally mounted in a bearing in said frame, and its rear end in a bearing on said axle, a recessed bearing-seat secured to said axle, and a lever pivoted to said frame, whose rear end is adapted to be detachably seated in said recessed-seat.

5. A device of the character described, consisting of the combination with a pair of carrying wheels rotatably mounted on an axle, of a frame having forwardly extending arms adapted to be secured to a harrow, bearings on said axle and bearings in said frame, rock-levers each of which has its front end pivotally mounted in a bearing in said frame, and its rear end in a bearing on said axle, the rear ends of said rock-levers being spaced more widely apart in their bearings than are their forward ends in their bearings, and means for detachably securing said frame to said axle.

[Claim 6 not printed in the Gazette.]

871,847. VELOCIPEDE. DALTON K. WILSON, Waterloo, Iowa, assignor to The William Galloway Company, Waterloo, Iowa. Filed Aug. 19, 1907. Serial No. 389,214.

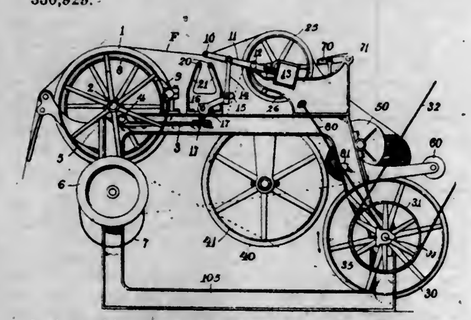


1. A device of the character described, consisting in combination, of a body-piece, a head-piece adapted to rock both laterally and vertically upon said body-piece, a front carrying wheel pivotally connected to said body-piece and slidably connected to said head-piece, rear carrying wheels adapted to support said body-piece, and means for simultaneously vertically rocking said head-piece and rotating said rear carrying wheels.

2. A device of the character described, consisting in combination, of a body-piece, a head-piece adapted to rock both laterally and vertically upon said body-piece, a front carrying wheel pivotally connected to said body-piece and slidably connected to said head-piece, rear carrying-wheels adapted to support said body-piece, an axle for said rear carrying wheels, one of said wheels being fixed to said axle and the other rotatable thereon, and means for simultaneously vertically rocking said head-piece and rotating said rear axle.

3. A device of the character described, consisting in combination, of a rear axle having a crank, carrying wheels mounted on said axle, a body-piece whose rear end is pivotally supported on said axle, an upright pivoted to the forward portion of said body-piece, a guide-wheel pivoted to said upright, a transverse rock-shaft pivotally mounted in said body-piece, a rod secured to said rock-shaft and projecting thereover and thereunder, a head-piece pivoted to the upper end of said rod and slidably connected to the upright extending from the guiding wheel, a pitman pivotally connected between the crank of the rear axle and the lower end of the rod secured to said rock-shaft, and a stirrup-rod secured to and depending from each end of said rock-shaft.

871,848. UNWINDING-MACHINE. JOHN E. WINDLE, Worcester, Mass. Filed Jan. 5, 1907. Serial No. 350,929.



1. A machine for unwinding a flat roll of flexible material, comprising a rotating drum of a diameter approximating the major diameter of such flat roll before being unwound, and a second rotating drum of substantially equal diameter located behind the first-named drum and with its center at approximately the level of the upper surface of the same; the first named drum turning with its upper surface moving toward the second drum, and the second turning with its under surface moving toward the first.

2. A machine for unwinding a flat roll of flexible material, comprising a rotating drum of a diameter approximating the major diameter of such flat roll before being unwound, a second rotating drum of substantially equal diameter located behind the first-named drum and with its center at approximately the level of the upper surface of the same; the first-named drum turning with its upper surface moving toward the second drum, and the second turning with its under surface moving toward the first, and yielding bearings for the first-named drum for deadening the blows given thereto by the unwinding flat roll.

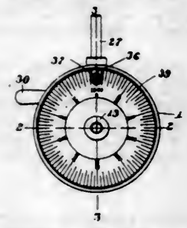
3. A machine for unwinding a roll of flexible material, comprising rotating members superficially contacting with and supporting such roll, and a pair of disks adjustably located above the members, for longitudinally positioning such roll.

4. A machine for unwinding a roll of flexible material, comprising unwinding devices rotatably supporting such roll, a source of power for said devices, a member located substantially in the path of the material being unwound, and means operated by the deflection of said member for disconnecting said devices from the source of power.

5. A machine for unwinding a roll of flexible material, comprising unwinding devices rotatably supporting such roll, a source of power and a clutch connection between such source and devices, a member located in the path of the flexible material being unwound from such roll and connections between said member and clutch disposed to unship such clutch when said member is deflected.

[Claims 6 to 13 not printed in the Gazette.]

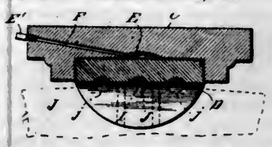
871,849. RECORDING-COUNTER. FRANK L. WOLFE, Medford, Mass., assignor to Crosby Steam Gage and Valve Company, Boston, Mass., a Corporation of Massachusetts. Filed July 28, 1905. Serial No. 271,587.



1. A recording counter comprising a case, a reciprocating rod extending through said case and operative from without, a spring controlled arm pivoted in said case in the form of a sector with an extended portion engaged by said reciprocating rod, such controlling spring suitably mounted, a rachet wheel mounted in said case, a retaining pawl suitably mounted, a driving pawl with its outer end rigidly fixed to the perimeter or arc of such sector, or to such extended portion of said sector, the axes of said pivoted arm and said ratchet wheel and the inner end of said driving pawl being substantially in the same vertical plane, gears driven by said ratchet wheel and means for recording the movement of said gears; substantially as described.

2. A recording counter comprising a case, a ratchet wheel mounted in said case, a driving pawl rigidly fixed to the perimeter or arc of a spring controlled sector, such sector pivoted in said case, such controlling spring, means operative from without such case for reciprocating said sector and thereby rotating such ratchet wheel, gears driven by such ratchet wheel and means for recording the movement of said gears; substantially as described.

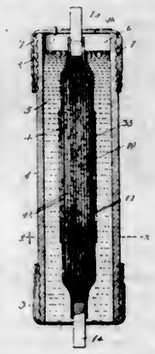
871,850. TURN-TABLE CASTING FOR LOCOMOTIVE-ENGINES. WILLIAM H. WRIGHT, Philadelphia, Pa. Filed Apr. 1, 1907. Serial No. 365,843.



1. The combination of an equalizer-bar, with a turn-table casting having a stationary section provided with an annular recess a central reservoir, and a lubricating channel leading to the reservoir.

2. The combination of an equalizer-bar, a turn-table casting having a stationary section provided with an annular recess, a central reservoir and a lubricating channel leading to the reservoir for lubricating the turn-table casting; of a smaller and movable section projected within the stationary section having parallel semi-circular lugs and lugs formed at right angles thereto, parallel grooves formed in the movable section and between the semi-circular lugs, grooves formed in the equalizer-bar corresponding to those in the movable section, and a fulcrum pin located in one of the grooves and interposed between the movable section and equalizer-bar, substantially as and for the purpose set forth.

871,851. FUSE. FREDERICK W. YOUNG, East Orange, N. J. Filed Mar. 14, 1907. Serial No. 362,347.



1. A fuse for electric circuits comprising a retaining tube having a fuse member disposed therein and composed of thin metal elements arranged between the insulating material and an inner tube of sufficient strength to resist the strains caused by the blowing of the fuse embracing said insulated elements to direct the strains towards the ends of the retaining tube.

2. A fuse for electric circuits comprising a retaining tube having a fuse member disposed therein and composed of a sheet of insulating material folded in zigzag form and having thin metal elements arranged in the folds thereof.

3. A fuse for electric circuits comprising an air-tight retaining tube partly filled with oil and having a vacuum at one end and a fuse member arranged therein and immersed in the oil.

4. A fuse for electric circuits comprising an air-tight retaining tube having a fuse member disposed therein and composed of thin metal elements arranged between insulating material, said tube being filled with oil around said fuse member and having means for sealing its ends.

5. A fuse for electric circuits comprising a retaining tube having a fuse member disposed therein and composed of a plurality of metal elements insulated one from the other and an inner tube closely hugging the middle portion of said member.

[Claims 6 to 8 not printed in the Gazette.]

871,852. WATER-MOTOR. BERNARD ZIEHLER, Dayton, Ohio. Filed Dec. 8, 1906. Serial No. 346,831.



1. In a water motor of the above type, a cylinder, a casting adjacent to one end thereof and providing a chamber at such end, inlet and exhaust valves within said casting and adapted to seat against oppositely-disposed interior and exterior seats therein, a yoke connecting said valves, a piston rod passing through the casting, a resilient member inclosed within said piston rod with means thereon for tripping the valve-connecting yoke to reverse the positions of the valves in the contracting movement of said resilient member.

2. In a water motor of the type specified, a cylinder, a casting attached to one end of said cylinder, and having two chambers, said casting having an extension providing an auxiliary chamber, a communication between said auxiliary chamber and the other end of the cylinder, valves seating against interior oppositely-disposed seats, and exteriorly oppositely-disposed seats, both chambers in said casting adapted to communicate with the cylinder on one side of said casting and with the auxiliary chamber on the other side of said casting, a yoke connecting said valves, a tubular piston rod passing through said casting, a resilient rod within said piston rod, pins secured to the ends of said resilient rod and extending through the sides of the piston rod at right angles to the valve-connecting yoke, and whereby the valves are tripped in opposite directions to admit water to drive the piston in opposite directions and to exhaust the cylinder on either side of the piston.

3. In a water motor of the above type, a cylinder, a casting providing an inlet chamber and an exhaust chamber and connected to one end of the cylinder and providing a chamber at one end of the motor, an inlet valve within the inlet chamber and seating against oppositely-disposed interior seats therein, an exhaust valve within the exhaust chamber and seating against exterior oppositely-disposed seats, said inlet and exhaust valves being connected by a yoke, a tubular piston rod, a resilient bar therein, pins projected from said resilient bar through slots in the piston rod and adapted to trip said yoke to reverse the positions of said resilient bar first expanding after the engagement of either pin, and then contracting to completely reverse the valves.

4. In a water motor of the above type, a cylinder, a casting connected to an end thereof and having an extension providing an auxiliary chamber separated from the cylinder of the motor, said casting having an inlet and an outlet chamber, valves within said chambers to supply, alternately the cylinder and the auxiliary chamber, and to exhaust alternately the cylinder and the auxiliary chamber, a yoke connecting said valves, a piston rod, an elongated resilient member carried in said piston rod parallel therewith and having a pin on each end thereof adapted to alternately engage the opposite sides of the yoke to reverse the positions of the valves after said elongated resilient member is expanded and during its contracting movement.

5. In a water motor of the above type, a cylinder, a casting at one end thereof providing an auxiliary chamber separated from the cylinder chamber, said casting having an inlet and an exhaust chamber, an inlet valve seating against interior oppositely-disposed valve seats in said inlet chamber, an exhaust valve seating against exterior oppositely-disposed seats in said exhaust chamber, a yoke connecting said valves, a piston rod, an elastic bar within said piston rod, pins on the ends of said bar for engaging, alternately, the opposite sides of the valve-connecting yoke to reverse the positions of the valves alternately from the contracting effect of said elastic bar after it has been elongated or expanded by the engagement of one or the other of the pins with the valve-connecting yoke.

[Claims 6 to 9 not printed in the Gazette.]

871,853. METAL WEATHER-STRIP. LEVI S. BACON, Washington, D. C., assignor, by mesne assignments, to Chamberlin Metal Weather Strip Company, Detroit, Mich., a Corporation of Michigan, (organized in 1907.) Filed Mar. 6, 1907. Serial No. 360,948.



1. A weather strip consisting of a strip of thin metal having a base portion and a rib portion arranged at an angle to the base, and a series of struck up strengthening braces arranged within the angle between the rib and base.

2. A metal weather strip consisting of a thin strip of metal having a base portion, a bent out rib portion formed with an overhanging edge part and a series of braces at the angle between the base and rib, and beneath the overhanging part of the rib.

3. A metal weather strip consisting of a thin metal strip having a base portion, a rib portion, an offset por-

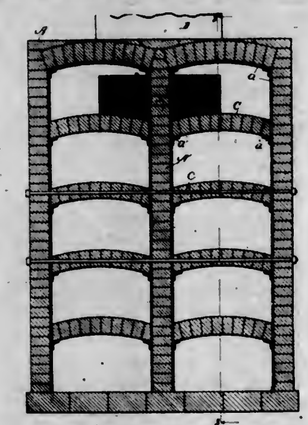
tion on the rib, and a series of struck up braces extending from the base to the rib across the angle.

4. A weather strip consisting of a flat strip of suitable metal bent or doubled longitudinally to form a raised rib at right angles to the base and provided with a series of struck up strengthening braces located in the angle and extending from the base to the rib.

5. The combination with a window frame or casing and a movable sash member therein, of a metallic weather strip secured to the frame and provided with a flat base, a projecting rib extending from the base into a groove formed in the sash and having a series of indented strengthening braces extending from the base to the rib across the angle formed by the bend.

[Claim 6 not printed in the Gazette.]

871,854. FURNACE. OSCAR BEGUELIN, Battle Creek, Mich. Filed June 22, 1906. Serial No. 322,889.

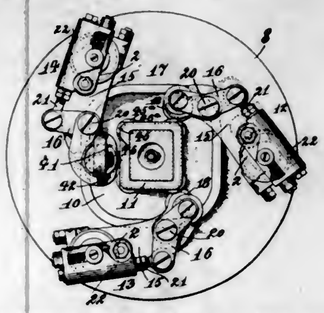


1. In a furnace, the combination of an outer wall; a central vertical wall extending from the front to the rear of the furnace, and dividing the same into two chambers; a plurality of solid grates or fire floors, said floors extending only partially across said chambers and dividing the same into a plurality of fire chambers, said floors being alternately arranged so that the material raked from one floor falls upon the floor next below; a smoke flue opening into the upper pair of fire chambers; and doors arranged to open a pair of said fire chambers, for the purpose specified.

2. In a furnace, the combination of an outer wall; a central vertical wall extending from the front to the rear of the furnace, and dividing the same into two chambers; a plurality of solid grates or fire floors, said floors extending only partially across said chambers and dividing the same into a plurality of fire chambers, said floors being alternately arranged so that the material raked from one floor falls upon the floor next below; a smoke flue opening into the upper pair of fire chambers, for the purpose specified.

871,855. SEAMING-MACHINE. OTTO S. BEYER, East Rutherford, N. J., assignor to E. W. Bliss Company, a Corporation of West Virginia. Filed Dec. 26, 1903. Serial No. 186,603.

1. In a seaming machine adapted to seam non-circular or irregular shaped cans, the combination with two opposed conical deflecting rolls, and work holding means, of means for moving the said conical deflecting rolls into and out of engagement with the work, coöperative means connected to the rolls and work holding means whereby the said rolls will follow the general contour of the can, justifying means on the rolls, and provisions on the work holding means coöperating with the justifying means and located at the points of irregularity of the can adapted to maintain the said deflecting rolls tangent to the work at the said points of irregularity.



2. In a seaming machine adapted to seam non-circular or irregular shaped cans, the combination with two opposed conical deflecting rolls, and work holding means, of means for moving the two deflecting rolls toward and away from each other, means for moving the said rolls toward and away from the work, coöperative means connected to the rolls and work holding means whereby the said rolls will follow the general contour of the can, justifying means on the rolls, and provisions on the work holding means coöperating with the justifying means and located at the points of irregularity of the can adapted to maintain the said deflecting rolls tangent to the work at the said points of irregularity.

3. In a seaming machine adapted to seam non-circular or irregular shaped cans, the combination with two opposed conical deflecting rolls, and work holding means, one of which travels with relation to the other, of means for moving the said conical deflecting rolls into and out of engagement with the work, coöperative means connected to the rolls and work holding means whereby the said rolls will follow the general contour of the can, justifying means on the rolls, and provisions on the work holding means coöperating with the justifying means and located at the points of irregularity of the can adapted to maintain the said deflecting rolls tangent to the work at the said points of irregularity.

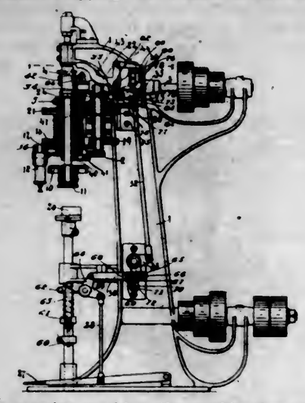
4. In a seaming machine adapted to seam non-circular or irregular shaped cans, the combination with two opposed conical deflecting rolls, and work holding means, one of which travels with relation to the other, of means for moving the two deflecting rolls toward and away from each other, means for moving the said rolls toward and away from the work, coöperative means connected to the rolls and work holding means whereby the said rolls will follow the general contour of the can, justifying means on the rolls, and provisions on the work holding means coöperating with the justifying means and located at the points of irregularity of the can adapted to maintain the said deflecting rolls tangent to the work at the said points of irregularity.

5. In a seaming machine, the combination of two opposed conical deflecting rolls, and work holding means, of means for moving the said conical deflecting rolls toward and away from the work, two justifying rolls and means coöperating therewith for justifying the position of the said conical deflecting rolls so as to maintain them tangent to the contour of the work.

[Claims 6 to 20 not printed in the Gazette.]

871,856. SEAMING-MACHINE. OTTO S. BEYER, East Rutherford, N. J., assignor to E. W. Bliss Company, a Corporation of West Virginia. Filed Dec. 26, 1903. Serial No. 186,604.

1. In a seaming machine, the combination of a rotating seamer head, one or more seaming members rotating with the seamer head, means for moving said seaming member or members into operating position comprising in part: a pinion rotating with the seamer head, means for imparting an individual rotation around its own axis to the pinion, and means for stopping the individual rotation of the said pinion without stopping the rotation of the seamer head.



2. In a seaming machine, the combination of a rotating seamer head, one or more seaming members rotating with the seamer head, means for moving said seaming member or members into operating position comprising in part: a pinion rotating with the seamer head, means for imparting an individual rotation around its own axis to the pinion so that the said pinion makes one revolution around its own axis to a predetermined number of revolutions of the seamer head, and means for stopping the individual rotation of the said pinion without stopping the rotation of the seamer head.

3. In a seaming machine, the combination of a rotating seamer head, one or more seaming members rotating with the seamer head, means for moving said seaming member or members into operating position comprising in part: a pinion rotating with the seamer head, means for imparting an individual rotation around its own axis to the pinion, and means for stopping the individual rotation of the said pinion substantially at the moment the seaming member or members is or are farthest away from the work.

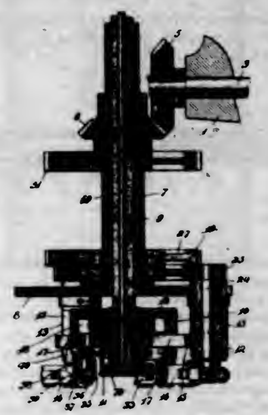
4. In a seaming machine, the combination of a rotating seamer head, one or more seaming members rotating with the seamer head, means for moving said seaming member or members into operating position comprising in part: a pinion rotating with the seamer head, means for imparting an individual rotation around its own axis to the pinion so that the said pinion makes one revolution around its own axis to a predetermined number of revolutions of the seamer head, and means for stopping the individual rotation of the pinion after it has made one revolution.

5. In a seaming machine, the combination of a rotating seamer head, one or more seaming members rotating with the seamer head, means for moving said seaming member or members into operating position comprising in part: a pinion rotating with the seamer head, means for imparting an individual rotation around its own axis to the pinion so that the said pinion makes one revolution around its own axis to a predetermined number of revolutions of the seamer head, and means for stopping the individual rotation of the pinion after it has made one revolution, and substantially at the moment when the seaming member or members is or are farthest away from the work.

[Claims 6 to 37 not printed in the Gazette.]

871,857. SEAMING-MACHINE. OTTO S. BEYER, East Rutherford, N. J., assignor to E. W. Bliss Company, a Corporation of West Virginia. Filed Dec. 26, 1903, Serial No. 186,602. Renewed June 5, 1906. Serial No. 320,228.

1. In a seaming machine, the combination with a relatively stationary work holding means, of a plurality of seaming members consisting of a crimping roll, two opposed conical deflecting rolls, and a finishing roll, adapted to travel in an orbit parallel to the contour of the work to be acted upon and also to be moved toward and away from the said work, and automatic means for moving the seaming members including the conical deflecting rolls toward and away from the said work in the order named.



2. In a seaming machine, the combination with relatively stationary work holding means, of a plurality of seaming members including in part two opposed conical deflecting rolls, adapted to travel in an orbit parallel to the contour of the work to be acted upon and also to be moved toward and away from the said work, means for moving one of the said conical deflecting rolls toward and away from the other, means for justifying the said opposed conical deflecting rolls with relation to the work as they travel around the same by maintaining them tangent to the contour of the said work, and automatic means for effecting the various movements of the said seaming members.

3. In a seaming machine for seaming non-circular can bodies or the like, the combination with relatively stationary work holding means, of a plurality of seaming members including in part two opposed conical deflecting rolls, adapted to travel in an orbit parallel to the contour of the work to be acted upon and also to be moved toward and away from the said work, means for moving one of said conical deflecting rolls toward and away from the other and means for justifying the said opposed conical deflecting rolls with relation to the work as they travel around the same by maintaining them tangent to the contour of the work, the parts being so arranged that the said deflecting rolls will recede slightly from the work on turning a corner.

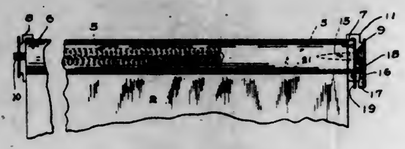
4. In a seaming machine, for seaming non-circular can bodies or the like, the combination with relatively stationary work holding means, of a plurality of seaming members including in part two opposed conical deflecting rolls, adapted to travel in an orbit parallel to the contour of the work to be acted upon and also to be moved toward and away from the said work, means for moving one of said conical deflecting rolls toward and away from the other, means for justifying the said opposed conical deflecting rolls with relation to the work as they travel around the same by maintaining them tangent to the contour of the work, the parts being so arranged that the said deflecting rolls will recede slightly from the work on turning a corner, and automatic means for effecting the various movements of the said seaming members.

5. In a seaming machine, the combination with relatively stationary work holding means, of a crimping roll, two opposed conical deflecting rolls, and a finishing roll all adapted to travel in an orbit parallel to the contour of the work to be acted upon, and also to be moved toward and away from the said work, means for moving one of said conical deflecting rolls toward and away from the other,

and means for justifying the said opposed conical deflecting rolls with relation to the work as they travel around the same by maintaining them tangent to the contour of the work.

[Claims 6 to 14 not printed in the Gazette.]

871,858. SAFETY-STOP FOR SHADE-ROLLERS. CLARK T. BOTTING, Watertown, N. Y. Filed May 13, 1907. Serial No. 373,353.



1. The combination with a window shade and a roller to carry the same, of a spring-rod mounted on said roller, the free end of said rod projecting beyond the end of said roller, a slotted guide-plate secured to one end of said roller adapted to limit the movement of said spring-rod, and a bracket to support the end of said roller and having an integral arm bent at its free end to form a stop to intercept and engage the free end of said spring-rod.

2. A stop mechanism, comprising a spring-rod, a slotted guide-plate to control and guide said spring-rod, and a bracket provided with an arm having an angular stop formed on its free end and disposed in a position to be engaged by one end of said spring-rod, in combination with a window shade and a self-winding roller, the said shade being attached to said roller and adapted when wound thereon to hold said spring-rod out of engagement or away from said stop, and when unwound from said roller to permit the engagement of said spring-rod and said stop to thereby prevent the further rotation of said roller in the direction to unwind said shade.

3. In a stop mechanism, the combination with a shade-roller and a shade capable of being wound and unwound thereon, of a pair of brackets to support said roller in operative position in a window, one of said brackets having an arm adapted to form a stop disposed adjacent to one end of said roller, a slotted guide-plate secured to the end of said roller facing said stop, a spring-bar secured at its inner end to the outer surface of said roller, its outer end passing through the slot in said guide-plate a sufficient distance to register with the said stop, and means for pressing and holding said spring-bar inwardly against the roller to prevent its engagement with said stop, thereby to permit the roller to wind and unwind freely.

4. In a stop mechanism, the combination with a window-shade and a spring-roller upon which said shade is adapted to be wound and unwound, of a pair of brackets to support said roller in operative position, one of said brackets having an arm fitted with an inwardly projecting stop-lug, a guide-plate rigidly secured to the end of said roller facing said stop arm, the said plate having a radial slot cut through a lug which projects beyond the outer surface of the roller, and a spring-rod secured at its inner end to the side of said roller, the outer free end thereof passing through the slot in said plate and adapted to engage the said stop-lug when said shade is unwound from the roller, and to be held out of reach or engagement with said stop-lug when the shade is coiled around the roller.

5. A safety stop for shade-rollers, comprising a spring-rod mounted on a shade roller, the free end of said spring-rod projecting beyond the end of said roller, a plate having a projecting-lug through which is formed a slot, rigidly secured to the end of said roller, adapted to guide and limit the movement of the free end of said spring-rod, a bracket to pivotally support one end of said roller, and having an integral arm, the outer end of which is formed into a stop-lug adapted to intercept said spring-rod when the latter is positioned in the outer end of the slot, and means for holding said spring-rod away from said stop.

871,859. FLUSHING-VALVE. ROBERT A. BROOKS, Chicago, Ill. Filed Oct. 26, 1905. Serial No. 284,543.



1. In a flushing valve of the class described the combination with a casing having a water chamber therein, of an inlet and an outlet pipe connected in said casing, a valve slidably engaged in said chamber, means admitting water pressure directly on the top of said valve and adapted to seat it automatically to close the inlet pipe, and means operated by a fluid other than that delivered through said valve adapted to control the pressure on the valve.

2. In a device of the class described the combination with a chamber affording a water chamber of an inlet and an outlet pipe opening therethrough, a valve seat at the inner end of the inlet pipe, a valve closure seating automatically to close said inlet pipe and fluid operated means physically disconnected from the valve closure and acting to time the closing of the same.

3. In a device of the class described the combination with an outlet and an inlet pipe of means acting automatically to close the inlet pipe and embracing a valve closure having a downwardly opening chamber therein and opening to the inlet pipe, connected valves controlling an aperture in the top of said chamber and fluid controlled means operated independently of the flushing fluid for actuating said valves in said chamber.

4. In a device of the class described the combination with a casing having an inlet pipe opening in its bottom, an outlet opening from the casing, a removable seat in the inlet pipe, a valve closure therefor comprising a bottom member having a restricted passage opening into the inlet pipe, a valve controlled passage opening above the closure and fluid controlled means operated independently of the flushing fluid for opening and closing the valve in said passage.

5. In a device of the class described a water casing, a chambered valve closure fitted in the casing and controlling the inlet opening, a downward extension on said closure projecting into the inlet pipe, a passage opening from the top of the closure, valve seats at each extremity of the passage and valves rigidly connected, adapted to seat thereon.

[Claims 6 to 46 not printed in the Gazette.]

871,860. FILTER FOR SEPARATING SOLUTIONS FROM ORE-PULP. CHARLES L. BUCKINGHAM, Denver, Colo., assignor of one-half to Robert B. McConney, Denver, Colo. Filed Jan. 9, 1907. Serial No. 351,511.

1. A filter for separating solutions from ore pulp, comprising a tank, a feed hopper at one end of said tank, a discharge spout at the opposite end of said tank, a filtering medium over the top of said tank, a plurality of ore pulp deflectors in said tank adapted to guide the ore pulp towards the bottom of said tank, and discharge valves in the bottom of said tank.

2. A filter for separating solutions from ore pulp, comprising a tank, a feed hopper at one part of said tank, a discharge member at another part of said tank, a filtering medium over said tank, filtering deflectors extending into said tank at a downward inclination in the direction of the flow, and suitable discharge valves in the bottom of said tank.



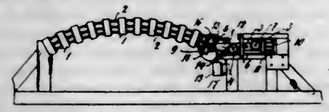
3. A filter for separating solutions from ore pulp, comprising a V-shaped rectangular tank of greater length than width, a feed hopper at one end of said tank adapted to feed ore pulp into its top end portion, a discharge spout at the opposite top end portion of said tank, a filtering medium extending over the top of said tank adapted to filter the solutions from the ore pulp flowing into said tank from said hopper, filtering deflecting plates extending at a downward angle into said tank from the under side of said filtering medium, downwardly in the direction in which the ore pulp flows along the tank from the hopper and up through the filtering medium to the discharge spout, and suitable ore discharge valves along the bottom of said V-shaped tank.

4. In a filter for separating solutions from ore pulp, the combination of the supporting timbers, the bed timber, the upwardly diverging side rib timbers secured to said bed, the transverse tie bolts at the top of the tank, the vertical strips extending from said supporting timbers to said side rib timbers, and the plank lining to said side rib timbers, with the filtering medium at the top of said tank, means for feeding ore pulp into said tank, means for discharging the filtered solutions from said tank, and suitable ore discharge valves in the bottom of said tank.

5. In a filter for separating solutions from ore pulp, the combination of the tank comprising the bed timber, the side ribs attached to said bed timber, the cross tie bolts, and the lining of the tank secured to said side ribs, with the filtering frames arranged to be set across the top of said tank, the solution discharge spout at the end of said tank, the inclined ore-pulp deflecting filters depending from said filtering frames, the feed hopper at the opposite end of said tank from said discharge spout, and the discharge valves.

[Claims 6 to 9 not printed in the Gazette.]

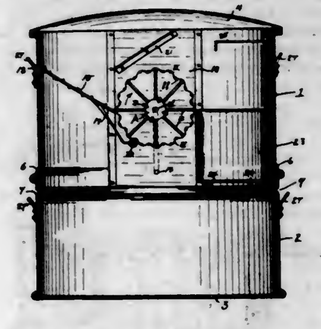
871,861. APPARATUS FOR DEMONSTRATING THE STRAINS IN BUILDING CONSTRUCTIONS. ERNST CARLIPP, Erlangen, Germany. Filed Jan. 2, 1907. Serial No. 350,421.



1. An apparatus for demonstrating the strains arising in building construction, comprising a plurality of elements, said elements consisting of alternately arranged springs and blocks, said springs indicating by their change of form the distribution of strains.

2. An apparatus for demonstrating the strains arising in building construction, comprising a pair of opposing abutments, a plurality of elements interposed between said abutments, comprising alternately arranged yielding and non-yielding members, which by their change in form demonstrate the distribution of strains, and means for supporting one of the abutments so as to permit it to have a pivoting and also a lateral yielding movement, substantially as described.

871,862. SIFTER FOR ASHES, &c. SAMUEL W. DUNNING, Milwaukee, Wis., assignor of one-half to William C. Dittman, Milwaukee, Wis. Filed Dec. 13, 1905. Serial No. 291,520.



1. In apparatus of the described class, the combination of a rotary drum having a skeleton peripheral frame and a perforate screen covering the same; means for rotating the drum; a hopper arranged to deliver material to the exterior surface of the upper portion of the drum on the upwardly moving side; a receiving chamber on the opposite side of the drum from the hopper; and a resilient device connected with the hopper and adapted to be actuated by projecting portions of the drum, said perforate screen being formed with longitudinal channels adapted to receive the material from said hopper.

2. In apparatus of the described class, the combination of a rotary drum having a skeleton peripheral frame and a perforate screen covering the same; means for rotating the drum; an inclined hopper screen at one side of the drum arranged to deliver material to the exterior surface of the upper portion of the drum on the upwardly moving side, and adapted to permit material passing through such screen to drop at the side of the drum without passing therethrough; a receiving chamber for the material passing through the hopper screen and drum; and a second chamber adapted to receive material carried over the drum; together with means for vibrating the drum and hopper screen.

3. In apparatus of the described class, the combination of a rotary vibratory drum having a skeleton peripheral frame and a perforate screen covering the same; means for rotating the drum; a hopper arranged to deliver material to the exterior surface of the upper portion of the drum on the upwardly moving side; and a receiving chamber arranged for the reception of material delivered from the drum on the side opposite the hopper; said hopper being formed with a screening surface over which the material passes to the drum; and interacting members of the drum and hopper arranged for resilient contact with each other and adapted to impart a vibratory movement to the drum and hopper.

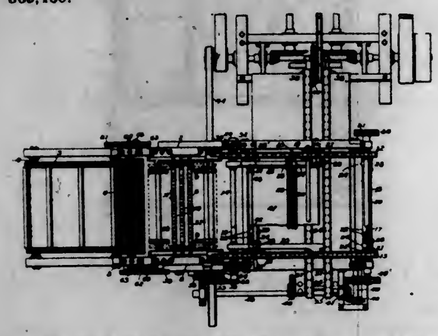
4. In apparatus of the described class, the combination with an inclosing casing, of a cylindrical vibratory screen mounted to rotate in said casing and provided with longitudinal channels; an inclined hopper screen interposed between one side of the cylindrical screen and the opposing walls of the casing, and arranged to deliver material to the exterior surface of the drum on the upwardly moving side; and a receiving chamber interposed between the other side of the cylindrical screen and the wall of the casing, together with a shield located above the cylindrical screen and inclined in the direction of the other screen.

5. In apparatus of the described class, the combination with an inclosing casing of a cylindrical screen mounted to rotate in said casing and provided with longitudinal channels; an inclined hopper screen interposed between the side of the cylindrical screen and the opposing walls of the casing, together with an arm mounted upon the in-

clined screen and provided with a roller bearing yieldingly upon the surface of the cylindrical screen.

[Claims 6 to 8 not printed in the Gazette.]

871,863. FEEDING MECHANISM FOR FLAX-BREAKERS. GEORGE H. ELLIS, St. Paul, Minn., assignor to International Flax Twine Company, a Corporation of Minnesota. Filed Apr. 22, 1907. Serial No. 369,460.



1. In a machine of the class described, the combination of primary and secondary feeding means operative lengthwise of the straw, said primary means controlling the straw in bulk and said secondary means adapted to intermittently separate successive and independent parts from the bulk controlled by the primary means.

2. In a machine of the class described, the combination of primary and secondary feeding means operative lengthwise of the straw, said primary means controlling a sheet of straw and operative to advance it toward the secondary means, said secondary means adapted to intermittently draw separate successive and independent sheets from that controlled by said primary means.

3. In a machine of the class described, the combination of primary and secondary feeding means operative lengthwise of the straw, said primary means comprising a gill chain adapted to control the straw in bulk and advance it toward said secondary means, said secondary means adapted to intermittently grasp the ends of successive portions of the straw so controlled and separate it in independent portions.

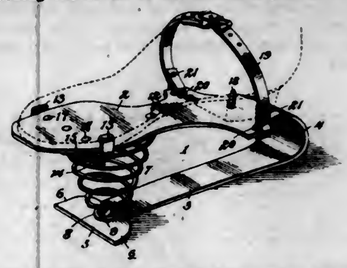
4. In a machine of the class described, the combination of primary and secondary feeding means operative lengthwise of the straw, said primary means adapted to control a sheet of straw and advance it toward said secondary means, said secondary means adapted to intermittently grasp the ends of successive portions of the straw throughout the width of the sheet and separate it in independent sheets.

5. In a machine of the class described, the combination of primary and secondary feeding means operative lengthwise of the straw and adapted to feed it in one direction, said primary means adapted to control the straw in bulk and advance it toward said secondary means, a transverse carrier, said secondary means adapted to separate successive portions from the bulk controlled by the primary means and transfer them to said transverse carrier.

[Claims 6 to 19 not printed in the Gazette.]

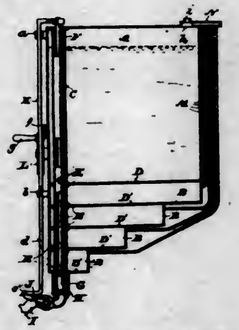
871,864. SPRINTING-SPRING. FRANK FRAZELL and HENRY THOMPSON, Winnfield, La. Filed Mar. 30, 1907. Serial No. 365,521.

1. A device of the class described comprising a substantially U-shaped body portion constructed of resilient material to form a spring and consisting of an inclined upper portion or foot plate, a horizontal lower portion or base, and a spring bend connecting the rear ends of the foot plate and the base, a coiled spring interposed between the front portions of the foot plate and the base, and means for attaching the device to the foot of a person.



2. A device of the class described comprising a substantially U-shaped body portion constructed of resilient material and consisting of an upper foot plate, and a horizontal base, an inverted conical spring interposed between the foot plate and the base at the front portions thereof, a stud projecting from the base and fitting in the small end of the spring, and a clip mounted on the lower face of the foot plate and engaging the upper coil of the spring.

871,865. MEASURING APPARATUS. AUGUSTUS J. FELTER, Grand Rapids, Mich., assignor of one-half to William F. Shedd, Grand Rapids, Mich. Filed May 21, 1906. Serial No. 317,849.



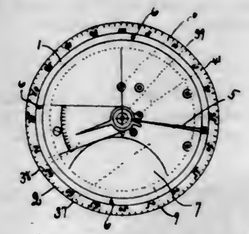
1. A measuring apparatus, comprising a reservoir, a tier of cells below the same, vents for the cells and reservoir, a tube having ports opening to the reservoir and each cell, a cock secured to the lower end of the tube, a valve fitted in the tube, a rod extending from the valve, a rack-bar connected thereto exterior of the reservoir, a toothed indicator wheel in mesh with the rack-bar, and means in connection with the latter and said cock, whereby the latter is automatically controlled in conjunction with said valve.

2. A measuring apparatus comprising a reservoir having a series of cells, a tube in the reservoir, port-openings in the tube for the reservoir and each cell, a valve fitted in the tube, a stem extending from the valve, a cock secured to the lower end of said tube, and means in connection with the valve-stem and cock whereby the latter is automatically controlled in conjunction with said valve.

871,866. HAIR-SPRING LOCATOR. BERNHARD Z. FRIEDMAN, Fort Worth, Tex., assignor to Isaac Blackman, Fort Worth, Tex. Filed Oct. 7, 1902. Serial No. 126,266.

1. A tool for locating the seat of the hair spring stud of watches and for setting the stud in said seat comprising devices for finding the seat and disk carrying means for holding the balance-wheel of the watch, said finding devices determining and pointing to the location of said seat while said holding devices hold the balance staff of the watch.

2. A tool for locating the seat of the hair spring stud of watches and for setting the stud in said seat comprising finding devices including an annulus carrying an indicator and a disk carrying means for holding the balance wheel of the watch, said indicator pointing to the location of said seat while said holding devices hold the balance-wheel staff of the watch.



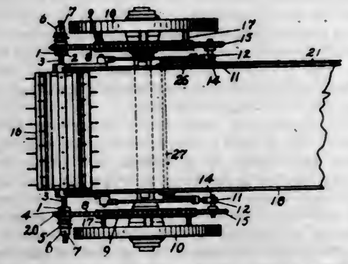
3. A tool for setting the hair spring of watches comprising a frame having a scale thereon, a movable indicator for indicating the divisions of said scale and pointing to the seat of the hair spring stud, and means for setting the hair spring stud.

4. A tool for setting the hair spring of watches comprising a frame, and means for locating the seat of the hair spring stud, a disk to be mounted in said frame and means mounted on said disk for holding the balance wheel staff and for receiving and holding the jewel pin.

5. A tool for setting the hair spring of watches comprising a frame, an annulus mounted in and movable in said frame, an indicator mounted on said annulus, said frame having a scale thereon, and a hair spring stud setter, said setter being provided with means for holding the balance staff and roller plate and means for engaging and holding the roller jewel.

[Claims 6 to 8 not printed in the Gazette.]

871,867. MANURE-SPREADER. WILLIAM GALLOWAY, Waterloo, Iowa, assignor to William Galloway Company, Waterloo, Iowa. Filed Feb. 23, 1907. Serial No. 359,023.



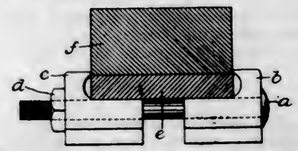
1. In a manure-spreader, the combination with a body supported on carrying-wheels having driving-sprocket-wheels secured to their inner faces, of a shaft rotatably mounted transversely to said body, a horizontally-adjustable sprocket-wheel secured to each end of said shaft, a horizontally-adjustable idler-sprocket-wheel rotatably mounted on a stub-shaft on each side of said body, a sprocket-chain on each side of said body passing about the idler- and the driven-sprocket-wheel on the same side, each of said sprocket-chains being adapted to engage and be driven by the driving-sprocket-wheel on the same side.

2. In a manure spreader, the combination with a body supported on carrying-wheels, of a beater-drum mounted on a shaft at one end of said body, horizontally-slidable sprocket-wheels on said shaft, means for adjusting and securing said sprocket-wheels a desired distance apart, sprocket-wheels on the rear carrying-wheels affixed thereto, sprocket-chains engaging both the driving- and driven-sprocket-wheels aforesaid, and means for adjusting the forward ends of said sprocket-chains to a desired distance apart.

3. In a manure spreader, the combination with a body supported on carrying-wheels having driving-sprockets affixed to their inner faces, of a vertically-adjustable idler-sprocket-carrying lever pivoted on each side of said body, a short shaft horizontally slidable in a bearing in the free end of each lever, means for fixing each shaft in a desired position of horisontal adjustment in the bearing in each lever, an idler-sprocket-wheel rotatable on each shaft, driven sprocket-wheels, a sprocket-chain on each side of said body passing about said idler and one of the driven-sprocket-wheels, and means for elevating or lowering said idler-carrying-levers to disengage or engage said sprocket-chains from or with said driving-sprocket-wheels.

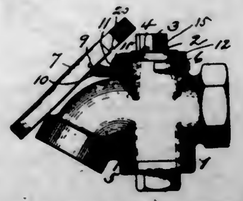
4. In a manure spreader, the combination with a body supported on carrying-wheels having driving-sprockets affixed to their inner faces, of a vertically-adjustable idler-sprocket-carrying-lever pivoted on each side of said body, a short shaft horizontally slidable in a bearing in the free end of each lever, means for fixing each shaft in a desired position of horizontal adjustment in the bearing in each lever, an idler-sprocket-wheel rotatable on each shaft, driven sprocket-wheels, a sprocket-chain on each side of said body passing about said idler and one of the driven-sprocket-wheels on that side, a rock-shaft mounted transversely to said body, a shifting-lever secured to each end of said rock-shaft, each shifting-lever being slidably connected to said idler-carrying-lever on the same side, a hand-lever pivoted to said body, a rack-bar on said body adapted to secure said hand-lever in either a desired forward or back position of adjustment, and a connecting-rod pivoted to said hand-lever and to the shifting-lever on the same side of the body.

871,868. TIRE-CLEAT FOR TRACTION-WHEELS. WILLIAM GALLOWAY, Waterloo, Iowa, assignor to William Galloway Company, Waterloo, Iowa. Filed Feb. 28, 1907. Serial No. 359,706.



A traction-wheel tire-cleat, comprising the combination with a tire of cleat-members adjustably spaced apart, said cleat-members embracing and overlapping the tire-tread and having inwardly projecting jaws adapted to be secured about the tire's opposite edges, the overlapping portions of said cleat-members having perforations in registration with each other, a bolt adapted to be secured within the said registering perforations and across and over said tire-tread, and means for removably and adjustably spacing said cleat-members apart and securing them about said tire.

871,869. MEANS FOR OPERATING COCKS OR VALVES. WILLIAM W. GORDON, Washington, D. C. Filed Nov. 2, 1906. Serial No. 341,716.



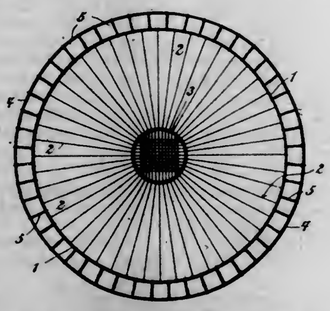
1. Means for operating a cock comprising a collar having an aperture for the passage of the plug of the cock and also having an annular seat in one of its faces, an annular

disk adapted to fit within said seat and having an angular aperture through which the plug is adapted to extend, said aperture having a configuration corresponding to that of the plug of the cock, and an operating handle pivotally connected with the collar and having an angular opening at one end corresponding to that of the plug of the cock and adapted to fit over the said plug when the handle is raised into operative position, and said handle being adapted to automatically drop when released by the hand to cause its plug-engaging end to free the plug.

2. The combination with a cock and its plug having an angular projecting end, of a collar seated upon the shell of the cock and having an aperture through which the said end of the plug extends and also having an annular seat in its upper face, an annular disk fitting within said seat and having an aperture through which extends the said projecting end of the plug, said aperture having a configuration corresponding to that of the said projecting end, and a handle pivotally connected with the said collar and having an opening of a configuration corresponding to that of the projecting end of the plug and into which opening in the handle the projecting end of the plug is adapted to project when the handle is raised into operative position, said handle being adapted to automatically drop when released by the hand to cause its plug-engaging end to free the plug.

3. The combination with a cock and its plug having an angular projecting end, of a collar seated upon the shell of the cock and having an aperture through which the said end of the plug extends and also having an annular seat in its upper face, an annular disk fitting within said seat and having an aperture through which extends the said projecting end of the plug, said aperture having a configuration corresponding to that of the said projecting end, and a handle pivotally connected with the said collar and having an opening of a configuration corresponding to that of the projecting end of the plug and into which opening in the handle the projecting end of the plug is adapted to project when the handle is raised into operative position, said handle being adapted to automatically drop when released by the hand to cause its plug-engaging end to free the plug, and a pin removably seated in an aperture in the projecting end of the plug above the annular disk to maintain the latter and the collar in position.

871,870. LIFE-NET. CHARLES HARRISON, New York, N. Y., assignor to S. F. Hayward & Company, a Corporation of New York. Filed July 2, 1907. Serial No. 381,934.



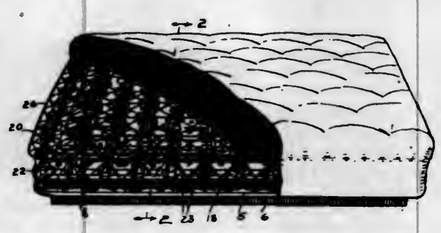
1. A life net comprising an edge rope and continuous ropes secured at their opposite ends to said edge rope and interwoven near the center of the net, substantially as described.

2. A life net comprising an edge rope, continuous ropes secured at their opposite ends to said edge rope and interwoven near the center of the net, and a rope surrounding the interwoven portion and secured to said interwoven ropes, substantially as described.

3. In a life net, a central portion comprising interwoven ropes passing across the same in two groups arranged so that members of each group pass through and are traversed by members of the other group, substantially as described.

4. In a life net, a central portion comprising a limiting rope, ropes crossing the limiting rope at equidistant intervals and interwoven within the space inclosed by said rope and means for fastening said radial ropes to said limiting rope, substantially as described.

871,871. MATTRESS. FRANK H. HIRSCHMAN, Indianapolis, Ind. Filed Sept. 9, 1907. Serial No. 391,982.



1. In a double-deck mattress having spirally wound wire springs in both decks, an upper deck having a larger number of springs than the lower deck, said springs of the upper deck being formed out of smaller wire than those of the lower deck, and a plurality of wires running longitudinally and other wires running transversely of the mattress forming a base for the support of the springs of the top deck without requiring a lower spring under each upper spring.

2. In a double-deck mattress, a box-frame, transverse slats supported by said frame, spirally wound springs resting upon and secured to the slats and box-frame, cords connecting the top members of said springs said cords extending longitudinally, transversely, and in a plurality of oblique directions, smaller and weaker but more numerous spirally wound springs for the upper deck, a frame-wire surrounding the bases of the springs of the top deck, longitudinal and transverse wires connecting said top deck springs at their bases with each other and with said frame-wire, a frame-wire surrounding the tops of said top-deck springs and fastened to the outside springs, and cords like those for the lower deck springs connecting the top members of said top-deck springs.

3. In a double-deck mattress, a box-frame, transverse slats supported by said frame, spirally wound springs resting upon and secured to the slats and box-frame, cords connecting the top members of said springs said cords extending longitudinally, transversely, and in two opposite oblique directions, smaller and weaker but more numerous spirally wound springs for the upper deck, a frame-wire surrounding the bases of the springs of the top deck, longitudinal and transverse wires connecting said top-deck springs at their bases with each other and with said frame-wire, a frame-wire surrounding the tops of said top-deck springs and fastened to the outside springs, cords like those for the lower deck springs connecting the top members of said top-deck springs a textile fabric between the springs of the upper and lower deck, and a hair or felt mattress covering the upper deck springs, and a cover for the mattress extending down and closing the sides of the latter.

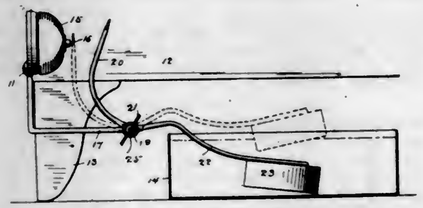
871,872. SEAL. GARRETT H. HUISING, Chicago, Ill., assignor to Porter Safety Seal Co., Chicago, Ill., a Corporation of Illinois. Filed Mar. 23, 1906. Serial No. 307,590.

A seal in the form of a double headed soft metal shank, one of said heads having a rim formation extending toward the other head and but partially about the shank to afford clear passage for the fastening loop or member, the head opposite the head having the rim formation being smaller



than the latter head to permit the location of the smaller head between portions of the rim formation.

871,873. REFRIGERATOR-ALARM. HENRY P. KELLY, Shelton, Conn. Filed June 12, 1907. Serial No. 378,548.



1. An alarm of the character described comprising a base plate, a bell carried thereby and provided with an actuating member, an arm extending from the base plate and provided with an eye, a shaft journaled in said eye, an actuating arm adjustably secured to the outer end of said shaft and adapted to engage the actuating member, an arm adjustably secured to the inner end of said shaft and a float carried by said inner arm.

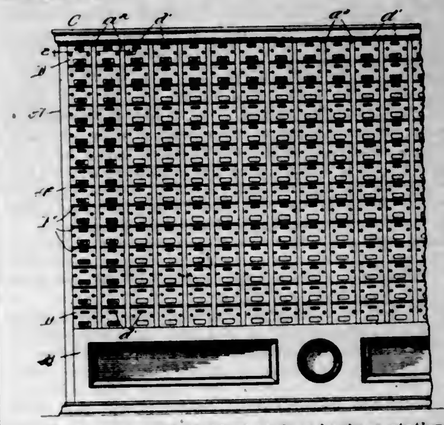
2. An alarm of the character described comprising a base plate, a bell secured thereto and provided with an actuating member, an arm extending from the base plate and provided with an eye, a shaft mounted to oscillate in said eye, an actuating arm at the outer end of said shaft, a float arm at the inner end of said shaft, a float carried by the float arm and a spring surrounding the shaft and bearing against the eye and the float arm, substantially as described, for the purpose specified.

3. An alarm of the character described comprising a base plate, a bell carried thereby and provided with an actuating member, an arm extending from the base plate and carrying an eye, a shaft mounted to oscillate in said eye, said shaft being provided with threaded ends, an actuating arm at the outer end of said shaft which is adapted to engage the actuating member, a float arm at the inner end of said shaft, thumb-nuts engaging the threaded ends of the shaft to retain said arms adjustably in place and a spring bearing against the eye and the float arm, substantially as described, for the purpose specified.

4. An alarm of the character described comprising a bell having an actuating member, an oscillatory longitudinally movable shaft, a bell actuating arm and a float arm and float carried by said shaft, and a spring acting to retain the shaft at its inward position but permitting the shaft to be moved outward and the float to be swung upward out of the way.

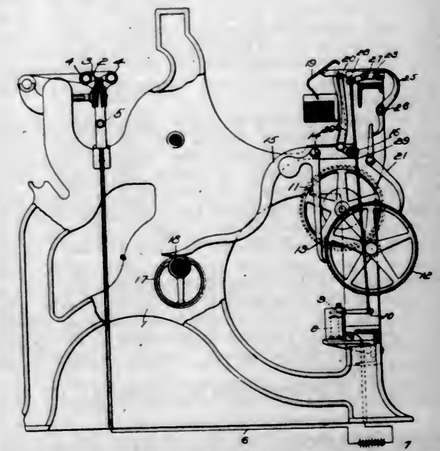
871,874. SAVINGS-BANK. JACOB L. KESNER, Chicago, Ill. Filed Oct. 16, 1905. Serial No. 282,876.

1. In a system of individual savings banks, the combination with a stationary frame-work comprising a plurality of separate compartments, of a door for each compartment, a drawer in each compartment secured to the door and having its one end closed thereby, and a pair of locks for retaining each door in position to prevent access to the compartment closed thereby, each door having an opening therethrough of sufficient size only to permit the insertion of pieces of money, the openings in the doors being arranged to permit the pieces of money to drop into the drawers.



2. In a system of individual savings banks, a stationary frame-work comprising a casing open on one side and having a plurality of intersecting vertical and horizontal partitions forming a series of open-ended compartments, a drawer slidably fitted in each compartment, a door forming the outer end wall of each drawer and adapted to close one of the compartments when the drawer is inserted therein, and a pair of locks for securing each door in place, each of said doors having an opening therethrough of a size only sufficient to receive pieces of money, and the openings being so arranged that the pieces of money may drop directly into the drawers.

871,875. STOP-MOTION FOR LOOMS. CHARLES D. LANNING, Dorchester, Mass. Filed Feb. 23, 1907. Serial No. 358,822.



1. A loom comprising a lay, a reciprocatory member mounted independently of the lay, a shipper device, means to retain the same in loom operating position, a knock-off device adapted to release the shipper device from said retaining means, weft thread fault detecting means, devices coöperating therewith and with said reciprocatory member, whereby the knock-off device is moved and the loom is stopped upon the occurrence of weft failure, warp thread fault detecting means, and means inde-

pendent of said weft thread fault detecting means and of said devices coöperating therewith and adapted to cooperate with said warp thread fault detecting means and with said reciprocatory member, whereby the knock-off device is moved and the loom is stopped upon the occurrence of warp failure.

2. A loom comprising a lay, a reciprocatory member mounted independently of the lay, a shipper device, means to retain the same in loom operating position, a knock-off device adapted to release the shipper device from said retaining means, weft thread fault detecting means, devices coöperating therewith and with said reciprocatory member, whereby the knock-off device is moved and the loom is stopped upon the occurrence of weft failure, electric warp thread fault detecting means and means distinct from the said weft thread fault detecting means and devices coöperating therewith and adapted to cooperate with said warp thread fault detecting means and with said reciprocatory member, whereby the knock-off device is moved and the loom is stopped upon the occurrence of warp failure.

3. A loom comprising a lay, a reciprocatory member mounted independently of the lay, a shipper device, means to retain the same in loom operating position, a knock-off device adapted to release the shipper device from said retaining means, weft thread fault detecting means, devices coöperating therewith and with said reciprocatory member, whereby the knock-off device is moved and the loom is stopped upon the occurrence of weft failure, drop bars mounted upon the warp threads, means moved by an indicating drop bar into the path of movement of the reciprocatory member, said means being mounted independently of the weft thread fault detecting means and devices coöperating therewith and adapted when moved into the path of movement of the reciprocatory member to be operated, thereby to move the knock-off device and stop the loom upon the occurrence of weft failure.

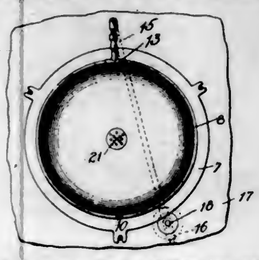
4. A loom comprising a lay, a reciprocatory member mounted independently of the lay, a shipper device, means to retain the same in loom operating position, a knock-off device adapted to release the shipper device from said retaining means, a weft fork, a weft fork slide whereon the same is mounted, said slide being adapted to be moved by the reciprocatory member upon the occurrence of weft failure, thereby to move the knock-off device, warp fault detecting means, and means distinct from said weft fork slide and adapted upon the occurrence of a warp fault to be brought into the path of movement of the reciprocatory member, and thereby moved to operate the knock-off device.

5. A loom comprising a lay, a reciprocatory member mounted independently of the lay, a shipper device, means to retain the same in loom operating position, a knock-off device adapted to release the shipper device from said retaining means, a weft fork, a weft fork slide whereon the same is mounted, said slide being adapted to be moved by the reciprocatory member upon the occurrence of weft failure, thereby to move the knock-off device, drop bars supported upon the warp threads, and means moved by indicating drop bars into the path of movement of the reciprocatory member, said means being disconnected from said weft fork slide and being adapted when brought into the path of movement of the reciprocatory member to be moved, thereby to operate the knock-off device.

[Claims 6 to 39 not printed in the Gazette.]

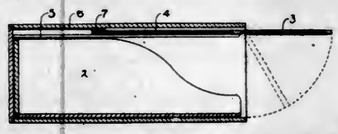
871,876. LAVATORY. PRENTIS E. LAW, Wilmette, Ill. Filed Mar. 18, 1907. Serial No. 362,827.

The combination with a lavatory bowl having an opening in its side, of a tubular ring arranged within the bowl at the top thereof and provided with openings located on the inner side of the ring to direct jets of water in the form of a spray centrally of the bowl and from the entire length of the ring, said ring being divided, plugs removably mounted in the ends of said ring to abut one against the other when the ring is arranged in the bowl, there being a tee in the ring opposite said plugs to enter the opening in the bowl, a supply pipe connected to said tee, and a foot operated valve located in said supply pipe below



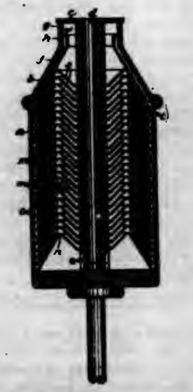
the bowl and in convenient position for operation by a person using the bowl.

871,877. DISPLAY-CASE. ARTHUR E. LYONS, Lansing, Mich., assignor to Hugh Lyons and Company, Lansing, Mich., a Corporation of Michigan. Filed Aug. 10, 1906. Serial No. 330,032.



A display case comprising a case having its front end open and having its top formed of glass to permit the observation of the interior thereof, an open frame comprising relatively narrow side and end bars slidably secured in guides secured to the side walls of the case and adjacent the tops thereof, a metal strip extending forwardly from the rear wall of the case and terminating in a downwardly bent position adapted to engage with the rear cross bar of said open frame to limit its movement in the case, and a door comprising an open frame having a glass panel therein hinged to the forward end of said sliding frame and adapted to close the end of the case when in its lowered position.

871,878. LINER FOR CENTRIFUGAL CREAM-SEPARATORS. WILBUR W. MARSH, Waterloo, Iowa. Filed Apr. 8, 1907. Serial No. 367,015.



1. A liner for a centrifugal cream separator, composed of a vertical series of superposed inner and outer concentric hollow frusta, each inner frustum being inverted with respect to its outer concentric frustum, and each inner frustum being connected by narrow bands or connections

to its outer concentric frustum whereby a nearly uninterrupted cylindrical concentric channel is provided between the entire series of inner and outer frusta located in the neutral zone of the bowl.

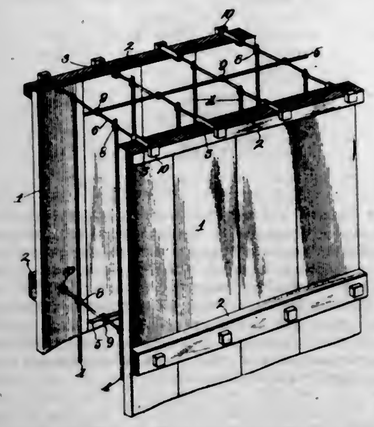
2. A liner for a centrifugal cream separator, composed of a vertical series of superposed inner and outer concentric hollow frusta, each inner frustum being inverted with respect to its outer concentric frustum, and each inner frustum being connected by narrow bands or connections to its outer concentric frustum whereby a nearly uninterrupted cylindrical concentric channel is provided between the entire series of inner and outer frusta located in the neutral zone of the bowl, each inner and its outer connected frustum being separable from the frusta above and below them.

3. A liner for a centrifugal cream separator, composed of a vertical series of superposed inner and outer concentric hollow frusta, each inner frustum being inverted with respect to its outer concentric frustum, and each inner frustum being connected by narrow bands or connections to its outer concentric frustum whereby a nearly uninterrupted cylindrical concentric channel is provided between nected frustum being separable from the frusta above and below them, and the outer frusta being arranged with respect to each other and the inner frusta so that the interspaces between said outer frusta are of less height than are the interspaces between the inner frusta.

4. A liner for a centrifugal cream separator, composed of a vertical series of superposed inner and outer concentric hollow frusta, each inner frustum being inverted with respect to its outer concentric frustum, and the abutting edges of such concentric frusta being joined by narrow connections so as to provide relatively long arc-shaped openings between such edges.

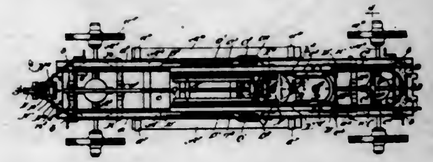
5. A liner for a centrifugal cream separator, composed of a vertical series of superposed inner and outer concentric hollow frusta, each inner frustum being inverted with tric hollow frusta, each inner frustrum being inverted with of such concentric frusta being joined by narrow connections so as to provide relatively long arc-shaped openings between such edges, such openings being located in the neutral zone of the bowl, and the outer frusta being arranged so as to be spaced a less distance apart than the inner frusta are spaced apart.

871,879. CONCRETE WALL OR COLUMN CONSTRUCTION. WILLIAM E. MIDDLETON, Kansas City, Mo. Filed Oct. 29, 1906. Serial No. 341,003.



Means for forming concrete structures comprising falsework, horizontal rods disposed longitudinally between the walls of the falsework, transverse horizontal rods centrally connected with a longitudinal horizontal rod and having their ends threaded and terminating approximately in the planes of the inner faces of the walls of the falsework, vertical rods connected with the transverse rods between the ends of the same and longitudinal rods, and threaded sleeves inserted through the falsework and removably engaging the threaded ends of the transverse rods the said sleeves fitting over the ends of the transverse rods beyond the inner faces of the falsework whereby when the sleeves are removed the ends of the rods will be projecting within sockets in the face of the concrete structure.

871,880. FIRE APPARATUS. JOHN H. MITCHELL, New York, N. Y. Filed June 8, 1906. Serial No. 320,862.



1. In an apparatus of the character described, the combination with a truck body, of running gear for supporting the body, a longitudinally adjustable section mounted upon and adapted to be extended beyond either end of said body, a second section mounted upon said first section, means for adjusting a horizontally swinging frame pivotally connected at one end to said second section, means for supporting the outer end of said frame, a ladder supported upon said frame, and means for rotatably supporting the lower end of said ladder upon said frame.

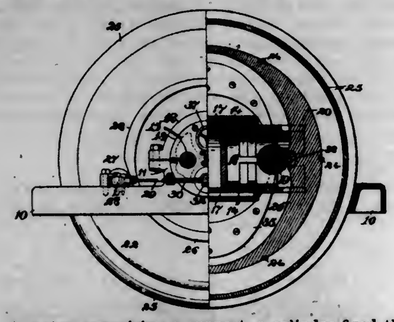
2. In an apparatus of the character described, the combination with a truck body, of running gear for supporting the body, a longitudinally adjustable section mounted upon and adapted to be extended beyond either end of said body, a second section mounted upon said first section, means for adjusting said second section longitudinally upon said first section, a horizontally swinging frame pivotally connected at one end to said second section, means for supporting the outer end of said frame, a base adjustably supported on said frame, a ladder supported upon said base, and means for rotating the lower end of said ladder upon said base.

3. In a fire apparatus, the combination with a truck body, of running gear supporting said body, a longitudinally adjustable section mounted upon said body, a horizontally swinging frame pivotally connected at one end to said section, a ladder supported upon said frame, a support pivotally connected to one end of said section for supporting the same when extended relatively to the body, and means for retaining said support above said body to support the ladder when the apparatus is in condition for transit.

4. In a fire apparatus, the combination with a truck body, of a longitudinally adjustable section mounted on said body, a rack bar secured to said section, a gear wheel engaging said rack bar, a shaft upon which said gear wheel is fixed journaled upon said truck body, a horizontally swinging frame pivotally secured at one end to said section, adjustable means for supporting the outer end of said frame, a ladder supported by said frame, and means for swinging said ladder in an upright position.

5. In a fire apparatus, the combination with a truck body, of running gear upon which said body is mounted, a section longitudinally adjustable mounted on said body, means for projecting said section relatively to said body in either direction, a horizontally swinging frame pivotally mounted at one end upon said section, means for adjustably supporting the outer end of said frame, a base longitudinally adjusted upon said frame, a ladder supported at its lower end upon said base, means for rotating said ladder upon said base, and means for swinging said ladder into an upright position.

871,881. ROTARY EXPLOSIVE-ENGINE. ADOLF MONTAN and JOSEPH SEHOLM, Newark, N. J. Filed June 14, 1907. Serial No. 378,916.



1. A motor comprising a support, a cylinder fixed thereon, pistons operating in the opposite ends of the cylinder, a rotatable casing mounted on the cylinder and entirely inclosing the same, and means for driving the casing from the pistons.

2. A motor comprising a support, a cylinder fixed thereon, pistons operating in the opposite ends of the cylinder and adapted to be actuated by the same charge, a rotatable casing mounted on the cylinder and entirely inclosing the same, a cam in the casing, and a roller on each piston to engage the cam to operate it.

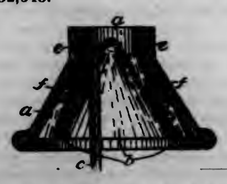
3. A motor comprising a support, a cylinder fixed thereon, pistons operating in the opposite ends of the cylinder and adapted to be actuated by the same charge, a rotatable casing mounted on the cylinder and entirely inclosing the same, a cam in the casing, a roller on each piston to engage the cam to operate it, a second set of cams, and means for actuating the pistons from the second cams to cause the admission of gas to the cylinder.

4. A motor comprising a support, a cylinder having a transverse portion secured to the support, the cylinder having a cooling chamber with openings through the transverse portion, the transverse portion also having inlet and outlet ports to the cylinder, pistons operating in the opposite ends of the cylinder, a casing rotatably arranged on the cylinder and entirely inclosing the same, and mechanism for rotating the casing from the pistons.

5. A motor comprising a support, a cylinder having a transverse portion secured to the support, the cylinder having a cooling chamber with openings through the transverse portion, the transverse portion also having inlet and outlet ports to the cylinder, valves in the inlet and outlet ports, a casing rotating on the cylinder and entirely inclosing the same, pistons operating in the opposite ends of the cylinder, mechanism for actuating the casing from the pistons, and the pistons from the casing, and means for opening the exhaust valve on the alternate movement of the pistons toward each other.

[Claims 6 to 18 not printed in the Gazette.]

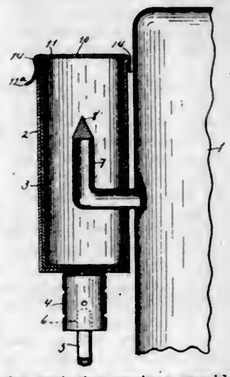
871,882. CENTRIFUGAL CREAM-SEPARATOR. THOMAS W. MORGAN, Waterloo, Iowa, assignor to Wilbur W. Marsh, Waterloo, Iowa. Filed Aug. 30, 1906. Serial No. 332,645.



1. In a centrifugal cream separator, a bowl-cover having a plurality of milk-exits, and a separate conduit for each milk-exit, the receiving openings of said conduits being separated but contiguous, and of equal area.

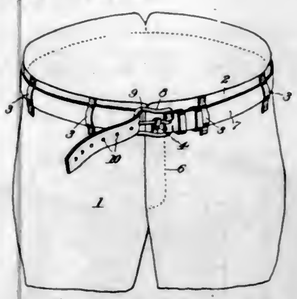
2. In a centrifugal cream separator, a bowl-cover having a plurality of milk-exits, and a separate conduit for each milk-exit, each conduit being widest at its receiving opening, and such receiving-openings of said conduits being contiguous to one another around the inner periphery of said cover.

871,883. BURNER FOR EXULOSION-ENGINES. PETER MCCUSKER, Galesburg, Ill. Filed May 22, 1907. Serial No. 375,172.



In a burner for explosion engines provided with a heating chamber and an ignition pipe therein, a removable heat reflector adapted to be secured over the open end of the heating chamber, being formed of a single thin plate of resilient metal and consisting of a central hub smaller than the end of the chamber and outward-projecting arms bent downward at their ends to clasp the outer sides of the walls of the chamber.

871,884. TROUSERS AND BELT FASTENER. PAUL C. NOETZEL, New York, N. Y., assignor to Sweet, Orr & Company, Newburgh, N. Y., a Firm. Filed Mar. 13, 1907. Serial No. 362,125.

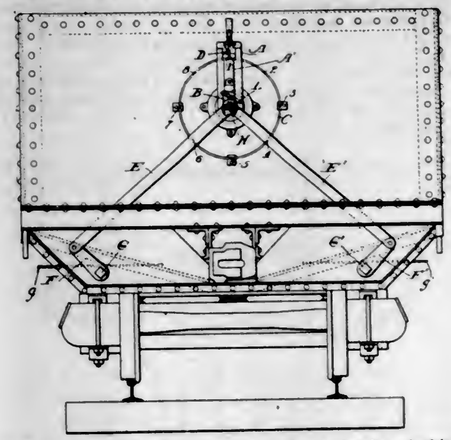


1. A trousers and belt fastener, comprising a vertically disposed loop arranged at the waistband seam above the fly and adapted to be engaged with the tongue of a belt buckle to support the front of the trousers and to hold the belt in place upon the trousers.

2. Trousers having a small loop of cloth extending upwardly lengthwise of the fly at the waistband, combined with a belt and its buckle, the loop and buckle tongue when engaged coöperating to retain the belt in place and to hold up the front of the trousers.

871,885. DUMP-CAR-OPERATING MECHANISM. ALBERT S. PAGE, El Paso, Tex. Filed June 17, 1907. Serial No. 379,398.

1. In combination with drop doors having locking means, means for rotating said locking means comprising a single selective mechanism and an operative mechanism therefor, substantially as described.



2. In combination with drop doors having locking means, a selective mechanism comprising a radial arm, a rack on said arm, a block having a pinion engaging said rack and adapted to be moved along said arm, and means connecting said block with said locking means.

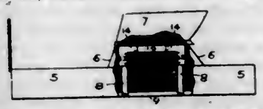
3. In combination with a dump car having locking means for its hoppers, means for actuating said locking means comprising a single selective mechanism and an operating mechanism therefor, substantially as described.

4. In combination with a dump car having locking means for its hoppers, a selective mechanism comprising a radial arm, a rack on said arm, a block having a pinion engaging said rack adapted to be moved along said arm, and means connecting said block with said locking means.

5. In combination with a dump car having a balanced locking means for its hoppers, means for rotating said locking means comprising a radial arm, a block adapted to be moved along said arm, means for moving said block along said arm, and means connecting said block with said locking means.

[Claims 6 to 9 not printed in the Gazette.]

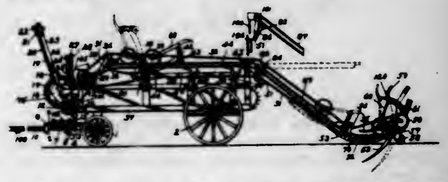
871,886. REINFORCED CORNER FOR VEHICLE-BODIES. DAVID M. PARRY and THOMAS H. PARRY, Indianapolis, Ind., assignors to Parry Manufacturing Company, Indianapolis, Ind., a Corporation of Indiana. Filed Sept. 18, 1906. Serial No. 335,099.



1. In a vehicle corner, a standard notched on its inner side, an end member notched on its outer end to receive the notched end of the standard, a transverse member wider than said end member notched on its inner face at the end to receive the standard and end member flush with its end, and a metal plate covering both of the outer sides of the corner thus formed said plate being continuous from one side to the other around said corner.

2. In a vehicle corner, a standard notched on its inner side, an end member notched on its outer end to receive the notched end of the standard, a transverse member wider than said end member notched on its inner face at the end to receive the standard and end member flush with its end, and a metal plate on the outside of the corner having a body portion which covers the side of the standard and end of the side member, said body having an extension which passes the joint between the standard and end member and is secured to the end member, and said plate body having a right-angled extension, and nails passing through said right-angled extension and through said adjacent side member into the parts inwardly adjacent to said side member.

871,887. WAGON-LOADING DEVICE. RASMUS PEDERSON, Parkersburg, Iowa. Filed Apr. 8, 1907. Serial No. 366,922.



1. The combination with a wagon, of track-rails extending therefrom to a position for loading, a fork or scoop mounted to travel over said track-rails, from a position for filling into a position for dumping into the wagon-box, trip-fingers pivotally connected to said wagon at different locations from front to rear thereof and arranged to intercept said fork or scoop and cause the same to dump its load into the wagon-box, means for raising and lowering said trip-fingers to cause them to intercept said scoop only at either of such locations, and means for preventing the tilting forward of said fork or scoop beyond its dumping position.

2. The combination with a wagon, of track-rails extending therefrom to a position for loading, a fork or scoop having a crank-like bail with wheels on its trunnions, which wheels run over the upper surface of said track-rails, a hanger suspended from said trunnions having a guard-wheel adapted to run over the under side of said track-rails, means for causing said fork or scoop to travel over said rails, and trips located at different points and arranged to intercept said fork or scoop and cause the same to dump its load into the wagon-box.

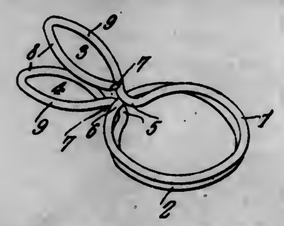
3. The combination with a wagon, of track-rails extending therefrom to a position for loading, a fork or scoop mounted to travel over said track-rails, from a position for filling into a position for dumping into the wagon-box, a cable attached to said fork or scoop at both ends, a draft-equalizing beam mounted to slide on the wagon-pole, detachable engaging means between said equalizing-beam and said pole, driving connections between said equalizing-beam and said cable, whereby the power of the horses is rendered available for causing the loaded fork or scoop to travel over said track-rails, and a device operative on said cable to impart return movements to said fork or scoop.

4. The combination with a wagon, of track-rails extending therefrom to a position for loading, a fork or scoop mounted to travel over said track-rails, from a position for filling into a position for dumping into the wagon-box, an endless belt composed in part of a cable and in part of a sprocket-chain connected to each other end to end only, a driving sprocket-wheel in operative engagement with the chain portion only of said endless belt, the said endless belt being attached to a fork or scoop at both ends, and a device operative on said endless belt to impart return movements to said fork or scoop.

5. The combination with a wagon, of track-rails extending therefrom to a position for loading, a fork or scoop mounted to travel over said track-rails, from a position for filling into a position for dumping into the wagon-box, a cable attached to said fork or scoop at both ends, a wheel adapted to move said cable in either direction, a gear adapted to drive said wheel, a lever, a double pawl pivoted to said lever and adapted to engage with and actuate said gear, means for reversing said double pawl to reverse the action of said gear, an upright, and a brake pivotally connected thereto and adapted to be removably engaged with said gear to arrest its movement and the movement of said cable in either direction.

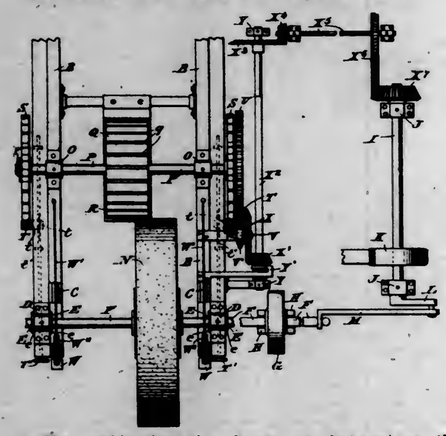
[Claims 6 to 8 not printed in the Gazette.]

871,888. CLIP. LOUIS H. PORTER, Rockdale, Tex. Filed June 5, 1907. Serial No. 377,419.



A clip embodying levers and coiled juxtaposed clamping members, one portion of which projects beyond the peripheries of the other portions and constitutes a fulcrum for the levers.

871,889. AUTOMATIC SHARPENING AND POLISHING MACHINE. FRANK M. RODZONOWSKI, Chicago, Ill. Filed June 9, 1906. Serial No. 320,963.

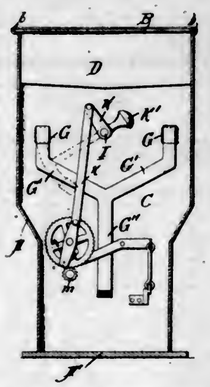


1. The combination of a frame, an abutment on the frame, a wheel to grind or polish rotatably mounted on the frame, a movable frame, a carriage consisting of a drum provided with slots to receive articles to be ground or polished, such carriage rotatably mounted on the movable frame, a toothed wheel on the shaft of the carriage to turn therewith and arranged to engage with the abutment, means to yieldingly hold the carriage in an advanced position, means to rotate the first named wheel and to move it laterally and means to intermittently rotate the carriage; substantially as described.

2. The combination of a frame, an adjustable abutment on the frame, a wheel, to grind or polish, rotatably mounted on the frame, a movable frame, a locking and turning wheel with gear teeth on a portion of the periphery thereof on the movable frame, a carriage consisting of a drum arranged to receive articles to be ground or polished, such carriage rotatably mounted on the movable frame, toothed wheels on the shaft of the carriage to turn therewith, one of such toothed wheels arranged to engage with the abutment and the remaining toothed wheel engaging with the locking and turning wheel, means to yieldingly hold the carriage in an advanced position means to rotate the first named wheel and to move it laterally and means to continuously turn the locking and turning wheel; substantially as described.

3. The combination of a frame, an additional frame movable on the first named frame, a rotatable carriage mounted on the movable frame, a toothed wheel on the shaft of the carriage arranged, to turn with the carriage, and an abutment on the rigid frame to engage with the teeth of the wheel, means to intermittently rotate the carriage and means to yieldingly hold the carriage with the teeth of the wheel in engagement with the abutment; substantially as described.

871,890. VENDING-MACHINE. WILLIAM ROHDE and EDWARD V. MUELLER, Cincinnati, Ohio; said Mueller assignor to said Rohde. Filed Feb. 27, 1905. Serial No. 247,603.



1. In a vending machine, in combination with the case, a reservoir in the upper part thereof, a sub-reservoir below said reservoir, a glass front giving view to said sub-reservoir, a display chute suspended from said reservoir with its front edges against said glass front, an oscillating arm journaled in the rear wall of said sub-reservoir, oppositely disposed scoops secured at the end of said arm bearing closely against said rear wall, said scoops being open at the rear, delivery openings in said rear wall, and mechanism adapted to bring one or the other of said scoops into registering position with said openings.

2. In a vending machine, a casing having an openable top, a center-board of the general section of the inside of the casing, a reservoir supported on said casing, a sub-reservoir with its back formed of said center-board, and its sides and bottom formed by a strip of metal secured to said center-board, a glass front to said casing giving view to said reservoir, scoops adapted to vibrate in said sub-reservoir, openings in said center-board above the bottom of said sub-reservoir, a main-chute and branches connecting with said openings leading to the outside of the case, and mechanism adapted to operate said scoops to bring them alternately to the level of said delivery openings.

3. In a vending machine, in combination with the case, a reservoir, a vibratory arm trunnioned against the back wall of said reservoir, scoops turned in opposite directions supported by said arm, openings in the path of said scoops one for each scoop in the back of said reservoir, delivery chutes communicating with said openings, and mechanism adapted to vibrate said arm.

4. In a vending machine, a casing, a reservoir therein having a discharge opening, a delivery chute leading from the opening, a carrier movable through the reservoir, a trunnion mounted in the wall of the reservoir having the carrier secured upon one end thereof, a counterweight for the carrier mounted upon the opposite end of the trunnion, an operating handle, and means interposed between the same and the trunnion for rocking the latter whereby the carrier is oscillated.

5. In a vending machine, a casing, a reservoir substantially the full width of the casing located in the top of the latter, a vertical partition disposed transversely of the casing below the reservoir, a supplemental reservoir arranged between one side of the partition and the opposing side of the casing, a carrier mounted to oscillate through the supplemental reservoir, means for oscillating the carrier, a discharge chute leading from the supplemental reservoir having inlet openings arranged to register with the carrier, and a spout depending from the main reservoir into the supplemental reservoir arranged in advance of the carrier and having its front wall formed by the adjacent wall of the casing, said adjacent wall being formed by a transparent plate disclosing the entire interior of the supplemental reservoir and the spout.

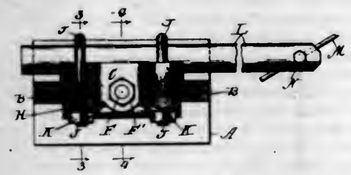
[Claims 6 to 8 not printed in the Gazette.]

871,891. INSOLE. HERBERT H. ROOSA, Lincoln, Nebr. Filed Feb. 15, 1907. Serial No. 357,492.



As a new article of manufacture, an insole for boots or shoes composed of an upper thickness of flannel, a thickness of asbestos immediately beneath the flannel, a thickness of water-proof tag-board immediately beneath the asbestos, and a thickness of muslin covering the under side of the tag-board, the thicknesses being united together at their edges by a binding tape overlapping the same with its edges stitched together through the thicknesses of material.

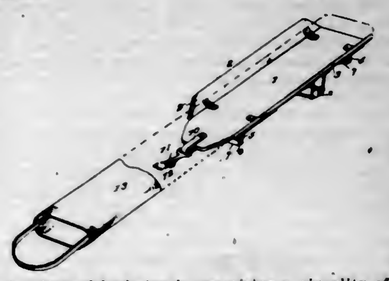
871,892. TOOL-HOLDER FOR LATHES. WILLIAM T. RUSSELL, Chicago, Ill. Filed Mar. 23, 1907. Serial No. 364,031.



1. In a tool holder of the kind described, the combination consisting of a head or main body adapted to rest on and to be secured to a lathe slide rest, having a recess in its face and an aperture extending horizontally therefrom through said head, and a groove extending across said face parallel with the base of said head and in the same plane as the axis of said aperture; a threaded eye bolt insertible in said recess and aperture, the rear part of the head of said bolt fitting into said recess so as to prevent all vertical, lateral and rotary movement of said bolt, the center of the eye of said bolt corresponding with the center line of said groove in said head, the threaded part of said bolt extending through and fitting said aperture in said head, and a nut on said threaded part adapted to engage the rear of said head and to adjust said bolt horizontally therein as described.

2. In a tool holder of the kind described, the combination consisting of a head adapted to be secured on the head of a lathe slide rest, having parallel recesses in its face, and parallel apertures extending horizontally from said recesses through said head, and a groove across said face parallel with the base of said head in the same plane as the axis of said apertures, threaded eye bolts insertible in said recesses and apertures, the heads of said bolts fitting into said recesses so as to prevent all vertical, lateral and rotary movements of said bolts, the center of the eyes of said bolts corresponding with the center line of said groove in said head, the threaded part of said bolts fitting and extending through said apertures; a nut on the threaded part of each of said bolts adapted to engage the rear part of said head and to adjust said bolts horizontally therein as described.

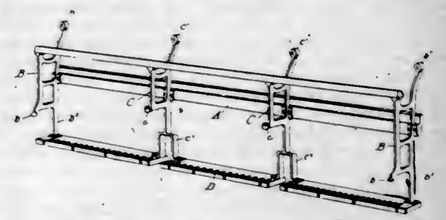
871,893. COTTON-PICKER'S TRUCK. ALEXANDER SANDERS, CLARENCE M. REBMAN, and BENJAMIN H. SANDERS, Okemah, Ind. Ter. Filed Dec. 6, 1906. Serial No. 346,664.



1. A cotton picker's truck comprising a plurality of longitudinal sections having a hinged connection and swinging freely with relation to each other, the sides being adapted to tilt upwardly to accommodate the truck to the furrow, and rollers applied to the various sections.

2. A cotton picker's truck comprising a plurality of longitudinal sections having a hinged connection and swinging freely with relation to each other whereby the sides are tilted upwardly to accommodate the truck to the furrow, front and rear rollers for the said sections, and side rollers mounted upon the sections between the front and rear rollers.

871,894. PIANO ACTION-FRAME. HENRY J. SANDLAS, Baltimore, Md., assignor to Ernest J. Knabe, Jr., Baltimore, Md. Filed June 6, 1906. Serial No. 320,456.



1. An action-frame for autopneumatic pianos having tracker-bar pipes arranged in clusters or bunches passing through the lower part of the action, said action-frame comprising an upper rail and lower rail with connected brackets adapted for mounting in the piano-case, the lower rail comprising separate sections having their adjacent ends spaced apart, and the intermediate action-brackets having their lower portions formed as forks which arch the spaces between adjacent sections of the lower rail and have the feet of the legs of said forks attached to said adjacent ends of said rail sections, thus making a rigid unitary frame structure having the ends of adjacent lower rail sections united by single brackets adapted for straddling the groups of tracker-bar pipes when the action-frame is mounted in the case of the instrument.

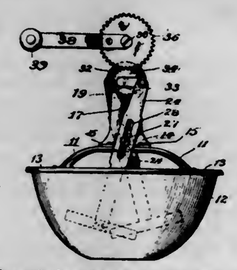
2. In an action-frame of the character described, the combination with the upper and lower rails for supporting different parts of the action, said lower rail comprising separate sections having adjacent ends spaced apart, of unitary action-brackets constructed and adapted for mounting in a piano-case and attached to said upper rail and having depending forks or yokes arching or straddling the spaces between adjacent sections of the lower rail and having the feet or legs of said forks attached to the adjacent ends of said lower rails or sections.

3. An action-bracket for action-frames of the character described made as a unitary structure in one general plane, having a rear upper supporting point and a lower front supporting point adapting said bracket to be mounted in a piano-case, and having below said lower front sup-

porting point a depending yoke or fork the plane of which is transverse of the plane of the bracket, the legs of said yoke or fork having feet adapted for attachment of rail-sections thereto.

4. The action-bracket C having supporting lugs c and c' and lying mainly in the plane of said lugs and having its lower end formed as a fork the plane of which is at right-angles to the plane of the bracket, substantially as and for the purpose described.

871,895. BEATER OR MIXER. GEORGE E. SAVAGE and JOSEPH R. MARCHESSEAULT, Meriden, Conn., assignors to Manning, Bowman & Co., Meriden, Conn., a Corporation of Connecticut. Filed May 13, 1907. Serial No. 373,221.



1. In a device of the character described, the combination of a supporting-frame, a pair of beater-levers at the sides of the frame and having slots formed therein, each being provided with a blade at its lower end, driving-mechanism comprising eccentric connections for the upper ends of the levers respectively, said frame comprising a base and a central standard rising from said base and having laterally extending lugs near the base and studs secured in said lugs and extending into said slots to guide the levers medially.

2. In a device of the character described, the combination of a supporting-frame comprising laterally extending legs a ring adapted to engage the rim of a bowl or pan, a standard and a base secured to said legs, a pair of beater levers at the sides of the frame having slots therein and each provided with a blade at its lower end, lugs adjacent the base of the bracket and studs secured in said lugs and extending into the slots in the beater-levers to guide the levers medially.

3. In a device of the character described, the combination of a frame comprising a bracket, and a lug at one side of and at the upper end of said bracket, a laterally extending handle secured to said lug, a pair of beater-levers each provided with a blade at its lower end, operating mechanism for the levers comprising eccentric-connections for the upper ends of the levers, and a gear-wheel having a crank-handle secured thereto, a stud also secured to said lug on which said gear-wheel is mounted, and medial guides for the levers said frame-handle extending laterally substantially in the direction of the axis of rotation of said crank-handle.

4. In a device of the character described, the combination of a supporting-frame comprising legs a ring adapted to engage the rim of a bowl or pan and a bracket having a base overlying the said legs and secured thereto, and a standard extending upwardly from the base, a pair of beater-levers provided with longitudinally extending slots medially disposed each lever being provided with a blade at its lower end, a crank-shaft mounted in said bracket and provided with wrist-pins to which the upper ends of the levers are connected respectively, lugs on the bracket near the base thereof, studs secured in said lugs and extending into the slots in the levers, a lug at the upper end of the standard and at one side thereof, a laterally extending handle secured to the upper end of said lug, a stud also secured in said lug and operating mechanism for the wrist-pins comprising a gear-wheel mounted on said latter stud.

871,896. COVERING FOR WATER-CLOSET SEATS. FRANK M. SCHAFFER, Hudson, Colo. Filed Sept. 5, 1905. Serial No. 276,956.



A flexible pad for water closet seats, provided with a wire fastened to the under surface thereof and near the pad opening, whereby the said cover may be folded or unfolded at will as herein described and set forth.

871,897. SEPARABLE BUTTON. MADISON D. SHIPMAN, De Kalb, Ill., assignor to United States Fastener Company of Portland, Maine, Boston, Mass, a Corporation of Maine. Filed Apr. 22, 1896, Serial No. 588,607. Renewed Sept. 26, 1907. Serial No. 394,710.

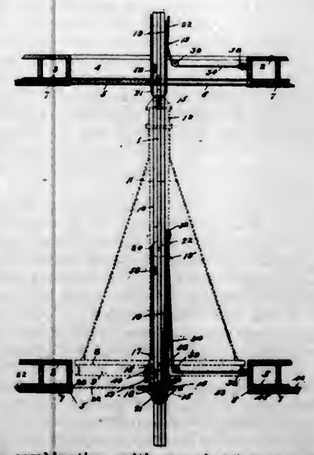


1. A tubular stud catch for separable buttons formed of two integral tubular sections of different diameters having an intermediate shoulder or offset, the smaller section serving as a means for securing the catch and a cap to the material, and the larger section slitted and having the lower edge of said slitted portions turned inward to form a resilient stud catch having a practically continuous engaging edge and closed sides, as set forth.

2. A button head or socket member of a separable button comprising a cap or shell and a tubular stud catch having two portions of different diameters, each cylindrical in form, one of which is slitted and has the lower edge of said slitted portions turned inward to form a stud-engaging catch with a practically continuous engaging edge, and the other adapted to be clenched to said cap or cover upon the opposite side of the material to that from which the said stud-catch is inserted, substantially as described.

3. A button head or socket member of a separable button comprising a stud catch consisting of two integral tubular sections of different diameters, one of which is slitted and extends beyond the other to form a pendent resilient stud catch, a catch guard or guard piece, a clench turning piece, a cap or shell, and a cover piece, all arranged and secured together and to the material as described.

871,898. FLOOR-GATE-ACTUATING DEVICE FOR ELEVATORS. WILLIAM C. SMITH, Minneapolis, Minn. Filed Apr. 8, 1907. Serial No. 366,955.



1. The combination with an elevator car, a pair of guides therefor and a floor gate, of a pair of push blocks adapted to travel on said guides, means for connecting said floor gate and said push blocks, a lock for locking each of said push blocks to said guides, and means carried by said elevator car to release said locks and for engagement with said push blocks, to open and close said floor gate, substantially as described.

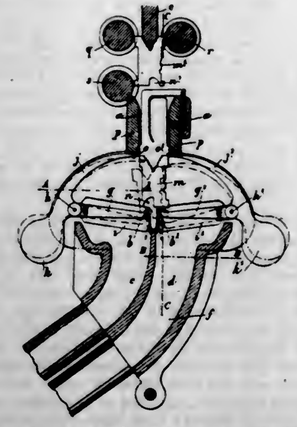
2. The combination with an elevator car, a pair of guides therefor and a two part floor gate, of a pair of push blocks adapted to travel on said guides, means for connecting said gate sections and said push blocks, locks mounted in said push blocks for locking engagement with said guides, and means carried by said elevator car to release said locks and for engagement with said push blocks, to open and close said gate sections, substantially as described.

3. The combination with an elevator car, a pair of guides therefor and a two part floor gate, of a carrier frame adapted to travel on one of said guides a predetermined distance, means for connecting said floor gate sections and said carrier frame, a push block carried by said carrier frame, and arms carried by said elevator car for engagement with said push block, to open and close said floor gate sections, there being a pair of pockets in said guide, to permit said push block to swing out of engagement with said arms and permit said arms to pass by the same, substantially as described.

4. The combination with an elevator car, a pair of guides therefor, and a two part floor gate, of a pair of carrier frames adapted to travel on said guides a predetermined distance, means for connecting said floor gate sections and said carrier frames, push blocks carried by said carrier frames, arms carried by said elevator car for engagement with said push blocks, to open and close said gate sections, there being pockets in said guides to permit said push blocks to trip and swing out of engagement with said arms and permit said arms to pass the same in either direction of travel of said elevator car, and locks for locking said push blocks to said guides, and adapted to be released by said arms, substantially as described.

5. The combination with an elevator car, a pair of guides therefor, and a floor gate, of a push-block adapted to travel on one of said guides, means for connecting said floor gate and said push-block, a lock for locking said push-block to said guide, and means carried by said elevator car to release said lock and for engagement with said push-block to open and close said floor gate, substantially as described.

871,899. DISTRIBUTER OF DOUBLE-MAGAZINE LINOTYPE-MACHINES. JEAN P. TIHON, Paris, France. Filed Apr. 27, 1907. Serial No. 370,606.



1. In matrix sorting apparatus for double magazine linotype machines, a matrix distributer bar, a series of straight walled guide conduits adapted to receive matrices from said bar, a pair of delivery conduits for each of said guide conduits, and means between each said guide conduit and said pair of delivery conduits adapted to direct a matrix from the said guide conduit towards one or other of the said pair of delivery conduits.

2. In matrix sorting apparatus for double magazine linotype machines, a matrix distributer bar, a series of straight walled guide conduits adapted to receive matrices from said bar, a pair of delivery conduits for each of said guide conduits, and an abutment between each said guide conduit and said pair of delivery conduits in the path of matrices passing through said guide conduits adapted to direct a matrix from the said guide conduit towards one or other of the said pair of delivery conduits.

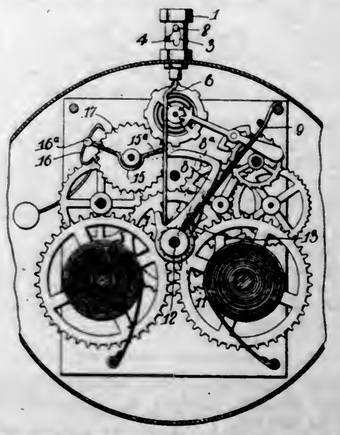
3. In matrix sorting apparatus for double magazine linotype machines the matrices of which are each formed with a shaped lower end, a matrix distributer bar, a series of straight walled guide conduits adapted to receive matrices from said bar, a pair of delivery conduits for each of said guide conduits and an abutment between each said guide conduit and said pair of delivery conduits adapted to coöperate with the shaped lower end of matrices passing through said guide conduit, substantially as set forth.

4. In matrix sorting apparatus for double magazine linotype machines, a matrix distributer bar, a series of straight walled guide conduits adapted to receive matrices from said bar, a pair of delivery conduits for each of said guide conduits, and a movable abutment between each said guide conduit and said pair of delivery conduits in the path of matrices passing through the said guide conduits adapted to direct a matrix from the said guide conduit towards one or other of the said pair of delivery conduits.

5. In matrix sorting apparatus for double magazine linotype machines, a matrix distributer bar, a series of straight walled guide conduits adapted to receive matrices from said bar, a pair of delivery conduits for each of said guide conduits and an abutment member for each conduit of said pairs of delivery conduits in the path of matrices passing through said guide conduits adapted to direct a matrix from the said guide conduit towards one or other of the said pair of delivery conduits.

[Claims 6 to 17 not printed in the Gazette.]

871,900. ALARM-CLOCK. CHARLES G. TRAUTMAN, Chicago, Ill. Filed May 28, 1907. Serial No. 376,177.



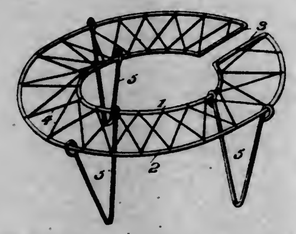
1. In a clock, the combination with alarm mechanism, and time mechanism, of means to lock the escapement of the alarm mechanism, including a lever having a spring tending to retract the same and release the escapement, and means controlled by the time mechanism to delay the releasing movement of the lever.

2. In a clock, the combination with alarm mechanism, including an escapement shaft having a projecting arm, and time mechanism having an arbor and a ratchet thereon, of a stop lever engageable with the arm and having a pawl engaging the ratchet, manually-operated means to swing the lever in engagement with said arm, and a spring tending to retract the lever, the action of the spring being delayed by the engagement of the pawl and the ratchet.

3. In a clock, the combination with alarm mechanism including an escapement shaft having a projecting arm, of a lever having an offset portion engageable with said arm to lock the escapement, a spring connected to the lever and tending to swing the same to release the escapement, a push rod engageable with the lever to advance the same to locking position, and means to fix the push rod to hold the same in locking position.

4. In a clock, the combination in an alarm mechanism, of an escapement shaft having a projecting arm, a let-off gear wheel driven by the time train and having a sleeve with a notch thereon, a stud on which the wheel turns, having a lug adapted to enter the notch when registered therewith, and a spring bearing against the wheel and engaging the arm to stop the escapement, and adapted to shift the wheel when the notch reaches the lug, and release the escapement.

871,901. STAND FOR PROPPING PLANTS. JOHN G. WALTON, Coleman, Mich. Filed Mar. 30, 1907. Serial No. 365,561.



1. A stand for propping plants comprising a pair of spaced and concentric rings having breaks formed in their peripheries at corresponding points the broken portions being joined by transverse rods, connecting means between the concentric rings, and a series of legs applied to the concentric rings.

2. A stand for propping plants comprising a pair of spaced rings, connecting means between the rings, and a series of V-shaped legs, the upper ends of the legs being formed with eyes loosely receiving the said concentric rings.

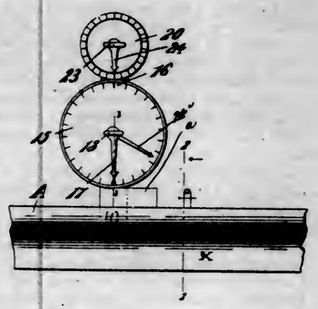
3. A stand for propping plants comprising a pair of spaced and concentric rings having breaks formed at corresponding points in their peripheries the broken portions being connected by transverse rods, netting connecting the concentric rings, and a series of V-shaped legs, the two arms of each of the legs being provided with eyes loosely receiving the respective concentric rings.

4. A stand for propping plants comprising a pair of spaced and concentric rings having breaks formed in their peripheries at corresponding points, connecting means between the concentric rings, and a series of legs applied to the concentric rings.

871,902. GAGE FOR TYPE-SETTING MACHINES. JAMES T. WILSON, Cynthiana, Ky. Filed July 13, 1906. Serial No. 326,132.

1. A type gage or indicator comprising a graduated revoluble disk adapted to be operated by direct contact with a line of movable type or matrices, a non-rotatable spindle carrying said disk on one end and supported at the other end on a horizontal pivot, and a non-rotatable manually adjustable pointer carried by said spindle.

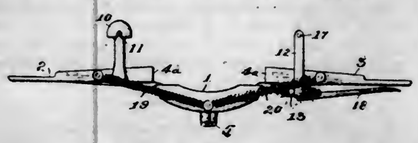
2. A type gage or indicator comprising a graduated revoluble disk adapted to be operated by direct contact with a line of movable type or matrices, a vertically swinging non-rotatable spindle carrying said disk, and two independent non-rotatable manually adjustable pointers carried by said spindle.



3. A type gage or indicator comprising a graduated disk adapted to be intermittently rotated by direct contact with a line of type or matrices, a vertical swinging non-rotatable spindle carrying said disk, two independent non-rotatable pointers carried by the spindle, and an adjustable clamp pivotally supporting said spindle.

4. A type gage or indicator for typesetting machines comprising a standard, a pair of clamps carried thereby, non-revoluble spindles having their inner ends pivoted to the clamps, disks mounted on said spindles, and in engagement with each other, the lowermost disk being arranged to receive movement from a line of type or matrices, and adjustable pointers carried by said spindles and coacting with the disks to indicate the length of the line of type.

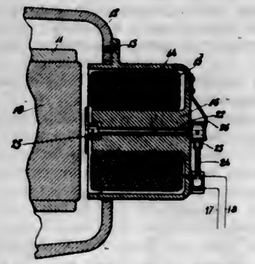
871,903. BOOK-HOLDER. CHARLES L. WORK, Granville, Ohio. Filed Sept. 24, 1906. Serial No. 335,850.



1. In a book holder, a back, lids hinged to said back and adapted to swing toward and from each other, springs secured to said back and to said lids to cause said lids to maintain their open position when open and to maintain their closed position when closed, means for automatically limiting the movement of said lids toward and from each other, a keeper on one of said lids having a recess and a surface inclined divergently from the edges thereof, a catch on the other of said lids, a lug on said catch adapted to be guided into said recess over said surface to hold said lids from recession, and a handle rigidly secured to said catch whereby said lug may be disengaged from within said recess.

2. In a book holder, a back, lids hinged to said back and adapted to swing toward and from each other, springs secured to said back and to said lids to cause said lids to maintain their open position when open and to maintain their closed position when closed, means for automatically limiting the movement of said lids toward and from each other, a keeper on one end of one of said lids and projecting inwardly at right angles thereto, a catch on one end of the other of said lids adapted to automatically engage said keeper to hold said lids from recession, and a handle rigidly secured to said catch and arranged to be grasped simultaneously with the lid whereby said catch may be disengaged from said keeper when opening a book in said holder, substantially as set forth.

871,904. SHAFT-OSCILLATOR. EDWIN C. WRIGHT, Newport, Ky., assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Apr. 20, 1907. Serial No. 369,219.



1. In combination, a shaft, and a magnetic shaft oscillator comprising a coil at the end of the shaft, and a switch in circuit with said coil, said switch being controlled by the combined rotary and longitudinal movements of the shaft.

2. In combination, a shaft, a magnetic shaft oscillator comprising a coil at the end of the shaft, a switch in circuit with said coil, and rotary means disconnected from said shaft but adapted to be engaged by the end of the shaft to be rotated to open the switch.

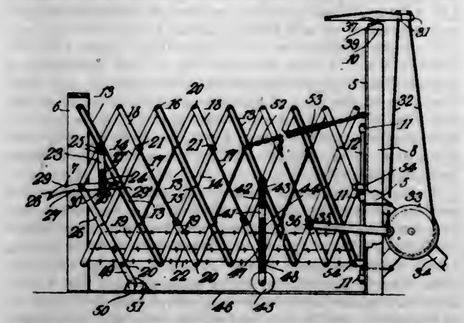
3. In combination, a shaft, a magnetic shaft oscillator comprising a magnet coil at the end of the shaft, a switch in circuit with said coil, and a disk operatively connected to the movable member of the switch and adapted to be engaged by the end of the shaft when the latter reaches a certain position and to be rotated thereby.

4. In combination, a shaft, a magnetic shaft oscillator comprising a coil, a switch in circuit with said coil, and means for operating said switch, said means being connected to the movable switch member and yieldingly supported opposite the end of the shaft in position to be engaged by the shaft when the latter approaches the limit of oscillation in one direction so as to be rotated thereby.

5. In combination, a shaft, a magnetic shaft oscillator comprising a coil, a switch in circuit with said coil, and means for opening said switch with a quick break comprising a friction disk yieldingly and rotatably supported in line with the end of the shaft and connected to the movable member of the switch, so that when the shaft reaches a certain position in its longitudinal movement it will engage the disk and rotate the latter and the movable switch member to open the coil circuit.

[Claims 6 and 7 not printed in the Gazette.]

871,905. GATE. ARTHUR D. ACERS, Norman, Okla. Filed Sept. 15, 1906. Serial No. 334,712.



1. The combination with spaced gate posts, of a collapsible gate secured to one of the gate posts and including a lazy-tong structure, a keeper secured to the opposite gate post, a latch pivotally mounted on the gate and having one end thereof weighted and its opposite end inclined or beveled for engagement with the keeper, and a hanger for supporting the weighted end of the latch.

2. The combination with spaced gate posts, of a collapsible gate secured to one of the gate posts and including a lazy-tong structure, a keeper secured to the opposite post, a weighted latch having an intermediate portion thereof pivotally mounted on the gate and one end thereof inclined and provided with a notch for engagement with the keeper, and a hanger pivoted to the gate and connected with the weighted end of the latch.

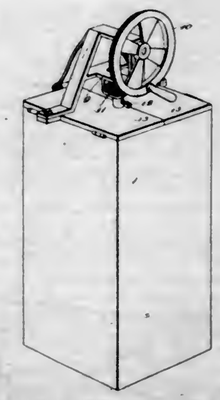
3. In a gate, spaced gate posts, a collapsible gate secured to one of the gate posts and including a lazy tong frame structure, a keeper secured to the opposite gate post, a latch pivoted on the gate and having one end thereof inclined and adapted to engage the keeper at its opposite end provided with a weight, a pin extending laterally from the latch and a hanger adjustably secured to the gate and having a slot formed in its free end for the reception of the pin.

4. In a gate, spaced gate posts, a collapsible gate pivotally secured to one of the gate posts and including a lazy-tong frame structure, a track, a spring pressed roller carried by the gate and bearing against the track, an auxiliary roller, and a scraper mounted on the pivotal axis of the roller and movable over the surface of the track when the gate is moved to open and closed position.

5. In a gate, spaced gate posts, a gate pivotally secured to one of the posts and including a lazy-tong frame structure, a keeper secured to the opposite gate post, a latch having an intermediate portion thereof pivotally mounted on the gate and its terminals free to swing in opposite directions, one of said terminals being adapted to engage the keeper for locking the gate in closed position, a track, a roller depending from the bottom of the gate, and a scraper mounted on the pivotal axis of the roller and movable over the surface of the track when the gate is moved to open and closed position.

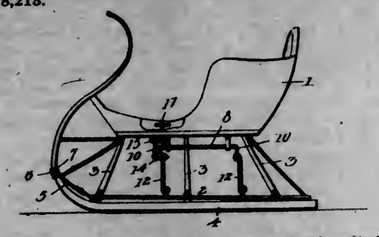
[Claims 6 to 8 not printed in the Gazette.]

871,906. MACHINE FOR CHURNING OR WASHING. HIRAM P. AVERY and SYLVESTER J. BARTLETT, Beardstown, Ill. Filed May 25, 1907. Serial No. 375,707.



In a device of the character described, the combination of an outer shell, an inner shell arranged within the outer shell and spaced therefrom, said inner shell being provided with a set of openings at each end thereof and also with an intermediate set of openings, a dasher rod rotatably mounted within the inner shell, a pair of oppositely arranged propeller like dasher mounted upon the dasher rod, one of the dashers being arranged just below the upper set of openings in the inner shell while the opposite dasher is arranged just above the lower set of openings, and means for rotating the dasher rod.

871,907. SLEIGH ATTACHMENT. WILLIAM A. BERTRAM, Brimley, Mich. Filed June 10, 1907. Serial No. 378,218.



1. An attachment for sleighs comprising longitudinally disposed hingedly mounted runner boards arranged on opposite sides of the sleigh immediately above the runners thereof, and means for holding said boards in laterally extended position, whereby the runners are prevented from sinking into the deep or drifted snow.

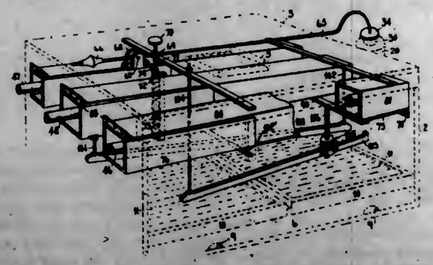
2. An attachment for sleighs, comprising longitudinally disposed runner boards hingedly mounted immediately above the sleigh runners to prevent the latter from sinking into deep or drifted snow, and means to raise and lower said running boards to operative and inoperative positions.

3. An attachment for sleighs, comprising a pair of longitudinally disposed runner boards adapted to be hingedly connected to the runner braces immediately above said runners, crank shafts mounted in suitable bearings on the underside of the sleigh, link rods connecting said crank shafts with said runner boards, an operating lever, and means to connect the same with said crank shafts, substantially as described.

4. An attachment for sleighs, comprising a pair of longitudinally disposed runner boards adapted to be hingedly connected to the runner braces immediately above said runners, crank shafts mounted in suitable bearings on the underside of the sleigh, link rods connecting said crank shafts with said runner boards, a spring retracted operating lever, links to adjustably connect the opposite ends of the lever with said crank shafts, and means whereby said lever is operated by the foot of an occupant of the sleigh, substantially as described.

5. An attachment for sleighs comprising longitudinally disposed runner boards adapted to be longitudinally connected to the sleigh runner braces immediately above the sleigh runners, deflecting plates hingedly connected to the forward ends of said runner boards, means to pivotally connect the forward ends of said deflecting plates to the sleigh runners, a system of shafts, connecting rods and levers arranged on the bottom of the sleigh and connected to said runner boards whereby the same are raised and lowered to inoperative and operative positions, substantially as described.

871,908. INCUBATOR. SYLVAN F. BIHN, Petaluma, Cal. Filed Feb. 7, 1907. Serial No. 356,186.



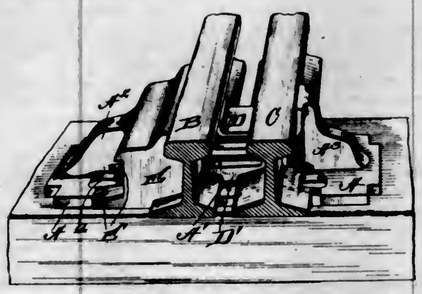
1. In an incubator, the combination of a plurality of compartments, water supply and return pipes passing through said compartments and a water heater disposed adjacent to said incubator and having the reservoir thereof connected with said pipes and each compartment having means for enveloping the pipes passing therethrough for regulating the temperature therein independently of the other compartments.

2. In an incubator, the combination of a plurality of compartments, water supply and return pipes passing through said compartments, means for heating the water passing through said pipes and means disposed in each compartment for enveloping the pipes passing therethrough and regulating the heat therein independently of the other compartments.

3. In an incubator, the combination of a plurality of compartments, water supply and return pipes passing through said compartments, means for heating the water passing through said pipes, means for enveloping the pipes in each compartment, and means operated by the temperature in said compartment for opening and closing said pipe-enveloping means for shutting off and admitting the heat radiated from said pipes to said compartment, whereby the heat in one compartment may be regulated independently of the others.

4. In an incubator, the combination of a plurality of compartments, heating means therefor, means for regulating the temperature in each compartment independently of the others and means for regulating the temperature in all of the compartments.

871,909. COMBINED TIE-PLATE AND GUARD-RAIL CLAMP. WILLIAM F. BOSSERT, Utica, N. Y. Filed Mar. 18, 1907. Serial No. 363,128.



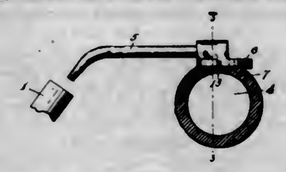
1. In combination with a guard and a main rail of a railway track, a base plate having a reinforced upright extension, one face of which conforms to the contour of the web, flange and tread of a railway rail, a spacing block interposed between the two rails and having the contracted extension passing through and adapted to engage the marginal edges of an aperture formed in said base plate and having its lower end flush with the under surface of the base plate, and a wedge member cooperating with said base plate for holding the rails against the opposite edges of said spacing block, as set forth.

2. In combination with a guard and a main rail of a railway track, a base plate having upright extensions, a spacing block interposed between the rails, a cap fitted over one of the upright extensions of the base plate and provided with a key-way, registering with a key-way in said extension, and a key fitted in said key-ways and adapted to force said cap against the web of the adjacent rail, as set forth.

3. In combination with a stock rail, a guard rail of smaller dimensions than the stock rail, a base plate having upright projections, the inner face of one of which conforms to the shape of the flange, web and edge of the tread of the stock rail against which it is adapted to contact, a spacing block interposed between the rails, a chair resting upon said base plate and upon which the guard rail is supported, and means for holding the guard rail against the edge of the spacing block, as set forth.

4. In combination with the guard and main rail, a base block having an upright extension, the inner face of which is adapted to conform to the flange, web and edge of the tread of the stock rail against which it is adapted to contact, a second extension from said base block provided with a horizontal key-way, a hollow cap fitted over said extension with the key-way therein and having a space adapted to conform to the flange, web and edge of the thread of the guard rail and having a key-way therein, a key fitted in the registering ways of said extension and cap, and means for holding the key in place, as set forth.

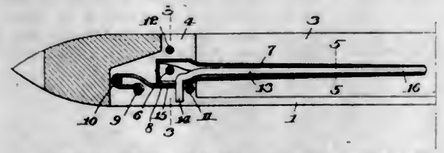
871,910. PNEUMATIC THREADING DEVICE FOR SPINNING-MACHINES. FRANK A. BREEZE, Philadelphia, Pa. Filed Oct. 27, 1904. Serial No. 230,248.



1. The combination with a spinning machine provided with a series of spinning tubes, of a common air conduit, a series of independent nozzles mounted on said conduit, each of said nozzles being mounted for independent rotation to operative position for directing a jet of air from said common conduit through the adjacent spinning tube, and spring means for maintaining said nozzles in closed position, substantially as described.

2. The combination with a spinning machine provided with a spinning tube, a spinning head, and rollers carried by said head, of an air conduit, a nozzle rotatably supported on said conduit for directing a jet of air through said tube, and a spring plate for insuring a close contact between said tube and conduit, substantially as described.

871,911. LOOM-SHUTTLE. ARTHUR BUCKLER, Philadelphia, Pa. Filed July 27, 1905. Serial No. 271,407.



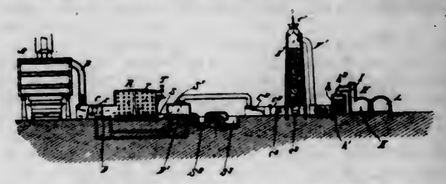
1. The combination of a shuttle body provided with a bobbin-receiving chamber, a spindle therein having an expansible free end and adapted to receive a bobbin, and means for expanding the free end of the spindle to engage and bind the bobbin.

2. The combination of a shuttle body provided with a bobbin-receiving chamber, a spindle having an expansible free end and movable into and from the chamber and adapted to receive a bobbin, and means for expanding the free end of the spindle upon the latter being moved into the chamber.

3. The combination of a shuttle body provided with a bobbin-receiving chamber, a spindle supported at one of its ends and movable into and from the chamber and adapted to receive a bobbin, said spindle including two parts connected near the supporting end of the spindle and having their free ends movable toward and from each other, and a tapering pin located between said parts and adapted when the spindle is moved into the chamber to engage said parts to move said ends from each other to engage and bind the bobbin.

4. The combination of a shuttle body provided with a bobbin receiving chamber, a bobbin-receiving spindle therein supported at one of its ends and including two parts connected near the supporting end of the spindle and having their free ends movable towards and from each other, and a pin located between said parts and having a tapering portion adapted to engage and move said ends from each other to engage and bind the bobbin.

871,912. APPARATUS FOR OBTAINING SULFUR FROM FURNACE-GASES. FRANKLIN R. CARPENTER, Denver, Colo., assignor of one-fourth to Arthur Howe Carpenter, one-eighth to Cranston Howe Carpenter, and one-eighth to Malcolm Howe Carpenter, Denver, Colo. Filed May 19, 1906. Serial No. 306,901.



1. The herein described apparatus for obtaining sulfur from furnace gases containing sulfurous oxid, comprising a dust chamber in which solid particles carried over mechanically may be deposited, coke towers with which the dust chamber communicates, valves for shutting off communication between the towers and the dust chamber, means for admitting steam with the gases to the coke towers, a cooling chamber with which the towers communicate, an iron oxid container communicating with said cooling chamber, means for admitting air to said iron oxid container, and a collecting chamber communicating with the iron oxid container.

2. The herein described apparatus for obtaining sulfur from sulfurous oxid contained in furnace gases comprising a refrigerating chamber, means for delivering furnace gases thereto, a coke tower, means for conveying sulfurous oxid from the refrigerating chamber to the bottom of the coke tower, means for delivering steam with the sulfurous acid, means for maintaining the coke in the tower incandescent, an iron oxid container, means for conducting gases from the top of the coke tower to the bottom of the iron oxid container, means for delivering air to the bottom of the container and means for carrying off and collecting the sulfur.

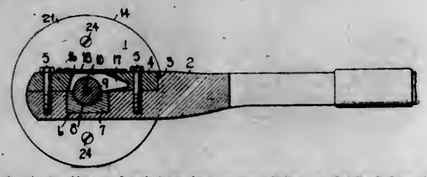
3. The herein described apparatus, comprising a refrigerating chamber, means for delivering furnace gases thereto, means for separating the fixed gases from the sulfurous oxid and the water deposited in the refrigerating chamber, means for evaporating the sulfurous oxid out of the water containing it, means for subjecting the sulfurous oxid thus concentrated to the action of a reducing agent at a high temperature, and means for further treating the resulting gas to obtain sulfur in a solid form.

4. The apparatus herein described, comprising a furnace, a cooling chamber connected therewith and receiving furnace gases therefrom equipped with means for condensing the sulfurous oxid contained in said furnace gases, means for collecting the condensed oxid, an evaporating chamber to which the water containing the oxid is conveyed, a coil of heating pipes contained in said evaporating chamber, another coil in the flue connection between the furnace and the cooling chamber, means for circulating a fluid through the coils whereby the furnace gases are to some extent cooled before reaching the cooling chamber and the coil in the evaporating chamber is heated sufficiently to vaporize off the sulfurous oxid, means for carrying off the water from the evaporating chamber and means for further treating the concentrated sulfurous oxid to obtain sulfur therefrom.

5. The herein-described apparatus for obtaining sulfurous oxid from furnace gases comprising a dust chamber in which particles carried over mechanically may be deposited, a coil of pipes containing water in said chamber, a refrigerating chamber into which the gases pass after the dust is deposited, a chamber for distilling liquid containing the deposited sulfurous oxid, a coil of water-pipes in said chamber connected with the coil in the dust-settling chamber whereby the heat from the settling chamber is conveyed to the distilling chamber and vice versa, the lower temperature of the distilling chamber is communicated to the settling chamber, whereby the gases are to some extent cooled before entering the refrigerating cham-

some extent cooled before entering the refrigerating chamber and means for carrying off and further treating the sulfur gases from the distilling chamber.

871,913. TROLLEY-WHEEL BEARING. WILLIAM M. CASWELL, Warren, Pa. Filed June 6, 1907. Serial No. 377,565.

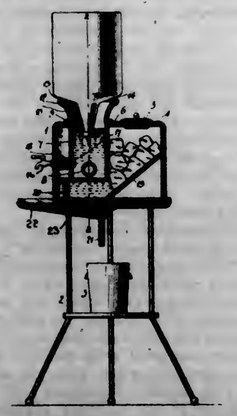


1. A trolley wheel bearing comprising a forked bearing arm adapted to be secured to the outer end of a trolley pole, said fork having formed in its ends bearing recesses, Babbitt metal blocks arranged in said bearing recesses, and detachable cap plates arranged in said recesses, said caps having formed therein grease or oil chambers, at one end of which is formed a pocket to receive the grease or oil when the trolley pole is in a vertical position, substantially as described.

2. A trolley wheel bearing consisting of a trolley fork adapted to be screwed onto the onter end of the trolley pole, said fork having formed in its outer end bearing recesses, Babbitt metal bearing blocks arranged in said recesses, cap plates detachably secured to the ends of said fork over said trolley wheel rollers, said plates having formed therein oil chambers, at one end of which is formed a pocket to receive the oil when the trolley pole is in a vertical position, and spring metal cover plates arranged on the upper end of said cap plates to close the oil chambers therein, substantially as described.

3. A trolley wheel bearing consisting of a trolley fork adapted to be screwed onto the outer end of the trolley pole, said fork having formed in its outer end bearing recesses, Babbitt metal bearing blocks arranged in said recesses, cap plates detachably secured to the ends of said fork over said trolley wheel rollers, said plates having formed therein oil chambers, at one end of which is formed a pocket to receive the oil when the trolley pole is in a vertical position, spring metal cover plates arranged on said cap plates to close the oil chambers therein, and bearing rollers adapted to revolve in said Babbitt metal bearing blocks and to receive the axle of the trolley wheel, substantially as described.

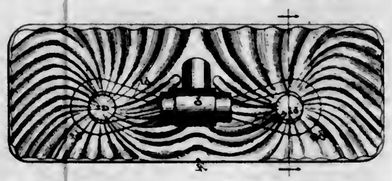
871,914. WATER-COOLER. CHARLES F. CONOVER, New York, N. Y. Filed Nov. 9, 1905. Serial No. 286,555.



1. In a device of the class described, an ice receptacle, a vessel for containing water arranged therein, an inclined ice chute sustained in the receptacle at one side of the vessel for maintaining the ice permanently in contact with the side wall of the latter, and means for drawing off the water from the vessel.

2. In a device of the class described, a vessel for containing water having an open upper end to accommodate an inverted water bottle, an elastic packing ring applied around the open end of the vessel and on which the bottle rests, said ring being provided with a series of vent openings, and means for drawing the water from the vessel.

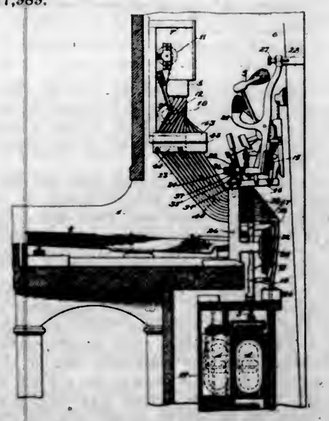
871,915. REFLECTOR. AUGUSTUS D. CURTIS, Chicago, Ill. Filed Jan. 18, 1906. Serial No. 296,599.



1. A reflector consisting of a hood-like structure of suitable material, having a central opening to receive a lamp attachment, and having the reflecting surface on opposite sides of said opening formed into series of corrugations, the corrugations of each series radiating on curved and slightly diverging lines from a common center.

2. A light-reflector consisting of hood-like structure, rectangular in outline, and having its reflecting surface formed with one or more substantially flat spots, and with corrugations radiating from said spots on curved and diverging lines extending to the margins of the structure, the depth of said corrugations being substantially the same throughout their length.

871,916. COMBINED MANUALLY AND MECHANICALLY OPERATED PIANO. JOHN W. DARLEY, Jr., Baltimore, Md., assignor to The Wm. Knabe & Co. Manufacturing Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed Sept. 11, 1905. Serial No. 277,989.



1. In a combined manually and mechanically operated instrument, the combination of a piano-action including the wippen thereof, a key-lever, a wippen-actuating rod vertically disposed immediately behind the rear end of the key-lever and supported thereby, a pneumatic below the key-lever, and a striker or lifter actuated thereby and arranged to operate on the foot of said rod below the key-lever.

2. In a combined manually and mechanically operated instrument, the combination of a piano-action including the wippen thereof, a key-lever, a wippen-actuating rod adjustable in length supported by said key-lever and operated thereby, and a mechanically operated striker arranged to operate on said rod.

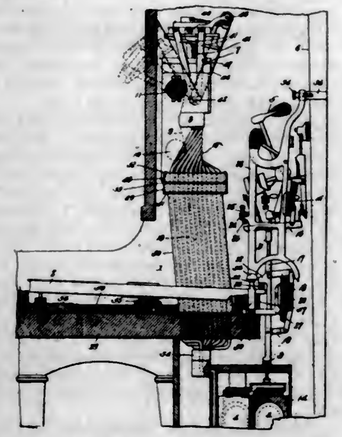
3. In a combined manually-and-mechanically-operated instrument, the combination of a key-lever, a mechanical striker, and wippen-actuating rod adapted to be moved either by the key-lever or by the striker, means for adjusting the length of said rod, and independent means for adjustment of the point of engagement between the key-lever and said rod.

4. In a combined manually-and-mechanically-operated instrument, the combination of the rocker or wippen of a piano-action, a vertically-movable actuating-rod therefor, a key-lever, a mechanical striker, said actuating-rod supported by said key-lever or by the striker, and a vertically-ported by said lever operated either by the key-lever or by the striker, and a vertically-adjustable head at the upper end of said actuating-rod bearing under the wippen.

5. In a combined manually-and-mechanically-operated instrument, the combination of the rocker or wippen of a piano-action, a vertically-movable actuating-rod therefor, a key-lever, a mechanical striker, said actuating-rod operated either by the key-lever or by the striker, and a vertically-adjustable cap or head at the upper end of said actuating-rod bearing under the wippen and laterally provided with an annular series of apertures to receive adjusting tools.

[Claims 6 to 33 not printed in the Gazette.]

871,917. COMBINED MANUALLY AND MECHANICALLY OPERATED PIANO. JOHN W. DARLEY, Jr., Baltimore, Md., assignor to The Wm. Knabe & Co. Manufacturing Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed Nov. 17, 1905. Serial No. 287,826.



1. In a combined manually and mechanically operated instrument, the combination of a piano-action including a wippen, a key-lever, a rod driving said wippen but not connected thereto and having a lug or projection bearing on the key-lever, said rod being supported thereby, and a mechanical striker arranged for operating on said rod.

2. In a combined manually and mechanically operated instrument, the combination of a piano-action, a key-lever, a mechanical striker, an action-actuating rod not connected to said action vertically disposed behind the rear end of the key-lever having a forward projection supported thereby and having its foot supported by the striker.

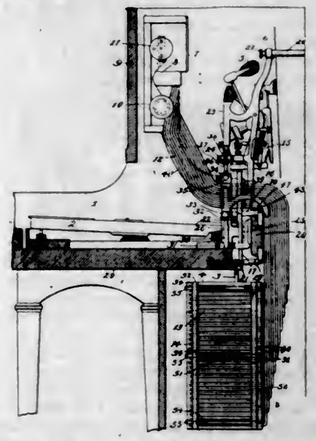
3. In a combined manually and mechanically operated instrument, the combination of a piano-action, a key-lever, an action-actuating rod not connected to said action vertically disposed behind the rear end of the key-lever and having means for direct engagement thereby for lifting said rod when the key is depressed, and a mechanical striker adapted to operate on the lower end of said rod and to lift the same.

4. In an automatic instrument, the combination of a pneumatic motor for operating music-winding devices, a rocking cradle supporting said motor and allowing the same to swing bodily, an air pipe arranged substantially coaxial with the axis of said cradle, and a cranked pipe connecting said motor and air pipe.

5. In an autopneumatic instrument, the combination of a note-selective mechanism including its operating shaft, a motor therefor movably supported, an air pipe for said motor and a cradle supporting said motor and fulcrumed coaxially with said shaft and said air pipe, both of which are connected with said motor, whereby the motor can be swung out of operative position without disturbing the operative relation between the same and the said note-selective mechanism.

[Claims 6 to 18 not printed in the Gazette.]

871,918. COMBINED MANUALLY AND MECHANICALLY OPERATED PIANO. JOHN W. DARLEY, Jr., Baltimore, Md., assignor to The Wm. Knabe & Co. Manufacturing Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed Dec. 7, 1905. Serial No. 290,794.



1. The combination of a key-lever, a wippen-actuating rod adjustably supported thereon and liftable thereby, said rod having an adjustable foot, and a mechanical striker arranged to operate on said foot.

2. The combination of a key-lever, a capstan-screw thereon, a wippen-actuating rod supported by said screw, said rod extending below the key-lever, a vertically adjustable screw carried by the lower end of said rod, and a mechanical striker arranged to operate on the last-mentioned screw, said screw adapted for adjusting the operative length of said rod with respect to said striker.

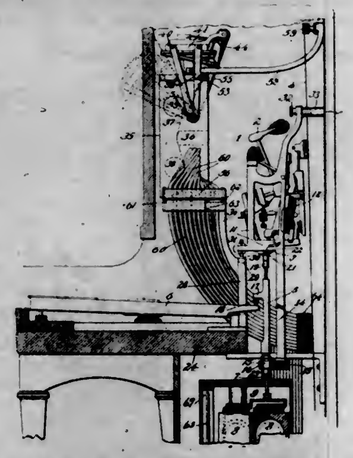
3. In a combined manually and mechanically operated instrument, the combination of a piano-action, a key-lever, a mechanical striker, a motion-transmitting rod for actuating the piano-action vertically-disposed behind the rear end of the key-lever, said rod having means adjustably supported by the rear end of the key-lever for lifting said rod, and an adjustable foot supportable on the striker.

4. In a combined manually and mechanically operated instrument, the combination of a piano-action, a vertically movable actuating-rod therefor, a key lever carrying at its rear end an adjustable capstan-screw, and a mechanical striker or lifter, the said actuating-rod being located behind the rear end of the key-lever and having means whereby it is supportable by said capstan-screw and liftable by the key-lever, and said rod having an adjustable foot supportable on the striker, whereby the rod is liftable by the striker.

5. In a combined manually and mechanically operated instrument, the combination of an action-bracket having a boxing or passageway extending therethrough transversely of the keyboard, said boxing having a removable top piece, and a group of pneumatic tubes or pipes extending through said boxing and adapted to be placed therein or removed therefrom by removing said top piece.

[Claims 6 to 17 not printed in the Gazette.]

871,919. COMBINED MANUALLY AND MECHANICALLY OPERATED PIANO. JOHN W. DARLEY, Jr., Baltimore, Md., assignor to Ernest J. Knabe, Jr., Baltimore, Md. Filed June 6, 1906. Serial No. 320,472.



1. In a combined manually and mechanically operated instrument, the combination of a piano-action including the hammer and wippen, said wippen having a cushion of appropriate material on its under side and having also a recess with a contracted mouth extending to the under side of the wippen and covered by said cushion, a vertically-disposed abstract or wippen-actuating rod whose head bears under said cushion and carries an upright pin inserted through said cushion and into said recess, there being sufficient clearance to avoid contact of said pin with the walls of said recess, a key-lever and mechanical striker both arranged for operating on or lifting said abstract, and means for holding the abstract in proper relation to said key-lever and striker.

2. In a combined manually and mechanically operated instrument, the combination of a piano-action including the hammer and wippen, a key-lever, an abstract vertically-disposed behind the rear end of the key-lever and supported and liftable thereby, a mechanical striker arranged to operate on the foot of said abstract, there being no positive connection between said abstract and key-lever or striker, said abstract carrying at its upper end a pin pivotally-seated in the under side of the wippen and constituting a guide for the upper end of the abstract, and a fixed guideway in which the lower part of the abstract is slidably fitted to allow an up and down movement.

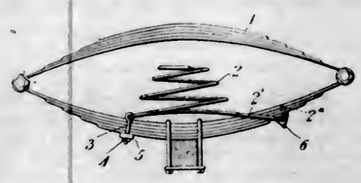
3. In a combined manually and mechanically operated instrument, the combination of a piano-action including the hammer and wippen, said wippen having a recess therein and having a cushion covering the mouth of said recess on the under side of said wippen, an abstract whose head bears under said cushion and is provided with a pin inserted through said cushion and into said recess, a key-lever, means whereby said abstract is supported at an intermediate point by the key-lever, a fixed member having a guideway in which the foot of the abstract is fitted to slide vertically, and a mechanical striker arranged to operate on the foot of said abstract.

4. In a combined manually and mechanically operated instrument, the combination of a piano-action including the hammer and wippen, a key-lever, an abstract vertically-disposed behind the rear end of the key-lever and supported thereby, the head of said abstract being pivotally seated against the under side of the wippen, the lower end of said abstract having a rigid frame secured thereto constituting the foot of the abstract, a rail having a transverse slot in which said frame is fitted to allow only an up and down movement, and a mechanical striker arranged to operate on the bottom of said foot of the abstract.

5. In an instrument of the character described, the combination of a series of vertically-disposed abstracts or wippen-actuating rods whose feet consist of rigid wire frames, a horizontal rail having a corresponding series of transverse slots constituting guide-ways for said feet, key-levers arranged to operate on the abstracts above said rail, and mechanically-actuated strikers arranged to operate on the feet of said abstracts below said rail.

[Claims 6 to 16 not printed in the Gazette.]

871,920. VEHICLE-SPRING. ARTHUR FALKENHAINER, St Louis, Mo. Filed Dec. 26, 1906. Serial No. 349,367.



1. In a vehicle spring, the combination with a main spring, of a coiled auxiliary spring having a terminal coil provided with an arm arranged for slidable engagement with a member of said main spring, and means whereby said terminal coil is rigidly and immovably secured to said main spring member, substantially as set forth.

2. In a vehicle spring, the combination with a main spring, of a coiled auxiliary spring having a terminal coil provided with an arm arranged for slidable engagement with a member of said main spring, and means rigidly and immovably connecting said terminal coil to said main spring member, at a point substantially diametrically opposite to that at which the arm of the coil engages said member, substantially as set forth.

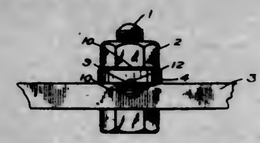
3. In a vehicle spring, the combination with a main spring, of a coiled auxiliary spring having a terminal coil provided with an arm arranged for slidable engagement with a member of said main spring, and means whereby said terminal coil is rigidly and immovably secured to said main spring member; said arm being extended transversely of said main spring member at the side thereof opposite to that against which said terminal coil bears, substantially as set forth.

4. In a vehicle spring, the combination with a main spring, of a coiled auxiliary spring having a terminal coil provided with an arm arranged for slidable engagement with a member of said main spring, and means whereby said terminal coil is rigidly and immovably secured to said main spring member; said arm being extended transversely of said main spring member at the side thereof opposite to that against which said terminal coil bears and terminating in a finger engaging an edge of said main spring member, substantially as set forth.

5. In a vehicle spring, the combination of a main spring, a coiled auxiliary spring having one of its terminal coils secured to said main spring and provided with an arm extending transversely of and having slidable engagement with the main spring member to which the auxiliary spring is applied, and a take-up block carried by said arm, substantially as set forth.

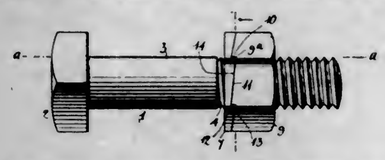
[Claims 6 and 7 not printed in the Gazette.]

871,921. NUT-LOCK. JOSEPH C. FISH, Chicago, Ill., assignor of one-half to E. B. Reith, Chicago, Ill. Filed July 23, 1906. Serial No. 327,420.



A nut lock comprising a bolt with an object, a washer and a nut thereon, the washer having a transverse recess provided on one side with a straight wall and on its opposite side with an angular wall, a pawl having opposite straight sides and also oppositely inclined sides, said inclined sides having their terminals sharpened, the pawl serving to be mounted in the recess to permit of one of its flat sides to contact with the straight wall of the recess and its sharpened terminals projecting forwardly and rearwardly therefrom, a resilient member constructed to conform to the shape of the recess and serving to be mounted therein, so as to contact with the inner straight wall of the pawl and also with the angular wall of the recess, the terminal sharpened ends of the pawl serving to impinge against said object and said nut, and said washer having an opening in its side which communicates with the recess to permit of the insertion of an implement to disengage said pawl substantially as specified.

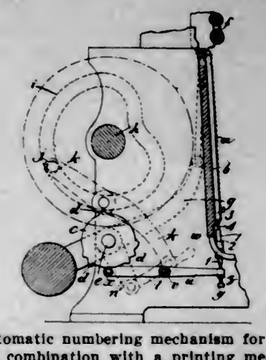
871,922. NUT-LOCK. HURFEY A. FISHER and JAMES P. FISHER, Charleston, W. Va., assignors to O. J. Morrison, Ripley, W. Va. Filed Nov. 8, 1906. Serial No. 342,527.



In a nut lock, a bolt having a threaded portion provided with a longitudinal groove, a yieldable spring metal washer of concavo-convex form in cross section loosely applied on the bolt with its concaved face disposed toward and to bear at its marginal edge directly against the bolted object, a locking washer arranged on the bolt to bear at its inner side face immediately against the convex face of the spring washer, said locking washer having a tongue engaged in said groove and being provided on its outer side face with a series of radial locking teeth having radial shoulders and intervening inclined surfaces, and a nut threaded onto the bolt and having on its inner side face radial locking teeth corresponding to and for coöperative interlocking engagement with those on the locking washer, adapting the meeting faces of the nut and locking washer to lie in flush contact throughout the entire area of said faces when the parts are in locked position, the spring washer having bearing at all points, in a line concentric with the axis of the bolt upon the adjacent face of the locking washer for pressing the latter evenly to locking position and being adapted to yield to permit positive movement of the locking washer to bolt-releasing position.

871,923. ARRANGEMENT FOR GIVING MOVEMENT TO AUTOMATIC NUMBERING MECHANISMS FOR PRINTING-MACHINES. JOHN DE BURGH GALWEY, Dublin, Ireland, assignor to Emil Schreier, London, England. Filed Mar. 1, 1905. Serial No. 247,866.

1. In automatic numbering mechanism for printing machines, the combination with a printing mechanism of a cam reciprocated thereby, a lever actuated by said cam, a plurality of numbering barrels and means actuated by said lever for imparting a plurality of movements to such numbering barrels between each impression to cause them to print numbers the desired interval apart, substantially as set forth.

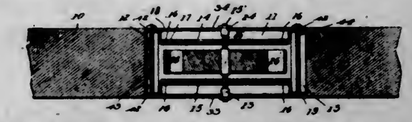


2. In automatic numbering mechanism for printing machines, the combination with a printing mechanism having a reciprocating shaft, of a cam mounted thereon between fixed collars, a plurality of sets of projections on said cam, graduations on said cam coöperating with a mark on one of the collars, holes in the other collar, a screw in said cam adapted to enter such holes to clamp the cam in an adjusted position, a lever actuated by said cam, a plurality of numbering barrels and means actuated by said lever for imparting a variable number of movements to such numbering barrels between each impression to cause them to print numbers the desired intervals apart, substantially as set forth.

3. In automatic numbering mechanism for printing machines, the combination with a printing mechanism of a cam reciprocated thereby, a lever actuated by said cam, a plurality of numbering barrels, a chase to carry the form and in which the numbering barrels are set up, rods adapted to actuate the printing wheels of said numbering barrels, a sliding beam to which such rods are attached, a guide way in said chase for such beam to slide in, a spring to urge said beam in one direction, levers to impart motion thereto in the opposite direction and a sliding part through which such motion is transmitted to said levers from the cam operated lever first mentioned substantially as set forth.

4. In automatic numbering mechanism for printing machines, the combination with a printing mechanism of a cam reciprocated thereby, a lever actuated by said cam, a roller on said lever engaged by said cam, a plurality of numbering barrels, means of actuating the said numbering barrels and an adjusting screw carried by said lever and adapted to transmit motion therefrom to the numbering barrel actuating mechanism, substantially as set forth.

871,924. LEVEL. SIDNEY H. GARDNER, Bellingham, Wash. Filed May 17, 1907. Serial No. 374,223.



1. In a level or plumb, a stock having a circular opening formed therethrough, an arbor arranged in the center of said opening, a weight secured to the arbor and within the opening, sectional plates secured to the stock and provided with openings through which the arbor projects, the stock having scales, and disks secured to the arbor and having pointers arranged to co-act with the scales.

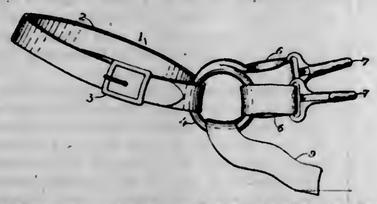
2. A level or plumb, a stock having a circular opening formed therethrough, the stock having an opening in its top and in communication with the opening through the stock, an arbor arranged in the center of said first mentioned opening, a weight secured to the arbor, a band secured to the weight and on the top edge thereof and be-

neath the opening in the top of the stock, the band having a scale, the top of the stock having a pointer and arranged to co-act with the scale on the band, the stock having scales, the scales being arranged above and below the circular opening through the stock, pointers secured to the arbor and adapted to co-act with said scales, and sectional arbor supporting plates adjustably secured to the stock and arranged within the opening in the stock.

3. In a level or plumb, a stock having a circular opening formed therethrough, the stock having an opening in its top and in communication with the opening through the stock, an arbor arranged in the center of said first mentioned opening, a weight secured to the arbor, a band secured to the weight and on the top edge thereof and beneath the opening in the top of the stock, the band having a scale, the top of the stock having a pointer and arranged to co-act with the scale on the band, the stock having scales, the scales being arranged above and below the circular opening through the stock, pointers secured to the arbor and adapted to co-act with said scales, bands adjustably mounted on both sides of the opening formed through the stock, sectional disks secured to the bands and arranged to support the arbor, the stock having recesses adjacent to the opening through the stock and bolts arranged in the recesses and connected to the bands.

4. In a level or plumb, a stock having a circular opening formed therethrough, and having an opening in its top and in communication with the first named opening, an arbor arranged in the center of said first mentioned opening, a weight secured to the arbor, a band secured to the weight on the top edge thereof and beneath the opening in the top of the body, the band having a scale, sectional plates secured to the body and provided with openings through which the arbor projects, the stock having scales above and below the opening formed therethrough, and pointers secured to the arbor and outside of the above mentioned plates and adapted to coact with the scales above and below said opening.

871,925. HALTER. SILAS E. GATES, Bigtimber, Mont. Filed Apr. 22, 1907. Serial No. 369,480½.



A halter comprising a neck-strap, a ring having said neck-strap passed through it and having formed integrally with it diverging ring-members, separated independent bit controlling loops connecting with said ring-members, snap-hooks connected with the bit and having said loops passed through them and a hitching strap also passed through and connected to said ring, said ring being adapted to occupy a position intermediate of said neck-strap and said bit-controlling loops and to accordingly draw upon these parts when subjected to a pulling action.

871,926. AIR-PROPELLER FOR FLYING-MACHINES. LOUIS GATHMANN, Washington, D. C., assignor of one-fourth to Emil Gathmann, Bethlehem, Pa. Filed Mar. 6, 1907. Serial No. 360,818.



1. An air propeller having two or more sets of vanes each of said vanes consisting of two or more superimposed aero-planes, the rear edge of the uppermost aero-plane extending beyond the rear edge of the lower planes.

2. An air propeller having two or more sets of vanes each of said vanes consisting of two or more superimposed aero-planes, the rear edge of the uppermost aero-plane overlapping or extending to rearward and downwardly beyond the rear edge of the underneath plane, substantially as set forth and for the purpose described.

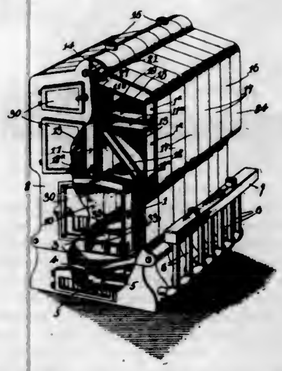
3. A rotary air propeller having two or more sets of vanes each of said vanes consisting of two or more superimposed aero-planes, the outer or peripheral portion of said planes being located in a lower plane than their inner portion.

4. An air propeller having two or more sets of vanes each of said vanes consisting of two or more superimposed aero-planes or blades, the rear edge of the uppermost aero-plane or blade overlapping rearwardly the rear edge of lower planes, and a segmental circumferential wall for closing the passage between said aero-planes or blades.

5. An air propeller having two or more sets of vanes each of said vanes consisting of two or more superimposed aero-planes or blades, the rear edge of the uppermost aero-plane or blade overlapping rearwardly the rear edge of lower planes, and a segmental circumferential wall for closing the passage between said aero-planes or blades and having the aero-planes or blades inclining at a downward angle towards their circumference.

[Claims 6 to 10 not printed in the Gazette.]

871,927. HOT-WATER HEATER. JOHN GEDEON, Jr., Cleveland, Ohio. Filed June 19, 1907. Serial No. 379,729.

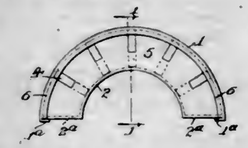


1. A vertical sectional boiler having an ashpit fire-box and also having sections each of which has a water passage extending around the top, bottom and sides of the fire box, the bottom parts of the various sections being spaced from each other and forming grate bars and having individual water inlets, at the middle thereof, and water passages extending at an inclination upwardly from said inlets, in opposite directions.

2. A sectional boiler having a series of connected sections each of which has an outer water passage extending completely around the section, upper and lower cross passages extending substantially horizontally from side to side, the lower cross passages being spaced apart and located directly above the fire box, and the upper cross passages being close together, forming a horizontal partition above the fire box, a pair of vertical passages extending from the upper cross passages to the top and forming side and middle flues extending from front to rear, the side flues being connected to the middle flue at the front end and to the fire box at the rear end.

871,928. BUSHING. HENRY J. GILBERT, Saginaw, Mich. Filed Feb. 8, 1904. Serial No. 192,702.

1. A bushing comprising a rigid shell, and a series of bars or strips connected therewith and arranged longitudinally thereof, said strips being separate from each other; substantially as described.



2. A bushing comprising a non-flexible shell, a series of substantially parallel and independent bars or strips arranged longitudinally thereof, and means for securing such strips to the shell, said shell and strips being arranged at different radial distances from the bushing axis; substantially as described.

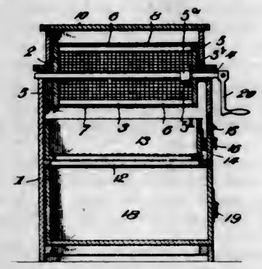
3. A bushing comprising a shell, a series of substantially parallel strips arranged longitudinally thereof and separate from each other, and means for spacing or distancing such strips; substantially as described.

4. A bushing comprising a shell, a series of substantially parallel strips arranged longitudinally thereof and separate from each other, and means for securing such strips to the shell and for distancing or spacing them with respect to each other; substantially as described.

5. A bushing comprising a shell arranged to have no bearing on a shaft, and a series of strips having interlocking connection therewith; substantially as described.

[Claims 6 to 25 not printed in the Gazette.]

871,929. ASH-SIFTER. JAMES GUERIN, Philadelphia, Pa. Filed Nov. 27, 1905. Serial No. 289,287.



An ash sifter comprising a casing, a sifter having heads, collars with secured sleeves having set screws, said collars being secured to the heads, a shaft projecting through the heads, collars and sleeves and rotatably mounted in the upper ends of the casing, said set screws serving to secure the shaft to said sleeves, and beater bars extending longitudinally along the angular corners of said sifter and secured to said heads, substantially as specified.

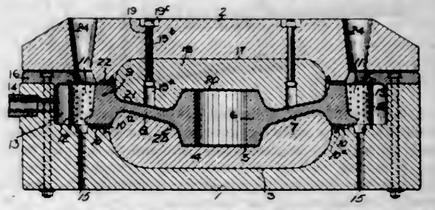
871,930. PATCH FOR PNEUMATIC TIRES. GUSTAF HAGSTROM and EMANUEL HAGSTROM, Lindsborg, Kans., assignors to The Hagstrom Bros. Manufacturing Company, Lindsborg, Kans. Filed Sept. 24, 1906. Serial No. 335,943.



1. A patch of the class described comprising a band to go around an inner tube having clips at its ends to engage the edges of an outer tube and provided with a flap forming an extension of one end to lie between the inner tube and a wheel rim, substantially as described.

2. A patch of the class described comprising a band to go around an inner tube and having clips at its ends to engage the edges of an outer tube, said clips being V-shaped in cross section and the outer webs thereof having tongues to be bent around the flanges at the edges of said outer tube, substantially as described.

871,931. APPARATUS FOR TEMPERING AND ANNEALING CAR-WHEELS. JOHN M. HANSEN, Pittsburg, Pa. Filed Nov. 15, 1906. Serial No. 343,572.



1. An apparatus for treating car wheels having a central practically air tight heat retaining chamber adapted to envelop the body of the wheel when exposing the tread face thereof, and means for introducing a hardening medium against the tread face.

2. An apparatus for treating wheels having a central practically air tight annealing or heat retaining chamber and an annular tread receiving chamber around the same and means for introducing a hardening medium therein.

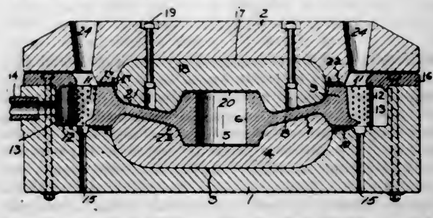
3. An apparatus for treating car wheels having a central practically air tight heat retaining chamber, an annular tread receiving chamber around the same and sealing means between said chambers.

4. An apparatus for treating car wheels having a central heat retaining chamber provided with a hub rest, and adapted to support the wheel at hub and rim, and means for introducing a hardening medium against the tread face.

5. An apparatus for treating car wheels having a central heat retaining chamber provided with a refractory lining, a tread receiving chamber around the same and means for introducing a hardening medium therein.

[Claims 6 to 10 not printed in the Gazette.]

871,932. METHOD OF TEMPERING AND ANNEALING CAR-WHEELS. JOHN M. HANSEN, Pittsburg, Pa. Filed Nov. 15, 1906. Serial No. 343,573.



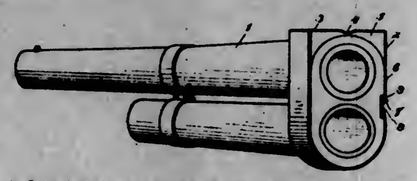
1. The method of annealing the body and hardening the tread of car wheels, consisting in inclosing the body of the wheel when in a heated state within a practically air tight heat retaining chamber and projecting against the tread face a suitable hardening medium.

2. The method of annealing the body and hardening the tread of car wheels, consisting in inclosing the body of the wheel when in a heated state within a practically air tight heat retaining chamber, sealing the wheel at the tread and projecting upon the tread face a suitable hardening medium.

3. The method of annealing the body and hardening the tread of car wheels, consisting in giving a resting support

to both hub and tread, and inclosing the hub when in a heated state within a heat retaining chamber, sealing the tread portion from said heat retaining chamber, and projecting against the tread face a suitable hardening medium.

871,933. SIGHT FOR FIREARMS. JOHN E. HARKER, Milford, Iowa. Filed Sept. 11, 1906. Serial No. 334,175.



A detachable rear gunsight having a flat upper surface provided with a sighting groove, said sight comprising a band arranged to be passed over the end of the gun barrel, and a spring carried on said band arranged to enter a notch on the gun barrel for securely holding the sight in position, substantially as described.

871,934. COMBINED EDUCATIONAL CHART, DRAWING-BOARD, AND WRITING-DESK. GEORGE A. HENDERSON, Stephenville, Tex. Filed June 22, 1907. Serial No. 380,333.

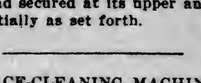


In a device of the character described, the combination of a frame comprising side pieces connected by an intermediate cross piece and also connected towards their upper ends by spaced cross bars, a back piece closing the space between the said cross bars, a rectangular frame applied to the forward edges of the cross bars, rollers journaled within the space between the cross bars, a web carried by the rollers and designed to be stretched across the space defined by the rectangular frame, a swinging leaf mounted upon the side pieces of the frame between the spaced cross bars and the intermediate cross piece, legs pivotally connected to the side pieces, a casing between the legs, and a guard strip extending across the face of the casing and serving to engage the edge of the swinging leaf to limit the pivotal movement thereof.

871,935. ARTIFICIAL BAIT. JOHN G. HENZEL, Chicago, Ill. Filed Apr. 8, 1907. Serial No. 367,038.

1. An artificial bait comprising a pervious casing containing edible matter.

2. An artificial bait comprising a fabric casing containing edible matter.



3. An artificial bait comprising a casing having the form and appearance of a natural bait and containing edible matter.

871,936. WARNING-POST FOR RAILWAY EQUIPMENT. EDWARD D. HILLMAN, Larchmont Manor, N. Y., assignor to Benjamin A. Hegeman, Jr., North Plainfield, N. J. Filed Sept. 21, 1907. Serial No. 393,891.



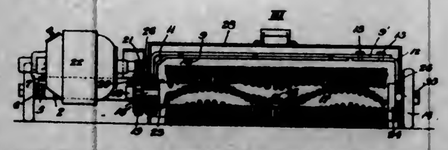
1. A warning-post for railway-tracks comprising metal side standards defining an open space between them and a metal letter spanning said space and secured to said post; substantially as set forth.

2. A metal warning-post for railway-tracks comprising a frame having side standards integrally connected and defining an open space between them, and a metal letter spanning said space and secured to said post; substantially as set forth.

3. A warning-post for railway-tracks comprising a folded metal rod creating two side standards connected together at one end, a bar connecting said standards at their other end and a metal letter spanning said space and secured to said post; substantially as set forth.

4. A warning-post for railway-tracks comprising a folded metal rod presenting an angle-iron shape in cross-section and creating two side standards integrally connected at one end, and a metal letter spanning the space between said standards and secured at its upper and lower corners thereto; substantially as set forth.

871,937. SURFACE-CLEANING MACHINE. ROBERT B. HUTCHISON, Pittsburg, Pa. Filed Dec. 9, 1905. Serial No. 291,158.



1. In a surface cleaning machine, the combination of a U shaped motor frame having front and back vertically adjustable wheels, a motor mounted on said frame, a supplemental brush frame extending laterally beyond said motor frame and having a downwardly extending detachable terminal, a rotating brush mounted in said supplemental frame, and gearing connecting the motor with the brush, substantially as set forth.

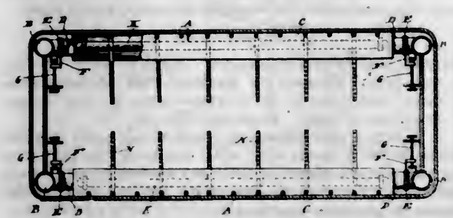
2. A surface cleaning machine provided with a brush-supporting frame and having downwardly extending bearing portions at each end thereof, supplemental end plates mounted upon the outer end of each bearing portion with intervening slot-like openings, a rotating brush mounted in said frame, supporting wheels for the frame, and a removable sheet metal cover in vertical sliding engagement with said frame between said outer bearing portions and the supplemental plates, whereby the cover will continually rest upon the floor surface irrespective of the position of the frame, substantially as set forth.

3. In a surface cleaning machine, the combination of a U shaped motor frame having front and back vertically adjustable wheels, a motor mounted on said frame, a supplemental brush frame extending laterally beyond said motor frame and having a downwardly extending terminal, a rotating brush mounted in said supplemental frame, gearing connecting the motor and brush, guiding plates located at each end of said supplemental frame providing intervening slot-like openings, and a removable slotted sheet metal cover in vertical sliding engagement with said frame and guiding plates, whereby the cover will continually rest upon the floor surface irrespective of the position of the frame, substantially as set forth.

4. In a surface cleaning machine, the combination of a brush-supporting frame having downwardly extending bearing portions, a supplemental plate fixed to one of said portions and having a plurality of apertures at different heights, a journal stud adapted to be mounted in either of said apertures, and a supporting wheel mounted on said stud, whereby the brush may be vertically adjusted, substantially as set forth.

5. In an apparatus of the class described, the combination of a U-shaped frame provided with a vertically adjustable wheel supporting bar, wheels pivotally mounted at each end of said bar, a supplemental brush carrying frame extending beyond said U-shaped frame and provided with a detachable end section, a rotating brush mounted therein, a driving motor in engagement with said brush, and a vertically adjustable supporting wheel mounted upon said end section, substantially as set forth.

871,938. CAR-VENTILATING SYSTEM. FRED D. JACOBS, Paw Paw, Mich. Filed Mar. 6, 1906. Serial No. 304,604.



1. In a ventilating system, a vertical inlet stack; a steam jet located in said stack to clarify the air passing therethrough, and an outlet in the lower end of the stack for the exit of water of condensation from the steam jet aforesaid together with impurities extracted from the air, substantially as shown and described.

2. In a ventilating system, a vertical inlet stack, a steam jet located in said stack, an outlet in the lower end of the stack, and a jacket for holding steam surrounding the lower end of said stack and having an outlet surrounding the outlet to the stack, substantially as shown and described.

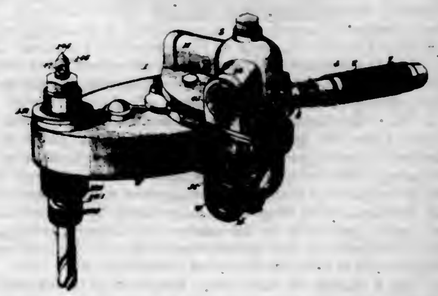
3. In a car ventilating system, a casing at each side of the car, inlet stacks in the corners of the car and connected with said casings, a steam jet located in each stack, an outlet in the lower end of the stack for water of condensation, and conduits connected with said casings leading to the upper portion of the car, substantially as shown and described.

4. In a car ventilating system, a casing at each side of the car, a steam jet located in each stack, an outlet in the lower end of the stack for water of condensation, inlet stacks in the corners of the car, connecting pipes between said stacks and casings, valves in said pipes, and conduits connected with said casings and leading to the upper portion of the car, substantially as shown and described.

5. In a car ventilating system, a casing at each side of the car, inlet stacks in the corners of the car and having their openings between the roof and floor of the car, steam jets in said stacks, connecting pipes between said stacks and casings, valves in said pipes, conduits connected with said casings and leading to the upper portion of the car, foul-air pipes in the walls of the car and horizontal perforated extensions from the lower ends of said pipes and located under the seats of the car, substantially as shown and described.

[Claim 6 not printed in the Gazette.]

871,939. PORTABLE PNEUMATIC DRILL. HENRY J. KIMMAN, Cleveland, Ohio, assignor to Chicago Pneumatic Tool Company, a corporation of New Jersey. Filed Jan. 15, 1907. Serial No. 352,413.



1. In a portable pneumatic drill, a divided casing, separable crank shafts having their inner ends juxtaposed and in alinement with each other, driving mechanism therefor, extensions on said casing, bearings in said extensions for the juxtaposed ends of said shafts, and tool operating mechanism driven from said crank shafts.

2. In a portable pneumatic drill, a divided casing, separable crank shafts having their ends juxtaposed and in alinement with each other, driving mechanism therefor, connecting means for the juxtaposed ends of said crank shafts, a gear carried by said connecting means, and tool operating mechanism driven by said gear.

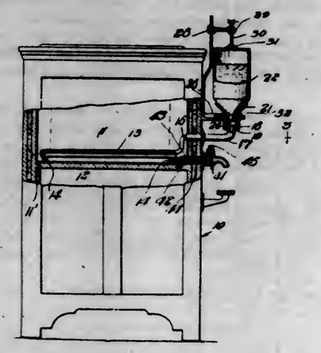
3. In a portable pneumatic drill, a divided casing, separable crank shafts having their ends juxtaposed and in alinement with each other, driving means therefor, a gear connecting the juxtaposed ends of said crank shafts, a train of gears driven thereby, and a tool operating mechanism actuated by the end gear of said train of gears.

4. In a portable pneumatic drill, a divided casing, separable crank shafts having their ends juxtaposed and in alinement with each other, driving mechanism therefor, connecting means for the juxtaposed ends of said crank shafts, a train of gears driven thereby, a tool operating mechanism actuated by the end gear of said train of gears, and controlling mechanism for said driving mechanism located intermediate the same.

5. In a portable pneumatic drill, a divided crank shaft having its inner ends juxtaposed and in alinement with each other, driving means therefor, a gear uniting the juxtaposed ends of said shaft, tool operating mechanism driven by said gear, an eccentric actuated by said crank shaft, and valve mechanism for said driving means actuated by said eccentric.

[Claims 6 to 65 not printed in the Gazette.]

871,940. LIQUID-COOLING DEVICE. ADOLPH KOCH, Pasadena, Cal. Filed Jan. 7, 1907. Serial No. 351,104.



1. In a device of the class described, a refrigerant holder, a pipe coil therein having an inlet and an outlet, an apertured liquid receptacle support attached to said refrigerant holder and forming the inlet end of said coil, a liquid receptacle adapted to be supported in said support, and having a valve adapted to be operated by movement of the liquid receptacle on its support to permit discharge of the contents of the liquid receptacle into the coil as desired; and a valve at the outlet end of said coil.

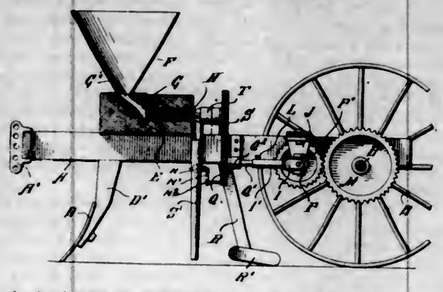
2. In a device of the class described, a refrigerant holder, a pipe coil therein having an inlet and an outlet, an apertured liquid receptacle support attached to said refrigerant holder and forming the inlet end of said coil, a liquid receptacle adapted to be supported in said support, and having a valve adapted to be operated by rotation of the liquid receptacle in its support to permit discharge of the contents of the liquid receptacle into the coil as desired; and a valve at the outlet end of said coil.

3. In a device of the class described, a refrigerant holder, a pipe coil therein having an inlet and an outlet, an apertured liquid receptacle support attached to said refrigerant holder and forming the inlet end of said coil, a liquid receptacle adapted to be supported in said support and carrying a detachable valve for controlling the discharge of the contents of the liquid receptacle into the coil, said valve comprising a plurality of plates, having apertures adapted to register, fitted over the open end of said receptacle, and one of said plates being rotative; and a valve at the outlet end of said coil.

4. In a device of the class described, a refrigerant holder, a pipe coil therein having an inlet and an outlet, an apertured liquid receptacle support attached to said refrigerant holder and forming the inlet end of said coil, a liquid receptacle adapted to be supported in said support and carrying a detachable valve for controlling the discharge of the contents of the liquid receptacle into the coil, said valve comprising a plurality of plates, having apertures adapted to register, fitting over the open end of said receptacle, and one of said plates being rotative; means whereby said last-named plate may be rotated upon rotation of the liquid receptacle in its support; and a valve at the outlet end of said coil.

5. A device of the class described, comprising a refrigerant holder; a pipe coil in the bottom of said holder, having an inlet and an outlet communicating with the outer face of said holder; a receptacle holder having a plurality of vertical grooves on its inner face rigidly secured to the outer face of said refrigerant holder; a liquid holding receptacle detachably secured to said holder, said receptacle being in communication with the inlet to said coil; a valve secured to the open end of said liquid holding receptacle, said valve having oppositely disposed lugs adapted to engage the vertical grooves in the receptacle holder; and means to control the flow of liquid from said coil.

871,941. PLANTER. JOHN D. LANCASTER, Lorena, Tex. Filed Aug. 13, 1907. Serial No. 388,405.



1. A planter comprising a beam, a seed hopper, a block upon said beam upon which said hopper is mounted, a movable member having a duct mounted therein arranged in the recessed portion of the beam and communicating with said hopper, spiral feeding arms in a passageway in said block, and means for rotating said feeding member, as set forth.

2. A planter comprising a beam, a seed hopper, a block upon said beam upon which said hopper is mounted, a movable member having a duct mounted therein arranged in the recessed portion of said beam and communicating with said hopper, a plurality of independent spiral feeding arms, a head to which said arms are fastened, said arms being mounted in a passageway leading to and communicating with the duct in said movable block, and means for rotating said arms, as set forth.

3. A planter comprising a beam, a seed hopper, a block upon said beam upon which said hopper is mounted, a movable member having a duct mounted therein arranged in the recessed portion of said beam and communicating with said hopper, a plurality of independent spiral feeding arms, a head having holes therein, each adapted to receive a spiral arm, and means for rotating said head, as set forth.

4. A planter comprising a beam, a seed hopper, a block upon said beam upon which said hopper is mounted, a movable member having a duct mounted therein arranged in the recessed portion of said beam and communicating with said hopper, a plurality of independent spiral feeding arms, a head having holes therein, each adapted to receive a spiral arm, a shaft upon which said head is fixed, and gear mechanism for rotating the shaft, as set forth.

871,942. BUFFING-MACHINE. JOHN E. LEAVITT, Boston, Mass., assignor to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed Feb. 3, 1905. Serial No. 243,936.

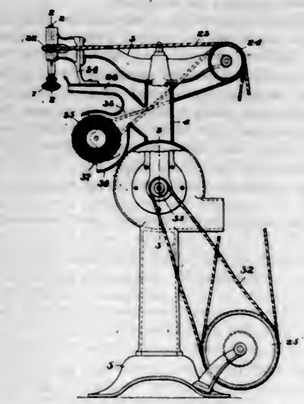
1. A buffing pad comprising a pad-shaped mass of filling material and a casing enveloping said mass, the said mass having portions united to the inner surface of said casing throughout the working area of the pad and having other portions free from the casing.

2. A new article of manufacture a buffing pad comprising a pad-shaped mass of resilient filling material, and a resilient casing therefor, the inner surface of said casing being united with the adjacent surface of the pad shaped mass and retaining said mass in proper relation to the casing, the non-adjacent surface of the pad shaped mass being free from the casing.

3. A Naumkeag buffing pad for operating upon boots and shoes, comprising a casing having a working face and an inwardly projecting lip extending about the perimeter of the casing, and a filled shaped to fit between the inner surface of the working face of the casing and said lip, said filler being formed of previously shaped sponge rubber.

4. A buffing pad comprising a casing and a filler formed of sponge rubber, the inner surface of the casing being cemented to the sponge rubber filler and an abrading material supported by the casing.

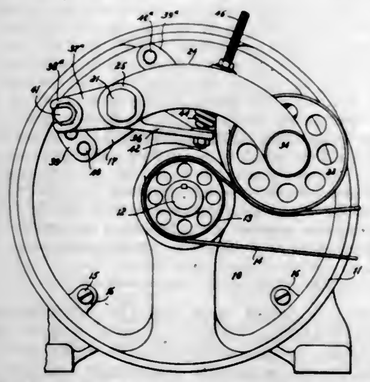
5. A buffing pad comprising a substantially disk-shaped head, a casing secured to said head, an abrading material supported by said casing a sponge rubber filler formed as a pad shaped mass and interposed between the said head



and casing, the peripheral portions of the casing and the filler extending beyond the peripheral portions of the head.

[Claims 6 to 9 not printed in the Gazette.]

871,943. BELT-TIGHTENER. EMIL MATTMAN, Norwood, Ohio, assignor to The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Jan. 2, 1906. Serial No. 294,081.



1. In combination, a shaft, an idler-pulley adjacent said shaft, a pivoted arm for said pulley, a tension-spring having one end attached to said arm, a normally stationary pivoted abutment to which the other end of the spring is attached, and means for locking said abutment in different positions to change the position of the idler-pulley.

2. In combination, a shaft, an idler-pulley, a stationary support, a bolt or stud attached to said support, an arm pivoted at one end to said bolt or stud and carrying at its other end said idler-pulley, a tension-spring attached at one end to said arm, and an adjustable member also mounted on said bolt or stud and forming an abutment for the other end of the tension-spring.

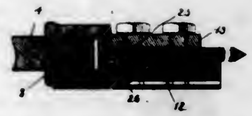
3. In combination, a shaft, a support, a bolt or stud extending from said support, an arm pivoted on said bolt or stud, an idler-pulley on the outer end of said arm, a normally stationary member mounted on said bolt or stud, a spring between said arm and said stationary member for holding the idler-pulley yieldingly against the belt, and means for locking said normally stationary member to said support in various positions of adjustment.

4. In combination, an electric motor, a plate mounted on said motor, a stud extending from said plate, an arm pivoted to said stud, an idler-pulley mounted on the outer end of said arm, a member mounted on said stud, a spring between the arm and said member, and means for locking said member to said plate in various positions of adjustment.

5. In combination, an electric motor having an end head, a sector-plate mounted on two adjacent bolts passing through said end head, a stud extending from said plate, an idler-pulley, a support therefor comprising an arm pivoted to said stud, a tension spring-abutment mounted on said stud, a tension spring between said pulley support and said abutment, and means for adjusting the position of said abutment.

[Claims 6 to 8 not printed in the Gazette.]

871,944. TOOL-HOLDER FOR STONE-WORKING MACHINES. HENRY H. MERCER, Claremont, N. H., assignor to Sullivan Machinery Company, Claremont, N. H., a Corporation of Maine. Filed July 12, 1906. Serial No. 325,825.



1. A stone channeling machine having a cross-head, guides in which the same is slidable, a flat outer tool-receiving face on the cross-head, a raised longitudinal abutment against which the tool is adapted to be laterally pressed, a clamping cap having an inturned abutting shoulder to press the tool or tools against the cross-head abutment, a second inturned shoulder on the cap, a wedge between the said second shoulder and the cross-head abutment to draw the clamp against the tool or tools, clamping means for fixing the clamp in position, a cross abutment on the cross-head for the ends of the tools, there being a shallow groove formed in the abutment at the junction thereof with its base to receive metal upset from the abutment by the action of the tool or tools thereon, the shallowness of the groove and the thickness of the part of the cross head having the said tool receiving face being such that a firm, non-springing support is afforded for the tool or tools.

2. In a stone working machine, a reciprocating tool-carrying cross-head and suitable guides in which the same is slidably mounted, said cross-head presenting a face against which the side of the tool is clamped, a clamping cap, an adjacent right-angled abutment for the end of the tool, there being a shallow groove formed in the abutment at the junction thereof with its base to receive metal upset from the abutment by the action of the tool or tools thereon, the shallowness of the groove and the thickness of the part of the cross head having the said tool receiving face being such that a firm, non-springing support is afforded for the tool or tools.

3. In a stone working machine, a slidable, reciprocating, tool-carrying metallic cross-head presenting an abutment for the end of the tool, cross-head guides for the same there being a shallow groove formed in the abutment at the junction thereof with its base to receive metal upset from the abutment by the action of the tool or tools thereon, the shallowness of the groove and the thickness of the part of the cross head having the said tool receiving face being such that a firm, non-springing support is afforded for the tool or tools.

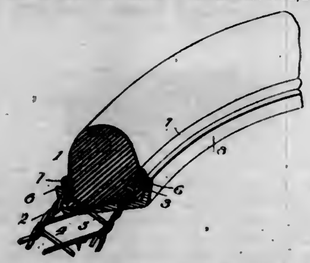
4. In a channeling machine, a reciprocating tool-carrying metallic cross-head, a suitable guide in which the same is slidably mounted, means for clamping the tool or tools to said cross-head, an end abutment for the tools, there being a shallow groove formed in the abutment at the junction thereof with its base to receive metal upset from the abutment by the action of the tool or tools thereon, the shallowness of the groove and the thickness

of the part of the cross head having the said tool receiving face being such that a firm, non-springing support is afforded for the tool or tools.

5. In a stone working machine, a reciprocating tool carrying cross head and suitable guides in which the same is slidably mounted, said cross head presenting a face against which the side of the tool is clamped, and a clamping cap, there being a shallow groove formed in the abutment at the junction thereof with its base to receive metal upset from the abutment by the action of the tool thereon, said groove extending only partially across the abutment from side to side thereof, the shallowness of the groove, the defined extent thereof and the thickness of the part of the cross head having the tool receiving face being such that a firm, non-springing support is afforded for the tool.

[Claims 6 and 7 not printed in the Gazette.]

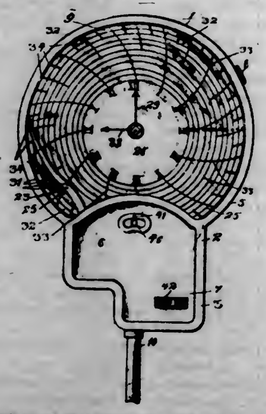
871,945. TIRE. ROBERT M. MERRIMAN, Youngstown, Ohio. Filed Mar. 13, 1907. Serial No. 362,168.



1. In combination, a soft tread tire, metal reinforcements embedded in opposite sides thereof, each reinforcement consisting of a number of strands twisted together, and lacing embedded in the tire and connecting said reinforcements and passed between the strands thereof to maintain fixed position.

2. In combination, a soft tread tire having side extensions, metal reinforcements embedded in said side extensions, each reinforcement comprising a number of strands twisted together, and lacing connecting said metal reinforcements and passed between the strands thereof.

871,946. COMBINED SPEED INDICATOR AND RECORDER. GEORGE E. MIRFIELD, Joliet, Ill. Filed Mar. 5, 1906. Serial No. 304,298.



1. In a device of the class described, in combination with a clock mechanism, a face plate surrounding the arbor for the hour hand, and revoluble therewith and adapted to revolve a chart, a stationary transparent clock face having the hour numbers marked thereon in a ring in front of the face plate, and a recording arm carrying an inscribing instrument, the latter being movable under the transparent clock face and outside of the ring of hour numerals, substantially as described.

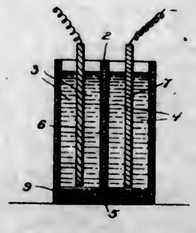
2. In a device of the class described, in combination with a clock mechanism, a face plate surrounding the arbor for the hour hand and revoluble therewith and adapted to revolve a chart, a stationary transparent clock face having the hour numbers marked thereon in a ring in front of the face plate, a recording arm carrying an inscribing instrument, the latter being movable under the transparent clock face and outside of the ring of hour numerals, an actuating shaft, a governor on the actuating shaft, and a connection between the governor and the recording arm for moving the recording arm to inscribe a record on the chart when inserted, substantially as described.

3. In a device of the class described, the combination of a casing, a glass face for the casing inscribed with the numbers of a clock, a clock mechanism within the casing, a plain face for the clock immediately beneath the numerals inscribed on the glass and adapted to have mounted thereon, a recording chart, the plain face being rotated by the clock mechanism, a recording arm adapted to inscribe a line on the chart, and mechanism for moving the recording arm, substantially as described.

4. In a device of the class described, the combination of a casing, a glass face for the casing inscribed with the numbers of a clock, a clock mechanism within the casing, a plain face for the clock immediately beneath the numerals inscribed on the glass and adapted to have mounted thereon, a recording chart, the plain face being rotated by the clock mechanism, a recording arm adapted to inscribe a line on the chart, an actuating shaft, and a governor adapted to move the recording arm, substantially as described.

5. In a device of the class described, the combination of a casing, a glass cover for the casing inscribed with numerals, a clock mechanism, a plain face for the clock, a recording chart in the form of a ring surrounding the space occupied by the numerals inscribed on the glass cover, both the plain face and chart being revolved by the clock mechanism, the chart being divided into a series of concentric rings indicating speed, and further divided by means of a series of cross lines indicating periods of time, a recording arm, a stylus on the recording arm, mechanism for moving the recording arm to inscribe a line on the revolving chart, a revoluble disk inscribed to indicate rates of speed and adapted to be actuated simultaneously with the recording arm, substantially as described.

871,947. PROCESS FOR THE MANUFACTURE OF WHITE LEAD. FRANK W. MORRIS, Victoria, British Columbia, Canada. Filed Dec. 28, 1906. Serial No. 349,828.



1. As a process for the production of white lead, the formation of formic acid by electrolytic action on a solu- of lead to the formic acid whereby formate or lead is pro- of lead to the formic acid whereby formate or lead is produced and the addition to the formate of lead of an alkali carbonate.

2. As a process for the production of white lead, the formation of formic acid and spongy lead by electrolytic action, keeping said formic acid and spongy lead normally separated, then adding the spongy lead to the formic acid and then precipitating lead carbonate from the lead formate so produced by the addition thereto of an alkali carbonate.

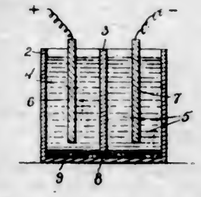
3. As a process for the production of white lead, the formation of formic acid and spongy lead by electrolytic action on a solution of a formate of sodium as an electrolyte, and in the presence of an anode and cathode of metallic lead, maintaining said anode and cathode separated, and means for maintaining the anode and cathode products separated the addition of spongy lead formed at the cathode, to the formic acid formed at the anode, and the precipitation of carbonate of lead from the formate of lead so produced by the addition thereto of ammonium carbonate.

4. A process of the character stated consisting in acting upon metallic lead in the presence of a suitable electrolyte, simultaneously producing lead-formate and spongy lead while maintaining the spongy lead and lead formate separated, substantially as specified.

5. A process of the character stated consisting in acting upon metallic lead in the presence of a suitable electrolyte, simultaneously producing lead-formate and spongy lead while maintaining the spongy lead and lead-formate separated, and simultaneously producing formic acid in the electrolyte, substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

871,948. PROCESS FOR THE MANUFACTURE OF CYANID OF POTASSIUM OR SODIUM. FRANK W. MORRIS, Victoria, British Columbia, Canada. Filed Dec. 28, 1906. Serial No. 349,829.



1. A process for the production of a cyanid of an alkali metal consisting in the formation of formic acid by electrolytic action on a solution of a formate of said metal, subsequently neutralizing the formic acid to form ammonium formate, and treating said formate to obtain hydrocyanic acid and the association of that acid with a hydrate or oxid of an alkali metal.

2. A process for the production of a cyanid of one of the alkali metals consisting in the formation of formic acid by electrolytic action on a solution of a formate of such metal, then subsequently neutralizing the formic acid by ammonium salt, then evaporating the resulting ammonium formate to crystallization, then distilling said crystals to form hydrocyanic acid, and then associating that acid with a hydrate or an oxid of an alkali metal.

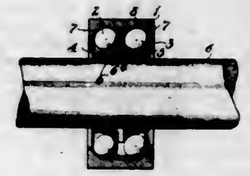
3. A process for the production of cyanid of potassium, consisting in the formation of formic acid by electrolytic action on a solution of a formate of potassium, neutralizing the formic acid by the addition of a salt of ammonium, evaporating the resultant ammonium formate to the dry crystals, then rapidly distilling the crystals and condensing the vapor thereof to form hydrocyanic acid, and adding thereto caustic potash to form cyanid of potassium.

4. A process of the class described consisting in simultaneously generating formic acid and caustic soda in an electrolytic apparatus, maintaining the formic acid separated from the caustic soda, then converting the formic acid into a formate, then evaporating said formate to crystallize the same substantially as specified.

5. A process of the class described consisting in simultaneously generating formic acid and caustic soda in an electrolytic apparatus, maintaining the formic acid separated from the caustic soda, then converting the formic acid into a formate, then evaporating said formate to crystallize the same, then heating such crystals to the decomposition or breaking-up point, substantially as specified.

[Claims 6 to 8 not printed in the Gazette.]

871,949. BALL-BEARING. PAUL J. MCCULLOUGH, St. Louis, Mo. Filed Feb. 20, 1907. Serial No. 358,401.



1. A ball bearing comprising a member consisting of a single piece which is provided with an approximately channel-shaped groove that constitutes ball races, a cooperating member composed of a plurality of parts that constitute coöperating ball races, means formed in sections and arranged between said parts to hold them separated, and a plurality of rows of balls arranged between said races; substantially as described.

2. A ball bearing comprising a one piece ring forming one member of the bearing and provided with an approximately channel-shaped groove, the side walls of which are inclined, a coöperating member composed of two cones arranged with their bases adjacent each other, a spacing member interposed between the bases of said cones and composed of a plurality of sections, and a plurality of rows of balls arranged between said cones and the groove in said ring; substantially as described.

3. A ball bearing comprising a member having a plurality of ball races, a coöperating member composed of two cones arranged with their bases adjacent each other, a spacing ring formed in sections and interposed between the bases of said cones, and a plurality of rows of balls arranged between said cones and the races in the coöperating member; substantially as described.

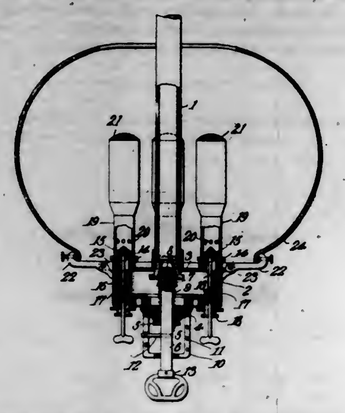
4. A ball bearing comprising a member having a plurality of ball races, a coöperating member composed of two cones arranged with their bases adjacent each other, a spacing ring formed in sections and interposed between the bases of said cones, a plurality of rows of balls arranged between said cones and the races in the coöperating member, and means on the sections of said ring for preventing them from moving radially in one direction; substantially as described.

5. A ball bearing comprising a member having a plurality of ball races, a coöperating member composed of two cones arranged with their bases adjacent each other, a spacing ring formed in sections and interposed between the bases of said cones, a plurality of rows of balls arranged between said cones and the races in the coöperating member, and flanges on the sections of said ring adapted to lie in an annular recess in one of said cones to prevent said sections from moving radially in one direction; substantially as described.

871,950. GAS-LAMP. JAMES J. MCINTYRE, Ironton, Ohio. Filed July 25, 1906. Serial No. 327,728.

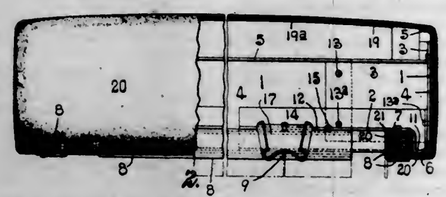
A gas lamp comprising a supply pipe, a gas distributing drum attached to the end thereof, a plurality of burners mounted upon the drum and disposed around the supply pipe, said drum serving as a source of supply common to all of the burners, a valve for controlling the supply of gas from the drum to each burner, a revoluble and slidable valve for controlling the supply of gas to the drum from the pipe, a spring for holding said valve normally seated, a locking lug extending from and movable with the stem,

and parallel series of alternately arranged stops, any one of said stops being disposed to be engaged by the lug, said



spring being disposed to seat the valve immediately subsequent to the release of the lug from any one of the stops.

871,951. SEAT AND SEAT-BACK FOR RAILWAY ROLLING-STOCK. ALLEN E. OSTRANDER, Paterson, N. J., assignor to American Car & Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Mar. 7, 1907. Serial No. 361,161.



1. A seat provided with a metallic frame comprising side members having horizontally disposed grooves, inside gusset members provided with portions that are located in said grooves, and outside corner-pieces secured to the side members; substantially as described.

2. A seat having a frame comprising flat metallic side members provided at their lower edges with integral channel-shaped portions, inside gusset plates having integral projections which interlock with said channel-shaped portions, and outside corner pieces connected to the side members; substantially as described.

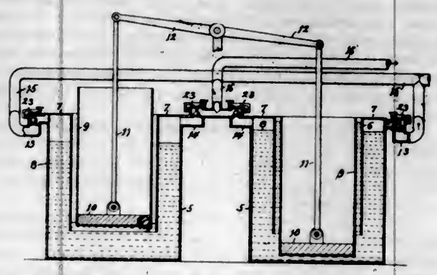
3. A seat provided with a frame comprising side members having straight vertical webs curved at their upper edges, integral channel-shaped portions adjacent the lower edges of said webs and projecting inwardly therefrom, and inside gusset plates having portions which are interlocked with the channel-shaped portions of the side members; substantially as described.

4. A seat provided with a frame comprising side members each of which has a web, a pair of channel-shaped portions adjacent the lower edge of said web, inside corner members constructed to fit into one of the channel-shaped portions of each of the side members to lock the side members together, and the other channel-shaped portion of each side member having a depending flange which is cut at intervals so that it can be more readily bent to clamp the seat covering in position; substantially as described.

5. A seat frame comprising metallic members curved at their upper edge and forming the sides and ends of the frame, outside angles forming the corners of the frame, said angles being curved at their upper edge, the curved portions of said angles butting against the curved portions of the side members, and inside gussets connected to said metallic members and to said corner angles; substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

871,952. SUCTION-PUMP FOR CLEANING SYSTEMS. JOHN V. O. PALM, Milwaukee, Wis. Filed Dec. 26, 1906. Serial No. 349,420.



1. A liquid piston suction pump, comprising a casing containing a liquid and forming an air dome, means free from the casing to be dipped into the liquid for displacing the liquid and causing it to move in the air dome, and valves controlling the inlet and outlet of air to the air dome.

2. A liquid piston suction pump, comprising a casing containing a liquid and forming an air dome, means free from the casing adapted to be forcibly dipped into the liquid outside of the air dome for displacing the liquid and causing it to move in the air dome, and valves for controlling the inlet and outlet of air to the air dome.

3. A liquid piston suction pump, comprising a casing having a double wall forming an air dome therebetween opening into the interior space and containing liquid, a plunger free from the casing adapted to be forced downwardly or dipping into the liquid in the interior space to displace the liquid and cause it to rise in the air dome, and valves for controlling the inlet and outlet of air to the air dome.

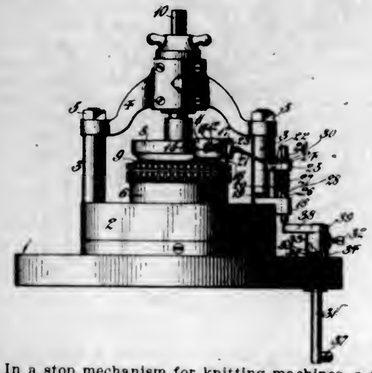
4. A liquid piston suction pump, comprising a cylindrical casing having double walls forming an air dome around a central open chamber with communication between the lower end of the air dome and the central chamber, there being a liquid contained in the casing, a plunger operating in the central chamber without fitting therewith and adapted to be dipped into the liquid and reciprocated therein to repeatedly displace the liquid and cause it to reciprocate in the air dome, and valves for controlling the inlet and outlet of air to the air dome.

871,953. STOP MECHANISM. HENRY PULSTER, Philadelphia, Pa., assignor of one-half to Wallace Wilson, Philadelphia, Pa. Filed Feb. 8, 1906. Serial No. 300,058.

1. In a knitting machine, the combination with the dial cap, and the needles, of a device movably mounted thereon and adapted to move axially with respect thereto in a plane inclined to the horizontal, said device being located in a position to encounter an abnormally placed needle or a bunch or knot of yarn drawn up above the meeting line of said needles and means co-acting with said device for throwing the machine out of action.

2. In a stop mechanism for knitting machines, a dial cap, a plate movably carried thereby and adapted to move axially with respect thereto in a plane inclined to the horizontal on its engagement with defective work, said device being located in a position to encounter an abnormally placed needle or a bunch or knot of yarn drawn up above the meeting line of the needles of the machine and means co-acting with said plate for throwing the machine out of action.

3. In a stop mechanism for knitting machines, a dial cap, a plate having a cam groove therein, fastening devices passing through said groove and engaging said dial cap, said plate having a depending end located in close proximity to the work and means coacting with said plate for throwing the machine out of action.

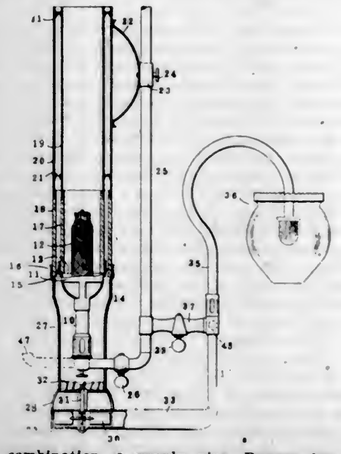


4. In a stop mechanism for knitting machines, a rotatable dial cap, a rotatable head, a plate movably carried by said cap and having a lug and a depending end located in close proximity to the work, and means carried by said head engaging said lug and coacting with the movement of said plate to throw the machine out of action.

5. In a stop mechanism for knitting machines, a dial cap, a plate having cam grooves therein and a pointed end, fastening devices passing through said grooves and engaging said cap, said plate having a lug thereon, a head rotatably mounted, a spring pressed plunger carried thereby, a lever engaging said lug and coacting with said plunger, and means actuated by said plunger for throwing the machine out of action.

[Claims 6 to 10 not printed in the Gazette.]

871,954. INCANDESCENT GAS-LAMP. ALCORN RECTOR, New York, N. Y., assignor to Rector Gas Lamp Company, New York, N. Y., a Corporation of Connecticut. Filed July 30, 1906. Serial No. 328,328.



1. In combination, a supply pipe, Bunsen burners in communication with said pipe, a casing carried by one of the Bunsen burners, a second casing supported by the first named casing, a connection between the second casing and the remaining burners, fans within the second casing, and means within the first named casing for operating the fans.

2. In combination, a supply pipe, Bunsen burners in communication with said pipe, a suitably supported casing surrounding one of the Bunsen burners, a draft tube supported by said casing and burner, a second casing supported by the first named casing, a connection between the second casing and the remainder of the burners, fans within a second casing, and means within the first named casing for operating the fans.

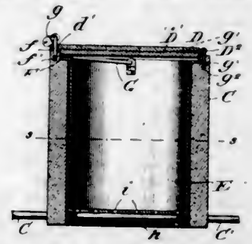
3. In combination, a supply pipe, Bunsen burners in communication with said pipe, a casing carried by and surrounding one of the Bunsen burners, a second casing supported by the first named casing, a connection between the second casing and the remaining burners, fans within the second casing, and means within the first named casing for operating the fans.

4. In combination, a supply pipe, Bunsen burners in communication with said pipe, suitably supported draft tubes acting in conjunction with one of the burners, a casing, a connection between the casing and the remainder of the burners, fans in the casing, and means operating in conjunction with the draft tube for rotating the fans.

5. In combination, a supply pipe, Bunsen burners in communication with said pipe, suitably supported draft tubes acting in conjunction with one of the burners, a casing, a connection between the casing and the remainder of the burners, fans in the casing, means made operative by the draft tubes for rotating the fans, and an intensifier for the draft tubes.

[Claims 6 to 9 not printed in the Gazette.]

871,955. GARBAGE-RECEPTACLE. ADAM REED, Los Angeles, Cal. Filed Mar. 7, 1907. Serial No. 361,023.



1. A garbage receptacle comprising a well open at its lower and upper ends, a cover for the well, rods carried by the lower end of the well and extending across the well and laterally beyond the side of the same, whereby they are adapted to serve as anchors, and a bucket removably arranged in the well and on said rods.

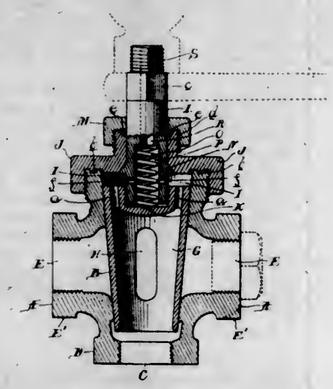
2. A garbage receptacle comprising a well of cement, a cover of cement having a reinforcing layer of reticulated material embedded therein and also having an opening, hinges connecting the well and cover and having members embedded in the well and cover, and lateral arms on said members, and a staple embedded in and extending above the well in position to extend through the opening in the cover and having lateral arms on its lower portion and an eye in its upper portion.

3. A garbage receptacle comprising a well of cement, a cover of cement having a reinforcing layer of reticulated material embedded therein, hinges connecting the well and cover and having members embedded in the well and cover and lateral arms on said members, and means for fastening the cover in its closed position.

871,956. STOP-COCK. ROBERT RICE, Detroit, Mich., assignor of one-half to George Stroh, Detroit, Mich. Filed Oct. 3, 1904. Serial No. 226,885.

1. A stop cock having a facing formed with a frustoconical seat chamber provided with an inlet at the small end of said chamber and with a lateral outlet therefrom, a hollow conical valve plug seated in said chamber, and provided with corresponding inlet and outlet openings the seat chamber extending above the valve plug and forming

a pressure chamber on the top thereof, the top being closed and provided with a socket and a valve stem extending through the casing and the pressure chamber into the socket of the valve plug and loosely engaging therewith, said valve stem being hollow and separate from the valve plug and communicating with the pressure chamber through openings in the stem and the pressure chamber communicating with the interior of the valve plug through openings in the top thereof.



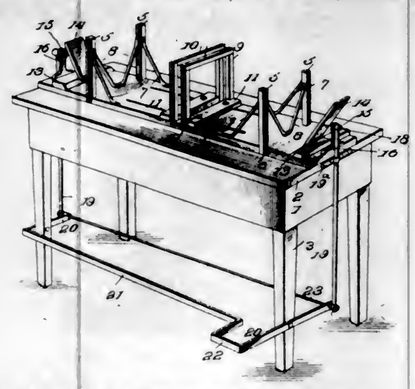
C

2. A stop cock having a facing formed with a frusto-conical seat chamber, a hollow conical valve plug in said chamber and provided with an inlet into its smaller end communicating with the inlet into the casing and with a lateral outlet adapted to register with a lateral outlet from the casing, said valve plug seated in the seat chamber independently of its stem and with the seat chamber extending above the valve plug and forming a pressure chamber on top thereof and means for blowing off through said pressure chamber, the pressure chamber being in communication with the interior of the valve plug.

3. In a stop cock, the combination with the casing having a frusto-conical seat chamber provided with an inlet into the small end of the chamber and with a lateral outlet therefrom, a hollow conical valve plug seated in said chamber and provided with a corresponding inlet and outlet, the seat chamber extending above the valve plug and forming a pressure chamber on top thereof and communicating with the interior of the valve plug, a separate valve stem extending through the casing and pressure chamber into the top of the plug, said top provided with a socket into which the valve stem loosely engages and a coil spring inclosed in a recess in the inner end of the valve stem said valve stem provided with a valve controlled passage therethrough communicating with the pressure chamber on the top of the valve plug for the purpose specified.

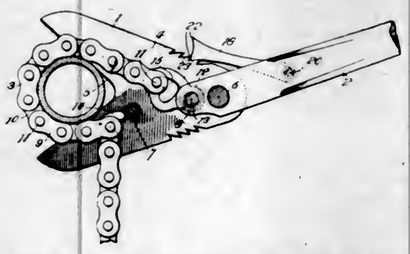
871,957. BOX OR CRATE MACHINE. LAUREN D. RIGG, Leon, Kans. Filed Feb. 19, 1907. Serial No. 358,263.

The herein described crate machine comprising a supporting table, a base mounted upon the table, end standards projecting upwardly from the base and each comprising a pair of spaced uprights secured to the sides of the base, side braces for the uprights, V shape braces between each pair of the uprights, base blocks mounted upon the base adjacent the standards, swinging clamp plates hinged to the base blocks and coöperating with the end standards to retain the ends of the crate in position, two opposing pairs of middle uprights, each pair being carried by a supporting block and the supporting blocks being adjustably mounted upon the base, the pair of middle uprights coöperating with each other to retain the middle partition of the crate between them, an upwardly projecting bracket applied to each end of the base, vertically reciprocating actuating rods slidably mounted upon opposite ends of the supporting table and having a pivotal connection with



the brackets, and a treadle mechanism mounted upon the supporting table for operating the said actuating rods.

871,958. PIPE-WRENCH. JOSEPH ROEMER, Santa Maria, Cal., assignor to Roemer Reversible Lever Tong Company, Santa Maria, Cal. Filed May 16, 1906, Serial No. 317,186. Renewed Apr. 29, 1907. Serial No. 370,923.



1. A device of the character described, comprising a head provided with a work receiving jaw, a lever or handle pivotally connected to said head, and a flexible gripping member connected at one end to said handle and arranged for adjustable connection to the head, connection between one end of said chain and the handle consisting of a plate formed with an angular slot producing two sockets one in advance of the other, and a connecting stud mounted in said slot and adapted to be held in either one of said sockets.

2. A device of the character described, comprising the head, the lever or handle connected to said head, a flexible gripping member embodying links arranged for adjustable connection to the head and also adjustably connected to the lever, one of said connections embodying a slotted plate and means for securing the adjacent link of the chain to said plate at different longitudinal positions with respect to the latter.

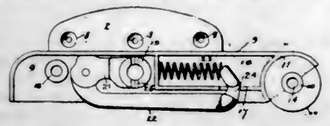
3. A device of the character described, comprising a head, a handle connected to said head, and a flexible gripping member adapted to encircle the work, said flexible gripping member embodying a slotted connecting link 12 formed with an angular slot, the two portions of said slot producing sockets one in advance of the other, and said gripping member also embodying links provided with connecting studs one of which is received in said slot and is adapted to be held in either one of said sockets, as and for the purpose set forth.

4. A device of the character described, comprising a head embodying two spaced apart plates provided with recesses constituting a work receiving jaw, a handle pivotally connected to said plates at one end and mounted between the same, and a flexible gripping member embodying a series of spaced apart plates, a single intermediate plate and studs pivotally connecting the same, and also embodying one link in the form of a slotted plate connected to the handle in advance of the pivot point of the latter, the said last named plate being received between the two spaced apart plates of the next adjacent portion of the gripping member, and the slot of said plate being angular and producing two sockets one in advance of the other, said slot receiving the adjacent pivot stud, and the latter being adapted for engagement in either one of said sockets.

5. A device of the character described, comprising a head, a lever pivotally connected to the head, a flexible gripping member adapted to encircle the work, said gripping member being arranged for connection to the head and also connected to the handle, and means for limiting the relative movement of the pivot handle with respect to the head at different predetermined points, as and for the purpose set forth.

[Claims 6 to 13 not printed in the Gazette.]

871,959. DOOR-HOLDER. ALBERT J. ROSENTRETER, Boonton, N. J., assignor, by mesne assignments, to Oscar Barnett Foundry Company, a Corporation of New Jersey. Filed May 21, 1906. Serial No. 317,901.



1. A door-holder comprising an attaching plate, a body portion reversible in its relation to said attaching plate adapted to lie at either side against said plate, and a removable screw connecting said body portion and attaching plate.

2. In a door holder, an attaching plate, a body portion pivoted upon an interior sleeve, means for connecting said sleeve to the attaching plate in fixed relation, and means carried by said body portion adapted to act against the said sleeve to throw one end of said body portion downward.

3. In a door holder, an attaching plate, a hollow body portion mounted on the attaching plate upon a pivot in fixed relation to said plate, an arm upon said pivot inside the body portion, a bar connected to said arm, and a spring in the body portion adapted to act upon said bar to throw one end of the said body portion downward.

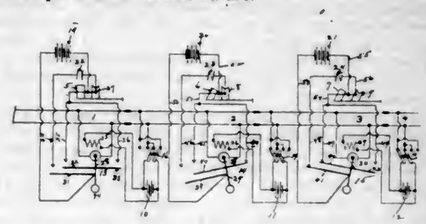
4. In a door holder, an attaching plate, a body portion adapted to be shifted in its relation to the said plate to either engage or disengage the floor, said body portion providing at one end a hub with an adjacent segmental annular seat, and an annular friction piece or wheel on said hub and projecting for a portion of its periphery to engage the floor.

5. In a door holder, an attaching plate, a pivot in non-rotatable relation to said attaching plate and having a rigid arm, a body portion rotatably mounted on said pivot and inclosing said arm, and means carried by said body portion for acting against said arm to swing the body portion.

[Claims 6 to 13 not printed in the Gazette.]

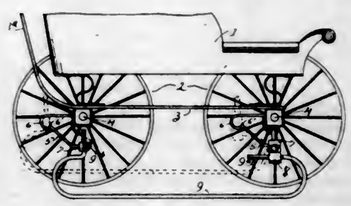
871,960. SIGNALING SYSTEM. WILMER W. SALMON, Buffalo, N. Y. Filed Aug. 29, 1905. Serial No. 276,270.

1. In a block signal system, the combination with track circuit sections and signals for such sections, of a source of direct current energy connected at one end of each of said sections, a relay connected at the other end of each of said sections comprising a stationary field connected across the source of direct current energy of the next adjacent section, and a rotating armature connected across the source of direct current energy of the section in which it is included and capable of three functional positions, means for controlling the functional positions of said armature, means for controlling one of said signals by one of said functional positions of said armature, and means for controlling two of said signals by another functional position of said armature.



2. In a block signal system, the combination with insulated track circuit sections and signals for such sections, of a source of energy connected to one end of each of said sections, means located at one end of each of said sections for creating a difference of potential between the rails thereof, a relay connected at the other end of each of said sections comprising a member energized by the difference of potential between the rails of the next adjacent section, and a rotating member energized by the difference of potential between the rails of the section in which it is included and capable of three functional positions, means for controlling said functional positions, means for operating one of said signals to the "proceed" position by one of said functional positions of said armature, means for operating two of said signals to the "proceed" position by another functional position of said armature, and means for operating both of said signals to the "stop" position by the third functional position of said armature.

871,961. PERAMBULATOR. WILLIAM H. SMITH, Reed City, Mich. Filed Feb. 25, 1907. Serial No. 359,311.



1. In combination with a wheeled perambulator, axletrees connecting the wheels in pairs, brackets secured to the axletrees and projecting backward therefrom and having inclines at the lower back portion, a depressed bearing at the upper end of each of said inclines, a cleat slidingly supported on said brackets and having bearings at the ends, runners having upright bolts thereon and said bolts secured in the bearings at the ends of the cleats.

2. In combination with a wheeled perambulator, axletrees connecting the wheels in pairs, brackets secured to the axletrees and projecting backward therefrom and having inclines at the lower back portion, a depressed bearing at the upper end of the inclines, cleats having slots to engage the bracket, bearings at the ends of the cleats, runners having horizontal projections at the front ends and vertical projections at the back end, vertical bolts secured to and longitudinally adjustable on the horizontal projections on the front end of the runners, said bolts and the vertical projections at the back ends of the runners secured in the bearings at the ends of the cleats, and vertically adjustable therein.

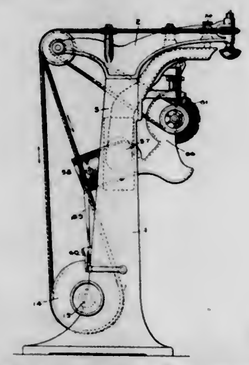
3. In combination with a wheeled perambulator and its axletrees, brackets secured to the axletrees and projecting backward therefrom and having an incline at the lower back portion, a cleat having slots to engage the brackets and bearings at the ends, said cleats made in two pieces

arranged to overlap and made adjustable lengthwise, and runners supported and vertically adjustable in the bearings at the ends of the cleats.

4. In combination with a perambulator and its axletrees, brackets secured to and vertically adjustable on the axletrees and projecting backward therefrom, the back lower portion inclining upward and terminating in bearings having the approach higher than the bearing, cleats supported by and adjustable upon said brackets, and runners supported by the cleats and vertically adjustable thereon.

5. In combination with a perambulator and its axletrees, brackets secured to and vertically adjustable on the axletrees, cleats supported on the brackets and longitudinally adjustable, an upward incline on each bracket, runners supported by the cleats and vertically adjustable thereon, a horizontal portion projecting back from the front end of each runner, and a bolt longitudinally adjustable thereon, all substantially as and for the purpose set forth.

871,962. BUFFING-MACHINE. GEORGE F. STEWART, Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed July 13, 1906. Serial No. 326,009.



1. A buffing machine of the class described, provided with a support having diverging arms, an upright buffing spindle in and at the end of each of said arms, an additional buffing spindle carried by and at the side of one of said arms, and suction means comprising diverging conduits leading respectively to the spindles at the ends of said arms, and an additional conduit projecting from the side of one of said conduits for the spindle at the side of said arm.

2. A buffing machine having, in combination, a buffing tool, suction means for carrying off waste products, means for starting and stopping the tool, and a valve under control of the starting and stopping means for rendering the suction means functionally operative and inoperative as the tool is started and stopped.

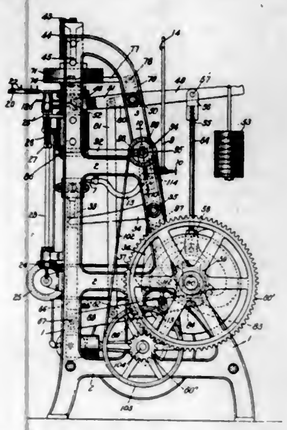
3. A buffing machine having, in combination, a plurality of buffing spindles, a single driving means for said spindles, a dust conduit for said spindles, means for starting and stopping the spindle driving means, and a shut-off for the dust conduit for rendering the suction means functionally operative and inoperative as the spindles are started and stopped.

4. A buffing machine having, in combination, a buffing tool, a dust conduit having an inlet in co-acting relation therewith, means for starting and stopping the movement of said buffing tool, and a shut-off for the dust conduit under control of the tool stopping and starting means.

5. A buffing machine having, in combination, a movable buffing tool, stopping and starting means for said tool, and suction means having a shut-off controlled by the said tool stopping and starting means.

[Claims 6 and 7 not printed in the Gazette.]

871,963. MACHINE FOR MAKING PAD-COVERS. GEORGE F. STEWART, Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed July 13, 1906. Serial No. 326,147.



1. In a machine for molding buffing pad covers, the combination of pad cover molding means, means engaging the margin of the blank while being treated by the molding means, and delivery means operatively positioned with relation thereto for positioning the blank for engagement by the margin engaging means.

2. A machine for molding buffing pad covers comprising molding mechanism, means for controllably holding the margin of a blank while being molded thereby, and delivery means to present a blank to said margin controlling means.

3. A machine for molding buffing pad covers comprising molding mechanism, margin controlling means operatively positioned with relation thereto, delivery means to present the blank to said margin controlling means and a carrier to receive and carry the blank to said delivery means.

4. A machine for molding buffing pad covers comprising margin controlling means to engage and positively hold the margin of a blank, molding means to mold the blank while its margin is so held and controlled and movement imparting means to impart to the positively held margin a compensating movement during the molding action.

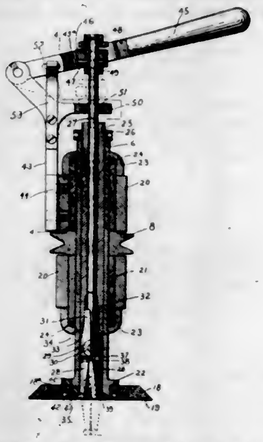
5. In a machine for making buffing pad covers, the combination of molding means to impart to a blank the general form it is to have upon the pad, blank holding means to engage and positively hold the margin of the blank, and means to positively move the margin of the blank radially inward to compensate for the molding action.

[Claims 6 to 39 not printed in the Gazette.]

871,964. BUFFING-MACHINE AND DISK-HOLDER THEREFOR. GEORGE F. STEWART, Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed Sept. 12, 1906. Serial No. 334,211.

1. In a machine of the type described, a spindle, an annular diaphragm having an abrasive surface at one side, and a laterally expansible and collapsible clamping device carried within said spindle and operable within the annulus of said diaphragm, and operating means for collapsing the same to receive said diaphragm and for expanding it to clamp the same to said spindle.

2. In a machine of the type described, a spindle having a longitudinal recess with an inwardly tapered opening communicating therewith at one end of said spindle, a holding device movable within said spindle having a plurality of laterally movable members each provided with clamping faces to fit within the tapered opening at the end of said spindle, an annular diaphragm having an abrasive surface and a central opening to receive the clamping faces of said members, and means for operating said members for clamping or removing said diaphragm.



3. In a machine of the type described, a buffing device comprising a spindle having a central lip receiving recess at one end, the wall of which constitutes a clamping member; means slidably mounted within said spindle having a spreadable clamping head to coöperate with said recess wall, an annular diaphragm having an abrasive face and receiving the clamping head within its central opening, and means for operating said means to spread said head to form an inturned lip at the inner edge of said diaphragm and clamp the same against said clamping member.

4. In a machine of the type described, a buffing device comprising a spindle having a central lip receiving recess at one end, the wall of which constitutes a clamping member; means slidably mounted within said spindle having a spreadable clamping head to coöperate with said recess wall, an annular pad surrounding the recessed end of said spindles and projecting below the same, an annular diaphragm having an abrasive face and receiving the clamping head within its central opening, and means for operating said means to spread said head to form an inturned lip at the inner edge of said diaphragm and clamp the same against said clamping member.

5. In a machine of the type described, a spindle having laterally separable clamping members at one end thereof, an annular diaphragm having its inner edge portions inturned by and forming a lip clamped by said spindle members, and means for moving said members from or toward one another respectively to form said lip and clamp the same or to release said lip and thereby said diaphragm.

[Claims 6 to 21 not printed in the Gazette.]

871,965. PAD-COVER. GEORGE F. STEWART, Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Original application filed July 13, 1906, Serial No. 326,147. Divided and this application filed Feb. 6, 1907. Serial No. 356,034.



1. A molded buffing pad cover having an outturned molded edge provided with shape retaining means molded therewith.

2. A molded buffing pad cover having an out-turned molded edge provided with transverse shape retaining corrugations.

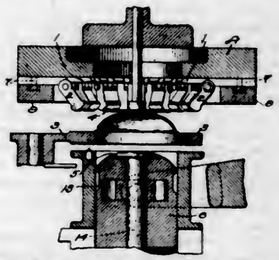
3. A molded buffing pad cover having a face molded to operative form and having a molded unbroken edge provided with an outward encircling reinforced channel, and having a flaring margin provided with radial corrugations.

4. A molded buffing pad cover having a continuous edge molded to conform to the edge of the pad to which it is to be applied, the perimeter of said edge being outwardly flared to facilitate the application of said cover to the pad.

5. A molded buffing pad cover having a molded face to conform to the operative shape of a pad and having a channel *c*, and flanking inner and outer walls *d* and *e*, respectively, the outer wall *e* being flaring and provided with molded strengthening means.

[Claims 6 and 7 not printed in the Gazette.]

871,966. METHOD FOR MAKING PAD-COVERS. GEORGE F. STEWART, Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Original application filed July 13, 1906, Serial No. 326,147. Divided and this application filed Apr. 17, 1907. Serial No. 368,649.



1. The method of molding buffing pad covers which consists in applying a molding pressure to the body of a blank within the marginal portion thereof and controllably moving the marginal portion during the action of a molding pressure.

2. The method of molding buffing pad covers which consists in positively holding the marginal portion of a blank against slip, applying a molding force to the body of the blank within the marginal portion, and giving to the marginal portion a controlled compensating movement while the molding force is acting on the body of the blank.

3. The method of molding buffing pad covers which consists in positively holding the marginal portion of a blank against slip, applying a molding force to a portion of the blank within the margin, and carrying the marginal portion of the blank radially inward about the molding element by a controlled compensating movement during the action of a molding force.

4. The method of molding buffing pad covers which consists in positively holding the marginal portion of a blank against slip, applying a molding force to a portion of the blank within the margin, and controllably moving the marginal portion differentially while the molding force is acting on the blank.

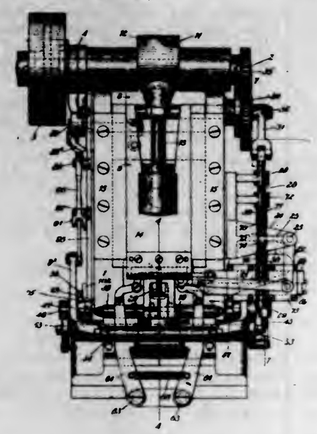
5. The method of molding buffing pad covers which consists in holding the marginal portion of a blank against slip, applying a molding force and attritive action to a portion of the blank within the margin, and giving to the marginal portion a controlled compensating movement radially inward.

[Claims 6 to 9 not printed in the Gazette.]

871,967. INSOLE-SLASHING MACHINE. WILLIAM C. STEWART, Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed May 10, 1906. Serial No. 316,102.

1. A shoe sole slashing machine comprising, in combination, reciprocating slashing means; and actuating means

therefor, to produce progressively a slashed area comprising slashes of varying lengths.



2. A slashing machine comprising the combination of slashing means for producing a slashed area of separate slashes, and slash elongating means.

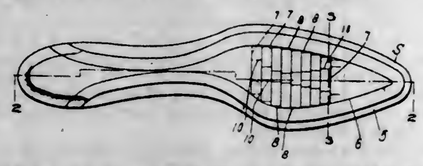
3. In a shoe sole slashing machine, the combination of slashing means for producing a slashed area comprising a plurality of separate slashes and means relatively to move the slashing means and work to elongate a slash.

4. In a slashing machine, the combination with a slashing means arranged to form a slashed area comprising a plurality of separate slashes, of means to cause the same to act upon the work in a plurality of positions for making a single slash.

5. A slashing machine comprising in combination, slashing means for producing a plurality of separate slashes in the surface of a shoe sole, and means to cause the slashing means to act progressively along the line of a proposed slash to determine the length of the latter.

[Claims 6 to 48 not printed in the Gazette.]

871,968. BOOT AND SHOE SOLE. WILLIAM C. STEWART, Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed Nov. 22, 1906. Serial No. 344,526.



1. A sole for boots and shoes provided with a series of substantially transverse incisions extending inwardly obliquely to one surface of the sole and an additional series of incisions angularly disposed with relation to the first series and laterally separated.

2. A sole for boots and shoes having a series of transversely extending incisions disposed obliquely to the surface of the sole, and a longitudinal incision at each side of the center of the sole, said longitudinal incisions being disposed in planes intersecting the planes of said transverse incisions.

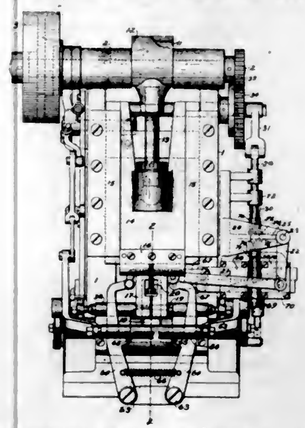
3. A sole for boots and shoes having substantially transverse incisions of less length than the width of the sole, and longitudinal incisions disposed in planes intersecting the planes of said transverse incisions adjacent the terminal portions thereof.

4. A sole for boots and shoes having substantially transverse incisions disposed obliquely to the surface of the sole, a portion of one transverse incision overlapping a portion of another, and longitudinal incisions intersecting the transverse incisions.

5. A sole for boots and shoes characterized by substantially transverse incisions extending partially across the sole forming transverse portions separated from the sole at one edge, said transverse portions each having terminal parts separated from the sole and forming integral tongues.

[Claims 6 to 8 not printed in the Gazette.]

871,969. SOLE-SLASHING MACHINE. WILLIAM C. STEWART, Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed June 28, 1907. Serial No. 381,194.



1. A sole slashing machine comprising in combination transverse and longitudinal slashing means, and actuating means therefor to produce a series of slashes, one of said series comprising slashes of varying lengths.

2. A sole slashing machine comprising in combination slashing means having provision for forming substantially transverse and longitudinal cuts in a sole, and actuating means therefor to produce a slashed area on the surface of a sole and means to vary the position of the transverse cuts.

3. A sole slashing machine comprising in combination slashing means having cutting edges disposed at an angle to each other to form substantially transverse and longitudinal slashes, and actuating means therefor to produce a slashed area of such slashes on the surface of a sole.

4. A sole slashing machine comprising in combination slashing means arranged to form a slashed area on the surface of a sole and having provisions for forming cuts at an angle to each other, and means to cause the slashing means to act upon the work in a plurality of positions for making a slash in one direction.

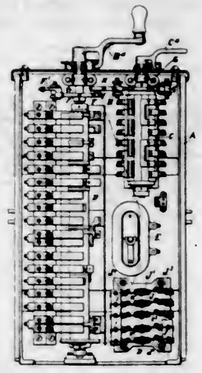
5. A sole slashing machine comprising in combination slashing means constructed and arranged to form substantially transverse and longitudinal cuts in the surface of a sole, and means for causing the slashing means to act upon the work in different positions transversely of the work in varying the transverse position of said transverse and longitudinal cuts.

[Claims 6 to 11 not printed in the Gazette.]

871,970. SYSTEM OF MOTOR CONTROL. EMMETT W. STULL, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Mar. 31, 1906. Serial No. 309,026.

1. A motor controller controlling two pairs of motors, and a single cut-out switch whereby either pair of said motors may be cut out without changing the effect of the controller on the other pair.

2. A motor controller controlling a plurality of motors, and a unitary cut-out switch whereby any of said motors may be cut out without changing the controller action on the motors not cut out.



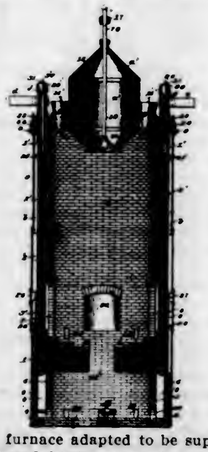
3. A motor controller, a plurality of sets of motors controlled thereby, and a single cut-out switch whereby any one of said sets of motors may be cut out without interfering with the effect of the controller upon any other set of motors.

4. A motor controller, two sets of motors controlled thereby, and a cut-out switch operable only in its entirety and by means of which either set of motors may be disconnected without affecting the controller action on the other set of motors.

5. A "series parallel" motor controller, a plurality of pairs of motors controlled thereby, a reversing switch for said motors, and a single cut-out switch whereby any pair of motors may be cut-out without affecting the series-parallel control of the remaining motors.

[Claims 6 to 46 not printed in the Gazette.]

871,971. ELECTRIC FURNACE. EDWARD R. TAYLOR, Penn Yan, N. Y. Filed Sept. 5, 1906, Serial No. 333,368. Renewed Apr. 15, 1907. Serial No. 368,248.



1. An electric furnace adapted to be supplied with self-moving material and having an embrasured wall of fire brick or the like inclosing a vertical working chamber, an outer shell surrounding said wall and inclosing an annular feed space between said wall and said shell, connections with a suitable generator of electricity, electrode stems to which said connections are attached and which extend downwardly therefrom within said feed space, and a pair of electrodes attached to the lower ends of said stems, located and supported wholly within said shell, and extending into the working chamber and toward each other.

2. In an electric furnace having a vertical working chamber and a feed space external to said chamber for self-moving material such as sulfur, a metallic electrode stem which extends downwardly within said feed space, and a carbon electrode attached to the lower end of said stem and composed of a number of sections clamped together side by side and substantially at right angles to said stem.

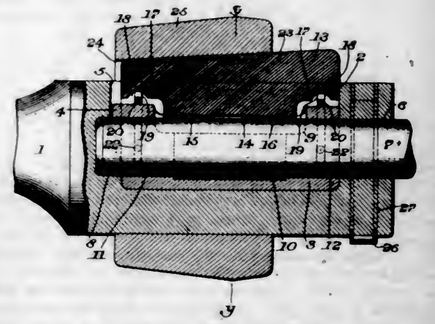
3. In a resistance electric furnace adapted to be supplied with self-moving material and having a vertical working chamber and a feed space external to said chamber for sulfur or the like, an electrode extending from within said feed space into said chamber and a tubular electrode stem extending downward within said feed space and through which fragmentary material can be fed downwardly upon the electrode to regulate the electrical action, the electrode projecting substantially at right angles from said stem.

4. A resistance electric furnace having, in combination, a wall of fire brick or the like inclosing a central working chamber, an outer shell surrounding said wall and inclosing an annular feed space between said wall and said shell, means for supplying said feed space with self-moving material for treatment, connections with a suitable generator of electricity, metallic electrode stems to which said connections are attached and which extend downwardly therefrom within said feed space, and a pair of carbon electrodes attached to the lower ends of said stems, located wholly within said shell, and supported beneath by bolster forming portions of said wall within embrasures through which the respective electrodes extend into the working chamber and toward each other.

5. A resistance electric furnace having, in combination, a wall of fire brick or the like inclosing a central working chamber, an outer shell surrounding said wall and inclosing an annular feed space between said wall and said shell, means for supplying said working chamber and said feed space with self-moving material for treatment, connections with a suitable generator of electricity, metallic electrode stems to which said connections are attached and which extend downwardly therefrom within said feed space, and carbon electrodes attached to the lower ends of said stems, located wholly within said shell, and supported beneath by bolster forming portions of said wall within embrasures through which the respective electrodes extend into the working chamber and toward each other.

[Claims 6 to 13 not printed in the Gazette.]

871,972. SELF-TIGHTENING ROCK-DRILL CHUCK. JAMES A. THOMPSON, EDWIN M. MACKIE, and PERCIVAL F. DOYLE, Chicago, Ill., assignors to Chicago Pneumatic Tool Company, a Corporation of New Jersey. Filed Feb. 6, 1907. Serial No. 356,020.



1. In a device of the character described, the combination of a chuck body having its side face apertured intermediate its ends, a bushing therefor, provided with a slot and adapted to be laterally inserted in said aperture, a chuck key engaging said aperture and slot, and means co-

acting with said chuck body and chuck key for maintaining the parts in assembled position.

2. In a device of the character described, the combination of a chuck body having an apertured face, a bushing therefor having an inner relieved portion intermediate its ends and a slot opposite said relieved portion, said bushing being adapted to be laterally inserted in said aperture, a chuck key in said slot and aperture, and means engaging said chuck body and chuck key for maintaining the parts in assembled condition.

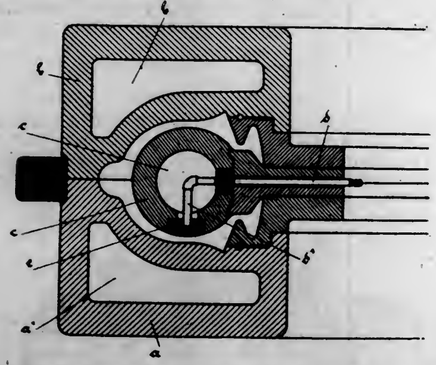
3. In a device of the character described, the combination of a chuck body having an apertured face, a bushing therefor adapted to be laterally inserted in said aperture and having an inner relieved portion intermediate its ends and a slot opposite said relieved portion, a chuck key having an inclined top engaging said slot and aperture, and means engaging said chuck body and chuck key for retaining the parts in assembled condition.

4. In a device of the character described, the combination of a chuck body having an apertured face, a bushing therefor, adapted to be laterally inserted in said aperture and having an inner relieved portion intermediate its ends and a slot opposite said relieved portion, a chuck key having an inclined top engaging said slot, means for preventing relative lateral movement of said bushing and said chuck body, and means engaging said chuck body and chuck key for retaining the parts in assembled condition.

5. In a self-tightening rock-drill chuck, the combination of a chuck body having an apertured face, a bushing therefor having an inner relieved portion intermediate its ends, and a slot opposite said relieved portion, means for resiliently securing said bushing in said aperture, a chuck key engaging said slot and aperture and having an inclined top, a device engaging said chuck body and chuck key to maintain the parts in assembled condition, and means for limiting the forward movement of said device when the chuck key is removed.

[Claims 6 to 18 not printed in the Gazette.]

871,973. MULTIPART MOLD FOR PNEUMATIC TIRES. FRIEDRICH VEITH, Veithwerk, near Höchst, Germany. Filed Jan. 28, 1907. Serial No. 354,413.

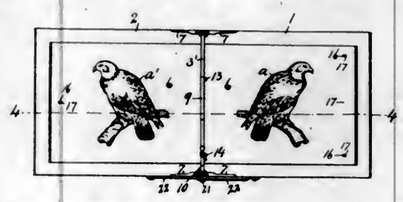


1. A mold for pneumatic tire covers comprising a core having an internal chamber and a gutter or depression at the lower part of said chamber for the reception of condensation water, and a drain pipe leading from said depression.

2. A mold for pneumatic tire covers comprising a core having an internal chamber and a depression or gutter at the lower portion of said chamber for the reception of condensation water, and a drain pipe having its inner end dipping into such depression to form a hydraulic seal.

3. A mold for pneumatic tire covers, comprising upper and lower sections, a core located between them, said core being chambered and having a depression in which the condensation water may collect, and a drain pipe leading from said depression and extending between the upper and lower mold sections, so as not to affect the edges of the tire cover.

871,974. FOLDING STEREOSCOPE. WILLIAM VERBECK, Manlius, N. Y. Filed Feb. 6, 1905. Serial No. 244,371.



1. In a stereoscope, a stereogram composed of separately movable reverse pictures and supports therefor, in combination with a mirror supported some distance from the stereogram to permit the separate pictures to be moved from side to side between the supports and adjacent edge of the mirror.

2. In a stereoscope, a stereogram composed of separately movable reverse pictures and supports therefor, in combination with a mirror supported some distance from the stereogram to permit the separate pictures to be moved from side to side between the supports and adjacent edge of the mirror, and means to engage and hold the pictures in place upon this support.

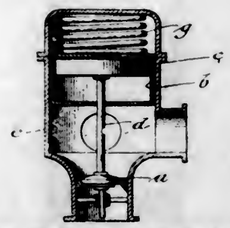
3. In a stereoscope, two covers and a mirror frame hinged together on a common axis, a stereogram having separately movable pictures, and a mirror mounted in the frame with its lower edge some distance from the covers for the purpose described.

4. In a stereoscope, the combination of a stereogram and its support, a mirror frame hinged to said support, and a mirror mounted in said frame with its lower edge some distance from the support to form an intervening opening for the adjustment of the stereogram, said stereogram having separate reverse pictures foldable from side to side under the mirror.

5. In a stereoscope, two covers and a mirror frame hinged together on a common axis, a stereogram having separately movable pictures, and a mirror mounted in the frame with its lower edge some distance from the covers for the purpose described, and adjustable means on the covers to engage and hold the pictures in place.

[Claims 6 to 21 not printed in the Gazette.]

871,975. SAFETY-VALVE. ALPHONS WACHE, Königshütte, Germany. Filed June 4, 1907. Serial No. 377,150.



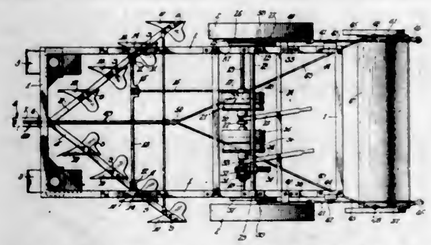
1. In a safety valve, in combination, a casing, a valve located therein, a piston carrying the valve, and a second piston constructed and arranged so that when the permissible pressure is exceeded a vacuum is formed between the two pistons, substantially as and for the purpose specified.

2. In a safety valve, in combination, a casing, a valve located therein, a hollow loaded piston located above the valve, and an auxiliary piston located within the hollow piston, attached to the valve whereby when the permissible pressure is exceeded the hollow piston ascends and causes a vacuum between the two pistons, substantially as and for the purpose specified.

3. In the safety valve in combination, a casing, a valve therein, a loaded hollow piston, an auxiliary piston within the hollow piston carrying the valve and made in two parts, and a flexible diaphragm clamped centrally between the two parts and connected at its periphery to the hollow piston, substantially as and for the purpose specified.

4. In the safety valve in combination, a casing, a valve therein, a loaded hollow piston, an auxiliary piston within the hollow piston carrying the valve and made in two parts, and a flexible diaphragm clamped centrally between the two parts and connected at its periphery to the hollow piston, the space between the two pistons at the top of the auxiliary piston being filled with liquid, substantially as and for the purpose specified.

871,976. GRADING-MACHINE. GUY S. WHITNEY, Lindsay, Cal. Filed Aug. 28, 1907. Serial No. 390,556.



1. A grading machine comprising a main frame, supporting wheels therefor, a plow frame pivotally supported at the front of the main frame and extending rearwardly, plows on the plow frame, a scraper frame pivotally supported at the front of the main frame and extending rearwardly beyond the plow frame, a scraper on the scraper frame, and mechanism operated by said wheels for adjusting the height of the plow frame and controlling the scraper.

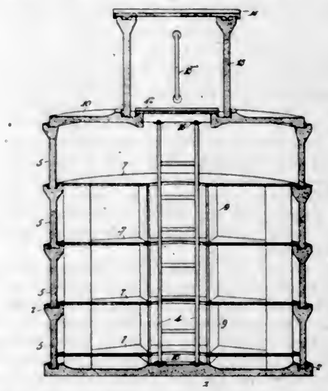
2. A grading machine comprising a main frame, supporting wheels therefor, a plow frame pivotally supported at the front of the main frame and extending rearwardly, plows on the plow frame, a scraper frame pivotally supported at the front of the main frame and extending rearwardly beyond the plow frame, a scraper on the scraper frame, mechanism operated by said wheels for swinging the plow frame to various elevations, and mechanism operated by said wheels for swinging the scraper on the scraper frame.

3. A grading machine comprising a main frame, supporting wheels therefor, a plow frame pivotally supported at the front of the main frame and extending rearwardly, plows on the plow frame, a scraper frame pivotally supported at the front of the main frame and extending rearwardly beyond the plow frame, a scraper on the scraper frame, mechanism operated by said wheels for swinging the plow frame to various elevations, mechanism operated by said wheels for swinging the scraper on the scraper frame, and circular runners on the scraper for supporting the scraper when the latter is inverted.

4. A grading machine comprising a main frame, supporting wheels therefor, a plow frame pivotally supported at the front of the main frame and extending rearwardly, plows on the plow frame, a scraper frame pivotally supported at the front of the main frame and extending rearwardly beyond the plow frame, a scraper on the scraper frame, a cam shaft geared to the wheels, a cam on the cam shaft, a crank shaft, links connecting the crank shaft and plow frame, a rod connected to the crank shaft and having operative connection with the cam, and clutch means for causing the cam to rotate with the clutch shaft or stand idle.

5. A grading machine comprising a main frame, supporting wheels therefor, a plow frame pivotally supported at the front of the main frame and extending rearwardly, plows on the plow frame, a scraper frame pivotally supported at the front of the main frame and extending rearwardly beyond the plow frame, a scraper on the scraper frame, a cam shaft geared to the wheels, a cam on the cam shaft, a crank shaft, links connecting the crank shaft and plow frame, a rod connected to the crank shaft and having operative connection with the cam, and clutch means for causing the cam to rotate with the clutch shaft or stand idle, an intermediate shaft, cams on the intermediate shaft, linkage between the latter cams and the scraper for swinging the scraper on its frame, a gear on the intermediate shaft, a pinion on the cam shaft, a cone clutch on the cam shaft one member of which is connected to the pinion, and a lever for shifting the pinion into mesh with the gear and simultaneously closing the cone clutch.

871,977. SECTIONAL VAULT. EDWARD J. WINSLOW, Chicago, Ill. Filed Oct. 20, 1905. Serial No. 283,585.



1. A water-proof vault comprising in combination, an imperforate main chamber of plastic material having substantially the shape of a right cylinder with horizontal plane top and bottom, a plurality of annular shelvings spaced vertically apart around the inner periphery of said main chamber, said shelvings being divided into a plurality of cells by radially disposed vertical partitions, a ladder extending from top to bottom of said chamber in the central space provided by said shelvings, said chamber top having a manhole eccentrically positioned with its perimeter adjacent the upper termination of said ladder, and a relatively large dome rising from said top and covering said manhole, said dome being provided with a manhole and removable cover in the rise thereof.

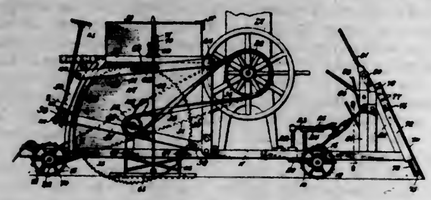
2. A water-proof vault comprising a plurality of similar annular sections superposed and lapjointed together, a plurality of floors resting upon and supported by said lap-joints, a cover for said sections, and a dome closing a man-hole in said cover.

3. A water-proof vault comprising a bottom, a plurality of superposed lap-jointed sections, each lap-joint forming an annular interior rim, a plurality of shelvings resting upon and supported by said rims, a top thereover, and a dome located over a manhole through said top.

4. A water-proof vault comprising a plurality of similar sections, a top therefor, a dome covering a man-hole extending therethrough, and a cellular structure within said vault consisting of a plurality of ring-like shelvings and intermediate partitions therefor.

5. A water-proof vault comprising a plurality of similar sections, a corresponding series of shelvings therein, the latter comprising centrally perforated disks spaced above one another with radially extending wings vertically positioned between said disks to form a multiplicity of compartments, and a perforate top over said section with a dome covering said perforation.

871,978. ICE-CUTTING MACHINE. HERMAN WULFF, Toledo, Ohio. Filed Aug. 21, 1906. Serial No. 331,480.



1. In an ice cutting machine, the combination with a supporting frame, of a swinging carrier frame, pivoted on the supporting frame, a shaft journaled on the carrier frame, cutters secured to the shaft, means for rotating the shaft and cutters, a guide frame associated with the carrier frame and comprising curved standards, and a cross bar connecting the standards, said bar having a transverse guide-way, a block slidably mounted in the guide-way, and an adjusting screw threaded through said block and having a rotatable bearing in the carrier frame, the path of movement of the rear end of the carrier frame being substantially parallel to the curved standards.

2. In an ice cutting machine, the combination with a supporting frame, of a casing mounted thereon, a swinging frame located outside the casing, a shaft journaled on the frame and extending through the casing, said casing having slots in its opposite side walls through which the shaft passes, a cutter carried by the shaft and having its upper portion located in the casing, means connected to the shaft exteriorly of the casing for rotating said shaft, and means located exteriorly of the casing for raising and lowering the frame.

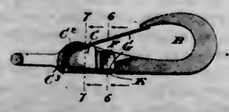
3. In an ice cutting machine, the combination with a supporting frame, of a casing mounted thereon and having side walls provided with curved slots, a door constituting a closure for the upper portion of said casing, a swinging frame mounted outside the casing, a guide frame associated with the casing and the swinging frame, an adjusting screw connecting the guide and swinging frames, a shaft journaled on the swinging frame and located exteriorly of the casing, said shaft extending through the slots of the casing and across the interior of said casing, a plurality of rotary saws fixed to the shaft, and a motor mounted on the supporting frame and connected to the shaft outside the casing for rotating the same.

4. In an ice cutting machine, the combination with a supporting frame, of cutting mechanism movably mounted thereon, a carrier movably mounted on the supporting frame independently of the cutting mechanism, a scraper movably mounted on the carrier, means for moving the carrier, and other means for moving the scraper on the carrier.

5. In an ice cutting machine, the combination with a supporting frame, of cutting mechanism mounted thereon, a guide-way carried by the supporting frame, a reciprocatory carrier mounted in the guide-way, means for moving the carrier, a scraper movably mounted on the carrier, and means for moving the scraper on the carrier.

[Claims 6 to 10 not printed in the Gazette.]

871,979. SPRING-TONGUE SNAP-HOOK. JOHN B. BAXTER, Watervliet, N. Y., assignor to Covert Manufacturing Company, Watervliet, N. Y., a Corporation of New York. Filed June 6, 1907. Serial No. 377,631.



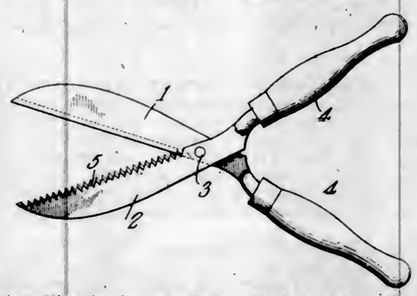
1. A spring tongue snap hook having a body provided with separated cheeks, an opening in its bottom part, projections on the inner faces of the cheeks adjacent the forward end of the opening, ears on the lower edges of the cheeks adjacent the forward end of the opening, and a U-shaped spring between the cheeks having its forward lower end secured between the projections on the cheeks and the said ears, substantially as described.

2. A spring tongue snap hook consisting of a casting having a bill part, separated cheek parts having an open bottom part, projections extending from the inner sides of the cheeks adjacent the forward end thereof, clamping portions at the sides of the forward end of the opening, and a U-shaped spring having its forward lower end secured in position by the said clamping portions, and inwardly extending projections, substantially as described.

3. In a spring tongue snap hook, the combination with a body part having separated cheeks and an opening in its base, projections on the cheeks near the forward end of the opening and inturned clamping portions, in combination with a U-shaped spring having its forward lower end clamped between the said projections and said inturned clamping portions.

4. A spring tongue snap hook of the character described, having a body provided with separated cheeks, an elongated opening in its under side, ears near the forward end of the opening and lugs on the inner face of the cheeks near the ears, a U-shaped spring having the forward end of its lower portion clamped between the ears and lugs, and inturned edges on the cheeks below the spring.

871,980. SHEARS. GEORGE E. BENTON, East Hampton, N. Y. Filed June 10, 1907. Serial No. 378,199.



A cutting implement of the character described comprising a blade having a continuous cutting edge, and a second blade pivotally connected thereto and having a plurality of teeth, each of which is in the form of an isosceles triangle, those faces of the teeth nearest the pivot being inclined backward from the outer face of the blade and toward the first mentioned blade and the pivot to constitute deflectors, said faces terminating in a plurality of parallel cutting edges all of said edges being disposed along lines intersecting the edge of the first mentioned blade, the upper edges of the teeth being inclined and terminating in points disposed in the same plane as the inner face of the toothed blade.

871,981. BUCKLE. ISAAC BLUM, Baltimore, Md., assignor to Alma Manufacturing Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Filed Apr. 30, 1907. Serial No. 371,159.



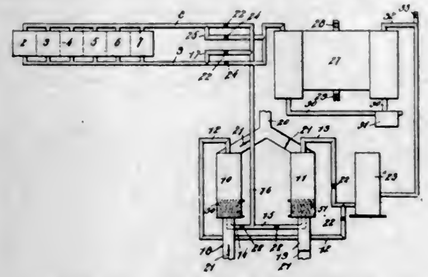
1. A buckle, having side-bars, integral end-bars provided with rearwardly projecting relatively short and dull prongs, and a cross-bar elevated above and integral with the side-bars and provided with upwardly projecting prongs.

2. A buckle, having side-bars, integral end-bars provided with rearwardly projecting relatively short and dull prongs, and a cross-bar elevated above and integral with the side-bars and of concavo-convex cross-section and provided with upwardly projecting prongs.

3. A buckle, having side-bars, integral end-bars provided on their inner edges with rearwardly projecting relatively short and dull prongs, and a cross-bar elevated above and integral with the side-bars and of concavo-convex cross-section and provided with upwardly projecting prongs on its opposite edges.

4. A reversible buckle, having side-bars, identical end-bars having rearwardly projecting prongs on their inner edges, and a concavo-convex cross-bar connected with the side-bars and elevated above said side-bars and having upwardly projecting prongs on its opposite edges, all of the aforesaid prongs being relatively short and dull, whereby the strap ends may be passed through the buckle from either end and over the cross-bar and out at the opposite end and a bight thereby formed in the strap ends over the cross-bar to insure the firm grip of the buckle on said strap ends when subjected to strain.

871,982. PROCESS OF DEHYDRATING ANIMAL AND VEGETABLE SUBSTANCES. ERNEST W. COOKE, Waukesha, Wis., assignor, by mesne assignments, to American Dehydrating Company, a Corporation of Wisconsin. Filed Dec. 21, 1906. Serial No. 348,968.



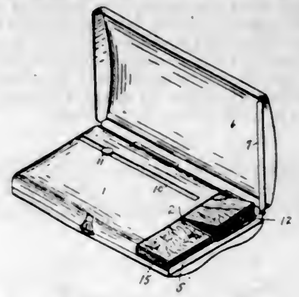
1. The process of dehydrating food substances, which consists in placing them on stationary trays in a closed chamber, passing a current of dry air through the same while away from said chamber and returning said air while away from said chamber and returning said air through the same substances in the chamber again but in the opposite direction.

2. The process of dehydrating food substances, which consists in placing them on stationary trays in a closed chamber, passing a current of dry air through the same in one direction for a certain period of time, removing the moisture from said air while away from said chamber, returning said air through the same substances again, and reversing the direction of flow of the air through the substances at predetermined, variable intervals.

3. The process of dehydrating food substances, which consists in passing a current of dry air upwardly through the same while in a closed chamber, removing the moisture from said air while away from said chamber and again passing the same air through the substances in the chamber but in the downward direction.

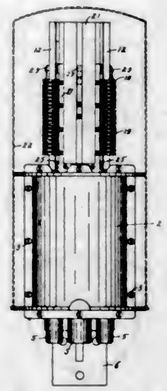
871,983. POCKET TOBACCO BOX AND CUTTER. ISAAC Z. COHEN, Baltimore, Md. Filed Feb. 11, 1907. Serial No. 356,722.

In a pocket tobacco box and cutter, the body of the box having its forward end beveled to form a knife and provided with a central longitudinal partition forming two compartments, a cover for the box having its forward end beveled to form a knife to coöperate with the beveled edge of the body, whereby a shearing cut is made when the cover is closed, a spring at the front end of one of said compartments to throw the end of the tobacco above the knife on the body of the box, means to move the tobacco forward over the knife, a coiled spring at the rear of the other compartment, and an incline at the front end of said



compartment to guide the tobacco above the front end of the box when being removed therefrom.

871,984. CABLE-TERMINAL AND JUNCTION-BOX. FRANK B. COOK, Chicago, Ill. Filed July 9, 1906. Serial No. 325,325.



1. A cable terminal comprising an inclosed box made of sheet metal, a removable cover for the front of the box, suitable fanning strips secured to the rear of the box, and suitable protective devices mounted on the said box and fanning strips.

2. A cable terminal comprising a sheet-metal box, a removable lid for one side of the box, suitable fanning strips secured to the said box, a series of spring members for supporting protective devices, mounted on the fanning strips, a series of spring members for supporting protective devices, mounted on opposite sides of the said box, and suitable protective devices carried by the said spring members.

3. A cable terminal comprising an inclosed sheet-metal box, a lid for the front side thereof, a rubber gasket placed underneath the lid to make an air-tight joint between same and the box, a guide strip carried by the said lid, fanning strips secured to the rear of the said box, suitable spring members carried by the said guide and fanning strips, and a suitable sheet-metal cover placed over the whole and bearing against the said spring members which hold same in place, the said guide strip and fanning strips serving as guides and supports for the said sheet-metal cover.

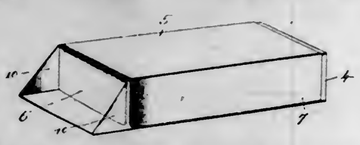
4. A cable terminal comprising a sheet-metal box having three sides made of a single piece of formed sheet metal, a removable lid for the front side thereof, suitable fanning strips secured to the rear of the box, a series of terminal pieces on each side of the box, extending from the outside thereof to the inside thereof and insulated therefrom, spring members carried by the said terminal pieces, spring

members carried by the said fanning strips, and suitable protective devices carried by the said spring members.

5. A junction box comprising a box portion, a lid for one side thereof, a suitable gasket between the lid and the box to form an air-tight and moisture-tight joint therebetween, a suitable bracket for mounting the junction box, and provisions on the top of the junction box for accommodating a cable terminal which may be mounted thereto.

[Claims 6 to 9 not printed in the Gazette.]

871,985. DEVICE FOR WRAPPING PACKAGES. JOSEPH D. COUGHLIN, Boston, Mass., assignor to Frederick McGrath, Boston, Mass. Filed Jan. 12, 1906. Serial No. 295,688.



1. In a device of the class described, a body portion, parallel side flanges extending therefrom at its opposite edges, and a shaping member extending from one end of the body at an angle thereto, said shaping member being spaced from the side flanges.

2. In a device for folding packages, a body-portion having at one end a shaping-member and at each side side-members, said shaping-member and side-members standing at right angles to the body-portion but being separated from each other, said shaping-member adapted to overlie the end of the package and to form a backing against which the wrapping paper may be folded.

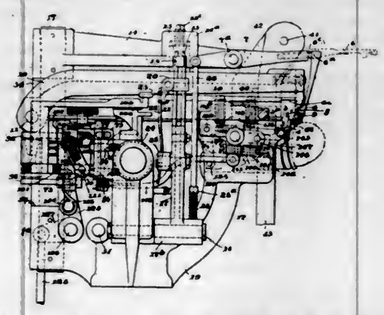
871,986. SCRAPER ATTACHMENT FOR SHOVELS. RICHARD J. EDWARDS, Galena, Ill. Filed Aug. 27, 1907. Serial No. 390,317.



1. The combination with a shovel, of a spring clasp secured to the flat surface of the hand hold with its fixed end adjacent to the hand hold, and a scraper comprising a blade adapted to rest in contact with the flat surface of the hand hold, and a curved handle adapted to closely fit the cylindrical portion of the shovel handle.

2. The combination with a shovel, of a spring clasp approximately triangular in shape and secured at its wider end to the flat face of the hand hold, the free end of the clasp pointing away from the hand hold, and a scraper comprising a blade and a handle, the former resting on the flat face of the hand hold under and engaged by the spring clasp and the handle curved to conform to the contour of the shovel handle.

871,987. SOLE ROUNDING AND CHANNELING MACHINE. ANALDO M. ENGLISH, Boston, Mass., assignor to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed Apr. 10, 1905. Serial No. 254,708.



1. In a machine for operating upon the soles of boots and shoes, the combination with an operating tool of a guide acting along a given contour of the shoe, and correcting means acting to maintain the general guiding effect of said guide irrespective of local irregularities in the said contour.

2. In a machine for operating upon the soles of boots and shoes, the combination with an operating tool of an inseam guide and means automatically to adjust said guide and tool relatively to vary the sole outline for irregularities in said inseam.

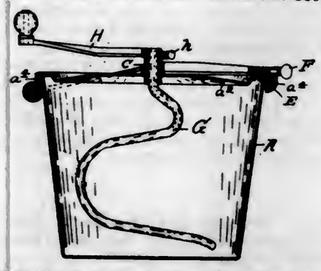
3. In a machine for operating upon the soles of boots and shoes, the combination with an operating tool of a guide acting along a given contour of a shoe, and contour correcting means automatically to adjust said guide and tool relatively to vary the guiding effect of said contour.

4. In a machine for operating upon the soles of boots and shoes, the combination with an inseam guide, an operating tool, of inseam compensating means to compensate for discrepancies between the inseam and a given contour of a last within the shoe.

5. In a machine for operating upon the soles of boots and shoes, the combination with a guide acting along a given contour of a shoe, and a tool adjustable with respect to said guide, of means also to adjust said guide to vary the guiding effect of said contour.

[Claims 6 to 53 not printed in the Gazette.]

871,988. BREAD-MIXER. ALPHEUS FAY, Louisville, Ky., assignor of one-half to Samuel E. Rawlings, Louisville, Ky. Filed Feb. 25, 1907. Serial No. 359,250.

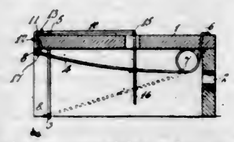


1. In a bread mixer, the combination of bucket A; ears a' on bucket A; frame B having radiating arms D', D^2 and D^3; slots d' in arms D' and D^2, adapted to engage the ears a'; lid a^2 imprisoned between the frame B and the top of the bucket; clamp E adapted to engage the rim of bucket A and secured to arm D^3 by set screw F; an operative shaft mounted in frame B; and means for operating the shaft, substantially as described.

2. In a bread mixer, the combination of bucket A; ears a' on bucket A; frame B having radiating arms D', D^2 and D^3; slots d' in arms D' and D^2 adapted to engage the ears a'; notches d^2 in arms D' and D^2; bail a adapted to engage notches d^2 and snap over the rim of the bucket; lid a^2 imprisoned between the frame B and the top of the bucket; clamp E adapted to engage the rim of bucket A and secured to arm D^3 by set screw F; an operative shaft mounted in frame B; and means for operating the shaft, substantially as specified.

3. In a bread mixer, the combination of bucket A having rim a^4; ears a' on bucket A and provided with recesses a^3; frame B having radiating arms D', D^2 and D^3; flanges d and slots d' on arms D' and D^2, adapted to engage in recesses a^3; notches d^2 in arms D' and D^2; bail a adapted to engage notches d^2 and snap over the rim of the bucket; lid a^2 imprisoned between the frame B and the top of the bucket; clamp E, having the narrow upper portion e and the wider portion e' curved vertically and laterally to fit rim a^4 and the side of the bucket; set screw F securing clamp E to arm D^3; an operative shaft mounted in frame B; and means for operating the shaft, substantially as specified.

871,989. ANIMAL-TRAP. JOHN W. GATES, Los Angeles, Cal. Filed Mar. 20, 1907. Serial No. 363,518.



1. An animal trap comprising a box open at the front and bottom, a cross member at the bottom of the box near the open end thereof, a spring jaw member working between the upper portion of the box and said cross member, and a catch fulcrumed on the upper portion of the box and consisting of a single piece of wire bent to form a downwardly extending arm formed with a hook to engage the jaw member and provided with an arm extending rearwardly and downwardly to serve as a trigger said trigger extending in the box rearwardly of the path of the jaw member to be operated as a trigger by direct engagement of the animal therewith.

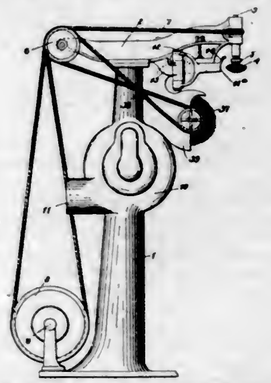
2. A trap comprising a box open at the front and bottom, a cross member at the bottom of the box near the open end thereof, a spring jaw member working between the upper portion of the box and said cross member, a fulcrum at the upper portion of the box, and a catch formed as a unitary member supported on said fulcrum and having one arm to engage the spring jaw member and another arm extending rearwardly and downwardly at the rear of the path of the spring jaw member to be engaged by the animal in entering the box to serve as a trigger.

3. A trap comprising a box open at the front and bottom, a cross member at the bottom of the box near the open end thereof, a spring jaw member working between the upper portion of the box and said cross member, a catch fulcrumed on the top of the box and having a downwardly and rearwardly extending arm formed with a hook to engage the jaw member and provided with an arm extending rearwardly over the top of the box and downwardly through the top of the box to serve as a trigger.

4. A trap comprising a box open at the front and bottom and having a notch in its forward end and a fulcrum at said notch, a unitary catch member entering said notch and passing over said fulcrum, said catch member having a downwardly extending portion formed with a hook and a rearwardly and downwardly extending portion to serve as a trigger, a cross member at the bottom of the box, and a spring jaw working between the upper portion of the box and said cross member and adapted to be engaged by said hook on the catch.

5. A trap comprising a box open at the front and bottom, a cross member at the bottom of the box near the open end thereof, a spring jaw member working between the upper portion of the box and said cross member, a fulcrum at the upper portion of the box, and a catch formed as a unitary member supported on said fulcrum and having one arm to engage the spring jaw member and another arm extending rearwardly and downwardly at the rear of the path of the spring jaw member to be engaged by the animal in entering the box to serve as a trigger, the trigger having an enlarged end.

871,990. BUFFING-MACHINE. JOHN GELZENLICHTER, Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed July 11, 1906. Serial No. 325,582.



1. In a buffing machine, the combination with a pad carrying support, of a cover applying device and means to move it toward and from said support, for use in applying a cover to the latter.

2. In a buffing machine, the combination with a pad carrying spindle, of a pad cover applying device mounted in proximity to said spindle and movable into and out of operative position relative to and for assisting in applying a pad cover to a pad on said spindle.

3. In a buffing machine, the combination with a pad carrying support, of a transferable cover applying device, and means to transfer it to cover applying position.

4. In a buffing machine, the combination with a pad carrying support, of a transferable cover applying device, and means to center it in cover applying position and also in normal inoperative position.

5. In a buffing machine, the combination with a pad carrying support, of a pad cover applying device mounted in proximity to said support and transferable into and out of applying position relative to said support, and operating means therefor transferable therewith.

[Claims 6 to 23 not printed in the Gazette.]

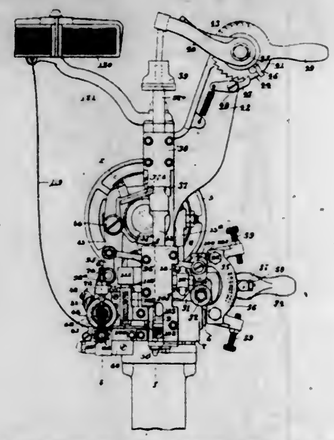
871,991. STAPLE-TACKER. PERLEY R. GLASS, Boston, Mass., assignor to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed May 6, 1905. Serial No. 259,140.

1. In a machine of the character specified, the combination with wire feeding and severing mechanism, of staple forming and driving means, an actuator for said means, and connections intermediate said means and actuator constructed and arranged to permit lateral movement of said staple forming and driving means relative to the feeding and severing mechanism in the production of staples of different lengths.

2. In a machine of the character described, the combination of wire feeding and severing mechanism, staple forming and driving means, an actuator for said means, connections intermediate said means and actuator constructed and arranged to permit lateral movement of said staple forming and driving means toward and from the feeding

and severing mechanism in the formation of staples of different lengths, and means for simultaneously effecting such lateral movement of the forming and driving means.

8. In a machine of the character specified, the combination with variable wire feeding means, and severing means, of staple forming and driving means and operating devices therefor constructed and arranged to permit the forming and driving means to be laterally adjustable relatively to said feeding and severing means in forming staples of different lengths, and means simultaneously to vary the feed and to effect such relative adjustment.

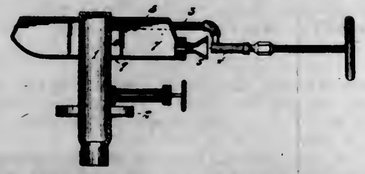


4. In a machine of the character specified, the combination with staple forming and driving mechanism, a support for said mechanism, of wire feeding and severing mechanism, and means to adjust said support and with it the staple forming and driving mechanism relatively to said feeding and severing mechanism to vary the length of the staples formed by the machine.

5. In a machine of the character specified, the combination with staple forming and driving mechanism, an adjustable support for said mechanism, of wire feeding and severing mechanism and means to adjust said support relatively to said feeding and severing mechanism and to simultaneously vary the feed to vary the length of the staple.

[Claims 6 to 21 not printed in the Gazette.]

871,992. HYDROCARBON-BURNER. HAROLD P. GLAZIER, Chelsea, Mich., assignor to Glazier Stove Company, Chelsea, Mich. Filed Nov. 1, 1906. Serial No. 341,527.



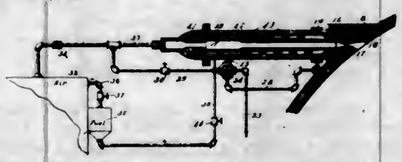
1. In combination with a vertically disposed central retort adapted to feed from beneath, a gas chamber extending completely about a portion of the side walls thereof near the top, and out of direct communication with the interior thereof, the top and bottom walls of said chamber each being perforated with a ring of burner holes, and there being radiating extensions communicating directly with the gas chamber and thereby with one another, the top wall of each of said extensions being perforated with burner holes, a discharge pipe leading from communication with the upper end of the retort to the outer air, a controlling valve for regulating the escape of vapor from the outer end thereof, and flaring inlet located adjacent to the discharge end of the discharge pipe, though spaced therefrom, communicating with said gas chamber and its extensions, substantially as described.

2. In a vapor generator and burner, in combination with a gas chamber having a vertically extending central aperture, and hollow radiating arms in direct communication with said chamber, the upper walls of both the chamber and the extensions and the lower wall of the chamber being perforated with burner holes, a vertical retort adapted to feed only from beneath, extending through said central aperture, though out of direct communication with the interior of the chamber, an escape pipe whereby the vapor generated in the retort may escape from the upper end thereof, a valve whereby the flow of vapor therethrough may be regulated, and an inlet pipe provided with a flaring mouth inserted through a side wall of said gas chamber adjacent to the discharge end of said escape pipe, though spaced therefrom, whereby the escaping vapor receives an admixture of atmospheric air previous to its reception into the gas chamber, substantially as described.

3. A vapor generator and burner, having in combination a vertically extending retort wherein the complete vaporization of liquid fuel is designed to take place, a single escape pipe leading from the upper portion thereof, a burner chamber provided with integral radiating extensions, extending with its central portion completely about a portion of said retort, the top walls of said chamber and its extensions and the bottom wall of said chamber being perforated with burner holes, those in the walls of the chamber being adapted to permit the impinging of jets of flame upon the walls of the retort to raise its temperature for vaporization, and an inlet member having a flaring mouth whereby communication may be had with the interior of the chamber and its extensions from without, adapted to receive an admixture of atmospheric air and the vapor emerging from said escape pipe, being spaced therefrom to permit such mingling of the air and vapor previous to its admission thereinto, substantially as described.

4. In combination with a vertically arranged central retort adapted to feed from beneath, a starting cup fixed thereto for the initial heating thereof, a valve whereby the flow of the oil from the retort into the cup may be controlled, a gas chamber provided with radiating arms engaging about the upper portion of said retort, though out of direct communication therewith, the upper walls of said chamber and extensions being perforated with burner holes, and the lower walls of said chamber being also perforated to allow the impinging of jets of flame upon the side walls of the retort for the heating thereof, an escape pipe whereby the vapor generated in the retort may flow therefrom, and a valve for regulating the flow of vapor therefrom toward an apertured portion of the walls of said chamber, the vapor being mixed with atmospheric air previous to its reception within the burner chamber, substantially as described.

871,993. POWER SYSTEM. RICHARD H. GOLDSBOROUGH, Washington, D. C. Filed May 14, 1906. Serial No. 316,733.



1. In a power system, means for producing a fluid jet, comprising a nozzle tip, a combustion chamber communicating therewith, means for supplying combustible mixture to said chamber, means for initially igniting such mixture, connections for conducting a cooling fluid in contact with the walls of said combustion chamber for absorbing heat therefrom and directing such heated fluid into said nozzle tip, other connections for discharging a cooling fluid into said nozzle tip, and a common means for controlling and cutting off either of said connections independently of the other, substantially as described.

2. In a power system, means for producing a fluid jet, comprising a tapered nozzle tip, a combustion chamber communicating therewith, means for supplying combustible mixture to said chamber, means for initially igniting such mixture, connections for conducting a cooling fluid in contact with the walls of said combustion chamber for absorbing heat therefrom and directing such heated fluid into said nozzle tip in a series of jets converging at the most contracted portion of said tip, other connections for discharging a cooling fluid into said nozzle tip, and a common means for controlling and cutting off either of said connections independently of the other, substantially as described.

3. In a power system, means for producing a fluid jet comprising a nozzle tip, a combustion chamber communicating therewith, means for supplying combustible mixture to said chamber, means for initially igniting such mixture, two independent sources of cooling fluid under pressure, connections for conducting either of said cooling fluids in contact with the walls of said combustion chamber for absorbing heat therefrom and directing said heated fluid into said nozzle tip, other connections for discharging either of said fluids into said nozzle tip, and a common means for controlling said connections, said common controlling means constructed to permit simultaneous supply of cooling fluid to both connections from one of said independent sources or to permit simultaneous supply of cooling fluid to the respective connections from said two independent sources, substantially as described.

4. In a power system, means for producing a fluid jet, comprising a tapered nozzle tip, a combustion chamber communicating therewith, means for supplying combustible mixture to said chamber, means for initially igniting such mixture, two independent sources of cooling fluid under pressure, connections for conducting either of said cooling fluids in contact with the walls of said combustion chamber for absorbing heat therefrom and directing said heated fluid into said nozzle tip in a series of jets converging at the most contracted portion of said tip, other connections for discharging either of said cooling fluids into said nozzle tip, and a common means for controlling said connections, said common controlling means constructed to permit simultaneous supply of cooling fluid to both connections from one of said independent sources or to permit simultaneous supply of cooling fluid to the respective connections from said two independent sources, substantially as described.

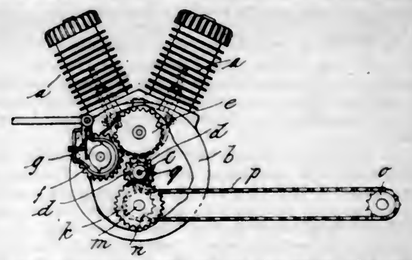
871,994. METHOD OF CLEANING METAL. JEAN HAWTHORNE, New York, N. Y. Filed Mar. 26, 1907. Serial No. 364,588.

1. The process of cleaning tarnished silver which consists in placing the silver to be cleaned in an alkaline electrolytic solution adapted to set free hydrogen on the surface of the silver, electrically connecting said silver to an anode of greater electrolytic solution tension than said silver, and generating an electro-motive force between said anode and silver solely because of the difference in tension between the same, said anode being capable of passing into the solution during the electrolytic action and being there held in solution without plating upon the silver.

2. The process of cleaning tarnished silver which consists in selecting a suitable containing vessel of tin, placing therein a suitable electrolytic solution adapted to set free hydrogen, placing the silver to be cleaned in said solution in electric connection with said vessel, and generating an electro-motive force between the same solely because of the difference of the solution tension of the two metals, whereby hydrogen is set free on said silver and silver sulfid tarnish on said silver is broken down into metallic silver which remains on the surface of the silver.

3. The process of cleaning tarnished silver which consists in selecting a suitable vessel of tin, placing therein a suitable electrolytic solution of sodium carbonate, placing the silver to be cleaned in said solution in electric connection with said vessel, and generating an electro-motive force between the same solely because of the difference of the solution tension of the two metals, whereby hydrogen is set free on said silver and silver sulfid tarnish on said silver is broken down into metallic silver which remains on the surface.

871,995. MOTOR-CYCLE. CARL O. HEDSTROM, Springfield, Mass. Filed Mar. 28, 1907. Serial No. 365,134.



1. In combination with the motive parts of a motor-cycle, an engine-shaft, a pinion and gear thereon, an exhaust valve-gear, a main sprocket-shaft, a gear thereon, a timing gear, the gear on the engine-shaft meshing with the exhaust valve-gear, said exhaust valve gear meshing with the timing gear, the pinion meshing with the gear on the main sprocket-shaft whereby, upon the reverse motion of the motive power the timing mechanism and the motor-cycle will be driven in a forward direction as described.

2. In combination with the exhaust valve gear, timer gear, main and sprocket-gear and engine shaft of a motor cycle, a gear on the engine-shaft meshing with the exhaust valve gear, the exhaust valve gear meshing with the timer gear, a pinion on the engine shaft meshing with the main sprocket-gear whereby when the engine is rotated in a reverse direction the motor cycle and timer gear will be rotated in a forward direction, as described.

871,996. MEASURING INSTRUMENT. JACOB JACOBSON and JOHN HAUGLAND, Brooklyn, N. Y. Filed May 21, 1907. Serial No. 374,884.



1. In a measuring instrument of the class described, the combination with a series of independent rule sections, of a plumb and level mounted in one of said sections, means for securing said sections end to end, and means to secure said sections in superposed relation, said last named means comprising a bore passing entirely through one of said sections, an apertured screw threaded plate at each end of, and concentric with, said bore, and screws countersunk in the other of said sections and being adapted to engage the screw threaded plates.

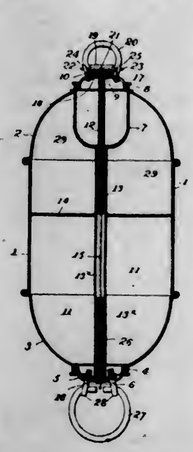
2. In a measuring instrument of the class described, the

combination with a series of rule sections, of means for securing said sections in superposed relation, said means comprising a bore passing entirely through one said section and an apertured screw threaded plate at each end of, and concentric with, said bore, and screws countersunk in the other said sections and being adapted to engage the screw threaded plates.

3. In a measuring instrument of the class described, the combination with a series of rule sections, of means for securing said sections in superposed relation, said means comprising a bore passing entirely through one said section and an apertured screw threaded plate at each end of, and concentric with said bore, and screws countersunk in the other said sections and being adapted to engage the screw threaded plates, each of said screws having the upper part of its shank smooth and the lower part thereof screw threaded.

4. In a measuring instrument of the class described, the combination with a series of rule sections, of means for securing said sections in superposed relation, said means comprising a bore passing entirely through one said section and an apertured screw threaded plate at each end of, and concentric with, said bore, and screws countersunk in the other said sections and being adapted to engage the screw threaded plates, each of said screws having the upper part of its shank smooth and the lower part thereof screw threaded, and a coiled spring surrounding each screw and being designed to prevent the same from projecting beyond the surface of its rule section when the said screw is not in engagement with the screw threaded plate.

871,997. MARINE TORCH. ALEXANDER F. J. JOHNSON, London, England. Filed Feb. 7, 1905. Serial No. 244,594.



1. In a marine torch, the combination with a buoyant shell having two independent compartments formed therein, and each communicating with a water inlet, and means for sealing said water inlets, of means for simultaneously rupturing the seals of said inlets.

2. In a marine torch, the combination with a buoyant shell having its interior divided into two independent compartments and provided with a plurality of water inlets communicating with both said compartments, means detachably connected with the shell for suspending the same from a suitable support, and connections between said suspending means and the seals of inlets to both compartments of the shell, whereby said seals will be destroyed when the shell is detached from its suspending means.

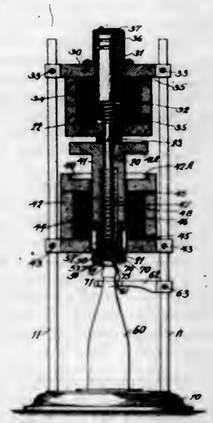
3. The combination with a marine torch comprising a buoyant shell having therein means adapted to generate and ignite an illuminating gas when water is admitted thereto, and means for sealing the passages through which water is admitted to said shell, of means connected independently of the sealing means with the body of the torch for suspending said torch when not in use, and means for automatically destroying the seals of said water passages when the torch is detached from said suspending means.

4. The combination with a marine torch comprising a buoyant shell having therein means adapted to generate and ignite an illuminating gas when water is admitted thereto, and means for sealing the passages through which water is admitted to said shell, of a ring or loop and means for detachably connecting it with said torch for suspending the same from a suitable support, and connections between said ring or loop and the seals of the water passages, whereby said seals will be destroyed when said ring is detached from the torch.

5. In a marine torch, the combination with a buoyant shell having two independent compartments formed therein, one of said compartments having a plurality of openings, and the other of said compartments having an opening contiguous to one of the openings of said first mentioned compartment, and means for sealing said openings, of means for simultaneously rupturing the seals of said openings.

[Claims 6 to 12 not printed in the Gazette.]

871,998. BOTTLE-CAPPING MACHINE. GEORG KIRKEGAARD, New York, N. Y. Filed June 13, 1906. Serial No. 321,432.



1. A bottle capping machine comprising a plunger, a forming-ring having its axis in alinement with the axis of the plunger, and an electromagnet arranged to actuate said plunger and ring.

2. A bottle capping machine comprising a plunger, a forming-ring having its axis in alinement with the axis of the plunger, an electromagnet arranged to actuate said plunger and ring, and means for regulating the action of the electromagnet.

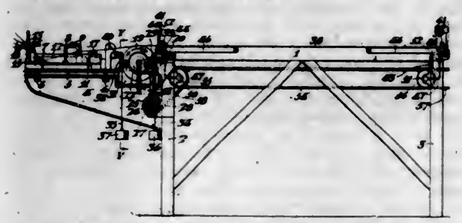
3. A bottle capping machine comprising a magnetized plunger arranged to support a cap of magnetic material, a forming-ring, and an electromagnet arranged to actuate said plunger and ring.

4. A bottle capping machine comprising two movable members, electromagnetic means arranged to move said members together until the movement of one of said members is arrested, and to impart a further movement to the other member.

5. In a bottle capping machine, the combination of a plunger, a forming-ring associated therewith, an electromagnet arranged to move the plunger and the ring together, until the movement of the plunger is arrested, and a second electromagnet arranged to impart a further movement to the forming-ring.

[Claims 6 to 11 not printed in the Gazette.]

871,999. THREAD-FINISHING MACHINE. EMORY J. LIPPS and FREDERICK OTT, South Bethlehem, Pa. Filed Jan. 10, 1906. Serial No. 295,339.



1. In a thread finishing machine, the combination with means arranged to direct the thread through a liquid; of a rotary drum; means arranged to roll said thread in contact with the periphery of said drum; a reservoir arranged to contain water in which said drum is partly submerged; and crossed wires in frictional contact with the surface of said drum respectively extending from diametrically opposite sides of one end of the drum, to diametrically opposite sides of the other end of said drum, substantially as set forth.

2. In a thread finishing machine, the combination with a table comprising a heated surface arranged to support the threads during their progression; of reciprocatory bars arranged to engage and shift said threads laterally; and, means arranged to uplift said threads from said table, at the will of the operator, substantially as set forth.

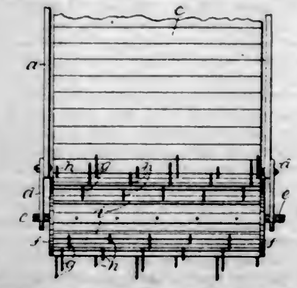
3. In a thread finishing machine, the combination with a table comprising a heated surface arranged to support the threads during their progression; of reciprocatory bars arranged to engage and shift said threads laterally; pivoted levers arranged to support said bars; and, means arranged to uplift the free ends of said levers and thereby raise the threads from the table, substantially as set forth.

4. In a thread finishing machine, the combination with a table comprising a heated surface arranged to support the threads during their progression; of reciprocatory bars arranged to engage and shift said threads laterally; pivoted levers arranged to support said bars; and, connections attached to the free ends of said levers whereby the bars may be raised to lift the threads from the table, substantially as set forth.

5. In a thread finishing machine, the combination with means to coat threads with a liquid; of a heated table; means to direct the coated threads over said table in contact with its surface; means comprising a rotary drum between said coating means and said table, arranged to remove the surplus liquid from said threads; and means arranged to uplift said threads from said table at the will of the operator; substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

872,000. MANURE-SPREADER. EDGAR C. LITCHFIELD and DUDLEY GARST, Waterloo, Iowa, assignors to The Litchfield Manufacturing Company, Waterloo, Iowa. Filed June 11, 1906. Serial No. 321,169.



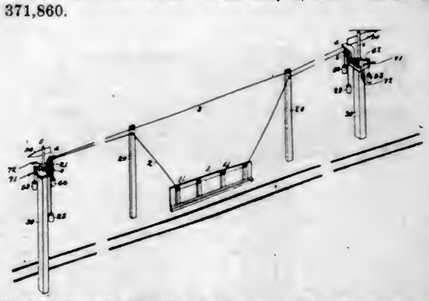
In a manure spreader, the combination of a movable apron, a beater-drum rotatably supported at one end thereof, and long and short distributing teeth alternately and spirally arranged upon the exterior periphery of said beater-drum.

872,001. HOSE-COUPLING. JOHN G. MASSIE, Belleville, Ill. Filed Jan. 14, 1907. Serial No. 352,199.



A hose coupling comprising a sleeve formed with a plain unobstructed interior surface, with an interior shoulder at its inner end, and with a neck having a cylindrical interiorly screw-threaded throat, a connection member formed, at one end, with a long cylindrical exteriorly screw-threaded channeled shank, fitted to said throat, and with a long tapering exteriorly screw-threaded portion extending from the channeled shank and at its other end with an annular rim and with a conical part, a second connection member formed, at one end, with an external screw-thread and a conical channel fitted to the conical part, and, at its other end, with a long cylindrical exteriorly screw-threaded channeled shank, and with a long tapering exteriorly screw-threaded portion extending from the channeled shank, a second sleeve formed with a plain unobstructed interior surface, with an interior shoulder at its inner end, and with a neck having a cylindrical interiorly screw-threaded throat fitted to said channeled shank of the second connection member, and a coupling nut formed with an internal flange and an interior screw thread fitted to the external screw thread of the second connection member.

872,002. RAILROAD SIGNALING DEVICE. BURNS S. MILLER, Everett, Wash. Filed May 4, 1907. Serial No. 371,860.



1. A railroad signaling device comprising a track-protecting bulkhead or fence, a distant warning signal, a catch normally holding said signal at safety, a releasing wire or cord connecting said bulkhead with the distant signal and engaging the catch by a loop, and means compensating for atmospheric changes in their effect upon said wire or cord.

2. A railroad signaling device comprising a track-protecting bulkhead or fence, a distant warning signal, a signal-operating wire or cord connecting said bulkhead and signal, a releasing catch or trigger engaged by a loop in said wire or cord, and means compensating for variations in length of said wire caused by atmospheric changes.

3. A railroad signaling device comprising a track-protecting bulkhead or fence, a distant signal, a releasing member for said signal, a wire or cord connecting said releasing member and said bulkhead, a compensating wire or cord of substantially equal length, and an actuating weight for said signal connected with both wires but normally supported by the compensating wire.

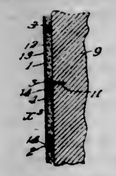
4. A railroad signaling device comprising a track-protecting bulkhead or fence, a distant visual signal, a releasing member for said signal, a wire or cord connecting said bulkhead and said releasing member, an electric signaling circuit thrown into action by the operation of said visual signal, a compensating wire or cord of substantially equal length to the other wire, an actuating weight for said sig-

nal device connected with both said wires but normally supported by the compensating wire.

5. A distant signal operating device comprising an actuating wire or cord having a loop formed therein and engaging a catch or trigger member, a compensating wire or cord of like extent, and a weight connected with both said wires and normally supported by the compensating wire.

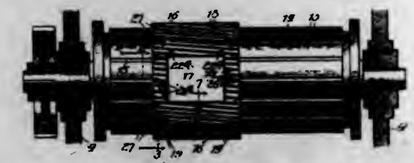
[Claims 6 and 7 not printed in the Gazette.]

872,003. IMITATION BRICK FACING. GEORGE MORGAN, Los Angeles, Cal., assignor to Charles C. Carter, Los Angeles, Cal. Filed Sept. 17, 1906. Serial No. 335,034.



An imitation brick facing comprising plates each provided at its edges with flanges both slanting in one direction, and with tongues at one end of said flanges and with slots and bars at the other end of said flanges, the bars being perforated to receive nails, and the slots being of corresponding dimensions relative to the tongues to receive like tongues or other plates, the plate being provided at one end with an angle flange perforated to receive a nail and at the other end with a flange adapted to engage an angle flange of another plate.

872,004. PRINTING-PRESS. CYRUS A. MCCAIN and CARL HENDERSON, Chicago, Ill. Filed Jan. 21, 1907. Serial No. 353,290.



1. In a printing-press, the combination of a form-carrier, a base provided with parallel inclinedly extending grooves, a printing plate on said base crossing the grooves therein, the grooves inclining but slightly with relation to the edges of said plate, and clamping means confined and longitudinally movable in said grooves and actuated by said inclination to wedge said clamping means by their movement along the same, against the plate edges, whereby the plate may be held in position on the base solely by the wedging action.

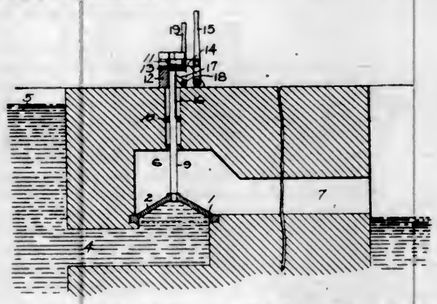
2. In a printing press, the combination with a form-carrier, a base provided with parallel inclinedly extending dovetail-grooves, a printing plate on said base with relation to the edges of which said grooves incline but slightly, and a headed clamping device confined in the grooves and movable longitudinally therein to be actuated by their said inclination to wedge the clamping devices by their movement along the same against the plate edges, whereby the plate may be held in position on the base solely by the wedging action.

3. In a printing press, the combination of a form-carrier, a base provided with parallel grooves extending inclinedly between its lateral edges and with similar grooves extending inclinedly between its top and bottom edges and intersecting said first-named grooves, a printing plate on said base with relation to the edges of which said grooves incline but slightly, and headed clamping devices confined in the grooves and movable longitudinally therein to be actuated by said inclination to wedge the heads, by movement of the clamping devices along said grooves against the plate edges, whereby the plate may be held in position on the base solely by the wedging action.

4. In a printing press, the combination of a form-carrier, a base provided with parallel inclinedly extending dovetail-grooves, a printing plate on said base with relation to the edges of which said grooves incline but slightly, and clamping devices releasably fastening the plate on the base, each comprising a block confined and movable longitudinally in a base groove, and a head adapted to engage the plate wedgingly at an edge thereof by moving the clamping device along said groove, whereby the plate may be held in position on the base solely by the wedging action.

5. In a printing press, the combination of a form-carrier, a base provided with parallel extending dovetail-grooves, a printing plate on said base with relation to the edges of which said grooves incline but slightly, and clamping devices releasably fastening the plate on the base, each comprising a block conforming in shape to that of the grooves, and movable longitudinally in a base-groove, a head adapted to engage the plate wedgingly at an edge thereof, by moving the clamping device along said groove, whereby the plate may be held in position on the base solely by the wedging action, said head containing an opening provided with an enlargement, and a screw passing through said opening and working in said block with its head countersunk in said enlargement, for the purpose set forth.

872,005. AUTOMATICALLY-OPENING VALVE. PETER A. MCCULLOUGH, Pittsburg, Pa. Filed Apr. 15, 1907. Serial No. 368,372.



1. In valve mechanism, the combination of a valve seat, a valve arranged to seat thereon against fluid pressure and to be opened automatically by said pressure, and valve locking means arranged to engage with and to be disengaged from said valve to thereby hold said valve to its seat and to permit the same to open.

2. In valve mechanism, the combination of a valve seat, a valve arranged to seat thereon against fluid pressure and to be opened automatically by said pressure, and a movable abutment arranged to be moved into position to engage the valve and force the same against its seat, or to be disengaged from the valve to permit the latter to open.

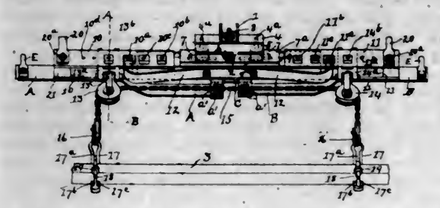
3. In valve mechanism, the combination of a valve seat, a valve coöperating with the seat and arranged to open under fluid pressure and to close automatically when the pressure on its opposite sides equalizes, and an abutment arranged to be moved into the path of movement of the valve and hold the same against its seat and to be moved out of said path to permit the valve to open.

4. In valve mechanism, the combination of a valve seat, a valve coöperating with the seat and arranged to be opened by the fluid pressure and automatically seat when the fluid pressure on its opposite sides equalizes, and a movable member having an inclined face and arranged to engage the valve to force the same against its seat or to disengage the valve to permit the same to open.

5. In valve mechanism, the combination of a valve seat, a valve arranged to seat thereon against fluid pressure, a movable member arranged to engage the valve and hold the same against its seat or disengage the same and permit it to be opened, and means arranged to engage the valve when open and to hold the same open.

[Claims 6 to 8 not printed in the Gazette.]

872,006. EVENER FOR VEHICLES. ALLAN L. MCGREGOR and DUNCAN MCGREGOR, Duluth, Minn., assignors to Miles T. Frink, Duluth, Minn. Filed Jan. 12, 1907. Serial No. 351,950.



1. In an evener for vehicles, the combination of hounds, a central bar suspended beneath the hounds by a draw bolt, spacing means between said hounds and said central bar, an end member pivoted to one end of said central bar, an end member pivoted to the opposite end of said central bar, means engaging said central member and said end members for restricting the pivotal movement of said end members, a pulley block support adjustably mounted on one of said end members, a pulley block pivotally secured thereto, pulley block support adjustably mounted on the other of said end members, a pulley block pivotally secured thereto, an adjustable clip adjustably secured to the axle of said running gear, a second clip secured to said axle, flexible means engaging said pulleys intermediate of its ends and embodying a cam lever, said cam lever engaging one of said clips, said flexible means engaging at its opposite end the other of said clips, a spring secured intermediate of its ends to said central bar and at one end to one of said end members and at its opposite end to the other of said end members, and hitching clips secured to the free ends of said end members.

2. In an evener for vehicles, the combination with the hounds of the vehicle of a central bar suspended therefrom by a draw bolt, spacing means between said central bar and said hounds, end members pivotally mounted on the opposite ends of said central bar, means engaging said end members and said central bar for limiting the pivotal movement of said end members, a spring secured intermediate of its ends to said central bar and secured at its ends to said end members, and flexible means connecting said end members and the axle of the forward running gear of said vehicle.

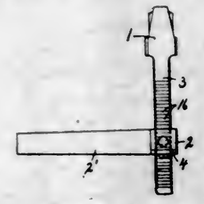
3. In an evener for vehicles, the combination with the hounds of said vehicle, of a central bar suspended therefrom, end members pivotally secured to said central bar, means engaging the central bar and said end members for limiting the pivotal movement of said end members, a spring secured intermediate of its ends to said central member and at its ends to said end members, and flexible means connecting said end members to the axle of the forward running gear of said vehicle.

4. In an evener for vehicles, the combination of hounds, a primary evener including a primary central bar suspended therefrom, primary end members pivotally secured to the ends of said primary central bar, means engaging said primary end members and said primary central bar for limiting the pivotal movement of said primary end members; a secondary evener, comprising secondary end bars pivotally secured intermediate of their ends to the outer ends of said primary end members, a secondary central bar, straps pivotally secured to the inner ends of the secondary end bars and to the ends of said secondary central bar, a hitching clip secured to said secondary central bar intermediate of its ends, hitching clips secured to the free or outer ends of said secondary bars and means embodying a flexible element for connecting said primary end members with the forward axle of said vehicle.

5. In an evener for vehicles, the combination with the forward axle of a vehicle and with a flexible element forming part of the evener, of an adjustable clip adapted to inclose a portion of the axle and comprising a slotted bar extending across said axle, an L-shaped bolt extending at one end through said bar and extending at the other end across said axle parallel with said slotted bar, and an eye bolt extending at one end through said bar and adapted to receive into its eye the said other end of said L-shaped bolt.

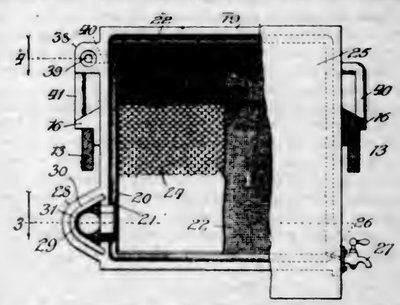
[Claims 6 and 7 not printed in the Gazette.]

872,007. LATHE-DOG. ROBERT G. NYE, Oswego, N. Y. Filed Feb. 12, 1906. Serial No. 300,742.



A lathe dog comprising a jaw having a threaded aperture at one end and an elongated slot at the other end, and with a tail piece extending laterally from the end of the jaw having the threaded aperture, a stop pawl carried by said jaw and extending into said slot, an opposing jaw having an elongated aperture through one end and a rack-bar projecting at right angles therefrom at the other end and extending through the slot in the first mentioned jaw, a spring operating to maintain said rack-bar yieldably in engagement with said pawl, and a screw extending through the slot in said last mentioned jaw and provided with an enlarged head bearing upon the same, and engaging said threaded aperture by its threaded portion.

872,008. FILTER-PRESS. FREDERICK W. VON OVEN, Aurora, Ill. Filed Apr. 26, 1907. Serial No. 370,490.



1. In a filter-press, the filter frames having inlet-ports in the junctions between them and provided with ears containing openings forming a feed-passage common to said ports.

2. In a filter-press, a chamber-forming element consisting of a frame comprising a rim and an open-work flexible center-portion within it, with filtering-cloth covering the frame-sides.

3. In a filter-press, a chamber-forming element consisting of a frame comprising a rim, screens with an interposed open-work mat confined within the rim, and filtering-cloth covering the frame-sides.

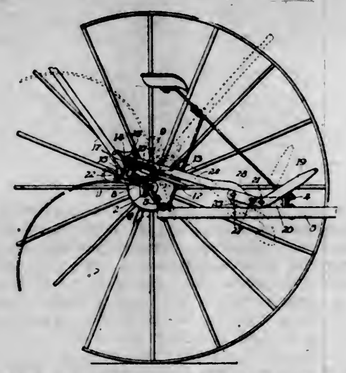
4. In a filter-press, a chamber-forming element consisting of a frame comprising a rim having inwardly beveled edges and a flange affording shoulders extending about its inner edges, screens abutting against said shoulders, and an open-work flexible mat interposed between the screens, and filtering-cloth covering the frame-sides.

5. In a filter-press, the combination with a stationary head and a movable head, of interposed chamber-forming frames comprising rims with open-work flexible center-portions, ears projecting from said rims and containing openings alining in the press to form the feed-passage

thereto, ports leading from said passage into the chambers between frames, and filtering-cloth covering the frame-sides.

[Claims 6 to 12 not printed in the Gazette.]

872,009. HAY-RAKE. CHARLES PEARSON, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed July 15, 1907. Serial No. 383,903.



1. A dumping mechanism for hay rakes having, in combination, carrying wheels, a draft frame, a rocking head, toothed wheels rotatable with said carrying wheels, a rock-shaft mounted upon said head and having pawls at opposite ends thereof, said pawls being adapted to engage with said toothed wheels when said shaft is rocked in one direction, means for rocking said shaft, said means comprising a lever connected intermediate its ends to said shaft, and extending forward and in rear of the axis thereof, a bracket secured to said head and having a vertically disposed member, and a friction member mounted upon the rear end of said lever and held in yielding contact with said vertical member.

2. A dumping mechanism for hay rakes having, in combination, carrying wheels, a draft frame, a rocking head, toothed wheels rotatable with said carrying wheels, a rock-shaft mounted upon said head and having pawls at opposite ends thereof, said pawls being adapted to engage with said toothed wheels when said shaft is rocked in one direction, means for rocking said shaft, said means comprising a lever connected intermediate its ends to said shaft, and extending forward and in rear of the axis thereof, a bracket secured to said head and having a vertically disposed member, said vertical member having a slot therein, which slot receives the rear end of said lever, a coiled spring surrounding said lever and operative against the adjacent face of said vertical member to frictionally oppose a movement of the lever.

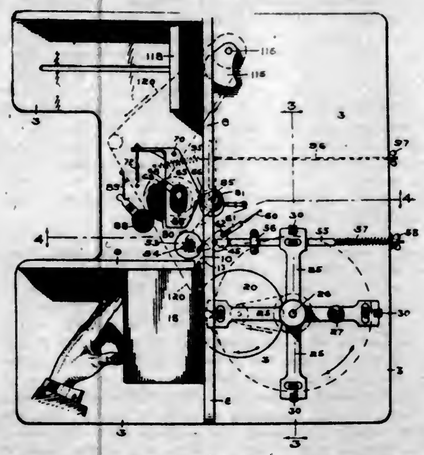
3. A dumping mechanism for hay rakes having, in combination, carrying wheels, a draft frame, a rocking head, toothed wheels rotatable with said carrying wheels, a rock-shaft mounted upon said head and having pawls at opposite ends thereof, said pawls being adapted to engage with said toothed wheels when said shaft is rocked in one direction, means for rocking said shaft, said means comprising a lever connected intermediate its ends to said shaft, and extending forward and in rear of the axis thereof, a bracket secured to said head and having a vertically disposed member, said member having a slot therein, which slot receives the rear end of said lever, a coiled spring surrounding said lever and operative against the adjacent inner wall of said vertical member to frictionally oppose a movement of said lever, the said inner wall of said vertical member having inclined surfaces in the direction of its length, against which said spring is frictionally operative.

4. A dumping mechanism for hay rakes having, in combination, carrying wheels, a draft frame, a rocking head, toothed wheels rotatable with said carrying wheels, a rock-shaft mounted upon said head and having pawls at opposite ends thereof adapted to engage with said toothed wheels, a bracket secured to said head intermediate its ends, said rock-shaft journaled in said bracket, a foot lever pivotally connected with the forward portion of said bracket, and extending forward and in rear of the pivotal axis, said rock-shaft having arms extending rearward, said arms being pivotally connected with said foot lever, a vertically disposed wall forming the rear portion of said bracket, said wall having a vertically arranged slot receiving the rear end of said foot lever, a coiled spring surrounding said lever and operative against the inner face of said wall in a manner to frictionally oppose a movement of said lever, the wall being inclined inward and upward and then rearward and upward from the axis of said rock-shaft.

5. In a hay rake and in combination, carrying wheels, a draft frame, a rocking head pivotally connected with said draft frame, a locking mechanism comprising a foot lever pivotally mounted intermediate its ends upon said draft frame, and extending forward and in rear of its pivotal axis, a bracket secured to said head, a link having its rear end pivotally connected with said bracket, the forward end of said link being provided with a hook-shaped end, laterally projecting guide pins secured to the rear end of said foot lever and having the hooked end of said link slidably received between said pins.

[Claim 6 not printed in the Gazette.]

872,010. STAMP-CANCELING MACHINE. CHARLES E. PHILLIPS, Indianapolis, Ind., assignor, by direct and meane assignments, of one-half to William W. Knapp and one-half to Iva A. Phillips, Indianapolis, Ind. Filed Feb. 18, 1907. Serial No. 358,097.



1. In a stamp canceling machine, the frame, a canceling disk mounted therein, means for operating said disk, a pressure-roller mounted adjacently to said canceling disk, means for rotating said roller, a cylinder surrounding said roller a trip means for normally holding said cylinder against rotation, said trip means being actuated by the envelops.

2. In a stamp canceling machine, the frame, a canceling disk mounted in said frame, a pressure-roller for holding the envelops against the canceling disk, means arranged on said frame for stacking the envelops, a rotatable disk located in and standing flush with the floor for starting the envelops, and adjustably mounted frictional contacts for engaging the envelops.

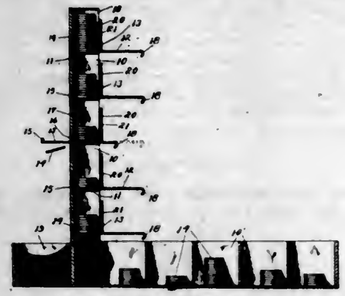
3. In a stamp canceling machine, the frame, a canceling disk mounted in said frame, a pressure-roller for holding the envelops against the canceling disk, and an adjustably mounted cam-shaped spacing device mounted independently of the canceling disk and actuated by the envelops for uniformly presenting the envelops to the canceling disk.

4. In a stamp canceling machine, the frame, a canceling disk mounted in said frame, a pressure-roller for holding the envelops against the canceling disk, an adjustably mounted cam-shaped spacing device mounted independently of the canceling disk and actuated by the envelops for uniformly presenting the envelops to the canceling disk, and means for applying a tension to said spacing device.

5. In a stamp canceling machine, the frame, a canceling disk mounted in said frame, a pressure-roller for holding the envelops against the canceling disk, an adjustably mounted cam-shaped spacing device mounted independently of the canceling disk and actuated by the envelops for uniformly presenting the envelops to the canceling disk, means for applying a tension to said spacing device, and means for returning said spacing device to normal.

[Claims 6 to 9 not printed in the Gazette.]

872,011. MEAL-CHECK SYSTEM. GEORGE A. PHILLIPS, Marion, Ind. Filed Jan. 14, 1905. Serial No. 241,050.



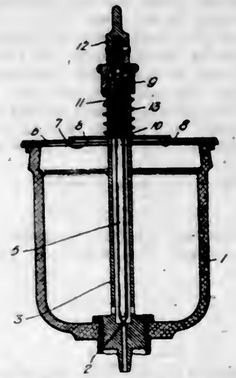
1. A ticket-system apparatus, consisting of a casing, one member of which is divided into a plurality of token-receiving compartments and another member of which is divided into a corresponding plurality of token-receiving compartments, a plurality of sets of tokens adapted to be placed in said compartments in sets, the compartments being distinguished, the tokens of each set being distinguished from each other in succession, means for ejecting tokens in succession from any one of the compartments of the second member, the compartments in the first member serving to receive in succession tokens previously ejected from the corresponding compartments of the second member.

2. A ticket system apparatus consisting of a substantially L-shaped casing, the horizontal arm of which is divided into a plurality of token receiving compartments and the vertical arm of which is divided into a corresponding plurality of token receiving compartments, a plurality of distinguished sets of tokens adapted to be placed in said compartments in sets, the compartments being distinguished correspondingly to the token-sets, the tokens of each set being distinguishable from each other in succession, means for ejecting tokens in succession from any one of the compartments in the vertical arm of the casing, the compartments in the horizontal arm serving to receive in succession the tokens ejected from the corresponding compartments of the vertical arm.

872,012. OIL-CUP LUBRICATOR. WILLIAM P. PHILLIPS, Boston, Mass. Filed Feb. 6, 1907. Serial No. 356,023.

1. A lubricator having a valve spring-pressed to its seat, said valve having a cap thereon, a valve casing, a screw threaded connection between said cap and the valve casing, means engaging said cap to lift the valve from its seat, a cover for the lubricator and a coiled spring interposed between and bearing against the cover and the cap.

2. A lubricator having a valve spring-pressed to its seat, a cap upon said valve interiorly screw threaded, a valve casing having an exterior screw threaded upper end, means mounted upon said valve and engaging said cap to lift the valve from its seat, a cover for the lubricator and a coiled spring interposed between and bearing against said cap and said cover.



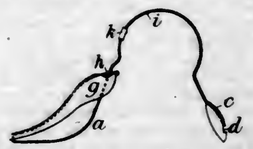
3. A lubricator having a valve 5, a coiled spring 11 to press the same to its seat, a cap 9 upon said valve, a valve casing 3, said cap and valve casing having a screw threaded engagement, a cam lever 12 mounted upon said valve, a cover 6 upon the lubricator, and a coiled spring 13 between and engaging with said cover and said cap.

4. A lubricator having a valve provided with a fixed shoulder, a member longitudinally and rotatably movable upon said valve, a coiled spring interposed between said shoulder and said member, a fixed part of the lubricator wherewith said member has an engaging connection, means upon the valve to lift the same from its seat, a cover for the lubricator, and a coiled spring surrounding said valve and engaging said cover and said member to maintain them in position.

5. A lubricator having a main cover provided with a filling opening concentrically formed therein, and a supplemental cover for such opening, said covers having relatively lateral movement.

[Claims 6 to 23 not printed in the Gazette.]

872,013. BOOT AND SHOE TREE OR EXPANDER. ARTHUR H. POWIS, Slindon, near Arundel, England, assignor of one-half to Tom Hartley Roberts, Preston, England. Filed Mar. 18, 1907. Serial No. 363,034.



1. In a boot tree or expander, the combination with a vamp piece and a heel piece of a spring connecting the vamp piece and the heel piece and bent laterally from the toe towards the rear to the shape or contour of the sole substantially as set forth.

2. In a boot tree or expander, the combination with a vamp piece and a heel piece of a spring made in the form of an upward and downward bent loop connecting the vamp piece and the heel piece and bent laterally from the toe towards the rear to the shape or contour of the sole substantially as set forth.

3. In a boot tree or expander, the combination with a vamp piece, a hole in said vamp piece near the upper and rear end thereof and a heel piece of a spring passing through the hole in the said vamp piece and connecting the latter and the heel piece, the said spring being bent from

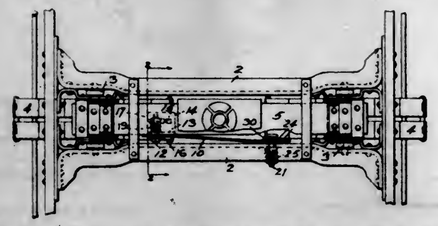
the toe towards the rear to the shape or contour of the sole substantially as set forth.

4. In a boot tree or expander, the combination with a vamp piece and a heel piece of a wire spring connected to said vamp piece and bent from the toe thereof on each side of the center of the sole laterally towards the rear to the shape or contour of the sole and connected to the heel piece substantially as set forth.

5. In a boot tree or expander, the combination with a vamp piece having an opening at the rear or upper end thereof and a heel piece, of a bent wire spring connecting said vamp piece and heel piece, said wire spring proceeding from the toe towards the rear on each side of the sole, being bent upward and passing through said opening and bent downwards towards the heel piece substantially as set forth.

[Claim 6 not printed in the Gazette.]

872,014. BOLSTER SWING-DAMPER. WILLIAM G. PRICE, New Castle, Pa. Filed Aug. 18, 1906. Serial No. 331,137.



1. In a car truck, the combination of the truck frame, a bolster mounted therein for both vertical and endwise movement, and friction mechanism between the bolster and truck frame and arranged to resist endwise movement of the bolster with increasing force as the bolster moves outwardly.

2. In a car truck, the combination of the truck frame, a bolster mounted therein for both vertical and endwise movement, and friction mechanism between the bolster and truck frame and arranged to automatically provide increasing friction as the bolster moves outwardly.

3. In a car truck, the combination of a truck frame including transoms, a bolster mounted between the transoms for both vertical and endwise movement, and friction mechanism between the transom and bolster and arranged to give automatically increasing friction as the bolster moves outwardly.

4. In a car truck, the combination of the transoms, a bolster mounted between the transoms for both vertical and endwise movement, and a friction plate having at one end frictional connection to the bolster and at its opposite end frictional connection to the transom.

5. In a car truck, the combination of a truck frame, a bolster mounted therein for both vertical and endwise movement, a friction plate having an adjustable frictional connection at one end to the bolster and an adjustable frictional connection at its opposite end to the frame.

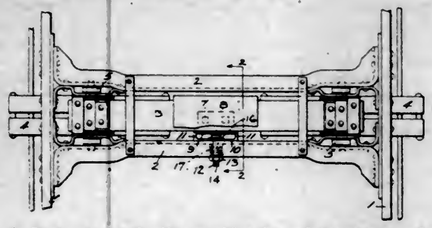
[Claims 6 to 12 not printed in the Gazette.]

872,015. BOLSTER SWING-DAMPER. WILLIAM G. PRICE, New Castle, Pa. Filed Aug. 18, 1906. Serial No. 331,138.

1. In a car truck, the combination of a truck frame, a bolster mounted therein for both vertical and horizontal movement, and a friction plate between the bolster and truck frame and arranged to resist the endwise but not the vertical movements of the bolster.

2. In a car truck, the combination of the truck frame, a bolster mounted therein for both vertical and horizontal movement, a friction plate connected to the frame, and connections between said friction mechanism and the bolster permitting a free vertical movement of the bolster.

3. In a car truck, the combination of transoms, a bolster mounted between the same for both vertical and horizontal movement, a plate movable longitudinally of the transom and having frictional connection therewith, and connections between said plate and the bolster providing a free vertical movement of the bolster.

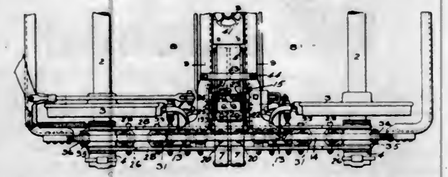


4. In a car truck, the combination of transoms, a bolster mounted between the same for both vertical and endwise movement, a plate longitudinally movable on the transom, a spring arranged to press said plate against the transom, and connections between said plate and the bolster permitting a free vertical movement of the bolster.

5. In a car truck, the combination of transoms, a bolster mounted therebetween for both vertical and endwise movement, a plate having a frictional connection with the transom, and connections between the plate and the bolster comprising members having a vertical sliding movement with reference to each other.

[Claims 6 to 9 not printed in the Gazette.]

872,016. TRUCK-FRAME. WILLIAM G. PRICE, New Castle, Pa. Filed Aug. 18, 1906. Serial No. 331,139.



1. In a truck, the combination of side frames, a bolster, and transoms secured to the side frames and having end portions extending substantially perpendicular to the side frames and having portions intermediate said end portions projecting toward the bolster.

2. In a truck, the combination of side frames, a bolster, and transoms secured to the side frames and having end portions projecting inwardly substantially perpendicular to the side frames and then bent toward the bolster for a portion of their length intermediate their ends.

3. In a truck, the combination of side frames, a bolster, transoms having end portions substantially perpendicular to the side frames and portions intermediate their ends projecting toward the bolster, the ends of said transoms lying at right angles to the main portion and secured to said side-frames.

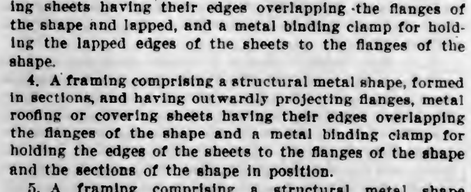
4. In a truck, the combination of a bolster, side-frames, transoms having end portions substantially perpendicular to the side frames and portions intermediate their ends projecting toward the bolster, the ends of said transoms being bent at right angles and secured to said side frames.

5. In a truck, the combination of side frames, a bolster, and angle-bar transoms secured to the side frames and projecting substantially perpendicularly to the side frames and then bent to project toward the bolster for a portion of their length intermediate their ends.

[Claims 6 to 16 not printed in the Gazette.]

872,017. TRUCK. WILLIAM G. PRICE, New Castle, Pa. Filed Jan. 17, 1907. Serial No. 352,710.

1. In a truck, the combination of side frames, a bolster, transoms secured to said side frames, a stiffener plate on the outside of said side frame, and gusset plates connecting said transoms to said stiffener plate.



2. In a truck, the combination of side frames, a bolster, transoms secured to said side frames, a stiffener plate secured to the outer face of said side frames, said stiffener plate projecting above said side frames, and gusset plates secured to said transoms and to the upper portion of said stiffener plate.

3. In a truck, the combination of side frames, a bolster, transoms secured to said side frames, a stiffener plate secured to the outer faces of said side frames, said stiffener plate extending above and below said side frames, and gusset plates secured to said transoms and to the upper portion of said stiffener plate.

872,018. METAL STRUCTURE. EPHRAIM B. REPP, New Windsor, Md. Filed July 5, 1907. Serial No. 382,286.

1. A framing comprising a structural metal shape having outwardly projecting flanges, metal roofing or covering sheets having their edges overlapping the flanges of the shape and a metal binding clamp for holding the edges of the sheets to the flanges of the shape.

2. A framing comprising a structural metal shape having outwardly projecting flanges, metal roofing or covering sheets having their edges overlapping the flanges, and a binding clamp having its edges tonged or bent to conform approximately to the flanges for holding the edges of the sheets to the flanges.

3. A framing comprising a structural metal shape having outwardly projecting flanges, metal roofing or covering sheets having their edges overlapping the flanges of the shape and lapped, and a metal binding clamp for holding the lapped edges of the sheets to the flanges of the shape.

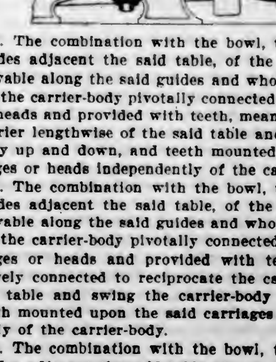
4. A framing comprising a structural metal shape, formed in sections, and having outwardly projecting flanges, metal roofing or covering sheets having their edges overlapping the flanges of the shape and a metal binding clamp for holding the edges of the sheets to the flanges of the shape and the sections of the shape in position.

5. A framing comprising a structural metal shape formed in sections having outwardly projecting flanges, metal roofing or covering sheets having their edges overlapping the flanges of the shape, a metal binding clamp for holding the edges of the sheets to the flanges of the shape and the outer parts of the sections of the shape in position and means for securing the inner parts of the sections of the shape together.

[Claims 6 to 12 not printed in the Gazette.]

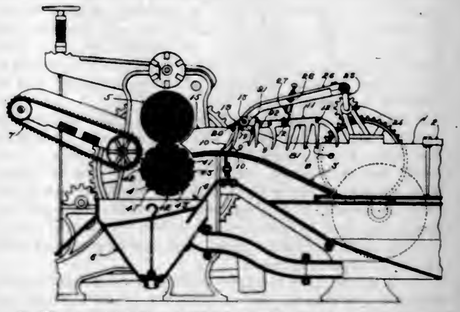
872,019. WHORL FOR CAP SPINNING-FRAMES. AUGUST A. SACK, Providence, R. I. Filed Apr. 9, 1906. Serial No. 310,596.

1. In a cap spinning machine, the combination with a bearing disk having its upper portion circularly recessed, of a whorl having its lower flat face resting directly upon the upper edge of the surrounding wall of the recess, a spindle passed through said disk and whorl, the lower face of the whorl having a recess coincident with the recess in the disk, and a spindle tube in said whorl and terminating at its lower end above the recess in the base of the whorl.



2. In a cap spinning machine, the combination with a bearing disk having its upper portion circularly recessed, of a whorl having its lower flat face resting directly upon the upper edge of the surrounding wall of the recess, a spindle passed through said disk and whorl, the lower face of the whorl having a recess coincident with the recess in the disk, a spindle tube in said whorl and terminating at its lower end above the recess in the base of the whorl, and a sliding rail provided with a lubricating chamber independent of said recesses.

872,020. WOOL-WASHING MACHINE. FREDERICK G. SARGENT, Graniteville, Mass., assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass. Filed Mar. 5, 1906. Serial No. 304,209.



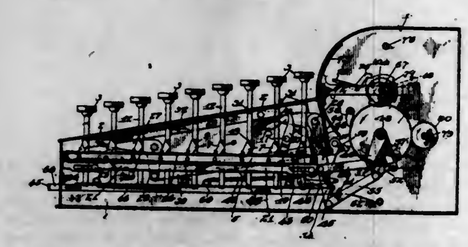
1. The combination with the bowl, the table, and fixed guides adjacent the said table, of the carriages or heads movable along the said guides and wholly supported thereby, the carrier-body pivotally connected with said carriages or heads and provided with teeth, means to reciprocate the carrier lengthwise of the said table and swing the carrier-body up and down, and teeth mounted upon the said carriages or heads independently of the carrier-body.

2. The combination with the bowl, the table, and fixed guides adjacent the said table, of the carriages or heads movable along the said guides and wholly supported thereby, the carrier-body pivotally connected with the said carriages or heads and provided with teeth, a crank operatively connected to reciprocate the carrier lengthwise of the table and swing the carrier-body up and down, and teeth mounted upon the said carriages or heads independently of the carrier-body.

3. The combination with the bowl, the table, and fixed guides adjacent the said table at opposite sides of the lat-

ter, of a vertically-swinging carrier-body provided with teeth, carriages or heads having the said carrier-body connected pivotally thereto and having the bases or supporting portions thereof extended in the direction of the length of the guides and working upon the said guides, carrier-actuating means operatively connected with the said carriages or heads at an intermediate point in the effective length of the latter, whereby the carriages or heads are prevented from tilting or turning under the application of moving power thereto, and teeth mounted upon the said carriages or heads independently of the carriage-body.

872,021. COMPUTING-MACHINE. DANIEL W. SHIEK, Chicago, Ill., assignor of one-half to Walter L. Milliken, Indianapolis, Ind. Filed Jan. 11, 1906. Serial No. 295,670.



1. In a device of the kind described, computing and indicating mechanism, and a plurality of series of controlling keys therefor, in combination with a pair of bell crank levers for each series, bars pivotally joining the corresponding ends of each pair of levers, means for transmitting the movement of each of the several keys in a series to one of said bars, and intermediate mechanism between the bars and the computing and indicating mechanism.

2. In a device of the kind described, computing and indicating mechanism, and a plurality of controlling keys therefor, in combination with a plurality of pairs of bell crank levers, bars pivotally joining the corresponding ends of each pair of levers, means for transmitting the movement of the keys to said bars, and resilient intermediate mechanism between the bars and the computing and indicating mechanism.

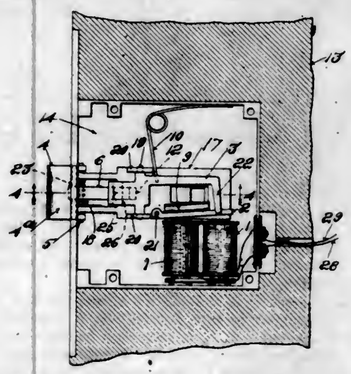
3. In a device of the kind described, computing and indicating mechanism, and a plurality of series of controlling keys therefor, in combination with a pair of bell levers for each series, means for transmitting the movement of each of the several keys in a series to one of said bars, intermediate mechanism between the bars and the computing and indicating mechanism, and means for returning said bell crank levers and their associated parts to their normal positions.

4. In a device of the kind described, computing and indicating mechanism, and a plurality of controlling keys therefor, in combination with a plurality of pairs of bell crank levers, bars pivotally connecting the corresponding ends of each pair of levers, means for transmitting the movement of the keys to said bars, intermediate mechanism between the bars and the computing and indicating mechanism, and resilient means for returning said bell cranks and their associated parts to their normal positions.

5. In a machine of the kind described, computing and indicating mechanism, a series of controlling keys therefor, and means for rendering all other keys in the series inoperative during the operation of any one of their number, in combination with a pair of bell crank levers, bars pivotally connecting the corresponding ends of the levers, means for transmitting the movement of each of the several keys to one of said bars, and intermediate mechanism between the bars and the computing and indicating mechanism.

[Claims 6 to 52 not printed in the Gazette.]

872,022. DOOR FASTENER AND OPENER. CHARLES SMITH, Boston, Mass. Filed Apr. 24, 1907. Serial No. 369,911.



1. A door fastener having a hinged catch which is adapted to engage with a socket in the door casing and which is released by a straight line pressure at right angles with the plane of the door, and a spring which normally holds the catch in engagement with said socket and throws the catch back into engaging position when the door is closed, a lock which prevents the catch from turning until the lock is released, a case therefor, a longitudinally movable shaft which extends through the case, means connected with said shaft whereby the longitudinal movement of the shaft will cause said means to release the lock, intermediate mechanism connected with said shaft provided with a key slot and a key which fits in said slot and is adapted to actuate said intermediate mechanism and said shaft by a straight line push whereby said unlocking means are operated to release the lock.

2. A door fastener having a hinged catch which is adapted to engage with a socket in the door casing and which is released by a straight line pressure at right angles with the plane of the door, and a spring which normally holds the catch in engagement with said socket and throws the catch back into engaging position when the door is closed, a lock which prevents the catch from turning until the lock is released, a case therefor, a movable shaft which extends through the case, means connected with said shaft whereby the movement of the shaft will cause said means to release the lock, intermediate mechanism connected with said shaft provided with a key slot and a key which fits in said slot and is adapted by a straight push to actuate said intermediate mechanism and said shaft whereby said unlocking means are operated to release the lock.

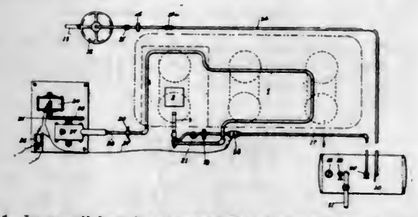
3. A door fastener having a hinged catch mounted on a slide plate, a case in which said slide plate is held in such position that the catch is normally adapted to engage with the socket in the door casing, said catch being adapted to be turned on its pivot into its case when the closed door is pushed from one side or pulled from the other and thereby permit the door to be opened, a spring which turns the catch again into its normal position after the door is opened, a cam face on said catch which is adapted to engage the socket on the door casing when the door is being closed and thereby move the slide plate and catch carried thereon back into the lock case, a spring which after the door is closed forces the slide plate forward to its normal position so that the catch will engage with the socket in the door casing, a lever pivotally mounted on said slide plate, a lever pivoted to said catch and engaged by said first lever, a pivoted locking lever which normally engages said second lever and thereby prevents the said catch from turning on its pivot, and means for releasing said locking lever from engagement with said second lever whereby the first lever is permitted to move and the catch is free to turn on its pivot.

4. A door fastener having a hinged catch mounted on a slide plate, a case in which said slide plate is held in such position that the catch is normally adapted to engage with the socket in the door casing, said catch being adapted to be turned on its pivot into its case when the closed door is pushed from one side or pulled from the other and thereby permit the door to be opened, a spring which turns the catch again into its normal position after the door is opened, a cam face on said catch which is adapted to engage the socket on the door casing when the door is being closed and thereby move the slide plate and catch carried thereon back into the lock case, a spring which after the door is closed forces the slide plate forward to its normal position so that the catch will engage with the socket in the door casing, a lever pivotally mounted on said slide plate, a lever pivoted to said catch and engaged by said first lever, a pivoted locking lever which normally engages said second lever and thereby prevents the said catch from turning on its pivot, a movable shaft which extends through said lock case, a cam face on said locking lever and a projection on said shaft which when the shaft is moved engages said cam face and actuates the locking lever and thereby releases the latch so that it is free to turn on its pivot.

5. A door fastener having a hinged catch which is adapted to engage with a socket in the door casing and which is released by a straight line pressure at right angles with the plane of the door, an electro-magnet, an armature controlled by said magnet, intermediate mechanism connected with said catch and normally engaged by said armature whereby the catch is prevented from turning on its pivot.

[Claims 6 to 9 not printed in the Gazette.]

872,023. OIL-BURNING SYSTEM. IRA E. SMITH, Stockton, Cal. Filed July 30, 1906. Serial No. 328,307.



1. In an oil burning apparatus, a fire chamber, a burner associated with said fire chamber, a fuel supply pipe connected to said burner, an air supply pipe leading through said fire chamber and connected at one end to said burner, means connected to the other end of said latter pipe for supplying air under pressure thereto, an electric motor, connecting means between said motor and the air supplying means, a valve in said fuel supply pipe and provided with a projecting stem, an electro magnet adapted when energized to influence said stem and maintain said valve open, a spring operating to close said valve when the electro magnet is deënergized, and electric conductors between said magnet and motor.

2. In an oil burning apparatus, a fire chamber, a burner associated with said fire chamber, a fuel supply pipe connected to said burner, an air supply pipe leading through said fire chamber and connected at one end to said burner, a positive pressure rotary air pump connected to the other end of said air pipe, an electric motor, connecting means between said motor and the air pump, a valve in the fuel supply pipe and provided with a projecting stem, an electro magnet adapted when energized to influence said stem and maintain said valve open, a spring operating to close said valve when the electro magnet is deënergized, and electric conductors between said magnet and motor.

872,024. TUBE-STOPPER. SAMUEL SMITH, Surrey Centre, British Columbia, Canada. Filed July 15, 1907. Serial No. 383,816.

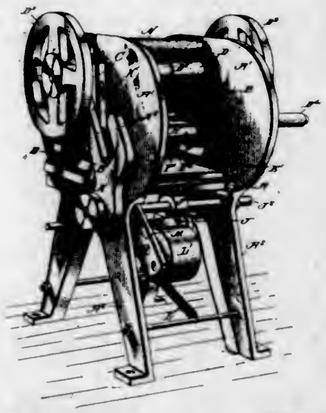
1. As a tube stopper, two pistons connected together a certain distance apart each piston comprising, a head having a circumferential recess on its outer face and an annular recess on its opposite or inner face and extending under the circumferential recess, apertures connecting the inner and outer recesses, a ring of packing in the outer recess, and a follower secured to the outer face of the head to retain such packing in place.



2. As a tube stopper, two pistons connected together a distance apart each piston comprising, a piston head having a circumferential recess on its outer face and an annular recess on its opposite or inner face the latter recess extending under the circumferential recess, apertures connecting the inner and outer recesses, a thin metal open ring fitting in the circumferential recess over the aforementioned apertures, a ring of packing outside of the metal ring in the recess the joint of which is approximately opposite to that of the metal ring, and a follower secured to the head to retain such packing in place.

3. As a tube stopper, a plurality of pistons connected together at intervals apart, each piston comprising a head having a circumferential recess 9 on its outer face, and an annular recess 10 on its inner face, said circumferential recess 9 extending over the annular recess 10, and having a series of radial apertures 11 communicating between the recesses 9 and 10, a follower disk 6 held adjacent the head and a ring 8 of packing material held in the outer recess 9, substantially as shown and described.

872,025. MACHINE FOR BENDING MATCH-SAFE BLANKS. WILLIAM F. SMITH and MARTIN JOHNSON, Coshocton, Ohio. Filed Jan. 16, 1907. Serial No. 352,585.



1. A device of the kind described comprising a machine having sides provided with angled slots, a forming block having a concaved portion, a roller working in said slots and adapted to enter the concavity, and means actuated by travel of the roller for clamping a blank upon the forming block.

2. A machine of the kind described comprising parallel sides provided with slots, each slot having a vertical and a horizontal portion, rack bars carried by the sides and parallel to the slots, a roller traveling in the slots, pinions carried by the roller engaging the rack bars, a forming block having a concaved portion to receive the roller, said block being arranged adjacent the ends of the horizontal portions of the slots and means for holding a blank upon said block.

3. A machine of the kind described comprising a forming block having a concaved portion, and being provided with

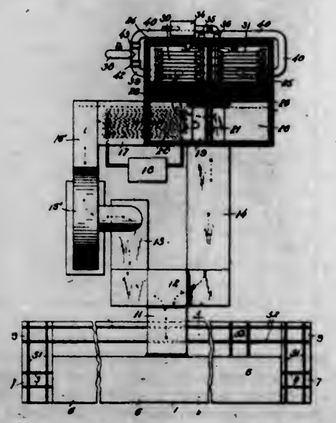
a plane surface in advance of the concaved portion, a hollow ground plate mounted upon said forming block and over-hanging the concaved portion and a portion of the plane surface, an adjustable plate mounted upon the first mentioned plate, V-shaped ribs formed transversely upon the first mentioned plate, means for clamping a blank, upon the first mentioned plate and upon the ribs, one edge of the blank being in engagement with the front edge of the adjustable plate, and a roller adapted to move toward and away from the concaved portion of the forming block.

4. A machine of the kind described comprising slotted sides, a shaft, a cam thereon, a bifurcated arm fixed upon the shaft, the bifurcated portion of the arm having members which alternately lie across one of the slots, a roller traveling in said slots and engaging said members, a forming block, a clamping lever and a rocking lever having one end in engagement with the clamping lever and the other end in engagement with the cam.

5. A machine of the kind described comprising a frame having parallel side members, said members being slotted vertically and horizontally, the slots of each side communicating, rack bars carried by the sides and parallel to the slots, a forming roller, pinions carried by the forming roller and traveling upon the rack bars, the forming block having a concaved portion adapted to receive said roller, a clamping lever for holding a blank upon the forming block, a shaft, a cam thereon, a lever having one end in engagement with the clamping lever and the other end in engagement with the cam, and an arm fixed upon the shaft and bifurcated, one member of the bifurcation being longer than the other and extending diagonally across one of the vertical slots when the parts are in their normal position, a shorter member being drawn across said slot when the longer member is thrown out of position by the roller.

[Claims 6 to 16 not printed in the Gazette.]

872,026. DEHYDRATING APPARATUS. FRANK T. STARE, Waukesha, Wis., assignor to American Dehydrating Company, a Corporation of Wisconsin. Filed May 21, 1907. Serial No. 374,965.



1. In a dehydrating apparatus, the combination with a chamber in which the material to be treated is placed, a condenser and an air drier, of means to maintain a current of air flowing through said chamber, condenser and drier and means to reverse the direction of the current of air through said chamber.

2. In a dehydrating apparatus, the combination with a chamber in which the material to be treated is placed, a condenser and an air drier, of means to maintain a current of air flowing to and from said chamber and through said condenser and drier constantly in the same direction and means to reverse the flow of air through said chamber.

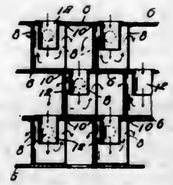
3. In a dehydrating apparatus, the combination with a tunnel to receive the material being treated and having apertures in its roof and floor, of an air-flue running longitudinally along the top thereof and an air-flue running longitudinally along the bottom thereof, a pipe communicating with one of said flues at its center, a second pipe communicating with the other of said flues at its ends, a valve-casing to which said pipes lead, means to maintain a constant flow of air to and from said casing, and a valve in said casing to cause the air to either enter said tunnel through the air-flue at the bottom and issue through the air-flue at the top, or vice versa.

4. In a dehydrating apparatus, the combination with a tunnel to contain the material to be treated and having in its roof and floor, an air-flue running along above the roof, and an air-flue running along beneath the floor, said air-flues communicating with said tunnel through said apertures, of a valve-casing, two air-conduits leading thereto, a moisture extractor, means to maintain a current of air flowing in the same direction from said valve-casing through said moisture-extractor and back to said valve-casing, a pipe leading from said casing to the center of one of said flues, a second pipe leading from said casing to the ends of the other of said flues, and a single valve in said casing to cause the air to enter either of said pipes, pass through the tunnel and issue from the other.

5. In a dehydrating apparatus, the combination with a chamber for the material to be treated, of a condenser, an air-drier, and a valve-casing, means to cause a constant flow of air in the same direction, from said casing, through said condenser, and drier, and back to said casing, a pipe leading from said casing to the top of said chamber, a second pipe leading from said casing to the bottom of said chamber, and a single valve in said casing to reverse the direction of the air flowing through said pipes and the chamber.

[Claims 6 to 12 not printed in the Gazette.]

872,027. AIR-DRIER. FRANK T. STARE, Waukesha, Wis., assignor to American Dehydrating Company, a Corporation of Wisconsin. Filed May 27, 1907. Serial No. 375,864.



1. An air drier, comprising a superimposed series of layers of receptacles for moisture-absorbing substances, the receptacles of each layer lying over the spaces between the receptacles of the layer below, each receptacle being open at the top and having openings in its side walls and a perforated plate interposed between each pair of layers, the openings in said plates lying over the open ends of the receptacles of the layer beneath.

2. An air drier comprising a casing provided with an apertured floor, a series of superimposed layers of cups or receptacles supported on said floor, and a perforated plate interposed between each two layers.

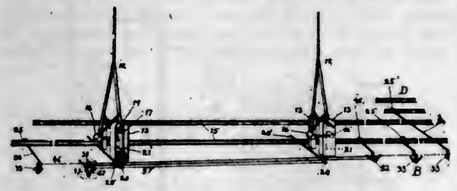
3. An air drier comprising a casing provided with air inlets and outlets at its top and bottom and with an apertured floor, superimposed series of layers of cups supported on said floor, the cups of each layer being staggered relatively to the cups of the adjacent layers, and a perforated plate interposed between each pair of layers.

4. An air drier, comprising a series of superimposed layers of cups of moisture-absorbing material, the cups of one layer lying over the spaces between the cups of the layer below, a perforated plate interposed between each two layers of cups and tubular funnels supported by said plates and projecting downwardly into said cups.

5. An air drier comprising a series of superimposed layers of cups having openings in their side walls, the cups of each layer lying over the spaces between the cups of the layer below, a perforated plate interposed between each two layers and a tubular funnel supported in the openings of said plates, and projecting downwardly into said cups below the level of said openings in their walls.

[Claim 6 not printed in the Gazette.]

872,028. RAILWAY-GATE. FRANK J. STEIN, Davenport, Iowa. Filed May 13, 1907. Serial No. 373,344.

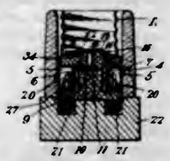


1. A railway gate hung on journal bearings for up and down movement and balanced to be moved one way by gravity; a ratchet toothed segment mounted on a shaft journaled in fixed bearings; a lever hung to swing beside the said segment and a pawl on the lever to engage the segment teeth; a detent engaging the said teeth and pivoted to a fixture; an actuating pedal located beside a rail in the path of car wheel flanges and mounted on a shaft which passes under the rail; an arm fixed to the shaft; a lever journaled to a fixture to be engaged by the arm when moving in one direction; a connection between the last named lever and the pawl-carrying lever, and a connection between the gate and the toothed segment, whereby the passing of car wheels along the said rail will actuate the gate to swing, step by step, in the direction opposed to the action of gravity.

2. The combination of a railway gate journaled and balanced to swing one way by the action of gravity; a ratchet-toothed segment journaled to swing in bearings, and connections between it and the gate; a pawl and a detent engaging the teeth of the said segment; an actuating pedal located in the path of a passing car wheel, and connections between the said pawl and pedal; a double cam hung beside the said segment to engage both said pawl and detent, and a release lever located in the paths of both the said segment and cam lever.

3. In railway gates, a toothed segment mounted for reciprocating movement; an actuating pawl and a detent for the segment; a double cam mounted beside the said segment to engage both pawl and detent; a releasing lever located in the paths of both the said segment and the cam, and connections substantially as shown and described.

872,029. MOLDING-RECEPTACLE. JAMES S. STEWART, New York, N. Y., assignor to Annie Stewart, New York, N. Y. Filed June 29, 1906. Serial No. 323,988.



1. An electrical apparatus comprising a block having a sleeve thereon, a clip arranged to clamp said sleeve in place and having a hole therein and a central stud terminal projecting through said hole.

2. An electrical appliance comprising a block having a protuberance thereon, a central stud terminal inset in said protuberance, a clip wholly surrounding said protuberance, and a sleeve held in place by said clip.

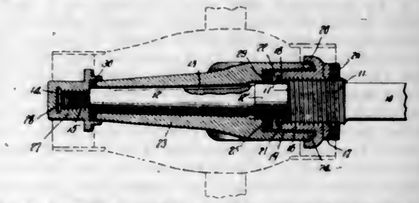
3. An electrical appliance comprising a block having a protuberance thereon, a central stud terminal inset in said protuberance, a clip wholly surrounding said protuberance and separated from said central terminal by the material of the protuberance, and a threaded shell clamped in place by said clip.

4. An electrical appliance comprising a block, a sleeve, a clip for holding said sleeve on said block, and a central stud terminal separated from said clip on all sides by a wall or protuberance on said block, said terminal and clip lying on opposite sides of the wall or protuberance at all points.

5. An electrical appliance comprising a single integral block of insulating material having passages on either side to receive circuit wires, the material of the block being extended at the ends of said passages to overhang said circuit wires in the plane of the lower face of the block whereby the wires are deflected into the grooves of a molding by said overhanging portions.

[Claims 6 to 19 not printed in the Gazette.]

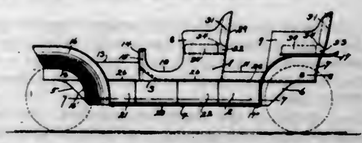
872,030. AXLE-SPINDLE. JAMES STICKNEY, Bad Axe, Mich. Filed Apr. 27, 1907. Serial No. 370,678.



1. The combination with an axle having a threaded enlargement, an intermediate cylindrical portion, a tapering spindle and a threaded outer extremity, of a shoulder nut adjustably screw threaded upon the aforesaid threaded enlargement and provided with an inwardly projecting flange fitted upon said cylindrical portion of the axle, the said nut having a smooth and slightly tapering outer surface, a metallic wear ring slidably fitted upon the axle against the said flange, a hub thimble having tapering interior portions to coöperate with the aforesaid tapering members and an intermediate shoulder to abut against said wear ring, and means to prevent outward displacement of the thimble with respect to the axle.

2. In a device of the class described, the combination of an axle having a threaded enlargement, an adjacent smooth portion, and a tapering spindle, an adjustable shoulder nut screw threaded upon the aforesaid enlargement of the axle, said shoulder nut having an inwardly projecting flange and an outer smooth bearing surface, a wear ring on the smooth portion of the axle and adjacent to the said flange, a hub thimble fitted upon the said smooth bearing surface of the shoulder nut and the tapering spindle, and having an intermediate shoulder abutting against said wear ring, a wear ring at the outer end of the spindle adjacent to the outer end of the thimble, means to retain the outer wear ring and thimble in adjusted position with respect to the axle, and means to adjust and lock the said shoulder nut in position upon the said axle enlargement.

872,031. AUTOMOBILE-BODY. WILLIE O. THOMAS, Riverside, and HARRY G. MOORE, Chicago, Ill. Filed Aug. 29, 1906. Serial No. 332,412.



1. An automobile body having side-bodies formed of sheet metal extending continuously both above and below the floor plane of the body throughout the principal length of the body, and laterally outstanding structural members rigidly secured to said side-bodies below said floor plane

and forming reinforcements to the transverse and vertical strength of the side-bodies.

2. An automobile body having side-bodies formed of sheet metal constructed to extend uninterruptedly both above and below the floor plane of the body throughout the principal length of the latter, offset rib or flange-like portions arranged to extend longitudinally of each side body at or near the floor plane and laterally extending structural members rigidly secured to said side bodies below said floor plane and forming reinforcements to the transverse and vertical strength of the side bodies.

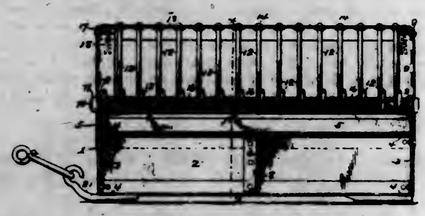
3. An automobile body having side bodies formed of sheet metal constructed to extend uninterruptedly both above and below the floor plane of the body throughout the principal length of the latter, the portions below the said floor plane being offset to stand in upright planes inside of the planes of the upper parts of the body, one or more sheet metal wheel guards secured edgewise and directly against the exterior of each side body and a foot board secured edgewise against the lower marginal portion of each side-body.

4. An automobile side body consisting of a sheet of metal having its marginal upper portions shaped to the contour of the box portion of the vehicle, an integral channel shaped extension extending along its lower margin below the floor plane of the vehicle, a sheet metal wheel guard flanged and riveted edgewise against said side body near each end thereof, and a foot board secured to extend along the lower edge of the side body and having its adjoining edge overlapping and secured to the lower flange of the channel-portion of the side-body, the lower ends of said wheel guards being flanged and lapped upon, and secured to the corresponding ends of said foot board.

5. An automobile side body consisting of a sheet of metal having its marginal upper portions shaped to the contour of the box portion of the vehicle, an integral channel-shaped extension extending along its lower margin below the floor plane of the vehicle, a sheet metal wheel guard flanged and riveted edgewise against said side body near each end thereof, a foot board secured to extend along the lower edge of the side body and having its adjoining edge overlapping and secured to the lower flange of the channel-portion of the side body, the lower ends of said wheel guards being flanged and lapped upon and secured to the corresponding ends of said foot board and one or more boxes fitted into the channel portion, resting upon the foot board and secured rigidly to each.

[Claims 6 to 10 not printed in the Gazette.]

872,032. COMBINED FEED-RACK, FEED-TROUGH, AND ANIMAL-PEN. WILLIAM J. TOLLE, Reesville, Ohio. Filed Feb. 12, 1907. Serial No. 357,055.

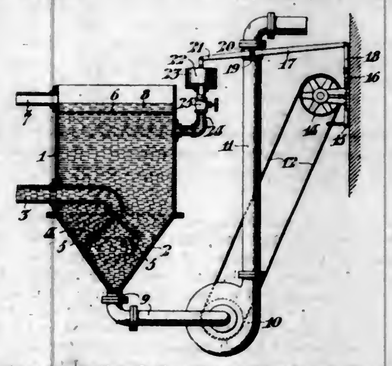


1. A device of the character described, comprising a pen provided with corner posts projecting above the same, troughs secured to said posts and constituting a cover for the pen, and a feed rack over the troughs and supported by said corner posts.

2. In a device of the character described, the combination with two pens, of troughs closing the top of the pens and permitting ventilation between and around the troughs, and a feed rack above the troughs.

3. A device of the character described, comprising a metallic chamber, a partition dividing said chamber into two pens and having an opening, sliding doors for both pens, a door for closing the opening in the partition dividing the pens, feed troughs closing the tops of the pens and a rack above the feed troughs.

872,033. DEVICE FOR SEPARATING MATERIALS HELD IN SUSPENSION BY LIQUIDS. CHARLES N. WAITE, Wilmington, Del. Filed Apr. 7, 1906. Serial No. 310,420.



1. In a separating device, the combination with a tank; of a screen dividing said tank; an inlet pipe for unseparated materials, arranged on one side of said screen; an outlet for separated residue arranged upon the same side of said screen; an outlet for strained liquid, arranged on the opposite side of said screen; means for effecting the discharge of the separated residue; and means responsive to abnormal increase of pressure beneath the screen for actuating the controlling mechanism of said discharging means.

2. In a separating device, the combination with a receiving tank; of a screen dividing said tank; an inlet pipe for unseparated materials, arranged below the screen; an outlet for separated residue, also arranged below said screen; an outlet for strained liquid arranged above said screen; a pump connected with the outlet for separated residue; actuating mechanism for said pump; a secondary tank arranged at a higher level than the normal water level of the main tank; a float arranged in said secondary tank; and means operatively connected with said float for controlling the actuating mechanism of the pump.

3. In a separating device, the combination with a receiving tank; of a screen dividing said tank; an inlet pipe for unseparated materials, arranged below the screen; an outlet for separated residue, also arranged below said screen; an outlet for strained liquid arranged above said screen, and adapted to maintain a body of liquid at the maximum water level of the receiving tank; a pump connected with the outlet for separated residue; actuating mechanism for said pump; a secondary tank arranged at a higher level than the normal water level of the main tank; a float arranged in said secondary tank; and means operatively connected with said float for controlling the actuating mechanism of the pump.

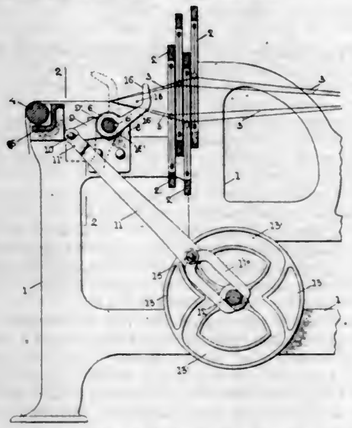
872,034. CASKET-HANDLE. JOSEPH H. WALKER, Grand Rapids, Mich. Filed Aug. 13, 1907. Serial No. 388,310.



1. In a casket handle, a handle member having plane end surfaces at right angles to its axis, brackets having plane surfaces opposite to the ends of the handle and curved slots concentric with the axis of the handle, pivot pins connecting the handle and bracket, and stops fixed in the handle and traversing the slots.

2. In a casket handle, the combination of a handle having plane end surfaces at right angles to its axis, brackets each having a plane surface opposite the respective end of the handle and each also having an opening for the pivot pin and a curved slot concentric with said opening, pivot pins in the ends of the handle and in said openings, and stops each comprising a rod bent twice at right angles and having one end traversing the slot in a bracket and having its other end and its middle portion inserted in the handle.

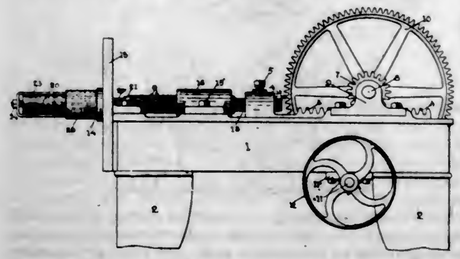
872,035. LOOM. WILLIAM WATTIE, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Original application filed Feb. 3, 1905, Serial No. 243,925. Divided and this application filed Apr. 19, 1907. Serial No. 369,069.



1. A filling beating up motion for a loom, comprising a shaft, and a series of filling beating up blades thereon, said blades having a rocking motion, and in their lowest position extending above the warps in the upper plane of the shed, to separate the same and form guides therefor.

2. A filling beating up motion for a loom, comprising a rock shaft, and a series of filling beating up blades fast thereon, said blades in their lowest position extending above the warps in the upper plane of the shed, to separate the same and form guides therefor, and means for positively moving said blades to beat up the filling.

872,036. MACHINE FOR CUTTING SPIRAL OIL-CHANNELS IN BOXES, BEARINGS, &c. WILLIAM WATTIE, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed July 1, 1905. Serial No. 267,905.



1. In a machine of the class described, the combination with a longitudinally reciprocating rack, of a longitudinally movable and rotary spindle connected with said rack, a second spindle connected with the first mentioned spindle to move therewith, and carrying a movable cutting tool, and said cutting tool, a guide pin extending loosely within the spindle carrying the cutting tool, and means for holding said guide pin stationary longitudinally relatively to said spindle and said cutting tool, and said guide pin engaged by the cutting tool and moving the cutting tool into operative position, and allowing the cutting tool to be moved out of operative position.

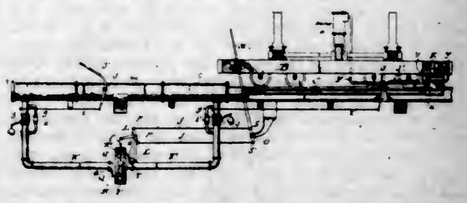
2. In a machine of the class described, the combination with a longitudinally movable and rotary spindle carrying a movable cutting tool, and said cutting tool, of a guide pin extending loosely within said spindle, a yoke attached to said guide pin, to hold the same stationary longitudinally relatively to said cutting tool, and said pin engaged by the cutting tool during the longitudinal and rotary movement of said spindle, to move the cutting tool into operative position, and release the cutting tool, to allow it to be moved out of operative position.

872,037. LACING DEVICE FOR BOOTS AND SHOES. MELBOURNE W. WHITE, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 16, 1906. Serial No. 317,190.



A shoe having its upper provided with relatively small eyelets at its lower portion where the laces are not removed and provided at its upper portion with a series of pairs of larger eyelets to facilitate the removal and insertion of the laces.

872,038. SAWMILL. THEODORE S. WILKIN, Milwaukee, Wis. Filed Mar. 7, 1904. Serial No. 196,875.



1. In a power feed cylinder, the combination of a cylinder, a piston therein, valve mechanism in connection with the cylinder and adapted for controlling the admission and exhaust of the fluid under pressure to and from the cylinder, means for operating the valve mechanism whereby the fluid under pressure is admitted to one or both sides of the piston in the cylinder at all times either when the piston is moving or at rest, and when admitted to both sides thereof an equal pressure is maintained on said sides, and means for conveying the fluid pressure so admitted to the cylinder to a mechanism to be operated thereby.

2. In a power feed cylinder, the combination of a cylinder, a piston therein, a hollow piston rod extending from the piston and constructed to receive the fluid under pressure which enters the cylinder from either end thereof and convey said fluid to a mechanism to be operated, valve mechanism in connection with the cylinder and adapted for controlling the admission and exhaust of the fluid under pressure to and from the cylinder, and means for operating the valve mechanism, whereby the fluid under pressure is admitted to one or both sides of the piston in the cylinder at all times either when the piston is moving or at rest, and when admitted to both sides thereof an equal pressure is maintained on said sides, the fluid pressure so admitted to the cylinder passing into the hollow piston rod to the said mechanism to be operated.

3. In a power feed cylinder, the combination of a cylinder, a piston therein, check valves on both sides of the piston, one adapted to open and the other adapted to close when pressure is exerted against the piston in one direction, and vice versa when pressure is exerted against the piston in the opposite direction, valve mechanism in connection with the cylinder and adapted for controlling the admission and exhaust of the fluid under pressure to and from the cylinder, means for operating the valve mechanism, whereby the fluid under pressure is admitted to one or both sides of the piston in the cylinder at all times either when the piston is moving or at rest, and when admitted to both sides thereof an equal pressure is maintained on said sides, and means for conveying the fluid pressure so admitted to the cylinder to a mechanism to be operated.

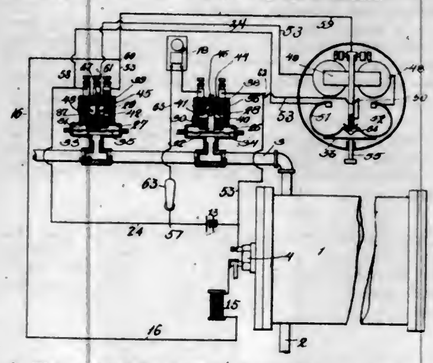
4. In a power cylinder, the combination of a cylinder, a hollow piston therein, check valves at opposite ends of the hollow piston, one adapted to open and the other to close when pressure is exerted against the piston in one direction, and vice versa when pressure is exerted thereagainst in the opposite direction, valve mechanism in connection with the cylinder and adapted for controlling the admission and exhaust of the fluid under pressure to and from the cylinder, means for operating the valve mechanism, whereby the fluid under pressure is admitted to one or both sides of the piston in the cylinder and into the interior of said piston at all times either when the piston is moving or at rest, and when admitted to both sides thereof an equal pressure is maintained on said sides and within said piston, and means for conveying the fluid under pressure from the interior of the hollow piston to a mechanism to be operated.

5. In a power feed cylinder, the combination with a cylinder, a hollow piston therein, check valves at opposite ends of the hollow piston, one adapted to open and the other to close when pressure is exerted against the piston in one direction, and vice versa when pressure is exerted thereagainst in the opposite direction, a hollow piston rod in communication with the interior of the hollow piston, and extending from said piston and adapted to convey the fluid under pressure from the interior of the piston to a mechanism to be operated, valve mechanism in connection with the cylinder and adapted for controlling the admission and exhaust of the fluid under pressure to and from the cylinder, means for operating the valve mechanism, whereby the fluid under pressure is admitted to one or both sides of the piston in the cylinder and into the interior of said piston at all times either when the piston is moving or at rest, and when admitted to both sides an equal pressure is maintained on said sides and within said piston, and means for conveying the fluid under pressure from the interior of the hollow piston through the hollow piston rod, to the said mechanism to be operated.

[Claims 6 to 16 not printed in the Gazette.]

872,039. AUTOMATIC ALARM AND STOPPING DEVICE FOR ENGINES. DANIEL B. ADAMS, Summitville, N. Y. Filed Sept. 30, 1903. Serial No. 175,174.

1. The combination with an internal combustion engine having a water-cooled cylinder, a water pipe therefor, electric igniting means comprising an ignition circuit, a diaphragm chamber connected to said water pipe, and a diaphragm arranged to be operated by variation in water pressure in said pipe, of contact points operated by said diaphragm, and controlling said ignition circuit.



2. The combination with an internal combustion engine having a water-cooled cylinder, a water pipe therefor, electric igniting means comprising an ignition circuit, a diaphragm chamber connected to said water pipe, and a diaphragm arranged to be operated by variation in water pressure in said pipe, of contact points operated by said diaphragm and arranged when the water pressure decreases to break said ignition circuit.

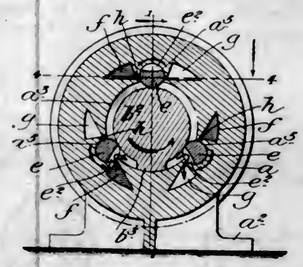
3. In an engine-stopping device, the combination with fluid-pressure-operated means comprising a pressure chamber, and a water-passage connected with said chamber having a contraction beyond the point of connection of said chamber thereto in the direction of flow of the water, of means operated by said fluid-pressure-operated means for controlling the operation of the engine.

4. In an engine-stopping device, the combination with a diaphragm chamber, a diaphragm therefor, and a water-passage connected with said chamber, having a contraction beyond the point of connection of said chamber thereto in the direction of flow of the water, of means operated by said diaphragm for controlling the operation of an engine.

5. The combination with an internal combustion engine having an electric ignition circuit, of means for stopping the engine arranged to automatically break said ignition circuit, a branch circuit for use in starting the engine, bridging said automatic stopping means and therefore nullifying action of said stopping means during the starting of the engine, and automatic means for completing or breaking said branch circuit.

[Claims 6 to 19 not printed in the Gazette.]

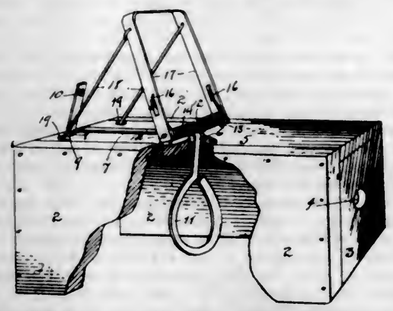
872,040. ROTARY PUMP. GUNNAR ANDERSON and RICHARD LUNDIN, New York, N. Y. Filed Aug. 21, 1907. Serial No. 389,443.



1. A pump comprising a cylindrical casing having head plates secured to the opposite ends thereof, said casing being provided in its opposite ends with annular chambers and said head plates with corresponding annular chambers in communication therewith, said casing being also provided with a central longitudinal cylindrical chamber, a drum or cylinder mounted in said chamber and of less diameter than said chamber and provided at one side with a longitudinal piston member adapted to closely fit the walls of said chamber, said drum or cylinder being also provided with a shaft by which it is rotated, a plurality of longitudinally arranged cylindrical valves located in said casing and geared in connection with said shaft, said valves being positioned so as to fill the space between the outer walls of said chamber and the drum or cylinder mounted therein, said valves being also provided with longitudinal recesses, and a plurality of longitudinal chambers in said casing, said chambers being arranged in pairs at the opposite sides of said valves and being provided with ports or passages which communicate with the chambers in which said valves are placed, one of the heads of the casing being provided with an inlet pipe in communication with the annular chamber formed therein and the other head of the casing being provided with an outlet pipe which communicates with the annular chamber formed therein, substantially as shown and described.

2. A pump comprising a cylindrical casing having a central cylindrical chamber and provided at both ends with a head plate, said casing and said plates being provided with corresponding annular chambers which are in communication, a drum or cylinder placed in the central chamber of the casing and of less diameter than said chamber and provided with a shaft which passes through one of the head plates, a plurality of longitudinally arranged valve chambers formed in said casing and in communication with the central chamber in which the drum or cylinder is mounted, cylindrical valves placed in said valve chambers and geared in connection with said shaft, said valves being provided in one side with longitudinal recesses and said drum or cylinder being provided at one side with a longitudinally arranged piston member, longitudinal chambers formed in said casing, said chambers being arranged in pairs at the opposite sides of said valves, and in communication with the valve chambers, one chamber of each pair being in communication with one of the oppositely arranged annular chambers in the ends of the casing, and the heads of the casing being provided with inlet and outlet pipes which communicate with the annular chambers formed therein.

872,041. GOPHER-TRAP. WILLIAM D. ARMSTRONG, WILLIAM C. HOOKER, and KNOX R. MARKS, Abingdon, Ill. Filed June 14, 1907. Serial No. 379,075.



1. In a trap, in combination, an apertured base, a spring actuated yoke fulcrumed thereon, a U-shaped jaw, the arms of which are projected through apertures in the base and engage said yoke, and a tripping and release lever fulcrumed at one end of the base, its former arm extended rearwardly and thence downwardly through an aperture disposed centrally of the base, its shorter arm adapted to engage the yoke and its longer one to be tripped by a rodent.

2. In a trap, in combination, an apertured base, a tripping and release lever pivoted at one end thereof, its longer end extended rearwardly and projected through an aperture disposed centrally of the base, a rod pivotally mounted on said base, torsion springs mounted on said rod, a yoke pivotally mounted on said rod and adapted to be actuated by said springs, a jaw depending therefrom, its arms passing through apertures in the base, adapted to be actuated by said yoke, one end of said lever adapted for engagement with the yoke and its other end to be tripped by the contact of an animal beneath the base.

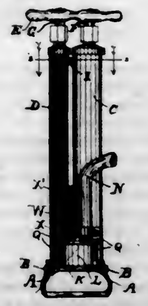
872,042. DRAWER-CONTENTS'-INDEXING DEVICE. JOSEPH J. BARROW, Louisburg, N. C., and THOMAS J. KING, Richmond, Va.; said King assignor to said Barrow. Filed Oct. 8, 1906. Serial No. 338,015.



1. In a device of this character, the combination of a casing, provided with a slot and a parallel main index support in its front wall, and with alined slots in its side walls terminating centrally of said walls, one of said slots terminating in a seat, a shaft having its ends mounted in said slots, means for holding one end in one slot, a bushing mounted in said seat and surrounding the other end of the shaft, an auxiliary index strip carried by said shaft and adapted to pass through the front slot, a spring normally holding the shaft so that the strip is wound thereon, and a main index supported upon the front wall of the casing.

2. In a device of this character, the combination of a casing, provided with a slot and a parallel main index support in its front wall and with alined slots in its side walls, each terminating near the center of the side walls, a spring actuated roller having its journals mounted in the slots, means for holding one journal in one slot, a bushing slidably mounted upon the other journal and in the other slot to hold the journal centered and allow it to revolve, a main index carried in the support upon the front of the casing, and an auxiliary index strip carried by said roller and adapted to pass through the front wall's slot.

872,043. AIR-PUMP. JOHN C. BECK and JOHN A. BOWYER, Chicago, Ill. Filed Feb. 25, 1907. Serial No. 359,197.



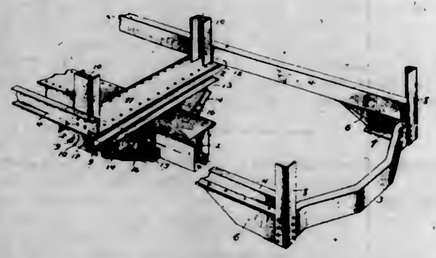
1. In an air pump, the combination of a cylinder provided with a piston, a chamber, a base common to the

cylinder and chamber, such base provided with a passage way communicating with the cylinder and with the chamber, means to prevent the flow of air through such passage way from the chamber to the cylinder, and such chamber provided with a discharge passage way, and adjustable mechanism to divert the discharge of air in the chamber from the discharge passage way when a desired maximum pressure of air is flowing through such chamber; substantially as described.

2. In an air pump, the combination of a plurality of cylinders respectively provided with pistons, a communicating passage way between the cylinders, a chamber, a base common to the cylinders and chamber, such base provided with a passage way communicating with one of the cylinders and with the chamber, means to prevent the flow of air through such passage way from the chamber to the cylinder, and such chamber provided with a discharge passage way, and adjustable mechanism to divert the discharge of air in the chamber from the discharge passage way when a desired maximum pressure of air is flowing through such discharge passage way; substantially as described.

3. In an air pump, the combination of cylinders of equal length and different diameters, a communicating passage way between the cylinders adjacent to the upper end thereof, a chamber, a communicating passage way between the small cylinder and the chamber, a valve seat at the discharge end of the passage way and a valve in the chamber to co-act with the valve seat, a spring in the chamber to yieldingly hold the valve on the seat, piston rods in the cylinders, a handle common to the piston rods, such piston rods respectively provided with piston heads arranged so that when the piston rods are raised the air above the piston heads in both cylinders is forced below the piston head in the smaller cylinder and when the piston rods are depressed the air below the piston head in the smaller cylinder is forced into the chamber and air at atmospheric pressure may enter both cylinders above the downward moving piston heads, an air discharge tube from the chamber and a combined relief and signal device in communication with the chamber; substantially as described.

872,044. UNDERFRAME FOR CARS. ANTON BECKER, Columbus, Ohio, assignor to The Ralston Steel Car Company, Columbus, Ohio. Filed Mar. 18, 1907. Serial No. 362,956.

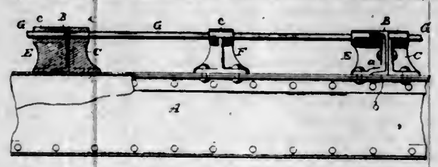


1. In a car under-frame, the combination with the bolster members, of stakes secured between said members and side sills supported upon the bolster members outside of said stakes and secured thereto.

2. In a car underframe, the combination with the bolster members, of stakes secured between said bolster members, each of said stakes consisting of a channel iron having its flanges projecting inwardly, and side sills located upon the bolster members outside of said stakes and secured to the body of said stake between the inwardly projecting flanges of the latter.

3. In a car underframe, the combination with the bolster members, of stakes secured between said members, a cover plate mounted upon said bolster members and extending beyond the stakes, and side sills mounted upon the ends of said cover plate and secured to the stakes.

872,045. DUMPING-CAR. ANTON BECKER, Columbus, Ohio, assignor to the Ralston Steel Car Company, Columbus, Ohio. Filed Mar. 20, 1907. Serial No. 363,438.



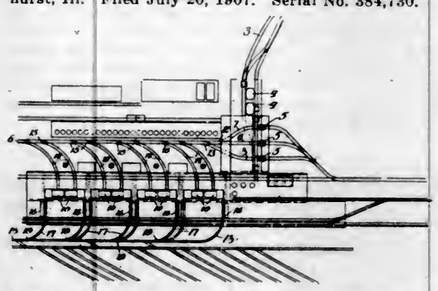
1. The combination with the center sill and cross sills, of door supporting brackets secured to both the cross sills and center sill, substantially as set forth.

2. The combination with the center sill and cross sills, of door supporting brackets constructed to seat against the webs of the cross sills, and riveted thereto, and to the center sill, substantially as set forth.

3. The combination with the center sill and cross sills, of door supporting brackets constructed to seat against the cross sills and upon the center sill, and secured to both sills, a rod mounted in the upper ends of said bracket, and dumping doors hinged to said rod, substantially as set forth.

4. The combination with a center sill, a series of brackets thereon having alining bearing sleeves, and a rod mounted in said bearing sleeves, of a pair of doors having their inner edges disposed in proximity to each other over said rod, and a hinge plate secured to the under face of each door, said hinge plate provided at their inner edges with bearings mounted on said rod under the inner edges of the doors.

872,046. STEEL PLANT. THOMAS S. BLAIR, Jr., Elmhurst, Ill. Filed July 20, 1907. Serial No. 384,730.



1. In a duplex steel-plant, the combination with the Bessemer-converters and the row of open-hearth furnaces, of a track for ladle-carrying cars extending lengthwise along the front side of said row with leads to it from the converters, and turn-outs having switch-connections with said track and leading laterally therefrom to extend transversely of the charging-platform to the different furnaces, for the purpose set forth.

2. In a duplex steel-plant, the combination with the row of open-hearth furnaces, of Bessemer-converters disposed at a level sufficiently high to adapt them to deliver the blown metal to ladles at or near the level of the charging-platform, a track for the ladle-carrying cars extending along the front side of said row with leads from it to the converters, and turn-outs leading laterally from said track to extend across the charging-plaform to the different furnaces, for the purpose set forth.

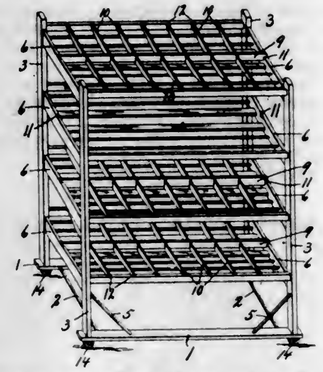
3. In a duplex steel-plant, the combination with the row of open-hearth furnaces, of a pit at the rear side of said row, a track extending lengthwise along said side, pouring-platforms extending across said pit, and turn-outs extending from said platforms to said track, for the purpose set forth.

4. In a duplex steel-plant, the combination with the row of open-hearth furnaces, of a pit at the rear side of said row, a track extending lengthwise along said side, pouring-platforms extending across said pit, and turn-outs extending from said platforms to and having switch-connections with said track, for the purpose set forth.

5. In a duplex steel-plant, the combination with the Bessemer-converters and the row of open-hearth furnaces, of a track for the ladle-carrying cars extending lengthwise along the front side of said row, with leads to it from the converters, turn-outs leading laterally from said track to the different furnaces across the charging-platform, a pit at the rear side of said row, pouring-platforms extending across said pit, and turn-outs extending from said platforms to said rear track, for the purpose set forth.

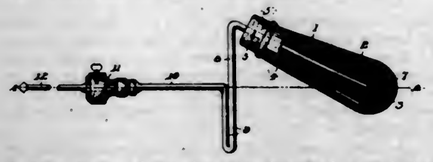
[Claim 6 not printed in the Gazette.]

872,047. SHOE-RACK. LEANDER P. BOWEN, Auburn, N. Y. Filed Apr. 20, 1907. Serial No. 369,347.



In portable shoe racks, a frame embodying base bars, corner posts supported by said base bars, and cross bars connecting said corner posts together at intervals throughout their length, shelves connecting the cross bars at one end of the frame with the cross bars at the other end thereof, each shelf comprising a plurality of bars having their ends secured in the end cross bars and having the central bars of the shelf depressed in a plane below the outer bars whereby the bottoms of the shelves are concave in form, and separator racks each comprising a longitudinally-extending central bar seated at its ends in notches provided therefor in end cross bars, and a series of cross arms connected to the central bar and projecting from opposite sides thereof, the said projecting arms resting on the bars of said shelves; said bars being of greatest width at their inner ends with their underneath edges tapering to the outer ends to conform to the concave shelves, and the lengthwise bar of the separator rack detachably engaged with the cross bars of the frame.

872,048. HAND-OPERATED TOOL. WILLIAM BROAD, Beaver Falls, Pa., assignor of one-third to Erastus E. Pierce and one-third to Charles A. White, New Brighton, Pa. Filed Feb. 23, 1907. Serial No. 358,771.



1. In a device of the character described, a tool shank provided at one end with a tool, an intermediate portion forming a T or cross with the end having the tool, and the other end operatively seated in a suitable handle, the axis of the part seated in the handle being at a suitable angle to the part provided with the tool, whereby, when the described motion is imparted to the handle, the tool will be revolved on its own axis; substantially as described.

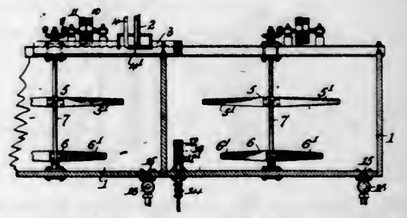
2. In a device of the character described, a tool shank provided with a tool at one end, the other end being operatively seated in a suitable handle with its axis at a suitable angle to the axis of the end provided with the tool; and the intermediate portion of said shank being so bent or shaped as to form a T head on the portion of the shank provided with the tool; substantially as described.

3. In a device of the character described, a tool shank provided at one end with a suitable chuck or socket for holding a tool, the other end being operatively seated in a suitable handle, with its axis at a suitable angle to the axis of the chuck, the intermediate portion of said shank being so bent or shaped as to form a T head on the portion of the shank provided with the chuck; substantially as described.

4. In a device of the character described, a suitable handle portion; a shank, one end thereof being operatively seated in said handle, and having a bent portion therein to constitute a leverage, said bent portion being doubled back on itself so as to form a gripping feature, also a straight portion to which is attached the tool to be operated, the latter portion being substantially on a direct line with the end of the shank seated in said handle portion.

5. In a device of the character described, a suitable handle portion; a shank, one end thereof being operatively seated in said handle, and having a bent portion therein to constitute a leverage, said bent portion being doubled back on itself in order to form a gripping feature, also a straight portion formed substantially on a direct line with the end of the shank seated in said handle; a suitable chuck or socket on the end of said straight portion for receiving the tool to be operated; and means for retaining the shank in said handle.

872,049. APPARATUS FOR TREATING TRADE EFFLUENTS. BENJAMIN BROADBENT and ARTHUR BROADBENT, Longwood, near Huddersfield, England. Filed Feb. 2, 1907. Serial No. 355,469.



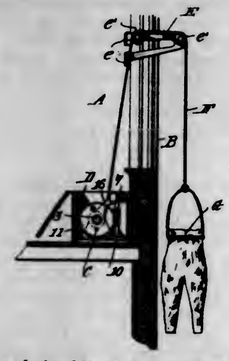
1. The combination, with a tank, of an outlet valve at the bottom of the said tank for letting out the grease and impurities, means for mixing acid with the sud, an agitator arranged in the tank for treating the sud so that it separates into layers of grease, water and impurities, and a valved pipe provided with a trap for preventing the passage of grease into it and projecting into the said tank above the level of the said outlet valve to tap off the middle layer of water.

2. The combination, with a tank, of an outlet valve at the bottom of the said tank for letting out the grease and impurities, means for mixing acid with the sud, an agitator arranged in the tank for treating the sud so that it separates into layers of grease, water and impurities, a pipe projecting through the bottom of the tank and having its upper end arranged above the level of the said outlet valve, and a strainer having V-shaped openings secured around the upper part of the said pipe.

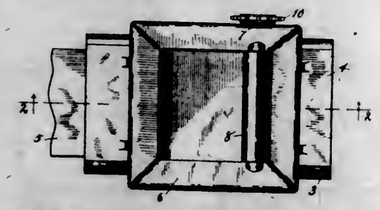
872,050. FIRE-ESCAPE. PAUL C. BURHANS, Phœnix, N. D. Filed July 14, 1906. Serial No. 326,245.

In a fire escape, the combination with a suitable winding device having a life line fastened thereto at one end, and means for guiding the line during its winding and unwind-

ing, and means for manually operating the said device to rewind the line, of a brake for controlling the operation of said device embodying a gear wheel revoluble with the winding device, a bearing supporting one end of the winding device and having a step bearing at its base and a hollow friction drum arranged in alinement therewith, a shaft having one end coöperating with the step bearing and having its upper end shouldered and coöperating with a relatively fixed portion of the friction drum to prevent upward movement of the shaft, a circular plate revoluble with the said shaft and fitting the friction drum, centrifugally acting weights pivoted on said plate and coöperating with the friction drum, and a spiral gear on said shaft coöperating with the said gear.



872,051. FEEDING DEVICE FOR DOUGH-MACHINES. PHILIP F. CARROLL, Joliet, Ill., assignor to Champion Machinery Company, Joliet, Ill., a Corporation of Illinois. Filed Aug. 6, 1906. Serial No. 329,498.



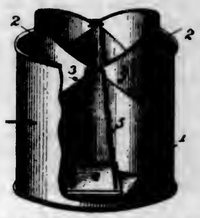
1. In a dough machine, a hopper adapted to receive a mass of dough, a feed roller mounted at the discharge end of said hopper, a scraper for said roller, a chamber adapted to receive the dough from the hopper, and a reciprocating plunger arranged to enter said chamber at a point opposite said roller, and coöperating with said roller to draw the dough into said chamber.

2. In a dough machine, a hopper adapted to receive a mass of dough, a feed roller of relatively small diameter mounted at one side of the discharge end of said hopper, a scraper for said roller, a chamber adapted to receive the dough from said hopper, and a reciprocating plunger arranged to enter said chamber at a point opposite said roller, whereby the plunger will coöperate with the roller in feeding the dough into said chamber in advance of the plunger.

872,052. LANTERN-HOLDER. WARD B. CHITTENDEN, Mankato, Minn., assignor of one-half to Henry Kiffe, Mankato, Minn. Filed Mar. 23, 1907. Serial No. 364,198.

1. In a lantern holder, a receptacle having an open top, a closure therefor, a horizontal support within the receptacle, and a connection between the support and closure.

2. In a lantern holder, a receptacle having an open top, a closure therefor, and means operable upon the insertion of an object within the receptacle for moving the closure to closed position.



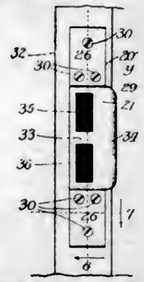
3. In a lantern holder, a receptacle having an open top, a pivoted closure therefor, a horizontal support within the receptacle, and a connection between said support and closure.

4. In a lantern holder, a receptacle having an open top, a pivoted closure therefor, and means operable upon the insertion of an object within the receptacle for swinging the closure upon its pivots to closed position.

5. In a lantern holder, a receptacle open at its upper end, a two-part closure therefor, a horizontal support within the receptacle, and connecting means between the support and the two parts of the closure said support acting to hold the closure normally open.

[Claim 6 not printed in the Gazette.]

872,053. KEEPER FOR LOCK-BOLTS. JAMES CHRISTY, Chicago, Ill. Filed Jan. 30, 1907. Serial No. 354,923.



1. A keeper comprising, in combination, an inner member adapted to be secured to a door-jamb, or the like, an outer member adjustably supported flatwise against said inner member and constructed and arranged to be moved longitudinally and laterally thereof, plates bearing flatwise against the outer surfaces of the end-portions of the inner member, and means for securing said inner member in its relatively adjusted position.

2. A keeper comprising, in combination, an inner member adapted to be secured to a door-jamb, or the like, and having recessed ends, an outer member bearing flatwise against said inner member and having its ends telescopically confined in said recesses, and means for releasably clamping said ends in the recesses, for the purpose set forth.

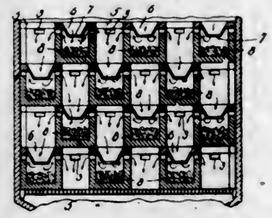
3. A keeper comprising, in combination, an inner member adapted to be secured to a door-jamb, or the like, and comprising a plate provided with a bolt-receiving opening and having recesses formed in its end-portions, the outer and inner walls of said recesses being integrally formed, an outer member bearing flatwise against said inner member and having its ends telescopically confined in said recesses, and means for releasably clamping said ends in the recesses, for the purpose set forth.

4. A keeper comprising, in combination, an inner member adapted to be secured to a door-jamb, or the like, and having its ends bent upon themselves to provide laterally opening recesses in the end-portions of said inner member, an outer member having its ends telescopically confined in said recesses, and means for releasably clamping said ends in the recesses, for the purpose set forth.

5. A keeper comprising, in combination, an inner member adapted to be secured to a door-jamb, or the like, and comprising a plate provided with a bolt-receiving opening and having recesses formed in its end-portions, the outer and inner walls of said recesses being integrally formed with their surfaces roughened, an outer member bearing flatwise against said inner member and having its ends telescopically confined in said recesses, and means for releasably clamping said ends in the recesses, for the purpose set forth.

[Claims 6 to 9 not printed in the Gazette.]

872,054. AIR-DRIER. ERNEST W. COOKE, Waukesha, Wis., assignor to American Dehydrating Company, a Corporation of Wisconsin. Filed Dec. 21, 1906. Serial No. 348,967.



1. As a new article of manufacture, a receptacle for moisture-absorbing substance consisting of a cup open at the top and closed at the bottom and having four diametrically opposite openings near the upper sides of its walls.

2. As a new article of manufacture, a receptacle for moisture-absorbing substance consisting of a cup having an opening at the top and closed at the bottom and rectangular in shape, having its upright corners chamfered off to permit of the assembling of a series of said cups in staggered relation and each vertical side having a recess or opening near the top.

3. As a new article of manufacture, a receptacle for moisture-absorbing substance consisting of a cup open at the top and closed at the bottom and rectangular in shape, having its upright corners chamfered off to permit of the assembling of a series of said cups in staggered relation and each vertical side having a recess or opening near the top, and a top portion of the same shape adapted to fit onto the cup and having a depressed funnel or hopper-like center projecting below the level of said openings.

4. In an air-drying apparatus, a plurality of cups adapted to contain moisture-absorbing substance, arranged in superimposed layers with the cups of one layer resting over the spaces between the cups of the layer below, each cup being open at the top and having recesses or openings in its side walls.

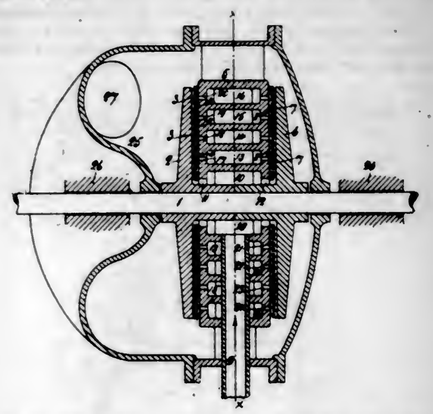
5. In an air-drying apparatus, a plurality of rectangular cups or receptacles adapted to contain moisture-absorbing substance having their corners chamfered off and arranged in layers so that the cups of each layer rest over the spaces of the layer below and each cup having an opening in each of its walls.

[Claims 6 to 8 not printed in the Gazette.]

872,055. ELASTIC-FLUID TURBINE. GUSTAF DALÉN, Stockholm, Sweden. Filed Apr. 27, 1907. Serial No. 370,588.

1. In elastic fluid turbines of the radial flow type a stationary intermediate portion, a turbine wheel provided with concentric rows of buckets coöperating with concentric rows of guide blades on the one side of the intermediate portion, a wheel provided with concentric rows of tightening rings, coöperating with concentric rows of tightening rings on the opposite side of the intermediate portion, and steam admitting ports in said intermediate portion.

2. In elastic fluid turbines of the radial flow type a stationary intermediate portion between two rotating wheels, fluid admitting ports in said intermediate portion, and openings in said intermediate portion, establishing communication between the spaces between the wheels and the intermediate portion at equal radial distances from the turbine shaft.



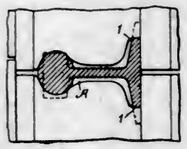
3. In elastic fluid turbines of the radial flow type a stationary intermediate portion between two rotating wheels, and concentric fluid admitting chambers in said intermediate portion communicating with the spaces between the wheels and the intermediate portion at equal radial distances from the turbine shaft.

4. In an elastic fluid turbine and in combination with a wheel of the radial flow type having on its face a plurality of buckets, a plurality of independent ducts for respectively leading working fluid to said buckets at points located at different distances from the wheel center.

5. In an elastic fluid turbine and in combination with a wheel of the radial flow type having on its face a plurality of concentric rings of buckets, a plurality of independent ducts for respectively leading working fluid to different bucket rings.

[Claims 6 and 7 not printed in the Gazette.]

872,056. REROLLING RAILS. AUGUST P. DIESCHER, Pittsburg, Pa. Filed May 23, 1904. Serial No. 209,322.



1. As an improvement in the art of utilizing rails, the method herein described, which consists in reducing the width and increasing the thickness of the flanges of rail and simultaneously reducing the transverse and increasing the vertical thickness of the head of the rail and finally reducing the height of the rail.

2. As an improvement in the art of utilizing rails, the method herein described which consists in subjecting the head and flange of the rail to transverse reduction and simultaneously applying a lateral spreading pressure to the inner walls of the head and flange thereby bending the flanges outwardly and elongating the head in the direction of the plane of the web.

3. As an improvement in the art of utilizing rails the method herein described which consists in laterally spreading the head and flange portion and in applying pressure to edges of the head and flange without subjecting the web to reduction.

4. As an improvement in the art of utilizing rails, the method herein described which consists in causing the

flanges to approach each other, while subjecting them to an upsetting action and in forcing the metal of the head transversely of the rail while reducing its thickness.

872,057. DUMP-CAR. CHARLES H. DOTY, Columbus, Ohio, assignor to The Kilbourne and Jacobs Manufacturing Company, Columbus, Ohio, a Corporation of Ohio. Filed Mar. 11, 1907. Serial No. 361,784.

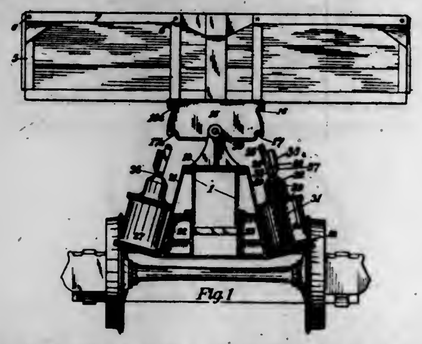


Fig 1

1. In a dump car a car body mounted upon a central pivot to swing vertically, fluid operated means arranged on one side of said pivot adapted to be moved into engagement with said car body to dump the same, and other fluid operated means arranged on the opposite side of said pivot adapted to be moved into engagement with said car body to right the same.

2. In a dump car a car body mounted upon a central pivot to swing vertically, fluid operated means arranged on one side of said pivot adapted to be moved into engagement with said car body to dump the same, whereupon said means falls out of engagement with said car body, and fluid operated means arranged on the opposite side of said pivot adapted to right said car body, whereupon said latter means falls out of engagement with said car body.

3. In a dump car, a car body mounted upon a central pivot to swing vertically thereon, and fluid operated means adapted to be moved into engagement with said car body to dump the same, said means being freed from enfor a succeeding operation when said car body has been tilted beyond its center of gravity.

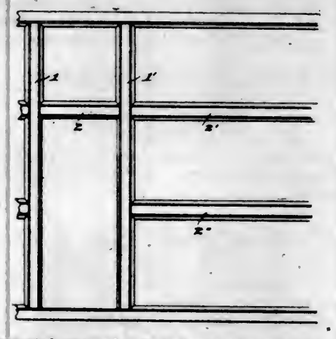
4. In a dump car a car body mounted upon a central pivot to swing vertically thereon, a member on said car body extending on both sides of said pivot, a cylinder argagement therewith and returned to its normal position ranged on one side of said pivot having a piston rod adapted to engage one side of said member to dump said car, and a second cylinder on the opposite side of said pivot adapted to engage the opposite side of said member to right said car.

5. In a dump car, a car body mounted upon a central pivot to swing vertically thereon, a plate on said car body having notches arranged in a vertical series on opposite sides thereof, fluid operated cylinders arranged on opposite sides of said pivot each having a piston rod adapted to engage said plate in the lower notch on one side thereof to dump said car body, the latter being adapted to be righted by the engagement of a piston rod of a cylinder on the opposite side with an upper notch on said plate.

[Claims 6 to 9 not printed in the Gazette.]

872,058. METAL-SHEATHED PANELED PARTITION. THOMAS I. DUFFY, Chicago, Ill., assignor to Voigtman and Company, Chicago, Ill., a Copartnership. Filed Aug. 21, 1905. Serial No. 275,145.

1. In a metal covered paneled or analogous frame structure, the combination of intersecting upright and transverse frame members, one arranged to abut against the other, the abutted member being made hollow and one side thereof detachable, a divided metal envelope arranged to inclose said abutted member, one part of which envelop covering the detachable side being also detachable and internally arranged connected devices uniting said abutting and abutted members.

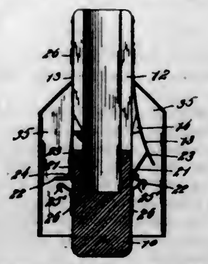


2. In a metal covered paneled or analogous frame structure, the combination with intersecting upright and transverse frame members, one arranged to abut against the other and the abutted member made hollow and one side thereof made detachable, of a dowel bolt seated longitudinally in the end portion of the abutting member and extending through the proximate side of the abutted member, whereby it is accessible when assembling said parts and inclosed when assembled.

3. In a metal covered paneled or analogous frame structure, the combination with intersecting upright and transverse frame members, one arranged to abut against the other and the abutted member made hollow and one side thereof made detachable, of a dowel bolt seated longitudinally in the end portion of the abutting member and extending through the proximate side of the abutted member whereby it is accessible when assembling said parts and inclosed when assembled and an abutting plate interposed between the end of the abutting member and the connected member.

4. In a metal covered paneled or analogous frame structure, the combination with intersecting upright and transverse frame members, one arranged to abut against the other and the abutted member made hollow and one side thereof made detachable, of a dowel bolt seated longitudinally in the end portion of the abutting member and extending through the proximate side of the abutted member whereby it is accessible when assembling said parts and inclosed when assembled and an abutting plate interposed between the end of the abutting member and the connected member, said abutting plate being constructed to conform at its margins to the external configuration of the abutting member and provided with marginal rabbets, and sheet metal envelops inclosing both abutting and abutted members.

872,059. WHIP-SOCKET. GEORGE DUMAS, Walhalla, N. D. Filed Mar. 15, 1907. Serial No. 362,502.



1. A whip socket of the class described comprising a socket proper, said member being provided with a slot, a latch device carried by a whip handle and having a lug adapted for movement in the slot when the whip handle is inserted in the socket, a leaf spring secured to the socket, a keeper lug carried by the leaf spring and projecting through the slot in the socket and adapted for engagement with the lug upon the latch device, and a rocking element for springing the leaf spring out of operative position.

2. A whip socket of the class described comprising a socket proper, said member being provided with a slot, a latch device carried by a whip handle and having a lug adapted for movement in the slot when the whip handle is inserted in the socket, a leaf spring secured to the socket, a keeper lug carried by the leaf spring and projecting through the slot in the socket and adapted for engagement with the lug upon the latch device, a rocking element for springing the leaf spring out of operative position, and means engageable with the rocking element for holding the same in position to retain the spring in inoperative position.

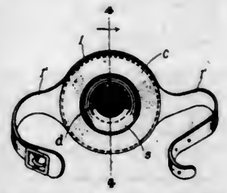
3. A whip socket of the class described comprising a socket proper, said member being provided with a slot, a latch device carried by a whip handle and having a lug adapted for movement in the slot when the whip handle is inserted in the socket, a leaf secured to the socket, a keeper lug carried by the leaf spring and projecting through the slot in the socket and adapted for engagement with the lug upon the latch device, a rocking element for springing the leaf spring out of operative position, and a pivoted hook member engageable with the rocking element for holding the same in position to retain the spring in operative position.

4. A whip socket of the class described comprising a socket proper, said member being provided with a slot, a latch device carried by a whip handle and having a lug adapted for movement in the slot when the whip handle is inserted in the socket, a leaf spring secured to the socket, a keeper lug carried by the leaf spring and projecting through the slot in the socket and adapted for engagement with the lug upon the latch device, a rocking element for springing the leaf spring out of operative position, and a casing slidable upon the socket member proper for inclosing the rocking means at times.

5. A whip socket of the class described comprising a socket proper, said member being provided with a slot, a latch device carried by a whip handle and having a lug adapted for movement in the slot when the whip handle is inserted in the socket, a leaf spring secured to the socket, a keeper lug carried by the leaf spring and projecting through the slot in the socket and adapted for engagement with the lug upon the latch device, a rocking element for springing the leaf spring out of operative position, and a casing supported upon the socket member proper, said casing being movable to expose the rocking element.

[Claims 6 and 7 not printed in the Gazette.]

872,060. BOOT FOR DRAFT-ANIMALS. JOHN J. FITZGIBBON, St. Louis, Mo. Filed Jan. 31, 1907. Serial No. 355,105.

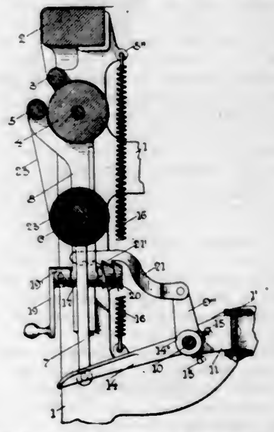


1. A boot comprising a perforated ring adapted to be secured about the affected part or sore, and having a ventilating screen located in the path of the opening or perforation thereof and adapted to protect the sore, said screen being removed a suitable distance from the exposed face of the ring, substantially as set forth.

2. A boot comprising a conical perforated ring adapted to be secured about the affected part or sore, and having a ventilating screen located in the path of the opening or perforation thereof and removed a suitable distance beyond the exposed face of the ring, substantially as set forth.

3. A boot comprising a conical ring composed of a series of annular disks progressively diminishing in diameter and having a conical outwardly tapering opening extending through a portion of the thickness of said ring, a screen or netting forming the outer wall of said opening, said screen being removed a suitable distance from the outer exposed face of the ring, a cushioning pad or layer lining the ring and means for securing the boot in position, substantially as set forth.

872,061. TAKE-UP MECHANISM FOR LOOMS. ALBERT A. GORDON, Jr., Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Jan. 17, 1906. Serial No. 296,467.



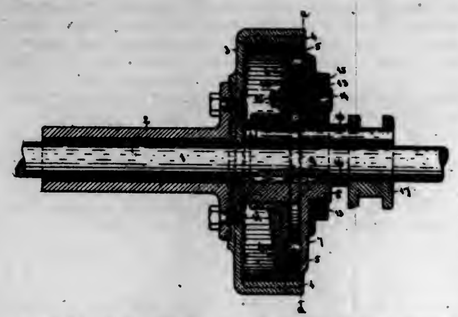
1. In the take-up mechanism of a loom, the combination with vertically extending guide-ways, and vertically moving supports for the winding-up roll, and means for yieldingly holding said supports in their raised position, and means for lowering said supports to lower the winding-up roll, said lowering means consisting of levers or arms connected with said supports and mounted on a rock shaft, and said rock shaft, and means for rocking the same, of means for holding said vertically moving supports in their lowered position, and manually operated means for controlling the upward movement of said supports to move the winding-up roll into its normal raised position.

2. In a take-up mechanism of a loom, the combination with vertically extending guide-ways, and vertically moving supports for the winding-up roll, and means for yieldingly holding said supports in their raised position, and means for lowering said supports to lower the winding-up roll, said lowering means consisting of levers or arms connected with said supports, and mounted on a rock shaft, and said rock shaft, and means for rocking the same, of means for holding said vertically moving supports in their lowered position, and manually operated means for controlling the upward movement of said supports to move the winding-up roll into its normal raised position, said means consisting of a latch connected to and moving with said rock shaft, and having teeth thereon adapted to engage a cam, and said cam, and means for rotating said cam, to cause the movement of said latch.

872,062. FRICTION-CLUTCH. WILLIAM J. HILLIARD, Elmira, N. Y., assignor to The Hilliard Clutch & Machinery Company, Elmira, N. Y., a Corporation of New York. Filed July 27, 1907. Serial No. 385,778.

1. In a friction clutch, the combination with a friction ring, of two gripping disks positioned on opposite sides of

said ring, bolts mounted to rotate on one of said disks and having screw-threaded connection with the other disk, and a shifting sleeve having direct rotative connection with said bolts to place the disks in or out of engagement with the ring.



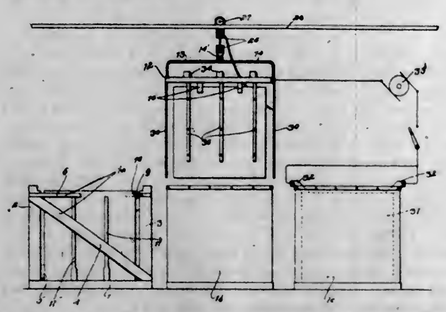
2. In a friction clutch, the combination with a friction ring, of two gripping disks positioned on opposite sides of said ring, bolts connected to rotate on one of said disks and having screw-threaded connection with the other disk, spiral gears on said bolts, and a shifting sleeve provided with rack bars which mesh with said gears.

3. In a friction clutch, the combination, with a friction ring, of two gripping disks positioned on opposite sides of the ring, bolts mounted to rotate on one of the disks and having screw threaded connection with the other disk, spiral gears on said bolts, a hub on one of the disks adapted to be fastened upon a shaft, guideways in said hub, rack bars mounted to slide in said guideways and having diagonally cut teeth in mesh with the spiral gears, and a shifting sleeve to operate the rack bars.

4. In a friction clutch, the combination with the clutch members, of an operating mechanism comprising a longitudinally movable rack bar having diagonally cut teeth, a spiral gear in mesh with said teeth, and means operated by said gear for actuating said members.

5. In a friction clutch, the combination with the clutch members, of a revoluble member adapted to actuate said members, a spiral gear on said revoluble member, and a longitudinally movable rack bar parallel to the axis of the revoluble member and having diagonally cut teeth in mesh with said gear.

872,063. SUPPORTING AND CONVEYING APPARATUS. HENRY L. HOLLIS, Chicago, Ill. Filed May 22, 1906. Serial No. 318,174.



1. In mechanism of the class described, the combination with a supporting frame, of a plurality of gripping jaws thereon, individual means for each of said jaws for closing said jaws together, common means for controlling the actuation of said jaws and conveying mechanism for conveying the clamping mechanism from one position to another.

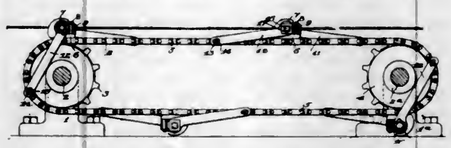
2. In mechanism of the class described, the combination with a gripping structure, of a plurality of gripping frames thereon, individual clamping mechanisms supported from said clamping frames, conveying mechanism for conveying the clamping frames whereby said individual clamping mechanisms may be brought into position over a plurality of plates to be suspended, and common means for causing simultaneous actuation of the clamping mechanism to each engage and grasp one of said plates whereby upon further conveyance of the gripping structure said plates will be carried therewith.

3. In mechanism of the class described, the combination with a gripping structure, of conveying mechanism for conveying said structure from one position to another, individual clamping mechanisms supported from said structure, and common means for simultaneously opening and for closing said clamping mechanisms whereby objects may be clamped therein to be conveyed with the structure and to be released therefrom.

4. In mechanism of the class described, the combination with a frame, of a plurality of clamping mechanisms supported therefrom, means for normally holding said clamping mechanisms in an open condition whereby they may receive objects to be supported, and common means adapted upon actuation to simultaneously close all the clamping mechanisms whereby the objects are clamped.

5. In combination, an assembly rack adapted to receive and to hold a plurality of plates, a frame, conveying mechanism for conveying said frame from one position to another, clamping mechanisms supported from said frame and spaced in accordance with the spacing of the plates in the rack, common means for simultaneously opening the clamping mechanisms when brought into position over the plates, and means for closing the clamping mechanisms after the plates have been received thereby.

872,064. FEEDING APPARATUS FOR CABLES, STRANDS, AND THE LIKE. LESLIE A. HOLMAN, Rochester, N. Y., assignor to William P. Randall, Leroy, N. Y. Filed June 15, 1907. Serial No. 379,135.



1. In a feeding apparatus for cables, strands, or the like, an endless carrier and a clamp on the carrier having connection with the latter by which it is operated.

2. In a feeding apparatus for cables, strands, or the like, an endless carrier, a clamp carried thereby, and means for operating the clamp operated by the carrier.

3. In a feeding apparatus for cables, strands and the like, an endless carrier, a clamp on the carrier, and means for operating the clamp controlled by the bending of the carriers.

4. In a feeding apparatus for cables, strands and the like, an endless carrier, a clamp carried thereby and separate means for effecting the gripping and the releasing of material by the clamp, operated by the bending of the carrier.

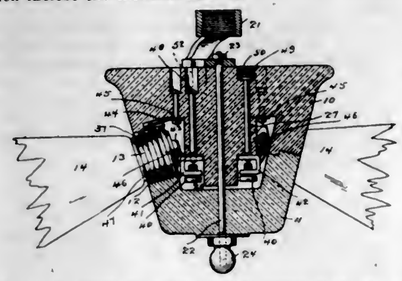
5. In a feeding apparatus for cables, strands and the like, an endless carrier, a clamp carried thereby and having separate connections with the carrier for effecting the gripping and the release of material.

[Claims 6 to 13 not printed in the Gazette.]

872,065. INCANDESCENT-LAMP CLUSTER. HARVEY HUBBELL, Bridgeport, Conn. Filed Oct. 13, 1905. Serial No. 282,600.

1. A cluster for incandescent lamps comprising two parts made of insulating material each having formed therein half-sockets which with the corresponding half-sockets of the other part form sockets, and threaded sleeves in said sockets which are adapted to receive the screw shells of incandescent lamps.

2. A cluster for incandescent lamps comprising a part made of insulating material and having half-sockets formed therein and provided with threaded sleeves for engagement by the screw shells of incandescent lamps and contacts for engagement by the bases of incandescent lamps, and another part also formed of insulating material and having half-sockets formed therein which with the corresponding half-sockets in the other part form sockets which inclose the threaded sleeves.



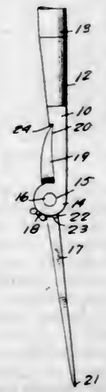
3. An incandescent lamp cluster comprising two parts both formed from insulating material and having corresponding half sockets which together form sockets, threaded sleeves in said sockets adapted to receive the screw shells of incandescent lamps, one of said parts having contacts for engagement by the bases of incandescent lamps.

4. An incandescent lamp cluster comprising two parts both formed from insulating material and having corresponding half-sockets which together form sockets, threaded sleeves in said sockets adapted to receive the screw shells of incandescent lamps, said cluster having an internal recess and within said recess contacts to engage the screw shells and other contacts to engage the bases of incandescent lamps.

5. An incandescent lamp cluster consisting of two corresponding parts made of insulating material each part having corresponding half-sockets which together form sockets, threaded sleeves in said sockets adapted to receive the screw shells of incandescent lamps, contacts to which the threaded sleeves are attached, other contacts for engagement by the bases of incandescent lamps and means for securing the parts together.

[Claims 6 to 9 not printed in the Gazette.]

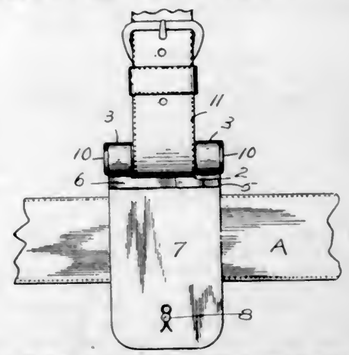
872,066. COMBINATION-TOOL. FRED W. JACKSON, Heartwell, Nebr. Filed Apr. 23, 1907. Serial No. 369,739.



1. A combination garden tool comprising a head including integral arms, a handle connected with the head, a blade pivoted adjacent one of its ends between the arms, means for holding the blade at various adjustments, the blade being provided at one end with a plurality of teeth and having its opposite end edge sharpened whereby the blade may perform the function of a hoe or spade, and means upon the head whereby the teeth will be protected when the blade is adjusted to position to serve the function of a spade.

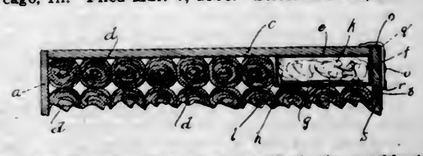
2. A combination garden tool comprising a head, a handle connected with the head, spaced arms extending from one longitudinal edge of the head at the ends thereof, a blade provided with recesses in its longitudinal edges and adjacent one end and with studs formed integral therewith and in the recesses, the arms being provided with offset apertured heads in the apertures of which the studs are pivotally received, the heads being received in the recesses formed in the longitudinal edges of the blade, and shoulders formed by the recesses being adapted to abut against the edges of the arms which extend tangential to the offset heads when the blade is adjusted to a plane at right angles to the head, set screws engaged through the heads and adapted to hold the blade at various adjustments, and teeth formed integral with that end edge of the blade adjacent which the studs are formed, one face of the head of the tool being provided with a channel adapted to receive the teeth and shield the same when the blade is adjusted to position to permit of use as a spade, the opposite end edge of the blade being sharpened for such use.

872,067. TUG-LOOP. FRED F. JENNINGS, Kansas, Ill. Filed May 13, 1907. Serial No. 373,438.



A device of the type set forth comprising a sheet metal blank having a central rectangular opening and bent to form the material at each side of said opening as loops, the material at each end of said opening being offset and bent in spaced parallel relation to afford ears, a pin held between said ears, and a roller mounted upon said pin.

872,068. CIGAR-MOISTENER. OSCAR L. JOHNSON, Chicago, Ill., assignor of one-half to John Glossinger, Chicago, Ill. Filed Mar. 7, 1906. Serial No. 304,654.



1. In a device of the class described, the combination with a perforated receptacle containing absorbent material, of means for supporting said receptacle from the walls of the cigar box, and a rotatable catch on said supporting means adapted to engage the box cover to retain it in its closed position.

2. In a device of the class described, the combination with a receptacle having suitable absorbent material therein, of a clip for supporting said receptacle in a cigar box

from a wall thereof, and an arm rotatably mounted in said clip for engaging the cover of said box to retain it in its closed position.

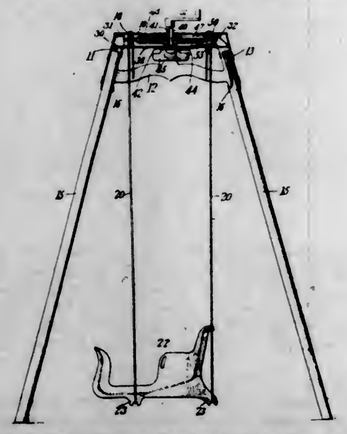
3. In a device of the class described, the combination with a receptacle having suitable openings and absorbent material therein, of means for supporting said receptacle within a cigar box, and a catch associated therewith for retaining the cover of the cigar box in closed position, said catch being in the form of a pivoted arm adapted to engage the cover of said box.

4. In a device of the class described the combination with a receptacle formed in part of perforated retaining walls, a tray-like bottom wall for the receptacle, suitable absorbent material within the receptacle, hook-like clips attached to the receptacle and adapted to hook over the side or end wall of a cigar box to retain the receptacle in position within said cigar box, means for attaching firmly the receptacle to the cigar box, and an L-shaped rotatable catch mounted on one of said clips and adapted to maintain the lid of the cigar box in a closed condition.

5. In a device of the class described the combination with a receptacle comprising top, bottom and rear walls of sheet metal and front and end walls of perforated material, the bottom wall being of tray-like form to prevent the overflow of water from the receptacle, hook-like supporting clips adapted to support the receptacle within a cigar box from a side or end wall thereof, a catch mounted on one of said clips for retaining the lid of the cigar box in a closed position and a pointed projection on the same clip adapted to be pressed into the wooden wall of the cigar box to retain the moistener in proper position and to assist in maintaining the closure of the cigar box lid.

[Claims 6 to 12 not printed in the Gazette.]

872,069. TOY SWING. HARRY T. KINGSBURY, Keene, N. H. Filed Mar. 28, 1907. Serial No. 364,992.



1. In a toy of the class described, a supporting frame, including a head member, swing rods supported from the head member independently of the motor mechanism, a motor mechanism carried by the head, and an escapement mechanism operated by the motor and arranged to engage and actuate one of the swing rods.

2. In a toy of the class described, a supporting frame including a head member, said member being provided with pairs of spaced openings, the material between such openings forming pivots, swing rods having hooked ends extending over said pivots, a motor mechanism carried by the head and arranged to actuate said swing rods.

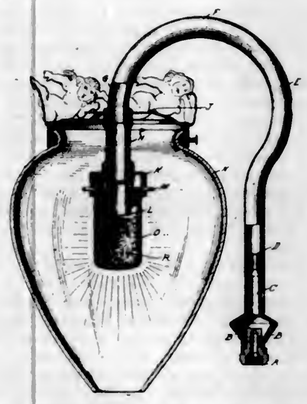
3. In a toy of the class described, a supporting frame including a head member, said head member having a plurality of pairs of openings, the openings of each pair being slightly spaced, and the metal between them forming a pivot, a swing rod having a hooked end insertible through one of the openings and adapted to be supported by said pivot, and a motor mechanism carried by the head and arranged to actuate said swing rod.

4. In a toy of the class described, a frame including a head formed of stamped sheet metal arranged to form part of a motor casing, a motor carrying plate arranged within and supported by the head, a spring motor carried by the plate, an escapement mechanism actuated by the motor, and swing rods pivoted to said head independently of said escapement, one of said swing rods being engaged by said escapement.

5. In a toy of the class described, a frame including a head formed of stamped sheet metal, a motor carrying plate arranged within the head and supported thereby, said plate being provided with integral struck up ears to space the plate from the upper plate of the head, a spring motor arranged between the two plates and accessible for winding from both above and below, and a swing rod arranged to be actuated by said motor.

[Claims 6 and 7 not printed in the Gazette.]

872,070. INVERTED GAS-BURNER. JOSEPH LEDEBER, New York, N. Y. Filed Dec. 22, 1904. Serial No. 237,916.



1. In a gas-burner for use with mantles for incandescent gas-light, the combination of an ascending duct for gas and air which diminishes in extent of opening at a point above the lower end of the ascending duct, and a descending duct provided with a downwardly opening orifice for the exit and ignition of the gas and air mixture and the formation, upon ignition, of an inverted flame, substantially as described.

2. In a gas-burner for use with mantles for incandescent gas-light, the combination of an upward duct for gas and air which is provided with an inlet for air at a lower part and which appreciably diminishes in extent of opening at an upward point of its ascent, and a downward duct provided with a downwardly opening orifice for the exit and ignition of the gas and air mixture and the formation, upon ignition, of an inverted flame, substantially as described.

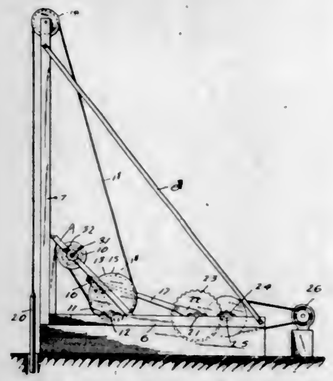
3. In a gas-burner for use with mantles for incandescent gas-light, the combination of an upward duct for gas and air which is provided with an inlet for air at a lower part of the upward duct, a plurality of arms extending from an upper part of the upward duct for a plurality of flames and a plurality of downward ducts provided with downwardly opening orifices for the exit and ignition of the gas and air mixtures and formation, upon ignition, of inverted flames, substantially as described.

4. In a gas-burner for use with mantles for incandescent gas-light, the combination of an upward duct for gas and air which appreciably diminishes in extent of opening at an upward point of its ascent, a plurality of arms extending from the upward duct for a plurality of flames and a plurality of downward ducts provided with downwardly opening orifices for the exit and ignition of the gas and air mixtures and the formation, upon ignition, of inverted flames, substantially as described.

5. In a gas-burner for use with mantles for incandescent gas-light, the combination of an upward duct for gas and air which is provided with an inlet for air at a lower part and which appreciably diminishes in extent of opening at an upward point of its ascent, a plurality of arms extending from the upward duct for a plurality of flames and a plurality of downward ducts provided with downwardly opening orifices for the exit and ignition of the gas and air mixtures and the formation, upon ignition, of inverted flames, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

872,071. QUICK-DROP MECHANISM. JAMES W. LITTLE, Deertrail, Wash. Filed June 15, 1905. Serial No. 265,335.



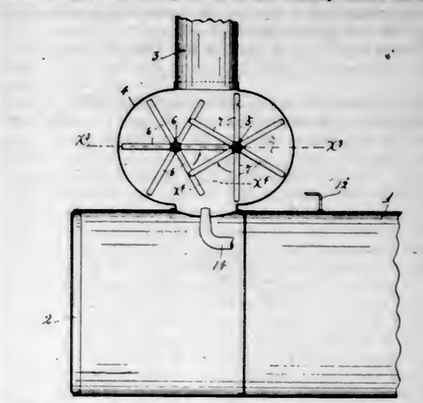
1. A machine of the class described comprising a frame, a rock shaft in the frame, an arm carried by the rock shaft, a disk eccentrically mounted upon the rock shaft for oscillation and arranged for engagement of a cable thereabout, a projection carried by the disk, a latch carried by the arm and arranged for engagement of the projection to move the disk with the rock shaft in one direction, means for disengaging the latch from the projection at a predetermined point of rotation of the disk, and means for rocking the shaft.

2. A machine of the class described comprising a frame, a rock shaft in the frame, an arm carried by the rock shaft, a disk eccentrically mounted upon the rock shaft for oscillation, a projection carried by the disk, a latch carried by the arm and arranged for engagement of the projection to move the disk with the rock shaft in one direction to raise the bit, said projection being movable with respect to the disk, means for holding the projection yieldably against such movement, and means for disengaging the latch from the projection at a predetermined point in the rotation of the disk.

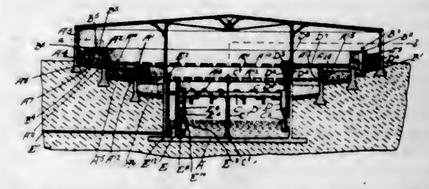
872,072. SPARK-DESTROYER FOR SMOKE-STACKS. FRANK J. LYMAN, Minot, N. D. Filed Aug. 8, 1906. Serial No. 329,689.

1. The combination with an engine boiler, of a pair of rotary spark destroying devices mounted in the smoke outlet passage thereof, and having radially arranged and laterally spaced interlapping arms and gears of different diameters connecting said rotary devices for rotary movements in opposite directions at different speeds, and means for positively rotating said devices, substantially as described.

2. The combination with an engine boiler, of a pair of rotary spark destroying devices mounted in the smoke outlet passage thereof, and having radially arranged and laterally spaced interlapping arms approximately triangular in cross section and having their sharp edges turned in the direction of rotation, gears of different diameters connecting said rotary devices for rotary movements in opposite directions at different speeds, and means for positively rotating said devices, substantially as described.



872,073. GRAVITY FILTRATION PLANT. JOHN G. MACGREGOR, Goderich, Ontario, Canada. Filed May 13, 1907. Serial No. 373,418.



1. A filtration plant comprising a central chamber forming a reservoir, a filter bed arranged in a series one without the other, each bed completely surrounding the central chamber, a water feed pipe, an annular pipe extending over the outer filter bed and with which the feed pipe communicates, radial pipes extending from the annular pipe and provided with controlling valves and arc-shaped perforated nozzles secured to the end of the radial pipes as and for the purpose specified.

2. In a filtration plant, the combination with the annular filter beds, of an annular pipe provided with a suitable water inlet, radial pipes extending from the annular pipe and terminating in arc-shaped perforated nozzles as and for the purpose specified.

3. A filtration plant comprising a central chamber forming a reservoir, filter beds arranged in a series one without the other, each bed completely surrounding the central chamber, a water feed pipe an annular pipe extending over the outer filter bed and with which the feed pipe communicates, and having a series of outlet pipes provided with spray nozzles and controlling valves, as and for the purpose specified.

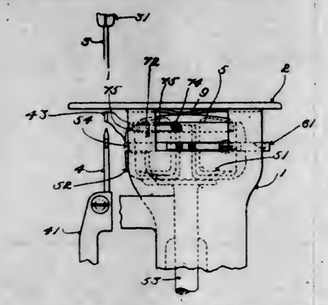
4. A filter plant comprising a central chamber forming a reservoir, a series of annular walls arranged in outwardly ascending tiers and surrounding the central chamber and having openings extending through the walls at the base, gratings quadrantal in cross section and comprising an outer barred grate and an inner perforated screen, filter beds located between the walls and extending over the gratings and means for feeding the water over the surface of the outer bed as and for the purpose specified.

5. In a filtration plant the combination with the central reservoir, the surrounding filter beds and the feed pipe, of an effluent chamber located in the central chamber, an outlet pipe therefrom, a series of openings in the wall of the effluent chamber arranged vertically, gates therefor and

means for maintaining that gate in an open position which is on a level with the water level in the central chamber and for closing the same, as the water changes its level, as and for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

872,074. LOCK-STITCH SEWING-MACHINE. FRANK W. MERRICK, Boston, Mass. Filed June 17, 1904. Serial No. 212,930.



1. In a lock-stitch sewing machine, in combination, the rotary shuttle, an inner pressure-member for the shuttle-thread, and an outer pressure-member mounted upon the shuttle and carried by the rotation of the latter past the shuttle-thread at the outer side thereof, the said outer member acting as it passes the shuttle-thread to press the same radially inward against the said inner member and thereby clamp the shuttle-thread as the stitch is being set.

2. In a lock-stitch sewing machine, in combination, the rotary shuttle, an inner pressure-member for the shuttle-thread, an outer pressure-member mounted upon the shuttle and carried by the rotation of the latter past the shuttle-thread at the outer side thereof, the said outer member acting as it passes the shuttle-thread to press the same radially inward against the said inner member and thereby clamp the shuttle-thread as the stitch is being set, and adjusting means to vary the relation of the pressure-members to each other.

3. In a lock-stitch sewing machine, in combination, the rotary shuttle, the inner pressure-member, between which and the rim of the shuttle the shuttle-thread passes from the source of supply within the shuttle to the stitch-forming point, and the outer pressure-member mounted upon the shuttle, acting exteriorly against the shuttle-thread as it passes the latter to pinch the same against the said inner member.

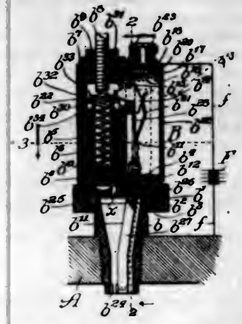
4. In a lock-stitch sewing-machine, in combination, the rotary shuttle, the inner pressure-member, between which and the rim of the shuttle the shuttle-thread passes from the source of supply within the shuttle to the stitch-forming point, the outer pressure-member mounted upon the shuttle, acting exteriorly against the shuttle-thread as it passes the latter to pinch the same against the said inner member, and adjusting means to vary the relation of the pressure-members to each other.

5. In a lock-stitch sewing machine, in combination, the rotary shuttle, a disk mounted co-axially with the said shuttle, and the outer pressure-member mounted upon the shuttle and carried by the rotation of the shuttle past the shuttle-thread, outside the latter, the said member acting as it passes the shuttle-thread to press the same radially inward against a surface of said disk and thereby pinch the shuttle-thread as the stitch is being set.

[Claims 6 to 18 not printed in the Gazette.]

872,075. SPARKING DEVICE. HARRY A. MILLER, Pasadena, Cal., and BENJAMIN G. GILBOUGH, Chicago, Ill. Filed Feb. 14, 1906. Serial No. 301,103.

1. An ignition device, for the purpose set forth, comprising a cylinder adapted to communicate with the engine-cylinder, a spring-held gas-actuated piston movable therein, a vibratory electrode extending above the base of and outside of said cylinder, a gas-tight bearing for said electrode, and means connected with the piston and with the outer end-portion of the vibratory electrode for actuating the vibratory electrode.



2. An ignition device, for the purpose set forth, comprising a tubular plug constituting an electrode adapted for connection with an engine-cylinder, a member carried thereby and equipped with a cylinder communicating with the interior of said tubular plug, a vibratory electrode extending through the base of said member adjacent to said cylinder, a gas-tight joint between said electrode and the base of said member, a piston movable in said cylinder, and means carried by said piston for actuating said electrode.

3. An ignition device comprising a member adapted for connection with an engine-cylinder, a member having a base-portion insulatingly connected with said first-named member and equipped at one side with a cylinder rising therefrom, said cylinder communicating, through said first-named member, with the engine-cylinder, a vibratory electrode extending through the base of said second-named member adjacent to the cylinder carried thereby, a bearing formed in the base-portion of said second-named member and having a removable section, said vibratory electrode having an enlargement in said bearing, a spring-held piston movable in the cylinder of the device, and means actuated by said piston for moving the vibratory electrode.

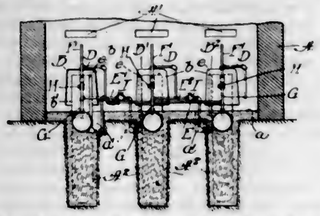
4. An ignition device comprising a tubular plug adapted for connection with an engine-cylinder, a cylinder and a chamber at the side thereof insulatingly mounted on the tubular plug, said cylinder adapted to communicate with the engine-cylinder, a spring-held piston movable in said cylinder, a vibratory electrode extending from the interior of the tubular plug into said chamber, a gas-tight bearing for said electrode between said chamber and the interior of said tubular plug, and means located at the outer end of the piston and the outer end of the vibratory electrode for moving said electrode.

5. An ignition device comprising a tubular plug adapted for connection with an engine-cylinder, a cylinder and a chamber at the side thereof mounted on said tubular plug, said cylinder adapted to communicate with the engine-cylinder, a spring-held gas-actuated piston movable in said cylinder, a vibratory electrode pivoted adjacent to the base of said cylinder and having its inner end extending into the tubular plug and its outer end extending into said chamber, a stationary electrode at the inner end of the tubular plug, yielding means for holding the vibratory electrode normally out of contact with the stationary electrode, and piston actuated-means serving to move the vibratory electrode to the closed position and then release the same to permit its return to its normally open position, for the purpose set forth.

[Claims 6 to 11 not printed in the Gazette.]

872,076. ALTERNATING SIPHON. SIDNEY W. MILLER, Chicago, Ill. Filed Oct. 25, 1906. Serial No. 340,575.

1. The combination with a liquid tank, of a plurality of deep trapped siphons for emptying the tank and a liquid diverting pipe leading from each siphon to the trap of another siphon, said pipes being located with the principal parts thereof above the levels of the intake limbs of said siphons.



2. The combination with a liquid tank, of a plurality of deep trapped siphons for emptying the tank and a liquid diverting pipe leading from each siphon to the trap of another siphon, the discharge ends of said pipes being connected rigidly to said traps and the receiving ends thereof having free or loose connection with the siphons.

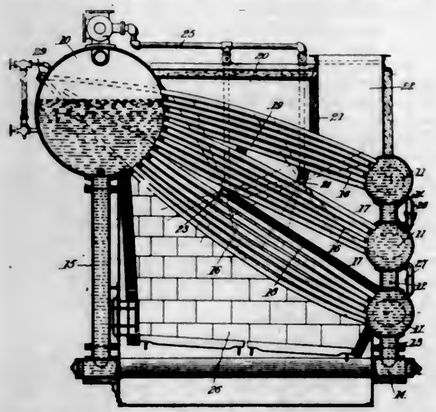
3. The combination with a liquid tank, of a plurality of deep trapped siphons for emptying the tank, and a liquid diverting pipe leading from each of the siphons to the trap of another, said pipes being located principally above the floor of the tank and the discharge ends of said pipes being connected rigidly with said traps and having free or loose connection at their receiving ends with the siphons.

4. The combination with a liquid tank, of a plurality of trapped siphons for emptying the same, of a liquid diverting pipe leading from each siphon to the trap of another siphon, said pipes being located principally above the floor of the tank, the floor of the tank being provided with upwardly opening recesses and the pipe being provided with trapped portions which occupy said recesses.

5. The combination with a liquid tank, of a plurality of trapped siphons for emptying the tank, and liquid diverting pipes located principally above the floor of the tank, each provided with a receiving end which enters freely the shorter limb of one siphon and is connected rigidly to the trap of another siphon.

[Claims 6 to 12 not printed in the Gazette.]

872,077. STEAM-BOILER. CHARLES D. MOSHER, New York, N. Y. Filed Dec. 17, 1906. Serial No. 348,298.



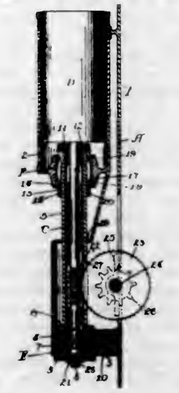
1. A water-tube boiler comprising a furnace, an elevated drum, a plurality of lower water-drums, a group of water-tubes connecting the elevated drum with the lower drums, and baffles for leading the gases upward among all of the tubes adjacent to the elevated drum and then downwardly among some of the same tubes.

2. A water-tube boiler comprising a furnace, an elevated drum, a plurality of lower water-drums, a group of water-tubes connecting the elevated drum with the lower drums and composed of sub-groups of tubes leading to the respective lower drums and located in successive positions with respect to the path of the furnace gases, and baffles for leading the gases upward among all of the tubes adjacent to the elevated drum and then downwardly among some of the same tubes.

3. A water-tube boiler comprising a furnace, an elevated drum, a plurality of lower water-drums, a group of water-tubes connecting the elevated drum with the lower drums and composed of sub-groups of tubes leading to the respective lower drums and located in successive positions with respect to the path of the furnace gases, baffles for leading the gases upward among all of the tubes adjacent to the elevated drum and then downwardly among some of the same tubes, and transverse blast-pipes located at the edges of said baffles and having steam outlets for directing a spreading steam-blast among the tubes.

4. A water-tube boiler comprising a furnace, an elevated drum, a plurality of lower water-drums, a group of water-tubes connecting the elevated drum with the lower drums and composed of sub-groups of tubes leading to the respective lower drums and located in successive positions with respect to the path of the furnace gases, a baffle extending from the lower one of the plurality of lower water-drums and located between the lowermost and next higher of the sub-groups of tubes, an upright transverse baffle extending from the upper end of the last named baffle across most of the tubes of the upper groups, and a second upright baffle extending across the rear portion of the upper sub-group of tubes and located between the first-mentioned upright baffle and the upper one of the plurality of lower water-drums.

872,078. JOURNAL-SUPPORT FOR CENTRIFUGAL MACHINES. KENNETH K. MCLEOD, White Bear Lake, Minn., assignor, by mesne assignments, to The De Laval Separator Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 7, 1905. Serial No. 272,986.



1. A metallic spring adapted for journal bearings, comprising a central plate, bowed spring fingers projecting from said central plate on opposite sides thereof.

2. A metallic open ended spring adapted for journal bearings, comprising a central plate, bowed spring fingers projecting from said central plate on opposite sides thereof said plate being open ended.

3. A metallic spring adapted for journal bearings comprising a central plate, bowed spring fingers integral with and projecting from said central plate on opposite sides thereof.

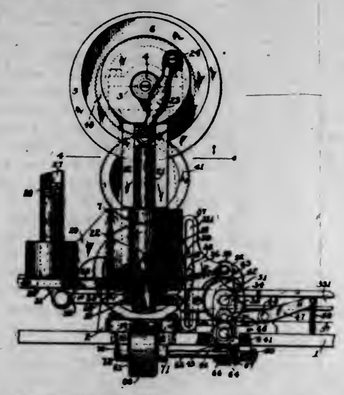
4. A metallic open ended spring adapted for journal bearings comprising a central plate, bowed spring fingers integral with and projecting from said central plate on opposite sides thereof, said plate being open ended.

5. The combination with a bearing, of a central plate

having bowed spring fingers projecting from said central plate on opposite sides thereof, surrounding said bearing, the ends of said fingers contacting with said bearing.

[Claims 6 to 12 not printed in the Gazette.]

872,079. FILLING-MACHINE FOR BOTTLE-CAPS. HENRY A. OLSSON, Brooklyn, N. Y. Filed June 6, 1907. Serial No. 377,550.



1. An apertured die block, an annular die punch cooperating with the die block to cut a collet, means to feed a strip intermittently between the die members to have a collet cut therefrom, a support below the die block aperture, means to feed caps intermittently under the die block aperture to receive the respective collets, means for feeding disks into the annular punch, and a plunger operable through the punch bore and through the die block aperture to force a collet and a disk down into each cap positioned below the die block aperture.

2. An apertured die block, an annular die punch cooperating with the die block to cut a collet, means to feed a strip intermittently between the die members to have a collet cut therefrom, a support below the die block aperture, means to feed caps intermittently under the die block aperture to receive the respective collets, means for feeding disks into the punch bore, a plunger operable through the punch bore and through the die block aperture to force a collet and a disk down into each cap positioned below the die block aperture, tthe punch having its bore converging downward to receive therein a compressible disk to be forced down therethrough by the plunger.

3. An apertured die block, an annular die punch cooperating with the die block to cut a collet, means to feed a strip intermittently between the die members to have a collet cut therefrom, a support below the die block aperture, means to feed caps intermittently under the die block aperture to receive the respective collets, means for feeding disks into the punch bore, a plunger operable through the punch bore and through the die block aperture to force a collet and a disk down into each cap positioned below the die block aperture, means to reciprocate the punch, and means to drive the plunger down through the punch in its lowered position to force the disk and collet down into the positioned cap.

4. An apertured die block, an annular die punch cooperating with the die block to cut a collet, means to feed a strip intermittently between the die members to have a collet cut therefrom, a support below the die block aperture, means to feed caps intermittently under the die block aperture to receive the respective collets, means for feeding disks into the punch bore, a plunger operable through the punch bore and through the die block aperture to force a collet and a disk down into each cap positioned below the die aperture, the punch having its bore converging downwardly to receive therein a compressible disk to be forced down therethrough by the plunger, means to reciprocate the punch, and means to drive the plunger down through the punch to force the compressible disk through the punch on to the cut collet in the die block aperture and to then drive both stopper and disk down into the positioned cap.

5. An apertured die block, an annular die punch cooperating with the die block to cut a collet, means to feed a strip intermittently between the die members to have a collet cut therefrom, a support below the die block aperture, means to feed caps intermittently under the die block aperture to receive the respective collets, means for feeding disks into the punch bore, a plunger operable through the punch bore and through the die block aperture to force a collet and a disk down into each cap positioned below the die aperture, the punch comprising an apertured block having an annular cutting rib at the lower end of the bore which fits into the die block aperture to cut the collet, the block having the bore diverging upward to receive a disk as large as the collet cut by the punch.

[Claim 6 not printed in the Gazette.]

872,080. CHIMNEY-FLUE CLEANER. WILLIAM H. PERRY, Concord, N. H. Filed Jan. 28, 1907. Serial No. 354,491.



1. An expansible chimney-flue cleaner comprising a rod, a lower disk rigid on said rod, an upper disk adapted to slide on said rod, a series of jointed levers arranged around the rod and each pivotally connected at its opposite ends to the upper and lower disks, a series of hollow brush-backs each consisting of two parts bolted to the opposite sides of the lower member or bar of a jointed lever, and radially disposed bristles secured to the outer wall of each brush-back, for the purpose set forth.

2. In an expansible chimney-flue cleaner, a rod, expansible mechanism surrounding said rod, brushes supported by said mechanism, a reversed cone-shaped plunger extending from the lower end of the rod and comprising a base and a plurality of substantially radial wings, and knives or cutters supported by said wings and corresponding substantially in shape thereto with their lower ends meeting at a central point below the plunger, substantially as and for the purpose set forth.

872,081. BULLET. JOHN PIATKOWSKI, Cleveland, Ohio, assignor to New System Bullet Company, Cleveland, Ohio. Filed June 27, 1907. Serial No. 381,014.

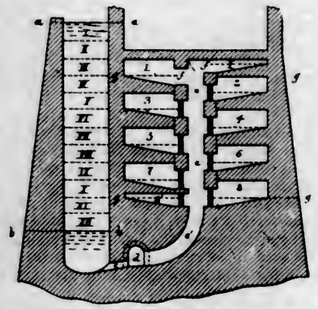


1. In combination, a cartridge casing, and a bullet or projectile therefor, said bullet or projectile having a forward portion of hard material, and a separate rear portion formed of a softer material and having a higher specific gravity than the forward portion and a sleeve surrounding said portions, said portion of hard material being provided with a sharp nose having a plurality of flat faces, said nose extending beyond said sleeve.

2. In combination, a cartridge casing and a bullet or projectile therefor, said bullet or projectile consisting of a cylindrical forward portion of hard material and having a sharp trihedral nose, a separate cylindrical rear portion of softer material having a higher specific gravity than the forward portion and a sleeve surrounding said portions, the sharp trihedral nose extending outward beyond the sleeve.

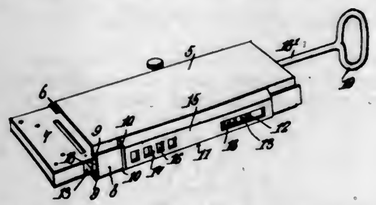
3. In combination, a cartridge casing, and a bullet or projectile consisting of a steel forward portion provided with a sharp trihedral nose, a rear portion of lead, and a sleeve open at both ends and holding said steel and lead portions together.

872,082. METHOD OF WORKING SHIP-LOCKS. GEORG PUMBERGER, Eberschwang, Austria-Hungary. Filed June 30, 1906. Serial No. 324,109.



The method of operating ship locks having annexed reservoirs disposed at different elevations which consists in causing the water to flow into the uppermost reservoir from the lock and closing said reservoir when full, causing the water to flow into the next subjacent reservoir and closing it when full, and so on, downwardly, throughout the series of reservoirs, each subjacent reservoir being opened upon the partial filling of the reservoir next relatively above it, substantially as described.

872,083. HARMONICA. MATTHEW J. REIDY, Mechanicsville, Iowa. Filed Mar. 27, 1907. Serial No. 364,929.



1. A harmonica provided with a casing having an opening formed therein, and a mouth piece provided with spaced openings of different sizes adapted to register with the opening in the casing.

2. A harmonica provided with a casing having an opening formed therein and a reversible mouth piece slidably mounted on the casing and having spaced openings formed therein and adapted to register with the opening in the casing.

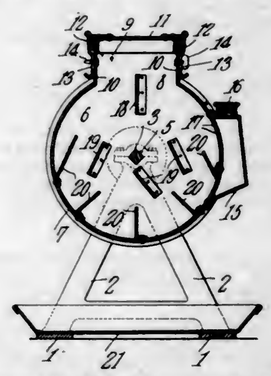
3. A harmonica provided with a casing having an opening formed therein, a mouth piece adjustably mounted on the casing and having an intermediate imperforate portion, there being terminal openings formed in said mouth piece and adapted to register with the opening in the casing.

4. A harmonica provided with a casing having an opening formed therein, an adjustable mouth piece slidably mounted on the casing and having an elongated opening formed near one end thereof and adapted to register with the opening in the casing, there being a plurality of spaced openings formed near the opposite end of the mouth piece and adapted to register with the opening in the casing when the mouth piece is reversed.

5. A harmonica having a casing provided with an opening, a reversible mouth piece slidably mounted for longitudinal movement on the casing and having an opening beginning near the middle and extending toward one end thereof of the same length as the opening in the casing, and adapted to register therewith, there being a plurality of spaced openings beginning near the middle and extending towards the opposite end of the mouth piece, the combined width of the spaced openings being equal to the width of the opening in the casing.

[Claims 6 to 12 not printed in the Gazette.]

872,084. MIXING APPARATUS. FRANK E. ROONEY, Altoona, Pa., assignor of one-half to Joseph C. Holliday, Altoona, Pa. Filed May 31, 1907. Serial No. 376,551.



1. In mixing apparatus the combination with a revoluble drum having an opening and a closure for said opening; of a receptacle upon and revoluble with the drum, said receptacle communicating with the drum through a plurality of apertures.

2. In mixing apparatus the combination with a revoluble drum having an opening and a closure for said opening; of a receptacle upon and revoluble with the drum, said drum constituting one wall of the receptacle, the upper portion of said wall being formed with a plurality of apertures for the passage of the contents of the receptacle into the drum.

3. In mixing apparatus the combination with a revoluble member having an opening and a closure for said opening; of a receptacle upon and revoluble with said member, said member constituting one wall of the receptacle and having apertures opening into the upper portion of the receptacle.

4. In mixing apparatus the combination with a revoluble member having an opening and a closure for said opening; of a receptacle upon and revoluble with said member, said member constituting one wall of the receptacle and having apertures opening into the upper portion of the receptacle, and a plurality of baffle devices disposed longitudinally within the revoluble member and inclined toward the opening therein.

5. The combination with a base, supports thereon, and a trough mounted upon the base; of a shaft journaled within the support, a drum revoluble therewith and having an opening therein, a closure for the opening, baffle plates disposed longitudinally within the drum and along

lines extending toward the opening, said opening extending throughout the length of the drum, a receptacle upon, and extending throughout the length of the drum, said drum constituting one wall of the receptacle and having openings extending into the upper portion of the receptacle, and means for rotating the drum and receptacle.

872,085. BROWN VAT-DYE. ALBRECHT SCHMIDT, Höchst-on-the Main, Germany, assignor to Farbewerke vorm, Meister Lucius & Bruning, Höscht-on-the-Main, Germany, a Corporation of Germany. Filed July 24, 1907. Serial No. 385,311.

As product, the brown vat dyestuff having the formula:

$$NH_2(3)C_6H_3\begin{matrix}(6)CO\\(1)\ S\end{matrix}\!\!>C=C<\!\!\begin{matrix}(6)CO\\(1)\ S\end{matrix}\!\!>C_6H_3(3)NH_2$$

being insoluble in water, alkalies, dilute acids, soluble in concentrated sulfuric acid with a blue color, forming with alkaline hydrosulfite a yellowish-brown vat from which wool and cotton are dyed brown shades.

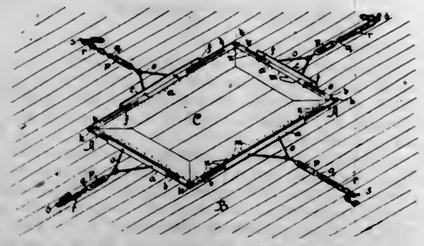
872,086. GREEN-BLACK VAT-DYE. ALBRECHT SCHMIDT, Höchst-on-the-Main, Germany, assignor to Farbwerke vorm. Meister Lucius & Bruning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed July 24, 1907. Serial No. 385,312.

As product, the greenish black vat dyestuff having the formula:

$$NH_2(4)C_6H_3\begin{matrix}(6)CO\\(1)\ S\end{matrix}\!\!>C=C<\!\!\begin{matrix}CO(6)\\S\ (1)\end{matrix}\!\!>C_6H_3(4)NH_2$$

being insoluble in water, alkalihydrates, dilute acids, alcohol, ether, benzene, soluble in concentrated sulfuric acid with a greenish dark blue color, yielding with alkaline hydrosulfite solution a yellowish-greenish vat from which wool and cotton are dyed greenish-black tints.

872,087. CARPET STRETCHER AND SIZER. FRED SCHWENSOW, Milwaukee, Wis. Filed Dec. 15, 1906. Serial No. 347,923.



1. A device of the class described comprising a frame having interadjustable sides, a flexible connection, such as a chain or cord attached to each side, and a member of variable length inserted in said flexible connection.

2. A device of the class described comprising a frame having interadjustable sides, a flexible connection corresponding to each side, and means inserted in said flexible connection for shortening the same.

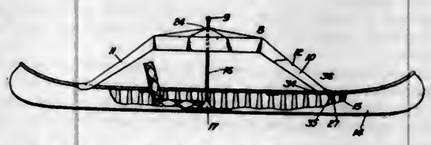
3. A device of the class described comprising a frame having adjustable sides, and means for separating said sides comprising connections of variable length applied thereto and adapted to be adjustably secured to fixed points.

4. A device of the class described comprising a frame having interadjustable sides, a chain connected to each side, and means for shortening the effective length of each chain.

5. A device of the class described comprising a frame having interadjustable sides, a V-shaped loop secured to the center of each side, a flexible connection such as a chain or cord secured at the apex of each loop, and means in each flexible connection for shortening the effective length thereof.

[Claims 6 to 13 not printed in the Gazette.]

872,088. CANOE-AWNING. WILLIAM B. SHERMAN, Dorchester, Mass. Filed July 22, 1907. Serial No. 384,857.



1. In an awning, a plurality of ribs carrying an awning cloth a supporting rod, an upper rib-ring moving freely on said rod, combined with a lower rib-ring secured to a sliding sleeve mounted on said rod, whereby the frame of said awning may be adjusted at different heights.

2. In an awning, a plurality of ribs carrying an awning cloth a supporting rod, an upper rib-ring moving freely on said rod, a sliding sleeve mounted on said rod, a lower rib-ring secured to the base of said sleeve, the top of said sleeve engaging with said upper rib-ring when the awning is opened, and maintaining said rings at a fixed distance from each other.

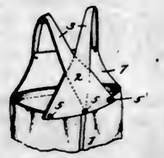
3. In an awning, a plurality of ribs carrying an awning cloth a supporting rod, an upper rib-ring moving freely on said rod, a reinforcing sleeve inclosing said rod and secured against longitudinal movement thereon, a sliding sleeve mounted on said rod and capable of moving freely over said reinforcing sleeve, a lower rib-ring secured to the base of said sliding sleeve, the top of said sliding sleeve engaging with said upper rib-ring when the awning is opened, and maintaining said rings at a fixed distance from each other.

4. In a stationary awning, a surface supporting a central rod, an upper rib-ring moving freely on said rod, a lower rib-ring secured to a sliding sleeve mounted on said rod, means for adjusting said rib-ring in various positions on said rod, combined with an awning cloth the flaps of which extend beyond said ribs, and means for attaching the ends of said flaps to said supporting surface.

5. In a canoe awning, a canoe supporting a central rod a supporting rod, an upper rib-ring moving freely on said rod, a sliding sleeve mounted on said rod, a lower rib-ring secured to the base of said sleeve, the top of said sleeve engaging with said upper rib-ring when the awning is spread, combined with a detachable awning cloth having flaps distended by braces and secured by hooks to the said canoe.

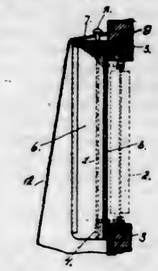
[Claim 6 not printed in the Gazette.]

872,089. OVERALLS. JACOB A. SOMMERS, Columbus, Ohio. Filed Aug. 22, 1907. Serial No. 389,617.



In an attachment for overalls, the combination with a pair of overalls having attaching devices arranged at the back and at the front of the waist-band thereof, of a back extension comprising a solid body portion and cut to form integral straps adapted to pass over the shoulders of the wearer, said straps having engaging means at their ends, means for securing the solid back portion to the fastening devices at the rear of the waist-band, a detachable bib adapted to engage the fastening devices at the front of the waist-band, and members located at the upper edge of said bib and adapted to engage the engaging members of the straps.

872,090. ATTACHMENT FOR REGISTERS. WILLIAM H. SOWASH, McKeesport, Pa., assignor of nine-twentieths to James A. Penny, McKeesport, Pa. Filed July 6, 1907. Serial No. 382,538.



1. An attachment for registers for the purpose set forth comprising a frame formed of a plurality of flat rails extending at right angles with respect to the register, said frame embodying an inwardly-extending flange positioned at a point removed from the inner edge of each of said rails, said flange being adapted to abut against the support to which the register is attached, and said rails adapted to extend into the support to which the register is attached, certain of said rails being provided with laterally-extending pins and another of said rails being provided with vertically-extending pins, and a cover connected with the frame by said pins whereby the dirt and dust carried through the register is arrested without cutting off the escape of hot air.

2. An attachment for registers for the purpose set forth, comprising a frame formed of a plurality of flat rails extending at right angles with respect to the register, said frame embodying an inwardly-extending flange positioned at a point removed from the inner edge of each of said rails, said flange being adapted to abut against the support to which the register is attached, certain of said rails being provided with laterally-extending pins, and another of said rails being provided with vertically-extending pins, and a cover connected with the frame by said pins whereby the dirt and dust carried through the register is arrested without cutting off the escape of hot air.

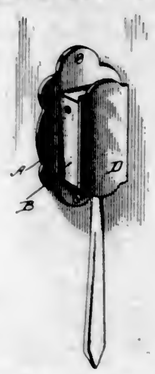
3. An attachment for registers for the purpose set forth comprising a frame formed of a plurality of flat rails extending at right angles with respect to the register, said frame embodying an inwardly-extending flange positioned at a point removed from the inner edge of each of said rails, said flange being adapted to abut against the support to which the register is attached, each of said rails further having the outer edge thereof inturned, certain of said rails being provided with laterally-extending pins, and another of said rails being provided with vertically-extending pins, and a cover connected with the frame by said pins whereby the dirt and dust carried through the register is arrested without cutting off the escape of hot air.

872,091. TOOTH-BRUSH HOLDER. FRED J. SPANGLER, Lebanon, Pa. Filed Mar. 18, 1907. Serial No. 363,149.

1. A tooth brush holder comprising a base adapted to be secured to the wall, a casing secured on said base having a notched bottom and a spring actuated cover arranged over said casing projecting down below the bottom of said casing, for the purpose described.

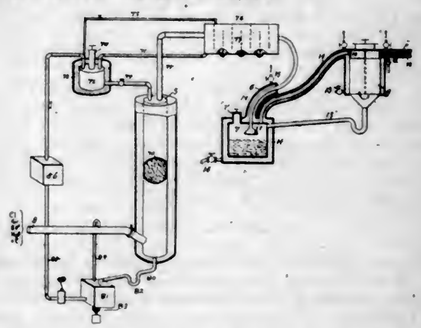
2. In a device of the kind described, the combination with a base adapted to be secured to the wall, of a casing secured on said base having an opening in its bottom, eyes formed on said casing carrying a pin and apertured ears, of a spring actuated cover mounted on said pin, for the purpose described.

3. In a tooth brush holder, the combination with a base provided with slots, of a casing provided with spurs secured in said openings in said base, eyes formed on the top of said casing carrying a pin, a cover of a greater length than the casing provided with apertured ears mounted on said pins and a spring connecting said cover to said base, for the purpose described.



4. In a tooth brush holder, the combination with a casing provided with an opening in its bottom adapted to receive the handle of the brush, and a spring actuated cover mounted on said casing adapted to be operated by the brush or hand, in placing the brush in the casing, and removing the brush, for the purpose described.

872,092. PROCESS FOR DETINNING AND RECOVERING MERCHANTABLE IRON FROM TIN-PLATE SCRAP. ELMER A. SPERRY, Brooklyn, N. Y. Filed Jan. 22, 1907. Serial No. 353,561.



1. Process of preparing merchantable iron from tin-plate-scrap which consists in refrigerating a reagent to dry it, elevating its temperature, heating the scrap therewith to remove the tin, and heating the resulting black scrap.

2. The process of preparing merchantable iron from tin-plate-scrap which consists in refrigerating a reagent to dry it, elevating its temperature, treating the scrap therewith to remove the tin, heating the resulting black scrap and washing same.

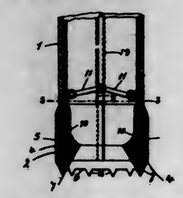
3. Process of preparing merchantable iron from tin-plate-scrap which consists in refrigerating a reagent to dry it, elevating its temperature, treating the scrap therewith to remove the tin, and heating the resulting black scrap and washing the same with a gas.

4. Process of preparing merchantable iron from tin-plate-scrap which consists in refrigerating a reagent to dry it, elevating its temperature, treating the scrap therewith to remove the tin, heating the black scrap and washing the same with a previously dried hot gas.

5. Process of preparing merchantable iron from tin-plate-scrap which consists in refrigerating a reagent to dry it, elevating its temperature, treating the scrap therewith to remove the tin and washing the resulting black scrap with a gas and then a liquid.

[Claims 6 to 40 not printed in the Gazette.]

872,093. EXCAVATING FOR CONCRETE PILES, &c. WILLIAM J. STEWART, Belfast, Ireland. Filed June 25, 1907. Serial No. 380,761.



1. In excavating for concrete piles, and other such work, the combination comprising an outer sinking tube provided with a cutting shoe and an inner tube, to receive and periodically discharge the excavated material, substantially as set forth.

2. In excavating for concrete piles, and other such work, the combination comprising an outer sinking tube provided with a cutting shoe and an inner tube having its lower end contracted, to receive and periodically discharge the excavated material, substantially as set forth.

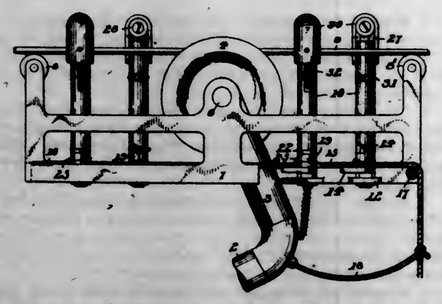
3. In excavating for concrete piles, and other such work, the combination comprising an outer sinking tube provided with a cutting shoe, having a lower sharp cutting edge and an inner annular shoulder, to support an inner tube to receive and periodically discharge the excavated material, substantially as set forth.

4. In excavating for concrete piles and other such work the combination of an outer sinking tube, provided with a cutting shoe formed with a lower sharp cutting edge and pointed teeth and an inner tube, to receive and periodically discharge the excavated material, substantially as set forth.

5. In excavating for concrete piles, and other such work, the combination comprising an outer sinking tube, provided with a cutting shoe, and an inner tube, to receive and periodically discharge the excavated material, having its lower end contracted by the insertion of a bar or bars formed as a knife edge below, substantially as set forth.

[Claim 6 not printed in the Gazette.]

872,094. TROLLEY-SECURING DEVICE. JOHN SZEKERES, Pittsburg, Pa., assignor of one-half to John Poluba, Allegheny, Pa. Filed Aug. 23, 1907. Serial No. 389,837.



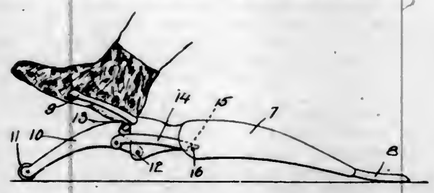
1. The combination of a trolley wheel, a support movable therewith, upright arms revolubly mounted on the support, springs for resisting rotation of the arms, each arm having a laterally extending top portion adapted to overhang the trolley wire, each arm being formed of sections hinged together, and springs for resisting the turning of the sections on the hinges.

2. The combination of a trolley wheel, a support movable therewith, upright arms on the support, each arm having a laterally extending top portion hinged thereto so that it may turn downward, and a spring for resisting such downward movement.

3. The combination of a trolley wheel, a support movable therewith, upright arms rotatably mounted on the support, each arm having a hinged joint midway its ends and each arm provided at its upper end with a laterally extending downwardly swinging portion, and a spring for resisting such downward movement.

4. The combination of a trolley wheel, a support movable, therewith, upright arms carried by the support, each arm at its upper end having a laterally extended portion provided with a roller, and a shield on the outer side of the arm partially overhanging said laterally extended portion.

872,095. BOOTJACK. WELLINGTON S. TITUS, Glenmoore, N. J. Filed Apr. 13, 1907. Serial No. 368,021.

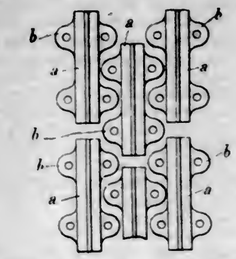


1. A boot-jack comprising an inclined body-portion provided at its lower end with floor-engaging feet and at its upper end with a pair of forwardly-extending shoe-engaging arms formed on opposite sides thereof; a supporting member pivoted to the upper end of said body-portion and adapted to maintain the latter in inclined position; shoe-engaging teeth formed on opposite sides of said member adjacent its pivotal point; a brace pivoted to said member and adapted to extend rearwardly beneath said body portion; and means carried by said body-portion for engagement with said brace, for limiting the yielding movement of said body-portion when downward pressure is applied thereto.

2. A boot-jack comprising an inclined convexo-concave body portion provided at its lower end with a pair of diverging floor-engaging feet and at its upper end with a pair of forwardly-extending, resilient, shoe-engaging arms formed on opposite sides thereof; a supporting member pivoted at one end to the upper end of said body-portion, and provided at its opposite end with a yielding floor-engaging roller, said member being adapted to maintain said body-portion in inclined position; shoe-engaging teeth formed on opposite sides of said member adjacent its pivoted end; a pin formed on the under face of said body-portion; and a rearwardly-extending brace pivoted at one end to said member and provided with a notched free end adapted for engagement with said pin, to limit the yielding movement of said body-portion when downward pressure is applied thereto.

872,096. MEANS FOR PREVENTING SIDE SLIP IN PNEUMATIC TIRES. LOUIS E. TREFFIÈRE and VICTOR J. JEHIN, Paris, France. Filed Mar. 9, 1906. Serial No. 305,189.

In a device of the class described the combination of a plurality of strips secured to the tire tread, said strips being located upon the tire in a plane co-incident with the plane of rotation thereof and in alined rows, the strips of each row being spaced apart longitudinally at their ends and disposed upon the tread in staggered relation to bring said spaces between the ends of the strips of one row out of transverse alinement with the spaces of strips of adjacent rows, said strips being provided with laterally projecting attaching ears formed to provide intervening re-



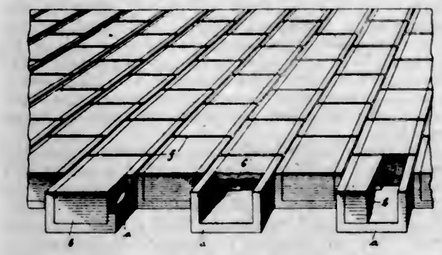
cesses, the attaching ears of one strip projecting into said intervening recesses of the strips of adjacent rows.

872,097. PROCESS OF BLEACHING COTTON FIBERS. RENÉ VAN BUGGENHOUDT, New York, N. Y., assignor of one-half to Otto Goetze, New York, N. Y. Filed Dec. 22, 1906. Serial No. 349,188.



The herein described process of bleaching fibers, which consists in moving the same by means of an apron to a tank and meanwhile alternately spraying the same with a bleaching solution and squeezing the same, then permitting the impregnated fibers to remain in moist condition until the bleaching action is completed, then immersing or saturating with water to wash the fibers and thoroughly remove the bleaching solution, draining off the water, subjecting the fibers to the action of an extractor for removing the excess of water, and finally further drying the fibers by heating the same.

872,098. CEILING AND FLOOR COMPOSED OF TILES. HEINRICH WESTPHAL, Posen, Germany, assignor to Richard Faber, Fermersleben, near Magdeberg, Germany. Filed Jan. 12, 1905. Serial No. 240,725.



1. A ceiling or floor comprising hollow structures each consisting of two channeled tiles one embracing the other with the channels extending transversely to each other and the faces of the one closing the channel of the other and vice versa, said hollow structures being cemented together by suitable cement.

2. A ceiling or floor comprising hollow structures or elements each consisting of two channeled tiles one embracing the other with the channels extending transversely to each other and the faces of the one closing the channel of the other and vice versa, the length of the outer tile being equal to the width of its channel, said hollow structures being cemented together by suitable cement.

872,099. SASH LOCK AND TIGHTENER. HERMAN O. WOLFF, Syracuse, N. Y. Filed Aug. 23, 1907. Serial No. 389,762.



1. The combination, with the sash and the casing provided with a vertical guide-strip engaging the inner side of the sash, of a dog movably connected to the sash and bearing on the outer edge of the guide-strip, a spring-pressed member automatically forcing the dog toward the said guide-strip to engage the latter, a rock-shaft connected to the spring-pressed member for moving the dog away from the guide-strip, and means for actuating said rock-shaft as set forth.

2. The combination, with the sash and casing, of a vertical guide-strip provided with a vertically disposed series of notches, a dog pivoted to the sash and having a protruding portion adapted to engage one of the notches and beveled to crowd the sash outwardly to bear on the casing, a spring-pressed rod automatically forcing the dog toward the guide-strip, a rock-shaft disposed in the bottom rail of the sash for operating the rod in opposition to the spring to turn the dog out of engagement with the notch, and a thumb-lever for actuating said rock-shaft as set forth.

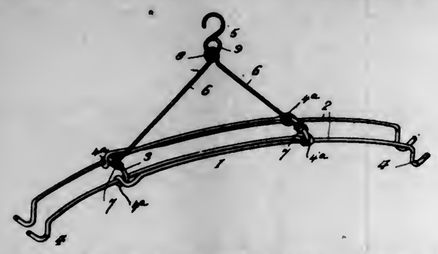
3. The combination, with the sash and the casing provided with a vertically disposed series of notches, of two dogs pivoted respectively to the lower and upper portions of the sash and disposed to engage the aforesaid notches, a rod extending vertically through the stile of the sash and connected to the dogs, a spring forcing said rod longitudinally in one direction, and means for moving the rod in the opposite direction.

4. The combination, with the sash and the casing provided with a vertically disposed series of notches, of a metal bar secured vertically in the stile of the sash, dogs pivoted respectively to the lower and upper end portions of said bar, a rod extending lengthwise of said bar and connected to said dogs, a bracket attached to the bar, a spiral spring surrounding the rod and seated at one end on the bracket, a collar attached to the rod and bearing on the opposite end of the spring, and means for moving the rod in opposition to said spring.

5. The combination, with the sash and the casing provided with a vertically disposed series of notches, of a metal bar secured vertically in the stile of the sash and provided with apertures, two dogs pivoted to the said bar and protruding through the aforesaid apertures, a rod extending lengthwise of said bar and connected to the dogs, a bracket attached to the bar, a spiral spring seated on said bracket, a collar attached to the rod and bearing on the upper end of the spring, a horizontal shaft in the bottom rail of the sash and constituting the pivotal support of the lower dog, and a thumb-lever connected to said shaft.

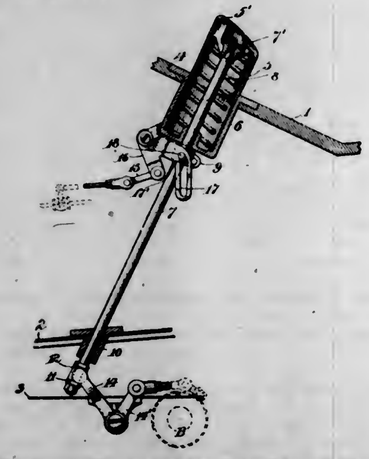
[Claims 6 and 7 not printed in the Gazette.]

872,100. GARMENT-HANGER. MARTIN A. WOOD, Marshall, N. C. Filed Mar. 25, 1905. Serial No. 252,021.



In a collapsible and extensible garment hanger, the combination of two yokes or frames, each comprising parallel side members, when collapsed or extended, each side member at one of its ends terminates in coils, each oppositely disposed coil being connected by an arch which spans above the said side members and across the space between the same, said side members being outwardly curved before terminating into the coils a pair of rods 6 having their lower ends formed into several coils 7, about said arches and provided at their upper ends with eyes or loops adapted to register with one another, a hook having an eye received by the eyes of said rods 6, said side members having their outer free ends provided with hooks 4, as and for the purpose specifically set forth.

872,101. CONTROLLING MECHANISM FOR SELF-PROPELLED VEHICLES. CHARLES C. WORTHINGTON, Dunnfield, N. J., and HENRY R. WORTHINGTON, Irvington-on-Hudson, N. Y. Filed Sept. 10, 1904. Serial No. 223,973.



1. In a controlling mechanism for self-impelled vehicles, the combination of a longitudinally depressible operating member, a throttle valve and a brake apparatus, the said valve being permanently connected with said member to be operated by it during its preliminary traverse and the brake apparatus being connected therewith to be operated by the member during its subsequent traverse.

2. In a controlling mechanism for self-impelled vehicles, a device for interrupting the supply of motive power to a driven member of said vehicle and a braking apparatus, in combination with an upright reciprocable presser rod mounted in journals respectively carried by the frame of the vehicle and the floor of the body and adapted to operate said device and apparatus, a longitudinally reciprocable push treadle journaled in the said floor and connected to the end of said rod.

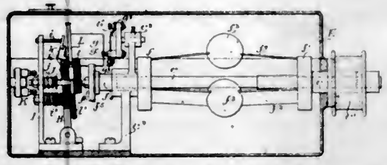
3. In a controlling mechanism for self-impelled vehicles, a depressible rod, connecting means associated therewith receiving a complete throw during a preliminary portion of the traverse of said rod, a device for interrupting the supply of motive power to a driven member of the said vehicle operated by said connecting means and a brake apparatus operated by the depression of said rod.

4. In a controlling mechanism for self-impelled vehicles, the combination of a depressible treadle-member, a throttle valve adapted to be regulated thereby during the preliminary traverse of said treadle member, means for connecting said valve and member adapted to hold the valve closed while permitting the further traverse of said member, and a braking apparatus controlled by the treadle member in its said further traverse.

5. In a controlling mechanism for self-impelled vehicles, a depressible rod and a bell crank pivoted adjacent thereto, a cam surface on one of said parts and a cam pin upon the other, in combination with a device for interrupting the supply of motive power to a driven member of the vehicle operated by said bell crank and braking apparatus operated by the depression of said rod.

[Claims 6 to 19 not printed in the Gazette.]

872,102. ELECTRIC STOP FOR ENGINES. JAMES K. WRIGHT, New York, N. Y. Filed Feb. 4, 1907. Serial No. 355,596.



1. Safety stop mechanism for an engine including a normally closed switch, means for automatically opening the same whenever the speed of the engine passes a predetermined limit, a normally energized electromagnet in circuit with the said switch, a valve in the main steam line of the engine, a weight constantly tending to close said valve, a device for normally preventing such closure, said device including a lever having an arm normally attracted to the magnet, substantially as described.

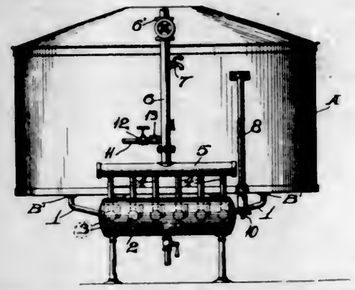
2. Safety stop mechanism for an engine, including a valve in the main steam line, a spindle for the valve, a weight operative on the spindle and constantly tending to close the valve, a bell crank lever having one of its arms constructed to maintain the weight in a raised position, an electromagnet placed to act on the other arm of the bell crank lever, a source of current, and a normally closed switch in circuit with the said magnet, with speed responsive means operated by the engine for operating the switch under abnormal speed conditions, substantially as described.

3. Safety stop mechanism for an engine including a revoluble spindle driven from the engine, a member slidably mounted on said spindle, speed responsive means driven from the spindle and operative upon the member, two normally closed switches, of which one is placed to be opened when said member is moved to an abnormal extent in one direction, and the other is placed to be opened when said member moves to an abnormal extent in the opposite direction, with means including a normally energized magnet in circuit with the switches for cutting off the supply of steam to the engine when either of said switches is operated, substantially as described.

4. Safety stop mechanism for an engine including an electric switch, means in circuit with said switch for causing cutting off of the steam supply to the engine when said switch is operated, and means actuated by the engine for operating said switch under abnormal conditions of speed, said latter means including a plunger, a pivoted lever, a bolt carried by the lever and movable into or out of a position of engagement with the plunger, means for holding the bolt out of said position, and means for causing automatic release of said bolt under predetermined conditions, substantially as described.

5. Safety stop mechanism for an engine including an electric switch, means in circuit with said switch for controlling the cutting off of steam to the engine, a device for automatically opening the switch when the engine speed falls below a predetermined point, means for preventing action of said device when the engine is shut down, with mechanism for resetting said device, substantially as described.

872,103. DRAIN-CONTROLLING APPARATUS FOR MASH-TUBS. ALOIS AUFRICHTIG, St. Louis, Mo. Filed Sept. 23, 1907. Serial No. 394,121.



1. The combination with a mash tub, of drain pipes leading from said tub, a receiver, a plurality of riser pipes, a header fitted to said riser pipes, and a plurality of multiple-way cocks for controlling the flow of liquid from said drain pipes to said header, through said riser pipes, and from said header through said riser pipes to said receiver, substantially as set forth.

2. The combination with a mash tub, of a plurality of drain pipes leading from said tub, a receiver, multiple-way cocks fitted to said drain pipes, riser popes fitted to said multiple-way cocks, and a header fitted to the upper ends of said riser pipes; said multiple-way cocks being adapted to permit the flow of liquid therethrough to either said header or to said receiver, substantially as set forth.

3. The combination with a mash tub, of a plurality of drain pipes leading from said tub, a receiver, a plurality of multiple-way cocks fitted to said drain pipes, riser pipes fitted to said multiple-way cocks, a header fitted to the upper ends of said riser pipes, and a stand pipe extending upwardly from said header; said multiple-way cocks being adapted to permit the flow of liquid therethrough to either said header or to said receiver, substantially as set forth.

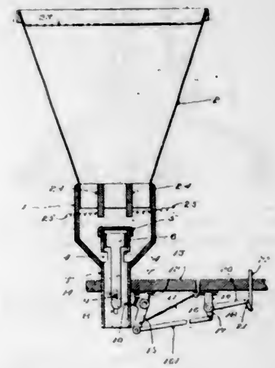
4. The combination with a mash tub, of a plurality of drain pipes leading from said tub, a receiver, a plurality of multiple-way cocks fitted to said drain pipes, riser pipes fitted to said multiple-way cocks, a header fitted to the upper ends of said riser pipes, a stand pipe extending upwardly from said header, and an air cock fitted to said stand pipe; said multiple-way cocks being adapted to permit flow of liquid therethrough to either said header or to said receiver, substantially as set forth.

5. The combination with a mash tub, of a plurality of drain pipes leading from said tub, a receiver, a plurality of multiple-way cocks fitted to said drain pipes, riser pipes fitted to said multiple-way cocks, a header fitted to the upper ends of said riser pipes, a stand pipe extending upwardly from said header, and a steam conducting pipe connected to said stand pipe, substantially as set forth.

[Claim 6 not printed in the Gazette.]

872,104. SAND-BOX FOR CARS. ABBOTT L. BACON, Franklin, Mass. Filed Mar. 22, 1907. Serial No. 363,805.

1. A sand-box having an outlet, a delivery-pipe extending from said outlet and a cylindrical valve-casing above the latter closed at its top, a movable valve-member for closing said outlet, which is moved upwardly within the said valve-casing to open the valve for the flow of sand and is shielded by the closed valve-casing from the mass and pressure of the sand, and means for operating the said valve-member from below, such means extending upwardly within the delivery-pipe.



2. In a sand-box, the combination with a tubular valve-casing extending up within the sand-chamber, closed at its upper end and having a lateral hole or opening through which sand may flow from the sand-chamber to the interior of the valve-casing, said valve-casing having a delivery-pipe continuation, of a valve-member within said valve-casing, which is shielded thereby from the mass and pressure of the sand, and which is moved upward inside said valve-casing to open the valve for the flow of sand, and means for operating the said valve-member from below.

3. In a sand-box, the combination with a tubular valve-casing extending up within the sand-chamber, closed at its upper end and having a lateral hole or opening through which sand may flow from the sand-chamber to the interior of the valve-casing, said valve-casing having a delivery-pipe continuation, of a valve-member vertically movable within said valve-casing to open and close the valve to permit or discontinue the flow of sand and which valve-member is shielded within the valve-casing from the mass and pressure of the sand, and operating means for the said valve-member.

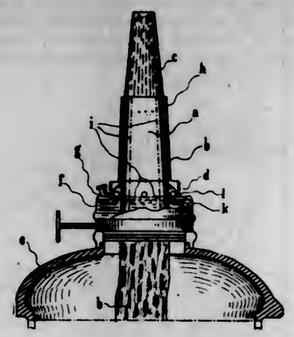
4. In a sand-box, the combination with the sand-receptacle, of one or more electrically-heated rigid plates or bars located within extending across the lower part of the sand-chamber, located intermediately with relation to the width of the sand-chamber, and adapted to be surrounded and covered by the sand, with the space above between and below the same unobstructed for the reception of the sand.

5. In a sand-box, the combination with a sand-receptacle, of an electrically-heated flat plate or bar extending across the lower part of the sand-chamber, located intermediately with relation to the width of the sand-chamber, with its width arranged vertically, and adapted to be surrounded by the sand.

872,105. SELF-EXTINGUISHING BURNER. ERNST BESENBRUCH, Hirschfelde, Germany. Filed Oct. 11, 1906. Serial No. 338,419.

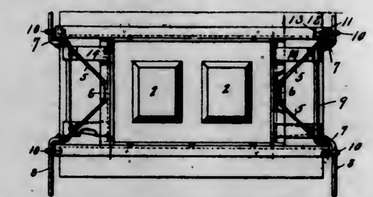
In lamps, stoves and the like for liquid fuel, the combination with the wick tube, of a jacket surrounding the same and divided by vertical partitions into compartments, a reservoir for extinguishing fluid also divided by partitions into compartments communicating with those of the wick tube, the partitions of the reservoir being perforated,

a cover for the reservoir having openings in depressed portions, and a ball adapted to close each of the openings



when the lamp or stove is upright and roll away from it when the lamp is tilted over, substantially as described.

872,106. MOLD FOR FORMING CEMENT BLOCKS. GEORGE B. BLODGETT, Fredonia, N. Y. Filed Oct. 11, 1906. Serial No. 338,441.



1. A mold having side and end members, each of said side members being connected to said end members by swinging links, a crank shaft carried by said side members, arms connected to said crank shaft, and said end members, said crank shaft and said arms, being so located that the connection between the same lies substantially in a plane co-incident with the axis of the crank shaft, and the point of connection between said arms and said end members, when said mold is in closed position, whereby said mold is locked in position and means for holding said arms and crank in closed position.

2. A mold, having side and end members, each of said side members being connected to said end members by swinging links, a crank shaft carried by said side members, arms connected to said crank shaft, and said end members, said crank shaft and said arms being so located that the connection between the same lies substantially in a plane co-incident with the axis of the crank shaft, and the point of connection between said arms and said end members, when said mold is in closed position, whereby said mold is locked in position, means for holding said arms and crank shaft in closed position, and means for adjustably supporting said rock shaft on said side members.

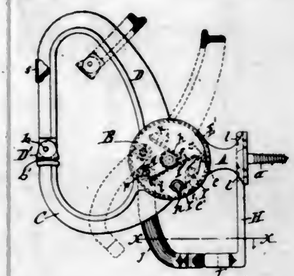
3. A mold having side and end members, swinging links pivoted at their opposite ends to the side and end members respectively, a crank shaft carried by said side members and extending substantially parallel to said end members, arms pivoted to the end members and to said crank shaft, said crank shaft and said arms being so located that the connection between the same lies substantially in a plane co-incident with the axis of the crank shaft, and the point of connection between said arms and said end members when said mold is in closed position, whereby said mold is held in said closed position and means for maintaining said arms and crank shaft in closed position.

4. A mold comprising side members and end members, links pivoted to said side members and end members, a crank shaft carried by said side members, arms connected to said crank shaft and to said end members, a bracket for supporting said arms and crank shaft when the mold is in closed position, said arms and crank shaft being so disposed as to hold the mold in closed position, and an auxiliary locking device for engaging and holding the crank shaft when supported by said bracket.

5. A mold including in combination side members and end members, face plates carried by said side and end members, said side members extending beyond said end members, and said face plates being so disposed that the end members contact with the ends of said face plates on the side members, links for connecting said end members and side members, means for opening and closing said mold comprising a crank shaft, arms pivotally connected to said end members and to the crank shaft, a bracket for supporting said arms and said crank shaft when the mold is in closed position, said arms and said crank shaft being so disposed as to lock the mold when in closed position.

[Claim 6 not printed in the Gazette.]

872,107. HAT, COAT, AND UMBRELLA RACK. EARL BOYNTON, Syracuse, N. Y., assignor of one-half to Frank E. Van Duyne, Auburn, N. Y. Filed Apr. 25, 1907. Serial No. 370,126.



1. The combination of the annular case formed with a coat and hat-hook and a key-hole, an annular cap pivoted to the center of the case and having its peripheral flange inside of said case and formed with a segmental ratchet and with an opening carried to and from the key-hole by the turning of the cap, a guard-arm formed integral with the cap and disposed over the aforesaid hook, spring-actuated dogs of different lengths pivoted to the case and engaging the ratchet, and a key provided with a guard adapted to press outwardly on the heels of the dogs and beyond the same, said guard being of a length to confine it between the heels of the dogs and the flange of the cap.

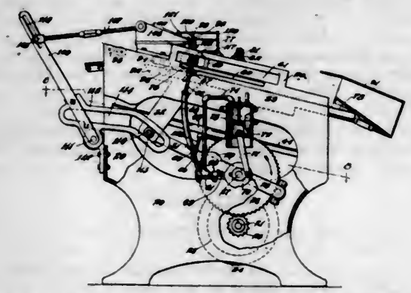
2. The combination of the stationary annular case formed with a coat- and hat-hook, a cap pivoted to the center of said case and having its peripheral flange inside of the case and formed with a segmental ratchet, a guard-arm formed integral with said cap and disposed over the aforesaid hook, spring-actuated dogs engaging the ratchet, a key adapted to throw said dogs out of engagement, and a jaw pivoted eccentrically to the end of the guard-arm to automatically reinforce the gripping action of the jaw by draft exerted on the article held by the jaw.

3. The combination of the stationary annular case formed with a coat- and hat-hook and provided with a key-hole, a cap pivoted to the center of the case and having its peripheral flange inside of said case and formed with a segmental ratchet and with an opening in the flange in proximity to the key-hole, a guard-arm formed integral with the cap and disposed over the aforesaid hook, spring-actuated dogs engaging the ratchet, and a key provided with a guard disposed to press outwardly on the heels of the dogs and become confined between the bottoms of the aforesaid heels and flange of the cap substantially as set forth.

4. The combination with the supporting bracket and annular case on said bracket, a cap pivoted to the center of said case and having its peripheral flange disposed inside of the case and formed with a segmental ratchet, spring-actuated dogs pivoted to the case and engaging the ratchet,

a key adapted to throw the dogs out of engagement, a hanger attached to the supporting bracket and terminated in a horizontal tongue formed with a notch in its end, and a retaining arm rigidly attached to the aforesaid cap and having its end disposed to meet the end of the aforesaid tongue and formed with a notch as and for the purpose set forth.

872,108. AUTOMATIC PRINTING-PRESS. HENRY E. BRETT, Los Angeles, Cal., assignor to The Mills Automatic Press Company, a Corporation. Filed Jan. 4, 1907, Serial No. 350,833. Renewed Sept. 30, 1907. Serial No. 395,288.



1. In a printing press, guideways; a reciprocating type carrying frame traveling on said guideways; a form box carried by said frame and vertically movable thereon; a reciprocating rotary impression cylinder; and means operable by exhaust to cause the movement of the form box toward and from said cylinder.

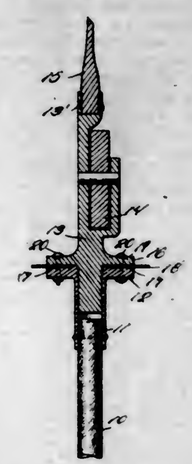
2. In a printing press, guideways; a reciprocating type carrying frame traveling on said guideways; a form box carried by said frame and vertically movable thereon; shafts mounted in bearings secured to said type carrying frame and having a portion thereof flattened, said form box being supported by said shafts; and mechanism operable by exhaust to rock said shafts.

3. In a printing press, a reciprocating feed box having the front end of the bottom open said feed box being adapted for the reception of the paper to be printed; a support for said feed box; a reciprocating rotary impression cylinder having in its periphery an air chamber provided with ports in the periphery thereof; mechanism for exhausting the air from said air chamber when the front end of a sheet of paper in said feed box registers with said air chamber; means for releasing said exhaust upon the revolution of said cylinder; guideways; a reciprocating type carrying frame traveling on said guideways; a form box carried by said frame and vertically movable thereon; type in said box; and mechanism operable by exhaust to cause the movement of the form box to carry the type into engagement with the paper on said cylinder.

4. In a printing press, a reciprocating rotary impression cylinder having in its periphery an air chamber provided with ports in the periphery thereof; a control valve chamber; a connection from said air chamber to said control valve chamber; an exhaust pump; a connection therefrom to said control valve chamber; a valve in said control valve chamber; a cam in engagement with said valve; a connection from said cam to said pump; and mechanism to operate said cam.

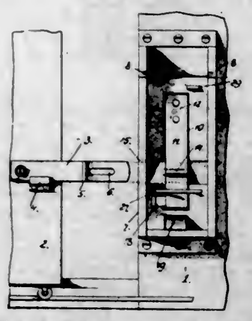
872,109. SEWER-PIPE CLEANER. THOMAS CANTWELL, St. Louis, Mo. Filed Oct. 12, 1906. Serial No. 338,667.

1. The combination, with the flexible handle, of a head comprising a sleeve secured on the inner end of a handle and provided with an annular flange, a detachable extension provided at its base with a flange coextensive with and of a form corresponding to the first-mentioned flange, wires radially arranged between said flanges and means for clamping the flanges together on the wires, the said extension being further provided with a socket in its forward end for the reception of the shank of a tool and having a wheel-bearing to the rear of said socket, and a wheel larger in diameter than the flanges supported on said bearings.



2. The combination, with the flexible handle, of a head comprising a sleeve secured on the inner end of the handle and provided with an annular flange, a detachable extension provided at its base with a flange coextensive with and of a form corresponding to the first-mentioned flange, wires radially arranged between said flanges, scrapers having shanks constructed as screw-threaded bolts extended through the apertures of the flanges, and nuts turned on said bolts for clamping the flanges together on the wires, the said extension being further provided with a socket in its forward end for the reception of the shank of a tool and having a wheel bearing to the rear of said socket, and a wheel larger in diameter than the flanges supported on said bearings.

872,110. SLIDING-DOOR LOCK. WILLIAM M. COOK, Warren, Ohio. Filed Apr. 13, 1907. Serial No. 367,923.



1. In a sliding door lock, the combination with a door having a pivoted slotted latch, of a lock casing mounted adjacent to said door, a front plate slidably mounted upon said casing and having an inclined end plate, a spring pressed dog mounted in said casing and adapted to lock said lid in a closed position, a spring locking-arm mounted in said casing, a lug carried by said locking-arm and adapted to engage in the slot of said door latch, a pivoted bell-crank lever mounted in said casing and adapted to hold said locking-arm out of engagement with said latch, means carried by said front plate for releasing said bell-crank lever, a guard carried by said front-plate for closing

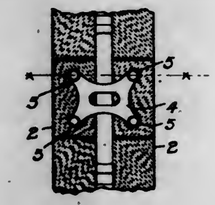
the latch opening formed in said casing, and a key for actuating said dog.

2. In a sliding door lock, the combination with a door having a pivoted slotted latch, of a lock casing slotted to receive said latch, a movable front plate carried by said casing, a spring pressed dog mounted in said casing for holding said front plate in a closed position, a spring locking arm mounted in said casing for engaging said slotted latch, a pivoted bell crank lever arranged in said casing for holding said spring out of engagement with said latch, a guard carried by said front plate for closing the latch slot of said casing, a key adapted to be inserted in said casing for actuating said dog, and means carried by said front plate for moving said bell crank lever.

3. In a sliding door lock, the combination with a slotted latch, of a lock casing adapted to receive said latch, a front plate movably mounted upon said casing, a spring locking arm mounted in said casing for engaging said latch and holding the same therein, a pivoted bell crank lever arranged in said casing for holding said locking-arm out of engagement with said latch, means carried by said door for engaging said lever and releasing said locking-arm, means carried within said casing for locking said front plate in a closed position, and a key for actuating the last named means to release said front plate.

4. In a sliding door lock, the combination with a latch having a slot, of a lock casing slotted in one side to receive said latch, a spring locking-arm mounted in said casing and having a lug to engage in the slot of said latch, means within the lock casing for holding the locking-arm depressed whereby the lug thereof is held out of the path of travel of the latch, a vertically movable front plate for said lock casing, means carried by said plate for releasing the locking-arm holding-means, and means for securing the movable front plate in position.

872,111. BUILDING-BLOCK. WALLACE L. DOW, Sioux Falls, S. D. Filed Jan. 25, 1906, Serial No. 297,773. Renewed Sept. 12, 1907. Serial No. 392,572.

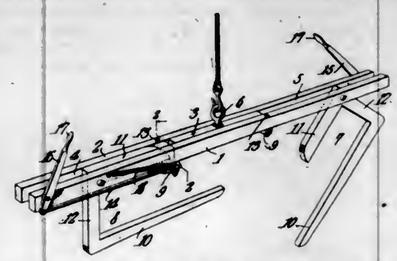


A wall composed of artificial blocks, each block comprising two sections or parts having a vertical air space between them and each section having sockets in its ends extending lengthwise thereof, and a plate arranged vertically in the joint between the ends of abutting blocks and having corner lugs projecting outwardly on each side of the plate in a direction substantially at right angles to the plane of the plate and fitting within said sockets and said lugs being diagonally arranged on said plate whereby they will brace and stiffen the wall and prevent lateral twisting and racking of the same.

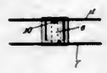
872,112. YOKE FOR WIRE-CARRYING HOOKS. BARTON S. DOWNEY, Kokomo, Ind. Filed Aug. 19, 1907. Serial No. 389,282.

1. In an apparatus of the character described a pair of spaced parallel beams, a hook pivoted between said beams near each end, a latch for holding each hook in horizontal position, and independent means for operating each of said latches and permit the hooks to turn on their pivots.

2. In an apparatus of the character described a pair of spaced parallel bars connected centrally by a short spacing block, a rectangular hook pivoted by one corner between said beams near their ends, said hooks having parallel upper and lower arms, latches adapted to engage said upper arms and hold the lower arms in horizontal position.



872,113. TYPE-WRITER RIBBON ATTACHMENT. WILLIAM F. ENDERS, Oakland, Cal. Filed Feb. 28, 1907. Serial No. 359,756.



1. In a device of the kind described a ribbon reel arranged in a cup, a ribbon on said reel, a passage way in the side of said cup permitting the passage of the ribbon therefrom and a guide member at the inner end of said passage way consisting of an upright member having an upper bent portion forming a slot therebetween, said ribbon running in said slot, as set forth.

2. In a device of the kind described a ribbon reel having a hub provided with a transverse vertical slot in one side thereof, the upper end of said slot being open, and one fixed and one removable flange on said hub, as specified.

3. In a device of the character described a ribbon reel having a hub, a fixed flange on one end of said hub, said hub being provided at its other end with V-shaped grooves extending radially with respect to the center of said hub, and a removable flange secured to said hub and provided with V-shaped spring clips adapted to engage with said grooves, as set forth.

4. In a device of the kind described a ribbon reel having a hub, a fixed flange at one end thereof, a flange held upward from the other end of said hub, a removable flange having a slot adapted to fit over said last named flange, said slot narrowing into a smaller slot, as set forth.

5. In a device of the character described a ribbon reel having a hub, said hub having a transverse vertical slot extending from side to side thereof and being open at its upper end and a removable flange on said hub adapted to form a cover for the top of said slot, when set on said hub, as set forth.

872,114. STABLE HYDROSULFITE PREPARATION AND PROCESS OF MAKING SAME. GADIENT ENGI, Basel, Switzerland, assignor to The Firm of Society of Chemical Industry in Basle, Basel, Switzerland. Filed Apr. 4, 1907. Serial No. 366,393.

1. The herein described process of manufacturing a stable hydrosulfite preparation suitable for the production of discharge effects upon ground colors which consists in causing anhydroformaldehyde-anilin and an aqueous solution of formaldehyde to act in rapid succession upon an aqueous solution of sodium hydrosulfite and in transforming the product of reaction thus obtained to a solid state by evaporation *in vacuo*.

2. As a new article of manufacture, the herein described stable hydrosulfite preparation suitable for the production of discharge effects upon ground colors and consisting mainly of a mixture of sodium phenylaminomethylsulfite and of sodium formaldehydesulfoxylate, the said hydrosulfite preparation being a glassy mass, stable in the air.

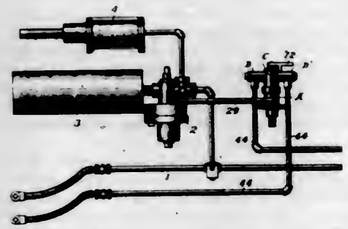
872,115. MIXED CHLOROBROMO DERIVATIVES OF INDIGO AND PROCESS OF MAKING SAME. GADIENT ENGI, Basel, Switzerland, assignor to The Firm of Society of Chemical Industry in Basle, Basel, Switzerland. Filed June 14, 1907. Serial No. 378,930.

1. The described process for the manufacture of mixed chlorobromo derivatives of indigo, which process consists in treating mono- and dichlorindigo with bromin in presence of a suitable indifferent medium.

2. The described process for the manufacture of mixed chlorobromo derivatives of indigo, which process consists in treating mono-and dichlorindigo with bromin in presence of nitrobenzene.

3. As new products the mixed chlorobromo derivatives of indigo which are obtained by treating mono- and dichlorindigo with bromin, constituting in dry state from blue to violet powders, insoluble in water, difficultly soluble in cold anilin and cold nitrobenzene, more easily in hot anilin and hot nitrobenzene with a blue to violet color, dissolving in fuming sulfuric acid with blue to violet color, yielding yellowish vats by treatment with suitable reducing agents, from which vats unmordanted cotton is dyed in beautiful violet to blue shades, fast to washing, light and chlorin.

872,116. FLUID-PRESSURE BRAKE APPARATUS. CHARLES H. FERGUSON, Jersey City, N. J. Filed Feb. 12, 1907. Serial No. 357,037.



1. The combination with the exhaust port of a fluid pressure brake apparatus, of a retainer valve connected thereto and having a normally open plug member, a piston connected to said plug member, means to admit the exhaust from said port to one side of said piston, and means to admit fluid under pressure to the other side of said piston.

2. The combination with a retainer valve having a piston operated plug member, of a source of fluid supply, and means on said valve to connect and disconnect said source to an operative position with said piston.

3. The combination with an automatic air brake system of the class described, of a retainer valve for each brake cylinder of said system for controlling the exhaust therefrom, a secondary fluid pressure supply pipe operatively connected with said retainer valves, and means for cutting out any one of said retainer valves without affecting the operativeness of the remainder of those in the system.

4. The combination with an automatic air brake system of the class described, of a retainer valve for each brake cylinder of said system, controlling the exhaust therefrom, a secondary fluid pressure supply pipe operatively connected with said retainer valves, and means for cutting out any one of said retainer valves and permitting the fluid to exhaust therefrom without affecting the operativeness of the remainder of those of the system.

5. In a pressure supply system, a valve comprising a casing having a by-pass and a piston therein held yieldably between the openings of said by-pass and adapted to remain in such position during normal working variations of pressure and to render said by-pass inoperative upon sudden reduction of pressure at one side of said piston.

[Claims 6 to 18 not printed in the Gazette.]

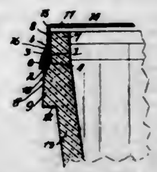
872,117. WRENCH. OLIVER H. GENTRY, Langley, S. C. Filed Sept. 16, 1907. Serial No. 393,027.



1. The combination with the fixed jaw and shank, of a sliding jaw mounted on said shank and having an internal chamber open at one end and a supplemental chamber merging with said internal chamber, said sliding jaw having bearing portions at the ends thereof, a screw shaft mounted in said bearing portions and projecting through said supplemental chamber, said screw shaft having smooth surfaced bearing portions to coöperate with said bearing portions of the sliding jaw, and a threaded portion, said shaft projecting to the outside of the sliding jaw, an operating nut secured to the projecting portion of the shaft, a slidable wedge block held within said sliding jaw and insertible through the open end thereof, said slidable wedge block having a bearing portion projected into said supplemental chamber and having a threaded portion to coöperate with the threaded portion of the shaft, a clamping block interposed between the wedge block and the fixed shank and retained from exit through said open end of the sliding jaw by said wedge block, all being arranged so that as the screw shaft is turned in one direction the wedge block will force the clamping block against the fixed shank to lock the sliding jaw thereto, substantially as shown and described.

2. The combination with the fixed jaw and shank, of a sliding jaw mounted thereon having an internal chamber and bearing portions, a screw shaft mounted in said bearing portions and having a pair of reverse threads, a pair of wedge blocks mounted in said sliding jaw and having bearing portions for coöperating with said screw shaft, a clamping block with reversely arranged clamping faces held in said sliding jaw, one coöperating with each wedge block, all being arranged substantially as shown and described.

872,118. HERMETIC CLOSURE FOR RECEPTACLES. JOHN S. GILES, Chicago, Ill. Filed June 21, 1907. Serial No. 380,088.



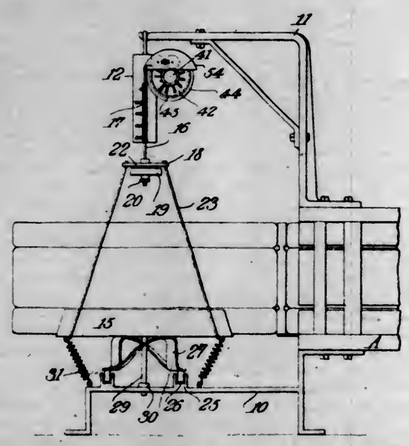
1. The combination with a receptacle having a rim or neck and a flange at the upper end, and a cap having a flaring depending flange, of a gasket triangular shaped in cross section, furnishing a lower right angle corner, a lower acute angle corner, and an upper acute angle corner, and presenting inner, lower, and outer contact faces

conforming to and co-acting with the contact faces of the neck and flange of the receptacle and the flange of the cap, with the lower right angle corner entering into the corner joining the neck and flange of the receptacle, substantially as described.

2. A closure for hermetically sealed receptacles, comprising a gasket having a triangular shape in cross section and furnishing a straight plain inner face, a straight plane lower face, and an oblique outer face, and a cap having a depending flange with an inner seating face engaging the inclined or oblique outer face of the gasket and forcing the gasket as a whole downwardly and inwardly, substantially as described.

3. A closure for hermetically sealed receptacles, comprising a gasket having a triangular shape in cross section and furnishing a straight plain inner face, a straight plane lower face and an oblique outer face, and a cap having a depending flange with a straight section and an outwardly curved section, the outwardly curved section furnishing a bearing face against the oblique outer face of the gasket for forcing the gasket as a whole downwardly and inwardly, substantially as described.

872,119. SCALE. ORIN L. GORDON, Robinson, Ill. Filed Sept. 17, 1906. Serial No. 334,917.



1. The combination with a scale, of a load receiver arranged for revoluble movement from load receiving to weighing position, cams for rigidly supporting the receiver in elevated load receiving position and arranged to permit descent of the load receiver when moved to weighing position, and means for turning the receiver to restore the same to elevated load receiving position after the removal of the load.

2. The combination with a scale, of a movable load receiver, a cam track carried by the load receiver, antifriction rollers engaging the cam track and serving to support the load receiver during the reception of the load, said load receiver being revoluble to disengage the cam track from the rollers and permit descent of the load receiver during the weighing movement.

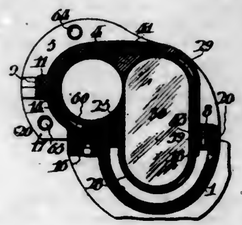
3. The combination with a weighing scale having a movable member, of a graduated disk free to rotate in but one direction, an annulus surrounding said disk, interlocking pawls between the disk and the annulus to permit independent movement of the latter in but one direction, and means for connecting the annulus to the movable member of the scale.

4. The combination with a weighing scale having a movable member, of a stationary disk, a graduated disk or ring supported thereby, a ratchet mechanism between the two disks, an annulus surrounding the graduated disk or ring, a ratchet mechanism between the annulus and said graduated disk, and means for connecting the annulus to the movable member of the scale.

5. The combination with a weighing scale having a movable member, of a stationary disk, a graduated disk or ring surrounding the same, ratchet mechanism for permitting movement of the graduated disk in but one direction, an annulus surrounding the graduated disk, ratchet mechanism for permitting independent movement of the annulus in but one direction, and an arm extending from said movable member and connected to said annulus.

[Claim 6 not printed in the Gazette.]

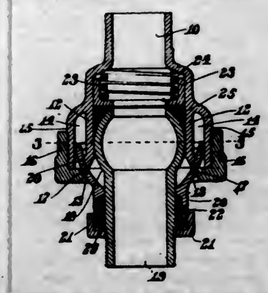
872,120. OPTICAL INSTRUMENT. JOHN G. GRAY, Philadelphia, Pa. Filed Apr. 8, 1907. Serial No. 366,889.



1. In a telescope provided with an offset at the region of the optical elements, the combination with the permanent casing, having an opening limited by flanges parallel to the optical axes; of a frame adapted to carry the optical elements, said frame comprising longitudinal bars which fit upon said flanges; means for directly securing said bars to said flanges; a removable shell adapted to completely inclose said frame and the elements carried thereby; and means for securing said shell to the permanent portions of said casing independently of the frame.

2. In a telescope provided with an offset at the region of the optical elements, the combination with the permanent casing having an opening limited by flanges parallel to the optical axes; of a frame adapted to carry the optical elements, said frame comprising longitudinal bars which fit upon said flanges; means for directly securing said bars to said flanges; a removable shell comprising a main portion having a downwardly depending rim adapted to inclose one of said bars and an independently removable portion adapted to inclose the other of said bars; means for securing the two parts of said shell together and means for securing said shell directly to the permanent portion of the casing.

872,121. FLEXIBLE PIPE-JOINT. WARREN A. GREENLAW, Melrose, Mass., assignor to The Greenlaw Manufacturing Co., Boston, Mass., a Corporation of Maine. Filed July 27, 1907. Serial No. 385,832.



1. In a flexible pipe joint, the combination of a pipe member provided with an enlarged chamber the walls of which terminate in a semi-spherical seat; another pipe member provided with a ball shaped end fitting said chamber; a semi-spherical member on the latter pipe member fitting said seat; and means for forcing said member to its seat.

2. In a flexible pipe joint, the combination of a pipe member provided with an enlarged chamber the walls of which terminate in a semi-spherical seat; another pipe member provided with a ball shaped end fitting said chamber; a semi-spherical member on the latter pipe member fitting said seat; an annular follower for said ball shaped end; a packing between the two; and a spring adapted to act upon said follower to force the semi-spherical member to its seat.

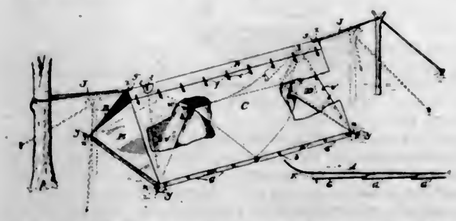
3. In a flexible pipe joint, the combination of a pipe member having an enlarged axial chamber, the walls of which terminate in a semi-spherical seat; an annular apron extending from said pipe member and forming an annular chamber surrounding said axial chamber; a cap secured to said apron provided with a semi-spherical seat concentric to the other seat; a pipe member provided with a ball shaped end fitting said enlarged axial chamber; means for packing the same therein; and a semi-spherical member on said ball ended pipe member adapted to fit between said seats.

4. In a flexible pipe joint, the combination of a pipe member having an enlarged axial chamber, the walls of which terminate in a semi-spherical seat; an annular apron extending from said pipe member and forming an annular chamber surrounding said axial chamber; a cap secured to said apron provided with a semi-spherical seat concentric to the other seat; a pipe member provided with a ball shaped end fitting said enlarged axial chamber; means for packing the same therein; a semi-spherical member on said ball ended pipe member adapted to fit between said seats; and means for adjusting one semi-spherical seat relative the other.

5. In a flexible pipe-joint, the combination of a pipe member having an enlarged axial chamber, the walls of which terminate in a semi-spherical seat; an annular apron extending from said pipe member and forming an annular chamber surrounding said axial chamber; a cap secured to said apron provided with a semi-spherical seat concentric to the other seat; a pipe member provided with a ball shaped end fitting said enlarged axial chamber; means for packing the same therein; a semi-spherical member on said ball ended pipe member adapted to fit between said seats; and means for packing the joint between said semi-spherical member and said pipe member.

[Claim 6 not printed in the Gazette.]

872,122. BEDDING-ROLL. GEORGE R. GUILD, U. S. Army, assignor of one-third to David S. Guild, Sr., and Emil J. Reuther, Nahant, S. D. Filed Feb. 13, 1907. Serial No. 357,138.



1. A bedding-roll comprising a body having side flaps and end flaps, a row of buckles on the outside of the roll along the line of fold between its body and a side-flap of same, straps projecting from the longitudinal edge of the other side flap, and interlocking fastening devices in connection with end and side flaps.

2. A bedding-roll comprising a body having side flaps and end flaps; pockets transversely of the body open at one end in the same direction and having the closed end of one within another throughout the series, a row of buckles on the outside of the roll along the line of fold between its body and a side-flap of same, straps projecting from the longitudinal edge of the other side flap, and interlocking fastening devices in connection with end and side flaps.

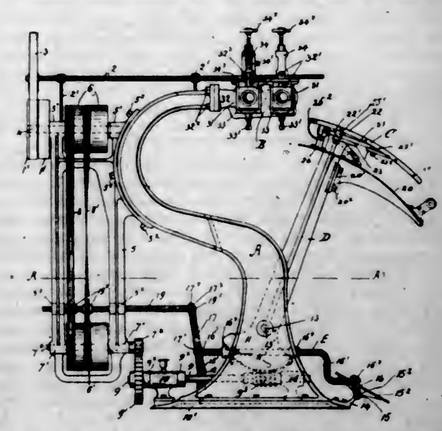
3. A bedding-roll comprising a body having side-flaps of different widths and end-flaps, corner-quadrants of material similar to the body between the flaps of same, loops in connection with the quadrants, a row of straps projecting from the longitudinal edge of the broadest side flap, a corresponding row of buckles on the other side flap adjacent to its longitudinal edge, fastening devices in connection with the end flaps, rings in connection with one of the side-flaps in position to be passed through slots in the other side flap and engage said fastening devices, and buttons in connection with said side-flaps for engagement with button holes provided in said end-flaps, the button-holes of each end-flap being divergent from the fastening device in connection with the same.

4. A bedding-roll comprising a body having outside pockets in which to stuff bedding material, side-flaps of different widths and end flaps, a row of straps projecting from the longitudinal edge of the broadest side flap, a corresponding row of buckles on the other side flap adjacent to its longitudinal edge, fastening devices in connection with the end-flap, rings in connection with one of the side flaps in position to be passed through slots in the other side flap and engage said fastening devices, buttons in connection with said side flaps for engagement with button-holes provided in said end flaps, the button-holes of each end-flap being divergent from the fastening device in connection with the same, corner-quadrants of material similar to the body between the flaps of same and loops in connection with the quadrants.

5. A bedding-roll comprising a body having side-flaps of different widths and end flaps, corner-quadrants of material similar to the body between the flaps of same, loops in connection with the quadrants, a row of straps projecting from the longitudinal edge of the broadest side flap, a corresponding row of buckles on the other side flap adjacent to its longitudinal edge, fastening devices in connection with the end flaps, rings in connection with one of the side-flaps in position to be passed through slots in the other side-flap and engage said fastening devices, buttons in connection with said side-flaps for engagement with button-holes provided in said end-flaps, the button-holes of each end-flap being divergent from the fastening device in connection with the same, and holders of various kinds in connection with said body and flaps.

[Claim 6 not printed in the Gazette.]

872,123. IRONING-MACHINE. AXEL R. GUSTAFSON, Chicago, Ill. Filed Apr. 20, 1906. Serial No. 312,845.



1. An ironing machine for use in laundries, comprising a curved standard, a power shaft 4, a pulley and belt device for the purpose of reversing the movement, a driven

shaft 7, a pinion 7^3 thereon, a gear shaft 9, a gear wheel 9' secured thereto, gear connection between the said pinion and the gear wheel, a worm on shaft 9, a rocker arm D, a toothed segment on the lower end of said rocker arm and gear connection between the said worm and the segment of the rocker arm, substantially as described.

2. In a device of the class described the combination with a standard having its upper end curved forwardly to a horizontal position and provided with a recessed lower end, driving mechanism carried on the rear side of said standard, a rocker arm pivoted at its lower end in said recess, a toothed segment on said rocker arm beneath its pivotal point, a worm shaft extending into said recess from the rear of the machine and engaging said segment and adapted to move the upper end of the arm inwardly and outwardly from said standard beneath the curved end, and coacting ironing devices on said curved end and rocker arm.

3. In a device of the class described the combination with a frame comprising a standard having a forwardly directed upper end, of a rocker bar pivoted adjacent its lower end in a recess in said standard, a segment rack on the lower end thereof beneath its pivotal point, a worm shaft journaled in the base of the standard and protruding from the rear side thereof, a worm gear thereon meshing with said rack, a drive shaft on the opposite side of the standard from said rocker bar, a shaft driven from the drive shaft, intermeshing gears on said driven shaft and worm shaft adapted to drive the worm shaft and move the upper end of said bar inwardly and outwardly from said standard beneath the forwardly directed end thereof, means operated by the lower end of said bar acting to reverse the movement of said bar, and ironing devices carried on the forwardly directed end of said standard.

4. A laundry machine, comprising a curved standard, a power shaft on the rear thereof, a driven shaft supported near the bottom of the standard, belt and pulley connections between said shafts, a worm shaft journaled in said standard, intermeshing gears on said driven shaft and worm shaft, a rocker arm pivoted in the bottom of the standard, a segment gear on the lower end thereof adapted to mesh with the worm on the worm shaft, a pair of rollers on the upper end of said standard, adjusting screws beneath said rollers adapted to adjust them as to height, means for exerting a yielding, downward pressure on said rollers, and a removable ironing board on the top of the rocker arm.

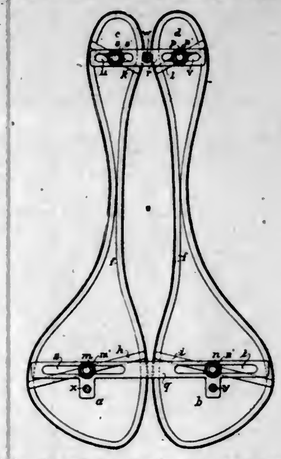
5. In a device of the class described the combination with a curved standard, of a pair of rollers journaled on the upper end thereof, means for adjusting the rollers as to height, means for exerting a yielding pressure on the top of said rollers, a rocker arm pivoted in the bottom of said standard, a saddle plate on the upper end thereof, an ironing board, locking devices on said board adapted to lock beneath the saddle plate, a segment gear on the lower end of said rocker arm, a worm shaft and a worm thereon meshing with said gear and means for rotating said shaft alternately in opposite directions.

[Claims 6 to 8 not printed in the Gazette.]

872,124. BICYCLE AND MOTOR-BICYCLE SADDLE. THURE F. HAMMARÉN, Koetzschenbroda, near Dresden, Germany. Filed Aug. 17, 1906. Serial No. 330,955.

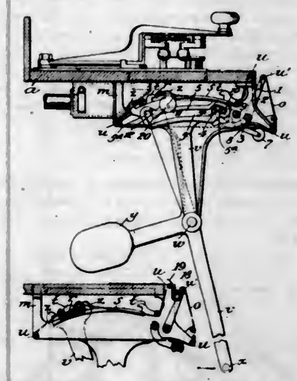
1. In a bicycle saddle, two metal frames forming the saddle halves, having front extensions forming an elongated pommel, said halves having their outer edges curved to correspond to a human upper thigh and having their inner edges curved away from each other at the middle part of the saddle to form a broad space, coverings for the frames, bars attached to the frames at the front and rear of the saddle, threaded bolts fixed to said bars, adjustable cross bars having slots arranged to receive the said threaded bolts and clamping nuts engaging the bolts for securing the cross bars tightly to the bars attached to the frames.

2. In a bicycle saddle, two metal frames forming the saddle halves, having front extensions forming an elongated pommel, said halves having their outer edges curved to correspond to a human upper thigh and having their inner edges curved away from each other at the middle part of the saddle to form a broad space, said space extending throughout the whole of the saddle, coverings for the frames, bars attached to the frames at the front and rear



of the saddle, threaded bolts fixed to said bars, adjustable cross bars having slots arranged to receive the said threaded bolts and clamping nuts engaging the bolts for securing the cross bars tightly to the bars attached to the frames.

872,125. CIGAR-BUNCH-ROLLING MACHINE. OSCAR HAMMERSTEIN, New York, N. Y. Original application filed June 25, 1904, Serial No. 214,082. Divided and this application filed Aug. 10, 1906. Serial No. 329,979.



1. The combination of a frame having a guide, a bar movable back and forth on said guide, an apron the ends of which are secured to opposite sides of said bar, fixed rollers and a movable roller over which said apron passes to form a bight between said movable roller and one of the fixed rollers, an operating member having projections adapted to engage said bar on opposite sides, the distance between the projections being greater than the width of the bar so that the operating member will have a partial movement independently of the bar, and means for actuating the movable roller by the independent movement of the operating member.

2. The combination of a frame having a guide, a bar movable back and forth on said guide, an apron secured to said bar so as to move therewith, means for supporting the apron, an operating member movable in the same direction as the said bar and adapted to engage it on opposite sides, but capable of a partial movement independently of said bar, and bight-opening and closing means actuated by said independent movement of the operating member.

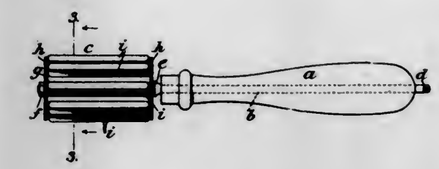
3. The combination of a frame having a guide, a bar movable back and forth on said guide, an apron secured to said bar so as to move therewith, means for supporting the apron, an operating member movable in the same direction as the said bar and adapted to engage it on opposite sides, but capable of a partial movement independently of said bar, a tension device for said apron, actuated by the movement of the operating member, and bight-opening and closing means actuated by said independent movement of the operating member.

4. The combination of a frame having a guide, a bar movable back and forth on said guide, an apron secured to said bar so as to move therewith, means for supporting the apron, an operating member movable in the same direction as the said bar and adapted to engage it on opposite sides, but capable of a partial movement independently of said bar, a tension device for said apron, means for applying said tension device slightly during the initial independent movement of the operating member and more strongly when said operating member moves together with the apron bar, and bight-opening and closing means actuated by said operating member.

5. The combination of a frame having a guide, a bar movable back and forth on said guide, an apron secured to said bar so as to move therewith, means for supporting the apron, an operating member movable in the same direction as the said bar and adapted to engage it on opposite sides, but capable of a partial movement independently of said bar, a tension device for said apron, means for applying said tension device slightly during the initial independent movement of the operating member and more strongly when said operating member moves together with the apron bar, and bight-opening and closing means actuated by said independent movement of the operating member.

[Claims 6 to 12 not printed in the Gazette.]

872,126. MASSAGE IMPLEMENT. HENRY G. HART, Mount Vernon, N. Y. Filed May 15, 1905. Serial No. 260,461.



1. In a massage implement the combination of two disks connected centrally by a tube, of a plurality of rollers carried by said disks and capable of revolving between them, a rod upon which said disks may revolve, and a handle for said rod, substantially as shown and described.

2. In a massage implement, the combination of two disks connected centrally by a tube, of a plurality of rollers carried by said disks and capable of revolving between them, a rod upon which said disks may revolve, a shoulder upon the rod forming an abutment for the disks, a nut handle for the rod, substantially as shown and described.

3. In a massage implement, the combination of two disks connected centrally by a tube, of a plurality of rollers carried by said disks and capable of revolving between them, a rod passing through said disks and tube and upon which they may revolve, a shoulder upon said rod forming an abutment for said connected disks, a nut upon the end of the rod to confine the disks in place, a handle for said rod and means for attachment of an electric conductor whereby an electric current may be passed through the rod, disks and rollers, substantially as shown and described.

872,127. REINFORCING MEANS FOR COMPOSITE STRUCTURES. JOHN F. HAVEMEYER, Ardsley-on-Hudson, N. Y. Filed July 20, 1907. Serial No. 384,757.



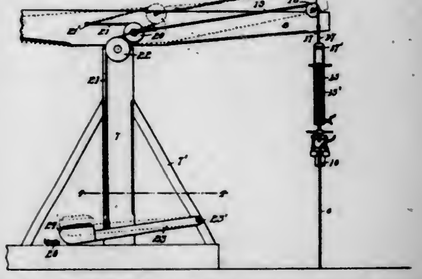
1. A reinforcing bar of any cross-section having along its length a plurality of groups of deformations, each group comprising a plurality of compensating depressions and projections arranged transversely of the bar, parts of projections and depressions in a group being separated transversely one from another by surfaces separate from the walls of either a projection or depression.

2. A reinforcing bar of any cross-section having along its length a plurality of groups of deformations, each group comprising a plurality of compensating depressed and projecting deformations arranged transversely of the bar, parts of projections and depressions in a group being separated transversely one from another by a portion of the original surface of the bar.

3. A reinforcing bar of any cross-section having a plurality of groups of deformations, each group comprising a plurality of compensating depressions and projections arranged thereon and partly separated transversely of the bar, the projections of adjacent groups being separated by a portion of the original surface of the bar.

4. A reinforcing bar of any cross-section having along its length a plurality of groups of deformations, each group comprising a plurality of compensating depressed and projecting deformations arranged transversely of the bar and on adjacent parts of the bar, each projection and each depression being surrounded by the original surface of the bar.

872,128. WELL-DRILLING APPARATUS. CHARLES M. HEETER, Butler, Pa. Filed Oct. 9, 1905. Serial No. 281,973.



1. In well drilling apparatus, hole-forming mechanism, a counterweight heavier than said mechanism, lifting means, and a connection between the hole-forming mechanism and counterweight, said connection having movable union with the lifting means.

2. In well drilling apparatus, the combination of hole-forming mechanism, a counterweight heavier than said mechanism, a flexible connection between the latter and counterweight, and actuating means movably connected to said flexible connection.

3. In well drilling apparatus, the combination of hole-forming mechanism, a counterweight heavier than said mechanism, vertically oscillating actuating means above the counterweight, a flexible connection between the hole-forming mechanism and the counterweight, the flexible connection being movably secured to the actuating means, and a guide for said connection coincident with the axis of the actuating means.

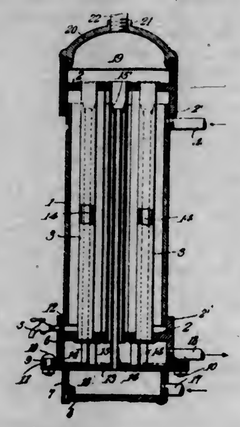
4. In well drilling apparatus, the combination of hole-forming mechanism, a walking-beam, a counterweight lower than the walking-beam and heavier than said mechanism, a flexible connection between the latter and the

counterweight, and guides for directing said flexible connection over the walking-beam.

5. In well drilling apparatus, the combination of a samson post, a walking beam fulcrumed thereon, a counterweight, tool-suspending mechanism, a flexible connection between the counterweight and said mechanism, and guiding means coincident with the beam fulcrum and at the outer end of the beam for movably directing said flexible connection.

[Claims 6 to 10 not printed in the Gazette.]

872,129. WATER-HEATER. ROBERT A. HEFFLEY, Denver, Colo. Filed Aug. 11, 1906, Serial No. 330,193. Renewed Oct. 16, 1907. Serial No. 397,676.



1. In a device of the class described, the combination of a jacket, a compartment at one end thereof, and sets of telescopic tubes communicating at corresponding ends with each other and with the compartment.

2. In a device of the class described, the combination of a jacket, separate compartments at one end, a single compartment at the opposite end of the jacket, and a set of tubes extending from each of said separate compartments and communicating with the said single compartment.

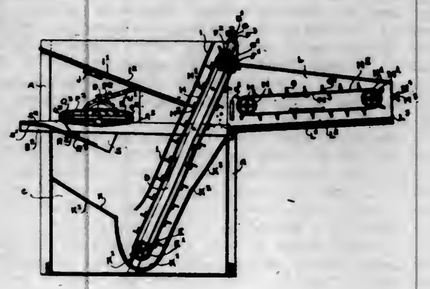
3. In a device of the class described, the combination of a cylinder adapted to contain a heating fluid and having oppositely disposed heads, a distributing chamber disposed above one of the heads, tubes connecting said heads, a casing at the opposite head of the cylinder, a partition dividing the casing into separate compartments, and tubes secured to the partition to receive the liquid to be heated from one of said compartments and extending through the other compartment for communication with the distributing chamber.

4. In a device of the class described, the combination of a cylinder adapted to contain a heating fluid, a casing at one end of the cylinder, a partition dividing the casing into separate inlet and outlet compartments, a chamber at the end of the cylinder opposite from the casing, tubes extending from said chamber to the outlet compartment, and tubes communicating with the said chamber and the inlet compartment.

5. In a device of the class described, the combination of a cylinder adapted to contain a heating fluid, a casing secured at one end of the cylinder and composed of separate sections removably secured together and having a wall between them for dividing the casing into two separate compartments, an inlet conduit leading to one of the compartments, an outlet conduit leading from the other compartment, separate sets of tubes communicating with the said compartments, and a chamber between one set of tubes and the other.

[Claims 6 to 8 not printed in the Gazette.]

872,130. GRAIN CLEANING AND PICKLING MACHINE. HALVOR T. HELGESON, Regina, Saskatchewan, Canada. Filed Nov. 1, 1906. Serial No. 341,587.



1. A device of the class described, comprising a feed hopper, a tank, a funnel-shaped cross partition within the tank and extending from one side thereof to the other and from end to end, an endless carrier extending into the channel, formed by the funnel-shaped partition, and a chute leading from the hopper, and extending into the tank and above the carrier, and adapted to direct the grain into the funnel-shaped channel, as and for the purpose specified.

2. A device of the class described, comprising a tank, having a cross partition, forming a funnel-shaped channel with the sides, an endless conveyer having its lower end within the channel, a cross partition extending obliquely downwardly above the ascending side of the conveyer, an adjustable gate making an angle with the latter cross partition, and forming with the latter cross partition a hopper, as and for the purpose specified.

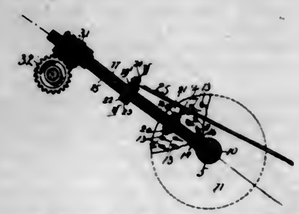
3. In a device of the class described, the combination with the supporting frame, of a tank in the lower portion of the frame, an endless carrier extending obliquely from the tank and within the framework, side inclosures at the ends of the carriers, and continuous with the sides of the tank, a cross partition in the tank, forming a basin with the side of the tank, an endless carrier extending obliquely upwardly from the basin, out of the tank and within the framework, a cross partition above the ascending side of the carrier and extending into the tank, an adjustable gate, forming with the latter cross partition and the side inclosures, a hopper, as and for the purpose specified.

4. In a device of the class described, the combination with the tank, the hopper and the endless carriers, of an inclined chute having its inner end connected with the tank above the endless carriers and adapted to receive the grain therefrom, an endless chain conveyer longitudinally within the chute, and having blades thereon, extending across the chute, a drain board below the tips of the blades on the lower side of the conveyer, and a cross partition adjacent to the inner end of the conveyer, as and for the purpose specified.

5. In a device of the class described, the combination with the tank, and the endless carrier, of a chute inclined towards the tank and having its inner end connected thereto, and adapted to receive the grain from the carriers, a set of gears supported on a shaft bearing in the sides of the inner end of the chute, a set of gear wheels secured on a shaft, supported in adjustable bearings at the sides of the outer end of the chute, endless gear chains encircling the opposing gears in the sets, a series of cross blades secured to the chains, and extending to the edges of the chute, a cross partition at the inner end of the chute, in juxtaposition to the conveyer, a perforated drain board extending across the chute, and considerably below the tips of the blades, as and for the purpose specified.

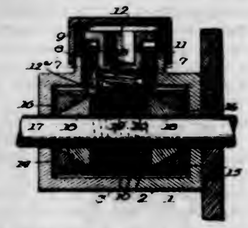
[Claims 6 and 7 not printed in the Gazette.]

872,131. CHANGE-SPEED GEARING. CHARLES JOHNSON, Auburn, N. Y., assignor of one-half to Charles Frank, Newark Valley, N. Y. Filed May 3, 1907. Serial No. 371,577.



In combination with the rotary disk provided with a plurality of concentric rows of gear-teeth, a shaft extending radially from the axis of said disk and provided with a longitudinal groove, a longitudinally movable spline in said groove and formed with a tooth on each end, and a longitudinally movable speed-changing rod restrained from lateral movement, a pinion mounted loosely on said shaft and connected to the tooth on the front end of the spline, a collar loosely embracing the shaft and formed with a circumferential groove in the center of its interior and engaging the tooth on the rear end of the spline, with a lug projecting from the exterior of said collar and connected to the aforesaid speed changing rod as set forth.

872,132. ROD-PACKING. THOMAS A. JOHNSTON, Chadron, Nebr. Filed May 2, 1907. Serial No. 371,447.



1. A rod-packing comprising a stuffing-box, a casing loose therein and surrounding the rod, and a packing inside the casing around the rod.

2. A rod-packing comprising a stuffing-box, a casing loose therein and surrounding the rod, and a packing incasing around the rod, and packing-rings between the aforesaid packing and the end walls of the stuffing-box.

3. A rod-packing comprising a stuffing-box, a casing loose therein and surrounding the rod, spaced packing rings inside the casing, and a packing of spheres in the casing between the aforesaid packing-rings.

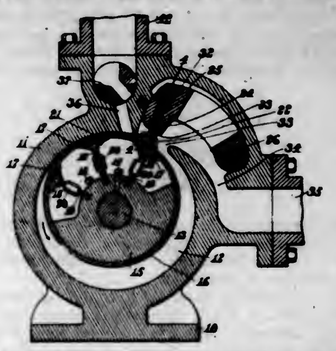
4. A rod-packing comprising a stuffing-box, a casing loose therein and surrounding the rod, spaced cup-shaped packing-rings inside the casing, conical packing-rings fitting the cupped edges of the aforesaid packing-rings, and a packing of spheres in the casing between the conical rings.

5. A packing-rod comprising a stuffing-box, a casing loose therein and surrounding the rod, spaced cup-shaped packing-rings inside the casing, spring-pressed conical packing-rings fitting the cupped ends of the aforesaid packing-rings, and a packing of spheres in the casing between the conical rings.

[Claims 6 to 8 not printed in the Gazette.]

872,133. ROTARY MOTOR. JUSTUS R. KINNEY, Dorchester, Mass. Filed Apr. 29, 1907. Serial No. 370,967.

1. In a device of the class described, the combination of a casing having a cylindrical chamber; an eccentric piston therein; a continuous peripheral band thereon; and means whereby said band may be adjusted about the periphery of said piston and clamped in adjusted position.



2. In a device of the class described, the combination of a casing having a cylindrical chamber; an eccentric piston therein; a continuous peripheral band thereon; and means whereby said band may be adjusted about the periphery of said piston and clamped in adjusted position.

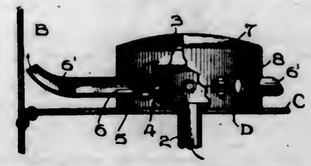
3. In a device of the class described, the combination of a casing having a cylindrical chamber; a rotary piston therein composed of a segment of a cylinder; a continuous cylindrical band thereon; and means for adjusting the position of said band toward and from said segment.

4. In a device of the class described, the combination of a casing having a cylindrical chamber; a rotary piston therein; a peripheral band therefor; and means in different radial planes for adjusting the position of said band toward and from the center of said piston.

5. In a device of the class described, the combination of a casing having a cylindrical chamber; a rotary piston therein; a continuous peripheral band therefor; and means in different radial planes for adjusting the position of said band toward and from the center of said piston.

[Claims 6 to 9 not printed in the Gazette.]

872,134. GAS-BURNER. WILLIAM KITCHING, Joplin, Mo., assignor to Haynes-Langenberg Manufacturing Company, St. Louis, Mo. Filed July 18, 1907. Serial No. 384,383.



In a gas burning furnace containing a fire chamber, a horizontal shelf at the bottom of said fire chamber provided with an orifice, a gas receiver located above said orifice, a conducting pipe leading to said receiver, mixer couplings fitted to said receiver, a housing above said shelf inclosing said receiver and mixer couplings and having a closed top and a wall fitting throughout its lower edge against the top of said shelf, and jet tubes snugly fitted in the wall of said housing and associated at their inner ends with said mixer couplings, substantially as set forth.

872,135. MAINSPRING-WINDER. LOUIS KOHN, Chicago, Ill. Filed June 7, 1907. Serial No. 377,734.

1. In a mainspring winder, the combination with a handle, a tubular shaft, a sliding shaft within said tubular shaft, disks secured to the ends of said shafts, means for winding a mainspring into any desired size, and means for transferring said wound mainspring into a barrel or case, said means comprising a series of adjustable plungers.

2. In a mainspring winder, the combination with a handle, a tubular shaft, a sliding shaft within said tubular shaft, disks secured to the ends of said shafts, means for winding a mainspring into any desired size, and means for transferring said wound mainspring into a barrel or case, said means comprising a series of radially adjustable plungers.



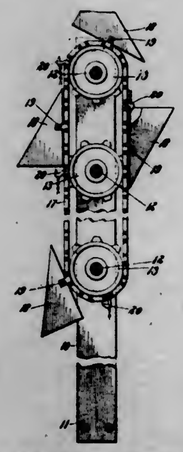
3. In a mainspring winder, adjustable mechanism for regulating the size of the mainspring, comprising a series of guides, a spiral track, and means on said guides for engaging the sides of said track.

4. In a mainspring winder, adjustable mechanism for regulating the size of the mainspring, comprising a series of radially adjustable guides, a spiral track, and means on said guides for engaging the sides of said track.

5. In a mainspring winder, adjustable mechanism for regulating the size of the mainspring, comprising a series of guides, a spiral track, a series of pins extending downwardly from said guides entering said track.

[Claims 6 to 11 not printed in the Gazette.]

872,136. CARRIER AND ELEVATOR. EDMUND G. KRAFT, Somerville, N. J. Filed Feb. 14, 1907. Serial No. 357,299.



1. In an elevator and carrier the combination with uprights, of a motor carried by one of the uprights, sprocket wheels on the motor shaft, uniting shafts carrying sprocket wheels, chains passing over the sprockets, buckets carried by the chains and latches on the chains adapted to drop and hold the buckets while they are moving upward.

2. An elevator including a chain, a bucket secured to the chain, and a latch pivotally secured to the chain, said latch being adapted to engage the bucket.

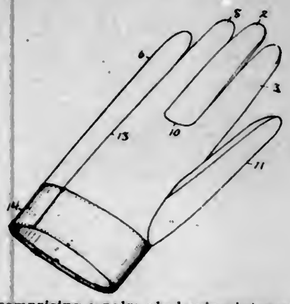
3. An elevator including a chain, a bucket secured to one of the links of the chain, and a latch pivotally secured to one of the links of the chain, said latch being adapted to engage the bucket.

4. An elevator including a chain, a bucket fixedly secured to one of the links of the chain, and a latch pivotally secured to one of the links of the chain, said latch being adapted to engage the bucket.

5. An elevator including a chain, a bucket secured to one of the links of the chain, and a latch secured to one of the links of the chain, said latch being adapted to engage the bucket.

[Claim 6 not printed in the Gazette.]

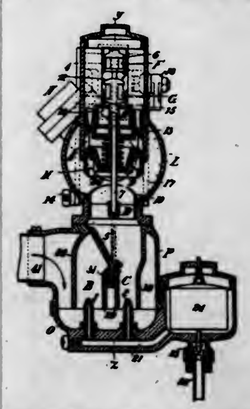
872,137. GLOVE. DAVID E. LAUFERTY, Fort Wayne, Ind. Filed Feb. 27, 1905. Serial No. 247,533.



A glove comprising a palm ply having integral therewith the palm portions of the index, second, third and little fingers, the back ply of the glove being constituted by portions integral with the palm ply at the edges of the little finger and index finger portions respectively, and united by a seam extending longitudinally of the back of the glove at a point adjacent the inner edge of the little finger, the back portion of the third finger being integral with the back ply including the back portion of the index finger but separated therefrom by a space to span the second finger, and an insert forming the back portion of the second finger.

872,138. VALVE-GEAR. HEINRICH MAYER, Arbon, Switzerland, assignor to The Firm of Adolph Saurer, Arbon, Switzerland. Filed Jan. 22, 1907. Serial No. 353,550.

1. In a valve-gear for four stroke cycle explosion-engines



with carbureters and governors, the combination with a casing having two apertures, of which the one leads to the carbureter and the other to without, of two piston-valves mounted to reciprocate in the two apertures of said casing, connections between said casing and the cylinder or cylinders of the explosion-engine, and means for opening the one and closing the other of said two piston-valves and vice versa for admitting explosive mixture or air to the engine respectively.

2. In a valve-gear for four-stroke cycle explosion-engines with carbureters and governors, the combination with a casing, of connections between said casing and the cylinder or cylinders of the explosion-engine, two piston-valves in said casing and adapted to admit explosive mixture from the carbureter and air from without respectively to the engine, and means for opening the one and closing the other of said two piston-valves and vice versa.

3. In a valve-gear for four stroke cycle explosion-engines with carbureters and governors, the combination with a casing, of connections between said casing and the cylinder or cylinders of the explosion-engine, a piston-valve mounted to reciprocate in said casing and adapted to admit explosive mixture from the carbureter to the engine, an air-valve in said casing and adapted to admit air from without to the engine, an elastic connection between said piston-valve and said air-valve, and means controlled from the operator for first closing said piston-valve and then opening said air-valve or for first closing the latter and then opening the former.

4. In a valve-gear for four stroke cycle explosion-engines with carbureters and governors, the combination with a casing, of connections between said casing and the cylinder or cylinders of the explosion-engine, a piston-valve mounted to reciprocate in said casing and adapted to admit explosive mixture from the carbureter to the engine, means controlled from the governor for actuating said piston-valve, a second piston-valve mounted in said casing to reciprocate and adapted to encircle with its edge the opposite edge of said piston-valve in the one extreme position for shutting off the explosive mixture and to leave between these two edges in the other extreme position a passage for the explosive mixture, an air-valve in said casing and adapted to admit air from without to the engine, an elastic connection between said second piston-valve and said air-valve, and means controlled from the operator for first closing said second piston-valve and then opening said air-valve or for first closing the latter and then opening the former.

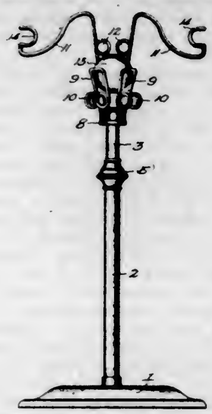
5. In a valve-gear for four stroke cycle explosion-engines with carbureters and governors, the combination with a casing having two cylindrical parts of which the one communicates with the carbureter, of connections between said casing and the cylinder or cylinders of the explosion-engine, a tubular regulating piston-valve mounted to reciprocate in the cylindrical part of said casing contiguous to the carbureter, means controlled from the governor for actuating said regulating piston-valve, a piston-valve with a partition mounted to reciprocate in the other cylindrical part of said casing and adapted to encircle with its edge the opposite edge of said tubular regulating piston-valve in the one extreme position and to bear against a seat in said casing for shutting off the carbureter and to leave between these two edges in the other extreme position a passage for the explosive mixture, slots being provided in the piston-valve on the side of its partition opposite to the tubular regulating piston-valve and being adapted to be opened in the one extreme position and to be closed in the other extreme position by the cylindrical part, an air-valve mounted to reciprocate in said piston-valve and adapted to admit air from without through the slots of the latter to the engine, a spring inserted between the partition of said piston-valve and said air-valve, and means controlled from the operator for actuating said air-valve and thereby said piston valve.

[Claim 6 not printed in the Gazette.]

872,139. DISPLAY-STAND FOR HATS. CLAUDE E. MENTZER, Denver, Colo., assignor of one-half to Otis W. Lyman and one-half to Isadore Rude, Denver, Colo. Filed Mar. 4, 1907. Serial No. 360,515.

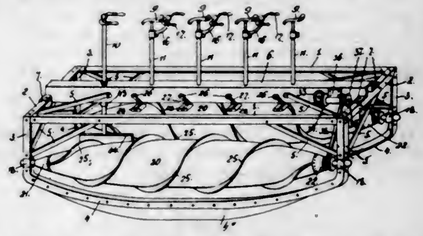
1. In a display stand, the combination with a base and hollow standard, of a rod adjustable in the standard, provided with a disk-shaped terminal end, a plurality of vertically extending inwardly-pressing spring clamps attached at one end to said disk-shaped terminal end of said rod, said spring clamps comprising U-shaped members provided with coils intermediate of their ends, and arranged in a circle above said rod, a ball held above said rod between said spring clamps by the resilient frictional pressure of said spring clamps, and hat-engaging spring arms, one of the ends of which is secured to said ball and provided with a spring coil close to said ball, the opposite ends of which terminate in segmental hat-retaining loops and extend in opposite directions from said ball far enough to clamp against the inside of a hat.

2. In a display stand, the combination of the stand and the rod provided with a plurality of spring clamping arms arranged in a circle, with a ball adapted to be adjustably pivotally clamped by the resilient spring pressure of said spring clamps above said rod, and the spring hat engaging and clamping arms secured to the opposite sides of said ball at one of their ends, and provided with a spring coil



intermediate of their ends, and arranged to extend in opposite diametrical directions from said ball and to clamp with an outward resilient pressure against the insides of hats.

872,140. WATER-VEHICLE. JOHN MIKULASEK, Grove City, Pa. Filed May 27, 1907. Serial No. 375,877.



1. In a pedal propelled boat, the combination with a supporting frame having a centrally disposed hollow girder, of corner supports depending from said frame and provided with shaft bearings, shafts mounted in said bearings, propeller-floats mounted on said shafts, guards secured to said corner supports and extending below said floats, pedal shafts having a bearing in said girder, riders-seats supported on said girder, and belts and gearing for revolving said floats from said pedal shafts.

2. In a pedal propelled boat, the combination with a supporting frame, of a central girder of inverted U-shape in cross-section, seat and rudder posts supported above said girder, propeller-floats mounted upon shafts having bearings in said frame, pedal shafts supported in bearings formed in the sides of said girder, sprocket wheels mounted on said pedal-shafts within said girder, a driving shaft also mounted in bearings of the girder, a sprocket wheel on said driving shaft, a sprocket chain engaging said sprocket wheels, and connections between said driving shaft and propeller floats for revolving the latter.

3. In a pedal-propelled boat, the combination with a supporting frame, of a central girder of inverted U-shape in cross-section, seat and rudder posts supported above said girder, propeller floats mounted upon shafts having bearings in said frame, pedal shafts supported in bearings formed in the sides of said girder, sprocket wheels, mounted on said pedal-shafts within said girder, a driving shaft also mounted in bearings of the girder, a sprocket wheel on said driving shaft, a sprocket chain engaging said sprocket

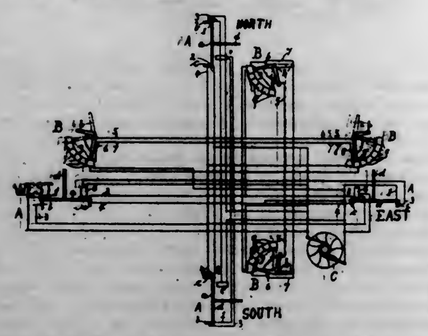
wheels, and connections between said driving shaft and propeller floats for revolving the latter, said connections comprising bevel gears on the ends of the driving shaft, parallel shafts supported on opposite sides of the girder, bevel pinions on the front ends of said parallel shafts, sprocket wheels on the rear ends of said parallel shafts, a sprocket on each of the propeller shafts, and chains connecting the propeller shaft sprockets with the sprockets on said parallel shafts.

4. In a pedal propelled boat, the combination with a supporting frame, comprising parallel longitudinal bars, transverse bars and depending corner supports provided with shaft bearings, of downwardly curved guards connected at opposite sides of the frame to the corner supports, a centrally-disposed longitudinal girder of inverted U-shape in cross section, seat and rudder-posts carried by said girder, pedal shafts and a driving shaft mounted in bearings of the girder, sprockets on said shafts, propeller-floats mounted upon shafts supported in the bearings of said corner-supports, sprocket gear connections between said driving shaft and the shafts of the propeller floats, a chain connecting said sprockets and means for maintaining the pedal-shaft-sprockets in engagement with said chain.

5. In a pedal propelled boat, the combination with a supporting frame, comprising parallel longitudinal bars, transverse bars and depending corner supports provided with shaft bearings, and shafts mounted in said bearings of downwardly curved guards connected at opposite sides of the frame to the corner supports, a centrally disposed longitudinal girder of inverted U-shape in cross-section, seats and rudder posts carried by said girder, pedal shafts and a driving shaft mounted in bearings of the girder, sprockets on said shafts, propeller floats mounted upon the shafts supported in the bearings of said corner-supports, sprocket gear connections between said driving shaft and the shafts of the propeller floats, a chain connecting said sprockets, and means for maintaining the pedal shaft sprockets in engagement with said chain, said means comprising brackets secured within the girder, and rollers supported by said brackets and bearing upon said chain.

[Claims 6 and 7 not printed in the Gazette.]

872,141. AUTOMATIC STOP FOR RAILWAY-TRAINS. VAUGHN MORRISON, Wessington Springs, S. D. Filed June 26, 1907. Serial No. 380,954.



1. In a system of the character described, a series of switch boxes located at suitable points along the track, each box containing a switch lever and contact points for opening and closing the circuits, an electro magnet adapted to actuate said switch lever in one direction, an arm adapted to operate said lever in the opposite direction, a source of electric energy, a series of trip boxes each containing a series of magnetic coils, an armature adapted to travel in the field of said coils, a bell crank lever to which said armature is secured, a switch with which said bell crank lever is adapted to contact to make and break a circuit, one end of said bell crank lever adapted to operate suitable trip mechanisms upon the locomotive and a series of wires connecting the switch and trip boxes and source of electric energy, as and for the purpose set forth.

2. In a system of the character described, a series of switch boxes each containing a pivoted switch lever *a*, contact posts *b* and *c*, an electro magnet *e* for operating said switch in one direction, an arm *b* projecting from the switch box and adapted to operate the switch lever in the opposite direction, a series of trip boxes each containing a series of magnetic coils *f*, an armature *g* adapted to travel in the field of said coils, a bell crank lever to which said armature is attached, one end of said bell crank lever projecting into the field of travel of suitable trip mechanisms carried by the locomotive, a series of wires connecting the switch and trip boxes and a source of electricity for vitalizing said electro magnets and magnetic coils, as and for the purpose set forth.

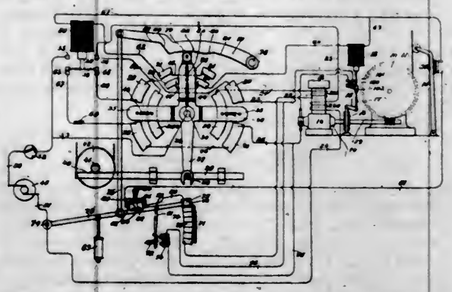
872,142. RAIL-BOND. ASA H. MOSHER, Westfield, N. J. Filed Jan. 17, 1907. Serial No. 352,678.



1. The combination of a rail, a wire to be connected therewith, and an intermediate connector comprising a plug adapted to engage a hole in the rail with a driving fit, the plug being provided with an opening adapted to receive the wire and this opening being located entirely within the plug and having its surrounding walls thin in one portion and thick in other portions, the thick portion being slotted, and the thin portion being adapted to yield when the plug with the wire therein is driven into the rail.

2. The combination of a rail, a wire to be connected therewith, and an intermediate connector comprising a tapered plug adapted to engage a hole in the rail with a driving fit, the plug being in the form of a hollow shell split longitudinally, the hollow of the shell being adapted to receive the wire, and the wall thereof opposite the split portion being of reduced thickness to adapt it to yield when the plug with the wire therein is driven into the rail.

872,143. CONTROLLING MECHANISM FOR ELECTRIC MOTORS. MARTIN B. MCLAUTHLIN, Malden, Mass. Filed Sept. 22, 1902. Serial No. 124,273.



1. The combination of an electric motor, a brake therefor, an electro-magnetic device for operating said brake, a rheostat controlling the circuit of said motor and having a movable resistance-varying member, and a resistance switched into and out of the circuit of said electro-magnetic device by movement of said member, said resistance when in circuit preventing the establishment of said device in brake-releasing condition but permitting its retention in such condition if already established therein.

2. The combination of an electric motor, a rheostat therefor having a traveler, a motor-controlling device, a disabling circuit for said device, and switching means for said circuit connected for operation concurrently with said traveler, said means closing said circuit near the limit of resistance-inserting movement of the traveler and opening it at the limit of said movement.

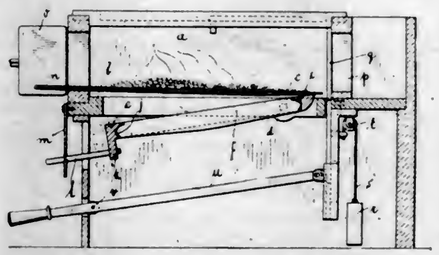
3. In an elevator-controlling apparatus, the combination of an electric motor having an operating circuit, a short circuit including the motor armature, a switching device having alternative positions in which it respectively establishes said operating circuit and said short circuit, an electro-magnet for operating said switching device, and shipper-mechanism mechanically operable from the car for controlling the operating circuit of said electro-magnet.

4. The combination of an electric motor, a brake therefor, motor-circuit-controlling and brake-controlling electro-magnets, a short-circuit for the motor armature controlled by the first-said magnet, and a shipper mechanism controlling the motor-circuit and having means for breaking first the circuit of the first-said magnet and then that of the last-said magnet during its motor-stopping movement.

5. The combination of an electric motor, an electromagnetic switching device having provisions for closing the operating circuit of said motor in one position and for short-circuiting the motor armature in another position, a brake for said motor, an electro-magnetic brake-operating device, and switching mechanism controlling the circuits of said electro-magnetic devices and having provisions for first opening the circuit of the former device and then that of the latter device when operated to stop the motor.

[Claims 6 to 8 not printed in the Gazette.]

872,144. OVEN. MICHAEL NUSSER, New York, N. Y. Filed July 22, 1907. Serial No. 384,860.



1. In an oven, the combination with a fire chamber, a counterbalanced sliding door for temporarily closing the exit opening of said chamber, a vertically swinging fire grate, and means for supporting said grate in horizontal position, substantially as and for the purpose set forth.

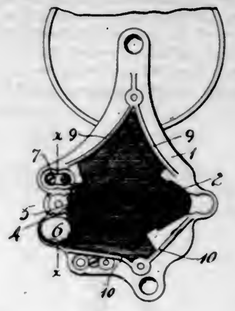
2. In an oven, the combination with a fire chamber, of a grate composed of a frame capable of swinging in vertical direction, a plurality of bars removably borne in said frame, and means for supporting the grate in horizontal position, substantially as and for the purpose set forth.

3. In an oven, the combination with a fire chamber, of a grate composed of a frame pivoted therein at one end to be capable of swinging in vertical direction, said frame having a plurality of curved sockets projecting from the rear of said frame and a curved groove or socket at the forward end thereof, a number of bars removably borne in said sockets and forming the grate proper, a forwardly projecting rod secured to the said frame and a notched bar secured to the structure of the oven and serving for the engagement of said rod to support the frame in horizontal position and to permit of it being tilted, substantially as and for the purpose set forth.

872,145. PROTECTIVE SHIELD FOR SKELETON-FRAME BELLS. GEORGE L. PATTERSON, New York, N. Y., assignor to Alice C. Patterson, New York, N. Y. Filed July 11, 1907. Serial No. 383,186.

1. The combination with a bell having a skeleton frame, of a protecting shield means securing the same at the back of the frame and a water-shed for said shield.

2. The combination with a bell having a skeleton frame, of a protecting shield, means securing the same at the back of the frame, and flanges on the back of the frame at the top and bottom engaging said shield.



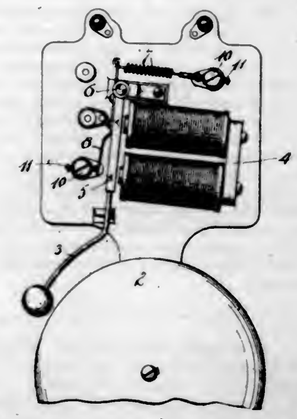
3. The combination with a bell having a skeleton frame, of a detachable protecting shield at the back of said frame and ribs on the body of said frame centering said shield.

4. The combination with a bell having a skeleton frame, of a detachable protecting shield at the back of said frame, said shield having clips adapted to engage the frame and water-sheds on the back of said frame on opposite sides of said shield.

5. The combination with a bell having a skeleton frame, of a protecting shield detachably engaging the back of the frame, and cap-like extensions on said shield overstanding the terminals.

[Claim 6 not printed in the Gazette.]

872,146. ADJUSTMENT FOR CONTACTS. GEORGE L. PATTERSON, New York, N. Y., assignor to Alice C. Patterson, New York, N. Y. Filed July 11, 1907. Serial No. 383,187.



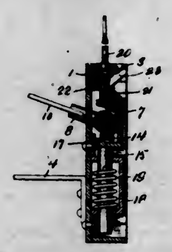
1. In a device of the character described, a split post, an adjusting screw passing therethrough, an adjusting nut mounted thereon between the side members of the post, and means for drawing together the side members of the split post to secure the adjusting screw against displacement after adjustment.

2. In a device of the character described, a split post, an adjusting screw passing therethrough, an adjusting nut mounted on said screw between the side members of

the split post, means to prevent the rotation of the screw, means to draw the side members of the split post into engagement with the adjusting nut to prevent the displacement of the screw after adjustment.

3. In a device of the character described, a split post having a transverse passage, a screw-threaded adjusting member passing therethrough, an adjusting nut between the side members of the post and mounted upon the screw-threaded adjusting member, means to prevent the rotation of the screw-threaded adjusting member in the post, and means to lock the adjusting nut against displacement after adjustment.

872,147. LOCKING COAT, HAT, AND UMBRELLA RACK. HENRY S. PAYNE, Wheeling, W. Va. Filed Nov. 26, 1906. Serial No. 345,082.

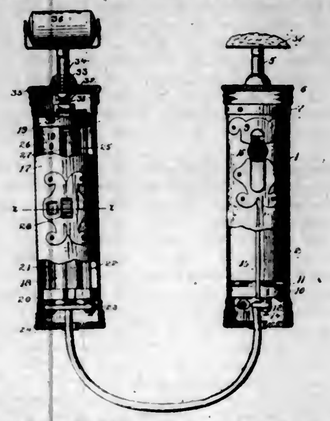


In combination with a vertically-extending supporting casing, a notched bracket secured to one side thereof, a shaft journaled in said casing at a point between the center and the top and having a ward arranged approximately centrally thereof, said shaft further provided with a pair of pins extending laterally through the casing and arranged at a point at each side of the ward, supporting hooks secured to the front of the casing and extending forwardly therefrom, a clamping arm carried by one of said pins and adapted to engage with one of said hooks, a clamping arm carried by the other of said pins and adapted to engage the other of said hooks and provided with a lateral extension adapted to engage said notched bracket, a keeper carried by the front wall of the casing and projecting inwardly therefrom, a spring arranged in the keeper, a locking bolt extending through the keeper and adapted to be controlled by said spring, a reversed C-shaped member formed integral with the upper end of the bolt spanning the said shaft and having a ward adapted to be engaged by the ward of the shaft, a pin projecting from the upper end of said head, and a ward depending from the top ward of the casing adjacent said pin, said pin receiving a key and said depending ward coacting with a ward on said key to depress said locking bolt thereby releasing the shaft.

872,148. ELECTROTHERAPEUTIC APPARATUS. NELSON H. RAYMOND, Brooklyn, and JOSEPH C. VETTER, Coney Island, N. Y., assignors to Alice C. Patterson, New York, N. Y. Filed Aug. 24, 1905. Serial No. 275,653.

1. As an article of manufacture, a casing, a removable cap at one end thereof, a battery contained within said casing, a base plate, a spring interposed between the base plate and said battery, binding posts carried by said plate, a second cap removably secured to said casing and having a perforation for the passage of electrical conductors.

2. In a device of the character described, a combination of a casing, a battery member contained therein, a longitudinally movable contact member carried by said casing for controlling the battery current, a plate mounted in said casing, binding posts carried thereby, and a removable



cap carried by said casing having an opening for the passage of electrical conductors.

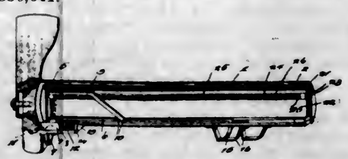
872,149. SELF-ATTACHING BUTTON. HENRY O. REESE, Baltimore, Md. Filed Mar. 23, 1907. Serial No. 364,055.



1. In a self attaching button, a disk having a central concavity and a plurality of attaching prongs disposed thereabout, said prongs being cut and formed from the body of the disk, leaving apertures entirely surrounded by the material thereof and extending substantially radially from the bases of the prongs toward the perimeter of the disk.

2. In a button of the character described, the combination of a disk provided with a bead formed on the outer edge thereof and having a depression formed within its central body portion, of a plurality of prongs cut and formed wholly within the body portion exterior of the said depression, a circumferential bead formed in the body portion and surrounding the said depression, substantially as described.

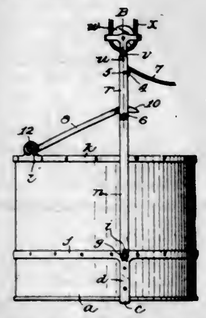
872,150. AUTOMATIC MAGAZINE-HAMMER. JAMES E. RIDINGS, Salina, Kans. Filed Feb. 9, 1907. Serial No. 356,641.



1. In self feeding magazine hammer a magazine, a main slide and a supplemental slide operating parallel and adjacent to the said magazine, said main slide having a spring catch device for feeding the nails contained in the magazine, said magazine having an open ended slot at its end, in which said spring catch device operates, a clutch device to receive each nail as it is delivered said slides having means of connection so as to allow the supplemental slide to have a slight movement on the forward and backward stroke thereof prior to the movement of the main slide.

2. In a self feeding magazine hammer, a hollow handle, a magazine fixed therein in which a plurality of nails are carried a main and supplemental slide to operate parallel and adjacent to said magazine, said main slide having a spring catch device for feeding a nail forward upon the forward stroke of the said slide, said magazine having an open ended slot at its end, in which said spring catch device operates, said slides having slot and pin connection so as to allow the supplemental slide to have a slight movement on the forward and backward stroke thereof prior to the movement of the main slide, a clutch device to receive the nail as it is delivered, said hollow handle having an offset, the said supplemental slide having an enlargement, said offset having a shouldered wall between which and the enlargement a spring is disposed as specified.

872,151. DUMPING-BUCKET. ADAM SCHROEDER, Sugar Creek township, Shelby county, Ind. Filed Aug. 8, 1907. Serial No. 387,573.



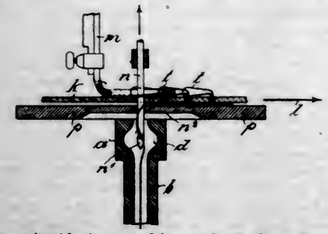
1. A dumping bucket comprising a receptacle, a bail pivoted to the receptacle, a yoke hinged to the top portion of the receptacle and latched to the bail, and a cord carried by the bail for unlatching the yoke.

2. A dumping bucket, comprising a receptacle, a bail pivoted to the receptacle and supporting a latch and also a pulley, a yoke hinged to the top portion of the receptacle and having a notched arm to be engaged by the latch, and a cord extending over the pulley and connected to the latch.

3. A dumping bucket comprising a receptacle having a frame provided with trunnions, a bail connected to the trunnions and having a latch mounted thereon, said receptacle having a pair of eyes at the top thereof, a yoke connected with the eyes and having an arm to be engaged by the latch, and a cord connected to the latch.

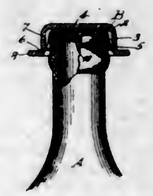
4. A dumping bucket comprising a receptacle having a side and a bottom, a frame extending about the side and under the bottom and provided with a pair of trunnions, a bail connected to the trunnions and having a horizontal reinforcing beam attached to horizontal portions thereof, a yoke hinged to the side of the receptacle to swing to the bail, a latch on the bail to engage the yoke, a cord connected to the latch to release the yoke therefrom, and a sheave frame connected to the bail.

872,152. EMBROIDERING-MACHINE. JOHANN SCHROEDER, Berlin, Germany, assignor to The Firm of Berliner Stickmaschinenfabrik Schirmer, Blau & Co., Berlin, Germany. Filed Nov. 26, 1906. Serial No. 345,171.



In an embroidering machine, a hooked needle, a thread feeder adapted to be oscillated through 180° acting to thread the needle and provided with two oppositely situated holes through one of which the thread is passed and a stitch plate provided with two rows of holes, the holes of each row equidistant from the center of the plate and the holes of one row being located so as to coöperate with the holes in the thread feeder and the holes of the other row situated so that the needle may pass therethrough, substantially as described.

872,153. DEVICE FOR RESEALING BOTTLES. JOHN R. SCOTT, Oakland, Cal. Filed Aug. 27, 1907. Serial No. 390,276.



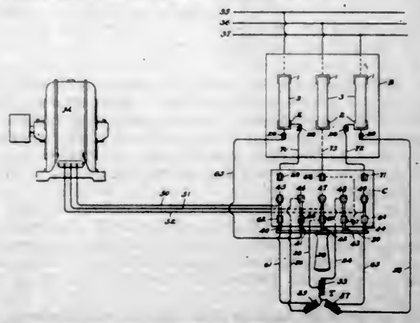
1. The combination with a bottle having an annular outside bead adjacent to the mouth of the bottle, of a crown cap to fit the bottle, said crown cap having compressible sides with means to engage underneath the bead, and a cylindrical hand device fitting over the crown cap to compress and lock the cap on the bottle.

2. The combination with a bottle having an annular outside bead adjacent to the mouth of the bottle, of a crown cap to fit the bottle, said crown cap having compressible sides with means to engage underneath the bead, a cylindrical hand device fitting over the crown cap to compress and lock the cap on the bottle, and a bushing inserted inside the cap and over the mouth of the bottle to form a tight joint when the bottle is re-sealed.

3. A device for re-sealing bottles, comprising a cylindrical member having an inwardly beveled lower end to fit over the outside of a crown cap, and an outside annular flange providing a hand-hold.

4. The combination with a bottle having an outside annular bead adjacent to the mouth of the bottle, of a crown cap fitting the bottle and having a compressible annular flange with means to engage underneath the bead, and a sealing device comprising a cylindrical member having an inwardly beveled edge at one end arranged to push down onto the cap and to compress said flange into engagement with the bead, and said sealing member having also a straight interior portion fitting over the compressed flange of the crown cap to hold said flange in engagement with said bead.

872,154. COMBINED CONTROLLER AND CIRCUIT-BREAKER. WILLIAM M. SCOTT, Philadelphia, Pa. Filed Apr. 9, 1907. Serial No. 367,249.



1. In combination with a controlling switch, an automatic magnetic circuit breaker, and means controlled by said controlling switch for changing the ampere-point of

operation of said circuit breaker, said means comprising independent electro-magnetic tripping devices, and means associated with said controlling switch for including said electro-magnetic tripping devices in circuit alternately.

2. The combination with a controller, of a circuit breaker, a plurality of independent electro-magnetic tripping devices each adapted to trip said circuit breaker and each adapted to be adjusted to respond to different current strengths, and contacts in said controller for including said electro-magnetic tripping devices in circuit at different times.

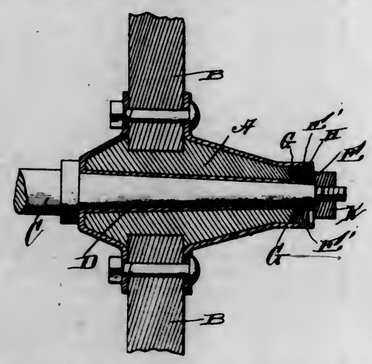
3. The combination with a controller, of a circuit breaker, a plurality of independent electro-magnetic tripping devices, and a contact in said controller for including in circuit during starting period a tripping device responsive to greater current strength, and another contact in said controller for including in circuit after starting period a tripping device responsive to less current.

4. The combination with a supply circuit, of a motor, a starting switch and circuit breaker associated with said motor, an electro-magnetic tripping device responsive to greater current and included in circuit during the period of starting said motor, and another electro-responsive device responsive to less current included in circuit after starting.

5. The combination with a supply circuit, of a motor, a starting switch and circuit breaker associated therewith, means in said starting switch for including in circuit during starting period an electro-magnetic tripping device responsive to greater current, and means in said starting switch for cutting out said electro-magnetic tripping device after said motor is started and including in circuit another electro-magnetic tripping device responsive to less current.

[Claims 6 to 12 not printed in the Gazette.]

872,155. MEANS FOR TAKING UP WEAR ON VEHICLE-AXLES. WILLIAM A. SHORT, Beeville, Tex., assignor of one-half to G. T. Ward, Beeville, Tex. Filed July 15, 1907. Serial No. 383,854.



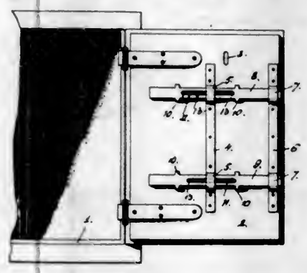
1. An extension apparatus for axle boxes comprising, in combination with the hub and axle boxing of a wheel, a metallic extension mounted concentrically with the end of the boxing, the outer end of the hub having undercut holes, a fusible metal engaging said holes and adapted to anchor the extension to the hub and against the end of the box, as set forth.

2. An extension apparatus for axle boxes comprising, in combination with the hub and axle boxing of a wheel, a metallic shell mounted concentrically with and against the end of the boxing, a fusible metal surrounding said extension and anchoring the same to the hub of the wheel, as set forth.

3. An extension apparatus for axle boxes comprising, in combination with the hub and axle boxing of a wheel, a metallic shell mounted concentrically with and against the end of the boxing, projections upon said extension, and a fusible metal anchored to the hub and in which said projections of the extension are anchored, as set forth.

4. An extension apparatus for axle boxes comprising, in combination with the hub and axle boxing of a wheel, a metallic shell having a shoulder formed upon the inner surface thereof and held against the end of an axle box, a fusible metal surrounding said extension and anchored to the hub, lugs projecting from said extension and embedded in said fusible metal, as set forth.

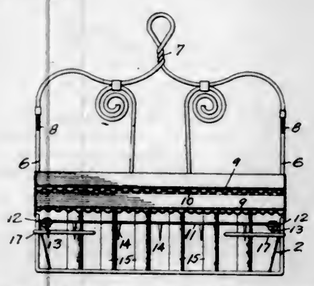
872,156. LOCK. FRITZ SIEBERT, Oakdale, Pa. Filed Aug. 23, 1907. Serial No. 389,897.



1. The combination with a door, of locking mechanism comprising loops or keepers secured thereto in horizontal alinement, a bolt supported in said loops or keepers, and formed with a series of recesses, and a key adapted to be inserted through an opening in the door, and having the bent end adapted to project into said recesses.

2. The combination with a door, of parallel bars or straps, formed with loops or keepers, bolts slidably supported within said loops or keepers, and formed with longitudinal grooves and recesses within said grooves and keys provided with projecting ends to engage said recesses.

872,157. COMBINED PEN AND PENCIL RACK. JANIE S. TWADDELL, El Paso, Tex. Filed June 8, 1907. Serial No. 377,970.



1. A combined pen and pencil rack and ink-stand supports, comprising a wire frame consisting of a base and raised sides and back, bars supported from the sides of the frame and provided on their under sides with receptacles for pen-points, vertically disposed tubes disposed at the rear of the said bars for the reception and support of pencils and pen stocks, and supports for inkstands connected with the sides of the frame and extending forward from the same.

2. A pen and pencil rack comprising a wire frame having raised sides, bars supported from the sides of the frame and provided on their under sides with means for receiving pen-points, and vertically disposed tubes at the rear of said bars for the reception of pencils and pen-stocks.

872,158. OAR FOR BOATS. RICHARD WALTERSKIRCHEN, Lainsdorf, near Krumpendorf-on-the-Wörthersee, Austria-Hungary. Filed Aug. 16, 1907. Serial No. 388,920.

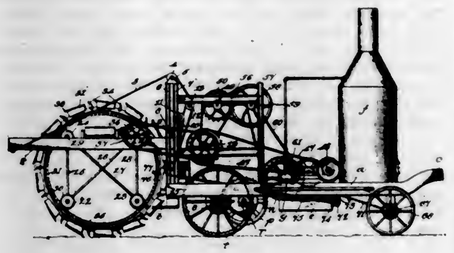


1. In combination with an oar shaft a metal blade provided with longitudinal strengthening ribs, an elastic shell rigidly secured to such blade and provided with a longitudinal slit and adapted to be pushed onto the shaft, substantially as and for the purpose described.

2. In combination with an oar shaft a metal blade, an elastic shell rigidly secured to such blade provided with a longitudinal slit and adapted to be pushed onto the shaft, a hollow rib in the shell and means located in such hollow rib for preventing the shell from turning round the oar shaft, substantially as and for the purpose described.

3. In combination with an oar shaft a metal blade provided with longitudinal strengthening ribs an elastic shell rigidly secured to such blade, provided with a longitudinal slit and adapted to be pushed onto the shaft, a hollow rib in the shell and an elastic bar located in such hollow rib of the shell and one of the strengthening ribs of the blade and engaging into a longitudinal groove in the oar shaft, substantially as and for the purpose described.

872,159. COMBINED SCALPER, EXCAVATOR, ROAD-ROLLER, AND LOCOMOTIVE. CHARLES J. VAN BUREN, Findlay, Ohio. Filed Sept. 12, 1905, Serial No. 278,123. Renewed June 20, 1906. Serial No. 322,610.



1. A road locomotive, road roller and excavator combined in a single unitary structure, substantially as described.

2. The combination of a traction engine and a road roller and ditching wheel removably secured thereto, substantially as described.

3. The combination of a road locomotive provided with driving and steering wheels, a frame provided with an excavating wheel and with an elevator detachably secured to said road locomotive, and rollers also detachably secured to said road locomotive, substantially as described.

4. The combination of a frame provided with driving and steering wheels, a boiler and engine and controlling means, the whole forming a road locomotive, with a ditching wheel detachably connected to said road locomotive, at the side or at the rear, but always to one side of the traction wheels, substantially as described.

5. The combination of a frame provided with steering and traction wheels, a boiler, engine, and gearing, the whole forming a road locomotive, and a second frame detachably secured to the frame of said road locomotive, said second frame being provided with a ditching wheel, an elevator, and with means for driving the same, substantially as described.

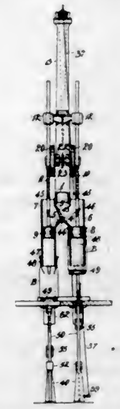
[Claims 6 to 16 not printed in the Gazette.]

872,160. RECEPTACLE-CLOSURE. ALFRED L. WEISSENTHANNER, New York, N. Y. Filed Dec. 6, 1904. Serial No. 235,718.



The combination of a receptacle having a plain open mouth with a rounded edge, a cover for sealing said receptacle by atmospheric pressure, said cover comprising a plain flat flange the outside diameter of which is equal to or less than the outside diameter of the mouth of the receptacle and a depressed central portion fitting within the mouth of the receptacle, said flange being adapted to bear upon the rounded edge of the receptacle, and a packing band adhesively secured to said flange and adapted to be compressed between the same and the mouth of the receptacle in substantially the manner described.

872,161. APPARATUS FOR PACKING PREDETERMINED QUANTITIES IN BAGS. THOMAS WHITEHORN, Coburg, Victoria, Australia. Filed Apr. 24, 1907. Serial No. 370,067.



1. A bagging apparatus consisting of a chute having a pair of oppositely disposed discharge legs alternately opened and closed by a hinged door and leading each to one of a pair of cylinders over which the bags are drawn, a counterbalanced table to support each bag and an intermittingly reciprocate plunger working within each cylinder substantially for the purpose specified.

2. An apparatus of the class described, comprising a chute, a plurality of cylinders having communication with the chute, movable plungers in said cylinders, means for intermittently reciprocating the plungers, a hinged door for alternately opening communication between said cylinders and chute, means coöperative with the plungers to actuate the door, a table below the cylinders, and counterbalance means associated with the table for supporting a receptacle for bringing the latter in working position.

3. In an apparatus of the class described, a chute, a pair of cylinders having oppositely inclined legs to form communication between the said cylinders and chute, a door for closing the communication between one cylinder and the chute to form communication between the other

cylinder and said chute, plungers movable in said cylinders, a standard having brackets forming supports for the plungers, tappets associated with the plungers for actuating the door to alternately open and close communication between the cylinders and the chute, a crank disk having its bearings in said standard, arms pivotally connected to the standard and having communication with the plungers and actuated by the crank disk to reciprocate the plungers intermittently, mechanism for actuating the crank disk, clutch means for controlling said mechanism, and a lever having connection with the clutch to operate the same.

4. In a bagging apparatus, a standard, a plurality of open end cylinders, reciprocating plungers movable in said cylinders and having rods, brackets carried by the standards forming bearings for said rods, a shaft journaled on said standard, crank disks mounted on said shaft, levers connected with the rods and said standard and actuated by the crank disks, a sprocket wheel carried by the shaft having communication with the crank disks, a driving shaft supported by the standard, a clutch slidable on said shaft and having a gear connected therewith, a chain connecting the shafts together, means for controlling said clutch to automatically throw the crank disks out of gear, a treadle, and flexible means forming connection between the treadle and clutch to actuate the latter.

5. In a bagging apparatus, a standard, a plurality of open end cylinders, reciprocating plungers movable in said cylinders and having rods, brackets carried by the standards forming bearings for said rods, a shaft journaled on said standard, crank disks mounted on said shaft, levers connected with the rods and said standard and actuated by the crank disks, a sprocket wheel carried by the shaft having connection with the crank disks, a driving shaft supported by the standard, a clutch slidable on said shaft and having a gear connected therewith, a chain connecting the shafts together, means for controlling said clutch to automatically throw the crank disks out of gear, a treadle, flexible means forming connection between the treadle and the clutch to actuate the latter, and a counterbalance bag supporting table for bringing the bags in position with respect to the cylinders.

[Claims 6 to 8 not printed in the Gazette.]

872,162. RECEPTACLE-CLOSURE. ALFRED L. WEISSENTHANNER, New York, N. Y. Filed Apr. 27, 1905. Serial No. 257,647.

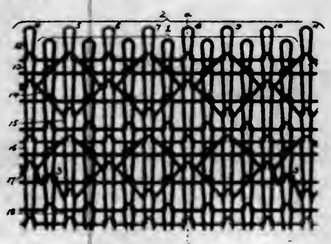


1. A receptacle comprising a body and a cover therefor, a locking tongue integral with and projecting from one of said members the other of said members having an opening through which said tongue is adapted to pass in effecting the closure of the receptacle, said tongue having its projecting end enlarged after the receptacle is closed to thereby prevent its withdrawal through said opening and also rendering impossible the opening of the receptacle without severing said tongue.

2. A receptacle comprising a body having a portion of the base cut therefrom and bent to constitute a tongue, a cover having an opening therein through which said tongue is adapted to pass upon the closure of the receptacle, said tongue having its projecting end enlarged after the receptacle is closed to thereby prevent its withdrawal through said opening and also rendering impossible the opening of the receptacle without severing said tongue.

3. A receptacle comprising a body and a cover therefor, one of said members having a tongue cut therefrom and bent out of the plane thereof, and the other member also having a tongue cut therefrom and bent out of the plane thereof, said second tongue being adapted to pass through the opening formed by the first-named tongue and having its projecting end enlarged to prevent withdrawal through said opening.

872,163. KNITTED FABRIC. LOUIS N. D. WILLIAMS, Ogontz, Pa., assignor of one-half to Robert W. Scott, Leeds Point, N. J. Filed Dec. 11, 1906. Serial No. 347,275.



1. A knitted fabric comprising two webs, one overlying the other and united at intervals by yarn of one web engaging the other web, the back web being knitted with tuck stitches whereby certain portions of the exposed face of said back web are projected beyond the remaining portions.

2. A knitted fabric comprising two webs, one overlying the other and united at intervals by yarn of one web engaging the other web, the back web being knitted with tuck stitches in certain courses in some of the wales and in alternate courses in the alternate wales whereby certain portions of the exposed face of said back web are projected beyond the remaining portions.

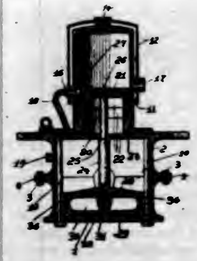
3. A knitted fabric comprising two webs, one overlying the other and united at intervals by yarn of one web engaging the other web, the back web being composed of heavier yarn than the face web and being knitted with tuck stitches whereby certain portions of the exposed face of said back web are projected beyond the remaining portions.

4. A knitted fabric comprising two webs, one overlying the other and united at intervals by yarn of one web engaging the other web, the back web being composed of heavier yarn than the face web and being knitted with tuck stitches in certain courses of some of its wales and in alternate courses of the alternate wales, whereby certain portions of the exposed face of said back web are projected beyond the remaining portions.

5. A knitted fabric comprising two webs, one overlying the other and united at intervals by a loop of the yarn of the back web engaging the face web, said back web being composed of heavier yarn than the face web.

[Claim 6 not printed in the Gazette.]

872,164. GAS AND GASOLENE ENGINE. EARL E. WRIGHT, Mansfield, Ohio. Filed Oct. 27, 1906. Serial No. 340,833.



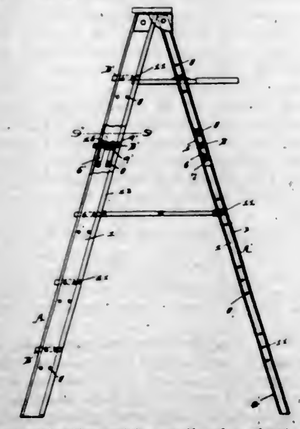
1. In an engine of the class described, a housing in two portions and having half bearings in their adjacent faces, cylinders mounted upon said housing, tie rods spaced apart and extending through said housing and connected to said cylinders, pistons operating in said cylinders, piston rods connected to said pistons and provided with transverse slotted cross heads slidably engaging said tie rods, and a shaft journaled in said housing bearings and provided with cranks operating in said slotted heads.

2. In an engine of the class described, a housing in two portions having half bearings in their adjacent faces, one housing portion closed at its outer side and the other housing portion open at its outer side, cylinders mounted upon the open side of said housing portion, tie rods spaced apart and extending through the closed side of said housing portion and connected to said cylinders, pistons operating in said cylinders, piston rods connected to said pistons and provided with transverse slotted heads slidably engaging said tie rods, and a shaft journaled in said housing bearings and provided with cranks operating in said slotted heads.

3. In an engine of the class described, a housing in two portions and divided by transverse partitions into a plurality of compartments with shaft bearings in said partitions, a cylinder mounted upon said housing over each of said compartments, tie rods spaced apart in pairs and extending through said housing in each of said compartments and connected respectively to said cylinders, a piston operating in each of said cylinders, a piston rod connected to each of said pistons and provided with a slotted transverse head slidably engaging each pair of the tie rods in said compartments, and a shaft journaled in the bearings in said partitions and with a crank within each of said compartments and engaging said slotted heads.

4. In an engine of the class described, a housing in two portions having half bearings in their adjacent faces and divided by transverse partitions into a plurality of compartments with half bearings between the adjacent faces of the partitions, a cylinder mounted upon said housing over each of said compartments, tie rods spaced apart in pairs and extending through said housing in each of said compartments and connected respectively to said cylinders, a piston operating in each of said cylinders and consisting of spaced heads and a cylindrical intermediate portion whereby a relatively large bearing surface is produced, a piston rod having an intermediate shoulder bearing against one of said piston heads and threaded at one terminal into the other piston head and with a slotted head at the other terminal slidably engaging each pair of the tie rods, a shaft journaled in the bearings in said housing and in the partitions thereof and provided with crank pins respectively engaging the slotted heads of the several piston rods.

872,165. LADDER. HENRY ADLER, Pittsburg, Pa., assignor to H. Adler Company, Inc., Pittsburg and Carnegie, Pa., a Corporation of Pennsylvania. Filed Sept. 24, 1906. Serial No. 335,861.



1. The combination with a rail, of a sheet metal rung seating bracket comprising a flanged end, a portion bent therefrom to form a brace and then back in the same vertical plane to form a seat and upwardly to cover the end of the rung, and a fastening passed through the rail and the bracket into the end of rung.

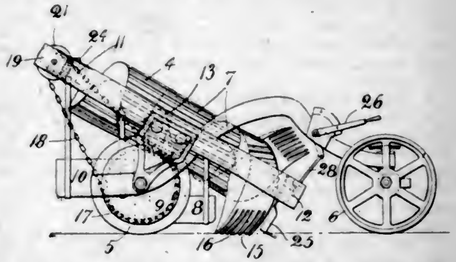
2. Ladder parts formed of sheet metal into channel shape providing lateral flat flanges and the edges of said flanges having rounded portions thereon, and a step or support fitting between said flanges.

3. Ladder parts formed of sheet metal into channel shape providing lateral flat flanges and the edges of said flanges having rounded rib portions thereon, and a step or support fitting between said flanges.

4. Ladder parts formed of sheet metal into channel shape providing lateral flat flanges and the edges of said flanges having rounded tubular portions thereon, and a step or support fitting between said flanges.

5. Ladder parts formed of sheet metal into channel shape providing lateral flat flanges and the edges of said flanges having rounded tubular rib portions thereon, and a step or support fitting between said flanges.

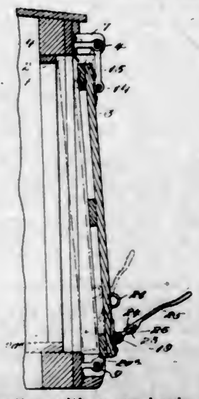
872,166. MACHINE FOR HARVESTING POTATOES. ROBERT S. BAXTER, Broughty Ferry, Scotland, assignor to James Urquhart, Dundee, Scotland. Filed Feb. 14, 1907. Serial No. 357,234.



1. A potato harvester comprising an inclined cylindrical screen, a fan of spirally arranged arms projecting from the lower end thereof and teeth on the end of each arm.

2. A potato harvester comprising an inclined cylindrical screen, spirally arranged arms projecting from the lower end thereof, said arms being so arranged as to enter the ground horizontally and teeth on the end of each arm.

872,167. CAR-DOOR. FRED W. BURWELL, Geneva, Ohio. Filed Feb. 16, 1907. Serial No. 357,693.



1. The combination with a car having a door opening and a door adapted to be seated in said opening, of a pair of guide rails, one arranged above and the other below the door opening, the guide rail above the opening supported

at a greater distance from the car than the other rail, and a pair of bails having angular ends pivotally connected to the door and connected to and mounted to oscillate upon said rails, the angular ends of the bail which are mounted upon the upper rail being longer than the angular ends of the other bail.

2. The combination with a car having a door opening and a door adapted to be seated in said opening, of a pair of guide rails, one arranged above and the other below the car door opening, the guide rail above the opening supported at a greater distance from the car than the other rail, and a pair of bails having angular ends pivotally connected to the door and connected to and mounted to oscillate upon said rails, the angular ends of the bail which are mounted upon the upper rail being longer than the angular ends of the other bail, one of said bails arranged in close proximity to the top of the door and the other of said bails in close proximity to the bottom of the door.

3. The combination with a car having a door opening and a door adapted to be seated in said opening, of a pair of guide rails, one arranged above and the other below the door opening, the guide rail above the opening supported at a greater distance from the car than the other rail, a pair of bails having angular ends pivotally connected to the door and connected to and mounted to oscillate upon said rails, the angular ends of the bail which are mounted upon the upper rail being longer than the angular ends of the other bail, and means connected to the lower of said bails whereby said bails can be shifted upon said rails causing thereby the withdrawing of the door from said opening.

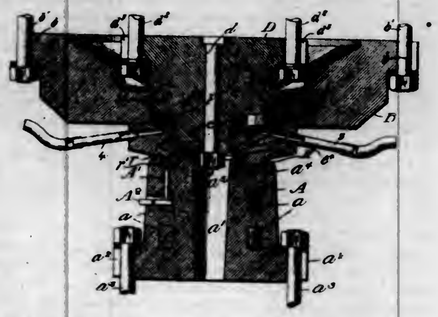
4. The combination with a car having a door opening and a door adapted to be seated in said opening, of a pair of fixed guide rails, one arranged above and the other below the car door opening, the guide rail above the opening supported at a greater distance from the car than the other rail, a pair of bails having angular ends pivotally connected to the door and permanently connected to and mounted to oscillate upon said rails, the angular ends of the bail which are mounted upon the upper rail being longer than the angular ends of the other bail, one of said bails arranged in close proximity to the top of the door and the other of said bails in close proximity to the bottom of the door, and means connected to the lower of said bails whereby said bails can be shifted upon said rails causing thereby the withdrawing of the door from said opening.

5. The combination with a car having a door opening and a door adapted to be seated in said opening, of a pair of fixed guide rails, one arranged above and the other below the door opening, the guide rail above the opening supported at a greater distance from the car than the other rail, a pair of end and an intermediate supporting bracket for each of said rails, and a pair of bails having angular ends pivotally connected to the door and connected to and mounted to oscillate and slide upon said rails, the angular ends of the bail which are mounted upon the upper rail being longer than the angular ends of the other bail, said bails when shifted upon said rails carrying the door therewith and preventing the door from swinging out at its top or its bottom, the angular ends of the bails being on opposite sides of the intermediate brackets and the opposite angular ends of each bail engaging the intermediate and the end bracket at the limit of movement in either direction of the door when shifted and further preventing the shifting of the door off the rails.

[Claims 6 to 9 not printed in the Gazette.]

872,168. APPARATUS FOR UPSETTING METAL RINGS. JAMES CLARK, Bradford, Pa., assignor to S. R. Dresser Manufacturing Company, Bradford, Pa. Filed Apr. 5, 1907. Serial No. 366,573.

1. In apparatus for upsetting the annular flange member of a clamping ring for pipe couplings and like articles, the combination with the main bottom section having its upper end provided with an annular recess for receiving the ring to be treated, and having a central portion for extending into the flange member thereof, of an annular holding ring having portions for engaging the ring to be treated and holding it in said annular recess, and an upsetting die located within said holding ring and movable with respect thereto, substantially as described.



2. In apapratus for upsetting the annular flange member of a clamping ring for pipe couplings and like articles, the combination with an annular holding ring, of an upsetting die located within said holding ring and movable with respect thereto, said holding ring and upsetting die being constructed to provide an annular cooling chamber between them, means for making a liquid tight connection between the contacting portions of said ring and die, and means for supplying liquid to said chamber, to cool the ring and die, substantially as described.

3. In apparatus for upsetting the annular flange member of a clamping ring for pipe couplings and like articles, the combination with an annular holding ring, of an upsetting die, located within said holding ring and movable with respect thereto, said holding ring and upsetting die being constructed to provide an annular cooling chamber between them, one of said parts being provided with an annular packing recess adjacent to the other part, an annular packing in said packing recess, and means for supplying a cooling fluid to said chamber, substantially as described.

4. In apparatus for upsetting the annular flange member of a clamping ring for pipe couplings and like articles, the combination with the main bottom section having its upper end provided with an annular recess for receiving the ring to be treated, and having a central portion for extending into the flange member thereof, of an annular holding ring having portions for engaging the ring to be treated and holding it in said annular recess, and an upsetting die, located within said holding ring and movable with respect thereto and provided with an annular upsetting recess, substantially as described.

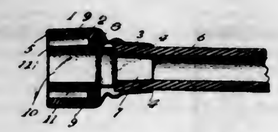
5. In apparatus for upsetting the annular flange member of a clamping ring for pipe couplings and like articles, the combination with the main top section, and an annular distance piece surrounding said top section, and movable with respect thereto, of an upsetting die, means for detachably securing it to the main top section, a holding ring surrounding said die, means for detachably connecting said ring to said distance piece, whereby said upsetting die, holding ring and bottom section may be replaced by others to enable rings of different sizes to be upset, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

872,169. PIPE CONNECTION. HERBERT CLAYTON, Brooklyn, N. Y. Filed May 15, 1906. Serial No. 317,038.

1. A resilient expansible coupling comprising a resilient gasket having a longitudinal open ended passage, and means for connecting one end of the passage with a pipe, the gasket provided with longitudinal openings outside of the wall of the said longitudinal passage, whereby the outer end of the passage is adapted to be expanded to receive a pipe of relatively larger diameter.

2. A resilient expansible coupling comprising a resilient gasket having a longitudinal open-ended passage, and means for connecting one end of the passage with the pipe, the gasket having longitudinal openings located outside of the wall of the passage, and extending inward from the outer end of the gasket, whereby the outer end of the passage is adapted to be expanded to receive a pipe of relatively larger diameter.



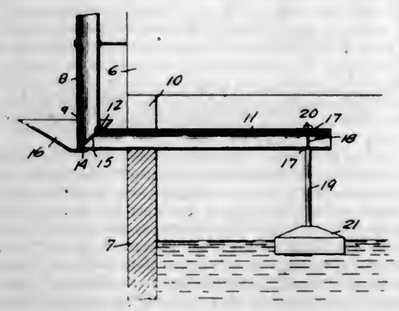
3. The combination with a socket, of a gasket therein, and having longitudinal recesses therein, and means for securing a tube within said socket.

4. The combination with a socket, of a gasket therein, and having longitudinal recesses surrounding the opening in the gasket, and means for securing a tube within said socket.

5. A resilient expansible coupling comprising a resilient gasket having a longitudinal open end, passage, means for connecting one end of the passage with a pipe, the gasket provided with longitudinal openings or recesses between the passage and the outer face of the gasket, whereby the said passage is adapted to be expanded to receive a pipe of relatively larger diameter.

[Claims 6 to 12 not printed in the Gazette.]

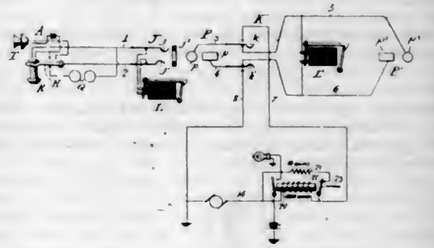
872,170. AUTOMATIC CUT-OFF. HENRY P. COSTER, Shabbona, Ill. Filed May 16, 1907. Serial No. 373,952.



1. The combination with a cistern and a pipe for conducting rain water, the said pipe having its lower end cut diagonally, of a pipe extended through one wall of the cistern and hinged to the first mentioned pipe for vertical swinging movement, the outer end of the pipe being cut diagonally to normally register with the diagonally cut lower end of the first mentioned pipe, a foraminous sheet fixed over the diagonally cut outer end of the last mentioned pipe, a receptacle connected with the said end of the pipe and into which the lower end portion of the first mentioned pipe extends, and a float connected with the second mentioned pipe within the cistern and adjacent the inner end of the said second named pipe.

2. The combination with a cistern and a pipe for conducting rain water, said pipe having its lower end cut diagonally, and the said cistern having one of its walls provided with an opening, of a pipe extended through the opening in the said wall of the cistern and hinged at its end to the first mentioned pipe for vertical swinging movement, the outer end of the said pipe being cut diagonally to register with the lower end of the said first mentioned pipe, a foraminous sheet fixed across the diagonally cut end of the second mentioned pipe, a funnel shaped receptacle connected with the said end of the second mentioned pipe and having its forward portion extended, the said second named pipe being provided with vertically alined openings adjacent its rear end, a rod having a reduced upper end portion engaged through said openings, a nut engaged upon the upper end of the reduced upper end portion of the rod and serving to fix the same with relation to the pipe, and a float carried at the lower end of the rod, said float having a conical upper end.

872,171. MEANS FOR PROTECTING OPERATORS' RINGING LEADS. WILLIAM W. DEAN, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Filed Apr. 7, 1906. Serial No. 310,572.



1. In a telephone system, a line circuit, a source of current supply for the line, an inductive resistance between said source and the line, and means including a non-inductive resistance for rendering said inductive resistance normally inoperative.

2. In a telephone system, a line circuit, a source of signaling current for the line, connection from said source to the line, a high inductive resistance in series in said connection, and a low non-inductive resistance in shunt of said high inductive resistance and controlled thereby.

3. In a telephone exchange system, a subscriber's station and a central station, and a line circuit interconnecting them, a signal receiving device at the subscriber's station and a source of signaling current at the central station adapted to be connected to the line; together with a high magnetic resistance between said source and the line, and means controlled by said magnet normally completing a low resistance path from the source to the line.

4. As a means for protecting operator's ringing leads, a high resistance relay therein normally inoperative, and a low resistance shunt around said relay controlled thereby.

5. As a means for protecting operator's ringing leads, a relay having high self inductance connected therein and a low non-inductive shunt around said relay controlled thereby.

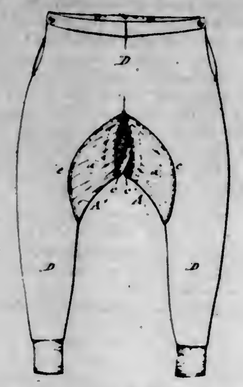
[Claim 6 not printed in the Gazette.]

872,172. SHIELD FOR LADIES' DRAWERS. ISABEL I. ELTERICH, Freeport, N. Y. Filed Mar. 9, 1907. Serial No. 361,586.

1. A shield for ladies' drawers, consisting of a main-piece of fabric composed of two approximately triangular portions stitched together, and an overlap-portion stitched to the upper curved edge of the main-piece.

2. The combination, with a pair of drawers having an open crotch, of shields applied to the edges of the crotch and each comprising a main-piece of fabric composed of

two aproximately triangular portions stitched together and extending outwardly over the crotch, and an overlap-



ping portion stitched to the edge of the main-portion and extending inwardly over the edges of the crotch.

872,173. CENTRIFUGAL LIQUID-SEPARATOR. ERIK A. FORSBERG, Stockholm, Sweden, assignor to Aktiebolaget Separator, Stockholm, Sweden. Filed Nov. 25, 1905. Serial No. 289,033.



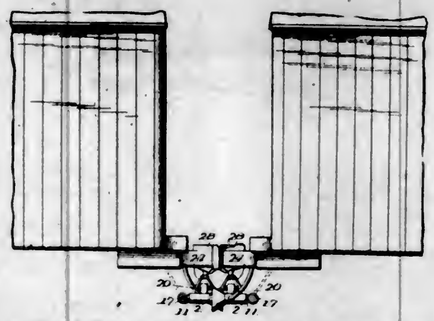
1. In a centrifugal liquid separator, the combination, with the separator, of a resistance device within the separator adapted to counteract the gliding effect caused by the difference of speed of the bowl and the separated liquid, and means enabling said resistance device to be adjusted from outside the bowl to vary its resistance, thereby enabling the relative proportions of the separated liquids to be regulated.

2. In a centrifugal liquid separator, the combination with the bowl and its contained liner, of a resistance device, adapted to counteract the gliding effect caused by the difference of speed of the bowl and the separated liquid, interposed in the space between the wall of the bowl and the liner, and means enabling said resistance device to be adjusted from outside the bowl to vary its resistance, thereby enabling the relative proportions of the separated liquids to be regulated.

3. In a centrifugal liquid separator, the combination between the bowl and its contained liner and top disk, of a resistance device, adapted to counteract the gliding effect caused by the difference in speed of the bowl and the separated liquid, interposed in the space between the top disk of the liner and wall of the bowl, and means enabling said resistance device to be adjusted from outside the bowl to vary its resistance, thereby enabling the relative proportions of the separated liquids to be regulated.

4. In a centrifugal liquid separator, the combination between the bowl and its contained liner and top disk, of a resistance device comprising one or more stationary strips arranged in the space between the bowl and the top disk, and an adjustable member arranged in the space above the upper limit of said strip or strips, said resistance device being adapted to counteract the gliding effect caused by the difference of speed of the bowl and the separated liquid and the adjustable member thereof by its adjustment enabling the relative proportions of the separated liquids to be regulated.

872,174. AUTOMATIC TRAIN-PIPE COUPLING. RALPH M. FYOCK and STEWART STONE, Butler, Pa. Filed Mar. 25, 1907. Serial No. 364,245.



1. In an automatic train-pipe coupling, the combination of a head comprising a body portion having a vertically arranged series of cylindrical openings therethrough, said openings being provided with a common bell mouth projecting from the body portion, each of said openings being provided with an internal annular shoulder at the junction of the bell mouth therewith, a gasket resting against the shoulder, a follower engaging the gasket, a plug threaded into the opening and engaging the follower, means for rotating the plug, whereby to vary the internal diameter of the gasket, said head having a vertical series of tubular portions projecting therefrom in the same direction as the bell mouth and communicating with the respective cylindrical openings, the axes of the tubular portions being parallel with the axes of the respective cylindrical openings, said head being provided with nipples communicating with the openings for connection with the train pipes, and means for supporting the head whereby to permit a limited horizontal swinging movement in the direction of the tubular portions, and to permit a yielding in the direction of the axes of the cylindrical openings.

2. In an automatic train-pipe coupling, the combination of a head having a plurality of parallel cylindrical openings therethrough, said openings being provided with a common bell mouth, each of said openings being provided with an internal annular shoulder at the end adjacent to the bell mouth, a gasket resting against the shoulder, a follower engaging the gasket, a plug threaded into the opening and engaging the follower, a manually operated means for rotating the plug whereby to vary the internal diameter of the gasket, said head having a series of parallel tubular portions projecting therefrom and communicating with the respective cylindrical openings, said head being provided with nipples communicating with the openings for connection with the train-pipes, and means for yieldingly supporting the head.

3. In an automatic train-pipe coupling, the combination of a head having a cylindrical opening therethrough, said opening terminating in a bell mouth and being provided with an internal annular shoulder at the junction of the bell mouth therewith, a gasket resting against the shoulder, a follower engaging the gasket, a plug threaded into the opening and engaging the follower, manually operated means for rotating the plug whereby to vary the internal diameter of the gasket, said head having a tubular portion projecting therefrom in the same direction as the bell mouth, and parallel with the axis of the opening and communicating with the opening, said head being provided with means whereby to connect the train-pipe with the opening.

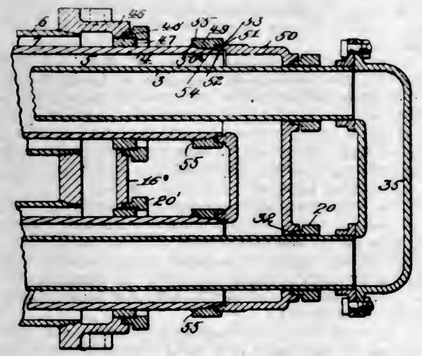
4. In an automatic train-pipe coupling, the combination

of a head having a cylindrical opening therethrough, said opening terminating in a bell mouth, and being provided with an internal annular shoulder at the junction of the bell mouth therewith, a gasket resting against the shoulder, a follower engaging the gasket, a plug threaded into the opening and engaging the follower, manually operated means for rotating the plug whereby to vary the internal diameter of the gasket, said head having a tubular portion projecting therefrom, and communicating with the opening, and being provided with means whereby to connect the train-pipe with the opening.

5. In an automatic train-pipe coupling, the combination of a head having a cylindrical opening therethrough provided with a bell mouth, and a tubular portion at the side of the bell mouth and communicating with the opening, side head having a nipple for connection with the train-pipe, a gasket in the opening adjacent to the bell mouth, said opening having an internal annular shoulder against which the gasket rests, a follower engaging the gasket, a plug threaded into the opening and engaging the follower, and manually operated means for rotating the plug whereby to vary the internal diameter of the gasket.

[Claims 6 to 9 not printed in the Gazette.]

872,175. COOLING APPARATUS. WILHELM GRIESSER, Joplin, Mo., assignor to Olga Koehn, doing business under the name of Brewery Equipment & Supply Co., New York, N. Y. Filed Feb. 19, 1906. Serial No. 301,886.



1. In a cooling apparatus, in combination with a series of pipe-units, each of which comprises a plurality of pipes concentrically arranged one within the other in spaced relation, hollow heads uniting the ends of corresponding pipes of adjacent units, one of said heads receiving the ends of the outermost pipes of two units and having the intermediate pipes continuing therethrough, rings interposed between said intermediate pipes and said head, means for forming a gas-tight joint between said head and said rings, collars secured on the outer ends of said intermediate pipes, a second head receiving the ends of said intermediate pipes and coöperating with said collars to form a gas-tight joint and having the innermost pipes continuing therethrough, and a return-bend connecting the ends of said innermost pipes.

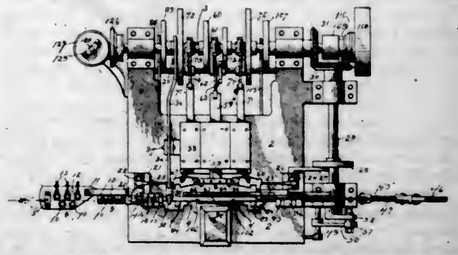
2. In a cooling apparatus, in combination with a series of pipe-units, each of which comprises a plurality of pipes concentrically arranged one within the other in spaced relation, hollow heads uniting the ends of corresponding pipes of adjacent units, one of said heads receiving the ends of the outermost pipes of two units and having the intermediate pipes continuing therethrough, collars secured on the outer ends of said intermediate pipes, said head having apertures of a size to permit said intermediate pipes with their attached collars to be withdrawn therethrough, means for forming gas-tight joints at said apertures, a second head receiving the ends of said intermediate pipes and having the innermost pipes continuing therethrough, and a return-bend connecting the ends of said innermost pipes.

3. In a cooling apparatus, in combination with a series of pipe-units, each of which comprises a plurality of pipes concentrically arranged one within the other in spaced relation, hollow heads uniting the ends of corresponding pipes of adjacent units, one of said heads receiving the ends of the outermost pipes of two units and having the intermediate pipes continuing therethrough, rings interposed between said intermediate pipes and said head, means for forming a gas-tight joint between said head and said rings, collars secured on the outer ends of said intermediate pipes, a second head receiving the ends of said intermediate pipes and coöperating with said collars to form a gas-tight joint and having the innermost pipes continuing therethrough, and a return-bend connecting the ends of said innermost pipes.

4. In a cooling apparatus, in combination with a series of pipe-units, each of which comprises a plurality of pipes concentrically arranged one within the other in spaced relation, hollow heads uniting the ends of corresponding pipes of adjacent units, one of said heads receiving the ends of the outermost pipes of two units and having the intermediate pipes continuing therethrough, collars secured on the other ends of said intermediate pipes, a second head receiving the ends of said intermediate pipes and having the innermost pipes continuing therethrough and coöperating with said collars to form a gas-tight joint, said head being provided with apertured lugs, means for forming gas-tight joints between said innermost pipes and the latter head comprising sleeves surrounding said pipes and having apertured lugs, a return-bend connecting the outer ends of said innermost pipes, bolts, each of which has a head engaged over one of said collars, and a screw-threaded shank passed through corresponding lugs of said second head and said sleeves, and nuts on said bolts screwed against respective lugs of said head and sleeves.

5. In a cooling apparatus, in combination with a series of pipe-nuts, each of which comprises a plurality of pipes concentrically arranged one within the other in spaced relation, hollow heads uniting the ends of corresponding pipes of adjacent units, one of said heads receiving the ends of the outermost pipes of two units and having the intermediate pipes continuing therethrough, a second head receiving the ends of said intermediate pipes and having the innermost pipes continuing therethrough, a return-bend connecting the ends of said innermost pipes, a gas-tight joint connecting the said intermediate pipes with the second-named head, said joint comprising collars secured on the ends of said intermediate pipes, and a connection between said intermediate pipes and the first-named head.

872,176. MACHINE FOR FORMING AND APPLYING WIRE BAILS TO PAPER BOXES. CHARLES D. GRIMES, Dayton, Ohio; Harry E. Dill administrator of said Charles D. Grimes, deceased. Filed Jan. 2, 1907. Serial No. 350,538.



1. In a machine as described, a reciprocating clamp to draw the wire across the machine, a series of independent plungers and actuating devices therefor, wire holding and wire bending devices each separately actuated by one of said plungers, driving mechanism for driving the bent ends of the wire through the sides of a paper vessel, and means

for clenching the ends of said wire, substantially as specified.

2. In a machine as described, the combination with three reciprocating plungers, of a supporting frame therefor, a shaft, cams thereon for actuating said plungers, a head upon the medial plunger adapted to engage and hold the wire to be operated upon, wire bending devices operated by the exterior plungers, a series of forms about which the wire is to be bent, means for depressing the exterior forms to permit the bending of the wires about the medial form, substantially as specified.

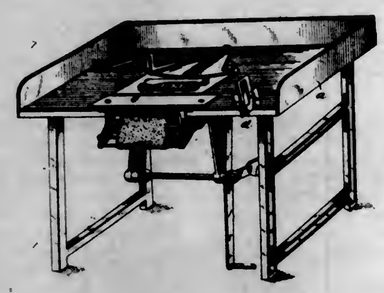
3. In a machine as described, wire feeding and wire severing devices, wire holding and wire bending devices, a series of plungers each independent of the others for actuating the respective wire holding and bending devices, a shaft, cams on said shaft, one for each plunger and connecting mechanism for operating said plungers, a block for holding the vessel to be bailed, driving and clenching mechanism to secure the bail when formed to the vessel, substantially as specified.

4. In a machine as described, wire feeding and wire severing devices, wire holding and wire bending devices, a series of plungers each independent of the others for actuating the respective wire holding and bending devices, a shaft, cams thereon, one for each plunger, connecting mechanism for operating said plungers, a block for holding the vessel to be bailed, a pair of driving devices, cams and connecting devices for operating the same to drive the ends of the wire through the vessel, clenching devices, a cam, and connecting devices to operate the same to clench the ends of the bail in place.

5. In a machine as described, the combination with wire severing and bending mechanism, of a sliding head, a stationery gripper jaw and a movable gripper jaw on said head, a projecting arm on said movable jaw, a reciprocating rod connected to said arm, means for reciprocating said rod whereby the initial movement in either direction will operate said gripper jaws, and a further movement will move said sliding head, substantially as specified.

[Claims 6 to 29 not printed in the Gazette.]

872,177. CIGAR-BUNCH-FORMING APPARATUS. OSCAR HAMMERSTEIN, New York, N. Y. Filed June 25, 1904. Serial No. 214,082.



1. A cigar bunch-forming apparatus consisting of a trough having an inclined edge or abutment in a free space so as to facilitate the insertion of a knife or the fingers of the operator.

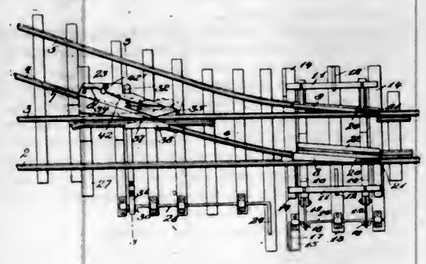
2. A cigar bunch forming apparatus consisting of a trough having an open end with an inclined free cutting edge.

3. A cigar bunch-forming apparatus consisting of a trough closed at one end and having a free cutting edge or abutment at the other end which is open.

4. A cigar bunch-forming apparatus consisting of a trough having an inclined wall at one end and a free cutting edge or abutment at the other end.

5. A cigar bunch-forming apparatus comprising a table or support and a trough carried by said support and projecting therefrom, the projecting portion of the trough being provided with a cutting edge or abutment.

872,178. RAILWAY-SWITCH. OTTO HARPOLD, Rosedale, Ind. Filed July 11, 1907. Serial No. 383,214.



1. In a switch, the combination of main and branch rails, one of the branch rails being divided, and a switch member between the sections of said divided branch rail and comprising a pivotally mounted body provided with a member pivotally mounted thereon, movable therewith, and constituting the operative portion of said switch member.

2. In a switch, the combination of main and branch rails, one of the branch rails being divided, a switch member between the sections of said divided branch rail and comprising a pivotally mounted body provided with a pivotally mounted member constituting the operative portion of said switch member, and a spring to act against said pivotally mounted member to normally hold the same in its working relation.

3. In a switch, the combination of main and branch rails, one of the branch rails being divided, a switch member between the sections of said divided branch rail and comprising a shiftably mounted body provided with a member jointed thereto, constituting the working part of the switch member and provided with a flange to overlie one of the main rails.

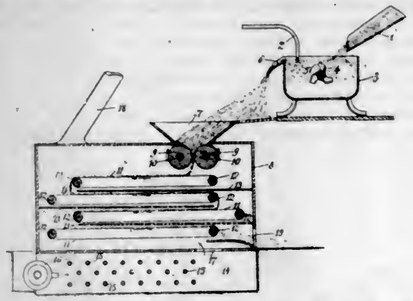
4. In a switch, the combination of main and branch rails, one of the branch rails being divided, a switch member between the sections of said divided branch rail and comprising a shiftably mounted body provided with a member shiftable thereon, constituting the working part of the switch member and provided with a flange to overlie one of the main rails, the side of said latter member provided with said flange being provided with angular converging faces.

5. In a switch, the combination of main and branch rails, one of the branch rails being divided, a switch member between the sections of said divided branch rail and comprising a shiftably mounted body provided with a member shiftable thereon, constituting the working part of the switch member and provided with a flange to overlie one of the main rails, the side of said latter member provided with said flange being provided with angular converging faces and also having a diagonally-disposed groove.

[Claims 6 to 8 not printed in the Gazette.]

872,179. PROCESS OF OBTAINING A SOLUBLE GLUTINOUS SUBSTANCE FROM TANG-ACID. ERNEST HEARMANN, Paris, France, assignor to Compagnie Internationale La Norgine, Paris, France. Filed May 9, 1906. Serial No. 316,001. (Specimens.)

Process of producing a glutinous substance which shall be dry, neutral and perfectly soluble, by pressing tang-acid while in a heated state, reducing the resulting product to a powder and subjecting it to the action of ammonia vapor or treating it with ammonia gas, drying and at the same time freeing said product from any excess of ammonia which it may contain, substantially in the manner described.



872,180. COTTER-PIN. FRANK E. HITE, Owensboro, Ky. Filed May 9, 1907. Serial No. 372,681.



1. A cotter pin having arms tending to spring outwardly, and a collar slidable on the arms for compressing them together, said collar being provided with outwardly extending lugs forming gripping means.

2. A cotter pin comprising an eye and spring arms tending to separate and having their extremities bent oppositely, and a member slidable on the arms to compress the same and permanently retained between the eye and bent portions of the arms.

3. A cotter pin comprising an eye and spring arms normally spread apart, a collar slidably mounted on the pin for compressing the arms, and means coöperating with the eye for holding the collar permanently on the pin.

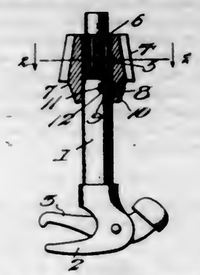
872,181. PROCESS OF MAKING RED LAKES. CARL IMMERHEISER, Ludwigshafen-on-the-Rhine, Germany, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed July 10, 1906. Serial No. 325,527.

1. The process for the production of red color lakes by grinding together a hereinbefore defined coloring matter, a metallic compound and less than ten per cent. (10%) of water, or other suitable liquid, that the resulting product is practically dry.

2. The process for the production of red color lakes by grinding together a hereinbefore defined coloring matter, a substratum, a metallic compound and less than ten per cent. (10%) of water, or other suitable liquid, that the resulting product is practically dry.

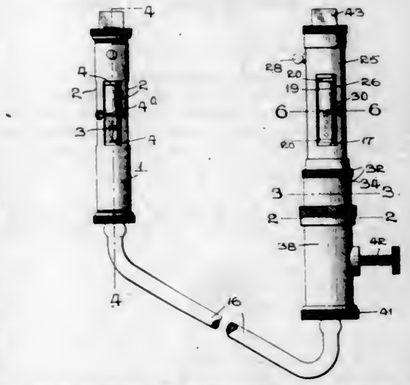
872,182. CORD-KNOTTER. ROBERT H. JAHNS, Naco, Ariz. Filed Apr. 24, 1906. Serial No. 313,404.

The herein described cord knotter comprising a knotter shaft having an annular series of teeth extending lengthwise thereof, and said shaft provided with a segmental groove extending partially around the same at a point beyond the teeth, said groove having oppositely disposed beveled side walls, a beveled knotter pinion having a bore provided with interior teeth extending lengthwise thereof to engage the teeth on the knotter shaft to prevent relative rotary movement, while permitting relative sliding movement, and a set screw carried by the knotter pinion and having its inner end reduced to form a beveled shoulder



which coöperates with the beveled walls of the groove in the knotter shaft.

872,183. LEVELING INSTRUMENT. GUSTAV A. JENNING, East St. Louis, Ill. Filed Mar. 19, 1907. Serial No. 363,287.



1. A leveling instrument constructed with a pair of tubes, transparent tubes arranged within the first mentioned tubes, a flexible tube connecting the lower ends of the first mentioned tubes, collapsible sacks arranged in the lower ends of the first mentioned tubes, which flexible tube is filled with fluid, and the transparent tubes and collapsible sacks being partially filled with fluid.

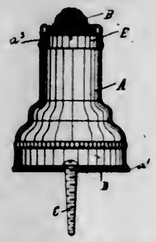
2. A leveling instrument, constructed with a pair of tubes, transparent tubes arranged within the first mentioned tubes, a flexible tube connecting the lower ends of the first mentioned tubes, collapsible sacks arranged in the lower ends of the first mentioned tubes, which flexible tube is filled with fluid, the transparent tubes and collapsible sacks being partially filled with fluid, and means arranged in the upper ends of the first mentioned tubes for preventing the discharge of the fluid from the transparent tubes through the upper ends of the first mentioned tubes.

3. A leveling instrument, constructed with a pair of transparent tubes, a flexible tube, means whereby the ends of the flexible tube are connected to the transparent tubes, collapsible sacks arranged in the connections between the flexible tube and the transparent tubes, which flexible tube is filled with fluid, and which transparent tubes and collapsible sacks are partially filled with fluid.

4. A leveling instrument, constructed with a pair of transparent tubes, a flexible tube, means whereby the ends of the flexible tube are connected to the transparent tubes, collapsible sacks arranged in the connections between the flexible tube and the transparent tubes, which flexible tube is filled with fluid, which transparent tubes and collapsible sacks are partially filled with fluid, and means whereby the level of the fluid in the transparent tubes is adjustable.

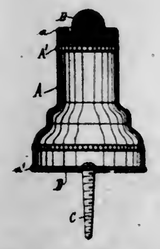
5. A leveling instrument, constructed with a pair of tubes, a flexible tube connecting the lower ends of said tubes, the lower ends of said tubes and the flexible tube being filled with fluid, transparent tubes arranged in the first mentioned tubes, which transparent tubes are partially filled with fluid, means whereby the level of the fluid in the transparent tubes is regulated, caps normally closing the upper ends of the first mentioned tubes, and means carried by said caps for preventing the discharge of air and fluid from the upper ends of the first mentioned tubes and the transparent tubes.

872,184. DOOR CHECK OR BUMPER. HENRY F. KEIL, Bronxville, N. Y. Filed Sept. 6, 1906. Serial No. 333,421.



A door check comprising a hollow sheet metal body and formed with an orifice, an inverted cup inserted within the said body to form a support, and a flanged elastic tip held between the shell of the body and the said support.

872,185. DOOR CHECK OR BUMPER. HENRY F. KEIL, Bronxville, N. Y. Filed Sept. 6, 1906. Serial No. 333,422.

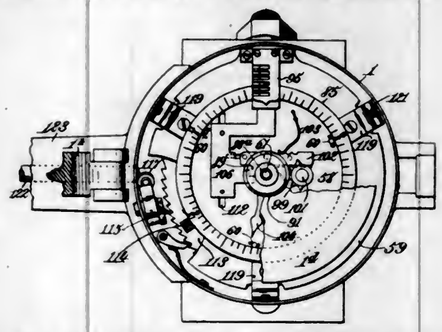


A door check comprising a hollow sheet metal body, closed at its outer end and provided with a swaged in seat or recess, and a flanged elastic tip held therein by the bent over edges of said recess.

872,186. SPEED-RECORDING INSTRUMENT. CASCIOUS H. D' LA MONTE, Philadelphia, Pa., assignor, by mesne assignments, to International Speed Register Co., Philadelphia, Pa., a Corporation of New York. Filed Mar. 21, 1906. Serial No. 307,235.

1. A speed recording instrument for the purpose set forth having a punching mechanism comprising a reciprocatory punch for puncturing a dial to form a record, a casing for the punch, and a plurality of combs having the outer ends thereof secured to the wall of the casing, said combs projecting inwardly, suitably spaced apart and adapted to have the dial enter between the inner ends thereof, the tines of the combs constituting guides for the punch, combined with means for actuating the punch and for intermittently varying the size of the punctures during the operation of the instrument.

2. A speed recording instrument for the purpose set forth comprising the combination with a dial punching mechanism, of a shifting mechanism therefor, comprising an automatically-slidable stepped plate connected to the punch of the punching mechanism for shifting it, a stop member shiftable from said plate for intermittently arresting the movement thereof when shifting the punch, rotatable means for intermittently shifting said member, combined with a clock mechanism for operating said means, a rotatable toothed wheel provided with a cam piece adapted to engage and intermittently operate the punch of the punching mechanism, and an intermittently operated mechanism automatically operated from a traveling body and engaging with and actuating said wheel.



3. A speed recording instrument for vehicles, comprising a casing, a clock mechanism having a dial connected therewith and rotated thereby, said dial having a plurality of circular spaces with portions within the circular spaces designated to constitute different parts of a day, a plurality of spring elements connected with the casing and to the clock mechanism for suspending the mechanism within the casing to prevent vibration thereof, means for successively punching in the circular spaces of the dial to form a record, means operated from the clock mechanism for successively shifting in the same direction the punching means from a position in operative relation with respect to the outer circular space to a position in operative relation with respect to the other circular spaces, and means for intermittently increasing the length of the stroke of the punching means during the operation thereof to increase the size of the aperture formed in the dial.

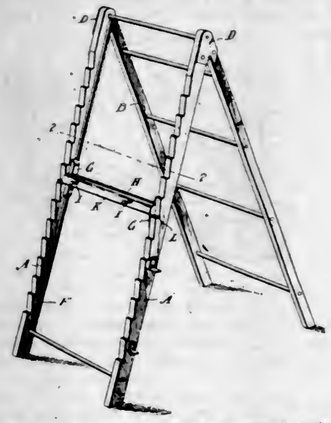
4. In a speed recording instrument for the purpose set forth, the combination with a dial punching mechanism, of means for intermittently shifting said mechanism in the same direction, said means comprising an arm rotatable from a clock mechanism and having a stud, a star wheel carrying a pinion, said wheel adapted to be engaged and shifted by said stud, a toothed stop member meshing with said pinion and adapted to be moved when the wheel is shifted, a slidable plate provided with an extension connected to the punch of the punching mechanism and having a plurality of shoulders adapted to be successively engaged by said stop member thereby limiting the movement of the plate when shifting the punch, and a spring fixed at one end to a support and at its other end connected with said plate for automatically moving the plate in one direction when the stop member is moved out of engagement with one of the shoulders of the plate.

5. A speed recording instrument for the purpose set forth comprising a punching mechanism consisting of a reciprocatory punch, a casing for the punch, and a plurality of combs carried by the outer end of the casing and having the tines thereof constituting guides for the needle point, combined with means for operating the punch.

[Claims 6 to 13 not printed in the Gazette.]

872,187. SCAFFOLD-SUPPORT. DAVID F. LUKE, Blakeslee, Ohio, assignor of one-half to Orrin H. Nihart, Edon, Ohio. Filed July 29, 1907. Serial No. 386,020.

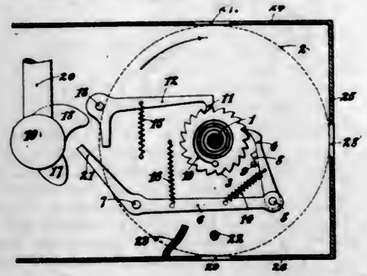
1. A scaffold support comprising notched strips having longitudinal grooves therein, a prop hinged to said strips, slides having tongues mounted to move in said longitudinal slots in the notched strips, a cross-piece connecting said slides, pins projecting from said cross-piece, a strip mounted upon said pins, and means supported by the strip upon said cross-piece for engagement with said notched strips, as set forth.



2. A scaffold support comprising notched strips having longitudinal grooves therein, a prop hinged to said strips, slides having tongues mounted to move in said longitudinal slots in the notched strips, a cross-piece connecting said slides, pins projecting from said cross-piece, a strip mounted upon said pins, a rod fastened to said strip which is supported by the cross-piece, the ends of said rod engaging said notched strips, and means for holding said rod in the notches of said strip, as set forth.

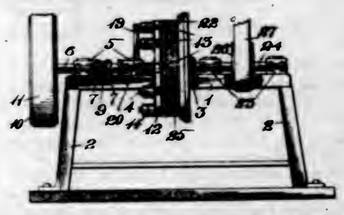
3. A scaffold support comprising notched strips having longitudinal grooves therein, a prop hinged to said strips, slides having tongues mounted to move in said longitudinal slots in the notched strips, a cross-piece connecting said slides, pins projecting from said cross-piece, a strip mounted upon said pins, a rod fastened to said strip which is supported by the cross-piece, the ends of said rod engaging said notched strips, and springs normally designed to hold the ends of the rods in the notches of said strips, as set forth.

872,188. CAB-FARE INDICATOR. CHARLES MASCART, Paris, France. Filed Oct. 13, 1905. Serial No. 282,665.



The combination of a drum provided with means to indicate the amount of fare paid, a ratchet wheel fixed to said drum, a spring for imparting movement to the drum when the ratchet wheel is released, a lever provided with a detent adapted to engage the ratchet wheel to prevent the rotation thereof in one direction, a pawl engaging said ratchet and adapted to prevent the rotation thereof in the same direction and further adapted to impart an impulse to the ratchet wheel in an opposite direction, a lever carrying said pawl and having an upwardly-extending arm adapted to be moved into engagement with the lever carrying the detent, thereby shifting said detent out of engagement with the ratchet wheel and further shifting the pawl out of engagement with the ratchet wheel, a pair of cam members, one of said members adapted to engage said arm for moving it into engagement with that lever which is provided with a detent, and the other of said members adapted to engage said arm for lowering it, thereby shifting said pawl to impart an impulse to the ratchet wheel, and means for retaining the detent and pawl in engagement with the ratchet wheel when said cam members are out of engagement with said arm.

872,189. MACHINE FOR BURRING NUTS. EDWARD MONGRAIN, East St. Louis, Ill., assignor of one-fourth to Thomas Cunningham, East St. Louis, Ill., and one-fourth to Charles P. Burgess, St. Louis, Mo. Filed May 28, 1907. Serial No. 376,170.



1. In a machine of the class described, a frame, a grinding wheel arranged for operation thereon, a disk arranged for rotation adjacent the grinding wheel so that portions of said disk and wheel overlap, there being a plurality of notches formed in the edge of the disk to receive the nuts that are engaged by the grinding wheel, housings fixed to the rear side of the disk immediately opposite the notches therein, a pair of blocks loosely mounted in each housing, an expansive coil spring arranged in each housing, between the pair of blocks therein, and means fixed on the frame for moving the rear series of blocks inwardly during the time the corresponding notches of the disk are moving past the grinding wheel.

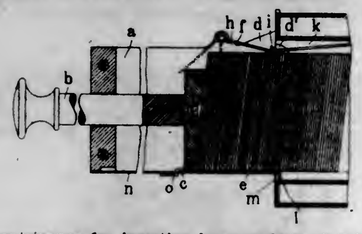
2. In a machine of the class described, a frame, a grinding wheel arranged for operation thereon, a disk arranged for rotation adjacent the grinding wheel so that portions of said disk and wheel overlap, there being a plurality of notches formed in the edge of the disk to receive the nuts that are engaged by the grinding wheel, housings fixed to the rear side of the disk immediately opposite the notches therein, a pair of blocks loosely mounted in each housing, an expansive coil spring arranged in each housing between the pair of blocks therein, means fixed on the frame for moving the rear series of blocks inwardly during the time the corresponding notches of the disk are moving past the grinding wheel, and a curved guard fixed in front of the grinding wheel and extending upward immediately adjacent the notched edge of the disk.

3. In a machine of the class described, a frame, a grinding wheel arranged for rotation thereon, a disk arranged for rotation adjacent the grinding wheel so that portions of said disk and wheel overlap, there being a plurality of nut receiving notches formed in the edge of the disk, yielding nut engaging devices arranged on the rear side of the disk immediately opposite the notches therein, and means fixed on the frame for engaging the yielding nut engaging means during the time the corresponding notches of the disk are moving past the grinding wheel.

4. In a machine of the class described, a frame, a grinding wheel arranged for rotation thereon, a disk arranged for rotation adjacent the grinding wheel so that portions of said disk and wheel overlap, there being a plurality of nut receiving notches formed in the edge of the disk, yielding nut engaging devices arranged on the rear side of the disk immediately opposite the notches therein, means fixed on the frame for engaging the yielding nut engaging means during the time the corresponding notches of the disk are moving past the grinding wheel, and a

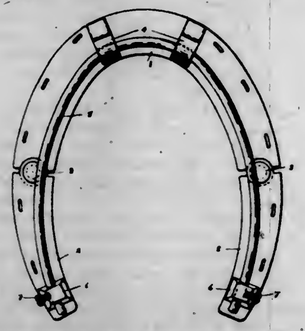
curved guard fixed on the frame in front of the grinding wheel and extending upward immediately adjacent the notched edge of the disk.

872,190. CONTRIVANCE FOR INSERTING LOOSE PACKETS OF TICKETS INTO TICKET-COMPARTMENTS. HEINRICH J. MÜLLER, Schaffhausen, Switzerland. Filed May 21, 1907. Serial No. 374,906.



A contrivance for inserting loose packets of tickets in ticket compartments, comprising a holder adapted for receiving packets of tickets and provided with a plunger for thrusting same into a ticket compartment, projections for bringing the holder in front of the compartment and projections to prevent lateral displacement of the holder and a spring-controlled plate hinged to the holder for releasing the tickets when thrust into the compartment, from the pressure of a spring disposed in the compartment the said plate being arranged to swing back into a vertical position upon the withdrawal of the plunger.

872,191. HOOF-SPREADING HORSESHOE. ANDREW NAGLEY, Elmhurst, Pa. Filed May 17, 1907. Serial No. 374,163.

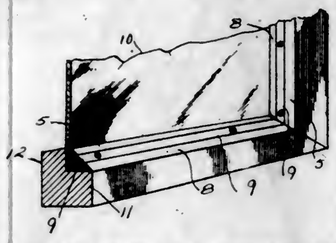


1. A horseshoe of the character described, comprising a main or front portion, heel portions pivoted to said front portion, a spring for expanding said heel portions of substantially the same outline as that of the shoe and supported by the front portion of the shoe, and an adjustable connection between the legs of the spring and the heel portions.

2. A horseshoe of the character described comprising a main or front portion, heel portions pivoted to said front portion, a spring for expanding said heel-portions of substantially the same outline as that of the shoe and supported by the front portion of the shoe, supports for the legs of the spring carried by the heel portions through which the spring loosely passes, and set-screws carried by the supports for securing said heel-portions and the legs of the spring together.

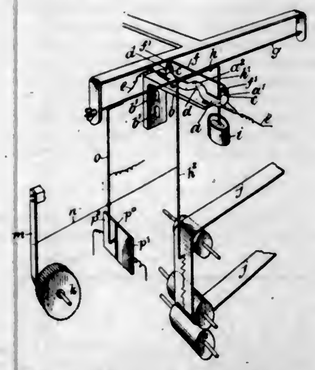
3. A horseshoe of the character described comprising a main or front portion, heel portions pivoted to said front portion, a spring for expanding the heel portions of substantially the same outline as that of the shoe, spaced toe-calks carried by said front portion and perforated to receive the spring, heel-calks carried by the heel-portions of the shoe perforated to receive the legs of the spring, and set-screws carried by the heel-calks engaging said spring and securing the heel-portions thereto.

872,192. WINDOW-PANE FASTENING. MARTIN A. OLSON, Brainerd, Minn. Filed Jan. 9, 1907. Serial No. 351,515.



A device of the type set forth, comprising a strip of rubber, having the cross sectional shape of a right angle triangle, and having its outer hypotenuse face formed with a longitudinal recess, said strip being formed at intervals with openings extending from said outer face to a point in the lower face of the same, and a strip of metal set conformably into said longitudinal recess and being flush with said outer face, said metallic strip being formed with openings registering with said first named openings for the reception of fastening means.

872,193. ELECTROCAPILLARY APPARATUS. AXEL ORLING, Upper Tooting, England. Filed June 1, 1907. Serial No. 376,876.



1. An indicator of successive electric impulses, comprising a fixed, horizontally situated, capillary passage, two plugs of electrically conductive, immiscible liquids contained therein in contact with one another, two terminals of an electric circuit, one in electric connection with one liquid and the other with the second and oscillating member in such contact with one of the plugs of liquid and so mounted as to be adapted to partake of its pulsating movements.

2. An indicator of successive electric impulses, comprising a fixed, horizontally situated capillary passage having a short portion of its length slightly arched, two plugs of electrically conductive, immiscible liquids contained therein in contact with one another at the arched portion, two terminals of an electric circuit, one in electric connection with one liquid and the other with the second and an oscillating member in such contact with one of the plugs of liquid and so mounted as to be adapted to partake of its pulsating movements.

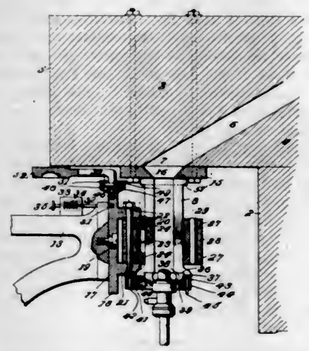
3. An indicator of successive electric impulses, comprising a fixed horizontally situated capillary passage, two plugs of electrically conductive, immiscible liquids contained therein in contact with one another, two terminals of an electric circuit, one in electric connection with one liquid and the other with the second and a pivoted oscillating member in contact with one extremity of one of the plugs of liquid.

4. An indicator of successive electric impulses, comprising a fixed horizontally situated capillary passage, two plugs of electrically conductive, immiscible liquids contained therein in contact with one another, two terminals of an electric circuit, one in electric connection with one liquid and the other with the second and a pivoted oscillating member in contact with one extremity of one of the plugs of liquid, and so mounted as to be adapted to partake of its pulsating movements and a recording device, one element of which is connected to the said oscillating member.

5. An indicator of successive electric impulses, comprising a fixed horizontally situated capillary passage, two plugs of electrically conductive, immiscible liquids contained therein in contact with one another, two terminals of an electric circuit, one in electric connection with one liquid and the other with the second and a pivoted oscillating member in contact with one extremity of one of the plugs of liquid, carrying one element of a recording device.

[Claims 6 to 8 not printed in the Gazette.]

872,194. GLASS-WORKING APPARATUS. RICHARD M. PAXTON, Washington, Pa. Filed Feb. 27, 1906. Serial No. 303,198.



1. A glass working apparatus, comprising a glass tank having an inclined outlet passage through its wall, the outer end of the outlet projecting beyond the outer face of the wall to permit a mold to be placed thereunder, and a movable mold adapted to be supported under and in communication with the projecting outer end of the said glass outlet.

2. A glass working apparatus comprising a glass tank, a block passing through the wall with its outer end projecting beyond the outer face of said wall, the block having an inclined passage-way, the inner end of which is in communication with the interior of the tank and its outer and lower end passing through the projecting portion of the blank, a movable mold adapted to be supported below and in communication with the outer end of said tank outlet.

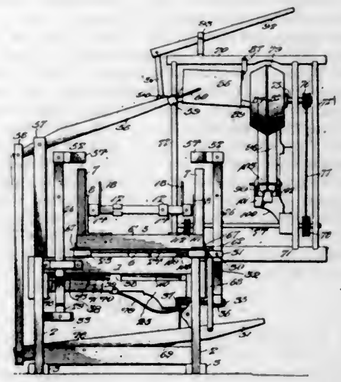
3. A glass working apparatus, comprising a glass tank having a glass outlet, a rotatably supported frame having a series of molds adapted to be brought below and in communication with said outlet, each mold having a shearing action in combination with the tank, plates located in a plane with the upper end of the molds and spanning the space between them to close the tank outlet when the molds are moved, and a vertically-movable plug carried by the frame below each mold.

4. A glass working apparatus, comprising a glass tank having a glass outlet, a rotatably supported frame having a series of molds adapted to be brought below and in communication with said outlet, each mold having a shearing action in combination with the tank, plates located in a plane with the upper end of the molds and spanning the space between them to close the tank outlet when the molds are moved, neck rings removably supported by the lower ends of the molds and a vertically movable plug carried by the frame below each mold.

5. A glass working apparatus comprising a standard, a hub rotatably mounted therein, radially extending arms carried by said hub, mold sections pivotally mounted on the outer ends of said arms, means for locking said mold sections together, the lower end of said sections having an annular inwardly-beveled recess, neck rings having an outwardly-beveled projection within the recess in the mold section, whereby the same is supported by the mold, and a vertically-movable plug carried by the arms below each mold.

[Claims 6 to 32 not printed in the Gazette.]

872,195. BOX-MAKING MACHINE. JAMES P. PAYNE, Delta, Colo. Filed May 29, 1906. Serial No. 319,381.



1. A box-making machine comprising a main frame, a table rotatably mounted thereon, a vertically adjustable platform connected with the table, and means carried by the platform for supporting the end sections of a box structure.

2. A box-making machine comprising a main frame, a table rotatably supported thereon, a vertically adjustable platform connected to the table, and spring arms carried by the platform and adapted to support the end sections of the box structure.

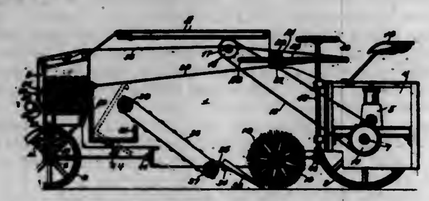
3. A box-making machine comprising a main frame, a table rotatably supported thereon, a vertically adjustable platform connected to the table, and supporting arms carried by the platform, said arms being normally spring held in operative position.

4. A box-making machine comprising a main frame, a table rotatably supported thereon, a vertically adjustable platform connected to the table, and supporting arms carried by the platform, said arms being normally spring held in operative position and arranged for free movement in either direction to dispose said arms below the supporting plane of the platform.

5. A box-making machine comprising a main frame, a table rotatably mounted thereon, a longitudinally adjustable platform supported on the table, means for supporting the platform to permit its vertical adjustment with relation to the table, edge clamping means supported on the frame, and a lever for operating said clamping means.

[Claims 6 to 9 not printed in the Gazette.]

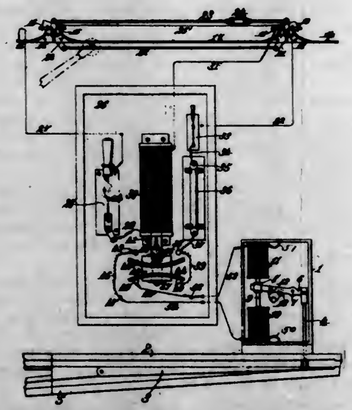
872,196. STREET-SWEEPER. FRANCIS M. PITTMAN, Logansport, Ind. Filed May 2, 1906. Serial No. 314,804.



1. A street sweeper comprising a wheeled frame including a body having rear side extensions and a motor casing connected therewith, said motor casing having a driver's seat mounted thereon, a shaft arranged at the lower rear portion of the body, a rotary brush carried by said shaft, a brush carrying frame comprising standards supporting the shaft and arranged on the outer sides of the extensions, said standards being adjustably connected with said extensions and connected at their upper ends by a transverse rod, means for securing the standards in adjusted position, and an operating lever pivotally mounted upon the casing and connected with said rod, and extending rearwardly above the forward portion of the motor casing in juxtaposition to the driver's seat.

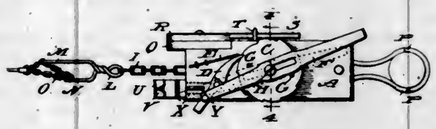
2. A street sweeper comprising a wheeled frame, including a body having rear side extensions and a motor casing connected therewith, said motor casing having a driver's seat mounted thereon, slotted standards arranged on the outer sides of the extensions, securing bolts extending through the extensions and slots in the standards, a rotary brush journaled in the lower ends of the standards at the lower rear portion of the body, a rod connecting the standards at the upper rear portion of the body, and a bail-shaped operating lever having its arms connected with the rod and its forward ends pivotally mounted upon the body, the return portion of said lever being arranged above the forward portion of the motor casing in proximity to the driver's seat.

872,197. ELECTRIC SWITCHING DEVICE. JAMES A. POSEY, Midlothian, Tex., assignor to Posey Automatic Switching Company, Dallas, Tex., a Corporation of Delaware. Filed Mar. 3, 1906. Serial No. 304,059.



An electric switching device comprising a contact making device having clamps for connection with the terminals of a severed wire forming a main circuit, a wire having the same potential of the main circuit and in connection with the clamps, and arranged in line with the said main circuit, a continuous current carrying wire carried by the said clamps and in electrical connection with the main circuit, depending bars carried by the clamps and insulated therefrom, a current transferring wire having its ends connected to the respective bars and arranged below and in parallelism with the first mentioned wires, means for tensioning the current transferring wire, a circuit changer having electrical connection with the main circuit and the wire having the same potential as the latter, and switch throwing mechanism in electrical connection with the circuit changer for controlling the same, said circuit changer also having electrical connection with the current transferring wire.

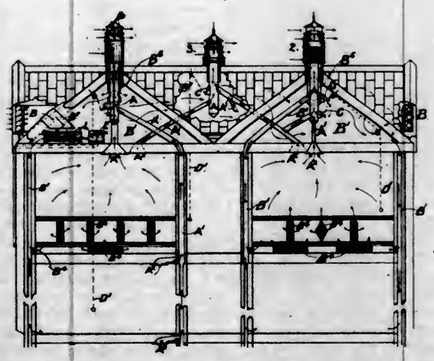
872,198. WIRE-STRETCHER. DAVID C. PULLINS, Conway, Ky., assignor of one-half to John C. Chenault and Daniel M. Chenault, Richmond, Ky. Filed June 28, 1907. Serial No. 381,241.



1. The wire stretcher herein described, comprising the main frame provided at one end with the opposite reversely projecting anchor hooks and having an opening at its other end for the passage of the stretching line, a drum journaled to the main frame midway between its ends, having at one end a ratchet wheel and a pawl for engaging the same, and provided on the face of the ratchet wheel with a central stud and with stop pins on opposite sides thereof, a handle lever slotted between its ends for the passage of the stud and engaging with the stop pins on opposite sides of the said stud, and the stretching line secured to the drum and having a hook connection provided with long and short hooks, all substantially as and for the purpose set forth.

2. The combination with the wire stretcher having a drum and a ratchet wheel thereon, and provided with a central stud and on opposite sides thereof with stop pins, a pawl engaging the ratchet wheel, a handle lever having a central slot for the passage of the stud, and arranged to engage with the stop pins on the opposite sides of the said studs, means for anchoring the wire stretcher in position, and a stretching line connecting with the drum and having means for connecting with the wire to be stretched, substantially as set forth.

872,199. SYSTEM OF DOUBLE VENTILATION. HENRY I. M. ROSS, Dunedin, New Zealand. Filed Oct. 11, 1906. Serial No. 338,510.



1. In a double current system of ventilation including one or more apartments, the combination of a plurality

of deflecting planes for inducing a current of foul air, an annular chamber having valved openings for admitting fresh air and directing the same to said apartments, and means in the roof for short-circuiting said currents of air.

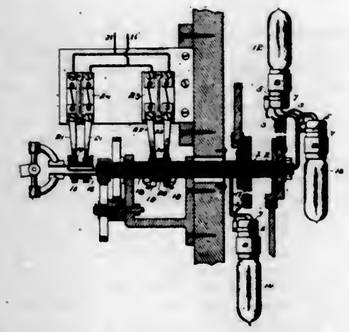
2. In a double current system of ventilation including one or more apartments, the combination of a plurality of fresh air inlets adapted to automatically open to admit air, a plurality of fresh air inlets adapted to automatically close to oppose the exit of said air, a foul air cowl and pipe in communication with said inlets, and means for short-circuiting said currents of air.

3. In a double current system of ventilation including one or more apartments, the combination of a revolving cowl for automatically exhausting the foul air, a fresh air inlet carried by said cowl, and deflecting means for said fresh air.

4. In a double current system of ventilation including one or more apartments, the combination of a plurality of gratings, and distributing air boxes arranged to equalize the flow of air through said gratings.

5. In a double current system of ventilation including one or more apartments, the combination of a revolving cowl, a fixed cowl having automatic valves, an exhaust cowl and extended inlets, distributing boxes for said inlets, a flushing cistern, dust arresting water trays connected with said cistern, and means for short-circuiting the air currents.

872,200. TOWER-CLOCK. EDWARD ROWE, Indiana, Pa. Filed May 9, 1901. Serial No. 59,482.

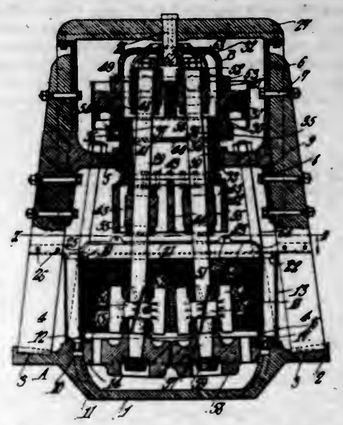


1. A clock provided with an unilluminated dial, and hands, flexible extension arms secured to the hands and projecting therebeyond, electric lamps received and supported by the projecting arms, the lamps extending in the same plane and direction as do the hands, concentric hollow arbors on which the hands are supported, the outermost arbor provided with an exterior longitudinally extending groove formed therein and wires leading from the lamps to the interior of the clock, the wires received in the innermost hollow arbor and in the groove in the outer arbor respectively.

2. A clock provided with an unilluminated dial and hands, extension arms secured to the hands, the arms carrying lamps at their outer ends, arbors on which are carried the hands, separate insulators carried by the two arbors within the clock, a plurality of separated contact rings carried on each insulator, fuse blocks connected to any suitable source of electricity, brushes secured to the fuse blocks and bearing on the contact rings and insulated wires leading from each pair of contact rings to the lamps carried by the hands.

3. In a clock, the combination with the two hands, and extension arms secured to each hand, said extension arms each having a clamp on its outer end, of a lamp, and lamp socket to which the lamp is secured, said lamp socket provided with a circumferential groove in which the clamp rests in holding the socket.

872,201. PULVERIZING-MILL. GEORGE E. RUDNICK, Iola, Kans. Filed May 16, 1907. Serial No. 373,890.



1. In a pulverizing mill the combination with a base constituting a basin, a die ring within the basin, and a cylindrical screen surrounding and upstanding from the ring; of a revoluble bearing sleeve, means for supporting the same above the basin, a driving element connected thereto, a skirt depending from the sleeve, boxes mounted to oscillate within and rotate with the driving element, shafts journaled within and depending from said boxes, said shafts being free to oscillate within the sleeve and skirt, boxes surrounding the shafts and bearing within the skirt, grinding rollers carried by the shafts and disposed to coöperate with the die ring.

2. In a pulverizing mill the combination with a base constituting a basin, a die ring therein, and a cylindrical screen upstanding from the basin and surrounding the ring; of a supporting ring above the screen, standards connecting the ring and basin, a sleeve revolubly mounted within the ring, a driving element connected to the sleeve, boxes mounted to oscillate within and to rotate with the driving element, shafts journaled within and depending from the boxes, said shafts being disposed to oscillate within the sleeve and extending into the basin, and rollers secured to the shafts and disposed to coöperate with the die ring.

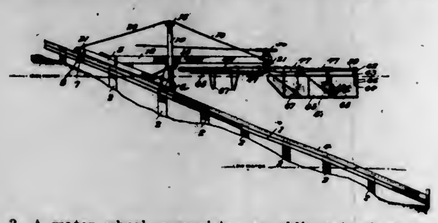
3. In a pulverizing mill the combination with a base constituting a basin, a die ring secured within the base, and a screen upstanding from the base and surrounding the ring; of standards, a ring supported thereby and above the basin, a sleeve revolubly mounted within the ring, a driving element secured to and revoluble with the sleeve, a skirt secured to and revoluble with the sleeve, oscillatory shafts movable with and mounted to rotate within the driving element, said shafts extending through the sleeve and skirt, rolls secured to the shaft and disposed to coöperate with the die ring, guide boxes surrounding the shafts, said boxes being disposed to reciprocate within the skirt, and fan blades revoluble with the shafts for directing dust toward the bottom of the basin.

872,202. WATER-WHEEL. WILLIAM M. SAUNDERS, WESLEY G. SAUNDERS, GEORGE B. SAUNDERS, and SAMUEL Q. SAUNDERS, Richland, Oreg. Filed Apr. 9, 1906. Serial No. 310,705.

1. A water wheel, comprising an oblique track, a truck movable upon said track, a water wheel carried by the truck, an intermediately pivoted lever carried by the truck, a bar pivoted to the lever on each side of said pivotal connection, one of said bars adapted to engage the upper face of the track and the other bar engaging the lower face of the track, whereby the truck is held upon the track and in its adjusted position.

2. A water wheel, comprising an oblique track, a truck movable upon said track, a water wheel carried by the

truck, an intermediately-pivoted lever carried by the truck, a bar pivoted to said lever on one side of its pivotal connection and engaging the upper face of the track, a second bar pivoted to the lever on the other side of its pivotal connection and having an upwardly-turned lower end engaging the lower face of the track, whereby the movement of the lever throws the bars in or out of engagement with the track for holding or releasing the truck.



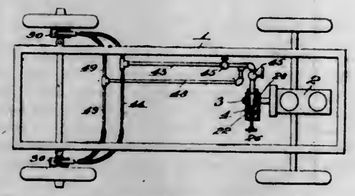
3. A water wheel, comprising an oblique track, a truck thereon, wheels carried by its forward end engaging the upper face of the track, wheels carried by the rear end for engaging the lower face of the track, an outwardly extending horizontal arm carried by the outer end of the truck, and a water wheel carried by the outer end of said arm.

4. A water wheel, comprising an oblique track, a truck thereon, wheels carried by its forward end and engaging the upper face of the track, wheels carried by the rear end for engaging the lower face of the track, a friction clutch carried by the truck for holding the truck in its adjusted position on the track, a horizontal arm carried by the truck, and a water wheel carried by said arm.

5. A water wheel, comprising a supporting arm, plates carried by the upper and lower faces of said arm, a shaft passing through the arm and plates, the upper plate having a ball-race surrounding the shaft, balls within said race, a plate secured to the upper end of the shaft and having a ball-race arranged opposite the balls, a sleeve carried by the shaft and below the plate carried by the lower face of the arm, the shaft having a reduced lower screw-threaded end, and a hub thereon, a nut on said screw-threaded end and below the hub and locking the hub on the shaft, spokes carried by said hub and feathering blades carried by said spokes.

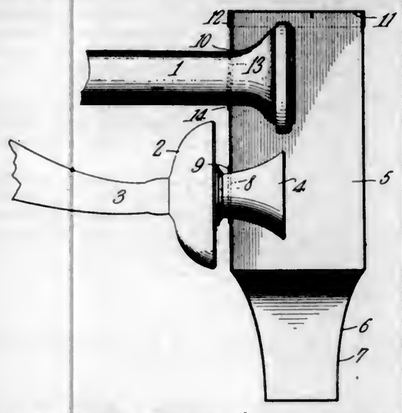
[Claim 6 not printed in the Gazette.]

872,203. HYDRAULIC TRANSMISSION DEVICE. VICTOR C. SHANK, St. Louis, Mo. Filed June 26, 1906. Serial No. 323,527.



In a hydraulic transmission device, the combination with a pair of motors, of a pump, comprising a shell, plates fixed to the sides thereof in the centers of which plates are formed openings, plates arranged to slide against the inner faces of the first mentioned plates, which inner plates are provided with projections extending through the openings in the outer plates, a third pair of plates rigidly arranged within the shell and bearing against the inner faces of the second pair of plates, there being openings formed in the centers of the third pair of plates, a shaft passing transversely through the shell, a cylindrical piston fixed on the shaft within the shell and connected to the second pair of plates, a series of radially arranged plates carried by the piston, shoes hinged to the outer ends of the last mentioned plates, guide plates fixed on the side plates of the shell, plates arranged to slide between said guide plates, and which sliding plates are connected to the rotary piston, and means arranged on the shell whereby the sliding plates are simultaneously shifted.

872,204. APPARATUS FOR FUMIGATING TELEPHONE INSTRUMENTS. LOUIS I. SHRADER, New Albany, Ind. Filed May 29, 1907. Serial No. 376,357.



1. A fumigator for telephone instruments comprising a casing provided with a receptacle for a fumigating agent and also having an opening for the mouth-piece of a telephone transmitter, the said casing being adapted to be locked to and carried by the transmitter head through the intermediary of said mouth-piece, and said casing also having an opening for embracing the telephone receiver body with the hearing end thereof interior to the casing.

2. A fumigator for telephone instruments comprising a casing, a receptacle for the fumigating agent at one end thereof, said receptacle being provided with an inlet opening, a removable cover at the other end thereof, a through passage into the receptacle adapted to receive the mouthpiece of a telephone transmitter, another opening in the receptacle extending to the covered end thereof and adapted to receive the hand portion of a telephone receiver, and a locking plate carried by the cover and movable into coaction with the telephone receiver opening.

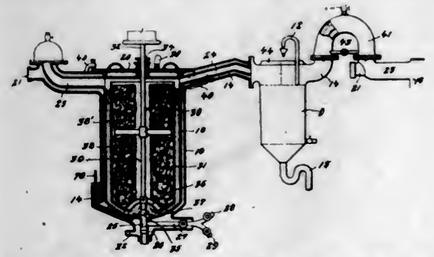
3. A fumigator for telephone instruments comprising a receptacle having an open upper end and a contracted lower end, said casing being provided with an opening for the introduction of a fumigating agent, another opening extending from the upper end downward and having a rounded lower termination, a third opening below the last named opening and arranged to receive the mouthpiece of a telephone transmitter, whereby the casing is supported, and a cover for the open end of the casing having a locking plate for retaining the telephone receiver in the respective opening in the casing.

872,205. PROCESS OF PRODUCING STANNIC CHLORID. ELMER A. SPERRY, Brooklyn, N. Y. Filed Apr. 13, 1906. Serial No. 311,559.

1. The process of producing stannic chlorid, which consists in reacting upon the tin-bearing material in a suitable anhydrous liquid with chlorin associated with gaseous tin chlorid.

2. In the process of producing stannic chlorid, which consists in reacting upon the tin-bearing material with chlorin, the steps of treating the gases by refrigeration, passing the same into contact with a liquid moisture-absorbent, prior to passing the gases into contact with the tin-bearing material.

3. The process of producing stannic chlorid, which consists in reacting upon the tin-bearing material in a suitable liquid chlorid, with chlorin contained in warmed tin chlorid vapors.

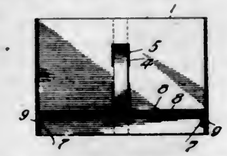


4. The process of producing stannic chlorid, which consists in reacting upon the tin-bearing material in liquid tin chlorid, with gaseous tin chlorid and chlorin, by bringing same over the surface of the liquid.

5. The process of producing stannic chlorid, which consists in reacting upon the tin-bearing material in liquid tin chlorid, with gaseous anhydrous stannic chlorid and chlorin, by bringing same over the surface of the liquid.

[Claims 6 to 31 not printed in the Gazette.]

872,206. FRUIT-BASKET. ANDRÉ G. VIENT, Hoquiam, Wash. Filed Nov. 15, 1905. Serial No. 287,507.



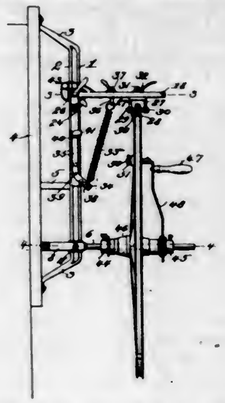
1. A collapsible box including side and end walls, and a bottom comprising independent sections respectively coextensive with the interior dimension of the box, each of said sections being removably connected to one of the opposing walls of the box and being otherwise free of connection with the box, each of said sections being formed for positive interlocking engagement with the box wall opposing the wall to which the particular section is connected, whereby pressure against the underside of the bottom will cause said section to fold against the respective walls to which they are connected.

2. A collapsible box including side and end walls and a bottom comprising duplicate sections co-extensive with the interior dimensions of the box, each of said sections being formed with a tongue, two of the opposing walls of the box being each formed with integral loops to receive the respective tongues, whereby each bottom section is connected to one of two opposing walls and is otherwise free of connection with the box.

872,207. TIRE-CHANNEL-CLEANING DEVICE. WILLIAM C. WEGNER, Laporte, Ind. Filed Nov. 9, 1906. Serial No. 342,750.

1. A device of the character described comprising a frame, a support projecting laterally therefrom for the object to be cleaned, clamps for securing the support to the frame, a suspension arm extending laterally from the frame, clamps for adjustably connecting the arm to the frame, a cutting element adjustably connected to the arm, a spring having one end attached to the arm, a lever having an angular end adapted to have the other end of the spring adjustably connected thereto, said lever adapted to increase the tension of the spring thereby retaining the cutting element in engagement with the object to be cleaned, and means for automatically moving the cutting element out of engagement with the object when the tension upon said spring is released.

2. A device of the character described comprising a frame, a support projecting laterally therefrom for the object to be cleaned, clamps for securing the support to the frame, a suspension arm extending laterally from the frame, clamps for adjustably connecting the arm to the frame, a cutting element adjustably connected to the arm, a spring having one end attached to the arm, a lever having an angular end adapted to have the other end of the spring adjustably connected thereto, said lever adapted to increase the tension of the spring thereby retaining the cutting element in engagement with the object to be cleaned, means for automatically moving the cutting element out of engagement with the object when the tension upon said spring is released, and means engaging the support and adapted to engage the object for rotating it.



3. A cleaning device comprising a frame, a swinging suspension arm projecting laterally from the frame, means for adjustably clamping the arm to the frame, a cutting element carried by the arm, a lever carried by the frame and having an angular end, a spring having one end connected to the frame and the other end to the angular end of the lever, said lever when moved in one direction adapted to increase the tension of the spring and when moved in the opposite direction to relax the tension, said spring adapted when tension is applied thereto to retain the cutting element in engagement with the object to be cleaned, a laterally extending member clamped to the frame and adapted to support the object to be cleaned, and means for automatically moving the cutting element out of engagement with the object when the tension upon said spring is released.

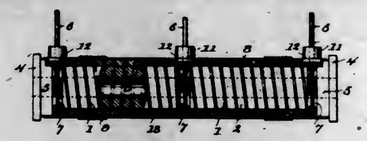
4. A cleaning device comprising a frame, a swinging suspension arm projecting laterally from the frame, means for adjustably clamping the arm to the frame, a cutting element carried by the arm, a lever carried by the frame and having an angular end, a spring having one end connected to the frame and the other end to the angular end of the lever, said lever when moved in one direction adapted to increase the tension of the spring and when moved in the opposite direction to relax the tension of said spring adapted when tension is applied thereto to retain the cutting element in engagement with the object to be cleaned, a laterally extending member clamped to the frame and adapted to support the object to be cleaned, means for automatically moving the cutting element out of engagement with the object when tension upon said spring is released, and means for engaging said member and adapted to engage the object for rotating it.

5. A cleaning device comprising a supporting frame, a laterally-extending spindle projecting from the frame for supporting the object to be cleaned, a handle for turning the object connected at one end with said spindle and adapted to be detachably clamped at its other end to the object, a vertically adjustable tensioned suspension arm projecting laterally from said frame, releasable means for applying tension to said suspension arm, means for

cleaning the object carried by said arm, and means for automatically removing said cleaning means from engagement with the object when the tension upon the said arm is released.

[Claims 6 to 12 not printed in the Gazette.]

872,208. INCLOSED RESISTANCE. HENRY J. WIEGAND, Milwaukee, Wis., assignor to The Cutler-Hammer Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 30, 1905. Serial No. 285,034.



1. An inclosed resistance comprising a base, a resistance carried thereby, and a casing surrounding said base and said resistance, said casing being constructed and arranged to be filled with a cement adapted to be poured into said casing in a plastic state and to set when hardened, whereby said casing, said base and said resistance are united into practically an integral structure.

2. An inclosed resistance comprising a base having outwardly extending shouldered flanges, a resistance carried by said base, and a casing surrounding said base and said resistance and having the ends thereof resting against said flanges.

3. An inclosed resistance comprising a base having outwardly extending flanges, a resistance carried by said base, a casing supported by said flanges and inclosing said resistance, said base being adapted to insulate said casing from a support.

4. An inclosed resistance comprising a base having outwardly extending flanges, a resistance carried by said base, a casing inclosing said resistance and supported by said flanges, said casing being constructed and arranged to be filled with an insulating material adapted to be poured into the casing in a plastic state and to set when hardened whereby the casing, the resistance material and the base are united into a practically integral structure.

5. An inclosed resistance comprising a base having outwardly extending flanges, a resistance carried by said base, a casing surrounding said resistance and said base and having the ends thereof resting upon said flanges, said casing being constructed and arranged to be filled with an insulating filler adapted to be poured into the casing in a plastic state and to set when hardened so as to make said base, said resistance and said casing practically an integral structure.

[Claims 6 to 25 not printed in the Gazette.]

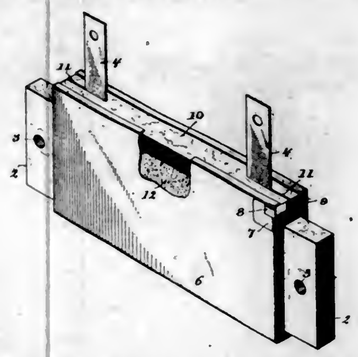
872,209. INCLOSED RESISTANCE. HENRY J. WIEGAND, Milwaukee, Wis., assignor to The Cutler-Hammer Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Oct. 30, 1905. Serial No. 285,035.

1. An inclosed resistance comprising a resistance, a casing therefor, and an insulating supporting member having said casing carried thereby.

2. An inclosed resistance comprising a resistance, a casing therefor, and an insulating supporting member, all combined into a unitary structure, said members being adapted to insulate said casing from the support for said structure.

3. An inclosed resistance comprising a resistance, a casing therefor, and an insulating supporting member having said casing carried thereby and adapted to be attached to a support, all combined into a unitary structure, said casing being so mounted upon said member as to be insulated thereby from said support.

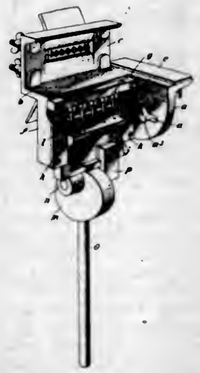
4. An inclosed resistance comprising an insulating supporting base adapted to be attached to a suitable support, a resistance wound upon said base, a casing surrounding said resistance and carried by said base so as to be insulated thereby from said support.



5. An inclosed resistance comprising a supporting member, a resistance carried by said member, and a casing surrounding said resistance and carried by said member, said casing being filled with an insulating filler.

[Claims 6 to 21 not printed in the Gazette.]

872,210. BELT-PUNCHING IMPLEMENT. WHITFORD W. WOODLEY, Elizabeth City, N. C. Filed Mar. 18, 1907. Serial No. 362,891.



In a punching implement, the combination of a support carrying a depending plate, a series of punches, a vertically movable platen and means for stripping the belt ends from the punches after being punched, and means for positively raising and lowering the platen, said means embodying a cam whose periphery is in position to engage and raise the platen and which is provided with a groove in one side, and a pin engaging in said groove and carried by the platen.

872,211. EYEGLASS-MOUNTING. LEO F. ADT, Albany, N. Y. Filed Feb. 17, 1906. Serial No. 301,561.

1. In an eyeglass mounting, the combination with the support, of a guard pivoted thereon and having the forwardly projecting operating arm, the spring arm extending rearwardly of the first and then forwardly and having a sliding engagement with the support and the nose bearing portion also located in rear of the pivot.

2. In an eyeglass mounting, the combination with the support, of a guard pivoted thereon and having the operating arm extending forward of the pivot, the rearwardly extending arm, coiled and extending forwardly and having a sliding engagement with the support and another arm in rear of the pivot having a bearing pad or pads thereon.



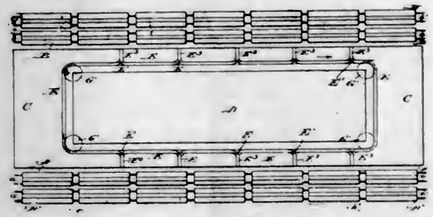
3. In an eyeglass mounting, the combination with the support, of a guard pivoted on the support, said guard embodying a forwardly extending operating arm, and two rearwardly extending portions, one of said portions extending forward again and having a sliding bearing on the support and the other portion having a nose bearing pad formed thereon.

4. In an eyeglass mounting, the combination with the support, of a guard pivoted on the support, said guard embodying a forwardly extending operating arm and two rearwardly extending portions one of which is given a quarter turn, coiled and extended forwardly, its free end having a sliding bearing on the support, and the other rearwardly extending portion having the upper and lower nose bearing pads.

5. In an eyeglass mounting, the combination with the support, of a guard pivoted on the support, said guard embodying the forwardly extending operating arm, and two rearwardly extending portions one of which is given a quarter turn, coiled and extended forwardly, its free end having a sliding bearing on the support and the other rearwardly extending portion being twisted slightly and extending downward, forward and upward to form the lower bearing loop and the upper bearing pad.

[Claims 6 and 7 not printed in the Gazette.]

872,212. SYSTEM OF TRANSFERRING BAGGAGE OR FREIGHT. BENJAMIN H. ALVEY, Louisville, Ky., assignor to The Alvey-Ferguson Company, Louisville, Ky., a Corporation of Kentucky. Filed Jan. 4, 1906. Serial No. 294,591.



1. A system of conveying freight or baggage from the cars of one train to the cars of a different train, consisting of an endless track having one of its sections adjacent to one train and another section adjacent to the other train, and each of said sections tapped, at intervals, approximately corresponding to the distance between doorways of cars, with switches which lead to said doorways and are provided with adjustable points adapted to be set to divert trucks from said sections to said doorways, an endless traveling propelling mechanism and a truck adapted to travel on said track and to be propelled by said propelling mechanism.

2. A system of conveying freight or baggage from the cars of one train to the cars of a different train, consisting of an endless track having one of its sections adjacent to one train and another section adjacent to the other train, and each of said sections tapped, at intervals, approximately corresponding to the distance between doorways of cars, with switches which lead to said doorways and are provided with adjustable points adapted to be set to divert trucks from said sections to said doorways, an endless traveling propelling mechanism arranged below the track and mounted upon wheels, and a truck adapted to travel on said track and to be propelled by said propelling mechanism and a truck adapted to travel on said track and to be propelled by said propelling mechanism.

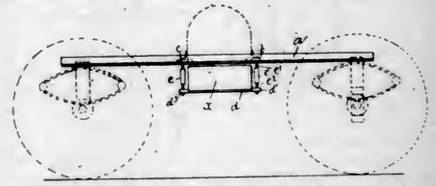
3. A system of conveying freight or baggage from the cars of one train to the cars of a different train, consisting of an endless track having one of its sections adjacent to one train and another section adjacent to the other train, and each of said sections tapped, at intervals, approximately corresponding to the distance between doorways of cars, with switches which lead to said doorways and are provided with adjustable points adapted to be set to divert trucks from said sections to said doorways, an endless traveling propelling mechanism arranged below the track and mounted upon wheels, and a truck adapted to travel on said track and to be propelled by said propelling mechanism, said truck having a depending arm to be engaged by the propelling mechanism.

4. A system of conveying freight or baggage from the cars of one train to the cars of a different train, consisting of an endless track having one of its sections adjacent to one train and another section adjacent to the other train, and each of said sections tapped, at intervals, approximately corresponding to the distance between doorways of cars, with switches which lead to said doorways and are provided with adjustable points adapted to be set to divert trucks from said sections to said doorways, an endless traveling propelling mechanism arranged below the track and mounted upon wheels, and a truck adapted to travel on said track and to be propelled by said propelling mechanism, said truck having a depending pivoted arm to be engaged by the propelling mechanism and a stop to engage the arm.

5. A system of conveying freight or baggage, comprising an endless track tapped at intervals by switches having adjustable points, a baggage or freight truck adapted to travel on the track, and an endless traveling propelling means arranged below the track and provided at intervals with links which are mounted upon carrying wheels and have upward projections respectively adapted to engage the truck.

[Claims 6 to 10 not printed in the Gazette.]

872,213. BATTERY-SUPPORT FOR AUTOMOBILES. SAMUEL R. BAILEY, Amesbury, Mass. Filed Jan. 4, 1907. Serial No. 350,734.

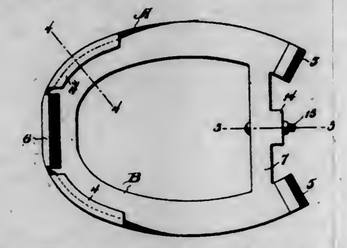


1. In combination with an automobile frame, a base adapted to support the batteries thereon, a series of three suspension rods having heads at each end provided with oppositely disposed spherical shaped faces, said frame and said base each having apertures, through which said rods pass loosely, and having oppositely disposed recesses about said apertures, the bottoms of which are adapted to receive the spherical faces of said heads to permit said base to swing freely in any direction with relation to said frame, as and for the purpose set forth.

2. In combination with an automobile frame, a battery support and means for suspending the same at points below its center of gravity comprising a pair of suspension rods connected to said base adjacent opposite sides and one end thereof, and a third rod connected to said base at the opposite end and adjacent the middle thereof, said rods being connected to said frame at their upper ends, said suspending means permitting free universal swinging movement of said support with relation to said frame, substantially as described.

3. In combination with an automobile frame, a battery support and means for suspending the same at points below its center of gravity comprising a pair of suspension rods connected to said base adjacent oppposite sides and one end thereof, and a third rod connected to said base at the opposite end and adjacent the middle thereof, said rods being connected to said frame at their upper ends, substantially as described.

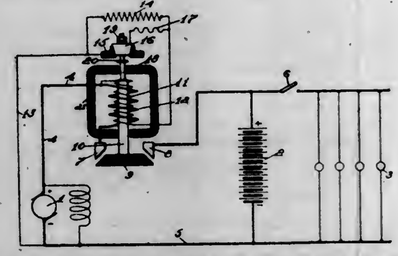
872,214. HORSESHOE. FRANK M. BETHUNE, Homestead, Pa. Filed May 23, 1907. Serial No. 375,342.



1. A horseshoe comprising a body plate having undercut flanges and provided with a cross-bar having a projection, in combination with a wear plate engaging the undercut flanges and having a recess corresponding with the projection of the cross-bar upon the body plate, and means for connecting the said cross-bars.

2. In a horseshoe, a body plate having undercut flanges and a cross-bar provided with a projection in combination with a wear plate having a correspondingly recessed cross-bar provided with a lug disposed adjacent to the cross-bar of the body plate, the latter and the lug being provided with registering apertures, and a connecting bolt engaging said apertures.

872,215. AUTOMATIC ELECTRIC SWITCH. WILLIAM L. BLISS, Brooklyn, N. Y. Filed Jan. 6, 1905. Serial No. 239,927.



1. In an automatic electric switch, in combination, a winding adapted to be connected in circuit in shunt, a winding adapted to be connected in circuit in series, a movable switch element adapted to be operated by said windings, said shunt winding being adapted to operate said switch element to close said switch initially, and automatically operated means adapted to reduce the current flowing through said shunt winding from an operating current to a retaining current while the switch is closed.

2. In an automatic electric switch, in combination, a winding adapted to be connected in circuit in shunt, a winding adapted to be connected in circuit in series, a switch element adapted to be operated by said windings, a resistance arranged in series with said shunt winding, an auxiliary switch adapted to short circuit said resistance, and a mechanical connection between said switch element and said auxiliary switch.

3. In combination, a generator, a storage battery, translating devices, a supply circuit connecting said storage battery and said translating devices to said generator, a winding arranged in shunt with said generator, a winding arranged in series with said generator and said storage battery, a movable contact controlling said supply circuit and operated by said windings, a resistance arranged in series with said shunt winding, an auxiliary switch adapted to short circuit said resistance, and a mechanical connection between said movable contact and said auxiliary switch, said connection being adapted to open said auxiliary switch when said movable contact closes said supply circuit.

4. In combination, a main switch having a movable contact, a winding adapted to be connected in circuit in shunt, a winding adapted to be connected in series, said windings being adapted to operate the movable contact of said main switch, a resistance arranged in series with said shunt winding, an auxiliary switch having a movable contact and adapted to short circuit said resistance, and a mechanical connection between the movable contact of said main switch and the movable contact of said auxiliary switch, said mechanical connection being adapted to open the auxiliary switch upon the closing of the main switch.

5. In an automatic electric switch, in combination, a winding adapted to be connected in circuit in shunt, a winding adapted to be connected in circuit in series, a main switch having a movable contact, said movable contact being operated by said windings, a resistance arranged in series with said shunt winding, an auxiliary switch adapted to shortcircuit said resistance and having a movable contact, a mechanical connection between the movable contact of said main switch and the movable contact of said auxiliary switch, said mechanical connection being adapted to permit sufficient freedom of movement between said movable contacts to allow said main switch to close before said auxiliary switch opens.

[Claims 6 to 14 not printed in the Gazette.]

872,216. INSULATOR. HOMER D. BODLEY, Stanley, N. Y. Filed Feb. 27, 1907. Serial No. 359,650.



1. An insulator having thereon a groove arranged to receive a wire, a slide adjacent to said groove and movable against a wire therein, and a pivoted member coöperable to clamp said slide against the wire.

2. An insulator having thereon a groove arranged to receive a wire, a slide adjacent to said groove and movable against a wire therein, and a pivoted member coöperable to clamp said slide against the wire and weighted to normally hold the slide in clamped position.

3. An insulator having a flattened surface, a shoulder projecting from said surface and forming a groove arranged to receive a wire, a slide adjacent to said groove and movable against a wire therein, and a pivoted member coöperable to clamp said slide against the wire.

4. An insulator having thereon a groove arranged to receive a wire, a slide adjacent to said groove and movable against a wire therein, and a cam coöperable to clamp said slide against the wire.

5. The combination with an insulator comprising means for attachment with a supporting member and means for holding a wire, of a flaring portion positioned between the supporting-attaching means and the wire-holding means whereby the one is insulated from the other.

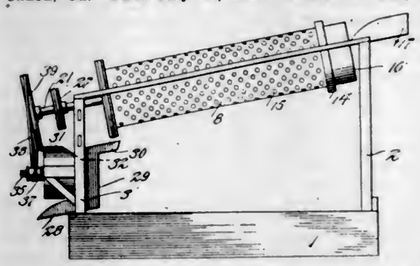
[Claim 6 not printed in the Gazette.]

872,217. SYRINGE. ARTHUR E. BONESTEEL, Denver, Colo. Filed Feb. 4, 1907. Serial No. 355,617.



A vaginal syringe consisting of a nozzle, a sleeve mounted thereon, means for causing the sleeve to move longitudinally upon the nozzle, a plurality of expansible arms secured to the sleeve, extending beyond the end of the nozzle and having their outer ends doubled inward on themselves, a spherical guard secured to the said inwardly-turned ends of the expansible arms in axial alinement with the nozzle, and a connecting-rod having its opposite ends fixedly secured to the end of the nozzle and to the guard whereby the guard will be held permanently in axial alinement with the nozzle and at a fixed distance therefrom.

872,218. COTTON-SEED CULLER. BYRON BOWERS, Canon, Ga. Filed May 23, 1907. Serial No. 375,278.

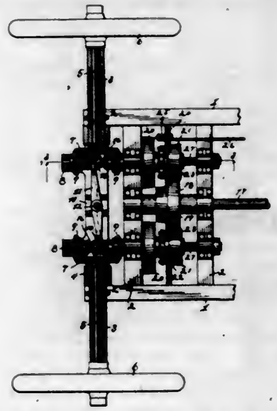


1. A cotton seed culler comprising a rotary screen, an imperforate drum disposed within the screen, a shaft passing through the screen and drum, said shaft having the drum fixed thereto, cross bars on the screen journaled on said shaft, a pulley on the screen, a pulley on the shaft, a crank shaft mounted in the frame and provided with pulleys, a belt passing around the pulley on the screen and around one of the pulleys on the crank shaft, a belt or band passing around the pulley on the drum shaft and crossed and passed around the pulley on the crank shaft, and a fan blower under the discharge end of the screen.

2. A cotton seed culler comprising a tubular perforated screen, an imperforate drum within said screen, a discharge spout at one end of said screen, a fan or blower mounted in front of said discharge spout, and means for rotating the drum and screen in opposite directions simultaneously, and means for rotating the fan.

872,219. VARIABLE-SPEED AND REVERSING TRANSMISSION-GEAR. ALLEN P. BOYER, Goshen, Ind. Filed Apr. 1, 1907. Serial No. 365,706.

1. In a structure of the class described, the combination with the axle shafts, of gears thereon; a pair of driven shafts; pairs of gears revolubly-mounted on said driven shafts arranged to mesh with said gears on said axle shafts; clutch members arranged between said gears on said driven shafts and adapted to connect either of the gears to the shafts; a pivoted lever connected to said clutch members for shifting them in opposite directions; connections for shifting said lever; a driving shaft arranged between said driven shafts; a pair of outwardly-facing conical gears of different diameters arranged on said driving shaft; pairs of inwardly-facing conical gears of different diameters splined upon said driven shafts adapted to be alternately brought into engagement with said gears on said driving shaft or to be disconnected therefrom; a rock shaft; arms on said rock shaft connected to said gears on said driven shafts for shifting the same; and connections for operating said rock shaft.



2. In a structure of the class described, the combination with the axle shafts, of gears thereon; a pair of driven shafts; pairs of gears revolubly-mounted on said driven shafts arranged to mesh with said gears on said axle shafts; clutch members arranged between said gears on said driven shafts and adapted to connect either of the gears to the shafts; a driving shaft arranged between said driven shafts; a pair of outwardly-facing conical gears of varying diameters arranged on said driving shaft; pairs of inwardly-facing conical gears of different diameters splined upon said driven shafts adapted to be alternately brought into engagement with said gears on said driving shaft or to be disconnected therefrom; a rock shaft; arms on said rock shaft connected to said gears on said driven shafts for shifting the same; and connections for operating said rock shaft.

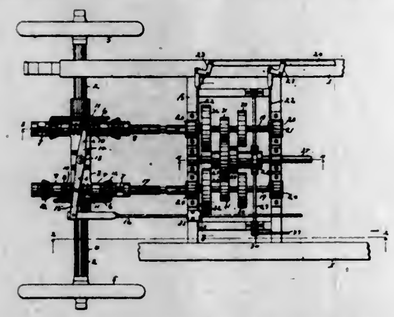
3. In a structure of the class described, the combination with the axle shafts, of gears thereon; a pair of driven shafts; pairs of gears revolubly-mounted on said driven shafts; clutch members arranged between said gears on said driven shafts and adapted to connect either of the gears to the shafts; a pivoted lever connected to said clutch members for shifting them in opposite directions; connections for shifting said lever; a driving shaft arranged between said driven shafts; a pair of outwardly-facing conical gears of different diameters splined upon said driven shafts adapted to be alternately brought into engagement with said gears on said driving shaft or to be disconnected therefrom; and means for shifting said gears on said driven shaft.

4. In a structure of the class described, the combination with the axle shafts, of gears thereon; a pair of driven shafts; pairs of gears revolubly-mounted on said driven shafts arranged to mesh with said gears on said axle shafts; clutch members arranged between said gears on said driven shafts and adapted to connect either of the gears to the shafts; a driving shaft arranged between said driven shafts; a pair of outwardly-facing conical gears of different diameters arranged on said driving shaft; pairs of inwardly-facing conical gears of different diameters splined upon said driven shafts adapted to be alternately brought into engagement with said gears on said driving shaft or to be disconnected therefrom; and means for shifting said gears on said driven shafts.

5. In a structure of the class described, the combination with a pair of driven shafts; a driving shaft arranged between said driven shafts; a pair of outwardly-facing conical friction gears of different diameters arranged on said driving shaft; pairs of inwardly-facing conical friction gears of different diameters splined upon said driven shafts adapted to be alternately brought into engagement with said gears on said driving shaft or to be disconnected therefrom; a rock shaft; arms on said rock shaft connected to said gears on said driven shafts for shifting the same; and connections for operating said rock shaft.

[Claims 6 to 9 not printed in the Gazette.]

872,220. TRANSMISSION-GEAR. ALLEN P. BOYER, Goshen, Ind. Filed Apr. 1, 1907. Serial No. 365,707.



1. The combination with the axle shafts, of gears thereon; a pair of gear shafts arranged transversely of said axle shafts; sleeves splined upon said gear shafts; pairs of gears revolubly mounted on said sleeves adapted to alternately engage said axle gears as said sleeves are shifted; pairs of ratchet clutch members through which said gears are connected to said sleeves, splined thereon; springs for holding said clutch members yieldingly in engagement with said gears; a pivoted lever connected to said sleeves for simultaneously shifting them in opposite directions, whereby the desired gears thereon are brought into mesh with said axle gears; a shifting link for said lever; a driving shaft; a pair of driven shafts arranged one at each side of said driving shaft and parallel thereto; combination universal and slip joints for connecting said driven shafts to said gear shafts; adjustable bearings for said driven shafts; connecting links for said bearings whereby they are adjusted in unison to throw them toward or from said driving shaft; a stop on one of the said connecting links for said adjustable bearings arranged to engage the operating link for said sleeve shifting lever; a plurality of friction gears of different diameters splined upon said driving shaft; means for shifting said gears on said driving shaft; and a plurality of gears of different diameters on said driven shafts, adapted to be brought into driving engagement with said gears on said driving shaft.

2. The combination with the axle shafts, of gears thereon; a pair of gear shafts arranged transversely of said axle shafts; sleeves splined upon said gear shafts; pairs of gears revolubly mounted on said sleeves adapted to alternately engage said axle gears as said sleeves are shifted; pairs of ratchet clutch members through which said gears are connected to said sleeves, splined thereon; springs for holding said clutch members yieldingly in engagement with said gears; a driving shaft; a pair of driven shafts arranged one at each side of said driving shaft and parallel thereto; combination universal and slip joints for connecting said driven shafts to said gear shafts; adjustable bearings for said driven shafts; connecting links for said bearings, whereby they are adjusted in unison to throw tnem toward or from said driving shaft; a plurality of friction gears of different diameters splined upon said driving shaft; means for shifting said gears on said driving shaft; and a plurality of gears of different diameters on said driven shafts, adapted to be brought into driving engagement with said gears on said driving shaft.

3. The combination with the axle shafts, of gears thereon; a pair of gear shafts arranged transversely of said axle shafts; sleeves splined upon said gear shafts; pairs of gears revolubly mounted on said sleeves adapted to alternately engage said axle gears as said sleeves are shifted; pairs of ratchet clutch members through which said gears are connected to said sleeves, splined thereon; springs for holding said clutch members yieldingly in engagement with said gears; a driving shaft; a pair of driven shafts arranged one at each side of said driving shaft and parallel thereto; connections for said driven shafts to said gear shafts; adjustable bearings for said driven shafts; connecting links for said bearings, whereby they are adjusted in unison to throw them toward or from said driving shaft; a plurality of friction gears of different diameters splined upon said driving shaft; means for shifting said gears on said driving shaft; and a plurality of gears of different diameters on said driven shafts, adapted to be brought into driving engagement with said gears on said driving shaft.

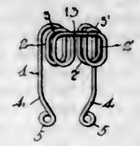
4. The combination with the axle shafts, of gears thereon; a pair of gear shafts arranged transversely of said axle shafts; sleeves splined upon said gear shafts; pairs of gears revolubly mounted on said sleeve adapted to alternately engage said axle gears as said sleeves are shifted; pairs of ratchet clutch members through which said gears are connected to said sleeves, splined thereon; springs for holding said clutch members yieldingly in engagement with said gears; a driving shaft; a pair of driven shafts arranged one at each side of said driving shaft and parallel thereto; connections for said driven shafts to said gear shafts; adjustable bearings for said driven shafts; connecting links for said bearings, whereby they are adjusted in unison to throw them toward or from said driving shaft; a plurality of friction gears of different diameters splined upon said driving shaft; means for shifting said gears on said driving shaft; and a plurality of gears of different diameters on said driven shafts, adapted to be brought into driving engagement with said gears on said driving shaft.

5. The combination with the axle shafts, of gears thereon; a pair of gear shafts arranged transversely of said axle shafts; sleeves splined upon said gear shafts; pairs of gears on said sleeves adapted to alternately engage said axle gears as said sleeves are shifted; a pivoted lever connected to said sleeves for simultaneously shifting them in opposite directions, whereby the desired gears thereon are brought into mesh with said axle gears; a shifting link for said lever; a driving shaft; a pair of driven shafts arranged one at each side of said driving shaft and parallel thereto; combination universal and slip joints for connecting said driven shafts to said gear shafts; adjustable bearings for said driven shafts; connecting links for said bearings, whereby they are adjusted in unison to throw them toward or from said driving shaft; a stop on one of the said connecting links for said adjustable bearings arranged to engage the operating link for said sleeve shifting lever; a plurality of friction gears of different diameters splined upon said driving shaft; means for shifting said gears on said driving shaft; and a plurality of gears of different diameters on said driven shafts, adapted to be brought into driving engagement with said gears on said driving shaft.

[Claims 6 to 21 not printed in the Gazette.]

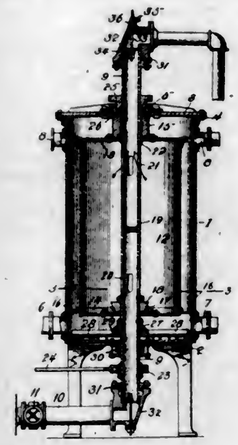
872,221. FASTENER. ALLEN U. BRIGHT, Anadarko, Okla. Filed May 31, 1906. Serial No. 319,640.

An approximately U-shaped cord fastener having two laterally extending coils projecting from the inner ends of the legs thereof and disposed side by side in close proximity with the outer convolutions of said coils connected



and arranged in a plane beyond said legs and fastening means carried by said legs.

872,222. BOILER WASHOUT SYSTEM. HORACE J. CLARK, Chicago, Ill. Filed Mar. 27, 1907. Serial No. 364,922.



1. In a device of the class described, an outer drum, a rotary device mounted for movement therein, scrapers carried by said device to engage the bottom of the outer drum and means for simultaneously feeding water upon said bottom.

2. In a device of the class described, an outer drum, a rotary device mounted for vertical movement therein, and scrapers pivotally mounted upon said device and resting at their free ends upon the outer drum.

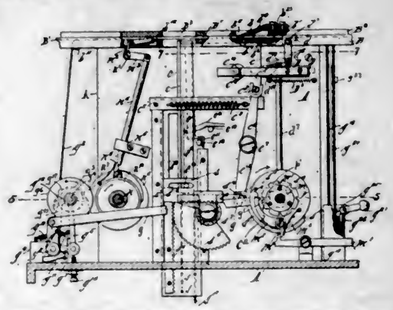
3. In a device of the class described, an outer drum, an inner drum, a rotary device mounted for movement therein, scrapers carried by said device to engage the bottom of the outer drum, a valved inlet connection between the inner drum and said device, and means for discharging from said connection in the rotary movement of said device.

4. In a device of the class described, an outer drum, an inner drum, a feed pipe mounted for rotary movement therein, scrapers carried by the feed pipe to engage the bottom of the outer drum, a valved inlet connection between the pipe and inner drum, and means for raising said pipe during its rotary movement.

5. In a device of the class described, an outer drum, an inner drum, a feed pipe mounted for rotary movement therein, scrapers carried by the feed pipe to engage the bottom of the outer drum, a valved inlet connection between the pipe and inner drum, a threaded discharge portion of said feed pipe from the inner drum, and a threaded socket for said discharge pipe carried by the upper head of the outer drum.

[Claims 6 to 15 not printed in the Gazette.]

872,223. JUSTIFYING MECHANISM. FRANCIS B. CONVERSE, Jr., Louisville, Ky., assignor, by mesne assignments, to Mergenthaler Linotype Company, a Corporation of New York. Filed Jan. 30, 1900, Serial No. 3,280. Renewed Dec. 10, 1902. Serial No. 134,703.



1. In a justifying mechanism, in combination, means for holding a line of type to be justified, an adjustably inclined blade, means for guiding it in a path whereby its incline may compact the line, and means for varying the angle of the blade to its path according to the number of spaces in the line, substantially as described.

2. In a justifying mechanism, in combination, means for holding a line of type to be justified, an adjustably inclined blade, means for varying said incline according to the number of spaces in the line and independently of the line measurement, means for moving said blade until stopped by the type in the line becoming compacted, and a space determining mechanism varied by such movement of the blade, substantially as described.

3. In a justifying mechanism, in combination, means for holding a line of type to be justified, an inclined measuring blade, means for moving said blade to compact said line and measure its shortage, means for varying the angle of said blade to its path according to the number of spaces in the line to be justified whereby a single blade may measure different lines, and a space-determining mechanism varied by said blade, substantially as described.

4. In a justifying mechanism, in combination, means for holding a line of type and interspersed temporary spaces, an adjustably inclined pivoted blade adapted to measure the line, means for shifting bodily the pivot of the blade and for changing the angle of the blade each according to the number of the temporary spaces, substantially as described.

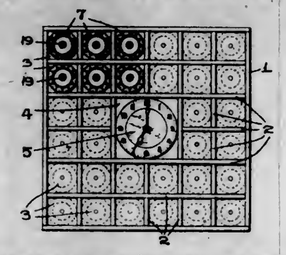
5. In a justifying mechanism, in combination, means for holding a line of type and temporary spaces, a pivoted measuring blade adapted to have various positions on its pivot and adapted to have its pivot shifted bodily, means for so shifting said pivot according to the thickness of the temporary spaces in the line, there being provided means for varying the angle of said blade on its pivot according to the number of such spaces, means for moving the blade to compact the line and measure it, and a space determining mechanism varied by the measuring movement of the blade, substantially as described.

[Claims 6 to 48 not printed in the Gazette.]

872,224. ELECTRIC GUEST-CALLING CLOCK. RALPH C. DICK, St. Louis, Mo. Filed June 4, 1906. Serial No. 320,028.

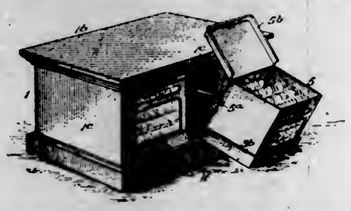
In an apparatus of the class described, a frame, a clock mounted therein, a series of shafts journaled in the frame, a train of gearing operated by the clock for simultaneously driving all of the shafts, spring arms carried by the shafts, a ring fixed on the face of the frame around each shaft, a set of spring actuated push buttons arranged for operation through each ring and the frame, the rear ends of which push buttons are moved into the path of travel of the corresponding spring arm when said push buttons are moved rearwardly, spring catches arranged in the ring

adjacent the push buttons for locking said push buttons when moved rearwardly, an audible signal, and means



whereby said signal is sounded when the spring arm contacts with the rear end of one of the push buttons.

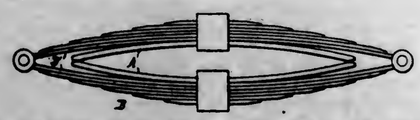
872,225. GROCER'S CABINET. RICHARD T. DURHAM, Richmond, Va. Filed Feb. 20, 1907. Serial No. 358,405.



1. In a cabinet of the class described, a casing having an open front, a slide held within said casing and adapted to be drawn therefrom, means for limiting the withdrawal of the said slides and for tilting them as they are being withdrawn, said means comprising oppositely disposed guide plates having horizontal slots that incline upwardly from the rear of the casing toward the front, said slots terminating near the front end of the casing, carriers having lateral members for engaging said slots and bearings for the carriers at the front end of the casing, said bearings being located in a plane below the front or closed end of the guide slots, substantially as shown and for the purposes described.

2. In a cabinet of the character described, a casing having an open front and oppositely disposed guide members at the bottom, said guide members having slots open at the rear end that incline upwardly toward the front end and terminate in stops at points near the front end of the casing, horizontal roller bearings mounted in the front end of the casing in a plane below the closed end of the guide slots and a can holding carriage having lateral roller bearings for engaging the slots in the guides and having solid bearing portions for riding upon the roller bearings in the front end of the casing, all being arranged substantially as shown and for the purposes described.

872,226. SPRING. CHAUNCY T. EDGERTON, Richmond Hill, and WELFORD J. GOLDEN, Oswego, N. Y. Filed Sept. 10, 1907. Serial No. 392,139.



1. In a leaf spring, an auxiliary plate of less camber than the working plates of the spring and tending by its reaction to substantially reduce the free height of the spring.

2. In a leaf spring, an auxiliary plate of less camber than the working plates of the spring which by its reaction substantially stiffens the spring under the initial range of load.

3. In a leaf spring, an auxiliary spring plate of less camber than the plates of the spring which is idle in the working position of the spring but substantially affects its action under light and overloaded conditions.

4. In a leaf spring, an auxiliary plate of less camber than the plates of the spring and so proportioned that with the spring in solid position, said auxiliary is subjected to the maximum safe fiber stress.

5. In a leaf spring, a plurality of auxiliary spring plates of less camber than the plates of the spring, which are idle in the working position of the spring but substantially affect its action under light and overloaded conditions.

[Claims 6 to 8 not printed in the Gazette.]

872,227. GREEN VAT-DYE AND PROCESS OF MAKING SAME. GADIENT ENGI, Basel, Switzerland, assignor to Firm of Society of Chemical Industry in Basle, Basel, Switzerland. Filed June 14, 1907. Serial No. 378,929.

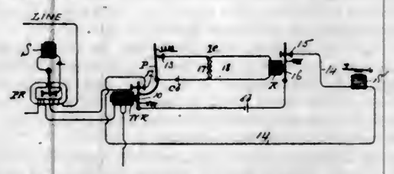
1. The described process for the manufacture of halogen derivatives of beta-naphthindigo, which process consists in first treating beta-naphthylisatin with halogenating agents, then reducing the resulting halogen derivatives of beta-naphthylisatin, preferably after their conversion into the corresponding chlorids, and finally treating the so obtained reduction products with suitable oxidizing agents.

2. The described process for the manufacture of halogen derivatives of beta-naphthylindigo which process consists in treating beta-naphthylisatin with bromin, then reducing the resulting bromo derivatives of beta-naphthylisatin, preferably after their conversion into the corresponding bromo-beta-naphthylisatinchlorids, and finally treating the so obtained reduction products with suitable oxidizing agents.

3. As new products, the hologen derivatives of beta-naphthylindigo, which can be obtained by first treating beta-naphthylisatin with halogenating agents, then reducing the resulting halogen derivatives of beta-naphthylisatin after their conversion into the corresponding chlorids and finally treating the so obtained reduction products with suitable oxidizing agents, the said halogen derivatives of beta-naphthylindigo being vat-dyestuffs dyeing unmordanted cotton from alkaline vats green tints fast to washing, light and chlorin.

4. As a new article of manufacture the described green vat-dyestuff, being a bromo derivative of beta-naphthylindigo and constituting, in dry state, a dark-green crystalline powder dissolving in concentrated sulfuric acid with greenish blue color, only difficultly soluble in cold nitrobenzene with a green color, easily soluble in hot nitrobenzene with a greenish-blue color and yielding by treatment with alkaline reducing agents, a reddish-brown vat, from which unmordanted cotton is dyed in vivid green shades, fast to washing, light and chlorin.

872,228. QUADRUPLEX-TELEGRAPH SYSTEM. JOHN J. GHEGAN, Newark, N. J. Filed July 25, 1907. Serial No. 385,440.



1. A quadruplex telegraph system, having a neutral relay and a polarized relay and their local sounder circuits in combination with means, including an induction coil, controlled by the armature of the neutral relay to act on the local sounder circuit of the neutral relay to prevent false signals.

2. A quadruplex telegraph system, having a neutral relay and a polarized relay and their local sounder circuits in combination with means controlled by the armature of the neutral relay to momentarily open the local sounder circuit of the neutral relay to prevent false signals.

3. A quadruplex telegraph system, having a neutral relay and a polarized relay and their local sounder circuits in combination with means, including an induction coil, controlled by the armature of the neutral relay to momentarily open the local sounder circuit of the neutral relay to prevent false signals.

872,229. SOLDERING-IRON. ARTHUR L. GIFFORD, Oil City, Pa., assignor of one-half to Lester L. Lewis, Oil City, Pa. Filed Feb. 14, 1907. Serial No. 357,422.



1. A soldering iron comprising a body portion formed of a compound of tin and copper in such proportions as to impart to the iron, when heated, the inherent quality of adhesion for solder.

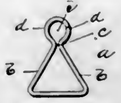
2. A soldering iron comprising a compound of a relatively large proportion of copper and a relatively small proportion of tin, the proportions being such as to give the iron when heated the inherent quality of adhesion for solder.

3. A soldering iron comprising a body portion formed of a compound of a base material with tin in such proportions as to impart to the iron when heated the inherent quality of adhesion for solder.

4. A soldering iron comprising a body portion formed of a compound of copper and a solder adhering element compounded in such proportions as to impart to the iron when heated the inherent quality of adhesion for solder.

5. A soldering iron comprising a body portion formed of a base material and a solder adhering element compounded in such proportions as to permanently impart to the iron, when heated, the inherent quality of adhesion for solder regardless of any degree of heat applied to the iron below the melting point.

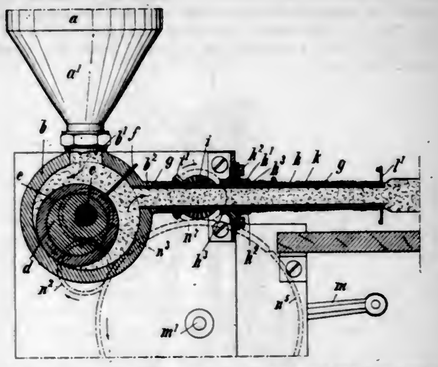
872,230. BUTTON-LOOP. THOMAS S. HALEY, West Haven, Conn. Filed Mar. 8, 1907. Serial No. 361,268.



A button loop formed from a single piece of resilient wire bent to form a substantially triangular body, the said members of which terminate in close relation to form a narrow throat, the free extremities of said wire beyond the termination of said side members being curved in a semi-circle to form hooks, the hooks overlapping each other to form an eye, the said overlapping portions of the hooks reversely inclined on their inner faces so that the wire is of the same cross-sectional area throughout, and all parts of the eye and body are in the same plane.

872,231. SAUSAGE-STUFFER. HEINRICH F. HAMBRUCH, Hamburg, Germany, assignor of three-fourths to The Firm of Biberfeld & Co., Hamburg, Germany. Filed Aug. 27, 1906. Serial No. 332,223.

1. In a machine of the character described, a filling tube, a cylindrical meat receptacle communicating therewith having an inlet for the meat, an eccentric rotatable in the receptacle, a ring loosely mounted on the eccentric movable in constant coutact with the entire wall of the receptacle by said eccentric, and a slide journaled in the ring and guided in the wall of the receptacle between the inlet and filling tube.



2. In a sausage filling and dividing machine, the combination with a filling tube, and a cylindrical meat receptacle communicating therewith, of an eccentric feed member mounted in the receptacle, a gut-carrying sleeve rotatably mounted on the filling tube, a driving member, means connecting the eccentric and the sleeve with the driving member, and means on the latter adapted to intermittently and alternately rotate the eccentric and sleeve.

3. In a sausage filling and dividing machine, the combination with a filling tube, and a cylindrical meat receptacle communicating therewith, of an eccentric feed member mounted in the receptacle, a gut-carrying sleeve rotatably mounted on the filling tube, a driving member, means connecting the eccentric and the sleeve with the driving member, means to rotate the eccentric and means to simultaneously lock the sleeve against rotation.

4. In a sausage filling and dividing machine, the combination with a filling tube, and a cylindrical meat receptacle communicating therewith, of an eccentric feed member mounted in the receptacle, a gut-carrying sleeve rotatably mounted on the filling tube, a driving member, means connecting the eccentric and the sleeve with the driving member, means to rotate the sleeve, and means to simultaneously lock the eccentric against rotation during the rotation of the sleeve.

5. In a sausage filling and dividing machine, the combination with a filling tube, a gut-carrying sleeve rotatable thereon, a cylindrical receptacle communicating with the filling tube, an eccentric rotatable in the receptacle, of a shaft carrying the eccentric, a pinion on the eccentric shaft, a drive wheel, a mutilated gear thereon adapted to mesh with said pinion, a second drive shaft, gearing connecting the latter with the carrying-sleeve, and a mutilated gear on said drive wheel adapted to operate said gearing.

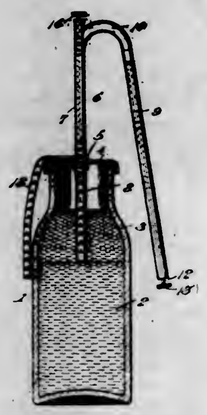
[Claims 6 to 9 not printed in the Gazette.]

872,232. SIPHON-SKIMMER. CURTIS HARBERT, Smethport, Pa. Filed Aug. 8, 1906. Serial No. 329,762.

1. A siphon skimmer attachment for milk bottles comprising a supporting member for closing the mouth of the bottle, said member being provided with a guide sleeve, a siphon having its intake leg slidably mounted in said sleeve and provided with a scale having designating numerals extending in increasing valuation upwardly from the lower end thereof for coaction with a portion of said supporting member, and an indicating strip carried by said supporting member and projecting downward at one side thereof to depend upon the exterior of the bottle, said strip being provided with a coöperating scale having its designating numerals extending downwardly thereon.

2. A siphon skimmer attachment for milk bottles comprising a supporting member adapted to engage the mouth

of the bottle, a siphon having its intake leg slidably mounted in said supporting member and provided with a gage comprising a set of designating numerals extending upwardly thereon for coaction with said supporting member, and a gage strip carried by the supporting member and projecting downward at one side thereof to depend upon the exterior of the bottle, said gage being provided with a coöperating set of designating numerals extending downwardly thereon.



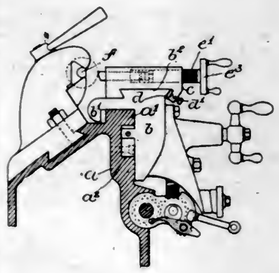
3. A siphon skimmer attachment for milk bottles comprising a flanged cap adapted to engage the mouth of the bottle, said cap being provided with a guide sleeve, a siphon having its intake leg slidably mounted in said sleeve and provided with scale graduations and designating numerals extending upwardly in increasing value from the lower end thereof for coaction with said cap, and a flexible gage strip secured at one end to the cap and projecting downward at one side thereof to depend therefrom upon the exterior of the bottle, said strip being provided with a coöperating set of graduations and designating numerals extending downwardly in increasing valuation.

4. A siphon skimmer attachment for milk bottles comprising a flanged cap having a central guide sleeve, a siphon having a short leg open at both ends and slidably mounted in said sleeve, and a long leg connected at its upper end with said short leg below the upper end of the latter, the lower portion of the short leg of the siphon being provided with a scale having numerals extending upwardly thereon for coaction with a portion of the cap, stoppers slidably mounted in the legs of the siphon, and a gage strip connected at its upper end with the cap and depending at one side therefrom to project down upon the outside of the bottle, the numerals upon said strip being arranged in reverse order to the numerals of the scale on the siphon.

872,233. ENGINE-LATHE. JAMES HARTNESS, Springfield, Vt. Filed Dec. 19, 1905. Serial No. 292,436.

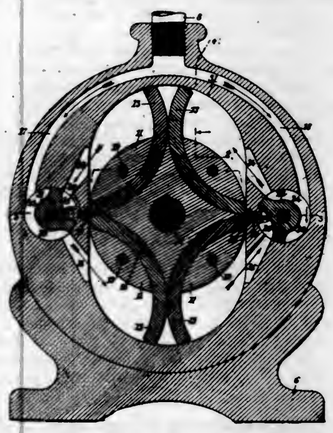
1. In an engine-lathe, a bed, a carriage longitudinally slidable thereon, a plurality of independent cutter holders supported directly on said carriage and immovable towards and from the work but adjustable towards and from each other, means for rigidly attaching said tool holders to said carriage after adjustment, a cutter slidably mounted in each of said holders, and means on each holder for positively moving the cutter thereon towards and from the work.

2. In an engine lathe, a bed, a carriage longitudinally slidable thereon, a cutter holder adjustable on said carriage longitudinally of its lines of travel but secured directly to said carriage so that it is immovable towards and from the work, said cutter holder having a socket transversely of its lines of movement, means for rigidly securing said holder to said carriage to travel therewith, a cutter slidable in the socket in said holder, and a screw on said holder connected to said cutter to move it back and forth in its socket.



3. In an engine lathe, a bed, a reciprocatory carriage, a plurality of cutter holders seated directly against said carriage but adjustable towards and from each other, means for rigidly securing said cutter holders after adjustment to said carriage, an unclamped cutter bar slidingly seated in and directly supported by each of said holders and means for adjusting each cutter bar in its holder towards and from the work.

872,234. ROTARY ENGINE. THOMAS C. HENRY, Montgomery, La. Filed June 22, 1907. Serial No. 380,234.

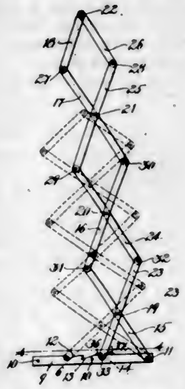


In an elastic fluid engine, the combination of a body portion provided with a steam space having a substantially elliptical cross section, a steam wheel mounted within said portion and provided with slots of arcuate conformity, and a slide of arcuate conformity mounted within each of said slots, said slide being made in a plurality of parts overlapping each other for the purpose of forming a steam-tight joint.

872,235. COLLAPSIBLE CLOTHES-HORSE. JOSEPH HIMMEL, Jamaica Plain, Mass. Filed Feb. 28, 1906. Serial No. 303,423.

A clothes-horse comprising in its construction a base, two sides pivoted to said base, and rods connecting said sides together, said sides each constituting a set of lazy-tongs, said rods forming the pivots of the links of said

lazy-tongs, the sides of one lower link of each lower pair of links, respectively, being of unequal length, whereby the



connecting rods are in a plane at an angle to a vertical plane when the rack is adjusted for use.

872,236. BUILDING. ELBRIDGE HUFF, Jr., Brooklyn, N. Y. Filed May 16, 1907. Serial No. 374,110.



1. In a building the combination with siding sheets having wedge shaped edges, of a binding strip having clips to engage and hold the edges of abutting siding sheets.

2. In a building the combination with siding sheets, having wedge shaped edges, of a binding strip having sprung in clips to engage the edges of abutting siding sheets.

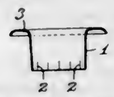
3. A binding strip for roof or side sheets of a building comprising a substantially reversed L shaped body and oppositely disposed clips extending therefrom.

4. A building strip for roof or side sheets comprising a main body and oppositely disposed clips extending therefrom, the stem of each clip being cut away to form a groove between the top of the clips and the main body.

5. In a building a corner strip substantially L shape in cross section, having a clip secured to each arm thereof.

[Claims 6 and 7 not printed in the Gazette.]

872,237. EYELET. WILLIAM HUGHES, Taunton, Mass., assignor to Hughes Eyelet Company, Taunton, Mass., a Corporation of Maine. Filed Apr. 16, 1907. Serial No. 368,538.



An eyelet comprising in its construction a barrel formed at its upper end with a series of independent petals, and having its lower end adapted to be clenched upon the material to secure the eyelet in place.

872,238. MEAT-TAG. RALPH H. JACKSON, Rochester, N. Y. Filed June 27, 1907. Serial No. 381,053.

1. In a meat tag, a body formed of a sheet metal blank having three sections that fold upon each other, a resilient locking rod therein having a free end, the body having registering perforations in its sections that afford access to the locking rod, and a shackle bow having a point at one end, a lateral hook on said end, and hinged at the opposite end on the body, whereby the point may first be passed through meat and then inserted in the registered perforations, thus interlocking the locking rod with the lateral hook for securing the shackle bow in the tag body.

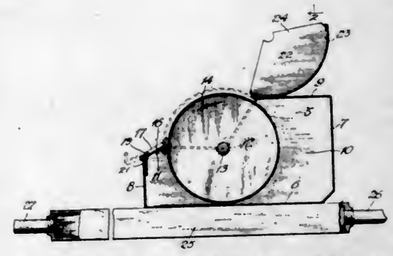


2. In a tag of the character described, a tag body formed of sheet metal, having a concavity in its surface, a wing foldable over the concavity, and two body sections, one at each side and folded upon each other and over the wing, said sections and wing having alined perforations therein above the concavity.

3. In a tag of the character described, a tag body formed of sheet metal, having a concavity near one end, a spring wire rod secured by one end and extended across the concavity, a wing foldable over the rod and the concavity, and two plate-like body sections folded successively upon the wing and upon each other, said sections and wing having alined perforations therein above the spring rod.

4. In a tag of the character described, a tag body having a spring locking rod therein, and also having a perforation opposite the spring locking rod, and a shackle bow pointed at one end and having a locking hook therein near the point, and a hinged connection at the other end of the shackle bow on the tag body, said connection having a construction which permits the shackle bow to be adjusted for folding it flat upon the tag body.

872,239. POPCORN-BUTTERING DEVICE. JOHN M. KLINE, Chicago, Ill. Filed Mar. 11, 1907. Serial No. 361,711.



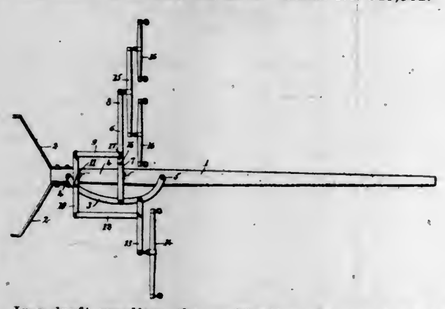
1. In a device of the character described, a reservoir higher at one side than at an opposite side, an opening in the top of the reservoir between the high side and the low side, a cylinder superposed above the bottom of said reservoir and having a top portion of its periphery exposed through and substantially filling said opening, and rotatable to move its peripheral surfaces from the high side toward the low side of the reservoir.

2. In a device of the character described, the combination of a cylinder, a casing larger than the cylinder, provided with an opening through which the portion of the periphery of said cylinder is exposed, and a cover for said opening serving as a material-chute when the exposed roller-surface is not inclosed thereby.

3. In a device of the character described, the combination of a casing having one side lower than the opposite side, a movable plate connected with the lower side, and a stationary top portion arranged with respect to the movable plate to leave between said elements an opening, and a cylinder of diameter greater than said opening removably arranged in bearings, said cylinder being of less diameter than the opening as increased by movement of the movable plate.

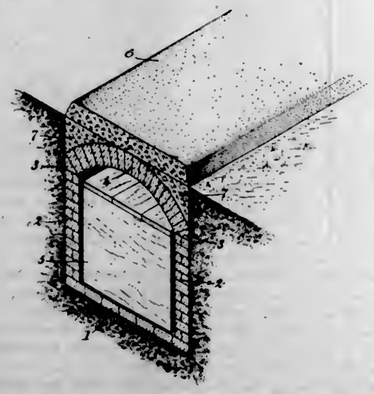
4. In a device of the character described, the combination of a casing provided with a top opening therein, a cylinder in the casing having a peripheral portion exposed through the said opening and substantially filling the same, and a closure for said opening pivoted to the casing arranged when in open position to constitute a means for directing material to the exposed portion of said cylinder.

872,240. DRAFT-EQUALIZER. AUGUST LANGE, Scribner, Nebr. Filed May 31, 1906. Serial No. 319,502.



In a draft equalizer, the combination of a pole, a bracket having its ends secured to the pole and projecting laterally therefrom, a main equalizer bar having one end pivoted to the bracket intermediate of the ends of the bracket and extending across the pole, an auxiliary equalizer bar pivoted at about the center of its length to the rear end of the bracket with its ends projecting on opposite sides of the pole, a link having one end pivoted to one end of the auxiliary equalizer bar and its other end adjustably pivoted to the main equalizer bar at one side of the center thereof, a lever pivoted at one end to the forward end of the bracket in front of the pivot of the main equalizer bar, a link pivoted to the other end of auxiliary equalizer bar and to the said lever at one side of its center of length, and draft appliances attached to the ends of the main equalizer and lever.

872,241. GRAVE CONSTRUCTION. WALTER LIVINGSTON, Hastings, Nebr. Filed June 12, 1907. Serial No. 378,485.



1. In a grave construction, a top supporting member arranged in the earth above the grave, with the upper surface substantially flush with the surface of the ground, and a grave top consisting of a slab arranged upon said supporting member.

2. In a grave construction, a top supporting member embedded in the earth above the grave and having the upper surface substantially flush with the surface of the earth, and a grave top arranged upon said supporting member and comprising a solid slab of cement or concrete.

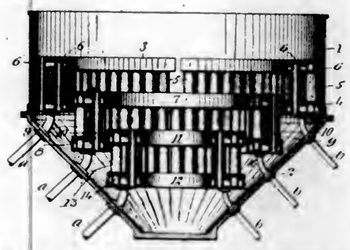
3. In a grave construction, an arch embedded in the earth above the grave and having the crown substantially flush with the surface of the earth, and a slab constituting a grave top resting upon said arch.

4. In a grave construction, an arch embedded in the earth above the grave and having the crown substantially flush with the surface of the earth, and a slab constituting a grave top resting upon said arch, said slab having the under side curved to conform to the extrados curve of the arch.

5. In a grave construction, an arch embedded in the earth above the grave and having the crown substantially flush with the surface of the earth, a slab constituting a grave top and resting upon the crown of said arch, and supporting members between the haunches of said arch and said slab.

[Claims 6 to 11 not printed in the Gazette.]

872,242. STEAM COOKING APPARATUS. WILHELM F. LORENTZEN, Habana, Cuba. Filed Jan. 30, 1907. Serial No. 354,792.



1. A heater comprising a plurality of independent heat elements having a plurality of jacketed heating tubes, and means for circulating a heating vapor between the jackets and tubes.

2. A heater for the purpose specified, comprising a casing, a heating element therein consisting of an upper tubular ring and a lower tubular ring, a plurality of tubes providing communication between the upper and lower rings, and opening through the lower wall of the upper ring and through the upper wall of the lower ring, and tubes extending through the first-named tubes and opening through the bottom wall of the lower ring and the upper wall of the upper ring.

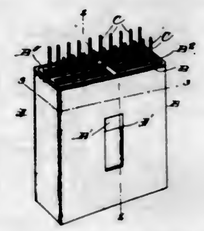
3. A heater for the purpose specified, comprising a casing, a plurality of heating elements arranged therein, concentrically one above the other and diminishing in circumference from the upper to the lower heater, each heater consisting of a tubular upper ring and a tubular lower ring, a plurality of tubes providing communication between the two rings, and opening through the lower wall of the upper ring and through the upper wall of the lower ring, and tubes extended through the first-named tubes, the last-named tubes opening through the upper wall of the upper ring and through the lower wall of the lower ring, a space being provided between each inner tube and its outer tube.

4. A heater of the class described, comprising a plurality of telescoping heat elements arranged at different levels, and consisting respectively of hollow rings connected by jacketed tubes, and means for circulating a heating fluid through said elements.

872,243. MATCH-BOX. MANUEL F. LUNA, Saltillo, Mexico. Filed Jan. 11, 1907. Serial No. 351,856.

1. A match-box comprising a casing open at both ends, and a match holder of a length less than the length of the casing and slidable longitudinally therein between the opposite open ends of the casing, a casing having a longitudinal slot and the holder having a button projecting thereinto and forming a handle by which the holder may

be moved within the casing, said holder being provided with longitudinal channels opening at its opposite ends and within which individual matches may be placed and moved longitudinally and with cross channels at the inner ends of said longitudinal channels for reception of the heads of the matches and with a rib or partition extending between the cross channels, substantially as and for the purpose set forth.



2. A match box, comprising a casing open at both ends and a holder movable longitudinally within the casing and of a length less than that of the casing and provided at its opposite ends with longitudinal channels for matches, and with a cross channel between the inner adjacent ends of said longitudinal channels substantially as set forth.

3. A match box comprising a casing open at both ends, and a holder movable longitudinally in the casing whereby its opposite ends may be brought adjacent to their respective ends of the casing and having longitudinal channels for matches, said channels opening toward the opposite ends of the casing, substantially as set forth.

4. A match holder having at each of its opposite ends a series of longitudinal channels for individual matches and supplied with a brading material, cross channels at the ends of the longitudinal channels, and a rib or partition between the adjacent cross channels, substantially as set forth.

872,244. YOKE-FASTENER. CARL MELCHERT, Lynch, Nebr. Filed Apr. 6, 1907. Serial No. 366,824.



1. A ferrule attachment for yoke ends comprising a sleeve member encircling the end of the yoke, and a plurality of extensions engaging the yoke in rear of the sleeve, and projections carried by the extensions to register with and form parts of the yoke limiting collar.

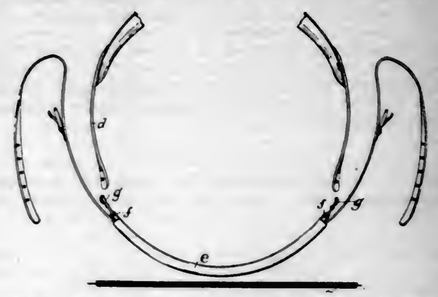
2. A ferrule attachment for yokes comprising a sleeve member to encircle the end of the yoke, a ring receiving staple carried thereby, and a plurality of extensions engaging the yoke in rear of the sleeve, each of said extensions being provided with projections to register with and form parts of the yoke limiting collars.

3. A ferrule attachment for yokes comprising a sleeve member to encircle the end of the yoke, a ring receiving staple carried thereby, a plurality of extensions engaging the yoke in rear of the sleeve, each of said extensions being provided with projections to register with and form parts of the yoke limiting collars, and a removable pin adapted to be passed through the sleeve extensions and yoke to secure the parts together.

872,245. HARNESS. EDWARD MORREY, Paterson, N. J., assignor of one-half to George Flax, Paterson, N. J. Filed May 27, 1907. Serial No. 375,820.

1. The combination, with the saddle and depending straps, of an elastic belly-band connecting said straps, an elastic thill-strap adapted to be connected with the shafts or thills of the vehicle, and means for securing the thill-strap and belly-band together, substantially as described.

2. In a belly band, the combination of a piece of flexible material having reduced extensions forming straps at the ends thereof, buckles slidingly arranged on said extensions, said extensions being turned-back towards each other, and an elastic member connecting the turned-back portions of said extensions, substantially as described.



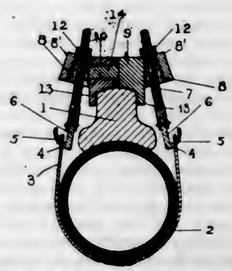
3. In a belly-band, the combination of a piece of flexible material having reduced extensions forming straps at the ends thereof, buckles slidingly arranged on said extensions, said extensions being turned-back towards each other, and an elastic band connecting the turned-back portions of said extensions, substantially as described.

4. The combination of a belly band consisting of a flexible tubular casing having straps at the ends thereof turned-back into said casing, an elastic member connecting the ends of said straps and inclosed in the casing, and a thill-strap extending through said casing, substantially as described.

5. The combination of a flexible tubular casing having straps at the end thereof turned-back into said casing, an elastic member connecting the ends of said straps and inclosed in the casing, a thillstrap extending through said casing, and a stiffening body inclosed in the casing and arranged adjacent to the upper side thereof, substantially as described.

[Claim 6 not printed in the Gazette.]

872,246. FASTENING DEVICE FOR PNEUMATIC-TIRE PROTECTORS. ROY H. MORRIS and ELVIN E. TOWNSEND, Oakland, Cal. Filed June 28, 1906. Serial No. 323,833.

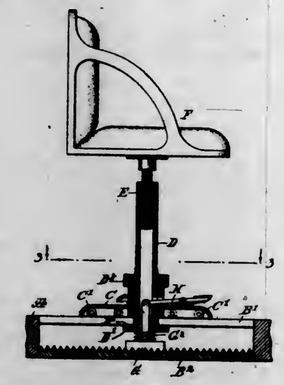


1. In a fastening device for pneumatic tire protectors, a pair of blocks, each provided with a perforated ear and a longitudinally disposed flange, said perforations being conical, and the flanges being opposite each other, whereby a recess is formed between the flanges when the blocks are in position, one of said blocks being provided with a transverse screw-threaded aperture, and the other one with a screw-threaded lug adapted to fit in said aperture and hold said blocks together with said flanges in engagement with the rim of a wheel when in position, a nutted bolt through each ear and a hooked plate pivotally secured to the lower end of said bolt adapted to receive the perforated edge of the tire protector.

2. In a fastening device for pneumatic tire protectors,

a pair of blocks, each provided with a perforated ear and a longitudinally disposed flange, said perforation being conical below and concave on top and the flanges being opposite each other, whereby a recess is formed between the flanges when the blocks are in position, one of said blocks being provided with a transverse screw-threaded aperture and the other one with a threaded lug adapted to fit in said aperture and hold said blocks together with their flanges in engagement with the rim of a wheel, a bolt through the perforation in each ear, the nut of which is convex on its under side and the lower end of the bolt is bifurcated, and a plate pivotally secured in each bifurcation provided with hooks for engaging with the perforated edge of the protector.

872,247. AUTOMOBILE-CHAIR. AUGUSTUS L. MOSS, Sandusky, Ohio. Filed May 20, 1907. Serial No. 374,582.



1. A vehicle chair comprising a guideway in the bottom of the vehicle body, a post carrying a seat, a base mounted to slide on the top of said guideway and through which the said post extends, the lower end of the post extending into the guideway and having a flange engaging the under side of the top of the guideway, a nut adjustable on the post and adapted to engage the top of the base, and means for locking the base and post in position on the said guideway.

2. A vehicle chair comprising a guideway fixed in the bottom of the vehicle body and having a slot in the top and notches on the bottom and running in the direction of the slot, a post carrying a seat and provided with a flange extending into the said guideway, and a locking catch held on the said post and adapted to engage the said notches.

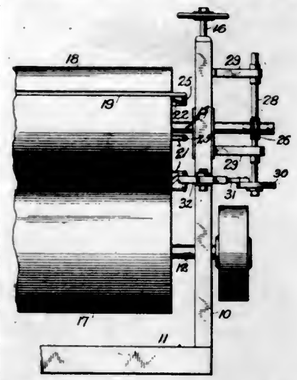
3. A vehicle chair comprising a guideway fixed in the bottom of the vehicle body and having a slot in the top and notches on the bottom and running in the direction of the slot, a post carrying a seat and provided with a flange extending into the said guideway, a locking catch held on the said post and adapted to engage the said notches, and a pedal for controlling the said catch.

4. A vehicle chair comprising a guideway fixed in the bottom of the vehicle body and having a slot in the top and notches on the bottom and running in the direction of the slot, a post carrying a seat and provided with a flange extending into the said guideway, a locking catch held on the said post and adapted to engage the said notches, and a base adjustable on the post and adapted to travel on the said guideway.

5. In combination with a vehicle, a guideway in the bottom of the vehicle body, a base mounted to slide on the top of the guideway, a post carrying a seat and extending through the base into the guideway, the post being provided at its lower end with a flange adapted to slide on the under side of the top of the guideway, means for holding the said base and the said flange of the post in sliding engagement with the top of the guideway to prevent wabbling of the chair, and means for locking the post and seat against movement.

[Claims 6 to 9 not printed in the Gazette.]

872,248. CUTTING ATTACHMENT FOR PAPER-MAKING MACHINES. CHARLES H. MCCORMICK, Jersey City, N. J. Filed Dec. 12, 1906. Serial No. 347,529.



1. In a paper cutting attachment for paper making machines, a paper winding roll, a cutter thereon, and means driven by the shaft of the roll for operating the cutter.

2. In a paper cutting attachment for paper making machines, a winding roll, a cutter mounted thereon, and means supported by the frame of the machine and driven by the shaft of the roll for operating the cutter at timed intervals.

3. In a paper cutting attachment for paper making machines, a paper winding roll, a cutter thereon, gearing driven by the shaft of the roll for actuating the cutter at timed intervals, and means forming a part of said gearing for varying the intervals of operation.

4. In a paper cutting attachment for paper making machines, a paper winding roll, a cutter normally lying within the periphery thereof, said cutter being movable longitudinally of and outwardly and inwardly from the periphery of the roll, a swinging cam dog for imparting an endwise projecting movement thereto, a cam for actuating said dog, and gearing for operating the cam to project the cutter when a predetermined number of layers have been wound upon the roll.

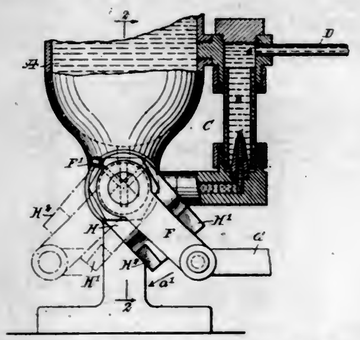
5. In a paper cutting attachment for paper making machines, a paper winding roll, a cutter thereon normally lying within the periphery thereof, said cutter being movable longitudinally at the roll, means for projecting the cutter beyond the periphery of the roll, a swinging cam for imparting an endwise projecting movement to the cutter, a rotary cam for actuating the swinging cam, and gearing for operating the rotary cam.

[Claims 6 to 15 not printed in the Gazette.]

872,249. PUMP-LUBRICATOR. HENRY L. MCCULLOUGH, Cropsey, Ill. Filed Apr. 6, 1907. Serial No. 366,678.

1. A pump lubricator comprising a container for the lubricant, an oscillating valve for receiving a quantity of the lubricant from the said container and carrying it to a discharge, and a pump plunger moving axially in the said valve for forcing the lubricant in the valve through the discharge to the part to be lubricated.

2. A pump lubricator comprising a container for the lubricant, an oscillating valve for receiving a quantity of the lubricant from the container and carrying it to a discharge, a pump plunger moving axially in the valve for forcing the lubricant in the valve through the discharge, and means for regulating the relative movement between the valve and plunger to control the amount of lubricant forced to the part to be lubricated.



3. A pump lubricator comprising a container for the lubricant, an oscillating valve for receiving a quantity of the lubricant from the said container and carrying it to a discharge, a pump plunger moving axially in the said valve for forcing the lubricant in the valve through the discharge to the part to be lubricated, and a relief device for automatically relieving the pump of undue pressure on the clogging up of the said discharge.

4. A pump lubricator comprising a container for the lubricant, an oscillating valve having a chamber adapted to connect alternately with the said container and with a discharge for conducting the lubricant in the part to be lubricated, a pump plunger mounted in the said valve and movable axially therein, to draw the lubricant into the said chamber from the said container, and to force it out of the chamber into the said discharge, means for imparting a rocking motion to the said valve, and means for imparting an axial movement to the said pump plunger.

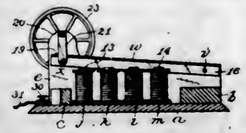
5. A pump lubricator comprising a container for the lubricant, an oscillating valve having a chamber adapted to connect alternately with the said container and with a discharge for conducting the lubricant to the part to be lubricated, a pump plunger mounted in the said valve and movable axially therein to draw the lubricant into the said chamber from the said container and to force it out of the chamber into the said discharge, means for imparting an axial movement to the said pump plunger, and means for transmitting the motion given to the said pump plunger to the said valve.

[Claims 6 to 11 not printed in the Gazette.]

872,250. DYESTUFF AND PROCESS OF MAKING SAME. FRANCIS J. OAKES, New York, N. Y. Filed Jan. 13, 1906. Serial No. 295,851.

The above described process for producing an improved dye stuff which consists in first making a solution of hematoxylin, next injecting into such solution oxygen until the hematoxylin has been changed to hematin and finally adding to the solution an alkaline nitrite until said hematin has become neutral.

872,251. ELECTROMAGNETIC POWER-GENERATOR. JOSEPH L. POTTER, Indianapolis, Ind., assignor to Harry G. Hawekotte, Indianapolis, Ind. Filed July 16, 1906. Serial No. 326,305.



1. An electro-magnetic power generator including a plurality of pairs of magnet cores, an armature covering all of the plurality of pairs of cores, a pivot supporting one end part of the armature, and a crank-shaft having constant operative connection with the other end part of the armature.

2. An electro-magnetic power generator including a frame, a rotative crank-shaft and also a pivot mounted on the frame, a make-and-break device mounted on the frame, a make-and-break device mounted on the crank-shaft, a plurality of magnet cores arranged as a group thereof, a circuit-wire between one of the group of cores and the frame, a pitman connected to the crank of the crank-shaft, and an armature mounted on the pivot and pivotally connected to the pitman and guided thereby.

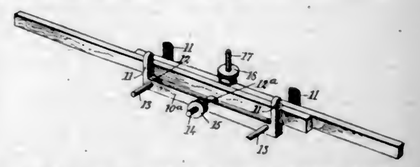
3. An electro-magnetic power generator including a plurality of pairs of fixed magnet cores, a pivot, a rotative crank-shaft, and an armature mounted on the pivot and extending over the ends of the plurality of pairs of cores, the armature being operatively connected with and guided by the crank of the crank-shaft and periodically moving toward the cores with part of the armature approaching one pair of cores in advance of another part thereof that approaches another pair of the magnet cores.

4. An electro-magnetic power generator including a plurality of stationary magnet cores grouped together, a pivot, a rotative crank-shaft, and an armature comprising a broad flat bar-shaped main member having side-bars and covering the ends of the group of cores, the armature being guided movably by the pivot and the crank-shaft.

5. An electro-magnetic power generator including a plurality of stationary magnet cores, a rotative crank-shaft, a pivot, a pitman connected to the crank of the crank-shaft, and an armature comprising a broad flat bar-shaped main member having side-bars formed integral therewith and connected pivotally to the pivot, the armature being pivotally connected to the pitman.

[Claims 6 to 10 not printed in the Gazette.]

872,252. CLAMP. MORLEY A. REARE, Los Angeles, Cal. Filed June 13, 1907. Serial No. 378,799.



1. A clamp comprising angle-iron side-bars having integral, upwardly-projecting jaws at opposite ends serrated on their inner faces, bosses formed on the inner faces of said bars adjacent to said jaws, guide-rods threaded into said bosses of one of said bars, the other of said bars being slidable upon said rod, centrally-arranged bosses formed on the inner faces of said bars, an operating screw threaded into one of said centrally-arranged bosses and slidable through the other, a thumb-nut carried by said screw for forcing said jaws together, and a screw projecting upwardly from the center of one of said bars and carrying a thumb-nut for clamping the material held between said jaws at right angles thereto.

2. A clamp comprising side-bars having upwardly-projecting jaws at opposed ends, means for drawing said jaws together, and means for clamping the material held by said jaws at right angles to the clamping action of the jaws.

3. A clamp comprising side-bars having upwardly-projecting jaws at opposite ends, guide-rods connecting said bars together adjacent to said jaws, a centrally-arranged screw connected to one of said bars and slidable through the other, carrying means for forcing said jaws together, and a screw projecting upwardly from the center of one of said bars, carrying means for clamping the material held between said jaws at right angles to the clamping action thereof.

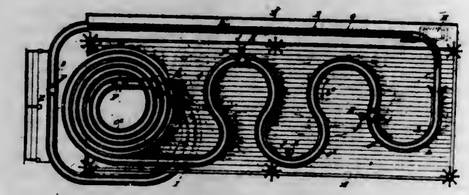
4. A clamp comprising angle-iron side-bars having upwardly-projecting opposed jaws at opposite ends, guide-

rods arranged adjacent to said jaws, connecting said bars together, and an operating screw intermediate said rods for forcing the jaws together.

5. A clamp comprising side-bars having upwardly-projecting jaws at opposite ends, guiding means connecting said bars together, means intermediate said guiding means for forcing the jaws together, and means for clamping the material held by the jaws at right angles to the clamping action of said jaws.

[Claim 6 not printed in the Gazette.]

872,253. AMUSEMENT APPARATUS. HENRY E. RIEHL, New York, N. Y. Filed July 17, 1907. Serial No. 384,206.



1. An amusement apparatus comprising an up-track and a down-track commencing at the terminal of the up-track and leading to the beginning of the up-track, the said down-track comprising a series of compound curves and a spiral and having guard walls on each side thereof, and a rotatable car for movement on the track, said down-track being provided with a plurality of yielding devices arranged at intervals for engagement by the car to impart rotation to the same.

2. An amusement apparatus comprising an up-track and a down-track commencing at the terminal of the up-track and leading to the beginning of the up-track, the said down-track comprising a series of compound curves and terminating in a spiral, a rotatable car for movement on the track, and a plurality of yielding devices alongside the down-track for engagement by said car to rotate the same.

3. An amusement apparatus comprising an up-track and a down-track commencing at the terminal of the up-track and leading to the beginning of the up-track, the said down-track comprising a series of compound curves and a spiral, a tunnel through which a part of the spiral passes, a rotatable car for movement on the track, and a plurality of yielding devices arranged alongside the down-track at intervals for engagement by the car to rotate the same.

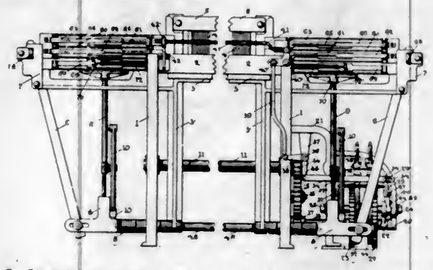
4. An amusement apparatus comprising a car having a car truck and a car body mounted to turn on the said truck, a track for the said car truck to travel on, springs supported alongside the track, and projections on the outside of the car for engagement with the said springs.

5. An amusement apparatus provided with a car having a car truck, a circular car body, a king pin centrally connecting the said car body with the said car truck to allow the car body to turn on the said car truck, the said car body having radially disposed arms on the outer side of the car body, a track for the said car truck to travel on, and projections outside the said track and adapted to be engaged by the arms, the said projections being in the form of spiral springs secured to posts alongside the track.

872,254. SHUTTLE-CHANGING MECHANISM FOR LOOMS. EPPA H. RYON, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Apr. 9, 1906. Serial No. 310,665.

1. The combination with a lay, a shuttle box having a cell to receive the spare shuttle, to be inserted by the weaver, a second cell to receive the shuttle to be removed, and a third cell for the shuttle in the normal operation of the loom, of manually controlled means to bring each of the three cells into line with the race-way.

2. The combination with a lay, a shuttle box having a cell to receive the spare shuttle, to be inserted by the weaver, a second cell to receive the shuttle to be removed, and a third cell for the shuttle in the normal operation of the loom, of manually controlled means to bring each of the three cells into line with the race-way, said means consisting of a cam, connections to the shuttle box, and mechanism to operate said cam.



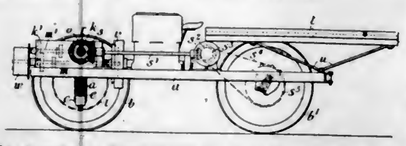
3. In a loom of the class described, a shuttle box having a working cell, a cell to receive the spare shuttle, a cell to receive the shuttle to be removed, a driving gear, a driven gear, connections from said driven gear to said shuttle box, and manually operated means for effecting operative connection between said gears.

4. In a loom of the class described, a shuttle box having a spare shuttle cell, a cell for the shuttle to be removed, and a normally operative cell, a driving gear, a driven gear normally at rest, manually operative means for effecting operative connection between said gears, and connections from said driven gear to the shuttle box to operate the same.

5. In a loom of the class described, a shuttle box, having a spare shuttle cell, a cell for the shuttle to be removed, and a normally operative cell, a driving gear connected with a moving part of the loom, and a second gear adapted to be driven by said driving gear, and having a movable manually controlled member adapted to be engaged by a corresponding member of said driving gear, and connections from said driven gear to the shuttle box to operate the same.

[Claims 6 to 9 not printed in the Gazette.]

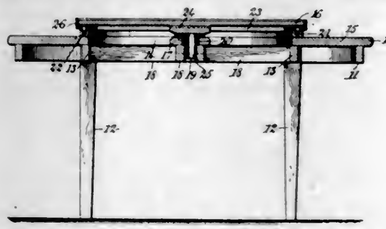
872,255. MOTOR-VEHICLE FOR AGRICULTURAL PURPOSES. HERBERT P. SAUNDERSON, Bedford, England. Filed Nov. 12, 1906. Serial No. 343,099.



In a motor vehicle or tractor, the combination with a pair of front steering wheels, of a differential gear for driving said wheels, mechanism for positively driving the balance box of said gear, a rear wheel adapted to travel in a path midway between the paths of said steering wheels and mechanism for positively driving said rear wheel from the balance box of said differential gear, substantially as described.

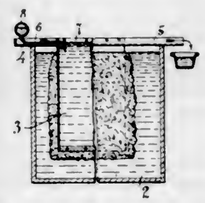
872,256. DINING-TABLE. JOHN A. SCHACKNER, New York, N. Y., assignor of one-fourth to Emma Velsor, New York, N. Y. Filed Apr. 17, 1907. Serial No. 368,743.

A table having a top provided with a rectangular frame secured to the under side thereof, legs connected to said frame at its corners, said top being provided with a circular opening within said frame, a flange extending upward from said top adjacent the periphery of said opening, rollers carried by said flange, two parallel braces extending across said frame, a second pair of parallel braces extending across said frame and at right angles to the first mentioned braces, a bearing block resting upon said braces and at the center of the opening and having a vertically-disposed passage therethrough, a rotatable top section having a pivot pin extending through said vertically-disposed



passage and between the separate pairs of parallel braces, said top section having the portions adjacent its periphery supported upon said rollers, and a band surrounding the periphery of the rotatable section and extending adjacent the upper edge of the flange carrying said rollers.

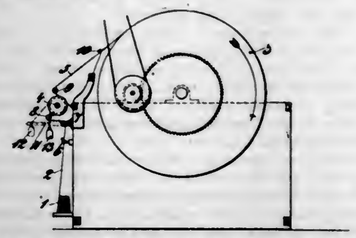
872,257. CRYSTALLIZING APPARATUS. GEORG SCHICHT, Vienna, Austria-Hungary. Filed June 27, 1905. Serial No. 267,229.



1. In combination, with a receptacle for containing crystallizing solutions, an apparatus comprising a multitude of cells, channeled arms independent from each other and suspended from the borders of the said receptacle, each of the said arms serving as support for, and communicating with, one of the said cells, means to admit cooling liquid at one end of the channels of said arms and to discharge the cooling liquid at the other end of the channels of the said arms, substantially as described.

2. In combination, with a receptacle for containing crystallizing solutions, an apparatus comprising a multitude of cells, slotted U-shaped bars independent from each other and suspended from the borders of the said receptacle, the said cells fixed to the slotted parts of the said bars, and means for admitting a cooling liquid to the said cells by way of said bars, substantially as described.

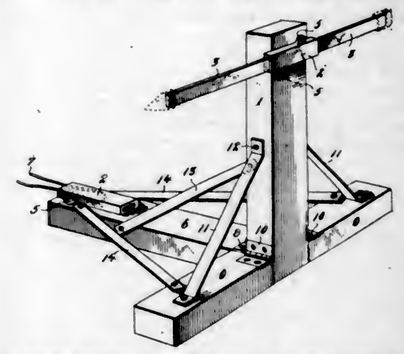
872,258. THREAD-STRETCHING DEVICE FOR THE WARPS OF DRUM PRINTING-MACHINES. FRANZ SCHMIDT, Oberschöneweide, Germany. Filed Sept. 12, 1903. Serial No. 172,910.



1. In a tension device for yarn printing machines, the combination with the cops and the printing drum for receiving the yarn thread therefrom, of a stretching roller, resting loosely and movable on the threads between the cops and the drum and supported directly thereby, said roller being provided with weights on the ends thereof.

2. In a tension device for yarn printing machines, the combination with the cops and the printing drum for receiving the yarn threads therefrom, of a stretching roller resting loosely and movable on the threads between the cops and the drum and supported directly thereby.

872,259. TOBACCO-LATH HOLDER. IRA SEBRING, Greenville, Ohio. Filed Feb. 6, 1907. Serial No. 356,077.

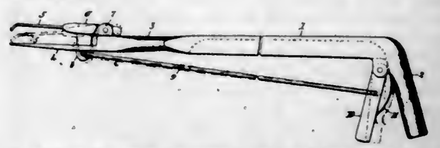


1. As an article of manufacture, a lath holder casing having a central partition to form inclosed sockets at the opposite ends thereof, and attaching lugs at the opposite sides of the holder at substantially the longitudinal center of each socket.

2. A lath holder comprising a vertical standard, oppositely disposed base pieces pivotally connected to the sides of said standard to fold upward against the same, a rearwardly extending sill pivotally connected to the standard to fold against the same, and a lath holder extending transversely of the standard to support laths parallel to said base pieces.

3. A lath holder comprising a standard, a holder casing mounted thereon, oppositely disposed base pieces pivotally connected to the standard to fold against the same, a rearwardly extending sill pivotally connected to the standard to fold against the same, and a stripper holder carried by the upper face of said sill.

872,260. CORN-THINNER. CHARLES S. SHANK, Scott Depot, W. Va., assignor of one-third to Robert A. Stewart, Scott Depot, W. Va. Filed Oct. 12, 1906. Serial No. 338,597.

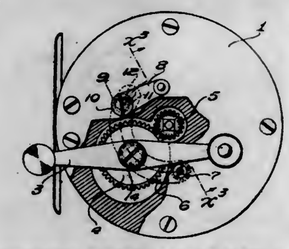


1. A corn thinner, consisting of a staff having a handle at its upper end, a slotted blade having a ferrule fitting on the lower end of the staff and provided with lugs, a jaw comprising a block pivoted to the lugs of the ferrule, and fingers projecting from the block and having inwardly curved lower ends, the block being provided with an arm, rigid therewith and extending through the slot of the blade, a pivoted hand lever adjacent to the handle of the staff, a spring between the hand lever and staff handle, and a rod connecting the hand lever and arm of the said block.

2. A corn thinner, comprising a staff having a handle at its upper end, a blade on the lower end of the handle

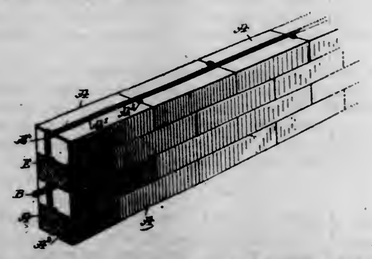
and provided with a slot, a jaw comprising a block pivoted to the staff and fingers projecting from the block and having inwardly bent lower ends, the block being provided with an arm rigid therewith and projecting through the slot of the blade, a pivoted and spring pressed hand lever on the staff adjacent to the handle thereof, and a rod connecting the hand lever and arm of the block.

872,261. FREE-CASTING REEL. HARRY SLOTTERBECK, Los Angeles, Cal. Filed Apr. 13, 1906. Serial No. 311,454.



A reel comprising a spool having a shaft, a gear mounted on said shaft, a swinging arm provided with a slot, a gear mounted on said arm and adapted to mesh with the gear on said shaft, a handle for the second named gear, a second shaft, a crank to turn said second shaft, and an eccentric pin on such shaft working in the slot of the swinging arm to move the arm, said pin having an orbit terminating on opposite sides of the axis of such second shaft so as to hold said arm in one position with the gears fully in mesh and in another position with the gears fully out of mesh.

872,262. WALL CONSTRUCTION. EDGAR W. STEELE and ANDY C. SHUSTER, Edna, Cal. Filed Jan. 23, 1907. Serial No. 353,604.



1. A wall construction comprising building bricks or blocks laid in courses and provided at top and bottom with longitudinally extending grooves, the grooves in the opposite faces of successive courses being in register to form lengthwise openings, spaced cables extending through sundry of the said openings, means for holding the ends of the cables in place, and comprising plates each having a socket engaging an end of a cable, and a device for expanding the end of the cable within said socket, and a binding material filling the remaining lengthwise openings.

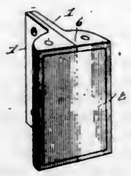
2. A wall construction comprising building blocks laid in courses and provided at top and bottom with longitudinal grooves, the grooves in the opposite faces of successive courses being in register to form longitudinal openings extending from one end of the wall to the other end thereof, a cable extending through one of the said openings, and a fastening device for each end of the cable, the said fastening device having a plate resting against the end of the wall, a socket integral on the plate and extending into the end of the groove and containing the end of the cable, and an expanding pin driven into the end of the cable within the said socket.

3. A wall construction comprising a wall, cables extending through the wall in the direction of the length thereof, and fastening devices for the ends of the cables, the said fastening devices each comprising a plate resting against the end of the wall, a socket on the plate and extending into the wall and engaging the end of the cable, and means for expanding the end of the cable within the said socket.

4. A wall construction comprising building bricks or blocks laid in courses and provided at top and bottom with longitudinal grooves, the grooves in the opposite faces of successive courses being in register to form longitudinal openings extending from one end of the wall to the other end thereof, each brick or block having a vertical groove at one end located to one side of the said top and bottom grooves, and a vertical groove at the other end located at the opposite side of said top and bottom grooves, cables extending through sundry of the said longitudinal openings, means for fastening the ends of the cables in place, and a binding material between the courses and filling the remaining longitudinal openings and the said end grooves.

5. A wall construction comprising building bricks or blocks laid in courses and provided at top and bottom with centrally arranged longitudinal grooves, the grooves in the opposite faces of successive courses being in register to form longitudinal openings extending from one end of the wall to the other end thereof, the ends of each brick or block having vertical grooves located on opposite sides of the said top and bottom grooves and spaced an equal distance from the sides of the block, the grooves on the opposite faces of adjacent bricks or blocks of a course being in register to form vertical openings, cables extending through sundry of the said lengthwise openings, means for fastening the ends of the cable in place in the wall, and a binding material in which the courses are laid, the binding material filling the remaining lengthwise openings and the said vertical openings.

872,263. HINGE. WILLIAM H. TORODE, Chicago, Ill. Filed Oct. 20, 1906. Serial No. 339,871.

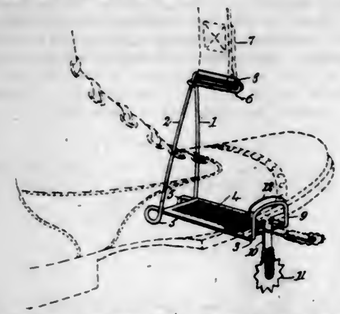


A hinge comprising a pair of flat leaves having a portion curved outwardly, apertured transverse end walls at the ends of the curved portions, a coupling plate proportioned to fit within the curved portions of the leaves and between the end walls and provided with inwardly extending flanges engaging the end walls and separate removable pintles extending only through the flanges of the coupling plate and into the apertures of the transverse end walls, whereby the pintles are accessible when the hinge leaves are opened.

872,264. STIRRUP. JACOB TWEIT, Ericson, Mont. Filed Jan. 22, 1907. Serial No. 353,421.

1. A stirrup comprising a frame consisting of a single length of spring yielding material and having spring coils, the said frame having divergent hanger members, and horizontally disposed foot plate members, the inner ends of the horizontally disposed members being turned upward to form a stop, an arm pivoted between said members, and a spur carried by the arm.

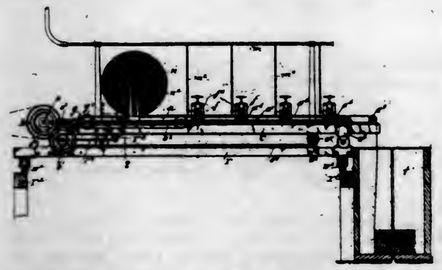
2. A stirrup, comprising a frame consisting of a single length of spring-yielding material and having spring coils, the said frame having divergent hanger members and horizontally-disposed foot plate members, the inner ends of the horizontally disposed members being turned upward to form a stop loop, an arm pivoted between said members, a plate carried by said arm and adapted for engagement with said stop loop when the arm is hanging downward, and a spur carried by said arm.



3. A stirrup, consisting of a single length of wire bent to form divergent hanger members having a loop at the top for receiving a saddle strap, the lower portion of the hanger members being coiled and extended inward, an arm having swinging connection with the inwardly extended members near the inner end, a plate on said arm, a stop at the inner end of said inwardly extended members forming a stop for said plate, a spur carried by the arm, and a foot plate attached to said inwardly extended members.

4. A stirrup comprising a frame consisting of a single length of resilient material, the said frame having hanger members and horizontally disposed foot plate members, the inner ends of the horizontally disposed members being turned upward to form a stop, an arm pivoted between said members, and a spur carried by the arm.

872,265. APPARATUS FOR BLEACHING. RENÉ VAN BUGGENHOUDT, New York, N. Y., assignor of one-half to Otto Goetze, Brooklyn, N. Y. Filed Dec. 22, 1906, Serial No. 349,189. Renewed Oct. 11, 1907. Serial No. 396,944.



1. In an apparatus for bleaching textile fibers, the combination of a tank, a track upon said tank, a carriage movable to and fro over said track, an endless apron on said carriage, means for reciprocating said carriage, and means for driving said apron during the reciprocation of said carriage.

2. In an apparatus for bleaching textile fibers, the combination of a tank, a track, a carriage movable on said track toward and away from said tank, an apron on said carriage, means to drive said apron, means to feed the fibers to said apron, and means to direct jets of bleaching solution against such fibers while conveyed by said apron.

3. An apparatus for bleaching textile fibers, which consists of a carriage, a tank located at the end of said carriage and in line with the same, a track for said carriage, means for reciprocating the carriage on said track, a plurality of pairs of squeezing-rolls supported on the carriage, an endless apron passing through between the squeezing-rolls, spraying-pipes located adjacent to the squeezing-rolls for supplying the spraying solution to the fibers transferred to the apron, and means for imparting motion to the endless apron while the carriage is moving to and fro over the tank.

4. In an apparatus for bleaching textile fibers, the combination of a reciprocating carriage provided with a number of pairs of squeezing-rolls, an endless apron passing through the squeezing-rolls, means for supplying the textile fibers to said apron, spraying-pipes located adjacent to said squeezing-rolls, means for rotating the squeezing-rolls, and means for imparting motion to the apron for feeding the fibers forward to the spraying-pipes and squeezing-rolls.

5. The combination, with a plurality of tanks arranged side by side, and transverse ways arranged adjacent to said tanks, of an apparatus for bleaching textile fibers, which consists of a carriage supported on a wheel-platform moving on longitudinal rails at right angles to the transverse ways, said carriage being provided with a plurality of pairs of squeezing-rolls, spraying-pipes adjacent to the squeezing-rolls, an endless apron passing through the squeezing-rolls below the spraying-pipes, means for feeding the fibers to one end of the apron, means for imparting reciprocating motion to the carriage, and means for imparting rotary motion to the squeezing-rolls and driving-rollers of the apron.

872,266. BALE-TIE. EDWARD H. VANCE, Colton, Tex. Filed May 21, 1907. Serial No. 374,904.



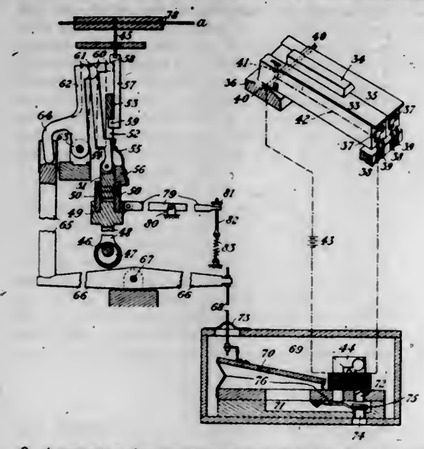
A bale-tie, formed of a wire strand or the like, having one end portion return-bent and twisted around the tie-body, a portion of this end of the wire being bent toward the loop at one side of the twisted member, a locking limb formed of the extremity of said portion that is bent toward the loop, and a ring-eye in the form of a coil on the other portion of the wire-body at a distance from its end and projecting from one side of said body, said ring-eye being hooked into the loop and interlocking therewith, and when hooked receiving the locking limb that prevents the ring-eye from being accidentally detached.

872,267. RECORDING MUSIC. JAMES J. WALKER, London, England. Original application filed Aug. 24, 1906, Serial No. 275,611. Divided and this application filed Apr. 30, 1906. Serial No. 314,595.

1. Apparatus comprising a plurality of recording instruments one of which is operated to produce a record of the operations of the controlling members of a musical instrument said record being adapted for the purpose of controlling a reproducer and another of which is simultaneously therewith operated to produce a companion record of the speed of each of such operations said companion record being adapted for the purpose of controlling accelerators in the reproducer.

2. Apparatus for producing simultaneously a record of the operations of controlling members of a musical instrument and a companion record of the speed of each of such operations, comprising in combination controlling members, a plurality of recorders for each such member, a plurality of impulse-transmitters governing the action of such

recorders and means for successively energizing such transmitters during one operation of a controlling member.



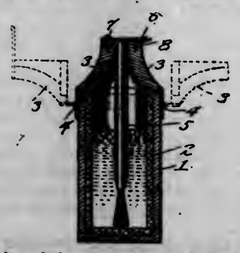
3. Apparatus for producing simultaneously a record of the operations of controlling members of a musical instrument and a companion record of the speed of each of such operations, comprising in combination a plurality of recorders for each key, a sliding carrier for each recorder, a normally free reciprocating selector adapted to operatively engage said carrier, and a plurality of impulse-transmitters connected with each controlling member for controlling the engagement of said selectors with said carriers.

4. Apparatus for producing simultaneously a record of the operations of controlling members of a musical instrument and a companion record of the speed of each of such operations, comprising in combination controlling members, a plurality of recorders for each such member, a plurality of impulse-transmitters governing the action of such recorders and on each said member a stepwise arrangement of energizing devices for the impulse transmitters.

5. Apparatus for producing simultaneously a record of the operations of controlling members of a musical instrument and a companion record of the speed of each of such operations comprising in combination controlling members, a plurality of recorders for each such member, a sliding carrier for each recorder, a normally free reciprocating selector adapted to operatively engage said carrier, a plurality of impulse-transmitters governing the engagement of said selectors with said carriers and on each said member a stepwise arrangement of devices for energizing said impulse-transmitters.

[Claims 6 and 7 not printed in the Gazette.]

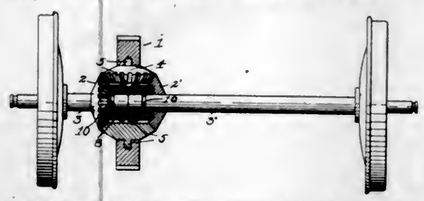
872,268. MUCILAGE-BOTTLE. RALPH WALTON, Warsaw, Ind. Filed Mar. 16, 1907. Serial No. 362,675.



1. In a device of the class described, the combination of a vessel open at the top, a casing into which the vessel is fitted, a cover composed of hingedly connected sections supported solely on the casing and arranged to close the top of the vessel, and a catch secured to one of the sections and adapted to engage the other section for holding both in closed position, with a brush located wholly within the casing.

2. In a device of the class described, the combination of a casing, a receptacle removably fitted therein, a tightly fitting cover on the casing composed of movably mounted sections, a brush in the receptacle inclosed by the cover, and a device for holding the cover sections closed and forming a seal at the upper end of the brush.

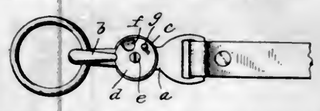
872,269. GEARING. OSCAR WILLIAMS, Charleston, Wash. Filed Jan. 30, 1907. Serial No. 354,934.



1. An axle formed in two sections having circumferential grooves in their contiguous end portion, a sleeve receiving the inner end portions of said axle sections and having ribs engaging in the grooves thereof, said sleeve being formed in longitudinal sections each of which is formed in its exterior surface with a bearing, a drive wheel, gears having opposite journal pins one of which is journaled in said drive wheel and the other in a bearing of said sleeve, and a gear on each of axle sections meshing with all of said first gears.

2. An axle formed of two sections arranged end to end, a drive wheel formed in two sections having flanges on their contiguous portions, means engaging the flanges of said wheel sections for securing the same together, a sleeve receiving the contiguous end portions of said axle sections, a gear on each of the axle sections, and gears meshing with said first named gear having opposite journal pins one of which is journaled in said drive wheel and the other in said sleeve.

872,270. SNAP-HOOK. JOHN N. BELLINGER, Casa, Ark. Filed July 22, 1907. Serial No. 384,848.

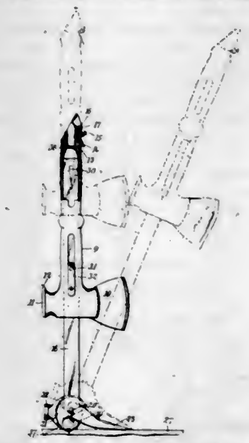


1. A snap hook whose body portion is provided at one end with an open hook and at its other end with a strap-engaging part and midway its ends with a disk-like body portion having a marginal flange extending upwardly to form a cup, a disk pivoted in this cup and having its edge adjacent to the end of the hook and provided with an inwardly extending notch, for the purpose set forth.

2. A snap-hook having a strap-engaging part at one end and an open hook at the other end and a broadened body portion between such parts, a disk centrally pivoted on said broadened body portion and having its circular edge engaging the extremity of the hook, said circular edge being provided with a notch adapted to be adjusted coincident with the end of the hook and thus open the hook, the bottom of the disk being convex and the pivot of the disk being a screw passed down through the disk and threaded into the body of the snap-hook, for the purpose set forth.

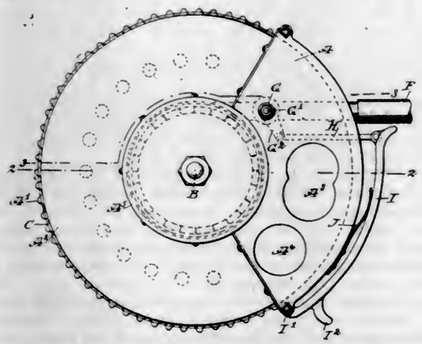
872,271. COMBINATION-TOOL. PETER A. BENET, Boston, Mass. Filed July 7, 1906. Serial No. 325,093.

In a device of the character described, the combination of a pair of members connected pivotally together and provided with claws for the purpose of gripping a nail or the like, one of said members being provided with a longitudinal portion for increasing the leverage between said claws, said longitudinal portion terminating at one of its ends in a screw driver blade having a sharp portion, and also having shoulders disposed upon opposite sides of said sharp portion, and a handle mounted telescopically upon said lon-



gitudinal portion of said blade and provided with a pair of oppositely disposed impact surfaces for engaging said shoulders and receiving therefrom the force of impact so as to avoid injury to the sharp portion of said screw driver blade.

872,272. SKINNING-TOOL. JAMES C. BOYLE, Calgary, Alberta, Canada. Filed Oct. 19, 1906. Serial No. 339,637.



1. A skinning tool comprising a flat casing, segmental knife guards forming part of said casing, one of which is straight and the other extends at an angle to the straight guard, the straight guard having projections at its edge extending beyond the inclined guard, a circular knife mounted to revolve in the said casing and having its cutting edge extending between the guards, a rotary motor on the said knife within the casing, and a supply tube on the casing and discharging the motive agent into the said motor.

2. A skinning tool comprising a casing, spaced segmental guards forming part of said casing, one of said guards being straight and corrugated at its edge and the other being inclined to the straight guard, a circular knife mounted to rotate in the said casing and extending with its cutting edge between the said guards, the circular cutting edge of the knife extending approximately midway of the length of the corrugations on the straight guard, and means for rotating the said knife.

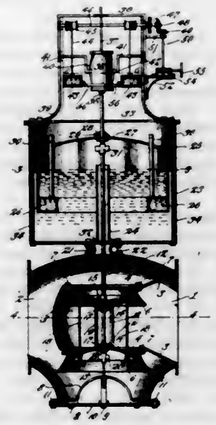
3. A skinning tool comprising a casing having a portion inclosing part of the cutting edge of the knife, the said portion being provided with finger holes, segmental knife guards forming part of the casing, a circular knife mounted to revolve in the said casing and having its cutting edge extending between the guards, a rotary motor on the said knife within the casing, means on the casing for discharging the motive agent into the said motor, and means for controlling the supply of motive agent to the motor, the said means including a hand lever fulcrumed on the outside of the casing and located adjacent to the finger holes.

4. A skinning tool comprising a casing having a portion adapted to inclose part of the cutting edge of the knife, the said portion being provided in its periphery with an aperture leading to the cutting edge of the knife for the insertion of a sharpening tool, the said portion of the casing being further provided with finger holes, segmental knife guards forming part of the casing, a circular knife mounted to rotate in the said casing and having its cutting edge extending between the guards, and means for rotating said knife.

5. A skinning tool comprising a casing having an opening in one of its faces, a cap for closing said opening, a central stud supported by the casing, spaced guards forming part of the casing, a circular knife having a hub mounted to turn on said stud, the said knife having its cutting edge extending between the guards, ball bearings interposed between one face of said knife and the inner face of the casing, ball bearings interposed between the end of the hub and the said cap, and a motor on the knife within the casing for rotating the said knife.

[Claims 6 and 7 not printed in the Gazette.]

872,273. GAS-PRESSURE REGULATOR. ADELARD D. BRASSON, San Francisco, Cal. Filed July 9, 1907. Serial No. 382,952.



1. A gas pressure regulator comprising an inlet section provided with flaring valve seats, oppositely disposed valves connected to a hollow shaft, a gasometer, a gasometer bell secured to said shaft, and a rotatable governor supported upon the upper end of said hollow shaft and provided with oppositely disposed spiral ribs, guides provided with lugs to bear against said ribs, and an annular mercury chamber provided with flexible pipes leading therefrom to the rotatable governor, and means for raising and lowering the mercury chamber.

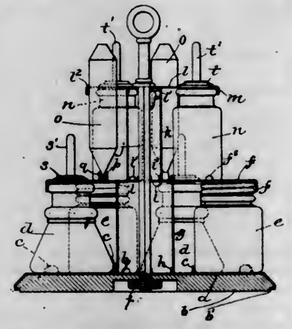
2. In a gas pressure regulator, the combination of an inlet section, oppositely disposed valves therein, a gasometer, a gasometer bell connected to said shaft and a rotatable governor provided with flexible hose connections, and an adjustable mercury chamber.

3. A gas pressure regulator comprising an inlet section

provided with flaring valve seats, concavo-convex valves connected together and supported upon a hollow shaft, a gasometer, said shaft passing through said gasometer and through a stand pipe secured to said gasometer, a gasometer bell connected to said hollow shaft and governing devices comprising a rotatable governor, a suspended mercury chamber and means to raise and lower the same, and flexible pipes extending from said governor to said mercury chamber.

4. In a gas pressure regulator, a governor comprising a hollow, rotatable chamber provided with oppositely disposed spiral ribs, guides provided with lugs which bear upon said ribs, and an adjustable mercury chamber having flexible hose connections which communicate with said governor.

872,274. DISPLAY-STAND. REUBEN BROOKS, Gloucester, Mass., assignor to Russia Cement Company, Gloucester, Mass., a Corporation of Massachusetts. Filed Dec. 5, 1906. Serial No. 346,406.



1. A display stand comprising a base adapted to support articles to be displayed and having individual recesses to receive the bottoms of such articles for preventing lateral movement thereof, and a member secured at a fixed distance from the base and arranged adjacent the upper portions of the articles constructed with peripheral rigidity so as to prevent lifting and removal thereof from the base, the parts above the base being connected thereto by means accessible for separation only from the under side of the base.

2. A display stand comprising a wide supporting base having on its upper surface pockets to receive the bottoms of articles to be displayed and prevent movement of such articles laterally in any direction; a cover supported at an invariable distance from the base engaging the upper parts of the articles and rigid at its edges to prevent lifting of the articles from the pockets; and a tie member connecting the base and cover together so that they cannot be separated, the parts above the base being connected thereto by means accessible for separation only from the under side of the base.

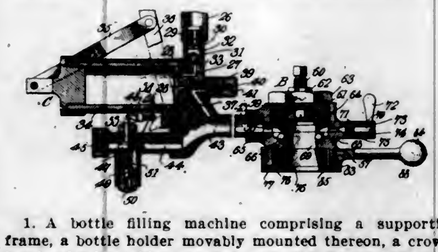
3. A display stand comprising a wide supporting base having on its upper surface pockets to receive the bottoms of articles to be displayed, and prevent movement of such articles laterally in any direction; a cover supported at an invariable distance from the base engaging the upper parts of the articles to prevent lifting thereof from the pockets; a tie rod non-circular in cross-section passing through correspondingly shaped orifices in the cover and base, and having an immovable collar above the cover; and a nut secured to the rod bearing against the under side of the base; the collar and nut serving to prevent separation of the cover and base, and the shape of the rod preventing loosening thereof while the stand is upright.

4. In a display stand designed for showing small packages of goods, the combination of a base having projections inclosing spaces adapted to hold the bottoms of the articles to be displayed, so as to prevent them from being slid off from the base or displaced in any direction; means for holding the tops of the package so that they cannot be raised from the base; and means for uniting all the parts of the device in such manner that they cannot be separated by the fingers alone while the stand is in an upright position, the parts above the base being connected thereto by means accessible for separation only from the under side of the base.

5. In a display atand designed for showing small packages of goods, the combination of a base plate having projections inclosing separate spaces adapted to hold the bottoms of the articles to be displayed so as to prevent them from being slid off from the plate or moved in any direction; a cover plate so formed as to fit the tops of said articles and prevent them from being raised up out of their places on the base plate; and a rod secured to the base passing through both said plates in such manner as to hold them firmly in position, the parts above the base being connected thereto by means accessible for separation only from the under side of the base, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

872,275. BOTTLING-MACHINE. JAMES R. COBB, Wal halla, S. C. Filed Sept. 4, 1906. Serial No. 333,205.



1. A bottle filling machine comprising a supporting frame, a bottle holder movably mounted thereon, a crowning head adjustably mounted upon the frame and above the holder, means for adjusting the head toward or from the holder, a pump movable with the crowning head and having an outlet above the bottom thereof and opening into the crowning head, means for directing a second fluid into the crowning head, a valve for closing said means, a lever for actuating the pump, a cam carried thereby, and a spring controlled push device for transmitting motion from the cam to the valve to open said valve immediately subsequent to the actuation of the pump.

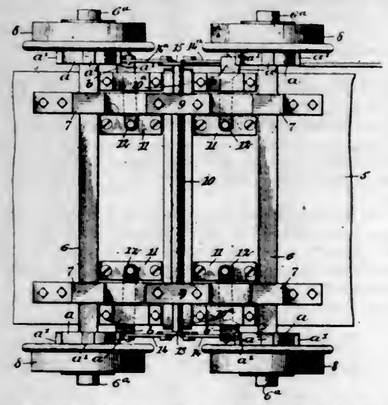
2. A bottle filling machine comprising an adjustable crowning head, a pump casing carried thereby, there being a passage for establishing communication between the pump casing and the crowning head, said pump casing having a valved inlet, a valve normally closing the outlet of the pump casing, a piston within the pump casing, a valved water inlet opening into the crowning head, and means outside of the casing for actuating the piston and for opening said valve to admit water to the crowning head subsequent to the discharge of fluid by the piston into the passage.

872,276. CAR-ARRESTER. WILLIAM COOK, Broadhead, Colo. Filed Sept. 28, 1907. Serial No. 394,973.

1. In a car arrester, the combination with a car, axles thereon, and wheels rotatable on the axles, of lugs on the hubs of the wheels, latch dogs rockable on the car that may interlock with the lugs, and means for manually rocking the dogs toward and from the lugs.

2. In a car arrester, the combination with a car body, two axles transversely secured on the bottom of said car body, wheels rotatable on the ends of the axles, and radial lugs on the hubs of said wheels, of latch dogs pivoted on the bottom of the car body, the heads of which will interlock with the lugs when the dogs are rocked toward the wheel hubs, and means for manually rocking the dogs.

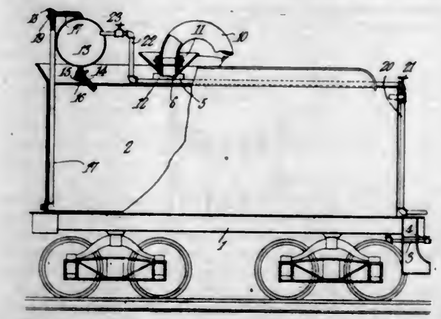
3. In a car arrester, the combination with a car body, axles transversely secured on the bottom of the car body, wheels rotatable on the ends of the axles, hubs on the wheels and radial lugs on said hubs, latch dogs pivoted on the car bottom, the heads of which will interlock with the lugs when the dogs are rocked toward the hubs, a rock shaft disposed transversely on the car body bottom, means connecting the rock shaft with the dogs for their rocking movement, and means for manually rocking said shaft.



4. In a car arrester, the combination with a car body, axles transversely secured on the bottom of the car body, wheels rotatable on the ends of the axles, radial lugs on the hubs of the wheels, and latch dogs pivoted by an end of each on the bottom of the car body and that will interlock with the lugs when the dogs are rocked toward the hubs, of a rock shaft rockable on the bottom of the car, a lever on one end of the rock shaft adapted for manipulation, dogs rockable on the bottom of the car toward and from the wheel hubs, and means connecting the rock shaft and lever with the dogs for their rocking movement.

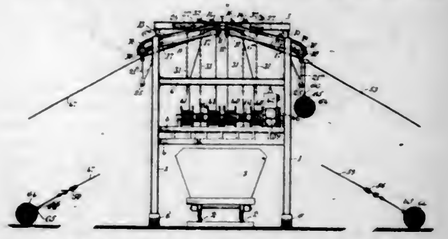
5. In a car arrester, the combination with a car body, axles transversely thereon, and wheels rotatable on said axles, the hubs of the wheels having radial lugs thereon, and a plurality of dogs pivoted by one end of each upon the bottom of the car body, and that may interlock with the lugs when said dogs are rocked toward the hubs, of a rock shaft journaled on the bottom of the car near each of its ends, a lever on one end of the rock shaft, links pivoted on the lever and also on two adjacent latch dogs, a rockable block on the other end of the lever, and links connecting said block with the remaining pair of latch dogs.

872,277. LOCOMOTIVE-TENDER. JOSEPH H. DAVIS, Winfield, Ala. Filed Apr. 12, 1907. Serial No. 367,777.



The combination with a tank having a valved water inlet, a detachable funnel surrounding the inlet, and a coupling within the funnel; of a reservoir, means for establishing communication between the top of the reservoir and the bottom of the tank, said means having an air vent, a valve within said means for closing the same or for placing the reservoir in communication with either the tank or the vent, means for establishing communication between the bottom of the reservoir and the top of the tank, said means projecting into the tank and constituting a nozzle, said means having an air vent, a valve within said means for closing the same or for establishing communication between the reservoir and either the vent or the tank, and separate valved means for directing steam into the tank and reservoir respectively.

872,278. LOADING APPARATUS. ALBERT J. DERBY, Honolulu, Hawaii. Filed Aug. 12, 1905, Serial No. 273,963. Renewed July 21, 1906. Serial No. 327,215.



1. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick, duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, and means for paying out the same in the opposite direction.

2. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick, duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, and means for paying out the same in the opposite direction; the said sets of trackways being laterally and downwardly inclined with reference to the derrick.

3. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick, duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, and means for paying out the same in the opposite direction; said trackways each embodying duplicate rails laterally and downwardly inclined with reference to the derrick and connected together at their outer ends by a rod having a roller thereon.

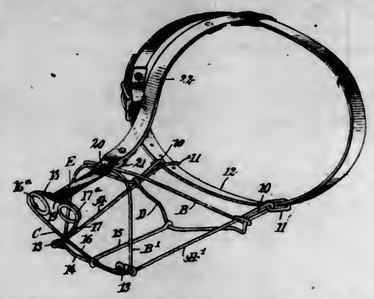
4. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick, duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, and means for paying out the same in the opposite direction; said trackways each embodying duplicate rails laterally and downwardly inclined with reference to the derrick, and each rail being constructed of separated members united together at their outer ends to form a depression for normally receiving a wheel of one of the carriers.

5. A loading apparatus for spanning a railway for a vehicle to be loaded, comprising a portable derrick, duplicate sets of trackways thereon, wheeled carriers on the trackways, a hoisting cable, an anchoring device therefor and suitable guides on the derrick for the cable, means for winding the cable in one direction, and means for paying out the same in the opposite direction; said trackways each embodying duplicate rails laterally and downwardly inclined with reference to the derrick, and each rail being constructed of parallel separated members connected together at their inner ends by a bolt, the bolts for the said

parallel members of the rails for each set of trackways constituting stops for the carrier.

[Claims 6 to 26 not printed in the Gazette.]

872,279. DOG-MUZZLE. WILLIAM H. DUSENBURY, New York, N. Y. Filed July 9, 1907. Serial No. 382,842.



In a dog muzzle, a body portion comprising side bar members, a connecting throat member, an upwardly and forwardly extending guard section comprising two centrally crossed members, each terminating in a coil at its upper end, a member connecting the coils, an arched head member that extends upwardly and forwardly from the rear portion of the side bar members, a flat metal strap secured at its forward end to the guard section between the coils thereof, being attached at its rear end to the upper central portion of said head member, and a link carried by the rear end portion of said strap.

872,280. MONOCHLOROMONOBROMO DERIVATIVES OF INDIGO AND PROCESS OF MAKING SAME. GADIENT ENGI, Basel, Switzerland, assignor to The Firm of Society of Chemical Industry in Basle, Basel, Switzerland. Filed June 14, 1907. Serial No. 378,931.

1. The described process for the manufacture of monochloromonobromoderivatives of indigo consisting in treating a monochlorindigo with two atomic proportions of bromin in presence of a suitable indifferent medium.

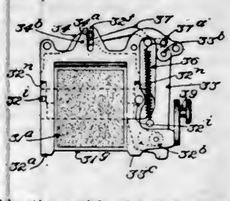
2. The described process for the manufacture of monochloromonobromoderivatives of indigo consisting in treating a monochlorindigo with two atomic proportions of bromin in presence of nitrobenzene.

3. As new products the monochloromonobromoderivatives of indigo constituting, in dry state, blue crystalline powders nearly insoluble in alcohol and benzene, sufficiently soluble in hot anailn with a yellowish blue coloration and in hot nitrobenzene with a pure blue coloration, soluble in concentrated sulfuric acid with a yellowish-green coloration turning to a blueish-green in the course of the time, soluble in fuming sulfuric acid with a blue coloration and yielding by their treatment with reducing agents yellowish vats dyeing cotton vivid reddish blue tints fast to washing, chlorin and light.

872,281. INKING DEVICE FOR STAMPING AND NUMBERING MACHINES. JOSEPH FRENCH, Woonsocket, R. I., assignor of one-half to The Sewing Machines Supplies Company, Boston, Mass., a Corporation of Massachusetts. Original application filed July 13, 1906, Serial No. 326,035. Divided and this application filed Oct. 30, 1906. Serial No. 341,322.

1. In combination, a type-head, operating means therefor, an inking-pad support having a swinging movement, operating means therefor, an inking-pad removably connected with the said support, a relief-spring operatively connected with the said inking-pad to permit the same to yield as described to obviate scraping, and a latch by which the inking-pad is retained in its working relations against the pressure of the said relief-spring.

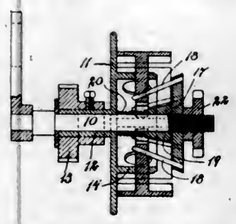
2. The combination with the inking-pad support, and an inking-pad, of a spring-actuated combined relief-device and ejector applied to the said support.



3. The combination with the inking-pad support, an inking-pad, and a pad-holder having an opening to receive the inking-pad, of a combined relief-device and ejector, and a latch to retain the inking-pad in place within the said holder.

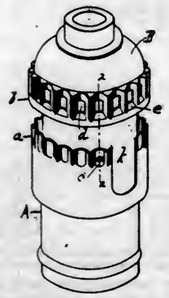
4. The combination with the inking-pad support, an inking-pad, and a pad-holder, of a combined relief-device and ejector, a latch to retain the inking-pad in place within the said holder, and a spring connected with said combined relief-device and ejector and with the said latch.

872,282. EXPANSION-PULLEY. GEORGE F. GEB, Franklin, Mass. Filed Feb. 1, 1906. Serial No. 298,952.



An expansion pulley, comprising a plurality of pulley sections, each having a radially arranged arm and a segment at the end thereof, a disk having an annular flange apertured to receive and guide said arms, an arbor on which said disk is journaled, and means for effecting a radial adjuatment of said sections consisting of an axially sliding member having a series of fingers arranged at an inclination to the axis of said pulley, the free ends of said finger being inserted in inclined apertures in said arms, and a nut threaded on said arbor for effecting an axial adjustment of said member.

872,283. INCANDESCENT-LAMP SOCKET. GILBERT W. GOODRIDGE, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed July 20, 1907. Serial No. 384,732.



1. An incandescent lamp socket, having the end of the shell and the flange of the cap corrugated, one set of corrugations being symmetrical and the other part corrugated

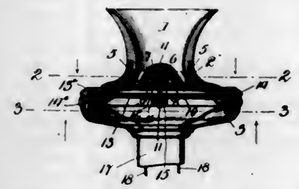
to fit, and latching means, the latching element on one part being repeated in proportion to the number of corrugations.

2. An incandescent lamp socket, having the end of the shell and the flange of the cap corrugated, the corrugations on one part being symmetrically repeated, and the other part corrugated to fit, a number of openings in one part proportioned to the number of corrugations, inclines adjacent to the openings and projections on the other part to enter any of the openings.

3. An incandescent lamp socket, having the flange of the cap provided with symmetrically arranged longitudinal corrugations and openings in the corrugations in combination with a shell corrugated where it sleeves into the cap flange and having projections to engage the openings in the cap flange.

4. An incandescent lamp socket, having the flange of the cap corrugated back of the rim, which latter is left plain, and openings in the corrugations and inclines leading to the openings in combination with a shell having corrugations at its edge and projections to enter any of the openings in the flange of the cap.

872,284. TRANSMITTER. RASMUS HANSEN, Chicago, Ill., assignor of one-half to A. Miller Belfield, Chicago, Ill. Filed Dec. 3, 1902. Serial No. 133,716.



1. In a telephone transmitter, the combination with the main and supplemental diaphragms, of a pair of electrodes, a chamber containing granular material with which the electrodes coöperate, a connection between the main and supplemental diaphragms, secured to one of the same, a member on the other diaphragm slidingly connected with said connection, and means for locking the same in adjusted position.

2. In a telephone transmitter, the combination with the main and supplemental diaphragms, of a pair of electrodes, a chamber containing granular material with which said electrodes coöperate, a pin secured to the supplemental diaphragm, a lug on the main diaphragm having an aperture through which said pin passes, and a set-screw in said lug for locking said pin in adjusted position.

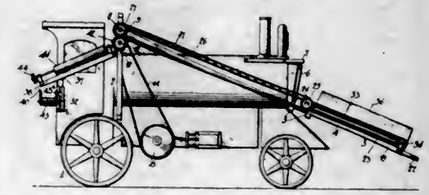
3. In a telephone transmitter, the combination of a main and a supplemental diaphragm, a chamber formed in the casing of the transmitter and provided with granular material, said chamber being closed by the supplemental diaphragm, two electrodes in said chamber, one secured to one wall thereof and the other secured to said supplemental diaphragm, a connection extending between the supplemental and main diaphragms, a collar on said connection, said collar being connected with the main diaphragm, and an adjusting screw in said collar for permitting adjustment of the same along the connection, substantially as described.

4. In a telephone transmitter, the combination of a chamber for granular material, carried by the casing, a main diaphragm situated behind said chamber, a supplemental diaphragm carrying an electrode located in said chamber, and a connection between the main and supplemental diaphragms, substantially as described.

5. A transmitter, comprising a mouth piece 1, a front piece 2 provided with an enlargement 4 having a chamber containing granular material, an electrode in the rear of said chamber, a supplemental diaphragm 9 closing said chamber, an electrode 8 attached to said diaphragm 9, a pin 11 extending from said electrode 8, a main diaphragm 13 arranged at the rear of the piece 2, a lug carried by the main diaphragm, and provided with an adjusting screw adapted to engage said pin 11, and a casing 3 attached to the piece 2, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

872,285. CORN HARVESTING AND HUSKING MACHINE. ELIJAH A. HOLLENBECK, Funk, Nebr. Filed Sept. 10, 1906. Serial No. 333,954.



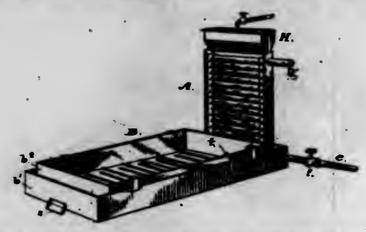
1. A corn harvesting and husking machine of the character described comprising a traction engine a main supporting frame mounted upon the engine, forwardly and downwardly projecting conveyer frames hingedly connected at their inner ends to said main frame, a block and tackle connection to support the forward ends of said frames, snapping rolls journaled on said forward ends of the conveyer frames, husking frames hingedly connected at their inner ends to said main supporting frame, adjustable brackets to support the outer ends of said husking frames, a series of husking rolls journaled in each of said husking frames, an endless conveyer adapted to conduct the ears from said snapping rolls to said husking rolls, an endless conveyer arranged beneath the discharge ends of said husking rolls to receive the cleaned ears therefrom, a main drive shaft journaled in said main frame, means whereby said shaft is driven from the fly wheel of the engine, and means whereby the motion of said shaft is imparted to the working parts of the machine, substantially as described.

2. In a corn harvesting and husking machine of the character described comprising a traction engine having a cab, a main supporting frame mounted upon the engine, conveyer frames hingedly mounted at their inner ends on said main frame, and projecting forwardly on each side of the engine boiler, a main drive shaft journaled in said main supporting frame, conveyer rolls on said shaft, similar rolls journaled in the outer ends of said conveyer frames, endless conveyers on said rolls, counter drive shafts mounted in said main frame, means whereby one of said counter shafts is connected to and driven by the fly wheel of the traction engine, gears to connect said counter shafts with the main drive shaft, whereby the latter is driven, guide bars secured to the outer ends of said conveyer frames to form wedge-shaped guideways, snapping rolls journaled on said guide bars and the ends of the conveyer frame, means to guide the corn stalks between said rolls, endless sprocket chains adapted to travel over the rolls, said chains having lugs formed thereon to engage corn stalks and draw the same into engagement with the snapping roll, means whereby said rolls and chains are driven from said main drive shaft, husking roll frames mounted on said main supporting frame and projecting rearwardly and downwardly on each side of the engine cab, pairs of husking rolls journaled on each of said frames, means whereby one roll in each of said pairs is geared to and driven by said counter drive shafts, a series of gears mounted on the rear ends of said husking roll shaft, whereby the motion of said driven rolls is imparted to the others, an endless conveyer arranged beneath the discharge end of said husking rolls, and means whereby said conveyer is driven from the main drive shaft of the machine, substantially as described.

872,286. MILK-COOLING APPARATUS. JOHN C. JEWETT and JOHN L. BOWEN, San Francisco, Cal. Filed Aug. 10, 1904. Serial No. 220,168.

In a cooling apparatus for milk, the combination of an upright cooling plate over which the milk is adapted to

flow by gravity, consisting of a series of tubes connected together to form a continuous passage for a circulating medium, a trough for delivering milk to said cooling plate, a pan into which the milk from said cooling plate is delivered, means for causing the milk to take a circuitous passage from the receiving end to the discharge end thereof, an ice pan of a size transversely to fit tightly within



the milk pan and form a conducting passage for the milk between its bottom surface and the upper surface of the milk pan, and of a length less than that of the milk pan and arranged to form a catch basin at the receiving end of the milk pan into which the lower end of the cooling plate is set, and a discharge spout for the milk at the other end of the milk pan.

872,287. OVERSHOE FOR HORSES. GEORGE N. KINNELL, Pittsfield, Mass. Filed Mar. 25, 1907. Serial No. 364,413.



1. An overshoe comprising a plurality of movably connected links intervening between the hoof and the ground.

2. In overshoes, a tread comprising a plurality of movable links and means for holding the links in position relatively to each other.

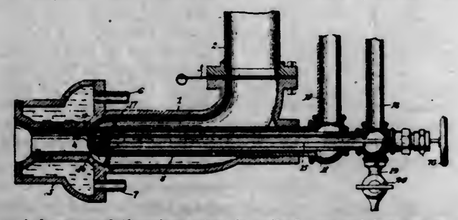
3. In overshoes, a tread composed of a plurality of metallic links movable relatively to each other.

4. An overshoe comprising a plurality of movable links in catenation intervening between the hoof and the ground.

5. An overshoe having a tread comprising movable links arranged in a plurality of catenations intervening between the hoof and the ground.

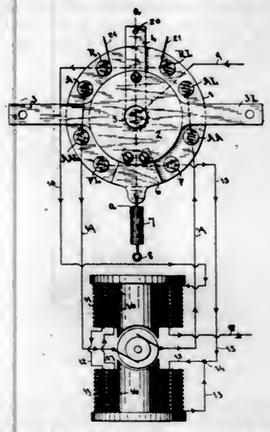
[Claims 6 to 18 not printed in the Gazette.]

872,288. LIQUID-FUEL BURNER. JOHN H. KOONS, Anderson, Ind. Filed Jan. 4, 1907. Serial No. 350,712.



A burner of the character described, comprising a tubular casing having one end reduced to form a mixing chamber and provided with a water jacket surrounding the same, the other end of the casing having a lateral valved low pressure air inlet, a high pressure pipe secured in the casing and having its inner end apertured and arranged adjacent to the reduced end of the casing, the other end of the pipe extending out through the end of the casing opposite its reduced end and having a lateral inlet, a liquid fuel pipe secured in the high pressure pipe and extending out through the outer end of the same and having a lateral inlet, a nozzle on the inner end of the fuel pipe, said nozzle being adjacent to the aperture of the high pressure pipe, and a spirally grooved valve in the nozzle and having its stem extending out through said fuel pipe.

872,289. CONTROLLING MECHANISM FOR ELECTRIC MOTORS. EDWARD D. LEWIS, Elmira, N. Y., assignor to Lewis Motor & Crane Company, a Corporation of Maine. Filed June 18, 1907. Serial No. 379,556.



1. The combination, with a motor, of a resistance the equivalent of the armature, a switch, and conductors connecting the field, the armature and said resistance with separate contacts on the switch, whereby in starting the motor the current will be applied to the field and the resistance simultaneously and afterwards to the armature, the resistance being cut out when the armature is cut in, and whereby in stopping the motor the resistance will be cut in when the armature is cut out.

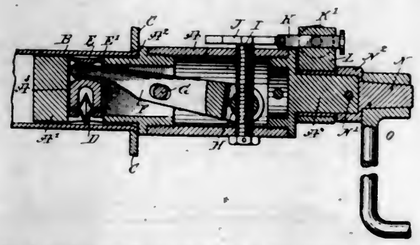
2. The combination, with a motor, of resistance coils wound around the field coils and connected in series therewith, a switch and conductors connecting the field, the armature and the resistance with separate contacts on the switch, whereby in starting the motor the current will be applied to the resistance and thence to the field and afterwards to the armature and thence to the field, the resistance being cut out when the armature is cut in, and whereby in stopping the motor the armature will be cut out and the resistance cut in and subsequently the resistance and field cut out.

3. The combination, with a motor, of a switch comprising a rock arm having two oppositely disposed contact plates mounted thereon and insulated from one another, one of said plates being connected with the current supply, a pair of contacts adapted to be engaged by said current supply plate, and a pair of contacts adapted to be engaged by the other plate, the first contact of each pair being in circuit with the field and the second contact of each pair being in circuit with the armature.

4. The combination, with a motor, of a switch comprising a rock arm having two oppositely disposed contact plates mounted thereon and insulated from one another, one of said plates being connected with the current supply, a pair of contacts adapted to be engaged by said current supply plate, a pair of contacts adapted to be engaged by the other plate, the first contact of each pair being in circuit with the field and the second contact of each pair being in circuit with the armature, and two other pairs of

contacts placed on opposite sides of the contact plates from the first pairs and connected in like manner with the field and armature circuits, whereby the motor may be reversed when the arm is turned in the opposite direction.

872,290. TUBE-CUTTER. JAMES G. LUSK, Newcastle, New South Wales, Australia. Filed Mar. 9, 1907. Serial No. 361,598.



1. A tube cutter comprising a casing having a reduced end for entering the tube to be cut, a block slidable transversely in the said reduced end, a member engaging said block and fulcrumed in the casing, a nut on the said member, a screw mounted to turn in the casing and screwing into the nut, and means whereby the turning of the casing will turn the said screw rod.

2. A tube cutter comprising a casing having a reduced end for entering the tube to be cut, a block slidable transversely in the said reduced end, a lever engaging the said block and fulcrumed in the casing, a nut on the said lever, a screw rod mounted to turn in the casing and screwing in the said nut, and means for turning the said screw rod.

3. A tube cutter comprising a casing having a reduced end for entering the tube to be cut, a block slidable transversely in the said reduced end, a lever engaging the said block and fulcrumed in the casing, a nut on the said lever, a screw rod mounted to turn in the casing and screwing in the said nut, a star wheel held on the said screw rod outside of the said casing, and a pin extending into the path of the teeth of the said star wheel to intermittently rotate the latter on turning the said casing.

4. A tube cutter comprising a casing having a reduced end for entering the tube to be cut, a block slidable transversely in the said reduced end, a lever engaging the said block and fulcrumed in the casing, a nut on the said lever, a screw rod mounted to turn in the casing and screwing in the said nut, a star wheel held on the said screw rod outside of the said casing, a pin extending into the path of the teeth of the said star wheel to intermittently rotate the latter on turning the said casing, and a handle fulcrumed loosely on the said casing and in which the said pin is adjustably secured.

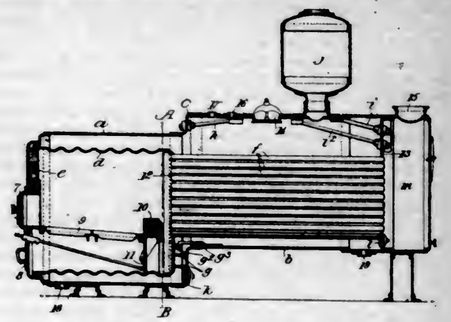
872,291. STEAM-BOILER. HARRY V. BRADY, Amherst, Nova Scotia, Canada. Filed May 9, 1907. Serial No. 372,811.

1. In a steam boiler, a furnace and barrel connection having lap-joint rims projecting on its front and rear sides respectively and offset portions integral with the respective rims.

2. In a steam boiler, a furnace and barrel connection having circular lap-joint rims projecting on its front and rear sides respectively and lune-shaped offset portions integral with the respective rims.

3. In a steam boiler, the combination of a furnace shell round in cross section, a barrel the longitudinal axis of which is higher than that of the furnace, and a connection comprising rims fitted to the adjoining ends of said furnace and said barrel respectively and offset portions at top and bottom.

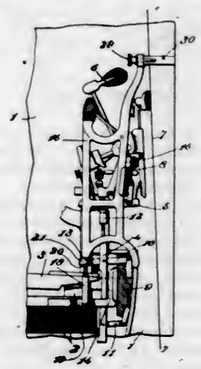
4. In a steam boiler, the combination of a furnace shell round in cross section, a cylindrical barrel the longitudinal axis of which is higher than that of the furnace, and a connection comprising circular rims fitted to the adjoining ends of said furnace and said barrel respectively and lune-shaped offset portions at top and bottom.



5. In a steam boiler, the combination of a furnace shell round in cross section, a cylindrical barrel the longitudinal axis of which is higher than that of the furnace, an offset connection having rims fitted to the adjoining ends of said furnace shell and the barrel shell, and a round firebox supported concentrically within said furnace shell.

[Claims 6 to 10 not printed in the Gazette.]

872,292. PIANO-ACTION FRAME. JOHN W. DARLEY, Jr., Baltimore, Md., assignor to The Wm. Knabe & Co. Manufacturing Company of Baltimore City, Baltimore, Md., a Corporation of Maryland. Original application filed Sept. 11, 1905, Serial No. 277,989. Divided and this application filed Feb. 6, 1906, Serial No. 299,813. Renewed Sept. 10, 1907. Serial No. 392,215.



1. In a piano, the combination of a piano-action comprising separate action-rails and superimposed groups of operative instrumentalities respectively connected to said rails; brackets supporting the lower rail, superposed brackets supporting the upper rail, said upper and lower brackets being relatively adjustable, thereby allowing horizontal adjustment of said lower brackets transversely of said rails without change of position of said upper brackets.

2. In a piano, the combination with the key-board bed, of an action comprising separate action-rails and superposed groups of operative instrumentalities connected to the respective rails, brackets for the lower rail mounted on the key-board bed, bolsters or posts rising from said bed through slots in the feet or bases of lower brackets, thus permitting horizontal adjustment of the latter transversely of said bed and rails, and brackets for the upper rail detachably mounted on said bolsters.

3. In a piano, the combination with the key-board bed and back-frame, of an action comprising separate action-

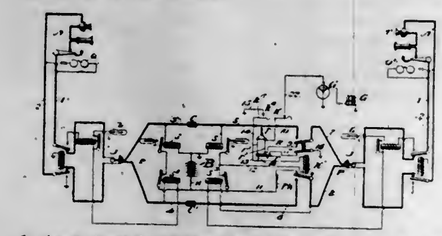
rails and superimposed groups of operative instrumentalities respectively carried thereby, brackets mounted on said bed and supporting the lower rail, bolsters or posts rising from said bed through slots in the bases or feet of lower brackets permitting adjustment thereof transversely of said bed and rails without obstruction from said bolsters, and superposed brackets supporting the upper rail having adjustable ball-and-socket bearings on said bolsters and having their upper ends attached to said back-frame.

4. In a piano, the combination of a piano-action comprising superimposed groups of operative instrumentalities and separate action-rails therefor, supporting brackets for the lower rail, and superposed supporting brackets for the upper rail having vertically-adjustable ball and socket bearings on brackets supporting the lower rail.

5. In a piano, the combination with the key-board bed, of an action comprising superimposed groups of operative instrumentalities and separate action-rails therefor, supporting brackets for the lower rail, superposed supporting brackets for the upper rail mounted on lower brackets and having bearings on said lower brackets horizontally-adjustable in a direction transverse of said key-board and rails.

[Claims 6 to 10 not printed in the Gazette.]

872,293. RINGING DEVICE FOR TELEPHONE-EXCHANGES. WILLIAM W. DEAN, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Original application filed Jan. 16, 1906, Serial No. 296,288. Divided and this application filed Aug. 8, 1906. Serial No. 329,751.



1. An automatic ringing device for telephone systems, comprising a ringing relay having line and generator connections, an operator's key adapted to momentarily close the relay circuit, short-circuit contacts controlled by the relay so that when energized it will lock itself, and non-inductive means controlled by the wanted subscriber to break the relay locking circuit, substantially as described.

2. In a telephone system, a cord-circuit automatic ringing device comprising a ringing relay, an operator's key adapted to temporarily close the circuit of said relay, a locking circuit closed through itself by the relay when energized, and non-inductive means then becoming associated with the wanted subscriber's line-circuit, adapted to break said locking circuit when the subscriber answers, substantially as described.

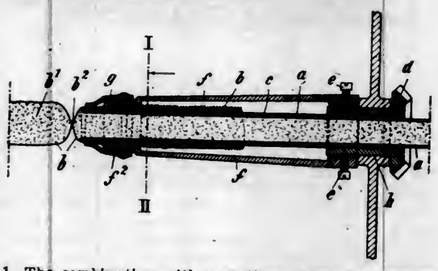
3. In a telephone system a cord-circuit automatic ringing device comprising a ringing relay, a generator circuit adapted to be connected thereby to line, a locking circuit closed by the relay through itself when energized, and non-inductive means included in the generator circuit adapted to break said locking circuit when the called subscriber answers, substantially as described.

4. In a telephone system, a cord circuit automatic ringing device, comprising a ringing relay, a generator circuit adapted to be connected to line thereby, a locking circuit for said relay closed by itself when energized, non-inductive means responsive to an act of the called subscriber for breaking said locking circuit, and a manual key under the control of an operator for initially closing the circuit of the ringing relay.

5. In a telephone exchange system, a cord-circuit, a subscriber's line adapted to be connected thereby, a ringer of relatively high resistance normally bridged across said line, a telephone set of relatively low resistance adapted to become bridged on the line in answering a call, a ringing relay in the cord-circuit adapted to connect a generator to line to actuate the ringer, and a non-inductive device in the path of the generator current to line and controlling the ringing relay, said non-inductive device being unresponsive to current of an amount determined by the resistance of the ringer, but responding and becoming active for an amount of current permitted to pass by the low resistance telephone set, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

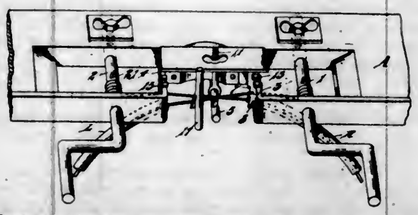
872,294. SAUSAGE-STUFFER. HEINRICH F. HAMBRUCH, Hamburg, Germany, assignor of three-fourths to The Firm of Biberfeld & Co., Hamburg, Germany. Filed Dec. 8, 1906. Serial No. 346,900.



1. The combination with a stationary spout and a gut-carrying tube rotatable thereon, of a rigid sleeve surrounding the gut-carrying tube forming an annular space for the storage of the gut, and an elastic cuff mounted on and projecting beyond the sleeve and engaging the entire periphery of the gut on the tube.

2. The combination with a stationary filling-spout and a gut-carrying tube rotatable thereon, of a longitudinally slotted rigid sleeve shorter than the tube and surrounding the same to form an annular space for the storage of the gut, means connecting the tube and sleeve, and a soft rubber cuff mounted on the sleeve having one end projecting beyond the latter, the inner periphery of said projecting end adapted to press the gut against the entire outer periphery of the projecting portion of the gut-carrying tube.

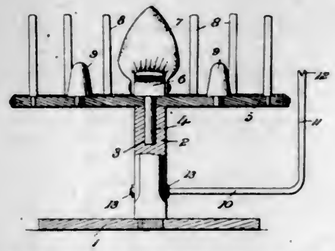
872,295. TIRE-SETTING MACHINE FOR RUBBER TIRES. JOHN L. HIXSON and CHARLES W. POWELL, Ypsilanti, Mich. Filed May 16, 1906. Serial No. 317,121.



In a machine for mounting rubber tires on wheel fellies, in combination with abutments for the ends of the rubber tire, notched on the under side thereof and adapted to engage the retaining wire in said notch, notched hangers adapted to co-act with said abutments to form with said abutments a passage surrounded by the walls of said combined abutment and hanger, substantially as described.

872,296. SPOOL-STAND. NATHANIEL W. HOSKINS, Almond, Wis., assignor of one-half to William H. Rice, Plainfield, Wis. Filed Jan. 9, 1907. Serial No. 357,573.

1. In a device of the character described, the combination of a stand comprising a base and a post projecting upwardly therefrom and having a vertical opening formed therein, a spindle inserted in the said vertical opening and provided with a head, a table rotatably mounted upon the spindle, the head of the spindle overlapping the table, a pin cushion applied to the head of the spindle and embracing opposite sides thereof, spool holding pins mounted upon the table, and thimble receiving pegs mounted upon the table.



2. In a device of the character described, the combination of a stand comprising a base and a post projecting upwardly therefrom, a table rotatably mounted upon the post, spool holding means carried by the periphery of the table, a lateral arm having the inner end thereof threaded and extending through the before mentioned post, set nuts applied to the threaded end of the arm upon opposite sides of the post and serving to retain the arm in position, and a vertical extension at the end of the arm, the extremity of the said extension being flattened and provided with a notch having the edges thereof sharpened to constitute a thread cutter.

872,297. GARMENT-HOLDER. HUGO C. KRAUSE, Chicago, Ill., assignor of one-third to Charles Turner Brown, Chicago, Ill. Filed Aug. 13, 1906. Serial No. 330,459.

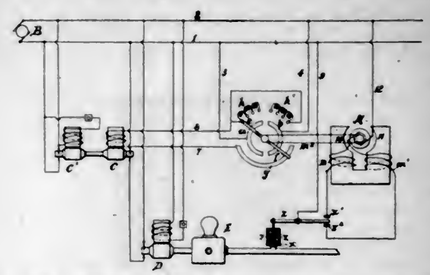


1. In a garment holder, a combined base and rigid jaw, in combination with a movable jaw and a movable lever, the adjacent ends of such movable jaw and lever bent up to provide curved faces on which they respectively slide, with the end of the movable jaw arranged to move into the curved end of the movable lever when the jaws of the device are opened, and the curved end of the movable lever arranged to engage with the curved end of the movable jaw when the jaws of the device are closed, substantially as described.

2. In a garment holder, a combined base and rigid jaw, provided with projections on the sides thereof, in combination with a movable jaw and a movable lever, the adjacent ends of such movable jaw and lever bent up to provide curved faces on which they respectively slide, with the end of the movable jaw arranged to move into the curved end of the movable lever when the jaws of the device are opened, and the curved end of the movable lever arranged to engage with the curved end of the movable jaw when the jaws of the device are closed, the projections on the combined base and rigid jaw bent over into the curved portions of the movable jaw and lever, respectively, to maintain the parts in operative position; substantially as described.

3. In a garment holder, a combined base and rigid jaw in combination with a movable jaw and a movable lever, the end of the lever adjacent to the movable jaw bent up to provide a curved face on which the lever slides, and such movable lever and movable jaw arranged to move the end of the movable jaw which is adjacent to the movable lever into the curved end of the movable lever when the jaws of the device are opened, and the curved end of the lever arranged to engage with the under face of the adjacent end of the movable jaw when the jaws of the device are closed, substantially as described.

872,298. MEANS FOR AUTOMATICALLY CONTROLLING ELECTRIC MOTORS. HARRY W. LEONARD, Bronxville, N. Y. Original application filed Feb. 6, 1897, Serial No. 622,269. Divided and this application filed Jan. 28, 1902, Serial No. 91,577. Renewed July 10, 1905. Serial No. 269,132.



1. The combination with a main source of electric energy, of a motor connected therewith, a second source of electric energy between the main source and the motor, and a regulator controlled by the work for automatically varying independently of the motor the electro-motive force of said second source to automatically increase or decrease the speed of the motor to meet the requirements of a variable duty.

2. The combination with a main source of electric energy, of a motor connected therewith, a second source of electric energy between the main source and the motor, and means controlled by the work for automatically varying and reversing the electro-motive force of said second source independently of the motor to automatically control the speed of the motor.

3. The combination of an electric motor, a source of electro-motive force in series with the armature of the motor and a regulator controlled by the work for automatically controlling the electro-motive force of said source to automatically increase or decrease the speed of the motor to meet the requirements of a variable duty.

4. The combination of an electric motor, a device which under conditions of practice must be operated at variable speed, a source of electro-motive force in series with one element of the motor, and a regulator controlled by the work for automatically controlling the electro-motive force supplied to automatically operate the motor at the increased or decreased speeds required by said device.

5. The combination of a translating device requiring in practice a variable electro-motive force upon its terminals, a source of electro-motive force in series with the translating device, and a regulator controlled by the work for automatically controlling the electro-motive force supplied from said source whereby the electro-motive force upon the translating device is automatically increased or decreased as required.

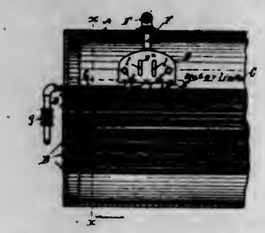
[Claims 6 to 60 not printed in the Gazette.]

872,299. FEED-WATER DISTRIBUTING-PAN MECHANISM. JOHN M. LYNCH, Erie, Pa., assignor of one-half to George A. Morgan, Erie, Pa. Filed July 29, 1907. Serial No. 386,115.

1. In a feed-water distributing-pan mechanism adapted to be placed in a boiler, a series of vertical sections forming pans one above the other having openings in alternate ends of the bottoms of all but the lowermost pan and having downward passages leading from the ends of the uppermost pan and extending downwardly below the normal water-line of the boiler, means for securing said vertical sections together, a feed-water pipe extending through the boiler-shell into a passage or chamber leading downwardly through one of said sections to the lowermost pan, and a blow-off pipe extending from the bottom of the lowermost pan out through the shell of the boiler, substantially as set forth.

2. A feed-water distributing-pan mechanism, consisting

substantially of a series of vertical sections adapted to be secured together and having horizontal plates therein with openings therethrough and downwardly extending passages from the uppermost pan, which sections when secured together form a series of pans one above the other having a central passage leading from the feed-water pipe downwardly to the lowermost pan, passages leading upwardly through the pans from the lowermost pan to the uppermost pan and from the uppermost pan downward past the ends of the intermediate pans, substantially as set forth.



3. A feed-water distributing-pan mechanism, consisting substantially of vertical longitudinal sections adapted to be secured together, horizontal pan bottom sections having openings therein and vertical central passage and end passage wall sections in each of said sections, and a feed-water pipe connection leading to said central passage, whereby water entering from the feed-water pipe passes downward through the central passage into the bottom pan, thence from the outer ends of said bottom pan up through openings in the outer ends of the top thereof into the second pan, thence along that pan to the inner ends thereof, thence through openings in the inner ends of the tops thereof into the third pan, thence along said pan to and upward through openings in the outer ends of the bottoms of the fourth pan; thence along the fourth pan to and upwardly through openings in the inner ends of the bottom of the fifth pan; thence outwardly along the fifth pan to the downward passages at the ends of the pans, and thence downward through said passages to the discharge ends thereof, substantially as set forth.

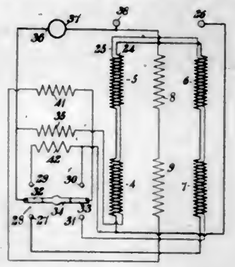
4. In a feed-water distributing-pan mechanism adapted to be placed in a boiler, a series of vertical sections, each comprising substantially parts of a series of horizontal pans and parts of vertical water passages and one of which has a downward passage therein, means for securing said sections together, a feed-pipe connection in the top of said downward passage, and a blow-off connection in the bottom of said structure, substantially as set forth.

5. In a feed-water distributing-pan mechanism, adapted to be placed in a boiler, a series of vertical sections each comprising substantially parts of a series of horizontal pans, parts of vertical water passages and parts of transverse steam passages, and means for securing said sections together, substantially as set forth.

872,300. ELECTRICAL MEASURING INSTRUMENT. PAUL MACGAHAN, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 18, 1905. Serial No. 283,339.

1. In an electrical measuring instrument, the combination with a receptacle for a translating device, stationary windings respectively of high and low resistance, and a movable winding, of a resistance, and means whereby the said receptacle may be connected between the circuit terminals in series circuit with the low resistance stationary winding and the movable winding may be connected in shunt thereto, or whereby the said receptacle may be connected between the circuit terminals in series with the resistance, and the high resistance stationary winding and the movable winding may be connected in series with each other and in shunt to the receptacle.

2. In an electrical measuring instrument, the combination with a receptacle for a translating device, stationary windings respectively of high and low resistance, and a movable winding, of a resistance approximately equal to that of the low resistance stationary winding, and means whereby the said receptacle may be connected between the circuit terminals in series circuit with the low resistance stationary winding and the movable winding may be connected in shunt thereto, or whereby the said receptacle may be connected between the circuit terminals in series with the resistance, and the high resistance stationary winding and the movable winding may be connected in series with each other and in shunt to the receptacle.

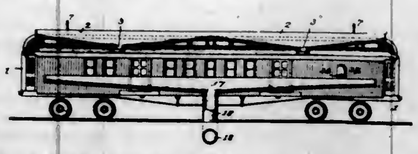


3. In an electrical measuring instrument, the combination with a receptacle for a translating device, stationary windings respectively of high and low resistance, and a movable winding, of a resistance, and means whereby the circuit relations of the parts may be so adjusted as to cause the instrument to operate either as a voltmeter or as a wattmeter and whereby the said receptacle may be connected in series circuit with the resistance in the former instance and in series circuit with the low resistance stationary winding in the second instance.

4. In an electrical measuring instrument, the combination with a receptacle for translating device, stationary windings respectively of high and low resistance, and a movable winding, of a resistance approximately equal to that of the low resistance stationary winding, and means whereby the circuit relations of the parts may be so adjusted as to cause the insturment to operate either as a voltmeter or as a wattmeter and whereby the said receptacle may be connected in series circuit with the resistance in the former instance and in series circuit with the low resistance stationary winding in the second instance.

5. In an electrical measuring instrument, the combination with a receptacle for a translating device, stationary windings respectively of high and low resistance, and a movable winding, of a resistance approximately equal to that of the low resistance stationary winding, and means whereby the said receptacle may be connected between the circuit terminals in series circuit with the resistance stationary winding and the movable winding may be connected in shunt thereto, or whereby the said receptacle may be connected between the circuit terminals in series with the resistance, and the high resistance stationary winding and the movable winding may be connected in series with each other and in shunt to the receptacle.

872,301. MAIL RECEIVER AND DELIVERER FOR RAILWAY-TRAINS. ANTON MATLAK, KASIMIR WISNIEWSKI, and MARJAN SKIKIEWICZ, Chicago, Ill. Filed Sept. 9, 1907. Serial No. 391,960.



1. In a mail catching and delivery apparatus for railway mail cars, the combination of a track crane, a car, a dislodging arm on said car and a longitudinal receiving trough extending approximately the length of the car and provided with a pair of discharge chutes extending down into the interior of the car, and with the bottom of the trough inclined towards said chutes, substantially as set forth.

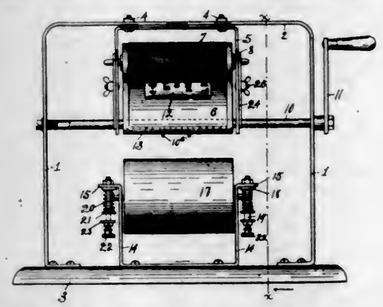
2. In a mail catching and delivery apparatus for railway mail cars, the combination of a discharge chute extending laterally through the side wall of the car and having a curved form, a gate closing the outer end of said chute, a stationary operating bar for said gate, and a stationary longitudinal receiving trough arranged beneath the outer end of said chute, substantially as set forth.

3. In a mail catching and delivery apparatus for railway mail cars, the combination of a discharge chute extending laterally through the side wall of the car and having a curved form, a pair of radius links forming a pivotal attachment for said chute to the body of the car, a gate closing the outer end of said chute, a stationary operating bar for said gate, and a stationary longitudinal receiving trough arranged beneath the outer end of said chute, substantially as set forth.

4. In a mail catching and delivery apparatus for railway mail cars, the combination of a discharge chute extending laterally through the side wall of the car and having a curved form, a gate closing the outer end of said chute, a stationary operating bar for said gate, a stationary longitudinal receiving trough arranged beneath the outer end of said chute, and a conduit connected to said receiving trough and extending to the interior of the railway station, substantially as set forth.

5. In a mail catching and delivery apparatus for railway mail cars of the type herein described, a holder for the mail comprising a pair of semi-spherical sections hinged together a latch for securing the same together, and a series of cushion springs arranged on the interior surface of said sections, substantially as set forth.

872,302. PRINTING APPARATUS. MICHAEL MCMAHON, Toledo, Ohio. Filed Feb. 4, 1907. Serial No. 355,591.



1. In a printing apparatus, a pair of upright members having their upper ends each formed with a lateral projection and longitudinally slotted, bearing members yieldingly carried by said projections, means for adjusting the yieldability of said bearing-members, and an impression-roll supported by said bearings, and a type-roll for coacting with the impression-roll.

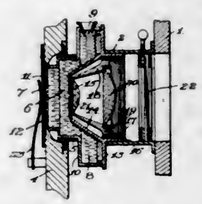
2. In combination an inverted U-shaped standard, arms pendently secured to the loop portion of the standard and provided with two sets of bearings, an inking-roll mounted in one of said sets of bearings and a type-cylinder in the other of said sets, said cylinder having one side partially cut away, means for revolving the type cylinder, upright bearing standards disposed intermediate the legs of the main standard, and an impression roll yieldingly mounted in said upright standards beneath the type-cylinder.

3. In combination, a base, an inverted U-shaped standard rising from the base, bearing arms pendently carried by the loop of the standard, a shaft journaled in said arms and the legs of the standard, a crank carried by said shaft, a type-cylinder mounted on the shaft between said arms, an inking-roll journaled in the arms above the type-cylinder, bearing-arms rising from the base intermediate the legs of the standard and having their upper ends turned outwardly to form shelves, bearings yieldingly suspended from said shelves, and an impression-roll journaled in said bearings, substantially as described.

4. In combination, a base, a bearing frame rising from the base, an inking-roll and a type-cylinder journaled in said frame, means for rotating the cylinder, arms rising from the base beneath the bearing-frame and having their upper end portions longitudinally slotted and bent outwardly at a point intermediate the ends of the slots, bearings yieldingly carried at the under sides of the outwardly turned portions of the arms, and an impression-roll having its trunnions supported by said bearings and permitted to be freely raised therefrom through the slots in the arms.

5. The combination with the type-cylinder, of subjacent bearing-standards having their upper end portions longitudinally slotted and bent outwardly at points intermediate the ends of the slots to form shelves, pins pendently carried by said shelves, spring 20 and plates 21 and 23 carried by said pins, bearing-blocks yieldingly supported beneath said shelves by the springs 20, adjusting-screws threaded to the plates 23 and coacting with the plates 21 to adjust the tension of the springs, and an impression-roll having its trunnions projecting through the slots in the standards and mounted in the bearing-blocks; substantially as described.

872,303. PROJECTION APPARATUS. WILLIAM L. PATTERSON, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed May 15, 1907. Serial No. 373,774.



1. The combination with a microscope and a condenser arranged to direct light rays to the microscope, of a cooling cell arranged between the microscope and the condenser, and means for holding the object in contact with the cooling cell.

2. The combination with a microscope stage, of a cooling cell having its front wall lying in the plane of the front wall of the stage.

3. The combination with a microscope stage of a cooling cell projecting into the stage.

4. The combination with a microscope and a microscope stage, of a cooling cell arranged to contact with an object on the stage, and a condenser arranged to direct light rays through the cell to the microscope.

5. The combination with a microscope and a stage, of a cooling chamber having transparent walls, the forward one being substantially in the plane of the front wall of the stage, and a condenser for directing rays through the cooling chamber to the microscope.

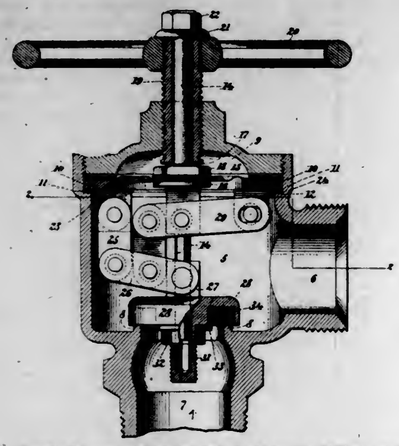
[Claims 6 to 11 not printed in the Gazette.]

872,304. VALVE. EMIL PHILLIPSON, New York, N. Y., assignor to Phillipson Valve Co., a Corporation of New York. Filed Oct. 19, 1906. Serial No. 339,589.

1. A valve comprising a casing, a non-rotating reciprocable stem therein, a valve in said casing adapted for longitudinal movement on said stem, a plurality of levers connected to said valve and stem, and a revoluble member for actuating said levers and operating said valve, substantially as specified.

2. A valve comprising a casing, a non-rotating reciprocable stem therein, a valve arranged upon said stem and adapted for longitudinal movement thereon, a plurality of connected levers connected to said valve and stem, and

means for actuating said levers to seat said valve, substantially as specified.



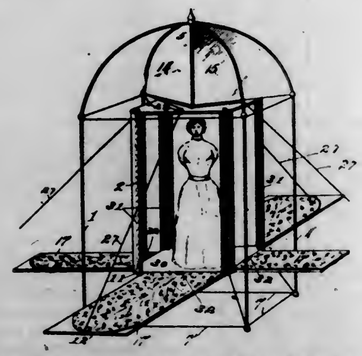
3. A valve comprising a casing, a non-rotating reciprocable stem therein, a valve on said stem adapted to move longitudinally thereon a plurality of levers pivotally supported in said casing and connected with each other and to said valve and stem, and means for actuating said levers, substantially as specified.

4. A valve comprising a casing, a non-rotating reciprocable stem therein, a valve on said stem, a plurality of levers pivotally supported in said casing, and secured to said stem and valve, links connecting said levers, and means for reciprocating said stem and actuating said levers, substantially as specified.

5. A valve comprising a casing, a non-rotating reciprocable stem therein, a valve on said stem, a plurality of levers pivotally supported in said casing, links connecting said levers, and a revoluble member for reciprocating said stem and actuating said levers to seat said valve, substantially as specified.

[Claims 6 to 10 not printed in the Gazette.]

872,305. ILLUSORY APPARATUS. BARTOLOMEO PURPURA, Wheeling, W. Va. Filed July 26, 1907. Serial No. 385,661.



1. An illusory apparatus comprising a frame, a cabinet supported between the extremes of the frame, and object-concealing means arranged above the cabinet.

2. An illusory apparatus comprising an open-work frame, a cabinet supported between the extremes of the frame, and object-concealing means arranged above the cabinet, said means including angularly related mirrors.

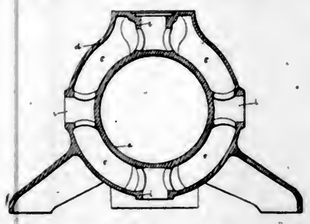
3. An illusory apparatus comprising an open-work frame, a cabinet supported between the extremes of the frame, and object-concealing means arranged above the cabinet, said means including mirrors arranged at right angles with respect to each other.

4. An illusory device comprising a frame having an upper dome section, a cabinet supported within the frame and spaced from the bottom thereof, and object-concealing means arranged in the dome section.

5. An illusory apparatus comprising a frame having a dome section, a cabinet supported within the frame, a rod depending from the dome apex and secured to the cabinet top, and mirrors extending from said top to the side walls of the dome.

[Claims 6 to 15 not printed in the Gazette.]

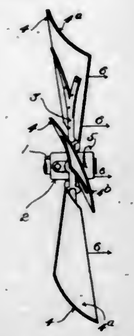
872,306. CYLINDER FOR GAS-ENGINES. HANS RICHTER, Nuremberg, Germany, assignor to The Firm of Vereinigte Maschinenfabrik Augsburg und Maschinenbaugesellschaft Nürnberg, A. G., Nuremberg, Germany. Filed July 9, 1903. Serial No. 164,864.



1. A cylinder comprising inner and outer walls spaced apart and having transverse portions connecting their ends together, transverse walls connecting the inner and outer walls together and forming casings, a pair of said casings being at each end of the cylinder, and transverse walls forming a pair of casings *h* located between the casings of each pair and two pairs of casings *i* located between the pairs of casings and having communication with the space between the inner and outer walls.

2. In a cylinder with a cast-on cooling jacket and cast-in casings, a number of said casings serving as casings for the ignition boxes and others as pipe connections for the cooling-water, said casings lying around and along the cylinder between the latter and the cooling jacket and all the casings having approximately the same measurements and being arranged radially of the cylinder and equidistant from each other.

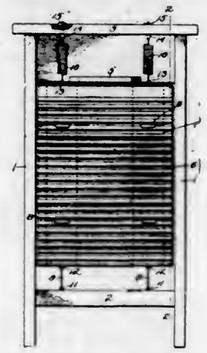
872,307. PROPELLER OR FAN. FREDERICK G. SARGENT, Granitеville, Mass., assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass., a Corporation of Massachusetts. Filed Sept. 27, 1905. Serial No. 280,266.



A rotary propeller or fan comprising vanes or blades following one another in series and alternately having

concave and convex faces facing in the direction of movement.

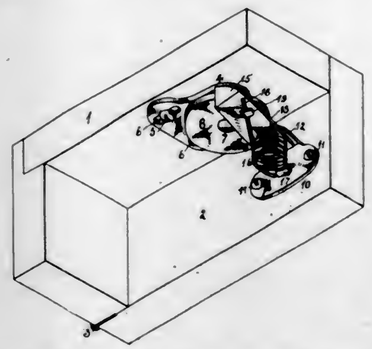
872,308. WASHBOARD. EDWARD M. SAUNDERS, Malden, Mass., assignor of one-fourth to Walter G. Payson, Boston, Mass. Filed Sept. 20, 1906. Serial No. 335,358.



1. A wash board comprising a frame, a rigid rubbing board, links connecting one end of the board with the frame and tension links yieldingly connecting the other end of the board with the frame.

2. A wash board comprising a frame, a rigid rubbing board, flexible connections between the lower end of the board and the frame, and extensible yielding connections between the upper end of the board and the frame.

872,309. DOOR AND CUPBOARD CATCH. SILAS C. SCHOFIELD, Freeport, Ill., assignor to William Petersen, Lyons, Iowa. Filed Dec. 21, 1906. Serial No. 348,940.

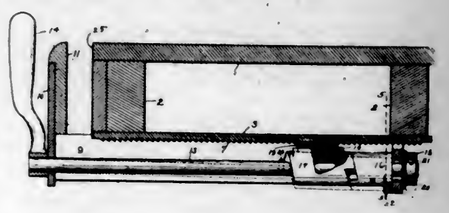


1. A catch comprising two sections, one section composed of a support and an axially movable wheel, and the other section composed of a support and a lever pivotally connected to the support and held yieldingly in one position and adapted to directly engage the wheel and a stop to the movement of the lever in one direction.

2. A catch comprising two sections, one section composed of a support and an axially movable wheel, and the other section composed of a support, a lever pivotally connected to the support, a spring having one end connected to the support and its other end connected to the lever.

3. A catch comprising a movable wheel, a pivoted lever held yieldingly in one position and adapted to engage the movable wheel, and a stop to the movement of the lever in one direction.

872,310. VISE. FREEMAN W. STROH, Barberton, Ohio, assignor of one-half to Jacob E. Millis, Barberton, Ohio. Filed Aug. 3, 1907. Serial No. 386,949.



1. In a vise, the combination of a fixed guide-plate provided with a toothed bar, a movable frame carried by the guide-plate, a shaft journaled in the movable frame and provided with a fixed cam-head, a cam-block loosely mounted upon the shaft and provided with cam ends, a toothed-bar carried by the loosely mounted cam block, means for holding the shaft against endwise movement, relative to the movable frame, and an operating handle secured to the shaft, and a jaw carried by the movable frame, substantially as and for the purpose specified.

2. In a vise of the class described, a guide plate, a movable frame carried by the guide plate, a shaft journaled in the movable frame, a cam-head fixed to the shaft and rotatable therewith, said cam-head provided with a cut out portion, a flange located below the cut out portion of the cam-head and carried by the movable frame, a cam-block loosely mounted upon the shaft, said loosely mounted cam-block provided with a toothed block and a rack-bar adapted for engagement with the toothed bar carried by the cam-head loosely mounted upon the shaft, means for holding the shaft against endwise movement, relative to the frame, and an operating handle, and fixed and movable jaws, the movable jaw carried by the movable frame, substantially as and for the purpose specified.

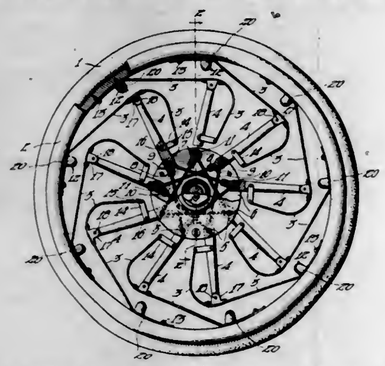
3. In a vise of the class described, a fixed guide plate, a movable frame carried by the guide plate, a shaft journaled in the movable frame, cam blocks mounted upon the shaft, one of the cam blocks loosely mounted and the other fixed upon the shaft, a loosely mounted cam block provided with a toothed block, and a rack bar adapted to engage the toothed block carried by the loosely mounted cam block, means for holding the shaft against endwise movement relative to the movable frame, and means for dropping the end of the shaft carrying the cam blocks, and fixed and movable jaws, said movable jaws carried by the movable frame, substantially as and for the purpose specified.

4. In a vise of the class described, a fixed guide plate and a rack bar, a movable frame carried by the fixed guide plate, a shaft journaled at one of its ends in an elongated slot, cam blocks mounted upon the shaft, one of said blocks fixed to the shaft, and the other loosely mounted thereon, a removable toothed block adapted for engagement with the rack bar, said toothed block carried by the loosely mounted cam block, said fixed cam-block provided with a cut out portion and a flange adapted to engage the shoulder of the cut out portion, means for holding the shaft against endwise movement, relative to the frame, clamp jaws, one fixed and the other movable, and an operating handle connected to the shaft, substantially as and for the purpose specified.

5. In a vise of the class described, a fixed guide plate, a movable frame carried by the guide plate, a clamp jaw carried by the movable frame, a fixed jaw, a shaft journaled in the movable frame, said shaft provided with an operating handle, cam blocks located upon the shaft, one of said cam blocks fixed to the shaft, means for elevating and lowering the end of the shaft provided with the cam blocks, means for holding the shaft against endwise movement relative to the movable frame, a fixed rack bar and a toothed block carried by the loosely mounted cam block, substantially as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

872,311. VEHICLE-WHEEL. EMIL SUTHERLAND, Hollywood, Cal. Filed Nov. 2, 1906. Serial No. 341,728.



1. A vehicle wheel having a non-deformable rim; carrying springs interposed between the spokes and the rim and workably connecting the same together; annular plates forming hubs and carrying the spokes pivotally connected thereon; compensating springs extending from the inner end of one spoke to the inner end of another spoke, the said springs being keyed to one spoke and having a sliding fit in a socket in another spoke.

2. In a vehicle wheel, a plurality of spokes being pivotally secured at their inner ends and carrying on their outer ends carrying springs and connected together at their inner ends with compensating springs.

3. In a vehicle wheel of the character herein described, spokes carrying on their outer ends carrying springs, the said carrying springs being detachably secured to the rim at one end and pivotally connected to a link at the other end, the said link being pivotally secured to the inner end of the spoke; a bracket mounted approximately on the center of the carrying springs and pivotally connected with the outer end of the spokes.

4. A wheel of the character herein described, having two annular plates surrounding and forming part of the hub of the wheel, the said plates having holes therein for the reception of bearing wrists on the inner end of the spokes, in combination with spokes having bifurcated inner ends with bearing wrists thereon; and compensating springs secured to the inner ends of the spokes, each spring being rigidly secured at one end to the inner end of the spoke and the other end of the spring having a sliding engagement with the inner end of another spoke, and means to workably connect the rim of the wheel with the spokes.

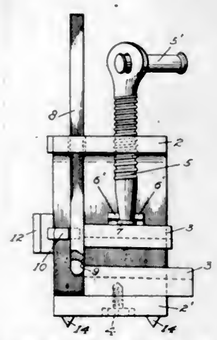
5. In a vehicle wheel of the character herein described, the herein described spoke, having on its outer ends means to pivotally secure the same to a carrying spring and having on the inner end thereof a socket for the sliding reception of one end of a compensating spring and having keyed in said inner end an end of another compensating spring.

[Claims 6 and 7 not printed in the Gazette.]

872,312. APPARATUS FOR CUTTING CABLE, &c. CHARLES WALLER, Seattle, Wash. Filed Apr. 6, 1907. Serial No. 366,851.

1. A cutting apparatus embodying a frame, a fixed jaw and a movable jaw carried by said frame and having their front faces in vertical alinement, a vertical cutter of bar form receiving support at an intermediate portion from said frame and at its lower portion from said front faces of the jaws, and a guide member carried by the frame and having a cut out portion to receive said cutter.

2. A cutting apparatus embodying a frame, having a pair of horizontal arms and a connecting arm, a fixed jaw carried by the lower of said horizontal arms, a movable jaw supported from the upper of said horizontal arms, a vertical cutter of bar form loosely passed through the upper arm, and means secured to said connecting arm and receiving said cutter to guide the same in its cutting movement.

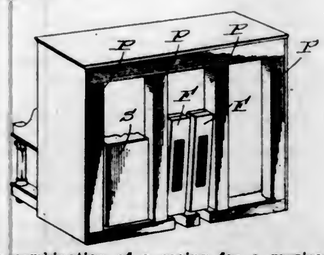


3. A cutting apparatus embodying a frame [illegible] shape, a movable clamp to clamp the material to one [illegible] zontal arm of said frame receiving support from the other horizontal arm thereof, a cutter receiving guiding support from the front end of said clamp, and a guide member shaped to receive said cutter and retain the same in its stated relation to the clamp during the cutting operation, said guide member having a horizontal disposition and being supported from the vertical connecting arm of said frame.

4. A cutting apparatus embodying a frame having a vertical arm and horizontal arms leading therefrom, the upper of said arms having an opening therein, a cutter extending through said opening, a rigid jaw on the lower arm having its front face to the rear of the cutter so as to engage and guide the same, a movable jaw carried by the upper arm to the rear of said cutter and having its front face engaged by said cutter, and a horizontal member having a threaded shank passed through an opening provided therefor in said vertical arm and a nut on its outer end bearing against the outer face of said vertical arm, to hold the guide member rigid, said guide member engaging the front face of the cutter and maintaining the same in guiding engagement with said movable clamp.

5. A cutting device comprising in combination with a frame, a pair of jaws carried thereby and having their front faces in vertical alinement, a cutter of bar form loosely projected through said frame so as to be removable therefrom by a mere lifting movement and receiving guiding support from said front faces of the jaws during its cutting movement, and means to engage the front face of said cutter and retain the same in its stated relation to the jaws during its cutting operation.

872,313. AUTOMATIC PLAYING ATTACHMENT FOR MUSICAL INSTRUMENTS. PETER WELIN, Newcastle, Ind., assignor to Albert Krell, Newcastle, Ind. Original application filed July 20, 1904, Serial No. 217,347. Divided and this application filed June 20, 1906. Serial No. 322,506.



1. The combination of a casing for a musical instrument, having vertical posts or uprights, vertical feeders, and a vertical storer or air reservoir, said feeders and storer being located in panels between said posts or uprights.

2. The combination of a casing for a musical instrument, having rear posts or uprights, substantially vertical feeders located between said posts or uprights, and means for operating said feeders.

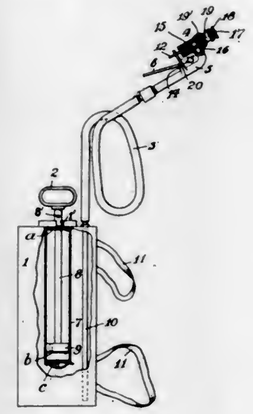
3. The combination of a piano casing having rear posts or up-rights, substantially vertical feeders located between said posts or up-rights, and means for operating said feeders, said means being foldable within the casing.

4. The combination of a piano casing having rear posts or uprights, feeders for supplying power for automatic playing attachments located in one of the panels between the posts or uprights and a storer or air reservoir located in another one of the panels between the posts or uprights.

5. The combination of a piano casing having rear posts or uprights, feeders for supplying power for automatic playing attachments, said feeders being located in a panel between two of the posts or uprights.

[Claim 6 not printed in the Gazette.]

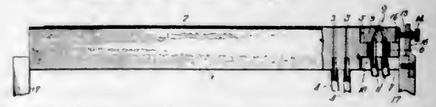
872,314. PROCESS OF REMOVING PAINT AND VARNISH. JOHN M. WILSON, Montclair, N. J. Filed Aug. 1, 1907. Serial No. 386,651.



1. The process of removing paint and varnish, which consists in causing a pneumatically-propelled jet of a paint and varnish remover, containing highly volatile non-aqueous solvent of dried films of paint and varnish and free from sufficient amounts of aqueous acid and alkaline solutions capable of dissolving dried films of paint and varnish, to materially retard the evaporation of the highly volatile, non aqueous solvent aforesaid, to impinge against an exposed surface of dried paint or varnish, and then removing the softened, slush-like film resulting from said treatment, substantially as described.

2. The process of removing paint and varnish, which consists in causing a pneumatically-propelled jet of a paint and varnish remover, containing highly volatile, non-aqueous solvent of dried films of paint and varnish and free from sufficient amounts of waxy, film-forming compounds to produce a film and effectively retard the evaporation of the highly volatile solvent, upon exposure to the atmosphere, to impinge against an exposed surface of dried paint or varnish, whereby the evaporation of the volatile ingredients is substantially retarded and an efficient penetration of the said solvent into the pores of and beneath the film of paint or varnish treated is secured, and then removing the softened, slush-like film resulting from said treatment, substantially as described.

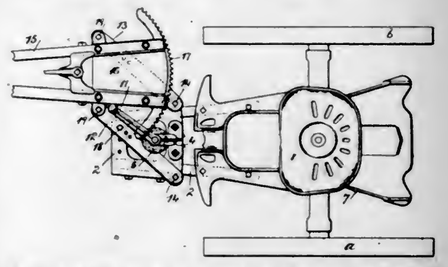
872,315. TRACKER-BAR FOR PIANO PLAYERS. FREDERICH W. WOOD, Kansas City, Mo., assignor to Berry-Wood Piano Player Co., Kansas City, Mo. Filed Dec. 14, 1906. Serial No. 347,899.



1. In a device of the character described, a tracker bar provided with a longitudinal series of air ducts and with an opening at one end of said series, a block fitting in said opening and having one of its faces flush with and forming practically a continuation of the face of the tracker bar; said block having a passage extending through it from said face, and means to adjust said block longitudinally in the opening of the tracker bar so as to vary the distance between the mouth of said passage and the series of tracker bar air ducts.

2. In a device of the character described, a tracker bar provided with a longitudinal series of air ducts and with an opening at one end of said series, a block fitting in said opening and having one of its faces flush with and forming practically a continuation of the face of the tracker-bar; said block having a passage extending through it from said face, and a screw suitably supported and engaging said block to adjust the same longitudinally and thus vary the distance between its passage and the longitudinal series of tracker bar air ducts.

872,316. AGRICULTURAL IMPLEMENT. LEWIS A. ASPINWALL, Jackson, Mich., assignor to Aspinwall Manufacturing Co., Jackson, Mich., a Corporation of Michigan. Original application filed Apr. 9, 1906. Serial No. 310,601. Divided and this application filed Apr. 12, 1907. Serial No. 367,727.



1. In a seed planter or cultivator, the combination with the main frame thereof and the pole structure to which the horses are attached, of means connecting said parts so that the relation of the pole to the frame can be changed at the pleasure of the operator and a parallel movement be imparted to the pole from one side to the other of the longitudinal center of the machine, means for effecting this change with regular progressive movement and means for locking the parts in their predetermined position.

2. In a seed-planter or cultivator, the combination with the forward portion of the main frame and a pole to which the horses are attached, of parallel bars pivotally connected at their respective ends to the forward portion of the frame and to the pole structure whereby the pole structure is given a swinging relation to the frame, a pinion and segment rack structure connected respectively to the parts for effecting the swinging movement of the pole and means for securing the pole structure in a predetermined relation to the frame.

3. In a seed-planter or cultivator, the combination with the forward part of the frame structure of the planter, of a bearing bracket 4 secured thereto, a short shaft passing through said bearing bracket, a pinion on the lower end of said shaft and a handle on the upper end for turning the shaft and the pinion, a pole structure to which the

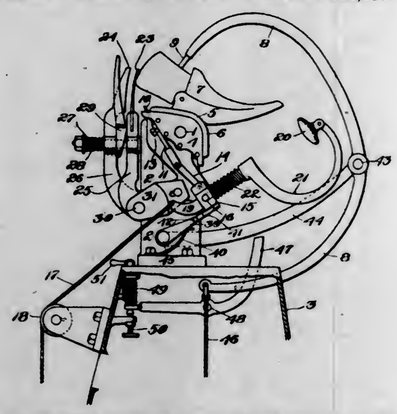
horses are to be attached, a frame structure upon which the pole structure is mounted, a segment gear on the end of the pole structure meshing with the aforesaid pinion and the position of which is adapted to change the relation of the pole structure to the frame of the machine and devices pivotally connecting the frame structure and pole and providing for the swinging movement.

4. In a seed-planter or cultivator, the combination with the forward part of the frame structure of the planter, of a bearing bracket 4 secured thereto, a short shaft passing through said bearing bracket, a pinion on the lower end of said shaft and a handle on the upper end for turning the shaft and the pinion, a divided pole structure 15, a platform 16 to which the ends of the divided pole structure are secured, a segment rack 17 at the back edge of said frame meshing with the aforesaid pinion, parallel bars 12 13, at one end connected to the frame at opposite sides of the aforesaid bracket and at the other ends to opposite sides of the platform 16, thus pivotally connecting the divided pole structure to the frame of the planter, and a locking pin adapted to pass through a hole formed in either of the parallel bars 12 13 into holes formed in the frame of the machine for locking the divided pole structure in a predetermined relation to the frame of the machine.

5. In a seed planter or cultivator, the combination with the main frame thereof and the pole structure to which the horses are attached, of devices pivotally connected to and connecting the pole and main frame so as to provide a swinging relation by which a movement is imparted to the pole parallel with the longitudinal center of the machine and at either side of said center, means manually operated for swinging the pole and means for securing the pole to the frame in the desired relation.

[Claim 6 not printed in the Gazette.]

872,317. RELASTING-MACHINE. CHARLES F. PYM, Essex, Ontario, Canada, assignor to Krentler-Arnold Hinge Last Company, Detroit, Mich., a Corporation of West Virginia. Filed July 18, 1906. Serial No. 326,685.



1. A relasting machine, comprising a support for engaging and retaining the shoe bottom, and means coöperating therewith to press a last downwardly and forwardly into the shoe.

2. A relasting machine, comprising a support for frictionally engaging and retaining the shoe bottom, and means coöperating therewith to press a last downwardly and forwardly into the shoe.

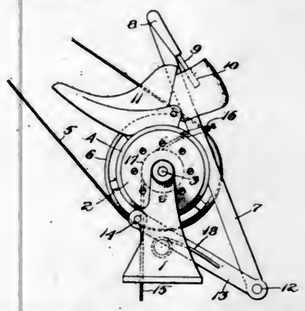
3. A relasting machine, comprising a shoe support having a contour to mold the shank of the shoe to the proper transverse and longitudinal curvature, and means to force the last forwardly and downwardly in the shoe on said support.

4. A relasting machine, comprising a shoe support provided with a yielding frictional block having a shape to conform the shank of the shoe to the proper transverse and longitudinal curvature, and means to force the last forwardly and downwardly in the shoe on said support.

5. In a relasting machine, a frictional support for the shoe having means for shaping the shank surface, and last inserting means coöperating therewith to mold and shape the shank of the shoe.

[Claims 6 to 25 not printed in the Gazette.]

872,318. APPARATUS FOR RELASTING SHOES. CHARLES F. PYM, Essex, Ontario, Canada, assignor to Krentler-Arnold Hinge Last Company, Detroit, Mich., a Corporation of West Virginia. Filed July 18, 1906. Serial No. 326,684.



1. In a relasting machine, a rotatable relasting block shaped to engage and retain the bottom of a shoe, and a last retainer constructed and arranged to force a last into said shoe as the latter is worked back over the last by the rotating relasting block.

2. In a relasting machine, a rotatable relasting block shaped to engage and retain the bottom of a shoe, a last retainer, and means to move the latter downwardly and forwardly with the last.

3. In a relasting machine, a movable relasting block adapted to engage frictionally against the shank of a shoe, a jack provided with means for engaging the last, means for causing a movement of the block, and means for causing the jack to change its position with reference to said block.

4. In a relasting machine, a relasting block having a transversely grooved friction surface adapted to engage the shank of a shoe, a relasting jack and operating means coöperating with said block and jack for permitting relative movement between the last and shoe when the last is inserted within the shoe.

5. In a relasting machine, a relasting block having a transversely grooved friction surface adapted to engage the shank of a shoe, a relasting jack, and means normally impelling said jack upward.

[Claim 6 not printed in the Gazette.]

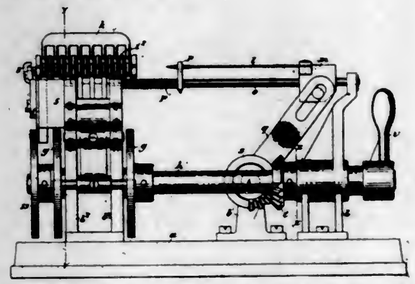
REISSUES.

12,724. MACHINE FOR SEWING TUBULAR STRUCTURES. SAMUEL COHN, New York, N. Y. Original No. 798,090, dated Aug. 29, 1905, Serial No. 207,055. Application for reissue filed Oct. 2, 1906. Serial No. 337,127.

1. In a machine for sewing the mouths of tubular fabric structures, the combination of means for corrugating such structures, suitable needles, means for passing the needles through the said structures and a threader comprising in its structure means for passing different portions of the same thread in opposite directions through the eyes of the needles.

2. In a machine for sewing the mouths of tubular fabric

structures, the combination of means for corrugating such structures, suitable needles, means for passing the needles through the said structures, a threader comprising in its structure means for passing different portions of the same thread in opposite directions through the eyes of the needles and a thread support or guide for the thread coöperating with the threader.



3. In a machine for sewing the mouths of tubular fabric structures, the combination of means for corrugating such structures, suitable needles, means for passing the needles through the said structures, a threader comprising in its structure means for passing different portions of the same thread in opposite directions through the eyes of the needles and a single shaft *h* for operating the fabric-corrugating means and the threader.

4. In a machine for corrugating the mouths of tubular fabric structures, the combination of movable jaws and a needle mechanism, cam means for actuating the movable jaws and mutilated gearing for actuating the needle mechanism, the said cam means and mutilated gearing being so arranged with relation to each other as to operate the jaws and needles separately during different periods of time.

5. In a machine for corrugating the mouths of tubular structures, the combination of suitable fabric-corrugating means and a center member of a general wedge shape at its upper portion to facilitate the placing of the tubular structure thereon, the said member having upwardly opening slots to facilitate the removal of the tubular structure, the said slots and surface of the wedge shaped member being so located that the wedge-shaped member guides the tubular structure over said slots when the said tubular structure is put on the said wedge-shaped member.

[Claims 6 to 16 not printed in the Gazette.]

12,725. BOX. RICHARD G. INWOOD and PERRY C. LAVENBERG, South Bend, Ind., assignors to The National Wire Bound Box Company, South Bend, Ind., a Corporation of Indiana. Original No. 799,854, dated Sept. 19, 1905, Serial No. 228,765. Application for reissue filed June 13, 1907. Serial No. 378,881.



1. A wire-bound foldable box-blank, comprising a plurality of straight-edged sheets, wires secured to and connecting said sheets, and cleats secured to said sheets to terminate short of edges of the latter, a distance equal or approximately equal to the thickness of a sheet, whereby when folded at a right-angle the end of one sheet overlaps the end of an adjacent sheet.

2. A wire bound foldable box blank, comprising a plurality of straight edged sheets, wires secured to and connecting said sheets, and step-mitered cleats secured to said sheets to terminate short of edges of the latter a distance equal to the thickness of a sheet, whereby when folded at a right angle the end of one sheet overlaps the end of an adjacent sheet.

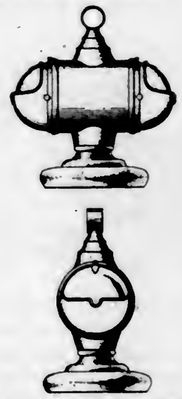
DESIGNS.

38,897. SPOON OR SIMILAR ARTICLE. EUSTACE CREES and CHARLES S. COURT, Providence, R. I., assignors to J. S. Townsend, Chicago, Ill. Filed Sept. 9, 1907. Serial No. 392,073. Term of patent 14 years.



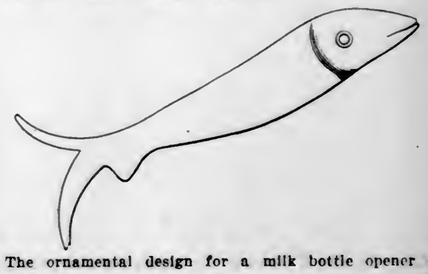
The ornamental design for a spoon, or similar article, as shown.

38,898. STERILIZING-RECEPTACLE. EDWARD KRONMAN, New York, N. Y. Filed July 18, 1907. Serial No. 384,489. Term of patent 14 years.



The ornamental design for a sterilizing receptacle, as shown.

38,899. MILK-BOTTLE OPENER. ANNIE NEWCOMB, Ridgefield, Conn. Filed Aug. 15, 1907. Serial No. 388,730. Term of patent 3½ years.



The ornamental design for a milk bottle opener as shown.

38,900. ICE-PICK. GEORGE E. WOOD, Plantsville, and EDMUND A. SCHADE, New Britain, Conn., assignors to The Stanley Rule & Level Company, New Britain, Conn., a Corporation of Connecticut. Filed Feb. 19, 1907. Serial No. 358,326. Term of patent 7 years.



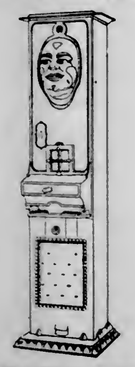
The ornamental design for an ice pick, as shown.

38,901. CIGAR-LIGHTER. LOUIS W. RICE, New York, N. Y. Filed Sept. 6, 1907. Serial No. 391,730. Term of patent 7 years.



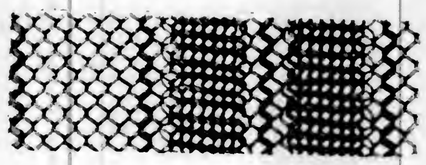
The ornamental design for a cigar-lighter, as shown.

38,902. VENDING-MACHINE CASING. WILLIAM JOSEPH PAUL, Pittsburg, Pa. Filed Aug. 31, 1907. Serial No. 390,958. Term of patent 3½ years.



The ornamental design for a vending machine casing, as shown.

38,903. WIRE FABRIC. HARRIS SUSSMAN, New York, N. Y. Filed June 15, 1907. Serial No. 379,289. Term of patent 7 years.



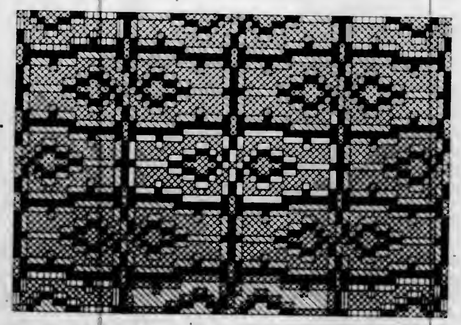
The ornamental design for wire fabric, as shown.

38,904. CARPET FABRIC. GEORGE HAWKINS, Philadelphia, Pa., assignor to Ivins, Dietz & Metzger Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 9, 1907. Serial No. 396,673. Term of patent 7 years.



The ornamental design for a carpet fabric, as shown.

38,905. CARPET FABRIC. GEORGE HAWKINS, Philadelphia, Pa., assignor to Ivins Deitz & Metzger Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 9, 1907. Serial No. 396,674. Term of patent 7 years.



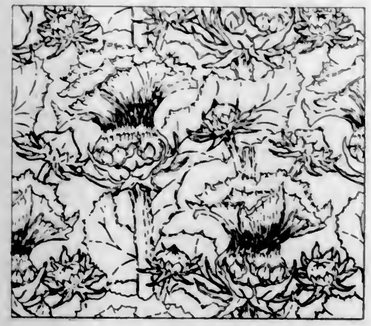
The ornamental design for a carpet fabric, as shown.

38,906. TEXTILE FABRIC. HARRIET WEBSTER FOWLER, New York, N. Y., assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Oct. 9, 1907. Serial No. 396,675. Term of patent 3½ years.



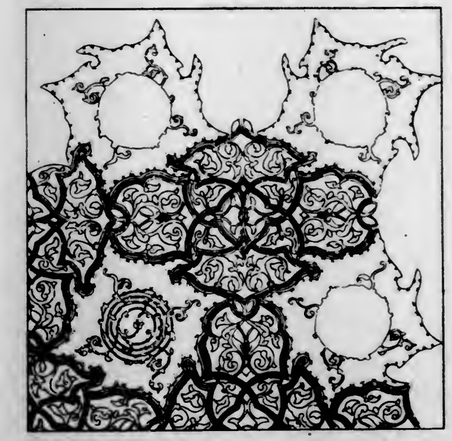
The ornamental design for a textile fabric, as shown.

38,907. TEXTILE FABRIC. HARRIET WEBSTER FOWLER, New York, N. Y., assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Oct. 9, 1907. Serial No. 396,676. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

38,908. TEXTILE FABRIC. ELIZABETH LAURA MOSENTHAL, New York, N. Y., assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Oct. 9, 1907. Serial No. 396,671. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

38,909. TEXTILE FABRIC. ANNA OLSSON, South Manchester, Conn., assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Sept. 21, 1907. Serial No. 394,002. Term of patent 3½ years.



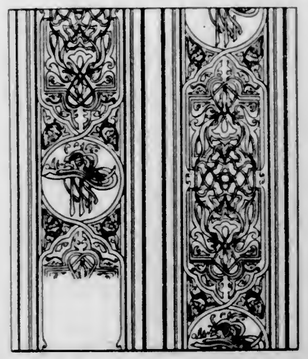
The ornamental design for a textile fabric, as shown.

38,910. TEXTILE FABRIC. ANNA OLSSON, South Manchester, Conn., assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Sept. 21, 1907. Serial No. 394,003. Term of patent 3½ years.



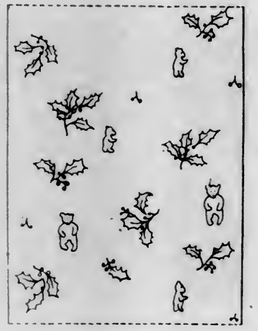
The ornamental design for a textile fabric, as shown.

38,911. TEXTILE FABRIC. LOUISA RUSSELL, Glenridge, N. J., assignor to Cheney Brothers, South Manchester, Conn., a Corporation of Connecticut. Filed Sept. 25, 1907. Serial No. 394,589. Term of patent 3½ years.



The ornamental design for a textile fabric, as shown.

38,912. RIBBON. EDGAR M. CORBETT, Paterson, N. J. Filed Oct. 18, 1907. Serial No. 398,131. Term of patent 7 years.



The ornamental design for ribbon, as shown.

38,913. RIBBON. EDGAR M. CORBETT, Paterson, N. J. Filed Oct. 18, 1907. Serial No. 398,132. Term of patent 7 years.



The ornamental design for ribbon, as shown.

38,914. NECKTIE. GEORGE O. SANBORN, Seattle, Wash. Filed Oct. 17, 1906. Serial No. 339,421. Term of patent 3½ years.



The ornamental design for a necktie as shown.

38,915. NECKTIE. GEORGE O. SANBORN, Seattle, Wash. Filed Oct. 17, 1906. Serial No. 339,422. Term of patent 3½ years.



The ornamental design for a necktie as shown.

38,912. RIBBON. EDGAR M. CORBETT, Paterson, N. J. Filed Oct. 18, 1907. Serial No. 398,131. Term of patent 7 years.



The ornamental design for ribbon, as shown.

38,913. RIBBON. EDGAR M. CORBETT, Paterson, N. J. Filed Oct. 18, 1907. Serial No. 398,132. Term of patent 7 years.



The ornamental design for ribbon, as shown.

38,914. NECKTIE. GEORGE O. SANBORN, Seattle, Wash. Filed Oct. 17, 1906. Serial No. 339,421. Term of patent 3½ years.



The ornamental design for a necktie as shown.

38,915. NECKTIE. GEORGE O. SANBORN, Seattle, Wash. Filed Oct. 17, 1906. Serial No. 339,422. Term of patent 3½ years.



The ornamental design for a necktie as shown.

TRADE-MARKS

PUBLISHED NOVEMBER 26, 1907.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 2,267. (CLASS 51. MALT PREPARATIONS NOT OTHERWISE CLASSIFIED.) BEADLESTON & WOERZ, New York, N. Y. Filed Apr. 19, 1905. Used ten years.

EMPIRE BREWERY.

Particular description of goods.—Ale, Porter, Lager-Beer, and Stout.

Ser. No. 3,872. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE DAVID E. FOUTZ CO., Baltimore, Md. Filed May 1, 1905. Used ten years.

FOUTZ'S

Particular description of goods.—A Remedy for the Ailments and Diseases of Horses, Horned Cattle, Swine, and other Stock.

Ser. No. 5,434. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) SIEGEL COOPER & CO., Chicago, Ill. Filed May 13, 1905. Used ten years.

MILFORD

Particular description of goods.—Canned Vegetables.

Ser. No. 9,916. (CLASS 71. TOBACCO PRODUCTS.) MASPERO FRÈRES, LIMITED, London, England. Filed July 8, 1905.

NILOMETER.

Particular description of goods.—Cigarettes, Cigars, Smoking-Tobacco, and Chewing-Tobacco.

Ser. No. 12,080. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) "LE RIPOLIN," (SOCIÉTÉ ANONYME FRANÇAISE DE PEINTURES LAQUÉES ET D'ENDUITS SOUS-MARINS, PROCÉDÉS LEFRANC & BRIEGLEB RÉUNIS,) Paris, France. Filed Aug. 29, 1905.

FESTINOL

Particular description of goods.—Mixed Paints and Varnishes.

Ser. No. 12,750. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) WM. ANDERSON & CO., New York, N. Y. Filed Sept. 18, 1905. Used ten years.

ANDERSON ZEPHYR

Particular description of goods.—Ginghams.

Ser. No. 12,965. (CLASS 71. TOBACCO PRODUCTS.) MASPERO FRÈRES, LIMITED, London, England. Filed Sept. 25, 1905.

ROSETTE

Particular description of goods.—Cigars, Cigarettes, Smoking-Tobacco, and Chewing-Tobacco.

Ser. No. 18,375. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) LEW ARNTZ, Des Moines, Iowa. Filed Mar. 30, 1906.

Dr Lew Arntz

Particular description of goods.—Eye Remedies.

Ser. No. 18,390. (CLASS 4. ABRASIVE AND POLISHING MATERIALS NOT INCLUDED IN CLASSES 8 AND 16.) THE MATCHLESS METAL POLISH CO., New York, N. Y., and Chicago, Ill. Filed Mar. 31, 1906. Used ten years.

WHITE DIAMOND

Particular description of goods.—Abrasive Material for Cleaning and Polishing Metal, Glass, and Marble.

Ser. No. 20,851. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) GODFREY L. CABOT, Boston, Mass. Filed July 11, 1906.



ELF

Particular description of goods.—Carbon-Black, Lampblack, and Gas-Black.

Ser. No. 21,458. (CLASS 41. KNITTED, NETTED, AND LACE GOODS.) DAVID J. ABRAHAM, Berkeley, Cal. Filed Aug. 10, 1906.



Particular description of goods.—Knit Gloves and Ladies' Hosiery.

Ser. No. 21,661. (CLASS 9. EXPLOSIVES.) THE HAZARD POWDER COMPANY, Hazardville, Conn. Filed Aug. 18, 1906. Used ten years.

HAZARD

Particular description of goods.—Explosive Powder, Including Smokeless Powder.

Ser. No. 21,983. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) BOOTT MILLS, Lowell, Mass. Filed Sept. 7, 1906.



Particular description of goods.—Cotton Piece Goods.

Ser. No. 21,985. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) BOOTT MILLS, Lowell, Mass. Filed Sept. 7, 1906. Used ten years.



Particular description of goods.—Cotton Piece Goods.

Ser. No. 22,378. (CLASS 58. GAMES AND TOYS, AND SPORTING GOODS NOT OTHERWISE CLASSIFIED.) BULLARD & GORMLEY CO., Chicago, Ill. Filed Sept. 29, 1906. Used ten years.



Particular description of goods.—Fishing Lines, Reels, Hooks, and Flies.

Ser. No. 22,419. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) HENRY VON GLAHN & SON, Brooklyn, N. Y. Filed Oct. 1, 1906. Used ten years.



The star being printed in silver.
Particular description of goods.—Canned Vegetables.

Ser. No. 22,674. (CLASS 71. TOBACCO PRODUCTS.) GLOBE TOBACCO COMPANY, Detroit, Mich. Filed Oct. 13, 1906. Used ten years.



Particular description of goods.—Smoking-Tobacco, Cigars, and Cigarettes.

Ser. No. 22,699. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE STOCK FOOD COMPANY OF AMERICA, Minneapolis, Minn. Filed Oct. 8, 1906.



Particular description of goods.—Stock-Tonics.

Ser. No. 22,813. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) DEITSCH BROTHERS, New York, N. Y. Filed Oct. 20, 1906.



The circle background being red.
Particular description of goods.—Tooth, Hair, Nail, and Toilet Brushes.

Ser. No. 22,814. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) DEITSCH BROTHERS, New York, N. Y. Filed Oct. 20, 1906.



The square background being red.
Particular description of goods.—Tooth, Hair, Nail, and Toilet Brushes.

Ser. No. 23,433. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) VANCE SHOE COMPANY, Wheeling, W. Va. Filed Nov. 17, 1906.



Particular description of goods.—Leather Boots and Shoes for Women's Wear.

Ser. No. 24,433. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) J. M. DELANEY & CO., New York, N. Y. Filed Jan. 4, 1907.

PERRY

Particular description of goods.—Sole-Leather, Taps, Top Pieces, Squares, Jumbo Blocks, Outsoles, Insoles, Counters, Sides, Crop, Backs, Bends, Heads, Bellies, and Heel-Stock.

Ser. No. 24,435. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) J. M. DELANEY & CO., New York, N. Y. Filed Jan. 4, 1907.

MARION

Particular description of goods.—Sole-Leather, Taps, Top Pieces, Squares, Jumbo Blocks, Outsoles, Insoles, Counters, Sides, Crop, Backs, Bends, Butts, Strips, Butt Shoulders, Side Shoulders, Back Shoulders, Heads, Bellies, and Heel-Stock.

Ser. No. 24,983. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE EASTERN DYNAMITE COMPANY, Kenvil, N. J. Filed Jan. 29, 1907. Used ten years.



The star is colored red.

Particular description of goods.—Electric Exploders in the Form of Caps and Leading and Connecting Insulated Electrical Wire.

Ser. No. 24,987. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) ADAM HILL, London, England, assignor to John Robertson & Sons Limited. Filed Jan. 29, 1907.

"OLD ADAM"

Particular description of goods.—Whisky.

Ser. No. 24,990. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) LAFLIN & RAND POWDER COMPANY, New York, N. Y. Filed Jan. 29, 1907.

LIGHTNING ELECTRIC

Particular description of goods.—Insulated Electrical Wires and Electric Exploders in the Form of Caps.

Ser. No. 25,220. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) CHEMISCHE FABRIK AUF ACTIEN (VORM. E. SCHERING), Berlin, Germany. Filed Feb. 9, 1907.

SATRAPOL

Particular description of goods.—A Photographic Developing Substance.

Ser. No. 25,600. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) G DE KONING TILLY, Harlem, Netherlands. Filed Feb. 25, 1907.



Particular description of goods.—Oil for Medicinal Purposes.

Ser. No. 26,316. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) WILLIAM C. TYNDALE, Geneva, Ill. Filed Mar. 28, 1907. Used ten years.

TYNDALE'S EUCALYPTUS

Particular description of goods.—A Medicine Used in the Treatment of Pulmonary Diseases.

Ser. No. 26,684. (CLASS 35. BELTING, HOSE, AND MACHINERY PACKING.) CHARLES MUNSON BELTING CO., New York, N. Y. Filed Apr. 13, 1907.

BEAVER BELTING

Particular description of goods.—Leather Belting.

Ser. No. 26,731. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) GEORGE NICHOLAS WANSER, Cranford township, Union county, N. J. Filed Apr. 15, 1907.

Hav-it

Particular description of goods.—Lozenges or Troches for Coughs, Colds, and Throat Troubles.

Ser. No. 26,998. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) LAMKIN AND FOSTER, INC., Boston, Mass. Filed Apr. 29, 1907. Used ten years.

BOSTON SCHOOL SHOE WARRANTED

Particular description of goods.—Children's Leather and Canvas Shoes.

Ser. No. 27,123. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE RED ROCK CO., Jacksonville, Fla. Filed May 4, 1907.

Lemo-Lime

Particular description of goods.—Non-Alcoholic Carbonated Beverages and Syrups for the Same.

Ser. No. 27,133. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) TALCUM PUFF COMPANY, INC., Asheville, N. C. Filed May 4, 1907.

Air-Float

Particular description of goods.—Talcum Powder.

Ser. No. 27,422. (CLASS 14. METALS, UNWROUGHT AND PARTLY WROUGHT.) THE MONMOUTHSHIRE STEEL AND TINPLATE COMPANY LIMITED, Pontymister, Wales. Filed May 16, 1907.



Particular description of goods.—Galvanized Iron and Steel Sheeting.

Ser. No. 27,451. (CLASS 37. PAPER AND PAPER MANUFACTURES NOT OTHERWISE CLASSIFIED.) GRAHAM PAPER CO., St. Louis, Mo. Filed May 17, 1907.

INDUSTRIAL BOND

Particular description of goods.—Printing and Writing Paper Commonly Employed for Printing and Writing Purposes.

Ser. No. 27,455. (CLASS 37. PAPER AND PAPER MANUFACTURES NOT OTHERWISE CLASSIFIED.) GRAHAM PAPER CO., St. Louis, Mo. Filed May 17, 1907.

CARAVAN BOND

Particular description of goods.—Printing and Writing Paper Commonly Employed for Printing and Writing Purposes.

Ser. No. 27,629. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) SIDNEY S. MCCARVER, Fordyce, Ark. Filed May 24, 1907.



Particular description of goods.—A Remedy for Cramps and Bots in Horses.

Ser. No. 27,773. (CLASS 68. PUBLICATIONS.) PHYSICIANS PUBLISHING COMPANY, Boston, Mass. Filed May 29, 1907.

MEDICA

Particular description of goods.—Treatises on Medicines and Supplements Thereto.

Ser. No. 28,035. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) FISCHER BROS., Seattle, Wash. Filed June 11, 1907.

MAX-I-MUM

Particular description of goods.—Corn-Starch, Rice, Yeast, Pearl-Barley, Buckwheat-Flour, Wheat-Flour, Whole-Wheat Flour, Graham Flour, Rye-Flour, Rye-Meal, Cornmeal, Farina, Hominy, Macaroni, Spaghetti, Vermicelli, Rolled Oats, Oatmeal, Wheat-Flakes, Rolled Wheat, Shredded Wheat, Granulated Wheat, Rusk, Dried Sweet Corn, Egg-Noodles, Crackers, and Biscuits.

Ser. No. 28,173. (CLASS 35. BELTING, HOSE, AND MACHINERY PACKING.) NEW YORK BELTING AND PACKING COMPANY, LTD., New York, N. Y. Filed June 17, 1907.

GRAPHON

Particular description of goods.—Machinery Packing Made of a Compound of India-Rubber With or Without Metallic Insertions.

Ser. No. 28,262. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) THE H. B. CLAFLIN COMPANY, New York, N. Y. Filed June 20, 1907.

NAPOLEON



Particular description of goods.—Antiseptics and Germicides for External and Internal Use, in the Form of Tablets, Lotions, and Powders other than Toilet Powders.

Ser. No. 28,380. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) WALTER RÜEGG, Basel, Switzerland. Filed June 25, 1907.

MARONIN

Particular description of goods.—Pudding Preparations.

Ser. No. 28,529. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) CHEMISCHE FABRIK AUF ACTIEN (VORM. E. SCHERING), Berlin, Germany. Filed July 1, 1907.

Citol

Particular description of goods.—A Photographic Developing Substance.

Ser. No. 28,869. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) DRAKE & COMPANY, Easton, Pa. Filed July 18, 1907.

GOLDEN CROWN



Particular description of goods.—Table-Salt, Blue, and Ammonia.

Ser, No. 29,018. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) M. PHILIPSBORN CO., New York, N. Y. Filed July 24, 1907.

"FLUFFY RUFFLES"

Particular description of goods.—Ladies' Two-Piece Outing-Suits, Dresses, Gowns, Dress-Skirts, Dress and Shirt Waists, Petticoats, Straw Hats.

Ser. No. 29,083. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) FREDERICK W. SULTAN, St. Louis, Mo. Filed July 29, 1907.

PRUNOIDS

Particular description of goods.—Laxative Tablets.

Ser. No. 29,147. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) THOMPSON MILLING COMPANY, Lockport, N. Y. Filed July 31, 1907. Used ten years.

HEALTH FLOUR

Particular description of goods.—Wheat-Flour.

Ser. No. 29,207. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) HENRY TURNER, Grand Rapids, Mich. Filed Aug. 3, 1907.



Particular description of goods.—Liniments and Lotions.

Ser. No. 29,282. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE GREAT WESTERN CEREAL COMPANY, Chicago, Ill. Filed Aug. 8, 1907.



Particular description of goods.—Food for Live Stock, Consisting of a Mixture of Bean and Cereal Products.

Ser. No. 29,308. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) HENRY J. S. HALL, WM. HENRY HALL, MARTHA M. HALL, and IRAD HAWLEY, New York, N. Y., executors of the estate of William Henry Hall, deceased. Filed Aug. 8, 1907.



Particular description of goods.—Dentifrices in Liquid, Powder, Paste, and Soap Form.

Ser. No. 29,418. (CLASS 20. CUTLERY NOT INCLUDED IN CLASS 61, AND EDGE-TOOLS.) JOSEPH F. McCOY CO., New York, N. Y. Filed Aug. 16, 1907.

AXIOM

Particular description of goods.—Grass-Shears, Hand-Clippers, Farrier-Knives, Razors, and Butcher-Saw Blades.

Ser. No. 29,481. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) STEWART & CO., Baltimore, Md. Filed Aug. 20, 1907.



The letter "S" in the representation of the medal is printed in red.

Particular description of goods.—Coffee.

Ser. No. 29,499. (CLASS 9. EXPLOSIVES.) JÖNKÖPINGS OCH VULCANS TÄNDSTICKSFABRIKSAKTIEBOLAG, Jönköpings, Sweden. Filed Aug. 21, 1907.



Particular description of goods.—Matches.

Ser. No. 29,568. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) MARGARET C. CORNELLY, New York, N. Y. Filed Aug. 24, 1907.

Jenno

Particular description of goods.—A Remedy for Headaches, Neuralgias, Cramps, and other Pains and Fevers.

Ser. No. 29,582. (CLASS 54. SEA FOODS.) JASPER WYMAN & SON, Millbridge, Me. Filed Aug. 26, 1907.

HUNTER

Particular description of goods.—Canned Sardines.

Ser. No. 29,591. (CLASS 51. MALT PREPARATIONS NOT OTHERWISE CLASSIFIED.) THEO. HAMM BREWING CO., St. Paul, Minn. Filed Aug. 26, 1907.

Digesto

Particular description of goods.—Malt Extract.

Ser. No. 29,602. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) ISAACS BROTHERS, New York, N. Y. Filed Aug. 26, 1907.

Mazel

Particular description of goods.—Men's, Boys', and Children's Overcoats, Coats, Vests, and Trousers of Textile Material.

Ser. No. 29,612. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) FORTUNA MACHINE CO., New York, N. Y. Filed Aug. 27, 1907.

FORTUNA

Particular description of goods.—Skiving-Machines and Machines for Drilling Iron and Steel.

Ser. No. 29,638. (CLASS 47. CONFECTIONERY.) THE MARJENHOFF CO., Charleston, S. C. Filed Aug. 28, 1907.



Particular description of goods.—Candy.

Ser. No. 29,640. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JAMES E. MORONEY, Philadelphia, Pa., executor of the estate of James Moroney, deceased. Filed Aug. 28, 1907.

OLD NAVY



Particular description of goods.—Gin.

Ser. No. 29,677. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) ALBERT KOPPEL, New Orleans, La. Filed Aug. 30, 1907. Used ten years.

NI-KO

Particular description of goods.—Tea.

Ser. No. 29,685. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) GEORGE N. HEIN, San Francisco, Cal. Filed Aug. 30, 1907.

PERITUNDO

Particular description of goods.—Dental Obtundents.

Ser. No. 29,689. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) MULRONEY MANUFACTURING COMPANY, Fort Dodge, Iowa. Filed Aug. 30, 1907.

"Fort Brand"

Particular description of goods.—Overalls, Textile Shirts, Duck Coats, Jackets, and Pants.

Ser. No. 29,716. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) STANDARD OIL CO. OF NEW YORK, New York, N. Y. Filed Sept. 3, 1907.

點美孚油

Particular description of goods.—Oil-Lamps.

Ser. No. 29,717. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) STANDARD OIL CO. OF NEW YORK, New York, N. Y. Filed Sept. 3, 1907.

行孚美

Particular description of goods.—Oil-Lamps.

Ser. No. 29,754. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) BARDELL & SCHICK, Joliet, Ill. Filed Sept. 5, 1907.



Particular description of goods.—Liniments and Unguents.

Ser. No. 29,762. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) LONG ISLAND PHARMACEUTICAL CO., New York, N. Y. Filed Sept. 5, 1907.

GLYCO-QUININE

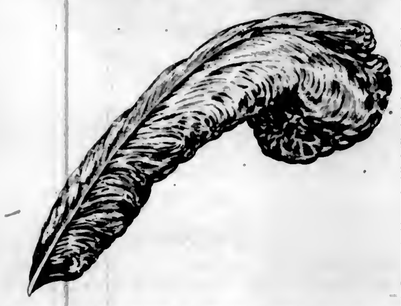
Particular description of goods.—Remedies for Dyspepsia and Diseases of the Blood.

Ser. No. 29,785. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal. Filed Sept. 6, 1907.

PLUMIE

Particular description of goods.—Dried Fruits—Namely, Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, and Raisins.

Ser. No. 29,786. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal. Filed Sept. 6, 1907.



Particular description of goods.—Dried Fruits—Namely, Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, and Raisins.

Ser. No. 29,787. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal. Filed Sept. 6, 1907.



Particular description of goods.—Dried Fruits—Namely, Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, and Raisins.

Ser. No. 29,809. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) JOHN HOFFMANN & SONS CO., Milwaukee, Wis. Filed Sept. 9, 1907.

Carnival

Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 29,812. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) JOHN HOFFMANN & SONS CO., Milwaukee, Wis. Filed Sept. 9, 1907.

REPEATER

Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 29,879. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ALFRED P. JONES, Minneapolis, Minn. Filed Sept. 12, 1907.

Ucaneat.

Particular description of goods.—A Remedy for the Relief of Indigestion and other Stomach Derangements.

Ser. No. 29,896. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) EDMUND VIERTEL, Detroit, Mich. Filed Sept. 12, 1907.



The circular background being printed in red.

Particular description of goods.—Pills for Functional Disorders of the Stomach and Intestines of an Atonic Origin.

Ser. No. 29,947. (CLASS 47. CONFECTIONERY.) HENRY MAILLARD, New York, N. Y. Filed Sept. 13, 1907. Used ten years.

MAILLARD'S
BREAKFAST
COCOA

Particular description of goods.—Cocoa.

Ser. No. 29,970. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) FEDERAL WATERPROOFING CO., St. Joseph, Mo. Filed Sept. 14, 1907.

NOROTTO

Particular description of goods.—A Textile Cotton Fabric Waterproofed with Oil.

Ser. No. 29,982. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) KILMARNOCK TEXTILE MANUFACTURING CO., Chicago, Ill. Filed Sept. 16, 1907.



Particular description of goods.—Woven Rugs.

Ser. No. 29,986. (CLASS 54. SEA FOODS.) P. PASTENE & Co., Boston, Mass. Filed Sept. 16, 1907.



Particular description of goods.—Anchovies, Tunny, Sardines, Sardelles, and Moscardini.

Ser. No. 29,998. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) THE WASHINGTON SHIRT CO., Chicago, Ill. Filed Sept. 16, 1907.



Particular description of goods.—Men's Overshirts of Woven Material.

Ser. No. 30,049. (CLASS 51. MALT PREPARATIONS NOT OTHERWISE CLASSIFIED.) THE NEW SOUTH BREWERY & ICE CO., Middlesboro, Ky. Filed Sept. 18, 1907.

Crystal Dale

Particular description of goods.—Beer.

Ser. No. 30,055. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE SMITH & EGGE MFG. CO., Bridgeport, Conn. Filed Sept. 18, 1907. Used ten years.

GIANT

Particular description of goods.—Sheet-Metal Chains.

Ser. No. 30,063. (CLASS 45. BEVERAGES, NON ALCOHOLIC.) WHANN LITHIA SPRINGS CO., Franklin, Pa. Filed Sept. 18, 1907.

"Whannis"

Particular description of goods.—Ginger-Ale and Sarsaparilla.

Ser. No. 30,079. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) THE CHAS. A. MAISH CO., Cincinnati, Ohio. Filed Sept. 19, 1907.



Particular description of goods.—Comforts.

Ser. No. 30,082. (CLASS 35. BELTING, HOSE, AND MACHINERY PACKING.) H. W. JOHNS-MANVILLE COMPANY, New York, N. Y. Filed Sept. 19, 1907. Used ten years.

TRADE MARK ASBESTOS

Particular description of goods.—Asbestos Engine and Machinery Packing.

Ser. No. 30,084. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) DUPARQUET, HUOT & MONEUSE CO., New York, N. Y. Filed Sept. 19, 1907.

D.H.&M.

Particular description of goods.—Cooking Stoves and Ranges, Furnaces, Broilers, Ovens, Their Parts and Attachments.

Ser. No. 30,100. (CLASS 68. PUBLICATIONS.) BIBLE & FITCH, New York, N. Y. Filed Sept. 20, 1907.

THE TEXTILE EXPORTER

Particular description of goods.—Trade Magazines and Trade Journals.

Ser. No. 30,101. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) BLOCK BROTHERS CLOTHING COMPANY, St. Joseph, Mo. Filed Sept. 20, 1907.

Geo Washington Jr. Clothes

Particular description of goods.—Overcoats, Coats, Vests, and Trousers.

Ser. No. 30,132. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) SHARP & DOHME, Baltimore, Md. Filed Sept. 21, 1907.

DETERGAL

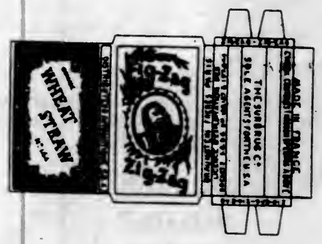
Particular description of goods.—An Antiseptic Solution.

Ser. No. 30,139. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) INTERNATIONAL CORSET COMPANY, Aurora, Ill. Filed Sept. 21, 1907.

"GALVANO"

Particular description of goods.—Corset-Stays.

Ser. No. 30,142. (CLASS 69. SMOKERS' ARTICLES NOT INCLUDED IN CLASS 71.) BRAUNSTEIN & CIE., Paris, France. Filed Sept. 21, 1907.



Particular description of goods.—Cigarette-Paper.

Ser. No. 30,148. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) CLYDE B. BLACKWELL, Statesville, N. C. Filed Sept. 23, 1907.

Aunt Betties Yeast

Particular description of goods.—Yeast.

Ser. No. 30,160. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THOMAS SHOCKLEY, Topaz, Mo. Filed Sept. 23, 1907.

HIRAM SHOCKLEY'S EYE TREATMENT.



Particular description of goods.—A Remedy for the Treatment of Diseases of Eyes.

Ser. No. 30,161. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) ALBERT S. HICKS, Grand Rapids, Mich. Filed Sept. 23, 1907.



Particular description of goods.—Polish for Furniture.

Ser. No. 30,172. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CHARLES R. TOLLE, Los Angeles, Cal. Filed Sept. 23, 1907.

TOLLE'S



ROCK CIDER

Particular description of goods.—Rock-Cider.

Ser. No. 30,219. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) CRYSTAL CARBONATE LIME COMPANY, Louisiana, Mo. Filed Sept. 26, 1907.



Particular description of goods.—Poultry Food.

Ser. No. 30,225. (CLASS 72. MERCHANDISE NOT OTHERWISE CLASSIFIED.) FREAR NOVELTY CO., Albany, N. Y. Filed Sept. 26, 1907.

THIS : IS : IT

Particular description of goods.—Skirt and Trousers Hanger Made of Metal.

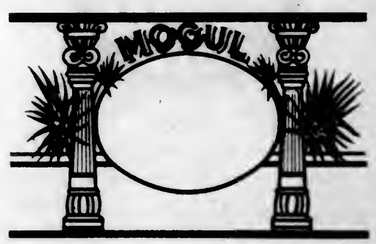
Ser. No. 30,238. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill. Filed Sept. 26, 1907.

QUALITY



The circular background being in red.
Particular description of goods.—Canned Corn.

Ser. No. 30,241. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill. Filed Sept. 26, 1907.



Particular description of goods.—Canned Vegetables.

Ser. No. 30,241½. (CLASS 12. MASONRY MATERIALS.) EMPIRE GYPSUM COMPANY, Garbutt, N. Y. Filed Sept. 26, 1907.



Particular description of goods.—Wall-Plaster.

Ser. No. 30,242. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill. Filed Sept. 26, 1907.

MOOSE-HEAD

Particular description of goods.—Canned Corn.

Ser. No. 30,242½. (CLASS 12. MASONRY MATERIALS.) EMPIRE GYPSUM COMPANY, Garbutt, N. Y. Filed Sept. 26, 1907.

EMPIRE GYPSUM CO. EXCELSIOR WALL PLASTER GARBUTT, N.Y.

Particular description of goods.—Wall-Plaster.

Ser. No. 30,243½. (CLASS 12. MASONRY MATERIALS.) EMPIRE GYPSUM COMPANY, Garbutt, N. Y. Filed Sept. 26, 1907.

EMPIRE GYPSUM CO. RELIANCE WOOD FIBER WALL PLASTER GARBUTT, N.Y.

Particular description of goods.—Wall-Plaster.

Ser. No. 30,245. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING CO., Camden, N. J., and Hoopeston, Ill. Filed Sept. 26, 1907.

ELITE

Particular description of goods.—Canned Corn.

Ser. No. 30,255. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) GEO. F. DITTMANN BOOT & SHOE COMPANY, St. Louis, Mo. Filed Sept. 27, 1907.

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 30,257. (CLASS 58. GAMES AND TOYS, AND SPORTING GOODS NOT OTHERWISE CLASSIFIED.) E. I. HORSMAN CO., New York, N. Y. Filed Sept. 27, 1907.

MEFISTO

Particular description of goods.—A Game Comprising Two Sticks Connected by a Cord and a Bobbin-Like Body Which is Whirled in the Air and Caught on the Connecting-Cord.

Ser. No. 30,263. (CLASS 71. TOBACCO PRODUCTS.) VINCENTE PORTUONDO COMPANY, Philadelphia, Pa. Filed Sept. 27, 1907.



Particular description of goods.—Cigars.

Ser. No. 30,287. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) J. E. LANE & SON, Golconda, Ill. Filed Sept. 28, 1907.



EGYPTIAN QUEEN

Particular description of goods.—Winter-Wheat Flour.

Ser. No. 30,308. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) JACOB LAUER, Baltimore, Md. Filed Sept. 30, 1907.

Monumental

Particular description of goods.—Dress and Negligée Shirts.

Ser. No. 30,327. (CLASS 15. OILS AND GREASES NOT INCLUDED IN CLASSES 6, 16, AND 50.) CHARLES H. REED & CO., Brockton, Mass. Filed Oct. 1, 1907.



BALAAM'S

Particular description of goods.—Lubricating Oils and Greases.

Ser. No. 30,328. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) GARNER & CO., New York, N. Y. Filed Oct. 1, 1907.

R.E.S

Particular description of goods.—Printed and Dyed Cotton Piece Goods.

Ser. No. 30,329. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) GARNER & CO., New York, N. Y. Filed Oct. 1, 1907. Used ten years.

D.M.

Particular description of goods.—Printed and Dyed Cotton Piece Goods.

Ser. No. 30,342. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) MANOMET CRANBERRY COMPANY, Plymouth, Mass. Filed Oct. 2, 1907.

BIG INJUN

Particular description of goods.—Cranberries.

Ser. No. 30,388. (CLASS 47. CONFECTIONERY.) WILLIAM S. HANNAH, East St. Louis, Ill. Filed Oct. 3, 1907.

CORN-ON-THE-COB

Particular description of goods.—Candied Popcorn, Candy, and Chewing-Gum.

Ser. No. 30,390. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) BORELLO BROS., San Rafael, Cal. Filed Oct. 3, 1907.

TAMALPAIS NATURAL MINERAL WATER BORELLO BROS. BB TRADE MARK SAN RAFAEL CAL. AND CARBONATED BEVERAGES

Particular description of goods.—Natural Mineral Waters and Carbonated Beverages.

Ser. No. 30,391. (CLASS 71. TOBACCO PRODUCTS.) JAMES E. MORONEY, Philadelphia, Pa., executor of the estate of James Moroney, deceased. Filed Oct. 3, 1907.

ARMY & NAVY

Particular description of goods.—Cigars.

Ser. No. 30,392. (CLASS 58. GAMES AND TOYS, AND SPORTING GOODS NOT OTHERWISE CLASSIFIED.) A. J. REACH COMPANY, Philadelphia, Pa. Filed Oct. 3, 1907.

OBL

Particular description of goods.—Base-Ball Gloves.

Ser. No. 30,402. (CLASS 70. STATIONERY NOT OTHERWISE CLASSIFIED.) GEO. BORGFELDT & CO., New York, N. Y. Filed Oct. 3, 1907.

CORONET

Particular description of goods.—Penholders, Rubber Pencil-Erasers, Rubber Ink-Erasers, Pencils, and Paper-Weights.

Ser. No. 30,407. (CLASS 15. OILS AND GREASES NOT INCLUDED IN CLASSES 6, 16, AND 50.) THE UNITED STATES GRAPHITE COMPANY, Saginaw, Mich. Filed Oct. 3, 1907.



Particular description of goods.—Graphite Machinery-Lubricant, Graphite, Auto-Lubricant, Graphite Cable-Grease, Graphite Axle-Grease, Graphite Journal and Gear Grease, Graphite Cup-Grease, and Lubricating-Graphite.

Ser. No. 30,408. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE UNITED STATES GRAPHITE COMPANY, Saginaw, Mich. Filed Oct. 3, 1907.



Particular description of goods.—Graphite Paint in Paste Form or Ready for Use and Graphite "Pipe-Cement," (a Preparation for Painting Pipe-Joints, Gaskets, Stay-Bolts, and Similar Articles.)

Ser. No. 30,418. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) DIELECTRIC MANUFACTURING COMPANY, St. Louis, Mo. Filed Oct. 4, 1907.

PETRITE

Particular description of goods.—An Electric-Coil-Insulating Compound.

Ser. No. 30,419. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) CHARLES V. CROSS, San Francisco, Cal. Filed Oct. 4, 1907.

Albathyme

Particular description of goods.—Antiseptic Powders.

Ser. No. 30,427. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) LEE BROOM & DUSTER COMPANY, Lincoln, Nebr. Filed Oct. 5, 1907.

WALDORF

Particular description of goods.—Brooms.

Ser. No. 30,430. (CLASS 23. HAND-TOOLS NOT OTHERWISE CLASSIFIED.) UTICA DROP FORGE AND TOOL CO., Utica, N. Y. Filed Oct. 5, 1907.

STORM KING

Particular description of goods.—Nippers and Pliers Without a Cutting Edge.

Ser. No. 30,455. (CLASS 51. MALT PREPARATIONS NOT OTHERWISE CLASSIFIED.) THE VA. BREWING CO., Roanoke, Va. Filed Oct. 7, 1907.



Particular description of goods.—Malt Extract.

Ser. No. 30,457. (CLASS 15. OILS AND GREASES NOT INCLUDED IN CLASSES 6, 16, AND 50.) THE EMERY CANDLE CO., Cincinnati, Ohio. Filed Oct. 7, 1907.



Particular description of goods.—Candles.

Ser. No. 30,458. (CLASS 15. OILS AND GREASES NOT INCLUDED IN CLASSES 6, 16, AND 50.) THE EMERY CANDLE CO., Cincinnati, Ohio. Filed Oct. 7, 1907.



Particular description of goods.—Candles.

Ser. No. 30,459. (CLASS 54. SEA FOODS.) E. T. SMITH COMPANY, Worcester, Mass. Filed Oct. 7, 1907.

CONSTITUTION

Particular description of goods.—Canned Fish, Clams, Lobsters, Shrimps, and Chowder.

Ser. No. 30,464. (CLASS 37. PAPER AND PAPER MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE AMERICAN BOARD & BOX COMPANY, Dayton, Ohio. Filed Oct. 7, 1907.

IMPERIAL

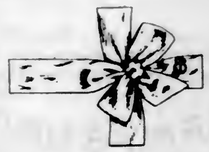
Particular description of goods.—Paper Pails.

Ser. No. 30,469. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) FRANK FULLER, New York, N. Y. Filed Oct. 7, 1907.

MICMAC

Particular description of goods.—A Remedy for Dyspepsia, Headaches, and Nausea.

Ser. No. 30,474. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) RICKETTS BROS., Detroit, Mich. Filed Oct. 7, 1907.



The ribbon being printed in blue.
Particular description of goods.—Cough Medicines.

Ser. No. 30,483. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) CHARLES E. DUCK, Baltimore, Md. Filed Oct. 8, 1907.

INNOVATION

Particular description of goods.—Tooth-Powder.

Ser. No. 30,503. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ALEXANDER LA BELL, Detroit, Mich. Filed Oct. 9, 1907.



Particular description of goods.—Medicines for Diseases of the Stomach and Liver.

Ser. No. 30,512. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) OLAX REMEDY COMPANY, Desplaines, Ill. Filed Oct. 9, 1907.



Particular description of goods.—Liniments.

Ser. No. 30,519. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) HENRY SOLOMON WELLCOME, London, England. Filed Oct. 9, 1907.

OPA

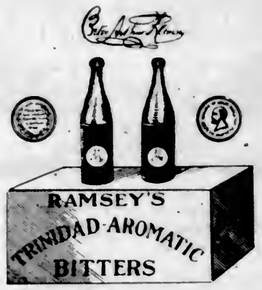
Particular description of goods.—Dentifrice and Perfumery.

Ser. No. 30,524. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) FRANK R. LEONORI, New York, N. Y. Filed Oct. 10, 1907. Used ten years.

RAMSEY'S TRINIDAD BITTERS

Particular description of goods.—Aromatic Bitters.

Ser. No. 30,525. CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) FRANK R. LEONORI, New York, N. Y. Filed Oct. 10, 1907. Used ten years.



Particular description of goods.—Aromatic Bitters.

Ser. No. 30,532. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) SHOEMART COMPANY, St. Louis, Mo. Filed Oct. 10, 1907.

SHOEMART

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 30,534. (CLASS 20. CUTLERY NOT INCLUDED IN CLASS 61, AND EDGE-TOOLS.) A. GRAEF, New York, N. Y. Filed Oct. 10, 1907.



Particular description of goods.—Razors.

Ser. No. 30,545. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) J. MARCUS CARGILL, Baltimore, Md. Filed Oct. 11, 1907.



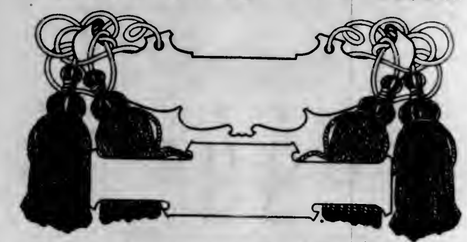
Particular description of goods.—Remedies for the Treatment of Coughs, Catarrh, Dyspepsia, Indigestion, Liver Trouble, Neuralgia, Rheumatism, and Biliousness.

Ser. No. 30,555. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE J. K. ARMSBY COMPANY, San Francisco, Cal., and Chicago, Ill. Filed Oct. 12, 1907.

TASSEL

Particular description of goods.—Dried Fruits—Namely Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, and Raisins.

Ser. No. 30,556. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE J. K. ARMSBY COMPANY, San Francisco, Cal., and Chicago, Ill. Filed Oct. 12, 1907.



Particular description of goods.—Dried Fruits—Namely, Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, and Raisins.

Ser. No. 30,557. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE J. K. ARMSBY COMPANY, San Francisco, Cal., and Chicago, Ill. Filed Oct. 12, 1907.



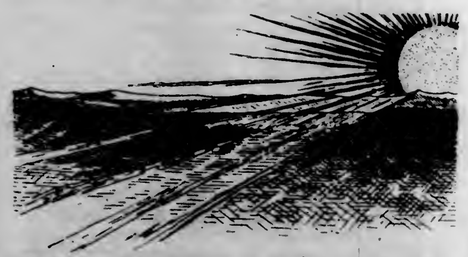
Particular description of goods.—Dried Fruits—Namely, Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, and Raisins.

Ser. No. 30,558. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal. Filed Oct. 12, 1907.



Particular description of goods.—Canned Fruits and Dried Fruits—Namely, Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, and Raisins.

Ser. No. 30,559. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal. Filed Oct. 12, 1907.



Particular description of goods.—Canned Fruits and Dried Fruits—Namely, Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, and Raisins.

Ser. No. 30,568. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE IRON-OX REMEDY COMPANY, Detroit, Mich. Filed Oct. 12, 1907.

Iron-ox

Particular description of goods.—Remedy for Laxative and Blood-Purifying Purposes.

Ser. No. 30,571. (CLASS 8. DETERGENTS.) THEODOR METZGER, Stamford, Conn. Filed Oct. 12, 1907.



Particular description of goods.—Soap for Cleaning Automobiles.

Ser. No. 30,581. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) VAIL BROTHERS, Philadelphia, Pa. Filed Oct. 12, 1907.

UKIO

Particular description of goods.—An Odorless Deodorant for the Toilet.

Ser. No. 30,599. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) A. C. LAWRENCE LEATHER CO., Boston, Mass. Filed Oct. 14, 1907.



Particular description of goods.—Leather.

Ser. No. 30,600. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE LIVE OAK DISTILLING COMPANY, Cincinnati, Ohio. Filed Oct. 14, 1907.



Particular description of goods.—Whisky.

Ser. No. 30,605. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) ELLIOTT-FISHER CO., New York, N. Y. Filed Oct. 15, 1907.

JUNIOR

Particular description of goods.—Type-Writing Machines.

Ser. No. 30,606. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE GOLDEN HILL DISTILLING CO., Columbus, Ohio. Filed Oct. 15, 1907.

ROB'S

Particular description of goods.—Whisky.

Ser. No. 30,612. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JAMES H. WALSH, Boston, Mass. Filed Oct. 15, 1907.



Particular description of goods.—Whisky.

Ser. No. 30,613. (CLASS 70. STATIONERY NOT OTHERWISE CLASSIFIED.) L. E. WATERMAN COMPANY, New York, N. Y. Filed Oct. 15, 1907.

CLIP-CAP IDEAL

Particular description of goods.—Fountain-Pens and Pencils.

Ser. No. 30,629. (CLASS 47. CONFECTIONERY.) THE STERN & SAALBERG COMPANY, New York, N. Y. Filed Oct. 16, 1907.

Nutlets

Particular description of goods.—Candy.

Ser. No. 30,630. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE ARROW ELECTRIC COMPANY, Hartford, Conn. Filed Oct. 16, 1907.

E

Particular description of goods.—Electrical Switches.

Ser. No. 30,631. (CLASS 31. FILTERS AND REFRIGERATORS.) THE ODORLESS REFRIGERATOR COMPANY, Chattanooga, Tenn. Filed Oct. 16, 1907.

KNICKERBOCKER

Particular description of goods.—Refrigerators.

Ser. No. 30,643. (CLASS 71. TOBACCO PRODUCTS.) PHILIP MORRIS & CO., LTD., New York, N. Y. Filed Oct. 17, 1907.

THE BOND ST CIGARETTES

Particular description of goods.—Cigarettes.

Ser. No. 30,647. (CLASS 71. TOBACCO PRODUCTS.) PHILIP MORRIS & CO., LTD., New York, N. Y. Filed Oct. 17, 1907.

UNIS

Particular description of goods.—Cigarettes.

Ser. No. 30,650. (CLASS 71. TOBACCO PRODUCTS.) PHILIP MORRIS & CO., LTD., New York, N. Y. Filed Oct. 17, 1907.

HUSSARS

Particular description of goods.—Cigarettes.

Ser. No. 30,663. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) CAUVIGNY BRUSH CO., New York, N. Y. Filed Oct. 19, 1907.

DEHAMME
DELETTRE

Particular description of goods.—Toilet-Brushes.

Ser. No. 30,666. (CLASS 10. FERTILIZERS.) AMERICAN CYANAMID COMPANY, New York, N. Y. Filed Oct. 19, 1907.



Particular description of goods.—Calcium Cyanamid.

Ser. No. 30,674. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) LEE BROOM & DUSTER COMPANY, Lincoln, Nebr. Filed Oct. 19, 1907.

DUSTFOE

Particular description of goods.—Brooms.

Ser. No. 30,675. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) LEE BROOM & DUSTER COMPANY, Lincoln, Nebr. Filed Oct. 19, 1907.

ORIENTO

Particular description of goods.—Brooms and Whisk-Brooms.

Ser. No. 30,676. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) LEE BROOM & DUSTER COMPANY, Lincoln, Nebr. Filed Oct. 19, 1907.

LYTO

Particular description of goods.—Brooms.

Ser. No. 30,682. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) R. P. SMITH & SONS Co., Chicago, Ill. Filed Oct. 19, 1907.

LA VISTA

Particular description of goods.—Leather Shoes.

Ser. No. 30,683. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) R. P. SMITH & SONS Co., Chicago, Ill. Filed Oct. 19, 1907.



Particular description of goods.—Leather Shoes.

Ser. No. 30,684. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) R. P. SMITH & SONS Co., Chicago, Ill. Filed Oct. 19, 1907.

LIVE OAK

Particular description of goods.—Leather Shoes.

Ser. No. 30,685. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) R. P. SMITH & SONS Co., Chicago, Ill. Filed Oct. 19, 1907.

BlackBuck

Particular description of goods.—Leather Shoes.

Ser. No. 30,692. (CLASS 47. CONFECTIONERY.) AMERICAN CANDY Co., Milwaukee, Wis. Filed Oct. 21, 1907.

REX

Particular description of goods.—Chocolates.

Ser. No. 30,696. (CLASS 35. BELTING, HOSE, AND MACHINERY PACKING.) DETROIT OAK BELTING Co., Detroit, Mich. Filed Oct. 21, 1907. Used ten years.

BEST GRADE

Particular description of goods.—Leather Belting.

Ser. No. 30,700. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING Co., Camden, N. J., and Hoopeston, Ill. Filed Oct. 21, 1907.

Baby Bunting

Particular description of goods.—Canned Vegetables.

Ser. No. 30,701. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING Co., Camden, N. J., and Hoopeston, Ill. Filed Oct. 21, 1907.



Particular description of goods.—Canned Vegetables.

Ser. No. 30,702. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) ILLINOIS CANNING Co., Camden, N. J., and Hoopeston, Ill. Filed Oct. 21, 1907.



Particular description of goods.—Canned Vegetables.

Ser. No. 30,706. (CLASS 71. TOBACCO PRODUCTS.) THE MUTUAL DRUG COMPANY, Cleveland, Ohio. Filed Oct. 21, 1907.

Mutual

Particular description of goods.—Cigars.

Ser. No. 30,726. (CLASS 70. STATIONERY NOT OTHERWISE CLASSIFIED.) JULIUS LEHMANN, New York, N. Y. Filed Oct. 22, 1907.



Particular description of goods.—Erasers Made of Rubber and of Rubber Substitutes.

Ser. No. 30,765. (CLASS 41. KNITTED, NETTED, AND LACE GOODS.) SOUTHDOWN KNITTING Co., Allentown, Pa. Filed Oct. 24, 1907.

Southdown Mills

Particular description of goods.—Women's and Misses' Ribbed Underwear.

Ser. No. 30,766. (CLASS 41. KNITTED, NETTED, AND LACE GOODS.) SOUTHDOWN KNITTING Co., Allentown, Pa. Filed Oct. 24, 1907.

Southdown Mills

Particular description of goods.—Women's and Misses' Ribbed Underwear.

Ser. No. 30,768. (CLASS 25. LOCKS AND SAFES.) THE YALE & TOWNE MANUFACTURING COMPANY, Stamford, Conn. Filed Oct. 24, 1907.

CYCLOPS

Particular description of goods.—Padlocks.

Ser. No. 30,788. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) WALTER K. PEEK, New York, N. Y. Filed Oct. 25, 1907.

PERFECTINE

Particular description of goods.—Tooth-Powder, Tooth-Paste, or Tooth-Wash.

TRADE-MARKS

REGISTERED NOVEMBER 26, 1907.

66,351. MACHINERY PACKING. THE B. F. GOODRICH COMPANY, Akron, Ohio.
Filed August 9, 1907. Serial No. 29,325. PUBLISHED SEPTEMBER 24, 1907.

66,352. HAIR-TONIC AND SCALP REMEDY. MAUDE L. CAMPBELL, Washington, D. C.
Filed August 3, 1907. Serial No. 29,186. PUBLISHED SEPTEMBER 24, 1907.

66,353. CERTAIN CHEMICALS. CHEMISCHE WERKE HANSA GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Hemelingen, near Bremen, Germany.
Filed April 18, 1906. Serial No. 18,897. PUBLISHED SEPTEMBER 24, 1907.

66,354. TONIC, LAXATIVE, AND DIGESTIVE PREPARATIONS. FREDERICK L. CHILDS, Kalamazoo, Mich.
Filed August 16, 1907. Serial No. 29,429. PUBLISHED SEPTEMBER 24, 1907.

66,355. TONIC, LAXATIVE, AND DIGESTIVE PREPARATIONS. FREDERICK L. CHILDS, Kalamazoo, Mich.
Filed August 16, 1907. Serial No. 29,430. PUBLISHED SEPTEMBER 24, 1907.

66,356. LEATHER BOOTS AND SHOES. COSBY SHOE CO. INCORPORATED, Lynchburg, Va.
Filed August 8, 1907. Serial No. 29,303. PUBLISHED SEPTEMBER 24, 1907.

66,357. MEN'S AND BOYS' LEATHER SHOES. E. E. TAYLOR CO., Boston, Mass.
Filed August 12, 1907. Serial No. 29,351. PUBLISHED SEPTEMBER 24, 1907.

66,358. LEAD-PENCILS. EBERHARD FABER, New York, N. Y.
Filed August 6, 1907. Serial No. 29,246. PUBLISHED SEPTEMBER 24, 1907.

66,359. LEAD-PENCILS. EBERHARD FABER, New York, N. Y.
Filed August 6, 1907. Serial No. 29,247. PUBLISHED SEPTEMBER 24, 1907.

66,360. LEAD-PENCILS. EBERHARD FABER, New York, N. Y.
Filed August 6, 1907. Serial No. 29,248. PUBLISHED SEPTEMBER 24, 1907.

66,361. LEAD-PENCILS. EBERHARD FABER, New York, N. Y.
Filed August 6, 1907. Serial No. 29,249. PUBLISHED SEPTEMBER 24, 1907.

66,362. LEAD-PENCILS. EBERHARD FABER, New York, N. Y.
Filed August 6, 1907. Serial No. 29,250. PUBLISHED SEPTEMBER 24, 1907.

66,363. LEAD-PENCILS AND RUBBER ERASERS. EBERHARD FABER, New York, N. Y.
Filed August 6, 1907. Serial No. 29,251. PUBLISHED SEPTEMBER 24, 1907.

66,364. RUBBER ERASERS. EBERHARD FABER, New York, N. Y.
Filed August 6, 1907. Serial No. 29,252. PUBLISHED SEPTEMBER 24, 1907.

66,365. UNGUENT OR SALVE. THE FREDERICK LABORATORY, Toledo, Ohio.
Filed August 12, 1907. Serial No. 29,367. PUBLISHED SEPTEMBER 24, 1907.

66,366. ALIZARIN. GEORGE W. GILBERT, Boston, Mass.
Filed August 26, 1907. Serial No. 29,580. PUBLISHED SEPTEMBER 24, 1907.

66,367. CERTAIN MEDICINES. THOMAS F. LAUBACH, New York, N. Y.
Filed May 31, 1907. Serial No. 27,800. PUBLISHED SEPTEMBER 24, 1907.

66,368. HOSIERY. LORD & TAYLOR, New York, N. Y.
Filed August 5, 1907. Serial No. 29,214. PUBLISHED SEPTEMBER 24, 1907.

66,369. HOSIERY. LORD & TAYLOR, New York, N. Y.
Filed August 5, 1907. Serial No. 29,215. PUBLISHED SEPTEMBER 24, 1907.

66,370. HOSIERY. LORD & TAYLOR, New York, N. Y.
Filed August 5, 1907. Serial No. 29,216. PUBLISHED SEPTEMBER 24, 1907.

66,371. HOSIERY. LORD & TAYLOR, New York, N. Y.
Filed August 5, 1907. Serial No. 29,217. PUBLISHED SEPTEMBER 24, 1907.

66,372. MOSQUITO-REPELLENT. JAMES E. LYLE, Bowling Green, Ky.
Filed August 14, 1907. Serial No. 29,393. PUBLISHED SEPTEMBER 24, 1907.

66,373. HOSIERY. M. HALFF & BRO., San Antonio, Tex.
Filed July 9, 1907. Serial No. 28,681. PUBLISHED SEPTEMBER 24, 1907.

66,374. CARTRIDGES, LOADED SHELLS, CAPS, PRIMERS, AND POWDER. THE PETERS CARTRIDGE COMPANY, Cincinnati, Ohio.
Filed March 15, 1906. Serial No. 17,869. PUBLISHED SEPTEMBER 24, 1907.

66,375. MEDICINAL SALTS. THE PHYSICIANS SUPPLY CO., Louisville, Ky.
Filed August 19, 1907. Serial No. 29,464. PUBLISHED SEPTEMBER 24, 1907.

66,376. CHEMICAL PRESERVING COMPOUNDS. PROTEGIT COMPANY, New York, N. Y.
Filed August 5, 1907. Serial No. 29,211. PUBLISHED SEPTEMBER 24, 1907.

66,377. KNIT UNDERSHIRTS. RUBENS & MARBLE, Chicago, Ill.
Filed December 13, 1905. Serial No. 15,378. PUBLISHED SEPTEMBER 24, 1907.

66,378. LEATHER TRUNKS. SIEGEL COOPER COMPANY, New York, N. Y.
Filed July 3, 1907. Serial No. 28,577. PUBLISHED SEPTEMBER 24, 1907.

66,379. CANNED MEAT. THE AUGUST KRESS COMPANY New York, N. Y.
Filed April 19, 1905. Serial No. 2,280. PUBLISHED AUGUST 7, 1906.

66,380. TOILET SOAPS. B. T. BABBITT INC., New York, N. Y.
Filed July 12, 1907. Serial No. 28,746. PUBLISHED SEPTEMBER 24, 1907.

66,381. FLAVORINGS FOR SODA-WATER AND LIKE BEVERAGES. BENTON, HALL & CO., Cleveland, Ohio.
Filed March 26, 1906. Serial No. 18,283. PUBLISHED SEPTEMBER 24, 1907.

66,382. SPOOL-COTTON OR SEWING-THREAD. BLODGETT & ORSWELL CO., Pawtucket, R. I.
Filed May 26, 1906. Serial No. 19,868. PUBLISHED SEPTEMBER 24, 1907.

66,383. SPOOL-COTTON OR SEWING-THREAD. BLODGETT & ORSWELL CO., Pawtucket, R. I.
Filed May 26, 1906. Serial No. 19,871. PUBLISHED SEPTEMBER 24, 1907.

66,384. PEANUT-CANDY. BOSMAN & LOHMAN CO., Norfolk, Va.
Filed August 16, 1907. Serial No. 29,423. PUBLISHED SEPTEMBER 24, 1907.

66,385. BASKETED FRESH FRUITS. CHARLES & CO., New York, N. Y.
Filed August 15, 1907. Serial No. 29,403. PUBLISHED SEPTEMBER 24, 1907.

66,386. WHEAT-FLOUR. COLUMBIA MILL & ELEVATOR COMPANY, Columbia, Tenn.
Filed August 20, 1906. Serial No. 21,672. PUBLISHED JANUARY 8, 1907.

66,387. PYROGRAPHIC OUTFITS. F. F. RICK & COMPANY, Buffalo, N. Y.
Filed July 31, 1907. Serial No. 29,141. PUBLISHED SEPTEMBER 24, 1907.

66,388. CANDY. GREEK AMERICAN CONFECTIONERY CO., New York, N. Y.
Filed August 9, 1907. Serial No. 29,313. PUBLISHED SEPTEMBER 24, 1907.

66,389. FLAVORING FOR TONIC MIXTURES. EMMETT B. HALL, Salt Lake City, Utah.
Filed January 29, 1906. Serial No. 16,597. PUBLISHED SEPTEMBER 24, 1907.

66,390. CERTAIN OIL. ANTHONY THOMAS JOHNSON, Mineola, N. Y.
Filed May 20, 1907. Serial No. 27,527. PUBLISHED SEPTEMBER 24, 1907.

66,391. [WITHDRAWN.]

66,392. WOODEN STEP-LADDERS. EDWARD M. MURRAY, Chicago, Ill.
Filed August 17, 1907. Serial No. 29,436. PUBLISHED SEPTEMBER 24, 1907.

66,393. WASHING COMPOUND. PACIFIC COAST BORAX CO., Oakland, Cal.; Chicago, Ill., and New York, N. Y.
Filed August 12, 1907. Serial No. 29,364. PUBLISHED SEPTEMBER 24, 1907.

66,394. HOSIERY. RUBENS & MEYER, New York, N. Y.
Filed August 13, 1907. Serial No. 29,375. PUBLISHED SEPTEMBER 24, 1907.

66,395. CHOCOLATES AND OTHER CANDIES. RUECKHEIM BROS. & ECKSTEIN, Chicago, Ill.
Filed May 21, 1906. Serial No. 19,722. PUBLISHED SEPTEMBER 24, 1907.

66,396. NON-ALCOHOLIC FERMENTED BEVERAGE. OTTO SCHOLZ, Bridgeport, Conn.
Filed July 30, 1907. Serial No. 29,121. PUBLISHED SEPTEMBER 24, 1907.

66,397. ALL KINDS OF CANDY. SCHRADERS, New York, N. Y.
Filed August 20, 1907. Serial No. 29,480. PUBLISHED SEPTEMBER 24, 1907.

66,398. SOAPS. LUKE F. SHINNERS, Cleveland, Ohio.
Filed July 29, 1907. Serial No. 29,090. PUBLISHED SEPTEMBER 24, 1907.

66,399. DENTAL CEMENT. OSCAR M. SPRINGER, Boston, Mass.
Filed July 22, 1907. Serial No. 28,944. PUBLISHED SEPTEMBER 24, 1907.

66,400. SOAP MADE OF WOOL-FAT. VEREINIGTE CHEMISCHE WERKE AKTIENGESELLSCHAFT, Charlottenburg, near Berlin, Germany.
Filed May 20, 1907. Serial No. 27,751. PUBLISHED SEPTEMBER 24, 1907.

66,401. SPOOL-COTTON, SEWING-COTTON, AND THREAD. THE AMERICAN THREAD COMPANY, Jersey City, N. J.
Filed August 20, 1907. Serial No. 29,483. PUBLISHED SEPTEMBER 24, 1907.

66,402. POLISHING AND PLATING COMPOUNDS. THE ARGENTINA COMPANY, New York, N. Y.
Filed July 31, 1907. Serial No. 29,126. PUBLISHED SEPTEMBER 24, 1907.

66,403. FLAVORING EXTRACTS. BAKER EXTRACT COMPANY, Portland, Me., and Springfield, Mass.
Filed March 20, 1907. Serial No. 26,119. PUBLISHED SEPTEMBER 24, 1907.

66,404. SPOOL-COTTON OR SEWING-THREAD. BLODGETT & ORSWELL CO., Pawtucket, R. I.
Filed May 26, 1906. Serial No. 19,869. PUBLISHED SEPTEMBER 24, 1907.

66,405. COAL, COKE, BREEZE, AND PARTIALLY-COKED COAL. COALITE LIMITED, London, England.
Filed February 19, 1907. Serial No. 25,414. PUBLISHED SEPTEMBER 24, 1907.

66,406. FOOD PRODUCT MADE FROM EGG-ALBUMEN AND MILK. JOSEPH P. COOPER, Jersey City, N. J.
Filed August 2, 1905. Serial No. 11,149. PUBLISHED SEPTEMBER 24, 1907.

66,407. CERTAIN CEREAL FOODS. THE CORNO MILLS COMPANY, East St. Louis, Ill.
Filed June 28, 1907. Serial No. 28,448. PUBLISHED SEPTEMBER 24, 1907.

66,408. PRESSED HAM, MORTADELLE, CAPICOLLI, PRESIUTTI, AND COTTEGHINI. HENRY FIORENTINI, Boston, Mass.
Filed August 7, 1907. Serial No. 29,277. PUBLISHED SEPTEMBER 24, 1907.

66,409. BED-SPRINGS. HAGGARD & MARCUSSON CO., Chicago, Ill.
Filed July 6, 1905. Serial No. 10,411. PUBLISHED SEPTEMBER 24, 1907.

66,410. WHEAT-FLOUR. HOLMES AND BARNES, LIMITED, Baton Rouge, La.
Filed February 2, 1907. Serial No. 25,076. PUBLISHED SEPTEMBER 24, 1907.

66,411. STOVE-POLISH AND METAL-POLISH. F. & E. LIEBSCHER, New York, N. Y.
Filed August 5, 1907. Serial No. 29,243. PUBLISHED SEPTEMBER 24, 1907.

66,412. TEAS. JAMES M. MONTGOMERY, New York, N. Y.
Filed May 1, 1905. Serial No. 3,828. PUBLISHED JULY 11, 1905.

66,413. SAUSAGE AND HAM. NATIONAL PACKING COMPANY, Chicago, Ill.
Filed July 22, 1907. Serial No. 28,937. PUBLISHED SEPTEMBER 24, 1907.

66,414. CANDIED POPCORN. RUECKHEIM BROS. AND ECKSTEIN, Chicago, Ill.
Filed March 17, 1906. Serial No. 17,984. PUBLISHED SEPTEMBER 24, 1907.

66,415. CERTAIN SKINS AND RUGS. C. SCHMITZ & CO., New York, N. Y.
Filed August 22, 1907. Serial No. 29,523. PUBLISHED SEPTEMBER 24, 1907.

66,416. HYDRAULIC CEMENT AND ASPHALT. P. H. TRUMMER & OTTO VOGLER, Hamburg, Germany.
Filed July 26, 1907. Serial No. 29,052. PUBLISHED SEPTEMBER 24, 1907.

66,417. CLOTHES-WRINGERS. THE AMERICAN WRINGER COMPANY, New York, N. Y., and Providence, R. I.
Filed December 15, 1906. Serial No. 24,056. PUBLISHED SEPTEMBER 24, 1907.

66,418. PAINTS, ENAMELS, FILLERS, STAINS, AND VARNISHES. SAML. B. BOWEN, Philadelphia, Pa.
Filed August 10, 1907. Serial No. 29,342. PUBLISHED SEPTEMBER 24, 1907.

66,419. FERTILIZERS AND FERTILIZING MATERIALS. B. DIAZ & CO., New York, N. Y.
Filed August 29, 1907. Serial No. 29,664. PUBLISHED SEPTEMBER 24, 1907.

66,420. CERTAIN ELECTRICAL CONDUCTORS. THE ELECTRIC RAILWAY IMPROVEMENT CO., Cleveland, Ohio.
Filed May 27, 1907. Serial No. 27,671. PUBLISHED SEPTEMBER 24, 1907.

66,421. WHISKY. GLASNER & BARZEN DISTILLING & IMPORTING CO., Kansas City, Mo.
Filed August 8, 1907. Serial No. 29,295. PUBLISHED SEPTEMBER 24, 1907.

66,422. COCKTAILS. EDWARD HEFFERNAN, Lynn, Mass.
Filed July 22, 1907. Serial No. 28,932. PUBLISHED SEPTEMBER 24, 1907.

66,423. WHISKY. THE HENRY THODE CO., Davenport, Iowa.
Filed July 19, 1907. Serial No. 28,876. PUBLISHED SEPTEMBER 24, 1907.

66,424. CERTAIN BELLS AND PARTS THEREOF. J. G. BRILL COMPANY, Philadelphia, Pa., assignor to The J. G. Brill Company, a Corporation of Pennsylvania.
Filed June 7, 1907. Serial No. 27,973. PUBLISHED SEPTEMBER 24, 1907.

66,425. INSECTICIDE-DISTRIBUTERS. LEGGETT & BROTHER, New York, N. Y.
Filed August 16, 1907. Serial No. 29,431. PUBLISHED SEPTEMBER 24, 1907.

66,426. CERTAIN CLOTHING. M. HALFF & BRO., San Antonio, Tex.
Filed July 9, 1907. Serial No. 28,682. PUBLISHED SEPTEMBER 24, 1907.

66,427. OVERCOATS, COATS, PANTS, AND VESTS. JACOB A. MARKS, Boise, Idaho.
Filed August 27, 1907. Serial No. 29,615. PUBLISHED SEPTEMBER 24, 1907.

66,428. WHISKY. MATTINGLY & MOORE DIST'Y. CO., Bardstown, Ky.
Filed July 6, 1907. Serial No. 28,624. PUBLISHED AUGUST 13, 1907.

66,429. CERTAIN MEDICINAL PREPARATIONS. THE SILVER SUDS MANUFACTURING COMPANY, Philadelphia, Pa.
Filed August 21, 1907. Serial No. 29,507. PUBLISHED SEPTEMBER 17, 1907.

66,430. DYED COTTON PIECE GOODS. WM. SIMPSON, SONS & CO., Philadelphia, Pa.; New York, N. Y.; Baltimore, Md.; Chicago, Ill., and St. Louis, Mo.
Filed June 22, 1906. Serial No. 20,491. PUBLISHED FEBRUARY 5, 1907.

66,431. PILLOW-TOPS, PILLOW-SLIPS, AND LAUNDRY-BAGS. SONDHEIM & MAGNUS, New York, N. Y.
Filed August 1, 1907. Serial No. 29,168. PUBLISHED SEPTEMBER 24, 1907.

66,432. WHISKY. THE ULLMAN EINSTEIN CO., Cleveland, Ohio.
Filed August 8, 1907. Serial No. 29,296. PUBLISHED SEPTEMBER 24, 1907.

66,433. CERTAIN MALT PREPARATIONS. JOHANN BAPTIST WEYERMANN, Potsdam, Germany.
Filed June 7, 1907. Serial No. 27,965. PUBLISHED SEPTEMBER 24, 1907.

66,434. GOLF-CLUB IRONS. A. G. SPALDING & BROS., Jersey City, N. J., and New York, N. Y.
Filed August 27, 1907. Serial No. 29,623. PUBLISHED SEPTEMBER 24, 1907.

66,435. WRITING AND PRINTING PAPER. AMERICAN WRITING PAPER COMPANY, Holyoke, Mass.
Filed July 22, 1907. Serial No. 28,966. PUBLISHED SEPTEMBER 24, 1907.

66,436. NURSING-BOTTLE NIPPLES. THE FAULTLESS RUBBER COMPANY, Akron, Ohio.
Filed February 11, 1907. Serial No. 25,238. PUBLISHED SEPTEMBER 24, 1907.

66,437. VARNISH. THE GLIDDEN VARNISH COMPANY, Cleveland, Ohio.
Filed November 25, 1905. Serial No. 14,990. PUBLISHED FEBRUARY 12, 1907.

66,438. CALIFORNIA WINES. THEODORE GRUMBACH, Los Angeles, Cal.
Filed June 3, 1907. Serial No. 27,853. PUBLISHED SEPTEMBER 24, 1907.

66,439. AUTOMOBILES. HATFIELD MOTOR VEHICLE COMPANY, Cortland, N. Y.
Filed May 20, 1907. Serial No. 27,528. PUBLISHED SEPTEMBER 24, 1907.

66,440. PAMPHLETS RELATING TO FINANCE. KNICKERBOCKER AUDIT COMPANY, New York, N. Y.
Filed June 14, 1906. Serial No. 20,273. PUBLISHED SEPTEMBER 24, 1907.

66,441. INSECTICIDE-DISTRIBUTERS. LEGGETT & BROTHER, New York, N. Y.
Filed August 16, 1907. Serial No. 29,432. PUBLISHED SEPTEMBER 24, 1907.

66,442. SOAP. LEVER BROTHERS COMPANY, Portland, Me., and Cambridge, Mass.
Filed August 2, 1905. Serial No. 11,124. PUBLISHED JULY 30, 1907.

66,443. PUMPS, STEAM ENGINES AND TURBINES, AND PARTS THEREOF. MASCHINENFABRIK ODDESSE, GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Oschersleben, near Magdeburg, Germany.
Filed July 5, 1907. Serial No. 28,603. PUBLISHED SEPTEMBER 24, 1907.

66,444. KNIVES, RAZORS, AND SHEARS. WALTER PAPE. St. Louis, Mo.
Filed November 16, 1906. Serial No. 23,420. PUBLISHED SEPTEMBER 24, 1907.

66,445. WHISKY. VAN VLEET-MANSFIELD DRUG CO., Memphis, Tenn.
Filed August 2, 1905. Serial No. 11,174. PUBLISHED JANUARY 30, 1906.

66,446. CORSET-STIFFENERS AND CORSET-STAYS. EDWARD C. WEEKS, New York, N. Y.
Filed March 23, 1907. Serial No. 26,187. PUBLISHED APRIL 30, 1907.

66,447. PREPARATION FOR PRESERVING WINE AND BEER. A. BOAKE ROBERTS & CO. LTD., Stratford, London, England.
Filed February 1, 1907. Serial No. 25,044. PUBLISHED OCTOBER 1, 1907.

66,448. CORN-OIL. CORN PRODUCTS REFINING COMPANY, New York, N. Y.
Filed June 5, 1907. Serial No. 27,886. PUBLISHED OCTOBER 1, 1907.

66,449. CORN-OIL. CORN PRODUCTS REFINING COMPANY, New York, N. Y.
Filed June 5, 1907. Serial No. 27,887. PUBLISHED OCTOBER 1, 1907.

66,450. [WITHDRAWN.]

66,451. [WITHDRAWN.]

66,452. SAFETY-PAPER. GEORGE LA MONTE & SON, Nutley, N. J., and New York, N. Y.
Filed February 26, 1906. Serial No. 17,341. PUBLISHED SEPTEMBER 24, 1907.

66,453. SAFETY-PAPER. GEORGE LA MONTE & SON, Nutley, N. J., and New York, N. Y.
Filed February 26, 1906. Serial No. 17,348. PUBLISHED SEPTEMBER 24, 1907.

66,454. PREPARATION FOR THE TREATMENT OF FINGER-NAILS. FRITZ HARNISCH, Berlin, Germany.
Filed June 29, 1907. Serial No. 28,468. PUBLISHED OCTOBER 1, 1907.

66,455. HAIR-TONICS. THOMAS J. MOWRY, Renovo, Pa.
Filed August 24, 1907. Serial No. 29,562. PUBLISHED OCTOBER 1, 1907.

66,456. PERFUMES AND PERFUMED TOILET POWDERS. SOLON PALMER, New York, N. Y.
Filed August 24, 1907. Serial No. 29,556. PUBLISHED OCTOBER 1, 1907.

66,457. HAIR TONICS AND RESTORERS. G. O. RANSON & Co., Fortuna, Cal.
Filed August 31, 1907. Serial No. 29,706. PUBLISHED OCTOBER 1, 1907.

66,458. OCHERS. F. A. REICHARD, New York, N. Y.
Filed August 29, 1907. Serial No. 29,662. PUBLISHED OCTOBER 1, 1907.

66,459. OCHERS. F. A. REICHARD, New York, N. Y.
Filed August 29, 1907. Serial No. 29,663. PUBLISHED OCTOBER 1, 1907.

66,460. MONTHLY MAGAZINE. THE SPORTING GOODS PUBLISHING COMPANY, St. Louis, Mo.
Filed July 15, 1907. Serial No. 28,817. PUBLISHED OCTOBER 1, 1907.

66,461. WEEKLY PAPER. THE SPORTING NEWS PUBLISHING COMPANY, St. Louis, Mo.
Filed July 15, 1907. Serial No. 28,818. PUBLISHED OCTOBER 1, 1907.

66,462. NAPHTHA. STANDARD OIL CO. OF NEW YORK, New York, N. Y.
Filed August 30, 1907. Serial No. 29,676. PUBLISHED OCTOBER 1, 1907.

66,463. BITTERS. JOHN WAGNER & SONS, Philadelphia, Pa.
Filed April 27, 1907. Serial No. 26,972. PUBLISHED OCTOBER 1, 1907.

LABELS

REGISTERED NOVEMBER 26, 1907.

13,894.—*Title:* "THE ONLY 5¢ BULL HEADS." (For Cigars.) JACOB FURTHMANN, Jersey City, N. J. Filed October 22, 1907.

13,895.—*Title:* "PROTECTION." (For Cigars.) HEINEMAN BROTHERS, Baltimore, Md. Filed October 26, 1907.

13,896.—*Title:* "HOMBREW." (For Beer.) THE HOME BREWING & ICE CO., Joplin, Mo. Filed October 28, 1907.

13,897.—*Title:* "BAKER BOURBON." (For Whisky.) THE FRANKFORT DISTILLERY, (INCORPORATED,) Frankfort, Ky. Filed October 14, 1907.

13,898.—*Title:* "BAKER RYE." (For Whisky.) THE FRANKFORT DISTILLERY, (INCORPORATED,) Frankfort, Ky. Filed October 14, 1907.

13,899.—*Title:* "IDO." (For a Beverage.) THE HOME BREWING & ICE CO., Joplin, Mo. Filed October 28, 1907.

13,900.—*Title:* "WHITE STAR WATER." (For Drinking-Water.) JOSEPH GREENBERG, New York, N. Y. Filed October 24, 1907.

13,901.—*Title:* "A. H. S." (For Prepared Potted Beef.) ANNIE H. SMITH, Berwyn, Pa. Filed October 25, 1907.

13,902.—*Title:* "BROMO MINT." (For Medicine.) FRANK P. CROTZER, Wilkes-Barre, Pa. Filed November 26, 1906.

13,903.—*Title:* "MENTHOLATUM." (For a Salve.) THE MENTHOLATUM COMPANY, Wichita, Kans., and Buffalo, N. Y. Filed September 16, 1907.

13,904.—*Title:* "MACK MAHON'S DIAMOND BACK OIL." (For a Medicinal Oil.) JOHN MACK MAHON, Pittsburg, Pa. Filed October 25, 1907.

13,905.—*Title:* "THE IDEAL LINIMENT." (For a Liniment for Man and Beast.) KURWIN S. GROSS & CO., Philadelphia, Pa. Filed September 16, 1907.

PRINTS

REGISTERED NOVEMBER 26, 1907.

2,161.—*Title:* "BUDWEISER GIRL." (For Beer.) ANHEUSER-BUSCH BREWING ASS'N., St. Louis, Mo. Filed October 25, 1907.

2,162.—*Title:* "CALIFORNIA SOUVENIR PLAYING CARDS." (For Playing-Cards.) MICHAEL RIEDER, Los Angeles, Cal. Filed October 25, 1907.

2,163.—*Title:* "MERITAS, TABLE OIL CLOTH." (For Table Oil-Cloth.) STANDARD OIL CLOTH CO., New York, N. Y. Filed October 18, 1907.

2,164.—*Title:* "IMMACULATE." (For Enamels.) PINCHIN, JOHNSON & CO. LTD., London, England. Filed October 23, 1907.

2,165.—*Title:* "SANITAS, CLOTH WALL COVERING." (For Cloth Wall-Covering.) STANDARD OIL CLOTH CO., New York, N. Y. Filed October 18, 1907.

2,166.—*Title:* "APPAREL FOR MAN AND BOY." (For Clothing.) E. L. BOONE, Chicago, Ill. Filed October 24, 1907.

2,167.—*Title:* "MEN'S AND BOYS' APPAREL." (For Men's and Boys' Apparel.) H. C. LYTTON, Chicago, Ill. Filed October 25, 1907.

2,168.—*Title:* "CHAMPION HARVESTING MACHINES." (For Harvesting Machinery.) THE HAYES LITHOGRAPHING CO., Buffalo, N. Y. Filed October 23, 1907.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

HOPKINS *v.* NEWMAN.

Decided April 6, 1907.

1. INTERFERENCE—RIGHT TO MAKE CLAIMS—RES ADJUDICATA.

Where the Examiner, on a motion to dissolve, holds that a party has a right to make the claims in issue and upon petition to the Commissioner by the opposing party asking him, under his supervisory authority, to review the favorable decision of the Examiner the Commissioner refuses to pass upon the question, it cannot be successfully urged that the question of the right of such party to make the claims is *res adjudicata*.

2. SAME—PRIORITY—SECOND INTERFERENCE—RES ADJUDICATA.

As to claims involved in a second interference between the same parties which could have been made in the first interference, *Held* that a final decision in the first interference on the question of priority renders that question *res adjudicata*.

3. AMENDMENT—NEW MATTER—RIGHT TO MAKE CLAIMS.

Where the original specification of an application relating to combined type-writing and adding machines did not describe the adding-machine, but stated that the invention was illustrated "in connection with an adding-machine of the class known as 'registering-accountants'" and only the case and a few minor elements thereof were shown in the drawings, *Held* that an amendment of the application reciting a patent disclosing the construction referred to by the words "registering-accountants" did not constitute a departure from the original disclosure, in view of evidence showing that such term referred to a construction well known in the market embodying the construction of the patent and that such construction was the only one on the market which had the distinctive appearance illustrated in the original drawing. *Held*, further, that such party had a right to make claims to a combination including specific elements of such adding-machine.

APPEAL from Examiners-in-Chief.

ADDING AND WRITING MACHINE.

Mr. John D. Rippey and *Mr. George R. Hamlin* for Hopkins.

Messrs. Rector & Hibben for Newman.

MOORE, *Assistant Commissioner:*

This is an appeal by Hopkins from the decision of the Examiners-in-Chief affirming the decision of the Examiner of Interferences and awarding priority of invention to Newman. The issue is stated in thirteen counts, of which the following are sufficient to illustrate the character of the invention:

1. In an adding-machine, a platen, type-carriers, type mounted in frames on the carriers, devices for operating the carriers adjacent to the platen, hammers for driving the type against the platen to print numbers, and mechanism operable to accumulate the numbers so printed, in combination with mechanism operable to print any desired words on the platen in alinement with the printed numbers.

3. In an adding and writing machine, a platen, type-writing mechanism operable to print any desired words thereon, devices carrying movable type for printing numbers, means for moving said devices adjacent to the said platen, hammers mounted in position to drive the type against the platen, and means for striking the hammers against the type when the type has been positioned for printing.

9. In an adding and writing machine, the combination with the word-printing mechanism having a platen arranged to carry paper, of devices carrying type independent of the word-printing mechanism, means for moving said devices toward the platen as required for printing numbers thereon, means for printing the number by use of the type after said devices have been so moved, and a totalizer operable to add the numbers as printed.

13. In a machine of the character described, word-printing mechanism having a platen arranged to carry paper, adding mechanism, type-carriers separate from the word-printing mechanism, a series of relatively movable type carried by each of said type-carriers adjacent to the platen aforesaid, means for driving the type so alined against the said platen to print numbers, and means for operating the adding mechanism to add the numbers so printed.

The invention in issue consists in the combination of a type-writer and an adding-machine in which a single platen or roller is adapted to coöperate with the printing mechanisms of both the type-writer and the adding-machine in such a manner as to provide for the writing of items and amounts in alinement and for the automatic totalizing of the latter. In accomplishing this result Hopkins has superposed the type-writing mechanism upon the adding-machine. Newman accomplishes the same purpose by placing the type-writer and adding-machine side by side and providing suitable means for conducting the platen from a position where it coöperates with the printing mechanism of the type-writer to a position where it coöperates with the printing mechanism of the adding-machine.

In a prior interference between the same parties involving the same applications Hopkins failed to file a preliminary statement, and Newman, who was first to file his application, was awarded priority of invention upon the following issue:

1. The combination with a type-writing mechanism, and an adding mechanism, of a paper-carriage, a roller or platen thereon arranged to feed a sheet of paper to both mechanisms, and means for rotating the roller operated by a part of the adding mechanism.

2. The combination with a type-writing mechanism, and an adding mechanism, of a paper-carriage, a roller or platen thereon arranged to feed a sheet of paper to both mechanisms and means for rotating the roller operated by a part of the adding mechanism or manually as desired.

3. The combination with a type-writing mechanism, and an adding mechanism, of a paper-carriage, a roller or platen thereon arranged to feed a sheet of paper to both mechanisms, manually-operated mechanism for rotating the roller, and automatic means for rotating the roller at the end of each line of printing.

The issue of this interference differs from that of the former interference in that it includes certain specific elements of the printing and adding mechanism of the adding-machine which were old in the art prior to the date of invention alleged by either party. These elements are not shown in detail in the drawing of Newman's application or specifically described in his specification.

Newman has presented no testimony relative to his date of conception and relies upon the date of filing of his application, February 7, 1901, for his constructive reduction to practice. Hopkins alleges in his preliminary statement that he conceived the invention in September, 1897, and reduced the same to practice in June, 1902. In addition to the testimony bearing upon his dates of conception and reduction to practice Hopkins contests the right of Newman to make the claims forming the issue of this interference upon the grounds that Newman's application now contains no sufficient disclosure of the elements of the adding-machine specified in the claims in issue, such as "means for striking the hammers against the type," "devices for drawing the hammers away from the type after operation," "a totalizer operable to add the numbers as printed," etc., and that his original application contained no basis for the assumption that these elements formed part of his invention which would warrant the addition of a specific disclosure of these elements to his application or their inclusion in his claims.

The Examiner of Interferences and the Examiners-in-Chief concurred in finding that Hopkins had failed to prove priority of invention, that Newman has the right to make the claims in issue, and that the question of priority as to the present issue is *res adjudicata* in view of the decision in the prior interference upon a broad issue which differs from the present issue only by the omission of old and well-known elements. In my opinion the conclusions of the lower tribunals are correct.

Hopkins's application involved in this interference is assigned to the Addograph Manufacturing Company. It appears that Hopkins is now hostile to his assignee, and it is sought to establish Hopkins's conception of the invention by the testimony of one Bullock, to whom, it is alleged, Hopkins disclosed his invention in 1897. Bullock's testimony concerning this alleged disclosure indicates that Hopkins had an idea of what he wished to accomplish at that time, but that there was no such communication of the idea to Bullock as would enable one skilled in the art to embody the invention in physical form, which is essential to an effective disclosure under the patent laws. (*Sendelbach* v. *Gillette*, C. D., 1904, 597; 109 O. G., 276.) If, however, it could be conceded that Hopkins conceived the invention in 1897, as alleged, he was clearly lacking in diligence in reducing it to practice until after Newman's application was filed. If, therefore, Newman's application comprised a disclosure of the invention in issue at the time it was filed, it constitutes a constructive reduction to practice of the invention by Newman, and he is entitled to the award of priority of invention.

It appears from the history of the cases of the parties involved in this interference that ten of the claims forming the issue of this interference were in Hopkins's application at the time of the earlier interference. After the conclusion of that interference the remaining three claims of the issue were added by Hopkins. The Examiner rejected all of the claims now in controversy upon the ground that they were readable upon the structure disclosed in Newman's application, but subsequently withdrew his rejection and suggested these claims to Newman for the purpose of interference. After the declaration of the present interference both parties moved for dissolution—Newman upon the ground that Hopkins has no right to make the claims, in view of the decision in the prior interference, and Hopkins upon the grounds that there was irregularity in the declaration of the interference and that Newman had no right to make the claims, because his application as originally filed did not disclose the elements of the printing mechanism of the adding-machine recited in the claims in issue. The Examiner denied both motions. Upon appeal the Commissioner affirmed the decision of the Primary Examiner as to the appealable grounds of the decision and also dismissed a petition by Hopkins that the Commissioner use his supervisory authority and set aside the decision of the Examiner affirming Newman's right to make the claims. In respect to the right of Newman to make the claims the Commissioner said:

> I fail to find any clear unmistakable error in the Examiner's conclusion that Newman has the right to make the claims in issue. The correctness of the Examiner's conclusion that Newman's application as filed, contained sufficient foundation for the amendments to which Hopkins objects as new matter therein, is a question upon which there is room for honest difference of opinion among those competent to judge. Since this is the case, and the question is one upon which Hopkins has no right of appeal, the Examiner's conclusion will be accepted here without further consideration.

It is contended in behalf of Newman that the question of Newman's right to make the claims is *res adjudicata* in view of the decisions upon Hopkins's motion to dissolve and petition above referred to. This contention is not sound. In his decision upon Hopkins's petition the Commissioner did not decide the question of Newman's right to make the claims, but merely refused to exercise his supervisory authority and review the decision of the Examiner upon this question.

The right of a party to contest his opponent's right to make the claim in issue as a basis for an award of priority is specifically provided for by Rule 130, which is in accordance with the holding of the court of appeals in the decision in *Podlesak and Podlesak* v. *McInnerney* (120 O. G., 2127) and in *Kilbourn* v. *Hirner* and *in re Wickers and Furlong*, (129 O. G., 869,) both of which were decided by that court February 5, 1907. The testimony presented by the respective parties relative to Newman's right to make the claims was therefore properly considered by the lower tribunals in connection with the disclosure in Newman's original application.

Newman illustrates in his drawing a type-writing machine and an adding-machine placed side by side with suitable means for adapting a single platen to coöperate with the printing mechanism of each machine. The printing mechanism of the type-writer is shown and described, as is also the mechanism for actuating and controlling the movement of the platen; but only the case and a few minor elements of the adding-machine are shown in the drawing, and the computing and writing mechanism thereof is not described. The statement of invention in Newman's original application is, in part, as follows:

> My invention relates to combined type-writing and adding machines and has for its object to provide type-writing mechanism and improved means for combining the same with adding mechanism.
>
> In the present embodiment of my invention I have illustrated it in connection with an adding-machine of the class known as "registering-accountants" and a special object of the present invention is to provide means whereby type-writing mechanism may be combined with such an adding-machine.
>
> As is well known to those skilled in the art, adding-machines of the class mentioned are provided with keyboards and in their operation they print the several numbers to be added as well as the sum of said numbers.

The Examiner in his first action requested Newman to "state the name of the patentee of the adding-machine," and Newman in response amended his specification upon April 29, 1901, to state that his improved type-writing mechanism is illustrated—

> in connection with an adding-machine of the class known as "registering-accountants" such as those machines patented to W. S. Burroughs, No. 504,963, dated September 12, 1893.

This patent and the Burroughs patents to which it refers illustrate and describe the specific features of the adding and printing mechanism stated in the claims in issue in this interference, and the question of Newman's right to make these claims depends upon whether his designation of the adding-machine by reference to it as the "registering-accountant" and illustration of its external form is a sufficient disclosure of the invention to warrant the amendment of April 29, 1901, and the subsequent amendment presenting the claims in issue.

The specification of a patent is addressed to persons skilled in the art, and a disclosure therein which is sufficient to enable such persons to make and use the same constitutes a compliance with the requirements of section 4888 of the Revised Statutes. Newman's original specification when supplemented with the disclosure of the Burroughs patent 504,963, referred to in Newman's amendment of April 24, 1904, clearly constitutes such a disclosure of the invention in issue. It is, however, contended by Hopkins that there was no sufficient identification in Newman's original specification of the device shown in Burroughs's patent and that the name "registering-accountant" is merely a transitory name which might not be perpetuated to inform the public in the future of the character of adding and recording machine involved in Newman's device. The evidence, in my opinion, clearly refutes these contentions. The testimony of Boyer, the president of the Burroughs Adding Machine Company, who is called as a witness by Newman, and of Dorman and Perkins, who are called as expert witnesses in behalf of Hopkins, shows conclusively that the "registering-accountant" was a well-known machine upon the market in 1901, that it embodied the structure disclosed in the Burroughs patent above referred to, and that it was the only adding-machine then on the market whose case had the distinctive appearance illustrated in Newman's drawings. It is conceded by Dorman and Perkins that the type-writing mechanism and carriage shown in Newman's application could be applied to the Burroughs "registering-accountant." In view of these facts it is believed that Newman's original specification and drawing sufficiently identified the adding-machine with which his mechanism was adapted to coöperate as that embodied in the well-known machine illustrated in Burroughs's patent and known to the public as the "registering-accountant" to enable a person skilled in the art to produce the invention in controversy and to warrant the amendment of April 24, 1901, by which a description of this machine is made a part of Newman's specification. Such a disclosure was found by the Court of Appeals of the District of Columbia to be sufficient to warrant a party to make claims embracing old elements not shown or specifically described in the recent case of *Kilbourn* v. *Hirner*, *supra*.

It is urged that Newman's present drawing is insufficient to comply with the requirements of Rule 50 and that the oath does not cover the claims of the issue, which were presented by an attorney nearly four years after the application was filed. These contentions are without force. Whether a further drawing is necessary in Newman's application or a supplemental oath should be required are *ex parte* questions which are not involved in this proceeding. The sworn preliminary statement of Newman is sufficient to support the claims in issue for the purpose of this interference, since it is found that their subject-matter is disclosed in his original application and comprehended in the statement of invention therein.

It is also urged that intervening rights have accrued which estop Newman from now making the claims in issue. In the decisions cited in support of this contention the facts differed from those in this case in that the later amendments comprised new matter or claims covering a broader invention or a different species of invention than that embraced in the original application. In such cases it has been held that claims presented at a late date which would dominate inventions made by others in a field which was unoccupied at the time such inventions were made should not be permitted. In the present case the claims in issue are based upon the structure originally disclosed, but are narrower in scope than those originally presented. The invention was embraced in the claims of the original application, and therefore no rights have become vested in later inventors which estop Newman from making these claims. (*McBerty* v. *Cook*, C. D.; 1900, 248; 90 O. G., 2295.)

The claims now in controversy might have been made by Newman at the time the earlier interference between these applications was declared. Such of these claims as were in Hopkins's application at that time should have been made part of the issue of that interference, and in view of the holding of the Court of Appeals of the District of Columbia in the recent case of *Blackford* v. *Wilder* (127 O. G., 1255) the question of priority as to the claims now before me is *res adjudicata* by reason of the decision in the earlier interference.

In *Blackford* v. *Wilder*, *supra*, Blackford was awarded priority as to certain specific claims. Subsequently broader claims based upon the same structure were presented by Wilder and a second interference instituted. The court said in their decision that Wilder—

> * * * having had the right to make the broader claims in the earlier stages of the proceedings in the Patent Office, as well as the opportunity, in the first proceeding, to introduce all of his evidence relating to the construction and operation of his Exhibit E structure, his right, in both respects, terminated with that litigation.
>
> Whether the former decision was right or wrong, or was induced by the want of the particular evidence that was offered in the present case, is not the question. However that might be it was final and put an end to the litigation in the first interference. It must be held, therefore, as conclusive of every question that not only was, but also might have been presented and determined in that case.

Having determined that Newman has by virtue of the disclosure in his original application the right to make

the claims now in issue, he is entitled to the award of priority not only in view of Hopkins's failure to establish priority of invention, but also by reason of this question being *res adjudicata*.

The decision of the Examiners-in-Chief is affirmed.

EX PARTE SAUNDERS, JR.

APPLICATION FOR DESIGN PATENT.

Decided October 28, 1907.

APPLICATION—AMENDMENT FROM DESIGN TO MECHANICAL CASE.

Where an applicant in presenting his own case requested in his petition the grant of a design patent upon a letter-scale, but his specification, claim, and oath were of the form prescribed for mechanical application, and it appears from the actions by the applicant in the case that it was his intention to obtain protection for an article of manufacture, *Held* that he should be permitted to amend the case to accord with the form prescribed for mechanical applications.

ON PETITION.

DESIGN FOR LETTER-SCALES.

Mr. Daniel G. Saunders, Jr., pro se.

MOORE, *Commissioner:*

This is a petition that this application, which as originally presented requested the grant of a patent for a design, be allowed to be amended as a mechanical case and examined as an application for a machine patent.

It appears from the record that the applicant originally presented a petition praying that Letters Patent be granted to him for a term of seven years for the new and original design for letter-scales set forth in the annexed specification. A fee of fifteen dollars was paid upon the filing of this application. The preamble of the specification alleged that the applicant had invented a new, original, ornamental, and useful design for letter-scales as a new article of manufacture. The specification clearly described the construction of the device and concluded with a claim for an article of manufacture, setting forth the specific features of the device. The oath accompanying the original application was in the form prescribed for mechanical applications.

On examination of the case the Examiner of Designs required the applicant to amend the application to agree with the practice in design cases and also required him to file a new oath in the terms prescribed by the statute for design applications. He further required that the applicant file an exhibit showing the design of a letter-scale.

The applicant in presenting an amendment in accordance with the Examiner's requirement stated that he was—

> * * * in doubt whether the exhibit shall be a working model of the device, or a drawing showing the weight-indicating pointer and full details of the process of weighing.

The model which was filed clearly showed that the invention consists of improvements in machines and was not an ornamental design for an article of manufacture. The applicant's claim was therefore rejected as not covering the proper subject-matter for design. Thereupon this petition that the case be amended in such a manner as to form a mechanical application was presented.

It is clear from the above-stated facts that from the first the intention of applicant, who is prosecuting his own case, was to obtain protection upon the article of manufacture and that his failure to present a proper application in the first instance was due to his unfamiliarity with the patent law. In view of these circumstances it is believed that the amendment should be permitted and that the oath originally filed in the application should be accepted in connection with the amendment of the petition and specification and that the case should be examined as for a mechanical application for patent.

The petition is granted.

EX PARTE UTICA DROP FORGE AND TOOL CO.

APPLICATION FOR REGISTRATION OF TRADE-MARK.

Decided August 9, 1907.

TRADE-MARKS—REQUIREMENT THAT CLASS OF MERCHANDISE BE LIMITED IS IN EFFECT A REJECTION.

Where the Examiner required that the particular description of his merchandise stated by the applicant as falling in Class 23 be limited to "Pliers without a cutting edge" or that the class stated be changed to Class 20 and the particular description of goods made to read "Nippers and pliers provided with a cutting edge," *Held*, that this action is in effect a refusal to register the mark, and the applicant's remedy is by appeal and not by petition.

ON PETITION.

TRADE-MARK FOR NIPPERS AND PLIERS.

Messrs. Robinson, Martin & Jones for the applicant.

BILLINGS, *Acting Commissioner:*

This is a petition from the action of the Examiner of Trade-Marks requiring that the particular description of goods be made definite.

It appears that the Examiner has required that the words "without a cutting edge" be added after "Pliers" if the class of merchandise be stated as Class 23 or that the class be changed to Class 20 and the particular description of goods be made to read "Nippers and pliers provided with a cutting edge."

This action of the Examiner is in effect a refusal to register the mark, and the applicant's remedy is therefore by an appeal and not by petition.

It does not appear from the record whether the Examiner regards the mark as registrable except for this requirement. The Examiner should therefore, if he has any other reasons for refusing registration, state them, in order that, if applicant sees fit to appeal, he may bring up the entire case.

The petition is dismissed.

STANDARD IMPORT CO., LTD., *v.* NEW ORLEANS IMPORT CO., LTD.

TRADE-MARK INTERFERENCE.

Decided October 31, 1907.

1. INTERFERENCE—REOPENING TO TAKE TESTIMONY TO STRENGTHEN CASE.

A practice which would allow a contestant to experimentally conduct his case to a probable failure and then permit him after consultation and with competent assistance to make further endeavors to show what he could and should have earlier shown with such assistance would be contrary to all well-established rules and legal principles.

2. SAME—SAME—MOTION BROUGHT BEFORE FINAL HEARING.

The fact that a motion to reopen an interference to take additional evidence was brought before final hearing is no reason why it should be granted.

APPEAL on motions.

TEA.

Mr. J. J. Sheehy for Standard Import Co., Ltd.

Messrs. Goepel & Goepel for New Orleans Import Co., Ltd.

BILLINGS, *Assistant Commissioner:*

This case comes up on appeal from the decisions of the Examiner of Interferences of July 24 and August 15, 1907, denying two motions of the New Orleans Import Co. that the case be reopened in order that further testimony be taken.

In the first of these motions it was asked that the case be reopened in order to take testimony to contradict the testimony of a certain witness and that testimony might be taken as to sales by the New Orleans Import Co. of tea bearing the trade-mark in issue.

The second motion asked, first, that the testimony of two witnesses, Winn and McClure, might be taken to rebut certain statements of the Standard Import Co.'s witness Harris, and, second, that the testimony of the witness Bailey be taken for the purpose of allowing him to correct an error in his deposition. No appeal is taken from the decision refusing permission to take the testimony of Winn and McClure.

The first of these motions was denied on the ground that it was indefinite, since the names of the witnesses whose testimony it was desired to take were not given and on the further ground that the evidence was not newly discovered and that the motion was not brought with diligence.

The second motion was denied as to the second part thereof on the ground that it had not been shown that the testimony of Bailey was material and that the moving party had not been diligent in bringing his motion.

The appellant argues that the cases of *Robinson* v. *Copeland* (107 O. G., 1376) and *Estes* v. *Gause*, (88 O. G., 1336,) cited by the Examiner of Interferences, are not pertinent, since the motions in this case were brought before final hearing, not afterward, as in those decisions. It is also argued that there is no evidence in the case to establish actual use of the mark by either party and that the testimony desired should be permitted in the interest of truth and justice.

The pertinency of the latter argument is not apparent, for if the evidence in the case is a nullity the decision must be in favor of the New Orleans Import Co., since it was the first to file an application for registration.

The mere fact that the motion was brought before final hearing is no reason why it should be granted, for, as pointed out in *Donnellan* v. *Berry*, (37 MS., 386,) quoted with approval in *Sutter* v. *McDonnell* v. *Jolly* v. *Neff*, (98 O. G., 1484)—

> A practice which would allow a contestant to experimentally conduct his case to a probable failure and then permit him after consultation and with competent assistance to make further endeavors to show what he could and should have earlier shown with such assistance would be contrary to all well-established rules and legal principles.

In each of these cases the motion to reopen was brought before final hearing.

The record clearly shows that the motions to reopen were not brought with due diligence, and, as pointed out by the Examiner of Interferences, it has not been shown that the testimony of Bailey is material.

The decision is affirmed.

EX PARTE PLUMB.

APPLICATION FOR PATENT.

Decided November 4, 1907.

CLAIMS—FUNCTIONAL—OPEN TO OBJECTION.

Claims which fail to include sufficient mechanical elements to effect the function expressed in the claims are open to objection, and from objection on such ground petition may be taken to the Commissioner.

ON PETITION.

DISINFECTING ATTACHMENT FOR CARPET-SWEEPERS.

Messrs. Raymond & Barnett for the applicant.

BILLINGS, *Assistant Commissioner:*

This is a petition that the Examiner be directed to forward an appeal to the Examiners-in-Chief.

It appears that on May 21, 1907, the Examiner objected to claims 2, 4, 5, and 6 as being functional and indefinite and rejected claims 1 and 3 on references. This action was made final on May 25, 1907.

On July 12, 1907, the applicant filed an appeal from this decision which the Examiner refused to forward, holding that the objection to the form of claims 2, 4, 5, and 6 should be disposed of prior to the appeal and that this question was one which went to the Commissioner on petition. This action was repeated on September 9, 1907, and at the same time the objection of vagueness and indefiniteness was held to apply to claim 1 also.

It was from this action that the present petition was taken, the appellant contending that the Examiner's action was in reality a rejection of the claims as being too broad and that the question is properly reviewable by the Examiners-in-Chief on appeal.

The distinction between claims which should be objected to as functional and claims which should be rejected on the ground that the statement of function contained therein is insufficient to distinguish them from the prior art is well stated in *ex parte McMullen* (84 O. G., 507) as follows:

> Functional claims—that is, claims for a function merely or which fail to include sufficient mechanical elements to effect the function expressed in the claim—are open to objection, and from objection made upon such ground petition may be taken to the Commissioner.
>
> On the other hand, claims which while including sufficient mechanical elements to effect a function stated therein, depend upon that statement of function to distinguish them from what is old in the prior art are not to be objected to as functional, but are open to rejection if in the opinion of the Examiner the statement of function is insufficient, the question being a question of merits and not of form.

It has also been pointed out in *ex parte Holder* (107 O. G., 833) that where the claim distinctly specifies a certain structure which is adapted to perform a particular function there is no objection to setting out in the claim also the function which the structure is adapted to perform.

The Examiner's objection to claims 1, 5, and 6 is well taken, for these claims do not include sufficient mechanical elements to effect the functions expressed therein.

Claims 2 and 4 appear to be unobjectionable in form, except that the brush is not positively included as an

element in claim 2. If the Examiner knows of references which anticipate these claims, he should cite the same.

As the appeal cannot be forwarded till the objection to the form of claims 1, 5, and 6 have been overcome, the petition cannot be granted, but the case is remanded to the Examiner for action in conformance with this decision.

The petition is denied.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., November 14, 1907.

Levy, Diamant, Oppenheimer & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Ainsworth Shoe Company, of 209-211 St. Clair street, Toledo, Ohio, for registration of a trade-mark and a trade-mark registered to Levy, Diamant, Oppenheimer & Company, of 107 Battery street, San Francisco, Cal., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Levy, Diamant, Oppenheimer & Company having been returned undelivered, notice is hereby given to the said Levy, Diamant, Oppenheimer & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR
UNITED STATES PATENT OFFICE.
Washington, D. C., October 31, 1907.

The Kittredge Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Business Magazine Company, of Knoxville, Tenn., for registration of a trade-mark and a trade-mark registered to The Book-keeper Publishing Company, Limited, of 61 Fort street, Detroit, Mich., and a trade-mark registered to The Kittredge Company, of 800 Broad street, Newark, N. J., and 72 Reade street New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said The Kittredge Company having been returned undelivered, notice is hereby given to The Kittredge Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE. *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 29, 1907.

Robert George, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The American Shoe Polish Company, of Chicago, Ill., for registration of a trade-mark and a trade-mark, No. 146,682, dated August 16, 1887, registered to Robert George, of Chicago, Ill. The notice of said declaration mailed by the Patent Office in the usual manner to the said Robert George at his known address, Chicago, Ill., has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the said Robert George, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 26, 1907.

Mayer Sam & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Palace Clothing Company, of 709-711 Kansas avenue, Topeka, Kans., for registration of a trade-mark and a trade-mark registered to Mayer Sam & Company, of 24 West One Hundred and Twenty-fifth street, New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Mayer Sam & Company having been returned undelivered, notice is hereby given to the said Mayer Sam & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 14, 1907.

The Saint Paul Roller Mill Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Ralston Purina Company, of Eighth and Gratiot streets, St. Louis, Mo., for registration of a trade-mark and a trade-mark registered to The St. Paul Roller Mill Company, of St. Paul, Minn., and the notice of said declaration mailed by the Patent Office in the usual manner to the said The St. Paul Roller Mill Company having been returned undelivered, notice is hereby given to the said The St. Paul Roller Mill Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 12, 1907.

Reade Manufacturing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The Hewitt Brothers Soap Company, of Dayton, Ohio, for registration of a trade-mark and a trade-mark registered to the Reade Manufacturing Company, of Chicago, Ill., and it appears from the record of the case that the registrant, Reade Manufacturing Company, or its attorneys of record cannot be located.

Notice is therefore hereby given to said Reade Manufacturing Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.
[BY AUTHORITY OF CONGRESS.]

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Patents	681	No. 872,319 to No. 872,999, inclusive.
Designs	19	No. 38,916 to No. 38,934, inclusive.
Trade-Marks	30	No. 66,464 to No. 66,493, inclusive.
Labels	8	No. 13,906 to No. 13,913, inclusive.
Prints	3	No. 2,169 to No. 2,171, inclusive.
Reissues	6	No. 12,726 to No. 12,731, inclusive.
Total	747	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	3	.....	New Hampshire	5	1
Alaska, District of	1	.....	New Jersey	24	2
Arizona Territory	.....	.....	New Mexico Ter't'y	.....	.....
Arkansas	3	.....	New York	105	7
California	21	.....	North Carolina	5	.....
Colorado	7	.....	North Dakota	1	.....
Connecticut	12	2	Ohio	53	4
Delaware	.....	.....	Oklahoma	1	.....
District of Columbia	7	1	Oregon	.....	.....
Florida	3	.....	Panama	.....	.....
Georgia	5	.....	Pennsylvania	74	3
Hawaii Territory	.....	.....	Philippine Islands	.....	.....
Idaho	.....	.....	Rhode Island	4	1
Illinois	71	1	South Carolina	1	.....
Indiana	16	1	South Dakota	2	.....
Iowa	5	.....	Tennessee	7	.....
Kansas	10	.....	Texas	10	.....
Kentucky	10	.....	Utah	1	1
Louisiana	1	1	Vermont	3	.....
Maine	2	1	Virginia	7	1
Maryland	8	2	Washington	9	.....
Massachusetts	41	2	West Virginia	5	.....
Michigan	21	1	Wisconsin	14	.....
Minnesota	16	2	Wyoming	.....	.....
Mississippi	1	.....	U. S. Army	.....	.....
Missouri	23	3	U. S. Navy	.....	.....
Montana	2	.....			
Nebraska	2	.....	Total to citizens of the United States	624	37
Nevada	2	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	3	.....	Netherlands	.....	.....
Belgium	1	.....	Newfoundland	.....	.....
Brazil	.....	.....	New South Wales	.....	.....
British West Indies	.....	.....	New Zealand	.....	.....
Canada	17	.....	Norway	.....	.....
Cape Colony	1	.....	Persia	.....	.....
Chile	.....	.....	Queensland	.....	.....
China	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	.....	.....
Cuba	.....	.....	Scotland	.....	1
Denmark	.....	.....	South Australia	.....	.....
Ecuador	.....	.....	Spain	.....	.....
England	23	1	Sweden	.....	.....
France	5	.....	Switzerland	2	.....
Germany	18	1	Transvaal, South Africa	3	.....
Haiti	.....	.....	Victoria	1	.....
Ireland	.....	.....	Western Australia	.....	.....
Italy	2	1			
Japan	.....	.....	Total to citizens of foreign countries	76	4
Java	.....	.....			
Mexico	.....	.....			

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 29, 1907.

Robert George, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The American Shoe Polish Company, of Chicago, Ill., for registration of a trade-mark and a trade-mark, No. 146,682, dated August 16, 1887, registered to Robert George, of Chicago, Ill. The notice of said declaration mailed by the Patent Office in the usual manner to the said Robert George at his known address, Chicago, Ill., has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the said Robert George, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 22, 1907.

Adams Packing Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Edward C. Fiaccus, of Wheeling, W. Va., for registration of a trade-mark and a trade-mark registered to the Adams Packing Company, of Indianapolis, Ind., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Adams Packing Company having been returned undelivered, notice is hereby given to the said Adams Packing Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business November 26, 1907.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
303	XVII. Linotyping; Printing; Matrix-Making; Nut and Bolt Locks; Clutches.	Nov. 12	Oct. 28	177
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Toilet; Signals; Garment-Supporters.	Nov. 12	Sept. 9	626
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Nov. 7	Oct. 3	253
172	XXXI. Alcohol; Charcoal and Coke; Ammonia, Water, and Wood Distillation; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Oils, Fats, and Glue; Water Purification; Mineral Oils.	Nov. 4	Oct. 5	234
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Towers; Iron Structures.	Nov. 2	Oct. 24	194
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Nov. 1	Oct. 4	330
167	V. Bookbinding; Harvesters; Jewelry; Music.	Nov. 1	Aug. 31	334
147	XXIX. Coopering; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking-Tools; Woodworking; Fire-Escapes; Ladders.	Oct. 31	Sept. 12	376
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants and Flowers.	Oct. 30	Oct. 2	287
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Measuring Instruments; Wind-Wheels; Engraving.	Oct. 28	Oct. 28	339
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Oct. 28	Aug. 1	452
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electricity, Medical and Surgical; Electric Signaling; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas and Canes.	Oct. 25	Sept. 9	302
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Oct. 24	Oct. 16	210
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Fishing and Trapping; Stationery; Stone-Working; Educational Appliances.	Oct. 24	Oct. 1	388
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Presses; Tobacco; Store-Service; Pneumatics.	Oct. 22	Sept. 17	322
327	XVIII. Steam-Engines; Steam-Boilers; Steam-Engine Valves; Steam and Vacuum Pumps; Injectors and Ejectors.	Oct. 18	Aug. 24	251
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Oct. 15	Oct. 12	335
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Oct. 15	Sept. 12	264
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus; Harness.	Oct. 14	Sept. 23	340
322	XII. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Oct. 14	Sept. 7	601
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Oct. 12	Oct. 14	356
332	X. Carriages and Wagons.....	Oct. 12	Sept. 17	530

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
152	XXX. Lamps and Gas-Fittings; Fluid-Pressure Regulators; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Oct. 11	Oct. 2	259
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Oct. 11	Aug. 27	406
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Oct. 10	Oct. 9	347
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Oct. 9	July 12	525
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heat-Engine Plants.	Oct. 2	Sept. 23	616
308	XV. Bread, Pastry, and Confection Making; Coating; Laminated Sheets and Fabrics; Fuel; Glass; Hydraulic Lime and Cement; Paper-Making; Paving; Plastics; Plastic Block and Earthenware Apparatus; Plastic Compositions; Photography.	Oct. 2	Sept. 5	574
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Oct. 1	Aug. 9	522
238	XIX. Furnaces; Stoves and Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel.	Sept. 28	Aug. 9	505
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Sept. 23	Sept. 18	535
307	XIV. Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal-Ware Making; Tools; Wire-Working; Compound Tools.	Sept. 23	July 18	263
312	VII. Games and Toys; Mechanical Motors; Paper Manufactures; Velocipedes; Optics.	Sept. 20	Sept. 26	390
107	XXXVII. Electricity, Conductors; Electric Lighting; Electricity, General Applications.	Sept. 20	July 27	689
142	IX. Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage; Air and Gas Pumps.	Sept. 18	Sept. 16	247
280	XL. Deposit and Collection Receptacles; Special Receptacles and Packages; Check-Controlled Apparatus; Fine Arts; Paper Receptacles; Package and Article Carriers; Wooden Receptacles; Baggage; Lighting-Fixtures; Cloth, Leather, and Rubber Receptacles.	Sept. 3	July 17	886
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Aug. 24	July 31	642
321	XXXIX. Water Distribution; Baths and Closets.	Aug. 23	June 22	819
109	XVI. Telegraphy; Telephony.....	Aug. 15	June 10	681
105	XXVI. Electricity, Generation; Electric Heating and Rheostats; Electric Railways; Motive Power.	Aug. 8	Aug. 2	483
352	XLI. Railway Draft Appliances; Railway-Ties and Fasteners; Railway-Rails and Joints; Resilient Tires and Wheels.	July 20	June 17	1224
	Total number of applications awaiting action			18,114
161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS.			
	Trade-Marks.....	Nov. 25	Nov. 6	190
	Designs.....	Nov. 20	Oct. 22	57
	Labels and Prints.....			

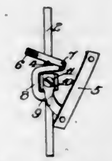
Money by Mail.

Money sent by mail to the Patent Office will be at the risk of the sender. Letters cantaining money should be registered.

PATENTS

GRANTED DECEMBER 3, 1907.

872,319. BRIDGE-SPRING FOR EYEGLASSES. LEO F. ADT, Troy, N. Y. Filed Mar. 6, 1905. Serial No. 248,425.



1. In eyeglasses, the combination with the lenses, of a bridge connecting the lenses having its ends bent alternately into horizontal and vertical loops the latter having their arms arranged transversely to the plane of the lenses, said loops being arranged intermediate the attaching ends and the central portion.

2. In eyeglasses, the combination with the lenses, of a bridge spring connecting them composed of flat material having horizontal loops formed therein by bending the material flatwise, and vertical loops formed by doubling the material edgewise and transversely to the plane of the lenses.

3. In eyeglasses, the combination with the lenses, of a bridge connecting them and having a central portion, horizontal and vertical loops at the ends of the central portion, formed by bending the material alternately flatwise and edgewise, the edgewise loops being transverse to the plane of the lenses.

4. In eyeglasses, the combination with the lenses, and the attaching devices thereon, of a bridge for connecting the lenses embodying a central portion having its ends extended rearwardly and doubled forwardly to form horizontal bends at each side of the central portion, the free ends of the horizontal bends being thence bent in a vertical plane extending transversely to the plane of the lenses and attached at their free ends to the attaching devices.

5. In eyeglasses, the combination with the lenses of a bridge connecting them and having a central portion, and horizontal resilient and vertical loops formed transversely to the plane of the lenses at the ends of the central portion, the ends of the vertical loops forming attaching arms,

[Claims 6 to 18 not printed in the Gazette.]

872,320. SPRING FOR EYEGLASSES. LEO F. ADT, Troy, N. Y. Filed Mar. 6, 1905. Serial No. 248,426.



1. In eyeglasses, the combination with the lenses, and suitable attaching devices thereon, of a bridge spring having horizontally-arranged bends formed therein, and vertically-extending attaching arms on the spring having their attaching portions located in substantially the same horizontal plane as said bends.

2. In eyeglasses, the combination with the lenses and the attaching devices thereon having vertically-arranged seats formed therein, of a spring having horizontally-yielding bends arranged in front of the lenses and in substantially the same horizontal plane with the attaching devices, and vertically-extending attaching arms on the spring arranged in horizontal alinement with their respective bends, and secured in the correspondingly formed seats in the attaching devices.

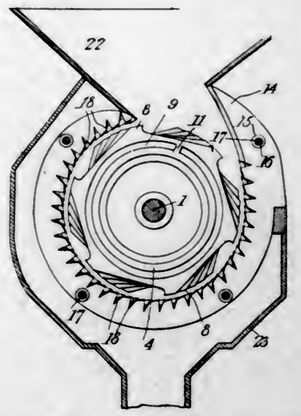
3. In eyeglasses, the combination with the lenses and the attaching devices thereon having vertically-arranged seats therein, of a spring having bends formed near each end arranged in front of the attaching devices and in substantially the same horizontal plane with said devices, and vertically-extending attaching arms formed on the bridge and arranged to enter the correspondingly formed seats in the attaching devices.

4. In eyeglasses, the combination with the lenses, and the attaching devices thereon having vertically-arranged seats therein for the reception of the guards and spring, of a spring having horizontal bends formed therein substantially in the same horizontal plane with the attaching devices, and vertically-extending attaching arms formed on the spring and arranged to enter the correspondingly-arranged seats in the attaching devices.

5. In eyeglasses, the combination with the lenses, and the attaching devices thereon having vertically-extending seats formed therein for the attaching portions of the guards and spring, of a spring having horizontal coils formed therein and arranged forward of the lenses and in substantially the same horizontal plane with the attaching devices, the ends of the coils forming vertically-extending attaching arms arranged on a level with their respective coils and adapted to enter the correspondingly-arranged seats of the attaching devices.

[Claims 6 to 11 not printed in the Gazette.]

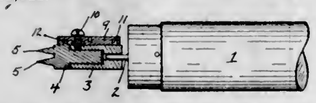
872,321. GRINDING-MILL. WILLIAM B. ALLEN and WILLIAM BLALACK, Parsons, Kans. Filed Aug. 3, 1906. Serial No. 329,126.



A mill comprising a concave, and a revoluble grinding element mounted therein, said element comprising a shaft, a plurality of toothed rings surrounding and out of contact with the shaft, each of said rings having an annular

groove in one face and an annular bead upon its opposite face, the bead of each ring being disposed to project into the groove in the adjoining ring, each groove being intersected by a bridge disposed to project into the bead of the adjoining ring to prevent independent rotation of the rings, an interior annular rib integral with each ring, the ribs of said rings forming annular grooves therebetween, a spacing disk upon the shaft having its periphery seated within one of said grooves, means engaging the disk and one of the ribs to prevent independent rotation of the disk and rings, heads upon the shaft bearing against the ribs of the end rings, and means for clamping the heads against the rings to lock the rings together, certain of said rings being supported out of contact with the shaft by the adjoining rings.

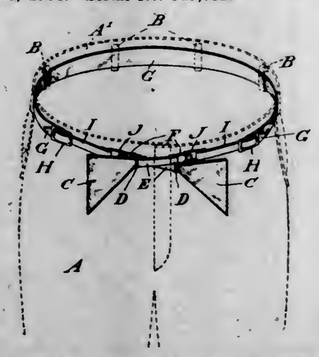
872,322. WINDOW-SHADE FIXTURE. WALTER C. ATHERTON, Milwaukee, Wis. Filed Nov. 26, 1906. Serial No. 345,011.



1. The combination of a curtain roller, a sleeve provided with one or more barbs connected with one end of said roller, a sleeve connected with the opposite end of said roller, a trunnion provided with one or more barbs supported in said last named sleeve, a disk revolubly connected with the side of said last named sleeve, a lateral contact bearing formed in connection with said trunnion against which said disk is adapted to bear, said disk being adapted as it is revolved against the lateral contact bearing of said trunnion to force the latter outwardly and cause the barbs to penetrate the opposing sides of a window frame.

2. The combination of a curtain roller, a sleeve provided with one or more barbs connected with one end of said roller, a second sleeve connected with the opposite end of said roller, a trunnion also provided with one or more barbs supported in said last named sleeve, a disk provided with an annular groove, means for revolubly connecting said disk with said last named sleeve eccentric to said groove, a lateral projection connected with said trunnion and adapted to engage in the groove of said disk, said disk being provided with means for attaching an operating tool to said disk, whereby said disk may be revolved and said trunnion forced outwardly, thereby causing said barbs to penetrate the opposing sides of said window frame.

872,323. INVISIBLE TROUSERS-SUPPORT. ALBERT BARNHARDT, Moyie, British Columbia, Canada. Filed Dec. 27, 1906. Serial No. 349,701.



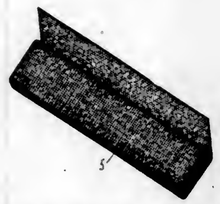
1. The combination with a pair of trousers provided with pieces secured to the inside, to each side of the fly, of a belt having its overlapping ends connected to said pieces.

2. The combination with a pair of trousers, of pieces secured to the inside of the trousers, carrying rings and a belt having overlapping ends, provided with hooks adapted to engage said rings.

3. The combination with a pair of trousers having pieces secured to the inside carrying rings of overlapping straps carried by said rings provided with eyes, and a belt provided with hooks adapted to engage said eyes.

4. The combination with a pair of trousers having triangular shaped pieces secured to the inside to each side of the fly opening, carrying rings, of overlapping straps carried by said rings provided with eyes, and an elastic belt carrying straps provided with hooks adapted to engage said eyes.

872,324. MAGNETIC WEDGE. SVEN R. BERGMAN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 10, 1907. Serial No. 367,323.



1. As an article of manufacture, a slot-closing device consisting of a bundle of wires fastened together and insulated from each other.

2. As an article of manufacture, a slot-closing device consisting of a roll of magnetic cloth having insulating material between the convolutions.

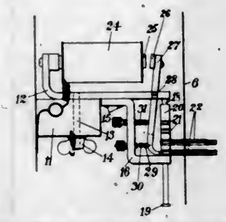
3. As an article of manufacture, a slot-closing device consisting of a roll of japanned magnetic cloth.

4. As an article of manufacture, a slot-closing device comprising in combination a bundle of wires fastened together and insulated from each other and a strip of insulating material partially surrounding the said bundle.

5. As an article of manufacture, a slot-closing device comprising in combination a roll of magnetic cloth having insulating material between the convolutions, and a strip of insulating material partially surrounding the said device.

[Claims 6 to 10 not printed in the Gazette.]

872,325. MECHANISM FOR MEASURING AND INDICATING VELOCITY. JAMES E. BOYD, Columbus, Ohio. Filed July 8, 1907. Serial No. 382,664.



1. Mechanism for measuring and indicating velocity comprising a moving member, a second member positioned adjacent said moving member, a spring member mounted upon said second member and adapted when released to attach itself to said moving member, means for positioning said spring member, and means for releasing the same.

2. Mechanism for measuring and indicating velocity comprising a moving member, a spring member positioned adjacent thereto, means for ejecting said spring member from its position whereupon it engages said moving member and is carried thereby.

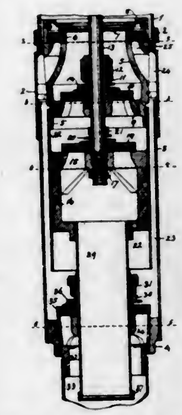
3. Mechanism for measuring and indicating velocity comprising a moving member, a plurality of spring members positioned adjacent thereto, means for rejecting said spring members from their position at known intervals of time, whereupon said spring members engage said moving member and are carried thereby.

4. Mechanism for measuring and indicating velocity comprising a moving member, a movable member positioned adjacent thereto, spring clasp members positioned on said second member, means for ejecting said clasp members from their position on said second member, said clasp members thereupon engaging said moving member and being carried thereby.

5. Mechanism for measuring and indicating velocity comprising a moving member, a vertically slidable member adjacent thereto, a plurality of spring clasp members positioned on said slidable member, means for disengaging said clasp members singly from said slidable member, whereupon said clasp members attach themselves to said moving member and are carried thereby.

[Claims 6 to 8 not printed in the Gazette.]

872,326. DEEP-WELL PUMP. HYLTON A. BRISCO and CHARLES J. ERICKSON, San Francisco, Cal. Filed Dec. 28, 1906. Serial No. 349,813.



1. In a deep well pump, the combination of inner and outer cylinders, spaced from each other to form an annular uplift space, the bottom of the inner cylinder being spaced from the outer cylinder to permit the water to pass around said bottom into said annular space, a hollow plunger sliding in the inner cylinder and carrying in its lower end a suction tube, a valve closing the upper end of said plunger, a second valve spaced above the first valve, a guideway for said suction tube having a port, a valve closing said port, a guideway for the plunger rod having a port leading from the annular space between the cylinders, a valve closing said latter port, said guideway having an upward extension with an inwardly extending flange, and a coiled spring abutting against said flange and depressing the valve, substantially as described.

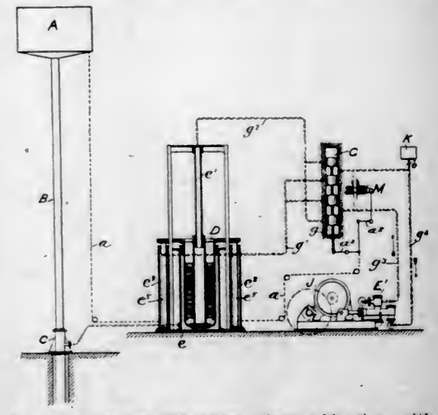
2. In a deep well pump, the combination of outer and inner cylinders, a port leading upwards from the annular space between the outer and inner cylinders, a valve seated on said port to close the same, a hollow plunger reciprocating in the inner cylinder, said plunger carrying a suction tube and having at the top a port, a valve seated on said port to close the same, the bottom of the inner cylinder being spaced from the outer cylinder to form a passageway for the water to pass into the annular space between the two cylinders, a guideway for the suction tube carried by the plunger, said guideway having a port, a valve closing said port, a guideway for the plunger rod above the plunger, said guideway having a port and a valve seated on and closing said port, substantially as described.

3. In a deep well pump, the combination, with an outer casing, of an inner casing, a plunger reciprocating therein, a suction tube carried thereby, said inner casing plunger and suction tube dividing the interior of the outer casing into two chambers, a valve for each chamber arranged to open automatically by the pressure of the liquid upon the downward movement of the plunger to permit liquid to pass upwards in said chamber and to close automatically upon the return movement of the plunger, and a valve for each chamber, arranged to open automatically by the pressure of the liquid upon the upward movement of the plunger to permit the liquid to pass to one chamber, and to force it from the other, said valve being arranged to close automatically upon the return movement of the plunger, substantially as described.

4. In a deep well pump, the combination, with an outer casing, of an inner casing, a plunger reciprocating therein, a suction tube carried thereby, said inner casing plunger and suction tube dividing the interior of the outer casing into two chambers, a valve for each chamber arranged to open automatically by the pressure of the liquid upon the downward movement of the plunger to permit liquid to pass upwards in said chamber and to close automatically upon the return movement of the plunger, and a valve for each chamber, arranged to open automatically by the pressure of the liquid upon the upward movement of the plunger to permit the liquid to pass to one chamber, and to force it from the other, said valve being arranged to close automatically upon the return movement of the plunger, and means carried by the plunger for raising with the plunger rod all of the said valves and the valve seats therefor, and the suction tube and inner casing, substantially as described.

5. In a deep well pump, the combination, with an outer casing, of an inner casing, dividing the interior of the outer casing into two chambers, an apertured plunger reciprocating within the inner casing, said aperture leading to the interior of said inner casing, a valve seat permitting the passage of liquid from the annular space between the inner and outer casings, a valve closing the aperture in the plunger and a valve closing the valve seat, both adapted to be opened when the plunger descends, valve seats through which the water passes from the interior of the inner casing and to said annular chamber, and valves on said valve seats adapted to be opened automatically by the pressure of the water upon the upward movement of the plunger, and means carried by the plunger for raising with the plunger rod all of the said valves and the valve seats therefor, and the suction tube and inner casing, substantially as described.

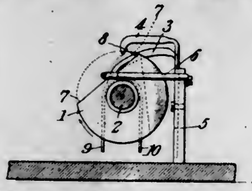
872,327. PLUNGER-ELEVATOR. JOHN W. BROWN, London, England. Filed Feb. 6, 1904. Serial No. 192,430.



In a direct acting lift-system, the combination, with a cage, ram and cylinder, and a balance weight for the cage,

ram and approximately half the load, of a closed hydraulic circuit, a displacement cylinder and plunger, lowering cylinders and plungers, a pump for augmenting the pressure according to the duty required, an electrical motor for actuating the same, a main valve, a by-pass for short circuiting the pump, a valve therefor, and a liftrope for said valves, said main valve being constructed and arranged to direct the discharge from the pump either to the displacement plunger or to the lowering cylinders, substantially as described.

872,328. TAKE-UP DEVICE FOR SEWING-MACHINES. MICHAEL E. BROWN, Brooklyn, N. Y., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 5, 1905. Serial No. 239,777.



1. In a take-up device for sewing machines, the combination with a grooved take-up cam and a cast-off wire, upon which the thread is guided, and additional means for guiding the thread out of the groove of the take-up to prevent winding thereon; substantially as described.

2. In a sewing machine, the combination with a grooved take-up cam, a cast-off wire, and a second wire, adapted to guide the thread out of the take-up cam groove; substantially as described.

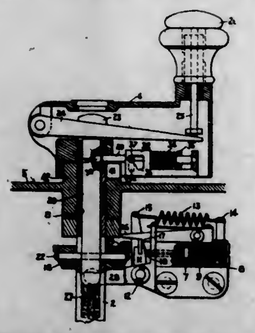
3. A take-up device including in combination, a cam disk, thread guides arranged on each side of said cam and having eyes for the passage of the thread, said eyes being located within the outer periphery of the cam, a cast-off device acting on the thread when the cam is turned in one direction, a second cast-off acting on the thread when turned in the opposite direction; substantially as described.

4. A take-up for sewing machines having a cam surface and means upon opposite sides of its axis to cast off thread from the cam surface; substantially as described.

5. In a take-up device, a revolving cam surface, thread guides upon opposite sides of said cam surface, a plurality of means to force the thread upon the outer periphery of the cam surface, said means being positioned upon opposite sides of said thread guides; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

872,329. CONTROLLER. ARTHUR T. CROCKER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 3, 1906. Serial No. 304,008.



1. In combination, a controller, an emergency device operated thereby, and a locking device adapted to engage with a fixed portion of the controller and with movable members of the controller and emergency device to lock the controller and emergency device in inoperative position.

2. In combination, a controller, an emergency device operated thereby, and a locking device adapted to engage with a fixed portion of the controller and with movable members of the controller and emergency device to lock the controller and emergency device in inoperative position, and a removable key for operating said locking device.

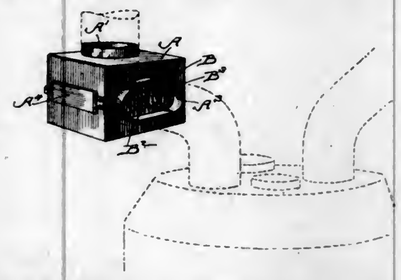
3. In a controller, a movable controller member, an emergency device, a governing member for said emergency device mounted upon said controller member, and a locking bolt adapted to engage recesses in a fixed portion of the controller, in said movable member and in said governing member.

4. In a controller, a movable controller member, an emergency device, a governing member for said emergency device mounted upon said controller member, a locking bolt adapted to engage recesses in a fixed portion of the controller, in said movable member and in said governing member, and a detachable key for operating said locking bolt.

5. In a controller, a controller handle, an emergency device, an operating member for said emergency device, a catch for restraining said operating member, and means associated with said controller handle for tripping said catch upon release of the controller handle.

[Claims 6 to 20 not printed in the Gazette.]

872,330. AIR-MOISTENER FOR FURNACES. WILLIAM A. CUNNINGHAM, Winona, Minn. Filed Nov. 10, 1905. Serial No. 286,754.

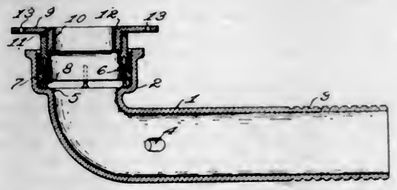


In a moistener for hot air furnaces, the combination with a box provided with flanged openings, adapted to contain water, one of said openings adapted to be connected to the hot air pipe leading from the furnace, the other openings being connected to hot air pipes leading to the rooms, duplicate frames arranged in said box, spaced apart by bars having wires stretched across from top to bottom forming backs, said frames being arranged in front of the opening connected to the pipe leading to the furnace, and strips of linen arranged over said frames and wires, and secured thereto, for the purpose set forth.

872,331. WATER-CLOSET FITTING. CHARLES A. DREIER, Chicago, Ill. Filed Feb. 23, 1907. Serial No. 358,908.

1. A pipe having a hub at one end, a thimble extending into said hub and provided with screw-threaded means for adjusting it longitudinally of the hub, said hub being suitably formed to provide a space around the thimble for filling and calking the joint between said thimble and hub, a flange having threaded connection with said thimble at its outer end, and a gasket interposed between said flange and thimble.

2. A pipe having a hub at one end, a shoulder at the inner end of said hub, a thimble extending into said hub and spaced away from the inner walls thereof to permit of filling and calking the joint between said thimble and hub, screw-threaded adjusting means bearing between said shoulder and thimble for adjusting the thimble longitudinally in the hub, and a flange at the outer end of said thimble.



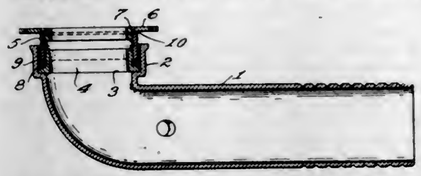
3. A pipe having a hub at one end, a shoulder at the inner end of said hub, a thimble extending into said hub and spaced away from the inner walls thereof to permit of filling and calking the joint between said thimble and hub, screw-threaded adjusting means bearing between said shoulder and thimble for adjusting the thimble longitudinally in the hub, a flange having screw-threaded connection with the outer end of said thimble, and a gasket sealing the joint between said flange and thimble.

4. A pipe having a hub at one end, a shoulder at the inner end of said hub, a thimble extending into said hub and spaced away from the inner walls thereof to permit of filling and calking the joint between said thimble and hub, screw-threaded adjusting means bearing between said shoulder and thimble for adjusting the thimble longitudinally in the hub, a flange having a tubular part extending into said thimble and having threaded connection therewith, and a gasket interposed between said flange and the outer end of said thimble.

5. A water closet bend having an upwardly disposed hub at one end, a thimble extending into said hub, a plurality of screws at the lower end of said thimble and adapted for adjusting the same longitudinally in the hub, said hub being arranged to permit of filling and calking the joint between said hub and thimble, a flange having threaded connection with the outer end of said thimble, and a gasket for packing the joint between said thimble and flange.

[Claim 6 not printed in the Gazette.]

872,332. WATER-CLOSET BEND. CHARLES A. DREIER, Chicago, Ill. Filed Feb. 23, 1907. Serial No. 358,909.



1. A pipe having a hub at one end, an annular shoulder located inward of said hub, a second pipe extending into said hub, and a ring having threaded engagement with said second pipe and adapted to bear on said shoulder for adjusting said second pipe with respect to the first, said hub being suitably formed to permit sealing material to be filled into the space between said hub and second pipe for sealing the joint, substantially as described.

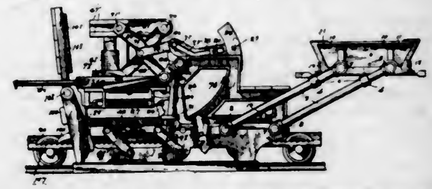
2. A pipe having a hub at one end, a thimble extending into said hub and having an adjustable joint for varying the length of the thimble, said joint being located inward of the hub, said hub being suitably formed to provide a space around the thimble adapted to be filled with material for rendering air-tight both the joint between said thimble and hub and the joint in said thimble.

3. A pipe having a hub at one end, a shoulder at the inner end of said hub, a thimble extending into said hub and resting upon said shoulder, said thimble being formed of two parts telescoping each other and adjustable with respect to each other for varying the length of the thimble, and said hub being suitably formed to permit of filling the space between said hub and thimble for simultaneously sealing both the joint between said thimble and hub and the joint between the parts of said thimble.

4. A pipe having a hub at one end, a shoulder at the inner end of said hub, a thimble extending into said hub and supported by said shoulder, said thimble comprising two tubular parts having a screw-threaded joint located inward of the hub, and said hub being suitably formed to permit material to be filled between said thimble and the hub for sealing both the joint between the thimble and hub and the joint between the parts of said thimble.

5. A pipe having a hub at one end, a thimble extending into said hub and having an adjustable joint for varying the length of the thimble, said joint being located inward of the hub, said hub being suitably formed to provide a space around the thimble adapted to be filled with material for rendering air-tight both the joint between said thimble and hub and the joint in said thimble, and a flange at the outer end of said thimble having screw-threaded engagement therewith.

872,333. CONCRETE-MOLDING MACHINE. LEWIS D. EWING, Akron, Ohio. Filed Apr. 28, 1905. Serial No. 257,860.



1. In a concrete molding machine, the combination with a mold box of a hopper having adjustable sides and adjustable extension members, and provided with an extensible bottom.

2. In a concrete molding machine, the combination with a mold box of a swinging hopper having adjustable sides and adjustable end members, and provided with an extensible bottom.

3. The combination with a mold box of a swinging hopper provided with adjustable sides and adjustable end members, and a bottom formed of plates adapted to slide one over the other to open or close the bottom of the hopper.

4. In a machine for molding concrete, a hopper provided with adjustable sides and an extensible bottom, a mold box, and means consisting of pivoted bars for swinging said hopper to and from the mold box.

5. The combination with the mold box of a concrete machine, of a hopper having its sides adjustable and provided with extensible bottom plates, and adjustable supporting oscillating arms provided with balancing weights for swinging the hopper to and from the mold box.

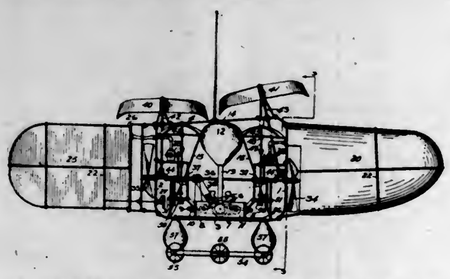
[Claims 6 to 50 not printed in the Gazette.]

872,334. AIR-SHIP. AURELIO S. FADDA and JOHN DI LORENZO, Pittsburg, Pa. Filed Dec. 17, 1906. Serial No. 348,360.

1. In an air ship, the combination with the body, of lifting and propelling means therefor, a hollow rudder hinged to said body, means for operating said rudder, and means carried by the body and arranged to exhaust the air from said hollow rudder.

2. In an air ship, the combination of a skeleton body, and lifting and propelling means therefor, including a buoyant anterior or bow portion immovably secured to the forward end of the body, a buoyant rudder or rear portion hinged to the rear end of the body, a motor on the body, and propellers driven from the motor and located respectively between the body and anterior portion and between the body and rudder.

3. In an air ship, the combination of a skeleton body, and lifting and propelling means therefor including a hollow buoyant anterior or bow portion, and a hollow buoyant rudder or rear portion, said bow portion and rudder being of substantially the width and height of the body and containing the latter between them.

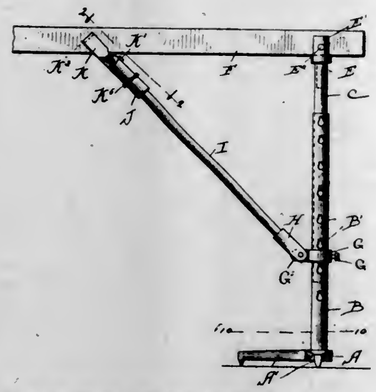


4. In an air ship, the combination with the body, of lifting and propelling means therefor, a hollow anterior portion immovably secured to the body, a hollow rudder hinged to the body, and means for exhausting the air from said hollow anterior portion and rudder.

5. In an air ship, the combination of a skeleton body, lifting and propelling means therefor, a large hollow anterior or bow portion immovably secured to the forward end of the body, a hollow rudder hinged to the rear end of the body, said hollow anterior portion and rudder being of substantially the same height as the body, and means for rendering said hollow bodies buoyant.

[Claims 6 to 8 not printed in the Gazette.]

872,335. SCAFFOLDING-SUPPORT. CHARLES A. FOSTER, Oaktown, Ind. Filed Aug. 20, 1906. Serial No. 331,322.



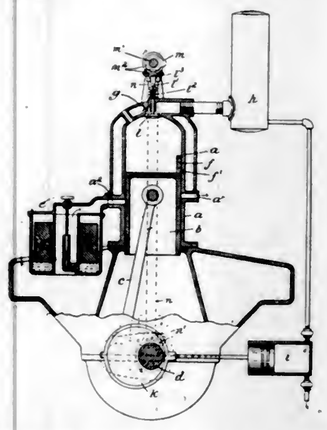
1. In a device of the kind described the combination with a base provided with a standard, of a supporting member adjustably mounted in said standard, a sleeve adjustably mounted on said standard, and an arm pivoted to said sleeve, a head secured to said arm provided with a fixed jaw and a pivoted jaw mounted on said head for the purpose described.

2. In a device of the kind described the combination with a base provided with a threaded opening, of a threaded tube secured in said opening provided with key hole slots, a tube arranged in said tube provided with corresponding slots, a key passing through said slots, a stem mounted in the smaller tube provided with a forked head provided with clamping means, a sleeve mounted on the tube carried by the base, provided with an apertured ear, a head pivoted to said ear provided with a threaded socket, a tube secured in said socket, a head secured to the end, said tube provided with a fixed jaw, a jaw pivoted to said head, and means carried by the pivoted jaw for locking it to the head for the purpose described.

3. In a device of the kind described, the combination with a base having a hollow cylindrical standard mounted thereon, of a tube adjustably mounted in said standard, both of said standards and said tube being provided with registering key-hole slots, and a supporting bracket adapted to be inserted in said keyhole, slots for supporting a bearing below the top of said standard.

4. In a device of the kind described, the combination with a base provided with a hollow standard, of a tube mounted in the standard provided with keyhole slots registering with similar slots in said standard, a sleeve adjustably mounted on the standard, an arm pivoted at one end to said sleeve and provided at its other end with a head having a fixed jaw and a jaw carrying locking means, pivotally U-shaped brackets having an angled head formed on the end thereof, said head being adapted to be inserted, in said keyhole slots, securely locking said bracket in a suspended position for the purpose described.

872,336. INTERNAL-COMBUSTION ENGINE. LUCIUS T. GIBBS, Hempstead, N. Y. Filed May 2, 1906. Serial No. 314,742.



1. In an internal combustion engine, the combination of a cylinder, a piston, said cylinder having inlet and exhaust ports uncovered by the piston as it approaches the limit of its forward stroke, the piston having an apertured lip whereby the exhaust port after being opened, is closed during the continued forward movement of the piston, and means to withdraw the burned gases from the cylinder while the exhaust port is closed and the inlet port is opened.

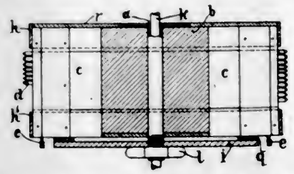
2. In an internal combustion engine, the combination of a cylinder, a piston, the cylinder having inlet and exhaust ports uncovered by the piston as it approaches the limit of its forward stroke, a subsidiary exhaust port independent of the main exhaust port, means to close the main exhaust port after it has been opened during the continued forward movement of the piston, a valve to control the subsidiary exhaust port, means to open said valve while the main exhaust port is closed, and a vacuum chamber connected with said subsidiary exhaust port.

3. In an internal combustion engine, the combination of a cylinder, a piston, the cylinder having inlet and exhaust ports uncovered by the piston as it approaches the limit of its forward stroke and a subsidiary exhaust port, the piston having an apertured lip to close the main exhaust port after the same is opened in the continued forward movement of the piston, a valve to control the subsidiary exhaust port, means to open said valve while the main exhaust port is closed and a vacuum chamber connected with the subsidiary exhaust port.

4. In an internal combustion engine, the combination of a cylinder, a piston, the cylinder having inlet and exhaust ports, means whereby said ports are opened as the piston approaches the forward limit of its stroke, a subsidiary exhaust port at the head end of the cylinder, a valve for controlling said subsidiary exhaust port, means for operating said valve to open said subsidiary exhaust port as the piston approaches the forward limit of its stroke, and a vacuum chamber connected with the subsidiary exhaust port.

5. In an internal combustion engine, the combination of a cylinder, a piston, the cylinder having inlet and exhaust ports, means whereby said ports are opened as the piston approaches the forward limit of its stroke, a subsidiary exhaust port at the head end of the cylinder, a valve for controlling said subsidiary exhaust port, means for operating said valve to open said subsidiary exhaust port as the piston approaches the forward limits of its stroke and while the main exhaust port is closed, and a vacuum chamber connected with the subsidiary exhaust port.

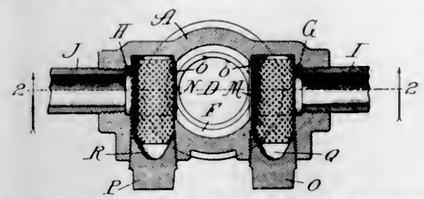
872,337. ROLLER-STAMP. FRANZ GOGEL, Kehl, Germany. Filed Apr. 18, 1907. Serial No. 368,960.



1. In a roller stamp the combination of a cylindrical core *b*, axle *a*, end disk *r*, wedge shaped type cases *c* arranged radially on the core, a fixed ring *h* and a loose ring h^1 securing the cases, and a pressing disk *i* and nut *l* securing them at the end, as herein described.

2. In a roller stamp the combination of a cylindrical core *b*, axle *a*, end disk *r*, wedge shaped type cases *c* arranged radially on the core, side piece c^1, adjusting set screws *e* and means for securing the cases at their ends and circumference.

872,338. FITTING FOR FLUID-SUPPLY SYSTEMS. EGBERT H. GOLD, Chicago, Ill. Filed Mar. 8, 1906. Serial No. 304,924.



1. A pipe fitting provided with a fluid passage extending therethrough, a second passage leading from the first named passage, and a strainer interposed at the junction of the two passages, said fitting having an opening for the insertion and removal of the strainer, and means for closing said opening.

2. A pipe fitting provided with a fluid passage extending through the fitting and with a feed passage opening therefrom, and a strainer interposed across said feed passage, said fitting being provided with an additional opening extending at an angle to both of said feed passages for the insertion of said strainer, and with a closure for said opening.

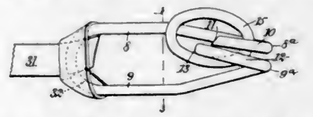
3. A pipe-fitting provided with a fluid passage, and a strainer interposed across said fluid passage, said fitting being also provided with a separate opening for the insertion and removal of said strainer and with a closure for said opening, said strainer and said closure being provided with mutually conforming surfaces, whereby end pressure upon said strainer will tend to deflect said strainer from said closure.

4. A pipe-fitting comprising a fluid passage, and a tubular strainer interposed across said fluid passage so as to have play transversely of said passage, said fitting being also provided with an opening for the insertion of said strainer and with a closure for said opening comprising a device engaging with said strainer.

5. A pipe-fitting provided with a fluid passage, and a cylindrical strainer interposed transversely of said passage, said fitting being also provided with an opening for the insertion and removal of said strainer and with a closure for said opening, said closure being provided on its inner face with a recess having an inwardly tapered wall and said strainer being correspondingly tapered at one end to engage the tapered wall of said recess.

[Claims 6 to 15 not printed in the Gazette.]

872,339. SNAP HOOK OR LINK. JOHN W. GONCE, Chattanooga, Tenn. Filed Apr. 23, 1906. Serial No. 313,182.



1. In a snap hook, the combination of a body portion of spring metal bent back upon itself so as to form two members, one being provided with a portion doubled upon itself and terminating in a bevel, the other being longer and provided with a further bend so as to terminate at a point substantially intermediate of said two members and ending in a bevel, each of the two said bevels being inclined slightly toward its respective members, and a link to be encircled by said bent portions.

2. In a snap hook, the combination of a metallic body portion of spring metal doubled so as to form two members, one of said members having a portion bent back upon itself, the other of said members having a longer portion bent back upon itself but slightly diverging toward the other member, and provided with a further bend, its end being thus brought into substantially the same plane as said members and provided with a bevel, and a link to be encircled by said portions thus bent backward.

3. As an article of manufacture, a snap hook member comprising a single piece of spring metal bent so as to occupy a general plane and provided with free ends, one of said ends being bent backward and terminating in a bevel, the other of said ends being bent backward and also being bent toward said plane.

4. As an article of manufacture, a single piece of spring metal bent so as to occupy a general plane and provided with free ends, one of which is bent backward so as to form a hook and terminating in a bevel, the other being longer and bent backward, and further bent toward said plane, and terminating in a bevel.

5. The combination of a metallic body portion of spring metal doubled so as to form two members occupying a general plane, one of said members having a portion bent back upon itself, the other of said members having a longer portion bent back upon itself but slightly diverging towards the other member and provided with a further bend, its end being thus brought into substantially the same plane as said two members, and a link to be encircled by both of said portions thus bent backward.

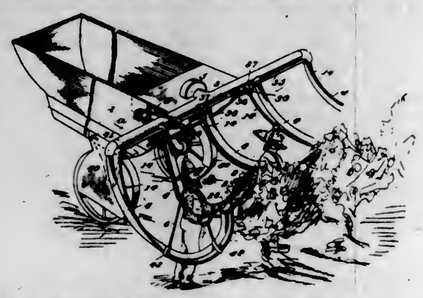
[Claims 6 to 8 not printed in the Gazette.]

872,340. COTTON-PICKER. GILBERT F. GREENE, Washington, D. C. Filed Sept. 7, 1905. Serial No. 277,388.

1. A cotton picker having a reversible spindle, a brush supported on the spindle, a motor to operate said spindle, connecting mechanism, and means for reversing the direction of the spindle at any period in its movement.

2. A cotton picker having a reversible spindle, a motor

to rotate said spindle, connecting mechanism, means for reversing the direction of the spindle at any period in its movement, a reversible brush supported on the spindle, and means for automatically reversing the brush independently of the support-reversing-means.



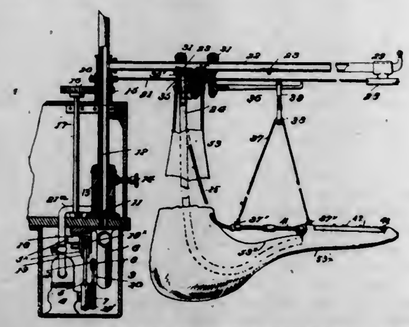
3. A cotton picker having a reversible brush support, mechanism to reverse it, a brush pivoted on said support, and means to automatically reverse the brush said means comprising parts fixed to the support and brush.

4. In a cotton picker, a reversible rotating spindle, a plurality of oscillating brushes pivoted thereon, means whereby said brushes pick cotton irrespective of the direction of rotation of the spindle, devices for reversing the spindle at will, and means for causing the brushes to oscillate independently of the direction of the rotary movement of the spindle.

5. In a cotton picker, the single rotatable spindle, means for reversing the direction of its rotation, a brush pivotally supported from the spindle, co-acting stripping teeth situated normally at the side of the brush holder and co-extensive lengthwise therewith, and means for receiving the picked cotton whatever the direction of the spindle rotation.

[Claims 6 to 23 not printed in the Gazette.]

872,341. MEANS FOR HARVESTING COTTON. GILBERT F. GREENE, Washington, D. C. Filed Mar. 12, 1906. Serial No. 306,431.



1. In a cotton picking machine, a vehicle to run between rows of bushes, a horizontally swinging picker support connected to the vehicle to carry the picker over a plurality of rows, a picker, and connections between the picker and support whereby such picker can be moved lengthwise on the same.

2. In a cotton picking machine, a vehicle to run between rows of bushes, a picker, a swinging picker support pivotally connected to the vehicle to carry the picker over a plurality of rows, and connections between the picker and support whereby it can be moved lengthwise on the same.

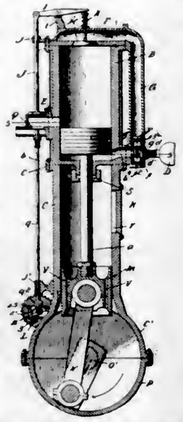
3. In a cotton picking machine, a vehicle to run between rows of bushes, a picker, and a swinging picker support pivotally connected to the vehicle to carry the picker over a plurality of rows, said picker having a connection with and movable on the support to and from the vehicle.

4. In a cotton picking machine, a vehicle to run between rows of bushes, a picker, a picker spindle, a handle for directing said picker, a swinging picker support, flexible connections suspending the picker from its support whereby it may be freely moved independently of said support, a picker-spindle-driving-shaft mediately carried by said support, and means to rotate the shaft.

5. In a cotton picking machine, a vehicle to run between rows of bushes, a picker, a picker support pivotally connected to the vehicle to swing transversely so as to carry the picker over a plurality of rows, an air tube carried by and swinging with said support, and means to force air through the tube to the picker.

[Claims 6 to 39 not printed in the Gazette.]

872,342. EXPLOSIVE-ENGINE. ARTHUR G. GRISWOLD, Kankakee, Ill., assignor of one-half to J. B. Griswold, Kankakee, Ill. Filed Sept. 1, 1906. Serial No. 332,974.



1. The combination of a casing, a crank shaft mounted therein, a working cylinder and piston therefor, a second casing connected at one end of the working cylinder and having communication with the crank casing, the two casings and the working cylinder being in longitudinal alinement, a cross head for the crank shaft, movable in the second casing, said cross head having a rigid rod connection with the piston, valve controlled exhausts and inlets for the working cylinder, a supplemental fluid compression chamber that discharges through the working cylinder inlet and communicates with that end of the cylinder opposite the inlet thereof, a valved working agent feed that discharges into the supplemental compression chamber, a foot valve in the said supplemental chamber that discharges automatically and closes as a new charge is being drawn into the cylinder and means for controlling the inlet and exhaust valves at predetermined times.

2. The combination with a working cylinder having a valved inlet and a valved exhaust; of a supplemental compression chamber that discharges at one end through a valved inlet of the working cylinder and has the other end in communication with the other end of the working cylinder, a back check valve in said other end of the supplemental compression chamber, a working piston, a crank shaft and mechanical devices actuated by the crank shaft for controlling the exhaust and inlet valve for the working cylinder at predetermined times.

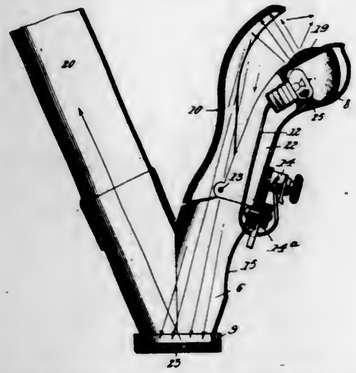
3. In an explosive engine of the character described, the combination with a working cylinder, a piston and an automatically controlled valve exhaust and inlet port for the cylinder, a supplemental compression chamber that communicates at one end through the inlet of the working cylinder, the other end of the said compression chamber having communication through the opposite end of the working cylinder, a valve operating under suction for cutting off the supplemental compression chamber as a new charge is being brought into the back of the piston and a fuel feed having a back pressure valve that discharges into the supplemental compression chamber at a point between the valve and the discharge of the lower or back end of the working cylinder, all being arranged substantially as shown.

4. In an explosive engine of the character described, the combination with the working cylinder and piston, said working cylinder having an automatic valve controlled exhaust port and an automatic valve controlled exhaust in one end thereof, the other end having a fuel intake; of a supplemental or charging chamber in communication with the fuel inlet of the cylinder, a working agent valve feed or carbureter that discharges through the charging chamber and into the fuel intake for the cylinder on the return stroke of the piston, said supplemental chamber being located outside of the working cylinder, and a valve in said cylinder at a point near the point of its inlet, all being arranged substantially as shown and described.

5. In an explosive engine of the character described, the supplemental or charging chamber that discharges through the valved inlet of the working cylinder and has communication with the fuel intake for the cylinder, a carbureter connected to the lower end of the said charging chamber, a tubular member detachably fitted in the lower end of the charging chamber and a foot valve on said tubular member, all being arranged substantially as shown and described.

[Claim 6 not printed in the Gazette.]

872,343. SPECULUM. FRANK E. GRISWOLD, Geneva, Ohio. Filed Mar. 11, 1907. Serial No. 361,759.



1. An instrument comprising a tubular angle piece having a reflector at the angle, a pair of speculum jaws one of which is fixed to one branch of the angle piece and the other of which is hinged thereto, and a sight tube on the other branch of the angle piece.

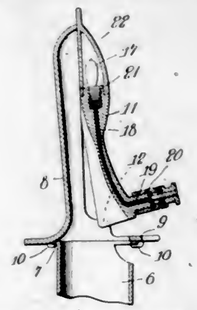
2. An instrument comprising a pair of speculum jaws and a sight tube, connected by a tubular angle piece provided with a reflector at the angle.

3. An instrument comprising a tubular angle piece having a reflector at the angle, a pair of speculum jaws projecting from one branch of the angle piece and having operating handles projecting rearwardly beside the angle piece, and a sight tube projecting from the other branch of the angle piece.

4. The combination with a speculum having an electric lamp therein in circuit with the metallic part of the speculum, and a battery connected thereto, of a circuit closer comprising a ring connected to the battery and adapted to be worn on the finger and to close the lamp circuit when brought to contact with said metallic part.

5. An instrument comprising a tubular angle piece having a reflector, and a pair of speculum jaws hinged together, one of the jaws being detachably fixed to the angle piece, and said jaws having rearwardly-extending operating handles.

872,344. SPECULUM. FRANK E. GRISWOLD, Geneva, Ohio. Filed May 31, 1907. Serial No. 376,681.



1. The combination of a supporting tube, a relatively fixed jaw rotatably mounted on the end of the tube, and a movable jaw hinged to the fixed jaw.

2. The combination of a supporting tube having a ring flange at the end, a relatively fixed jaw with a ring at the base detachably connected to said flange and rotatable around the same, and a movable jaw hinged to the fixed jaw.

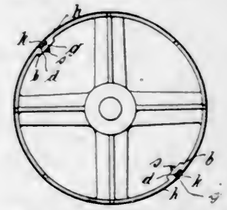
3. The combination of a pair of jaws hinged together, one jaw having a ring at the base with an opening therethrough, and the other jaw having a threaded rod extending through said opening and having a nut behind the ring.

4. A speculum having a jaw with a removable hollow end, containing a lens, and an electric lamp behind the lens.

5. A speculum having a jaw with a socket at the end, a removable hollow end piece fitting on the end of the jaw and having a lens, and an electric lamp fitting in the socket and extending into the hollow of the end piece.

[Claim 6 and 7 not printed in the Gazette.]

872,345. PATTERN-ROLL FOR PAPER-MACHINES. OSKAR HAMMER, Mahlitzsch, Germany. Filed Apr. 26, 1907. Serial No. 370,496.



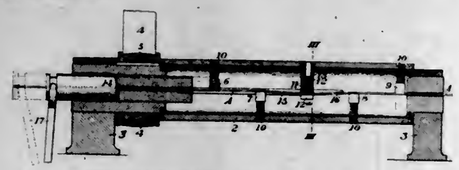
A pattern roll for cardboard or paper machines having in its surface a longitudinal groove in combination with a pattern adapted to engage said groove, a bar for holding the pattern in said groove, and screws for attachment of said bar to the roller, the bar having a longitudinal slot and the screw heads having their slots alined with that of the bar.

872,346. WIRE-STRAIGHTENER. NOAH S. HARTER, Waukegan, Ill., assignor to American Steel & Wire Company, Chicago, Ill., a Corporation of New Jersey. Filed June 13, 1907. Serial No. 378,727.

1. A wire straightener having a plurality of rotary dies, and means for adjusting one of said dies without stopping its rotation; substantially as described.

2. A die straightener having a rotary body, through which the wire passes, a plurality of dies arranged to bear

upon the wire, and means for adjusting one of said dies without stopping the rotation of the body; substantially as described.



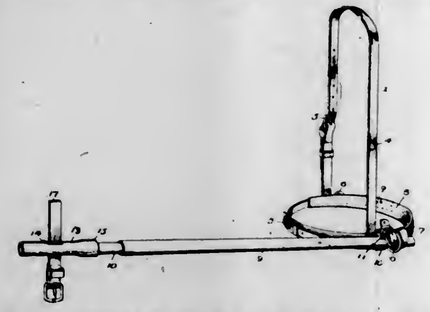
3. A wire straightener having a rotating body, a straightening die therein, and means for adjusting said die while the body is rotated; substantially as described.

4. A wire straightening device having a rotating body, a straightening die therein, a movable carrier, for said die, and an adjusting device engaging said carrier and arranged to be operated without stopping the rotation of the body; substantially as described.

5. A wire straightener having a rotating body, a straightening die therein, a movable yoke carrying said die, a slide arranged to operate said yoke, and means for operating said slide; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

872,347. CONTROLLING DEVICE. JOHN HOWELL, New York, N. Y. Filed Nov. 15, 1905. Serial No. 287,408.



1. The combination with the head and body portion of a harness, of a freely extensible rod having its respective extremities connected thereto, the said extremities being secured against lateral movement.

2. The combination with the head and body portion of a harness, of a freely telescopic rod having its respective extremities connected thereto, the said extremities being secured against lateral movement.

3. The combination with a harness, of a freely extensible controlling rod having its extremities respectively connected to the cheek band and body portion of said harness, the said extremities being secured against lateral movement.

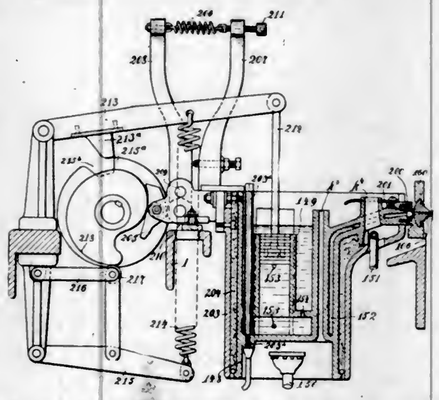
4. A controlling device for horses, comprising a freely telescopic rod, having its respective extremities connected to the cheek band and the saddle portion of the harness, the said extremities being secured against lateral movement.

5. A controlling device for horses, comprising a freely extensible rod, having its respective extremities connected to the cheek band and the saddle portion of the harness, the said extremities being secured against lateral movement.

[Claims 6 to 16 not printed in the Gazette.]

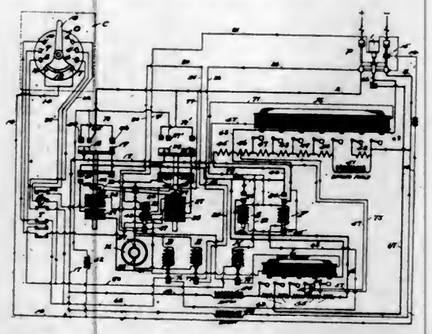
872,348. TYPING-MACHINE. RÜDOLF HÜNDHAUSEN, Halensee, near Berlin, Germany. Filed Jan. 6, 1904. Serial No. 187,979.

1. In a typographic casting machine, a melting pot having its interior divided into a main receptacle, a plunger chamber and a primary heating chamber which extends parallel to the plunger chamber and communicates with both the main receptacle and plunger chamber through horizontal ducts, whereby when a plunger is depressed in the plunger chamber a circulation of heated metal is created from said primary heating chamber.



2. In a typographic casting machine, the combination with a melting pot and a plunger working in said pot, of a lever for actuating said plunger, a second lever, a cam adapted to vibrate said second lever, and a spring connecting said levers.

872,349. MOTOR-CONTROLLING SYSTEM. JOHN D. IHLDER, New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed July 28, 1905. Serial No. 271,585.



1. The combination with a pair of reversing switches, of electromagnets for actuating the same, an additional electromagnet, and means controlled by said additional electromagnet for preventing the operation of both of said switches at the same time.

2. The combination with a pair of reversing switches, of electromagnets for operating the same, an additional electromagnet having coils in series with the aforesaid electromagnets, and means controlled by said additional electromagnet for insuring the operation of only one of said switches at a time.

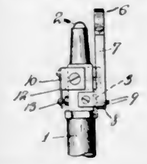
3. The combination with a plurality of switches, of electromagnets for operating said switches, an additional electromagnet having coils wound to assist one another, said coils being in series with the first-named electromagnets, and means operated upon the energization of more than one coil of said additional electromagnet for preventing the operation of more than one switch at a time.

4. The combination with a motor, of electric motor-controlling means, reversing switches, magnets for operating said switches, a circuit-breaker, and means for operating said circuit-breaker to cause the stopping of the motor upon both of said magnets receiving current at the same time.

5. The combination with a motor, of controlling means therefor, circuits and connections for said motor and motor-controlling means, reversing switches, magnets for operating said switches, a potential switch in the main line circuit, and means co-acting with said motor-controlling-means and magnets for operating said potential switch to interrupt the main line circuit upon both of said magnets receiving current at the same time.

[Claims 6 to 16 not printed in the Gazette.]

872,350. GAS-BURNER. WILLIAM V. D. KELLEY, Newark, N. J. Filed June 3, 1907. Serial No. 376,908.

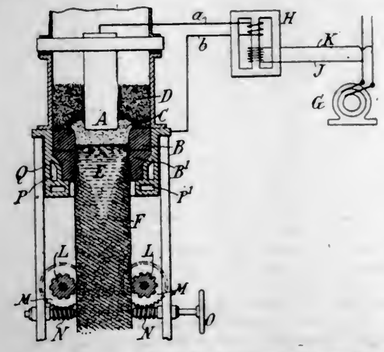


1. The combination with a gas-burner, of a thermostat disposed in proximity thereto to be heated by the flame, a gas controlling cock, a mechanical connection between said cock and said thermostat for actuating the cock as the thermostat expands and contracts, a magnet, and a vibratory armature disposed in the field of the magnet and connected to be vibrated by the expansion and contraction of the thermostat, as set forth.

2. The combination with a gas-burner, of a thermostat disposed in proximity thereto and having one portion heated by the flame and another portion movable in response to the expansion and contraction of the heated portion, a regulating cock arranged to vary the flow of gas, an actuating connection between the movable portion of the thermostat and the cock, a permanent magnet, and a movable armature carried by the movable portion of the thermostat and disposed between the poles of the magnet, as set forth.

3. The combination with a gas-burner tube, of a bent thermostat mounted thereon to be heated by the flame and having a free depending end, a cock in said tube adapted to vary the flow of gas without completely cutting off and engaged by said thermostat to be actuated thereby, and a permanent magnet mounted on said tube and having its poles located on opposite sides of said depending portion of the thermostat.

872,351. MANUFACTURE OF CALCIUM CARBID, &c. JESSE C. KING, St. Catharines, Ontario, Canada, assignor to The Willson Carbide Works Company of St. Catharines, Limited, St. Catharines, Canada, a Corporation of Ontario. Filed Jan. 5, 1904. Serial No. 187,836.



1. The production of calcium carbid by fusing and reducing the entire mixture by passing it through a zone of fusion and discharging the reduced product therefrom as a pig, so that the pig is devoid of crust.

2. The production of calcium carbid by fusing and reducing the mixture and confining the fused reduced material within walls in contact therewith, while supporting it by the solidified product beneath.

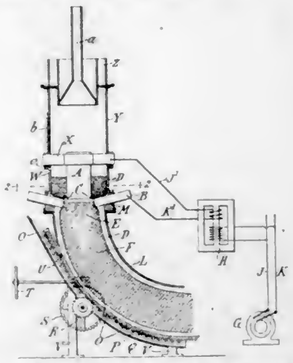
3. The production of calcium carbid by fusing and reducing the entire mixture by passing it through a zone of fusion, the fused reduced material being maintained within and bounded by a die opening, and discharging the solidifying carbid therefrom as a pig, so that the pig is devoid of crust.

4. The production of calcium carbid by passing the mixture through a zone of fusion wherein it is reduced and through a die which separates the unreduced mixture above from the solidified carbid beneath so as to form a crustless carbid.

5. The production of calcium carbid by passing the entire mixture through a zone of fusion wherein it is reduced and through a die in which the carbid hardens sufficiently to determine the shape of the pig.

[Claims 6 to 8 not printed in the Gazette.]

872,352. ELECTRIC FURNACE. JESSE C. KING, St. Catharines, Ontario, Canada, assignor to The Willson Carbide Works Company of St. Catharines, Limited, St. Catharines, Canada, a Corporation of Ontario. Filed Jan. 5, 1904. Serial No. 187,837.



1. In an electric furnace for the production of calcium carbid or the like, means for maintaining a zone of fusion, refractory walls closely circumscribing such zone, and means for progressively passing all the material to be utilized in forming the product within said walls and through said zone of fusion and discharging it in solidified form, said means engaging the solidified product, whereby is obtained a pig devoid of crust.

2. In an electric furnace for the production of calcium carbid or the like, means for maintaining a zone of fusion in which the material is fused, a die having walls closely circumscribing such zone, and means for withdrawing the material from said die progressively as it solidifies and thus holding up the fused material within said die.

3. In an electric furnace for the production of calcium carbid or the like, means for fusing the material, and a die through which the fused material passes and by which it is shaped, and which separates the unreduced material above from the reduced material beneath, and means for withdrawing the material from said die progressively as it solidifies and thus holding up the fused material within said die.

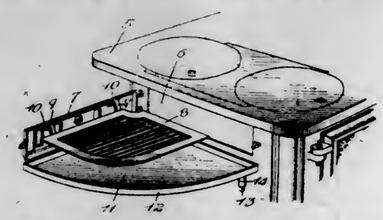
4. An electric furnace having a die through which the material passes, means for fusing the material within such die, said die adapted to retain the product until it is sufficiently solidified to emerge in a solid pig, and means for controlling the rate of emergence of said pig.

5. An electric furnace having a die through which the material passes, said die formed of refractory conducting material and serving as one of the electrodes, a second

electrode arranged adjacent thereto whereby when a suitable current passes between them the material within the die is fused and reduced, and means for controlling the passage of material through the die adapted to retain the product therein until it is sufficiently solidified to emerge in a solid pig.

[Claims 6 to 11 not printed in the Gazette.]

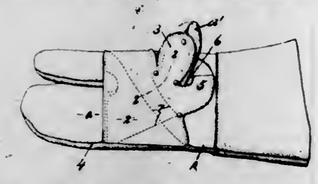
872,353. COOKING-STOVE. ALBERT KONST, Burlington, Wis. Filed May 3, 1907. Serial No. 371,637.



1. The combination with a stove having an opening through one wall portion into the fire chamber, a movable member covering said opening, and a broiler connected to said movable member, of a drip pan connected to the stove below said opening.

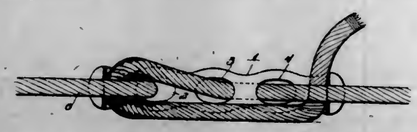
2. The combination with a stove having an opening through one wall portion into the fire chamber, a hinged door covering said opening, and a broiler connected to said door, of a drip pan connected to the stove below said opening, said drip pan having an edge conforming substantially to the arc of the circle upon which the free edge of the door moves.

872,354. GLOVE. JOHN E. LANDON, Syracuse, N. Y. Filed Dec. 27, 1905. Serial No. 293,453.



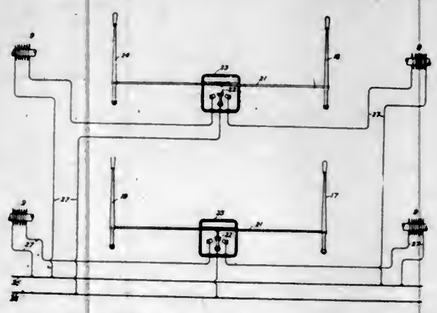
A one piece palm attachment for gloves having its ends secured in the side seams of said glove and with a projecting tongue adapted to cover the thumb of said glove and a second projecting tongue extending around the base of the thumb and engaged in the seam of the thumb and spaced metal fastening devices connecting the palm attachment at points where the greatest wear occurs.

872,355. SECURING DEVICE FOR ROPES. JOHN B. LE MAIRE, Jersey City, N. J. Filed Nov. 18, 1905. Serial No. 288,016.



As an improved article of manufacture the herein described rope securing device comprising a strip of metal having a plurality of alined elongated apertures one between two others extending in the direction of the length of the strip, the upper surface of the strip being formed with a transversely-extending recess near each end between the end of the adjacent aperture, each end of the strip beyond its transverse recess being tapered from the outer edge of the recess to the end of the strip.

872,356. MOTOR-DRIVEN BOAT. HERMANN LEMP, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 27, 1905. Serial No. 262,571.



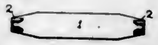
1. In a motor driven boat, the combination of a hull, a longitudinal bulkhead dividing the hull into two watertight compartments, a continuously operating prime mover in each compartment, propeller shafts, electrically operated clutches for connecting and disconnecting the propeller shafts with respect to the prime movers, and controllers for the clutches located adjacent the steering wheel of the boat.

2. In a motor driven boat, the combination of a plurality of automatically and continuously operated internal combustion engines, fore and aft propeller shafts for each engine, independently actuated electrically-controlled power-transmitting connections between the shafts and their respective engines, and controllers for said connections located adjacent the steering wheel of the boat.

3. In a motor driven boat, the combination of a plurality of continuously-operating automatically-governed internal combustion engines, propeller shafts, electrically-controlled power transmitting connections between the shafts and the engines, separate circuits controlling said connections, and separate sets of controllers located to be operated from different points for opening and closing the said circuits.

4. In a motor driven boat, the combination of a hull, a longitudinal bulkhead which divides the hull into independent compartments, an automatically-governed internal combustion engine in each compartment, fore and aft propeller shafts for each engine, electrically-controlled power-transmitting connections between the shafts and the engines, separate circuits controlling the said connections, a pilot-house, means located in the pilot-house for opening and closing said circuits, and separate sets of controllers located at different points in the pilot-house for operating the circuit controlling means.

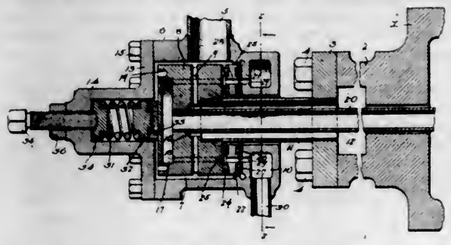
872,357. COMBINED PACKAGE SEAL AND FASTENER. FREDERICK J. LERCH and ROBERT M. KERR, Louisville, Ky., assignors to Mapother, Kerr and Lerch, Louisville, Ky., a Copartnership. Filed Apr. 1, 1907. Serial No. 365,873.



1. A package seal and fastener, comprising a metal strip having its ends cut at an acute angle and forming approximately isosceles triangles with the middle portion of the base integral with said strip, said triangles being bent up sharply at the integral part of the base approximately at right-angles to said strip and having their sides serrated and bent to form adjacent channels.

2. A package seal and fastener, comprising a metal strip, approximately arrow-shaped barbed points formed on the ends of said strip bent at approximately right-angles to the body of the strip, said points being partly severed from said strip at their bases to render them comparatively easily broken off, substantially as described.

872,358. PIPE-JOINT. JOHN G. LIDDELL, East Walpole, Mass. Filed Feb. 23, 1907. Serial No. 358,930.



1. A pipe joint for revolving journals, comprising a fixed casing with which one pipe communicates a swivel block centrally disposed in said casing, spaced apart therefrom, and provided with a plurality of ports, and a discharge pipe screwed centrally into said block, and communicating with said ports.

2. Means for supplying steam to a rotating drum, comprising a fixed casing in communication with the steam supply, a perforated swivel block arranged to rotate within said casing, an inlet pipe connected therewith for conveying steam to the drum, and a sealing member arranged between the swivel block and casing.

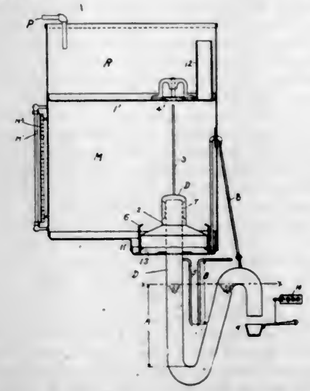
3. Means for supplying steam to a rotating roll or drum, comprising a casing to which steam is admitted, a swivel block in said casing, radial ports in said block converging to a central chamber, and a pipe rigidly secured at one end, in this chamber, and at the other end in the revolving drum.

4. In a revolving steam tight pipe joint, a casing, a swivel block mounted therein, a pipe connected with said swivel block, a sealing element between one face of said swivel block and the casing, and means acting upon the other face of said swivel block for holding it against the sealing element.

5. In a steam-tight, revolving pipe-joint, a sealing member comprising a plate provided on each face with a plurality of packing elements.

[Claims 6 to 11 not printed in the Gazette.]

872,359. AUTOMATIC MEASURING-TANK. FREDERICK N. LOWRY, Midland, Mich. Filed Apr. 7, 1905. Serial No. 254,391.



1. A liquid measuring device comprising a receiving compartment and a measuring compartment communicating therewith; together with a U-shaped discharge pipe having one end projecting into said measuring compartment; a U-shaped pressure-regulating pipe communicating with said upwardly-projecting end of said discharge pipe at a point above the normal liquid level in said discharge pipe; together with an inverted cup float inclosing the upper end of said discharge pipe, substantially as described.

2. A liquid measuring device comprising a measuring compartment for receiving liquid, an inverted bell, the upper end of which is closed, the lower end being open, a liquid sealed discharge pipe communicating with the bell, and coöperating therewith to form an air space wherein the air is compressed by the weight of the liquid admitted to the measuring compartment, and a liquid holding pipe connecting the air space with a point under less pressure outside the air space.

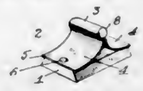
3. In a liquid measuring device, a bell containing a compartment, a valveless liquid sealed discharge pipe communicating with said compartment in the bell and forming therewith an air space, and a tripping means connecting the air space with a point under less pressure outside of said bell.

4. In a liquid measuring device, a bell containing a chamber, a liquid-sealed discharge pipe communicating with the chamber in the bell and coöperating therewith to form an air space for alternately containing compressed air and the liquid being measured; and a tripping member connecting the air space with a point under less pressure outside of said bell.

5. A liquid measuring device comprising a chamber, a valveless liquid-sealed pipe communicating therewith, and adapted to alternately contain air or vapor and the liquid being measured, and a liquid-sealed tripping member in direct communication with the discharge pipe and connecting the air space of said chamber and pipe with a point under less pressure.

[Claims 6 to 30 not printed in the Gazette.]

872,360. FRONT SIGHT. WEBSTER L. MARBLE, Gladstone, Mich. Filed Mar. 18, 1907. Serial No. 363,036.



1. A front sight for firearms consisting of a base plate, and a bead holder composed of a strip of steel bent to form an eye and two depending legs.

2. A front sight for firearms, consisting of a strip of steel doubled to form an eye open along one side, and a bead forced into said eye.

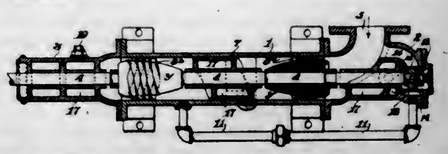
3. A front sight for firearms, consisting of a strip of resilient metal doubled to form an eye open on one side and two curved legs depending therefrom.

4. A front sight for firearms, consisting of a strip of resilient metal forming an eye, two depending legs curved inwardly, and a base plate to which said legs are secured.

5. A front sight for firearms, comprising an eye formed of resilient metal, and a bead normally larger than said eye clamped therein by the resilience of said metal.

[Claim 6 not printed in the Gazette.]

872,361. SCREW-PROPELLER PUMP. FRANZ MARBURG, Jr., New York, N. Y. Filed Aug. 4, 1903. Serial No. 168,159.



1. A mechanism for the purpose specified, having a casing, a shaft rotatable in said casing, an inlet and an outlet for the fluid, and a screw on said shaft and rotative in the casing, the said screw having its core tapered or coned toward its delivery end and its diameter at the periphery of its blades uniform, whereby the capacity increases from

the receiving end of the screw, substantially as and for the purpose set forth.

2. A mechanism for the purpose specified, having a casing with an inlet and an outlet for a fluid, a shaft rotatable in said casing, and a screw on said shaft and rotative in the casing, said screw having a substantially spiral blade, the radial width of which increases toward the delivery end of the screw, thus effecting an increase in the capacity from the receiving to the delivery end of the screw.

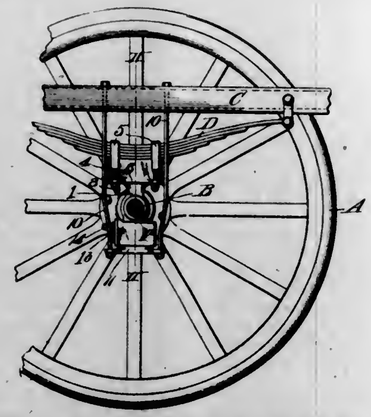
3. In a device for the purpose set forth, a casing with a fluid-inlet and fluid-outlet, a screw-wheel mounted rotatively within said casing between the fluid-inlet and outlet, said screw-wheel having a substantially spiral blade, the full radial width of said blade and the capacity of the screw increasing from the screw-inlet toward the screw-outlet.

4. In a device for the purpose set forth, a casing with a fluid-inlet and fluid-outlet, a screw-wheel fitted in and mounted rotatively within said casing between the fluid-inlet and outlet, said screw-wheel having a substantially spiral blade, the full radial width of said blade and the capacity of the screw increasing from the screw-inlet toward the screw-outlet.

5. In a device for the purpose set forth, a casing with a fluid-inlet and fluid-outlet, a screw-wheel fitted in and mounted rotatively within said casing between said fluid-inlet and outlet, said screw-wheel having a substantially spiral blade, the full radial width of said blade and the capacity of the screw increasing throughout the screw from its inlet.

[Claims 6 to 86 not printed in the Gazette.]

872,362. PNEUMATIC SPRING AND SHOCK-ABSORBER FOR MOTOR-VEHICLES. ALBERT L. MUREN, Belleville, Ill. Filed Oct. 18, 1906. Serial No. 339,432.



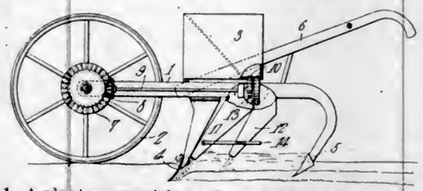
1. In a vehicle, the combination with an axle and frame, of an upwardly projecting compression member suspended beneath said axle from said frame, a resistance member beneath said axle above said compression member and slidingly connected therewith, and a pneumatic shock absorbing cushion located between said compression member and said resistance member; said resistance member being of box shape and having a detachable wall, substantially as set forth.

2. In a vehicle, the combination with an axle and frame, of a pedestal carried by said axle and having a head above the axle, and a resistance member below the axle, an upper pneumatic cushion mounted on said head, an upper compression member resting on said upper pneumatic cushion and having connection with said frame, a lower upwardly projecting compression member suspended from said frame and located beneath said axle, and a lower pneumatic shock absorbing cushion located between said lower compression member and the resistance member of said pedestal, substantially as set forth.

3. The combination, with a frame, an axle, and a spring located between the frame and the axle; of a depending upper compression box, means whereby the upper compression box is suspended from the spring, an upwardly projecting lower compression box, means whereby the lower compression box is suspended from the frame, a pedestal mounted upon the axle and having an upwardly projecting head, with which the upper compression box is slidingly connected, and a depending resistance box with which the lower compression box is slidingly connected, a pneumatic cushion located between the head and the upper end of the upper compression chamber, and a pneumatic cushion located between the lower compression box and the upper end of the resistance box.

4. The combination, with a frame, an axle, and a spring located between the frame and the axle; of a depending upper compression box, means whereby the upper compression box is suspended from the spring, an upwardly projecting lower compression box, means whereby the lower compression box is suspended from the frame, a pedestal mounted upon the axle and having an upwardly projecting head, with which the upper compression box is slidingly connected, and a depending resistance box with which the lower compression box is slidingly connected, a pneumatic cushion having a flexible casing and located between the head and the upper end of the upper compression chamber, and a pneumatic cushion having a flexible casing and located between the lower compression box and the upper end of the resistance box.

872,363. SEED-PLANTER. DANIEL H. MCGUIRE, Wharton, Tex. Filed May 31, 1907. Serial No. 376,542.



1. A planter comprising a frame having a furrow opener and furrow closer, a chute terminating at its lower end behind the furrow opener, a chute located in alinement with the first said chute and having its lower end spaced from the lower end of the same, a seed hopper common to both chutes and means for feeding seed from the hopper into the chutes.

2. A planter comprising a frame having a furrow opener and furrow closer, a hopper mounted thereon, a chute having its lower end terminating behind the furrow opener, a second chute located behind the first said chute, means for adjusting the space between the lower ends of the chutes, and means for feeding seed from the hopper to the chutes.

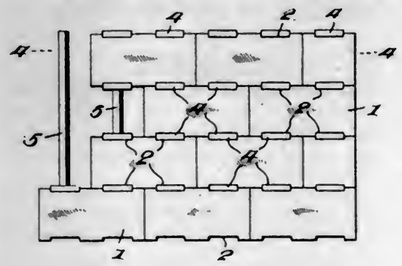
3. A planter comprising a frame having a furrow opener and furrow closer, a hopper located thereon, a fixed chute attached thereto, a pivoted chute attached thereto, means for adjusting the space between said chutes and means for feeding seed from the hopper to the chutes.

872,364. CEMENT BLOCK. JAMES S. PIERCE, Tacoma, Wash. Filed Sept. 24, 1906. Serial No. 335,987.

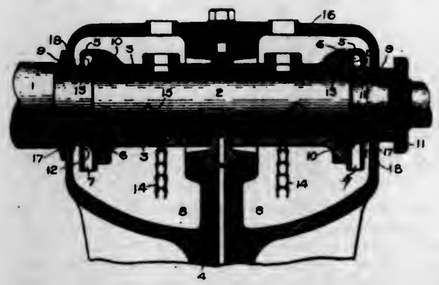
1. A wall formed of plastic blocks laid in superposed layers and each block formed with grooves upon opposite sides and openings with the grooves and openings registering girders disposed in coincident registering grooves, and disposed transversely of the length of the blocks, there being two girders to each block, and tie shafts passed through the openings of the blocks and coincident openings in said girders, and extended at right angles to the girders.

2. A wall formed of plastic blocks laid in superposed layers and each block formed with grooves upon opposite

sides and openings with the grooves and openings registering girders disposed in coincident registering grooves and disposed transversely of the length of the blocks, there being two girders to each block, and tie shafts passed through the openings of the blocks and coincident openings in said girders and extended at right angles to the girders, said blocks being laid to break joints and the girders being parallel to each other and concealed from view.



872,365. SHAFT-BEARING. WILLIAM E. VER PLANCK, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed July 13, 1905. Serial No. 269,449.



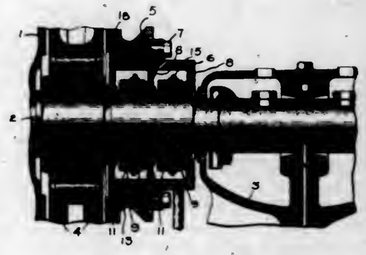
1. The combination of a shaft having a journal, brasses in which the journal rotates, a beveled flange mounted on the shaft which abuts the end of the brasses, a second beveled flange parallel to the first and spaced therefrom, an annular hood formed on the ends of the brasses within which the flanges rotate, said hood having a beveled edge overhanging the beveled edge of the second flange and separated therefrom by a narrow space, and a drain from the lower portion of the hood.

2. The combination of a shaft having a journal, brasses for the journal, a collar on the shaft provided with a flange having a flat face abutting the brasses at one end of the journal, the opposite face being beveled and intersecting the first face to form a thin edge, and a second similarly shaped flange parallel to the first, a hood formed on the ends of the brasses adjacent the collar which incloses a chamber between it and the flanges and has an inwardly projecting rim lying in the same plane with the second flange, the edge of the rim being parallel to the beveled edge of said flange and separated therefrom by a narrow space leading to the chamber, and a drain at the bottom of the chamber.

3. The combination of a shaft having a journal, brasses for the journal, a collar on the shaft provided with a flange having a flat face which abuts the end of the brasses, the opposite face of the flange being beveled, a second beveled flange parallel to the first and spaced therefrom, and a third flange beyond the second, an annular hood formed on the ends of the brasses within which the first flange rotates, said hood having a beveled edge lying in the same plane as the second flange and separated therefrom by a narrow space, a pillow block which supports the brasses and is provided with an opening of slightly greater diameter than the third flange within which said flange rotates, and a drain from the lower portion of the hood.

4. In a shaft bearing, the combination with a pillow block, cap and a journal 2, of brasses 3 having annular hoods 5 formed on the ends thereof, and collars 9 secured to the shaft and having flanges 10 abutting said brasses and deflecting flanges 12 inside of said hoods and separated therefrom by a narrow space.

872,366. PACKING FOR SHAFTS OF ROTARY STEAM-ENGINES. WILLIAM E. VER PLANCK, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed Aug. 7, 1905. Serial No. 273,002.



1. A packing for a rotating shaft comprising two segmental rings lying side by side and arranged to break joints, the abutting ends of the segments being rabbeted together.

2. A packing for a rotating shaft comprising two segmental rings lying side by side and arranged to break joints, the abutting ends of the segments being rabbeted together, the meeting surfaces of the joints in one ring being parallel with the shaft and in the other ring radial thereto.

3. A packing for a rotating shaft comprising two segmental rings arranged to break joints, the abutting ends of the segments being rabbeted together, and segmental metallic holders overlapping the joints.

4. A packing for a rotating shaft comprising two segmental rings arranged to break joints, the abutting ends of the segments being rabbeted together, and segmental metallic holders overlapping the joints, and having flanges extending inwardly over the face of one ring.

5. A packing for a rotating shaft comprising two segmental rings lying side by side and arranged to break joints, the abutting ends of the segments being rabbeted together, a stationary abutment for said rings, springs urging them toward said abutment, and circumferential springs for compressing them upon the shaft and taking up the wear.

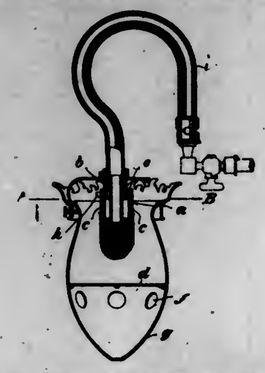
[Claims 6 and 7 not printed in the Gazette.]

872,367. INVERTED INCANDESCENT GAS-BURNER. MAX PLEDATH, Berlin Germany. Filed Dec. 14, 1905. Serial No. 291,748.

1. In an inverted incandescent gas-burner the combination of a mantle in inverted position, a screw-threaded mantle-support (a) in connection with the mantle, perforations (c) for draft in the cylindrical wall of the support, a flattened socket (b) keeping the mantle-support in position leaving passages (e) between itself and the support the perforations and passages being channels for the passage of a slight stream of products of combustion and means for the conduction of gas and air into the mantle, as and for the purpose specified.

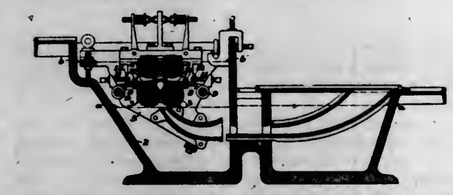
2. In an inverted incandescent gas-burner the combination of a mantle in inverted position, means for keep-

ing the same in position, a globe perforated on its lower part inclosing the mantle—a perforated disk made of



wire-gauze and inserted in the globe above the perforations of the globe as and for the purpose specified.

872,368. COATING APPARATUS. EDGAR G. PORTER and JOHN I. JONES, Elwood, Ind., assignors to American Sheet and Tin Plate Company, Pittsburg, Pa., a Corporation of New Jersey. Filed July 26, 1906. Serial No. 327,795.



1. A coating machine having a pair of scrapers arranged to contact with opposite surfaces of the sheet as it rises from the coating bath, said scrapers consisting of pivotal metal blades having comparatively thin edge portions normally resting in contact with each other; substantially as described.

2. A coating machine having a pair of scrapers arranged to contact with opposite surfaces of the sheet as it rises from the coating bath, said scrapers consisting of pivotally supported thin-edged, metal blades normally resting in contact with each other and arranged to be separated by the sheet and to bear against the sheet by gravity alone; substantially as described.

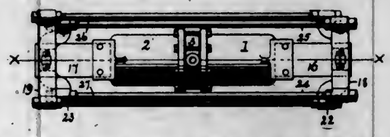
3. A coating machine having a pair of scrapers arranged to contact with opposite surfaces of the sheet as it rises from the coating bath, said scrapers consisting of pivoted metal blades having comparatively thin-edge portions normally resting in contact with each other, and means for adjusting said blades, substantially as described.

4. A coating machine having a pair of scrapers arranged to contact with opposite surfaces of the sheet as it rises from the coating bath, said scrapers consisting of pivoted blades normally supported in substantially horizontal position, with upturned, comparatively thin, scraping edges, substantially as described.

872,369. BRAKE-CYLINDER. WILLIAM K. RANKIN, Philadelphia, Pa., assignor to John E. Reyburn, Philadelphia, Pa. Filed Feb. 11, 1907. Serial No. 356,728.

1. In a brake, cylinders joined at their inner ends to an intermediate portion having an air connection and ports to the cylinders, and outer ends for the cylinders of less diameter than the cylinders, and guides thereon for crossheads.

2. In a brake, cylinders joined at their inner ends to an intermediate portion having an air connection and ports to the cylinders, and outer ends for the cylinders of less diameter than the cylinders, and integral guides thereon for crossheads.



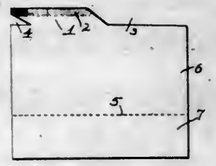
3. In a brake, cylinders having an intermediate ported connection member and crosshead guides formed at their outer and opposite ends.

4. In a brake, cylinders having an intermediate ported connection member, crosshead guides formed at their outer and opposite ends, and crossheads thereon having means for brake lever connections.

5. In a brake, cylinders connected at their inner ends to an intermediate portion having an air connection and ports to the cylinders; pistons and rods therefor and crossheads for the piston rods; guides and crossheads therefor attached to the outer ends of the cylinders, and connections from each piston rod crosshead to the opposite guided crosshead.

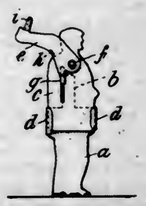
[Claims 6 and 7 not printed in the Gazette.]

872,370. LETTER-SHEET. RALPH REED, Middletown, Ohio. Filed May 31, 1907. Serial No. 376,480.



A letter-sheet having a rectangular body-portion having a gummed flap projecting laterally from one end of one edge to a point about midway of the length of that edge, the outer end extremity of the flap being notched inwardly from the end of the flap and the free long edge of the flap being parallel with the edge of the body-portion from which it projecta, the sheet being adapted to be folded and sealed as set forth.

872,371. MECHANICAL FIGURE FOR PROJECTING BALLS OR THE LIKE. HARRY O. ROBERTS and JOHN O. ROBERTS, Gloucester, England. Filed Apr. 9, 1906. Serial No. 310,851.

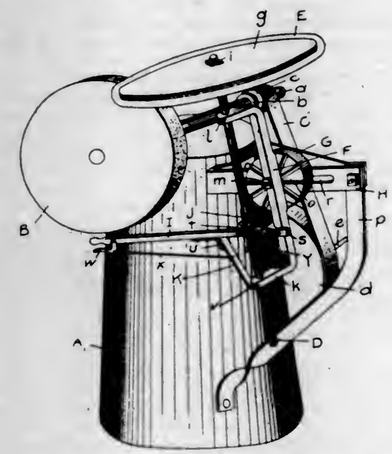


1. A mechanical figure or device for throwing kicking or otherwise projecting balls or the like and other articles consisting of two parts so connected that one can slide relatively to the other, and a pivoted part or parts mounted on one of the sliding parts and having motion imparted to it or them by a projection on the other sliding part substantially as described.

2. A mechanical figure or device for throwing, kicking or otherwise projecting balls or the like and other articles, consisting of a lower leg part, integral guides on the edges of the leg part, an upper body part mounted to slide in said guides, a pivoted part mounted on the body and adapted to throw or otherwise project a ball or the like, and a stop on the leg part arranged to actuate the pivoted part when the body part is depressed.

3. A mechanical figure or device for throwing, kicking or otherwise projecting balls or the like and other articles, consisting of a lower leg part, integral guides on the edges of the leg part, a slotted upper body part mounted to slide in said guides, a pivoted part mounted on the body adapted to throw or otherwise project a ball or the like, and a stop on the leg part arranged to work in the slot in the body part and to actuate the pivoted part substantially as described.

872,372. DISK-GRINDER. JOHN M. ROSS and JOHN S. RIDDELL, Frobisher, Saskatchewan, Canada. Filed May 23, 1906. Serial No. 318,415.



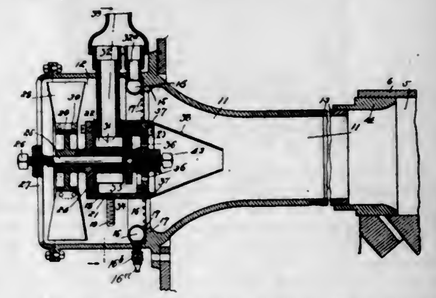
1. An improved disk grinder comprising a grinding wheel, means for rotating the same, a disk supporting shaft, vertically movable and gravity held in its lowest position, a frame supporting the same, a tenon on the frame, a plate, a plurality of radial grooves therein, adapted to be engaged by said tenon and means for supporting the plate, as and for the purpose specified.

2. An improved disk grinder comprising a grinding wheel, means for rotating the same, a frame a shaft slidably supported therein, means for pivotally supporting the frame, means for holding the frame in any position to which it has been adjusted, a lever pivoted to the frame having a slot therein through which the shaft extends, a collar adjustably secured on the shaft, a spring-held dog pivoted to the lever normally engaging the frame, and means operably from the end of the lever for removing the dog from engagement with the frame as and for the purpose specified.

3. An improved disk grinder comprising a suitable base, a shaft horizontally supported on the top thereof, a grinding wheel on the same, means for rotating the shaft, a bar laterally extending from one side of the base, a plate slidably secured thereon, means for holding the plate in any adjusted position, a plurality of radial grooves in said plate, a frame, a tenon thereon engaging the grooves in the plate, a shaft slidably supported in the frame and means for holding the shaft in any position relative to the frame as and for the purpose specified.

4. An improved disk grinder comprising a suitable base, a shaft horizontally supported on top thereof, a grinding wheel on said shaft, means for rotating the shaft, a bar laterally extending from one side of the base and having a longitudinal groove therein, a plate having a plurality of radial grooves therein, a U-shaped frame, a tenon thereon adapted to engage the grooves in the plate, a bolt extending through said frame, plate and slot in the bar, a disk supporting shaft extending through the arms of the frame, an adjustable collar thereon, a lever pivoted to the shaft having a slot therein through which the shaft extends and a spring-held dog on said lever engaging the lower arm of the frame as and for the purpose specified.

872,373. SMOKE-CONSUMING FURNACE. GEORGE E. R. ROTHENBUCHER, New York, N. Y. Filed Dec. 1, 1906. Serial No. 345,969.



1. In a fan blower a conveyer, a motor casing mounted in the forward end thereof, radially adjustable devices for centering said motor frame, a motor shaft, adjustable centering points for the ends of said shaft, a rotary steam motor wheel within the motor casing and secured to said shaft, means for directing the exhaust from said motor casing through the inner exhaust head thereof, an inwardly tapering funnel to receive said exhaust and direct it to the center of the conveyer, a fan on the outer end of the motor shaft larger in diameter than the motor casing and arranged to draw air inward around the motor frame, a perforated steam ring arranged in the conveyer around the motor casing and adapted to direct steam inward on lines oblique to the axial line of the conveyer, and means for simultaneously delivering steam to the motor and the ring.

2. In a fan blower a conveyer, a motor casing mounted in the forward end thereof, a rotary steam motor in the casing, a fan operated by said motor and arranged to drive air around the motor casing into the conveyer.

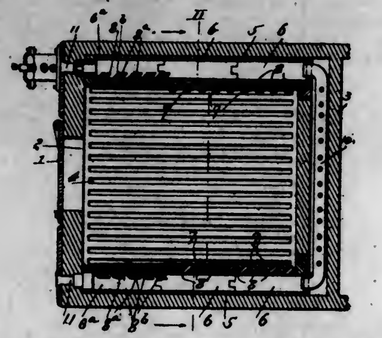
3. In a fan blower a conveyer, a motor casing in the forward end thereof, radially adjustable supporting devices for mounting said motor casing, a rotary steam motor in said casing, means to direct the exhaust steam from said motor into the conveyer, a fan secured to the motor shaft and adapted to drive air inward around the motor casing and into the conveyer.

4. In a fan blower a conveyer, a motor casing in the forward end thereof, means for centering said motor casing in the conveyer, means for directing the exhaust steam from said motor through the exhaust head in the motor casing, a converging delivering funnel secured to said inner end of the motor casing and projecting into the conveyer, a fan on the motor shaft in front of the motor casing and larger in diameter than said motor and adapted to drive air inward around the motor and out-side of the delivery funnel.

5. In a fan blower a conveyer, a motor casing mounted in the forward end thereof, radially adjustable devices for centering said motor frame, a motor shaft, adjustable centering points for the ends of said shaft, a rotary steam motor wheel within the motor casing and secured to said shaft, means for directing the exhaust from said motor casing through the inner exhaust head thereof, an inwardly tapering funnel to receive said exhaust and direct it to the center of the conveyer, a fan on the outer end of the motor shaft and larger in diameter than the motor casing and arranged to draw air inward around the motor frame.

[Claim 6 not printed in the Gazette.]

872,374. SMOKE-CONSUMING FURNACE. GEORGE E. R. ROTHENBUCHER, New York, N. Y. Filed Mar. 12, 1907. Serial No. 362,048.



1. A smoke consuming furnace comprising a fire box, a grate therein, horizontal flues in the side walls of the furnace above the grate, annular projections on the side walls of the furnace and extending into the fire box, one wall of said projections forming a heating and deflecting wall, openings being formed in said side walls, said openings extending from the inner edges of said deflector walls into the flues, and on the same angle as the deflector walls, and means for supplying steam and air in proper proportions to said flues, whereby said steam and air will be discharged through said openings over the deflector walls into the fire box above the grate.

2. A smoke consuming furnace comprising a fire box, a grate therein, horizontal flues in the side walls of the furnace above the grate, said flues being formed of a plurality of tubular sections interlocked at their adjoining ends, each section being formed with a plurality of projections on its inner face and adapted to extend into the fire box, one wall of each of said projections inclining inwardly and rearwardly at an angle of forty-five degrees with respect to the side wall of the furnace, openings being formed in said sections and extending inwardly from the inner edges of said walls and on the same angle as said walls, and means for supplying steam and air in proper proportions to said flues, whereby said steam and air will be discharged through said openings over the deflector walls into the fire box above the grate.

3. A smoke consuming furnace comprising a fire box, a grate therein, horizontal flues in the side walls of the furnace above the grate, said flues being formed of a plurality of tubular sections interlocked at their adjoining ends, each section being formed with a plurality of projections on its inner face and adapted to extend into the fire box, one wall of each of said projections inclining inwardly and rearwardly at an angle of forty-five degrees with respect to the side wall of the furnace, openings being formed in said sections and extending inwardly from the inner edges of said walls and on the same angle as said walls, a horizontal flue extending across the bridge wall smaller in diameter than the side flues and connected thereto, said flue being provided with openings in its upper wall, and a cellular structure forming the upper part of the bridge wall, the openings from said bridge wall flue connecting with the openings in said cellular structure, and means for supplying steam and air in proper proportions to said flues, whereby said steam and air will be discharged through said openings over the deflector walls into the fire box above the grate and into the bridge wall.

4. A smoke consuming furnace comprising a fire box, a grate therein, horizontal flues in the side walls of the furnace above the grate, openings being formed in the side walls of the flues, means for supplying air or steam under pressure to said flues, and means whereby gases from the fire box will be drawn into said flues through the openings at the forward ends of said flues and then forced out through the openings at the rear ends of said flues.

5. A smoke consuming furnace comprising a fire box, a grate therein, horizontal flues in the side walls of the furnace above the grate, openings being formed in the side walls of the flues, some of said openings extending rearwardly and inwardly through said flue wall and some of said openings extending outwardly and rearwardly through said flue wall, means for supplying air or steam under pressure to the forward ends of said flues, whereby smoke and gases from the fire box will be drawn into the flues through some of the openings thereof and forced into the fire box through the other openings therein.

[Claims 6 to 8 not printed in the Gazette.]

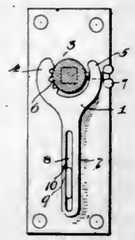
872,375. MAGNESIUM CEMENT AND PROCESS OF MAKING THE SAME. EMIL RUEFF, New York, N. Y. Filed Apr. 19, 1907. Serial No. 369,041.

1. A cement composed of magnesia and powdered magnesium sulfate in amorphous condition, substantially as described.

2. The process of manufacturing cement consisting in slowly heating crystallized magnesium sulfate substantially in the manner specified, pulverizing the resultant amorphous dehydrated substance, and mixing it with powdered magnesia, substantially as and for the purpose described.

3. The process of manufacturing hardened cement consisting in slowly heating crystallized magnesium sulfate substantially in the manner specified, pulverizing the resultant amorphous dehydrated substance, mixing it with powdered magnesia, and then adding water and filling material, substantially in the manner and for the purpose described.

872,376. COMBINED DOOR-KNOB AND KEY FASTENER. CHARLES H. RUEL, Castle Shannon, Pa., assignor to John W. Hinton, Ingram, Pa. Filed Nov. 14, 1906, Serial No. 343,404. Renewed July 27, 1907. Serial No. 385,810.



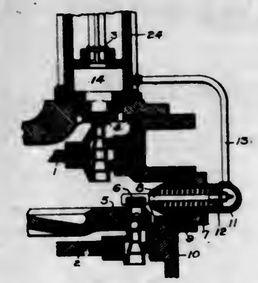
1. A fastener of the class specified consisting of an integral device comprising a shank with a head at one extremity having means extending through a portion thereof to engage a knob spindle, and an elongated closed slot at the opposite extremity.

2. A fastener of the class specified consisting of an integral device comprising a shank having a head at one extremity formed with a knob spindle seat therein, the inner surface of a portion of the wall of the seat having teeth, and an opposite part of the head provided with a clamping screw which projects inwardly towards the teeth, the opposite extremity of the shank having an elongated closed slot extending longitudinally thereof.

3. As an improved article of manufacture, a fastener of the class specified having a shank with an integral head at one end provided with a knob spindle seat, and an elongated closed slot extending longitudinally of the opposite extremity, one wall of the slot being thinner than the remaining wall and intermediately separated and yielding to serve either as a means for engaging the head of a key or with the slot forming a key ring.

872,377. GOVERNING MECHANISM FOR TURBINES. FREDERICK SAMUELSON, Rugby, England, assignor to General Electric Company, a Corporation of New York. Filed June 1, 1905. Serial No. 263,212.

1. A turbine divided into stages with wheel buckets for the stages, in combination with a valve for controlling the passage of motive fluid through one of the stages, and a fluid actuated valve controlling the passage of motive fluid through another stage, the said valve receiving its operating fluid when the first mentioned valve moves from its seat.



2. In a multi-stage turbine of the type hereinbefore referred to, a motor-operated valve or valves controlling the fluid passage between two or more stages, said valve or valves operating automatically in accordance with the pressure within the valve controlled supply chamber of a nozzle or nozzles of the first stage, substantially as described.

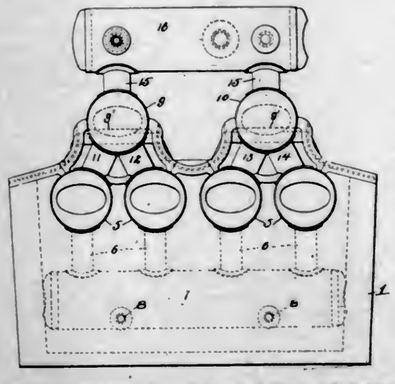
3. In a multi-stage turbine, of the type hereinbefore referred to, a motor-operated valve or valves controlling the fluid passage between stages said valve or valves being normally held in the closed position by means of a spring and opened by means of fluid pressure admitted from the supply chamber of a nozzle or nozzles of the first stage, substantially as described.

4. A turbine comprising wheel buckets and fluid-discharging devices arranged in stages, in combination with a stage valve which is normally operated by high-pressure fluid but which opens automatically upon an increase in stage pressure above a certain amount.

5. A turbine comprising wheel buckets and fluid-discharging devices arranged in stages, a stage valve which opens under a predetermined increase in stage pressure, a means for normally opening said valve by motive fluid of a pressure above that of the stage, and a means for controlling the action of the motive fluid of higher pressure.

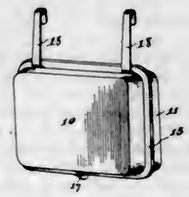
[Claims 6 to 10 not printed in the Gazette.]

872,378. HIGH-PRESSURE STEAM-GENERATOR. ADOLPH J. SCHAAF, Pittsburg, Pa. Filed Nov. 21, 1906. Serial No. 344,383.



A steam generator comprising a battery of lower parallel drums spaced apart and arranged in pairs, a supplemental upper drum arranged above each pair of said lower drums and spaced therefrom, pipes between said lower drums and upper drums, vertical rear and side walls spaced from said lower drums, a combustion chamber within said walls, longitudinal bridge plates between said lower drums, longitudinal bridge plates between said side walls and said lower drums, longitudinal bridge plates between each of said upper drums and its respective pair of lower drums, a smoke arch at the rear ends of the drums, and a smoke hood at the forward ends of the drums.

872,379. RECEPTACLE FOR ANTISEPTIC BANDAGES. OTTO C. SCHULZ, Chicago, Ill., assignor to Bauer & Black, Chicago, Ill., a Corporation of Illinois. Filed June 6, 1906. Serial No. 320,439.



1. A receptacle of the character described, comprising two parts, each having a lateral outstanding flange the thickness of which at any point is at least equal to the thickness of the flange at any point nearer its outer edge, said parts being adapted to be assembled to form a closed receptacle with one flange on the other, and a removable binding strip adapted to grip said flanges to hold the two parts of the box or receptacle together, said binding strip constituting the sole means for sealing the receptacle, substantially as described.

2. A receptacle of the character described comprising two parts each having a lateral outstanding flange of substantially uniform thickness, said parts being adapted to be assembled to form a closed receptacle with one flange on the other, and a removable binding strip adapted to grip said flanges to hold the two parts of the box or receptacle together, said binding strip constituting the sole means for sealing the receptacle, substantially as described.

3. A receptacle of the character described, comprising two telescoping parts each having an outstanding flange, the two flanges being brought together when the two parts are assembled to form a closed box or receptacle, and a removable binding or locking strip gripping said flanges to hold the two parts of the receptacle together, said binding strip constituting the sole means for sealing the receptacle, substantially as described.

4. A receptacle of the character described, comprising two parts each having an outstanding flange, the two flanges being brought together when said parts are assembled to form a closed receptacle, and a removable binding or locking strip gripping said flanges to hold the two parts of the receptacle together, said strip constituting the sole means for sealing the receptacle and having means adapted to be manually grasped to remove the strip from the flanges, substantially as described.

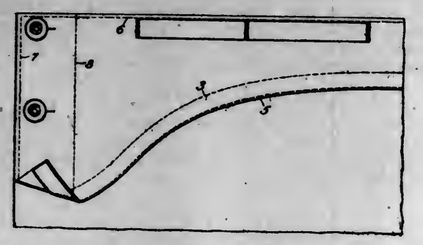
5. A receptacle of the character described, comprising two parts each having an outstanding flange, the two flanges being brought together when said parts are assembled to form a closed receptacle, and a removable binding or locking strip gripping said flanges to hold the two parts of the receptacle together, said strip being equipped with supporting hooks, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

872,380. GARMENT. JAMES A. SHUFELT, Oswego, N. Y., assignor to Frederic Conde, Oswego, N. Y. Filed Mar. 23, 1907. Serial No. 364,115.

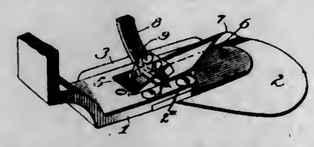
1. A facing strip having a curved folded edge, including a convex curved portion and a concave curved portion, the inner free edge of the fold on the convex portions of the curve being gathered and the inner free edge of the fold on the concave portion being stretched and a line of

stitching passing through the fold adjacent its edge and the body portion of the facing strip.



2. A garment comprising a body portion and a facing strip, having a curved folded edge including a convex portion and a concave curved portion, the inner free edge of the fold on the convex portions of the curve being gathered and the inner free edge of the fold on the concave portion being stretched and a line of stitching passing through the fold adjacent its edge and the body portion of the facing strip, and a line of stitching passing through said folded edge and through the garment for securing the facing strip to said garment.

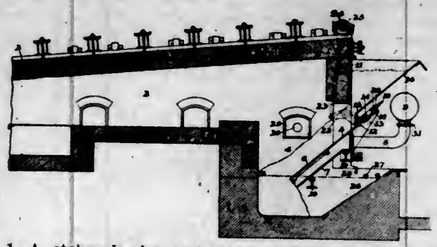
872,381. MACHINE FOR FOLDING AND STITCHING FABRICS. JAMES A. SHUFELT, Oswego, N. Y., assignor to Frederic Conde, Oswego, N. Y. Filed Mar. 23, 1907. Serial No. 364,116.



1. A sewing machine, including in combination, a presser foot, stitch-forming mechanism, a ruffling mechanism, means under the control of the operator for rendering said ruffling mechanism inoperative, said ruffling mechanism including a stationary stripper blade, means for supporting said stationary stripper blade so a fabric may be passed underneath the same and have its edge folded over flat on to said stripper blade, and said folded edge thereby separated from the body portion of said fabric and ruffled when desired, a folder extending underneath said stripper blade around the free edge of the same and over said stripper blade, the entire upper space formed by the folder being substantially parallel to the stripper blade, whereby the fabric is folded over flat on said stripper blade with the edge upturned, and an edge guide for the edge of the folded portion of the fabric arranged above said stripper blade.

2. A sewing machine, including in combination, a presser foot, stitch-forming mechanism, a ruffling mechanism, means under the control of the operator for rendering said ruffling mechanism inoperative, said ruffling mechanism including a stationary stripper blade, means for supporting said stationary stripper blade so a fabric may be passed underneath the same and have its edge folded over flat on to said stripper blade, and said folded edge thereby separated from the body portion of said fabric and ruffled when desired, a folder extending underneath said stripper blade around the free edge of the same and over said stripper blade, the entire upper space formed by the folder being substantially parallel to the stripper blade, whereby the fabric is folded over flat on said stripper blade with the edge upturned, and an edge guide for the edge of the folded portion of the fabric arranged above said stripper blade, and means against which the edge of the folded portion may be drawn and stretched when said ruffler is inoperative.

872,382. FURNACE-STOKER. EDWIN E. SLICK, Pittsburg, Pa. Filed Feb. 12, 1906. Serial No. 300,595.



1. A stoker having a transverse shelf extending forwardly into a combustion chamber and terminating short of the wall opposite said shelf to form a fuel bed space beyond the shelf, and a series of independently adjustable pushers arranged to move on the entire width of said shelf and feed the fuel forwardly across the shelf and combustion chamber, and adapted to vary the amount of feed for the fuel across the width of said chamber; substantially as described.

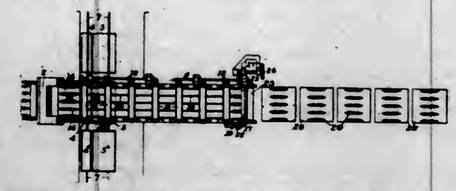
2. In a stoker, a transverse shelf extending forwardly into a combustion chamber and terminating short of the wall opposite the shelf to form a fuel bed space beyond said shelf, and a series of reciprocating pushers arranged to feed the fuel at all points in the width of the shelf, said pushers being mounted on said shelf so as to be independently adjustable to vary the amount of feed for the fuel at different points in the width of the shelf; substantially as described.

3. In a stoker, a combustion chamber, a transverse shelf in front of said chamber, a series of pushers arranged to force fuel forwardly on said shelf, a series of blast boxes beneath the shelf, means for varying the length of the stroke of the pushers with respect to each other, and means for varying the blast supply through each blast box; substantially as described.

4. In a stoker, a transverse shelf extending forwardly into a combustion chamber, a water-sealed ash-pit for said chamber, a series of pushers arranged to push fuel forwardly on said shelf, means for varying the stroke of at least a part of said pushers with respect to each other, a series of blast boxes beneath said shelf, and means for varying the blast supply through each blast box, substantially as described.

5. A stoker having a transverse shelf extending forwardly into a combustion chamber and terminating short of the wall opposite the shelf to form a fuel bed space beyond said shelf, an ash pit below the fuel bed space arranged to accumulate the ashes and support the fuel bed on the ashes, a series of pushers arranged to force fuel forwardly on the shelf, means for varying the length of the stroke of the pushers with respect to each other and adapted to vary the amount of feed for the fuel across the width of the fuel bed space; substantially as described.

872,383. BAR-HANDLING APPARATUS. EDWIN E. SLICK, Pittsburg, Pa. Filed June 5, 1907. Serial No. 377,334.



1. In bar handling apparatus, a shear having a table in front thereof, a feed chute below said table, said chute having a slot or opening adapted to select the shorter pieces and divide them into two piles; substantially as described.

2. The combination with a shear having a feed table in front thereof, of a chute leading from said shear below said table, a car having receptacles into which the chute discharges, and a slot or opening in the chute arranged to separate the shorter pieces and drop them into one of the receptacles; substantially as described.

3. In metal handling apparatus, a shear having a shear table with vertical partitions or separators arranged to separate the bars or skelp lying side by side; substantially as described.

4. A shear table having rollers with driving connections and apron plates between the rollers having separators extending at right angles to the roller axes; substantially as described.

5. The combination with a roller table, a pair of pinch rollers at one end thereof and arranged to feed metal from said roller table, of a motor for simultaneously driving said roller table and pinch rolls; substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

872,384. HUMIDIFIER. JOSEPH J. SMITH, New York, N. Y. Filed May 7, 1903. Serial No. 155,988.



1. A humidifying apparatus for apartments, comprising a vertical casing with openings at opposite ends communicating with the apartment to be treated, to receive air from the upper part of said apartment and discharge the air into the lower part of the same, a series of absorbent sheets dividing the casing into a series of longitudinal side by side passages between the said inlet and outlet openings, a drip tank below the said sheets, means for distributing water to the upper ends of said sheets, and a blower for delivering air currents in a downward direction from the inlet to the outlet, through the passages formed by the said sheets.

2. A humidifying apparatus for apartments, comprising a vertical casing with inlet and outlet openings at its opposite ends respectively, both openings communicating with the apartment to be treated, to receive air from the upper part of said apartment and discharge the air into the lower part of the same, a series of absorbent sheets dividing the casing into a series of longitudinal side by side passages between said inlet and outlet openings, a tank in the lower part of the casing below the said sheets to receive the drip therefrom, means for distributing water to the upper ends of said sheets, and a blower located in the casing above said sheets and delivering air currents in a downward direction from the inlet to the outlet openings in the casing.

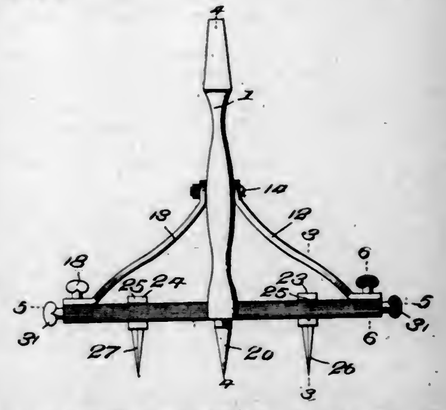
3. A humidifying apparatus for apartments, comprising an upright casing having an inlet opening at its upper end and an outlet opening at its lower end, both openings communicating with the apartment to be treated, whereby the incoming air may be taken from the upper part of the apartment, a series of absorbent sheets dividing the casing into a series of side by side passages between its inlet and outlet openings, means for supporting the sheets, and for distributing water to the upper ends of said sheets, and a blower producing a downward air current from the inlet opening, which current is subdivided into the side by side passages and delivered into the apartment from the outlet opening in the lower part of the casing.

4. A humidifying apparatus for apartments, comprising a casing having its inlet and outlet openings both communicating with the apartment to be treated, a series of absorbent sheets dividing the casing into a series of side by side passages between its inlet and outlet openings, a combined drip and supply tank in the lower part of the casing, a blower and motor in the upper part of the casing above said sheets, a pump in the lower part of the casing communicating with the said tank on one side and on the other side with the upper ends of the sheets, and operating-connections for the pump extending from the motor at one end of the casing to the pump at the other end.

5. A humidifying apparatus for apartments, comprising a casing having inlet and outlet openings at its opposite ends communicating with the apartment to be treated, a series of absorbent sheets therein, a supply tank at the lower end of the casing, a pump also at the lower end of the casing, a motor and blower at the upper end of the casing, and a connecting rod operated by the motor and extending downward to the pump at the lower end of the casing.

[Claims 6 to 8 not printed in the Gazette.]

872,385. CUTTER. CHARLES W. SNOW and HORACE H. SNOW, Truro, Mass. Filed June 15, 1907. Serial No. 379,280.

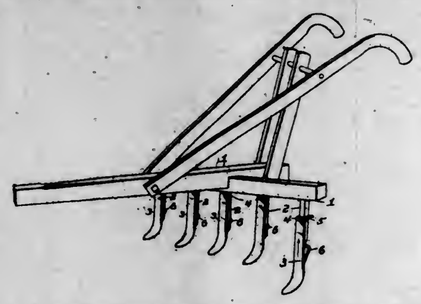


1. In a cutter of the class described, the combination with a bit, having lugs at the lower end thereof; of a frame formed in sections and having notches in the outer edges thereof to receive said lugs, inwardly directed members at each end of said sections and body portions at the longitudinal center of said sections, said members and body portions forming cavities when the sections are placed together, cutting blades slidably mounted in said cavities, means to adjust said cutting blades in the cavities, a spur and means carried by the spur to secure said bit to the frame.

2. In a cutting device of the class described, the combination with a bit, having lugs at the lower end thereof; of a frame formed in sections, said frame having cavities between the sections, brace arms secured at one end to said bit and having their opposite ends bifurcated to form shanks, means to secure said shanks to the sections of the frame, whereby said frame will be held together, cross heads in said cavities, said cross heads having channels in each end thereof to receive said sections, the cross heads also having threaded openings therethrough, shafts

extending longitudinally through said cavities and through the openings in the cross heads, cutting blades carried by said cross heads, spindles at one end of said rods, disks carried by said spindles and seats in said sections to receive said spindles and disks to hold said rods against longitudinal movement.

872,386. ATTACHMENT FOR HARROW-TEETH. WILLIAM B. ST. JOHN, New Edinburg, Ark. Filed Apr. 24, 1907. Serial No. 370,039.



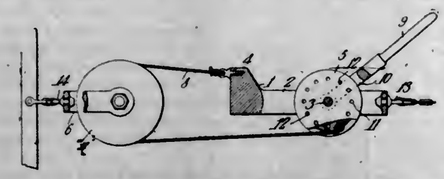
1. A tooth provided at its upper end with a shoulder having an opening therein, and a spring clamp secured to the tooth intermediate of its ends and projecting rearwardly therefrom.

2. A tooth provided at its upper end with a shoulder having an opening, and a spring clamp secured to the tooth intermediate the ends of the latter, said spring clamp projecting rearwardly and upwardly from its connection with the tooth.

3. The combination with a harrow frame and a harrow tooth secured thereto, of a detachable tooth adapted for attachment to the harrow tooth, and having a shouldered upper end which reats in contact with the underside of the harrow frame, the said shoulder having an opening for the passage of the harrow tooth and a spring clamp on the rear face of the detachable tooth adapted to engage the harrow tooth.

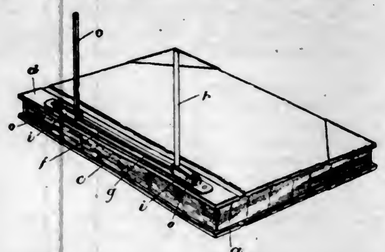
4. The combination with a harrow frame and a harrow tooth secured thereto, of a detachable tooth adapted for attachment to the harrow tooth and having a shouldered upper end which rests in contact with the underside of the harrow frame, the said shoulder having an opening for the passage of the harrow tooth, and a loop shaped spring metal clamp secured to the rear face of the detachable tooth and projecting upwardly and rearwardly therefrom.

872,387. WIRE-FENCING STRETCHER. BENJAMIN F. STUART, Rushville, Mo. Filed Apr. 30, 1907. Serial No. 371,082.



A stretcher comprising a frame having an opening, a shaft fixed to the frame and extending transversely across the opening, a wheel located in the opening and journaled upon the shaft, a block, a pulley journaled on the block, a tackle fixed at one end to the frame and passing around the pulley and being fixed at its opposite end to the periphery of the wheel, means for connecting the block and the frame with objects, a forked lever having its branches located upon opposite sides of the wheel and being pivoted to the said shaft, means for causing the wheel to rotate as the lever is swung and means for retaining the wheel against reverse rotation.

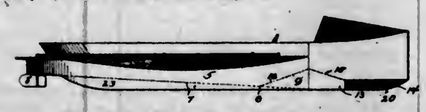
872,388. LOOSE-LEAF BINDER. ARTHUR A. TAIT, Winnipeg, Manitoba, Canada, assignor to The Business Systems Limited, Toronto, Canada, a Corporation of Canada. Filed June 19, 1906. Serial No. 322,364.



1. A binder for loose leaves comprising, a bottom board, multilateral posts projecting from the inner surface of the bottom board, a top board having apertures therein to receive the posts, a plate secured to the outer surface of the top board, having apertures therein alined with the apertures in the top board, lock cases secured to the plate each having upright sides and ends and a post engaging projection having its inner edge alined with the corresponding edge of the aperture, locking bars contained between the sides of the lock cases having their outer ends to be depressed within the lock cases and their inner ends to engage the sides of the posts and coöperate with the projections on the ends of the lock cases to prevent the outward movement of the cover, flanges extending downwardly from the locking bars, fulcrum pins inserted through the sides of the lock cases and flanges between the ends thereof, and springs mounted on the fulcrum pins to engage the bottom of the lock cases and the under surfaces of the locking bars adjacent to the outer ends thereof.

2. A binder for loose leaves comprising, a bottom board, multilateral posts projecting from the inner surface of the bottom board, a top board having apertures therein to receive the posts, a plate secured to the outer surface of the top board having apertures therein alined with the apertures in the top board, lock cases secured to the plate, each having upright sides and ends and a post engaging projection having its inner edge alined with the corresponding edge of the aperture, locking bars contained between the sides of the lock cases having their outer ends to be depressed within the lock cases and their inner ends to engage the sides of the posts and coöperate with the projections on the ends of the lock cases to prevent the outward movement of the cover, triangular guiding flanges extending downwardly from the locking bars, fulcrum pins inserted through the sides of the lock cases and the flanges between the ends thereof, and springs mounted on the fulcrum pins to engage the bottom of the lock cases and the under surface of the locking bars adjacent to the outer ends thereof.

872,389. BOAT. ELAH TERRELL, Columbus, Ohio. Filed May 4, 1907. Serial No. 371,806.

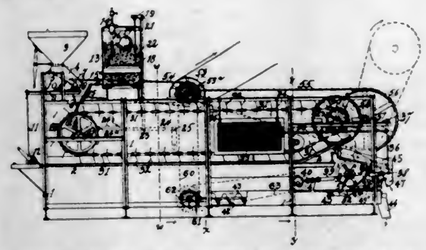


1. A boat having a flat inclined bottom which terminates in a pair of pointed extensions, there being a well located between said pointed extensions, means located in said well for exhausting the water from in front of the boat and disposing it beneath said inclined bottom, and a closure for a portion of the bottom of the well.

2. A boat having a flat inclined bottom which terminates in a pair of pointed extensions, there being a well located between said pointed extensions, means located in said well for exhausting the water from in front of the boat and disposing it beneath said inclined bottom, and a closure for a portion of the bottom of the well, said closure extending between said pointed projections.

3. A boat having a flat inclined bottom which terminates in a pair of pointed extensions, there being a well located between said pointed extensions, means located in said well for exhausting the water from in front of the boat and disposing it beneath said inclined bottom, a closure for a portion of the bottom of the well, said closure extending between said pointed projections, and a centrally disposed keel which projects from said well to the bow of the boat.

872,390. LIME-HYDRATING MACHINE. JOHN H. VAN GLAHN, Toledo, Ohio. Filed Mar. 4, 1907. Serial No. 360,354.



1. In a machine of the described character, an elongated chamber having a trough-like bottom, an endless series of scrapers traversing said trough-like portion, means at one end of said chamber for feeding into the chamber lime and water in regulated quantities and proportions, at the other end of said chamber upright screens at the sides of the chamber, means for actuating said screens, a screen beneath the discharge end of the trough-like part arranged to separate the coarse from the fine hydrate, and means for actuating said screens.

2. In a machine of the described character, an elongated chamber having a trough-like bottom, an endless series of scrapers traversing said trough-like portion, means at one end of said chamber for feeding into the chamber lime and water in regulated quantities and proportions, at the other end of said chamber upright screens at the sides of the chamber, means for actuating said screens, a screen beneath the discharge end of the trough-like part arranged to separate the coarse from the fine hydrate, means for actuating said screen, a pulverizing mechanism arranged to receive the fine hydrate from the screen last mentioned, and means for conveying the output of the pulverizer and of the screens first mentioned to a common outlet.

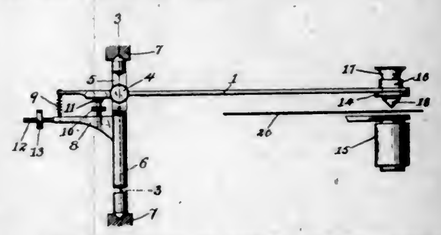
3. In a lime hydrating machine, a hopper, a spout for the hopper pivoted at its upper end, a knocker for the lower end of the spout, means for adjusting the force of the knock, a tank having two compartments one above the other, a float valve in the upper tank, a valve between the two tanks, a driving gear for the machine, connections between the driving gear and said knocker and between the driving gear and said last mentioned valve, means for the adjustment of said connections whereby the force of the knock may be regulated and whereby the intervals between the movements of said last mentioned valve may be varied, an elongated chamber into one end of which lead said hopper and said tank and having a trough-like floor, an endless series of scrapers arranged to agitate and to carry the lime through said chamber, screens for separating the coarse from the fine lime, and means connected with said driving gear for actuating said screens.

4. In a lime hydrating machine, an elongated chamber having a trough-like floor, means for feeding lime and water into one end of said chamber in regulated quantities and proportions, means for agitating and conveying lime through said chamber from its inlet-end to its discharge-end, a pair of screens at opposite sides of said chamber, a floor beneath said chamber and said pair of screens inclined downwardly and inwardly toward each other, and a conveyer in the meeting angle of said floor.

5. In a lime hydrating machine, an elongated chamber having a trough-like floor, means for feeding lime and water into one end of said chamber in regulated quantities and proportions, means for agitating and conveying lime through said chamber from its inlet-end to its discharge-end, a pair of screens at opposite sides of said chamber, a floor beneath said chamber and said pair of screens inclined downwardly and inwardly toward each other, a conveyer in the meeting angle of said floor, and another screen onto which said first mentioned trough-like floor discharges, adapted to separate the coarse from the fine product and to discharge its fine screenings into said conveyer.

[Claim 6 not printed in the Gazette.]

872,391. INDEX FOR RECORDING INSTRUMENTS. CHARLES E. VAWTER, Jr., Blacksburg, Va. Filed Aug. 24, 1906. Serial No. 331,895.



1. A support mounted for angular movement upon an axis, an index arm fulcrumed on said support substantially in the line of said axis for angular movement in a direction at right angles to the axial movement of said support, and recording means carried by said arm.

2. A support mounted for angular movement on an axis but rigid against movement in a direction at right angles to said axis, an index arm pivoted at one point only on said support for movement in a direction at right angles to the axial movement of said support, resisting means to oppose the said movement of said arm in one direction and assist it in the opposite direction, and recording means carried by said arm at its free end.

3. A support mounted for angular movement upon an axis, an index arm fulcrumed in said support for angular movement in a direction substantially at right angles to the axial movement of said support, cushioning means to limit the angular movement of said arm in its fulcrum in one direction, resisting means acting against said movement in the opposite direction, and recording means carried by said arm near one end, the said fulcrum of said arm being between said recording means and the point where said resisting means acts on said arm.

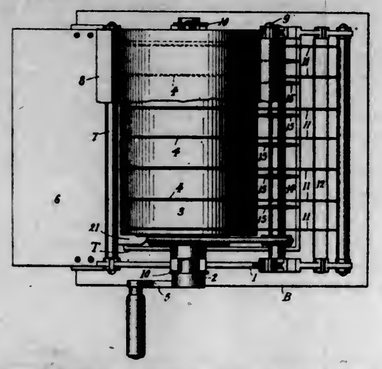
4. A spindle pivoted for angular movement on its longitudinal axis, an index arm pivotally supported near one end by said spindle for angular movement in a direction substantially at right angles to the axial movement of said spindle, a projection movable with said spindle, a stop carried by said projection to limit the movement of said index arm in one direction, a spring connected to said projection and to said index arm near one end thereof, and recording means carried by said arm near its other end.

5. A supporting yoke mounted for angular movement on a diametrical axis, an index arm pivotally mounted near one end in said yoke for angular movement in a direction substantially at right angles to the axial movement of said yoke, an arm movable with said yoke, a stop carried by said arm to limit the movement of said index arm in one direction, a spring connected to said stop-carrying arm and to said index arm near one end thereof to oppose the movement of said index on its pivot in one direction, and

recording means carried by said index arm near its other end.

[Claims 6 to 12 not printed in the Gazette.]

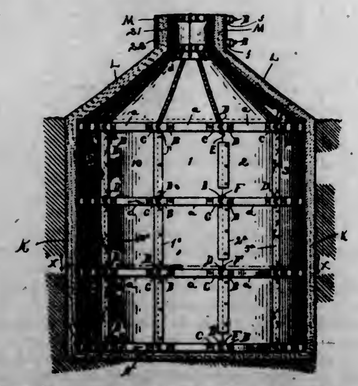
872,392. MACHINE FOR GUMMING OR MOISTENING LABELS. ALWIN VON AUW, New York, N. Y. Filed Dec. 10, 1904. Serial No. 236,345. Renewed May 3, 1907. Serial No. 371,625.



1. In a machine for gumming or moistening labels and the like, the combination with an applying roller, of guiding and feeding devices at one side of the roller, stripping fingers on the other side of the roller substantially opposite the guiding and feeding devices, and a shield or cover extending above the roller in close proximity thereto, one margin of said shield lying adjacent to the guiding and feeding devices and the opposite margin of the shield lying adjacent to and extending over the stripping fingers.

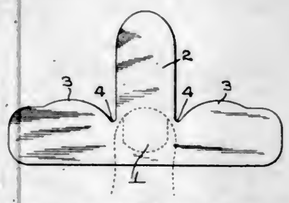
2. In a machine for gumming or moistening labels or the like, the combination with an applying roller of relatively large diameter, of a feed table at one side of the roller and disposed substantially perpendicular to the adjacent portion of the surface of the roller, a guide roller above said table and spaced slightly therefrom, a scraper or doctor extending parallel to the roller beneath the feed table and pivoted at its lower edge, said scraper or doctor presenting a downwardly inclined lip or plate at its free edge, stripping devices diametrically opposite the feed table, and a removable shield extending over the upper portion of the applying roller in close proximity thereto.

872,393. FORM FOR CEMENT CISTERNS OR THE LIKE. HOWARD E. VOTAW, College Corner, Ind. Filed Sept. 26, 1906. Serial No. 336,240.



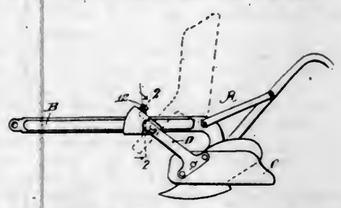
A form for making cement cisterns or the like, comprising a plurality of sections each formed substantially on the segment of a circle, said sections having ribs secured transversely to their inner faces and provided with means for flexibly connecting their adjacent ends, the adjacent ends of the ribs of a pair of said sections being spaced apart, knuckle joint members secured to the inner sides of these ribs and projecting beyond but in rear of their spaced ends, pins connecting said knuckle joint members, seats thus being formed between the spaced rib ends and between the knuckle joint members and the inner sides of the form sections, and longitudinally tapering wedges adapted to be driven into said seats to expand the form.

872,394. HOSE-TOE PROTECTOR. RAYMOND D. WEAKLEY, St. Louis, Mo. Filed Oct. 30, 1906. Serial No. 341,317.



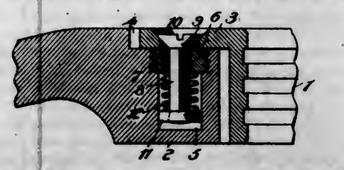
As a new article of manufacture, a hose toe protector, composed of paper, and comprising a straight body portion, the ends of which are adapted to be folded so as to overlap and over lie the toe nail, and a flap integral with the front edge of the body portion, which flap is adapted to be folded upwardly over the overlapping ends.

872,395. FENDER-ADJUSTER. PARMER D. WELLS, Aix, Ind. Filed Apr. 18, 1907. Serial No. 368,948.



In a plow fender adjuster, the combination with a fender and its shank provided with an opening adjacent its end, of a segmental housing attachable to the plow beam and terminating in a rounded point, said housing comprising a base plate, and a partial cover therefor closing one end and providing a suitable bearing for an adjusting screw, said housing being provided with a pin extending upwardly therefrom adjacent said rounded point and said pin having angular extensions at its upper portion adapted for insertion through said opening in said shank to detachably, pivotally hold the same with its end between said base plate and said cover and against said adjusting screw, substantially as described.

872,396. SHAFT-PACKING FOR TURBINES. JAMES WILKINSON, Providence, R. I., assignor to Wilkinson Turbine Company, Birmingham, Ala., a Corporation of Alabama. Filed Aug. 17, 1905. Serial No. 274,608.



1. In a fluid motor, a rotatable driven element and means to pack it to prevent leakage between it and a part of the motor, said means comprising a packing device such as a ring, a non-rotatable element which said means engages, and metallic yieldable means to permit the packing means to yield laterally for the purposes described.

2. In a fluid motor, a rotatable element driven by the action of the fluid pressure, a packing means therefor disposed within the motor and comprising a packing device closely surrounding said element with a slight clearance, a support for said device in which it is seated pressure tight, and yielding means, surrounded by the high pressure and temperature medium in the motor, which permit the lateral adjustment of said device while normally holding it against rotation.

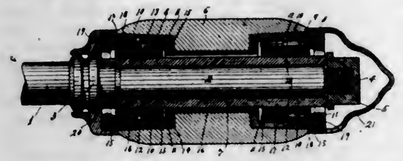
3. In an elastic fluid turbine, a rotor, a stationary element through which said rotor passes, a packing ring yieldingly supported in the opening in said element, and provided with an axially elongated sleeve portion surrounding said rotor.

4. In a rotary motor, a rotatable element, a circular packing device surrounding said element, a fixed support for said packing device, and means tending to hold said packing device against rotation with said element while leaving it free to follow lateral movements of said element said means being adapted to engage said device at different points around its periphery.

5. In a rotary motor, a rotating driven element, a packing ring or sleeve surrounding said element, a fixed support for said ring or sleeve in which it is seated substantially pressure tight, a plurality of devices which are yieldingly connected to said support, and adapted to engage said ring or sleeve.

[Claims 6 to 14 not printed in the Gazette.]

872,397. ANTIFRICTION WHEEL-BEARING. JOHN P. WULFF, Minneapolis, Minn. Filed Jan. 10, 1907. Serial No. 351,619.

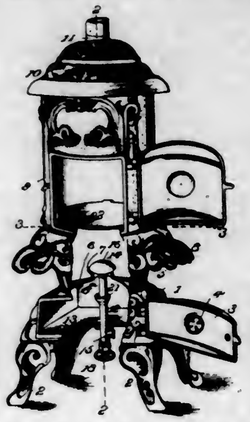


1. The combination with a sleeve adapted to fit and to be secured upon the journal of an axle, of a pair of bearing collars on said sleeve, one of which is capable of sliding movement thereon, a pair of bushings adapted to be inserted into the hub of a wheel, bearing rings within said bushings, reversely tapered rollers working on said bearing collars and within said bushings and bearing rings, and annular nuts working in the ends of said bushings for adjusting said bearing rings, substantially as described.

2. The combination with a bearing sleeve 7 adapted to fit upo nand to be secured to the journal of an axle, bearing collars 8 and 9 on said sleeve 7, of a sleeve 16 surrounding the intermediate portion of said sleeve 7, bushings 17 detachably secured to the ends of said sleeve 16 and adapted to be inserted into the hub of a wheel, bearing rings fitted within said bushings, reversely tapered rollers 10 working on said bearing collars and within said bushings and bearing rings, roller spacing rings 15 connected to the ends of said rollers, and annular nuts 19 working within the ends of said bushings and serving to adjust said rings 18, substantially as described.

3. The combination with a hub 6 and an axle 1 having a fixed collar 3, journal 2 and threaded end 4, of a sleeve 7 fitting said journal, a nut 5 working on said threaded end 4 and coöperating with said collar 3 to clamp said sleeve 7, the bearing collars 8 and 9 on said sleeve 7, a short sleeve 16 surrounding the intermediate portion of said sleeve 7, the bushings 17 having screw-threaded engagement with the ends of said sleeve 16 and fitting in said hub 6, bearing rings 18 in the ends of said bushings, the reversely tapered bearing rollers 10 working on the said collars 8 and 9 and within said bushings 17 and rings 18, annular nuts 19 working in the ends of said bushings for adjusting said rings 18, a clamping collar 20 threaded onto the end of the inner bushing 17, and a cap nut 21 threaded onto the outer end of the outer bushing 17, and inclosing the nut 5, substantially as described.

872,398. OIL-BURNER. JOHN C. ZIEGLER, Wichita Falls, Tex. Filed Sept. 10, 1906. Serial No. 334,049.



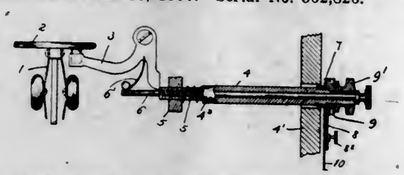
1. In a stove, a fire-pot provided with a bottom opening from which the bottom slopes outwardly on all sides, an inclosed base upon which the fire-pot is mounted and through which air is admitted underneath the fire pot and to said opening, a tubular generator supported in said base with its upper end projecting through and spaced from the walls of said opening, the said walls of the fire-pot extending above said generator, said generator being provided with a supply inlet and with an outlet orifice, and with a valve controlling said orifice, a cone surrounding the outlet orifice of the generator and of an extent and position to entirely cover and spaced from the bottom opening in the fire-pot, and a flat deflector plate secured in the stove above the upper end of the generator, there being provided spaces between the margin of said plate and side wall of the stove, and the space between the outlet orifice of the generator and the deflector plate being entirely free and uninterrupted, as and for the purpose set forth.

2. In a stove, a fire-pot provided with a central bottom opening from which the bottom slopes outwardly and continuously and evenly on all sides, an inclosed base upon which the fire-pot is mounted and through which air is admitted underneath the fire pot and to such opening, a tubular generator supported in said base with its upper end projecting and spaced from the walls of said opening, the side walls of the fire pot extending above the generator, said generator being provided with a supply inlet and with an outlet orifice, and with a valve controlling said orifice, a cone supported on the upper end of said generator, said cone being spaced from the bottom opening of the fire pot of a diameter to extend entirely over and around said opening and beyond the margins thereof on all sides, the surface of the cone being smooth, a short upstanding collar being formed around the opening of the fire-pot bottom and from which said cone is spaced and is entirely in a higher plane, permitting an interrupted upward draft of heated air beyond and surrounding the upper end of the generator, and a flat deflector plate secured in the stove above the upper end of the generator with an open space between, as and for the purpose set forth.

3. In a stove, a fire-pot provided with a central bottom opening from which the bottom slopes outwardly and continuously and evenly on all sides, an inclosed base upon

which the fire-pot is mounted and through which air is admitted underneath the fire-pot and to said opening, a tubular generator supported in the bottom of said base and projecting upwardly therefrom into and through the central opening of the fire-pot bottom and slightly above said opening, said generator tube being provided above said opening with an orifice and below the bottom of the base of the stove with an inlet for the oil and with a controlling valve for the orifice, a cap supported upon the upper end of said tube, the side walls of said fire-pot extending above the upper end of said tube and its cap, the cap being spaced from and above the said central opening of the fire-pot bottom and permitting a substantially uninterrupted upward draft of heated air through the base of the stove and upwardly in the fire-pot, and a flat deflector plate secured within the stove above the fire-pot with a clear uninterrupted space between the outlet orifice of the generator tube and the said deflector plate, the said deflector plate being provided with a marginal space between it and the walls of the stove, as and for the purpose set forth.

872,399. PITCH-INDICATING DEVICE FOR GRAPHOPHONES AND THE LIKE. THEODOR ZOEBL, Chicago, Ill. Filed Mar. 18, 1907. Serial No. 362,826.



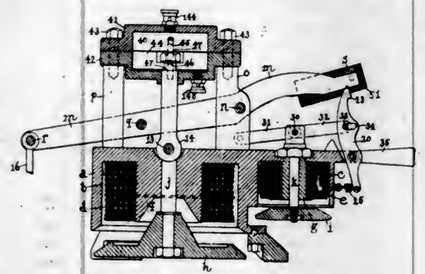
1. In a device of the class described the combination with a casing 4', of a speed governor therein, an adjusting rod 4 for said governor extending outwardly from the casing, a circular scale plate 10 engaged on said casing, having a radial slot 10^3 therein through which said rod passes and having a straight upper edge at the top of said slot adapted to abut against the top of the casing, a chromatic scale on said plate, arranged concentrically with its axis and having the symbols 10^4 thereof increasing in distance apart from the beginning to the end of the scale, a flanged collar 7 on said rod, having a plurality of concentrically arranged indentions in its outer face, a pointer 8 on said rod having a projection 8' adapted to fit in said indentions and a lock nut on said rod adapted to lock the pointer in adjusted position with respect to said plate.

2. In a device of the class described the combination with a speed governor of a graphophone, of an adjusting rod 4 therefor, a flanged collar 7 rigidly engaged on said rod and provided with a plurality of indentations 7' in its outer face, a pointer 8 rotatively engaged on said rod and provided with a projection 8' on its inner face adapted to engage in any of said indentations, a nut 9 on said rod adapted to rigidly hold said pointer against the collar, a set 9' therefor, a disk 10 having a straight upper edge and a radial slot extending downwardly therefrom adapted to receive said rod, a chromatic scale on said disk arranged concentrically with the rod and the symbols thereof being arranged at varying distances apart, and numbers on said disk corresponding with the symbols.

3. In a device of the class described the combination with a casing, of a speed governor therein, a rotary adjusting rod for said governor and projecting through the wall of the casing, a flanged collar rigidly engaged on the outer end of said rod having a plurality of indentations therein, a pointer adjustably on the rod and provided with a projection adapted to engage in said indentations, means for locking the pointer in adjusted position on the rod and a slotted scale disk supported between the pointer and the wall and having a straight upper edge adapted to engage beneath the top of the casing.

4. In a device of the class described the combination with a casing of a revoluble speed regulating rod projecting therefrom, a stationary disk slotted to receive said rod and having a straight upper side adapted to engage beneath the top of the casing, a plurality of symbols on said disk indicating musical tones, a collar on said rod having a plurality of indentations therein, a pointer on the rod and having a projection thereon adapted to engage in said indentations and lock nuts carried on the rod for locking the pointer in adjusted position.

872,400. ELECTROMAGNETICALLY-OPERATED MECHANISM. JOHAN M. ANDERSEN, Boston, Mass., assignor to Albert and J. M. Anderson Manufacturing Company, Boston, Mass., a Corporation of Maine. Filed Jan. 20, 1906. Serial No. 296,953.



1. In an apparatus of the class described, in combination, a lever, an electromagnet having its armature connected to said lever to turn the same into its operative position, a locking device coöperating with said lever to retain it in its operative position, toggle levers connected with said locking device, an electromagnet having its armature connected with said toggle levers to release the said lever when said second electromagnet is energized, said locking device having provision for permitting it to be disengaged from said lever independently of said toggle levers and release magnet, substantially as described.

2. In an apparatus of the class described, in combination, a lever, an electromagnet having its armature connected to said lever to turn the same into its operative position, a locking device coöperating with said lever to retain it in its operative position, toggle levers connected with said locking device, an electromagnet having its armature connected with said toggle levers to release the said lever when said second electromagnet is energized, and circuit controllers movable with said lever, and circuit terminals with which said circuit controllers coöperate, substantially as described.

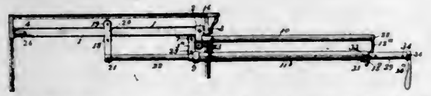
3. In an apparatus of the class described, in combination, a lever, an electromagnet having its armature connected to said lever, a locking device coöperating with said lever and engaged thereby when said magnet is energized, toggle levers connected to said locking device, a second electromagnet connected with said toggle levers to disengage said locking device from said lever when the said second electromagnet is energized, and circuit controllers movable with said lever, substantially as described.

4. In an apparatus of the class described, in combination, a movable device, an electromagnet having its armature connected to said movable device to effect movement thereof, a locking device coöperating with said movable device to lock it in the position into which it is moved when said electromagnet is energized, toggle levers connected with said locking device, and a second electromagnet having its armature connected with said toggle levers to disengage said locking device from said movable device, when said second electromagnet is energized, substantially as described.

5. In an apparatus of the class described, in combination, a movable device, an electromagnet having its armature connected to said movable device to effect movement thereof, a locking device coöperating with said movable device to lock it in the position into which it is moved when said electromagnet is energized, toggle levers connected to said locking device, a second electromagnet having its armature connected with said toggle levers to disengage the locking device from said movable device, when said second electromagnet is energized, said locking device having provision for being disengaged from said movable device independently of said second electromagnet, and when said toggle levers are in their substantially straight position substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

872,401. GARMENT-SUPPORT FOR WARDROBES. JOHN T. BATTS, Grand Rapids, Mich. Filed Nov. 21, 1906. Serial No. 344,377.



1. A garment support for wardrobes, comprising a bar, flanges attached to the respective ends of the bar, a yoke embracing the bar and traversing the same, said yoke also having a downward extension and two spaced apart screw-threaded sockets, two parallel rods having their rear ends screw-threaded and inserted in said sockets, a yoke on the forward end of the bar and movably supporting the rods, a coupling having a screw-threaded socket to receive the screw-threaded forward end of one rod and extended opposite the end of the other rod and a removable screw connecting the coupling and the abutting forward end of the said other rod.

2. In a garment support for wardrobes, a flat bar having convex edges, a yoke embracing the bar, rolls journaled in the yoke and engaging the respective upper and lower edges of the bar, two screw threaded sockets in the yoke and spaced apart, the upper socket being in the plane of the lower roll, two parallel rods having screw-threaded ends in said sockets, a screw thread on the forward end of the lower rod, a coupling having a screw threaded socket to receive the forward end of the lower rod, and a removable screw extending through the upper end of the coupling and inserted in the abutting end of the upper rod.

3. A garment support for wardrobes, comprising a longitudinally movable tube adapted to support garments, means for supporting and moving said tube, a rod slidable in the tube and projecting rearward therefrom, a movable support for the rear end of the rod, means for limiting the outward movement of the rod in the tube, and means for retarding the movement of said support to withdraw the rod from the tube.

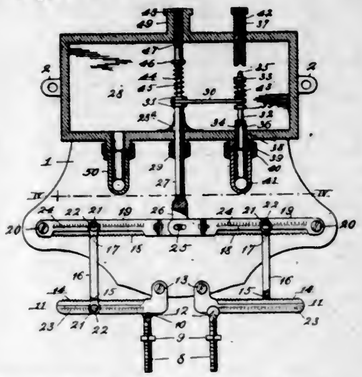
4. A garment support for wardrobes, comprising a longitudinally movable tube adapted to support garments, means for supporting and moving said tube, a rod slidable in the tube and projecting from the rear end thereof, a bar forming part of the supporting means for the tube, a yoke traversing the bar and supporting the rear end of the rod, a spring frictionally engaging the yoke when in rearward position to delay its forward movement, a collar on the rod, and a socket on the end of the tube, said socket having a shoulder to engage the collar and stop the rod.

5. In a garment support for wardrobes, a bar, means for securing the bar within a wardrobe, two yokes adapted to traverse the bar, a rod and a tube inserted in one of said yokes and spaced apart, a yoke on the forward end of the bar, a roll journaled in the yoke and movably supporting the rod, a coupling connecting the forward ends of the tube and rod, a rod slidable in the tube and attached to the second movable yoke, and means for retarding the movement of said yoke to move the rod in the tube.

[Claims 6 to 17 not printed in the Gazette.]

872,402. THERMOSTAT. JOSEPH H. BRADY, Kansas City, Mo. Filed May 12, 1906. Serial No. 316,445.

1. In a device of the character described, the combination with an expansive medium, levers for compounding its movement, a stem moved by the levers, and a spring bearing on the stem; of a chamber, nipples adjustable through its walls, one of them having an inlet port for the admission of fluid under pressure and the other having an exhaust port alined with the inlet port, an outlet pipe for conducting said fluid to the point of use, a single valve plug whose ends are adapted to alternately engage said inlet and exhaust, a guide for the plug, an arm connecting the stem and plug, and a second spring on the plug between the guide and arm.



2. In a device of the character described, the combination with an expansive medium, levers for compounding its movement, a stem moved by the levers, and a spring bearing on the stem; of a chamber having an inlet port for the admission of fluid under pressure, an exhaust alined with it, and an outlet pipe for conducting said fluid to the point of use, a single valve-plug whose ends are adapted to alternately engage said inlet and exhaust, a guide for the plug, an arm connecting the stem and plug, and a second spring on the plug between the guide and arm.

3. A thermostat consisting of an expansive medium fixed at one end, a lever moved by the other end of the medium for compounding the movement thereof and having a serrated edge, another lever for compounding the movement of the first-mentioned lever and having a serrated edge, scales on the levers, and a member connecting the levers and having knife-edges adjustably engaging the serrated edges and apertured flanges through which said scales may be read.

4. A thermostat consisting of an expansive medium, a lever connected thereto, a second lever arranged vertically above the first-mentioned one and having its fulcrumed end reversely-disposed to the fulcrumed end of the first lever, a link connecting said levers and adjustable longitudinally thereon, a valve-stem connected to the second lever, a chamber into which said stem extends provided with an internally threaded boss, an inlet port for the admission of fluid under pressure, and an outlet pipe for conducting said fluid to the point of use; a spring bearing against the stem, a cup engaging said spring, a screw swiveled to the cup and adjustably engaging the boss for regulating the tension of the spring, and a valve-plug carried by the stem for normally closing the inlet port.

5. A thermostat consisting of an expansive medium fixed at one end, a head secured to its other end and having a threaded hole, a screw adjustable therein and having a knife-edge between two flanges, a lever extending across the knife-edge, a second lever above the first and having its fulcrumed end reversely-disposed to the fulcrumed end of the first lever, a link connecting said levers and adjustable at both ends independently thereon, and a stem actuated by the second lever, for the purpose set forth.

[Claim 6 not printed in the Gazette.]

872,403. BOTTLE-CLOSURE. HENRY S. BREWINGTON, Baltimore, Md. Filed Jan. 31, 1907. Serial No. 354,959.

1. A bottle closure made of suitable material provided with a concavo-convex depending flange adapted to be compressed on the bead of a bottle head, the diameter of the

depending flange being greater than that of the bead on the bottle head, substantially as described.



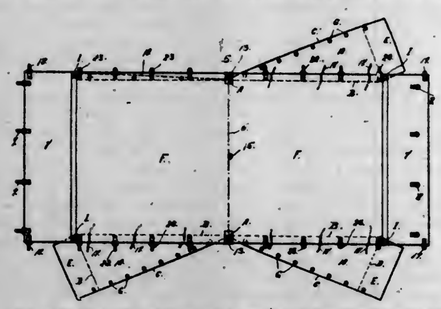
2. A bottle closure made of suitable material provided with a concavo-convex depending flange, a suitable packing within the closure, the diameter of the flange being greater than that of the bead on the bottle head, substantially as described.

3. A bottle closure of suitable material provided with a concavo-convex depending flange, a suitable packing within the closure, the flange and packing being of greater diameter than that of the bead on the bottle head, the flange adapted when compressed on the convex portion to roll inwardly and secure the packing between the bead on the bottle head and the said flange, substantially as described.

4. The combination with a bottle head formed with an external annular bead, of a cap comprising a disk of sheet metal and having a depending concavo-convex flange, the diameter of the flange of the cap being greater than that of the bead on the bottle head, the cap adapted to be secured to the bead on the bottle head by pressure being applied to the convex portion of the depending flange, substantially as described.

5. The combination with a bottle head formed with an external annular bead, of a cap comprising a disk of sheet metal and having a concavo-convex depending flange, the diameter of the flange being greater than that of the bead on the bottle head, a suitable packing within the cap adapted to be secured to the bead on the bottle head by pressure applied upon the convex portion of the depending flange of the cap, substantially as described.

872,404. STOCKMAN'S COMBINATION BED-SHEET, TENT, AND SLEEPING-BAG. FREDERICK W. BURCH, Pueblo, Colo. Filed Jan. 2, 1907. Serial No. 350,819.



1. A device of the class described comprising an elongated rectangular body part of flexible material, triangular members located on opposite sides of the body part and starting at the center and extending to the ends and a floor forming part carried at the end of said rectangular part, substantially as described.

2. A device of the class described comprising an elongated rectangular body part of flexible material, a pair of triangular members located on each side of the body part and starting at the center and extending to the ends, and a floor forming part carried at each end of the rectangular body part, each of said floor forming parts being approximately equal in width to the width of the adjoining edge of the triangular part, substantially as described.

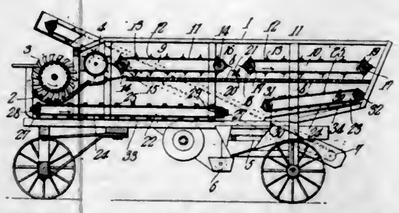
3. A device of the class described comprising an elongated rectangular body part of flexible material, a pair of triangular members located on each side of the body part and starting at the center and extending to the ends, and a floor forming part carried at each end of the rectangular body part, each of said floor forming parts being approximately equal to the width of the adjoining edge of the triangular part, and means for connecting the edges of the floor forming parts to form a continuous floor, substantially as described.

4. A device of the character described comprising an elongated rectangular body portion, triangular portions connected thereto for forming tent ends, said triangular portions starting at the center and extending to the ends of said rectangular portion, said triangular portions having projecting floor portions, substantially as described.

5. In a device of the character described, an elongated rectangular body portion, triangular portions at the sides starting at the center and extending to the ends for forming tent ends, floor forming portions at the ends of said body portion, said triangular portions having extensions for overlapping said floor portions, substantially as described.

[Claim 6 not printed in the Gazette.]

872,405. THRESHING-MACHINE. CYRUS BURWELL, Bunker Hill, Ill. Filed July 9, 1907. Serial No. 382,837.



1. In a threshing machine the combination with a fixed grate; of endless conveyers supported thereabove and moving at different speeds, revoluble devices adjacent opposite portions of one of the conveyers, one of said devices being disposed to rotate at a greater speed than said conveyer and the other device being disposed to rotate at a speed between those of the two conveyors.

2. In a threshing machine the combination with a cylinder and a concave; of a fixed grate adjacent and extending beyond the concave, and separate means disposed to successively engage material and direct it from the concave and along the grate, each of said means being movable at a less speed than the succeeding means.

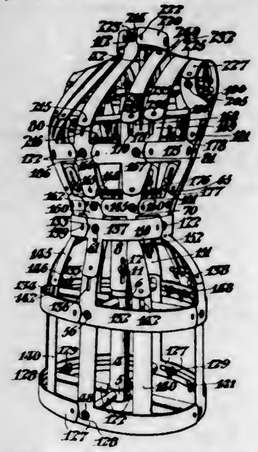
3. In a threshing machine the combination with a cylinder and a concave; of a fixed grate adjacent, and extending beyond, the concave, separate means disposed to successively engage material and direct it from the concave and along the grate, each of said means being movable at less speed than the succeeding means, a screen, guide boards disposed below the grate for directing material toward the screen, and endless means above each board for dragging material thereon toward the screen.

872,406. DRESS-FORM. RUBIN CORSENSKY, Philadelphia, Pa. Filed Dec. 6, 1905. Serial No. 290,536.

1. In a dress form, the combination with an interior axial support comprising a vertically adjustable portion; of means tending to uplift said adjustable portion, and thereby counterbalance the weight which it supports; an exterior system of contour plates adjustably connected together; socket members radiating from said support; and adjusting screws mounted in said socket members and engaging appropriate contour plates, substantially as set forth.

2. In a dress form, the combination with an interior axial support comprising a laterally adjustable portion; of means to maintain said adjustable portion in a fixed direction, in any adjusted position; an exterior system of contour plates adjustably connected together; socket members radiating from said support; and adjusting screws mounted in said socket members and engaging appropriate contour plates, substantially as set forth.

mounted in said socket members and engaging appropriate contour plates, substantially as set forth.



3. In a dress form, the combination with an interior axial support comprising a vertically adjustable portion and a laterally adjustable portion; means arranged to maintain said laterally adjustable portion in invariable angular relation to said vertically adjustable portion; of an exterior system of contour plates adjustably connected together; socket members radiating from said support; and adjusting screws mounted in said socket members and engaging appropriate contour plates, substantially as set forth.

4. In a dress form, the combination of a lower standard, comprising a vertically adjustable portion; an intermediate standard mounted thereon, and comprising a vertically adjustable portion; an upper standard mounted on said intermediate standard and comprising a vertically adjustable portion; means for adjusting said upper standard laterally in invariable angular relation to the general axis of the other standards; an exterior system of contour plates adjustably connected together; socket members radiating from said support; and adjusting screws mounted in said socket members and engaging appropriate contour plates, substantially as set forth.

5. In a dress form, the combination with an interior axial support; of a rotatable bearing mounted therein capable of rotating on relatively angular axes; independent groups of adjustably connected contour plates arranged respectively at the hip zone of the figure, and at the waist zone of the figure; radiating members mounted in said rotatable bearings; and adjusting screws carried by said members and engaging appropriate contour plates of the group at the waist zone whereby different inclinations of said waist zone with relation to the main axis of the hip zone may be attained, substantially as set forth.

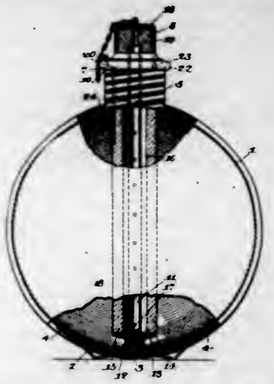
[Claims 6 to 21 not printed in the Gazette.]

872,407. CANTEEN. HEDLEY J. DONAHOE, Chicago, Ill. Filed Oct. 1, 1904. Serial No. 226,744.

1. A canteen structure comprising in combination a liquid receptacle, a filter and a mouth piece provided with an internal passage, an air vent passage, the inner end of which terminates substantially above the inner end of the filter, and a check valve in said passage at a point removed from the inner end thereof.

2. A canteen structure comprising in combination a liquid receptacle, a filter, and a mouth piece, provided with an internal passage, an air vent passage for said receptacle, and a valve located in said air vent passage adjacent the outer end thereof, automatically operating to admit air to the receptacle and prevent a liquid discharge therefrom through said air vent passage.

3. A canteen structure comprising in combination a liquid receptacle, a filter, and a mouth piece, provided with an internal normally submerged passage, an air vent passage for said receptacle, and a valve located in said air



vent passage adjacent the outer end thereof, automatically operating to admit air to the receptacle and prevent a liquid discharge therefrom through said air vent passage.

872,408. CANTEEN. HEDLEY J. DONAHOE, West Chicago, Ill. Filed Sept. 30, 1905. Serial No. 280,830.



1. In a device of the class described, the combination with the cloth body, of the stay wires in the edges thereof adapted to conform to the outline of the associated half of the canteen, projections on said wires adjacent the neck of the canteen, and the collar surrounding the neck and having the hooks to engage the projections.

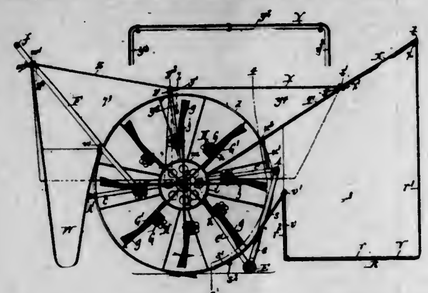
2. In a device of the class described, the combination with the cloth body, of the hinged stay wires in the edges thereof adapted to conform to the outline of the associated half of the canteen and provided with the semi-circular portions to conform to the neck and recessed for the strap links, projections on said semi-circular portions of the stay wires, and the collar surrounding the neck and having the hooks adapted to engage the projections.

3. In a device of the class described, the combination with the cloth body, of means for stiffening the edges thereof, rigid projections secured to said edges adjacent the neck of the canteen, and a collar surrounding the neck and having the hooks to engage the projections.

4. In a device of the class described, the combination with the cloth body, of the means for stiffening the edges adapted to conform to the outline of the associated half of the canteen, the rigid projections secured to said stiffening means adjacent the neck, and the collar surrounding the neck having the hooks to engage the projections.

5. A canteen structure comprising in combination a liquid receptacle, a divided cloth cover therefor, means concealed within and stiffening the edges of said cover, rigid projections secured to said edges adjacent the neck of the canteen, a collar surrounding said neck, and means for locking the projections thereto, substantially as described.

872,409. LAWN-SWEEPER. THOMAS T. ELDRED, Buffalo, N. Y. Filed Jan. 3, 1907. Serial No. 350,598.



1. A lawn sweeper comprising a frame, supporting wheels for said frame, a rotatable brush arranged within the frame, and means for operating said brush comprising an internal gear wheel secured to one of said supporting wheels, a counter-shaft mounted on the frame and composed of inner and outer sections, a ratchet connection between said sections, a pinion secured to the outer counter shaft section and meshing with said internal gear wheel, a pinion secured to the inner counter shaft section, and a gear wheel meshing with said last mentioned pinion and secured to the hub of said brush, substantially as set forth.

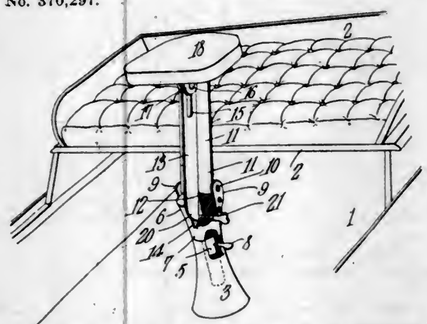
2. A lawn sweeper comprising a frame having transverse bars and longitudinal bars, an axle mounted transversely on the frame, supporting wheels mounted on the axle, a rotatable brush having a hub rotating about said axle, a head arranged at one end of the hub close to one of the longitudinal bars, a head arranged on the hub at a distance from the opposite longitudinal bar forming a clearance space between the same and an annular row of brush sections mounted on said heads and extending with their opposite ends close to both of said longitudinal bars, and means for operating said brush consisting of a bracket arranged in said clearance space and secured to the adjacent longitudinal bar, a counter shaft journaled on said bracket parallel with said axle and hub, an internal gear wheel secured to one of said supporting wheels, a pinion arranged on one end of the counter shaft and meshing with the internal gear wheel, a gear wheel secured to said brush hub and a pinion secured to said counter shaft and meshing with the last mentioned gear wheel, substantially as set forth.

3. A lawn sweeper comprising a frame, supporting wheels for said frame, a rotatable brush mounted on said frame and operating to deliver the sweepings forwardly, a receptacle for the sweeping arranged in front of the brush and consisting of a flexible bag, and means for supporting the upper end of the bag consisting of two side bars and a cross bar connecting the front ends of the side bars, sockets arranged on the frame and receiving the rear ends of said side bars, and posts arranged on the frame in front of said sockets and provided at their upper ends with forks which receive said side bars, substantially as set forth.

4. A lawn sweeper comprising a frame, supporting wheels for said frame, a rotatable brush mounted on said frame and operating to deliver the sweepings forwardly, a receptacle for the sweepings arranged in front of the brush and consisting of a flexible bag, a guide plate for the sweepings secured to the frame between the brush and bag, and means for holding the lower part of the bag in a distended condition consisting of a distending frame arranged within the bag and arms projecting upwardly from the rear end of said distending frame and provided at their upper ends with hooks which engage with said guide plate, substantially as set forth.

5. A lawn sweeper comprising a frame, supporting wheels for said frame, a rotable brush mounted in said frame and operating to deliver the sweepings forwardly, a receptacle supported on the frame in front of the brush and adapted to receive the sweepings from the brush at its upper end, a perforated cover section arranged over the front part of said receptacle, a tight cover section arranged over the rear part of the receptacle and the front part of the brush, a cross bar which receives the rear end of said tight cover section and posts arranged on the frame and connected with opposite ends of said cross bar, substantially as set forth.

872,410. BUGGY-SEAT ATTACHMENT. WILLIAM P. GRANNIS, Kendallville, Ind. Filed Apr. 25, 1907. Serial No. 370,297.



1. In an auxiliary seat for vehicles, the combination with a standard adapted to be secured to the vehicle body, of a seat supporting section mounted to turn in horizontal and vertical planes relatively thereto, and a reversible seat mounted on the seat supporting section and adjustable longitudinally of the latter.

2. In an auxiliary seat for vehicles, the combination with a supporting standard, of a swivel head pivoted to turn in a horizontal plane relatively thereto, a seat supporting section mounted on the swivel head and pivoted to swing in a vertical plane relatively thereto, and a reversible seat mounted on the free end of said section and pivoted to swing in a vertical plane relatively thereto.

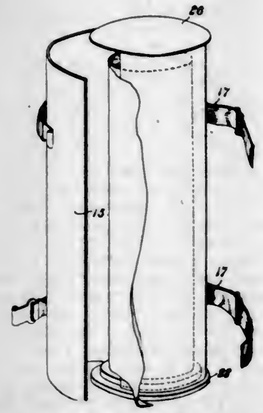
3. In an auxiliary seat for vehicles, the combination with a standard adapted to be secured to the vehicle body and having a vertical bore, of a swivel head seated on and supported by the upper end of said standard and having a vertical journal fitting said bore for permitting relative turning movement between the swivel head and the standard, of a seat supporting section pivotally mounted for vertical adjustment on the swivel head about a horizontal axis, a seat slidable longitudinally on the said section and capable of a pivotal movement to permit the seat to move into and out of operative positions, and a device coöperating with the journal of the swivel head for locking the latter in fixed relation to the standard.

4. In an auxiliary seat for vehicles, the combination with a standard adapted to be secured to the vehicle body, of a swivel head mounted to turn in a horizontal plane relatively to the standard, a pivot pin carried by said head, a seat supporting section slidable in a direction transversely of the axis of said head, and having a hinge member formed thereon to coöperate with the pivot pin and permit relative pivotal movement between the said section and the swivel head in a vertical plane, and means for locking the seat supporting section in operative position.

5. In an auxiliary seat for vehicles, the combination with a supporting standard, of a swivel head having a vertical pivot coöperating with said standard, a pivot pin carried by the swivel head, a seat supporting section having a hinge member formed thereon and coöperating with said pivot pin and provided with a longitudinally extending flange, a seat supported by the flange of the seat supporting section, and a device coöperating with said flange for locking the said section in operative position.

[Claim 6 not printed in the Gazette.]

872,411. MERCHANDISE-HOLDER. DAVID F. GREENAWALT, York, Pa. Filed Oct. 25, 1906. Serial No. 340,583.



1. A merchandise holder comprising a flexible sheet rolled to form a tubular casing of variable diameter, adjustable securing means for maintaining the same at the desired diameter, and an exterior rigid support attached to the sheet and bearing thereon throughout its length.

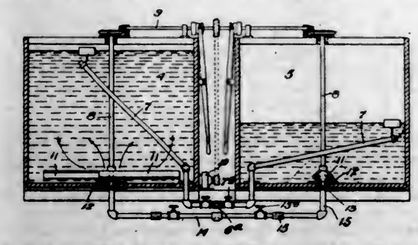
2. A merchandise holder comprising a flexible sheet rolled to form a tube of variable diameter, adjustable securing means for the same, and a rigid supporting strip disposed longitudinally of the sheet.

3. A merchandise holder comprising a flexible sheet rolled to form a tube of variable diameter, adjustable securing means for the sheet, and a rigid strip secured longitudinally of the sheet and provided with an attaching means.

4. A merchandise holder comprising a foldable casing, a longitudinal strip secured to the casing, and a flexible securing band encircling the casing and held in place by said strip.

5. A merchindise holder comprising a foldable casing, a longitudinal strip attached thereto, and a base and cap secured, respectively, to the extremities of the strip for closing the ends of the casing.

872,412. WATER-PURIFYING APPARATUS. JOHN C. W. GRETH, Pittsburg, Pa., assignor to The Wm. B. Scaife & Sons Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Nov. 27, 1906. Serial No. 345,409.



1. In intermittent water purifying apparatus, the combination of two flat bottom tanks each having a rotary stirring paddle therein adapted to throw water either upward or downward, and a common inlet pipe having branches opening into the bottoms of each tank directly at the center and immediately under the plane of movement of said paddles, said inlets being adapted to create vertical currents at the center of motion of the paddles, where the circular motion due to the paddles is least, and said inlet pipe being provided with means for using it as an outlet to withdraw sludge and having valves by which it may be connected with each of said tanks in alternation.

2. The combination of a flat bottom circular tank, a stirring device revolving therein having inclined paddles close to the bottom, and an inlet for the water adapted to inject the same or to withdraw water directly at the center of motion of the paddles, whereby to stir the water in vertical currents at the point where the revolving paddle action is least.

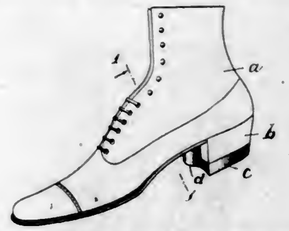
3. In a treatment vessel the combination with a stirring device adapted to create circular currents in one direction, of an inlet for the water having a means to create currents in the opposite direction, substantially as described.

4. In water purifying apparatus a re-action tank having a mechanical stirring device, and an inlet for the water placed under the stirrer and arranged to throw any collected precipitates spirally into the path of the moving parts of the stirrer, substantially as described.

5. In water purifying apparatus a re-action tank and an outlet therefor having means to create circular currents in the tank as the water flows in or out, substantially as described.

[Claim 6 not printed in the Gazette.]

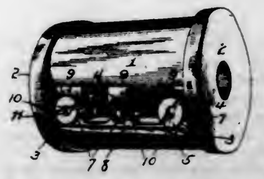
872,413. EXTENSION FOR THE HEELS OF SHOES. JULIUS GROSSMAN and FRANK GROSSMAN, New York, N. Y. Filed July 16, 1907. Serial No. 384,007.



1. As a new article of manufacture, an extension piece adapted to be secured to the heel of a shoe or other form of foot covering, the same comprising a lift piece forming the bottom of the heel and having a right angled portion thereon projecting forwardly and upwardly to support the arch of the foot.

2. An extension piece for the heel of a shoe or other form of foot covering, comprising a flat portion conforming in shape to the heel and provided at its front edge with a right angled portion extending upwardly under the arch of the foot and supporting the same.

872,414. RAG-CUTTING MACHINE. GORDON W. HALL, Lockport, N. Y. Filed Mar. 30, 1907. Serial No. 365,515.



1. The combination with a cylindrical cutter head and a longitudinally disposed knife, of bearings on the head, a

longitudinally disposed binder shoe having the bearing faces, and conical devices disposed between the bearings on the head and bearings on the shoe for causing the latter to bind the knife to the head.

2. The combination with a cylindrical cutter head and a longitudinally disposed knife, of a series of lugs on the head, a longitudinally disposed shoe to bind the knife to the head, and conical devices between the lugs on the head and the shoe.

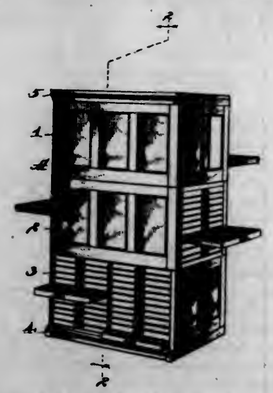
3. The combination with a cylindrical cutter head and a longitudinally disposed knife, of a series of lugs on the head, a longitudinally disposed shoe to engage the knife and bind it to the head, conical devices between the lugs on the head and said longitudinally disposed shoe, and threaded studs secured to the head and on which the conical devices are adapted to screw.

4. The combination with a cylindrical cutter head and a longitudinally disposed knife, of a longitudinally disposed shoe to bear against the knife, bearings on the head and devices having inclined faces disposed between the bearings on the head and the shoe to cause the latter to bind the knife longitudinally of the head.

5. The combination with a cutter head having a knife socket, and a screw secured in the bottom of said socket, of a binding shoe for a knife located in said socket, and a cone threaded on said screw and coöperating with said shoe to bind the knife to the cutter head.

[Claim 6 not printed in the Gazette.]

872,415. SECTIONAL CABINET. HENRY P. HAMILTON, Two Rivers, Wis., assignor to The Hamilton Manufacturing Company, Two Rivers, Wis., a Corporation of Wisconsin. Filed Aug. 22, 1906. Serial No. 331,552.

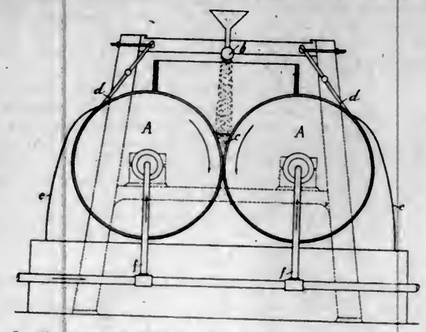


A cabinet comprising a series of units or sections supported one on top of the other and having their abutting faces provided with interlocking parts and the adjoining edges of their walls abutting, the abutting edges of the front walls and the back walls being adapted to interchangeably register with each other, and the abutting edges of the end walls also being adapted to interchangeably register with each other, whereby each of the sections is rendered reversible so that it may be faced frontwardly or rearwardly with respect to the adjoining section or sections.

872,416. CHOCOLATE AND COCOA COMPOUND AND PROCESS OF MAKING SAME. JAMES R. HATMAKER, Paris, France. Filed Jan. 9, 1905. Serial No. 240,353.

1. Cacao, sugar and milk homogeneously combined and sterile and in light, dry, flaky form, substantially as described, each flake of the product being composed of the said homogeneous compound.

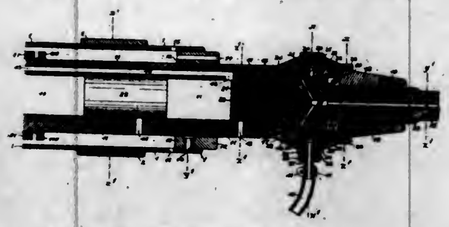
2. The hereinbefore described homogeneous sterile food compounds, in light, dry, flaky form, consisting approximately of 20 parts of cacao, 30 parts of sugar and 50 parts of milk solids, each flake of the said compounds being composed of a homogeneous compound of the said elements.



3. The hereinbefore described process of producing dry homogeneous compounds of cacao, sugar and milk solids in light, dry, flaky form, consisting of making a solution of cacao, sugar and liquid milk in approximately the proportions specified, and in rapidly evaporating its contained water by exposing the said solution, in a very thin film, upon a suitable surface heated sufficiently high to cause a rapid evaporation of its contained water until it is reduced to a solid yet slightly moist state and in then removing the resulting compound from the said surface, the said solution being fed upon the drying surface in such restricted quantity as to avoid its being greatly reduced in bulk prior to the formation of the film.

4. The hereinbefore described process of producing dry sterile homogeneous compounds of cacao, sugar and milk solids in light, dry, flaky form, consisting of making a solution of cacao, sugar and liquid milk in approximately the proportions specified and in rapidly evaporating its contained water by exposing the said solution, in a very thin film, upon a suitable surface heated in excess of 212° F. until it is reduced to a solid yet moist state, and in the removing the resulting compound from the said surface, the said solution being fed upon the drying surface in such restricted quantity as to avoid its being greatly reduced in bulk prior to the formation of the film.

872,417. ROCK-DRILLING MACHINE OR ENGINE. HENRY HELLMAN and LEWIS C. BAYLES, Johannesburg, Transvaal. Filed July 12, 1905. Serial No. 269,405.



1. In a drilling or boring machine or engine actuated by fluid pressure, in combination, a casing, a hollow or tubular piece slidingly and non-rotatably carried by said casing, a head or tool holding device revolubly attached to the forward end of said tubular piece inside the casing, a drill or tool operatively carried therein, packing located in the casing between the exterior of said tubular piece and the interior of the casing, means for introducing the actuating fluid to the casing at the rear of said packing to feed the drill, a piston in the tubular piece, means operated by the piston for transmitting to the revoluble piece and drill or bit an intermittent rotary motion in one direction, and means for admitting the fluid to reciprocate said piston.

2. In a drilling or boring machine or engine actuated by fluid pressure, in combination, a casing, a hollow or tubular piece slidingly and non-rotatably carried by said casing, a head or tool holding device revolubly attached to the forward end of said tubular piece inside the casing, a drill or tool operatively carried therein, packing between the exterior of said revoluble head and the interior of the casing, means for introducing the actuating fluid to the casing at the rear of said packing to feed the drill, a piston in the tubular piece, means operated by the piston for transmitting to the revoluble piece and drill or bit an intermittent rotation in one direction, a valve located in the tubular piece for alternately admitting the actuating fluid to either end of the piston, and means for introducing the actuating fluid to said tubular piece and valve.

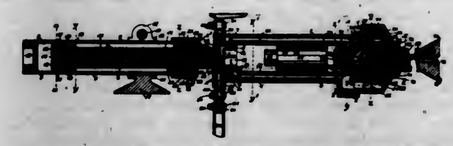
3. In a drilling or boring machine or engine actuated by fluid pressure, in combination, a casing, a hollow or tubular piece slidingly and non-rotatably carried by said casing, a head or tool holding device, a drill or tool operatively carried therein, packing between the revoluble head and casing, a cylindrical piece or ratchet box fixed to the tool holding device, a swivel revolubly attaching said ratchet box to the forward end of the tubular piece, a piston in said tubular piece, means for permitting said piston to reciprocate therein while preventing it rotating, a rifle nut carried by said piston, a rifle bar working through said rifle nut constructed with a head located in the ratchet box, said head carrying ratchets adapted to be moved in one direction to rotate the ratchet box and tool holding device and free to move in the reverse direction, and a valve and valve box carried by the tubular piece for alternately admitting the actuating fluid to either side of the piston to reciprocate it.

4. In a drilling or boring machine or engine actuated by fluid pressure, in combination, a casing, a hollow or tubular piece of polygonal external section, a cap or cover on the casing shaped internally to correspond to the tubular piece and fitted with a gland through which the tubular piece works, a revoluble head or tool holding device, a drill or tool operatively carried therein, packing between the revoluble head and casing, means for admitting the actuating fluid to the casing at the rear of said packing, a cylindrical piece or ratchet box fixed to the tool holding device, a swivel revolubly attaching said ratchet box to the forward end of the tubular piece, a cylinder in said tubular piece, a piston in said cylinder constructed with a tail or rearward projection, a nut in which said projection works to prevent the rotation of the piston while permitting of its reciprocation, a valve and valve box carried at the rear of the cylinder inside the tubular piece the cylinder being constructed with ports placing the casing in communication with the valve box and the latter alternately in communication with either end of the cylinder, a rifle nut carried by the piston, a rifle bar working through said rifle nut, said rifle bar being constructed with a head located in the ratchet box, ratchets or pawls carried by said head for locking the rifle bar to the ratchet box and tool holding device when moved in one direction by the piston and rifle nut.

5. In a drilling or boring machine actuated by fluid pressure, the combination of a rotatable power cylinder, a cylinder revolubly connected to the rear end of said power cylinder, means for preventing rotation of said rear cylinder, and means carried by said rear cylinder for rotating the power cylinder.

[Claims 6 to 21 not printed in the Gazette.]

872,418. ROCK-DRILLING MACHINE OR ENGINE. HENRY HELLMAN and LEWIS C. BAYLES, Johannesburg, Transvaal. Filed July 12, 1905. Serial No. 269,408.



1. In a drilling or boring machine or engine, a power cylinder containing percussive apparatus and provided with a rear extension, a feed-cylinder into which the rear extension is engaged, a piston carried by said extension, a port for supplying air to the apparatus, a port for supplying water under pressure to the rear extension, and a valve for connecting either of said ports as desired to said extension.

2. In a drilling or boring machine or engine, a power cylinder having two ports leading into a third port common to both, and a valve comprising a screw and a piston, 40, for connecting either of the two ports with the third port and closing the other port.

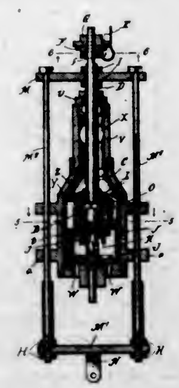
3. In a drilling or boring machine or engine, a power cylinder provided with a rear extension, a port for supplying water to the rear extension, a second port for supplying water to the forward end of the power cylinder, and a valve for cutting off the supply of water through the first named port and without stopping the supply through the second named port.

4. In feed mechanism of the class described, the combination with a motor, of means for feeding the same to its work, said means comprising a cylinder and a piston operating therein, means for conducting and admitting fluid under pressure to the cylinder on one side of the piston, and means, movable with the piston, for varying the effective pressure area of the piston acted on by such motive fluid.

5. In feed mechanism of the class described, the combination with a motor, of means for feeding the same to its work, said means comprising a cylinder and a piston operating therein, a passage-way lengthwise through said piston for conducting and admitting fluid under pressure to the cylinder at one side of the piston and means for admitting the fluid under pressure to the cylinder on the opposite side of the piston to vary the effective pressure area of the piston acted on by such motive fluid.

[Claim 6 not printed in the Gazette.]

872,419. CHARGE-FORMING DEVICE FOR INTERNAL-COMBUSTION ENGINES. FREDERICK HERBST, Ouray, Colo., assignor of one-half to I. A. Martin and R. W. Haskins, Ouray, Colo. Filed Apr. 5, 1907. Serial No. 366,508.



1. The combination of a charge-forming chamber, and a fuel pump-vessel and its plunger located within the chamber and arranged to discharge thereinto, the vessel being spaced on all sides from the chamber, through which space the charge is drawn.

2. The combination of a charge-forming chamber, a fuel pump-vessel and plunger located within the same, and a perforated diaphragm extending across the chamber under the discharge from the pump, the chamber having an air inlet below said diaphragm and an outlet above the same.

3. The combination of a charge-forming chamber having an air inlet at the bottom and a charge outlet at the top, an oil or other fluid-fuel pump vessel supported within the chamber, and a pump plunger working in said vessel and

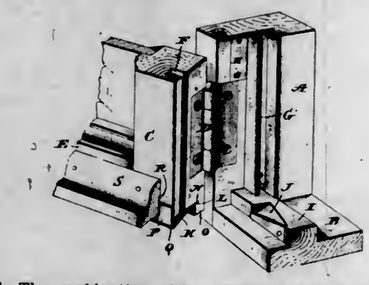
extending through the top of the chamber and arranged to deliver oil or other fluid fuel from the vessel into the chamber.

4. The combination of a charge-forming chamber having an air inlet at one end and an outlet at the opposite end, and a liquid-fuel pump located lengthwise within said chamber and spaced from the side walls thereof forming a surrounding space or passage through which air is drawn, said pump discharging into said space and having operating means external to the chamber.

5. The combination of a charge-forming chamber, a fuel pump located and discharging within the same and spaced from the walls thereof, and a supply pipe extending through the wall of the chamber and across said space and into the pump.

[Claims 6 to 9 not printed in the Gazette.]

872,420. SWINGING SASH. JOHN H. HILTZ and JOHN B. SMITH, Detroit, Mich., assignors to Chamberlin Metal Weather Strip Company, Detroit, Mich. Filed July 6, 1907. Serial No. 382,501.



1. The combination with a window casing and a swinging sash therefor, of a spring metal weather strip interposed between opposite members of the sash and frame and arranged beneath the sash, said strip being secured at its inner edge to one of said members and having a freely movable projected edge portion arranged to be opposed to the direction of the closing movement of the sash, the member to which the strip is unattached having an oppositely projecting portion behind which said freely movable projected edge portion of the strip is adapted to spring when the sash is closed, and said free edge portion terminating in a rounded or smooth edge adapted to facilitate the riding of the parts over each other in the closing movement of the sash.

2. The combination with a window casing and a swinging sash therefor, of a spring metal weather strip interposed between opposite members of the sash and frame, said strip being secured at its inner edge to one of said members and having a freely movable projected edge portion arranged to be opposed to the direction of the closing movement of the sash, the member to which the strip is unattached having an oppositely projecting portion behind which said freely movable projected edge portion of the strip is adapted to spring when the sash is closed, and said free edge terminating in a flange bent therefrom and projected loosely into a grove in the member to which it is attached.

3. The combination with a window casing and a swinging sash therefor, of a spring metal weather strip interposed between opposite members of the sash and frame and arranged beneath the sash, said strip being secured at its inner edge to one of said members and having a freely movable projected edge portion arranged to be opposed to the direction of the closing movement of the sash, the member to which the strip is unattached having an oppositely projecting portion behind which said freely movable projected edge portion of the strip is adapted to spring when the sash is closed, and said free edge terminating in a flange bent therefrom and loosely associated with the member to which it is attached.

4. The combination with a window casing and swinging sash therefor, of a spring metal weather strip interposed between the bottom members of the sash and frame, said strip being secured at its inner edge to the bottom member of the sash and having a freely movable portion projecting inwardly and downwardly from the sash arranged to be opposed to the direction of the closing movement of the sash terminating in a flange bent therefrom, and the bottom member of the casing having a projecting part behind which the free edge of the weather strip is adapted to spring when the sash is closed.

5. The combination with a window casing and swinging sash therefor, of a spring metal weather strip interposed between the bottom members of the sash and frame, said strip being secured at its inner edge to the bottom member of the sash and having a freely movable portion projecting inwardly and downwardly from the sash arranged to be opposed to the direction of the closing movement of the sash terminating in a flange bent therefrom, and the bottom member of the casing having a projecting part behind which the free edge of the weather strip is adapted to spring when the sash is closed, the bottom member of the sash also having a grooved portion in which the flange of the strip projects and may play.

[Claims 6 to 11 not printed in the Gazette.]

872,421. DEVICE FOR LIGHTING GAS-LAMPS FROM A DISTANCE. GOTTLOB HIMMEL, Tübingen, Germany. Filed May 28, 1907. Serial No. 376,075.



1. In apparatus of the class described, a main burner tube, a pilot flame tube, a gas supply tube, and a slide valve operated by variation in pressure in the gas-supply tube for placing the gas supply tube alternately in communication with the main burner tube and the pilot lamp tube.

2. In combination, a gas supply tube, and a main burner tube, a pilot flame tube, a slide valve operated by pressure in the gas supply tube and arranged to cut off communication between the supply tube and main burner tube and establish communication between the supply tube and the pilot flame tube, and mechanism for preventing reshifting of the valve to the opposite position on the next impulse of the pressure operated means.

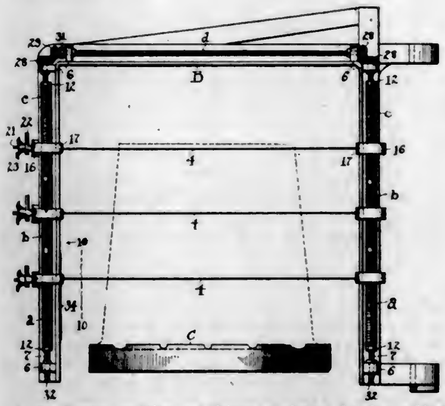
3. In a system of the class described, a pair of burners arranged to be ignited simultaneously and extinguished at different times, respectively, controlling valves arranged at the burners, means under the control of and operated by the pressure in the gas supply pipes and uniform for all burners for shifting the valves, and means located at the burner first extinguished for preventing reignition of such burner when the pressure of gas is increased to extinguish the second burner.

4. In apparatus of the class described, a main burner tube, a pilot flame tube, a gas supply pipe, a ported slide valve controlling communication between the supply pipe and the two tubes, a diaphragm actuated by pressure in the supply pipe, a pivoted rocker arm connected to the valve, a two-armed rod extending from the rocker arm, a pair of members actuated by the diaphragm and arranged to engage the arms of the rod to shift the valve, and means for controlling the engagement of the members with said arms.

5. In combination, a main burner tube, a pilot flame, a gas supply pipe, a pressure actuated diaphragm connected in the supply pipe, a valve controlling communication between the supply pipe, the main burner tube and the pilot flame tube, a rocker arm connected to the valve, a two-armed rod carried by said rocker arm, a bridge or cross bar receiving movement from the diaphragm, a pair of rod engaging members carried by said bridge or cross bar, and means for operating said bridge or cross bar to control the engagement of said members with the arms of the rod.

[Claims 6 to 9 not printed in the Gazette.]

872,422. BUTTER-CUTTING MACHINE. FREDERIC G. HODELL, Cleveland, Ohio. Filed May 22, 1907. Serial No. 375,026.



1. In butter cutting machines, a frame having adjustable cutting wires and means to stretch said wires under tension upon said frame, and supplementary slack producing means for said wires usable during periods of adjustment.

2. In butter cutting machines, a frame and a series of parallel wires mounted thereon having screw and cam tension members for said wires.

3. In butter cutting machines, a frame and cutting wires and adjustable operating means for setting said wires, and quick relief or slack producing means for said wires adapted to permit adjustment of the said setting means.

4. In butter cutting machines, a frame having cutting wires adjustably supported thereon, and a gage plate having sliding scale graduations thereon for use in setting said wires to cut different length prints.

5. In butter cutting machines, the combination of a vertically movable frame having cross cutting wires, with a laterally movable frame having parallel cutting wires at different elevations, a gage plate on said vertically movable frame having graduations consecutively characterized, and a gage plate on said laterally movable frame having sliding scale graduations provided with characters corresponding to said other gage plate.

[Claims 6 to 14 not printed in the Gazette.]

872,423. CHAIN PUMP-BUCKET. FREDERIC G. HODELL, Cleveland, Ohio. Filed June 24, 1907. Serial No. 380,378.

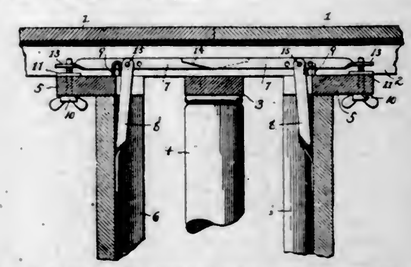
1. In chain pump buckets, a metallic core having a threaded shank and a fixed disk at the base of the shaft, in combination with a flexible bucket adjustably screwed on said shank and having an inner annular bevel at its edge engaged beneath the edge of said disk.



2. In chain pump buckets, a metallic core having a threaded shank and a fixed beveled disk integral therewith, in combination with a substantially bell shaped bucket threaded on said shank and having its widest portion engaged about said disk, said widest portion having an internal annular channel provided with a beveled surface at its bottom portion adapted to match the beveled edge on said disk, whereby the said bucket may be spread to take up wear, substantially as herein set forth.

3. In chain pump buckets, an integral core member having a threaded shank and an annular spreading disk at the base of said shank provided with a beveled outer edge —5—, in combination with an expansible bucket having an interiorly threaded neck engaged on said shank and an enlarged body portion provided with an annular spreading lip at its bottom and an inner beveled edge adapted to bear against said beveled edge —5— and thereby spread the said enlarged body portion of the bucket to make a close working fit of the parts.

872,424. EXTENSION-TABLE. HENRY F. HOLTMANN, Indianapolis, Ind., assignor to The Seng Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 16, 1906. Serial No. 312,063.



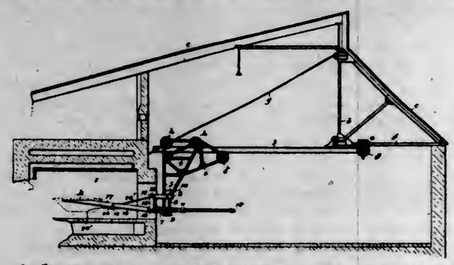
1. In a pedestal extension table, the combination with the pedestal sections and bridge pieces thereon, of a rod secured to each pedestal section, a lever pivoted to each rod so as to extend at opposite sides thereof and bifurcated at its outer end, a thumb-screw adjustable in each bridge-piece and having an annular recess engaging the bifurcated end of the lever thereabove, and a projection on each pedestal section upon which the inner end of the lever of the opposite pedestal-section rides when the pedestal sections are brought together.

2. In a pedestal extension table, the combination with the pedestal sections and bridge-pieces thereon, of a rod secured to each pedestal section, a lever connected to each of said rods so as to extend at opposite sides thereof and bifurcated at its outer end, a plate secured to the bridge-piece of each of said pedestal sections and having a screw-threaded opening therein, a thumb-screw threaded in each of said plates and having an annular groove which engages the bifurcated end of the lever thereabove, and a projection on each pedestal section upon which the inner end of the lever of the opposite pedestal-section rides when the pedestal sections are brought together.

3. In a pedestal extension table, the combination with the pedestal sections and bridge-pieces thereon, of a lever mounted above each of the pedestal sections and beveled at its inner end and at its outer end horizontally disposed and bifurcated, a rod connected to an interme-

diate portion of each lever and to each pedestal section, a plate mounted upon each of the bridge-pieces below the outer end of the lever carried thereby, a thumb-screw threaded through each of the plates and having an annular recess which engages the bifurcated end of the lever thereabove, and a projection on each pedestal section upon which the inner beveled end of the lever carried by the opposite pedestal-section rides, substantially as shown and described.

872,425. SERVING-FORK. CHARLES N. HOOPER, Dubuque, Iowa. Filed July 18, 1905. Serial No. 270,188.



1. In an apparatus of the character described, serving mechanism adapted to insert or withdraw articles from a treating chamber comprising a shiftable overhanging support, a carrier arm, a lever pivoted to the support for raising and lowering said arm, and connections intermediate said lever, arm and support for maintaining the arm parallel to a predetermined plane in its up and down movements, in combination with means for initially adjusting said arm to said predetermined plane.

2. In an apparatus of the character described, serving mechanism adapted to insert or withdraw articles from a treating chamber comprising a shiftable support, a carrier arm, a lever pivoted to the support for raising and lowering said arm, and pivoted link connections intermediate said lever, arm and support for maintaining the arm parallel to a predetermined plane in its up and down movements, in combination with means for initially adjusting said arm to said predetermined plane including a pivotal connection intermediate the said link connections and the end of said arm, and an adjustable rod leading from the arm at a point between its ends to said link connections at a point removed from said pivoted end of the arm.

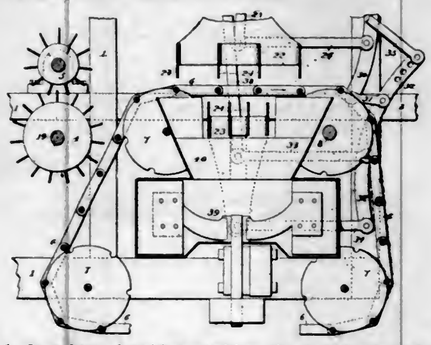
3. In a serving fork for furnaces, the combination with a shiftable support for moving the fork to and from the furnace, of a carrier arranged at one side of said support, and operating means extending beyond the opposite side of said support including intermediate connections for maintaining the carrier parallel to a predetermined plane in its up and down movements, in combination with means for adjusting the carrier to said predetermined plane.

4. In an apparatus of the character described, serving mechanism adapted to insert or withdraw the articles from a treating chamber comprising a shiftable support, a carrier arm, a lever pivoted to the support for raising and lowering said arm, said lever being extended beyond the side of the support which adjoins the arm, and pivoted link connections intermediate said lever, arm and support for maintaining the arm parallel to a predetermined plane in its up and down movements, consisting of a link pivoted to the support of a length substantially that of the extension of the lever, and a connecting link pivoted to said extension of the lever and said first mentioned link, the carrier arm being pivotally connected at one of the pivot points of the connecting link, and an adjustable rod extending from the opposite pivot point of said link to the arm and connected thereto intermediate its ends.

5. In an apparatus of the character described, the combination of a support, a carriage mounted for travel on the support, comprising a main frame provided with a roller bearing, an offset portion also provided with a roller bearing, the said bearings engaging respectively opposite surfaces of the support, and a downwardly depending portion on the main frame, arms pivoted one above the other to the downwardly depending portion, a member connecting the arms at one side of their fulcrums, an article handling device supported by said arms, and means connected with one of the arms for operating the same to move the article handling device vertically while maintaining it parallel to a horizontal plane.

[Claims 6 to 18 not printed in the Gazette.]

872,426. HEMP-BREAKING MACHINE. THOMAS HOPKINS and WILLIAM B. HOPKINS, Lexington, Ky. Filed Dec. 13, 1906. Serial No. 347,668.



1. In a hemp breaking machine, the combination of reciprocating breaking means, a carrier on which the hemp rests, and towards and from which said means reciprocates, said carrier having openings, and means to cause a current of air to pass through the hemp towards the carrier, whereby the hemp is held on the carrier and loose matter removed from the hemp.

2. In a hemp-breaking machine, the combination of breaking means, a carrier having openings and supporting the hemp under the action of the breaking means, and air pressure producing means leading to the carrier on the side opposite that supporting the hemp.

3. In a hemp breaking machine, the combination of reciprocating breaking means, a carrier having hemp supporting means composed of a series of separated or spaced surfaces, towards and from which the reciprocating means reciprocates, and means for producing a current of air crosswise of the carrier from the hemp engaging side thereof, and through the spaces between the separated hemp supporting surfaces of the carrier, such current of air acting to hold the hemp on the carrier and to remove loose matter from the hemp.

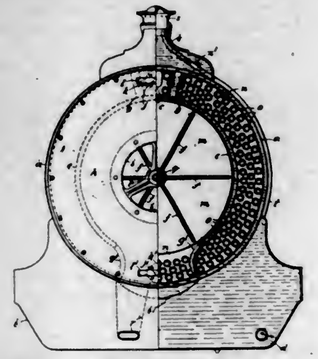
4. In a hemp breaking machine, the combination of a hemp carrier, a reciprocating hemp beater, and means to move the beater in the same direction as the direction of movement of the carrier while in contact with the hemp thereon.

5. In a hemp breaking machine, the combination of a hemp carrier, two oppositely reciprocating hemp beaters, and means to move the beaters in the same direction as the direction of movement of the carrier while in contact with the hemp thereon.

[Claims 6 to 8 not printed in the Gazette.]

872,427. COOLER. FRIEDRICH J. D. HÜLLINGHORST, London, England. Filed Mar. 13, 1907. Serial No. 362,221.

1. In radiators or coolers for motor road vehicles having an air-propelling fan disposed within an annular chamber, the combination of a secondary cooling chamber arranged concentric with the annular chamber surrounding said fan, supplemental cooling spaces provided at the front and back of the radiator, inter-communicating pipes or connections between said annular chamber and the secondary and supplemental cooling spaces; and a series of short pipes or ducts leading from the space between the two annular chambers through one of the supplemental cooling spaces by which the air is directed about the parts to be cooled, substantially as described and shown.



2. In radiators or coolers for motor road vehicles of the kind hereinbefor referred to, the combination of an outer annular chamber, a secondary cooling chamber arranged within and concentric with the same, an air propelling fan surrounded by said annular chamber and provided with an opening or aperture for the air to be circulated between its exterior and the interior of said annular chamber, and inlet and discharge pipes for the circulation of water therethrough, substantially as described and shown.

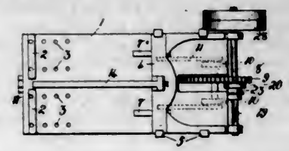
3. In radiators or coolers for motor road vehicles of the kind hereinbefore referred to, and provided with a base, the combination of a hollow detachable end plate or cover for the front of the radiator provided with a central aperture for the admission of cool air, a fan to the central part of which said air is admitted, an annular chamber, and short pipes connecting said cover with the annular chamber and the base of the radiator for the circulation of water therethrough, substantially as described and shown.

4. In radiators or coolers for motor road vehicles of the kind specified and provided with a back and base, the combination of a hollow end plate or cover for the back of the radiator, a supplemental annular chamber for the same, and connecting passages therebetween, a fan, an annular chamber surrounding the fan, and connecting passages between the annular chamber surrounding the fan and the base for the circulation of water through the same, substantially as described and shown.

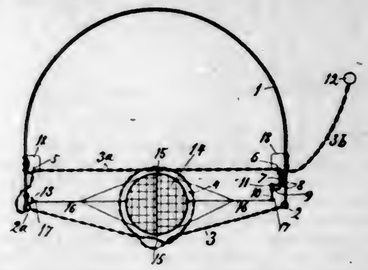
5. In radiators or coolers for motor road vehicles of the kind specified, provided with a back, the combination of a supplemental annular chamber formed on or fixed to the back of the radiator and provided with a series of short concave or tapered pipes or air ducts therethrough, a fan, an annular chamber surrounding the same, and a secondary cooling chamber for the passage of cool air to the motor, said air ducts communicating with the space between the said annular chamber surrounding the fan and the said secondary cooling chamber, substantially as and for the purpose described.

872,428. MACHINE FOR CLAMPING TOGETHER PIECES OF WOOD. WILLIAM JAMIESON, Grays, England. Filed Feb. 5, 1906. Serial No. 299,656.

In a machine for clamping together pieces of wood and other material, the combination of a table supported on a suitable frame, a driving shaft carrying a spur wheel meshing with a spur-wheel on another shaft which also carries two crank disks to which are attached the corresponding ends of two connecting rods, the other ends of which are pivoted to two hanging levers which at their lower ends are spring controlled and at their upper ends pivoted to a presser board arranged to slide on the top of the table, a bar hinged to the presser bar and having a small arm free to move in a slot in the table, removable stops being provided on the table to accommodate the machine to various dimensions of material, and the driving shaft carrying a clutch for giving intermittent movement to the machine substantially as hereinafter described.



872,429. ANIMAL-TRAP. ABNER JOHNSON, Strandquist, Minn. Filed Apr. 11, 1907. Serial No. 367,487.



1. An animal trap comprising a normally straight spring bar, an integral chain secured with the ends to the ends of the spring bar and having intermediate its ends its middle portion formed into a loop adapted to catch the animal, means for holding the spring bar bent when the trap is set, and means for tripping the trap.

2. An animal trap comprising a flexible member with an over hand knot on it by which to catch the animal, and a spring secured with an end to each end of the flexible member to pull the knot tight when the animal is in it.

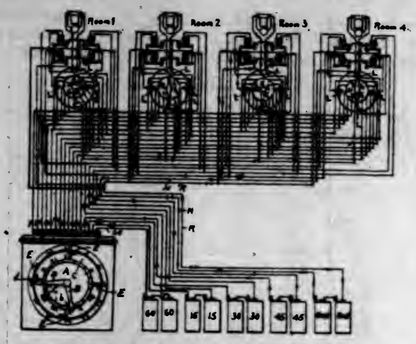
3. An animal trap comprising a normally substantially straight spring bar adapted to be curved to a horse-shoe-shape, a chain secured with an end to each end of the spring and having a loop in which to catch the animal, a tripping device carried by one end of the spring, a trip adapted to be placed below the catching loop and having one end detachably held by the tripping device and the other end secured to the other end of the spring, a chain holding the spring in set position and being detachably held by the tripping device so as to spring the trap when the trip is operated.

4. An animal trap comprising a normally substantially straight spring bar adapted to be curved to a horse-shoe-shape, a chain secured with an end to each end of the spring and having a loop in which to catch the animal, a tripping device carried by one end of the spring, a trip adapted to be placed below the catching loop and having one end detachably held by the tripping device and the other end secured to the other end of the spring, a chain holding the spring in set position and being detachably held by the tripping device so as to spring the trap when the trip is operated, and a chain for securing the trap against removal by the animal, said chain and the chain holding the trap set and the catching chain being made integral.

872,430. ELECTRIC ALARM. FREDERICK I. JOHNSON, Barrington, R. I. Filed Sept. 1, 1905. Serial No. 276,766.

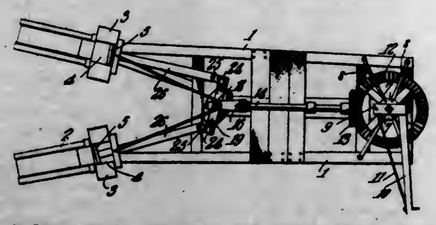
1. A system of alarms consisting of a central clock provided with contacts traversed by its hands, dials with contacts corresponding to those of the clock and means for

connecting the dial contacts, and wires and batteries connecting the contacts of the clock with those of the dials; the clock hands, wires and batteries and connecting means of any dial forming a number of circuits one of which is closed whenever the hands of the clock indicate a time for which the contacts of that dial are connected; a group of relay magnets for each dial, one of which is inserted in each of the clock circuits for that dial, and an alarm circuit with its battery connected to the several relay magnets and including a bell for each dial, whereby the bell will be sounded whenever any one of the clock circuits for that dial is closed.



2. In an alarm clock having two sets of electrical contacts, one traversed by the hour hand and the other by the minute hand, the hour and minute hands being in electrical contact, a series of dials having two series of contact points, movable means for each dial to make electrical connections as desired between the two sets of contacts of that dial, two sets of wires, one set connecting each one of the contacts traversed by the hour hand of the clock with the corresponding contact of all the dials, and the other set of wires connecting each one of the contacts traversed by the minute hand of the clock with the corresponding contact of all of the dials, an electro magnet for each dial inserted in each of one set of wires, an alarm and a circuit to operate the alarm connected with the armatures and their contacts in such manner that the alarm circuit will be closed whenever any of the magnets are energized, and suitable electrical means for energizing the several circuits.

872,431. BALING-PRESS. THOMAS A. JONES, Stamford, Tex. Filed Aug. 1, 1907. Serial No. 386,637.



1. In a baling press the combination with a body and diagonally disposed press boxes mounted thereon; of an oscillatory ring disposed above the body, followers within the press boxes and pivotally connected to the ring, and revoluble means within the ring for oscillating the same.

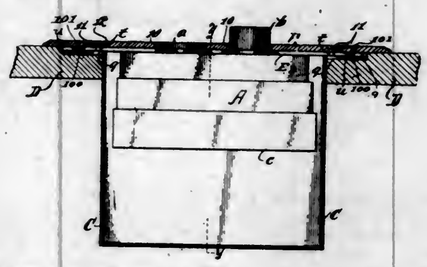
2. In a baling press the combination with diagonally disposed press boxes, and a follower within each box; of an oscillatory ring, pivotal connections between the ring and followers, and means revoluble within the ring for oscillating the same.

3. In a baling press the combination with a plurality of press boxes, and a follower within each box; of an oscillatory ring, pivotal connections between the ring and followers, and revoluble means within the ring for oscillating the same.

4. In a baling press the combination with press boxes and a follower within each box; of an oscillatory ring, pivotal connections between the ring and followers, oppositely extending projecting devices within the ring, and an obliquely disposed annular grooved wheel revoluble within the ring and engaging a projecting device.

5. In a baling press the combination with a plurality of press boxes, and a follower within each box; of a drive shaft, a driven shaft, gears for transmitting motion from the drive to the driven shaft, an obliquely disposed annular grooved wheel upon the driven shaft, a ring surrounding said wheel, oppositely extending trunnions upon the ring, oppositely disposed projections within the ring and engaging the wheel, and pivotal connections between the ring and followers.

872,432. ELECTRICAL APPARATUS. CHARLES J. KLEIN, New York, N. Y., assignor to Ralph Abraham Schoenberg, New York, N. Y. Filed Mar. 18, 1907. Serial No. 362,910.

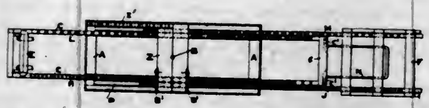


1. The combination of a push-button switch adapted for use as a molding switch, of a removable connecting member whereby the switch may be installed within a wall box or casing.

2. The combination with a push-button switch normally adapted to be used upon a molding, a detachable member adapted to be removably secured to the switch that it may be used as a flush switch.

3. The combination with a push-button switch, a detachable connecting member employed only when such switch is installed in a box or casing that the switch may be used as a flush switch.

872,433. PHOTOGRAPHIC STAND. ARTHUR J. LAMBERT and CHARLES H. LAND, Bradford, England. Filed Jan. 4, 1907. Serial No. 350,732.



1. In a photographic stand, the combination, with a base, of two telescopic frames provided with overlapping parallel bars slidable in the said base and projecting at opposite ends of it, and supports for photographic apparatus pivoted to the end portions of the said frames.

2. In a photographic stand, the combination, with a base, of two telescopic frames provided with overlapping parallel bars slidable in the said base and projecting at the opposite ends of it, catches pivoted to the said base and locking the said frames in position, and supports for photographic apparatus pivoted to the end portions of the said frames.

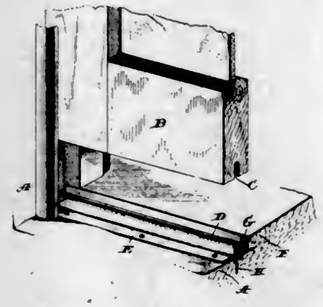
3. In a photographic stand, the combination, with a base, of two telescopic frames slidable in the said base and projecting at opposite ends of it, a detachable handle of spring metal which forms an extension at one end of one of the said frames, and supports for photographic apparatus pivoted to the end portions of the said frames.

4. In a photographic stand, the combination, with a base, and a crossbar secured above the base for supporting a source of light, of two telescopic frames provided with overlapping parallel bars slidable between the said base and crossbar, and supports for photographic apparatus pivoted to the end portions of the said frames on opposite sides of the said crossbar.

5. In a photographic stand, the combination, with a base, and a crossbar secured above the base for supporting a source of light, of two telescopic frames provided with overlapping parallel bars slidable between the said base and crossbar, and supports for photographic apparatus pivoted to the end portions of the said frames on opposite sides of the said crossbar, said parallel bars being provided with graduations for indicating the distance between the said source of light and the said supports.

[Claim 6 not printed in the Gazette.]

872,434. WEATHER-STRIP. WILL J. LAWDER, Washington, D. C., assignor to Chamberlin Metal Weather Strip Company, Detroit, Mich., a Corporation of Michigan. Filed July 19, 1907. Serial No. 384,622.



1. A weather strip having a sealing rib formed of sheet metal folded upon itself, a bracing or stiffening member therein of a width to project a substantial distance therewithout whereby to be anchored, and a securing flange integral with and offset from said rib.

2. A weather strip having a sealing rib formed of sheet metal folded upon itself, a bracing or stiffening member therein of a width to project a substantial distance therewithout whereby to be anchored, and securing flanges integral with and offset from opposite sides of said rib.

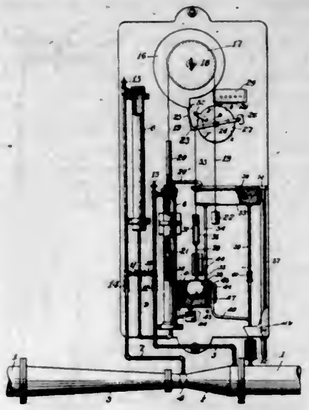
3. In combination with a frame having a groove formed therein; a weather strip having a sealing rib arranged over said groove, said sealing rib being formed of sheet metal bent upon itself, and a bracing or stiffening member introduced in the hollow interior of said rib and projecting outwardly therefrom and into the groove of said frame.

4. In combination with a frame having a groove formed therein; a weather strip having a sealing rib arranged over said groove, said sealing rib being formed of sheet metal bent upon itself, a bracing or stiffening member introduced in the hollow interior of said rib and projecting outwardly therefrom and into the groove of said frame, and a flange integral with said sealing rib offset therefrom and securing the rib in position.

5. In combination with a frame having a groove formed therein, a weather strip having a sealing rib arranged over said groove, said sealing rib being formed of sheet metal bent upon itself, a bracing or stiffening member introduced in the hollow interior of said rib and projecting outwardly therefrom and into the groove of said frame, and flanges integral with said rib and offset in opposite directions therefrom securing the same in place.

[Claims 6 and 7 not printed in the Gazette.]

872,435. LIQUID-METER. JOHN W. LEDOUX, Swarthmore, Pa., assignor to Simplex Valve and Meter Company, a Corporation of New Jersey. Filed Sept. 21, 1905. Serial No. 279,379.



1. A liquid meter comprising a vessel having a siphon for discharging loads accumulated therein, a float which reciprocates in said vessel as the same is filled and discharged, a tappet, a revoluble cam with which said tappet is adapted to make contact, means whereby said float is connected with and withdraws said tappet from said cam, a conduit, a reservoir connected with said conduit, a float in said reservoir, means whereby said float in said reservoir is variable in position with variations in the flow of a liquid in said conduit, and means whereby the position of said cam is varied with the variation in the position of said float in said reservoir.

2. A liquid meter comprising an oscillating vessel having a siphon for discharging loads accumulated therein, means for discharging a liquid into said vessel at a constant rate, a float reciprocating in said vessel at a regular rate with the rise and fall of the liquid therein, an oscillating tappet connected with said float and moved thereby to a definite position at regular intervals, a register connected with and operated by said tappet, a revoluble cam for varying the arc of oscillation of said tappet, a reservoir having a float therein, and means for connecting said float in said reservoir with said cam, whereby variations in the position of said float causes corresponding variations in the position of said cam.

872,436. LIQUID-METER. JOHN W. LEDOUX, Swarthmore, and NORMAN Z. BALL, Philadelphia, Pa., assignors to Simplex Valve & Meter Company, Camden, N. J., a Corporation of New Jersey. Filed Apr. 20, 1906. Serial No. 312,844.

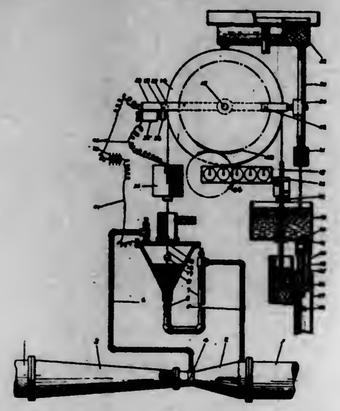
1. A meter comprising a column of liquid variable with variations in the flow to be measured, a circuit adapted to be made and broken during intervals varying with variations in said column and means whereby said circuit is made and broken.

2. A meter comprising a column of liquid variable with variations in the flow to be measured, electrical mechanism having a circuit with a reciprocating contact, means whereby said circuit is made and broken and apparatus whereby the intervals of making and breaking the circuit vary with variations in said column.

3. A meter comprising an indicating mechanism, a device alternating in a path of movement at regular intervals, apparatus for engaging and disengaging said device with relation to said mechanism, electrical mechanism for operating said apparatus and means whereby a flowing liquid regulates the action of said electrical mechanism.

4. A meter comprising an indicating mechanism, an oscillating mechanism, an electromagnet, means whereby

said electromagnet engages and disengages said oscillating mechanism with relation to said indicating mechanism, a circuit connected with said electromagnet, and means comprising a column of liquid for making and breaking said circuit.



5. A meter comprising a fluid conduit, a reservoir connected with said conduit and containing a fluid heavier than the fluid in said conduit, an indicating mechanism, an oscillating lever, apparatus for engaging and disengaging said lever in relation to said indicating mechanism, to actuate the latter, and electrical mechanism under control of the fluid in said reservoir for operating said apparatus.

[Claims 6 to 9 not printed in the Gazette.]

872,437. FILTER. CALEB E. LEONARD, Los Angeles, Cal. Filed Aug. 26, 1907. Serial No. 390,231.



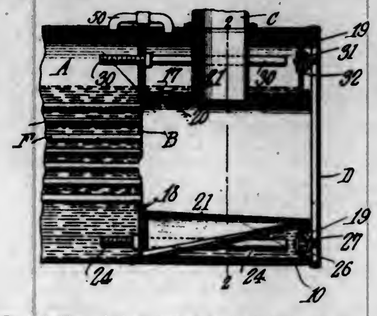
In a filter, a filtering barrel, an inlet pipe at one end thereof, an outlet pipe at the other end thereof, unions connecting the barrel with said inlet and outlet pipes, a filter cone within said barrel and having a flange clamped between the outlet end of the barrel and the adjacent union, a pipe 10 connected to the inlet pipe, a pipe 12 connecting the pipe 10 with the filter barrel near the outlet end of the filter barrel, a valve in pipe 12, a valve 17 in the inlet pipe between pipe 10 and the filter barrel, a valve 16 connected to the inlet pipe between valve 17 and the filter barrel, and a valve 20 in pipe 10.

872,438. BOILER. JOHN LINDNER, Waconia, Minn. Filed Mar. 29, 1907. Serial No. 365,427.

1. In a boiler of the class described, a shell, a flue sheet extending across the shell and dividing the front of the boiler from the smoke box, a separate water jacket fitted within the smoke box, and approximately annular in form in cross section, the rear wall of the jacket fitting against the flue sheet, and circulating pipes extending through said rear wall and flue sheet.

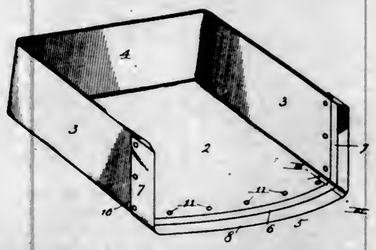
2. In a boiler of the class described, a shell, a flue sheet extending across the shell and dividing the boiler proper from the smoke box, a separate water jacket fitted in the smoke box, and of approximately annular form in cross section, the inner wall of said smoke box jacket being tapered, and the inner end of the jacket fitting against the flue sheet, and circulating pipes extending through the end wall of the jacket and the flue sheet.

3. In a boiler of the class described, a smoke box having a tapered wall and provided with an enlarged channel, and a circulating pipe extending through the forward flue sheet to connect the water space of the boiler with the water space of the smoke box.



4. In a boiler of the class described, a smoke box having a water space, the inner wall of which is tapered to form a water space of gradually increasing area from the forward flue sheet outward, auxiliary plates forming part of the inner wall of the water space and curved into approximately U shape form in cross section, such plates being tapered in width, and circulating pipes secured in the forward flue sheet and connecting the water and steam spaces of the main boiler and smoke box water space.

872,439. SCRAPER-PAN BIT. WINFIELD S. LIVENGOOD, Kansas City, Mo., assignor to Smith & Sons Mfg. Co., Kansas City, Mo. Filed Oct. 23, 1906. Serial No. 340,219.



1. The combination with a scraper pan 1 having the front edge of its bottom portion 2 curved forward; of a bit of one width throughout its length and bent into U-shape, the bit comprising a horizontal portion 6 curved forward to conform with the shape of said bottom, and upwardly extending end portions 7, all said portions being beveled as at 8 on their inner faces to their front edges and being cut away on their inner faces from their rear edges forward to a shoulder 9 which extends parallel with both edges of the bit and is of a depth equal to the thickness of the pan, thereby leaving a heel 10 underlying the bottom and embracing the sides of the pan, and means for securing said heel to the pan.

2. The combination with a scraper pan; of a bit of one width throughout its length and bent into U-shape, the bit comprising a horizontal portion and upwardly extending end portions, all said portions being beveled on their inner faces to their front edges and being cut away on their inner faces from their rear edges forward to a shoulder which extends parallel with both edges of the bit and is of a depth equal to the thickness of the pan, thereby leaving a heel 10 underlying the bottom and embracing the sides of the pan, and rivets through said heel and the bottom and sides of the pan.

872,440. ROUGHING-CALK FOR HORSESHOES. EMERICH VON MARSÓVSZKY and JOSEF JOBBAN, Budapest, Austria-Hungary. Filed June 2, 1905. Serial No. 263,415.



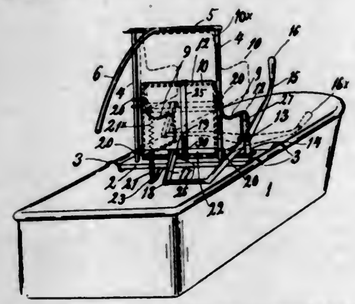
1. A calk for horse-shoes consisting of a relatively deep and sharp screw thread adapted to provide a uniform bearing surface as said calk wears, substantially as and for the purpose described and set forth.

2. A calk for horse-shoes consisting of a relatively deep and sharp cylindrical screw thread adapted to provide a uniform bearing surface as said calk wears.

3. A calk for horse-shoes consisting of a plurality of relatively deep and sharp screw threads adapted to provide a uniform bearing surface as said calk wears.

4. A calk for horse-shoes consisting of a relatively deep and sharp screw thread adapted to provide a uniform bearing surface and provided at its upper end with a sharp threaded screw adapted to be screwed into the horse-shoe.

872,441. BATHING AND MASSAGING DEVICE. ANNA MATTISON, Kewanee, Ill. Filed Apr. 29, 1907. Serial No. 370,736.

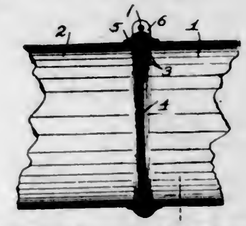


1. A device of the class described comprising in combination, a seat adapted to span a bath tub and having means adapted to engage guidingly the edges of the tub, uprights on the seat, a frame guided to slide on the uprights and being covered with a spongy material, a hand lever fulcrumed to the seat and having at its rear end a link connecting it with the back of the frame, a perforated tube secured to the upper ends of the uprights and a hose connected with the tube and adapted to be attached to some faucet or bib adjacent to the bath tub, said covered frame having forwardly projecting side arms adapted to wash the sides of a person while the frame proper washes and rubs the back.

2. A device of the class described comprising in combination, a seat adapted to span a bath tub and having means adapted to engage guidingly the edges of the tub, uprights on the seat, a frame guided to slide on the uprights and being covered with a spongy material, a hand lever fulcrumed to the seat and having at its rear end a link connecting it with the back of the frame, a perforated tube secured to the upper ends of the uprights, and a hose connected with the tube and adapted to be attached to some faucet or bib adjacent to the bath tub, said covered frame having forwardly projecting side arms adapted to wash the sides of a person while the frame proper washes and rubs the back, and a massage pad of rubber or similar material formed as a lining for the inner side of the frame and its arms, said pad having straps adapted to go over the arms of the frame and straps extending from its top and bottom edge adapted to be passed one over the lower edge and one over the upper edge of the frame, and means for securing said straps at the back of the frame in a detachable manner.

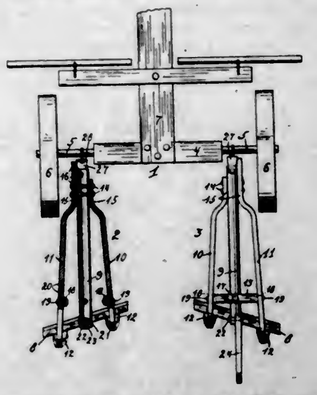
3. A device of the class described comprising in combination, a seat adapted to span a bath tub and having means adapted to engage guidingly the edges of the tub, uprights on the seat, a frame guided to slide on the uprights and being covered with a spongy material, a hand lever fulcrumed to the seat and having at its rear end a link connecting it with the back of the frame, a perforated tube secured to the upper ends of the uprights and a hose connected with the tube and adapted to be attached to some faucet or bib adjacent to the bath tub, said covered frame having forwardly projecting side arms adapted to wash the sides of a person while the frame proper washes and rubs the back, and a spring arranged to hold the sliding frame in normal position and to assist in operating the frame.

872,442. PIPE-JOINT. HUGH MORRIS, Middletown, Ohio. Filed Jan. 19, 1907. Serial No. 353,082.



The combination of adjoining pipe sections, the abutting ends of which have annular projecting convexly-curved portions of approximately circular outline in a plane intersecting the longitudinal axis of the pipes, the circular portions mentioned joining the pipe bodies in concave curvatures merging in the projecting portions; a split clamping band encircling the pipe members at the point of intersection and having an interior surface so shaped that when the band is constricted it firmly grips the projecting portions, the greatest pressure being applied to the greatest circumferential part of said projecting portion, and also grips the concave curved portions to a lesser degree; and means for tightening the clamping band.

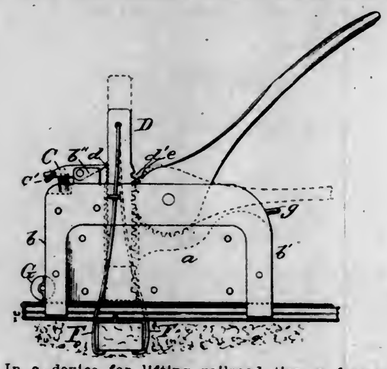
872,443. CULTIVATOR. THOMAS L. MCDONALD, Luella, Tex. Filed June 1, 1907. Serial No. 376,806.



An implement of the character described comprising a central beam formed adjacent to its front end with transverse apertures, two substantially parallel side beams arranged upon opposite sides of the central one and having their rear ends bent downwardly to provide feet and their front ends bent inwardly into parallel relation and engaged with the central beam, one of said side beams hav-

ing apertures in its front end and its rear portion and the other of said side beams having longitudinal series of apertures in its corresponding parts whereby it may be adjusted longitudinally, transverse fastenings passed through the alining apertures in the front end of the central beam and the front end of the side beams, a cross bar arranged upon the rear portion of the central beam and having angularly bent apertured ends, transverse fastenings passed through said ends of the cross bar and the apertures in the rear portions of the side beams, and a scraper blade pivoted at its ends to the feet of the side beams and adapted to be adjusted angularly by adjusting one of said side beams longitudinally with respect to the central beam and the other side beam, substantially as set forth.

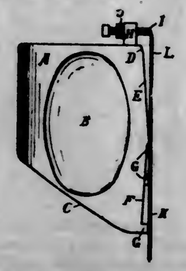
872,444. RAILWAY-TIE LIFTER. JAMES W. NORTON, Lovelady, Tex., assignor of one-half to William Collins, Lovelady, Tex. Filed Aug. 9, 1907. Serial No. 387,940.



1. In a device for lifting railroad ties, a frame constructed to bear longitudinally upon the tread of one of the rails of a railroad track, such frame having lugs that depend from both sides of its lower end portions to overlie the sides of the upper part of the rail when the frame is mounted thereon, a rack-bar maintained and guided by the central portion of the frame, a lever fulcrumed to the frame and adapted to engage the rack-bar, and tie-engaging-bars attached to the rack-bar and spanning the rail-engaging frame, substantially as shown.

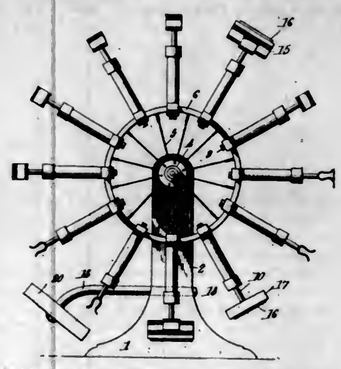
2. In a device of the character set forth, a frame constructed to engage a railroad rail and provided with lugs that depend below the portion of the frame that bears upon the tread of the rail, a vertically movable bar carried by the frame, a pair of grappling bars attached to the movable bar above the frame and a lever fulcrumed to the frame for reciprocating the movable bar.

872,445. SAW-SETTING TOOL. JOHN P. OLSON and MOGENS C. CHRISTENSEN, Tacoma, Wash. Filed Dec. 17, 1903. Serial No. 185,541.



A saw-set and gage consisting of a heavy body having a hammer-set anvil and a spider-gage in two planes which together form a single continuous working face and which are set at an obtuse angle to each other.

872,446. STAMP-RACK. JAMES P. OWENS, Weatherford, Tex. Filed Feb. 28, 1907. Serial No. 359,814.

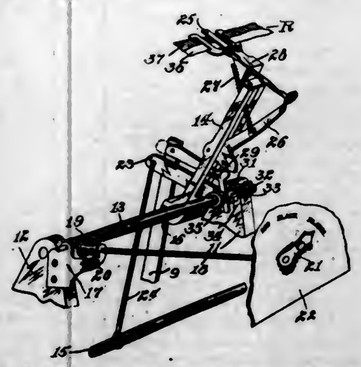


1. A rubber stamp holder comprising a suitable base, a standard thereon, a rotatable member carried by the standard, radially-disposed, tubular members carried by the rotatable member, headed rods within the tubular members, caps for said tubular members through which said rods extend, springs surrounding said rods within the tubular members between the headed ends of the rods and said caps, and carrying means for the rubber stamps on the outer ends of said rods beyond the tubular members.

2. A rubber stamp carrier comprising a suitable support, a rotary member thereon, radially-disposed tubes on said rotary member, U-shaped clips engaging said rotary member and secured thereto by set-screws, centrally-perforated caps for the outer ends of said tubes, headed rods within said tubular members, springs surrounding the rods within the tubular members, and rubber-stamp-holding means on the rods exterior to the tubular members.

3. A rubber stamp carrier comprising a suitable base, a standard thereon, a rotatable member carried by said standard, radially-disposed tubes carried by said rotatable member, extensible rods carried by said tubes, springs within the tubes tending to retract the rods therein, rubber stamp holders carried by the outer ends of said rods, and an ink-pad carried by said standard in the radial path of the rubber stamps carried by the holders therefor.

872,447. RIBBON-SHIFT FOR TYPE-WRITERS. CHAS. J. PAULSON, Brooklyn, N. Y. Filed May 18, 1906. Serial No. 317,540.



1. In a typewriter, the combination of a supporting member, a ribbon guide arranged to reciprocate on the supporting member toward and from the printing position, a flexible shaft supported to oscillate, means for causing the transverse reciprocation of the flexible shaft to reciprocate the ribbon guide, said means being organized to vary the position to which the ribbon is carried by the ribbon guide upon rotative adjustment of the shaft.

2. In a typewriter, the combination of a supporting member, a ribbon guide arranged to reciprocate on the supporting member toward and from the printing position, a flexible shaft supported to oscillate, means for causing the transverse reciprocation of the flexible shaft to reciprocate the ribbon guide, said means being organized to vary the positions to which the ribbon is carried by the ribbon guide upon rotative engagement of the shaft, and means for effecting the transverse reciprocation of the flexible shaft from the universal bar.

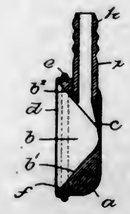
3. In a typewriter, the combination of a supporting member, a ribbon guide arranged to reciprocate on the supporting member toward and from the printing position, a flexible shaft supported to oscillate, means for causing the transverse reciprocation of the flexible shaft to reciprocate the ribbon guide, said means being organized to vary the positions to which the ribbon is carried by the ribbon guide upon rotative engagement of the shaft, means for effecting the transverse reciprocation of the flexible shaft from the universal bar, and means for rotatively adjusting the flexible shaft.

4. In a typewriter, the combination of a supporting member, a ribbon guide arranged to reciprocate on the supporting member toward and from a printing position, a flexible shaft, a lever pivotally supported and arranged to move said shaft transversely when rocked, means for causing the bending of the flexible shaft by said lever to reciprocate the ribbon guide, said means including means to vary the movement of the ribbon guide by the movement of the flexible shaft on its axis.

5. In a typewriter, the combination of a supporting member, a ribbon guide arranged to reciprocate on the supporting member toward and from a printing position, a flexible shaft, a lever pivotally supported and arranged to move said shaft transversely when rocked, means for causing the bending of the flexible shaft by said lever to reciprocate the ribbon guide, said means including means to vary the movement of the ribbon guide by the movement of the flexible shaft on its axis, means for swinging the flexible shaft on its axis to different positions, and means for retaining the shaft in such adjusted positions.

[Claims 6 to 14 not printed in the Gazette.]

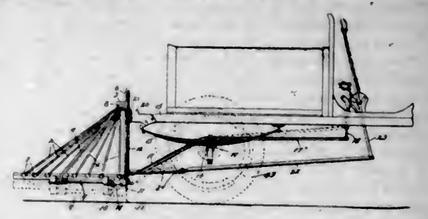
872,448. STETHOSCOPE. DUNLAP P. PENHALLOW, Boston, Mass. Filed Jan. 2, 1907. Serial No. 350,493.



1. A stethoscope consisting of a cup formed from a solid block with a cavity in one face, the elements of the bounding walls of said cavity being straight from end to end and converging from the edges of the block to a sharp apex near the opposite face, and a straight tube extending into one side of the block and opening at the apex of the cavity.

2. A stethoscope consisting of a cup made from a solid block of metal with a cavity in one face, the bounding walls of which form a conical surface converging to a sharp apex, and are straight from the apex to the edges, and a straight tube extending into one side of the block and opening at the apex, the walls of the cavity making substantially equal angles with the axes of the tube and of the cavity, whereby the sound waves are gathered into a sharp and distinct focus and reflected directly through the tube.

872,449. FENDER. WALTER H. PETERS, Elmhurst, Ill. Filed Mar. 7, 1907. Serial No. 361,134.



1. A fender of the kind described, comprising a main frame and wings pivotally secured thereto, said wings arranged to lie in substantially the same plane as the main frame when open, but lie with their free edges transversely of the frame when closed.

2. A fender of the kind described, comprising a main frame and wings pivotally secured thereto, said wings arranged to lie when open in substantially the same plane as the main frame, but to lie with the free edges transversely of the frame when closed, and means for operating said wings.

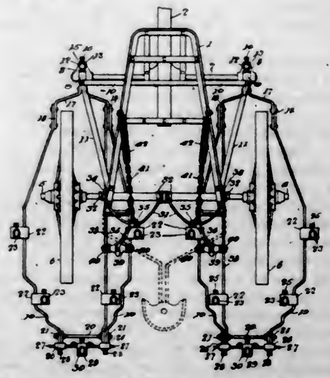
3. A fender of the kind described, comprising a horizontally extended frame, and a substantially vertically extended frame, in combination with fender wings pivotally secured to the horizontal frame and arranged to lie in substantially the plane of the horizontal frame or to lie with the free edges in the plane of the vertical frame as desired.

4. A fender of the kind described, comprising a substantially horizontally extended frame and a substantially vertically extended frame, in combination with fender wings pivotally secured to said horizontal frame and arranged to lie in substantially the plane of the horizontal frame or with the free edges in the plane of the vertical frame as desired, and means for pivotally securing said wings to the frame.

5. A fender of the kind described, comprising a horizontally extended frame and a substantially vertically extended frame, in combination with fender wings pivotally secured to said horizontal frame and arranged to lie in substantially the plane of the horizontal frame or with free edges in the plane of the vertical frame as desired, and cooperating guard wings.

[Claims 6 to 24 not printed in the Gazette.]

872,450. CULTIVATOR. GEORGE A. PLANK, Independence, Mo., assignor to The Ohio Cultivator Company, Bellevue, Ohio, a Corporation of Ohio. Filed Feb. 14, 1907. Serial No. 357,254.

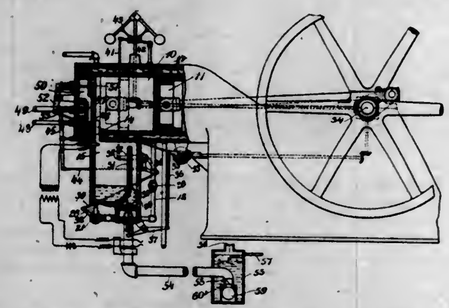


1. In a cultivator, the main frame and its ground wheels, shovel beams each surrounding the adjacent wheel and having their forward ends coupled to the main frame

on horizontal and vertical axes, to afford vertical and lateral movements to the beams, in combination with beam-floating and lifting devices, comprising a hand-rod for each beam pivoted thereto at its lower end, an arm for each hand-rod connected thereto by a joint allowing the hand-rod free lengthwise and lateral movement, each arm being pivoted to the main frame, and springs connecting these devices to the main frame and giving them a floating support, whereby the beams while surrounding the wheels are floated as well in any of their lateral positions as when trailing directly behind their couplings and whereby they are readily lifted when in any position.

2. In a machine of the character described, the combination, with a frame and a ground wheel therefor, of a beam pivotally supported from said frame in front of said wheel and comprising two members extending on opposite sides of said wheel, a bar extending substantially the full length of said beam adjacent to the inner side member thereof, a shaft extending between said bar and the adjacent side member of said beam, supporting means pivotally connected to said shaft, means for adjustably connecting the rear ends of the side members of said beam, and shovels carried by said beam.

872,451. CLEARANCE-CONTROLLING MECHANISM FOR COMPRESSORS AND MOTORS. SIDNEY A. REEVE, Worcester, Mass., assignor to Charles F. Brown, trustee, Reading, Mass. Filed July 16, 1902. Serial No. 115,813.



1. In an explosion motor, the combination of a working cylinder having a clearance-chamber, means for supplying a clearance-varying liquid thereto, and means for automatically varying the admission of said liquid according to the load on the motor.

2. In an explosion motor, the combination of a working cylinder having a clearance-chamber, means for supplying a clearance-varying liquid thereto, and means controlled by the speed of the motor for varying the admission of said liquid.

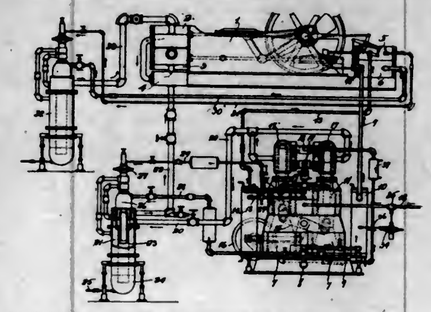
3. The combination of a cylinder having a clearance-chamber, a conduit for supplying said chamber with a clearance-varying liquid, valve-mechanism in said conduit controlling the flow of said liquid, and speed-controlled means for adjusting said valve-mechanism.

4. In an explosion motor, the combination of a working cylinder having a clearance-chamber, a conduit for admitting a clearance-varying liquid to said chamber, conduit connections for supplying the cylinder with combustion charges, and speed-controlled means for varying the quantity of each charge admitted and for directly varying the admission of said liquid.

5. In an explosion motor, the combination of a working cylinder having a clearance-chamber, means for admitting combustion charges to said cylinder, means for admitting a clearance-varying liquid to said chamber, an exhaust-and-discharge outlet from said chamber for releasing both the combustion products and the liquid, and valve-mechanism mechanically controlled by the motor and controlling said outlet.

[Claims 6 to 11 not printed in the Gazette.]

872,452. INTERNAL-COMBUSTION POWER APPARATUS. SIDNEY A. REEVE, Worcester, Mass., assignor to Charles F. Brown, trustee, Reading, Mass. Filed Feb. 7, 1906. Serial No. 299,889.



1. A power apparatus comprising a main motor, a constant-pressure internal-combustion burner for supplying motive fluid thereto, a charge-compressor for supplying said burner, and an independently-running internal-combustion motor driving said charge-compressor and supplied with motive fluid from said charge-compressor independently of said burner.

2. A power system comprising a main motor having an internal-combustion burner for supplying it with motive fluid, a mechanically-separate intermittent-combustion compressing motor, and a charge-compressor operated by the last-said motor and supplying compressed fluid for both motors.

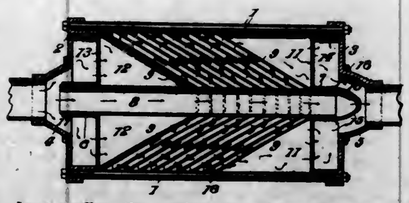
3. A power apparatus comprising a main motor operated by internal combustion of compressed air and fuel, a compressor for supplying the charge to said main motor, and an explosion motor for driving said compressor, adapted to operate with a charge compressed by said compressor.

4. A power system comprising high and low stage serial charge compressors, and two independently-running motors, both operated by the internal combustion of the compressed charge, one of said motors operating the high-stage compressor and the other operating the low-stage compressor.

5. A power system comprising high-stage and low-stage compressors, a motor operated by continuous internal combustion of compressed charge and driving one of said compressors, and a motor operated by internal combustion of compressed charge and operating the other compressor.

[Claims 6 to 19 not printed in the Gazette.]

872,453. MUFFLER. DAVID REID, Ithaca, N. Y. Filed July 22, 1904, Serial No. 217,680. Renewed June 19, 1905. Serial No. 266,044.



1. In a muffler, the combination of an expansion chamber, a passage for the flow of gas opening into said chamber, means disposed in said passage for retarding the flow of gas therethrough, and means for creating a partial vacuum in said chamber.

2. In a muffler, the combination of an expansion chamber with means for utilizing a portion of the heat energy of the exhaust gas to create a partial vacuum in said chamber.

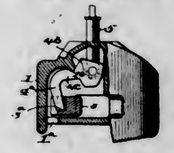
3. In a muffler, the combination of an expansion chamber, a passage opening into said chamber, means for retarding the flow of gas through said passage, and means for utilizing a portion of the heat energy of the exhaust gas to create a partial vacuum in said expansion chamber.

4. In a muffler, the combination of means for retarding the flow of the exhaust gas with means for accelerating the flow against the resistance of the said retarding means.

5. In a muffler, the combination of means for retarding the flow of the exhaust gas, with means for utilizing the heat energy of a portion of the exhaust gas to accelerate the flow of the remainder of the exhaust gas against the resistance of said retarding means.

[Claims 6 to 25 not printed in the Gazette.]

872,454. CAR-COUPLING. GILBERT P. RITTER, Chicago, Ill. Filed Feb. 18, 1903. Serial No. 143,926.



1. In a car coupler, the combination with a pivoted knuckle, of a unitary lock, lock-set and knuckle opener member adapted to have a rotary movement and to be supported in unlocked position by engagement with said knuckle, the lock portion of said unitary member being interposed between the front of the knuckle tail and a wall of the coupler head and the lock-set and knuckle-opener portion thereof being caused to travel outwardly with and by said knuckle as the latter rotates to uncoupled position while supporting said unitary member in unlocked position, substantially as and for the purposes specified.

2. In a car coupler, the combination with a pivoted knuckle, of a unitary gravity lock, lock-set and knuckle-opener member, the lock portion of which is interposed between the front of the knuckle tail and a wall of the coupler head and the lock-set and knuckle-opener portion of which extends downwardly behind said knuckle, said unitary member being adapted to be supported in unlocked position by engagement with said knuckle and said lock-set and knuckle-opener portion being caused to travel outwardly with and by said knuckle as the latter rotates to uncoupled position while supporting said unitary member in unlocked position, substantially as and for the purposes specified.

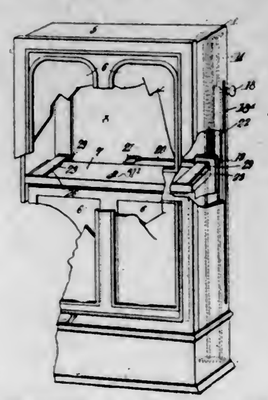
3. In a car coupler, the combination with a pivoted knuckle, of a unitary lock, lock-set and knuckle-opener member adapted to be seated upon the knuckle and to have a rotary movement to open said knuckle, the lock portion of said unitary member being interposed between the front of the knuckle tail and the coupler head and the lock-set and knuckle opener portion thereof being caused to travel outwardly with and by said knuckle as the latter rotates to uncoupled position while said unitary member is seated thereon, substantially as and for the purposes specified.

4. In a car coupler, the combination with a pivoted knuckle, of a unitary lock, lock-set and knuckle-opener member adapted to be seated upon the knuckle and to have a rotary movement to open said knuckle, the lock portion of said unitary member being interposed between the front of the knuckle tail and the coupler head and the lock-set and knuckle-opener portion thereof being caused to travel outwardly with and by said knuckle as the latter rotates to uncoupled position while said unitary member is seated thereon, means for displacing said unitary member from its seat upon said knuckle, and means for returning said unitary member to its locked position, substantially as and for the purposes specified.

5. In a car coupler, the combination with a pivoted knuckle, of a unitary lock, lock-set and knuckle-opener member adapted to be seated upon the knuckle and to have a rotary movement to open said knuckle, the lock portion of said unitary member being interposed between the front of the knuckle tail and the coupler head and the lock-set and knuckle-opener portion thereof being caused to travel outwardly with and by said knuckle as the latter rotates to uncoupled position while said unitary member is seated thereon, and means for displacing said unitary member from its seat upon said knuckle, substantially as and for the purposes specified.

[Claims 6 to 9 not printed in the Gazette.]

872,455. PICTURE-EXHIBITOR. ERNST C. G. ROESLER, Philadelphia, Pa. Filed Mar. 30, 1907. Serial No. 365,500.



1. A picture exhibitor including a case having a display opening and provided with superposed picture receiving compartments, there being a passage on one side of the case and foming a source of communication between said compartments, means for transferring the pictures from one compartment to the other, means for automatically closing said passage during the ascent of the pictures from one compartment to the other, and a kicking device disposed within one of the compartments and successively actuated by the ascending pictures for locking the remaining pictures in said compartment against accidental displacement.

2. A picture exhibitor including a case having a display opening and provided with picture receiving compartments, means for transferring the pictures from one compartment to another, and a kicking device operable by one of the ascending pictures in one compartment for locking the remaining pictures in said compartment against accidental displacement.

3. A picture exhibitor including a case having a display opening and provided with a plurality of communicating picture receiving compartments, an actuating device for transferring the pictures from one compartment to another, means operable by the ascending picture for cutting off communication between the compartments, and a kicking device disposed within one of the compartments and actuated by the ascending pictures for locking the remaining pictures in said compartment against accidental displacement.

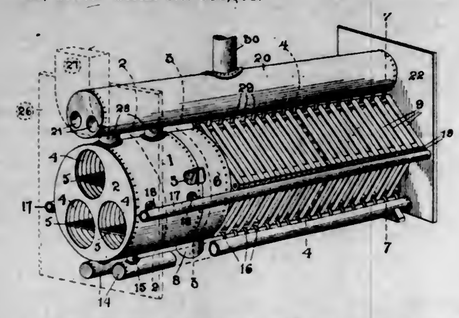
4. A picture exhibitor including a case having a display opening and provided with communicating picture-receiving compartments, a yieldably supported actuating member, a lifting device pivotally mounted on the actuating member for successively transferring the pictures from one compartment to the other, and means for locking the pictures in the upper compartment against accidental displacement during the ascent of the pictures in the lower compartment.

5. A picture exhibitor including a case having a display opening and provided with communicating picture receiving compartments, an actuating member mounted for reciprocation in the case, a lifting member pivotally mounted on the actuating member and adapted to engage the pictures for successively transferring said pictures from one compartment to the other, and means extending in the path of movement of the ascending pictures for lock-

ing the pictures in one compartment against accidental displacement during the ascent of the pictures in the other compartment.

[Claims 6 to 16 not printed in the Gazette.]

872,456. BOILER. LLOYD ROWAN, Shawneetown, Ill. Filed Jan. 22, 1906, Serial No. 297,144. Renewed Mar. 26, 1907. Serial No. 364,578.



1. A boiler constructed with a cylindrical shell, a series of furnace cylinders in said shell, a shell forming a combustion chamber to the rear of the first mentioned shell, a a series of tube sections arranged at the rear of the combustion chamber, a steam drum extending longitudinally above the shells and tube sections, connections from said shells and tube sections to said steam drum and return flues extending throughout the steam drum, substantially as specified.

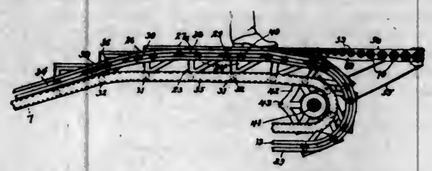
2. A boiler constructed with a cylindrical shell, a series of furnace cylinders in said shell, a shell forming a combustion chamber to the rear of the first mentioned shell, a series of tube sections arranged at the rear of the combustion chamber, a steam drum extending longitudinally above the shells and tube sections, connections from said shells, and tube sections to said steam drum, return flues extending throughout the steam drum, mud drums extending longitudinally beneath the shells and tube sections and tubular connections from said mud drums to the first mentioned shell and the tube sections, substantially as specified.

3. A boiler constructed with a cylindrical shell, a series of corrugated furnace cylinders arranged in said shell, a series of vertically arranged tube sections at the rear of the shell, there being a combustion chamber formed between the shell and the tube sections, a steam drum arranged above the shell and tube sections, tubular connections from the shell and tube sections to said steam drum, return flues extending throughout the steam drum, mud drums extending beneath the shell and the tube sections, tubular connections from the mud drum to the shell and tube sections, and tubular connections for supplying water to the shell and tube sections, substantially as specified.

4. A boiler constructed with a cylindrical shell, a series of furnace cylinders in said shell, a shell forming a combustion chamber at the rear of the first mentioned shell, a series of vertically disposed tube sections arranged at the rear of the combustion chamber, a steam drum extending longitudinally above the shells and tube sections, and connections from said shells and tube sections to said steam drum, substantially as specified.

872,457. MOVABLE STAIRWAY. HOWLAND RUSSEL, Milwaukee, Wis. Filed Feb. 15, 1902. Serial No. 94,183.

1. In a movable stairway, the combination of landings, a series of steps, extending from one landing to another, links pivoted to one step of the series and having their opposite ends loosely connected to the next step in advance to permit an independent up and down movement of each step, whereby the horizontal distance from the face of the riser of one step to the face of the riser of the next step will always remain the same whether the step be moving on the level or at an angle, and means for driving the endless stairway.



2. In a movable stairway, the combination of upper and lower tracks extending from one landing to another, and so spaced apart as to set parallel, converging, and diverging, a series of steps, the end pieces thereof provided with openings, roller bearings carried by each step, said roller bearings adapted to engage the respective tracks, guide rollers carried by each step and adapted to bear against the front bordering edge of the end openings of the steps, a series of links each link extending from the axis of the guide rollers of each step and pivoted to the next step to the rear, whereby the series of steps are connected together in the form of an endless stairway, and means for actuating the endless stairway.

3. In a movable stairway, the combination of upper and lower tracks extending from one landing to another and so spaced apart as to set parallel, converging, and diverging, a series of steps, the end pieces thereof provided with openings, roller bearings carried at the upper rear portion of each step and engaging the upper track, roller bearings carried at the lower front portion of each step and engaging the lower track, guide rollers carried by each step and adapted to bear against the front bordering edge of the end openings of the step, other rollers carried on the axes of the guide rollers, said other rollers engaging the upper track, a series of links, each link extending from the axis of the guide rollers of each step and pivoted to the next step to the rear, whereby the series of steps are connected together in the form of an endless stairway, and means for actuating the endless stairway.

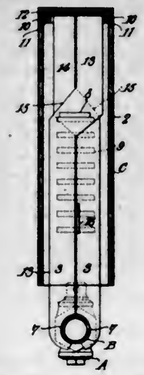
4. The combination of a movable stairway extending from one landing to another, wheels provided with peripheral recesses, an endless hand rail extending from one landing to another and around said wheels, and in convenient position to be reached by a person on the movable stairway, said rail provided on its inner side at distances apart with projecting dogs adapted to be engaged by the recesses of the wheels, handles projecting from the outer side of the endless rail, and means for positively driving one of the wheels.

5. The combination of a movable stairway extending from one landing or approach to another, an endless hand rail extending from one landing or approach to another, and in convenient position to be reached by a person standing on the stairway, a series of plates secured to the outer face of the endless hand rail, each plate provided with projecting arms, a pin journaled in said arms, a series of bars each provided at one end with a projecting handle, and having a depending portion or portions mounted on the pin, and said bar also having at its opposite end a slot or opening through which the pin of the next succeeding plate passes, a sheathing or casing for the hand rail, said sheathing or casing having its ends adjacent to the edges of the hand rail, and having its upper portion bent over the hand rail in close proximity thereto, and means for actuating the endless hand rail.

[Claims 6 to 20 not printed in the Gazette.]

872,458. CURB-BOX. FLOYD T. SANBORN and CLINTON H. YOUNG, Youngstown, Ohio. Filed Nov. 20, 1906. Serial No. 344,301.

1. In a device of the class described, the combination of two relatively movable members having hook-shaped ends for gripping around a pipe, a housing for the members to hold them in gripping position, and means for adjustably securing the housing directly to the members.



2. In a device of the class described, the combination of two tubular members having adjacent ends formed to interlock with a stop cock service pipe, one member extending into the other and arranged to permit of a scissors-like movement, and means associated with the members for holding the latter in position.

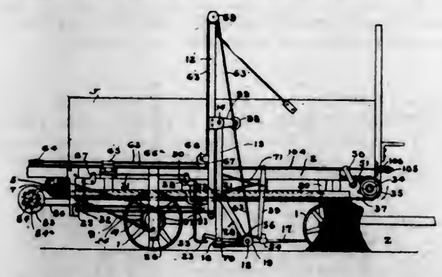
3. In a device of the class described, the combination of two semi-tubular members having oppositely disposed pipe engaging notches, and an inclosing sleeve detachably engaging around and longitudinally adjustable on the members to hold the notched ends thereof in gripping position on a pipe.

4. In a device of the class described, the combination of a pair of members having oppositely disposed semi-tubular ends and assembled to have a scissors-like movement, means at the ends of the members for gripping around a pipe, and a sleeve arranged to hold the members in gripping relation and adjustable longitudinally thereof.

5. In a device of the class described, the combination of a pair of members having oppositely disposed semi-tubular end portions and assembled to have a scissors-like movement, a sleeve surrounding the members, interlocking lugs between the sleeves and members, and a cap on the upper end of the sleeve.

[Claims 6 and 7 not printed in the Gazette.]

872,459. SHOCK-LOADER. KNUTE S. SATRE, Frost, Minn. Filed Nov. 28, 1906. Serial No. 345,477.



1. The combination with a truck carrying a receptacle for the bundles, of a frame carried by said truck and mounted for horizontal pivotal movement, a second frame connected to the first named frame for vertical pivotal movement, a fork carried by said second frame, and means for imparting respective pivotal movements to said frames, to deliver the bundles from the ground into said receptacle, substantially as described.

2. A bundle-loading device comprising an upright support, a frame hinged thereto for horizontal pivotal movement, a second frame hinged to the first named frame for vertical pivotal movement, and a fork carried by said second frame, substantially as described.

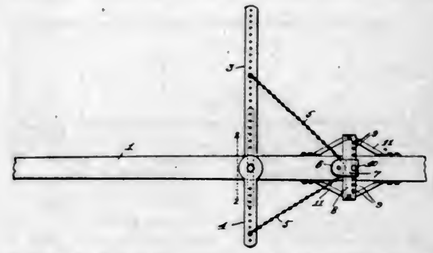
3. A bundle-loading device comprising an upright support, a frame hinged thereto for horizontal pivotal movement, a second frame hinged to the first named frame for vertical pivotal movement, a fork carried by said second frame, connections to the said frames arranged to swing the two frames rearward and then to swing the said second frame and fork upward, to discharge the bundle, and means for effecting the return of the said two frames and fork to normal positions by movements in reverse order, substantially as described.

4. A bundle-loading device comprising an upright support, a frame hinged thereto for horizontal pivotal movement, a second frame hinged to the first named frame for vertical pivotal movement, a fork hinged to said second frame for a limited vertical movement sufficient to raise the bundles from the ground, and means for moving the said frames pivotally to elevate and discharge the bundles from the fork, substantially as described.

5. The combination with a truck having a bundle receiving receptacle, of a frame hinged to parts of said truck for pivotal movement in a horizontal direction, a second frame hinged to the first named frame for vertical pivotal movement, a fork carried by said second frame, and connections operative under the advance movement of the truck to impart the horizontal and vertical pivotal movements to said frames required to deposit the bundles from said fork into said receptacle and to return the parts to normal positions, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

872,460. DRAFT-EQUALIZER. JACOB SCHENCK, Clinton, Wis. Filed July 27, 1907. Serial No. 385,898.



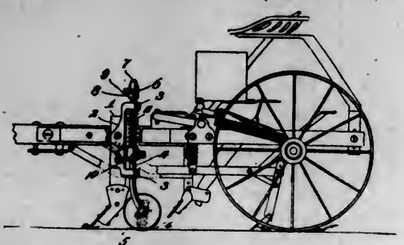
1. In a draft equalizer, the combination with a wagon pole or tongue, oppositely disposed bars or levers pivoted thereto, and a chain connected to said bars or levers at its ends, of a rear pulley with which said chain is engaged intermediate its length, a bracket carrying said pulley and a cross bar on said pole or tongue with which said bracket is slidably engaged.

2. In a draft equalizer, the combination with a wagon pole or tongue, oppositely disposed bars or levers pivoted thereto, and a chain connected to said bars or levers at its ends, of a rear pulley with which said chain is engaged intermediate its length, a bracket carrying said pulley, a T-shaped cross bar on said pole or tongue engaging a similarly shaped transverse recess in said bracket to form a sliding engagement between the two and means for fastening said bracket in any adjusted position on said cross bar.

872,461. PLANTER. JAMES D. SCHOFIELD and CHARLES T. RAY, Dallas, Tex., assignors to The Texas Implement and Machine Company, a Corporation. Filed Mar. 8, 1907. Serial No. 361,371.

1. In a riding planter, the combination with a support, of a vertical standard vertically movable and rotatable in the support, a rudder-blade at the lower end of the standard, stops for limiting the vertical movement of the standard, means for yieldingly supporting the standard in its support, and means for turning said standard.

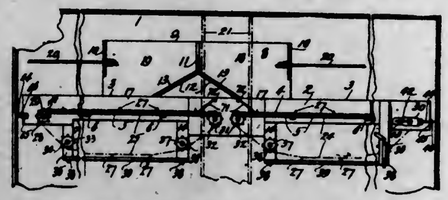
2. The combination, in a planter, of a steering device therefor comprising a rotatable standard, a rudder-blade at the lower end of said standard, a compression spring acting on the standard, and means for turning the standard.



3. The combination, in a riding planter, of a steering device therefor comprising a supporting bracket, a standard rotatable therein, a rudder-blade at the lower end of said standard, an adjustable collar on the standard, a compression spring interposed between the collar and bracket, and means for turning the standard.

4. The combination, in a riding planter, of a steering device therefor comprising a supporting bracket, a standard rotatable therein, a rudder-blade at the lower end of said standard, a collar adjustable on the standard, a compression spring interposed between the collar and bracket, and a cross-bar secured to the upper end of the standard and provided with stirrups at its ends, substantially as herein shown and described.

872,462. GRAIN-CONVEYER. ERNST H. SCHROEDER, Minier, Ill. Filed Oct. 30, 1905. Serial No. 285,201.



1. In an apparatus of the character described, a pair of conveyers secured in the upper portion of a barn or crib and adapted to be driven in opposite directions, an elevator, a slidably supported feed-box adapted to connect the delivery spout of the elevator with either of said conveyers, means for operating said feed-box, and means actuated by the feed-box for causing the conveyer connected to the delivery spout of the elevator to run with the elevator.

2. In an apparatus of the character described, a conveyer-trough secured in the upper portion of a barn or crib, a pair of conveyers associated with said trough and adapted to be driven in different directions, an elevator, a movably supported feed-box adapted to connect the delivery spout of the elevator with either of said conveyers, means for operating said feed-box, and means actuated by the said feed-box for causing the conveyer connected with the elevator spout to run with the elevator.

3. In an apparatus of the character described, a conveyer-trough, a pair of endless conveyers arranged end to end in said trough, means for driving said conveyers independently in different directions, an elevator, a feed-box slidably supported above the adjacent ends of said conveyers, said feed-box divided into two compartments and adapted to connect the delivery spout of the elevator with either of said conveyers, and means for moving the feed-box.

4. In an apparatus of the character described, a conveyer-trough, a pair of endless conveyers arranged end to end in said trough, means for driving said conveyers independently in different directions, an elevator, a feed-box slidably supported above the adjacent ends of said conveyers, said feed-box divided into two compartments and adapted to connect the delivery spout of the elevator with either of said conveyers, means for operating the feed-box, and pivotally supported plates in said conveyer-trough intermediate the feed-box and the inner ends of the conveyers aforesaid.

5. In an apparatus of the character described, a conveyer-trough, a pair of endless conveyers arranged end to end in said trough, means for driving said conveyers independently in different directions, an elevator, a feed-box mounted for reciprocation above the adjacent ends of said conveyers, wheels at the four corners of the feed-box and tracks for the said wheels attached to the conveyer trough, the said feed-box divided into two compartments and adapted to connect the delivery spout of the elevator with either of said conveyers, and means for moving the feed-box.

[Claim 6 not printed in the Gazette.]

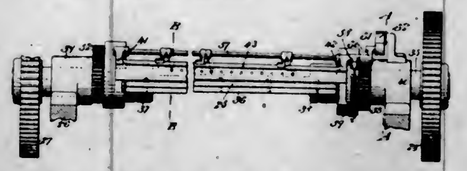
872,463. HOSE-COUPLING. BERNARD A. SCHWABE, Abrams, Wis. Filed Apr. 14, 1906. Serial No. 311,740.



1. A device of the kind described comprising in combination, a pair of coupling disks, each provided with a series of alternating headed studs and key hole slots, the studs of each disk interlocking with the slots of the opposite disk, one of said disks having an opening formed transversely therethrough and communicating with one of the slots therein, a headed bolt slidable in said opening, and a retractile coil-spring carried by said bolt exteriorly of said disk, for normally forcing the inner end of said bolt into said slot, to retain the corresponding stud of the opposite disk in locked position therein.

2. A device of the kind described comprising in combination, a pair of coupling disks each provided with a series of alternating headed studs and key-hole slots, the latter having inclined internal ways, the studs of each disk interlocking with the slots of the opposite disk, one of said disks having an opening formed transversely therethrough and communicating with one of the slots therein, and a headed bolt slidable in said opening, and a retractile coil-spring carried by said bolts exteriorly of said disk, for normally forcing the inner end of said bolt into said slot, to retain the corresponding stud of the opposite disk in locked position therein, said spring being secured at opposite ends to said disk and bolt head.

872,464. CUTTING AND FEEDING MECHANISM FOR PRINTING-PRESSES. RALPH C. SEYMOUR, New York, N. Y., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of New Jersey. Filed Dec. 30, 1905. Serial No. 293,924.



1. A rotary cutter and a web carrier driven thereby and located at the back of the cutter blade, the axis of rotation of the cutter being at an angle to the axis of rotation of the web carrier.

2. A rotary cutter and a rotary web carrier driven thereby and located at the back of the cutter blade, the axis of the rotary cutter being oblique to the line of travel of the advancing web and the axis of the web carrier being arranged at right angles to the line of travel of the advancing web.

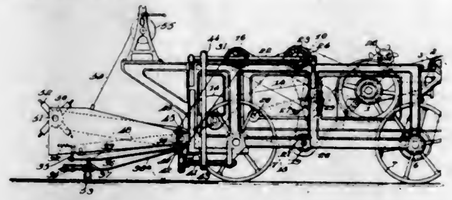
3. A rotary cutter, a web carrier arranged to rotate therewith, said web carrier being located at the back of the cutter blade, and means for retarding and advancing the web carrier.

4. A rotary cutter and a rotary web carrier driven thereby located at the back of the cutter blade, the driving connection between the cutter and web carrier being such that the movement of the web carrier is retarded and accelerated during one revolution of the cutter.

5. A rotary cutter and a rotary web carrier mounted eccentrically to the axis of the cutter whereby the circular path of the web carrier extends beyond the circular path of the cutter during part of the revolution of the cutter.

[Claims 6 to 21 not printed in the Gazette.]

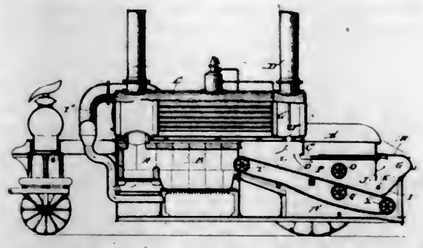
872,465. HEADER AND THRESHER. PAWEL SIKORA, Pustkow, Austria-Hungary. Filed Mar. 25, 1901. Serial No. 52,787.



1. The improved header comprising a number of section cutters 33 for stripping off the heads and cutters 34 for cutting off the stalks in each section, means for actuating said cutters, jagged reels for bringing the heads to the cutters, an endless band leading from said head cutters, a windlass and connections between the latter and these several sections, whereby said sections may be raised independently, and supporting rollers under the cutters 34, substantially as set forth.

2. In a header, the combination of sectional cutter bars arranged end to end each in an independent hinged frame, a reel overhanging each cutter bar, means for lifting the cutter bars independently of each other, and a conveying apron leading from each cutter bar.

872,466. GARBAGE-CREMATORY. ISAAC D. SMEAD, Cincinnati, Ohio. Filed Jan. 5, 1906. Serial No. 294,741.



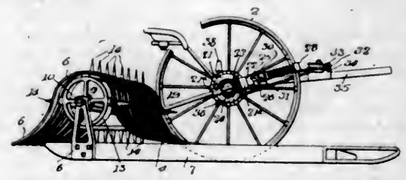
1. In a crematory, the combination of a retort; a hopper for the reception of garbage or the like; a conveyer extending from the hopper and discharging into the retort, said conveyer comprising two endless chains and a series of cross-bars connected to said chains; a fluted crushing-roll located above said conveyer; a second crushing-roll situated below said conveyer, the lower roll being provided with a series of teeth extending lengthwise thereof and likewise having a flat surface at each end upon which the chains may rest; and means for driving said conveyer.

2. In a crematory, the combination of a retort; a hopper for the reception of garbage or the like; a conveyer comprising a pair of chains with a series of cross-bars connected at their ends to said chains; a driving roll for said conveyer, said roll having a series of teeth extending longitudinally thereof and arranged to pass inwardly between the cross-bars; a fluted crushing-roll located above the conveyer; a second crushing-roll situated below the upper stretch of the conveyer, said second crushing-roll being provided with a series of teeth which extend throughout the length thereof and with a flat surface at each end upon which the chains of the conveyer may rest; and driving connections between said crushing-rolls.

3. In a crematory, the combination of a retort; a hopper for the reception of garbage or the like; a conveyer extending from said hopper and discharging into the retort, said conveyer comprising a series of separated bars extending crosswise thereof; a pair of crushing-rolls acting in conjunction with said conveyer; and a third roll located at a point adjacent to the retort and serving to force the material from beneath the cross-bars of the conveyer and to thereby discharge it into the retort, substantially as described.

4. In a crematory or the like, the combination of a retort; a boiler located above the same; a chamber situated at a point in rear of the retort; a hopper for the reception of garbage located at the outer end of said chamber; means contained within said chamber for crushing the garbage and delivering the same to the retort; and a flue or opening extending from the upper portion of the chamber, said flue opening into the stack of the boiler, substantially as and for the purpose described.

872,467. SIDE-DELIVERY BUNCHER. AMOS SMITH, Vienna Cross Roads, Ohio. Filed Apr. 6, 1907. Serial No. 366,707.



1. In a machine of the character described, the combination, with a frame, the ground wheels and the cutter bar, of a platform extending rearwardly from said cutter bar and adapted to receive the crop therefrom, a rotatable member mounted beneath said platform and adapted to engage said crop, and means for controlling the rotation of said member.

2. In a machine of the character described, the combination, with the frame, the ground wheels, and the cutter bar, of a slotted platform extending rearwardly from the cutter bar, a drum rotatably mounted beneath said platform, projections carried by said drum and adapted to extend through said slots, and means for rotating said drum.

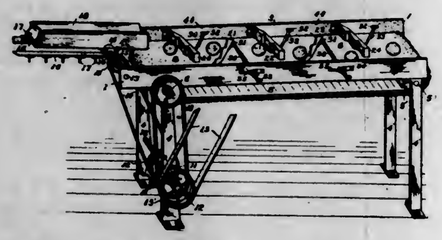
3. In a machine of the character described, the combination, with the frame, the ground wheels, and the cutter bar, of a slotted platform extending rearwardly from the cutter bar, a tapered drum rotatably mounted beneath said platform, projections carried by said drum and adapted to extend through said slots, and means for rotating said drum.

4. In a machine of the character described, the combination, with the frame, the ground wheels, and the cutter bar, of a slotted platform extending rearwardly from said cutter bar and having an upwardly curved portion, a drum rotatably mounted beneath said upwardly curved portion, projections on said drum adapted to extend through the slots in said platform, and means for rotating said drum.

5. In a machine of the character described, the combination, with the frame, the ground wheels, and the cutter bar, of a slotted platform extending rearwardly from said cutter-bar and having a horizontally curved portion and an upwardly curved portion, a drum rotatably mounted beneath said upwardly curved portion, projections on said drum adapted to extend through the slots in said platform, and means for rotating said drum.

[Claims 6 to 14 not printed in the Gazette.]

872,468. MACHINE FOR BRUSHING AND REVOLVING ORANGES AND OTHER FRUITS. WILLIAM D. SMITH, Fullerton, Cal. Filed Oct. 23, 1906. Serial No. 340,205.



1. A combined feeding and brushing apparatus, comprising a feeding-belt having separating-blocks secured thereto, means for operating the feed-belt, in combination with a brush-lined trough and supports therefor, an endless carrier-belt having brushes secured thereto, means for operating the carrier-belt, a series of brushes arranged at angles to the feed-trough provided with steps or notches upon the faces thereof and means secured to the brushes and to the trough for supporting the angle-arranged brushes at different angles to the sides of the trough.

2. A fruit cleaning apparatus for separately feeding and singly brushing oranges and other fruits, comprising a feed-belt, carrying separating-blocks thereon in combination with a trough having brushes secured at an angle to the inner faces of the sides of the trough, a carrier-belt provided with brushes, means for operating the carrier-belt, a series of angle-arranged brushes, movably secured to the inner faces of the sides of the trough, and means secured to the brushes and to the trough for retaining the angle-arranged brushes at different angles to the sides of the trough.

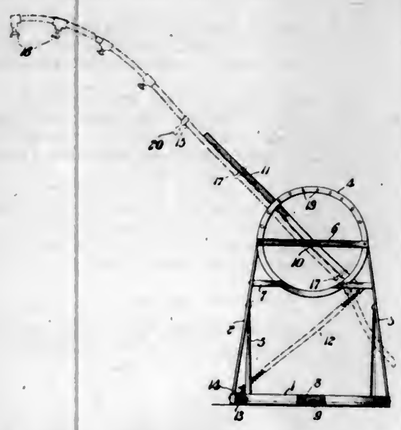
3. A combined separately feeding brushing apparatus, comprising a feeding-belt provided with separating-blocks, a brush-lined trough and supports therefor, a brush-covered carrier-belt adapted to travel within the trough, means for operating the feeding-belt and the brush-covered carrier-belt, a series of brushes hinged to the sides of the trough, having steps or notches upon the brushing faces thereof and means secured to the brushes and sides of the trough for retaining the brushes at different angles to the inner faces of the sides of the trough.

4. A brushing trough for fruits, lined upon the inner faces of the sides thereof with brushes, a series of angle-arranged brushes, hinged to the inner surfaces of the sides of the trough having steps or notches upon the brushing faces thereof, rack-braces hinged to the brushes adapted to engage stops upon the sides of the trough, to retain the said angle-arranged brushes at different angles to the inner faces of the trough.

5. A brush-lined trough, having a series of slots in the sides thereof, a series of angle-arranged brushes swiveled to the inner faces of the sides of the trough at different angles thereto, rack-braces movably secured to the brushes at one end and the opposite end extending through the said slots in the sides of the trough, stops secured upon the sides of the trough, and springs fastened to the trough adapted to force the teeth of the rack-braces against the stops to hold the angle-arranged brushes at different angles to the sides of the trough.

[Claim 6 not printed in the Gazette.]

872,469. SUPPORTER FOR SPRAYING-TOWERS. DAVID SNELL, Gasport, N. Y. Filed Feb. 28, 1907. Serial No. 359,780.



1. A supporter for a spraying tower comprising a circular frame arranged vertically and having a peripheral series of perforations, a bar pivoted to the center or axis of the frame, stops adapted to said perforations and in the path of the bar or tower support, and a spring tending to hold the bar against a stop in its path.

2. A supporter for a spraying tower comprising a horizontal circular frame, a bar diametrically across the same, a pivot in said bar in the axis of the circular frame, standards rising from diametrically opposite points of said frame, a vertical ring mounted on the upper ends of said standards, a rod for carrying the tower pivoted in the axis of said vertical frame for movement through a vertical arc, a spring connected to the lower end of said bar and to a fixed point on the supporting frame, and a stop pin adapted to any one of a series of perforations in the vertical frame and arranged to be locked in the path of the tower-carrying bar.

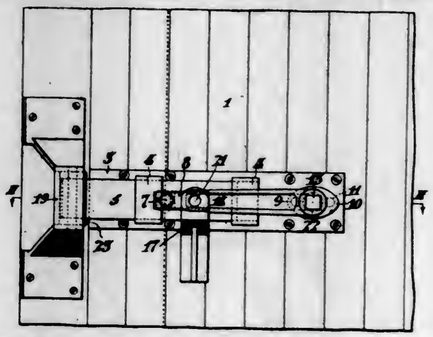
3. A supporter for a spraying tower comprising a horizontal frame movable about a vertical axis, a vertical frame supported thereby and movable therewith, a tower-carrying bar supported at the axis of said vertical frame to move through a vertical arc, a stop adapted to any one of a number of perforations in said vertical frame and in the path of the tower-carrying bar, a spring secured to the tower-carrying bar at the end opposite that carrying the tower nozzles, and a clip adjustably secured to a fixed portion of the lower part of the frame and connected to the end of the spring remote from that secured to the tower-carrying bar.

872,470. DOOR-FASTENER. SAMUEL P. STEVENSON, Chester, Pa. Filed Apr. 12, 1905. Serial No. 255,106.

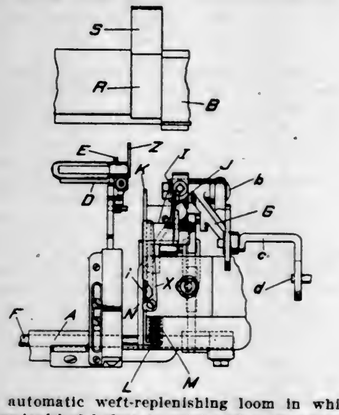
1. The combination of a bolt in a direction transversely of its length, means for shifting the same, and a hasp having a roller whose engaging surface is inside the plane of movement of the bolt, whereby when the bolt is protruded, its front end is sprung towards the doorway.

2. The combination of a bolt in a direction transversely of its length; a link; a rotatable plate having studs, one of which is connected with said link and the other of which is adapted to engage with the surface of said link in one extreme position; a spindle for actuating said plate; a handle for said spindle; and a hasp having a roller adapted to engage the front end of said bolt.

3. In a securing device for doors of refrigerating apartments, the combination with a door; of a sliding bolt mounted upon the inner face of said door; an actuating spindle for said bolt, which spindle passes entirely through the door; an elongated greased packing of absorbent material surrounding said spindle; and a sleeve surrounding said packing.



872,471. THREAD-CUTTER FOR WEFT-REPLENISHING LOOMS. EDWARD S. STIMPSON, Hopedale, Mass., assignor to Draper Company, Portland, Me., and Hopedale, Mass., a Corporation of Maine. Filed June 28, 1906. Serial No. 323,803.



1. An automatic weft-replenishing loom in which the weft is replenished before complete exhaustion having, in combination, a spent weft-cutter mounted on a stationary part of the loom in front of the lay, said cutter having a movable blade which is actuated regularly during the running of the loom, and means for bringing a weft thread extending from the adjacent selvage to the adjacent shuttle-box within reach of the said cutter, said means being brought into action when the weft-replenishing mechanism is brought into action.

2. An automatic weft-replenishing loom in which the weft is replenished before complete exhaustion having, in combination, a spent weft-cutter mounted on a stationary part of the loom in front of the lay and between the shuttle box at the replenishing side of the loom and the adjacent temple, said cutter having a movable blade which is actuated regularly during the running of the loom, and means for bringing a weft thread extending from the adjacent selvage to the adjacent shuttle-box within reach of the spent weft-cutter.

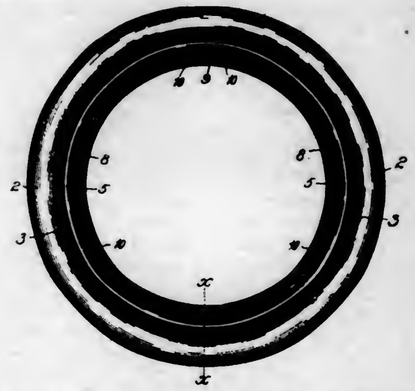
3. An automatic weft-replenishing loom in which the weft is replenished before complete exhaustion having, in combination, a spent weft-cutter mounted on a stationary part of the loom in front of the lay and adapted to cut the spent weft close to the plane of the point of the shuttle when occupying the shuttle-box at the change end of the lay, and means for bringing a welt thread extending from the adjacent selvage to the adjacent shuttle-box within reach of said cutter, said means being brought into action when the weft-replenishing mechanism is brought into action.

4. An automatic weft-replenishing loom in which the weft is replenished before complete exhaustion having, in combination a spent weft-cutter mounted on a stationary part of the loom in front of the lay and adapted to cut the spent weft close to the plane of the point of the shuttle when occupying the shuttle box at the change end of the lay, and means located between said cutter and the adjacent selvage for bringing a weft thread extending from the adjacent selvage to the adjacent shuttle-box within reach of said cutter.

5. An automatic weft-replenishing loom in which the weft is replenished before complete exhaustion, having, in combination, a cutter for the fresh weft, and a second cutter for the spent-weft mounted on a stationary part of the loom in front of the lay, and means for bringing a weft thread extending from the adjacent selvage to the adjacent shuttle-box within reach of said second cutter.

[Claims 6 to 8 not printed in the Gazette.]

872,472. FASTENING FOR RESILIENT TIRES. OTTO G. STOLZ, Chicago, Ill. Filed Sept. 10, 1906. Serial No. 333,918.



1. A resilient tire attachment comprising a main plate metal ring having a concave peripheral portion, marginal beads at the sides of said peripheral portion, and a laterally and inwardly extending attaching web, said peripheral portion, marginal beads and attaching web being integrally formed, a supplementary plate metal ring having a laterally and inwardly curved form and its outer edge tucked into the recess between the adjacent bead and the main ring for retention, and bolts passing through the parts and through the wheel rim to secure the parts together, substantially as set forth.

2. A resilient tire attachment comprising a main plate metal ring having a concavo-convex peripheral portion, marginal beads at the sides of said peripheral portion and a laterally and inwardly extending attaching web, said peripheral portion, marginal beads and attaching web being integrally formed, a supplementary plate metal ring having a laterally and inwardly curved form and its outer edge tucked into the recess between the adjacent bead and the main ring for retention and bolts passing through the parts and through the wheel rim to secure the parts together, substantially as set forth.

3. A resilient tire attachment comprising a main plate metal ring having a concave peripheral portion, hollow marginal beads at the sides of said peripheral portion and a laterally and inwardly extending attaching web, said peripheral portion, marginal beads and attaching web being integrally formed, stiffening rings fitting the interior of said hollow marginal beads, a supplementary plate

metal ring having a laterally and inwardly curved form and its outer edge tucked into the recess between the adjacent bead and the main ring for retention, and bolts passing through the parts and through the wheel rim to secure through the parts and through the wheel rim to secure the parts together, substantially as set forth.

4. A resilient tire atachment comprising a main plate metal ring having a concave peripheral portion, marginal beads at the sides of said peripheral portion, and a laterally and inwardly extending attaching web, said peripheral portion, marginal beads and attaching web being integrally formed, a split supplementary plate metal ring having a laterally and inwardly curved form, and bolts passing through the parts and through the wheel rim to secure the parts together, substantially as set forth.

5. A resilient tire attachment comprising a main plate metal ring having a concavo-convex peripheral portion, marginal beads at the sides of said peripheral portion and a laterally and inwardly extending attaching web, said peripheral portion, marginal beads and attaching web being integrally formed, a split supplementary plate metal ring having a laterally and inwardly curved form, and bolts passing through the parts and through the wheel rim to secure the parts together, substantially as set forth.

[Claim 6 not printed in the Gazette.]

872,473. RAILROAD-FROG. JAMES B. STRONG, Hillburn, N. Y., assignor to Ramapo Iron Works, Hillburn, N. Y., a Corporation of New York. Filed Mar. 18, 1907. Serial No. 362,828.



1. In a railroad frog the combination with the wing rails and the main rails, of a frog block provided with a point portion, a chock portion and a heel portion, said chock portion being inclosed between the heads and bases of the main rails.

2. In a railroad frog the combination with the wing rails and the main rails, of a frog block, provided with a point portion, a chock portion and a heel portion, said point and heel portions being arched in section and supported solely by the bases of the wing rails and the main rails respectively.

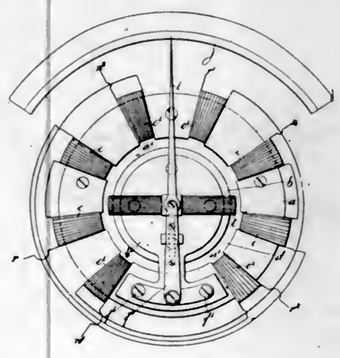
3. In a railroad frog the combination with the wing rails and the main rails, of a frog block comprising a point portion, a chock portion and a heel portion, said point and heel portions being provided with lateral flanges engaging between the heads and bases of the wing rails and the main rails respectively, and the chock portion being inclosed between the heads and bases of the main rails.

4. In a railroad frog the combination with the wing rails and the main rails, of a frog block arranged between the wing rails and the main rails resting upon and supported its entire length by the bases of said wing rails and main rails respectively, and filler blocks arranged between the wing rails and the main rails at or near the ends of the wing rails and away from the joint between the main rails and the frog block to wedge the ends of the main rails together and against the frog block, substantially as described.

5. In a railroad frog, the combination with the wing rails and the main rails, of a frog block comprising a point portion, a chock portion and a heel portion, said point portion being arched in section and provided with lateral flanges extending the length of said point portion and engaging with and seating upon the bases of the wing rails, and said heel portion being arched in section and having lateral flanges engaging with and seating upon the bases of the main rails.

[Claims 6 to 9 not printed in the Gazette.]

872,474. ELECTRICAL MEASURING INSTRUMENT. WILLIAM E. SUMPNER, Birmingham, England. Filed Oct. 19, 1905. Serial No. 283,445.



1. An instrument for indicating electrical phase relations comprising a stationary multiphase iron cored electromagnet having a narrow air gap, a conductor capable of movement in the said air gap, and means for supplying the conductor with current whose phase relation with the rotary field is in correspondence with the phase relation to be indicated, substantially as set forth.

2. An instrument for indicating electrical phase relations comprising an outer iron core, an inner iron core, a conductor capable of movement in the air gap between the cores, means for producing in such air gap a rotary field whose frequency and phase depend on one of the two quantities whose phase relation is to be indicated, and means for supplying the movable conductor with a current whose frequency and phase depend upon the other of such quantities substantially as set forth.

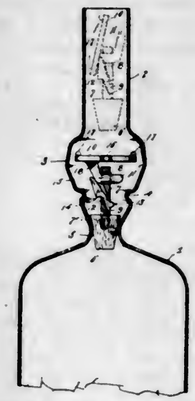
3. An instrument for indicating electrical phase relations comprising a stationary multiphase iron cored electromagnet adapted to produce a rotary magnetic field, a conductor capable of movement in the said rotary field, means for supplying the conductor with current whose phase relation with the rotary field is in correspondence with the phase relation to be indicated, and means for changing by a definite amount the mutual phase relationship of the field and the current in the conductor substantially as set forth.

4. An instrument for indicating electrical phase relations, comprising an outer iron core, an inner iron core, a conductor capable of movement in the air gap between the cores, coils which when appropriately energized produce in such air gap a rotary field whose frequency and phase depend on one of the two quantities whose phase relation is to be indicated, means for supplying the movable conductor with a current whose frequency and phase depend upon the other of such quantities and means for changing by a definite amount the mutual phase relationship of the produced field and the current in the movable conductor substantially as set forth.

5. An instrument for indicating electrical phase relations, comprising an outer iron core, an inner iron core, a conductor capable of movement in the air gap between the cores, coils which when appropriately energized produce in such air gap a rotary field, whose frequency and phase depend on one of the two quantities whose phase relation is to be indicated, means for supplying the coils with currents corresponding in frequency and phase with the currents in the mains of a multiphase system, transformers having their primaries connected respectively across such mains, a non-inductive resistance joined in series with the secondaries of the said transformers and with the movable conductor and a reversing switch substantially as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

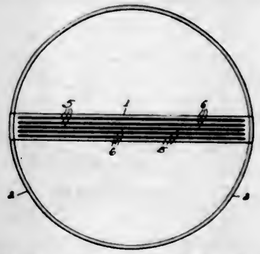
872,475. NON-REFILLABLE BOTTLE. ARTHUR W. SWANBERG, Minneapolis, Minn. Filed Mar. 18, 1907. Serial No. 362,876.



1. The combination with a bottle having a neck, an expanded portion forming a chamber and a valve seat, of a plug valve coöperating with said seat and having a projecting stem, a guard plate within said chamber, supported by said projecting stem, and means for locking said guard plate to said projecting stem, substantially as described.

2. The combination with a bottle having a neck, an expanded portion forming a chamber and a valve seat, of a plug valve coöperating with said valve seat and having a projecting stem formed with seats 8 and 9, a guard plate within said chamber and having a depending arm mounted in said seat 8, and a lock wedge mounted in said seat 9 and engageable with the arm to lock the same in said seat 8, substantially as described.

872,476. DRUM-SNARE. HENRY THEOPHEL, Detroit, Mich. Filed July 31, 1907. Serial No. 386,380.



1. Drum snares comprising a plurality of strands united integrally at each end in parallel spaced relation and tapered from their centers toward their ends.

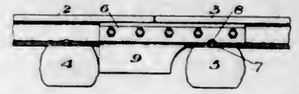
2. Drum snares whose upper faces are rectilinear when they are drawn taut, and whose undersides slope gradually from the centers to the ends toward the upper face.

3. Drum snares comprising a plurality of strands united integrally at each end in parallel relation, whose upper faces are rectilinear when they are drawn taut, and whose under sides slope gradually from the centers to the ends toward the upper face.

4. Drum snares comprising a strip of suitable material adapted to be drawn taut across a drum head, having a straight upper face and decreasing in thickness from the center toward each end, divided between its ends for the major portion of its length into parallel strands.

5. Drum snares comprising a strip of suitable material having a straight upper face and decreasing in thickness from the center toward each end, divided between its ends for the major portion of its length by parallel longitudinal slots into parallel spaced strands of equal size independently vibratory in planes transverse to the plane of the strip when the latter is taut.

872,477. RAIL-JOINT. WILLIAM P. THOMSON, Philadelphia, Pa. Filed Feb. 6, 1907. Serial No. 356,025.



1. A splice bar having a portion to extend below the base of the rail, and designed to fit on one side of two adjoining rails and having each half of its length unsymmetrical with reference to a vertical plane equidistant from the ends of the bar and at right angles to the bar; substantially as described.

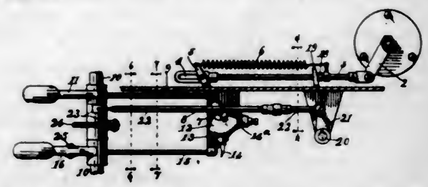
2. A splice bar having a portion to extend below the base of the rail, and designed to fit on one side of two adjoining rails and having its end portions unsymmetrical with reference to a vertical plane through a point opposite the adjoining ends of the rails and at right angles to the bar; substantially as described.

3. A rail joint having two splice bars of similar form, applied to opposite sides of the rail in a reverse position, the two arms or end portions of each bar being of unequal lengths; substantially as described.

4. A rail joint having each of its two splice bars unsymmetrical with reference to a vertical plane through a point opposite the meeting ends of the rails and applied to the opposite sides of the rails with their longer ends extending in opposite directions; substantially as described.

5. A rail joint having each of its two splice bars similar in form and unsymmetrical with reference to a vertical plane through a point opposite the meeting ends of the rails, and applied to the opposite sides of the rails so that the similar ends extend in opposite directions; substantially as described.

872,478. THROTTLE-CONTROLLER. OTTO THUM, Grand Rapids, Mich. Filed May 14, 1906. Serial No. 316,700.



1. In an automobile, in combination with a throttle, a manually operated lever to partially open the throttle, means for adjusting and holding said lever, pedal operative means for wholly opening the throttle, separate means for holding the throttle in said opened position, and means for releasing the last named holding means, connected to the brake mechanism and automatically operated thereby.

2. In an automobile in combination with an engine throttle, a rod to open the throttle, two independently movable levers, each rigidly engaging the rod, in one direction only to open the valve, a spring connected to the rod and yieldingly closing the valve, means for manually adjusting one of the levers, and means for pedal adjustment of the other lever.

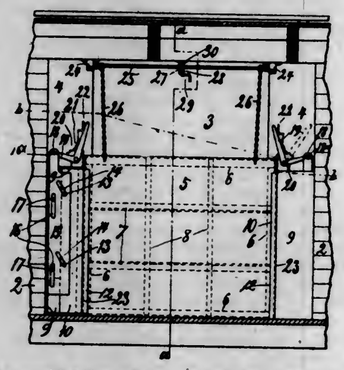
3. In an automobile the combination of an engine throttle, a rod to open the throttle, a spring to close the throttle, a manually adjusted lever, a pin on the rod engaged by the lever to open the valve and movable away from the lever, a second lever, means for independently adjusting said second lever, and a link on the rod having a rigid engagement with said lever, at one end and freely movable relative to said lever.

4. In an automobile, in combination with an engine throttle, a rod to open the throttle, a spring to move the rod in one direction, two separately adjustable levers, each rigidly engaging the rod in opposition to the spring, means for manually adjusting one of said levers, means for pedal adjustment of the other lever, a pawl and ratchet to hold said last named lever, and a rod connected to the brake mechanism and operated thereby to release the pawl.

5. In an automobile, the combination of an engine throttle, pedal operated means for controlling the throttle, a manually operated lever, means for connecting said lever to the throttle to partially open the same independently of the pedal operated means, a ratchet and pawl to hold said lever, and a second manually operated lever to release the pawl.

[Claims 6 and 7 not printed in the Gazette.]

872,479. GRAIN-DOOR. ROBERT R. TICHENOR, Feeley, Minn. Filed May 11, 1907. Serial No. 373,193.

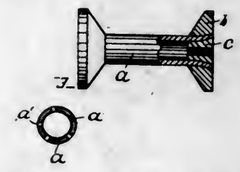


1. The combination with a freight-car, of hollow casings provided upon each side of the door-opening and having the forwardly projected faces or flanges 12; horizontally movable plates guided to move one in each casing and having each a beveled front edge forming together with the face 12 of the casing a V-shaped groove for the edge of the car door, and means for moving and holding the plates in various positions.

2. The combination with a freight car, of hollow casings provided upon each side of the door-opening and having the forwardly projected faces or flanges 12, horizontally movable plates guided to move one in each casing and having each a beveled front edge forming together with the face 12 of the casing a V-shaped groove for the edge of the car-door, and means for moving and holding the plates in various positions, said means consisting of studs in the plates, upright slides guided to slide vertically in the casings and having diagonal slots engaging the studs, and an extension projected above the casing, an L-shaped lever pivotally mounted upon the casing and having one arm pivotally connected to the extension of the slide, and means for holding the lever in various positions.

3. The combination with a freight car, of hollow casings provided upon each side of the door-opening and having the forwardly projected faces or flanges 12, horizontally movable plates guided to move one in each casing and having each a beveled front edge forming together with the face 12 of the casing a V-shaped groove for the edge of the car door, and means for moving and holding the plates in various positions, said means consisting of studs in the plates upright slides guided to slide vertically in the casings and having diagonal slots engaging the studs, and an extension projected above the casing, an L-shaped lever pivotally mounted upon the casing and having one arm pivotally connected to the extension of the slide, and means for holding the lever in various positions, the latter means consisting of a toothed sector upon the casing, a catch carried by the lever and adapted to engage the toothed sector, and a finger-operated latch on the lever controlling the catch.

872,480. SPOOL. MARSHALL TILDEN, Willimantic, Conn. Filed Mar. 2, 1906. Serial No. 303,816.



1. A spool body comprising a strip of paper coiled a number of times upon itself and having slits in the ends of each coil which register with slits in the ends of the other coils of said body.

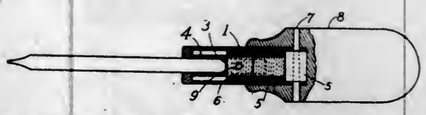
2. In a spool, a body portion comprising a strip of paper coiled a number of times upon itself and having slits in the ends of each coil which register with slits in the ends of the other coils in combination with heads secured to the slitted body.

3. In a spool, a body portion comprising a strip of paper coiled a number of times upon itself and having slits in the ends of each coil which register with slits in the ends of the other coils in combination with heads secured to the slitted ends, and means consisting of a tapered bushing for securing the said body in said heads all being substantially as specified.

4. In a spool, a body portion comprising a strip of paper coiled a number of times upon itself and having slits in the ends of each coil which register with slits in the ends of the other coils in combination with heads secured to said slitted body, and means for covering the otherwise exposed slitted ends of the body.

5. In a spool, a body portion comprising a strip of paper coiled a number of times upon itself and having slits in the ends of each coil which register with slits in the ends of the other coils in combination with a head secured to said slitted portion, a bushing in said body, and means for covering the otherwise exposed slitted ends of the body consisting of disks inserted in the said heads.

872,481. POWER-TRANSMISSION CLUTCH. CHARLES C. TILLOTSON, Olathe, Kans. Filed May 29, 1907. Serial No. 376,294.

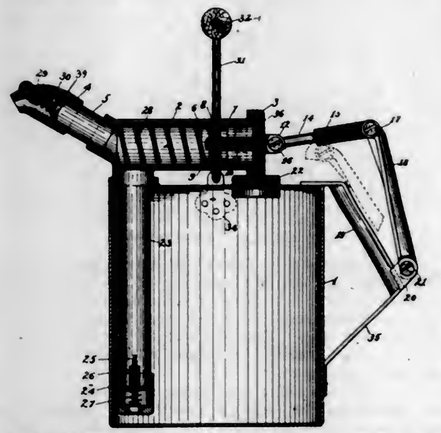


1. In a coil spring clutch, comprising rotary members and a voluted spring member embracing the aforesaid members and engaging the same frictionally only, a hollow cylindrical shield fitting over said rotary members in such manner as to be retained in position coaxial with them, and in conjunction with other parts completely surrounding and inclosing the aforesaid voluted spring member.

2. A coil spring clutch comprising a rotary driven member, and two rotary driving members, a voluted spring member embracing the aforesaid members, and engaging the same frictionally only, said spring member extending over the driven member and one of the driving members, and a shifting device consisting of a hollow cylinder having its ends flanged inward to fit over the said rotary members, and with inwardly projecting teeth formed thereon in such manner as to release the spring member and shift it longitudinally to any desired position on the driving and driven members.

3. A clutch comprising a trinity of alined rotary members, a volnted spring member embracing the aforesaid members and of such length as to extend along the entire length of but two of the same, a hollow cylinder inclosing the voluted spring member, and one or more members rigidly connecting the two driving members, and preventing the rotary movement of either with respect to the other, all substantially as shown and described herein.

872,482. GRADUATED MEASURING-CAN. CHARLES P. TOLMAN, New York, N. Y., assignor of one-half to Edward S. Taylor, New York, N. Y. Filed Jan. 19, 1906. Serial No. 296,780.



1. A measuring can comprising a reservoir, and a manually operative pump mechanism consisting of a cylinder, a piston, a suction valve, a discharge valve, a movable handle pivoted on the reservoir and connected to the piston, means for limiting the stroke of the piston in either direction, and a spring opposing the piston to restore the piston to its initial position when the displacing force has been relieved.

2. A measuring can comprising a portable reservoir, a pump consisting of a cylinder, a piston connected to a movable handle pivoted on the reservoir, a suction cavity having a suction valve therein, a discharge cavity having a discharge valve therein, and means for limiting the stroke of the piston in either or both directions.

3. In a measuring can the combination of a reservoir having means for carrying the same, a pump mechanism secured to the reservoir, a handle rigidly attached to the reservoir, a supplementary handle movably mounted on said rigid handle and connected by suitable devices to the piston of the pump mechanism, and means for limiting the stroke of said piston in either direction.

4. In a measuring can the combination with a reservoir and a pump mechanism secured to the reservoir having the piston adjustably operative from a movable handle pivoted on the reservoir, of a discharge outlet comprising an inclosing case, a valve seat in the outer end thereof, a valve, means for directing the motion of said valve, and a spring normally maintaining the valve on said seat, said spring being of sufficient strength to maintain said valve on said seat against the force of gravity when the apparatus is inverted.

5. In a measuring can the combination of a reservoir, a pump mechanism consisting of a cylinder attached to the reservoir, a piston in said cylinder actuated in one direction by manual force on a handle which is pivoted on a handle fixed to the reservoir and in the other direction by a spring, means for adjusting the length of stroke of said piston in either direction, a suction cavity in the reservoir in communication with the cylinder and having a suction valve therein and a discharge cavity in communication with the suction cavity and with the cylinder and having a discharge valve in the outer end thereof.

[Claims 6 and 7 not printed in the Gazette.]

872,483. COMPOSITION OF METAL. ROBERT C. TORTEN, Pittsburg, Pa. Filed Dec. 22, 1906. Serial No. 349,169.

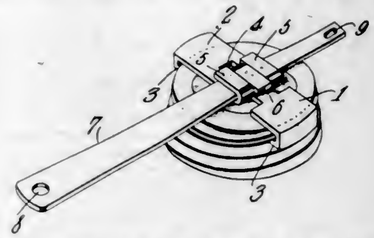
1. A new composition of chilling cast iron, consisting of coke or coal iron and a chromium compound containing combined iron and carbon.

2. A new composition of chilling cast iron, consisting of coke or coal iron and ferro-chrome.

3. A new composition of chilling cast iron, consisting of coke or coal iron and a chromium compound containing combined iron and carbon, the composition containing at least one-fourth (¼) of one (1) per cent. of combined carbon.

4. A new composition of chilling cast iron, consisting of coke or coal and ferro chrome containing at least one fourth (¼) of one (1) per cent. of combined carbon.

872,484. SPANNER-WRENCH. WILLIAM W. VOGEL, Chicago, Ohio. Filed Aug. 21, 1907. Serial No. 389,523.



A wrench comprising jaws adapted to move longitudinally with relation to each other, one of the jaws having at its inner end a bifurcation with loops located at the opposite sides thereof, the other jaw having a loop at its inner end which lies within the bifurcation of the first said jaw, and a handle bar located slidably in said loops.

872,485. EXTRACTOR FOR BOTTLE-CORKS. ANDREW P. WATT, Baltimore, Md. Filed Jan. 7, 1907. Serial No. 351,192.



1. A stopper having a slit extending thereinto from its periphery adjacent one end to form a tongue, said slit being disposed in a plane extending transversely of the stopper and at an angle to one end thereof.

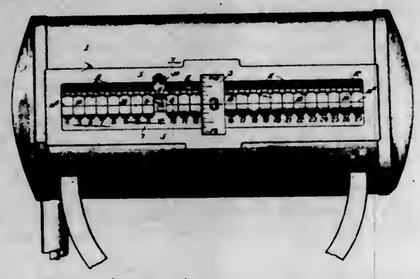
2. A stopper having a slit extending thereinto from the periphery thereof adjacent one end, said slit being disposed in a plane extending transversely through the stopper and at an angle to the end thereof to form a tongue gradually diminishing in thickness toward its end.

3. A stopper having a slit extending thereinto from the periphery thereof adjacent one end, said slit being disposed in a plane extending transversely through the stopper and at an angle to the end thereof to form a tongue gradually diminishing in thickness toward its ends, and a tape seated within the slit and having its end portions wrapped about the stopper.

872,486. SCALE. FRANK F. WEAR, San Francisco, Cal., assignor to Toledo Computing Scale Company, Toledo, Ohio, a Corporation of New Jersey. Filed Aug. 1, 1905. Serial No. 272,180.

1. The combination with a chart of computations and a price scale relatively movable, of a series of shutters ad-

jacent the price scale and fixedly located with relation thereto, there being a shutter for each division thereof, said shutters when closed concealing the chart but leaving the price scale exposed and each shutter being independently movable to expose a division of the chart representing multiples of the associated price unit of the scale.



2. The combination with a chart of computations and a price scale relatively movable, of a series of shutters adjacent the price scale and fixedly located with relation thereto, there being a shutter for each division thereof, said shutters when closed concealing the chart but leaving the price scale exposed and each shutter being independently movable to expose a division of the chart representing multiples of the associated price unit of the scale and having a reading line to guide the eye when the shutter is closed and an adjacent one open.

3. In a scale, the combination, with a housing having a sight opening or slot, a computing chart mounted in the housing and having different series or columns of figures representing values at different prices per pound, of a series of shutters hinged upon the housing at one side of the sight opening, said shutters being independently movable to obscure or expose any desired column of figures, each shutter having on its back a line indicating the correct point at which to take the reading; substantially as described.

4. In a scale, the combination, with a computing chart having different series or columns of figures representing values at different prices per pound, of a series of shutters corresponding in number to the different columns and adapted to stand open at an angle to the chart, each of said shuters having a reflecting surface on its inner face for casting light upon the chart; substantially as described.

5. In a scale, the combination, with a computing chart having different series or columns of figures representing values at different prices per pound, of a series of shutters corresponding in number to the different columns, each of said shutters being curved and having a reflecting side on its inner surface for casting light upon the chart; substantially as described.

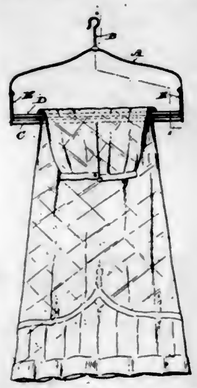
872,487. CAPO-TASTO BAR FOR PIANOS. PETER WEBER, New York, N. Y., assignor to Sohmer & Co., New York, N. Y., a Firm. Filed May 24, 1907. Serial No. 375,394.



1. In a piano, a string plate having a pair of bridges, combined with strings supported thereon, a capo-tasto bar having a pair of flanges resting on the strings, and means for regulating the pressure of the bar against said strings, substantially as specified.

2. In a piano, a capo-tasto bar having a pair of flanges, one of which is stepped, combined with a string engaged by such flanges, said string having a freely vibratile portion intermediate the flanges, substantially as specified.

872,488. GARMENT-HOLDER. GEORGE H. WHEARY, Racine, Wis., assignor to The Hartmann Trunk Company, Racine, Wis. Filed Aug. 24, 1906. Serial No. 331,847.



1. A garment-holder comprising a bail bent to form a coat-hanger and having a cross-bar secured to its end, depending swinging arms pivoted to the bail above the cross-bar, and a clamping-rod in rigid connection with the depending arm ends immediately above the said cross-bar, whereby a gripping-jaw is formed in connection with the aforesaid cross-bar.

2. A garment-holder comprising a bail having a cross-bar connecting its ends, a clamping-rod located immediately above the first named bar in swinging connection with the bail, the said clamping-rod being adapted to act in conjunction with the cross-bar as a gripping member.

3. A garment-holder comprising a bail having a cross-bar connecting its ends, pivotal arms in connection with the bail above the cross-bar, a gripping-rod carried by the arms immediately above the cross-bar, and a stop depending from one of the pivoted arms in the path of said cross-bar.

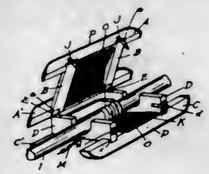
872,489. HIDE-WORKING MACHINE. ARTHUR E. WHITNEY, Winchester, Mass., assignor of one-half to Robert F. Whitney, Winchester, Mass. Filed Feb. 19, 1906. Serial No. 301,861.



In a hide working machine, a bed roll approximately six inches in diameter consisting of a metal shaft of a thickness approximately one half the total diameter of the roll, covered with a thin priming and inner and outer coverings of approximately equal thickness of soft spongy and hard close grained rubber respectively, all vulcanized together; substantially as described.

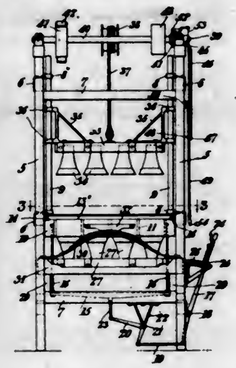
872,490. REVERSIBLE SLIDE AND HOSE-PROTECTOR. JOHN H. WILLIAMSON and WILLIAM C. MOORE, St. Joseph, Mo. Filed Apr. 29, 1907. Serial No. 370,943.

1. In a reversible slide and hose protector duplicate runners provided with shoes, duplicate frame pieces at right angles with and rigidly fastened to said runners and provided with sockets to receive a hose, duplicate runners also provided with shoes and cross pieces thereon hinged to the ends of said frame pieces, screens on each of said duplicate sets of runners between their respective frame and cross pieces, side guards secured to the ends of the frame pieces, fastenings on corresponding ends of the frame and cross pieces to lock the device, staples in the outer sides of said frame pieces and cables to engage therewith, substantially as set forth and shown.



2. In a reversible hose protector a lower part comprising duplicate runners having corresponding ends, duplicate frame pieces thereon at right angles therewith provided with duplicate sockets to receive a hose, an upper part hinged to said lower part and comprising duplicate runners in reverse position to the first named runners, cross pieces at right angles with and connecting the upper runners, and hasps on one of said upper runners and staples in the ends of the frame pieces by which to lock the parts and retain the hose in position, substantially as described and shown.

872,491. BRICK-MACHINE. LEVI D. WOGOMAN, Versailles, Ohio. Filed Oct. 2, 1906. Serial No. 337,118.

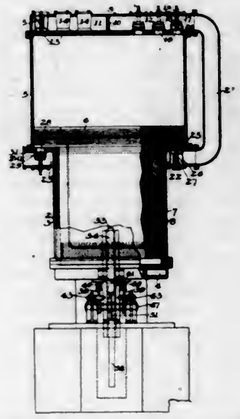


1. In a brick-making machine, a supporting frame, a power-shaft journaled in the frame and provided with a friction pulley, an auxiliary shaft provided with a similar pulley adapted to engage the pulley on the power-shaft, a vertically movable mold-carrying frame, ejecting means disposed in the path of movement of the mold-carrying frame for exposing the bricks when the frame is moved to lowered position, a tamping element, a flexible connection between the auxiliary shaft and tamping element, an eccentric mounted on the auxiliary shaft for moving the pulleys into and out of engagement with each other thereby to raise the tamping element, and means for locking the tamping element in elevated position.

2. In a brick-making machine, a supporting frame, a vertically movable mold-carrying frame, ejecting means disposed in the path of movement of the mold-carrying frame, a tamping element, a power-shaft journaled in the frame and provided with a friction pulley, an auxiliary shaft carrying a similar pulley adapted to engage the pulley on the operating shaft, an eccentric carried by the auxiliary shaft for moving the pulleys into and out of engagement with each other, a lever operatively connected with the eccentric for actuating the latter, and pawl and ratchet mechanism for locking the tamping element in elevated position.

3. In a brick-making machine, a supporting frame, a vertically movable mold-carrying frame, tamping means disposed in the path of movement of the mold-carrying frame for ejecting the bricks when the mold-carrying frame is moved to lowered position, yieldable means for moving the mold-carrying frame to elevated position, a tamping element, a power-shaft provided with a friction pulley, an auxiliary shaft having a similar pulley secured thereto, an eccentric mounted on the auxiliary shaft, a flexible element connecting the tamping element and auxiliary shaft, a hand-operated lever operatively connected with the eccentric for throwing the friction pulleys into and out of engagement with each other, a ratchet-wheel secured to the auxiliary shaft, a pawl adapted to engage the ratchet-wheel, and a flexible connection between the operating lever and the pawl for moving the latter to operative and inoperative position.

872,492. BLOWING-ENGINE. HENRY AIKEN, Pittsburg, Pa. Filed Dec. 1, 1903. Serial No. 183,354.



1. A double-acting blowing engine having one working stroke effected by power and the other working stroke by gravity, substantially as described.

2. A double-acting blowing engine having an upper compressor cylinder and a lower power cylinder forming continuations of one another, the upper compressor cylinder being the larger in diameter, and a piston working in the lower cylinder and having an enlargement working in the upper compressor cylinder, the upstroke being effected by explosion in the lower cylinder, and the return stroke being effected by gravity, substantially as described.

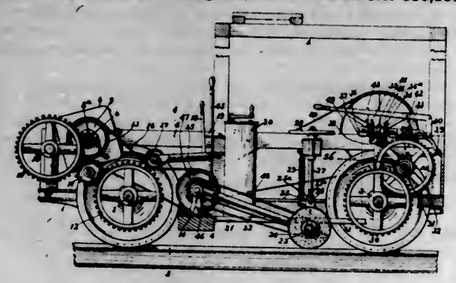
3. A double-acting blowing engine including an upright power cylinder, an enlarged compressor cylinder forming an upright continuation of the power cylinder and having a closed outer end, a weighted piston working in the power cylinder and having an enlargement working in the compressor cylinder, the outstroke of the piston being effected by power and its return stroke by gravitation of the weighted piston, and inlet and outlet valves for each end of the compressor cylinder, whereby the compressor cylinder is double acting, substantially as described.

4. A double-acting blowing engine including a power cylinder, an enlarged compressor cylinder forming a continuation of the power cylinder and provided at each end with valve-controlled inlet and outlet chambers, a passage leading from the outlet chamber at one end of the compressor cylinder to the inlet chamber at the opposite end of the compressor cylinder, and a piston working in the power cylinder and having an enlargement working in the compressor cylinder, substantially as described.

5. A blowing engine including a compressor cylinder having valve-controlled inlet and outlet chambers at each end, and a passage leading from the outlet chamber at one end to the inlet chamber at the other end of the cylinder, whereby the outstroke of the piston is assisted by the initial compression, substantially as described.

[Claims 6 to 25 not printed in the Gazette.]

872,493. TRACK-GRINDER. WARREN W. ANNABLE, Grand Rapids, Mich., assignor to C. Vallette Kasson, Chicago, Ill. Filed Aug. 11, 1906. Serial No. 330,181.



1. In a track grinder, the combination of a truck, abrasive wheels mounted on the truck and adapted to be brought in contact with the track rails, a motor mounted on the truck, and means for simultaneously connecting the motor with the abrasive wheels and one pair of the truck wheels, means for disconnecting the motor from the abrasive wheels and said truck wheels, and means for connecting the motor to the other pair of truck wheels.

2. In a track grinder, the combination of a truck, a motor mounted on the truck, gears connecting the motor and one of the truck axles, a clutch between the gears and the motor, abrasive wheels carried by the truck and adapted to be brought in contact with the track rails, and means for simultaneously connecting or disconnecting the motor with the abrasive wheels and with the other truck axle.

3. In a track grinder, the combination of a truck, a motor mounted on the truck, means for connecting said motor to one of the axles of the truck, a clutch between the motor and said means, abrasive wheels carried by the truck and adapted to be brought in contact with the track rails, means for both vertically and transversely adjusting said abrasive wheels relative to the track rails, and means for simultaneously connecting or disconnecting the abrasive wheels with the motor and with the other truck axle.

4. In a track grinder, the combination of a truck, a motor mounted on the truck, means for connecting the motor to one axle of the truck, vertically swinging arms mounted on the truck, means for both vertically and horizontally adjusting said arms, abrasive wheels mounted on the swinging ends of the arms, and means for driving the abrasive wheels from the motor.

5. In a track grinder, the combination of a truck, abrasive wheels carried by the truck, a motor mounted on the truck, means for driving the abrasive wheels by the motor, means for connecting the motor to the axle of the truck, and means actuated by the motor for slowly moving the machine to and fro over the track when grinding, said means being detachably connected to the motor.

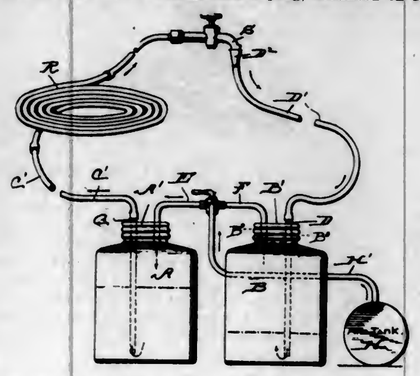
[Claims 6 to 12 not printed in the Gazette.]

872,494. BEER-COIL CLEANER. HARVEY BLACKBURN, Evansville, Ind. Filed Nov. 17, 1905. Serial No. 287,817.

1. In a device of the kind described, the combination with jars adapted to contain cleaning fluid, of tubes carried by said jars adapted to be connected respectively to the ends of a coil, pipes connecting said jars carrying a valve provided with an exhaust and an air tank connected to said valve by a tube said tank adapted to contain compressed air for forcing the liquid out of one jar through the coil to the other jar.

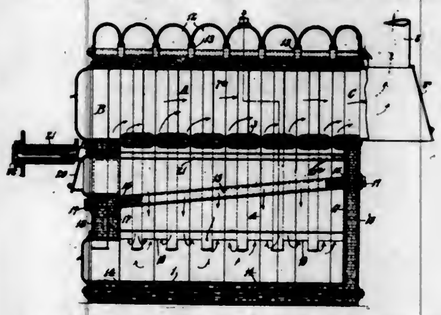
2. In a device of the kind described, the combination with a pair of jars carrying rubber tubes adapted to be connected to the coil, of pipes extending upwardly from said jars, a valve casing connected to said pipes provided with exhaust ports, and an air tank connected to said valve casing, and a plug provided with passage-ways arranged in said valve casing, for the purpose described.

3. In a device of the kind described, the combination with jars provided with rubber tubes, of pipes connected to said jars, a three-way valve casing connected to said pipes provided with exhaust ports, an air tube connected to said valve casing, and a plug, mounted in said



valve casing provided with passage-ways adapted to connect the air tube with the other pipes, for the purpose described.

872,495. SECTIONAL BOILER. ELIJAH M. BOSLEY, St. Louis, Mo. Filed Feb. 9, 1907. Serial No. 356,585.



1. A down-draft sectional boiler having a horizontal flue extending through the upper portion thereof, and vertically-disposed flues leading from the combustion chamber beneath the grate to said horizontal flue; substantially as described.

2. A down-draft sectional boiler provided with a grate, a hollow water crown extending over said grate and downwardly on each side of the combustion chamber beneath the grate, and vertical flues leading from the combustion chamber beneath the grate to horizontal flues which extend longitudinally of the boiler over said water crown; substantially as described.

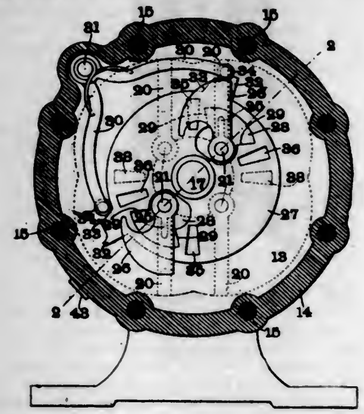
3. A down-draft sectional boiler provided with water legs that are connected by water bases, a grate arranged over said water bases, means for causing the fire to pass downwardly through said grates and play on said water bases, and vertical flues leading from the combustion chamber beneath the grate to horizontal flues that lead to a smoke pipe; substantially as described.

4. A down-draft boiler composed of sections having hollow water legs and hollow water bases connecting said legs, a hollow water crown extending downwardly on each side of the combustion chamber and connected by hollow contracted webs to said water legs so as to produce vertical flues between the sections, depending portions of said crown terminating adjacent the water base to permit the fire to travel from the combustion chamber upwardly through said flues, and a horizontal flue extending over the hollow water crowns and communicating with the vertical flues; substantially as described.

5. A down-draft sectional boiler comprising a grate, a hollow water base arranged beneath the grate and connecting the water legs of the sections, and vertical flues leading from the combustion chamber underneath the grate to a horizontal flue above the grate; substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

872,496. OSCILLATING-PISTON ENGINE. PAUL A. BREDSVOLD, St. Louis, Mo., assignor of one-half to Herbert A. Vrooman, St. Louis, Mo. Filed Mar. 4, 1907. Serial No. 360,589.



1. In a steam engine or the like, the combination with four independently pivoted oscillating pistons arranged in a common piston chamber, of supply and discharge ports for alternately admitting fluid to and from said chamber between opposite pairs of pistons.

2. In a steam engine or the like, the combination with four independently pivoted oscillating pistons arranged in a common piston chamber, of means for alternately admitting motive fluid to and exhausting it from said piston chamber between opposite pairs of pistons, and means for causing said pistons to move with the same angular velocity.

3. In a steam engine or the like, the combination with four independently pivoted oscillating pistons symmetrically arranged around a center, of means for alternately admitting motive fluid between opposite pairs of pistons, a common crank shaft for said pistons, and connections between said pistons and crank shaft.

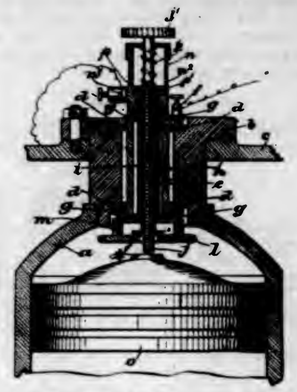
4. In a steam engine or the like, the combination with a plurality of oscillating pistons, of a valve device controlling the admission of motive fluid to and the exhaust thereof from said pistons, means actuated by said pistons for moving said valve device through a part of its travel, and other means for completing the travel of said valve device.

5. In a steam engine or the like, the combination with a plurality of oscillating pistons, of a valve device controlling the admission of motive fluid to and exhaust thereof from said pistons, means actuated by said pistons for moving said valve device through a part of its travel, other means for completing the travel of said valve device, and means for causing said pistons to move with the same angular velocity.

[Claims 6 to 16 not printed in the Gazette.]

872,497. INTERNAL-COMBUSTION ENGINE. ALEXANDER CAMPBELL, Halifax, England. Filed Nov. 13, 1906. Serial No. 343,195.

1. The combination, with a supporting plug, of a contact-plate secured to the said plug, a tube or socket carried by the said plug and insulated from the said contact-plate, a contact-sleeve slidable in the said tube or socket and provided with means for preventing it from revolving, a spring which normally holds the said contact-sleeve and contact-plate in contact, and a longitudinally-adjustable spindle screwthreaded to engage with the said contact-sleeve and projecting past the said contact-plate.



2. The combination, with a supporting plug, of an insulated conductor-tube carried by the said plug, a contact-plate carried by the said conductor-tube and also insulated from the said plug, a tube or socket secured inside the said conductor-tube and insulated from it, a contact-sleeve slidable in the said tube or socket and provided with means for preventing it from revolving, a spring which normally holds the said contact-sleeve and contact-plate in contact, and a longitudinally-adjustable spindle screwthreaded to engage with the said contact-sleeve and projecting past the said contact-plate.

872,498. PIANO-BENCH. ALVA W. CLEVELAND, Waukesha, Wis. Filed Feb. 21, 1907. Serial No. 358,611.



1. In a bench, the top frame comprising two leg-receiving members at each end thereof, and a bottom frame comprising two transverse base-pieces, legs rising from said base-pieces, and a longitudinal brace connecting said base-pieces, said brace being so articulated as to permit angular movement of the base-pieces and legs relatively thereto.

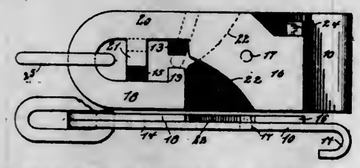
2. In a bench, the top frame comprising two leg-receiving members at each end thereof, a bottom frame comprising the legs, the base pieces, and a longitudinal brace, the legs having telescopic engagement with the leg-receiving members, said longitudinal brace having jointed connections with the two end sections, and locking mechanism for adjustably locking the bottom leg frame to said leg-receiving members.

3. In a bench, the top frame comprising the leg-receiving members, and the bottom frame comprising the transverse base-pieces, the legs rising therefrom, and a longitudinal brace connecting said base-pieces, said brace consisting of two terminal members rigidly secured to said base-pieces, respectively, an intermediate member the ends of which are pivoted to said terminal members in such a manner as to permit oscillation of either of the end members in a vertical plane, and locking mechanism for adjustably locking the bottom leg frame to said leg-receiving members.

4. In a bench, the top frame comprising two pairs of leg-receiving members, a transverse member connecting

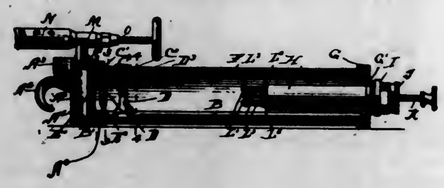
each pair of said leg-receiving members, a lever pivotally mounted upon said transverse member, a pair of spring actuated locking bolts rotatably secured to opposite sides of said lever, a coil spring secured in one end to said lever and at the other end to said transverse member and tending to force said bolts into contact normal locking position, a bottom frame comprising two transverse base-pieces, two pairs of legs rising therefrom and having loose, telescopic engagement with the leg-receiving members, each leg being provided with a series of bolt-holes arranged to receive the ends of the locking bolts.

872,499. HAME AND TRACE CONNECTOR. JOHN M. COOPER, Paskenta, Cal. Filed Aug. 17, 1906. Serial No. 331,012.



In a hame and trace connector, a stationary member comprising a plate having at one end means for fastening the same to a hame, and at the opposite end a hook having its extremity offset toward the shank of the hook, a finger projecting from the shank of the hook within the bill or bend thereof, and with its free end spaced from the hook, and a movable member pivoted to the aforesaid plate, and having a hook oppositely presented to the first mentioned hook, said movable hook having its extremity offset toward its shank, and a finger projecting from said shank within the bill or bend of the hook, and with its outer end spaced from the hook, the shank of one of the hooks coinciding with the other hook when the hooks are closed, and the fingers overlapping to form a cross bar extending across the body of the hooks within the ends or extremities thereof.

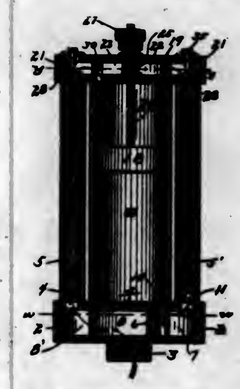
872,500. GASOLENE SOLDERING-TOOL. WILLIAM E. CRANE and CHARLES D. PRATT, Binghamton, N. Y. Filed July 18, 1906. Serial No. 326,761.



1. In a gasolene soldering iron, the combination with a reservoir provided with a tube having an opening formed adjacent one end, of a mixing and combustion chamber communicating with one end of said tube, a weight pivoted in said reservoir over said tube provided with an arm, and a valve stem carried by said arm, for the purpose described.

2. In a gasolene soldering iron, the combination with a reservoir provided with a cap at the rear end carrying a pump, of a cap formed on the forward end and provided with an enlargement having a vertical bore, a tube extending within said reservoir communicating with said bore and provided with an opening adjacent its fixed end, a mixing and combustion chamber connected to said bore and controlled by a needle valve, an oil cup formed on the enlargement of said cap directly under said mixing and combustion chamber forming an auxiliary heater, said oil cup having a downwardly curved hook projecting therefrom a bar secured to the forward cap of the reservoir and having a bifurcated end, a weight pivoted within said reservoir to the bifurcated end of said bar, directly over said tube, and a valve stem having a bifurcated upper end pivoted to an arm of said weight directly over said tube, substantially as described.

872,501. SELF-MEASURING OIL-PUMP. JOHN B. DAVIS, Dayton, Ohio. Filed June 8, 1906. Serial No. 320,787.



In a pump of the type specified, a cylinder, a piston therein, a base joining the cylinder and having a main inlet chamber fed through an axial opening, and an auxiliary inlet chamber above the main inlet chamber, the inlet to the auxiliary chamber from the main chamber being controlled by a valve which is located out of the plane of the cylinder, the said auxiliary inlet chamber communicating with the cylinder below the piston, an exterior cover inserted in the base above the valve which controls the communication between the main and auxiliary inlet chambers and by means of which access is had to said valve, the said base having a third chamber communicating with the cylinder through a valveless port and forming the outlet from the cylinder below the piston, a cylinder head having a main outlet chamber which communicates with both ends of the cylinder, a valve-controlled pipe parallel with the cylinder and through which is established a communication between the third chamber in the base and the outlet chamber in the head, said cylinder head having an inlet chamber to the upper end of the cylinder, and a valve-controlled pipe establishing a communication between the lower end of the cylinder and the inlet chamber in the head, all arranged substantially as specified.

872,502. POULTRY-ROOST. ELFORD F. DOOLITTLE, Torrington, Conn. Filed Mar. 11, 1907. Serial No. 361,695.



1. A device of the character described comprising a body of wood having openings through it, a tube secured to the body and having openings registering with the openings in the body and a wick in the tube adapted to be saturated with an antiseptic chemical.

2. A device of the character described comprising a body of wood curved upon its upper side and having vertical openings, a tube secured to the body on the underside and having openings registering with the openings in the body and a wick in the tube, substantially as described, for the purpose specified.

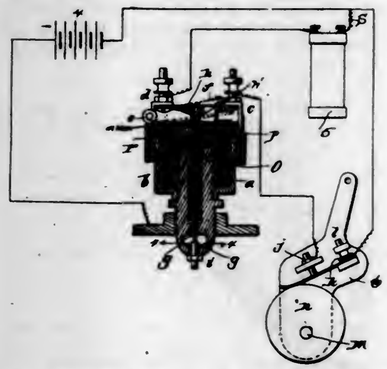
3. A device of the character described comprising a body of wood curved upon its upper side having vertical openings and provided with a groove in its underside, and openings in the under side communicating with the vertical openings, a tube secured in the groove and having openings

registering with the vertical openings in the body and a wick in the tube, substantially as described, for the purpose specified.

4. A device of the character described comprising a body of wood semi-cylindrical upon its upper side and having a groove in its underside and vertical openings communicating with the groove, a tube having openings registering with the openings in the body, a wick in the tube for the purpose specified and screws passing through the body and engaging the tube.

5. A device of the character described comprising a body of wood curved upon its upper side having a groove in its under side and provided with vertical openings communicating with the groove, and openings in the under side communicating with the vertical openings, for the purpose set forth, a tube having openings registering with the vertical openings in the body and secured to the body and a wick in the tube, substantially as described, for the purpose specified.

872,503. MAGNETIC IGNITER. CHARLES E. DURYEA, Reading, Pa. Filed Sept. 14, 1906. Serial No. 334,675.



1. In a magnetic igniter, a circuit breaker mechanism consisting of a reciprocating pin, an electrode carried at one end thereof, an adjustable coacting electrode, an armature contacting said pin intermittently, a spring engaging said armature to move it in one direction, an independent spring of less power mounted on the same support as the first-named spring and acting on said pin, and an insulated binding post.

2. In a magnetic igniter, multiple electric-paths and suitable mechanism embodying a movable part to carry the ignition current, a light spring, a heavy spring arranged to forcibly and elastically close the ignition circuit under the pull of an armature, but normally free, and an armature arranged to impart a strong pull against the heavy spring.

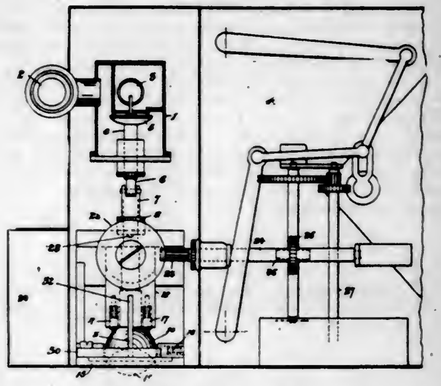
3. In a magnetic igniter, multiple circuit paths, one an insulated path for an igniting current normally broken, and means for closing said path consisting of an electric magnet, a movable part to carry the ignition current, a light spring acting on said part, a heavy spring normally free but arranged to forcibly and elastically close the insulated path when attracted by the magnet coil through the medium of an armature, and an armature arranged to impart a strong pull against the heavy spring.

4. In an igniting device, two electric paths and suitable means embodying a movable part, a light spring acting thereon, a heavy spring normally free but arranged to forcibly and elastically close the circuit under the pull of an armature, and an armature arranged to impart a strong pull against the heavy spring.

5. In an igniting device, a reciprocating circuit breaking rod carrying an electrode and supported by and carried in an insulated bushing or support, a light spring acting on said rod, a heavy spring normally free but arranged to forcibly and elastically close the circuit under the pull of an armature, and an armature arranged to impart a strong pull against the heavy spring.

[Claims 6 to 9 not printed in the Gazette.]

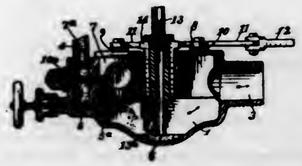
872,504. PREPAYMENT-METER. HARRY GAMWELL and CHARLES GAMWELL, Liverpool, England. Filed Mar. 7, 1904. Serial No. 196,936.



1. In a prepayment gas meter, a revoluble spindle formed with slots to receive a coin as the implement by which such coin receiver is turned, a plate journaling the end of said coin receiver and having an aperture of less diameter than the coin, said aperture having notches in its edge permitting the entry of such coin into the slot in the coin receiver registering therewith, said plate operating to prevent withdrawal of the coin after the coin receiver has been turned, spring detents located on said plate and engaging the slot so registering with such notches and arranged to be displaced therefrom by the coin, and a connection between said coin receiver and the valve controlling the passage of gas through the meter, whereby the rotation of said coin receiver operates to open said valve.

2. In a prepayment gas meter, a revoluble spindle having a concave globular end possessing slots adapted to receive a coin as the implement by which it is turned, a plate journaling the end of said coin receiver and having an aperture of less diameter than the coin, said aperture having notches in its edge for entirely uncovering said slots, a non-return pawl engaging such slots, and a connection between said coin receiver and the valve controlling the passage of gas through the meter, whereby the rotation of said coin receiver operates to open said valve.

872,505. CARBURETER. GEORGE H. GERE, Utica, N. Y. Filed Mar. 30, 1906. Serial No. 308,865.



1. The combination of a case having a depression in the bottom thereof, means for admitting a current of air to the case, means for removing a combustible mixture from the case, a vertically adjustable sleeve in the case, a nozzle in the case, an air tight tank above the case, a pipe connecting the bottom of the tank and the nozzle and having means for longitudinal expansion, a pipe extending from

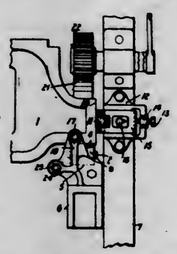
the depression to the upper part of the tank and vertically adjusted relative to the case by means of the sleeve.

2. The combination of a case, an air inlet valve in the case and having openings for air and for gasolene, a gasolene valve outside the air valve, means for supplying gasolene to both of said valves, means for removing a combustible mixture from the case, and means for closing the gasolene opening of the air valve except when the air opening of the same is nearly or quite wide open.

3. The combination of a case, an air inlet valve having a side opening to admit gasolene only when said air valve is nearly or quite open, a nozzle below said valve, means for supplying gasolene to said valve and nozzle, and means for removing a combustible mixture from the case.

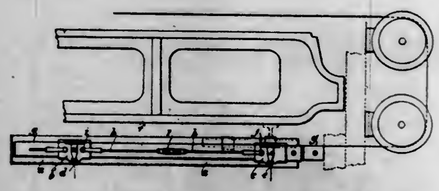
4. The combination of a case, an air valve near one end of the case, and having a side opening to admit gasolene only when said air valve is nearly or quite wide open, a nozzle below said air valve, an air tight tank, a pipe connecting the lower part of the tank with the valve and nozzle, a pipe connecting the lower part of the case and the upper part of the tank, and means for removing a combustible mixture from the case.

872,506. LOOM FOR THE MANUFACTURE OF TUFTED OR PILE FABRICS. THOMAS GREENWOOD, Wolverley, near Kidderminster, England. Filed Mar. 20, 1907. Serial No. 363,339.



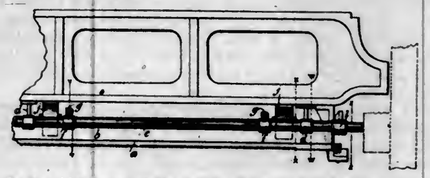
In a loom of the class described, a frame, supporting brackets thereon, a top beam having planed vertical surfaces at the ends thereof, rollers arranged underneath the ends of the beam and adapted to roll on the brackets and adjustable end rollers carried by said frame and adapted to bear against the said vertical surfaces.

872,507. LOOM FOR THE MANUFACTURE OF TUFTED OR PILE FABRICS. THOMAS GREENWOOD, Wolverley, near Kidderminster, England. Filed Mar. 20, 1907. Serial No. 363,340.



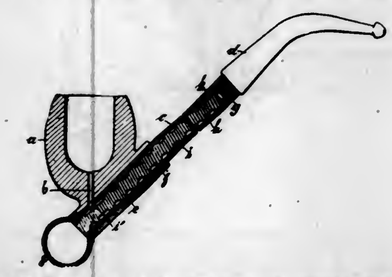
In a wide loom of the kind herein referred to for weaving tufted or pile fabrics, the combination in the tuft yarn cutting mechanism of a long cutter having a number of teeth or blades and extending across the whole width of the set of yarns and two or more sliding knife boxes each carrying a single cutter and adapted to traverse along a portion of the long cutter not traversed by the other cutter and the rods connecting the knife boxes and adjustable in length by screw threads whereby the sliding cutters can be set to register accurately with the teeth of the long cutter, substantially as set forth.

872,508. LOOM FOR THE MANUFACTURE OF TUFTED OR PILE FABRICS. THOMAS GREENWOOD, Wolverley, near Kidderminster, England. Filed Mar. 20, 1907. Serial No. 363,343.



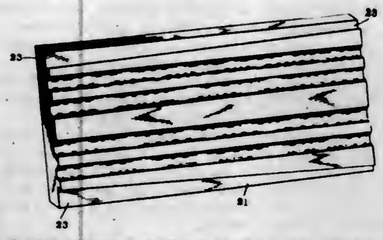
In a wide loom of the kind herein referred to for weaving tufted or pile fabrics, the combination with the knife blade and sliding knife guide which extends across the whole width of the set of yarns, of the top beam one or more downwardly projecting inclined guide brackets fixed to the top beam slides fixed to the knife blade and adapted to be engaged by said guide brackets so that said knife blade is movable up and down the same, a horizontal shaft and a series of levers connecting the combined knife blade and sliding knife guide to the said horizontal shaft whereby the combined knife and sliding knife guide are effectually prevented from sagging and springing, substantially as set forth.

872,509. TOBACCO-PIPE. JOSEPH GRÜNINGER, New York, N. Y. Filed Nov. 25, 1905. Serial No. 289,015.



A sanitary pipe of the class described comprising a bowl, a stem, a mouth piece with spirally grooved solid inner plug secured thereto and extended beyond the bottom opening of the bowl, a tubular stem portion surrounding said plug, and a receptacle attached to the lower end of the tubular stem and communicating with the spiral groove of the solid plug at a distance from said bowl so that the smoke cannot come in contact with any nicotin, tobacco juice, or condensed water and the passage for the smoke is kept dry.

872,510. TILE. HARRY HAUGH, Anderson, Ind. Filed Oct. 28, 1905. Serial No. 284,831.

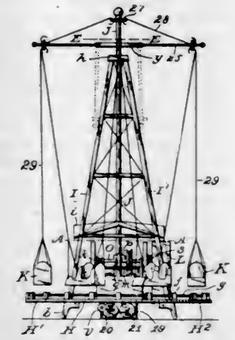


1. A tile having a half dove-tail groove at each edge tapered and wider at one end than the other, the wide ends of the two grooves being arranged at the same end of the tile and the side of each groove being straight and continuous from one end to the other.

2. A tile having a half dove-tail tapered groove at each edge the side thereof being straight and continuous from one end to the other, and a series of straight open grooves between the two half dove-tail tapered grooves.

3. A tile having a half dove-tail tapered groove at each edge, and a series of straight open grooves between the two half dove-tail tapered grooves, the wide ends of the two half dove-tail tapered grooves being arranged at the same end of the tile and the side of each tapered groove being straight and continuous from one end to the other.

872,511. TOY AERIAL SWING. HARRY G. HAWEKOTTE and HENRY W. KLAUSMANN, Indianapolis, Ind. Filed Sept. 14, 1906. Serial No. 334,578.



1. An aerial swing including a platform, an electromagnetic motor mounted upon the platform and having an armature provided with an opening therein, a battery, electrical connections between the battery and the motor, a tower mounted on the platform, a vertical shaft mounted in the tower and extending through the opening in the armature to the base of the motor and supported thereon, operative connections between the motor and the shaft, arms mounted on the shaft, and swings supported by the arms.

2. An aerial swing including a platform comprising a main section, supporting legs attached to the main section, and a plurality of platform sections attached removably to the main section; a motor mounted on the main section of the platform, a battery mounted under and supported by the main section of the platform, a tower mounted on the main section of the platform, a vertical shaft mounted in the tower and having a pulley, a belt connecting the pulley and the motor, and a controlling device for the motor having an operating stem extending under one of the plurality of platform sections and detachably connected therewith.

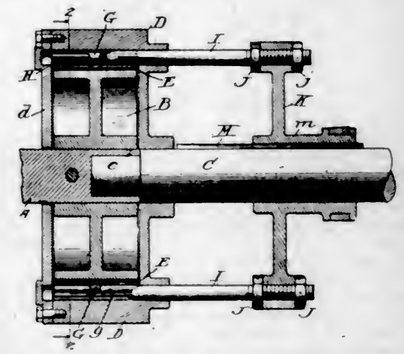
3. An aerial swing including a platform comprising a main section having supporting legs, and a plurality of portable sections attached removably to the main section and provided on the tops thereof with posts having railings attached thereto; a tower mounted on the main section of the platform, a vertical shaft mounted rotatively in the tower and having a ring attached thereto, a plurality of arms pivoted to the ring, swings supported by the arms, and means for rotating the vertical shaft.

4. An aerial swing including a platform comprising a main section provided with supporting legs and having a case attached to the under side thereof and a tower attached to the top thereof, and a plurality of portable sections attached removably to the main section; a motor mounted on the main section of the platform, a battery supported by said case, a vertical shaft mounted in the tower and connected with the motor, arms mounted on the vertical shaft, and swings supported by the arms.

5. An aerial swing including a platform having removable side sections, a motor mounted on the platform, railings mounted on the removable sections of the platform, a tower mounted on the platform over the motor and having a roof attached thereto covering the motor, a battery mounted under the platform below the motor, an electrical circuit between the battery and the motor and having make-and-break devices connected therewith, a folding operating device connected with the make-and-break devices, a vertical shaft mounted in the tower and connected with the motor, arms mounted on the shaft, and swings supported by the arms.

[Claims 6 to 11 not printed in the Gazette.]

872,512. POWER-TRANSMISSION DEVICE. JOSEPH W. HAYS, Chicago, Ill. Filed Mar. 25, 1907. Serial No. 364,422.



1. In a clutch mechanism the combination with a revoluble driving member and a concentric revoluble driven member having alining axes, of a series of segmental shoes arranged in circumferential order one after the other and connected to the outer one of said members, and means for causing said shoes to engage the other member one after the other.

2. In a clutch mechanism the combination with a revoluble driving member and a revoluble driven member, having alining axes, of a series of alining segmental shoes connected to the outer one of said members, and means reciprocal transversely to said shoes for causing the same to engage the other member one after the other.

3. In a clutch mechanism the combination with a revoluble driving member and a concentric revoluble driven member, having alining axes, of a series of corresponding segmental shoes arranged in circumferential order one after the other and connected to the outer one of said members, and means for causing said shoes to engage the other member one after the other.

4. In a clutch mechanism the combination with a revoluble driving member and a concentric revoluble driven member, having alining axes, of a series of corresponding equi-distant segmental shoes arranged in circumferential order one after the other and connected to the outer one of said members, and means for causing said shoes to engage the other member one after the other.

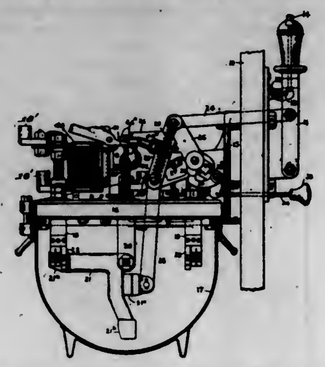
5. In a transmission clutch mechanism the combination with a revoluble driving member and a concentric driven member having alining axes, of a series of segmental clutch shoes arranged circumferentially one after the other each having one end connected to the outer one of said members, and means for causing said shoes to engage the other member one after the other.

[Claims 6 to 19 not printed in the Gazette.]

872,513. OIL-SWITCH. EDWARD M. HEWLETT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 30, 1904. Serial No. 218,908.

1. The combination with a switch having its open position between two closed positions and biased to open when closed, of means for automatically tripping the switch to

allow it to open, and means for automatically locking the switch in open position when automatically tripped.



2. The combination with a switch having an open position between two closed positions and biased to open when closed, of means for automatically tripping the switch to allow it to open, and means for stopping the switch in its open position when thrown from one of said closed positions and permitting it to pass freely through the open position to said closed position when thrown from the other closed position.

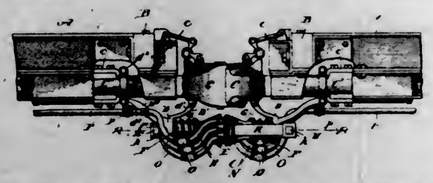
3. The combination with a switch having an open position between two closed positions and biased to open when closed, of mechanical means for stopping the switch in its open position whenever thrown from one closed position and permitting it to pass freely through the open position to said closed position when thrown from the other closed position.

4. The combination of a switchboard, a double throw switch located at the rear thereof, an operating lever therefor mounted on the face of the board, means for locking the switch in its open position, and a release rod therefor extending through the switchboard.

5. An electric switch comprising a movable element, an operating lever, a collapsible connection between said lever and said movable element, a spring tending to collapse said connection, means for locking the parts against collapse, means operative to hold said element in its open position, and means for rendering said holding means inoperative.

[Claims 6 to 16 not printed in the Gazette.]

872,514. AUTOMATIC TRAIN-PIPE COUPLING. PHILIP HIEN, Chicago, Ill. Filed Feb. 26, 1906. Serial No. 302,908.



1. The combination with a railroad car, of a train pipe coupling head supported beneath said car, a coupling surface on said head in which the train pipes terminate, means for holding said coupling surface out of contact with a coöperating coupling surface during the relative movement of the surfaces in coupling and uncoupling, and means for forcing the alined terminals of the train pipes into close contact, said latter means comprising a flaring guide having a resilient wall.

2. The combination with a railroad car, of a train pipe coupling head supported beneath said car, a coupling surface on said head in which the train pipes terminate, ribs on said coupling surface adapted to engage a coöperating coupling surface during the movement of the surfaces into and out of engagement, said coupling surface having grooves therein to receive said ribs when the train pipe terminals in the respective coupling surfaces aline, and means for retaining the coupling surfaces in contact.

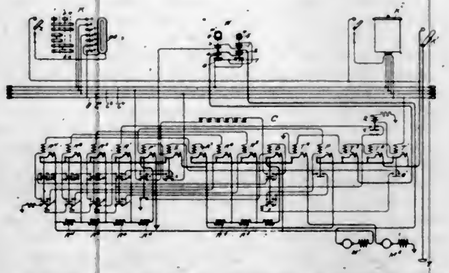
3. The combination with a railroad car, of a train pipe coupling head supported beneath said car, a coupling surface on said head in which the train pipes terminate, ribs on said coupling surface, a lug on said coupling surface at the rear of said ribs, said coupling surface having grooves corresponding to said ribs and a recess corresponding to said lug whereby when coöperating coupling surfaces are moved relatively in coupling and uncoupling the terminals of the train pipes will be held apart, and means for forcing said coupling surface into contact with a coöperating coupling surface when said ribs and lug register with said grooves and recesses.

4. The combination with a railroad car, of a draw bar operatively connected thereto, of a bracket depending from and secured to said draw bar, a train pipe coupling head supported by said bracket so as to move longitudinally with respect thereto, a coupling surface on said coupling head in which the train pipes terminate, and a spring interposed between said coupling head and said bracket for retaining said coupling surface in contact with a coöperating coupling surface on an adjoining car.

5. The combination with a railroad car, of a draw bar operatively connected thereto, of a bracket depending from and secured to said draw bar, a train pipe coupling head supported by said bracket so as to move longitudinally with respect thereto, a coupling surface on said coupling head in which the train pipes terminate, means on said coupling surface for retaining the train pipe terminals thereon out of contact with the terminals on the coöperating coupling surface during the relative movement of such surfaces into and out of engagement, a flaring guide projecting from said coupling head adapted to receive the end of a coöperating coupling surface, and a spring interposed between said bracket and coupling head for retaining the coupling surface thereon in contact with a coöperating coupling surface.

[Claims 6 and 7 not printed in the Gazette.]

872,515. AUTOMATIC MOTOR-CONTROL APPARATUS. GEORGE H. HILL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 21, 1906. Serial No. 317,888.



1. In combination, an electric circuit including a translating device, a controller for varying the conditions of said circuit, automatic actuating means for said controller, and an electroresponsive governor for automatically controlling the rate of operation of said actuating means to limit the current in said circuit to different predetermined values under different predetermined conditions of said translating device.

2. In combination, a motor, a speed controller, automatic actuating means for said controller, and an electroresponsive governor for automatically controlling the rate of operation of said actuating means to limit the motor current to differing values corresponding to differing loads.

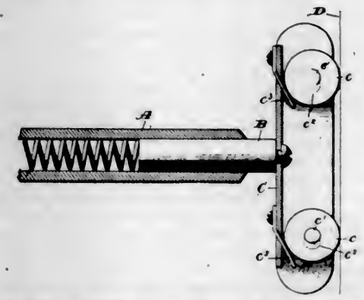
3. In combination, a motor, a speed controller, automatic actuating means for said controller, and an electroresponsive governor for controlling the operation of said actuating means, said governor including a plurality of coils in the motor circuit and coöperating elements connected and arranged to govern the rate of operation of said actuating means to limit the motor current to a predetermined value on a certain load and to limit the current to a different predetermined value on a different load.

4. In combination, a motor, a controller for varying the resistance of the motor circuit, automatic actuating means for said controller, and an electroresponsive governor for automatically controlling the rate of operation of said actuating means to limit the motor current to differing values corresponding to differing loads.

5. In combination, a motor, a controller including a plurality of individual contacts for varying the conditions of the motor circuit, actuating means for said contacts arranged to actuate the contacts in automatic succession, an electroresponsive governor for said actuating means arranged to control the rate of progression of said contacts to limit the motor to a predetermined value on a certain load and to a different value on a different load.

[Claims 6 to 21 not printed in the Gazette.]

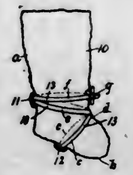
872,516. CURTAIN-FIXTURE. PAUL A. HOUGHTALING, Riverton, N. J., assignor to The Curtain Supply Company, Newark, N. J., a Corporation of New Jersey. Filed June 29, 1905. Serial No. 267,480.



1. A holding attachment for a curtain consisting of a curtain rod, heads carried thereby, a bodily movable roller and a spring piece carried by each head, said spring pieces being inclined to the lines of movement of the heads and placed to retard revolution of their respective rollers when these are in definite positions, substantially as described.

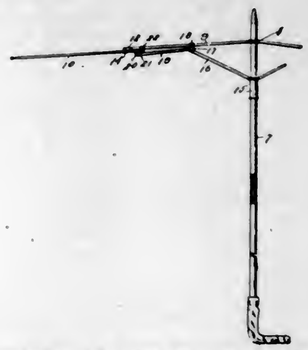
2. A holding attachment for curtains consisting of a curtain rod, a holding head on each end thereof having elongated slots in its sides, a roller for engaging a window-frame groove, said roller having a spindle mounted in the slots, and a spring structure carried by each head extending outwardly from the back thereof and terminating at a distance from the bottom of the window-frame groove less than the diameter of the roller, said structure being placed to engage and retard revolution of the roller when the spindle of the latter occupies a predetermined position in the slots.

872,517. BABY'S STOCKING. LOUISA E. IRWIN, London, Ontario, Canada. Filed Aug. 21, 1906. Serial No. 331,525.



As a new article of manufacture, a stocking embodying a leg portion and a foot portion, a keeper carried by the leg portion adjacent the juncture of the latter with the foot portion, a keeper carried by the bottom of the foot portion substantially midway between the ends of said foot portion, and a flexible band passed through said loops and wrapped around the foot portion and leg portion of the stocking.

872,518. FOLDING UMBRELLA. ALBERT JOHNSON, Ladysmith, Wis. Filed July 31, 1907. Serial No. 386,375.



1. An umbrella of the class described comprising a staff, a head fixed upon the staff, a runner slidable upon the staff, ribs comprising inner and outer pivoted members, the former being pivoted to the head upon the staff, the connection between the sections of each rib being such that the extreme inner end of each of the outer members is free, stay ribs pivoted to the runner, an element carried by each of the inner members of the ribs and arranged to embrace the inner end of the corresponding outer member when the umbrella is open, and connection between the element and the outer end of the stay rib whereby when the umbrella is folded, the said element will be moved from engagement with the end of the said outer member.

2. An umbrella of the class described comprising a staff, a head fixed upon the staff, a runner slidable upon the staff, ribs comprising inner and outer pivoted members, the former being pivoted to the head upon the staff, the connection between the sections of each rib being such that the extreme inner end of each of the outer members is free, stay ribs pivoted to the runner, an open sleeve carried by each of the inner members of the ribs and arranged to embrace the inner end of the corresponding outer member when the umbrella is open, and connection between the open sleeve and the outer end of the stay rib whereby when the umbrella is folded, the said open sleeve will be moved from engagement with the end of the said outer member.

872,519. TAMPING DEVICE. JOSEPH P. KANE, Worcester, Mass., assignor to himself, Michael J. Kane, and Richard P. Kane, Worcester, Mass. Filed Mar. 11, 1907. Serial No. 361,822.

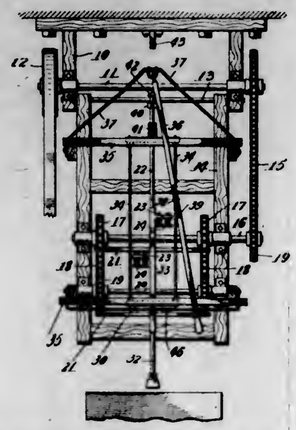
1. In a tamping machine, the combination of a horizontal shaft, a frame pivoted thereon to swing in a vertical plane, a tamper mounted on the frame and movable in the plane in which it swings, and a hand grip on the frame by which it may be swung to different inclinations.

2. In a tamping machine, the combination of a depending frame swinging on a horizontal axis, a reciprocable tamper thereon, means for operating the tamper, a counterweight on the frame to hold the same normally in substantially vertical position, and a hand grip on the frame by which it may be swung out of vertical position.

3. In a tamping machine, the combination of a track, a frame movable thereon, a tamping device supported by the frame, and a pivoted lever connected with the frame for moving it along the track.

4. In a tamping machine, the combination of a swing-

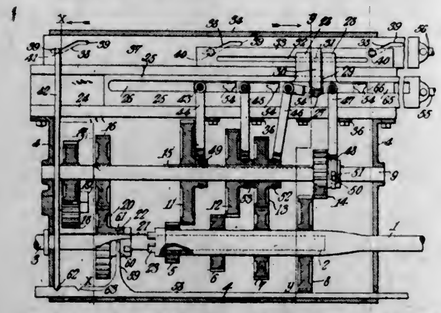
ing frame, a track thereon, a second frame movable along the tracks, a tamping device supported by the second frame, and a lever pivoted to the swinging frame and connected with the second frame for moving the latter along the track.



5. In a tamping machine, the combination of a main frame, a track extending along the frame, a second frame mounted to move along the track, a tamping device supported by the second frame, the main frame having an extension projecting beyond the second frame, a lever pivotally connected at its end with the extension and having a longitudinal slot therein, and a pin secured to the movable frame and extending through said slot, whereby the motion of the lever will move the second frame.

[Claims 6 to 20 not printed in the Gazette.]

872,520. INTERLOCKING TRANSMISSION MECHANISM. JOHN H. LAIRD, Lexington, Va. Filed Feb. 18, 1907. Serial No. 357,945.



1. In a power transmission mechanism, a power shaft, a driven shaft, a gear connection between the two shafts including gear wheels movable into and out of mesh with other gear wheels, shifting devices for each movable gear wheel, and a common operating mechanism for each of the shifting devices acting on any one of the shifting mechaniams in any order to the exclusion of all the other shifting mechanisms.

2. In a power mechanism, a number of power transmission elements, other power transmission elements movable into and out of gear with the first-named power transmission elements, a shifting mechanism therefor, a positive lock for holding all the movable elements out of gear, means for unlocking any one of the movable elements in any order without affecting any of the other movable elements, and means for effecting the movement of the unlocked element to operative position, also without affecting any of the other movable elements.

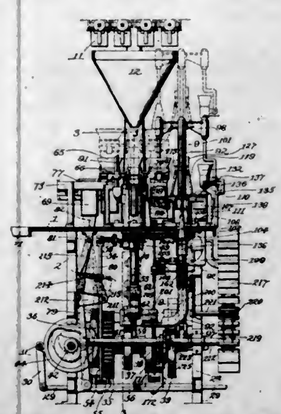
3. In a power transmission mechanism a number of power transmission elements, other power transmission elements movable into and out of gear with the first-named power transmission elements, a shifting mechanism therefor comprising bell-crank levers engaging the movable elements and provided with heads or lugs, a sliding bar having a longitudinal seat for all the heads or lugs on the bell-crank levers and holding them against movement, which seat has a notch or depression, means for moving the sliding bar to bring the notch or depression under any one of the lugs, and means for moving the head or lug into the notch or depression and thereby causing the bell-crank lever to move about its pivot to actuate the movable element engaged thereby.

4. In a power transmission mechanism a number of power transmission elements, other power transmission elements movable into and out of gear with the first-named power transmission elements, a shifting mechanism therefor comprising bell-crank levers engaging the movable elements and provided with heads or lugs, a sliding bar having a longitudinal seat for all the heads or lugs on the bell-crank levers and holding them against movement, which seat has a notch or depression, means for moving the sliding bar to bring the notch or depression under any one of the lugs, a bar coincident with said notch or depression, and means for actuating said bar to force the head or lug on a bell-crank lever into said notch or depression.

5. In a power transmission mechanism a number of power transmission elements, other power transmission elements movable into and out of gear with the first-named power transmission elements, a shifting mechanism therefor comprising bell-crank levers engaging the movable elements and provided with heads or lugs, a sliding bar having a longitudinal seat for all the heads or lugs on the bell-crank levers and holding them against movement, said seat having a notch or depression, means for moving the sliding bar to bring the notch or depression under any one of the lugs, a bar coincident with the notch or depression, a sliding plate engaging the bar, and a longitudinal movable plate having inclined slots engaging the first-named plate for causing it to move in a direction to actuate the bar coincident with the notch in a direction to or from said notch.

[Claims 6 to 8 not printed in the Gazette.]

872,521. MACHINE FOR PACKAGING MATERIALS. GEORGE A. LEE, Yonkers, N. Y., assignor to Automatic Packing & Labeling Company, Durham, N. C., a Corporation of North Carolina. Filed Apr. 26, 1905. Serial No. 257,511.



1. In a machine for packaging material, the combination of a turret; means for moving said turret step by step; a hollow bag-form or shape; means carried by the turret for temporarily engaging said bag-form or shape; a second turret adapted and designed to receive a bag with a charge therein from the bag-form; a bag-closing mechanism; and means for moving said second turret to present the bag to said closing mechanism.

2. In a machine for packaging material, the combination of a turret; means for periodically raising and lowering the same; means for rotating said turret step by step when in its raised position; a hollow bag-shape or form carried by the turret; a second turret located in a plane below the first turret; means carried by said turret for receiving a charged bag from the first turret; a bag-closing mechanism; and means for rotating said second turret to bring the charged bag into line with said bag-closing mechanism.

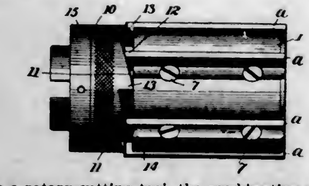
3. In a machine for packaging material, the combination of a form-carrying turret; means for raising and lowering the same; means for rotating said turret step by step while in its raised position; a hollow bag-shape or form carried by said turret; a second turret; means carried by said second turret to receive the bag-form with a bag and contained charge of material; a packer arranged to enter the form and pack the material and to hold the same against movement as the form-carrying turret with the form thereon is elevated; a bag-closing mechanism; and means for rotating said second turret to bring the bag, with the compressed charge therein, beneath said bag-closing mechanism.

4. In a machine for packaging material, the combination of a form-carrying turret; a hollow form carried thereby; means for periodically raising and lowering said turret; a second turret underlying the first turret; means carried by said second turret to receive the form with a bag thereon; and means for compressing the material in the form and holding it against movement as the form is elevated.

5. In a machine for packaging material, the combination of a form-carrying turret; a hollow form; means carried by the turret for engaging the form; means for periodically raising and lowering said turret; means for rotating said turret step by step when in its raised position; means for feeding material to the form; means adapted to receive the form with a bag thereon; means for packing the material within the form and holding it against movement as the turret is raised to withdraw the form from the bag; a bag-closing mechanism; and means for transferring the bag, with the compressed charge therein, to said bag-closing mechanism.

[Claims 6 to 50 not printed in the Gazette.]

872,522. REAMER. FREDERICK W. LETSCH, Baltimore, Md., assignor to Ott. Mergenthaler Company, Baltimore, Md., a Corporation of Delaware. Filed Jan. 3, 1906. Serial No. 294,483.



1. In a rotary cutting tool, the combination with a cylindrical body having longitudinal grooves in its outer surface, of cutters seated in said grooves, and screws for clamping the cutters in position, each cutter having a shoulder parallel with its cutting edge, and a second shoulder inclined to its cutting edge, the screws bearing against said shoulders to clamp the cutters in position, as set forth.

2. In a rotary cutting tool, the combination with a cylindrical body provided with longitudinal grooves having inclined seats, of cutters having inclined bases adapted to said seats, each cutter having a clamping shoulder substantially parallel to its cutting edge and a shoulder inclined away from the cutting edge at an angle greater than the angle between inclined seats and the axis of the body, and screws adapted to bear on said shoulders to clamp the cutter to its seat.

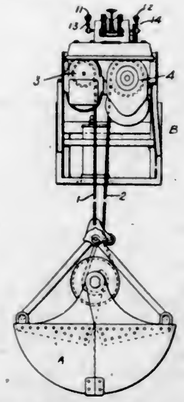
3. In a rotary cutting tool, the combination with a body having longitudinal grooves in its periphery and inclined seats at the bottom of the grooves, of cutters having inclined bases adapted to be seated in said grooves and adjustable lengthwise therein, means for clamping the cutters on said seats and a rotatable ring on said body having a series of inclines on its forward edge adapted to coöperate with the rear ends of the cutters, for the purpose set forth.

4. In a rotary cutting tool, the combination with a body having longitudinal grooves in its periphery, of cutters seated in said grooves, a ring upon a reduced portion of the body and having a series of teeth adapted to be clamped against the shoulder separating said reduced portion from the main portion of the body, inclines on said teeth coöperating with the cutters, and means for clamping said toothed ring against said shoulder in any desired position.

5. In a rotary cutting tool, the combination with a cylindrical body having longitudinal grooves in its periphery, the bottoms of said grooves forming inclined seats, of tapering cutters seated in said grooves and having inclined shoulders at their larger ends, screws seated in said body and bearing upon said inclined shoulders, whereby the cutters are prevented from moving forward, a ring rotatably mounted on the body and having inclines adapted to bear against the narrower ends of said cutters, and means for locking said ring in any desired position, whereby the cutters are positively locked against endwise movement in either direction.

[Claim 6 not printed in the Gazette.]

872,523. GRAB-BUCKET HOIST APPARATUS. SAM H. LIBBY, East Orange, N. J., assignor to Sprague Electric Company, a Corporation of New Jersey. Filed Mar. 7, 1906. Serial No. 304,656.



1. In a grab-bucket hoist, a bucket, a holding rope and a closing rope, motors for operating said ropes, a controller for causing the motor for the closing rope to operate in either direction and for causing the motor for the holding rope to operate only to wind up that rope, and means for applying tension to the holding rope while the bucket is being lowered.

2. In a grab-bucket hoist, a bucket, a holding rope and a closing rope, motors for operating said ropes, means for causing the motor for the closing rope to wind up the closing rope in raising the bucket and unwind the closing rope in lowering the bucket and for causing the motor for the holding rope to operate only to wind up the rope, and means for paying out the holding rope under tension in lowering the bucket.

3. In a grab-bucket hoist, a bucket, a holding rope and a

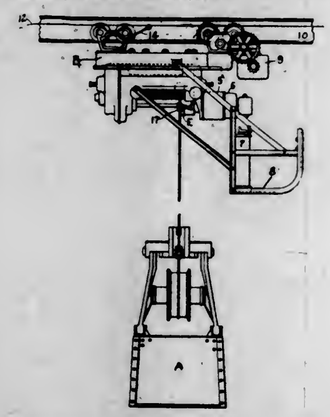
closing rope connected to said bucket, motors connected to said ropes for operating the same, and means for simultaneously energizing the motor connected to the closing rope to close the bucket and supplying the motor connected to the holding rope with only sufficient current to maintain the holding rope taut.

4. In a grab-bucket hoist, a bucket, a holding rope and a closing rope, motors for operating said ropes, and means for simultaneously energizing the motor connected to the closing rope to close the bucket and supplying the motor for the holding rope with only sufficient current to maintain the holding rope taut and for then increasing the power of the motor for the holding rope to assist the other motor in raising the bucket.

5. In a grab-bucket hoist, a bucket, a holding rope and a closing rope, a motor for said closing rope, a motor for said holding rope, a controller for said motors, a brake for maintaining said holding rope stationary in dumping the bucket, and an auxiliary brake device for applying tension to said holding rope while the bucket is being lowered.

[Claims 6 to 12 not printed in the Gazette.]

872,524. HOIST-CONTROLLER. SAM H. LIBBY and ISAAC F. BAKER, East Orange, N. J., assignors to Sprague Electric Company, a Corporation of New Jersey. Filed Mar. 7, 1906. Serial No. 304,657.



1. In a grab-bucket hoist, a bucket, a holding rope, a closing rope, motors connected to said ropes, and means for causing the motor for the closing rope to pay out the closing rope to lower the bucket and for causing the motor for the holding rope to place the holding rope under tension in lowering the bucket.

2. In a grab-bucket hoist, a bucket, a holding rope and a closing rope, motors connected to said ropes, and means for causing said motors to wind up said ropes to raise the bucket and for causing the motor for the closing rope to unwind the closing rope and the motor for the holding rope to exert a pull upon the holding rope to lower the bucket.

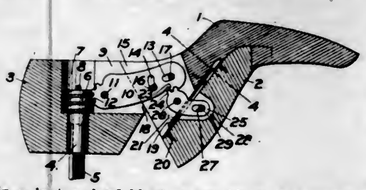
3. In a grab-bucket hoist, a bucket, a holding rope and a closing rope, motors connected to said ropes, and means for causing the motor for the closing rope to wind up the closing rope in raising the bucket and unwind the closing rope in lowering the bucket and for causing the motor for the holding rope to exert a winding effort on the holding rope both in raising and lowering the bucket.

4. In a grab-bucket hoist, a holding rope, a closing rope, motors connected to said ropes, and a controller having contacts and connections arranged to energize the motor for the closing rope so as to either wind up or unwind the closing rope and to energize the motor for the holding rope only so as to tend to wind up the holding rope.

5. In a grab-bucket hoist, a bucket, a holding rope and a closing rope connected to said bucket, motors connected to said ropes for operating the same, and a controller having contacts and connections arranged to energize both motors so as to wind up the said ropes to raise the bucket and to energize the motor for the closing rope so as to unwind the closing rope and the motor for the holding rope so as to tend to wind up the holding rope in order to lower the bucket.

[Claims 6 to 11 not printed in the Gazette.]

872,525. LAST. HENRY F. LOEWER, Rochester, N. Y. Filed Feb. 27, 1905. Serial No. 247,455.



1. In a last, a heel block, a toe block, a connection for connecting the two parts together, an instep block sliding upon said toe block, a connection between said toe block and said instep block, and means for sliding said instep block by simultaneous movement of said connections.

2. In a last, a heel block, a toe block, a connection for connecting the two parts slidably together, an instep block sliding upon said toe block, and means for sliding said instep block by said connection.

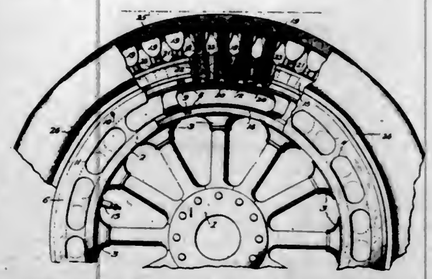
3. In a last, a heel block, a toe block, a connection for connecting the two parts together, an instep block sliding upon said toe block, means for sliding said instep block by said connection, and a rotary thimble in said heel block for actuating said connection.

4. In a last, a heel block, a toe block, a connection for connecting the two parts together, a rotary worm thimble in said heel block engaging said connection for actuating the latter, an instep block sliding upon said toe block, and means for sliding said instep block by said connection.

5. In a last, a heel block, a toe block, a lever pivoted to the heel block and extending into and attached to the toe block, a rotary thimble in said heel block engaging said lever for actuating the same, an instep block sliding upon the said toe block, and means for sliding said instep block by movement of said lever.

[Claims 6 to 16 not printed in the Gazette.]

872,526. PROTECTED PNEUMATIC TIRE. CARL G. LOTAVE, Denver, Colo., assignor of one-half to Edwin R. Cooper, Denver, Colo. Filed Feb. 11, 1907. Serial No. 356,818.



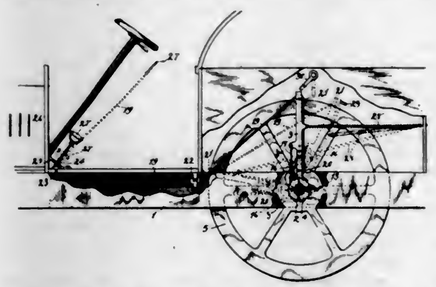
1. The combination with a wheel having a hollow felly, provided with elongated openings in one side, a removable side to said felly having elongated openings, and means for locking said side to said felly, of a pneumatic tube in said felly, a hollow tire removably secured to a projecting rim of said felly, and plungers extending through radial apertures in said rim and resting upon the pneumatic tube, their outer ends extending into and bearing against the inner periphery of the tire.

2. The combination with a wheel having a hollow felly, provided with a projecting, under-cut rim, of a pneumatic tube in said felly; a hollow tire secured upon the rim of said felly; plungers comprising stems having semi-circular heads which extend into said tire, said stems extending through radial apertures in said rim, and being provided with removable feet which rest upon the pneumatic tube; anti-friction bearing balls in the rim in contact with said plunger stems, and caps for preventing the escape of said balls.

3. The combination with a wheel, having a hollow felly, a pneumatic tube in said felly, and a hollow tire removably secured to said felly, of plungers having stems which extend through radial slots in the felly rim and rest upon the pneumatic tube, and semi-circular heads which extend into the tire, said stems being formed with semi-circular, longitudinally-disposed grooves, which register with similar grooves in the side of the radial apertures to form pockets; anti-friction balls in said pockets, and caps surrounding the stems and secured to the rim for retaining the balls.

4. The combination with a wheel having a hollow felly, one side of which is removable and is provided with elongated openings, the fixed side being provided with like openings, of a pneumatic tube in said hollow felly; a hollow tire removably secured to said felly; plungers resting on said pneumatic tire and extending through radial apertures in the felly rim, and into the tire; anti-friction balls in contact with said plungers, and circular plates formed with concavities which fit into the elongated openings in the sides of the felly, and permit bulging of the pneumatic tube.

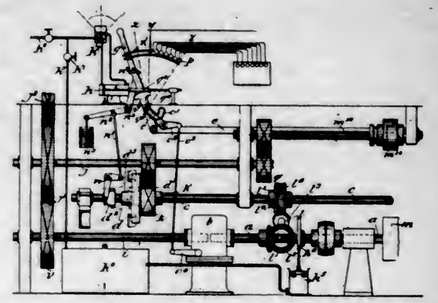
872,527. MOTOR-STARTER. ADOLPH W. MANZ, Chicago, Ill., assignor to Paul H. Manz, Chicago, Ill. Filed Feb. 26, 1906. Serial No. 302,922.



A starting device for motors, in combination with the motor main shaft, a lever loosely mounted on said shaft, split bearings on said shaft embracing said lever, a split ratchet-wheel secured on said shaft adjacent to said lever, pulleys mounted on said lever near its ends, operative means for making traction upon said lever, said operative means consisting of a flexible and a yielding portion, said flexible portion passing over said pulleys and provided with a handle, a pawl pivoted to the lever and forming a link between the said portions of the operative means for the lever, means for retaining the lever in inoperative position, and means for preventing the untimely operation of said lever.

872,528. GEARING. GEORGE W. MASCORD, London, England. Filed Jan. 9, 1905. Serial No. 240,257.

1. In combination, a motor shaft, a shaft in line therewith, a clutch interposed between, a driven shaft driving connections between it and said second shaft, a slow speed shaft driven from said motor shaft, power transmitting means interposed between said slow speed shaft and the driven shaft, said transmitting means including a clutch, a trip lever and connections therefrom for operating said last named clutch, a lever and operating connections therefrom to the first named clutch, and means carried by said lever for operating the trip lever, substantially as described.

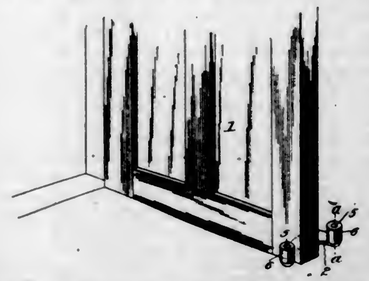


2. In combination, a motor shaft, a driven shaft, a slow speed shaft driven from the motor shaft, driving connections between the motor shaft and driven shaft, including a clutch, driving connections between the slow speed shaft and driven shaft including a clutch, a lever and connected means for successively operating said clutches, and electrical means for moving said lever, substantially as described.

3. In combination, a motor shaft, a driven shaft, a slow speed shaft driven from the motor shaft, driving connections between the motor shaft and driven shaft, including a clutch, driving connections between the slow speed shaft and driven shaft including a clutch, a bell crank lever connected to said first named clutch, a hand lever having a cam device for operating said bell crank lever, a bell crank lever and operating connections therefrom to said second clutch, and means carried by the said lever for tripping said bell crank lever, substantially as described.

4. In combination, a motor shaft, a driven shaft, driving connections between the same, including a clutch, and a slow speed shaft, driving connections between the same and the motor shaft including a clutch, a lever, connections therefrom for successively controlling the said clutches, a segmental rack carried by said lever, a reciprocating rack engaging said segmental rack, and power means for operating said reciprocating rack, substantially as described.

872,529. DOOR-CHECK. ISAAC R. MATTHEWS, Barnesville, Ga. Filed May 14, 1907. Serial No. 373,648.



A door check or retaining device comprising a flat arcuate shaped body provided with a perforation intermediate its ends, and a roller mounted at each end of the body, the body upon each side of said perforation being the same length.

872,530. METHOD OF SEALING METAL IN GLASS. GEORGE H. MEEKER, Media, Pa. Filed Apr. 18, 1907. Serial No. 368,831.

1. The process of sealing oxidizable metal within glass which consists in heating the glass to plastic condition

without heating the metal to oxidizing temperature, and so quickly pressing the plastic glass around said metal that the metal will be sealed therein and the air substantially excluded therefrom before said metal has become heated to oxidizing temperature; and then reheating the glass and metal embedded therein, substantially as set forth.



2. The process of sealing oxidizable metal within incandescent lamp stems, which consists in heating a portion of the tubular stem to plastic condition without heating said metal to oxidizing temperature, and so quickly pressing the plastic portion of said stem together that the metal will be sealed therein and the air substantially excluded therefrom before said metal has become heated to oxidizing temperature; and then reheating the lamp stem and metal embedded therein, substantially as set forth.

3. The process of sealing oxidizable metal within incandescent lamp stems, said metal having substantially the same coefficient of heat expansion and contraction as the stem, which consists in heating a portion of the tubular stem to plastic condition at a point away from said metal, bringing the tubular stem to position inclosing said metal, and pressing the plastic portion of the stem together, embedding said metal therein before they have become heated to oxidizing temperature; and then reheating the tubular stem and metal embedded therein, substantially as set forth.

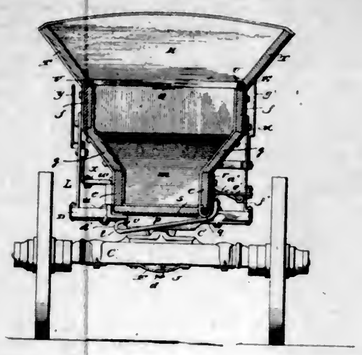
4. The process of sealing oxidizable metal within glass which consists in heating the glass to plastic condition without heating the metal to oxidizing temperature, and so quickly pressing the plastic glass around said metal that the metal will be sealed therein and the air substantially excluded therefrom before said metal has become heated to oxidizing temperature; then reheating the glass and metal embedded therein, and subjecting one end of the embedded portion of the metal and the glass surrounding the same to a vacuum or air exhaust, substantially as set forth.

5. The process of sealing oxidizable metal within incandescent lamp stems which consists in heating a portion of the tubular stem to plastic condition without heating said metal to oxidizing temperature, and so quickly pressing the plastic portion of said stem together that the metal will be sealed therein and the air substantially excluded therefrom before said metal has become heated to oxidizing temperature; then reheating the lamp stem and metal embedded therein, and subjecting one end of the embedded portion of the metal and the stem surrounding the same to a vacuum or air exhaust, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

872,531. WAGON. FREDERICK W. MILLER, Muskegon, Mich. Filed June 18, 1906. Serial No. 322,272.

1. In a dumping wagon, the combination with a body having a vertically swinging bottom; of a rock shaft disposed vertically in a bearing on the body and having an arm arranged to assume a position below the swinging portion of the bottom, and also having an arm through the medium of which it may be rocked.



2. In a dumping wagon, the combination with a body having a vertically swinging bottom; of a lever mounted on the body, a rock shaft disposed vertically in a bearing on the body and having an arm arranged to assume a position below the swinging portion of the bottom and also having an arm extending in an opposite direction with respect to the first mentioned arm, and a connection between the second mentioned arm of the rock shaft and the lever.

3. In a dumping wagon, the combination with a body having a vertically swinging bottom; of a lever mounted on the body, rock shafts disposed vertically in bearings on the body at intervals in the length thereof and having lower arms arranged to assume positions below the swinging portion of the bottom and also having upper arms extending in an opposite direction with respect to the first mentioned arms, and connections between the upper arms of the rock shafts and the said lever.

4. In a dumping wagon, the combination with a body having a vertically swinging bottom hinged to one of its sides; of a lever mounted on the body, rock shafts disposed vertically in bearings on the side of the body at intervals in the length thereof and having rearwardly and inwardly extending arms at their lower ends and rearwardly and outwardly extending arms at their upper ends, a rod connecting the upper arms of the several rock shafts, and a connection between the said rod and the lever.

5. In a dumping wagon, the combination of a body having a vertically swinging bottom provided adjacent to its swinging edge with a loop or eye, a rock-shaft journaled on the body and having an arm disposed below the swinging bottom and terminating in a hook disposed in the loop or eye on said bottom, a lever, and a connection between the lever and the rock shaft for moving the latter by the former.

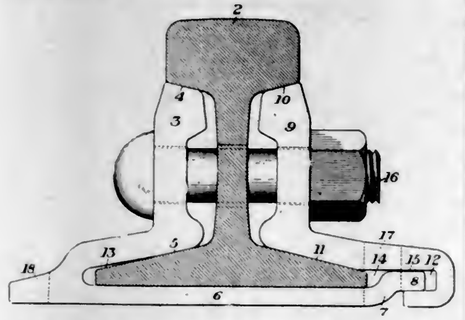
[Claims 6 to 8 not printed in the Gazette.]

872,532. RAIL-JOINT. ANDREW MORRISON, Pittsburg, Pa. Filed Mar. 13, 1907. Serial No. 362,101.

1. In a rail joint, a splice bar having a base portion extending underneath the entire base of the rail and terminating at its free edge in a raised lip or extension, which engages and is supported by the opposite splice bar, said lip or extension being joined to the base by a connecting portion having a clearance space between its entire upper surface and the adjacent edge of the rail; substantially as described.

2. A rail joint having a pair of splice bars, one of which has a base plate extending entirely underneath the base of the rail, said base plate having at its free edge a raised lip or extension extending entirely beyond and clear of the rail, and the other bar having an extension to receive and support said lip, the lip being capable of horizontal movement in its support for the purpose of taking care of irregularity in manufacture and adjustment for wear; substantially as described.

3. In a rail joint, a splice bar having a base plate extending underneath the base of the rail and beyond the opposite edge of the same, and supported by the opposite splice bar, the first-named bar having clearance spaces at both edges of the rail base and also at the extreme end of the base plate; substantially as described.

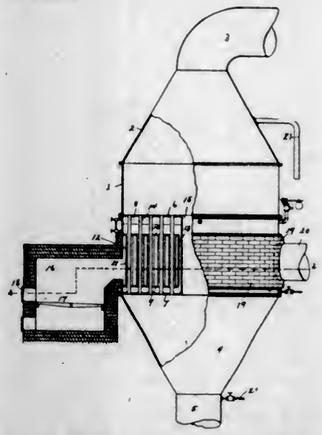


4. A rail joint, consisting of a pair of splice bars having vertical portions provided with bearings against both the head and the base of the rail, one of said bars having a base portion extending underneath the base of the rail and supported at its free edge at a point beyond the base of the rail by the other bar, the first named bar being capable of horizontal adjustment; substantially as described.

5. A rail joint consisting of a pair of splice bars, one of which has a base plate extending underneath the rail base and supported at its free edge by the depending portion of the other bar at a point beyond the base of the rail, the first named bar being capable of horizontal adjustment; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

872,533. EVAPORATING APPARATUS. ALEXANDER H. MCDONALD, Wyandotte, Mich. Filed Jan. 10, 1906. Serial No. 295,337.



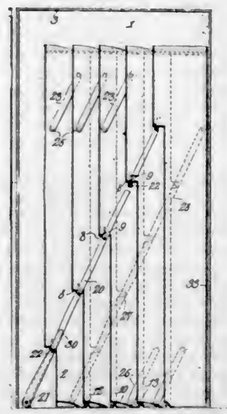
1. In an evaporating apparatus, the combination of the evaporating pan divided by transverse plates into independent brine spaces, brine tubes secured at their opposite ends in said plates respectively and passing therethrough to establish communication between the brine spaces of the pan, said evaporating pan having a fire space therein located between the divided plates of the pan and crossed by said brine tubes, a water jacket around each of the brine tubes within said fire space, said water jackets being intercommunicable and entirely separated from the brine spaces of the pan, and a wall of non-conducting material surrounding the fire space between the divided brine spaces.

2. In an evaporating apparatus, the combination of the evaporating pan, transverse plates dividing said pan into independent brine spaces superimposed, a relatively large central brine tube having its ends secured in said dividing plates and establishing communication between the brine spaces, a plurality of relatively small brine tubes secured at their ends in said dividing plates and establishing communication between the brine spaces, a fire space located between said dividing plates and crossed by said brine tubes, transverse plates crossing the fire space to form a steam generating space entirely separated from the fire space, and from the brine spaces, tubes surrounding the brine tubes within the fire space and communicating at their ends with the steam generating space, and a wall of non-conducting material surrounding the fire space.

3. In an evaporating apparatus, the combination of the evaporating pan, the transverse plates dividing said pan into brine spaces and forming between them a steam generating space entirely separated from said brine spaces, brine tubes connecting said plates and establishing communication between the divisions of the pan, transverse plates dividing the steam generating space and forming a fire space between them, and water tubes passing through said fire space and connecting said last-mentioned plates to form circulatory tubes for the steam generator, said water tubes embracing the brine tubes which pass centrally therethrough.

4. In an evaporator and steam generator, the combination with the evaporating pan having brine spaces at its ends, of a steam generator entirely separated from said brine spaces centrally disposed within said pan and having a fire space, water tubes within the fire space of said generator around which the hot gases may pass, brine tubes communicating at their ends with the brine spaces of the pan and passing centrally through said water tubes, and a wall of non-conducting material surrounding the fire space for preventing undue radiation of heat.

872,534. FIREPROOF DOOR, SHUTTER, AND THE LIKE. FLOYD W. NEWMAN, Bradford, Pa. Filed Feb. 7, 1907. Serial No. 356,177.



1. A door comprising a plurality of parallel telescopic door sections disposed to contact with and be supported by a floor, and means within and connected to each of said sections for compelling simultaneous movement thereof to extend or collapse the door.

2. A door comprising parallel telescopic door sections, means within and pivotally connected to the sections for preventing independent movement of said sections, each of said sections being disposed, when the door is extended,

to rest upon a floor, and when the door is collapsed to rest upon the adjoining door section.

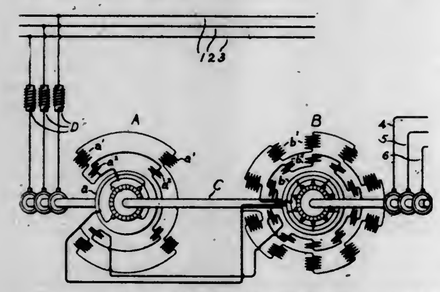
3. A door comprising a plurality of telescopic sections, anti-friction means carried by each section and movable upon the bottom of the adjoining section, and means for simultaneously shifting the sections to collapse or to extend the door.

4. A door comprising a plurality of telescopic sections having inclined bottoms, rollers carried by the sections and mounted to travel upon said bottoms, and means for simultaneously shifting the sections to collapse or extend the door.

5. A door comprising a plurality of telescopic sections, one end of each section being disposed to ride upon one end of the adjoining section, and means for simultaneously shifting the sections to collapse or extend the door.

[Claims 6 to 20 not printed in the Gazette.]

872,535. FREQUENCY-CHANGER. JAKOB E. NOEGGERATH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 4, 1905. Serial No. 290,089.



1. In combination, two alternating-current circuits of different frequencies, two rotary-converters, one supplied with alternating-current from one of said circuits and the other supplying alternating-current to the second circuit, and electrical connections between the direct-current sides of said converters whereby one supplies direct-current to the other.

2. In combination, two alternating-current circuits of different frequencies, two rotary-converters, one supplied with alternating-current from one of said circuits and the other supplying alternating-current to the second circuit, connections between the direct-current sides of said converters whereby one supplies direct-current to the other, and means for varying the field strength of one or both converters upon variation in the amount of said direct-current.

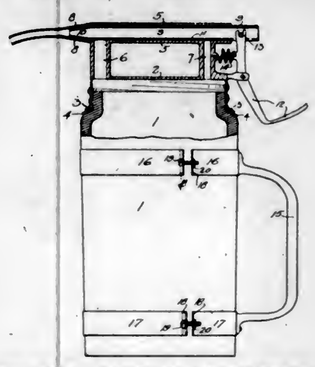
3. In combination, two alternating-current circuits of different frequencies, two rotary-converters, one supplied with alternating-current from one of said circuits and the other supplying alternating-current to the second circuit, connections between the direct-current sides of said converters whereby one supplies direct-current to the other, and field coils included in said connections.

4. In combination, two alternating-current circuits of different frequencies, two rotary converters mechanically connected, one supplied with alternating-current from one of said circuits and the other supplying alternating-current to the second circuit, and connections between the direct-current sides of said converters whereby one supplies direct-current to the other.

5. In combination, two alternating-current circuits of different frequencies, two rotary converters mechanically connected, one supplied with alternating-current from one of said circuits and the other supplying alternating-current to the second circuit, connections between the direct-current sides of said converters whereby one supplies direct-current to the other, and field coils included in said connections.

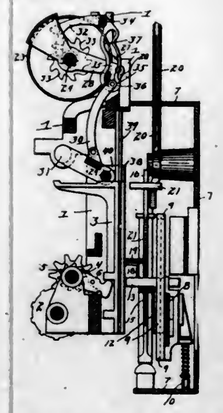
[Claims 6 to 15 not printed in the Gazette.]

872,536. DEVICE FOR FILLING BOTTLES, INKWELLS, &c. CHARLES A. M. NYSTROM, Tacoma, Wash., assignor of two-thirds to J. Henry Beckman, Seattle, Wash., and Frank W. Beckman, Portland, Oreg. Filed Feb. 25, 1907. Serial No. 359,111.



The combination of a jar, a closure therefor, an open-ended tube mounted thereon and having a tapered end and communicating with said jar by passages near its ends, an inner tube fitting within said open-ended tube and tapered at one end to fit in said first taper and extending out from the other end of said outer tube and open at its ends, an air passage through the side of said inner tube and adapted to register with one of said first passages only when said tapered parts are separated, and a thumb-lever pivoted to said closure and engaging the extended end of said inner tube to withdraw said tapered parts from each other.

872,537. FARE-REGISTER. JOHN F. OHMER and ELMER H. BRIDENBAUGH, Dayton, Ohio. Filed Aug. 27, 1906. Serial No. 332,277.

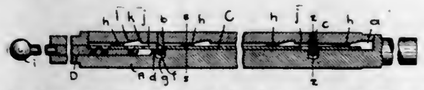


1. In a fare register, detail fare counters, a total fare counter, a main operating member, means actuated by the main operating member to operate the detail counters, means actuated by the actuating means of the detail counters for operating the total counter simultaneously with each actuation of a detail counter, and means controlled by the main operating member for returning to normal position the actuating mechanism of the total counter when said main operating member returns to normal.

2. In a fare register, detail fare counters, a slide for each of such counters, a main operating member adapted to engage any one of said slides to actuate any one of said counters, a total counter, means actuated by any one of said slides for imparting movement to the total counter simultaneously with the movement of a detail counter, and a connection between said main operating member and the means acted upon by said slides to impart movement to the total counter and whereby said means for imparting movement to the total counter is returned to normal when the main operating member itself returns to normal.

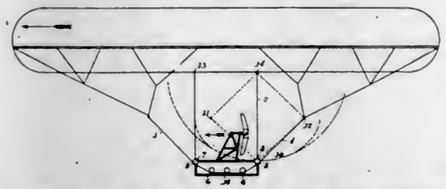
3. In a fare register, detail counters, a total counter, a main operating member, independent actuating devices intermediate of said detail counters and said main operating member, a common member actuated alike by any one of said independent actuating devices, connections between said common member and the total counter by which the total counter is actuated simultaneously with the operations of the detail counters, and a connection between said common member and the main operating member whereby the connections between the common member and the total counter are returned to normal position when the main operating member returns to normal position.

872,538. CONTRACTIBLE SHAFT. JOSEPH A. PAQUETTE, Hull, Quebec, Canada. Filed Mar. 30, 1907. Serial No. 365,586.



In a contractible shaft, the combination with the shaft having a longitudinal slot therein, of a rod in the bottom thereof having apertures therethrough, means for actuating the rod from the end of the shaft, recesses in the bottom of the slot in the shaft below the apertures in the rod, outwardly movable sections located in the outer part of the slot in the shaft, pins secured thereto, extending through the apertures in the rod, and into the recesses in the bottom of the shaft, and having slots in their extremities, and pins extending transversely across the recesses in the shaft and through the slots in the said pins, as and for the purpose specified.

872,539. CAR SUSPENSION FOR MOTOR-BALOONS. AUGUST VON PARSEVAL, Augsburg, Germany, assignor to Motorluftschiff-Studiengesellschaft M. B. H., Berlin, Germany. Filed June 30, 1906. Serial No. 324,228.



1. In a combination, a balloon, a car, flexible supporting ropes connecting the car with the balloon, and flexible guiding ropes secured to the balloon and slidably engaged with the car to permit movement of the same, the guiding ropes being so arranged with respect to the supporting ropes and the two sets of ropes being so proportioned that both are maintained taut by the weight of the car in any position which the same may assume.

2. In combination, a balloon, a car, flexible supporting ropes connecting the car with the balloon and permitting movement of the car, rollers for the car, and flexible guide ropes longitudinally disposed with respect to the axis of the balloon and connected therewith, said ropes passing beneath said rollers, said supporting and guide ropes being so proportioned and disposed with respect to each other that the weight of the car maintains said ropes taut in any position which it may assume.

3. In combination, a balloon, a car, flexible means for supporting the car from the balloon in a manner to permit movement of the car, and flexible guiding means connected with the balloon and slidably connected with the car to guide the same in its changing positions, said guiding and supporting means being so proportioned and so disposed with respect to each other as to distribute the weight of the car equally thereon.

872,540. SLACK-ADJUSTER FOR CAR-BRAKES. WILLIAM G. PRICE, New Castle, Pa. Filed Aug. 18, 1906. Serial No. 331,140.



1. In a slack adjuster, the combination of brake applying mechanism, a turn-buckle in said mechanism, and a ratchet in said turn-buckle arranged to rotate one element of said turn-buckle when force is applied to the turn buckle.

2. In brake mechanism, the combination of shoes, means for spreading the same apart, frictional means for momentarily holding said shoes apart, a turn-buckle connecting said shoes, and a ratchet in said turn-buckle arranged to expand the same when force is applied to the turn-buckle.

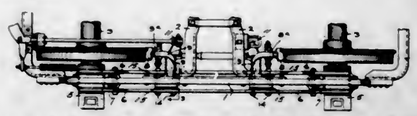
3. In a slack adjuster, the combination of brake applying mechanism, and a turn-buckle in said mechanism, said turn-buckle having an internally threaded member, a screw working therein, and a member reciprocating longitudinally of the turn buckle and arranged on its reciprocation to rotate said screw.

4. In a slack adjuster, the combination of brake applying mechanism, a turn buckle in said mechanism, said turn buckle having an internally threaded member, a screw working therein, and a member reciprocating longitudinally of the turn buckle and projecting into the internally threaded member and guided thereby and arranged on its reciprocation to rotate said screw.

5. In a slack adjuster, the combination of brake applying mechanism, and a turn buckle in said mechanism, said turn buckle having an internally threaded member, a screw working therein, and a reciprocating rod forming one member of the turn buckle and arranged on its reciprocation to rotate said screw.

[Claims 6 to 20 not printed in the Gazette.]

872,541. BRAKE-SHOE HANGER. WILLIAM G. PRICE, New Castle, Pa. Filed Aug. 20, 1906. Serial No. 331,348.



1. In a car truck, the combination of the frame, wheels journaled therein, and brake shoe hanger brackets rigidly connected to the frame and adjustable in a horizontal plane both toward and from the wheels and at right angles thereto.

2. In a car truck, the combination of the frame, wheels journaled therein, equalizer bars, and a brake hanger bracket rigidly secured to the equalizer bar and adjustable toward and from the wheels.

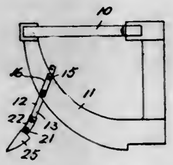
3. In a car truck, the combination of the frame, wheels and axles journaled therein, equalizer bars, and a brake hanger bracket rigidly secured to an equalizer bar and adjustable thereon parallel to the axle.

4. In a car truck, the combination of the frame, wheels journaled therein, equalizer bars, a brake shoe hanger bracket rigidly secured to an equalizer bar and adjustable in a horizontal plane both toward and from the wheels and transversely of the frame.

5. In a car truck, the combination of the frame, wheels journaled therein, an equalizer bar consisting of two bars spaced apart, a brake shoe hanger bracket of less width than the space between the bars, a bolt passing through the bars and said bracket, and washers interposed between the bracket and bars.

[Claims 6 and 7 not printed in the Gazette.]

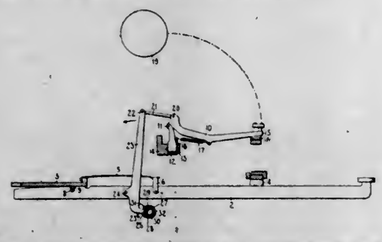
872,542. ATTACHMENT FOR PLANTERS. ALVA SHERMAN, Howard, Kans. Filed July 27, 1907. Serial No. 385,869.



1. An attachment of the type set forth, comprising the combination with a stationary part, of a standard, means for clamping said standard to said stationary part, a shank carried at the lower end of said standard, and including side portions, a shovel adapted to be fastened to said shank, a bolt projecting through said shovel and said shank, a plate carried by said bolt and bearing against said side portions and a nut threaded on said bolt and bearing against said plate.

2. An attachment of the type set forth, comprising in combination, a stationary part, a standard, means for clamping said standard to said stationary part, a shank carried at the lower end of said standard, and of U-shape in cross section, said shank including parallel side portions, a shovel adapted to be fastened upon said shank and bearing against the front face thereof, a plate formed at each side thereof with flanges lying against the side portions of said shank, a bolt passing through said shovel, said shank and said plate, and a nut threaded upon the end of said bolt, and bearing against said plate.

872,543. TYPE-WRITING MACHINE. HENRY A. SMEDBERG, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New York. Filed Feb. 6, 1906. Serial No. 299,805.



1. In a typewriting machine, the combination of a type bar, a key lever, a fixed fulcrum bar having transverse extended bearing surfaces for rolling means to bear and travel on, and a bell crank pivoted to the key lever and carrying rolling means for coöperating with said bearing surfaces.

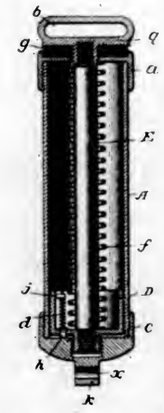
2. In a typewriting machine, the combination of a type bar, a key lever, a fixed fulcrum bar having transverse extended bearing surfaces for rolling means to bear and travel on, and a bell crank pivoted to the type bar and carrying one or more rollers to coöperate with said bearing surfaces.

3. In a typewriting machine, the combination of a type bar, a key lever, a bell crank pivoted to the key lever, a roller pivoted on the bell crank, and a fixed fulcrum bar provided with transverse extended bearing surfaces between which said roller is received and with which it cooperates.

4. In a typewriting machine, the combination of a type bar, a key lever, a bell crank pivoted to the key lever, a roller pivoted on the bell crank, and a fixed fulcrum bar provided with transverse extended bearing surfaces at opposite sides of said roller and with which said roller cooperates alternately during the operation of the parts.

5. In a typewriting machine, the combination of a type bar, a key lever, a bell crank pivoted to the key lever, a roller pivoted on the bell crank, and a fixed fulcrum bar U-shaped in cross-section, said roller entering the opening in said fulcrum bar.

872,544. RECOIL-CHECK FOR VEHICLES. WILLIAM H. STAATS, Colonie, N. Y. Filed Feb. 19, 1907. Serial No. 358,250.



1. The combination in a recoil check, of a closed cylinder, a piston, a piston rod extending through the head of the cylinder and provided with a cap, a spring between the piston and the cylinder head, means for connecting the cylinder and the cap to a vehicle, and a washer interposed between said cap and cylinder head.

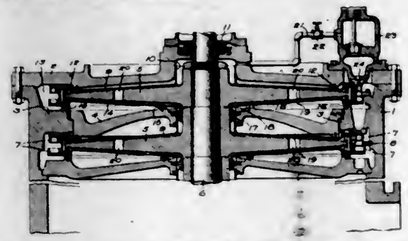
2. The combination in a recoil check, of a cylinder closed at the ends, a piston and piston rod, the piston having a port and check valve opening upward, a spring coiled around the piston rod and bearing upon the piston, and means for connecting the piston rod with the body of the vehicle and the cylinder with the axle.

3. The combination in a recoil check, of a closed cylinder, piston, piston rod, a perforated lug at the bottom of the cylinder, a clip adapted to encircle the axle and a bolt passing through the ends of the clip and through the said lug, a cap at the upper end of the piston rod provided with a loop, and a washer at the top of the cylinder, for the purpose set forth.

872,545. TURBINE. CHARLES P. STEINMETZ, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 10, 1907. Serial No. 378,083.

1. In an elastic fluid turbine, the combination of a bucket wheel, a casing therefor containing a main chamber for the wheel, admission and exhaust conduits, stationary walls located adjacent to the sides of the wheel, and means for introducing fluid into the auxiliary chambers formed between the wheel and the walls at a temperature above that of the fluid passing through the wheel buckets to reduce the rotation losses.

2. In an elastic fluid turbine, the combination of a bucket wheel, a casing therefor containing a main chamber for the wheel, admission and exhaust conduits, stationary walls located adjacent to the sides of the wheel, means for introducing fluid into the auxiliary chambers formed between the wheel and the walls at a temperature above that of the fluid passing through the wheel buckets to reduce the rotation losses, and a passage which connects the auxiliary chambers.

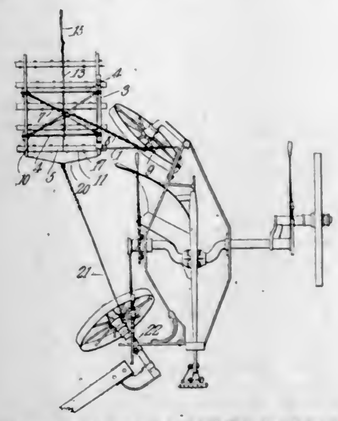


3. In an elastic fluid turbine, the combination of a bucket wheel, a casing therefor containing a main chamber for the wheel, admission and exhaust conduits, a plate located on one side of the wheel and carried by the casing to form an auxiliary chamber independent of the main wheel chamber, and a means for introducing a fluid into the auxiliary chamber whose temperature is above that of the fluid passing through the buckets and contained in the main chamber for the purpose of reducing rotation losses.

4. In an elastic fluid turbine, the combination of a casing, a diaphragm dividing the casing into main wheel chambers, bucket wheels mounted therein, walls situated on both sides of the wheels approximately conforming in shape thereto to form auxiliary chambers that are independent of the main wheel chambers, a packing between the diaphragm and the rotating member of the machine, which is so arranged that the leakage therefrom passes to the auxiliary chamber to reduce rotation losses, and admission and exhaust conduits.

5. In an elastic fluid turbine, the combination of a casing, diaphragms dividing the casing into main wheel chambers, buckets wheels mounted therein, plates mounted in the chambers and situated on opposite sides of the wheels and separated therefrom by small auxiliary chambers, passages in the wheels connecting the auxiliary chambers on opposite sides thereof, and packing sleeves carried by the diaphragms, the leakage from which passes through the auxiliary chambers to reduce rotation losses and thence passes to the main chambers.

872,546. HARROW ATTACHMENT. JOSEPH STICKLEY, Lake Andes, S. D. Filed Aug. 23, 1907. Serial No. 389,899.



1. A harrow attachment comprising an arm carrying a shaft and a ratchet lever, a frame journaled to the shaft, a harrow located under the frame and being pivotally connected thereto at one side, chains connecting the opposite side of the harrow with the shaft, a chain connecting the harrow with the ratchet lever and a draft means attached to the harrow member.

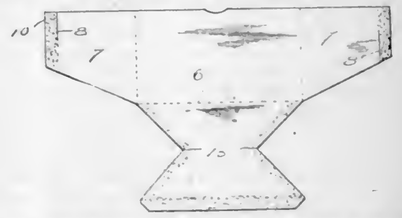
2. A harrow attachment comprising an arm having a shaft and a ratchet lever, a frame journaled to said shaft, a harrow member located under the frame and being pivotally connected thereto at one side, chains connecting the opposite side of the harrow member with the shaft, a chain connecting the harrow member with said ratchet lever, said harrow member consisting of side beams, cross bars journaled in said beams and being connected together, a lever mechanism for turning the cross bars simultaneously and a draft means attached to the beams of the harrow member.

872,547. ALBUM. HYMAN UFFNER, New York, N. Y., assignor to F. L. Schafuss Company, Brooklyn, N. Y., a Corporation of New York. Filed May 31, 1907. Serial No. 376,469.



An improved album composed of sheets, folded into leaves, integral filling pieces formed out of the sheet by folding portions of it upon itself, the filling pieces adjacent to the front cover lying between two leaves forming four thicknesses, and other filling pieces folded out of the centers of sheets, which in the book each compose two leaves, said two leaves when thus folded lying in contact with each other face to face, the folded filling pieces being of four thicknesses and entirely on one side of the two leaves out of which it is folded.

872,548. ENVELOP. FRANK D. WHITE, Alpena, Mich. Filed July 14, 1906. Serial No. 326,213.

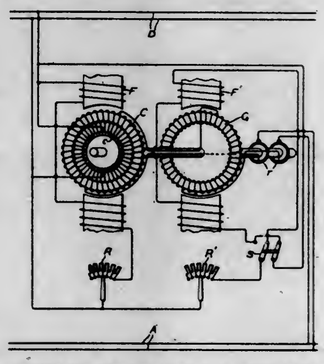


1. An envelop comprising a front section; side flaps foldable towards each other and overlapping at their free ends, each side flap having a slit therein adjacent to and parallel with its free end forming a single tongue, said tongues extending in opposite directions from and interlocking with each other, the under face of each tongue being gummed and cemented to the outer face of the body portion of the other flap; and a rear section having a longitudinal flap at its free end adapted to be folded over the upper portion of the front section, and cemented thereto, to seal the envelop, the inner face of the rear section being gummed at its side edges to the side flaps.

2. An envelop comprising a front section; side flaps foldable towards each other and overlapping at their free ends, each side flap having a slit therein adjacent to and parallel with its free end forming a single tongue; said tongues extending in opposite directions from and interlocking with each other, the under face of each tongue being gummed and cemented to the outer face of the body portion of the other side flap; the front section having a

pair of longitudinal flaps formed at its upper edges in spaced relation to each other, and adapted to be folded over the upper portion of the side flaps and cemented thereto; and a rear section having a longitudinal flap at its free end adapted to be folded over the upper portion of the front section, and cemented thereto, to seal the envelop, the inner face of the rear section being gummed at its side edges to the side flaps.

872,549. CURRENT-CONVERTER. LEONARD WILSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 4, 1906. Serial No. 294,565.



1. In combination, an inverted rotary converter, and an alternating-current generator mechanically-connected to said converter and having its armature in series with the alternating-current side of the converter and its field in parallel with the direct-current side of the converter, and means for varying at will the field-strength of the generator.

2. In combination, an inverted rotary converter, an alternating-current generator mechanically connected to said converter and having its armature in series with the alternating-current side of the converter, and means for varying the strength of, and for reversing, the field of said generator.

3. In combination, an inverted rotary converter, an alternating-current generator mechanically connected to said converter and having its armature in series with the alternating-current side of the converter, and means for independently varying the field-strengths of both machines.

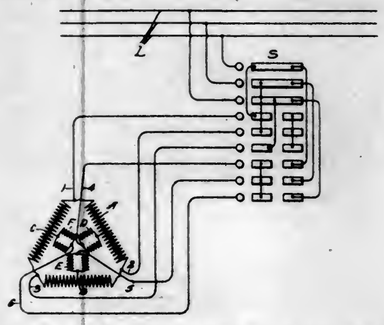
4. In combination, an inverted rotary converter, an alternating-current generator mechanically connected to said converter and having its armature in series with the alternating-current side of the converter, means for independently varying the field-strengths of both machines, and means for reversing the field of said generator.

5. In a converter from direct to alternating-current, a rotary converter having its armature arranged to be supplied from the direct-current source through a commutator, an alternating-current generator mechanically connected to said rotary converter and having its armature in series with fixed points on the armature winding of the rotary converter, collecting means in series with both armatures, and means for independently varying the field-strength of both machines.

[Claim 6 not printed in the Gazette.]

872,550. INDUCTION-MOTOR. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., asignor to General Electric Company, a Corporation of New York. Filed Nov. 9, 1905. Serial No. 286,511.

1. In combination with an induction motor, means for connecting the primary winding of the motor for producing simultaneously different numbers of poles, the secondary of said motor being arranged to offer a low resistance path for currents induced by one number of poles and a high resistance path for currents induced by another number of poles.



2. In combination with an induction motor, means for connecting the primary winding of the motor for producing simultaneously two different numbers of poles, the secondary of said motor being arranged to offer a low resistance path for currents induced by one number of poles and a high resistance path for currents induced by another number of poles.

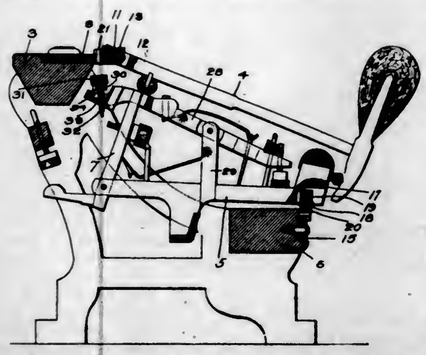
3. In combination with an induction motor, means for connecting the primary winding of the motor for producing simultaneously two different numbers of poles, the secondary of said motor being arranged to offer a low resistance path for currents induced by the greater number of poles and a high resistance path for current induced by the smaller number of poles.

4. In combination with an induction motor, means for connecting two portions of the primary winding of the motor for producing simultaneously two different pole numbers bearing to each other the ratio of one to two, the rotor-winding being arranged to offer a low resistance path for currents induced by one number of poles and a high resistance path for currents induced by the other number of poles.

5. In combination with an induction motor, means for connecting two portions of the primary winding of the motor for producing simultaneously two different pole numbers bearing to each other the ratio of one to two, the rotor winding being arranged to offer a low resistance path for currents induced by the greater number of poles and a high resistance path for currents induced by the smaller number of poles.

[Claims 6 to 20 not printed in the Gazette.]

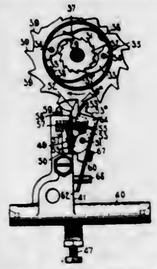
872,551. PIANO-ACTION. JOHN ANDERSON, Boston, Mass. Filed Apr. 5, 1907. Serial No. 366,466.



1. The combination with the rail of a piano action, of a metal flange member secured thereto provided with arms or tongues integral therewith, hammer-shanks pivoted to said arms, a pivoted repeating lever beneath each hammer shank, and an adjustable stop carried by the end of each repeating lever and adapted to engage the under side of the flange member when said lever is operated.

2. The combination with the rail of a piano action of a hammer-shank pivotally supported thereby, a wippen, a repeating lever pivoted on the wippen, and an adjustable stop carried by the end of the repeating lever adjacent the rail and projecting above said lever in position to engage the pivotal support of the hammer-shank when the wippen is operated.

872,552. TYPE-WRITING MACHINE. EDWIN E. BARNEY, Syracuse, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Apr. 25, 1906. Serial No. 313,605.



1. In a typewriting machine, the combination of carriage feed mechanism comprising a rack member and two dog members; and means for changing the character of carriage feed from "ordinary" to "reverse" and vice versa, said means comprising a single shiftable stop connected to be moved by one of said dog members and movable by hand at one time into a position to coöperate with the other dog member and at another time into a position in which said stop is inoperative on said other dog member.

2. In a typewriting machine, the combination of carriage feed mechanism, comprising a rack member and two dog members; and means for changing the character of carriage feed from "ordinary" to "reverse" and vice versa, said means comprising a single shiftable stop mounted on one dog member and movable by hand at one time into position to coöperate with the other dog member and at another time into a position in which said stop is inoperative on said other dog member.

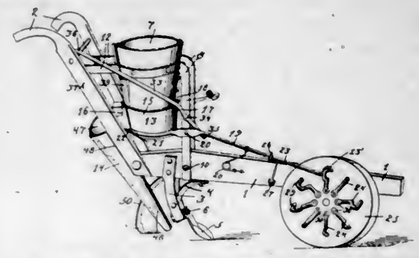
3. In a typewriting machine, the combination of an escapement rack; a dog carrier; a pair of dogs pivoted on said dog carrier; and means for changing the character of the carriage feed from "ordinary" to "reverse" and vice versa, said means comprising a single stop mounted on one dog and rotatable by hand at one time into position to coöperate with the other dog and at another time into a position in which it is inoperative on said other dog.

4. In a typewriting machine, the combination of a toothed escapement wheel; a pivoted vibratory dog carrier; a pair of dogs pivoted on said dog carrier and means for changing the character of carriage feed from "ordinary" to "reverse" and vice versa, said means comprising a single stop mounted on one dog and rotatable by hand at one time into position to coöperate with the other dog and at another time into a position in which it is inoperative on said other dog; and means for maintaining said shift member in desired position.

5. In a typewriting machine, the combination of a rack member; a dog carrier; a pair of dogs pivoted thereon; springs coöperative with said dogs and tending to press them independently in the same direction; and means for changing the character of carriage feed from "ordinary" to "reverse" and vice versa comprising a single stop secured on one dog and rotatable by hand at one time into a position to coöperate with the other dog and at another time into a position in which said stop is inoperative on said other dog.

[Claims 6 to 19 not printed in the Gazette.]

872,553. FERTILIZER-DISTRIBUTER. JOHN M. BISHOP, Huntsville, Ala. Filed May 29, 1907. Serial No. 376,336.



1. A fertilizer distributer comprising a beam, handles thereon, a standard depending from said beam, a discharge shoe arranged at the rear of the standard, angular brackets connecting said beam and handles, a hopper supported in said brackets above the rear portion of the beam, a vibratory bottom for the hopper pivoted at its forward end to the same and having at its rear end an outlet to discharge fertilizer into the shoe, a tappet wheel journaled upon the forward portion of the beam, a tappet lever pivoted upon one of said brackets and having one end shaped to engage the bottom of the hopper and its other end shaped to engage the tappets on said wheel, and a controlling lever pivoted intermediate its ends upon one of said brackets and having one of its ends projecting rearwardly to provide a handle and its other end bent angularly and engaged with the forward end of the tappet lever to elevate the same to an inoperative position, substantially as described.

2. A fertilizer distributer comprising a beam, a hopper arranged at the rear portion of the same, a vibratory bottom for said hopper, a tappet wheel upon the forward portion of the beam and provided with laterally projecting tappets, a tappet lever pivoted intermediate its ends and having its rear end bent inwardly to engage the under face of said hopper bottom and its forward end shaped to engage said tappets, a spring for actuating the tappet lever to hold its forward end in engagement with the tappets and a controlling lever pivoted intermediate its ends and having one of its ends projecting rearwardly to provide a handle and its other end projecting forwardly and bent angularly to take under the front end of the tappet lever to raise the same to an inoperative position, substantially as described.

3. A fertilizer distributer comprising a beam, handles thereon, a standard upon said beam, a shoe having a discharge arranged in rear of said standard, angular brackets having their lower ends secured to the beam and their upper or rear ends secured to the handles, a hopper secured to and supported between said brackets, a vibratory discharge bottom for said hopper, a tappet wheel, a tappet lever pivoted intermediate its ends upon one of said brackets and having at its rear end a laterally projecting arm to engage and support said discharge bottom and its forward end shaped to engage the tappets on said wheel, a spring for actuating said tappet lever, a controlling lever for moving said tappet lever to an inoperative position, a controlling gate for regulating the discharge of the contents of the hopper, and a resilient bar or rod carried by the beam and having a mixing point or shovel to travel in rear of the discharge end of said shoe, substantially as described.

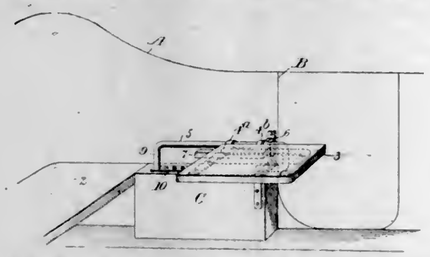
4. In a fertilizer distributer, a beam, a standard carrying a plow point or shovel, a fertilizer discharge shoe arranged in rear of said beam, a vertically extending guide arranged upon one side of said beam, and a resilient rod or bar arranged horizontally upon one side of the beam and extending through said guide for vertical movement therein, the front end of said rod or bar being fixed to the beam and the rear end of the same being curved downwardly and terminating in a covering and mixing shovel arranged in rear of said shoe, substantially as described.

5. In a fertilizer distributer, a beam, handles thereon, a hopper supported above the rear portion of the beam

in front of said handles and formed with an open lower end and a discharge opening in its rear side, a gate on the rear side of said hopper to control said discharge opening, a hook upon the front side of the hopper, a vibratory bottom for the hopper provided with an upwardly extending flange to receive the lower end of the hopper, the rear portion of said bottom and its flange being arranged to provide a discharge spout, a loop or bail arranged upon the front portion of the flanges of the bottom and engaged with the hook on the hopper to pivotally suspend said bottom, a wear plate arranged upon the under face of said bottom and a pivoted tappet lever adapted to engage said wear plate to vibrate said bottom, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

872,554. VEHICLE-SEAT. WILLIAM BREWSTER, Mount Carmel, Conn. Filed Oct. 23, 1906. Serial No. 340,163.



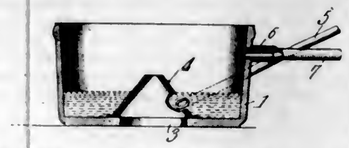
1. A device of the class described comprising a support and guide bar having one end provided with a leg standard connected to the support, the other end of the bar projecting beyond the support and having a return elbow bearing against the support to space the bar therefrom, a seat mounted to slide and rotate upon the guide bar, a latch member carried by the seat, a keeper bar in substantial parallelism with the guidebar in position for frictional engagement by the latch to prevent swinging of the seat during its sliding movement, and a stop device disposed for engagement by the latch when the latter has cleared the keeper bar and the seat has been turned into its operative position.

2. A device of the class described comprising a guide bar, a seat, a slide carried by the seat and embracing the guide bar to slide and turn thereon, a latch member carried by the slide, a keeper bar below and in substantial parallelism with the guide bar in position for frictional engagement by the latch to prevent swinging of the seat during its sliding movement, and means disposed for engagement by the latch when the latter has cleared the keeper bar and the seat has been turned into its operative position.

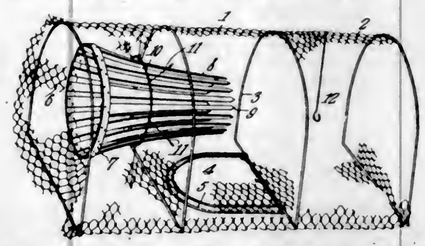
3. The combination with a vehicle body, of a guide bar spaced from one side of the body, a seat slidable upon the guide bar and capable of being swung thereon into operative and inoperative positions, a keeper bar secured to the adjacent side of the vehicle below and in substantial parallelism with the guide bar, a latch member carried by the seat and frictionally engaging the keeper to support the seat in an upright position, the seat capable of being turned down into a horizontal position when the latch has cleared one end of the keeper bar, and means upon the side of the vehicle for engagement by the latch in the horizontal position of the seat to support the seat in its operative position.

872,555. ORE-CONCENTRATOR. JOHN R. CAPPS, Middletown, Cal. Filed June 21, 1907. Serial No. 380,120.

In a concentrator of the character described the combination with a stationary bowl having a central orifice in the bottom thereof and a hollow frusto-conical extension upon the bottom of the bowl and surrounding the orifice, said extension being fixed within the bowl and constituting an outlet for tailings; of a tangentially disposed pipe inclined downward toward the bottom of the bowl and opening into the bowl, said pipe being disposed to direct fluid under a head into the bowl to produce a whirling action, an outlet pipe extending from the bowl adjacent the top thereof, a flexible hose extending from said pipe, and discharging means connected to the bowl adjacent the bottom thereof, the upper end of the frusto-conical extension being located in a horizontal plane extending below the outlet pipe.



872,556. FISH-TRAP. EUGENE B. CARWILE, Atlanta, Tex. Filed Aug. 5, 1907. Serial No. 387,125.



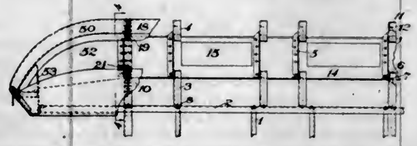
1. In a trap the combination with a cage having an inwardly directed end wall provided with an inlet opening; of flexible converging tongues secured around the inlet and extending into the cage, and combined centering and retaining means loosely surrounding the tongues and supported within the cage.

2. In a trap the combination with a cage having an inwardly extending end wall; of a ring secured to the wall, flat metallic tongues secured to the ring and extending into the cage, said tongues converging, and a combined centering and retaining ring supported within the cage and surrounding the tongues.

3. In a trap the combination with a cage having an inwardly extending end wall; of a ring secured to said wall, flat metallic tongues secured to the ring and extending into the cage, said tongues converging, a combined centering and retaining ring surrounding the tongues, and radial supporting devices connecting the ring and cage.

4. A trap comprising a cage having an inwardly directed end wall provided with an inlet opening, a ring secured to said wall and around the opening, flat metallic tongues secured at one end to the ring and extending into the cage, said tongues being tapered and converging, a combined centering and retaining ring surrounding and normally spaced from the tongues, and radial devices connecting the ring and the cage.

872,557. PASSENGER AND LIKE CAR. ANDREW CHRISTIANSON, Butler, Pa., assignor to Standard Steel Car Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Aug. 25, 1906. Serial No. 332,014.



1. In a metallic car the combination of side frames, carlines connected to the side frames and comprising lower deck members, upper deck members and vertical connecting members, the upper deck members being of pressed channel

shapes with the webs arranged vertically and secured to the vertical connecting members.

2. In a metallic car the combination of side frames, carlines connected to the same and comprising lower deck members, and vertical connecting members, the upper deck members being of channel form having flanges of different widths.

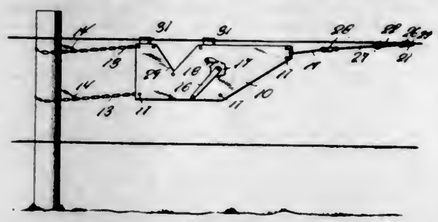
3. In a metallic car, the combination of side frames, carlines connected to the same and comprising lower deck members, upper deck members, and vertical connecting members, the upper deck members being pressed channels having top and bottom flanges, the former being wider than the latter, and also having end flanges for securing the downturned edges of the roof sheets.

4. In a metallic car, the combination of side frames, carlines connected to the same and comprising lower deck members, upper deck members, and vertical connecting members, the lower deck members being of channel form having the webs arranged vertically and secured directly to the vertical connecting members.

5. In a metallic car, the combination of side frames, carlines connecting the same and comprising lower deck members, upper deck members, and vertical connecting members, the lower deck members being of pressed channel shape having the web arranged vertically and the top flange wider than the bottom flange.

[Claims 6 to 20 not printed in the Gazette.]

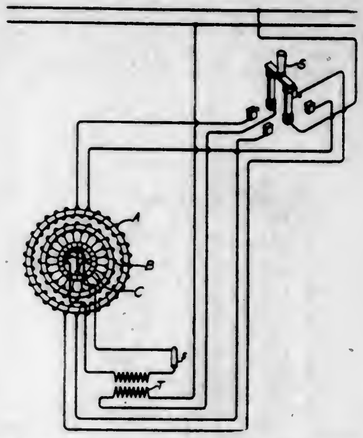
872,558. WIRE-STRETCHER. JAMES B. CROCKETT, Glendive, Mont. Filed July 14, 1906. Serial No. 326,224.



1. A device of the class described comprising a pair of plates connected in spaced parallel relation, the plates being provided at corresponding points in their upper edges with recesses, and having their forward ends curved outwardly, a wire gripping device arranged at each side of the recesses in the plates and adapted to grip the end portions of wires to be spliced, a shaft journaled in the plates, a crank handle connected with the shaft whereby the same may be rotated, a ratchet carried by the shaft, a pawl carried by one of the plates and resting normally in engagement with the ratchet, a cable connected with the shaft and adapted to be wound thereon when the shaft is rotated, said cable being extended between the outwardly curved forward ends of the plates, and a wire gripping device carried at the end of the cable.

2. A device of the class described comprising a pair of plates connected in spaced parallel relation, the plates being provided at corresponding points in their upper edges with recesses, and having their forward ends curved outwardly, a wire gripping device arranged at each side of the recesses in the plates and adapted to grip the end portions of wires to be spliced, a shaft journaled in the plates, a crank handle connected with the shaft whereby the same may be rotated, a ratchet carried by the shaft, a pawl carried by one of the plates and resting normally in engagement with the ratchet, a cable connected with the shaft and adapted to be wound thereon when the shaft is rotated, bolts connecting the plates at their outwardly curved forward ends, and a cable connected with the shaft and adapted to be wound thereon when the shaft is rotated, said cable being extended between the bolts and the said outwardly curved forward ends of the plates, and a wire gripping device carried at the end of the cable.

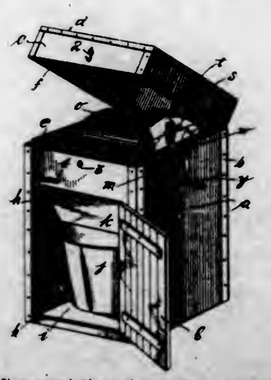
872,559. ALTERNATING-CURRENT MOTOR. FRIEDRICH EICHBERG, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Dec. 18, 1905. Serial No. 292,129.



1. The method of operating a single-phase motor of the commutator type which consists in starting the motor by short-circuiting the armature through brushes displaced from the line of primary magnetization and supplying to the armature through brushes displaced substantially ninety electrical degrees from the short-circuiting brushes a current adapted to produce a magnetic field displaced from the primary magnetization and after the motor is up to speed bringing the armature short-circuit and primary magnetization into line.

2. The method of operating a single-phase motor of the commutator type having two sets of brushes displaced from each other by approximately ninety electrical degrees, which consists in starting the motor by short-circuiting the armature through one set of brushes on a line displaced from the primary magnetization and supplying to the other set of brushes current adapted to produce a field displaced from the primary magnetization and after the motor is up to speed bringing the armature short-circuit and the primary magnetization into line.

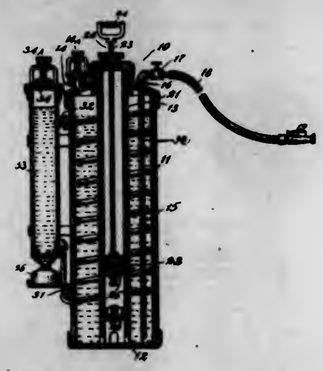
872,560. DUSTLESS ASH-SIFTER. EDWARD ELLIOTT, Calumet, Mich., assignor of one-half to Richard D. Jones, Calumet, Mich. Filed Apr. 17, 1907. Serial No. 368,784.



An ash sifter consisting of a casing; a shaft journaled in said casing; a sleeve mounted upon said shaft, the ends

of said sleeve being squared; straps mounted upon said squared ends; and a sleeve secured to said straps and mounted upon said shaft.

872,561. PROCESS OF REMOVING PAINT AND VARNISH. CHARLES J. FESS, Newark, N. J., assignor to The Palmer-Price Company, a Corporation of New Jersey. Filed June 26, 1907. Serial No. 380,868.

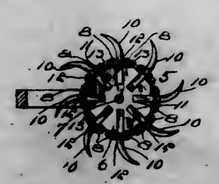


1. The herein-described process of removing paint or varnish which consists in heating a removing composition containing wax and spraying such heated composition upon a desired surface.

2. The herein-described process of removing paint or varnish which consists in heating a removing composition containing wax above the melting point of the wax and spraying said heated composition upon a desired surface.

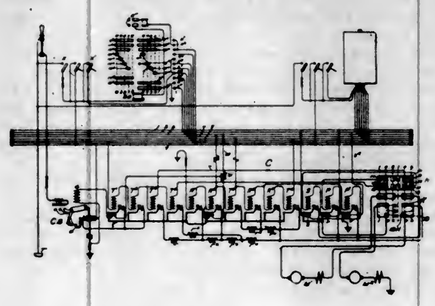
3. The herein-described process of removing paint or varnish which consists in heating a removing composition containing wax above the melting point of the wax to a temperature greater than that of the surface to which it is to be applied and spraying said heated composition under pressure upon a desired surface.

872,562. REVOLVING HARROW. JAMES T. HIBLER, Del Norte, Colo. Filed July 19, 1906. Serial No. 326,895.



A rotary harrow comprising, in combination, a pair of spaced polygonal wheels and a connecting axle; a series of pairs of spaced resilient plane-faced strips secured at opposite ends to the periphery of said wheels, each pair of strips being provided intermediate its ends with a series of pairs of openings formed transversely therethrough; a series of harrow teeth having their stems frictionally engaged with the inner side faces of each pair of strips and adjustable longitudinally and laterally therebetween, to different depths, and to different distances from each other, and a series of bolts engaged in the openings in each pair of strips, to regulate the tension of said strips upon said teeth.

872,563. CONTROL SYSTEM. GEORGE H. HILL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 27, 1905. Serial No. 289,155.



1. In a system of control, a motor circuit, a motor controller comprising a plurality of individual switches for governing said motor circuit, a governing system arranged to operate said switches normally in a predetermined order, and means for modifying said system so as to change the order in which certain of said switches are actuated.

2. In a system of control, a plurality of motors, a switch for cutting one of said motors out of circuit, a motor controller comprising a plurality of individual switches, a controlling system arranged to normally operate said switches in a predetermined order, and means controlled by said cut-out switch for changing the order in which certain of said switches are operated.

3. In a system of motor control, a motor circuit, a motor controller of a separately-actuated switch type including speed controlling switches, a governing system for said motor controller arranged to normally operate said speed controlling switches in a definite order, and means for modifying said governing system to vary the order of operation of certain of said speed controlling switches.

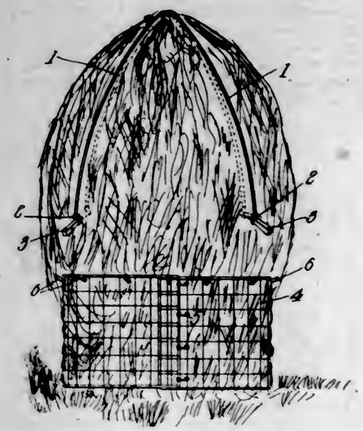
4. In a system of control, a plurality of motors, a resistance, a series parallel motor controller of the separately-actuated switch type including switches adapted to vary the amount of resistance in the motor circuit, a master controller and connections constructed and arranged to operate one of said resistance switches in the series position of the master controller and another in the parallel position, and means for modifying the connections so as to reverse the order in which said latter switches are operated.

5. In a system of motor control, a plurality of motors, a resistance, a series parallel controller arranged to connect said motors in series with a portion of said resistance in circuit and in parallel with a different portion of said resistance in circuit, and means for reversing the order in which said portions of resistance are included in the motor circuit.

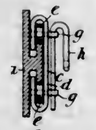
[Claims 6 to 9 not printed in the Gazette.]

872,564. HAY STACK OR RICK PROTECTOR. JAMES L. HOTT, Lahmansville, W. Va. Filed Sept. 5, 1907. Serial No. 391,509.

A hay stack protector comprising a plurality of crossed wires having their terminals provided with loops, separate anchors passing through the loops and adapted to be thrust into the hay of the stack, an open work metallic girdle adapted to surround the base of the stack and provided with means for holding its ends interlocked, and anchors adapted to pass through the meshes of the girdle and into the hay of the stack.

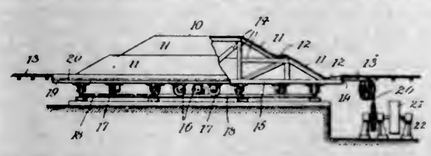


872,565. CURTAIN-ROD. ROBERT C. JOHNSON and MATTHEW H. MYERS, Leicester, England. Filed May 24, 1907. Serial No. 375,510.



The combination with a curtain rod or bar of double channel section having the plate on one side of the channel broader than the plate on the other side of the said channel, of runners adapted to travel on the said rod or bar and to have curtain hooks attached to them, each runner being provided with two eyes placed one above the other to receive the straight shank of a hook, substantially as described.

872,566. ROUNDABOUT. GASTON LACOMME, New York, N. Y., assignor of one-half to Edward C. Eustace, New York, N. Y. Filed Aug. 28, 1907. Serial No. 390,450.



1. In a roundabout, a central raised platform, a downwardly sloping riser surrounding the platform, and a tread surrounding the riser, combined with an axially rotatable frame that supports the platform, riser and tread, substantially as specified.

2. A roundabout composed of an axially rotatable frame having a central raised platform, a downwardly sloping riser surrounding the platform, and an upwardly sloping tread surrounding the riser, substantially as specified.

3. A roundabout composed of an axially rotatable frame having a central raised platform, a downwardly sloping riser surrounding the platform, an upwardly sloping tread surrounding the riser, and a floor flush with the outer edge of the tread, substantially as specified.

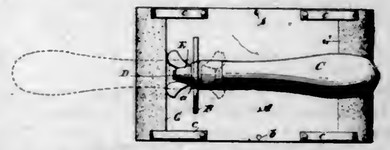
872,567. CURETTE. LEWIS G. LANGSTAFF, New York, N. Y. Filed May 7, 1906. Serial No. 315,513.



1. A curette having its outer end turned back to form a rounded hook, said hook being provided with a substantially straight scraping edge on its turned back portion and a curved scraping edge at the side of the hook, and also being provided with one or more openings adjacent to said straight and curved scraping edges.

2. A curette having its outer end turned back to form a rounded hook, said hook being provided with a substantially straight scraping edge on its turned back portion and curved scraping edges at the sides of the hook, and also provided with one or more openings adjacent to said straight and curved scraping edges.

872,568. SANDPAPER-HOLDER. MARTIN LINDEROTH, Newark, N. J. Filed July 17, 1907. Serial No. 384,199.



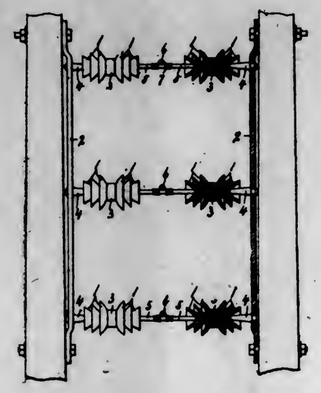
1. In a sand paper holder, the combination with the foundation and an upright applied in connection therewith, of a removable handle and means for securing the same in connection with the upright and on either side thereof, the upright being located at one side of the central part of the foundation and the foundation being supplied with springs for holding the sand paper in place, for the object set forth.

2. The herein described sand paper holder comprising the foundation, an upright applied thereon, a removable handle, means for securing the handle in connection with the upright and on either side thereof, a pad fixed on the foundation, and springs applied on the foundation for holding the sand paper in position, all being constructed, combined and arranged, substantially as shown and described.

872,569. SYSTEM OF INSULATION FOR HIGH-VOLTAGE ELECTRIC CONDUCTORS. FRED M. LOCKE, Victor, N. Y. Filed Apr. 9, 1907. Serial No. 367,252.

1. A system of insulation for high voltage currents comprising a series of co-axial insulators each composed of sections nested together, center pins entering the inner

sections of said insulators and holding them in axial alinement, and supports for the end center pins.



2. A system of insulation for high voltage currents comprising a series of co-axial petticoat insulators nested together with their axes in a horizontal position, center pins entering the inner sections of said insulators, and holding them in axial alinement, and supports for the end center pins.

3. A system of insulation for high voltage electric conductors comprising a pair of insulators arranged end to end, a band encircling the adjacent ends of the insulators for holding them in axial alinement, each insulator being composed of a series of petticoat sections nested together with their open ends facing in opposite directions.

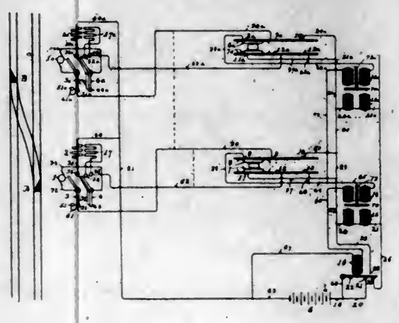
4. A system of insulation for high voltage electric conductors comprising a plurality of pairs of insulators, those of each pair being arranged end to end, metal bands encircling adjacent ends of the insulators of each pair, each insulator comprising a series of petticoat sections nested together, those of each pair having their opposite ends facing in opposite directions, and center pins entering the open ends of the center sections of each insulator.

872,570. RAILWAY SWITCHING AND SIGNALING APPARATUS. WILLIAM MACOMBER, Buffalo, N. Y., assignor to General Railway Signal Company, Buffalo, N. Y., a Corporation of New York. Filed Mar. 15, 1904. Serial No. 198,220.

1. In a railway switching apparatus, a source of electric energy, a motor and means for moving the rail switch, an indicating device, a controller, two wires leading from said controller to said motor, a common return wire, one of said two wires and said common capable of being included in a circuit to move the motor in one direction and the other of said two wires and said common capable of being included in a circuit to move the motor in the other direction, and means for shunting the battery current from common through said indicating device, and through said two wires, after each movement of the rail switch.

2. In a railway switching apparatus, a source of electric energy, a switch motor and mechanism for moving the rail switch, a controller, an indicating device, two wires leading from said controller to said motor, a common return wire, one of said two wires and said common capable of being included in a circuit to move the motor in one direction and the other of said two wires and said common capable of being included in a circuit to move the motor in the other direction, and means controlled by the throw of the rail switch for cutting out said common and establishing a circuit including said two wires and said indicating device with said source of energy.

3. A source of electric energy, a motor and mechanism for actuating the rail switch, a controller, an indicating device, two wires leading from controller to motor, a common wire capable of being included alternately with one of said two wires to form the operating circuits for actuating the motor in two directions, a pole-changing switch and means for causing said pole-changing switch to cut out said common and close a circuit of the battery including said two wires and said indicating device.



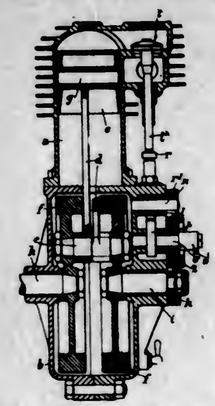
4. A source of electric energy, a motor and mechanism for moving the rail switch, a controller, an indicating device, a common return wire, a pole-changing switch, two wires leading from said controller to said pole-changing switch acting alternately in conjunction with said common wire to form an operating circuit, means for producing such alternate action by the movement of said pole-changing switch and the movement of said controller, a safety magnet, an indicating magnet, a cut-out magnet, means for closing said safety magnet in the operating circuits, means for closing said indicating magnet in a circuit embracing said two wires when the rail switch has completed a movement, means for causing said cut-out magnet to cut out said safety magnet when the current has shunted from the common return wire to the indicating circuit, and means for cutting off the battery after indication.

5. A source of electric energy, a motor and mechanism for moving the rail switch, an indicating device, a controller, a pole-changing switch, two wires leading from controller to motor, a common return wire said two wires coöperating alternately with said common wire to form the circuits for actuating the motor in the two directions and said two wires coöperating to form an indicating circuit after each rail switch movement when the common return is cut out, mechanical means for storing up energy by the movement of the rail-switch to cause the throw of said pole-changing switch, means for releasing said stored-up energy to cause a half-throw of said pole-changing switch to establish the indicating circuit when a switch movement is completed and means for permitting said stored-up energy to complete the throw of said pole-changing switch after indication.

[Claims 6 to 38 not printed in the Gazette.]

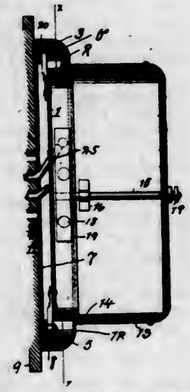
872,571. INTERNAL-COMBUSTION ENGINE. FRITZ MOSER, St. Aubin, Switzerland. Filed Dec. 14, 1906. Serial No. 347,812.

In an internal combustion engine, the combination of valve-actuating devices; a shaft for operating the same; a casing for said devices; a cover for said casing, said cover being formed on its outer face with an interrupted annular rib and said shaft projecting through said cover within said rib; an electric ignition device mounted upon said rib; and means mounted on the projecting end of said shaft for operating said ignition device; the interruption



in said rib permitting the oil which exudes from said casing along said shaft to flow away from said ignition device.

872,572. ELECTRIC-METER CASE AND SUPPORT. THOMAS E. MURRAY, New York, N. Y. Filed July 13, 1907. Serial No. 383,557.



1. In combination with a base, a back plate thereon, a flanged plate supported in front of said back plate, a rim surrounding said back plate and flanged plate, a cover in front of said flanged plate and having its edges bearing said rim, and means for securing said cover in place.

2. In combination with a base, a back plate having outwardly projecting side flanges, a flanged plate supported in front of said back plate, a rim surrounding said back plate and flanged plate, and having its rear edges bearing on said base, in which rim said back plate flanges fit, a cover in front of said flanged plate and having its edges bearing on said rim and means for securing said cover in place.

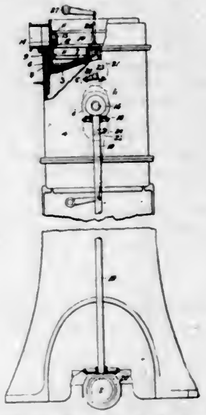
3. In combination with a base, a back plate of non magnetic metal thereon, a flanged plate supported in front of said back plate, a rim of non magnetic metal surrounding said back plate and flanged plate, a cover in front of said flanged plate and having its edges bearing on said rim, and means for securing said cover in place.

4. In combination with a base, a back plate thereon, a flanged plate, means for elastically supporting said flanged plate in front of said back plate, a rim surrounding said back plate and flanged plate, a cover in front of said flanged plate having a recess receiving the edge of the flange of said flanged plate and means for securing said cover in place.

5. In combination with a base, a back plate thereon, a flanged plate supported in front of said back plate, a rim surrounding said back plate and flanged plate, beyond which rim the flange of said flanged plate protrudes, a cover inclosing said flange and receiving the same in a recess formed around its inner wall, and means for securing said cover in place.

[Claims 6 to 12 not printed in the Gazette.]

872,573. VALVE MECHANISM FOR BLOWING-ENGINES AND COMPRESSORS. MARVIN A. NEELAND, Youngstown, Ohio. Filed Oct. 24, 1901. Serial No. 79,754.



1. In a blowing engine, a blowing cylinder having annular inlet and outlet ports in the same end of the cylinder, and an annular valve located concentrically within the cylinder head and common to said ports, the valve being movable axially to control the ports, substantially as described.

2. In a blowing engine, a blowing cylinder having annular inlet and outlet ports in the same end of the cylinder, and an annular valve located concentrically within the cylinder head and common to the ports, the valve being movable axially to control the ports and having an annular recess arranged to connect the inlet and outlet ports during part of the compression stroke, substantially as described.

3. In a blowing engine, a cylinder having inlet and outlet ports at its ends, valves for said ports, and meshed elliptical gears journaled eccentrically and connected to said valves; substantially as described.

4. In a blowing engine or compressor, a cylinder having inlet and outlet ports at each end, a valve at each end of the cylinder arranged to control both sets of ports, and gearing connections aranged to vary the relative velocity of said valves between inlet and outlet strokes; substantially as described.

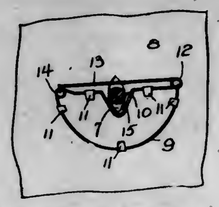
5. In a blowing engine or compressor, a cylinder having inlet and outlet ports at each end, a valve at each end of the cylinder arranged to control both sets of ports, gearing connections arranged to vary the relative velocity of said valves between inlet and outlet strokes, and means for varying the point in the stroke at which the valves uncover the ports; substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

872,574. BUTTONHOLE-SHIELD. JAMES NICKEL, McCracken, Kans. Filed June 8, 1907. Serial No. 377,942.

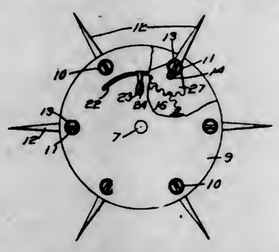
1. The combination, with a fabric having a button-hole formed therein, of a shield for the button-hole consisting of a pair of members disposed upon opposite sides of the fab-

ric, each member being provided upon one edge with an inwardly-directed notch adapted to register with the button-hole, one of said members being provided with a series of peripherally-disposed fingers adapted to be passed through the fabric and clenched against the other member, to hold the latter in place, the last-mentioned member including a movable locking member and a catch for engagement therewith.



2. A button-hole comprising a pair of members for application to opposite sides of a fabric containing a button-hole, one of said members having an opening to clear the button-hole and further provided with bendable fingers to be forced through the fabric, the other member being made from a single wire bent to form a frame providing a notch to clear the button-hole and further provided with a pair of coils at opposite sides of such member and a pin extending from one of said coils for the purpose set forth, the said wire-constructed member being adapted to be engaged and held by the bendable fingers of the first-mentioned member.

872,575. CULTIVATOR. JOHN W. NILSSON, Balfour, N. D. Filed Apr. 11, 1907. Serial No. 367,585.

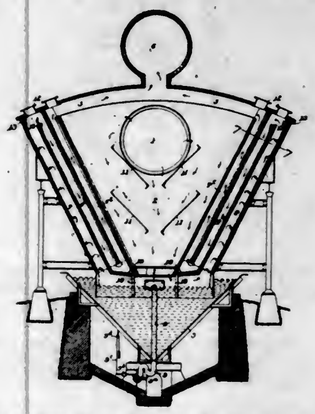


1. A machine of the type set forth comprising a frame, parallel shafts journaled therein, plates fixed in spaced parallel relation upon said respective shafts, rock shafts journaled in said plates and parallel to said first named shafts, teeth carried upon said rock shafts, means for simultaneously moving said rock shafts and the teeth carried thereby to selected positions, and means for fixing said rock shafts at any position to which they may be moved.

2. A machine of the type set forth comprising a frame, parallel shafts journaled therein, plates fixed in spaced parallel relation upon said respective shafts, rock shafts journaled in said plates and parallel to said first named shafts, teeth carried by said rock shafts, pinions loosely sleeved on said first named shafts, pinion sectors fixed on said rock shafts and meshing with said respective pinions, means for rotating said pinions, and means for holding said pinions at selected positions against rotation.

3. A machine of the type set forth comprising a frame, parallel shafts journaled therein, plates fixed in spaced parallel relation upon said respective shafts, rock shafts journaled in said plates and parallel to said first named shafts, teeth carried by said rock shafts, sleeves surrounding said first named shafts, pinions carried singly by each of said sleeves, radially extending arms carried singly by each of said sleeves, one of said plates at the end of each of said first named shafts being provided with an arcuate slot, rods slidably projected through the pinions and arms of each of said shafts, said rod having a portion thereof extending through said slot of the plate adjacent thereto, members fixed singly on each of said first named shafts adjacent said pinions, and having an arcuate series of openings therein, and pinion sectors fixed on said rock shaft and meshing with said respective pinions.

872,576. GAS-PURIFIER. DAVID F. NISBET, Wilkinsburg, Pa. Filed July 8, 1907. Serial No. 382,587.



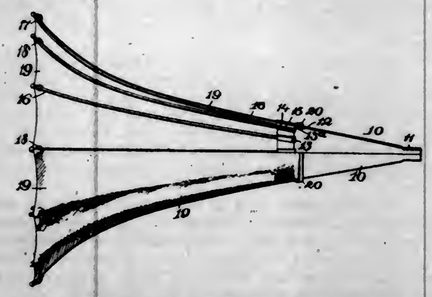
1. In an apparatus of the class described, a gas receiving chamber having an open bottom, a water-tank below the chamber, a gas-washing pass in one of the walls of said chamber, means for supplying water to said pass, and a gas reheating pass contiguous to said chamber and connected to the gas-washing pass.

2. In an apparatus of the class described, a gas receiving chamber, a pair of series washing passes in one wall, and sides of the chamber, and reheating passes in the roof thereof.

3. In an apparatus of the class described, a gas receiving chamber, a pair of series washing passes in one wall, and reheating passes in the roof in series with the chamber and the respective washing passes.

4. In an apparatus of the class described, a gas receiving chamber, a washing pass and a reheating pass in one side wall, and a reheating pass in the roof, said passes and chamber being connected in series.

872,577. PHONOGRAPH-HORN. FRANK B. NORMAN, West Orange, N. J., assignor of one-half to Samuel I. Kopatousky, Newark, N. J. Filed Apr. 9, 1907. Serial No. 367,157.



1. A phonograph horn comprising a tapered sleeve, rods fitting in the tapered sleeve in extension thereof and individually detachable, means for preventing the rods from turning, and a fabric covering having one end secured to the tapered sleeve, and the other end secured to the projecting ends of the rods.

2. A phonograph horn comprising a tapered sleeve on its small end, the larger end of the horn being made of a fabric, and stiffening rods inside the fabric and being individually and detachably secured to the tapered sleeve.

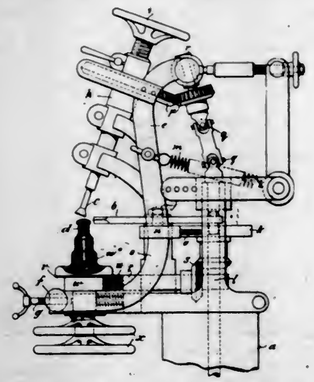
3. A phonograph horn comprising a tapered sleeve on its small end, the large end of the tapered sleeve having rectangular channels, rods having their ends formed to fit the channels and placed therein, and a fabric covering outside of the rods secured on one end to the tapered sleeve, and having its other end secured to the rods.

4. A phonograph horn comprising a tapered sleeve, an annular rib on the tapered sleeve near its large end, rods individually and detachably secured to the large end of the tapered sleeve, and a fabric covering having one end detachably secured to the projecting ends of the rods, the small end of the fabric being secured around the tapered sleeve beyond the annular rib.

5. A phonograph horn comprising a tapered sleeve, rods secured to the tapered sleeve and projecting from its large end, means on the ends of the rods for securing a fabric covering thereto, means for attaching it to the securing means on the ends of the rods, an annular rib on the tapered sleeve, and means for binding the small end of the fabric covering around the tapered sleeve adjacent to the annular rib.

[Claims 6 to 13 not printed in the Gazette.]

872,578. MACHINE FOR PRODUCING SEWING-RIBS ON THE SOLES OF BOOTS AND SHOES. WILHELM NOWOTNY, Street, England, assignor to The Phoenix Boot Machinery Company, Limited, Street, England. Filed May 10, 1907. Serial No. 372,988.



1. A machine for producing sewing ribs for boot and shoe soles comprising a stationary frame, an upper press tool, a lower forward feeding tool, an upsetting tool, a swinging frame for carrying the upper press tool and means for pivoting the said frame at its lower end to the stationary frame substantially as described.

2. A machine for producing sewing ribs for boot and shoe soles comprising an upper press tool, a lower forward feeding tool, an upsetting tool and a swinging frame carrying the upper press tool, a driving shaft for the machine and a universally jointed shaft interposed between the said driving shaft and the upper press tool substantially as described.

3. A machine for producing sewing ribs for boot and shoe soles comprising an upper press tool, a lower forward feeding tool, means for adjusting the lower forward feeding tool higher or lower, an upsetting tool, means for adjusting the lower forward feeding tool horizontally with regard to the end of the upsetting tool and means for imparting a swinging movement to the upsetting tool, substantially as described.

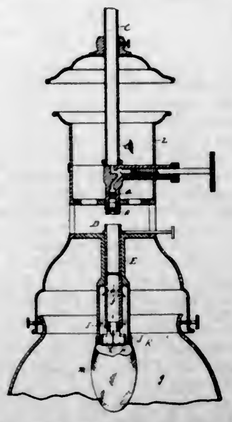
4. A machine for producing sewing ribs for boot and shoe soles comprising an upper press tool, a lower forward feeding tool, an upsetting tool, means for adjusting the lower forward feeding tool horizontally with regard to the end of the upsetting tool and means for supporting the lower forward feeding tool elastically substantially as described.

872,579. DOOR-PLATE AND HANDLE. ALBERT A. PAGE, East Haven, and JOHN H. SHAW, New Haven, Conn., assignors to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Mar. 10, 1906. Serial No. 305,339.



The combination with the door or escutcheon plate, having perforations therein; of a hollow handle having its ends internally screw threaded; cylindrical pieces adapted to be screwed into said handle ends and project through said perforations; and washers and nuts adapted to be screwed on to said pieces and bear against opposite sides of said door or escutcheon plate, substantially as described.

872,580. COMBINING AND MIXING TUBE. EDWARD H. PALMER, Detroit, Mich. Filed Apr. 12, 1907. Serial No. 367,750.



1. In a device of the kind described, the combination of concentric tubes spaced to produce an annular chamber, passages through the inner tube, a tip provided with a

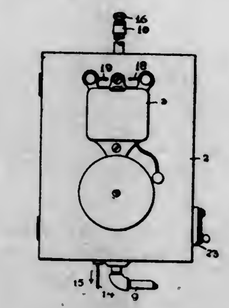
cross slot inserted in the end of the inner tube and forming between itself and the outer tube an annular delivery passage for said annular chamber, said cross slot forming an inner passage surrounded by said annular passage, substantially as described.

2. In a device of the kind described, the combination of an inner and outer tube arranged to form an intermediate chamber, holes through said inner tube leading to said chamber, the lower end of said inner tube being arranged to form an exit between it and the outer tube, and a slot *h* in the lower end of said inner tube communicating with the interior thereof and with said intermediate chamber.

3. In a device of the kind described, the combination of an inner and outer tube arranged to form an intermediate chamber, holes through said inner tube to said chamber, the lower end of said inner tube being arranged to form an exit between it and the outer tube, a slot *h* in the lower end of said inner tube connecting with the interior thereof and with said intermediate chamber, and a ferrule over the end of said inner tube.

4. In a device of the kind described, concentric tubes spaced to produce an annular chamber, the inner tube being provided with passages communicating between the interior thereof and said annular chamber, a tip of larger diameter than the interior tube and provided with a cross slot, said tip being inserted in the end of the inner tube and forming between itself and the outer tube an annular passage, a ferrule surrounding the tip and dividing the said annular passage from the passage produced by said slot, substantially as described.

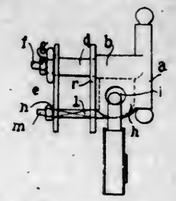
872,581. ALARM APPARATUS. LAWRENCE W. PENNINGTON, Worcester, Mass. Filed Dec. 15, 1905. Serial No. 291,940.



1. In an alarm apparatus, the combination with means for producing an audible alarm forming part of an electric circuit, of a swinging lever, an arm carried by one end of said lever and curved concentrically with its axis of rotation, a contact point arranged in the path of said curved arm, said contact point and said arm forming the terminals of said electric circuit, a rocking pan connected with said arm and containing liquid, said pan provided with a partition having openings of different sizes through the larger of which the liquid passes when said lever is swung to complete the contact and through the smaller of which the liquid passes to rock the pan, thereby reversing the movement of said pan and its connecting swinging arm.

2. In an alarm apparatus, the combination with a gas burner, a key for controlling the admission of gas to said burner, a lever connected with said key, means for swinging said lever to open said key, and a rocking pan connected with said lever and containing liquid, said pan provided with a partition having openings of different sizes through the larger of which the liquid passes when the lever is swung to open the key, and through the smaller of which the liquid passes to rock the pan, thereby reversing the movement of said lever and closing the key.

872,582. DOOR-LOCK. FERDINAND PIENING, Rendsburg, Germany. Filed Dec. 17, 1906. Serial No. 348,190.

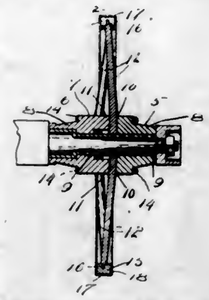


1. In a door lock the combination of a handle, a plate like stop (*h*) fixed to one side of said handle, a plate fixed below said handle, and means to place the stop (*h*) against the plate (*k*) if the bolt is locked substantially as and for the purpose set forth.

2. In a door lock the combination of a handle, a plate like stop (*h*) fixed to one side of said handle, a hole (*i*) provided in said plate like stop, a plate fixed below said handle, a hole (*o*) provided in said plate, means to locate the holes in such a manner that they cover themselves if the handle is turned, means to place the stop (*h*) against the plate (*k*), and a means for locking the parts together substantially as and for the purpose set forth.

3. In a door lock the combination of two handles, means to screw one handle into the other, a slit provided in a bar (*b*), of one handle a plate (*k*), a lock located in said plate and means to prevent a turning of the handles and bolt substantially as set forth.

872,583. WHEEL. LAZAR PIERRE, Folsom, La. Filed Jan. 3, 1906. Serial No. 294,491.

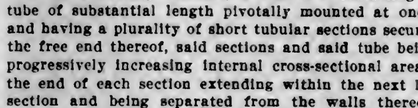


A wheel comprising, in combination, a hub consisting of two cylindrical members each having an opening extending longitudinally therethrough, and a series of slots formed in its inner end, the slots of each member radiating directly from the longitudinal opening therein and communicating therewith, said members being disposed with the portions between the slots in interlocking engagement; an axle-box disposed within the longitudinal opening of said members; spokes having tapered inner ends fitted in said slots and extending into said opening, in contact with the axle-box; a felly carried by the outer ends of said spokes; and clamping bolts engaged in said members and extending between the spokes, to retain the latter in position and prevent endwise movement thereof.

872,584. SUPPORT FOR CORPSES IN CASKETS. JOSEPH I. RENO, Rochester, Pa. Filed May 28, 1907. Serial No. 376,182.

1. A support for a corpse, comprising standards, blocks apertured to receive the standards and adapted to slide thereon when horizontal, and to grip the standards when deflected, a rest and links connecting the rest and the blocks.

2. In a support of the character described in combination with standards, a rest adapted to be tilted in a plurality of directions and members adjustably mounted on the standards and connected to the rests, and adapted to be held in adjusted position by a weight on the rests.



3. A support for a corpse, comprising standards, blocks apertured to receive the standards and adapted to slide thereon when normally disposed, and to grip the standards when deflected, a rest and means for flexibly connecting the rest and the blocks.

872,585. ORANGE VAT-DYE AND PROCESS OF MAKING SAME. ALBRECHT SCHMIDT and CARL PRETZELL, Höchst-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed July 24, 1907. Serial No. 385,318.

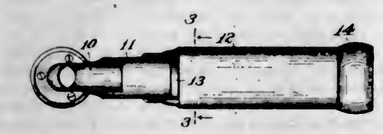
1. The process herein described of making orange colored vat dyestuffs, which consists in treating with a halogen the brown vat dyestuff obtained by heating meta-ace-tylamidophenylthioglycollic-ortho-carboxylic acid

$$H_4H_3\begin{cases}COOH & (6)\\ SCH_2COOH & (1)\\ NHOC.CH_3 & (3)\end{cases}$$

with alkalihydrate and by oxidizing the leuco bodies thus obtained.

2. As new product, the halogenated orange colored vat dyestuff, being insoluble in water, alkalies, dilute acids, alcohol, acetone, soluble with difficulty in hot nitrobenzene with an orange-brown color, soluble in concentrated sulfuric acid with a cornflower-blue color, yielding with alkaline hydrosulfite a vat from which cotton and wool are dyed in fast orange colored tints.

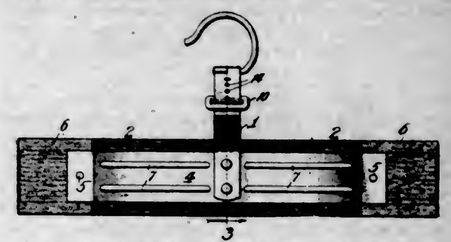
872,586. TALKING-MACHINE. HORACE SHEBLE, Philadelphia, Pa., assignor to Hawthorne & Sheble Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 21, 1906. Serial No. 348,910.



1. In a talking machine, a tone-arm consisting of a tube of substantial length pivotally mounted at one end and having a plurality of short tubular sections secured to the free end thereof, said sections and said tube being of progressively increasing internal cross-sectional area and the end of each section extending within the next larger section and being separated from the walls thereof by space open to the interior of the tube, and a sound-box secured to the end of the smallest section, substantially as set forth.

2. In a talking machine, a tone-arm consisting of a tube of substantial length pivotally mounted at one end and having a plurality of short tubular sections secured to the free end thereof, said sections and said tube being of progressively increasing diameter, the end of each section extending within the end of the next larger section and being separated from the walls thereof by space open to the interior of the tube, and the smallest of said sections being curved in the direction of its length, and a sound-box secured to the end of said curved section, substantially as set forth.

872,587. TROUSERS-HANGER. CLIFFORD J. SPRUCE, Chicago, Ill., assignor to The Mackey-Lovejoy Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed May 31, 1907. Serial No. 376,652.



1. A trousers hanger comprising supporting arms, pressure plates, means whereby said supporting arms may be drawn together, and connections between said supporting arms and said pressure plates, said connections extending from said supporting arms to points adjacent the ends of said pressure plates.

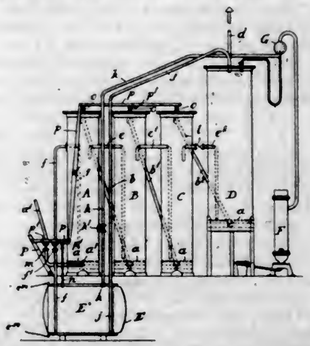
2. A trousers hanger comprising coacting yielding pressure plates, and reinforcing members secured near their ends to said pressure plates at points adjacent the ends thereof.

3. A trousers hanger comprising co-acting pressure plates, and arched reinforcing members secured near their ends to said pressure plates at points adjacent the ends thereof.

4. In a trousers hanger, opposed pressure plates, arched reinforcing members co-acting with said pressure plates on either side of the center thereof, and yieldingly connected supporting arms secured to said reinforcing members.

5. In a trousers hanger, opposed pressure plates, arched reinforcing members secured near their ends to said pressure plates at points on either side of the center thereof, garment engaging members extending along the face of said pressure plates and folded over the ends thereof and secured between said reinforcing members and said pressure plates.

872,588. APPARATUS FOR THE MANUFACTURE OF CARBON DIOXID. JOHN C. STEAD, London, England. Filed Aug. 23, 1905. Serial No. 275,335.



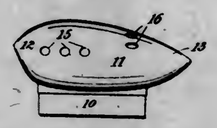
1. Apparatus for the recovery of CO_2 from furnace or like gases by alternate bi-carbonation and decarbonation of a CO_2 absorbing lye through which said gases are passed, comprising a plurality of bi-carbonating vessels connected in series by bent pipes, and by separate gas-circulating pipes, and a separate decarbonating boiling-off vessel arranged on a lower level than said bi-carbonating vessels and connected with the first and the last of the series of bi-carbonating vessels, whereby the lye is returned to the last of the bi-carbonating vessels by fluid pressure generated in said boiling-off vessel.

2. Apparatus for the recovery of CO_2 from furnace or like gases by alternate bi-carbonation and decarbonation of a CO_2 absorbing lye through which said gases are passed, and in which the lye is circulated in one direction by the head of liquid and returned by fluid pressure, consisting in the combination of a plurality of bi-carbonating vessels connected in series by pipes through which the lye flows from vessel to vessel, separate gas-circulating pipes connecting the vessels and through which pipes the gas is made to pass from vessel to vessel in the reverse direction from that in which the lye flows, a boiling-off vessel placed below said bi-carbonating vessels, pipes *f* and *j* connecting the boiling-off vessel with the first and last of the series of bi-carbonating vessels, the pipe *f* extending to near the bottom of the boiling-off vessel and the pipe *j* leading to the last bi-carbonating vessel extending to near the bottom of said boiling-off vessel, cocks on said pipes, means for shifting said boiling-off vessel, and means for rapidly heating the contents of the boiling-off vessel to first drive off the CO_2 from said vessel and thereafter to return the lye through pipe *j* to the connected bi-carbonating vessel, such return of the lye to the connected bi-carbonating vessel being effected by the fluid pressure generated in the boiling off vessel.

3. In apparatus for recovery of CO_2 from furnace or like gases by alternate bicarbonation and decarbonation of a CO_2 absorbing lye, through which said gases are passed, the combination of a plurality of bicarbonating vessels connected in series by gas-circulating pipes leading from the upper end of one vessel to the lower end of the next one, separate inverted U-shaped lye-conducting pipes leading from near the lower end of one vessel to near the upper end of the next, a boiling-off vessel at a lower level than said bi-carbonating vessels, a siphon connection between the first one of the latter and the boiling-off vessel, to charge the latter, a separate connection between the boiling-off vessel and the last one of the bicarbonating vessels, whereby the decarbonated charge of lye is returned thereto by pressure generated in the boiling-off vessel, and a separate outlet for the CO_2 driven off from the charge in the boiling-off vessel.

4. In apparatus for the recovery of CO_2 from furnace or like gases by alternate bicarbonation and decarbonation of a CO_2 absorbing lye through which said gases are passed, a plurality of bicarbonating vessels connected in series by separate lye-conducting and gas-circulating pipes, the head of liquid in the last vessel being greater than in the others, a decarbonating boiling-off vessel below the level of the bicarbonating vessels, a siphon connection between the first one of the last vessels and the boiling-off vessel to introduce a charge of bicarbonated lye thereto, and means to discharge the decarbonated lye from the boiling-off vessel to the last one of the bicarbonating vessels by fluid pressure in the boiling-off vessel generated by heat.

872,589. HARMONICA. FERDINAND STRAUSS, New York, N. Y. Filed Aug. 22, 1907. Serial No. 389,747.

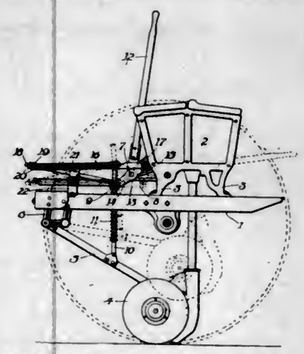


1. A harmonica provided with a communicating ovoid resonating chamber, having closed tapering ends, that extend beyond the ends of the harmonica body, substantially as specified.

2. A harmonica provided with a communicating ovoid resonating chamber that increases in diameter from the treble toward the bass of the harmonica and has closed tapering ends substantially as specified.

3. A harmonica provided with a communicating ovoid resonating chamber having closed tapering ends, and two sets of air holes that extend at right angles to each other, substantially as specified.

872,590. GRAIN-DRILL. JOHN STURROCK and ANDREW L. JOHNSON, Hamilton, Ontario, Canada, assignors to International Harvester Company, a Corporation of New Jersey. Filed June 8, 1907. Serial No. 377,867.



1. In a grain drill, the combination of a main frame, furrow-openers connected therewith, means for adjusting said furrow-openers in vertical planes, said means comprising a rock-shaft having lever arms connected with said furrow-openers, means for rotating said rock-shaft, said means comprising a lever secured thereto and having arms extending in opposite directions from the axis thereof, a counterbalancing spring having one end pivotally connected with one of said arms, a rod having one end pivotally connected with the other arm, the opposite end of said counterbalancing spring being connected with the opposite end of said rod, said rod being fulcrumed intermediate its ends upon a fixed part of said main frame.

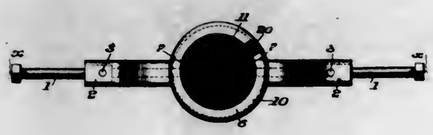
2. In a grain drill, the combination of a main frame, furrow-openers connected therewith, means for adjusting said furrow-openers in vertical planes, said means comprising a rock-shaft having lever arms connected with said furrow-openers, means for rotating said rock-shaft, said means comprising a lever secured thereto and having arms extending in opposite directions from the axis thereof, a counterbalancing spring having one end pivotally connected with one of said arms, a rod having one end pivotally connected with the other arm, the opposite end of said counterbalancing spring being connected with the opposite end of said rod, said rod being slidably connected intermediate its ends with a swinging fulcrum mounted upon a fixed part of said main frame.

3. In a grain drill, the combination of a main frame, furrow-openers connected therewith, means for adjusting said furrow-openers in vertical planes, said means comprising a rock-shaft having lever arms connected with said furrow-openers, means for rotating said rock-shaft, said means comprising a lever secured thereto and having arms extending in opposite directions from the axis thereof, a counterbalancing spring having one end pivotally connected with one of said arms, a rod having one end pivotally connected with the other arm, the opposite end of said counterbalancing spring being adjustably connected with the opposite end of said rod, said rod being slidably connected intermediate its ends with a swinging fulcrum mounted upon a fixed part of said main frame.

872,591. FIFTH-WHEEL. CHARLES A. WALTER, Duncannon, Pa., assignor to Standard Novelty Works, Duncannon, Pa., a Corporation of Pennsylvania. Filed June 6, 1906, Serial No. 320,428. Renewed Oct. 9, 1907. Serial No. 396,660.

1. In a fifth wheel, a base plate, upwardly directed walls and an overhang inwardly extending from said walls and provided with a single aperture, in combination with an inverted pan-shaped member of greater length than the opening in the overhang and adapted to be seated upon said base plate directly beneath the overhang throughout a major part of the circumference.

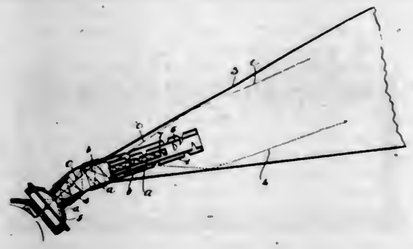
2. In a fifth wheel, a circular base plate, upwardly extending walls and an overhang inwardly extending from said walls and having a circular opening therein extended at one point to substantially the line of the upwardly extending walls, in combination with a member adapted to be seated upon the base plate and having one end of less and the other of greater width than the width of the opening in the extension in the overhang.



3. In a fifth wheel, a female bearing member provided with an inwardly directed overhang interrupted at one point, in combination with a male member adapted to extend beneath the overhang upon each side of the center thereof and having one end only narrower than the interruption of the overhang.

4. In a fifth wheel, a bearing member provided with a base, an inwardly directed interrupted overhang in combination with another member adapted to pass through the interruption of the overhang at a single point and to bear at its outer circumference directly beneath the overhang and cupped inside this bearing point to provide a guide operating against the inside of the overhang.

872,592. TONE-PURIFIER. ADELBERT E. E. WANGEMANN, West Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Sept. 9, 1905. Serial No. 277,801.



1. As a new article of manufacture, a tone purifier consisting of a plurality of concentric tubes secured together and forming channels, adjacent channels being closed at opposite ends, substantially as set forth.

2. As a new article of manufacture, a tone purifier consisting of a plurality of hollow members of different diameter secured together one within another and forming channels, adjacent channels being closed at opposite ends, substantially as set forth.

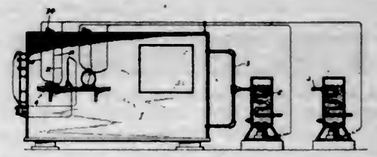
3. As a new article of manufacture, a tone purifier consisting of a plurality of concentric tubes secured together, the walls of said tubes being provided with apertures, substantially as set forth.

4. As a new article of manufacture, a tone purifier consisting of a plurality of hollow members of different diameter secured together one within another, the walls of said members being provided with apertures, substantially as set forth.

5. In a phonograph or talking machine, the combination with a reproducer or recorder and an amplifying horn, of a tone purifier situated within the small end of said horn and comprising a tube, the side walls of which are provided with apertures, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

872,593. HOGROMETER. GEORGE L. WARNKEN, Jamestown, Cal., assignor to Warnken, Congdon, Coffer Company, Jamestown, Cal., a Corporation. Filed Feb. 25, 1907. Serial No. 359,281.



1. In an apparatus of the class described, an inclosed compartment, a heater associated with said compartment, a burner connected to said heater, an electrically controlled valve associated with said burner and adapted to control the supply of fuel thereto, an electrically controlled signal bell, an electrically operated hygrometer including a swinging indicator located in said compartment, two contacts spaced apart and connected to said hygrometer in the path of said indicator, means for adjusting one of said contacts to the point of greatest moisture reached by said indicator, means for adjusting the other of said contacts to the point of least moisture reached by said indicator, a conductor between one pole of said signal bell and the least moisture contact of said hygrometer, a conductor between the other pole of said signal bell and the controlling means of said hygrometer indicator and one pole of the burner valve, and a conductor between the greatest moisture contact of said hygrometer and the other pole of said burner valve.

2. In an apparatus of the class described, an inclosed compartment, an air heater associated with said compartment, a burner connected to said heater, an electrically controlled valve associated with said burner and adapted to control the supply of fuel thereto, an electrically controlled signal bell, an electrically operated hygrometer including a swinging indicator located in said compartment, a slotted plate connected to said hygrometer and insulated therefrom, a contact member adjustable in said slotted plate and insulated therefrom and extending into the path of said indicator and adapted to be adjusted relative to the great moisture point reached by the indicator, a contact adjustable in the slot of said plate and in electrical contact therewith and extending into the path of said indicator and adapted to be adjusted relative to the least moisture point reached by the indicator, a conductor between one pole of said signal bell and the least moisture contact of said hygrometer, a conductor between the other pole of said signal bell and the controlling means of said hygrometer indicator, a conductor between the controlling means of said hygrometer indicator and one pole of the burner valve, and a conductor between the greatest moisture contact of the hygrometer and the other pole of said burner valve.

3. In an apparatus of the class described, an inclosed compartment, a heater associated with said compartment, an electrically operated valve controlling the supply of fuel to said heater, an electrically operated signal bell, an electrically operated hygrometer, electrically operated means connected to said hygrometer whereby the decrease of the moisture within the compartment to a certain predetermined point will cause the operation of said signal bell, and electrically operated means connected to said hygrometer whereby the increase of the moisture within the compartment to a certain predetermined point will operate the fuel controlling valve.

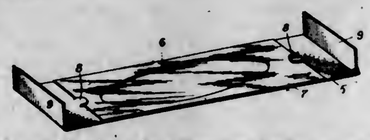
872,594. BOX FOR CANDY AND OTHER ARTICLES. PETER R. WARREN, Brookline, Mass., assignor to the P. R. Warren Company, Boston, Mass., a Corporation of Maine. Filed Jan. 5, 1905. Serial No. 239,719.

1. In combination with a box tray having an open top, an outside cover independent of the tray and having a sight-opening in the top, an independent inside removable cover for the contents of the box consisting of a sheet of stiff material such as card board or the like having a flat

top portion which is adapted to fit the interior of the tray and has downwardly extending end flanges which are adapted to fit inside the end walls of the tray, a sight-opening in said inner cover which registers with the sight-

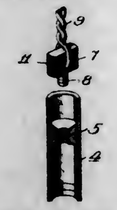


opening in the outer cover and a sheet of transparent material lying wholly on the under side of said cover and closing said opening and secured to the under surface of said cover.



2. In combination with a box tray having an open top, an outside cover independent of the tray and having a sight-opening in the top, an independent inside removable cover for the contents of the box consisting of a sheet of stiff material such as card board or the like having a flat top portion which is adapted to fit the interior of the tray and has downwardly extending end flanges which are adapted to fit inside the end walls of the tray, a sight-opening in said inner cover which registers with the sight-opening in the outer cover and a sheet of transparent material lying wholly on the under side of said inner cover and closing said opening and secured to the under surface of said inner cover by downward clips formed by slitting said inner cover whereby the outer surface of said inner cover and the inner surface of said outer cover being adjacent to each other are free from interfering projections.

872,595. BOTTLE-WASHER BRUSH. HARRY WARSHILSKY, Chicago, Ill., assignor to E. Goldman & Company, Chicago, Ill., a Corporation of Illinois. Filed June 5, 1907. Serial No. 377,295.



1. In a bottle-washer brush-device, the combination of a ferrule containing and having housed within it between its ends a nut, an eyelet consisting of a solid metal head insertible into the ferrule and provided with a threaded stem screwing into said nut, and a brush on a stem connected with said eyelet and affording a handle through the medium of which to manipulate the eyelet in screwing it into and unscrewing it from the nut.

2. In a bottle-washer brush-device, the combination of a ferrule containing and having housed within it between its ends a nut, an eyelet consisting of a solid metal head insertible into the ferrule and provided with a hole and with a threaded stem screwing into said nut, and a brush on a stem looped through said hole and affording a handle through the medium of which to manipulate the eyelet in screwing it into and unscrewing it from the nut.

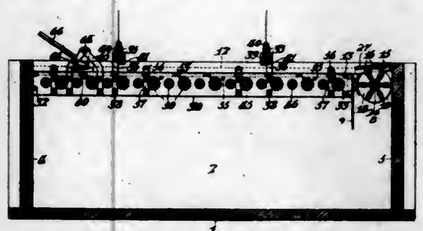
872,596. BOTTLE-WASHER BRUSH. HARRY WARSHILSKY, Chicago, Ill., assignor to E. Goldman & Company, Chicago, Ill., a Corporation of Illinois. Filed June 5, 1907. Serial No. 377,296.

1. A brush-device for bottle-washing machines, comprising, in combination, a ferrule adapted to be connected at one end with its carrying-stem on a bottle-washing machine and having a reduced threaded section on its opposite end, a brush-head having its base formed with a nut-portion at which it screws on said reduced ferrule-section, said head containing longitudinal openings inclined to its axis, and tufts of brush-material confined in said openings to extend spreadingly from the head and fastened together at the inner ends.



2. A bottle-washer brush-device comprising, in combination, a ferrule having a solid externally threaded end-portion containing a discharge-opening, a head having a nut-portion on one end at which it is screwed upon said threaded ferrule, and provided with longitudinal openings in its solid outer-end portion with an interposed chamber having discharge outlets extending at varying angles through the wall of the head, tufts of brush-material fastened in said openings to extend spreadingly from the head, and a central discharge-opening in the solid portion of said head.

872,597. DYEING-MACHINE. DANIEL F. WATERS, Philadelphia, Pa. Filed Nov. 21, 1906. Serial No. 344,418.



1. In a dyeing machine, the combination with a vat; of a frame; a series of yarn sticks supported in said frame; and means arranged to intermittently rotate the alternate yarn sticks independently of each other, substantially as set forth.

2. In a dyeing machine, the combination with a vat; of a frame; a series of yarn sticks supported in said frame; means arranged to contemporaneously rotate every other one of said sticks independently of the sticks which are disposed intermediate thereof; and, means arranged to rotate said intermediate sticks contemporaneously with one another, substantially as set forth.

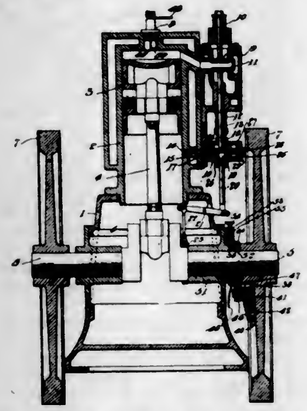
3. In a dyeing machine, the combination with a vat; of a removable frame in said vat; a series of yarn sticks supported in said frame; and, means arranged to intermittently rotate the alternate yarn sticks independently of each other, substantially as set forth.

4. In a dyeing machine, the combination with a vat; of a removable frame in said vat; a series of removable yarn sticks supported in said frame; and, means arranged to intermittently rotate the alternate yarn sticks independently, substantially as set forth.

5. In a dyeing machine, the combination with a vat; of a frame comprising side rails; a series of ratchet wheels mounted for rotation in said rails; a series of bearing sleeves mounted for rotation in said rails intermediate of said ratchets; the ratchet wheels on one rail being disposed in axial alinement with the bearing sleeves in the other rail; means arranged to support yarn sticks in said wheels and sleeves; and, means arranged to contemporaneously rotate the wheels in each rail independently of the wheels in the other rail, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

872,598. GAS-ENGINE. ELMER A. WATTS and EDWARD G. MORRISON, Springfield, Ohio. Filed Jan. 12, 1906. Serial No. 295,692.



1. In an explosive engine of the four cycle type, the combination, with a main cylinder, a piston therein, and an exhaust valve and its stem, of an auxiliary cylinder into which said valve stem enters, said cylinder communicating with the main cylinder, an auxiliary piston mounted in said auxiliary cylinder, a connecting or transmission member carried by said auxiliary piston within its cylinder and movable relatively thereto, and an actuating rod reciprocated by the engine and entering said auxiliary cylinder, said auxiliary piston being normally so positioned that the transmission member is out of the path of the actuating rod, and being moved by the explosive forces to a position such that said member is engaged by said rod and engages the exhaust valve stem, substantially as described.

2. In an explosive engine of the four cycle type, the combination, with a main cylinder and its piston, of an auxiliary cylinder communicating therewith and provided with a piston, an exhaust valve having a stem entering said auxiliary cylinder on one side thereof, an actuating rod reciprocated by the engine at each revolution thereof and entering the auxiliary cylinder on the opposite side thereof, and a transmission member carried by the auxiliary piston within its cylinder and adapted to be interposed between the actuating rod and exhaust valve stem by the movement of the auxiliary piston when an explosion occurs in the main cylinder, said auxiliary piston being normally so positioned that said transmission member is out of the path of the actuating rod, substantially as described.

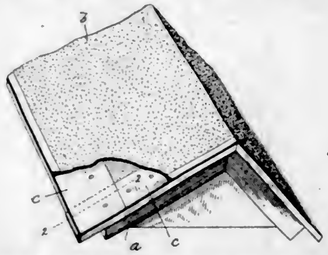
3. In a four cycle gas engine, the combination, with a main cylinder and its piston, of an exhaust valve having a stem, and an actuating rod reciprocating in alinement therewith, an auxiliary cylinder communicating with the main cylinder, an auxiliary piston mounted therein and slotted transversely to receive the ends of the valve stem and actuating rod, and a transmission block mounted to slide transversely of the piston in said slot, said block being moved to a position between the ends of the rod and valve stem when the auxiliary piston is actuated by an explosion in the main cylinder, substantially as described.

4. In an explosive engine, an exhaust valve operating device comprising an auxiliary cylinder communicating with the main cylinder at one end and closed at the other end, a piston fitting said cylinder and provided with a transmitting member movable by the piston to a position to transmit movement from an actuating rod to the exhaust valve stem, an exhaust port for the communicating end of said cylinder normally closed by the piston, a cushioning exhaust port located near the other or closed end of the cylinder, a spring on one side of said piston to return the same to normal position and a cushioning spring on the opposite side of said piston, substantially as described.

5. In a device of the character described, an auxiliary cylinder communicating with the main cylinder and into whch the exhaust valve stem and its actuating rod enter, a two part piston fitting said cylinder and having springs interposed between it and the cylinder heads on each side, the main or body portion of said piston being transversely slotted to receive the ends of the exhaust valve stem and actuating rod and having a transmission block adapted to slide therein, the supplemental portion of the piston having a stem extending into the slot of the body portion and serving as a guide for the transmission block, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

872,599. ROOFING. HENRY R. WEBSTER, New Lyme, Ohio. Filed June 27, 1907. Serial No. 381,141.



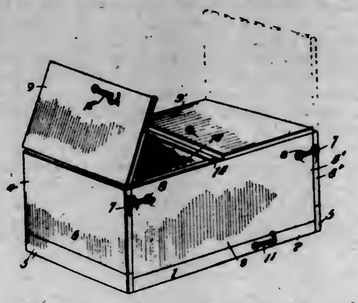
In combination with a roof structure, metallic plates fastened down on the roof along its ends and along its lower edge, the outer edges of these plates projecting beyond the roof structure to provide a sharp dripping edge and provided with up-turned flanges which meet at the corners of the roof, the plates at the ends of the roof having their ends projecting beyond the lower edge of the roof and the plates along the lower edge being overlapped upon these projecting ends, a roofing fabric laid upon the roof and overlapped upon said plates and their overlapping portions and extending to near said up-turned flanges, and a plastic fastening composition applied at the juncture of the edges of the fabric and said up-turned flanges.

872,600. SHIPPING-CRATE. LEWIS WHARTON, Cambridge, Ohio. Filed June 16, 1906. Serial No. 322,049.

1. In a device of the character described, the combination of a bottom, a side designed to be folded against the bottom, a second side folding against the first mentioned side, ends carried by the bottom and designed to fold against the before mentioned sides, studs projecting from the ends, hooks secured to the sides and designed to engage the studs to hold the sides and ends rigidly in position when the crate is distended, and a second set of hooks secured to the bottom and adapted to engage the studs to hold the sides and ends closely against the bottom when the crate is folded.

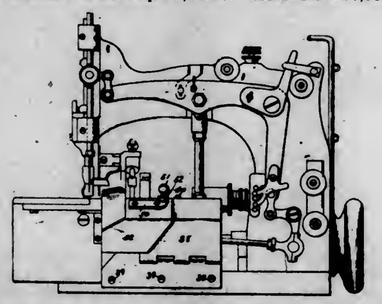
2. In a device of the character described, the combination of a bottom, a side designed to be folded against the bottom, a second side folding against the first mentioned side, ends, a cover section hinged to each end, one of the ends and the cover section hinged thereto folding against the last mentioned side, while the opposite end and corre-

sponding cover section folds against the first mentioned end and cover section, studs projecting from the ends, hooks secured to the sides and designed to engage the studs to hold the members rigidly in position when the



crate is distended, and hooks secured to the bottom and adapted to engage the before mentioned studs to hold the members closely together when the crate is folded.

872,601. COVER-PLATE FOR SEWING-MACHINES. RUSSEL G. WOODWARD, Waukegan, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 7, 1905. Serial No. 277,351.



1. In a sewing machine, a cover plate attached to and supported by a stationary part of the machine frame and adapted to be moved to afford access to the interior of the machine, means for locking the same in its closed position, and a single implement independent of the locking means adapted to be manipulated by the operator for operating the locking means and moving said cover plate upon its support; substantially as described.

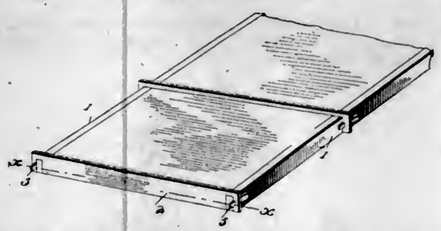
2. In a sewing machine, a sectional cover plate attached to and supported by a stationary part of the machine frame, and adapted to be moved upon its support, means for locking the cover plate in its closed position, means for moving a portion of said cover plate laterally and simultaneously operating the locking device; substantially as described.

3. A sectional cover plate for sewing machines, pivoted to the machine frame, means for locking the same in its closed position, means for slidingly supporting one portion of the cover on the other, and means for simultaneously moving said sliding portion and operating the locking means for said cover plate; substantially as described.

4. A hinged cover plate for sewing machines, a member carried by the machine frame and adapted to engage the cover plate when in closed position, a plate sliding on said cover plate, a handle on said sliding plate, and means carried by said handle, whereby when the plate is moved, the said member is engaged or disengaged from the cover plate; substantially as described.

5. A hinged cover plate for sewing machines, adapted to engage holding means on the machine frame, a sliding plate on said cover plate carrying a diverting guide, an angle piece on said sliding plate having a handle and having an arm adapted in the movement of said sliding plate to come in contact with the holding means upon the cover plate and operate the same; substantially as described.

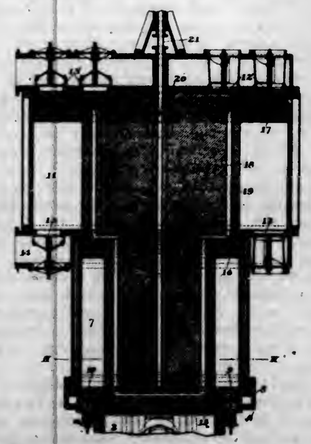
872,602. FORM FOR CONCRETE SIDEWALKS. JOHN R. ZEISER and ADLOW ZEISER, Berwick, Pa. Filed July 17, 1907. Serial No. 384,240.



1. A form for use in constructing side walks of concrete or like material, the same comprising spaced confining strips, tie plates having slots near their ends extended transversely thereof in an upward direction from their lower edges to receive said confining strips by slipping over their upper edges, and having transverse notches in the outer vertical edges of the said slots, and keys adapted to be driven into said notches after securing the tie plate and confining strips.

2. A form for use in constructing side walks of concrete or like material, the same comprising spaced confining strips and tie plates having their upper edges in the plane of the upper edges of said confining strips and having their end portions widened and formed with slots extended through the lower edges of the said tie plates and adapted to slip over the confining slips, the outer vertical edges of said slots having transverse notches, and keys adapted to be driven into said notches to secure the tie plates and confining strips.

872,603. BLOWING-ENGINE. HENRY AIKEN, Pittsburg, Pa. Filed July 25, 1904. Serial No. 217,904.



1. An engine comprising an upright explosive cylinder having at least two sections of different diameter, and a piston having portions fitting the respective cylinder sections, the return stroke of the piston being effected by gravity, substantially as described.

2. An engine comprising an explosive cylinder having at least two sections of different diameter, a piston having portions fitting the respective cylinder sections, and valves

in the inner head of the larger cylinder sections, substantially as described.

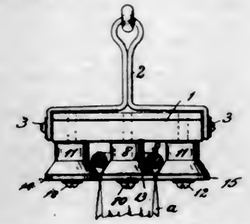
3. An engine comprising an explosive cylinder having at least two sections of different diameters, a piston having portions fitting the respective cylinder sections, the working area of the piston portions being substantially equal, and valves in the inner head of the larger cylinder section, substantially as described.

4. An engine having two explosion cylinders in endwise vertical alinement, an air compression cylinder in alinement with the explosion cylinders and a compound piston arranged to effect its return stroke by gravity and to compress air in the compression cylinder on both strokes; substantially as described.

5. An engine having two explosion-cylinders in endwise alinement and directly connected with each other, an air compression cylinder also in endwise alinement, a compound piston having portions fitting in the several cylinders, and valves located in the annular heads between the cylinders; substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

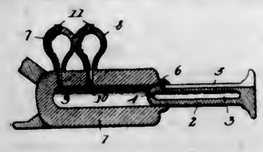
872,604. LINE-HOLDER. DEWITT ALTMAN and ABE SILVERMAN, Washington, D. C., assignors of one-third to Max Janofsky, Washington, D. C. Filed July 9, 1907. Serial No, 382,889.



1. In a line holder, the combination of the base, the suspension means, the hook having the supporting shank and the parallel confining portion 7, acting to hold the suspension means from tilting under the pull of the line and the flanged main pulley and guard pulleys pivoted on the under side of the base, substantially as set forth.

2. In a line holder, the combination of a base or support, three pivots or journals extending downward from the same, a main line pulley on the intermediate journal and having a flange at its lower side, and guard pulleys on the other journals having flanges at their lower sides which extend into close proximity to the flange of the main pulley, substantially as set forth.

872,605. RAILWAY SAFETY DEVICE. CHARLES E. BOEHRINGER, Carterville, Ill. Filed Mar. 26, 1907. Serial No. 364,673.



1. A safety device for railway cars, comprising a cylinder, a plurality of compressed air cylinders communicating therewith through different sized passages, and a plunger slidable in the first mentioned cylinder.

2. A safety device for railway cars comprising a cylinder, a plurality of compressed air cylinders communicating therewith, and a plunger slidable in said first mentioned cylinder.

3. A safety device for railway cars, comprising a cylinder, compressed air cylinders in communication therewith, a plunger slidable in said first mentioned cylinder, an air chamber in said plunger and opening into the cylinder.

872,606. BOTTLE. JOSEPHINE BOYCE, Bigbattle, W. Va. Filed May 3, 1907. Serial No. 371,699.



1. The combination of a bottle, a stopper applied to the mouth of the bottle, means for moving the stopper within the bottle, and a spring arm for preventing the stopper from being replaced within the neck of the bottle without indicating previous removal.

2. The combination of a bottle having a pair of openings formed therein, stoppers fitting within the openings, connecting means between the stoppers, and means carried by the stoppers to prevent the same from being replaced after being once withdrawn without indicating previous removal.

3. The combination of a bottle formed with a pair of openings in alinement with each other, stoppers fitted within the openings, connecting means between the stoppers, and a spring arm carried by one of the stoppers and designed to expand when the stopper is withdrawn into the interior of the bottle.

4. The combination of a bottle having a pair of openings in alinement with each other, one of said openings being smaller than the other, stoppers fitted within the openings, a stem connecting the stoppers, and spring arms coöperating with the larger stopper to prevent the same from being replaced after being withdrawn into the interior of the bottle without indicating previous removal.

5. The combination of a bottle formed with a pair of openings in alinement with each other, one of said openings being smaller than the remaining opening, stoppers fitted within the openings, a stem connecting the stoppers, and laterally projecting spring arms carried by the stem and normally deflected and fitting between the larger stopper and the walls of the opening, the said spring arms being designed to expand when the said stopper is withdrawn into the interior of the bottle and prevent said stopper from being replaced without indicating previous removal.

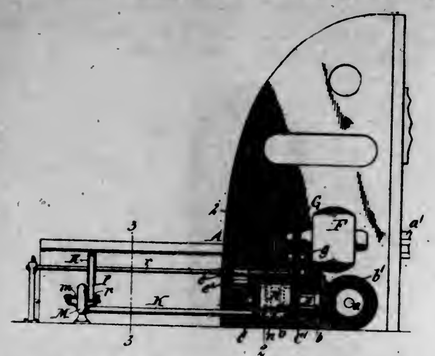
[Claim 6 not printed in the Gazette.]

872,607. COOLING DEVICE FOR FRICTION-CLUTCHES. JOHN H. B. BRYAN, Buffalo, N. Y., assignor to Niles-Bement-Pond Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 26, 1907. Serial No. 370,370.

1. The combination of a pair of friction clutches, and an air supply pipe arranged adjacent to said clutches and having one end closed and its other end connected with an air forcing device while its side is provided with an air outlet opening opposite each of said clutches, the opening nearest the air supplying device being of smaller area than the opening farther away from the same, substantially as set forth.

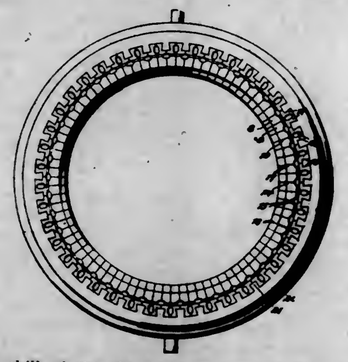
2. The combination of a pair of friction clutches, an air supply pipe arranged adjacent to the clutches and having an outlet opening opposite each clutch, a rotary fan having the outlet of its case connected with said pipe, a driving shaft having an extension, reversing gearing inter-

posed between said shaft and clutches, a pulley arranged on said shaft extension, and a belt passing around said



pulley and a pulley on the shaft of said fan, substantially as set forth.

872,608. CAR-WHEEL CHILL. BENJAMIN M. CARR, Houston, Tex. Filed Apr. 6, 1907. Serial No. 366,741.



1. A chill of the character set forth having an inner portion comprising a series of segments located side by side, certain of the adjacent segments having recesses in their opposing sides and having said opposing sides abutted on opposite sides of the recesses forming open-ended inclosed vent channels.

2. A chill of the character set forth having an inner portion comprising a series of segments located side by side, certain of the adjacent segments having recesses in their opposing sides and having said opposing sides abutted on opposite sides of the recesses forming inclosed vent conduits, and spaced flanges carried by the upper and lower portions of certain of the opposing faces and abutting against the other faces forming open ended vent channels between the segments that communicate with the said conduits.

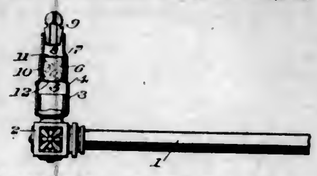
3. A chill of the character set forth including sets of segments, the segments of each set having alined recesses in their opposing faces forming an inclosed vent conduit, one of the opposing faces having spaced longitudinal flanges that abut against the other face forming an open ended channel between them that communicates with the conduit, the outer faces of the segments of each set being flat and abutting against the outer flat faces of the adjacent sets.

4. A chill of the character set forth, including sets of segments having alined recesses in their opposing faces, the said faces on the opposite sides of the recesses being abutted, forming inclosed drag pin receiving sockets.

5. A chill of the character set forth, including a plurality of segments located side by side, each segment having recesses in its opposite sides that aline with the corresponding recesses in the opposing sides of the adjacent segments, forming vent conduits and drag pin receiving sockets.

[Claims 6 to 12 not printed in the Gazette.]

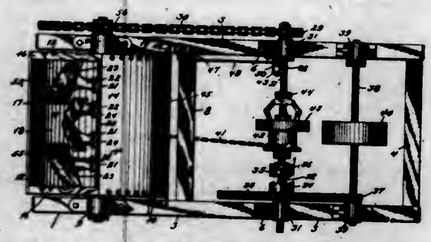
872,609. GAS-BURNER. GILBERT A. CROTTO, Reading, Pa., assignor of one-half to Irvin E. Hepler, Reading, Pa. Filed Feb. 8, 1907. Serial No. 356,392.



1. In a gas burner, the combination with a casing having an internal bore of differential diameters, of a burner tip engaging one end of said casing, an apertured container closely engaging the inner walls of said casing intermediate the ends thereof, there being a chamber between said container and said tip, wool within said container, and gauze caps closing the end of said container.

2. In a gas burner, the combination with a casing comprising a member having an internal bore of differential diameters and a second member having an internal bore of differential diameters removably secured thereto, of a burner tip engaging one end of one of said members, an apertured container engaging the larger internal bore of said members, wool within said container, gauze caps closing the ends of said container, there being a chamber intermediate said container and burner tip, and the ends of said container being deflected inwardly to form restricted openings registering with the smaller diameter of said members.

872,610. MIXING-MACHINE. ROY N. CUNNINGHAM and JOHN W. MCPHERSON, Columbus, Ohio, assignors to The American Concrete Machinery Company, Columbus, Ohio, a Corporation of Ohio. Filed Mar. 31, 1906. Serial No. 309,228.



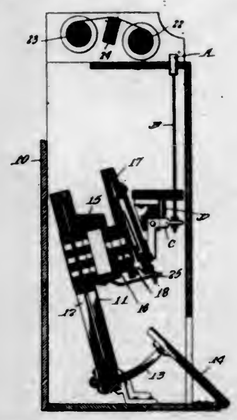
1. In a device of the character described, the combination with a supporting frame of a drum mounted to rock in said frame, a shaft which extends through said drum, means for rotating said shaft, a pair of oppositely inclined flat faced plows mounted upon said shaft and having bodily rotation therewith, said plows traveling over the inner face of the drum and throwing the material toward the sides of the drum, flated faced plows inclined at such an angle as to throw the material toward the center of the drum, said latter plows also being mounted upon said shaft and having bodily rotation therewith and said latter plows following the first named plows, means for rocking the drum in a direction opposite to the rotation of the shaft, and means for driving said latter means from the driving mechanism of said shaft.

2. In a device of the character described, the combination with a supporting frame, of a shaft mounted in said supporting frame, a drum freely mounted to rock on said shaft, mixing plows mounted upon said shaft, means for driving said shaft, a spool mounted for rotation in the supporting frame, a flexible connection between said spool and said drum, said flexible connection being adapted when wound upon said spool to turn said drum over, said spool being driven by the mechanism which drives the plow shaft.

3. In a device of the character described, the combination with a supporting frame, of a shaft mounted in said supporting frame, a drum freely mounted to rock upon said shaft, mixing plows mounted upon said shaft, means for driving said shaft, a spool mounted for rotation in said supporting frame, a flexible connection between said spool and said drum, said flexible connection being adapted when wound upon said spool to turn said drum over, said spool being driven by the mechanism which drives the plow shaft, a locking mechanism for said drum, and a member the movement of which simultaneously actuates said locking mechanism to release the drum and to set said spool in action to rock said drum.

4. In a device of the character described, the combination with a supporting frame, of a shaft mounted in said supporting frame, means for driving said shaft, a plow shaft mounted in the supporting frame, a drum freely mounted to rock upon said plow shaft, means for imparting movement from the first named shaft to the plow shaft, a support mounted upon said first named shaft, a locking mechanism for the drum, a connection between said drum and said spool and a member the movement of which is adapted to simultaneously release said drum and throw said spool into connection with said shaft to thereby impart rotation to said spool from said shaft and wind said member upon said spool to rock the drum.

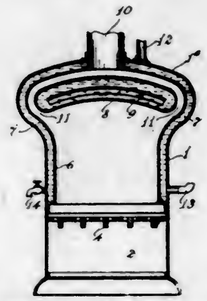
872,611. AUTOMATIC MUSICAL INSTRUMENT. THOMAS DANQUARD, New York, N. Y., assignor to Autopiano Company, New York, N. Y., a Corporation of New York. Filed May 10, 1905. Serial No. 259,700.



1. In a musical instrument, the combination of a paper winding mechanism and a wind motor, of a pneumatic governor mechanism for the wind motor comprising a collapsible pneumatic having a movable member, a finger key connected to hold the movable member of the pneumatic closed when the retarded effect is desired, a stop rod fixed in stationary position and connected with the movable member of the pneumatic, and a button adjustably mounted on the stop rod for limiting the stroke of the finger key.

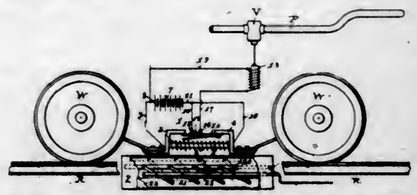
2. In an instrument of the class described, the combination of the paper winding mechanism, a wind motor, a pneumatic governor mechanism for the wind motor comprising a collapsible pneumatic having a movable hinged member, a finger key connected to hold the movable member of the pneumatic closed when a retard effect is desired, and an adjustable stop mechanism limiting the stroke of the finger key.

872,612. HOT-WATER HEATER. WILLBERT R. DE HARPORTE, Minneapolis, Minn. Filed June 10, 1907. Serial No. 378,151.



In a boiler or hot water heater, the combination with an outer shell 1 bulged and arched at 1^a, of an inner shell 6 spaced apart from said shell 1 to form a water chamber 7, the upper portion of said inner shell being bulged and arched and extended approximately parallel to the upper portion of said outer shell, a smoke pipe leading upward from an opening in the arched top of said inner shell, an arched water leg 8 located in the upper portion of the combustion chamber and spaced apart from the upper portion of said inner shell to form a divided draft passage leading to said smoke pipe, curved deflecting plates 9 secured to said outer shell 1 and extending into the ends of said water leg 8, and extending approximately parallel to the arch of said water leg substantially as described.

872,613. RAILWAY SIGNALING APPARATUS. FRANK L. DODOSON and WINTHROP K. HOWE, Buffalo, N. Y., assignors to General Railway Signal Company, Buffalo, N. Y., a Corporation of New York. Filed Nov. 27, 1905. Serial No. 289,202.



1. In combination with a signal and a brake system of a railway train, electro-magnetic means carried by said train for normally holding said brake system inactive, and means actuated by said signal comprising a conductor capable of diverting the lines of magnetic force from the governing magnet of said electro-magnetic means for rendering said electro-magnetic means inactive, when said signal is in the "stop" position and causing said brake system to act.

2. In combination with a signal and a brake system of a railway train, electromagnetic means carried by said train for normally holding said brake system inactive, a magnet, an electric switch governing said electro-magnetic means, a source of electric energy, a magnetic conductor and means actuated by said signal for moving it in and out of the plane of the field of said magnet, said magnet having its poles and helix so proportioned as to cause it to release said electric switch when said conductor is in its magnetic field.

3. In combination with the brake system of a railway train, a train stop comprising a valve biased to the position

of air on, electro-magnetic means for normally overcoming such bias, an electro-magnet, an electric switch governed by said magnet and governing said first-mentioned electro-magnetic means, a source of electric energy; and a magnetic conductor adjacent to the tracks and means for moving it in and out of the plane of the magnetic field of said magnet, said magnet having its poles and helix so disproportioned as to release said switch when said magnetic conductor is in its field.

872,614. BARREL-COVER. JOHN F. EAST, Norfolk, Va. Filed Aug. 17, 1906. Serial No. 331,052.



1. A flat, flexible wood-fiber barrel cover, comprising flat, crossed strips having their ends free, a straight reinforcing member extending across said strips and provided with hooked ends, the outer strips positioned at right-angles to each other, and each of said hooked ends positioned over the outer edges of a plurality of outer, angularly-disposed strips and upon opposite sides of said strips for preventing displacement of said reinforcing member off of said strips and securing said strips together.

2. A flat wood-fiber barrel cover, comprising interwoven, crossed, flexible strips having their ends free, crossed reinforcing members interwoven between said strips and extending across the engaging-portions of the outer strips intermediate the ends of said strips, and staples straddling said wires and extending through the engaging-portions of the outer strips, thereby rigidly securing said wires and outer strips together.

3. A flat, flexible, wood-fiber barrel cover, comprising interwoven strips having their outer ends free, and reinforcing members interwoven with said strips and having each of their outer ends bent around the outer edges of a plurality of the outer strips for securing all of the strips together.

4. A flat, flexible wood-fiber barrel cover, comprising interwoven strips having their outer ends free, and reinforcing means extending entirely across the interwoven portion of said strips and surrounding the outer edges of the outer strips and positioned upon opposite sides of said strips for securing all of the strips together.

5. A flat wood-fiber barrel cover, comprising interwoven flexible strips having their ends free, the outer strips disposed at right-angles to each other, each outer strip extending across a plurality of the angularly-disposed, outer strips intermediate their ends, and staples extending through the engaging-portions of the angularly-disposed outer strips, thereby rigidly securing said outer strips together and preventing independent movement of said outer strips with respect to each other.

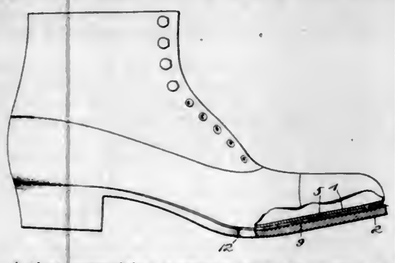
[Claims 6 to 11 not printed in the Gazette.]

872,615. SELF STRETCHING OR SHAPING SHOE. ERNEST A. EASTMAN, Chicago, Ill., assignor of one-half to William H. Crawford, Dayton, Ohio. Filed Nov. 15, 1906. Serial No. 343,575.

1. A shoe, comprising an upper, a sole secured thereto, an internal stiffening means for preventing the sole from bending or curling up when the shoe is off the foot and for maintaining the upper smooth and without wrinkles, consisting of a rigid plate within the shoe next to the sole located entirely forward of the ball of the shoe and fastened immovably to the sole.

2. A shoe, comprising an upper, a welt, and a sole, combined with a stiffener clamped between said welt and sole forward of the ball of the shoe.

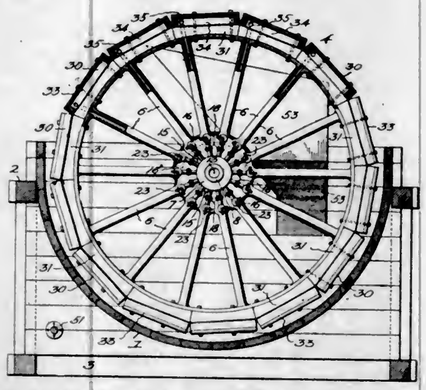
3. A shoe, comprising an upper, a welt, and a sole, combined with a stiffener clamped between said welt and sole at the inner edge of the welt forward of the ball of the shoe.



4. A shoe, comprising an upper, innersole, welt, and sole all secured together, and a stiffener engaged at its peripheral edge by the innersole and welt on its upper side and by the sole on its under side for maintaining the shoe in normally taut condition when not in use.

5. A shoe, comprising an upper, welt, and sole, and a stiffener plate located forward of the ball of the shoe and spanning the width of the shoe at the inner edges of the welt, said plate being clamped between the sole and welt adjacent the sewing line thereof.

872,616. REVOLVING FILTER. OSCAR H. FAIRCHILD, Denver, Colo., assignor of two-thirds to William Archer Diboll, Denver, Colo. Filed Apr. 1, 1907. Serial No. 365,83.



1. A revoluble filter, comprising a semi-circular solution tank; a wheel mounted in said tank so as to be partially submerged, and having passages which connect on one side with a vacuum tank and on the other side with a source of fluid under pressure; filter boxes on said wheel communicating with said passages, and automatically operated valves for controlling said passages.

2. A revoluble filter, comprising a solution tank; a wheel mounted in said tank so as to be partially submerged, and having hollow spokes communicating with passages in the shaft of said wheel; filter boxes on said wheel communicating with said hollow spokes; a pipe in one end of said shaft leading to a vacuum tank; a pipe in the other end of said shaft leading to a source of fluid under pressure; and automatically operated valves for controlling communication between said spokes and shaft.

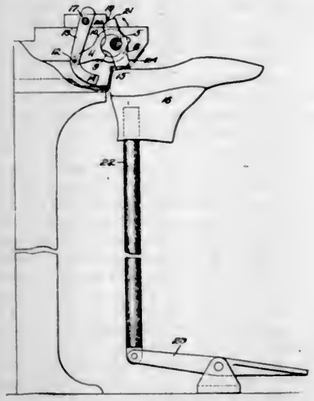
3. In a revoluble filter, the combination with a solution tank, of a wheel mounted therein so as to be partially submerged, having a hollow shaft, and hollow spokes communicating therewith, one end of said shaft being connected with a vacuum tank, while the other end is connected with a source of fluid under pressure; filter boxes on said wheel communicating with said hollow spokes, and valves which are automatically operated as the wheel revolves, to open or close communication between the hollow spokes and shaft at any predetermined point in the travel of the wheel.

4. In a revoluble filter, the combination with a semi-circular solution tank, of a wheel mounted therein, having hollow spokes communicating with a hollow shaft and automatically operated valves for controlling communication between the spokes and shaft; filter boxes on said wheel communicating with the hollow spokes; a pipe in one end of the shaft connecting with a vacuum tank; a pipe in the other end of the shaft connecting with a source of fluid under pressure, a partition in said hollow shaft forming independent passages on each side of its center, and a power-driven wheel on one end of said shaft.

5. In a revoluble filter, the combination with a solution tank, of a wheel mounted thereon so as to be partially submerged therein, having a shaft provided with independent axial passages extending from each end and separated by a central partition, and hollow spokes connecting at their lower ends with the independent passages in the shaft; automatically operated valves on each side of the spokes at their lower ends, which control communication between the spokes and the separate shaft passages; pipes in the ends of the shaft, connecting respectively with a vacuum tank and a source of fluid under pressure; filter boxes secured to the wheel at the extremities of the spokes and communicating with said spokes; and a sprocket wheel on one end of said shaft connected by a chain with a wheel on a power-driven shaft.

[Claims 6 to 12 not printed in the Gazette.]

872,617. ROTARY HEEL-SEAT MAKER AND COUNTER-POUNDER. IRA E. FLETCHER, Montello, Mass. Filed Sept. 26, 1906. Serial No. 336,279.



1. A heel-seat maker, comprising a heel rest, a rotary hammer above said heel rest for delivering a series of swinging blows to form the heel-seat, combined with a swinging side pounder in the same vertical plane with said hammer below and back of the hammer for simultaneously pounding the counter immediately next to the portion of the heel-seat being crushed down by the hammer, said hammer and pounder being constructed and arranged to strike the leather in directions tending to work the leather forward in the same direction over the edge of the last and inwardly on the heel-seat.

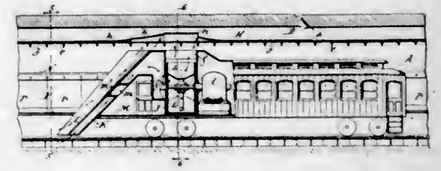
2. A heel-seat maker, comprising a rotary hammer having a plurality of striking ends extending radially in different directions from the axis of rotation, a work rest for maintaining the shoe in position to receive a series of rapid blows from said hammer at the heel-seat region, combined with a side pounder for engaging the counter adjacent the heel-seat, and means for operating said side pounder to deliver a slower series of blows than said rotary hammer.

3. A heel-seat maker, comprising a rotary hammer for delivering a series of swinging blows to form the heel-seat, a swinging hammer adjacent said rotary hammer for simultaneously pounding the counter adjacent said heel-seat, and a connection from said rotary hammer to said swinging hammer for operating the latter by the former.

4. A heel-seat maker, having an angular heel rest to position the heel of a shoe, a transverse rotary shaft mounted approximately vertically above said heel rest, a radially extending hammer mounted to revolve with said rotary shaft, said radial hammer having the front edge of its outer end beveled and at such a distance from the shaft that when a shoe is in place in said heel rest, the beveled end of the hammer first strikes a light blow which is followed by a forward horizontal, sliding, crushing pressure of the back portion of said outer end of the hammer on the heel-seat of the shoe, an eccentric on said shaft, a laterally movable hammer having its striking end opposite the lower portion of said heel rest to strike against the counter of the shoe, and an eccentric strap from said eccentric to said hammer, arranged to move the latter at each revolution of said shaft to strike a blow against the counter of the shoe.

5. A heel-seat maker, comprising a heel rest, a shaft mounted transversely above said rest, a radial hammer fast on said shaft and arranged to swing across said heel rest for giving a long sliding blow and rubbing pressure across the heel-seat of the shoe, a swinging hammer pivotally mounted above said shaft, having its lower end curved forwardly toward said heel rest, and operating means extending from said shaft to said swinging hammer for simultaneously swinging the latter hammer as the first mentioned hammer rotates.

872,618. MEANS FOR VENTILATING TUNNELS. LAWRENCE G. GEBHARD, Buffalo, N. Y. Filed Mar. 27, 1906. Serial No. 308,216.



1. Means for ventilating tunnels and the like, comprising an air outlet conduit arranged lengthwise at the top of the tunnel and having an elongated outlet opening in its underside, baffle bars arranged at intervals across said outlet opening, and a valve or shutter arranged within the outlet conduit and adapted to cover and uncover said opening, substantially as set forth.

2. Means for ventilating tunnels and the like, comprising an air outlet conduit arranged lengthwise at the top of the tunnel and having an elongated outlet opening in its underside, a longitudinal supporting bar arranged centrally in said outlet opening, baffle bars arranged at intervals across said outlet opening and each secured at its ends to said conduit while its central part supports said longitudinal bar, and a valve or shutter for covering or uncovering said opening consisting of a plurality of shutter sections arranged in two parallel rows over said outlet opening and having their inner opposing ends secured to said supporting bar while their outer ends rest loosely on the bottom of said conduit, substantially as set forth.

3. Means for ventilating tunnels and the like, comprising an air inlet conduit arranged lengthwise in the tunnel and having a continuous inlet opening, a screen arranged across said opening, and a flexible valve or shutter for covering or uncovering said opening adapted to rest against the outer side of said screen, substantially as set forth.

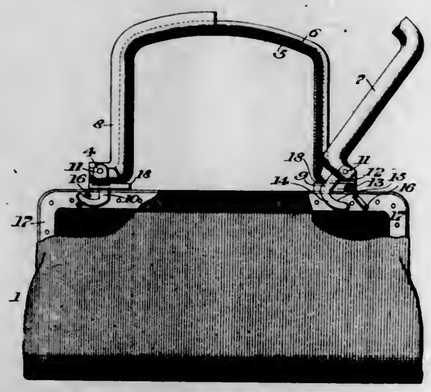
4. Means for ventilating tunnels and the like, comprising an air inlet conduit arranged at the side of the tunnel

and having an elongated air inlet opening on its inner side, and a valve or shutter for covering or uncovering said opening consisting of a longitudinal series of sections which are secured to said conduit above its inlet opening and rest loosely at their lower ends against the conduit below said opening, the inner side of said conduit and the valve or shutter coöperating with the opening therein being inclined, substantially as set forth.

5. Means for ventilating tunnels and the like, comprising an air outlet conduit having an elongated outlet opening, a valve or shutter which covers said opening and which may be shifted for successively uncovering different parts of said opening, and an air expelling device operating to force the air from the tunnel past said shutter and into said conduit, substantially as set forth.

[Claims 6 to 23 not printed in the Gazette.]

872,619. SAFETY-LOCK FOR POCKET-BOOKS AND HAND-BAGS. FRANKLIN P. GEYER, Philadelphia, Pa. Filed Apr. 24, 1907. Serial No. 369,956.



1. The combination with the bow frames of a bag, of a handle member rigidly secured to one bow frame, a pivoted handle member adapted to be seated in said first member, a latch carried by said pivoted member, and a socket carried by the other bow frame with which said latch coacts to prevent opening of the bag without relative movement of said handle members.

2. The combination with a bag, of a handle member fixed to one side thereof, a segmental handle pivoted in proximity thereto, locking members carried by said segmental handle, and sockets carried by the other side of the bag with which said locking members engage.

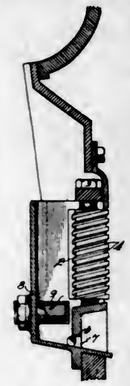
3. The combination with a bag, of a hollow handle member rigidly secured to one side thereof, a pivoted segmental handle provided with locking members and adapted to be seated in said fixed handle, and means carried by the other side of said bag adapted to coact with said locking members.

4. The combination with a bag, of a handle member rigidly secured to one side thereof, a second handle member pivoted in proximity to said first handle member, a latch carried by said pivoted member, and a socket carried by the other side of the bag with which said latch engages on the movement of said second handle member towards said first handle member.

5. The combination with the bow frames of a bag, of a handle member fixed to one of the bow frames, a second handle member pivoted to said fixed member and adapted to move outwardly therefrom, a latch carried by said second member, there being an aperture in the bow frame contiguous thereto through which said latch extends, and a socket carried by the other of said bow frames and with which said latch co-acts.

[Claims 6 to 12 not printed in the Gazette.]

872,620. HYDRAULIC SIZING-MACHINE. LOUIS C. GRAUPNER, San Francisco, Cal. Filed Apr. 1, 1907. Serial No. 365,785.



1. In a sizing and separating apparatus, the combination of a settling receptacle, said receptacle having a wall adapted to connect with the interior of a grinder, an overflow valve connected with the upper part of the receptacle through which pulp held in suspension in the upper part of said receptacle may be classified and delivered, said wall comprising adjustable gates arranged in overlapping order and having channels connecting with the interior of the receptacle, and an over-size valve in the lower part of the receptacle, said receptacle having a return port for returning the coarser material to the grinder.

2. In a hydraulic sizing and separating apparatus, the combination of a settling receptacle, adjustable screen gates forming a wall of said receptacle and arranged in overlapping order, said gates having channels connecting with the chamber of the receptacle, turnably mounted valves or gates connecting with the upper part of the receptacle, and an adjustable over-size return valve in the lower part of the receptacle, said receptacle having a port controlled by said valve and adapted to return the coarser material to the grinder.

3. In a separating and classifying apparatus, the combination of a receptacle adapted to connect with a grinder and having a wall separating its interior from the interior of the grinder, said wall composed of turnable gates arranged in overlapping order and having channels connecting the interior of the grinder with the interior of the receptacle, in which receptacle the coarser material settles, said receptacle having a return port adapted to connect with the grinder, means for regulating the overflow from the receptacle and a valve controlling the return port of said receptacle.

4. A settling, separating and sizing receptacle adapted to be connected with a grinder, said receptacle having an inclined bottom and a chamber in which the material settles, a series of overlapping valves forming the wall of the receptacle between the settling chamber thereof and the grinder, said gates having channels in their faces forming a connection between the grinder and the settling chamber of the receptacle, means for discharging the finer graded material from near the surface of the material in the settling chamber, and means by which the over-size coarser material may be returned from the settling chamber to the grinder.

5. The combination in a separator and classifier of a settling receptacle having a separating and sizing chamber wherein grading of the material is accomplished, a screen forming a wall of said chamber, said screen being composed of pivotally mounted plates arranged in overlapping order and having channels leading the material into said chamber, and adjustable discharge gates or valves for the fine and coarse materials respectively.

[Claims 6 to 10 not printed in the Gazette.]

872,621. POROUS FILTERING-PLATE AND PROCESS OF MAKING SUCH FILTERING-PLATE. PETER D. GRAY, San Francisco, Cal., assignor to Tone Randolph Gray, San Francisco, Cal. Filed June 3, 1907. Serial No. 377,119.

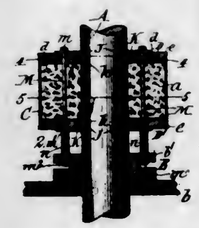
1. A porous filtering plate composed of pure block tin made porous by the admixture of a soluble substance, substantially as described.

2. A porous filtering plate composed of pure block tin made porous by the admixture of a soluble substance and the dissolving out of the soluble substance, substantially as described.

3. The process of making a porous filtering plate composed of pure block tin made porous by an admixture of a soluble substance, by compressing and molding the said materials into shape and finally by dissolving out the said soluble substance, substantially as described.

4. The process of making a homogeneous porous filtering plate of pure block tin, first by admixing therewith a soluble substance, second by molding the two ingredients into shape, and third by dissolving out the soluble substance, substantially as described.

872,622. PISTON-ROD LUBRICATOR. EMMETT G. HAGADORN, Buffalo, N. Y., assignor of one-half to Harry D. Hagadorn, Olean, N. Y. Filed June 26, 1907. Serial No. 380,851.



1. A piston rod lubricator comprising a receptacle adapted to contain a lubricating medium and having two heads each of which is split to permit of applying the same laterally to said rod, and a split body engaging with both of said heads, substantially as set forth.

2. A piston rod lubricator comprising a receptacle adapted to contain a lubricating medium and having two heads each divided into two sections which are adapted to embrace opposite sides of the piston, and a split body adapted to engage with the outer edges of said heads, substantially as set forth.

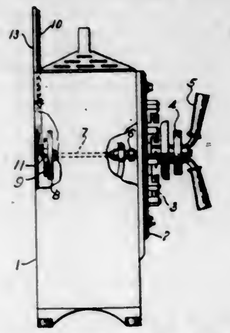
3. A piston rod lubricator comprising a receptacle adapted to contain a lubricating medium and having two heads each divided into two sections which are adapted to embrace opposite sides of the piston, a split body adapted to engage with the outer edges of said heads, and means for detachably connecting the opposiug ends of said body, substantially as set forth.

4. A piston rod lubricator comprising a receptacle adapted to contain a lubricating medium and having circular heads each divided diametrically into two sections and said sections having a circular opening between them through which the piston rod is adapted to pass, a split cylindrical body engaging at its opposite ends with said heads, and means for connecting the opposing ends of said body, substantially as set forth.

5. A piston rod lubricator comprising a receptacle adapted to contain a lubricating medium and having circular heads each divided diametrically into two sections and said sections having a circular opening between them through which the piston rod is adapted to pass, a split cylindrical body engaging at its opposite ends with said heads, and screws connecting the sections of each head, substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

872,623. INDICATING DEVICE. WATER A. HALL, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 6, 1906. Serial No. 320,435.



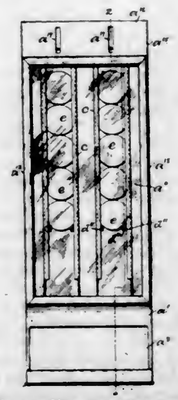
1. In an electrical regulator, a rotary switch adapted to make more than one complete revolution for a complete cycle of the regulator, a pivoted indicator, and gearing between said switch mechanism and said indicator adapted to produce a movement of said indicator through a relatively small arc for a predetermined movement of said switch mechanism.

2. The combination with a rotary switch mechanism of a shaft therefor carrying a spiral, a pivoted lever adapted to engage said spiral, and indicating means actuated by said lever.

3. An electrical apparatus having a rotary switch mechanism, a shaft therefor carrying a spiral, and a pointer engaging said spiral and moved thereby.

4. The combination with a rotary switch mechanism, of a pointer, and means for moving said pointer through a relatively small arc when said switch mechanism makes more than one complete revolution.

872,624. AUTOMATIC VENDING-MACHINE. HARRY R. HOLBROOK, Attleboro, Mass. Filed Sept. 22, 1905. Serial No. 279,700.



1. An automatic vending machine comprising a case in which is a coin slot, an open compartment, a coin receptacle, a coin chute adapted to have a reciprocating movement, a merchandise hopper, actuating mechanism on the hopper the normal position of which locks the merchandise in the hopper, said actuating mechanism consisting of a latch pivotally secured near its center to the hopper, a weighted catch pivotally secured to the lower end of the latch and adapted to enter the hopper, a yoke pivotally secured to the upper end of the latch and having fixed arms and a piv-

oted arm adapted to enter the hopper and an arm adapted to enter an opening in the coin chute, a whip spring secured to the hopper in a position to exert a spring tension on the yoke, and a finger on the coin chute adapted to engage with the latch of the actuating mechanism, whereby on the entering of a coin through the coin slot into the coin chute the actuating mechanism first assumes an extreme operative position to partly release the bottom article of merchandise, then an intermediate position to lock the following articles of merchandise, and then its normal position to fully release the bottom article of merchandise from the hopper, as described.

2. The combination with an automatic vending machine having a case *a* in which is an open compartment a^2, a coin receptacle a^3, a coin slot a^{17}, a coin chute *b* having an opening b^2 and held in its normal position by a coiled spring b^4, and a merchandise hopper *c*, of an actuating mechanism *d* comprising a latch *d'* pivotally secured to the back of the hopper *c* and having the lower arm d^2, the central arm d^3 d^4 supporting the cross bar d^4, and the upper arm d^5 on the end of which are the ears d^6 d^6, a catch d^7 having the hook-shaped end d^8 and the weighted portion d^9 pivotally secured to the end d^3 of the latch *d'* in a position for the hook-shaped end d^8 to enter an opening in the hopper *c*, a yoke d^{10} having the side arms d^{11} d^{11}, an L-shaped arm d^{12}, an upper arm d^{13}, a pivoted arm d^{14}, and pivotally secured to the ears d^6 d^6 on the arm d^5 of the latch *d'* in a position for the arms d^{11} d^{11} and d^{14} to enter openings in the hopper *c*, and the L-shaped arm d^{12} to enter the opening b^2 in the coin chute *b*, a whip spring d^{15} secured to the hopper *c* in a position for the free end of the spring to bear on the arm d^{13} of the yoke d^{10}, and means for operatively connecting the coin chute *b* with the latch *d'* whereby on the entering of a coin through the coin slot a^{17} into the coin chute *b* the actuating mechanism *d* first assumes an extreme operative position to partly release the bottom article of merchandise in the hopper, then an intermediate position to lock the following articles of merchandise in the hopper, and then its normal position to fully release the bottom article of merchandise from the hopper, as described.

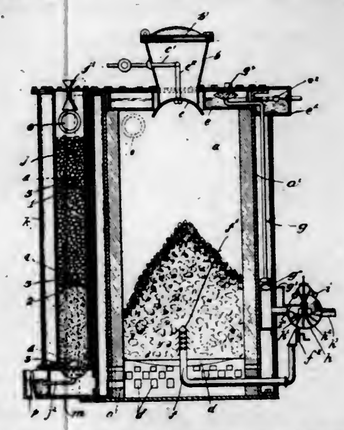
3. An automatic vending machine, embodying a case, a movable coin chute, a merchandise hopper, actuating mechanism on the hopper the normal position of which locks the merchandise in the hopper, embodying a latch pivoted to the hopper, a catch pivoted to the lower end of the latch and adapted to enter the hopper, a member pivoted to the upper end of the latch embodying a pivoted arm adapted to enter the hopper and an arm adapted to enter an opening in the coin chute, said member being spring pressed, and a finger on the coin chute adapted to engage with the latch whereby on the entering of a coin the actuating mechanism first assumes an extreme operative position to partly release the bottom article of merchandise, then an intermediate position to lock the following articles, and finally its normal position to fully release the bottom article.

4. A vending machine embodying a merchandise hopper, a coin actuated vertically depressible coin receiving chute disposed adjacent said hopper and spaced therefrom, said hopper and chute having openings in adjacent sides, means to control the discharge of the merchandise in said hopper disposed in said space between the hopper and chute and adapted to project in said openings of the hopper and chute, and a projection on said chute adapted on downward movement of the chute to engage and operate said means.

5. A vending machine comprising a merchandise hopper, a suspended coin chute adapted for movement with relation thereto said article chute having upper and lower openings therein, an article delivery controlling mechanism comprising an upper finger normally disposed within said upper opening and a lower finger normally held out of said lower opening means actuated upon the movement of said coin chute in a determinate direction for moving the upper finger out of said upper opening and for simultaneously moving the lower finger into said lower opening, coin actuated means for moving said lower finger out of said lower opening after the actuation of said first named means means for restoring said upper finger and the actuating means therefor to normal position after the actuation of said coin actuated means, and means for restoring said coin chute to normal position.

[Claims 6 to 10 not printed in the Gazette.]

872,625. GAS-PRODUCER. ERNEST D. HOPCROFT, Bridgeport, Conn., assignor to The Hopcroft Gas Producer Co., Bridgeport, Conn. Filed Oct. 9, 1906. Serial No. 338,133.



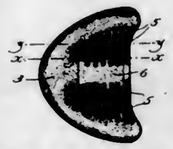
1. In a gas producer, the combination of a retort, means in communication therewith whereby gas generated therein is washed, scrubbed and dried, a distributing chamber in communication with the lower part of said retort, a vapor tank, means whereby said tank is placed in communication with said chamber, means whereby gases are introduced to said chamber in volume proportionate to the quantity of gas drawn from said retort including a blower casing, a wheel mounted therein having vanes whereby said gases will rotate said wheel, a governor actuated by said wheel, a damper plate or valve, and connections between said governor and said plate or valve whereby the volume of steam admitted to said chamber is automatically controlled to preserve the proportions of said vapor and said gases in the mixture in said chamber.

2. In a gas producer, the combination of a retort, means in communication therewith whereby gas generated therein is washed, scrubbed and dried, a distributing chamber in communication with the lower part of said retort, a vapor tank, a tank adapted to contain chemicals in communication with said vapor tank, means whereby said tank is placed in communication with said chamber, means whereby gases are introduced to said chamber in volume proportionate to the quantity of gas drawn from said retort including a blower casing, a wheel mounted therein having vanes whereby said gases will rotate said wheel, a centrifugal governor actuated by said wheel, a damper plate or valve, and connections between said governor and said plate or valve whereby the volume of steam admitted to said chamber is automatically controlled to preserve the proportions of said vapor and said gases in the mixture in said chamber.

3. In a gas producer, the combination of a retort, means in communication therewith whereby gas generated therein is washed, scrubbed and dried, a distributing chamber in communication with the lower part of said retort, a vapor tank, means whereby gases are introduced to said chamber in volume proportionate to the quantity of gas drawn from said retort including a perforated drum, a pipe leading therefrom and opening into said chamber, a damper plate or valve in said pipe, a blower casing communicating with said chamber, a wheel therein having vanes whereby said gases will rotate said wheel, a centrifugal governor actuated by said wheel and connections between said governor and said damper plate or valve whereby the volume of steam admitted to said chamber is automatically controlled to preserve the proportions of said vapor and said gases in the mixture in said chamber.

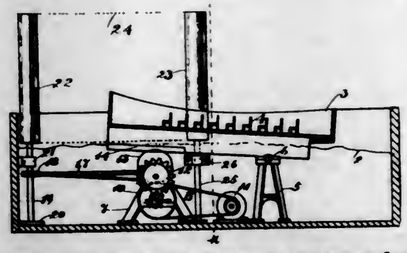
4. In a gas producer, the combination of a retort, means in communication therewith whereby the gas generated therein is washed, scrubbed and dried, a pipe leading therefrom to the inlet port of an internal combustion engine, a distributing chamber in communication with the lower part of said retort, a vapor tank, means whereby gases are introduced to said chamber in volume proportionate to the quantity of gas drawn from said retort including a perforated drum in said vapor tank, a pipe leading therefrom and opening into said chamber, a damper plate or valve in said pipe, a blower casing communicating with said chamber and with the exhaust port of a gas engine, a wheel mounted in said casing having vanes whereby the exhaust gases from said engine will rotate said wheel, a centrifugal governor actuated by said wheel, and connections between said governor and said damper plate or valve whereby the volume of steam admitted to said chamber is automatically controlled to preserve the proportions of said vapor and said gases in the mixture in said chamber.

872,626. PLATE FOR ARTIFICIAL TEETH. JAMES HUMPHREY, Boston, Mass. Filed Mar. 7, 1906. Serial No. 304,638.



A palatal plate having on its upper surface a palatal-chamber and a plurality of ribs extending inwardly from each side of the chamber toward the center thereof.

872,627. AMUSEMENT DEVICE. CHARLES C. KEEN, San Francisco, Cal. Filed Aug. 9, 1907. Serial No. 387,828.



1. The combination of a tight compartment, a flexible cover attached to the sides of the compartment, a movable platform to which the cover is attached, and a movable endless curtain placed in front of and at an acute angle with the longitude of the platform.

2. The combination of a tight compartment, a flexible cover secured to the sides of the same, a platform adapted to be moved in a vertical plane and to which the cover is also secured, a movable endless curtain placed in front of the platform and at an acute angle with the longitude of the same, and means to move the platform and curtain.

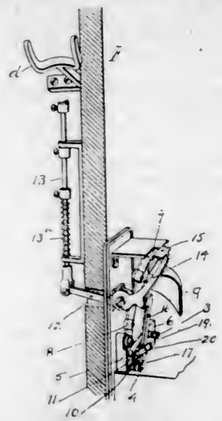
3. The combination of a tight compartment, a flexible cover secured thereto, a vertically movable platform to which the cover is also secured, two vertically journaled curtain rollers one placed in the front of and the other at the side of the platform, a curtain carried thereby, and means to move the platform and curtain.

4. The combination of a tight compartment, a flexible cover for the same and attached to the sides thereof, a platform placed near the center of the compartment and to which the cover is secured, a shaft below and near the rear of the platform and on which it is journaled, a shaft having cams which support the platform at its front end, a movable curtain placed at an acute angle with the longitude of the platform, and means to drive the curtain and platform.

5. The combination of a tight compartment, a flexible cover therefor and attached to the sides thereof, a platform placed near the center of the compartment, a shaft adapted to oscillate supporting the platform near the rear thereof, a shaft having two cams which support the platform near the front thereof, a series of antifriction rolls with which said cams come into direct contact whereby the friction of the cams in moving the platform is decreased and a slight vibration imparted to the platform, a vertically placed endless curtain in front of the platform, and means to move the platform and curtain.

[Claims 6 and 7 not printed in the Gazette.]

872,628. TELEPHONE PAY-STATION. GEORGE A. LONG, Hartford, Conn., assignor to The Gray Telephone Pay Station Company, Hartford, Conn., a Corporation of Connecticut. Filed Nov. 16, 1905. Serial No. 287,606.



1. In a telephone pay station device for use in connection with an automatic telephone system in which the receiver is normally in a closed circuit and the transmitter normally in an open circuit, comprising fixed blocks connected with the ends of the broken branch of the transmitter circuit, said blocks being insulated from one another, a coin channel having its outlet arranged so as to deliver a coin between said blocks to complete the circuit, and means controlled by the switch hook lever for holding said coin in position between said blocks while the receiver is off the hook.

2. A telephone pay station for use in automatic telephone systems in which the receiver circuit is normally closed and the transmitter circuit normally open, comprising the casing having a coin slot, a coin channel within the casing registering with said slot, two fixed blocks insulated from one another and connected with the ends of the broken branch of the transmitter circuit, said coin channel being arranged to deposit the coin between said blocks to close the circuit, and a stop having operative connection with the switch hook lever and adapted to hold said coin in position between said blocks when the said lever is raised and to be withdrawn from under the coin when said lever is depressed by the weight of the receiver.

3. A telephone pay station adapted for use with an automatic telephone system in which the receiving circuit is normally closed and the transmitter circuit normally open, comprising the casing having a coin slot, a coin channel within the casing registering with said coin slot, fixed blocks insulated from one another and having the ends of

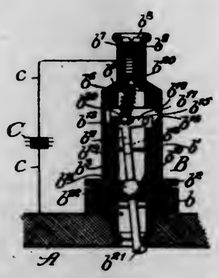
the broken branch of the transmitter circuit secured thereto, the delivery end of said coin channel being arranged above the space between said blocks in order to deposit a coin to close the gap in the transmitter circuit, and mechanism independent of said blocks and having operative connection with the switch hook lever by which the coin slot is closed and the coin deposit outlet opened when the lever is down, and the coin slot opened and the coin deposit outlet closed when the lever is raised, all substantially as described and for the purposes set forth.

4. In a telephone pay station device in which there is a normally open circuit adapted to be closed by the coin which is deposited in payment for the use of the circuit, fixed blocks insulated from one another and connected with the ends of the broken circuit wires, a pivoted lever mounted on one block and projecting downwardly and towards the other block, said lever when in position to receive a coin forming with the opposite block a tapering recess, substantially as described.

5. In a telephone pay station device in which there is a normally open circuit adapted to be closed by the coin which is deposited in payment for the use of the instrument, fixed blocks insulated from one another and connected with the ends of the broken circuit wires, a lever pivoted to one block and projecting downwardly and towards the other block, a spring tending to throw the lower end of said lever towards the opposite block to form a tapering recess to receive the coin, means connected with the switch hook to retract said lever when said hook is down.

[Claims 6 and 7 not printed in the Gazette.]

872,629. SPARKING DEVICE. HARRY A. MILLER, Pasadena, Cal., and BENJAMIN G. GILBOUGH, Chicago, Ill. Filed Feb. 14, 1906. Serial No. 301,104.



1. An ignition device comprising a cylinder having its inner end adapted for communication with an engine cylinder and equipped with a fixed electrode, a gas-actuated piston, and a vibratory electrode disposed longitudinally of said cylinder and mounted upon and carried by the piston, for the purpose set forth.

2. An ignition device comprising a cylinder having its inner end adapted for communication with an engine cylinder and equipped with a fixed electrode, a gas-actuated piston, and a vibratory electrode disposed longitudinally of said cylinder and mounted upon and carried by the piston and having a gas-tight joint therewith, for the purpose set forth.

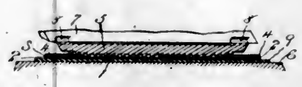
3. An ignition device comprising a cylinder having its inner end adapted for communication with an engine cylinder, a gas-actuated piston of tubular form having an inner end provided with a socket-section, a vibratory electrode having an enlarged pivotal portion received by said socket-section, said electrode extending through the end of the piston, and a removable socket-section maintaining the pivotal portion of the vibratory electrode in position.

4. An ignition device comprising a tubular plug adapted for connection with an engine-cylinder and equipped with a stationary electrode, a cylinder insulatingly mounted on said tubular plug and having its inner end in communication with the tubular plug, a piston movable in the cylinder of the device, a vibrating electrode extending through the piston and having a gas-tight joint therewith, and yielding means for maintaining the piston normally at the inner end of its stroke, and the vibratory electrode normally out of contact with the stationary electrode and in position to be engaged by the stationary electrode upon the initial movement of the piston under the action of gas pressure.

5. An ignition device comprising a tubular plug adapted for connection with an engine-cylinder, a cylinder insulatingly mounted thereon and in communication with said plug, a piston movable in said cylinder, a vibratory electrode having gas-tight connection with said piston, and a coil-spring normally occupying an oblique position, serving to maintain the vibratory electrode in an oblique position, for the purpose set forth.

[Claim 6 not printed in the Gazette.]

872,630. PROCESS OF TREATING PRINTING-PLATES. MILTON A. MCKEE, New York, N. Y., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 30, 1904, Serial No. 222,713. Renewed May 20, 1907. Serial No. 374,726.



1. The process of treating printing plates for the purpose of correcting or preventing a hard printing impression on the edges of the plates, which consists in subjecting the plate to pressure while its face is in contact with a matrix having a continuous raised portion of the same height throughout its length along each of the side edges of the plate.

2. The process of treating printing plates for the purpose of correcting or preventing a hard printing impression on the edges of the plates, which consists in subjecting the plate to pressure while its face is in contact with a matrix having a continuous raised portion of the same height throughout its length along each of the side edges of the plate and subjecting the plate to pressure and heat between two parallel surfaces while the plate is in contact with the matrix.

3. The process of treating printing plates for the purpose of correcting or preventing a hard printing impression on the edges of the plates, which consists in subjecting the plate to pressure while its face is in contact with a matrix having a continuous raised portion of the same height throughout its length along each of the side edges of the plate, subjecting the plate to pressure and heat between two parallel surfaces while the plate is in contact with the matrix and finally cooling the plate while under pressure.

4. The process of treating printing plates for the purpose of correcting or preventing a hard printing impression on the edges of the plates, which consists in subjecting the plate to a shaving operation while its face is in contact with a matrix having a continuous raised portion of the same height throughout its length along each of the side edges of the plate.

5. The process of treating printing plates for the purpose of correcting or preventing a hard printing impression on the edges of the plates, which consists in subjecting the plate to a shaving operation while its face is in contact with a matrix having a continuous raised portion of the same height throughout its length along each of the side edges of the plate and subjecting the plate to pressure and heat between two parallel surfaces while in contact with the matrix.

[Claims 6 to 8 not printed in the Gazette.]

872,631. AUDIBLE WARNING-SIGNAL FOR RAILWAY-CROSSINGS. CHARLES D. ANDERSON and ASHBY G. STOUT, Louisville, Ky., assignors to Union Railway Signal Company, Louisville, Ky., a Corporation of Kentucky. Filed May 27, 1907. Serial No. 376,040.



1. In a warning signal for railway crossings, the combination of a pair of adjacent terminals of a relay circuit for closing a signal bell circuit, said terminals being normally insulated and fixed at a given point along a railway track; adjacent terminals of a second relay circuit for opening said signal-bell circuit, said terminals of said second relay being insulated and fixed at a second point along said railway track; an electric signal-bell and its circuit arranged to be closed by the energizing of said first relay circuit, and to be opened again by the energizing of said second relay circuit; with a metal contact-brush carried on a moving car, and adjusted so as to touch simultaneously and electrically connect both adjacent terminals of either of said relay circuits as said car passes said given points in its course along the track.

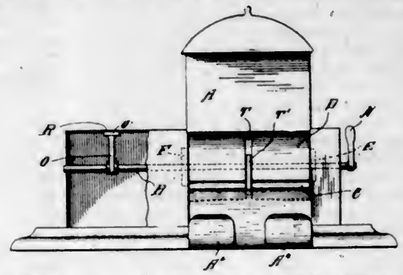
2. In an audible warning signal for railway crossings, the combination of a contact-brush carried on the car; contact-rails in pairs along the railway track at given points, each pair of said rails being adapted to be simultaneously touched and electrically connected by said contact-brush in brushing along over said pair; an insulating rail-bed for each pair of said contact-rails; an insulating tongue between each pair of said rails adapted to prevent accidental short circuits between the rails of each pair; a circuit from said rails through a local battery; a relay magnet in said circuit; a bell-circuit adapted to be closed by said relay magnet; a signal-bell in said bell-circuit for causing the audible signal, substantially as described.

3. In an audible warning signal for railway crossings, the combination comprising pairs of insulating rail-beds securely fastened to the crossties along a railway track; a pair of parallel, metal contact-rails on the upper face of each of said rail-beds; an insulating tongue between said rails running their entire length; a bell-starting relay circuit whose terminals are the two contact-rails on the one of a pair of said rail-beds; a bell-stopping relay circuit whose terminals are the contact-rails on the other of said pair of rail-beds; a signal-bell and its circuit adapted to be closed by the energizing of said bell-starting relay circuit, and to be opened again by the energizing of said bell-stopping relay circuit; and a metal contact-brush carried by the car and adapted to touch simultaneously either pair of said relay terminals to complete the circuit thereof, as said car in its course passes either one of any pair of said rail-beds.

4. An audible warning signal of the character described, comprising, in combination with the railway track and the contact-rails thereon, the car and the contact-brush fastened thereto, the signal-bell and its circuit adapted to be alternately closed and opened at predetermined intervals by the action of relay magnets, the grooves 28^a on the armature 28, a bell-starting relay magnet adapted to close said signal-bell circuit, the finger 32 on the armature 32^b adapted to be engaged and locked by groove 28^a when said relay magnet is energized, the spring contact strip 31 on armature 32^b adapted to contact with pin 29 to close said bell-circuit, the bell-stopping relay magnet 26 adapted when energized to cause a break in said bell-circuit, and a suitable housing for said bell and magnets.

872,632. CIGAR-CUTTER AND MATCH-RECEPTACLE. GEORGE W. ANSLEY, Medical Lake, Wash. Filed Mar. 29, 1907. Serial No. 365,403.

A combined match box and cigar cutter comprising a receptacle, a rock shaft mounted within said receptacle, a cylinder fixed to said shaft and provided with a longitudinal groove to receive a match, a spring seated in an annular recess formed in said cylinder, an inclined partition within the receptacle having a contracted pointed portion which is positioned adjacent to the circumference of said cylinder, a coil spring fixed at one end to said shaft and the other end to said cylinder at one end thereof, a



disk fastened upon said shaft and having a shoulder upon the circumference thereof, a pin fixed to the cylinder and against which said shoulder is adapted to contact, and a blade fixed to said shaft and adapted to shear against the marginal edge of an opening formed in the top of an extension of the casing, as set forth.

872,633. WRENCH. FRANCIS G. ANSPACH, Ida, Mich., assignor of one-half to C. A. Johnson, Chicago, Ill. Filed Apr. 15, 1907. Serial No. 368,271.



1. A wrench comprising a body, a handle mounted to rotate on and move longitudinally of said body, a head having a ratchet connection with said body, a pair of movable jaws mounted in said head, gearing for adjusting said jaws including a gear carried by and movable with said handle, and means for locking said handle in various positions of longitudinal adjustment.

2. A wrench comprising a body, a handle movably mounted thereon, a head having a ratchet connection with said body, a pair of movable jaws mounted in said head, a single shaft having oppositely threaded portions in threaded engagement with said jaws, and gearing adapted to be actuated by the wrench handle for rotating said shaft.

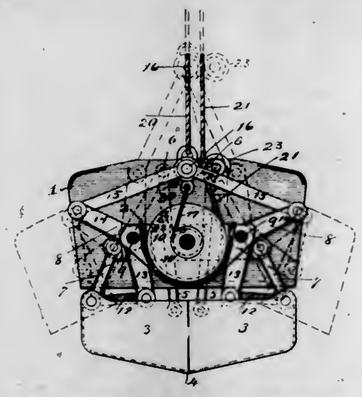
3. A wrench comprising a body, a handle mounted on said body, a shaft journaled loosely in said body, a ratchet wheel carried by said shaft, a pawl carried by the body and engaging said ratchet wheel, a wrench head mounted upon said shaft, a pair of oppositely disposed jaws mounted in said wrench head, a shaft journaled in the end of said first mentioned shaft and having oppositely threaded portions engaging said jaws, and gearing for rotating said threaded shaft.

4. A wrench comprising a body, a handle mounted on said body, a shaft journaled loosely in said body, a ratchet wheel carried by said shaft, a pawl carried by the body and engaging said ratchet wheel, a wrench head mounted upon said shaft, a pair of oppositely disposed jaws mounted in said wrench head, a shaft journaled loosely in the end of said first mentioned shaft and having oppositely threaded portions engaging said jaws, and means actuated by the wrench handle for rotating said threaded shaft.

5. A wrench comprising a body, a handle mounted on said body, a shaft extending transversely of the body, a wrench head mounted on said shaft, a pair of oppositely disposed jaws mounted in said wrench head, a shaft journaled loosely in the end of said first mentioned shaft and having oppositely threaded portions engaging said jaws, a beveled gear carried by the threaded shaft, a sleeve mounted on said first mentioned shaft and provided with a beveled gear meshing with the beveled gear carried by the threaded shaft, and means for rotating said sleeve.

[Claims 6 to 10 not printed in the Gazette.]

872,634. AUTOMATIC BUCKET. EDMOND F. ATHERTON, Cleveland, Ohio. Filed Sept. 16, 1907. Serial No. 393,148.



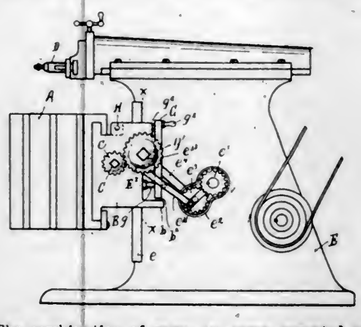
1. In an automatic bucket, the combination with a suitable frame, of scoop portions, long links connecting the inner ends of said scoop portions with said frame and short links connecting the outer ends of said scoop portions with said frame, whereby said buckets are permitted to swing outward from the closed position to a substantially vertical position when opened, an operating bell crank for each scoop portion, pivoted in said frame one at each end thereof, a short link connecting one arm of each bell crank with the outer end of one of said scoop sections, a central transverse shaft vertically movable in said frame, links connecting said shaft with the remaining arms of said bell cranks and a rope and pulley device for withdrawing said vertically movable shaft into said frame to close said scoop portions together, substantially as described.

2. In an automatic bucket, in combination, a frame, scoop portions suspended therefrom for horizontal and vertical movement, an operating bell crank for each scoop portion, pivoted in said frame, and a link connecting the outer end of each scoop portion with one arm of its corresponding bell crank, a toggle joint having its central, pivot vertically movable, and having links pivotally attached to said bell cranks, a hold up rope attached to said toggle joint at the pivotal point, a central drum and power pulley on a common axis pivoted in said frame, a closing rope passing over said drum, and a second operating closing rope operatively connecting said toggle joint at the central pivot point with the said power pulley, substantially as described.

3. In an automatic bucket, the combination with a frame, of scoop portions mounted in said frame for horizontal and vertical movement, bell cranks operatively connected with the said scoop portions, a toggle joint operatively connecting said bell cranks and means for depressing said toggle joint to operate said bell cranks to close said scoop portions together substantially as described.

4. In an automatic bucket, the combination with a frame, comprising side pieces and a transverse diaphragm, scoop portions suspended therefrom for horizontal and substantially vertical movement, said scoop portions adapted to close together underneath said frame, bell cranks transversely pivoted in said diaphragm, one for each scoop portion and operatively connected therewith at the outer end thereof, a toggle joint comprising duplicate links, pivotally connected together on the vertical central line of the bucket, said pivotal point being vertically movable in said frame, and said links operatively connected with said bell cranks, a large pulley centrally pivoted in said diaphragm, power pulleys movable therewith one on each side thereof, a central pivotal shaft for the toggle joint, a power rope operatively connecting said shaft with said power pulleys, a hold up rope connected with said shaft, and a closing rope passing over said large pulley, substantially as described.

872,635. FEED-REGULATOR. HENRY J. AVERBECK, Covington, Ky. Filed Apr. 2, 1906. Serial No. 309,309.



1. The combination of ways, an apron mounted reciprocably upon the ways, a feed-screw for reciprocating the apron, an auxiliary shaft mounted adjacent to the feed-screw, a pinion mounted loosely upon the auxiliary shaft and meshing with the feed-screw, a sleeve mounted rotatably upon the auxiliary shaft, a driving shaft, means for coupling the sleeve to the driving shaft, two pawls mounted upon the sleeve and adapted to engage the pinion, one of said pawls moving the pinion in one direction and the other moving it in the opposite direction and a shifting mechanism mounted adjacent to the sleeve and engaging the pawls so that when moved in one direction it carries one of the pawls into engagement and the other one out of engagement with the pinion and when moved in the opposite direction it carries the first of said pawls out of engagement and carries the second into engagement with the pinion, and when in an intermediate position holds both pawls out of engagement with the pinion.

2. A shifting mechanism for making and breaking the connection between the feed-screw and the driving shaft, consisting of an auxiliary shaft, a pinion mounted upon the shaft adapted to engage the feed-screw, a loose sleeve mounted upon the auxiliary shaft, means for connecting it to the driving shaft, pawls pivoted upon the loose sleeve and facing in opposite directions, a sliding sleeve mounted upon the loose sleeve and a finger secured to the sliding sleeve projecting beneath the pawls and having its ends beveled so that when the sliding sleeve is at either limit of its travel, one or the other of the pawls is in contact with the pinion and when the sleeve is in its intermediate position both pawls are held out of contact with the pinion by the finger.

3. The combination of ways, an apron mounted reciprocably upon the ways, a feed-screw for reciprocating the apron, an auxiliary shaft mounted adjacent to the feed-screw, a pinion mounted loosely upon the auxiliary shaft and meshing with the feed-screw, a sleeve mounted rotatably upon the auxiliary shaft, means for coupling the sleeve to the driving shaft, two pawls mounted upon the sleeve and adapted to engage the pinion, one of said pawls moving the pinion in one direction and the other moving it in the opposite direction, a shifting mechanism mounted adjacent to the sleeve and engaging the pawls so that when moved in one direction it carries one of the pawls into engagement and the other one out of engagement with the pinion and when moved in the opposite direction it carries the first of said pawls out of engagement and carries the second into engagement with the pinion, and when in an intermediate position holds both pawls out of engagement with the pinion, a lever for engaging the shifting mechanism and an automatic means for holding it in a central or in a position to one or the other side of its central position.

4. The combination of ways, an apron mounted reciprocably upon the ways, a feed-screw for reciprocating the apron upon the ways, a driving shaft, a means for connecting the feed-screw and the driving shaft, a feed regulating shaft mounted adjacent to the apron, a movable contact device mounted upon the feed regulating shaft and adapted to be contacted by the apron to move the feed regulating shaft, and means for connecting the feed regulating shaft and the connecting means between the driving shaft and a feed-screw whereby when the feed-regulating shaft is moved it operates the connecting means to break the connection between the feed-screw and the driving shaft.

5. The combination of ways, an apron reciprocating on the ways, a feed-screw for feeding the apron, an auxiliary shaft, a pinion mounted on the auxiliary shaft and engaging the feed-screw, a sleeve mounted on the auxiliary shaft, reverse pawls pivoted upon the sleeve and adapted to engage the pinion to move it in opposite directions, a shifting mechanism mounted adjacent to the sleeve and carrying a finger which in the extremes of the travel of the shifting mechanism carries one pawl into engagement and the other out of engagement with the pinion, a lever for reciprocating the shifting mechanism, a feed regulating shaft mounted in the ways, an arm mounted on the regulating shaft and engaging the lever so that when the regulating shaft is carried from its normal position it moves the lever to its central position to carry the pawls out of engagement with the pinion.

[Claim 6 not printed in the Gazette.]

872,636. ICE-CREAM FREEZER AND CHURN. IRA T. BABBITT, Abingdon, Ill. Filed Sept. 24, 1906. Serial No. 335,949.



In a device of the class described the combination with a supporting frame having a bottom; of a body mounted upon the bottom, a revoluble element within the body, a shaft revoluble simultaneously with said element, means mounted upon the body and constituting a bearing for the shaft, said shaft having an angular end portion, a spindle journaled within the supporting frame, a longitudinally movable slotted coupling upon the spindle, means on the spindle and within the slot to limit the longitudinal movement of the coupling, said coupling having a socket disposed below the spindle and designed to engage the angular portion of the shaft, and means upon the supporting frame for rotating the spindle and coupling, the receptacle being adjustable upon the bottom of the frame to center the shaft below the coupling.

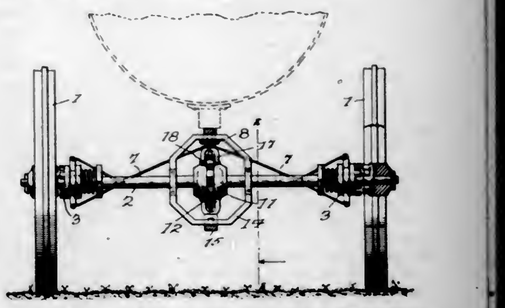
872,637. COMBINED SHADE AND CURTAIN-POLE SUPPORT. CHARLES G. BACON, Antigo, Wis., assignor of one-half to Edward Hadler, Antigo, Wis. Filed June 24, 1907. Serial No. 380,506.



1. A combined curtain pole and shade support, comprising a continuous rod member having intermediate of its inner and outer ends a substantially U-shaped bent portion adapted to form a socket for the reception of one of the trunnions of the shade roll, the said rod having its outer end adapted to be passed through an opening in a curtain pole and provided beyond said point with means for the effective retention of said rod in said opening.

2. A continuous rod having intermediate of its end portions a substantially downwardly bent U-shaped portion, forming a socket for the reception of the trunnion upon one end of the shade roll, said rod having its outer end bent upwardly to form a stop at that point, and a curtain pole having a transverse opening therethrough for the reception of said rod.

872,638. DEVICE FOR PROPELLING VEHICLES. WILLIAM C. BERNER, El Reno, Okla. Filed Sept. 27, 1906. Serial No. 336,518.

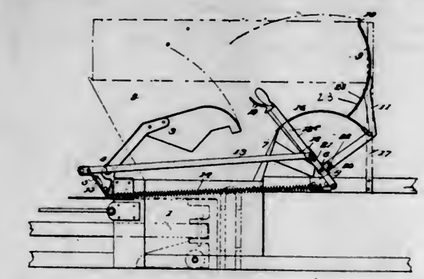


1. The combination with the steering axle of a vehicle, of a rounded block secured thereto, a drive wheel provided with curved hub plates inclosing said block and having a swivel movement thereon, a frame mounted on said axle, a hound with which said frame has a relatively pivotal movement, and arms extending inwardly from said hounds on opposite sides of said drive wheel.

2. The combination with the steering axle of a vehicle, of a rounded block secured thereto, a drive wheel mounted on said block, the block and drive wheel having a relative swivel movement, a vertically disposed frame mounted on said axle, and a hound with which said frame has pivotal connection to turn about a vertical axis, the said hound being formed with inwardly extending fingers, said fingers

carrying at their extremities rollers bearing on opposite sides of said drive wheel.

872,639. PACKER FOR BALING-PRESSES. DAVID E. BELLINGER, Chanute, Kans. Filed Mar. 30, 1907. Serial No. 365,527.



1. In a baling press embodying a feeder and a tucker, the two being spaced apart and arranged upon opposite sides of the feed opening in a side of the baling chamber, a packer pivotally supported in the rear of the tucker and adapted to condense the material and to force the same away from the tucker and beneath and into the path of the feeder, and actuating means for the feeder and packer.

2. In a baling press embodying a feeder and a tucker, the two being spaced apart and arranged upon opposite sides of the feed opening in a side of the baling chamber, a packer pivotally supported in the rear of the tucker and adapted to condense the material and to force the same away from the tucker and beneath and into the path of the from the tucker and beneath and into the path of the feeder, a yielding connection between the packer and feeder and positive connection for transmitting motion from the feeder to the packer.

3. In a baling press embodying a feeder and a tucker arranged upon opposite sides of the feed opening leading to the baling chamber, a pivoted packer arranged to operate over the tucker and to move the material away from said tucker towards the feeder and beneath the same, a rod or bar having crank connection with the feeder and packer and a spring connecting the outer end of said rod or bar with a crank of the packer.

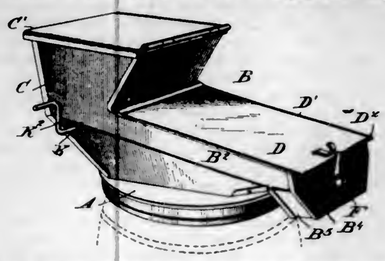
4. In a press embodying a feeder and a tucker arranged upon opposite sides of the feed opening of the baling chamber, a double crank removably fitted upon the packer shaft, a packer pivotally mounted and adapted to force the material away from the tucker and towards and beneath the feeder, a rod or bar connecting one arm of said double crank with a crank of the feeder shaft, and a spring connecting the opposite arm of said double crank with the outer end of said rod or bar.

5. In a press embodying a feeder and a tucker located upon opposite sides of the feed opening of the baling chamber, a packer arranged to move the material from the tucker towards and beneath the feeder, a shaft for the packer, a double crank removably fitted upon said shaft to admit of the feeder normally occupying either a vertical or an inclined position, a rod or bar connecting one arm of said crank with a crank of the feeder shaft, and a spring connecting the other arm of the crank with the outer end of said rod or bar.

[Claims 6 to 8 not printed in the Gazette.]

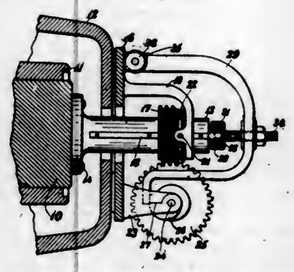
872,640. ASH-SIFTER. THOMAS P. BOLGER, Gloucester, Mass., assignor to Success Manufacturing Company, Gloucester, Mass., a Corporation of Massachusetts. Filed Apr. 8, 1907. Serial No. 367,076.

A sifter comprising a cap provided with a casing having a hopper at one end, and a spout at the other end, a top slidably mounted on said casing, a hook pivotally mounted on the end of said casing, adapted to engage said top and



lock it thereon, a sieve slidably mounted in said casing and means for reciprocating said sieve.

872,641. SHAFT-OSCILLATOR. WILL F. BOUCHÉ, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Aug. 31, 1906. Serial No. 332,745.



1. In combination, a rotary shaft, a rotary spindle driven by said shaft, and oscillatory means operated by said spindle for moving the shaft longitudinally in its bearings.

2. In combination, a rotary shaft, a rotary spindle driven by the shaft, an arm pivoted to a stationary support and bearing on the end of the shaft, and means for reciprocating the arm from said spindle.

3. In combination, a rotary shaft, a toothed wheel positively driven thereby, and means operated by said wheel for oscillating said shaft.

4. In combination, a rotating shaft, a gear wheel rotating therewith, a second gear wheel meshing with the first gear wheel, and means operated by said second gear wheel for moving said shaft longitudinally in its bearings.

5. In combination, a rotary shaft, a spindle at substantially right angles to the shaft, a driving connection between the shaft and spindle, and an arm pivoted to a stationary support and reciprocated by said spindle, said arm bearing on the shaft.

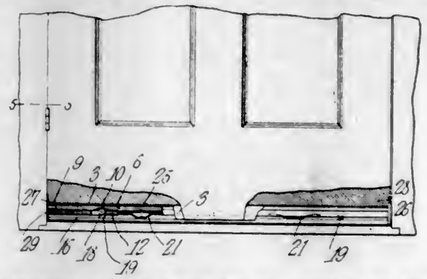
[Claims 6 to 11 not printed in the Gazette.]

872,642. WEATHER-STRIP. ALBERT BUJEWSKI, St. Louis, Mo. Filed Apr. 5, 1907. Serial No. 366,616.

1. A weather strip comprising a casing, a longitudinally movable bar, a transversely movable bar, a fixed separating strip between the two bars, coöperating means carried by the two bars for causing one of said bars to move the other in a direction transverse to the movement of the first mentioned bar, and interlocking spring plates fastened to the separating strip and to the transversely movable bar.

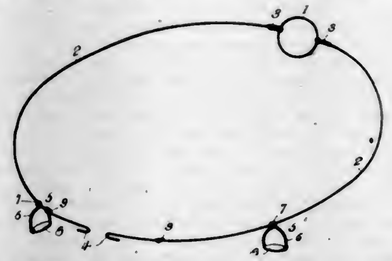
2. A weather strip comprising a casing, a longitudinally movable bar, a transversely movable bar, a fixed separating strip between the two bars provided with through

openings and exterior recesses, coöperating means within said openings carried by the two bars for causing one of said bars to move transversely when the other is moved longitudinally, a spring plate centrally fastened to the



transversely movable bar opposite each recess in the separating strip, and other spring plates in the ends of said recesses arranged to overlap the ends of the spring plates on the transversely movable bar.

872,643. FODDER-TIE. HENRY A. Y. BURKHART, Monocacy, Pa. Filed Mar. 7, 1907. Serial No. 361,072.



1. A fodder tie comprising wire strands designed to be drawn around the sheaf, the ends of the strands being formed with hook members adapted to have an interlocking connection and the said strands being provided with enlargements adjacent the hook members, and handles for drawing the strands around the sheaf, said handles being formed with eyes loosely receiving the strands and engaging the enlargements to produce tension in the strands.

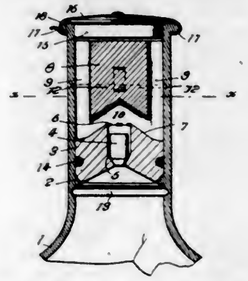
2. A fodder tie, comprising a ring, a pair of wire strands loosely connected to the ring and extending in opposite directions therefrom, the said wire strands having the end portions thereof formed with hook members adapted to have an interlocking connection and being provided with enlargements located adjacent the hook members, and handles for drawing the strands around the sheaf, the said handles being formed with eyes loosely receiving the strands and engaging the before mentioned enlargements to produce tension in the strands.

872,644. NON-REFILLABLE BOTTLE. WILLIAM E. CAMPBELL and HOWARD T. INGHRAM, Fairfield, Iowa. Filed Mar. 21, 1907. Serial No. 363,639.

1. The combination of a bottle, a tubular member arranged in the neck of the bottle, a valve operating within the tubular member, and ears carried by the tubular member to prevent displacement of the valve.

2. The combination of a bottle, a tubular member fitted within the neck of the bottle, the opening through the tubular member having a contracted portion, a valve fitting loosely within the tubular member and normally resting upon the contracted portion, ears carried by the tubular member to prevent displacement of the valve, and a plug fitting over the tubular member and formed with a channel.

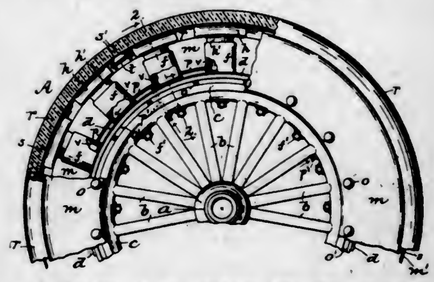
3. The combination of a bottle, a tubular member arranged in the neck of the bottle, the outer end of the tubular member having the middle portion thereof raised, a valve operating within the tubular member, ears carried by the tubular member to prevent displacement of the valve, and a plug resting upon the tubular member and having the inner end thereof depressed to correspond to the raised outer end of the tubular member, the said plug being formed with a channel.



4. The combination of a bottle, a tubular member arranged within the neck of the bottle, the opening through the tubular member having the inner portion thereof contracted, a valve fitting loosely within the tubular member and normally resting upon the contracted portion at the inner end of the opening therethrough, ears carried by the tubular member and preventing displacement of the valve, the outer end of the tubular member having the middle portion thereof raised, and a plug fitting against the tubular member and having the inner end thereof formed with a depression corresponding to the raised portion of the outer end of the tubular member, the said plug being formed with a channel.

5. The combination of a bottle, a tubular member fitting within the neck of the bottle, the outer end of the tubular member having a conical formation, a valve operating within the tubular member, a plug fitting over the tubular member and having the lower end thereof formed with a depression to receive the conical upper end of the tubular member, the said plug being also provided upon its sides with longitudinal channels and upon its base with a transverse channel connecting the longitudinal channels and extending over the opening through the tubular member, and means for locking the plug within the neck of the bottle.

872,645. RESILIENT-TIRED WHEEL FOR SELF-PROPELLED VEHICLES. EDWIN M. CARHART, Providence, R. I. Filed Feb. 16, 1907. Serial No. 357,625.

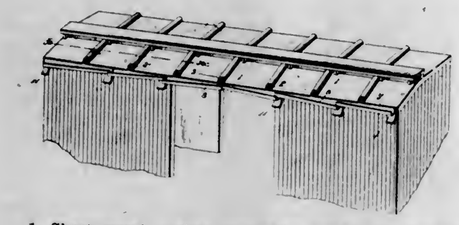


1. In a wheel of the character described, the combination with the rim *c*, a pair of oppositely disposed annular metal plates *m* rigidly secured to the front and rear sides of the rim, and a continuous annular rubber tire member *r* having a substantially concavo-convex form cross-sectionally seated in and being supported by said plates, of a plurality of short radially extending air-tight cylinders

arranged around and rigidly secured to said rim member, a suitably packed piston or plunger-block h h^1 movably mounted in each cylinder, its upper or head portion being enlarged and fitted to the adjacent concave part of the tire r, and a continuous hoop or band s of metal extending circumferentially around and being secured to the heads of the pistons, all constructed, arranged, and adapted for operation substantially as hereinbefore described.

2. In a wheel of the character described, the combination of the rim member c, a plurality of radially arranged independent air-tight cylinders secured to the rim by bolts passing through the latter and the bottom of the cylinders, a non-pneumatic annular tire of rubber having its inner peripheral surface provided with a continuous groove or recess, a packed piston or plunger-block movably mounted in each cylinder and being in continuous yielding contact with said grooved portion of the tire, and a pair of laterally separated removable non-yielding outer side plates m m secured to said rim and tire for supporting and maintaining the latter member in the normal position.

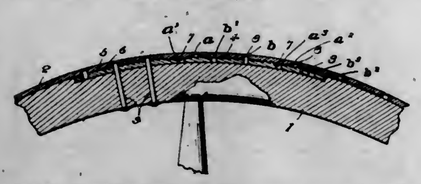
872,646. METAL ROOF AND EAVES-TROUGH. JAMES CARTER, Huntington, W. Va. Filed Jan. 16, 1907. Serial No. 352,568.



1. Sheet metal roofing comprising plates, or sections, each plate or section having an end portion folded upon itself, thence bent outward about at a right angle to form a securing flange and provided at opposite longitudinal edges with matching rolls terminating in upstanding flanges, the rolls ending at the folded end of a plate and arranged upon the side thereof opposite to the securing flange, the several plates being adapted to be fitted together by slipping the rolls one within the other.

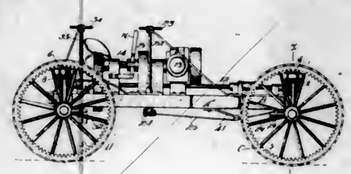
2. In combination a sheet metal roof composed of sections, or plates, having matching rolls which interlock by a slip joint, each plate having an end folded upon itself, thence bent about at a right angle, and a sectional eaves trough having a horizontal wing to underlap the folded portion of the plates and a vertical wing to underlap the pendent portion of the roof plates, and fastenings passed through the overlapped vertical portions of the roof plates and eaves trough sections to secure them to the roof structure.

872,647. TIRE. STEPHEN G. DAVIS, Cooper, Iowa. Filed May 3, 1907. Serial No. 371,697.



A wheel provided with a felly formed with a recess in its outer side, a fillet fitting in said recess and formed with a plurality of equidistant apertures relatively close together, and a tire encircling the felly and provided with a joint, the ends of the joint abutting against each other and extending over the fillet, said ends being formed with a plurality of apertures relatively farther apart than the apertures in the fillet, the longer of the abutting ends being formed with interlocking teeth, and bolts one on each side of the joint and adapted to extend through registering apertures in the ends next to the joint and through the fillet and felly, substantially as shown and described.

872,648. TRACTION-MOTOR. FRANK L. EMERSON, Mountain View, Cal. Filed Jan. 18, 1907. Serial No. 352,929.



1. In a traction apparatus, a frame, wheels turnable upon axis at the front and rear, said wheels having internal gear teeth around their peripheries, a motor carried upon the frame, and mechanism between the motor and said wheels whereby the wheels may be driven independently, said mechanism comprising gears engaging the teeth of said wheels and mounted on vertical axes.

2. In a traction apparatus, the combination of a main frame, rear wheels journaled and independently turnable thereon, a front frame having a pair of wheels journaled and independently turnable thereon, a longitudinal central connection between the front and rear frames whereby the two are turnable independently about a longitudinal axis, a motor carried upon the frame, and connections between the motor and said wheels for operating the latter, said connections comprising internal gear teeth around the peripheries of the wheels and a vertically-journaled gear wheel for each wheel engaging the teeth of the latter.

3. In a traction apparatus, the combination of front and rear frames having bearing wheels, said wheels having gear teeth around their peripheries, a sleeve fixed horizontally to one of said frames and having a turnable connection with the other, a motor upon the main frame, a counter-shaft passing through said sleeve, means for driving said shaft from the motor, a transverse shaft journaled on the forward frame and means whereby said shaft is driven from the counter-shaft, a vertically-journaled shaft at each end of the transverse shaft, having a gear wheel to engage the teeth of the adjacent bearing wheel, and connections between the ends of said counter-shaft and the vertical shafts.

4. In a traction apparatus, main and supplemental frames connected and turnable about a horizontal centrally located sleeve, bearing wheels having internal gear teeth around the peripheries, vertically journaled gears engaging the teeth of the wheels, a transversely journaled horizontal shaft, gears whereby motion is transmitted from said shaft to turn the wheels, driving gears, a longitudinally journaled countershaft passing through the joint connections of the frames, beveled gears whereby motion is transmitted to the transverse shaft, and motor connections to drive the countershaft.

5. In a traction apparatus, a main frame, a supplemental frame, a hollow sleeve forming a joint connection about which said frames are turnable, bearing wheels journaled upon the front and upon the rear frames respectively, said wheels having internal gear teeth near the periphery, vertical shafts and sleeves turnable thereon, said sleeves carrying gear wheels which engage the teeth of the bearing wheels, transverse shafts with beveled gear connections to revolve the sleeves and gear wheels, a longitudinal countershaft passing through the sleeve connection of the frames having gears at opposite ends engaging gears upon the transverse wheel driving shafts, a motor located upon the main frame, and gearing whereby motion is transmitted therefrom to drive the countershaft.

[Claims 6 to 11 not printed in the Gazette.]

872,649. OIL-ATOMIZER. WHILLDIN FOSTER and EUGENE C. FOSTER, Philadelphia, Pa., assignors to Leede Process Company, a Corporation of New Jersey. Filed May 7, 1906. Serial No. 315,570.



1. An oil atomizer having an oil chamber with delivery ducts, and a steam chamber with delivery nozzles, both of said chambers having additional nozzles for directing jets of steam against the combined flow from said ducts and first named nozzles.

2. An oil atomizer having an oil chamber and a steam chamber both of semi-cylindrical form, a hollow casing formed to receive and guide said chambers so as to permit longitudinal adjustment with respect to one another, said chambers having delivery ducts and nozzles for the exit of steam and oil therefrom.

3. An oil atomizer having a pair of chambers each formed with a cavity, ducts and nozzles issuing from the respective cavities, and additional cavities in both chambers having nozzles for the delivery of steam against the combined flow from said ducts and first named nozzles.

4. An oil atomizer having a pair of semi-cylindrical chambers, means for guiding said chambers with their flat faces in juxtaposition to one another so as to permit longitudinal adjustment, and ducts and nozzles in said flat faces directed at an angle to one another.

5. An oil atomizer having an oil delivery chamber with a coned or tapering cavity therein, a plug formed to be closely received in said cavity, oil delivery ducts leading from said cavity, and means for impinging jets of steam across the path of delivery of said ducts.

[Claims 6 to 10 not printed in the Gazette.]

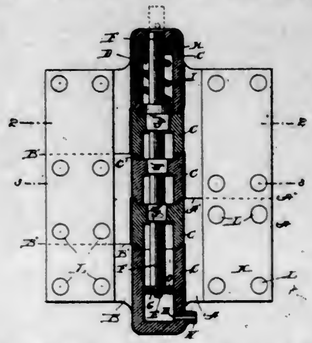
872,650. LOCKING-HINGE. FRANK J. GILROY, Buffalo, N. Y. Filed June 15, 1907. Serial No. 379,230.

1. The combination with a hinge provided with devices for locking its leaves in closed position, of means for applying fluid pressure to said devices for unlocking them.

2. The combination with a hinge provided with devices for locking its leaves in closed position, of a spring arranged for holding said devices in locking position, and means for applying fluid pressure to overcome the action of the spring.

3. The combination with a hinge provided with devices for locking its leaves in closed position, of means for applying fluid pressure to unlock said devices, said means being adapted to allow a part of the pressure-exerting fluid to escape while the fluid is acting upon said devices; whereby a large supply of fluid is made essential to unlocking.

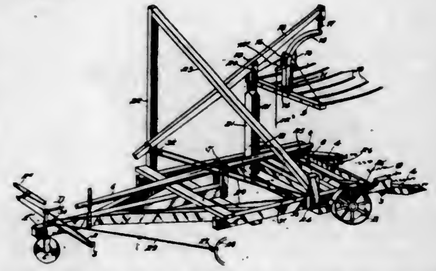
4. The combination with hinge leaves, of a longitudinally sliding pintle having non-circular portions adapted to engage the knuckle of both leaves and lock them against relative rotary movement, a spring resisting unlocking movement of the pintle, and a fluid-actuated piston arranged for compelling unlocking movement of the pintle, and means for applying fluid pressure to said piston.



5. The combination with two hinge leaves, of a longitudinally sliding pintle adapted to lock the hinge knuckles against opening movement, a spring resisting unlocking movement of the pintle and itself inaccessible when the hinge is assembled, a fluid actuated piston arranged for compelling unlocking movement of said pintle and itself inaccessible when the hinge is assembled, and means for applying fluid pressure to said piston.

[Claims 6 to 8 not printed in the Gazette.]

872,651. HAY AND GRAIN LOADER. IRA GORDON, Davisville, Cal. Filed June 24, 1907. Serial No. 380,514.



1. In an apparatus for gathering and transferring hay and like material, a main wheeled frame with steering means, a supplemental frame pivoted to the front of the main frame, means by which said supplemental frame may be tilted, stops and latching mechanism carried by said frame, a gathering implement, and a guided movable lever arm from which the implement is suspended.

2. In an apparatus for gathering and transferring hay the like material, a main wheeled steerable frame, a supplemental frame tiltably pivoted and extending at the front of the main frame, a lever by which said supplemental frame may be tilted, a rake, stops and latching means upon the tiltable frame with which said rake is engaged, a post and a lever arm pivotally fulcrumed thereon, a swivel and link connection whereby the implement is suspended from the outer end of said lever arm, a guide, and means by which said arm is moved to lower the rake and place it on the pivoted frame, or to raise it when disengaged therefrom.

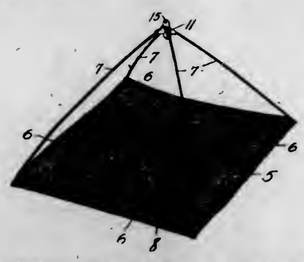
3. In an apparatus of the character described, a main wheeled steerable frame, a tiltable frame pivoted thereto and projecting to the front, a rake having a head, means by which the rake head is disengageably locked to the tilting frame, a guided turnable lever arm, a swivel connection with its outer end, a curved bar suspended from said swivel and to the lower end of which the rake head is pivotally connected to maintain the teeth in a load retaining posi-

tion, and a holding latch by which the rake is disengaged from its suspending means to allow the load to be discharged.

4. In an apparatus of the character described, a main wheeled frame, a supplemental frame turnably pivoted to the front end of the main frame, a lever by which the supplemental frame is moved, a gathering implement, means for disengageably connecting the head of said implement with the tiltable frame, a post, a lever arm turnably fulcrumed thereon, swivel connections between the outer end of said lever arm and the implement, an inclined guide extending diagonally across the main frame and against which the implement carrying lever is slidable, a rope connected with the inner and lower end of the lever arm, direction pulleys, and connections whereby power may be applied to the lever arm to raise or lower and transfer the implement.

5. In an apparatus of the character described, including a main wheeled frame, a double-tree mounted thereon, a draft appliance, a tiltable supplemental frame, a swiveled lever arm with a gathering implement suspended from its outer end, a diagonally disposed guide for the inner end of the lever arm, a rope connected with said lever, with direction pulleys, said rope being connected with the draft appliance connected with one of the draft animals, and means for disengageably connecting said animal with the doubletree to alternately haul the wheeled frame and to elevate the gathering implement.

872,652. MINNOW-NET. GEORGE W. GRAU, Jr., and EDWARD L. NELSON, Columbus, Ohio. Filed Apr. 10, 1907. Serial No. 367,314.



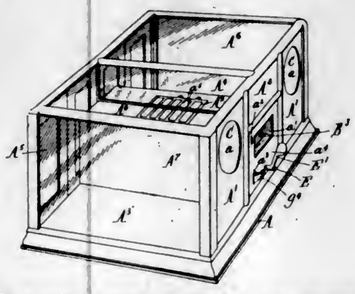
1. In a device of the character described, the combination with a central block comprising a plurality of arms having channels formed in the upper faces thereof, of a plurality of resilient rods pivoted in said blocks, and a net to the corners of which the free ends of the rods are secured, said rods being adapted to lie in the channels of the arms when the device is in use.

2. In a device of the character described, the combination with a central block, of a plurality of arms carried by said block, said arms having channels in the upper faces thereof and a plurality of resilient rods pivoted for swinging and a slight lateral movement in said block and adapted to be moved into or out of engagement with the channels of the arms, and a net to which the free ends of said rods are secured.

872,653. VENDING-MACHINE. FREDERICK HART, Poughkeepsie, N. Y. Filed Jan. 24, 1905. Serial No. 242,543.

1. In a coin-controlled mechanism, the combination of a stationary coin passage having means for temporarily supporting the coin, a hand-operated carrier movable toward and from said passage, a tumbler mounted on said carrier and moved by the same over the coin held in said passage and shifted by the coin from an inoperative to an operative position, a delivery device, and intermediate mechanism by which the tumbler operates the delivery device, substantially as set forth.

2. In a coin-controlled mechanism, the combination of a stationary coin passage having means for temporarily supporting the coin, a hand-operated carrier movable toward and from said passage, a tumbler mounted on said carrier and moved by the same over the coin held in said passage and shifted by the coin from an inoperative to an operative position, a delivery device, and a coupling device which is actuated by the tumbler and which connects the carrier to the delivery device, substantially as set forth.



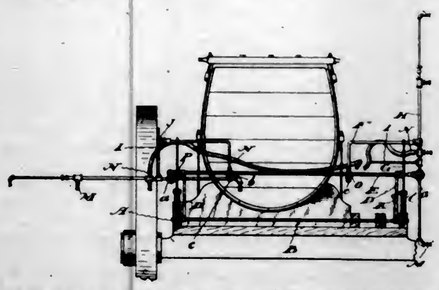
3. In a coin-controlled mechanism, the combination of a stationary coin passage having means for temporarily supporting the coin therein, a hand-operated reciprocating carrier which is movable toward and from said passage, a tumbler mounted on said carrier and moved by the same over the coin held in said passage and shifted by the coin from an inoperative to an operative position, a reciprocating delivery carriage, and a coupling device which is carried by the carriage and operated by the tumbler for connecting the same to the carrier, substantially as set forth.

4. In a coin-controlled mechanism, the combination of a stationary support, a hand-operated carrier, a coin-shifted tumbler carried thereby, a delivery device, a detent which locks the latter to the support and which is released by the tumbler, and a coupling device which is operated by the tumbler and which connects the carriage to the carrier, substantially as set forth.

5. In a coin-controlled mechanism, the combination of a hand-operated carrier, a coin-shifted tumbler carried thereby, a delivery device, a detent which locks the latter against movement and is released by the tumbler, and a coupling device attached to the detent and actuated by the tumbler for connecting the delivery device to the carrier, substantially as set forth.

[Claims 6 to 38 not printed in the Gazette.]

872,654. SPRAYING APPARATUS. WILLIAM H. HEARD, London, Ontario, Canada. Filed July 11, 1906. Serial No. 325,608.



1. In spraying apparatus the combination of a vehicle; two independent conduits transversely hinged thereon and each capable as a whole of occupying either a vertical or horizontal position; a plurality of spray nozzles carried thereby; means for holding said conduits either horizontal or vertical, the parts being so proportioned and arranged that the conduits when horizontal will spray a plurality of substantially equidistant rows; means for laterally and separately adjusting each spray conduit in either position; and means for vertically and simultaneously adjusting both conduits in either position, substantially as described.

2. In spraying apparatus the combination of a vehicle; two independent conduits transversely hinged thereon and each capable as a whole of occupying either a vertical or horizontal position; a plurality of spray nozzles carried thereby; means for holding said conduits either horizontal or vertical, the parts being so proportioned and arranged that the conduits when horizontal will spray a plurality of substantially equidistant rows; and means for vertically and simultaneously adjusting both conduits in either position, substantially as described.

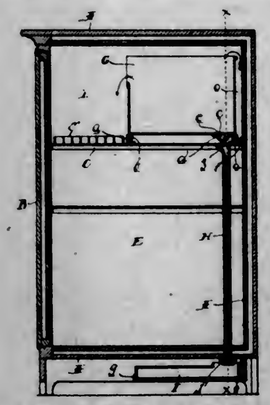
3. In spraying apparatus the combination of a vehicle; a vertical transverse frame supported therefrom; a spray conduit hinged at the lower part of the frame; means for clamping the conduit to the lower part of the frame when the conduit is horizontal; a stem secured to the conduit at right angles thereto; and means for clamping either the conduit or said stem to the upper part of the frame, substantially as described.

4. In spraying apparatus the combination of a vehicle; a vertical transverse frame supported therefrom; a spray conduit hinged at the lower part of the frame; means for clamping the conduit to the lower part of the frame when the conduit is horizontal; a stem secured to the conduit at right angles thereto; and means for clamping either the conduit or said stem to the upper part of the frame and two parallel links pivoted respectively to the top and bottom of the frame and at their other ends to the vehicle, substantially as described.

5. In a spraying apparatus the combination of a vehicle; a frame; a spray conduit rigidly carried thereby; and two pairs of parallel links, the links of each pair being each pivoted on the vehicle and on said frame, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

872,655. REFRIGERATOR. HENRY JOHNSON, Detroit, Mich. Filed Oct. 29, 1904. Serial No. 230,462.



1. In a refrigerator, an ice pan freely insertible and withdrawable therefrom, a drip nozzle depending from the under side of the icepan and adapted to discharge the drip therefrom and a ball valve in said nozzle controlling the outlet therefrom and adapted when seated to project below the discharge end of the nozzle.

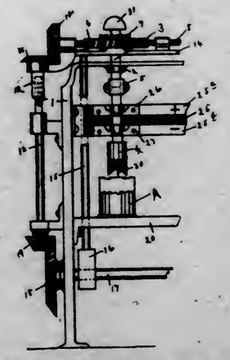
2. In a refrigerator having its cabinet horizontally divided into an upper and a lower compartment, the combination of an ice pan in the upper compartment freely insertible and withdrawable through an opening in one side of the cabinet, a door closing said opening, parallel guides on the bottom of said compartment adapted to support and guide the ice pan into position within the compartment, a drip nozzle projecting from the underside of the pan in position to conduct the drip from the ice pan into a waste pipe below, a ball valve in said nozzle controlling the outlet therefrom and adapted when seated to project below the nozzle and means adapted to unseat the ball valve when the icepan is in position.

3. In a refrigerator having its cabinet horizontally divided into an upper and a lower compartment, the combination of an icepan extending within the rear portion of the upper compartment freely insertible and withdrawable through a door opening in the side of the cabinet, parallel guides upon which said ice pan is supported in prescribed position within the compartment, a drip nozzle projecting from the underside of the pan near its rear wall, a waste pipe fixed in position beneath the ice pan to receive the drip from said nozzle, a ball valve adapted to seat within the discharge end of the nozzle and project below the nozzle when seated, and an arched bar fixed above the inlet of the waste opening and adapted to uplift the ball from its seat.

4. In a refrigerator, the combination with the cabinet having a horizontal open work partition dividing the cabinet into an upper and a lower compartment, the upper compartment being provided with a door at one end, an ice pan within the rear portion of the upper compartment and adapted to be spaced from the walls thereof, parallel guides adapted to removably support said ice pan and space the same from the walls of the upper compartment in prescribed position within the compartment, said ice pan formed with a front wall of lower height than its sides and ends and having the space between its rear wall and that of the cabinet in communication with the space above and below the ice pan, a projection at the top of the ice pan at one end adapted to close the space between it and the adjacent end of the upper compartment and a cut-off at the opposite end of said upper compartment adapted to correspondingly close the space between it and the ice pan, said end of the compartment being provided with a door for the removal of the ice pan.

5. In a refrigerator having its cabinet divided into an upper ice compartment and a lower storage compartment, an ice pan removably supported in guides within the upper compartment, a waste pipe below the ice pan and an automatically operating valve controlling the passage of the drip from the ice pan into the waste pipe, said valve adapted to close automatically when the ice pan is removed, and means to automatically open said valve when said ice pan is returned into its prescribed position in the cabinet.

872,656. ELECTRICALLY-HEATED CAN-CAPPING MACHINE. MONTGOMERY H. JOHNSON, Utica, N. Y. Filed Apr. 5, 1907. Serial No. 366,495.



1. The combination in a can capping machine of a soldering iron having an electric heating coil embodied therein, collector rings surrounding the shank of the soldering iron to which ends of the coil are respectively connected, means on the machine for making contact with said collector rings and means for rotating and raising and lowering the iron, substantially as set forth.

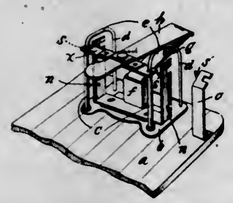
2. A soldering iron for a can capping machine consisting

of a general cylindrical body, an electric heating coil encircling a portion of the body, insulated collector rings encircling at different points the said body and connected with the ends of the coil, respectively, substantially as set forth.

3. A can-capping machine having means for rotating and raising and lowering the soldering irons, and stationary electric current conductors of a soldering iron adapted to be mounted in said machine consisting of a general cylindrical body having a heating coil mounted on one portion of the body, insulated collector rings mounted on and surrounding other portions of the body and connected with the ends of the heating coil, respectively, said rings being, respectively, of a width greater than the distance that the irons are arranged to move vertically, and a connector mounted on the machine and engaging with said collector rings, respectively, substantially as set forth.

4. A soldering iron consisting of a body and a heating coil arranged in close proximity to the surface of the body and embedded in a composition of sodium silicate and pumice stone, substantially as set forth.

872,657. DOCUMENT-FILE. ROBERT P. JOHNSTON, Asheville, N. C. Filed Apr. 27, 1907. Serial No. 370,661.



1. In a device of the character described, the combination of a base-plate provided with a socket; posts mounted upon said base-plate for receiving the document to be filed; rotatable hook-shaped arms mounted upon said base-plate and adapted to co-act with said posts to form an arch; a hinge-post mounted in said socket free to be readily removed therefrom; and a perforator pivotally secured to said hinge-post and formed with apertures adapted to co-act with said posts to perforate and file the document.

2. In a device of the character described, the combination of a base-plate provided with a socket; posts for receiving the documents to be filed; means for locking said documents in place upon said posts; a hinge-post mounted in said socket free to be readily removed therefrom; and a perforator pivotally secured to said hinge-post and adapted to co-act with said posts to perforate and file the document.

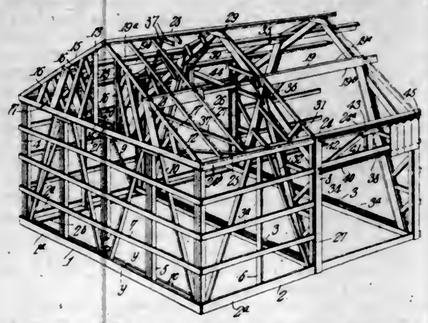
3. In a device of the character described, the combination of a base-plate; posts for receiving the documents to be filed; means for locking said documents upon said posts; a hinge-post slidably mounted in said base-plate free to be readily removed therefrom; a handle-plate pivotally secured to said hinge-post; and a perforator-plate adjustably mounted upon said handle-plate and adapted to co-act with said posts to perforate and file simultaneously the document.

4. In a device of the character described, the combination of a support; posts for receiving the documents to be filed; guides for determining the position of the document to be filed; and a perforator adapted to co-act with said posts to perforate the document in place thereon.

5. In a device of the character described, the combination of a support; posts for receiving the documents to be filed; guides for determining the position of the document to be filed, said guides rising from said support and being provided with shoulders to hold the paper flat; and a perforator for simultaneously perforating the document to be filed and forcing it in place upon said posts.

[Claims 6 to 10 not printed in the Gazette.]

872,658. BUILDING CONSTRUCTION. WILLIAM V. LEE, Urbana, Ohio. Filed July 3, 1907. Serial No. 382,044.



1. In a building construction the combination with a wall post comprising spaced boards; of a purlin post extending from the base of the wall post and inclined away therefrom, said post comprising spaced boards and a shorter face board, a ridge support extending between the spaced boards of the purlin post and bearing upon one end of the face board thereof, one end of said support extending between and secured to the spaced boards of the wall post.

2. In a building construction the combination with a wall post comprising spaced boards; of a purlin post extending from the base of the wall post and inclined away therefrom, said post comprising spaced boards and a shorter face board, a ridge support extending between the spaced boards of the purlin post and bearing upon one end of the face board thereof, one end of said support extending between and secured to the spaced boards of the wall post, and a purlin plate comprising upper and lower boards secured at right angles to each other, said upper board resting upon the ends of the spaced boards of the purlin post, said spaced boards being rabbeted to receive the lower board of the purlin plate.

3. In a building construction the combination with a wall post consisting of spaced boards; of a purlin post extending upward from the base of and inclined away from the wall post, said purlin post comprising spaced boards and a shorter face board, braces connecting the purlin and wall posts, the ends of said braces extending between the spaced boards of the posts and bearing upon and braced by the face boards, a purlin plate L-shaped in cross section and mounted upon the upper ends of the spaced boards of the purlin post, a wall plate L-shaped in cross section and secured upon the wall post, and rafters secured at their ends to the purlin and wall plates respectively.

4. In a building construction the combination with a trough-like sill consisting of a base board and upstanding side boards; of wall posts seated at their lower ends within the sill, each post consisting of a plurality of boards, a wall plate secured upon the posts, cap strips interposed between the posts and wall plate, diagonally disposed braces bearing at their upper ends against the ends of the cap strips and at their lower ends within the sill and against the bases of the adjoining posts.

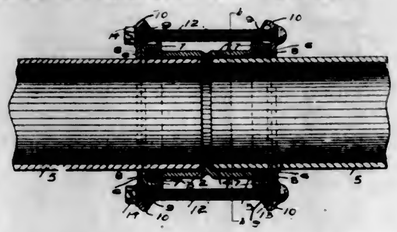
5. In a building construction the combination with a purlin post comprising spaced boards and a shorter face board; of a ridge support extending between the spaced boards and bearing upon and supported by one end of the face board.

[Claim 6 not printed in the Gazette.]

872,659. PIPE-COUPLING. RAYMOND S. LORD, Pittsburg, Pa. Filed June 12, 1906. Serial No. 321,311.

1. A pipe coupler follower consisting of an inner steel ring, having a flange forming a packing seat, and an outer steel ring having alternating flange portions and lug portions.

2. A pipe coupler follower consisting of an inner steel ring having a flange, and an outer steel ring pressed on the inner ring, said outer ring having pressed lug portions and flange portions engaging said inner ring flange.



3. A pipe coupling consisting of a steel sleeve having flared ends, a packing, and a follower comprising inner and outer rings shrunk together, the inner ring having a flange forming a packing seat, and the outer ring having alternating flange portions and lug portions.

872,660. STOPPER FOR BOTTLES, JARS, OR OTHER RECEPTACLES, AND PROCESS FOR MANUFACTURING SAME. JOHN LOWMAN, London, England, assignor of one-half to Franz Josef Wilhelm Bender, Frankenthal, Pfalz, Germany. Filed Aug. 5, 1905. Serial No. 272,900.



1. The herein described process of manufacturing stoppers from cork held in capsules caps or covers for effecting the closure of bottles jars or other receptacles which consists in compressing edgewise a piece of cork of suitable form and while in this compressed state placing same into a cap or holder which serves to retain it in this laterally compressed state and whereby it is applied in this state to the outlet to be closured.

2. The process of manufacturing bottle-stoppers, which consists in laterally compressing a piece of cork throughout its periphery, and forcing the same into a cap of such size as to maintain said piece in such laterally-compressed condition.

3. The process of manufacturing bottle-stoppers, which consists in laterally compressing a piece of cork simultaneously at all points in its periphery, and forcing the same into a cap having a flange to maintain said piece in such laterally-compressed condition.

4. The herein described process of manufacturing stoppers from cork held in capsules caps or covers for effecting the closure of bottles jars or other receptacles which consists in compressing edgewise a cork washer and simultaneously supporting the washer on its inner circumference and while in this compressed state placing same into a cap or holder which serves to retain it in this laterally compressed state and whereby it is applied in this state to the outlet to be closured.

5. The herein described process of manufacturing stoppers from cork held in capsules caps or covers for effecting the closure of bottles jars or other receptacles which consists in compressing edgewise a cork washer and simultaneously compressing the washer from its inner circumference and while in this compressed state placing same into a cap or holder which serves to retain it in this laterally compressed state and whereby it is applied in this state to the outlet to be closured.

[Claims 6 to 13 not printed in the Gazette.]

872,661. BRAKE-LEVERAGE SYSTEM. GEORGE MACLOSKIE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 25, 1907. Serial No. 370,180.

1. In a brake leverage system, in combination with the brake cylinder, cylinder levers, tie-rod, and brake shoes actuated thereby, operative connections from the brake cylinder piston to brake shoes independent of said levers and tie-rod.



2. In a brake leverage system, in combination with the brake cylinder, cylinder levers, tie-rod, and brake shoes actuated thereby, operative connections from the brake cylinder piston to the brake shoes independent of said levers and tie-rod, and brake actuating means independent of the brake cylinder piston operatively connected both to said levers and to said independent connections.

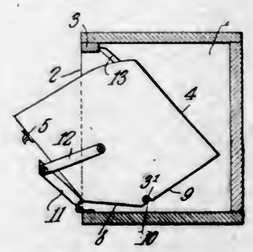
3. In a brake leverage system, in combination with the brake cylinder, cylinder levers, tie-rod and brake shoes operated thereby, a lever having a fixed fulcrum, a connection from the brake cylinder piston to said lever, and connections from said lever to the brake shoes independent of the cylinder levers and tie-rod.

4. In a brake leverage system, in combination with the brake cylinder, cylinder levers, tie-rod, and brake shoes operated thereby, a lever having a fixed fulcrum, a connection from the brake cylinder piston to said lever, connections from said lever to the brake shoes independent of the cylinder levers and tie-rod, and actuating means for said lever independent of the brake cylinder piston.

5. In a brake leverage system, in combination with the brake cylinder, cylinder levers, tie-rod, and truck rods, a lever having a fixed fulcrum, a rigid connection between said lever and the brake cylinder piston, and chains connecting said lever to the truck rods.

[Claims 6 to 9 not printed in the Gazette.]

872,662. PIVOTED BIN. DAVID H. MALONE, Kelso, Wash. Filed Aug. 5, 1907. Serial No. 387,190.

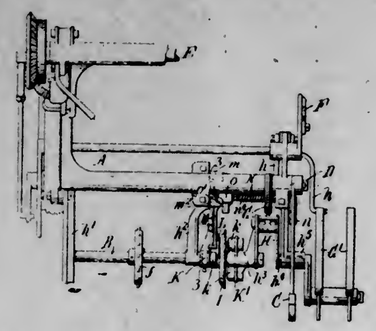


In combination with a casing having a vertically disposed opening and a transversely disposed support, a bin pivotally mounted upon said support, a board hinged to the floor of the casing and operating in the opening thereof, a link pivotally connected at one end to said board and at its opposite end to the side of the bin at a point located at a greater distance from the floor of the casing than the distance from the said floor to the pivotal connection between said link and the board whereby the board will engage the bin only when the bin is completely within the casing and will be out of engagement with the bin at other times.

872,663. GRAIN-BINDER. CHRISTIAN MAUL, Batavia, N. Y., assignor to The Johnston Harvester Company, Batavia, N. Y. Filed July 2, 1906. Serial No. 324,435.

1. In a clutch mechanism for operating the packers of a binding machine when the binding means are inactive and for stopping the packers during the action of the binding means, the combination of a driving member, a driven member, a clutch member which is loose with respect to said driving and driven members and is provided with parts for engaging said driving and driven members, and

intermittently operating trip means which are constructed to hold said loose clutch member with said parts thereof out of engagement with said driving and driven members at predetermined times and to release said clutch parts at other times, substantially as set forth.



2. In a clutch mechanism for operating the packers of a binding machine when the binding means are inactive and for stopping the packers during the action of the binding means, the combination of a drive shaft, a drive member secured on said shaft, a driven member loose on said shaft, a clutch member which is loose on said drive shaft and is provided with parts for engaging said driving and driven members, and intermittently operating trip means which are constructed to hold said loose clutch member with said parts thereof out of engagement with said driving and driven members at predetermined times and to release said clutch parts at other times, substantially as set forth.

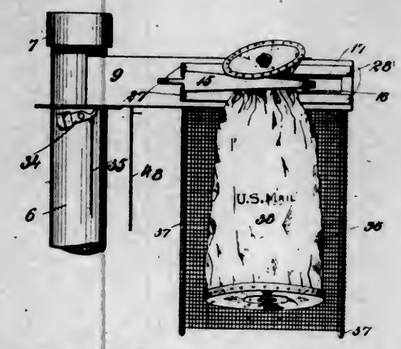
3. In a clutch mechanism for operating the packers of a binding machine when the binding means are inactive and for stopping the packers during the action of the binding means, the combination of a loose dog carrier, cooperating movable dogs on said carrier, a driving member which is positively driven and engages one of said dogs to drive said dog carrier, a driven member which is engaged and driven by said other dog, and an intermittently operating trip device which is constructed to hold said dogs from engagement with said driving and driven members at predetermined times and to free said dogs to engage said driving and driven members at other times, substantially as set forth.

4. In a clutch mechanism for operating the packers of a binding machine when the binding means are inactive and for stopping the packers during the action of the binding means, the combination of a positively driven driving member, a driven member, a losse dog carrier arranged between said driving and driven members, coöperating movable dogs on said dog carrier for engaging said driving and driven members, and intermittently operating trip means which are constructed to hold said dog carrier stationary and hold said dogs out of engagement with said driving and driven members at predetermined times and leave both of said members free, and to release said dog carrier at other times, substantially as set forth.

5. In a clutch mechanism for operating the packers of a binding machine when the binding means are inactive and for stopping the packers during the action of the binding means, the combination of a positively driven driving member, a driven member, a loose dog carrier arranged between said driving and driven members, coöperating movable dogs on said dog carrier for engaging said driving and driven members, an intermittently operating trip lever which engages one of said dogs to hold the dogs out of engagement with said driving and driven members at predetermined times and to free said dogs at other times, and a pawl controlled by said trip lever for holding said dog carrier stationary when the trip lever engages said dog, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

872,664. MAIL-BAG CATCHER. FREDRICK MELCHER, Wheeling, W. Va. Filed Sept. 13, 1907. Serial No. 392,735.



1. In a mail bag catcher, the combination of a support, a swinging arm, pivoted at one end thereto and adapted to swing under impact of the bag, and a clamping arm pivoted at the other end of the said swinging arm and arranged to swing toward said swinging arm and automatically actuated by the bag to grip the same between the said arms on the impact of the bag.

2. In a mail bag catcher, the combination of a support, an arm therson, a spring-actuated clamping arm pivoted to said arm and arranged to swing toward and from the same, a trigger which holds said clamping arm in set position, and a strike plate pivoted at its inner end to the arm to receive the impact of the mail bag and connected to the trigger to release the clamping arm, and having forwardly extending fingers at said inner end, between which the clamping arm enters when released.

3. In a mail bag catcher, the combination of a support, an arm pivoted at its inner end thereto, a clamping arm pivoted to the outer end of said arm and arranged to swing inwardly toward the same to grip a bag therebetween, a spring connected to said arm and tending to swing the same inwardly, and a pivoted strike plate located in front of said arm, to receive the impact of the bag and having a rearwardly extending pin, and a trigger connected to the pin and adapted to release the clamping arm when the bag strikes said plate.

4. In a mail bag catcher, the combination of a post, an arm pivotally mounted thereon, to swing toward and from the track under impact of a bag, a bag-catching device at the outer end of the arm, a segmental plate carried by the arm and having a series of perforations therein, and a latch supported on the post and engageable in the perforations in the plate when swung away from the track, to prevent the return of the arm.

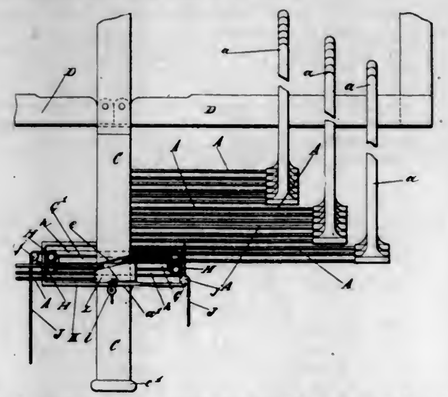
5. In a mail bag catcher, the combination of a tubular post having an opening in the side thereof at the top, a pivot pin supported within the post, a swinging arm the inner end of which extends through said opening and is mounted on the pin, and a bag catching device carried at the outer end of said arm.

[Claim 6 not printed in the Gazette.]

872,665. LEAF-TURNING APPARATUS. GUSTAV H. MEYER, George Town, Cape Colony. Filed Nov. 12, 1906. Serial No. 343,131.

1. In apparatus for turning the leaves of music, fingers to be inserted between the leaves, arms carrying the fingers free to turn to either side, a spindle on which the arms are pivoted, independent pushers operated by the player, meeting the front arm on either side and turning it to the opposite side, and means for bringing the arms successively into position for operation by the pushers.

2. In apparatus for turning the leaves of music, turning fingers and arms, a spindle carrying the same, independent pushers turning the arms singly and successively, and a cylindrical casing inclosing the spindle having a guiding slot for the arms consisting of two vertical parts at opposite sides united by a short sloping part through which the arms turn one at a time.



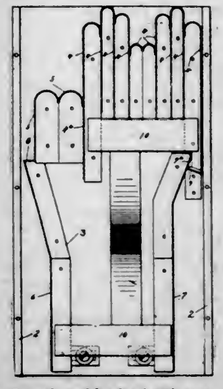
3. In leaf turning apparatus turning arms and fingers, a cylindrical casing having a guiding slot through which the arms pass, consisting of two vertical portions at opposite sides and at the upper and lower part of the cylinder respectively, and a sloping connecting portion, the vertical portions narrowing towards the connecting one but the lower having its upper shoulder cut away, and a movable cover piece forming the shoulder when the apparatus is in use, as herein described.

4. In leaf turning apparatus, turning arms and fingers moving singly to either side, a cylindrical casing having a guiding slot for the arms and a slide binding the arms into a group moving vertically as a whole but permitting each arm to turn singly in the guiding slot.

5. In leaf turning apparatus the combination of turning fingers and arms free to turn singly in either direction, a vertical slide holding the arms in a group for vertical movement, two pivoted pushers, spring dogs on the ends of said pushers engaging one or other of the arms carrying the fingers temporarily at the front and slipping past the next arm on the return movement, and connections to the pushers enabling either to be turned by the operator at will.

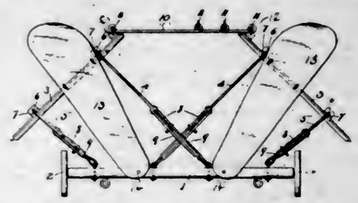
[Claim 6 not printed in the Gazette.]

872,666. GLOVE-CUTTING DIE. JOHAN P. MÖLLER, Gloversville, N. Y., assignor to Gloversville Silk Mills, Gloversville, N. Y., a Corporation of New York. Filed Mar. 27, 1906. Serial No. 308,268.



A cutting die for glove-blanks having a continuous cutting edge for the body, entire thumb, and front and backs of the fingers, all of said edges adapted to cut the sides of the thumb and finger portions being parallel with each other, one body-cutting edge extending obliquely outwardly beyond the outer side-cutting edge for the thumb and being connected therewith by a transverse cutting edge, and the other body-cutting edge extending outwardly to a point beyond and inside of the inner end of the cutting edge for the outer side of the front of the first finger with which it is connected by an oblique cutting edge at right angles to said oblique body-cutting edge.

872,667. ROAD-SCRAPER. HARRISON MUCKEY and EUGENE ROBERTSON, Triplett, Mo. Filed June 11, 1907. Serial No. 378,362.



1. In a road scraper, drag bars formed of two portions pivotally secured together and capable of adjustment in vertical planes, and scraper blades secured to said drag bars, substantially as shown and described.

2. In a road scraper, a wheeled drag, drag bars secured to said drag, scraper blades secured to said drag bars, and platforms removably secured to the drag and supported by the scraper blades, substantially as shown and described.

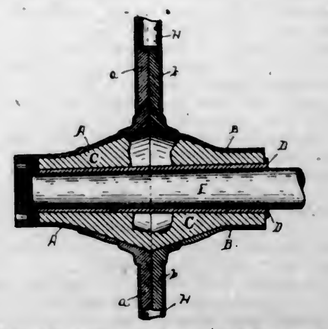
3. In a road scraper, a wheeled drag, drag bars secured to said drag having hooked ends, scraper blades having perforated ears to receive the hooked ends of said drag bars, and platforms removably secured to the drag and supported by the scraper blades, substantially as shown and described.

4. In a road scraper, a wheeled drag, drag bars secured to said drag, said drag bars consisting of two parts pivotally secured together so as to be capable of adjustment in vertical planes, and scraper blades secured to said drag bars, substantially as shown and described.

5. In a road scraper, a wheeled drag, drag bars secured to said drag having hooked ends, said drag bars consisting of two parts pivotally secured together so as to be capable of adjustment in vertical planes, and scraper blades having perforated ears to receive the hooked ends of said drag bars, substantially as shown and described.

[Claims 6 to 9 not printed in the Gazette.]

872,668. VEHICLE-WHEEL. THOMAS L. MCCONNAUGHEY, Hagerstown, Ind. Filed July 29, 1907. Serial No. 386,083.



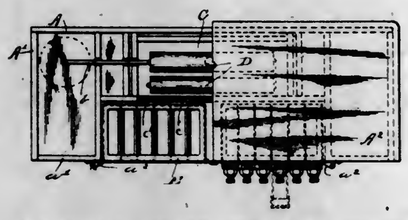
1. In a vehicle wheel; a hub, comprising a core, a pair of oppositely disposed bands surrounding the core, stubs

radiating from the juncture of said bands with one portion of each stub formed integral with its respective band, and a tubular spoke for each stub and the spokes holding together the two parts of their respective stubs, all substantially as shown and described and for the purposes set forth.

2. In a vehicle wheel, two oppositely disposed and outwardly tapering bands abutting together, a plurality of half-round stub-portions radiating from the adjoining ends of the bands, one of said stub-portions from each band together forming a complete stub, shoulders formed at the base of each stub, and a tubular spoke surrounding each stub and resting on said shoulders, all substantially as set forth.

3. In a vehicle-wheel, a hub divided near its center into two portions, stubs radiating from said hub, one-half of each stub being integral with each portion of the hub, and tubular spokes each having its inner end portion surrounding one of said stubs and holding the two portions of the hub together, all substantially as shown and described.

872,669. SODA-FOUNTAIN. JOSEPH A. MCCORMICK, Chicago, Ill., assignor to J. J. Ryan & Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 2, 1906. Serial No. 294,102.



1. In a device of the class described the combination with a counter of a refrigerating compartment in the front thereof, a syrup containing compartment, a perforated partition between the same and said refrigerant compartment, a crate adapted to closely fit said syrup compartment and having an open front, a plurality of guide strips secured thereto, syrup receptacles adapted to be slid into said crate between the guide strips and facing on each receptacle adapted to form a complete closure for said crate, when the same are in place.

2. In a device of the class described the combination with a counter of a syrup compartment therein, oppositely swinging crates hinged to said counter and adapted to fit in said compartment, said crates having open fronts, a flange around the outer side of said crates adapted to closely fit said counter when in closed position, means dividing said crates affording a plurality of sections, a receptacle for each section, a facing on each receptacle adapted with the adjacent receptacles to form a closure for said crates and means in the top of said receptacle whereby the same may be filled.

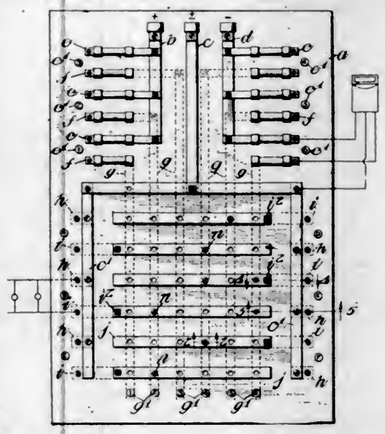
3. In a device of the class described the combination with a counter of a refrigerating compartment therein, a syrup compartment adjacent the same, a perforated partition between the same and refrigerating compartment, a crate for the syrup compartment opening on all sides, means integral therewith adapting the same to swing laterally from said compartment, a plurality of syrup receptacles slidable longitudinally in said crate, means secured to the crate separating said receptacles and affording an equal space for the action of the cooling fluid around the same and facings on said receptacles adapted to form a complete closure for said crate thereby preventing the escape of the cooling fluid.

4. In a device of the class described the combination with a counter of a refrigerating compartment therein, a syrup compartment adjacent the same, means affording passages from the same to said refrigerating compartment, a plurality of syrup receptacles secured in said syrup compartment, means whereby said receptacles may be removed collectively, said receptacles also adapted to be removed individually independently of the aforesaid means.

5. In a device of the class described the combination with a counter of a refrigerating compartment therein affording an air space between said compartment and the walls of the counter, a syrup compartment adjacent said refrigerant compartment, a swinging crate adapted to fit closely therein, syrup receptacles slidable in said crate, and adapted to be removed from said syrup compartment independently of and when said crate is locked in said syrup compartment.

[Claims 6 to 8 not printed in the Gazette.]

872,670. METERING PANEL-BOARD. ARTHUR C. MCWILLIAMS, Chicago, Ill. Filed May 8, 1906. Serial No. 315,741.



1. In a panel board the combination with the board, of two sets of cross conductors, said sets being in two parallel planes separated from each other for insulation; fuses of a length approximately equal to the distance between said sets of cross conductors, a metallic cap fitting into the conductors of one set, and adapted to receive one end of a fuse, and screw caps screwing into the conductors of the other set and adapted to receive the other end of the fuse whereby electrical connection is made from one conductor to the other.

2. A panel board having permanent conductors crossing each other in parallel planes located a slight distance apart; and detachable fuse plugs adapted to connect any two conductors at the point of crossing, the length of the plug being approximately equal to the distance from one conductor to the one crossing it, and said plugs being arranged perpendicularly to the planes of said conductors, and caps fitting over the ends of said plugs and making electric contact therewith, said caps being adapted to make electric contact with two of said permanent conductors at the point of crossing thereof.

3. In combination, an insulating base or panel; two sets of conductors permanently mounted on said base in separate parallel planes, the conductors of one set running transverse to the conductors of the other set, said conductors being apertured at their points of intersection; a fuse plug extending perpendicularly from one conductor to another one crossing it, a cap fitting in the aperture of one conductor for affording electrical connection between the plug and the conductor; and a screw cap fitting the other end of the plug and screwing into the other conductor for holding the plug in place and establishing electrical connection between it and the conductor.

4. In combination, an insulating base, cross conductors permanently mounted thereon and lying in separate parallel planes, a cylindrical fuse plug having metallic ends, and arranged perpendicularly to said base so as to extend from one cross conductor to another, and metallic caps fitting the ends of said plug and making electrical contact with said cross conductors for the purpose described.

872,671. CAP FOR SYRUP-BOTTLES AND THE LIKE. JOHN S. NASH, Chicago, Ill. Filed Dec. 8, 1906. Serial No. 246,827.



1. A cap for syrup bottles and the like comprising a pivoted lid, and a lever pivotally mounted adjacent the lid pivot and extending downwardly adjacent the neck of the bottle, said lever having means for lifting the lid when it is shifted inwardly, whereby the neck of the bottle may be grasped and the lid lifted simultaneously.

2. The combination with a syrup bottle or the like, of a sleeve mounted on the neck of the bottle, a lid pivoted at its edge to said sleeve and a lever pivoted to said sleeve adjacent the lid pivot and extending downwardly adjacent the neck of the bottle, said lever having means for lifting the lid when shifted inwardly, substantially as described.

3. A cap for syrup bottles and the like, comprising a sleeve, a lid pivoted at its edge to said sleeve, and a lever pivoted to said sleeve adjacent the lid-pivot, said lever having means for lifting the lid when shifted inwardly, and said lid and lever having stop portions engaging to limit the lift of said lid, substantially as described.

4. The combination with a syrup bottle or the like, of a sleeve mounted on the neck of the bottle, a lid pivoted at its edge to said sleeve and a lever pivoted to said sleeve at a point adjacent the lid-pivot, said lever having a finger extending around inside of the lid-pivot to lift the lid when the lever is shifted inwardly, said lid having a lug and said lever having a coöperating shoulder to limit the lift of the lid, substantially as described.

5. The combination with a syrup bottle or the like, of a lid therefor pivoted at its edge, and a lever pivotally mounted at a point adjacent the lid-pivot and extending downwardly adjacent the neck of the bottle, said lever having a finger extending around the lid-pivot and engaging the lid at a point inside of the same, whereby said lid is lifted when said lever is shifted inwardly toward the neck of the bottle, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

872,672. BOTTLE CAP OR CLOSURE. WILLIAM H. NIEMEYER, Baltimore, Md. Filed Mar. 18, 1907. Serial No. 363,143.



1. A bottle sealing cap having a top and a continuous flange integral therewith formed about its circumference with a plurality of spaced perforations and thin web-portions extending from the edge thereof to said perforations.

2. A bottle sealing cap having a top and a continuous flange integral therwith formed at intervals about its circumference with thin web-portions extending upward from the edge thereof and perforations in which said thin portions terminate, said perforations being disposed a sufficient distance below the top of the cap to be below the upper edge of the bottle top when the cap is in position thereon.

3. A bottle sealing cap having a top and a continuous flange integral therewith formed about its circumference with spaced perforations and having the metal thereof removed on its inner and outer surfaces to form thin web-portions which extend from the lower edge thereof to said perforations.

4. A bottle sealing cap having a top and a continuous flange integral therewith and formed about its circumference with spaced perforations and having alined V-shaped grooves in its inner and outer surfaces extending from its lower edge to said perforations and of such depth as to form thin web-portions.

872,673. FRAME AND BACK-RETAINING DEVICE THEREFOR. RUPERT A. NOCK, Newark, N. J., assignor to The William B. Kerr Company, a Corporation of New Jersey. Filed May 18, 1907. Serial No. 374,479.



1. In a device of the character set forth, a frame provided with a removable back and a holding or retaining means connected with a portion of said frame, said means comprising a pair of right-angled members, one of said members extending beneath and in lifting engagement with said back and being adapted to be brought in holding engagement with a portion of said frame, and the other member of said holding or retaining means being adapted to be brought in binding engagement with a portion of said rack.

2. In a device of the character set forth, a frame provided with a removable back and a holding or retaining means connected with a portion of said frame, said means comprising a pair of right-angled members, one of said members extending beneath and in lifting engagement with said back and being adapted to be brought in holding engagement with a portion of said frame, and the other member of said holding or retaining means being adapted to be brought in binding engagement with a portion of said back, and a retaining plate-like member connected with another portion of the frame beneath which a portion of the back is adapted to be arranged.

3. In a device of the character set forth, a frame provided with a removable back and a holding or retaining means connected with a portion of said frame, said means comprising a pair of right-angled members, one of said members extending beneath and in lifting engagement with said back and being adapted to be brought in holding en-

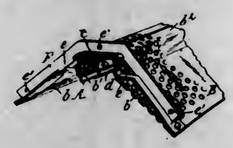
gagement with a portion of said frame, and the other member of said holding or retaining means being adapted to be brought in binding engagement with a portion of said back, and a finger-piece connected with said last-mentioned member of said holding or retaining means.

4. In a device of the character set forth, a frame provided with a removable back and holding or retaining means connected with a portion of said frame, said means comprising a pair of right-angled members, one of said members extending beneath and in lifting engagement with said back and being adapted to be brought in holding engagement with a portion of said frame, and the other member of said holding or retaining means being adapted to be brought in binding engagement with a portion of said back, a finger-piece connected with said last-mentioned member of said holding or retaining means, and a retaining plate-like member connected with another portion of the frame beneath which a portion of the back is adapted to be arranged.

5. In a device of the character set forth, a frame provided with a rearwardly extending rim, a removable back surrounded by said rim, and a holding or retaining means connected with a portion of said rim, said means comprising a pair of right-angled members, one of said members extending beneath and in lifting engagement with said back and being adapted to be brought in holding engagement with a portion of said rim, and the other member of said holding or retaining means being adapted to be brought in binding engagement with a portion of said back.

[Claims 6 to 30 not printed in the Gazette.]

872,674. SAFETY-GUARD FOR TROLLEY-WHEELS. FRANK J. NOLAN, Buffalo, N. Y., assignor to Automatic Trolley Guard Company, Buffalo, N. Y. Filed Nov. 26, 1906. Serial No. 345,116.



1. The combination with a trolley wheel and a trolley wire, of a guard having upwardly converging side portions which are separated from the wire on each side thereof by a space of less width than the width of the trolley wheel, whereby the trolley wheel, when displaced, is guided to the wire, substantially as set forth.

2. The combination with a trolley wheel, of a guard therefor having upwardly converging side portions separated by an intervening space, and a trolley wire supported in said space between the upper edges of said side portions and separated therefrom on each side by a space of less width than the width of the trolley wheel, whereby the trolley wheel, when displaced, is guided to the wire, substantially as set forth.

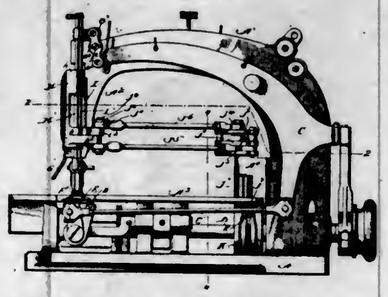
3. The combination with a trolley wheel, of a guard therefor having upwardly converging side portions and a central pocket portion, and a trolley wire supported in said pocket portion and separated on each side thereof from said side portions by a space of less width than the width of the trolley wheel, substantially as set forth.

4. The combination with a trolley wheel, of a guard therefor having upwardly converging side portions and a central pocket portion, and a trolley wire supported in said pocket portion in substantially the same horizontal plane with the upper edges of said side portions and separated therefrom on each side by a space of less width than the width of the trolley wheel, substantially as set forth.

5. A guard for trolley wheels having upwardly converging side portions, a central pocket portion connecting said side portions, and supporting means for the trolley wire in said pocket portion, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

872,675. ZIGZAG NEEDLE-OPERATING MECHANISM FOR SEWING-MACHINES. LANSING ONDERDONK, New York, N. Y., assignor to Union Special Sewing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 9, 1901. Serial No. 81,763.



1. A sewing machine comprising two independent vertically and laterally movable needle bars, adjusting devices to adjust the needle bars into and out of line, means for imparting independent lateral movement to the needle bars, means for adjusting the length of stroke of such lateral movement and means for simultaneously reciprocating the needle bars vertically; substantially as described.

2. A sewing machine comprising a driving shaft, a needle bar operated thereby, two oscillating needle bar carriers and each having a needle bar mounted therein and reciprocated simultaneously vertically from the needle arm, a vertical rock shaft operated from the main shaft, and two connecting rods connecting the said two needle bar carriers with said vertical rock shaft for oscillation thereby; substantially as described.

3. A sewing machine comprising two independent oscillating needle bar carriers and two needle bars respectively reciprocated simultaneously vertically on the said carriers, a vertical rocking shaft operatively connected to the main shaft and having a transverse head on its upper end, and two connecting rods adjustably connected at one end to said transverse head and at their opposite ends connected to said needle bar carriers for imparting independent oscillation thereto; substantially as described.

4. A sewing machine comprising two independent oscillating needle bar carriers, and two needle bars respectively mounted on the two needle bar carriers for simultaneous vertical reciprocation therein, an adjustable eccentric block on each needle carrier, a vertical rocking shaft geared to the main shaft for operation thereby and connecting rods operatively connected at one end to said vertical rock shaft and at their opposite ends strapped to said eccentric blocks; substantially as described.

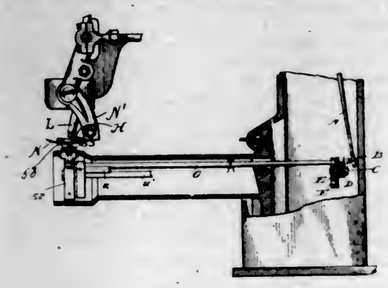
5. A sewing machine comprising two independent oscillating needle bar carriers, and two needle bars respectively mounted on the needle bar carriers for simultaneous vertical reciprocation, a vertical rocking shaft geared to the main shaft for operation therefrom and provided at its upper end with slotted arms having adjustable blocks, and two connecting rods connecting the needle bar carriers to said adjustable blocks; substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

872,676. DEVICE FOR CONTROLLING THE BIGHT OF THE NEEDLE INTO THE GOODS IN BLIND-STITCH SEWING-MACHINES. LANSING ONDERDONK, New York, N. Y., assignor to Union Special Sewing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 9, 1903. Serial No. 151,789.

1. In a sewing machine having stitch forming mechanism including a needle, means for crimping the goods to enable the needle to take a bight therein, and means for automatically changing the position of the crimping device, with respect to the goods, to vary the amount of crimp therein; substantially as described.

2. In a sewing machine having stitch forming mechanism including a needle and means for crimping the goods to enable the needle to take a bight therein, a stitch bight controller with means for raising its operative position at intervals, with respect to the goods, to increase the amount of crimp therein, to enable the needle to take a deeper bight into said goods; substantially as described.



3. In a sewing machine having a work support, suitable stitch forming mechanism including a needle and a movable crimping member operating through the work support, to increase at intervals the amount of crimp in the goods and means for moving the crimping member; substantially as described.

4. In a sewing machine having suitable stitch forming mechanism including a needle and means for crimping the goods including a ridge forming member operated by a moving part of the machine, with means for raising and lowering at intervals its operative point of engagement with the goods; substantially as described.

5. In a sewing machine having a work support and suitable feed dogs with means for operating them, stitch forming mechanism including a needle, and means for crimping the goods including a movable member operating through the work support and between the feed dogs, with means for raising at intervals its operative position with respect to the goods, so as to increase the amount of crimp; substantially as described.

[Claim 6 not printed in the Gazette.]

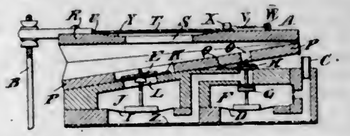
872,677. HOSE-SUPPORTER. OREN B. OYER, Chillicothe, Ohio, assignor of one-half to Willard A. Hall, Chillicothe, Ohio. Filed Dec. 17, 1906. Serial No. 348,318.



1. A clasp of the type set forth comprising wire stock bent upon itself to form parallel loops having their ends fixed and including juxtaposed gripping bars designed to resiliently bear against one another, and a member including a tubular portion clasped axially about the outer side bar of one of said loops, said member having a hooked end for engagement with the outer side bar of the other of said loops.

2. A clasp of the type set forth comprising wire stock bent upon itself to form parallel loops having their ends fixed and including juxtaposed gripping bars designed to resiliently bear against one another, and a member pivoted axially on the outer side bar of one of said loops, said member having a hooked end for engagement with the outer side bar of the other of said loops.

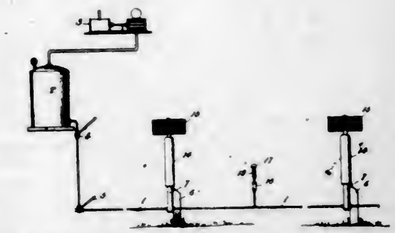
872,678. ACTUATING MECHANISM FOR PNEUMATICALLY-OPERATED MUSICAL INSTRUMENTS. ROBERT W. PAIN, New York, N. Y., assignor to The Aeolian Company, a Corporation of Connecticut. Filed Jan. 28, 1907. Serial No. 353,581.



1. In actuating mechanism for pneumatically operated musical instruments, the combination with the striking pneumatic having movable and immovable boards provided with valve openings, of a sheet of flexible material adapted to control the valve opening of the movable board, and operating automatically to close and open in accordance with the tension of the air in the secondary pneumatic.

2. In actuating mechanism for pneumatically operated musical instruments, the combination of a pneumatic having a movable board dished on its outer side and provided with a valve opening in said dished portion of the board, and a flexible valve in the form of a sheet of material fastened to the board at one side of the valve opening, a spring being connected to the other free end of said sheet of material to maintain the valve normally tight across the dished portion of the board.

872,679. RAILWAY SIGNAL MECHANISM. JOHN S. PAYNE, Mulvane, Kans. Filed Feb. 23, 1907. Serial No. 358,851.



1. A signal mechanism, comprising piping, a source of supply of compressed air for said piping, an upright cylinder at a point in said piping, said cylinder being provided with one or more spiral grooves, a piston working within the cylinder with its follower head lowermost and provided with one or more arms working in said grooves, the upper end of the piston stem projecting above the cylinder, and a signal plate mounted on the upper end of the piston stem.

2. A signal mechanism, comprising piping, an upright cylinder at a point in said piping, said cylinder being provided with one or more spiral grooves, a piston mounted in said cylinder with its follower head lowermost, the stem of said piston projecting upwardly through the cylinder and protruding above the same, a source of supply of compressed air for said cylinder below the follower head, a hood mounted on the protruding end of the piston stem and surrounding and inclosing the grooved portion of the cylinder, and a signal plate secured to said hood.

3. A signal mechanism, comprising piping, a source of supply of compressed air for said piping, an upright cylinder secured to said piping at a predetermined point, a box held on the upper end of said cylinder and provided with a downwardly facing opening, a piston mounted in said cylinder and movable downwardly therein upon the admission of the compressed air in the cylinder, a signal plate secured to the piston stem and movable upwardly within the box and downwardly out of the same, and means for returning the piston to its uppermost position so as to con-

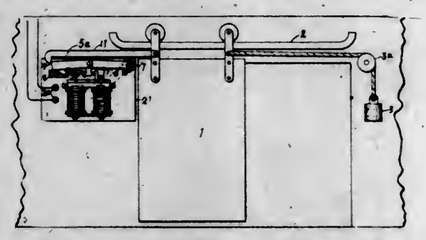
ceal the board within the box upon the withdrawal of the compressed air.

4. A signal mechanism, comprising piping, a source of supply of compressed air for said piping, an upright cylinder secured to said piping at a predetermined point, a box held on the upper end of said cylinder and provided with a downwardly facing opening, a piston mounted in said cylinder and movable downwardly therein upon the admission of the compressed air in the cylinder, a signal plate secured to the piston stem and movable upwardly within the box and downwardly out of the same, and a rod fulcrumed intermediate of its ends on the cylinder and secured at one end to the piston, the other end of said rod being provided with a counterweight, as and for the purpose set forth.

5. A signal mechanism, comprising piping, a source of supply of compressed air for said piping, a cylinder connected to said piping at a predetermined point and projecting upwardly therefrom and provided with a downwardly extending upper end, a box held on said upper end of the cylinder and adapted to cover a signal, a signal arranged to move downwardly from the box upon the admission of compressed air into the cylinder, and a rod fulcrumed intermediate of its ends on said cylinder and provided at one end with a counterweight.

[Claim 6 not printed in the Gazette.]

872,680. AUTOMATIC RELEASER FOR FIRE-DOORS, FIRE-SHUTTERS, &c. HENRY J. PODLEŠÁK, Chicago, Ill. Filed July 5, 1902. Serial No. 114,405.



1. The combination, in automatic release devices of the class described, of a toggle lever consisting of two sections, arranged and adapted to assume a rigid position, with a means for determining said rigid position of the toggle lever, a means of shifting the toggle lever out of its rigid position, and a means of connecting a movable member, to be released, with said toggle lever when this is in its rigid position, substantially as and for the purpose set forth.

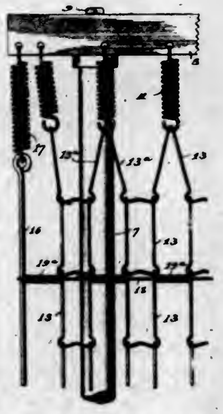
2. In automatic release devices, the combination of a toggle lever consisting of two sections, one section being pivoted to a frame and connected with the other section so that the two may assume a rigid position, a means to determine and retain said rigid position of the toggle lever, a means of engaging the toggle lever with a movable member to be released, for the purpose of holding said movable member when the toggle lever is in its rigid position, with a means for shifting the toggle lever out of its rigid position, in order to release said movable member, to allow the same to move, substantially as and for the purposes set forth.

3. In automatic release devices of the class described, the combination of two members or sections one of which is pivoted on a suitable frame the other section being connected to a movable member and adapted to so connect with the first said section that the two sections form a toggle lever in a certain and rigid position, a means for determining and retaining said rigid position of the toggle lever, a movable member to be held in some predetermined position, a means for shifting said toggle lever out of said rigid position and so releasing the said movable member and allowing it to move, and a means for operating said shifting means, substantially as set forth.

4. In automatic release devices the combination, of a toggle lever adapted to assume, and to normally be, in a rigid position, with a movable member, a means of connecting said movable member with the toggle lever, whereby the said movable member may be held in a predetermined position; a means for shifting the toggle lever out of its rigid position to allow the disengagement of the said means of connection from the toggle lever, and a means for operating said means for shifting the toggle lever, substantially as and for the purposes set forth.

5. In automatic release devices of the class described, the combination of a toggle lever, normally held in a rigid position, a movable member, a connection between said movable member and the toggle lever, with a means for shifting or bending said toggle lever out of its rigid position, an electric circuit containing a source of electric current, an electro-magnetic switch, and thermostatic devices, said thermostatic devices being arranged to cause, when the temperature in their proximity reaches a dangerous point or degree, said electro-magnetic switch to close a second electric circuit, which contains a source of electric current and release devices, said release devices being adapted to actuate other devices, controlling the means for bending said toggle lever out of its rigid position, substantially as and for the purposes set forth.

872,681. BED-BOTTOM. FRANK A. POWERS and THOMAS KLIPFEL, Chicago, Ill., assignors to Union Wire Mattress Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 27, 1907. Serial No. 370,722.



1. A bed bottom comprising a frame, a bed bottom fabric, end rows of helicals connecting said fabric to the head and foot rails of said frame, side wires connecting the ends of said head and foot rails, and cross wires connecting said side wires at intervals and supporting said fabric, substantially as described.

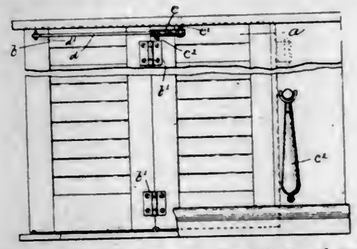
2. A bed bottom comprising a frame, a bed bottom fabric composed of palallel longitudinal strands of interhooked units, end rows of helicals connecting said fabric to the head and foot rails of said frame, side wires connecting the ends of said head and foot rails, and cross wires connecting said side wires at intervals and passed through the hooks of transverse rows of units in said fabric, substantially as described.

3. A bed bottom comprising a frame, a bed bottom fabric composed of parallel longitudinal strands of bent-wire units, end rows of helicals connecting said fabric to the head and foot rails of said frame, side wires connecting the ends of said head and foot rails, cross wires connecting said side wires at intervals and supporting said fabric, and spacing sleeves on said side wires between adjacent longitudinal rows of units in said fabric, substantially as described.

4. A bed bottom comprising a frame, a bed bottom fabric composed of parallel longitudinal strands of interhooked bent-wire units, end rows of helicals connecting said fabric to the head and foot rails of said frame, side wires connecting the ends of said head and foot rails, cross wires connecting said side wires at intervals and passed through the hooks of transverse rows of units in said fabric, and spacing sleeves on said side wires between adjacent longitudinal rows of units in said fabric, substantially as described.

5. A bed bottom comprising a frame, a bed bottom fabric composed of parallel longitudinal strands of interhooked bent-wire units, side wires disposed alongside the opposite edges of said fabric, end rows of helicals connecting said fabric and said wires to the head and foot rails of said frame, cross wires connecting said side wires at intervals and passed through the hooks of transverse rows of units in said fabric, and spacing sleeves on said wires between adjacent longitudinal rows of units in said fabric, substantially as described.

872,682. SHUTTER-WORKER. EDWIN PRESCOTT, Arlington, Mass. Filed Aug. 30, 1907. Serial No. 390,761.

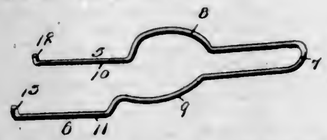


1. The combination with a folding blind and means for operating it, of a connecting-rod for connecting the outer blind-section with the window-casing having a loose connection at one end with one of said parts and having an attaching-device at the other end of which is pivoted to the other part, said rod being adjustably connected with said attaching-device, substantially as described.

2. The combination with a folding blind and means for operating it, of a connecting-rod loosely connected at one end to the outer blind-section, an attaching-device pivoted to the window-casing and means for adjustably connecting the opposite end of said connecting-rod to said attaching-device, substantially as described.

3. The combination with a folding blind and means for operating it, of a connecting-rod loosely connected at one end to the outer blind-section, a tubular case pivoted to the window casing, adapted to receive the opposite end of said connecting-rod, and a set-screw in said pivoted case for adjustably securing said connecting-rod thereto, substantially as described.

872,683. PIE-PAN LIFTER. JOSEPH RAY, Decatur, Ill. Filed Mar. 21, 1904, Serial No. 199,138. Renewed Oct. 23, 1907. Serial No. 398,844.

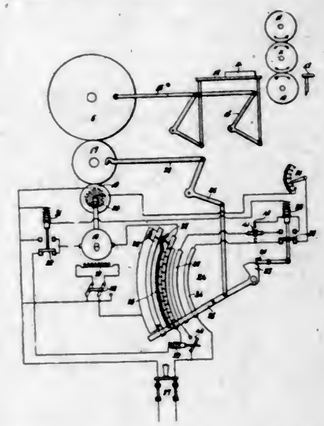


1. A pan handle consisting of a single piece of wire which is bent upon itself to form parallel members, and a connecting bight, the wire at the ends of said parallel members being bent outwardly in arc shape, then downwardly and parallel, then forwardly and parallel at right angles to the downwardly bent portions, and then upwardy at right angles, the parallel and arc shaped members being adapted to spring from the bight.

2. The combination with a pan having an outwardly directed flange at its upper edge and having clips at diametrically opposite points bent downward from the flange, of a handle consisting of a single piece of wire bent to form parallel members having a connecting bight whereby the parallel members may be moved toward and away from each other, said parallel members being disposed against the under side of the flange and removably engaged with the ears, the bent wire having portions intermediate its ends and bight curved outwardly, the outwardly directed portions and bight being disposed in a plane higher than the plane of the free ends of the wire.

3. A pan lifter consisting of a single piece of wire bent upon itself to form spaced members, said spaced members comprising parallel portions, portions curved outwardly from said parallel portions and having their terminals lying outwardly of the said parallel portions and turned downwardly and thence forwardly to form other parallel portions lying in a plane parallel to the plane occupied by the first-named parallel portions, said last-named parallel portions having their ends turned upwardly at right angles to the said portion.

872,684. MOTOR-CONTROL SYSTEM. WALTER J. RICHARDS, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey. Filed Apr. 29, 1907. Serial No. 370,960.



1. A rheostat comprising a plurality of resistance sections, means for cutting said sections into and out of circuit, and independent means of varying the resistance of one of said articles.

2. In combination, a sectional resistance, and a relatively movable arm for cutting sections of said resistance into and out of circuit, one of the resistance sections controlled by said arm being adjustable.

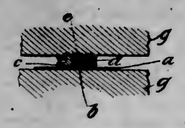
3. In combination, an electric motor, a sectional resistance, means for cutting the sections of said resistance into and out of the armature circuit, and means for varying the resistance of one of said sections independently of the aforesaid means.

4. In combination, an electric motor, a source of current supply, a variable resistance, a reciprocable arm for varying said resistance, and connections controlled by said arm whereby movement of the same in one direction varies the amount of said resistance in circuit with the motor and said source of supply in series, and movement in the other direction varies the amount of said resistance in circuit with the motor alone.

5. In combination, an electric motor, and a reciprocable controller therefor arranged when moved in one direction to vary the electromotive force impressed on the motor armature, and when moved in the other direction over the same path to vary the resistance in a local circuit supplied by the motor armature.

[Claims 6 to 33 not printed in the Gazette.]

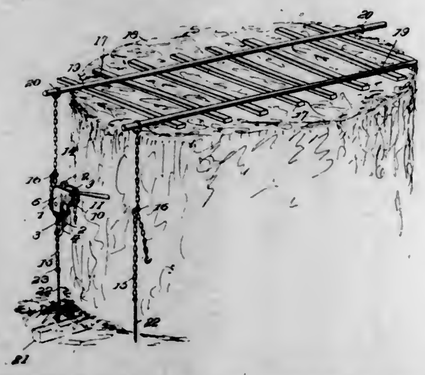
872,685. REGISTERING DEVICE. HARRY B. ROUSE, Chicago, Ill. Filed June 26, 1903. Serial No. 163,187.



1. A printer's registering device, comprising a plate, a stud projecting therefrom and fixed with respect thereto and a nut upon the stud, said nut having an annular projection for engagement with a portion of a form the width or thickness of the nut and the length of the portion of the stud projecting from the plate being substantially co-extensive, substantially as described.

2. A printer's registering device, comprising an elongated plate, a stud projecting therefrom and fixed with respect thereto and a nut upon the stud, said nut having an annular projection for engagement with a portion of a form the width or thickness of the nut and the length of the portion of the stud projecting from the plate being substantially co-extensive, substantially as described.

872,686. STACK-COMPRESSOR. ALBERT C. S. RUE and OLE S. RUE, Northwood, Iowa. Filed Mar. 13, 1907. Serial No. 362,179.

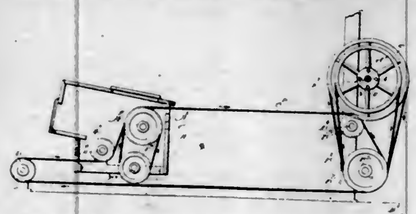


1. In a stack compressor, the combination of a frame applied to the top of the stack, anchor members at the base of the stack, anchor rods connected to the anchor members and extending upwardly above the surface of the ground, cables pendent from the frame, a second set of cables connected to the anchor rods and detachably engaging the first mentioned cables, a frame provided with means for detachably engaging one set of the cables, a drum journaled upon the frame and designed to receive one of the opposite set of cables, and means for operating the drum.

2. In a stack compressor, the combination of a frame applied to the top of the stack, anchor members at the base of the stack, cables pendent from the frame, a second set of cables connected to the anchor members and detachably engaging the first mentioned cables, a frame provided with means for detachably engaging one set of the cables, a drum journaled upon the frame and designed to receive one of the opposite set of cables, a lever mounted upon the frame, a ratchet carried by the drum, and a pawl mounted upon the lever and engaging the ratchet to operate the drum.

3. In a stack compressor, the combination of a frame applied to the top of the stack, anchor members at the base of the stack, cables pendent from the frame, a second set of cables connected to the anchor members and detachably engaging the first mentioned cables, a frame provided with means for detachably engaging one of the second mentioned cables, a drum journaled upon the frame and receiving one of the first mentioned cables, a lever mounted upon the frame and provided with a pair of oppositely arranged eccentric members, a pair of ratchets carried by the drum, and pawls mounted upon the eccentric members of the lever and engaging the ratchets whereby the drum is given a continuous rotary movement by a reciprocating movement of the operating lever.

872,687. SPINDLE-DRIVING MECHANISM FOR MULES. WILLIAM D. RUNDLETT, North Andover, Mass., assignor to Davis & Furber Machine Company, North Andover, Mass., a Corporation of Massachusetts. Filed May 11, 1906. Serial No. 316,288.



1. In a mule, a rim-band shaft provided with a driving pulley, a bearing for said shaft, a slow-speed rim-band pulley, a second shaft in alinement with said rim-band shaft, bearings slidably sustaining said second shaft, and means for connecting said shafts and fixing said slow-speed pulley thereto whereby by disconnecting said shafts and sliding one of them in its bearings said slow-speed pulley may be changed while said shafts remain in their bearings.

2. In a mule, a rim-band shaft provided with a driving pulley, a bearing for said shaft, a second shaft in alinement therewith, a bearing in which said second shaft is slidably mounted, a slow-speed pulley externally grooved to receive a band and interposed between the contiguous ends of said shafts, and means for uniting the hub of said pulley to both of said shafts, said means connecting said shafts.

3. In a mule, a rim-band shaft provided with a driving pulley and having at one end a flange, a bearing for said shaft, a second shaft in alinement with said rim-band shaft and having a flange, a bearing in which said second shaft is slidably mounted, a slow speed pulley having its hub interposed between the flanges of said shafts, and means to secure the hub of said pulley between said flanges whereby when said second shaft is slid in its bearings said slow speed pulley may be readily disconnected from said shaft to enable a slow speed pulley of another diameter to be readily interposed between said flanges without removing the shafts from their bearings.

4. In a mule, a rim-band shaft provided with a driving pulley and having at one end a flange provided with a boss, a bearing for said shaft, a second shaft in alinement with said rim-band shaft, said second shaft having a flange and a boss extended therefrom, a bearing in which said second shaft is slidably mounted, a slow-speed pulley interposed between the flanges of said shafts and having a hole in its hub to fit said bosses, and means to connect said flanges and the hub of said wheel retaining said bosses in the hub of said wheel.

872,688. ELECTRICAL AND THERMAL CUPPING DEVICE. EDWARD S. SAIGHMAN, Chicago, Ill. Filed Dec. 30, 1903. Serial No. 187,151.

1. A flexible suction cup having a flexible water bag covering the sides and top thereof and adapted to permit said cup to be depressed upon the surface treated.

2. As an article of manufacture, a flexible cupping device adapted to be depressed upon the surface treated, a flexible water compartment thereon adapted for circulation of water therethrough during treatment, an annular plate in the water compartment adapted to aid in compressing said device and a handle having a valve controlled passage therein adapted to permit the passage of air in one direction only.



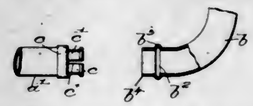
3. The combination with an inner resilient cup of an outer resilient cup integral at each end with the respective ends of the inner cup thereby providing a chamber and a plate concentric with one of the connected ends and extending into the chamber.

4. The combination with a flexible suction cup of an outer cup integrally united therewith and affording a chamber therebetween, a handle engaged to said cups having a passage therethrough and a valve positioned in said handle adapted to release the air from the inner cup and to prevent the return of the air thereinto when pressed against the surface treated.

5. In a device of the class described the combination with a pair of cups, one nested within the other and providing a compartment between the cups and a plate above the inner cup.

[Claims 6 to 16 not printed in the Gazette.]

872,689. CURTAIN-POLE AND SUPPORT THEREFOR. DICKRAN M. SARKISIAN, Malden, Mass. Filed July 18, 1907. Serial No. 384,393.



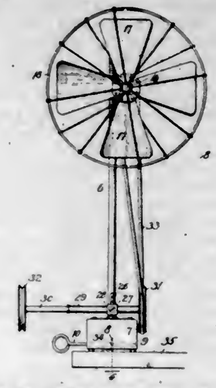
1. The combination, with a longitudinally-extensible curtain-pole, of an attaching member fixedly secured to each end of the pole, each member having a compressible head, and a sustaining bracket for each end of the pole, each bracket having its outer tubular end provided with a continuous annular, internal socket to receive and grip the entire periphery of the head of the adjacent attaching member when inserted therein.

2. The combination with a two-part, telescopically connected curtain pole, of an attaching member rigidly secured to the outer end of each part and having a reduced neck and a compressible head, and a sustaining bracket for each end of the pole, each bracket having an internal, annular socket to receive and grip the head of the adjacent attaching member and a tubular extension into which the reduced neck snugly fits.

3. A curtain-pole having an attaching member fixedly secured to each of its ends, each member consisting of a sleeve-like base to receive the end of the pole, a tubular neck and an enlarged head, the head and neck being longitudinally slotted, combined with a bent supporting bracket having a short tubular extension and an internal annular recess therein adjacent one end to receive and grip the head of the attaching member and at its other end having apertured feet whereby the bracket may be secured in place, the neck of the attaching member fitting snugly in the tubular extension.

4. A curtain-pole bracket comprising a tubular metallic body bent in the direction of its length and having integral feet at one end and an internal annular socket adjacent its other end, combined with a coupling member having a slotted, compressible head and a sleeve-like base adapted to receive and be fixedly secured to the end of a curtain-pole, the socket in the bracket receiving and gripping the compressible head, to separably connect the bracket and curtain-pole.

872,690. FAN. CHRISTIAN F. SCHNOOR, Chicago, Ill. Filed Aug. 19, 1907. Serial No. 389,112.



1. A portable fan-device comprising, in combination, a post rising from a base and having a threaded upper section with a nut screwed thereon, a collar rotatably clamped about said post-section and provided with lips forming a sleeve-bearing, a sleeve secured in said bearing to extend across the post, a shaft journaled in said sleeve and carrying a fan, a cage secured on said sleeve to envelop the fan, and a drive-shaft rotatably supported on the lower part of the post and geared to said fan-shaft.

2. A portable fan-device comprising, in combination, a base containing a slit in its under side and a pin-hole crossing said slit, a clip adapted to be fastened on a support and having an upright flange adapted to enter said slit and provided with a series of holes adapted to register with said pin-hole, a post rising from said base, a fan on a rotary shaft supported on the upper part of the post, and a drive-shaft rotatably supported on the lower part of the post and geared to the fan-shaft.

3. A portable fan-device comprising, in combination, a post rising from a base and provided near the base with a series of stop-teeth, a fan on a rotary shaft supported on the upper part of the post and carrying a belt-pulley, a collar surrounding the post at said stop-teeth and having a set-screw in one end to engage the post, a sleeve secured to said collar to extend across the post, and a drive-shaft journaled in said sleeve and carrying on one end a pulley having a belt-connection with said pulley on the fan-shaft and on its opposite end a pulley adapted to be geared to the driving-power.

872,691. SWIVEL. FRANK W. SEIDL, Manitowoc, Wis. Filed Nov. 14, 1905, Serial No. 287,286. Renewed Sept. 17, 1907. Serial No. 393,325.



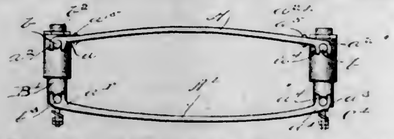
1. A swivel comprising a body portion, a hook rotatably secured thereto, means for preventing axial movement thereof, a latch member carried by said body portion and provided with a head for engaging said hook in closed position, a sleeve slidably supported about said latch member for locking the hook in engagement therewith, a stop carried by said sleeve for engaging the head of the latch member to limit the movement of said sleeve, and a spring mounted within said sleeve and bearing against said stop, substantially as described.

2. A swivel comprising a body portion, a hook rotatably secured thereto, means for preventing axial movement thereof, a latch member carried by said body portion and provided with a head for engaging said hook in closed position, interlocking faces on said latch and hook, a sleeve slidably supported about said latch member for locking the hook in engagement therewith, a stop carried by said sleeve for engaging the head of the latch member to limit the movement of said sleeve, and a spring mounted within said sleeve and bearing against said stop, substantially as described.

3. A swivel comprising a body portion, a hook having a headed shank rotatably mounted therein, a deflected part of the body portion arranged to engage the head of said shank for preventing axial movement thereof, a latch member carried by said body portion and provided with a head for engaging said hook in closed position, a sleeve slidably supported about said latch member for locking the hook in engagement therewith, a stop carried by said sleeve for engaging the head of the latch member to limit the movement of said sleeve, and a spring mounted within said sleeve and bearing against said stop, substantially as described.

4. A swivel comprising a body portion, a hook rotatably secured thereto, means for preventing axial movement thereof, a latch member carried by said body portion and provided with a head for engaging said hook in closed position, a sleeve slidably supported about said latch member for locking the hook in engagement therewith, an inner annular flange carried by said sleeve for engaging the head of the latch member to limit the movement of said sleeve, and a spring mounted within said sleeve and bearing against said flange, substantially as described.

872,692. SPRING. FERNANDIZE M. SIMMONDS, Chicago, Ill., assignor of one-half to Raymond B. Donaldson, Chicago, Ill. Filed Feb. 28, 1906. Serial No. 303,395.



1. In a device of the class described the combination with a downwardly opening upper casing, lugs integral therewith, a leaf spring engaged at one end to said lugs, an upwardly opening casing telescoping the upper casing, lugs integral therewith, a leaf spring engaged to said lugs, a sleeve integral with and extending upwardly from the lower casing, a spring in said casing around said sleeve and bearing against the upper casing and a bolt extending through said upper casing and sleeve.

2. In a device of the class described the combination with an upper and lower housing, lugs on each, leaf springs one engaged at its end to each housing, a sleeve extending upwardly from the bottom of the lower housing, a bolt extending through the upper housing and sleeve and projecting beyond the lower housing, a spring inclosed by said housings and a spring on said bolt pushing upward against the lower housing.

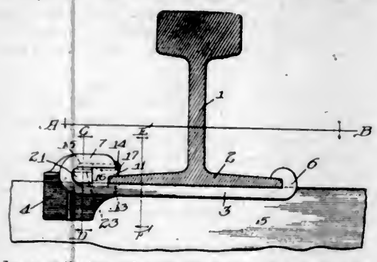
3. In a device of the class described the combination with telescoping housings of a leaf spring pivotally engaged to each housing, a sleeve concentric with one of said housings affording a space between the same, a spring in said housing around the sleeve, a rod extending below the housing, a stop thereon and a spring engaged on said rod adapted to force the lower housing upwardly.

4. The combination with oppositely disposed leaf springs of interfitting, telescoping parts pivoted on the ends thereof, resilient means concealed therein and acting to force the leaves of the spring oppositely and means on each end of the upper leaf spring adapted to limit the swinging movement of the telescoping parts.

5. The combination with the oppositely disposed leaves of a leaf spring of downwardly opening casings or housings on the ends of one of said springs and upwardly opening casings on the ends of the other adapted to telescope within the upper casings, a spiral spring concealed in the housing thus formed and bearing at its ends against the top and bottom of the housing and a lug on each end of the upper leaf spring adapted to limit the swinging movement of the casing.

[Claims 6 to 11 not printed in the Gazette.]

872,693. RAILROAD-RAIL STAY. HIRAM H. SPONENBURG, Wadsworth, Ill., assignor, by direct and mesne assignments, to Laas & Sponenburg Co., a Corporation of Illinois. Filed Feb. 14, 1907. Serial No. 357,395.



1. In a rail-stay, the combination of a bar, with rail-clamping means associated with the bar at each end, a split key to hold said means in engagement with the rail flange, and a fixed projection to force the leaves of the split key apart.

2. In a rail-stay, the combination of a bar, with rail-clamping means associated with the bar at each end, a key to hold said means in engagement with the rail flange, said key having a bifurcation forming a relatively thin leaf, and a projection to force the leaf outwardly.

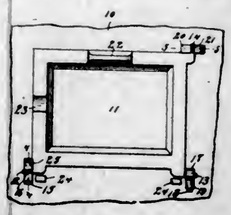
3. In a rail-stay, the combination of a bar, with rail-clamping jaws at each end of the bar, a split key in one of the jaws, and a projection to force the leaves of the split key apart.

4. In a rail-stay, the combination of a bar, with rail-clamping jaws at each end of the bar, a gripping plate associated with one of the jaws, a split key to hold the gripping plate against the flange of the rail and a projection to force the leaves of the split key apart.

5. In a rail-stay, the combination of a bar, with a rail-clamping jaw at one end of the bar, means for engaging the rail flange at the other end of the bar, a split key in the jaw, and a projection to force the leaves of the key apart, the inner surface of said jaw being beveled.

[Claims 6 to 15 not printed in the Gazette.]

872,694. STOVE-DOOR. JAMES E. THIEM, Raleigh, N. C. Filed Aug. 1, 1907. Serial No. 386,640.



1. The combination with a door-frame, of a door having a horizontal and a vertical hinge-connection therewith.

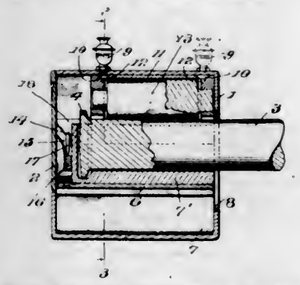
2. The combination with a door-frame, of a door having pintles at its lower corners and a pintle at one of its upper corners, a swiveled bearing for one of the lower pintles, and a bearing for the other pintles in which they are removably supported.

3. The combination with a door-frame, of a door having pintles at its lower corners and a pintle at one of its upper corners, a swiveled bearing for one of the lower pintles, and supporting brackets for the other pintles, said brackets having recesses in their faces in which the last mentioned pintles are removably seated.

4. The combination with a door-frame, of a door having pintles at its lower corners and a pintle at one of its upper corners, a swiveled bearing for one of the lower pintles, supporting brackets for the other pintles, said brackets having recesses in their faces in which the last mentioned pintles are removably seated, and a spring-finger in the recess of the lower bearing bracket engageable with the pintle.

5. The combination with a door-frame, of a door having pintles at its lower corners and a pintle at one of its upper corners, a swiveled bearing for one of the lower pintles, supporting brackets for the other pintles, said brackets having recesses in their faces in which the last mentioned pintles are removably seated, the entrance to the recesses being contracted, and the cross section of the pintles being oblong, said pintles being movable into and out of the recesses by their short sides, and their long sides being wider than the entrances.

872,695. JOURNAL-BOX. ABE THOMAS, Cynthiana, Ky. Filed July 13, 1906. Serial No. 326,124.



1. In a journal box, the combination of a casing, a bearing mounted within the casing, a journal received by the casing and engaging the bearing, a removable shelf mounted within the casing, and a guard block supported upon the shelf and normally spaced from the journal, the said guard block being designed to be lowered after the removal of the shelf.

2. In a journal box, the combination of a casing, a bearing mounted within the casing, a journal received by the casing and engaging the bearing, a slidable shelf arranged within the casing, and a guard block supported upon the slidable shelf below the journal and normally spaced therefrom, the said guard block being designed to be lowered upon the removal of the slidable shelf.

3. In a journal box, the combination of a casing having ways formed at opposite sides thereof, a bearing mounted within the casing, a journal received by the casing and engaging the bearing, a sliding shelf arranged within the casing, a block supported by the shelf below the journal and adapted to be lowered after the removal of the shelf, and a retainer bar having its ends received within the before mentioned ways and operating to clamp the block against a side of the casing to prevent displacement of the said block.

4. In a journal box, the combination of a casing, a bearing block mounted within the casing, rollers journaled upon the bearing block, a journal received by the casing and engaging the rollers, a removable shelf arranged within the casing, and a block supported by the shelf below the journal and adapted to be lowered after the removal of the shelf.

872,696. BROOM-MOISTENER. EDWARD M. THOMAS, Norway, Me. Filed Apr. 23, 1907. Serial No. 369,770.

In a broom moistener, a tank or reservoir suitably supported, a pipe leading from the reservoir, a sprinkler head secured to the pipe, plugs in the ends of the head and a fibrous strainer extending longitudinally of the head and



secured therein by a plug as and for the purpose described.

872,697. CHARM, HAT-PIN, &c. GEORGE H. TILFORD, Providence, R. I., assignor of one-half to George A. Keach, Providence, R. I. Filed Feb. 26, 1907. Serial No. 359,418.



1. An article of jewelry comprising side members provided with attaching fingers, a top plate engaged by said fingers, and a member located between said side members and having a socket, said member being also provided with flexible means to engage the adjacent portions of said side members.

2. An article of jewelry comprising side members provided with attaching fingers, a top plate engaged by said fingers, a member provided with a socket and located between said side members, and a flexible fastening plate carried by said socket member engaging said side members.

3. An article of jewelry comprising a top plate, side members having means for engaging said top plate, and a member having a socket, and also provided with flexible means for engaging said side members.

4. An article of jewelry comprising a top plate, a plurality of side members, flexible means for uniting said plate and said side members, and a member having a socket and provided with flexible means for engaging said side members.

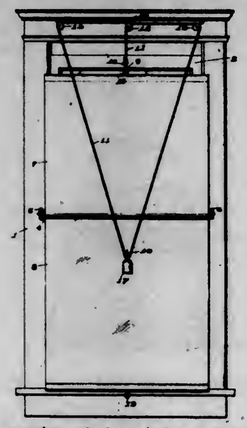
5. An article of jewelry comprising a top plate, side members having means for engaging said top plate, a member provided with a socket and interposed between said side members, and a flexible fastening plate carried by the socket member and engaging said side members.

[Claims 6 to 10 not printed in the Gazette.]

872,698. CURTAIN-FIXTURE. BENJAMIN F. TYLER, Coshocton, Ohio. Filed Feb. 12, 1907. Serial No. 356,981.

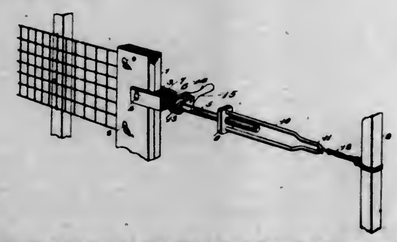
In a curtain fixture, the combination of a curtain roll located intermediate the bottom and upper ends of the window frame, two shades connected to said curtain roll and adapted to wind and unwind in unison, pulleys located at the upper end of the window frame and spaced from each other, a cord passed over said pulleys, hooks connected at one end of the cord and adapted for connec-

tion to the curtain shades, said cord carrying a weight, and the weight located below one of the pulleys connected



to the upper portion of the window pane, all arranged substantially as described and for the purpose specified.

872,699. WIRE-STRETCHER. DAVID A. VANDEVORT, Scottsburg, Ind. Filed Aug. 16, 1907. Serial No. 388,871.

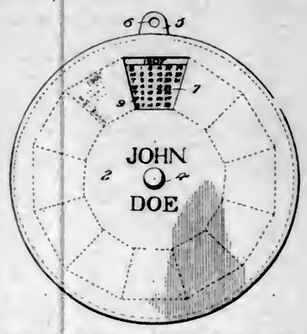


1. In a device of the character described, the combination of a fence engaging clamp, a clip loosely connected to the fence engaging clamp, a threaded operating rod having a swivel connection with the before mentioned clip, a block coöperating with the threaded operating rod, a U-shaped yoke projecting from the block and receiving the operating rod between the arms of the same, a tie member coöperating with the yoke to hold the block in position, and means for turning the operating rod.

2. In a device of the character described, the combination of a fence engaging clamp, a clip loosely connected to the fence engaging clamp, a threaded operating rod having a swivel connection with the before mentioned clip, a block coöperating with the threaded operating rod, means for holding the block in position, a ratchet wheel fast upon the threaded operating rod, an operating lever loosely mounted upon the operating rod, and a reversible pawl carried by the operating lever, the said pawl being adapted to coöperate with the ratchet wheel to turn the operating rod in either direction.

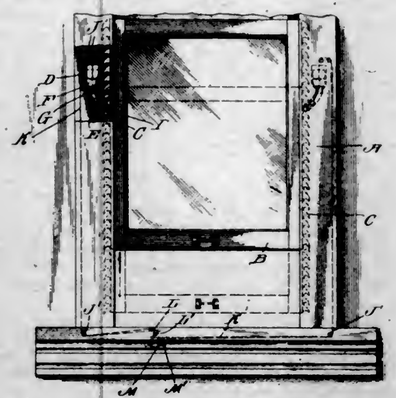
3. In a device of the character described, the combination of a fence engaging clamp, a U-shaped clip loosely connected to the fence engaging clamp, a threaded operating rod having a swivel connection with the said clip, a block coöperating with the threaded operating rod, a U-shaped yoke projecting from the block and receiving the operating rod between the arms of the same, the said yoke serving as a means for holding the block in position, a ratchet wheel fast upon the operating rod, a lever pivotally mounted upon the operating rod, and a pawl mounted upon the lever and coöperating with the ratchet wheel to rotate the operating rod.

872,700. ADVERTISING DEVICE. PETER F. VAN HALDER, Sharon, Pa. Filed Feb. 13, 1907. Serial No. 357,145.



As an improved article of manufacture, the herein described display device consisting of three disks face to face and pivotally connected together at the center, the intermediate disk being provided with an integral handle extension and containing display matter, and the two outer disks being of greater diameter than the intermediate disk and free from connection with each other and the intermediate disk, except with the pivot, one of said outer disks being formed with a side opening extending therethrough in registry with the display matter of the intermediate disk, the said outer disks being susceptible to bowing by pressure exerted on them from their margins inwardly, whereby pressure applied inwardly at diametrically opposite points of the device will result in spreading apart the outer disks so as to permit the intermediate disk to have free rotation without undue frictional engagement with the opposite walls of the outer disks.

872,701. SASH-HOLDER. LOUIS H. VINCENT, Jr., Gila Bend, Ariz. Filed Jan. 25, 1907. Serial No. 354,041.



1. The combination with a sash provided with racks, of a guide frame and a pin slidably mounted in said frame adapted to be engaged by said rack, for the purpose described.

2. In a sash holder, the combination with a frame having a sash mounted therein, of racks secured to said sash provided with saw-shaped teeth and pins mounted in guides secured in said sash adapted to be engaged by said teeth, for the purpose described.

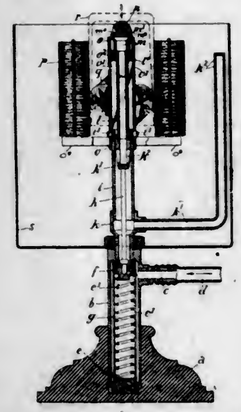
3. In a sash holder, the combination with a frame having a sash mounted therein provided with racks having downwardly projecting curved teeth, of guide-frames secured in said frame, pins mounted in said guide frames adapted to be engaged by said teeth, and means for raising said pins out of engagement with said teeth, for the purpose described.

4. The combination with a frame having a sash mounted therein provided with racks, of guide-frames mounted in said frame, pins mounted in said guide frames adapted to be engaged by said racks and cables connected to said pins and means for operating said cables, for the purpose described.

5. The combination with a frame having a sash mounted therein, provided with racks, of holders secured in said frame, guide-frames connected to said holders, pins mounted in said guide frames adapted to be engaged by said racks, weights mounted in said holders connected to said pins, and operating cables connected to said weights for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

872,702. APPARATUS FOR WASHING GLASSES. ALFRED VODOZ, Geneva, Switzerland. Filed Sept. 11, 1906. Serial No. 334,120.



1. The combination of a water-pipe; a valve controlling the same; means for opening said valve; a sleeve rotatably mounted on said means and free to slide lengthwise of said pipe and to rotate thereon; a brush-carrying frame secured to said sleeve; and means for rotating said sleeve during the lengthwise movement of the same.

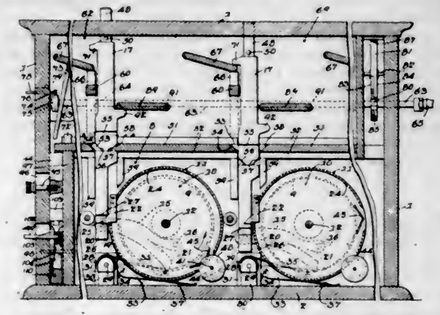
2. The combination of a water-pipe; a spring-controlled valve controlling the same; means for opening said valve; a sleeve rotatably mounted on said means and free to slide lengthwise of said pipe and to rotate thereon; a brush-carrying frame secured to said sleeve; and means for rotating said sleeve during the lengthwise movement of the same.

872,703. VOTING-MACHINE. CLARENCE M. WARNER, Cambridge, Ill. Filed Mar. 6, 1906. Serial No. 304,575.

1. A voting machine having a voting key provided with a telescopic push pin which is movable outwardly independently of the key to prevent withdrawal of the key after it has been forced inwardly, said push pins serving to guide and steady the adjacent end of the key.

2. In a voting machine, the combination with a cabinet, of an endwise movable voting key terminating short of one side of the cabinet, and a push pin working through said side of the cabinet and telescoped with the key to force the latter inwardly, said pin serving to guide and steady the adjacent end of the key and being capable of being drawn outward independent of the key to prevent withdrawal of the latter after it has been forced inwardly.

3. In a voting machine, the combination with a cabinet, of an endwise movable voting key terminating short of one side of the cabinet, and a push pin working through said side of the cabinet and telescoped with the voting key to force the latter inwardly and capable of being moved outwardly independently of the key, said pin serving to guide and steady the adjacent end of the key and having a stop shoulder located between the outer end of the key and the adjacent side of the cabinet for engagement with the latter to prevent entire withdrawal of the pin.

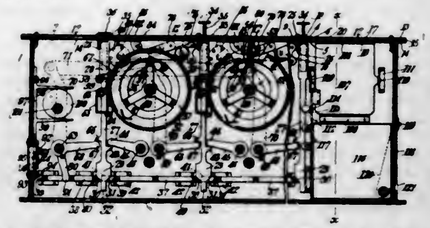


4. A voting machine having an endwise movable voting key provided at its outer end with a longitudinal socket, and a push pin slidably received within the socket to actuate the key, said pin serving to guide and steady the adjacent end of the key and being capable of being moved outwardly through the socket without withdrawing the key.

5. In a voting machine, the combination with a cabinet, of an endwise movable voting key having its outer end terminating short of one end of the cabinet and provided with a longitudinal socket, and a push pin working through said side of the cabinet and slidably received within the socket to force the key inwardly said pin serving to guide and steady the adjacent end of the key and being capable of being moved outwardly through the socket without withdrawing the key.

[Claims 6 to 23 not printed in the Gazette.]

872,704. VOTING-MACHINE. CLARENCE M. WARNER, Cambridge, Ill. Filed Feb. 21, 1907. Serial No. 358,678.



1. In a voting machine, a register for the number of voters; a plurality of means, under the control of the voters, each connected to said register, and means whereby the first means actuated by a voter throws the register out of connection with all the other means controlled by the voters.

2. In a voting machine, a register for the number of voters, push-buttons or keys for the several candidates to be voted for, connections between the push-buttons or keys and the register of the number of voters, and means whereby the movement of the first push-button or key operated by a voter throws the register out of connection with all the other push-button or keys.

3. In a voting machine, a register for the number of voters, a pawl-and-ratchet mechanism for moving said register step-by-step, interconnected rock arms operating said

pawl-and-ratchet mechanism, push-bars, one for each of the several candidates to be voted for, and means on each push-bar for engaging the rock arms and moving all the rock arms simultaneously.

4. In a voting machine, push-bars under the control of voters, lugs thereon, rock arms in the paths of the lugs when the push-bars are depressed, rock shafts carrying the rock arms, other arms on the shafts, a common connecting bar for all of the rock arms, a register for the number of voters, and a pawl-and-ratchet actuating means for said register.

5. In a voting machine, longitudinally moving push-bars, one for each candidate to be voted for and under the control of the voter, a rock arm in the path of each push-bar on its movement in one direction, connections between all the rock arms for simultaneous movement thereof, and means for moving the rock arms in the reverse direction for resetting the operating push-bars.

[Claims 6 to 19 not printed in the Gazette.]

872,705. COMPOSITION OF MATTER. SIMON G. WIGHTMAN, Washington, D. C. Filed Feb. 6, 1906. Serial No. 299,779.

The herein-described monolithic structure, consisting of a base stratum formed by combining resin and an iron oxid in the presence of heat and then incorporating therewith while still heated a finely divided earthy base and finally compressing the mass before cooling while still in a plastic condition and a surface stratum combined therewith composed of an earthy base and a mixture of asphaltum and resin which is commingled with the earthy base while the latter is in a heated condition and the asphaltum and resin are in a heated and plastic condition, the surface stratum being applied to the base stratum while the former is heated, so that the heat thereof will draw up a certain amount of resin and iron from the base stratum, making a complete cohesion of the two strata.

872,706. SIGHT FOR FIREARMS. JAMES WINDRIDGE and GEORGE S. WILCOX, Middlefield, Conn., assignors to Lyman Gun Sight Corporation, Middlefield, Conn., a Corporation of Connecticut. Filed Jan. 16, 1907. Serial No. 352,626.



1. A sight for firearms having an attenuated slot permitting the passage of a mere line of light, said slot being formed between the edges of two separate independent members said edges being nearly in contact.

2. A sight for firearms comprising a leaf or blade divided into separate parts having a space between their edges that forms an attenuated slot permitting the passage of a mere line of light in the vertical sighting plane said edges being nearly in contact.

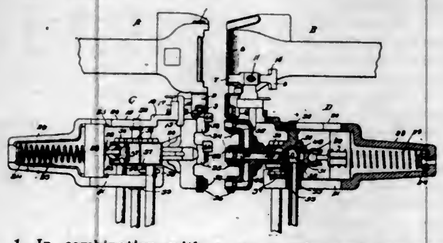
3. A sight for firearms comprising a leaf or blade having a sighting notch and an attenuated slot below and central of the notch permitting the passage of a mere line of light in the vertical sighting plane said blade consisting of two separate parts between the edges of which said notch and slot are formed said slot being between portions of the edges that are nearly in contact.

4. In a sight for firearms the combination of a leaf and a pair of blades secured thereon with their edges separated to provide an intervening attenuated slot in the vertical sighting plane.

5. In a sight for firearms the combination of a leaf and a pair of blades secured on the leaf with their edges separated to provide an intervening sighting notch and an attenuated slot below and in continuation therewith in the vertical sighting plane.

[Claims 6 to 9 not printed in the Gazette.]

872,707. AUTOMATIC CONNECTOR FOR TRAIN-PIPES. PETER BEAHM, Altoona, Pa. Filed June 29, 1907. Serial No. 381,526.



1. In combination with a car coupler and the train pipes of a train, of an automatic coupler for the pipes pivotally connected to the knuckle pin of the car coupler and having adjustable means to hold the pipe couplings relatively to the car coupler.

2. In combination with a car coupler and the train pipes of a train, of an automatic coupler for said pipes, consisting of a frame, means for connecting the same to the coupler, adjustable means for holding the same in a relative position to the car coupler, an adjustable means for holding the coupling members of each coupler in horizontal corelation, and spring actuated couplers for the pipes carried by the frame.

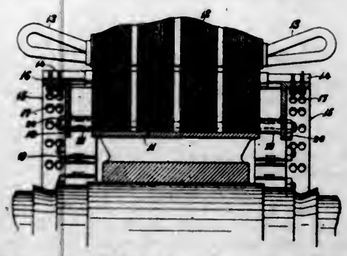
3. In combination with a car coupler and the train pipes of a train, of an automatic coupler for said pipes, consisting of a frame, means for connecting the frame to the knuckle pin of the car coupler, adjustable means for holding the same in a relative position to the car coupler, a carriage slidingly and pivotally mounted within said frame, pipe couplers carried by said frame and in engagement with said train pipes, and means for projecting the carriage forward and exerting a tension in such direction.

4. In an automatic connector for train pipes, the combination of a frame, a carriage slidingly and pivotally mounted in said frame, and means for projecting the carriage and holding the connector either directly forward or to one side, for the purpose set forth.

5. In combination with a car coupler and the train pipes of a train, of an automatic coupler for the pipes, consisting of a frame supported by the car coupler, a carriage slidingly and pivotally mounted and capable of transverse tilting movement in said frame, couplers carried by said carriage, and means for projecting the carriage and holding the coupling either in or out of line with the car coupler, for the purpose set forth.

[Claims 6 to 14 not printed in the Gazette.]

872,708. INDUCTION-MOTOR. BERNARD A. BEHREND, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Aug. 31, 1906. Serial No. 332,772.



1. In a rotor, a laminated core, conductors located in said core, short circuiting rings for said conductors, said rings having integral fan blades extending therefrom toward and into engagement with the end liminæ of the core, and means for clamping the rings and laminæ together.

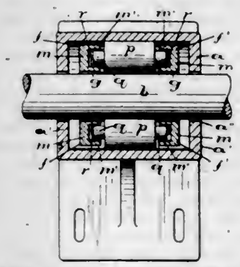
2. In a rotor for induction motors, a slotted laminated core, conductor bars located in the slots of the core, short-circuiting rings for said bars, said rings having substantially radial ribs in engagement with the end laminæ of the core, and bolts or rods for clamping the core and rings together.

3. In a rotor for induction motors, a slotted laminated core, conductor bars located in the slots of the core, and combined short-circuiting rings and end-heads clamped to each side of the core, said combined short-circuiting rings and end-heads formed with a portion located in a plane parallel to the laminæ of the core and having radial ribs which act as fan-blades the fan-blades being located between said parallel portion and the core.

4. In a rotor for induction motors, a slotted core, conductor bars located in the slots of the core, combined short-circuiting rings and end-heads clamped to the laminæ, and radial ribs serving as fan-blades on the inner sides of the rings and engaging the end laminæ.

5. In a squirrel-cage rotor of an induction motor, a slotted core, conductor bars located in the slots of the core, short-circuiting rings for the ends of the conductors, said rings having radial ribs or blades engaging the end laminæ, and bolts or rods passing through the radial ribs or blades and laminæ for clamping the parts tightly together, whereby said rings serve also as end-heads for the laminæ and as ventilating members.

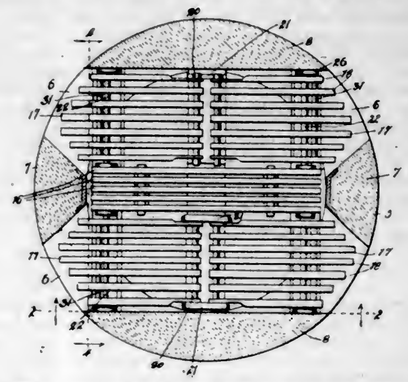
872,709. ANTIFRICTION-BEARING. THOMAS A. BLAKELY, Flesherton, Ontario, Canada, assignor of one-half to Frederick W. Harrison, Owen Sound, Canada. Filed Feb. 23, 1907. Serial No. 358,919.



An anti friction bearing comprising a journal box, having a longitudinal bore therethrough, and composed of two separable sections with means for fastening them together, there being flange seats within the journal box sections, retaining rings consisting of separable sections contained within the journal boxes and having flanges with means for fastening them together, said retaining rings comprising annular rims, and side plates with longitudinal bores allned with the longitudinal bore of the journal box, antifriction bearing rollers arranged in an annular set between the retaining rings and of less length than the distance between the inner faces of said annular rims, there being trunnions for the anti friction bearing rollers projecting within the plane of said rims but not extending to the side faces of the retaining rings, anti friction spacers contained within the retaining ring rims and interposed between the trunnions of the anti friction bearing rollers, and of greater dimension than the width of the inner faces of the retaining ring rims to contact with the side faces of the retaining rings and the ends of the anti friction bearing rollers, to prevent the ends of the anti friction bearing rollers coming into contact with the retaining ring rims.

872,710. TILTING FIRE-GRATE. ALEXANDER CARSWELL, Chicago, Ill., assignor to John Williamson, Chicago, Ill. Filed Aug. 8, 1907. Serial No. 387,689.

1. The combination in a furnace structure, provided with four doors, of a hollow cross wall provided with blast outlets, four movable grate sections hinged at their inner ends to the supporting wall and extending toward the respective doors, and means for supporting the free ends of the grate sections in raised position and adapted to permit lowering of the ends, substantially as described.



2. The combination in a furnace structure, provided with four doors, of a hollow cross wall provided with blast outlets, four movable grate sections hinged at their inner ends to the supporting wall and extending toward the respective doors, and a pivoted yoke for each of the grate sections for supporting the free end thereof when raised, substantially as described.

3. In a furnace structure provided with four doors, the combination of a transversely extending hollow supporting wall, and a hollow cross wall at right angles thereto, the walls being provided with blast openings, four movable grate sections, one for each of the doors, pivoted at their inner ends to the supporting wall and extending toward the respective doors, and means for supporting the free ends of the movable grate sections, substantially as described.

4. In a furnace structure provided with four doors, the combination of a transversely extending hollow supporting wall, and a hollow cross wall at right angles thereto, the walls being provided with blast openings, four movable grate sections, one for each of the doors, pivoted at their inner ends to the supporting wall and extending toward the respective doors, and a pivoted yoke for supporting the free end of each of the grate sections, substantially as described.

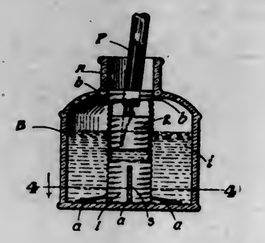
5. In a furnace structure provided with four doors, the combination of a transversely extending hollow supporting wall, and a hollow cross wall at right angles thereto, the walls being provided with blast openings, four movable grate sections, one for each of the doors, pivoted at their inner ends to the supporting wall and extending toward the respective doors, a pivoted yoke for supporting the free end of each of the grate sections, and a plurality of fixed grate bars extending through the center of the furnace structure, in alinement with the cross wall, substantially as described.

[Claim 6 not printed in the Gazette.]

872,711. ATTACHMENT FOR INK-BOTTLES. EDWIN M. CASE, St. Louis, Mo. Filed Jan. 28, 1907. Serial No. 354,540.

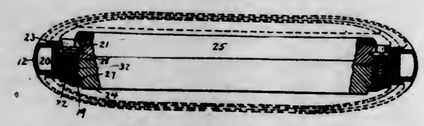
1. As an article of manufacture, a shell or casing insertible into an ink-bottle and provided with means for engaging the walls of the body of the bottle to avoid lateral displacement of said shell, and with means for engaging the neck of the bottle for the support of the upper portion of the shell, a cup having a perforated bottom serving as a diaphragm, insertible into the casing and adjustable along the length thereof for limiting the depth of insertion of the pen thereinto, substantially as set forth.

2. As an article of manufacture, a screw-threaded shell or casing insertible into an ink-bottle, and having a series of tongues or arms excised from the wall thereof adapted to be bent against the body portion of the bottle, and having a series of prongs excised therefrom adapted to be



bent against the base of the neck of the bottle, a screw-threaded cup having a perforated bottom serving as a diaphragm, insertible into the casing and adjustable along the length thereof for limiting the depth of insertion of the pen thereinto, subatantially as set forth.

872,712. WATCH. DUANE H. CHURCH, Newton, Mass.; Harriet L. Church, executrix of said Duane H. Church, deceased, assignor, by mesne assignments, to Waltham Watch Company, a Corporation of Massachusetts. Filed Mar. 1, 1905. Serial No. 247,840.



1. A watch-case center having a space in which is an internal seat or shoulder adapted to prevent displacement of a movement in one direction from its operative position, and an adjustable securing device adapted to be projected inwardly from a point over the case center into the space to engage the movement and prevent its displacement in the opposite direction.

2. A watch case center formed with a space and a movement supporting seat to receive and support a movement and provided with a cavity between its sides communicating with its interior, and an adjustable movement-securing device carried by the center in said cavity, and adapted to be projected into the interior of the case-center.

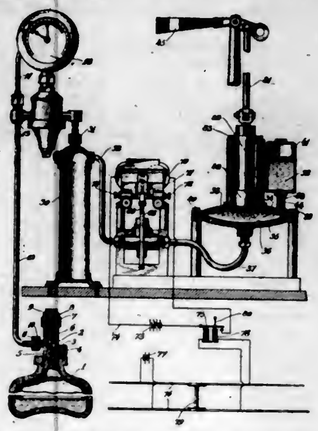
3. A watch case center formed with a space and a movement supporting seat to receive and support a movement and provided with a tapped socket, a cavity at the outer end of the socket, said cavity communicating with the interior of the case center, and a screw engaged with said socket and provided with an eccentric head located in said cavity and adapted to be projected therefrom into the interior of the case center.

4. A watch comprising a movement provided in its periphery with a cavity having a screw head seat, and a case center formed with a space and a movement supporting seat to receive and support the movement, and provided with an adjustable screw having an eccentric head adapted to be projected into the movement-cavity and engage the said seat.

5. A watch comprising a top plate and a pillar plate, the latter having a cavity in its periphery, combined with a case center formed to receive and support said movement, and provided with an adjustable securing device adapted to be projected inwardly to engage said cavity.

[Claims 6 to 9 not printed in the Gazette.]

872,713. SIGNALING SYSTEM. CLARENCE W. COLEMAN, Westfield, N. J., assignor to The Hall Signal Company, a Corporation of Maine. Filed June 22, 1906. Serial No. 322,897.



1. In a railway signaling system, the combination of a signal normally biased to danger, a local tank for liquefied gas, a liquid link, a track circuit and means controlled by said track circuit whereby the pressure of the gas may be transmitted to the liquid to actuate the signal.

2. In a railway signaling system, the combination of a signal normally biased to danger, a local tank for liquefied gas, a liquid link, means for replenishing the supply of liquid, a track circuit and means controlled by said track circuit whereby the pressure of the gas may be transmitted to the liquid to actuate the signal.

3. In a railway signaling system, the combination of a signal normally biased to danger, a local tank for liquefied gas, a liquid link, a diaphragm between the gas and the liquid, a track circuit and means controlled by said track circuit whereby the pressure of the gas may be transmitted through the liquid to actuate the signal.

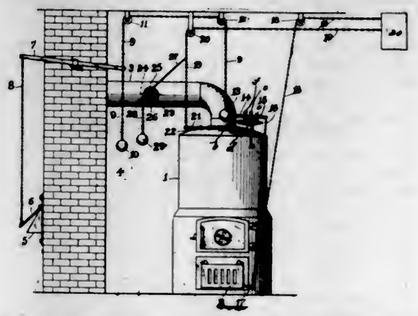
4. In a railway signaling system, the combination of a signal normally biased to danger, a local tank for liquefied gas, a piston, a piston chamber, a chamber for containing liquid located at the base of said piston chamber and into which said piston chamber opens and means whereby the pressure of the gas may be transmitted to the liquid to actuate the signal.

5. In a railway signaling system, the combination of a signal normally biased to danger, a local tank for liquefied gas, a piston, a piston chamber, a chamber for containing liquid located at the base of said piston chamber and into which said piston chamber opens, a diaphragm in said chamber, and means whereby the pressure of the gas may be transmitted to the liquid to actuate the signal.

[Claims 6 to 16 not printed in the Gazette.]

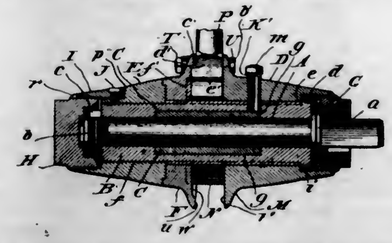
872,714. HEAT-REGULATING APPARATUS. WILBUR A. COMSTOCK, Bethel, Conn. Filed May 1, 1907. Serial No. 371,316.

1. In a heat regulating apparatus, the combination of a steam furnace having a draft door at the bottom and provided with an expansible and collapsible diaphragm connected with the steam chamber, a beam operatively connected with said diaphragm and having thereon a slidable weight, a chimney provided in its lower portion with an opening leading into said chimney, a door closing said opening, a pipe whereby the products of combustion pass from the furnace into said chimney at a point above the door therein, a pivoted lever, a chain connecting the outer end of said lever to said chimney door, a second chain connected to the inner end of said lever and depending therefrom and having a weight secured to its lower extremity, said second chain being passed up over suitable pulleys and thence depending and secured to the beam weight, a third chain extending over a suitable overhead pulley and thence downwardly around a pulley secured to said draft door and thence upwardly and secured to said beam, and a thermostat connected to said third chain for operating the latter.



2. In a heat regulating apparatus, the combination of a steam furnace having a draft door at the bottom and provided with an expansible and collapsible diaphragm connected with the steam chamber, a beam operatively connected with said diaphragm and having thereon a slidable weight, a chimney provided in its lower portion with an opening leading into said chimney, a door closing said opening, a pipe whereby the products of combustion pass from the furnace into said chimney at a point above the door therein, a pivoted lever, a chain connecting the outer end of said lever to said chimney door, a second chain connected to the inner end of said lever and depending therefrom and having a weight secured to its lower extremity, said second chain being passed up over suitable pulleys and thence depending and secured to the beam weight, a shaft journaled within said pipe and carrying a damper, a wheel affixed to said shaft outside the pipe and provided with a hub, a third chain suspended from the periphery of said wheel, and having a weight affixed to its lower end, a belt around said hub and having one end secured thereto, a check-draft door for the furnace, a fourth chain led over a suitable pulley and connected with said belt and check draft-door in such manner that the slackening of said chain will effect the closing of said check draft door and opening of said damper, a fifth chain led over a suitable pulley and thence down around a pulley carried by the draft door and thence upwardly and secured to said beam, and a thermostat connected to said fourth and fifth named chains to operate the same.

872,715. WHEEL-HUB. WILLIAM J. CONALLY, Atlanta, Ga. Filed May 3, 1907. Serial No. 371,603.



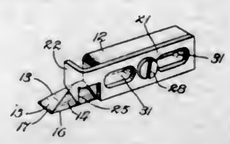
1. The combination in a wheel hub, of a body section having a circular series of spaced, outwardly extending projections, an annulus connected with the body section and having a circular series of seats receiving the outer ends of the projections on the body section, and also having a recess surrounding said series of seats, and spokes having base portions resting between the body section and the annulus and on the projections of the former, and also having reduced inner ends disposed between the projections, and a shoulder resting against the outer wall of the recess in the annulus.

2. The combination in a wheel hub, of a body section having a circumferential flange at its outer end and also having a circular series of spaced, outwardly extending projections, an annulus having a circular series of seats receiving the outer ends of the projections on the body section and also having a recess surrounding said series of seats, spokes having base portions resting between the body section and the annulus and on the projections of the former, and also having reduced inner ends disposed between the projections and a shoulder resting against the outer wall of the recess in the annulus, and bolts detachably connecting the body section and the annulus; the said bolts having heads and being extended through one of the said elements and threaded into the other and being also arranged in recesses in opposed faces of certain of the spokes.

3. The combination in a wheel hub, of a box having a boss at its inner end and also having an exterior longitudinal rib and a nexterior thread, a body section arranged on the box in engagement with the rib or ribs thereof and having a circular series of spaced, outwardly extending projections, an annulus arranged on the box and in engagement with the rib thereof and connected with the body section and having a circular series of seats receiving the outer end of the projections on the body section, and also having a recess surrounding said series of seats, spokes having base portions resting between the body section and the annulus and on the projections of the former and also having reduced inner ends disposed between the projections, and a shoulder resting against the outer wall of the recess in the annulus, an outer body section threaded on the box and arranged against the outer side of the annulus, means connected to the first mentioned body section for excluding dust from the inner end of the hub, and means connected to the outer body section for excluding dust from the outer end of the hub.

4. The combination in a wheel hub, of a body section having a circular series of spaced, outwardly extending projections, an annulus having a circular series of seats receiving the outer ends of the projections on the body section, and also having a recess surrounding said series of seats, means for holding the annulus against movement in a direction away from the body section, and spokes having base portions resting between the body section and the annulus and on the projections of the former and also having reduced inner ends disposed between the projections, and a shoulder resting against the outer wall of the recess in the annulus.

872,716. SOLE-CHANNELING TOOL. MILLER COOK, Jr., Whitman, Mass. Filed May 20, 1907. Serial No. 374,600.



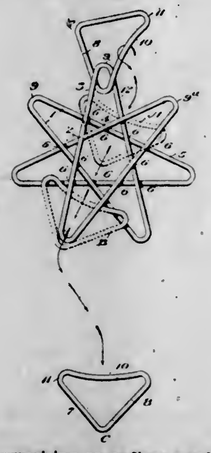
1. In a sole-channeling tool, in combination, a slitting knife composed of a shank and a thin extension formed as a blade at one end of the shank, and a trimming knife composed of two arms of unequal length arranged substantially at right angles with each other, the longer arm constituting the shank, and the shorter arm the blade of the trimming knife, said blade overhanging the slitting blade, and having a cutting edge substantially at right angles with the cutting edge of the slitting blade, the length of the shorter arm in a direction transverse of the slitting knife exceeding the thickness of the longer arm or

shank, the said shanks being adjustably connected to permit an adjustment of the trimming blade toward the slitting blade.

2. In a sole-channeling tool, in combination, a slitting knife composed of a shank and a thin blade extension at one end of the shank provided with a beveled face 14, which intersects the bottom surface of the blade, and forms a cutting edge, and a trimming knife composed of two arms of unequal length, arranged substantially at right angles with each other, the longer arm constituting the shank, and the shorter arm the blade of the trimming knife, said blade overhanging the slitting blade, and having a cutting edge substantially at right angles with the cutting edge of the slitting blade, and an inclined lower end which conforms to the beveled face of the slitting blade, the length of the shorter arm in a direction transverse of the slitting knife exceeding the thickness of the longer arm or shank, the shanks of the two knives being adjustably connected to permit an adjustment of the trimming blade toward the slitting blade.

3. A sole-channeling tool comprising a slitting knife composed of a shank and a thin extension formed as a blade at one end of the shank, and a trimming knife composed of two arms bent substantially at right angles with each other and forming a shank and a blade, and formed with a recess adjacent to the angle of the two arms, one of said arms extending transverse of the slitting knife, the cutting edges of the two knives being substantially flush with each other.

872,717. PUZZLE. ALFRED M. DAVIS, Freetown, Mass. Filed July 8, 1907. Serial No. 382,620.



1. A puzzle comprising an endless member having parts crossing each other and provided with points, and an endless member engaged therewith.

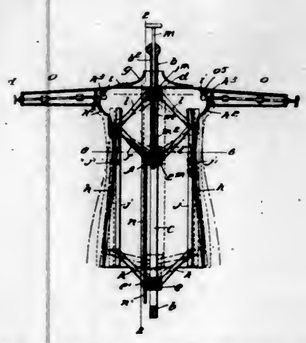
2. A puzzle comprising an endless member of substantially star shape having parts crossing each other, and an endless member engaged therewith.

3. A puzzle comprising an endless member of substantially star shape having parts crossing, but entirely free from, each other, and an endless member engaged therewith.

872,718. GARMENT SHAPING AND PRESSING FORM. SAMUEL E. DUGGINS, Richmond, Va. Filed Nov. 21, 1906. Serial No. 344,469.

1. An apparatus of the character described, comprising a pair of disconnected supports, a garment shaping and holding frame hinged to one of the supports, and means for sustaining the frame either in a vertical or a horizontal plane with respect to the two supports.

2. An apparatus of the character described, comprising a garment shaping and holding frame, a pair of disconnected supports, said shaping frame being hingedly connected to one of the said supports and adapted to be swung to either a vertical or a horizontal position, means on the frame for engaging the support to which the frame is hinged for locking it to its vertical position, the other support being so disposed as to sustain the upper end of the holding frame when it is swung down to the horizontal position.



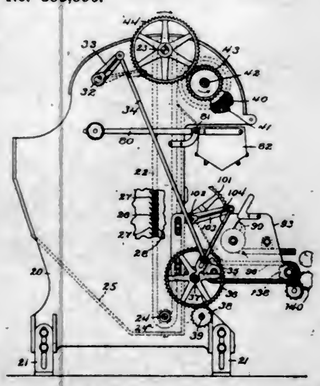
3. An apparatus of the character described, comprising a pair of separated supporting members, a garment holding and shaping frame rotatably mounted on the supporting members and having a hinged connection with one of the supporting members whereby it can be moved to a vertical or horizontal position with respect to the two supporting members, as set forth.

4. An apparatus of the character described, comprising a pair of suitable supports, a garment holding and shaping means connected thereto for adjustment to a vertical or to a horizontal position and rotatably mounted with respect to the said supports.

5. An apparatus of the character described, comprising a pair of supports, a garment holding and shaping frame hingedly mounted in one of the said supports, its upper end being arranged to rest on the other support when the frame is swung to a horizontal position, the said frame, when horizontally mounted on the supports, being rotatably held thereon, as set forth.

[Claims 6 to 10 not printed in the Gazette.]

872,719. FEED MECHANISM FOR CARDING-ENGINES. DANIEL C. FISHER, Boston, Mass. Filed Sept. 27, 1906. Serial No. 336,396.



1. In a machine for feeding fibrous material, the combination with a receptacle for the material to be fed, of a transferring apron provided with pins for engaging the fibrous material, means for positively driving said apron, an oscillating comb composed of a single blade of metal having triangular teeth alternating with the paths of movement of the pins of said apron, and means for positively oscillating said comb.

2. In a machine for feeding fibrous material, the combination with a receptacle for the material to be fed, of a transferring apron provided with pins for engaging the fibrous material, means for positively driving said apron, an oscillating comb composed of a single blade of metal having triangular teeth alternating with the paths of movement of the pins of said apron, and means for positively oscillating said comb, the points of said triangular teeth being curved toward the pins on the apron and in a direction to oppose the direction in which the material is carried by the apron pins.

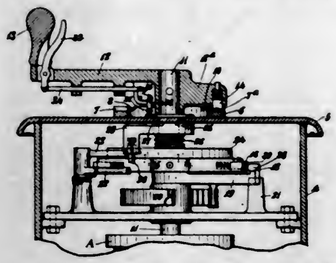
3. In a machine of the character described, the combination with a transferring apron having pins, of means for positively driving said apron, an oscillating comb having triangular and curved teeth, intersecting the path of movement of the apron pins a stripping comb having a serrated edge formed with recesses to permit the passage of the pins of the apron, and means for oscillating said combs.

4. In a machine of the character described, the combination with a receptacle for the fibrous material, of a transferring apron, means for positively driving said apron, a comb for stripping the fibers from the apron, a scale for weighing the fibers discharged from the apron, said scale being provided with a hinged bottom, means for automatically opening the bottom, a feed apron, and means controlled by the stock upon said apron for opening the bottom of the scale.

5. In a machine of the character described, the combination with a receptacle for the fibrous material, of a transferring apron, a preparing comb, a stripping comb, a weighing scale, a positively-driven feed apron, and means for controlling the discharge from the scale according to the stock upon the feed apron.

[Claims 6 to 18 not printed in the Gazette.]

872,720. CONTROLLER-OPERATING MECHANISM. CARL FLEMING, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Jan. 31, 1907. Serial No. 354,962.



1. A controller for electric motors, comprising fixed and movable contacts, means which when released tends to move the movable contact to "off" position, and two locking devices for said means.

2. A controller for electric motors, comprising fixed and movable contacts, means which when released tends to move the movable contact to "off" position, and a plurality of locking devices for said means, one of said locking devices being released when the movable contact is in a predetermined position.

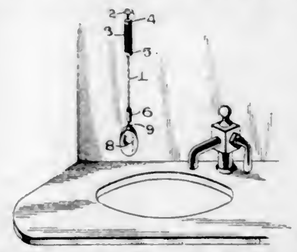
3. A controller for electric motors, comprising fixed and movable contacts, an operating handle, means which when released tends to move the movable contact to "off" position, and two locking devices for said means, one of said locking devices being released when the operating handle is released by the operator.

4. A controller for electric motors, comprising fixed and movable contacts, an operating handle, means which when released tends to move the movable contact to "off" position, and two locking devices for said means, one of said locking devices being released when the operating handle is released by the operator and the other when the movable contact is in a predetermined position.

5. A controller for electric motors, comprising a rotatable drum, means which when released tends to move said drum to "off" position, and a plurality of independent locking devices, all of which must be in unlocked condition simultaneously to release said means.

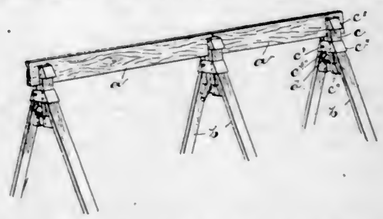
[Claims 6 to 20 not printed in the Gazette.]

872,721. TOILET-SOAP HANGER. FRANK J. FOX, St. Louis, Mo. Filed Dec. 26, 1906. Serial No. 349,424.



A device of the class described, comprising a flexible hanger, a retractile coil spring inclosing a normally slack portion of said flexible hanger, caps fixed to the ends of the coil spring and to the flexible hanger, a tube attached to the lower end of the hanger, a wire loop adapted to be embedded in a cake of soap, the upper end of which wire loop is twisted together and formed into a hook, and detachably engaged in the lower end of the tube.

872,722. KNOCKDOWN TRESTLE. JESSE FRAVEL, near Dayton, Ohio. Filed Mar. 14, 1907. Serial No. 362,433.



1. In a knock-down trestle, an independent beam, independent legs, vertical members hinged together between which said beam extends, a cam member pivoted between said hinged members and adapted to move said members to clamp the beam, and means for attaching said legs, substantially as specified.

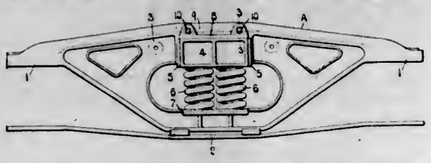
2. In a knock-down trestle an independent beam, independent legs, two parallel levers having a common fulcrum, a third lever pivoted between said parallel levers adapted to cause said levers to grip said beam and means for engaging said legs with said parallel levers, substantially as specified.

3. In a knock-down trestle, an independent beam, independent legs, two parallel levers having a common fulcrum, cam faces formed on the adjacent sides of said levers, an adjusting member engaging said cam faces to move said parallel levers about their pivotal connections and cause it to engage the beam and means for engaging said legs, substantially as specified.

4. In a knock-down trestle an independent beam, independent legs, two parallel levers, a plurality of sockets

attached to said levers, in any of which said legs are adapted to engage, an extension on one of said levers pivotally engaged with the corresponding lever, a pivoted lever for moving said parallel levers about their pivotal connections, substantially as and for the purpose specified.

872,723. CAR-TRUCK. THOMAS M. GALLAGHER, Old Orchard, Mo., assignor to Scullin-Gallagher Iron and Steel Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 13, 1907. Serial No. 392,703.



1. A side frame for car trucks having an opening for the reception of a bolster and bolster springs, a portion of said opening being enlarged, and a removable member arranged in the upper portion of said opening to form a filler between the upper edge of the opening and the upper side of the bolster; substantially as described.

2. A cast metal side frame for car trucks having an opening for the reception of a bolster and bolster springs, a portion of said opening being enlarged, a spring seat formed integral with the side frame, and a removable member arranged in the upper portion of said opening to form a filler between the upper edge of the opening and the upper side of the bolster; substantially as described.

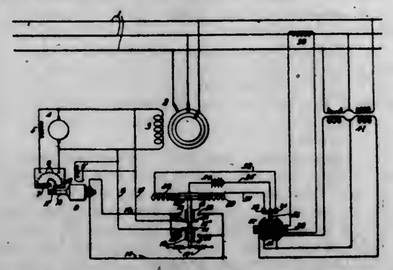
3. In a car truck, side frames, each having an opening, a portion of which is enlarged, a bolster mounted in said openings, spring seats, springs interposed between said bolster and spring seats, and removable fillers interposed between the bolster and the upper walls of said openings; substantially as described.

4. In a car truck, side frames, each having an opening, a portion of which is enlarged, a bolster mounted on springs, said bolster being arranged partly within said openings and having column guides which coöperate with the side frames, and removable fillers interposed between the bolster and the upper walls of said openings; substantially as described.

5. In a car truck, side frames, each having an opening, a portion of which is enlarged, a bolster mounted on springs, said bolster being arranged partly within said openings and having column guides which coöperate with the side frames, removable fillers interposed between the bolster and the upper walls of said openings, and means for fastening said fillers in position; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

872,724. SYSTEM OF DISTRIBUTION. EDWARD M. GERAY, Norwood, Ohio, assignor to The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Oct. 19, 1905. Serial No. 283,531.



1. An alternating current system of distribution, a synchronous dynamo electric machine connected thereto and adapted to maintain the power factor thereof constant, an exciter for said machine, and means responsive to a change in the power factor of the system for changing the resistance in the field circuit of the exciter.

2. An alternating current system of distribution, a synchronous dynamo electric machine connected thereto for maintaining constant its power factor, an exciter for said synchronous machine, a variable resistance in the field circuit thereof, an auxiliary motor for regulating the resistance in the exciter field circuit, and means responsive to a change in the power factor of the system for controlling the action of the auxiliary motor.

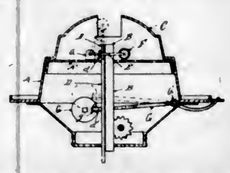
3. An alternating current system of distribution, a synchronous dynamo electric machine connected thereto for maintaining constant its power factor, an exciter for said synchronous machine, a variable resistance in the field circuit of said exciter, an auxiliary motor for controlling the amount of resistance in the field circuit, and means responsive to a change in the power factor of the system for controlling the direction and degree of rotation of the auxiliary motor.

4. An alternating current system of distribution, a synchronous dynamo electric machine connected thereto for maintaining constant its power factor, an exciter for said synchronous machine, a variable resistance in a circuit of said exciter, an auxiliary motor for controlling the amount of resistance in said exciter circuit, a reversing switch for reversing the connections of the auxiliary motor to its source of supply, and means responsive to the change in the power factor of the system for controlling the reversing switch.

5. An alternating current system of distribution, a synchronous dynamo-electric machine connected to said system for maintaining constant its power factor, an exciter for said machine, and means responsive to changes in either the potential or current of said system for controlling the resistance in a circuit of the exciter.

[Claims 6 to 9 not printed in the Gazette.]

872,725. LAMP-EXTINGUISHING MECHANISM. CYRUS P. GIFFORD, Erie, Pa. Filed Feb. 9, 1907. Serial No. 356,653.

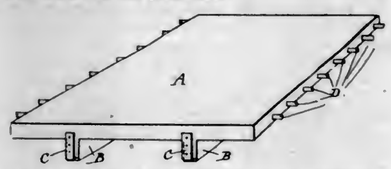


1. The combination in a lamp-burner, of a frame, a wick tube, a vertically movable vent-tube at one side of the wick-tube, a lever pivoted to the upper part of the burner-frame, a roller on the free end of said lever adapted to be raised thereby up over the upper end of the wick-tube, means connecting the lever and vent-tube so they will move up and down in unison, a spring actuated lever pivoted in the lower part of the burner-frame, a weight on the free end of said lever, and means connecting said weight and lever with the lower end of the vertically movable vent-tube, substantially as and for the purpose set forth.

2. The combination in a lampburner, of a wick-tube, a vertically movable vent-tube at one side of the wick-tube, a lever pivoted to the upper part of the burner-frame, a roller loosely mounted on the free-end of said lever, and means for moving said vent-tube and lever up and down in unison, substantially as and for the purpose set forth.

872,726. FLOOR-SLAB. CHARLES B. GRADY, West Orange, N. J. Filed Nov. 16, 1906. Serial No. 343,681.

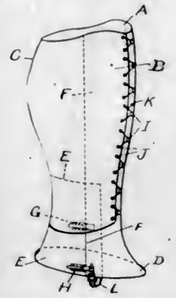
1. In a floor-slab, a mass of hardened concrete formed about a metallic frame provided with a pair of strengthening girders each comprising a plurality of superimposed plates secured together where superimposed and with their ends bent upwardly, bars passing through the hardened concrete mass, contacting with the sides of the upwardly-bent ends of such plates and projecting from the side edges of the concrete mass, and means engaging with both the said bars and the plate-ends.



2. In a floor-slab, a mass of hardened concrete formed about a metallic frame provided with separate strengthening girders each comprising a plurality of plates connected together and each of said plates having upwardly bent ends, bars passing through the hardened concrete mass and projecting from the side edges of said mass, and means for securing each of said bars into engagement with one upwardly-bent plate end of each girder.

3. In a floor-slab, a mass of hardened concrete formed about a metallic frame provided with separate strengthening girders each comprising a plurality of plates connected together and each of said plates having upwardly-bent ends, bars passing through the hardened concrete mass, contacting with the sides of the upwardly-bent ends of such plates and projecting from the side edges of the concrete mass, and rods each of which extends lengthwise of a girder and passes through openings in all of the upwardly-bent plate-ends of such girder and through openings in all of the bars contacting with the sides of such plate-ends.

872,727. LEGGING. THOMAS W. HAMILTON, Berlin, Wis. Filed Jan. 12, 1907. Serial No. 351,908.



1. A legging comprising a body portion cut away at one of its lower corners, the side edges of said body-portion overlapping, lacing means disposed adjacent said overlapping edges, a flap secured to said body portion and projecting under said cut away portion, and fastening means disposed on said flap and said body portion.

2. A legging comprising a body portion cut away at one of its lower corners, the side edges of said body-portion overlapping, lacing means disposed adjacent said overlapping edges, a flap secured to said body portion and projecting under said cut away portion, and fastening means disposed on said flap and said body portion, said fastening means being covered by that portion of said body portion above said cut away portion.

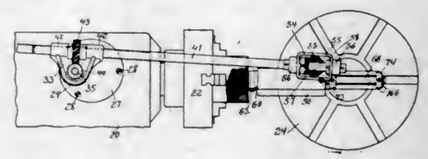
3. A legging comprising a body portion of flexible material having overlapping side edges, one end thereof extending from substantially the middle of the calf around the inner side and over the front of the leg, and the other end extending in the opposite direction to a point adjacent the front of the leg, said first named end overlapping the inner side of the foot and the instep, and said other end being cut away at its lower end, a flap secured to said body portion by a line of stitching coincident substantially with the line of juncture of said ends and underlying said cut-away portion and said first named end of said body portion at its free end, and coacting fastening means disposed in operative relation to all of said ends.

4. In a legging, a body portion comprising two main flaps of unequal length secured together at one edge, the free edge of the shorter flap overlapping the free edge of the longer flap, fastening means disposed adjacent said over lapping edges, a supplemental flap secured to said body portion, and extending below the lower end of said shorter main flap, and fastening means carried by said supplemental flap and the longer of said main flaps.

5. In a legging, two main flaps of unequal length over lapping at their free edges, fastening means disposed adjacent said overlapping edges, a supplemental flap secured to the body portion and extending below the lower end of the shorter main flap, the free edge of said supplemental flap underlying at the free edge of the longer main flap throughout the length of the supplemental flap, and fastening means carried by said supplemental flap and the longer of said main flaps.

[Claim 6 not printed in the Gazette.]

872,728. MACHINE FOR CUTTING SCREW-THREADS. JAMES HARTNESS, Springfield, Vt. Filed June 12, 1905. Serial No. 264,778.



1. An attachment for a lathe comprising a support or frame adapted to be attached to the tool-slide of the lathe, a lead-screw journaled on said support or frame, a cutter arranged to move on said support or frame, connections between the cutter and the lead-screw, and power-transmitting connections independent of the slide-moving mechanism of the lathe for transmitting power from the work-rotating mechanism to the lead-screw.

2. An attachment for a turret-lathe comprising a frame adapted to be attached to the turret, a movable cutter on the frame, a lead-screw and nut on the frame for moving the cutter independently of the movement of the turret, and swivel connections for driving the lead-screw from the work-rotating mechanism adapted to be connected to the head-stock and turret respectively.

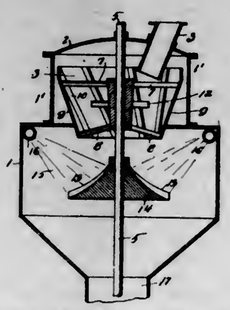
3. In a turret lathe, a bed, a head-stock having work-rotating mechanism, a carriage, a turret, and a cutting attachment comprising a frame on the turret, a cutter, a nut and a lead-screw mounted on the frame for feeding the cutter, a power-transmitting shaft extending from the head-stock longitudinally of the bed towards the frame and power-transmitting connections connecting said shaft respectively with the work-rotating mechanism in the head-stock and with the said lead-screw.

4. An attachment for a lathe comprising a frame adapted to be attached to the tool-slide, a cutter-bar movable in said frame, a lead-screw journaled on said frame and movable with the tool-slide, means independent of the slide-moving mechanism for rotating said lead-screw to feed the cutter-bar, and means on said frame independent of the lead-screw for retracting the cutter-bar when the nut is disengaged from the lead-screw.

5. An attachment for a lathe comprising a support adapted for attachment to the head-stock, a support adapted for attachment to the tool-slide, swiveled heads on said supports, a shaft journaled in said heads and slidable with relation to one of them, means on the first-mentioned support by which power is transmitted to said shaft, a cutter on the second-mentioned support, and means on said second-mentioned support for transmitting power from said shaft to said cutter.

[Claims 6 to 19 not printed in the Gazette.]

872,729. MIXING-MACHINE. GEORG HILLER, Teplitz, Austria-Hungary. Filed Nov. 12, 1906. Serial No. 343,079.

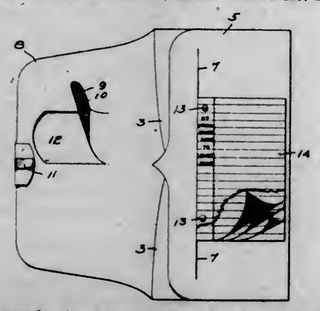


1. In a mixing machine, the combination of a casing, a shaft arranged vertically therein, a mixing drum of substantially frusto-conical form mounted on the shaft, and embodying beater-arms arranged at an incline to the horizontal, and beater ribs on the drum arranged obliquely to the vertical shaft, a dispersing plate carried by the shaft below the mixing drum, and ribs on said plate adapted to throw the material outwardly within the casing, substantially as described.

2. In a mixing machine, the combination of a casing, a vertical shaft therein, a mixing drum embodying a hub secured to the shaft, beater-arms secured to said hub, spokes also secured to said hub, and a drum carried by said beater-arms and spokes and provided with beater ribs dispersed on the drum obliquely to the vertical shaft, a dispersing plate mounted on the shaft below the mixing drum, to receive the material as it is discharged from the drum, and means extending into the casing for moistening the mixed material received on the dispersing plate.

3. In a machine for mixing concrete or the like, the combination of a casing, a vertical shaft therein, a mixer mounted on the shaft and embodying a hub, beater-arms connected at their inner ends to said hub and arranged at an incline to the horizontal, spokes connected at their inner ends to said hub and also arranged at an incline to the horizontal, a drum carried by said beater arms and spokes, being of substantially frusto-conical form, and having beater ribs arranged obliquely to the vertical shaft, a dispersing plate carried at the shaft below the mixer, and means extending into the casing for moistening the material after it has passed the mixer.

872,730. ENVELOP. ALBERT J. HUGHES, St. Anthony Park, Minn. Filed Oct. 23, 1905. Serial No. 283,955.

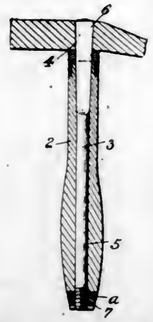


1. An envelop having end flaps adapted to be folded over and secured together, and side flaps, one of them having a gummed edge and a longitudinal slit, and a series of duplicate carbon sheets secured thereto and having blanks to receive the name of the postoffice for which the envelop is intended, the other flap being adapted to be inserted into said slit and having a gummed tongue that is slipped in between the front of the envelop and the gummed edge of said first named side flap, and said tongue forming an opening in said second named side flap through which the address on said upper duplicate sheet is visible, and a suitable fastening device for securing the edge of said second named side flap to the edge of the envelop, substantially as described.

2. An envelop for registered mail having a pocket for the mail matter and a series of duplicate carbon sheets secured thereto, the upper sheet being designed to receive the name of the postoffice to which the envelop is directed and a description of the package, and blank spaces for the signatures of the clerks through whose hands the envelop passes, and a flap arranged to close the mouth of said pocket and close the envelop and partially cover and protect the said carbon sheets, and said flap having an opening through which the upper carbon sheet is visible when the envelop is sealed, substantially as described.

3. An envelop for registered mail having a pocket to receive the registered mail matter and a series of duplicate carbon sheets, the upper sheet being designed to receive the name of the postoffice for which the envelop is intended and a description of the package, and blank spaces for the signatures of the clerks through whose hands the envelop passes, and a flap arranged to close the mouth of said pocket, and having a sealing means adapted to be inserted between said pocket and said carbon sheets and a temporary fastening on its free edge, and said flap also having an opening between said sealing means and said temporary fastening through which opening the upper carbon sheet is visible when the envelop is closed and sealed.

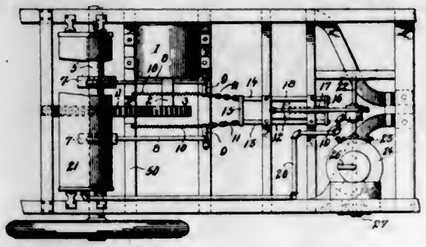
872,731. DETACHABLE TOOL-HANDLE. JOHN B. ISABEL, Columbus, Ohio. Filed June 21, 1906. Serial No. 322,788.



A bricklayer's tool comprising a steel-head provided with an inward tapered eye, angular in cross-sectional outline, a rod-member having the eye-engaging end portion tapered in like manner to the eye and formed to fit closely in the latter, the angularity and taper of the end portion of said rod extending some distance inward from the head, a handle having a longitudinal opening therethrough for receiving and conforming in outline to the outline of the rod-member, the latter being screw-threaded on its rearward extremity which screw-threaded part extends beyond the rear end of the handle, a nut adapted to receive a tool for operating it turned on the screw-threaded extremity of the rod-member, and a pliable leather washer interposed between said nut and the end of the handle to which latter it is secured.

872,732. AUTOMOBILE AIR-BRAKE. JAMES T. JOHNSON, Memphis, Tenn. Filed Oct. 22, 1906. Serial No. 339,937.

1. In combination with a motor-driven vehicle, and brakes for said vehicle, a brake-cylinder having a piston, connections between the rod of said piston and the said brakes, an air-reservoir, a brake-valve casing, and a brake-valve in said casing, connections between said air-reservoir and the brake-valve casing, and between said brake-valve casing and the brake-cylinder, and a single actuating-element for controlling the motive-power of said vehicle and said air-brake valve.

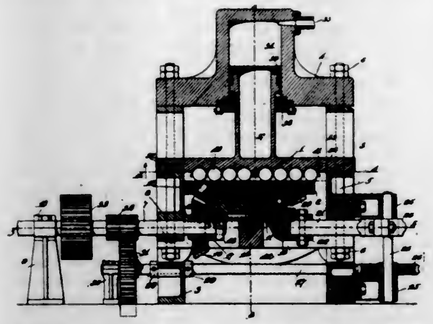


2. A brake-valve having a lug on one face, and provided with a port extending diagonally through the valve and said lug.

3. In air-brakes, a brake-valve comprising a casing closed at one end and having an exhaust port in its other end, inlet and outlet ports in said casing, and a brake-valve rotatably-mounted in the casing and having a lug on one face, and a port extending through the valve and said lug.

4. An air-brake valve having a lug on one face with a port extending through the valve and said lug.

872,733. ROLLING-MACHINE. WILLIAM L. JONES, Newark, N. J. Filed May 12, 1906, Serial No. 316,459. Renewed Oct. 26, 1907. Serial No. 399,311.



1. In a rolling machine, the combination of a platen carrying a rolling surface of balls, and a table between which and the platen the material is rolled, means for imparting relatively rotative and reciprocating movements to the table and platen, and means on the platen for carrying the balls.

2. In a rolling machine, the combination with a platen, carrying a rolling surface of balls, and a table, between which and the platen the material is rolled, means for bringing the platen and table together, and means for imparting relatively reciprocating and rotative movements to the table and platen.

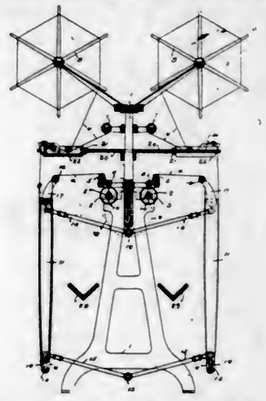
3. In a rolling machine, the combination with a platen carrying a rolling surface of balls, and a table, between which and the platen the material is rolled, means for bringing the platen and table together, means for rotating the table, and means for reciprocating the table.

4. In a rolling machine, the combination with a fixed platen carrying a rolling surface of balls, of a reciprocating table, means for bringing the platen and table together, and means for imparting relative angular movements to the platen and table.

5. In a rolling machine, the combination with a fixed platen, carrying a rolling surface of balls, of a reciprocating table, means for rotating the table, and means for bringing the platen and table together.

[Claims 6 to 9 not printed in the Gazette.]

872,734. MACHINE FOR WINDING, LUSTERING, AND FINISHING SILK, &c. WILLIAM C. KEYWORTH, Paterson, N. J. Filed Mar. 1, 1906. Serial No. 303,601.



1. In a machine for winding, lustering and finishing silk thread or fiber, the combination with a frame and thread-carriers mounted thereon, of a series of individual basins for liquid below the same, one for the treatment of each thread or fiber as it comes down from its spool or carrier, a series of vertically arranged, individual heating bodies below said basins, one for each thread or filament, and means for causing each thread to travel vertically on both sides of its heating body after leaving its basin, and thence on to its receiving spool, for the purposes specified, and substantially as set forth.

2. In a machine for winding, lustering and finishing silk thread, a frame, delivering and receiving spools mounted thereon in combination with a series of individual basins for liquid, one for the treatment of each thread, a series of vertically arranged individually heating bodies located below said basins, one for each thread, and means for winding each thread upon its receiving spool as it is drawn from the basin and about its heating body, and causing each of said individual threads to travel in a separate and substantially parallel course, from start to finish, substantially as set forth.

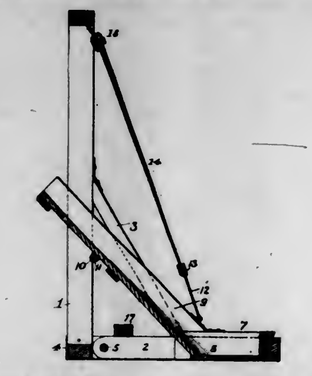
3. In a machine for finishing silk threads, a frame, a removable basin for containing liquid in which the thread is to be immersed, adjustably held thereon, in combination with removable and revoluble rollers mounted in said basin, a knife and a brush, both removable, and carried in said basin above the surface of the liquid and arranged substantially as set forth.

4. In a machine for finishing silk thread, a plurality of skein-carrying members and winding bobbins, in combination with a plurality of basins provided with rollers, brushes and knives arranged as shown, a plurality of heated bodies over which the threads are caused to travel, and means for drawing a series of silk threads in substantially parallel courses from the skein-carrying members, through the basins, over the heated bodies and to the winding bobbins.

872,735. GRAVEL-LOADING MACHINE. ALBERT KNUTSON, Red Cloud, Nebr. Filed Apr. 11, 1907. Serial No. 367,639.

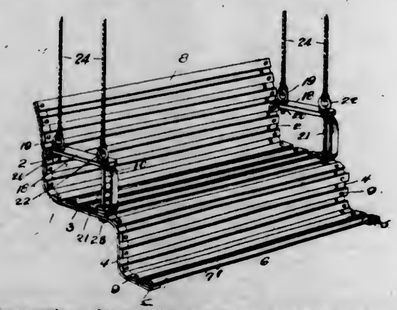
1. A machine as described, comprising a supporting frame having an upright frame and a horizontal base frame, a receptacle adapted to set within the longitudinal frame, said receptacle having an obtuse angle chute

pivoted to the upright frame, and means for raising and lowering said receptacle and chute.



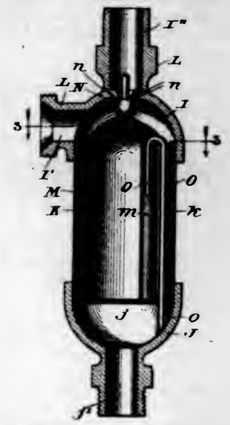
2. A machine as described, comprising a supporting frame having an upright frame and a horizontal base frame, a receptacle adapted to set within the horizontal frame, said receptacle having an obtuse angle chute pivoted to the upright frame, and means for raising and lowering said receptacle and chute, comprising a rope first passed through a pulley attached to a bail on the chute, secondly through a double pulley suspended from the upright frame and finally through a pulley on the horizontal base.

872,736. SWING. ALFERD C. LANSBERRY, Jr., Patton, Pa. Filed Aug. 10, 1906. Serial No. 330,087.



In a swing, the combination of end frames bent to form supports for back seat and foot rests of the swing, slats forming the back of the swing secured to said frames, slats forming the seat of the swing secured to said frames, and slats forming the foot rest secured to said frames, arm frames bent to form vertically and horizontally disposed portions, the vertical portions having inturned apertured ends mounted upon one of the slats forming the seat, the horizontally-disposed portion of each of the arm frames having downturned apertured ends resting against one of the slats formed in the back, arm rests mounted on each of the arm frames, means extending through the downturned apertured ends of the arm frames and engaging with the slat against which said downturned apertured ends bear for fixedly securing the latter, eye-bolts extending through the arm rests and the horizontal portion of the arm frames for securing the arm rests at their rear ends to the arm frames, tie rods extending through said arm rests near their forward end, and further through the inturned ends of the arm frames and of the slats against which the inturned ends bear for securing the arm rests and end frames to the seat, said tie rods having their upper ends formed with eyes, and suspension cables connected to said eyes and to the bolts.

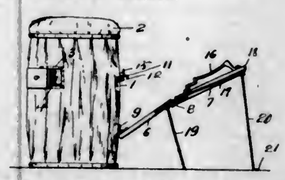
872,737. AIR-VALVE. DOCTOR F. MORGAN, Chicago, Ill. Filed Dec. 17, 1906. Serial No. 348,286.



1. An air valve consisting of a casing provided with an upper passage way thereinto and a lower passage way communicating therewith and with an outlet, such outlet provided with a valve seat, and such casing provided with a chamber closed at its bottom and open at its upper end, a float in the chamber, a valve on the float, such valve coacting with the valve seat on the outlet, a passage way from the upper part of the chamber to the lower passage way of the casing, and a tube bent to obtain legs of different lengths, the longer leg thereof in such passage way from the upper part of the chamber and the shorter leg in such chamber, such bent tube arranged to form a siphon automatically set in operation to deliver water from the chamber to the lower portion of the casing; substantially as described.

2. The combination with a shell provided with a chamber closed at its bottom and provided with an upper passage way thereinto and a lower passage way communicating therewith and with an air outlet, of a float in the chamber, a valve and a siphon, such air outlet provided with a valve seat and such float and valve associated so that flotation of the float by water of condensation in the chamber advances the valve to its seat, such passage way into the casing communicating with the chamber above the level of the water required therein to raise the float and such siphon arranged so that the automatic operation thereof discharges water of condensation from the chamber to lower the float and retract the valve from its seat; substantially as described.

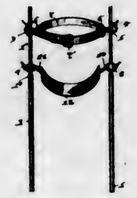
872,738. COMBINATION STOOL AND FOLDING FOOT-REST. ALBERT B. MCDANIEL, Allegheny, Pa., assignor of one-half to Patrick Doody, Pittsburg, Pa. Filed Dec. 21, 1906. Serial No. 348,893.



1. The combination with a stool, of a folding foot rest comprising two folded sections loosely connected together, one of said sections having a hinged connection with the stool, while the other section is provided with oppositely projecting loops or bails, a foot support, and folding braces secured respectively one to each of the sections of the folding foot rest.

2. The combination with a stool, of a folding foot rest, comprising two loosely connected sections, one of said sections being hinged to the stool, oppositely disposed loops or bails projecting from opposite sides of the other section of the foot rest, pivotally secured braces for said section, and means for securing the sections in their folded position comprising a spring catch secured to the stool, and an angle plate secured to the upper end of the foot rest section which is hinged to the stool.

872,739. ADJUSTABLE AND PORTABLE CARRYING-STOOL. ALBERT B. MCDANIEL, Allegheny, Pa. Filed July 7, 1905, Serial No. 268,600. Renewed Sept. 21, 1907. Serial No. 393,916.



1. The combination of two supporting legs having ratchet-faces thereon, means connected to said legs for carrying the same upon the person, sleeves on said legs and adapted to engage with said ratchet-faces, and a seat connected to said sleeves and extending between said legs.

2. The combination of two supporting legs having ratchet-faces thereon, means connected to said legs for carrying the same upon the person, sleeves on said legs, spring-pawls on said sleeves and engaging with said ratchet-faces, and a seat connected to said sleeves and extending between said legs.

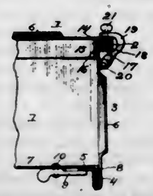
3. The combination of two supporting legs, a seat connected to and extending between said legs, and slidable means connected to said legs for carrying the same upon the person and for permitting the adjustment of the same in using said seat.

4. The combination of two supporting legs, a seat connected to and extending between said legs, slidably adjustable sleeves around said legs, and a strap connected to said legs for carrying the legs and seat upon the person and for permitting the adjustment of said legs in using said seat.

5. The combination of two supporting legs, a seat connected to and extending between said legs, sleeves around said legs, a strap for being connected to the person, and rings connected to said strap and fitting around said legs for carrying said legs and seat and adapted to engage with said sleeves to permit the adjustment of said legs in using said seat.

[Claims 6 and 7 not printed in the Gazette.]

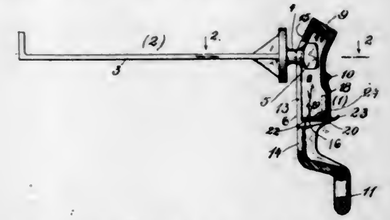
872,740. METALLIC CASE OR CASKET. ANGUS MCKENZIE, Canton, Ohio, assignor of one-half to W. W. Stephens, Canton, Ohio. Filed Dec. 27, 1906. Serial No. 349,605.



1. A sheet metal casket comprising a bottom having downturned annular edges, sides and ends having their lower edges doubled back to provide a groove-way to receive the flanged edges of the bottom, thence directed laterally to form a securing flange, turn buttons pivoted to the bottom and engaging the lateral securing flange.

2. A sheet metal casket comprising a bottom having downturned edges, sides and end sections having lower edges doubled back to provide a groove-way to receive the flanged edges of the bottom and further provided with an angularly directed securing flange to abut against the bottom, turn buttons pivoted to the bottom to clamp against said securing flange, and means for securing the abutting ends of the side and end sections.

872,741. SUPPORTING TERMINAL CLIP. FREDERICK NEVINS, Brooklyn, N. Y., and WILLIAM B. MOREWOOD, Elizabeth, N. J.; said Nevins asignor to said Morewood. Filed Apr. 27, 1907. Serial No. 370,712.



1. A supporting terminal clip comprising an eye at one end; sides providing a longitudinal channel therebetween; a base member provided with a longitudinal slot connecting with said channel and provided with a bolt head opening for the eye end of said slot; a bolt neck engaging wall for the terminal end of said slot; a gate comprising a rigid plate normally extending across said channel at the end near said bolt head opening; pivoting means for said gate; a stop for said gate to prevent the outward swing thereof and the accidental exit of the bolt head from said channel but permitting the automatic inward swing of said gate to clear the bolt head upon its entrance and permitting the readily manually effected inward swing of said gate so that the clip may be released and removed by one hand alone.

2. In combination, a wall bolt comprising a neck and an enlarged head, with a supporting terminal clip comprising an eye at one end; sides providing a longitudinal channel therebetween; a base member provided with a longitudinal slot connecting with said channel and provided with a bolt head opening for the eye end of said slot; a bolt neck engaging wall for the terminal end of said slot; a longitudinal closure for the top of said channel; a gate comprising a rigid plate normally extending across said channel at the end near said bolt head opening; pivoting means for said gate; a stop for said gate to prevent the outward swing thereof and the accidental exit of the bolt head from said channel but permitting the automatic inward swing of said gate to clear the bolt head upon its entrance and permitting the readily manually effected inward swing of said gate so that the clip may be released and removed by one hand alone.

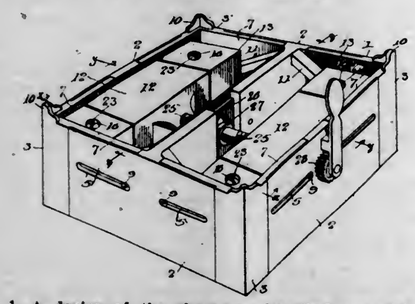
3. A supporting terminal clip comprising an eye at one end; sides providing a longitudinal channel therebetween; a base member provided with a longitudinal slot connecting with said channel and provided with a bolt head opening for the eye end of said slot; a bolt neck engaging wall for the terminal end of said slot; a gate comprising a rigid plate normally extending across said channel at the end near said bolt head opening; pivoting means for said gate secured to said sides at a greater distance away from said base member than the thickness of the bolt head; a stop for said gate to prevent the outward swing thereof and the accidental exit of the bolt head from said channel but permitting the automatic inward swing of said gate to clear the bolt head upon its entrance and permitting the readily manually effected inward swing of said gate so that the clip may be released and removed by one hand alone.

4. A supporting terminal clip comprising an eye at one end; sides providing a longitudinal channel therebetween; a base member provided with a longitudinal slot connecting with said channel and provided with a bolt head opening for the eye end of said slot; a bolt neck engaging wall for the terminal end of said slot; a longitudinal closure for the top of said channel; a gate comprising a rigid plate normally extending across said channel at the end near said bolt head opening; pivoting means for said gate secured to said sides at a greater distance away from said base member than the thickness of the bolt head; a stop for said gate to prevent the outward swing thereof and the accidental exit of the bolt head from said channel but permitting the automatic inward swing of said gate to clear the bolt head upon its entrance and permitting the readily manually effected inward swing of said gate so that the clip may be released and removed by one hand alone.

5. A supporting terminal clip comprising an eye at one end; sides providing a longitudinal channel therebetween; a base member provided with a longitudinal slot connecting with said channel and provided with a bolt head opening for the eye end of said slot; a bolt neck engaging wall for the terminal end of said slot; a gate; pivoting means for said gate engaging said sides between said bolt head opening and said socket; a stop to prevent the outward swing of the gate, said gate being arranged to engage said stop, permitting the entrance of the bolt head into the channel but preventing its accidental exit from the channel; and a finger engageable lip extending outwardly beyond said pivoting means for swinging said gate inward to permit the exit of the bolt head from the channel, all forming a clip capable of ready application and removal by one hand alone.

[Claim 6 not printed in the Gazette.]

872,742. SUPPORT OR CARRIAGE FOR CASH-REGISTERS. CHARLES OESTERLE and WILLIAM V. FRANK, Springfield, and WILLIAM H. ALTHOFF, Dayton, Ohio. Filed Jan. 24, 1907. Serial No. 353,929.



1. A device of the character described comprising a frame having a plurality of inclined surfaces, a plurality of trucks having inclined surfaces adapted to coöperate with the inclined surfaces of said frame, and means for moving said trucks in opposite directions.

2. In a device of the character described, the combination, with a frame having opposite inclined members, of trucks having guides adapted to coöperate with the inclined members of said frame, and means for moving said trucks in opposite directions.

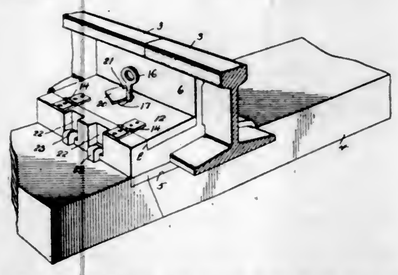
3. In a device of the character described, the combination, with a frame having oppositely inclined members, of trucks having inclined members adapted to coöperate with the inclined members of said frame, and means for moving said trucks simultaneously in opposite directions, substantially as described.

4. In a device of the character described, the combination, with a frame having oppositely inclined members, of trucks having inclined members adapted to coöperate with the inclined members of said frame and provided with screw-threaded apertures, and a shaft journaled in said frame and fixed against longitudinal movement, having its ends provided with oppositely extending screw threads and adapted to engage the screw-threaded apertures in said trucks, and means for rotating said shaft, substantially as described.

5. A device of the character described comprising a frame adjustable both laterally and longitudinally, wheels mounted on said frame, and means for vertically adjusting said wheels relatively to said frame.

[Claims 6 to 16 not printed in the Gazette.]

872,743. RAIL-FASTENER AND LOCK. JOHN O'NEIL, Wilmerding, Pa. Filed June 28, 1907. Serial No. 381,308.



1. In a rail fastener, the combination with rails and a support, of a chair carried by said support, comprising a base plate and a splice bar for engaging the inner sides of said rails, a splice bar resting upon said base plate and embracing the outer sides of said rails, bolts extending upwardly through said base plate and splice bar, said splice bar having recesses formed therein, nuts secured upon said bolts in one of said recesses, a plate hinged to said splice bar and seating in the other of said recesses, a lock carried by said hinged plate and having a latch to engage in said splice bar, said plate having a key opening formed therein, a shutter for normally closing said opening, and means for securing said chair and splice bar to said support.

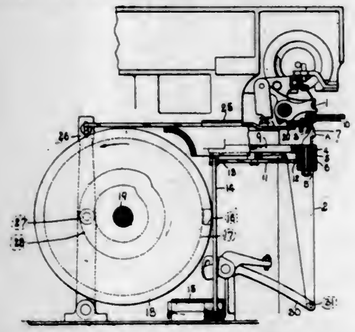
2. In a rail fastener, the combination with rails, of a chair, for embracing the inner sides and bottom of said rails, a splice bar mounted upon said chair and embracing the outer sides of said rails, bolts and nuts for holding said splice bar upon said chair, a plate hinged to said splice bar and covering said nuts, a lock carried by said plate and engaging said splice bar for holding said plate in a closed position.

3. In a rail fastener, the combination with rails, of a chair for embracing the inner sides and base of said rails, a splice bar mounted upon said chair and embracing the outer sides of said rails, means for holding said splice bar in engagement with said chair, and a hinged plate carried by said splice bar for shielding and covering said means.

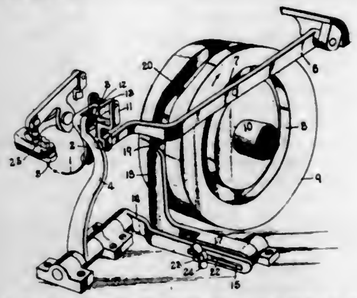
872,744. THREAD-LAYING MECHANISM FOR SEWING-MACHINES. CHRISTIAN PEDERSEN, St. Louis, Mo., assignor to Landis Machine Company, St. Louis, Mo., a Corporation of Missouri. Filed Mar. 7, 1907. Serial No. 361,090.

1. In a thread-laying mechanism for sewing machines, a rotatable thread-carrying member having a pinion secured thereto, a lever having a toothed segment meshing with said pinion, a positively actuated rock arm, a link connecting said rock arm and lever together, an oscillating thread-engaging member having an elongated slot formed therein, a reciprocating bar provided with a pin which enters said slot, and a positively actuated rock arm connected to the rear end of said reciprocating bar; substantially as described.

2. In a thread-laying mechanism for sewing machines, a work support, an oscillating thread-engaging member located beneath said support and having a laterally projecting finger, a rotatable thread-laying member arranged underneath the thread-engaging member and consisting of a shank having a head provided with a thread-receiving opening located at one side of said shank, means for rotating said thread-laying member first in one direction to carry the thread into the path of movement of the laterally projecting finger of the thread-engaging member and thereafter in a reverse direction to cause it to travel around the needle, and means for actuating the thread-engaging member to cause it to hold the thread while the thread-laying member is traveling around the needle and thereafter release the thread and return quickly to normal position; substantially as described.



872,745. AWL-FEEDING MECHANISM FOR SEWING-MACHINES. CHRISTIAN PEDERSEN, St. Louis, Mo., assignor to Landis Machine Company, St. Louis, Mo., a Corporation of Missouri. Filed Mar. 7, 1907. Serial No. 361,091.

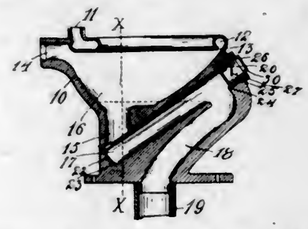


1. In an awl-actuating mechanism for a sewing machine, an awl-carrier, a lever for oscillating the awl-carrier, a rock arm on which said carrier is mounted, a shaft to which said arm is connected, an arm projecting rearwardly from said shaft, a positively actuated rock lever adjacent said rearwardly extending arm and projecting toward the shaft to which said arm is secured, a connection block adjustably mounted on said arm, a guideway on the rock lever for receiving said connection block, and a cam block provided with cam grooves for actuating the rock lever and the lever that actuates the awl-carrier; substantially as described.

2. In an awl-actuating mechanism for a sewing machine, an awl-carrier, a rock arm on the upper end of which said carrier is pivotally mounted, a member for moving said rock arm, an actuated lever, a link connected to said lever and provided with a horizontally disposed member that engages said awl-carrier, and a rotating cam block for operating said lever to cause the awl to penetrate the work and also actuate said member to cause the rock arm to move the awl laterally; substantially as described.

3. In an awl-actuating mechanism for a sewing machine, a rock arm, an awl-carrier pivotally mounted thereon and having a rearwardly extending portion, a lever having a link connected to the free end thereof, a horizontally disposed pin on said link which extends through an opening in the rearwardly extending portion of the awl-carrier, a cam for actuating said lever to cause the awl to penetrate the work, and means for actuating the rock arm on which the awl-carrier is mounted to cause the awl to feed the work laterally; substantially as described.

872,746. WATER-CLOSET BOWL AND CLEANER. FREDERICK A. PETERSON, Jamestown, N. Y. Filed Aug. 30, 1906. Serial No. 332,630.



1. A water-closet bowl comprising a receptacle having a flushing inlet, a trapped flushing duct from said receptacle, the cross duct of said trap having a lengthwise recess, and a cleaner operatively placed in said lengthwise recess to clean said cross duct.

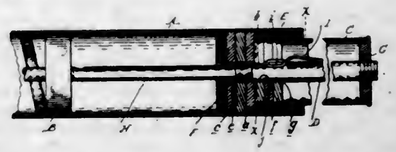
2. In a water-closet, a bowl having a flushing inlet, an outer duct to said bowl, a Z-shaped trap in said outlet, a cleaning rod operatively placed in said trap, and a seat for the end of the cleaning rod in the wall of the trap out of the channel of the duct.

3. In a water-closet, a bowl having a flushing inlet, an outlet duct to said bowl, a Z-shaped trap in said outlet, a cleaning rod in said trap, a perforated cleaning spoon attached to said rod at one side, an opening in the wall of said trap for said cleaning rod, and a packing box for said rod in said opening.

4. In a water-closet, a bowl having flushing inlet, an outlet duct to said bowl, a trap in said outlet, an opening in the front wall of said trap, a packing box removably placed in said opening, a cleaning rod in said trap and slidably mounted in said packing box and concealed therein when in normal position.

5. In a water-closet, a bowl 16, a flushing inlet 11 12 13 thereto, an outlet duct 15 17 18 therefrom, a recess 20 in the side of the cross duct 17 and a seat 23 in the side of the outlet duct, a cleaner 20 22 slidably mounted in recess 23 and duct 17, and a packing box 25 for rod 20 in opening 24, substantially as shown and for the purpose specified.

872,747. MAGAZINE AIR-GUN. DAVID F. POLLEY, Plymouth, Mich., assignor to Markham Air Rifle Company, Plymouth, Mich. Filed Feb. 7, 1905. Serial No. 244,654.



1. In an air gun, the combination with the false barrel having a shoulder therein, of a shooting barrel, a piston abutment fixedly secured to the rear end of said shooting barrel and adapted to be inserted therewith in the rear end of said false barrel and against the shoulder therein, and a cap adjustably mounted on the forward end of said shooting barrel and engaging the end of the false barrel.

2. In an air gun, the combination with a false barrel comprising two sections of different diameters, secured to each other and forming an annular shoulder within the larger section of a true barrel, a piston abutment secured to the rear end of said true barrel and having a portion thereof fitting each section of said false barrel, and a cap having a threaded engagement with the forward end of said true barrel, closing the end of said false barrel.

3. In an air gun, the combination with a false barrel comprising two sections of different diameters, of a piston abutment therefor comprising a plurality of stamped, metallic disks of a size to fit the said sections of the false barrel and rigidly secured to each other.

4. The combination with a false barrel and a true barrel therein, of a piston abutment comprising a plurality of stamped disks having central apertures for fitting about the true barrel, said disks being integrally united to each other and to said true barrel and constituting a rigid member extending between the false and true barrels.

5. In an air gun, the combination with a false barrel and a shooting barrel therein, of a piston abutment comprising the disks *c* and *f*, sleeved upon and rigidly secured to said shooting barrel and to each other, the disk *f* being provided with registering slots and said shooting barrel with an aperture in registration with said slots, whereby the shot is guided through said slots and aperture into the shooting barrel.

[Claims 6 to 9 not printed in the Gazette.]

872,748. PLUMBER'S TOOL. LEONARD D. PUTNEY, St. Louis, Mo. Filed Jan. 14, 1907. Serial No. 352,328.



1. A tool of the class described, comprising a tubular handle, a fixed jaw adjustably arranged at the forward end of the handle, a spring pressed jaw hinged to the fixed jaw, a jaw operating handle extending through the tubular handle for operating the hinged jaw, and a locking device adjustably mounted on the rear end of the tubular handle for engaging and holding the rear end of the jaw operating means.

2. A tool of the class described, comprising a sectional tubular handle, a fixed jaw adjustably connected to the forward end of the sectional handle, a spring pressed jaw hinged to the fixed jaw, a sectional wire passing through the tubular handle and connected at its forward end to the hinged jaw, a handle connected to the rear end of the sectional wire and operating through the rear end of the tubular handle, and an adjustable locking device arranged on the rear end of the tubular handle for engaging the handle on the rear end of the sectional wire.

3. A tool of the class described, comprising a tubular handle, a fixed jaw adjustably arranged at the forward end of said handle, a pulley arranged in said fixed jaw, a spring pressed jaw hinged to the fixed jaw, a wire passing through the tubular handle, and a flexible connection between the forward end of the wire and the hinged jaw, which flexible connection passes around the pulley on the fixed jaw.

4. A tool of the class described, comprising a tubular handle, a fixed jaw adjustably arranged at the forward end of said handle, a pulley arranged in said fixed jaw, a spring pressed jaw hinged to the fixed jaw, a wire passing through the tubular handle, a flexible connection between the forward end of the wire and the hinged jaw, which flexible connection passes around the pulley on the fixed jaw, a handle fixed to the rear end of the wire, and an adjustable locking device arranged on the rear end of the tubular handle for engaging the handle fixed to the wire.

872,749. BARREL-HEAD FASTENER. GEORGE L. RICHARDS, Malden, Mass., assignor to Standard Commercial Company, Boston, Mass., a Corporation of Maine. Filed Oct. 24, 1905. Serial No. 284,247.



1. The combination with a barrel, of a barrel-head fastener constructed with a drive-section disposed for being driven into the barrel-chime substantially parallel with the grain of the wood; and a brace-section at the upper end of said drive-section arranged to brace between the upper surface of the barrel-head and the barrel-chime, and by such bracing action to aid said drive-section against removal from the chime into which it is driven; the face of said brace-section where it contacts with said barrel-head being horizontally extended parallel with the surface of such chime.

2. The combination with a barrel, of a barrel-head fastener consisting of a single length of wire having the terminals thereof compose the drive-sections designed to be driven into the barrel-chime substantially parallel with the grain of the wood; having the central part compose the pressure-bar for contacting with the barrel-head, and the remainder thereof compose the connections between said pressure-bar and drive-sections; said connections being the brace-sections and lying in a plane at an angle with the drive-sections; and the length of said drive-sections being a plural number of times longer than said brace-sections, in order that the former may securely hold their position.

3. A barrel-head fastening device consisting of a single length of wire the terminals of which compose the drive-sections, and the intermediate part of which is constructed to rest against the surface of the barrel-head; said drive-sections making an acute angle one with respect to the other.

4. A barrel-head fastening device constructed to be driven in with the grain of the barrel-staves; the same being formed from an elongated length of metal the terminals of which compose the drive-sections and the intermediate part of which is constructed to rest against the surface of the barrel-head; said drive-sections having their upper ends approximately in contact and their lower end separated to a substantial distance from each other.

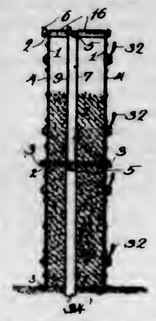
5. A barrel-head fastening device constructed from a length of wire formed with drive-sections, pressure-bar, and brace-sections between the latter and said drive-sections; said drive-sections being in substantial contact at their upper ends but substantially separated at their lower ends.

[Claims 6 to 8 not printed in the Gazette.]

872,750. MOLD FOR CONCRETE WALLS. JOHN L. RICHARDSON, Bloomsburg, Pa. Filed Jan. 26, 1907. Serial No. 354,262.

1. A mold consisting of a series of units comprising form plates, clamps having keepers secured to one of the plates of abutting units and a pivoted yoke adapted to engage said keeper secured to the other of said plates, a cam carried by said yoke to effectively lock the parts together, the plates of each unit also having straps secured to the sides thereof, coupling rods connecting the straps of opposite plates, a core, and U-shaped spacing blocks adapted to be seated on said rod between the form plates and the core.

2. A mold for the purpose described comprising form plates having outwardly turned flanges, straps secured to the sides of said plates and extending through openings in the upper of the flanges, a coupling rod connecting each pair of straps, a core, and spacing blocks adapted to be seated on said rod between the form plates and the core.



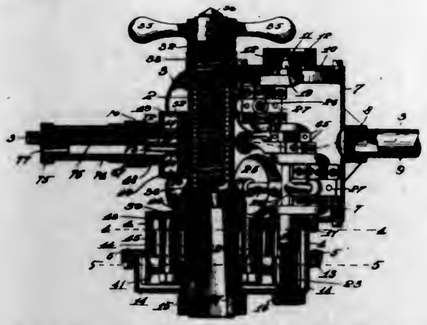
3. In a mold the combination of outer form plates, a core, a coupling rod connecting said plates, and U-shaped spacing blocks adapted to be seated on said rod between the form plates and the core.

4. In a mold the combination of outer form plates, a coupling rod connecting said plates, a core consisting of plates having oppositely disposed flanges, all of said plates having alined openings adapting them to be seated on a coupling rod of a coresponding mold section of the next lower course.

5. In a mold the combination of outer form plates, a coupling rod connecting said plates, a core consisting of plates having oppositely disposed flanges, said core plates being of such length as to extend below the form plates, all of said plates having alined openings adapting them to be seated on a coupling rod of a corresponding mold section of the next lower course.

[Claims 6 and 7 not printed in the Gazette.]

872,751. PNEUMATIC MOTOR. WILLIAM F. ROTHE, East St. Louis, Ill. Filed June 12, 1906. Serial No. 321,390.



1. In a pneumatic motor of the class described, a main casing, power cylinders formed integral therewith and arranged in pairs, one pair at right angles to the other, a crank chamber casing detachably secured to the main casing, pistons operating in the power cylinders, a crank shaft arranged for operation within the crank chamber casing and to which the pistons are connected, a fixed ball bearing at one end of the main casing in which the crank shaft operates, and an adjustable ball bearing removably seated in the opposite end of the main casing for the opposite end of the crank shaft.

2. In a pneumatic motor of the class described, a main casing, power cylinders formed integral therewith and arranged in pairs, one pair at right angles to the other, cylindrical valve housings formed integral with the main casing between each pair of power cylinders, valves arranged for operation in said valve cylinders for controlling the delivery and exhaust of fluid pressure to and from the power cylinders, a crank chamber casing detachably secured to the main casing, pistons operating in the power cylinders, a crank shaft arranged for operation within the crank chamber casing and to which the pistons are connected, a fixed ball bearing at one end of the main casing in which the crank shaft operates, and an adjustable ball bearing removably seated in the opposite end of the main casing for the opposite end of the crank shaft.

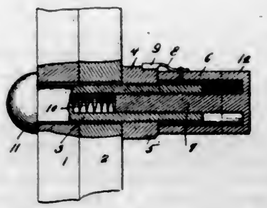
3. In a pneumatic motor of the class described, a main casing, power cylinders formed integral therewith and arranged in pairs, one pair at right angles to the other, cylindrical valve housings formed integral with the main casing between each pair of power cylinders, valves arranged for operation in said valve cylinders for controlling the delivery and exhaust of fluid pressure to and from the power cylinders, a throttle valve arranged for operation between the cylindrical valve housings for controlling the supply and exhaust of fluid pressure to and from said valve housings, a crank chamber casing detachably secured to the main casing, pistons operating in the power cylinders, a crank shaft arranged for operation within the crank chamber casing and to which the pistons are connected, a fixed ball bearing at one end of the main casing in which the crank shaft operates, and an adjustable ball bearing removably seated in the opposite end of the main casing for the opposite end of the crank shaft.

4. In a pneumatic motor of the class described, a main casing, power cylinders formed integral therewith, a cylindrical feed screw casing integral with the main casing, valve casings integral with the main casing between the cylinders, a crank chamber casing detachably secured to the main casing, a crank case cap detachably secured to the main casing, and the crank chamber casing, and a planetary gear casing arranged at the lower end of the main casing.

5. In a pneumatic motor of the class described, a main casing, power cylinders formed integral therewith, a cylindrical feed screw casing integral with the main casing, valve casings integral with the main casing between the cylinders, a crank chamber casing detachably secured to the main casing, a crank case cap detachably secured to the main casing, a crank chamber casing, a planetary gear casing arranged at the lower end of the main casing, a handle projecting outwardly from the main casing, and a handle projecting outwardly from the crank chamber casing.

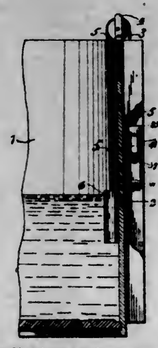
[Claims 6 and 7 not printed in the Gazette.]

872,752. NUT-LOCK. PETER M. RULLI and PHILLIP PEPE, New Haven, Pa. Filed Aug. 1, 1907. Serial No. 386,614.



In a nut lock, a bolt having an externally threaded shank and an internally threaded bore, a nut fitting on the external threads of the bolt and having peripheral notches at its outer end, a cap-nut inclosing the outer end of said bolt and abutting against the outer face of said nut, an interior screw integral with the closed end of the cap-nut and projecting beyond the open inner end of said cap-nut and engaging the internal threads of said bolt, and a spring secured at one end to the periphery of said cap-nut and having its free end overlapping the said nut and engaging in one of said notches.

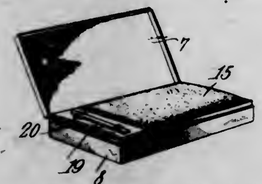
872,753. INDICATING AND REGISTERING DEVICE. JOSEPH RUNYON, Rome, Ind. Filed May 29, 1905. Serial No. 262,788.



1. In a tank indicator and register, the combination with a tank or reservoir, a float and a vertically extending gage secured to said tank, a weight suspended in front of said gage, a float rope and a rope-pulley, so arranged that when said float ascends, said weight will descend, a registering mechanism mounted in the interior of said weight and operated by the movements of the latter whereby the height of the water in the tank is indicated and the volume supplied registered.

2. In a tank indicator and register, the combination with a tank or reservoir, a float and a gage having vertically extending side-walls secured to said tank, a weight suspended in front of said gage, a float rope and a rope-pulley, so arranged that when said float ascends, said weight will descend, a registering mechanism in the interior of said weight, a friction wheel operatively connected to said registering mechanism and arranged to contact with the fixed vertically extending wall to be rotated by the movement of said weight.

872,754. INKING-PAD. SAMUEL D. RUTH, Beatrice, Nebr. Filed Feb. 20, 1907. Serial No. 358,492.



1. An inking pad including a base, a perforated pad-supporting member resting on the base and having its lower face formed with an ink-receiving chamber, one end of the base being extended upwardly and thence inwardly and downwardly to form an ink-reservoir communicating with said chamber, and a pad resting on the supporting member and normally closing the perforations therein.

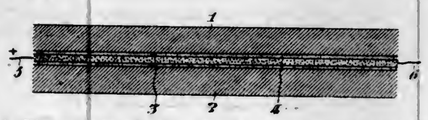
2. An inking pad including a receptacle, a perforated pad-supporting member disposed within the receptacle and having its lower face provided with a longitudinal ink-receiving groove defining a marginal flange adapted to bear against the base of the receptacle, one end of the walls of the receptacle being extended inwardly and thence extended downwardly to form an ink reservoir communicating with the groove, a pad engaging the supporting member and covering the perforations therein, and means for locking the pad against accidental displacement.

3. An inking pad including a receptacle having a flat base and one of its end walls extended inwardly and downwardly in spaced relation to the base to form an ink reservoir, there being an opening formed in the top of the reservoir, a perforated pad-supporting member disposed within the receptacle and having its lower face formed with a longitudinal groove communicating with the reservoir, a pad covering the perforations in said supporting member, one wall of the reservoir being bent laterally to form a shoulder for engagement with the pad, and a closure for the opening in the reservoir.

4. An inking pad including a receptacle having one of its end walls extended inwardly and thence downwardly to form an ink-reservoir, there being a depression formed in one wall of the reservoir and a laterally extending shoulder formed on the opposite wall of said reservoir, a perforated pad supporting member disposed within the reservoir and provided with a longitudinal ink-receiving chamber communicating with the reservoir, a pad engaging the lateral shoulder of the ink-reservoir, a flange formed on one of the end walls of the receptacle and bearing against the pad, and a cover pivotally mounted on the receptacle and adapted to engage the depression and flange when the cover is moved to closed position.

5. An inking pad including a receptacle having one of its end walls extended inwardly and thence downwardly to form an ink-reservoir, a perforated pad supporting member disposed within the receptacle and having a longitudinal ink-receiving groove formed in the bottom thereof and opening through one end of said member, the opposite end of the groove terminating in a shoulder, a pad engaging the supporting member and covering the perforations therein, there being a feed-opening formed in the reservoir and communicating with the open end of the ink-receiving groove.

872,755. CEMENTATION PROCESS. MARCUS RUTHENBURG, Lockport, N. Y. Filed Jan. 17, 1906. Serial No. 296,452.



1. The process of carburizing steel or iron, which consists in heating the carburizing material in contact with the metal to be carburized, by an electric current limited to a path extending parallel with the face of the metal to be carburized and excluded from the latter, substantially as set forth.

2. The process of carburizing steel or iron, which consists in heating the carburizing material in contact with the metal to be carburized, by an electric current limited to a continuous path through a poor conductor and excluded from the metal to be carburized, substantially as set forth.

3. The process of carburizing steel or iron, which consists in heating the carburizing material in contact with the metal to be carburized, by an electric current limited to a path through the carburizing material, and excluded from the metal to be carburized, substantially as set forth.

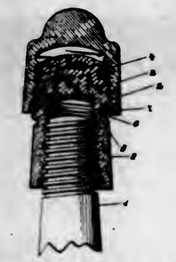
4. The process of carburizing steel or iron, which consists in heating the carburizing material in contact with the metal to be carburized, by an electric current limited to a continuous path through a poor conductor extending parallel with the face of the metal to be carburized and excluded from the latter, substantially as set forth.

5. The process of carburizing steel or iron, which consists in heating the carburizing material in contact with the metal to be carburized, by an electric current limited to a continuous path through a poor conductor extending parallel with the face of the metal to be carburized, and maintaining said poor conductor insulated from the carburizing material, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

872,756. INSULATOR. FREDERICK C. SCHERER and HENRY C. FASHBAUGH, Columbiana, Ohio. Filed Oct. 19, 1906. Serial No. 339,650.

In an insulator, a hollow exterior and interior threaded insulator body provided in its outer face with a transversely-extending slot terminating in a vertically-extending recess, the bottom of said recess being in a plane below the lower wall of the slot, said recess and slot of a length equal to the length of the half of said member, said recess positioned in said member at a point approximately centrally of the inner and outer faces thereof, said slot positioned at a point above the center of said member, and a cap of non-conducting material provided with interior



threads, said threads terminating at a point removed from the lower end of the cap thereby providing the inner face at the lower end of the cap with a smooth portion, said cap adapted to be mounted upon said body and when so positioned the lower end of the cap being in alinement with the bottom of the recess, said recess adapted to receive a conductor wire and said cap adapted to confine said wire in said body when the cap is secured thereto.

872,757. PROCESS OF MAKING NITRATED SUPERPHOSPHATE. JOHANNES SCHLUTIUS, Karow, Germany. Filed Jan. 3, 1906. Serial No. 294,348.

1. The process of preparing a fertilizer which consists in oxidizing atmospheric nitrogen to form nitric acid and other products of oxidation and reacting upon a native phosphate containing iron and alumina with sufficient of such products to decompose the contained tricalcium phosphate and to combine with basic bodies present.

2. The process of preparing a fertilizer which consists in oxidizing atmospheric nitrogen and reacting upon a native phosphate containing iron and alumina with the crude products of such oxidation in sufficient quantity to decompose contained phosphates and to combine with basic bodies present.

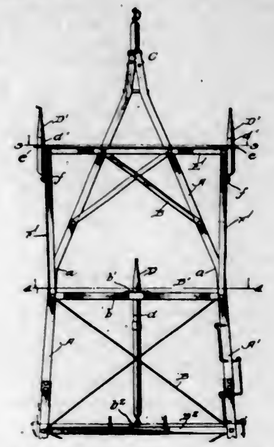
872,758. TRANSMISSION-TOWER. DANIEL R. SCHOLES, Chicago, Ill., assignor to Aermotor Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 13, 1907. Serial No. 367,941.

1. A tower having four posts converging at their upper portions to form a peak, braces in the form of the letter X connecting the posts at the base of the peak and means supported by the braces for carrying a transmission wire.

2. A tower having four posts converging at their upper portions to form a peak, the angle of convergence of said posts at the peak being greater longitudinally than transversely, braces connecting the posts at the base of the peak, and means carried by the braces for supporting the transmission wire.

3. A tower having four posts bent near their upper ends so that their upper and lower portions form angles with each other and so that their upper portions converge to form a peak, a cross arm secured to the peak and having projecting ends and a pair of braces for each end of the cross arm, the braces of each pair having their upper ends secured to the cross arm whence they diverge downward and have their lower ends secured to the tower.

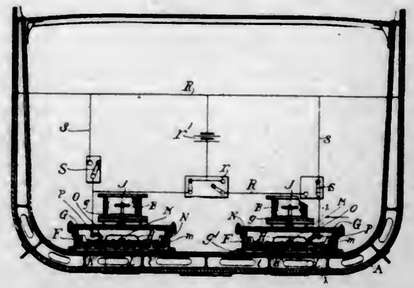
4. A tower having four posts bent near their upper ends so that their upper and lower portions form angles with each other, and the upper portions converging to form a peak, a cross arm secured to the peak, said cross arm being of truss formation and having parallel intermediate portions secured to the peak and converging outer portions projecting beyond the peak and a pair of braces for each projecting end and cross arm, the braces of each pair having their upper ends secured to the cross arm whence they diverge downward and have their lower ends secured to the tower.



5. A tower having four posts, the upper portions of which converge to form a peak, braces connecting said posts, a cross arm having its intermediate portion secured to the peak and having outer portions projecting beyond the peak and a pair of braces for each projecting end of the cross arm, the braces of each pair lying in a substantially vertical plane, and having their upper ends secured to the cross arm whence they diverge downward and have their lower ends secured to the tower posts.

[Claims 6 to 9 not printed in the Gazette.]

872,759. ELECTROLYTIC SHIP-BOTTOM PROTECTOR. JOHN H. SCHONEBERGER and GEORGE W. FRAZIER, Allegheny, Pa., assignors to Pittsburgh Electrolytic Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 14, 1906, Serial No. 334,584. Renewed Oct. 9, 1907. Serial No. 396,664.



1. In an electrolytic ship-bottom protector, the combination with a casing in communication with the sea water, of an electrode within the casing and insulated from it, and a conductor connected with the electrode and passing out of the casing, the said conductor being insulated from the casing and having its end connected with the skin of the vessel, the said casing being secured to the vessel.

2. In an electrolytic ship-bottom protector, the combination with a casing in communication with the sea water, of an electrode within the casing and insulated from it, and a conductor connected with the electrode and passing out of the casing, the said conductor being insulated from

the casing and having its end connected with the skin of the vessel, the said casing being secured within the vessel.

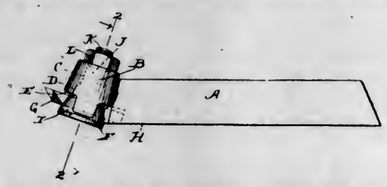
3. In an electrolytic ship-bottom protector, the combination with a casing in communication with the sea water, of an electrode within the casing and insulated from it, a conductor connected with the electrode and passing out of the casing, the said conductor being insulated from the casing and having its end connected with the skin of the vessel, and means whereby the external sea water may be caused to flow through the casing.

4. In an electrolytic ship-bottom protector, the combination with a casing in communication with the sea water, of an electrode within the casing and insulated from it, a conductor connected with the electrode and passing out of the casing, the said conductor being insulated from the casing and having its end connected with the skin of the vessel, the said casing being secured within the vessel, and means whereby the external sea water may be caused to flow through the casing.

5. In an electrolytic ship-bottom protector, the combination with a casing having two openings one forward of the other in communication with the sea water, of an electrode within the casing and insulated from it, a conductor connected with the electrode and passing out of the casing, the said conductor being insulated from the casing and having its end connected with the skin of the vessel, the said casing being secured to the vessel.

[Claims 6 to 10 not printed in the Gazette.]

872,760. LATHE AND SHAPER TOOL. FRITZ SCHULZ, Chicago, Ill. Filed Dec. 6, 1906. Serial No. 346,657.



1. A device of the kind specified, comprising the stock enlarged at one end and provided in said end with a lateral opening tapered at one end, segmental recesses in the last-named end portion of said enlarged portion of said stock, a longitudinal groove in one face of the latter having its bottom disposed flush with the bottoms of said segmental recesses, a head tapered at one end and provided at its other end with a threaded shank adapted to enter said opening, said head being provided with a diametrical slot extending throughout the length of said tapered portion and enlarged between its ends to provide an opening to receive the tool, and a nut on said threaded shank engaging the other end of said enlarged portion of said stock to draw said tapered portion of said head into said tapered mouth of said opening and contract the same, said tool receiving opening being disposed below the outer end of said enlarged portion and the clamping pressure being exerted thereon in alinement with the said opening the said recesses being adapted to receive the tool and thus hold the head against rotation relatively to the stock.

2. A device of the kind specified, comprising a stock provided at one end with a lateral opening tapered at one end, a tapered head provided with a diametrical opening adapted to be received in said opening in said stock, a threaded shank on said head, a nut thereon adapted to engage one wall of said stock around said opening therein, said tapered portion of said head being split and adapted to be contracted when drawn into said opening, a cutter adapted to be received and clamped in said diametrical opening in said head, there being recesses in said stock around said opening to receive said cutter, the said recesses being of such depth as to prevent contact of said cutter with the bottom walls thereof when said head is drawn to its limit of movement within the said opening in said shank the said recesses being adapted to receive the tool and thus hold the head against rotation relatively to the stock.

872,761. PACKING-BOX FOR PHOTOGRAPHIC PLATES. AULEY B. SHEPPARD, Salem, N. J. Filed Oct. 31, 1905. Serial No. 285,338.



1. A plate package having an open face for the passage of plates facewise therethrough, and a plurality of movable light-excluding plate confining devices, each device adapted to be moved for the passage of a plate through said open face.

2. The combination of a plate package open at one side to form a plate passage, and a slide for closing the passage movable through a slot in the package, the slide having a thickened inner end for the purpose described.

3. The combination of a plate package having an open face for the passage of a plate facewise therethrough, the package having a slot of irregular form in one side of its edge faces, and a flexible slide movable through the slot.

4. The combination of a plate package having an open face for the passage of a plate facewise therethrough, the package having a slot of irregular form in one of its edge faces, and a flexible slide movable through the slot, the slide having a thickened inner end for the purpose described.

5. A plate package having an open face for the passage of plates facewise therethrough, and a plurality of parallel plate confining slides operative successively for discharging plates, one after another, through the open face of the package.

[Claims 6 to 14 not printed in the Gazette.]

872,762. SHOE-SOLE. DANIEL H. SHILLABER, Lynn, Mass. Filed May 11, 1907. Serial No. 373,072.



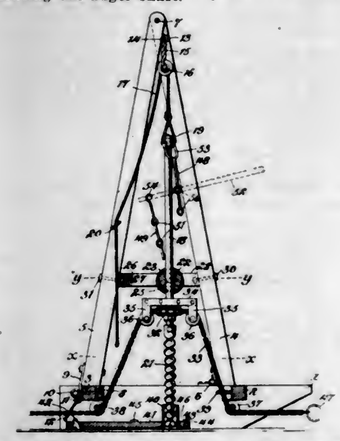
1. An outer sole for boots and shoes, the heel portion of which is split to form an integral lip, and the thicker portion having a heel lift cut therefrom, the lip being adapted to cover the cavity thus formed.

2. An outer sole for boots and shoes having the heel portion split and having a cavity formed in the thicker portion by the cutting and removal therefrom of a heel lift.

872,763. EARTH-AUGER. ADAM T. SMITH, Greensboro, N. C., assignor of one-half to William Y. Everton, Grifton, N. C. Filed Mar. 11, 1907. Serial No. 361,821.

1. An earth auger comprising a main frame, a derrick frame having side and central standards, a combined support and brace connecting the central and side standards at points between the ends thereof and detachably secured to the side standards and pivotally connected to the central standard and adapted to be turned when the derrick frame is folded, guiding means carried by the combined support and brace, an auger shaft operating in the guiding means, and means for operating the auger shaft.

2. An earth auger comprising a main frame, a derrick frame having central and side standards, a combined support and brace arranged horizontally and connecting the central and side standards at points between the ends thereof and having spaced side portions, concavo-convex bearing plates secured to and arranged between the side portions of the combined support and brace, a spherical guide mounted between and supported by the bearing plates, an auger shaft operable in the guide, and means for operating the auger shaft.



3. An earth auger comprising a foldable derrick frame composed of side and central standards, a combined support and brace secured to the central and side standards at a point between the ends thereof and having spaced side portions, concavo-convex bearings arranged between and secured to the said side portions, a spherical guide supported by the said bearings and having an opening, an auger shaft slidable through the opening of the guide, and means for rotating the auger shaft.

4. An earth auger comprising a frame, an auger shaft, means for rotating the auger shaft, and a shoe provided with anchoring means and having a tubular auger guide, said guide being provided with an attachment plate secured to the shoe.

5. An earth auger comprising a frame, an auger shaft, means for rotating the auger shaft, and a shoe having an enlarged portion and provided with a tubular auger guide, said guide being provided with an attachment plate having arms for engaging the enlarged portion of the shoe.

[Claims 6 to 11 not printed in the Gazette.]

872,764. APPARATUS FOR GATHERING FRUIT. ERNEST U. SMITH, Honeoye, Falls, N. Y. Filed Nov. 10, 1906. Serial No. 342,900.



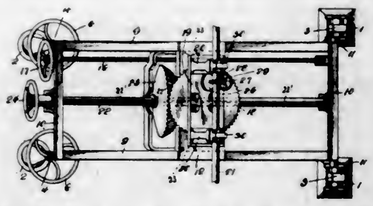
1. A fruit gathering apparatus comprising a frame made up of four sections adapted to fit together and cut away to fit about the trunk of a tree, each section having rods fastened thereto at their outer ends extending downward and inward and secured together at their inner ends, a canvas covering adapted to be supported by said rods and fit the edges of said frame sections and forming troughs, deflecting strips over portions of said troughs, and protecting means over the meeting edges of said sections of the frame, as set forth.

2. A fruit gathering apparatus comprising a frame made up of four sections adapted to fit together and cut away to fit about the trunk of a tree, each section having inclined rods fastened thereto at their outer ends extending downward and inward and secured together at their inner ends, a canvas covering adapted to be supported by said rods and fit the edges of said frame sections and forming troughs, deflecting strips over portions of said troughs, arched members rising from the meeting corners of the frame sections and protecting strips fastened over said arched members, as set forth.

3. A fruit gathering apparatus comprising a frame made up of four sections adapted to fit together and cut away to fit about the trunk of a tree, each section having inclined rods fastened thereto at their outer ends extending downward and inward and secured together at their inner ends, a canvas covering adapted to be supported by said rods and fit the edges of said frame sections and forming troughs, deflecting strips over portions of said troughs, arched members rising from the meeting corners of the frame sections, protecting strips fastened over said arched members, and a ring at the lowest portion of the canvas covering forming an exit through which the fruit is adapted to fall, as set forth.

4. A fruit gathering apparatus comprising a frame made up of four sections adapted to fit together and cut away to fit about the trunk of a tree, each section having inclined rods fastened thereto at their outer ends extending downward and inward and secured together at their inner ends, a canvas covering adapted to be supported by said rods and fit the edges of said frame sections and forming troughs, deflecting strips over portions of said troughs, arched members rising from the meeting corners of the frame sections, protecting strips fastened over said arched members, a ring forming an exit through which the fruit is adapted to fall, and protecting strips extending over said ring, as set forth.

872,765. COAL-CUTTING MACHINE. HUBERT L. SMITH, Edri, Pa. Filed Jan. 6, 1906. Serial No. 294,858.



1. A platform for coal cutting machines embodying standards, a frame supported by said standards, a platform revolubly mounted upon said frame, brackets carried by said platform and forming bearings for said cutting machine, an elevating device carried by said platform, means to revolve said platform, means to adjust said platform longitudinally upon said frame, and means to adjust said frame, substantially as described.

2. A platform for coal cutting machines embodying an adjustable frame, a platform revolubly mounted upon said frame, brackets carried by said platform, and adapted to support a coal cutting machine, means to revolve said platform and means to adjust said platform, and means to adjust said frame, substantially as described.

3. A platform for coal cutting machines embodying an adjustable frame, a revoluble platform mounted upon said frame, brackets carried by said platform and adapted to support a coal cutting machine, means to revolve said platform, means to adjust said platform longitudinally upon said frame, substantially as described.

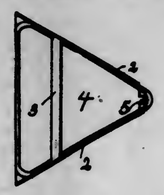
4. A platform for coal cutting machines embodying an adjustable metallic frame, a platform slidably mounted

on said frame and revoluble in a substantially horizontal plane, and means to adjust said revoluble platform.

5. A platform for coal cutting machines embodying an adjustable metallic frame, a platform slidably mounted upon said frame and revoluble in a substantially horizontal plane, and means to revolubly adjust said platform, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

872,766. POOL-BALL CARRIER. JOHN A. SMITH, San Francisco, Cal. Filed May 6, 1907. Serial No. 372,095.



1. In a ball carrier, a flat base plate having two of its edges upturned, a handle secured between the edges, and means to retain a pool ball triangle on the plate.

2. In a ball carrier, the combination of a flat base plate having two of its edges upturned, a handle secured between the upturned edges, and means at one of the other edges of the carrier to hold a pool ball triangle on the carrier.

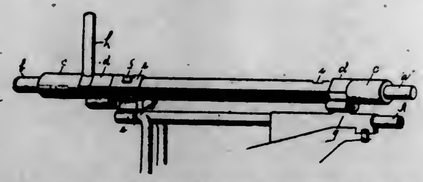
3. In a ball carrier, the combination of a flat base plate having two of its edges upturned and open at a third edge, a handle secured to the upturned edges and passing over the base plate, and means at a fourth edge of the base plate to hold a pool ball triangle on the base plate.

4. In a carrier for balls, a trapezoidal base plate having two of its edges upturned and the other two open, a handle secured to the upturned edges and extending over the base, and means to secure a pool ball triangle on the base.

5. In a ball carrier, a trapezoidal base plate having its opposite non-parallel edges upturned and the other two open, a handle secured to the upturned edges and extending between them, and means to secure a pool ball triangle on the base plate.

[Claims 6 and 7 not printed in the Gazette.]

872,767. MAIL-BAG-CATCHING DEVICE. JOHN E. SMITH, Kansas City, Kans. Filed Jan. 7, 1907. Serial No. 351,137.



1. A bar having a square body, carrying the heads of tenon bodies, adjustably attached near each end as shoulders, limiting the sliding movement of said bar, the ends thereof fitted to engage buffers and sockets, the apex angle as shown vertically recessed near each shoulder to engage a spring locking device, a handle near one end rigidly attached at right angles to said bar.

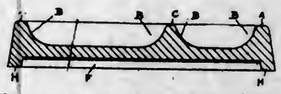
2. A bar having a square body, carrying the heads of tenon bodies adjustably attached near each end as shoulders, the apex angle as shown vertically recessed near each shoulder to engage a spring locking device, a swivel head, carrying a spring locking device, slidably adapted to said bar between said shoulders, and lockably held in position on said bar against either of said shoulders, when the said spring locking device engages either of the said vertical recesses, the pivotal part of said swivel being rigidly attached at right angles to the shank of a double catcher arm.

3. In a reversing attachment for a mail bag catcher, the combination of a supporting bar with tenon holders, having square heads adjustably attached to the supporting bar, and having bodies with tenoned grooves for the purpose described.

4. The combination in a reversing attachment for a mail bag catcher of a supporting bar and tenon holders with a tenon tail, slidably insertible into the tenon holders.

5. The combination in a reversing attachment for a mail bag catcher of a supporting bar and a swivel with a spring; said swivel having an opening in its top provided for the action of said spring in engaging notches on the supporting bar.

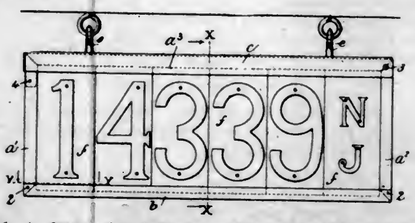
872,768. CASH-TRAY. MICHAEL H. SMITH, London, England. Filed Mar. 22, 1906. Serial No. 307,382.



1. A cash tray having an upstanding rim, a well inclosed by said rim and occupying the interior of the upper side of the tray, and an upstanding cross-ridge dividing said well into two compartments having bottoms constructed to receive coins lying horizontally, the sides of said ridge and rim merging into the bottoms of the compartments on a slope or curve formed to facilitate the slidable removal of coins thereover.

2. A cash tray having an upstanding rim, a well inclosed by said rim and occupying the interior of the upper side of the tray, an upstanding cross-ridge so positioned as to divide said well into a large compartment and a small compartment, the large compartment having an expanded generally horizontal bottom, the sides of said ridge and rim merging into the bottoms of the compartments on a slope or curve formed to facilitate the slidable removal of coins thereover.

872,769. INTERCHANGEABLE-NUMBER FRAME. ROBERT A. STEVENSON, New York, N. Y., assignor of one-half to N. Stafford Co., New York, N. Y., a Corporation of New York. Filed May 2, 1907. Serial No. 371,401.



1. A frame for interchangeable numerals or letters, comprising a plate with over-turned edges and a lower edge spaced apart from the plate, a member along the edge opposite to the spaced apart edge and pivotally connected to the frame at one corner in a hinged relation and adapted to fit over one over-turned edge so as to receive between the said member and the spaced apart edge the interchangeable numerals or letters.

2. A frame for interchangeable numerals or letters, comprising a plate with over-turned edges and a lower edge spaced apart from the plate, a member along the edge opposite to the spaced apart edge and pivotally connected to the frame at one corner in a hinged relation and adapted to fit over one over-turned edge so as to receive between the said member and the spaced apart edge the interchangeable numerals or letters, and means secured to the said plate for removably connecting the same with a suitable support.

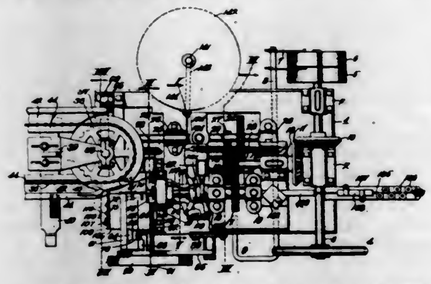
3. A frame for interchangeable numerals or letters, comprising a plate with over-turned edges and a lower over-turned edge spaced apart from the plate, a member fitting over the edge opposite to the spaced apart edge and pivotally connected to the said plate at one corner of the frame so as to swing, and a series of interchangeable plates having over-turned edges and upon which are numerals or letters, said plates being interchangeable with one another and received within the lower spaced apart edge and beneath the pivotal member along the opposite edge of the frame.

4. A frame for interchangeable numerals or letters, comprising a plate with over-turned edges and a lower over-turned edge spaced apart from the plate, a member fitting over the edge opposite to the spaced apart edge and pivotally connected to the said plate at one corner of the frame so as to swing, and a series of interchangeable plates having over-turned edges and upon which are numerals or letters, said plates being interchangeable with one another and received within the lower spaced apart edge and beneath the pivotal member along the opposite edge of the frame and devices connected to the back of the plate for removably suspending the same from a point of support.

5. In a frame for interchangeable numerals or letters, the combination with a plate of rectangular configuration, an over-turned spaced apart edge along the longest dimensions of the plate, a member adapted to fit over and along the opposite longest edge of the plate and a pivotal connection therefor at one end, a part adapted to extend around the corner of the edge of the frame at the opposite edge of said hinge member and a catch device connected to this latter end of the pivotal member for fixing the position of the same.

[Claims 6 to 8 not printed in the Gazette.]

872,770. BALE-TIE MACHINE. ARTHUR H. SYMONS and JABEZ H. SYMONS, Kansas City, Mo. Filed Dec. 26, 1906. Serial No. 349,384.



1. In a bale-tie machine, an arm having a substantially oblong rectangular non-rotatable portion, a pin contiguous to one edge and side of and parallel with said portion, and means to cause said pin to travel from its position at said edge and side of such portion to a position at the opposite side and beyond the opposite edge thereof.

2. In a bale-tie machine, a support, an arm carried thereby and having a substantially oblong rectangular non-rotatable portion projected from said support, a pin contiguous to one edge and side of and parallel with said portion, and means to cause said pin to travel from its position at said edge and side of such portion to a position at the opposite side of and beyond the opposite edge thereof.

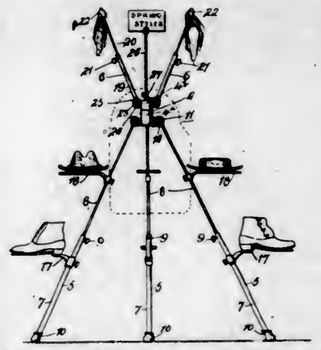
3. In a bale-tie machine, a support, an arm carried thereby and having a substantially oblong rectangular non-rotatable portion yieldingly projected from said support, a pin contiguous to one edge and side of and parallel with said portion, and means to cause said pin to travel from its position at said edge and side of such portion to a position at the opposite side of and beyond the opposite edge thereof.

4. In a bale-tie machine, a suitable support, an arm pivoted therein and having a substantially oblong rectangular non-rotatable portion yieldingly projected beyond the support, a pin contiguous to one edge and side of and parallel with said portion, and means to cause said pin to travel from its position at the said edge and side of said portion to a position at the opposite side of and beyond the opposite edge thereof.

5. In a bale tie machine, a shaft provided with an eccentrically-disposed pin at one end, a stationary support within said shaft, an arm having a substantially oblong rectangular portion projecting from said support, and means to cause said pin to travel from its position at said edge and side of such portion to a position at the opposite side of and beyond the opposite edge thereof.

[Claims 6 to 22 not printed in the Gazette.]

872,771. DISPLAY-STAND. WILLIAM F. ST. CLAIR, Owatonna, Minn. Filed Feb. 5, 1907. Serial No. 355,916.



1. In a display stand, the combination of an attaching neck having leg and arm clutch members secured thereto, legs having coöperating clutch members on their upper ends, clamping means for holding the clutch members in engagement and permitting adjustment, arms having on their lower ends clutch members adapted to coöperate with the arm clutch members on the neck, and clamping means for holding the clutch members in engagement, the arms and legs serving for the display of merchandise, substantially as described.

2. In a display stand, the combination of a neck consisting of upper and lower sections swiveled together, arm and leg clutch members secured to the respective sections of the neck, arms having on their lower ends clutch members adapted to coöperate with the arm clutch members on the neck, clamping means for holding the clutch members in engagement, legs having coöperating clutch members on their upper ends, clamping means for holding the clutch members on the legs in engagement with the leg clutch members on the lower section of the neck, the arms and legs serving for the display of merchandise, substantially as described.

872,772. HOOK AND EYE. CAROLINE UMNITZ, Philadelphia, Pa. Filed Feb. 16, 1907. Serial No. 357,673.

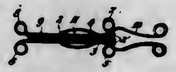


1. A hook for a hook and eye comprising opposing primary fastening-loops, occupying one and the same plane; a bill projecting in the direction of said primary fastening-loops and somewhat above the plane thereof; and an intermediate member, the latter projecting forwardly of said hook proper, beneath said bill, turned or bent around the same to form a secondary fastening-loop, at the nose or forward end of said hook proper, and from thence projecting somewhat upwardly and terminating in an elastic eye-retaining stem, said secondary fastening-loop occupy-

ing substantially the same plane as that occupied by each of said primary fastening-loops, substantially as herein specified.

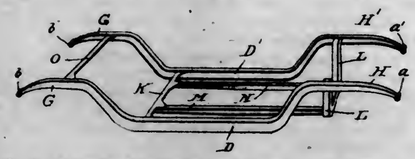
2. A hook for a hook and eye formed from a length of wire, bent and returned to form a bill having opposing members, the latter being jointly bent and extended beneath and somewhat beyond said bill, one of said members terminating in a primary fastening-loop, and the other being bent and returned to form an additional primary fastening-loop and an intermediate member, the latter extending forwardly along said hook proper, beneath the bill thereof, being bent or turned around both of said members, thereby tying the same together, and at the same time forming, at the nose or forward end of said hook, a secondary fastening-loop, and from thence projecting somewhat upwardly and terminating in an eye-retaining stem, said primary fastening-loops and said secondary fastening-loop occupying, respectively, substantially one and the same plane, substantially as herein specified.

872,773. HOOK AND EYE. CAROLINE UMNITZ, Philadelphia, Pa. Filed Feb. 20, 1907. Serial No. 358,378.



A hook for a hook and eye formed from a single length of wire, and comprising a bill consisting of opposing members, jointly bent at the shank of said bill, and each thereat turned or bent to form opposing, secondary fastening-loops, at the forward end of the hook proper and at opposite sides of said bill, one of said members being projected rearwardly of the hook proper, beneath said bill, and terminated in a primary fastening-loop, and the other being projected rearwardly of said hook, beneath said bill, bent to form an additional primary fastening-loop, in opposition to the aforenamed primary fastening-loop, and from thence returned to form an intermediate member, the latter projecting forwardly of the hook proper, provided with a hump, and terminating in an upwardly projecting, elastic eye-retaining stem, having its free end normally in engagement with the hump aforenamed of said intermediate member, and said primary and secondary fastening-loops being all arranged in substantially one and the same plane, substantially as herein specified.

872,774. MOTOR-CAR. CORNELIUS P. A. VAN FERLS and JOSEPHINE M. KNEELAND, New York, N. Y. Filed May 24, 1907. Serial No. 375,505.

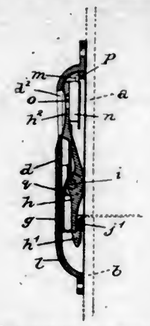


1. A car-body supporting frame for a motor car and comprising opposite side frame members each of which is depressed midway of its length, and a supplementary frame provided with a rearward cross-bar connected with said side frame members where depressed and provided with a downwardly-bent forward cross-bar connected with such members above said depressed parts, and longitudinal bars forming part of the supplementary frame and disposed in a plane substantially parallel with the depressed parts of the side frame members and connected with both cross-bars.

2. A car-body supporting frame for a motor car and comprising opposite side frame members each of which is depressed midway of its length, and a supplementary frame disposed between and connected with said side frame members and substantially parallel with and extending forwardly of the depressed parts of the latter.

3. In a motor car, a car-body supporting frame comprising opposite side-frame members each of which is depressed midway of its length, and a supplementary frame comprising longitudinal bars disposed between said side frame members, the upper part of the depressed portions of the side-frame members being substantially in the same plane as the aforesaid longitudinal bars of the supplementary frame.

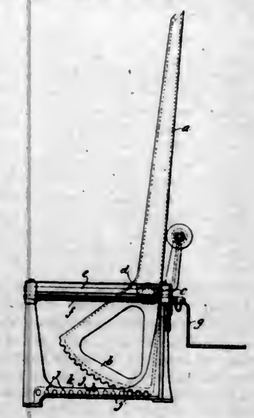
872,775. TRUNK-LOCK. BENJAMIN WEBER, Baltimore, Md. Filed May 22, 1906. Serial No. 318,113.



1. The improved trunk-lock comprising a cross bar, f^1, for attachment to the trunk-box; a case for attachment to the trunk-lid and having two bearings, q; a tongue having trunnions pivoted in said two bearings, and provided at its lower end with a hook to engage said cross-bar and a spring, g, having at its upper end two prongs which take on the back of the pivoted tongue and said spring provided with two under-cut shoulders, s, which rest upon the said two pivot-bearings of the case, whereby the spring is supported and held rigidly in position without rivets or other device.

2. The herein-described trunk-lock having in combination a case, d, for attachment to the trunk-lid said case provided at its top and back with a downward projecting flange, p, and at its front with an opening, d^2; a tongue pivoted in said case and provided at its lower end with a hook, h^1; a sliding bolt, m, carried at the upper end of said tongue and adapted to engage with said downward-projecting flange; and a cross-bar, f^1, for attachment to the trunk-box and with which said tongue-hook engages.

872,776. DAVIT. AXEL WELIN, London, England. Filed May 27, 1907. Serial No. 375,913.

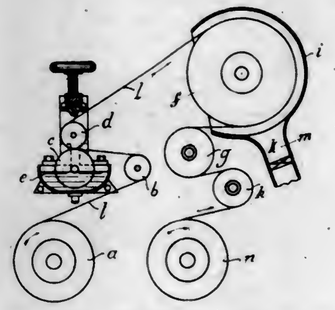


1. The combination of a davit, a toothed quadrant at the bottom of the davit and a horizontal rack beneath the toothed quadrant having clear openings through it between its teeth upon which the quadrant can roll, crush ice and force it through the openings.

2. The combination of a davit, a toothed quadrant at the bottom of the davit and a horizontal rack below the quadrant having clear openings between its teeth which flare or increase in width downwardly from their upper portions toward their lower ends upon which the quadrant can roll and force ice through the openings.

3. The combination of a davit, a toothed quadrant at the bottom of the davit, a horizontal rack below the davit having clear openings between its teeth upon which the quadrant can roll and crush ice through the openings and guide plates at each side of the rack projecting above its teeth.

872,777. APPARATUS FOR COLORING ROLL-PAPER AND THE LIKE. FRITZ C. WICKEL, Nuremberg, Germany. Filed Oct. 3, 1905. Serial No. 281,134.

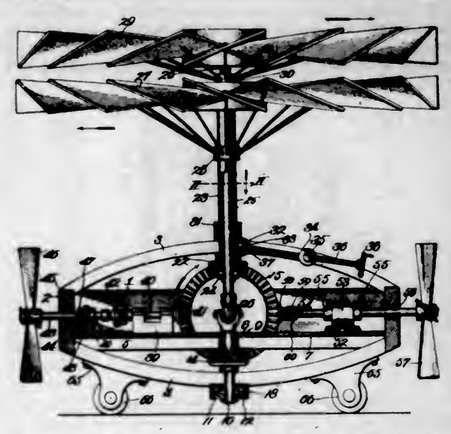


1. In an apparatus for coloring fabric, the combination, of a color box, a color roll arranged above the box with its lower side dipping below the level of the color solution therein, a pressure roll arranged above and closely adjacent to the color roll, adjustable means for forcing the pressure roll toward the color roll, a heating drum, a vapor collecting device operatively arranged relative to the surface of the heating drum, a cooling drum, means for applying heat to the heating drum, means for refrigerating the cooling drum, and means for drawing the fabric successively between the color roll and the pressure roll and over the heating drum and the cooling drum.

2. In an apparatus for coloring fabric, the combination, with a color box, of a color roll arranged above the box with its lower side dipping below the level of the color solution therein, a pressure roll arranged above and bearing upon the color roll, means for adjustably varying the pressure between said pair of rolls, a heating drum, means for heating the said drum, a hood surrounding said heating drum and provided with an exit passage leading therefrom, a cooling drum, means for refrigerating the cooling drum, a feed roll for the uncolored fabric, a receiving roll for the colored roll, and means for driving said feed and receiving rolls.

3. In an apparatus for coloring fabric, the combination, with a color box, of a color roll arranged above the box with its lower side dipping below the level of the color solution therein, a pressure roll arranged above and bearing upon the color roll, means for adjustably varying the pressure between said pair of rolls, a heating drum, means for heating the said drum, a hood surrounding said heating drum and provided with an exit passage leading therefrom, an exhaust device arranged in said passage, a feed roll for the uncolored fabric, a receiving roll for the colored fabric, means for driving the feed roll and receiving roll, and guide rolls arranged to direct the fabric between the color roll and pressure roll and over the heating roll with its colored side outward and over the cooling roll with its colored side inward.

872,778. AERIAL VESSEL. FREELAND B. ASHLEY, Kansas City, Mo. Filed Dec. 26, 1906. Serial No. 349,397.



1. An aerial vessel, comprising a car, a shaft suitably journaled therein and having a universal joint, a lifting wheel secured to the upper end of said shaft, a tubular shaft journaled on the first-named shaft above said universal joint and provided with a lifting wheel at its upper end, and a drive wheel geared to said shafts with its axis coincidental with said universal joint.

2. An aerial vessel, comprising a car, a shaft suitably journaled therein and having a universal joint, a lifting wheel secured to the upper end of said shaft, a tubular shaft journaled on the first-named shaft above said universal joint and provided with a lifting wheel at its upper end, a drive wheel geared to said shafts with its axis coincidental with said universal joint, and means to swing said shafts forward or rearward of the vertical plane without throwing them out of gear with said drive wheel.

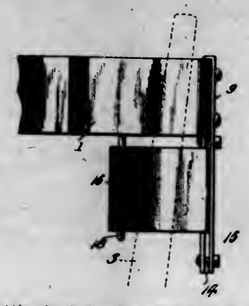
3. In an aerial vessel, a car, a driven wheel therein having oppositely disposed gear teeth, a shaft pivoted to swing horizontally and projecting beyond the front end of the car and provided with a propeller, a gear mounted on the rear end of said shaft, means to swing said shaft, and means to hold it with its gear in engagement with one set or the other of the gear teeth of said driven wheel and between and out of engagement with said sets of teeth.

4. An aerial vessel, comprising a car, a pair of parallel arched bars extending longitudinally of the car, a vertical shaft suitably journaled and disposed between said arched bars and having a universal joint below the same, a lifting wheel secured to the upper end of said shaft, a drive wheel geared to said shaft with its axis coincidental with said universal joint, a collar journaled on said shaft above the arched bars and provided with a socket portion depending into the space formed by and between the arched bars, a screw suitably mounted in the car and extending into the socket portion and provided within the latter with a ball-head, means for adjusting said screw to move the collar toward the bow or stern of the car and thereby swing said shaft forwardly or rearwardly without throwing the same out of gear with said drive wheel, and means geared to said drive wheel for propelling the car at an angle to the movement imparted to it by the lifting wheel.

872,779. SHUTTLE-CHECK FOR LOOMS. WILLIAM H. AYER, Claremont, N. H. Filed Mar. 7, 1906. Serial No. 304,737.

1. A shuttle check for looms, comprising a body having spring wings or cheek pieces, arranged to form a receiving space and a widened entrance thereto, a bracket on which the check is vertically adjustable, and means for clamping the body portion of the check to the bracket.

2. In a shuttle check for looms, the combination with a lay, of a hanger attached thereto and hanging pendent therefrom, and a check supported by said hanger below the end of the lay, said check being vertically adjustable on said hanger and provided with divergent wings forming a space to receive the picker stick and adapted to exert a gradual frictional pressure thereon to bring said stick to a stop.



3. In a shuttle check for looms, the combination with a lay, of a hanger mounted upon the outer end of the lay and depending therefrom, a check supported by the hanger below the end of the lay, said check having spring actuated wings or cheek pieces provided with outwardly curved or flared ends, and stop pins projecting downward from the lay to limit the inward movement of said wings or cheek pieces.

4. In a shuttle check for looms, the combination with a lay, of a supporting device secured to the end of the lay and hanging pendent therefrom, a check disposed below the end of the lay and carried by said supporting device, said check being adjustably connected with said supporting device for vertical movement toward and from the lay and having spring cheek pieces formed with diverging ends, and stop pins projecting downward from the lay and engaging said diverging ends of the cheek pieces to limit their inward movement, the cheek pieces being adapted to slide on the pins to permit the check to be adjusted without interference therefrom.

5. In a shuttle check for looms, the combination with a lay, of a supporting bracket attached thereto and hanging pendent therefrom, a check disposed below the end of the lay and having a body portion adjustably clamped between the arms of the bracket, spring means or cheek pieces projecting forwardly therefrom and having diverging ends, and stop pins projecting from the lay and bearing against said diverging ends to limit the inward movement of the cheek pieces.

[Claims 6 to 8 not printed in the Gazette.]

872,780. PICKER-CHECK FOR LOOMS. WILLIAM H. AYER, Claremont, N. H. Filed Apr. 27, 1906. Serial No. 313,988.



1. In a shuttle check, the combination with an impact band, shuttle guiding flanges, a fixed second support for the band, of a second support for the band adjustable both longitudinally of the band and laterally with respect to the guiding flanges.

2. In a shuttle check, the combination with an impact band, of a fixed support therefor having a rounded bearing surface, and an adjustable support capable of longitudinal and transverse adjustment with respect to the plane of the band.

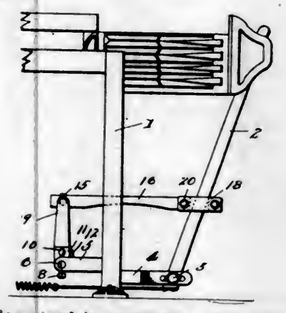
3. The combination with an impact strap having an impact surface of harder material, of a pair of spiral springs connecting the ends of the strap, means for anchoring the central portion of one of the springs, a fixed support for the band having a curved bearing surface, and an adjustable support capable of longitudinal and transverse adjustment.

4. In a shuttle check, the combination with an impact band, a fixed support for the band, of an adjustable eccentric support for the opposite end of the band.

5. A shuttle check comprising a fixed support, an eccentric support capable of rotary and sliding adjustment, and an impact band arranged on said supports.

[Claims 6 and 7 not printed in the Gazette.]

872,781. PICKING-MOTION FOR LOOMS. WILLIAM H. AYER, Claremont, N. H. Filed July 12, 1906. Serial No. 325,835.

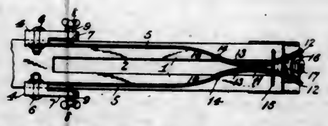


1. In a loom, and in combination, the picker staff, lug stick and picker arm, an aperture near one end of the lug stick, an angular lug on the picker arm for engagement with said opening or aperture; a rock shaft, a slidable block thereon and pivotally connected to said picker arm, and adjusting means on the picker arm adapted to bear in said shaft.

2. In a loom, and in combination, the picker staff, lug stick, and picker arm, an opening in the lug stick and a stud on the picker arm engaging said opening; a rock shaft, a movable block on said shaft, a bolt securing said block and picker arm, and a set screw in the picker arm bearing on said shaft.

3. In a loom, the combination with the rock shaft thereof, of a picker arm adjustably secured to said shaft, a lug stick removably secured to said picker arm, and a lug strap adjustably secured to said lug stick, said lug strap comprising alternate layers of leather, a flat metallic filling piece and an outer layer of leather, and a bearing block sewed in the looped end of the strap.

872,782. SHUTTLE-CHECK FOR LOOMS. WILLIAM H. AYER, Claremont, N. H. Filed May 17, 1907. Serial No. 374,220.



1. The combination with the lay of a loom, of angular brackets depending therefrom, flat springs secured to said brackets having converging portions, and set screws mounted in the brackets to engage the springs for adjusting the tension of said springs.

2. The combination with the lay of a loom, angular brackets depending therefrom, of spring members adjustably secured to said brackets and having converging portions, a guiding loop surrounding the free ends of the spring members, and an abutment located between the sides of the loop for holding the ends of the members in spaced relation.

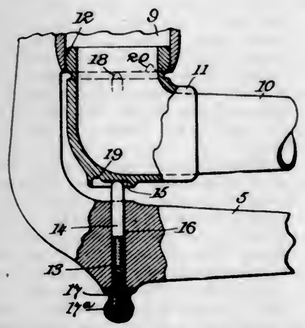
3. A shuttle check comprising angular brackets having a horizontally adjustable supporting portion, converging spring members carried by said supporting portions and set screws mounted in the supporting portions to engage the spring members to adjust the tension thereof.

4. In a shuttle check, the combination with spring retarding members, of a guiding plate having openings therein to receive the free ends of the spring members and form a guide for such free ends, the guiding openings in the plate being separated by a comparatively thin strip which acts as an abutment to keep the ends of the spring members properly spaced.

5. The combination with the lay of a loom, of angular brackets depending therefrom, the brackets having a lateral extension parallel to the lay, flat springs secured to the bracket, set screws carried by the lateral extensions to regulate the springs, the springs having curved converging ends faced with friction material, a guiding loop depending from the lay surrounding the free ends of the springs, and an abutment arranged between the ends of the springs to hold the same spaced apart.

[Claim 6 not printed in the Gazette.]

872,783. TALKING-MACHINE. HENRY B. BABSON and ANDREW HAUG, New York, N. Y., assignors to Universal Talking Machine Manufacturing Company, a Corporation of New York. Filed Feb. 7, 1905. Serial No. 244,573.



1. The combination of a sound reproducer, an arm carrying the reproducer and mounted free to move vertically and horizontally, and means for yieldingly locking the arm against vertical movement only, said means serving directly as a support for the arm.

2. The combination of a sound reproducer, an arm mounted free to move vertically and horizontally, and self-engaging locking means coöperating with the arm to check its vertical motion only, said locking means directly engaging the arm as a support therfor.

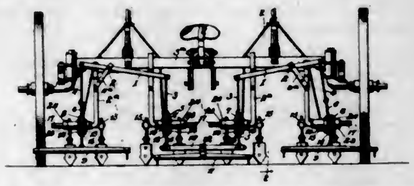
3. A support for a sound reproducer comprising a sound conveyer, and a relatively fixed support upon which the conveyer rests and freely moves, said conveyer being shiftable in such relation as to be held thereby in an inoperative position.

4. The combination of a sound reproducer, a tubular arm forming a continuation of the reproducer and movable therewith, a yielding support directly engaging the arm and permitting movement thereof in planes at right angles to each other, and means for limiting the arm to movement about the support as an axis.

5. The combination of a sound reproducer, an arm movable therewith, a support directly engaging the arm and permitting free movement thereof, and means for causing the arm when elevated to be yieldingly held by the support.

[Claims 6 to 8 not printed in the Gazette.]

872,784. DRAFT-EQUALIZER FOR CULTIVATORS. SILAS E. BAILOR, Tarkio, Mo. Filed Feb. 6, 1907. Serial No. 356,053.



1. In a draft equalizer for cultivators, the combination with a cultivator frame, and arches slidable thereon and movable laterally of the cultivator frame, of transversely disposed equalizing levers fulcrumed on and carried by the arches, guiding means also carried by the arches and located at the bottoms thereof, whiffletrees, and flexible connections passing through the guiding means and connected with the whiffletrees and with the equalizing levers.

2. In a draft equalizer for cultivators, the combination with a cultivator frame, and arches slidably mounted on the cultivator frame and movable transversely thereof, said arches being composed of sides and top connecting portions, of transversely disposed equalizing levers provided with pivots mounted on the top connecting portions of the arches and carried by the latter, inclined braces extending from the pivots to the outer sides of the arches, guiding means also carried by the lower ends of the sides of the same, whiffletrees, and flexible connections passed through the guiding means and connected with the whiffletrees and with the levers.

3. In a draft equalizer for cultivators, the combination with a frame, and plow beams, of pivotally mounted laterally movable members, guiding means carried by the members, flexible connections operating in the guiding means, equalizing levers connected with the flexible connections, and whiffletrees also connected with the flexible connections.

4. In a draft equalizer for cultivators, the combination with a frame, and pivotally mounted plow beams, of pivot members connected to the plow beams in rear of their pivotal points and extending in advance of said pivotal points and having guiding means at the front, flexible connections operating in the guiding means, equalizing levers connected with the flexible connections, and whiffletrees also connected with the latter.

5. In a draft equalizer for cultivators, the combination with a frame, and pivotally mounted plow beams, of laterally movable members pivoted at their rear ends to the plow beams and extending in advance of the pivots thereof, guide pulleys or sheaves mounted on the said members at the front ends thereof, flexible connections arranged on the guide pulleys, equalizing means connected with the flexible connections, and whiffletrees also connected with the latter.

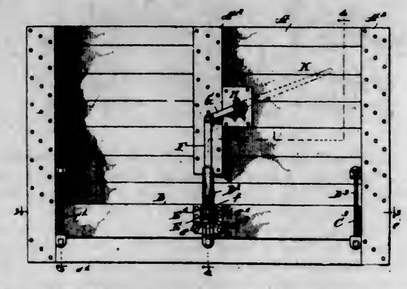
[Claims 6 to 8 not printed in the Gazette.]

872,785. GRAIN-DOOR FOR CARS. THOMAS F. BARTON, Chicago, Ill. Filed Mar. 1, 1907. Serial No. 360,017.

1. The combination with a car grain door of a vertically movable wicket located on the inner surface of the door and controlling an opening therethrough, pairs of guides secured to the outer and inner surfaces of said door between which said wicket is adapted to slide, and means extending to the ontside of the car door for raising said wicket to uncover the opening through the door.

2. The combination with a car grain door of a vertically movable wicket located on the inner surface of the

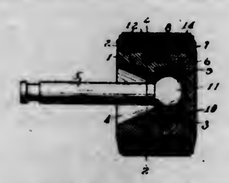
door and controlling an opening therethrough, a vertical guide secured to the inner surface of the car door between which and the inner surface of the door said wicket is adapted to slide, a saddle secured to the inner surface of said wicket and extending around said vertical guide, a link pivotally connected at its lower end to said saddle, an oscillatory stub shaft extending through said door, a crank arm fixed upon the inner end of said shaft to which the upper end of said link is pivotally connected, and a lever fixed to the outer end of said shaft for raising said wicket to uncover the opening through said door.



3. The combination with a car grain door of a vertically movable wicket located on the inner surface of the door and controlling an opening therethrough, guides secured to the outer surface of said door and off-set inwardly within said opening to form guide surfaces for said wicket flush with the inner surface of said door, coöperating guides secured to the inner surface of said door, and means extending to the outside of the car door for raising said wicket to uncover the opening through the door.

4. The combination with a car grain door of a vertically movable wicket located on the inner surface of the door and controlling an opening therethrough, guides secured to the outer surface of said door and off-set inwardly within said opening to form guide surfaces for said wicket flush with the inner surface of said door, coöperating guides secured to the inner surface of said door, a saddle secured to the inner surface of said wicket extending over the central inner guide, a link pivotally connected at its lower end to said saddle, an oscillatory stub shaft extending through said door, a crank arm fixed upon the inner end of said shaft to which the upper end of said link is pivotally connected and a lever fixed to the outer end of said shaft for raising said wicket to uncover the opening of said door.

872,786. PISTON. EDWIN H. BEAZELL, Canonsburg, Pa. Filed Mar. 20, 1907. Serial No. 363,374.

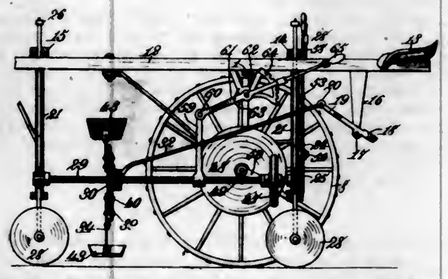


1. A piston comprising cylindrical members provided with peripheral flanges and with recesses for bearing plates, packing rings on the peripheries of said members, bearing plates in said recesses, and means for securing said members together for clamping the packing rings between said flanges and clamping said bearing plates in their recesses, substantially as described.

2. A piston comprising cylindrical members provided with peripheral flanges and with recesses for bearing plates, a series of split fiber packing-rings on the peripheries of said members, bearing plates in said recesses, means for securing said members together for clamping the series of rings between said flanges and simultaneously clamping said bearing plates in their recesses, and a common means for securing said packing rings in position and positively locking said cylindrical members in their secured position, substantially as described.

3. A piston comprising cylindrical members provided with peripheral flanges, a series of split fiber packing-rings on the peripheries of said members, screw-threaded engaging portions on said members for securing them together and provided with recesses, bearing plates in said recesses and a common means for securing said packing rings in position and positively locking said members against accidentally unscrewing, substantially as described.

872,787. COTTON-CHOPPER. JOHN C. BELL, Cartersville, Ga., assignor of one-half to Nicholas M. Adams, Cartersville, Ga. Filed July 22, 1907. Serial No. 384,936.



1. A cotton chopper comprising a rotatable knife shaft, a plurality of lengthwise and angularly-adjustable knife-carrying arms mounted upon the shaft and rotated thereby, a knife secured to the arms, means for adjusting said arms longitudinally of the shaft at the rotation of the knives, a driving disk, an operating shaft therefor, a driven disk mounted upon said rotatable knife shaft and adapted to engage with the driving disk, and a radius bar connected with said operating shaft and with said driven disk for maintaining the driven disk permanently at a predetermined position with respect to the axis of the driving shaft.

2. A cotton chopper comprising a rotatable knife shaft, a plurality of lengthwise and angularly adjustable knife-carrying arms mounted upon the shaft and rotated thereby, a knife secured to the arms, means for adjusting said arms longitudinally of the shaft during the rotation of the knives, a driving disk, an operating shaft therefor, a driven disk mounted upon said rotatable knife shaft and adapted to engage with the driving disk, a radius bar connected with said operating shaft and with said driven disk for maintaining the driven disk permanently at a predetermined position with respect to the axis of the driving shaft, and means engaging with the rear end of said knife shaft for shifting the driven disk out of engagement with the driving disk and causing thereby the shifting of the driving disk upon the knife shaft.

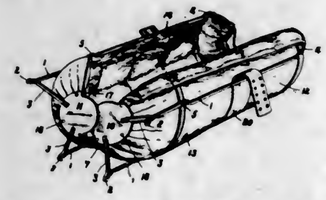
3. A cotton chopper comprising a rotatable knife shaft, a plurality of knives carried and rotated by said shaft, means for longitudinally adjusting said knives upon said shaft during the operation of the knives, a longitudinally slidable rotatable disk mounted upon and engaging with the said shaft for operating it, and a driving disk engaging with said driven disk for rotating it means for elevating said shaft, and means connected with the driven disk and with said shaft for retaining the driven disk at the same distance from the axis of the driving disk when the shaft is elevated.

4. A cotton chopper comprising a rotatable knife shaft, a plurality of length-wise and angularly adjustable knife carrying arms mounted upon the shaft and rotated thereby, knives secured to the arms, means for adjusting said arms longitudinally of the shaft during the rotation of the knives, a longitudinally slidable and rotatable disk mounted upon and engaging with the said shaft for operating it, a driving disk engaging with said driven disk for rotating it means for elevating said shaft, and means connected with the driven disk and with said shaft for retaining the driven disk at the same distance from the axis of the driving disk when the shaft is elevated.

5. A cotton chopper comprising a rotatable knife shaft, a plurality of knives carried and rotated by said shaft, means for longitudinally adjusting said knives upon said shaft during the operation of the knives, and a link and lever mechanism connected with said shaft for vertically adjusting it.

[Claims 6 to 18 not printed in the Gazette.]

872,788. BANANA-CASE. WILLIAM BELL, Montreal, Quebec, Canada. Filed Jan. 21, 1907. Serial No. 353,315.



1. A banana case, comprising split end rings having their portions hinged together and fastening means secured to their free ends and longitudinal bars joining said end rings, and a lining extending beyond said rings at each end thereof and padded throughout to the full extent of the inclosing portion and having unpadded strips at the ends thereof drawn in and suitably fastened, and means intermediate of its length for gathering said padded portion about the bunch of bananas and holding it securely thereto, substantially as described.

2. A banana case, comprising a skeleton frame in two parts formed of uprights having feet at the lower end thereof and arms extending inwardly above said feet and sections of bands hinged together at one end and having fastenings at the free ends, a pair of disks secured respectively to the arms at the lower ends of said uprights, quilted linings secured to said bands and drawn in at the lower end to said disks, and means for drawing said lining together at the upper end, substantially as described.

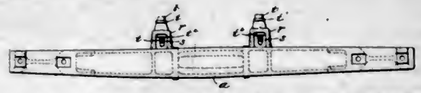
3. A banana case, comprising a skeleton frame divided vertically into parts, said parts being hinged together and formed of upright parts standing on feet from which arms extend inwardly, said uprights having inward bends at the top ends and toward the lower ends, and bands in parts secured to said uprights at said bends and hinged together to join the parts of the frame, a pair of disks rigidly secured to the inwardly extending arms from said uprights, a quilted lining secured to said bands and drawn inwardly at the lower end and secured to said disks, means for drawing the upper end of said lining together, and a belt adjustable as to length encircling said lining inside of said uprights, substantially as described.

872,789. ATTACHMENT FOR DESK-DRAWERS. HERMAN BELLMER, Brooklyn, N. Y. Filed July 22, 1907. Serial No. 384,928.



A device for holding bills, papers, etc., comprising a drawer, a resilient bail-shaped wire having portions thereof normally held by the resiliency in the wire against the opposite side walls of the drawer, each end of the wire being bent to form oppositely disposed hooks, headed pins rising from the bottom of the drawer and adapted to be engaged by said hooked ends, and a leaf spring fastened to the drawer intermediate said pins, as set forth.

872,790. SIDE FRAME FOR CAR-TRUCKS. EDWIN H. BENNERS, Elizabeth, N. J. Filed June 25, 1907. Serial No. 380,673.



1. In a device of the class described, a top member provided with depending flanges from which extend reëntering flanges, two members extending at an angle therefrom, a base member, and uprights connecting the said members.

2. In a device of the class described, a top member, uprights depending therefrom, said uprights being provided with flanges, the said flanges being wider where the uprights join the top member than they are at the points intermediate the length of said uprights.

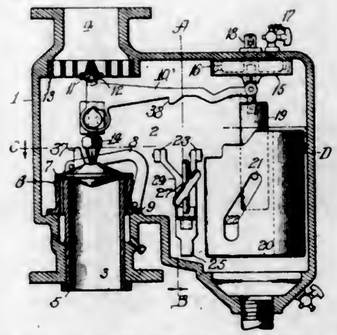
3. In a device of the class described, a top member, uprights extending therefrom, said uprights being provided with flanges, the said flanges being wider where the uprights join the top member than they are at the points intermediate the length of said uprights and hangers integral with said uprights and below the top member.

4. In a device of the class described, a top member, a skeletonized base member, uprights connecting the top member with the base member, and a re-inforcing member secured to the base member and each of the uprights.

5. In a device of the class described, a top member, inclined members extending therefrom, a skeletonized base member, uprights connecting the top member with the base member, and a re-inforcing member secured to the base member and each of the uprights.

[Claims 6 to 10 not printed in the Gazette.]

872,791. FIRE-EXTINGUISHER VALVE. ALBERT BLAUVELT, Chicago, Ill. Filed July 20, 1903. Serial No. 166,327.



1. An automatic valve for sprinkler systems comprising a valve casing having an inlet communicating with the water supply and with an outlet communicating with the system, said inlet and outlet being in substantial alinement, a valve governing said inlet, an operating lever which, when in normal position, is arranged to hold the valve seated, means arranged beyond the line of passage of the water and laterally of the inlet and outlet and controlled by the air pressure of the system to hold such lever in normal position, and a weight acting on such lever in opposition to such air pressure and operating, when permitted by the release of the air pressure, to positively move the operating lever and thereby open the valve.

2. An automatic valve for sprinkler systems compris-

ing a valve casing having a pressure chamber communicating with the system and with the water supply, a valve governing the water supply, an operating lever when in normal position arranged to hold the valve seated, a flanged disk connected to one end of said lever, a weight also connected thereto, said disk being arranged to seat upon an interior wall of the casing, and means for exhausting the pressure from the interior of such disk.

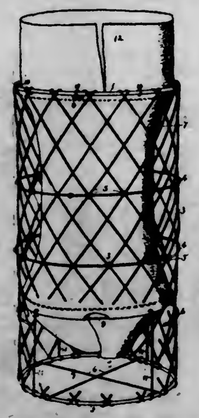
3. An automatic valve for sprinkler systems comprising a valve casing communicating with the system and with the water supply, a valve governing the water supply, an operating lever when in normal position arranged to hold the valve seated, a flanged disk connected to one end of said lever and arranged to seat upon an interior wall of the casing, a weight also connected thereto, a pet cock for exhausting the pressure from the interior of such disk, and a ball check for maintaining such interior of the disk at atmospheric pressure.

4. An automatic valve for sprinkler systems comprising a valve casing communicating with the system and with the water supply, a valve governing the water supply, an operating lever when in normal position arranged to hold the valve seated, and a resetting device governed by the air pressure of the system for holding the operating lever in set or normal position but arranged to be automatically withdrawn from such service when the system is charged with air pressure.

5. An automatic valve for sprinkler systems comprising a valve casing communicating with the system and with the water supply, a valve governing the water supply, an operating lever when in normal position arranged to hold the valve seated, and a resetting device consisting of a pivoted bridge, an adjustable rod carried thereby and adapted, in set position, to support the operating lever, and fluid pressure actuated mechanism controlled by the pressure of the system for holding such resetting device in set position.

[Claims 6 to 10 not printed in the Gazette.]

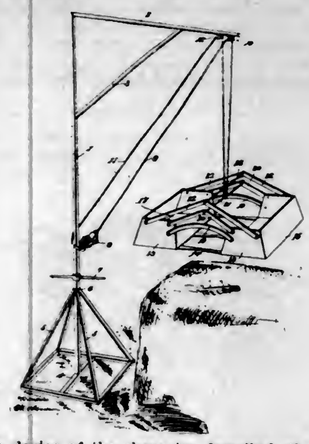
872,792. CRATE. WALTER V. BOYLE, Rockford, Ill. Filed Apr. 15, 1907. Serial No. 368,212.



A banana crate comprising an outer wire frame, and a sack provided with top and bottom rings suspended within the wire frame by means of rings or links attached to the top ring of the sack and to the top portion of the wire frame and rods attached to the bottom portion of the wire frame and to the lower ring of the sack.

872,793. LOADING MECHANISM FOR MANURE, HAY, AND THE LIKE. AARON W. BRODEEN, Big Lake, Minn. Filed May 11, 1907. Serial No. 373,111.

1. In a device of the character described, the combination of a grab comprising complemental jaws, a pair of link members having their inner ends pivotally connected while the outer ends are applied to the inner portions of the jaws, a second pair of link members having their inner ends pivotally connected while their outer ends are applied to the outer portions of the jaws, and hoisting cables coöperating with the two pairs of link members to elevate the grab and operate the jaws thereof.



2. In a device of the character described, the combination of a grab comprising complemental jaws, a bar joining the jaws and pivotally connected thereto, a pair of link members having their inner ends pivotally connected while their outer ends are applied to the inner portions of the jaws, a second pair of link members having their inner ends pivotally connected while their outer ends are applied to the outer portions of the jaws, and hoisting cables coöperating with the two pairs of link members to elevate the grab and operate the jaws thereof.

3. In a device of the character described, the combination of a grab comprising complemental jaws, coöperating teeth carried by the adjacent edges of the jaws, a bar connecting the jaws and pivoted thereto, pivoted link members applied to the jaws, and hoisting means coöperating with the link members to elevate the grab and to swing the complemental jaws to throw the teeth toward or away from each other.

4. In a device of the character described, the combination of a grab, comprising complemental jaws, pivoted link members applied to the inner portion of the jaws, a second set of pivoted link members applied to the outer portion of the jaws, a hoisting cable having a slidable connection with the first mentioned set of link members and a positive connection with the second set of link members for holding the jaws in an operative position, and a cable coöperating with the second set of link members to release the jaws.

5. In a device of the character described, the combination of a grab, comprising complemental jaws, pivoted link members applied to the inner portion of the jaws at opposite ends of the grab, a cross bar connecting the link members, a second set of link members applied to the outer portion of the complemental jaws at each end of the grab, a second cross bar connecting the second mentioned link members, a hoisting cable loosely connected to the first cross bar for holding the jaws in a closed position, and a cable applied to the second cross bar for releasing the jaws.

872,794. METHOD OF FORMING PLATE-HIGH LINOTYPE PRINTING-PLATES. EDWIN C. BRUEN, Brooklyn, N. Y., assignor of one-fourth to Norman W. Henley, New York, N. Y. Filed Apr. 26, 1907. Serial No. 370,355.

1. The herein described method of forming a "plate-high" printing plate consisting in first casting a series of linotype-bars "plate-high" then binding said type-bars together and then uniting the same by fusing, substantially as set forth.



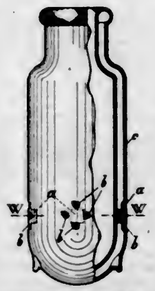
2. The herein described method of forming a "plate-high" printing plate consisting in first casting a series of linotype-bars "plate-high" then binding said type-bars together, and then fusing the binding agent to unite said bars, substantially as described.

3. The herein described method of forming a "plate-high" printing plate consisting in first casting a plurality of linotype-bars "plate-high" then binding said bars together as the latter are delivered from the machine and assembled, and then fusing the binding agent to unite said bars, substantially as set forth.

4. The herein described method of forming a "plate-high" printing plate consisting in first casting a plurality of linotype-bars "plate-high" with beveled edges having a semi-circular groove therein, then inserting a fusible soldering wire in said groove to bind the bars together and then fusing said wire to unite said bars, substantially as set forth.

5. A "plate-high" printing plate consisting of "plate-high" linotype bars provided with beveled edges having a semi-circular groove therein and a binding and soldering wire fused in said groove substantially as described.

872,795. DOUBLE-WALLED VESSEL WITH A SPACE FOR A VACUUM BETWEEN THE WALLS. REINHOLD BURGER, Berlin, Germany, assignor, by mesne assignments, to American Thermos Bottle Company, New York, N. Y., a Corporation of Maine. Filed Oct. 23, 1906. Serial No. 340,140.



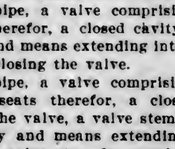
1. A vessel comprising in combination, double walls of glass united with each other only at the mouth of said vessel and inclosing between them a rarefied space, an unevenness on the surface of one of said walls within said space, and a stiffening body disposed between said walls and engaging and kept in position by said unevenness, substantially as and for the purpose set forth.

2. A vessel, comprising in combination, double walls of glass united with each other only at the mouth of said vessel and inclosing between them a rarefied space, unevennesses provided on the adjacent surfaces of said walls at about the same height within said space, and stiffening bodies disposed between said walls and engaging the unevenesses referred to and kept in position thereby, substantially as set forth.

3. A vessel, comprising in combination, double walls of glass united with each other only at the mouth of said vessel and inclosing between them a rarefied space, a projection on the surface of one of said walls within said space, and a stiffening body disposed between said walls and engaging and kept in position by said projection, substantially as set forth.

4. A vessel, comprising in combination, double walls of glass united with each other at the mouth of said vessel and inclosing a rarefied space between them, and projections on the surfaces of said walls at about the same height within said space, and separate stiffening bodies disposed between said walls and each engaging and kept in position by a projection, substantially as set forth.

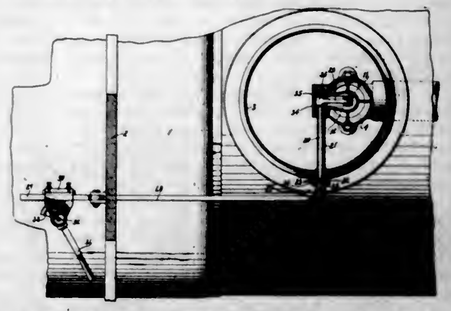
872,796. STUD MEMBER OF STUD-AND-SOCKET FASTENING DEVICES. FRED S. CARR, Malden, Mass. Filed Nov. 3, 1906. Serial No. 341,841.



1. In a stud and socket fastening device, a stud member having inclined sides or faces at its outer portion, and diagonal or undercut grooves in its sides for the reception of socket jaws, the grooves extending inward from said inclined faces, and being arranged so that a direct outward pull on jaws in said grooves will force the jaws toward each other, and thus increase the firmness of their engagement with the stud member.

2. A fastening device comprising a socket member having separable resilient jaws normally held yieldingly in their operative position, and a stud member having inclined sides or faces at its outer portion, and having diagonal or undercut grooves for the reception of said jaws extending inward from said inclined faces, and arranged so that a direct outward pull on the jaws will press them inwardly toward each other, and thus increase the firmness of their engagement with the stud member.

872,797. THROTTLE-VALVE. JOHN S. CHAMBERS, Wilmington, N. C. Filed Mar. 31, 1906, Serial No. 309,023. Renewed May 28, 1907. Serial No. 376,207.



1. In a standpipe, a valve, its seat, a closed cavity in the standpipe below the valve and means extending into the closed cavity for opening and closing the valve.

2. In a standpipe, a valve comprising a plurality of members, seats therefor, a closed cavity in the standpipe below the valve and means extending into the closed cavity for opening and closing the valve.

3. In a standpipe, a valve comprising a plurality of valve members, seats therefor, a closed cavity in the standpipe below the valve, a valve stem extended into the said closed cavity and means extending into the cavity connected to said valve stem for opening and closing the valve.

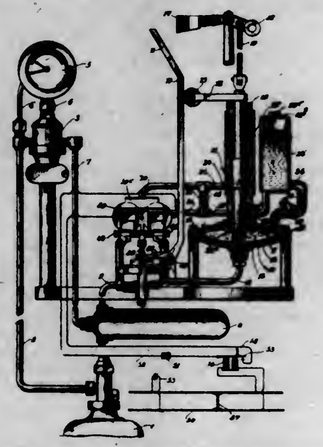
4. In a standpipe, a valve comprising outer, intermediate and inner valve members, seats therefor, a closed cavity, a valve stem extended into said cavity and means extending into the cavity connected to said valve stem for opening and closing the valve.

5. In a standpipe, a valve comprising a plurality of valve members, seats therefor, a closed cavity in the standpipe below the valve, a valve stem extending from one of

the valve members into the closed cavity, a connecting piece having a sliding movement in the cavity and operated by the valve stem and means extending into said cavity connected to the valve stem for opening and closing the valve.

[Claims 6 to 20 not printed in the Gazette.]

872,798. SIGNALING SYSTEM. CLARENCE W. COLEMAN, Westfield, N. J., assignor to The Hall Signal Company, a Corporation of Maine. Filed May 1, 1906. Serial No. 314,625.



1. In a railway signaling system, the combination of a signal, a tank for liquefied gas, piston mechanism acted upon by gas pressure comprising a plurality of pistons for actuating said signal, and means for varying the volume swept through by the piston mechanism which is subjected to gas pressure, during a portion of the stroke of the said piston mechanism.

2. In a railway signaling system, the combination of a signal, a tank for liquefied gas, piston mechanism subjected to gas pressure for actuating said signal, and means for varying the area of the piston mechanism subjected to gas pressure while the pressure of the gas acting on said mechanism is varied.

3. In a railway signaling system, the combination of a signal normally biased to danger, a local tank for liquefied gas, piston mechanism subjected to gas pressure for actuating said signal, and means for increasing the area of the piston mechanism subjected to gas pressure while the pressure is diminished.

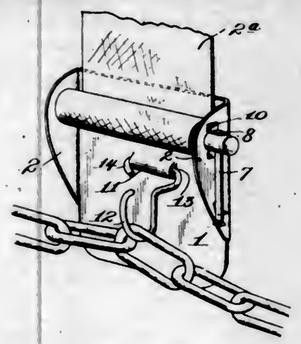
4. In a railway signaling system, the combination of a signal, a plurality of pistons for actuating said signal, a source of liquefied gas, means for admitting gas to actuate said pistons, and means for cutting off the supply of gas at a predetermined point and allowing the gas to expand.

5. In a railway signaling system, the combination of a signal, a plurality of pistons for actuating said signal, a source of liquefied gas, liquid between the gas and the piston, means for admitting gas to transmit pressure to said liquid, means for cutting off the supply of gas at a predetermined point and allowing the gas to expand.

[Claims 6 to 17 not printed in the Gazette.]

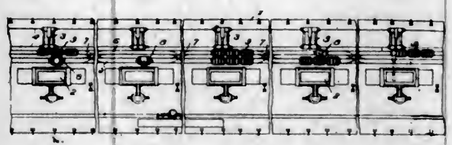
872,799. BACK-BAND BUCKLE. JOHN F. CONNER, Teckville, Miss. Filed July 18, 1907. Serial No. 384,397.

1. A back-band buckle comprising a supporting plate provided with a pair of forwardly-projecting ears, a headed reel shaft journaled in said ears and projecting from one side of one of said ears, said shaft having an elongated slot to receive the back-band, means extending through the shaft and associating with the head thereof for preventing lateral movement of the shaft, a lever arm extending through the projecting end of the shaft, a hook attached to the plate, and means projecting laterally from one of said ears and associating with said arm for arresting rotative movement of the reel shaft.



2. A back-band buckle comprising a supporting plate, a reel shaft journaled in said plate and adapted to adjustably connect the back-band thereto, said shaft being of a length greater than the width of the plate, said shaft further having one end provided with a head, means extending through the projecting end and associating with the head of the shaft to prevent lateral movement of the latter, a lever arm extending through the projecting end of the shaft for rotating it, a hook coupled to the plate, and means carried by the plate and associating with said lever arm for arresting the rotative movement of the shaft.

872,800. OPEN-HEARTH STEEL PLANT. FRANK H. CROCKARD, Birmingham, Ala., assignor of one-half to Alexander Laughlin, Sewickley, Pa. Filed Nov. 10, 1906. Serial No. 342,860.

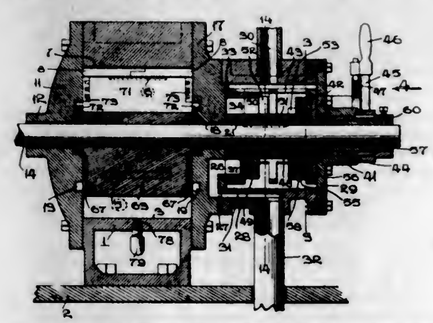


1. The combination, in an open hearth steel plant, of a series of furnaces, a charging machine movable in proximity to said furnaces, conveyers for charging boxes, conveyers for hot metal, a plurality of tracks for such conveyers located between the line of travel of said charging machine and the furnaces, and means connecting said tracks for transferring conveyers from one track to another.

2. The combination, in an open hearth steel plant, of a series of furnaces, a charging machine movable in proximity to said furnaces, conveyers for charging boxes, conveyers for hot metal, a plurality of tracks for such conveyers located between the line of travel of said charging machine and the furnaces, and switch-rail-connections between said tracks located between all of the several furnaces.

3. In an open hearth steel plant, the combination of a series of furnaces, a charging machine movable in proximity to said furnaces, charging box cars for carrying metal to said furnaces, a plurality of tracks for said cars located between said charging machine and said furnaces, and switch-rail connections between said tracks located between all of the several furnaces, said charging machine being constructed to deliver boxes from cars on either track into the furnaces.

872,801. ROTARY ENGINE. ALBIN C. EEK and ADOLF F. CEDERQUIST, St. Louis, Mo. Filed Apr. 23, 1907. Serial No. 369,884.



1. In a rotary engine, a cylinder, a rotary piston eccentrically positioned and arranged for rotation in the cylinder, the edges of the periphery of the piston being cut away, spring pressed packing plates arranged on the sides of the piston, lugs integral with the edges of the plates, which lugs project over the cut away edges of the periphery of the piston, a plurality of radially arranged sliding plates carried by the piston, and spring pressed packing strips arranged in the outer ends of said plates.

2. In a rotary engine, a cylinder, a rotary piston eccentrically positioned and arranged for rotation in the cylinder, the edges of the periphery of the piston being cut away, spring pressed packing plates arranged on the sides of the piston, lugs integral with the edges of the plates, which lugs project over the cut away edges of the periphery of the piston, a plurality of radially arranged sliding plates carried by the piston, spring pressed packing strips arranged in the outer ends of said plates, and spring pressed packing strips arranged on the sides of said plates.

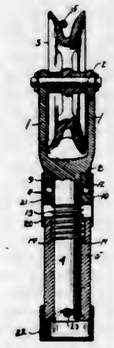
3. In a rotary engine, a cylinder, a rotary piston eccentrically positioned and arranged for rotation in the cylinder, the edges of the periphery of the piston being cut away, spring pressed packing plates arranged on the sides of the piston, lugs integral with the edges of the plates, which lugs project over the cut away edges of the periphery of the piston, a plurality of radially arranged sliding plates carried by the piston, spring pressed packing strips arranged in the outer ends of said plates, spring pressed packing strips arranged on the sides of said plates, and rollers journaled upon the ends of the plates which engage in grooves formed in the heads of the cylinder for causing the plates to slide in the cylinder.

4. In a rotary engine, a cylinder, a shaft journaled therein, a rotary piston fixed on the shaft within the cylinder, the edges of the periphery of the piston being cut away, spring pressed packing plates arranged on the sides of the piston, lugs integral with the edges of the plates, which lugs project over the cut away edges of the periphery of the piston; plates arranged to slide in the rotary piston, spring pressed packing strips arranged in the outer ends of said plates, and spring pressed packing strips arranged on the sides of said plates; a valve housing, a throttle valve plate arranged for operation in the valve housing and constructed to direct the flow of fluid pressure to the cylinder, and means arranged on the exterior of the valve housing and connected to the valve plate for regulating the position thereof.

5. In a rotary engine, a cylinder, a shaft journaled therein, a rotary piston fixed on the shaft within the cylinder, the edges of the periphery of the piston being cut away, spring pressed packing plates arranged on the sides of the piston, lugs integral with the edges of the plates, which lugs project over the cut away edges of the periphery of the piston; plates arranged to slide in the rotary piston, spring pressed packing strips arranged in the outer ends of said plates, and spring pressed packing strips arranged on the sides of said plates; a valve housing, a throttle valve plate arranged for operation in the valve housing and constructed to direct the flow of fluid pressure to the cylinder, means arranged on the exterior of the valve housing and connected to the valve plate for regulating the position thereof, and a disk fixed on the shaft within the valve housing for regulating the supply of fluid pressure to the throttle valve.

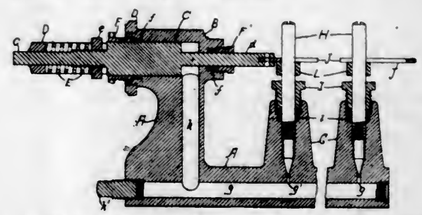
[Claim 6 not printed in the Gazette.]

872,802. TROLLEY. GUSTAV EHMANN, Canton, Ohio. Filed June 19, 1906. Serial No. 322,480.



In a trolley of the class described, the combination of a harp and wheel, a stem provided with means at its bottom or lower end to limit its upward movement, a barrel provided with a cam wall, a housing adapted to inclose the bottom or lower end of the barrel and harp stem, rings interposed between the barrel and harp and a spring located within the barrel below the lowermost ring and a ring secured to one of the interposed rings, and adapted to inclose the spring and extended over the joint between the interposed rings, substantially as and for the purpose specified.

872,803. DISTRIBUTER FOR FORCE-FEED LUBRICATORS. ROLAND H. ELKINS, Sioux City, Iowa. Filed Nov. 15, 1906. Serial No. 343,648.



1. In an oil distributer, an outer shell having communication with the supply main of a lubricator, a plug therein against which the lubricant presses, a spring to sustain the pressure of the lubricant, pipes leading from the supply main to the machinery to be lubricated, means for closing said pipes and means operated by said plug for opening the same, substantially as described.

2. In an oil distributer, an outer shell having communication with the supply main of a lubricator, an operating plug therein against which the lubricant presses, a spring to sustain the pressure of the lubricant, shells leading from the lubricator into which the lubricant passes, plugs seated in the said shells to arrest the flow of the lubricant, levers connecting said plugs with the operating plug for opening and closing the same, and pipes leading from the shells to the machinery to be lubricated, substantially as described.

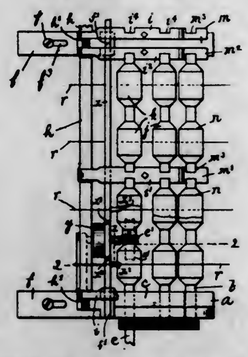
3. An oil distributer consisting of an outer shell having communication with the supply main of a lubricator, an operating plug therein against which the lubricant presses,

a spring on said plug to sustain the pressure of the lubricant, shells connected with the supply main into which the lubricant passes, plugs screwed into the interior of the shells to arrest the flow of the lubricant, a lever connecting said plugs with the operating plug for turning said plugs and regulating the openings in said shells, and pipes leading from the shells to the machinery to be lubricated, substantially as described.

4. An oil distributer consisting of an outer shell leading from the supply main of a lubricator, an operating plug therein against which the lubricant presses, a spring on said plug to sustain the pressure of the lubricant, shells having direct communication with the lubricator, plugs screwed into the interior of the said shells to arrest the flow of the lubricant, levers secured to said operating plugs and attached to said plugs for turning them in their seats, means for adjusting the length of said levers for regulating the extent to which said plugs are turned, and pipes leading from the shells to the machinery, substantially as described.

5. An oil distributer consisting of an outer shell leading from the supply main of a lubricator, an operating plug therein against which the lubricant presses, a spring on said plug to sustain the pressure of the lubricant, shells having communication with the lubricator, plugs screwed into the interior of the said shells to arrest the flow of the lubricant, a bar having a central slot inclosing the stems of said plugs and secured to the operating plug, arms secured at right angles to said bar and having central slots therein, arms secured to said plugs underneath said first arms and having correspondingly central slots therein, bolts for adjustment in said slots to secure said arms together, and pipes leading from the shells to the machinery to be lubricated, substantially as described.

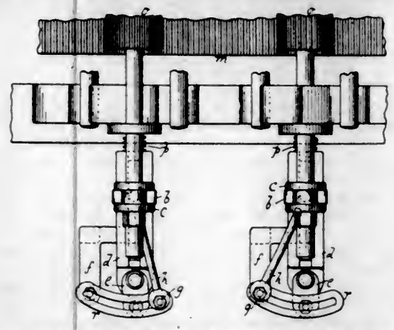
872,804. DRAWING MECHANISM FOR SPINNING-MACHINES. GEORGE A. FARLEY, Lawrence, Mass. Filed May 2, 1907. Serial No. 371,402.



1. The combination of a support having a parallel series of upper and lower drawing rolls, bearings in which said lower rolls are mounted, and means for driving said lower rolls, cap-bars for holding the upper rolls in position over said lower rolls, said bars having extensible portions between said upper rolls to permit relative transverse adjustment thereof, a thread guiding rod, and brackets to which said cap-bars are pivotally connected and in which said guiding rod is slidably mounted, said brackets being mounted on said support and having an adjustable connection therewith permitting adjustment thereof transversely of the rolls, substantially as described.

2. The combination of a support having a parallel series of upper and lower drawing rolls, bearings in which said lower rolls are mounted, and means for driving said lower rolls, cap-bars for holding the upper rolls in position over said lower rolls, said bars having extensible portions between said upper rolls to permit relative transverse adjustment thereof, a thread guiding rod, brackets to which said cap-bars are pivotally connected and in which said guiding rod is slidably mounted, said brackets being mounted on said support and having an adjustable connection therewith permitting adjustment thereof transversely of the rolls, and means for reciprocating said rod permitting transverse adjustment thereof, substantially as described.

872,805. INKING APPARATUS FOR PRINTING-PRESSES. GEORGE P. FENNER, New London, Conn. Filed Aug. 16, 1907. Serial No. 388,899.

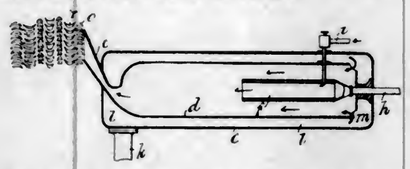


1. A device for regulating the vibration of an ink roller which comprises a vibrator nut or screw, a lever piece vibrated by the nut and a link for conveying motion from the lever piece to the roller, said link being adjustable to coincide with the fulcrum of the lever to eliminate vibration.

2. A device for regulating the vibration of an ink roller which comprises a vibrator nut or screw, a slotted lever actuated by the nut, and a link for connecting the lever and roller, said link having its connection adjustable along the slot of the lever to coincide with or be out of register with the fulcrum.

3. A device for regulating the vibration of an ink roller which comprises a vibrator nut or screw, a lever piece vibrated by the nut, a fixed bracket, a fulcrum for the lever supported on the bracket, and a link for conveying motion from the lever piece to the roller, said link being adjustable to coincide with the fulcrum of the lever to eliminate vibration.

872,806. ELASTIC-FLUID TURBINE-ENGINE. SEBASTIAN ZIANI DE FERRANTI, Hampstead, London, England. Filed June 9, 1904. Serial No. 211,838.



1. In a turbine installation, the combination of a source of condensable elastic fluid under pressure; a combustion chamber connected to said source; means other than said combustion chamber for heating said source; means for introducing into said chamber fuel and oxidizing means, the combustion of said fuel acting to superheat said fluid to a high temperature; one or more de Laval type nozzles issuing from said chamber and proportioned to expand said fluid to exhaust pressure in a single stage together with a multiple impact turbine receiving the fluid from said nozzle or nozzles.

2. In a turbine installation, the combination of a source of condensable elastic fluid under pressure; a combustion chamber connected to said source; means for introducing into said chamber fuel and oxidizing means; the combustion of said fuel acting to superheat said fluid to a high temperature; one or more de Laval type nozzles issuing from said chamber and proportioned to expand said fluid to exhaust pressure in a single stage together with a multiple impact turbine receiving the fluid from said nozzle and means for utilizing heat in the exhaust therefrom, exhaust heat acting to assist in the production of said elastic fluid.

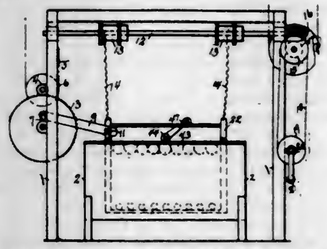
3. In a turbine installation, the combination with a source of supply of condensable elastic fluid of an internal combustion superheater connected to said source of supply; means other than said combustion chamber for heating said source; a multiple impact turbine and one or more single stage expansion nozzles interposed between the superheater and turbine.

4. In a turbine installation, the combination with a source of supply of condensable elastic fluid of an internal combustion superheater arranged to receive the condensable fluid therefrom, means other than said combustion chamber for heating said source, a multiple impact turbine and one or more single stage expansion nozzles interposed between the superheater and turbine together with means for utilizing heat in the exhaust from said turbine, substantially as described.

5. In a turbine installation, the combination of a boiler; an external superheater connected therewith; an internal combustion superheater connected with said external superheater; one or more expansion nozzles connected with said internal combustion superheater and a multiple impact turbine receiving the fluid from said nozzles.

[Claims 6 to 15 not printed in the Gazette.]

872,807. DYEING-MACHINE. WILLIAM H. FLETCHER, Paterson, N. J. Filed June 14, 1906. Serial No. 321,698.

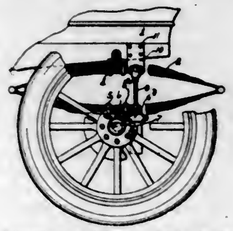


In a dyeing machine, the frame for supporting the reels and rollers on which the goods are, the top reels supported at one end in the frame, and the other end supported by the slotted piece 26 held in place by catches 31, said reels consisting of a center bar or tube, the rods 40 and the heads 41 and having gears on the one end of the said reels, in connection with the bottom rolls, consisting of a tube, or rod with another tube or shell on said rod, the said bottom rolls pivoting on a rod 25, the rod being secured to the frame 1 by the studs 54; the piece 27 for holding the bottom rollers in place, the buttons 34 for securing the said retaining piece 27 in place and the guard rods 36, 37, 38 and 39 for the purpose of keeping the skeins from the ends of the rollers and to prevent the goods from catching or rubbing as described and set forth in the drawings and specifications.

872,808. SHOCK-ABSORBING DEVICE FOR VEHICLES. CLAUD H. FOSTER, Cleveland, Ohio. Filed Dec. 14, 1905. Serial No. 291,704.

1. The combination, with the body and axle of a vehicle, of a dashpot comprising a cylinder supported by the axle and a piston therein, a rod for said piston having at its upper end a bracket, a pin carried by said bracket and a plate or member carried by said body and provided with a slot for the reception of said pin, said slot being elongated longitudinally of the vehicle, substantially as specified.

2. The combination, with the body and axle of a vehicle, of a dashpot comprising a cylinder and a piston, a rod for said piston, a pin carried by the upper end of said rod, a plate or member carried by said body and having an elongated slot for said pin, and a collar surrounding said cylinder and having an extension adapted to be operatively secured to said axle, substantially as specified.



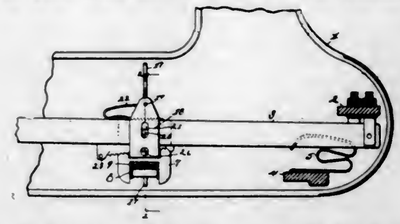
3. The combination, with a vehicle body and axle, of a dash pot comprising a piston connected to one of the aforesaid vehicle members and a cylinder supported by the other member, a piston rod for said piston, said piston having a circular series of perforations arranged concentrically with respect to said piston rod with their outer portions substantially equidistant from said rod, a circular disk on said piston and being of a diameter to extend nearly to the outer portions of said perforations, said disk having an opening therethrough to permit of its application to the piston rod, and a stop on said rod, substantially as specified.

4. The combination, with a vehicle body and axle, of a dashpot comprising a piston connected to one of the aforesaid vehicle members and a cylinder supported by the other member, said piston having a plurality of perforations therethrough, a valve consisting of a disk resting on one face of said piston and adapted to nearly cover the perforated area of the piston, said valve having an opening therethrough to permit of its application to the piston rod, and a stop on said piston rod to limit the separation of the piston and said valve, substantially as specified.

5. The combination, with the body and an axle of a vehicle, of a dashpot comprising a cylinder supported by one of the aforesaid vehicle members, a piston in said cylinder, a piston rod for said piston connected with the other vehicle member, such connection comprising a roller projecting through an elongated slot, substantially as specified.

[Claims 6 to 11 not printed in the Gazette.]

872,809. SPACER-BAR MECHANISM FOR TYPE-WRITING MACHINES. WILLIAM R. FOX, Grand Rapids, Mich. Filed Feb. 1, 1907. Serial No. 355,329.



1. In a typewriter, the combination with the frame of the typewriter of the spacer lever 6; a guide 7 thereon; a universal spacer bar retained within the guide; a rod connecting said bar to the escapement and suitable adjusting means therefor; key levers to the typewriter; an adjustable stop on each key lever, made of a fold of sheet metal and having vertical slots; a pin on the key lever engaging the said slots; a spring for holding said stops upward; and an adjustable wedge with rack teeth, between the underside of the key lever and the adjustable stop for regulating the height of the stop vertically at a

substantially fixed point on the key lever, all co-acting substantially as described and for the purpose specified.

2. In a typewriter, the combination with the spacer lever of a guide 7 thereon; a universal spacer bar formed of a channel of sheet metal; escapement connecting rod 17 screw-threaded at its lower end; the notched screw nut thereon; and a lock for the nut consisting of the spring slide 10 arranged within the channel with its end slotted and curved to pass readily outside the nut, the ends being formed with projections to engage the notches in the nut, co-acting substantially as described and for the purpose specified.

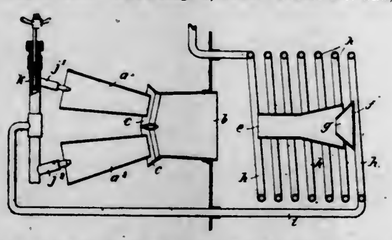
3. In a typewriter, the combination with the spacer lever of a guide 7 thereon; a universal spacer bar formed of a channel of sheet metal; the escapement connecting rod 17 screw-threaded at its lower end; a screw nut thereon; and a lock for the nut, consisting of the spring slide 10 arranged within the channel with its end curved to pass readily outside the nut, co-acting substantially as described and for the purpose specified.

4. In a typewriter, the combination with the spacer lever of a universal spacer bar formed of a channel of sheet metal; the escapement connecting rod 17 screw-threaded at its lower end; the notched screw nut thereon; and a lock for the nut, consisting of the spring slide 10 with its end slotted and curved to pass readily outside the nut, the ends being formed with projections to engage the notches in the nut, co-acting substantially as described and for the purpose specified.

5. In a typewriter, the combination with the spacer lever of a universal spacer bar formed of a channel of sheet metal; the escapement connecting rod 17 screw-threaded at its lower end; the screw nut thereon; and a lock for the nut, consisting of the spring slide 10 with its end curved to pass readily outside the nut, co-acting substantially as described and for the purpose specified.

[Claims 6 to 14 not printed in the Gazette.]

872,810. MULTIPLE HEATING-BURNER FOR VAPORIZED LIQUID COMBUSTIBLES. MAX FRIEDMANN, Vienna, Austria-Hungary, and RICHARD KNOLLER, Pantin, France. Filed Aug. 3, 1906. Serial No. 329,116.

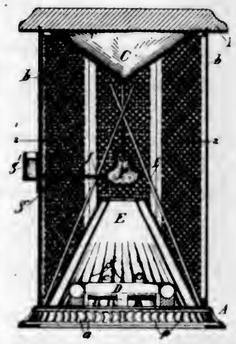


1. In a burner of the class specified, the combination of a combustion chamber, a mixing nozzle projecting into the combustion chamber, a plurality of suction nozzles projecting into the outer end of the mixing nozzle and converging towards each other, means for feeding gaseous fuel to the nozzles and provided with separate branch nozzles individually extending into the said suction nozzles, and a flame divider arranged in advance of the inner end of the mixing nozzle.

2. In a burner of the class specified, the combination of a combustion chamber, a mixing nozzle projecting into the combustion chamber and diametrically reduced towards its outer end, conical suction nozzles having their reduced ends projecting into the mixing nozzle, the suction nozzles opening into the mixing nozzle at its narrowest point where the reduction of pressure in the said mixing nozzle is about the greatest, means for feeding gaseous fuel into the suction nozzles and provided with separate branch nozzles individually projecting into said suction nozzles, and a flame divider arranged in advance of the mixing nozzle.

3. In a burner of the class specified, the combination of a mixing nozzle, a plurality of suction nozzles projecting into the outer end of the mixing nozzle, means for feeding gaseous fuel to the suction nozzles, and a flame divider arranged in advance of the mixing nozzle and comprising a tube having at the end facing the mixing nozzle one or more openings and at the opposite end an impact body having the form of a conical frustum.

872,811. GAS-HEATER. WILLIAM L. GIBSON and JAMES V. ROYAL, Philadelphia, Pa., assignors to The Royal Gas Heating Company, Camden, N. J., a Corporation of New Jersey. Filed Aug. 17, 1906. Serial No. 331,013.



1. As a new article of manufacture, a gas heater consisting of a supporting base, a burner, a substantially conical hollow, ornamental, open-topped casting surrounding the burner, and having in its sides a series of elongated slits extending towards its apex, with an inclosing guard or screen extending around the burner and the casting, substantially as described.

2. The combination in a gas heater, of a supporting base, an inclosing screen or casing thereon having a cover, a burner within the casing, an open topped ornamental casting supported over and around the burner, and a vapor generator supported between said casting and the cover so that the products of combustion directly impinge upon it, substantially as described.

3. The combination in a gas heater, of a supporting base, an inclosing screen or casing thereon, a burner within the casing, a substantially pyramidal, ornamental casting open at the top and supported over and around the burner, a vapor generator supported over said casting, with means for regulating the rate of evaporation from said vapor generator, substantially as described.

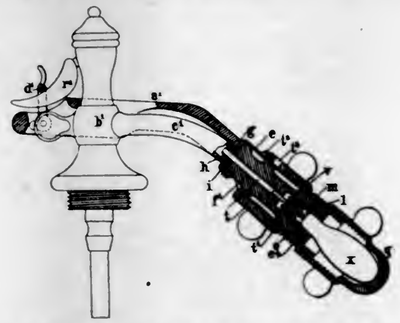
4. The combination in a gas heater, of a base, an inclosed casing thereon, an inverted conical deflector at the top of said casing, a burner supported on the base within the casing, and a water vessel supported within the casing between the burner and the deflector, with a device for adjusting the rate of evaporation from said vessel, substantially as described.

5. The combination in a gas heater, of a supporting base, a burner thereon, a pyramidal ornamental casting having openings in it and open at the top, said casting extending around and over the burner, a tripod on the base, a water container suspended from said tripod, and a screen forming a casing surrounding the burner, the casting and the water container, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

872,812. APPARATUS FOR CHARGING SIPHONS OR SELTZOGENES. PIERRE GIRON, Paris, France. Filed Dec. 27, 1905. Serial No. 293,519.

1. In apparatus for charging siphons and the like, an arm adapted to be slidably secured at the neck of the receptacle to be charged, a catch mounted on said arm to engage the operating lever of the discharge valve of said receptacle, in combination with means to hold the charging vessel and secure its discharge into the discharge spout of the receptacle to be charged, together with means to depress said arm and open the charging vessel by the same operation, substantially as described.

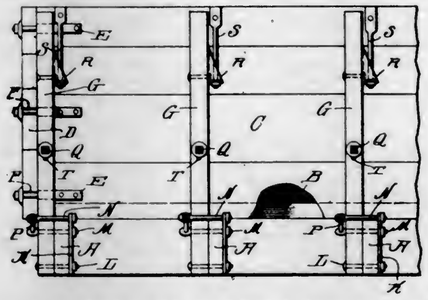


2. In apparatus for charging siphons and the like, an arm adapted to be slidably secured at the neck of the receptacle to be charged, a catch mounted on said arm to engage the operating lever of the discharge valve of said receptacle, in combination with a part having limited and guided movement upon said arm coöperating with a cap to hold a charging vessel, means to secure the discharge of the latter into the discharge spout of the receptacle to be charged, and means to depress said arm and open the charging vessel by the same operation, substantially as described.

3. For charging a siphon or the like, having a discharge valve and a lever for operating said valve, an apparatus of the character described having an arm adapted to be secured at the neck of the siphon, means to hold the charging vessel and secure its discharge into the discharge spout of the siphon, together with means for simultaneously opening the charging vessel and the entrance to the siphon, substantially as described.

4. For charging a siphon or the like having a discharge valve and means for operating the same, an apparatus of the character described having a body part, means for supporting a charging vessel in connection therewith and means for opening the siphon valve and the charging vessel by the same operation so that the latter charges the siphon through the siphon spout, substantially as described.

872,813. KNOCKDOWN TANK. JOSEPH C. HAMES, Goldfield, Nev. Filed Apr. 8, 1907. Serial No. 367,021.

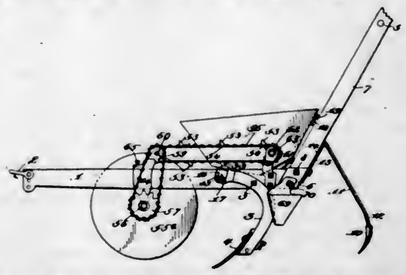


1. A knockdown tank comprising a bottom wall, side walls abutting against opposite edges of the bottom wall, end walls also abutting against opposite edges of the bottom wall and having notches in their ends, cross-wise stringers disposed below the bottom wall and extending beyond the vertical plane of the side walls, upright posts disposed alongside of the extended portions of the stringers and at the outer sides of the side walls, strap bolts connected to the side walls and disposed in the notches of the end walls, metallic straps K connected to the opposite sides of the extended portions of the stringers, with reference to the upright posts, and extending above the extended portions of the stringers, longitudinally-disposed eye-bolts N connected to the said straps and extending across the outer sides of the upright posts, longitudinally-disposed eye-bolts M extending through the stringers and disposed in vertical planes between those of the side walls, transversely disposed bolts P connecting the said eye-bolts M and N and arranged to draw the side walls in against the edges of the bottom wall, bolts connecting the side walls and the upright posts and disposed in slots in the latter, lugs on the side posts, bolts connected to the side walls, above said lugs, and extending downwardly through the lugs, and nuts mounted on said bolts and disposed below the lugs.

2. In a knockdown tank, the combination of a bottom wall, side walls abutting against opposite edges of the bottom wall, end walls connected with the side walls, cross-wise stringers disposed below the bottom wall and extending beyond the vertical planes of the side walls, upright posts disposed alongside of the extended portions of the stringers and at the outer sides of the side walls and connected with said side wall, metallic straps K connected to the opposite sides of the extended portions of the stringers, with reference to the upright posts, and extending above the extended portions of the stringers, longitudinally-disposed eye-bolts N connected to the said straps and extending across the outer sides of the upright posts, longitudinally-disposed eye-bolts M extending through the stringers and disposed in vertical planes between those of the side walls, and transversely-disposed bolts P connecting the said eye-bolts M and N and arranged to draw the side walls in against the edges of the bottom wall.

3. A knockdown tank comprising a bottom wall, side walls abutting against opposite edges of the bottom wall, end walls also abutting against opposite edges of the bottom wall and connected with the side walls, stringers disposed below the bottom wall and extending beyond the vertical planes of the side walls, upright posts disposed alongside of and connected with the extended portions of the stringers and having vertical slots, bolts extending through said slots and connecting the posts and the side walls, lugs connected to sides of the upright posts, bolts connected to the side walls, above the lugs, and extending downwardly through the lugs, and nuts mounted on said bolts and disposed below the lugs.

872,814. COMBINED PLANTER AND FERTILIZER-DISTRIBUTER. WILLIAM W. HARRIS, Spartanburg, S. C. Filed Nov. 9, 1906. Serial No. 342,645.



1. An agricultural implement comprising an operating means for a fertilizer distributer and a seed device, said operating means embodying a transmission element having a plurality of tripping devices for operating the seeder, and a sprocket pinion operated by said element and having its shaft engaging with the fertilizer distributer for operating it.

2. An agricultural implement comprising an operating

means for a fertilizer distributer and a seed device, said operating means embodying a transmission element having a plurality of tripping devices for operating the seeder, a sprocket pinion operated by said element and having its shaft engaging with the fertilizer distributer for operating it, means for operating said transmission element, and a support therefor.

3. An agricultural implement comprising an operating means for a fertilizer distributer and a seed device, said operating means embodying a transmission element having a plurality of tripping devices for operating the seeder, a sprocket pinion operated by said element and having its shaft engaging with the fertilizer distributer for operating it, means for operating said transmission element, and a support therefor, said support being adjustable to provide for varying lengths of transmission elements.

4. An agricultural implement comprising a plow, a fertilizer distributing means carried thereby, a seeding device carried thereby, means for operating said fertilizer distributing means and said seeding device, and a shiftable means for operating the operating means for the fertilizer distributing means and seeding device.

5. An agricultural implement comprising a plow, a fertilizer distributing means carried thereby, a seeding device carried thereby, means for operating said fertilizer distributing means and said seeding device, a shiftable means for operating the operating means for the fertilizer distributing means and seeding device, and furrow closers connected to the plow.

[Claims 6 to 11 not printed in the Gazette.]

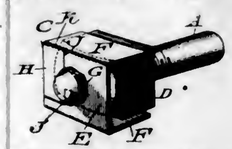
872,815. SAFRANIN DYE AND PROCESS OF MAKING SAME. HEINRICH HEIMANN, Berlin, Germany, assignor to Actein Gesellschaft für Anilin Fabrikation, Berlin, Germany. Filed Aug. 2, 1907. Serial No. 386,766.

1. The hereinbefore-described manufacture of new dyestuffs of the safranin series consisting in forming an indamin by the joint oxidation of a para-nitro-para'-aminodiphenylamin sulfonic acid with a secondary or tertiary aromatic amin or a sulfonic acid of such an amin, converting the indamin thus formed by further joint oxidation with an aromatic amin or with a sulfonic acid of such an amin into the corresponding nitro-safranin dyestuff and reducing the nitro-group of this dyestuff by the action of a suitable reducing agent.

2. As new articles of manufacture the hereinbefore-described new dyestuffs of the safranin-series, containing an amino-group which dyestuffs may be obtained by first oxidizing a para-nitro-p'-aminodiphenylamin sulfonic acid with a secondary or tertiary aromatic amin or a sulfonic acid of such an amin to the corresponding indamin, then oxidizing the indamin thus obtained with an aromatic amin or the sulfonic acid of such an amin to the corresponding nitro-safranin and reducing the nitro-group by the action of a suitable reducing agent, these new dyestuffs dyeing wool from an acid bath clear tints varying from greenish-blue to reddish-blue which are fast to light and to alkalies, which dyestuffs are soluble in water with a blue coloration, which solution on the addition of some concentrated soda-lye becomes more reddish and more dull, and which solution on the addition of a small quantity of concentrated hydrochloric acid turns from bluish-red to red, these dyestuffs being soluble in alcohol to a blue solution, and these dyestuffs dissolving in concentrated sulfuric acid to a green solution which solution on the addition of some ice becomes blue, whereas by adding more ice the color turns to bluish-red.

3. As a new article of manufacture the new dyestuffs of the safranin series which may be obtained by first oxidizing para-nitro-para'-aminodiphenylamin-orthosulfonic acid with ethylbensylaniilin sulfonic acid to the corresponding indamin, then oxidizing the indamin thus obtained with sulfanilic acid to the corresponding nitro-safranin and reducing the nitro-group by the action of iron powder in the presence of hydrochloric acid, this new dyestuff dyeing wool from an acid bath a clear blue tint which is fast to light and to alkali, this dyestuff being in the shape of the sodium salt when dried and pulverized, a dark brown powder with bronze-like luster, which dyestuff dissolves in water to a blue solution which solution on the addition of some concentrated soda-lye turns to a more dull violet and which solution on the addition of concentrated ammonia remains unaltered, whereas adding of a small quantity of concentrated hydrochloric acid changes the color to red and whereas on adding more of the acid the solution becomes blue and then green blue, this dyestuff being difficultly soluble in alcohol to a blue solution and this dyestuff dissolving in concentrated sulfuric acid to a green solution which solution on the addition of some ice becomes blue, whereas by adding more ice the color turns to bluish red.

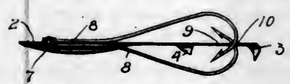
872,816. NUT LOCK OR FASTENING DEVICE. BERNARD HEMANN and ALBERT GUENTHER, Belleville, Ill. Filed Dec. 13, 1906. Serial No. 347,717.



1. A nut fastening device comprising a body provided with a flange adapted to embrace the side of a nut, a passage in said body having its walls adapted to straddle the shank of a bolt on which the nut is fitted to prevent unscrewing of the nut, and a pliable tongue on said body adapted to close said passage and engage said shank, the several members of the device as named being integral.

2. A nut fastening device comprising a body provided with a flange adapted to embrace the side of a nut, a passage in said body having its walls adapted to straddle the shank of a bolt on which the nut is fitted to prevent unscrewing of the nut, and a pliable tongue on said body adapted to close said passage and engage said shank, the several members of the device as named being integral, said shank having in its side a recess which is adapted to receive the walls of said passage.

872,817. FISH-HOOK. FRANK J. HIPP, New Brighton, Minn. Filed June 25, 1906. Serial No. 323,281.

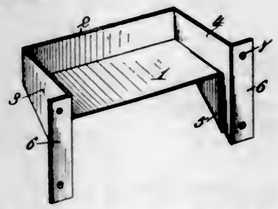


1. An artificial bait having a body portion formed to resemble a fish and provided with an opening extending therethrough, and fish hooks having their shanks secured to said body portion on opposite sides thereof, the barbed ends of said hooks projecting through the opening in said body portion on each side, and the wall of said opening engaging the curved portions of said shanks near their barbed ends when the hooks are separated, and temporarily holding said barbs in an inoperative position with the shank of each hook protecting and forming a weed guard for the point of the other hook.

2. An artificial bait comprising a body portion formed to resemble a fish and having a slot near its tail, fish hooks secured near the forward end of said body portion and having their barbed ends projecting through said slot and the rear end of said slot engaging the curved portions of said shanks when the hooks are separated and temporarily holding said barbs in an inoperative position, substantially as described.

872,818. SALT-BRICK HOLDER FOR LIVE STOCK. CASWELL L. HUTCHESON, Chattanooga, Tenn. Filed Aug. 19, 1907. Serial No. 389,258.

1. A brick holder comprising a receptacle having an open top, and a bottom and a side, and end walls, said end walls projecting below and constituting a support for the bottom, that portion of the end walls which projects below the bottom being reinforced, each of said end walls provided with a laterally-extending flange and hold-fast devices extending through the flange for securing the holder in position.



2. A brick holder comprising a receptacle embodying a side wall, a bottom, a pair of end walls, each of said end walls having a laterally-extending flange, said walls, bottom and flanges formed from a unitary strip of material.

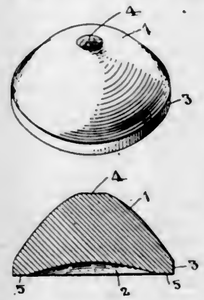
3. A brick holder comprising a receptacle embodying a side wall, end walls formed integral with and having an overlapping portion, a bottom formed integral with the side wall and with said overlapping portions, each of said side walls terminating in a laterally-extending flange provided with openings.

4. A brick holder comprising a receptacle embodying a side wall, a pair of end walls formed integral with the side walls and of greater height, each of said end walls bent upon itself, a bottom formed integral with the bent portions of the end walls and with the side wall, said bottom of less width than the width of the end walls.

5. A brick holder comprising a receptacle embodying a side wall, a pair of end walls formed integral with the side wall and of greater height, each of said end walls bent upon itself, a bottom formed integral with the bent portions of the end walls and with the side wall, said bottom of less width than the width of the end walls, each of said end walls provided with a laterally-extending flange.

[Claims 6 to 10 not printed in the Gazette.]

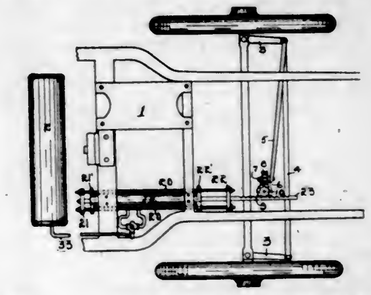
872,819. CAKE OF SHAVING-SOAP. MARTIN H. ITTNER, Jersey City, N. J., assignor to Colgate & Co., New York, N. Y., a Firm. Filed Mar. 9, 1906. Serial No. 305,040.



A cake of soap, the base of which presents the greatest diameter of the cake, said diameter and the contour of the base adapting said base for closely conforming to the angle at the bottom and sides of a usual shaving mug, said cake diminishing in cross section upwardly from a narrow vertical margin which bounds said base, the apex of said cake being formed by a small plane surface parallel to the plane of the base, substantially as described.

872,820. AIR GUIDE OR STEERING DEVICE FOR AUTOMOBILES. JAMES T. JOHNSON, Memphis, Tenn. Filed Oct. 8, 1906. Serial No. 337,909.

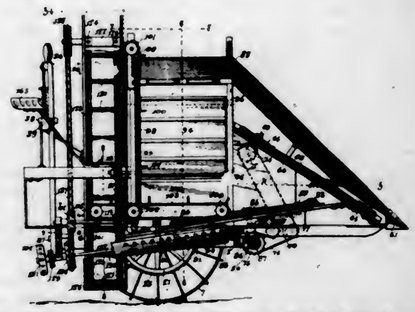
1. The combination with the running-gear of an automobile, of a reservoir for fluid under pressure, a fluid receiving cylinder divided into two compartments each in communication with the reservoir, pistons in said compartments of the fluid-receiving cylinder connected with the steering wheels, a steering-post, and a valve interposed between the fluid-receiving cylinder and the reservoir and controlled by said steering-post to admit air from the reservoir to said compartments of the fluid-receiving cylinder.



2. The combination with the running-gear of an automobile, of a storage reservoir for fluid under pressure, a fluid-receiving cylinder divided into compartments, a piston in each compartment, guide-rods connecting said pistons, connections establishing communication between each compartment of the cylinder and the storage reservoir, a valve interposed in said connections for controlling admission of fluid to the compartments of the cylinder, a steering-post connected to said valve, and mechanism connected to said pistons and to the steering-gear of the automobile, substantially as described.

3. The combination with the running-gear of an automobile, of a power device connected with the steering-wheels and comprising a fluid-receiving cylinder having separate compartments and pistons in each compartment, a storage-reservoir, connections between the storage-reservoir and the said cylinder, and a controlling valve interposed in said connections.

872,821. CORN-HARVESTING MACHINE. JESSE H. JOHNSON, New Paris, Ohio. Filed Jan. 22, 1906. Serial No. 297,296.



1. A corn harvesting machine provided with a corn receiving chamber or guide-way, composed of vertical side and rear walls, said chamber being open at the front and adapted to receive the severed corn while the stalks are in an upright position, means arranged at the bottom of the chamber or guide-way for stripping the ears from the stalks, and cutting mechanism arranged at the front of the chamber or guide-way.

2. A corn harvesting machine provided with a corn receiving chamber or guide-way arranged to receive the severed stalks in an upright position and having side and rear walls, means for feeding the stalks rearwardly in substantially an upright position means located at the

bottom of the chamber or guide-way for stripping the ears from the stalks, cutting mechanism located at the front of the chamber or guide-way, and feeding mechanism projecting in advance of the cutting mechanism and extending rearwardly therefrom into the chamber or guide-way.

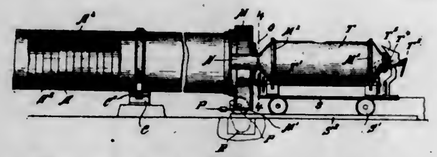
3. A corn harvesting machine having cutting mechanism for severing the stalks from the ground and provided with a corn-receiving chamber or guide-way located in rear of the cutting mechanism and arranged to receive the stalks in substantially an upright position, means arranged at the bottom of the chamber or guide-way for stripping the ears from the stalks, and conveyer mechanism located above and moving downwardly toward the stripping means to carry the corn downwardly to the same.

4. A corn harvesting machine provided with a corn-receiving chamber or guideway, rolls located at the bottom of the chamber or guideway, and an upright conveyer operating within the chamber or guideway for carrying the corn downward to the rolls.

5. A corn harvesting machine provided with a chamber or guideway, rolls arranged at the bottom thereof, and an endless conveyer having a stretch or portion operating within the chamber or guideway and moving downwardly therein to carry corn to the rolls.

[Claims 6 to 38 not printed in the Gazette.]

872,822. PROCESS OF MAKING SULFUR DIOXID. JOHN G. JONES, Carthage, N. Y. Filed May 11, 1907. Serial No. 373,093.



1. The process of making SO_2 which consists in burning comparatively pure sulfur and introducing sulfur dioxid produced thereby, together with a regulated quantity of air, into a kiln in which sulfid ore is being roasted, thereby enriching the gas given off from the ore being roasted, as set forth.

2. The process of making SO_2 which consists in burning comparatively pure sulfur and introducing the sulfur dioxid produced thereby together with a regulated quantity of air into a kiln in which sulfid ore is being roasted thereby enriching the gas given off from the ore being roasted, and afterwards separating the dust from the kiln and withdrawing the gas therefrom, as set forth.

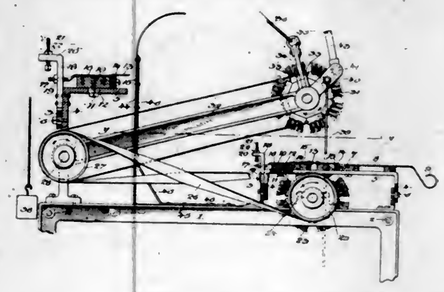
3. The process of making SO_2 which consists in burning comparatively pure sulfur and introducing the sulfur dioxid produced thereby, together with a regulated quantity of air, into a kiln in which sulfid ore is being roasted, thereby enriching the gas given off from the ore being roasted, and afterwards separating the dust from the kiln and withdrawing the gas therefrom, the temperature of which has been reduced by imparting its heat to the incoming ore as set forth.

4. The process of making sulfur dioxid which consists in burning commercial sulfur in a suitable receptacle and introducing the relatively concentrated sulfur dioxid produced thereby at a high temperature with air into a kiln in which sulfur bearing ore is being roasted, thereby enriching the gas given off from the ore and afterwards separating the dust from the kiln and withdrawing the gas therefrom, as set forth.

5. In the process of making sulfur dioxid the steps consisting in burning commercial sulfur and introducing with air the highly heated relatively concentrated sulfur dioxid given off from the burning of the sulfur into a kiln to gradually heat up sulfur bearing ore being fed through the kiln, thereby preparing the ore for the burning zone, as set forth.

[Claims 6 and 7 not printed in the Gazette.]

872,823. SCOURING-MACHINE. ERNST KETZLER, Chicago, Ill. Filed Apr. 16, 1906. Serial No. 311,943.



1. In a scouring machine, the combination of two brushes located one above the other, a work support, having openings through which said brushes contact with each other and having a table-like portion adjacent to the brushes and freely accessible to the operator upon which he may manipulate the goods, means for revolving the brushes in opposite directions so that their contacting faces move away from the work-table, and means for raising and lowering the upper brush, whereby the operator may manually feed the goods to the brushes and allow them to be drawn forward at any desired speed and, upon the lifting of the upper brush may quickly withdraw the goods for manipulation on the work table, substantially as described.

2. In a scouring machine, the combination of two brushes, one located above the other, a work support, having openings through which said brushes contact with each other and having a table-like portion adjacent to the brushes and freely accessible to the operator upon which he may manipulate the goods, means for revolving the brushes in opposite directions so that their contacting faces move away from the work-table, a frame carrying the upper brush, a fixed pivotal support for the frame, the axes of the brush and pivotal support being parallel, and means for moving the free side of the frame up and down, about its pivotal support, whereby the upper brush is raised and lowered, whereby the operator may manually feed the goods to the brushes, substantially as described.

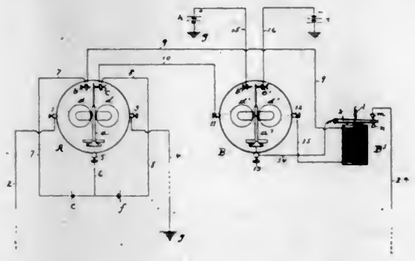
3. In a scouring machine, the combination of two brushes, one located above the other, and a work-support, having openings through which said brushes contact with each other and having a table-like portion adjacent to the brushes and freely accessible to the operator, means for revolving the brushes in opposite directions, a frame carrying the upper brush, a fixed pivotal support for the frame, the axes of the brush and pivotal frame being parallel, means for automatically lifting the free side of the frame and holding it normally elevated, and means for manually lowering it, substantially as described.

4. In a scouring machine, the combination of two brushes, one located above the other, and a work support, having openings through which said brushes contact with each other and having a table-like portion adjacent to the brushes and freely accessible to the operator, means for revolving the brushes in opposite directions, a frame carrying the upper brush, a fixed pivotal support for the frame, the axes of the brush and pivotal support being parallel, means for automatically lifting the free side of the frame and holding it normally elevated, treadle-mechanism for lowering it and stops for limiting its downward movement, substantially as described.

5. In a scouring machine, the combination of a work support, having elongated openings, a brush located below the support and projecting through said openings, means for revolving the brush, a brush located above said support, a frame carrying the brush, a pivotal support for the frame, the axes of the brush and pivotal support being parallel, means for revolving the brush, means for raising and lowering the frame and means carried by the frame for discharging water on to the brush, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

872,824. ELECTRIC TELEGRAPHY. ISIDOR KITSEE, Philadelphia, Pa., assignor of one-half to William J. Latta, Philadelphia, Pa. Filed Mar. 16, 1905. Serial No. 250,386.



1. In combination with a line of transmission two polarized relays, one relay connected to said line, the second relay connected to the contacts of the first relay, an electro-magnet, a second line of transmission and means to connect through the movements of the armature of said electro-magnet said second line to a source of current.

2. In telegraphy with reversals, a polarized relay connected to the line of transmission, localized sources of current for said relay, a second relay operatively connected to said first relay, an electro-magnet, a second line of transmission and means whereby through the movements of the armatures of said relays, the electro-magnet is energized or deënergized thereby connecting or disconnecting the second line of transmission from a source of current.

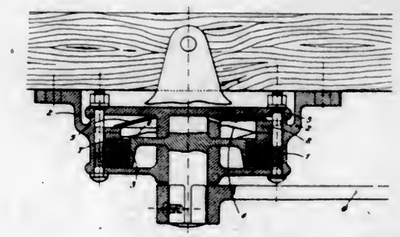
3. In telegraphy means to receive true reversals, means to relay said reversals, means to translate said reversals into Morse characters and means to relay said characters on to a second line said aforesaid means embracing two polarized relays and a translating device.

4. In telegraphy, a line of transmission, a polarized relay connected to said line of transmission, sources of current locally connected to said relay, a second polarized relay and electro-magnet connected operatively to said first relay, sources of current connected operatively to said second relay, a second line of transmission in operative relation to parts of said electro-magnet and means whereby through the movement of the movable part of the first relay the movable part of the second relay is connected with one or the other of the poles of a source of current and through parts of the electro-magnet with said second line of transmission.

5. In combination with two lines of transmission two polarized relays and an electro-magnet in operative relation with each other and said two lines, a source of current locally connected to one of said relays, a source of current locally connected to the second of said relays, and means whereby the movement of the movable part of the first relay are repeated by the movement of the movable part of the second relay and whereby during the travel of the movable part of the first relay electrical connections are established between parts of the electro-magnet and one of the lines of transmission, said parts of the electro-magnet adapted to be brought in electrical connection with one or the other of the poles of the source of current in operative relation to the second relay.

[Claim 6 not printed in the Gazette.]

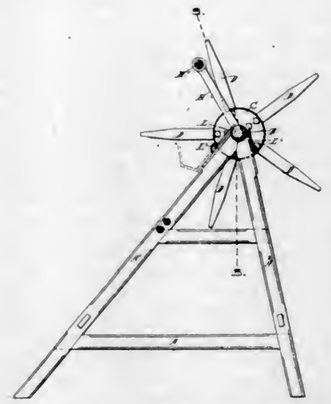
872,825. APPARATUS FOR CHECKING OR DEADENING THE VIBRATIONS IMPARTED TO SUSPENDED VEHICLES. ARTHUR KREBS, Paris, France, assignor to Société Anonyme des Anciens Etablissements Panhard et Levassor, Paris, France. Filed Mar. 29, 1906. Serial No. 308,769.



1. An apparatus of the class described, comprising a case, a movable member arranged within the case, superimposed washers alternately connected to the movable member and the case, an elastic element coöperative with the case and the movable member, and cam elements, one cam element carried by the case and the other by the movable member, and the cam faces of each adapted to traverse one another.

2. An apparatus of the class described, comprising a box connected with a vehicle frame, a rotatable element movable within the box and connected with a vehicle axle, superimposed washers connected alternately with the box and with the movable element, a split conical shaped spring disk mounted within the box, and annular members interposed between the washers and the conical disk and having opposed working surfaces for traversing each other.

872,826. REEL. JED N. LANDON, Hartland, Vt. Filed Oct. 19, 1906. Serial No. 339,725.

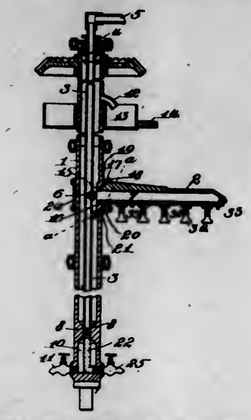


1. In a reel of this class, a suitable supporting frame, a main shaft and means for rotating it, a non-collapsible coned reel-drum mounted upon said shaft, and having fixed guards at its longer end, retracting guards at the other end of said drum and means for retracting them; substantially as and for the purpose set forth.

2. In a reel of this class, a suitable supporting frame, a main shaft and means for rotating it, a non-collapsible coned reel-drum mounted upon said shaft, and having fixed guards at the large end of said reel-drum; retracting guards at the other end of said drum, a sliding sleeve

mounted upon said main shaft and being pivotally connected to said retracting guards; substantially as and for the purpose set forth.

872,827. RABBLE SHAFT AND ARM FOR FURNACES. ARTHUR V. LEGGO, Pendeen, Ballarat, Victoria, Australia. Filed Apr. 6, 1906. Serial No. 310,324.



1. In an apparatus of the class described, a rabble arm having projections on the top and bottom thereof, and a plurality of removable teeth having recesses forming jaws for engagement with the projections.

2. In an apparatus of the class described, a rabble arm having projections at the top and bottom thereof, a plurality of teeth, one or more of the same having feet, and jaws associated with said teeth at the opposite ends for detachable engagement with the projections on the rabble arm.

3. In an apparatus of the class described, a rabble arm having projections at the top and bottom thereof, a plurality of teeth, one or more of the same having feet, jaws associated with said teeth at the opposite ends for detachable engagement with the projections on the rabble arm, and spacer bars interposed between the teeth and projections for holding the teeth suitably spaced from each other.

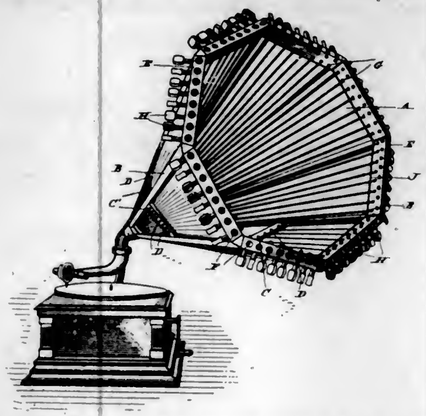
4. In an apparatus of the class described, a double rabble arm having projections at its opposite side edges, oblique teeth carried by the respective arms, one series of the teeth carried by one arm arranged at an angle opposite to the series of teeth carried by the other arms, jaws formed integral with each of the teeth for detachable engagement with the projections, and means associated with the teeth for spacing the same from each other.

5. In an apparatus of the class described, a rabble arm having projections at the top and bottom thereof at opposite sides, a front row of teeth detachably engaging one series of the projections, a back row of teeth removably engaging the remaining series of the projections, the front row of teeth being narrower than the back row of teeth, said teeth having jaws for engagement with the projections, a spacing bar for holding the teeth a suitable distance from each other, and means for locking the spacing bars in position on the rabble arm.

872,828. REPRODUCING-HORN FOR TALKING-MACHINES. WILLIAM E. LEIGHTON, Pembroke, Me. Filed Nov. 1, 1906. Serial No. 341,642.

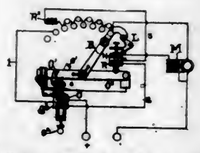
1. A horn for conveying sound having a multiplicity of flat sides of resonant material, cleats secured to said sides, tuning keys revoluibly secured, and strings secured to said cleats and keys and tuned to the chromatic scale, substantially as shown and described.

2. A horn for conveying sound comprising a multiplicity of longitudinal ribs, thin pieces of wood secured to said ribs, cleats secured to said pieces of wood, tuning keys revolubly secured in the outer edge of the horn, and strings



secured to said cleats and keys and tuned to the chromatic scale, substantially as shown and described.

872,829. ELECTRIC-CIRCUIT CONTROLLER. HARRY W. LEONARD, Bronxville, N. Y. Filed June 1, 1903, Serial No. 159,528. Renewed June 3, 1907. Serial No. 377,046.



1. The combination with a switch, of a mechanical device for holding it in a definite position, an electromagnetic device having a movable part held by said electromagnetic device against the action of a force tending to move it whereby when the magnetism of said electromagnetic device falls below a certain strength, the said movable part will move under the action of said force and deliver a blow and cause the release of said mechanical holding device, and auxiliary means for moving said movable part to its normal operating position.

2. The combination with a switch, of a mechanical device for holding it in a definite position, an electro-magnetic device having a movable part held by said electromagnetic device against the action of a force tending to move it whereby when the magnetism of said electromagnetic device falls below a certain strength, the said movable part will move under the action of said force and deliver a blow and cause the release of said mechanical holding device, auxiliary means for moving said movable part to its normal operating position, and means for protecting the circuit against overload conditions.

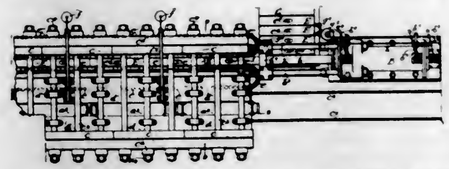
3. The combination with a switch lever, of a mechanical device for holding it in a definite position, an electro-magnetic device having a movable part held by said electromagnetic device against an action of force tending to move it whereby when the current which energizes said electromagnetic device falls below a certain strength, the said movable part will move under the action of said force and deliver a blow and cause the release of said mechanical holding device, and auxiliary means acting only while the switch lever is in a position other than its normal operating position for moving said movable part to its held position.

4. The combination with an electric motor, of a circuit controlling switch, means for moving said switch, mechanical restraining means for holding said switch, an automatic device having a movable part normally restrained by magnetism and which automatically operates when the electromotive force of the circuit falls below a certain amount to release said mechanical restraining means and permit the movement of said switch by its actuating means, and auxiliary means controlled by said switch for placing the said movable part in its normally restrained position.

5. The combination of a circuit controlling switch, means tending to move said switch, mechanical restraining means for holding the switch in a certain position, an electro-magnetic device having a magnetic mass normally held up against the action of gravity, and which under abnormal conditions of the circuit falls and delivers a blow to cause the release of said restraining means, and automatic means controlled by the movement of said switch for raising said magnetic mass to its elevated position.

[Claims 6 to 34 not printed in the Gazette.]

872,830. APPARATUS FOR COMPRESSING STEEL INGOTS. NILS H. O. LILIENBERG, Philadelphia, Pa. Filed Dec. 11, 1906. Serial No. 347,331.



1. An ingot press consisting of an elongated frame having substantially parallel walls, means for supporting a series of ingots in a substantially straight line between said walls, means for exerting force in a direction substantially parallel to the walls and to the line of ingots, and means for changing the direction of such force to cause it to act in lines substantially at right angles to the line of ingots, substantially as described.

2. An ingot press consisting of an elongated frame having substantially parallel walls, wedges for the press, and means for forcing said wedges through the press to compress ingots placed between the walls, substantially as described.

3. An ingot press consisting of an elongated frame having substantially parallel walls, a series of blocks movably supported between said walls, a series of wedges constructed to act between said blocks and one of the walls, with means for forcing said wedges through the machine to compress a plurality of ingots confined between the movable blocks and the second of the walls, substantially as described.

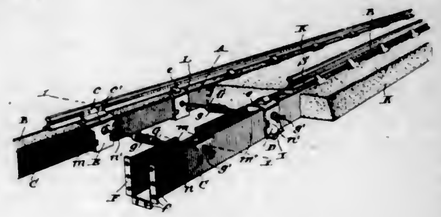
4. An ingot press consisting of an elongated frame having substantially parallel walls, a structure or series of structures movably supported between said walls, a series of wedges constructed to act between said structure or structures and one of the walls, with means for forcing said wedges through the machine to simultaneously compress a plurality of ingots confined between the movable structure or structures and the second of the walls, substantially as described.

5. An ingot press consisting of an elongated frame having substantially parallel walls and means for simultaneously compressing a plurality of ingots supported between said walls, said means including a plurality of pieces of progressively increasing widths, and a device for forcing said pieces through the press, substantially as described.

[Claims 6 to 30 not printed in the Gazette.]

872,831. RAILWAY. MATTHIAS R. LONGACRE, Millerstown, Pa. Filed Jan. 19, 1907. Serial No. 353,104.

1. A railway having sectional sills lengthwise or parallel with the rails for supporting the rails, formed of concrete molded in metal casings having bands reinforcing the sills and forming rail chairs for supporting and securing the rails to the sills, suitably tied together, embedded in filling.



2. A railway having sectional sills formed of concrete molded in metal casings, the ends of said casings formed with flanges bolted together, securing the sills together lengthwise, and bands secured to the sills provided with rail chairs securing the rails to the sills.

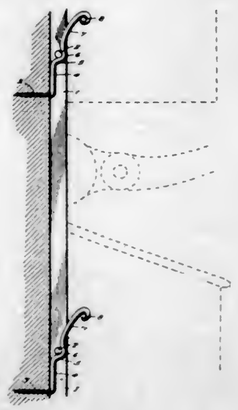
3. A railway having sectional sills formed of concrete molded in metal casings, bands supporting and securing the rails to the sills which are tied together lengthwise, and held in alinement by tie rods secured to the sills, extending laterally from one sill to the sill opposite forming cross ties.

4. A railway having sectional sills supporting the rails, said sills formed of concrete in metal casings, and bands with arched tops forming rail chairs resting on cushion plates with open space between the base of the rails and sill.

5. A railway having sectional sills formed of concrete in metal casings, and bands forming rail chairs formed in two detachable parts clamping the rails to the sills.

[Claim 6 not printed in the Gazette.]

872,832. TELEPHONE-BOX HANGER. JOHN G. MALABY and CHARLES E. OXFORD, Foreman, Ark.; said Malaby assignor to said Oxford. Filed Feb. 19, 1907. Serial No. 358,183.



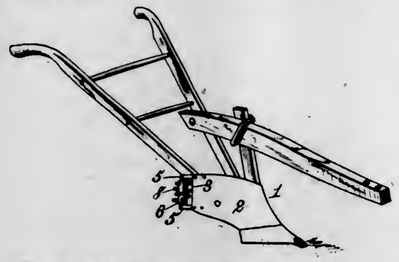
Means for supporting a telephone-box, consisting of a plurality of hangers, each formed from a single piece of metal, and comprising a screw-threaded shank, a member extending at right angle to said shank to bear against a wall or other suitable surface, and an upwardly and outwardly curved arm having an outward bend near its lower end, in combination with a telephone-box provided with screws projecting outward therefrom to engage the bends in the hangers, substantially as described.

872,833. INVERTED GAS-BURNER. OTTO MANNESMANN, Remscheid, Germany. Filed Dec. 12, 1906. Serial No. 347,550.



An improved nozzle for inverted incandescent gas burners with previously heated air for combustion having a nozzle from material which is a bad conductor of heat in combination with a bottom plate of suitable material with large perforations and a second plate of suitable material arranged inside the nozzle above said first bottom plate and having perforations of smaller diameter than those of the first bottom plate, substantially as described and shown and for the purpose set forth.

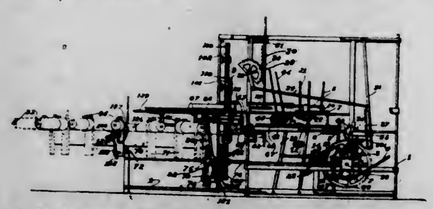
872,834. PLOW ATTACHMENT. CHARLES I. MATTINGLY, Uniontown, Ky. Filed Apr. 25, 1907. Serial No. 370,290.



1. The combination with a mold board of a plow having an elevated rear extremity, and a cylindrical roller held at a distance in rear of the said extremity of the plow and in approximately upright position, the roller being provided with comminuting devices and having a minimized projection outwardly beyond the plane of the adjacent surface of the mold board.

2. The combination with a mold board of a plow having a rear reduced elevated extremity and a cylindrical roller held in rear of the terminal of said extremity and at the same angle of inclination as the adjacent portion of the mold board to which it is attached, the roller being provided with communicating devices and also having a minimized projection outwardly beyond the plane of the adjacent surface of the mold board to prevent side draft and heaviness of the team.

872,835. RECEPTACLE-FORMING MACHINE. GEORGE W. MAXWELL, San Francisco, Cal. Filed Jan. 2, 1906. Serial No. 294,218.



1. In a receptacle forming machine, means for successively feeding blanks of fibrous material thereto, means for beveling the edge of one end of the blank, means for forming the blank into a tubular body with the beveled edge upon the interior, and means for inserting a circular bottom within said body.

2. In a receptacle forming machine, a clamp, means for feeding blanks thereto, means for beveling the edge of one end of the blank and placing a line of adhesive material upon the other end while the blank is within said clamp, and means for forming each blank into a body having a circular cross section with the adhesive end overlapping the beveled end.

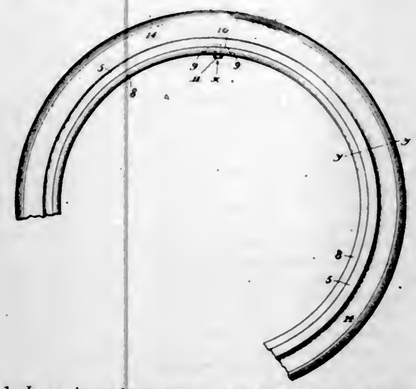
3. In a receptacle forming machine, a clamp, means for feeding blanks thereto, means for beveling one end of each blank while it is in the clamp and gluing the other, a plurality of formers, a reciprocatory clamp for moving each blank from the first mentioned clamp to one of said formers, means for stopping the blank before the reciprocatory blank reaches the limit of its movement, and means for folding the blanks around the former with the glued end overlapping the beveled end.

4. In a receptacle forming machine, a clamp, guide pins thereon, part of which are vertically movable and the others all inclined, means for successively feeding blanks of fibrous material to said clamp, means for beveling the edge of one end of the blank and gluing the other, a plurality of formers, means for depressing the movable pins, means for moving each blank onto a former while said pins are depressed, and means for folding each blank around its former with the glued end overlapping the beveled end.

5. In a receptacle forming machine, a magazine for blanks of fibrous material, a platform provided with guide pins, part of which are movable, a feeder under the magazine provided with yielding fingers, a carrier between the feeder and the platform, means for beveling the edge of one end of the blank and gluing the other end while the blank is held on said platform, a plurality of formers, means for depressing the movable pins, means for moving the blank from the platform to one of the formers while said pins are depressed, and means for folding each blank around its former with the glued end overlapping the beveled end.

[Claims 6 to 24 not printed in the Gazette.]

872,836. VEHICLE-WHEEL. TOD J. MELL, Youngstown, Ohio, assignor to The Republic Rubber Company, Youngstown, Ohio, a Corporation of Ohio. Filed May 17, 1906. Serial No. 317,369.



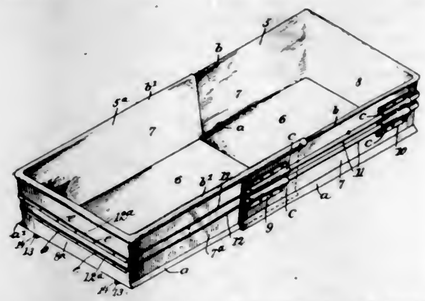
1. In a circumferentially divided wheel rim, the combination with separable sections, of a spring locking ring having coöperating inclined faces for drawing and securing said sections together, substantially as described.

2. In a circumferentially divided wheel rim, the combination with separable sections, of an outwardly extending spring locking ring having coöperating inclined faces for drawing and securing said sections together, substantially as described.

3. In a circumferentially divided wheel rim, the combination with separable sections, of a channeled spring locking ring having coöperating inclined faces for drawing said sections together, and means whereby said ring is retained in operative position, substantially as described.

4. In a wheel rim, the combination with relatively fixed and removable sections, of a locking flange upon each of said sections, a non-continuous locking ring having relatively inclined faces for drawing said flanges together, a filler block interposed between the ends of said ring, and means for securing said block, substantially as described.

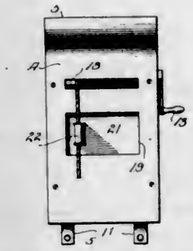
872,837. ADJUSTABLE BAKE-PAN. JENMATSU MIO, Salt Lake City, Utah. Filed July 23, 1907. Serial No. 385,118.



1. A pan comprising two half sections, one slidable within the other, each section having one end wall, two longitudinally extended guide rods supported from the end wall of one section and spaced apart on each side wall thereof, a corresponding number of bracket plates on the other half section and longitudinally disposed guide tubes mounted on the bracket plates, said tubes receiving the guide rods when the pan sections are slid upon each other.

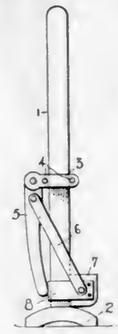
2. A pan, comprising two half sections, one slidable in the other, means for holding the upper side edges of the pan sections loosely connected, means for slidably interlocking the lower corners at the sides of the pan sections, and a guide-rod on one pan section at the lower side of its bottom, slidable in clip-plates on the bottom of the other pan section.

872,838. CLOTHES-LINE REEL. WILLIAM MOELLER, Philadelphia, Pa. Filed Sept. 17, 1906. Serial No. 334,840.



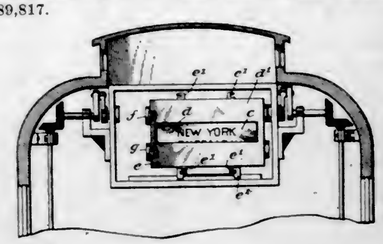
A clothes line reel comprising the casing provided with a transverse guide slot and a doorway below said slot, the upper and lower edge walls of said doorway being bent to form guides, a sliding door for closing said doorway, said door being provided with a hooked upper and lower edge to engage the guides, a line guide upon the door, independent bracket plates at the respective ends of the casing, each of said bracket plates being provided with a bearing portion and also provided with supporting hooks, a reel within the casing having the ends of the shaft journaled in the bearing portions of the bracket plates, said shaft having a crank handle, a line secured to the shaft and projecting through the guide slot and the guide upon the door, securing plates upon the casing below said hooks and disposed in vertical alinement therewith, a series of openings in one of the bracket plates, and a pin adapted to be inserted in any one of the said openings of said bracket plate to hold the crank handle of the shaft against movement, substantially as specified.

872,839. LIFTING-JACK. STEPHEN D. MCMAHON, Genoa township, Delaware county, Ohio. Filed June 20, 1907. Serial No. 379,948.



A lifting jack, as described, comprising a standard, opposed adjusting bars arranged laterally of said standard, said adjusting bars having connecting pins effective to engage or impinge upon opposite edges of said standard, a lifting lever, fulcrumed between said adjusting bars, a stirrup slidable upon said standard and equipped with a bearing member arranged upon the forward side of said standard, and link-bars extending obliquely and laterally of said standard, with their lower forward ends pivoted to said stirrup and their upper rear ends pivotally connected to said lifting lever, beyond said adjusting bars.

872,840. CURTAIN-DISPLAY RACK. HERBERT R. NELSON, New York, N. Y. Filed Dec. 1, 1905. Serial No. 289,817.

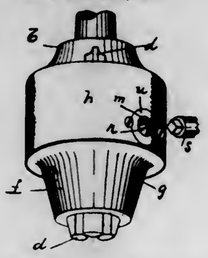


1. A curtain display rack having a guide, a removable carrier, having slotted rails on opposite sides for engaging said guide, said carrier having a curtain and openings in opposite sides through which the curtain may be seen.

2. The combination of a guide, a carrier removably mounted on the guide and having slotted rails on a plurality of sides for engaging said guide, whereby the carrier may be placed on the guide in a plurality of positions, said carrier having openings in a plurality of its walls, and a curtain located in the carrier and observable through all of said openings.

3. The combination of a guide, a carrier removably mounted on the guide and having slotted rails on a plurality of sides for engaging said guide, whereby the carrier may be placed on the guide in a plurality of positions, said carrier having openings in a plurality of its walls, and a curtain located in the carrier and observable through all of said openings, rollers on which said curtain is wound and idler rollers located on opposite sides of said openings for passing the curtain across the openings.

872,841. DRILL-CHUCK. ALBERT A. NORTH, New Britain, Conn., assignor to The Skinner Chuck Company, New Britain, Conn., a Corporation of Connecticut. Filed May 12, 1905. Serial No. 260,067.



1. In a chuck body, threaded jaws slidable in the body, an annular nut concentric with the body and having threaded engagement with the jaws, the perimeter of the nut being exposed and adapted to be actuated by hand, and rack and pinion mechanism beneath the surface of the body and the nut, adapted to be actuated by a key, substantially as described.

2. In a chuck the body having an annular groove forming shoulders, a beveled gear cut in one of said shoulders, a jaw operating nut rotarily mounted in the annular groove in said body, a beveled pinion rotarily mounted in a recess in said nut and meshing with said gear, and the jaws operatively connected with said nut.

3. In a chuck the body having an annular groove forming shoulders, a beveled gear cut in one of said shoulders, a jaw operating nut rotarily mounted in the annular groove in said body, a beveled pinion rotarily mounted in a recess in said nut and meshing with said gear, a flange on said nut inclosing the gear on the body, and the jaws having operative connection with said nut.

872,842. SUBMERGIBLE VESSEL. EDWARD L. PEACOCK, Montreal, Quebec, Canada, assignor to The Lake Torpedo Boat Company, Bridgeport, Conn., a Corporation of New Jersey. Filed Feb. 25, 1907. Serial No. 359,328.



1. A submergible vessel, having water-tight side openings, hydroplanes hinged next to said openings and capable of being moved to stand at right angles to the sides and substantially parallel thereto, and to be rotated axially to take any desired angle of inclination lengthwise, a reciprocating piston arranged within each opening, a protractile connection in each opening between the piston and hydroplane, and a motor mechanism arranged wholly within the vessel for giving to the hydroplanes the several movements described.

2. A submergible vessel, having water-tight openings in its sides, a hinge-piece arranged in each opening, a hydroplane hinged to said hinge-piece, a reciprocating piston arranged within the hinge-piece, a connection between the piston and hydroplane, and means within the vessel to operate the piston.

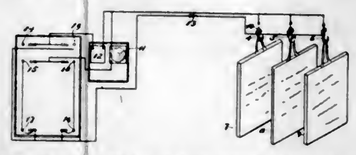
3. A submergible vessel, having water-tight openings in its sides, a hinge-piece arranged in each opening, and capable of rotation therein, a hydroplane hinged to said hinge-piece, a reciprocating piston arranged within the hinge-piece and adapted to rotate with it, a connection between the piston and hydroplane, and means within the vessel to operate the piston to vibrate the hydroplane on its hinge and also to rotate it.

4. A submergible vessel, having openings in its sides, and hinge-pieces arranged water-tight in said openings, hydroplanes hinged to said hinge-pieces, pistons movable longitudinally in the hinge-pieces without rotating them, and also rotatable with the hinge-pieces, connections within the openings for connecting the pistons and hydroplanes and means within the vessel for actuating the pistons both to vibrate the hinged hydroplanes and to turn them lengthwise.

5. A submergible vessel, having openings in its sides, a hull upon which said sides are erected, tubular pieces fitted water-tight in said openings and between the sides and hull and extending into the hull, tubular hinge-pieces fitted in said tubular pieces, hydroplanes hinged to the hinge-pieces outside of the sides and capable of being folded against the sides and turned out at an angle thereto, pistons in said hinge-pieces, connections between the pistons and hydroplanes, and means to reciprocate the pistons.

[Claims 6 to 16 not printed in the Gazette.]

872,843. SEMAPHORE SAFETY-ALARM. GEORGE L. PETTYGROVE, Berkeley, Cal., assignor of one-half to C. E. Loofbourrow, Oakland, Cal. Filed July 10, 1906. Serial No. 325,484.

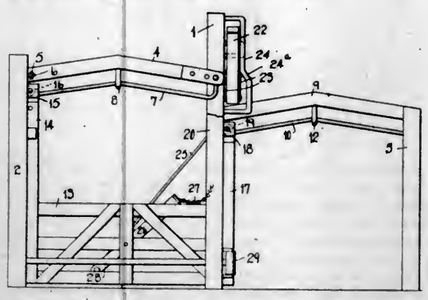


1. A semaphore safety alarm comprising the combination with a semaphore of an electrical alarm bell circuit and an electrical alarm buzzer circuit, said circuits being normally open at two points, means of closing said circuits at one of the points by the act of removing a train order clipboard from its normal position, means of closing said circuits at the other point by the act of moving said semaphore from its "stop" position, and means of opening said bell circuit by the act of setting the semaphore to "clear" position.

2. In a semaphore safety alarm, means for suspending train order clip-boards comprising movable hooks, electrical contacts thereon separable by the weight of said clip-boards, and a spring on every hook adapted to close its contacts when a clip-board is removed.

3. In a semaphore safety alarm, a semaphore lever, means for signaling an imminent danger alarm and a cautionary signal alarm at the instant of removing said lever from stop position, and means for stopping said imminent danger alarm, situated at clear position.

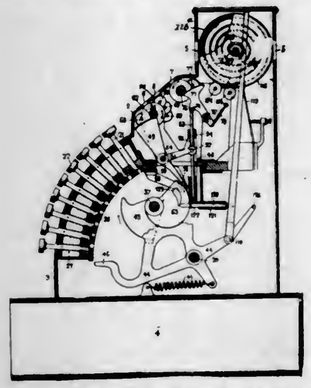
872,844. GATE. JOHN PIEPERGEADES, Stewartsville, Mo. Filed May 27, 1907. Serial No. 375,924.



1. In a gate of the character described, the combination with a main and side supporting post, gate supporting tracks arranged on and secured to said supporting posts and extending on opposite sides of the main supporting posts, a gate having upwardly projecting end posts, supporting pulleys journaled on the upper ends of said posts and adapted to be engaged with said supporting track, lever posts arranged along one side of the road and opposite sides of said main supporting posts, operating levers pivoted on said lever posts, means to loosely connect the inner ends of said levers together, an operating bar pivotally mounted on said gate, an operating rod to connect the lower end of said bar with the inner ends of said levers, a stop chain to connect the upper end of said bar with said main supporting post, means to guide said gate in its open and closing movements, and means to prevent the same from binding against said track supporting posts, substantially as described.

2. In a gate of the character described, the combination with a main and side supporting posts, of gate supporting tracks arranged on said posts and extending in each direction on opposite sides of said main supporting post, said tracks being inclined from their outer ends toward their center, means to protect and cover said tracks, a gate having upwardly projecting end posts, bearing brackets on the upper ends of said posts, supporting pulleys journaled in said brackets and adapted to be engaged with said brackets, pivotally mounted operating levers extending along the side of the road at suitable distances on each side of said main supporting post, an operating mechanism connected with said levers and with the gate, whereby the latter is raised and drawn toward the center of said tracks until the supporting pulleys thereon pass the inclined center of the tracks, whereby the weight of the gate will cause the same to continue to open or close, guide posts arranged opposite said main supporting post and the closing post of the gate to guide and hold said gate in position, a bearing track on one side of said gate, a bearing roller journaled on said main supporting post and adapted to be engaged by said track, and an inclined guiding and gate holding block arranged on the closing posts of the gate, substantially as described.

872,845. CASH-REGISTER. ROBERTO T. PISCICELLI, Naples, Italy. Filed Dec. 11, 1903. Serial No. 184,743.



1. In cash registers having a cylindrical key board and sets of keys, the combination with each set of keys of a sector having a rim concentric with the cylindrical key board and fitted with holes in each of which the end of a depressed key may enter, a stepped piece rotatable about the axis of the cylindrical key board, a spring exerting tension on said stepped piece to cause the same to turn, and a lever arm rotating together with said stepped piece until its end strikes against the end of the depressed key projecting inside of the perforated rim, substantially as and for the purposes described.

2. In cash registers, the combination with the keys, and the summing mechanisms, of a stepped piece, rotatable about an axis through an angle determined by the depression of a key, and a spring actuated rod, which is permitted to move on the rotation of the stepped piece until it meets one of the steps to control the operation of the summing mechanisms, substantially as described

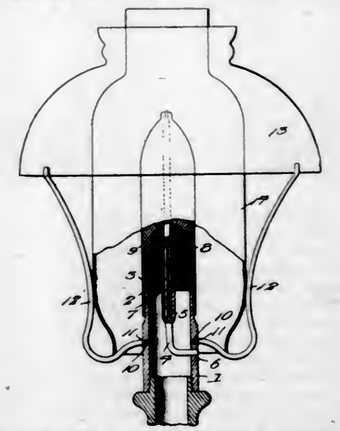
3. In cash registers, the combination with the main shaft, and with each set of keys, of a partial summing mechanism, a spring actuated stepped piece free to turn about an axis, a cam keyed on the main shaft of the machine and controlling said stepped piece, a spring actuated rod, vertical guides in which the rod slides, the rod being permitted to move on the rotation of the stepped piece, until it meets one of the steps and a toothed sector permanently connected with the sliding rod and controlling the operation of the partial summing mechanism, substantially as described.

4. In cash registers, a set of partial summing apparatus, a sliding carriage on which the partial summing apparatus is mounted, the carriage being arranged to be traversed so as to bring any desired apparatus into position to be acted on, a toothed sector and a spring actuated sliding rod, with which each partial summing apparatus is permanently connected and a rotatable stepped piece, which in connection with the said sector and sliding rod controls the operation of the said summing apparatus, substantially as described.

5. In cash registers, the combination with a set of keys, of a part rotatable about an axis through an angle determined by the depression of a key, and of several partial summing apparatus, a toothed sector and a spring actuated sliding rod, with which each partial summing apparatus is permanently connected, and on which the several summing apparatus are mounted, and which can be traversed, so as to bring any desired apparatus to be acted on by the rotatable part, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

872,846. BURNER. MARION W. PITNER, Chicago, Ill. Filed Mar. 26, 1906. Serial No. 308,100.



1. In a device of the class described, a tubular burner base, a burner screen removably positioned thereon, a supporting member positioned wholly within and attached to the base, said member being formed for engagement with and to centrally support the screen and permit the latter to be removable from the member and having a socket to receive the lower end of a mantle supporting post.

2. In a device of the class described, a tubular burner base, an L-shaped supporting member disposed wholly within and attached at its lower end to the base, and having its upper end supported free of the base and a screen positioned at the upper end of the latter and centrally engaged with and supported by said member, the member being adapted for engagement with the lower end of a mantle supporting post.

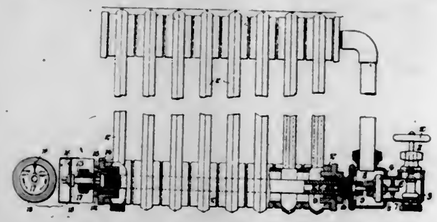
3. In a device of the class described, a tubular burner base, a supporting member permanently disposed wholly within and attached to the base, said member being pro-

vided at its upper end with a bearing shoulder, and a screen positioned in the upper end of the burner base and loosely and removably resting at its center upon said shoulder, the supporting member being formed for engagement with a mantle-supporting post.

4. In a mantle burner, the combination of a tubular base, a supporting member arranged within the base and extending vertically and provided with a vertical socket at its upper end, means for permanently attaching the bottom of the member to the base, a mantle supporting post held in an upright position solely by having its lower end removably resting in the socket of the member, and a removable screen supported loosely on the base and having an opening for receiving the member and post.

5. In a mantle burner, the combination of a tubular base provided with an internal shoulder disposed inwardly from its upper end, a central supporting member provided with an external shoulder and having a vertically extending socket, means for attaching the lower end of the member to the base, a mantle supporting post removably engaged in the socket, and a screen in the form of a disk set into the upper end of the base and resting on the internal shoulder of the latter and provided with an opening for receiving the upper end of the member and bearing on the shoulder of the latter, the disk coöperating with the said means for holding the member in fixed position so that the mantle supporting post will be maintained vertical.

872,847. STEAM-HEATING APPARATUS. FREDERICK C. PULSFORD, Leicester, England, assignor to Robert Ernest Atkinson, Knighton, England. Filed Jan. 10, 1906. Serial No. 295,407.



1. In combination a radiator, a valve casing (5) a hand operated valve (3) for admitting steam to said casing, a cut-off valve (4) for controlling the outlet of steam from said casing, a thermostatic member inside the radiator and connected to said cut-off valve (4), and yielding means between said member and the cut-off valve, the steam admission and cut-off valves having the ratio of their respective diameters inversely proportional to the ratio of their respective lifts for the purpose described.

2. In combination a radiator, a valve casing, a hand operated steam admission valve therein, a cut-off valve therein for controlling the outflow therefrom, a thermostatic tube within the radiator, a yielding connection between the cut-off valve and the thermostatic tube, said tube having a screw thread on its opposite end, a threaded sleeve engaging therewith and carried by the radiator, and means for rotating said sleeve for the purpose hereinbefore set forth.

872,848. COMBINED SEWING-MACHINE AND STAND. CLINTON B. REPP, New York, N. Y., assignor to Catherine M. M. Vahjen, Brooklyn, N. Y. Filed Mar. 30, 1907. Serial No. 365,537.

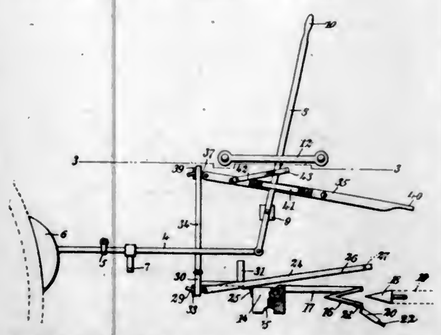
1. The combination, with a sewing-machine provided with a base-plate at the lower part of its frame, of a knock-down supporting-stand for the same consisting of a forked and braced main-standard attached to one end of the base-plate, an inclined standard attached to the opposite end of the base-plate, a bottom brace-rod connecting the lower ends of the main and inclined standards, means for connecting the base-plate with the upper ends of the main and inclined standards, and means for connecting the lower ends of the standards with the bottom-brace-rod.



2. The combination, with a sewing-machine provided with a base-plate at the lower end of its frame, said base-plate having an extension with an upwardly-extending lug, of a knock-down supporting-stand consisting of a forked and braced main-standard provided with a shoulder at its upper end for the extension of said base-plate, an inclined standard attached to the opposite end of the base-plate, a bottom brace-rod connecting the lower ends of the main and inclined standards, and means for attaching the upper ends of the forked main and inclined standards to the opposite ends of the base-plate and the lower ends of the same to the bottom brace-rod

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872,849. SAFETY DEVICE FOR VEHICLES. MARCO D. ROSA, New Rochelle, N. Y., assignor of one-half to John De Bona, Umberto De Bona, Vittorio De Bona, Santo Baron, and Agostino Losso, New Rochelle, N. Y. Filed May 25, 1907. Serial No. 375,626.



1. In a device of the class described, a socket, a member removably arranged in said socket and adapted to be rigidly secured to a draft attachment, a retaining member hinged to said socket and adapted to hold said member within said socket, said retaining member having a projection extending beyond said socket when said retaining member is in an operative position, a pivoted lever having an opening adapted to engage said projection, a second lever having an elongated slot, said first lever slidably engaging said slot, an operating lever, and a link connecting said operating lever and said second lever.

2. In a device of the class described, a socket, a member removably arranged in said socket and adapted to be rigidly secured to a draft attachment, a retaining member hinged to said socket and adapted to hold said member within said socket, said retaining member having a projection extending beyond said socket when said retaining member is in an operative position, a pivoted lever adapted to engage said projection, said lever having a pivoted finger, a second pivoted lever having an elongated slot engaging said finger, an operating lever, and a link connecting said operating lever and said second lever.

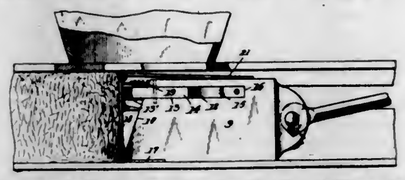
3. In a device of the class described, a socket, a member removably arranged in said socket and adapted to be rigidly secured to a draft attachment, a retaining member hinged to said socket, a pivoted lever adapted to engage said retaining member to hold the same in an operative position, said lever having a pivoted finger, a second lever having an elongated slot engaging said finger, an operating lever having a pivoted finger, and a link operatively connected with said second lever, said link having an opening engaging said pivoted finger of said operating lever.

4. In a device of the class described, a socket, a member removably arranged in said socket, a retaining member hinged to said socket and adapted to hold said member within said socket, a lever engaging said retaining member to hold the same in an operative position, an operating lever controlling said first lever and adapted to be operated to release said retaining member, and a brake lever, said operating lever having an arm adapted operatively to engage said brake lever when said operating lever is operated.

5. In a device of the class described, a socket, a member removably arranged in said socket and adapted to be secured to a draft attachment, a retaining member hinged at said socket and having a projection, a pivoted lever removably engaging said projection to hold said retaining member in an operative position, a second pivoted lever operatively connected with said first lever, an operating lever for controlling said second lever, and a brake lever, said operating lever having an arm presenting a fork adapted operatively to engage said brake lever, when said operating lever is operated.

[Claim 6 not printed in the Gazette.]

872,850. HAY-BALER. FRANK A. ROWEKAMP, Witaka, Minn. Filed Feb. 28, 1907. Serial No. 359,873.



1. In a baling press, the combination with a baling chamber and a plunger movable in the chamber, of a front plate pivoted to the inner end of the plunger for movement into and out of vertical position and levers pivoted in the plunger and arranged for operation to bring the front plate into vertical position, said levers being disposed for engagement of the walls of the baling chamber for movement when the plunger is moved in the chamber.

2. In a baling press, the combination with a plunger, of a hay-engaging member connected with the inner end of the plunger for movement to lie at times in diagonal position and at times in vertical position, and a lever pivoted in the plunger and arranged for operation to move the hay-engaging member.

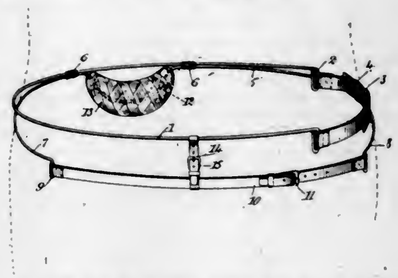
3. In a baling press, the combination with a baling chamber and a plunger movable in the baling chamber, of a front plate pivoted to the inner end of the plunger for movement into and out of vertical position, and means for coöperation with the walls of the baling chamber to move the front plate into vertical position when the plunger is moved to compress a bale.

4. In a baling press, the combination with a baling chamber and a plunger movable in the chamber, of a front plate pivotally connected with the plunger for movement to lie at times in upwardly and outwardly slanting position, and at times in vertical position, means for holding the front plate in slanting position, and means movable to bring the front plate into vertical position, said means being arranged for engagement of the baling chamber when the plunger is moved to compress a bale, for movement of said means to bring the front plate into vertical position.

5. The combination with a plunger for baling presses of a plate secured to the under face of the plunger, a front plate hinged to the forward end of the first mentioned plate for movement to extend at times in vertical and at times in diagonal position, means for holding the front plate normally in diagonal position, means for moving the front plate into vertical position and a top plate hinged to the front plate and resting upon the plunger.

[Claim 6 not printed in the Gazette.]

872,851. TRUSS. GEORGE Q. SEAMAN, New York, N. Y. Filed Feb. 28, 1907. Serial No. 359,713.



1. A truss having a main frame adapted to be secured to the body, an adjusting frame comprising a bar rotatably mounted on the side of said main frame and having an inwardly projecting arm, a pad carried on said arm and adapted to press over the position of the rupture, said adjusting frame having extensions removed from said main frame, and means for adjusting said adjusting frame toward said main frame to support the pressure on said pad.

2. A truss comprising a main frame adapted to be applied to the body and having a bar projecting across the front of the body, an adjusting frame pivoted to said bar at the front and having an arm formed thereupon projecting inwardly toward the body, a pad formed on said arm, said adjusting frame having extensions at the side of said main frame, and means for adjusting the pivotal position of said adjusting frame upon said main frame to support the pressure on said pad.

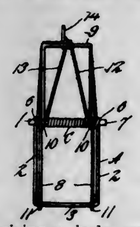
3. A truss comprising a main frame adapted to substantially surround the body, an adjusting frame pivotally attached on said main frame at the front and extending toward the rear of the body, an arm carrying a pad formed on said adjusting frame and projecting toward the body, and means for drawing said adjusting frame toward said main frame at the rear thereof to support the pressure on said pad.

4. A truss having a main frame of substantially horseshoe form adapted to be applied to the body from the side, adjustable means for connecting the ends of said main frame at the side of the body, an adjusting frame pivotally attached to said main frame at the forward side thereof and having an arm formed thereupon, a pad carried on said arm and projecting toward the body, said adjusting frame having curved extensions passing around the sides of the body, an adjusting strap connecting said curved extensions, and an adjusting strap supporting said adjusting frame from said main frame at the rear.

872,852. NAPKIN-HOLDER. DAVID SELLERS, Winfield, Kans. Filed July 18, 1906. Serial No. 326,784.

1. A clasp comprising a body constructed of a single strand of wire, the ends of the strand being enlarged and overlapped, a pivot post secured to the body, a jaw con-

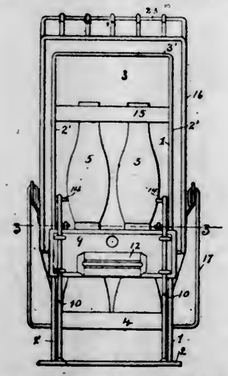
structed of a single strand of wire and pivotally mounted upon the pivot post, and a coiled spring mounted upon the pivot post and having one of its ends wrapped about the overlapped ends of the strand of which the body is formed and thence extended and formed to provide a hook, the other end of the strand engaging the jaw.



2. A clasp comprising a body constructed of a single strand of wire, the ends of the strand being enlarged and overlapped, a jaw pivotally mounted upon the body, and a spring, one end of the spring being wrapped about the overlapped ends of the strand.

3. A clasp comprising a body constructed of a single strand of wire, the ends of the strand being overlapped, a jaw pivotally mounted upon the body, and a spring, one end of the spring being wrapped about the overlapped ends of the strand.

872,853. HEATING DEVICE. THOMAS SHARP, Carlisle, Pa. Filed May 25, 1907. Serial No. 375,687.

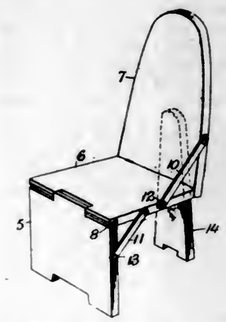


1. In a heating device, the combination with a casing containing heating elements and a hood over the upper end of said casing, a fender mounted upon said hood, said fender comprising a plurality of bails, a series of parallel rods mounted transversely upon said bails, said rods extending over said bails rearwardly and downwardly where their ends are secured to the back of said hood.

2. In a heating device, the combination with a casing open at one side, of a fender mounted on the upper end of said casing, an adjustable shield mounted across the open side of said casing, and means for securing the heating elements in said casing, said securing means comprising a removable plate of substantially triangular formation formed with semi-circular openings near the edge thereof through which said heating elements are secured, and adjustable semi-circular rings spanning the edge of said opening for the purpose of holding said heating elements securely in said openings.

3. A heating device, comprising a casing open at one side, heating elements in said casing, a hood over the upper end of said casing, a fender on said hood, and a shield adjustably secured across the front of said casing, means for adjustably securing said shield in position, said adjustable securing means comprising fingers on said shields, a series of studs extending inwardly from the sides of said casing, said fingers engaging said studs for holding said shield in position.

872,854. IRONING-BOARD. JOSEPHINE G. SHEPARD, Brooklyn, N. Y. Filed Oct. 22, 1906. Serial No. 340,065.



1. An ironing board formed of several sections, hinge connections joining the proximate edges of the respective sections, one of said connections having a pivot pin, an auxiliary board, and a bracket member carried by the auxiliary board and adapted to be connected to the ironing board sections through the medium of the pivot pin, whereby said auxiliary board is adapted to serve as a rear support when the board is arranged in chair form.

2. An ironing board formed of a plurality of sections movably connected to permit arrangement of the sections to form respectively a forward support, a seat, and a back for a chair, means for securing the respective sections in chair forming positions, and independent means adapted to engage the connection between two of the sections to form a rear support for the chair.

3. An ironing board formed of a plurality of sections movably connected to permit arrangement of the sections to form respectively a forward support, a seat, and a back for a chair, means for securing the respective sections in chair forming positions, an auxiliary board, and a bracket member removably secured to the board and adapted to engage the connection between two of said sections, said bracket member being formed to engage the lower edge and rear surface of one of the sections and to maintain the auxiliary board at an angle to said section in position to provide a rear support for the chair.

4. An ironing board formed of a plurality of sections movably connected to permit arrangement of the sections to form respectively a forward support, a seat, and a back for a chair, means for securing the respective sections in chair forming positions, an auxiliary ironing board, and a bracket member removably secured to the board and adapted to engage the connection between two of said sections, said bracket member being formed to engage the lower edge and rear surface of one of the sections and to maintain the auxiliary board at an angle to said section in position to provide a rear support for the chair.

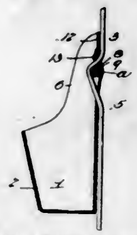
5. An ironing board comprising several connected sections, said sections being adapted to be arranged to provide a forward support, a seat and a back for a chair, an auxiliary ironing board adapted to form the rear support for the chair, and a bracket carried by said board and adapted for removable connection with the board and with one of the connections between the respective sections, said bracket being formed to maintain said auxiliary board at an an angle to the chair back section.

872,855. ELEVATOR. JACOB W. SHOOK, Turbotville, Pa. Filed June 7, 1907. Serial No. 377,790.

1. An elevator bucket having an opening in the rear part thereof for the reception of a belt, and a depression or seat on each side of said opening for the reception of a means adapted to attach the bucket to the belt.

2. An elevator bucket, having an opening in its rear portion for the reception of a belt, and oppositely disposed depressions or seats for the reception of a means adapted to attach the bucket to a belt.

3. An elevator bucket having an opening in the back part thereof for the reception of a belt, and oppositely disposed depressions or seats for the reception of the ends of a pin or cross bar adapted to attach the belt to a bucket.

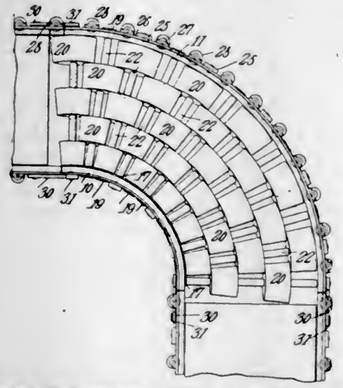


4. An elevator bucket having an upper extension having an opening therein for the reception of a belt, and oppositely disposed depressions or seats on each side of said opening for the reception of a pin or cross bar adapted to attach the bucket to the belt.

5. An elevator bucket having an upper extension having an opening therethrough for the reception of a belt, a depression or seat on each side of said opening for the reception of the ends of a pin or cross bar adapted to attach the bucket to the belt.

[Claims 6 to 13 not printed in the Gazette.]

872,856. GRAVITY-CONVEYER. CHARLES H. SPENCE, St. Paul, Minn. Filed July 31, 1907. Serial No. 386,392.



1. In a curved gravity conveyer, a plurality of radially arranged shafts, a plurality of frusto-conical rollers arranged on each shaft, and spacing means on the shafts for holding each roller from contact with the others.

2. In a curved gravity conveyer, a plurality of radially arranged shafts, a plurality of frusto conical rollers arranged on each shaft, spacing means on the shafts for holding each roller from contact with the others, the rollers of each shaft intersecting those of adjacent shafts.

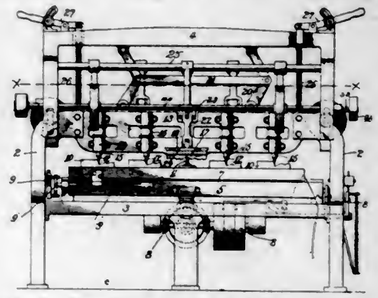
3. In a curved gravity conveyer, a series of radially disposed shafts, a set of frusto conical rollers arranged on each shaft, spacing means on the shafts for holding each roller from contact with the others, and the rollers of each shaft intersecting the rollers of adjacent shafts.

4. In curved gravity conveyers, a plurality of radially disposed shafts, a set of frusto-conical rollers arranged on each shaft, spacing sleeves surrounding the shafts at points between the rollers, and means for supporting said shafts.

5. In curved gravity conveyers, a plurality of radially arranged shafts, frusto-conical rollers mounted on the shafts, the upper or load carrying surfaces of all of the rollers of each shaft being disposed in a common horizontal plane.

[Claims 6 and 7 not printed in the Gazette.]

872,857. AUTOMATIC CARVING-MACHINE. FRANK STREICH, Chicago, Ill., assignor to Universal Automatic Carving Machine Co., Chicago, Ill., a Corporation of New Jersey. Filed Nov. 21, 1903. Serial No. 182,203.



1. In an automatic carving machine, a reciprocated feed-table for the work, in combination with a tracing-point thereon, a vertically movable tool-head with tools and carrying a pattern, and automatic means for elevating said head, substantially as described.

2. In an automatic carving machine, a feed-table for the work, and means for operating the same, in combination with a tracing-point arranged on said table, a tool-head perpendicularly movable with relation to said table, means of pattern-attachment on said head, cutting-tools carried by said head, means for driving said tools and an automatic retracting mechanism, substantially as described.

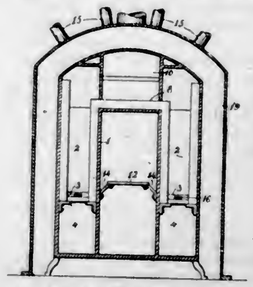
3. In an automatic carving machine, a feed-table for the work, in combination with means for actuating said table, a tracing-point arranged upon said table, a head arranged for perpendicular movement with relation to said table, a pattern carried by said head and substantially parallel to said table and normally in contact with said point, cutting-tools carried by said head, and a retracting-mechanism comprising a continuously-driven part for retracting said head when pressed upon, substantially as described.

4. In an automatic carving machine, a feed-table, and means for actuating the same, in combination with a tracing-point arranged on said table, a tool-head movable with relation to said table, a pattern carried by said head, tools also carried by said head, means for driving said tools and means for retracting said head, substantially as described.

5. In an automatic carving machine, a feed-table and means for actuating the same, in combination with a tool-head, a pattern and a tracing-point, arranged on said head and table respectively, and means governed by said point and pattern for retracting said head, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

872,858. HEATING-FURNACE. FRANCIS E. SWIFT, Dayton, Ohio. Filed June 3, 1907. Serial No. 376,996.



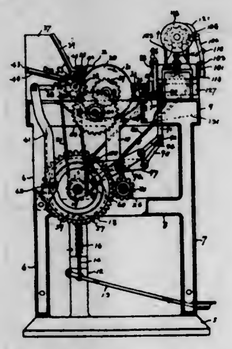
1. In a furnace for house heating purposes, a shell provided with fire pockets, a hollow coking table, a partition below said table and between the fire pockets.

2. In a furnace for house heating purposes, a shell pro-

vided with fire pockets, a hollow coking table, a partition between the walls of said table and at a distance therefrom at its edges.

3. In a furnace for house heating purposes, a shell provided with fire pockets, a coking-table, a partition below said table and between said fire pockets, and means for passing the draft up through the grates, into said fire pockets.

872,859. LABEL-AFFIXING MACHINE. FLORENCE E. TAYLOR, Boston, Mass., assignor of one-third to Edward P. Forbes, Boston, Mass. Filed Dec. 11, 1905. Serial No. 291,180.



1. A label affixing machine comprising a glue roll having a series of slight annular depressions, means for rotating said roll, means for supplying glue to the periphery thereof, a smoother plate having an edge located near the roll, means for feeding labels to said roll beneath said smoother plate, and means extending into said depressions for stripping labels from said roll.

2. A label affixing machine comprising glue applying means, a guide located at one side of said means, a slide movable on said guide for adjustment, a jaw fixed to said slide, a shaft journaled in said jaw and having a lip thereon, means for rotating the shaft, and means for reciprocating the guide.

3. A label affixing machine comprising guides, slides movable on said guides and having laterally extending guide members, blocks adjustable on said guide members and having fixed jaws shafts journaled in said jaws and having lips complemental to said jaws and crank arms, plates pivotally mounted on the first mentioned slides, means for moving said slides and means for intercepting the free end of the pivoted plate as and for the purpose described.

4. In a label affixing machine, the combination with a support for the article to which a label is to be applied, a clamp movable towards and from said support and adapted to bear against the central portion of the label whereby the surface of the label at the sides of said clamp are exposed for the action of pressers, and means periodically moving said clamp towards and from said support, of a pair of wipers, and means for operating said wipers in succession, one of said wipers being mounted to swing across the path of said clamp as described.

5. In a label affixing machine, the combination with a support for the article to be labeled, of a pair of wipers mounted to slide and swing above said support, and means for alternately operating said wipers to wipe against the label from the central portion towards the ends.

[Claims 6 to 9 not printed in the Gazette.]

872,860. VEHICLE-TIRE. WILLIAM C. TAYLOR, Paris, France, assignor of one-half to Clarence G. Taylor, Washington, D. C. Filed Feb. 20, 1907. Serial No. 358,481.

1. In combination with a rim; a plate carried thereby, said plate being provided with numerous perforations throughout its length and breadth; a pneumatic tire mounted upon the rim over said perforate plate; and means for admitting air to the opposite side of the plate.



2. In combination with a rim; a perforate plate mounted thereon; a chamber formed between said plate and the rim; a tire mounted over said plate; and means for forcing air into the chamber independently of the compression and expansion of the tire.

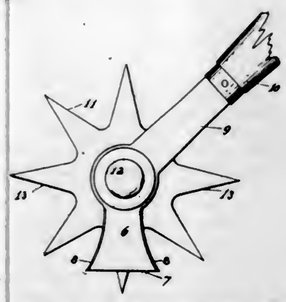
3. In combination with a rim having a chamber extending around the same; a series of tubes opening into said chamber; a plate mounted over the chamber, said plate being provided with numerous perforations throughout its length and breadth, the perforations being in communication with the external atmosphere through the chamber and tubes; and a pneumatic tire carried by the rim and resting upon the plate.

4. In combination with a rim having a chamber extending around the same; a perforate plate carried by the rim and forming the upper wall of the chamber; a series of tubes opening into said chamber; a screen mounted upon the plate; and a tire carried by the rim and resting upon the screen.

5. In combination with a rim having a chamber formed around the same; a perforate plate carried by the rim and forming the upper wall of the chamber; tubes communicating with said chamber, the mouths of the tubes opening in opposite directions, whereby upon rotation of the wheel air will be forced into and out of the chamber; and a tire secured to the rim and bearing upon the plate.

[Claim 6 not printed in the Gazette.]

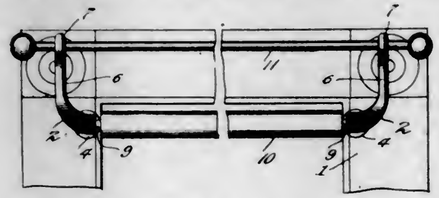
872,861. LAWN-EDGE TRIMMER. FREDERICK W. THEBERATH, Lakewood, Ohio. Filed July 9, 1907. Serial No. 382,024.



A device of the kind stated, comprising a blade cut off square at the lower end and sharpened on opposite edges and having a handle fixed thereto, and a star wheel rotatable beside the blade and having points sharpened on both edges and projecting at their tips below the blade.

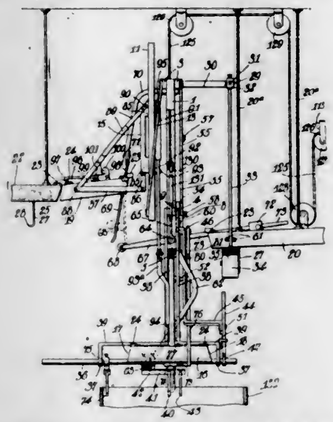
872,862. CURTAIN AND SHADE BRACKET. AVERY M. TRUESDALE and ERNIE A. THOMPSON, Jefferson, Ohio. Filed Apr. 24, 1907. Serial No. 370,059.

1. A bracket having a combined curtain and shade supporter comprising a shank having recesses in one of its side surfaces extending partially through the same, a screw rigidly secured to one end of the shank, an outwardly extending arm integrally connected with the shank at the opposite end and curving upwardly and laterally therefrom and provided with an eye at its extremity.



2. A bracket comprising a shank having recesses in one of its side surfaces and suitably spaced apart, a fastening device rigidly secured to one end of the shank, an outwardly extending arm curved laterally and upwardly so as to be horizontally and vertically out of the plane of the shank and parallel therewith, the said shank forming a head to permit the fastening to be driven into a support.

872,863. DIPPING-MACHINE. WILLIAM M. TULLEY, Marion, Ind. Filed Apr. 29, 1907. Serial No. 370,932.



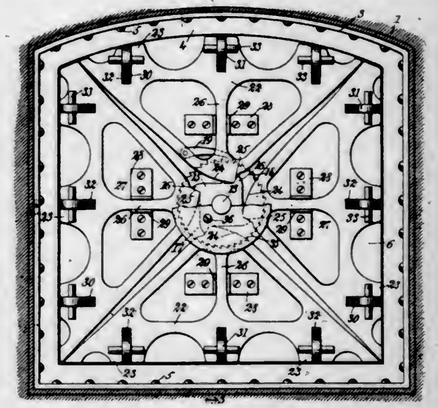
1. In a dipping machine, in combination with a frame of an ontake track sustained thereby and an offtake track, a dipping elevator to receive the work from the ontake track, a discharge elevator to receive the dipped work from the dipping elevator and convey the same to the offtake track, each of said elevators having a track section, a work-supporting trolley to pass from the ontake track to the offtake track section of the dipping elevator, from said track section of said elevator to that of the discharge elevator, and from the track section of the discharge elevator to the offtake track, means to operate said elevators, and means to control the passage of the work-supporting trolley with respect to the said tracks and elevators.

2. In a dipping machine, the combination of a frame an inclined ontake track sustained thereby, a work-engaging trolley to operate on the same by gravity, an inclined offtake track mounted in the frame, a dipping elevator to receive the said trolley from said ontake track, a discharge elevator having a tilting track, means to operate said elevators, means actuated by the movement of the dipping elevator to cause the said trolley to pass from the ontake track to the dipping elevator, and subsequently from the latter to the tilting track of the discharge elevator, means to tilt the track of the said discharge elevator when said track alines with the offtake track and cause said trolley to pass by gravity from said tilting track to said offtake track and means for controlling the passage of the trolley between the said tracks and elevators.

3. In a dipping machine, the combination of a frame a dipping elevator mounted therein, a discharge elevator, means to operate said dipping elevator, and a cam lever, operated by the dipping elevator to operate said discharge elevator.

4. In a dipping machine, the combination of a frame an inclined ontake track sustained therein, a work-carrying trolley to operate on the same by gravity, an inclined offtake track, a dipping elevator to receive the said trolley from said ontake track, a discharge elevator having a tilting track, means to operate said elevators, means actuated by the movement of the dipping elevator to cause the said trolley to pass from the ontake track to the dipping elevator and subsequently from the latter to the tilting track of the discharge elevator, means to tilt the track of the said discharge elevator when said track alines with the offtake track and cause said trolley to pass by gravity from said tilting track to said offtake track, and means coacting with said tilting track to retain the trolley on the latter until said tilting track alines with the offtake track and to release said trolley when said tilting track is tilted, for the purpose set forth.

872,864. VAULT-CLOSURE. FERDINAND UNCKERICH, Galion, Ohio. Filed Apr. 18, 1907. Serial No. 368,912.



1. A vault closure, comprising a door adapted to seat against a door-frame, bolts movably mounted on said door, an operating member formed in sections to project said bolts, a frangible member connecting said sections and adapted to be broken when said bolts are forced home, and means for clamping said bolts against said frame by a continuous movement of said operating member.

2. A vault closure, comprising a door adapted to seat against a door-frame, bolts carried by said door, and a key-member having an initial movement adapted to project said bolts behind said frame, and having a second movement adapted to clamp said bolts against said frame.

3. A vault closure, comprising a door adapted to seat against a door-frame, slidable bolts, means for successively projecting said bolts towards said frame, and for forcing said bolts into an inclined position with respect to the face of said door to clamp said bolts against said frame.

4. A vault closure, comprising a door adapted to seat against a door-frame, slidable bolts carried by said door, a key member mounted upon said door, a cam carried by said key member and adapted to project said bolts when said key member is operated, said key member having means controlled by its movement for clamping said bolts when the latter are projecting against said door-frame.

5. A vault closure, comprising a door adapted to seat against a door-frame, slidable bolts carried by said door, a key member movably mounted upon said door, a cam car-

ried by said key member and adapted to project said bolts toward the edge of said door, said key member serving to clamp said bolts against said door-frame when said bolts are projected, and means for locking said key member against momentum in one direction.

[Claims 6 to 9 not printed in the Gazette.]

872,865. STRAP-LOCK. ROBERT VERCH, Albany, N. Y. Filed Feb. 18, 1907. Serial No. 357,869.



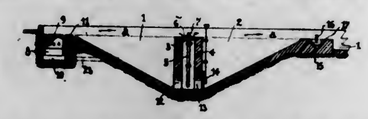
1. A fastening device for straps, comprising a body section having a loop extension at one end and a buckle extension at the opposite end, and a recessed stud located at a point above its bottom and a cover hinged to the body having tumblers for engagement with the said stud of the body.

2. A locking device for straps, consisting of a body section comprising a bottom member, side members extending upwardly therefrom, a loop member at one end and a buckle member at the opposite end and a recessed stud located above the bottom, a cover hinged to the body provided with a pin adapted to enter the strap and an opening to receive the studs, tumblers located within the cover, and a bolt connected with the tumblers to enter the recesses in the said stud.

3. A locking device for a strap, comprising a body section having a loop at one end and a buckle at its opposite end and a recessed stud located above its bottom portion, a cover for the said body hinged thereto provided with an aperture to receive the said stud, a pin adapted to pass through the strap, and means for locking the cover to the stud.

4. A fastening device for straps, comprising a body section having a loop extension at one end and side pieces extending out from its bottom, a recessed stud supported by said side pieces, a hinged cover for the body having an opening to receive said stud, said body having a bolt for engagement with the stud, and means for locking and releasing the bolt.

872,866. MUD RETAINER OR COLLECTOR FOR WATER-CLARIFYING TANKS. EMILE VIAL, Brussels, Belgium; Louise Bourgoin Vial, Blanche Vial, and Gabrielle Vial heiresses-at-law of said Emile Vial, deceased. Filed Mar. 17, 1906. Serial No. 306,512.



1. In a mud-retainer and collector for water clarifying tanks, the combination, with a tank, of two spaced partitions dividing the tank transversely into two compartments, each partition extending up to approximately the level of circulation and the one having an opening near the bottom thereof, means for admitting the water to be clarified into the compartment adjacent to the partition having said opening, a perforated plate arranged between said partitions in the upper portion thereof, horizontally, and means for causing the water to flow over the partition having said opening, down through said plate and then up through said plate and over the other partition, substantially as described.

2. In a mud-retainer and collector for water clarifying tanks, the combination, with a tank, of two spaced partitions dividing the tank transversely into two compartments, each partition extending up to approximately the level of circulation and the one having an opening near the bottom thereof, means for admitting the water to be clarified into the compartment adjacent to the partition having said opening, a perforated plate arranged between said partitions in the upper portion thereof, horizontally, and a weir arranged above said plate and extending longitudinally thereof, substantially as described.

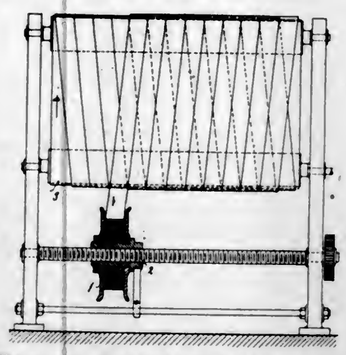
3. In a mud retainer and collector for water clarifying tanks, the combination of a substantially funnel-shaped tank, two spaced parallel partitions dividing said tank into two compartments and extending upwardly to approximately the level of circulation, one of said partitions having an opening in the lower part thereof, means for admitting the water to be clarified into the compartment adjacent the partition having said opening, and means, extending down into said tank, between said partitions, for removing therefrom the deposited matter, substantially as described.

4. In a mud retainer and collector for water clarifying tanks, the combination of a substantially funnel-shaped tank, two spaced parallel partitions dividing said tank into two compartments and extending upwardly to approximately the level of circulation, one of said partitions having an opening in the lower part thereof, means for admitting the water to be clarified into the compartment adjacent the partition having said opening, means, extending down into said tank, between said partitions, for removing therefrom the deposited matter, and means for causing the water to be clarified to flow over the partition having said opening, then down between said partitions, and then up over the other partition, substantially as described.

5. In a mud retainer and collector for water clarifying tanks, the combination of a substantially funnel-shaped tank, two spaced parallel partitions dividing said tank into two compartments and extending upwardly to approximately the level of circulation, one of said partitions having an opening in the lower part thereof, means for admitting the water to be clarified into the compartment comprising a channel and a wall extending up toward but not to the level of circulation and separating said channel from the tank and means for removing from said tank the deposited matter, substantially as described.

[Claim 6 not printed in the Gazette.]

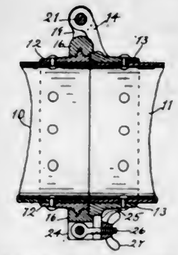
872,867. MANUFACTURE OF SEAMLESS FELT TUBES FOR COVERING ROLLERS AND THE LIKE. NIKOLAUS WAHL, Kahl-on-the-Main, Germany. Filed Sept. 2, 1905. Serial No. 276,835.



1. The process of manufacturing seamless felt tubes or bands, consisting in winding slivers of a width less than the length of the tube to be formed, upon an endless band in a plurality of layers, each layer being arranged obliquely with the convolutions having their edges contiguous, each layer of convolutions being wound in a different oblique direction to the contiguous layer; and thereupon finishing the tube by fulling.

2. The process of manufacturing seamless felt tubes or bands, consisting in winding slivers of a width less than the length of the tubes to be formed, upon an endless band in a plurality of layers, each layer being arranged obliquely with the convolutions having their edges contiguous, each layer of convolutions being wound in a different oblique direction to the contiguous layer; and thereupon cutting off the uneven edges of the tube, and then fulling the tube.

872,868. PNEUMATIC STRAW-STACKER. JAMES A. WALSH, Indianapolis, Ind., assignor to The Indiana Manufacturing Company, Indianapolis, Ind., a Corporation of West Virginia. Filed Aug. 12, 1907. Serial No. 388,073.



1. A folding stacker pipe composed of sections connected by a swiveling hinge, means for locking said sections in extended position, and means associated with said hinge for fixedly maintaining the swinging section in any position to which it has been swung relatively to its supporting section.

2. The combination, in a pneumatic stacker, of a sectional pipe, means for rotating and folding a section of said pipe to any predetermined position relatively to its adjoining section, and locking mechanism associated with said means for fixedly maintaining said section in such folded position.

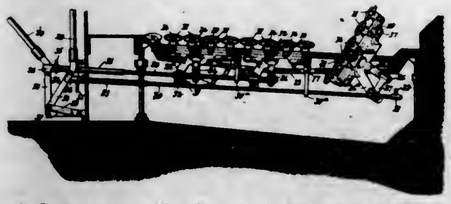
3. The combination, in a pneumatic stacker, of a folding pipe, means for folding a section of said pipe to any predetermined position relatively to its adjoining section, and means associated with said folding means for fixedly maintaining said folded section in such position.

4. The combination, with a pneumatic stacker, of a sectional discharge pipe, a hinge connecting said sections, said hinge being fixedly secured to one of said sections and movably mounted upon the adjoining section, and means opposite the hinge joint for fixedly engaging the meeting ends of said sections and disengaging the same.

5. The combination, in a pneumatic stacker, of a sectional discharge pipe comprising a fixed section and a folding section hingedly and rotatably mounted thereon, and means asociated with said sections for fixedly maintaining said folded section alongside said fixed section.

[Claims 6 to 11 not printed in the Gazette.

872,869. FURNACE-GRATE. MONTROSS WASHBURN, Ossining, and ROGER D. GRANGER, New York, N. Y. Filed Aug. 22, 1907. Serial No. 389,656.



1. In a grate, a plurality of pivoted grate sections, a plurality of grate bars pivotally supported on each section, and a single mechanism operable to either swing said sections on their pivots or oscillate the grate bars on the grate sections.

2. In a grate, a plurality of pivoted grate sections, a plurality of grate bars pivotally supported on each section, an operating rod, means for axially revolving said operating rod to alternately connect it to the grate sections and to the grate bars, and means for reciprocating said rod, whereby the grate sections or grate bars with which it is connected will be swung on their pivots.

3. In a grate, a pivoted grate section, a plurality of grate bars pivotally supported on said section, an operating rod having engaging devices and means for axially revolving said rod to alternately engage said devices with either the grate section or the grate bars, and means for reciprocating said rod for the purpose described.

4. In a grate, a pivoted grate section, a plurality of grate bars pivotally supported on said section, each having a depending arm provided with a stud, a slide carried by the grate section having slots with which the studs of the grate bars engage, means for reciprocating the slide, whereby the grate bars are caused to oscillate on their pivots, and means partly included in said first-named means for swinging the grate section.

5. In a grate, a pivoted grate section, a plurality of grate bars pivotally supported on said section, an operating rod, a device carried by said rod, means for axially revolving the rod to engage said device with the grate section and lock the grate bars thereon against relative movement relative to the grate section, and means for reciprocating the rod, whereby the grate section is carried to and from a dumping position.

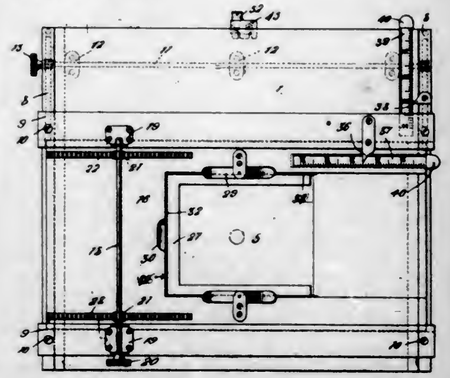
[Claims 6 to 12 not printed in the Gazette.]

872,870. BOAT. BENJAMIN F. WATERS, Dover, N. C. Filed Mar. 4, 1907. Serial No. 360,374.



A boat comprising a body, pulleys mounted in pairs at the ends thereof, parallel cables trained over said pulleys and transverse paddles connecting said cables, each of said paddles comprising a vertical working portion, and flexibly connected slats disposed as an entirety in a horizontal plane, the end ones of said slats being provided with an inwardly extending inclined deflecting blade.

872,871. MULTIPLYING ATTACHMENT. COLUMBUS A. WAYLAND, South Knoxville, Tenn. Filed June 14, 1906. Serial No. 321,739.



1. A multiplying attachment for cameras embodying a camera back a pair of longitudinally movable members adapted to engage the opposite edges of the camera back and having portions coöperating with the forward surface thereof, a pair of cross members secured to the members first mentioned and coöperating with the rear sur-

face of the camera back to retain the longitudinally movable members in coöperative relation therewith, and a plate holder frame guided to operate between the said cross members.

2. A multiplying attachment for cameras embodying a camera back a frame comprising suitably spaced bars L-shaped in cross section and coöperating with two opposite edges and the forward surface of the camera back, and cross members arranged angularly to the said bars and coöperating with the rear surface of the camera back to retain the L-shaped bars in coöperative relation therewith, said cross members being provided with guides at their proximate sides, and a plate holder frame operating longitudinally between the said cross members.

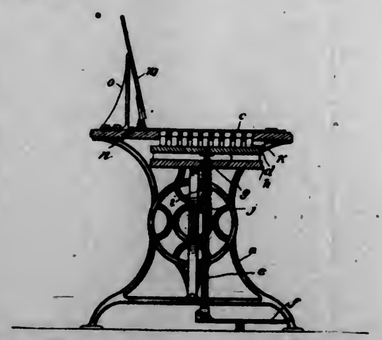
3. A multiplying attachment for cameras embodying a camera back a vertically movable frame composed of a pair of suitably spaced bars engaging the vertical edges of the camera back, racks secured to the forward surfaces of said bars, a pinion shaft journaled on the forward surface of the camera back and having pinions on its ends cooperating with the racks on the said bars for adjusting the latter relatively to the camera back, cross members rigidly connecting the said bars and coöperating with the rear surface of the camera back to retain the said bars in coöperative relation therewith, and a plate holder frame carried by the cross members.

4. A multiplying attachment for cameras embodying a camera back a frame composed of a pair of spaced bars having portions coöperating with two opposite edges and the forward surface of the camera back, and a pair of suitably spaced cross members rigidly connecting the said bars and coöperating with the rear surface of the camera back to retain the said bars in coöperative relation therewith, a pinion shaft having its ends journaled on the cross members and provided with pinions toward its ends, a plate holder frame slidable longitudinally between the cross members, and a pair of racks carried by the plate holder frame and coöperating with the pinions on said shaft.

5. A multiplying attachment for cameras embodying a camera back a frame composed of vertical and horizontal bars rigidly connected, a pair of racks secured to the vertically extending bars, a pinion shaft journaled on the camera back and having pinions at its ends coöperating with the said racks to adjust the frame vertically relatively to the camera back, a plate holder frame adjustable longitudinally between the horizontal bars, a pair of racks arranged thereon toward its longitudinal edges, a pinion shaft journaled on the horizontal bars, and pinions on said latter shaft coöperating with the racks on the plate holder frame for adjusting the latter horizontally relative to the camera back.

[Claims 6 to 12 not printed in the Gazette.]

872,872. SAMPLE-MOUNTING MACHINE. HARRY WEISKOPF, Chicago, Ill. Filed June 18, 1907. Serial No. 379,582.



The herein described machine for mounting sample strips upon cards, comprising a frame, a table supported upon the frame and provided with a series of apertures therethrough, a weighted platen hinged to the table, a stop for said platen, a series of guides on said table to hold the paper sheets in position to receive the sample strips, a plunger board, a series of presser blocks secured to said board and projecting into the apertures in said table, a board or plate rigidly secured to the frame under said plunger board, a plunger rod extending through said board and connected to said plunger board, a spring surrounding said plunger rod and bearing at its upper end against said board or plate, a supporting collar on said plunger rod for the opposite end of said spring, and a foot treadle to which the lower end of said plunger rod is pivoted.

872,873. MOUNTING FOR HOOKS AND EYES. FRANK L. WEST, Cleveland, Ohio. Filed Aug. 20, 1906. Serial No. 331,241.



1. A hook and eye member, provided with a hump near its middle, combined with a mounting having fastenings at its rear for said member and said mounting being of substantially the same length as said member and extending beneath said hump.

2. A hook and eye member having lateral loops, combined with a mounting having a substantially triangular body provided with a single front prong and two rear prongs integral therewith and lateral raised projections at the edge of said body engaged over the said lateral loops of said hook and eye member.

3. As a new article of manufacture and sale, a mounting for hooks and eyes comprising an elongated body having a single integral downwardly projecting prong at its front end and opposite integral prongs at its rear edge and lateral raised projections at each side of said body in advance of said rear prongs.

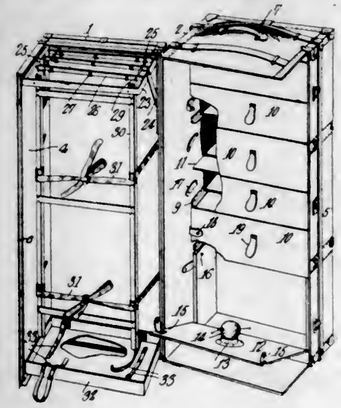
4. As a new article of manufacture and sale, a mounting for hook and eye members comprising a substantially triangular plate having integral prongs bent downwardly at right angles at its base and apex and having lateral hook projections at its wider end of opposite sides thereof and standing above the plane of said plate, and adapted to detachably mount hook and eye members upon the upper face of said mounting.

872,874. TRUNK. GEORGE H. WHEARY, Racine, Wis., assignor to The Hartmann Trunk Co., Racine, Wis. Filed Apr. 12, 1907. Serial No. 367,740.

1. A trunk comprising a body portion having one side panel and two end panels of equal width and the other side panel of less width than the first-named side panel, a top portion having one side panel and the end panels of equal width and the other side panel of such greater width than the first-named side panel of the top portion as to meet the narrow side panel of the body portion when the top portion is closed down on the body portion, and a garment-carrier support secured to the top portion near one end thereof.

2. A trunk comprising a body portion having the back panel and both end panels of equal width and the front panel of a width less than that of the other panels, drawers or containers within the body portion of the trunk and occupying a space commensurate with the width of the front panel, a top portion having the back panel and end panels of equal width and the front panel of greater width to meet the narrow front panel of the body portion, and a garment-carrier support carried by said top portion of the trunk and arranged to be moved thereby into the body portion of the trunk when the top portion is closed on to the body portion.

3. A trunk comprising a body portion having its front panel of less width than the height of said body portion, a top portion having its front panel of a correspondingly greater width to complete the front of the trunk, and a garment carrier secured to one end of the top portion of the trunk and projecting therefrom to an extent coextensive with the width of the front panel of said top portion and accessible from the side adjacent to the body portion of the trunk and also from the side adjacent to the extended front panel of the top of the trunk.



4. A trunk comprising a body portion having a front panel of less width than the back and end panels of said body portion, a series of drawers or compartments within said body portion occupying a space between the bottom of the trunk and the top of the narrow front panel and extending from one end of the trunk to a point near the other end of the trunk, a top portion having a front panel of greater width than the rear and side panels and of sufficient width to meet the narrow front panel of the body portion, and a supporting frame for garment-carriers secured to the top portion of the trunk near one end thereof and of such extent of projection from said top portion as to enter the body portion of the trunk between the series of compartments and the end of the trunk near which they terminate, said garment-supporting frame projecting beyond the narrow back panel of the top and accessible from the side corresponding to such narrow back panel.

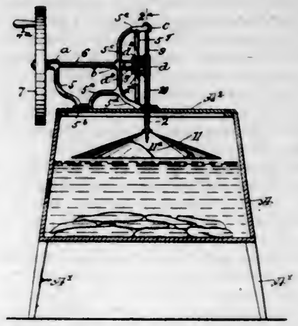
5. A trunk comprising a body portion having a front panel of less width than the height of said body portion, a top portion having the front panel of sufficient width to meet the narrow front panel of the body portion, a series of drawers or compartments in the body portion of the trunk and of a depth approximately that of the narrow front panel of the body portion, a supporting frame for garment-carriers fast in the top portion of the trunk near one end thereof and projecting from said top portion a distance equal to the width of the front panel of said top portion, and another frame hung from the first-named frame and movable from the front thereof toward the rear end thereof for compacting garments placed on the garment-carriers.

[Claim 6 not printed in the Gazette.]

872,875. MECHANICAL MOVEMENT. ALCID O. WIEGANT, Wathena, Kans. Filed Apr. 23, 1907. Serial No. 369,853.

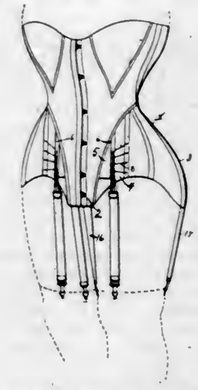
1. A mechanical movement, comprising a supporting frame, a rotatable driving shaft on the frame, a pinion on an end of said shaft, a guide shaft pendent on the frame, a hollow shaft or barrel slidable and rotatable on the guide shaft, and teeth projected from the barrel and engaging the pinion.

2. A mechanical movement, comprising a supporting frame, a rotatable driving shaft on the frame, a bevel pinion on an end of said shaft, a crank wheel on the other end of said shaft, a guide shaft pendent from the frame, a hollow shaft or barrel slidable and rotatable on the guide shaft, and a vertical row of teeth projected from the barrel and engaging the pinion.



3. A mechanical movement, comprising a supporting frame, said frame having an upright oblong ring member, a horizontally disposed rotatable driving shaft on the frame, a balance wheel having a handle and secured on one end of the driving shaft, a bevel pinion on the other end of said shaft and entering the oblong ring member of the frame, a guide shaft pendent from the frame disposed near the oblong ring member, a hollow shaft on the barrel slidable and rotatable on the guide shaft, a hub on the barrel opposed to the bevel pinion, a plurality of spaced short arms projecting laterally from the hub and in vertical alinement, and a like number of similar rotatable roller teeth loosely mounted on the short arms, said teeth engaging between the teeth of the bevel pinion.

872,876. CORSET. CHARLES H. WILLIAMS, Kalamazoo, Mich., assignor to Puritan Corset Company, Kalamazoo, Mich. Filed Dec. 14, 1906. Serial No. 347,879.



1. A corset, provided with hip and front portions; collapsible portions arranged between the said hip and front portions; central vertically arranged stiffening strips for said collapsible portions; flaps connected to said front portions; stiffening strips having eyelets therein arranged at the edges of said flaps; stiffening strips having eyelets therein connected at their rear edges to said hip portions; hose-supporting straps having eyelets at the upper ends thereof; and cords laced through said eyelets in said stiffening strips and in said hose-supporting straps.

2. A corset, provided with hip and front portions; flaps connected to said front portions; stiffening strips having eyelets therein arranged at the edges of said flaps; stiffening strips having eyelets therein connected at their rear edges to said hip portions; hose-supporting straps having eyelets in the upper ends thereof; and cords laced through

said eyelets in said stiffening strips and in said hose-supporting straps.

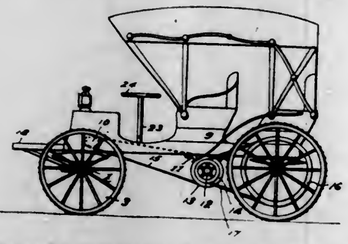
3. A corset provided with hip and front portions; collapsible portions arranged between the said hip and front portions; central vertically arranged stiffening strips for said collapsible portions; stiffening strips having eyelets therein connected to said front portions; stiffening strips having eyelets therein connected to said hip portions; attaching straps having eyelets therein; and cords laced through said eyelets in said strips and in said attaching straps, said attaching straps being adapted to be connected to the legs of the wearer.

4. A corset provided with hip and front portions; stiffening strips having eyelets therein connected to said front portions; stiffening strips having eyelets therein connected to said hip portions; attaching straps having eyelets therein; and cords laced through said eyelets in said strips and in said attaching straps, said attaching straps being adapted to be connected to the legs of the wearer.

5. A corset provided with hip and front portions; collapsible portions arranged between the said hip and front portions; central vertically-arranged stiffening strips for said collapsible portions; flaps connected to said front portions; stiffening strips on said flaps; stiffening strips connected to said hip portions; attaching straps; and collapsing cords suitably connected to said stiffening strips on said hip and front portions and to said attaching straps, said attaching straps being adapted to be connected to the legs of the wearer.

[Claims 6 to 13 not printed in the Gazette.]

872,877. VEHICLE. ZEPHANIAH E. WILLIAMSON, Sheffield, Ill. Filed May 9, 1907. Serial No. 372,693.



A vehicle of the class described having a frame projecting from the front end of its body and provided with a transversely disposed guide-way, a tongue pivotally connected to an axle of the vehicle and bearing and disposed to travel in said guide-way, a steering shaft mounted in the body of the vehicle, having a steering wheel at its upper end and a sprocket wheel at its lower end, direction sprocket wheels mounted in the said frame at points at opposite sides thereof, and a sprocket chain engaging and connecting the sprocket wheels, the sprocket wheel at the lower end of the steering shaft and also connected to the tongue to move the latter in the guide-way, for the purpose set forth.

872,878. ELECTRODE. ROBERT J. WISNOM, Virginia City, Nev. Filed Oct. 3, 1906. Serial No. 337,305.

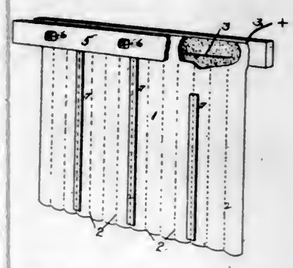
1. An anode comprising a metallic oxid and a support for the same formed of vegetable fibers.

2. An anode comprising peroxid of lead in a granular form and a support for the same formed of vegetable fibers.

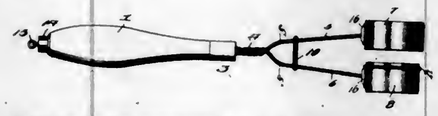
3. An anode comprising a non-conducting envelop divided into a number of vertical pockets, a transverse pocket connecting them at the top and a metallic oxid inclosed in said pockets.

4. An anode comprising a non-conducting envelop divided into a number of vertical pockets with a transverse pocket connecting them at the top, a metallic oxid inclosed in said pockets and a wire in said transverse pocket.

5. An anode comprising a non-conducting envelop divided into a number of vertical pockets, a transverse pocket having a wire therein, a metallic oxid inclosed in said pockets and means for compressing the contents of said pocket around said wire.

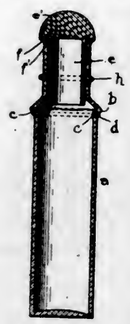


872,879. BLUING DEVICE. MINARD F. WOOD, Worcester, Mass. Filed Sept. 2, 1905. Serial No. 276,815.



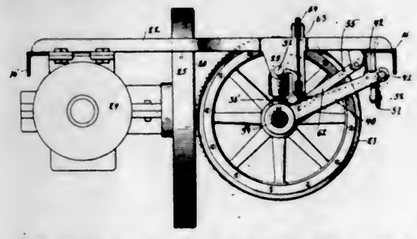
A bluing device comprising a handle with a socket in its upper end, a pair of arms spirally intertwisted at their lower ends to provide a shank which is screwed into said socket, the arms above the shank being curved outwardly which serves to give the same springing action, bluing holders provided with strainers on their outer sides, reinforces on one portion of the peripheries to permit of securing the upper ends of the arms to the holders, one of the holders having a surrounding peripheral stop flange, and a compressor slidably mounted on the arms, substantially as specified.

872,880. BOTTLE. GEORGE G. WUCHNER, Louisville, Ky. Filed Apr. 5, 1906. Serial No. 310,031.



A syrup bottle for use with soda water apparatus, having a body, a neck portion having a shouldered base projecting beyond such body, said neck portion having a convex upper edge rounded at the top and upon both sides, and an intermediate hand-hold shoulder lying between said upper edge and shouldered base, and said body having a shallow annular groove below such shouldered base, a cushion ring in such groove, and a stopper having a loose fitting hollow stem having a measuring cavity of cylindrical form and a solid top having a projecting shoulder provided with a concave annular groove fitting closely against the top and both sides of the rounded upper edge of said neck portion.

872,881. DRIVE MECHANISM FOR MOTOR-VEHICLES. ADAM ZISKA, Jr., Chicago, Ill., assignor to Rockford Automobile & Engine Co., Rockford, Ill. Filed Nov. 24, 1906. Serial No. 344,936.



1. In a motor-vehicle, the combination of a motor-operated drive-wheel having a friction face, a pulley having a peripheral friction surface, a shaft on which the pulley is mounted operatively connected to the pulley, means for adjusting the shaft to vary the line of engagement of the friction-surfaces of the drive-wheel and pulley and means for adjusting the pulley to engage the face of the drive-wheel at different points along said line to vary the speed of the pulley.

2. In a motor-vehicle, the combination of a motor-operated drive-wheel having a friction face, a pulley having a peripheral friction surface, a shaft on which the pulley is mounted operatively connected to the pulley, means for adjusting the shaft to vary the line of engagement of the friction-surfaces of the drive-wheel and pulley, and means for shifting the pulley into and out of operative relation with the drive-wheel.

3. In a motor-vehicle, the combination of a motor-operated drive-wheel having a friction face, a pulley having a peripheral friction surface, a shaft on which the pulley is mounted operatively connected to the pulley, means for adjusting the shaft to vary the line of engagement of the friction-surfaces of the drive-wheel and pulley, means for adjusting the pulley to engage the face of the drive-wheel at different points along said line to vary the speed of the pulley, and means for shifting the pulley into and out of engagement with the drive-wheel.

4. In a motor-vehicle, the combination of a motor-operated drive-wheel having a friction-face, a pulley having a peripheral friction-surface, a shaft on which the pulley is slidably mounted operatively connected to the pulley, means for adjusting the shaft to vary the line of engagement of the friction-surfaces of the drive-wheel and the pulley, and means for adjusting the pulley on said shaft to vary the point of engagement along the line of the shaft.

5. In a motor-vehicle, the combination with a motor-operated drive-wheel having a friction-face, a pulley having a peripheral friction-surface, a shaft on which the pulley is slidably mounted operatively connected to the pulley, journals in which the shaft is slidably mounted and means for adjusting the bearings to vary the position of the shaft so the line of contact of the friction-surfaces of the pulley and drive-wheel may be varied.

[Claims 6 to 21 not printed in the Gazette.]

872,882. BELTING. CHARLES F. AARON, New York, N. Y. Filed Dec. 18, 1906. Serial No. 348,417.



1. The method of making belting which consists in cutting a continuous strip from the weaker and stronger portions of a hide, placing several such strips on edge and side by side, so arranged that the weaker portions of the several strips lie in transverse proximity to the stronger portions of others of said strips, and finally securing the strips together.

2. The method of making belting composed of strips of leather, which consists in cutting the respective strips in continuous lengths from the weaker and stronger portions of a hide, placing the strips on edge and side by side, with the weaker portions of the several strips placed adjacent the stronger portions of the contiguous strips to produce a belting of uniform strength throughout, and finally securing the several strips together.

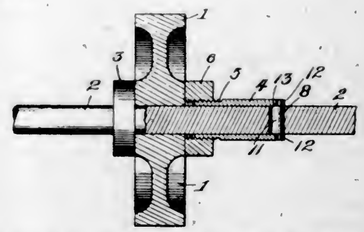
3. The method of making belting composed of strips of leather, which consists in cutting the respective strips in continuous lengths and of a width substantially equal to the thickness of the finished belting, from the weaker and stronger portions of a hide, placing the strips on edge and side by side, with the weaker portions of the several strips placed adjacent the stronger portions of the contiguous strips to produce a belting of uniform strength throughout, and finally securing the several strips together.

4. The method of making belting composed of strips of leather, which consists in cutting the respective strips in continuous lengths from the weaker and stronger portions of a hide, placing the strips on edge and side by side in alternate relation to cause the weaker portions of the several strips to lie adjacent the stronger portions of the contiguous strips, and finally securing the strips together by transverse fastenings.

5. The method of making belting which consists in splitting the grain from the hides in continuous sheets, cutting a continuous strip from the weaker and stronger portions of each hide, placing several such strips on edge and side by side so arranged that the weaker portions of the several strips lie in transverse proximity to the stronger portions of others of said strips, and finally securing the strips together.

[Claims 6 to 11 not printed in the Gazette.]

872,883. LOCKING MEANS. EDWIN G. ADAMS, near Plain City, Ohio. Filed Mar. 23, 1907. Serial No. 364,121.



1. A means for securing an element in fixed relation to a shaft comprising a member movable on the shaft and free of engagement with the element, a clamping member adjustable on the movable member, and a pin coöperating with the shaft and adapted to be engaged by the movable member to limit movement of the latter in one direction.

2. A means for securing an element in fixed relation to a shaft comprising a member movable on the shaft and free of engagement with the element, a clamping member adjustable on the movable member, and a pin coöperating with the shaft and adapted to be engaged by the movable member to limit movement of the latter in one direction, said movable member being arranged to secure the pin in fixed relation to the shaft.

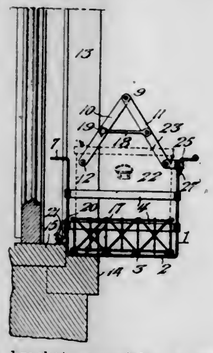
3. A means for securing an element in fixed relation to a shaft comprising a member movable on the shaft and free of engagement with the element, a clamping member adjustable on the movable member, a pin coöperating with the shaft and adapted to be engaged by the movable member to limit movement of the latter in one direction, said movable member being arranged to secure the pin in fixed relation to the shaft, said pin being formed with shoulders to underlie the movable member when the latter is in engagement with the pin.

4. A securing means for maintaining an element in fixed relation to a shaft comprising a sleeve free of engagement with the element and arranged for free movement on the shaft, a clamping nut having threaded connection with the sleeve and adapted to engage the element, and a pin engaging the shaft and limiting the movement of the sleeve in one direction.

5. A securing means for maintaining an element in fixed relation to a shaft comprising a sleeve arranged for free movement on the shaft, a clamping nut having threaded connection with the sleeve and adapted to engage the element, and a pin mounted in an opening in the shaft and provided with projecting studs to engage notches formed in the sleeve.

[Claim 6 not printed in the Gazette.]

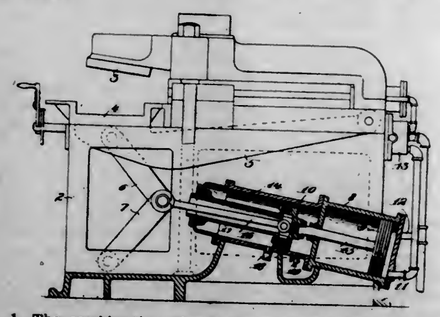
872,884. WINDOW-BRACKET. MAE D. ADAMS and ANDREW J. COLLIER, Washington, D. C. Filed Jan. 9, 1907. Serial No. 351,543.



1. A window bracket comprising a main frame constructed of spaced bars terminally connected, the side bars being of substantially U-shape, the forward portions of said bars being connected at their upper ends by a longitudinal bar projected beyond the side bars and bent to provide ears, and supporting arms connected to said ears, the upper terminals of the rear portions of said side arms being projected laterally to provide supporting lips.

2. A window bracket comprising a frame, supporting arms for connecting the frame to the window casing, said arms comprising hinged sections, means for securing the respective sections at an angle to each other to maintain the frame in elevated position, and means carried by the frame to engage the window sill and support the frame when in lowered position.

872,885. CAKE-FORMING MACHINE. ELLIS B. ANDERSON, Memphis, Tenn. Filed June 28, 1906. Serial No. 323,968.



1. The combination of cake forming mechanism involving a movable member, a toggle connected with said movable member, a cylinder, a piston in said cylinder, the cylinder having openings at longitudinally separated points, one opening being for the admission of air to opposite sides of the piston, and the other constituting a vent opening, and means for positively operating the piston to compress the air forward of the same, the air at the opposite side of said piston serving to check the same on the backward motion thereof under the action of compressed air thereagainst.

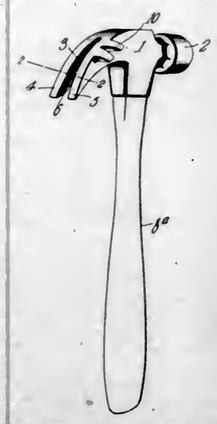
2. The combination of cake-forming mechanism, a cylinder, a piston, in said cylinder, the cylinder having openings at longitudinally separated points, one opening being for the admission of air to opposite sides of the piston and the other constituting a vent opening, means for positively operating the piston to compress the air at one side of the same, the air at the opposite side of said piston serving to check the motion of said piston when operated by the air thus compressed, and means for transferring the effect of said piston to said cake-forming mechanism.

3. The combination of cake-forming mechanism, a cylinder, a piston in said cylinder, the cylinder having openings at longitudinally separated points, one opening being for the admission of air to opposite sides of the piston, and the other constituting a vent opening, a second cylinder, a piston in said second cylinder, means for transferring the effect of the second piston to the first piston to cause the latter to compress the air forward of the same, the air at the opposite side of said first piston serving to check the same on the backward motion thereof under the action of compressed air thereagainst, and means for transferring the effect of the first piston to said cake-forming mechanism.

4. The combination of cake-forming mechanism, a cylinder, a piston operable in said cylinder, a tube open at its outer end extending through one head of said cylinder and connected with said piston, a rod connected with the latter and disposed in said tube, and means for transferring the effect of said rod to said cake-forming mechanism.

5. The combination of cake-forming mechanism, a cylinder, a piston in said cylinder, a tube open at the outer end extending through one head of said cylinder and connected with the piston, a rod extending through said tube and connected with said piston, means for transferring the effect of the rod when operated by said piston to said cake-forming mechanism, a second cylinder, a piston in said second cylinder, and means for transferring the power of the second piston to said first piston to operate the latter.

872,886. HAMMER. JOHN C. BATES, Lake City, Fla., assignor of one-half to Franklin J. Appell, Lake City, Fla. Filed June 26, 1907. Serial No. 380,926.



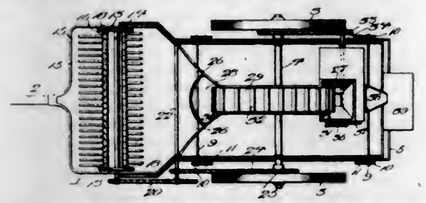
1. A tool having extracting claws flat on the side adapted to engage beneath the head of an object to be extracted and having their facing sides inclined or curved away from said flat side.

2. A tool having extracting claws flat on the side adapted to engage beneath the head of an object to be extracted and separated by a tapering notch, the edges of which are sharp, the facing sides of said claws being inclined or curved away from said edges in a lateral direction.

3. A hammer provided with curved extracting claws having a tapered central notch, the inner concaved face of said extracting claws being straight or flat transversely to form a sharp edge at said notch, the facing walls of which curve or incline laterally.

4. A hammer having curved extracting claws separated by a central longitudinally tapering slot narrower in a transverse direction on the inner side of said claws than on the outer side.

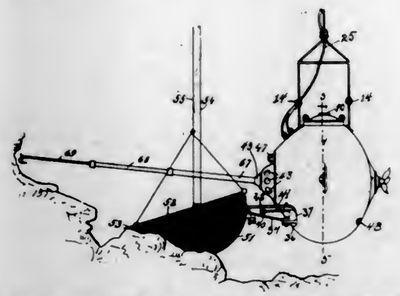
872,887. PEA-HARVESTING MACHINE. LANCING B. BAXTER, Hickory, Va. Filed Nov. 24, 1906. Serial No. 344,906.



1. In a pea harvester, a gathering reel comprising disks mounted upon a shaft, gathering fingers comprising tubular portions and fingers extending therefrom, rods secured to the disks and said fingers strung upon the rods, substantially as described.

2. In a pea harvester, a reel for gathering peas comprising disks mounted upon a shaft, rods connecting the disks, gathering fingers mounted upon the rods and spaced apart by sleeves formed integral with the fingers, the fingers of each alternate series being disposed in line with the spaces between the fingers of the next adjacent series, substantially as described.

872,888. APPARATUS FOR SUBMARINE RECOVERING OPERATIONS. ANGELO BECCHI and GIOVANNI B. TARANTINI, Genoa, Italy. Filed Nov. 15, 1906. Serial No. 343,646.



1. An apparatus for submarine recovering and fishing operations, provided with an external arm handled from the inside by the operator and with cranes adapted to hold the submerged objects to be recovered.

2. An apparatus for submarine recovering and fishing operations consisting of an outer casing of an ovoidal form, provided with a suitable propeller, motioned from inside, and with two rudder blades, at two diametrically opposed points of the outer casing and means permitting the folding of the rudders against the sides of the casing.

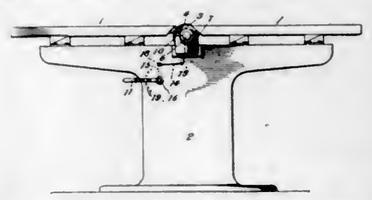
3. An apparatus for submarine recovering and fishing operations provided with two outside cranes, which from inside, by means of suitable bars, passing through water tight fittings of the outer casing may be turned on suitable pivots and folded against the chamber casing, owing to their curved shape.

4. In a device of the class described, a shell, derrick arms extending outwardly from the shell, a receptacle suspended from the derrick arms, and means to introduce material into the receptacle.

5. In a device of the class described, a shell, derrick arms extending outwardly from the shell, a receptacle suspended from the derrick arms, means within the shell for operating the derrick arms, means to introduce material into the receptacle, and means to move the shell.

[Claims 6 to 8 not printed in the Gazette.]

872,889. GUARD FOR ROTARY KNIVES. BYRON E. BECHTEL and JACOB BALL, Waterloo, Ontario, Canada. Filed Dec. 11, 1906. Serial No. 347,358.



1. In combination, a bed having a cutter head opening, a rotary cutter band operating through said opening, a bar arranged longitudinally beneath and carrying said cutter head, said bar beneath the head being transversely convexed at its under surface, a series of swinging parallel crescent shaped guard fingers carried by said bar and at their lower ends pivoted on a common axial line at the under side of said bar, said fingers adapted to extend forwardly and upwardly along said convexed surface of said bar and upwardly therefrom through and bridging said opening, said convexed surface limiting the upward swing of said fingers, said fingers normally tending by gravity to swing down from said opening, and a manually controlled spring device yieldingly holding said fingers in operative position up against said convex surface and bridging said opening.

2. In combination, a bed having a cutter head opening, a rotary cutter head working through said opening, a removable cutter head carrying bar arranged longitudinally of and below said cutter head and provided with the cutter head journal boxes, and a guard for said cutter head comprising swinging fingers pivoted to and carried by said bar and extending upwardly therefrom and adapted to bridge said opening, and means normally and yieldingly holding said fingers in operative position bridging said opening.

3. In combination, a bed having a cutter head opening, a rotary cutter head arranged below said bed and adapted to work through said opening, a movable cutter head carrying bar arranged longitudinally of and closely below said head and provided with and carrying end journal boxes for the cutter head axis, and a cutter head guard comprising a series of swinging spring held crescent shaped fingers carried by said bar and at their lower ends arranged at the under side of the bar and pivotally joined thereto to swing on a common axial line.

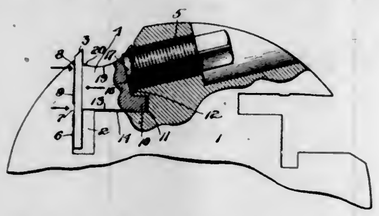
4. A rotary cutter head guard comprising a support arranged closely below and longitudinally of the cutter head, a series of closely arranged crescent shaped swinging guard fingers extending partially around the circular path of movement of said head, said fingers at their lower ends pivotally joined to said support to swing on a common axis, whereby said fingers tend under gravity to swing down from operative position, a spring tension device applied to each finger to yieldingly hold the same up to operative position, and manually controlled means for simultaneously varying or relieving the tension of said

device on said fingers, whereby when said tension is relieved said fingers automatically drop from operative position.

5. A rotary cutter head guard comprising a series of movable guard fingers adapted to extend partially around the path of movement of said head, each finger having a retractive coiled tension spring connected thereto, and manually controlled means for simultaneously varying the tension of all of said springs, and of relieving all of said fingers from the tension of said springs to permit said fingers to drop by gravity from guarding position.

[Claims 6 to 12 not printed in the Gazette.]

872,890. SOLID-BACK CUTTER-HEAD. CHARLES W. H. BLOOD, Winthrop, Mass., assignor to S. A. Woods Machine Company, Boston, Mass. Filed Nov. 30, 1906. Serial No. 345,728.



1. A cutter-head for wood planers and a cutter-knife, said head being provided with a longitudinal knife-supporting recess having a back wall provided with a plurality of separated bearing points in supporting engagement with the back side of said knife, said wall being out of contact with said knife excepting at said bearing points, and a clamping block supported by said recess and at its lower side having a clearance above the bottom of the recess for permitting a slight pivotal movement of the block, and means for clamping said knife against said bearing points.

2. In a cutter-head for wood planers, a cutter-knife, a clamping block, and a tightening bolt, said head being provided with a longitudinal knife-supporting recess having a back wall to support the rear side of said knife, and a space in front of the knife to receive said block, and having a clearance between the bottom of the recess and the block, when the latter is in operative position, except at the rear lower edge of the block, where the latter is arranged to fulcrum against the bottom of the recess, to automatically square itself flat against the knife when moved into clamping position by the clamping bolt.

3. A cutter-head for wood planers, and a cutter-knife, said head being provided with a longitudinal knife-supporting recess having a back wall provided with a plurality of bearing points in supporting engagement with the back side of said knife, said wall between said points narrowing down gradually toward the outer bearing point in a plane oblique to the knife until the cavity vanishes, and means for clamping said knife against said bearing points.

4. A cutter-head for wood planers and a cutter-knife, said head being provided with a longitudinal knife-supporting recess having a back wall provided with a plurality of bearing points in supporting engagement with the back side of said knife, said wall being out of contact with said knife excepting at said bearing points, and a clamping block constructed and arranged to permit the block to rock slightly on the head as a fulcrum for permitting it automatically to seat itself squarely against the front side of the knife, and a screw-bolt for clamping said knife and block in immovable position.

5. A cutter-head for wood planers and a cutter-knife, said head being provided with a longitudinal knife-supporting recess having a back wall provided with a plurality of bearing points in supporting engagement with the back side of said knife, said wall being out of contact with said knife excepting at said bearing points, a clamping block having its front side adapted to fit against the front side of said knife, with a clearance between the block and bottom of the recess except at the rear lower edge of the block where the latter fulcrums on the recess, said block having an oblique locating groove in its rear side, and a screw-bolt mounted in the cutter-head back of the block obliquely of the plane of the knife, snugly fitting at its outer end against said locating groove for clamping the block and knife in immovable position and maintaining the block in unvarying longitudinal position.

[Claims 6 to 8 not printed in the Gazette.]

872,891. WINDOW-SCREEN. FERDINAND J. BOEHL, Spokane, Wash. Filed Apr. 24, 1907. Serial No. 370,035.

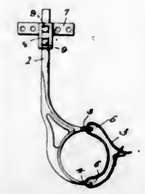


1. The combination with a frame having its inner outside edges beveled, and narrow woven-wire strips secured thereto and their outer edges projecting beyond the bevel, of a woven-wire sheet applied to the frame, and devices interposed between its edges and the aforesaid strips, the outer sides of said devices being in a plane parallel to the frame, whereby lateral escape openings are formed between the edges of the said strips and sheet, said openings being widest at their inner ends, as and for the purpose set forth.

2. The improved screen comprising a rectangular frame having side bars extended below the bottom bar, and a screen secured to the face of the frame and its lower edge extended below the bottom bar, as and for the purpose specified.

3. The improved screen comprising a rectangular frame having woven-wire strips applied to the side bars, and a woven-wire sheet extending over the whole frame and below the bottom bar thereof, means being provided at the lower corners of the frame for supporting the bottom bar out of contact with a ledge, or other part, upon which the screen may rest, substantially as described.

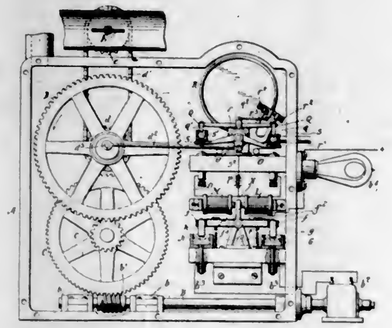
872,892. SPARE-TIRE HOLDER. FREDSON E. BOWERS, New Haven, Conn. Filed Oct. 26, 1906. Serial No. 340,709.



The herein described spare tire holder comprising a straight shank, two fingers projecting from one side thereof at substantially right angles thereto, a strap engaged with said fingers, a socket in which the inner end of the shank is longitudinally and rotatably adjustable, and means for securing said shank in the socket, substantially as described.

872,893. ELECTRIC DAMPER-REGULATOR. JOHN D. BOWNE, New York, N. Y., assignor of one-half to John W. Slawson, New York, N. Y. Filed Nov. 15, 1906. Serial No. 343,614.

1. In a damper regulator, the combination with the damper, of electro-magnetic mechanism adapted to operate the damper, a switch device comprising a pivoted switch, pressure-actuated means arranged to move the said switch, pivotally supported switch contacts, and connections whereby the said mechanism moves the said switch contacts, a second switch, and electrical switch-operating means arranged to act upon the said second switch, the said switch-operating means being in circuit with and controlled by the said switch device, and the said second switch being arranged to make and break the circuit of the said electro-magnetic mechanism.



2. In a damper regulator, the combination with the damper, of a reversible electric motor and mechanism adapted to operate the said damper, a reversing switch device comprising a pivoted switch, pressure-actuated means adapted to move the said switch in two opposite directions, pivotally supported switch contacts, and connections whereby the said damper-operating mechanism moves the said switch contacts, a second reversing switch, and electrical switch-operating means arranged to act upon the said second switch, the said switch-operating means being in circuit with and controlled by the said switch device, and the said second switch being arranged to make and break and reverse the circuit of the said electric motor.

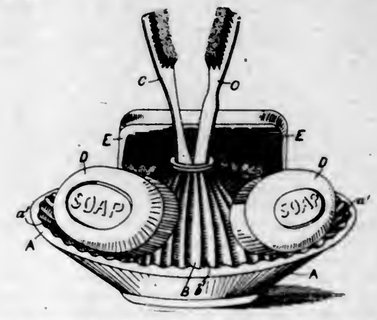
3. In a damper regulator, the combination with the damper, of electro-magnetic mechanism adapted to operate the damper, a switch device comprising a pivoted switch, a pressure-actuated curved tube arranged to move the said switch, pivotally supported switch contacts, and connections whereby the said mechanism moves the said switch contacts, a second switch, and electrical switch-operating means arranged to act upon the said second switch, the said switch-operating means being in circuit with and controlled by the said switch device, and the said second switch being arranged to make and break the circuit of the said electro-magnetic mechanism.

4. In a damper regulator, the combination with the damper, of a reversible electric motor and mechanism adapted to operate the said damper, a reversing switch device comprising a pivoted switch, a pressure-actuated curved tube adapted to move the said switch in two opposite directions, pivotally supported switch contacts, and connections whereby the said damper-operating mechanism moves the said switch contacts, a second reversing switch, and electrical switch-operating means arranged to act upon the said second switch, the said switch-operating means being in circuit with and controlled by the said switch device, and the said second switch being arranged to make and break and reverse the circuit of the said electric motor.

5. In a damper regulator, the combination with the damper, of electro-magnetic mechanism adapted to operate the damper, a switch device including a switch, expansible means constructed and arranged to move the said switch, pivotally supported switch contacts, and connections whereby the said mechanism moves the said switch contacts, a second switch, and electrical switch-operating means arranged to act upon the said second switch, the said switch-operating means being in circuit with and controlled by the said switch device, and the said second switch being arranged to control the circuit of the said electro-magnetic mechanism.

[Claim 6 not printed in the Gazette.]

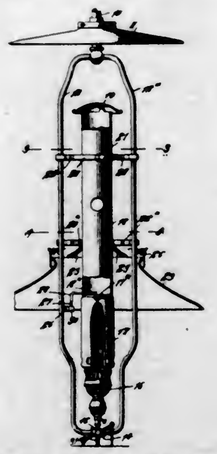
872,894. LAVATORY APPURTENANCE. JOHN S. BURN, Liverpool, England, assignor of one-half to Max Tönnies, Hull, England. Filed Aug. 20, 1906. Serial No. 331,412.



1. A lavatory appliance, comprising a tray having an upwardly inclined fluted surface, a hollow tapered member resting on the tray, and having its outer surface fluted, the lower edge of said hollow tapered member being provided with projections to form spaced drainage channels, and said tray and tapered member being so located relative to each other, that an article placed between the same will rest upon the apices of the fluted portion of both the tray and the tapered member.

2. A lavatory appurtenance comprising a tray having a flat center field and inclined sides, and a hollow taper body with center hole and ring of projections at bottom, placed on the flat field, both the inclined sides of the tray and the outside of the cone being fluted or channeled so that any article placed between them will touch only the apices of these channels, substantially as described.

872,895. INCANDESCENT GAS-LAMP. CHARLES A. CAMPBELL, New York, N. Y. Filed Aug. 24, 1907. Serial No. 389,985.



1. An incandescent gas lamp having a burner, a glass chimney, a metal intensifier tube the lower end of which is engaged with the upper end of the chimney, side tubes extending down the sides of the chimney and intensifier, an upper bracket fastening the intensifier and side tubes, a bottom bracket also fastening the intensifier and side tubes, means projecting from the bottom bracket to sustain a shade, and a pilot light device carried by and communicating with one of the side tubes and extending through an opening in the lower portion of the intensifier.

2. An incandescent gas lamp having side tubes, an intensifier tube between them, a bracket loosely inclosing the intensifier, a fastening connected with the bracket and engaging the intensifier tube to fasten the bracket thereto and means for clamping the bracket to the side tubes.

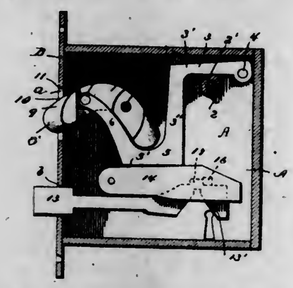
3. An incandescent gas lamp having side tubes, an intensifier tube between them, a bracket loosely inclosing the intensifier, a fastening connected with the bracket and engaging the intensifier tube to fasten the bracket thereto, means for clamping the bracket to the side tubes and arms depending from the bracket to sustain the shade.

4. An incandescent gas lamp having side tubes, an intensifier tube between them, a bracket inclosing the intensifier, a fastening connected with the bracket and engaging the intensifier tube to fasten the bracket thereto, means for clamping the bracket to the side tubes, arms depending from the bracket, a shade crown and fastenings serving to secure both the shade crown and shade to said arms.

5. An incandescent gas lamp having side tubes, an intensifier tube between them, a bracket composed of duplicate members each having a semi-circular portion and projecting arms at its ends, the semi-circular portions embracing the intensifier tube and the arms engaging the side tubes in pairs, means for holding the bracket members together and for clamping the said arms against the side tubes, and means for clamping the intensifier in the semi-circular portions of the bracket members.

[Claims 6 to 14 not printed in the Gazette.]

872,896. DOOR LATCH AND LOCK. LEWIS C. CAMPBELL, Kalamazoo, Mich., assignor of one-half to Otto A. Geeseka and Alfred O. Pitcher, Mount Pleasant, Iowa. Filed Aug. 2, 1905. Serial No. 272,371.



1. In a latch, the combination of a turning spindle, a weight arm arranged to be lifted by the turning of the spindle, a latch piece pivoted directly to the arm and arranged to be moved bodily upward when the spindle is turned, whereby the weight of the latch piece serves to assist in restoring the parts to their normal positions, and means for turning the latch piece into the casing to disengage the keeper as said latch piece is moved upward, substantially as set forth.

2. In a latch, the combination with the knob spindle, of an arm arranged to be moved by the turning of the spindle, and a latch piece pivoted to the outer end of the arm arranged to swing on its pivot when the spindle is turned and to swing on its pivot when the door is closed without moving the arm, substantially as set forth.

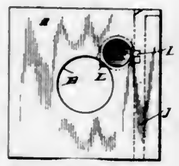
3. In a latch, the combination with the casing and the knob spindle, of a weighted arm pivoted in said casing and arranged to be lifted when the spindle is turned, a latch piece pivoted to the end of the arm that is lifted and arranged to be bodily moved vertically thereby, and means for causing the latch piece to swing on its pivot to disengage the keeper as it is moved upward, substantially as set forth.

4. In a latch, the combination with the spindle provided with knobs, of a weighted arm, a latch piece pivotally connected to the arm and arranged to be moved upward when the spindle is turned and to be returned to normal position by the weight of the arm when the spindle is released, means for swinging the latch piece on its pivot during its upward movement, and independent means for swinging the latch piece back to normal position when the weighted arm falls to its normal position, substantially as set forth.

5. In a latch, the combination with a casing, of a spindle mounted therein and provided with a bearing surface, an arm, pivoted at one end to the casing, arranged to rest upon the bearing surface, and its free end being provided with a pivot, an arc-shaped latch piece loosely mounted on said pivot, and a plate for swinging the latch piece on its pivot as the arm is moved by the turning of the spindle, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

872,897. NUT-LOCK. JOHN W. CHAPMAN and CHRISTIAN C. FOSS, Barwick, Ga. Filed Aug. 31, 1907. Serial No. 390,937.



1. The combination of a nut having a bolt hole and a chamber therein communicating with the bolt hole and having a lateral wing or extension, and also provided with a transverse channel communicating with said lateral wing or extension of the chamber or recess, a pawl rocking in the chamber or recess of the nut and having a pawl point arranged to be protruded into the bolt hole and provided with a tongue operating in the lateral extension of the chamber or recess, and a key movable longitudinally in the transverse channel of the nut and having a notch receiving the tongue of the pawl and arranged at one end to be bent into engagement with the nut to secure the key in position, all substantially as and for the purpose set forth.

2. A nut having a rocking pawl, and a key movable transversely of the nut and engaged between its ends with the rocking pawl, and having one end made flat on one side adapted to be bent into engagement with a nut, the key having a slot cut long enough where it engages with the rocking pawl so that when it is driven forward, the flat end of the key will extend far enough beyond the nut to be bent along the nut whereby to hold the rocking pawl in place, substantially as set forth.

3. A nut having a bolt hole, and a chamber alongside the same and communicating with the bolt hole, a pawl rocking in the chamber and having at one side a pawl point which may be protruded into the bolt hole, and a transverse key engaged with the pawl at the side thereof opposite the pawl point, and projecting at its end beyond the nut whereby said end may be bent into engagement with the nut, substantially as and for the purpose set forth.

872,898. TROLLEY-HARP. JAMES L. CHASE, Ayer, Mass., assignor of one-half to Ralph J. Joslin, Webster, Mass. Filed July 18, 1907. Serial No. 384,396.

1. In a trolley-harp a head having laterally separated cheeks, one of the cheeks having a socket and the other cheek having an opposite, externally threaded boss, a shaft extended through the boss and into the socket, a wheel peripherally grooved and rotatably mounted on the shaft, and a cap adapted to screw onto the boss and retain the shaft in position.

2. A trolley-wheel comprising two circular sections each provided with a peripheral groove, the outer wall of each groove being extended to form an annular flange, the inner, adjacent and relatively shallow sides of the grooves being of less diameter than the flanges and forming a central ridge separating the grooves.



3. A trolley-wheel consisting of two similar circular sections each having a peripheral groove and an enlarged annular flange at the outer side of each groove, a hub on the outer face of each section, and a series of sockets surrounding each hub.

4. A trolley-wheel consisting of two similar circular sections each having a peripheral groove and an enlarged annular flange at the outer side of each groove, each section having an internal circular recess concentric with its axis.

5. A trolley-wheel consisting of two similar circular sections each having a peripheral groove and an enlarged annular flange at the outer side of each groove, each section having an internal circular recess concentric with its axis, and a series of sockets in the outer face of each section concentric with its axis.

[Claims 6 to 8 not printed in the Gazette.]

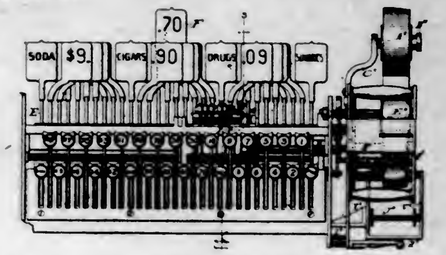
872,899. CLAMPING-RING. JAMES CLARK, Bradford, Pa., assignor to S. R. Dresser Manufacturing Company, Bradford, Pa. Filed Dec. 17, 1906. Serial No. 348,302.



A clamping ring for pipe couplings formed in one piece from wrought metal, and having an annular plate portion disposed substantially perpendicularly to the axis of said ring and provided with bolt holes, an annular flange portion extending from the inner edge of said plate portion substantially perpendicularly thereto and on one side of the same, and having at its outer end an inwardly extending annular flange substantially parallel with said plate portion forming a packing recess, and providing a central pipe aperture, the inner diameter of said plate portion being greater than that of the said pipe aperture, substantially as described.

872,900. CASH-REGISTER. JOSEPH P. CLEAL, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Aug. 29, 1900. Serial No. 28,415.

1. The combination of a series of keys representing different amounts in dollars and cents, type-wheels or carriers coöperating therewith and bearing the types representing similar amounts, a series of special depressible finger keys an impression platen coöperating with said type-carriers to print said amounts upon a paper strip interposed between them, said strip and type-carrier being adjustable in relation to each other to cause the printing of any desired amount within the capacity of the machine to be effected in different columns or spaces, and connections for causing the depressions of the different special keys to adjust the parts to print in different columns corresponding to the particular key operated, substantially as described.



2. The combination of a series of keys representing different amounts in dollars and cents, printing devices coöperating therewith to print said amounts upon a paper strip, said devices comprising a type-wheel or carrier coöperating with said keys and a platen coöperating with said carrier, a movable carriage for the paper strip, and a series of special depressible finger keys and connections between the same and paper carriage for causing the depression of the different special keys to move the carriage to different positions to bring different columns or spaces upon the paper strip into position for printing therein any desired amount within the capacity of the machine, substantially as described.

3. The combination of a series of keys representing different amounts in dollars and cents, printing devices actuated thereby to print said amounts upon a paper strip, said printing devices comprising a type-wheel or carrier adapted to be turned to different positions by the operation of the different keys and a platen coöperating therewith, a movable carriage for the paper strip, and a series of special depressible finger keys and connections between the same and paper carriage for causing the depressions of different keys to move the carriage to different positions to bring different spaces or columns upon the paper strip to the printing point to receive an imprint of any amount within the capacity of the machine, substantially as described.

4. The combination of a series of keys representing different amounts, printing devices coöperating therewith to print said amounts upon a paper strip, a movable carriage for said paper strip yieldingly held in a given normal position, a series of special keys and connections for moving said carriage to bring different columns or spaces upon the paper-strip to the printing point, means for holding the carriage in such adjusted positions during the operation of the amount keys, and means actuated by the latter to release the frame and permit it to return to normal position, substantially as described.

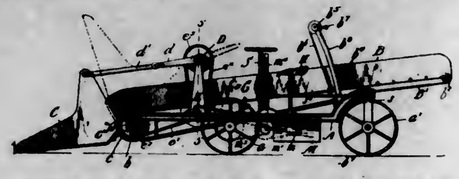
5. The combination of a series of keys representing different amounts, printing devices actuated thereby to print said amounts upon a paper strip, a movable carriage for said strip, a spring operating to yieldingly hold said carriage in and return it to normal position, a series of special keys and connections for moving said carriage to different positions to bring different columns or spaces upon the record-strip to the printing point, a latch for holding the carriage in its adjusted positions, and a trip for said latch actuated by the operation of the amount keys to release the paper-carriage and permit its spring to return it to normal position, substantially as described.

[Claims 6 to 44 not printed in the Gazette.]

872,901. LOADING APPARATUS. JOHN COLLINS, Dayton, Ohio. Filed Sept. 11, 1907. Serial No. 392,332.

1. The combination with a vehicle, of an endless conveyer mounted thereon, a pivotally mounted scoop, located in advance of and adjacent to the said conveyer, and means for tipping said scoop rearward upon its pivotal connections to discharge its contents upon said conveyer, substantially as described.

2. The combination with a vehicle, of an endless conveyer mounted thereon, a scoop pivotally mounted in advance of and adjacent to said conveyer, mechanism for tipping said scoop on its pivotal connections to discharge its contents upon said conveyer and operative connections between said scoop and conveyer for operating the conveyer when the scoop is tipped, substantially as described.



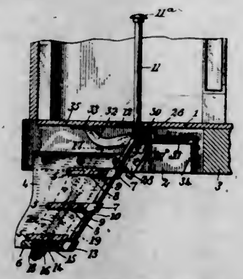
3. The combination with a vehicle, of an endless conveyer mounted thereon, a scoop pivotally mounted in advance of and adjacent to said conveyer, mechanism for tipping said scoop on its pivotal connections to discharge its contents upon said conveyer, operative connections between said scoop and conveyer for operating the conveyer when the scoop is tipped, and mechanism for operating said conveyer independently of said scoop, substantially as described.

4. The combination with a vehicle, of an endless conveyer mounted thereon, a pivotally mounted scoop located in advance of said conveyer, mechanism for tipping said scoop upon its pivotal connections to discharge its contents upon said conveyer, and means for raising and lowering the discharge end of said conveyer, substantially as described.

5. The combination with a vehicle, of an endless conveyer mounted thereon, a pivotally mounted scoop located in advance of one end of said conveyer, a motor mounted on said vehicle, operative connections between said motor and said scoop for tipping the scoop rearward on its pivotal connections to discharge its contents upon said conveyer, and connections between said motor and said conveyer for operating the latter, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

872,902. CAR-STEP. GEORGE G. COMER, ALBRO BURK, and DAVID MODROW, Kalama, Wash. Filed May 21, 1907. Serial No. 374,966.



1. In a device of the class described, in combination, a fixed step, an extension step, means for holding said extension step normally adjacent to said fixed step, means for automatically returning said extension step to its normal position, means for holding said extension step in its projected position, and means operable below the platform of the car for releasing said means for holding said extension step in its projected position.

2. In a device of the class described, in combination, a fixed step, an extension step, means for holding said extension step normally adjacent to said fixed step, means for automatically returning said extension step to its normal position, a catch adapted to hold said extension step in its projected position, and means operable below the platform of the car to release said catch.

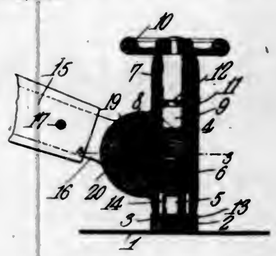
3. In a device of the class described, in combination, a fixed step, an extension step, means for holding said extension step normally adjacent to said fixed step, means for automatically returning said extension step to its normal position, a catch adapted to hold said extension step in its projected position, and a member arranged below the platform of the car and operable from above the platform of the car and adapted to release said catch.

4. In a device of the class described, in combination, a fixed step, an extension step, means for holding said extension step normally adjacent to said fixed step, a spring adapted automatically to return said extension step to its normal position, a catch adapted to hold said extension step in its projected position, and a member adapted to be depressed below the platform of the car to release said catch.

5. In a device of the class described, in combination, a fixed step, an extension step, means for holding said extension step normally adjacent to said fixed step, means for projecting said extension step, in a projected position, means for automatically returning said step to the normal position, and a member adapted to be operated from the car platform to release said extension step from the projected position, said member projecting above the car platform when said extension step is projected.

[Claims 6 to 8 not printed in the Gazette.]

872,903. ADJUSTABLE TOOL-HOLDER. PATRICK F. CONNELLY, Sioux Falls, S. D. Filed May 10, 1907. Serial No. 372,912.



1. An adjustable tool holder comprising a socket having a side projection integrally formed thereon, a stem in said socket adapted to rotate therein and having a threaded axial opening in its lower end to engage a threaded projection on a tool, means for preventing endwise movement of said stem, a handle pivoted to said projection and means for clamping said handle to said projection.

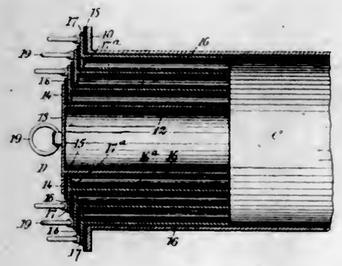
2. An adjustable tool holder comprising a socket having an integral projection on one side, a movable handle, a pivot bolt for said handle extending through said projection and means on said bolt for fastening the parts against movement, a rotatable stem within said socket and having a threaded axial opening in its lower end, a hand wheel on the upper end of said stem for rotating it and means for preventing endwise movement of said stem, combined with a tool having a threaded projection adapted to enter the threaded opening in the stem and be clamped against said socket.

872,904. IRRIGATING-PIPE. WILLIAM CONNOLLY, Fort Benton, Mont. Filed Jan. 21, 1907. Serial No. 353,249.

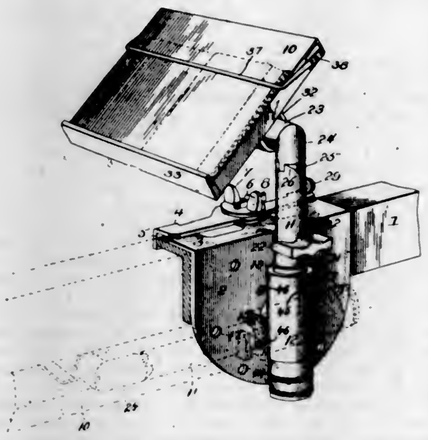
1. The combination with an irrigating pipe, having a marginal flange, of a closure therefor, comprising a plurality of stoppers, the central stopper being closed at its inner end, the other stoppers comprising inner and outer walls, the inner walls engaging with the next smaller stopper, and the outer with the next larger stopper, each of said stoppers being provided with an outwardly projecting annular flange overlapping the flange of the next larger stopper, each of said flanges having a gasket secured to the outer face thereof.

2. The combination with an irrigating pipe, having a marginal flange, of a closure therefor, comprising a plurality of stoppers, the central stopper being closed at its inner end, the other stoppers comprising inner and outer walls, the inner walls engaging with the next smaller stopper, and the outer with the next larger stopper, each of

said stoppers being provided with an outwardly projecting annular flange overlapping the flange of the next larger stopper.



872,905. ATTACHABLE TABLE. JOSEPH CONNORS, Louisville, Ky. Filed Sept. 18, 1906, Serial No. 335,133. Renewed Nov. 1, 1907. Serial No. 400,271.



1. In a device of the class described, a supporting plate, a post pivotally mounted thereon for adjustment in a vertical plane, an automatic latch carried by said post to engage an aperture in said plate, and a head for rotating said latch having a withdrawing face adapted to contact with said post.

2. In a device of the class described, a supporting plate, a post pivotally mounted thereon for adjustment in a vertical plane, an automatic latch carried by said post to engage an aperture in said plate, a head for rotating said latch having a withdrawing face adapted to contact with said post, and a spring within said post bearing upon a projection carried by said latch.

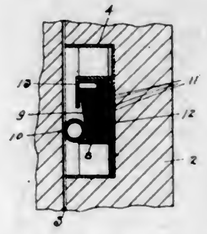
3. In a device of the class described, a post, an arm having a stem extended in said post and mounted for longitudinal movement therein, a toothed connection between the upper end of said post and said arm comprising a beveled tooth on one meber and a straight walled tooth upon the other, and a table carried by said arm.

4. In a device of the class described, a securing plate provided with a post upon its upper surface, a cam mounted upon said post, a clamping plate mounted upon said cam, means for rotating said cam, and means for frictionally retaining said cam in its adjusted position.

5. In a device of the class described, a securing plate provided with a post upon its upper surface, a cam mounted upon said post, a clamping plate mounted upon said cam, means for rotating said cam, and a wedge extending from said post to frictionally hold said cam.

[Claims 6 to 10 not printed in the Gazette.]

872,906. SASH-HOLDER. HENRY W. COVERT, Waterford, N. Y. Filed Sept. 11, 1907. Serial No. 392,404.



1. In a device of the class described, and in combination, a pair of relatively movable members; an elastic body mounted upon one of said members, and having an inclined surface adjacent to the other member; a friction-roller confined between said inclined surface of said elastic body and a slideway on said other member; an adjustable stop for limiting the movement of said roller along said inclined surface; and means whereby said stop can be adjusted.

2. In a device of the class described, and in combination, a pair of relatively movable members; an elastic block mounted upon one of said members, and having an inclined surface adjacent to the other member; a friction-roller confined between the inclined surface of said elastic block and a slideway on said other member; and removable backing-plates for said elastic block.

3. In a device of the class described, and in combination, a pair of relatively movable members; a case mounted upon one of said members; a cover-plate for said case; an elastic block mounted within said case, and having an inclined surface adjacent to the other of said members; a friction-roller confined between the inclined surface of said elastic block and a slideway on said other member; a stop in the path of said roller; a stop-carrying plate located within said case, and adapted to be engaged by said cover-plate; and means for clamping said cover-plate upon said stop-carrying plate to secure the latter in adjusted position.

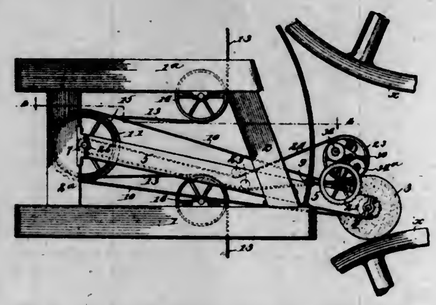
4. In a device of the class described, and in combination, a pair of relatively movable members; a case mounted upon one of said members; a cover-plate for said case provided with a slot; an elastic block mounted within said case, and having an inclined surface adjacent to the other of said members; a friction-roller confined between the inclined surface of said elastic block and a slideway on said other member; a stop in the path of said roller; a stop-carrying plate located within said case, and adapted to be engaged by said cover-plate; means for clamping said cover-plate upon said stop-carrying plate to secure the latter in adjusted position; and a thumb-piece on said stop-carrying plate projecting outwardly through the slot in said cover.

872,907. BAND-SAW-WHEEL GRINDER. DANIEL C. CRIVVEA, Aberdeen, Wash. Filed June 4, 1907. Serial No. 377,158.

1. The combination, with a grinder and a feathered shaft on which it is mounted rotatably but adapted to slide, and a swinging arm in which the shaft is journaled, a rotatable screw shaft arranged parallel to the feathered shaft, a sleeve traveling on such threaded shaft and connected with the grinder; means for driving the grinder, and means for driving the screw-threaded shaft, whereby

the grinder is rotated and shifted along its shaft automatically, substantially as described.

2. The combination, with a frame, of a grinding wheel and a pivoted carrier therefor adapted to be adjusted in a vertical plane, a feathered shaft on which the grinder is mounted and adapted to rotate and slide as described, a screw-threaded shaft arranged parallel to the feathered shaft and a threaded sleeve connecting it with the grinder, and means for driving and reversing the threaded shaft, the same comprising a spur gear mounted thereon, a train of gears and a shiftable carrier on which the same are mounted so that either end of the train may be brought into engagement with the gear on the aforesaid feathered shaft, a driving pinion 32 from which the aforesaid train derives motion, a shaft on which such pinion is mounted, and means for driving said shaft, substantially as described.



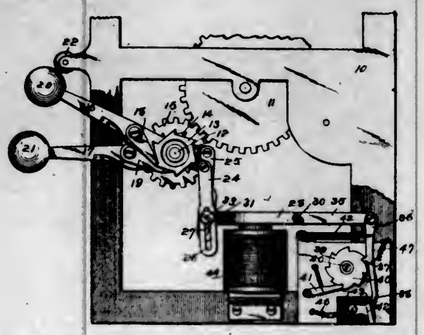
3. The combination, with a frame, a grinding wheel and a pivoted carrier therefor adapted to be adjusted in a vertical plane, a feathered shaft on which the grinder is mounted and adapted to rotate and slide, as described, of a screw-threaded shaft arranged parallel to the feathered shaft and a threaded sleeve connecting it with the grinder, and means for driving and reversing the threaded shaft, the same comprising a spur gear mounted thereon, a train of gears and a shiftable carrier on which the same are mounted so that either end of the train may be brought into engagement with the gear on the aforesaid feathered shaft, a driving pinion 32 from which the aforesaid train derives motion, a shaft on which such pinion is mounted, and means for driving said shaft, a rotatable sleeve to which the aforesaid adjustable carrier is attached, said sleeve having its bearings on the carrier of the grinder and the gear driving shaft passing through the same, and means for clamping the sleeve in either of the two positions to which it may be rotated for holding the train of gears in engagement with the gear on the feathered shaft, substantially as described.

872,908. DENTAL FLOSS. JOHN D. CUTTER, New York, N. Y. Filed Apr. 9, 1907. Serial No. 367,242.



A dental floss consisting of a series of threads laid parallel and in proximity to each other, and a covering of wax for the said threads.

872,909. ELECTRICALLY-WOUND CLOCK. ARIE DE VOS, Minneapolis, Minn., assignor of one-half to S. S. Still, Des Moines, Iowa. Filed Sept. 10, 1906. Serial No. 333,961.



1. An electrically wound clock, the combination of an electro-magnet, an armature movable to and from the magnet, a weight elevated by a movement of the armature toward the magnet, said weight during its descent moving the armature away from the magnet, a contact plate and a contact arm both included in a circuit with the electro-magnet and means for moving the contact point across the face of the contact plate out of contact therewith during the movement of the armature away from the magnet and then into contact with the plate before the end of said movement of the armature is reached, said contact arm being also moved out of contact with the said plate when the armature reaches its limit of movement toward the magnet.

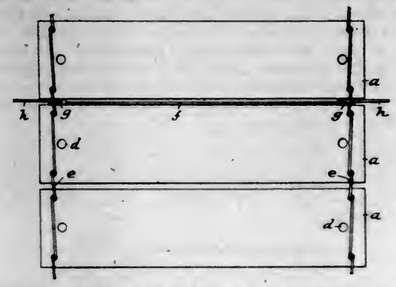
2. In an electrically wound clock, the combination of an electro-magnet, a pivoted armature, an arm pivoted to the armature and formed with a tooth and with a contact point, a contact plate, an insulator above the contact plate, a pivoted ratchet wheel, a spring actuated pawl in engagement therewith and a spring for holding the pivoted arm with its tooth in engagement with the ratchet wheel, an electric circuit including the electro-magnet, the contact plate and the contact arm.

3. In an electrically wound clock, the combination of an electro-magnet, an armature movable to and from the magnet, an arm carried by the armature and formed with a tooth and with a contact point, a contact plate in the path of the said contact point, said contact point at one limit of its movement being out of engagement with the contact plate, a notched wheel to be engaged by the tooth of said arm, said wheel arranged to cause the arm to move to position out of contact with the contact plate during part of its movement and then into contact with the plate during another part of its movement.

4. In an electrically wound clock, the combination of a rotatable shaft, two ratchet wheels fixed to the shaft with their teeth in staggered positions two weighted levers rotatably mounted upon the shaft, pawls carried by the levers and in engagement with the ratchet wheels, an electro-magnet, an armature movable to and from the magnet and a link pivoted to each lever and having a limited sliding connection with the armature to thereby permit the weights to move upwardly by their momentum beyond the point where they would be positively moved by the armature and the connecting means and to permit independent upward movement of each lever.

872,910. JACQUARD CARD-WIRE. LOUIS DIEFFENBACH, Union Hill, N. J. Filed Apr. 8, 1907. Serial No. 366,904.

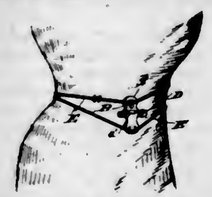
1. A jacquard card-wire having hooks near its ends opening toward each other and projections extending beyond said hooks, each projection and the portion of the wire connecting said hoops being offset relatively to each other and substantially equidistant from a plane which intersects that of the corresponding hook at right angles thereto and is disposed in the axial line of the space of said hook, substantially as described.



2. A jacquard card-wire having a substantially straight body portion and its end-portions rebent first toward each other and forming open hooks and then rebent away from each other, the extremities of the wire being projected beyond the hooks to form the supporting portions of the wire, substantially as described.

3. A jacquard card-wire having a substantially straight body-portion and its end-portions rebent first toward each other and forming open hooks and then rebent away from each other, the two rebends being disposed in planes intersecting each other, substantially as described.

872,911. WAIST SUPPORTER AND FORMER. ELIZABETH DILWORTH, Baltimore, Md. Filed Apr. 27, 1907. Serial No. 370,634.



1. A waist support and former comprising a plate provided with means at or near its center for attaching it to a skirt band or other garment, and having holes adjacent to its lower end to receive a tape, and a downwardly extending hook projecting from its front face above said attaching means.

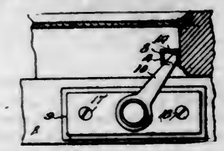
2. A waist support and former comprising a plate provided with means at or near its center for attaching it to a skirt band or other garment, and having holes adjacent to its lower end to receive a tape, and a downwardly extending spring hook projecting from its front face above said attaching means, said hook adapted to receive and retain the tape after being passed around the body of the wearer.

3. A waist support and former comprising a plate having a fastening device projecting rearwardly therefrom at or near its center, and having a series of holes at or near its lower end to receive a tape, and an integral spring hook struck out from the front face of said plate above said fastening device, said hook extending downwardly and adapted to receive and retain the tape after having been passed around the body of the wearer.

4. A waist support and former comprising a plate having a pin fastening projecting rearwardly therefrom at or about its center for attachment to a skirt band or other garment, and pin fastenings disposed on its rear face at or near its upper and lower ends, said upper and lower pin fastenings adapted for attachment to a girdle or belt.

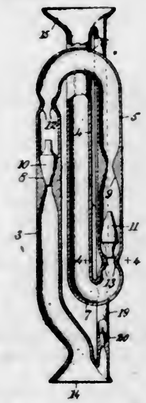
5. A waist support and former comprising a plate having struck-up a socket at or near its center and a pin fastening mounted in said socket, struck-up sockets at or near the upper and lower ends of said plate, pin fastenings mounted in said sockets, a struck out integral spring hook above the intermediate pin fastening, the point of said hook projecting downwardly, said plate also having holes at or near its lower end to receive a tape, adapted to be passed around the body of the wearer, under the aforesaid spring hook and retained therein, the inclined run of said tape adapted to have the lower edge of an apparel waist tucked thereunder.

872,912. CASH-LOCK. ALLEEN J. DOWNEY, St. Louis, Mo. Filed June 18, 1907. Serial No. 379,615.



A sash lock comprising a slotted keeper member, and a locking member, said locking member consisting of a casing, an arm pivoted to said casing and provided with a T-head within the casing, a spring bearing against the T-head, said spring provided with a hub having a squared portion which fits a recess in the under wall of the casing, and an attaching screw passing through the squared portion and hub of said spring to secure the same to the sash.

872,913. NON-REFILLABLE BOTTLE. PHILIP DWYER and JACOB OTTMANN, New York, N. Y. Filed Apr. 4, 1907. Serial No. 366,295.



1. A bottle having its neck provided with a discharge tube having a central loop and end sections, and provided with oppositely disposed valve seats formed in the central and inner end section, and self centering valves adapted to bear on said seats and extending in opposite directions.

2. A bottle having a neck provided with a tube bent to form a loop, comprising a central and end sections, the central and one of the end sections being provided with oppositely disposed valve seats, and stops spaced from said seats, and self centering valves facing in opposite directions adapted to bear on said seats.

3. A bottle having its neck provided with a tube bent to form a loop, comprising a central and end sections, the central and the inner end section being provided with valve seats facing in opposite directions and provided with stops spaced from said valve seats, the inner end section being provided with a flaring mouth, and self-centering valves facing in opposite directions adapted to bear against said seats.

4. A bottle having its neck provided with a tube arranged therein terminating at its outer end short of the extremity of said neck, and comprising a loop forming a

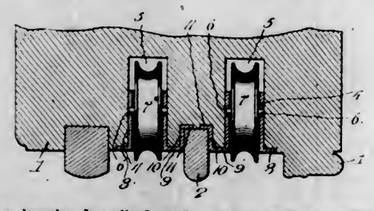
central and end portions, the central and inner end portion being provided with oppositely disposed valve seats and stops spaced from said seats, and self centering valves facing in opposite directions and adapted to bear on said seats.

872,914. GARMENT-COLLAR. WARREN V. EATON, Kansas City, Mo. Filed Mar. 23, 1906. Serial No. 307,706.



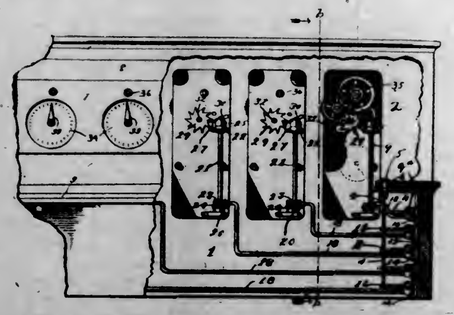
As a new article of manufacture, a garment-collar consisting of a neck-band portion having fastening means at its ends, and a body portion secured to the upper edge of the neck-band portion and provided at its end with a longitudinal extension adapted to be folded under and hidden by the body portion or extended across to overlap the opposite end of the body portion, the body portion being further provided at its ends with permanent fastening means to hold the longitudinal extension in its folded under or its extended over position.

872,915. SASH-PULLEY CASING. JOSIAH H. EDWARDS, Los Angeles, Cal. Filed Mar. 16, 1907. Serial No. 362,738.



The herein described sash pulley casing comprising a plate having inwardly extending arms, a pulley journaled in said arms, a right angled flange extending from the inner edge of the plate into the parting strip groove of a window frame, such flange provided with an extension lying flush with the bottom of said groove, and a parting strip seated in the groove for binding the flange in place.

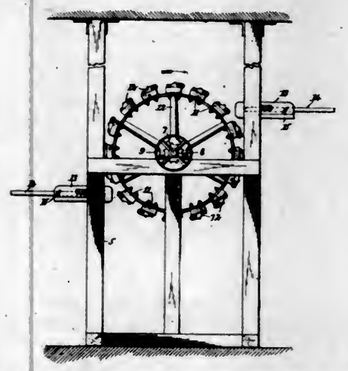
872,916. REGISTERING MECHANISM. CHARLES H. EIMERBRINK, York, Pa. Filed Aug. 25, 1906. Serial No. 332,066.



1. In a registering-mechanism, and in combination with an escapement-wheel, a vertical key-stem, a horizontal rocker-shaft, a rocker-arm secured to the forward end thereof, and upon which the lower end of the key-stem bears; and intermediate mechanism operatively connected to the rocker-shaft for permitting movement of the escapement-wheel upon actuation of the rocker-shaft.

2. In a registering-mechanism, and in combination with an escapement-wheel, a vertical key-stem, a horizontal rocker-shaft, a rocker-arm secured to the forward end thereof, and upon which the lower end of the key-stem bears, a rotatable shaft carrying escapement-dogs engaging with the escapement-wheel, and intermediate mechanism operatively connected to the rocker-shaft and to said rotatable shaft for actuating the latter and the escapement-dogs carried thereby.

872,917. FEATHER-DRYING MACHINE. EMIL EISSMANN, New York, N. Y. Filed Aug. 22, 1907. Serial No. 389,669.



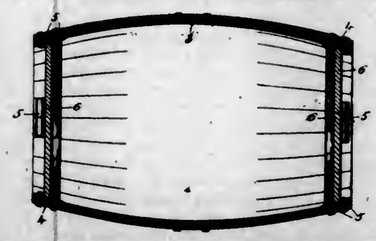
1. In a drying machine, a drum composed of annular heads having slats longitudinally arranged of the drum and forming the periphery thereof, snap hooks fixed to the outer face of said slats, beating boards substantially horizontally arranged at the opposite sides of the drum, respectively above and below the horizontal center thereof, and means for adjusting the boards to and from the drum for the purpose described.

2. In a feather drying machine, a revoluble drum, means for attaching the feathers to the periphery of the drum, and beating boards located at the opposite sides of the drum in the path of travel of the feathers.

3. In a feather drying machine, a revoluble drum, means for attaching the feathers to the periphery of the drum, and beating boards located at the opposite sides of the drum, respectively above and below the center thereof in the path of travel of the feathers.

4. In a feather drying machine, a revoluble drum, means for attaching the feathers to the drum, and a beating board adjustable to and from the drum in the path of the feathers.

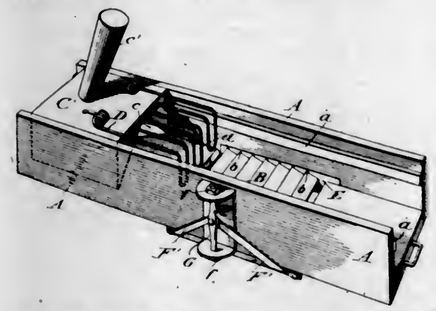
872,918. PAPER BARREL. ERNEST P. EVERETT, New York, N. Y. Filed Nov. 20, 1906. Serial No. 344,244.



1. A barrel having a sheet metal hoop secured in one end thereof, said hoop having corrugations formed therein providing an inner and outer rib spaced apart, the outer rib being interrupted, and a head having cut-out portions in the circumference thereof, adapted to register with said interrupted rib and be passed thereover, for the purpose described.

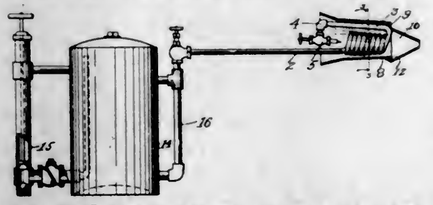
2. A barrel having a body composed of a strip of paper wound upon itself, a hoop in the barrel near one end thereof covered and secured in place by the inner layer of said strip, said hoop having two ribs spaced apart, one of which is interrupted, and a head having cut-out portions in its circumference adapted to register and be passed over the interrupted rim, for the purpose described.

872,919. VEGETABLE-SLICER. RICHARD E. EZEKIEL, Carbon Hill, Ala. Filed Sept. 23, 1905. Serial No. 279,870.



In a vegetable slicer, the combination, with a guideway having an opening in the bottom, of cutters arranged in series and pivoted at their ends, a means for adjusting them at different inclinations crosswise of the guideway, said means comprising a vertically adjustable plate arranged longitudinally of said guideway and having a pivotal connection with the rear edge of the cutters, a screw-threaded rod and means for holding the same in vertical position, nuts applied to said rod for adjusting it higher or lower, and bars which pivotally connect the rod with the vertically adjustable plate as shown and described.

872,920. VAPOR-BURNER. MICHAEL H. FARLEY, Seattle, Wash., assignor of one-half to Charles Harrison, Seattle, Wash. Filed Mar. 27, 1906. Serial No. 308,365.



In a burner, a vaporizing coil, the forward terminal of said coil extending rearwardly above said coil, a hood inclosing said coil, said hood being crimped longitudinally thereby providing a groove snugly receiving the rearwardly extending portion of said coil, whereby said hood is supported and prevented from turning, the forward end portion of said hood being formed with an external circumferential bead, and a tapered nozzle having its rear edge portion crimped and engaging over the bead on said hood, the rear portion of said nozzle being formed with longitudinal slits extending through the crimped edge portion of said nozzle for the purpose specified.

872,921. HORSESHOE-CALK. GEORGE W. FENSTEMAKER, Amboy, Ill. Filed Jan. 4, 1907. Serial No. 350,831.

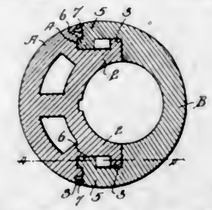
1. A horseshoe calk of composite structure comprising a center of steel and a sheathing of comparatively soft iron welded to opposite sides of the steel center, the said calk carrying a threaded stem by means of which it is secured in position, and the soft iron sheathing being formed with a laterally projecting arm designed to have the extremity thereof bent into an opening in the horse shoe to prevent the calk from working loose.





2. In a device of the class described, the combination of a horseshoe having a pair of spaced threaded openings formed therein and also provided with a locking opening intermediate of the said threaded openings, and a pair of horseshoe calks each being of a composite structure and comprising a steel center having a sheathing of comparatively soft iron welded to opposite sides thereof, the said calks being provided with stems engaging the said threaded openings, and the soft iron sheathing of each calk being formed with a lateral arm designed to have the extremity thereof bent into the before mentioned intermediate opening in the shoe to prevent the calk from working loose.

872,922. ECCENTRIC. FORNEY W. FLEMING, Archer, Fla., assignor of one-half to Samuel K. Fleming, Montgomery, Ala. Filed Apr. 2, 1907. Serial No. 365,991.



A device of the class described comprising parts or sections having a shaft engaging aperture, one of said sections being provided adjacent to the shaft engaging aperture with lugs having terminal outward projecting flanges and undercut grooves in the walls at the inner ends of said lugs, and the other section being provided with perimetral lugs having inward projecting terminal overhanging flanges, and one of said sections being provided with spurs engaging recesses in the other section; in combination with tightening wedges adjustable between the flanges of the two sections.

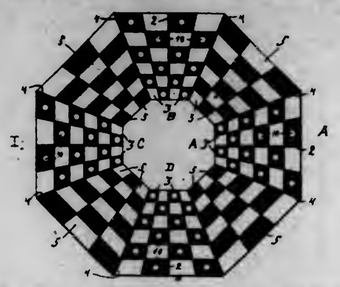
872,923. CHECKER-BOARD. JAMES S. FORD, Oak Park, Ill. Filed Mar. 18, 1907. Serial No. 362,905.

1. A checker board divided by radial and concentric lines into radial and concentric rows of spaces, the spaces of each row alternating in color, means dividing such board into sections and designed to indicate the dividing line of a player's home territory, means arranged on either side of said dividing means and spaced therefrom to bound and limit the home territory of each player and to provide fields for the different players.

2. A checker board divided by radial and concentric lines into radial and concentric rows of spaces, the spaces of each row alternating in color, said board being divided by heavy lines into a plurality of sections, each line indicating the dividing line of a player's home territory, and double lines bounding said home territories forming playing fields between the home territories.

3. An octagonal checker board divided by radial and

concentric lines into radial and concentric rows of spaces, the spaces of each row alternating in color, said board having double lines running from the corners thereof to-



wards the center and dividing the board in eight parts or spaces, and heavy lines dividing four of said spaces through their middle.

872,924. APPLIANCE FOR MAINTAINING GARMENTS IN A FOLDED CONDITION. LA VAUGHAN P. GAGE, Denver, Colo. Filed Apr. 1, 1907. Serial No. 365,811.



1. A new article of manufacture comprising in combination a member adapted to be inserted between the folds of a folded garment and means adapted to maintain the garment in its folded state, forming part thereof.

2. A new article of manufacture, comprising in combination a member adapted to be inserted between the folds of a folded garment and a member adapted to encircle the garment, connected therewith.

3. A new article of manufacture comprising in combination a member adapted to be inserted between the folds of a folded garment and having a recurved extension, and a band extending laterally from the latter and adapted to encircle the garment.

4. A new article of manufacture comprising in combination a member adapted to be inserted between the folds of a folded garment, a band adapted to encircle the garment and a connection between the latter and an extremity of the said member.

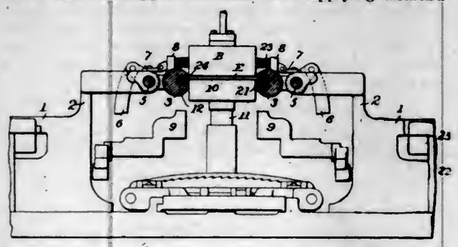
5. A new article of manufacture comprising in combination a member adapted to be inserted between the folds of a folded garment, and a band adapted to encircle the garment, connected therewith and having means to secure its extremities.

[Claim 6 not printed in the Gazette.]

872,925. COVER-APPLYING ELEMENT FOR BOX-COVERING MACHINES. CHARLES A. GARRETT, Philadelphia, Pa., assignor to Stokes & Smith Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Nov. 1, 1905. Serial No. 285,485.

1. In a machine for covering extension edge boxes, the combination with a box support, of an element provided with a part to apply the box cover to the extension edge of the box, and means interposed between the support and covering element to cause the latter to apply the cover to the extension edge of the box with a cushioned pressure.

2. In a machine for covering extension edge boxes, the combination with a box support, of a cover applying element provided with a part to apply the cover to the extension edge of the box, and a yielding element interposed between said box support and said cover applying element.



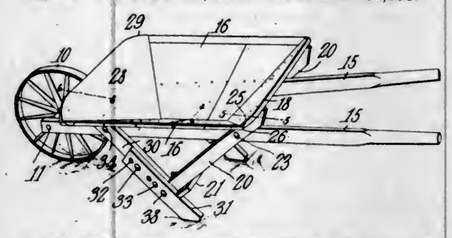
3. In a machine for covering extension edge boxes, the combination with a cover applying element having a part to apply the cover to the extension edge of the box, means for actuating said cover applying element, and means interposed between said actuating means and said element for causing the latter to apply the cover to the extension edge of the box with a cushioned pressure.

4. A cover applying element for covering extension edge boxes, provided with a longitudinal cavity and having a part to apply the cover to the extension edge, and a movable buffer arranged in said cavity.

5. In a machine for covering extension edge boxes, the combination with a cover applying element having a part to apply the cover to the extension edge of the box, and means for actuating said element, of a yielding buffer associated with said element and operatively interposed between said element and said actuating means.

[Claims 6 to 16 not printed in the Gazette.]

872,926. WHEELBARROW. VIRGIL A. GATES, Charleston, Va. Filed Mar. 25, 1907. Serial No. 364,398.



1. In a wheelbarrow, a tray formed of side and end sections, the edges of which are beveled and interfit for mutual support, the rear edges of the side sections presenting a beveled seat for the lowest edge of the rear end section whereby the latter may exert downward pressure on the side sections, frame members detachable from each other, and each permanently secured to one of the tray sections, the securing means of the frame section which carries the rear end section of the tray serving as a fulcrum during assembling of the parts to force the tray sections tightly together.

2. In wheelbarrow construction, a tray formed of side and end sections, the rear edges of the side sections being beveled to present a seat for the lower edge of the rear end section whereby the latter may exert downward pressure on the side sections, detachable frame members each permanently secured to one of the sections, and frame securing means including a bolt connecting the frame member of the rear end section to the frame members of the side sections, whereby the rear end section may be forcibly swung against the beveled rear edges of the side sections in order to force the latter forward and downward and thus firmly lock the sections of the tray together.

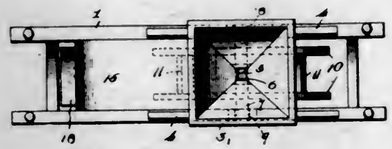
3. In a wheelbarrow, a tray comprising a pair of side members having beveled meeting edges, front and rear sections, the meeting edges between the front and rear sections and the side sections being arranged to interfit for mutual support, handles disposed at an angle to the side edges of the side sections, and permanently secured to said sections, thereby forming a diagonal brace or reinforce for each of such side sections, a wheel journaled at the forward ends of the handles, a pair of legs permanently secured to the front section and to the handle members, a pair of struts permanently secured to the rear section and to the handle sections, and means for securing the lower ends of the struts and legs to each other.

4. In a wheelbarrow, a tray including a pair of side sections having tapered meeting edges, handles forming a part of the frame and permanently secured to the side sections, an approximately triangular tray section arranged to form the rear of the tray, a pair of struts permanently secured to said rear section, a pair of securing bolts connecting the struts to the handles and serving as fulcrums on which said struts may turn in assembling the parts, a cross bar connecting the lower portions of the struts, a front tray section, a pair of legs permanently secured thereto, and to the handles, the lower ends of the struts fitting under the lower ends of the legs, a pair of detachable foot pieces carried by the legs, and bearing against the lower face of the cross piece of the struts and securing bolts connecting said foot pieces to said struts.

5. In wheelbarrow construction, a wheel, handle members arranged on divergent lines from the wheel rearwardly, a pair of struts connected to the handles at a point intermediate the ends of the latter, and located outside of such handles, the angle of the struts with relation to each other being similar to that of the handles, and a sectional tray including a rear section that is rigidly secured to the struts, and side members that are rigidly secured to the handles, the rear edges of the side sections, and the forward edge of the rear section being provided with interfitting bevel edges which may be brought into close relation by turning the pair of struts with relation to the handles as the parts of the frame are assembled.

[Claims 6 to 8 not printed in the Gazette.]

872,927. PROCESS OF SEPARATING GARLIC OR THE LIKE FROM GRAIN. HARVEY J. GEHR, Waynesboro, Pa. Filed Mar. 27, 1906. Serial No. 308,244.



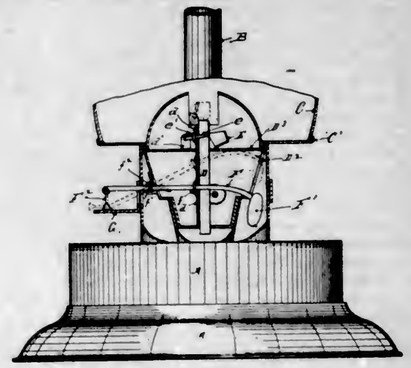
1. The process of promoting the separation of the garlic contained in a mixture of grain and garlic by garlic crushing means employed upon the mixture while in a loose and non-compacted state.

2. The process herein described of promoting the separation of garlic from grain, which consists in subjecting the commingled mass to be separated to impact sufficient to crush the garlic but not the grain, and thereby crushing the garlic, substantially as and for the purpose specified.

3. The process of promoting the separation of garlic from grain, which consists in subjecting the elements of a falling commingled mass of garlic and grain to impact derived from a moving body, said impact being sufficient to crush the garlic but not the grain, and thereby crushing the garlic, substantially as and for the purpose specified.

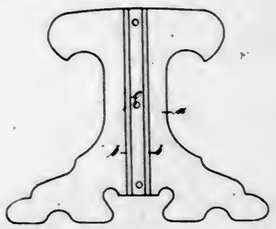
4. The process of promoting the separation of garlic from grain, which consists in subjecting the elements, separately, of a commingled mass of garlic and grain to a force, sufficient to crush the garlic but not the grain, applied to one side only of said elements.

872,928. LANTERN-BURNER. CYRUS P. GIFFORD, Erie, Pa. Filed May 3, 1907. Serial No. 371,705.



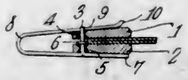
The combination in a lantern-burner, of a burner-frame, a wick-tube, a vertically movable vent-tube plate at one side of the wick-tube, a lever pivoted to the upper part of the frame, an extinguisher on the free end of said lever, a connection between said lever and vent-tube plate so they will operate in unison, a spring actuated lever pivoted in the lower part of the frame, a weight on the longer end of said lever, means connecting said lever with the lower part of the vent-tube plate, and mechanism engaging the shorter end of the spring actuated lever for preventing its operation when the lantern is in a vertical position, substantially as set forth.

872,929. FOLDING HAT-STAND. FRANZ GOERLINGER, Barmen, Germany. Filed Mar. 20, 1907. Serial No. 363,357.



An improved folding hat-stand consisting of two pieces of card-board of identical shape, united by rivets at their middle and having vertical folds at the right and left of the united middle part whereby flaps are formed adapted to be placed at an angle to the middle part.

872,930. FABRIC-PRESSING DEVICE. HENRY GOODACRE, Pine Village, Ind. Filed Feb. 28, 1907. Serial No. 359,768.



1. In a device of the character described, the combination with a pair of substantially rigid clamping members adapted to receive the folded portions of a fabric between them, and having coöperatively arranged apertures therein, of a clamp having a pivot or journal portion engaging in said apertures of the clamping members to retain the latter in registration, and provided with a pair of connected arms extending inwardly from the edges of the clamping members for holding the clamping members in

coöperative relation with the fabric interposed between them.

2. In a device of the character described, the combination with a pair of clamping members adapted to receive the fabric between them, and having apertures arranged to register, of a clamp having a journal portion adapted to engage with said apertures, means for preventing disengagement between said clamp and one of said members, and clamping arms on said clamp adapted to coöperate with the respective clamping members.

3. In a device of the character described, the combination with a pair of clamping members having apertures therein adapted to register when said members are in proper coöperative relation, of a clamp having a journal portion adapted to engage in said apertures, a relatively fixed shoulder on said journal portion between the clamping members for permitting detachment of one of the latter and preventing detachment of the other, and clamping arms on the clamp adapted to move into and out of cooperative relation with the respective clamping members when the clamp is turned about its journal portion.

4. In a device of the character described, the combination with a pair of coöperating clamping members, of a clamp arranged in pivotal relation therewith and embodying a journal portion extending transversely of the plane of said members, a loop portion having its arms lying in a plane substantially parallel to the plane of said members and adapted to engage with one of them, and a loop having its arms lying in a plane substantially at right angles to the plane of said members and having a free arm arranged to coöperate with the other clamping member of the pair.

5. In a device of the class described, the combination with a pair of substantially rigid clamping members, of a clamp mounted to turn in a plane substantially parallel to the clamping surfaces of said members and embodying a journal portion extending in a direction transversely of the plane of the clamping surfaces, a loop having its sides lying in a plane substantially parallel to the plane of movement of the clamp, and a resilient loop portion having its arms lying in a plane arranged transversely of the plane of movement of the clamp and adapted to engage the respective clamping members to hold them in cooperative relation.

[Claim 6 not printed in the Gazette.]

872,931. ORGAN-PIPE. ANTON GOTTFRIED, Erie, Pa. Filed Aug. 9, 1906. Serial No. 329,859.



1. An organ pipe having a languid provided with a thickened and double beveled front edge.

2. An organ pipe, comprising a body, a foot, a concavo-convex languid having a thickened and double beveled front edge to direct the sheet of wind directly against the upper front plate, the lower bevel of the languid being nicked.

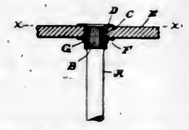
3. An organ pipe, comprising a body, a foot, and a languid having a double beveled front edge to direct the sheet of wind directly against the upper front plate, the underside of the languid being convex at the rear and the top of the languid being hollowed out.

4. An organ pipe, comprising a body, a foot, and a languid having a double beveled front edge to direct the sheet of wind directly against the upper front plate, the latter being flat throughout its length and beveled at its lower end and in the direction of its length.

5. An organ pipe, comprising a body, a foot having a nicked lip, and a languid having a double beveled front edge to direct the sheet of wind directly against the upper front plate, the lower beveled portion of the languid being nicked and arranged opposite the nicked surface of the lip of the foot.

[Claims 6 to 10 not printed in the Gazette.]

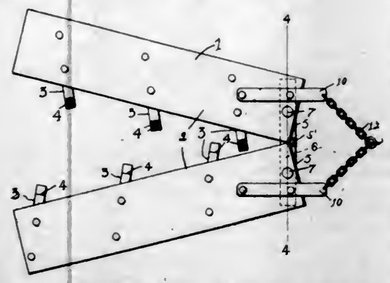
872,932. POLISHING-WHEEL AND MANDREL THEREFOR. LINCOLN E. HALL, Philadelphia, Pa. Filed Dec. 26, 1905. Serial No. 293,166.



1. The herein described combination of a mandrel, serrations formed upon one end thereof, a wheel, a sleeve bushing fitted within the center bore of the wheel, a flange formed upon one end of the sleeve adapted to bear against the wheel and a crimp formed upon the sleeve to hold the wheel against the said flange, as specified.

2. The herein described combination of a mandrel, serrations formed upon one end thereof, a wheel, a sleeve bushing fitted within the center bore of the wheel, a flange formed upon one end of the sleeve adapted to bear against the wheel, a washer fitted upon the sleeve and bearing against the opposite side of the wheel from the flange and a crimp formed upon the sleeve to hold the parts in place said sleeve being forced upon the serrations, as specified.

872,933. DRAG. EDWARD HAMILTON, Winchester, Ill. Filed Mar. 11, 1907. Serial No. 361,816.



1. A drag comprising a pair of boards, a series of cleats arranged on the under side thereof and projecting at an angle from one side thereof, substantially as described.

2. A drag comprising a pair of boards, a series of cleats arranged on the under side of said boards, and means whereby the boards are hingedly-connected together at their forward ends, substantially as described.

3. A drag comprising a pair of boards, a series of cleats on the under sides of said boards and arranged transversely thereto, a hinge to connect the forward ends of said boards, and means connected to the latter whereby when the same are drawn over the ground the rear ends of the boards will be spread apart, substantially as described.

4. A drag comprising a pair of boards, hingedly-connected at their forward ends, a series of obliquely-arranged cleats secured to the under sides of said boards and projecting beyond the inner edges thereof, forwardly-projecting draft bars connected to the forward ends of said boards, and a draft chain connected to the outer ends of said draw bars, substantially as described.

5. A drag comprising a pair of boards hingedly connected at their forward ends and pivotally-connected to a cross-bar arranged under the forward ends thereof, a series of obliquely-disposed cleats secured across the under sides of said boards, forwardly-projecting diverging draw bars connected to the forward ends of said boards, and a draft chain connected to the outer ends of said draw bars, substantially as described.

872,934. FISH-HOOK SPREADER AND SUSPENDER. JOSEPH B. HARIG, Baltimore, Md. Filed Apr. 22, 1907. Serial No. 369,556.



1. A fish-hook spreader and suspender comprising a semicircular wire having safety-hook terminals, a swivel-head cushioned central of the wire, and a spring-hoop adapted to have a fishing line looped to one end thereof and the other end hooked to the said head.

2. A fish-hook spreader and suspender comprising a bowed wire terminating in safety-hooks, spiral-springs central of the wire, a head swiveled to the wire between the springs, a spring-hook removably secured to the head and having a coil adapted for looping a fishing-line therein, and a spring-hook carried by the safety-hooks and adapted to suspend fishing-hooks.

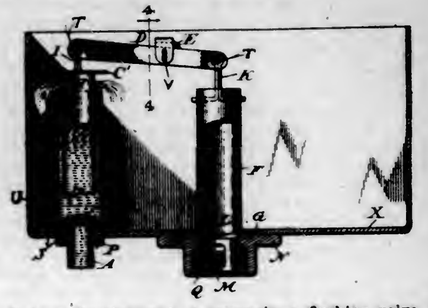
3. A fish-hook spreader comprising a bowed wire, a pair of spiral springs having one end secured to the wire, a pair of followers between the springs, and a head swiveled to the wire between the followers.

4. A spreader for fishing comprising a bowed wire, adapted to carry fish-hooks, a pair of spiral-springs through which the wire extends and having one end of the springs fixed thereto, and a head loosely mounted on the wire between the springs and adapted to have a fishing-line connected therewith.

872,935. FLUSH-TANK. AZY H. HARMAN, Philadelphia, Pa., assignor to Haines, Jones & Cadbury Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 9, 1907. Serial No. 361,446.

1. In a flushing tank, a reservoir, an inlet for supplying water thereto, an open top, upstanding casing surrounding said inlet, a smaller casing movable within said first casing, and having an open lower end, and a baffle plate disposed between said end and inlet.

2. In a flushing tank, a reservoir, a flushing valve, an inlet port, a casing surrounding said port, a floating bell suspended and extending within said casing, and a connection between said bell and flushing valve.



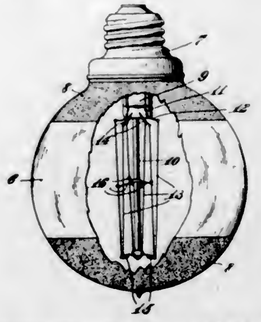
3. In a flushing tank, a reservoir, a flushing valve, an inlet, a casing surrounding said inlet, and open at its top, a floating bell adapted to slide within said casing, and a pivoted lever, connected at one end to said floating bell, and at the other end to said flushing valve.

4. In a flushing tank, a reservoir, a flushing valve therein, an inlet, a casing surrounding said inlet and open at its top, a second casing, arranged to slide in said first casing and having a closed top but an open bottom arranged above said inlet and connected with said flushing valve, and means for preventing water from spurting into said second chamber.

5. In a flushing tank, a reservoir, a flushing valve therein, an inlet, a casing surrounding said inlet and open at its top, a second casing, closed at its top, adapted to slide in said first chamber, and connected with said flushing valve, said second casing having an open mouth adjacent said inlet, and a baffle plate disposed between said mouth and inlet.

[Claims 6 to 11 not printed in the Gazette.]

872,936. TUNGSTEN ELECTRIC INCANDESCENT LAMP. JOHN A. HEANY, York, Pa. Filed Jan. 19, 1905. Serial No. 241,782.



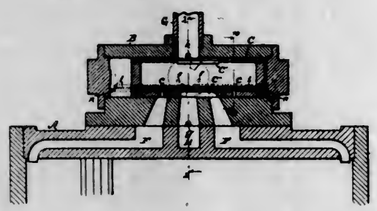
1. The combination of a plurality of fine hair-pin shaped filaments of dense but fragile refractory metallic material connected in series and a support for said filaments within a vacuum bulb with suitable current connecting wires for said series of filaments, said support comprising a plurality of spiral springs, each of which engages a filament at the loop thereof, and an additional steadying means located between said springs and the other end of each filament.

2. A high voltage incandescent electric lamp comprising filaments formed into a coherent mass and consisting mostly of tungsten mounted in a plurality of hair-pin shaped units in series and supported by a fine spiral spring at the loops of each hair-pin and by suitable connections at the other end and having also an additional steadying means.

3. A mount for refractory metallic filaments comprising a stem with suitable lead-in wires and a support mounted upon said stem and comprising a plurality of short conductors to connect a plurality of fine hair-pin filaments in series at one end thereof, a plurality of fine resilient spiral supports at the other end thereof to engage each hair-pin filament and additional intermediate steadying means for the filaments.

4. The method of mounting refractory metallic filaments which are dense, but which are subject to slight longitudinal contraction after being mounted on the support in the bulb and during use of the lamp, which comprises the connecting of a plurality of fine hair-pin filaments in series by the aid of intermediate short conductors of greater current carrying capacity and in connecting both terminals of the series of filaments with suitable lead-in wires, the short conductors and lead-in wires acting as supports for the end of the hair-pin filaments opposite the loops thereof, and in providing a plurality of resilient supports which are insulated from each other and one of which engages each hair-pin filament at the loop thereof, and then heating said filaments so as to contract each slightly thereby causing the straight lengths thereof to converge slightly towards the loops thereof and thereby simultaneously causing each resilient support to be placed under slight and individual tension as the individual shrinkage of each filament requires.

872,937. DIRECT-ACTING STEAM-ENGINE. FREDERICK J. HEYSER, Battle Creek, Mich., assignor of one-half to William T. Hulscher, Battle Creek, Mich. Filed June 24, 1903. Serial No. 162,844.



1. In a direct acting engine, the combination of the steam cylinder A, with steam passages F F and an exhaust passage H; a valve casing with ports connecting with said steam and exhaust passages; a hollow cylindrical valve supported in a cylindrical bore in said valve casing and adapted to reciprocate therein, the said valve having an opening connecting its interior to the steam supply, and having a D, C″ formed on the under side thereof, and restricted steam ports *c* formed through the walls thereof, towards each end for delivering steam through the steam passages F, to the engine; a flat valve seat in the side of the main valve casing having exhaust ports *f f* connected by a passage *g* to the exhaust of the engine, and a passage *h* leading from the steam supply to the said valve chamber; a steam passage *i* passing from the said valve seat outwardly to near the end of the cylindrical valve chamber, and a passage *n* opening in the same radial line as the passage *i* on the same side of the valve seat and extending to the extreme end of the main valve chamber at each side; an auxiliary disk valve D with radial notch *k* therein, of sufficient depth to embrace the openings to the passages *i*, *n* at first one side and then the other of the engine as the valve is operated and having depressions *j* in its face, positioned to embrace and connect the exhaust ports *f* alternately with the steam passages *i* at each end of the main valve, whereby the valve will be cushioned in its operation; a valve stem E supported by a suitable stuffing box and having an angular end engaging the disk valve D for oscillating the same; an arm E′ with a connecting pitman E″ adapted to connect to a moving part of the engine for actuating the said auxiliary valve, all coacting for the purpose specified.

2. In a direct acting engine, the combination of the steam cylinder A, with steam passages F F and an exhaust passage H; a valve casing with ports connecting with said steam and exhaust passages; a hollow cylindrical valve supported in a cylindrical bore in said valve casing and adapted to reciprocate therein, the said valve having an opening connecting its interior to the steam supply and having a D, C″ formed on the under side thereof, and steam ports *c* formed through the walls thereof towards each end for delivering steam through the steam passages F to the engine; a flat valve seat in the side of the main valve casing, having exhaust ports *f f* connected by a passage *g* to the exhaust of the engine, and a passage *h* leading from the steam supply to the said valve chamber; a steam passage *i* passing from the said valve seat outwardly to near the end of the cylinder valve chamber, and a passage *n* opening in the same radial line as the passage *i* on the same side of the valve seat and extending to the extreme end of the main valve chamber at each side; an auxiliary disk valve D with radial notch *k* therein, of sufficient depth to embrace the openings to the passages *i*, *n*, at first one side and then the other of the engine as the valve is operated, and having depressions *j* in its face, positioned to embrace and connect the exhaust ports *f* alternately with the steam passage *i* at each side of the main valve, whereby the valve will be cushioned in its operation; a valve stem E supported by a suitable stuffing box and having an angular end engaging the disk valve D for oscillating the same; an arm E′ with a connecting pitman E″ adapted to connect to a moving part of the engine for actuating the said auxiliary valve, all coacting for the purpose specified.

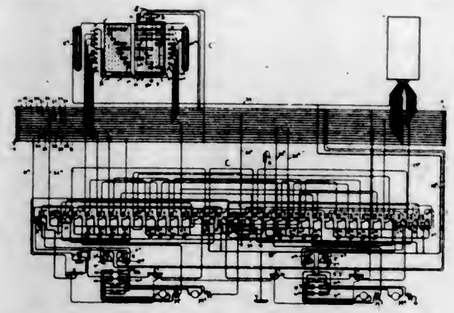
3. In a direct acting engine, the combination of the steam cylinder A, with steam passages F F and an exhaust passage H; a valve casing with ports connecting with said steam and exhaust passages; a hollow cylindrical valve supported in a cylindrical bore in said valve casing and adapted to reciprocate therein, the said valve having an opening connecting its interior to the steam supply and having a D, C″ formed on the under side thereof, and restricted steam ports *c* formed through the walls thereof towards each end for delivering steam through the steam passages F to the engine; a flat valve seat in the side of the main valve casing having exhaust ports *f f* connected by a passage *g* to the exhaust of the engine, and a passage *h* leading from the steam supply to the said valve chamber; a steam passage *i* passing from the said valve seat outward to near the end of the cylindrical valve chamber, and a passage *n* opening in the same radial line as the passage *i* on the same side of the valve seat and extending to the extreme end of the main valve chamber at each side; an auxiliary disk valve D with radial notch *k* therein, of sufficient depth to embrace the openings to the passages *i*, *n* at first one side and then the other of the engine as the valve is operated and having depressions *j* in its face, positioned to embrace and connect the exhaust ports *f* alternately with the steam passages *i* at each side of the main valve, whereby the valve will be cushioned in its operation; connections to the said auxiliary valve for actuating the same, all coacting for the purpose specified.

4. In a direct acting engine, the combination of the steam cylinder A, with steam passages F F and an exhaust passage H; a valve casing with ports connecting with said steam and exhaust passages; a hollow cylindrical valve supported in a cylindrical bore in said valve casing and adapted to reciprocate therein, the said valve having an opening connecting its interior to the steam supply and having a D, C″ formed on the under side thereof, and restricted steam ports *c* formed through the walls thereof towards each end for delivering steam through the steam passages F to the engine; a flat valve seat in the side of the main valve casing having exhaust ports *f f* connected by a passage *g* to the exhaust of the engine, and a passage *h* leading from the steam supply to the said valve chamber; a steam passage *i* passing from the said valve seat outwardly to near the end of the cylindrical valve chamber, and a passage *n* opening in the same radial line as the passage *i* on the same side of the valve seat and extending to the extreme end of the main valve chamber at each side; an auxiliary disk valve D with radial notch *k* therein, of sufficient depth to embrace the openings to the passages *i*, *n* at first one side and then the other of the engine as the valve is operated and having depressions *j* in its face, positioned to embrace and connect the exhaust ports *f* alternately with the steam passages *i* at each side of the main valve, whereby the valve will be cushioned in its operation; connections to the said auxiliary valve for actuating the same, all coacting for the purpose specified.

5. In a direct acting engine, the combination of the steam cylinder A, with steam passages F F and an exhaust passage H; a valve casing with ports connecting with said steam and exhaust passages; a hollow cylindrical valve supported in a cylindrical bore in said valve casing and adapted to reciprocate therein, the said valve having an opening connecting its interior to the steam supply and having a D, C″ formed on the under side thereof, and restricted steam ports *c* formed through the walls thereof towards each end for delivering steam through the steam passages F to the engine; a valve seat in the side of the main valve casing having exhaust ports connected by a passage *g* to the exhaust of the engine, and a passage leading from the steam supply to the said valve chamber; a passage *i* passing from the valve seat outwardly to near the end of the cylindrical valve chamber, and a passage *n* opening into the valve seat in position to be connected to the steam passage *i* by the movements of the engine and leading to the extreme end of the main valve chamber to each side; an auxiliary valve formed with ports to connect the passages *n i* together to the steam supply at each end alternately and with a portage to connect the passage *i* only, to the exhaust at the opposite side, for the purpose specified.

[Claims 6 to 8 not printed in the Gazette.]

872,938. SYSTEM OF CONTROL. GEORGE H. HILL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 31, 1904. Serial No. 230,634.



1. In a system of motor control, in combination, a plurality of motors, a plurality of groups of resistance sections, and means for grouping said motors in different relations to each other with all resistance in circuit therewith and for cutting out by groups all except one group of resistance sections in series with any motor or group of motors and for cutting out the last group, section by section.

2. In a system of motor control, in combination, a plurality of motors, a plurality of groups of resistance sections, and means for grouping the motors in different relations to each other and to said groups of resistance sections and for cutting out by groups all except one of the groups of resistance sections in circuit with any motor or group of motors and then cutting out the last group, section by section.

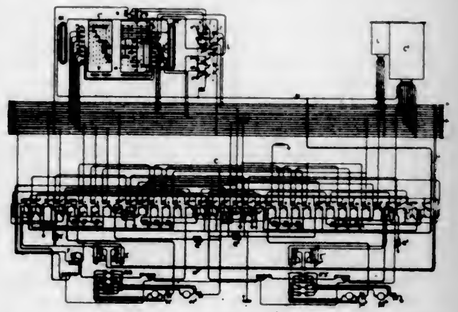
3. In a system of motor control, in combination, a plurality of motors, a plurality of groups of resistance sections, and a motor-controller arranged to group said motors in various relations to each other with all resistance in circuit and to successively cut out by groups all except one of the groups of resistance sections in circuit with any motor or group of motors and to cut out the last group, section by section.

4. In a system of motor control, in combination, a plurality of motors, an equal number of groups of resistance sections, and a motor-controller arranged to group the motors in various relations to each other and to distribute the groups of resistance sections symmetrically during the various motor groupings, to cut out by groups all except the last of the groups of resistance sections in circuit with any motor or group of motors and to cut out said last group of resistance sections step by step.

5. In a system of motor control, in combination, a plurality of motors adapted to be grouped in various relations to each other, groups of resistance sections one greater numerically than the number of motor groupings, and a motor-controller arranged to produce the various motor groupings with all resistance in circuit with the motors, to cut out all except the last group of resistance sections in series with any motor or group of motors, and to cut out said last group, section by section.

[Claims 6 to 27 not printed in the Gazette.]

872,939. SYSTEM OF MOTOR CONTROL. GEORGE H. HILL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 7, 1906. Serial No. 310,414.



1. In a system of control, a motor or motors, a speed-controlling switch, a direction-controlling switch, a brake switch, and connections so arranged that the operation of the brake switch to the braking position causes the reversal of the connections of the motor or motors as determined by the direction-controlling switch.

2. In a system of control, a source of current supply, a motor or motors, a speed-controlling switch, a direction-controlling switch, a brake switch, and connections so arranged that when the brake switch is in one position the speed-controlling switch and direction-controlling switch operate to connect said motor or motors to said source of current supply for either direction of rotation and to vary the speed of the motor or motors, while when the brake switch is in the other position the same operation of the other two switches causes the motor or motors to be connected as braking generators.

3. In a system of control, a source of current supply, a motor or motors, a speed-controlling switch, a direction-controlling switch, a brake switch, and connections so arranged that when the direction-controlling switch is in a running position and the brake switch in its power position the operation of the speed-controlling switch causes the motor or motors to be connected to said source of current supply for normal operation, while upon moving the brake switch to its braking position without changing the direction-controlling switch, the speed controller serves to cause the motor or motors to continue to operate as braking generators.

4. In a system of control, motors, a source of current supply, a series-parallel motor controller, a reversing switch, a master controller, a master reversing switch, a brake switch, and control connections so arranged that the operation of the master controller causes the motors to be successively connected in series and in parallel to said

source of current supply in one position of the brake switch and in separate closed circuits in another position of the brake switch.

5. In a system of control, motors, a source of current supply, a series-parallel motor controller, a reversing switch, master switch-devices, a two-position brake switch, and connections such that same operation of the master switch devices causes the motors to be connected to said source of current supply first in series and then in parallel in one position of the brake switch and to connect the motors in separate closed circuits in the other position of the braking switch.

[Claims 6 to 22 not printed in the Gazette.]

872,940. TUBE-EXTRACTOR FOR WELLS. JOHN A. HOLMBERG, Lindsborg, Kans. Filed June 13, 1907. Serial No. 378,770.



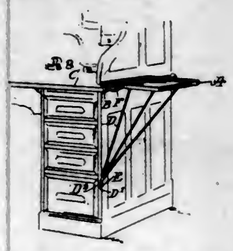
1. A well extractor having a gravity-actuated gripping device and a slidable sleeve adapted to initially retain the latter retracted and, finally, to be engaged by the broken well tube for the release of said gripping device for its projection and effective engagement with said broken well tube.

2. An extractor for well tubes comprising a rod having formed therein adjacent to its lower end a wedge-shaped recess, a wedge-shaped gripping block arranged in said recess, a sleeve slidably mounted on said rod to hold said wedge-block in position, said sleeve being adapted to be engaged by the upper end of the broken well tube to release said gripping block and thus permit the same to assume an operative position in engagement with the well tube, substantially as described.

3. An extractor for well tubes comprising a rod having a tapered lower end and a wedge-shaped recess formed therein adjacent to its lower end, a wedge-shaped gripping block arranged in said recess, a sleeve slidably mounted on said rod to normally hold said block in an inoperative position, and a coupling tube arranged on the upper end of said rod, substantially as described.

872,941. SWING-SHELF. FRED W. HUNT, Key West, Fla. Filed Mar. 9, 1907. Serial No. 361,452.

1. The combination with a desk or the like having an opening, forming a bearing, in a projecting portion of its table at one corner thereof and provided with a bearing projecting from the desk below the opening and an axial alinement therewith, of a shelf having at one corner and projecting from its under side a pivot engaging the opening in the desk table, a brace formed of a plurality of rods united at their lower ends and provided at said united ends with a collar and below the collar with a pivot, engaging the lower bearing, the upper ends of the rods being secured to the shelf, and a locking device for the shelf comprising serrated disks, one secured to the under side of the shelf at the pivot and the other to the desk table concentric with the opening thereof.



2. The combination with a desk or the like having an opening forming a bearing, in a projecting portion of its table at one corner thereof, and provided with a bearing projecting from the desk below the opening and in alinement therewith, of a shelf having at one corner and projecting from its under side a pivot engaging the opening in the desk table, a brace formed of a plurality of rods united at their lower ends and provided at said united ends with a collar and below the collar with a pivot engaging the lower bearing, the upper ends of the rods being secured to the shelf, and means for locking the shelf in position.

3. The combination with a desk or the like provided with vertically alined bearings at one corner thereof, of a shelf having at one corner on its under side a pivot engaging the upper bearing, a brace formed of a plurality of rods united at their lower ends and provided at said united end with a pivot engaging the lower bearing, the rods diverging and having their upper ends secured to the shelf, disks, one secured to the underside of the shelf at the pivot and the other to the desk table concentric with the upper bearing.

872,942. DISPLAY-CABINET. THOMAS C. HUTCHESON and ABNER M. WILKINS, Comer, Ga. Filed July 18, 1907. Serial No. 384,342.

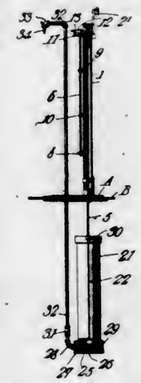


1. A display cabinet, comprising a series of vertical panels, each pivoted about a vertical axis and having on one side display supports and each having on one end a rigid coaxial gear wheel, in combination with an internal gear arranged horizontally and surrounding and meshing with all the gear wheels of the panels and adapted to inclose and protect the same.

2. A display cabinet, comprising a series of vertical panels, each pivoted about a vertical axis and having on one side display supports, and each having on one end a rigid coaxial gear wheel, in combination with a turning wheel having outwardly projecting handles and an internal gear inclosing and meshing with all the gear wheels of the vertical panels.

3. A display cabinet, comprising an upper and lower head with a central column connecting the same, a pedestal base with an upright shaft bearing a supporting collar and extending through the central column and provided with a clamping nut at its upper end, a circular series of vertical panels each pivoted about a vertical axis between the heads and having on one side display supports, and each having on one end a rigid coaxial gear wheel, a turning wheel arranged upon the central shaft and having an internal gear inclosing and meshing with all of the said gear wheels.

872,943. SELF-MEASURING PUMP. CHARLES S. JONES, Marion, Ind. Filed Nov. 5, 1906. Serial No. 342,164.



1. In a measuring pump, a pumping mechanism including a piston rod, means for actuating the same, a block secured to the piston rod and adjustable in the direction of the length of the rod, an adjustable stop for engaging said block, an indicating device including a ratchet wheel, a pointer carried thereby, a graduated dial over which the pointer may travel, a pawl engaging the ratchet wheel, said pawl having a shoulder disposed in the path of movement of the block, and means for retracting the pawl.

2. In a measuring pump, a pumping mechanism including a piston rod, means for operating the rod, a block secured to the rod, an indicator with which the block engages, and an adjustable means for limiting the movement of the rod during the discharging operation of the pump.

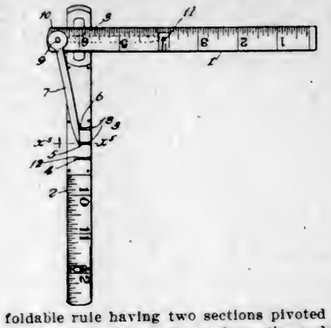
3. A measuring pump including a piston rod, an indicating device, a block carried by the piston rod, and operating said indicating device, and adjustable stops movable into the path of the block and serving to limit the discharging movement of the pump.

4. A measuring pump including a piston rod, means for operating the rod, a block projecting from said piston rod, a revolubly mounted stop rod having a plurality of blocks, any one of which may be adjusted in the path of movement of the piston rod block, a stop disk having a series of notches, and an operating handle carried by the stop rod and having a catch arranged to engage any one of said notches.

5. A measuring pump including a piston rod, a block carried thereby and having a pointer, a graduated scale over which the pointer may travel, a link belt secured to the block, and means for actuating said link belt, substantially as herein set forth.

872,944. COMBINED POCKET RULE, SQUARE, AND BEVEL. THEODORE KALMA, South Pasadena, Cal. Filed Feb. 20, 1907. Serial No. 358,517.

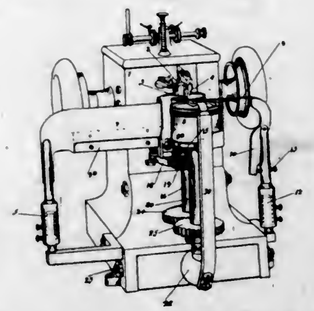
1. A foldable pocket rule the sections of which are pivoted to each other by a pivot located at a distance from the ends of the sections, so that the sections cross each other when unfolded, one of the sections being provided with a keeper, such keeper facing the other section, and a brace pivoted to the shorter limb of the other section and provided with means to engage said keeper to hold the sections in unfolded position with free unobstructed edges in the inner angle formed by their longer arms.



2. A foldable rule having two sections pivoted together by a pivot located at a distance from the ends thereof and arranged to cross each other when unfolded, one of said sections being provided in its longer limb with a keeper on the face thereof next the other section, and a spring brace pivoted to the shorter limb of the other section and provided with a detent to engage said keeper when the sections are unfolded thus to form a try-square or bevel-free from obstructions on its inner angle.

3. A foldable pocket rule comprising sections pivotally secured together at or near the ends thereof, and arranged to cross each other when unfolded, one of said sections being provided in the longer end thereof with a keeper secured to the face of the same provided with channels or grooves terminating in indentations, and a resilient member pivotally secured to one end of said sections and provided with a detent, arranged to slide in said grooves or channels in said keeper and engaging said indentations whereby to form a try-square or bevel, and a seat for said resilient member when out of use.

872,945. SEWING-MACHINE. FRANK J. KAUFMANN, Fultonville, N. Y., assignor of one-half to Charles W. Heckert, Fultonville, N. Y. Filed Mar. 23, 1907. Serial No. 364,048.



1. The combination in a sewing machine of a stitch forming mechanism, the work supporting plate, the continuation thereof in a supporting wire, and the feed wheels having coinciding recesses receiving the wire, substantially as set forth.

2. The combination in a sewing machine of the feeding wheels having coinciding grooves in their operative faces, and a guide extending between the feeding wheels through the opening provided by said coinciding grooves, substantially as set forth.

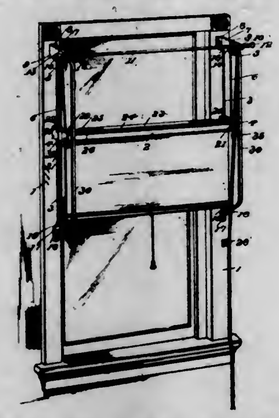
3. The combination in a sewing machine of the stitch forming mechanism, including a reciprocating needle, a guide extending transversely to the needle, driven feeding wheels having grooved faces affording a space through which the guide passes arranged to grip the material substantially in the vertical plane of the needle and while the same is held by the guide, substantially as set forth.

4. The combination in a sewing machine of a stitch forming mechanism, including a reciprocating needle, a wire material guide extending past the needle in close proximity thereto, feeding wheels gripping the material above and below the guide and at a point substantially in the vertical plane of the needle, substantially as set forth.

5. The combination in a sewing machine of the character described of the work supporting plate having a guide thereon, the wire guide providing a continuation of the upper edge of the plate, a sewing mechanism including a reciprocating needle arranged to operate at right angles to and in close proximity to said guide wire, driven feeding wheels adapted to forward the material along the wire past the needle, a top guide for holding the folded edge of the material down in close proximity to the guide wire, and means for guiding the tipping strip, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

872,946. SHADE-HANGER. GEORGE A. LAVENDER, Oakland, Cal. Filed Sept. 18, 1906. Serial No. 335,146.



1. In a device of the character described, the combination of a pair of fixed brackets, curtain supporting means carried by the fixed brackets, a pair of movable brackets vertically adjustable below the fixed brackets and provided with means for supporting a shade, and a pair of guard strips coöperating with the fixed brackets to hold the curtains out of engagement with the shade.

2. In a device of the character described, the combination of a bracket, shade supporting means adjustably mounted beneath the bracket, an operating cord pendent from the bracket and engaging the shade supporting means, and a guard strip pendent from the bracket and coöperating therewith to prevent any window drapery from interfering with the operation of the shade.

3. In a device of the character described, the combination of a pair of fixed brackets provided with means for supporting a curtain, a second pair of brackets mounted beneath the fixed brackets and provided with means for supporting a shade, and guard strips for preventing the curtain from interfering with the operation of the shade.

4. In a device of the character described, the combination of a bracket, a guide rod, a movable bracket slidably mounted upon the guide rod, an operating cord pendent from the first mentioned bracket and connected to the movable bracket, and a guard strip pendent from the first mentioned bracket and coöperating therewith to prevent any window drapery from interfering with the operation of the shade.

5. In a device of the character described, the combination of a pair of fixed brackets having guide members mounted thereon, a curtain pole supported by the brackets, a pair of movable brackets vertically adjustable below the fixed brackets and provided with means for supporting a shade, an operating cable passing over the guide members upon the fixed brackets and connected to the movable brackets, and a pair of guard strips coöperating with the fixed brackets to hold the curtains out of engagement with the shade.

[Claim 6 not printed in the Gazette.]

872,947. CURTAIN-RING AND TRAVERSE-ROLL THEREFOR. JAMES W. LESLIE, Wakefield, Mass, assignor to Alexander Leslie, Boston, Mass. Filed Feb. 15, 1906. Serial No. 301,168. Renewed Oct. 5, 1907. Serial No. 396,025.



1. In a curtain ring, a traverse roll, an axle on which it rotates, heads on the ends of the axle to limit lateral play of the roll, annularly grooved bosses on the heads, and a tubular ring-body having its ends embracing the bosses and compressed into the grooves thereof.

2. A tubular metallic ring-body, a traverse roll, an axle on which it is rotatably mounted, and annularly grooved enlargements on the ends of the axle, to enter the open ends of the ring-body, the latter being compressed into the grooves to lock the axle and body together.

3. In a curtain ring, an annular, tubular, metallic body having separated ends, a plurality of traverse rolls, an axle for each, having annularly grooved enlargements on their ends, the enlargement on the outer end of each axle being inserted in the adjacent end of the body, the latter being compressed in the groove to lock the body and axle together, and a tubular distance piece embracing the enlargements at the inner ends of the axles and similarly locked thereon.

4. A traverse roll having an axial opening, a two-part tubular axle loosely extended therethrough, one part being telescoped into the other, an annular head on the outer end of each part, a hollow, externally grooved boss compressed onto each of said heads, and means to lock the axle parts together.

5. A traverse roll having an axial opening, an axle loosely extended therethrough and comprising two hollow studs one of which is inserted within the other and upset at its inner end, to lock the parts together, a head on the outer end of each stud, and an externally grooved boss on each of said heads.

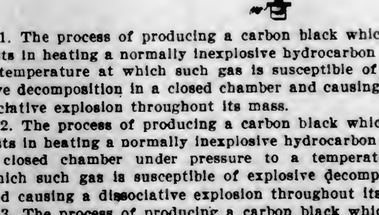
[Claim 6 not printed in the Gazette.]

872,948. FASTENING DEVICE FOR BINDING-BARS AND SIMILAR PURPOSES. PETER MACGREGOR, Ottawa, Ontario, Canada. Filed Apr. 6, 1907. Serial No. 366,836.

1. In a temporary binder, a binding bar having a fastening device stamped in the top thereof integral therewith, the said fastening device including a resilient member integral with the bar and extending downwardly into a slot cut therein, as and for the purpose specified.

2. In a temporary binder, a binding bar having a fastening device stamped in the top thereof, integral therewith, the said fastening device including a plurality of divergent resilient members integral with the bar and extending below the surface thereof, as and for the purpose specified.

3. An improved fastening device for securing a cord to a plate or bar, comprising a plate, a resilient tongue cut therein having a portion downwardly curved and extending below the surface of the plate as and for the purpose specified.

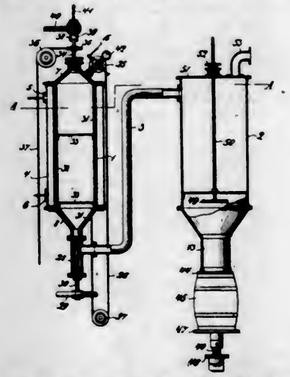


4. An improved fastening device for binding bars and the like comprising a plate, a resilient tongue therein having an inner portion upwardly curved above the surface of the plate and the outer portion downwardly curved to extend below the surface of the plate, as and for the purpose specified.

5. In a temporary binder, a binding bar having an inclined slot in the edge thereof, and a fastening device stamped in the top thereof, the said fastening device being in alinement with the inclined slot and including a resilient member integral with the bar and extending downwardly into a slot therein.

[Claim 6 not printed in the Gazette.]

872,949. PROCESS FOR THE PRODUCTION OF AMORPHOUS CARBON. JOSEF MACHTOLF, Böblingen, Germany. Filed Mar. 9, 1907. Serial No. 361,548.



1. The process of producing a carbon black which consists in heating a normally inexplosive hydrocarbon gas to a temperature at which such gas is susceptible of explosive decomposition in a closed chamber and causing a dissociative explosion throughout its mass.

2. The process of producing a carbon black which consists in heating a normally inexplosive hydrocarbon gas in a closed chamber under pressure to a temperature at which such gas is susceptible of explosive decomposition and causing a dissociative explosion throughout its mass.

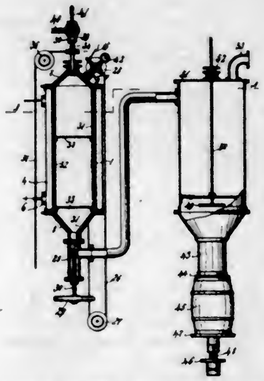
3. The process of producing a carbon black which consists in heating a normally inexplosive hydrocarbon gas in admixture with a small proportion of a facilitating normally explosive body to a temperature at which such gas is susceptible of explosive decomposition in a closed chamber and causing a dissociative explosion throughout its mass.

4. The process of producing a carbon black which consists in heating a normally inexplosive hydrocarbon gas in admixture with a small proportion of acetylene to a temperature at which such gas is susceptible of explosive decomposition and causing a dissociative explosion throughout its mass.

5. The process of producing a carbon black which consists in heating oil gas in admixture with a small proportion of acetylene to a temperature at which such gas is susceptible of explosive decomposition and causing a dissociative explosion throughout its mass.

[Claims 6 to 10 not printed in the Gazette.]

872,950. APPARATUS FOR PRODUCING CARBON. JOSEF MACHTOLF, Böblingen, Germany. Original application filed Mar. 9, 1907, Serial No. 361,548. Divided and this application filed July 2, 1907. Serial No. 381,921.



1. In an apparatus for the production of amorphous carbon, the combination, with a decomposition chamber provided with controllable means for producing explosive decomposition therein, of a collection chamber, a conduit connecting the decomposition chamber with the collection chamber, and means for controlling the conduit.

2. In an apparatus for the production of amorphous carbon, the combination, with a decomposition chamber, means for supplying an explosive fluid thereto, and controllable means for igniting said fluid explosively, of a collection chamber, and means for putting the collection chamber and the decomposition chamber in connection with each other.

3. In an apparatus for the production of amorphous carbon, the combination, with a decomposition cylinder, means for supplying an explosive hydrocarbon mixture to the same, and means for igniting said mixture explosively, of means for removing soot from said explosion chamber, and a scraper mechanism within the decomposition chamber.

4. In an apparatus for the production of amorphous carbon, the combination, with a decomposition chamber provided with controllable means for producing explosive decomposition therein, of a collection chamber connected therewith, and means for removing soot from the collection chamber.

5. In an apparatus for producing amorphous carbon, the combination, with a decomposition chamber provided with controllable means for producing explosive decomposition therein, and a collection chamber connected thereto, of means for attaching a receptacle to the collection chamber, and means for discharging the contents of the collection chamber into the receptacle.

[Claims 6 to 9 not printed in the Gazette.]

872,951. CATTLE-GUARD FOR RAILWAYS. EMILIEN A. MANNY, Beauharnois, Quebec, Canada. Filed Mar. 18, 1907. Serial No. 363,112.

1. In a cattle guard, the combination comprising a plurality of strips provided with teeth, each having three in-

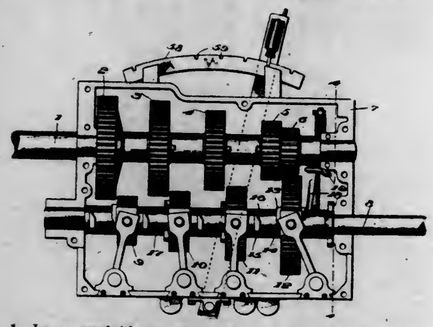
clined surfaces and a vertical wall, means for spacing the strips apart, and means for binding the strips and spacing means together to form a unitary structure.



2. In a cattle guard, the combination comprising a plurality of strips provided with teeth, each having three inclined surfaces, a vertical wall and a flat top, spacing means disposed between the strips, and means for binding the strips and the spacing means together to form a unitary structure.

3. In a cattle guard, the combination comprising a plurality of continuous wood strips provided with integral teeth, each having a plurality of inclined sides and a vertical wall, means for spacing the strips apart, and means for binding the strips and spacing means into a unitary structure.

872,952. VARIABLE-SPEED AND REVERSING GEAR. FRANZ MARKGRAF, New York, N. Y. Original application filed Feb. 11, 1903, Serial No. 142,974. Divided and this application filed Dec. 15, 1904. Serial No. 236,950.



1. In a variable speed mechanism, in combination, a shaft, a plurality of gears of varying diameters fixed thereon, a second shaft, a plurality of gears slidably mounted thereon and adapted to mesh with said first mentioned gears, means adapted positively to throw said second mentioned gears into mesh with said first mentioned gears and to throw some of the gears out of mesh without breaking connection between all the gears, a lever controlling said means, and cushioning means interposed between said throwing means and said lever.

2. In a variable speed mechanism, in combination, a shaft, a plurality of gears of varying diameters fixed thereon, a shaft and plurality of gears slidably mounted thereon and adapted to mesh with said first mentioned gears, means adapted to throw one of said second mentioned gears into mesh with one of said first mentioned gears and to move some of the gears out of mesh without breaking connection between all the gears, a lever controlling said means, and cushioning means interposed between said throwing means and said lever.

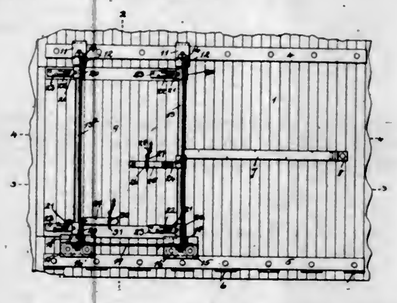
3. In a variable speed mechanism, in combination, a shaft, a plurality of gears of varying diameters fixed thereon, a second shaft, a plurality of gears loosely and slidably mounted thereon and adapted to mesh with said first mentioned gears, means adapted positively to throw said second mentioned gears into mesh with said first mentioned gears, clutch mechanism upon said second mentioned shaft adapted to be engaged by co-acting clutch mechanism upon said second mentioned gears, a lever controlling the means whereby said second mentioned gears are thrown into engagement with said first mentioned gears and cushioning means interposed between said lever and said throwing means.

4. In a variable speed mechanism, in combination, a shaft, a plurality of gears of varying diameters fixed thereon, a second shaft, a plurality of gears loosely and slidably mounted thereon and adapted to mesh with said first mentioned gears, means adapted selectively to throw said second mentioned gears into mesh with said first mentioned gears and rigid clutch mechanism upon said second mentioned shaft adapted to be engaged by co-acting clutch mechanism upon said second mentioned gears.

5. In a variable speed mechanism, in combination, a shaft, a plurality of gears of varying diameters fixed thereon, a second shaft, a plurality of gears loosely and slidably mounted thereon and adapted to mesh with said first mentioned gears, means adapted positively to throw said second mentioned gears into mesh with said first mentioned gears and rigid clutch mechanism upon said second mentioned shaft adapted to be engaged by co-acting clutch mechanism upon said second mentioned gears, a lever controlling the means whereby the said second mentioned gears are thrown into engagement and cushioning means interposed between said throwing means and said lever.

[Claims 6 to 20 not printed in the Gazette.]

872,953. CAR-DOOR. JOHN N. MARQUETTE, Baltimore, Md., assignor of one-third to James D. M. Marquette and one-third to Peter J. Nelson, Baltimore, Md. Filed Dec. 19, 1906. Serial No. 348,546.



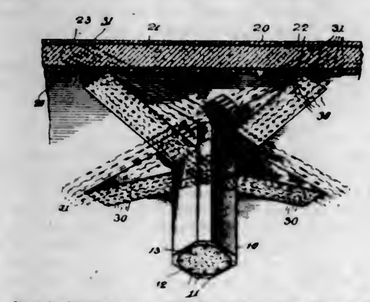
1. The combination with the car-body having a door-opening, of a rail on the car-body below said opening; carriers traveling on said rail and having a flat top surface substantially flush with the bottom of the said door-opening; a door; brackets on the door; vertical shafts having their lower ends rotatably mounted on the said carriers, and arms attached to the vertical shafts and pivotally connected with the said door-brackets.

2. The combination with the car-body having a door-opening, of the traveling carriers at the side of the body; shafts having their lower ends engaged with said carriers; bearings at the upper ends of the shafts for maintaining them in a vertical position; a door; arms rigid with and carried by the said shafts and pivotally connected with the door, and a bar, 24, also rigid on one shaft for rotating the shaft to cause the door to move from the door-opening into the carriers, and said bar having a jointed arm to be fastened to the door.

872,954. BUILDING CONSTRUCTION. EDGAR D. MARTIN, Chicago, Ill., assignor of one-half to Franklin P. Smith, Chicago, Ill. Filed Jan. 7, 1907. Serial No. 351,048.

1. In a girderless floor construction, the combination with suitable columns, of rods supported therein and extending transversely therefrom, a metal fabric extending over the entire area bounded by the columns and resting upon and connected with said rods and columns, a second metal fabric extending over the entire area bounded by the columns and arranged above the first fabric and a body of concrete in which said fabric and rods are wholly embedded.

2. In a building construction, the combination with suitable columns, of diagonally disposed brace rods supported therein, a layer of metal fabric resting upon said brace rods, a second series of rods arranged above the first series, stirrups connecting and separating said rods, a second layer of metal fabric resting upon said second series of rods and a body of concrete in which said parts are wholly embedded.



3. In a building construction, the combination with suitable columns, comprising uprights and metal connecting bands, of caps for said columns comprising diagonal brace rods, horizontal cap rods and connecting stirrups, a floor comprising two layers of metal fabric resting upon and connected to said brace rods and cap rods and a body of concrete in which the metal parts of said columns, caps and floor are wholly embedded.

4. In a building construction, the combination with a suitable column, of a cap therefor, comprising substantially a series of transversely extending and inclined brace rods, a second series of transversely extending rods, stirrups connecting and spacing said rods apart and a body of concrete in which all of said metal parts are wholly embedded.

5. In a building construction, the combination with suitable columns, of caps therefor containing two series of transversely extending rods and spacing stirrups, and a floor construction comprising substantially a plurality of layers of metal fabric, each layer resting upon one of said series of rods and a body of concrete in which all of said metal parts are wholly embedded.

[Claims 6 to 8 not printed in the Gazette.]

872,955. WRENCH. FRANKLIN C. MILLER, Kittanning, Pa. Filed Apr. 27, 1907. Serial No. 370,615.



1. In a wrench, the combination with a toothed shank having a handle and a fixed jaw, of an adjustable jaw slidably mounted upon said shank and having a socket formed therein, an extension carried by said shank, a grooved shaft revolubly mounted upon said extension and extending into the socket of said adjustable jaw, a worm eccentrically mounted upon said shaft and adapted to engage said threaded shank, screws carried by said worm and extending into the groove of said shaft, an arm carried by said shaft, and means resting upon said extension and secured to said adjustable jaw for normally holding the same in a fixed position.

2. In a wrench, the combination with a toothed shank having a handle and a fixed jaw, of an adjustable jaw slidably mounted upon said shank, an extension carried by said shank, a worm eccentrically arranged in said adjustable jaw and adapted to engage said toothed shank, a shaft revolubly mounted upon said extension and extending through said worm and into said adjustable jaw, and means resting upon said extension and surrounding said shaft for normally holding said adjustable jaw in a fixed position.

3. In a wrench, the combination with a toothed shank having a fixed jaw, of an adjustable jaw slidably mounted upon said shank, a worm eccentrically mounted in said adjustable jaw and adapted to engage the toothed shank, a shaft supported adjacent to said shank and extending through said worm and adapted to rotate therewith, and a spring surrounding said shaft for normally holding said worm in engagement with said shank.

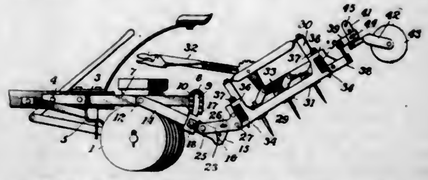
4. A wrench embodying a toothed shank, a fixed jaw carried thereby, an adjustable jaw slidably mounted upon said shank, a worm eccentrically mounted in said jaw and adapted to engage said shank, and a spring located beneath said jaw for simultaneously holding said jaw in a closed position and said worm in engagement with said shank.

872,956. RAILROAD TIE, BEAM, OR POST. CHARLES K. MOHLER, Chicago, Ill. Filed May 19, 1904. Serial No. 208,759.



The combination in a railroad tie, beam, or post, of an integral part known as the tie, beam, or post body, or framework, composed of vitrified clay, or other suitable material, of an elongated form, having longitudinal holes for the reception of reinforcing rods or bars, and transverse holes suitable for the reception of the rail fastenings, together with one or more longitudinal reinforcing bars or rods provided with suitable nuts and washers or other fastenings, the same being inserted in the holes running lengthwise of the tie, beam, or post body and securely fastened thereto, and tightened up so as to be in a condition of initial tension before the binding material has hardened, and remain under a condition of initial tension after the entire combination for the tie, beam, or post, is completed, and produce an opposite condition of initial compressive stress in the particles of the tie, beam, or post body, the reinforcing bars or rods being embedded in and covered and cemented in with a cementing or binding material composed of cement mortar, or other suitable material, the body or framework of the tie, beam, or post, being held in a condition of compression as a result of the initial tension on the reinforcing bars, all substantially as set forth.

872,957. HARROW. DIEDERICH P. MOHR and JOHN A. DUVANEL, Mackinaw, Ill. Filed July 1, 1907. Serial No. 381,695.



1. Means for the connection of one harrow section with another, comprising supporting means adapted to be connected to one of said harrow sections, arms pivoted on opposite sides of said harrow section on said supporting means for angular adjustment vertically, and hinged extensions on said arms respectively, said extensions connected to the other harrow section.

2. The combination with supporting arms for connection to a harrow, of arms pivoted to said supporting

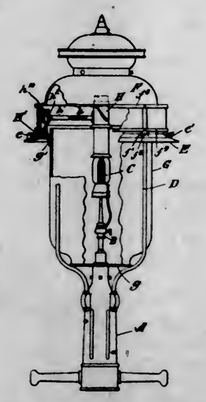
arms for angular adjustment, clamping means to hold said pivoted arms in adjustment, extensions hinged on said arms for angular adjustment and provided with means to hold them in adjustment, and a harrow connected to said hinged extensions, the said hinged extensions permitting the elevation from the ground of the harrow connected thereto and the retention of the same in the elevated position.

3. The combination with supporting arms for connection to a harrow, of arms pivoted to said supporting arms for angular adjustment, clamping means to hold said pivoted arms in adjustment, extensions hinged on said arms for angular adjustment and provided with means to hold them in adjustment, a harrow rigidly connected to said hinged extensions, and a vertically adjustable supporting wheel connected to the rear of said last named harrow.

4. The combination with a disk harrow, of supporting arms attached thereto, arms pivoted to said supporting arms for angular adjustment, clamping means acting to hold said pivoted arms in positions of adjustment, arms pivoted on each of said second named arms and forming extensions thereto, clamping means to hold said extensions in angular adjustment, harrow side bars rigidly connected respectively to said arm extensions, tooth harrow beams supported on said side bars, a rear frame portion connecting said side bars, and a vertically adjustable wheel connected to said rear frame portion.

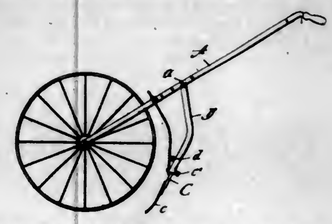
5. In a harrow, the combination with a harrow section comprising a frame, a plurality of toothed bars mounted in said frame, side bars in which said frame is mounted for movement vertically relative thereto, springs arranged to oppose said movement, a second harrow section, and adjustable means connecting one of said harrow sections with the other, said means comprising adjusting pivoted arms, adapted to permit of the raising and lowering of said first named harrow section with respect to the second named section, and clamping means to retain the said pivoted arms in adjusted positions.

872,958. STREET-LAMP. RAGLAND MOMAND, New York, N. Y., assignor to Consolidated Street Lighting Company, a Corporation of Maine. Filed Mar. 31, 1906. Serial No. 309,220.



In a street lamp, a lamp head, posts extending upwardly therefrom, a lower flange member supported upon said posts, an upper flange member hinged to said lower flange member and carrying a dome, a globe supported upon the lamp head, a flue holder carrying an adjustable flue, a telescoping arm carrying said flue holder, and a pivotal support, upon the lower flange, for said telescoping arm, whereby the flue-holder may be swung aside out of the path of the globe.

872,959. HAND-CULTIVATOR. WILLIAM J. MCGEHEE, Bushnell, Ill. Filed June 17, 1907. Serial No. 379,464.

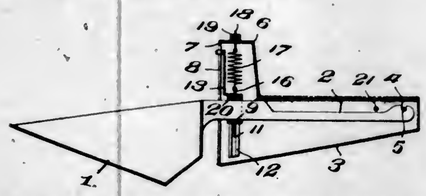


In a device of the class described, a hollow standard, a blade carrying shank located in the hollow standard and fitting between the sides thereof but of less thickness than the distance between the inner faces of the front and rear walls of the standard, a set screw passing through the rear wall of the standard near the lower end thereof, and impinging against the rear side of the shank, a second set screw passing through the front wall above the line of the first screw, and a leaf spring interposed between the shank and front wall of the standard, substantially as described.

872,960. PAINT COMPOUND. CHARLES J. MCLENNAN, Detroit, Mich. Filed Sept. 9, 1907. Serial No. 391,904.

A paint, composed of bichromate of soda, silicate of soda, linseed oil, glue, water, and pigment in substantially the proportion specified.

872,961. SCOOP. PHILIP NEDDO, Barre, Vt. Filed Mar. 28, 1907. Serial No. 365,204.



1. The combination with a scoop having a shank; of a handle to receive said shank, shafts in said handle adapted to form pivotal points for said shank and means in the handle to weigh the contents of the scoop.

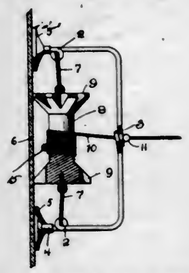
2. The combination with a scoop having a shank thereon and a notch in the free end of said shank; of a handle, shafts in said handle adapted to be engaged by said notch and form pivotal points for said shank, a hanger for said shank and yielding means to support said hanger whereby the contents of said scoop may be weighed.

3. The combination with a scoop having a shank; of a handle having a slot in one end thereof through which said shank extends, means to pivotally and removably secure the shank in the handle, a hanger, slidably mounted in said handle to receive said shank, a spring to support said hanger and a finger carried by said hanger and adapted to extend through the slot and over graduations to indicate the weight of the contents of the scoop.

4. The combination with a scoop having a shank thereon a tubular handle for said shank, means to pivotally and removably secure said shank in the handle, a plate at one end of said handle having a slot therein through which said shank extends, a hanger slidably mounted in said handle and having a cavity to receive said shank, a spring secured at one end to said hanger, means at the opposite end of said spring to anchor the same and adjust the tension thereof and a finger carried by said hanger and adapted to extend over graduations on said plate whereby the weight of the contents of the scoop will be indicated.

5. The combination with a scoop having a shank thereon; of a hollow handle, a dome at one end of said handle, a plate on said handle and dome having a slot therein through which said shank extends, a hanger slidably mounted in said handle and having a cavity therein to receive said shank, a spring secured at one end to said hanger, a bolt for the opposite end of said spring, said bolt being directed through the crown of said dome, an adjusting nut for said bolt whereby the tension of said spring may be varied, a finger carried by said hanger adapted to extend through said slot and over graduations on said plate and means to vary the tension upon the scales.

872,962. TICK-TACK. FRED J. NIGGEL, Jeannette, Pa. Filed June 13, 1907. Serial No. 378,762.



1. A tick-tack embodying a wire frame or bracket, suction disks carried by the ends of said frame or bracket, a notched spool resiliently supported in said bracket or frame, and a cord or cable attached to said spool and normally held in a wound condition thereon.

2. A tick-tack embodying a frame or bracket, eyelets carried thereby, suction disks carried by said frame or bracket, a notched spool resiliently held between two of said eyelets, a cord or cable wound upon said spool and having its free end passing through the other of said eyelets.

3. A tick-tack embodying a frame or bracket, suction disks carried thereby, an agitator resiliently supported in said frame or bracket, and a cord or cable normally wound upon said agitator.

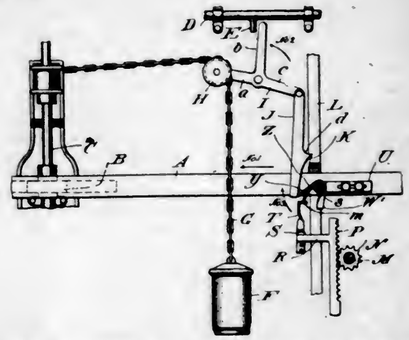
4. In combination with a window pane, a tick-tack embodying a frame, an agitator resiliently supported in said frame and adapted to contact with said window pane, a cord or cable normally wound upon said agitator, and means carried by said frame for detachably securing the same to said window pane.

872,963. STOP-MOTION FOR ROVING-FRAMES. MAURICE NOLET, Manchester, N. H. Filed June 14, 1907. Serial No. 378,965.

1. In a roving frame, the combination of a belt-shifting rod, a lever having an arm for engaging and moving the belt-shifting rod, a weight, a cable connected to the weight and passed over a guide on the lever, a latch connected to the said lever, a keeper for engaging and holding the latch against movement in one direction, a belt-traversing rack, means thereon for moving the latch out of engagement with the keeper, and a device movable at an angle to the belt-traversing rack and arranged to move the said means for moving the latch.

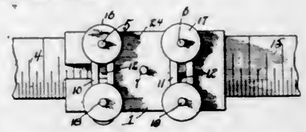
2. In a roving frame, the combination of a belt-shifting rod, a lever having an arm for engaging and moving the belt-shifting rod, a weight for swinging the said lever in one direction, a latch connected to the lever, a keeper for engaging and holding the latch against movement in the said direction, a belt-traversing rack, swinging arms carried by the said rack; one of said arms being arranged to move the latch out of engagement with the keeper, and a device movable at an angle to the rack and arranged to engage the other arm.

3. In a roving frame, the combination of a belt-shifting rod, a lever having three arms, one of which is arranged to engage and move the belt-shifting rod, a sheave on one of the other arms of the lever, a pendent latch pivotally connected to the remaining arm of the lever, a weight for swinging the said lever in one direction, a cable connected to the weight and passed over the said sheave, a keeper for engaging and holding the latch against movement in the mentioned direction, a belt-traversing rack, a bar connected to said rack and having a lateral journal, a hub loosely mounted and retained on said journal and having arms one of which is arranged to engage the latch and also having a counterbalance, a tappet for engaging and moving the other arm of the hub, and means for moving the said tappet.



4. The combination in a roving frame, of means for shifting a belt, a latch, a connection between the latch and said means, a weight connected with the said connection for moving the belt-shifting means when the latch is released, a keeper for engaging and holding the latch against movement in one direction, a belt-traversing rack, means thereon for moving the latch out of engagement with the keeper, and a device movable at an angle to the belt-traversing rack and arranged to move the said means for moving the latch.

872,964. SCALE-CONNECTOR. JOHN OSTLUND and WILLIAM SANDBERG, Braddock, Pa. Filed June 13, 1907. Serial No. 378,760.



1. A connecting device for scales comprising a slotted plate, provided with stops against which the edges of the scales bear, slotted keepers on the upper side of said plate, stationary threaded pins extending through said keepers, thumb nuts on said pins, adjustable screws extending through the slots in the plate, and cleats secured to said screws on the under side of the plate.

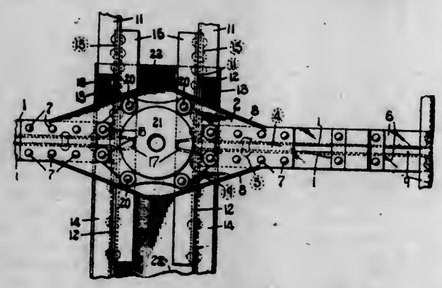
2. A connecting device for scales comprising a plate formed on one side with parallel slots, and with a longitudinal slot at one end, and having integral stops on its underside, stationary threaded pins projecting from the upper side of the plate, longitudinally slotted keepers through which the pins extend, thumb-nuts on said pins, adjustable screws extending through the slots of the plate and through said keepers, cleats on the ends of said screws below the plate adapted to overlap the scales, and thumb nuts on screws.

3. A connecting device for scales, comprising a plate formed on one side with parallel slots, and with a longitudinal slot at one end, and having integral stops on its under side, stationary threaded pins projecting from the

upper side of the plate, slotted keepers through which said pins extend, thumb nuts on said pins, adjustable screws extending through the slots of the plate and keepers, cleats secured to the ends of the screws below the plate and adapted to overlap the scales, countersunk thumb-nuts on said screws, and coil springs within the countersunk portions of said nuts.

4. A connecting device for scales comprising a plate formed at one side with parallel transverse slots and at one end with a longitudinal slot, two threaded pins projecting from one side of the upper surface of the plate, a centering indentation between said pins, a third threaded pin projecting centrally from the plate, longitudinally slotted keepers adapted to fit over said pins, adjustable screws fitting the slots of the plate, cleats secured to said screws on the under side of said plate and adapted to overlap the scales, stops on the under side of said plate against which the edges of the scales rest, and spring-pressed thumb-nuts on said screws.

872,965. CAR BOLSTER AND UNDERFRAME. ALLEN E. OSTRANDER, Paterson, N. J., assignor to American Car & Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Aug. 15, 1907. Serial No. 388,745.



1. A bolster comprising pairs of members projecting laterally from the center sills of a car, and a member passing below the center sills and provided outside of the center sills with upwardly projecting fins, each of which is secured to both members of one of said pairs of laterally projecting members; substantially as described.

2. A bolster made up of members that project laterally from the center sills of a car, and a plate-like member arranged underneath the center sills and having upwardly projecting fins at approximately the longitudinal center thereof that are secured to the members first referred to above the lower edges thereof; substantially as described.

3. A bolster composed of members that project laterally from the center sills of a car, a tension plate secured to the upper edge portions of said members, and an aproximately flat members passing below the center sills and provided at approximately its longitudinal center with upwardly projecting portions that are secured to said laterally projecting members above the lower edges thereof; substantially as described.

4. A bolster comprising pairs of diaphragms projecting laterally from the center sills of a car, and an approximately flat member passing below the center sills and having a pair of fins, each of which is secured to the webs of a pair of diaphragms; substantially as described.

5. A bolster comprising pairs of channel-shaped members projecting laterally from the center sills of a car, a member passing underneath the center sills and secured to the lower flanges of the members first referred to, and a pair of fins projecting upwardly from said connecting member and each being secured to the webs of one pair of said channel-shaped members; substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

872,966. BUFFING OR POLISHING WHEEL. WILLIAM A. PAINTER, Allegheny, Pa., assignor of one-half to Patrick H. Bergin, Allegheny, Pa. Filed Aug. 6, 1907. Serial No. 387,330.



1. A buffing or polishing-wheel comprising a plurality of radially folded overlapping pieces and means for securing the pieces together.

2. A buffing or polishing-wheel having a plurality of radially folded pieces.

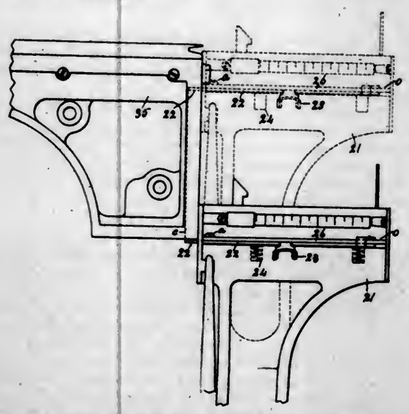
3. A buffing or polishing-wheel having a plurality of radially folded overlapping pieces.

4. A buffing or polishing-wheel having a hub portion and an outer portion formed by a plurality of radially folded pieces.

5. A buffing or polishing-wheel comprising outer disk-pieces, a plurality of radially folded pieces interposed between the outer pieces, and means for securing the said folded pieces to the disk-pieces.

[Claim 6 not printed in the Gazette.]

872,967. ASSEMBLING-ELEVATOR FOR LINOTYPE-MACHINES. BENJAMIN L. PARKINSON, London, Ontario, Canada, assignor to London Free Press Printing Company Limited, London, Canada. Filed May 13, 1907. Serial No. 373,498.



1. In a linotype machine, an assembling elevator for receiving the matrices in combination with a duplex rail adjustable longitudinally and laterally on the assembling elevator for supporting said matrices.

2. In a linotype machine, a duplex rail in combination with an assembling elevator and adapted to be adjusted longitudinally and laterally on the same, sockets formed in the upper front portion of said assembling elevator, and springs in said sockets adapted to resiliently engage with said duplex rail, substantially as shown and described and for the purpose specified.

3. In a linotype machine, a duplex rail in combination with an assembling elevator and adapted to be adjusted longitudinally and laterally on the same, and a line delivery channel in the inner edge of which adjacent to the assembling elevator, a recess is formed, substantially as shown and described and for the purpose specified.

4. In a linotype machine, a duplex rail in combination with an assembling elevator and adapted to be adjusted longitudinally and laterally on the same, sockets formed in the upper front portion of said assembling elevator, springs in said sockets adapted to resiliently engage with said duplex rail, and a line delivery channel in the inner edge of which adjacent to the assembling elevator, a recess is formed, substantially as shown and described and for the purpose specified.

5. In a linotype machine, a duplex rail in which angular shaped slots are formed, in combination with an assembling elevator provided with pins which are fitted to and inserted in said angular shaped slots, substantially as shown and described and for the purpose specified.

[Claims 6 to 8 not printed in the Gazette.]

872,968. LOOSE-LEAF BINDER. MILAN W. PATRIC, Rochester, N. Y., assignor to John C. Moore, Corporation, a Corporation of New York. Filed July 8, 1907. Serial No. 382,583.



1. In a loose leaf binder, in combination with a plate having an impaling post or impaling posts secured therein; a following plate having a hole or holes therethrough adapted to receive and movable longitudinally on such impaling post or posts; a clamping mechanism carried by such following plate comprising a lever or levers each pivotally secured to and between two rigidly connected plates, one on each side thereof; each such pair of side plates and clamping lever secured to such following plate and having holes therethrough alined with the corresponding hole in such following plate adapted to receive the corresponding impaling post and means for operating each such lever upon its pivotal connection tending to force the hole therethrough out of alinement with the hole in such side plates and thereby clamp the impaling post between such lever and side plates.

2. In a loose leaf binder, in combination with a plate having an impaling post or impaling posts secured therein; a following plate having a hole or holes therethrough adapted to receive and movable longitudinally on such impaling post or posts; a clamping mechanism carried by such following plate comprising a lever or levers each pivotally secured to and between two rigidly connected plates, one on each side thereof; each such pair of side plates and clamping lever secured to such following plate and having holes therethrough alined with the corresponding hole in such following plate adapted to receive the corresponding impaling post; means for operating each such lever upon its pivotal connection tending to force the hole therethrough out of alinement with the hole in such side plates and thereby clamp the impaling post between such lever and side plates and a spring or springs for returning each such clamping lever to its inoperative position.

3. In a loose leaf binder, in combination with a plate having an impaling post or impaling posts secured therein; a following plate having a hole or holes therethrough adapted to receive and movable longitudinally on such impaling post or posts; a clamping mechanism carried by such following plate comprising a lever or levers each pivotally secured to and between two rigidly connected plates, one on each side thereof; each such pair of side plates and clamping lever secured to such following plate and having holes therethrough alined with the corresponding hole in such following plate adapted to receive the corresponding impaling post; means for operating each such lever upon its pivotal connection tending to force the hole therethrough out of alinement with the hole in such side plates and thereby clamp the impaling post between such lever and side plates and a spring or springs and coöperating therewith a stop or stops for normally holding each such clamping lever in its inoperative position.

4. In a loose leaf binder, in combination with a plate having an impaling post or impaling posts secured therein; a following plate having a hole or holes therethrough adapted to receive and movable longitudinally on such impaling post or posts; a clamping mechanism carried by such following plate comprising a lever or levers each pivotally secured to and between two rigidly connected plates, one on each side thereof; each such pair of side plates and clamping lever secured to such following plate and having holes therethrough alined with the corresponding hole in such following plate adapted to receive the corresponding impaling post; means for operating each such lever upon its pivotal connection tending to force the hole therethrough out of alinement with the hole in such side plates and thereby clamp the impaling post between such lever and side plates and a spring or springs for normally holding each such clamping lever in its inoperative position, such stop or stops comprising such operating means in its inoperative position.

5. In a loose leaf binder; a plate having an impaling post or impaling posts secured therein; a following plate having a hole or holes therethrough adapted to receive such impaling post or posts; a clamping lever or clamping levers carried by such following plate and means for operating such lever or levers comprising a rod rotatably supported by such following plate and having a curved portion or curved portions therein adapted to engage such clamping lever or levers.

[Claims 6 to 8 not printed in the Gazette.]

872,969. BALE-BAND BUCKLE. JAMES S. PATTERSON and DALLAS E. SMITH, Abilene, Tex. Filed Dec. 5, 1906. Serial No. 346,478.



1. A bale band buckle consisting of side bars turned in at one end to form separated overlapping ends, a cross bar connecting the opposite ends of the side bars, and a second cross bar connecting the side bars near their centers, the side bars diverging slightly in both directions from said central cross bar.

2. The improved bale band buckle consisting of side bar connected by a cross bar at one end and having their opposite ends turned in and overlapped, the said overlapped ends being tapered and separated, and an intermediate cross bar connecting the side bars between the ends thereof, the cross bars being arranged to be engaged by and carry the band and the overlapped tapered ends being arranged to permit the buckle to pass under the tightened band.

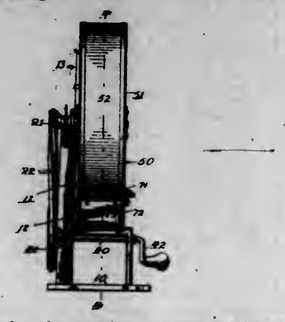
872,970. MAGAZINE FOR MOVING-PICTURE MACHINES. JOHN J. PINK, Chicago, Ill. Filed Mar. 28, 1907. Serial No. 365,150.

1. In a magazine for moving picture machines, the combination of a suitably supported cylindrical telescoping casing, a spindle axially disposed with respect thereto, and a pivot connection between the telescoping members independent of the spindle.

2. A magazine for moving picture machines, comprising a suitably supported casing, containing two telescoping and approximately symmetrical halves, and pivots forming connections between the two halves, one of which pivots contains a concentric aperture.

3. A magazine for moving picture machines, comprising a suitably supported casing, containing two telescoping and approximately symmetrical halves, a spindle and

pivots forming connections between the halves of the casing, independent of the spindle, one of which pivots contains a concentric aperture through which the spindle may project into the casing.

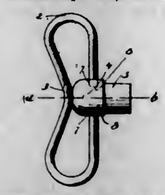


4. In a magazine for moving picture machines, the combination of a standard, containing a supporting arm, a semicylindrical receptacle secured thereto, a semicylindrical cover telescoping the same, and pivots forming connections between the cover and receptacle, one of which pivots contains an aperture concentric with the axis of the pivots.

5. In a magazine for moving picture machines, the combination of a standard, containing a supporting arm, a semi-cylindrical receptacle secured thereto, a semicylindrical cover telescoping the same, a spindle concentrically arranged within said semi-cylindrical receptacle and cover, and pivots forming connections between the cover and receptacle, one of which pivots contains a concentric aperture, through which the spindle may project into the casing.

[Claims 6 to 12 not printed in the Gazette.]

872,971. CLOCK-KEY. ARTHUR H. PORTER, Bristol, Conn., assignor to The E. Ingraham Co., Bristol, Conn., a Corporation. Filed Sept. 30, 1907. Serial No. 395,126.



A clock-key comprising a bow and a threaded sleeve formed with a head, the ends of the bow being pivotally mounted in the head and the central portion of the bow being bent inward to form a yielding retaining point which co-acts with the end of the head in holding the bow in its operating position.

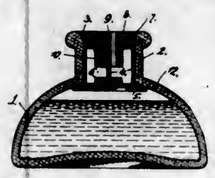
872,972. LINK-LAST. CHARLES F. PYM, Essex, Ontario, Canada, assignor to Krentler-Arnold Hinge Last Company, Detroit, Mich., a Corporation of West Virginia. Filed July 11, 1907. Serial No. 383,227.



1. A hinged last, comprising a forepart and heel-part transversely severed obliquely toward the bottom of the heel-part, and two pairs of links located one above the other for joining said last parts, the links of each pair being pivoted together and pivotally secured respectively in the respective last parts.

2. A hinged last, comprising a fore part and heel-part joined by two intermediately articulated unions pivotally secured at their opposite ends in the respective last parts one above the other, said unions being capable of flexing in opposite directions as the last parts move from one position to the other.

872,973. INK-WELL. FRANK RESDERK, Roscoe, Pa. Filed May 29, 1907. Serial No. 376,278.



1. The combination with an ink bottle having a neck, of a rubber attachment mounted therein, said attachment comprising an annulus or ring, depending elastics, a sealing disk carried by said elastics and having a central enlargement, a stopper for retaining said ring or annulus in the neck of said bottle, said stopper having a vertically disposed opening formed therein.

2. The combination with a bottle having a neck, of an attachment mounted therein, said attachment comprising a sealing disk of greater diameter than and adapted to close the neck of said bottle, a stopper for holding said attachment in the neck of said bottle, said stopper having an opening formed therein, and means within said bottle neck for resiliently supporting said sealing disk, said disk and its supporting means being formed integral and of a non-metallic material.

3. In an attachment for ink bottles a resilient annulus or ring, depending elastics carried thereby, and a sealing disk carried by the lower ends of said elastics, said parts being formed integral with each other.

4. In an attachment for ink bottles a resilient sealing disk, a stopper having an opening formed therein, said disk being of greater diameter than the stopper, and means held by said stopper for resiliently supporting said disk, said disk and its supporting means being formed integral and of a non-metallic material.

5. The combination with an ink bottle, of a sealing disk therefor normally supported within the bottle below and in contact with the bottle neck, said disk being of greater diameter than the inner diameter of the neck, and being also yieldbly-supported to permit access to the contents of the bottle, said disk and its supporting means being formed integral and of a non-metallic material.

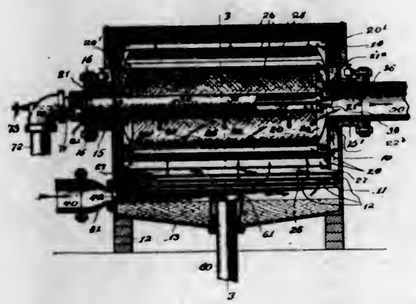
872,974. MOP-WRINGER. JOSEPH C. RINK, Erie, Pa., assignor to Eureka Manufacturing Co., Erie, Pa., a Copartnership. Filed Jan. 28, 1907. Serial No. 354,517.

1. The combination in a mop-wringer of a frame open at one side, a hinge at one edge thereof adapted to be secured to a pail, catches adapted to secure the opposite edge of said frame down upon a pail, a stationary wringer roll mounted in said frame, a yielding roll mounted in said frame opposite said stationary roll, springs acting on the yielding roll, and a guide adapted to close the open side of said frame when the yielding roll is moved back from the stationary roll, substantially as set forth.

2. The combination in a mop-wringer of a semi-circular frame having the front side thereof open, a hinge on said frame by which the same may be secured to a pail, catches

adapted to secure the front corners of said frame down upon a pail, a flange on the inner edge of said frame having a fixed journal bearing therein and a slotted journal bearing opposite said fixed bearing, arms on said frame partially closing the front of said frame, one of said arms having a slotted bearing coinciding with the slotted bearing in the rear of said frame, an adjustable slide having a fixed journal bearing therein secured to the opposite of said arms, rollers mounted on journals in said journal bearings, springs acting upon the roller journals mounted in the slotted bearings, and a guide pivoted to the first mentioned arm adapted to close the space between the ends of said arms when the yielding roll is moved away from the fixed roll, and open the same when the yielding roll returns to its normal position, substantially as set forth.

872,975. APPARATUS FOR WASHING GAS. CHARLES E. SARGENT, Chicago, Ill., assignor to Sargent Engineering Company, Bronxville, N. Y., a Corporation of New York. Filed Jan. 16, 1907. Serial No. 352,586.



1. In a device of the class described the combination with a filtering wall through which the gas passes in one direction, of means for projecting a washing fluid through the wall from the side opposite to that in which the gas enters and simultaneously agitating or jarring the wall to knock off any foreign matter.

2. In a device of the class described the combination with a filtering wall through which gas is passed in one direction to filter it, of a spraying device upon the opposite side of the wall, which is arranged to forcibly project a spray across the surface of the wall with sufficient force to knock off foreign matter, and to cause a considerable portion of the spray to pass through the interstices of the wall and carry away said foreign matter, said drum and spraying device being relatively movable.

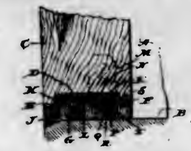
3. In a device of the class described the combination with a cylindrical filtering wall, through which the gas passes in one direction, of a spraying device arranged to forcibly project the spray through the wall in a direction opposite to that in which the gas enters with sufficient force to agitate said wall and knock off foreign matter, said wall and spraying device being relatively rotatable.

4. In a device of the class described the combination with a rotatable cylindrical filtering wall, through which the gas passes in one direction, of a spraying device adapted to forcibly project a spray through the wall in a direction opposite to that in which the gas enters with sufficient force to agitate said wall and knock off foreign matter.

5. In a device of the class described, the combination with a rotatable cylindrical filtering wall, of a water supply pipe within said cylindrical wall, a plurality of nozzles upon said supply pipe arranged to project a spray upon the inner surface of the wall, a casing inclosing said filtering wall, having an inlet for the gas, and a gas outlet communicating with the cylindrical filtering wall.

[Claims 6 to 13 not printed in the Gazette.]

872,976. WEATHER-STRIP FOR DOORS AND WINDOWS. JOHN B. SMITH, Royal Oak, Mich. Filed Dec. 11, 1906. Serial No. 347,353.



1. In combination with two members, one moyable relative to the other, one of said members being recessed, a weather strip for sealing the space between said members comprising a sealing part, and a securing part fastened in said recess, said securing part having a reinforcing flange for the corner portion of said recessed member.

2. In a weather strip of the character described, a supporting member having a downwardly turned free edge, means for pivotally supporting said member in place, means for moving said member outwardly and a felt strip secured beneath said downwardly turned portion of said supporting member and projecting outwardly at an angle relative to said member whereby said downwardly turned portion will back said felt strip and force the same into edgewise contact with the member against which it abuts, when said supporting member is moved outwardly.

3. In combination with two members, one movable relative to the other, one of said members being provided with a recess, a weather strip for sealing the space between said members including a movable sealing part adapted to rest within said recess and to be forced outwardly therefrom, said sealing part being provided with a flange serving as a reinforcing means for a corner of said recessed member, when the sealing part rests within the recess.

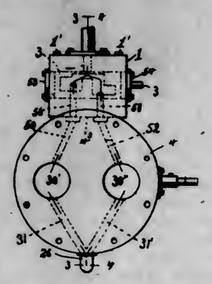
4. In a combination with a door cut away to form a recess at its bottom, and its sill, a weather strip comprising a movable supporting member adapted to rest within the recess and to be moved outwardly therefrom, said supporting member having a portion bent at an angle to the plane of the body portion thereof, means for forcing the supporting member outwardly and a felt strip secured beneath said bent portion of the supporting member and projecting outwardly at an angle relative to the supporting member, whereby said bent portion will back said felt strip and force the same into edgewise contact with the member against which it abuts, when said supporting member is moved outwardly.

5. In a weather strip of the character described a supporting member having a curved free edge, means for pivotally supporting said member in place, means for moving said member outwardly, a clamping plate secured to the supporting member and having an upturned edge entering the groove formed by the curved edge of the supporting member, and a felt strip inserted between said members and held in place by the biting action of the interfitting portions of the clamping plate and supporting member.

872,977. STEAM HOISTING-ENGINE. JOHN W. SMITH, Louisville, Ky., assignor of one-half to John A. Cooper, Louisville, Ky. Filed Jan. 23, 1905. Serial No. 242,258.

1. In a steam engine, a body having two cylinder bores spaced apart therein and provided respectively with exhaust passages leading therefrom centrally of the cylinder at one side and with a flattened face at another side with steam passages communicating between said flattened face and the opposite ends of said cylinder bores, heads connected to said body and extending over said cylinder bores, pistons movable in said cylinders and provided respectively with piston rods extending through one of said heads, a crank shaft, connecting means between said crank shaft and piston rods, a steam chest bearing upon the flattened surface of said body and provided with a valve bore, steam passages communicating respectively between said valve bore and the steam passages of said body, an intake

passage in said steam chest and having a steam supply pipe communicating therewith and leading into said valve bore, a valve mounted for oscillation in said bore and provided with alternating steam passages and cut-off "lands", and connecting means between said crank shaft and valve for operating the same.



2. In a steam engine, a body having two cylinder bores spaced apart therein and provided respectively with exhaust passages leading therefrom centrally of the cylinders at one side and with a flattened face at another side, said flattened face having spaced cavities therein and with steam passages communicating between said cavities and the opposite ends of said cylinder bores, pistons movable in said cylinders and provided respectively with piston rods extending through one of the said heads, a crank shaft, connecting means between said crank shaft and piston rods, a steam chest bearing upon the flattened surface of said body and provided with lugs bearing in said recesses and provided with a valve bore, steam passages communicating at one end with said valve bore and leading at the other ends through said lugs and likewise communicating with the steam passages of said body, an intake passage in said steam chest and having a steam supply pipe communicating therewith and leading into said valve bore, a valve mounted for oscillation in said bore and provided with alternating steam passages and cut-off "lands", and connecting means between said crank shaft and valve for operating the same.

872,978. METHOD FOR MAKING MOLDS FOR DENTAL INLAYS AND THE LIKE. WILLIAM H. TAGGART, Chicago, Ill. Original application filed Jan. 12, 1907, Serial No. 351,917. Divided and this application filed July 12, 1907. Serial No. 383,482.



1. The process of making patterns for dental inlays and the like, which consists in molding plastic material upon the tooth surface to the size and shape of the desired inlay.

2. The process of making patterns for dental inlays and the like, which consists in molding wax upon the tooth surface to the size and shape of the desired inlay.

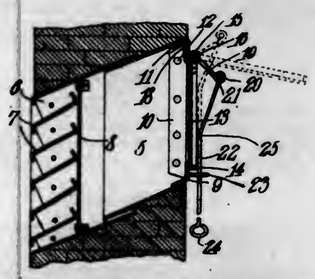
3. The process which consists in making a pattern of a tooth filling within the cavity to be filled and in contact with the surface thereof, removing the pattern from the cavity, forming about the pattern a mold provided with a sprue, and melting out the pattern.

4. The process which consists in forming a pattern for a tooth filling, attaching to the pattern a sprue former, supporting the pattern by means of the sprue former within a flask, and introducing investing material into the flask around the pattern.

5. The process which consists in making a pattern of a tooth filling in the cavity to be filled and in contact with the surface thereof, removing the pattern from the cavity, placing about the pattern a primary body of mold material, adding a secondary body of mold material outside the primary body, forming a sprue, and removing the pattern from the mold thus formed.

[Claims 6 to 12 not printed in the Gazette.]

872,979. WINDOW-VENTILATOR. MILES TOWNSEND, Riverside, Cal. Filed Aug. 28, 1907. Serial No. 390,509.



1. A ventilator including a frame having an opening formed therein, a door pivotally mounted on the frame and adapted to close said opening, a crank arm operatively connected with the door, a rod pivotally connected with the crank arm, and spring clamping arms secured to the frame and adapted to engage the rod for locking the door in open or partially open position.

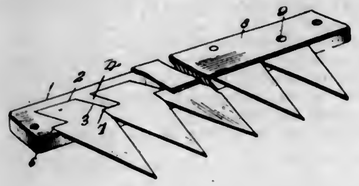
2. A ventilator including a frame having an opening formed therein, clips secured to the exterior walls of the frame on each side of the opening, a door pivotally mounted on the frame, a pin secured to the door and journaled in said clips, one end of the pin being bent laterally beyond the adjacent clip to form a crank arm, a rod pivotally connected with the crank arm, and spring arms adapted to receive and clamp the rod for locking the door in open or partially open position.

3. A ventilator including a frame having an opening formed therein, a door pivotally mounted on one side of the frame at said opening and provided with a marginal reinforcing flange, clips secured to the frame, a pin secured to the door and journaled in said clips, one end of said pin being bent to form a crank arm having a terminal eye, a rod depending from the crank arm and provided with an eye for pivotal engagement with the eye on said crank arm, and a clamping device having spring arms adapted to engage the rod for clamping the door in open or partially open position.

4. A ventilator including a frame stamped from a single piece of metal and having its longitudinal and transverse edges bent laterally to form strengthening flanges, there being an opening formed in the metal between said flanges, clips secured to one face of the frame on each side of the opening, a door pivotally mounted for lateral movement and adapted to normally close the opening in the frame, said door being provided with a marginal reinforcing flange, a pin secured to the door and journaled in the clips, one edge of the metal at the door opening being bent upwardly and pressed laterally in engagement with the rear face of the frame to form a longitudinal reinforcing strip at the rear of the pivot pin, a crank arm formed on one end of the pivot pin, an operating rod pivotally connected with the crank arm, and a clamping device having spring pressed arms adapted to receive the rod for clamping the door in open or partially open position.

5. A ventilator including inner and outer telescopic members, spaced storm slats secured to one of the members, a screen extending transversely of said member and arranged at the rear of the storm slats, a frame secured to the other member and having an opening formed therein, a door pivotally mounted on the exterior of the frame and movable laterally to open position, a crank arm secured to the door, an operating rod pivotally connected with the crank arm, and a clamping device secured to the frame and formed of a single piece of metal bent to produce converging spring clamping arms adapted to engage the rod for locking the door in open and partially open position.

872,980. HARVESTER-CUTTER. WILLIAM D. WHEAT, Jamestown, Ky., assignor of one-half to Elmer Wheat, Jamestown, Ky. Filed Feb. 1, 1907. Serial No. 355,307.



A cutter bar consisting of a supporting beam provided with forwardly opening recesses disposed obliquely to lines perpendicular to the beam, a locking strip secured to said beam and adapted to cover said recesses, teeth provided with offset extensions, the side walls of which are disposed obliquely to the direction in which said teeth point, said extensions fitting into said recesses, each of said teeth except one being provided with a rearwardly facing shoulder, and an opposite forwardly facing shoulder, and the rearwardly facing shoulder of one tooth overlapping the forwardly facing shoulder of the next tooth, the said excepted tooth being provided with a rearwardly facing shoulder overlapping the forwardly facing shoulder of the next tooth, and means for securing this last named tooth in place.

872,981. DISK-SHARPENER. JACOB WISSLER, Lyndhurst, Va., assignor of one-half to Robert Lee Lambert, Walter Armstrong, Harold H. Lantz, and Alfred E. Glascock, Washington, D. C. Filed Dec. 6, 1905, Serial No. 290,615. Renewed July 2, 1907. Serial No. 381,927.



1. In combination with a disk implement a disk sharpener consisting of a flat spring attached at one end to the implement, an abrading material attached to the other end of said spring and held in contact with the edge of the disk as it rotates while working the ground.

2. In combination with a disk implement a disk sharpener consisting of a flat spring attached at one end to the implement, a shoe attached to the other end of said spring, an abrading material held in said shoe and bearing against the edge of the disk as it rotates while working the ground.

3. In combination with a disk implement a disk sharpener consisting of a flat spring having at one end a collar by means of which it may be adjustably attached to the implement, an abraiding material attached to the other end of said spring and held in contact with the edge of the disk as it rotates while working the ground.

4. In combination with a disk implement a disk sharpener consisting of a flat spring having at one end a collar by means of which it may be adjustably attached to the implement, a shoe attached to the other end of said spring, an abrading material held in said shoe and bearing against the edge of the disk as it rotates while working the ground.

872,982. RAILWAY-SWITCH. ROBERT B. WOODALL, Traskwood, Ark., assignor of one-sixth to David S. McCray, one-sixth to William H. Cooper, one-sixth to Enoch H. Vance, Jr., one sixth to John H. B. Adams, and one-sixth to Thomas N. Atchison, Malvern, Ark. Filed May 16, 1907. Serial No. 373,912.



1. The combination with a switch tongue, a tripping device, means operated by the tripping device for shifting the tongue, and means for automatically returning the tongue to normal position; of a latch, and separate means operated by a car approaching the switch from either direction for holding the latch in the path of the shifted tongue.

2. The combination with a switch tongue, a tripping device, means operated by the tripping device for shifting the tongue, and means for automatically returning the tongue to normal position; of a latch, yieldingly supported actuating rails disposed to be depressed by a car approaching the switch from either direction, and means actuated by said rails for positively projecting the latch into the path of the shifted tongue.

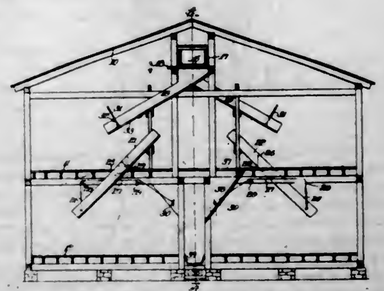
3. The combination with a switch tongue, a tripping device, means operated by the tripping device for shifting the tongue, and means for automatically returning the tongue to normal position; of a latch, yieldingly supported actuating rails disposed to be depressed by a car approaching the switch from either direction, means actuated by said rails for positively projecting the latch into the path of the shifted tongue, and means for holding the latch normally out of the path of the tongue.

4. The combination with a switch tongue, yielding means for holding the same normally in a predetermined position, a tripping lever, and means operated by the lever for shifting the tongue out of normal position; of actuating means comprising a yieldingly supported shoe disposed to be brought against the tripping lever, a plunger, and means operated by the plunger for depressing the shoe and locking it in the path of the tripping lever.

5. The combination with a switch tongue, and a tripping lever for actuating the tongue; of portable actuating means comprising a yieldingly supported shoe normally above the path of the tripping lever, oppositely disposed dogs above the shoe, and means for simultaneously actuating the dogs to depress and lock the shoe in the path of the lever or to release the shoe.

[Claim 6 not printed in the Gazette.]

872,983. APPARATUS FOR HANDLING GREEN CORN, &c. DANIEL W. ARCHER, Chicago, Ill. Filed Apr. 12, 1905. Serial No. 255,181.



1. In an apparatus of the class described, the combination with the conveyer, of a plurality of working floors served thereby, one set of spouts leading from the con-

veyer to an upper floor, another set leading from the upper floor to a lower one, means for discharging from the conveyer into any desired spout of the first series, and means for discharging from the spouts of the first series on to the upper floor or directly into the spouts of the second series, as may be desired.

2. In an apparatus of the class described, the combination with the conveyer, of a plurality of working floors served thereby, one set of spouts leading from the conveyer to an upper floor, another set leading from the upper floor to a lower one, means for discharging from the conveyer into any desired spout of the first series, means for discharging from the spouts of the first series on to the upper floor or directly into the spouts of the second series, as may be desired, and means for adjusting the spouts of one set so that they will discharge at different points on their floor.

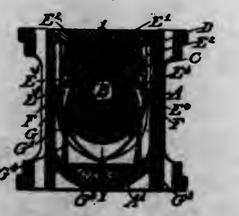
3. In an apparatus of the class described, the combination with the conveyer, of a plurality of working floors it is adapted to serve, a spout into which said conveyer delivers adapted to discharge on an upper floor, a spout adapted to discharge on the lower floor, and means for causing the first spout to discharge into the second spout or upon the upper floor, as desired.

4. In an apparatus of the class described, the combination with the conveyer, of a plurality of working floors it is adapted to serve, a spout into which said conveyer delivers adapted to discharge on an upper floor, a spout adapted to discharge on a lower floor, and means for causing the first spout to discharge into the second or upon the upper floor, as desired, consisting of a trap door in the bottom of the first spout which when opened permits the material to discharge into the lower spout.

5. In an apparatus of the class described, the combination with the conveyer, of a plurality of working floors it is adapted to serve, a spout into which said conveyer delivers adapted to discharge on an upper floor, a spout adapted to discharge on a lower floor, and means for causing the first spout to discharge into the second or upon the upper floor, as desired, consisting of a trap door hinged at its lower edge in the bottom of the first spout and adapted in one position to form a part of the bottom, and in the other position to stop the further flow of the material and cause it to fall through the aperture formed thereby.

[Claims 6 to 12 not printed in the Gazette.]

872,984. AXLE-LUBRICATING DEVICE. ERNEST ARMSTRONG, Woodbury, N. J., assignor, by direct and mesne assignments, to Twin Lubricator Company, Camden, N. J. Filed Mar. 4, 1907. Serial No. 360,305.



1. In combination with an axle box and an axle supported therein, a wick oiler having its ends supported in the box out of contact with the axle above the center thereof, and one on each side thereof, and its intermediate part forming a loop extending below the axle as described, and so as to contact lightly with the sides thereof by gravity.

2. In combination with an axle box and an axle supported therein, a wick oiler having its ends supported in the box out of contact with the axle above the center thereof, and one on each side thereof, and its intermediate part forming a loop extending below the axle as described, said looped wick oiler having swab pads attached to it at points adapted to contact with the sides of the axle.

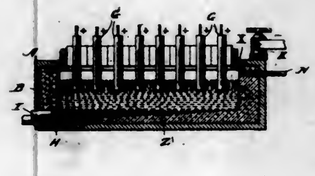
3. In combination with an axle box and an axle supported therein, a wick oiler having its ends supported in the box out of contact with the axle above the center thereof, and one on each side thereof, and its intermediate part forming a loop extending below the axle as described, said looped wick oiler having swab pads attached to it at points adapted to contact with the sides of the axle, and auxiliary wicks depending from said swab pads.

4. In combination with an axle box and an axle journal therein, a wick supporting frame extending over the bearing, and a wick oiler supported at each end on said frame and arranged to extend beneath the axle.

5. In combination with an axle box and an axle bearing in the upper side thereof, a wick supporting frame of thin sheet metal extending over the bearing, and a wick oiler supported at each end on said frame and arranged to extend beneath the axle.

[Claims 6 to 9 not printed in the Gazette.]

872,985. ART OF PRODUCING ALUMINUM AND OTHER METALS. HENRY S. BLACKMORE, Mount Vernon, N. Y. Original application filed Apr. 18, 1903, Serial No. 153,329. Divided and this application filed Sept. 23, 1904. Serial No. 225,642.



1. The process of producing metal which consists in exposing a substance containing the metal to electrolysis, while employing an electrode containing a carbid of a different metal decomposable by an ingredient of the substance employed and capable of liberating metal thereform.

2. The process of producing metal which consists in exposing a compound containing the metal to electrolysis, while employing an electrode containing a more electropositive metal carbid decomposable by an ingredient of the substance employed and capable of liberating metal therefrom.

3. The process of producing metal which consists in exposing a substance containing metal and two or more non-metallic elements to electrolysis, while employing an electrode containing a carbid of a different metal decomposable thereby and capable of liberating metal therefrom.

4. The process of producing metal, which consists in exposing a substance containing metal, oxygen, and a haloid, to electrolysis, while employing an electrode containing a carbid of a different metal decomposable thereby and capable of liberating metal therefrom.

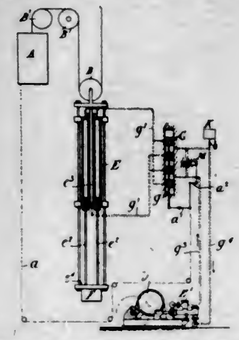
5. The process of producing metal, which consists in exposing a substance containing a metal and oxygen to electrolysis, while employing an electrode containing a carbid of a different metal decomposable thereby and capable of liberating metal therefrom.

[Claims 6 to 14 not printed in the Gazette.]

872,986. ELEVATOR. JOHN W. BROWN, East Sheen, England. Original application filed Feb. 6, 1904, Serial No. 192,430. Divided and this application filed Feb. 18, 1907. Serial No. 358,079.

In a lift system, the combination, with a suspended cage, a counterbalance for the same and approximately half the load, and raising and lowering cylinders furnished with

rams, of a closed hydraulic circuit, a pump, an electrical motor for actuating the same, a main valve, a by-pass for



short circuiting the pump, a valve therefor, and a lift-rope for operating said valves, substantially as described.

872,987. TOBACCO PAPER FOR CIGARETTES. POINDEXTER W. CAPEHART, Norfolk, Va. Filed Nov. 30, 1906. Serial No. 345,813.

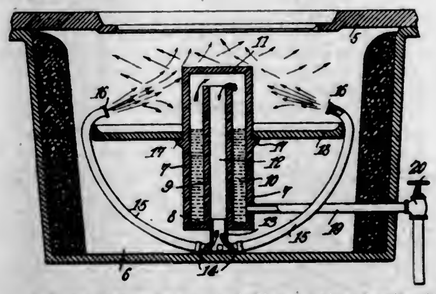
1. A compound of the class described consisting of tobacco, rice paste and gluten.

2. A compound of the class described consisting of tobacco, rice jelly, gluten and a vegetable pulp.

3. A compound of the class described consisting of tobacco, rice jelly, gluten and a straw pulp.

4. A compound of the character specified consisting of tobacco one thousand parts, rice jelly fifteen to thirty five part, gluten eight to fifteen parts, and straw pulp six to ten parts in or about the proportions specified.

872,988. HYDROCARBON-BURNER. ARBA I. CARNINE and ROLAND L. GOBLE, Anaheim, Cal.; said Carnine assignor to said Goble. Filed Mar. 18, 1907. Serial No. 363,075.



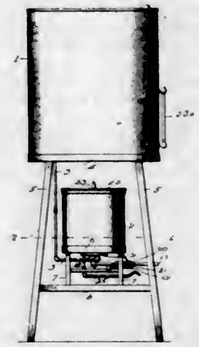
1. A hydro-carbon burner including a retort having its centrally disposed tube constituting a gas chamber and defining an intermediate oil compartment, said tube being formed integral with the retort and having its upper end spaced from the adjacent end of the retort and its lower end provided with interior threads, a coupling engaging said threads, a valved pipe for supplying oil to the compartment, an oil pan surrounding the exterior walls of the retort and spaced from the upper end thereof, and a plurality of conducting pipes secured to the coupling and having their free ends bent laterally into engagement with the peripheral edge of the oil pan and provided with burner jets for deflecting the flame in contact with the retort above the oil pan.

2. A hydro-carbon burner including a retort having its upper end closed and its exterior walls provided with lateral supporting lugs spaced from the upper end of said retort, a vertically disposed open ended tube formed integral with the retort and having its interior walls threaded, said tube defining an intermediate oil compartment and having its upper end spaced from the closed end of the retort, an oil pan supported by the lugs, a coupling engaging the threaded walls of the tube, and conducting pipes united to the coupling and having their free ends deflected upwardly in engagement with the peripheral edge of the oil pan and provided with burner jets for directing the flame in contact with the retort above the oil pan.

3. A hydro-carbon burner including a retort provided with supporting lugs, an oil pan resting on said lugs, and conducting pipes communicating with the retort and having their free ends bent laterally in engagement with the peripheral edge of the oil pan and provided with burner jets for directing the flame in contact with the retort.

4. A hydro-carbon burner including a retort having a centrally disposed tube constituting a gas chamber and defining an intermediate oil compartment, the upper end of the tube being spaced from the adjacent end of the retort, lugs extending laterally from the exterior walls of the retort, an oil pan resting on said lugs, conducting pipes communicating with the gas chamber and having their free ends deflected upwardly in engagement with the peripheral edge of the oil pan and provided with burner jets over-hanging the pan, and means for supplying oil to the compartment in the retort.

872,989. LIQUID-MEASURING TANK. PAUL C. CLARKE, Denver, Colo., assignor of one-third to George Bignell and one-third to Ezra O. Cochran, Denver, Colo. Filed Jan. 25, 1907. Serial No. 354,024.



1. A liquid measuring tank, provided with a cover, a reservoir adjacent to said tank, a liquid conveying tube connecting said tank and reservoir together, an air vent in said cover, an oscillatory valve in the bottom of said tank comprising a valve seat and a valve disk, said valve disk being provided with a group of liquid discharge ports, a plurality of liquid measuring tubes of such length and arrangement as to discharge different quantities of liquid connected to the valve ports of said valve disk, an operating handle connected to said valve disk, and a measuring index arranged to define the valve opening movement of said operating handle.

2. In a liquid measuring machine, the combination of a reservoir tank, provided with a liquid indicating gage, a discharge pipe connected to said reservoir tank, a liquid measuring tank connected to said reservoir by said discharge pipe, and comprising a closed tank having a valve in its bottom adapted to control the liquid passage between said reservoir and measuring tank, said valve having a plurality of liquid discharging apertures provided with a plurality of liquid discharging tubes extending into said tank predetermined distances, said tubes being of such length and arrangement relative to the capacity of said tank above the inlet of each tube as to discharge different predetermined measures of liquid, an operating handle connected to said valve, and an index arranged to determine the operative valve opening and closing movements of said handle.

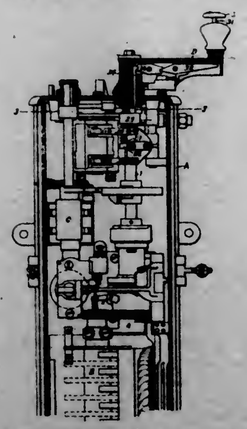
3. In a liquid measuring machine, a reservoir provided with a discharging pipe, a measuring tank connected to said discharge pipe, a valve seat in the bottom of said tank, a multiple port valve in said seat, a measuring tube connected to each port of said valve, said tubes being of such length and arrangement relative to the capacity of said measuring tank's capacity, and with each other to discharge different quantities of liquid, and an operating handle arranged to oscillate said valve disk to cut off the supply of liquid to the measuring tank, and open said measuring tank's measuring tube ports, as specified.

4. In a liquid measuring tank, the combination of the reservoir, the water gage connected thereto, and the liquid discharging tube connected to said reservoir with the measuring tank comprising a closed tank provided with a removable cover having a suitable air vent valve therein, a valve in the bottom of said tank, having a plurality of liquid discharging valve ports, a plurality of liquid measuring tubes extending vertically from said valve ports into said measuring tank, said liquid measuring tubes being arranged to measure different quantities of liquid, said valve being provided with a port arranged to control the reservoir's inlet pipe into said measuring tank, and arranged to stand open when said measuring valves are closed, and to be closed when said measuring tube ports are opened, an operating handle for operating said valve to close said reservoir's liquid discharging pipes inlet into said measuring tank and to open any predetermined measuring tube port at the same time, and an index connected to said measuring tank and arranged to indicate the movement of said valve operating handle to open any predetermined measuring tube's liquid discharge port.

5. In a liquid measuring device, the combination with a reservoir provided with a liquid discharge pipe, of a measuring tank connected to said reservoir's discharge pipe, provided with a liquid discharge aperture, a rotary vavle disk in the bottom of said tank having apertures provided with liquid discharge tubes of varying lengths, which register in successive order with the outlet in said tank as said disk is rotated; a handle for rotating said disk, and a quadrant over which the handle travels, having indicating marks, which designate the position of any one of the liquid discharge tubes, relatively to the outlet, when the handle is operated.

[Claims 6 to 9 not printed in the Gazette.]

872,990. CONTROL APPARATUS. ARTHUR T. CROCKER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Original application filed Jan. 9, 1905, Serial No. 240,143. Divided and this application filed Mar. 21, 1907. Serial No. 363,585.



1. In a controller, an emergency air-brake valve, a circuit-breaker, a controller shaft and a cam slidingly mounted thereon, mechanism associated with the controller handle for moving said cam into operative relation to the circuit-breaker, and means operative upon release of the controller handle to move said cam out of operative engagement with the circuit-breaker and into operative engagement with said emergency valve.

2. In combination, a controlling handle, a shaft operatively connected to said handle, a brake-controlling device, a member slidably mounted on said shaft and arranged to coöperate with said brake-controlling device to cause application of the brakes, means including mechanism associated with the said handle for controlling said member, means for moving it into its brake-applying position upon release of the said handle, and means operative to automatically lock said member in said brake-applying position.

3. In combination, a controller shaft and handle, a brake-controlling device, a member slidably mounted on the controller shaft and arranged to coöperate with said brake-controlling device to cause the application of the brakes, means including mechanism associated with the controller handle for controlling said member, means for moving it into its brake-applying position upon release of the controller handle, and means operative to automatically lock said member in its brake-applying position in the running positions of the controller.

4. In combination, a controller shaft and handle, a brake-controlling device, a member slidably mounted on the controller shaft and arranged to coöperate with said brake-controlling device to cause the application of the brakes, means including mechanism associated with the controller handle for controlling said member, means for moving it into its brake-applying position upon a release of the controller handle, means operative to automatically lock said member in its brake-applying position, a reversing switch, and means controlled by the reversing switch for locking said member out of its brake-applying position.

5. In combination, a controller shaft and handle, a brake-controlling device, a circuit breaker, a cam slidably mounted upon the controller shaft, mechanism associated with the controller handle for moving said cam into operative relation to the circuit-breaker so that the cam closes the circuit-breaker when the handle is rotated, and means operative upon release of the controller handle to move said cam out of operative relation to the circuit-breaker and into brake-applying relation to the brake-controlling device, the parts being constructed and arranged so that the circuit-breaker is adapted to lock the cam in its brake-applying position if the controller handle is released while in a running position.

[Claims 6 to 12 not printed in the Gazette.]

872,991. CONTROL APPARATUS. ARTHUR T. CROCKER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 9, 1905, Serial No. 240,143. Renewed Sept. 18, 1907. Serial No. 393,462.

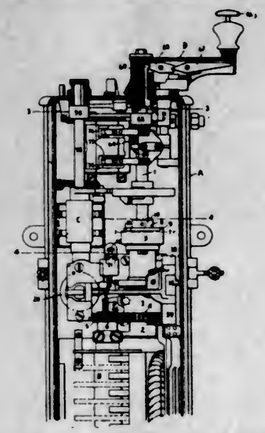
1. In control apparatus, a controller, an operating handle, a flexible connection between said controller and said operating handle, mechanism for producing a step by step movement of said controller, and electromagnetic means for rendering said mechanism inoperative.

2. In control apparatus, a controller, an operating handle, an electromagnetic escapement for limiting the speed of movement of said controller, and electromagnetic means for rendering said escapement inoperative.

3. In control apparatus, a controller, an operating handle, an electromagnetic escapement for limiting the speed of movement of the said controller, and electromagnetic means for locking said escapement to arrest the movement of the controller.

4. In control apparatus, a controller, an operating handle, a flexible connection between said controller and said operating handle, an escapement for limiting the speed of movement of the said controller, and electromagnetic means for rendering said escapement inoperative.

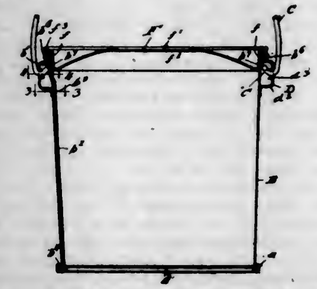
5. In control apparatus, a controller, means for actuating said controller, an escapement for limiting the rate of movement of said controller, and means for rendering said



escapement inoperative when the controller is in its final running position.

[Claims 6 to 24 not printed in the Gazette.]

872,992. SHEET-METAL PAIL FOR LARD, &c. JACOB DANZ, 2d, St. Paul, Minn. Filed Jan. 21, 1907. Serial No. 353,303.



1. In a solderless sheet metal lard pail, the combination with a body having an externally projecting lock seam at its upper mouth portion, and an internally projecting lock seam below said mouth portion, and provided at its upper end with an external annular roll, of an internal friction fit cover provided with a raised or dome shaped center and a folded rim flush with the raised center, and bail ears having seaming flanges at their upper ends embraced by the annular roll on the body to unite the said ears to the body without solder, said bail ears having a horizontally extending bearing shoulder fitting against the external annular roll at the upper end of the body and furnished with raised eye bosses to receive the hooks of the bail, and marginal bearing flanges fitting against the smooth exterior of the pail body, substantially as specified.

2. In a sheet metal pail, the combination with a body having an externally projecting lock seam at its upper or mouth portion, and an internally projecting lock seam there below, said body having a seaming flange or portion at its upper end, of a bail ear having a seaming flange at its upper end formed into a roll or seam with the seaming flange at the upper end of the body, said bail ear having at its upper part a horizontally extending shoulder bearing against the external annular shoulder or roll by which the bail ear is united to the body, substantially as specified

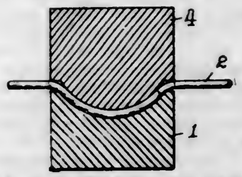
3. In a sheet metal pail, the combination with a body having an externally projecting lock seam at its upper or mouth portion, and an internally projecting lock seam there below, said body having a seaming flange or portion at its upper end, of a bail ear having a seaming flange at its upper end formed into a roll or seam with the seaming flange at the upper end of the body, said bail ear having at its upper part a horizontally extending shoulder bearing against the external annular shoulder or roll by which the bail ear is united to the body, and the bail ear having a marginal bearing flange fitting against the body of the pail, substantially as specified.

4. In a sheet metal pail, the combination with a body having an externally projecting lock seam at its upper or mouth portion, and an internally projecting lock seam there below, said body having a seaming flange or portion at its upper end, of a bail ear having a seaming flange at its upper end formed into a roll or seam with the seaming flange at the upper end of the body, said bail ear having at its upper part a horizontally extending shoulder bearing against the external annular shoulder or roll by which the bail ear is united to the body, and the bail ear having a marginal bearing flange fitting against the body of the pail, said bail ear being normally of a sharper curvature than the pail body to which it is applied to cause its marginal bearing flange to snugly hug or clamp against the body of the pail, substantially as specified.

5. In a sheet metal pail, the combination with a pail body having an external annular roll at its upper end, of a bail ear having a seaming flange at its upper end embraced by said roll on the body to unite the bail ear to the body said bail ear having a supplemental external raised portion forming at its upper part a curved bearing shoulder to engage the external roll on the pail body, and provided with a circular bail eye boss or raised portion to receive the hook of the bail, substantially as specified.

[Claims 6 to 13 not printed in the Gazette.]

872,993. INSULATOR. ARTHUR S. DEEM, Reading, Pa., assignor of one-half to Isaac Bear, Reading, Pa. Filed July 6, 1907. Serial No. 382,462.



1. An insulating cleat for electric wires comprising two members, having plain meeting surfaces, one of which is provided with transverse concaved grooves spaced apart, the other member having integral convex lugs correspondingly spaced and adapted to enter said grooves, said lugs and said grooves terminating within said plain surfaces and leaving a margin on either side thereof.

2. An insulating cleat for electric wires comprising two members having registering grooves and lugs terminating short of the opposite edges of the cleat, whereby clamping shoulders are formed at opposite sides of the registering grooves.

872,994. WATCH-BARREL. LEWIS A. FALLER, Nashville Tenn., assignor to Webster C. Ball. Filed Oct. 25, 1906. Serial No. 340,429.

1. In a watch, the combination with the pillar plate and top plate of such watch, of a third plate mounted upon said pillar plate between the same and said top plate, a hollow winding arbor journaled intermediately between its ends in said third plate and wholly supported thereby, a winding wheel mounted upon the lower end of said winding arbor and lying between said pillar and third plates, a main arbor lying within said winding arbor and having its ends journaled in said pillar and top plates respectively, a barrel and a great wheel borne by said main arbor, and a main spring attached at its inner end to said wind-

ing arbor and at its outer end to said drum, said winding arbor, main arbor and barrel being removable from the watch along with said third plate, substantially as described.



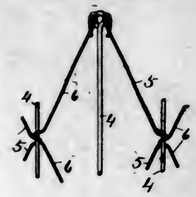
2. In a watch, the combination with the pillar plate and top plate of said watch, said pillar plate having a recess on its upper side, of a third plate mounted upon said pillar plate and bridging such recess, a hollow winding arbor journaled intermediately between its ends in said bridge plate and wholly supported thereby, a winding wheel screw-threaded upon the lower end of said winding arbor and lying in such recess, a main arbor lying within said winding arbor and having its ends journaled in said pillar and top plates respectively, a barrel and a great wheel borne by said main arbor, and a main spring attached at its inner end to the upper end of said winding arbor and at its outer end to said drum, said winding arbor, main arbor and barrel being removable from the watch along with said bridge plate, substantially as described.

3. In a full plate watch, the combination with the pillar plate and top plate of such watch, said pillar plate having a recess on its upper side, of a third plate bridging such recess, a hollow winding arbor journaled intermediately between its ends in said bridge plate and wholly supported thereby, a winding wheel screw-threaded upon the lower end of said winding arbor and lying in such recess, a main arbor lying within said winding arbor and having its ends journaled in said pillar and top plates respectively, a barrel integral with said main arbor, said barrel being open on one side, a main spring attached at its inner end to the upper end of said winding arbor and at its outer end to said barrel, and a detachable member adapted to close the open side of said barrel to wholly inclose said spring therein, said winding arbor, main arbor and barrel being removable from the watch along with said third plate, substantially as described.

4. In a full plate watch, the combination with the pillar plate and top plate of such watch, said pillar plate having a recess on its upper side, of a third plate bridging such recess, a hollow winding arbor journaled intermediately of its ends in said bridge plate, the upper end thereof being formed with a collet, a winding wheel screw-threaded upon the lower end of said winding arbor said wheel lying in such recess and serving in conjunction with such collet to secure said winding arbor to said bridge plate, a main arbor lying within said winding arbor and having its ends journaled in said pillar and top plates respectively, a barrel integral with said main arbor the side of said barrel disposed toward said bridge plate being open, a great wheel integral with said barrel, a main spring attached at its inner end to the upper end of said winding arbor and at its outer end to said barrel, and a detachable plate adapted to close the open side of said barrel to wholly inclose said spring therein, said winding arbor, main arbor and barrel being removable from the watch along with said third plate, substantially as described.

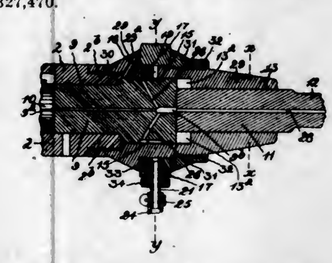
872,995. BED-BOTTOM FABRIC. CHARLES B. FRALEY, Chicago, Ill., assignor to Haggard & Marcusson Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 11, 1907. Serial No. 356,801.

A bed bottom fabric, composed of a number of spaced straight longitudinal wires, of a series of zig-zag wires, each extending back and forth diagonally between two adjacent straight wires and looping loosely thereabout at the angles, each pair of zig-zag wires forming a diamond mesh, and the looped portions of each pair of wires which interlock with the same region on a longitudinal wire



being entirely independent and capable of individual movement.

872,996. WATER-SUPPLYING ATTACHMENT FOR ROCK-DRILLING MACHINES. HENRY HELLMAN and LEWIS C. BAYLES, Johannesburg, Transvaal. Original application filed July 12, 1905, Serial No. 269,405. Divided and this application filed July 24, 1906. Serial No. 327,470.



1. In a rock-drilling machine or engine, in combination, a cylinder, a swivel mounted on the front end thereof, a drill steel slidably and non-rotatably positioned in the front end of the cylinder, and formed with a longitudinal port leading to the cutting end, ports placing the swivel in communication with said longitudinal hole and means for conducting water to the swivel.

2. In a rock-drilling machine or engine, in combination, a cylinder with a recess formed at the front end thereof, a swivel located in said recess, a drill steel loosely and non-rotatably positioned in the forward end of the cylinder in advance of the swivel, means for introducing water to the swivel and means for placing the swivel in communication with a longitudinal hole in the steel.

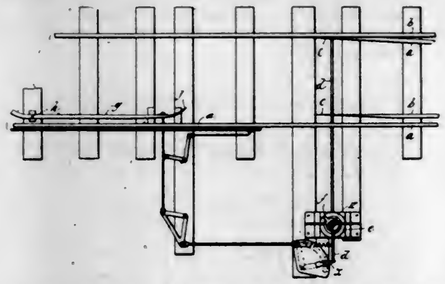
3. In a rock-drilling machine or engine, in combination, a cylinder formed with a recess at the front end thereof, a swivel located in said recess, a drill steel loosely and non-rotatably positioned in the forward end of the cylinder in advance of the swivel, means for introducing water to the swivel and means for placing the swivel in communication with a longitudinal hole in the steel, and means permitting a quantity of the actuating fluid to pass from the cylinder along the drill steel along with the water.

4. In a rock-drilling machine or engine, in combination, a cylinder formed with a recess at the front end thereof, a swivel mounted within the recess, a drill steel loosely and non-rotatably positioned in the forward end of the cylinder and formed with a longitudinal hole leading to the cutting end, a reciprocating percussive member and an impact piece positioned in the front end of the cylinder and adapted to receive and transmit the impacts of said percussive member to the drill steel, said impact piece being formed with ports in communication with the swivel and with the longitudinal hole in the steel, and means for introducing water into the swivel.

5. In a rock-drilling machine or engine, in combination, a cylinder, a swivel mounted on the forward end thereof, a drill steel loosely and non-rotatably positioned in the forward end of the cylinder formed with a longitudinal hole leading to the cutting end, a reciprocating percussive member and an impact piece positioned in the front end of the cylinder and adapted to receive and transmit the impacts of said percussive member to the drill steel, said impact piece being formed with ports in communication with the swivel and with a longitudinal hole coinciding with the longitudinal hole in the steel along which a quantity of the actuating fluid may pass with the water to the longitudinal hole in the steel.

[Claims 6 to 17 not printed in the Gazette.]

872,997. RAILWAY-SWITCH. CHARLES L. HOUGHTON, Westfield, Mass., assignor of one-third to G. C. Eno, Simsbury, Conn., and one-third to Marcienne A. Whitcomb, Holyoke, Mass. Filed June 7, 1907. Serial No. 377,765.



1. The combination with a facing point switch and stand, of a safety rail located in operative relation to the main line track and capable of actuation by a train moving against the points of the switch, and connections between said safety-rail and switch stand, whereby when the switch is set to run the train on a side track, the safety rail will be moved into position to throw the switch back again to a position to give a clear main track, together with means to move the safety rail out of operative position while the switch is set for the side track.

2. The combination with a facing point switch and switch stand, of a train-actuated safety-rail pivotally supported near the main line rail, the free end being movable into and out of operative position relative to said main line, and connections extending from the switch stand to the free end of the safety rail, and including means whereby the movement of the switch-stand to provide a clear main line will move the safety rail out of operative position, and vice versa, and a device to move the safety rail into inoperative position independently of the switch, and means to automatically lock the moving device for the safety-rail by the movement of the switch which provides a clear main line.

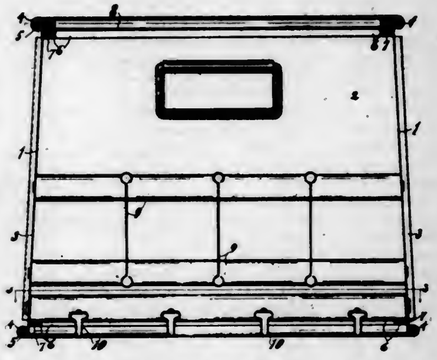
3. The combination with a facing point switch and switch-stand, of a safety rail located in operative relation to the main line, connections between the switch and switch-stand, and between the latter and the safety-rail and comprising a quadrant, one arm of which is movable relative to the other, said switch connections being connected to one of said arms and the safety-rail to the other, whereby the rail or the switch may be actuated independently; and a locking device for the arms of the quadrant whereby both safety-rail and switch may be actuated together by the actuation of the switch-stand.

4. The combination with a facing point switch and switch-stand and a safety-rail located in operative relation to the main line, of connections extending from the switch-stand to the switch and from the switch-stand to the safety-rail, said connections comprising a quadrant or elbow-lever, each arm of which is movable independently, and means to lock the arms together to move as one, and a spring associated with the connections extending to the safety-rail whereby when said rail is actuated to move it out of operative relation to the main line rail, it may be automatically returned to operative position.

5. The combination with a facing point switch and switch-stand, and a safety-rail located in operative relation to the main line rail, of a quadrant, the arms of which are movable relative to each other, the arc of the quadrant being supported on one of said arms, and said arc having gear teeth thereon; a pinion supported on the other arm to mesh with said teeth, and means to rotate the pinion to vary the angle of said arms; connections extending from one arm of the quadrant to the safety-rail and other connections extending from the other arm to the switch-stand, together with means to lock the arms together whereby the quadrant may be moved as one piece by the actuation of the safety-rail, or the actuation of the switch-stand.

[Claim 6 not printed in the Gazette.]

872,998. SHEET-METAL PACKING-CASE. ALFRED T. KRUSE, Defiance, Ohio, assignor to American Steel Package Company, Defiance, Ohio, a Corporation of Ohio. Filed Sept. 5, 1906. Serial No. 333,286.



1. In a packing-case, inclined sides and ends bent to form continuous lid and bottom-supporting-flanges and a beading at the upper and lower edges of said sides and ends, a plurality of supporting-bars having their ends mounted on said bottom-supporting-flange, and a reinforcing-iron mounted within said flanges.

2. A packing-case, comprising sides and ends bent to form continuous lid and bottom-supporting-flanges and a beading at the upper and lower edges of said sides and ends, a beaded cover mounted on said lid-supporting-flange, and a series of supporting-bars mounted on said bottom-supporting-flange.

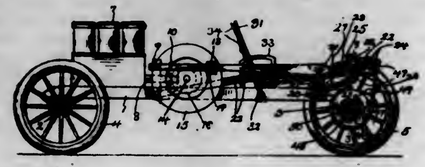
3. A packing-case, comprising sides and ends crimped to form lid and bottom-supporting-flanges and a beading at the upper and lower edges of said sides and ends, a beaded cover mounted on said lid-supporting-flange and within the upper beading of the case, a series of supporting-bars having the ends thereof taking over and resting on said bottom-supporting-flange, and a main cross supporting-bar intersected by said series of supporting-bars.

4. A packing-case, comprising inclined sides and ends crimped to form encircling lid and bottom-supporting-flanges, and an upper and lower beading about the edges of said sides and ends, a lid or cover mounted on said lid-supporting-flange, a series of supporting-bars provided with notched ends taking over and resting on said bottom-supporting-flange, and a cross supporting-bar engaging and supporting the intermediate portions of said supporting-bars.

5. In a packing-case, the combination with sides and ends provided with a reinforced bottom-supporting-flange and a beading about the lower edges of said sides and ends; of a series of supporting-bars mounted on said flange and flush with said beading.

[Claims 6 to 11 not printed in the Gazette.]

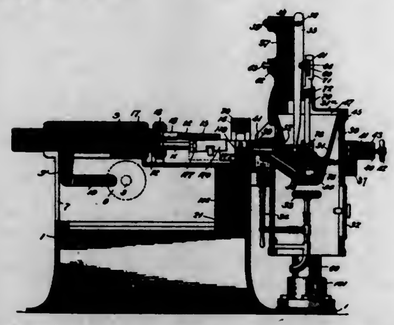
872,999. POWER-TRANSMITTING MECHANISM. GOTTFRIED MALBURG, Cleveland, Ohio, assignor of three-fourths to A. A. Maresh, R. J. MacKenzie, Theo. Hanks, Frank McHale, and Fred Mathews, Cleveland, Ohio. Filed Dec. 24, 1904. Serial No. 238,204.



Power transmitting mechanism comprising, the combination of a frame, an engine mounted on said frame, a gear wheel secured on the engine shaft, a shaft arranged at a right-angle to the engine shaft, a gear wheel mounted on said last-mentioned shaft and arranged to mesh with the gear wheel on the engine shaft, two wheels rigidly secured on said last-mentioned shaft, boxes rotatably mounted on said wheels, levers fulcrumed in said frame and having their ends extending into and arranged to slide freely in the respective boxes, sleeves arranged on the opposite ends of said levers, means for sliding said sleeves in and out on same, means for locking said sleeves in their adjusted positions, a driving shaft, drums mounted on said driving shaft, a cable connecting each drum with one of said levers so that the movement of said levers in one direction will cause a rotary movement of said drums in one direction, automatically operating clutches arranged to lock said drums to said driving shaft when said drums are rotated by the movements of said levers, and springs for rotating said drums in the opposite direction to that in which they were rotated by said levers, substantially as described and for the purpose set forth.

REISSUES.

12,726. SORTS-MACHINE FOR MAKING TYPE. FRANK H. BROWN and JOHN E. HANRAHAN, Baltimore, and GEORGE A. BOYDEN, Mount Washington, Md., assignors to National Compositype Company, Baltimore, Md., a Corporation of Delaware. Filed Oct. 26, 1907. Serial No. 399,972. Original No. 861,430, dated July 30, 1907, Serial No. 140,152.



1. A machine for casting type comprising a head, mold mechanism secured thereto, and a pivoted yoke independent of the mold parts to cover the latter to prevent spurts of molten metal in case the mold mechanism is not entirely closed.

2. A machine for casting type comprising a head, a metal receptacle yoke pivoted to the head, and a molten metal receptacle loosely supported at opposite sides in said yoke.

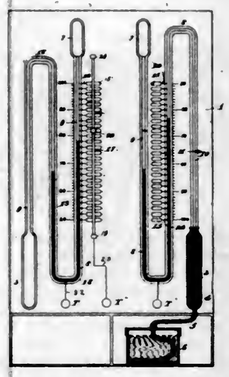
3. A machine for casting type comprising a head, a metal receptacle yoke pivoted to the head, and a molten metal receptacle suspended at its opposite sides in said yoke.

4. A machine for casting type comprising a head, a yoke pivoted to the head, and a molten metal receptacle yieldingly supported in the yoke, whereby the metal receptacle may be swung around for inspection and cleaning, and adjust itself to the mold parts when in the operating position.

5. A machine for casting type comprising a head, mold mechanism having a stationary mold part secured to the head, and projections arranged to support the said stationary mold part and to form an air space between the mold part and the head.

[Claims 6 to 87 not printed in the Gazette.]

12,727. HYGROMETER FOR REGULATING HUMIDIFYING AND HEATING SYSTEMS. STUART W. CRAMER, Charlotte, N. C. Filed Sept. 3, 1907. Serial No. 391,256. Original No. 811,383, dated Jan. 30, 1906, Serial No. 238,626.



1. The combination with a source of electrical energy, of means for indicating temperature and means for indicating humidity, and an electro-magnetic device each of said means being adapted to close an electric circuit through said electro-magnetic device, and electric conductors connecting said source of electrical energy, said indicating means and said electro-magnetic device.

2. The combination with a source of electrical energy, of means for indicating temperature and means for indicating humidity, and an electro-magnetic device, each of said means being adapted to close an electric circuit through said electro-magnetic device, and electric conductors connecting said source of electrical energy, said indicating means and said electro-magnetic device, means for controlling the supply of water to regulate the humidity, and electrical connections between said last named means and the means for indicating humidity.

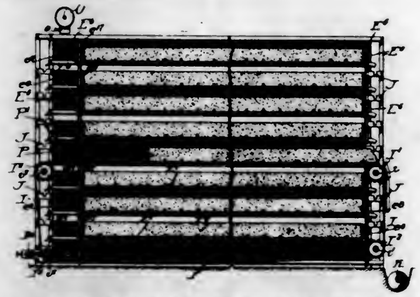
3. The combination with a source of electrical energy, of means for indicating temperature and means for indicating humidity, and an electro-magnetic device, each of said means being adapted to close an electric circuit through said electro-magnetic device, and electric conductors connecting said source of electrical energy, said indicating means and said electro-magnetic device, means for controlling the supply of a heating medium to regulate the temperature, and electrical connections between said last named means and the means for indicating temperature.

4. The combination with a cource of electrical energy, of means for indicating temperature and means for indicating humidity, and an electro-magnetic device, each of said means being adapted to close an electric circuit through said electro-magnetic device, and electric conductors connecting said source of electrical energy, said indicating means and said electro-magnetic device, means for controlling the supply of water to regulate the humidity, means for controlling the supply of a heating medium to regulate the temperature, and electrical connections between the last two named means, the means for indicating humidity and the means for indicating temperature.

5. The combination with a source of electrical energy, of means for indicating humidity, and means for indicating humidity, each of the means being adapted to close an electric circuit, an electro-magnetic device, separate electrical conductors connecting said source of electrical energy with each of said means, one of said conductors including said electro-magnetic device, an electrical conductor connecting said means, and said latter conductor uniting a selected point on the means for indicating temperature with a selected point on the means for indicating humidity.

[Claims 6 to 14 not printed in the Gazette.]

12,728. MALT-HOUSE AND APPARATUS. WILLIAM P. RICE, Chicago, Ill. Filed Aug. 23, 1906. Serial No. 331,818. Original No. 826,886, dated July 24, 1906, Serial No. 249,870.



1. In a malting apparatus, a malting unit having a movable foraminous malt support constructed by its movement to dump the contents thereof entirely from the unit, means whereby the support is loaded from a loading device located outside the unit and means for directing air in prescribed paths through said foraminous support and the contents of the unit.

2. In a malting apparatus, a traveling foraminous malt support constructed to be moved endwise toward one end of the unit to dump the contents thereof, means for directing air in a prescribed path through said support and the contents thereof, and a conveying apparatus arranged to receive said dumped contents and constructed and arranged to direct said contents on to the same or another support.

3. A malting unit comprising inclosing walls, a malt support, and means for directing air through said support and the contents thereof, said support consisting of a plurality of short perforated sections flexibly joined together and means for advancing the support towards the end of the unit for dumping the contents thereof.

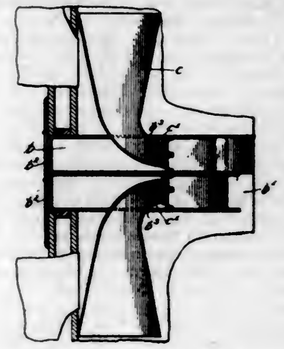
4. In a malting unit, a plurality of closely-spaced, vertically-separated shelves and a frame common to and supporting all said shelves, said shelves being made of a plurality of dumping-sections, and means for moving the shelves severally toward and out of one end of the unit to dump the contents of each of said shelves from the unit.

5. In a malting unit, a plurality of vertically-separated, closely-spaced shelves, each comprising a plurality of dumping-sections joined flexibly together, a frame provided with a series of tracks on which said shelves are severally supported, and means for advancing said shelves severally toward and out of one end of the unit for dumping the contents of each shelf from the unit.

[Claims 6 to 30 not printed in the Gazette.]

12,729. CAR-VENTILATOR. THOMAS H. GARLAND, Chicago, Ill. Filed Sept. 23, 1907. Serial No. 394,252. Original No. 800,438, dated Sept. 26, 1905, Serial No. 232,825.

1. A ventilator having two cowls provided with flaring ends pointing in opposite directions and each being provided with a contracted curved end, and a pair of conductors into which said contracted ends lead, said conductors being curved downwardly at their outlet ends.



2. The combination with a car, of a ventilator having a conductor leading from the deck of the car and curving along the roof thereof, and a cowl extending longitudinally of the car and located on the roof therof, said cowl having a contracted end entering the conductor and extending in an outward direction from the body of the cowl.

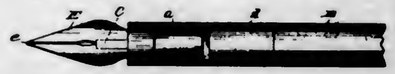
3. The combination with a car, of a ventilator having a conductor leading from its deck and curving along the roof of the car so that its outer end points in a downward direction, and a cowl extending longitudinally of the car upon the roof thereof and having a flaring end pointing toward the front end of the car, said cowl also being provided with a contracted end leading into the conductor and pointing toward the outer end thereof, said conductor and cowl being rigidly mounted upon the roof of the car.

4. In combination with a car, a plurality of eduction conduits communicating with the interior of the car and discharging externally side by side and substantially at right angles to the traveling movement of the car, and a pair of oppositely facing cowls each having its larger end facing towards one end of the car and its smaller end discharging within a corresponding one of said conduits and in a direction towards the outer discharge end of the latter, the discharge end portions of said conduits being unobstructed and freely exposed to the sweep of the external cross drafts induced by the travel of the car.

5. In combination with a car, a plurality of eduction conduits communicating with the interior of the car and discharging externally side by side in the same non-forwardly direction considered with reference to the direction of travel of the car, the discharge end portions of said conduits being unobstructed, arranged in immediate juxtaposition to each other, terminating coincidently, and freely exposed to the external cross drafts induced by the travel of the car, and a pair of oppositely facing funnel-shaped cowls, each having its larger end facing towards one end of the car and its small end projecting freely within a corresponding one of said conduits and arranged to discharge in a direction coincident with the direction of that part of the conduit into which it extends.

[Claims 6 to 8 not printed in the Gazette.]

12,730. PEN HOLDING AND RELEASING DEVICE. JAMES O. DODGE and HERBERT E. DODGE, Los Angeles, Cal. Filed Aug. 22, 1907. Serial No. 389,753. Original No. 825,197, dated July 3, 1906, Serial No. 300,067.



1. A penholder comprising two rigid pen-bearing points which are separated longitudinally, and a yielding bearing

member located beyond such rigid bearings so as to be in contact with a pen proper at a third point, substantially as described.

2. A pen-holder having two rigid bearings for a pen-point, the same being separated longitudinally and also arranged in different horizontal planes, one being thus adapted to bear on the upper side, and the other on the under side, of a pen-point, and a yielding member which is located adjacent to one of the rigid bearings and forms a third bearing, substantially as described.

3. In a penholder, the combination with the stub or forward end of same, of a ferrule encircling said stub, a rigid bearing-point within the ferrule and a rigid bearing-point on the stub, said rigid bearing-points being longitudinally separated, and a single yielding or spring bearing located longitudinally beyond said rigid bearing-points.

4. In a penholder, the combination with the stub or forward end of same of a ferrule encircling the same, a rigid bearing point within the ferrule and a rigid bearing-point on the stub, said rigid bearings being longitudinally separated, and a yielding member secured at one end to the ferrule and adapted to bear at its free end against a pen-body secured between the ferrule and stub to cause the pen-body to be firmly seated against the aforesaid rigid bearings, whereby releasing pressure of the yielding member will cause the pen to be released from the ferrule by gravity.

5. A pen holding and releasing device consisting of a stub and a ferrule encircling said stub to receive the pen, a rigid bearing point within said ferrule near its forward end said ferrule having a cut-out portion in its upper wall, a rigid bearing-point on the stub beneath said cut out portion and adjacent thereto, and a yielding spring member secured at one end to a rigid portion of the ferrule, and adapted to bear at its free end on a pen inserted in said ferrule to cause the pen to have a rigid bearing at two points within the ferrule whereby releasing pressure of the yielding spring against the pen will cause the pen to be released from the ferrule by gravity.

[Claim 6 not printed in the Gazette.]

12,731. WINDOW-CURTAIN-SUSPENDING DEVICE. ARTHUR A. PAGE, Brooklyn, N. Y. Filed Nov. 1, 1907. Serial No. 400,377. Original No. 865,520, dated Sept. 10, 1907. Serial No. 335,406.



1. In a suspending device, a spring clamp segmental in cross section and into which a pole with a folded curtain, portière or the like may be inserted, said spring clamp being composed of inner and outer members and the inner member being provided with transverse slots forming openings therein.

2. The herein described means for suspending a curtain, portière or the like consisting of a pole over which one end of the curtain, portière or the like is folded, and a spring clamp segmental in cross section and into which the pole with the folded curtain, portière or the like is inserted, said spring clamp being composed of inner and outer members, and the inner member being provided with transverse slots forming openings therein.

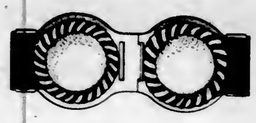
DESIGNS.

38,916. BOOK-MARK. HENRY M. WILLIS, Hempstead, N. Y. Filed Aug. 31, 1907. Serial No. 390,996. Term of patent 7 years.



The ornamental design for a book-mark, as shown.

38,917. BELT-BUCKLE. LOUIS C. HENRIKSEN, Los Angeles, Cal. Filed July 23, 1907. Serial No. 385,225. Term of patent 3½ years.



The ornamental design for a belt buckle as shown.

38,918. HEAD OF BROOCHES, SCARF-PINS, OR SIMILAR ARTICLES. JOSEPH E. DE WYNGAERT, Newark, N. J. Filed Sept. 3, 1907. Serial No. 391,276. Term of patent 7 years.



The ornamental design for a head of a brooch, scarf-pin, or similar article, as shown.

38,919. PURSE OR BAG. ALBERT E. VOGT, Rochester, N. Y., assignor to Emergency Rubber Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 7, 1907. Serial No. 396,354. Term of patent 7 years.



The ornamental design for a purse or bag as shown.

38,920. HANDLE FOR COMBS, KNIVES, OR SIMILAR ARTICLES. AMOS DUPONT, Champlain, N. Y. Filed Sept. 16, 1907. Serial No. 393,245. Term of patent 14 years.



The ornamental design for a handle for combs, knives, or similar articles, as shown.

38,921. SPOON OR FORK. AUGUST C. MILLER, Taunton, Mass., assignor to Reed and Barton Corporation, a Corporation of Massachusetts. Filed Jan. 14, 1907. Serial No. 352,310. Term of patent 14 years.



The ornamental design for a spoon or fork as shown.

38,922. SALT-SHAKER. CLARENCE A. NELSON and CHARLES A. PAYNE, Utica, N. Y., assignors to Utica Aluminum & Novelty Works, Utica, N. Y. a Corporation. Filed July 27, 1907. Serial No. 385,925. Term of patent 7 years.



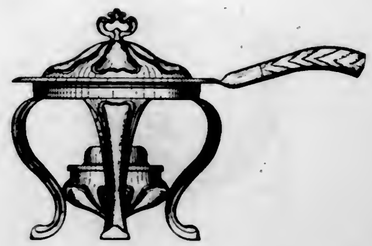
The ornamental design for a salt shaker as shown.

38,923. CUT-GLASS BOWL. MAX E. SCHECK, Chicago, Ill. Filed Oct. 14, 1907. Serial No. 397,456. Term of patent 3½ years.



The ornamental design for a cut glass bowl, as shown.

38,924. CHAFING-DISH, LAMP, AND STAND. SAMUEL G. WILKES, Taunton, Mass., assignor to Reed and Barton Corporation, a Corporation of Massachusetts. Filed Jan. 14, 1907. Serial No. 352,311. Term of patent 14 years.



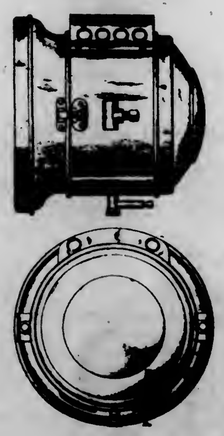
The ornamental design for a chafing dish, lamp and stand as shown.

38,925. METAL DISH. JOSEPH THEODORE HOMAN, Cincinnati, Ohio. Filed July 29, 1907. Serial No. 386,174. Term of patent 7 years.



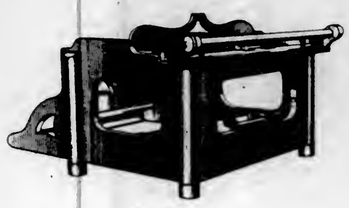
The ornamental design for a metal dish, as shown.

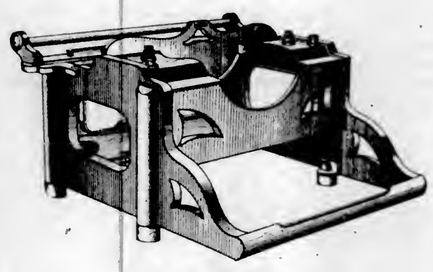
38,926. HEADLIGHT. RICHARD H. WELLES, Kenosha, Wis. Filed Sept. 19, 1907. Serial No. 393,739. Term of patent 7 years.



The ornamental design for a head-light as shown.

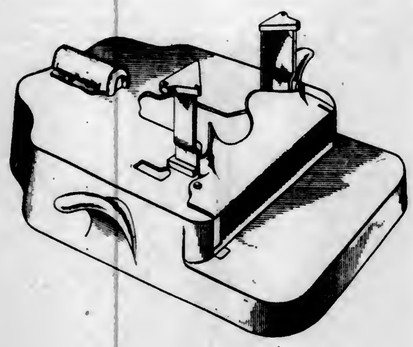
38,927. TYPE-WRITER FRAME. JESSE ALEXANDER, Brooklyn, N. Y. Filed Nov. 12, 1904. Serial No. 232,530. Term of patent 14 years.





The ornamental design for a typewriter frame, as shown.

38,928. TYPE-WRITER BASE-FRAME. HARRY CROSS and GEORGE J. GRIFFITHS, Woodstock, Ill., assignors to The Oliver Typewriter Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 26, 1906. Serial No. 340,783. Term of patent 14 years.



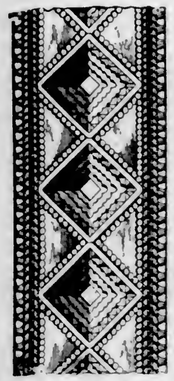
The ornamental design for a typewriter base frame as shown.

38,929. MIRROR OR SIMILAR ARTICLE. WILLIAM A. JAMESON, Niagara Falls, N. Y. Filed Oct. 4, 1907. Serial No. 395,973. Term of patent 14 years.



The ornamental design for a mirror or similar article as shown.

38,930. MOLDING. EARL RYON, Washington, D. C. Filed Sept. 9, 1907. Serial No. 392,074. Term of patent 7 years.



The ornamental design for molding, as shown.

38,931. SHINGLE. JOSEPH LAURENCE DICKELMAN, Forest, Ohio. Filed Sept. 27, 1907. Serial No. 394,930. Term of patent 14 years.



The ornamental design for a shingle, as shown.

38,932. NECKWEAR FABRIC. HENRY BERNSTEIN, Philadelphia, Pa. Filed Sept. 14, 1907. Serial No. 392,933. Term of patent 3½ years.



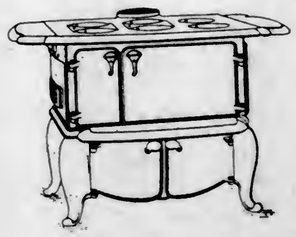
The ornamental design for a neck-wear fabric, as shown.

38,933. WOVEN FABRIC. WILLIAM T. SMITH, Philadelphia, Pa. Filed Sept. 20, 1907. Serial No. 393,867. Term of patent 7 years.



The ornamental design for woven fabric, as shown.

38,934. STOVE. ARTHUR W. WALKER, Malden, Mass. Filed Sept. 11, 1907. Serial No. 392,409. Term of patent 14 years.



The ornamental design for a stove, as shown.

TRADE-MARKS

PUBLISHED DECEMBER 3, 1907.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 6,398. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) THE WILLIAM LEA & SONS COMPANY, Wilmington, Del. Filed May 23, 1905.

FFF

Particular description of goods.—Wheat-Flour.

Ser. No. 7,219. (CLASS 54. SEA FOODS.) MOOS & Co., New York, N. Y. Filed June 2, 1905. Used ten years.

BEAUMARGHAND

Particular description of goods.—Canned Fish.

Ser. No. 10,223. (CLASS 8. DETERGENTS.) THE N. K. FAIRBANK COMPANY, Chicago, Ill. Filed July 13, 1905. Used ten years.

FLANNEL

Particular description of goods.—Soap.

Ser. No. 14,124. (CLASS 37. PAPER AND PAPER MANUFACTURES NOT OTHERWISE CLASSIFIED.) RAYNOR & PERKINS ENVELOPE COMPANY, New York, N. Y. Filed Oct. 31, 1905. Used ten years.



Irish Linen

Particular description of goods.—Paper for Writing and Printing Purposes, and Envelops.

Ser. No. 17,540. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Mar. 6, 1906.

P. P. P.

Particular description of goods.—Fertilizers.

Ser. No. 17,541. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Mar. 6, 1906.

C. C. C.

Particular description of goods.—Fertilizers.

Ser. No. 17,831. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Mar. 15, 1906.

O. D.

Particular description of goods.—Fertilizers.

Ser. No. 17,840. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Mar. 15, 1906. Used ten years.

POWHATAN

Particular description of goods.—Fertilizers.

Ser. No. 17,841. (CLASS 10. FERTILIZERS.) VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Filed Mar. 15, 1906. Used ten years.

OSCEOLA

Particular description of goods.—Fertilizers.

Ser. No. 18,032. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) THE YALE HAT CO., Detroit, Mich. Filed Mar. 19, 1906.



Particular description of goods.—Men's Felt, Straw, and Stiff Hats and Cloth Caps.

Ser. No. 18,711. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) CHEMISCHE FABRIK AUF ACTIEN (VORM. E. SCHERING), Berlin, Germany. Filed Apr. 5, 1906.

Hippol

Particular description of goods.—Antiseptic Remedies for the Treatment of Urinary Passages.

Ser. No. 18,744. (CLASS 12. MASONRY MATERIALS.) THE NORCROSS CO., Cleveland, Ohio. Filed Apr. 12, 1906.



Particular description of goods.—Sinks Made of Natural Stone.

Ser. No. 20,923. (CLASS 12. MASONRY MATERIALS.) PORTLAND CEMENTFABRIK MEMMOOR, Hamburg and Hemmoor-on-the-Oste, Germany. Filed July 13, 1906.



Particular description of goods.—Portland Cement.

Ser. No. 20,964. (CLASS 12. MASONRY MATERIALS.) UNION CEMENT AND LIME COMPANY, Louisville, Ky. Filed July 16, 1906. Used ten years.



Particular description of goods.—Hydraulic and Portland Cement, Lime, and Plaster-of-Paris.

Ser No. 21,942. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) MABEL M. LEDDAN, Baltimore, Md. Filed Sept. 6, 1906.



Particular description of goods.—Cough Medicines.

Ser. No. 22,754. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) F. M. BOWER CO., New York, N. Y. Filed Oct. 18, 1906.



Particular description of goods.—Bakers' and Confectioners' Utensils Comprising Bread and Cake Pans.

Ser. No. 25,173. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE ARIZONA WONDERINE CO., Phœnix, Ariz., and Los Angeles, Cal. Filed Feb. 6, 1907.

WONDERINE

Particular description of goods.—A Preparation of Geyser-Mud Used as a Plaster, Salve, or Poultice as a Remedy for Pneumonia, Pleurisy, Bronchitis, Peritonitis, Appendicitis, Inflamed Breasts, Ovarian Diseases, Sore Throat, Cancers, Ulcers, Malignant Sores, Carbuncles, Felons, Tonsilitis, Neuralgia, Rheumatism, Piles, Eczema, Scalds, Burns, and in All Cases Where Inflammation Exists, Also as an Internal Remedy for Dyspepsia, Constipation, Liver Diseases, Blood and Kidney Disorders.

Ser. No. 25,269. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) HOWARD W. LIGHT, Newtown, Conn. Filed Feb. 12, 1907.

Salmagundi

Particular description of goods.—Gherkins, Mixed Pickles, Chilli-Sauce, Chow-Chow, and Cranberries.

Ser. No. 25,543. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) ISAAC PROUTY & CO. (INCORPORATED), Boston, Mass. Filed Feb. 23, 1907.

BEHEMOTH

Particular description of goods.—Men's, Boys', and Youths' Leather Boots and Shoes.

Ser. No. 25,925. (CLASS 4. ABRASIVE AND POLISHING MATERIALS NOT INCLUDED IN CLASSES 8 AND 16.) THE CHENEY CHEMICAL COMPANY, South Manchester, Conn. Filed Mar. 12, 1907.



Particular description of goods.—Cleaning and Polishing Powder Containing Abrasive and Detergent Substances.

Ser. No. 26,042. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) JOHN C. MILLER, Akron, Ohio. Filed Mar. 18, 1907.



Particular description of goods.—Liquid Medicine for the Treatment of Rheumatism.

Ser. No. 26,380. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) LYNCHBURG SHOE CO., Lynchburg, Va. Filed Apr. 1, 1907.



Particular description of goods.—Leather Boots and Shoes.

Ser. No. 26,976. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) THE E. H. JACOBS MANUFACTURING COMPANY, Killingly, Conn. Filed Apr. 29, 1907. Used ten years.

JACOBS

Particular description of goods.—Loom-Pickers and Lug-Straps.

Ser. No. 27,019. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) C. T. HAM MANUFACTURING COMPANY, Rochester, N. Y. Filed Apr. 30, 1907.

NO 40

Particular description of goods.—Oil-Burning Lamps.

Ser. No. 27,104. (CLASS 35. BELTING, HOSE, AND MACHINERY PACKING.) ACME BELTING COMPANY, Phillipsburg, N. J. Filed May 4, 1907.

A B C

Particular description of goods.—Machinery-Belts of Textile Material.

Ser. No. 27,336. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE TOES-O-K MEDICAL COMPANY, Welland, Ontario, Canada. Filed May 13, 1907.

TOES-O-K

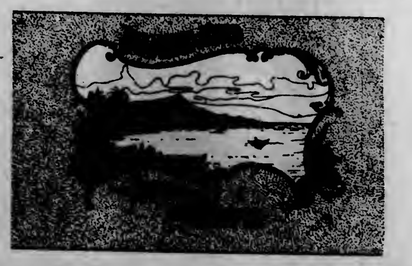
Particular description of goods.—Remedies for Corns, Calluses, and Bunions.

Ser. No. 27,648. (CLASS 70. STATIONERY NOT OTHERWISE CLASSIFIED.) L. & C. HARDTMUTH, Vienna and Budweis, Austria-Hungary, and London, England. Filed May 25, 1907.

KOH-I-NOOR

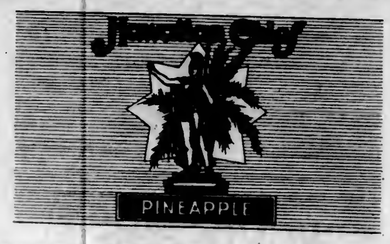
Particular description of goods.—Tracing-Cloth.

Ser. No. 27,755. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) PEARL CITY FRUIT COMPANY, LIMITED, Pearl City and Honolulu, Hawaii. Filed May 29, 1907.



Particular description of goods.—Canned Pineapples.

Ser. No. 27,756. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) PEARL CITY FRUIT COMPANY, LIMITED, Pearl City and Honolulu, Hawaii. Filed May 29, 1907.



Particular description of goods.—Canned Pineapples.

Ser. No. 27,827. (CLASS 54. SEA FOODS.) A/S STAVANGER SARDINE CO., Stavanger, Norway. Filed June 1, 1907.



Particular description of goods.—Canned Sardines.

Ser. No. 28,010. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) BERTHA F. SNYDER, New Kensington, Pa. Filed June 10, 1907.



Particular description of goods.—A Remedy for Rheumatism.

Ser. No. 28,037. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) FISCHER BROS., Seattle, Wash. Filed June 11, 1907.

MAX-I-MUM

Particular description of goods.—Canned Fruit, Canned Vegetables, Canned Berries, Canned Soups, Dried Fruits, Dried Vegetables, Jams, Jellies, Fruit Preserves, Horse-Radish, Olives, Mince-Meat, Dried Eggs, Cotton-Seed Oil, Olive-Oil, Salad-Oil, Spices, Mustard, Sauces, Shredded

Cocoanut, Dried Cocoanut, Sauer-Kraut, Catsup, Celery Salt, Flavoring Extracts, Dried Beans, Dried Peas, Lentils, Dried Potatoes, Dried Soup Vegetables, Dried Onions, Sago, and Tapioca.

Ser. No. 28,318. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ROBERT NATHANIEL BATES, Ottawa, Ontario, Canada. Filed June 22, 1907.



Particular description of goods.—Pills.

Ser. No. 28,365. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) JOHANN A. WÜLFING, (a Firm,) Berlin, Germany. Filed June 24, 1907.

„Albulactin"

Particular description of goods.—Albumen and Albuminous Food Compounds Obtained from Milk.

Ser. No. 28,401. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE ST. LUKE REMEDIES CO., New York, N. Y. Filed June 26, 1907.

Hairetka

Particular description of goods.—A Hair-Tonic.

Ser. No. 28,463. (CLASS 12. MASONRY MATERIALS.) THE CHATFIELD MFG. CO., Cincinnati, Ohio. Filed June 29, 1907.

PARACOTE

Particular description of goods.—Roofing-Paper.

Ser. No. 28,707. (CLASS 12. MASONRY MATERIALS.) INDIANAPOLIS COMPOSITE BRICK COMPANY, Indianapolis, Ind. Filed July 10, 1907.

EL-KUS

Particular description of goods.—Bricks.

Ser. No. 28,941. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) "TOT" COMPANY, Milan, Italy. Filed July 22, 1907.

TOT Company-Milano

TOT

Particular description of goods.—Remedies for Indigestion.

Ser. No. 29,040. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE UNIVERSAL DRUG AND CHEMICAL CO., Augusta, Me. Filed July 25, 1907.

U---D---C

Particular description of goods.—Perfumeries, Tooth-Washes, Tooth-Powders, Cold-Cream, Talcum Powder, Hair-Tonic, Shampoo, Sedlitz-Powders, Whooping-Cough Remedies, Catarrh Remedies, Cough and Cold Remedies, Pain-Killer, White Liniment, Rheumatism Remedies, Kidney and Liver Remedies, General Tonics, Blood-Purifiers, Headache Remedies, Grip Remedies.

Ser. No. 29,086. (CLASS 68. PUBLICATIONS.) THE JEWELERS CIRCULAR PUB CO., New York, N. Y. Filed July 29, 1907.

THE OPTICAL REVIEW

Particular description of goods.—A Periodical Devoted to Optical Interests.

Ser. No. 29,142. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) SCHEUER & BROTHER, New York, N. Y. Filed July 31, 1907.

Fluffy Ruffles

Particular description of goods.—Leather Pocket-Books and Leather Purses.

Ser. No. 29,164. (CLASS 61. JEWELRY AND SOLID AND PLATED PRECIOUS-METAL WARE.) S. & B. LEDERER COMPANY, Providence, R. I. Filed Aug. 1, 1907.

S.L.B.L. CO.

Particular description of goods.—Jewelry for Personal Adornment.

Ser. No. 29,166. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) THE COLUMBIA FLOURING MILLS COMPANY LTD., Enderby, British Columbia, Canada. Filed Aug. 1, 1907.

ALPINA

Particular description of goods.—Wheat-Flour.

Ser. No. 29,204. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) KELLOGG-MACKAY-CAMERON CO., Chicago, Ill. Filed Aug. 3, 1907.

Klymax

Particular description of goods.—Steam and Hot-Water Boilers, Tank and Laundry Heaters.

Ser. No. 29,355. (CLASS 64. MEDICAL AND SURGICAL APPARATUS, APPLIANCES, AND INSTRUMENTS.) PETER A. AURNESS, Minneapolis, Minn. Filed Aug. 12, 1907.

"Duplex"

Particular description of goods.—Stethoscopes.

Ser. No. 29,405. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CIASSIFIED.) THE ELASTRO MANUFACTURING COMPANY, Hartford, Conn. Filed Aug. 15, 1907.

ELASTRO

Particular description of goods.—A Resilient Composition of Matter Intended to be Injected into Automobile, Motor-Cycle, Bicycle, and other Vehicle Pneumatic Tires.

Ser. No. 29,517. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE ROWE PATENT CALK COMPANY, Hartford, Conn. Filed Aug. 22, 1907.



Particular description of goods.—Horseshoe-Calks.

Ser. No. 29,518. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) BAYLESS FRUIT CO., Lexington, Ky. Filed Aug. 22, 1907.



Particular description of goods.—**Fresh Fruits, Comprising Apples, Peaches, Apricots, Pears, Plums, Figs, Grapes, Pineapples, Bananas, Lemons, Oranges.**

Ser. No. 29,563. (CLASS 63. MEASURING AND SCIENTIFIC APPARATUS, APPLIANCES, AND INSTRUMENTS.) THE ASHCROFT MANUFACTURING COMPANY, Bridgeport, Conn. Filed Aug. 24, 1907.



Particular description of goods.—Pressure-Gages, Indicators, Revolution-Counters, Water-Level Gages, Planimeters.

Ser. No. 29,566. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) NEW ORLEANS IMPORT CO., LTD., New Orleans, La. Filed Aug. 24, 1907.



Particular description of goods.—Tea.

Ser. No. 29,571. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE PHYSICIANS CHEMICAL AND DRUG COMPANY, Denver, Colo. Filed Aug. 24, 1907.



Particular description of goods.—Medicated Plasters.

Ser. No. 29,702. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) ELDER-HARRISON COMPANY, Baltimore, Md. Filed Aug. 31, 1907.

GREEN SPRING VALLEY CLUB

Particular description of goods.—Whisky.

Ser. No. 29,711. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) EDWARD A. QUIRI, Amsterdam, N. Y. Filed Aug. 31, 1907.

MT. MARCY

Particular description of goods.—Leather Shoes.

Ser. No. 29,722. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) KAUFHERR & CO.'S SHOE LEATHER TANNERIES, Newark, N. J. Filed Sept. 3, 1907.



Particular description of goods.—Calf Leathers.

Ser. No. 29,791. (CLASS 41. KNITTED, NETTED, AND LACE GOODS.) STEINER, ROSENSTEIN & TRAUB, New York, N. Y. Filed Sept. 7, 1907.

Fluffy Ruffles.

Particular description of goods.—Netted Veilings.

Ser. No. 29,805. (CLASS 48. DAIRY PRODUCTS.) THE ELGIN BUTTER COMPANY, Elgin, Ill. Filed Sept. 9, 1907.



Particular description of goods.—Butter.

Ser. No. 29,808. (CLASS 48. DAIRY PRODUCTS.) THE ELGIN BUTTER COMPANY, Elgin, Ill. Filed Sept. 9, 1907.



Particular description of goods.—Butter.

Ser. No. 29,854. (CLASS 20. CUTLERY NOT INCLUDED IN CLASS 61, AND EDGE-TOOLS.) A. FEIST & CO., Solingen, Germany. Filed Sept. 10, 1907.

LUNA

Particular description of goods.—Table-Knives, Pocket-Knives, Table-Forks, Scissors, Shears, Razors, Hand Hair-Cutters, and Hand Cigar-Cutters.

Ser. No. 29,855. CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) JUSTIN WM. BAMBERGER & CO., München, Germany. Filed Sept. 10, 1907.

„LILIPUT"

Particular description of goods.—Type-Writing Machines.

Ser. No. 29,924. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) THE JOSEPH BANIGAN RUBBER CO., Providence, R. I. Filed Sept. 13, 1907.

WOONASQUATUCKET

Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 29,926. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) THE JOSEPH BANIGAN RUBBER CO., Providence, R. I. Filed Sept. 13, 1907.



Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 29,927. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) MEYER RUBBER COMPANY, New Brunswick, N. J. Filed Sept. 13, 1907. Used ten years.

MEYER RUBBER COMPANY.

Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 29,929. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) AMERICAN RUBBER COMPANY, Boston, Mass. Filed Sept. 13, 1907. Used ten years.



Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 29,930. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) AMERICAN RUBBER CO., Boston, Mass. Filed Sept. 13, 1907. Used ten years.



Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 29,938. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) GOODYEAR'S INDIA RUBBER GLOVE M'F'G. CO., Naugatuck, Conn. Filed Sept. 13, 1907. Used ten years.



Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 29,939. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE QUAKER OATS COMPANY, Jersey City, N. J., Chicago, Ill.; Cedar Rapids, Iowa, and Akron, Ohio. Filed Sept. 13, 1907.

QUAKER



Particular description of goods.—Stock Foods.

Ser. No. 29,940. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE QUAKER OATS COMPANY, Jersey City, N. J., Chicago, Ill.; Cedar Rapids, Iowa, and Akron, Ohio. Filed Sept. 13, 1907.

VICTOR

Particular description of goods.—Stock Foods.

Ser. No. 29,942. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE QUAKER OATS COMPANY, Jersey City, N. J., Chicago, Ill.; Cedar Rapids, Iowa, and Akron, Ohio. Filed Sept. 13, 1907.

SCHUMACHER
FS
STOCKFEED

Particular description of goods.—Stock Foods.

Ser. No. 29,944. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) BOSTON RUBBER SHOE COMPANY, Boston, Mass. Filed Sept. 13, 1907. Used ten years.



Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 29,945. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) BOSTON RUBBER SHOE COMPANY, Boston, Mass. Filed Sept. 13, 1907. Used ten years.



BOSTON U.S.A.

Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 29,946. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) NEW BRUNSWICK RUBBER COMPANY, New Brunswick, N. J. Filed Sept. 13, 1907. Used ten years.

New Brunswick Rubber Company.

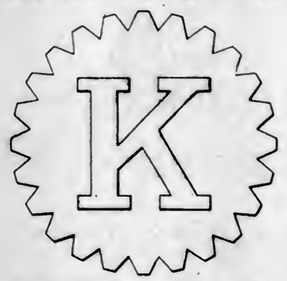
Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 29,958. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) UNITED STATES RUBBER COMPANY, New Brunswick, N. J. Filed Sept. 13, 1907. Used ten years.



Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 30,011. (CLASS 72. MERCHANDISE NOT OTHERWISE CLASSIFIED.) JOHN J. KULHAWIK, Grand Rapids, Mich. Filed Sept. 16, 1907.



Particular description of goods.—Hat-Hangers.

Ser. No. 30,134. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) THE JOSEPH N. EISENDRATH COMPANY, Chicago, Ill. Filed Sept. 21, 1907. Used ten years.

EISENDRATH GLOVE CO.

Particular description of goods.—Gloves, Mittens, and Gauntlets Made of Leather.

Ser. No. 30,150. (CLASS 69. SMOKERS' ARTICLES NOT INCLUDED IN CLASS 71.) PHOENIX-AMERICAN PIPE WORKS, Washington, Mo. Filed Sept. 23, 1907.



Particular description of goods.—Corncob Pipes.

Ser. No. 30,166. (CLASS 61. JEWELRY, AND SOLID AND PLATED PRECIOUS-METAL WARE.) ROBERT B. MACDONALD, Attleboro, Mass. Filed Sept. 23, 1907.



ATRICE

Particular description of goods.—Lockets, Cuff-Pins, and Fobs.

Ser. No. 30,209. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) THE QUAKER OATS COMPANY, Jersey City, N. J., and Chicago, Ill. Filed Sept. 26, 1907.

QUAKER

Particular description of goods.—Flours Made from Wheat, Oats, Rye, Corn, and Buckwheat; Meals Made from Rye, Corn, and Oats; Oatmeal, Rolled Oats, Cracked Wheat, Rolled Wheat, Flaked Wheat, Farina, Prepared Wheat Foods, Hominy-Grits, Flaked Corn, Pearl-Barley, Prepared Rice Breakfast Foods, and Corn-Starch.

Ser. No. 30,210. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) THE QUAKER OATS COMPANY, Jersey City, N. J., and Chicago, Ill. Filed Sept. 26, 1907.



Particular description of goods.—Flours Made from Wheat, Oats, Rye, Corn, and Buckwheat; Meals Made from Rye, Corn, and Oats; Oatmeal, Rolled Oats, Cracked Wheat, Rolled Wheat, Flaked Wheat, Farina, Prepared Wheat Foods, Hominy-Grits, Flaked Corn, Pearl-Barley, Prepared Rice Breakfast Foods, and Corn-Starch.

Ser. No. 30,211. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) THE QUAKER OATS COMPANY, Jersey City, N. J., and Chicago, Ill. Filed Sept. 26, 1907.

QUAKER



Particular description of goods.—Flours Made from Wheat, Oats, Rye, Corn, and Buckwheat; Meals Made from Rye, Corn, and Oats; Oatmeal, Rolled Oats, Cracked Wheat, Rolled Wheat, Flaked Wheat, Farina, Prepared Wheat Foods, Hominy-Grits, Flaked Corn, Pearl-Barley, Prepared Rice Breakfast Foods, and Corn-Starch.

Ser. No. 30,222. (CLASS 20. CUTLERY NOT INCLUDED IN CLASS 61, AND EDGE-TOOLS.) THE STEPHEN RICHARD CO., Southbridge, Mass. Filed Sept. 26, 1907. Used ten years.

I. A. Snyder

Particular description of goods.—Hand Knives and Blades for Cutting Cigars and Tobacco.

Ser. No. 30,226. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) MAAS & WALDSTEIN EXTRACT COMPANY, New York, N. Y. Filed Sept. 26, 1907.

IRONBREW

Particular description of goods.—A Non-Alcoholic Preparation for Soda-Water Syrups.

Ser. No. 30,258. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) MONCRIEF & FRANCIS, Troy, N. Y. Filed Sept. 27, 1907. Used ten years.

BLISS'

Particular description of goods.—A Dyspepsia Remedy.

Ser. No. 30,316. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) TEXAS OVERALL COMPANY, Fort Worth, Tex. Filed Sept. 30, 1907.



The points of the star being printed in red.

Particular description of goods.—Overalls, Jumpers, and Trousers.

Ser. No. 30,321. (CLASS 23. HAND-TOOLS NOT OTHERWISE CLASSIFIED.) CRESCENT TOOL CO., Jamestown, N. Y. Filed Sept. 30, 1907.



Particular description of goods.—Wrenches and Pliers.

Ser. No. 30,324. (CLASS 38. PUBLICATIONS.) GERTRUDE INA ROBINSON, New York, N. Y. Filed Oct. 1, 1907.

Floral Fairies

Particular description of goods.—A Series of Printed and Illustrated Books.

Ser. No. 30,394. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) M. LEVY'S SONS, Shreveport, La. Filed Oct. 3, 1907.



Particular description of goods.—Men's and Boys' Leather Boots and Shoes.

Ser. No. 30,399. (CLASS 58. GAMES AND TOYS, AND SPORTING GOODS NOT OTHERWISE CLASSIFIED.) GEO. BORGFELDT & Co., New York, N. Y. Filed Oct. 3, 1907.



Particular description of goods.—Rubber Balls, Rubber Toy Animals, Rubber Toy Male and Female Figures, Rubber Rattles, and Rubber Dolls.

Ser. No. 30,400. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) GEO. BORGFELDT & Co., New York, N. Y. Filed Oct. 3, 1907.

CORONET

Particular description of goods.—Hair, Tooth, Hat, Nail, Clothes, Flesh, and Complexion Brushes.

Ser. No. 30,401. (CLASS 64. MEDICAL AND SURGICAL APPARATUS, APPLIANCES, AND INSTRUMENTS.) GEO. BORGFELDT & Co., New York, N. Y. Filed Oct. 3, 1907.



Particular description of goods.—Hard and Soft Rubber Syringes, Pessaries, Rubber Water-Bottles, Rubber Ice-Bags, Rubber Stomach-Tubing, Rubber Nipples, and Rubber Breast-Shields, Atomizers, Atomizer-Bulbs, Rubber Teething-Rings.

Ser. No. 30,416. (CLASS 47. CONFECTIONERY.) NEW ENGLAND CONFECTIONERY CO., Portland, Me., and Boston, Mass. Filed Oct. 4, 1907.

SIGNET

Particular description of goods.—Chocolates and Chocolate Bonbons.

Ser. No. 30,417. (CLASS 63. MEASURING AND SCIENTIFIC APPARATUS, APPLIANCES, AND INSTRUMENTS.) JACOB A. PFEIFER, Detroit, Mich. Filed Oct. 4, 1907.

TEDDY BEAR

Particular description of goods.—Spectacles and Eyeglasses.

Ser. No. 30,448. (CLASS 41. KNITTED, NETTED, AND LACE GOODS.) LOEB NEWMAN, New York, N. Y. Filed Oct. 7, 1907.



The globe being printed in red.

Particular description of goods.—Knitted Sweaters and Knitted Bathing-Suits.

Ser. No. 30,453. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) RIDENOUR BAKER GROCERY CO., Kansas City, Mo. Filed Oct. 7, 1907.



Particular description of goods.—Vinegar and Canned Fruits and Vegetables.

Ser. No. 30,467. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) JACOB RIES, Shakopee, Minn. Filed Oct. 7, 1907. Used ten years.

THE KING OF TABLE WATERS.

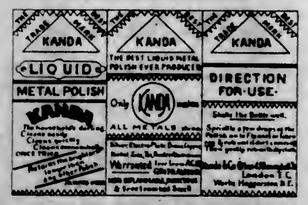
Particular description of goods.—Table-Waters.

Ser. No. 30,468. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) STANDARD IMPORT CO., LTD., New Orleans, La. Filed Oct. 7, 1907.



Particular description of goods.—Nutmeg, Chilli-Pepper, Sage, Cayenne, Cinnamon, Mustard, Cloves, Allspice, Ginger, Gumbo, Filé, Thyme, Celery Pepper, Celery Salt, Pepper, White Pepper, Mace, Curry-Pepper, Marjoram, Anise-Seed, Caraway-Seed, Coriander-Seed, and Pickle-Spice.

Ser. No. 30,485. (CLASS 8. DETERGENTS.) KRAUSSE & AUERBACH, London, England. Filed Oct. 8, 1907.



Particular description of goods.—Liquid Metal-Polish in the Form of a Detergent.

Ser. No. 30,497. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) SIDNEY BLUMENTHAL & CO. INC., New York, N. Y. Filed Oct. 9, 1907.

"Sheltona"

Particular description of goods.—Dress Fabrics Composed of Worsted, Silk, Cotton, and Mohair.

Ser. No. 30,510. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) The C. F. BROWN CHEMICAL CO., New York, N. Y. Filed Oct. 9, 1907.



Particular description of goods.—Liniment.

Ser. No. 30,549. (CLASS 53. SACCHARINE FOODS NOT INCLUDED IN CLASS 47.) E. E. POST CO., Utica, N. Y. Filed Oct. 11, 1907.



Particular description of goods.—A Saccharine Butter Composed Mainly of Maple and Cane Sugars with Flavoring.

Ser. No. 30,560. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE J. K. ARMSBY COMPANY, Chicago, Ill., and San Francisco, Cal. Filed Oct. 12, 1907.



Particular description of goods.—Canned Fruits and Dried Fruits—Namely, Apples, Apricots, Cherries, Nectarines, Peaches, Pears, Plums, Prunes, Raisins.

Ser. No. 30,564. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) GOLDEN STATE WINE CO., Los Angeles, Cal. Filed Oct. 12, 1907.

SI WHIPPEL

Particular description of goods.—Bourbon and Rye Whisky.

Ser. No. 30,572. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) A. H. NIEMANN, Berkley, Va. Filed Oct. 12, 1907.

Plantuna

Particular description of goods.—A Remedy for Paralysis, Neuralgia, Toothache, Pneumonia, Throat or Lung Trouble.

Ser. No. 30,574. (CLASS 51. MALT PREPARATIONS NOT OTHERWISE CLASSIFIED.) W. A. ROSS & BROTHER, INC., New York, N. Y. Filed Oct. 12, 1907.



Particular description of goods.—Ale.

Ser. No. 30,579. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) EDWARD LOUIS ODENWELLER, Ottoville, Ohio. Filed Oct. 12, 1907.

NEGGO

Particular description of goods.—Wheat-Flour.

Ser. No. 30,597. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) FLORIDA FRUIT OIL & EXTRACT CO., Atlanta, Ga. Filed Oct. 14, 1907.

HOP CHEER

Particular description of goods.—Carbonated Hop Drinks.

Ser. No. 30,601. (CLASS 8. VEGETABLE.) OLIVER PERRY LAWSON, McGregor, Tex. Filed Oct. 14, 1907.



Particular description of goods.—Seed-Oats.

Ser. No. 30,607. (CLASS 38. PUBLICATIONS.) NATIONAL SPORTSMAN, (INC.,) Boston, Mass. Filed Oct. 15, 1907.



Particular description of goods.—Monthly Magazines Devoted to Sports.

Ser. No. 30,616. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) FREDERICK STEARNS & Co., Detroit, Mich. Filed Oct. 15, 1907.

FLUFFY RUFFLES

Particular description of goods.—Perfumes.

Ser. No. 30,617. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) H. JACOB & SONS, New York, N. Y. Filed Oct. 15, 1907.

FLUFFY RUFFLES

Particular description of goods.—Textile Leggings and Overgaiters.

Ser. No. 30,624. (CLASS 54. SEA FOODS.) GLOBE PACKING COMPANY, Lubec and Eastport, Me. Filed Oct. 16, 1907.



Particular description of goods.—Sardines.

Ser. No. 30,625. (CLASS 54. SEA FOODS.) GLOBE PACKING COMPANY, Lubec and Eastport, Me. Filed Oct. 16, 1907.



Particular description of goods.—Sardines.

Ser. No. 30,626. (CLASS 33. GLASSWARE NOT OTHERWISE CLASSIFIED.) MARION FLINT GLASS COMPANY, Marion, Ind. Filed Oct. 16, 1907. Used ten years.

Red Cross

The mark being printed in red.
Particular description of goods.—Glass Bottles.

Ser. No. 30,632. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) FRANK J. TISHENBANNER, Gilmore City, Iowa. Filed Oct. 16, 1907. Used ten years.

MEDICATED CHARCOAL.

Particular description of goods.—A Remedy for Bowel Complaint in Poultry.

Ser. No. 30,636. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) LEVI ALTSCHULER, Allegheny, Pa. Filed Oct. 17, 1907.



Particular description of goods.—Liniments.

Ser. No. 30,664. (CLASS 38. PUBLICATIONS.) ELBERT HUBBARD, East Aurora, N. Y. Filed Oct. 19, 1907.

Little Journeys

Particular description of goods.—Monthly Publications.

Ser. No. 30,668. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) H. J. MCGRATH COMPANY, Baltimore, Md. Filed Oct. 19, 1907.

CHAMPION



Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 30,672. (CLASS 34. MEDICAL AND SURGICAL APPARATUS, APPLIANCES, AND INSTRUMENTS.) PHILIPPE CHARLES MAURICE MONTBARBON, Paris, France. Filed Oct. 19, 1907.

L.I.M.

Particular description of goods.—Eye-Protectors.

Ser. No. 30,678. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) GLENN SPRINGS COMPANY, Spartanburg, S. C. Filed Oct. 19, 1907.



Particular description of goods.—Mineral Water, Carbonated Water, and Aerated Water.

Ser. No. 30,693. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) AMERICAN ELECTRIC LAMP CO. OF N. Y., Philadelphia, Pa. Filed Oct. 21, 1907.



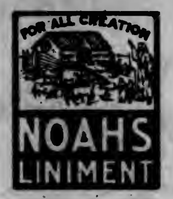
Particular description of goods.—Electric Lamps.

Ser. No. 30,704. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) A. E. LITTLE & COMPANY, Lynn, Mass. Filed Oct. 21, 1907.

ALICE A

Particular description of goods.—Boots and Shoes of Leather and Leather and Cloth.

Ser. No. 30,705. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) LOUIS B. MARTIN, Boston, Mass. Filed Oct. 21, 1907.



Particular description of goods.—Liniment.

Ser. No. 30,709. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) THE MARJENHOFF COMPANY, Charleston, S. C. Filed Oct. 21, 1907.

C. B. W.

Particular description of goods.—Biscuits, Crackers, and Cakes.

Ser. No. 30,710. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) NEW YORK & LONDON DRUG CO., New York, N. Y. Filed Oct. 21, 1907.

SANTACAPS

Particular description of goods.—Remedies for Venereal Diseases.

Ser. No. 30,715. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ENRICO P. SICCARDI, New York, N. Y. Filed Oct. 21, 1907.

"The Queen of Health"

Particular description of goods.—Vegetable Compounds Adapted for External Application in Rheumatism, Neuralgia, Spinal Diseases, External Tumors, and All Affections of the Skin.

Ser. No. 30,723. (CLASS 71. TOBACCO PRODUCTS.) CHARLES CHESTER BOGART, Middletown, N. Y. Filed Oct. 22, 1907.

C.C.B.

Particular description of goods.—Smoking and Chewing Tobacco, Cigars, Cigarettes, and Cheroots.

Ser. No. 30,725. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) CARGILL CLEVELAND & Co., Westfield, Mass. Filed Oct. 22, 1907.

THE QUEEN

Particular description of goods.—Whips.

Ser. No. 30,727. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) LYCOMING RUBBER CO., Williamsport, Pa. Filed Oct. 22, 1907. Used ten years.

Lycoming

Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 30,728. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) LYCOMING RUBBER CO., Williamsport, Pa. Filed Oct. 22, 1907. Used ten years.



Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 30,729. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) LYCOMING RUBBER CO., Williamsport, Pa. Filed Oct. 22, 1907. Used ten years.



Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 30,738. (CLASS 53. SACCHARINE FOODS NOT INCLUDED IN CLASS 47.) PENICK & FORD LTD., Shreveport and New Orleans, La. Filed Oct. 23, 1907.



Particular description of goods.—Molasses.

Ser. No. 30,739. (CLASS 53. SACCHARINE FOODS NOT INCLUDED IN CLASS 47.) PENICK & FORD LTD., Shreveport and New Orleans, La. Filed Oct. 23, 1907.



Particular description of goods.—Molasses.

Ser. No. 30,740. (CLASS 53. SACCHARINE FOODS NOT INCLUDED IN CLASS 47.) PENICK & FORD LTD., Shreveport and New Orleans, La. Filed Oct. 23, 1907.



Particular description of goods.—Molasses.

Ser. No. 30,741. (CLASS 53. SACCHARINE FOODS NOT INCLUDED IN CLASS 47.) PENICK & FORD LTD., Shreveport and New Orleans, La. Filed Oct. 23, 1907.



Particular description of goods.—Molasses.

Ser. No. 30,742. (CLASS 53. SACCHARINE FOODS NOT INCLUDED IN CLASS 47.) PENICK & FORD LTD., Shreveport and New Orleans, La. Filed Oct. 23, 1907.



Particular description of goods.—Molasses.

Ser. No. 30,743. (CLASS 53. SACCHARINE FOODS NOT INCLUDED IN CLASS 47.) PENICK & FORD LTD., Shreveport, La. Filed Oct. 23, 1907.

Aunt Dinah

Particular description of goods.—Molasses.

Ser. No. 30,750. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE DONALDSON-SHULTZ CO., Baltimore, Md. Filed Oct. 23, 1907.

SEAL BRAND

Particular description of goods.—Tomato Soup and Worcestershire Sauce.

Ser. No. 30,756. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) MILTON C. NELLIS, New York, N. Y. Filed Oct. 23, 1907.



Particular description of goods.—Canned, Bottled, and Preserved Fruits and Vegetables.

Ser. No. 30,759. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE DAVIS CHEMICAL COMPANY, Denver, Colo. Filed Oct. 24, 1907.

Mencampho

Particular description of goods.—A Salve or Ointment and an Unguent for the Treatment of Chapped Hands, Cold-Sores, Bruises, Catarrh, Croup, Earache, Piles, and Inflamed Conditions of the Skin and Mucous Membranes.

Ser. No. 30,761. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ABBIE GERTRUDE BAUMGARTEN, New York, N. Y. Filed Oct. 24, 1907.

MINERVA

Particular description of goods.—Skin and Face Food, Powder, Lotion, Balm, and Rouge, Tooth-Powder, and Scalp-Tonic.

Ser. No. 30,762. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ABBIE GERTRUDE BAUMGARTEN, New York, N. Y. Filed Oct. 24, 1907.



Particular description of goods.—Skin and Face Food, Powder, Lotion, Balm, and Rouge, Tooth-Powder, and Scalp-Tonic.

Ser. No. 30,763. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ABBIE GERTRUDE BAUMGARTEN, New York, N. Y. Filed Oct. 24, 1907.



Particular description of goods.—Skin and Face Food, Powder, Lotion, Balm, and Rouge, Tooth-Powder, and Scalp-Tonic.

Ser. No. 30,764. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ABBIE GERTRUDE BAUMGARTEN, New York, N. Y. Filed Oct. 24, 1907.



Particular description of goods.—Skin and Face Food, Powder, Lotion, Balm, and Rouge, Tooth-Powder, and Scalp-Tonic.

Ser. No. 30,769. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) GLO-ZO GLOSS CO., Philadelphia, Pa. Filed Oct. 24, 1907.

GLO-ZO

Particular description of goods.—A Material for Improving the Finish of Starched Fabrics and Preventing the Iron Sticking to the Same.

Ser. No. 30,772. (CLASS 41. KNITTED, NETTED, AND LACE GOODS.) JOHN W. SMITH, Chester, Pa. Filed Oct. 24, 1907.

CALITEX

Particular description of goods.—Laces Manufactured of Cotton, Linen, Silk, or other Material and Made by Machinery in Imitation of Hand-Made Lace.

Ser. No. 30,776. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE J. W. JAMES COMPANY, Wheeling, W. Va. Filed Oct. 25, 1907. Used ten years.

DR. JAMES'
CHERRY
Tar Syrup

Particular description of goods.—A Remedy in Liquid Form for Coughs, Colds, Bronchitis, Asthma, Hoarseness, Whooping-Cough, Croup, and All Lung Affections.

Ser. No. 30,778. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE J. W. JAMES COMPANY, Wheeling, W. Va. Filed Oct. 25, 1907. Used ten years.

DR. JAMES'
SOOTHING
SYRUP
CORDIAL.

Particular description of goods.—A Remedy in Liquid Form for Colic, Cramps, Summer Complaint, Diarrhea, Dyssentery, and Cholera Infantum.

Ser. No. 30,785. (CLASS 64. MEDICAL AND SURGICAL APPARATUS, APPLIANCES, AND INSTRUMENTS.) CHESTERMAN & STREETER, Philadelphia, Pa. Filed Oct. 25, 1907.

FACTIS

Particular description of goods.—Pads for Trusses.

Ser. No. 30,786. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) GLORIETTA RANCH COMPANY, Clovis, Cal. Filed Oct. 25, 1907.

GLORIETTA
RANCH

Particular description of goods.—Green, Dried, and Preserved Fruits and Vegetables.

Ser. No. 30,792. (CLASS 47. CONFECTIONERY.) HEYWOOD CANDY MANUFACTURING COMPANY, Des Moines, Iowa. Filed Oct. 25, 1907.

Florodora

Particular description of goods.—Candies.

Ser. No. 30,798. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) CHINA & JAPAN TRADING COMPANY, LIMITED, New York, N. Y. Filed Oct. 26, 1907.



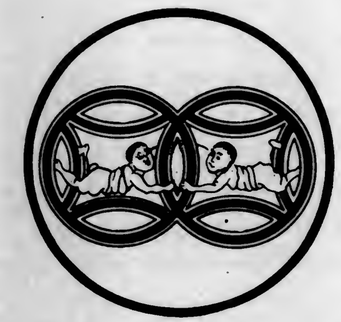
Particular description of goods.—Unbleached Sheetings, Shirtings, Drills, and Flannels Woven of Cotton Yarn.

Ser. No. 30,799. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) CHINA & JAPAN TRADING COMPANY, LIMITED, New York, N. Y. Filed Oct. 26, 1907.



Particular description of goods.—Unbleached Sheetings, Shirtings, Drills, and Flannels Woven of Cotton Yarn.

Ser. No. 30,800. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) CHINA & JAPAN TRADING COMPANY, LIMITED, New York, N. Y. Filed Oct. 26, 1907.



Particular description of goods.—Unbleached Sheetings, Shirtings, Drills, and Flannels Woven of Cotton Yarn.

Ser. No. 30,807. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE KNOWLTON DANDERINE CO., Chicago, Ill. Filed Oct. 26, 1907.

DANDERINE

Particular description of goods.—A Scalp-Tonic.

Ser. No. 30,808. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED. THE VALENTINE & BENTLEY SILK CO., New York, N. Y. Filed Oct. 26, 1907.

KUALA

Particular description of goods.—Silk Piece Goods.

Ser. No. 30,814. (CLASS 14. METALS, UNWROUGHT AND PARTLY WROUGHT.) GLOBE WIRE COMPANY, LIMITED, Sharpsburg, Pa. Filed Oct. 26, 1907.

GLOBE



Particular description of goods.—Polished Drill-Rods and Drawn Wire.

Ser. No. 30,826. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) GENEVA PRESERVING COMPANY, Geneva, N. Y. Filed Oct. 28, 1907.



Particular description of goods.—Canned Fruits and Vegetables.

Ser, No. 30,827. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) GENEVA PRESERVING COMPANY, Geneva, N. Y. Filed Oct. 28, 1907.



Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 30,828. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) GENEVA PRESERVING COMPANY, Geneva, N. Y. Filed Oct. 28, 1907.



Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 30,829. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) GENEVA PRESERVING COMPANY, Geneva, N. Y. Filed Oct. 28, 1907.



Particular description of goods.—Canned Fruits and Vegetables.

TRADE-MARKS

REGISTERED DECEMBER 3, 1907.

66,464. BEER. ANHEUSER-BUSCH BREWING ASSOCIATION, St. Louis, Mo.
Filed July 3, 1905. Serial No. 9,766. PUBLISHED AUGUST 13, 1907.

66,465. SPOOL-COTTON OR SEWING-THREAD. BLODGETT & ORSWELL CO., Pawtucket, R. I.
Filed May 26, 1906 Serial No. 19,872. PUBLISHED OCTOBER 1, 1907.

66,466. COTTON DUCK. CONSOLIDATED COTTON DUCK COMPANY, Baltimore, Md.
Filed August 19, 1907. Serial No. 29,466. PUBLISHED OCTOBER 1, 1907.

66,467. PHONOGRAPHS. DUPLEX PHONOGRAPH CO., Kalamazoo, Mich.
Filed October 15, 1906. Serial No. 22,703. PUBLISHED OCTOBER 1, 1907.

66,468. CERTAIN RUBBER ARTICLES. THE FAULTLESS RUBBER COMPANY, Akron, Ohio.
Filed February 23, 1907. Serial No. 25,525. PUBLISHED OCTOBER 1, 1907.

66,469. COFFEES. HEWLETT BROS. CO., Salt Lake City, Utah.
Filed March 31, 1906. Serial No. 18,386. PUBLISHED OCTOBER 1, 1907.

66,470. WHITE AND COLORED COTTON CLOTH. L. HESS & CO., INC., New York, N. Y.
Filed August 15, 1907. Serial No. 29,404. PUBLISHED OCTOBER 1, 1907.

66,471. COTTON DUCK. MOUNT VERNON-WOODBERRY COTTON DUCK COMPANY, Baltimore, Md.
Filed June 25, 1906. Serial No. 20,567. PUBLISHED OCTOBER 1, 1907.

66,472. CERTAIN WOOD MANUFACTURES. THE REES-SCOTT COMPANY, LIMITED, New Orleans, La.
Filed August 31, 1907. Serial No. 29,704. PUBLISHED OCTOBER 1, 1907.

66,473. SMOKING-TOBACCO. HYMAN RIPPEN, Perth Amboy, N. J.
Filed August 21, 1907. Serial No. 29,504. PUBLISHED OCTOBER 1, 1907.

66,474. STOGIES. RUBEN ROSENBERG, Pittsburg, Pa.
Filed August 15, 1907. Serial No. 29,402. PUBLISHED OCTOBER 1, 1907.

66,475. GUM-DROPS. ROWNTREE AND COMPANY, LIMITED, York, England.
Filed March 6, 1907. Serial No. 25,807. PUBLISHED OCTOBER 1, 1907.

66,476. CIGARS. RUPP & OESCHGER, Berlin, N. H.
Filed August 24, 1907. Serial No. 29,565. PUBLISHED OCTOBER 1, 1907.

66,477. BEDS AND COUCHES AND BED-SPRINGS. SANITARY STEEL COUCH CO., Elkhart, Ind.
Filed November 30, 1906. Serial No. 23,696. PUBLISHED FEBRUARY 26, 1907.

66,478. COTTON PIECE GOODS. C. SCHMITZ & CO., New York, N. Y.
Filed August 22, 1907. Serial No. 29,525. PUBLISHED OCTOBER 1, 1907.

66,479. UMBRELLAS. SIEGEL COOPER COMPANY, New York, N. Y.
Filed July 3, 1907. Serial No. 28,578. PUBLISHED OCTOBER 1, 1907.

66,480. SNUFF. ISRAEL SJOBERG, Roseau, Minn.
Filed August 15, 1907. Serial No. 29,409. PUBLISHED OCTOBER 1, 1907.

66,481. DRESS FABRICS COMPOSED OF WORSTED OR COTTON, AND WORSTED AND COTTON. STRAWBRIDGE & CLOTHIER, Philadelphia, Pa.
Filed August 20, 1907. Serial No. 29,482. PUBLISHED OCTOBER 1, 1907.

66,482. CERTAIN MEDICINE AND CORN-PLASTER. WILLIAM L. WHITE, Brooklyn, N. Y.
Filed August 16, 1907. Serial No. 29,412. PUBLISHED OCTOBER 1, 1907.

66,483. WOOLEN PIECE GOODS. WORUMBO MANUFACTURING COMPANY, Bath, Me.
Filed August 22, 1907. Serial No. 29,512. PUBLISHED OCTOBER 1, 1907.

66,484. CERTAIN RUBBER GOODS. THE FAULTLESS RUBBER COMPANY, Akron, Ohio.
Filed February 23, 1907. Serial No. 25,526. PUBLISHED OCTOBER 1, 1907.

66,485. CERTAIN SURGICAL GOODS. THE FAULTLESS RUBBER COMPANY, Akron, Ohio.
Filed February 23, 1907. Serial No. 25,527. PUBLISHED OCTOBER 1, 1907.

66,486. LIQUEURS. ENRICO CIABURRI & FLI., Naples, Italy.
Filed June 26, 1907. Serial No. 28,387. PUBLISHED OCTOBER 1, 1907.

66,487. CIDER. FLEMING & CHRISTIAN CO., Richmond, Va.
Filed August 7, 1907. Serial No. 29,275. PUBLISHED OCTOBER 1, 1907.

66,488. WHISKY. SIG. & SOL. H. FREIBERG, Cincinnati, Ohio.
Filed May 1, 1905. Serial No. 3,768. PUBLISHED AUGUST 29, 1905.

66,489. STOVEPIPES. JACKES-EVANS MANUFACTURING COMPANY, St. Louis, Mo.
Filed November 9, 1906. Serial No. 23,179. PUBLISHED DECEMBER 18, 1906.

66,490. WHISKY. JOHN DEWAR & SONS, LTD., Perth, Scotland.
Filed March 7, 1907. Serial No. 25,825. PUBLISHED OCTOBER 1, 1907.

66,491. LADIES' AND MISSES' DRESS-SKIRTS AND WALKING-OVERSKIRTS. THE ROYAL SKIRT CO., New York, N. Y.
Filed January 25, 1907. Serial No. 24,903. PUBLISHED FEBRUARY 26, 1907.

66,492. CERTAIN WEARING-APPAREL. WOLFF & GLASERFELD, Berlin, Germany.
Filed March 9, 1907. Serial No. 25,881. PUBLISHED OCTOBER 1, 1907.

66,493. LOADED PAPER SHOT-SHELLS. WINCHESTER REPEATING ARMS CO., New Haven, Conn.
Filed December 31, 1906. Serial No. 24,374. PUBLISHED FEBRUARY 12, 1907.

LABELS

REGISTERED DECEMBER 3, 1907.

13,906.—*Title:* "GUARANTEE." (For Cigars.) SCHMIDT & Co., New York, N. Y. Filed October 31, 1907.

13,907.—*Title:* "THE COMB MAKERS." (For Cigars.) FRANCIS E. NICHOLS, Leominster, Mass. Filed October 30, 1907.

13,908.—*Title:* "BIRDWOOD RYE." (For Whisky.) MARTIN ROTH, Washington, D. C. Filed November 4, 1907.

13,909.—*Title:* "HOME MALT TONIC." (For a Malt Beverage.) THE HOME BREWING & ICE CO., Joplin, Mo. Filed October 31, 1907.

13,910.—*Title:* "DR. MEANS' PILLS." (For Pills.) WILLIAM B. MEANS, Lebanon, Pa. Filed November 1, 1907.

13,911.—*Title:* "KING PHILIP BLEACHING WATER." (For Bleaching-Water.) OLIVA ST. DENIS, Fall River, Mass. Filed September 30, 1907.

13,912.—*Title:* "NONE SUCH FURNITURE & FLOOR POLISH." (For a Polish for Furniture and Floors.) GEO. W. SAUMS, Plainfield, N. J. Filed November 1, 1907.

13,913.—*Title:* "OVAL." (For Shears.) THE ACME SHEAR COMPANY, Bridgeport, Conn. Filed November 1, 1907.

PRINTS

REGISTERED DECEMBER 3, 1907.

2,169.—*Title:* "DON'T BE ODD." (For Flour.) WASHBURN CROSBY COMPANY, Minneapolis, Minn. Filed October 30, 1907.

2,170.—*Title:* "MEN'S AND BOYS' APPAREL." (For Men's and Boys' Apparel.) H. C. LYTTON, Chicago, Ill. Filed November 2, 1907.

2,171.—*Title:* "BUILT RIGHT & WEARWELL." (For Men's Clothing.) BERGER, RAPHAEL & WILE, New York, N. Y. Filed September 25, 1907.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

ALBERS BROS. MILLING COMPANY *v.* FORREST.

TRADE-MARK INTERFERENCE.

Decided July 8, 1907.

INTERFERENCE—PRINTING TESTIMONY.

The fact that the senior party took no testimony is not a sufficient reason for waiving the requirements of Rule 162.

ON PETITION.

TRADE-MARK FOR ROLLED OATS.

Mr. Chas. J. Schnabel and *Mr. John Imirie* for Albers Bros. Milling Company.

Mr. A. O. Behel for Forrest.

MOORE, *Commissioner:*

This is a petition that the requirement of the printing of testimony in this case be waived.

The senior party took no testimony and, according to the statement of the petitioner, was not represented at the taking of testimony by the junior party. It is urged that the petitioner should not be put to the expense of printing testimony when the opposing party did not actively defend his case, and the petitioner now offers to print the record should the other party, Forrest, appeal.

Rule 162 was clearly not intended to permit the filing of type-written copies of the record in place of printed copies under such circumstances as appear in this case. Exemption from printing is to be permitted only where by reason of poverty an inventor is, in fact, unable to bear the cost of printing the testimony.

The reasons for requiring printed copies of testimony apply as forcibly to records presented before the Office as to those presented before the courts, and it is not believed that the additional burden should be placed upon any of the tribunals of this Office of considering type-written instead of printed copies of testimony. In respect to the offer of the petitioner to print the testimony if appeal is taken it may be said that such agreements cannot be enforced by the Commissioner and should not therefore be considered.

The petition is denied.

HESS *v.* JOERISSEN *v.* FELBEL.

INTERFERENCE.

Decided July 19, 1907.

APPEAL ON PRIORITY—PATENTABILITY OF THE ISSUE.

The question of the patentability of the issue will not be considered on an appeal on priority except under such special circumstances as would warrant the exercise of the supervisory authority of the Commissioner.

APPEAL from Examiners-in-Chief.

TYPE-WRITING MACHINE.

Messrs. Baldwin & Wight for Hess.

Messrs. Knight Bros. for Joerissen.

Mr. Jacob Felbel pro se.

MOORE, *Commissioner:*

This is an appeal by Hess from the decision of the Examiners-in-Chief affirming the decision of the Examiner of Interferences that he is not the prior inventor of the invention in issue.

In his preliminary statement Hess alleged a date of conception subsequent to the filing date of the senior party. In response to an order of the Examiner of Interferences to show cause why judgment should not be rendered against him on the record Hess moved to dissolve the interference, alleging the non-patentability of the issue to all parties. This motion was denied by the Primary Examiner, and the Examiner of Interferences thereupon rendered judgment against Hess.

On appeal to the Examiners-in-Chief Hess urged the non-patentability of the issue to all parties; but they declined to make a recommendation under Rule 126.

Hess has again urged the non-patentability of the single claim of the issue upon this appeal and requests consideration under the exercise of my supervisory authority. The question raised in this case is similar to those considered in the Commissioner's decisions in *Sobey* v. *Holsclaw* (119 O. G., 1922) and *Potter* v. *McIntosh*, (120 O. G., 1823,) which decisions were affirmed by the Court of Appeals of the District of Columbia in *Sobey* v. *Holsclaw* (126 O. G., 3041) and *Potter* v. *McIntosh*, (127 O. G., 1995.) In these decisions it was stated that under the circumstances here presented only the question of priority was raised and

that the question of patentability would not be considered and that there was no occasion for the exercise of supervisory authority. This practice is believed to be a proper one, and no special circumstances are presented in this case which would warrant a deviation therefrom.

The decision of the Examiners-in-Chief is affirmed.

SILVER LAKE COMPANY *v.* SAMSON CORDAGE WORKS.

OPPOSITION.

Decided October 15, 1907.

1. TRADE-MARK—THE WORDS "SPOT CORD" AND A CORD HAVING SPOTS THEREON NOT ALTERNATIVES.

The words "Spot Cord" as a trade-mark for braided sash-cord *Held* not in conflict with the use of spots on a cord, the latter being a mere symbol which may be translated into words other than the words "spot cord." Spots on a cord and the words "Spot Cord" are not true alternatives.

2. SAME—THE WORDS "SPOT CORD" NOT INDEFINITE.

The words "Spot Cord" not being the mere equivalent or alternative, in a trade-mark sense, of a cord having spots thereon, such words will not be refused registration on the ground that a mark consisting of spots on a cord is too indefinite to form trade-mark subject-matter.

APPEAL from Examiner of Interferences.

TRADE-MARK FOR BRAIDED SASH-CORD.

Messrs. Macleod, Calver, Copeland & Dike for Silver Lake Company.

Messrs. Clarke, Raymond & Coale for Samson Cordage Works.

MOORE, *Commissioner:*

This is an appeal by the Silver Lake Company from a decision of the Examiner of Interferences dismissing its notice of opposition to the registration by the Samson Cordage Works of the words "Spot Cord" as a trade-mark for braided sash-cord.

Appellant asks that registration be refused to applicant on the ground that the mark described in such application conflicts with a mark to which it has a prior right. Appellant's rights are founded upon evidence showing that prior to the adoption of its trade-mark by applicant and prior to its manufacture of the article to which the mark is applied appellant manufactured and sold braided cords of various sizes and for various purposes having colored spots thereon. Appellant therefore urges that it acquired an exclusive right to the use of spots on braided cord as a mark of origin or ownership, that the words "Spot Cord" have the same significance as appellant's mark, and that it would therefore be damaged by the registration.

It may be observed that the testimony taken on behalf of appellant does not show that it ever used or intended to use the spots on its braided cord as a mark of origin or ownership or that the trade ever relied on such marks as an indication that the goods bearing them were made by appellant. It would therefore seem that the opposition might be dismissed on the ground that appellant has not shown the possession of any right which would be in any way interfered with by granting registration to the applicant. However, I prefer to place my decision of this case on the ground that, assuming appellant to have a right to the use of spots on a braided cord as a mark of origin or ownership, there is no conflict between such mark and the words "Spot Cord," for which applicant seeks registration. In the first place applicant's mark consists of words which may be spoken and which at the same time give a distinct impression to the eye, while the opposer's mark consists merely of a symbol which is liable to be translated into words differently by different individuals. It has been held, both by the Patent Office and by the courts, that many words and symbols are full equivalents—as, for example, the word *star* and the representation of a star or the word *squirrel* and the representation of a squirrel—and in such cases the registration of one of these would bar the registration of the other for the same class of goods. But in the examples given the symbol immediately suggests the word which it represents and no other, and vice versa. Such is not the case here. The appearance of opposer's product does not suggest the words "Spot Cord" any more than it suggests the words *fancy cord*. In this connection it is interesting to note that in the taking of testimony by appellant the cord was referred to as "fancy cord." The testimony of G. H. Shapley, the treasurer of appellant, (X-Q. 50, S. L. C. Rec., p. 33,) indicates that the cord was ordered by the term "fancy cord" or by submitting samples. If the words "Spot Cord" or *spotted cord* constituted a natural expression of the mental impression created by appellant's symbol, the trade would undoubtedly have used such terms; but if such is the fact the record fails to show it. As it does not appear from the record that applicant's product has become known as "spot cord" and as there is no reason to apprehend that it will become so known, I conclude that the registration of applicant's mark will not tend to cause confusion between the goods of the parties to this proceeding.

It is urged by appellant that registration should be refused in view of the decision of the Circuit Court of Appeals for the Eighth Circuit, reported in 134 Fed. Rep., 571, in which it was held that a mark for wire rope consisting of a colored strand twisted in the rope and not restricted to any particular color is too indefinite to constitute a valid trade-mark. This decision has been affirmed by the United States Supreme Court, their decision being reported in 201 U. S., 166. Since I do not regard applicant's mark as the mere equivalent of a cord having spots thereon, the decision referred to is not considered material to the disposition of this case.

The decision of the Examiner of Interferences dismissing the opposition and granting registration to the applicant is affirmed.

EX PARTE WESTINGHOUSE.

APPLICATION FOR PATENT.

Decided October 29, 1907.

ABANDONMENT OF APPLICATION—SUFFICIENCY OF ACTION.

Where on December 29, 1905, an Examiner rejected certain claims and made a formal objection to another claim, to which the applicant made a sufficient response on January 27, 1906, with the exception that he failed to mention the informal claim, and the Examiner in his next action on February 16, 1906, reiterated the formal objection, but did not state that the applicant's action by reason of failure to mention the informal claim was unresponsive and did not make such objection final *Held* that an amendment curing the informality filed January 18, 1907, is filed in proper time, the renewal of the objection by the Examiner without objection to the insufficiency of the applicant's action of January 27, 1906, constituting a waiver of the question of incompleteness of such action.

APPEAL from Examiners-in-Chief.

ELASTIC-FLUID TURBINE.

Mr. J. S. Green and *Mr. Melville Church* for the applicant.

MOORE, *Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief affirming a decision of the Primary Examiner holding that the application is abandoned because of "lack of proper prosecution."

As originally filed the application contained thirteen claims, of which the thirteenth read as follows:

A turbine, substantially as herein shown and described.

On December 29, 1905, the Examiner rejected claims 2, 3, and 4 upon a French patent, and with reference to claim 13 said:

Claim 13 is informal, being merely a reference to the specification.

On January 27, 1906, applicant authorized and requested the cancelation of claims 2, 3, and 4, but made no reference to claim 13. The Examiner apparently treated this action as a request for reconsideration of his action on claim 13 and on February 16, 1906, replied to applicant's letter of January 27, 1906, as follows:

Claim 10 is informal, being merely a reference to the specification.

The claims having been renumbered, claim 10 of this letter is original claim 13.

On January 18, 1907, applicant authorized and requested the cancelation of claim 10 and added three new claims. This amendment was not entered, the Examiner holding that the application was abandoned, since no action was taken with reference to original claim 13 within one year from the Office action of December 29, 1905. It is from this holding that the appeal was taken to the Examiners-in-Chief.

It would have been perfectly proper for the Examiner to have made his action of February 16, 1906, final, for it was a repetition of his action of December 29, 1905. However, this was not done, nor was any reference made to the fact that applicant's action of January 27, 1906, was not completely responsive to the Office action of December 29, 1905.

In view of the character of the Office action of February 16, 1906, it must be held that the Examiner thereby waived the question of the incompleteness of applicant's action of January 27, 1906, and that applicant was, under the statute, entitled to a year from February 16, 1906, within which to amend his application. Such an amendment having been filed on January 18, 1907, the case cannot be held to have been abandoned.

The decision of the Examiners-in-Chief is reversed.

EX PARTE LABANCE.

APPLICATION FOR PATENT.

Decided November 16, 1907.

FINAL REJECTION—WHEN WARRANTED.

Where substitute claims were rejected upon the same references as the prior claims and it was stated that the "claims are substantially like those previously rejected on the same references, being, if anything, a little broader," *Held* that a final rejection was proper.

ON PETITION.

DOVETAILING-MACHINE.

Messrs. Heidman & Street for the applicant.

MOORE, *Commissioner:*

This is a petition that the Examiner be instructed that the final rejection of February 11, 1907, was premature and that the amendment filed February 23, 1907, should be entered and considered.

In his sixth action, dated February 11, 1907, the Examiner rejected substitute claims 1 and 5 upon the same references as the prior claims and stated:

As these claims are substantially like those previously rejected on the same references—being, if anything, a little broader,—this action is made final.

Petitioner contends that as the Examiner admits that the substitute claims are "a little broader" they are not the same as those previously rejected and that a final rejection was therefore improper.

It is not necessary that the claims should be identical to warrant a final rejection. If the claims have not been materially amended, but are substantially the same, a final rejection is proper. (*Ex parte Cox*, 122 O. G., 1045.) Slightly broadening the claims in no way avoids the references. An amendment which merely broadens the scope of the claims is not apparently an attempt to avoid the references and must be construed as either a desire on the part of applicant to present broader claims on appeal or an attempt to merely avoid a final rejection. If such an amendment was considered sufficient to prevent a final rejection, it would be impossible for the Primary Examiner to ever bring the prosecution of the case before him to a close.

The petition is denied.

THE W. BINGHAM COMPANY *v.* G. W. BRADLEY'S SONS.

TRADE-MARK INTERFERENCE.

Decided November 9, 1907.

1. TRADE-MARKS—INTERFERENCE IN FACT—ARROW PIERCING LETTER "B" AND LETTERS "X L C R" PIERCED BY ARROW INCLOSED IN DIAMOND-SHAPED BORDER.

Held that a trade-mark comprising the letters "X L C R" pierced by an arrow, the whole being inclosed in a diamond-shaped figure, does not so nearly resemble a trade-mark for the same merchandise which comprises the letter "B" pierced by an arrow as to cause confusion in the mind of the public.

2. SAME—SAME—EX PARTE SMITH & HEMINWAY (129 O. G., 2500) DISTINGUISHED.

Where the words are alike in appearance or where the common features of a mark are of sufficient prominence as to cause the merchandise of both parties to become known by a common name, the interference should be continued in order that the Office may have the benefit of testimony showing whether confusion in trade has actually occurred; but where there is so marked a difference in appearance and significance of the marks when considered as a whole that no likelihood of confusion in trade is apparent the interference should be dissolved.

ON APPEAL.

TRADE-MARK FOR HARDWARE.

Mr. T. W. Johnson for The W. Bingham Company.

Messrs. Munn & Co. for G. W. Bradley's Sons.

BILLINGS, *Assistant Commissioner:*

This is an appeal from the decision of the Examiner of Trade-Marks dissolving an interference. The trade-mark of G. W. Bradley's Sons consists of the letter "B" pierced by an arrow. The trade-mark of The W. Bingham Company as originally filed comprised the letters "X L C R" pierced by an arrow. Subsequently to the declaration of interference, upon his request, jurisdiction was given to the Examiner of Trade-Marks for the purpose of re-forming the issue of interference, and The W. Bingham Company was permitted to amend its drawing to show the entire mark disclosed in the specimens originally filed. The mark thus displayed comprises the letters "X L C R" pierced by an arrow, the whole being inclosed in a diamond-shaped figure bounded by two parallel lines. The Examiner of Trade-Marks then held in his decision on the motion for dissolution that there was no such close resemblance between the marks of the two applications which would be likely to cause confusion in trade, and dissolved the interference. It is contended upon behalf of G. W. Bradley's Sons that the representation of an arrow is the salient feature of the mark and that confusion in trade would be likely to follow from the concurrent use of the marks of the respective applicants upon goods of the same descriptive properties. This contention is believed to be untenable. In determining the question of interference in fact between the trade-marks it is necessary to consider the appearance of the mark as a whole and to determine whether the predominating features of the mark are substantially identical in appearance, significance, and sound. In the present case the mark of G. W. Bradley's Sons consists of an arrow crossing the letter "B," and it is doubtful if the mark would be known as the "arrow" brand in view of the prominence of the letter "B." The mark of The W. Bingham Company, on the other hand, consists of a composite mark, the most striking features of which are the letters "X L C R," which is merely a misspelling of the word "Excelsior." This, it is believed, far overshadows the significance of the arrow, and by reason of its location within the diamond-shaped frame gives the mark an entirely different appearance from that of G. W. Bradley's Sons. It is likely that the goods of The W. Bingham Company would be known as the "Excelsior" brand, and not as the "arrow" brand. There is, therefore, not only a difference in appearance of the marks, but also a difference in significance.

In each of the cases cited in support of the contention of G. W. Bradley's Sons that the interference should be continued it appears that either the trade-marks of the respective parties had become known by a common name or, as in the case of *ex parte Smith & Heminway*, (129 O. G., 2500,) that the common feature of the mark is of so great prominence as to overshadow other features of the mark. In such cases the interference should be continued in order that the Office may have the benefit of testimony showing whether confusion in trade has actually occurred; but where, as in the present case, there is so marked a difference in appearance and significance of the marks when considered as a whole that no likelihood of confusion in trade is apparent it is believed that the interference should be dissolved.

The decision of the Examiner of Trade-Marks is affirmed.

GOLD *v.* GOLD.

PATENT INTERFERENCE.

Decided November 7, 1907.

INTERFERENCE — INDEFINITE MOTION — AMENDED MOTION — TRANSMISSION.

It is well settled that piecemeal action cannot be permitted; but where a party acting in good faith files a motion which is held to be indefinite and an amended motion curing the informalities is promptly filed within the limit of appeal set from the previous decision the amended motion should be transmitted.

APPEAL on motion.

STEAM-HEATING SYSTEM.

Messrs. Raymond & Barnett and *Messrs. H. C. Evert & Co.* for E. H. Gold.

Messrs. Arthur C. Fraser & Usina for E. E. Gold.

BILLINGS, *Assistant Commissioner:*

This case is before me on two appeals by E. H. Gold from decision of the Examiner of Interferences.

The first appeal is from the decision granting E. E. Gold's motion for transmission and denying the transmittal of E. H. Gold's motion. The second appeal is from the decision of the Examiner of Interferences refusing to consider the amended motion of E. H. Gold.

It appears from the record of this interference that under date of August 2, 1907, times were set for taking testimony. The limit for filing motions for dissolution was set to expire September 3, 1907. There was subsequently a motion filed in behalf of E. H. Gold to extend the time within which motions might be filed, and this motion was accompanied by the affidavit of Percival H. Truman, an employee of counsel for E. H. Gold, which affidavit was executed August 7. In this affidavit it was stated that his employer was ill, was absent from the city at that time because of this illness, that he would not return to the city for some time, and that in the opinion of the affiant a motion for dissolution should be filed; that in view of the fact that his employer was counsel in this case and had charge of this interference and others relating thereto, it would be practically impossible for a motion to be filed within the time specified. This motion was of course denied under the prevailing practice, for the reason that it was not positively known that a motion would be filed; but in the decision denying the extension it was stated that the reasons given in support of that motion would be considered in connection with any showing that might be made later should a motion for dissolution be filed. It appears that eleven days after the expiration of the time E. H. Gold filed a motion, accompanying the same with a showing why the motion was filed late. This showing was also to be taken in connection with the showing previously made with the motion for an extension of time. The Examiner of Interferences held that the motion was informal in some respects, while formal in others, but refused to transmit any part of the motion, on the ground that the showing for the

delay was not sufficient. In this latter holding it is believed that the Examiner of Interferences was in error. The showing accompanying the motion for dissolution, when taken in connection with the previous showing accompanying the motion for an extension of time, is regarded as sufficient to excuse the short delay of eleven days. Subsequently counsel for E. H. Gold filed an amended motion for dissolution which clearly corrected the informalities in the first motion and gave more specific statements of reasons in excuse of the delay. The second motion was filed within the limit of appeal and on the same day that an appeal was filed from the decision on the first motion. The Examiner of Interferences dismissed the second motion because an appeal had also been filed from the previous decision. It is well settled that the practice which has been characterized as piecemeal cannot be permitted. Where, however, the record indicates good faith in interference cases and where the Office holds that a motion is not sufficiently specific to warrant transmittal and the applicant promptly files a specific motion within the limit of appeal set from the previous decision and it is found that the second motion is sufficiently definite to meet all requirements, it is believed that less delay will be experienced and less harm done to any parties in the case by transmitting the second motion than by denying the transmission thereof. In such cases the amended motion should be transmitted, provided, of course, that the excuse for the delay in filing the first motion, should it be filed late, is regarded as satisfactory.

There is no error found in transmitting the motion filed by E. E. Gold for dissolution.

The decision of the Examiner of Interferences transmitting the motion of E. E. Gold is affirmed, and his decision refusing to transmit E. H. Gold's amended motion is reversed.

BROWN *v.* INWOOD AND LAVENBERG.

PATENT INTERFERENCE.

Decided November 18, 1907.

INTERFERENCE—MOTION TO DISSOLVE—AFFIDAVITS.

When a party may not appeal from a decision on a motion to dissolve, he may not appeal from a determination upon the admissibility of affidavits filed with that motion.

ON PETITION.

MEANS FOR MAKING BOX-BLANKS.

Messrs. Bulkley & Durand and *Messrs. Davis & Davis* for Brown.

Messrs. Dyrenforth, Dyrenforth & Lee for Inwood and Lavenberg.

BILLINGS, *Assistant Commissioner:*

This case comes up on petition by Brown from the action of the Primary Examiner in refusing to consider an affidavit of William P. Healy filed in support of a motion to dissolve.

It appears that Brown brought a motion to dissolve on the ground that the device of Inwood and Lavenberg is inoperative, and therefore they have no right to make the claims corresponding to the issue of the interference.

The Primary Examiner denied this motion and refused to consider in connection therewith the affidavit above referred to, on the ground that certain testimony taken in an equity suit in which Brown's assignee and the parties Inwood and Lavenberg were involved and which is quoted in the affidavit was not supported by a certificate from the clerk of the court or other proper evidence as to its authenticity.

It is pointed out in *Browne* v. *Stroud* (122 O. G., 2688) that the consideration of affidavits upon a motion to dissolve is not a right which parties are entitled to demand, and in that case, where, as in this, no appeal lay from the decision of the Primary Examiner, it is stated:

> When, as is the position of the petitioner here, a party may not appeal from the decision on the motion, he may not appeal from a determination upon the admissibility of affidavits. The determination in such cases will only be reviewed upon a petition making out an apparent case of abuse of discretion.

No such abuse of discretion has been shown in this case.

The petition is denied.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., November 14, 1907.

Levy, Diamant, Oppenheimer & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Ainsworth Shoe Company, of 209-211 St. Clair street, Toledo, Ohio, for registration of a trade-mark and a trade-mark registered to Levy, Diamant, Oppenheimer & Company, of 107 Battery street, San Francisco, Cal., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Levy, Diamant, Oppenheimer & Company having been returned undelivered, notice is hereby given to the said Levy, Diamant, Oppenheimer & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 31, 1907.

The Kittredge Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Business Magazine Company, of Knoxville, Tenn., for registration of a trade-mark and a trade-mark registered to The Book-keeper Publishing Company, Limited, of 61 Fort street, Detroit, Mich., and a trade-mark registered to The Kittredge Company, of 800 Broad street, Newark, N. J., and 73 Reade street, New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said The Kittredge Company having been returned undelivered, notice is hereby given to The Kittredge Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference tney should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 26, 1907.

Mayer Sam & Company, their assigns or legal representatives take notice:

An interference having been declared by this Office between the application of The Palace Clothing Company, of 709-711 Kansas avenue, Topeka, Kans., for registration of a trade-mark and a trade-mark registered to Mayer Sam & Company, of 24 West One

Hundred and Twenty-fifth street, New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Mayer Sam & Company having been returned undelivered, notice is hereby given to the said Mayer Sam & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

[Vol. 131. No. 5.]

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.
[BY AUTHORITY OF CONGRESS.]

VOL. 131—No. 6. TUESDAY, DECEMBER 10, 1907. PRICE—$5 per year.

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Patents	701	No. 873,000 to No. 873,700, inclusive.
Designs	15	No. 38,935 to No. 38,949, inclusive.
Trade-Marks	88	No. 66,494 to No. 66,581, inclusive.
Labels	10	No. 13,914 to No. 13,923, inclusive.
Prints	2	No. 2,172 to No. 2,173, inclusive.
Reissues	None.	
Total	816	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	1	.....	New Hampshire	.....	.....
Alaska, District of	.....	.....	New Jersey	32	2
Arizona Territory	.....	.....	New Mexico Ter't'y	1	.....
Arkansas	3	.....	New York	109	29
California	13	4	North Carolina	3	.....
Colorado	10	1	North Dakota	3	.....
Connecticut	19	2	Ohio	47	7
Delaware	.....	1	Oklahoma	2	.....
District of Columbia	3	4	Oregon	3	.....
Florida	3	.....	Panama	.....	.....
Georgia	4	1	Pennsylvania	82	1
Hawaii Territory	.....	.....	Philippine Islands	.....	.....
Idaho	4	.....	Rhode Island	6	.....
Illinois	79	9	South Carolina	1	1
Indiana	12	2	South Dakota	2	.....
Iowa	16	1	Tennessee	4	1
Kansas	11	2	Texas	8	.....
Kentucky	6	.....	Utah	.....	1
Louisiana	.....	.....	Vermont	1	1
Maine	6	.....	Virginia	2	2
Maryland	4	1	Washington	6	.....
Massachusetts	50	2	West Virginia	5	.....
Michigan	23	2	Wisconsin	20	1
Minnesota	11	.....	Wyoming	.....	.....
Mississippi	.....	.....	U. S. Army	.....	.....
Missouri	13	9	U. S. Navy	1	.....
Montana	2	.....			
Nebraska	12	.....	Total to citizens of the United States	644	87
Nevada	1	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	1	.....	Netherlands	.....	2
Belgium	3	.....	Newfoundland	.....	.....
Brazil	2	.....	New South Wales	.....	.....
British West Indies	.....	.....	New Zealand	2	.....
Canada	14	2	Norway	.....	.....
Cape Colony	.....	.....	Persia	.....	.....
Chile	.....	.....	Queensland	.....	.....
China	.....	.....	Rhodesia	1	.....
Costa Rico	.....	.....	Russia	.....	.....
Cuba	2	.....	Scotland	1	.....
Denmark	6	.....	South Australia	.....	.....
Ecuador	.....	.....	Spain	.....	.....
England	19	4	Sweden	.....	.....
France	4	3	Switzerland	1	.....
Germany	15	2	Transvaal; South Africa	.....	.....
Haiti	.....	.....	Victoria	.....	.....
Ireland	1	.....	Western Australia	.....	.....
Italy	.....	.....			
Japan	.....	.....			
Java	.....	.....	Total to citizens of foreign countries	72	13
Mexico	.....	.....			

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., November 14, 1907.

Levy, Diamant, Oppenheimer & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Ainsworth Shoe Company, of 209-211 St. Clair street, Toledo, Ohio, for registration of a trade-mark and a trade-mark registered to Levy, Diamant, Oppenheimer & Company, of 107 Battery street, San Francisco, Cal., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Levy, Diamant, Oppenheimer & Company having been returned undelivered, notice is hereby given to the said Levy, Diamant, Oppenheimer & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 4, 1907.

When Thursday falls on a legal holiday, final fees upon applications for the current issue must be paid before the close of business on the preceding Wednesday.

W. F. WOOLARD,
Chief Clerk.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business December 3, 1907.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
303	XVII. Linotyping; Printing; Matrix-Making; Nut and Bolt Locks; Clutches.	Nov. 19	Nov. 4	169
244	XXXV. Buckles, Buttons, and Clasps; Cards, Picture, and Sign Exhibiting; Toilet; Signals; Garment-Supporters.	Nov. 19	Sept. 16	629
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Nov. 13	Oct. 3	251
172	XXXI. Alcohol; Charcoal and Coke; Ammonia, Water, and Wood Distillation; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Oils, Fats, and Glue; Water Purification; Mineral Oils.	Nov. 11	Oct. 12	230
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Towers; Iron Structures.	Nov. 9	Nov. 1	182
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants and Flowers.	Nov. 4	Oct. 10	281
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Fishing and Trapping; Stationery; Stone-Working; Educational Appliances.	Nov. 4	Oct. 8	377
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Nov. 4	Oct. 4	365
167	V. Bookbinding; Harvesters; Jewelry; Music.	Nov. 4	Aug. 31	296
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electricity, Medical and Surgical; Electric Signaling; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas and Canes.	Nov. 2	Sept. 18	316
14	XXIX. Coopering; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking-Tools; Woodworking; Fire-Escapes; Ladders.	Nov. 2	Sept. 16	344
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Nov. 2	Aug. 6	442
152	XXX. Lamps and Gas-Fittings; Fluid-Pressure Regulators; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Oct. 30	Oct. 2	258
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Oct. 28	Oct. 16	232
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Presses; Tobacco; Store-Service; Pneumatics.	Oct. 25	Sept. 20	336
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Measuring Instruments; Wind-Wheels; Engraving.	Oct. 24	Nov. 5	332
332	X. Carriages and Wagons.....	Oct. 23	Sept. 19	519
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Oct. 22	Aug. 27	418
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Oct. 19	Oct. 8	321
327	XVIII. Steam-Engines; Steam-Boilers; Steam-Engine Valves; Steam and Vacuum Pumps; Injectors and Ejectors.	Oct. 19	Sept. 12	281
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus; Harness.	Oct. 17	Sept. 30	359
322	XII. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Oct. 17	Sept. 12	612

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Oct. 16	Oct. 10	336
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Oct. 12	Oct. 18	400
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Oct. 12	July 15	533
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heat-Engine Plants.	Oct. 11	Oct. 1	569
308	XV. Bread, Pastry, and Confection Making; Coating; Laminated Sheets and Fabrics; Fuel; Glass; Hydraulic Lime and Cement; Paper-Making; Paving; Plastics; Plastic Block and Earthenware Apparatus; Plastic Compositions; Photography.	Oct. 9	Sept. 9	584
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Oct. 7	Sept. 17	262
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Oct. 5	Oct. 7	545
238	XIX. Furnaces; Stoves and Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel.	Oct. 3	Aug. 19	513
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Oct. 1	Aug. 10	512
107	XXXVII. Electricity, Conductors; Electric Lighting; Electricity, General Applications.	Sept. 23	Aug. 1	701
307	XIV. Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal-Ware Making; Tools; Wire-Working; Compound Tools.	Sept. 23	July 18	288
312	VII. Games and Toys; Mechanical Motors; Paper Manufactures; Velocipedes; Optics.	Sept. 20	Sept. 24	356
142	IX. Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage; Air and Gas Pumps.	Sept. 18	Sept. 28	247
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Sept. 13	Aug. 1	649
280	XL. Deposit and Collection Receptacles; Special Receptacles and Packages; Check-Controlled Apparatus; Fine Arts; Paper Receptacles; Package and Article Carriers; Wooden Receptacles; Baggage; Lighting-Fixtures; Cloth, Leather, and Rubber Receptacles.	Sept. 13	July 19	876
321	XXXIX. Water Distribution; Baths and Closets.	Sept. 4	July 1	818
105	XXVI. Electricity, Generation; Electric Heating and Rheostats; Electric Railways; Motive Power.	Sept. 3	Aug. 2	475
109	XVI. Telegraphy; Telephony.....	Aug. 24	June 10	686
352	XLI. Railway Draft Appliances; Railway-Ties and Fasteners; Railway-Rails and Joints; Resilient Tires and Wheels.	Aug. 1	July 1	1221
	Total number of applications awaiting action			18,121
161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS.			
	Trade-Marks.....	Nov. 29	Nov. 12	341
	Designs.....	Dec. 2	Nov. 2	51
	Labels and Prints.....	.....	.....	....

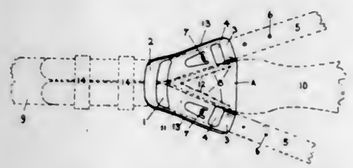
Notice.

Coupons unless properly filled out will not be accepted in payment for copies of publications.

PATENTS

GRANTED DECEMBER 10, 1907.

873,000. HARNESS-BUCKLE. EDWARD I. ALLISON, Saginaw, Mich. Filed Feb. 16, 1907. Serial No. 357,727.



1. A harness buckle comprising an approximately triangular plate slotted near its front end, the plate also provided with slots adjacent its rear angles, and having raised keepers located adjacent the slots, rigid projections pressed out of the plate adjacent the slots and opposite the keepers, means for securing the buckle to the harness, and guide ribs extending along the sides of the plate.

2. In a harness, the combination with hip straps, a crupper strap and a back strap, of an approximately triangular plate slotted at its corners, and provided with apertures intermediate the slots, the crupper strap lying upon the plate and covering the apertures, the back strap extending beneath the plate and crupper strap, means passing through the apertures for connecting the buckle, and crupper and back straps respectively, the plate also provided with raised keepers located adjacent the slots and rigid means adapted to engage the hip straps passing beneath the raised keepers and through the slots.

3. In a harness, the combination with converging straps and an intermediate strap, of a buckle located at the juncture of the converging straps with the intermediate strap, the buckle comprising a slotted flat plate, the slots being arranged in triangular relation, two of which slots are located at an angle to each other to receive the converging straps, means carried by the buckle for holding the converging straps in place, the straps together passing through the remaining slot and adjustable keepers for retaining the free ends of the converging straps and the intermediate strap together.

4. In a harness, the combination with converging straps and an intermediate strap, of a buckle located at the juncture of the converging straps with the intermediate strap, the buckle comprising a slotted flat plate, the slots being arranged in triangular relation, two of which slots are located at an angle to each other, to receive the converging straps, and means carried by the buckle for holding the converging straps in place, the straps together passing through the remaining slot.

5. The combination with a continuous back and crupper strap, and independent hip straps converging toward the continuous strap, of a slotted plate secured to the continuous strap, the slots being arranged triangularly relative to each other and two of the slots arranged aslant relative to each other to receive the converging apertured hip straps, the hip straps passing through the respective slanted slots and thence through the single remaining slot, raised keepers carried by the plate adjacent the slots beneath which the hip straps pass, and rigid lugs carried by the plate and receivable in the apertures in the hip straps.

[Claim 6 not printed in the Gazette.]

873,001. SHOE-SOLE SUPPORT. JAMES W. ARROWSMITH, Morristown, N. J. Filed Dec. 12, 1906. Serial No. 347,502.



1. In a device of the character described, the combination of a metallic plate provided with longitudinal slits and a tongue of metal between said slits and secured to the plate near its ends, but out of contact therewith intermediate the ends.

2. In a device of the character described, the combination of a plate of sheet metal of greater length than width, curved in one plane and arched from end to end in another plane and provided with longitudinal curved slits intermediate its ends, a tongue of metal connected to the said plate near the ends thereof and extending across its arch in a substantially straight line, said tongue being curved from side to side, and normally out of contact with the plate at its medial parts.

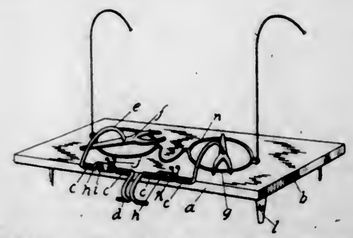
3. In a device of the character described, the combination of a plate of sheet metal of greater length than width, arched from end to end and provided with longitudinal curved slits intermediate its ends, a tongue of metal connected to the said plate near the ends thereof and extending across its arch in a substantially straight line, said tongue being curved from side to side, and normally out of contact with the plate at its medial parts.

4. In a device of the character described, the combination of a plate of sheet metal of greater length than width, arched from end to end and provided with longitudinal slits intermediate its ends, a tongue of metal connected to the said plate near the ends thereof and extending across its arch and having one of its surfaces in a substantially straight line, said tongue being curved from side to side.

5. A device of the character described consisting of a piece of sheet metal of greater length than width having substantially plane surfaces at its ends and a curved medial portion integral therewith and portions between said medial curved portion and the edges of the plate disposed in a different plane thereto.

[Claims 6 to 12 not printed in the Gazette.]

873,002. SPECTACLE-CLAMP. STEAD A. ASQUITH, Waterloo, Iowa. Filed Sept. 17, 1907. Serial No. 393,339.



1. A device of the character described, composed of a base-plate, bearings thereon, a rock-shaft in said bearings,

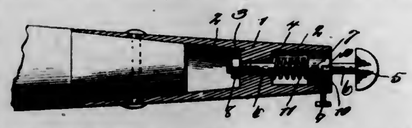
a clamp-member extending from said rock-shaft and adapted to contact with said base-plate, a dentated rack-plate supported by said base-plate, and a spring one end of which is secured to said rock-shaft and whose other end is adapted to be adjustably engaged with said dentated rack-plate.

2. A device of the character described, composed of a base-plate, a non-combustible pad thereon, bearings extending from said base-plate, a rock-shaft in said bearings, a clamp-member extending from said rock-shaft and adapted to contact with the pad on said base-plate, a dentated rack-plate supported by said base-plate, and a spring one end of which is secured to said rock-shaft and whose other end is adapted to be adjustably engaged with said dentated rack-plate.

3. A device of the character described, composed of a base-plate, a plurality of bearings in alinement thereon, a plurality of rock-shafts each one mounted in certain of said bearings, one end of each rock-shaft being projected outwardly to form a crank-handle and its other end being projected inwardly to form a clamp-support, a clamp pivotally secured to the inward end of each clamp-support, a dentated rack-plate supported adjacent to each rock-shaft, and springs each having one end secured to one of said rock-shafts with its other end adapted to be adjustably secured between any of the dentations on the adjacent rack-plate.

4. A device of the character described, composed of a base-plate, a non-combustible pad thereon, a plurality of alined bearings supported by said base-plate, a plurality of rock-shafts each one being mounted in certain of said bearings, one end of each rock-shaft being projected outwardly to form a crank-handle and its other end projected inwardly to form a clamp-support, a bifurcated clamp pivotally secured to the inward end of each clamp-support, a dentated rack-plate supported adjacent to each rock-shaft, and springs each having one end secured to one of said rock-shafts with its other end adapted to be adjustably secured between any of the dentations on the adjacent rack-plate.

873,003. WHIFFLETREE-HOOK. LEONIDAS J. AUSTIN, Allapaha, Ga. Filed Aug. 13, 1907. Serial No. 388,323.

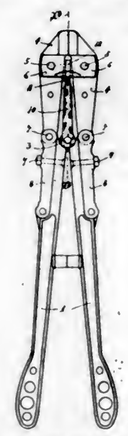


In a device as set forth, the combination of a whiffletree and a casing, said casing having a bore provided with an apertured portion, said whiffletree having a reduced portion to be received by a portion of the said bore, a rivet for holding the casing to said reduced portion, revolving member comprising a button 5, and a stem 6, having an integral shoulder 7, provided about its periphery, with a plurality of recesses 10, said stem being received by the apertured portion of the casing, a spring interposed between the apertured portion and the shoulder 7, to hold the said member pressed outwardly, a nut threaded upon the stem to limit the outward movement of said member, said casing having a thumb screw to engage said recesses of the shoulder 7, to prevent rotation of the said member when once adjusted, as and for the purpose specified.

873,004. COMBINATION BOLT AND NUT CUTTER. JACOB BACKSCHEIDER, Minneapolis, Minn. Filed Sept. 18, 1907. Serial No. 393,490.

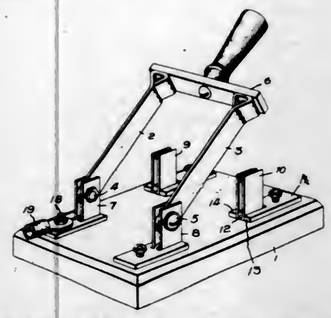
1. The combination with a pair of cutting jaws and a pair of laterally spaced tie bars to which said jaws are pivoted, of a pair of handle bars pivotally connected to said jaws, and a chisel connected by a common pivot to said two handle bars at a point between the pivotal connections of said handle bars and cutting jaws, the said chisel being arranged for coöperation with one of the said tie bars, substantially as described.

2. The combination with a pair of cutting jaws and a pair of laterally spaced tie bars to which said jaws are pivoted, of a pair of handle bars pivotally connected to said jaws, and a chisel connected by a common pivot to said two handle bars at a point between the pivotal connections of



said handle bars and cutting jaws, the said chisel being arranged for coöperation with one of the said tie bars and having a projecting guide finger that works between two tie bars and the said two cutting jaws, substantially as described.

873,005. KNIFE-SWITCH. HENRY P. BALL, New York, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 5, 1905. Serial No. 253,932.



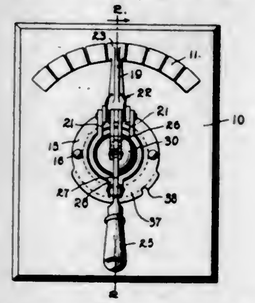
1. In an electric switch, the combination with a base and a blade movably mounted on said base, of a contact clip for engagement with said blade comprising a foot-piece secured to said base and having a tongue between slots in said foot-piece struck up from the plane thereof, and a bent engaging strip surrounding said tongue in engagement with the sides of said slots and with the portions underlying said tongue resting upon said base.

2. In an electric switch, the combination with a base, of a blade and a coöperating contact, and a supporting clip pivotally carrying said blade comprising a foot-piece secured to said base and having a tongue between slots in said foot-piece struck up from the plane thereof, and an engaging strip bent around said tongue in engagement with the sides of said slots and with the portion under-lying said tongue resting upon said base.

3. A clip for an electric switch comprising a foot-piece having a tongue between slots in said foot-piece and bent out of the plane thereof, and a U-shaped engaging strip around said tongue in engagement with the sides of said slots and in fixed relation with said tongue.

4. A clip for an electric switch comprising a foot-piece having a tongue formed by parallel slots and offset from said foot-piece, and a metallic strip bent to enter said slots in engagement with the sides thereof and engage said tongue, said strip being flush with the underside of the said foot-piece.

873,006. RHEOSTAT. HENRY P. BALL, New York, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 21, 1905. Serial No. 292,720.



1. A rheostat comprising a series of contacts, a controlling arm mounted for sliding engagement therewith to vary the resistance, and means for breaking the circuit at any of said contacts by disengaging said arm therefrom upon the occurrence of underload or overload conditions.

2. A starting rheostat comprising a series of contacts, a controlling arm mounted to successively engage the same to vary the resistance, means for disengaging said arm from any of said contacts to break the circuit upon the occurrence of underload or overload conditions, and means for preventing a reëngagement until the arm is brought to starting position.

3. A starting rheostat comprising a series of contacts, a controlling arm adapted for sliding engagement with said contacts but biased therefrom and pivoted for movement in a plane at an angle to the plane of said contacts, and means for preventing engagement between said arm and said contacts until the former is moved to the starting position.

4. A rheostat comprising a series of contacts, a controlling arm adapted for sliding engagement with said contacts but biased therefrom and pivoted for movement in a plane at an angle to the plane of said contacts, means for holding said arm in engagement with said contacts during normal operation, and means for releasing the same in any position upon the occurrence of underload or overload conditions.

5. A starting rheostat comprising a series of contacts, a controlling arm adapted for sliding engagement with said contacts but biased therefrom and pivoted for movement in a plane at an angle to the plane of said contacts, means for preventing engagement between said arm and said contacts until the former is moved to the starting position, and means for releasing the same in any position upon the occurrence of underload or overload conditions.

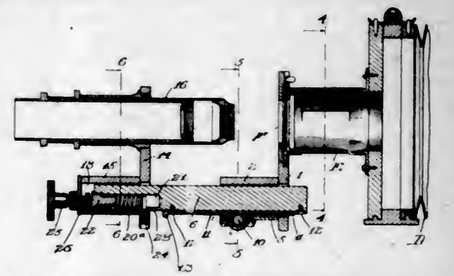
[Claims 6 to 15 not printed in the Gazette.]

873,007. MICROSCOPE. EDWARD BAUSCH, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 25, 1907. Serial No. 370,199.

1. In a microscope, a suitable support, a microscope mounting, a slide having a guiding face common to the support and to the microscope mounting, and a fine and coarse adjusting mechanisms controlling the adjustment of the parts.

2. In a microscope, a support, a slide adjustable longitudinally in the support, coarse adjusting mechanism for moving the slide, a microscope mounting adjustable longitudinally of the slide, and a fine adjusting mechanism for moving the microscope mounting.

3. In a microscope, a suitable support, a slide adjustable longitudinally in the support, coarse adjusting mechanism for the slide, a microscope mounting adjustable on the slide, and a screw for fine adjustment, carried by the microscope mounting.

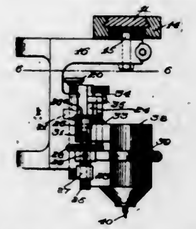


4. In a microscope, a suitable support having a pair of guide faces arranged at an angle to each other, a suitable microscope mounting having a pair of guide faces also arranged at an angle to each other, and a slide having a pair of guide faces arranged at an angle to each other and cooperating with the guide faces on both the support and the mounting.

5. In a microscope, a suitable support, a slide guided on the support, a microscope mounting guided on the slide and having its guiding faces alined with the guiding faces on the support, and fine and rough adjusting mechanisms, one for controlling the movement of the slide on the support and the other for controlling the movement of the microscope mounting on the slide.

[Claims 6 to 11 not printed in the Gazette.]

873,008. ENGRAVING-MACHINE. EDWARD BAUSCH, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed June 13, 1907. Serial No. 378,685.



1. In an engraving machine, the combination with a tracer, and a pantograph controlled thereby, of a carrier frame pivoted to the pantograph, a motor movable on the carrier frame and having a cutting tool secured to its shaft, and coarse and fine adjustments for feeding the motor with the tool on the carrier.

2. In an engraving machine, a tracer, a tool controlled thereby, a coarse adjustment for the tool, and a fine adjustment moved by the coarse adjustment and controlling the feeding of the tool.

3. In an engraving machine, a tracer, a tool controlled thereby, a coarse adjustment for the tool, a fine adjustment moved by the coarse adjustment and controlling the feeding of the tool, and an adjustable stop arranged to limit the feeding of the tool by the fine adjustment and to have its position determined by the latter.

4. In an engraving machine, a tracer, a carrier frame controlled thereby, a coarse adjustment slide guided on the carrier frame, a carrier guided on the slide and having a cutting tool arranged thereon, fine adjustment mechanism connecting the slide and the carrier, and coöperating stops on the carrier and the slide, one of which is adjust-

able and has its position determined by the fine adjustment.

5. In an engraving machine, a tracer, a carrier frame connected thereto, a coarse adjustment slide guided on the frame, a motor carrier guided on the slide, a fine adjustment mechanism connecting the slide and the motor carrier, and a motor on the motor carrier having a cutting tool connected thereto and moved therewith.

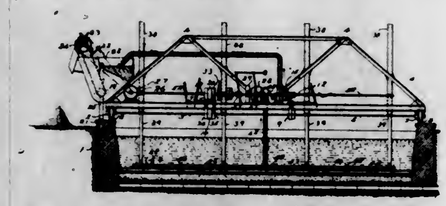
[Claims 6 to 13 not printed in the Gazette.]

873,009. BELT-FASTENER. FREDERIC BAXTER, Manchester, England. Filed Apr. 8, 1907. Serial No. 367,047.



In bolt belt fasteners a nut having slots formed with their innermost sides eccentrically disposed for the purpose and in manner substantially as herein set forth.

873,010. MACHINE FOR CLEANING FILTER-BEDS. HIRAM W. BLAISDELL, Los Angeles, Cal. Filed Apr. 6, 1904. Serial No. 201,933.



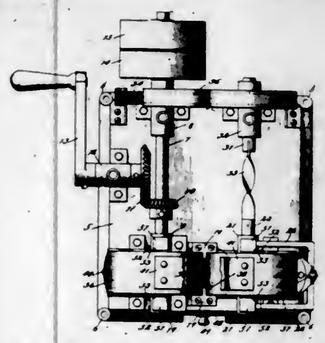
1. A machine for cleaning filter beds comprising a support adapted to travel lengthwise the filter bed, suction means for elevating and discharging material, a series of independently operating scrapers arranged end to end entirely across the filter and adapted to scrape material from the surface of the filter bed in the direction of travel of the support and a connection between said scraper means and said elevating and discharging means.

2. A machine for cleaning filter beds comprising a support adapted to travel lengthwise the filter bed, suction means for elevating and discharging material, a series of independently operating scrapers arranged end to end entirely across the filter and adapted to scrape material from the surface of the filter bed in the direction of travel of the support, a connection between said scraper means and said elevating and discharging means and means for raising said scraper means and connection.

3. A machine for cleaning filter beds comprising a support adapted to travel lengthwise the filter bed, suction means for elevating and discharging material, a series of independently operating scrapers arranged end to end entirely across the filter and adapted to scrape material from the surface of the filter bed in the direction of travel of the support and a connection between said scraper means and said elevating and discharging means, said connection comprising a horizontally extending pipe into which each of the scraper means is adapted to discharge.

4. A machine for cleaning filter beds comprising a support adapted to travel lengthwise the filter bed, suction means for elevating and discharging material, guides on said support, frames movable vertically in said guides, a series of independently operating pivotally supported scrapers supported from said frames and arranged end to end entirely across the filter and adapted to scrape material from the surface of the filter bed in the direction of travel of the support and connections on said frame affording communication between said scraper means and said elevating and discharging means.

873,011. KNIFE-POLISHING MACHINE. GEORGE S. BLAKESLEE, Chicago, Ill. Filed Dec. 28, 1906. Serial No. 349,765.



1. In a knife-polishing machine, the combination with two rotatable polishing wheels placed edge to edge, of a covering over same consisting of a pair of separate, movable hoods, the inner edges of such hoods being close to the bite of the wheels, whereby a narrow slot is formed into which a knife can be entered and be directed down between said wheels, and means for connecting said hoods together, substantially as specified.

2. In a knife-polishing machine, the combination with two rotatable polishing wheels placed edge to edge, of a covering over the same consisting of a separate semi-cylindrical hood portion over each wheel, the inner edges of such hood portions being close to the bite of the wheels, whereby a narrow slot is formed into which a knife can be entered and be directed down between said wheels, and an arched bridge-piece secured to the upper faces of said hood portions for connecting such hood portions together, substantially as specified.

3. In a knife-polishing machine, the combination with two rotatable polishing wheels lying in the same plane and placed edge to edge, of a covering over the same having a slot directly over the bite of the wheels to permit and direct the passage of a knife between the wheels, and a powder receptacle carried by said covering and having a discharge opening adapted to direct powder from the receptacle onto the surfaces of said wheels, substantially as specified.

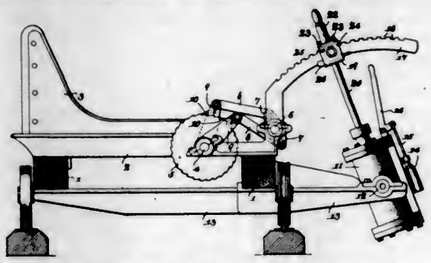
4. In a knife-polishing machine, the combination with two rotatable polishing wheels lying in the same plane and placed edge to edge, of a powder receptacle above said wheels, and a covering over said wheels having a slot directly over the bite of the wheels to permit and direct the passage of a knife between the wheels, said slot being widened between its ends to permit powder to be fed to the wheels at the same time that a knife is in position between the wheels, substantially as specified.

5. In a knife-polishing machine, the combination with two rotatable polishing wheels lying in the same plane and placed edge to edge, of a covering over the same having a slot directly over the bite of the wheels to permit the passage of a knife between the wheels, said slot being widened between its ends to permit powder to be fed to the wheels at the same time that a knife is in position between the wheels, and a powder receptacle carried by said covering and having a discharge opening adapted to direct powder through said slot, substantially as specified.

[Claims 6 to 8 not printed in the Gazette.]

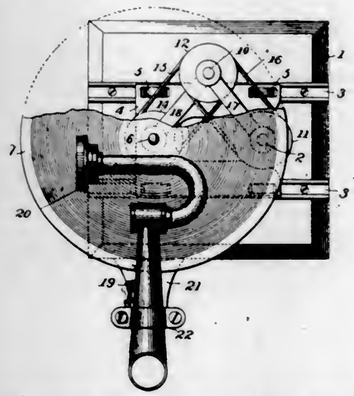
873,012. SAWMILL SET-WORKS. PATRICK J. BOGIE and MATTHEW C. ANDERSON, Washburn, Wis. Filed Feb. 26, 1906. Serial No. 303,028.

1. In saw mill set works, a set shaft, ratchet wheels thereon, pawl carriers for each ratchet wheel, a rock shaft, crank arms on said shaft projecting therefrom in diametrically opposite directions, connections between the cranks and the pawl carriers, an arc-shaped crank arm carried by the rock shaft, an oscillating cylinder, and a piston-rod connected to the last-named crank arm.



2. In saw mill set works, the combination with a rocker shaft having double or reversely-disposed crank arms, of links pivotally connected with the crank arms, a set shaft, pawl carriers connected with the shaft and with the links, an oscillating cylinder, a crank arm carried by the rock shaft and struck from the pivotal support of the cylinder as a center, and a piston-rod adjustably connected with the crank arm.

873,013. PHONOGRAPH. JOSEPH BORNAND, Pelham, and BURCHARD THOENS, New York, N. Y. Filed June 1, 1907. Serial No. 376,804.



1. The combination of a relatively fixed reproducer, a rotative record shiftable by said reproducer in a given direction, and in a straight line relatively to said reproducer, and means independent of the reproducer tending to shift said record in the direction in which it is moved by the reproducer.

2. The combination with a stationary sound tube, of a carriage free to move laterally in a straight line, beneath the end of said tube, a rotatable record support mounted on said carriage, stationary driving means, and flexible connections between said driving means and record support for rotating said support without interfering with its free lateral motion.

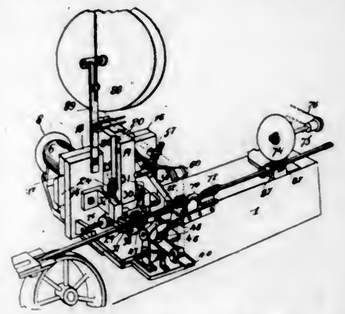
3. The combination with a stationary sound tube, of a rotatable record support mounted upon a carriage free to move laterally in a straight line in either direction and means independent of the stylus whereby the friction and inertia of the carriage when it is moved in one direction is almost overcome.

4. The combination with a stationary sound tube, of a rotatable record mounted upon a laterally movable carriage, rollers supporting said carriage and inclined trackways upon which said rollers move.

5. The combination with a stationary sound tube, of a rotatable record mounted upon a laterally movable carriage, rollers supporting said carriage, and track-ways for the rollers so inclined to the horizontal as to almost overcome the frictional resistance of the carriage to motion in one direction.

[Claims 6 to 8 not printed in the Gazette.]

873,014. CIGARETTE-TIPPING MACHINE. ARTHUR L. BOUCHER, New York, N. Y., assignor to New York Cigarette Machine Company, New York, N. Y., a Corporation of New York. Filed Oct. 15, 1906. Serial No. 338,892.



1. In a cigarette machine, means for forming a cigarette rod and moving the same in the direction of its length and means interposed in the path of the cigarette rod for applying cork tips to the cigarette rod, after it comes from the "former".

2. In a cigarette machine, means for forming a cigarette rod and moving it in the direction of its length and means operating transversely of the cigarette rod for applying tips thereto after the rod comes from the "former".

3. In a cigarette machine, means for forming a cigarette rod and moving it in the direction of its length and means interposed in the path of the cigarette rod, traveling in the direction thereof, and adapted to apply tips to the rod while traveling with it.

4. In a cigarette machine, means for forming a cigarette rod and moving it in the direction of its length and means traveling in the direction of the cigarette rod and adapted to transversely apply a tip thereto while traveling with the rod.

5. In a cigarette machine, means for forming a cigarette rod and moving it in the direction of its length and means for partially attaching a tip to the cigarette rod, and means through which the rod passes, for completing the attachment of the tip to the rod.

[Claims 6 to 20 not printed in the Gazette.]

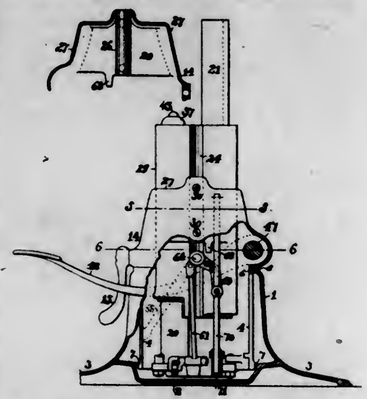
873,015. DENTAL CHAIR. ARTHUR W. BROWNE, Prince Bay, N. Y., assignor to The S. S. White Dental Manufacturing Company, Philadelphia, Pa. Filed Sept. 19, 1906. Serial No. 335,189.

1. The combination in a chair base, of the pedestal, the supporting-cylinder rotatably mounted therein, a clamping lever placed between said pedestal and supporting-cylinder and bearing near one end upon the former and at or near its opposite end upon the latter, a screw-bolt passing through an opening in said lever at a point above where it bears upon said pedestal and also through an opening or bearing in said supporting-cylinder, and an operating handle having threaded connection with said screw-bolt outside said supporting-cylinder.

2. The combination in a chair base, of the supporting-cylinder, an extensible chair-body supporting column, the main section of said column having an elliptical cross-section, said main section having bearing in the supporting-cylinder at but two points diametrically opposite each other on the flat side of the ellipse midway the long axis thereof.

3. The combination in a chair base, of the supporting-

cylinder, an extensible chair-body supporting column, the main section of said column having an elliptical cross-section, centrally disposed longitudinal grooves diametrically opposite each other on the flat sides of said main section, and corresponding projections on said supporting-cylinder, said projections fitting in said grooves.

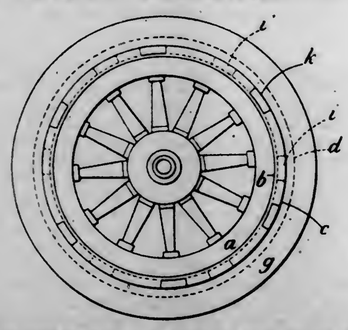


4. The combination in a chair base, of the supporting-cylinder, an extensible chair-body supporting column, the main section of said column having an elliptical cross-section, centrally disposed longitudinal grooves diametrically opposite each other on the flat sides of said main section, and corresponding projections mounted upon said supporting-cylinder and fitting said grooves, one of said projections being adjustable toward and away from said main section.

5. The combination in a chair base, of the supporting-cylinder, an extensible chair-body supporting column movable up and down in said cylinder, longitudinal grooves on the exterior of said column, plates integral with said cylinder, one of said plates being slightly flexible or movable toward and away from said column, a projection on each of said plates, each projection fitting a groove in said column, and means for altering the position of said movable plate.

[Claims 6 to 9 not printed in the Gazette.]

873,016. PNEUMATIC AND SOLID TIRE FOR VEHICLE-WHEELS. JAMES BURNHAM, London, England. Filed Jan. 28, 1907. Serial No. 354,563.

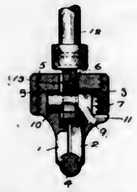


1. The combination of a wheel, a band on the exterior thereof having side flanges of unequal heights, one of said flanges being notched and the other slotted, of a tire rim carrying a tire and provided with internal projections of substantially the same size as said notches, and wedges fitting in said notches, substantially as described.

2. The combination of a wheel, a band on the exterior thereof, having side flanges of unequal heights, one of said flanges being slotted and the other notched, said band being also provided with stop pieces, a tire rim carrying a tire, said rim being of a size to pass over the narrower of said flanges and having inwardly-projecting blocks of substantially the same size as said notches, and wedges adapted to fit into said notches, one end of each wedge passing into one of said slots, substantially as described.

3. The combination of a tire, a two-part tire rim holding said tire, the inner edges of said rim abutting squarely against each other, two-part fastening blocks secured to said tire rim at intervals, and countersunk means for locking the parts of said blocks together, thereby locking the parts of said tire rim together and leaving the interior of said blocks with a smooth surface when locked, substantially as described.

873,017. TROLLEY-WIRE EAR. WILLIAM G. CAREY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 21, 1907. Serial No. 358,533.



1. An ear for trolley wires comprising a jaw member having a projection at its upper side provided with vertical and transverse recesses, a supporting member having an eye located in said vertical recess, a second jaw member provided with a projection extending through said eye and engaging the wall of said transverse recess, and means for forcing said jaw members toward each other.

2. An ear for trolley wires comprising a jaw member having at its upper side a projection provided with vertical and horizontal recesses, a supporting member having an eye located in said vertical recess, a second jaw member having at its upper edge a bracket provided on the inner side thereof with a cylindrical projection extending through said eye and engaging the wall of said horizontal recess, and means for forcing said jaw members toward each other.

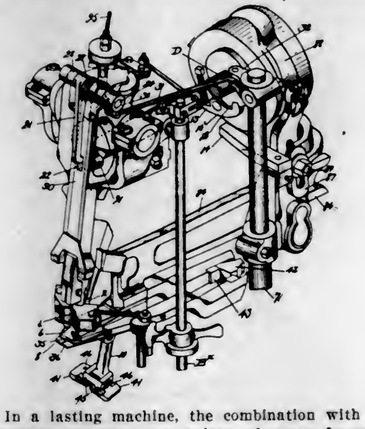
3. An ear for trolley wires comprising a jaw member having at its upper side a cylindrical projection provided with a peripheral screw thread and vertical and horizontal recesses, a supporting member having an eye located in said vertical recess, a second jaw member having a projection extending through said eye and engaging the wall of said transverse recess, and a nut mounted on said peripheral screw thread and adapted to force said jaw members toward each other.

873,018. LASTING-MACHINE. JAMES CAVANAGH, Jr., Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 16, 1906. Serial No. 301,449.

1. In a lasting machine, the combination with means for working an upper over a last, of means including a movable carrier for supplying fastening material in position to be inserted to secure the upper in overworked position, means for causing the insertion of the fastening material, and means for suspending the operation of said carrier while the overworking means continues in operation.

2. In a lasting machine, the combination with means for working an upper over a last, of means including a tack carrier for supplying tacks in position to be driven to secure the upper in overworked position, a driver, and means for suspending the operation of the tack carrier while the overworking means continues in operation.

3. In a lasting machine, the combination with grippers and means for actuating the grippers to work an upper over a last, of means for supplying tacks, a driver, and means for simultaneously rendering the tack supplying means and the driver inoperative while the grippers continue in operation for working the upper over the last.



4. In a lasting machine, the combination with means for working an upper over a last, of means for pressing the overworked portion of upper into position to be secured and for delivering tacks in position to be driven, and means for rendering inoperative said pressing and tack delivering means while the overworking means continues in operation.

5. In a lasting machine, a thick presser for forcing the upper into position to be secured, and a thin presser for forcing the upper into position to be secured, actuating means for said pressers, and means under control of the operator for rendering either of said pressers operative or inoperative at will.

[Claims 6 to 30 not printed in the Gazette.]

873,019. FRAME FOR SUPPORTING COAL-DRILLS. WILLIAM H. CLARKSON, Edwards Station, Ill. Filed Dec. 6, 1906. Serial No. 346,580.



1. A frame having independent opposed extremities, an adjustable bar between and separating them, a collar inclosing the bar and the frame extremities, a nut carried within one of the said extremities and held from turning therein, said nut adapted to bear outward upon the collar, and a screw carried by the nut and adapted to engage the adjustable bar.

2. A device of the class described comprising a frame having substantially parallel separated extremities, a collar for receiving such extremities, a slidable bar between the extremities, an internally screw threaded member carried in the collar and extending into one of the frame ends and having an enlargement within one of the ends of said frame for the purposes described, and a screw carried by the member, one end adapted to contact with the slidable bar, the said enlargement of said member adapted to bear outward against the inner surface of said collar.

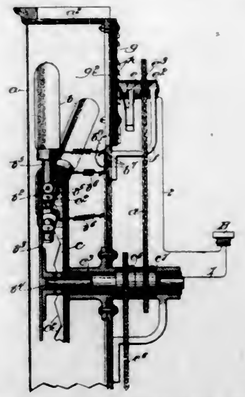
3. A device of the character described comprising divided frame extremities, a bar positioned between the divided extremities and adapted to be clamped therebetween in any vertical adjustment, a member for inclosing the frame and bar, a screw for engaging the bar, and a nut for carrying the screw, said nut being seated in one of the frame extremities and prevented from turning, and adapted to bear outward against the member due to contact of its screw upon the said adjustable bar.

4. A device of the character described comprising a frame having independent substantially parallel extremities, a bar adjustable between said extremities, a collar carried by and inclosing the extremities, an internally threaded nut having an enlarged portion, there being an opening in the collar to receive the nut, there also being a larger opening in one of the frame extremities for receiving the enlarged portion of the nut, a screw carried by the nut and engaging the adjustable bar, the enlarged portion of the nut adapted to bear against the collar substantially as described.

5. A device of the character described, comprising a frame, its lower end engaging the coal, and having two upper substantially parallel extensions, a collar surrounding such extensions, a vertically slidable bar carried between the extensions within the collar there being a square opening within one side of the collar and a larger opening opposite said square opening within the adjacent frame extension, a member having a screw threaded aperture and seated partially in the smaller square opening and partially within the larger opening, that portion within the larger opening adapted to bear upon the inside surface of the collar as described, the said square opening preventing the member from turning, and a screw carried in and by the member and adapted to contact with the slidable bar and clamp the collar, the frame ends and the said bar firmly together.

[Claim 6 not printed in the Gazette.]

873,020. TRANSPARENCY. PAUL E. COLLINS, Boston, Mass., assignor, by direct and mesne assignments, to Electric Novelty Machine Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 7, 1904. Serial No. 235,896.



1. In a transparency, the combination with a translucent design portion; of an illuminating element having

opaque portions between said design portion and the luminant movable from a position parallel to the plane of the said translucent portion to a portion at an angle thereto; and continuously operating means for producing such movement of said element.

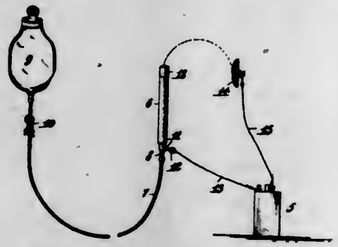
2. In a transparency, a translucent portion; a series of illuminating elements having opaque portions between said translucent portion and the luminant pivotally supported behind said translucent portion; and a movable member for moving said elements back and forth between positions in which they are respectively substantially parallel to the plane of the translucent portion and at an angle thereto.

3. The combination with a translucent design, of electric lamps provided with globes having stripes of opaque or semi-opaque coloring mater in line with the filaments; and continuously operating means for causing said lamps to travel back and forth between a position parallel to the plane of the design and a position at an angle thereto.

4. In a transparency, a part to be illuminated; means for illuminating the same from the back; a member having parallel stripes of opaque, or semi-opaque, coloring matter pivotally supported between the illuminating means and the part to be illuminated, its pivotal axis being transverse to the stripes, and means for rocking said member on its pivot.

5. In a transparency, the combination with a translucent design; of a plurality of electric lamps behind said design, said lamps being provided with globes having light interfering portions; a mechanically operated device for producing a bodily movement of said lamps back and forth between a position substantially parallel with the plane of the translucent design at a position at an angle thereto; a traveling switch member to control the circuits of said lamps; and common operating mechanism whereby said mechanically operated device and said switch member are caused to operate, substantially as described.

873,021. ELECTROTHERAPEUTIC SYRINGE. HARLOW R. COOL, Bradford, Pa. Filed Aug. 2, 1907. Serial No. 386,754.



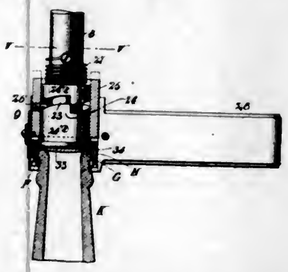
1. The combination with a syringe having a hollow nozzle and a metallic perforated cap applied to the outer end of said nozzle, of a contact-plate, a conducting-wire within said nozzle having yielding contact with said cap, a source of electrical energy, and electrical connections from the latter to said conducting-wire and to said contact-plate.

2. The combination with a syringe having a hollow nozzle and a metallic perforated cap applied to the outer end of said nozzle, of a conducting-wire passing through said nozzle and having its outer end coiled and in contact with said metallic-cap, a contact-plate, a source of electrical energy, and electrical connections from the latter to said conducting wire and to said contact-plate.

3. The combination with the syringe having a hollow nozzle and a perforated metallic cap applied to one end of said nozzle, of a conducting wire extending lengthwise through the nozzle and having its outer end coiled to form a substantially conical depressible contact interposed between the end wall of said cap and the end of said nozzle, a contact-plate, a battery, and electrical connections from said battery to said conducting wire and to said contact-plate.

4. The combination with the syringe having a hollow nozzle and a metallic perforated cap applied by frictional contact to the outer end of said nozzle, of a metallic bushing in the wall of said nozzle at the inner end thereof, a conducting-wire connected to said bushing and extending lengthwise through the nozzle, said wire having its outer end coiled to form a depressible contact bearing against said perforated cap, a battery, a contact-plate, a conducting-wire between said battery and contact-plate, and a conducting-wire between said battery and the bushing in the nozzle and having a plug removable in said bushing.

873,022. BOTTLE-CAPPING MACHINE. AUGUST W. CORDES, New York, N. Y. Filed Sept. 21, 1906. Serial No. 335,538.



1. In a machine for applying a cap having a clamping ring to a bottle, means for initially rotating the bottle and the cap relatively to one another and finally rotating the clamping ring relatively to the cap.

2. In a machine for applying a cap having a clamping ring to a rotatable bottle, a bottle support cam guides for rotating said support when it is depressed, and a cap applying head adapted to depress a cap on the bottle without rotation of said head.

3. In a machine for applying a cap having a clamping ring to a bottle, a bottle support arranged to be simultaneously depressed and rotated, a cap applying head depressible in alinement with said support, and means for independently rotating the clamping ring.

4. In a machine for applying a cap having a clamping ring to a bottle, a cap applying head having a spring ring to receive a bottle cap, means for depressing said cap upon a bottle, and means for gripping the clamping ring to rotate it.

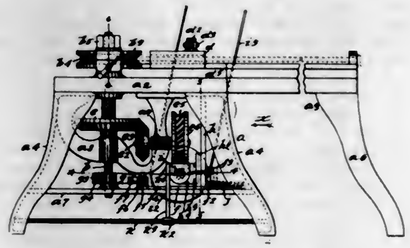
5. In a machine for applying a cap having a clamping ring to a bottle, a cap applying head having a spring ring adapted to engage the cap independently of the clamping ring, means for depressing the cap applying head upon a bottle, and means for grasping the clamping ring to rotate it.

[Claims 6 to 21 not printed in the Gazette.]

873,023. PIPE-BENDING MACHINE. JAMES F. COX, Jersey City, N. J. Filed Sept. 12, 1906. Serial No. 334,220.

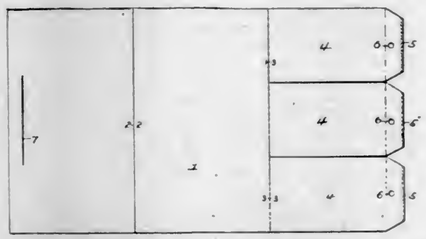
1. In a machine of the class described the combination with a bending former and a vertically arranged shaft for actuating said former of a horizontally arranged shaft geared in connection with the vertically arranged shaft and provided with a worm gear wheel, a support pivoted adjacent to the worm gear wheel, a worm shaft mounted in said support, and means for operating said support so as to throw the worm shaft into and out of connection with the worm gear wheel, substantially as shown and described.

2. In a machine of the class described the combination with a bending former and a vertically arranged shaft for actuating said former of a horizontally arranged shaft provided with a worm gear wheel, a movable support mounted adjacent to the worm gear wheel, a worm shaft mounted in said support and adapted to operate in connection with the worm gear wheel, and devices in operative connection with the vertically arranged shaft and with said support for automatically throwing the worm shaft out of connection with the worm gear, substantially as shown and described.



3. In a machine of the class described the combination with a bending former and a vertically arranged shaft for actuating said former of a horizontally arranged shaft provided with a worm gear wheel, a movable support mounted adjacent to the worm gear wheel, a worm shaft mounted in said support and adapted to operate in connection with the worm gear wheel, devices in operative connection with the vertically arranged shaft and with said support for automatically throwing the worm shaft out of connection with the worm gear, and a pedal lever in connection with said support and whereby the worm shaft may be thrown back into connection with the worm gear wheel, substantially as shown and described.

873,024. POSTAL MAILING-CARD. DWIGHT W. CUSTER, Brooklyn, N. Y. Filed Sept. 11, 1906. Serial No. 334,163.

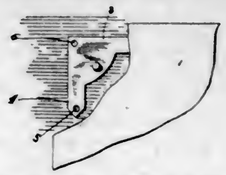


1. A mailing device comprising a body portion foldable upon itself, and a series of detachable tags integral with one edge of said body portion and foldable between the two members of the foldable body portion.

2. A mailing card comprising a foldable body portion, having a slit, and a series of detachable tags integral with one edge of said body portion and foldable into the said foldable portion, one of said tags adaptable to be passed over the free edges of the folded body portion, and pass through the slit in the latter.

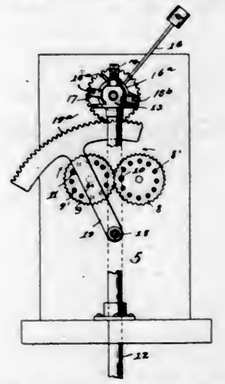
873,025. RUG-FASTENER. NATHANIEL K. DAVIDYAN, Philadelphia, Pa. Filed June 6, 1907. Serial No. 377,646.

In a rug fastener, the combination of a plate secured to the rug, said plate having a circular perforation adjacent one of its edges, a bushing, and a detachable headed retaining device capable of being inserted between the plate



and rug, said retaining device passing loosely through the perforation and extending into the bushing.

873,026. TIME-CONTROLLED GAS-COCK. AUGUSTINE DAVIS, Chicago, Ill., assignor to Davis Acetylene Company, Elkhart, Ind., a Corporation of South Dakota. Filed June 4, 1906. Serial No. 320,061.



1. In a device of the class described, the combination with the hour-hand shaft of a clock movement, and a gas burner provided with main and pilot light tips, of a valve controlling the flow of gas to said main and pilot light tips, a counterweighted arm loosely mounted on the stem of said valve, coöperating tappets on said valve-stem and arm, respectively, and mechanism actuated by said hour-hand shaft of the clock movement adapted to raise and tilt said arm over its intermediate vertical position alternately from both sides of the vertical position to ignite and extinguish the main light, substantially as described.

2. In a device of the class described, the combination with the hour-hand shaft of a clock movement, and a gas burner provided with main and pilot light tips, of a valve-controlling the flow of gas to said main and pilot light tips, a counterweighted arm loosely mounted on the stem of said valve, coöperating tappets on said valve-stem and arm, respectively, a pinion loosely mounted on said valve-stem having a pin and slot connection with said arm, and means actuated by said hour-hand shaft of the clock movement for turning said pinion alternately in opposite directions, substantially as described.

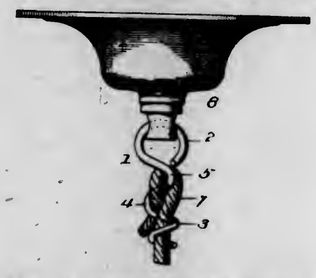
3. In a device of the class described, the combination with the hour-hand shaft of a clock movement, and a gas burner provided with main and pilot light tips, of a valve controlling the flow of gas to said main and pilot light tips, a counterweighted arm loosely mounted on the stem of said valve, coöperating tappets on said valve-stem and arm, respectively, a pinion loosely mounted on said valve-stem and having a pin and slot connection with said arm, a pivoted segmental rack engaging said pinion, and adjustable means actuated by said hour-hand of the clock movement for oscillating said rack, substantially as described.

4. In a device of the class described, the combination with the hour-hand shaft of a clock-movement and a gas burner provided with main and pilot light tips, of a valve

controlling the flow of gas to said main and pilot light tips, a counterweighted arm loosely mounted on the stem of said valve, coöperating tappets on said valve-stem and arm, respectively, a pinion loosely mounted on said valve-stem and having a pin and slot connection with said arm, a segmental rack engaging said pinion, a pivoted arm carrying said rack, a pair of intergeared pinions actuated by the hour hand shaft of the clock-movement and each provided with apertures spaced around its circumference, and pins insertible in said apertures and adapted to engage and oscillate said rack-carrying arm at predetermined times determined by the relative positions of said pins in their respective pinions, substantially as described.

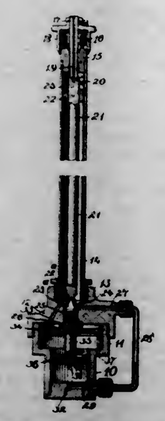
5. In a device of the class described, the combination with a burner-valve, of time-controlled means for opening and closing the same consisting of the hour-hand shaft of a clock movement, a pair of intergeared pinions actuated thereby and each provided with apertures spaced around its circumference, pins insertible in said apertures, a pivoted arm adapted to be oscillated through engagement by said pins, and actuating connections between said pivoted arm and said burner-valve, substantially as described.

873,027. PUNCHING-BAG HANGER. EDWIN K. DAVIS, Philadelphia, Pa., assignor to George A. Reach, Philadelphia, Pa. Filed June 18, 1907. Serial No. 379,608.



A punching bag hanger comprising a hook having a shank with a sinuous portion adjacent to the shoulder of the hook and approximately in the plane of the curve thereof, and a spiral portion extending from the sinuous portion, substantially as described.

873,028. TEMPERATURE-REGULATOR. VERNER F. DAVIS, Orange, N. J. Filed Nov. 21, 1906. Serial No. 344,360.



1. A temperature regulator comprising a casing, a hollow expanding member, the casing having an inlet connected by a duct at the top to the expanding member, and a passage at the bottom, a valve actuated by the expanding member and adapted to normally close the duct, a valve on the top of the expanding member, means for the opening of the valve on the expanding member after the valve on the duct is closed, the casing having an air outlet below the pistons and an exhaust between the pistons, and pistons actuated by the air pressure to control the direction of the air.

2. A temperature regulator comprising a casing having an air inlet connected by a duct to an expanding member an air outlet and an exhaust, pistons in the casing, a spring actuated valve normally shut to close the duct, a hollow expanding member to open the valve, and a valve at the top of the expanding member to be opened after the first valve is shut.

3. A temperature regulator comprising a casing having an air passage at the top for admitting air connected with an air duct at the top, pistons in the casing, the casing having an outlet and an exhaust, a vlave to close the air duct, a hollow expanding member connected with the duct and having a passage leading from its interior to the interior of the casing, a rod in the hollow member to open the valve when the expanding member contracts, and a valve in the top of the expanding member adapted to open after the first valve is closed.

4. A temperature regulator comprising a casing having an air inlet opening by a passage into the bottom, and having an air duct opening into an expanding member and having an air outlet near the bottom, the casing also having an exhaust, a piston in the top of the casing, a piston to pass across the air outlet, a rod common to the pistons, a hollow expanding member on the casing, the casing having a passage to the hollow member, a valve in the top of the casing, a spring to close the valve to shut off the duct, a rod actuated by the expanding member to open the valve, and a valve in the top of the expanding member to be opened by the rod after the first valve is shut.

5. A temperature regulator comprising a casing having pistons therein, the casing having an air passage for admitting air and having an outlet, a hollow expanding member, the casing having an air duct leading from the inlet passage to the expanding member, the casing having a passage leading from its interior to the expanding member, a valve closing the duct, a spring to close the valve, a rod resting on the valve, a collar on the rod fitting loosely in the member, a spring between the end of the member and the collar on the rod, and a second rod having a longitudinal perforation adapted to have its lower end seated on the first rod and opening on the other end into the atmosphere.

873,029. FILM-FRAME REST FOR PRINTING-FILM FRAMES. BENJAMIN DAY, West Hoboken, N. J. Filed Aug. 14, 1907. Serial No. 388,482.



1. The combination of a support, a printing-film frame mounted to swing with relation to said support, adjusting devices for adjusting said frame, a bar arranged parallel to said frame, means for securing said bar to said support, said film frame resting against said bar when swung away from the work whereby jarring of the adjusting devices is avoided.

2. The combination of a support, a printing-film frame pivotally mounted to swing with relation to said support, a bar acting as a film frame rest and a clamp to which said bar is secured.

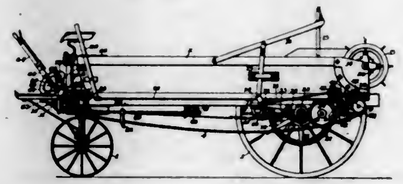
3. The combination of a support, a rod carried by said support, a printing-film frame mounted to swing with relation to said support, a bar acting as a film frame rest and a clamp for detachably securing said bar to said rod.

4. The combination of a support, a printing-film frame pivotally mounted to swing with relation to said support, a bar arranged parallel to said frame, a clamp to which said bar is secured, said clamp comprising a pair of legs and a collar surrounding said legs.

5. A film frame rest for printing-film frames, said rest being adapted to be detachably secured to a support, and comprising in combination, a bar, a clamp to which said bar is secured, said clamp being provided with means for detachably securing it to the support.

[Claims 6 to 10 not printed in the Gazette.]

873,030. MANURE-SPREADER. SAMUEL K. DENNIS and FRANK W. RICE, Chicago, Ill., assignors to International Harvester Company, a Corporation of New Jersey. Filed Aug. 3, 1907. Serial No. 386,942.



1. In a manure spreader, the combination of a body mounted upon carrying wheels, a movable apron operative along the bottom of said body, a distributing cylinder mounted above and at the delivery end of said apron, levers upon opposite sides of said body, said levers having their forward ends pivotally connected with said body, an end gate pivotally connected with the rear end of said levers, means for moving said levers about their pivotal axes, said means comprising a rock-shaft mounted below said body, arms secured to opposite ends of said shaft, links connecting said arms with said levers intermediate the ends of the latter, and means for rocking said shaft.

2. In a manure spreader, the combination of a body mounted upon carrying wheels, a movable apron operative along the bottom of said body, a distributing cylinder mounted above and at the delivery end of said apron, a rotatable axle, means for transmitting motion from said axle to said cylinder, a clutch mechanism forming part of said motion transmitting means, levers upon opposite sides of said body, said levers having their forward ends pivotally connected with said body, an end gate pivotally connected with the rear ends of said levers, means for moving said levers about their pivotal axes, said means comprising a rock-shaft mounted below said body, arms secured to opposite ends of said shaft, links connecting said arms with said levers intermediate the ends of the latter, an arm loosely mounted upon said shaft in a manner permitting a limited independent movement of said arm relative to said shaft, and a connection between said arm and said clutch mechanism, and means for rocking said shaft.

3. In a manure spreader, the combination of a body mounted upon carrying wheels, a movable apron operative along the bottom of said body, a distributing cylinder mounted above and at the delivery end of said apron, a rotatable axle, means for transmitting motion from said axle to said cylinder, a clutch mechanism forming part of said motion transmitting means, levers upon opposite sides of said body, said levers having their forward ends pivotally connected with said body, an end gate pivotally connected with the rear ends of said levers, means for moving said levers about their pivotal axes, said means comprising a rock-shaft mounted below said body, arms secured to opposite ends of said shaft, links connecting said arms with said levers intermediate the ends of the latter, an arm loosely mounted upon said shaft in a manner permitting a limited independent movement of said arm relative to said shaft, a connection between said arm and said clutch mechanism, means for positively rocking said shaft in one direction, and a spring operative to rock it in an opposite direction.

4. In a manure spreader, the combination of a body mounted upon carrying wheels, a movable apron operative along the bottom of said body, a distributing cylinder mounted above and at the delivery end of said apron, a rotatable axle, means for transmitting motion from said axle to said cylinder, a clutch mechanism forming part of said motion transmitting means, levers upon opposite sides of said body, said levers having their forward ends pivotally connected with said body, an end gate pivotally connected with the rear ends of said levers, means for moving said levers about their pivotal axes, said means comprising a rock-shaft mounted below said body, arms secured to opposite ends of said shaft, links connecting said arms with said levers intermediate the ends of the latter, a two-armed lever loosely mounted upon said shaft in a manner permitting a limited independent movement of said lever relative to said shaft, a link connection between one arm of said lever and said clutch mechanism, a link pivotally connected with the other arm, a coiled spring surrounding said link and operative between a fixed resistance and the link in a manner to rock said two-armed lever in one direction, and manually operative means for rocking said shaft and lever in an opposite direction.

5. In a manure spreader, the combination of a body mounted upon carrying wheels, a movable apron operative along the bottom of said body, a distributing cylinder mounted above and at the delivery end of said apron, a rotatable axle, means for transmitting motion from said axle to said cylinder, a clutch mechanism forming part of said motion transmitting means, levers upon opposite sides of said body, said levers having their forward ends pivotally connected with said body, an end gate pivotally connected with the rear ends of said levers, means for moving said levers about their pivotal axes, said means comprising a rock-shaft mounted below said body, arms secured to opposite ends of said shaft, links connecting said arms with said levers intermediate the ends of the latter, a two-armed lever loosely mounted upon said shaft in a manner permitting a limited independent movement of said lever relative to said shaft, a link connection between one arm of said lever and said clutch mechanism, a link pivotally connected with the other arm, a coiled spring surrounding said link and operative between a fixed resistance and the link in a manner to rock said two-armed lever in one direction, a sector secured to said rock-shaft, a hand lever pivotally mounted upon said body, and a flexible connection between said lever and said sector whereby said lever is operative to rock said shaft in one direction in opposition to the force of said spring.

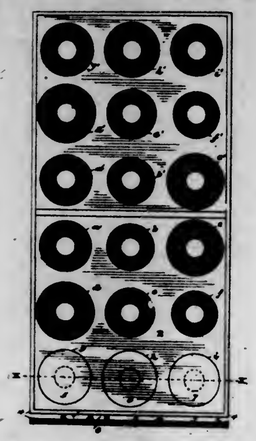
[Claims 6 to 13 not printed in the Gazette.]

873,031. GAME-BOARD. GEORGE B. DOAN and HART HANSON, Chicago, Ill., assignors to George B. Doan & Company, Chicago, Ill., a Copartnership. Filed Feb. 26, 1906. Serial No. 303,051.

1. A game board of the class described having two series of circular indentations or cups of similar formation, the individual cups of each series corresponding each with a cup of the other series but varying from each other in size, in combination with counters adapted to be fitted one in each cup, and means for removing the same therefrom, substantially as and for the purpose specified.

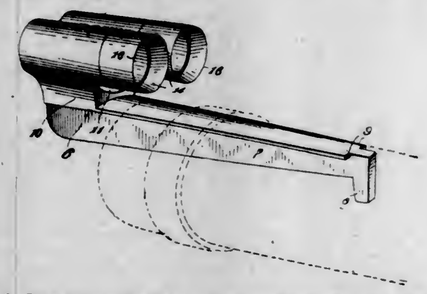
2. A game board of the class described, comprising a board having circular apertures or cups of varying sizes therein and a second board adapted to be secured to the back of the first, and provided with apertures registering

with the cups and affording a perforated bottom therefor, and a plurality of circular counters or disks, each adapted



to fit one of said cups, substantially as and for the purpose specified.

873,032. TURPENTINE-HACK. CHARLES H. DRIVER, Tarpon Springs, Fla., assignor of one-half to W. W. K. Decker, Tarpon Springs, Fla. Filed Sept. 17, 1906. Serial No. 334,967.



1. In a turpentine hack, the combination with a holder, of means for securing the holder against movement to a handle, and a cutter rotatably mounted in the holder to present different cutting edges to the work.

2. In a turpentine hack, the combination with a holder, of means for securing the holder fixedly to a handle, and a tubular cutter mounted in the holder and having a continuous cutting edge at one end.

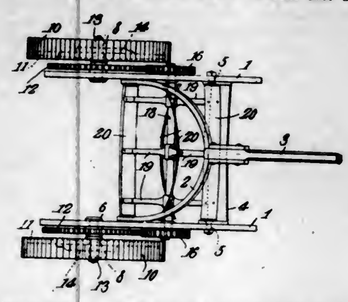
3. In a turpentine hack, the combination with a holder having an opening therethrough, of a cutter exteriorly threaded and screwed into the opening of the holder, said cutter having a passageway for the chips.

4. In a turpentine hack the combination with a holder having a passageway therethrough, of a tubular cutter having its rear portion exteriorly threaded and screwed into the passageway of the holder, said cutter having its front portion provided with a cutting edge and having a chip passageway.

5. In a turpentine hack, the combination with a holder having a passageway therethrough, of means for fixing the holder to a handle, a tubular cutter detachably fitted in the passageway and terminating short of the rear end thereof, said cutter having a continuous cutting edge and having a passageway therethrough that communicates with the passageway of the holder.

[Claims 6 to 11 not printed in the Gazette.]

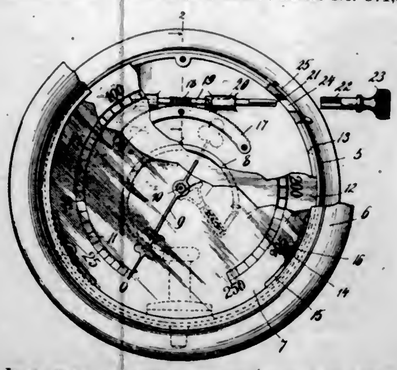
873,033. LAWN-MOWER. THOMAS J. DUNNING, Chatfield, Minn. Filed Sept. 15, 1906. Serial No. 334,714.



1. A lawn mower consisting of a wheel supported frame, a shaft revolubly mounted within the frame, means for transmitting motion thereto from one of the supporting wheels, arms radiating from the shaft, a series of cutter blades carried by the arms, and disposed in lines substantially radial to the axis of rotation each of said blades being formed of a flat strip of metal bowed from end to end, all parts of each blade being straight in cross section, the outer longitudinal edge of each blade being sharpened, and a cutterbar supported within and extending transversely of the frame, said bar having a longitudinal edge sharpened and cooperating with the cutting edges of the blades.

2. A lawn mower having a frame consisting of side members, a handle having a yoke connecting said side members near their forward ends, a stationary cutter bar connecting said side members adjacent their rear ends, a stud shaft rotatably connected with each of said side members, a ratchet wheel fixed on each stud shaft and having a sleeve portion, a ground wheel loosely mounted on said sleeve portion and having a spring-operated pawl engaging the said ratchet wheel, a gear wheel fixed on each stud shaft between the ground wheel and the side member for holding the ground wheel on the sleeve portion of the ratchet wheel, and idle gear wheel journaled on each side member, a cutter shaft having a small gear wheel meshing with said idle gear wheel, radial arms on said cutter shaft, cutter blades connected with said radial arms and each curved from end to end on the segment of a circle, arms pivotally connected with the rear ends of said side members, a gage roller journaled upon said pivotal arms, and nuts for holding said pivotal arms in adjusted position.

873,034. STEAM OR VACUUM GAGE. JAMES ELY, Summit, N. J. Filed May 2, 1907. Serial No. 371,384.



1. In a steam gage, the combination with a casing, a rotatable indicating hand and means for rotating same in the operation of the device, of a rotatably mounted scale carrying disk, means arranged within the casing for rotatively adjusting same and for locking the disk in its adjusted position, and a removable key by which access may be had to such adjusting means from the exterior of the casing.

2. In a steam gage, the combination with a casing, a rotatable indicating hand and means for rotating same in the operation of the device, of a rotatably mounted scale carrying disk, worm teeth carried by said disk, a worm in engagement with said worm teeth, and a removable key fitted to said worm and by which access may be had thereto from the exterior of the casing.

3. In a steam gage, the combination with a casing, an indicating hand rotatably mounted therein and means for rotating same in the operation of the device, of a rotatively mounted scale carrying disk, said disk provided with slotted openings for receiving screws, screws received within said slotted openings and spring washers between the screws and the disk, worm wheel teeth carried by the disk upon the rear side thereof, a worm in engagement with said worm wheel teeth, an arbor for said worm wheel mounted wholly within the casing, said casing provided with an opening in line with said arbor, a movable closure for said opening, and a removable key arranged to be received within said opening and fitted to the arbor of said worm, substantially as set forth.

873,035. AUTOMATIC SHEET-MUSIC CORNET. CHARLES E. FAUTH and GEORGE D. SKAMPER, Chicago, Ill. Filed Apr. 20, 1906. Serial No. 312,869.

1. In a device of the class described the combination with a mouth tube of a reed bar supported thereon, a perforated sheet fitting closely on said bar, a reciprocating pin and mechanism connecting said pin with said sheet and adapted to advance the sheet across the bar at each movement of the pin.

2. In a device of the class described the combination with a tube of a casing supported thereon, a reed bar in said casing, a perforated sheet adapted to move across said bar, a reciprocating pin in said casing and means connecting said pin with said sheet adapted to advance the sheet when the pin moves in either direction.

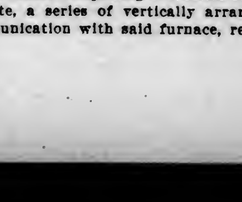
3. In a device of the class described the combination with a coiled mouth tube of a casing supported in the coil thereof, a reed bar in said casing, reeds therein, a perforated sheet adapted to move across said bar, a reciprocating push pin protruding from said casing, means operated thereby adapted to advance the sheet across the bar at both the inward and outward movement of said pin and a reversing mechanism adapted to reverse the movement of the sheet on further operation of the pin.

4. The combination with a mouth tube, of a casing supported thereon, a reed bar in said casing, in open communication with said tube, a plurality of reeds therein, a perforated sheet, a roll on each side of said bar adapted to carry said sheet, a gear on each roll, a pinion adapted to mesh with either gear, a shaft on said pinion, a reciprocating push pin protruding from said casing and means connecting said pin with said shaft adapted to advance the sheet across the bar at the movement of said pin in either direction.

5. In a device of the class described the combination with a coiled wind tube of a casing connected therewith, a hollow bar in said casing in open communication with said tube, reeds in said bar, a spool on each side of the bar, a perforated sheet thereon adapted to lie in close contact with the bar, a gear on one of said rolls, a pinion in mesh therewith, a shaft on said pinion, a gear operatively connected with said shaft, ratchets on said gear, a spur gear and a spring housing supported adjacent said gear, a pawl on each of the same adapted to engage said ratchets, a segment gear in engagement with the spur gear, an arm operatively engaged with said segment gear and housing and a push pin connected with said arm and adapted to advance the sheet at both the inward and outward movement thereof.

[Claims 6 to 8 not printed in the Gazette.]

873,036. TRANSFORMER. JOHN J. FRANK, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 1, 1907. Serial No. 371,284.

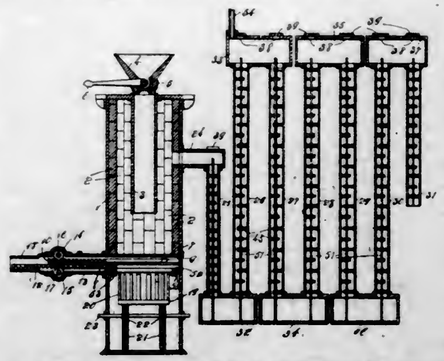


1. In a transformer, a magnetic core, a plurality of sets of secondary coils on different portions of said core, and direct series connections between each secondary coil of one set and a secondary coil on another set, said connections being arranged to form a substantially non-inductive circuit.

2. In a transformer, a magnetic core, a plurality of sets of secondary coils on different portions of said core, and conductors connecting in series secondary coils on different portions of the core, each of said conductors lying parallel with and adjacent to a second conductor carrying current in the opposite direction.

3. In a transformer, a magnetic core, a pair of oppositely-wound secondary coils on each leg of the core, a connection from one end of one of said coils to the corresponding end of the second coil on the other leg of the core, a connection from the other end of the second coil to the corresponding end of the other coil on the same leg, and a connection from the other end of the last-mentioned coil to the corresponding end of the other coil on the same leg with the first-mentioned coil.

873,037. GAS-PRODUCER. CHARLES GAMER, Fort Worth, Tex. Filed May 24, 1907. Serial No. 375,393.



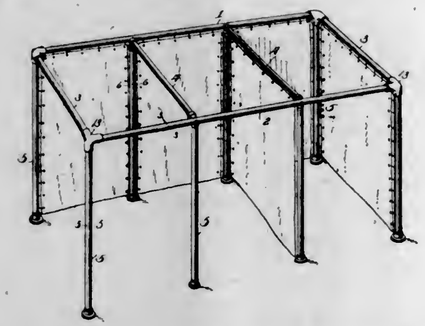
1. A gas producer comprising a furnace for the combustion of lignite, a series of vertically arranged cylinders having communication with said furnace, removable sepa-

rators horizontally disposed in said cylinders, boxes, each box forming a connection of one cylinder with the next cylinder in succession, drain pipes connected to the boxes at the lower ends of said cylinders, and means for collecting the gas for distribution.

2. A gas producer comprising a furnace for the combustion of lignite, a series of vertically arranged cylinders having communication with said furnace, removable separators mounted in said cylinders, connecting boxes, each box connecting one cylinder with the next cylinder in succession, rods engaging lugs on said boxes and holding said boxes and cylinders in operative relation, drain pipes connected to the boxes at the bottom of said cylinders, a box containing water for immersing the ends of said drain pipes, and means for collecting the gas.

3. A gas producer comprising a receptacle for the combustion of gas producing material, a series of vertically arranged cylinders, a series of boxes at the upper and lower ends of said cylinders, each box connecting a cylinder with the next cylinder in succession, a rod running through each cylinder, separators mounted on said rods and forming a circuitous passage through said cylinders, drain pipes connected to boxes at the lower ends of said cylinders, and means for collecting the gas.

873,038. CURTAIN SUPPORT AND HANGER. JEAN GARRET, Pittsburg, Pa. Filed Dec. 5, 1906. Serial No. 346,517.



1. The combination with a support comprising a series of rods, of curtains slidably connected with the rods, and means for slidably securing the curtains to the rods, and means carried by the rods for engaging and supporting any of the curtain securing means, whereby said curtains may be arranged to dispose their bottom edges at any desired elevation from the base line.

2. A curtain support comprising a frame including side rods, end rods and supporting rods; the side rods, end rods and supporting rods being formed with keyhole openings extending longitudinally thereof; and three-way couplings connecting the meeting ends of said rods, said couplings being formed with openings to register with the openings in the rods, whereby an uninterrupted channel is formed throughout the length of the supporting rod and end rod and the supporting rod and side rod.

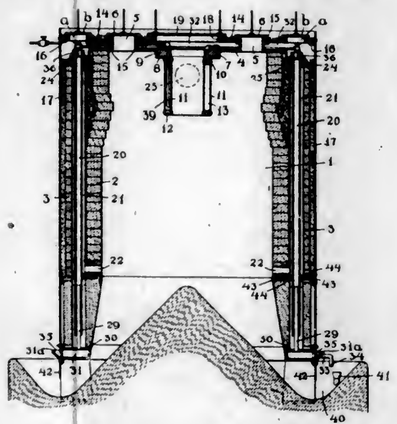
3. A curtain support comprising a frame including side rods connected at their ends by end rods and intermediate said ends by cross-rods, the side rods being formed with keyhole openings extending throughout the length of the rods, the end rods being formed with keyhole openings in communication with the openings in the side rods, and connections between said side rods and cross-rods to support the cross-rods from the side rods without interrupting the continuity of the side rod openings.

4. A curtain support comprising a frame including a series of connected rods arranged to provided a horizontal frame and a series of vertical supports therefor, said rods being formed with a series of keyhole openings to provide a continuous channel throughout the vertical and horizontal extent of the frame.

5. A curtain support comprising a frame including a series of connected rods, said rods being formed with a series of keyhole openings to provide a continuous channel throughout the vertical and horizontal extent of the frame, said frame including cross-rods and a cross-rod coupling including a cap to engage the cross-rod, and a head to bear against the side rod, and means for securing said side rod to the head.

[Claims 6 and 7 not printed in the Gazette.]

873,039. GAS-PRODUCER. ALBERT J. GIFFORD, Worcester, Mass., assignor to Charles H. Morgan, Worcester, Mass. Filed June 27, 1906. Serial No. 323,748.



1. In a gas producer, the combination with a gas producing chamber having an annular space surrounding said chamber and connected therewith, a twyer for supplying air to the interior of said chamber, an air pipe in said annular space open at the bottom for the admission of air and open at the top to supply air to said twyer, and means at the top of said annular space for removably supporting said pipe.

2. In a gas producer, the combination with a gas producing chamber having an annular space surrounding said chamber and a twyer for supplying air to the interior of said chamber, of an air pipe within said annular chamber communicating with the twyer of the producer, and a pipe communicating at one end with the outside air, said pipes being telescoped together.

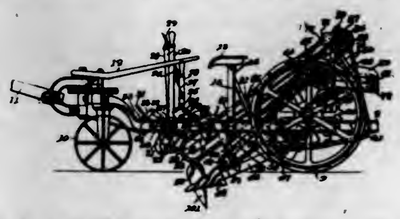
3. In a gas producer, the combination with a gas producing chamber having an annular space surrounding said chamber, of a cover for said annular space, and a twyer for supplying air to the interior of said chamber, of a series of air pipes within said annular space removably supported by said cover, and arranged to supply air to said twyer, and a second series of pipes supported by the bottom of said annular space communicating with the outside air and telescoping with the first series of air pipes.

4. In a gas producer, the combination with a gas producing chamber having an annular space surrounding said chamber, of a series of air pipes in said annular space communicating with the outside air, a water receptacle below the lower end of said pipes and communicating therewith, and means for varying the level of water in said receptacle, whereby said pipes are water sealed and the entrance of air prevented at will.

5. In a gas producer, the combination with a gas producing chamber having an annular space surrounding said chamber and a twyer for supplying air to the interior of said chamber, of a series of air pipes in said annular space communicating with the twyer of the producer, with the lower ends of said pipes communicating with the outside air, and adjustable means for water sealing the lower ends of said pipes at will and arresting the supply of air to the gas producing chamber.

[Claims 6 to 11 not printed in the Gazette.]

873,040. BEET-HARVESTER. MOORE GOODFELLOW, Columbus, Ohio, assignor of one-half to Joseph O. Dye, Columbus, Ohio. Filed Feb. 24, 1906. Serial No. 302,776.



1. In a machine such as described, the combination, with the pullers, of an elevator having overhanging flexible cross pieces coöperating therewith, substantially as described.

2. In a machine such as described, the combination, with the pullers, of an elevator combined with an auxiliary elevator having flexible cross pieces coöperating with said pullers, substantially as described.

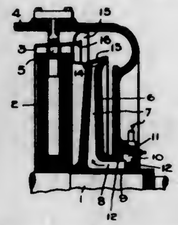
3. In a machine such as described, the combination, with the pullers, of an elevator and an auxiliary elevator having flexible cross pieces coöperating with said pullers, means to raise and lower said pullers and elevators in unison, and means to drive said pullers and elevators from the axle of the machine, substantially as described.

4. In a machine such as described, the combination, with pulling devices, of auxiliary devices coöperating therewith comprising a traveling elevator having overhanging flexible cross pieces, substantially as described.

5. In a machine such as described, the combination, with pulling devices, of auxiliary devices coöperating therewith comprising a pair of traveling elevators, the cross-pieces of one of said elevators being flexible, substantially as described.

[Claims 6 to 21 not printed in the Gazette.]

873,041. CONDENSER FOR ELASTIC-FLUID TURBINES. ALEXANDER T. GRAY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 24, 1903. Serial No. 186,447.



1. An elastic-fluid turbine comprising a casing and bucket wheel, in combination with a means which discharges cooling water in a divided state across the body of vapor at the point where it issues from the wheel.

2. An elastic-fluid turbine comprising a casing and bucket wheel, in combination with a means which surrounds the shaft and discharges cooling water in a divided state across the vapor body issuing from the wheel.

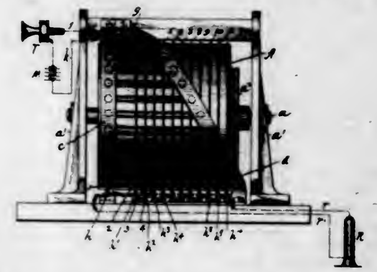
3. An elastic-fluid turbine comprising a casing and bucket wheel, in combination with a water-discharging wheel mounted on the same shaft with the bucket wheel for discharging water in a finely divided state into the body of vapor discharged by the wheel.

4. An elastic-fluid turbine comprising a casing and bucket wheel, in combination with a wheel which has a plurality of orifices located adjacent to the exhaust side of the bucket wheel that discharges cooling water into the body of vapor after it passes through the bucket wheel.

5. An elastic-fluid turbine comprising a casing and bucket wheel, in combination with a wheel which has a plurality of discharge orifices that discharge cooling water at substantially right angles to the plane of movement of the vapor from the bucket wheel.

[Claims 6 to 20 not printed in the Gazette.]

873,042. APPARATUS FOR RECEIVING AND STRENGTHENING THE REPRODUCTION OF MESSAGES, SIGNALS, &c. EMIL S. HAGEMANN, Copenhagen, Denmark, assignor, by mesne assignments, to American Telegraphone Company, a Corporation of the District of Columbia. Filed June 19, 1900, Serial No. 20,816. Renewed May 2, 1907. Serial No. 371,451.



1. The combination of a telephone transmitting circuit and a telephone receiving circuit, with an instrument adapted to electro-magnetically record a message from the transmitting circuit and simultaneously electro-magnetically reproduce the said message in the receiving circuit, and means whereby the strength of the message delivered to the receiving circuit is made greater than that recorded from the transmitting circuit.

2. In an apparatus for electro-magnetically recording and reproducing speech or signals, the combination of a receptive device, a transmitting circuit, means for making a plurality of records in said device of the speech or signals traversing the transmitting circuit, a receiving circuit and means for simultaneously reproducing corresponding portions of each record in said receiving circuit, substantially as described.

3. In an apparatus for recording and reproducing speech or signals, the combination of a receptive or recording body or surface, a recording device adapted to act upon said body or surface, a reproducing device and an obliterating device presented at successive points thereto, whereby speech or signals may be recorded on the body or surface, reproduced therefrom and obliterated in succession, substantially as described.

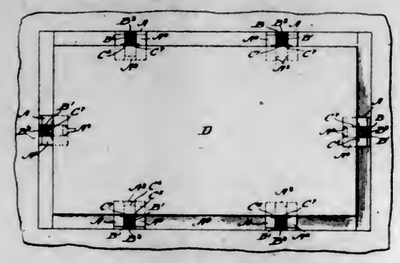
4. In an apparatus for electro-magnetically recording and reproducing speech or signals, the combination of a receptive device in or upon which a record of the speech or signals is to be made, a transmitting circuit leading to said device, recording mechanism operated by said transmitting circuit, a receiving circuit leading from said device and means for reproducing and augmenting the record in said receiving circuit.

5. In an apparatus for electro-magnetically recording messages and signals, the combination of a receptive body or surface, two electro-magnets presented at successive points thereto, one for recording a message or signal on the body or surface, and the other for reproducing it therefrom, and one or more receptive bodies or surfaces, each having a recording and reproducing magnet presented to it at successive points; the reproducing magnet of the first set being connected with the recording magnet of the second, and so on throughout the series, and means for moving all of the bodies or surfaces and their respective mag-

nets simultaneously with respect to each other, whereby the message or signal may be successively recorded, reproduced and transmitted, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

873,043. REGISTER-HOOK. WILLIAM L. HAMILTON, Chicago, Ill. Filed Nov. 24, 1906. Serial No. 344,900.



1. In a device of the kind described the rectangular body, said body having a transverse ledge at one end, a cylindrical channel extending longitudinally therethrough and longitudinal parallel guideways forming the open top of said channel; the shaft insertible in said channel, the surface of said shaft being threaded the full length and channeled longitudinally by a series of parallel channels extending the full length of said shaft, and having a central annular channel; the projection in said body adapted to enter said annular channel in said shaft; the clutch slidably supported in said guideways, said clutch having an arched and threaded under surface adapted to mesh into the threaded surface of said shaft, and thereby adapted to be moved from end to end of said body by the rotation of said shaft.

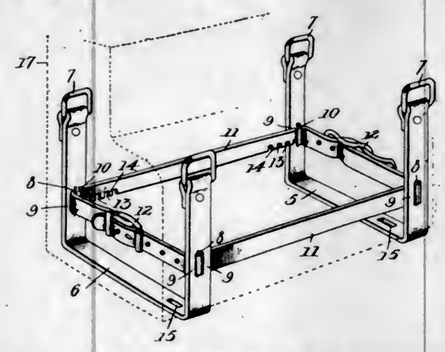
2. In a device of the kind described, the combination with the main body, said body having a transverse ledge at one end, a cylindrical channel extending longitudinally therethrough and longitudinal parallel guideways; of a shaft insertible in said channel, the surface of said shaft being threaded the full length, channeled from end to end with a series of parallel channels and having an annular channel in the central part adapted to admit a projection in said cylindrical channel adapted to prevent a lateral movement of said shaft in said body; and a clutch insertible in said guideways adapted to be engaged and moved therein by the rotation of said shaft.

3. In a device of the kind described, the combination with the main body having a transverse ledge at one end, a cylindrical channel extending therethrough and parallel guideways, and a shaft insertible in said channel, the surface of said shaft being threaded and channeled longitudinally with a plurality of parallel channels and having an annular channel; of a projection in said cylindrical channel adapted to enter said annular channel in said shaft and to thereby prevent its lateral movement in said main body, and a clutch slidably supported in said guideways, said clutch being adapted to engage said shaft and be moved by its rotation in said body.

4. In a device of the kind described, the combination with the main body, the shaft revolubly supported therein, the surface of said shaft being threaded and channeled the full length, and means in said body adapted to prevent the lateral movement of said shaft in said body; of a clutch slidably supported in said body, said clutch having an arched under surface said surface being threaded and adapted to mesh into the threaded surface of said shaft, said clutch being thereby adapted to be moved from end to end of said body by the rotation of said screw.

5. A register hook having a rectangular body, a cylindrical channel extending through said body, the open parallel sides of said channel forming guideways adapted to hold a clutch; a surface threaded shaft insertible and revoluble in said channel, said shaft having surface parallel channels adapted to admit the end of an operating lever and to be thereby rotated in said body, and an annular groove in said shaft adapted to admit means in said body whereby the lateral position of said shaft in said body is fixed; a clutch slidably supported in said guideways in which it is free to be moved from end to end of said body, said clutch having an arched under surface, said surface being threaded and thereby adapted to mesh into the threaded surface of said shaft and to be moved in said guideways by the rotation of said shaft.

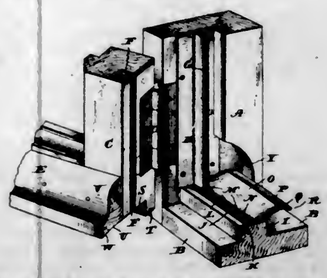
873,044. PIANO-SLING. HENRY H. HANSON, Tyler, Tex. Filed Aug. 5, 1907. Serial No. 387,177.



1. In a sling of the class described, the combination with end straps disposed in parallel relation and including vertical portions and horizontal bottom portions, of horizontal straps engaged in the vertical portions of the end straps and detachably connected at their ends, said end straps and one of the side straps being arranged for cooperation to hold the side strap against movement with respect to said end straps, and grips carried by the ends of the end straps.

2. A sling of the class described comprising end straps arranged for engagement around the sides and bottom of a piano, said end straps having roller receiving openings therein, and horizontal side straps adjustably engaged in the end straps, said side straps being detachably connected at their ends.

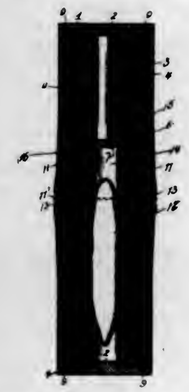
873,045. CASEMENT-WINDOW. JOHN H. HILTZ and JOHN B. SMITH, Detroit, Mich., assignors to Chamberlin Metal Weather Strip Company, Detroit, Mich. Filed July 6, 1907. Serial No. 382,502.



1. The combination with a window casing and swinging sash therefor, of a spring metallic weather strip interposed between the bottom members of the sash and frame, said frame having a stop-strip, and said strip being secured at one edge to said stop-strip near the upper surface thereof and projecting inwardly and upwardly therefrom to be free at its inner edge and formed to permit the sash to ride thereover in the closing movement of the sash, the sash having a grooved portion in which said free edge may spring and interlock.

2. The combination with a window casing and swinging sash therefor, of a spring metallic weather strip interposed between the bottom members of the sash and frame, said frame having a stop-strip, and said strip being secured at one edge to said stop-strip near the upper surface thereof and projecting inwardly and upwardly therefrom to be free at its inner edge and formed to permit the sash to ride thereover in the closing movement of the sash, the sash having a grooved portion into which said free edge may spring and interlock, and a depending portion arranged to abut the outer surface of the stop-strip.

873,046. DEVICE FOR TYING ROLLS OF ROOFING MATERIALS. FRANK S. HOWARD, Lombard, Ill. Filed Feb. 26, 1906. Serial No. 303,135.



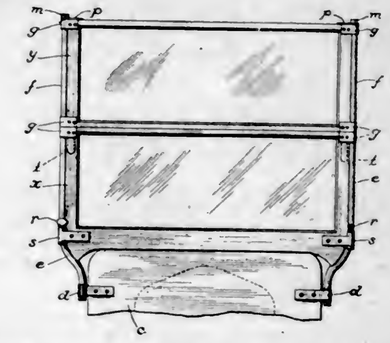
1. In combination with a roll of flexible material having a hollow core, blocks adapted to be applied to the ends of said roll substantially in the manner and for the purpose shown and described, circular end-plugs firmly centrally attached thereto adapted to fit the core and having attached to their outer circumferences strands of wire, a circular collar-plug adapted to fit said core provided with notches in its outer circumference adapted to receive and retain said strands, by means whereof a can or parcel may be firmly secured between said plugs.

2. In combination with a roll of flexible material having a hollow core, blocks adapted to be applied and secured to the ends of said roll, circular end-plugs adapted to fit said core closely attached centrally to said blocks and provided with means for securing strands of wire, circular-collar-plugs adapted to fit said core closely provided with means for receiving and retaining said strands, whereby a can or parcel may be firmly fixed between said plugs, substantially in the manner and for the purpose shown and described.

873,047. AUTOMOBILE WIND-SHIELD. STEPHEN D. HUNTER, Philadelphia, Pa. Filed July 11, 1907. Serial No. 383,272.

1. A wind-shield for automobiles comprising a two part frame and two pairs of tubes between which the frames are respectively supported, plugs secured within the tubes of the lower frame and provided with threaded sockets having conical outer seats, and pins extending through the tubes of the upper frame, said pins having contracted threaded ends and tapered shoulders at the junction of their bodies and said contracted threaded ends, said contracted threaded ends being adapted to engage respectively the threaded orifices and conical seats in said plugs substantially as described.

2. A wind shield for automobiles comprising a two part frame and two pairs of tubes between which the frames are respectively supported, plugs, having screw threaded end sockets, secured within the tubes of the lower frame, brackets, having screw threaded sockets, also secured to the tubes of the lower frame, and pins extending through the tubes of the upper frame, said pins having contracted threaded ends adapted to engage either the threaded sockets in the plugs when the upper frame is superposed upon the lower frame or the threaded sockets in the brackets when the upper frame is supported alongside the lower frame.



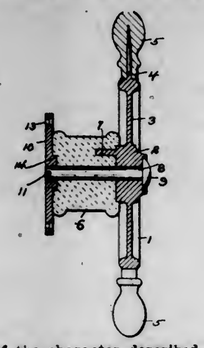
3. A wind-shield for automobiles comprising a two part frame and two pairs of tubes between which the frames are respectively supported, plugs, having screw threaded end sockets, secured within the tubes of the lower frame, brackets, having screw threaded sockets, also secured to the tubes of the lower frame, and pins extending through the tubes of the upper frame, said pins having contracted threaded ends adapted to engage either the threaded sockets in the plugs when the upper frame is superposed upon the lower frame or the threaded sockets in the brackets when the upper frame is supported alongside the lower frame, tie-plates through which said pins extend, and threaded plugs adapted to extend through said tie-plates and engage the threaded sockets in the plugs of the lower tubes.

4. A wind-shield for automobiles comprising a two part frame and two pairs of tubes between which the frames are respectively supported, plugs secured within the tubes of the lower frame and provided with sockets having conical outer seats, brackets provided with sockets having conical outer seats, and pins extending through the tubes of the upper frame, said pins having contracted ends and tapered shoulders at the junction of their bodies and said contracted ends, said contracted ends being adapted to engage either the sockets in the plugs when the upper frame is superposed upon the lower frame or the sockets in the brackets when the upper frame is supported alongside the lower frame.

5. A wind-shield for automobiles comprising a two part frame and two pairs of tubes between which the frames are respectively supported, plugs secured within the tubes of the lower frame and provided with threaded sockets having conical outer seats, brackets provided with threaded sockets having conical outer seats, and pins extending through the tubes of the upper frame, said pins having contracted threaded ends and tapered shoulders at the junction of their bodies and said contracted threaded ends, said contracted threaded ends being adapted to engage either the sockets in the plugs when the upper frame is superposed upon the lower frame or the sockets in the brackets when the upper frame is supported alongside the lower frame, tie-plates through which said pins extend, and threaded plugs adapted either to extend through said tie-plates and engage the threaded sockets in the plugs of the lower tubes when the upper frame is supported alongside the lower frame or to engage the threaded sockets in the brackets when the upper frame is superposed upon the lower frame.

[Claims 6 and 7 not printed in the Gazette.]

873,048. WHEEL. GEORGE B. HURLBURT, Middletown, Conn. Filed Apr. 6, 1907. Serial No. 366,674.

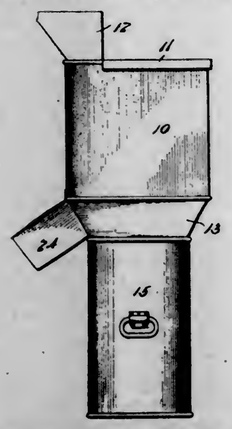


1. In a device of the character described, the combination with a wheel having laterally projecting pins upon the hub thereof; a drum connected with said wheel and secured by said pins; a plate; a headed bolt passing through the hub of said wheel and said drum, and separably secured to said plate.

2. In a device of the character described, the combination with a wheel having pins connected with the hub thereof; a drum secured to said hub by said pins; a plate; a headed pin passing through said hub and drum with the head thereof engaging the exposed side of said hub; and a fastening pin for separably securing the aforesaid pin to said plate.

3. In a device of the character described, the combination with the wheel 1 having the hub 2 integral therewith; pins 7 forming part of said hub and projecting laterally therefrom; a drum 6 mounted on said pins; a plate 10 having a boss 14 thereon upon which said drum is rotatable; a pin 8 having a head 9 thereon; and means, as a pin 11, for separably securing said pin to said plate.

873,049. ASH-SIFTER. JOHN IRVING, Jr., New Brighton, N. Y. Filed Aug. 9, 1907. Serial No. 387,912.



1. An ash sifter consisting of a separating chamber having a bottom discharge neck adapted to be fitted within an ash receptacle, an upper inclined screen having depending therefrom inclined chutes provided with guard flanges, a lower screen inclined in a direction opposite to that of said upper screen, and an outlet chute with which said lower screen communicates.

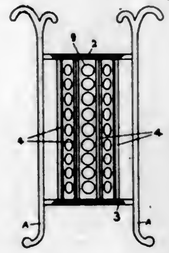
2. An ash sifter consisting of a separating chamber provided with a contracted lower portion terminating in a tubular discharge neck, oppositely arranged inclined screens within said separating chamber, said screens being located one above the other, chutes depending from the upper of said screens and provided with vertical guard flanges, the lower screen being provided with upturned sides, and an outlet chute with which the lower of said screens is in communication.

3. An ash sifter consisting of a separating chamber provided with a contracted lower portion terminating in a depending tube, a cover for said separating chamber provided with a hopper, oppositely arranged inclined screens within said separating chamber, said screens being located one above the other, oppositely inclined chutes provided with guard flanges depending from the upper screen and straddling the lower screen, flanges carried by said lower screen, and an outlet chute with which the lower screen is in communication.

4. An ash sifter consisting of a separating chamber, an upper screen, a lower screen provided with an end supporting frame and having its sides upturned to form tapering flanges, and inclined chutes carried by said upper screen and being provided with guard flanges and having their lower ends arranged to straddle the lower screen.

5. An ash sifter consisting of a separating chamber, an upper screen, a lower screen inclined in a direction opposite to that of the upper screen and provided with a rectangular end supporting frame and having its sides upturned to form flanges which decrease in height as they approach the upper end of said screen, and oppositely inclined chutes provided with vertical guard flanges carried by said upper screen and having their lower ends arranged to straddle said lower screen.

873,050. PHOTOGRAPH-EASEL. HERBERT C. ITTER, Bay City, Mich. Filed Mar. 30, 1907. Serial No. 365,536.



1. An easel or stand for ornamental display comprising a suitably supported frame consisting of a plurality of suitably arranged panels, and a door hinged to the frame, the door consisting of a number of leaves equal to the number of panels, the leaves hinged together to conform to the arrangement of panels and apertured mats and pictures received in the frame and held in place by the door.

2. An easel or stand comprising upper and lower brackets, panel bars extending between the brackets, a suitably supported cross bar, and a removable brace rod extending from the lower panel near its outer edge to the cross bar.

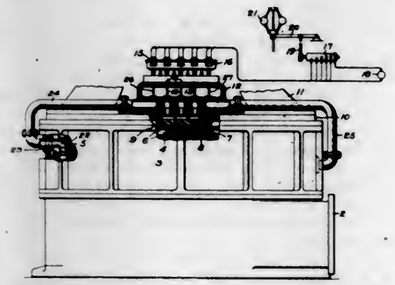
3. An easel or stand comprising a frame, a plurality of panel bars dividing the frame into a number of suitably arranged panels, the panel bars being rabbeted, translucent plates and mats fitting in the rabbets and between the panel bars, and a door or closure for the back of the frame, the door consisting of as many leaves as there are panels, the leaves connected together and adapted to retain the plates and mats in position.

4. An easel or stand comprising a frame divided into a plurality of suitably arranged panels, translucent plates and apertured mats received in the panels and means for supporting illustrations consisting of a pair of tautened members extending longitudinally of the panels and lying laterally of the apertures in the mats and fastening means for retaining the tautened members in position.

5. An easel or stand comprising a frame divided into a plurality of suitably arranged panels, a combined mat and plate received in each of the panels, the combined mat and plate consisting of a translucent plate rendered opaque and having blank portions thereon, a closure for the rear face of the frame, the closure comprising a plurality of connected leaves corresponding to the number of panels, and tautened wires extending longitudinally of the leaves.

[Claims 6 and 7 not printed in the Gazette.]

873,051. ELASTIC-FLUID TURBINE. OSCAR JUNGGREN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 8, 1905. Serial No. 254,517.



1. In a turbine wherein the pressure of the motive fluid is converted into velocity and the energy abstracted by successive stages, the combination of nozzles and wheel buckets arranged in stages, and an auxiliary stage nozzle or nozzle sections which receive and convert motive fluid of higher pressure than the main stage nozzles into velocity and discharge it against the wheel buckets.

2. An elastic-fluid turbine wherein the pressure of the motive fluid is converted into velocity and the energy abstracted by successive stages, comprising admission and main stage nozzles, and wheel buckets for abstracting the velocity from the motive fluid, in combination with one or more auxiliary stage nozzles which receive motive fluid under higher pressure and have a greater ratio of expansion than the main stage nozzles and discharge it against the wheel buckets.

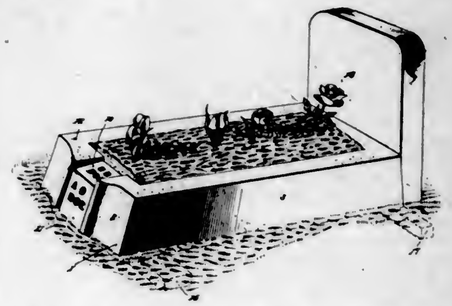
3. An elastic-fluid turbine wherein the pressure of the motive fluid is converted into velocity and the energy abstracted by successive stages, comprising admission and main stage nozzles, wheel buckets for abstracting the velocity from the motive fluid, and a chest from which the admission nozzle or nozzles receive their supply of motive fluid, in combination with one or more auxiliary nozzles discharging into a low pressure stage which receive motive fluid from the chest and discharge it against the buckets, the said auxiliary stage nozzle or nozzles having a greater ratio of expansion than the main stage nozzles.

4. In an elastic-fluid turbine wherein the pressure of the motive fluid is converted into velocity and the energy abstracted by successive stages, the combination of wheel buckets, a nozzle for converting the pressure of motive fluid into velocity and discharging it against the buckets, a second nozzle having a greater ratio of expansion than the first which also discharges motive fluid against the same buckets, and means for rendering one nozzle active for certain load conditions, and for rendering both nozzles active for greater load conditions.

5. In an elastic-fluid turbine, the combination of two or more bucket wheels, a separate compartment for each wheel, admission nozzles for the first stage, nozzles between stages which convert a certain amount of the pressure of the motive fluid in the first stage into velocity and discharge it against the wheel buckets of the second stage, and one or more auxiliary stage nozzles which receive motive fluid under a pressure exceeding that in the first stage and after converting it into velocity discharge it against the wheel buckets of the second stage at a pressure the same or substantially the same as that existing in said second stage.

[Claims 6 to 21 not printed in the Gazette.]

873,052. GRAVE-PROTECTOR. GEORGE H. KNÖCHEL, Lansdowne, Md. Filed May 15, 1907. Serial No. 373,857.



1. A grave protector, consisting of an elongated upright frame having an opening extending vertically therethrough and adapted to inclose a mound of earth, the frame having three external lateral surfaces upwardly and inwardly inclined and at the head an external vertical surface adapted to engage a headstone.

2. A grave protector consisting of an upright elongated frame adapted to support and shape a mound of earth, the said frame having external lateral surfaces upwardly and inwardly inclined, and at the head an external vertical surface, the front top surface being cut away to form a forwardly and downwardly inclined recording surface, and an auxiliary recording surface formed of a raised portion of the front surface.

3. The combination of a grave protector and a headstone which coöperate to mark and beautify a grave, supports for both members having bearing surfaces engaging the solid earth and of an area proportionate to the weight borne thereby, the protector having a vertical head surface and the headstone having a coöperating vertical surface so as to form a neat, joint, to the end that the settling of the protector will not injure or move the stone and the settling of the stone will not injure or move the protector.

4. The combination of a grave protector and a headstone, coöperating to mark and beautify a grave, a vertical head surface on the protector and a coöperating vertical surface on the headstone, so that the settling of the protector will not injure or move the stone and the settling of the stone will not injure or move the protector.

873,053. ELECTRIC CONDENSER. FRANK S. KOCH, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed June 29, 1904. Serial No. 214,605.



1. A condenser formed of a folded roll of alternate conducting and non-conducting materials, of a metal core for said condenser adapted to be folded within said roll to maintain the same in its folded position, substantially as described.

2. A condenser formed of a folded roll of conducting and insulating sheets, of a plate about which said sheets

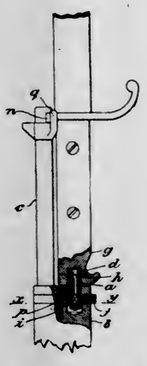
are rolled, said plate being bent within the folds of the condenser and adapted to hold the same in its folded position, substantially as described.

3. A condenser consisting of a roll of alternate layers of plates and dielectric folded upon itself to form several layers and impregnated with paraffin or similar insulating material and compressed upon all sides to constitute a homogeneous mass with the plates and dielectric in intimate contact at all points and internal means to prevent the plates and dielectric from separating when the pressure is released.

4. A condenser formed of a flattened roll of alternate layers of plates and dielectric folded upon itself to form a plurality of layers, a metallic core provided for said layers, and the whole compressed upon all sides to form a homogeneous mass with the plates to intimate relation at all points.

5. A condenser formed of alternate sheets of conducting and insulating material, of a core about which said sheets are wound, said core and sheets being adapted to be folded integral, whereby the rigidity of the core maintains the folded position of the sheets, substantially as described.

873,054. BAYONET AND SIDE ARM. AUGUST KRÜLL, Acton, England. Filed Dec. 21, 1906. Serial No. 348,935.

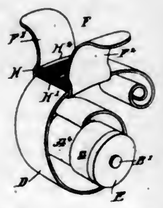


1. A bayonet catch consisting of a projection on the gun engaging with a hole or aperture within the bayonet hilt the projection being formed of two parts of irregular section, the upper part being capable of rotary movement so as to lie within a recess in the upper part of the hole or aperture substantially as described.

2. A bayonet catch consisting in combination of a projection on the gun engaging with a hole or aperture having an enlarged recess at its upper end within the bayonet hilt the projection being formed of two parts of irregular section the upper part being capable of rotary movement so as to lie within said recess in the upper part of the aperture, a thumb piece fixedly connected to the upper part of the said projection and provided with recesses and a spring adapted to engage in one or other of said recesses so as to retain the thumb piece in position substantially as described.

3. A bayonet catch consisting in combination of a projection on the gun engaging with a hole or aperture having an enlarged recess at its upper end within the bayonet hilt the projection being formed of two parts of irregular section the upper part being capable of rotary movement so as to lie within said recess in the upper part of the aperture, a thumb piece fixedly connected to the upper part of said projection and provided with three recesses and a spring adapted to engage in one or other of said recesses so as to retain the thumb piece in position substantially as described.

873,055. VEHICLE-TOP SUPPORT. GOLLADAY LAKE, Memphis, Tenn. Filed Dec. 17, 1906. Serial No. 348,191.



1. A vehicle top support, comprising a sleeve having a polygonal bore to fit a correspondingly shaped top prop stud, and provided with a socket in one wall of the bore, a peripheral recess and a slot of a length equal to that of the recess and leading into the socket, a volute spring having an angular end extending through the slot in the sleeve into the socket thereof, said spring being of a width equal to the width of the recess of the sleeve, screws projecting into the bore of the sleeve at the side opposite the socket, and approximately U-shaped clip having its middle portion fitting the under side of the spring near the free end thereof and secured thereto, and a lining secured upon the spring between the flanges of the clip, the lower portions of the flanges of the clip being bent inwardly onto said lining.

2. In a vehicle top support the combination with a top prop stud, of a sleeve having a bore fitting the top prop stud, and provided with a socket in one wall of the bore and a slot leading from said socket, a volute spring having an angular end fitting in the socket of the sleeve, an approximately U-shaped clip secured to the spring near its free end, and screws in the sleeves at the side opposite the socket of the bore thereof, whereby the sleeve will be secured to the top prop stud and the spring secured in the socket of said sleeve.

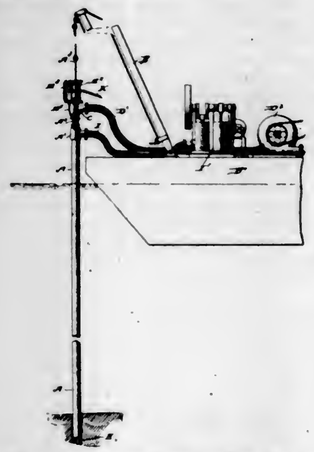
3. In a vehicle top support, a curved spring, means for securing one end of the spring to the top prop stud, an approximately U-shaped clip having its middle portion engaging the under side of the spring, near the free end thereof and secured to the same, a lining of rubber or the like, and a plate to which the lining is secured, said plate being secured to the upper face of the spring between the flanges of the clip and having its ends bent upon the said lining, the lower portions of the flanges of the clip being bent inwardly into engagement with the bent ends of the said lining carrying plate.

4. A vehicle top support comprising a sleeve having a polygonal bore fitting the correspondingly shaped top prop stud, the sleeve having a transversely extending slot terminating in a socket formed in one of the side walls of the said bore, a curved spring extending through the said slot and having a bent end fitting the said socket, a clip approximately U-shaped in cross section and having its bottom engaging the under side of the spring at the free end thereof, means for securing the said clip bottom to the said spring, and a lining of rubber secured to the top of the spring between the side flanges of the said clip.

5. A vehicle top support comprising a sleeve for attachment to the top prop stud and having an external annular recess, from which leads a transverse slot to the polygonal bore of the sleeve, one side wall of the said bore having a socket leading to the said slot, and a curved spring extending through the said slot and having an angular terminal engaging the said socket, the width of the spring corresponding approximately to the width of the said sleeve recess, the free end of the spring being adapted to receive and support a bow of the vehicle top.

873,056. DRILL. SIMON LAKE, Berlin, Germany. Filed Mar. 22, 1907. Serial No. 363,943.

1. A drill, comprising a water discharge tube, a cutter arranged adjacent to the end thereof, a suction tube adjacent to the cutter, means to revolve the cutter actuated by the water passing through the said discharge tube, means to force water through the tube, and means connected to the suction tube to lift the water and the material freed by the cutter.



2. A drill, comprising an inner tube and an outer tube, a cutter revolubly held at the lower ends of the tubes, means for revolving the cutter, means to force water down through the annular space between the said tubes and thereby actuate the cutter-revolving means, and means to lift the water and cuttings through the inner tube.

3. A device of the kind described, comprising an inner and an outer tube, said inner tube being of somewhat smaller diameter than the outer tube, thereby providing an annular space between the tubes, a cutter revolubly held at the lower ends of the tubes, means operable at the lower end of the said annular space for operating the cutter, means for forcing water down through the annular space for actuating the said cutter-revolving means, a propeller operating within the inner tube, and means for lifting the water in the said inner tube.

4. A device of the kind described, comprising an inner and an outer tube, a cutter revolubly held at the lower end of the tubes, means arranged between the inner and outer tubes at the lower ends thereof for revolving the cutter, means for supplying an actuating medium to the cutter-revolving means, and means for imparting a vertical reciprocating movement to the inner tube and cutter.

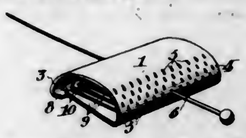
5. A device of the kind described comprising an inner and an outer tube, a cutter carried at the lower end of the inner tube, means for forcing water down through the space between the tubes, means for lifting the water through the inner tube and means for imparting a vertical reciprocating movement to the said inner tube and cutter.

[Claims 5 to 15 not printed in the Gazette.]

873,057. HAT-FASTENER. MARGARET F. LAUBACH, Philadelphia, Pa. Filed Feb. 26, 1907. Serial No. 359,484.

1. A hat fastener comprising a resilient body portion; a series of teeth projecting from one side of said body portion; and a ledge on the opposite side of said body portion against which said teeth are adapted to rest, in combination with means whereby the fastener may be secured to the hat of the wearer.

2. A hat fastener comprising a resilient body portion of substantially semi-circular cross-section; a ledge or lip extending inwardly from one side of said body portion; and a series of teeth projecting from the opposite side of said body portion and overlapping said ledge or lip, in combination with means whereby the device may be secured to the hat of the wearer.

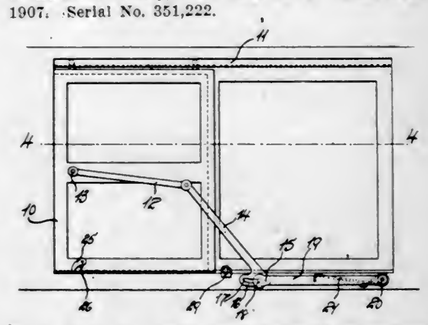


3. A hat fastener comprising a body portion having its sides rounded and provided with apertures whereby the fastener may be pinned to the hat of the wearer; a ledge or lip projecting inwardly and extending along one side of said body portion; and a series of teeth projecting from the other side of said body portion, the tips of said teeth overlapping said lip.

4. A hat fastener comprising a substantially straight body portion having rounded perforated sides, whereby the fastener may be pinned to the hat of the wearer; a lip projecting inwardly from and extending the length of one of said sides; a series of teeth projecting from the opposite rounded side, and adapted to overlap said lip, whereby after the teeth have been inserted in a braid or mass of hair, they may be sprung into engagement with the inner side of said lip to firmly hold the fastener in position.

5. A hat fastener comprising a split cylindrical tube of resilient material having its opposing edges formed to interlock as a hair clasp and its unbroken side perforated to receive a hat pin.

873,058. DOOR-OPERATING MECHANISM. RICHARD F. LE BROCQ, New York, N. Y., assignor of one-half to Edwin J. Selley, New York, N. Y. Filed Jan. 7, 1907. Serial No. 351,222.



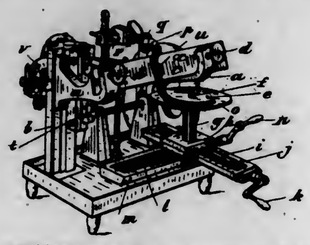
1. An apparatus of the kind described, comprising a sliding door, a tilting lever pivoted near one edge of the door and having a slotted off-set near its pivoted end, a pivotal connection between the lever and the door, and an arm pivoted near the door at one end and at the other end having a connection with the slotted off-set of the lever.

2. An apparatus of the kind described, comprising a sliding door, a tilting lever pivoted near one edge of the door and provided with an off-set, a link pivoted directly to the door and to the aforesaid lever so that the two act as toggle levers, and a swinging arm on the same edge of the door as the pivot of the aforesaid lever held generally parallel with the door and having at its free end a sliding connection with the aforesaid off-set of the lever.

873,059. MICROTOME. HECTOR LEBRUN, Brussels, Belgium. Filed Mar. 20, 1906. Serial No. 307,078.

1. The combination with a microtome of a support placed underneath the knife of the said microtome for receiving the successive slices of the object to be cut and means for imparting a revolving motion to said support.

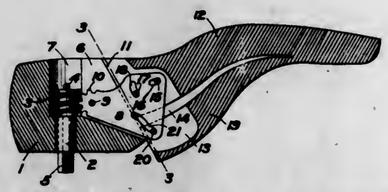
2. The combination with a microtome of a support located underneath the knife of the said microtome for receiving the successive slices of the object to be cut, means for imparting a revolving motion to said support and means for moving the center of revolution of said support.



3. The combination with a microtome of a support for receiving the successive sections of the object to be sliced, a carrier for said support arranged on a vertical axle underneath the knife of the microtome, means for imparting a rotary motion to said axle, a base upon which said axle rests and rotates, a slide-way carrying said base, means for moving said base along said slide-way, a second slide way upon which rests the first slide way at right angles therewith and means for moving the said first slide way along said second slide-way.

4. The combination with a microtome of a support for receiving the successive sections of the object to be sliced, a carrier for said support arranged on a vertical axle underneath the knife of the microtome, means for imparting rotary motion to said axle, a base carrying said axle, a slide-way upon which said base rests, means for moving said base along said slide-way and a vertical axle upon which is pivoted the said slide way.

873,060. LAST. HENRY F. LOEWER, Rochester, N. Y. Filed Jan. 13, 1905. Serial No. 240,891. Renewed Oct. 23, 1907. Serial No. 398,801.



1. In a last, a heel block and a toe part having meeting surfaces constructed to permit relative movement both longitudinally and transversely, and means adapted for use as the jack post socket for shifting simultaneously the relative positions of the heel block and toe part both longitudinally and transversely.

2. In a last, a heel block and a toe part having meeting surfaces constructed to permit relative movement both longitudinally and transversely, and means for shifting simultaneously the relative positions of the heel block and toe part both longitudinally and transversely by turning the last upon a pivot vertical to the sole of the last.

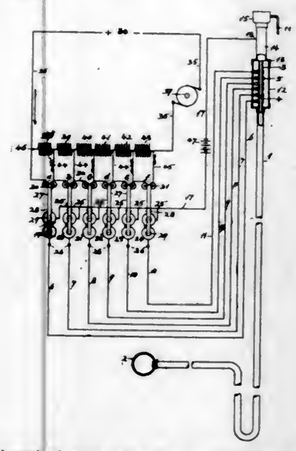
3. In a last, a heel block and a toe part having meeting surfaces constructed to permit relative movement both longitudinally and transversely, a rotary thimble in the heel part set substantially vertically to the bottom of the last, a connection between said heel block and toe part, and a connection with said thimble for actuating said first mentioned connection for shifting simultaneously the relative positions of the heel block and the toe part both longitudinally and transversely upon turning said thimble.

4. In a last, a heel block having a thimble therein, a toe part, the said heel part and toe part having meeting surfaces constructed to permit relative movement both longitudinally and transversely, a connection for connecting the two parts slidably together, and means actuated by turning said thimble for sliding simultaneously the two parts both longitudinally and transversely with reference to each other.

5. In a last, a heel block and a toe part having meeting surfaces constructed to permit relative movement both longitudinally and transversely, means adapted for use as the jack post socket for shifting the relative positions of the heel block and toe part longitudinally and transversely, an instep block, and means for moving said instep block transversely with reference to the toe part at the same time that the said heel block and toe part are shifted with reference to each other.

[Claims 6 to 13 not printed in the Gazette.]

873,061. ELECTRICAL CONTROL APPARATUS FOR STEAM-GENERATORS. RALPH LOMAX and JOHN TOMLINSON, Darwen, England. Filed July 26, 1905. Serial No. 271,386.



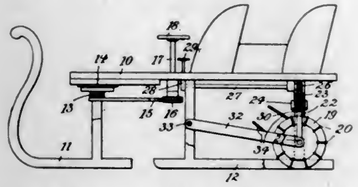
1. An electrical apparatus for controlling the strength of the current in a main electric circuit by means of the rise and fall of the pressure in steam generators, consisting of a series of resistances adapted to be brought into and cut out of said main circuit; a second electric circuit a column of mercury in a tube communicating with the steam generator, and included in said second electric circuit; a series of insulated contacts in said tube adapted to be successively brought into and cut out of said second circuit by the movement of the column of mercury under varying pressure and switches electrically operated by means of said contacts and adapted to bring said resistances successively into said main circuit as the steam pressure rises and to cut them out as the steam pressure falls.

2. An electrical apparatus for controlling the strength of the current in a main electric circuit by means of the rise and fall of the pressure in a steam generator, consisting of a series of resistances adapted to be brought into or cut out of said main circuit, a second electric circuit a column of mercury in a tube communicating with the steam generator and included in said second electric circuit; a series of surface contacts in said tube one above the other adapted to be brought into and cut out of said second circuit by the movement of the column of mercury under varying steam pressures, and insulated from said tube, the number of said contacts being the same as that of said resistances; an electro-magnet for each contact in conductive connection therewith and adapted to be brought into said second circuit as the mercury column makes contact with the respective surface contact; an armature for each of said magnets, and a make and break switch for each of said magnets adapted to be operated by its armature so as to bring one of said resistances into the main circuit, and cut it out therefrom as the steam pressure rises and falls.

3. An electrical apparatus for controlling the pressure in steam generators consisting of a motor, a series of resistances adapted to be brought into or cut out of the circuit of said motor; a second electric circuit a column of mercury in a tube communicating with the steam generator and included in said second electric circuit; a series of surface contacts in said tube one above the other adapted to be brought into and cut out of said second circuit by the movement of the column of mercury under the variation of the steam pressure and insulated from said tube, the number of said contacts being equal to that of said resistances; an electro magnet for each contact in conductive connection therewith and adapted to be brought into said second circuit as the mercury column makes contact with the respective surface contact; an armature for each magnet and operated thereby; a make and break mercurial switch for each magnet adapted to be operated by its armature and to bring one of said resistances into said main circuit and cut it out therefrom as the steam pressure rises and falls.

4. The combination of a pipe, a mercury column therein under steam pressure, a series of contacts insulated from each other and located in the path of the mercury, said contacts forming terminals of independent circuits, a separate electro magnet in each circuit a separate switch actuated by each one of said magnets an additional circuit, a series of resistances, for being cut into or out of said additional circuit which is independent of those already mentioned, and a device for controlling the steam generation, and regulated by the current in the last named circuit, so as to reduce or increase the steam generation when the current is reduced or increased.

873,062. MOTOR-SLEIGH. ALBERT LUCHINGER, New York, N. Y. Filed Aug. 10, 1907. Serial No. 387,963.



A motor sleigh provided with an axle, a pair of propelling wheels mounted thereon, a pair of vertically movable rods connected to the axle, a leaf spring connecting the rods, a rack mounted on the leaf spring, and a pinion engaging the rack, substantially as specified.

873,063. FASTENING DEVICE. MATHIAS F. MACNELLY, Buffalo, N. Y., assignor of one-half to Oliver R. Vasbinder, Buffalo, N. Y. Filed Mar. 31, 1906. Serial No. 309,214.

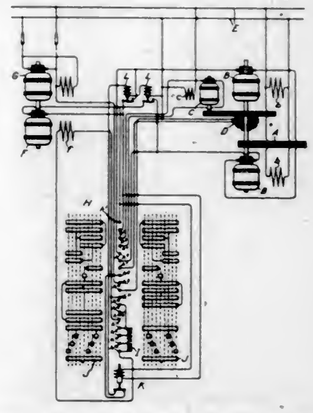


1. A fastening-device consisting of a flexible support and metallic retainers secured to said support, each retainer comprising two parts having flat contacting intermediate portions and opposing concaved end portions, one part of each retainer having lugs bent over the edges of the other part to secure said parts together.

2. A fastening device for closing openings or connecting two parts or articles, consisting of metallic retainers comprising two parts and held slidably to the edges of said opening, parts, or articles, one part of each retainer having lugs bent over the other part, and a flexible element clamped between the two parts of each retainer.

3. A fastening-device consisting of a flexible support and metallic retainers, each retainer comprising two parts having flat contacting intermediate portions and opposing concaved end portions, one part of each retainer having apertured lugs extending laterally from the edges of its flat intermediate portions and through the apertures of which said support is passed, said lugs being bent over the edges of the other part of the retainers to clamp said support thereto and to secure the two parts of each retainer together.

873,064. SYSTEM OF MOTOR CONTROL. WILBUR L. MERRILL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 6, 1907. Serial No. 366,679.



1. In combination with a load to be driven, an electric motor for driving the load at low speed, a second electric motor for driving the load at high speed, a common source of current for the motors, controlling means adapted to connect the first motor to the source and gradually to increase the voltage of the source and then to lower the voltage of the source and connect the second motor thereto, and means for preventing a sudden operation of said controlling means in changing from one motor to the other.

2. In combination with a load to be driven, an electric motor for driving the load at low speed, a second electric motor for driving the load at high speed, a common source of current for the motors, controlling means adapted to connect the first motor to the source and gradually to increase the voltage of the source and then to lower the voltage of the source and connect the second motor thereto, and means controlled by the voltage of the source controlling the operation of said controlling means in changing from one motor to the other.

3. In combination with a load to be driven, an electric motor for driving the load at low speed, a second electric motor for driving the load at high speed, a common source of current for the motors, controlling means adapted to connect the first motor to the source and gradually to increase the voltage of the source and then to lower the voltage of the source and connect the second motor thereto, and a magnet connected in shunt to said source controlling the operation of said controlling means in changing from one motor to the other.

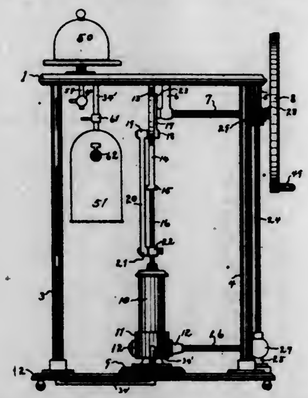
4. In combination with a load to be driven, an electric motor for driving the load at low speed, a second electric motor for driving the load at high speed, a common source of current for the motors, a controlling switch adapted to connect the first motor to the source and gradually to increase the voltage of the source and then to lower the voltage to the source and connect the second motor thereto, a magnet connected in shunt to said source, and a lock

controlled by said magnet adapted to engage said switch when said switch is moved to change from one motor to the other.

5. In combination with a load to be driven, an electric motor for driving the load at low speed, a second electric motor for driving the load at high speed, a common source of current for the motors, controlling means adapted to connect the first motor to the source and gradually to increase the voltage of the source and then to lower the voltage of the source and connect the second motor thereto, a device adapted to prevent a sudden operation of said controlling means in changing from one motor to the other, and means controlled by said device for connecting the second motor to the source independently of said controlling means.

[Claims 6 to 12 not printed in the Gazette.]

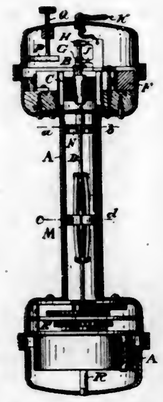
873,065. AIR-PUMP. GEORGE H. MOHLER, Fremont, Nebr. Filed Nov. 24, 1906. Serial No. 344,841.



1. In mechanism as described, the combination with an exhaust receptacle, a condensing-receptacle, a valve-housing, a suitable frame; a cone-shaped valve seated in said valve-housing and having two recesses formed therein and provided with a lengthwise-extending shaft axially mounted thereon; a rotatable driving-shaft mounted in suitable bearings upon the frame and provided with a crank-arm and with a gear thereon; a vertical shaft in suitable bearings upon the frame and having a rotatable connection with said gear upon the driving-shaft and extended to a rotatable connection with the lengthwise-extending shaft of said cone-shaped valve; an air pump in communication with the recesses of said cone-shaped valve and having a piston connected with said crank-arm of the driving shaft; an intake-pipe communicating with said exhaust-receptacle and one of the recesses of said cone-shaped valve, and an exit-pipe communicating with the condensing-receptacle and the other of said recesses of the cone-shaped valve; the rotatable movement of the driving shaft adapted, simultaneously, to cause a longitudinal movement of the piston of the air-pump and rotary movement of said cone-shaped valve to exhaust air from the exhaust-receptacle and to force air within the condensing-receptacle.

2. In mechanism as described, the combination with an exhaust-receptacle, a condensing-receptacle, a valve housing and a suitable frame; a valve seated in said valve housing and having two recesses formed therein and provided with a horizontally disposed shaft mounted thereon; a rotatable driving shaft mounted in suitable bearings upon the frame and provided with a crank-arm and a gear thereon; a vertical shaft in suitable bearings upon the frame and having a rotatable connection with the gear upon the driving shaft and extended to a rotatable connection with the horizontally disposed shaft of said valve; downwardly-extending piston guide-arms secured upon the frame; an air pump in communication with the recesses of said valve and having a piston contactingly traversing said guide-arms to a connection with said crank-arm of the driving shaft; an intake-pipe communicating with said exhaust receptacle and one of the recesses of said valve, and an exit-pipe communicating with the condensing-receptacle and the other of said recesses of said valve; the rotatable movement of the driving shaft adapted, simultaneously, to cause a longitudinal movement of the piston of the air pump and rotary movement of said valve to exhaust air from the exhaust-receptacle and to force air within the condensing-receptacle.

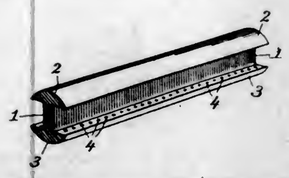
873,066. MAGNETO-ELECTRIC DUMB-BELL. JAMES MOORES, Manchester, England. Filed June 12, 1906. Serial No. 321,326.



1. In a magneto electric dumb bell, a shaft running axially through the handle of the dum bell, a spring motor at one end of the bell and arranged to drive said shaft, a magneto generator at the other end of the bell and having its armature directly connected to said shaft, a clutch, and a lever projecting through the handle of the bell and operating said clutch to start and stop said shaft.

2. In a magneto electric dumb bell, a shaft projecting axially through the handle of the dumb bell, a spring motor at one end of the bell for driving said shaft, a magneto generator at the other end of the dumb bell and having its armature directly connected to said shaft, centrifugal means for maintaining a constant speed of rotation of said shaft, a clutch, and means projecting through the handle of the dumb bell and operating said clutch, whereby said shaft may be started and stopped.

873,067. CAME. THOMAS W. MORRELL, Bloomfield, N. J. Filed Mar. 11, 1907. Serial No. 361,804.

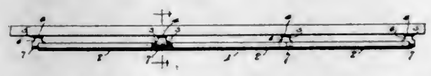


1. A came having the inner faces of its flanges provided with longitudinal series of spaced depressions.

2. A came having a milled heart and flanges, the inner faces of the flanges being provided with hemispherical indentations.

3. A came having the inner faces of its flanges provided with a series of pockets.

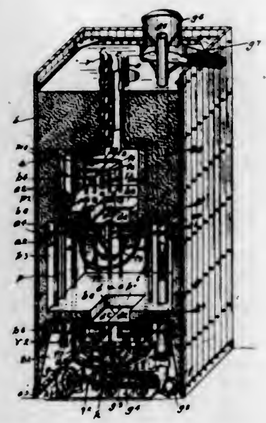
873,068. TRACK FOR DOOR-HANGERS. PHILIP A. MYERS, Ashland, Ohio, assignor to F. E. Myers and Brother, Ashland, Ohio, a Copartnership. Filed Sept. 10, 1906. Serial No. 333,921.



1. A track of the character described comprising a series of hollow sections, a support for said track having a connecting member of non-resilient material carried thereby and adapted to enter the ends of said hollow sections and having a slot extending from one end thereof, whereby the diameter of said end may be varied, substantially as described.

2. A track of the character described comprising a series of hollow cylindrical sections, a support for said track having a hollow connecting member of non-resilient material carried thereby, adapted to enter the ends of said sections and having a longitudinal slot extending through the entire length thereof, whereby the diameter of said connecting member may be varied, substantially as described.

873,069. CAISSON CONSTRUCTION. ALEXANDER Z. MCLEOD, New York, N. Y. Filed Dec. 27, 1906. Serial No. 349,642.



1. A caisson composed of a suitable casing filled in with concrete, said caisson being provided in the bottom thereof with a working chamber, above which is an air lock chamber, above which is an operator's chamber, said chambers being separated by floor and ceiling constructions having air lock doors.

2. A caisson composed of a suitable casing filled in with concrete, said caisson being provided in the bottom thereof with a working chamber, above which is an air lock chamber, above which is an operator's chamber, said chambers being separated by floor and ceiling constructions having air lock doors, composed of two similar sliding parts mounted beneath the floor and ceiling constructions.

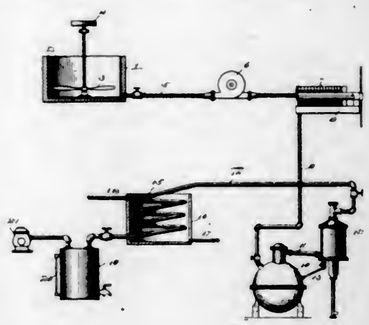
3. A caisson, comprising a suitable casing filled in with concrete and provided in the bottom thereof with a working chamber, above which is an air lock chamber, above which is an operator's chamber, above which is a passage way extending through the concrete to the top of the caisson.

4. A caisson, comprising a suitable casing filled in with concrete and provided in the bottom thereof with a working chamber, above which is an air lock chamber, above which is an operator's chamber, above which is a passage way extending through the concrete to the top of the caisson, said chambers being separated by floor and ceiling constructions having door ways, and doors mounted beneath the said floor and ceiling constructions and adapted to close said doorways and composed of two similar sliding parts and adapted to be operated by air pressure applied thereto.

5. A caisson composed of a suitable casing filled in with concrete and provided in the bottom thereof with a working chamber, above which is an air lock chamber, above which is an operator's chamber, above which is a passage way extending to the top of the caisson, said chambers being separated by floor and ceiling constructions provided with doorways having sliding air pressure operated doors, and the working chamber and air lock chamber being placed in communication by a pipe which extends from the working chamber into the operator's chamber and back into the air lock chamber.

[Claims 6 to 22 not printed in the Gazette.]

873,070. RECOVERING SODIUM SULFATE AND SULFURIC ACID. AXEL W. NIBELIUS, Hackettstown, N. J. Filed June 18, 1906. Serial No. 322,313.



1. The process hereinbefore described of separating sulfuric acid from niter cake which consists in dissolving said acid in a volatile solvent in which sodium sulfate is insoluble, then removing the solution of the acid from the sodium sulfate and separating the said acid from the solvent.

2. The process hereinbefore described of isolating sulfuric acid and a sulfate of sodium from niter cake which consists in adding to said cake a volatile solvent capable of dissolving said acid, but in which sodium sulfate is insoluble, removing the solution of the acid from the sodium sulfate and separating the solvent from the acid by distillation.

3. The process hereinbefore described of isolating sulfuric acid and a sulfate of sodium from niter cake which consists in adding to said niter cake a mixture of volatile solvents capable of dissolving said acid, but in which sodium sulfate is insoluble, removing the solution of the acid from the sodium sulfate and separating the solvents from the acid by distillation.

4. The process hereinbefore described of isolating sulfuric acid and sulfate of sodium from niter cake which consists in adding to said cake a volatile solvent in which said acid is soluble, but in which the sodium sulfate is insoluble, removing the solution of the acid from the sodium sulfate and separating the solvent from the acid by distillation under diminished atmospheric pressure.

5. The process hereinbefore described of isolating sulfuric acid and a sulfate of sodium in the form of Glauber's salt from niter cake which consists in adding to said niter cake in a dissolved state a volatile solvent capable of dissolving the acid but in which the sodium sulfate is insoluble, removing the solution of the acid from the sodium sulfate and finally separating the acid and the solvent.

[Claim 6 not printed in the Gazette.]

873,071. RIBBON-HOLDER FOR TYPE-WRITERS. MORRIS B. NIXON, New York, N. Y., assignor to Adelbert P. Little, Rochester, N. Y. Filed Jan. 12, 1907. Serial No. 352,024.



1. In a holder for typewriter ribbons, a receptacle having an opening in its bottom and having sides provided with a slot, a cover for the top thereof having a portion adapted to cover and to uncover said slot when the cover is turned on the receptacle, a revoluble roller in the receptacle, and means for connecting said roller with the driving spindle of a typewriter.

2. In a holder for typewriter ribbons, a receptacle circular in cross-section having an opening in its bottom and having sides provided with a slot, a cover for said receptacle circular in cross-section and having a slot in its side and adapted to cover and to uncover the slot in the receptacle when the cover is turned on the receptacle, a revoluble roller in the receptacle, and means for connecting said roller with the driving spindle of a typewriter.

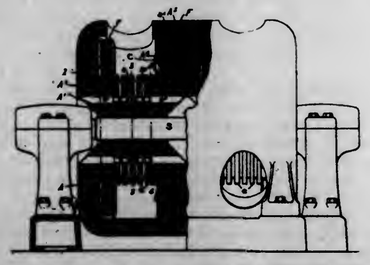
3. In a holder for typewriter ribbons, a cylindrical receptacle having an opening in its bottom and having sides provided with a slot, a cylindrical cover for said receptacle having a slot in its side and adapted to cover and to uncover the slot in the receptacle when the cover is turned on the receptacle, a revoluble roller in the receptacle, and means for connecting said roller with the driving spindle of a typewriter.

4. In a ribbon holder for typewriters, a receptacle having a slot in its side and an opening in its bottom, a cover for said receptacle, a revoluble roller in the receptacle, and means for connecting said roller with the driving spindle of a typewriter through said opening.

5. In a ribbon holder for typewriters, a receptacle having a slot in its side and a bearing in its bottom, a cover for said receptacle having a bearing in its top, a roller for a ribbon carried by said bearings, and means for connecting said roller with the driving spindle of a typewriter.

[Claim 6 not printed in the Gazette.]

873,072. DYNAMO-ELECTRIC MACHINE. JAKOB E. NOEGGERATH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 22, 1905. Serial No. 279,624.



1. In a dynamo-electric machine, a rotor body comprising two superposed cylindrical members shaped so as to form a chamber intermediate their lengths and provided with holes extending from said chamber to the surfaces of said members.

2. In a dynamo-electric machine, a rotor body comprising two superposed cylindrical members engaging each other near their ends and separated from each other near their centers so as to form an air chamber, and having substantially axial and substantially radial holes extending from said chamber to the surfaces of said members.

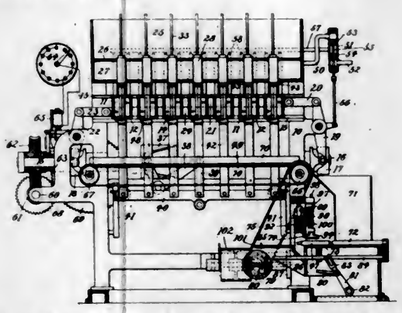
3. In a dynamo-electric machine, a rotor body comprising a cylindrical member having an outer surface of three different diameters, and a superposed cylindrical member having inner diameters corresponding to the outer diameters of the end portions of the first member, but greater than the outer diameter of the intermediate portion of the first member, so as to form a central chamber between said members, said members having substantially axial and substantially radial holes extending from said chamber to the surfaces of said members.

4. In a unipolar generator, an armature comprising two superposed cylindrical members shaped so as to form a chamber intermediate their lengths and provided with holes extending from said chamber to the surfaces of said members, and collector rings carried by the outer member adjacent to the outer ends of a portion of said holes.

5. In a dynamo-electric machine, a symmetrical rotor body made up of two similar halves placed end to end, each half comprising two superposed cylindrical members shaped so as to fit together and form a chamber intermediate their lengths and provided with holes extending longitudinally from said chambers to the end surfaces of said members.

[Claim 6 not printed in the Gazette.]

873,073. MACHINE FOR MOLDING CANDLES. CONRAD NORDFORS, Jersey City, N. J. Filed May 2, 1907. Serial No. 371,424.



1. In a machine of the character described, a divided mold, means for automatically opening and closing said mold, and means for placing a wick into the mold, substantially as specified.

2. In a machine of the character described, a divided mold, means for simultaneously moving the mold-sections in opposite directions, and means for placing a wick into the mold, substantially as specified.

3. In a machine of the character described, a divided mold, means for automatically sliding the mold sections in opposite directions, and a cutter attached to one of said mold-sections, substantially as specified.

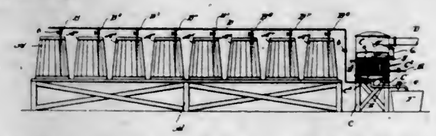
4. In a machine of the character described, a pair of hollow blocks having a series of alined casting recesses, means for placing wicks into said recesses and means for sliding said blocks alternately in opposite directions, substantially as specified.

5. In a machine of the character described, a series of divided molds, means for placing wicks into said molds, a pair of rods connected to alternate mold-sections, and means for simultaneously reciprocating said rods in opposite directions, substantially as specified.

[Claims 6 to 25 not printed in the Gazette.]

873,074. SUBSTANCE FOR TREATING HIDES AND PROCESS OF MAKING SAME. OTTOKAR H. NOWAK, Chicago, Ill., assignor to Nowak Manufacturing Company, a Corporation of Illinois. Filed Sept. 16, 1905. Serial No. 278,822.

1. The process of making a substance for the purpose described which consists in removing the curd from milk and in permitting the sour liquor remaining after the removal of the curd to ferment for a period of at least seven days.



2. The process of making a substance for the purpose described which consists in heating milk to promote the precipitation of the curd, in removing the precipitated curd, and in permitting the sour liquor remaining after the removal of the curd to ferment for a period of at least seven days.

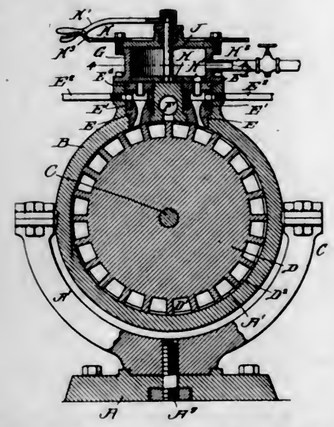
3. The process of making a substance for the purpose described, which consists in heating milk to promote the precipitation of the curd, further promoting the precipitation by adding sour liquor previously obtained from milk, removing the precipitated curd, and permitting the sour liquor remaining after the removal of the curd to ferment for a sufficient period to convert at least 1% thereof into acid.

4. The process of making a substance for the purpose described which consists in removing the curd from milk, and in permitting the sour liquor remaining after the removal of the curd to ferment for a sufficient period to convert at least 1% thereof into acid calculated as lactic acid.

5. The process of making a substance for the purpose described, which consists in promoting the precipitation of the curd in milk by adding thereto sour liquor previously obtained from milk, in removing the precipitated curd, and in permitting the sour liquor remaining after the removal of the curd to ferment for a sufficient period to develop at least 1% acidity calculated as lactic acid.

[Claims 6 to 11 not printed in the Gazette.]

873,075. TURBINE. ALFRED OLIVER, Alpena, Mich. Filed Jan. 22, 1907. Serial No. 353,490.



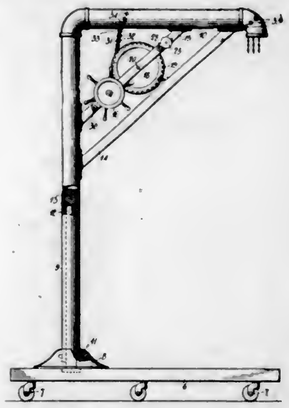
1. An engine of the kind described comprising a base, a bracket having oppositely extending arms and rotatably mounted upon the base, a cylinder suspended between said arms, a turbine wheel carried by said cylinder, and a shaft passing through the cylinder and fixed to the wheel.

2. A device of the kind described comprising a base, a bracket movable upon said base, a cylinder supported by the bracket, a shaft passing through the cylinder, floating bearings for the shaft, a turbine wheel fixed upon the shaft, means for admitting air to said wheel, and means for directing steam to the said wheel in different directions.

3. A turbine engine of the kind described comprising a rotatable cylinder, a shaft journaled in said cylinder upon floating bearings, a turbine wheel arranged within the cylinder and fixed to the shaft, said wheel having a zigzag passage upon its periphery, oppositely arranged plugs having steam inlets, said inlets communicating with the passage formed on the wheel, pipes admitting air to the passages of said plugs, means for admitting steam to said plugs, and means for controlling the admission of said steam.

4. A turbine engine of the kind described, comprising a cylinder, a shaft therethrough, a turbine wheel upon said shaft, said cylinder being provided with steam inlets and an exhaust outlet, the exhaust outlet being arranged between the steam inlets, a valve casing, a steam pipe opening into said casing, a disk valve arranged in the casing and slotted, means for bringing said slot into alinement with either of the inlet passages, and pipes opening into the cylinder to admit air at points between the valve casing and the inlet passages, as and for the purpose described.

873,076. INVALID-LIFTER. GEORGE E. OLSEN and OLE J. JOHNSON, Muskegon, Mich. Filed Mar. 20, 1907. Serial No. 363,442.



1. In a lifter, the combination of a swinging arm and standard, a frame thereon, a pair of drums in the frame having clutch devices therebetween, and a winding gear connected to one of the drums, and independent detent devices for each drum.

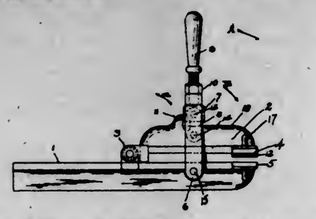
2. In a lifter, the combination of a swinging arm and standard, a frame thereon, a shaft extending across the frame, a drum fast on the shaft, a drum loose on the shaft, said drums having clutch members on their adjacent ends, a power device geared to the fast drum, means to shift the loose drum to engage or disengage the clutch, and cables connected to the drums.

873,077. COMB-CEMENTING CLAMP. FELIX J. PATNOD, Worcester, Mass., assignor of one-half to James Fitzgerald, Worcester, Mass. Filed Jan. 2, 1907. Serial No. 350,553.

1. In comb cementing clamps, the combination of a fixed jaw, a movable jaw pivotally mounted thereon, a lever pivoted on said fixed jaw and attached to said movable jaw by a toggle-joint to operate said movable jaw with relation to said fixed jaw and means upon said lever to adjust the relative position of said jaws, substantially as described.

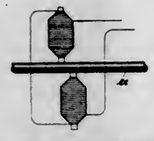
2. In comb cementing clamps, the combination of a fixed jaw, a movable jaw pivotally mounted thereon, a lever pivoted on said fixed jaw and attached to said movable jaw by a toggle-joint and an adjusting screw upon said

lever to regulate the relative position of said jaws, substantially as described.



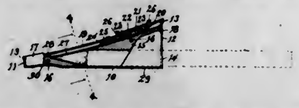
3. In comb cementing clamps, the combination of a fixed jaw, a movable jaw pivotally mounted thereon, a lever pivoted on said fixed jaw and attached to said movable jaw by a toggle-joint, to operate said movable jaw with relation to said fixed jaw and an adjustable handle upon said lever to regulate the relative position of said jaws.

873,078. ELECTROMAGNET FOR TELEGRAPHONE PURPOSES. PEDER O. PEDERSEN and VALDEMAR POULSEN, Copenhagen, Denmark, assignors to American Telegraphone Company, a Corporation of the District of Columbia. Filed Apr. 4, 1902, Serial No. 101,345. Renewed May 2, 1907. Serial No. 371,452.



The combination with the recording body of a telegraphone, of an electro-magnet having its opposite poles applied thereto in a line oblique to the direction of motion of said body.

873,079. PENCIL-SHARPENER. ARNE T. PETERSON, Racine, Wis. Filed Feb. 14, 1907. Serial No. 357,251.



1. A pencil sharpener, comprising a sheet metal casing having an opening in its end to receive a pencil, a separate pencil support mounted therein and provided with a conical socket to receive and support the end of the pencil with an opening through which the pencil is exposed, a guide formed by bent edges of the casing, a slide movably mounted in the guide, and a knife member carried by the slide and adapted to engage the end of the pencil through the opening in the socket of the pencil support.

2. A pencil sharpener, comprising a sheet metal casing having an opening to receive a pencil, a separate pencil support contained within the casing and provided with a conical socket to receive and support the end of a pencil with an opening through which the pencil is exposed, a guide formed by inturned edges of the casing, a slide movably mounted in the guide, a knife member carried by the slide and adapted to engage and cut the end of the pencil through the opening in the socket of the pencil support, and a thumb piece on the slide by which the slide may be moved.

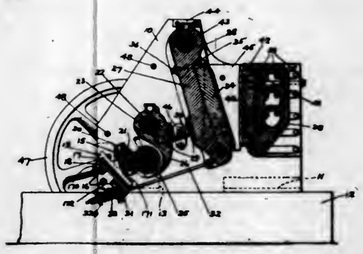
3. A pencil sharpener, comprising a sheet metal casing having an opening through which a pencil may be inserted, a separate pencil support contained within the casing and provided with a conical socket to receive the end of the pencil with an opening through which the pencil is exposed, a guide formed by inturned edges of the casing, a slide mounted in the guide, a knife member carried by the slide for engaging and cutting the end of the pencil through the opening in the socket of the pencil support, and a pocket formed between the end of the casing and the pencil support to receive the shavings from the knife member.

4. A pencil sharpener, comprising a casing having an opening through which a pencil may be inserted, a pencil support contained within the casing and having a conical socket to receive the end of the pencil with an opening through which the pencil is exposed, a guide formed by inturned edges of the casing, a slide comprising a top and bottom plate and an intermediate plate secured together and movably mounted to slide on the guide with the inturned edges of the casing held between the top and bottom plates, and a rotary knife member adjustably mounted on the lower plate of the slide and adapted to engage and cut the end of the pencil through the opening in the socket of the pencil support.

5. A pencil sharpener, comprising a sheet metal casing having an opening to receive a pencil, a pencil support comprising a block of soft metal contained within the casing and provided with a conical socket to receive the end of the pencil with an opening through which the pencil is exposed, a guide formed by inturned edges of the casing, a slide movably mounted on the guide, a knife member carried by the slide and adapted to engage and cut the end of the pencil through the opening in the socket of the pencil support, and a stop at the end of the opening to engage and support the end of the pencil.

[Claims 6 and 7 not published in the Gazette.]

873,080. MULTIPLE ROCK-CRUSHER. EDWIN S. PHILIPS, Kennett Square, Pa., assignor to The American Road Machine Company, Kennett Square, Pa., a Corporation of Pennsylvania. Filed June 11, 1906. Serial No. 321,096.

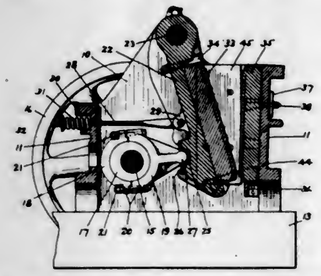


1. In a rock crusher, the combination with the side plates, of a shaft between the side plates and a plurality of moving jaws swinging thereon, a second shaft between the side plates back of and below the first shaft, and a plurality of tumbler-levers, corresponding in number to the moving jaws, swinging thereon and actuating the moving jaws respectively, a main cam shaft between the side plates back of and below the second shaft, cams fixed thereon corresponding in number to the moving jaws and actuating the tumbler-levers respectively, a cross-brace between the side plates back of the main shaft, and brackets on the cross-brace having bearings for the main shaft extending between adjacent cams, substantially as described.

2. In a rock crusher, the combination with the moving jaw and actuating mechanism therefor, of a fixed jaw having a key-bolt orifice extending from front to back, a die applied to the face of the fixed jaw, and extending above the orifice in the fixed jaw and having, between its upper and lower ends, an orifice, in line with the jaw orifice, having one tapered wall, and a key-bolt having a tapered side bearing against the tapered wall of the die orifice, the opposite side of the key-bolt bearing against the corresponding wall of the jaw orifice, substantially as described.

3. In a rock crusher, the combination with the side plates, of the fixed and moving jaws between the side plates, dies carried by the jaws respectively, and actuating mechanism for the moving jaw, a shaft, from which the moving jaw is hung, above the level of the fixed jaw, and between the side-plates, the upper edges of the side plates being cut away from above said shaft to substantially the level of the top of the fixed jaw, an upright face plate extending between the side plates in front of that part of the moving jaw above its die, and a cover plate overlying the fixed jaw and die, substantially as described.

873,081. ROCK-CRUSHER. EDWIN S. PHILIPS, Kennett Square, Pa., assignor to The American Road Machine Company, Kennett Square, Pa., a Corporation of Pennsylvania. Filed June 11, 1906. Serial No. 321,097.



1. In a rock crusher, the combination with the moving jaw and a shaft from which the same is pendulous, and the fixed jaw, of the main shaft, a cam thereon, a strap on the cam having a removable section and a toggle on the removable section of the strap, said toggle having a rounded head, there being a cup-shaped recess in the moving jaw, and a wearing plate of substantially uniform thickness having its central part dished in to conform on one side to said recess and on the other side to the rounded head of the toggle.

2. In a rock crusher, the combination with the side plates of the frame, of a jaw suspended from the frame and movable between the side plates, a guide-plate secured to the side plate, and a guide-plate secured to the side of the jaw opposite and adjacent to the guide-plate, and means to adjust the first guide plate inwardly toward the second to maintain them in proper relation notwithstanding wear.

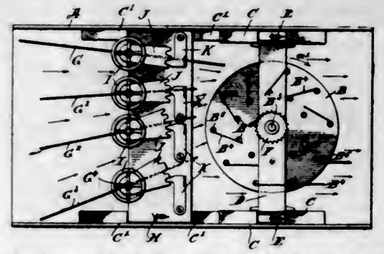
3. In a rock crusher, the combination with the side plates of the frame, of a jaw suspended from the frame and movable between the side plates, an inwardly adjustable guide-plate secured to the side plate, a guide plate, secured to the side of the jaw at its lower end, opposite and adjacent to the first guide plate, and a check plate secured to the inner face of the side plate substantially opposite the crushing face of the jaw.

4. In a rock crusher, the combination with the side plates of the frame, of a jaw suspended from the frame and movable between the side plates, a guide-block secured to the side plate and comprising a body or shank portion extending through an orifice in the side plate and a guide-plate at its inner end, and a guide-plate secured to the side of the jaw opposite and adjacent to the first guide-plate.

5. In a rock crusher, the combination with the side plates of the frame, of a jaw suspended from the frame and movable between the side plates, a guide-block comprising a body or shank portion extending through an orifice in the side plate, an outside flange and an inner guide plate, and bolts by which the flange is secured to the side plate.

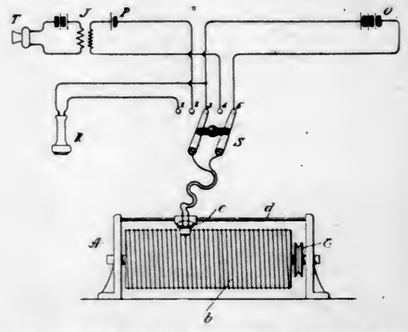
873,082. CURRENT WATER-WHEEL. ASAHEL A. PORTER, Naugatuck, Conn. Filed July 22, 1903. Serial No. 166,586.

In a current water wheel, the combination with a flume, of a vertically slidable frame in the flume, a wheel mounted in the frame and provided with wings pivoted to swing into reverse position and with stops for the wings, a second frame mounted to slide vertically in the flume in front of the wheel frame, a plurality of gates mounted in the



second frame, and means for locking the gates in position, as set forth.

873,083. TELEGRAPHONE. VALDEMAR POULSEN and PEDER O. PEDERSEN, Copenhagen, Denmark, assignors to American Telegraphone Company, a Corporation of the District of Columbia. Filed June 12, 1902, Serial No. 111,305. Renewed May 2, 1907. Serial No. 371,454.



1. In an apparatus for recording speech, sounds or current variations electro-magnetically, the combination of a magnetizable body, a recording magnet, a source of constant current and means whereby said current can be sent through the magnet successively in opposite directions and eventually with different strengths.

2. In an apparatus for recording speech, sounds or current variations electro-magnetically, the combination of a magnetizable body, a recording magnet, means for uniformly magnetizing said body with opposite directions of the magnetic lines of force, substantially as described.

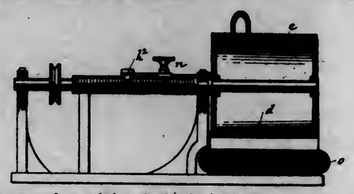
3. In an apparatus for recording speech, sounds, or current variations electro-magnetically, the combination of a magnetizable body, a recording magnet, means for uniformly magnetizing said body and means for further magnetically influencing said body to bring it to a magnetic condition most favorable to receive and preserve a record, substantially as described.

4. In an apparatus for recording speech, sounds or current variations electro-magnetically the combination of a circuit transmitting apparatus in said circuits a battery in said circuit, a magnetizable body, a recording electromagnet, a second circuit containing a battery and a switch whereby either battery can be connected in circuit with the electro-magnet in a manner to send current through the magnet in opposite directions, substantially as described.

5. The method of operating telegraphones which consists in obliterating a magnetic record by uniformly magnetizing the body containing the record and then uniformly remagnetizing said body with magnetic lines of force of opposite direction to bring it to the most favorable condition to receive a new message, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

873,084. TELEGRAPHONE. VALDEMAR POULSEN, Copenhagen, Denmark, assignor to American Telegraphone Company, a Corporation of the District of Columbia. Filed Sept. 29, 1902, Serial No. 125,148. Renewed May 2, 1907. Serial No. 371,455.



1. A record receiving body for telegraphones consisting of magnetic material in sheet form, in combination with means for tracing magnetic lines throughout its surface.

2. A record receiving body for telegraphones consisting of a sheet of magnetic material having a smooth surface, in combination with means for tracing lines of magnetism throughout its surface.

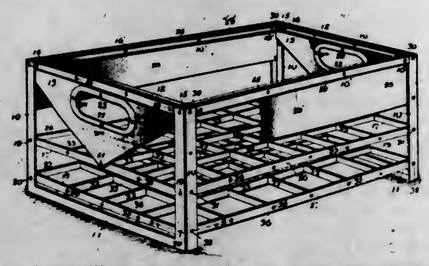
3. A record receiving body for telegraphones consisting of a sheet of magnetic material in the form of a cylinder, in combination with means for tracing lines of magnetism throughout its surface.

4. A record receiving body for telegraphones consisting of a sheet of magnetic material in the form of a cylinder and having a smooth surface, in combination with means for tracing a screw-thread line of magnetism thereon.

5. A record receiving body for telegraphones consisting of a sheet of magnetic material rolled into cylindrical form and having abutting end edges.

[Claims 6 to 8 not printed in the Gazette.]

873,085. METALLIC CRATE OR CASE FOR BOTTLES, JARS, AND THE LIKE. JOHN REPETTO, Philadelphia, Pa. Filed Aug. 1, 1905. Serial No. 272,166.



1. A metallic crate comprising end angle irons bent to form a U-shaped frame, having its free ends connected by channel irons, a sheet metal plate substantially triangular in shape and bound at its corner portions and along one side of its base to web portions of the crate bars, the said plate having an opening therein to act as a handle.

2. In an all metallic crate for bottles etc., the combination of end angle irons bent to form two parallel uprights and a base piece, channel bars secured to the tops of said uprights, sheet metal plates secured between said channel irons and the tops of the said uprights, the sheet metal plates at the ends being provided with handles, parallel rods connecting the lower ends of said uprights and cross stays forming pockets or cells secured to said parallel rods.

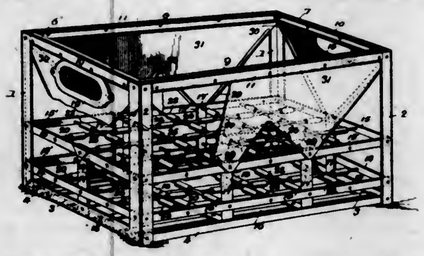
3. In an all metallic crate for bottles, etc., the combination of end angle irons bent to form two parallel uprights and a base piece, parallel rods connecting the lower end of said uprights, channel irons secured to the tops of said uprights, sheet metal plates secured between the said channel irons and the tops of said uprights, the plates at the ends of said crate being triangular in shape, and secured to one of said parallel rods and provided with handles, cross stays forming pockets or cells secured to the said parallel rods and bottom bars for supporting the bottles.

4. In a skeleton case for bottles, the combination of end pieces composed of integral angle irons bent to form a base piece and uprights extending at right angles to said base piece, a channel iron connecting the top of said arms of each end piece, sheet metal plates substantially triangular in shape secured between said channel irons and the ends of said uprights and a rod or bar curved on its outer face also extending between the ends of the said uprights and located on the outside of said triangular sheet, and parallel cross bars, provided with holes, near the bottom of said integral angle irons, to the top one of which one corner of each triangular plate is secured; of sides composed of channel irons connecting the tops of the two end pieces, strips of sheet metal secured between the tops of said end pieces and said channel irons, curved faced rods or bars secured to the outside of said sheet metal, and parallel bars provided with rivet holes securing the bottoms of said end pieces together; cross stays arranged at right angles to each other, at suitable intervals apart, notched to secure the same to each other and provided with integral lugs or extensions to pass through the holes in said parallel bars and to be headed over or riveted to said bars; and bottom rods extending between said end pieces providing means for supporting the bottles between said cross stays.

5. In an all metallic crate for bottles, etc., the combination of end pieces made of angle iron bent to form a base and parallel uprights, a top composed of channel iron extending between said uprights, rods having a curved outer face arranged parallel to said channel irons and adjacent thereto, and sheet metal strips secured between said channel irons and said curved faced rods.

[Claims 6 to 21 not printed in the Gazette.]

873,086. METALLIC CRATE. JOHN REPETTO, Philadelphia, Pa. Filed May 23, 1906. Serial No. 318,282.



1. A metallic crate, comprising a skeleton frame having its vertical and lower edges formed of angle bars and its top edges formed of U-shaped bars, sides and bottom slats secured to the webs of the angle bars, and sheet metal plates fastened to the webs and slats around the upper portion of the sides, the said plates having serrations on lower edges and beads formed on the edges of such serrations.

2. A metallic crate, comprising a skeleton frame having its vertical, bottom and top edges formed out of structural bars, each end thereof having its vertical and bottom edges bent out of one single piece, transverse slats fastened to the webs of said vertical pieces, a sheet metal plate secured to the top bar of the end portion and also secured to one of the transverse slats, the said plates having serrations on their lower edges and beads formed on the edges of such serrations.

3. A metallic crate, a sheet metal plate secured on one of its edges to a part of said crate and having its opposite edge serrated and beaded and secured to another part of the crate.

4. A metallic crate, having its edges made up of structural bars, and the lower portion of its sides, ends and bottom made up of slats crossing each other, and fastened at their extremities to the webs of said bars, the upper portions of said sides and ends being formed of sheet metal plates, having their upper edges secured to the top edge of the crate and their lower edges secured at intervals to the top slats, the said plates having triangular serrations on their lower edges and beads formed on the edges of such serrations.

5. A metallic crate, having its edges made up of structural bars, and the lower portions of its sides, ends and bottom made up of slats crossing each other and fastened to the webs of said bars in combination with wires extending transversely and longitudinally of the crate, and having their extremities fastened to the slats, forming skeleton receptacles, the said wires being kinked up and down at their intersections, covered with rubber tubing intermediate their kinked portions, and being struck up into edges, to keep said rubber tubing in place.

[Claims 6 to 13 not printed in the Gazette.]

873,087. BOTTLE-STOPPER. JOHN REPETTO, Philadelphia, Pa. Filed May 11, 1907. Serial No. 373,032.



1. The combination with a bottle, of a hollow stopper of substantially conical shape comprising a plurality of parts of sheet material and means to fasten said stopper into the bottle, said bottle and fastening means coacting upon the conical surface of the stopper to wedge the parts thereof together.

2. A hollow stopper formed of sheet material and comprising two parts joined longitudinally of said stopper.

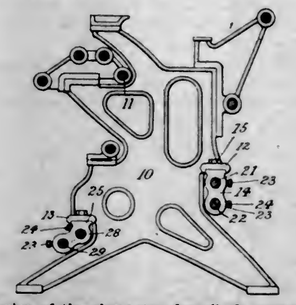
3. A hollow stopper formed of sheet material and comprising two parts having overlapping edges forming a joint extending longitudinally of said stopper.

4. A hollow stopper formed of sheet material and comprising two parts having overlapping edges, one of said edges being flanged inwardly to receive the other of said edges.

5. A hollow stopper formed of sheet material comprising two parts having overlapping edges forming a joint extending longitudinally of said stopper, said stopper being provided with a transverse aperture for the reception of a fastening device.

[Claims 6 to 15 not printed in the Gazette.]

873,088. FRAME FOR LONG MACHINES. WOLFGANG D. RICHTER, Philadelphia, Pa. Filed Jan. 25, 1907. Serial No. 353,959.

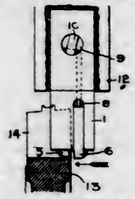


1. A device of the character described, comprising a series of parallel standards, shafts journaled therein and extending at right angles thereto, perforated boxes removably secured to the standards, and a plurality of braces secured to the boxes, the shafts and braces having the same coefficient of linear expansion, substantially as specified.

2. A device of the character described, comprising a series of spaced parallel standards, shafts journaled therein and extending at right angles thereto, a first and a second set of boxes removably attached to the standards, a first set of braces arranged sidewise of each other and secured in the first set of boxes, and a second set of braces arranged vertically below each other and secured in the second set of boxes, the shaft and the braces having the same coefficient of linear expansion, substantially as specified.

3. A device of the character described, comprising a series of spaced parallel standards, shafts journaled therein and extending at right angles thereto, a first set of boxes removably secured to the standards and having a pair of perforations arranged sidewise of each other, a second set of boxes also removably secured to the standards and having a pair of perforations arranged vertically below each other, a first set of steel braces engaging the first set of boxes, a second set of steel braces engaging the second set of boxes, and means for locking the braces to the boxes, substantially as specified.

873,089. TOOL FOR CUTTING TURBINE-BUCKETS. JOHN RIDDELL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 18, 1904. Serial No. 189,414.



1. A slotting tool, comprising a shank, cutters extending from one end face thereof and having their cutting edges facing each other, one cutter being located at the rear of the center of said end face and adapted to cut during the forward stroke and the other cutter being located at the front of the center and adapted to cut during the rearward stroke, and means for advancing one cutter to an operative position while the other is being retracted.

2. In a tool for cutting curved slots across the peripheral face of a disk, ring or segment thereof, the combination of a shank having in cross-section a greater length than width and tapering toward the front and rear and provided with sockets, each socket having an open side, with cutters movably mounted in the sockets, which are flushed with and partake of the same shape as the outer surfaces of the shank, and means operatively related to the cutters for moving them alternately into and out of their cutting position.

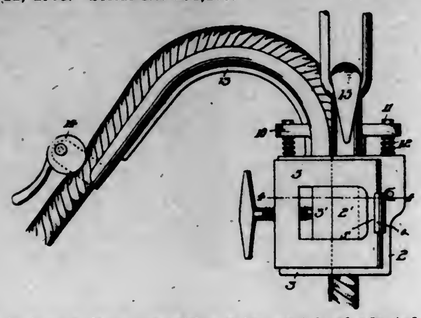
3. In a tool for cutting curved slots across the peripheral face of a disk, ring or segment thereof, the combination of a socketed shank having in cross-section a greater length than width and tapering toward the front and rear, cutters mounted in the sockets with their cutting edges facing each other, and means for moving first one cutter into engagement with the work and then another.

4. A slotting tool, comprising a shank provided with longitudinal sockets, cutters facing each other and mounted in the sockets for lengthwise movement therein and extending outwardly from an end face of the shank, and a member in the shank which is oscillated first by one cutter and then by the other to impart movement to the cutters alternately, the cutters being arranged one in front of the other so that at the beginning of each stroke the first cutter engages with the work and is moved inwardly thereby and operates through the said member to move the other cutter outwardly into its cutting position.

5. In a tool for cutting slots by successive cuts, the combination of a socketed shank, cutters oppositely mounted therein, and means arranged in the shank which is under the control of one cutter for moving another cutter into operative relation to the work.

[Claims 6 to 12 not printed in the Gazette.]

873,090. CLAMP FOR WELL-DRILLING CABLES. CLARK F. RIGBY, New Martinsville, W. Va. Filed Dec. 11, 1905. Serial No. 291,179.



1. A rope-clamp comprising a two-part bowl adapted to open and close, means for securing the bowl-parts together, cable-slips operative in the bowl, and suspending means for the clamp connected to one part only of the bowl.

2. A cable-clamp comprising a divided bowl, means for securing the bowl-parts together, coöperating slips carried by the bowl-parts, a cable-guide carried by one of the slips, and clamp suspending means on one only of the bowl-parts.

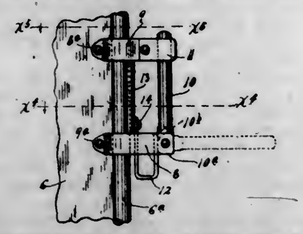
3. A cable-clamp comprising a divided bowl, means for securing the bowl-parts together, suspending means for the clamp connected to one part only of the bowl, coöperating slips carried by the bowl-parts, and a cable-guide carried by the slip of the unsuspended bowl-part.

4. A cable-clamp comprising a divided bowl with the parts thereof hinged together at one side, means for securing together the opposite sides thereof, cable-securing slips operative within the bowl, and suspending means for the clamp connected to one part only of the bowl.

5. A cable-clamp comprising a divided bowl with the parts thereof hinged together at one side, suspending means for the clamp connected to one part of the bowl, a clamping device carried by the suspended part for securing thereto the free portion of the other bowl-part, and cable-securing slips operative in the bowl.

[Claim 6 not printed in the Gazette.]

873,091. AUTOMATIC UNCOUPLING-HANDLE FOR VESTIBULE-CURTAINS. HENRY M. ROBERTSON, St. Paul, Minn. Filed Sept. 13, 1907. Serial No. 392,811.

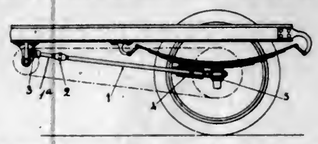


1. The combination with a vestibule curtain and a spring actuated roller attached to one edge thereof, and a handle applied to the free edge of said curtain and having a spring held pivoted lock bolt adapted to be opened by excessive pressure, substantially as described.

2. The combination with a vestibule curtain, of a handle comprising vertically spaced brackets secured to the free edge of said curtain, a lock bolt pivoted to one of said brackets, and spring clamping prongs applied to the other of said brackets and engageable with the free end of said lock bolt to yieldingly hold the same in normal position, substantially as described.

3. The combination with a vestibule curtain, of a pair of vertically spaced brackets rigidly secured to the free edge thereof, a lock bolt pivoted to one of said brackets and having at its pivoted end flat surfaces 10^a—10^b, a spring secured in respect to said brackets and operative on the said surfaces 10^a and 10^b of said lock bolt to yieldingly hold the same, respectively, in open and closed positions, and spring prongs applied to the other of said brackets and engageable with the free end of said lock bolt to yieldingly hold the same in a closed position, substantially as described.

873,092. COUPLING-ROD FOR THE AXLES OF AUTOMOBILES. THÉODORE ROMMEL, Neuilly-sur-Seine, France. Filed Sept. 6, 1906. Serial No. 333,458.



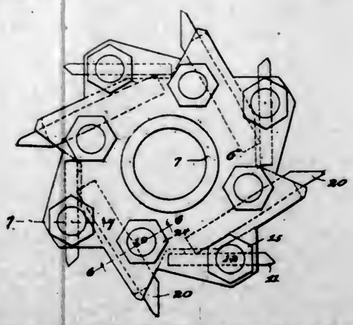
1. The combination with a vehicle frame and wheel axle of a coupling or tension rod adjustable as to length and having a non-displaceable connection at one end to said frame, and a spring connection between the other end of said rod and the wheel axle aforesaid substantially as described.

2. The combination with a vehicle frame and wheel axle of a coupling or tension rod adjustable as to length and positively connected at one end to said frame, a box connected to said axle into which the other end of the rod enters and a spring within said box adapted to act on said rod substantially as described.

3. The combination with a vehicle frame and wheel axle of a coupling or tension rod adjustable as to length and positively connected at one end to said frame, a box connected to said axle into which the other end of the rod enters, an abutment on said rod within the box, and springs adapted to act against opposite sides of said abutment substantially as described.

4. The combination with a vehicle frame and wheel axle of a coupling or tension rod adjustable as to length and positively connected at one end to said frame, a box connected to said axle into which the other end of the rod enters, an abutment on said rod within the box, a screw plug inserted into the free end of the box and a spring located at each side of the abutment, said spring bearing at one end against said abutment and at the opposite end against the wall of the box and screw plug respectively substantially as described.

873,093. CUTTER-HEAD FOR GROOVING AND JOINTING MACHINES. HARRY B. ROSS, Beloit, Wis., assignor to The Berlin Machine Works, Beloit, Wis., a Corporation of Wisconsin. Filed Jan. 19, 1907. Serial No. 353,091.

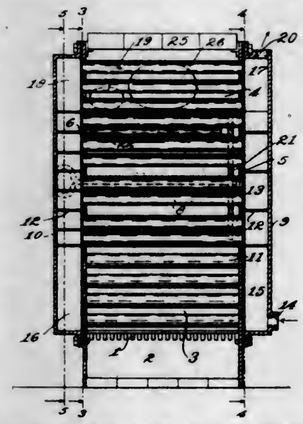


1. In a cutter-head, the combination with a head-piece carrying jointing knives, of a plate adapted to be clamped against the face of said head-piece, said head-piece and plate having corresponding channels in their adjacent faces positioned between said jointing knives, and grooving knives carried in said channels, substantially as described.

2. In a cutter-head of the class described, the combination with a head-piece having two series of bolt-holes formed therethrough, of slotted bolts engaging one series of said bolt-holes, jointing knives passed through the slots of said bolts and drawn against the side of the head-piece by the latter, a series of grooving knives in alternating relation to said jointing knives, an apertured clamp-plate, and bolts engaging the other series of holes in said head-piece and the apertures of said clamp-plate and securing said grooving knives between said clamp-plate and head-piece, the opposed sides of said head-piece and clamp-plate being channeled to receive said jointing and grooving knives, respectively, substantially as described.

3. In a cutter-head of the class described, the combination with a head-piece having bolt-holes formed therethrough, of a clamp-plate provided with bolt-holes registering with said bolt-holes of the head-piece and also having channels formed in its inner side, said channels extending across one side of said bolt-holes, grooving knives fitted to said channels of the clamp-plate, and bolts engaging said bolt-holes and clamping said grooving knives between said clamp-plate and head-piece, said bolts having transverse notches engaged by the inner edges of said grooving knives, substantially as described.

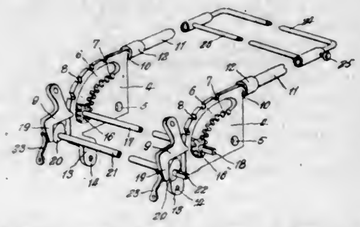
873,094. BOILER. WILLIAM G. ROSS, Chicago, Ill., assignor of one-half to Frank Sutherland, Chicago, Ill. Filed Nov. 19, 1906. Serial No. 344,115.



1. A boiler comprising a heating chamber having vertically disposed tube sheets at opposite sides thereof, a plurality of tubes extending transversely between said sheets, and a casing fitting against one of said tube sheets and having a plurality of horizontal partitions extending toward and abutting against the tube sheet and forming a substantially water-tight joint therewith, and a plurality of vertically disposed partitions connecting adjacent horizontal partitions, said partitions being arranged to form a plurality of pockets each connecting an adjacent pair of tubes, a second casing abutting against the other tube sheet and having a corresponding system of pockets, all arranged to cause water or steam to follow a tortuous path upwardly through said system of tubes.

2. A boiler or water heater comprising a fire-box and a heating chamber extending upwardly therefrom, vertically disposed tube-sheets on opposite sides of said fire-box and heating chamber, a plurality of tubes extending between and through said sheets and having water-tight connection therewith, a row of said tubes being located behind the fire-box, a casing mounted outside of each of said sheets, each of said casings forming a water-chamber extending along the side of the fire-box over the ends of said row of tubes and communicating directly with each of the tubes in said row, and each of said casings having above said chamber a plurality of pockets each connecting adjacent pairs of the tubes above said row, all of said pockets being arranged to cause the water to follow a tortuous upward path throughout the system of tubes above said row, said chambers being in communication with said pockets only through said system of tubes, and one of said chambers and said row of tubes communicating with said system only through the other of said chambers.

873,095. HEAD-REST FOR BEDS. JOHN G. RYAN, Montreal, Quebec, Canada. Filed Apr. 12, 1907. Serial No. 367,888.



1. A head rest for beds comprising a pair of pivoted slotted quadrants, side frames carried by said quadrants, locking pawls engaging said quadrants, gears operating in the slots in said quadrants, tension springs attached to said quadrants, and an adjustable head frame uniting said side frame.

2. A head rest for beds comprising a pair of pivoted slotted quadrants, a pair of tubular side frames fixed to said quadrants, a slidable end frame uniting said side frames, means operating in said slots to raise said framework, springs acting in conjunction with said raising means, and spring actuated means for locking said quadrants against downward movement.

3. A head rest for beds comprising a pair of pivoted slotted quadrants having spaced notches in the curved edges thereof, a pair of tubular side frames fixed to said quadrants, a slidable end frame uniting the extremities of said side frames, means for locking said end frame, means operating in said slots to raise said framework, springs acting in conjunction with said raising means, spring actuated means engaging the notches in the quadrants to lock same against downward movement, and means for withdrawing said locking means.

4. A head rest for beds comprising a pair of pivoted slotted quadrants having spaced notches in the curved edges thereof, locking pawls engaging said notches, gear teeth on the convex edges of said slots, gears operating in said slots and meshing with said gear teeth, side frames fixed to said quadrants, a slidable head frame uniting said side frames, and tension springs attached to the quadrants and adapted to raise said framework.

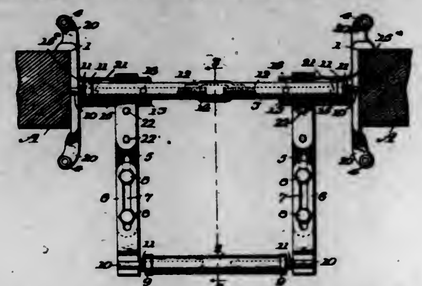
5. A head rest for beds comprising a pair of pivoted slotted quadrants having spaced notches in the curved edges thereof, spring pressed locking pawls engaging said notches, gear teeth on the convex edges of said slots, gears engaging said gear teeth, tubular side frames fixed to said quadrants, integral arms located opposite said side frames, helical tension springs attached to said arms, and a slidable end frame uniting the side frames.

[Claims 6 and 7 not printed in the Gazette.]

873,096. LUMBER-LOADING JACK. GERRIT RYPKEMA, Wichert, Ill., assignor of one-half to Peter J. Claussen, Chicago, Ill. Filed Feb. 28, 1907. Serial No. 359,758.

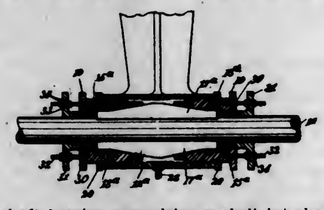
1. A lumber jack having, in combination, a pair of heads connected together and having laterally extending arms provided with upright rollers, and a horizontal roller extending between the heads and supported at its ends in bearings thereon.

2. A lumber jack having, in combination, an extensible support arranged to engage door jambs or the like at opposite ends, a pair of arms projecting from said support and adjustable to various angles in a vertical plane, and a roller carried between the outer ends of the arms.



3. A lumber jack having, in combination, a pair of heads, a screw rod connecting the same, arms projecting from the rod and adjustable angularly with respect thereto, and extensible rollers respectively carried between the heads and between the arms.

873,097. SHAFT-BEARING. ADELBERT SAUER, Pittsburg, Pa. Filed Jan. 17, 1905. Serial No. 241,474.



1. A shaft bearing comprising a shell interiorly screw-threaded at one end, a slotted sleeve loosely fitted on the shaft, wedge shaped bearing blocks set in the slots, a thimble having its bore tapering and thereby engaging the blocks, the thimble being exteriorly screw-threaded and thereby engaging the threaded shell, there being a flange on one end of the sleeve, bolts secured to the flange and arranged to engage the thimble, and lock nuts on the bolts engaging the flange, substantially as herein shown and described.

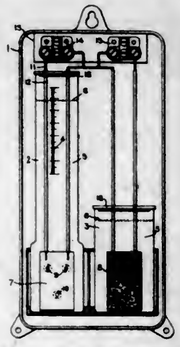
2. A shaft bearing comprising a slotted sleeve loosely fitted on the shaft, bearing blocks set in the slots, the outer faces of the blocks being inclined towards each end, a shell, thimbles one at each end of the shell located between the inclined faces of the bearing blocks and the shell, and provided with means for moving the thimbles to adjust the blocks, substantially as herein shown and described.

3. A shaft bearing comprising a shell interiorly screw-threaded at each end portion, a slotted sleeve loosely fitted on the shaft, bearing blocks set in the slots, the outer faces of the blocks being inclined towards each end; thimbles, one at each end of the shell, having their bore made tapering and engaging the blocks by their inclined faces, the thimbles being externally screw-threaded and thereby engaging the threaded shell, substantially as herein shown and described.

873,098. METER. ERNEST SCHATTNER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 24, 1905. Serial No. 251,778.

1. In combination with an alternating-current circuit, an electrolytic meter comprising an electrolytic valve having electrodes and electrolyte adapted to permit the flow of current impulses in one direction only, a shunt around said valve adapted to permit the flow of current impulses in the opposite direction, and means for indicating the amount of electrolytic decomposition in said valve.

2. An electrolytic meter comprising two electrolytic valves oppositely arranged in parallel with each other, each valve comprising electrodes and electrolyte adapted to transmit current impulses in one direction only, and means to indicate the amount of electrolytic decomposition.



3. An electrolytic meter comprising two electrolytic valves each composed of an aluminium and a carbon plate immersed in an electrolyte oppositely arranged in parallel with each other, means for connecting said valves in series in a circuit, and means to indicate the amount of electrolytic decomposition.

4. An electrolytic meter comprising two electrolytic valves each composed of an aluminium and a conducting plate immersed in a solution of Rochelle salts oppositely arranged in parallel with each other, means for connecting said valves in series in a circuit, and means to indicate the amount of decomposition of said solution.

873,099. UMBRELLA ATTACHMENT. WILLIAM O. SHEPARD and CHARLES W. CASON, Sr., Camden, N. J. Filed Apr. 7, 1906. Serial No. 310,499.



As a new article of manufacture a clip formed of a flat metal plate provided with an up struck spring clamping tongue having its free end spaced from the plate and its terminal portion deflected laterally to form a guide lip, said tongue being curved laterally at its juncture with the plate and having its opposite longitudinal edges formed with depressions disposed one on each side of the guide lip, that portion of the tongue between the depressions and base thereof being inclined towards one end of the plate to form a relatively thin shank.

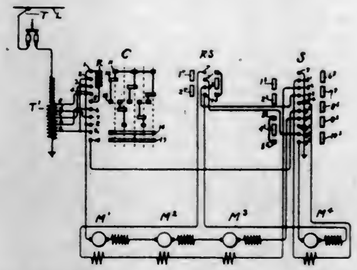
873,100. DENTAL BROACH. CARL A. SKALSTAD, Chicago, Ill. Filed Jan. 10, 1907. Serial No. 351,582.



1. As a new article of manufacture, a dental tool comprising a slotted sleeve, having an ear extending from the end of said sleeve integral therewith, a shaft fitting within said sleeve, and terminating in a bevel gear, a tool holder seated in said ear, and means for bringing said tool holder into operative engagement with said bevel gear.

2. As a new article of manufacture, a dental instrument comprising a slotted sleeve, an ear extending from the end thereof, a shaft provided with an annular groove fitting within said sleeve, said shaft terminating in a bevel gear, a removable tool holder provided with a bevel gear in operative engagement with the gear on said shaft, means for holding said shaft removably in place, said means comprising a spring secured to said sleeve, a pin carried thereby, said pin being so positioned as to pass through the slot in said sleeve and into the annular groove in said shaft.

873,101. REGENERATIVE SYSTEM FOR BRAKING. WALTER I. SLICHTER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 11, 1906. Serial No. 321,105.



1. The method of braking electrically in systems embodying a plurality of motors adapted to drive a common load, which consists in operating a portion of the motors as separately-excited generators driven by the load and operating other of said motors as generators driven by the load and excited by current generated in the first-named portion of the motors.

2. The method of braking electrically in systems embodying a plurality of motors adapted to drive a common load, which consists in operating a portion of the motors as generators excited from the source of current supply, exciting other of the motors with the current so generated, and connecting the armatures of the latter motors to the source of supply in such relation that the current generated in said armatures may flow in said source of supply.

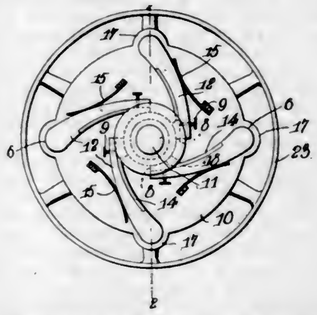
3. The method of braking electrically in systems comprising a plurality of series motors connected to a common load, which consists in operating a portion of the motors as generators driven by the load and excited from the main source of supply and connecting the remaining motors to the source of supply and operating them as generators driven by the load and excited by current generated in the other motors.

4. The method of braking electrically in a system comprising a plurality of motors connected to a common load and adapted to receive current from a transformer, which consists in operating a portion of said motors as generators driven by the load and excited from the transformer and operating the other motors as generators driven by the load, excited by current generated in the first-mentioned motors and returning current to the transformers.

5. The method of braking electrically in a system comprising a plurality of motors connected to a common load and adapted to receive current from a transformer, which consists in operating a portion of said motors as generators driven by the load and excited from the transformer and operating the other motors as generators driven by the load, excited by current generated in the first-mentioned motors and returning current to the transformer, and varying the point of connection between one of the elements and the transformer.

[Claims 6 to 14 not printed in the Gazette.]

873,102. CLUTCH. WILLIAM W. SLY, Cleveland, Ohio. Filed June 21, 1907. Serial No. 380,070.



1. The combination of a shaft, a rotative member thereon having an annular flange, a clutch lever supported on the shaft and having a pivot head with a slot therein through which the flange extends, and means to operate the lever to bind the flange in the slot.

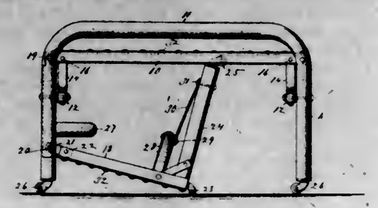
2. The combination of a shaft, a rotative member, thereon having an annular flange, a disk mounted on the shaft beside said member, clutch levers having heads pivoted in the disk, said heads having slots through which the flange extends, and means to operate the levers, to bind the flange in the heads.

3. The combination of a shaft having fast and loose rotative members thereon, one of said members having an annular flange and the other having pivot bearings opposite said flange, levers having pivots in said bearings, with gripping parts located on opposite sides of the flange, and means to operate the levers to turn the pivots and grip the flange.

4. The combination of a shaft, a wheel thereon having an annular flange, a disk on the shaft, having bearings the walls of which are slotted to allow the passage of the flange therethrough, levers having pivot heads in said bearings, slotted to extend on opposite sides of the flange, and means to operate the levers to grip the flange.

5. The combination of a shaft, a wheel thereon, a disk on the shaft adjacent the wheel, laterally swinging levers carried by the disk and at their outer ends having grip devices to engage the wheel, and at their inner ends having adjustable shoes, and a sliding conical sleeve on the shaft, between the inner ends of the levers.

873,103. COUCH-BED. FRANKLIN S. SPRAGUE, Somerville, Mass., assignor of one-half to Carl Oscar Hasselbarth, Albany, N. Y. Filed Sept. 23, 1907. Serial No. 394,204.



1. In a couch-bed of the character described, a longitudinal stationary section, and a longitudinal movable section hinged at its inner edge to the outer edge of the stationary section and having jointed end-bars whereby the movable section comprises two longitudinal parts pivotally connected at their adjacent edges, the joints in said end-bars being located at points which are nearer to the inner edge of the movable section than to the outer edge whereby said movable section is adapted to be swung under the stationary section with its supporting legs extending upward in an inclined position.

2. In a couch-bed of the character described, a longitudinal stationary section, a longitudinal movable section hinged at its inner edge to the outer edge of the stationary section and having jointed end-bars whereby the movable section comprises two longitudinal parts pivotally connected at their adjacent edges, the inner one of the longitudinal parts of the jointed movable section being adapted to swing down into a vertical position at the front edge of the stationary section, and the outer one of the longitudinal parts of the jointed movable section being adapted to swing inward under the stationary section at a downwardly extending angle and rest on the floor at its outer end.

3. In a couch-bed of the character described, a longitudinal stationary section, a longitudinal movable section hinged at its inner edge to the outer edge of the stationary section and having jointed end-bars whereby the movable section comprises two longitudinal parts pivotally connected at their adjacent edges, and casters secured to the outer side edge of the jointed movable section.

4. In a couch-bed of the character described, a longitudinal stationary section, a longitudinal movable section hinged at its inner edge to the outer edge of the stationary section and having jointed end-bars whereby the movable section comprises two longitudinal parts pivotally connected at their adjacent edges, the joints in said end-bars being located at points which are nearer to the inner edge of the movable section than to the outer edge, and casters secured to the outer edge of the outer longitudinal part of the jointed movable section whereby said movable section is adapted to be swung under the stationary section with its supporting legs extending upward in an inclined position.

873,104. LAMP-RECEPTACLE. JAMES S. STEWART, New York, N. Y., assignor to Annie Stewart, New York, N. Y. Filed Aug. 17, 1906. Serial No. 330,962.



1. In an electrical appliance adapted to be positioned on a molding having longitudinal grooves, an insulating base having a flat lower surface with an integral elongated tongue thereon and projecting from said lower surface of the base intermediate the side edges thereof, said tongue being adapted to enter one of the grooves of said molding whereby the base is properly positioned on the molding when said tongue enters such groove thereof.

2. In an electrical appliance adapted to be positioned on a molding having longitudinal grooves, an insulating base having a flat lower surface with a plurality of parallel elongated tongues projecting from said lower surface of the base intermediate the side edges thereof, said tongues being adapted to enter the grooves of said molding, whereby the base is properly positioned on the molding when said tongues enter the grooves thereof.

3. In an electrical appliance adapted to be positioned on a molding having circuit wires, an insulating base having a flat lower face, and having passages to receive the circuit wires, said passages leading upward from said flat lower face so as to produce edges or corners 11, and which are adapted to bear against the said circuit wires.

4. In an electrical appliance of the class described, an insulating base having a protuberance, one side face of which is notched, a shell or sleeve apertured to fit over said protuberance, a clip having a hole adapted to fit over said protuberance and laterally displaced to enter said notch, and means for additionally holding said clip against the shell, whereby the shell is secured in place.

5. In an electrical appliance of the class described, an insulating base, a shell, said base having a protuberance projecting into the shell, and a mica disk apertured to closely fit said protuberance and slitted so as to frictionally engage the same against withdrawal.

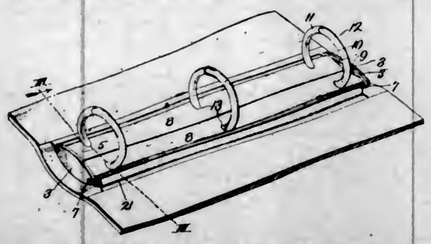
873,105. DOUBLE TELESCOPE WITH SUPPORT. RUDOLF STRAUBEL, Jena, Germany, assignor to the Frm of Carl Zeiss, Jena, Germany. Filed Jan. 25, 1907. Serial No. 353,981.

1. The combination with two single telescopes hinged together of a support therefor and a guide for keeping the telescopes symmetrical to the support.

2. The combination with two single telescopes hinged together of a support therefor and means for rotating the telescopes about the hinge symmetrically to the support.

3. The combination with two single telescopes hinged together of a support therefor, guiding means for keeping the telescopes symmetrical to the support and a balancing spring connected with the guiding means.

873,106. LOOSE-LEAF BOOK. HERBERT M. STURGIS, Kansas City, Mo. Filed Oct. 16, 1906, Serial No. 339,160. Renewed Sept. 24, 1907. Serial No. 394,412.



1. In a loose leaf book, a tubular bar having a pair of openings, and a hook extending through one of said openings into said bar and riveted in the other opening.

2. In a loose leaf book, a flattened tubular bar provided with openings one of which has angular sides, and a hook extending through one of said openings into the bar and having its base end reduced and fitting non-rotatably and riveted in said angular opening.

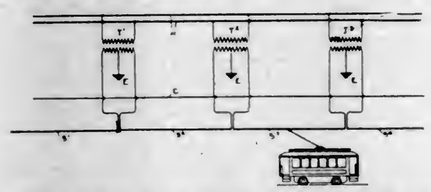
3. In a loose leaf book, a pair of hook-carrying bars, an integrally formed elliptic spring inclosing one end of the hook-carrying bars, and a similar spring inclosing the other end of the hook-carrying bars, the opposite ends of the elliptic openings of said springs forming bearings for the outer edges of the inclosed portions of the bars and holding said bars yieldingly together at their inner edges with the upper ends of the hooks apart or with the upper ends of the hooks together and the inner upper edges of the bars together and disposed below the plane of their outer edges.

4. In a loose leaf book, an anchor plate of segmental form in cross section and provided with upwardly projecting end walls, springs fitting and secured against the inner sides of the end walls, bars having their ends projecting into the openings of said springs and pressed by the latter yieldingly together, and sets of hooks rigidly secured to and projecting upwardly above said bars and adapted to be held yieldingly together or apart by the contractile pressure of the springs on the bars.

5. In a loose leaf book, a pair of bars equipped with hooks, curved springs engaging the outer edges of the ends of said bars and pressing the latter yieldingly together, an anchor plate below the bars and provided at its ends with walls projecting upwardly at the outer sides of said springs, and means for fastening the latter to said walls without preventing said springs from exerting continuously a yielding inward pressure on the bars.

[Claims 6 to 9 not printed in the Gazette.]

873,107. SYSTEM OF DISTRIBUTION. JOHN B. TAYLOR, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 4, 1906. Serial No. 294,566.



1. In a system of distribution, a conductor comprising a plurality of insulated sections, and sources of alternating voltage connected between each section and earth and arranged to supply to a portion of said sections a positive potential with respect to earth at the instant the remaining sections are at a negative potential with respect to earth.

2. In a system of distribution, a conductor comprising a plurality of insulated sections, and sources of alternating voltage connected between each end of each section and earth and arranged to supply to a portion of said sections a positive potential with respect to earth at the instant the remaining sections are at a negative potential with respect to earth.

3. In a system of distribution, a conductor comprising a plurality of insulated sections, and sources of alternating voltage connected between each end of each section and earth and arranged to supply to adjacent sections relatively opposite potentials with respect to earth.

4. In a railway system operated by alternating-current, a plurality of sub-stations, a working conductor composed of sections each extending between adjacent sub-stations, and transformers at said sub-stations connected between the ends of each section and earth, said transformers being arranged to supply to a portion of said sections a positive potential with respect to earth at the instant the remaining sections are at a negative potential.

5. In a railway system operated by alternating-current, a plurality of sub-stations, a working conductor composed of sections each extending between adjacent sub-stations, and transformers at said sub-stations connected between the ends of each section and earth and arranged to supply to adjacent sections relatively opposite potentials with respect to earth.

[Claims 6 to 9 not printed in the Gazette.]

873,108. ELECTRIC-LAMP HOLDER. CHARLES E. THROOP and SAMUEL A. FREEMAN, Buffalo, N. Y., assignors to Olin Gas Engine Company, Buffalo, N. Y. Filed Sept. 15, 1906. Serial No. 334,803.



1. An electric lamp holder comprising two bars slidable lengthwise one upon the other, and means constructed and operating to hold the bars frictionally in place relatively to each other comprising a bow spring arranged in a recess in one of said bars and resting at one end on the bottom of said recess while its convex central part bears against the other bar, and an adjusting screw mounted on the bar containing the recess and bearing against the other end of said spring, substantially as set forth.

2. An electric lamp holder comprising two bars slidable lengthwise one upon the other, and means constructed and operating to hold the bars frictionally in place relatively to each other comprising a bow spring arranged in a recess in one of said bars and resting at one end on the bottom of said recess while its convex central part bears against the other bar, a screw nut seated in said recess, and an adjusting screw working in said nut and bearing against the other end of said spring, substantially as set forth.

3. An electric lamp holder comprising a supporting bar, a bracket adapted to be secured to a support, and a universal joint connecting said bar and bracket and comprising a swivel block and pivotal connections between said block and said bracket and bar, said block having the form of a rectangular frame and being constructed of two L-shaped sections, the ends of one section abutting against the ends of the other section, substantially as set forth.

4. An electric lamp holder comprising a supporting bar, a bracket adapted to be secured to a support, and a universal joint connecting said bar and bracket and comprising a swivel block and pivotal connections between said blocks and said bracket and bar, said block being constructed of two sections each of which consists of two integral walls arranged at right angles to each other and said sections having their longitudinal edges abutting and interlocked by means of a tongue formed on the longitudinal edge of one section and engaging with a recess in the longitudinal edge of the other section, substantially as set forth.

5. An electric lamp holder comprising a supporting bar,

a bracket adapted to be secured to a support, and a universal joint connecting said bar and bracket comprising a swiveling block having the form of a rectangular frame and being constructed of two L-shaped sections, the ends of one section abutting against the ends of the other section, an upper bolt passing transversely through said sections and pivotally connecting the same with said bracket, and a lower bolt passing transversely through said sections and pivotally connecting the same with said bar, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

873,109. EYEGLASS. JESSE M. WEBSTER and CARL F. INGOLD, Milwaukee, Wis., assignors to The Milwaukee Optical Manufacturing Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Apr. 16, 1906. Serial No. 311,876.



1. The combination with the studs of eyeglass lenses or frames of same, the spring-bow bridge-piece, slotted arms each having a fold held with an end of said bridge-piece in engagement with one of said studs, the outer portion of each arm being a spring; a nose-guard in pivotal connection with the lower stiff portion of each arm, and a spring-and-guard connecting rivet having play in the slot with which the stiff portion of the arm is provided.

2. The combination of the eyeglass studs, the spring-bow bridge-piece, slotted arms each having a fold held with an end of said bridge-piece in engagement with one of said studs, the outer portion of each arm being a spring; a nose-guard in pivotal connection with the lower stiff portion of each arm and having a reverse curve aperture longitudinally thereof as well as concavo-convex longitudinal edges approximately parallel to the edges of said aperture, and a spring-and-guard connecting rivet having play in the slot with which the lower stiff portion of each arm is provided.

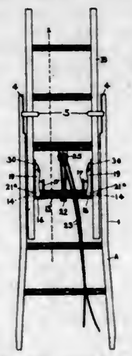
3. The combination of the eyeglass studs, the spring-bow bridge-piece, slotted arms each having a fold held with an end of said bridge-piece in engagement with one of said studs, the outer portion of each arm being a spring; a nose-guard in pivotal connection with the lower stiff portion of each arm and extended to fit up under the orbital arch of the wearer of the glasses; and a spring-and-guard connecting rivet having play in the slot with which the stiff portion of each arm is provided.

873,110. EXTENSION-LADDER. WILLIAM WILLIAMSON, Saginaw, Mich. Filed Apr. 26, 1906. Serial No. 313,813.

1. The combination with a base section and an extensible section, of a rocking round on the extensible section, double latches pivotally secured to the extensible section, and arms projecting from the round and positively engaging the respective latches to swing the latter toward and from the rounds of the base section, the latches adapted to take over the rounds of the base section to sustain the extensible section in adjusted position.

2. The combination with a base section and an extensible section, of a rocking round on the extensible section, double latches pivotally secured to the extensible section, the latches being apertured, arms projecting from the round, studs carried by the arms and receivable in the apertures in the latches to positively swing the latches toward and from the rounds of the base section.

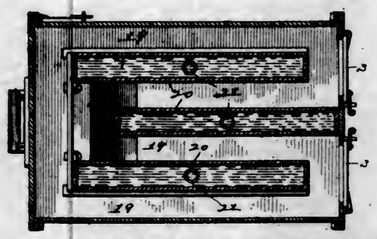
3. The combination with a base section and an extensible section slidable relative to the base section, of a rocking round on the extensible section, double latches pivotally secured to the extensible section, arms projecting from the round and positively engaging the respective latches to swing the latter toward or from the rounds of the base section, the latches adapted to take over the rounds of the base section to sustain the extensible section in adjusted position, oppositely extending curved fingers on the rocking round and a flexible connection having an enlargement in the bight thereof, for engaging the fingers.



4. An extension ladder comprising base and adjustable sections, latches pivotally supported by the adjustable section for supporting the latter at various points relative to the base section, a rocking rung, means connecting the rung and latches, oppositely curved fingers mounted on the rocking rung and a knotted flexible connection independent of the means connecting the rung and latches for actuating the rung in opposite directions, the knot being releasably held by the curved fingers.

5. An extension ladder comprising base and extensible sections, a latch on the extensible section for supporting the same at various heights relative to the base section, a rocking rung, means connecting the rung and latch, curved fingers mounted on the rung and a flexible connection independent of the means connecting the rung and latch, and an enlargement located intermediate the ends of the connection, the enlargement being releasably caught in the curved fingers to rock the rung in opposite directions.

873,111. HOT-WATER-BOILER. HARVEY WILSON, Brooklyn, Ohio. Filed Oct. 10, 1905. Serial No. 282,146.



1. In a boiler, a fire box, a combustion chamber arranged above the fire box, a water chamber arranged horizontally between the fire box and the combustion chamber, a flue passing through the said water chamber and affording communication between the fire box and the combustion chamber, rear and side depending water legs having free communication with the water chamber and the side legs having communication with each other, a plurality of casings spaced apart, and arranged in the combustion chamber, nipples connecting the casings with the water chamber, and hot water pipes leading upwardly from said casings.

2. In a hotwater boiler a fire box, a water chamber above the fire box, depending water legs having communication with the water chamber, a water jacket arranged in the upper portion of the fire box and extending transversely across the box and opening at each end into one of said water legs, a water coil arranged in the upper portion of the fire box beneath the water chamber and in advance of the water jacket, and independent means for supplying water to the water legs and to the water coil.

873,112. SIGHT FOR FIREARMS. JAMES WINDRIDGE and GEORGE S. WILCOX, Middlefield, Conn., assignors to Lyman Gun Sight Corporation, Middlefield, Conn., a Corporation of Connecticut. Filed Jan. 16, 1907. Serial No. 352,627.



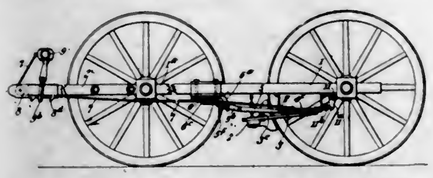
1. In sights for firearms the combination of a pair of leaves or blades provided with notches of identical form having sides of differential shape, whereby the blades when overlaid upon each other with their notches reversed respectively form the opposite sides of two separate forms of sighting notch.

2. In a sight for firearms the combination of a leaf, and a pair of blades provided with notches of identical form having sides of differential shape secured to the leaf, one overlaid upon the other with the notches relatively reversed and respectively forming the opposite sides of the sighting notch.

3. In sights for firearms, the combination of a suitable supporting element provided with a groove, a pair of blades slidably mounted in said groove and provided in their respective edges with notches of identical form having sides of differential shape, said parts being shiftable relative to each other to place their respective notches in different positions to provide different forms of sighting notch.

4. In a sight for firearms, the combination of a suitable supporting element, a plurality of coöperating sight-forming members, each of which has a plurality of sight elements, said members being movably mounted on said supporting element so that they may be moved with reference to the said element and with reference to each other to produce sighting notches of different form.

873,113. BRAKE-OPERATING ATTACHMENT. HARRY L. WITHERELL, Milan, Ill., assignor of one-half to Charles M. Witherell, Rock Island, Ill. Filed Apr. 25, 1907. Serial No. 370,262.



1. In a vehicle brake, the combination of a brake-beam, a strap connected thereto, a bar pivotally connected with the running gear adjacent said strap, a lever pivotally connected to the rear end of said bar and having its short arm pivotally connected to said strap, and a cable connected to the long arm of said lever and to the neck yoke whereby when the horses hold back the brake is applied.

2. The combination of a vehicle running gear and brake beam, a casting attached to the running gear, a link pivoted to said casting, a bar pivotally connected to said link, a lever pivoted to the rear end of said bar; a strap connecting the short arm of said lever to the brake-beam, and brake applying devices connected with the long arm of said lever.

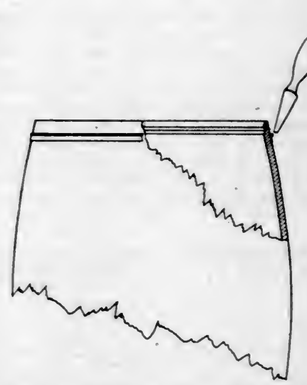
3. The combination of a running gear, a brake-beam, a casting attached to the running gear in front of the brake-beam, a link pivoted to said casting, a bar pivotally connected to said link, a lever pivoted to the rear end of said bar, a strap connecting the short arm of said lever to the brake-beam, and a cable connected with the long arm of said lever, and to the neck yoke whereby when the team holds back the brake is applied.

4. The combination with a vehicle running gear and brake-beam, a link pivotally connected to the running gear, a bar pivotally connected to said link, a lever pivoted to the rear end of said bar, a strap connecting the short arm of said lever to the brake-beam, and brake applying devices connected with the long arm of said lever, the pivotal connection between the bar and link lying normally below the pivots of the link to the gear and of the bar to the lever, whereby when the wagon is backed the brake-bar and the pivotal connections between the link and bar will be raised so as to release the brake.

5. The combination of a vehicle running gear, and brake-beam, a casting attached to the running gear in front of the brake-beam, a link pivoted to said casting, a bar pivotally connected to said link, a lever pivoted to the rear end of said bar, a strap connecting the short arm of said lever to the brake-beam, and a cable connected with the long arm of said lever and to the neck yoke, whereby when the team holds back the brake is applied, the pivotal connection between the bar and link lying normally below the pivots of the link to the casting and the bar to the lever, whereby when the wagon is backed the brake bar and the pivotal connections between the link and bar are raised and the brake released.

[Claims 6 to 9 not printed in the Gazette.]

873,114. METAL HOOP. JAMES E. WRIGHT, West Bay City, Mich., assignor of one-half to John M. Kelton, Bay City, Mich. Filed Aug. 15, 1904. Serial No. 220,839.



1. A hoop for receptacles comprising a band, the entire width of which is adapted to lie against the receptacle, and an open unreinforced hollow yieldable curved bead formed along the upper edge of the band and overhanging the outer surface only of the band, the bead being substantially hook-shaped in cross-section and constituting a hollow curved unreinforced driving edge to receive the impact of the driving means, the free edge of the bead normally lying out of engagement with the band.

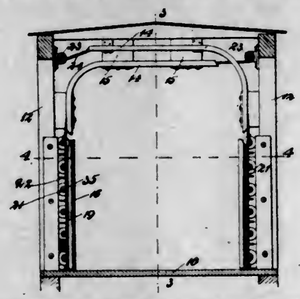
2. A hoop comprising a flat band and an open, unreinforced, curved, hollow bead formed along the upper edge of the band and overhanging the outer surface only of the band, the bead being outwardly curved and thence projecting downwardly, the extreme free edge of the bead being bent slightly inwardly to avoid an exposed raw edge, the bead forming a hollow curved unreinforced driving edge.

3. A hoop for receptacles comprising a band, and an open unreinforced continuously curved hollow bead, formed along the upper edge of the band and overhanging the outer surface only of the band, the bead extending in a curve upwardly and outwardly away from the receptacle, and thence dropping downwardly, the free edge of the bead

being turned slightly inwardly and adapted to be moved toward and forced against the outer surface of the band when driven under heavy pressure, so as to prevent subsequent slipping or curling of the bead, the bead forming a hollow curved unreinforced driving edge.

4. A hoop comprising a flat band, its entire width adapted to lie against the receptacle to which it is applied, and an open unreinforced curved hollow bead formed along the upper edge of the band overhanging the outer surface only thereof and normally out of engagement therewith, the depending free edge of the bead adapted to be closed down against the outer face of the band when driven under heavy pressure, so as to prevent subsequent slipping or curling of the bead which forms a firm hollow unreinforced driving edge.

873,115. GRAIN-DOOR. WILLIAM H. ASCUE, Kiowa, Kans. Filed Aug. 17, 1907. Serial No. 389,020.



1. The combination with a door-frame having runways; of a sliding door having rollers at its ends traveling on the runways; and a shield hinged at one edge adjacent the runways and extending in a bend around the rollers, and at its opposite edge in sliding contact with the door.

2. The combination with a door-frame having grooved runways on the inner face of the jambs; of a sliding door having rollers at its ends traveling in the grooves of the runways; and a shield hinged at one edge adjacent the runways, and extending in a bend around the rollers, and at its opposite edge in sliding contact with the door.

873,116. BUNG-STARTER. HERMAN H. ASHENBERG, Peoria, Ill. Filed Dec. 6, 1906. Serial No. 346,581.



1. A device of the character described comprising a handle, a flexible metallic blade secured at one end therein and having its other end reduced in width and leaving shoulders on said blade, a striking member carried on the reduced portion and adapted to rest upon the shoulder, the extremity of the reduced portion extending beyond the striking member and turned over thereupon for preventing the striking member leaving the blade.

2. A device of the character described comprising a handle, a flexible metallic blade secured at one end therein, a striking member having a hole therethrough for receiving the blade, a member at each side of the blade and secured thereto for entering and filling the hole in said striking member, a wedge adapted for insertion between one of the portions and the blade the latter extending beyond the striking portion and turned over upon the wedge for the purposes set forth.

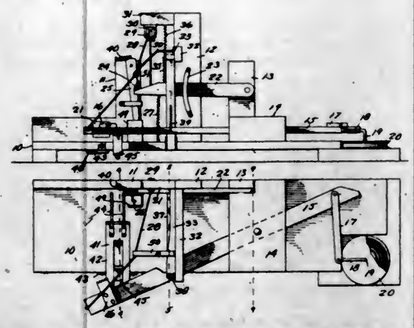
3. In a device of the class described, a flexible blade constituting a handle, a head having a bore to receive one end of the blade, a member inserted in the bore at each side of the blade and extending below said head, a member inserted between the blade and one of the last named members, there being an extension of the blade turned over upon said inserted member.

4. In a device of the class described, a flexible blade reduced in width at one end to form shoulders at the base of the said reduced portion, a head having a bore to receive the reduced portion, said head adapted to rest upon the shoulders, a member extending through the bore at each side of the reduced portion of the blade and extending below the head, and below the shoulders, a member inserted between the reduced portion and one of the first said members, the reduced portion having an extension above the head and turned over upon the said inserted member.

5. In a device of the class described, a blade, a head having a bore to receive the blade, a member inserted in the bore at each side of the blade and secured to the latter, an inserted member between one of the latter members and the blade, there being an extension of the blade turned over upon the top of the head and upon the inserted member.

[Claims 6 to 9 not printed in the Gazette.]

873,117. ANIMAL-TRAP. JACOB B. BRENDT and CHARLES O. SHERMAN, Pollock, S. D. Filed Apr. 23, 1907. Serial No. 369,725.



1. In an animal trap in combination, a base-plate; an upright mounted upon said base-plate; an oscillatory claw movable horizontally across the base-plate; means for operating said claw; and a cutting plate carried by said upright and adapted to be struck by said claw.

2. In an animal trap in combination, a base-plate; an upright mounted upon said base-plate; an oscillatory claw movable horizontally across the base-plate and pivoted intermediate its ends thereon; and means for oscillating said claw, said means including a rotatably mounted shaft having a crank portion, and a pitman connecting said crank portion with the rear end of said claw.

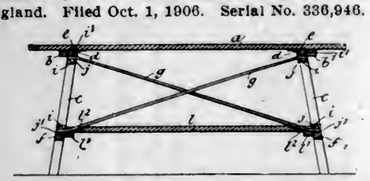
3. An animal trap comprising in combination, a base-plate having a transverse seat formed therein adjacent its front end; an oscillating claw movable horizontally across the base-plate; means for operating said claw; means for releasably holding said claw against operation by said means; means for releasing said holding means from engagement with said claw; and a tiltable member disposed within said seat and adapted to be operated by said claw during its movement in one direction for removing the body of an animal from the base-plate.

4. An animal trap comprising in combination, a base-plate; a swinging claw pivoted to the base-plate; a latch; trip members engaged with said latch and claw for normally holding the latter in operative position; means for operating said claw when said trip members are released from engagement with said latch; and a flexible connection between said claw and one of said trip members for reëngaging the latter with said latch upon movement of said claw.

5. An animal trap comprising in combination, a base-plate; an oscillatory claw pivoted to the base-plate and movable thereacross; a latch; a trip member normally engaged with said latch; trip members operatively connected with said claw and first-mentioned trip member and engaged with each other for normally retaining said claw in operative position; means for operating said claw upon disengagement of said first-mentioned trip member from said latch; and a flexible connection between said claw and first-mentioned trip member, for reëngaging the latter with said latch upon movement of said claw in one direction.

[Claims 6 and 7 not printed in the Gazette.]

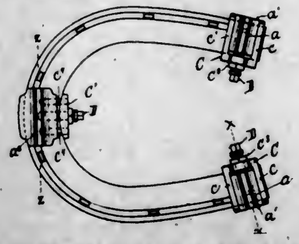
873,118. FOLDING TABLE, FORM, AND THE LIKE. WILLIAM CASSELS and WILLIAM J. CASSELS, London, England. Filed Oct. 1, 1906. Serial No. 336,946.



1. The improvements in folding tables, forms and the like, comprising a board or top provided at its ends with cross battens and hinged legs, metal bars or stays crossing each other and fixed at each end, by screw nuts and studs engaging with slots in the ends of the same, to cross-bars forming part of the legs or support, a screw stud and nut fixed to one of the battens, and an opening formed in the other batten for receiving the ends of the stays and holding them in their folded position underneath the board or top, substantially as described.

2. In folding tables fitted with hinged legs or supports, the combination therewith of slotted adjustable plates or feet fixed by a screw and nut to the lower end of each leg and guided by a metal strip engaging with the said slot for adjusting the lengths of the legs, substantially as described.

873,119. HORSESHOE-CALK. EDMUND COURTNEY and PAUL BORNHORN, Covington, Ky. Filed Aug. 5, 1907. Serial No. 387,052.

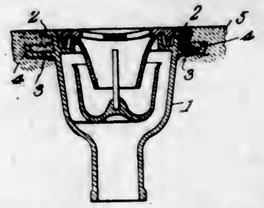


1. In a horse shoe calk a plate carrying one or more studs for contacting the ground and a jaw for engaging one side of a shoe, the said plate having transverse ways and a screw-threaded recess, in combination with a second jaw having arms to engage the ways and a perforation to register with the recess and a screw for passing through the perforation in the second jaw into the recess in the plate.

2. In a horse shoe calk a plate carrying one or more studs for contacting the ground and a jaw for engaging one side of a shoe, the said plate having a screw-threaded recess, in combination with a second jaw having a perforation to register with the recess, a screw to pass through the perforation in the second jaw and into the recess in the plate, ratchet teeth near the head of the screw and a pawl mounted upon the said plate for engaging the ratchet teeth to prevent the screw's working loose.

3. A horse shoe calk consisting of a stud having formed integral with it a longitudinal jaw adapted to engage the exterior rim of a shoe and having a central screw-threaded recess and transverse ways in combination with a second jaw, having arms to engage the ways and a central perforation to register with the recess, and a screw for passing through the perforation and into the recess.

873,120. DOUBLE-FLANGE TRAP AND SINK. GEORGE E. DUNSTAN, Lorain, Ohio. Filed Aug. 10, 1906. Serial No. 330,052.



1. A device of the character described comprising a casing having a peripheral flange surrounding its upper edge, the upper surface of the flange being flush with the upper edge of the casing, and a supplemental imperforate flange surrounding the casing immediately below the upper flange and having a peripheral rim turned upwardly and offset outwardly beyond the periphery of the upper flange to form an enlarged basin to catch and retain the liquid leaking by the upper flange.

2. A trap or the like embodying a casing having an upper peripheral flange thereon, and a supplemental imperforate flange surrounding the casing below the upper flange and projecting outwardly beyond the periphery thereof and provided with an upturned surrounding rim forming a cement receiving pocket between the flanges with a contracted opening through which the cement may be introduced and tamped, the upturned peripheral rim constituting a shoulder to prevent the cement crowding away from the casing, and also forming an annular liquid receptacle surrounding it and serving to intercept liquid leaking between the outside of the casing and the surrounding floor.

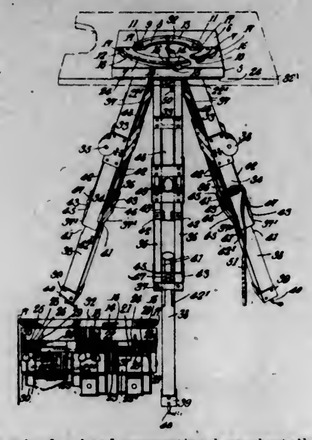
873,121. TRIPOD AND ATTACHING DEVICE. CHARLES I. FLORY, Palmyra, Mo. Filed Feb. 27, 1907. Serial No. 359,572.

1. In a tripod, a head, supporting legs pivotally mounted on the head and formed of pivotally united sections including spaced longitudinal strips, and a gravity actuated locking member slidably mounted between the strips at the pivotal juncture of adjacent leg sections for locking said sections in alinement with each other.

2. In a tripod, a head, supporting legs pivotally mounted on the head and each formed of pivotally connected sections and a sliding section, and gravity actuated means for locking the pivoted sections in alinement with each other, said locking means being movable to released position by engagement with the sliding sections.

3. In a tripod, a head, supporting legs pivotally mounted

on the head and each formed of pivotally connected sections and a sliding section, the pivoted sections being formed of longitudinal strips spaced apart for the reception of the sliding section, and a gravity actuated locking member carried by one of the pivoted sections for locking the same in engagement with an adjacent section, said locking means being released by engagement with the sliding section.

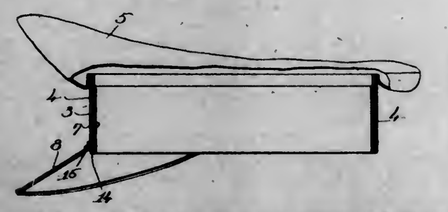


4. In a tripod, a head, supporting legs pivotally mounted on the head and each formed of pivotally united sections and a sliding section, a locking member carried by one of the pivoted sections of each leg for locking adjacent sections in alinement with each other, said locking member being movable by gravity to operative position when the sliding section is extended and moved to inoperative position by engagement with the sliding section when said section is moved to retracted position.

5. In a tripod, a head, supporting legs carried by the head and each formed of pivotally united sections and a sliding section, the sliding sections being movable longitudinally of one of the pivoted sections, a locking member movable to operative position at the pivotal connection of adjacent sections, and means carried by the sliding section and adapted to engage the locking member when the pivoted sections are folded.

[Claims 6 to 15 not printed in the Gazette.]

873,122. CAP. ELIE FORMAN, Boston, Mass. Filed July 13, 1906. Serial No. 326,095.



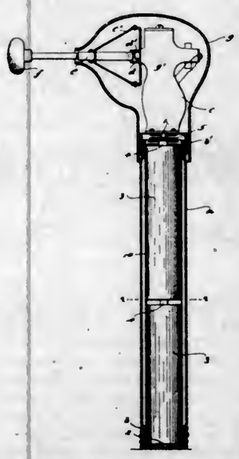
1. In a cap, an annular foundation member, a finishing band surrounding the foundation and secured thereto, and a top having its lower edge secured directly to the upper edge of the foundation, said top overhanging the foundation member and having a lining, the lower edge of which is folded over and secured directly to the top edge of the foundation and thus constitutes a finish therefor.

2. In a cap, a foundation, a band surrounding the foundation and secured thereto, a top of a size to overhang the foundation and having its lower edge secured directly to the upper edge of the foundation, said top having a lining, the lower edge of which is folded over and secured to the top edge of the foundation and constitutes a finish therefor, and a sweat-band secured to the lower edge of the foundation and overlying the folded-over edge of the lining.

3. In a cap, a foundation, a band surrounding the same and secured to the lower edge thereof for a portion of its length, a top separate from the band and having its lower edge turned upwardly and lying against the upper edge of the band and secured to the band and foundation by stitches, said top having a lining provided with a flap which is folded over the upper edge of the band and foundation and secured thereto by stitches, and a sweat-band secured to the lower edge of the foundation and overlying the folded-over portion of the lining.

4. In a cap, an annular foundation member of stiff material, a finishing band surrounding the foundation member and secured thereto, and a top overhanging the foundation member and having its lower edge turned upwardly and secured to the outer side of the top edge of the foundation member, said top having a lining, the lower edge of which is folded over the top edge of the foundation and is secured both to the inner and outer sides thereof.

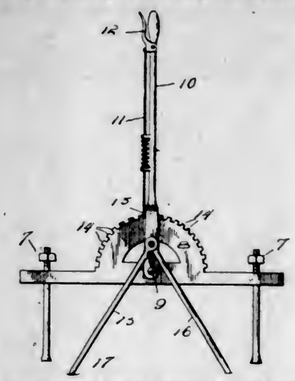
873,123. MASSAGE IMPLEMENT. HENRY D. GARDY, Philadelphia, Pa. Filed Apr. 8, 1907. Serial No. 367,079.



A device of the character described, comprising a tubular casing capable of rotating said casing having screw-threaded ends, top and bottom caps accommodated by said screw threaded ends, a motor equipped with a massage device carried by the top cap, a battery capable of endwise movement through said casing the cells of which are arranged end to end, one pole of the battery formed by said cells being normally out of contact with a permanent terminal of the motor and the other pole of said battery being in direct contact with the bottom cap, whereby when the said casing is slightly rotated the battery is moved endwise for electrically contacting with the motor terminal for closing the circuit and resilient means interposed between and insulated from the motor terminal and battery for maintaining an open circuit, substantially as described.

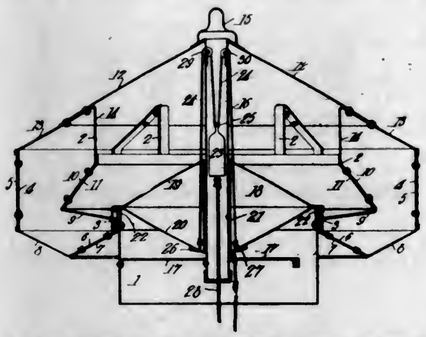
873,124. SLED-BRAKE. GUDMUNDER S. GUDMUNDSON, Ardal, Manitoba, Canada. Filed Mar. 3, 1906. Serial No. 304,048.

A device of the class described, the combination with a runner provided with a pair of downwardly diverging bores, of a lever mounted for pivotal movement thereon, a pair of brake rods pivotally connected with said lever and extending one through the forward bore and the other through the rear bore and at an angle to each other, the lever being adapted to be rocked to bring the rear brake rod into frictional engagement with the surface over which the runner is traveling and being also adapted to be



rocked to bring the forward brake rod into positive engagement with the surface over which the runner is traveling.

873,125. VENTILATOR. WILLIAM HAMMANN, Milwaukee, Wis. Filed Apr. 20, 1907. Serial No. 369,314.



1. In a ventilator, the combination with a draft pipe, and a roof supported above the upper open end thereof, of a tube centered axially of the draft pipe, a valve arranged to coöperate with the draft pipe and having a sleeve guided to operate longitudinally of the said tube, a counterweight mounted to operate vertically within the said tube, and operative connections between the counterweight and the valve whereby the former balances the latter.

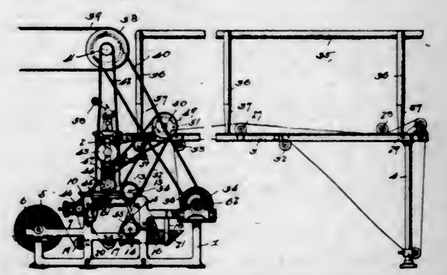
2. In a ventilator, the combination with a supporting or draft pipe, and a top spaced above the upper end thereof and forming an exit for the air ascending the pipe, of a guiding tube arranged axially of the pipe, a damper guided to operate on said tube and to coöperate with the upper end of the draft pipe to control the flow of air therethrough, a counterweight guided to operate longitudinally within the tube, and operative connections between the counterweight and damper.

3. In a ventilator, the combination with a supporting or draft pipe, and a top mounted above the upper end thereof and forming an exit for air ascending the pipe, of a guiding tube arranged axially of the pipe, a damper guided to operate longitudinally of the tube and adapted to coöperate with the upper end of the pipe, a counterweight mounted to operate vertically within the guiding tube, a flexible cord having its ends attached to the damper, and loosely engaging the weight at an intermediate point and pulleys mounted in the top for guiding the cord.

4. In a ventilator, the combination with a supporting or draft pipe, and a top spaced above the upper end thereof, of a guiding device arranged between the top and the supporting pipe, a damper mounted to operate vertically of said guiding device and adapted to coöperate with the upper end of the pipe to control the passage of air therethrough, a counterweight for normally supporting the weight of the damper, flexible connections attached to the counterweight and extending to the underside of the damper, and fusible links secured to the underside of the damper and attached to the flexible connections for relieving the supporting action of the weight.

5. In a ventilator, the combination with a supporting or draft pipe, and a conical top spaced above the upper end thereof, of a guiding tube connected at its upper end to the top and having stays operatively connecting its lower end to the pipe, a damper mounted to operate longitudinally of the guiding tube and adapted to coöperate with the upper end of the pipe, embodying a pair of conical sheet metal members placed together with their concavities facing one another, and a central sleeve connecting the conical members, a counterweight mounted to operate longitudinally of the guiding tube, flexible connections attached to the counterweight, an operating device connected to the counterweight and extending through the lower end of the guiding tube, and fusible links arranged at the underside of the damper and connecting the latter to the flexible connections.

873,126. PAPER COATING OR TREATING MACHINE. HENRY P. HILBERT, Cincinnati, Ohio. Filed July 23, 1906. Serial No. 327,341.



1. In a machine of the class specified, the combination of upper and lower trays, transfer rolls coöperating with said trays, drawing rollers, a spindle for holding a web of paper, slatted guiding rollers between the spindle for holding the web of paper and the drawing rollers, and between the latter and the transfer rolls, heated distributing rollers, and cooling means for treating the web of paper after it leaves the heated distributing rollers.

2. In a machine of the class set forth, the combination with a paper supporting spindle, drawing rollers adjacent to the said spindle, one of the rollers having a flexible covering and the other solid metal, means for moving one roller toward the other, a tray for containing a liquid material, a transfer roll disposed in upper relation to the tray to raise the liquid therefrom, a stack of heated distributing rollers arranged above the tray, and air feeding devices for cooling the paper web after it leaves the distributing rollers.

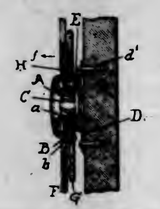
3. In a machine of the class described, the combination of paper web feeding mechanism, means for applying a liquid coating to the paper, a stack of heated distributing rollers, guide rollers associated therewith, means for actuating the distributing and guide rollers, means for causing the web of paper to run slack or taut, an extended conveying means having guiding devices, and means for supplying an air blast to the web of paper when the same passes over the conveying means.

4. In a machine of the class described, the combination with a paper supporting spindle, drawing rollers adjacent to the spindle, one of the rollers having a flexible covering and the other solid metal, means for moving one roller towards the other, a tray for containing liquid material, a

transfer roll disposed in upper relation to the tray to raise the liquid therefrom, a stack of heated distributing rollers arranged above the tray, and air feeding devices for cooling the paper web after it leaves the distributing rollers.

5. In a machine of the class described, the combination of a paper web feeding mechanism, means for applying a liquid coating to the paper, a stack of heated distributing rollers, guide rollers, associating therewith, means for actuating the distributing and guide rollers, means for modifying the speed of the feeding mechanism without changing the speed of the means for applying the coating material, a conveying means having guiding devices, and means for cooling the paper when passing over the conveying means.

873,127. SNAP-FASTENER. GEORGE A. HOLMES, Newton Center, Mass., assignor to United States Fastener Company, Boston, Mass., a Corporation of Maine. Filed May 11, 1906. Serial No. 316,248.



1. In a snap fastener, a socket member and a ball member, one of the members having an offset inwardly extending locking projection, and the other a dished washer its offset rim adapted at any point of said rim to engage said locking projection, in the act of engaging said members.

2. In a snap fastener, a socket member and a ball member, one of the members having an offset inwardly extending locking projection, and the other a dished washer its offset rim adapted at any point of said rim to engage said locking pin projection, in the act of engaging said members; said locking projection being formed on a plate that is attached at two or more points to its base.

3. In a snap fastener, a socket member and a ball member, one member having a laterally extended plate which has a plurality of attaching places as nail-holes said plate also having an inwardly projecting offset locking projection; the other member having a coöperating offset projection consisting of a circular disk with offset rim.

873,128. SNAP-FASTENING BUCKLE. GEORGE A. HOLMES, Newton, Mass. Filed June 20, 1907. Serial No. 379,878.

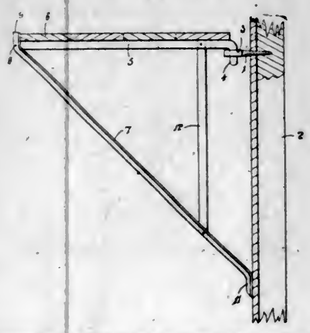


1. In a snap fastening buckle, the combination of a plate, a snap fastener member secured centrally thereon, the plate having a pair of slots, one on either side of the fastening member, a tongue piece loosely secured on the fastener member and having a buckle tongue projecting therefrom over one of the slots.

2. In a snap fastening buckle, the combination of a plate, a snap fastener member secured centrally thereon, the plate having a pair of slots, one on either side of the fastener member, a tongue piece loosely secured on the fastener member and having a buckle tongue projecting therefrom over one of the slots, and a cross head on the side opposite the tongue and adjacent to the opposite slot.

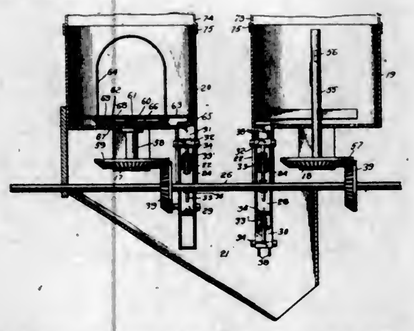
873,129. SCAFFOLDING-BRACKET. GEORGE E. HUMPHRIES, Wellington, New Zealand. Filed Nov. 23, 1905. Serial No. 288,773.

A scaffold bracket comprising a horizontal member having a downturned hook at its inner end and a downwardly and inwardly inclined strut, the two connected near their divergent ends by a brace in combination with a screw-eye having a rectangular opening to receive the said downturned end of the horizontal member and afford the sole



vertical support for the bracket, the lower end of the strut of which loosely engages the wall or upright, substantially as described.

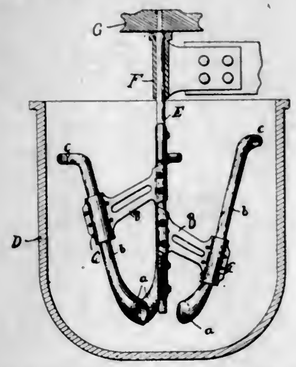
873,130. SEEDER AND FERTILIZER-DISTRIBUTER. JESSE A. INGRAM, Avery, Tex. Filed Feb. 8, 1907. Serial No. 356,298.



1. A seed distributing mechanism comprising a hopper mounted for travel and having extended sides, a shaft journaled for rotation beneath the hopper, a feeding wheel fixed upon the shaft for rotation therewith and adapted to rotate between the extended sides of the hopper, the said sides of the hopper being cut away eccentrically with respect to the said wheel, the wheel being provided with a plurality of peripheral pockets, plates disposed in said pockets for sliding movement therein, stems fixed to the plates and extending through the bottoms of the pockets, springs engaged upon the stems and adapted to normally hold the stems and the plates at the outward limit of movement, and rollers journaled upon the opposite edges of the plates and adapted to travel along the edges of the cut away portions of the extended sides of the hopper.

2. A seed distributing mechanism comprising a hopper mounted for travel and having extended sides, a shaft journaled for rotation beneath the hopper, a feeding wheel fixed upon the shaft for rotation therewith and adapted to rotate between the extended sides of the hopper, the said sides of the hopper being cut away eccentrically with respect to the said wheel, the wheel being provided with a plurality of peripheral pockets, plates disposed in said pockets for sliding movement therein, stems fixed on the plates and extending through the bottoms of the pockets, springs engaged upon the stems and adapted to normally hold the stems and the plates at the outward limit of movement, and rollers journaled upon the opposite edges of the plates and adapted to travel along the edges of the cut away portions of the extended sides of the hopper, the said edges being terminated abruptly at the lower ends of the extended sides.

873,131. DEVICE FOR MIXING FLUIDS AND MOLTEN METALS OF DIFFERENT DENSITIES. HEINRICH LEISER, Thorn, Germany. Filed Nov. 5, 1906. Serial No. 342,091.



1. An apparatus for mixing fluids of different specific gravity comprising a receptacle, a vertical shaft depending thereinto with means for rotating it, and an outwardly and upwardly inclined tube supported from said shaft having a forwardly turned lower end.

2. An apparatus for mixing fluids of different specific gravity comprising a vessel, a vertical shaft depending within the same with means for operating it, arms carried by said shaft, and a tube carried by each arm, each tube having a forwardly turned lower end and a rearwardly turned upper end and an upwardly and outwardly inclined intermediate portion, substantially as described.

873,132. ELECTRIC ACCUMULATOR. QUINTIN MARINO and EDWARD W. BARTON-WRIGHT, London, England. Filed Dec. 17, 1906. Serial No. 348,234.

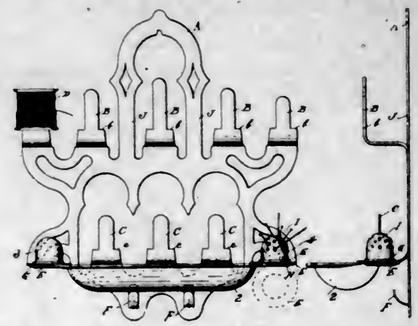


In electric accumulators having the positive and negative plates supported horizontally and alternately one above the other, the combination therewith of separating boards of specially treated wood placed between the said plates and lined on each side with a layer of specially treated wood fibers, a hole or holes, formed in each plate and board in line with each other, a raised rim forming the edge of each hole so as to provide a continuous passage or tube running vertically through the said plates and boards, and a vertical screw-threaded rod fitted within and passing through each of the said passages or tubes for effecting the escape of the expanded gases, substantially as described.

873,133. ARTICLE-HOLDER. ERNEST E. MINARD, Chicago, Ill. Filed June 27, 1907. Serial No. 381,036.

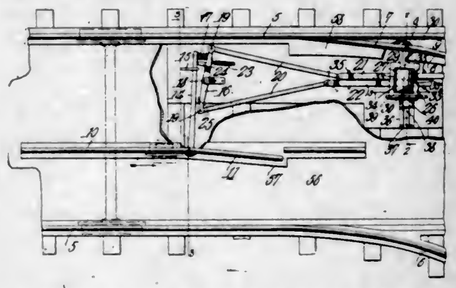
1. An article holder comprising a sheet metal back plate having eyes in portions bent out thereon, a dished plate having eyes at its ends matching with said eyes, and eyelets extending through said eyes and having confining beads and flanges around said eyes, fastening said plates together.

2. An article holder comprising a sheet metal back plate, a dished plate forming a receptacle in front thereof, and



fastenings between said plates, said fastenings being provided with article holding devices.

873,134. SWITCH. MILTON B. MCCONNELL, Tampa, Fla. Filed Aug. 9, 1907. Serial No. 387,889.



1. The combination with the main rails and siding, of a pivoted switch point, an oscillating member secured to and extending laterally from the pivoted end of the switch point, and means operable by a passing car for actuating said member to effect the movement of the switch point.

2. The combination with the main rails and siding, of a pivoted switch point, an oscillating member secured to and extending laterally from the pivoted end of the switch point, and a track device extending beneath the oscillating member and operatively connected with the same, said track device being actuated by a passing car to effect the movement of said switch point.

3. The combination with the main rails and siding, of a pivoted switch point, an oscillating member secured to the switch point and extending laterally from the pivoted end thereof, actuating bars extending beneath the oscillating member, and a track device operatively connected with the actuating bars and operable by a passing car for oscillating said member thereby to effect the movement of the switch.

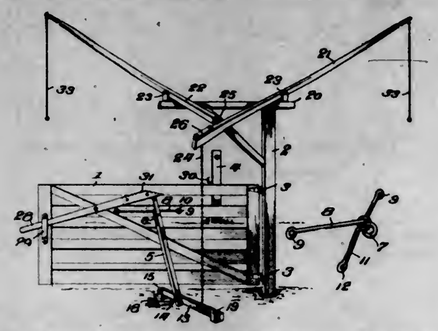
4. The combination with the main rails and siding, of the switch point, an oscillating frame connected with the switch point, a track device, actuating bars operatively connected with the track device, and a tilting member pivotally mounted for oscillating movement in said frame and adapted to engage the actuating bars, said track device being operable by a passing car to effect the movement of the switch point.

5. The combination with the main rails and siding, of the switch point, a movable member connected with the switch point, a tilting member carried by the movable member, an actuating member slidably mounted beneath said movable member, a track device operatively connected with the actuating member and operable by a passing car

to effect the movement of the switch, and means for moving the tilting member in engagement with the actuating member when the track device is operated.

[Claims 6 to 20 not printed in the Gazette:]

873,135. GATE. EDUARD L. MCMICHAEL, Arlington, Ky. Filed Oct. 15, 1906, Serial No. 339,063. Renewed July 9, 1907. Serial No. 382,932.

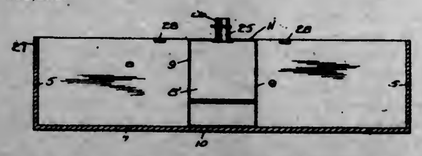


1. The combination with a gate, a supporting post at one end of said gate and a keeper post at the opposite end thereof; of a controlling bar, means to yieldingly secure one end of said controlling bar to the gate, an auxiliary bar pivoted to said controlling bar, a clip at the lower end of said auxiliary bar, a hook at the opposite end of said auxiliary bar adapted to engage the controlling bar, a latch bar pivotally secured to said gate, a keeper for said latch bar, a weight on said latch bar, a spring arm secured to said controlling bar, and adapted to engage the weighted end of said latch bar, and hold the same in engagement with said keeper and means upon said supporting post to operate said auxiliary bar whereby the gate is opened or closed.

2. The combination with a gate; of an auxiliary bar, pivotally secured at its lower end to a clip; an operating bar pivotally secured to the central portion of said auxiliary bar, a bracket secured to said gate, a loop at the central portion of said bracket, a clevis disposed through said loop and secured to the free end of said operating bar, a brace arm for said bracket and means to operate said auxiliary and controlling bar whereby the gate will be opened or closed.

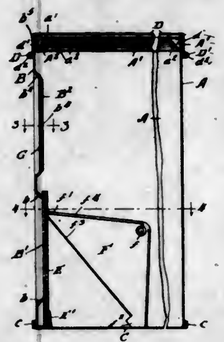
3. The combination with a gate; of controlling bars and means to yieldingly secure said controlling bars to the gate, comprising a bracket having a looped portion at the center thereof, a brace arm for said bracket and a clevis disposed through said loop and into engagement with one of said controlling bars.

873,136. WATER-TANK HEATER. DAVID H. QUINN, Williams, Minn., assignor of one-half to Mathew Erickson, Williams, Minn. Filed July 11, 1907. Serial No. 383,199.



A tank heater comprising a tank including a front wall, a heater located within the tank and comprising front and rear walls, sides, a bottom, and a top, the front wall of the heater being disposed directly against the front wall of the tank and being secured in this position, the front wall of the heater and the front wall of the tank being provided with registering firebox and ash-pit openings, the edges of the firebox and ash-pit openings in the front wall of the heater being flanged and the flanges being extended through the corresponding openings in the front wall of the tank and being bent back upon themselves and thence outwardly at right angles and secured to the said front wall of the tank, firebox and ash-pit doors hinged to the flanges of the respective openings, one end of the tank being provided with an overflow opening, a flue extending upwardly from the top of the heater, and a damper located within the flue and in a plane above that occupied by the overflow opening.

873,137. SHEET-METAL DISPLAY-CAN. FRANK RUDOLPHI, Chicago, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Aug. 7, 1905. Serial No. 272,958.



1. A display can having a sheet metal front plate furnished with a countersink or sunken panel surrounded on all sides thereof by an integral wall or flange to receive a sign plate, and an external removable spring sheet metal sign plate fitting in said countersink or sunken panel of the front plate, said sign plate and front plate having interengaging holding devices disengageable by springing or bowing the sign plate, said front plate having a hole therein to facilitate the outward bending of the sign plate when it is desired to remove the same, said holding devices consisting in tenons on the sign plate and slots on the front plate, substantially as specified.

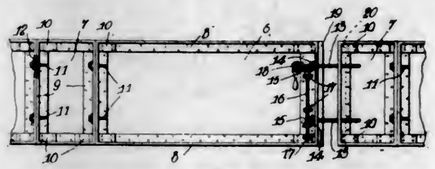
2. In a can, the combination with a front plate having a sign plate seat surrounded on all sides by a marginal wall, of a sheet metal flexible sign plate having tenons at its ends, said front plate having slots to receive said tenons, the bending of the flexible sign plate withdrawing or disengaging its tenons from the front plate, substantially as specified.

3. In a sheet metal display can, the combination with a can body having a bottom plate, upright side plates, a front strengthening bar and a front display plate fitting at its upper edge against said front strengthening bar and supported thereby and provided with a display opening and with a countersink or recess above its display opening, of an external removable flexible sheet metal sign plate fitting in said recess or countersink of the front plate, said sign plate and front plate having interengaging holding devices, disengageable by the bending or bowing of the sign plate, substantially as specified.

4. In a rectangular sheet metal display can, the combination with a can body having upright side plates and a front strengthening bar at the upper end of the body and a brass or burnishable metal front plate secured at its upper edge to said strengthening bar and provided with a display opening, and with an external sign plate seat to receive a removable sign plate and a removable external flexible sheet metal sign plate fitting in said external seat on the front plate and interengaging holding devices on the sign plate and front plate disengageable by the bending or bowing of the sign plate for removably securing the sign plate to the front plate, substantially as specified.

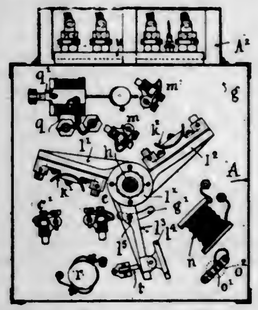
5. In a rectangular sheet metal display can, the combination with a can body having upright side plates and an upright front or display plate, a front strengthening bar at the upper end of the can body against which the upper edge of said front or display plate abuts, a removable flexible sheet metal sign plate, and interengaging holding devices on the sign plate and front plate disengageable by the bending or bowing of the front plate so that the sign plate may be removed without slipping it upward between the front plate and the front strengthening bar, thus enabling the front plate to fit against and receive support from said front strengthening bar, substantially as specified.

873,138. MOLD FOR CONCRETE WORK. FREDERICK M. STULTS, Chicago, Ill. Filed Apr. 18, 1907. Serial No. 368,975.



The combination of a plurality of molds adapted to be superposed one upon the other, each of which is composed of a plurality of long and short sheet metal sections having angle bars at the upper and lower edges and at the ends, and connected at the ends by screws extensible to enlarge the mold and changeable from one to the other, permitting the removal of one or more of said sections, the screws being provided with connecting means to turn all of them simultaneously.

873,139. APPARATUS FOR USE IN STARTING AND CONTROLLING ELECTRIC MOTORS. ABRAHAM TAYLOR, Rishton, and THOMAS EATON and HERMAN SCHWARZ, Manchester, England. Filed July 23, 1907. Serial No. 385,106.



1. A self-contained liquid motor starter, having a combined and inclosed switch, an inclosed resistance, a contact device, means for elevating said contact device, interlocking means for closing said switch operable only when the contact device is elevated, means for holding said switch when closed, and means for lowering said contact device to cut out the resistance, substantially as described.

2. A self-contained motor starter, having a double-pole switch inclosed and interlocked with a resistance, a movable contact device in connection with the resistance, means for raising and lowering said movable contact device, means for interlocking with the switch when the movable contact is elevated to set the switch, means for holding the switch when set, and contacts for the double-pole switch, substantially as described.

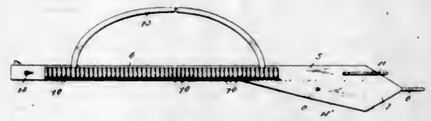
3. A self-contained liquid motor starter having an inclosed and combined double-pole switch, a liquid resistance, a movable contact device, means for raising and lowering same, an interlocking connection between said raising and lowering means and the switch allowing the switch to be closed when the contact device is elevated, means for holding such switch, a fixed support and contacts thereon for the double pole switch when closed, substantially as described.

4. In combination in a liquid motor starter, a resistance, a contact device, a screwed spindle, an inclosed switch centered about said spindle, and means in connection with the screwed spindle for actuating the switch to close same operable only when the contact device is elevated, as herein set forth.

5. A motor starter having a liquid resistance, and comprising a tank, a contact device, means for raising and lowering same, an inclosed switch, means for engaging and closing the switch when the contact device is elevated, contacts for the switch, an inclosed support for such contacts, means for holding the switch when set, and short circuiting contacts in connection with the tank, and operable means for actuating the raising and lowering appliance as herein set forth.

[Claims 6 to 9 not printed in the Gazette.]

873,140. COMBINED GUN-CASE AND AMMUNITION-BELT. NELSON T. VELIQUETTE, Kewadin, Mich. Filed June 27, 1906, Serial No. 323,674. Renewed Sept. 16, 1907. Serial No. 393,117.



1. A gun case including a barrel inclosing portion and a stock inclosing portion, a series of cartridge loops secured upon its barrel inclosing portion and extending substantially throughout the entire length thereof, the stock inclosing portion of the gun case being foldable upon itself to form a belt portion which constitutes a continuation of the barrel inclosing portion and is substantially the same width as the barrel inclosing portion, and a strap carried by the stock inclosing portion.

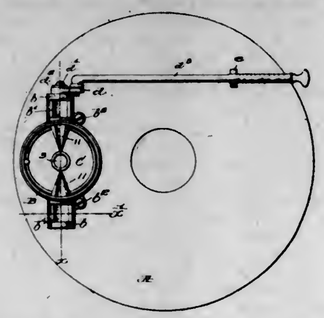
2. A gun case including a barrel inclosing portion and a stock inclosing portion, a series of cartridge loops secured upon its barrel inclosing portion and extending substantially throughout the entire length thereof, the stock inclosing portion of the gun case being foldable upon itself to form a belt portion which constitutes a continuation of the barrel inclosing portion and is substantially the same width as the barrel inclosing portion, a flap carried by the stock inclosing portion, and straps secured one to the stock inclosing portion and the other to the end of the flap thereof as and for the purpose stated.

873,141. DAMPER. ARTHUR W. WALKER, Malden, Mass. Filed June 18, 1906. Serial No. 322,141.

1. In an apparatus of the class described, the combination with a pipe-collar, and a pivoted damper therein having a hollow journal open at its end adjacent the damper and provided with an air inlet port in its side, of a bearing in which said journal is rotatably mounted, said bearing having a port arranged in its side whereby the turning of the damper into closed position brings the two ports into register with each other and into communication with the interior of the pipe-collar, while the turning of the damper into open position closes said ports.

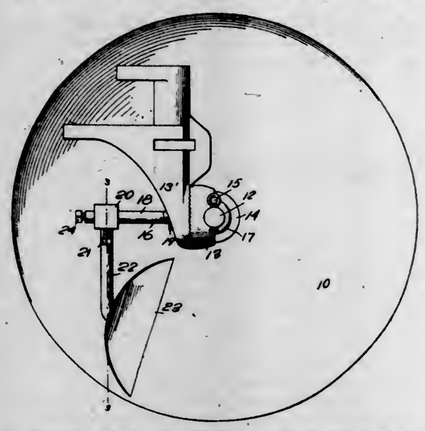
2. In an apparatus of the class described, the combination with a pipe collar, of a damper pivotally mounted therein and having hollow journals each provided with an air inlet port in its side and with another port leading to the interior of the pipe collar, bearings for said journals

rigid with the pipe collar, each bearing having an air inlet port in its side adapted to register with the air inlet port



in the journal when the damper is closed and to be out of register therewith when the damper is open.

873,142. DISK-SCRAPER. WALTER E. WILHELM, Palmyra, Nebr. Filed Mar. 26, 1907. Serial No. 364,574.



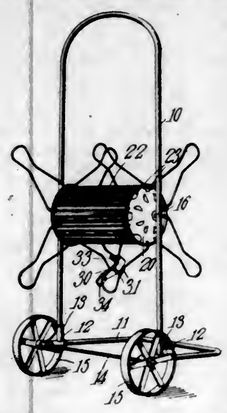
1. The combination, with the cultivator disk and its journal pin, of an eye-bolt on the journal-pin, a coupling-nut adjustable on the eye-bolt, and a scraper for the disk and its shank, the latter being adjustably secured in the coupling-nut, at right angles to the eye-bolt.

2. A cultivator disk having a journal pin, an eyebolt engaged therewith, combined with a disk-scraper having a shank, and a coupling-nut with which the said bolt and shank are severally adjustable both longitudinally and axially, the shanks of the disk-scraper and eye-bolt extending at right angles to each other.

873,143. GARDEN-REEL. REUBEN D. WIRT, Philadelphia, Pa., assignor of one-fourth to Edgar C. Wilson and one-fourth to Raymond Keables, Philadelphia, Pa. Filed June 11, 1907. Serial No. 378,397.

1. In a hose reel, a frame, a shaft carried thereby, a pair of spaced sheet metal disks mounted on the shaft and provided with outwardly dished central portions to present a minimum surface area for direct engagement with the frame, said disks having inwardly extending struck up tongues formed by punching out portions of the disks, and being provided with inwardly bent marginal flanges, and a cylindrical sheet metal drum arranged between the tongues and flanges and secured to said tongues.

2. In a hose reel, a frame, a shaft carried thereby, a pair of sheet metal disks mounted on the shaft and provided with struck up tongues, a drum member carried by the disks, and arms extending from the disks, the inner ends of the arms being secured in place by said tongues.



3. In a hose reel, a frame, a shaft carried thereby, a pair of sheet metal disks mounted on the frame and provided with inwardly extending struck up tongues, a drum connecting the disks, and guard arms extending radially from the disks, the inner ends of the arms being bent to pass through openings near the periphery of the disks, and being secured in place by said tongues.

4. In a hose reel, a frame, a shaft carried thereby, a pair of sheet metal disks mounted on the frame and provided with inwardly extending struck up tongues and with openings, the latter being disposed near the peripheries of the disks, a drum connecting the disks, and a plurality of arms, each formed of a length of wire centrally bent to form a loop, the arms of the loop being bent to pass through the openings near the margin of the disks, and thence bent into approximately radial arrangement with respect to the disks and secured in place by the tongues.

5. In a hose reel, a frame comprising a pair of approximately T-shaped socket members having extended arms provided with openings, an axle extending through the openings, supporting wheels mounted on the axle, a U-shaped foot frame, the arms of which are in alinement with the extended arms of the socket members, and a handle frame secured to the socket members, a shaft supported by the handle member above the socket members, and a hose reel mounted on said shaft.

[Claim 6 not printed in the Gazette.]

873,144. SHEET-METAL POLE. WILFRED L. WRIGHT, Philadelphia, Pa. Filed Sept. 7, 1906. Serial No. 333,583.

1. A sheet metal pole comprised of two similar sheet metal sections respectively bent upon their central longitudinal axes and provided with inwardly bent marginal flanges, the said sections being adapted to be wedged one within the other, with the outsides of the marginal corner portions of the inner section respectively forced into frictional contact within the angles of the marginal flanges of the other section.

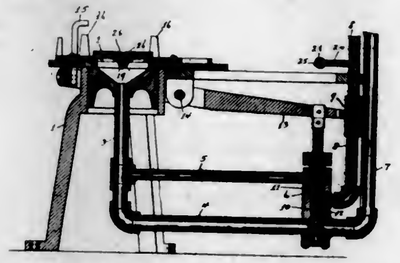
2. A sheet metal pole comprised of two similar and longitudinally tapered sheet metal sections bent at substantially ninety degrees along their central longitudinal axes and provided with marginal side flanges inwardly bent at substantially a right angle on each side thereof, the said sections being adapted to be wedged one within the other, with the outsides of the marginal corner portions of the inner section respectively in frictional contact with the insides of the marginal corner portions of the outer section, whereby said sections are united by lap-joints at diametrically opposite corners of the pole.

3. A sheet metal pole of angular cross-section, comprised of two similar sheet metal sections having inturned marginal flanges and adapted to be wedged one within the other, the overlapping marginal portions of said sec-



tions being located at diametrically opposite corners of the pole and constituting lap-joints formed around the angles of said corners.

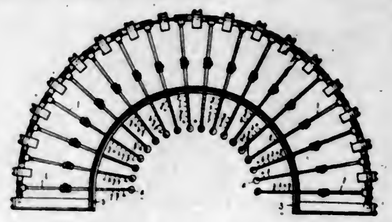
873,145. AUTOMATIC CUT-OFF FOR GAS-STOVES. JAKOB ZILLHARDT, Troy, N. Y., assignor to Tim & Company, Troy, N. Y., a Corporation of New York. Filed Mar. 7, 1905, Serial No. 248,838. Renewed Oct. 28, 1907. Serial No. 399,450.



In a gas-stove, the combination with a burner, and a valve-case having a cylindrical chamber; of air and gas pipes communicating with said burner, through said valve case which is provided with inlet and outlet ports for the respective pipes; and a hollow cylindrical slide valve fitting the interior of said valve-case having its inner end closed and its cylindrical wall adjacent thereto adapted to close the inlet and outlet ports for one set of pipes, and provided in its cylindrical wall with ports adapted in certain positions of the valve to register with and establish communication between the ports for the other set of pipes, said ports being so arranged that all of said ports are simultaneously opened and all simultaneously closed; a movable member adapted to be displaced by an article placed over the burner; and operating connections between said movable member and said valve.

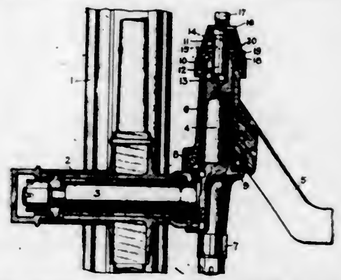
873,146. KEYBOARD FOR MUSICAL INSTRUMENTS. ARTHUR E. ADRIANCE, Buffalo, N. Y. Filed Aug. 24, 1905. Serial No. 275,608.

1. In an apparatus such as described, a chime of bells and a key-board composed of a series of levers connecting with the bells, having the upper surfaces of their exposed ends divided into a series of groups of spaces, the groups being distinguished from each other and the members of each group equidistant from the free ends of the levers, the characters in each group of spaces indicating the intervals of the diatonic scale, all combined and operating as and for the purpose stated.



2. In an apparatus such as described, a chime of bells and a key-board composed of a series of radial levers connecting with the bells, having the upper surface of their exposed ends divided into a series of concentric groups of spaces, the groups being distinguished from each other, the characters in each group of spaces indicating the intervals of the diatonic scale, all combined and operating as and for the purpose stated.

873,147. STEERING-WHEEL PIVOT FOR AUTOMOBILES. HENRY S. BALDWIN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Mar. 25, 1904. Serial No. 199,930.



1. The combination with a steering-wheel pivot, of an upright bearing therefor, a freely rotatable retaining device arranged between said pivot and said bearing for preventing relative axial movement between the latter and the bearing, and a cap supported by the bearing which maintains the retaining device in operative position to the pivot.

2. The combination with a steering-wheel pivot, of an upright bearing therefor provided with a centering pin entering the upper end of said pivot, a loose retainer located below the upper end of the pivot for preventing it from dropping out of said bearing, and a removable member on said bearing for holding said retainer in place.

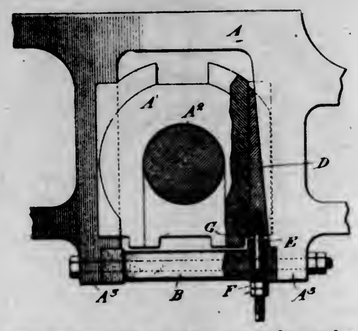
3. The combination with a steering-wheel pivot, having a groove in its cylindrical surface, of an upright bearing for said pivot, a freely rotatable retainer supported by said bearing and engaging with said groove, and a removable member engaging the periphery of said bearing for holding said retainer in place.

4. The combination with a steering-wheel pivot, having a circumferential groove in its cylindrical surface, of an upright bearing for said pivot, one or more loose retainers engaging the groove, said retainers being supported by the bearing and rotatable about an axis other than the axis of the pivot, and a removable member on said bearing for holding said retainer in place.

5. The combination with a steering-wheel pivot having a circumferential groove, of an upright bearing for said pivot having a corresponding groove, a plurality of balls interlocking in the grooves to prevent axial movement between the pivot and the bearing, and a removable cap on said bearing for retaining the balls in the grooves.

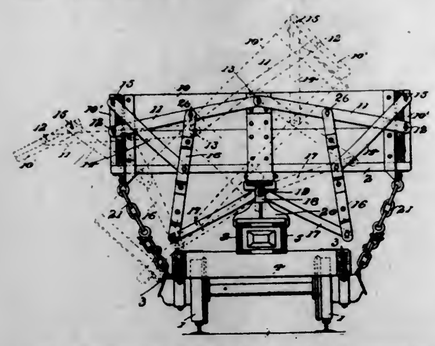
[Claims 6 to 12 not printed in the Gazette.]

873,148. WEDGE FOR LOCOMOTIVE DRIVING-BOXES. WILLIAM J. BARRETT, Chicago, Ill. Filed Feb. 15, 1907. Serial No. 357,532.



The combination with a driving box wedge, and a pedestal brace, of an adjusting bolt passing loosely through said brace, the lower end portion of the wedge having a vertically arranged threaded socket receiving the upper end portion of the adjusting bolt, an adjusting nut upon the lower end portion of said bolt, said nut bearing upon the under side of the pedestal brace, a second adjusting bolt passing loosely through the pedestal brace and bearing at its upper end upon the lower end of the wedge, a dead nut arranged upon said bolt, said dead nut having a collar, and the pedestal brace having a socket to receive the collar, and an adjusting nut upon the last mentioned adjusting bolt.

873,149. DUMPING-CAR. JOHN H. BLAKE, Knoxville, Tenn. Filed Sept. 10, 1907. Serial No. 392,178.



1. In a dump car or similar structure, the combination of a body having a movable wall, a lever, and a pair of crossed links connected to said movable wall and to said lever.

2. In a dump car or similar structure, the combination of a body having a movable wall, a pair of toggle levers, and a pair of crossed links each pivoted at one end to said movable wall and also pivoted to one of said toggle levers.

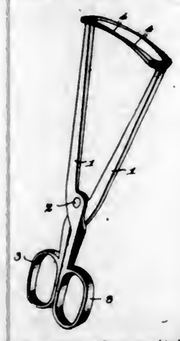
3. In a dump car or similar structure, the combination of a body having a movable wall, a lever, a pair of crossed links each pivoted to said movable wall and to said lever, one of said links being shorter than the other.

4. In a dump car or similar structure, the combination of a body having a movable and a fixed wall, a pair of toggle levers, a link pivoted at its ends to said movable wall and fixed wall respectively and connected at an intermediate point to one of said toggle levers, and a second link crossing and first-mentioned link and pivoted at its ends to said movable wall and toggle lever respectively.

5. In a dump car or similar structure, the combination of a body having a movable and a fixed wall, a link pivoted at one end to said movable wall and at its other end to said fixed wall, a lever pivoted to said link and adapted to hold it and the movable wall in an elevated position when the car dumps, and a second link crossing said first-named link and pivoted to the movable wall and lever respectively and adapted upon dumping of the car to turn said movable wall on its pivotal connection with the first link and thereby move said wall outward at its lower edge and inward at its upper edge.

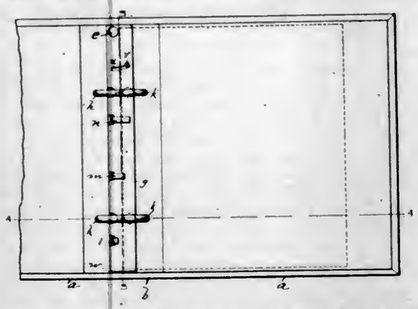
[Claim 6 not printed in the Gazette.]

873,150. CARVING-FORK. JAMES F. BROWER, Rodney, Mich., assignor of one-half to Edward F. Ketchum, Rodney, Mich. Filed May 31, 1906. Serial No. 319,579.



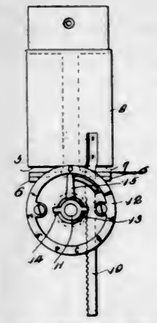
A utensil comprising crossed oppositely disposed shanks, said shanks being pivotally connected at their points of intersection, each shank having a handle at one end and a prong extending at right angles from its other end, said prongs and handles being disposed to simultaneously contact when the handles are drawn together, said shanks being constantly spaced apart from their points of intersection to their pronged ends.

873,151. LOOSE-LEAF BINDER. JOHN E. MACLACHLAN, Boston, Mass. Filed June 27, 1907. Serial No. 381,001.



In a loose-leaf binder adapted to be applied to a cover having ordinary sides and a connecting back, a stationary bar or member adapted to be rigidly secured to said back, leaf-receiving posts mounted on said bar or member, a swinging bar or member pivotally connected at one end with the corresponding end of the stationary bar or member and provided with opposite leaf-receiving posts and with notches on its inner edge, said swinging bar moving on a plane which is parallel with the surface of the stationary bar, and lips on the stationary bar facing and registering with the said notches, the lip opposite the notch which is nearest the pivotal connection of the bars being longer and extending nearer to the inner edge of the stationary bar than the lip which is at a greater distance from said pivotal connection, whereby said lips will successively overlap the swinging bar at the ends of the notches, for the purpose set forth.

873,152. VALVE. JOHN H. MARTINDALE, Bradford, Pa., assignor to Leader Specialty Manufacturing Company, Smethport, Pa., a Corporation of Pennsylvania. Filed June 4, 1907. Serial No. 377,224.



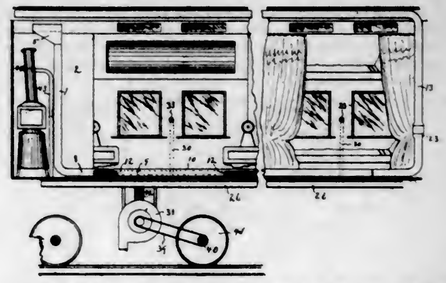
1. In a device of the character described, the combination of a tubular valve casing tapering toward one end thereof and provided with a pair of laterally extending arms, an outlet port being formed in one side of the valve casing, a mixing chamber communicating with the outlet port and provided with an air inlet, a sleeve controlling the effective size of the air inlet, an indicating plate carried by the laterally extending arms of the valve casing, a hollow valve plug mounted within the valve casing and provided with a row of openings designed to be brought successively into registry with the outlet port, the said valve plug having a tapered formation and being provided with a stem which projects through the indicating plate, a head mounted upon the stem and coöperating with the indicating plate, and a spring mounted upon the stem and bearing against the indicating plate to hold the valve plug closely within the casing.

2. In a device of the character described, the combination of a tubular valve casing tapering toward one end thereof and provided with a pair of laterally extending arms, an outlet port being formed in the valve casing, an indicating plate secured to the laterally extending arms, a mixing chamber communicating with the outlet port and provided with an air inlet, a sleeve for controlling the effective size of the air inlet, a hollow valve plug mounted within the valve casing and provided with a row of openings designed to be brought successively into registry with the outlet port, the said valve plug having a tapered formation and being provided with a stem extending through the indicating plate, a head applied to the stem and coöperating with the indicating plate, a pinion rigid with the stem and located between the indicating plate and the valve casing, and a rack bar carried by the before mentioned sleeve and meshing with the pinion.

3. In a device of the character described, the combination of a valve casing, a valve within the casing, a mixing chamber communicating with the interior of the valve casing, a valve for controlling the admission of air to the mixing chamber, a rack bar for operating the second mentioned valve, a pinion operated by the first mentioned valve and engaging the rack, and a removable key normally holding the rack bar and pinion in engagement with each other.

4. In a device of the character described, the combination of a valve casing provided with a laterally extending arm, a valve mounted within the valve casing, a pinion operated by the said valve, a second valve controlling the admission of air to the mixing chamber, a rack bar for operating the second valve, the said rack bar being designed to engage the before mentioned pinion, and a U-shape key fitting removably over the laterally extending arm and normally holding the rack bar in engagement with the pinion.

873,153. SYSTEM FOR VENTILATING PASSENGER-CARS. NELSON S. MERCER, Omaha, Nebr. Filed Sept. 29, 1906. Serial No. 336,682.



1. In a system for ventilating cars, the combination with lengthwise extending air pipes within the car and having exteriorly communicating intake portions, of a ventilating duct in communication with said lengthwise extending air pipes and having longitudinal outer walls, a partition disposed between the outer walls of said ventilating duct and making a closure with and intermediate the ends of one of said outer walls to form an air-conducting chamber extending a part of the length of said ventilating duct and to form separate ventilating sections with apertures communicating with the interior of the car.

2. In a system for ventilating cars, the combination with longitudinal air pipes within the car and having exteriorly communicating intake portions, of a ventilating duct disposed adjacent and above the ceiling of the car and having a communication with said longitudinal air pipes and provided with longitudinal outer walls; a partition disposed between the outer walls of said ventilating duct and making a closure with and intermediate the ends of one of said outer walls to form separate ventilating sections with apertures in substantial alinement communicating with the interior of the car, and mechanism within said ventilating duct for causing a movement of air in the direction of said apertures within said separate ventilating sections.

3. In a system for ventilating cars, the combination of inclosing-pipes disposed longitudinally within the car to occupy planes above the car floor and below the car seats, and provided with intake pipes extended to communicate exteriorly of the car; heating-pipes extending within the inclosing-pipes and having transverse pipe-sections traversing the walls of the inclosing-pipes; a ventilating duct in communication with said inclosing-pipes and having longitudinal outer walls, a partition disposed between the outer walls of said ventilating duct and making a closure with and intermediate the ends of one of said outer walls to form an air-conducting chamber extending a part of the length of said ventilating duct and to form separate ventilating sections with apertures communicating with the interior of the car.

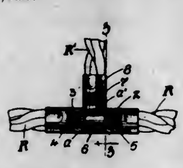
4. In a system for ventilating cars, the combination of inclosing-pipes disposed longitudinally within the car to occupy planes above the car floor and below the car seats, and provided with intake pipes extended to communicate exteriorly of the car; heating-pipes extending within the inclosing-pipes and having transverse pipe-sections traversing the walls of the inclosing-pipes; a ventilating duct disposed adjacent and above the ceiling of the car and having a communication with said inclosing-pipes and provided with longitudinal outer walls; a partition disposed between the outer walls of said ventilating duct and making a closure with and intermediate the ends of one of said outer walls to form separate ventilating sections with apertures in substantial alinement communicating with the interior of the car; and mechanism within said ventilating duct for causing a movement of air in the direction of said apertures within said separate ventilating sections.

5. In a system for ventilating cars, the combination with exhaust pipes communicating with the interior of the

car, rotatable exhaust fans disposed beneath the car and in communication with said exhaust pipes, of inclosing-pipes disposed longitudinally within the car to occupy planes above the car floor and below the car seats and provided with intake pipes extended to communicate exteriorly of the car; heating-pipes extending within the inclosing-pipes and having transverse pipe-sections traversing the walls of the inclosing-pipes, and an upper longitudinally-extending ventilating duct in communication with said inclosing-pipes and having apertures in communication with the interior of the car.

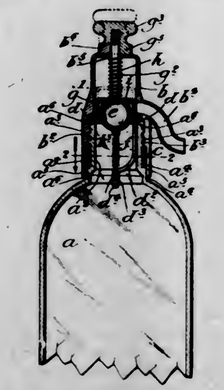
[Claims 6 to 9 not printed in the Gazette.]

873,154. TWO-MALE T. GEORGE A. MILLER, St. Louis, Mo., assignor to St. Louis Lightning-Rod Co., St. Louis, Mo., a Corporation of Missouri. Filed Feb. 4, 1907. Serial No. 355,625.



In combination with two contiguous lightning-rod sections, a two-male tee comprising a male section composed of a cylindrical stem terminating at one end in a screw-threaded portion coupled to the adjacent end of one of the rods, and in an enlarged interiorly screw-threaded socket at the opposite end coupled to the adjacent end of the opposite rod, an annular shoulder formed between the stem and socket, and a female section comprising a ring freely rotatable about the stem and bearing against the shoulder, and having a peripheral screw-threaded nipple adapted to be coupled to a third rod, substantially as set forth.

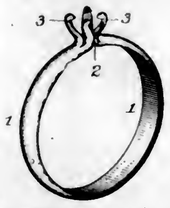
873,155. NON-REFILLABLE BOTTLE. HENRY MINDERMANN, Brooklyn, N. Y. Filed Sept. 16, 1907. Serial No. 392,960.



1. A bottle or similar vessel provided with a neck, the top portion of which is provided with an exterior thread and the bottom portion of which is provided with annularly and vertically arranged ratchet teeth, an annular valve seat placed in the top portion of said neck and provided with a depending arm, a ball valve seated on said annular valve seat and connected with said arm by a spiral spring, a cap adapted to be screwed on to said neck and provided in the bottom portion thereto with a spring which operates in connection with said ratchet teeth to prevent the unscrewing of the cap, said cap being provided at one side thereof and above the neck with a discharge spout, and a spring depressed device adapted to rest on the valve within said cap, said device being provided with a rod which passes out through the neck of said cap, and means for raising said rod and cage and holding them in a raised position.

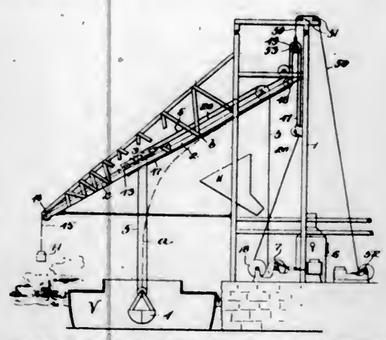
2. A bottle or similar vessel provided with a neck, a cap adapted to inclose said neck and to be permanently secured thereto, said cap being provided above said neck with a discharge spout, and a detachable annular valve seat at the top of said neck, and held in position by said cap, a tensional device connected with said valve seat, and said valve for holding said valve seated, and a spring depressed device resting on said valve, and provided with a rod which passes out through the top of said cap, said rod and said cap being provided with means for lifting said device and holding it in a raised position.

873,156. GEM-DISPLAYING RING. CHARLES MOE, Chicago, Ill. Filed Oct. 1, 1906. Serial No. 336,950.



A display ring for jewelers, the same comprising an open circle of resilient material provided with opposed gem holding prongs at the respective sides of its open portion, said holding prongs being normally in close relation and requiring to be sprung apart in order to receive and have holding engagement with a gem.

873,157. HOISTING APPARATUS. ARCHIBALD G. MONKS, Brookline, Mass. Filed Feb. 15, 1907. Serial No. 357,441.



1. In a hoisting apparatus, a trolley-way, a trolley movable thereon, a bucket suspended below said trolley by a holding cable for controlling the movement of the trolley holding cable adapted to raise and lower the bucket, a trolley cable for controlling the movement of the trolley along the trolley-way, a motor for operating the holding cable, and means automatically operated by the same motor to operate the trolley cable while the holding cable is being operated, to cause the bucket to be simultaneously hoisted and hauled inwardly upon a continuous path between its loading and discharging points.

2. In a hoisting apparatus, a trolley-way, a trolley movable thereon, a bucket suspended below said trolley by a holding cable adapted to raise and lower the bucket, a trolley cable for controlling the movement of the trolley along the trolley-way, a motor for operating the holding cable, and means automatically operated by the motor after the bucket has been hoisted to a predetermined point, to operate the trolley cable while the holding cable is being operated, to cause the bucket to be simultaneously hoisted and hauled inwardly upon a continuous path.

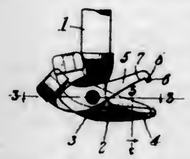
3. In a hoisting apparatus, a trolley-way, a trolley movable thereon, a bucket suspended below said trolley by a holding cable adapted to raise and lower the bucket, a trolley cable for controlling the movement of the trolley along the trolley-way, a motor for operating the holding cable, and means also operated by the motor to operate the trolley cable at an increasing rate of speed while the holding cable is being operated, to cause the bucket to be simultaneously hoisted and hauled inwardly upon a curved path.

4. In a hoisting apparatus, a trolley-way, a trolley movable thereon, a bucket suspended below said trolley by a holding cable adapted to raise and lower the bucket, a trolley cable for controlling the movement of the trolley along the trolley-way, a motor for operating the holding cable, and means automatically operated by the motor after the bucket has been hoisted to a predetermined point, to operate the trolley cable at an increasing rate of speed while the holding cable is being operated, to cause the bucket to be simultaneously hoisted and hauled inwardly upon a continuous curved path.

5. In a hoisting apparatus, a trolley-way, a trolley movable thereon, a bucket suspended below said trolley by a holding cable, a trolley cable for controlling the movement of the trolley along the trolley-way, a drum driven from a motor for operating the holding cable, a second drum for operating the trolley cable, the former drum being rotatable independently of the latter, and means automatically to cause said drums to rotate together after the former drum has operated the holding cable to lift the bucket to a predetermined point, whereby the bucket will follow a continuous path between its loading and discharging points.

[Claims 6 to 18 not printed in the Gazette.]

873,158. KNOTTER FOR HARVESTERS. RICHARD H. MOORE, Wakita, Okla. Filed June 20, 1907. Serial No. 379,960.

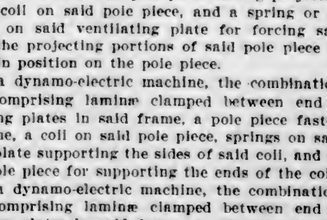


1. A knotter comprising a spindle, a jaw fixed thereto and having a channel and a perforation entering the channel and located in the vicinity of the end of the jaw, a jaw pivoted to the first said jaw and adapted to enter said channel, the twine engaging end of the pivoted jaw being shorter than the twine engaging end of the fixed jaw, said pivoted jaw having at the extremity of its end a hook adapted to enter said perforation.

2. A knotter comprising a spindle, a jaw fixed thereto and having a channel and a perforation entering the channel and located in the vicinity of the end of the jaw, a jaw pivoted to the first said jaw and adapted to enter said channel, the twine engaging end of the pivoted jaw being shorter than the twine engaging end of the fixed jaw, said pivoted jaw having at the extremity of its end a hook adapted to enter said perforation, said pivoted jaw when closed having contact with the bottom of the channel at one point only which point is located between said hook and the pivot of said pivoted jaw.

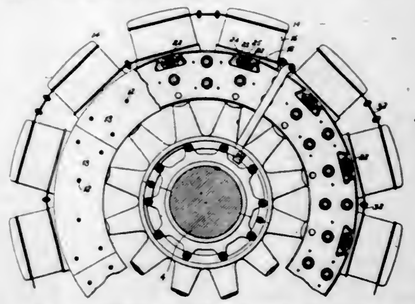
873,159. TRUCK. FRANK M. MORTON, Columbus, Ga. Filed Oct. 8, 1906. Serial No. 338,051. Renewed Oct. 7, 1907. Serial No. 396,326.

A truck of the character described comprising a rectangular metallic body, reinforcing strips around the upper edge of said body, angle metal strips at the corners of said body, a frame for supporting said body in an elevated position, said frame comprising spaced longitudinal bars, pairs of upwardly and outwardly inclined uprights having oppositely-bent ends in engagement with the bottom of said body and the ends of said longitudinal bars, cleats upon the upper side of the bottom of said body, fastening devices passed through said cleats, said body and the bent upper ends of the uprights, angle brackets engaged with



the bent lower ends of said uprights, fastening devices passed through said longitudinal bars, the lower ends of said uprights and said angle brackets, wheels disposed between the spaced longitudinal bars adjacent to their ends and journaled in bearings on said angle brackets, a transverse bar connecting said longitudinal bars adjacent to their centers and formed at its ends with spindles, and wheels journaled upon said spindles, substantially as shown and described.

873,160. FIELD-COIL SUPPORT. EDWARD T. MUG, Norwood, Ohio, assignor to The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Sept. 30, 1904. Serial No. 226,674.



1. In a dynamo-electric machine, the combination of a frame, a ventilating plate in said frame, a pole piece secured to said frame, a coil on said pole piece, and a resilient support for said coil mounted on said ventilating plate.

2. In a dynamo-electric machine, the combination of a frame, a ventilating plate in said frame, a pole piece secured to said frame, said pole piece having projecting portions, a coil on said pole piece, and a spring or springs mounted on said ventilating plate for forcing said coil against the projecting portions of said pole piece to hold the coil in position on the pole piece.

3. In a dynamo-electric machine, the combination of a frame, comprising laminæ clamped between end plates, ventilating plates in said frame, a pole piece fastened to said frame, a coil on said pole piece, springs on said ventilating plate supporting the sides of said coil, and springs on the pole piece for supporting the ends of the coil.

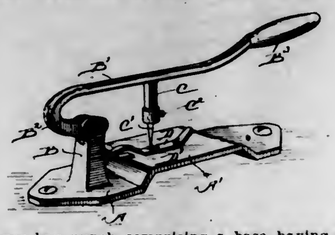
4. In a dynamo-electric machine, the combination of a frame, comprising laminæ clamped between end plates, ventilating plates in said frame, a pole piece fastened to said frame, a coil on said pole piece, springs on said ventilating plate supporting the sides of said coil, springs on the pole piece for supporting the ends of the coil, and guides on the ventilating plates and pole piece for holding said springs in position.

5. In a dynamo-electric machine, the combination of a frame, ventilating plates in said frame, a pole piece se-

cured to said frame, a coil on said pole piece, and a resilient seat for said coil, comprising compression springs carried by said pole piece and said ventilating plates.

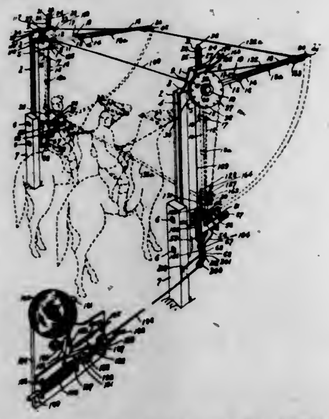
[Claims 6 to 15 not printed in the Gazette.]

873,161. PAPER-BAG PUNCH. ROBERT MUNDAY, Fulton, Ark. Filed Nov. 19, 1906. Serial No. 344,112.



A paper bag punch comprising a base having a raised apertured central portion, an upright standard carried by the base upon one side of the raised portion, a handle pivotally connected to said standard, a shank depending from said handle, a punching tool detachably carried by said shank, and a notched spring secured at one end to the raised portion, the notch alining with the aperture as and for the purpose set forth.

873,162. RACE-COURSE BARRIER AND STARTING DEVICE. DAVID MCGLADDERY, Newport, Ky., and JACOB PAWOLOWSKI, Cincinnati, Ohio. Filed July 5, 1907. Serial No. 382,162.



1. In a race course barrier and starting device, an arm, a pivotal support for said arm upon which said arm is adapted to swing, a tape supported and guided by said arm, means for controlling the swinging of said arm and means for permitting lengthwise movement of the barrier to allow it to pay out and recede in harmony with the movements of the horses against and away from it, while said barrier is connected to and supported by the arm independently of the movement of said arm, substantially as and for the purposes specified.

2. In a race course barrier and starting device, an arm, a pivotal support for said arm, a reel pivoted adjacent to said arm, a tape supported by said reel and supported and guided by said arm, means for swinging said arm, and means for controlling the swinging of said arm, substantially as and for the purposes herein specified.

3. In a race course barrier and starting device, a spindle suitably mounted a reel mounted thereon, a barrier connected to said reel, means for actuating said reel, a pivoted arm constituting a barrier holder and barrier guide and means for permitting movement of the barrier relative to said arm, substantially as shown and for the purposes specified.

4. In a race course barrier and starting device, an arm, a head in which said arm is pivotally supported, a reel pivotally supported upon said head concentric with the pivotal support of said arm, a tape supported upon said reel and supported and guided by said arm, whereby said tape is stretched by the rotation of said reel, means for swinging said arm mounted upon said head, means for restraining said arm, and means for releasing said arm, substantially as and for the purposes herein specified.

5. In a race course barrier and starting device, an arm, a removable head in which said arm is pivotally supported, a tape supported and guided by said arm, means for permitting movement of said tape relative to said arm, a spring mounted upon said head, a connection between said spring and said arm, whereby said spring is adapted to swing said arm and said tape supported thereby, means for restraining said arm in position against the action of said spring and means for releasing said arm to the action of said spring, substantially as shown and for the purposes specified.

[Claims 6 to 40 not printed in the Gazette.]

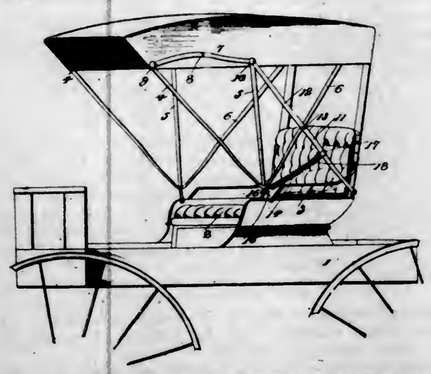
873,163. HAIR-PIN. DANIEL W. MCNEIL, Cincinnati, Ohio. Filed June 10, 1907. Serial No. 378,148.



1. A hair-pin consisting of a wire and a flat metal clip, said clip consisting of a flat piece of spring metal said clip being secured at one of its ends to the wire by being bent around the same and leaving its opposite end free but normally held by the spring of the metal in the clip against a contiguous part of the hair-pin to form a jaw for receiving wisps of hair.

2. A hair-pin consisting of a double pronged wire, the prongs being connected at the ends by a U-curve and a flat metal clip bent at its center about the curve and forming contacting jaws between the prongs for receiving wisps of hair.

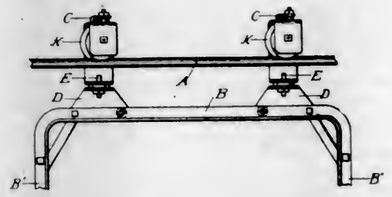
873,164. ATTACHMENT FOR BUGGY-TOPS. WHITMAN C. NEFF, Lawrenceville, Ill. Filed June 24, 1907. Serial No. 380,532.



1. In combination with the bows of a collapsible buggy-top, a jointed brace, and a spring member having one end attached to a relatively fixed part of the vehicle, and having at its other end a clip adapted to embrace and slide upon said brace, and means for fixing the clip in desired position on the brace.

2. In combination with the bows of a collapsible buggy-top, a jointed brace, and a spring member having one end attached to a relatively fixed part of the vehicle, and having at its other end a clip adapted to embrace and slide upon said brace, and means for fixing the clip in desired position on the brace, said means comprising a thumb-screw whereby the clip may be caused to grip said brace firmly.

873,165. ELEVATED CARRIER. ALBERT H. NELLER, Fairfield, Iowa, assignor to Louden Machinery Company, Fairfield, Iowa, a Corporation of Iowa. Filed July 23, 1906. Serial No. 327,354.



1. In elevated carriers, overhead tracks set at an angle to each other, a curved section joining said tracks together so as to form a continuous way, a carrier frame, a pair of upwardly extending brackets secured at their lower ends to said frame, one member of which extends up under and the other up by and over the track, housings pivoted between said brackets so as to turn at an angle thereto, and wheels adapted to run on the track and on the curved section thereof mounted in said housings.

2. In elevated carriers, overhead tracks set at an angle to each other, a curved section joining said tracks together so as to form a continuous way, a carrier frame, a pair of upwardly extending brackets secured at their lower ends to said frame, one member of which extends up under and the other up by and over the track, housings pivoted between said brackets so as to turn at an angle thereto in both directions, and wheels adapted to run on the track and on the curved section thereof mounted in said housings.

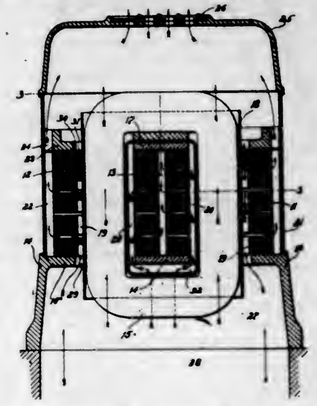
3. In a device of the character described, a carrier frame, a pair of main brackets secured at their lower ends to the frame, and having their upper ends bent at an angle to their bodies on the side next to the frame, a pair of supplemental brackets secured at their lower ends between the main brackets and the frame, and their upper ends bent at an angle so as to be directly below the upper ends of the main brackets, pivots mounted in the upper ends of the brackets, a pair of housings mounted on said pivots, and wheels adapted to run on the tracks and on the curved section joining the tracks together, mounted in said housings.

4. In a device of the character described, having brackets and housings constructed and arranged substantially as set forth, the lower ends of the main brackets being divided and diverged, and secured to the carrier frame at two separate points so as to brace the brackets thereon.

5. In a device of the character described, having brackets and housings constructed and arranged substantially as set forth, the lower ends of the main brackets being divided and diverged, and secured to the carrier frame at two separate points so as to brace the brackets thereon, and one of the divided ends being extended down and secured to a depending part of the carrier frame.

[Claims 6 to 12 not printed in the Gazette.]

873,166. TRANSFORMER. LOUIS C. NICHOLS, Norwood, Ohio, assignor to The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Jan. 15, 1906. Serial No. 296,058.



1. In a transformer, a laminated core, coils thereon, and a casing surrounding the core and coils, the parts being so provided with passageways that air can be forced from the bottom to the top of the casing between the coils, between the core and coils, and between the casing and the parts incased therein.

2. In a transformer, a laminated core, coils separated by passageways, and a casing surrounding the core and coils, the parts being so constructed and arranged that there are vertical air passageways between the core and coils and between the core and casing, all said passageways communicating with an air inlet opening at the bottom of the casing, and an air outlet opening at the top of the casing.

3. In a transformer, a laminated core provided with a plurality of air passageways, primary and secondary coils, and a casing surrounding said core and coils, the whole being so constructed that air can be forced in a general upward direction, between the core and coils, between the core and casing, and through said air passageways whereby all parts will be well cooled.

4. In an air blast transformer, a transformer base, a laminated core mounted thereon, said core having a plurality of passageways between the core laminæ, primary and secondary coils, said coils being divided into sections and separated by air passageways, and a casing surrounding the core and coils, the parts being so constructed that air can be forced in a general upward direction through the passageways between the coils, between the core and coils, between the core and casing and through said passageways between the core laminæ, whereby all parts can be effectively cooled.

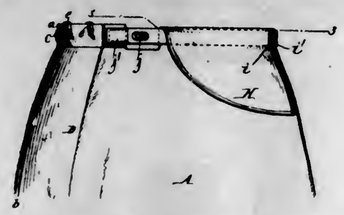
5. In a transformer, a base or stand, a laminated core thereon, said core being provided with ventilating passageways between the laminæ, primary and secondary coils provided with ventilating passageways, an insulating casing or sheath surrounding the coils and open only at the top and bottom, and a casing surrounding the core and coils, said stand being seated over or otherwise provided with an air inlet opening and said casing being provided at the upper end with an air outlet opening, the whole being so constructed that air can be forced in a general upward direction through the coils, between the core and coils, between the core and casing and through the passageways in the core laminæ.

[Claims 6 and 7 not printed in the Gazette.]

873,167. MATERNITY-SKIRT. ROBERT H. PETERS, Buffalo, N. Y. Filed Mar. 19, 1906. Serial No. 306,704.

1. A skirt having a flap or extension only at the upper end of its front part, and means for holding said flap

or extension in various folded positions, substantially as set forth.



2. A skirt having a flap or extension only at the upper end of its front part, and means for holding said flap or extension in various folded positions comprising a belt over which said flap or extension is adapted to be folded, substantially as set forth.

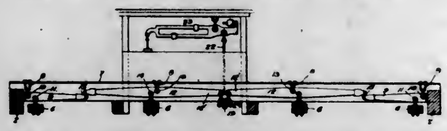
3. A skirt having a flap or extension at the upper end of its front part, and a belt over which said flap or extension is folded and which is connected at its ends to the sides of the skirt while its intermediate part is detached from the skirt, substantially as set forth.

4. A skirt having a flap or extension at the upper end of its front side, and a belt comprising two clamping members between which said flap or extension is arranged, substantially as set forth.

5. A skirt having a flap or extension at the upper end of its front side, and a belt comprising two clamping members between which said flap or extension is arranged, and means for detachably connecting said clamping members, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

873,168. PLATFORM-SCALE. MATTHEW H. REED, Pittsburg, Pa. Filed Feb. 5, 1906. Serial No. 299,403.



1. The combination with a rectangular supporting framework having an upper inwardly projecting supporting portion along two opposite sides, of a platform having a top surface within and substantially on a plane with the top of said framework, connected series of multiplying levers depending below said projecting supporting portion and arranged longitudinally between the inner sides of the framework and the outer edges of the platform and operable in vertical planes coincident with the longitudinal spaces between the framework and platform, and transmitting levers extending across said multiplying levers and connected therewith and with indicating mechanism.

2. The combination with a rectangular supporting framework having an upper inwardly projecting supporting portion along two opposite sides, of a platform having a top surface within and substantially on a plane with the top of said framework, connected series of multiplying levers depending below said projecting supporting portion and arranged longitudinally between the inner sides of the framework and the outer edges of the platform and operable in vertical planes coincident with the longitudinal spaces between the framework and platform, and compound transmitting lever mechanism consisting of two levers linked together, each connected with the abutting terminals of said multiplying levers and extending transversely across underneath the platform below said multiplying levers, the end of one of said transmitting levers depending from a pivotal bearing underneath said supporting framework, and the end of the other of said levers being connected by a steelyard rod with the poise beam of the scale.

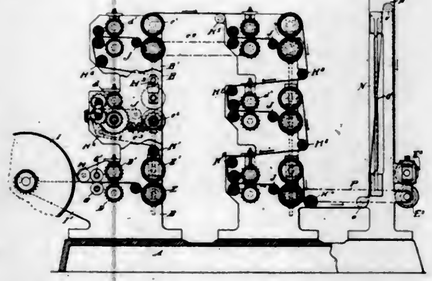
3. The combination with a weighing platform and transversely arranged transmitting lever mechanism located beneath the top planking of the platform; of a surrounding framework having a supporting top substantially on a level with the platform surface, and series of multiplying levers depending downwardly from said supporting top at each side, said levers being located within the horizontal planes of the top and bottom of the platform and connected therewith above its lower portion and operable in vertical planes coincident with the longitudinal spaces between the framework and platform, and also connected to each other and to the transmitting lever mechanism.

4. The combination with a weighing platform and transversely arranged transmitting lever mechanism located beneath the top surface of the platform: of a supporting framework and series of multiplying levers depending downwardly from said framework at each side, said levers being located above the bottom portion of the platform and connected therewith at each corner and along the sides between the corners, and to each other and to the transmitting lever mechanism, substantially as set forth.

5. The combination with a weighing platform, and a surrounding framework provided with an upper supporting portion substantially on a plane with the top of the platform, of longitudinally arranged series of multiplying levers in substantial alinement suspended from said supporting portion along each side of the platform above its bottom portion and supporting it, pairs of said levers being connected endwise to each other, with vertically tilting transmitting lever mechanism connected to the free ends of said multiplying levers, extending transversely across underneath the top surface of the platform and connected with indicating mechanism, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

873,169. APPARATUS FOR SOFTENING PAPER. THEODORE SCHEIF, Cleveland, Ohio. Filed Aug. 14, 1907. Serial No. 388,512.



1. In an apparatus for softening paper, in combination, coöperating kneading rolls between which the paper passes, feed rollers engaging the paper after issuance from the kneading rolls, and means for rotating the kneading rolls and the feed-rollers at different peripheral speeds, as set forth.

2. In an apparatus for softening paper, in combination coöperating kneading rolls between which the paper passes, feed-rollers engaging the paper after issuance from the kneading rolls, and means for rotating the feed-rollers at higher peripheral speed than the kneading rolls, as set forth.

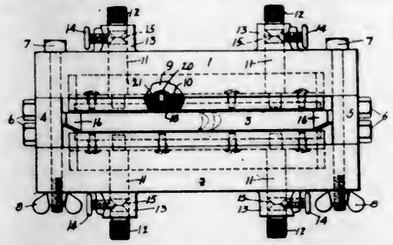
3. In an apparatus for softening paper, in combination, coöperating kneading rolls between which the paper passes, feed-rollers engaging the paper after issuance from the kneading rolls, means for rotating the kneading rolls and the feed-rollers at different peripheral speeds, and means intermediate to the kneading rolls and the feed-rollers for guiding the paper into engagement with the latter, as set forth.

4. In an apparatus for softening paper, in combination, coöperating kneading rolls between which the paper passes, feed-rollers engaging the paper after issuance from the kneading rolls, means for driving the feed-rollers, and means for driving the kneading rolls from the feed-rollers, at different peripheral speed from the latter, as set forth.

5. In an apparatus for softening paper, in combination, coöperating kneading rolls between which the paper passes, feed-rollers engaging the paper after issuance from the kneading rolls, means for driving the feed-rollers, and gearing connecting the kneading rolls with the feed-rollers to drive the former at lower peripheral speed than the latter, as set forth.

[Claims 6 to 22 not printed in the Gazette.]

837,170. CORE-BOX. WALTER F. RICE, Quincy, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 25, 1906. Serial No. 340,540.



1. A core-box arranged to receive an article to be embedded in the core, a notched guiding member arranged to engage with one edge of said article to hold it in position, and means for varying the effective width of said notches.

2. A core-box arranged to receive an article to be embedded in the core, a notched guiding member arranged to engage with one edge of said article to hold it in position, and a notched strip slidable along said guiding member.

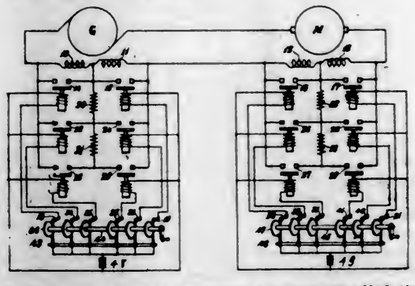
3. A core-box arranged to receive an article to be embedded in the core, a guiding member having a longitudinal groove, and a strip adjustable lengthwise in said groove, said member and strip having registering transfer notches.

4. A core-box arranged to receive an article to be embedded in the core, guiding members in opposite sides of said box, longitudinally adjustable strips in said guiding members, means for clamping said strips, and registering notches extending transverse to the inner face of said strips and members.

5. The combination with a core-box adapted to receive an article to be embedded in the core, of a device for exposing the upper end of said article after the sand has been rammed, comprising a block adapted to enter said core-box and provided with a recess to receive the end of said article.

[Claims 6 to 8 not printed in the Gazette.]

873,171. MOTOR-CONTROL SYSTEM. WALTER J. RICHARDS, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey. Filed Sept. 29, 1906. Serial No. 336,666.



1. In combination, a generator, a motor supplied thereby, opposing field windings for both the generator and the motor, and means for short-circuiting one field winding on either machine.

2. In combination, a motor having opposing series field windings, a generator for supplying said motor and also having opposing series field windings, and means for short-circuiting either field winding on either machine.

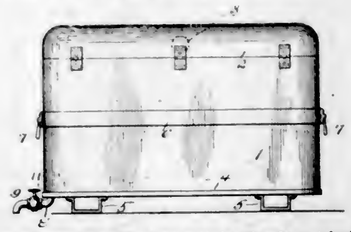
3. In combination, a motor having opposing series field windings, a generator for supplying said motor and also having opposing series field windings, means for short-circuiting one field winding on each machine, and means for regulating the remaining field winding of each machine.

4. In combination, a generator having opposing series field windings, means for short-circuiting either of said field windings, and means for regulating the remaining field winding.

5. In combination, a motor having opposing series field windings, a generator for supplying said motor and also having opposing series field windings, means for short-circuiting either field winding on either machine, and means for shunting the remaining field winding of each machine by variable resistances.

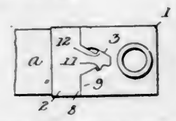
[Claims 6 to 45 not printed in the Gazette.]

873,172. WASHBOILER. LILLIAN A. RITTER, Allegheny, Pa. Filed Apr. 24, 1906. Serial No. 313,396.



The combination with a receptacle of a faucet body having a transverse valve seat with a single conduit communicating with the valve seat at one side and two spaced conduits communicating with the valve seat at the other side, one of said spaced conduits extending upwardly into the receptacle and the other spaced conduit terminating flush with the bottom of the receptacle, and a valve plug engaging said seat and provided with two independent ports at right angles to each other and spaced apart and adapted to be alternately alined with said spaced conduits.

873,173. METALLIC BEDSTEAD SIDE-RAIL JOINT. GEORGE M. ROBINSON, Chicago, Ill. Filed June 24, 1907. Serial No. 380,508.

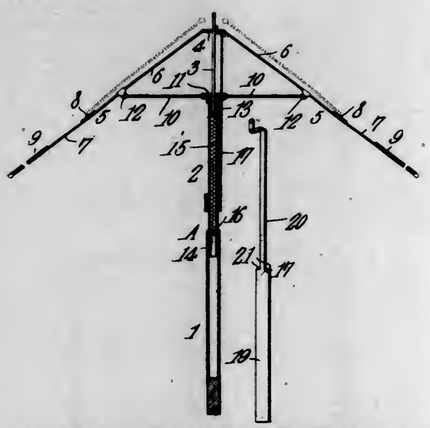


1. A bed rail joint comprising a member having a vertical, longitudinally-tapered socket provided with lateral shoulders in opposite sides, one of said shoulders being inclined and converging downwardly toward the closed end of said socket, and a member having a vertical, longitudinally-tapered tongue provided with a laterally-shouldered head at its outer end, the shoulders of said head, on opposite sides thereof, being oppositely-inclined, so that one of them will be parallel and engaging the inclined shoulder of the socket of the first-named member when the last-named member is jointed to the first-named member with either side uppermost.

2. A bed rail joint comprising a member having a vertical, longitudinally-tapered socket provided with lateral shoulders in opposite sides, one of which is inclined and converges downwardly toward the closed end of said socket, said socket having in the side opposite the said in-

clined shoulder an upwardly-tapered, wedge-shaped, salient tongue, and a member having a vertical, longitudinally-tapered tongue provided with a laterally-shouldered head at its outer end, the shoulders of said head on opposite sides thereof being oppositely-inclined for the purpose set forth, and said head having reversely-disposed, tapered grooves in opposite sides for engagement respectively with the salient tongue of the socket of the first-named member, substantially as described.

873,174. FOLDING UMBRELLA OR PARASOL. ALVAH C. ROLLER, Lawrence, Kans. Filed Mar. 28, 1907. Serial No. 365,202.



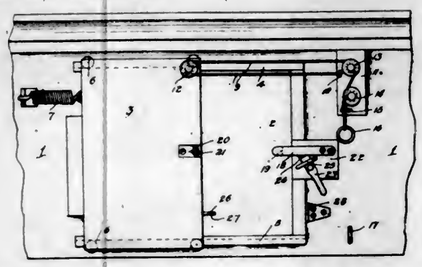
1. A folding umbrella having an extensible handle comprising a lower section, an intermediate section, and an upper section telescoping into the intermediate section, a notch on the upper end of the intermediate section having a slot therethrough, folding ribs pivoted to the upper section, bracing members pivoted to said folding ribs and to said notch, a slide passing through said slot and attached to the upper section for moving it in and out of the intermediate section and shoulders on said slide to abut against said notch for limiting the upward movement of said upper section.

2. A folding umbrella having an extensible handle comprising an upper section telescoping into a lower section, a notch on the upper end of the lower section having a slot therethrough, folding ribs pivoted to the upper section, bracing members pivoted to said folding ribs and to said notch, and a slide having a ferrule on its lower end surrounding said lower handle passing through said slot and attached to the upper section, shoulders being formed on said slide to abut against said notch and limit the upward movement of said upper section.

3. A folding umbrella having an extensible handle comprising three telescopic sections, a notch on the intermediate member of the sections having a slot therethrough, a spring in the intermediate section acting on the upper section to force it out of said intermediate section, catches on the sections to hold them in extended position, folding ribs pivoted to the upper section, bracing members pivoted to said folding ribs and to said notch, a narrow slide attached to the upper section and passing through the slot in said notch terminating in a ferrule embracing the intermediate section, said slide having shoulders to abut against the under side of said notch to limit the upward movement of the upper section.

873,175. CAR-DOOR. GEORGE W. SAYRE, Stevens, W. Va. Filed Apr. 25, 1907. Serial No. 370,249.

1. The combination with a support having an opening, of a door slidable over the opening and provided with a keeper recess, a resilient latch bar secured at one of its ends to the support and having a beveled and hook-shaped portion at its free end to engage the keeper recess in the door and a lever pivoted intermediate its ends upon the support and having a handle at one end and a beveled or cam portion at its other end, said beveled or cam portion being adapted to engage the inner or under face of the latch bar to actuate the free end of the same outwardly and disengage it from the keeper recess in the door, substantially as described.



2. The combination with a support having an opening, of a door slidable over said opening, an eye fixed upon one edge of the door and projecting horizontally therefrom and a right angular keeper plate having one member secured upon said support and its other member projecting outwardly at right angles from the same and formed with a horizontal slot adapted to receive the eye upon the edge of the door, substantially as shown and for the purpose specified.

3. The combination with a support having an opening and track bars arranged at the top and bottom of said opening, of a door, rollers carried by said door to engage said track bars, a spring for moving said door to its open position, a stop for limiting the opening movement of the door, a guide pulley upon said door, a block upon said support, vertically alined guide pulleys upon said block, a guide eye upon said block, a cable attached at one end to said block and passed around the pulleys upon said block and said door and through said guide eye, a hand loop upon the free end of said cable, and a spring latch for holding said door in its closed position.

873,176. CARBID-FEED MECHANISM FOR ACETYLENE-GAS GENERATORS. AUGUSTUS E. SCHLIEDER, Buffalo, N. Y., assignor to Monarch Acetylene Gas Company, Omaha, Nebr., a Corporation of Nebraska. Filed May 25, 1906. Serial No. 318,668.



1. In an acetylene gas-generator, the combination with a carbid-receptacle, a gas generating-chamber, and a valve-chamber between the two, of two shafts journaled in the wall of said valve-chamber, a valve on one of said shafts adapted to close the carbid-receptacle, a valve on the other shaft adapted to close the outlet of the valve-chamber, a segment cam on one of said shafts, means on the other shaft co-acting with said segment-cam, a spring between said cam and its co-acting means and normally inactive, said segment cam being held against movement until the means co-acting therewith has been moved a predetermined distance and said spring being placed under tension during the movement of said co-acting means to cause said cam to move when said co-acting means reaches a predetermined point.

2. In an acetylene gas-generator, the combination with a carbid-receptacle, a generating-chamber, and a valve-chamber between the two, of a valve adapted to close said carbid-receptacle, a valve adapted to close said valve-chamber, shafts extending out through the valve-chamber to which said valves are secured, means to prevent movement of the second mentioned valve until after the first-mentioned valve has traveled a predetermined distance, and a spring to cause the said second-mentioned valve to open after the said first-mentioned valve has traveled its predetermined distance.

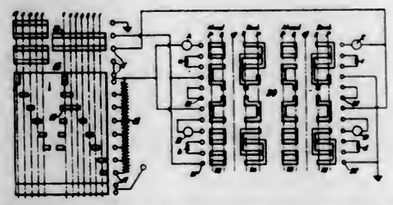
3. In an acetylene gas-generator, the combination with a carbid-receptacle, a gas-generating chamber, and a valve-chamber between the two, of two shafts journaled in the wall of the valve-chamber, a valve on one of said shafts adapted to close the carbid-receptacle, a valve on the other shaft adapted to close the outlet of the valve-chamber, a segment-cam on the last-mentioned shaft, and means on the other shaft co-acting with said segment-cam and adapted to prevent movement of said cam in one direction until said other shaft has been rotated a predetermined distance also to cause movement of said cam in the opposite direction.

4. In an acetylene gas-generator, the combination with a carbid-receptacle and a chamber beneath said receptacle, of a shaft extending out through the wall of the generator, a valve on said shaft adapted to close said receptacle, a second shaft also extending out through the wall of the generator, and a valve secured to said second shaft and adapted to close the chamber beneath the carbid-receptacle, a segment-cam on the last-mentioned shaft, a retainer-lever on the first-mentioned shaft co-acting with said segment-cam, a spring connecting said lever and said cam to cause the latter to rotate after the lever has traveled a predetermined distance, and means for rotating the first mentioned shaft.

5. In an acetylene gas-generator, the combination with a carbid-receptacle and a chamber beneath said receptacle, of a shaft extending out through the wall of the generator, a valve on said shaft adapted to close said receptacle, a second shaft also extending out through the wall of the generator, and a valve secured to said second shaft and adapted to close the chamber beneath the carbid-receptacle, a segment-cam on the last-mentioned shaft having a concaved upper edge, a retainer-lever having a convex lower edge bearing against the said concaved edge of the cam, and means for causing said cam to rotate after the retainer-lever has traveled a predetermined distance.

[Claims 6 and 7 not printed in the Gazette.]

873,177. SYSTEM OF MOTOR CONTROL. WILLIAM F. SCHNEIDER, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Mar. 25, 1907. Serial No. 364,293.



1. In a controller for electric motors, a resistance-varying switch, and a combined reversing and series-parallel switch, the former being independent of the latter when the latter is in either series or parallel position.

2. In a controller for electric motors, a main regulating switch, and a combined series-parallel and reversing switch, the former being completely operable for any operative position of the latter.

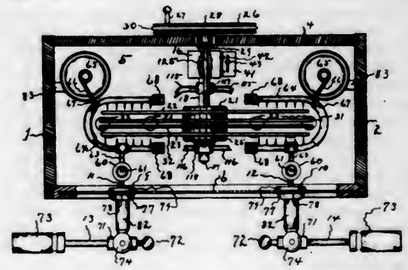
3. In a controller for electric motors, a plurality of series-parallel switches, one of said switches being combined with a reversing switch, and another being operable when the first is in either series or parallel position.

4. In a controller for electric motors, a plurality of series-parallel switches, one of said switches being combined with a reversing switch and another with resistance-varying switch, the latter being operable for all operative positions of the former.

5. In a controller for electric motors, a switch for varying the relationship of the motors to be controlled in one manner, and a second switch for varying the relationship of the motors to be controlled in another manner and for reversing the motors.

[Claims 6 to 20 not printed in the Gazette.]

873,178. STATIC ELECTRIC MACHINE. WILLIAM C. SHINN, Lincoln, Nebr. Filed Apr. 22, 1907. Serial No. 369,456.



1. In a static electric machine, the combination with static electrical generating means, means for storage of electrical charges and a receptacle adapted to contain said electrical generating and storage means; said receptacle provided with a vertically-disposed glass face having transverse apertures therein, said transverse apertures being provided with angularly-formed, longitudinal walls; horizontally-disposed conducting-rods in communication with said electrical storage means and having near their inner ends angularly-formed faces thereon seated within the angularly-formed longitudinal walls of said apertures formed in the face of said receptacle.

2. In a static electric machine, the combination with static electrical generating means, means for storage of electrical charges and a receptacle adapted to contain said electrical generating and storage means; said receptacle provided with a vertical closure having transverse apertures formed therein, said transverse apertures of said vertical closure being provided with angularly-formed inner walls; horizontally-disposed conducting-rods in communication with said electrical storage means, said horizontally-disposed conducting-rods having angularly-formed contact-faces traversing the transverse apertures of said closure; a pair of discharging-rods disposed substantially parallel with reference to each other transversely and slidably seated in connection with said conducting-rods exteriorly of and horizontally-adjacent to said vertical closure.

3. A static electric machine as described, in combination, comprising friction electric-generating means, electric storage means, non-conducting sleeves, removable non-rotative mounting; a case adapted to contain said friction electric-generating and storage means and having an insulated, apertured face-closure; vertical non-conducting supporting posts within said case disposed adjacent said insulated apertured face-closure and having upper metal terminals in communication with said electric storage means; metal conducting-rods within said non-conducting sleeves horizontally disposed exteriorly of said case and traversing the apertured face of said closure through said removable non-rotative mounting to have electrical communication

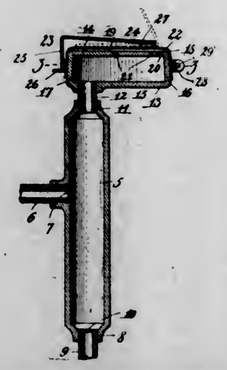
with the metal terminals of said non-conducting supporting posts within said case; and slidable electrical discharging-arms exteriorly of the case in connection with said metal horizontally-disposed conducting-rods.

4. A static electric machine as described, in combination; a suitable inclosing case, inner stationary induction plates vertically secured adjacent the base of the inclosing case; circular plates disposed outwardly and adjacently with reference to said inner stationary induction plates; a pivotally mounted vertical standard; a shaft transversely mounted in said standard to furnish a rotative mounting for said circular plates; means for lateral adjustment of said circular plates comprising a bracket having a wing thereof secured upon said vertical standard and having a slot formed in the opposite wing thereof with a keeper therein in connection with the base of said inclosing case; electrical storage means; brush-bearing arms overhanging one of the circular plates and secured upon said induction plates; electrical collector-combs in communication with said electrical storage means and mounted within operative proximity to said circular plates; and horizontally disposed electrical discharging means disposed exteriorly of the inclosing case and in communication with said electrical collector-combs.

5. A static electric machine as described, in combination; electrical storage devices; electrical discharging devices in electrical communication with said electrical storage devices; electrical generating devices in electrical communication with said electrical storage devices and comprising inner stationary plates and outer rotatable plates disposed operatively adjacent thereto; said inner stationary plates bearing segmental armatures with metal spreading-blocks disposed therebetween; angular brush-arms secured to said metal spreading-blocks by transversely traversing one of the inner stationary plates and disposed to overhang one of said rotatable plates; electrical collector-combs in communication with electrical storage means and mounted within operative proximity to said rotatable plates.

[Claim 6 not printed in the Gazette.]

873,179. DEVICE FOR DAMPENING AND FOLDING COLLARS. EMILY G. SKINNER, Buffalo, N. Y. Filed Nov. 29, 1905. Serial No. 289,680.



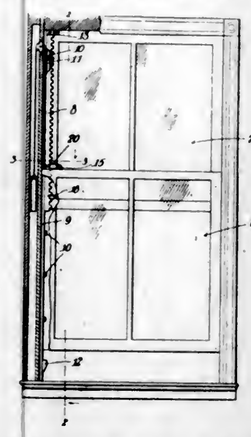
1. A device for dampening and folding collars, comprising a casing having a steam inlet and a series of steam-escape apertures, a covering of absorbent material for said casing, a fold-plate above said casing and separated therefrom by an intervening space, and means to support said fold-plate and simultaneously hold said absorbent material on the casing.

2. A device for dampening and folding collars, comprising a casing having a steam-inlet and a series of steam-escape apertures, a covering of absorbent material for said casing, and a combined fold and clamp-device consisting of a clamping-band to clamp the covering to the casing and a fold-plate supported by said clamping-band, said fold-plate having its fold-edge in proximity to said apertures.

3. A device for dampening and folding collars, comprising a casing having a steam-inlet and its upper surface provided with grooves and having also steam-escape apertures opening into said grooves, a covering of absorbent material for said casing, and a combined clamp and fold-device consisting of a clamping-band surrounding said covering to secure the same to the casing and a fold-plate positioned above said covering and supported by said clamping-band.

4. A device for dampening and folding collars, comprising a casing of semi-circular contour and having its upper side provided with a groove adjacent to and parallel with the straight side of said casing and a series of parallel grooves arranged at right-angles to the first mentioned groove, a series of apertures in the casing opening into said first mentioned groove, a second series of apertures in the casing arranged in diagonal rows and opening into said parallel grooves, and a fold-plate supported on the casing and arranged above said last mentioned grooves, said fold-plate being separated from said casing by an intervening space.

873,180. SASH-LOCK. CHARLES SMITH, Cleveland, Ohio. Filed Mar. 28, 1907. Serial No. 365,180.



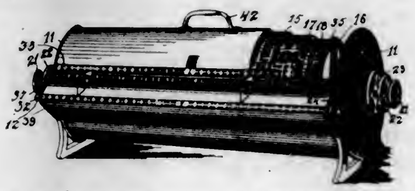
1. A sash lock comprising a rack bar slidable between the sashes, a stop on one sash engaged by the end of the bar to limit its movement, and a pin carried by the other sash and engageable with the rack at various points.

2. A sash lock comprising a rack bar slidable along the parting strip between the sashes, a stop on one sash adapted to strike the end of the bar, said sash having a recess in its frame, beside the rack, and a sliding pin carried by the other sash and normally engaging the rack and movable into the recess to disengage the same.

3. A sash lock comprising a rack bar of substantially the same length as the height of one sash, said bar being slidable between the sashes, a stop on the upper sash, adapted to strike the upper end of the bar, and a spring pin carried by the lower sash and having a lateral projection on its inner end normally engaging the rack, the upper sash having a recess beside the rack and opposite to the pin when the sashes are closed, the pin being then movable into the recess to disengage the rack.

873,181. CALCULATING-MACHINE. CHESTER J. SMITH, Jamestown, N. Y. Filed Aug. 2, 1907. Serial No. 386,704.

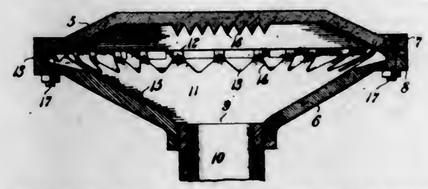
1. In a calculating machine, a casing having a lengthwise slot, concentric cylinders revolubly mounted in said case and having similar lengthwise slots, hand wheels of progressively different sizes separately attached to said cylinders to revolubly actuate any one of the same, a lock for one or more of said cylinders consisting of a spring pin having lugs thereon, said cylinders having an opening for the end of said locking pin, and a tubular projection on said case having slots corresponding to the different positions in which it is desired to lock said cylinders by said lugs.



2. In a calculating machine, a case having lengthwise parallel slots, cylinders revolubly mounted in said case one to each slot, computations on said cylinders corresponding to said slots, a price holder on said case between and parallel to said slots, a rod on said case between and parallel to said slots, a double pointed index having an opening opposite said price holder and pointing into said slots to indicate said computations, said index slidably mounted on said rod and having a suitable handle, substantially as and for the purpose specified.

3. In a calculating machine, a case 10 having lengthwise slots 32 and 33, cylinders concentrically mounted in said case and having lengthwise slots 34 corresponding to slot 33, hand wheels separately attached to said cylinders to actuate the same, a spring locking pin 24 having lugs 30 thereon, a tubular projection 28 on said case having slots 29 corresponding to the different positions in which it is desired to lock said cylinders by said lugs, said cylinders having an opening 27 for the end of said locking pin.

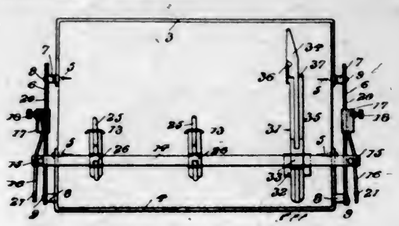
873,182. GAS-BURNER. EDWARD S. SPRINGER and JOHN L. MALONEY, Leavenworth, Kans. Filed Mar. 12, 1907. Serial No. 362,021.



A gas burner including a plurality of detachable sections provided with laterally extending flanges the inner face of one of which is formed with a flat bearing surface disposed in a horizontal plane, the flange of the mating section being provided with a plurality of spaced radiating ribs gradually increasing in height from the peripheral edge of the flange to the center of said section and defining intermediate jet orifices the walls of which are smooth and unobstructed and inclined upwardly towards the flat bearing face of the other flange, one of said sections being provided with an inlet and having its interior walls between said inlet and flange inclined upwardly, there being openings formed in some of the ribs and of less width than said ribs, a series of lugs depending from the upper section and disposed in alinement with the inlet, and fastening devices carried by the flanges and passing through the openings in the ribs for clamping said sections in assembled position.

873,183. PLATEN-GAGE. ORRILL V. STAFF, Seattle, Wash. Filed Feb. 20, 1907. Serial No. 358,414.

1. The combination with a platen, of gages, a bar to which the latter are secured, supports for the bar at the ends thereof, such supports consisting each of a single bar movable lengthwise and also laterally relative to the platen, and holding means engaging each support at the inner or upper end thereof, the outer or lower ends of such supports being free and capable of being extended beyond the lower edge of the platen.



2. The combination with a platen, of gages, a bar to which the latter are secured, supports for the bar at the ends thereof, such supports consisting each of a lever, and devices engaging said levers at one end, said levers being movable at their outer or lower ends away from the side edges of the platen and capable of being extended beyond the lower edge thereof.

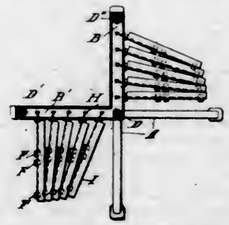
3. The combination with a platen having upper and lower tympan, balls, of side bars secured at their ends to said tympan balls, gages, a supporting bar therefor extended lengthwise of the platen, levers bearing against said side bars and to which said supporting bar is secured, and means mounted on said side bars engaging said levers for effecting the turning thereof on their fulcra.

4. The combination with a platen having upper and lower tympan balls pivotally secured to the side edges of the platen, side bars pivotally secured relative to each tympan ball, gages, a support therefor, tension devices for said support, and means adjustably connecting said tension devices to said bars.

5. The combination with a platen having upper and lower tympan balls pivotally secured to the side edges of the platen, side bars pivotally secured relative to each tympan ball, gages, a support therefor, levers mounted on said side bars, and to which said gage-support is secured, keepers on said side bars into which one of the arms of each lever projects, and means engaging said levers for holding them and the keepers on said side bars.

[Claims 6 to 11 not printed in the Gazette.]

873,184. DISPLAY CARD-RACK. FRED L. STONE, Denver, Colo. Filed Sept. 3, 1907. Serial No. 391,010.

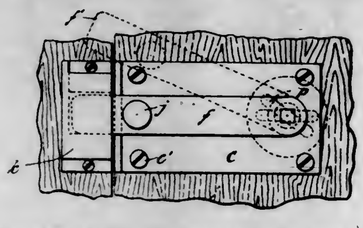


1. In the construction of display card-racks, a portable supporting standard, a sustaining frame raised thereon, said frame consisting of two wings set at right angles with each other and apexing at the center of the standard, a number of swinging panels hinged between the upper and lower members of the sustaining frame with means for holding and displaying cards, or similar articles, conveniently disposed upon the surfaces of each panel, and each panel bearing at top and bottom a spacing flange, substantially as described.

2. In the construction of display card-racks, a sustaining frame raised upon a supporting portable standard, and

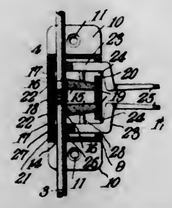
consisting of two wings set at right angles with each other and apexing at the center of the standard, and carrying hinged swinging panels, which panels bear upon their surfaces means for holding and displaying cards, or similar articles, with spacing flange at the top and bottom of each panel, substantially as described.

873,185. DOOR-LATCH. JOHN H. STRATTON, Holyoke, Mass. Filed Feb. 13, 1906. Serial No. 300,840.



In a locking and indicating mechanism for doors, a shaft extending through the door and carrying the indicating element on its outer end, a locking element secured to the shaft, means for operating the locking element from the inside of the door whereby the indicating element and locking element are moved in unison, and spring-actuated means for retaining the locking element in its locking position comprising an inclined surface, as *c*, on the boss *d* for drawing the latch inward toward the door, whereby the indicating element is normally held in a locked position, as described.

873,186. SASH-SUPPORTER. WILLIAM W. SWEETLAND, Edwardsburg, Mich. Filed Dec. 11, 1906. Serial No. 347,349.

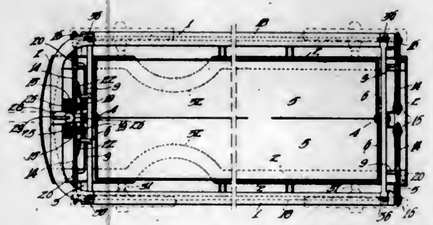


1. The combination of two relatively movable members, with a fastening device between them, said device comprising a rod secured to one of the members, and a lock secured to the other member, the lock including a pair of dogs having apertures whose edges grip the rod, and actuators independent of the dogs for releasing the latter.

2. The combination of two relatively movable members, with a fastening device between them, said device comprising a rod secured to one of the members, a support on the other member, walls on the support disposed in parallel relation and having recesses in their opposed faces, a pair of dogs having gripping means at one end and fulcrumed at their opposite ends in the recesses of one wall, levers disposed alongside of the dogs and fulcrumed in the recesses of the opposite walls, handholds on the levers, and a spring arranged between the dogs.

3. The combination of a casing having apertures in its end walls and slots in one of its side walls and recesses on the opposed faces of both side walls, a rod extending through the apertures of the end walls, a pair of dogs in the casing engaging at their ends in certain of the recesses of the side walls and having apertures for receiving the said rod, levers extending through the slots of one of the side walls and fulcrumed in the remaining recesses of the other wall, fingerholds on the outer ends of the levers, devices on the levers extending toward the adjacent dogs and bearing against the same, and a spring arranged between the dogs to normally hold the latter in gripping engagement with the rod.

873,187. AUTOMATIC DUMP-BED. CHARLES C. TAYLOR, GEORGE W. WOOD, and MATHEW A. VINCENT, San Diego, Cal. Filed June 25, 1906. Serial No. 323,409.



1. An automatic dump bed comprising a frame, dump bed members pivoted on said frame and movable outwardly and upwardly to open the dump bed, a controlling lever connected to each dump bed, a fulcrum for said lever and operating means for said lever, comprising a chain, sprocket wheels for said chain, and a worm gearing connected to operate said sprocket wheels.

2. An automatic dump bed comprising a frame, dump bed members pivoted on said frame and movable outwardly and upwardly to open the dump bed, a controlling lever connected to each dump bed, a fulcrum for said lever and operating means for said lever, comprising a chain, sprocket wheels for said chain, a worm gearing connected to operate said sprocket wheels, and clutch means between said worm gearing and chains.

3. An automatic dump bed comprising a frame, dump members pivoted thereon to move outwardly and upwardly in opening the dump bed, a controlling means for the dump members comprising a worm gearing, and a clutch connection between the worm gearing and each of the dump members whereby each dump member can be disconnected from the controlling means, and whereby when the clutch connection is established the worm gearing will hold the dump members in position.

4. A dump bed comprising a frame, dump bed members pivoted thereon to move outwardly and upwardly in opening the dump bed, controlling means for the dump bed members and a clutch connection between said controlling means and each dump bed member, whereby either of said dump bed members can be disconnected from the operating means, leaving the other member to be operated separately.

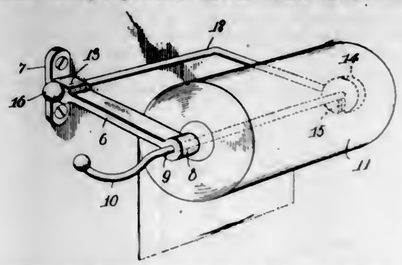
5. An automatic dump bed comprising a frame, dump bed members to move outwardly and upwardly in opening the dump bed, a controlling and operating mechanism for said dump bed members pivoted with an operating drum, means for suspending the dump bed frame, an operating and suspending line for said suspension means, a releasable connection between the two parts of said line to produce a slack therein, means for releasing said releasable connection, and a line extending from the suspending and operating line above said connection and connected to the winding drum for operation thereof to control opening of the dump bed.

[Claim 6 not printed in the Gazette.]

873,188. ROLL-HOLDER. HENRY THUMANN, Chicago, Ill. Filed June 10, 1907. Serial No. 378,194.

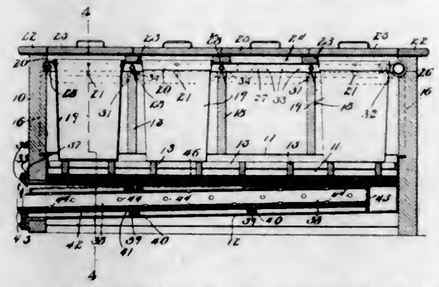
1. A roll holder comprising a supporting arm, a rod projecting therefrom, and an angular retaining arm having a rear horizontally extending part pivoted on the supporting arm and a forwardly extending part at one end arranged to swing up and down to and from the free end of said rod.

2. A roll holder comprising a supporting arm having a rod projecting laterally therefrom, and a swinging retaining arm having a groove at the end which the end of the



rod enters, and arranged to swing to and from the free end of said rod.

873,189. ICE-MACHINE. WILLIAM W. TOBEY and FRED FREEMAN, Iola, Kans. Filed Sept. 25, 1905. Serial No. 280,068.



1. In an apparatus for manufacturing ice, a plurality of receptacles for the water to be frozen arranged in rows spaced apart and with the receptacles in each row likewise spaced apart, pipes arranged exteriorly of the outer rows and within the spaces between the rows and provided with branch pipes extending between the receptacles in the rows, said pipes having spaced orifices discharging toward the receptacles and adapted to supply the freezing compound simultaneously to all the sides of all the receptacles.

2. In an apparatus for manufacturing ice, an inclosing casing, a plurality of partitions dividing the interior of the casing into a series of compartments, a plurality of receptacles arranged one in each of said compartments and supported above the bottom of said casing, and a series of pipes arranged above said partitions and provided with spaced lateral apertures opening toward said receptacles.

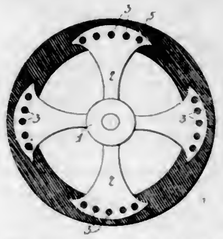
3. In an apparatus for manufacturing ice, an inclosing casing having a discharge for the freezing medium, a plurality of receptacles for the water to be frozen and spaced apart within said casing and supported above the bottom of the same, and a series of pipes for the freezing medium extending between said receptacles and provided with spaced lateral apertures opening toward said receptacles.

4. In an apparatus for manufacturing ice, an inclosing casing having a discharge for the freezing medium, a plurality of receptacles for the water to be frozen and spaced apart within said casing and supported above the bottom of the same, and a series of pipes for the freezing medium extending between said receptacles near their upper parts and provided with spaced lateral apertures arranged to cause sprays of the freezing medium to be discharged against the receptacles at downwardly extending angles.

5. In an apparatus for manufacturing ice, an inclosing casing having an inclined bottom terminating in a depressed discharge trough for receiving the freezing medium after its action upon the freezing receptacles, a detachable grating, bearing upon said casing bottom, a plurality of receptacles for the water to be frozen spaced apart and supported upon said grating, and pipes for the freezing medium extending between said receptacles and provided with spaced lateral apertures opening toward said receptacles.

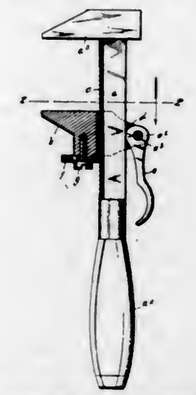
[Claims 6 and 7 not printed in the Gazette.]

873,190. STEERING-WHEEL. EDMUND F. UPTON, Mineral City, Ohio. Filed Apr. 18, 1907. Serial No. 368,931.



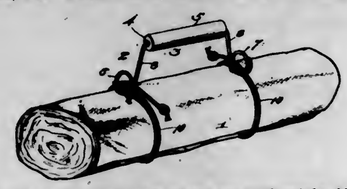
In a wheel of the type described, a hub, a plurality of radiating spokes carried thereby, said spokes having enlarged flaring outer ends, each provided with a series of perforations, and a rim composed wholly of moldable material and having the enlarged ends of the spokes embedded therein during formation of the rim, the material of the rim being adapted while in the plastic state, to fill said perforations for securely anchoring the spokes within the rim, and the moldable rim serving as the sole connection between the ends of the spokes.

873,191. MONKEY-WRENCH. CHARLES VAN HORN, Bethlehem, Pa., and GEORGE C. VAN HORN, Jersey City, N. J. Filed Apr. 25, 1907. Serial No. 370,135.



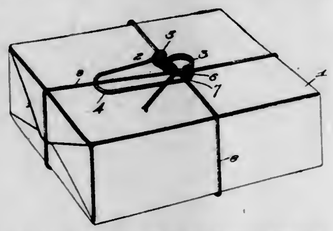
A monkey wrench provided with the usual movable jaw slidably mounted on the shank of the wrench, the shank of the wrench being provided on the face thereof with a rack or ratchet bar at the opposite sides of which are longitudinal grooves, the movable jaw being also provided with side ribs which fit in said grooves, the transverse depth or thickness of said ribs being greater than the transverse depth of said grooves whereby the said movable jaw is prevented from bearing on the teeth of the rack or ratchet bar, and means for locking said jaw to the shank of the wrench at any desired point, consisting of a tang mounted on the face of the movable jaw adjacent to the handle and adjustable transversely of the shank of the wrench and adapted to operate in connection with the teeth of the rack or ratchet bar, and an arm pivoted in the back portion of the movable jaw and provided with a cam head adapted to bear on the shank of the wrench.

873,192. PACKAGE-TIE. ORMOND S. WHITE, Wilkes-Barre, Pa. Filed Dec. 6, 1906. Serial No. 346,611.



A package tie composed of an approximately U-shaped bail having its ends bent to form coils arranged parallel with the legs of said bail and at right angles to the plane of said bail, and flexible binding elements attached to said coils at one end and with their other ends adapted to engage the coils.

873,193. PACKAGE-TIE. ORMOND S. WHITE, Wilkes-Barre, Pa. Filed Dec. 6, 1906. Serial No. 346,612.



1. A package tie comprising an approximately U-shaped member having an eye formed at the free end of one leg and a resilient coil at the free end of the other leg spaced from said eye and having the lower whirl of said coil spaced laterally from said leg and a member connected with said eye spanning the space between said legs and having means for engaging said coil-carying leg beneath the lower whirl of the coil, and a flexible element connected at one end with said eye and adapted to have its other end engaged with said coil.

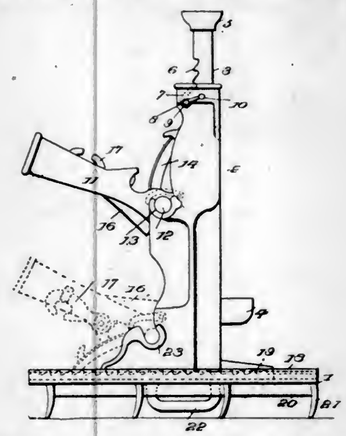
2. A package tie comprising a single piece of wire bent into a coil, then bent downwardly to form a spacing member and extended laterally and bent to form an approximately U-shaped loop arranged in a plane below the coil, said loop having an eye formed at the end of its free leg, said wire being then extended transversely between the legs of said loop and provided with a terminal hook to engage the spacing member of said coil, and a flexible binding element connected at one end with said eye and adapted to be connected at its other end with said coil.

873,194. COMBINED LIFTING AND MOVING JACK. ALEXANDER W. WHITEFORD, Omaha, Nebr. Filed Dec. 28, 1906. Serial No. 349,841.

1. A combined lifting and moving jack, comprising a base, an upright mounted to slide on said base, a lifting bar movable in said upright, said upright being formed with upper and lower fulcrum bearings, and an operating lever provided with a fulcrum adapted for removable support in either one of said bearings, and provided with a part adapted to engage the base with the lever fulcrumed in the lower bearing of the upright and to engage the lifting bar with the lever fulcrumed in the upper bearing of said upright.

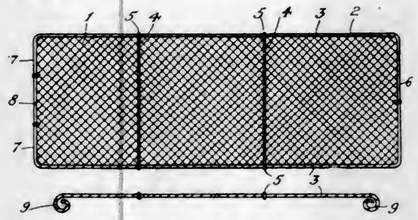
2. In a device of the character specified, the combination of a lifting jack, a base therefor having a longitudinal raised portion toothed upon its upper side and having longitudinal inturned flanges forming guides and provided with pendent anchoring wings and longitudinal strengthening ribs, and with a loop shaped handle, and actuating means coöperating with the toothed portion of the base to effect forward movement of the jack thereon.

3. In combination, a base provided with a rack bar, an upright slidable on said base and provided with upper and lower fulcrum bearings, a lifting bar mounted to slide in said upright and provided with a rack, and an operating lever provided with a fulcrum and adapted for inter-



changeable mounting in the bearings of the upright, said operating lever being provided with a pawl adapted for engagement with either rack according to the location of the fulcrum of said lever in the upper and lower bearings of the upright.

873,195. WIRE-FABRIC BLANK. WILLIAM C. WILLETS, Minneapolis, Minn. Filed Mar. 11, 1904. Serial No. 197,619.



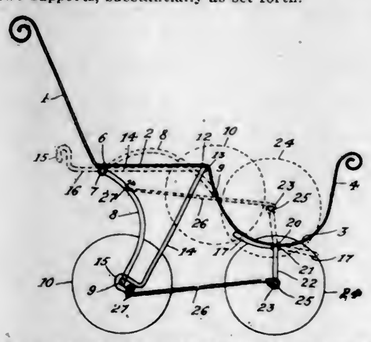
A reinforced wire fabric blank adapted to be bent to form the body of a chair, lounge, go-cart, or carriage for children's use, and consisting of a strip of taut wire fabric formed of interwoven warp coils the courses of which run lengthwise of the strip, a selvage wire extending through the coils at the sides and bent across the ends of the fabric, tie-wires connecting the ends of the fabric to the selvage wire, and brace wires at intervals connected to the selvage wires and extending transversely through the coils of the fabric body, said blank having its end portions rolled or bent upon themselves, substantially as set forth.

873,196. RUNNING-GEAR SUPPORT FOR BABY-CARRIAGES. WILLIAM C. WILLETS, Minneapolis, Minn. Filed June 11, 1906. Serial No. 321,184.

1. In an article of the class described, the combination with a body-frame, of running-gear supports comprising a hinged support for the front axles arranged to swing forward and upward past the front of the frame, a hinged support for the hind axles arranged to swing rearward and upward past the back of the frame, and a brace for detachably connecting the two supports, substantially as set forth.

2. In an article of the class described, the combination with a body-frame, of running-gear supports comprising a

hinged support for the front axles arranged to swing forward and upward past the front of the frame, a hinged support for the hind axles arranged to swing rearward and upward past the back of the frame, a diagonal brace hinged to the frame and adapted to be removably connected to the rear support, and a brace for detachably connecting the two supports, substantially as set forth.

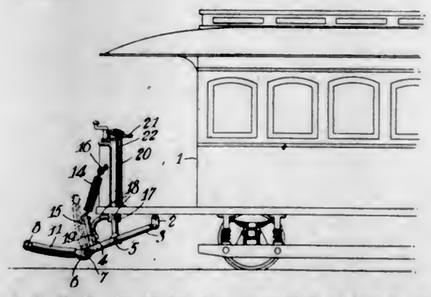


3. In an article of the class described, the combination with a body-frame, of running-gear supports comprising a hinged support for the front axles formed of a suitably bent wire arranged to swing forward and upward, a hinged support for the hind axles formed of a suitably bent single wire, and a brace for detachably connecting the two supports, substantially as set forth.

4. In an article of the class described, the combination with a body-frame, of running-gear supports comprising a hinged support for the front axles formed of a suitably bent wire arranged to swing forward and upward, a hinged support for the hind axles formed of a suitably bent single wire, a diagonal brace formed of a suitably bent wire hinged to the frame and adapted to be removably connected to the rear support, and a brace for detachably connecting the two supports, substantially as set forth.

5. In an article of the class described, the combination with a body-frame, of running-gear supports comprising a hinged support for the front axles formed of a suitably bent wire arranged to swing forward and upward and to bear against the frame in use, a hinged support for the hind axles formed of a suitably bent single wire, and a brace for detachably connecting the two supports, substantially as set forth.

873,197. FENDER FOR STREET-CARS. MORRIS WILENSKI, Chicago, Ill. Filed Feb. 14, 1907. Serial No. 357,330.



1. A fender for street cars, consisting of jointed side pieces pivotally secured at their rear ends to the car body and provided at their forward ends with a scoop, and means through the platform of the car for lowering the scoop.

2. In a fender for street cars, jointed side pieces pivotally secured at their rear ends to the car body and provided at their forward ends with a scoop, a wall at the rear of the scoop, springs connected with said wall at one end and detachably connected with the car body at the other.

3. In a fender for street cars, hinged side pieces pivotally secured at their rear ends to the car body and provided at their forward ends with a scoop, cross pieces between said side pieces, means for yieldingly supporting the fender in inoperative position, a presser bar through the platform of the car, the upper end of which is provided with a handle and the lower end is bifurcated for engaging with said cross pieces, and a spring for normally holding said bar upward.

4. In a fender for street cars, hinged side pieces pivotally secured at their rear ends to the car body, and provided at their forward ends with a scoop, cross pieces between said side pieces, means for yieldingly supporting the fender in inoperative position, a slotted standard on the platform, a presser rod in said standard, the upper end of which is provided with a handle which is projected through said slot, and the lower end bifurcated, the ends, of said bifurcations being recessed for engaging with said cross pieces, and a coiled spring around the rod within said standard, the upper end of which engages with said handle and lower end and with said platform.

5. In a fender for street cars, side pieces pivotally secured at their rear ends to the car body and having their forward ends shouldered, a substantially U-shaped frame pivotally secured to the side pieces in position for engaging with said shoulders, a net in said frame, means for yieldingly holding the forward ends of the side pieces of said frame in an elevated position, and means for forcing the same downward.

[Claim 6 not printed in the Gazette.]

873,198. STOVEPIPE-HANGER. WILLIAM A. WILSON, Arlington, Nebr. Filed July 1, 1907. Serial No. 381,781.



1. A pipe-hanger comprising, a pipe-clasp made of a single sheet-metal strip bent centrally to embrace the pipe and having outwardly looped bends to form abutting spring ends to said central bend and said looped bends cross-perforated to form attaching ears, a two-part separably-coupled hanger-rod having one end bent adapted to hinge in an attaching screw-eye and the opposite end headed and bent adapted to be disposed through said attaching ears to hinge the rod therein and draw said spring-ends together.

2. A pipe-hanger comprising, an open encircling pipe-clasp with ears at its ends, an attaching screw-eye, a two-part separably-coupled hanger-rod one part adapted to slide through and bent to hinge in said screw-eye and the other part bent to adapt it to be separably connected through said ears to hinge therein and draw said ears together.

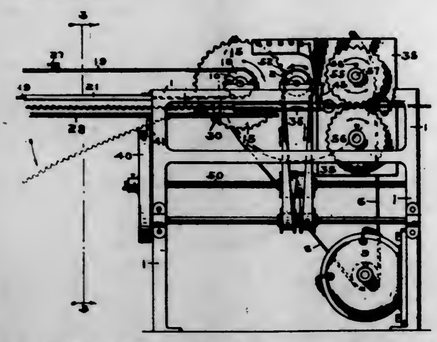
3. A pipe-clasp for pipe-hangers consisting of, a single piece of sheet metal having a central bend to embrace the pipe, adjacent portions bent outward in elliptical shaped loops to form spring connecting ears at the ends of the clasp and the ends of the metal strip each bent and disposed against the inside of the central bend at the base of its adjoining ear.

873,199. BUCKLE. ANDREW E. YOUNG and JAMES F. HINKLE, Roswell, N. Mex. Filed Feb. 25, 1907. Serial No. 359,206.



As an improvement in cinch buckles, the buckle body, consisting of an outer circular shaped frame, a transverse brace bar, a pair of other bars integrally joined with the transverse bar midway thereof and extending divergingly therefrom and integrally joined with the said frame, a cinch rope looped over the frame between and to each side of the ends of the divergingly opposing brace bars, said cinch rope having a re-inforce for holding the loops thereof in a uniformly spread position on the circular frame of the buckle, a transverse brace bar having a portion projected above the said frame at a point centrally thereof, said projected portion having an aperture and a recess, the latter being in line with the aperture, and a tongue pivotally engaging the said aperture and the recess, substantially as shown and for the purposes described.

873,200. WIRE-CRIMPING MACHINE. JESSE L. ALLEY, Indianapolis, Ind. Filed Dec. 26, 1906. Serial No. 349,511.



1. A wire crimping machine comprising the frame, a pair of crimping disks mounted therein, means for shifting the disks from a vertical to a horizontal position, means for holding the disks in a given position, and a wire grasping means for grasping and pulling the wire through the crimping disks.

2. A wire crimping machine comprising the frame, a pair of crimping disks mounted therein, means for shifting the disks from a vertical to a horizontal position, means for holding the disks in a given position, and a wire grasping means for automatically grasping and pulling the wire through the crimping disks.

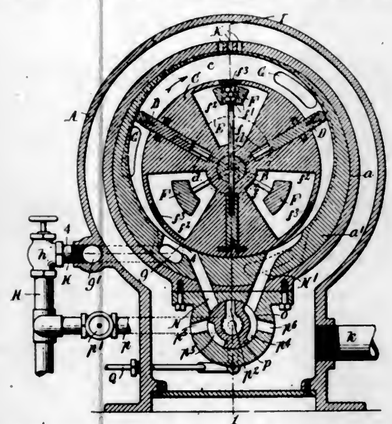
3. A wire crimping machine comprising the frame, a pair of crimping disks mounted therein, wire pulling means arranged within the machine to grasp and pull the wire through the crimping disks, and a guide means comprising a hollow tube to guide and direct the wire from the crimping disks to the pulling means.

4. A wire crimping machine comprising the frame, a pair of crimping disks mounted therein, means for changing the relationship of the disks, means for shifting the disks from a vertical to a horizontal position, and means for grasping and pulling the wire through the crimping disks.

5. A wire crimping machine comprising the frame, a pair of crimping disks mounted therein, means for changing the relationship of the disks, means for shifting the disks from a vertical to a horizontal position, means for grasping and pulling the wire through the crimping disks, and a cutter means for severing the wire.

[Claims 6 to 12 not printed in the Gazette.]

873,201. ROTARY ENGINE. BENJAMIN F. AUGUSTINE, Buffalo, N. Y. Filed Dec. 17, 1906. Serial No. 348,275.



1. The combination of a casing having a cylindrical bore, a hollow separate cylindrical abutment piece fitted in said cylindrical bore of the casing and having a cylindrical bore eccentric to its outer surface and end flanges concentric with said outer surface, a rotary core arranged in said abutment piece concentrically with the bore of said casing and with one side in contact with the thick side thereof and having end enlargements located within and concentric with said end flanges of the abutment piece, movable pistons carried by said core, means for holding said pistons in sliding contact with the inner surface of said abutment piece, and means for admitting fluid to and exhausting it from said casing, substantially as set forth.

2. The combination of a casing having a cylindrical bore, a hollow separate cylindrical abutment piece fitted in said cylindrical bore of the casing and terminating short of the ends of said casing, said abutment piece having cylindrical end flanges, and a cylindrical bore eccentric to its outer surface, a rotary core arranged in said abutment piece and contacting with the thick side thereof and having end enlargements located within said end flanges of the abutment piece, and end plates secured to said core and projecting between the end flanges of said abutment piece and the ends of said casing, movable pistons carried by said core, means for holding said pistons in sliding contact with the inner surface of said abutment piece, and means for admitting fluid to and exhausting it from said casing, substantially as set forth.

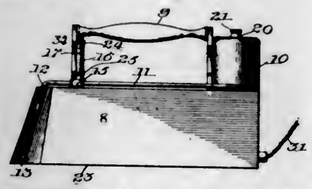
3. The combination of a casing, a rotary core therein, an odd number of pistons carried by said core and arranged to move radially toward and from the axis of the core, a counter-weight connected to each piston and located at the opposite side of the axis of the core therefrom, said counter-weights being arranged between adjacent pistons, and means for admitting fluid to and exhausting it from the casing, substantially as set forth.

4. The combination of a casing, a rotary core therein having an odd number of piston chambers therein and weight chambers between said piston chambers, pistons arranged to slide in said piston chambers toward and from the axis of the core, counter-weights arranged in said weight chambers and each connected to a piston at the opposite side of the axis of the core therefrom, and means for admitting fluid to and exhausting it from the casing, substantially as set forth.

5. The combination of a casing having an inlet port, a rotary core having an admission port at its peripheral portion which passes said port in the cylinder, a piston carried by said core, a cut-off ring which rotates with said core and is located near the periphery thereof and has an opening to register with said admission port, and means located in said casing within the space bounded by said cut-off ring for shifting said cut-off ring relative to said core, substantially as set forth.

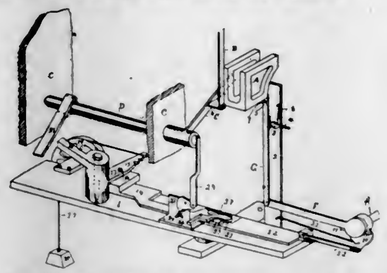
[Claims 6 to 8 not printed in the Gazette.]

873,202. FLAT-IRON. CHARLES G. AVERY, Chicago, Ill. Filed Mar. 30, 1906. Serial No. 308,915.



The combination of a flat iron body having a small water passage and perforations in the bottom and near the forward end thereof, a valve-controlled pipe of small dimensions, and means adapted to supply water to the pipe.

873,203. LINOTYPE-MACHINE. GEORGE G. BABCOCK, Portland, Me., assignor to Charles T. Libby, Portland, Me. Filed Aug. 29, 1904. Serial No. 222,656.



1. In a linotype machine, in combination with the vertically movable assembling elevator and mechanically actuated operating devices therefor, a trip hook and block connection between the operating devices and the elevator adapted to stay hooked while pulling the elevator up and unhooked while the elevator returns by gravity.

2. In a linotype machine, in combination with the assembling elevator, actuating devices therefor consisting of interlocking trip hook and trip block with connections from the elevator and a source of power, adapted to raise the elevator while interlocked and permit its return by gravity while disengaged.

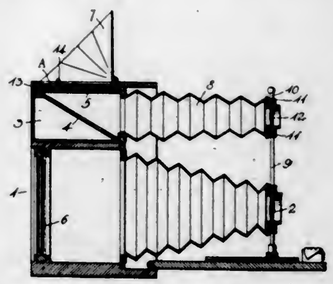
3. In a linotype machine, the assembling elevator adapted to be raised by force and fall by gravity, in combination with a to-and-fro, reciprocating, trip-hook mechanism adapted to automatically effect the former movement and permit the latter movement.

4. In a linotype machine, in combination with the vertically movable assembling elevator, trip hook mechanism adapted when connected up to raise said elevator and when disconnected to let it fall, and means for connecting and disconnecting said raising means.

5. In a linotype machine, in combination with the assembling elevator, means for raising said elevator comprising component parts connected during their working stroke and disconnected during their return stroke.

[Claims 6 to 15 not printed in the Gazette.]

873,204. FOCUSING ATTACHMENT. ERNEST S. BALLOU, Des Moines, Iowa. Filed Jan. 17, 1907. Serial No. 352,783.



1. In combination with a camera having upwardly-extending, lens-supporting legs and a frame, of cross-bars adjustably mounted on said legs, a lens supported between said bars, a bellows connected with the frame and with the lens support, an inclined reflector in the frame at the rear of the bellows, a ground glass in the frame above the reflector, and a folding cover for the ground glass.

2. In combination with a camera, a frame thereon, the top of which is provided with a circular groove and provided with marks, a circular frame rotatably mounted in said groove, the under face of which is corrugated and the outer face provided with marks adapted to register with the marks on the frame, the circular frame being provided with an elongated rectangular opening, a ground glass in said opening, an inclined reflector below said ground glass, means for throwing an image on the reflector, and a pin in the circular frame for rotating it.

873,205. METHOD OF MAKING A SOLUTION OF RARE-EARTH METALS. CHARLES BASKERVILLE, New York, N. Y., assignor to Welsbach Light Company, Gloucester, N. J., a Corporation of New Jersey. Filed June 15, 1905. Serial No. 265,440.

1. The method of preparing a solution containing a rare earth metal, which comprises heating a compound of said metal with a mineral acid and under high pressure.

2. The method of preparing a solution containing a rare earth metal which comprises heating a compound of said metal in a finely divided state with hydrochloric acid and under high pressure.

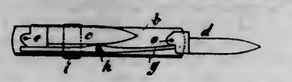
3. The method of preparing a solution containing a rare earth metal which comprises first, finely sub-dividing the substance containing the metal, second, heating the same under high pressure and in an excess of hydrochloric acid.

4. The method of preparing a solution containing a rare earth metal which comprises first, finely sub-dividing the substance containing the metal, second, heating the same to a temperature from 140° to 200° C. under high pressure and in an excess of hydrochloric acid.

5. The method of preparing a solution containing the rare earth metals of Welsbach mantle remnants, which comprises heating the remnants under high pressure in an excess of mineral acid.

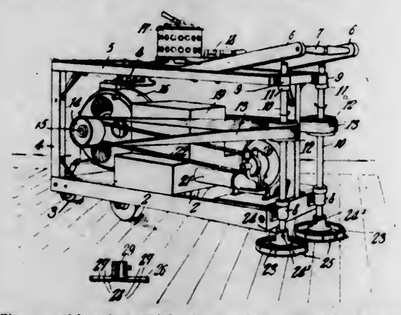
[Claims 6 to 11 not printed in the Gazette.]

873,206. POCKET-KNIFE. HUGO BEANS, Ohligs, Germany. Filed Oct. 22, 1906. Serial No. 340,082.



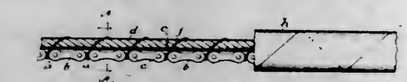
In a pocket knife the combination of a U-shaped handle, two blades pivotally connected thereto, a blade spring fixed at the bottom of the handle and acting on the blades and a slide surrounding the handle and holding the blades in the closed position as described and for the purpose set forth.

873,207. MACHINE FOR FINISHING AND SMOOTHING FLOODS. GEORGE P. BILLINGS, Bar Harbor, Me. Filed May 22, 1907. Serial No. 375,092.



The combination with a portable tiltable frame; of shafts journaled upon one end of the frame, floor finishing devices revoluble therewith and disposed to contact with the surface thereunder and support the frame when oscillated in one direction, means for simultaneously rotating the shafts in opposite directions and at the same speed, a receiver carried by the frame and in rear of the shafts, said finishing devices being disposed to throw loosened material beneath the receiver, a suction device for establishing an air current upward through the receiver, and a handle above said floor finishing devices and extending beyond the end of the frame.

873,208. CHAIN ROPE OR BELT. CLARENCE H. BRYAN, Chicago, Ill. Filed May 9, 1907. Serial No. 372,771.



1. A chain rope, consisting of a chain flexible in a single plane, a cushioning layer of longitudinally-arranged material on one of the sides in the plane of flexure, means for securing the cushioning layer on the chain, and a cover surrounding the chain and cushioning layer.

2. A chain rope, consisting of a chain flexible in a single plane, a cushioning layer of longitudinally-arranged material on one of the sides in the plane of flexure, means for securing the cushioning layer on the chain, and a helically-wound covering surrounding the chain and cushioning layer.

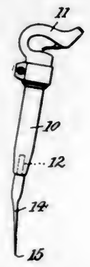
3. A chain-rope, consisting of a chain flexible in one plane only, a cushioning layer on the sheave side, a wire wound helically about the chain and cushioning layer to secure the latter to the chain, and a covering surrounding the chain and cushioning layer.

4. A chain-rope, consisting of a chain flexible in one plane only, a cushioning layer made in longitudinal sections on the sheave side, means for securing the cushioning layer on the chain, and a covering surrounding the chain and cushioning layer.

5. A chain-rope, consisting of a chain flexible in one plane only, a cushioning layer on the sheave side consisting of a pair of rope sections, means for securing the cushioning layer on the chain, and a covering surrounding the chain and cushioning layer.

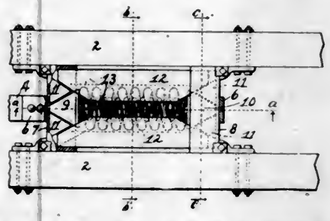
[Claims 6 and 7 not printed in the Gazette.]

873,209. TOOL FOR CUTTING CLAY. KARL BUSCH, Grossalmerode, Germany. Filed July 13, 1906. Serial No. 326,016.



A tool for cutting clay composed of a pneumatic hammer, a handle on one end of the hammer, and a cutter removably secured to the other end of the hammer, the axis of the cutter being inclined to the axis of the hammer, substantially as specified.

873,210. FRICTION DRAFT-GEAR. JAMES R. CARDWELL, Chicago, Ill. Filed Apr. 24, 1905. Serial No. 257,181.

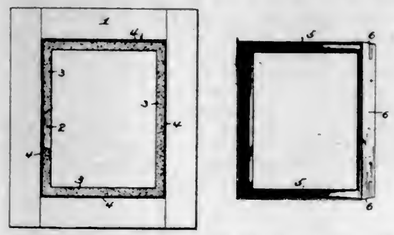


1. A friction draft gear including a coupler, pocketed follower plates operated by the coupler, centrally disposed friction blocks 9, 10 in the pockets of the follower plates, friction blocks 11 flanking each of said centrally disposed friction blocks, a friction producing device 12 extending between the follower plates and into the pockets thereof and adapted for substantially simultaneous engagement with the friction mechanisms, and spring mechanism interposed between the said centrally disposed friction blocks, said device 12 being formed in separated sections, the opposed faces of the sections being made concave to house the spring mechanism.

2. A friction draft gear including a coupler provided with a yoke, pocketed follower plates, friction mechanisms carried thereby, spring mechanism substantially extending across the space between the longitudinal sides of the yoke, and side friction elements 12, 12 constituting non-contractible friction mechanisms and having their inner opposed faces made concave to receive the spring mechanism which is disposed between said side friction elements.

3. A friction draft gear including a coupler provided with a yoke, pocketed follower plates, friction mechanisms carried thereby, spring mechanism substantially extending across the space between the longitudinal sides of the yoke, and side friction elements 12, 12 constituting non-contractible friction mechanisms and extending into the pocketed follower plates and engaging the friction mechanisms carried by the said follower plates, the spring mechanism being disposed between said side friction elements.

873,211. WINDOW-SASH. LYMAN J. COOK, Silver Creek, N. Y., assignor of one-half to John B. Webster, Silver Creek, N. Y. Filed May 4, 1907. Serial No. 371,810.



1. A window sash, comprising an outer frame having a continuous shoulder against which the edges of the glass rests, and an inclined seat in rear of said shoulder, and an inner frame fitting within the outer frame and provided with a perimeter inclined at a different angle from that of the inclined seat on the outer frame and resting on the latter, the front edge of said inner frame adapted to bear against the glass and hold the latter against the shoulder.

2. The combination with an outer frame having a continuous shoulder, and a yielding cushion covering the inner face of said shoulder, the portion of the frame from the shoulder to the inner face of the sash being inclined outwardly, of an inner rectangular frame having a perimeter which is inclined at a different angle from that of said inclined portion of the outer frame and means for securing said inner frame to the outer frame in rear of the shoulder.

3. The combination with an outer frame having a shoulder and an inclined face in rear of said shoulder, of an inner frame located within the outer frame and having an inclined outer face disposed at a different angle from that of the inclined face of the outer frame, and means for securing the inner frame to the outer frame and clamping a glass between said inner frame and the shoulder on the outer frame.

873,212. LOCK. ADOLPHE CORDEAU, Ste. Madeleine, Quebec, Canada. Filed May 17, 1906. Serial No. 317,264.



1. In a lock, the combination with a pivotally supported plate, of a slidably supported yoke carried by the plate, and having cross pieces thereon, a disk disposed between the cross pieces, a spindle secured eccentrically to the disk and provided with a head flush with the plate, said head provided with a slot therein, means adapted to lock the yoke against movement, and a casing having a lug adapted to be engaged by the yoke.

2. In a lock, the combination with a casing, of a plate pivotally connected thereto, filling blocks on said plate, having guide lugs thereon, a yoke slidably mounted between said lugs, locking means attached to said yoke, and an eccentric for operating said yoke.

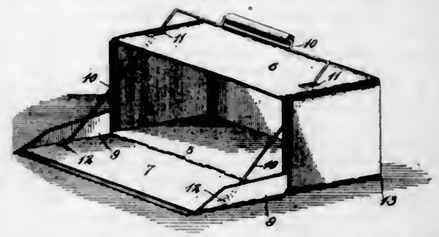
3. In a lock, the combination with a casing, of a plate pivotally connected thereto, filling blocks mounted on said plate, having guide lugs thereon, a yoke slidably mounted between said lugs, and having cross pieces thereon, locking means attached to said yoke, and an eccentric adapted to engage said cross pieces and thereby operate said yoke.

4. In a lock, the combination with a casing, of a plate pivoted thereto, filling blocks on said plate, having guide lugs thereon, a yoke slidably mounted between said lugs, an eccentric for operating said yoke, a flange on said yoke, and a device adapted to engage said flange and thereby prevent movement of the aforesaid yoke.

5. In a block, the combination with a casing, of a plate pivotally connected thereto, filling blocks on said plate, having guideways thereon, a yoke slidably mounted in said guideways, an eccentric for operating said yoke, a flange on said yoke, and a rotatable member in the path of movement of said flange adapted in one position to allow movement of said yoke and in all other positions to prevent movement of the same.

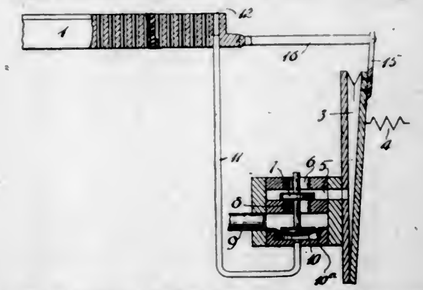
[Claims 6 and 7 not printed in the Gazette.]

873,213. DUST-PAN. SARAH C. COURTNEY, Fairmont, W. Va., assignor of one-half to Alvin Hurford, Canton, Ohio. Filed May 4, 1907. Serial No. 371,855.



A dust box having a hinged side, and slots in the top thereof at its ends, and a bail handle the branches of which extend through the slots and are connected at their ends to the side, so that the same is closed when the box is lifted.

873,214. AUTOPNEUMATIC MUSIC-PLAYING INSTRUMENT. WALTER R. CRIPPEN, Cambridge, Mass., assignor to Emerson Piano Company, Boston, Mass., a Corporntion of Illinois. Filed Mar. 19, 1907. Serial No. 363,167.



1. In an instrument of the character described, a longitudinally movable tracker-board, a note sheet arranged to traverse the same transversely, ducts in the tracker-board and perforations in the note sheet, means for moving the tracker-board transversely relatively to the direction of travel of the note sheet to vary the degree to which the ducts in the tracker-board are exposed by the note sheet when traversed by perforated portion in the note sheet.

2. In an instrument of the character described, a longitudinally movable tracker-board, a note sheet arranged to traverse the same transversely, ducts in the tracker-board and perforations in the note sheet, means for moving the tracker-board transversely relatively to the direction of

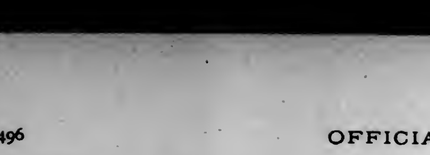
travel of the note sheet to vary the degree to which the ducts in the tracket-board are exposed when traversed by the perforated portions of the note sheet, including a power pneumatic controllable from the tracker-board by said note sheet.

3. In an auto-pneumatic music playing instrument, a longitudinally movable tracker-board, a perforated note sheet arranged to traverse the same transversely, a power pneumatic connected with the tracker-board, means for operating said power pneumatic to shift said tracker-board longitudinally to vary the line of registration of the ducts therein relatively to the direction of movement of the perforations in the note sheet.

4. In an auto-pneumatic music playing instrument, a longitudinally movable tracker-board, a perforated note sheet arranged to traverse the same transversely, a power pneumatic connected with the tracker-board, means for operating said power pneumatic to shift said tracker-board longitudinally to vary the line of registration of the ducts therein relatively to the direction of movement of the perforations in the note sheet, including a spring for distending said pneumatic, and an exhaust for collapsing the same.

5. In an auto-pneumatic music playing instrument, a longitudinally movable tracker-board, a perforated note sheet arranged to traverse the same transversely, a power pneumatic connected with the tracker-board, means for operating said power pneumatic to shift said tracker-board longitudinally to vary the line of registration of the ducts therein relatively to the direction of movement of the perforations in the note sheet, including a spring for distending said pneumatic, an exhaust for collapsing the same, a note sheet perforation, a tracker-board duct in line therewith, and a valve operated by a primary pneumatic controllable from the tracker-board by the note sheet for opening and closing the exhaust of said pneumatic.

873,215. JOINT FOR METAL-SHEATHED CABLES. CHARLES W. DAVIS, Edgeworth, Pa., assignor to Standard Underground Cable Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Mar. 31, 1906. Serial No. 309,199.



1. An insulated joint for a metal-sheathed cable which includes a case or shell formed of a pair of thimbles connected to the sheath on opposite sides of the point of union of the cable core and extending into proximity to one another, and an annulus of insulating material surrounding such point of union, the inner surface thereof covering the proximate ends of said thimbles and the outer surface thereof exposed for a distance greater than that which separates the thimbles, substantially as described.

2. An insulated joint for a metal-sheathed cable which includes a case or shell formed of a pair of thimbles connected to the sheath on opposite sides of the point of union of the cable core and extending into proximity to one another, the outer surfaces of said thimbles being corrugated, and an annulus of insulating material surrounding such point of union, and connecting said thimbles, covering the proximate ends of said thimbles over the corrugated surfaces thereof, and exposed outwardly over a distance greater than that which separates said thimbles, substantially as described.

3. An insulated joint for a metal-sheathed cable which includes a case or shell formed of a pair of thimbles connected to the sheath on opposite sides of the point of union of the cable core and extending into proximity to one another, and an annulus of insulating material formed upon and uniting the proximate ends of said thimbles and surrounding such point of union, and outwardly exposed over a distance greater than that which separates the thimbles, substantially as described.

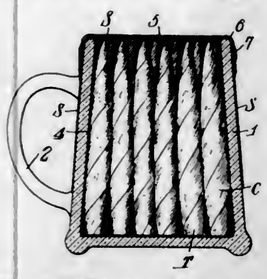
4. A thimble for use in forming an insulated joint for metal-sheathed cables, such thimble being of suitable size to surround the cable adjacent to the point of union, and composed of two substantially annular portions of substantially equal diameter, a third ring of heat-insulating substance interposed between the abutting ends of the two first-named annular portions when brought into service position and serving to separate said portions from heat transmitting contact, and means for securing said two first-named annular portions to one another with the third ring portion interposed between them when in service position, substantially as described.

873,216. ELECTRIC CABLE. CHARLES W. DAVIS, Edgeworth, Pa., assignor to Standard Underground Cable Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Aug. 29, 1906. Serial No. 332,496.



A stranded cable for electrical purposes composed of a sheaf or bundle of strands in conductive contact with one another and surrounded by an envelop of insulating material of such character or nature as to be injured when heated beyond a certain critical temperature, the said sheaf or the strands composing said sheaf being disposed in annular form of such peripheral extent that the rate of radiation from the conductor when carrying a current of desired strength will prevent a rise in the temperature of the insulation beyond the critical point thereof, substantially as described.

873,217. CIGAR-PACKAGE. FRANK E. DERGE, Eau Claire, Wis. Filed Sept. 16, 1907. Serial No. 393,170.

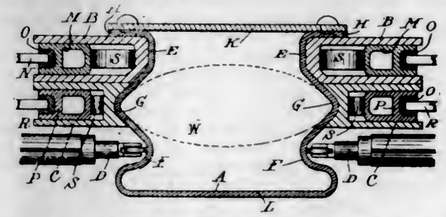


A package comprising a moisture proof cylindrical holder flared outward from its mouth to its bottom, cigars arranged within the holder with all of their tuck ends downward, a moisture and dust proof envelop inclosing the cigars and having its upper ends folded over upon the tip ends thereof, a closure for the mouth of the holder, an elastic band for temporarily holding the closure in position, and a stamp secured over the closure, band, and to the holder.

873,218. METALLIC WINDOW-FRAME FOR STEEL CARS. JAMES S. DOYLE, New York, N. Y. Filed Jan. 24, 1907. Serial No. 353,840.

1. The combination with a window sash, of a metallic box girder having a channel formed in the side thereof a box casting fitted to said channel and adapted to receive and guide the side bar of the sash.

2. The combination with the window sash, of a metallic sheet or plate, shaped to form a hollow box girder, and having channels and beads in the sides thereof box castings fitted to said channels and beads and adapted to receive and guide the sash.



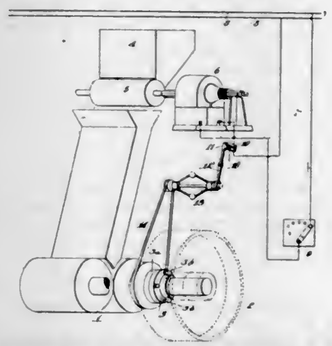
3. In a metallic window frame for steel cars, a metal plate bent to form a box girder, and having the sides thereof shaped to form channels and beads, metal sash bars, and means fitting said channels and beads for receiving and guiding said sash bars in the sliding movement of the latter.

4. In a metallic window frame for steel cars, a box girder having the sides thereof shaped to form channels, box castings fitting in said channels and metal sash bars received and sliding in said castings.

5. The combination with a box girder having channel seats formed in the sides thereof, open sided channel castings received in and fitting said channel seats, sash bars received and sliding in said channel castings and bow springs interposed between said channel casting and said sash bars.

[Claims 6 to 8 not printed in the Gazette.]

873,219. FEED-REGULATOR FOR GRINDING-MACHINES. THOMAS A. EDISON, Llewellyn Park, Orange, N. J. Filed Jan. 13, 1903. Serial No. 138,812.



1. In grinding apparatus, the combination with grinding rolls and means including a motor for driving the same, of feed mechanism for supplying material to said rolls, a separate motor for operating the feed mechanism, and means controlled by one of the grinding rolls for automatically stopping the last named motor when rotation of the grinding rolls is arrested, substantially as and for the purposes set forth.

2. In grinding apparatus, the combination with grinding rolls, driving shaft, means including a motor for driving said shaft and a shearing connection between the driving shaft and grinding rolls, of feed mechanism for supplying material to the grinding rolls, a separate motor for operating the feed mechanism, and means controlled by one of the grinding rolls for automatically stopping the last named motor when rotation of the grinding rolls is arrested, substantially as and for the purposes set forth.

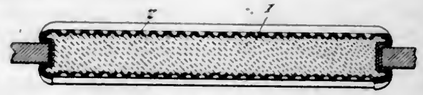
3. In grinding apparatus, the combination with grinding rolls, and means including a motor for driving the same, of feed mechanism for supplying material to said rolls, a separate motor for operating the feeding device, means for controlling the speed of the motor, and means controlled by one of the grinding rolls for automatically stopping the last named motor when rotation of the grinding rolls is arrested, substantially as and for the purposes set forth.

4. In grinding apparatus, the combination with grinding rolls and means for driving the same, of feed mechanism for supplying material to the rolls, an electric motor for operating the feeding device independently of the rolls, and means connected with said grinding rolls for automatically breaking the circuit to said motor when rotation of the grinding rolls is arrested, substantially as and for the purposes set forth.

5. In grinding apparatus, the combination with grinding rolls and means for driving the same, of feed mechanism for supplying material to the rolls, an electric motor for operating the feeding device independently of the rolls, and a centrifugal governor connected with said grinding rolls for automatically breaking the circuit to said motor when rotation of the grinding rolls is arrested, substantially as and for the purposes set forth.

[Claims 6 to 9 not printed in the Gazette.]

873,220. REVERSIBLE GALVANIC BATTERY. THOMAS A. EDISON, Llewellyn Park, Orange, N. J., assignor to Edison Storage Battery Company, Orange, N. J., a Corporation of New Jersey. Filed Nov. 23, 1903. Serial No. 182,429.



1. A depolarizing electrode for reversible galvanic batteries, containing a mixture of nickel hydroxid and bismuth hydroxid the proportion of the latter ingredient being much smaller than that of the former, and an inert as set forth.

2. A depolarizing electrode for reversible galvanic batteries, containing a mixture of nickel hydroxid and bismuth hydroxid the proportion of the latter ingredient being much smaller than that of the former, and an inert flake-like conducting material on the surfaces of which the mixture is carried, substantially as set forth.

3. A depolarizing electrode for reversible galvanic batteries, containing a mixture of nickel hydroxid and bismuth hydroxid, and an inert flake-like conducting material on the surfaces of which the mixture is carried in the form of very thin films, substantially as set forth.

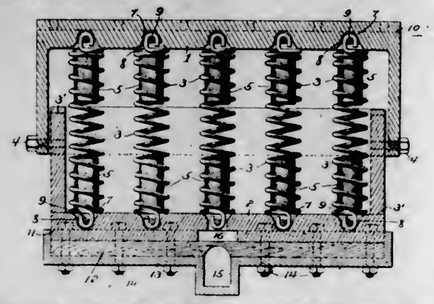
4. In a reversible galvanic battery, an alkaline electrolyte, a depolarizing electrode containing a mixture of nickel hydroxid and bismuth hydroxid the proportion of the latter ingredient being much smaller than that of the former, and an oxidizable electrode, substantially as set forth.

5. In a reversible galvanic battery, an alkaline electrolyte, a depolarizing electrode containing a mixture of nickel hydroxid and bismuth hydroxid the proportion of the latter ingredient being much smaller than that of the former, and an oxidizable electrode, containing finely divided electrolytically active iron, substantially as set forth.

873,221. SPRING-BEARING FOR VEHICLES. RICHARD J. EDWARDS, Galena, Ill., assignor of one-fourth to Ferdinand Hengesch, Chicago, Ill. Filed May 15, 1907. Serial No. 373,802.

1. In a spring bearing for vehicles, the combination with a two part hollow casing, the open bottom of the top part overlapping the open top of the lower part, and screw pins carried by one part and resting within slots in the other part, of springs within the two part casing, the said springs having looped ends resting in recesses in the top and bottom of the casing and screw bolts passing through said looped ends.

2. In a spring bearing for vehicles, the combination with a two part casing, the open bottom of the top part overlapping the open top of the lower part, each part of the casing having projecting studs arranged in pairs and forming seats for the springs, and screw bolts carried by the top part and moving in slots in the lower part, of coiled springs each seated on a pair of studs, the ends of each spring being looped and resting in recesses adjacent to the bases of the studs, and screw bolts passing through said looped studs.



3. The combination with a two part hollow casing the upper part overlapping the lower part, each provided with horizontally projecting flanges for attachment to the vehicle, and each provided internally with a series of vertical studs, the latter being arranged in pairs, of a coiled spring for each pair of studs, the said springs having looped ends resting in recesses adjacent to the bases of the studs, and bolts passing through said looped ends.

4. The combination of the upper and lower overlapping sections of the casing, each section having a series of integral studs, and recesses adjacent to the bases of the studs, springs, each seated at its ends on a pair of studs and provided with looped ends resting in said recesses, bolts passing through said looped ends, a wood spacing block under the lower section of the casing and a clip for securing the casing to the bolster or underframe of the vehicle, the said lower section of the casing, spacing block and clip being secured together, substantially as described.

873,222. TOBACCO-PIPE. ERNEST ENGHOLM, New York, N. Y. Filed Apr. 29, 1907. Serial No. 370,927.

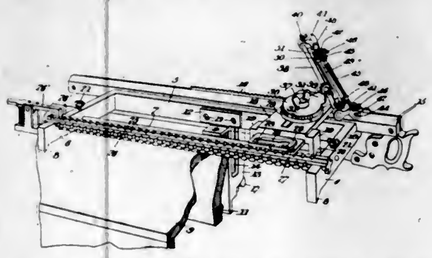


1. A tobacco pipe provided with a bowl, a mouth-piece, a stem, a vessel inclosed within the stem and having a pair of centrally perforated heads, and a pair of tubes entering said heads and communicating with the bowl and mouth-piece respectively, the inner ends of said tubes being deflected with the vessel in opposite directions, substantially as specified.

2. A tobacco pipe provided with a bowl, a mouth-piece, a stem, a vessel inclosed within the stem and having a pair of centrally perforated heads, a pair of tubes entering said heads and communicating with the bowl and mouth-piece respectively, the inner ends of said tubes being deflected within the vessel in opposite directions, and an absorbent lining inclosed by the vessel, substantially as specified.

873,223. SAW-FILING MACHINE. ISAAC H. FARROW, Pueblo, Colo. Filed Dec. 18, 1903. Serial No. 185,766.

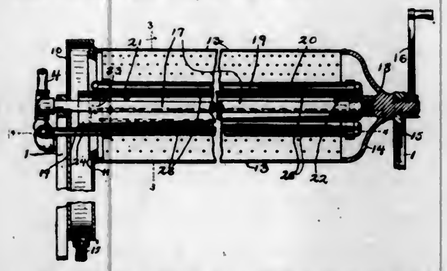
1. In a saw filing machine, a supporting frame having laterally extending arms connected by a longitudinally disposed rod, means carried by the frame for clamping a saw, a carriage mounted for travel on the frame and provided with depending perforated ears for the reception of the longitudinal connecting rod, a file holder mounted on the carriage, a toothed spacing bar seated in recesses in the laterally extending arms, and a pawl carried by the carriage and adapted to engage the teeth on the spacing bar thereby to gage the movement of said carriage.



2. In a filing machine a supporting frame, a longitudinally adjustable toothed spacing bar mounted on the frame and provided with a series of spaced terminal notches, spaced apart a distance equal to approximately one half the distance between the teeth on said spacing bar a pawl pivoted to one end of the supporting frame and adapted to engage the terminal notches in the bar for locking the latter in adjusted position, a carriage mounted for travel on the frame, a file holder rotatably mounted on the carriage, a saw clamping means, and a pawl carried by the carriage and adapted to engage the intermediate teeth on the spacing bar for gaging the movement of the carriage.

3. In a filing machine, a supporting frame, a saw clamping means, a carriage mounted for travel on said frame, a reciprocating file holder rotatably mounted on the carriage and provided with a pair of spaced file supporting arms, a gage bar disposed between said arms and having its opposite ends bent upwardly into engagement with said arms and provided with terminal slots, screws secured to the file supporting arms, and engaging the slots in the ends of the gage bar for locking the latter in adjusted position, and means carried by the carriage and engaging the file holder for clamping the latter in adjusted position.

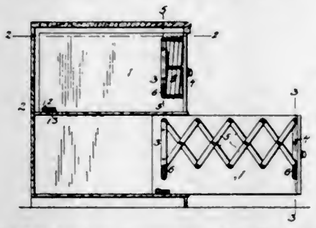
873,224. MACHINE FOR SHRINKING CLOTH. CHARLES W. FENNER, Cleveland, Ohio, assignor to Spotless Steam Sponger Company, Cleveland, Ohio, a Copartnership. Filed Oct. 18, 1905. Serial No. 283,261.



1. In a machine of the character indicated, the combination of a frame, a steaming box mounted on said frame, a drum rotatably mounted at one side of the said steaming box and a steaming drum mounted at the opposite side of said steaming box, said steaming drum comprising a drainage receptacle arranged at one end of said frame, a perforated cylinder, means for rotating said cylinder, a steam pipe provided with jet orifices arranged with said cylinder, a casing arranged around said steam pipe and provided with an opening for the escape of the steam, said casing having one end in open communication with said drainage receptacle and a heating coil arranged around said casing, substantially as described and for the purpose set forth.

2. In a machine of the character indicated the combination of a frame, a box arranged at one end of said frame and provided with a circular opening, means for draining said box, a perforated cylinder having one end rotatably mounted in the opening in said box and in open communication therewith and having its other end rotatably supported at the opposite side of said frame, a steam pipe provided with jet orifices extending longitudinally through the center of said cylinder and supported independently of said cylinder, a casing arranged around said steam pipe and having one end extending into and in open communication with said box and provided with an opening extending longitudinally thereof for the escape of steam and a steam pipe arranged in coils around said casing so as to heat said casing and the said cylinder.

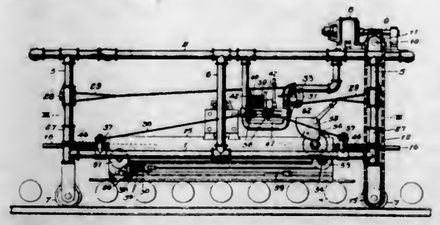
873,225. DRAWER-SUPPORT. CARL A. GEHNE, Chicago, Ill. Filed May 2, 1907. Serial No. 371,459.



1. A drawer support comprising a series of lazy tong bars, inner and outer fastening bars connected to the opposite end of said lazy tong bars, fastening devices to rigidly connect the inner bar with the end of the drawer casing, a slotted connecting plate secured to the end of the drawer and a supporting hook arranged on said outer bar and adapted to engage the said slotted plate of the drawers to detachably connect the latter with said outer bar, substantially as described.

2. A drawer support comprising a series of lazy tong bars, inner and outer fastening bars connected to the opposite end of said lazy tong bars, fastening devices to rigidly connect the inner bar with the end of the drawer casing, a slotted connecting plate secured to the end of the drawer, a supporting hook arranged on said outer bar and adapted to engage the said slotted plate of the drawers to detachably connect the latter with said outer bar, guide or track strips arranged in the drawer casing, and guide rollers carried by the drawer to engage and travel on said track bars, substantially as described.

873,226. MECHANISM FOR MARKING SHEETS. GEORGE J. GERHARDT, Steubenville, Ohio, assignor of one-half to Charles Hoffman, Steubenville, Ohio. Filed Jan. 4, 1907. Serial No. 350,701.



1. In a sheet marking mechanism the combination of means for supporting pencils or other marking devices, means for shifting such marking devices towards and from each other, means for shifting the marking devices longitudinal of the sheet, and means for imparting an angular movement to the marking devices at suitable points in their traverse and while in contact with the surface to be marked.

2. In a machine for marking sheets, the combination of two rails or edges, means for adjusting such rails or edges towards and from each other, marking devices movable along and guided by the rails or edges and means for shifting such marking devices.

3. In a machine for marking sheets, the combination of rails or edges, adapted to be shifted simultaneously to an angular position relative to the sheet to be marked, means for adjusting the rails towards and from each other, marking devices movable along and guided by the rails or edges and means for shifting the marking devices.

4. In a machine for marking sheets the combination of rails or edges, means for raising and lowering the rails or edges, means for adjusting the rails or edges towards and from each other, marking devices movable along and guided by the rails or edges and means for shifting such marking devices.

5. In a machine for marking sheets the combination of rails or edges having their ends adjustably supported, means for shifting the rails or edges towards and from each other, means for shifting the rails to an angular position relative to the sheet to be marked, marking devices movable along and guided by the rails or edges and means for shifting the marking devices.

[Claims 6 to 9 not printed in the Gazette.]

873,227. HOP-WIRE-DETACHING DEVICE. JOEL E. GROVER, Woodland, Wash. Filed Oct. 19, 1906. Serial No. 339,726.



1. In a device of the character described, the combination of a shank, a head on the upper end thereof, the upper part of which head is provided with laterally projecting shoulders and the portions below the shoulders receding downward, said head also having a central aperture, fingers as i projecting transversely from the sides of the head, a spring-controlled sleeve-like lifter having a flaring mouth adapted to be raised over the base of the head, said lifter being normally below said head, and lever-like means whereby to raise the lifter.

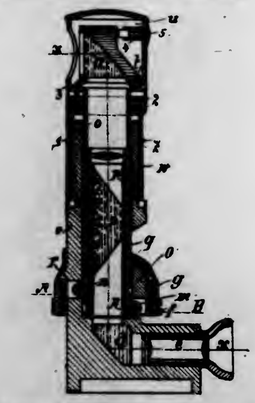
2. In a device of the character described, the combination of a pole, a tubular shank mounted thereon, a head on the end of the shank, the upper part of which head is provided with laterally projecting shoulders and the portions below the shoulders receding downward, said head also having a central aperture, fingers as i projecting transversely from the sides of the head, a sleeve-like lifter having a flaring mouth adapted to be raised over the base of the head, interior shoulders at the base of the lifter, a collar on the shank at the upper end of the lifter, a coil-spring seated between said shoulder and collar to normally hold the lifter down, a forked lever pivoted on the shank, one end thereof connected to the lifter, a forked handle pivoted on the pole, a rod connecting said lever and handle; the parts being so arranged that depressing the handle will raise the lifter.

3. A device of the character described, comprising a

pole, a tubular shank mounted thereon, a head on the uppef end of the shank, the upper part of which head is provided with laterally projecting shoulders and the portions below the shoulders receding downward, said head also having a central aperture, fingers as i projecting transversely from the sides of the head, a sleeve-like lifter having a flaring mouth adapted to be raised over the base of the head, interior shoulders at the base of the lifter, a collar on the shank at the upper end of the lifter, a coil-spring seated between said shoulder and collar to normally hold the lifter down, a forked lever pivoted on the shank, one end thereof connected to the lifter, a forked handle pivoted on the pole, a rod connecting said lever and handle; the parts being so arranged that depressing the handle will raise the lifter, and said head being also provided with a knife, for the purpose described.

4. A device of the character described, comprising a pole, a tubular shank mounted thereon, a head on the upper end of the shank, the upper part of which head is provided with laterally projecting shoulders and the portions below the shoulders receding downward, said head also having a central aperture, fingers as i projecting transversely from the sides of the head, a sleeve-like lifter having a flaring mouth adapted to be raised over the base of the head, interior shoulders at the base of the lifter, a collar on the shank at the upper end of the lifter, a coil-spring seated between said shoulder and collar to normally hold the lifter down, a forked lever pivoted on the shank, one end thereof connected to the lifter, a forked handle pivoted on the pole, a rod connecting said lever and handle; the parts being so arranged that depressing the handle will raise the lifter, and said head being also provided with a socket for the purpose of receiving a knife.

873,228. TELESCOPE. ARWED HAHN, Cassel, Germany. Filed Feb. 9, 1907. Serial No. 356,534.



1. A telescope of the type described comprising in combination an adjustable receiving reflector, a casing for the same provided with worm-wheel teeth, an object glass, an adjustable erecting reflector, a casing for the same provided with worm-wheel teeth, a third reflector, an eye-piece, and means for adjusting the receiving reflector and erecting reflector comprising endless screws engaging with the worm-wheel teeth on the reflector casings.

2. A telescope of the type described comprising in combination an adjustable receiving-reflector, an object-glass, an adjustable erecting reflector, a third reflector, an eye-piece, a casing inclosing said parts, a sleeve concentrically arranged round said casing and provided internally with a thread and externally with a milled edge, a plurality of worm-wheels engaging with said thread, and means transmitting motion from said worm-wheels to said adjustable reflectors.

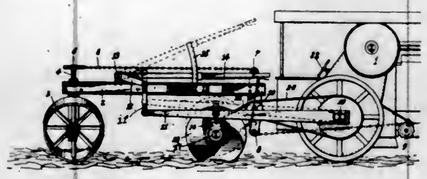
3. A telescope of the type described comprising in combination an adjustable receiving-reflector, a worm-wheel connected with said receiving-reflector, an object glass, an adjustable erecting-reflector, a worm-wheel rigidly connected with said erecting-reflector, a third reflector, an eye-piece, a casing inclosing said parts, a sleeve concentrically arranged round said casing and provided internally with a thread and externally with a milled edge, a plurality of worm-wheels engaging with said thread, a spindle carrying said worm-wheels and provided with a worm, said worm engaging both of the first-mentioned worm-wheels connected with the receiving-reflector and erecting-reflector respectively.

4. A telescope of the type described comprising in combination a receiving-reflector revoluble about both a vertical and horizontal axis, an object-glass, a revoluble erecting-reflector, a third reflector, an eye-piece, means for revolving the erecting-reflector, means for revolving the receiving-reflector about its vertical axis of revolution, and means for adjusting it about its horizontal axis of revolution, said latter means comprising one of the fixed parts of the telescope provided with a thread, a vertical drum surrounding said fixed part and provided with an internal thread engaging the former thread and also provided with an external graduated helical groove, means transmitting the upward motion of said drum when rotated by hand to the receiving-reflector, and a vertically displaceable pointer engaging in said helical groove, and means for preventing said pointer from rotating.

5. A telescope of the type described comprising in combination a receiving-reflector revoluble about both a vertical and horizontal axis, an object-glass, a revoluble erecting-reflector, a third reflector, an eye-piece, means for revolving the erecting-reflector, means for revolving the receiving-reflector about its vertical axis of revolution, and means for adjusting it about its horizontal axis of revolution, said latter means comprising one of the fixed parts of the telescope provided with a thread, a vertical drum surrounding said fixed part and provided with an internal thread engaging with the former thread and also provided with an external graduated helical groove, means transmitting the upward motion of said drum when rotated by hand to the receiving-reflector, and a vertically displaceable pointer engaging in said helical groove, and means for preventing said pointer from rotating, and a spring acting on the receiving-reflector and opposing its displacement by the means for adjusting it about a horizontal axis.

[Claims 6 and 7 not printed in the Gazette.]

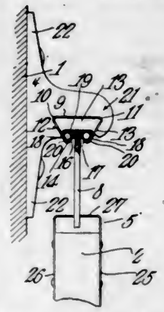
873,229. AUTO STEAM-PLOW. CALVIN G. HAMPTON, Ryde Station, Cal. Filed Feb. 28, 1907. Serial No. 359,876.



1. In a device of the kind described a motive means, side levers pivotally secured at their front ends to said motive means, a plow frame carrying a rear guide wheel, pivoted links connecting the rear ends of said levers to the integral arms of a rod journaled on said frame, a lever secured to said rod and co-acting with a lever rack secured to said frame, a three bladed rotary spiral plow carried by said levers, said plow being connected to said motive means by suitable gearing, as set forth.

2. In a device of the kind described a frame movably secured to a motive means, a spiral three bladed rotary plow journaled upon a shaft and hung in adjustable connection with said motive means, a shaft journaled across the front end of said frame, gear wheels on said plow shaft and said last named shaft, a chain connecting the two, two other gear wheels on said last named shaft, chains connecting said last named gears to the driving shaft of the motive means, to revolve said plow at a greater speed than that of the motive means and means for raising and lowering said plow, as set forth.

873,230. DOOR-HANGER. JAMES W. HARRIS, Ashland, Ohio. Filed Mar. 20, 1907. Serial No. 363,455.



1. In a door hanger the combination with a covered track or rail having inwardly inclined depending sides and inwardly upturned lower edges between which is left a space, of a suspending bracket for said track having its under sides socketed to guide and embrace the upper part of said track, a hanger supported on the upturned ends of and within said track, and a door suspending member loosely attached to said hanger to permit of independent movement of said suspending member in a direction transverse to said track.

2. In a door hanger, the combination with a covered track having inwardly inclined depending sides and a ball track formed in the lower end of each of said sides, a space being left between said ball tracks, of a hanger having a flanged head traveling within said track and provided with ball seats on its under surface, and a door suspending member loosely supported by said hanger to permit of independent movement of said member in a direction transverse to said track.

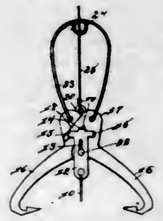
3. In a door hanger the combination with a covered track having inwardly inclined depending sides and a ball track formed in the lower ends of each of said sides separated by a space, of a hanger having a flanged head traveling within said track and provided with ball seats on its under surface and an opening in its lower end and a yoke attached to the door and adapted to slide in said opening transversely of the track.

4. In a door hanger the combination with an over head track, a hanger supported therein and movable in a longitudinal direction, and a yoke from which the door is suspended and adapted to slide freely back and forth in an opening in said hanger in a direction transverse to the movement of said hanger, whereby said door is carried bodily in a straight line to and from the opening to be closed.

5. In a door hanger, a track therefor, made of sheet metal and having a flat top, downwardly extending sides inclining towards the center of the track and upwardly inclining edges at the bottom of said sides, said inclined edges in connection with the sides of the track form two grooves which serve as ball tracks.

873,231. TRAP FISH-HOOK. JOSEPH HARTSHORN, Des Moines, Iowa. Filed Mar. 14, 1907. Serial No. 363,107.

1. In a trap fish hook, two mating auxiliary hooks having extensions at their upper ends and lateral projections on the extensions provided with notches in their lower edges pivotally connected with each other, a plate having a slot to be traversed by the pivot fixed in the overlying parts of the auxiliary hooks, a main hook fixed to said plate and a projection at the upper end of the plate to enter the notches in the tops of the auxiliary hooks, to operate as set forth.



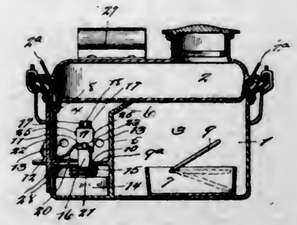
2. In a trap fish hook, two mating auxiliary hooks having extensions at their upper ends and lateral projections on the extensions provided with notches in their lower edges pivotally connected with each other, a plate having a slot to be traversed by the pivot fixed in the overlying parts of the auxiliary hooks and a projection at the upper end of the plate to enter the notches in the tops of the auxiliary hooks, a main hook fixed to said plate, and means to normally press the auxiliary hooks towards the main hook, to operate as set forth.

3. In a trap fish hook, two mating auxiliary hooks having extensions at their upper ends and lateral projections on the extensions provided with notches in their lower edges pivotally connected with each other, a plate having a slot to be traversed by the pivot fixed in the overlying parts of the auxiliary hook and a projection at the upper end of the plate to enter the notches in the tops of the auxiliary hooks, a main hook fixed to said plate and a spring connected with the upper ends of the auxiliary hooks, to operate as set forth.

4. In a trap fish hook, two mating auxiliary hooks having extensions at their upper ends and lateral projections on the extensions provided with notches in their lower edges pivotally connected with each other, a plate having a slot to be traversed by the pivot fixed in the overlying parts of the auxiliary hooks and a projection at the upper end of the plate to enter the notches in the tops of the auxiliary hooks, a main hook fixed to said plate and a plate, provided with a slot, fixed to the pivot for connecting a line with the plate having a fixed main hook, to operate as set forth.

5. A trap fish hook comprising a plate having a longitudinal slot and a right angled projection at its top, a main hook fixed to said plate, two auxiliary hooks pivotally connected with each other and the pivot extended through the slot in said plate, extensions at the tops of the auxiliary hooks provided with lateral projections having notches, a second plate having a longitudinal slot fixed to the pivot in the auxiliary hooks, and a spring having an eye at its center and its ends fixed to the auxiliary hooks, arranged and combined to operate as set forth.

873,232. DINNER-PAIL AND HEATER. ELMER F. HAYES, Kirwin, Kans. Filed Apr. 26, 1907. Serial No. 370,447.



1. In a dinner pail, a partition dividing the pail into two compartments, a liquid-container closing the compartments and resting against the upper end of the partition, a doorway in one of said compartments, a horizontal portion in this latter compartment, provided with a recess opening

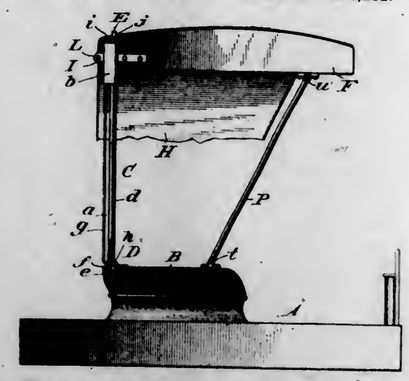
toward the doorway and a lamp having its body beneath the horizontal partition and its burner projecting through the recess.

2. In a dinner pail, a partition dividing the pail into two compartments, a liquid container closing the compartments and resting against the upper end of the partition, a doorway in one of said compartments, a horizontally disposed partition in the latter compartment and provided with a recess opening toward the doorway, said doorway being provided with a door, having means to close the open end of said recess, and a lamp having its body beneath the horizontal partition and its burner projecting through the recess.

3. In a dinner pail, a partition dividing the same into two compartments, and provided with a yieldable flange, a liquid container closing the compartments and resting upon said flange, one of said compartments having a doorway, a door therefor, a horizontal partition in the latter compartment, a recess therein, said door having horizontally disposed U-shaped member for closing the recess and a lamp having its body beneath the horizontal partition, and its burner projecting through the recess.

4. A dinner pail, comprising two compartments, a closure therefor, one of said compartments, having a horizontally disposed partition, and provided with a doorway and door therefor, said partition having a recess therein, a lamp having its body beneath the horizontal partition and its burner projecting through the recess, said door having means for closing the recess.

873,233. VEHICLE-TOP. JOSEPH A. HEMSLEY, Trenton, N. J. Filed Apr. 25, 1907. Serial No. 370,261.



1. The combination of a support, uprights fixed to and rising from the support, keepers carried at the upper portions of the said uprights, a top arranged to be moved bodily from a raised horizontal position to a lowered upright position and vice-versa; said top having latches arranged to coöperate with the keepers of the uprights, and means for supporting the forward portion of the top when the top is in its raised position.

2. The combination of a support, a top arranged to be moved bodily from a raised horizontal position to a lowered upright position and vice versa, uprights fixed to and rising from the support and connected with and arranged to guide the rear portion of the top in the vertical movements thereof and provided with means for supporting the said rear portion in its raised position, and props extending between and pivotally connected to the support and the front portion of the top.

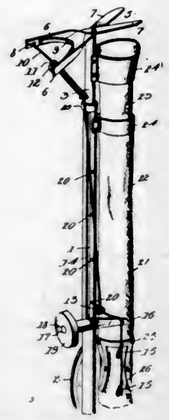
3. The combination of a support, uprights fixed to and rising from said support and having vertical guideways and keepers located in the upper portions of the guideways, an adjustable top, latches carried by the top and arranged in the guideways of the uprights and movable past the keepers and adapted to assume positions above said keepers, and props connecting the said top with the said support.

4. The combination of a vehicle body, a seat carried thereby and having a rear wall, uprights fixed to and rising from the end portions of the seat at the rear thereof and having vertical guideways and keepers located in the upper portions of the guideways, a top adjustable bodily and arranged when lowered to rest in a substantially upright position between the uprights and with its rear ends resting on the rear wall of the seat, latches carried by the top and arranged in the guideways of the uprights and movable past the keepers and adapted to assume positions above said keepers, and props connecting the seat and the top.

5. The combination of a vehicle body, a seat carried thereby, uprights fixed to and rising from the end portions of the seat at the rear thereof and having vertical guideways and also having housings at their upper ends and beveled keepers arranged in the guideways and contained in said housings, a cross-bar connecting the upper portions of the uprights, an adjustable top, latches carried by the top and movable in the guideways of the uprights; said latches being movable in the direction of their length with respect to the top, springs for moving said latches outward, finger pieces connected with the latches and carried by the top and adapted for use in drawing the latches inward, and props connecting the seat and the top.

[Claims 6 to 8 not printed in the Gazette.]

873,234. FRUIT-PICKER. BERNT HESTNESS, Rockford, Wash., assignor of one-half to I. J. Blakkan, Rockford, Wash. Filed May 20, 1907. Serial No. 374,615.



1. In a fruit picker, the combination of a pole, an extension rod working in one end of the pole, a lower chute section arranged longitudinally of, and sustained by the pole, an upper chute section sustained by the extension rod, and working in the lower chute section, and an annular ring arranged to encircle the lower chute section, said ring having a plurality of resilient spaced springs adapted to embrace said section.

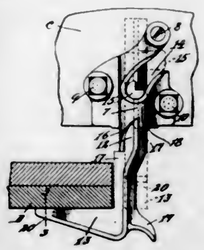
2. In a fruit picker, the combination of a pole, an extension rod adjustably secured in one end of said pole, a lower chute section arranged longitudinally of and secured to said pole, an upper chute section arranged longitudinally of said extension rod and working in said lower chute section, an annular ring working around said lower chute section and provided at its lower end with a number of longitudinally disposed springs, with means secured in the lower end of said lower section for normally closing the same against the passage of fruit.

3. In a fruit picker, the combination of a pole having a longitudinal socket in one end, with a longitudinal slot opening through the wall thereof, one of the walls of the slot being provided with a plurality of spaced notches, an extension rod working in the socket, and means secured near the inner end of said rod for engaging either of said notches.

4. In a fruit picker, the combination of a pole having a longitudinal socket in one end with a longitudinal slot opening through the wall thereof, one of the side walls of the slot being provided with a plurality of spaced notches, an extension rod working in the socket and a guide member arranged near the inner end of the extension rod, extending through said slot, and adapted to engage either of said notches.

5. In a fruit gatherer, the combination of a pole having a longitudinal socket in one end, and a longitudinal slot provided at one edge with a number of notches and communicating with said socket, and means secured near the lower end of said extension rod and adapted to engage in one of the notches of said longitudinal slot of said pole.

873,235. LATCH-HOOK. EDWARD A. HILL, Chicago, Ill., assignor to Chicago Grain Door Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 9, 1907. Serial No. 396,550.



1. The combination with a substantially vertically arranged socket piece, of a hanger hook provided with a shank and a door-supporting foot mounted thereon and adapted to be reciprocated and rotated within said socket piece, a cam formed on the lower edge of the socket, a projection on the shank to engage said cam, whereby longitudinal movement of the shank will cause the same to rotate, and means for supporting the hanger hook in the socket piece.

2. The combination with a substantially vertically arranged socket piece, of a hanger hook provided with a shank and a door-supporting foot mounted thereon, the lower edge of the socket being formed on a curve, a shoulder on the shank to engage the curved edge of the socket, whereby the longitudinal movement of the shank will cause the same to rotate, and a projection on the shank, the socket being formed with a slot to receive said projection.

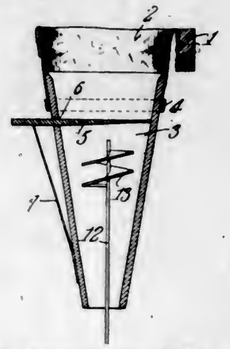
3. The combination with a substantially vertically arranged socket piece, of a hanger hook provided with a shank and a door-supporting foot mounted thereon, a cam at the lower end of the socket, a shoulder on the shank to engage said cam, whereby upward movement of the shank will cause the same to rotate, and means at the upper end of the socket and shank whereby the shank is supported in the socket and caused by gravity to rotate back into its normal position.

4. The combination with a substantially vertically arranged socket piece, of a hanger hook provided with a shank and a door-supporting foot mounted thereon, the lower edge of the socket being formed on a curve, a shoulder on the shank to engage the curved edge of the socket, and a projection on the shank, the socket being formed with a cam slot to receive said projection, whereby longitudinal movement of the shank will cause the same to rotate about its longitudinal axis.

5. The combination with a substantially vertically arranged socket piece, of a hanger hook provided with a shank and a door-supporting foot mounted thereon, the lower edge of the socket being formed on a curve, a shoulder on the socket forming a stop for said shank, and coöperating means on the socket piece and shank whereby the latter is rotatably supported in the former.

[Claim 6 not printed in the Gazette.]

873,236. FERTILIZER-DISTRIBUTER. PATRICK F. HILL and JOHN E. COLEMAN, Cabot, Ark. Filed Sept. 19, 1907. Serial No. 393,712.

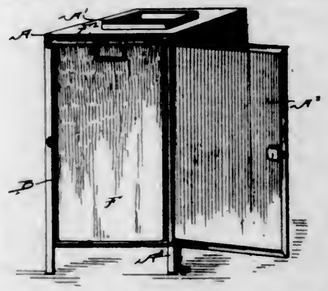


1. A fertilizer distributor comprising a hopper, means for suspending the same for swinging movements, from a suitable support, a cutoff intersecting the passage through the hopper, and an agitator projection below the lower end of the hopper and being designed to contact with the ground.

2. A fertilizer distributer comprising a hopper, a sack secured to the upper end thereof and adapted for attachment to a suitable support, a gage or cutoff intersecting the passage through the hopper, a locking device engaging with the gage, and an agitator having its lower end projected below the hopper.

3. A fertilizer distributer comprising a hopper, a sack secured thereto and adapted for attachment to a suitable support, a locking device coacting with the gage, an agitator disposed in the hopper and projecting below the lower end thereof, and means for swinging the hopper to effect cutting off of the discharge of fertilizer.

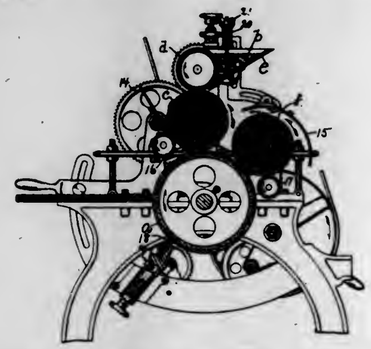
873,237. RECEPTACLE. JACOB A. HOFFMANN, Denver, Colo. Filed Nov. 27, 1906. Serial No. 345,388.



1. A device of the kind described comprising a can having a framework of angle iron, the front posts being cut out adjacent their upper ends, opposite side members of the frame forming tracks alining with the cut out portion of the posts, a rectangular frame sliding on said tracks and a bag supported by said frame.

2. A receptacle comprising a can having corner posts of angled iron cut away on one side adjacent the top, angle iron connecting front and rear posts, cross pieces, the cross piece connecting the front post being horizontal, and a bag having a frame adapted to slide under the last mentioned cross piece and upon the track formed by the angle iron connecting front and rear posts.

873,238. SEASONING-MACHINE. FRED F. HOWE, Salem, Mass., assignor, by mesne assignments, to The Turner Tanning Machinery Company, Boston, Mass., a Corporation of Maine. Filed Aug. 6, 1904. Serial No. 219,721.



1. In a machine of the class described, in combination, a bed roll or drum to support the hide skin or leather, a rotary brush coöperating with said bed roll or drum, means to rotate said brush, a trough or pan to contain liquid material to be applied to the hide skin or leather on said drum or bed roll, a fluted roll coöperating with said trough or pan and with said brush, a cam attached to said brush, and a device coöperating with said cam to effect longitudinal movement of said brush while it is in rotation, substantially as and for the purpose specified.

2. In a machine of the class described, in combination, a bed roll or drum to support the hide skin or leather, a rotary brush coöperating with said bed roll or drum, means to rotate said brush, a trough or pan to contain liquid material to be applied to the hide skin or leather on said drum or bed roll, a fluted roll coöperating with said trough or pan and with said brush, a collar or hub fast to said brush to rotate therewith and provided with a cam groove, a stud or pin extended into said groove, and an adjustable support for said stud or pin, substantially as described.

873,239. SNAP-HOOK. CHARLES S. HUNTINGTON and ARTHUR S. HUNTINGTON, Omaha, Nebr. Filed Dec. 17, 1906. Serial No. 348,143.



1. A snap hook formed of wire, comprising an eye, a stem and a hook, one end of the wire being passed through the parts at the juncture of the eye and the stem, and said end being provided with means to secure the parts of the eye together.

2. A snap hook formed of wire and comprising an eye, a stem, and a hook, and a spring, one end of the wire being riveted to hold said spring in place.

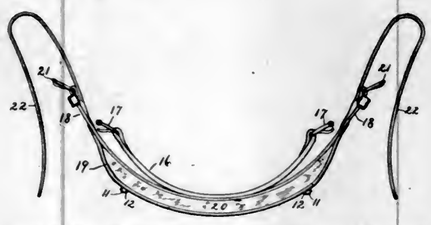
3. A snap hook formed of wire and comprising an eye, a stem, and a hook, the wire being bent to form a loop through which one end of the wire is extended and riveted to secure the parts of the eye together.

4. A snap hook formed of wire comprising an eye, a stem and a hook, the wire being bent to form a loop at the juncture of the eye and the stem, one end of the wire being passed through said loop, and a spring, said end of the wire being riveted to hold said spring in place.

5. A snap hook formed of wire and comprising an eye, a stem, and a hook, the wire being bent to provide a loop at the juncture of the eye and the stem, one end of said wire extending through said loop, and a spring fitting over said wire end, the latter being riveted to hold said spring in place.

[Claim 6 not printed in the Gazette.]

873,240. GAITING DEVICE FOR HORSES. EUGENE A. HYDE, New Britain, Conn. Filed Jan. 22, 1907. Serial No. 353,546.



1. In a gaiting device for horses, the combination of a harness belly band having fastening devices, one at each end, for connecting the said band with the straps that depend from a harness saddle, with a pulley frame secured by its middle portion to the middle portion of the said belly band, and two pulleys mounted on the said frame with one of the said pulleys at or near each of the respective ends of the said frame and in a line that extends longitudinally to the said band.

2. In gaiting devices for horses, a pulley frame, pulleys at each end of the said frame, means for adjusting the said pulleys to and from each other and a harness belly band secured by its middle portion to the middle portion of the said pulley frame.

3. In gaiting devices for horses, a pulley frame carrying pulleys at or near each end, the said frame being curved from end to end, a harness belly band secured by its middle portion to the concave side of the said pulley frame, and shaft straps extending from the ends of the said pulley frame to convert the said frame into the lower part of a double belly band.

4. In gaiting devices for horses, a pulley frame having curved plates and middle connecting pieces, a middle roller with rope space underneath, and a pulley and pulley support at each end of the said plates.

5. In gaiting devices for horses, curved plates secured together to constitute a pulley frame, the said plates being slotted at each end, pulleys and pulley axles adjustably mounted in the slotted ends of the said plates.

873,241. TURBINE-WHEEL. EMIL IMLE, Weisser Hirsch, near Dresden, Germany. Filed June 13, 1907. Serial No. 378,847.



1. A turbine wheel having a radial bore, and an opening communicating therewith, and blades provided with a foot inserted into said radial bore, the parts being welded together to form an integral body, substantially as set forth.

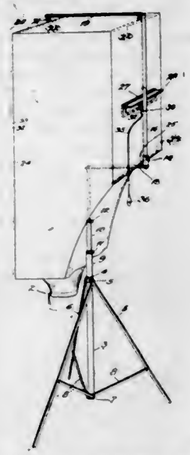
2. A turbine wheel having a radial bore and a lateral opening intersecting said radial bore, and a blade provided with a foot inserted into said radial bore, the parts being welded together to form an integral body, substantially as set forth.

3. A turbine wheel having a lateral annular groove and radial bores intersecting said groove, and blades provided with feet inserted into said radial bores and entering into the groove, the parts being welded together to form an integral body, substantially as set forth.

4. A turbine wheel having an annular groove in its side and radial bores in its periphery intersecting said groove, blades provided with feet inserted into said radial bores, and metal filling in said groove, the parts being welded together to form an integral body, substantially as set forth.

5. A turbine wheel having an annular groove in its side and radial bores in its periphery intersecting said groove, blades provided with feet inserted into said radial bores, and a wire in said groove, the parts being welded together to form an integral body, substantially as set forth.

873,242. PHOTOGRAPHIC FLASH-LAMP. JAMES INGLIS, Toronto, Ontario, Canada; F. D. Todd, administrator of said Inglis, deceased, assignor, by mesne assignments, to George R. Lawrence, Chicago, Ill. Filed June 24, 1904, Serial No. 214,001. Renewed Oct. 29, 1906. Serial No. 341,200.



1. In a flash-lamp, the combination with the lamp and the supporting standard, of a hood of flexible fire-proof material having an opening in the back thereof, the tray of the flash-lamp secured to said standard and extending through said opening, and an open bottom provided with means for collapsing the same, substantially as described.

2. In a flash light apparatus, the combination of a bag made of flexible material, a portion of said bag at least being translucent, means for supporting said bag with a portion thereof collapsed so as to permit the bag to expand under internal pressure, means for supporting a flash light charge within said bag, and means for igniting said charge.

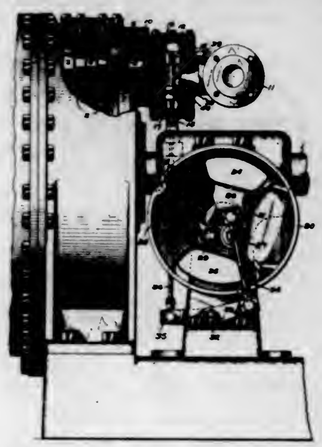
3. In a flash light apparatus, the combination of a bag composed wholly of a flexible material, a portion of said bag at least being translucent, means for supporting said bag in a partially expanded condition so as to permit it to expand further under internal pressure, means for supporting a flash light charge within said bag, and means for igniting said charge.

4. In a flash light apparatus, the combination of a bag composed wholly of a flexible fire proof fabric a portion of which at least is translucent, of means for supporting said bag in a partially expanded condition so as to permit it to expand further under internal pressure, means for supporting a flash light charge within said bag, and means for igniting said charge.

5. In a flash light apparatus, a bag composed wholly of a flexible fire-proof material, a portion of the bag at least being translucent, means for loosely supporting said bag in an expanded condition which permits the bag to expand further under internal pressure, means for supporting a flash light charge within said bag, and means for igniting said charge.

[Claims 6 and 7 not printed in the Gazette.]

873,243. GOVERNING MECHANISM FOR TURBINES. OSCAR JUNGGREN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 7, 1906. Serial No. 315,523.



1. A turbine through which the flow of motive fluid is from the high to the low pressure end, in combination with a valve for regulating the admission of motive fluid, and a governor-controlled member whose orbit varies with load changes and which moves the valve to and fro to regulate the passage of motive fluid, the stroke of the valve changing with changes in the orbit of said member.

2. An elastic-fluid turbine comprising a casing and relatively rotatable elements, in combination with a valve for regulating the passage of motive fluid through said elements, a speed-responsive device, a member rotating with said device for moving the valve to-and-fro whose orbit varies in size with load changes to vary the travel of the valve.

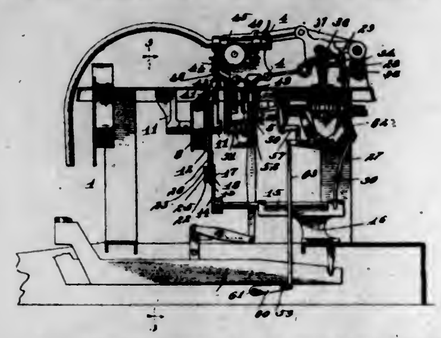
3. An elastic-fluid turbine having wheel buckets and a fluid-admitting device, in combination with a valve that regulates the passage of motive fluid to the device and is interposed between it and the source of supply, a speed governor, a member carried by and rotating with the governor whose orbit changes in size with the load, and a connection that transforms the rotary motion of said member into to-and-fro movement of the valve.

4. An elastic-fluid turbine having wheel buckets and independent fluid-admitting devices, in combination with a valve having a constant to-and-fro movement varying in amplitude with the load, that is common to the devices to regulate the passage of motive fluid to the devices and is interposed between them and the source of fluid supply, a governor responding to changes in load on the turbine, a member carried by and rotating with the governor weight whose orbit enlarges and diminishes as the load changes, and a connection which transforms the rotary motion of the said member into a to-and-fro motion of the valve and also changes the amplitude of its movement with changes in size of the orbit of the said member.

5. An elastic-fluid turbine having wheel buckets and a fluid-admitting device, in combination with a valve for regulating the passage of fluid to the device that has a to-and-fro movement, a fly-wheel driven by the turbine, a weight pivotally mounted on the fly-wheel, the wheel and weight changing their relative positions with changes in speed, a member mounted on and moving with the weight whose orbit enlarges and diminishes as the relative positions of the weight and fly-wheel change, and a mechanical connection uniting the valve and said member so that the rotary movement of the latter is transformed into a to-and-fro movement of the valve whose amplitude of stroke varies with changes in the orbit of the said member.

[Claims 6 to 16 not printed in the Gazette.]

873,244. RIBBON MECHANISM FOR TYPE-WRITING MACHINES. JAMES W. KENNEDY, Chicago, Ill., assignor, by mesne assignments, to The Kennedy Typewriter Company of Manhattan, New York, N. Y., a Corporation of New York. Filed June 1, 1904, Serial No. 210,758. Renewed Jan. 4, 1907. Serial No. 350,822.



1. In a typewriting machine, the combination with the ribbon spools and ratchet wheels secured to rotate therewith, of a pawl arm, a support movable transversely of the machine on which said pawl arm is pivoted by means of a shiftable pivot bearing, means for exerting a lateral tension on said pawl arm which will become unbalanced on opposite sides of its pivotal point, as the pivot bearing of said pawl arm is shifted and means for imparting movement to said movable support transversely of the machine in both directions, substantially as described.

2. In a typewriting machine, the combination with the ribbon spools and ratchet wheels secured to rotate therewith, of a pawl arm, a support movable transversely of the machine and means to impart movement thereto in both directions, pivotal connection between said pawl arm and said movable support comprising a slot in one thereof and a pivot stud in the other which extends through said slot and means for exerting a lateral tension on said pawl arm which will become unbalanced on opposite sides of said pivot stud as said pivot stud moves lengthwise of the slot in said pawl arm, substantially as described.

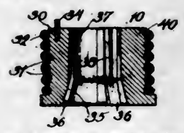
3. In a typewriting machine, the combination with the ribbon spools and ratchet wheels secured to rotate therewith, of a pawl arm, a support movable transversely of the machine to which said pawl arm is pivoted by means of a shiftable pivot bearing, a spring or springs which connect said movable support and said pawl arm, the relation being such that said spring or springs will exert an unbalanced tension on said pawl arm on opposite sides of its pivot bearing as said pivot bearing is shifted, and means to impart movement to said movable support transversely of the machine in both directions, substantially as described.

4. In a typewriting machine, the combination with the ribbon spools and ratchet wheels secured to rotate therewith, of a pawl arm, a support movable transversely of the machine and means to impart movement thereto in both directions, pivotal connection between said pawl arm and said movable support comprising a slot in one thereof and a pivot stud in the other which extends through said slot, and spring connection between said movable support and said pawl arm whereby an unbalanced tension will be exerted on said pawl arm on opposite sides of said pivot stud as the pivot bearing of said pawl arm is shifted, substantially as described .

5. In a typewriting machine, the combination with the ribbon spools and ratchet wheels secured to rotate therewith, of a pawl arm, a support movable transversely of the machine and means for imparting movement thereto in both directions, pivotal connection between said pawl arm and said movable support comprising a pivot stud in one thereof and a slot in the other through which said pivot stud extends, said slot being provided with pivot bearings located at a distance from each other and springs which connect said movable support and said pawl arm, said springs being connected to one thereof at a point between said pivot bearing and to the other at points adjacent to said pivot bearings, substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

873,245. HEAD FOR BOTTLE-CAPPING MACHINES. GEORG KIRKEGAARD, New York, N. Y. Filed Oct. 1, 1906. Serial No. 336,831.



1. A plurality of sectors together forming a hollow circular die, the inner surface of said die being arranged to coact with parts of a bottle stopper cap, a horizontal groove on the outer surfaces of said sectors, and a spring in said groove arranged to hold said sectors together.

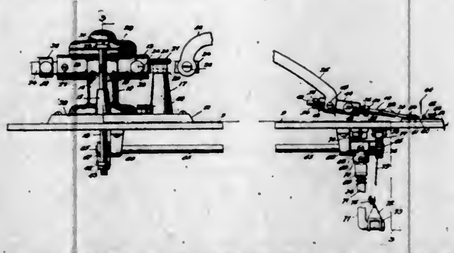
2. A plurality of sectors together forming a hollow circular die, the inner surfaces of said die being arranged to coact with parts of a bottle stopper cap, horizontal grooves on the outer surfaces of said sectors, and split rings in said horizontal grooves arranged to yieldably hold said sectors together.

3. A plurality of sectors, together forming a hollow circular die, said die being arranged to be used in conjunction with a bottle stopper cap, horizontal grooves on the outer surfaces of said sectors, a cam-shaped groove on the inner surface of each of said sectors, said grooves being arranged to coact with parts of said cap, and springs in the horizontal grooves arranged to yieldably hold said sectors together and to hold the sectors in horizontal alinement.

4. A plurality of sectors, together forming a hollow circular die, said die being arranged to be used in conjunction with a bottle stopper cap, horizontal grooves on the outer surfaces of said sectors, a cam-shaped groove on the inner surface of each of said sectors, said grooves being arranged to coact with parts of said cap, and provided with indentations for clearing other parts of the cap, and springs in the horizontal grooves arranged to yieldably hold said sectors together and to hold the sectors in horizontal alinement.

5. A plurality of sectors together forming a hollow circular die, said die being arranged to be used in conjunction with a bottle stopper cap, horizontal grooves on the outer surfaces of said sectors, a cam-shaped groove on the inner surface of each of said sectors, said grooves having two parts at different angles from the axis of the die and arranged to coact with parts of said cap, and being provided with indentations for clearing other parts of the cap, and split rings in the horizontal grooves arranged to yieldably hold said sectors together and to hold the sectors in horizontal alinement.

873,246. EDGE-GUIDE FOR SEWING-MACHINES. JOSEPH KOSATKA, Chicago, Ill. Filed Oct. 27, 1906. Serial No. 340,804.



1. In a device of the class described, the combination with a base plate, a guide post, a standard adapted to revolve thereon, a cylinder disposed transversely of the standard, and an edge-guide carried thereby and adapted to press out the seam of the material.

2. In a device of the class described, the combination with a base plate, a guide post, a standard adapted to revolve thereon, a gage an edge-guide on the standard, and adapted to press out the seam of the material toward the gage, and a stop on the base plate for the edge-guide.

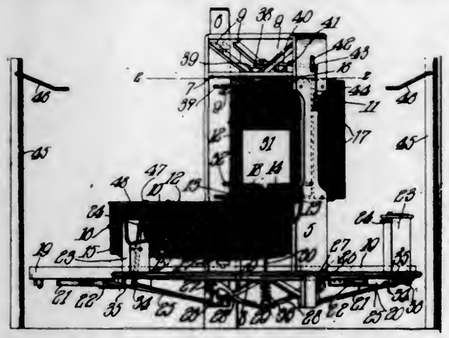
3. In a device of the class described, the combination with a base plate, a guide post, a standard adapted to revolve thereon, an edge-guide on the standard and adapted to press out the seam of the material, a stop on the base plate, and means for adjusting the stop.

4. In a device of the class described, the combination with a base plate, a guide post, a standard adapted to revolve thereon, an arm carried by the standard, an adjustable holder carried by the arm, and an edge-guide carried by the holder and adapted to press out the seam of the material.

5. In a device of the class described, the combination with a base plate, a guide post, a standard adapted to revolve thereon, an edge-guide on the standard, and a raising plate for the standard.

[Claims 6 to 20 not printed in the Gazette.]

873,247. MAIL-RECEIVER. ALBERT F. KUHL, Van Wert, Ohio. Filed Sept. 27, 1907. Serial No. 394,902.



1. A mail bag catcher including a support, a frame mounted for swinging movement on the support, a sectional basket carried by the frame, means for locking the basket sections in open position, and means operable by the impact of the bag for releasing the locking means.

2. A mail bag catcher including a support, a frame mounted for swinging movement on the support, a sectional basket carried by the frame, means for locking the basket sections in open position, means for locking the frame on either side of the support, and means disposed between said sections and operable by the impact of the bag for releasing the frame and basket locking means.

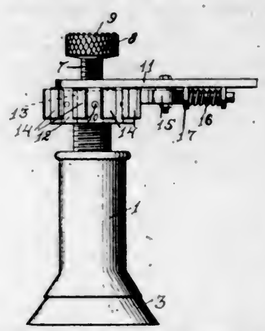
3. A mail bag catcher including a support, a frame pivotally mounted for swinging movement on the support, a sectional basket carried by the frame, means for locking the basket sections in open position, means for alternately locking the frame on each side of the support, and means operable by the impact of the bag for releasing the frame and basket locking means.

4. A mail bag catcher including a support, a frame pivotally mounted for swinging movement on the support, a sectional basket carried by the frame, means for locking the basket sections in open position, means for alternately locking the frame on each side of the support, and means disposed between the basket sections and operatively connected with the frame and basket locking means for releasing the same.

5. A mail bag catcher including a support, a frame pivotally mounted for swinging movement on the support, a basket carried by the frame and comprising mating sections one of which forms a guard when the other is in open position, means for locking one of said sections in open position, and means operable by the impact of the mail bag for releasing the locking means.

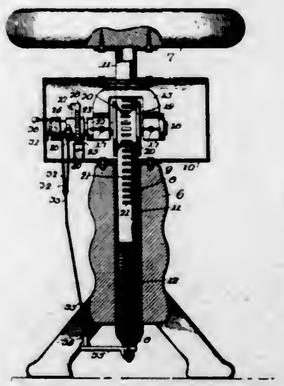
[Claims 6 to 14 not printed in the Gazette.]

873,248. JACK OR LIFTING DEVICE. ISIDORE J. LAGASSE and NORCISSE NORMAND, New Bedford, Mass. Filed Feb. 4, 1907. Serial No. 355,730.



In a lifting jack, a hollow interiorly screw-threaded body portion, a hollow screw mounted therein, having threaded engagement therewith, a central screw within said hollow screw and having threaded engagement with the same, and having a head upon its upper end integral therewith, a head provided with an angular portion in the upper end of said hollow screw, a toothed ratchet head having an angular opening fitting over said angular portion of said head, a lever with an annular opening rotatably mounted on said ratchet head and a pawl on said lever for coöperation with the teeth of said ratchet head, said lever being removable from said ratchet head and both said lever and said ratchet head being adjusted to be removed from the lifting jack over the head of said central screw.

873,249. STOOL. EDWARD P. LANG and CHARLES J. KALBE, Chicago, Ill. Filed Mar. 15, 1907. Serial No. 362,488.



1. The combination of a pedestal, a seat standard movable up and down therein, a pair of gear wheels supported on the pedestal and engaging the standard, and means to turn either wheel, to raise or lower the standard including a treadle and pawl and ratchet connections between the treadle and each wheel.

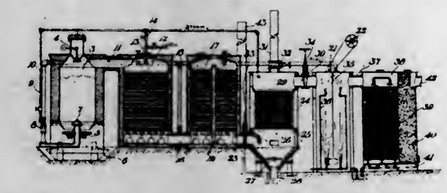
2. The combination of a pedestal, a seat standard movable up and down therein, a pair of gear wheels supported

on the pedestal and engaging opposite sides of the standard, a clutch for each wheel, and means to turn either wheel, to raise or lower the standard, according to the engagement of either clutch including a treadle pivoted on the pedestal, and pawl and ratchet connections between the treadle and each clutch.

3. Means to raise or lower a seat standard, comprising, in combination, a pair of gear wheels acting oppositely on the standard, a clutch and ratchet connected to each wheel, to turn the same, an operating lever, a pawl for each ratchet, connected to said lever, and means to engage one clutch and disengage the other, to turn either wheel.

4. Means to raise or lower a seat standard, comprising, in combination, a pair of gear wheels acting oppositely on the standard, a clutch for each wheel, one member of which is fast on the wheel shaft and the other of which is a sleeve loose thereon, a ratchet on the sleeve, a pawl for each ratchet, means to simultaneously operate both pawls, and means to shift the sleeves to engage one clutch and disengage the other.

873,250. GAS MANUFACTURE. HENRY I. LEA, Pittsburg, Pa. Filed July 24, 1905. Serial No. 270,912.



1. The method of manufacturing gas which consists in passing air through a fuel bed in such quantities as to support only partial combustion, then in enriching the resultant gas by introducing hydrocarbon oil into it, then in burning enough of said gas in the presence of said hydrocarbon oil so that the heat resulting from the combustion, together with the sensible heat of the gas, will be sufficient to break up the hydrocarbon oil into vapors and fix said vapors into permanent gases which are mechanically mixed with the remainder of the gas, thereby producing a permanent gas of relatively high thermal value.

2. The method of manufacturing gas which consists in passing air through a fuel bed in such quantities as to support only partial combustion, then enriching said gas by introducing an enricher into it, then burning a portion of the gas for fixing the enricher into permanent gases and allowing the products of combustion to mingle with the enriched gas.

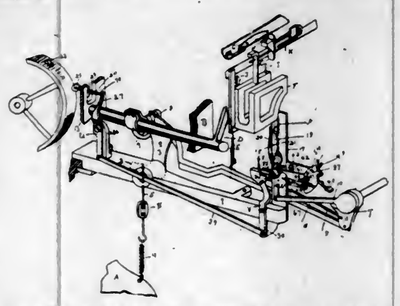
3. The method of manufacturing gas which consists in passing air through a fuel bed in such quantities as to support only partial combustion, passing said gas through a chamber, introducing carbonaceous material into said chamber with said gas, burning a portion of said gas within said chamber so that the heat of combustion resulting therefrom, together with the sensible heat of the gas, will break up the carbonaceous material into vapors, and fix the vapors into permanent gases which, together with the products of combustion, mix with the gas to produce a permanent gas of relatively high thermal value.

4. The method of manufacturing gas which consists in passing air through a fuel bed in sufficient quantities to support only partial combustion, then passing the gas resulting therefrom through a chamber, introducing carbonaceous oil into said chamber with said gas, burning a portion of the gas within said chamber so that the heat of combustion resulting therefrom will break up the carbonaceous material into vapors and fix the vapors into permanent gases which, together with the products of combustion, mix with the gas to produce a permanent gas of high thermal value.

5. The method of manufacturing gas which consists in generating producer gas, passing said gas through a chamber, introducing an enricher into said chamber and maintaining a fixing temperature within said chamber by admitting air thereto and thereby burning a portion of said gas within said chamber.

[Claims 6 to 8 not printed in the Gazette.]

873,251. LINOTYPE-MACHINE. CHARLES T. LIBBY and GEORGE G. BABCOCK, Portland, Me.; said Babcock assignor to said Libby. Filed Dec. 26, 1905. Serial No. 293,172.



1. In a linotype machine, in combination, an assembling elevator, elevator raising mechanism comprising a source of power and intermediate connecting mechanism, a make and break connection in said intermediate mechanism, a cam lever rigidly mounted on the line delivery carriage shaft having one face adapted to break the connection at predetermined times, and a second face adapted to energize the elevator raising mechanism.

2. In a linotype machine, in combination, an assembling elevator, elevator raising mechanism comprising a source of power and intermediate connecting mechanism, a make and break connection in said intermediate connecting mechanism, a cam lever rigidly mounted on the line delivery carriage shaft having one face adapted to break the connection and a second face adapted to energize the elevator raising mechanism and restore the connection in the make and break mechanism.

3. In a linotype machine, an assembling elevator, elevator raising mechanism comprising a source of power and intermediate connecting mechanism, a make and break connection in said intermediate mechanism, a pivot latch adapted to hold the elevator down and means operable by a moving part of the machine to release said elevator holding latch.

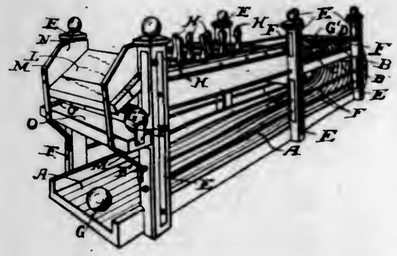
4. In a linotype machine, in combination, an assembling elevator, elevator raising mechanism comprising a source of power and intermediate mechanism, a make and break connection in said intermediate mechanism, a pivoted latch for holding the elevator down, a pivoted latch lever, one end in engagement with and adapted to disengage the latch and the other in the path of mechanism operable by some moving part of the machine to operate the latch lever, to disengage the latch.

5. In a linotype machine, in combination with a mechanically actuated assembling elevator, means for holding the elevator down, means for disengaging said holding means comprising a spring impelled piston mounted in a pivoted lever and means actuated by a moving part of the machine to operate said piston lever to automatically release the latch.

[Claims 6 to 25 not printed in the Gazette.]

873,252. BOWLING-ALLEY. CHARLES LUFSKY, Chicago, Ill. Filed Apr. 8, 1907. Serial No. 366,921.

1. The combination of a bowling alley bed with a series of rods extending transversely across the bed and in a plane above such bed, a pin pivotally mounted on the forward rod of the series and a plurality of pins on the remaining rods of the series, all of such pins arranged with the bottoms thereof adjacent to and not in contact with the bed, and an additional series of rods also extending transversely across the bed and in a plane above such bed, such additional rods respectively arranged to permit a ball to roll thereunder on the bed and to permit the upper end of the pins to move past the same and the lower end to contact therewith and rest thereon when such pins are turned on their respective rods by the ball on the bed moving towards the discharge end thereof, substantially as described.



2. In a bowling alley, the combination of a going bed, a curved bed and a return bed, rods above the return bed, pins pivotally mounted on the rods with the bottom of the pins adjacent to and not in contact with the bed and additional rods above the return bed, such additional rods respectively arranged to permit a ball to roll thereunder on the bed and to permit the upper end of the pins to move past the same and the lower end to contact therewith and rest thereon when such pins are turned on their respective rods by the ball on the bed moving toward the discharge end thereof, and means to stop the forward motion of such ball as it is discharged from the return bed, and to deliver it to one side of the bed; substantially as described.

3. In a bowling alley, the combination of a bed, rods above the bed, pins pivotally mounted on the rods with the bottom of the pins adjacent to and not in contact with the bed, tubes on the rods to determine the position of the pins on the rods, and additional rods above the bed, such additional rods arranged to permit partial turning of the pins on the respective rods on which they are mounted and to form a stop to the pins; substantially as described.

4. In a bowling alley, the combination of a going bed, a curved bed and a return bed, a table at the discharge end of the return bed, the upper surface of such table below the upper surface of the return bed, and one end of such table in a plane below the other end thereof, and an inclined board above the discharge end of the return bed and above the table; substantially as described.

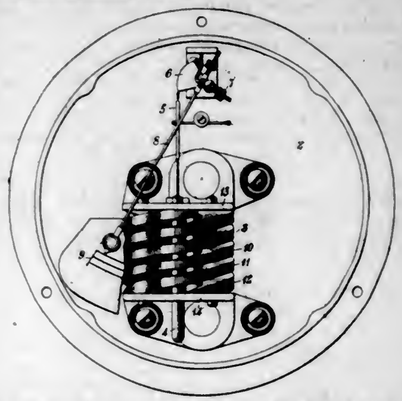
873,253. COIL FOR ELECTRICAL APPARATUS. PAUL MACGAHAN, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Oct. 18, 1905. Serial No. 283,338.

1. A solenoid comprising a plurality of interleaved single layer helices of substantially equal diameter and length and connected in parallel relation.

2. A solenoid comprising a plurality of interleaved, equally spaced helices of equal length and conducting rings connecting corresponding ends together.

3. An actuating coil for electrical measuring instruments comprising a plurality of interleaved, helices of the same diameter and separated throughout by air spaces and means for electrically connecting corresponding ends together.

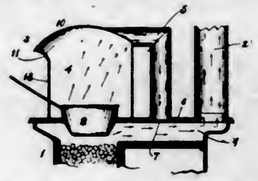
4. A multiple solenoid comprising a plurality of helical strap coils symmetrically disposed and separated from each other by uniform air spaces, and means for connecting corresponding ends together.



5. A solenoid comprising a plurality of interleaved helices uniformly separated from each other by air spaces and connected in parallel relation.

[Claim 6 not printed in the Gazette.]

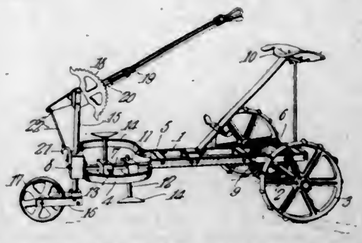
873,254. ATTACHMENT FOR STOVES. ARTHUR H. MERRILL, Hartford, Conn. Filed Dec. 10, 1906, Serial No. 347,118. Renewed Oct. 9, 1907. Serial No. 396,665.



1. An attachment for stoves or other heaters, comprising a shell having an open front, and a curved top wall, said curved wall merging in a depending reëntrant flange where it joins the open-front, and thus serving as a trap to prevent the emission of odors, and a vent-conduit leading from said shell and adapted to communicate with the draft-space of said heater, and to secure the attachment upon the top of the heater.

2. An attachment for heaters comprising a shell having a curved top, and an open front joined to the top by a reëntrant flange to prevent the emission of odors due to back-draft; and conduits leading from the shell and fitting in openings in the rear stove lids.

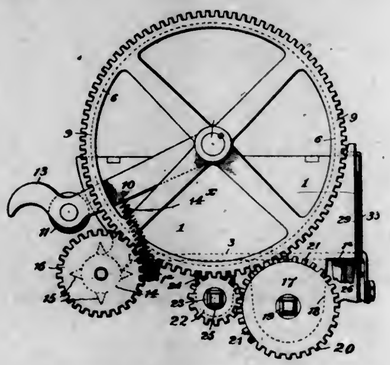
873,255. COTTON-CHOPPER. HARDY P. MIZELL, Waxahachie, Tex. Filed July 31, 1907. Serial No. 386,397.



An implement as described comprising a frame having at its forward ends oppositely and laterally bowed portions,

wheeds supporting the rear end of the frame, a journaled shaft mounted upon the frame and extending longitudinally thereof, means operatively connecting the shaft with said wheels, choppers mounted upon the shaft and operating between the bowed portion of the frame, a bearing block mounted upon the forward end of the frame and to one side of the shaft, a shaft slidably journaled in said bearing block, a ground wheel attached to the lower end of the last said shaft and a lever mechanism attached to the upper end of the last said shaft.

873,256. FAT-CUTTING MACHINE. ELMER E. MOTTER, Tippecanoe City, Ohio. Filed July 6, 1905. Serial No. 268,387.



1. In a machine of the character described, the combination with a series of circular revoluble slicing knives, of a feed roller adapted to automatically feed material to said knives as the latter are being operated, and a presser roller mounted in a frame pivoted on the slicing knife shaft and adapted to press the material into engagement with the feed roller.

2. In a machine of the character described, the combination, with a casing having a slotted top plate and a slotted bottom plate, of a series of circular revoluble slicing knives mounted on a shaft arranged just above said top plate, each knife arranged in one of the slots in the top plate and extending into one of the slots in the bottom plate, a cross cut knife adapted to pass across the discharge end of said casing, and means to actuate said knives.

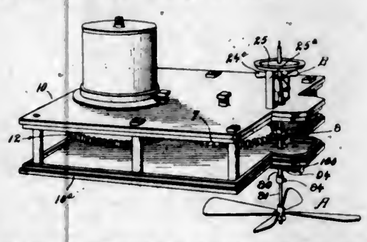
3. In a machine of the character described, the combination with a casing, a series of slicing knives mounted on a common shaft, a gear wheel on said shaft, a cross-cut knife arranged to move across the discharge end of the casing, a gear for operating said cross-cut knife, a doube interrupted gear pivoted to the casing and having one row of teeth adapted to mesh with the gear wheel on the slicing knife shaft and another row of teeth adapted to mesh with the cross-cut knife operating gear, and means to actuate said double gear whereby the material is sliced and the slices cut into blocks continuously.

4. In a machine of the character described, the combination with a casing, a series of slicing knives mounted on a common shaft, a gear wheel on said shaft, a cross-cut knife arranged to move across the discharge end of the casing, a gear for operating said cross-cut knife, a double gear with interrupted teeth pivoted to the casing, and having one of its rows of teeth adapted to mesh with the gear wheel on the slicing knife shaft; said cross-cut knife operating gear mounted on a slidable shaft whereby it is adapted to engage the rear wheel on the slicing knife shaft or the inner row of teeth on said double gear.

5. In a machine of the character described, the combination with a casing, a series of slicing knives mounted on a common shaft, a gear wheel on said shaft, a feed roller carrying a gear meshing with said gear wheel, a cross-cut knife arranged to move across the discharge end of the casing, a gear for operating said cross-cut knife, a double interrupted gear pivoted to the casing and having one row of teeth adapted to mesh with the rear wheel on the slicing knife shaft and another row of teeth adapted to mesh with the cross-cut knife operating gear, and means to actuate said double gear whereby the material is sliced and the slices cut into blocks continuously.

[Claim 6 not printed in the Gazette.]

873,257. FAN. THOMAS M. MULKERINS, Chicago, Ill. Filed June 25, 1906. Serial No. 323,257.



In a fan, in combination, a casing having upper and lower plates, a motor mounted thereon, a tubular fan shaft extending through the casing and mounted in bearings on said plates, gearing within the casing, between the shaft and the motor, a spindle adjustable lengthwise within the shaft, a fan, and means to attach the same to either end of the spindle.

873,258. ORNAMENTAL ARTICLE FOR PERSONAL WEAR. MICHAEL E. MCDONNELL, Loeminster, Mass. Filed Dec. 14, 1906. Serial No. 347,885.



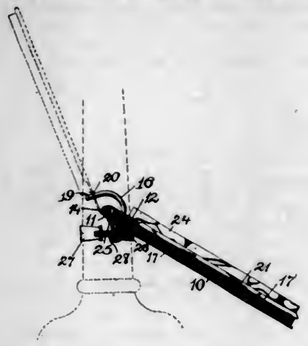
1. An article for personal wear comprising a non-opaque body having a plain, smooth face, teeth integral with said body, and a hollow non-opaque ornament cemented to the face of said body.

2. An article for personal wear comprising a pressed non-opaque body having a smooth, plain face, teeth integral with said body, ornaments carried by the head of said body, and hollow non-opaque ornaments cemented to the face of said body.

3. An ornamental comb for personal wear comprising a non-opaque body having a smooth, plain face, and a hollow non-opaque ornament having its edges cemented to the body.

4. An article for personal wear comprising a plain smooth faced body of celluloid or similar material, means carried by said body adapted to secure the same upon the person, and a hollow pressed ornament of material similar to that of the body with its edges finished to fit the same and cemented thereto.

873,259. TELEPHONE-DIRECTORY. CHARLES E. NAPP, Trenton, N. J. Filed Feb. 25, 1907. Serial No. 359,235.



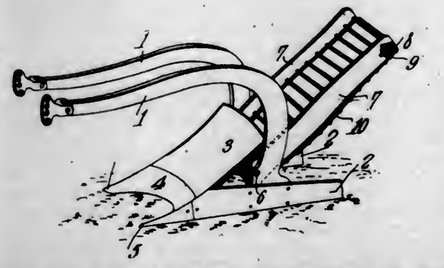
1. A telephone directory comprising a pair of plates hinged on one end, index cards on one plate, a memorandum pad on the second plate, the second plate having slots therein, hooks secured to one plate and passing through the slots in the second plate, the hooks for a portion of their length being concentric to the hinge of the plates and having a straightened portion on their ends, the hooks thus acting to limit the outward swing of the plates.

2. A telephone directory comprising a pair of plates having loops on one end, a removable pintle in the loops to form a hinge, one of the plates having slots therein, hooks on the other plate passing through the slots, the hooks being concentric for a portion of their length to the hinge of the plates, and having straightened portions on their ends, and means for attaching the directory to a telephone.

3. A telephone directory, comprising a plate having means for attaching it to a telephone, a second plate mounted pivotally on one end of the first plate, a pair of hooks on the first plate passing through the second plate, the hooks having straightened ends, index cards on the first plate, the index cards having perforations on the hooks, and means on the second plate for attaching a memorandum pad thereto.

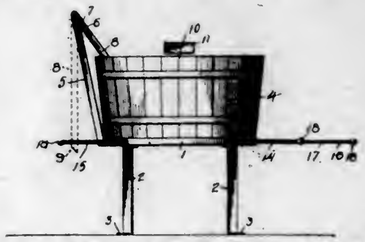
4. A telephone directory comprising a plate having means for attaching it to a telephone, a second plate mounted pivotally on one end of the first plate, a pair of hooks on the first plate passing through the second plate, the hooks having straightened ends, index cards on the first plate, the index cards having perforations on the hooks, and a tongue on the second plate projecting toward the hooks, and a memorandum pad slid on the tongue.

873,260. COMPOST DIGGER AND ELEVATOR. GEORGE NOLL, Winchester, Kans. Filed Aug. 8, 1907. Serial No. 387,725.



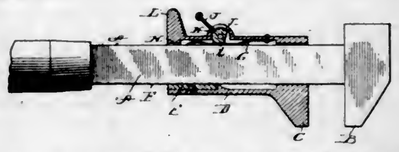
An implement as described comprising beams, land side plates attached to the outer sides of the rear ends of the beams, a conveyer located between the beams and being attached to the inner sides thereof, a plow share attached to the landside plate and a concaved mold board attached to the landside plates and having its rear end lying between the beams and over the conveyer.

873,261. TUB-RACK. SIMON K. PAINTER, Liberty, W. Va. Filed Mar. 22, 1906. Serial No. 307,465.



A devicce of the type set forth comprising an annular band having an upstanding circumferential flange, said band being formed to surround the bottom of a tub, supporting legs depending from said band, a wash board support projecting upwardly and outwardly from said band and being formed at its upper end with spaced apertured ears, said ears being formed for pivotal connection with the side sills of a wash board.

873,262. WRENCH. HERMAN A. PAQUETTE, Washington, D. C., assignor, by mesne assignments, to Persy S. Angle, Washington, D. C. Filed Jan. 11, 1907. Serial No. 351,871.



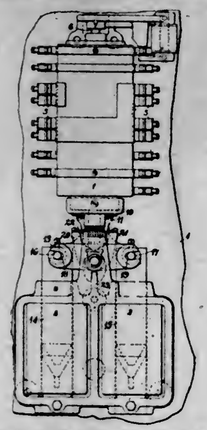
A wrench comprising a shank carrying a fixed jaw and formed with a series of teeth, a movable jaw slidably mounted on the shank and formed with teeth to coöperate with the teeth of the shank, a spring carried by the movable jaw and having its free terminal bent laterally to rest upon the shank, that portion of the spring in rear of said terminal being normally free of contact with the shank, and a locking member eccentrically mounted in the movable jaw, said member being formed with a plane portion to engage the spring in rear of the free terminal when the member is in open position to reinforce the spring bearing of said terminal on the shank, said member being also formed with a second plate portion to engage the spring in rear of the terminal when the member is in operative position, whereby to force said engaged portion of the spring into binding contact with the shank.

873,263. ELECTRIC-CIRCUIT CONTROLLER. WILLIAM A. PARIS, Edgewood Park, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 3, 1906. Serial No. 304,093.

1. In a controller, the combination with a rotatable, contact-carrying member and coöperating contact fingers, of a pair of solenoids the axes of which are parallel to the axis of the rotatable member, cores for said solenoids, operating connections between said cores and said rotatable member, and means for automatically returning the drum to its off position when both solenoids are deënergized.

2. In a controller, the combination with a rotatable, contact-carrying member and coöperating contact fingers, of means for moving said rotatable member through a pre-

determined angle in either direction comprising a pair of similar electro-magnets having similar armatures mounted to operate in lines parallel to the axis of the rotatable member, a pivotally-mounted driving member connected to the outer extremities of the armature and provided with a gear member and a coöperating gear member attached to one end of the contact-carrying member.



3. In a controller, the combination with a rotatable, contact-carrying member provided with a gear segment, and stationary contact fingers, of actuating means for said member comprising a pair of similar electro-magnets, armatures for said magnets the axes of which are substantially parallel to the axis of the rotatable member, and a second gear segment which engages the segment on the rotatable member and is connected to said magnet armatures.

4. In a controller, the combination with a rotatable, contact-carrying drum and stationary engaging contact fingers therefor, of means for rotating said drum through a predetermined arc in either direction, said means comprising a pair of similar electro-magnets and movable core members therefor, the axes of which are parallel to the axis of the drum, a lever pivotally mounted upon an axis that is perpendicular to that of the drum and connected, at its ends, to the movable core members, and a pair of complementary gear segments which are respectively attached to the rotatable drum and to the lever.

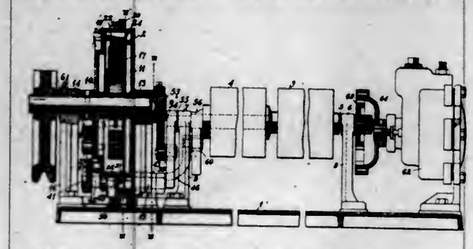
5. The combination with a base of insulating material, a pair of similar electro-magnets and cylindrical cores, the axes of which are parallel to each other and to said base, a rotatable, contact-carrying drum the axis of which is also parallel to the base, stationary engaging fingers, and a gear segment attached to one extremity of the drum, of a shaft perpendicular to the plane of the magnets, a complementary gear segment mounted upon said shaft to engage the gear segment which is attached to the drum and provided with projections that are so connected to the extremities of said cylindrical cores that motion of the cores produces a rotative movement of the drum, and means for automatically returning the drum to a predetermined position.

[Claims 6 and 7 not printed in the Gazette.]

873,264. CONTROLLER FOR ELECTRIC MOTORS. WILLIAM A. PARIS, Edgewood Park, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 5, 1907. Serial No. 366,497.

1. In a controller, the combination with a contact-bearing drum, a driving member, and a resilient conection between said members, of means for exerting a substantially constant turning moment upon the drum as it is moved through a predetermined angle.

2. In a controller, the combination with a contact-bearing drum, a latch for preventing its motion, a driving member, and a resilient connection between them, of means for tripping the latch when a predetermined movement has been imparted to the driving member, and means for exerting a substantially constant turning moment upon the drum as it is moved through a predetermined angle.



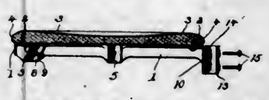
3. In a controller, the combination with a driven member, means for temporarily preventing motion thereof, a driving member, and a resilient connection between the two members, of means for releasing the driven member when a predetermined movement has been imparted to the driving member, and means for exerting a substantially constant force during a predetermined motion of the driven member.

4. In a controller, the combination with a contact-bearing member, a driving cam, a driven cam, and a resilient connection between the cams, of connecting means interposed between the driven cam and the contact-bearing members for varying the ratio of forces transmitted from the driving cam to the contact-bearing member.

5. In a controller, the combination with a contact-bearing drum, a driving cam, a driven cam, and a spiral spring connecting the two cams, of means interposed between the driven cam and the contact-bearing member for varying the ratio of forces transmitted from the driving cam to the contact-bearing member.

[Claims 6 and 7 not printed in the Gazette.]

873,265. METALLIC CHAIR. JOHN H. PETROSKEY, Detroit, Mich., assignor to Ideal Register and Metallic Furniture Company, Detroit, Mich., a Corporation of Michigan. Filed July 11, 1907. Serial No. 383,162.



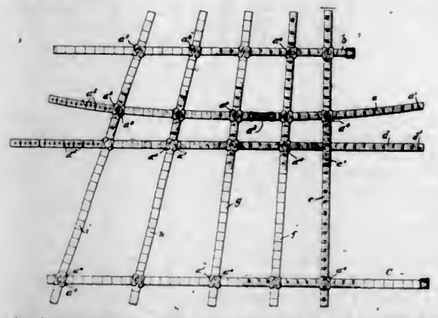
1. A chair having tubular metal supports and back, a seat ring, inset oblique half-sockets integral with the ring, clips therefor adapted to engage the front supports, projecting half-sockets integral with the ring adapted to receive the rear supports and backs, clips securing the rear supports and back whose margins are interlocked with the margins of the said rear sockets against longitudinal displacement, a seat body in the ring whose margin projects beyond the ring, and corner and cross-braces secured to the chair supports and ring.

2. A chair having tubular metal supports and back, an inwardly flanged seat ring, inset oblique half-sockets integral with the ring, clips therefor adapted to engage the front supports, projecting half-sockets integral with the ring adapted to receive the rear supports and backs, clips securing the rear supports and back, gains on the margins of the clips engaging tenons on the margins of the rear sockets, a seat body in the ring flange whose margins project beyond the ring, and corner and cross-braces secured to the chair supports and ring.

3. A chair comprising an inwardly flanged seat-ring of metal, oblique half-sockets formed integrally with the ring inset into the ring aperture, tubular front legs whose upper ends lie in said sockets, U-clips mating the sockets securing the front legs therein, screws passing through the clips and tubing engaging the ring sockets, dependent outwardly extending half-sockets formed integrally on lugs projecting from the ring opposite the inset sockets whose vertical margins are tenoned, tubular rear legs and back lying in said sockets, U-clips mating with the sockets whose margins are gained to interlock with the tenons of the socket margin, screws passing through the clips and rear legs entering the seat ring, projecting full sockets formed integrally on the ring between the back-sockets, back tubing whose ends are secured in said sockets, a seat on the ring whose margin extends beyond the ring, and corner and cross-braces engaging the tubular members and seat ring.

4. A chair comprising an inwardly flanged seat ring of metal, oblique half sockets formed integrally with the ring inset into the ring aperture, tubular front legs whose upper ends lie in said sockets, U-clips mating the sockets securing the front legs therein, screws passing through the clips and tubing engaging the ring sockets, dependent outwardly extending half-sockets formed integrally on lugs projecting from the ring opposite the inset sockets whose vertical margins are tenoned, a back and rear legs formed of a single piece of tubing bent to appropriate shape lying in said sockets, U-clips mating with the sockets whose margins are gained to interlock with the tenons of the socket margin, screws passing through the clips and rear legs entering the seat ring, projecting full sockets formed integrally on the ring between the back sockets, back tubing bent between its ends to lie between and correspond to the upper portion of the back to which it is tangentially secured at its center point by a screw whose ends are secured in said sockets, a seat on the ring whose margin extends beyond the ring, and corner and cross-braces engaging the tubular member and seat-ring, and screws securing the ends of the back tubing in the full sockets.

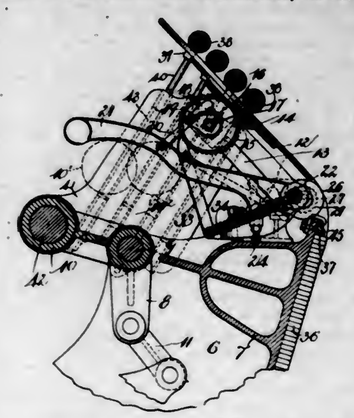
873,266. MACHINE OR DEVICE TO BE USED IN MEASURING AND CUTTING SKIRTS. VIRGINIA A. PHOEBUS, New York, N. Y. Filed Mar. 27, 1907. Serial No. 364,747.



An improved measuring apparatus for skirts comprising a number of metal measuring bands adapted to fasten horizontally about the hips of the human figure, a flexible measuring band adapted to fasten about the waist, a flexible band adapted to fasten about the figure just above the knees and a series of perpendicular measuring tapes intersecting said horizontal bands and tapes to afford vertical measurements, together with double slide ways to receive said horizontal bands and tapes and said vertical tapes at their points of intersection, and weights having means of attachment for the lower ends of said vertical tapes.

873,267. INK-DISTRIBUTING MECHANISM FOR PRINTING-PRESSES. GEORGE W. PROUTY, Boston, Mass., assignor to The Imperial Art Press Co., a Corporation of Maine. Filed Feb. 26, 1907. Serial No. 359,409.

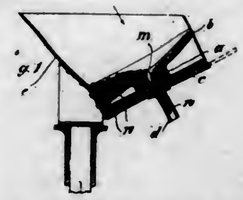
1. In a printing press, an ink distributer disk and mechanism adapted to impart an intermittent rotary motion thereto embodying a pivoted arm and a rock-lever adapted to engage said arm in sliding contact during a portion of its rocking movement and a stop-screw on said arm adapted to engage a stationary member, whereby the extent of movement of said arm in one direction may be determined.



2. In a printing press, an ink distributer disk, an elbow lever, a pair of bevel gears operatively connected to said distributer disk, a pawl and ratchet mechanism connected to one of said bevel gears and adapted to impart an intermittent rotary motion thereto, a pivoted arm, a link connecting said arm and ratchet mechanism, a rock-lever adapted to engage said arm and impart a rocking movement thereto during a portion of the rocking movement of said rock-lever, and a stop-screw having screw-threaded engagement with said arm and adapted to engage a stationary member, whereby the extent of movement of said arm in one direction is limited.

3. In a printing press, an ink distributer disk, a bevel gear fast to said disk, a second bevel gear meshing into said first bevel gear, a ratchet connected to said second bevel gear, a pawl adapted to operatively engage said ratchet, a rocking pawl carrier on which said pawl is mounted, a pivoted arm, a link connecting said arm and said pawl carrier, a rock-lever adapted to engage said arm and impart a rocking movement thereto during a portion of the rocking movement of said rock-lever, and an adjustable stop adapted to limit the extent of movement of said arm in one direction.

873,268. DEVICE FOR AUTOMATICALLY DELIVERING ARTICLES OF MANUFACTURE FROM A COLLECTING-RECEPTACLE. PAUL RAABE, Karlsruhe, Baden, Germany, assignor to Deutsche Waffen-und Munitionsfabriken, Berlin, Germany. Filed June 27, 1907. Serial No. 381,180.



1. A device of the type described for delivering articles comprising in combination a receptacle having an inclined bottom for said articles, a disk-shaped body revoluble at the bottom of said receptacle having a hole at its center and one or more carrying members proceeding from said hole towards the outside edge of the disk and forming ways, and means for rotating said body, whereby when said body is rotated articles are carried from the stock of

the same in said receptacle and are delivered at the center of said body.

2. A device of the type described for delivering articles comprising in combination a receptacle having an inclined bottom for said articles, a disk-shaped body revoluble at the bottom of said receptacle having a hole at its center and one or more guiding members proceeding from said hole towards the outside edge of the disk, and means for rotating said body, whereby when said body is rotated articles are carried from the stock of the same in said receptacle and are delivered at the center of said body.

3. A device of the type described for delivering articles comprising in combination a receptacle having an inclined bottom for said articles, a disk-shaped body revoluble at the bottom of said receptacle having a hole at its center and one or more grooves proceeding from said hole towards the outside edge of the disk, a tube connected with said hole and means for rotating said body, whereby when said body is rotated articles are carried upwards in said grooves from the stock of the same in said receptacle and then slide down in consequence of their own weight in the grooves to the center of the disk and fall into the tube.

4. A device of the type described for delivering articles comprising in combination a receptacle having an inclined bottom for said articles, a disk-shaped body revoluble at the bottom of said receptacle having a hole at its center and one or more curved grooves proceeding from said hole towards the outside edge of the disk, a tube connected with said hole and means for rotating said body, whereby when said body is rotated articles are carried upwards in said grooves from the stock of the same in said receptacle and then slide down in consequence of their own weight in the grooves to the center of the disk and fall into the tube.

5. A device of the type described for delivering articles comprising in combination a receptacle having an inclined bottom for said articles, a disk-shaped body revoluble at the bottom of said receptacle having a hole at its center and a plurality of carrying members proceeding from said hole to the outer edge of the body, means for rotating said body and a swinging member attached to said body adapted to prevent all said carrying members except the uppermost communicating with said hole, whereby when said body is rotated articles are carried from the stock of the same in said receptacle and are delivered at the center of said body.

[Claim 6 not printed in the Gazette.]

873,269. WATER-HEATING DEVICE. ALLAN C. SARGENT, Westford, Mass., assignor to C. G. Sargent's Sons, Westford, Mass., a Corporation of Massachusetts. Filed Apr. 11, 1907. Serial No. 367,510.



1. The combination with a water tank having a sloping bottom of steam pipes and downwardly inclined nozzles connected with said steam pipes for directing steam into the tank located near the upper part of said bottom, whereby said nozzles will direct the steam and a current of water downwardly along said bottom and remove sediment and the like therefrom.

2. The combination with a water tank having downwardly converging sloping bottoms, of downwardly inclined nozzles for directing steam into the tank located near the upper sides of said bottoms, additional nozzles entering the tank at the side between the bottoms, and independent valves for controlling the supply of steam to said nozzles.

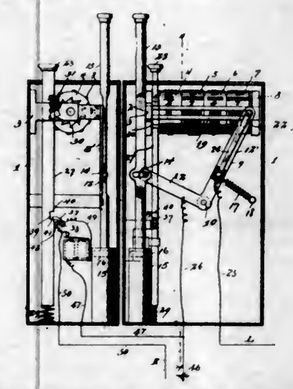
3. The combination with a water tank, of clean out steam inlet nozzles near, and parallel with, the bottom of the tank, and a steam inlet nozzle at a distance therefrom, said nozzles comprising a support secured to the side wall of the tank and a guard on said support extending into the tank beyond the open end of the nozzle.

4. The combination with a water tank having a sloping bottom, of steam pipes and downwardly inclined nozzles connected with said steam pipes for directing steam into the tank, and hoods located over said steam pipes for preventing the steam from rising directly from the ends thereof, whereby the steam and current of water will be directed downwardly along said bottom.

5. The combination with a water tank, of a steam injecting nozzle having a support fixed to a wall of the tank, a pipe entering the tank through said wall and support and carried by said support, means carried by said support for directing water from the tank along the outer surface of the pipe toward the discharge end thereof, and a hood covering the top of said nozzle to prevent the rising of the steam directly from the end thereof.

[Claims 6 to 9 not printed in the Gazette.]

873,270. REGISTER. LOUIS A. SCHMIDT, Chicago, Ill., assignor of one-half to James E. Plew, Chicago, Ill. Filed Feb. 10, 1902. Serial No. 93,412.

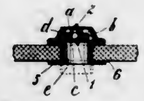


1. In an electrical register, the combination of a series of tally wheels, a ratchet and push-button mechanism for stepping said tally wheels forward to record the number of calls, a circumferential series of groups of contact points upon each tally wheel each group corresponding in number of points to one of the digits, a traversing slide guided to reciprocate across said series of tally wheels, a spring-pressed vibrating contact device operatively mounted in said slide, an electric circuit, circuit interrupting means actuated by said vibrating contact device and included in said circuit which is alternately opened and closed by the vibrations of said contact device, a manually operable actuating device for moving said slide across the series of tally wheels, operable independently of said ratchet push-button, and an electric signal operatively connected with said ratchet push-button mechanism.

2. In an electrical register, the combination of a series of tally wheels, a ratchet and push-button mechanism for stepping said tally wheels forward to record the number of calls, a circumferential series of groups of contact points upon each tally wheel each group corresponding in number of points to one of the digits, a traversing slide guided to reciprocate across said series of tally wheels, a spring-pressed vibrating contact device operatively mounted in said slide, an electric circuit, circuit interrupting means actuated by said vibrating contact device and included in said circuit which is alternately opened and closed by the vibrations of said contact device, a manually operable actuating device for moving said slide across the series of tally wheels, operable independently of said ratchet push-button, a retarding mechanism governing the moving of said slide actuating device, and an electric signal operatively connected with said ratchet push-button mechanism.

3. In an electrical register, the combination of a series of tally wheels, a ratchet and push-button mechanism for stepping said tally wheels forward to record the number of calls, a circumferential series of groups of contact points upon each tally wheel each group corresponding in number of points to one of the digits, a traversing slide guided to reciprocate across said series of tally wheels, a spring-pressed vibrating contact device operatively mounted in said slide, an electric circuit, circuit interrupting means actuated by said vibrating contact device and included in said circuit which is alternately opened and closed by the vibrations of said contact device, a manually operable actuating device for moving said slide across the series of tally wheels, operable independently of said ratchet push-button, a retarding mechanism governing the moving of said slide actuating device, means operating to automatically return said slide actuating device to its normal position, and an electric signal operatively connected with said ratchet push-button mechanism.

873,271. FASTENING DEVICE. JOHANN SENN, Berne, Switzerland. Filed Sept. 16, 1905. Serial No. 278,691.



1. A fastening device for laces, comprising a flanged attaching shank, a plate superposed thereon, a cap uniting the peripheries of said shank-flange and plate, and a roller rotatably mounted between said cap and plate; the cap having orifices to permit a lace to be passed behind the roller.

2. A fastening device for laces, comprising a flanged attaching shank, a plate superposed on the flange of said shank, a cap uniting said plate and flange throughout their peripheries, and a roller rotatably mounted between said cap and plate; said cap having orifices to permit a lace to be passed behind the roller.

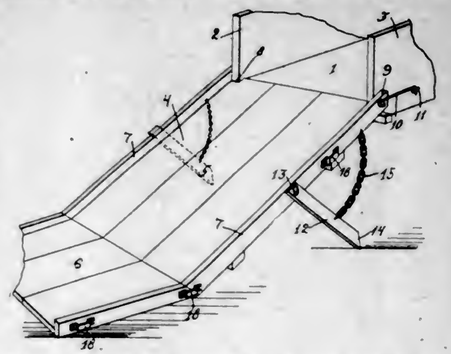
3. A fastening device for laces, comprising a hollow flanged attaching shank, a plate resting on said flange, a cap having its edges compressed about the edges of the plate and shank-flange to unite the parts, and a roller rotatably mounted in depressions in the cap and plate; said cap having orifices to permit a lace to be passed behind the roller.

4. A fastening device for laces, comprising a recessed plate, a laterally apertured cap having a recessed top, a roller rotatably mounted in said plate and cap, and means for attaching the fastening to an article of apparel; said cap apertures being suitably located to permit a lace to be passed behind the roller.

5. A fastening device for laces, comprising a hollow, flanged attaching shank, a recessed plate resting on said flange, an externally-smooth, recessed cap uniting said plate and shank-flange throughout their peripheries, a roller journaled in the recesses of said cap and plate, and means for securing said shank to an article of apparel.

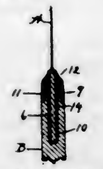
873,272. SKID. CLIFFORD SHELEY, Norton, Kans. Filed May 31, 1907. Serial No. 376,545.

The combination with a vehicle body having a bottom and upright sides, of a skid having an angular body consisting of a bottom and side bars upon the longitudinal edges of said bottom, said skid body being adapted to project into the vehicle body and rest upon the bottom of the same, the upper corners of the bottom of the skid being formed with notches to receive the upright sides of the vehicle body, the side bars upon the skid body having their upper ends extended beyond said notches to engage the outer faces of the sides of the vehicle body, detachable fastenings connecting said side bars of the skid body to the vehicle body, legs pivoted to the skid and adapted to engage the ground and flexible connections between said legs and the skid body, substantially as described.



873,273. [WITHDRAWN.]

873,274. TABLE-CUTLERY. WILLIAM H. SMITH, New Britain, Conn., assignor to Landers, Frary and Clark, New Britain, Conn., a Corporation. Filed Nov. 13, 1906. Serial No. 343,234.



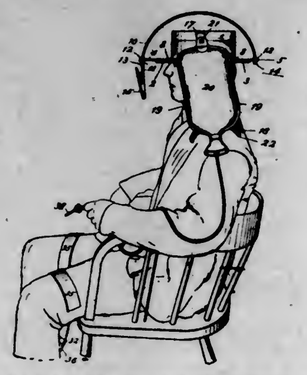
1. In table cutlery, the combination of a handle having longitudinal and cross bores with a ferrule on the end of the said handle in position to cover the ends of the cross bore, an implement having a flat tang inserted within the said longitudinal bore, and a combined bolster and filling formed of cast metal, the said bolster being outside of the tip end of the ferrule and forming the junction of the handle and implement, the filling at the cross bore being concealed by the said ferrule.

2. In table cutlery, a handle having a tenon at its smaller end, a closed or imperforate butt end, a longitudinally bore extending inwardly from its smaller end to the depth that the implement tang is designed to enter, and a cross bore in the said tenon that extends into the central bore of the said handle, in combination with a ferrule open for its full size at each end and fitted upon the tenon of the said handle, an implement having a notched tang with its major portion extended through the said ferrule, into and partly filling the said central bore of the said handle while a connecting portion of the said tang remains between the body of the said implement and the smaller end of the said handle and outer end of the said ferrule, and a combined bolster and filling of cast metal with its bolster portion on the connecting portion of the said tang between the body of the implement and outer end of the ferrule and its filling portion around the said shank within the said handle and ferrule.

873,275. CATHETER-USER'S PORTABLE MECHANICAL ASSISTANT. JAMES F. SPALDING, Kansas City, Mo. Filed Mar. 29, 1907. Serial No. 365,425.

1. In an apparatus of the character described, a headpiece, front and rear extensions thereon, a guide secured to said extensions, an elastic cord carried by the guide, and means carried by said cord for supporting a catheter.

2. In an apparatus of the character described, a suitable head-piece, a tube carried thereby, an elastic cord carried by said tube, and means attached to said elastic cord for supporting a catheter.



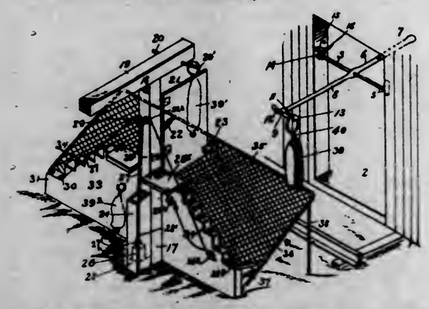
3. In an apparatus of the character described, a suitable head-piece, front and rear arms secured thereto, a guide carried by said arms, a resilient device carried by said guide, and means carried by said resilient device for supporting a catheter.

4. In an apparatus of the character described, a suitable head-piece, a curved guide detachably secured to the front and rear thereof, resilient means carried by said guide, and a device for supporting a catheter secured to said resilient means.

5. In an apparatus of the character described, a syringe support adapted to rest upon the user's shoulder, and a head-piece adapted to hold the upper end of said support.

[Claims 6 to 13 not printed in the Gazette.]

873,276. DEVICE FOR RECEIVING AND DELIVERING MAIL-POUCHES. BUELL STANLEY, Herndon, Va. Filed Oct. 22, 1907. Serial No. 398,557.



1. In a device for receiving and delivering mail pouches to and from railroad cars, while in motion, and holding same when delivered, in combination with a railroad car, a bar 3, pivoted near the upper end of the door opening of said car in bearings 4 and 5; a ratchet-wheel 14, rigidly secured to one end of said bar; a dog, pivoted to the face of said door, and adapted to work with said ratchet-wheel; a handle 6, extending inwardly from said bar; an extension handle 7, hinged to the inner end of said handle 6; an arm 8, having a square end 9, extending outwardly from said bar; delivering and receiving arms 11 and 12, secured, horizontally, on said square end 9; a post 17, erected on the side of the railroad track; a cross-beam 19, secured on the top of said post, and having secured to its inner end, rods 20 and 20^1, running parallel with said track; a swinging door 21, hinged to said post, and made to swing immediately under said cross-beam, by means of springs 22; a ring 23, secured to the lower end and inner corner of said door; a wall 33, provided with steps 34, and platforms 28^5, and 28^6, secured to the inner face of said post 17, some little distance from said track and running parallel therewith; a wire gauze, running inwardly and upwardly from the base of said wall, nearly to and under the door of the car; a housing 24, secured to the outer face of said post, having a weight-seat; pulleys 28^3, secured to the right-hand end of said wall; pulleys 30, secured to the left-hand end of said wall; pulleys 28^2 and 29, secured to the outer face of said post, near its top end; a weight 26, seated in said housing; a cable 27, having one end 27^1, secured to said weight, passing up over pulley 29, thence down over pulleys 30, its free end provided with a hook 32, and adapted to be hooked in the ring 23, of said door, or in the hook 28^7, secured to the platform 28^6, of said wall, and a cable 28, having one end 28^1, secured to said weight, passing thence upwardly over pulleys 28^2, then downwardly over pulleys 28^3, its free end adapted to be hooked to said ring 23, or to the hook 28^4, secured to the platform 28^5, substantially as shown and described and for the purposes set forth.

2. In a device for receiving and delivering mail pouches to and from railroad cars, while in motion, and holding same when delivered, in combination with a railroad car, a bar 3, journaled near the top of the door of said car; a ratchet-wheel 14, rigidly secured near one end of said bar, said bar adapted to be held in position by a dog 15; a handle 6, extending inwardly from said bar; delivering and receiving arms 11 and 12, respectively, secured horizontally to the free end of said arm 8; a post 17, erected near the railroad track; a beam 19, secured horizontally on the upper end of said post; rods 20—20^1, secured to the inner end of said post and running parallel to said track; a swinging door 21, hinged to the inner face of said post, and springs 22, causing said door to swing immediately under the inner end of said cross-beam 19, substantially as shown and described and for the purposes set forth.

3. In a device for receiving and delivering mail pouches to and from railroad cars, while in motion, and holding same when delivered, the combination of a post erected near a railroad track; a wall 33, provided with steps 34 and platforms 28^5, and 28^6, secured to the inner face of said post, and running parallel with said track; a wire gauze, secured in a frame 36, its outer edge secured to the base of said wall, its inner edge running inwardly and upwardly, nearly to the door of said car and a little below the door; legs 38, supporting the inner edge of said wire gauze, and a foot-board 37, resting on said frame near its outer edge, substantially as shown and described and for the purposes set forth.

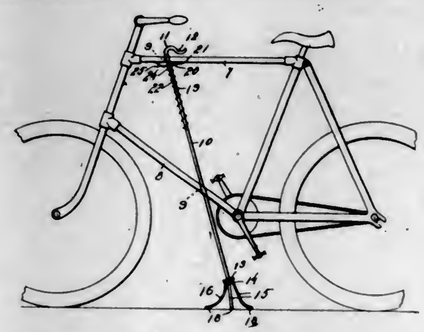
873,277. PROCESS OF DYEING. GUSTAV A. WALDINGER and CARL F. ISERLOTH, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Dec. 29, 1906. Serial No. 349,973.

1. The herein-described process of dyeing vegetable fibers with sulfur dyestuffs, which process consists in dyeing vegetable fiber in a dyebath containing sulfur dyes, alkaline sulfids and salts of fixed bases, capable of binding alkali, substantially as described.

2. The herein-described process of dyeing vegetable fibers with sulfur dyestuffs, which process consists in dyeing vegetable fiber in a dyebath containing sulfur dyes, alkaline sulfids and sodium bicarbonate, substantially as described.

873,278. BICYCLE ATTACHMENT. JOSEPH J. WALTERS, Binghamton, N. Y. Filed May 2, 1907. Serial No. 371,488.

1. The combination, with a bicycle frame having alining openings formed diagonally through its upper frame bars, of a rod slidable through said openings; a plate carried by said rod at its lower end; radially-disposed ground-engaging members; secured to said plate; means for normally holding said rod in raised position; means carried by said rod for lowering the same against the action of said first-mentioned means; and means for retaining the rod in lowered position.



2. The combination with a bicycle frame having upwardly and forwardly inclined openings formed through its upper and lower frame bars in alinement with each other; a rod movable endwise through said openings; a plate secured to the lower end of said rod; radially-disposed ground-engaging feet carried by said plate, each foot having its lower end grooved and provided with an elastic tread; means for normally holding said rod in raised position; means carried by said rod for lowering the same against the action of the first-mentioned means; and means for retaining the rod in lowered position.

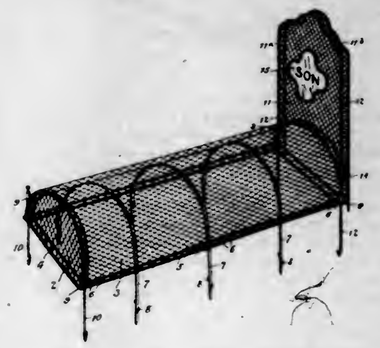
3. The combination with a bicycle frame having upwardly and forwardly inclined openings formed through its upper and lower frame bars in alinement with each other; each of said openings being rectangular in cross-section; a rod movable endwise through said openings and having its opposite ends squared, to prevent its rotation during such movement; a plate secured to the lower end of said rod; radially-disposed ground-engaging members secured to said plate; means for normally holding said rod in raised position; means carried by said rod for lowering the same against the action of the first-mentioned means; and means for retaining the rod in lowered position.

4. The combination with a bicycle frame having upwardly and forwardly inclined openings formed through its upper and lower frame bars in alinement with each other; each of said openings being rectangular in cross-section; a rod movable endwise through said openings and having its opposite ends squared, to prevent its rotation during such movement; a plate secured to the lower end of said rod; radially-projecting ground-engaging feet carried by said plates, each foot having its lower end grooved and provided with an elastic tread, one foot being forwardly inclined and disposed directly beneath the lower frame bar; means for normally holding said rod in raised position; means carried by the rod for lowering the same against the action of said first-mentioned means; and means for retaining the rod in lowered position.

873,279. COVER FOR DECORATING MOUNDS, GRAVES, AND OTHER SIMILAR PURPOSES. CARL WEBER-ILLIG, Delawanna, N. J. Filed Nov. 11, 1905. Serial No. 286,800.

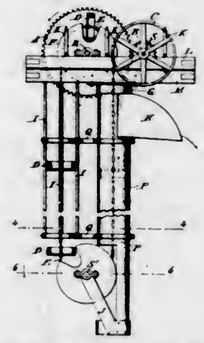
1. A cover for graves, mounds and the like, comprising an inner and outer body portion of wire mesh, adapted to fit over a grave and so arranged with respect to each other as to provide an interspace or receptacle of equal transverse dimensions throughout and in which can be positively confined moss, earth, artificial or natural flowers, and means for maintaining a definite distance between the inner and outer body portions; said means including sockets on the outer body portion, and independent removable anchoring rods bearing in said sockets.

2. A cover for graves, mounds, and the like, comprising an inner and an outer body portion of wire mesh adapted to fit over a grave and so arranged relatively with each other as to provide a space between them for the reception of moss, ferns, earth, artificial or natural flowers, means for maintaining a definite distance between the inner and outer body portion, a head or foot piece comprising two walls spaced apart to provide space between them



for holding moss, ferns, earth, leaves, etc., and having an opening for receiving and retaining a slab, stone or inscription plate, and means for interlocking said head or foot piece with the cover, and for securing the same to the ground.

873,280. CHAIN-PUMP. CHARLES J. WILLIAMS, Prosser, Wash. Filed June 19, 1906. Serial No. 322,490.



1. In a chain pump, the combination with a stock, of a guide formed of a plurality of separated strips, hoops surrounding the strips to support the strips in position, and means extending from the hoops and engaging the stock to hold the guide parallel to the stock.

2. In a chain pump, the combination with a frame, a stock supported from the frame, a second frame mounted over the first frame, means for adjusting said second frame toward and away from the first frame, chain operating mechanism including a chain pulley upon the upper frame, a second chain pulley secured to the lower end of the stock and a pump chain extending over said pair of pulleys.

3. In a chain pump, the combination with a frame, a stock supported from the frame, a second frame mounted over the first frame, means for adjusting said second frame toward and away from the first frame, chain operating mechanism including a chain pulley upon the upper frame, a second chain pulley secured to the lower end of the stock and a pump chain extending over said pair of pulleys and having buckets mounted thereon.

873,281. SIGHT FOR FIREARMS. JAMES WINDRIDGE and GEORGE S. WILCOX, Middlefield, Conn., assignors to The Lyman Gun Sight Corporation, Middlefield, Conn., a Corporation of Connecticut. Filed Feb. 23, 1907. Serial No. 358,899.



1. A sight for firearms, comprising a base having longitudinally extending flanges, a sight-carrying lever mounted on the base between the flanges, an abutment on the base situated between the flanges, and a slide on the lever above the abutment and coacting therewith.

2. A sight for firearms, comprising a base having longitudinally extending flanges, a sight-carrying lever mounted on the base between the flanges, an abutment on the base situated between the flanges, a slide on the lever above the abutment and coacting therewith, the engaging surfaces of the slide and abutment being inclined, and means for clamping the slide to hold it immovable on the lever.

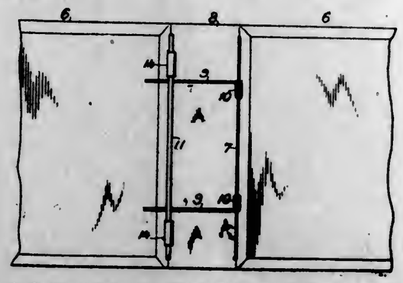
3. In a sight for firearms, the combination of a base, a sight-carrying lever hinged to the base and having a longitudinal slot or way that extends from the hinge, and an abutment on the base lying in said slot, and a slide guided in said slot, said abutment and slide having co-acting surfaces.

4. In a sight for firearms, the combination of a base, a sight-carrying lever hinged to the base and having a longitudinal slot or way that extends from the hinge, an abutment on the base lying in said slot, a slide guided in said slot, said abutment and slide having co-acting surfaces, and a clamping device for the slide having an operating member overlying the slide on the top of the lever.

5. In a sight for fire arms, the combination of a base, a sight carrying lever hinged to the base, a slide carried by said lever, an abutment on the base in the path of the slide, a clamping device for the slide having a rotatable member overlying the lever on the top thereof, and projecting beyond the sides of the lever, said member serving as a means for moving the slide.

[Claims 6 to 9 not printed in the Gazette.]

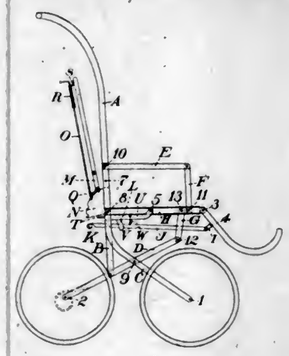
873,282. BINDER AND LETTER-FILE. ERNST A. P. WOLF, New York, N. Y. Filed Mar. 2, 1907. Serial No. 360,193.



1. A file or binder of the class described comprising a back, flaps attached thereto, pins attached to one of such flaps, a plate disposed longitudinally of the outer flap forming a channel, with side flanges for said flap and provided with openings for the reception of the pin, and slides embracing and slidable on the flanges of such strip and adapted to move over the ends of the pins, bend them down and secure them.

2. A binder or file of the class described comprising a backing having a pair of flaps, pins attached to one of the flaps, the other flap being provided with a longitudinal channel and side flanges for such channel, slides movable on the last mentioned flaps over the channel thereof, engaging the flanges at the sides of such channel and adapted to be forced over the ends of the pins to bend them down and hold them.

873,283. COLLAPSIBLE GO-CART. JOHN WOLFENDEN, Minneapolis, Minn., and JOHN KNUTSON and LEWIS LARSEN, Menominee, Mich., assignors, by direct and mesne assignments, to Harris Aronson and Meyers Rosenstein, St. Paul, Minn. Filed Feb. 23, 1907. Serial No. 359,028.



1. As a new article of manufacture, a collapsible go-cart designed to be stood on end when collapsed, and comprising in combination, a body composed of a seat, sides, and a back therefor, supporting wheels, main side bars connecting the body with the supporting wheels, means for normally supporting the body in a position above said wheels and means for effecting collapsing movement of the body and side bars aforesaid to cause these parts to assume positions between the wheels of the go-cart and comprising a rest co-acting with the wheels to support the go-cart on end, when collapsed.

2. As a new article of manufacture, a go-cart of the type described designed to be stood on end when in collapsed position and comprising in combination, a seat, sides, and a back therefor, supporting wheels, pivotally connected side bars connecting the body and the wheels and normally supporting the body above the wheels, and a handle for the go-cart connected with the main side bars aforesaid to collapse the cart, and comprising a rest co-acting with the wheels to support the go-cart on end when collapsed.

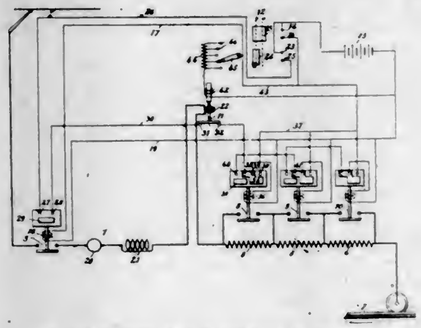
3. As a new article of manufacture, a go-cart of the type described, designed to be stood on end when in collapsed position and comprising in combination, a seat, sides, and a back therefor, supporting wheels, pivotally connected side bars connecting the body and the wheels and normally supporting the body above the wheels, a handle for the go-cart connected with the main side bars aforesaid to collapse the cart, and comprising a rest co-acting with the wheels to support the go-cart on end when collapsed, and means admitting of adjustment of the back of the go-cart independently of said handle.

4. A collapsible go-cart designed to be stood on end when in collapsed position and comprising a body, supporting wheels therefor, main side bars connecting the body and the supporting wheels and adapted to fold in collapsing the go-cart, and means for effecting positive folding movement of the side bars to cause the body to assume a position between the wheels of the go-cart, the body of the go-cart including a back mounted thereon and adjustable independently of the last mentioned means.

5. In a collapsible go-cart of the type described, designed to be stood on end when collapsed, the combination of supporting wheels, a body normally supported above said wheels, a member for collapsing the go-cart to cause the body to assume a position between the wheels and comprising means co-acting with certain of the wheels of the go-cart as a rest to support the go-cart on end when it is collapsed.

[Claims 6 to 12 not printed in the Gazette.]

873,284. CONTROL SYSTEM FOR ELECTRIC MOTORS. LOUIS M. ASPINWALL, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Apr. 4, 1906. Serial No. 309,897.



1. The combination with a plurality of motor-controlling switches that are adapted to close in a predetermined sequence, a master controller and a limit switch for retarding the operation of said motor-controlling switches, of an independently controlled means for regulating the action of the limit switch.

2. The combination with a plurality of motor-controlling switches that are adapted to close in a predetermined sequence, a master controller and a limit switch for retarding the operation of said motor-controlling switches, an opposing magnet coil for said limit switch, and means independent of the master controller for varying the ampere turns in said coil.

3. The combination with a plurality of motor-controlling switches that are adapted to close in a predetermined sequence, a master-controller and a limit switch for retarding the operation of said motor-controlling switches, an opposing magnet coil for said limit switch, a resistance in series circuit therewith, and an independently operated switch for varying the said resistance.

4. The combination with an electric motor, resistance sections in series therewith, short-circuiting switches for said resistance sections that are adapted to close in a predetermined sequence, a master controller and a single limit switch, of means for adjusting the operation of the limit switch, said means comprising a switch the operation of which is independent of the master controller.

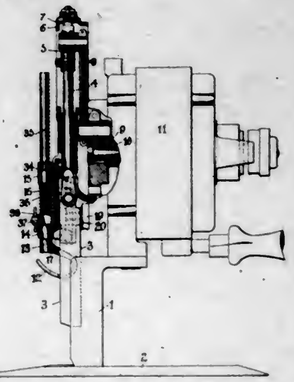
5. The combination with an electric motor, resistance sections in series circuit therewith, switches that are adapted to short-circuit the resistance sections, a limiting switch which is dependent for its action upon the current flowing in the motor circuit, and a master controller, of an auxiliary magnet coil and means for varying the ampere turns of said coil, said means comprising an independently operated switch.

[Claim 6 not printed in the Gazette.]

873,285. CLOTH-CUTTING MACHINE. GEORGE L. BALLARD, Norristown, Pa., assignor to Wildman Manufacturing Company, Norristown, Pa. Filed June 4, 1907. Serial No. 377,222.

1. In combination in a machine of the class described, a knife, means for moving the same, and a guard for the knife pivoted to one side of the machine, the said guard swinging in a substantially horizontal plane.

2. In combination in a machine of the class described, a knife, means for operating the knife and a guard frame pivoted to one side of the machine to swing in a substantially horizontal plane, the said pivot being substantially in the same transverse plane in which the knife lies, substantially as described.



3. In combination in a machine of the class described, a knife, means for operating the same, a frame pivoted to one side of the longitudinal axis of the machine to swing in a substantially horizontal plane and a presser foot carried by the said frame, substantially as described.

4. In combination in a machine of the class described, a knife, means for operating the knife, a frame pivoted to one side of the longitudinal axis of the machine to swing in a substantially horizontal plane, a presser foot carried by the said frame and means for adjusting the said presser foot, said adjusting means being also carried by the said frame, substantially as described.

5. In combination in a machine of the class described, a knife, means for operating the same, a frame pivoted to one side of the longitudinal axis of the machine swinging in a substantially horizontal plane and a support to which the said frame is pivoted, said support being detachably connected with the main frame of the machine substantially as described.

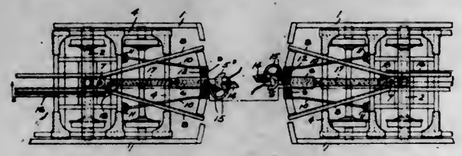
[Claims 6 to 13 not printed in the Gazette.]

873,286. MUSIC-SHEET HOLDER. FRANK W. BARROWS, Cambridge, Mass. Filed Apr. 16, 1907. Serial No. 368,528.



In a music-sheet holder, a back, lips extending forward and upward from the lower edge of the back on opposite sides of the center for supporting the sheets of music, a short lip extending forward and inward from substantially the central portion of one side edge of the back, and a roof extending forward from the upper edge of the back and adapted to protect the music-sheets from rain or snow.

873,287. COMBINED CAR AND TRAIN-PIPE COUPLING. JOHN W. BARTH, Pittsburg, Pa. Filed Mar. 8, 1905. Serial No. 249,040.



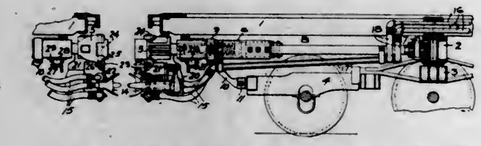
1. In a combined train pipe and car coupler, the combination of an automatic car coupler, draft rigging therefor pivoted to the car body, connections between said coupler and the truck for moving the former with the truck, an automatic train pipe coupler member connected to the swinging draft rigging, and a pipe section connected to the draft rigging and flexibly connected to the train pipe and also to the coupling member.

2. In a combined train pipe and car coupler, the combination of an automatic car coupler, draft rigging therefor pivoted to the car body, connections between said coupler and the truck for moving the former with the truck, an automatic train pipe coupler member connected to the swinging draft rigging, a pipe section mounted on the draft rigging, and hose sections flexibly connecting said pipe sections to the train pipe and also to the coupling member.

3. A car having a draft gear mounted to swing radially and having a guiding connection with the car truck, and pipes extending along the draft gear and having flexible connections with corresponding pipes extending along the car frame; substantially as described.

4. A car having a draft gear mounted to swing radially and having a guiding connection with the car truck, pipes extending along the draft gear and having flexible connections with corresponding pipes extending along the car frame, and brackets on the draft gear by which said pipes are held; substantially as described.

873,288. COMBINATION CAR AND TRAIN-PIPE COUPLING. JOHN W. BARTH, Pittsburg, Pa. Filed Jan. 19, 1907. Serial No. 353,127.



1. In a railway car, the combination of a draft gear mounted to swing radially and having a guiding connection with the car truck, an automatic pipe coupling head carried by said draft gear, and anti-friction devices supporting said draft gear.

2. In a railway car, the combination of a draft gear mounted to swing radially and having a guiding connection with the car truck, an automatic train pipe coupling head carried by said draft gear, a bracket on which said draft gear moves laterally, and an anti-friction device between said draft gear and bracket.

3. In a railway car, the combination of a draft gear mounted to swing radially and having a guiding connection with the car truck, a bracket on which said draft gear is supported, and anti-friction rollers between said bracket and draft gear.

4. In a railway car, the combination of a draft gear mounted to swing radially and having a guiding connection with the car truck, a bracket on which said draft gear moves laterally, and anti-friction rollers mounted on the lower face of said draft gear and supporting the latter on the bracket.

5. In a railway car, the combination of a draft gear mounted to swing radially and having a guiding connection with the car truck, an automatic train pipe coupling head carried by said draft gear, a bracket on which said draft gear moves laterally, and anti-friction rollers between said draft gear and bracket.

[Claims 6 to 9 not printed in the Gazette.]

873,289. MUSICAL INSTRUMENT. JOHN A. BARTHOLOMEW, New York, N. Y. Filed Apr. 20, 1907. Serial No. 369,340.



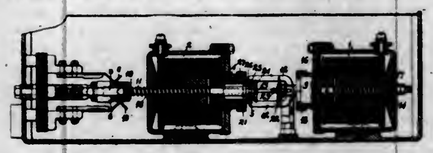
1. A musical instrument or mouth whistle composed of top and bottom plates, connected at the back and at the opposite sides and open at the front and provided centrally with apertures, said device being provided at the front with an open extended neck portion, and a transversely arranged open tubular member connected therewith and in communication therewith.

2. A musical instrument or mouth whistle composed of top and bottom plates connected at the back and at the opposite sides and open at the front and provided centrally with apertures, said device being also provided at the front with an open extended neck portion having transverse perforations in the top and bottom thereof and having also a transversely arranged tubular member connected therewith and in communication therewith and open at both ends.

3. A musical instrument or mouth whistle composed of top and bottom plates connected at the back and at the opposite sides and open at the front and provided centrally with apertures, said device being also provided at the front with an open extended neck portion, having a transversely arranged tubular member connected therewith and in communication therewith and open at both ends, and said tubular member being open at the front side thereof and provided with a horn which communicates therewith.

4. A musical instrument or mouth whistle composed of top and bottom plates connected at the back and at the opposite sides and open at the front and provided centrally with apertures, said device being also provided at the front with an open extended neck portion, having a transversely arranged tubular member connected therewith and in communication therewith and open at both ends, and said tubular member being open at the front side thereof and provided with a horn which communicates therewith, the neck portion of the device and the back portion thereof being also provided with holes or apertures.

873,290. ELECTRIC APPARATUS. HOWARD L. BEACH, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 3, 1906. Serial No. 304,095.



1. The combination with a movable contact member having a ratchet device, and actuating and holding pawls to engage said device, of a spring and an electro-magnet acting alternatively and oppositely upon the actuating pawls, means for holding the pawls out of engagement with the ratchet device, and a spring and an electro-magnet acting alternately and oppositely upon said means.

2. The combination with a movable contact member having a ratchet device and stationary contact fingers, of actuating and holding pawls, an electro-magnet for moving the actuating pawls forwardly and a spring for moving them rearwardly to effect a step-by-step movement of the contact member to engage said fingers successively, and a spring-actuated means for releasing the ratchet device from the pawls.

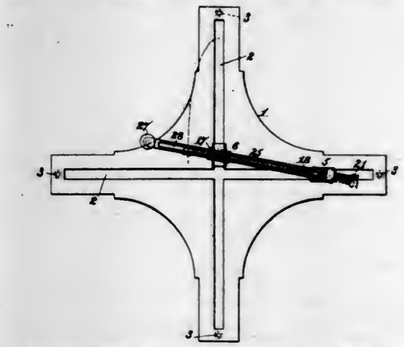
3. The combination with a movable contact member having a ratchet device and stationary contact fingers, of electro-magnetically-actuated pawls for automatically moving said member into engagement with said fingers successively, and springs for moving said pawls rearwardly and for moving them out of engagement with the ratchet device.

4. The combination with a longitudinally movable contact member, stationary contact terminals and a ratchet member attached to the movable member, of pawls for engaging the ratchet member, an electro-magnet and a spring acting in opposition upon said pawls to move the contact member step-by-step into engagement with the stationary fingers successively, means for holding said member in each position to which it is moved, and means for releasing the ratchet member from the pawls when the interruption of the circuit is desired.

5. The combination with a longitudinally movable contact member, stationary contact terminals and a ratchet member attached to the movable member, of electro-magnetically-actuated means for engaging the ratchet member to move the contact member step-by-step into engagement with the stationary terminals successively, and means for holding the movable member in each position to which it is moved.

[Claims 6 to 23 not printed in the Gazette.]

873,291. ELLIPSOGRAPH. NIELS D. S. K. BECK, Chicago, Ill. Filed May 22, 1907. Serial No. 375,039.



1. An ellipsograph comprising a frame, legs supporting the same, slides mounted on the frame, a bar adjustably fixed to said slide, an instrument holder rigidly fixed on one end of said bar, and means for depressing the holder and moving the same while depressed for drawing an ellipse.

2. An ellipsograph comprising a cruciform frame having slotted arms, legs supporting the frame, slides movable in the slots of the arms, adjustable connection at the underside of the frame for connecting the slides, an instrument holder and instrument arranged thereon a handle mounted on one of the slides and disposed above the frame, and means connecting the handle with the other slide for depressing said holder and instrument, substantially as described.

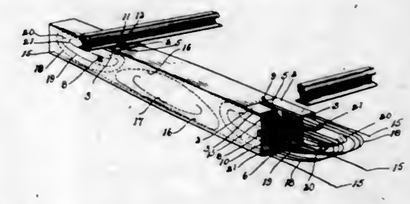
3. In a device of the class described, a cruciform slotted frame, in combination with a pair of slides mounted in respective slots, blocks pivotally secured to respective slides, a bar slidably mounted in said blocks and having a scale marked thereon, an instrument holder, fixed to one end of said bar, means for adjusting said blocks on said bar in relation to each other and to said instrument holder and means for lowering said holder and causing the same to revolve, substantially as described.

4. In a device of the class described, a cruciform slotted frame, in combination with a pair of slides mounted in respective slots, blocks pivotally arranged beneath said slides, a bar slidably connecting said blocks, an instrument holder and instrument arranged at the end of said bar, a handle pivotally arranged above one of said slides and adapted to lower the block on the other said slide to bring the instrument into contact with the surface to be marked and also to cause the same to revolve, substantially as described.

5. In a device of the class described, a cruciform slotted frame, in combination with a pair of slides mounted in respective slots, a block arranged beneath each said slide and having a stud extending vertically through said slide and forming pivots for said blocks, a bar slidably mounted in said blocks, an instrument holder and instrument fixed to one end of said bar adjacent to one of said blocks, a handle pivoted to the stud on the other said block and adapted to depress the first said block to cause the same to lower the instrument into contact with the paper and also adapted to cause the same to revolve, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

873,292. RAILWAY-TIE. LOUIS BLESSING, Jackson, Mich. Filed Apr. 20, 1907. Serial No. 369,266.



1. A railway tie comprising a molded body of cementitious material provided with embedded reinforcing cable loops and straight cable reinforcing members, recesses in the upper face of the tie near each end thereof, cross-pins extending transversely through the recesses, metal rail seats resting on the tie face and rail bolts detachably engaging the cross-pins extending upwardly past the rail seats, provided with rail-locking members on their outer ends.

2. A railroad tie comprising a molded body of cementitious material, recesses in the upper face, near each end, metal cross-pins passing transversely through the recesses, a series of cable reinforcing loops embedded in the body between the recesses, a series of cable reinforcing loops embedded in the body encircling the cross-pins, metal rail seats secured on the face of the tie and rail bolts detachably engaging the cross-pins, extending upwardly beyond the rail seats, provided with rail clamping members.

3. A railroad tie comprising a molded body of cementitious material, recesses in the upper face near each end, metal cross-pins passing transversely through the recesses, a series of reinforcing cable loops embedded in the body between the recesses, with their upper sides convexly curved and their lower sides straight, a series of reinforcing cable loops embedded in the body encircling the cross-pins with their lower sides downwardly curved, and their upper sides parallel to the upper face of the tie, metal rail seats on the face of the tie and rail bolts detachably engaging the cross-pins extending upwardly beyond the rail seats, provided with rail clamping members.

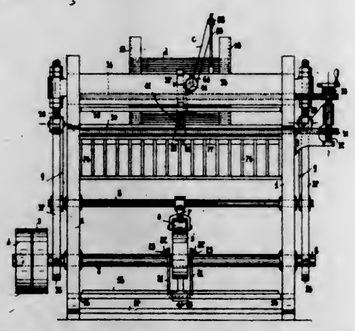
4. A railroad tie comprising a molded body of cementitious material, recesses in the upper face near each end, metal cross-pins passing transversely through the recesses, a series of reinforcing cable loops embedded in the body between the recesses, an outer set of reinforcing cable loops embedded in the body, encircling each cross-pin with their lower sides downwardly curved and their upper sides straight, similar inner concentric sets of reinforcing loops encircling the cross-pins, some of which have their straight portions cut away between the ends, sets of embedded straight reinforcing cable members extending from end to end outside of the loops, metal rail seats on the upper face

of the tie, rail bolts detachably engaging the cross-pins, extending upwardly beyond the rail seats, provided with rail locking members.

5. A railroad tie comprising a molded body of cementitious material, wedge-shaped recesses on the upper face near each end provided with drain ducts passing down through the tie, metal cross-pins passing transversely through the recesses, a plurality of sets of reinforcing cable loops embedded in the body, part of which encircle the cross-pins, apertured metal rail seats resting on the upper face and rail bolts detachably engaging the cross-pins, extending upwardly beyond the seats, provided with rail clamping members.

[Claims 6 to 9 not printed in the Gazette.]

873,293. MACHINE FOR PUNCHING JACQUARD-CARDS FOR LACE-MACHINES. HENRI CARBONNELLE, Uccis, Belgium. Filed Sept. 22, 1905. Serial No. 279,621.



1. In a card punching machine of the class described, the combination with a transverse punch-box carrier, and means for vertically reciprocating said carrier, of a punch-box adjustably arranged on said carrier, a normally stationary die-plate registering with said punch-box, a plurality of vertically movable punches in said punch-box, a corresponding number of plungers or selecting pins transversely arranged above the punches, a selecting needle suitably connected with each plunger, a spring fitted around each plunger and having a tendency to move the same above the corresponding punch, a rotatable drum, carried by the punch-box and arranged in front of said needles, longitudinal slots in said drum, means for normally holding the plungers in their inoperative position and liberating the same only when the punch-box is lowered, and means for moving the drum after each stroke of the punch-box, substantially as set forth.

2. In a card punching machine of the class described, the combination with a transverse punch-box carrier, and means for vertically reciprocating said carrier, of a punch-box adjustably arranged on said carrier, a normally stationary die-plate registering with said punch-box, suitable support for said die-plate guided on the frame of the machine, a horizontal transversely-arranged rack connecting said support, another horizontal transversely-arranged rack above the former and secured to the punch-box, a vertical rotatable shaft and means for manually actuating the same, toothed pinions on said shaft arranged to mesh with said racks, a plurality of vertically movable punches in said punch-box, a corresponding number of plungers or selecting pins transversely arranged above the punches, a selecting needle, suitably connected with each plunger, a spring fitted around each plunger and having a tendency to move the same above the corresponding punch, a rotatable drum, carried by the punch-box and arranged in front of said needles, longitudinal slots in said drum, means for normally holding the plungers in their inoperative position and liberating the same only when the punch-box is lowered, and means for moving the drum after each stroke of the punch-box, substantially as set forth.

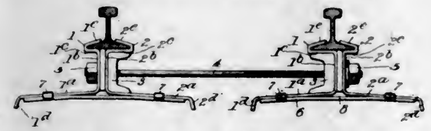
3. In a card punching machine of the class described, the combination with a transverse punch-box carrier, and means for vertically reciprocating said punch-box carrier, of a punch-box adjustably arranged on said carrier, a normally stationary die-plate registering with said punching-box, means for simultaneously adjusting said punch-box and die-plate for each operation, a plurality of vertically movable punches in said punch-box, a corresponding number of plungers transversely arranged above the punches, a corresponding number of selecting needles, arranged horizontally above said punch-box and suitably connected with the plungers normally to move them to their operative positions above the punches, and means for holding said plungers normally out of engagement with the punches, and liberating the same only when the punch-box is lowered, a rotatable drum carried by the punch-box and arranged in front of the free ends of the selecting needles, longitudinal slots in the cylindrical wall of said drum, and means for moving the drum after each stroke of the punch-box, substantially as set forth.

4. In a card punching machine of the class described, the combination with a transverse punch-box carrier, and means for vertically reciprocating said punch-box carrier, of a punch-box adjustably arranged on said carrier, a normally stationary die-plate registering with said punch-box, means for adjusting simultaneously said punch-box and said die-plate for each operation, a plurality of vertically movable punches in said punch-box, a corresponding number of plungers transversely arranged above the punches, a corresponding number of selecting needles arranged horizontally above said punch-box and suitably connected with the plungers means for causing the plungers normally to move to their operative positions above the punches, a stop-plate transversely arranged on one side of the punch-boxes, to hold the needles and plungers normally in their inoperative position, horizontal guide rods attached to said stop-plate and slidably arranged in the top portion of said punch-box, lever-arms on the opposite ends of each guide-rod, a common pivotal pin, on which the lower ends of said arms are pivoted, a suitable extension on one of said arms, arranged to permanently engage a stationary part of the frame, a suitable spring for holding said extension in engagement with said stationary part and causing the lever-arms to swing on their pin when the punch-box is lowered, a rotatable drum, carried by said punch-box and arranged in front of the free ends of the selecting needles, longitudinal slots in the cylindrical wall of said drum, and means for moving the drum after each stroke of the punch-box, substantially as set forth.

5. In a card punching machine of the class described, the combination with a transverse punch-box carrier, and means for vertically reciprocating said punch-box carrier, of a punch-box adjustably arranged on said carrier, a normally stationary die-plate registering with said punch-box and said die-plate for each operation, a plurality of vertically movable punches in said punch-box a corresponding number of plungers transversely arranged above the punches, a corresponding number of selecting needles, arranged horizontally above said punch-box and suitably connected with the plungers, means for causing the plungers normally to move in their operative position above the punches, a stop plate transversely arranged on one side of the punch-box to hold the needles and plungers normally in their inoperative position, horizontal guide-rods attached to said stop-plate and slidably arranged in the top portion of said punch-box, lever-arms on the opposite ends of said guide-rods, a common pivotal pin, on which the lower ends of said arms are pivoted, a suitable extension on one of said arms, arranged to permanently engage a stationary part of the frame, a suitable spring for holding said extension in engagement with said stationary part and causing the lever-arms to swing on their pin when the punch-box is lowered, a rotatable drum carried by said punch-box and arranged in front of the free ends of the selecting needles, longitudinal slots in the cylindrical wall of said drum, a ratchet-wheel, made one with said drum, and a co-operating pawl carried by one of said lever-arms and adapted to engage and rotate said ratchet-wheel when the lever arms swing on their common pivotal pin, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

873,294. RAILWAY-TIE. WILLIAM H. CASTLE, Geneva, Ohio. Filed Apr. 23, 1907. Serial No. 369,778.



1. A rail chair comprising a base, a vertical portion and an upper horizontal portion arranged more on one side of said vertical portion than on the other and having means to grip a rail.

2. A rail chair comprising a base, a vertical portion and an upper horizontal portion arranged more on one side of said vertical portion than on the other and having means to grip a rail and a support for the wider side of said upper portion arranged between it and the base.

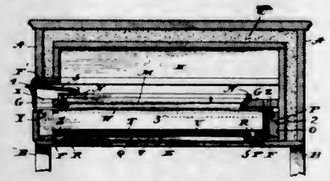
3. A rail chair comprising a base, a vertical portion and an upper horizontal portion arranged more on one side of said vertical portion than on the other and having integral means to grip a rail.

4. A rail chair comprising a base extending substantially horizontally and having its ends bent downward for the purpose specified, a vertical portion and an upper horizontal portion arranged more on one side of said vertical portion than on the other for the purpose specified.

5. A rail chair comprising two bent plates suitably secured together, each plate having a base portion, a vertical portion and an upper horizontal portion provided with means to grip a rail, the upper portion of one plate being wider than that of the other for the purpose specified.

[Claims 6 to 12 not printed in the Gazette.]

873,295. INCUBATOR. JOHN E. CHAMBERS, Shelbyville, Ind. Filed Jan. 30, 1907. Serial No. 354,921.



1. In an incubator, a casing having an open bottom, a frame above the bottom opening, a reticulated bottom for said frame, a ventilating cloth supported by said reticulated bottom, and means overlying said cloth to retain the same in place.

2. In an incubator, a casing having an open bottom, a frame above the bottom opening, a reticulated bottom for said frame, a ventilating cloth supported by said reticulated bottom, and means overlying said cloth to retain the same in place, said last mentioned means including a frame having an open central portion, and a sheet of burlap carried thereby and covering the ventilating cloth.

3. In an incubator, a casing having an open bottom, a frame above the bottom opening, a reticulated bottom for said frame, a ventilating cloth supported by said reticulated bottom, and means overlying said cloth to retain the same in place, said last mentioned means including a frame having an open central portion, and a sheet of burlap carried thereby and covering the ventilating cloth, in combination with a frame resting upon said last mentioned frame carrying a reticulated covering at its upper edge to confine the chicks within the space between said covering and the burlap.

4. In an incubator, a casing having an open bottom, a frame above the bottom opening, a reticulated bottom for said frame, a ventilating cloth supported by said reticulated bottom, another frame within said first mentioned frame, and a reticulated covering at its upper edge to confine the chicks in the space between said covering and said ventilating cloth.

5. In an incubator, a casing, a removable nursery therein comprising two frames, one within the other, a reticulated material spanning the opening at the bottom of one of the frames, and a similar covering spanning the opening at the top of the other frame whereby to provide a confined space within said frame and between said reticulated materials.

[Claims 6 to 25 not printed in the Gazette.]

873,296. SCREW-DRIVER. CHARLES H. CHAPPELLE, Woodburn, Oreg. Filed Aug. 19, 1905. Serial No. 274,954.



1. In a tool of the class described, the combination of a reciprocatory body portion, a right and left spiral-grooved spindle, nuts confined against longitudinal movement in the body portion and provided with projections respectively engaging the grooves in the spindle, said nuts having clutch teeth, a tilting pawl operative to engage the teeth of one nut to permit rotation of said nut in one direction while locking it against movement in the other direction, a second tilting pawl adapted to engage the teeth of the other nut to permit rotation thereof in one direction while holding it from rotation in the other direction, a third tilting pawl adapted to engage the teeth of the latter named nut to operate reversely to said second pawl, said second and third pawls being connected for simultaneous adjustment under certain conditions and provided with contact portions, a spring to hold said third pawl normally out of engagement with the nut, and a sliding shifter controlling all three pawls, said shifter being adjustable to regulate the action of said pawls to control the nuts to secure a right or left intermittent rotary motion of the spindle or a continuous rotary motion thereof when the body portion is reciprocated or to lock said spindle to the body portion.

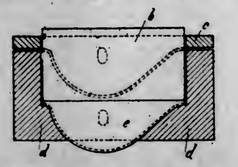
2. In a tool of the class described, the combination of a reciprocatory body portion provided with a longitudinal slot having a series of seat notches, a right and left spiral-grooved spindle, nuts confined against longitudinal movement in the body portion and provided with projections respectively engaging the grooves in the spindle, said nuts having clutch teeth, a tilting pawl operative to engage the teeth of one nut to permit rotation of said nut in one direction while locking it against movement in the other direction, a second tilting pawl adapted to engage the teeth of the other nut to permit rotation thereof in one direction while holding it from rotation in the other direction, a

third tilting pawl adapted to engage the teeth of the latter-named nut to operate reversely to said second pawl, said second and third pawls being connected for simultaneous adjustment under certain conditions and provided with contact portions, a spring to hold said third pawl normally out of engagement with the nut, and a spring-supported shifter sliding in said slot in the body portion and provided with locking lugs to engage the seat notches and bearing portions to operatively engage all three pawls, the construction being such that by moving the shifter to engage the several seat notches the pawls may be adjusted thereby to control the nuts to secure a right or left intermittent rotary motion of the spindle or a continuous rotary motion thereof when the said body is reciprocated or to lock said spindle to the body portion.

3. In a tool of the class described, the combination of a reciprocatory body portion, a rotary spindle provided with reverse spiral grooves, clutch nuts provided with projections engaging said grooves, a single pawl controlling one nut to permit rotary movement thereof in one direction and lock the same against rotation in the opposite direction, a compound pawl formed of members controlling the reverse movements of the other nut, said members being connected for simultaneous or independent adjustment and provided with portions whereby they may be simultaneously or independently moved, a spring for retracting one of said pawl members, and a shifter controlling all three pawls and adjustable to shift the same to control the nuts to secure a right or left intermittent rotary motion of the spindle or a continuous rotary motion thereof when the body portion is reciprocated or to lock said spindle to the body portion.

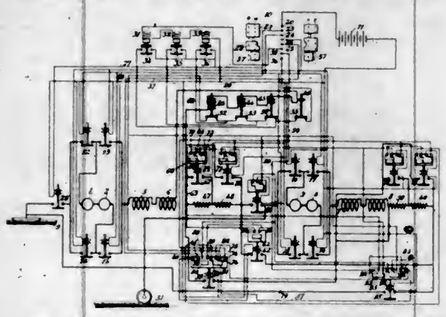
4. In a tool of the character described, the combination of a reciprocatory body portion, a right and left spirally grooved spindle, nuts confined against longitudinal movement in the body portion and provided with projections respectively engaging the grooves in the spindle, said nuts having clutch teeth, a tilting pawl having a finger to engage the teeth of one nut to permit rotation of said nut in one direction while locking it against movement in the reverse direction, a pair of tilting parallel pawls having fingers to engage the teeth of the other nut to respectively control the rotation thereof in opposite directions, one of said pawls being formed with a raised portion and the other with a depression and a raised portion, and said pawls also having engaging projections to adapt them to tilt in unison, substantially as described, a retracting spring acting upon the finger of the first named pawl provided with a raised portion, and a shifter upon the body portion having portions to bear upon the pawls and coöperate with the said raised portions thereof to tilt the pawls, whereby said shifter may be adjusted to govern the pawls to control the nuts to secure a right or left intermittent rotary motion of the spindle or a continuous rotary motion thereof when the body portion is reciprocated or to lock said spindle to the body portion.

873,207. PROCESS OF PRODUCING HOLLOW SHEET-METAL ARTICLES. RUDOLF CHILLINGWORTH, Nuremberg, Germany. Filed Aug. 15, 1900. Serial No. 26,905.



The hereindescribed method of forming trough shaped articles of sheet metal which consists in first bending the entire sheet of metal into the curved form of the curved part of the finished article so that all surface lines perpendicular to a transverse plane are straight or rectilinear, sustaining a portion of said curved part of the finished article, and simultaneously drawing the remainder of the blank so that all surface lines are parallel to each other and to the transverse plane, substantially as described.

873,298. ELECTRIC-MOTOR CONTROL. WILLIAM COOPER, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 3, 1906. Serial No. 304,063.



1. The combination with independently operated switches that are adapted to a close in a predetermined sequence, of an electro-magnetically adjustable, automatic limiting device which retards the operation of said switches.

2. The combination with independently operated switches that are adapted to close in a predetermined sequence, of an electro-magnetically adjustable, automatic limiting device which retards the operation of said switches and is dependent upon the value of current flowing from the supply circuit.

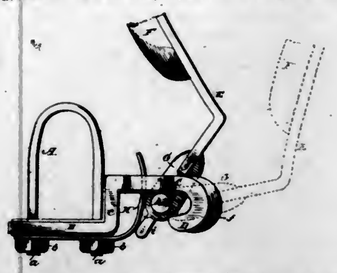
3. In a system of electric motor control, the combination with switches that are adapted to close in a predetermined sequence, of a plurality of limit switches which are adapted to operate at different values of electric current and to retard the closure of the said switches.

4. In a system of electric motor control, the combination with switches that are adapted to close in a predetermined sequence, of limit switches which are adapted to operate at different values of electric current and to retard the closure of the said switches, and selective means for determining which of said limit switches shall be included in the circuit.

5. In a system of acceleration for electric motors, the combination of switches which are electrically interlocked so that their closure is confined to a predetermined sequence, of an adjustable limiting device which automatically interrupts the interconnecting control circuits so that the normal sequential operation is delayed.

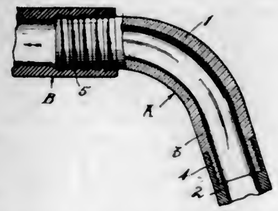
[Claims 6 to 14 not printed in the Gazette.]

873,299. THILL-COUPLING. ROBERT F. CORNEIL, Phillipsburg, Mont. Filed July 9, 1907. Serial No. 382,822.



A thill-coupling provided with suitable means for attaching it to the axle of a vehicle, said coupling comprising a slotted bracket having hooks with beveled sides and connected at their ends by a transverse web, a thill-iron having an extension with inwardly beveled shoulders to correspond with the bevel on the hooks, coupling-pins upon the extension, a presser-lug thereon, and a spring with which the lug acts, substantially as and for the purpose set forth.

873,300. VACUUM-CLEANER HANDLE. ALFRED P. CRANSTON, New York, N. Y. Filed May 7, 1907. Serial No. 372,347.



1. A vacuum cleaner handle reinforced at the portions of greatest wear.

2. A vacuum cleaner handle having its curved portions reinforced.

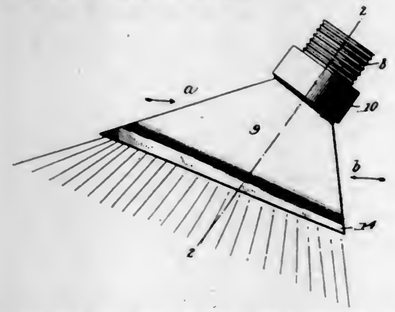
3. A vacuum cleaner handle having a detachable sighting device.

4. A vacuum cleaner handle having a curved detachable sighting device.

5. A vacuum cleaner handle having a reinforced transparent portion.

[Claims 6 to 8 not printed in the Gazette.]

873,301. NOZZLE. FREDERICK W. CUMMINGS and GUSTAVE H. HANNA, Cleveland, Ohio, assignors to Sanitary Street Flushing Machine Company, St. Louis, Mo. Filed Feb. 4, 1907. Serial No. 355,628.



1. A nozzle comprising a body having opposite concave side walls, and end walls of different lengths which diverge at different angles from the axis of the nozzle and on opposite sides thereof, and the side walls of which converge and form therebetween a narrow mouth, which extends obliquely across the axis of the nozzle, from one end wall to the other.

2. A nozzle having opposite concave side walls forming an enlarged chamber, and a long narrow mouth the plane of which is parallel to and offset from the axis of the nozzle toward one of said walls.

873,302. TICKET APPARATUS. HENRY H. CUMMINGS, Newton, Mass., assignor to Adams D. Claflin, Newton, Mass. Filed Apr. 12, 1907. Serial No. 367,798.

1. In a strip feeding mechanism, the combination of a case, a primary jaw member movably mounted in the case, a secondary jaw member movably mounted on the primary jaw member, a spring to close the jaw members together, means to move the primary jaw member reciprocally on its mounting, a catch to arrest one of the jaw members and hold the two members distended, a trigger controlling the catch and adapted to be actuated by a suitably perforated strip to release the jaw member held thereby, and means to advance a strip between the distended jaw members.

2. In a strip feeding and severing mechanism, the combination of a case provided with a strip receptacle and a strip aperture, a pair of jaw members having their severing ends within the case close to the strip aperture, the primary jaw member pivoted in the case, the secondary jaw member pivoted on the primary jaw member, a spring to close the jaw members together, means to move the primary jaw member reciprocally on its pivot, a catch to arrest the secondary jaw member and hold the two members distended, a trigger, controlling the catch and adapted to be actuated by a suitably perforated strip, to release the secondary jaw member, and means to advance a strip between the distended jaw members.



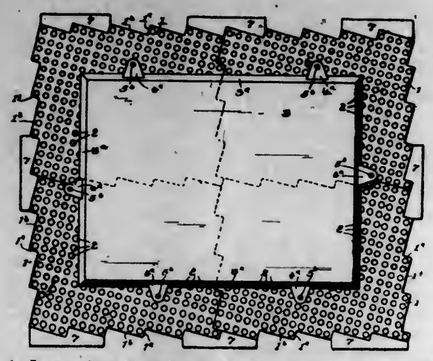
3. In a strip feeding and severing mechanism, the combination of a case, a primary jaw member movably mounted in the case, provided with a severing edge and a strip guiding bar, a secondary jaw member movably mounted on the primary jaw member, provided with a severing edge to coöperate with that of the primary jaw member, a spring to close the jaw members together, means to move the primary jaw member reciprocally on its mounting, a catch to arrest the secondary jaw member and hold the two members distended, a trigger to control the catch, and a reciprocally movable feed finger between the trigger and the severing edges, and means to actuate the feed finger to advance a strip between the distended jaw members.

4. In a strip feeding and severing mechanism, the combination of a case, a pair of jaw members with coöperating strip severing ends, the primary jaw member movably mounted in the case, a strip guide on the primary jaw member, the secondary jaw member movably mounted on the primary jaw member, a spring to close the severing ends of the jaw members, means to move the primary jaw member reciprocally on its mounting, a catch to arrest the secondary jaw member and hold the two members distended, a trigger to control the catch, located close to the strip guide, a reciprocally movable feed finger between said trigger and the severing ends of the jaw members, and means to actuate the feed finger to advance a strip between the distended jaw members.

5. In a strip feeding and severing mechanism, the combination of a case, a pair of jaw members with coöperating severing ends, the primary jaw member consisting of a plate movably mounted in the case, the secondary jaw member movably mounted on the primary member, a spring to close the jaw members together, means to move the primary jaw member reciprocally on its mounting, a catch, mounted in the case, to arrest the primary member and hold the jaw members distended, a trigger to control the catch, projecting through an aperture in the primary member, a strip guide on the primary member adjacent to the trigger aperture, a reciprocally movable feed finger between said trigger and the severing ends of the jaw members, and means to actuate the feed finger to advance a strip between the distended jaw members.

[Claims 6 to 10 not printed in the Gazette.]

873,303. PRINTER'S REGISTERING DEVICE. FRANK C. DOHRMANN, Brooklyn, N. Y. Filed Feb. 14, 1907. Serial No. 357,325.



1. In a printer's registering device, a block section having holes in its surface and irregular edges of step like formation with risers whose depth equals the distance between the centers of said holes with the tread in parallel relation with the holes of the block, for the purpose set forth.

2. In a printer's registering device, a block section having a series of holes in its surface laid out in rows, said rows in parallel relation with each other, said block having interlocking step like indentations in all of its edges whose faces are parallel with said holes, for the purpose set forth.

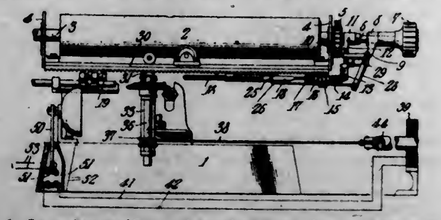
3. In a printer's registering device, a block section having a series of diagonally arranged holes in its surface and indented edges of step like formation whose faces are parallel with the diagonal arrangement of the holes, for the purpose set forth.

4. In a printer's registering device, a block having the series of holes —2— therethrough and indented edges, the lower part —2^a— of said holes threaded, a registering hook comprising a shell or body adapted to freely enter the upper portion —2—, and said hook having a clamping arm projecting from and integral with said body, a pin journaled in said body, a threaded collar mounted on the lower end of the pin adapted to engage the threaded portion —2^a— of the holes, means on the upper end of said pin to actuate said collar, for the purpose set forth.

5. A printer's registering device comprising a series of sections, each section having a series of rows of holes arranged in cross alinement, each section having indented edges whose faces are in parallel relation with said holes, said sections adapted to interlock with each other to give an increased surface area with the holes in one section in alinement with the holes of the other sections, and the indented faces of the interlocking edges in parallel relation with each other, for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

873,304. TYPE-WRITER. CHARLES S. DU BELLE, Williamsport, Pa. Filed June 17, 1907. Serial No. 379,511.



1. In a typewriter, automatic means for returning the typewriter carriage to its initial position, and a line spacing mechanism operated by the movement of the carriage toward its initial position comprising intermeshing gears for rotating the platen, means for actuating said gears, a stop in the path of said gear-operating means, and means for connecting the gear members to the platen also operated by engagement with said stop.

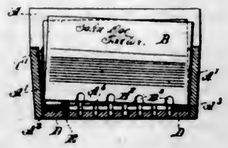
2. In a typewriter, automatic means for returning the typewriter carriage to its initial position, and a line spacing mechanism operated by the movement of the carriage toward its initial position comprising intermeshing gears for rotating the platen, means for actuating said gears, a stop in the path of said gear-operating means, and means for connecting the platen and gear members comprising a tooth for connecting one of the gear members to the platen, a lever controlling said tooth, and a sliding member connected to said lever and arranged to be engaged by said stop.

3. In a typewriter, automatic means for returning the typewriter carriage to its initial position, and a line spacing mechanism operated by the movement of the carriage toward its initial position comprising means for rotating the platen, a stop in the path of said means, and means for connecting the platen and operating means therefor comprising a tooth, a lever controlling said tooth, and a sliding member connected to said lever and arranged to be engaged by said stop.

4. In a typewriter, an automatic means for returning the typewriter carriage to its initial position, and a line spacing mechanism operated by the movement of the carriage toward its initial position comprising intermeshing gears for rotating the platen, a sliding rod connected to the gears, a stop in the path of the rod, a sliding member carried by said rod and provided with means coacting with said stop, a lever carried by one of the gears, a tooth connected to said lever and movable thereby to connect the said gear to the platen, and connections between the lever and the sliding member.

5. In a typewriter, means for returning a typewriter carriage to its initial position ready for the imprinting of a line, comprising a solenoid, electric circuit terminals controlled from the keyboard of the typewriter, a charged electric circuit including said circuit terminals and the solenoid, connections between the solenoid and the typewriter carriage for moving the latter to its initial position when the solenoid is energized, and line spacing mechanism for the platen comprising an adjustable line spacing means operated to rotate the platen on the return movement of the carriage, and means operated by the carriage on its return movement toward its initial position for locking the line spacing means to the platen.

873,305. CARD-INDEX. EDMUND ECKART, New Rochelle, N. Y. Filed Feb. 8, 1906. Serial No. 300,053.



1. A selective card index device comprising a receptacle, card-lifting members movably mounted in said receptacle, and movable selecting members adapted for insertion at different points in the width of the receptacle so as to engage the cards at different points.

2. A selective card index device comprising a receptacle, cards adapted to be contained in said receptacle and provided at their bottom edges with projections placed differently to correspond to a classification plan, movable lifting members for raising the said cards, and selecting members adapted for insertion at different points corresponding to the positions of the said projections on the cards, to keep certain cards raised when the others are lowered.

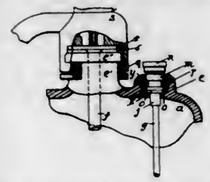
3. A selective card index device comprising a receptacle adapted to contain index cards, lifting members movably mounted at the bottom of said receptacle, and a movable selecting member adapted for insertion between said lifting members.

4. A selective card index device comprising a receptacle for index cards, lifting bars pivoted at the bottom of said receptacle, and selecting members adapted for insertion at various points between said lifting members.

5. A selective card index device comprising a receptacle adapted to contain cards, lifting members for raising the cards, and selecting bars adapted to be slid lengthwise of the receptacle and under the cards at different points.

[Claims 6 to 15 not printed in the Gazette.]

873,306. LIQUID-DISPENSER. JAMES FITZPATRICK, Peekskill, N. Y. Filed Jan. 29, 1906. Serial No. 298,326.



1. A jug or bottle provided with an outlet and an inlet, the outlet made to receive a siphon head, the inlet having its bottom partly closed.

2. A jug or bottle provided with an outlet and an inlet, the outlet made to receive a siphon head, the inlet provided with a recess in its inner walls.

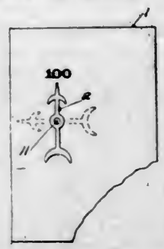
3. A jug or bottle provided with an outlet and an inlet, the outlet made to receive a siphon head, the inlet recessed in its inner walls and having its bottom partly closed.

4. The combination in a jug or bottle having its outlet provided with a siphon head, of an inlet to the vessel provided with a valve having means for the attachment of a pump thereto, and packing between the walls of the inlet and the valve body.

5. The combination in a jug or bottle provided with an outlet and an inlet, a siphon head on the outlet, a valve body containing a valve and having means for connecting a pump thereto sealed within the inlet, and a tube supported within the inlet and extending towards the bottom of the vessel.

[Claim 6 not printed in the Gazette.]

873,307. ELECTRICAL DROP. GEORGE J. GALBRAITH, Boston, Mass., assignor to Couch & Seeley Company, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 19, 1906. Serial No. 344,001.



1. In an electrical drop, an electro magnet provided with a core which is fixed therein and projects below the lower end of the magnet, a bracket having a base on which said magnet is vertically mounted, the lower end of the magnet resting on said base, said base being formed with a hole through which said projecting lower end of the core extends, said base having two downwardly extending short ears at opposite ends of one edge of said base, and two downwardly extending longer ears at the ends of the opposite edge of said base, a swinging armature pivoted on one edge to said short ears, the swinging side of said armature extending beneath said base and beneath the said downwardly projecting end of said core, said base being between the magnet and the armature, an arbor pivoted in said longer ears, the axis of the arbor being parallel with the axis of the armature pivots, an indicator carried on one end of said arbor, a catch lever fixedly mounted on said arbor and normally engaged by said armature, thereby holding said lever and arbor in a position to retain the indicator out of call position, means for energizing said magnet which when energized will attract said armature and disengage it from said catch lever the catch lever being over-balanced at one end whereby when the said armature is disengaged from the catch lever the catch lever will swing down and turn the indicator into call position.

2. In an electrical drop, an electro magnet provided with a core which is fixed therein and projects below the lower end of the magnet, a bracket having a base on which said magnet is vertically mounted, the lower end of the magnet resting on said base, said base being formed with a hole through which said projecting lower end of the core extends, said base having two downwardly extending short ears at opposite ends of one edge of said base, and two downwardly extending longer ears at the ends of the opposite edge of said base, a swinging armature pivoted on one edge to said short ears, the swinging side of said armature extending beneath said base and beneath the said downwardly projecting end of said core, said base being between the magnet and the armature, an arbor pivoted in said longer ears, the axis of the arbor being parallel with the axis of the armature pivots, an indicator carried on one end of said arbor, a catch lever fixedly mounted on said arbor and normally engaged by said armature, thereby holding said lever and arbor in a position to retain the indicator out of call position, means for energizing said magnet which when energized will attract said armature and disengage it from said catch lever the catch lever being over-balanced at one end whereby when the said armature is disengaged from the catch lever the catch lever will swing down and turn the indicator into call position, a projection on said bracket which limits the upward swinging of said catch lever and a projection on said armature which is engaged by said catch lever to limit the downward movement thereof.

873,308. ADJUSTABLE CLEANING-BRUSH. ROBERT T. GILLESPIE, Bloomfield, N. J. Filed Nov. 22, 1905. Serial No. 288,572.



1. In a cleaning implement, the combination of a main shank portion provided with a thumb terminal, a pivoted brush, and an operating rod connected to the brush and having a finger terminal, said thumb and finger terminals having adjacent co-acting transversely corrugated faces adapted to be pressed together and to make interlocking engagement, substantially as set forth.

2. A cleaning implement comprising a main shank portion provided with a corrugated holding terminal at one end and a pivoted brush at the other end, and an operating rod connected to the brush and provided at the other end with a similarly corrugated holding terminal, and having a retracting spring, substantially as set forth.

3. A cleaning implement comprising a main shank portion having a spoon shaped corrugated thumb terminal at one end and a pivotally mounted cleaning brush at the other end, and an operating rod connected to the brush for adjustment and provided at the other end with a corrugated locking face and a terminal finger loop, substantially as set forth.

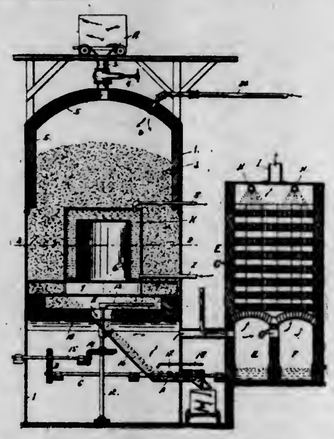
4. A cleaning implement comprising a main shank portion having a spoon shaped corrugated thumb terminal at one end and a pivotally mounted cleaning brush at the other end, an operating rod connected to the brush for adjustment and provided at the other end with a corrugated locking face and a terminal finger loop, and means for au-

tomatically extending the brush and for maintaining said holding portions out of engagement with each other, substantially as set forth.

5. In a cleaning device of the class described, the combination of a tubular shank provided with a bifurcated extremity and a corrugated holding terminal, a brush having its rear end pivoted in said extremity, an operating rod contained within the tubular shank, connected with said brush extremity and provided with a corrugated operating terminal, and an extending spring surrounding said rod, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

873,309. PROCESS OF CHLORIDIZING ORES. JOHN E. GREENAWALT, Denver, Colo. Filed Mar. 27, 1905. Serial No. 252,109.



1. The herein described chloridizing process which consists in introducing the heated ore into a chloridizing chamber, passing the ore through said chamber and into and through a cooling zone, and simultaneously passing a stream of chloridizing gas through the ore.

2. A chloridizing process which consists of chloridizing the ore by means of sodium chlorid by heating in a suitable furnace and then introducing the ore while still in the heated condition into a closed chamber and finally passing a stream of chloridizing gas through the ore.

3. A chloridizing process which consists of partly chloridizing the ore by means of heat and sodium chlorid, in a roasting chamber and then introducing the ore into a closed cooling chamber and simultaneously passing a stream of chloridizing gas through the ore while the ore is passing through the cooling chamber.

4. A chloridizing process which consists of partly chloridizing the ore by means of heat and sodium chlorid in a roasting chamber, and then introducing the ore into a closed cooling chamber and simultaneously passing a stream of chloridizing gas through the ore while the ore is passing through the cooling chamber, and finally passing the resultant gas into a condensing chamber.

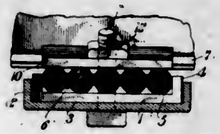
5. An ore chloridizing process which consists in introducing the hot roasted ore into a chloridizing chamber, subjecting the ore when in a heated condition to a chloridizing gas, passing the ore through a cooling zone and finally passing the surplus or resultant gas into a condensing chamber.

[Claim 6 not printed in the Gazette.]

873,310. RAILWAY-TIE. ADOLPH F. GUSTAFSON, Pueblo, Colo. Filed Mar. 11, 1907. Serial No. 361,756.

1. The combination with a metallic tie and a holding device thereon; of a plurality of parallel solid metallic rail supporting devices within the holder.

2. The combination with a metallic tie; of a plurality of solid cylindrical metallic cushioning devices upon the tie, and means for holding said devices against displacement.



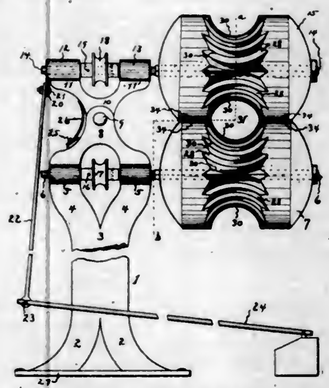
3. The combination with a metallic tie; of a plurality of solid cylindrical metal cushioning devices upon the tie, and means for protecting the spaces between said devices from the admission of dirt, etc.

4. The combination with a metallic tie; of a plurality of solid cylindrical metallic cushioning devices upon the tie, and a rail secured upon and supported by said devices, said rail constituting a protecting means for the devices.

5. The combination with a metallic tie; of a holding device thereon, parallel solid cylindrical metallic rail supporting devices upon the tie, means for preventing displacement of said devices, and a rail secured upon and supported by said devices, said rail constituting a guard to prevent the admission of dirt between the devices.

[Claims 6 and 7 not printed in the Gazette.]

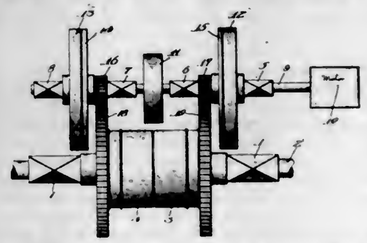
873,311. ENTRAIL-CLEANING MECHANISM. HERMAN HAKENHOLZ, South Omaha, Nebr. Filed Apr. 4, 1907. Serial No. 366,439.



1. In a cleaning mechanism as described, the combination with a frame, a treadle and a cleaning-rod, of two rotatable cylinders journaled in the frame, each of said rotatable cylinders having an annular recess formed thereon, each of said annular recesses being provided with combs having concavedly formed edges and side-walls formed convergently from their bases; said cleaning-rod adapted to have a seating within said annular recesses transversely between said rotatable cylinders; one of said cylinders adapted to have a swinging movement under control of said treadle.

2. In combination, the herein described cleaning mechanism, comprising a frame, a treadle, a spring, a cleaning-rod; a pair of oppositely-disposed rotatable cylinders each having shafts journaled in the frame; each of said oppositely-disposed rotatable cylinders having a series of concavedly formed combs longitudinally and annularly disposed thereon; said cleaning-rod seated transversely between said oppositely-disposed rotatable cylinders, adjacent said series of concavedly formed combs; one of said oppositely-disposed rotatable cylinders adapted to have swinging movements under control of the treadle and the spring in directions from and toward the oppositely-disposed rotatable cylinder of said pair.

873,312. ELECTRICALLY-OPERATED COAL-HOIST. CLARK T. HENDERSON, Pittsburg, Pa., and NORMAN C. BASSETT, Milwaukee, Wis., assignors to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Jan. 15, 1906. Serial No. 296,172.



1. The combination with a motor, of a plurality of resistances arranged in parallel in the circuit thereof, a plurality of switches controlling said resistances, a plurality of solenoids for operating said switches, and means for automatically and successively admitting operating current to said solenoids.

2. The combination with a motor, of a plurality of resistances arranged in parallel in the circuit thereof, a plurality of switches for controlling said resistances, a plurality of solenoids for operating said switches, a plurality of resistances in the circuits of said solenoids, and means for automatically and successively cutting out said solenoid resistances.

3. The combination with a motor, of a plurality of resistances arranged in parallel in the circuit thereof, a plurality of solenoids for controlling said switches, a plurality of resistances in said solenoid circuits, a movable element, and means for automatically operating said movable element to cut out said solenoid resistances successively.

4. The combination with a motor, of a plurality of resistances arranged in parallel in circuit thereof, a plurality of switches for controlling said resistances, a plurality of solenoids for controlling said switches, a plurality of resistances in circuit with said solenoids, a movable element, and a solenoid for operating said movable element to successively cut out said solenoid resistances.

5. The combination with a motor, of a plurality of resistances arranged in parallel in the motor circuit, a plurality of switches for controlling said resistances, an electro-responsive device for operating each of said switches, means for automatically and successively admitting operating current to said device, and an automatically operated switch for controlling the motor circuit.

[Claims 6 to 30 not printed in the Gazette.]

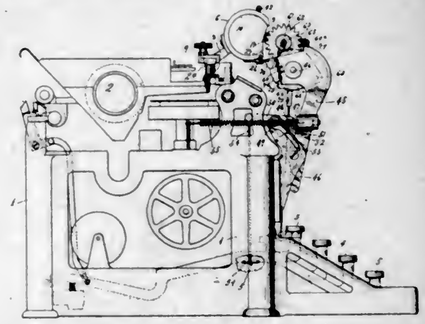
873,313. PUZZLE. CHARLES HUNT, Chicago, Ill. Filed Mar. 23, 1907. Serial No. 364,205.

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

1. A puzzle comprising a set of cards having the number from one to thirty-six, each of said cards having a different number upon each side thereof, all of said numbers but two being duplicated, and two of said cards being half the size of the remaining cards, substantially as described.

2. A puzzle comprising a set of cards, each of said cards having a different number upon each side thereof, all of said numbers but two being duplicated, two of said cards being half the size of the remaining cards, said half sized cards adapted to be placed upon each side of a whole card to form two new numbers, substantially as described.

873,314. COMPUTING ATTACHMENT FOR TYPE-WRITING MACHINES. OSCAR C. KAYLE, Syracuse, N. Y., assignor to John T. Underwood, New York, N. Y. Filed Nov. 15, 1905. Serial No. 287,425.



1. The combination with a typewriter having a movable paper carriage, of a register mounted on and movable with said carriage, a support mounted on the typewriter frame in front of said register for movements transversely of the line of the carriage's feed movement, a master wheel mounted on said support and movable thereby into and out of position for action on the wheels of said register, and differential key connections for imparting different feed movements to said master wheel, according to the value of the depressed key, substantially as described.

2. The combination with a typewriter having a movable paper carriage, of a register mounted on said carriage, and movable therewith, an oscillatory support pivoted to the typewriter frame, for movements transversely of the line of the carriage's feed movement, a master-wheel mounted on said oscillatory support, and movable thereby into and out of position for action on the wheels of said register, and differential key connections for imparting different feed movements to said master-wheel, according to the value of the depressed key, substantially as described.

3. The combination with a typewriter having a movable carriage, of a register mounted on and movable with said carriage, an oscillatory support pivoted to the typewriter frame, for movements transversely of the line of the carriage's feed movement, a register actuator mounted on said oscillatory support and movable thereby into and out of position for action on the wheels of said register, and differential key-actuated pawl-and-ratchet devices, mounted on said oscillatory frame, and independently operative on said register actuator, to impart differential movements thereto according to the value of the depressed key, substantially as described.

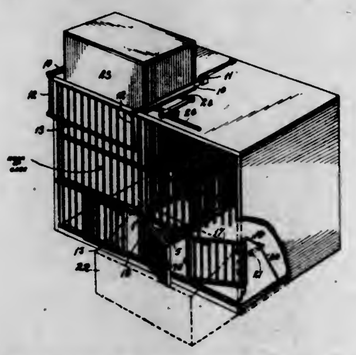
4. The combination with a typewriter having a movable paper carriage, of a register mounted on said carriage and movable therewith, an oscillatory support movable transversely of the line of the carriage's feed movement, a master wheel mounted on said oscillatory support and movable thereby into and out of position for action on the wheels of said register, a shaft mounted on said oscillatory support and geared to said master wheel, a plurality of ratchet wheels carried by said shaft, key actuated levers pivoted to said oscillatory support and provided with pawls coöperating with the respective ratchet wheels, and

means for determining the effective stroke of the several pawl equipped levers, according to the value of the depressed key, substantially as described.

5. The combination with a typewriter having a movable paper carriage and having a shift key connection to said carriage, of a register mounted on and movable with said paper carriage, a key controlled master wheel having a differential action on the wheels of said register, and a connection whereby when said shift key is depressed, said master wheel will be moved into a position in which it may rotate without action on any of the wheels of said register, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

873,315. THEATRICAL DEVICE. THE GREAT LAFAYETTE, New York, N. Y. Filed July 1, 1905. Serial No. 268,010.



1. In a theatrical device, the combination of two cage-compartments located adjacently with the division between the compartments endwise to the audience and communicating with each other by an opening; a real door adapted to control said opening; a door called for convenience an entrance door, controlling an opening in the rear wall relative to the audience of one of said compartments; a door called for convenience an exit door controlling an opening in the rear wall of the other compartment; and a false door in the partition adapted to be moved in front of the real door and to conceal from the audience said real door and also the exit and entrance doors.

2. In a theatrical device, the combination of a cage divided into two compartments by a partition located endwise to the audience; said partition provided with an opening therethrough; a swinging real door adapted to control said opening; a swinging non-transparent false door hinged in front of said real door and adapted to conceal said door from the audience; a door adapted to control an opening in the rear wall relative to the audience of one of the compartments and concealed from the audience by the false door when the same is in open position; and a door adapted to control an opening in the rear wall of the other compartment and likewise concealed from the audience by the false door when the same is in open position.

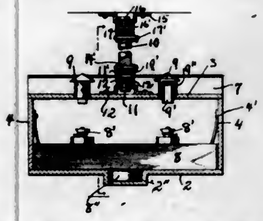
3. In a theatrical device, the combination of two cage-compartments located adjacently with the division between them endwise to the audience; a door called for convenience an exit door, controlling an opening in the rear wall relative to the audience of one of the compartments; a door called for convenience an entrance door controlling an opening in the rear wall of the other compartment; a false door in the partition apparently controlling an opening in said partition and adapted when in open position to conceal said exit and entrance doors from the audience.

4. In a theatrical device the combination of two cage-compartments located adjacently with the division between the compartments endwise to the audience; a non-transparent member adapted to be located transversely to the division between the compartments and to project into their respective interiors; a door adapted to control an opening in the rear wall relative to the audience of one of the compartments and located behind the non-transparent member; and a door adapted to control an opening in the rear wall of the other compartment and located behind the non-transparent member.

5. In a theatrical device the combination of two cage-compartments located adjacently with the division between the compartments endwise to the audience; a non-transparent member adapted to be located transversely to the division between the compartments and to project into their respective interiors; a door called for convenience an entrance door adapted to control an opening in the rear wall relative to the audience of one of the compartments and located behind the non-transparent member; a door called for convenience an exit door adapted to control an opening in the rear wall of the other compartment and located behind the non-transparent member; and a third compartment located behind the cage-compartment having the exit door and in communication therewith.

[Claims 6 to 8 not printed in the Gazette.]

873,316. NUMBER-LANTERN FOR AUTOMOBILES. FRANK C. LAME, New York, N. Y. Filed May 3, 1907. Serial No. 371,720.



1. In a license number display lantern for automobiles, a casing, a plurality of number-carrying translucent slides for the sides of said casing, a lamp within the casing, and a support for said casing having an engagement with the casing for movement in horizontal and vertical planes.

2. In a license number display lantern for automobiles, a casing, a plurality of number-carrying translucent slides for the sides of said casing, a lamp within the casing, and a support for said casing having swiveled engagement with the casing for rotation in a horizontal plane, and pivotal engagement with the casing for movement in a vertical plane.

3. In a license number display lantern for automobiles, a casing, a plurality of number-carrying translucent slides for the sides of said casing, a lamp within the casing, a perforated strap engaging with the top of the casing, a support whose end is provided with a swivel engagement with said strap and clamping means for holding the support set in any relative position to the said casing.

4. In a license number display lantern for automobiles, a casing, a plurality of number-carrying translucent slides for the sides of said casing, a lamp within the casing, a support, side pieces upwardly extending from the lamp casing engaging with the sides of the support, and a detachable bolt passing through the said side pieces and the support.

5. In a license number display lantern for automobiles, a casing, a plurality of number-carrying translucent slides for sides of said casing, a lamp within the casing, a support, side pieces upwardly extending from the lamp casing and perforated in the arc of a circle engaging with the sides of the support, and a detachable bolt adapted to pass through the perforations of said side pieces and the support.

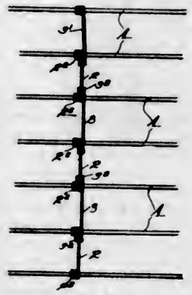
[Claims 6 to 10 not printed in the Gazette.]

873,317. ELECTRIC HEATER. MOISE LANDRY, Merced, Cal. Filed Mar. 27, 1907. Serial No. 364,748.



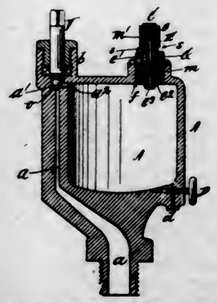
A portable electric heater, comprising two wood veneer boards covered with asbestos and hinged together, fastening devices for securing the boards together, a resistance wire between the boards, binding posts arranged between the boards comprising washers disposed upon opposite faces of the boards and internally and externally threaded insulating sleeve, extending through the board and the washers, and a thumb bolt engaging the internal thread and serving to hold the ends of the current wire, while the lower washers serve to hold the resistance wire as and for the purpose specified.

873,318. WIRE FENCE. GOTTHOLD L. LANGER, Stockton, Cal., assignor to Pacific Steel & Wire Co., Oakland, Cal., a Corporation of Maine. Filed Nov. 21, 1906, Serial No. 344,448. Renewed Aug. 26, 1907. Serial No. 390,212.



A wire-fence consisting of an odd number of strand-wires, said strand-wires except the last connected in pairs by stay-wires which have their ends coiled about adjacent strand-wires, stay-wires having one end coiled about said last-strand-wire and having their opposite ends coiled about adjacent of said first named stay-wires, and other stay-wires having their ends coiled about said first-named stay-wires, and bridging the open spaces between the pairs of previously connected strands.

873,319. LUBRICATOR. WILLIAM LEYLAND and JOHN W. LEYLAND, New York, N. Y. Filed Mar. 28, 1907. Serial No. 364,978.

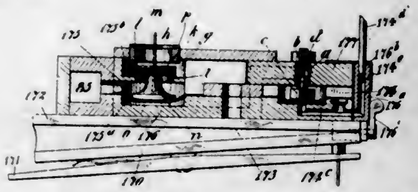


1. In a lubricator of the character designated, the combination with the lubricant receptacle having a common conduit for the inlet of steam and the gravitating outlet of oil, of a tell-tale sight on top of the receptacle consisting of a glass tube and casing sealed at the outer end and communicating at the inner end with the interior of the receptacle for the purpose described.

2. In a lubricator of the character designated, the combination of a lubricant receptacle having a common conduit for the inlet of steam and the gravitating outlet of oil and a tell-tale sight consisting of a screw plug fitted to the top of said receptacle and having a passage communicating with the interior thereof, a glass tube fitting in a bore in said plug and communicating with said passage therein, said plug being formed with sight openings exposing said glass tube in part, and means for sealing the upper end of said glass tube for the purpose described.

3. In a lubricator of the character designated, the combination with the lubricant receptacle having a common conduit for the inlet of steam and the gravitating outlet of oil of a tell-tale sight on top of the receptacle, consisting of a screw plug fitted to the top of said receptacle and formed with a passage communicating with the interior thereof, a glass tube fitting in a bore formed for its reception in said plug and communicating with said passage therein, the plug being formed with sight openings exposing said glass tube in part, a perforated gasket interposed between the lower end of said glass tube and the opposed supporting shoulder in the plug, a gasket interposed between the upper end of said glass tube and the screw by which it is secured in position, and said securing screw, for the purpose described.

873,320. MECHANICAL MUSICAL INSTRUMENT. FRANK G. LYNDE, New York, N. Y., assignor to John A. Weser, New York, N. Y. Filed Feb. 15, 1907. Serial No. 357,448.



A pneumatic action for mechanical musical instruments, comprising a board having the primary and secondary chambers formed therein, the primary chamber opening through the front of the board, a top board a diaphragm between said chambers secured to the first named board, a front board hinged to the top board and having conduits to communicate with the lower portions of the primary chambers below the diaphragm, and latches to hold the front board firmly against the first named board and closing the front openings of the primary chambers.

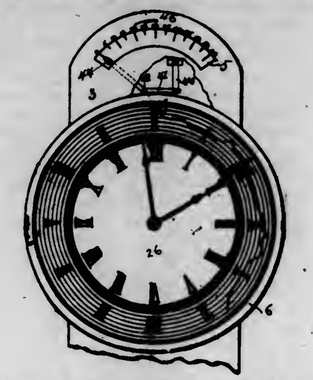
873,321. SPEED RECORDER AND INDICATOR. FRED LYON, Ithaca, N. Y., assignor of one-half to Edward E. Ingalls, Ithaca, N. Y. Filed Dec. 29, 1905. Serial No. 293,703.

1. In a device of the class described, the combination with a clock including a dial, of a transparent record carrier disposed in front of said dial and rotative therewith and through which the characters on the dial are visible and provided with a record ring.

2. In a device of the class described, the combination with a clock including a dial, the hands and their arbors, of a transparent record carrier between said dial and hands and through which the configuration of the dial is visible, and a record ring upon the carrier and concentric with the dial and beyond the same.

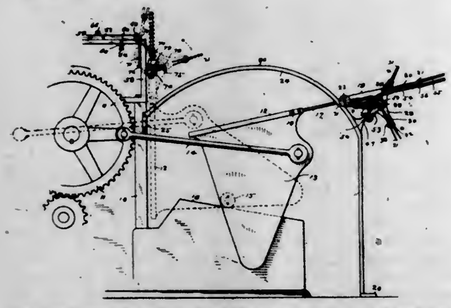
3. In a device of the class described, the combination with a clock including a dial, of a transparent record carrier disposed in front of said dial and rotative therewith and through which the configuration of the same is visible

and provided with a record ring, a speed indicating device, a pencil operative over said record ring, and connecting means between said pencil and speed indicating device.



4. In a device of the class described, the combination with a clock including a dial and its hand and hand arbors, of a transparent record carrier between said dial and hands and through which the configuration of the dial is visible, a record ring upon the carrier and concentric with the dial, speed indicating devices, a pencil operative over said record ring, and connecting means between said pencil and speed indicating devices.

873,322. SHEET-FEEDING MECHANISM. MICHAEL F. MAHONEY, New Haven, Conn., assignor of one-half to John W. Doyle, East Haven, Conn. Filed Aug. 31, 1907. Serial No. 390,914.



1. The combination with a swinging platen having rods extending therefrom, of carriers adapted to reciprocate on said rods, a rotating gripper shaft journaled in said carriers, grippers carried thereby and mechanism for opening and closing the grippers.

2. The combination with a swinging platen having rods extending therefrom, of carriers adapted to reciprocate on said rods, rollers upon the carriers, cam tracks upon which the rollers travel, a gripper shaft journaled in the carriers, grippers carried by said shaft and mechanism for opening and closing the grippers.

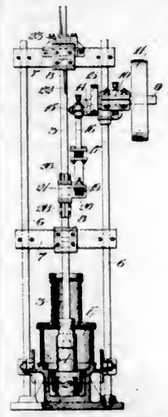
3. In a press, the combination with a bed, a swinging platen having rods extending therefrom and cam tracks, of carriers adapted to reciprocate on the rods, grooved rollers on the carriers engaging the cam tracks, and a gripper shaft journaled in the carriers.

4. The combination with a swinging platen having rods extending therefrom and provided with collars at their outer ends, of carriers on said rods, rollers on the carriers, a cam track engaged by the rollers and springs intermediate the carriers and the collars, said cam tracks and springs acting to reciprocate the carriers on the rods when the platen is operated.

5. The combination with a swinging platen having rods extending therefrom and provided with collars at their outer ends, of carriers on said rods, rollers on the carriers, a cam track engaged by said rollers, springs intermediate the carriers and the collars for the purpose set forth, and a gripper shaft journaled in the carriers.

[Claims 6 to 47 not printed in the Gazette.]

873,323. STAMP-MILL. FRANCIS I. MATTHEWS, Oakland, Cal., assignor to Oakland Stamp Mill Co., Oakland, Cal., a Corporation. Filed Nov. 28, 1906. Serial No. 345,554.



1. In an ore crushing mill of the character described, a guided rising and falling stamp stem, collars adjustably fixed upon the stem, a sleeve located between the collars through which the stem is loosely turnable, said sleeve having an offset horizontally channeled box, a segmental bow spring, a crank shaft and connection between the crank and the center of said spring, links connected with the ends of the spring, a flexible yielding band extending between the said links and loosely through the channel of the box, a fixed guide, a transversely movable casing carried thereby, through which casing the stamp stem passes, a clutch mechanism carried by the casing, a spirally grooved sleeve fixed to the stamp stem, and corresponding lugs actuated by the clutch mechanism and engaging the grooved sleeve.

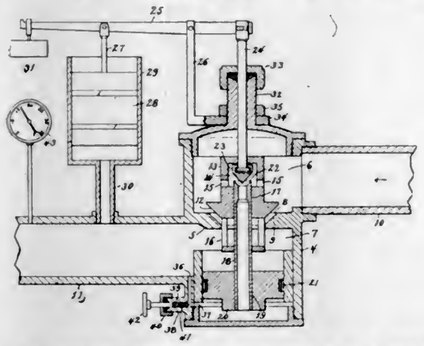
2. In a stamp mill, a guided rising and falling stamp stem, a sleeve within which the stem is loosely turnable, collars fixed to the stem above and below the sleeve to adjust said sleeve up or down upon the stem, said sleeve having an offset transversely channeled box, a crank shaft and elastic flexible double acting connections between the crank and the box, a collar through which the stamp stem is slidable, an inclined feather and grooved clutch connection whereby each reciprocation of the stem will cause it to turn, and a containing casing for said clutch connections yieldingly mounted to compensate for transverse irregularities of movement of the stamp stem.

3. In a stamp mill, a guided rising and falling stamp stem, adjustable collars thereon and an inclosed sleeve within which said stem is turnable and through which movement is transmitted to reciprocate the stem, a spirally grooved sleeve fixed to the stem, a collar with lugs engaging said grooves a casing surrounding the collar, a clutch mechanism carried thereby and acting to intermittently rotate the stamp stem, a support upon which the casing is movable transversely, and a link connecting the movable casing with a fixed support.

4. The combination with a rising and falling stamp stem, and a turning and clutch mechanism, of a spirally grooved sleeve removably secured to the stamp stem, and a transversely movable casing within which the turning mechanism is contained.

5. In an apparatus of the character described, a rising and falling stamp stem, a revoluble crank shaft with connecting rod, an interposed double-acting spring and a box with which the spring is connected, a sleeve offset from the box within which the stamp stem is turnable, collars adjustably fixed to the stamp stem above and below the sleeve, a fixed guide yoke, a casing carried by the yoke having a free transverse movement relative thereto, a link whereby said movement is limited and a stamp turning mechanism carried by the casing.

873,324. AUTOMATIC VALVE. AUGUST MICHAELS, Milwaukee, Wis. Filed Mar. 4, 1907. Serial No. 360,627.



1. In valve mechanism, the combination of a casing having two compartments with an opening or passage therebetween, an inlet for the pressure fluid leading to one of the compartments, an outlet for the pressure fluid leading from the other of said compartments, a valve adapted to seat itself against the opening or passage and thereby close the same, and adapted to be moved away from the end of the opening or passage in order to open the same, a piston movably fitted in one of the compartments, and having such area of pressure surface as to maintain the valve open under a certain pressure and against the contrary pressure exerted upon the valve, a tube having one end connected to the piston and adapted for the flow of the pressure fluid through the piston, and its opposite end communicating with an opening through the valve mechanism, a valve for controlling said opposite end of the tube, and mechanism for raising and lowering the tube valve, said mechanism being in communication with the outlet pipe and adapted to be operated by the fluid passing through the outlet pipe in a manner to cause a movement of the tube valve toward and to said end of the tube and thus shut off the flow of the pressure fluid through the tube, when said fluid exerts a certain pressure in the outlet pipe, whereby the excess pressure thereby created within the casing is exerted in a direction to close the valve controlling the opening between the two compartments, and when the fluid pressure in the outlet pipe falls below a certain point, the said tube valve is adapted to be operated in a direction away from the end of the tube which it controls to again open the tube to the flow of the pressure agent therethrough.

2. In valve mechanism, the combination of a casing having two compartments with an opening or passage therebetween, an inlet for the pressure fluid leading to one of the compartments, an outlet for the pressure fluid leading from the other of said compartments, a valve adapted to be moved away from or toward the end of the opening or passage in order to open and close the same, a piston movably fitted in one of the compartments and having such area of pressure surface as to maintain the valve open under a certain pressure and against the contrary pressure upon the valve, a tube having one end connected to the piston and adapted for the flow of the pressure fluid through the piston and its opposite end communicating with an opening through the valve mechanism, an inclosed chamber fitted over one of the ends of the tube and provided with a port or ports for placing said chamber in communication with one of the compartments, a valve within said chamber and adapted for controlling one of the ends of the tube, and mechanism for raising and lowering the tube valve, said mechanism being in communication with the outlet pipe, and adapted to be operated by the fluid passing through the outlet pipe in a manner to cause a movement of the tube valve toward and to said end of the tube and thus shut off the flow of the pressure fluid through the tube, when said fluid exerts a certain pressure in the outlet pipe, whereby the excess pressure thereby created within the casing is exerted in a direction to close the valve controlling the opening between the two compartments, and when the fluid pressure in the outlet pipe falls below a certain point, the said tube valve is adapted to be operated in a direction away from the end of the tube which it controls to again open the tube to the flow of the pressure agent therethrough.

3. In valve mechanism, the combination of a casing having two compartments with an opening or passage therebetween, an inlet for the pressure fluid leading to one of the compartments, an outlet for the pressure fluid leading from the other of said compartments, a valve adapted to seat itself against the opening or passage and thereby close the same, and adapted to be moved away from the end of the opening or passage in order to open the same, a piston movably fitted in one of the compartments, and having such area of pressure surface as to maintain the valve open under a certain pressure and against the contrary pressure exerted upon the valve, a tube having one end connected to the piston and adapted for the flow of the pressure fluid through the piston, and its opposite end communicating with an opening through the valve mechanism, a valve adapted for controlling the last referred to end of the tube, a stem extending from said valve, a cylinder having a tube extending therefrom and communicating with the outlet pipe, a piston within said cylinder, and connections between the piston and the valve stem, whereby the tube valve is adapted to be operated by the fluid passing through the outlet pipe in a manner to cause movement of the tube valve toward and to said end of the tube, and thus shut off the flow of the pressure fluid through the tube, when said fluid exerts a certain pressure in the outlet pipe, whereby the excess pressure thereby created within the casing is exerted in a direction to close the valve controlling the opening between the two compartments, and when the fluid pressure in the outlet pipe falls below a certain point, said mechanism between the cylinder piston and the valve stem is adapted to operate the tube valve in a direction away from said end of the tube to again open the tube to the flow of the pressure agent therethrough.

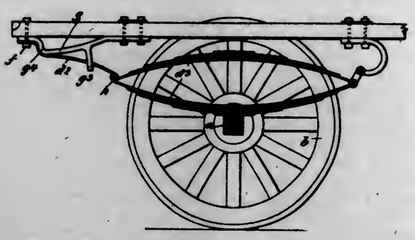
4. In valve mechanism, the combination of a casing having two compartments with an opening or passage therebetween, an inlet for the pressure fluid leading to one of the compartments, an outlet for the pressure fluid leading from the other of said compartments, a valve adapted to seat itself against the opening or passage and thereby close the same, and adapted to be moved away from the end of the opening or passage in order to open the same, a piston movably fitted in one of the compartments, and having such area of pressure surface as to maintain the valve open under a certain pressure as against the contrary pressure exerted upon the valve, a tube having one end connected to the piston and adapted for the flow of the pressure fluid through the piston, and its opposite end communicating with an opening through the valve mechanism, a valve adapted for controlling the last referred to end of the tube, a stem extending from said valve, a cylinder having a tube extending therefrom and communicating with the outlet pipe, a piston within said cylinder, a piston stem extending from said piston, and a lever fulcrumed between its ends and connected between its ends to the said piston, and having one end connected to the tube valve stem, and its other end carrying a weight, whereby the tube valve is adapted to be operated by the

fluid passing through the outlet pipe in a manner to cause a movement of the tube valve toward and to said end of the tube and thus shut off the flow of pressure fluid through the tube, when said fluid exerts a certain pressure in the outlet pipe, whereby the excess pressure thereby created within the casing is exerted in a direction to close the valve controlling the opening between the two compartments, and when the fluid pressure in the outlet pipe falls below a certain point, the tube valve is operated in a direction away from said end of the tube to again open the tube to the flow of the pressure agent therethrough.

5. In valve mechanism, the combination of a casing having upper and lower compartments with an opening or passage between the two and also provided in the wall of the lower compartment with a lead passage, an inlet for the pressure fluid leading to the upper of the compartments, an outlet for the pressure fluid leading to the lower of said compartments, and with which outlet the lead passage communicates, a valve located in the upper compartment and adapted to seat itself against the opening or passage and thereby close the same, and adapted to be moved away from the end of the opening or passage in order to open the same, a piston movably fitted in the lower compartment and having such area of pressure surface as to maintain the valve open under a certain pressure as against the contrary pressure exerted upon the valve, a tube having its lower end connected to the piston and adapted for the flow of the pressure fluid through the piston, and its upper end extending into the valve mechanism, a valve for opening and closing the end of the tube which extends into the valve mechanism, and mechanism for raising and lowering the tube valve, said mechanism being in communication with the outlet pipe and adapted to be operated by the fluid passing through the outlet pipe in a manner to close the tube valve and thus shut off the flow of the pressure fluid through the tube, when said fluid exerts a certain pressure in the outlet pipe, whereby the excess pressure thereby created within the casing is exerted in a direction to close the valve controlling the opening between the two compartments, and when the fluid pressure in the outlet pipe falls below a certain point, said tube valve adapted to be operated in a direction to again open the tube to the flow of the pressure agent therethrough.

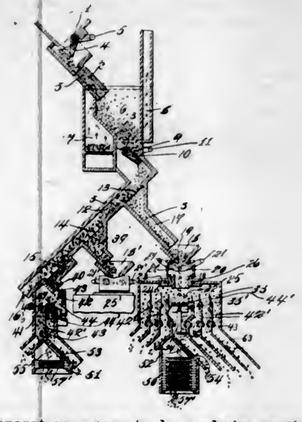
[Claims 6 and 7 not printed in the Gazette.]

873,325. SPRING FOR VEHICLES. PATRICK J. McGINN, Salisbury, Rhodesia. Filed Aug. 7, 1906. Serial No. 329,549.



A vehicle provided with heavy leaf main springs by which the body or bed is supported when weighted, and light supplemental springs connected with the front ends of the main springs and with the body or bed work by means of plates having downwardly curved portions over which the supplemental springs are passed, said plates being also provided rearwardly of said downwardly directed curved portions with keepers through which the supplemental springs are passed, and the rear ends of the main springs being also provided with supplemental springs connected therewith and with the body or bed work of the vehicle.

873,326. SEPARATING PROCESS AND APPARATUS. WILLIAM E. PEARSE, New York, N. Y. Filed June 16, 1906. Serial No. 321,977.



1. In separators, means to dry and size particles, a bin having a receiving hopper for such particles mounted upon it, means to vertically and horizontally adjust said hopper, a pair of symmetrical centering feed gates in said hopper, a sectional wedge-shaped target mounted below said gates, and having adjustable curved working faces, and a series of dividers to coöperate with said target and separate the material rebounding therefrom.

2. In separators, a bin, a hopper adjustably mounted on said bin, means to feed material from said hopper in a substantially uniformly located stream, a substantially wedge-shaped target, having an advance edge substantially in the path of said stream, said target being provided with adjustable curved working faces of resilient material and adjustable dividers to separate particles rebounding from said target.

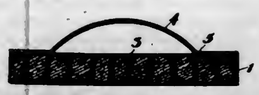
3. In separators, means to feed a stream of particles, a substantially wedge-shaped target having an advance edge substantially in the path of said stream of particles, and provided with curved working faces, and means to separate the diversely rebounding particles.

4. The process of separating ore from its gangue which consists in sizing the ore particles, in feeding particles of substantially the same size in a thin flat stream, and in separating the ore particles from the gangue by means of the different resiliencies of the ore particles and gangue.

5. The process of separating finely comminuted ore from its gangue which consists in segregating from the mass of ore particles of substantially the same size, dropping said ore particles and gangue of substantially the same size, and separating the ore particles from the gangue by means of the different resiliencies of said ore particles and gangue.

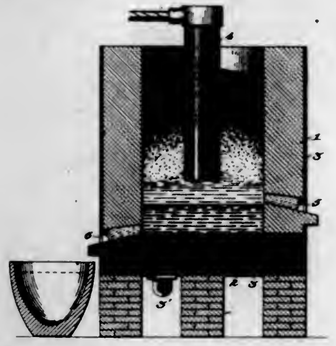
[Claims 6 to 9 not printed in the Gazette.]

873,327. BLACKBOARD-ERASER. MARTIN W. PERKINS, Battle Creek, Mich. Filed Feb. 24, 1903. Serial No. 144,692.



A wholly flexible blackboard eraser, comprising a spirally wound flexible strip constituting a body having a flat top and bottom, the extreme outer end of the strip being secured to the outer edge of the body, and the coils of the spiral being otherwise disconnected, a back formed of freely flexible material covering the entire top of the body and closing the joints between the turns of the spiral to prevent dust working through the eraser, said back being secured to the individual coils, and said coils being freely separable from one another and capable of spreading to collect chalk dust, the back having spaced incisions, and a flexible strap handle passing through the incisions and secured between the body and the back.

873,328. PROCESS OF PRODUCING SILICIDS. EDGAR F. PRICE, Niagara Falls, N. Y., assignor, by mesne assignments, to Central Trust Company of New York, a Corporation of New York, trustee under first mortgage. Filed Nov. 14, 1905. Serial No. 287,347.



1. The process of producing silicids high in silicon, which consists in providing a charge comprising a silicon compound, an alloying metal and carbon, the silicon compound being in such proportion as to make the charge of relatively low electrical conductivity, establishing an arc within the charge, and surrounding the zone of reduction and protecting the electrodes from the oxidizing effect of the atmosphere by a considerable body of the charge, as set forth.

2. The process of producing ferrosilicon high in silicon, which consists in providing a charge of low electrical conductivity, comprising a silicon compound, iron and carbon, the silicon compound being in such proportion as to make the charge of relatively low electrical conductivity, establishing an arc within the charge, and surrounding the zone of reduction and protecting the electrode from the oxidizing and cooling effect of the atmosphere by a considerable body of the charge, as set forth.

3. The process of producing silicids high in silicon, which consists in providing a charge of low electrical conductivity, comprising a silicon compound, an alloying metal and carbon, the silicon compound being in such proportion as to make the charge of relatively low electrical conductivity, establishing an arc within the charge, surrounding the zone of reduction and protecting the electrodes from the oxidizing and cooling effect of the atmosphere by a considerable body of the charge, and withdrawing the product and supplying the charge-mixture as required, as set forth.

4. The process of producing ferrosilicon high in silicon, which consists in providing a charge of low electrical conductivity, comprising a silicon compound, iron and carbon, the silicon compound being in such proportion as to make the charge of relatively low electrical conductivity, establishing an arc within the charge, surrounding the zone of reduction and protecting the electrodes from the oxidizing and cooling effect of the atmosphere by a considerable body of the charge, and withdrawing the product and supplying the charge-mixture as required, as set forth.

5. The process of producing silicids containing forty percent and upwards of silicon, which consists in providing a charge which is substantially a non-conductor of electricity, comprising a silicon compound, an alloying metal and carbon, establishing an arc within the charge, surrounding the zone of reduction and protecting the electrodes from the oxidizing and cooling effect of the atmosphere by a considerable body of the charge, and withdrawing the product and supplying the charge-mixture as required.

[Claim 6 not printed in the Gazette.]

873,329. VEHICLE-SPRING. GUSTAV SCHMITT, Milwaukee, Wis. Filed Mar. 18, 1907. Serial No. 363,091.



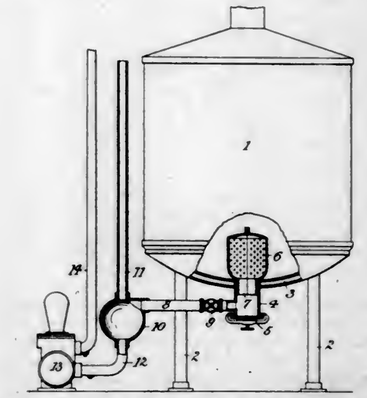
1. A vehicle spring comprising oppositely bowed springs connected together in the center, links connected to the ends of one of said springs, and rollers connected to the ends of the other spring and mounted to move in said links.

2. In a vehicle spring, the combination of a bowed spring having rollers mounted upon the opposite ends thereof, and links connected to the other spring and receiving the rollers.

3. In a vehicle spring, the combination of a spring member provided with oppositely disposed ball bearing rollers mounted on the ends of said spring, and links provided with inturned flanges in which said rollers travel.

4. A vehicle spring comprising oppositely bowed springs secured together in the center, links connected to the upper spring and provided with inturned flanges, a rubber buffer in the bottom of said links, rollers mounted upon the opposite ends of the lower bowed spring, said rollers being inclosed within the links, substantially as described.

873,330. HOP-JACK. OTTO SELG, New York, N. Y., assignor to The Selg Brewery Apparatus Co., a Corporation of New York. Filed Aug. 30, 1907. Serial No. 390,725.

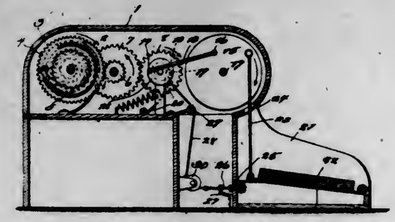


In a hop jack, a kettle having an outlet tube, a hollow strainer within the kettle having a lower neck that engages said tube, an accumulator communicating with the tube, a stand pipe extending upwardly from the accumulator, and a pump operatively connected to the accumulator, substantially as specified.

873,331. ANIMAL-TRAP. FRED M. SLETTO, Moscow, Idaho. Filed May 25, 1907. Serial No. 375,711.

1. An animal trap, comprising motor-operated disks, rocking disks, having pitman rod connections with the motor-operated disks, an oscillatory plate operated there-

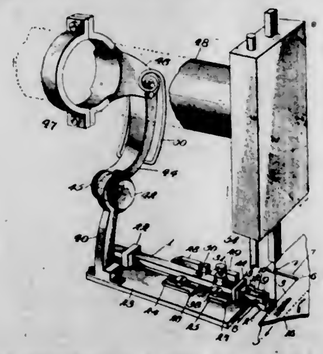
by, and means to be actuated by an animal for releasing the motor-operated disks substantially as and for the purpose described.



2. The combination in an animal trap, of a spring motor, disks operated thereby, said trap having in the forward part thereof, a shaft provided with rocking disks having pitman rod connections with the first-named disks, a disk 18 mounted on shaft 9 having a radiating tooth, an oscillatory plate and means for coöperating with the disk having the tooth for releasing the same, substantially as and for the purpose set forth.

3. The combination in an animal trap, of a spring motor, disks operated thereby, rocking disks having pitman rod connections with the first-named disks, said trap having a shaft in rear of the first mentioned shaft provided with a disk having a radiating tooth, an oscillatory plate, a spring actuated member designed for engagement with the tooth, and a bait carrying rod having a cord connection with the spring actuated member, the said bait carrying rod when operated disengages the spring actuated member from the said tooth so that the disks will operate the oscillatory plate.

873,332. SEWING-MACHINE GUIDE. ISAAC STUHLMAN, Chicago, Ill. Filed Apr. 21, 1900. Serial No. 13,700.



1. The combination in a sewing machine of a stitching means, a guide having its guiding end independently movable lengthwise of and in the direction of movement of the goods and cushioning means for resisting the movement of said independently movable end, substantially as set forth.

2. The combination in a sewing machine of a stitching means, a guide having its guiding end independently movable lengthwise of the line of stitching, cushioning means for resisting the movement of said independently movable end and a catch for locking said independently movable end in place and holding it against movement lengthwise of the line of stitching, substantially as set forth.

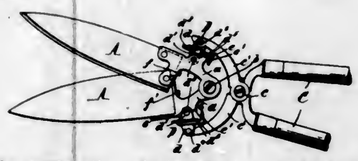
3. The combination of a sewing machine, of a stitching means, a bodily liftable guide and a supplemental guide hinged to said bodily liftable guide, adapted to project below said first guide and free to gravitate upon the goods.

4. The combination in a sewing machine of a bodily liftable guide, a supplemental guide and a sliding and pivotal joint connection between said liftable guide and supplemental guide, with a stitching mechanism, substantially as set forth.

5. The combination in a sewing machine of a bodily liftable guide, a supplemental guide supported on and carried by the first guide, a loose joint connecting said supplemental guide with the forward side of said first guide and means for limiting the downward movement of said supplemental guide, with a stitching mechanism, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

873,333. SHEARS AND OTHER TOOL. JOHN M. SWEET, Batavia, N. Y. Filed Nov. 15, 1905. Serial No. 287,487.



1. The combination of pivoted tool members, pivoted handle levers therefor, and swivel connections between said tool members and said handle levers whereby the tool members and said handle levers having swivel joints the plane of the handle levers, substantially as set forth.

2. The combination of pivoted tool members, pivoted handle levers therefor, and connections between said tool members and said handle levers having swivel joints formed therein whereby the tool members can be turned to a plane at an angle to the plane of the handle levers, substantially as set forth.

3. The combination of pivoted tool members, pivoted handle levers therefor, and links pivoted to said tool members and said handle levers and connecting the same, said links being provided with swivel joints between their points of attachment thereto whereby said tool members can be turned to a plane at an angle to the plane of said handle members, substantially as set forth.

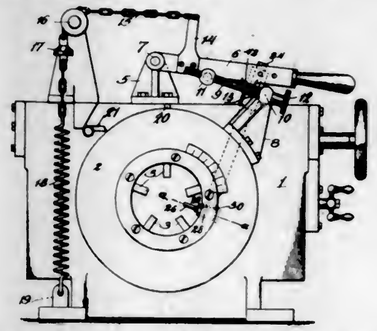
4. The combination of pivoted tool members, pivoted handle levers therefor, links pivoted to said tool members and said handle levers and connecting the same, said links being provided with swivel joints between their points of attachment thereto whereby said tool members can be turned to a plane at an angle to the plane of said handle members, and means for holding said links rigid with one of the parts to which they are connected when the tool members and the handle levers are set in the same plane, substantially as set forth.

5. The combination of pivoted tool members, pivoted handle levers therefor, links pivoted to said tool members and said handle levers and connecting the same, said links being provided with swivel joints between their points of attachment thereto whereby said tool members can be turned to a plane at an angle to the plane of said handle members, and parts on said links and said tool members adapted to interlock to hold said links rigid therewith when said tool members and said handle levers are set in the same plane, substantially as set forth.

[Claim 6 not printed in the Gazette.]

873,334. PIPE-THREADING MACHINERY. EDWARD D. WESTRIP, Myerstown, and RALPH MCCARTY, Lebanon, Pa. Filed Jan. 28, 1905. Serial No. 243,009.

1. In a pipe-threading machine, the combination of a die-head provided with die-slots; dies located in said slots and operatively connected with a rotatable cam-ring and governed thereby; cam-ring mechanism comprising said cam-ring and means for rotating it into and out of the working position which it occupies when the dies are cutting; locking means comprising a stop secured to a rock shaft and a part in said cam-ring mechanism which when engaged lock the cam-ring in its working position; said rock shaft; a finger adapted to project into the path of the pipe-feed and secured to said rock shaft, and adapted when pressed by the moving pipe to move the aforesaid stop on the rock shaft out of its engaged position; and automatic means adapted to shift the cam-ring automatically out of its working position when the parts comprising the locking means are disengaged.



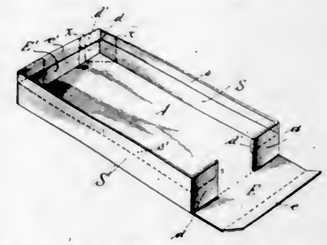
2. In combination, a die-head having an opening therein in the direction of the pipe-feed to permit the complete passage therethrough of a pipe; dies projecting from the die-head into said opening and movable into and out of cutting position to thread the pipe; die-locking means adapted when engaged to lock the dies in cutting position; a rock-shaft; a finger on said shaft rotatable therewith into and out of the path of the pipe-feed and connected with the die-locking means, said finger operating when pressed by the pipe, to disengage said locking means; a spring acting on the rock-shaft normally to rotate the finger against the direction of the pipe-feed and out of its path; and a releasable stop adapted to stop rotation of the rock-shaft at the point where its finger is in the path of the pipe, until said stop is released.

3. In a pipe-threading machine, the combination of a die-head; a cam-ring rotatably mounted on said die-head; dies operatively connected with the cam-ring and governed by the rotation thereof; an arm secured to the die-head by a pivotal connection; a second arm secured to the cam-ring by pivotal connection; a pivotal connection between said arms; an abutment on the first arm arranged to engage the second arm when said arms are positioned with their three pivotal connections in substantial alinement; adjusting means adapted to vary the length of the second arm between its respective pivotal connections with the first arm and the cam-ring; a movable stop adapted to engage one of said arms and to lock the cam-ring in the working position which it occupies when the dies are cutting; a support for said stop; means for adjusting the position of said stop on its support; and means operatively connected with said stop and adapted to contact with the moving pipe to disengage the movable stop.

4. In combination, a die; a rotary cam adapted to control said die; an arm secured to a stationary part by a pivotal connection; said stationary part; a second arm pivotally connected with the rotary cam; a pivotal connection between said arms; locking means comprising a movable stop adapted to engage one of said arms and to lock them in the position which they occupy when the die is cutting; and a finger connected with said movable stop and projecting into the path of the article being threaded and adapted when pressed by said article to disengage the stop.

873,335. PAPER BOX. GEORGE R. WYMAN, East Walpole, Mass., assignor to Charles S. Bird, doing business as F. W. Bird & Son, East Walpole, Mass. Filed Dec. 13, 1905. Serial No. 291,509.

1. A rectangular folding paper box or lid consisting of a single piece of board, cut, scored, folded and secured to comprise the following members, viz: a bottom portion A, bent-up sides S, S', having inwardly-bent reinforcing strips, *s*, *s'*, integral therewith and secured thereto by adhesive, turned-in side extensions *d*, *d*, *d*, *d*, integral with said sides and rectangularly disposed thereto and having the lower edges thereof contacting with said bottom, turned-in reinforcing strips *d'*, *d'*, *d'*, *d'*, integral with said reinforcing strips *s*, *s'*, and integral with and secured by adhesive to said side extensions *d*, *d*, *d*, *d*; also end-pieces E, E', integral with and rectangularly disposed to said bottom portion A, and secured by adhesive to said turned-in extensions *d*, *d*, *d*, *d*, and having inwardly and downwardly turned flaps *e*, *e'*, likewise secured by adhesive to said inwardly-bent reinforcing strips *d'*, *d'*, *d'*, *d'*, whereby the rim of said box or lid along its sides and at its corners is composed of a fold of a single board bent into contact with, and secured to, itself, and, at its ends, of two folds of single board, towit, an inner fold thereof bent into contact with, and secured to, itself and an outer fold bent over into contact with, and secured to, said inner fold, whereby the said sides and ends including their said constituent members are by reason of their aforesaid folds and connections, precluded from movement relatively to each other.



2. A rectangular folding paper box or lid consisting of a single piece of board cut, scored, folded and secured to comprise the following members, viz: a bottom portion A, bent-up sides S, S', having inwardly bent reinforcing strips *s*, *s'*, integral therewith and secured thereto, turned-in side extensions *d*, *d*, *d*, *d*, integral with said sides and rectangularly disposed thereto and having the lower edges thereof contacting with said bottom, turned in reinforcing strips *d'*, *d'*, *d'*, *d'*, integral with said reinforcing strips *s*, *s'*, and integral with and secured to said side extensions *d*, *d*, *d*, *d*; also end pieces E, E', integral with and rectangularly disposed to said bottom portion A, and secured to said turned-in extensions *d*, *d*, *d*, *d*, and having inwardly and downwardly turned flaps *e*, *e'*, likewise secured to said inwardly bent reinforcing strips *d'*, *d'*, *d'*, *d'*, whereby the rim of said box or lid along its sides and at its corners is composed of a fold of a single board bent into contact with, and secured to, itself and, at its ends, of two folds of said single board, towit, an inner fold thereof bent into contact with, and secured to, itself, and an outer fold bent over into contact with, and secured to, said inner fold, whereby the said sides and ends including their said constituent members are by reason of their aforesaid folds and connections, precluded from movement relatively to each other.

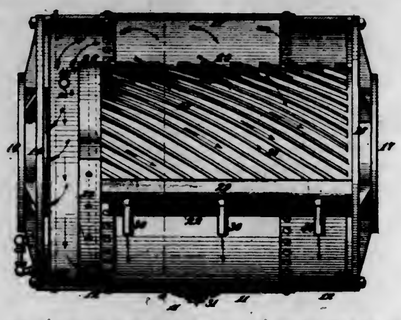
873,336. GAS OR STEAM SEPARATOR. JOHN E. ANGELL, St. Louis, Mo. Filed Sept. 10, 1906, Serial No. 334,026. Renewed Nov. 1, 1907. Serial No. 400,151.

1. In an apparatus of the character described, the combination in a casing having an inlet passage and an outlet passage, of a semi-tubular partition between the inlet and outlet passage, and a series of ribs extending obliquely toward each side from the center of said partition to effect separation of the water and other foreign impurities from the gases or steam substantially as specified.

2. In a gas or steam separator, a casing having inlet and outlet passages, a baffle plate adjacent to the inlet passage, a semi-tubular partition between the baffle plate and the outlet passage, and a grid between the baffle plate and the inlet passage, substantially as described.

3. In a gas or steam separator, a casing having inlet

and outlet passages, a grid or break adjacent to the inlet passage, a partition between the grid or break and the outlet passage, and a series of ribs on said partition, substantially as specified.

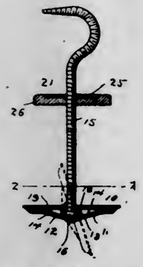


4. In a gas or steam separator, a casing having inlet and outlet passages, a grid or break disposed at right angles to the inlet passage, a baffle plate behind said grid or break, a partition between the baffle plate and the outlet passage, and a series of ribs on the partition, substantially as specified.

5. In a gas or steam separator, a casing having inlet and outlet passages, a baffle plate adjacent to the inlet passage, a partition between the baffle plate and the outlet passage, and a second partition supported separate from the first-named partition, substantially specified.

[Claims 6 to 39 not printed in the Gazette.]

873,337. PUNCTURE-CLOSER. DAVID APSTEIN, Bridgeport, Conn. Filed Feb. 14, 1907. Serial No. 357,300.



1. A device of the character described comprising a threaded shank having a head formed thereon, a sheet metal cap formed from a disk of metal having a central hole through which the shank is passed, the disk being then closed loosely over the head and a flexible closer secured to the cap.

2. A device of the character described comprising a threaded shank having a head formed thereon, a sheet metal cap formed from a disk of metal having a central hole through which the shank is passed, the disk being then closed loosely over the head, and a flexible closer secured to the cap.

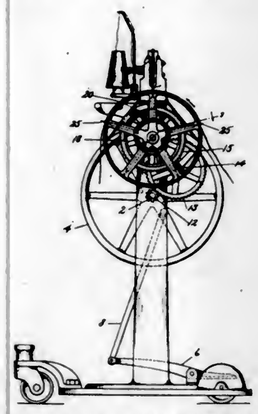
3. A device of the character described comprising a threaded shank having a head formed thereon, an elongated sheet metal cap formed upon the head in which the shank and head are rotatable, and a flexible closer consisting of a sheet metal body having a socket to receive the cap, on which the body swings in the vertical plane, and a flexible pad into which the body is molded.

4. A device of the character described comprising a threaded shank having a head formed thereon, an elongated sheet metal cap formed upon the head in which the shank and head are rotatable and a flexible closer consisting of a sheet metal body having a transverse socket to receive the cap, grooves leading therefrom deepest at the inner end and a longitudinal slot in the upper side thereof, said slot and said groove being adapted to receive the shank in the inserting position, and a flexible pad into which the body is molded.

5. In a device of the character described, the combination with a threaded shank having a head formed thereon and an elongated cap swiveled on the head, of an elongated flexible closer consisting of a sheet metal body and a pad of rubber in which the body is molded, said body being provided with a transverse socket to receive the cap, longitudinal grooves leading from the socket and deepest at the inner end and a slot in the upper side thereof, said slot and grooves being adapted to receive the shank in the inserting position.

[Claim 6 not printed in the Gazette.]

873,338. FEEDING MECHANISM. ORRELL ASHTON, Lawrence, Mass. Filed Apr. 12, 1906. Serial No. 311,290.



1. In a mechanism of the class described, the combination with a carrier for supporting the stock and means for actuating the carrier, of stock engaging pins movable with the carrier and normally occupying positions below the stock supporting surface of the carrier, and means for automatically projecting the pins into the stock and then withdrawing them therefrom.

2. In a mechanism of the class described, the combination with a carrier wheel for supporting the stock and means for turning the wheel, of pins located normally within the periphery of the wheel and means for projecting the pins beyond the periphery of the wheel and thereafter retracting them at predetermined points in the rotation of the wheel.

3. In a mechanism of the class described, the combination with a stock feeding wheel and means for rotating it, of pins arranged radially on the wheel and a cam stationary with relation to the wheel for automatically projecting the pins into engagement with the stock on the wheel and retracting said pins to strip them from the stock.

4. In a mechanism of the class described, the combination with means for operating on stock, of a stock feeding wheel, means for rotating the wheel, pins located normally within the periphery of the wheel, and means for projecting the pins successively into engagement with the stock on the wheel before the operating means is reached and withdrawing the pins from the stock after the operating means has been passed.

5. In a mechanism of the class described, the combination with means for operating on stock, of a stock feeding wheel, means for rotating the wheel, pins arranged radially on the wheel, and a cam for projecting the pins successively into engagement with the stock on one side of the operating means and withdrawing them when they have reached the other side of the operating means, said cam being adjustable relatively to the means for operating on the stock

to change the point in the rotation of the wheel at which the pins shall be projected and withdrawn.

[Claims 6 to 8 not printed in the Gazette.]

873,339. NOSE-GUARD FOR EYEGLASSES. GUSTAV A. BADER, Rochester, N. Y., assignor, by direct and mesne assignments, of one-half to E. Kirstein Sons Company, Rochester, N. Y., a Corporation of New York, and one-half to Leo F. Adt, Albany, N Y. Filed Aug. 29, 1906. Serial No. 332,433.



1. In eyeglasses, the combination with the lenses and a bridge for connecting them, of nose guards, guides on which the nose guards move substantially in line with one another, and pivoted levers for operating the guards on their guides.

2. In eyeglasses, the combination with the lenses, of a rigid bridge connecting them and having guiding portions formed thereon behind the lenses, of nose guards mounted to operate substantially in line with one another on said guiding portions.

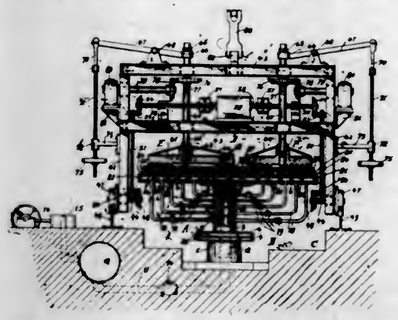
3. In eyeglasses, the combination with the lenses having suitable attaching devices thereon, and a bridge connecting the lenses, of guides extending outwardly beyond the inner edges of the lenses and behind the said attaching devices, and nose guards having portions coöperating with said guides to insure movement of the nose guards substantially in line between the centers of the lenses and in a direction parallel to the plane of the lens surfaces.

4. In eyeglasses, the combination with the lenses, and a bridge for connecting them, of nose guards, guides for insuring relative movement of the guards in line with one another, and pivoted levers having finger grips at their forward ends and having suitable connection with the guards for operating the latter.

5. In eyeglasses, the combination with the lenses, the attaching devices thereon, the bridge connected to the attaching devices and having the extensions in line with and in rear of said devices, of slides operating on said extensions and nose guards carried by the slides.

[Claims 6 to 12 not printed in the Gazette.]

873,340. MACHINE FOR GRINDING, SMOOTHING, AND POLISHING PLATE-GLASS. EDWARD BAGNALL, Pittsburg, Pa. Filed Aug. 19, 1904. Serial No. 221,372.

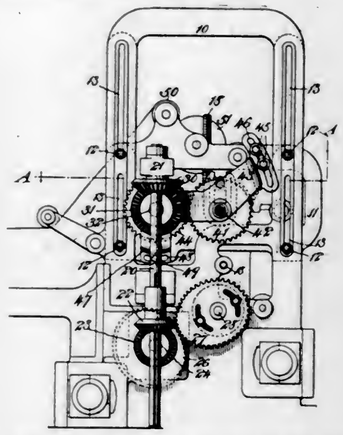


1. In a machine of the character described, the combination of a hollow rotary shaft, a flat plate carried by said shaft, a casing having depending annular ribs, and apertures communicating with the spaces between said ribs, said casing resting on said plate, a series of pipes each leading from one of the spaces in said casing to the interior of said hollow shaft, and means for exhausting air from said shaft.

2. In a machine of the character described, the combination of a hollow rotary shaft, a perforated pipe arranged centrally of said shaft, means for exhausting air from said pipe, a plate carried by said shaft, a casing formed with a series of depending annular ribs, and pipes leading from the interior of said hollow shaft to the spaces between said ribs.

3. In an apparatus of the character described, the combination of a stationary standard, a hollow shaft rotatably mounted in said standard, means for rotating said shaft, a stationary pipe extending through said standard and shaft and having perforations in its side walls, and a flat plate carried by said shaft, a casing having a plurality of depending annular ribs and a plurality of openings extending through the plate between said ribs, a plurality of suction pipes each extending from the space between two of said ribs to the space in said shaft exterior to said perforated pipe, each of said suction pipes being provided with a valve, and means for exhausting air from the said perforated pipe.

873,341. VARIABLE-SIZE-SHEET CUTTING AND FEEDING MECHANISM. HOWARD M. BARBER, Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 23, 1906. Serial No. 302,395.



1. A sheet cutting and feeding mechanism comprising cutters, means for feeding the web thereto, a sheet feeding cylinder having a set of grippers arranged to engage the advance edge of the web after it has passed through the cutters and means for driving the sheet feeding cylinder at variable speeds during one revolution of the cylinder.

2. A sheet cutting and feeding mechanism comprising cutters, means for feeding the web thereto, a sheet feeding cylinder having a set of grippers arranged to engage the advance edge of the web after it has passed through the cutters but before the sheet is severed therefrom by the cutters and means for driving the sheet feeding cylinder at variable speeds during one revolution of the cylinder.

3. A sheet cutting and feeding mechanism comprising cutters, means for feeding the web thereto, an impression cylinder having a set of grippers, a sheet feeding cylinder having a set of grippers arranged to engage the advance edge of the web and feed the sheet to the impression cylinder grippers and means for driving the sheet feeding cylinder at variable speeds during one revolution of the said sheet feeding cylinder.

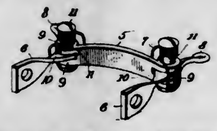
4. A sheet cutting and feeding mechanism comprising cutters, means for feeding the web at different speeds thereto, an impression cylinder, a sheet feeding cylinder arranged to engage the web after it has passed through

the cutters and means for driving the sheet feeding cylinder at variable speeds during one revolution of the said sheet feeding cylinder.

5. A sheet cutting and feeding mechanism comprising rotary cutters, means for feeding the web thereto at a predetermined speed, an adjustable variable speed device for driving the cutters at the same speed as the web at the time of cut, a sheet feeding cylinder having a set of grippers arranged to engage the advance edge of the web after it has passed through the cutters but before the sheet is severed therefrom by the cutters and a variable speed device for driving the sheet feeding cylinder at the speed of the web from the time the web is engaged thereby until the sheet is severed from the web.

[Claims 6 to 21 not printed in the Gazette.]

873,342. EYEGLASSES. LOUIS B. BECKER, New York, N. Y., assignor, by direct and meane assignments, of one-half to E. Kirstein Sons Co., Rochester, N. Y., a Corporation of New York, and one-half to Leo F. Adt, Albany, N. Y. Filed Dec. 22, 1906. Serial No. 349,036.



1. In an eyeglass bridge, a bridging portion, arms pivoted thereto, springs acting upon said arms, and means adapting said arms for attachment to the lens-supporting parts of an eyeglass mounting.

2. In an eyeglass bridge, a bridging portion, arms pivoted thereto, forwardly-projecting finger pieces connected to said arms, springs acting upon said arms to force their rear ends inwardly, and means for securing the rear ends of said arms to the lens-supporting parts of an eyeglass mounting.

3. The combination with the lens-supporting parts of an eyeglass mounting, and nose guards connected thereto, of a bridging portion, arms pivoted to said bridging portion and detachably secured to said lens-supporting parts, and springs acting upon said arms to force the rear ends thereof inwardly.

4. The combination with the lens-supporting parts of an eyeglass mounting, and nose guards connected thereto, of a bridging portion, arms pivoted to said bridging portion and secured at their rear ends to said lens-supporting parts, forwardly-projecting finger pieces connected to said arms, and springs acting upon said arms to force the rear ends thereof inwardly.

5. The combination with the posts and boxes of an eyeglass mounting and nose-guards secured in said boxes, of a rigid bridging portion, arms pivoted to the ends of said bridging portion and secured at their rear ends in said boxes, and springs acting upon said arms to force the rear ends thereof inwardly.

[Claims 6 to 11 not printed in the Gazette.]

873,343. EYEGLASSES. WALLACE L. BEMIS, Brockton, Mass., assignor, by direct and mesne assignments, of one-half to E. Kirstein Sons Co., Rochester, N. Y., a Corporation of New York, and one-half to Leo F. Adt, Albany, N. Y. Filed Jan. 11, 1907. Serial No. 351,828.



1. In eyeglasses, the combination with a lens and a stud secured thereto, of a vertically arranged pivot-piece secured in said stud and having a pivot pin projecting upwardly therefrom; a bridge pivotally mounted on said pivot-piece; and a coil spring surrounding the pivot pin and interposed between said pivot-piece and bridge.

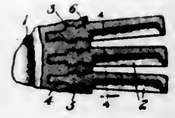
2. In eyeglasses, the combination with a lens and a stud secured thereto, of a pivot-piece secured in said stud; a bridge pivotally mounted on said pivot-piece; a yielding device interposed between said pivot-piece and bridge; and a device for preventing the lenses being turned too far forward.

3. In eyeglasses, the combination with a lens and a stud secured thereto, of a pivot-piece secured in said stud and carrying an upwardly extending lug and a pivot pin; a bridge pivotally mounted on said pivot-piece; and a coil spring surrounding the pivot pin and having one end bearing against said bridge and the other end of which bears against said lug.

4. Eyeglasses consisting of a pair of lenses; a stud secured to each of said lenses; a pair of nose-guards; a pair of pivot-pieces; means for securing one of said nose-guards and pivot-pieces in each of said studs; a bridge to each end of which is pivotally secured one of said pivot-pieces; a spring interposed between each pivot-piece and the end of the bridge pivotally secured thereto; and a device for preventing the lenses being thrown too far forward.

5. In eyeglasses, the combination of a bridge each end of which is formed with a lug; a stud-carrying device mounted free to swing on the end of said bridge; said device being formed two lugs, one of which extends upwardly and the other of which extends downwardly; and a spring, one end of which bears against the lug formed on the end of said bridge and the other end of which bears against one of the lugs formed on said device; the other lug formed on said device serving to limit the rotary movement of said device in coöperation with said bridge.

873,344. TURBINE-WHEEL. WILLIAM D. BOYCE and HERMAN GUELS, St. Louis, Mo.; said Guels assignor to said Boyce. Filed Oct. 2, 1907. Serial No. 395,647.



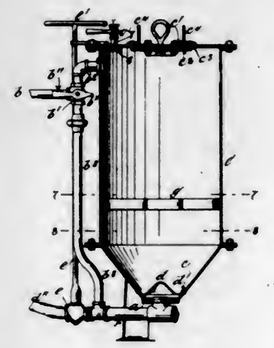
1. A turbine wheel comprising a body portion provided with radially disposed slots, and radially projecting blades or buckets having attaching shanks that fit snugly in said slots, each of said shanks being provided intermediate its end and the base of the bucket with an enlarged portion that fits in a widened portion of the slot located between the inner and outer end of the slot; substantially as described.

2. A turbine wheel comprising a member provided in its edge portion with radially disposed slots and radially projecting buckets or blades having attaching shanks that fit snugly in said slots, the portion of each shank at the base of the bucket being wedge-shaped in cross section and merging into a bulb or enlarged portion located some distance from the inner end of the shank; substantially as described.

3. A turbine wheel consisting of a body portion provided with radially disposed slots, each of which has a rectangular-shaped inner end, a flared outer end, and an intermediate widened portion, and radially projecting blades or buckets provided with attaching shanks that conform in cross section to the shape of said slots; substantially as described.

4. A turbine wheel consisting of a member having radially disposed slots formed in its edge portion, the outer ends of said slots being flared and merging into a widened portion that is located intermediate the inner and outer ends of the slots, and radially projecting blades or buckets provided with shanks that conform in cross section to the shape of the slots in said member; substantially as described.

873,345. PNEUMATIC GROUT MIXING AND DISCHARGING APPARATUS. WILLIAM L. CANNIFF, New York, N. Y. Filed Oct. 29, 1906. Serial No. 341,042.



1. In a device of the character designated, the combination of a mixing chamber, means for introducing material to be mixed into said chamber, means for sealing said chamber, and means connected with said chamber for injecting compressed air therein below the material contained therein for the purpose of mixing the same.

2. In a device of the character designated, the combination of a mixing chamber, means for introducing materials to be mixed in said chamber, means for sealing said chamber, means connected with said chamber for injecting compressed air therein below the material contained therein for the purpose of mixing the same, and an air vent and vent valve connected with said chamber, for the purpose described.

3. In a device of the character designated, the combination of a mixing chamber, means for introducing materials to be mixed in said chamber, means for sealing said chamber, means connected with said chamber for injecting compressed air therein below the material contained therein for the purpose of mixing the same, and means for discharging said chamber of its contents by air pressure for the purpose described.

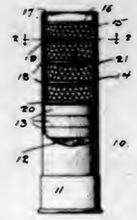
4. In a device of the character designated, the combination of a mixing chamber, means for introducing materials to be mixed in said chamber, means for sealing said chamber, means connected with said chamber for injecting compressed air therein below the materials contained therein for the purpose of mixing the sme, an air vent and vent valve connected with said chamber, and means for discharging the mixed material by air pressure for the purpose described.

5. In a device of the character designated, the combination of a mixing chamber, means for introducing materials to be mixed in said chamber, means for sealing said chamber, means connected with said chamber for injecting compressed air therein below the material contained therein for the purpose of mixing the same, an air vent and vent valve connected with said chamber, and a shield in said chamber opposed to and protecting said vent for the purpose described.

[Claims 6 to 14 not printed in the Gazette.]

873,346. METHOD OF LOADING SHORT-RANGE SHOT-SHELLS. LEWIS D. CHRISTIE, Bridgeport, Conn., assignor to The Union Metallic Cartridge Company, Bridgeport, Conn., a Corporation of Connecticut. Filed June 10, 1907. Serial No. 378,074.

The method of loading shells with shot charges varying in weight requirements, which consists in forming uniformly definite minimum shot charges, each consisting of a plurality of sections separated by wads, which charges are complete in themselves, placing one of said charges in each shell and producing the required weight of shot by the addition of supplemental shot charges of a



weight to bring the total up to the requirements of special lines of shells.

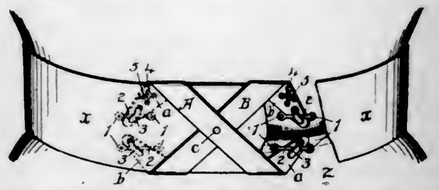
873,347. SCATTER-LOAD FOR SHOT-SHELLS. LEWIS D. CHRISTIE, Bridgeport, Conn., assignor to The Union Metallic Cartridge Company, Bridgeport, Conn., a Corporation of Connecticut. Filed June 10, 1907. Serial No. 378,075.



1. A scatter load for shot cartridges comprising a shot charge divided into a plurality of sections separated by wads, top and bottom wads and a covering of light paper inclosing the charge and secured in place independently of the cartridge shell.

2. A scatter load of shot cartridges comprising a shot charge divided into a plurality of sections separated by wads, top and bottom wads and a covering of light paper inclosing the charge and crimped above and below the top and bottom wads, respectively, the said load being capable of handling independently of the cartridge shell.

873,348. ADJUSTABLE SKIRT-SUPPORTER. ANNA CLEVES, Omaha, Nebr. Filed May 26, 1905. Serial No. 262,411.



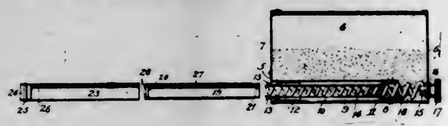
In a device of the character described the combination of two similar flat members preferably of sheet metal a pivot pin to pivotally unite said members crosswise, each member having its ends bent so as to extend at right angles but in a parallel plane with the flat or body portion of each member, projecting ears secured to the ends of each member, and eyes adapted to be engaged by said bent ends and ears as set forth.

873,349. [WITHDRAWN.]

873,350. CIGARETTE-MAKING DEVICE. IRA L. CONKLING, Philadelphia, Pa. Filed July 3, 1907. Serial No. 381,959.

1. In a cigarette-making device, the combination of a receptacle for the tobacco, a stationary tube in said receptacle closed at its inner end and opening through said receptacle, a second stationary tube within said first-named

tube concentric with it and open at both ends, means for forcing tobacco from said receptacle through said second tube, and a third tube about which to wrap a cigarette-paper, adapted to be slipped over said second tube, with means for holding it thereon while the paper is being forced off said wrapped tube by the action of said forcing-means, for the purpose set forth.



2. In a cigarette-making device, the combination of a receptacle for the tobacco, a stationary tube on said receptacle, closed at its inner end and open at its opposite end, a second stationary tube in said first-named tube concentric with it and open at both ends, means for forcing tobacco from said receptacle through said second tube, a third tube about which to wrap a cigarette-paper and adapted to be slipped over said second tube, and a spring interposed between said first-named and third tubes, for the purpose set forth.

3. In a cigarette-making device, the combination with a receptacle for the tobacco, a stationary tube on the receptacle, open to its interior, and means for forcing tobacco from said receptacle through said tube, of a second stationary tube about which to wrap a cigarette-paper and adapted to be slipped over said second tube and held thereon while the paper is being forced off said wrapped tube by the action of said forcing-means, and a third tube adapted to slip over said second tube and the paper thereon and provided with an abutment, for the purpose set forth.

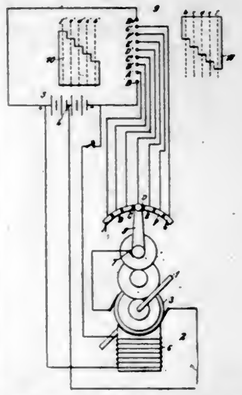
4. In a cigarette-making device, the combination with a receptacle for the tobacco, having a stationary tube open to its interior, and means for forcing tobacco from said receptacle through said tube, of a second tube about which to wrap a cigarette-paper and adapted to be slipped over said stationary tube and held thereon while the paper is being forced off said wrapped tube by the action of said forcing-means, and a third tube adapted to slip over said wrapped tube and the paper thereon, and provided with a plunger, for the purpose set forth.

5. In a cigarette-making device, the combination of a receptacle for the tobacco, having a stationary tube within it, closed at its inner end and opening through said receptacle, a secondary stationary tube in said first-named tube open at both ends and expanded at its inner end to fit the interior of said first-named tube, a spiral-conveyer journaled at one end in a wall of the receptacle and equipped with means for turning it and extending into said second tube, a third tube about which to wrap a cigarette-paper and adapted to be slipped over said second tube and held thereon while the paper is being forced off said third tube by the action of said conveyer, a fourth tube adapted to slip over said third tube and the paper wrapped thereon and provided with a plunger near its outer end, and springs fastened on said first-named tube to bear against said fourth tube, for the purpose set forth.

873,351. SYSTEM OF CONTROL. FREDERICK DARLINGTON and OTTO S. SCHAIBER, Pittsburg, Pa., assignors to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 3, 1906. Serial No. 304,018.

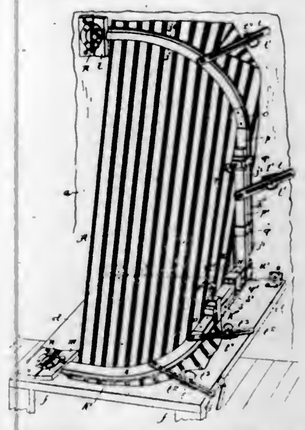
1. The combination with a source of electrical energy and a motor having one terminal connected to a neutral or intermediate point thereof, of a set of conducting segments, means operated by the motor whereby its other terminal may be connected to the conducting segments, and means whereby the conducting segments may be connected to the one terminal or the other of the source.

2. The combination with a source of electrical energy and a motor having one terminal connected to a neutral or intermediate point thereof, of a set of conducting segments, means operated by the motor whereby its other terminal may be connected to the conducting segments, and means whereby all but one or a less number of the conducting segments may be connected simultaneously to the one terminal or the other of the source.



3. The combination with a source of electrical energy and a motor having one terminal connected to a neutral or intermediate point thereof, of a set of conducting segments, means operated by the motor whereby its other terminal may be connected to the conducting segments, and means whereby the end segments of the set may be connected, respectively, to the terminals of the source and whereby the intermediate segments may be connected to the one terminal or the other of the source.

873,352. APPARATUS FOR LAYING OUT AND MARKING ROUND-TOP AWNINGS. CHARLES DIEHL, New York, N. Y. Filed Mar. 23, 1907. Serial No. 364,157.



1. In an apparatus for laying out and shaping round top awnings, the combination of a vertical board, a horizontal board, clamp-bars curved to correspond with the ends of the desired awning pattern and adapted to form guides in marking the ends thereof, and means for fixing the said clamp-bars to the vertical and horizontal boards.

2. In an apparatus for laying out and marking round top awnings the combination of a vertical and a horizontal board, means for fixing them in position at a suitable angle to each other, clamp bars curved to correspond with the required shape of the ends of a round top awning, means for clamping said bars on said boards and clipping the ends of the awning in position for marking or scoring the same preparatory to cutting, and vertical and horizontal clamps connected to said curved clamp bars in position to clip the side of the awning patterns and form a guide for marking or scoring the same preparatory to cutting, substantially as described.

3. In an apparatus for laying out and marking awning patterns the combination of pattern clamp bars adapted to clip the top and bottom edges of the cloth and form guides for marking the same, extensible clamp connections between said bars, serving to hold them in proper relative position at approximately right angles to each other, and means for pressing said top and bottom and connecting clamp bars against vertical and horizontal supports for marking or scoring the cloth, substantially as described.

4. In an apparatus for laying out and marking awning patterns the combination of curved clamp bars suitable to serve as marking guides for the top and bottom of awning patterns for round top windows, means for pressing said top and bottom clamping guides against the respective ends of the awning pattern on vertical and horizontal supports, a vertical extension clamp-bar extending down from the curved clamp bar to the level of the horizontal support, means for pressing back the heel of said vertical extension clamp bar against the vertical support, a horizontal extension clamp bar extending back from the near end of the bottom curved clamp bar to the heel of the vertical extension clamp bar and means for conecting the meeting ends of said vertical and horizontal extension clamp bars, whereby the top and bottom curved clamps may be secured at proper juxtaposition at variable distance asunder for marking out awning patterns of different sizes.

5. In an apparatus for laying out and marking awning patterns for round top windows the combination of vertical supports and horizontal supports on which the respective ends of the cloth or pattern may be stretched for fitting and marking, quarter circle clamps for the top and bottom of the pattern adapted to serve as marking guides for one half the top and bottom of the awning pattern, clips for pressing the free ends of the quarter circle clamps against the vertical and horizontal supports at the longitudinal center of the awning pattern, extensible vertical and horizontal clamp bars connecting the opposite ends of the quarter circle clamps at variable distance asunder and means for pressing the said curved and vertical and horizontal clamping guide bars upon the cloth on the vertical and horizontal supports in position for marking or scoring the cloth, substantially as described.

873,353. FENCE STRUCTURE. NAPOLEON B. DIXON, Dixie, Ala. Filed May 18, 1907. Serial No. 374,399.

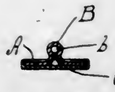


1. A fence post, consisting of a single length of metal doubled upon itself at its middle to form two members, the ends of said strip projecting outwardly away from each other and thence at an angle, the extremities being pointed, the two members of the post being formed with registering undulations adapted to form pockets for rails or the like, clamping bolts extending through said members and adapted to clamp the rails in said pockets, brace rods secured to one of said clamping bolts and to the oppositely extending ends of the strip, and angular brace plates secured to the bolt to which the brace rods are attached and provided with holes through which said brace rods extend.

2. A fence post consisting of an integral strip of metal doubled upon itself at an intermediate point, the ends extending away from each other and thence downwardly whereby to form feet, the two members of the strip being provided with undulations constituting pockets for the reception of wires or the like, clamping bolts extending through said members and brace rods secured to one of said clamping bolts and to the oppositely extending ends of the strip.

3. A fence post consisting of an integral strip of metal doubled upon itself at an intermediate point, the ends extending away from each other and thence downwardly to form feet, the two members of the strip being designed to receive rails or wires between them, clamping bolts extending through said members, and brace rods provided at their upper ends with eyes, by which they are received on one of said clamping bolts, the brace rods extending downwardly therefrom, the outwardly extending portions of the strip being formed with holes through which the brace rods extend, and the latter being formed with protuberances 10 adapted to abut against the outwardly extending portions of the strip, as and for the purpose set forth.

873,354. BUTTON. JAMES C. DORAN and JAMES A. DORAN, Providence, R. I. Filed May 3, 1906. Serial No. 314,967.



1. A button back comprising a back plate and a shank integral therewith, said shank having a hollow base and a solid adjacent portion provided with an eye opening therethrough.

2. A button back comprising a back plate having a shank integral therewith, said shank comprising a hollow substantially conical base and a flat upper portion provided with a transverse perforation.

3. A button back comprising a back plate and a shank integral therewith, said shank having a hollow base and a solid adjacent portion provided with a transverse perforation having a rounded margin.

4. A button back comprising a back plate and a shank integral therewith and compressed therefrom, said shank having a hollow base and a compressed solid adjacent portion with an opening therein.

5. As an improved article of manufacture, a button composed of a back comprising a back plate with integral shank, said shank having a hollow substantially conical base and a compressed flattened solid adjacent portion provided with an opening, and a face plate having its marginal edge folded inwardly and downwardly over the edge of the back plate and fixedly clamped thereon.

873,355. BUTTON. JAMES C. DORAN and JAMES A. DORAN, Providence, R. I. Filed Apr. 5, 1907. Serial No. 366,542.

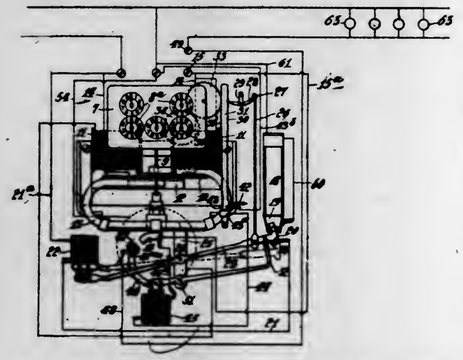


1. A button back comprising a back plate, a hollow shank integral with the back plate and an annular member fixed within the hollow shank.

2. A button back comprising a back plate, a hollow shank integral with the back plate and provided with transverse perforations, and an annular member fixed within the hollow shank with its open portion concentric with the perforations.

3. A button back comprising a back plate, a hollow shank integral with the back plate and provided with transverse perforations, and an auxiliary member provided with an opening fixed within the hollow shank and having its opening concentric with the perforations.

873,356. PREPAYMENT ATTACHMENT FOR ELECTRICITY-METERS. FRANCIS J. DOWLING, Montreal, Quebec, Canada. Filed Feb. 27, 1905. Serial No. 247,459.



1. In combination with an electricity meter having electrical actuating connections and rotatable indicating means, a prepayment attachment comprising a switch in the connection leading from the meter, a chute disposed adjacent to the meter, a contact on the chute, electrical connections to the contact, and a lever provided with a contact adjacent to the chute and adapted to close the switch when the space between the chute and the lever is bridged, and electrically actuated means for opening the switch.

2. In combination with an electricity meter having electrical actuating means and rotatable indicating means, a prepayment attachment comprising a switch in the connection leading from the meter, a chute disposed adjacent to the meter, a spring-pressed slotted closure for the chute, a contact on the chute, a lever pivoted adjacent to the chute and adapted to close the switch, and electrically actuated means for opening the switch.

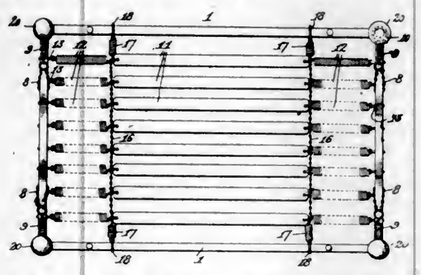
3. In combination with an electricity meter having electrical actuating connections and rotatable indicating means, a prepayment attachment comprising a switch in the connection leading from the meter, a chute disposed adjacent to the meter, a hinged slotted closure disposed on the chute, an electrical connection from the source of electricity to said closure, a connection from the closure to the switch, whereby the switch may be rendered inoperative by opening the closure, and electrically actuated means for opening the switch.

4. In combination with an electricity meter having electrical actuating connections and rotatable indicating means, a prepayment attachment comprising a switch in the connection leading from the meter, a chute disposed adjacent to the meter and in electrical connection therewith, a lever pivoted adjacent to the end of the chute and adapted to close the switch, and an electro magnet and connections adapted to actuate the lever to open the switch.

5. In combination with an electricity meter having electrical actuating connections and rotatable indicating means, a prepayment attachment comprising a switch in the connection leading from the meter, a bent lever supporting the switch, a chute disposed adjacent to the meter and in electrical connection therewith, a lever pivoted above the bent lever and terminating adjacent to the end of the chute and adapted to close the switch, and an electro magnet and connections adapted to actuate the bent lever to open the switch.

[Claims 6 to 15 not printed in the Gazette.]

873,357. BED. JOHN J. DUNN, New York, N. Y. Filed Sept. 14, 1907. Serial No. 392,891.



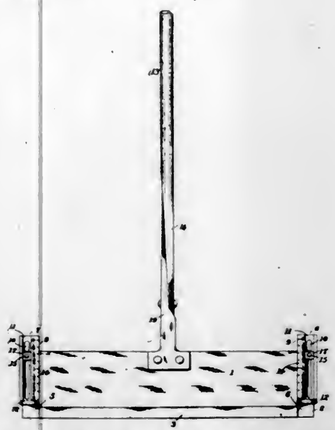
1. The combination of a post, a lateral arm projecting therefrom, an end panel supported on said arm, means for moving the panel relatively to the arm, and flexible connections between the post and the panel for holding the post to the panel.

2. The combination of end panels, side bars, means for moving the side bars laterally with respect to the end panels, slats, flexible connections between the slats and the end panels, and connections between the slats and the side bars.

3. The combination of end panels, side bars, means for moving the side bars laterally with respect to the end panels, slats, and means for separating the slats as the side bars are moved laterally.

4. The combination of an expansible bedstead frame, slats, movable connections between the ends of the slats and the ends of the frame, a flexible connection between the end of the slats, and connections between the slats and the sides of the frame.

873,358. ADJUSTABLE ROOFING-TONGS. PHILIP EMRICH, Cincinnati, Ohio. Filed May 17, 1906. Serial No. 317,330.



1. In adjustable roofing tongs, a pair of jaws one of which projects beyond the other at each end, an adjustable gage at each end of the shorter jaw, means for securing each gage to the longer jaw to hold it in an adjusted position thereon, and a scale on each adjustable gage by which to set said gages and measure the width of seam, substantially as set forth.

2. In adjustable roofing tongs, a pair of jaws one of which projects beyond the other at each end, an adjustable gage upon the projecting parts of the longer jaw at each end of the shorter jaw, means for adjusting the gage to hold it in adjusted position upon the longer jaw and adjacent the ends of the shorter jaw, a scale upon each gage, and a gage mark upon the shorter jaw adapted to register with the respective graduations of the scale, substantially as set forth.

3. In adjustable roofing tongs, a pair of jaws one of which is cut away at each end, an adjustable gage at each end of said cut away jaw, means for adjusting each gage to hold it in adjusted position upon the jaw which is not cut away and a flange upon said gage adapted to take over and bear against the jaw which is not cut away.

4. In adjustable roofing tongs, a jaw cut away at each end, an opposing jaw, an adjustable gage secured to the opposing jaw at each end within the space cut away, said gage having a slot, a screw bolt taking through a hole in said opposing jaw and through said slot, a nut adapted to engage said screw bolt, means upon said gage adapted to engage said nut whereby it is held from turning and a stop to limit the extent of insertion of the metal between said jaws.

5. In adjustable roofing tongs, a jaw cut away at each end, an opposing jaw, an adjustable gage adapted to occupy the cut away space at each end and rest against the end of said cut away jaw and the inner surface of the opposing jaw, said adjustable gage having a slot, means for securing said gage to said opposing jaw and a flange upon said gage adapted to extend over the end of said opposing jaw whereby the metal plate operated upon is prevented from passing between said jaw and gage and whereby said gage is more firmly held in adjusted position.

[Claim 6 not printed in the Gazette.]

873,359. ROLLING DOOR. JOHN ERWOOD, Chicago, Ill. Filed Apr. 5, 1907. Serial No. 366,532.



1. In combination, a series of slats, each having a central web, hooks at the upper edges of the webs inclosing grooves, hooks at the lower edges of the webs and inclosing grooves in which lie the hooks on the next lower slats, said lower hooks and webs being brought into close proximity at the attached edges of the hooks, so as to leave no accessible depressions between the same, and shields continuous with the webs and extending therefrom over the space between the same and the free edges of the hooks.

2. In combination, a series of slats, each having a central web, hooks at the upper edges of the webs inclosing grooves, hooks at the lower edges of the webs and inclosing grooves in which lie the hooks on the next lower slats to form pivoted connections between adjacent slats, said webs and pivotal connections being in the line with the center of gravity, said lower hooks and webs being brought into close proximity at the attached edges of the hooks, so as to leave no accessible depressions between the same, and shields extending from the webs over the spaces between the same and the free edges of the hooks.

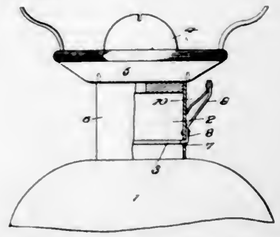
3. In combination, a series of slats, each having a central web, hooks at the upper edges of the webs inclosing grooves, hooks at the lower edges of the webs and inclosing grooves in which lie the hooks on the next lower slats to form pivotal connections between adjacent slats, said webs and pivotal connections being in the line with the center of gravity, said lower hooks and webs being brought into close proximity at the attached edges of the hooks, so as to leave no accessible depressions between the same, and shields continuous with the webs and extending therefrom over the spaces between the same and the free edges of the hooks.

4. A slat of sheet metal comprising a web having an upper hook provided with a downturned edge at its upper end, the metal of the web being carried forward and diagonally downward from the lower edge of the web, thence back upon itself to form a double shield and thence downward to form a hook with an upturned edge lying beneath the shield, no accessible depression being left between the web and the attached edge of the lower hook.

5. A structure composed of slats having interlocking hooks at top and bottom and plates covering the hooks to prevent longitudinal movement of the slats with respect to each other, the plates leaving the bottom of the hooks exposed for the purpose specified.

[Claim 6 not printed in the Gazette.]

873,360. LAMP-BURNER. WILLIAM A. FAIN and ROBERT A. HENRY, Dandridge, Tenn. Filed Apr. 20, 1907. Serial No. 369,320.

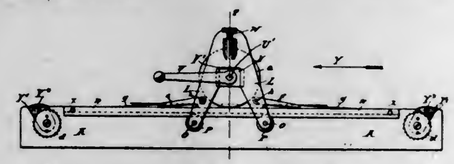


In a lamp burner, the combination of a reservoir formed with a neck, the said neck being provided with an annular groove, a base, a burner mounted upon the base, a sleeve carried by the base and fitting loosely over the before mentioned neck, the said sleeve having an opening formed therein designed to register with the groove, a catch comprising a pair of angularly disposed arms loosely connected to the sleeve at their junction, one of said arms being provided at its extremity with a lateral extension passing through the opening in the sleeve and designed to engages the groove in the neck while the opposite arm extends outwardly and constitutes a finger-piece, and a spring connected to the latter mentioned arm and bearing loosely against the sleeve.

873,361. DUPLICATING PRINTING-MACHINE. BENJAMIN O. FANSLOW, Los Angeles, Cal., assignor, by direct and mesne assignments, to The Universal Polygraph Company, Incorporated, a Corporation of Arizona. Filed Feb. 13, 1907. Serial No. 357,219.

1. A printing machine wherein impressions from type and printing surfaces are conveyed to the paper to be printed upon by means of an intermittently moving printing ribbon carried by rollers in the base of the machine and between the printing surfaces and paper, the base of the machine with parallel sides having grooves therein, the carriage, the impression roller, the rollers in the bottom of the carriage operating in said grooves, adjustable bearings for the impression roller, the ribbon rollers, the ratchet wheels of the ribbon rollers, the adjustable pawls of the carriage alternately making contact with each

ratchet wheel of the ribbon rollers, bearings for the ribbon rollers, the type holder and blocks in the base containing the impression surfaces of the representations to be printed, the elastic circular end portions of the impression roller traveling upon parallel rigid smooth surfaces upon the base and, the stops at each end of the base, substantially as set forth.



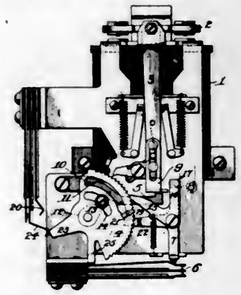
2. The combination in a printing machine wherein impressions from type and printing surfaces are conveyed from such type and printing surfaces to the paper to be printed upon, by means of an intermittently moving printing ribbon carried by inking ribbon rollers in the base of the machine which base has parallel sides with grooves therein, a carriage containing an impression roller for pressing the paper to be printed upon the printing ribbon and the printing ribbon upon the type and impression surfaces, the vertical guides in the ends of the carriage, the bearing blocks and set screws whereby the impression roller is carried in the vertical guides of the carriage, and adjusted therein the rollers in the bottom of the carriage operating in the grooves in the parallel sides of the base, the adjustable pawls and ratchet wheels for operating the inking ribbon rollers, the inking ribbon, the type and printing surfaces from which the impressions are to be taken, the elastic tires on each end of the impression roller in operative engagement with the upper parallel parts of the base constituting two smooth rigid flat rails, substantially as set forth.

3. In a printing machine wherein impressions from type and printing surfaces are conveyed from such type and printing surfaces to the paper to be printed upon by means of an intermittently moving printing ribbon carried upon the base thereof, the combination of the base carrying parallel guide rails at its top above parallel grooves in the base, the carriage, means coöperatively engaging the carriage with these parallel grooves, the impression roller having an elastic tire at each end cooperating with the flat top guide rails of the base, the type and impression surfaces, all operating in such manner that elastic pressure is maintained by the elastic tires of the impression roller between all the coöperating parts of the machine, the base having stops in its sides for terminating the travel of the carriage, substantially as set forth.

4. In a printing machine wherein impressions from type and printing surfaces are conveyed from such type and printing surfaces to the paper to be printed upon, by means of an intermittently moving printing ribbon carried on the base of said machine, the combination of the base having parallel guide rails at its top and parallel grooves in the under parts of these guide rails, the carriage, the impression roller having an elastic tire at each end cooperating with the flat top guide rails of the base, the impression roller being carried so as to revolve upon the driving shaft of the machine, the type and impression surfaces, all operating in such manner that elastic pressure is maintained by the elastic tires of the impression roller between all the operating parts of the machine, the stops at the sides and toward the ends of the base for terminating the travel of the carriage, substantially as set forth.

873,362. LOCK-OUT SWITCH FOR PARTY TELEPHONE-LINES. OSCAR F. FORSBERG, Chicago, Ill., assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 5, 1906. Serial No. 337,510.

1. In a switching device, the combination with a ratchet, of an electromagnetically operated stepping lever therefor, said lever when rocked in one direction advancing said ratchet, contact mechanism, an arm operated by said ratchet when advanced a predetermined distance, to cause said lever when rocked in the opposite direction to actuate said contact mechanism, and retaining mechanism for said ratchet, said arm being operated by said ratchet at the end of its movement to cause said lever when rocked in said opposite direction to operate said retaining mechanism and release said ratchet.



2. In a switching device, the combination with a ratchet, of an electromagnetically-operated stepping lever, said lever when rocked in one direction controlling the advance of said ratchet, contact springs, a lever adapted to operate said springs, an arm operated by said ratchet when advanced a predetermined distance to cause said stopping lever when rocked in the opposite direction to actuate said second-mentioned lever, a spring-actuated retaining pawl for said ratchet, and a finger carried by said pawl, said arm being operated by said ratchet at the end of its movement to cause said stepping lever when rocked in said opposite direction to move said finger and pawl and release said ratchet.

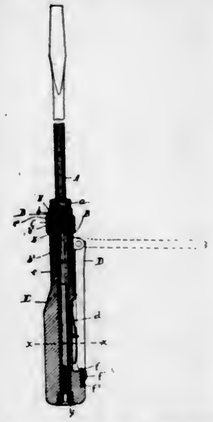
3. In a switching device, the combination with a ratchet, of an electromagnetically-operated stepping lever adapted when rocked in one direction to advance said ratchet, contact springs, an operating lever therefor, a foot movably mounted upon said stepping lever, means operated by said ratchet when advanced a predetermined distance for moving said foot into position to engage and operate said second-mentioned lever upon the rocking of the stepping lever in the opposite direction, a retaining pawl for said ratchet, and means operated by said ratchet at the end of its movement for moving said foot into position to operate said retaining pawl upon the movement of said stepping lever in said opposite direction.

4. In a switching device, the combination with a ratchet, of an electromagnetically-operated stepping lever adapted when rocked in one direction to advance said ratchet, contact springs, an operating lever therefor, a foot slidably mounted upon said stepping lever, a pivoted arm, means operated by said ratchet when advanced a predetermined distance for moving said arm to cause the same to bring said foot into operative relation to said second-mentioned lever, said lever when rocked in the opposite direction moving said foot to cause the same to operate said second-mentioned lever, and a retaining pawl for said ratchet, a finger carried thereby, and means operated by said ratchet at the end of its movement for operating said arm to cause the same to bring said foot into operative relation to said finger; whereby when the stepping lever is subsequently rocked in said opposite direction, said foot will engage said finger and remove said pawl from said ratchet.

5. In a switching device, the combination with a ratchet, of an electromagnetically-operated stepping lever therefor adapted when rocked in one direction to advance said ratchet, contact mechanism, a foot upon said stepping lever, and an arm operated by the ratchet when advanced a predetermined distance to cause said foot, when the lever is rocked in the opposite direction, to actuate said contact mechanism.

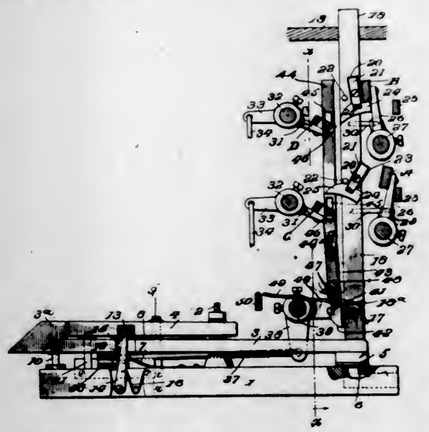
[Claims 6 to 13 not printed in the Gazette.]

873,363. RATCHET SCREW-DRIVER. BENJAMIN F. FOSS, Fairfield, Me. Filed Sept. 17, 1906. Serial No. 334,870.



In a ratchet screw driver, the combination of a spindle, a ratchet member on said spindle, a handle through which the spindle passes and to which it is journaled, a ferrule on said handle provided with an annular exterior shouldered portion intermediate its ends, a sleeve provided with an interior annular offset bearing surface, said sleeve fitting over the ferrule to rotate thereon with the inner end of the sleeve bearing against the shouldered portion of the ferrule and with the annular offset bearing surface of the sleeve engaging one end of the ferrule and the handle, pawls mounted in the sleeve to engage the ratchet member, and a lever pivoted to said sleeve.

873,364. COMBINATION STOP-ACTION. JACOB O. FUNKHOUSER, Hagerstown, Md. Filed Mar. 5, 1907. Serial No. 360,632.



1. A stop action for organs, comprising a manually operable stop actuating key, means for engaging said key to hold the stop "on," means for mechanically moving said key to the "on" position, and means for momentarily releasing the key holding mechanism before the completion of such mechanical movement.

2. A stop action for organs, comprising a manually operable stop actuating key, means for mechanically moving said key to the "on" position, a latch adapted to automatically engage and hold said key in such position, and means engaging said latch, for automatically releasing the same before the completion of the mechanically actuated movement of said key to the "on" position.

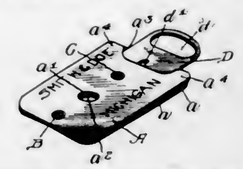
3. A stop action for organs, comprising a manually operable stop actuating key, a stop bar operatively connected thereto, a tilting trip shoe mounted on said stop bar, means adapted to swing across the plane of said trip shoe in the direction of movement of the stop bar, the trip shoe being tiltable so as to project into the path of movement of said last named means, or be retracted out of the way of such means, whereby when projected, the actuation of such means will move the stop bar and also move the stop actuating key to the "on" position, means for holding said key in the "on" position, and means for tilting said trip shoe.

4. A stop action for organs, comprising a stop actuating key fulcrumed intermediate of its ends, a stop bar connected to the rear end of said key, an operating trip shoe mounted on said stop bar and adapted to be projected beyond one edge thereof, a fan arranged to swing into engagement with the projecting end of the trip shoe whereby to move the stop bar, means for setting said trip shoe, a latch adapted to automatically engage with the key and hold it in the "on" position, and means actuated by said fan for momentarily releasing the latch.

5. A stop action for organs, comprising a manually operable stop actuating key, an automatic latch adapted to engage and hold said key in the "on" position, mechanical means for moving said key to the "on" position, and means actuated by said mechanical means for automatically releasing said latch previous to the movement of said key by the said mechanical means.

[Claims 6 to 18 not printed in the Gazette.]

873,365. CIGAR-CUTTER. ALBERT C. GAST, St. Joseph, Mich. Filed May 26, 1906. Serial No. 318,821.



1. In a combined cigar cutter and advertising device, the combination of a pair of flat side walls *a* and *a*, said walls having free side edges, and a flat knife slidably mounted between said side walls, the said walls provided with registering openings adapted to receive the tip of a cigar, said knife provided with a slot, and means extending through the slot to guide the knife and retain the side walls together, the side walls and interposed knife arranged in three superimposed layers, as set forth.

2. In a combined cigar cutter and advertising device, the combination of a folded blank A forming the body of the cigar cutter, affording space for advertising matter, and a knife slidably mounted between and guided by the folded end portions a^4 and a^4 of said blank, said body having an opening adapted to receive the tip of a cigar, said blank having flat side portions which, with the interposed knife, form three superimposed layers, each layer having a free side edge and a free end edge.

3. In a combined cigar cutter and advertising device, the combination of a body A composed of a folded blank having integrally connected side walls *a*, said walls each having at least one free edge, openings a^1 and a^2 adapted to receive the tip of a cigar, eyelets B and C connecting and retaining the two side walls together, a knife D slidably mounted between the flat opposing surfaces of said side walls, the outer end of said knife provided with a finger opening *d*, a slot d^1 engaged by the eyelet C, and a cutting edge d^2 at the inner end of the knife, substantially as set forth.

4. In a cigar cutter, a pair of flat walls each having one or more free edges, a flat knife intermediate said walls, there being a slot in said knife, a handle on one end of said

knife for reciprocating the same endwise, and means extending through the said slot to guide and limit the endwise movements of the knife, and to bind the said walls together, said walls spaced apart by the thickness of said knife, the body of said cigar cutter providing oppositely facing smooth flat surfaces affording ample space for printed matter, the handle of the knife being provided with an opening adapted to receive a finger while said body is grasped by the thumb and other fingers of the same hand, as set forth.

5. In a cigar cutter, a pair of side walls each having one or more free edges, a flat knife interposed flatwise between said walls, there being a slot in said knife, means integral with end of said walls for engaging the side edges of the knife, a handle on one end of said knife for reciprocating the same endwise, and means extending through said slot to bind and hold the said walls together and limit the endwise movements of the knife, said walls spaced apart by the thickness of said knife, the body of said cigar cutter providing oppositely facing smooth flat surfaces affording ample space for printed matter, the handle of the knife being provided with an opening adapted to receive a finger while said body is grasped by the thumb and other fingers of the same hand, as set forth.

[Claims 6 to 11 not printed in the Gazette.]

873,366. CLOSURE-GASKET AND PROCESS OF MAKING THE SAME. JOHN S. GILES, Chicago, Ill. Filed June 21, 1907. Serial No. 380,089.



1. The process of making triangular shaped gaskets or sealing rings from a tube of yieldable material, which consists in revolving the tube and severing the gaskets or rings therefrom by a traversing straight cut and a traversing diagonal cut through the wall of the revolving tube at the required intervals, for the cuts to form a straight plane side face, a straight plane bottom face, a diagonal side face with a lower right angle, a lower acute angle corner and an upper acute corner, substantially as described.

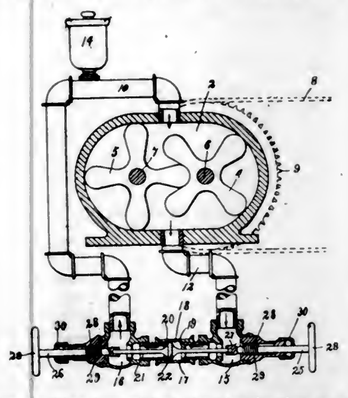
2. The process of making a triangular shaped closure gasket or sealing ring, which consists in dividing two gaskets or rings from a tube of yieldable material by a straight line circumferential cut and a diagonal line circumferential cut, both cuts penetrating the wall of the tube, one at right angle and the other at an acute angle to the longitudinal plane of the tube, substantially as described.

3. A closure gasket or sealing ring of compressible and yieldable material and having a straight plane inner face, a straight plane bottom face, and a diagonal outer face, with a lower right angle corner, a lower acute angle corner and an upper acute angle corner, joining the three faces, substantially as described.

873,367. BRAKE. OVID M. GOULD, Montreal, Quebec, Canada. Original application filed Feb. 5, 1904, Serial No. 192,157. Divided and this application filed Jan. 19, 1905. Serial No. 241,870.

1. The combination with a chamber having an external pipe circuit leading from one side thereof to the opposite side and such chamber and pipe circuit being adapted to contain a liquid, a movable part located in such chamber and the movement whereof causes the liquid to flow through the latter and the duct in either direction according to the direction of movement of the said movable part, of a valve chamber included in the pipe circuit and having a valve seat, a valve in the chamber for controlling the flow of said liquid through the seat and while allowing the same to flow in either direction retard such flow in one direction to a greater degree than in the opposite direction.

2. The combination with a chamber having an external pipe circuit leading from one side thereof to the opposite side and such chamber and pipe circuit being adapted to contain a liquid, a movable part located in such chamber and the movement whereof causes the liquid to flow through the latter and the duct in either direction according to the direction of movement of the said movable part, of a valve chamber included in the pipe circuit and having a valve seat, a valve in the chamber for controlling the flow of said liquid through the seat, and a member within the chamber for limiting the movement of the valve towards its seat for the purpose of allowing the liquid to flow in either direction and retarding its flow through the seat to a greater degree than in the opposite direction.

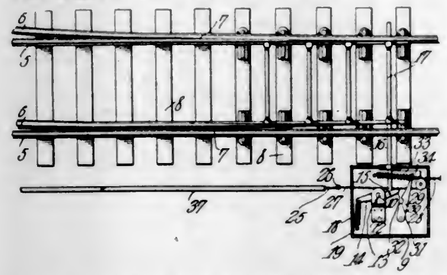


3. The combination with a chamber having an external pipe circuit leading from one side thereof to the opposite side and such chamber and pipe circuit being adapted to contain a liquid, a movable part located in such chamber and the movement whereof causes the liquid to flow through the latter and the duct in either direction according to the direction of movement of the said movable part, of a valve chamber included in the pipe circuit, and having a pair of valve seats, a valve in the chamber between the said valve seats and adapted to be seated on either one for controlling the flow of said liquid through the seat and means within the chamber for limiting the movement of the valve towards either seat for the purpose of allowing the liquid to flow in either direction and retarding its flow through one seat to a greater degree than through the other.

4. The combination with a chamber having a movable part, angle chambers 15 and 16, valve casing 17 connected at its opposite ends to the angle chambers, and having a valve chamber 18, a duct leading from one side of said first mentioned chamber to one of the angle chambers, a second duct leading from the opposite side of said first mentioned chamber to the other angle chamber, said chambers and ducts constituting a circuit adapted to contain a liquid and the movement of said movable part being adapted to cause the liquid to flow through said circuit, such valve chamber presenting a pair of seats, a valve located between said seats and adapted to be seated on either one thereof, a valve spindle projecting longitudinally through the valve chamber and having said valve mounted rigidly thereon, a pair of screw-threaded spindles screwed into the angle chambers in line with and adapted to receive and support the opposite ends of the valve spindle, means whereby the screw-threaded spindles are rotated, and means for supporting the valve spindle in line with said screw-threaded spindle said screw-threaded spindles being adapted to limit the movement of said valve spindle.

5. The combination with a chamber having a movable part, angle chambers 15 and 16, valve casing 17 connected at its opposite ends to the angle chambers and having a valve chamber 18, a duct leading from one side of said first mentioned chamber to one of the angle chambers, a second duct leading from the opposite side of said first mentioned chamber to the other angle chamber, said chambers and ducts constituting a circuit adapted to contain a liquid and the movement of said movable part being adapted to cause the liquid to flow through said circuit, such valve chamber presenting a pair of seats, a valve located between said seats and adapted to be seated on either one thereof, a valve spindle projecting longitudinally through the valve chamber and having said valve mounted rigidly thereon, a pair of screw-threaded spindles screwed into the angle chambers in line with and adapted to receive and support the opposite ends of the valve spindle, means whereby the screw-threaded spindles are rotated the adjacent ends of the said screw-threaded spindles being chambered and receiving and limiting the movement of said valve spindle.

873,368. AUTOMATIC SWITCH. FRANCIS M. HALL, Potomac, Ill., assignor of one-third to John Goodwine and one-third to Ulysses S. Goodwine, Potomac, Ill. Filed Aug. 31, 1907. Serial No. 390,991.



1. The combination with the main rails and siding, of the switch rails, a housing, a standard journaled in the housing, a pivoted arm secured to and movable with the standard, a connection between the arm and switch rails, a locking member engaging one end of the arm for locking the switch in open position, and track devices operatively connected with the locking member for releasing the latter thereby to effect the closing of the switch.

2. The combination with the main rails and siding, of the switch rails, a housing, a standard journaled in the housing, an arm arranged within the housing and movable with the standard, a connection between the arm and switch rails, a locking bar having a recess formed therein for the reception of the adjacent end of the arm, track devices disposed on opposite sides of the housing and operatively connected with the locking bar, said track devices being operable by a passing train to release the locking bar and effect the closing of the switch.

3. The combination with the main rails and siding, of the switch rails, a housing, a bracket disposed within the housing, a standard journaled in the bracket, an arm interposed between the bracket and housing and secured to the standard, a connection between the arm and switch rails, a pivoted locking member adapted to engage the arm for locking the switch in open position, and track devices connected with the locking member and operable by a passing train for moving the locking member to released position thereby to effect the movement of the switch.

4. The combination with the main rails and siding, of the switch rails, a housing disposed on one side of the main rails, a bracket disposed within the housing, a standard journaled in the bracket and having its upper end provided with a signal, an arm secured to the lower end of the standard and interposed between the bracket and the housing, a connection between one end of the arm and switch rails, a spring secured to the opposite end of the arm, a locking member having a recess formed therein and adapted to engage the arm for locking the switch in open position, and track devices disposed one on each side of the housing and operatively connected with the locking member for releasing the latter thereby to close the switch.

5. The combination with the main rails and siding, of the switch rails, a housing arranged on one side of the main rails, a standard journaled in the housing and provided with a signal, an arm secured to and mounted for rotation with the standard, a connection between one end of the arm and switch rails, a spring arranged within the housing and secured to the opposite end of the arm, a pivoted locking bar having a recess formed therein adapted to receive the adjacent end of the arm, means for normally and yieldably supporting the locking bar in engagement with the arm, and track devices connected with the locking bar and operable by a passing train to release said locking bar thereby to effect the closing of the switch.

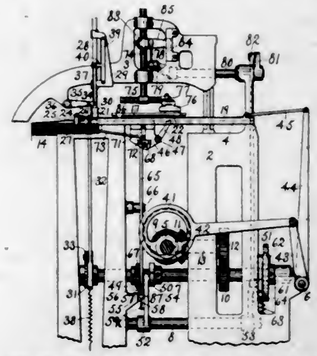
[Claims 6 and 7 not printed in the Gazette.]

873,369. ARTICLE OF CONFECTIONERY. GEORGE HEPPE, Philadelphia, Pa. Filed Jan 5, 1906. Serial No. 294,761.



A new article of confectionery formed of finely divided cocoanut meat, colored with cochineal and mixed with a solution of sugar, the whole being inclosed in a thin protective casing of slightly porous nature through which a portion of the liquid sugar exudes to form an air impervious film.

873,370. MECHANISM FOR GUMMING ENVELOP-BLANKS. CHARLES H. HEYWOOD and DENISON E. TRAVIS, Waukegan, Ill., assignors to United States Envelope Company, Springfield, Mass., a Corporation of Maine. Filed Apr. 28, 1906. Serial No. 314,136.



1. In mechanism for gumming envelop blanks, a picker arranged and adapted to lift a blank, a gummer, and means so located as to be actuated by the moving blank to bring the gummer into later contact with said blank.

2. In mechanism for gumming envelop blanks, a picker arranged and adapted to move a blank, a gummer, and means to vary the action of said gummer according to the success or non-success of said picker in moving a

blank, such means being so located as to be actuated by a moving blank.

3. In mechanism for gumming envelop blanks, a picker, a gummer, and governing or controlling means in the path of and adapted to be operated by a blank lifted into contact with such means by said picker to regulate the stroke of said gummer.

4. In mechanism for gumming envelop blanks, a picker, a gummer, means to cause said gummer to travel a longer or shorter distance, and a governor adapted to control such means, such governor having a finger subject to a blank moved by said picker against the same.

5. In mechanism for gumming envelop blanks, a gummer, actuating mechanism for said gummer consisting in part of a lever and a movable fulcrum therefor, said lever being pivotally connected with said fulcrum, and a governor adapted to control the position of such fulcrum.

[Claims 6 to 18 not printed in the Gazette.]

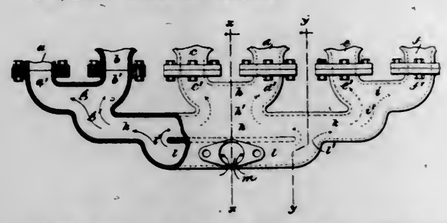
873,371. MAKING ARTIFICIAL MARBLE. ERNST E. HIPPE, Copenhagen, Denmark. Filed Oct. 4, 1905. Serial No. 281,362.

1. The herein described method of making artificial marble or stone which consists in dipping an article of gypsum into a hardening bath comprising resin and petroleum kept in a melted condition and allowing the liquid to penetrate the article, and then heating the article as described for the purpose specified.

2. The herein described method of making artificial marble or stone which consists in dipping an article of gypsum into a hardening bath comprising resin and petroleum to which has been added a fatty substance as described, the various substances being kept in a melted condition, allowing the liquid to penetrate the article and then heating the article as and for the purpose set forth.

3. The herein described method of making artificial marble or stone which consists in first forming the article of gypsum, and subjecting it to pressure before the gypsum has entirely hardened, then dipping the article into a hardening bath comprising resin and petroleum kept in a melted condition, allowing the liquid to penetrate the article and then heating the article as described for the purpose specified.

872,372. INTAKE DEVICE FOR EXPLOSIVE MIXTURES IN VAPOR-ENGINES. CLARENCE P. HOLLISTER, Pittsfield, Mass., assignor to Stilson Motor Car Co., Pittsfield, Mass., a Corporation of Massachusetts. Filed Oct. 4, 1907. Serial No. 395,844.

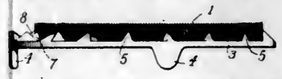


1. A vapor mixture intake device for a six cylinder engine comprising three intake groups of two each, a single intake to each group, a continuous chamber into which the several single intakes open, a general chamber connecting at its respective ends with the said continuous chamber and a single pipe connecting centrally with the general chamber.

2. A vapor mixture intake device for a six cylinder engine comprising an integral structure including three intake groups of two each, a single intake to each group, a continuous chamber into which the several intakes open, a general chamber connecting at its ends and at equally distant places with said continuous chamber and a single pipe connecting centrally with the general chamber.

3. A vapor mixture intake device for a six cylinder engine comprising an integral structure including three intake groups of two each, a single intake to each group, a continuous chamber into which the several intakes open, a general chamber connecting at its ends and at equal distant places with said continuous chamber, a single pipe connecting centrally with the general chamber and pipes extending from each of the two members of the three intake groups to the six companion cylinders of the engine.

873,373. HORSESHOE. ROBERT HÜBNER, New York, N. Y. Filed Apr. 5, 1906. Serial No. 309,978.

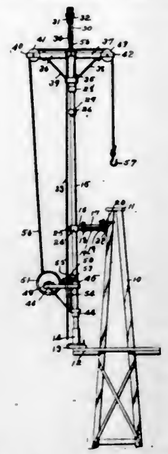


1. In a horseshoe, a brush composed of substantially vertical wires, retaining wires horizontally arranged and interlaced therewith, whereby the first named wires are firmly fixed in place but otherwise free to move, and means adapted to clamp upon and hold the brush in place.

2. In a horseshoe, a brush composed of substantially vertical wires, retaining wires horizontally arranged and interlaced therewith, whereby the first named wires are firmly fixed in place but otherwise free to move, and a series of downwardly extending projections between which the brush is clamped and held in place.

3. A horseshoe comprising a plate provided along its inner edge with a series of spaced pyramidal projections, having substantially vertical inner and tapering outer faces with flat spaces between them and along its outer edge with spaced pyramidal projections, having vertical inner and tapering outer faces, with flat spaces between them and a toe plate, consisting of rows of teeth breaking joints and located in line with the outer series of projections opposite one or more projections of the inner series, all arranged to operate with the continuous single filling or pad as described.

873,374. DERRICK. EDWIN E. JENKINS, Villisca, Iowa. Filed Feb. 25, 1907. Serial No. 350,049.



1. In a wind-mill derrick, an upright, means for supporting the upright on the platform of a wind-mill in position relative to the tower thereof, a derrick head at the upper end of the upright, pulleys in the derrick head, and a rope passed over the pulleys.

2. In a wind-mill derrick, an upright, means for supporting the upright on the platform of a wind-mill in position relative to the tower thereof, a rotatably mounted derrick head at the upper end of the upright, pulleys in the derrick head, and a rope passed over the pulleys.

3. In a wind-mill derrick, an upright, means for adjustably supporting the upright on the platform of a wind-mill in position relative to the tower thereof, a derrick head at the upper end of the upright, pulleys in the derrick head, and a rope pasesd over the pulleys.

4. In a wind-mill derrick, an upright, means for adjustably supporting the upright on the platform of a wind-mill in position relative to the tower thereof, a rotatably mounted derrick head at the upper end of the upright, pulleys in the derrick head, and a rope passed over the pulleys.

5. In a wind-mill derrick, an upright, means for supporting the upright on the platform of a wind-mill in position relative to the tower thereof, a derrick head at the upper end of the upright, pulleys in the derrick head, a rope passed over the pulleys, and a windlass secured to the upright and the rope.

[Claims 6 to 14 not printed in the Gazette.]

873,375. GROUND-PLATE. BUDD J. JONES, Cincinnati, Ohio. Filed Aug. 5, 1907. Serial No. 387,063.



1. In a ground plate, an inner plate forming a diaphragm, a conductor connected thereto and a conducting material covering said inner plate and said conductor.

2. In a ground plate, an inner plate forming a diaphragm, a conductor connected thereto, a shell surrounding said inner plate, and a conducting material covering said inner plate and confined thereto by said shell.

3. In a ground plate, an inner plate forming a diaphragm, a conductor connected thereto, a pervious shell surrounding said inner plate, and a conducting material covering said inner plate and confined thereto by said shell.

4. In a ground plate, an inner plate, a conductor connected thereto, flanges on said inner plate, a shell attached to said flanges wherbey said inner plate forms a diametrically extending diaphragm, and a conducting material covering said inner plate and confined thereto by said shell.

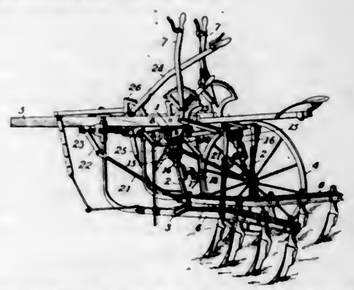
5. In a ground plate, an inner plate forming a diaphragm, a conductor connected thereto, a shell surrounding said inner plate, caps on said shell, one of said caps being provided with an opening through which said conductor passes, and a conducting medium covering said inner plate and confined thereto by said shell and said caps.

[Claims 6 to 9 not printed in the Gazette.]

873,376. WHEELED CULTIVATOR. JACOB S. KENDIG, York, Pa., assignor to Keystone Farm Machine Company, York, Pa., a Corporation of Pennsylvania. Filed Dec. 15, 1905. Serial No. 291,893.

1. In a wheeled cultivator, the combination with the frame, of two independent axles, supporting wheels mounted on said axles, means for turning said axles to steer the cultivator, and means for shifting the axles relatively to the frame to balance the cultivator.

2. In a wheeled cultivator, the combination with the transverse supporting beam, of a pair of axle supporting arms each connected with said beam by joints permitting said arms to turn for steering and to rock forward and rearward to balance the cultivator.



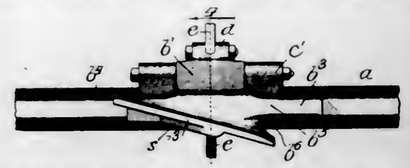
3. In a wheeled cultivator, the combination with the transverse supporting beam, of a pair of axle supporting arms connected with said beam by suitable joints, means for turning said axles to steer the cultivator, and means for moving said axles forward and rearward relative to the beam to balance the cultivator.

4. In a wheeled cultivator, the combination with the frame including a transverse beam, axle arms connected to the beam by suitable joints and extending downward therefrom, means for turning said arms to steer the cultivator, connections between said arms whereby they turn simultaneously, a rock shaft, means for turning said rock shaft and locking it in different positions, and connections between said rock shaft and the axle arms whereby the latter are made to swing forward or rearward to balance the cultivator.

5. In a wheeled cultivator, the combination with the frame, including a transverse beam, of plates 8 connected with said beam, plates 10 pivotally connected with said plates 8, axle arms 2 pivotally connected with the plates 10, means for turning said axle arms to steer the cultivator, and means for swinging said axle arms to balance the cultivator.

[Claims 6 to 8 not printed in the Gazette.]

873,377. BLOCKING AND DERAILING DEVICE. WILLIAM J. C. KENYON and WINFIELD S. KING, Omaha, Nebr. Filed Dec. 7, 1906. Serial No. 346,796.



A derailing device, comprising an inclined part in line with the track, a flange inclined transversely to the track, said flange sloping downward to the track at the end opposite said inclined part, and an inclined car at the side of said flange.

873,378. FLOAT FABRIC. GEORGE W. KNOX, Philadelphia, Pa. Filed July 9, 1906. Serial No. 325,218.

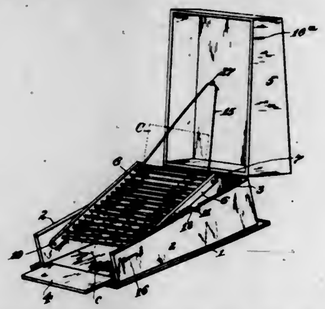


1. A fabric blank composed of a plurality of fabrics, each having a plain figured surface produced from warp and weft threads and floating wefts, the latter extending

from one fabric to the other and woven with the warp and weft threads to produce figures upon one fabric only at a time.

2. A fabric blank composed of a plurality of fabrics, each having a plain figured surface produced from warp and weft threads and floating wefts, the latter extending from one fabric to the other and woven with the warp and weft threads to produce figures upon one fabric only at a time, said floating wefts joining the two fabrics and extended at right angles to the warp threads.

873,379. PHOTOGRAPH CABINET OR RACK. JOHN N. KOCH, Cincinnati, Ohio. Filed July 26, 1906. Serial No. 327,821.



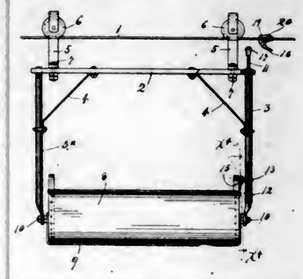
1. A cabinet for photographs, cards, or the like, comprising a base having side and end walls, a rack having side frame-bars and a rear cross-bar and pivoted at its fore end to the said base, a series of parallel, horizontal transverse bars or rods mounted at their opposite ends in the side frame-bars of said rack, clasps or clips mounted on said transverse bars and each having outwardly-directed flaring-mouthed presser-jaws adapted to receive and hold between them one of the edges of a photo-card or the like to be housed and displayed, and means on the base adapted to be directed into and out of the vertical path of swinging-movement of said rack for supporting the latter in an inclined position for display of the photographs.

2. A cabinet for photographs, cards, or the like, comprising a base having upright side and rear walls and an outwardly-swinging front wall, a lid hinged at its rear end to the rear wall of said base, a rectangular rack pivoted at its fore end to the said base adjacent the said swinging front wall and having a series of parallel transverse bars or rods each one of which latter carries means having outwardly-directed clamping-jaws adapted to receive and hold the lower edges of the photo-card to be housed and displayed, a swinging easel mounted at the rear end of said rack and adapted to support the photo-cards in an inclined position, and means on the said base for supporting the said rack in an inclined position when swung upwardly on its pivotal fore end, substantially as set forth.

873,380. CARRIER. KNUTE LEIDAL and MARTIN ULRING, Webster, Minn. Filed June 28, 1907. Serial No. 381,369.

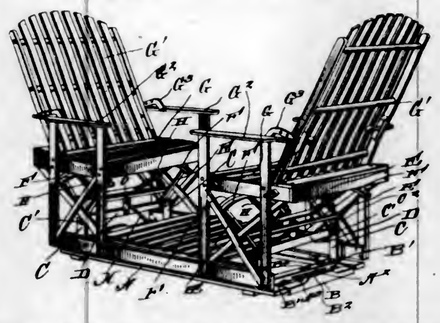
1. The combination with an overhead track, of a carrier frame having wheels arranged to travel on said track, a bucket pivotally mounted on said frame, an upwardly spring-pressed vertically movable trip rod mounted on said frame for locking said bucket to said frame in its operative position, and a tripping abutment on said track directly engageable with the head of said trip rod, substantially as described.

2. The combination with an overhead track, of a carrier frame having wheels arranged to travel on said track and provided with a vertically extended tubular leg, an upwardly spring pressed trip rod mounted to be guided by and to work telescopically within said tubular leg for locking said bucket to said frame in its operative position, and a tripping abutment on said track directly engageable with the head of said trip rod, substantially as described.



3. The combination with an overhead track, of a carrier frame comprising a horizontal bar and a pair of depending legs secured thereto, one of said legs being tubular in form, wheels secured to said horizontal bar and arranged to travel on said track, a bucket pivotally mounted on the lower ends of said depending legs, a notched latch bar carried by said bucket, a trip rod mounted to be guided by and to work telescopically within said tubular leg, a spring mounted in the lower end of said leg and compressed between said lower end and the lower end of said trip rod, a lateral projection on said trip rod working through a slot formed in said tubular leg for engagement with said notched bar to lock said bucket in its operative position, and a tripping abutment on said track directly engageable with the head of said trip rod, substantially as described.

873,381. GLIDING SETTEE. IRA C. MANAHAN, Goshen, Ind. Filed Aug. 5, 1907. Serial No. 387,156.



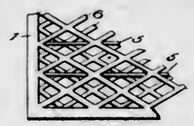
1. A settee comprising a frame, axle bearings mounted thereon, rocking axles mounted in said bearings, rockers fixed to said axles, seats supported upon said rockers, a platform, wheels carried thereby and adapted to rest upon said frame, rods pivotally connected to said platform and having hooked ends adapted to be attached to projections upon said axles, as set forth.

2. A settee comprising a frame, axle bearings mounted thereon, rocking axles mounted in said bearings, arms projecting from said axle, rockers fixed to the ends of said arms, seats supported upon said rockers, rods connecting said arms, springs connected to said rods and also to said seats, a movable platform, and pivotal connection between the latter and said axles, as set forth.

3. A settee comprising a frame, axle bearings mounted thereon, angular outline axles resting upon an edge in the bearing openings in said bracket arm, arms fastened to said axles, rockers fastened to said arms, seats having grooved ways in the under surfaces thereof and adapted to receive said rockers, rods connecting said arms, coiled springs fastened to said rods and to said seat, a movable platform, and pivotal rod connections between the same and said axles, as set forth.

4. A settee comprising a frame, axle bearings mounted thereon, rocking axles mounted in said bearings, rockers fixed to said axles, seats supported upon said rockers, a movable platform, connections between the same and said axles, axially movable strips mounted upon said frame, casters carried by said strips, said frame having a shouldered portion adapted to receive a projecting part of said axially movable strip, and a button adapted to hold said projecting part upon the shoulder, as set forth.

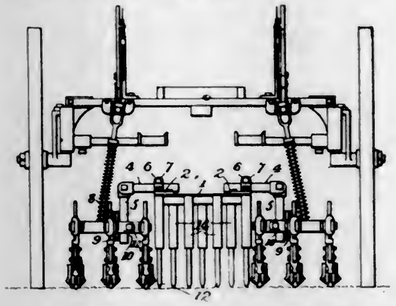
873,382. STORAGE-BATTERY GRID. JOSEPH MARX, Buffalo, N. Y. Filed Jan. 2, 1907. Serial No. 350,444.



1. A grid of the character described, consisting of a framework provided with a series of superposed and horizontally extending bars, and obliquely extending gratings on both sides of said bars.

2. A grid of the character described, consisting of a frame provided with a series of spaced parallel and horizontally extending bars and two sets of obliquely extending ribs on opposite sides of said bars, the said ribs of each set interescting each other, and the said ribs being V-shaped in cross section.

873,383. WEEDER ATTACHMENT FOR CULTIVATORS. SAMUEL A. MCCUNE, New Waterford, Ohio. Filed Oct. 27, 1904. Serial No. 230,204.



1. The combination with a straddle-row cultivator having two gangs of cultivator shovels, of a weeder arranged between said gangs and comprising a frame and suitable weeder teeth connected thereto, and means at each side of said weeder frame for connecting it respectively to each of said cultivator gangs.

2. The combination with a straddle-row cultivator having two gangs of cultivator shovels, of a weeder arranged between said gangs and comprising a frame and suitable weeder teeth connected thereto, and means at each side of said weeder frame for flexibly connecting it respectively to each of said cultivator gangs, whereby the cultivator gangs may move up and down independently.

3. The combination with a straddle-row cultivator having two gangs of cultivator shovels, of a weeder arranged between said gangs and comprising a frame and suitable weeder teeth connected thereto, and means at each side of said weeder frame for adjustably and flexibly connecting it respectively to each of said cultivator gangs, whereby the cultivator gangs may move up and down independently.

4. The combination with a straddle-row cultivator having two gangs of cultivator shovels, of a weeder arranged between said gangs and comprising a frame and suitable weeder teeth connected thereto, and means at each side of said weeder frame for connecting it respectively to each of said cultivator gangs, said weeder frame being laterally adjustable with respect to said connecting means.

873,384. RADIATOR. ELMER L. OGLE, New York, N. Y., assignor to N. Leroy Otis, New York, N. Y. Filed Oct. 8, 1906. Serial No. 337,887.



1. A cooler comprising polygonal tubes having a longitudinal seam on one flat side provided with a rectangular enlargement at one end only and grouped alternately so as to leave spaces between such tubes, substantially as described.

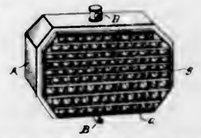
2. A cooler comprising square tubes having a longitudinal seam on one flat side, the seam being brought flush on the exterior at the ends of the tube, the tubes enlarged on two opposite unseamed sides at one end and grouped alternately in layers or rows so as to leave spaces between such tubes, substantially as described.

3. A cooler comprising square tubes enlarged on two opposite sides at one end and grouped alternately into rows, the rows laid one upon the other with spacers between the ends of the tubes of each row.

4. A cooler comprising tubes enlarged on two opposite sides at one end and arranged alternately to leave spaces between such tubes, grouped in layers or rows and an air deflector between the rows at the face of the cooler.

5. A cooler comprising square tubes enlarged at one end upon two opposite sides grouped alternately into rows so as to leave spaces between each tube in the row, the rows laid one upon the other so that the tubes of a given row are vertically above the space in the row below with spacers between the ends of the tubes of each row.

873,385. RADIATOR. ELMER L. OGLE, New York, N. Y., assignor to N. Leroy Otis, New York, N. Y. Filed Jan. 7, 1907. Serial No. 351,095.

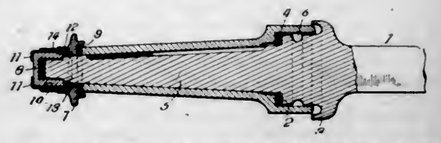


1. Steel radiator-tubes adapted to be united by solder; tinned at the points where they are to be soldered, in combination with a superimposed coat of copper over-laying the tube including the tinned surfaces.

2. Steel radiator tubes adapted to be united by solder; tinned at the points where they are to be soldered, in combination with a superimposed, electrolytically-deposited, coat of copper over-laying the tube including the tinned surfaces.

3. A cooler comprising steel tubes adapted to be united by solder; tinned at the points where they are to be soldered, in combination with a superimposed coat of copper over-laying the tube including the tinned surfaces, the said tubes being soldered at their ends through the copper coating, substantially as described.

873,386. AXLE-NUT. NOBLE H. ROE, Marceline, Mo. Filed Nov. 5, 1906. Serial No. 342,097.



1. An axle nut comprising separable flanged and threaded members, and retaining means for securing the parts

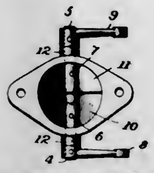
when placed together and independent of each of said parts and comprising bendable portions in positive engagement with both the said flanged and threaded members.

2. An axle nut comprising separable flanged and threaded members, one of the parts having a slot, a plate having an end portion passed through said slot and bent and having the opposite end of said plate bent to engage with the other member or part of the nut.

3. An axle nut comprising a flange having a socket and having a slot in a wall of the socket, a plate having an end portion placed within the socket and its extremity passed through the said slot and bent and a threaded member inserted in the socket of the flange and confining the plate therein, the projecting end of said plate being bent to engage with the outer end of said threaded member.

4. An axle nut comprising a flange having a box upon one side and having slots in the sides of the box, plates inserted in said box and having end portions passed through the slots thereof and bent, and a threaded member fitted within the box and confining the said plates therein, said plates having their outer ends bent to engage over the outer end of said threaded member.

873,387. THROTTLE-VALVE FOR HYDROCARBON-ENGINES. CHARLES SCHMIDT, Cleveland, Ohio, assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of West Virginia. Filed Oct. 12, 1905. Serial No. 282,511.

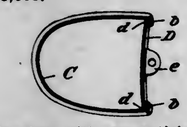


1. In a throttling device for hydrocarbon engines, the combination of a valve casing, two opposite radially arranged coaxial shafts therein, independent valves on said shafts, and means for controlling said valves including a governor connected to one valve and adjusting and locking devices for the other valve.

2. In a throttling device for hydrocarbon engines, the combination of a valve casing through which the mixture passes to the engine, two valve operating shafts arranged radially and coaxially in said casing, semicircular valves arranged on said shafts and adapted jointly to close the passage through said casing, and means for operating said valves independently.

3. In a throttling device for hydrocarbon engines, the combination with a cylindrical valve casing, of two semicircular valves adapted jointly to close the passage through said valve casing, and means for operating said valves independently.

873,388. DETACHABLE HEEL. CARL C. SCHMIDT, St. John, New Brunswick, Canada. Filed Aug. 15, 1907. Serial No. 388,609.



1. The combination with an article of foot gear; of a heel comprising a pad, and a coupler holding the pad and made up of a resilient frame which engages the sole of said article, and a forward cross-bar; the said frame and the cross-bar having ends which are interlocked, whereby the cross-bar is enabled to hold the ends of the frame against outward movement.

2. The combination with an article of foot gear; of a heel comprising a pad, and a coupler holding the pad and made up of a U-shaped, resilient frame which engages the upper side of the sole, a cross-bar connected to the ends of the frame and arranged to hold the said ends against outward movement, and a device connecting the said cross-bar to the sole.

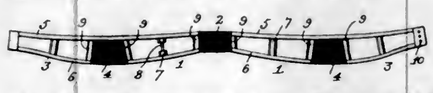
3. The combination with an article of foot gear; of a heel comprising a pad, and a coupler holding the pad and made up of a U-shaped resilient frame having an inturned horizontal flange engaging the upper side of the sole, and also having upright inwardly directed flanges, of U-shape in cross-section, at its ends, and a cross-bar having U-shaped flanges at its ends engaging the said end flanges of the frame, and suitably fixed in position.

4. The combination of an article of foot gear; of a heel comprising a pad, and a coupler holding the pad and made up of a U-shaped resilient frame having an inturned horizontal flange engaging the upper side of the sole, and also having inwardly directed end flanges, of U-shape in cross-section, at its ends, and inclined upward and outward, a cross-bar having similarly inclined end flanges of U-shape in cross-section at its ends engaged with the end flanges of the frame, and also having an apertured lip on its upper edge, and a device extending through the said apertured lip and connecting the cross-bar to the sole.

5. The combination with an article of foot gear; of a heel comprising a pad, and a coupler holding the pad and made up of a resilient frame which engages the sole of said article, a forward cross-bar; said frame and the cross-bar having ends which are interlocked, and a device connecting the said cross-bar to the sole.

[Claims 6 to 9 not printed in the Gazette.]

873,389. WAISTBAND. JOHN C. STANFORD, Atlanta, Ga. Filed June 13, 1907. Serial No. 378,773.



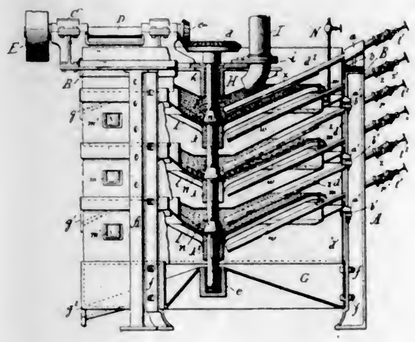
1. A waistband comprising a plurality of inelastic sections, elastic sections of quadrilateral shape connecting the inelastic sections with the elastic sections extending all the way across the waistband, and a binding extending along the upper edges of two inelastic sections and the intervening elastic section.

2. A waistband having comparatively short and long upper and lower edges respectively to produce an outward flare at its lower edge and having its greatest width at the sides to provide enlarged bearing surfaces for the hips of the wearer, said waistband comprising front and back inelastic sections, an elastic strap connecting the back sections, elastic gores of quadrilateral shape connecting the front and back sections with the gores extending all the way across the waistband, and a binding extending along the upper edges of the front and back sections and the intervening gore.

3. A waistband comprising a plurality of inelastic sections, elastic sections of quadrilateral shape connecting the inelastic sections with the elastic sections extending all the way across the waistband, pockets extending across the inelastic sections, stays of resilient material placed in said pockets, a binding extending along the upper edges of two inelastic sections and the ends of the pockets placed thereon and across the upper edge of the intervening elastic section, and a binding extending along the connected edges of said sections.

873,390. APPARATUS FOR SCREENING PULP. WILLIAM A. STEVENSON, Northampton, Mass., and AMBROSE H. WHITE, Brooklyn, N. Y. Filed May 17, 1907. Serial No. 374,217.

1. Apparatus for screening pulp, consisting of an inverted, shallow, conical screen, means for supplying pulp to the upper surface of the screen, means for imparting a moderate rotation to the screen so as to spread the pulp up the incline and over the screen plates, means for discharging a spray downwardly upon the upper surface of the screen so as to wash the fine pulp of the desired grade through the screen plates as they pass said spray, and means for spraying upwardly the lower surface of the screen, so as to raise or float the coarser particles and permit them to move outwardly toward the outer verge or discharge edge of the screen; substantially as described.



2. Apparatus for screening pulp, consisting of an inverted, shallow, conical screen, means for supplying pulp to the upper surface of the screen, means for imparting a moderate rotation to the screen so as to spread the pulp up the incline and over the screen plates, a spray pipe arranged radially to the revolving screen and discharging downwardly upon the upper surface of the screen so as to wash the fine pulp of the desired grade through the screen plates as they pass it, and a series of upwardly discharging radially arranged sprays arranged below the screen plates; substantially as described.

3. Apparatus for screening pulp, comprising an inverted, shallow, conical screen, means for rotating it at a moderate speed, means for supplying pulp to the screen at the lower part of its incline, a collecting or receiving gutter at the upper rim or verge of the screen, and means for supplying a spray of water or like diluent transversely to the upper surface of the scren as it revolves; substantially as described.

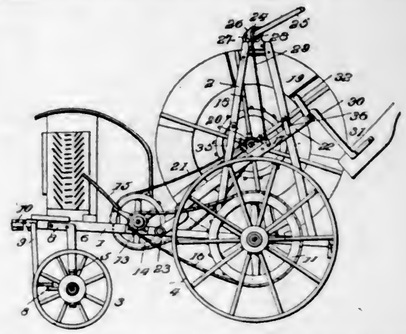
4. Apparatus for screening pulp, comprising an inverted, shallow, conical screen, means for rotating it at a moderate speed, means for supplying pulp to the screen at the lower part of its incline, a collecting or receiving gutter at the upper rim or verge of the screen, and means for supplying a spray of water or like diluent transversely to the upper surface of the screen as it revolves, and for supplying a like spray to its bottom surface; substantially as described.

5. Apparatus for screening pulp, comprising an inverted conical screen, made up of a series of screen plates, a supporting hub upon which the inner edges of said screen plates rest, and a releasable clamping nut upon the screen shaft for clamping the inner ends of the screen plates to the hub; substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

873,391. MIXING-MACHINE. WILLIAM G. STOCKHAM and FRANK L. DOYLE, Piqua, Ohio, assignors to The Stockham Homogeneous Mixer Manufacturing Company, Piqua, Ohio, a Corporation of Ohio. Filed Aug. 31, 1906. Serial No. 332,877.

1. In a machine of the character set forth, the combination of a main frame embodying standards, supporting wheels constituting drivers, beams pivoted at their ends to said frame, a rotary mixer journaled upon said pivoted beams, adjusting means between the pivoted beams and standards for entirely raising and lowering the mixer relative to said standards and securing the same in an adjusted position, a drive shaft journaled upon the main frame, connections between the driving shaft and the aforesaid driver and mixer, and a motor mounted upon the machine and connected with the driving shaft to impart motion thereto.

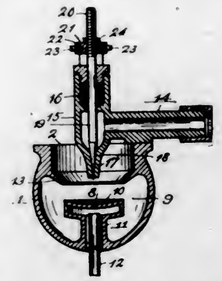


2. In a machine of the character described, the combination of traveling wheels, a framework supported thereby, a rotary mixer revolubly mounted in the framework and embodying laterally extending spirally curved blades, means for revolving said mixer, gathering blades carried by and movable with said support and extending to the rear of the mixer, said gathering blades extending inwardly towards each other, whereby they will tend to move the material inwardly towards the pile and prevent scattering thereof, and yielding means for holding the gathering blades to their work, and permitting a limited vertical play thereof independent of the mixer.

3. In a machine of the character set forth, the combination of a main frame, pivoted beams connected thereto, a rotary mixer mounted upon the pivoted beams, bars pivotally mounted upon said beams, gathering blades attached to the rear ends of the pivoted bars for moving the material inward, and directing and yielding means between the pivoted bars and pivoted beams.

4. In a machine of the character set forth, the combination of a main frame, beams pivoted thereto and provided with guides, a rotary mixer mounted upon the pivoted beams, bars pivoted to said beams and provided with gathering blades and directed in their movement by the aforesaid guides, and tension springs interposed between the said guides and pivoted bars.

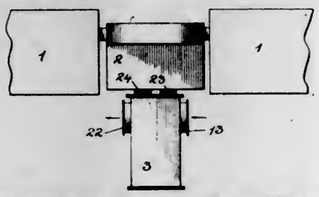
873,392. CARBURETER. ALBERT E. STOKER, Dallas, Tex. Filed Feb. 7, 1907. Serial No. 356,204.



A carbureter consisting of a mixing-chamber, an oil inlet pipe opening into said chamber, a hollow spreader within the chamber having a concave face upon which the oil drops, a tubular stem supporting said spreader and communicating with a source of heat, a valve in the oil inlet pipe, a passage connecting the mixing chamber and

engine, a valve adapted to close said passage, and means connecting the valves so they will be simultaneously operated, said means being adjustably connected to the valve in the oil inlet, for the purpose described.

873,393. HYDRAULIC REVERSING-VALVE FOR GAS APPARATUS. FREDERICK H. WAGNER, Baltimore, Md., assignor to Thomas J. Hayward, trading as Bartlett, Hayward & Co., Baltimore, Md. Filed Sept. 16, 1907. Serial No. 393,062.



1. A gas apparatus comprising the purifiers, a center valve for directing the flow of gas to the purifiers and having two gas ports and a reversing valve having connection with the two gas ports of the center valve for directing the flow of gas through either of said center valve ports.

2. A gas apparatus comprising a plurality of purifiers, a center valve having a plurality of connections with each purifier and also having two gas ports to receive and discharge gas, and a reversing valve having connection with the two gas ports of the center valve, and means in the reversing valve for permitting gas to flow in either direction through the connections between the reversing valve and the center valve.

3. A valve for reversing the flow of gas comprising a casing having a main gas inlet and a main gas outlet and also having an outlet and an inlet both of which are interposed between said main inlet and main outlet, and a plurality of compartments in said casing.

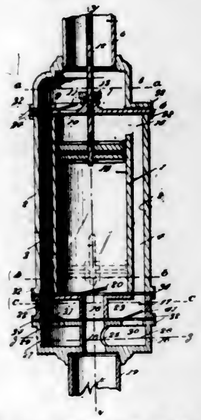
4. A valve for reversing the flow of gas comprising a casing having a permanent gas inlet and a permanent gas outlet and also having an outlet and an inlet which are interposed between the permanent inlet and outlet, and means within the casing for directing the flow of gas in either direction through the interposed inlet and outlet.

5. A valve for reversing the flow of gas comprising a casing having a permanent gas inlet and a permanent gas outlet and also having an inlet and an outlet which are interposed between the permanent inlet and outlet and a liquid sealed compartment in the casing between the permanent inlet and the permanent outlet.

[Claims 6 to 12 not printed in the Gazette.]

873,394. PUMP. HENRY WAHLER, Estherville, Iowa. Filed Aug. 16, 1907. Serial No. 388,915.

1. In a pump, the combination of a barrel having longitudinal passages extending along the sides thereof, a piston operating within the pump barrel, a cap applied to the upper end of the barrel and formed with an outlet, a plate interposed between the cap and barrel and formed with openings establishing communication between the barrel and the cap and one of the longitudinal passages and the cap, the opposite longitudinal passage communicating directly with the barrel, a valve controlling the communication between the barrel and the cap, a base detachably applied to the lower end of the barrel and formed in a plurality of annular sections, the said base being provided with an inlet passage communicating with the pump barrel and also with a pair of opposite compartments, one of which establishes communication between the interior of the pump barrel and the longitudinal passage extending along the pump barrel and leading to the cap, while the opposite compartment communicates with the inlet passage and also with the opposite longitudinal passage along the pump barrel, a valve preventing any backward flow of the water from the barrel to the inlet passage, and valves preventing any backward flow of water through either of the before mentioned longitudinal passages along the pump barrel, the said valves being located at the junction of the sections of the base.

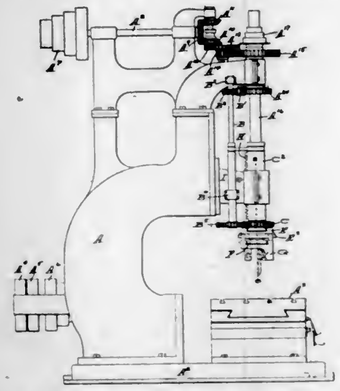


2. In a pump, the combination of a cylinder having a pair of longitudinal passages extending along the sides thereof, one of said passages and the upper end of the pump barrel being in communication with an outlet, while the opposite longitudinal passage communicates directly with the pump barrel, a piston operating within the pump barrel, a base detachably applied to the lower end of the pump barrel and formed with two sections, each of the sections being provided at approximately its central portion with an annular wall forming an inlet passage leading to the pump barrel, the upper section being divided by radial partitions into a series of compartments surrounding the annular wall and communicating respectively with the interior of the pump barrel and the two longitudinal passages extending along the pump barrel, while the lower section of the base is subdivided by similar partitions into two compartments, one of which establishes communication between those compartments of the upper section in communication with the pump barrel and the compartment of the said upper section communicating with the longitudinal passage leading to the outlet, while the opposite compartment of the said lower section is in communication with the inlet passage and leads to that compartment of the upper section in communication with the longitudinal passage communicating directly with the pump barrel, a valve for preventing backward flow from the pump barrel to the inlet passage, and a pair of valves operating to prevent backward flow through either of the before mentioned longitudinal passages.

3. In a pump, the combination of a cylinder having a pair of longitudinal passages extending along the sides thereof, a piston operating within the pump barrel, a cap located at the upper end of the barrel and formed with an outlet, the said cap communicating with one of the longitudinal passages extending along the pump barrel and also communicating directly with the pump barrel, the opposite longitudinal passage being in direct communication with the pump barrel, a valve for preventing backward flow from the cap to the pump barrel, a base detachably applied to the lower end of the pump barrel and formed in two sections, each of said sections being provided at approximately its central portion with an annular wall and the said annular walls being in alinement with each other and forming an inlet passage leading to the pump barrel, the upper section of the base being divided by radial partitions into a series of compartments surrounding the annular wall and communicating respectively with the interior of the pump barrel and with the two longitudinal passages along the pump barrel, while the lower section of the base is subdivided by similar valves into two compartments one

of which connects those compartments of the upper section in communication with the pump barrel with the compartment of the said upper section in communication with the longitudinal passage leading to the cap, while the opposite compartment of the lower section is in communication with the inlet passage and also with that compartment of the upper section communicating with the longitudinal passage leading to the pump barrel, a valve for preventing any backward flow of water from the barrel to the outlet passage, and a pair of valves for preventing any backward flow of water through either of the longitudinal passages.

873,395. MACHINE FOR CUTTING OUT CIRCULAR OR ELLIPTICAL FORMS. CHARLES C. WAIS, Oakley, Ohio. Filed Jan. 10, 1906. Serial No. 295,362.

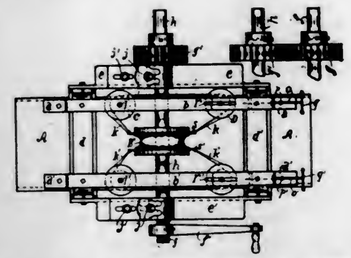


1. In a machine of the class described, the combination of a rotatable shaft, a tool holder supported by and rotating with said shaft, a cam adapted to impart lateral motion to the tool holder, and mechanism driven by said shaft to rotate said cam, all substantially as described.

2. In a machine of the class described, the combination of a rotatable shaft, a tool holder supported by and rotating with said shaft, a cam adapted to impart lateral motion to the tool holder, means for changing the throw of the cam, and mechanism driven by said shaft to rotate said cam, all substantially as described.

3. In a machine of the class described, the combination of a rotatable shaft, a tool holder supported by and rotating with said shaft, means for adjusting the tool, a cam adapted to impart lateral motion to the tool holder, means for changing the throw of the cam, and mechanism driven by said shaft to rotate said cam, all substantially as described.

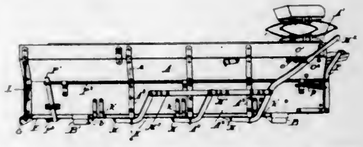
873,396. ROUND-STICK-CANDY-MAKING MACHINE. RUSSELL S. WALTERS, Oklahoma, Okla. Filed May 4, 1907. Serial No. 371,880.



1. In a stick candy-making machine having proper framework, a pair of like or duplicate rollers mounted on shafts journaled in said frame-work with means for rotating the same, the semicircular annular grooves B'' in alinement to form a round hole between said rollers when their peripheries contact, the cushion or covering firmly secured in said grooves to produce a pulling and a pressing force to be exerted upon the candy material, the annular channels *t* and *t'* cut in the peripheries of the said rollers adjacent the said semicircular grooves to serve as guide seats, the guide-plates *s* and *s'* being adapted to said seats with their sides vertical their ends outwardly bent and inwardly concaved to confine and guide the candy material, substantially as described.

2. In a stick-candy-making machine as described; a pair of duplicate forming rollers having centrally located annular grooves on alinement to constitute a forming opening *c* between said rollers; cushions or covering secured in said grooves; means for rotating said rollers in opposite directions; an annular channel cut in the peripheries of the said forming rollers each side and near the said grooves centrally located therein; a pair of vertical guide-plates loosely fitted in said channels and having their ends concave and outwardly bent to resist the lateral pressure of the pre-molded material; a pair of guide-belts *k* and *k'* vertically arranged on rollers or pulleys and adapted to pass continuously in either direction through the molding hole or opening *c* formed by the said grooves in the said forming rollers, for the purpose of drawing the pre-molded material through the said molding hole or opening; means for tightening said belts, substantially as described and for the purposes set forth.

873,397. DUMPING-WAGON. ARTHUR L. WARNER, Moline, Ill., assignor to Koob Dumping Wagon Company, a Corporation of Illinois. Filed Aug. 3, 1907. Serial No. 386,925.



1. A dumping wagon body having an open bottom, front and rear bolsters or cross pieces, a central longitudinal beam having a depending flange, a pair of longitudinal bottom-sections at each side of the beam, the adjacent edges of the inner bottom-sections being hinged to said depending flange, and shielded by the horizontal member of the beam, and the outer edges of the outer bottom-sections being hinged to the lower edges of the sides of the body, and means for operating said sections.

2. A dumping wagon body having front and rear bolsters or cross pieces, a central longitudinal T-beam having a depending flange, a pair of longitudinal bottom-sections at each side of the beam, the adjacent edges of the inner bottom-sections being hinged to said depending flange and shielded by the horizontal member of the beam, and the outer edges of the outer bottom-sections being hinged to the lower edges of the sides of the body, means for operating said sections, a rear bottom-section hinged to the rear bolster or cross bar, a plate or shield on the upper side of said rear bolster projecting over the hinged edge of said rear section, and means for holding said rear section closed.

3. In a dumping wagon body, a rear bolster, a downwardly swinging rear bottom-section hinged thereto, a plate on the upper side of the bolster projecting over the hinged edge of the said section, and an angle iron across the body in rear of the bolster and under which the free edge of said section swings, and a latch for the bottom-section.

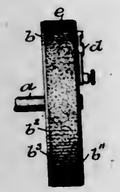
4. In a dumping wagon body, a front and rear bolster, a downwardly swinging rear bottom-section hinged to the rear bolster, a central longitudinal T-beam connecting the two bolsters, downwardly swinging longitudinal bottom-

sections hinged at their adjacent edges to the depending rib of said T-beam, other similar sections hinged at their outer edges to the sides of the body, a plate on the rear bolster overlapping the hinged edge of the rear bottom-section and the rear ends of the four longitudinal sections, and means for locking and releasing said bottom-sections.

5. In a dumping wagon body, a rear angle iron, a downwardly swinging rear bottom-section closing at its free edge under said angle iron and having means for latching it thereto, and a swinging end-gate hinged at its lower end to the said angle iron.

[Claims 6 to 10 not printed in the Gazette.]

873,398. GRINDING OR POLISHING WHEEL. CYRA B. WATTLES, Providence, R. I., assignor to Surfacing Machine Company, Providence, R. I., a Corporation of Rhode Island. Filed Nov. 11, 1905. Serial No. 286,916.

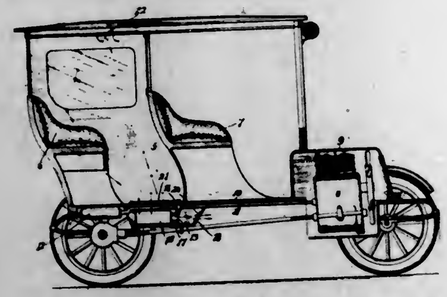


1. A grinding or polishing wheel having a slot in the peripheral surface, a strip of flexible abrasive material supported on the peripheral surface of the wheel in position for the ends to extend through the slot and overlap, and means for automatically exerting tension on one end of the abrasive material, whereby the ends of the material are brought into frictional contact and the slack of the material is taken up.

2. In a grinding or polishing wheel, means for detachably securing a strip of flexible abrasive material on the peripheral surface of the wheel in a position for the ends of the material to overlap, means for automatically bringing the two ends into frictional contact and exerting a spring tension on one end to take up the slack.

3. In a grinding or polishing wheel, means for detachably securing a strip of flexible abrasive material at one end to the wheel in a position for the ends of the material to overlap, and means for automatically exerting a spring tension on one end to take up the slack.

873,399. COMBINED HEATING AND VENTILATING SYSTEM FOR AUTOMOBILES. NATHAN W. WILLIAMS, Evanston, Ill. Filed Nov. 2, 1906. Serial No. 341,737.



1. In combination with the structure to be heated, a hydro-carbon engine, an exhaust pipe leading therefrom, a muffler secured to the discharge end of the exhaust pipe and in open communication with the atmosphere, an inclosing box, secured to the structure to be heated and provided with an intake opening for supplying fresh air, a register in communication with the inclosing box for controlling the flow of heated air therefrom, a radiator box within the inclosing box, a branch pipe leading from the radiator box to the exhaust pipe intermediate the muffler and the engine, and a discharge pipe, leading from the radiator box and out of the inclosing box and discharging directly into the atmosphere, substantially as described.

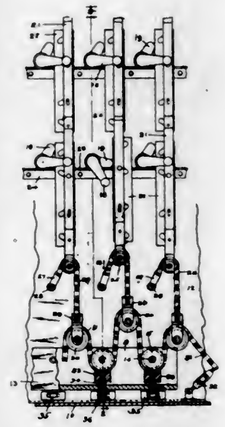
2. In combination with the structure to be heated, a hydro-carbon engine, an exhaust pipe leading therefrom, a muffler secured to the discharge end of the exhaust pipe and in open communication with the atmosphere, an inclosing box, secured to the structure to be heated and provided with an intake opening for supplying fresh air, a radiator box within the inclosing box, a branch pipe leading from the radiator box to the exhaust pipe intermediate the muffler and the engine, a valve controlled discharge pipe leading from the radiator box and out of the inclosing box and discharging directly into the atmosphere, and a register in the structure to be heated, for controlling the flow of heated air away from the inclosing box, substantially as described.

3. In combination with the structure to be heated, a hydro-carbon engine, an exhaust pipe leading therefrom, a muffler secured to the discharge end of the exhaust pipe and in open communication with the atmosphere, an inclosing box under the floor of the structure to be heated and provided with an intake opening for supplying fresh air, a radiator box within the inclosing box and elevated above the floor thereof, open ended tubes leading through the radiator box for increasing the circulation thereof, a branch pipe leading from near the top of the radiator box to the exhaust pipe intermediate the muffler and the engine, a valve controlled discharge pipe leading from near the bottom of the radiator box and out of the inclosing box and discharging directly into the atmosphere, and a register in the floor of the structure for controlling the flow of heated air away from the inclosing box, substantially as described.

4. In an automobile, the combination of a closed body, an inclosing box located beneath the floor of the closed body and provided with an intake opening, an engine at the forward end of the automobile, a muffler at the rear end of the automobile in open communication with the atmosphere, an exhaust pipe passing through the inclosing box and connecting the engine with the muffler, a register in the floor of the automobile immediately above the inclosing box for controlling the flow of heated air therefrom, a radiator box within the inclosing box and elevated above the floor thereof, and provided with a plurality of open ended tubes or flues, a branch pipe connecting the radiator box with the exhaust pipe intermediate the engine and the muffler, and a discharge pipe leading from the radiator box through and out of the inclosing box and discharging directly into the atmosphere, substantially as described.

5. In an automobile, the combination of a body portion having a seat, an inclosing box located beneath the floor of the body portion and provided with an intake opening at its forward end, an engine at the forward end of the automobile, a muffler at the rear end of the automobile in open communication with the atmosphere, an exhaust pipe passing through the inclosing box immediately beneath the floor of the automobile, and connecting the engine with the muffler, a register in the floor of the automobile immediately above the inclosing box for controlling the flow of heated air therefrom, a radiator box within the inclosing box and immediately below the exhaust pipe and elevated above the floor of the box, and provided with a plurality of open-ended tubes or flues, a branch pipe connecting the radiator box with the exhaust pipe intermediate the engine and the muffler, and a discharge pipe leading from the radiator box through and out of the inclosing box behind the intake opening therein and discharging directly into the atmosphere, whereby the back pressure on the engine is relieved and the products of combustion passing through the radiator box are discharged behind the intake opening in the inclosing box, substantially as described.

873,400. GROUPING MECHANISM FOR VOTING-MACHINES. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,612.



1. In a voting machine, the combination with voting members and interlocking members having rollers, of fixed grouping rollers, carriers having movable grouping rollers, a flexible grouping member passing alternately about the fixed and movable grouping rollers and flexible connecting members attached to the carriers and passing over the rollers on the interlocking members and attached to a fixed portion of the machine.

2. In a voting machine, the combination with voting members and interlocking members having rollers, of fixed grouping rollers, carriers having movable grouping rollers, a flexible grouping member passing alternately about the fixed and movable grouping rollers, flexible connecting members attached to the carriers and passing over the rollers on the interlocking members and attached to a fixed portion of the machine, and means for locking the flexible grouping members upon the fixed grouping rollers for ordinary voting.

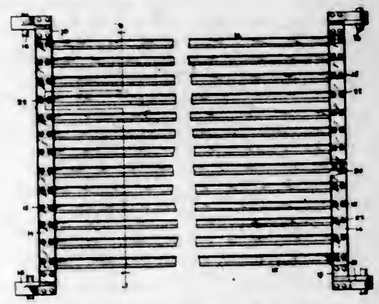
3. In a voting machine, the combination with interlocking members having rollers, a grouping plate and fixed grouping rollers journaled therein, of flexible connecting members passing over the rollers in the interlocking members, carriers attached thereto and carrying movable grouping rollers, a flexible grouping member passing alternately about fixed and movable grouping rollers, screws in the grouping plate and shoes carried thereby which are adapted to lock the flexible grouping member to the fixed grouping rollers intermediate the first and last columns in a group.

4. In a voting machine, the combination with interlocking members having rollers, a grouping plate and fixed grouping rollers journaled therein, of flexible connecting members passing over the rollers in the interlocking members, carriers attached thereto and carrying movable grouping rollers, a flexible grouping member passing alternately about fixed and movable grouping rollers, means for adjusting the flexible grouping member, and means for locking the flexible grouping member to the fixed rollers.

5. In a voting machine, the combination with interlocking members, fixed grouping rollers and carriers having movable grouping rollers, of flexible connecting members having engagement with the interlocking members and attached to the carriers, a flexible grouping member passing alternately about a fixed and movable grouping roller and means for locking the flexible grouping member to the fixed grouping rollers.

[Claims 6 and 7 not printed in the Gazette.]

873,401. COUNTER-CARRIER FOR VOTING-MACHINES. CHARLES C. ABBOTT, Pittsfield, Mass, assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,613.



1. A counter carrier consisting of a plurality of bars formed from sheet metal, each bar comprising a vertical portion, a horizontal portion, a flange depending from the horizontal portion and a horizontal flange, and end strips to which the bars are attached.

2. A counter carrier consisting of a plurality of bars formed from sheet metal, each bar comprising a vertical portion, a horizontal portion, a horizontal flange and a flange depending from the horizontal portion and provided with identification marks, and end strips to which the bars are attached.

3. A counter carrier consisting of a plurality of bars formed from sheet metal, each bar comprising a vertical portion, a horizontal portion, a flange depending from the horizontal portion and a horizontal flange, and U-shaped end strips also formed from sheet metal to which the bars are attached and which are provided with bearings, for the purpose set forth.

4. A counter carrier consisting of a plurality of bars each comprising a vertical portion, a horizontal portion, a flange depending from the horizontal portion and a horizontal flange, a part of the horizontal portion and depending flange being cut away at each end of the bars leaving recesses, U-shaped end strips engaging said recesses, the edges of the horizontal flange and the remaining portion of the horizontal portion engaging the face of the end strips, and bolts passing through the faces of the bars and the end strips whereby the parts are secured together.

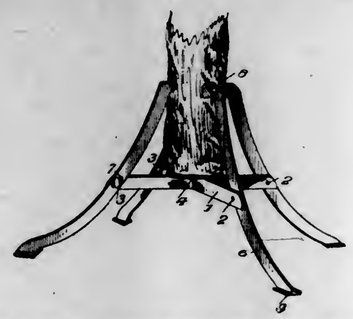
5. The combination with a bar comprising a vertical portion, a horizontal portion, a horizontal flange and a flange depending from the horizontal portion and provided with an identification mark, of a counter resting on the horizontal portion and secured to the vertical portion in alinement with the identification mark.

873,402. CHRISTMAS-TREE HOLDER. JAMES T. BAILEY, Phœnixville, Pa. Filed Feb. 25, 1907. Serial No. 359,144.

1. In a device of the character described, the combination of a body portion upon which the tree trunk rests, the said body portion comprising a plurality of arms, and legs the intermediate portions of which have a detachable and interlocking connection with said arms while their upper portions are provided with means for engaging the tree trunk, one of the members being connected having a pin projecting therefrom provided with an elongated head while the opposite member is formed with an elongated opening corresponding to the head and receiving the pin.

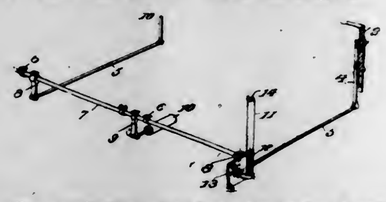
2. In a device of the character described, the combination of a spider formed with a plurality of arms, pins projecting laterally from the arms of the spider and formed with elongated heads, and legs provided at intermediate points with elongated openings receiving the pins and corresponding with the elongated heads upon the same whereby a detachable and interlocking connection

is produced between the legs and arms, the upper portions of the legs being provided with means for engaging a tree trunk.



3. In a device of the character described, the combination of a spider comprising a series of cross bars intersecting at their middle portions whereby a plurality of radial arms is formed, a plate carried by the spider, lateral pins projecting from the arms of the spider and formed with elongated heads, and a series of legs provided at intermediate points with elongated openings receiving the pins and corresponding to the elongated heads upon the same whereby a detachable and interlocking connection is produced between the legs and arms, the upper extremities of the legs carrying inwardly extending prongs designed to embed themselves in a tree trunk.

873,403. SHOW-CASE. DAVID M. BALDWIN, Jonesboro, Ark. Filed Mar. 5, 1907. Serial No. 360,972.



1. The combination of a show case having a swinging front, a rock shaft journaled upon the base of the show case for controlling the swinging front, a crank arm projecting from the rock shaft, connecting means between the crank arm and the swinging front, a second crank arm carried by the rock shaft, a buffer coöperating with the second crank arm to prevent sudden movement of the swinging front, and means for operating the rock shaft.

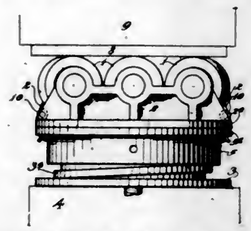
2. The combination of a show case having a swinging front, a downwardly extending arm carried by the swinging front, a rock shaft journaled upon the base of the show case, a crank arm projecting from the rock shaft, a link connecting the crank arm of the rock shaft and the arm carried by the swinging front, a second arm projecting from the rock shaft, a buffer coöperating with the second arm to prevent sudden closure of the swinging front, and means for operating the rock shaft to control the movements of the swinging front.

3. The combination of a show case having a swinging front, a rock shaft carried by the show case, means whereby the swinging front can be controlled through the medium of the rock shaft, an operating lever mounted upon the rock shaft, a latch mounted upon the operating lever, a rack, and a sleeve slidable upon the operating lever and controlling the latch.

4. The combination of a show case having a swinging front, a rock shaft carried by the show case, means whereby the swinging front can be controlled through the medium of the rock shaft, an operating lever mounted upon the rock shaft, a slidably mounted latch carried by the lever, a rack normally in engagement with the latch, and a sleeve slidably mounted upon the operating handle and provided with an inclined slot receiving a lug projecting from the said handle whereby a rotary movement of the sleeve imparts a longitudinal movement to the same, the said sleeve normally holding the latch in engagement with the rack.

5. The combination of a show case having a swinging front, a downwardly extending arm carried by the swinging front, a rock shaft journaled upon the base of the show case, a crank arm projecting from the rock shaft, a link connecting the crank arm of the rock shaft and the arm carried by the swinging front, an operating lever mounted upon the rock shaft, a latch mounted upon the operating lever, a rack carried by the show case and designed to engage the latch, and a sleeve slidable upon the operating lever and controlling the latch.

873,404. SIDE BEARING FOR CARS. JOHN C. BARBER, Chicago, Ill. Filed June 3, 1907. Serial No. 377,059.



1. A vertically adjustable side bearing for cars comprising a base member, a vertically adjustable bearing bracket held against rotation in respect to said base member, rollers on said bracket, an intermediate rotary adjusting member operative on said base member and bearing bracket to vertically adjust said bracket and its rollers, and means for locking said adjusting member against rotation, substantially as described.

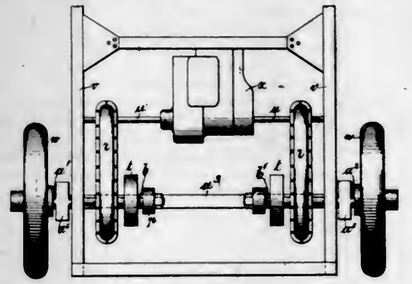
2. A vertically adjustable side bearing for cars, comprising a base member, a rotary adjusting member having threaded engagement with said base member, a bearing bracket supported by and vertically adjustable with said adjusting member, but held against rotation with respect to said base member, and bearing rollers journaled in said bearing bracket, substantially as described.

3. A vertically adjustable side bearing for cars, comprising a base member having an externally threaded hub portion, an adjusting sleeve surrounding and having threaded engagement with said threaded hub, a roller bearing bracket supported by said sleeve but connected to the hub of said base member with freedom for vertical movement but held thereby against rotary movement, and bearing rollers mounted on said bearing bracket, substantially as described.

4. In a side bearing for cars, the combination with a base member having an externally threaded hub 3^a and internal guide ribs 7, of an adjusting sleeve 5 working with threaded engagement on said hub, a two-part roller bearing bracket 2 having a projecting flange 2^a resting upon said sleeve 5 and having flanges 2^b, the ends of which embrace said guide lugs 7, thereby holding the said bracket 2 against rotation but permitting vertical movement thereof, bearing rollers mounted on said bearing bracket, and means for locking said adjusting sleeve 5 against rotation with respect to said bearing bracket, substantially as described.

873,405. AUTOMOBILE. FRANZ BARTL, New York, N. Y. Filed Nov. 30, 1906. Serial No. 345,589.

1. A motor vehicle or automobile in which the actuating mechanism is located within the chassis frame comprising a drop axle with a stump on each end passing through the hub of a wheel, borings in said stumps, a wheel shaft in each boring, a ball bearing on each side of the wheel on the axle stump, a third ball bearing on each shaft at the end of each axle stump, a fourth ball bearing at the inner end of each shaft, and a standard bolted to the drop axle supporting the last named ball bearing and the inner end of the shaft.



2. A motor vehicle or automobile comprising a drop axle with a stump at each end passing through the hub of a wheel, borings in said stumps, a wheel shaft in each boring, a ball bearing on each side of the wheel on the axle stump, a spring-seat with spring near the inner ball-bearing of the wheel, a third ball bearing on the shaft at the end of the axle stump, a chassis frame, a chain mechanism on the shaft located inside of the chassis frame, a brake on the shaft located inside of the chain mechanism, and a suitably supported fourth ball bearing on the inner end of the shaft.

3. A motor vehicle or automobile in which the actuating mechanism is located within the chassis frame comprising a drop axle with a stump on each end passing through the hub of a wheel, borings in said stumps, a shaft in each boring, and an enlarged head on each shaft forming a multiple of shoulders, a ring of conforming shape on said head, and a wheel hub whose inner part conforms in shape to said ring, two ball bearings on the stump on each side of the wheel, a third ball bearing on the shaft at the inner end of the stump, and a fourth ball bearing at the end of the shaft suitably supported on the drop axle.

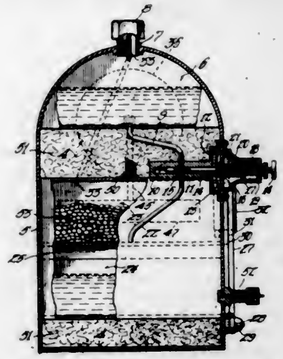
4. A motor vehicle or automobile comprising a drop axle with a stump at each end passing through the hub of a wheel, borings in said stumps, a shaft in each boring and an enlarged head on each shaft forming a multiple of shoulders, a ring conforming in shape on said head and a wheel hub whose inner part conforms in shape to said ring, two ball bearings on the stump one on each side of the wheel, a spring-seat with spring near the inner ball bearing a third ball bearing on the shaft at the inner end of the stump, a chassis frame, a chain mechanism on the shaft, a brake near the inner end of the shaft, and a suitably supported ball bearing at the end of same.

5. In a motor vehicle or automobile a drop axle with a stump at each end, borings in said stumps, a wheel shaft in each boring, a chassis frame, a chain mechanism located within said frame on the shaft, and a casing around said chain mechanism adapted to be filled with oil.

873,406. ACETYLENE-GAS GENERATOR. TELESPHORE J. BEAUDETTE, Los Angeles, Cal. Filed Dec. 19, 1906. Serial No. 348,547.

1. An acetylene gas generator, comprising a storage chamber; a water chamber within the top of said storage chamber; a carbid chamber within said storage chamber and below said water chamber having a communication with said storage chamber; a pipe leading from the lower portion of said water chamber and opening into said carbid chamber; a spring operated valve on said pipe; a resilient diaphragm secured to said valve, said diaphragm being in communication with the storage chamber and being opposed by the spring pressure on the valve; and a sludge chamber below and in communication with said carbid chamber.

2. In an acetylene gas machine, a water chamber; a storage chamber; a carbid chamber below said water chamber provided with a communication with said storage chamber; a pipe leading from said carbid chamber to the lower part of said water chamber; a reciprocating valve on said pipe; means connected to said valve operable by gas pressure to move the said valve in one direction to cut off the flow of water through said pipe and a spring operating in the other direction to cause the valve to cut off the flow of water through the pipe when the pressure on the other means to move said valve falls below a predetermined degree; and means to regulate the tension of said spring.



3. In an acetylene gas machine, a storage chamber; a water chamber in the upper part of said storage chamber; a carbid chamber within said storage chamber and below said water chamber; a sludge chamber below said carbid chamber and in communication therewith; a pipe leading from the bottom of said water chamber and opening into said carbid chamber; a reciprocating valve on said pipe operable by gas pressure in one direction and by spring pressure in the other direction whenever the pressure falls below a predetermined degree; a check valve controlling the communication between said carbid and said storage chambers; a distributing chamber connected to said storage chamber; and a regulating valve on said last connection operable by gas pressure in one direction and by spring pressure in the other direction.

4. An acetylene gas generator, comprising a storage chamber; a water chamber within the top of said storage chamber; a carbid chamber within said storage chamber and below said water chamber; a sludge chamber below said carbid chamber and in communication therewith; a pipe leading from the bottom of said water chamber and opening into said carbid chamber; a reciprocating valve on said pipe operable by gas pressure in one direction when the pressure rises upon a predetermined degree and by spring pressure in the other direction whenever the pressure falls below said predetermined degree; a check valve controlling the communication between said carbid and storage chambers; a connection between the top of said carbid chamber and the top of said water chamber; a distributing chamber connected to said storage chamber; and a regulating valve on said last connection operable by gas pressure to close said connection and by spring pressure to open it.

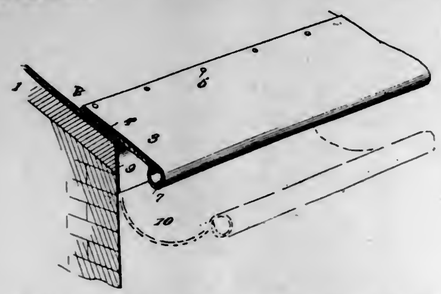
5. In an acetylene gas machine, a storage chamber; a water chamber, a carbid chamber and a sludge chamber all located within said storage chamber, said water chamber being in communication with said carbid chamber and said carbid chamber being in communication with said storage chamber.

[Claims 6 and 7 not printed in the Gazette.]

873,407. EAVES-STRIP. WILLIAM BEHL, Scotland, S. D. Filed Aug. 24, 1907. Serial No. 390,013.

1. The herein described eaves strip formed with a rearwardly facing pocket and extending forwardly therefrom, said strip being curled upon itself along an intermediate

line and thence returned upon itself and provided with a downwardly extending opposite edge portion, substantially as described.



2. The herein described eaves strip, consisting of an integral or continuous structure twice doubled upon itself at one edge to form a rearwardly facing pocket, said strip extending forwardly from said pocket and thence downwardly and backwardly and provided with a downwardly extending opposite edge portion.

3. The combination with the sheathing of a roof, of a continuous eaves strip doubled upon itself along one edge to form a pocket and secured at such edge to the sheathing, said strip extending forwardly beyond the sheathing and provided with a bib, the said strip extending rearwardly from the bib and provided with a downwardly extending opposite edge portion secured to the front edge of the sheathing, such edge portion projecting below the sheathing.

873,408. WHEEL. CHARLES E. BRINLEY, Philadelphia, Pa., and RUSSELL H. BOWEN, Palmyra, N. J., assignors to The American Pulley Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 9, 1906. Serial No. 295,231.

1. In a wheel, a hub comprising an annular recess; an annular ridge in said recess and an annular member divided in contact with said ridge and so shaped in said recess as to be inseparably interlocked therewith, substantially as set forth.

2. In a wheel, the combination with a rim having a spoke member arranged to connect said rim with a hub; of a unitary hub comprising a cylindrical axial bearing extending from end to end thereof and having a recess distinct from said axial bearing; and, a member distinct from said spoke member and hub so shaped in said recess as to be inseparably interlocked therewith; the thickness of said member within said recess being greater than the width of opening from said recess, substantially as set forth.

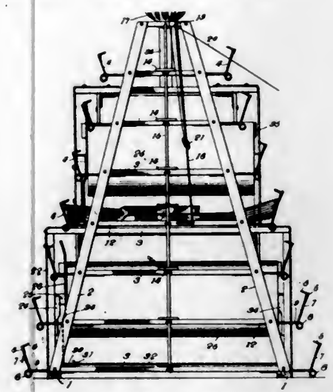
3. In a wheel, the combination with a rim having a spoke member arranged to connect said rim with a hub; of a unitary hub comprising a cylindrical axial bearing extending from end to end thereof and having a recess distinct from said axial bearing; and, a collar distinct from said hub and spoke member, so shaped in said recess as to be inseparably interlocked therewith; the thickness of said collar within said recess being greater than the width of opening from said recess, substantially as set forth.

4. In a wheel, the combination with a rim having a spoke member arranged to connect said rim with a hub; of a unitary hub comprising a cylindrical axial bearing extending from end to end thereof and having a recess distinct from said axial bearing; and, a collar, formed of an annularly bent strip, distinct from said hub and spoke member, so shaped in said recess as to be inseparably interlocked therewith; the thickness of said collar within said recess being greater than the width of opening from said recess, substantially as set forth.

5. In a wheel, the combination with a rim having a spoke member arranged to connect said rim with a hub; of a unitary hub comprising a cylindrical axial bearing extending from end to end thereof and having a recess distinct from said axial bearing; and, a member distinct from said hub and spoke member so shaped in said recess as to be inseparably interlocked therewith; the contiguous surfaces of the interlocked members being of circumferentially irregular configuration; and the thickness of said member within said recess being greater than the width of opening from said recess, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

873,409. COMBINED HOLDER FOR PAPER SACKS AND ROLL-PAPER. WILLIAM E. BURKS, Ashland, Ky., assignor of one-half to V. V. Adkins, Ashland, Ky. Filed Dec. 28, 1906. Serial No. 349,866.



1. A store service apparatus of the character described, consisting of a base, uprights supported on said base, a shelf secured to the uprights and adapted to receive piles of paper sacks, protectors secured to both ends of the shelf and each consisting of a horizontally extending portion attached to the shelf and extending outwardly therefrom and an upwardly extending portion adapted to support the sacks at their outer ends, upright rods secured to the shelf at opposite sides thereof and at the middle of the shelf, and a gravity actuated pressure bar slotted at its ends, the upright rods extending through the slots and the bar being adapted to rest upon the piles of sacks upon the shelf.

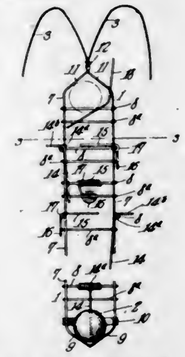
2. In store service apparatus, the combination of a shelf and a protector coöperating therewith, the same comprising spaced upright and horizontal members, the latter having outer extensions to make detachable connection with the shelf, coils at the juncture of the upright and horizontal members and other coils at the top of the said uprights, one of the coils being in the plane thereof and the other coil about at a right angle to the plane of the uprights to extend over a pile of paper sacks, or the like, placed upon the shelf and abutting against the said uprights.

3. In combination a shelf having a notch and openings in opposite walls of the notch and a protector comprising upright and horizontal portions, the latter lying in the notch below the upper surface of the shelf and adapted to be pressed together and having outer extensions to enter the said openings in the walls of the notch.

4. In combination, a shelf provided with a notch and having openings in opposite walls of the notch, a plate closing the bottom side of the notch and a protector comprising upright and horizontal portions, the latter lying in the notch upon the said plate and adapted to be pressed together and having extensions to enter the openings in the vertical walls of said notch.

5. In combination, a shelf adapted to receive a pile of paper sacks arranged with their end portions overlapped, protectors at opposite ends of the shelf to prevent outward displacement of the pile and a pressure bar arranged to exert a confining influence upon the overlapped portions of the said sacks.

873,410. INDICATING DEVICE FOR BOTTLES. JULIUS CASACCIA, San Francisco, Cal. Filed Sept. 28, 1907. Serial No. 394,997.



1. An indicating device for bottles and the like comprising a cage having an uninterrupted passage in one direction, a float movable in said passage, and swinging means adapted to close said passage to movement of the float in the other direction.

2. An indicating device for bottles and like receptacles comprising a float, a cage having an uninterrupted passage for the float in one direction, and means hinged to said cage for closing said passage to the movement of the float in the opposite direction.

3. An indicating device for bottles and like receptacles comprising a float, an elongated cage having an uninterrupted passage for the float in one direction, and means hinged to said cage at different points thereon to prevent any return movement of said float.

4. An indicating device for bottles and like receptacles comprising a float, an elongated cage having an uninterrupted passage for the movement of the float in one direction, and fingers hinged to the cage and adapted to extend across the passage to prevent the return of the float.

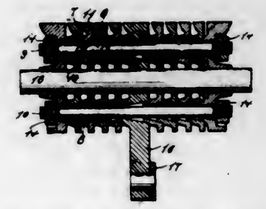
5. An indicating device for bottles and the like comprising a float, an elongated cage adapted to extend from the bottom to the neck of a bottle within the same and sealed thereto, said cage having an uninterrupted passage for the movement of the float in one direction, and a plurality of fingers pivoted to said cage from end to end arranged to close said passage to the travel of the float in the opposite direction.

[Claims 6 and 7 not printed in the Gazette.]

873,411. FURNACE-GRATE. HENRY C. CHAMBERLIN, Olyphant, Pa. Filed Sept. 14, 1906. Serial No. 334,618.

1. A grate bar comprising a plurality of transverse, interlocking sections, each section having an upstanding body part and a horizontally extending fuel support offset laterally from one side only of said section, tubular projections on the side only of the sections whence the fuel supports are offset for spacing them apart and interlocking them, and tie-rods passing through the tubular projections.

2. A grate bar, comprising a plurality of transverse, interlocking sections, each section having an upstanding body part and a horizontally extending fuel support offset laterally from one side only of said section, a tie-rod passing through the body parts and tying the sections together, and spacing projections on the same side of the body parts as the fuel supports to interlock and to space the sections apart so as to leave narrow air spaces between the supports and wider spaces between the body parts.



3. A grate bar comprising a plurality of transverse interlocking sections, each section having an upstanding body part and a fuel support projecting horizontally therefrom, the outer sections being wider than the intermediate sections and provided on their outer sides with counter-sinks and integral journal projections, tie rods passing through the body parts of the sections and having retaining members seated in the counter-sinks, said body parts having spacing projections to space the sections apart so as to leave narrow air spaces between the supports and wider spaces between the body parts.

4. A grate bar comprising a plurality of transverse interlocking sections, each section having an upstanding body part and a fuel support projecting horizontally therefrom, and the outer sections having tubular journals integral therewith and counter-sinks above and below the journals, tie rods passing through all the sections and having retaining members seated in the said counter-sinks, tubular spacing and interlocking projections on the body parts in line with the counter-sinks, perforations through the intermediate sections in line with the journals, and auxiliary spacing projections abreast of the perforations in the body parts.

5. A grate bar comprising a plurality of transverse interlocking sections, each section having an upstanding body part flat on one side and a horizontally-extending fuel support offset laterally from the opposite side thereof, said fuel supports being wider in the direction of the axis of the grate bar than the body parts are thick, so as to leave narrow air spaces between the fuel supports and wider spaces between the body portion of the sections, tie rods passing through the body parts of the sections and tying them together, and interlocking and spacing projections extending from the side of the body parts on which the fuel supports are offset.

873,412. CLEANING DEVICE. HARVEY CHAPMAN, Dorchester, Mass. Filed Apr. 8, 1907. Serial No. 367,055.

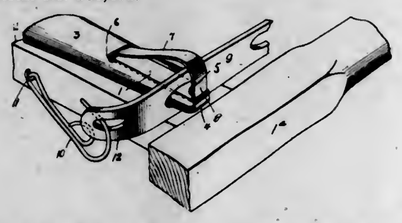


1. In a cleaning device, the combination, with a pair of jaws having shanks formed of two pieces of spring wire ar-

ranged side by side, the end portions of the said shanks being formed into a bundle of four straight and parallel wires, of a tube having the end portions of the said shanks rigidly secured in it, a clamping ring slidable on the said shanks, and a handle provided with a hole in which the said tube is inserted.

2. In a cleaning device, the combination, with a pair of jaws provided with spring shanks, of a clamping-ring slidable on the middle portions of the said shanks, a retaining tube having the end portions of the said shanks secured in it, and a handle provided with a hole in which the said tube is inserted.

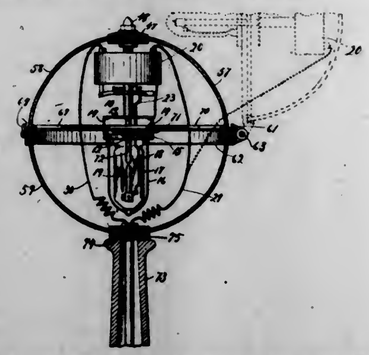
873,413. TUG AND TRACE FASTENER. ABELARD V. CUNNINGHAM, Sr., Zelienople, Pa. Filed June 24, 1907. Serial No. 380,473.



1. A tug and trace fastener comprising an elongated strip of metallic material having one end bent around and secured to the end of a swingle tree, said strip having a portion of its length extending inwardly and engaging the upper face of the swingle tree and the remaining portion of its length extending outwardly and over that portion positioned against the swingle tree and constituting a spring arm, combined with means for securing to the swingle tree the inner terminus of that portion of the strip which engages the outer face of the swingle tree.

2. A tug and trace fastener comprising an elongated strip of metallic material having one end bent around and secured to the end of a swingle tree, said strip having a portion of its length extending inwardly and engaging the upper face of the swingle tree and the remaining portion of its length extending outwardly and over that portion positioned against the swingle tree and constituting a spring arm, that portion of the strip constituting a spring arm having its outer terminus bent in a curvilinear manner and with the end thereof normally engaging the outer terminus of that portion of the strip which engages the outer face of the swingle tree, combined with means for securing to the swingle tree the inner terminus of that portion of the strip which engages the outer face of the swingle tree.

873,414. ARC-LAMP. WALTER E. DANIELS, Chicago, Ill. Filed July 21, 1906. Serial No. 327,184.



1. In combination with an electric arc lamp having a frame and with a support therefor having a capital, a trunnion formed on the lamp frame, a standard rising from the capital of the support and having a journal for the trunnion, and a globe inclosing the lamp and having an opening for receiving the capital of the support.

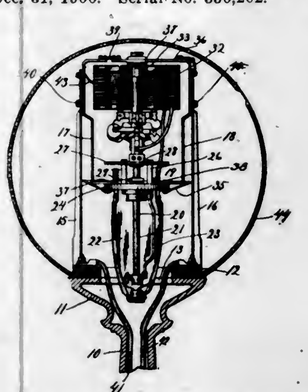
2. In combination with an electric arc lamp having a frame and with a support therefor having a capital, a trunnion formed on the lamp frame, a standard rising from the capital of the support and having a journal for the trunnion, a bolt formed on the top of the lamp frame, a horizontally divided sectional globe inclosing the lamp, the lower section thereof having an opening fitting the capital of the support and the upper section thereof having an opening for receiving the bolt of the lamp frame, and a keeper engaging the bolt and bearing on the upper globe section.

3. In combination with an electric arc lamp having a frame and a vertical support therefor, a bolt formed on the top of the lamp frame, a horizontally divided sectional globe inclosing the lamp, the lower section thereof having an opening to receive the end of the support and the upper section thereof having an opening to receive the bolt, and a keeper engaging the bolt and bearing on the upper globe section.

4. In combination, an electric arc lamp, a horizontally divided sectional globe forming a housing for the lamp, and a support for the lamp within the globe having a hinged connection with the lamp adjacent the plane of division of the globe.

5. In combination, an electric arc lamp having a frame, a bolt formed on the top of the frame, a horizontally divided sectional globe forming a housing for the lamp, the upper section thereof having an opening to receive the bolt, a support for the lamp within the globe having a hinged connection with the lamp frame adjacent the plane of division of the globe, and a keeper engaging the bolt and bearing on the upper globe section.

873,415. ARC-LAMP. WALTER E. DANIELS, Chicago, Ill. Filed Dec. 31, 1906. Serial No. 350,202.



1. In combination, a support having a capital, a globe mounted on the capital and having an opening over the capital, a standard rising from the capital of the support within the globe and an arc lamp carried by the standard.

2. In combination, a tubular support having a capital, a diaphanous globe imperforate except for an opening fitting the capital of the support, a pair of standards rising from the capital of the support within the globe, an arc lamp carried by the standards, and a wire leading through the support to each lamp terminal.

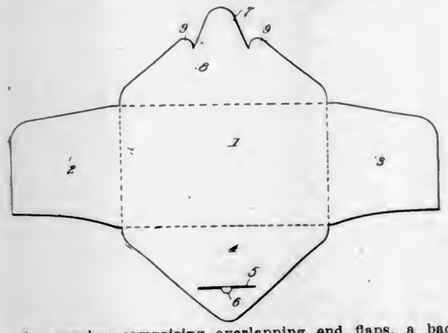
3. In combination, a tubular support having a capital, a diaphanous globe imperforate except for an opening fitting the capital of the support, a pair of insulated standards rising from the standard of the support within the globe, an arc lamp carried by the standards and a wire leading through the support to the base of each of the standards.

4. An electric arc lamp structure, comprising a column provided at its upper end with a capital, a supporting frame sustained upon the capital of the column, a complete electric arc lamp mounted in said supporting frame, and a globe inclosing the arc lamp and its supporting frame and having an opening in its bottom, the bottom open end of the globe resting upon the capital and being closed thereby.

5. An electric arc lamp structure, comprising a column provided at its upper end with a capital, an insulating disk mounted upon the capital, a complete electric arc lamp supported upon the insulating disk, and a globe mounted upon the capital and inclosing the electric arc lamp, said globe having an opening through which the insulating disk projects.

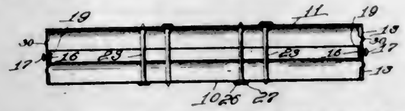
[Claims 6 to 8 not printed in the Gazette.]

873,416. ENVELOP. BENJAMIN DAVIS, Nesquehoning, Pa. Filed Mar. 30, 1907. Serial No. 365,617.



An envelop comprising overlapping end flaps, a back flap overlapping the end flaps and provided with a slot having a recess in its under edge intermediate the ends of the slot, the upper edge of the slot being straight, and a closure flap having three alining tongues, the intermediate tongue being considerably longer than the end tongues and formed for insertion through said slot for sealing engagement with the backs of the end flaps, and the end tongues being arranged for sealing engagement with the outer face of the back flap only at opposite ends of said slot.

873,417. LOOSE-LEAF BINDER. JAMES C. DAWSON, St. Louis, Mo., assignor to Sieber & Trussell Manufacturing Company, a Corporation of Missouri. Filed Apr. 29, 1907. Serial No. 370,906.



1. In a binder, in combination, a pair of relatively movable side plates, each of such plates having a prong-receiving aperture, a pair of clamping lugs turned outwardly on one of the plates adjacent the aperture, and a filing prong having a flattened heel, such prong extending inwardly through the aperture in the last-named plate and having its heel seated upon the outer face of such plate between the clamping lugs, the end of the prong being engageable with the aperture in the other plate and the clamping lugs being clenched upon the heel of the prong.

2. In a binder, in combination, a pair of relatively movable side plates, one of such plates having an aperture elongated in a direction transverse to the length of the plate, a clamping lug turned outwardly on the plate adjacent the aperture, and a filing prong having a flattened heel, the prong being extended inwardly through the aperture in the plate and being inclined to the plate to fill the aperture, the heel of the prong being seated upon the outer face of the plate and being held to its seat by clenching the lug.

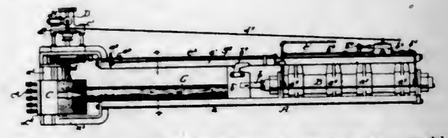
3. In a binder, in combination, a binder plate in angle form, an end flange integral with one leaf of the plate and filling the angle between the leaves, and a lip integral with the other leaf of the plate and engaging the flange.

4. In a binder, in combination, an apertured binder plate, a filing prong set through the aperture, and means for clamping the heel of the prong against the rear face of the plate.

5. In a binder, in combination, an apertured binder plate, a filing prong set through the aperture, and a pair of clamping lugs engaging the heel of the prong and binding it to the plate.

[Claim 6 not printed in the Gazette.]

873,418. WOOD-SPLITTING MACHINE. PHILIP ECKENROTH, Jr., Philadelphia, Pa. Filed June 28, 1907. Serial No. 381,273.



1. The combination of an operating cylinder, a movable head actuated by a piston in said cylinder, a guide for supporting logs to be split, a knife structure having two intersecting blades for splitting the logs, and means for adjusting the said knife structure to cause the point of intersection of the knife blades to strike the centers of logs of varying dimensions, substantially as described.

2. The combination of a frame having a guideway, a head movable thereon, means for forcing said head against a log mounted in the guideway, a knife structure having intersecting blades, a guide on the frame for said knife structure, and means for moving and positively holding said knife upon its guide to bring the point of intersection of its blades into line with the centers of logs of varying dimensions, substantially as described.

3. The combination of a frame having a head for engaging one end of a log, means for operating the head, a guide extending in a line substantially at right angles to the line of movement of the head, a knife structure slidable upon said guide, means for moving said knife structure, and means for creating friction between its knife structure and the guide, substantially as described.

4. The combination of a frame having a head for engaging one end of a log, a guide, a knife for splitting logs movably mounted on said guide, means for forcing said head toward the knife to split the log, a cylinder having a piston connected to the knife structure for adjusting the same upon the guide, and means tending to retard movement of said knife structure upon the guide, substantially as described.

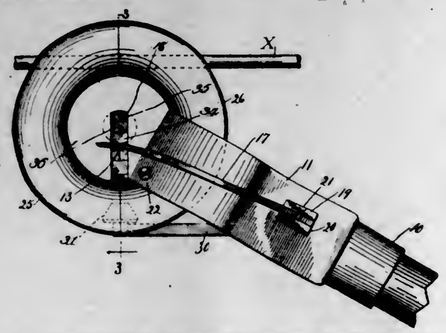
5. The combination of a frame having a head for engaging one end of a log, a guide, a knife for splitting logs movably mounted on said guide, means for forcing said head towards the knife to split the log, a cylinder having a piston connected to the knife structure for adjusting the same upon the guide, a structure attached to the knife structure, with means for pressing said two structures together to cause them to exert friction against the guide and thereby retard the movement of the knife structure thereon, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

873,419. TROLLEY AND HARP THEREFOR. SAMUEL F. ESTELL, Los Angeles, Cal., and FREDERICK W. G. PHILLIPS, Wilmette, Ill. Filed Aug. 8, 1907. Serial No. 387,701.

1. In combination, a rotatable trolley wheel having a peripheral groove and being mounted for universal move-

ment in its bearings, and means engageable with the groove of the trolley for yieldingly maintaining it in central position.



2. In combination, a rotatable trolley wheel having a peripheral groove and being mounted to tilt in its bearings, and means engageable with the groove of the trolley for yieldingly maintaining it in central position.

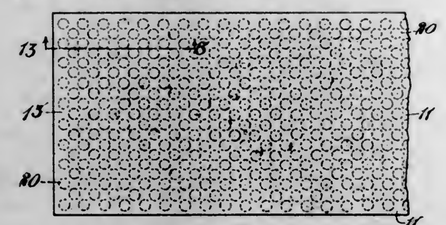
3. In combination, an axle fixed against rotation and having a spherical bearing portion, a trolley having a peripheral groove and having its hub recessed to receive the spherical portion of the axle, and means engageable with the peripheral groove of the trolley for yieldingly maintaining it in an upright position on the axle.

4. In combination, a rotatable trolley having a peripheral groove and being mounted to tilt in its bearings, a guide roller engageable with the groove of the trolley, and an elastically flexible support for the roller.

5. In combination, a harp, an axle carried in the arms of the harp and having a spherical bearing, a trolley comprising two semicircular sections and adapted to the axle bearing.

[Claim 6 not printed in the Gazette.]

873,420. RUBBER MAT. THEODORE P. FARMER, Southwest Harbor, Me., assignor to Protective Tread Company, Boston, Mass., a Corporation of Maine. Filed Feb. 10, 1905. Serial No. 245,082.

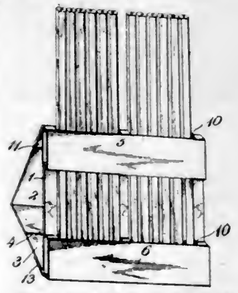


1. As a new article of manufacture, a mat consisting of a layer of rubber having vulcanized therein a multiplicity of metal spheres.

2. As a new article of manufacture, a mat consisting of a layer of rubber having vulcanized therein under pressure a multiplicity of metal spheres located at predetermined distances from each other.

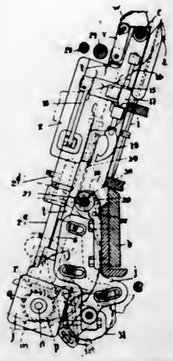
873,421. DISPLAY DEVICE. CLARENCE C. FLEMING, Amityville, N. Y., assignor to Eberhard Faber, New York, N. Y. Filed Aug. 21, 1907. Serial No. 389,442.

1. A display device formed of a single sheet of paper and comprising body, base and supporting portions secured together in triangular form and adapted to fold so as to lie parallel one to another, and holders for the articles to be displayed extending outwardly from the body portion, said holders being formed by a portion of said sheet having a part intermediate its edges secured to the body portion and parts on opposite sides of said part extending outwardly from the body portion, then parallel to the body portion and then inwardly to the body portion, said inwardly extending parts being secured to the body portion and certain of the parts of said sheet lying at an angle to the body portion having registering openings therein, substantially as described.



2. A display device formed from a single sheet of paper and comprising body, base and supporting portions arranged edge to edge in triangular form, said base portion being creased to permit folding the two parts of the base on opposite sides of the crease and the supporting portion into parallelism with the body portion, and holders extending outwardly from the body portion having registering openings to receive the articles to be displayed and means for coacting with the ends of the articles to prevent axial movement thereof, substantially as described.

873,422. SPINNING-MULE. HENRY S. GOLLAND, Manchester, England. Filed Apr. 19, 1907. Serial No. 369,101.



1. In a spinning mule, a guide wire, a rock shaft actuating the guide wire, a crank on the rock shaft, links connecting the crank to a cross head, a rod rotatably connected to the crosshead and means for rotating and reciprocating such rod to rock the shaft, substantially as described.

2. In a spinning mule, a guide wire, a rock shaft actuating the guide wire, a crank on the rock shaft, links connecting the crank to a crosshead, a rod rotatably connected to the crosshead, means for rotating and reciprocating such rod to rock the shaft, and means for gradually raising the rock shaft, substantially as described.

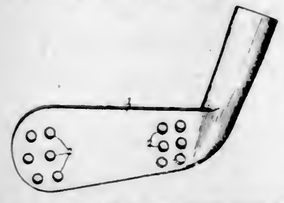
3. In a spinning mule, a winding faller wire, a guide wire, a rock shaft actuating the guide wire, a crank on the rock shaft, links connecting the crank to a crosshead, a rod rotatably connected to the crosshead, means for rotating and reciprocating such rod to rock the shaft, means for gradually raising the rock shaft, and the winding faller wire during the run in of the mule carriage to build the cops substantially as described.

4. In combination in a spinning mule a mule carriage, a rock shaft, fingers carried on such shaft, wires attached to the fingers at each side of the rock shaft one of such wires acting as a guide wire, a crank on the rock shaft, a cross head, a sleeve, links connecting the crank to the crosshead, a rod rotatably connected to the crosshead and slidably socketed in the sleeve, a shaft, a bevel pinion thereon, a bevel pinion on the sleeve meshing with the bevel pinion on the shaft, bearings for the shaft and sleeve provided by a bracket bolted to the mule carriage, a pinion on such shaft, a rack on the floor gearing with such pinion, cam grooves on the rod inclosed with a casing, a bearing carried by the casing for the rock shaft, two plates contained within the casing, bowls on such plates engaging with the cam grooves, means for locking and releasing the plates, pokers carrying the rock shaft, bearings for such pokers secured to the mule carriage, racks attached to the pokers and to the casing carrying the reciprocating rod, a shaft, means for slowly rotating such shaft each time the mule carriage runs in, pinions on such shaft gearing with the racks on the pokers substantially as described.

5. In combination with the rod *t*, a boss, two cam grooves of different pitches formed on such boss, a casing, two plates slidable within such casing, bowls on the plates engaging with the cam grooves, side plates pivoted to the slidable plates, each of said plates having a slot therein, a bar slidable in the casing, pins on such bar engaging with the slots and means for sliding the bar on the run in of the mule carriage substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

873,423. GOLF-CLUB. JAMES GOVAN, Abington, Pa. Filed Apr. 21, 1906. Serial No. 312,997.



1. A golf club having the ends of its head apertured or recessed to lighten the same whereby the bulk of the weight is disposed at or near the center of the head.

2. A golf club having the ends of its head apertured or recessed to lighten the same whereby the bulk of the weight is disposed at or near the center of the head, and filling material for said apertures or recesses.

3. A golf club head having a solid central portion, and apertured transversely at its heel and toe.

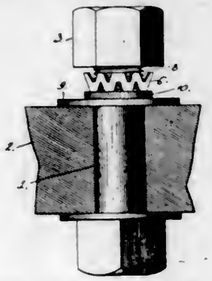
4. A golf club head having a solid central portion, apertured transversely at its heel and toe, in combination with material for filling said apertures, said filling material lying flush with the face of the club and preventing the reception of dirt.

5. A golf club having its hose advanced from the heel of the head and offset forwardly with respect to its striking face, said club being apertured or recessed at its heel and toe to lighten the same, whereby the bulk of the weight is disposed at or near the center of the head.

873,424. NUT-LOCK. FREDERICK GREENE, Canonsburg, Pa. Filed Aug. 10, 1907. Serial No. 387,947.

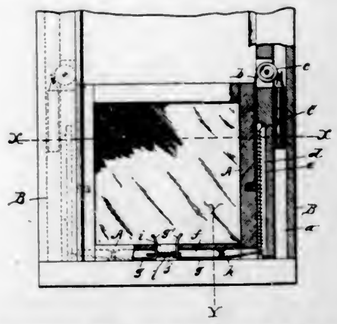
1. The combination with a grooved bolt, of a nut provided adjacent to its inner face, with an internal annular groove registering with the groove of the bolt and a compressible washer of conical form having its edges notched to facilitate the compression thereof and the forcing of the same into the grooves of the bolt and nut.

2. In a nut lock, the combination of a bolt provided with an annular groove at the inner end of its threaded portion, and a nut countersunk on its inner face and having an internal annular groove of greater diameter than the countersunk portion of the nut, of a notched-washer of compressible material adapted to be crushed by the screwing home of the nut on the bolt and thereby forced into the said annular grooves of the said nut and bolt respectively to lock the nut on the bolt.



3. In a nut lock, the combination with a bolt having an annular exterior groove and a nut having an interior annular groove, of a washer of compressible material having both edges thereof notched to facilitate compression of the washer and the entry thereof into the grooves of the nut and bolt.

873,425. SASH-LOCK. FRANK E. GREIS, Syracuse, N. Y. Filed Oct. 1, 1906. Serial No. 336,820.

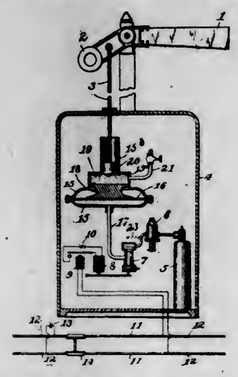


In combination with the ratchet racks attached to the window-casing and disposed with the abrupt faces of the teeth presented downward, the counter-balanced sash provided with a groove extending across the entire width of the sash, a longitudinal slot in the sash intersecting the aforesaid groove, hangers pivoted to the sash within the said groove, longitudinally movable locking-bars carried on said hangers and formed with fingers protruding through the aforesaid slot and normally resting on the ends of the slot, and an expansive spring interposed between the inner ends of said locking-bars as set forth.

873,426. MECHANICAL MOVEMENT. LAWRENCE GRIFFITH, Yonkers, N. Y., assignor to The Hall Signal Company, a Corporation of Maine. Filed Mar. 31, 1905. Serial No. 253,048.

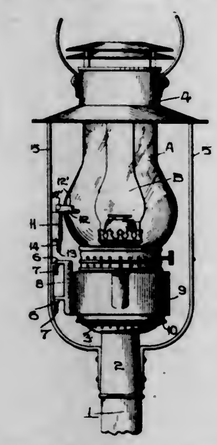
1. In a railway traffic-controlling device, the combination of a part to be moved, a supply of liquefied gas, means for operating the part to be moved by the gas, which consists of a casing covered by a diaphragm said diaphragm being mechanically connected with a moving part of a mechanical movement comprising two communicating chambers of unequal cross-section a block adapted to fit and work in each of said chambers and a substance adapted to fill the space between said blocks and to readily change its form so as to pass from one chamber to the other and to transmit motion to one of said blocks as the other is moved.

2. In a railway traffic-controlling device, the combination of a part to be moved, a supply of liquefied gas, means for operating the part to be moved by the gas, which consists of a moving part of a mechanical movement comprising two communicating chambers of unequal cross-section



a block adapted to fit and work in each of said chambers and a substance adapted to fill the space between said blocks and to readily change its form so as to pass from one chamber to the other and to transmit motion to one of said blocks as the other is moved.

873,427. LAMP. ALEXANDER H. HANDLAN, Jr., St. Louis, Mo. Filed May 20, 1907. Serial No. 376,362.



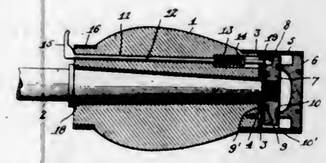
1. The combination of a support provided with a head having a flat surface, an upwardly extending supporting arm secured to the support, a vertical bracket having superposed perforated ears and secured to the supporting arm, a font having a base rim fitting around and removable from said head, and a hinge bracket having superposed depending extended pintles and secured to the side of the font whereby the font is hinged to the superposed ears while permitting it to be moved vertically and also to be swung laterally over the flat surface of the head.

2. The combination of a support, an upwardly extending supporting arm secured to the support, a vertical bracket having a vertical bore and secured to the supporting arm, and a globe supporting arm formed with a recess at its outer end providing a shoulder to retain the globe in position and swingingly fitted in the vertical bracket so as to be swung laterally into position beneath the globe and retracted from such position so that the globe is entirely free to be moved independent of the globe supporting arm when the latter is out of use.

3. The combination of a support, an upwardly extending supporting arm secured to the support, a vertical bracket having a vertical bore and secured to the supporting arm, a globe supporting arm swingingly fitted in the vertical bracket so as to be swung laterally into position beneath the globe and retracted from such position so that the globe is entirely free to be moved independent of the globe supporting arm when the latter is out of use and a spring for placing the globe supporting arm automatically beneath the globe when the latter is elevated.

4. The combination of a support, an upwardly extending supporting arm secured to the support, a vertical bracket having a vertical bore and a stop and secured to the supporting arm, a globe supporting arm swingingly fitted in the vertical bracket so as to be swung laterally into position beneath the globe and retracted from such position so that the globe is entirely free to be moved independent of the globe supporting arm when the latter is out of use and a spring for placing the globe supporting arm automatically beneath the globe when the latter is elevated and limited in its movement by the stop.

873,428. VEHICLE-HUB. ARCHIEBALD HART, Glen Head, N. Y., assignor of one-half to William J. Fox, Glen Head, N. Y. Filed Mar. 21, 1907. Serial No. 363,689.

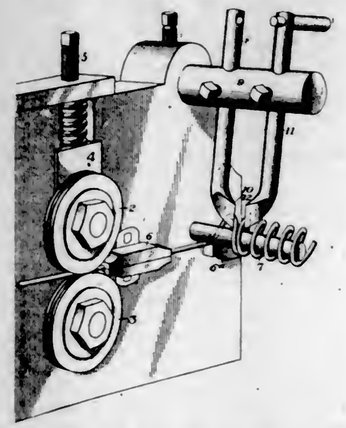


1. The combination with the hub of a wheel, of an axle or spindle extending therethrough, a nut fitting the outer end of the axle having a depression or opening therein adjacent to the hub, a cap engaging the hub for inclosing the nut, a rotary releasing pin extending longitudinally through a recess in said hub its outer end adapted to fit the depression or opening in the nut and its inner end bent up at right angles and rigid with the section of the pin passing through the hub, and a collar having a slit secured on the inner side of the hub in which the inner bent up end of the pin is adapted to be seated.

2. The combination with a hub of a wheel, of an axle or spindle extending therethrough, a nut fitting the outer end of the axle having annular grooves or depressions on its opposite sides and a depression or opening adjacent to the hub, packing strips in said annular grooves or depressions, a cap engaging the hub for inclosing the nut, a rotary releasing pin extending longitudinally through a recess in said hub its outer end adapted to fit the depression or opening in the nut and its inner end bent up at right angles and rigid with the section of the pin passing through the hub, and a collar having a slit secured on the inner side of the hub in which the inner bent up end of the pin is adapted to be seated.

3. The combination with a hub of a wheel, of an axle or spindle extending therethrough, a nut fitting the outer end of the axle having annular grooves or depressions on its opposite sides and a depression or opening adjacent to the hub, packing strips in said annular grooves or depressions, a cap engaging the hub for inclosing the nut, a rotary releasing pin extending longitudinally through a recess in said hub its outer end adapted to fit the depression or opening in the nut and its inner end bent up at right angles and rigid with the section of the pin passing through the hub, a collar having a slit secured on the inner side of the hub in which the inner bent up end of the pin is adapted to be seated, and a spring in said recess for normally forcing said releasing pin outwardly.

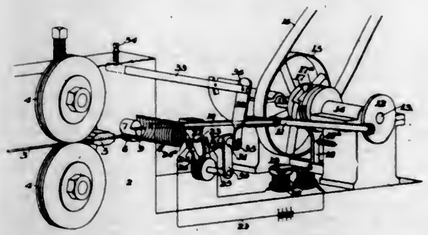
873,429. METHOD OF MAKING COIL-SPRINGS. NOAH S. HARTER, Waukegan, Ill., assignor to American Steel & Wire Company, Chicago, Ill., a Corporation of New Jersey. Filed May 6, 1907. Serial No. 372,005.



1. The method of forming helical springs, which consists in forming wire into a series of coils, imparting to each coil as it is formed a pitch in excess of the desired pitch, and then pressing each coil backwardly against the following coil to remove the excess pitch and give a permanent set thereto; substantially as described.

2. The herein described method of forming open coil springs, which consists in winding or coiling a piece of wire to form coils of a certain pitch, and pressing each coil backwardly against a later coil to remove excess pitch and give a permanent set; substantially as described.

873,430. MEANS FOR CUTTING COIL-SPRINGS. NOAH S. HARTER, Waukegan, Ill., assignor to American Steel & Wire Company, Chicago, Ill., a Corporation of New Jersey. Filed May 23, 1907. Serial No. 375,301.



1. In mechanism for forming coil-springs, a coiling means which rotates the coil as it is formed, a cutter, electro-magnetic means for controlling the action of the cutter, and a circuit-controlling device located in the path of the rotating end of the coil wire and closed by the rotating movement thereof, substantially as described.

2. In mechanism for forming coil springs, a coiling means which rotates the coil as it is formed, a cutter, electro-magnetic means for controlling the action of the cutter, and a circuit-controlling device located in the path of the rotating end of the coil wire and closed by the rotating movement thereof, together with means for adjusting the angular position of said device with reference to the axis of the coil, whereby the cut ends of the wire at the two ends of the coil may be in any desired angular relation to each other, substantially as described.

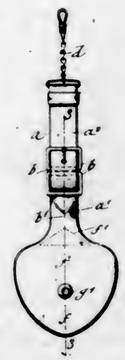
3. In mechanism for forming coil springs, a coiling means which rotates the coil as it is formed, a cutter, an electro-magnetic means for controlling the action of the cutter, and a circuit-controlling device located in the path of the rotating end of the coil wire and closed by the rotating movement thereof, together with means for adjusting said device longitudinally and also angularly with respect to the axis of the coil, whereby the length of the cut coil may be varied, and the cut ends of the wire at the two ends of the coil may be in any desired angular relation to each other, substantially as described.

4. In mechanism for forming wire coils, a coiling means which rotates the ends of the coil, and a circuit-closing device arranged to be engaged and closed by the rotating end of the coil, substantially as described.

5. In mechanism of the character described, cutting means, an electro-magnetic device for controlling the operation of the cutting means, a circuit closer for the circuit of said device operated by the movement of the metal to be cut, and means for adjusting the angular position of said device with reference to the axis of the coil; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

873,431. COMBINED FOB AND PURSE. RICHARD HEINE, New York, N. Y. Filed Feb. 20, 1907. Serial No. 358,466.



In a combined fob and purse, the combination of a doubled strap having a long rear-portion and a short front-portion, a pocket formed at the lower end of said rear-portion, a covering-flap for said pocket, a front-strap extending from said covering-flap at its upper portion, means for securing said front-strap to the rear-portion of the doubled strap, and a buckle connecting the upper end of said front-strap with the lower end of the front-portion of the doubled strap.

873,432. DOOR-HINGE. WILLIAM K. HENRY, New Britain, Conn., assignor to P. & F. Corbin, New Britain, Conn., a Corporation of Connecticut. Filed Jan. 25, 1907. Serial No. 353,934.

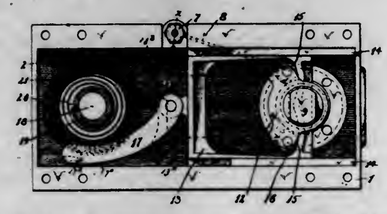


1. In a door hinge, the combination with a case having a central bore therein extending partially through the same, and a series of balls at the bottom thereof, of a spindle having a shouldered portion snugly fitting the bore and rotatably supported upon the balls therein, and a cover plate overstanding the end of the case and the shouldered portion of said spindle.

2. In a door hinge, the combination with a substantially

cylindrical case having off-set lugs integral with the outer surface thereof, and an annular flange at the upper end thereof, said case having a central bore extending part way through the same, of a spindle having a shouldered portion rotatably fitted to said bore, anti-friction device between the lower end of the spindle and the bottom of said case, and a removable cover plate overstanding the case flange and shouldered portion of said spindle.

873,433. DOOR CLOSER AND CHECK. WILLIAM K. HENRY, New Britain, Conn., assignor to P. & F. Corbin, New Britain, Conn., a Corporation of Connecticut. Filed July 30, 1907. Serial No. 386,274.



1. In a door closer, the combination of a casing, a spindle, a slide mounted in the casing and operated by the spindle, a coil spring, a saddle connected to the spring and pivoted directly on the slide, and a rotatable member engaging the spring and adapted to be secured in different positions to adjust the tension of the spring.

2. In a door closer, the combination with a casing, of an adjustable coil spring, a spindle, a slide operated by the spindle, a saddle detachably pivoted to one end of the slide and connecting the slide to the coil spring, and a rotatable member engaging the spring and adapted to be secured in different positions to adjust the tension of the spring.

3. In a door closer, the combination with a casing of a coil spring, a spindle, a slide operated by the spindle, a curved hollow saddle connecting the coil spring to the slide and passing above and below the coils of the spring, and a rotatable member engaging the spring and adapted to be secured in different positions to adjust the tension of the spring.

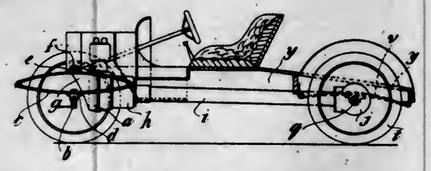
4. In a door closer, the combination with a casing of a coil spring, a spindle, a slide operated by the spindle, a curved saddle frame connected to the coil spring and detachably pivoted to the center of the slide, the coils of the spring passing between the plates of the saddle frame, and a rotatable member engaging the spring and adapted to be secured in different positions to adjust the tension of the spring.

5. In a door closer, the combination with a casing of an adjustable coil spring, a rotatable member engaging the spring and adapted to be secured in different positions to adjust the tension of the spring, a slide, a spindle operating the slide, and a saddle pivoted to the slide comprising curved plates passing above and below the coils of the spring, said saddle detachably connected to the spring and held in connection therewith by the tension thereof.

[Claim 6 not printed in the Gazette.]

873,434. MOTOR-CAR. JAMES T. HEPBURN, Lochwinnoch, Scotland. Filed Nov. 20, 1906. Serial No. 344,299.

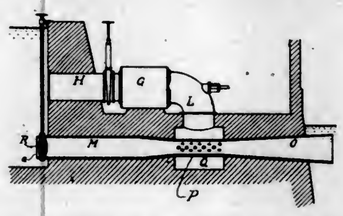
1. In a motor car the combination with the front axle of a motor pivotally supported thereon, gear for driving the back axle, a shaft directly connecting said gear with the gear of the motor, a tube surrounding said shaft, a second tube arranged outside of the first one, the one tube being fixed at its front end and free at its rear end while the other is fixed at its rear end and free at its front end in order that the wheel axles may take up different angles relatively with one another and to the horizontal.



2. In a motor car the combination with the front axle, of a motor pivotally supported thereon, lateral supports for the motor, driving gear on the back axle, a shaft extending from the motor and driving said gear, a tube surrounding said shaft which tube is fixed at its front end and free at its rear end, and a second tube outside the first which is fixed at its rear end and free at its front end.

3. In a motor car the combination with the front axle, of a motor pivotally supported thereon, a gear case extending from the rear of the motor, lateral supports for said gear case, a tube extending rearwardly from the gear case, a shaft arranged within said tube, gearing on the back axle driven by said shaft, a gear case for said gear, a tube secured to said case and extending forwardly and lateral stays connected with the front end of the said tube.

873,435. MEANS FOR DRIVING HYDRAULIC TURBINES. CLEMENS HERSCHEL, Glenridge, N. J. Filed Apr. 26, 1907. Serial No. 370,458.



1. The combination of an elevated body or source of water, a turbine, a penstock leading from the former to the latter, and a fall-increaser consisting of a conduit separate from said penstock through which water may flow independently from said source to a lower level, said conduit comprising a contracted portion or throat and an expanding portion or cone extending thence toward the outlet, said throat having substantially continuous walls formed with suction orifices and a suction connection communicating from said orifices to the discharge of the turbine, whereby the vacuum created in said fall-increaser is transmitted to the turbine with the effect of increasing the fall acting thereon.

2. As a means of counteracting the effect on a turbine of back-water during freshets, the combination with a dam forming an elevated body or source of water, a penstock and turbine, of a fall-increaser consisting of a conduit separate from said penstock through which water may flow independently from said source to a lower level, said conduit comprising a contracted portion or throat and an expanding portion or cone extending thence toward the outlet, said throat having substantially continuous walls formed with suction orifices, and a suction connection communicating from said orifices to the discharge of the turbine, and means for controlling the flow through said conduit, whereby during high water surplus water otherwise wasted over the spillway can be turned through said conduit with the effect of increasing the fall acting on the turbine, and compensating for the diminution of fall due to back water.

3. The combination with a turbine, of a fall-increaser consisting of a conduit through which water may pass from a higher to a lower level, said conduit expanding from its contracted portion or throat toward the outlet, said throat having substantially continuous walls formed with suction orifices a vacuum chamber communicating with said orifices, and a suction connection between the discharge of the turbine and said vacuum chamber.

4. The combination with a turbine and its penstock, of a vacuum chamber into which the turbine discharges and a conduit through which water may pass from a higher to a lower level comprising a contracted throat passing through said vacuum chamber and having orifices communicating therewith, and said conduit expanding from said throat toward the outlet, whereby is generated a suction causing the water to flow at accelerated velocity through said throat and creating and maintaining a vacuum in said vacuum chamber.

5. The combination with a turbine, of a fall-increaser consisting of a conduit through which water may pass from a higher to a lower level, said conduit expanding from its contracted portion or throat toward the outlet, said throat having substantially continuous walls formed with suction orifices a vacuum chamber surrounding said throat and communicating with it through said orifices, and a suction connection between the discharge of the turbine and said vacuum chamber, and means for controlling the flow of water through said fall increaser.

[Claim 6 not printed in the Gazette.]

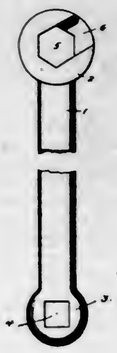
873,436. DEVICE FOR BEHEADING FOWLS. HERBERT H. HOLDREN, Dayton, Ohio. Filed Apr. 29, 1907. Serial No. 370,856.



A device for beheading fowls, consisting of a base-plate or body having an opening to receive the neck of the fowl and having thereon an inclined keeper and a stop, a circular block, a knife composed of thin spring steel pivotally connected thereto, a spring coiled around the block one end of which is secured to the base-plate or body and the opposite end engaging a notch upon the back of the knife, substantially as and for the purpose set forth.

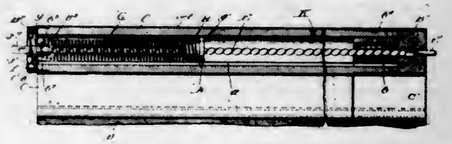
873,437. WRENCH. HARRY JEFFREY, Louisville, Ky. Filed Feb. 15, 1907. Serial No. 357,453.

A wrench of the type set forth comprising a handle having formed integral therewith at one end thereof an enlarged head provided with a hexagonal-shaped opening, said head further having one face thereof formed with an angularly-disposed groove having two of the sides thereof alining in a plane with two oppositely-disposed walls of the said opening, said groove disposed permanently at an angle with respect to the handle and said head further having on the opposite face thereof a groove, the side walls of which aline with two opposite side walls of the opening,



said last mentioned groove permanently extending in the direction in which the handle extends.

873,438. SPRING SHADE-ROLLER. ALBERT JOHN, Jr., Chicago, Ill. Filed Jan. 31, 1906. Serial No. 298,783.



1. The combination with a hollow shade roller composed of two longitudinal portions united by a dove-tail joint and an axial adjustable end portion, of an apron having one section secured to said roller between the longitudinal portions and another section secured to the axial adjustable end portion, and a shade secured to said apron.

2. The combination with a spring shade roller, of an axial journal relatively to which said roller rotates, a resilient detent fixed at one end to said journal and a shoulder on the end of the roller for engaging with said detent and locking the roller against rotation or for permitting rotation of the roller according to the speed of rotation thereof.

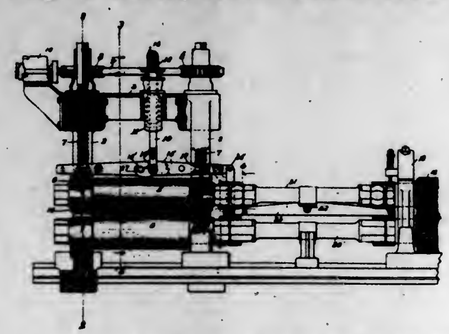
3. The combination with a spring shade roller, of an axial journal relatively to which said roller rotates, a resilient detent fixed at one end to said journal, and a projection on said detent coöperating with recesses in the end of the roller to lock the roller against rotation or to permit the roller to rotate according to the speed of rotation of the roller.

4. The combination with a shade roller, of a window shade secured thereto, a coiled spring within said roller one end of which is secured to the roller, and means located within and rotating with the roller for expanding said spring longitudinally when the shade is unwound thereby placing the spring under tension to rewind the shade.

5. The combination with a shade roller, of a window shade secured thereto, a coiled spring within said roller one end of which is secured to the roller, a block mounted within and rotating with said roller to which the other end of said spring is secured, and means for moving said block axially within the roller when the shade is unwound thereby placing the spring under tension by expanding the same longitudinally to rewind the shade.

[Claims 6 to 8 not printed in the Gazette.]

873,439. ROLLING-MILL. ALBERT T. KELLER, Pittsburg, Pa. Filed May 11, 1905. Serial No. 259,876.



1. In a rolling-mill, a roll, a driving spindle, and supporting mechanism with which the roll and spindle have separate and distinct sustaining connections.

2. In a rolling-mill, a roll and its bearings, adjusting means, a driving spindle, and movable supporting means with which the roll bearings and spindle have separate and distinct connections.

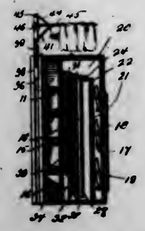
3. In a rolling-mill, a roll and its bearings, a driving spindle, a supporting member with which the roll bearings and spindle have separate and distinct connections, and lift mechanism connected to said member.

4. In a rolling-mill, a roll and its bearings, adjusting screws engaged by the bearings, a vertically movable supporting member extending longitudinally of the roll, roll-sustaining connections between said member and the roll bearings, and a driving spindle having a sustaining connection with said supporting member.

5. In a rolling-mill, a roll and its bearings, a driving spindle, and lift mechanism connected to the roll bearings and having a separate and distinct connection with the spindle.

[Claims 6 to 13 not printed in the Gazette.]

873,440. KITCHEN-CABINET. ADELAIDE C. KERR, Trafford City, Pa. Filed Mar. 1, 1907. Serial No. 360,038.



1. A kitchen cabinet consisting of a rear board having guide ways, a collapsible rack slidably mounted in said guide ways, end walls carried by said board, hinged doors carried by said end walls, dish racks carried by said doors, partitions arranged between said end walls and forming a plurality of compartments, drawers slidably mounted between said board and one of said partitions, hinged doors forming the top and a portion of the front of said cabinet, a plurality of working boards mounted in said cabinet and adapted to be supported in an extended position from said cabinet.

2. A kitchen cabinet consisting of a board, end walls carried thereby, hinged front doors carried by said end walls, partitions arranged between said end walls and providing a plurality of compartments, drawers slidably mounted between said board and one of said partitions, hinged doors forming the top and a portion of the front of said cabinet, a collapsible rack movably supported within said cabinet, a two-part ironing board mounted within said cabinet, and a plurality of working boards mounted in said cabinet, and means to support said boards in an extended position from said cabinet.

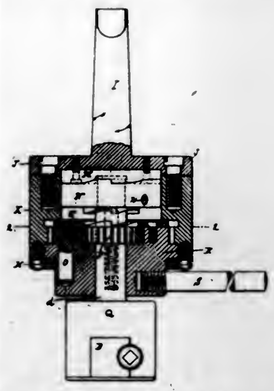
3. A kitchen cabinet comprising a rear board, end walls carried thereby, hinged front doors carried by said end walls, partitions arranged between said end walls and providing a plurality of compartments, drawers slidably mounted between said board and one of said partitions, hinged doors forming the top and a portion of the front of said cabinet, a two-part ironing board mounted within said cabinet, a plurality of working boards pivotally mounted in said cabinet normally resting in a vertical position within the cabinet and adapted to be swung on their pivots and supported in a horizontal position, and means to support said boards in an extended position from said cabinet.

4. In a kitchen cabinet, a rear board, end walls carried thereby, partitions arranged between said end walls and providing a plurality of compartments, a plurality of hinged sections forming the top of the cabinet and one of which sections overlies and forms a part of the front of said cabinet, a pair of doors hinged to the end walls and constituting the remainder of the front of the cabinet, and a plurality of working-boards disposed to rest normally in a vertical position within the cabinet and adapted to be elevated vertically therefrom and supported in horizontal position with respect to the cabinet, and means for supporting said working-boards in horizontal position.

5. In a kitchen cabinet, a rear board, end walls carried thereby, a top composed of a plurality of sections hinged together, a front embodying a pair of boards hinged to the end walls, a supporting bar arranged within the cabinet near the upper end thereof, and provided adjacent each end with a depending guide rod, a working-board provided with loops engaging said guide rod, and means for supporting said working-board when extended from the cabinet in a horizontal position.

[Claim 6 not printed in the Gazette.]

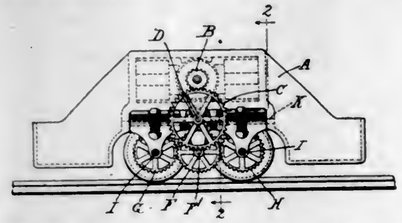
873,441. REVERSING TAP-HOLDER. WILBUR A. LEONARD, New Haven, Conn., assignor to The Geometric Tool Company, New Haven, Conn., a Corporation of Connecticut. Filed Feb. 6, 1907. Serial No. 355,992.



1. A tap holder containing a clutch and reversing gear and having a rotating shell and shank, with a body part within the shell independent of the clutch, and on which the shell revolves, spring-pressed pins in the body part to bear against the movable part of the clutch and normally hold the latter to the shell, and a lever for holding the said body part.

2. A tap holder containing a clutch and reversing gear and having a rotating shell and shank, with a body part within the shell independent of the clutch and on which the shell revolves, a ring at the mouth of the shell to retain the body part, spring-pressed pins in the body part to bear against the movable part of the clutch to normally hold the latter to the shell, and means to hold said body part from rotation.

873,442. LOCOMOTIVE. NILS D. LEVIN, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 28, 1907. Serial No. 354,429.



1. A locomotive comprising, a motor, an axle provided with supporting wheels, said axle mounted upon a substantially horizontal pivot, and an operative connection between said motor and said axle independent of said pivot.

2. A locomotive comprising a frame, a motor mounted thereon, two axles provided with supporting wheels both pivotally connected with said frame by means of a substantially horizontal pivot, and an operative connection between said motor and both of said axles independent of said pivot.

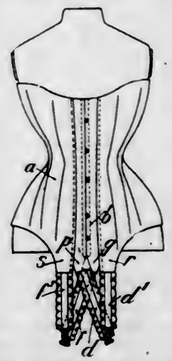
3. A locomotive comprising a frame, an axle provided with supporting wheels and pivotally connected with said frame so as to be free to move in a substantially vertical plane, a gear on said axle substantially in line with said pivot, and an operative connection between said motor and said gear.

4. A locomotive comprising a frame, a motor mounted thereon, two axles each pivotally connected with said frame by a substantially horizontal pivot, a driving connection on each of said axles near the middle thereof, and an operative connection between said motor and both of said driving connections independent of said pivot.

5. A locomotive comprising a frame, two axles provided with supporting wheels, said axles mounted in brackets which are pivotally connected to the frame, driving gears on said axle substantially at the middle thereof, and a driving connection between the motor and said gears whereby the axles are driven in all their various positions.

[Claims 6 to 12 not printed in the Gazette.]

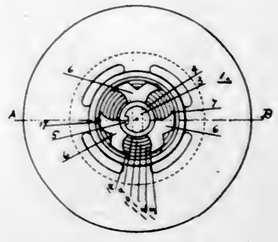
873,443. CORSET. JULES LINDAUER, Paris, France. Filed July 9, 1907. Serial No. 382,883.



1. A corset comprising, soft flaps *p* and *q* provided respectively below the busks on the right and left halves of the corset, and two hose-suspenders formed each of two branches *d d'* and *f f'* respectively, one of the branches *d* which is attached to the soft flap *p* being adapted to be hooked on the left hand hose with the corresponding branch *d'* which is attached to the left half of the corset, and the other branch *f* which is attached to the soft flap *q* being adapted to be hooked on the right hand hose with the corresponding branch *f'* which is attached to the right half of the corset, substantially as described and for the purpose set forth.

2. A corset comprising two hose-suspenders formed each of two branches *d d'* and *f f'* respectively, one of the branches *d* which is attached at the bottom of the busk of the right half of the corset being adapted to be hooked on the left hand hose with the corresponding branch *d'* which is attached to the left half of the corset, and the other branch *f* which is attached at the bottom of the busk of the left half of the corset being adapted to be hooked on the right hand hose with the corresponding branch *f'* which is attached to the right half of the corset, substantially as described and for the purpose set forth.

873,444. TROLLEY-WHEEL. ELLSWORTH N. LUBURG, Baltimore, Md., assignor of one-third to William Wesley Varney and one-third to Albert Henry Smith, Baltimore, Md. Filed Sept. 18, 1905. Serial No. 278,832.



1. The combination of a wheel, a bearing in the hub thereof comprising a casing having a longitudinal groove therein, a stationary member operating in said casing having arms for sweeping the lubricant from said casing and conveying it inwardly, and a plurality of concentric wearing rings on each side of said stationary member.

2. The combination of, a wheel forming a casing in the hub thereof, a stationary member operating in said casing and formed to convey lubricant from the inner surface of said casing inwardly and wearing rings at the side of said stationary member.

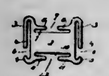
3. An axle, a member secured to said axle having means for conveying lubricant from a moving surrounding member towards said axle, in combination with a rotating body forming said surrounding member and a plurality of wearing rings in said surrounding member at the side of said member secured to said axle whereby lubricant may be conveyed to the said wearing rings.

4. The combination of a wheel, a casing in the hub thereof, a stationary member operating in said casing and formed to convey lubricant from the inner surface of said casing inwardly, wearing rings at the side of said stationary member, and means for retaining the lubricant in said casing.

5. An axle, a member secured to said axle having means for conveying lubricant from a moving surrounding member towards said axle, in combination with a rotating body forming said surrounding member and a plurality of wearing rings in said surrounding member in communication with said member secured to said axle whereby lubricant may be conveyed to the said wearing rings, means for retaining lubricant in said casing, and means of introducing lubricant through the periphery of said casing.

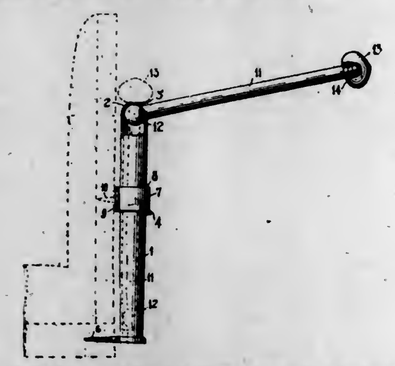
[Claim 6 not printed in the Gazette.]

873,445. GARTER-SLIDE. JULIUS MALTBY, Waterbury, Conn., assignor to Waterbury Buckle Co., Waterbury, Conn., a Corporation. Filed July 12, 1907. Serial No. 383,466.



A garment slide having the upper and lower edges of its body provided with horizontal fingers separated from each other by threading openings, and from the body by slide-webbing slots, and having the sides of its body formed with vertical suspension fingers separated from its body by vertical slots entered by webbing openings.

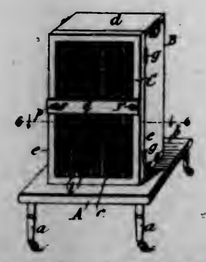
873,446. RACK. HENRY M. MANHEIM, New York, N. Y. Filed June 10, 1907. Serial No. 378,181.



1. A rack comprising a hollow standard, a ferrule supporting the lower end thereof, said standard being formed with a lug intermediate of its ends and having its upper end reduced and provided with a recess, a clip resting upon said lug, and an arm arranged to slide within the standard and enter the recess thereof and having at its ends enlarged heads adapted to limit the movement of an arm in the standard.

2. A rack comprising a hollow standard, a ferrule supporting the lower end thereof, said ferrule having a portion adapted to fit within the end of the standard and a screw adapted to enter a support, said standard having its upper end reduced and provided with a recess, and an arm arranged to slide within the standard and enter the recess thereof and having at its ends enlarged heads adapted to limit the movement of an arm in the standard.

873,447. ILLUSION DEVICE. ASCANDER K. MASSAAD, New York, N. Y. Filed Mar. 28, 1906. Serial No. 308,388.



1. In an illusion device, a chamber having its front wall formed with a series of openings, shutters adapted to be moved into and out of position to close such openings, the interior of such chamber and the exterior of said shutters being correspondingly colored so that when the shutters are closed they have an appearance to the eye which is similar to that of the interior of the chamber as seen through such openings.

2. In an illusion device, a chamber having a front door formed with a series of openings, shutters adapted to be moved into and out of position to close such openings, the interior of such chamber and the exterior of said shutters being correspondingly colored so that when the shutters are closed they have an appearance to the eye which is similar to that of the interior of the chamber as seen through such openings.

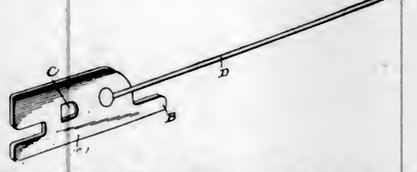
3. In an illusion device, a chamber having a front wall formed of a series of strips, a series of shutters adapted to be moved from behind such strips to positions between the same, the interior of said chamber and the exterior of said shutters being correspondingly colored, so that when the shutters are closed they have an appearance to the eye which is similar to that of the interior of said chamber, as seen through the spaces between said strips.

4. In an illusion device, a chamber having a front wall formed of a series of strips, a series of shutters adapted to be moved from behind such strips to positions between the same, the interior of said chamber being colored to give it a dark appearance, and said shutters being correspondingly colored, and said strips having light central portions and dark edges.

5. In an illusion device, a chamber having its front wall formed with a series of openings, shutters adapted to be moved into and out of position to close such openings, the interior wall of such chamber and the exterior of said shutters being correspondingly colored so that when the shutters are closed they have an appearance to the eye which is similar to that of the interior of the chamber as seen through such openings and said chamber having a door at its rear.

[Claims 6 to 8 not printed in the Gazette.]

873,448. WIRE HEAD AND FASTENING MEANS FOR LOOMS. FRANK MITCHELL and CHARLES BEAL, Jr., Philadelphia, Pa. Filed Mar. 27, 1907. Serial No. 364,920.



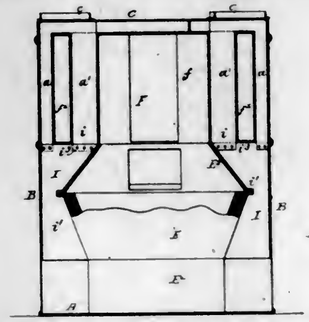
1. In a device of the character described, the combination with the head provided with an opening therethrough, and a slot extending from the edge thereof and communicating with said opening, of a malleable metal plug adapted to be inserted through said opening, and provided with a transverse opening for the reception of the end of the pile wire extending within said slot, substantially as described.

2. In a device of the character described, the combination with the wire head provided with an opening therethrough, having beveled edges, and a slot extending from the edge thereof, and communicating with said opening, of a malleable metal plug adapted to be inserted through said opening, said plug being provided with a tapering flange fitting against one of said beveled edges and with a transverse opening for the reception of the end of the pile wire extending within said slot, substantially as described.

873,449. HOT-AIR FURNACE. ABRAM C. MOTT, Philadelphia, Pa. Filed May 26, 1905. Serial No. 262,444.

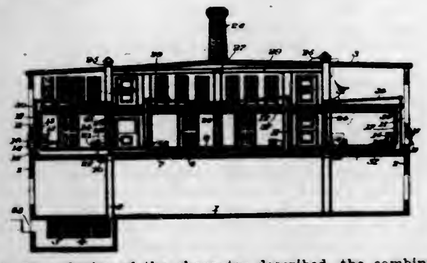
The combination in a hot air furnace, of an outer casing, a fire pot, a combustion chamber and a heating drum all mounted within the outer casing, said heating drum having a ring section forming two passage-ways for the air

to be heated, a series of vertical partitions extending from the base of the fire pot to the top of the outer casing, each vertical partition being made in two parts, the upper part being slotted so as to pass over the ring section of the



heating drum, the lower part being shaped to fit the fire pot and combustion chamber and secured to the upper part, the casing having flue openings connected to the several sections separated by the vertical partitions, substantially as described.

873,450. DRYING AND VENTILATING SYSTEM FOR HOUSES, FACTORIES, OR BUILDINGS. GOTTFRIED MÜLLER, Philadelphia, Pa. Filed Mar. 20, 1907. Serial No. 363,338.



1. In a device of the character described, the combination of a building having an air inlet and a plurality of rooms with which said inlet communicates near their floor said rooms having hollow walls forming outlet passages communicating with the atmosphere, and said rooms having outlet ports near their lower ends opening into said hollow walls.

2. In a device of the character described, the combination with a building of an air inlet and a plurality of rooms with which said inlet communicates near their floor, said rooms having hollow walls forming outlet passages communicating with the atmosphere, said rooms having outlet ports near their lower ends opening into said hollow walls, and means for changing the temperature of the incoming air.

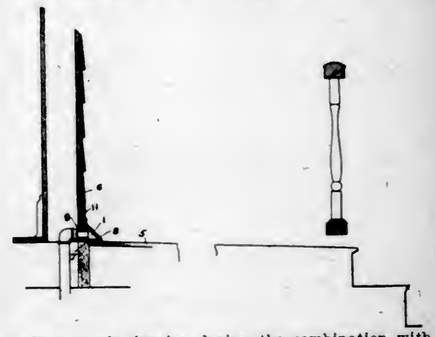
3. In a device of the character described the combination with a building having an air inlet, of means for changing the temperature of said air, said building having passages leading from said inlet, and opening through the floor of the rooms near one side thereof, said rooms having hollow walls forming outlet passages communicating with the atmosphere, said rooms having an outlet port near the floor, and means for maintaining a substantially constant temperature in said first named passages.

4. In a device of the character described, the combination with a building having a plurality of floors and controllable fresh air inlets, of longitudinal passages beneath said floors, vertical passages communicating therewith and communicating with each room near the floor thereof, said rooms having hollow walls forming outlet passages which communicate with each room near the floor thereof and also with the atmosphere, and means for controlling said outlet passages.

5. In a device of the character described, the combination with a building having a plurality of floors and controllable air inlets, of longitudinal passages beneath said floors, vertical passages communicating therewith and communicating with each room near the floor thereof, outlet passages leading from each room near the floor thereof communicating with the atmosphere, means for controlling said outlet passages, and conduits extending through said passages and into said rooms adapted to convey a heating or cooling fluid for varying the temperature in said rooms.

[Claims 6 to 12 not printed in the Gazette.]

873,451. PORCH-CLEANER. MARTIN MUELLER, Elyria, Ohio. Filed Jan. 4, 1907. Serial No. 350,770.



1. In a porch cleaning device, the combination with a supply pipe, of a hollow molding adapted to substantially fit the angle between the porch floor and the adjacent wall and having discharge openings near its lower edge and having ears rising from its upper edge whereby it may be secured in place.

2. In a building having a porch, the combination with the floor of the porch and the vertical wall of the building, of a hollow conduit in the form of a molding adapted to substantially fit the angle between the floor and the wall, said conduit having a cross section which is substantially a right triangle and there being openings from the interior through the long side of the triangle adjacent to the base, ears rising from the apex of the triangle, and a feed pipe located in the wall of the building and extending through such wall to the back side of the molding.

873,452. PUMPING-CYLINDER VALVE. MARVIN A. NEELAND, Youngstown, Ohio. Filed Oct. 4, 1904. Serial No. 227,136.

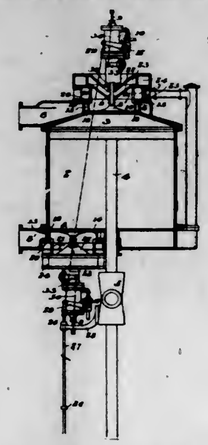
1. The combination with the outlet valve of a pumping cylinder, of an inlet valve, and a power cylinder, the inlet valve and power cylinder being associated with the outlet valve for opening the same by the combined action of the power cylinder and the opening movement of the inlet valve, substantially as described.

2. A pumping-cylinder outlet-valve arranged to be seated by air-pressure and to be opened by the joint action of an inlet-valve and a power-cylinder, and means for reversing the pressure in said power-cylinder; substantially as described.

3. The combination with a pumping-cylinder, of an inlet-valve, an outlet-valve constituting a seat therefor, an actuating piston for said inlet valve, and means for reversing the pressure thereon; substantially as described.

4. The combination with a pumping-cylinder, of an inlet-valve, an outlet-valve constituting a seat therefor, an actuating piston and a dash-pot for said inlet-valve, and means for reversing the pressure on said piston; substantially as described.

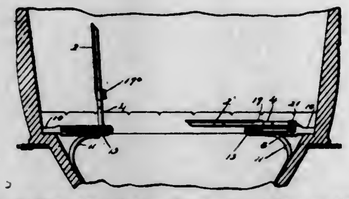
5. The combination with a pumping-cylinder, of an inlet-valve, an outlet-valve constituting a seat therefor, an actuating piston and an adjustable damping device for



said inlet-valve, and means for reversing the pressure on said piston; substantially as described.

[Claims 6 to 20 not printed in the Gazette.]

873,453. FOLDING-SEAT FRAME FOR AUTOMOBILES. JAMES M. NOLAN, New Haven, Conn., assignor of two-thirds to William H. Wilson and Charles Rasmussen, New Haven, Conn. Filed Aug. 23, 1907. Serial No. 389,848.

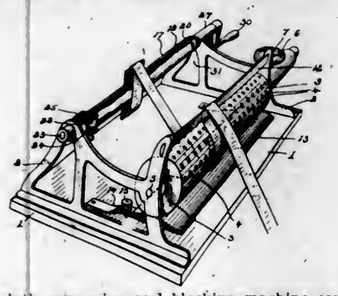


1. A folding seat frame for automobiles consisting of a bracket having outwardly extending slotted guides and transverse and longitudinal grooves, a seat spider having inwardly extending arms and fingers, a rod connecting said fingers and extending through the slots in the frame, one of said fingers adapted to ride in said grooves, substantially as described.

2. The herein described folding seat frame for automobiles comprising a bracket having outwardly extending slotted guides, a transverse groove and a longitudinal groove intersecting the same, and a spider having inwardly extending arms terminating in fingers, a rod connecting said fingers and extending through the slots in the guides, a clip on one arm adapted to engage with one of said guides and a lug on the other arm adapted to rest upon the other guide, substantially as described.

873,454. CLOTH-MEASURING MACHINE. LEVI P. NORMANDIN, Jackson, Mich. Filed July 25, 1907. Serial No. 385,449.

1. A cloth measuring and blocking machine comprising a main frame, a measuring roller therein, an indicator therefor, a spreading guide bar above the roller, a tension bar yieldingly engaging the periphery of the roll, and a bolt block clip consisting of a pair of pivotally connected parallel spring arms journaled at one end in a frame bearing hinged to swing in a perpendicular plane, and detachably engaged at the other end in a journaled clip block on the frame, and a crank handle for the clip adapted to loosely engage the frame and lock the clip against rotation when the hinged bearing is upturned.



2. A cloth measuring and blocking machine comprising a main frame, a measuring roller therein, an indicator therefor, a spreading guide bar above the roller, a tension bar yieldingly engaging the periphery of the roll, and a bolt block clip consisting of a spring arm provided at one end with a shouldered journal integral therewith, a mating spring arm pivotally secured at one end to the journaled end of the other arm, a clip block adapted to detachably engage and center the free ends of the arms, a bearing in the frame in which the block is journaled, a hinged bearing in horizontal alinement with the block bearing for the arm journal, adapted to swing in a vertical plane, and a crank handle secured on the journaled end of the arms, adapted to loosely engage the frame and to lock the clip against rotation when the hinged bearing is upturned.

3. A cloth measuring and blocking machine comprising a main frame, a measuring roller therein, an indicator therefor, a spreading guide bar above the roller, a tension bar yieldingly engaging the periphery of the roll, and a bolt block clip consisting of a spring arm having a flat inner face, a journal at one end integral therewith, a parallel spring arm having a flat inner face, secured to the journaled end of the other arm by an adjustable pivot bolt, the outer ends of said arms being notched, a journaled clip block having a pair of jaws adapted to detachably engage the free ends of the arms, a stop between the block jaws centering the notched ends in relation to the block journal, a fixed bearing in the frame for the clip block, a hinged clip bearing in the frame alined horizontally therewith, adapted to swing in a vertical plane, and a crank handle secured to the clip, loosely engaging the frame when the clip is upturned.

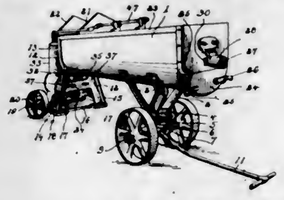
4. A cloth measuring and blocking machine comprising a main frame, a measuring roller therein, an indicator therefor, a spreading guide bar above the roller, a tension bar yieldingly engaging the periphery of the roll, a horizontal clip block bearing secured in the frame, a clip bearing normally in axial alinement therewith, pivoted to swing in a vertical plane in the main frame, and provided with a stop to hold it perpendicularly when upturned, a clip consisting of a pair of spring arms adjustably secured together at one end to a journal rotatable in the hinged bearing, having parallel faces, and centering notches in their free ends, a clip block consisting of a journaled rotatable in the fixed bearing, a fixed jaw secured integrally thereon, a movable jaw clamped thereto by a pivot bolt, and a stop between the jaws adapted to engage the notches in the arm ends and to center them in relation to the journal, said clip block being adapted to hang, when free in the bearing, with its jaws in a vertical plane, and a crank handle secured to the clip adapted to normally hold the clip arms in the vertical plane of the block jaws.

5. A cloth measuring and blocking machine comprising a main frame, a measuring roller therein, an indicator therefor, a spreading guide bar above the roller, a tension bar yieldingly engaging the periphery of the roll, and a bolt block clip consisting of a pair of parallel, spaced tapered arms adjustably secured at one end to a journal rotatable in a vertically tiltable bearing in the frame, and detachably engaged at the other end in a clip block jour-

naled in the frame, a ribbon cylinder having a tapered axial aperture adapted to center said cylinder on the arms and a longitudinal card holding slit in its periphery, and a crank handle for rotating the clip.

[Claims 6 to 8 not printed in the Gazette.]

873,455. MORTAR-MIXER. CURT E. OELMAN, Detroit, Mich. Filed July 10, 1907. Serial No. 382,982.



1. A mixer comprising a horizontal U-shaped trough provided with a hopper delivering centrally into the trough from either side, near one end thereof, and at the other end with a discharge door, a wheeled bolster and cradle supporting the discharge end of the trough, a horizontally slotted drop-frame carrying the hopper end of the trough, having a wheeled platform, a mixer and conveyer in the trough, a motor on the platform, and a gear train connecting the conveyer and motor having an intermediate pinion, a bearing block on which the pinion is journaled, adjustably secured by bolts in slots of the drop frame.

2. A mixer comprising a horizontal U-shaped trough, supported by bearing wheels, a hopper over one end, a discharge door at the other end, a water spray pipe discharging centrally over an intermediate portion of the trough, a conveyer and mixer consisting of a shaft journaled at each end in the trough, squared between its bearings, symmetrically disposed conveyer arms detachably secured on the portion of the shaft below the hopper, each consisting of a socket adapted to slide on the shaft, a shank and a segmental blade thereon oblique to the shaft provided with a marginal flange on its back edge, mixing blades symmetrically disposed on the remainder of the shaft, each consisting of a socket adapted to slip onto the shaft and a radial segmental blade thereon having less rake than the conveyer arm blade, provided with a marginal flange on its forward edge, a motor secured at the hopper end of the trough and a gear train operatively connecting the motor and shaft.

3. A mixer comprising a U-shaped sheet metal trough, a hopper on the rear end of the trough adapted to deliver centrally thereto from either side for a portion of its length, a discharge door in the forward end, a shaft bearing secured on the rear end of the trough, an overhanging bearing bracket secured on the front end of the trough, a shaft having a polygonal body extending through the front end, journaled in the bracket and in the rear end bearing, symmetrically disposed oblique flanged conveyer arms detachably secured on the portion of the shaft below and adjacent to the hopper, oblique mixing blades having less rake than the conveyer arms, detachably secured in regular order on the remainder of the shaft, a wheeled platform carrying an upright pedestaled frame supporting the rear end of the trough, a motor on the platform whose drive shaft is in parallel alinement with the conveyer shaft, a gear secured to the conveyer shaft outside the rear bearing, a gear secured to the motor drive shaft, an intermediate change pinion meshing with said gears, a stud block carrying said pinion, adjustably secured by bolts passing through horizontal slots in the pedestal, and a cradle supporting the forward end of the trough, swiveled horizontally on a bolster plate, and bearing wheels supporting the bolster.

4. In a mixer having a U-shaped trough supported on bearing wheels and provided with a hopper delivering into one end and a discharge door at the other, a shaft having a polygonal body journaled at either end on the trough ends in axial coincidence with the axis of curvature of the trough, conveyer arms symmetrically disposed in helical relation on the shaft below the hopper, each consisting of a hollow socket adapted to slip onto the shaft body, a shank integral therewith and a short, broad segmental blade integral with the shank, oblique to the axis of rotation, provided with a short marginal flange on its rear edge, turned toward the discharge door, and combined mixing and grinding blades detachably secured in symmetrical, helical relation along the remainder of the shaft body, each consisting of a hollow socket embracing the shaft, a segmental blade integrally joined thereto at an angle oblique to the axis of rotation, of less degree than the angle of the arms, and a marginal flange on the forward edge of the blade lying in a plane parallel to the shaft axis, the segmental margin and adjacent end margin of the flange being adapted to closely approach and sweep the inner face of the trough.

873,456. WIRE-CARRYING CROSS-ARM AND INSULATOR THEREFOR. EDWIN C. OTTINGER, Newport, Pa.; Walter Scott Ottinger, Sr., administrator of said Edwin C. Ottinger, deceased, assignor of one-third to Jennie E. Ottinger and one-third to Walter S. Ottinger, Sr., Philadelphia, Pa., and one-third to Samuel H. Bair, Newport, Pa. Filed Apr. 12, 1906. Serial No. 311,307.



1. A cross-arm for electrical conductors, comprising a continuous member secured to the pole, independent sections carried by said continuous member, means for holding said sections to the continuous member, and insulator sections carried by said cross-arm sections and the continuous member between which the wires are clamped, said insulator sections being immovably fixed in their supports.

2. A cross-arm for electrical conductors, comprising a continuous member, independent sections mounted on said continuous member, means for securing the sections and said continuous member together, and insulators between which the wires are clamped dovetailed into the continuous member and the sections secured thereto whereby they may be supported when the sections of the cross-arm are in the separated condition.

3. A clamping insulator for use with wire supporting sectional cross-arms, comprising registering members of the same contour immovably fixed in seats in the meeting faces of the sections of the cross-arm.

4. The combination in a cross-arm for electrical conductors, of a continuous member, independent sections secured thereto, clamping insulators immovably fixed in said sections and the continuous member and registering with each other whereby the wires may be confined between the same, the lowermost member carrying said insulator sections having its upper surface rounded to shed rain.

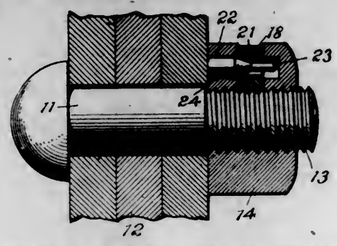
5. A clamping insulator for use with sectional supporting cross-arms, said insulator comprising a pair of registering members of the same contour having bodies shaped to dove-tail into recesses formed in the meeting faces of the cross-arm sections.

[Claims 6 and 7 not printed in the Gazette.]

873,457. NUT-LOCK. ARTHUR H. READE, New York, N. Y. Filed Aug. 27, 1907. Serial No. 390,330.

1. The combination with a bolt, of a nut having a threaded opening fitting said bolt, a slot extending across the nut transversely of the threaded opening so as to remove a part of the threads in said opening and an aperture extending transversely of the slot, a locking member slidingly held in the slot in the nut and having a threaded inner surface corresponding to the threads of the nut and provided with an aperture therethrough adapted to be forced into alinement with said aperture in the nut, and a device having a wedge-shaped portion adapted to engage the locking member and force the same inward into clamp-

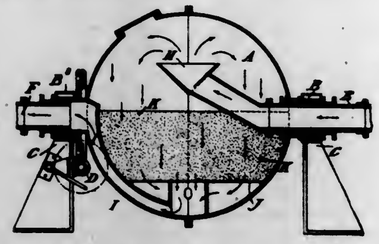
ing engagement with the bolt when the nut is forced against the object to be held.



2. A device of the character described, comprising a nut having a threaded opening and provided with a slot extending across the nut transversely of the threaded opening so as to remove a part of the threads in said opening and an aperture extending transversely of the slot parallel with the threaded opening, a locking member slidingly held in the slot in the nut and having a threaded inner surface corresponding to the threads of the nut and provided with an aperture adapted to be forced into alinement with said aperture in the nut, and a device entering the apertures and adapted to engage the locking member and force the same inward into clamping position.

3. A device of the character described, comprising a nut having a threaded opening and provided with a slot extending across the nut substantially midway of its thickness and transversely of the threaded opening so as to remove a part of the thread in said opening and an aperture extending transversely of the slot, a substantially T-shaped locking block slidingly held in the slot in the nut and having a threaded inner surface corresponding to the threads of the nut and provided with an aperture therethrough adapted to be forced into alinement with said aperture in the nut, and a pin having a wedge-shaped portion entering the apertures of the block and nut and adapted to engage the locking block and force the same inward into clamping position.

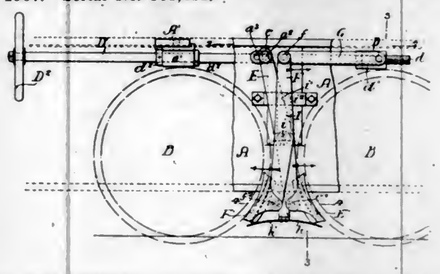
873,458. APPARATUS FOR FILTERING LIQUIDS. WILFRED REEVES and BALFOUR BRAMWELL, Wellington Place, county of Belfast, Ireland. Filed Nov. 23, 1904. Serial No. 234,003.



1. Apparatus for filtering liquids comprising a spherical ended casing revolubly mounted on hollow trunnions integral with and opening directly into said casing, the axis of said trunnions being disposed at right angles to the axis of the spherical ends of the casing, a permanently fixed inlet pipe passing through one of the said trunnions into, extending upwardly within, the said casing and terminating in an upwardly directed open bell-mouthed end, a filter bed contained entirely in the lower spherical part of the said casing having spherical walls and a perforated floor, a collecting chamber located below and supporting the said floor, a passage within the casing leading from the said collecting chamber to the second trunnion, and a fixed outlet pipe leading from the said trunnion; substantially as described.

2. In apparatus of the character herein described, a spherical ended casing revolubly mounted on hollow trunnions and constructed in two sections divided on a plane normal to the axis of said trunnions, a permanently fixed inlet pipe passing through one of the said trunnions into the said casing, an upwardly inclined extension of said inlet pipe terminating in an upwardly directed open bell mouth, a fixed outlet pipe leading from the second trunnion, and means for revolving the casing; substantially as described.

873,459. BRAKE MECHANISM. KENNETH RUSHTON, Philadelphia, Pa., assignor to Burnham, Williams & Company, Philadelphia, Pa., a Firm. Filed Mar. 20, 1907. Serial No. 363,412.



1. The combination in brake mechanism, of two wheels, two levers pivoted together and mounted between the wheels, means for suspending the levers at their pivots from the frame, one of the levers being attached to the frame, operating mechanism connected to the other lever, with brake shoes hung from each lever, substantially as described.

2. The combination of two wheels, a frame, two levers pivoted together and mounted between the wheels, one lever extending through the other, a link connected to the levers at the pivot point and pivoted to the frame, a brake shoe hung from the lower end of each lever, the upper end of one lever being pivoted to the frame, the upper end of the other lever being connected to operating mechanism, substantially as described.

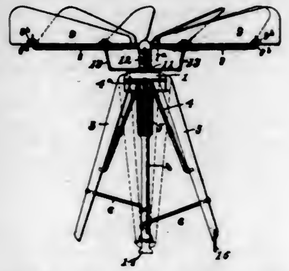
3. The combination of two wheels, a frame, two levers pivoted together and mounted between the wheels, a link connected to the levers at the pivot and pivoted to the frame, a brake shoe attached to one end of each lever, the opposite end of one of the levers being slotted, a pin projecting through the slot and attached to the frame, a link connected to the other lever, and a brake beam attached to the link, with means for moving the brake beam, substantially as described.

4. The combination of a frame of a locomotive, two wheels at each side of the frame, two sets of brake levers pivoted together each set extending between a pair of wheels, brake shoes on one side of each lever, the upper end of one lever at each side being pivoted to the frame, the upper end of the other lever at each side being connected to the brake beam, a screw shaft passing through a threaded nut on the brake beam, so that on the turning of the screw shaft the brake beam will be moved longitudinally and the levers will be operated to apply or release the brake shoes, substantially as described.

5. The combination of a frame, two wheels, two brake levers pivoted together and extending between the wheels and hung to the frame, a pivot pin secured to the frame and passing through one of the levers, operating mechanism connected to the other lever, a brake hung to the lower end of each lever, a bracket projecting from the frame, a plate spring attached to the bracket resting against the brake shoes to hold them in position when they are released from contact with the wheels, substantially as described.

873,460. FAN. ALEXIS SAKOVITCH, New York, N. Y., assignor to Michael White, Winnipeg, Canada. Filed Apr. 22, 1907. Serial No. 369,665.

1. A toilet or hand fan comprising a rotary spindle, reversible fan blades carried thereby, hand gripped levers, and means whereby the movement of said levers to and from each other rotates said spindle in opposite directions, substantially as described.



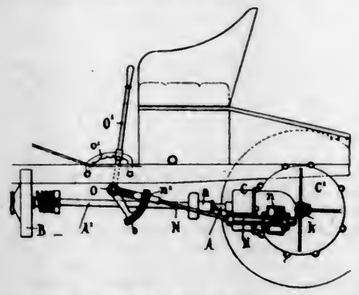
2. In combination, a spindle carrying element, a spindle rotatably mounted therein, hand operated means for rotating said spindle in opposite directions, automatically reversing blades carried by said spindle, and means for folding said blades, substantially as described.

3. In combination, the spindle carrier, a spindle rotatable and longitudinally movable therein, hand levers pivotally connected to said spindle carrier, means whereby the opening and closing of said hand levers oscillate the said spindle, fan blade carrying arms pivotally connected with the spindle, and blades pivotally carried by said arms, substantially as described.

4. In combination, a spindle carrying element, a spindle journaled therein, a pair of arms pivotally connected to said spindle carrying element, a spring tending to force said arms apart, a flexible device wound upon the spindle and connected to the arms and operating upon the separation of the arms to rotate the spindle in one direction, a spring interposed between the spindle and spindle carrier tending to rotate the spindle in the opposite direction, and automatically reversing fan blades carried by the spindle, substantially as described.

5. In combination, a spindle carrier, a spindle rotatably mounted therein, and means for rotating the spindle, a ring fixedly attached to the spindle, fan carrying blades pivotally connected to said ring, a second ring movable on the spindle, and links connecting the blade carrying arms with said ring, substantially as described.

873,461. CHANGE-SPEED GEAR. MAURICE SIZAIRE and LOUIS NAUDIN, Puteaux, France, assignors to Société des Automobiles Sizaire et Naudin, Paris, France. Filed Feb. 28, 1906. Serial No. 303,443.



1. A change speed gear for motor cars, motor cycles, and like, comprising a driven axle, a toothed wheel secured upon said axle, a driving shaft having a universal joint, a number of change speed pinions capable of sliding on the said driving shaft and driving the said toothed wheel, means for moving laterally said universally jointed shaft to disengage said pinions from said wheel and for sliding longitudinally the number of pinions when these pinions have been disengaged from with the toothed wheel.

2. A change speed gear for motor cars, motor cycles and like comprising a driven axle, a toothed wheel secured upon said axle, a driving shaft having a universal joint, and a member capable of sliding longitudinally on said shaft, a number of change speed pinions on this sliding member for driving the said toothed wheel, means for moving laterally the said universally jointed shaft with its sliding member to disengage said pinions from said wheel and for moving longitudinally the sliding member and its change speed pinions.

3. A change speed gear, comprising a driven axle, a toothed crown secured upon said axle, a driving shaft having a universal joint, a member capable of sliding longitudinally on said shaft, a number of change speed pinions on this sliding member, and a cam device by which the sliding member may be displaced to mesh one or other of its pinions with the toothed crown, this shaft with its sliding member receiving from the said cam a longitudinal movement for the passage from one pinion to the other and also a lateral displacement so as completely to disengage the pinion of the sliding member from the toothed crown in order to allow the said longitudinal movement.

4. A change speed gear for motor cars, etc., comprising a longitudinal driving shaft with universal joint, a driven axle, a toothed crown wheel thereon, change speed pinions on the rear end of said shaft and means for moving said rear end of the shaft longitudinally and also laterally to engage said pinions with, and disengage them from, the crown wheel.

5. A change speed gear for motor cars, etc., comprising a longitudinal driving shaft with universal joint, a driven axle, a toothed crown wheel thereon, change speed pinions on the rear end of said shaft, a rotatable shaft with two cams, one to move the shaft longitudinally and the other to move it laterally to effect the engagement and disengagement of one or other of the pinions with the crown wheel.

[Claim 6 not printed in the Gazette.]

873,462. APPARATUS FOR ROLLING. EDWIN E. SLICK, Pittsburg, Pa. Filed Dec. 12, 1903. Serial No. 184,927.



1. The combination with a set of rolls having back and forth passes, of two sets of rolls in front thereof and staggered relatively to each other, and feed-tables extending from one of the two sets to the set of rolls having back and forth passes, and from the latter set of rolls back to the other of the two sets; substantially as described.

2. In a rolling mill plant, a set of rolls having back and forth passes, a set of rolls in front thereof, a feed-table extending from the front set of rolls to the set having back and forth passes, and a third set of rolls in front of and in line with one of the passes of the set of rolls having back and forth passes said third set being at one side of the said feed table; substantially as described.

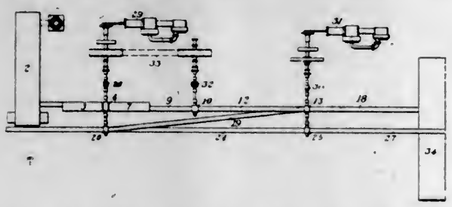
3. A series of sets of rolls arranged in tandem, another set of rolls beyond them and having back and forth passes, a feed-trough extending from the last set of rolls of the tandem mill to the set of rolls having back and forth passes, said trough being at an angle to the line of feed in the tandem mill, another set of rolls on the same side as the tandem mill, and a feed-table extending thereto from the set of rolls having back and forth passes; substantially as described.

4. The combination with a set of rolls having a plurality of back and forth passes, of two sets of rolls in front thereof, one of the latter sets being in line with the set of rolls having back and forth passes, and the other being out of alinement with the set of rolls having back and forth passes, and a bending guide extending between the non-alined set of rolls and the set having back and forth passes; substantially as described.

5. The combination with a three-high set of rolls having back and forth passes, of two sets of rolls in front thereof

and staggered relatively to each other, and feed devices extending from one of the two sets of the three-high set of rolls having back and forth passes and from the latter set of rolls back to the other of the two sets; substantially as described.

873,463. MILL FOR ROLLING IRREGULAR SHAPES. EDWIN E. SLICK, Pittsburg, Pa. Filed Mar. 3, 1905. Serial No. 248,233.



1. In a rolling-mill plant, a three-high set of roughing rolls, another three-high set of rolls in the rear of the same, a third set of three-high rolls on the same side of the rear set as the roughing mill, and a laterally-inclined feed-device between the rear set and the third set of rolls; substantially as described.

2. In a rolling-mill plant, a three-high set of roughing rolls, another three-high set of rolls in the rear and in line with the roughing set, a third three-high set of rolls on the same side of the second set as the first set, and a laterally-inclined feed-device leading from the second set to the third set; substantially as described.

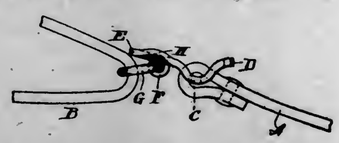
3. In a rolling-mill plant, a three-high set of roughing rolls, another three-high set of rolls in the rear and in line with the roughing set, a third three-high set of rolls on the same side of the second set as the first set, a laterally-inclined feed-device leading from the second set to the third set, and a fourth set of rolls in the rear of and in line with the third set of rolls; substantially as described.

4. In a rolling-mill plant, a three-high roughing set of rolls, a second set of three-high rolls in the rear thereof and in line with the roughing set, a third set of three-high rolls on the same side of the second set as the first set, a laterally-inclined feed-device leading from the second set to the third set, and a two-high set of rolls in the rear of the third set and in line therewith; substantially as described.

5. In a rolling-mill plant, a three-high roughing set of rolls, a second set of three-high rolls in the rear thereof and in line with the roughing set, a third set of three-high rolls on the same side of the second set as the first set, a laterally-inclined feed-device leading from the second set to the third set, a two-high set of rolls in the rear of the third set and in line therewith, and an edging set of rolls in the line of feed between the first and second sets of rolls; substantially as described.

[Claim 6 not printed in the Gazette.]

873,464. BUCKLE. CLARENCE E. SMITH, New Britain, Conn., assignor to North & Judd Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed June 26, 1907. Serial No. 380,862.



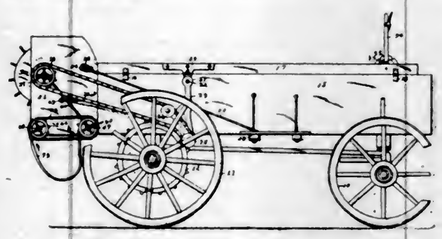
1. In a buckle, a frame having a depressed portion intermediate its forward and rear ends, a cross bar forming a bearing on which the frame may be tilted, a loop hinged to the under side of the frame near the forward end thereof, and a laterally projecting finger-piece at the edge of the frame between the cross-bar and the forward edge of said frame.

2. In a buckle, a frame having a depressed portion intermediate its forward and rear ends, a cross bar forming a bearing on which the frame may be tilted, a loop hinged to the upper side of the frame near the forward end thereof and a laterally projecting finger-piece on each side at the edge of the frame between the cross-bar and the forward end of said frame.

3. In a buckle, a main frame depressed intermediate its length, a cross-bar at said depression, a strap end secured to said cross-bar, and a loop pivoted to the under side of the frame forward of said cross-bar, the rear end of said frame being elevated in a plane above the normal position of the strap end carried by the cross-bar C when the buckle is in use.

4. In a buckle, a frame having a depression across the same intermediate its length, a cross-bar coincident with said depression, a strap end secured to said cross-bar, a loop hinged to the under side of the frame forward of the cross-bar, the free side of said loop coöperating with the extreme edge of the frame to clamp the other end of the strap, and means for manual engagement to tilt said frame on the bearing formed by the depressed portion to free that end of the strap carried by said hinged loop.

873,465. MANURE-SPREADER. CHARLES W. SMITH, Berlin, Iowa, assignor to The Waterloo Spreader Manufacturing Company, Waterloo, Iowa. Filed Dec. 15, 1903, Serial No. 185,221. Renewed Nov. 1, 1907. Serial No. 400,153.



1. The combination with a wagon box, of a flexible apron slidingly supported in the wagon box and a number of rods arranged to form a receptacle at the rear of the wagon box their rear ends positioned to receive the apron and their body portions extending downwardly and then forwardly and upwardly.

2. The combination with a wagon box, of rods fixed to the rear end of the wagon box extended downwardly and then forwardly and then upwardly and a flexible apron movably supported; in one position resting upon the bottom of the wagon box and in its other position having its rear end and body portion rolled within said rods.

3. The combination with a wagon box, of a flexible apron slidingly supported in the wagon box and a number of rods arranged to form a receptacle at the rear of the wagon box their rear ends positioned to receive the apron and their body portions extending downwardly and then forwardly and upwardly and means for moving the apron rearwardly when the wagon is advanced.

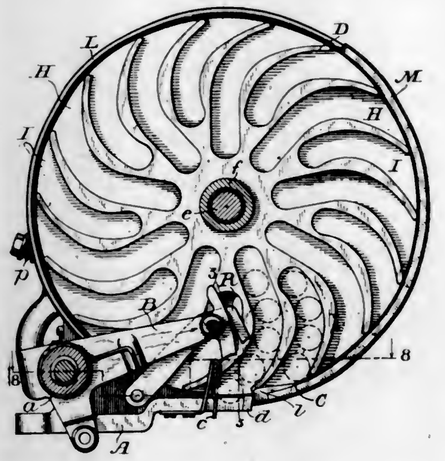
4. The combination with a wagon box, of rods fixed to the rear end of the wagon box extended downwardly and then forwardly and then upwardly, a flexible apron movably supported, in one position resting upon the bottom of the wagon box and in its other position having its rear end and body portion rolled within said rods and means for moving the apron rearwardly when the wagon is advanced.

5. The combination with a wagon box, of a flexible apron slidingly supported in the wagon box, and having a rearward free end, means for moving the apron rearwardly when the wagon is advanced, other means at the rear of the wagon box for causing the free end of the apron to roll when moved rearwardly, said latter means being also adapted to hold the apron when rolled, means for moving the apron forwardly when the wagon is advanced, and means for controlling said apron-moving means.

[Claims 6 to 19 not printed in the Gazette.]

873,466. [WITHDRAWN.]

873,467. ROTARY MAGAZINE FOR WEFT-REPLENISHING LOOMS. MELVIN L. STONE, Lowell, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Feb. 16, 1906. Serial No. 301,406.



1. An automatic weft-replenishing loom having a rotary magazine provided with a plurality of guideways, each capable of holding a plurality of weft-carriers, the weft-carriers in the several guide-ways feeding therefrom in the same direction.

2. An automatic weft-replenishing loom having, in combination, a rotary magazine provided with a plurality of guide-ways each capable of holding a plurality of weft-carriers, and automatic means for rotating the magazine always in the same direction.

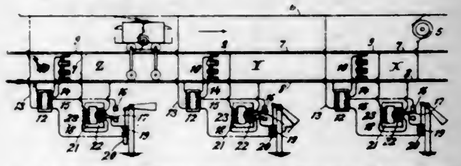
3. An automatic weft-replenishing loom having a rotary magazine provided with a plurality of guide-ways, each capable of holding a plurality of weft-carriers, and each extending from the periphery towards the axis of the magazine.

4. An automatic weft-replenishing loom having, in combination, a transferrer; a rotary magazine provided with a plurality of guide-ways each capable of holding a plurality of weft-carriers, the active guide-way being in position to coöperate with the transferrer and the weft-carriers feeding by gravity in the active guide-way at each action of the transferrer; a weft-carrier feeler which feels for weft-carriers in the active guide-way at each action of the transferrer, and which has an additional functional movement when the active guide-way is empty; and automatic means governed by said functional movement of the feeler to rotate the magazine the necessary distance to bring the next following guide-way into active position, the feed of the magazine due to the feeler being always in the same direction.

5. An automatic weft-replenishing loom having a rotary magazine provided with two disks each having a plurality of channels extending from the periphery towards the axis of the magazine, the channels in one disk being adapted to receive the butts of weft-carriers, and those in the other to receive the weft-carrier tips.

[Claims 6 to 12 not printed in the Gazette.]

873,468. AUTOMATIC BLOCK-SIGNALING SYSTEM FOR ELECTRIC RAILWAYS. FITZHUGH TOWNSEND, New York, N. Y.; John J. Townsend, administrator of said Fitzhugh Townsend, deceased, assignor to General Railway Signal Company, a Corporation of New York. Filed June 29, 1906. Serial No. 323,976.



1. A signaling system comprising a source of alternating power current, a trackway divided into block sections, both of the rails of which are traversed by the power current on its retrun to the generator, means for exciting a direct current difference of potential between the rails of each block, and a relay connected across the rails of each block operable by direct current but not by the alternating power current.

2. A signaling system comprising a source of alternating power current, a trackway divided into block sections, both of the rails of which are traversed by the power current on its return to the generator, means for exciting a direct current difference of potential between the rails of each block, and a relay connected across the rails of each block operable by direct current but shielded from the alternating power current.

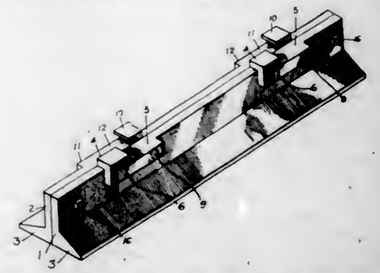
3. A signaling system comprising a source of alternating power current, a trackway divided into block sections, both of the rails of which are traversed by the power current on its return to the generator, means for exciting a direct current difference of potential between the rails of each block, a relay in each block having its field and armature directly connected across the rails of the block and said relay operable by a direct current but not by an alternating current.

4. A signaling system comprising a source of alternating power current, a trackway divided into block sections, both of the rails of which are traversed by the power current on its return to the generator, means for exciting a direct current difference of potential between the rails of each block, and a rotary relay connected across the rails of each block operable by direct current but not by alternating power current.

5. A signaling system involving block sections, comprising an alternating current generator for the propulsion current, thermo-generators for exciting a direct current difference of potential between the rails of the block sections, and a translating device energized by the direct current in each block section.

[Claims 6 to 26 not printed in the Gazette.]

873,469. METALLIC TIE. WILLIAM D. TURNER, Mars, Pa. Filed Dec. 13, 1906. Serial No. 347,647.

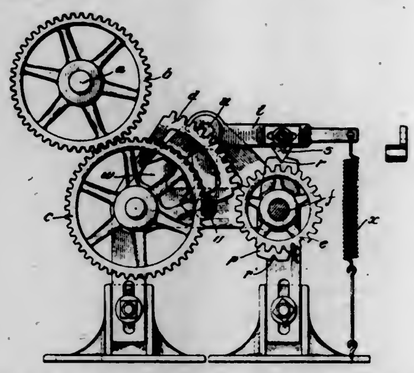


1. A combined metallic tie and rail-seat comprising two tie members each formed angular in cross-section, the inner vertical faces of the members abutting, rail seats formed

on said members, each seat projecting laterally of the vertical web and extending longitudinally of the web to points beyond the edge of the rail resting thereon, and a rail-engaging lug extending upwardly from and of equal width with the upper surface of the rail seat, the angular faces of greatest width of each of the members being free from projections or portions overhanging the plane of the opposing member, and means for removably securing the members in position relatively to each other.

2. A metal tie comprising two counterpart angle sections having their webs placed back to back and secured together, the opposing backs of the webs being free from projections or overhanging portions, each web formed adjacent each end with a substantially rectangular enlargement projecting from the outer faces of the webs and free from engagement with the base flange of the section with the upper face of said enlargement flush with the upper edge of the sections, said enlargements projecting laterally beyond the plane of the base of the rail and rail-clamping lugs integral with and of a width equal to the enlargements and sections at the ends of said enlargements, substantially as described.

873,470. SHUTTLE-MOTION. GEORGE M. VON CULIN, Philadelphia, Pa. Filed Nov. 28, 1906. Serial No. 345,495.

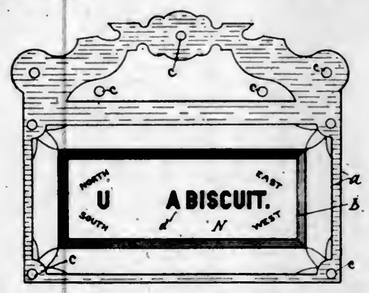


1. In a shuttle motion for narrow fabric looms, in combination, with the main driving shaft of the loom, a shuttle actuating rack, means driven from the main shaft of the loom for reciprocating said rack, and means actuated by the movement of said main shaft for locking said shuttle reciprocating means at the completion of each stroke of said rack and for unlocking said means immediately prior to each stroke.

2. In a shuttle motion for narrow fabric looms, in combination, a shuttle actuating rack, a shaft, a spur gear on said shaft, an arm on said shaft, furnished at points diametrically opposite with notches, a double crank on said shaft, a segmental gear driven from the main shaft of the loom for intermittently actuating said gear wheel, a bell crank lever, a stop carried by one arm of said lever for engaging the notches in said arm, a cam moving with said segmental gear for actuating said bell crank lever to cause a disengagement of said stop and notches, a spring normally causing said stop to engage one of said notches, and connections between each of said cranks and the rack, one serving to move said rack in one direction, the other in the other direction.

873,471. AUTOMATIC DISPLAY-SIGN. JOHN A. VIGER, St. Paul, Minn., assignor to James D. Lotz, Stillwater, Minn. Filed Jan. 19, 1907. Serial No. 353,050.

1. In a sign of the class described, a housing or casing having a display opening, a series of parallel rollers mounted in the casing and a transparent endless canvas stretched over and moved by the rollers and having various signs upon it to be displayed at the opening; electric lights back of the canvas displayed, a constantly running electric motor, means driven by the motor for turning the rollers intermittingly, means for extinguishing the lights while the rollers turn and change the signs; lights outside the casing near the opening, a shutter closing the opening during the moving of the canvas signs, and means operated by the motor for moving the shutter intermittingly and means for extinguishing the outer lights during the periods the shutter is open; said shutter having upon it a sign adapted to be displayed in the light of the outer lamps while the shutter is closed.



2. In a sign of the class described, a frame or casing having a display opening, an endless transparent canvas sign adapted to display various advertisements periodically at the opening; rollers moving the canvas, an endless chain and chain wheels on the rollers to rotate them in unison, a sprocket wheel moving the chain, a shaft revolving in the sprocket wheel, a pivoted clutch arm carried by the shaft and adapted to engage and turn the wheel, a stationary cam-plate disengaging the arm from the wheel during a part of each turn of the shaft; the cams A and B fixed on said shaft, a worm wheel fixed on the shaft, a worm screw turning the same, an electric motor operatively connected with the worm screw; a rock shaft with two arms, one of which is operated by the cam A, a shutter with a sign on it arranged to appear periodically in front of the canvas sign, a rod connecting the shutter with the other arm of the rock-shaft so as to let the sign be operated by the arm and display its own sign and conceal the canvas signs during their motion and display them when they are at rest, an electric switch operated by the cam B, electric lights lighted and extinguished periodically and alternately back of the canvas signs and outside the casing to throw light on the sign on the shutter, the alternating periods of the use of the inner and the outer lights being regulated by the switch and the cam B operating it.

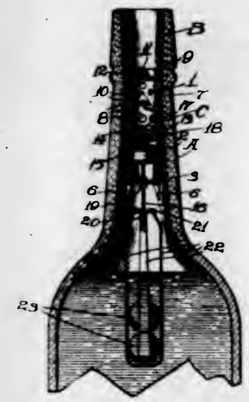
873,472. NON-REFILLABLE BOTTLE. GEORGE P. VISSAS, St. Louis, Mo. Filed Sept. 16, 1907. Serial No. 393,089.

1. In a device of the character described, the combination of an outer shell provided with an internal valve seat, an inner shell within said outer shell provided with guard tongues, a valve within said outer shell loosely fitted to said inner shell, and a spring interposed between said inner shell and said valve, substantially as set forth.

2. In a device of the character described, the combination of an outer shell, an inner shell within said outer shell provided with guards and having a guide at its lower end, a valve within said outer shell, a stem fixed to said valve and loosely fitted in said guide, and a spring interposed between said valve and said inner shell, substantially as set forth.

3. In a device of the character described, the combination of an outer shell, an inner shell within said outer shell, a valve stem loosely fitted to said inner shell, a valve fixed to said stem, a spring interposed between said valve and said inner shell, and a keeper arm fixed to said inner shell and adapted to be engaged by said valve stem, substantially as set forth.

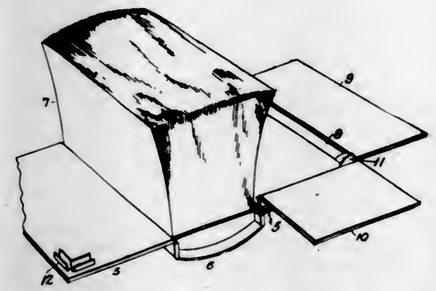
4. In a device of the character described, the combination of an outer shell, an inner shell within said outer shell having perforations in its wall and provided with guard tongues extending inwardly from its wall, a valve stem loosely fitted to said inner shell, and a valve fixed to said valve stem and adapted to seat in said outer shell, substantially as set forth.



5. In a device of the character described, the combination of an outer shell, means within said outer shell for preventing flow of liquid therethrough in an inward direction, and spring actuated dogs carried by said shell, substantially as set forth.

[Claim 6 not printed in the Gazette.]

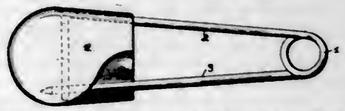
873,473. FILE-BOX. THOMAS A. WALSH, Yonkers, N. Y. Filed Jan. 23, 1907. Serial No. 353,671.



1. A file box of the class described comprising a back, covers hinged to the sides thereof, one of such covers having devices on its inner sides near one outer corner forming angle sockets, the other cover having side and end flanges projecting from the inner side thereof, angle pieces in the angles between such flanges and projecting beyond their outer edges, and wings hinged to the said flanges of the last mentioned cover and adapted, when in closed position, to bear against such angle pieces and to enter the angle sockets of the other cover.

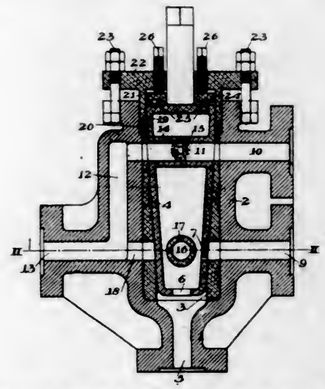
2. A file box of the class described comprising a back, covers hinged to the sides thereof, one of said covers having devices on its inner side at its outer corners providing angle sockets, the other cover having flanges at its sides and ends extending from its inner face, and wings hinged to such flanges and adapted, when in closed position, to enter the angle sockets of the other cover.

873,474. SAFETY-PIN. LOUIS C. WICKS, Pittsburg, Pa. Filed Aug. 14, 1905. Serial No. 274,137.



A safety pin formed from a single piece of wire bent to form two parallel arms connected at one end by a coil of the wire, one of said arms exceeding the other in length and having its free end bent at right angles to the body of the arm and having said bent portion substantially square in cross section, and passed around the other arm and given a return bend to form a hook, the other arm constituting the prong of the safety pin being reduced in diameter adjacent its free end having flattened faces engaging the flattened faces of the hook member and having a head on said free end, the headed end extending beyond the hook member of the other arm and the reduced portion of said prong engaging in said hook member, and a shield fitted over the ends of said arms and inclosing the hook and projecting headed end of said prong arm.

873,475. FLUID-PRESSURE VALVE. HARRY WOODS, Steubenville, Ohio. Filed Feb. 10, 1905. Serial No. 245,104.



1. In a fluid pressure valve, a hollow valve body having a continuously open port leading thereinto, said valve body having transverse trough-ports at different angles and cut off from its interior, and ports extending through the valve wall and communicating with its interior; substantially as described.

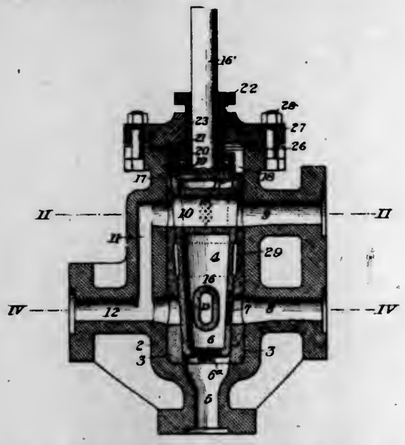
2. A valve comprising a casing having a valve socket provided at one end with an enlargement, a hollow turning plug working in the socket and provided with an inlet opening in that end which is opposite the enlargement of the socket, a packing gland fitting in the enlarged portion of the socket and embracing the valve, and a thrust bearing interposed between the gland and the plug in opposition to the force of the incoming fluid, substantially as described.

3. A valve comprising a casing having a valve socket provided at one end with an enlargement, a hollow turning plug mounted in the valve socket and provided with an inlet opening in that end which is opposite the enlarged portion of the socket, a packing gland embracing the other end of the valve and fitting in the enlarged portion of the socket, a bearing plate interposed between the back of the gland and the adjacent end of the valve, antifriction devices interposed between the plate and the valve, and adjusting screws piercing the gland and in coöperative relation with the bearing plate, substantially as described.

4. A valve comprising a casing having a valve socket provided with pairs of diametrically opposite ports, a hol-

low turning plug mounted in the socket, corresponding ends of the socket and the plug having inlet openings in continuous communication with one another, a pair of through ports piercing the plug at different angles and cut off from the interior of the plug, said through ports being disposed for successive communication with the respective pairs of ports of the casing, and the valve plug being provided with ports extending through one wall only of the plug and in the transverse plane of the respective through ports for successive communication with the ports of the casing, substantially as described.

873,476. VALVE FOR FLUIDS UNDER PRESSURE. HARRY WOODS, Steubenville, Ohio. Filed June 15, 1905. Serial No. 265,441.



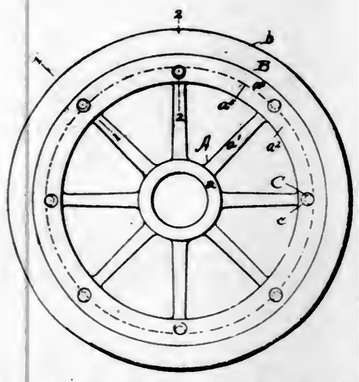
1. In a fluid pressure valve, the combination of a casing having a valve socket provided in one end with a longitudinal inlet, a hollow turning plug working in the socket and provided in one end with a longitudinal inlet port in continuous communication with the inlet of the casing, a valve stem for the other end of the plug, there being a space between the valve stem end of the plug and the adjacent end of the casing, said end of the plug having an opening communicating from the interior of the plug to said space, whereby fluid pressure is admitted to said space and the plug thereby balanced, an antifriction bearing for the plug located in said space, and a packing for the valve stem, said packing engaging the antifriction bearing and capable of adjustment to take up wear on the bearing and plug, substantially as described.

2. In a fluid pressure valve, the combination of a valve casing provided with a valve socket having a longitudinal inlet in one end, a hollow turning plug working in the socket and provided in one end with a longitudinal inlet port in continuous communication with the inlet of the casing, a valve stem for the other end of the plug, there being a space between the stem end of the plug and the adjacent end of the casing, said stem end of the plug having an opening communicating from the interior of the plug to said space, whereby fluid pressure is admitted to the space to balance the valve, an antifriction bearing for the plug in said space, a packing ring embracing the stem and engaging the antifriction bearing, an adjustable gland embracing the stem, and a flexible packing element interposed between the gland and the packing ring, substantially as described.

3. A valve comprising a casing having a valve socket and inlet and outlet ports, and a hollow turning plug working in the socket and provided with inlet and outlet ports for registration with the corresponding ports of the casing, the inlet ports being continuously registered, whereby the hollow plug is continuously under internal pressure, the walls of the plug being thin and having sufficient resiliency to be forced outwardly by the internal pressure into a fluid-tight fit with the walls of the valve socket, substantially as described.

4. A valve comprising a casing having a valve socket provided with a lateral outlet port and a terminal inlet port leading longitudinally inward, and a hollow turning plug working in the socket and provided with a lateral outlet port and a terminal inlet port continuously registering with the inlet ports of the casing, whereby the plug is continuously under internal pressure, the walls of the plug being thin and resilient enough to be forced outwardly by the internal pressure into a fluid-tight fit with the walls of the socket, substantially as described.

873,477. CAR-WHEEL. JOHN H. WOODWORTH, Cleveland, Ohio. Filed Oct. 17, 1905, Serial No. 283,087. Renewed May 13, 1907. Serial No. 373,378.



1. In a car wheel, the combination of a center having a rim beveled off at its outer edge and with a beveled projecting flange near its inner edge, a tire having an outward flange to engage the rail, said tire surrounding the rim and being beveled at the inner edge of its bore and having a beveled inwardly projecting flange at the outer edge of its bore, and a series of bolts passing through the two flanges and crossing the junction of the tire and the rim.

2. In a car wheel, the combination of a center having a rim formed with an outwardly projecting flange, a tire from whose bore there extends an inwardly projecting flange, and a series of bolts passing laterally through the rim and tire and through such flanges, said bolts being staggered to alternately have their major portion in the rim and in the tire.

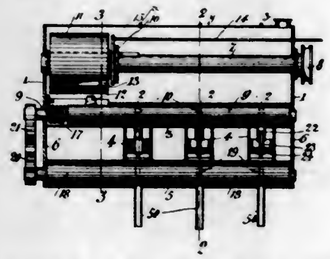
3. In a car wheel, the combination of a wheel rim, a tire surrounding the same, each of such members having a flange extending across the body of the other and having engaging portions intermediate of such flanges, and bolts extending crosswise through the tire and rim, said bolts lying partly in the tire and partly in the rim at such intermediate portions.

4. In a wheel, the combination of a center having an outwardly projecting beveled flange near one side of the rim, the other edge of the rim being beveled off, and a tire beveled off at one edge of its bore and having an inwardly projecting beveled flange near the other edge of its bore, and bolts extending through the tire and rim at the plane of their division intermediate of the bevels thereof, whereby at such intermediate portion the bolts are partly in the tire and partly in the rim.

5. In a car wheel, the combination of a rim having at its periphery near its inner side an outward flange, and a tire seating on said rim and engaged by said flange, and a series of bolts passing laterally through the rim and tire, said bolts having eccentric heads occupying corresponding recesses in the rim.

[Claims 6 and 7 not printed in the Gazette.]

873,478. LUBRICATING DEVICE FOR AUTOMOBILES. FREDERICK J. ZIEGLER, New York, N. Y. Filed Apr. 2, 1907. Serial No. 365,965.



1. In a lubricator, the combination of a container for the lubricant, a shaft which controls by its angular position the discharge of lubricant from said container, a shaft journaled in said container and arranged for operative connection with the engine to be lubricated, and an operative connection between said shafts by which the discharge-controlling shaft is rocked.

2. In a lubricating device, the combination of a container, an operating shaft journaled therein, a rockable discharge-controlling shaft, means to normally hold said last-named shaft in position to cut off the lubricant, and an operative connection between said shafts by which the discharge-controlling shaft is rocked in opposition to said means.

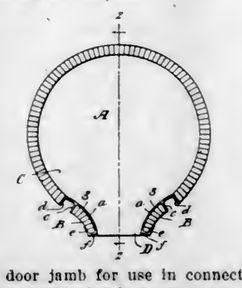
3. In a lubricator, the combination of a container, an operating shaft journaled therein, a rockable discharge-controlling shaft, means to normally hold said last-named shaft in cut-off position, and an adjustable connection between said shafts by which the discharge-controlling shaft may be moved into discharging position and held in such position during variable periods of time.

4. In a lubricator, in combination, a container for the lubricant having openings therein, a shaft having openings therein to register with the openings of said container, a shaft journaled in said container and adapted for operative connection with the engine or other device to be lubricated, and a cam on said last-named shaft for rocking said first-named shaft.

5. In a lubricator, the combination of a container having an opening, a rockable shaft having a transverse opening to register with that of said container, means to normally maintain said shaft in such a position that said openings are out of register, and means for rocking said shaft so that said openings are brought into register, said means being manually adjustable to cause said openings to register during different periods of time.

[Claims 6 to 9 not printed in the Gazette.]

873,479. DOOR-JAMB FOR COKE-OVENS. ENOCH H. ABRAHAM, Uniontown, Pa., assignor to Covington Door Jamb Company, a Corporation of Maine. Filed Nov. 30, 1906. Serial No. 345,590.



1. A metal door jamb for use in connection with beehive coke ovens, conforming in curvature to the curvature of the furnace, and provided with a part at the inner end which is arranged not to be closed in by fire brick so as to permit of expansion and contraction.

2. The combination in the wall of a beehive coke oven, of a metal door jamb conforming in curvature to the curvature of the oven so placed that the same will not extend into the furnace to such a point as to be subjected to the extreme heat of the oven, and yet will protect the edges of the walls from destruction from coke extracting, and uninclosed by fire brick at the inner end so as to permit of expansion and contraction.

3. The combination in the wall of a beehive coke oven of a metal door jamb conforming in curvature to the curvature of the furnace, so placed at the inner end that the same will not extend into the furnace to such a point as to be subjected to the extreme heat of the oven, and extending exteriorly beyond the wall of the oven at the other end and uninclosed by fire brick at the inner end, so as to permit of expansion and contraction.

4. The combination in the wall of a beehive coke oven of the ordinary type, of a metal door jamb conforming in curvature to the curvature of the furnace placed at the bottom of the door on either side below the brickwork of the arch, extending a suitable distance into the interior of the oven, for the purposes of rendering the door practically indestructible to machine operation, and uninclosed by fire brick at the inner end, so as to permit of expansion and contraction.

873,480. WRENCH. CORNELIUS AHERN, Allegheny, Pa. Filed June 7, 1907. Serial No. 377,699.



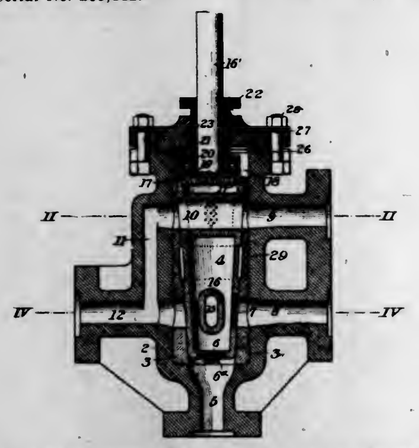
1. A wrench embodying a graduated shank having diametrically opposed threaded edges, a fixed jaw carried by one end of said shank, a handle detachably mounted upon the opposite end of said shank, a jaw slightly mounted upon said shank and having a depending flanged sleeve provided with a slot, a sectional collar loosely clamped upon said sleeve, interiorly arranged teeth carried by said collar and adapted to engage the threaded edges of said shank, lugs carried by said collar for engaging said jaw and limiting the movement of said collar, and a spring carried by said collar and frictionally engaging said flanged sleeve, substantially as described.

2. A wrench embodying a graduated shank having threaded edges, a fixed jaw carried by one end of said shank, a movable jaw mounted upon said shank and having a depending slotted sleeve, a sectional collar loosely clamped upon said sleeve and having interior teeth for engaging the threaded edges of said shank, means carried by the upper edge of said collar for limiting its rotation, and means carried by said collar and frictionally engaging said sleeve for preventing accidental rotation of said collar.

3. In a wrench, the combination with a shank having threaded edges, a fixed jaw and a detachable handle, of a movable jaw mounted upon said shank and having a depending slotted sleeve, a sectional collar loosely clamped upon said sleeve and having teeth for engaging the thread-

low turning plug mounted in the socket, corresponding ends of the socket and the plug having inlet openings in continuous communication with one another, a pair of through ports piercing the plug at different angles and cut off from the interior of the plug, said through ports being disposed for successive communication with the respective pairs of ports of the casing, and the valve plug being provided with ports extending through one wall only of the plug and in the transverse plane of the respective through ports for successive communication with the ports of the casing, substantially as described.

873,476. VALVE FOR FLUIDS UNDER PRESSURE. HARRY WOODS, Steubenville, Ohio. Filed June 15, 1905. Serial No. 265,441.



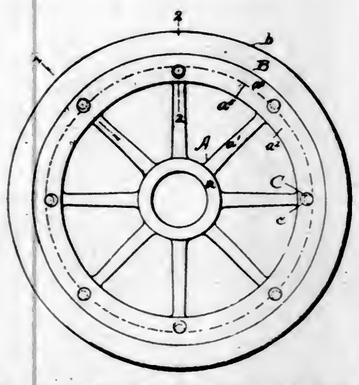
1. In a fluid pressure valve, the combination of a casing having a valve socket provided in one end with a longitudinal inlet, a hollow turning plug working in the socket and provided in one end with a longitudinal inlet port in continuous communication with the inlet of the casing, a valve stem for the other end of the plug, there being a space between the valve stem end of the plug and the adjacent end of the casing, said end of the plug having an opening communicating from the interior of the plug to said space, whereby fluid pressure is admitted to said space and the plug thereby balanced, an antifriction bearing for the plug located in said space, and a packing for the valve stem, said packing engaging the antifriction bearing and capable of adjustment to take up wear on the bearing and plug, substantially as described.

2. In a fluid pressure valve, the combination of a valve casing provided with a valve socket having a longitudinal inlet in one end, a hollow turning plug working in the socket and provided in one end with a longitudinal inlet port in continuous communication with the inlet of the casing, a valve stem for the other end of the plug, there being a space between the stem end of the plug and the adjacent end of the casing, said stem end of the plug having an opening communicating from the interior of the plug to said space, whereby fluid pressure is admitted to the space to balance the valve, an antifriction bearing for the plug in said space, a packing ring embracing the stem and engaging the antifriction bearing, an adjustable gland embracing the stem, and a flexible packing element interposed between the gland and the packing ring, substantially as described.

3. A valve comprising a casing having a valve socket and inlet and outlet ports, and a hollow turning plug working in the socket and provided with inlet and outlet ports for registration with the corresponding ports of the casing, the inlet ports being continuously registered, whereby the hollow plug is continuously under internal pressure, the walls of the plug being thin and having sufficient resiliency to be forced outwardly by the internal pressure into a fluid-tight fit with the walls of the valve socket, substantially as described.

4. A valve comprising a casing having a valve socket provided with a lateral outlet port and a terminal inlet port leading longitudinally inward, and a hollow turning plug working in the socket and provided with a lateral outlet port and a terminal inlet port continuously registering with the inlet ports of the casing, whereby the plug is continuously under internal pressure, the walls of the plug being thin and resilient enough to be forced outwardly by the internal pressure into a fluid-tight fit with the walls of the socket, substantially as described.

873,477. CAR-WHEEL. JOHN H. WOODWORTH, Cleveland, Ohio. Filed Oct. 17, 1905, Serial No. 283,087. Renewed May 13, 1907. Serial No. 373,378.



1. In a car wheel, the combination of a center having a rim beveled off at its outer edge and with a beveled projecting flange near its inner edge, a tire having an outward flange to engage the rail, said tire surrounding the rim and being beveled at the inner edge of its bore and having a beveled inwardly projecting flange at the outer edge of its bore, and a series of bolts passing through the two flanges and crossing the junction of the tire and the rim.

2. In a car wheel, the combination of a center having a rim formed with an outwardly projecting flange, a tire from whose bore there extends an inwardly projecting flange, and a series of bolts passing laterally through the rim and tire and through such flanges, said bolts being staggered to alternately have their major portion in the rim and in the tire.

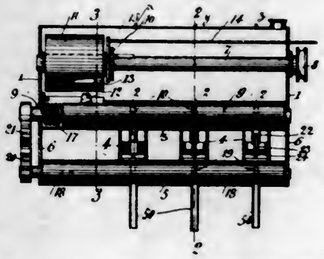
3. In a car wheel, the combination of a wheel rim, a tire surrounding the same, each of such members having a flange extending across the body of the other and having engaging portions intermediate of such flanges, and bolts extending crosswise through the tire and rim, said bolts lying partly in the tire and partly in the rim at such intermediate portions.

4. In a wheel, the combination of a center having an outwardly projecting beveled flange near one side of the rim, the other edge of the rim being beveled off, and a tire beveled off at one edge of its bore and having an inwardly projecting beveled flange near the other edge of its bore, and bolts extending through the tire and rim at the plane of their division intermediate of the bevels thereof, whereby at such intermediate portion the bolts are partly in the tire and partly in the rim.

5. In a car wheel, the combination of a rim having at its periphery near its inner side an outward flange, and a tire seating on said rim and engaged by said flange, and a series of bolts passing laterally through the rim and tire, said bolts having eccentric heads occupying corresponding recesses in the rim.

[Claims 6 and 7 not printed in the Gazette.]

873,478. LUBRICATING DEVICE FOR AUTOMOBILES. FREDERICK J. ZIEGLER, New York, N. Y. Filed Apr. 2, 1907. Serial No. 365,965.



1. In a lubricator, the combination of a container for the lubricant, a shaft which controls by its anguiar position the discharge of lubricant from said container, a shaft journaled in said container and arranged for operative connection with the engine to be lubricated, and an operative connection between said shafts by which the discharge-controlling shaft is rocked.

2. In a lubricating device, the combination of a container, an operating shaft journaled therein, a rockable discharge-controlling shaft, means to normally hold said last-named shaft in position to cut off the lubricant, and an operative connection between said shafts by which the discharge-controlling shaft is rocked in opposition to said means.

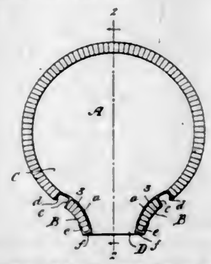
3. In a lubricator, the combination of a container, an operating shaft journaled therein, a rockable discharge-controlling shaft, means to normally hold said last-named shaft in cut-off position, and an adjustable connection between said shafts by which the discharge-controlling shaft may be moved into discharging position and held in such position during variable periods of time.

4. In a lubricator, in combination, a container for the lubricant having openings therein, a shaft having openings therein to register with the openings of said container, a shaft journaled in said container and adapted for operative connection with the engine or other device to be lubricated, and a cam on said last-named shaft for rocking said first-named shaft.

5. In a lubricator, the combination of a container having an opening, a rockable shaft having a transverse opening to register with that of said container, means to normally maintain said shaft in such a position that said openings are out of register, and means for rocking said shaft so that said openings are brought into register, said means being manually adjustable to cause said openings to register during different periods of time.

[Claims 6 to 9 not printed in the Gazette.]

873,479. DOOR-JAMB FOR COKE-OVENS. ENOCH H. ABRAHAM, Uniontown, Pa., assignor to Covington Door Jamb Company, a Corporation of Maine. Filed Nov. 30, 1906. Serial No. 345,590.



1. A metal door jamb for use in connection with beehive coke ovens, conforming in curvature to the curvature of the furnace, and provided with a part at the inner end which is arranged not to be closed in by fire brick so as to permit of expansion and contraction.

2. The combination in the wall of a beehive coke oven, of a metal door jamb conforming in curvature to the curvature of the oven so placed that the same will not extend into the furnace to such a point as to be subjected to the extreme heat of the oven, and yet will protect the edges of the walls from destruction from coke extracting, and uninclosed by fire brick at the inner end so as to permit of expansion and contraction.

3. The combination in the wall of a beehive coke oven of a metal door jamb conforming in curvature to the curvature of the furnace, so placed at the inner end that the same will not extend into the furnace to such a point as to be subjected to the extreme heat of the oven, and extending exteriorly beyond the wall of the oven at the other end and uninclosed by fire brick at the inner end, so as to permit of expansion and contraction.

4. The combination in the wall of a beehive coke oven of the ordinary type, of a metal door jamb conforming in curvature to the curvature of the furnace placed at the bottom of the door on either side below the brickwork of the arch, extending a suitable distance into the interior of the oven, for the purposes of rendering the door practically indestructible to machine operation, and uninclosed by fire brick at the inner end, so as to permit of expansion and contraction.

873,480. WRENCH. CORNELIUS AHERN, Allegheny, Pa. Filed June 7, 1907. Serial No. 377,699.



1. A wrench embodying a graduated shank having diametrically opposed threaded edges, a fixed jaw carried by one end of said shank, a handle detachably mounted upon the opposite end of said shank, a jaw slightly mounted upon said shank and having a depending flanged sleeve provided with a slot, a sectional collar loosely clamped upon said sleeve, interiorly arranged teeth carried by said collar and adapted to engage the threaded edges of said shank, lugs carried by said collar for engaging said jaw and limiting the movement of said collar, and a spring carried by said collar and frictionally engaging said flanged sleeve, substantially as described.

2. A wrench embodying a graduated shank having threaded edges, a fixed jaw carried by one end of said shank, a movable jaw mounted upon said shank and having a depending slotted sleeve, a sectional collar loosely clamped upon said sleeve and having interior teeth for engaging the threaded edges of said shank, means carried by the upper edge of said collar for limiting its rotation, and means carried by said collar and frictionally engaging said sleeve for preventing accidental rotation of said collar.

3. In a wrench, the combination with a shank having threaded edges, a fixed jaw and a detachable handle, of a movable jaw mounted upon said shank and having a depending slotted sleeve, a sectional collar loosely clamped upon said sleeve and having teeth for engaging the thread-

ed edges of said shank, lugs carried by said collar for limiting its rotation, and means carried by said collar for frictionally holding the same stationary.

873,481. LOCK. FRANK S. ALIANO, New York, N. Y. Filed Nov. 29, 1905. Serial No. 289,547.



1. In a lock, a lock cup having a bolt opening therein, a sliding bolt seated in said cup and projecting through said opening having a shank having a way in the side thereof forming a shoulder a laterally projected abutment; a guide for said shank, a rotary plate carrying a pendent stud normally seated in said way and adapted to engage said abutment on said bolt, key controlled means whereby said plate may be actuated, a support for said cup and a lock or socket plate.

2. In a lock, a lock cup having a bolt opening therein, a sliding bolt seated in said cup and projecting through said opening having a reduced shank provided with laterally projected abutments whereby oppositely disposed shoulders are formed, a guide for said shank, a rotary plate carrying a pendent stud seated between said shoulders whereby the rotation of said plate in opposite directions will project or withdraw said bolt, key controlled means whereby said plate may be actuated, a support for said cup, and a lock or socket plate.

3. In a lock, a lock cup having a bolt opening therein, a sliding bolt seated in said cup and projecting through said opening having a shank provided with a laterally projected abutment presenting an inclined shoulder, a guide for said shank, a rotary plate carrying a pendent stud adapted to engage said abutment on said bolt, key controlled means whereby said plate may be actuated, a support for said cup and a lock or socket plate.

4. In a lock, a lock cup having a bolt opening therein, a sliding bolt seated in said cup and projecting through said opening having a reduced shank provided with a laterally projected abutment whereby oppositely disposed shoulders converging toward the center of rotation of the rotary controlling plate, are formed, a guide for said shank, a rotary plate carrying a pendent stud seated between said shoulders whereby the rotation of said plate in opposite directions will project or withdraw said bolt, key controlled means whereby said plate may be actuated a support for said cup, and a lock or socket plate.

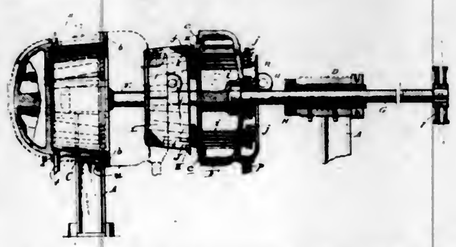
5. In a lock, a lock cup having a plurality of substantially diametrically opposite bolt openings therein, a plurality of oppositely sliding bolts seated in said cup and projecting through said bolt openings respectively, each having a shank provided with a laterally projected abutment whereby oppositely disposed shoulders converging toward the center of rotation of the rotary controlling plate, are formed, a guide for said shanks, a rotary plate carrying a plurality of pendent studs at diametrically opposite points thereof seated between said shoulders on said bolts respectively whereby the rotation of said plate in opposite directions will project or withdraw said bolts, key controlled means whereby said plate may be actuated, a support for said cup, and a lock or socket plate.

[Claims 6 to 11 not printed in the Gazette.]

873,482. FILTER-PRESS. FRANK B. ANDERSON, Cleveland, Ohio. Filed Sept. 4, 1907. Serial No. 391,387.

1. A filter press comprising in combination, a frame; a shell or casing mounted in or upon said frame; a head or closure for said shell or casing movable toward and from the latter; a series of independent plates or leaves carried by the head; pipes or outlets communicating with the respective plates or leaves, and filtering cloths applied to said plates or leaves, substantially as described.

2. In a filter press, the combination of a suitable supporting frame; a shell or casing carried thereby; a head or closure movable toward and from the shell or casing, and adapted to make close connection therewith; a series of plates or leaves independently hinged to said head; filter cloths applied to the respective plates or leaves; and pipes or outlets communicating with the respective plates and extending to the outside of the head, whereby each plate and cloth is rendered capable of performing its filtering operation independently of the others.



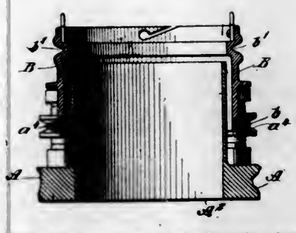
3. In a filter press, the combination of a frame; a shell or casing and a head or closure for said shell or casing, both carried by said frame, and one movable toward and from the other; a series of plates or leaves carried by the head; independent filter cloths applied to the respective plates or leaves, and pipes or outlets extending from the respective plates or leaves to the exterior of the head, substantially as described.

4. In a filter press, the combination of a shell or casing; a head or closure therefor; independent plates carried by the head or closure, and bag-like filter cloths adapted to be drawn over and secured to the respective plates or leaves, and to be removed therefrom without dismounting or disturbing the devices supporting the leaves or plates, or connecting them with the head.

5. In a filter press, the combination of a shell or casing; a head or closure therefor, one movable toward and from the other; a series of plates or leaves hinged or jointed to the head, and adapted to be swung to and from operative position; and filtering cloths applied to said leaves.

[Claims 6 to 11 not printed in the Gazette.]

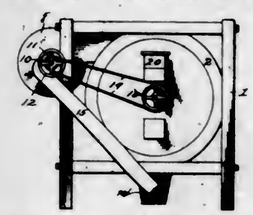
873,483. RING FOR SPINNING MACHINERY. CHARLES T. ATHERTON, Providence, R. I., assignor to Atherton Spinning Ring Company, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 5, 1906. Serial No. 304,178.



1. A rotatable spinning and twisting ring having an integral depending tubular extension, an external annular seat on the lower end of the extension, an annular wear-resisting runway or track adapted to be supported on the seat, and means to detachably retain the runway or track seated, substantially as described.

2. In a rotatable spinning and twisting ring, a tubular body constructed of unhardened material, having a thread-guide at its upper end, and a track-receiving seat at its lower end, with a track constructed of hardened material arranged on such seat, and means by which the track may be secured upon the seat and be detachably retained thereon, substantially as described.

873,484. SEPARATOR. WILLIAM BAKER, Youngstown, Ohio. Filed May 28, 1906. Serial No. 319,109.



1. In a separator of the class described, the combination of a foraminated casing, rotary brushes arranged within the casing with a movable slide covering a portion of the wall of the casing and adjustable around the casing, said slide having a laterally extending end with openings therethrough.

2. In a separator of the type described, the combination of a casing having foraminated walls, an inlet at one end and brushes revolubly mounted within the casing with a curved slide covering a portion of the periphery of the casing and adjustable in position relatively to the periphery of the casing, said slide having a bent end with openings therethrough.

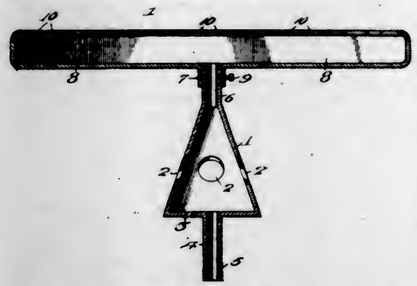
3. In a separator of the type described, the combination of a separating chamber, a casing having foraminated walls mounted in said chamber, brushes revolubly mounted within the casing, a curved slide covering a portion of the periphery of the casing and adjustable in position relatively to the periphery of the casing, said slide having a bent end with openings therethrough, said bent end carrying deflectors disposed over said openings.

4. In a separator of the type described, the combination with a separating chamber, a perforated casing mounted within said chamber and having an inlet in its end, rotary brushes mounted within said casing, a slide partly surrounding the casing and movable around the periphery thereof, said slide having a radially extending end with openings therethrough, and deflectors above said openings, of means for forcing air around said casing and through said openings.

5. In a separator of the type described, the combination with a separating chamber, and a foraminated casing mounted in said chamber, rotary brushes mounted in said casing, means for circulating air around the casing, said chamber having a discharge spout located beneath the casing and a second discharge spout located in the rear of the casing, of a slide covering a portion of the periphery of the casing and movable relatively thereto in a circular path, said slide having one end bent radially to the casing and formed with openings and rotary brushes mounted within the separating chamber laterally of said casing.

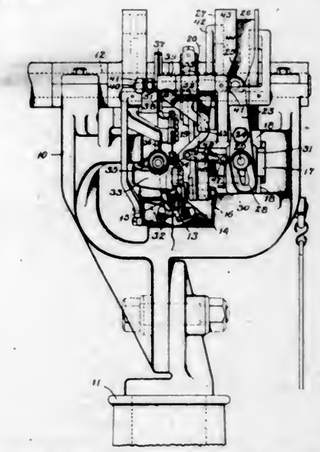
[Claims 6 to 15 not printed in the Gazette.]

873,485. GAS-BURNER. JAMES BALL, Louisa Ky. Filed Mar. 31, 1906. Serial No. 309,146.



A gas burner comprising a cone-shaped mixing chamber with a series of openings arranged at suitable distances apart around its surrounding wall, the bottom of the chamber having a depending screw threaded nozzle, a neck formed by a continuation of the upper end of the cone, a flat top distributing chamber having a single row of inclined outlet openings arranged on opposite sides of its top portion, said openings being constructed in pairs and arranged at suitable distances apart, and said distributing chamber having a central nozzle serving to be slidably mounted on said neck and a set screw for detachably securing the nozzle to said neck, substantially as specified.

873,486. CHAIN-STITCH SHOE-SEWING MACHINE. HARRIE A. BALLARD, Ashland, Mass., assignor to The Boylston Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed Mar. 13, 1905. Serial No. 249,693.



1. A chain-stitch shoe-sewing machine comprising stitch-forming mechanism including a hooked needle, a looper and means for operating them, a thread-finger, work-feeding mechanism adapted to feed the work one step for each stitch, and adapted to cause said thread-finger to draw from the thread supply a predetermined supply of thread through the looper for each stitch.

2. A chain-stitch shoe-sewing machine comprising stitch-forming mechanism including a hooked needle, a looper and means for operating them, a thread-finger, work-feeding mechanism adapted to feed the work one step for each stitch, means for varying the length of the steps, and means for causing said thread-finger to draw from the thread-supply a supply of thread through the looper proportionate to the length of each step.

3. A chain-stitch shoe-sewing machine comprising stitch-forming mechanism including a hooked needle, a looper and means for operating them, a thread-finger, work-feeding mechanism adapted to feed the work one step for each stitch, and means actuated by said work-feeding mechanism for causing said thread-finger to engage the thread between the looper and the work and to draw from the thread-supply a predetermined supply of thread for each stitch.

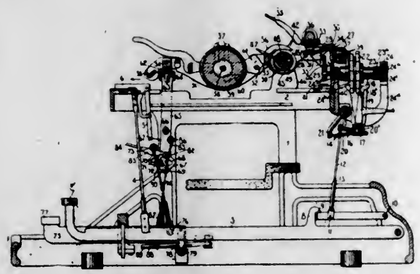
4. A chain-stitch shoe-sewing machine comprising stitch-forming mechanism including a hooked needle, a looper and means for operating them, a thread-finger, work-feeding mechanism adapted to feed the work one step for each stitch, means for varying the length of the steps, and means actuated by said work-feeding mechanism for causing said thread-finger to engage the thread between the looper and the work and to draw from the thread-supply a supply of thread for each stitch in proportion to the length of the steps.

5. A shoe-sewing machine comprising stitch-forming mechanism including a movable thread-finger adapted to

engage the thread, and means for vibrating said thread-finger in a predetermined direction, work-feeding means adapted to feed the work one step for each stitch, and means actuated by said work-feeding means for vibrating said thread-finger transversely of said predetermined direction.

[Claims 6 to 15 not printed in the Gazette.]

873,487. TYPE-WRITING MACHINE. WALTER J. BARRON, New York, N. Y., and HENRY W. MERRITT, Springfield, Mass., assignors to Densmore Typewriter Company, Syracuse, N. Y., a Corporation of New York. Original application filed Feb. 6, 1902, Serial No. 92,839. Divided and this application filed June 3, 1902. Serial No. 110,042.

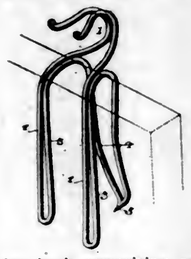


1. In a typewriting machine, the combination of a paper carriage, a transversely movable platen, key operated means for moving the platen transversely to any one of a plurality of positions and for retaining it in the position to which it has been moved, temporary shift keys one at each side of the keyboard, a rigid connection between said temporary shift keys, operative connections between one of said temporary shift keys and the key operated mechanism whereby both shift keys are operable to move the platen transversely from the position to which it has been moved by the first mentioned key operated mechanism and for permitting said platen to be restored to its initial position when pressure is removed from either of the temporary shift keys, both of the said temporary shift keys being at all times operable irrespective of the position of the key operated means.

2. In a platen shifting device for typewriting machines, the combination of a shift rod, a pivoted depending arm connected to said shift rod, a spring, an arm which is pivoted to the depending arm of the shift rod and is connected to one end of the spring, hand operated means for moving the pivoted arm to shift the tension of the spring to either side of the center on which the shift rod swings to apply the force of the spring in either one of two directions and thus move the shift rod accordingly, a rod as 74 controlled by said hand operated means and adapted at all times to act in opposition to said spring, and a plurality of finger keys which are at all times operable to actuate the rod 74 and to enable it to be automatically restored when pressure on the actuated finger key is released.

3. In a typewriting machine, the combination of a shiftable member, means for holding said shiftable member in either lower or upper case position at will, a transverse rock shaft connected to said shiftable member, and two temporary shift keys one on each side of the keyboard and both connected to said rock shaft on the same side of its axis, whereby both said temporary shift keys are adapted to shift the shiftable member in the same direction from normal position, that is to say, from lower case to upper case position or from upper case to lower case position according as the shiftable member is permanently held in one or the other of the two case positions and to afford an automatic return movement of the shiftable member when pressure on the actuated temporary shift key is released.

873,488. CLOTHES-LINE HOOK. AUGUSTUS H. DE BEAUMONT and AMOS J. J. DE BEAUMONT, Philadelphia, Pa. Filed July 29, 1907. Serial No. 385,971.

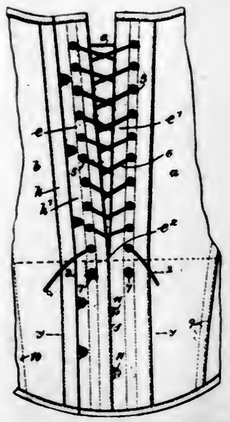


1. A clothes line hook comprising retaining members disposed on opposite sides of a fence, and a hook disposed above said members and formed continuous with the same.

2. A clothes line hook comprising parallel duplex members disposed on one side of a fence, a retaining member on the opposite side, and a hook disposed above said members and formed continuous with the same.

3. A bifurcated member adapted to fit over the edge of a fence, a hook integral therewith and extending above the arch of said bifurcated member, one of the legs of said bifurcated member being bent outwardly, and a projection at the lower end of said outwardly extending member.

873,489. APPAREL-CORSET. ALFRED H. BENJAMIN, East Orange, N. J., assignor to Benjamin & Johnes, Newark, N. J., a Firm. Filed Mar. 9, 1907. Serial No. 361,473.



1. In a corset and in combination with the half portions thereof, a solid back central portion from slightly below the waist to the top edge of the corset and lacing edges also at the center of the back from above the waist line to the lower edge, whereby the lower portion of the solid back and the upper laced edges overlap at the waist for a support to the waist.

2. In a corset and in combination with the half portions thereof, front lacing edges that extend centrally from the upper edge of the corset to slightly below the waist line, with the front of the corset below this point made solid, front steels parallel with and adjacent to the laced edges at one side of the center of the corset and extending from the top to the bottom of the corset, and a transverse back or anchor strip on the under side of the corset at the front and connected directly below the point of separation of the front into the lacing edges for the purpose of strengthening the beginning of the sewed line of union.

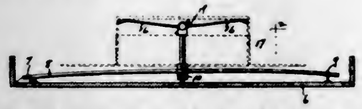
3. In a corset and in combination with the half portions thereof, front lacing edges that extend centrally from the upper edge of the corset to slightly below the waist line, with the front of the corset below this point made solid, front steels parallel with and adjacent to the laced edges at one side of the center of the corset and extending from the top to the bottom of the corset and abdominal flaps beneath the corset portions at the front and sewed permanently at its edges to the halves of the corset with the meeting hooked edges of the abdominal flaps at the center of the corset below the central sewed line of union.

4. In a corset and in combination with the half portions thereof, front lacing edges that extend centrally from the upper edge of the corset to slightly below the waist line, with the front of the corset below this point made solid, front steels parallel with and adjacent to the laced edges at one side of the center of the corset and extending from the top to the bottom of the corset and abdominal flaps formed of fabric members with series of substantially vertical bones in pockets and secured at the sewed lines of union 9 10 to the under surfaces of the corset portions at the front and with hook devices connecting the abdominal flaps at the center of the corset below the central sewed line of union.

5. In a corset and in combination with the half portions thereof, front lacing edges that extend centrally from the upper edge of the corset to slightly below the waist line, with the front of the corset below this point made solid, front steels parallel with and adjacent to the laced edges at one side of the center of the corset and extending from the top to the bottom of the corset, a transverse back or anchor strip on the under side of the corset at the front and connected directly below the point of separation of the front into the lacing edges for the purpose of strengthening the beginning of the sewed line of union and abdominal flaps formed of fabric members with substantially vertical bones in pockets secured at the sewed lines of union 9 10 to the under surfaces of the corset portions at the front and with hook devices connecting the abdominal flaps at the center of the corset below the central sewed line of union.

[Claims 6 to 9 not printed in the Gazette.]

873,490. HAT-HOLDER. RICHARD W. BOCK, Chicago, Ill. Filed Sept. 22, 1906. Serial No. 335,684.

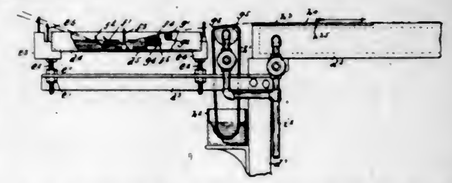


1. In a hat holder, a standard, and a support for the hat, comprising two frames secured to the standard, each of the frames having outwardly divergent side-arms, and a substantially V-shaped connecting arm providing contacting points or corners, the support as a whole being adjustable to different angles with respect to the standard, and the frames being independently adjustable with respect to one another, and a rod upon which the standard is slidably mounted, substantially as described.

2. In a hat holder, a standard, and a support for the hat, comprising two frames secured to the standard, each of the frames having outwardly divergent side arms, and a substantially V-shaped connecting arm providing contacting points or corners, the support as a whole being adjustable to different angles with respect to the standard, and the frames being independently adjustable with respect to one another, an adjusting nut for clamping the frames in adjusted position, and a rod upon which the standard is slidably mounted, substantially as described.

873,491. SILK-THREAD-FINISHING MACHINE. XAVER BOSSART, Paterson, N. J., assignor to American Silk Thread Finishing Co., of Paterson, N. J., a Corporation of New Jersey. Original application filed Mar. 22, 1905, Serial No. 251,442. Divided and this application filed Mar. 13, 1906. Serial No. 305,920.

1. In a machine for finishing and lustering textile filaments or the like, a heated metallic body having a contact surface for the filaments, the contact surface portion of said body having one part thereof composed of one metal and another part thereof composed of a metal affected by heat differently from said first-named part, substantially as described.



2. In a machine for finishing and lustering textile filaments or the like, a heated metallic body having a contact surface for the filaments, the contact surface portion of said body having one part thereof composed of one metal and another part thereof removable and composed of a metal affected by heat differently from said first-named part, substantially as described.

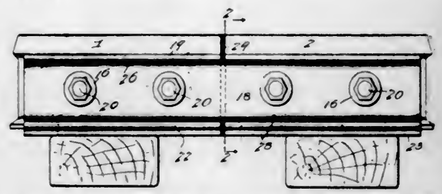
3. In a machine for finishing and lustering textile filaments, or the like, a metallic table having a recess in its top or acting surface and a metallic plate removably arranged in said recess and composed of a metal affected by heat differently from the metal of the table, substantially as described.

4. In a machine for finishing and lustering textile filaments or the like, a metallic table having a recess in its top or acting surface, spaced removable plates arranged in said recess transversely of the table, and means arranged between said plates for maintaining the threads in contact with both of said plates, substantially as described.

5. The combination of a suitable support, means for treating the threads in a suitable solution, a heated thread contact surface, a heated support arranged relatively between said means and said surface, and a flexible strip laid over and hanging pendent from the support and adapted to be engaged by the thread, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

873,492. INSULATED RAIL-JOINT. JAMES H. BROTHERS, Newark, N. J., assignor to The Rail Joint Company, a Corporation of New York. Original application filed Mar. 22, 1907, Serial No. 363,921. Divided and this application filed Sept. 7, 1907. Serial No. 391,847.

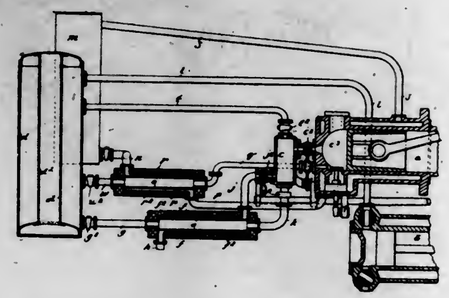


1. In a rail joint, the rails, continuous splice bars and discontinuous filler members, said filler members being arranged at the sides of each rail and having a bearing against the under sides of the rail heads and also having portions overlying the splice bars.

2. In a rail joint, the rails, continuous splice bars and separate discontinuous filler members, said filler members being arranged at the sides of each rail and having a direct bearing against the under sides of the rail heads, said filler members having portions overlying the splice bars which are of greater area than the area of the under sides of the rail heads.

3. In an insulated rail joint, the rails, continuous splice bars, separate discontinuous filler members arranged at the sides of each rail and having a bearing against the under side of the rail heads and on top of the splice bars, and insulating material interposed between the filler members and the splice bars.

873,493. INTERNAL-COMBUSTION ENGINE. ARTHUR M. BROWN, Ye Kowhai, Ngaruawahia, New Zealand, assignor to Providence Engineering Works, Providence, R. I., a Corporation of Rhode Island. Filed Sept. 20, 1904. Serial No. 225,274.



1. Attachments for internal combustion engines for the purpose set forth embodying a cooler for compressed air, a supplementary receiver provided with compartments, means for establishing communication between one of the compartments of the receiver and the cooler and between the other of the compartments of the receiver and a combustible gas or hydrocarbon supply, a mixing and controlling chamber, and means for establishing communication between the combustion chamber of the engine and one of said compartments of the receiver.

2. Attachments for internal combustion engines comprising means for introducing a cooled blast of scavenging air into the combustion chamber of the engine, said means embodying a receiver for compressed air, a water supply communicating with the jacket of the combustion chamber of the engine and a receiver provided with compartments, one of said compartments communicating at one end with said cooler and at its other end with the combustion chamber of the engine, and the other of said compartments communicating at one end with the water jacket, and at its other end with the water supply.

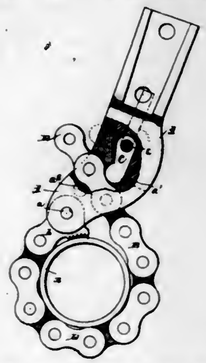
3. Attachments for internal combustion engines for the purpose set forth comprising a cooler for compressed air, a combined mixing and controlling chamber for the explosive mixture communicating with the combustion chamber of the engine, and means for supplying compressed air from said cooler to said combined mixing and controlling chamber.

4. Attachments for internal combustion engines, embodying a compressed air supply, a compartment receiver provided with compartments, a valve-feed pipe between one of the compartments of said receiver and said compressed air supply, a pipe communicating with the other of said compartments of said supplementary compartment receiver and with a combustible gas or hydrocarbon supply, and means for establishing communication between the compartments of said receiver and the combustion chamber of an engine.

5. Attachments for internal combustion engines, comprising the combination with a compressed air supply, of a supplementary compartment receiver, a valved feed pipe between one of the compartments of said receiver and said compressed-air supply, a pipe communicating with the other of said compartments of said supplementary compartment receiver and with a combustible gas or hydrocarbon supply, a combined mixing and controlling chamber, a valved pipe for establishing communication between said mixing chamber and the combustion chamber of the engine, a valved pipe for establishing communication between the air-receiving compartment of said supplementary compartment receiver and said mixing chamber, and a valved pipe for establishing communication between the other compartment of said supplementary compartment receiver and the said mixing chamber.

[Claims 6 to 8 not printed in the Gazette.]

873,494. PIPE-WRENCH. JAMES L. BROWN, Brookville, Pa. Filed Aug. 1, 1907. Serial No. 386,635.



1. The improved pipe wrench comprising the forked lever head having a solid abutment a', a dog pivoted adjacent to said abutment and adapted for contact therewith when in locking engagement, a chain pivotally attached to the nose of the forked head and adapted to pass through the space between the forks, and a pin a^2 arranged above the chain pivot, the distance between the said pin and the free end of the dog when the latter is in locking position being less than the diameter of the ends of the chain link, as shown and described.

2. The combination with a chain and a forked lever head having interior abutments a', a^2, the distance between them being greater than the thickness of the chain links, and a locking dog pivoted adjacent to the abutment a' and adapted when in locking position to rest against the latter in the manner described.

3. The combination with the forked lever head having abutments a' and a^2 and a chain pivotally attached to the nose of said head, of a dog pivoted at the inner angle of the abutment, its pivotal end being rounded and the adjacent portion of the abutment being correspondingly curved whereby the dog when in locking position rests against said abutment, and its pivotal end in contact with the curved portion of the latter, substantially as described.

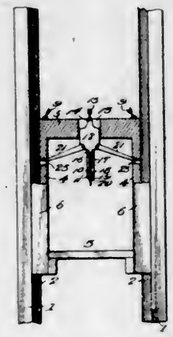
4. The improved chain pipe wrench comprising a chain and a forked lever head pivotally connected, fixed abutments a' and a^2 arranged in said head and a dog pivoted adjacent to one of the abutments, the center of the space in said head which is available for the chain being coincident with the central line of the pulling strain and a line passing diametrically through the pipe to which the wrench may be applied, as shown and described.

5. A chain pipe-wrench, comprising a forked lever head, a chain and a biting link b that pivotally connects it with said head, the lever head having a locking device and a transverse bearing pin a^2, the space in the forked head at the right of said pin being free to permit shifting the chain toward and from the pivot a when applied to objects of different diameters, the center line of strain on the chain remaining between the center of pin a^2 and the contact end of the locking device, as shown and described.

873,495. ELEVATOR SAFETY APPLIANCE. SAMUEL BRUCE, Helvetia, Pa. Filed Mar. 5, 1907. Serial No. 360,689.

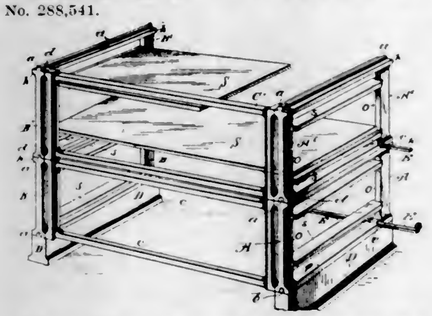
1. The combination with an elevator car including a cross beam provided with an opening, of a U-shaped frame secured to the cross beam, a draw bar slidably mounted in the opening of the cross beam, an elevating cable secured to the draw bar, safety levers pivotally secured to said draw bar, a tie bolt adjustably secured to the cross bar of the U-shaped frame, and a spring secured at one end to the draw bar and at its other end to the tie bolt.

2. The combination with an elevator car including a cross beam provided with an opening, of a U-shaped frame having the terminals of its arms secured to opposite sides of the cross beam, a draw bar slidably mounted in the opening of the cross beam and between the arms of the U-shaped frame, an elevating cable secured to the



draw bar, safety levers pivotally secured to said draw bar, a tie bolt adjustably secured to the cross bar of the U-shaped frame, and a spring secured at one end to the tie bolt.

873,496. SYSTEM OF SHELF-SUPPORTS. EDWARD W. BRYANT, New York, N. Y., assignor of one-half to John J. Corell, Norfolk, Va. Filed Nov. 22, 1905. Serial No. 288,541.



1. A skeleton shelf supporting structure, consisting of a series of alined stacks of superposed shelf supporting frames, provided upon their upper and lower surfaces respectively with dovetailed tongues and grooves, and upon their sides with registering dovetailed slots, and connecting pieces between said stacks, provided with dovetailed ears adapted to enter said slots, and so arranged that each of said connecting pieces engages at each end with two of said shelf supporting frames.

2. A skeleton shelf supporting structure, composed of a series of alined stacks of shelf supporting frames, provided upon their upper and lower surfaces with dovetailed tongues and grooves, whereby vertical displacement of said frames is prevented, and connecting pieces between said stacks so arranged that each of said pieces engages at each end with two of said shelf supporting frames.

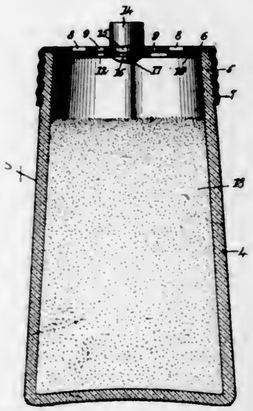
3. A skeleton shelf supporting structure, composed of a series of alined stacks of shelf supporting frames, provided upon their sides with registering dovetailed slots, and connecting pieces between said stacks, provided at each end with dovetailed ears adapted to enter said slots, and so arranged that each of said connecting pieces engages at each end with two of said frames, whereby the stacks are held together, and horizontal displacement of said frames is prevented.

4. A skeleton shelf supporting structure, composed of a series of alined stacks of shelf supporting frames, means for preventing vertical displacement of said frames, and connecting pieces between said stacks, so arranged that each of said connecting pieces engages at each end with two of said shelf supporting frames, whereby the stacks are held together, and horizontal movement of said frames one upon another is prevented.

5. A skeleton shelf supporting structure composed of alined stacks of vertical frames, having interlocking devices for preventing the vertical displacement of said frames and provided with shelf supports, and connecting pieces independent of the shelving constructed to hold the stacks together, and prevent the disengagement of said interlocking parts, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

873,497. RECEPTACLE FOR POWDERED SUBSTANCES. YOUNG K. BUELL, New York, N. Y. Filed Sept. 18, 1907. Serial No. 393,454.



1. A receptacle for powdered substances, comprising a body portion, a cap mounted thereupon and provided with slots of substantially arcuate form, a gage plate rotatably mounted on the cap and likewise provided with slots of substantially arcuate form, the slots of said gage plate crossing the slots of said cap, and means for turning said gage plate.

2. A receptacle for powdered substances, comprising a body portion provided with slots of substantially arcuate form, and a gage plate rotatably mounted upon said body portion and likewise provided with slots of substantially arcuate form, the slots of said gage plate crossing the slots of said body portion, all of the slots in said body portion and said gage plate being narrower at their inner ends.

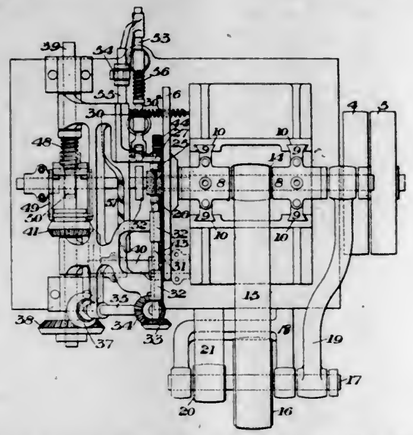
873,498. MACHINE FOR GRINDING OR FINISHING CORKS. HERMAN F. BUSCH, Millvale, Pa., assignor to Armstrong Cork Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Aug. 8, 1907. Serial No. 387,646.

1. In a cork grinding machine, a reciprocating grinding wheel, means for rotating the wheel as it is reciprocated, and means for bringing and holding the corks to the action of said wheel; and means for permitting the cork-holding means to move towards and away from the wheel while the corks are being ground, substantially as described.

2. In a cork grinding machine, the combination with a rotary reciprocating grinding wheel having its grinding face provided with abrasive portions of different characters, of an oscillating cork holder, and means for moving the same towards and away from said grinding face; substantially as described.

3. In a cork grinding machine, the combination with a rotary reciprocating grinding wheel having its grinding face provided with inner and outer portions of different characters, of a feed chute for the cork blanks, and a piv-

oted cork holding device arranged to oscillate between the lower end of the chute and the grinding wheel, and means for periodically operating the same; substantially as described.

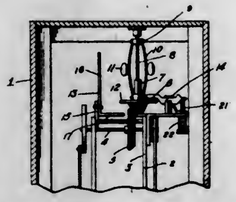


4. In a cork grinding machine, the combination with a rotary reciprocating grinding wheel, of a feeding device for the cork blanks to be ground, an oscillating frame arranged to move between the feeding device and the grinding wheel, cork-holding chucks journaled in said frame, means for rotating said chucks while the cork is being ground, and means for stopping the rotation of the chucks while the frame is moving from the wheel to the feed device and back; substantially as described.

5. In a cork grinding machine, a vertically-movable frame, a cam for reciprocating the frame, a grinding wheel journaled in the frame, means for rotating said wheel during the reciprocation of the frame, an oscillating cork holder having chucks, cam means for oscillating said holder towards and away from the grinding wheel, means for rotating the chucks at definite times and for holding them at rest at other times, and means for moving one of the chucks towards and away from the other; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

873,499. SPRING-MOTOR. SAMUEL B. BYNUM, Jackson, Tenn., assignor of one-fourth to William F. Lamb, one-eighth to John P. Mallory, and one-eighth to Clarence E. Pigford, Jackson, Tenn. Filed Dec. 21, 1906. Serial No. 348,931.



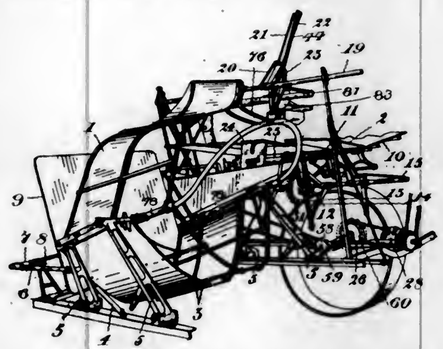
1. In a spring motor, the combination with a shaft, of a governor shaft, a brake disk slidable on the latter, a gear carried by said disk, a gear on the motor shaft to mesh with the first mentioned one, springs fixed at one end to the governor shaft and at the other end to said brake disk, weights upon said springs, and means for elevating the brake disk to throw its gear out of mesh with the gear on the motor shaft.

2. In a spring motor, the combination with a shaft, of a governor shaft, a brake disk slidable on the latter, a gear carried by said disk, a gear on the motor shaft to mesh with the first mentioned one, springs fixed at one end to the governor shaft and at the other end to said brake disk, weights upon said springs, and a lever for elevating the brake disk to throw its gear out of mesh with the gear on the motor shaft.

3. In a spring motor, the combination with a shaft, of a governor shaft, a brake disk slidable on the latter, a gear carried by said disk, a gear on the motor shaft to mesh with the first mentioned one, springs fixed at one end to the governor shaft and at the other end to said brake disk, weights upon said springs, a brake lever to co-act with the brake disk, means for adjusting said brake lever and another lever for engagement with the opposite side of the brake disk for the purpose specified.

4. In a motor, the combination with a shaft, of a governor shaft a gear slidably arranged upon the governor shaft, a centrifugally acting device between said gear and said governor shaft, a gear upon the motor shaft adapted to be engaged by the gear on the governor shaft and a lever pivoted intermediate its ends and having one end forming a handle and its other end adapted to lift the gear on the governor shaft out of mesh with the gear on the motor shaft, substantially as described.

873,500. APPARATUS FOR SHOCKING GRAIN. JAMES CALDER, Hamilton, Ontario, Canada, assignor to The Calder Grain Shocker Company, Limited, Hamilton, Canada. Filed Mar. 8, 1906. Serial No. 304,934.



1. A harvester-binder and the binder-deck thereof, in combination with a shock receptacle suitably supported adjacent to the binder deck; and binding mechanism for a shock carried on the binder, substantially as described.

2. A harvester-binder and the binder-deck thereof, in combination with a shock receptacle suitably supported adjacent to the binder-deck; a needle for binding the shock carried by the binder above the binder-deck; and a knotter adapted to coöperate with the needle and located below the binder-deck, substantially as described.

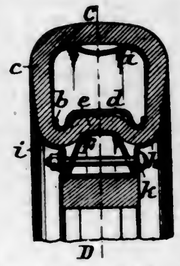
3. A harvester-binder and the binder deck thereof, in combination with a shock receptacle suitably supported adjacent to the binder-deck; binding mechanism for a shock carried on the binder comprising a needle and a knotter; and means for reciprocating the needle in a straight line, substantially as described.

4. A harvester-binder and the binder-deck thereof, in combination with a shock receptacle suitably supported adjacent to the binder-deck; a needle for binding the shock; guides for the needle carried by the binder; means for reciprocating the needle in the guides; and a knotter carried by the binder and adapted to coöperate with the needle, substantially as described.

5. A harvester-binder and the binder-deck thereof, in combination with a shock receptacle suitably supported adjacent to the binder-deck; a needle for binding the shock, inclined from its point towards the binder and away from the shock receptacle; guides for the needle carried by the binder; means for reciprocating the needle in the guides; and a knotter adapted to coöperate with the needle, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

873,501. ELASTIC TIRE FOR WHEELS. TITO L. CARBONE, Charlottenburg, Germany. Filed May 22, 1907. Serial No. 375,075.



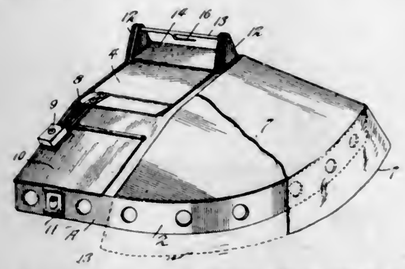
1. In elastic tires for wheels the combination with an annular tubular casing of elastic material and with inextensible spreading rings disposed within said casing of externally disposed means for forcing part of said casing inwards.

2. In elastic tires for wheels the combination with an annular tubular casing of rubber and with two inextensible spreading rings disposed within said casing, one of said spreading rings having a circumferential groove, of a third ring of variable diameter disposed externally of said casing and of means for varying the diameter of said third ring.

3. In elastic tires for wheels the combination with an annular tubular casing of rubber and with two inextensible spreading rings disposed within said casing, the inner of said spreading rings being provided on its inner side with a circumferential groove, of a ring placed inside the inner of said spreading rings and externally of the said casing, said latter ring being composed of several separate segments and of means for forcing said segments away from the center of the wheel.

4. In an elastic tire for wheels the combination with an annular tubular casing of rubber containing an outer and an inner inextensible spreading ring, the inner ring being provided with a circular groove on the side facing the center of the wheel, of a third ring placed on the inner side of the said rubber casing but externally thereof said third ring being composed of separate segments, and of an ordinary wheel having a rigid tire placed within the said segmental ring means being provided to force said segments away from the tire of the said wheel.

873,502. ANIMAL-TRAP. JOHN O. CARLSON and CARL O. HEDSTROM, Funk, Nebr. Filed July 23, 1907. Serial No. 385,166.



1. In an animal trap, a quadrant shaped casing having a partition connecting the two straight sides and forming a receiving compartment at the corner of the casing, a pivotally supported trap door forming the top of the receiving compartment, a yoke supported pivotally adjacent to the free end of the trap door and having a beveled catch engaging the latter, and a rock shaft supporting the yoke and having a bait hook.

2. In an animal trap, a casing having a receiving compartment and a storage compartment, a pivotally supported trap door forming the top of the receiving compartment, a yoke supported pivotally adjacent to the free end of the trap door and having a catch engaging the latter, a weight carrying arm extending from the pivotally supported end of the trap door, and a door for the storage compartment of the trap, said door being arranged beneath the weight carrying arm, and normally obstructed by said arm.

873,503. RECEPTACLE FOR THE DRAIN-WATER OF REFRIGERATORS AND ALARM THEREFOR. ANDREW CASALE, New Haven, Conn. Filed Apr. 17, 1907. Serial No. 368,762.



In combination with a refrigerator a casing divided into two compartments by a partition one compartment forming a tank and the other a housing or receptacle for the reception of the operating mechanism, a float, a lever pivoted upon the partition relatively near to the extremity of said lever, the float attached to the longer arm of said lever, an L-shaped metallic spring strip clamped by the shorter arm of the L to the side of the housing and in circuit with an electric battery, a free end of said strip projecting beneath the shorter end of the lever within the housing and adapted to serve as an electric terminal, an adjusting screw threaded through the inner extremity of the shorter arm of the lever and adapted to contact with said strip when the water shall have reached any desired point within the tank, a battery within the housing adapted to be actuated by the contact between the screw and the strip a bell adapted to be actuated by the battery, a cover hinged to the housing a door hinged to the cover, hinges on one side of the casing an oppositely disposed hasp adapted to coöperate with the hinges and fasten the casing to the bottom of the refrigerator as specified.

873,504. COMPOSITE BUILDING STRUCTURE. BENJAMIN CERUTTI, Habana, Cuba. Filed Feb. 25, 1907. Serial No. 359,167.



1. A composite structure comprising supporting beams of inverted T-shape, said beams near their top edges provided with a plurality of openings, flat tie members extending through the openings, filling blocks of shell-like formation interposed between a pair of beams and supported upon the base thereof, curvilinear suspension cables embedded in the filling blocks and projecting from each end thereof and further extending over the tops of the beams and with the ends of the cables which extend from one end of one block secured to the ends of the cables which project from the opposing end of another block, and a layer of plastic material extending over the top of the blocks and embedding the upper portion of the beams and projecting ends of the cables.

2. A composite structure comprising supporting beams of inverted T-shape, filling blocks arranged at each side of said beam, the blocks upon opposite sides of the beams each having the end which opposes the beam mounted upon the base of the latter, means for supporting the other end of the blocks, suspension cables embedded in each of the blocks and projecting from each end of their respective block, the ends of the cables at one end of the blocks at one side of the beam extending over the latter and connected to the ends of the cables which project from one end of the blocks upon the opposite side of the beam, and a layer of plastic material extending over the tops of the blocks and embedding the upper portion of the beam and projecting ends of the cables.

3. A composite structure comprising supporting beams, filling blocks arranged at each side of said beam, the blocks

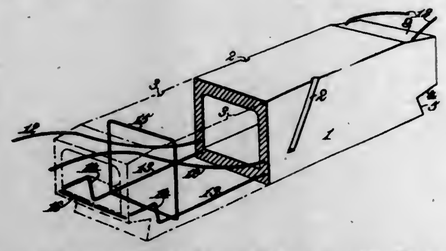
upon opposite s ides of the beams each having the end which opposes the beam mounted upon the base of the latter, means for supporting the other end of the blocks, suspension cables embedded in each of the blocks and projecting from each end of their respective block, the ends of the cables at one end of the blocks at one side of the beam extending over the latter and connected to the ends of the cables which project from one end of the blocks upon the opposite side of the beam, and a layer of plastic material extending over the tops of the blocks and embedding the upper portion of the beam and projecting ends of the cables.

4. A composite structure comprising the combination with supporting beams, of plastic filling blocks of shell-like formation having each lower corner cut away to form a shoulder, said filling blocks of shell-like formation interposed between and having the shouldered portions thereof mounted upon the base of the beams, said lower face of the filling blocks when mounted upon the base of the beams flush with the lower face of the base of the beams, metallic cables extending through each of the filling blocks, projecting from both ends thereof and having the projecting ends extending over the tops of the beams, the projecting ends of the cables of the blocks upon one side of the beams connected to the projecting ends of the cables of the blocks upon the other side of the beams, and a layer of plastic material extending over the filling blocks and embedding the upper portion of the beams.

5. A composite structure comprising the combination with supporting beams, of plastic filling blocks of shell-like formation having each lower corner cut away to form a shoulder, said filling blocks of shell-like formation interposed between and having the shouldered portions thereof mounted upon the base of the beams, said lower face of the filling blocks when mounted upon the base of the beams flush with the lower face of the base of the beams, metallic cables extending through each of the filling blocks, projecting from both ends thereof and having the projecting ends extending over the tops of the beams, the projecting ends of the cables of the blocks upon one side of the beams connected to the projecting ends of the cables of the blocks upon the other side of the beams, and a layer of plastic material extending over the filling blocks and embedding the upper portion of the beams, combined with short tie members carried by the beams near the tops therof and embedded in the plastic material.

[Claims 6 to 8 not printed in the Gazette.]

873,505. HOLLOW BUILDING-BLOCK. BENJAMIN CERUTTI, Habana, Cuba. Filed May 15, 1907. Serial No. 373,812.



1. A hollow building block adapted to have its ends mounted upon supports and having its opening extending in the direction of its length, and a transversely extending frame embedded in the block and surrounding the opening at each end of the block in close proximity to the supports thereby reinforcing the ends of the block.

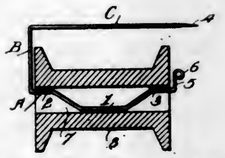
2. A hollow building block adapted to have its ends mounted upon supports and comprising a transversely extending frame embedded in the block and surrounding the opening at each end of the block in close proximity to the supports thereby reinforcing the ends of the block, and suspension cables extending through the sides of the block and abutting against the sides of the frame, thereby preventing lateral displacement of the cables in one direction.

3. A hollow building block adapted to have its ends mounted upon supports and comprising a transversely extending frame embedded in the block and surrounding the opening at each end thereof in close proximity to the supports thereby reinforcing each end of the block, and longitudinally extending reinforcing members arranged in the bottom of the sides of the block and abutting against the bottom and sides of the frame to prevent lateral displacement of said members in one direction.

4. A hollow building block adapted to have its ends mounted upon supports and comprising transversely extending reinforcing frames embedded in the block and surrounding the opening at each end thereof in close proximity to the supports thereby reinforcing the ends of the block, suspension cables embedded in the block adapted to abut against said frames to prevent lateral displacement of said cables in one direction, and longitudinally extending reinforcing members abutting against said frames to prevent lateral displacement of said members in one direction.

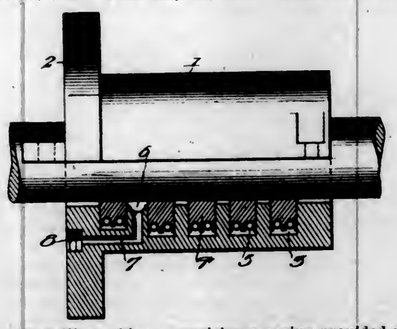
5. A hollow building block adapted to have its ends mounted upon supports and comprising transversely extending frames embedded in the block and surrounding the opening of each end thereof, longitudinal suspension cables embedded in the block, projecting therefrom, extending through and abutting against said frames, thereby preventing lateral displacement in one direction of said cables, said cables, in connection with the supports, sustaining the block, and longitudinally extending reinforcing members projecting through and abutting against said frames, thereby preventing lateral displacement of said members in one direction.

873,506. SPOOL-HOLDER. HERVEY D. CLARK, Arcola, Ill. Filed July 10, 1907. Serial No. 383,096.



A spool holder formed of a piece of resilient wire and comprising a body portion, a connecting portion and an attaching portion formed approximately at right angles to each other, said attaching portion being approximately parallel to the body portion, and the latter being provided intermediate its ends with an arch and at its free or terminal end with a catch extending opposite to the arch and having a terminal eye.

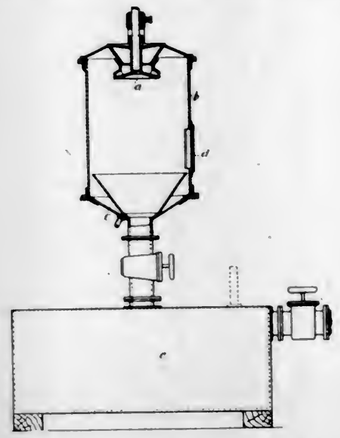
873,507. METALLIC PACKING. EDWARD M. COOK, Oberlin, Ohio. Filed May 29, 1907. Serial No. 376,302.



1. A metallic packing comprising a casing provided with a series of internal cavities, the outer cavity of the series being shallower than the other cavities, and packing rings arranged in said cavities, the casing also being provided between the shallow cavity and the next adjacent cavity with a condensation outlet extending radially from the piston space to a point beyond said shallow cavity and thence longitudinally past said outer cavity through the outer end of the casing.

2. A metallic packing comprising a casing provided with a series of packing ring cavities, the outer cavity of the series being shallower than the others, a gutter between said shallow cavity and the next adjacent cavity, and a condensation drain outlet of L-form, having a portion extending radially outward from said gutter between said adjacent cavities to a point beyond the cavities and thence longitudinally of the casing and through the outer end thereof.

873,508. ELECTRODEPOSITION OF COPPER AND OTHER METALS. SHERARD O. COWPER-COLES, London, England. Filed Nov. 12, 1906. Serial No. 343,100.



1. In the electrodeposition of metals from solutions which have to be maintained in an oxidized state, the process of freeing the solution from impurities in suspension, which consists in passing the same through an atomizer and bringing it into intimate contact with air so as to convert and maintain it in an oxidized state, substantially as described.

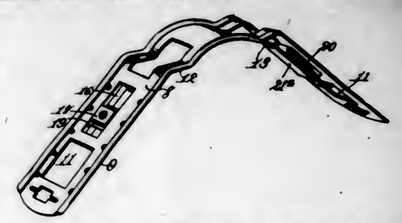
2. In the electrodeposition of metals from solutions which have to be maintained in an oxidized state, the process wherein the solution is freed from impurities in suspension by centrifugal force and is brought into intimate contact with air so as to convert and maintain it in the oxidized state, substantially as hereinbefore described.

3. In the electrodeposition of metals from solutions which have to be maintained in an oxidized state, the process wherein the solution is freed from impurities in suspension by centrifugal force and is brought into intimate contact with air and strong light so as to convert and maintain it in the oxidized state, substantially as hereinbefore described.

4. In the electrodeposition of metals from solutions which have to be maintained in an oxidized state, the process of freeing the solution from impurities in suspension, which consists in passing the same through an atomizer and bringing it into intimate contact with air and in subsequently treatng it to free it from air, substantially as described.

5. In the electrodeposition of copper from solutions the process wherein the solution is aerated and then conveyed through filtering material, the said solution being also submitted to the action of strong light, substantially as described.

873,509. SADDLETREE-PLATE. JOHN E. L. CRAWFORD, Lisbon, Ohio. Filed May 17, 1907. Serial No. 374,154.



1. A saddle tree plate comprising a strip of sheet metal provided with stiffening members arranged solely at the top of the strip and inclosed by bent-over marginal portions of the strip, the parts of the bent-over marginal portions of the strip which do not inclose the stiffening members lying flat against the strip, thereby reinforcing it.

2. A saddle tree plate comprising a strip of sheet metal substantially arch-shaped in contour and having the longitudinal marginal portions thereof bent parallel with the strip to reinforce it, and stiffening members arranged against the outer face of the strip and inclosed by the bent marginal portions thereof, said members of less length than said strip said strip at a point intermediate the center and each end thereof offset.

3. A saddle tree plate comprising a strip of sheet metal substantially arch-shaped in contour and having the longitudinal marginal portions thereof bent against the strip to reinforce it, and stiffening members arranged at the top of the strip and inclosed by the bent marginal portions thereof, said members of less length than said strip said strip at a point intermediate the center and each end thereof offset and further provided with a plurality of openings for terrets.

4. A saddle tree plate formed from a strip of metallic material having portions thereof bent downwardly to form a box for the socket of a terret, said strip further having portions overlapping the lower face to constitute a support for the socket of the terret and bearing for the upper face of the back band.

5. A saddle tree plate formed from a strip of metallic material substantially arch-shaped in contour and formed with rectangular openings for the backband, and openings of like contour for terret sockets, the openings for the terret sockets being of less width than the openings for the backband, said strip further having offset portions so as to provide the strip with raised portions of a height equal to the thickness of a backband.

[Claim 6 not printed in the Gazette.]

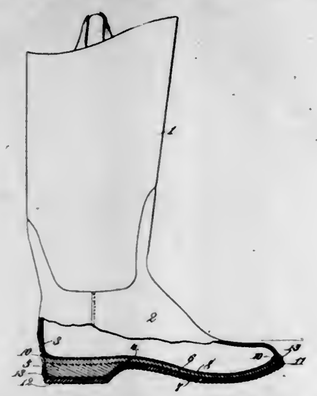
873,510. RUBBER BOOT AND SHOE. THOMAS CROWLEY, Lambertville, N. J. Filed May 28, 1907. Serial No. 376,178.

1. A rubber boot comprising an inner sole, a heel block secured to the lower face of said sole at the rear thereof and having the forward portion thereof beveled, a filler positioned against the lower face of the inner sole, against the beveled portion of the heel and against the lower face of the heel block, a foot portion overlapping the heel block at the rear thereof and abutting against the rear end of the filler and further overlapping the inner sole at the front thereof and abutting against the forward end of the filler, and an outer sole inclosing the heel block and inner sole and overlapping and secured to the foot portion.

2. A rubber boot comprising an inner sole, a heel block secured to the inner sole, a foot portion overlapping the lower face of the inner sole and the lower face of the heel block, and an outer sole abutting against the overlapping part of the foot portion and overlapping and secured to the outer face of the foot portion.

3. A rubber boot comprising an inner sole, a heel block secured to the lower face of said inner sole at the rear thereof, a foot portion overlapping the lower face of the heel block and inner sole, a filler interposed between the

edge of the overlapping part of the foot portion, and an outer sole abutting against the filler, the overlapping part of the foot portion, and overlapping and secured to the outer face of the foot portion.



4. A rubber boot comprising an inner sole, a heel block secured to the lower face thereof at the rear, said heel block having the forward portion thereof beveled, a foot portion overlapping the lower face of the heel block and inner sole, and an outer sole abutting against the overlapping part of the foot portion and overlapping and secured to the outer face of the foot portion.

5. A rubber boot comprising an inner sole, a heel formed of a single member and secured to the lower face of the inner sole at the rear thereof, said heel having the forward portion thereof beveled, a foot portion overlapping the heel and the inner sole, and an outer sole abutting against the overlapping part of the foot portion and overlapping and secured to the outer face of the foot portion.

873,511. THERMOSTAT. CHARLES A. CYPHERS, Buffalo, N. Y., assignor, by mesne assignments, to Model Incubator Company, Buffalo, N. Y., a Corporation of New York. Filed Dec. 7, 1905. Serial No. 290,791.



1. In a thermostat, the combination of a substantially straight member and a bowed member having different coefficients of expansion, secured together rigidly at the ends and having registering corrugations formed longitudinally thereof intermediate the ends; said bowed member being adapted to bend intermediate its ends when affected by changes in temperature; substantially as described.

2. In a thermostat, the combination with a straight member corrugated longitudinally throughout its width, of a bowed member secured rigidly to the straight member at the ends and having longitudinal corrugations registering with the corrugations of the straight member; said members having different coefficients of expansion and the bowed member being adapted to bend intermediate its ends when affected by changes in temperature; substantially as described.

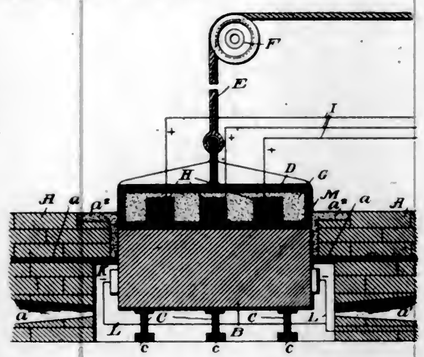
3. In a thermostat the combination with an intermediate straight member corrugated longitudinally, of bowed members having a different coefficient of expansion therefrom located on opposite sides thereof and secured rigidly thereto at the ends, said bowed members having longitudinal corrugations registering with the corrugations of the straight members and being adapted to bend intermediate their ends when affected by changes in temperature; substantially as described.

4. In a thermostat, the combination of a plurality of sections, each composed of longitudinally corrugated substantially straight and bowed members secured together, said straight members having a coefficient of expansion different from that of said bowed members, the corrugations of the members and sections registering with each other in proximity to the points of union and the bowed members being adapted to bend intermediate their ends when affected by changes in temperature.

5. In a thermostat, the combination of a plurality of sections, each composed of straight and bowed members having different coefficients of expansion corrugated longitudinally throughout their width, the corrugations registering in proximity both to the points of connection between the members of the sections and to the points of connection between the sections and the bowed members being adapted to bend intermediate their ends when affected by changes in temperature; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

873,512. FACE-HARDENED STEEL PLATE. CLELAND DAVIS, U. S. Navy, assignor, by mesne assignments, to Carnegie Steel Company, Pittsburg, Pa., a Corporation of New Jersey. Original application filed Apr. 10, 1901, Serial No. 55,124. Divided and this application filed Apr. 23, 1902. Serial No. 104,379.



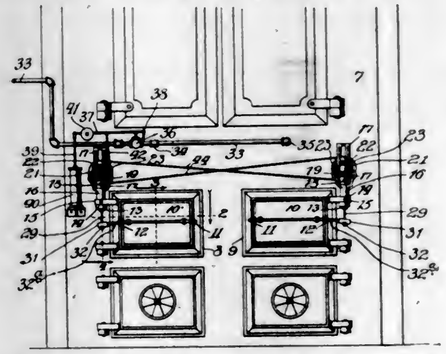
1. An integral mass of steel the face of which is uniformly impregnated with absorbed carbon to a prescribed depth, the carbon decrementally shading off below that depth, the percentage of the carbon in the portion of the plate so impregnated being greater than the normal content of the body of the plate substantially as described.

2. A hard faced armor plate composed of an integral mass of steel having one face impregnated with absorbed carbon uniformly to a prescribed depth, and the carbon shading off decrementally below that depth, the percentage of carbon in the portion of the plate so impregnated being greater than the normal content of the body of the plate substantially as described.

3. An integral steel plate having a surface portion or stratum of determinable depth containing a substantially uniform content of carbon which is higher than the normal content of the plate body, and an underlying portion or stratum in which the carbon content shades off decrementally into the body of the plate; substantially as described.

873,513. SMOKE-PREVENTING APPARATUS. JOHN P. DAVIS, Chicago, Ill., assignor of two-fifths to Llewellyn Morton, Chicago, Ill. Filed Nov. 10, 1906. Serial No. 342,775.

1. In a furnace, the combination with a hinged fuel-door containing an air-inlet, of an air-door movably supported thereon to open and close said inlet, a reciprocably supported rod, a loose crank-like connection between said air-door and rod constructed to adapt said rod at the point of its said connection to be maintained in a position coincident with the axis upon which said fuel-door swings, and means for moving said rod to swing the air-door.



2. In a furnace, the combination with a hinged fuel-door containing an air-inlet, of an air-door rotatably journaled thereon to swing on an axis at an angle to that upon which said fuel-door swings for opening and closing said inlet, a reciprocably supported rod, means for moving said rod, and a loose crank-like connection between said air-door and rod constructed to adapt said rod at the point of its said connection to be maintained in a position coincident with the axis upon which said fuel-door swings.

3. In a furnace, the combination with a hinged fuel-door, of an air-door journaled thereon and provided near its outer end with a bent arm, a reciprocable rod and means for raising it, and a loose connection between said bent arm and rod constructed to adapt said rod at the point of its said connection to be maintained in a position coincident with the axis upon which said fuel-door swings.

4. In a furnace, the combination with a hinged fuel-door of an air-door journaled thereon and provided near its outer end with a crank-like arm, a thimble with which said arm is loosely engaged, a reciprocable rod loosely connected with said thimble in a manner to adapt said rod at the point of its said connection to be maintained in a position coincident with the axis upon which said fuel-door swings whereby the raising of the said rod will open said air-door, and means for maintaining said air-door in open condition after the fuel-door is closed.

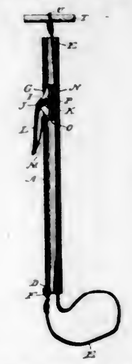
5. In a furnace, the combination with a hinged fuel-door, of an air-door journaled thereon, a reciprocable rod, means for raising the rod, a loose crank-like connection between said air-door and rod constructed to adapt said rod at the point of its said connection to be maintained in a position coincident with the axis upon which said fuel-door swings, and means for maintaining said air-door in open condition after the fuel-door is closed.

[Claims 6 to 12 not printed in the Gazette.]

873,514. HOG CATCHER AND HOLDER. JOSHUA DAVIS, New Ross, Ind. Filed Feb. 2, 1907. Serial No. 355,397.

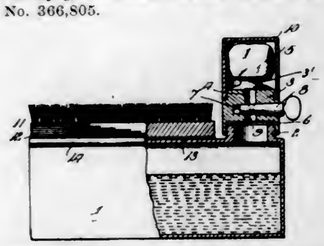
1. In an implement for catching and holding hogs, a main part comprising a tube having two opposite sides at an end thereof pressed together and forming two internal ribs joined together to form a partition, there being two openings thus formed in the end and communicating with the interior of the tube, in combination with a cord movable in the opening at one side of the said partition and fixed in the opening at the opposite side of said partition, as shown and described.

2. In an implement for catching and holding hogs, a main part comprising a tube with a slot in the wall thereof and having the wall thereof flattened at opposite sides of the slot, the metal at opposite sides of the slot being turned outwardly and forming two projecting ears to which a pivot is attached, a dog mounted between said ears on said pivot and having a hand lever, and a spring seated between the tube and the lever, in combination with a cord fastened to an end of the tube and extending therethrough past the dog, as shown and described.



3. In an implement for catching and holding hogs, the combination of a main part comprising a tube with a slot therein, a cable extending through the tube and fastened to an end thereof, a dog pivoted in the slot and having a lever, a spring seated between the tube and the lever of the dog, and a movable grooved shoe to engage the cord and having a recess therein to receive the nose of the dog, said dog being pivoted to said shoe, as shown and described.

873,515. SHOE-POLISHING DEVICE. HENRY W. DEDELS, Winnipeg, Manitoba, Canada. Filed Apr. 6, 1907. Serial No. 366,805.



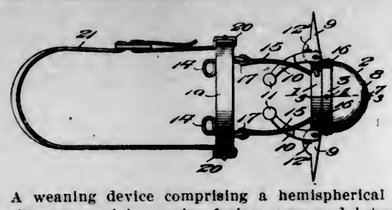
1. A polishing device comprising a liquid containing receptacle provided with an opening and an externally threaded boss at the said opening, a neck provided with a passage communicating with the opening, one end of the neck having a threaded engagement with the boss, a plug-valve controlling the passage of the neck and arranged with its axis at right angles to the passage and removable with the neck for permitting the receptacle to be re-filled through the opening, and a dauber secured directly to the neck and removable therewith.

2. The combination of a liquid containing vessel having a filling and discharge opening, a neck removably connected with the body and communicating with the opening, a valve carried by and removable with the neck, a screw thread on the extremity of the neck, a dauber rigidly secured to the neck, and a cap for the dauber secured to the neck by the said screw thread.

873,516. CALF-WEANER. EDWARD E. DEHLER, Wonewoc, Wis. Filed May 18, 1907. Serial No. 374,323.

1. A weaning device comprising a supporting member, a hollow hemispherical body fixedly secured to the member, a plurality of barbs disposed within the body, a common base plate for the barbs, means for securing the base plate

solely to the body, and means for attaching the supporting member to the head of an animal.



2. A weaning device comprising a hemispherical body of resilient material, a pair of rings arranged internally and externally of the body at the edge thereof, outwardly extending barbs on one of the rings, internal barbs on the body, and means attached to one of the rings for securing the device to the head of an animal.

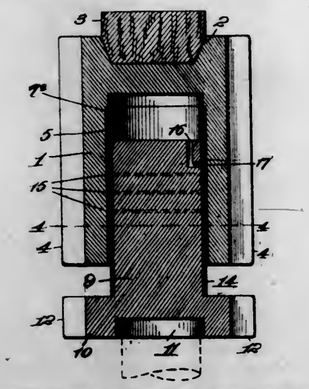
3. A device of the class described, comprising a supporting member, a flexible body carried thereby, internal pricking devices on the said body, means for attaching the member to the head of an animal, and external barbs on the member.

4. A device of the class described comprising an annular member, outwardly extending barbs, nose-gripping devices on the member, a flexible body attached to the said annular member, barbs supported wholly on the body.

5. A device of the class described comprising a ring, a hemi-spherical bulb secured at its edge to the ring, internally arranged pricking members secured to the bulb, outwardly extending and fixed barbs on the ring, nose-gripping devices connected with the barbs, and means for coöperating with the devices for supporting the ring and attached parts on the head of an animal.

[Claims 6 and 7 not printed in the Gazette.]

873,517. COMPRESSED-AIR-CUSHION BLOCK FOR PILING. CLINTON C. DE WITT, St. Louis, Mo., assignor of one-half to Frank L. Aymond, St. Louis, Mo. Filed July 15, 1907. Serial No. 383,728.



1. A cushion block of the class described, comprising a pair of telescoping members, and between which members is formed an air chamber.

2. A cushion block of the class described, comprising a pair of telescoping members, between which members is formed an air chamber, and there being guide grooves formed on the sides of said telescoping members.

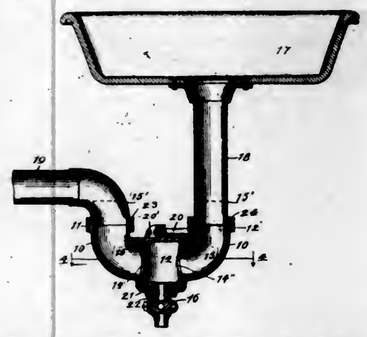
3. A cushion block of the class described, comprising a pair of telescoping members, between which members is formed an air chamber, an anvil block carried by the upper one of the telescoping members, and lugs formed integral with each of the members.

4. A cushion block of the class described, comprising a pair of telescoping members, between which members is formed an air chamber, and an anvil block carried by the upper one of the telescoping members.

5. A cushion block, comprising a pair of telescoping members, between which is formed an air chamber, a bushing arranged in the outer one of the members, and a shell arranged on the bearing face of the inner member.

[Claims 6 to 9 not printed in the Gazette.]

873,518. TRAP-VALVE. JOSEPH L. DONAT, Chicago, Ill. Filed Dec. 6, 1906. Serial No. 346,532.



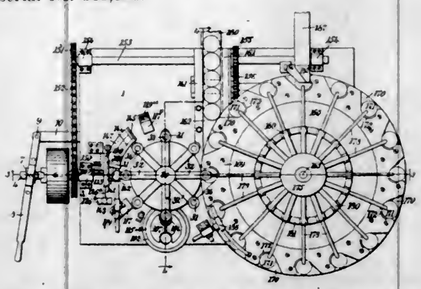
1. The combination, in a drain trap, of a U-shaped casing, having a drain opening at the bottom of the U, a valve in said bottom having a through passage and an opening constantly effecting communication between the drain opening and said through passage, and an independent valve controlling the drain opening.

2. An article of manufacture, a drain trap structure comprising a casing providing downwardly extending legs connected at their lower ends, a valve in said connection controlling communication of the legs, said valve and the casing providing drain openings arranged in constant registration, and an independent valve controlling said drain openings.

3. The combination in a drain trap, of a U-shaped casing having a drain opening in its bottom, a valve rotatable on a vertical axis having a transverse through passage and a vertical passage from said transverse passage through its bottom registering constantly with the drain opening in the casing, and another valve controlling said drain opening in the casing.

4. In a drain trap, a U-shaped casing, a valve, rotatable on a vertical axis positioned between the legs of the casing, with its top presented in like direction with the said legs, a boss upon the top of the valve, and a handle 20 passing freely through said boss.

873,519. CAN-VENT-SHIELDING MACHINE. HARRY J. DOUGLASS, Bellingham, Wash. Filed Mar. 22, 1907. Serial No. 363,821.



1. In a machine of the character described, a rotary carrier, means for feeding blanks to said carrier, means for applying solder to said blanks while carried by said carrier, a revoluble table on which said carrier discharges said blanks, means for feeding can-covers to said table, means for sweating the blanks and covers together on said table, and means for removing the assembled blanks and covers from the table.

2. In a machine of the character described, a rotary carrier, means for feeding blanks to said carrier, means for applying acid to said blanks, means for applying solder to said blanks, a revoluble table on which said carrier discharges said blanks, means for feeding can-covers to said table, means for sweating the blanks and covers together, and means for automatically discharging the assembled blanks and covers from the table.

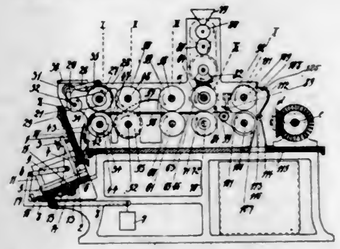
3. In a machine of the character described, a rotary carrier comprising plungers and reciprocating shelves coacting therewith and arranged under the plungers, means for reciprocating the plungers to clamp the blanks to the shelves, and means for applying solder to said blanks while clamped.

4. In a machine of the character described, a rotary carrier including as elements shelves, and plungers coacting therewith, means for feeding blanks to said plungers, means for projecting the shelves under the blanks, means for moving the plungers to clamp the blanks to the shelves, and means for applying solder to said blanks while clamped.

5. In a machine of the character described, a rotary carrier including as elements, shelves, and plungers coacting therewith, means for feeding blanks to the plungers, means for projecting the shelves under the blanks, means for moving the plungers to clamp the blanks to the shelves, means for applying solder to the blanks while clamped, and means for thereafter sweating said blanks to a can-top.

[Claims 6 to 50 not printed in the Gazette.]

873,520. MACHINE FOR MANUFACTURING ENVELOPS. MAX R. DUNNEBIER, Dresden, Germany, assignor to Carl Herzberg, Cologne, Germany. Filed Dec. 22, 1903. Serial No. 186,192.



1. In an envelop-making machine the combination with a device for feeding single blanks, a first pair of feed rolls, the upper recessed, means for bending the lifted blanks into the recess and thereby between the rolls, resilient means on the upper roll for momentarily holding the center front of the blanks only, centralizing members momentarily engaging the blanks, means for moving these members into and out of active position, a second pair of rolls parallel and close to the first and having means for creasing the side edges of the blanks, means for adjusting the length of the rolls, guides to fold the side flaps of the blanks inwards, a third pair of rolls parallel and close to the second, the upper hollow and recessed to complete the folding of the sides and to press the blanks on the lower roll, means for adjusting the length of the rolls, a fourth pair of rolls parallel and close to the third, the upper provided with longitudinal blades for creasing the blanks along the end flaps, the lower having corresponding abutments, means for varying the distance between the blades and between the abutments, a removable gumming ledge on the upper roll, means for supplying it with gum, a corresponding removable grooved piece on the lower roll, a swinging bar oscillating towards the blanks discharged from the fourth rolls and arranged to fold the bottom flap of the blanks, a feed roll intermittently coöperating with the bar, a fifth pair of rolls parallel and close to the fourth, the upper roll having a removable grooved piece arranged to coincide with the gummed parts and fasten the flaps, a curved plate arranged to arrest the blanks as discharged, an auxiliary roll arranged to fold the lid of the blanks and deliver them, means for driving the rolls and means for rotatably adjusting the rolls.

2. In an envelop-making machine the combination with means for feeding single blanks of a pair of rolls having means for creasing the blanks along the edges of the said flaps, guides to fold the side flaps of the blanks inwards and a pair of rolls parallel and close to the creasing rolls, the upper hollow and recessed to complete the folding of the sides and to press the blanks on the lower roll and means for adjusting the length of the rolls.

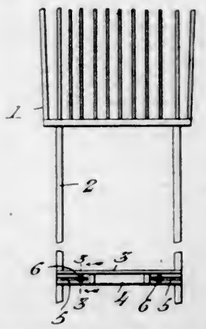
3. In an envelop-making machine the combination with means for feeding single blanks, roll mechanism for creasing the blanks along the edges of the side flaps and folding the side flaps inwards, a pair of rolls parallel and close to the former rolls, the upper provided with longitudinal blades for creasing the blanks along the edges of the top and bottom flaps, the lower having corresponding abutments, means for varying the distance between the blades and between the abutments, a removable gumming ledge on the upper roll, means for supplying it with gum, and a corresponding removable grooved piece on the lower roll.

4. In an envelop-making machine the combination with means for feeding single blanks, roll mechanism for creasing the blanks along the edges of the side flaps, means for folding and rolling the side flaps of the blanks, roll mechanism for creasing the blanks along the edges of the top and bottom flaps and for gumming the side flaps, a swinging bar oscillating towards the blanks discharged from the last named rolls and arranged to fold the bottom flaps of the blanks, and a feed roll intermittently coöperating with the bar.

5. In an envelop-making machine the combination with a first roll device for feeding single blanks, a second roll mechanism for creasing the blanks along the edges of the side flaps, stationary means and a third roll mechanism for folding the side flaps of the blanks, a fourth roll mechanism for creasing the blanks along the edges of the top and bottom flaps and for gumming the side flaps, oscillating means for folding in the bottom flap, a fifth pair of rolls parallel and close to the fourth, the upper roll having a removable grooved piece arranged to coincide with the gummed parts and fasten the flaps.

[Claims 6 to 14 not printed in the Gazette.]

873,521. FOOT-REST. CHRISTIE P. EARLEY, Auburn, Mass. Filed June 30, 1906. Serial No. 324,255.

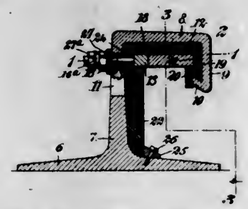


1. A foot rest including an angular or L-shaped member including two strips secured together at right angles, one of said strips being provided with longitudinal slots at the ends thereof and a clamping bar likewise having longitudinal slots at the ends thereof in combination with connecting bolts adjustable in the longitudinal slots of the L-

shaped member and the clamping bar, and a support upon which the foot rest is clamped.

2. A foot rest comprising an angular or L-shaped member having reinforcing blocks disposed in the angle thereof and longitudinal slots at the ends thereof in combination with a clamping bar having longitudinal slots at the ends thereof, connecting bolts adjustable in the longitudinal slots of the L-shaped member and the clamping bar, and a supporting member upon which the foot rest is clamped.

873,522. THIRD RAIL. RALPH K. EDDOWES, Philadelphia, Pa. Filed Dec. 7, 1906. Serial No. 346,704.



1. A third rail comprising a longitudinal body portion of metal provided with slots disposed transversely of the general length thereof, a conductor mounted within said body portion and provided with bonding bosses extending through said slots, a member of insulating material engaging said conductor and supported by said body portion, a second member of insulating material engaging said conductor, and means for detachably securing said second member of insulating material to said body member.

2. A third rail, comprising an outer metallic body, a strip of insulating material mounted therein and provided with a step, a rail member partially inclosed within said metallic body and engaging said step, and a second strip of insulating material engaging said rail member, said last mentioned strip of insulating material resting upon its own edge.

3. A third rail, comprising an outer metallic body provided with a vertical portion, the lower edge of which is bent obliquely upward and inward, a supporting strip fitted upon said portion thus bent upward and inward, said supporting strip being provided with steps, a rail member having a portion in engagement with one of said steps, a strip of insulating material provided with a portion engaging the opposite edge of said rail member, said supporting strip resting upon its own edge.

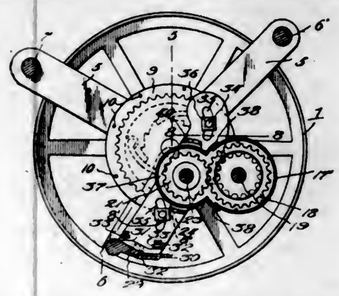
4. A third rail, comprising a metallic body, a supporting strip mounted therein, a rail member engaging said supporting strip, another supporting strip engaging said rail member, and an angle strip connected with said metallic body and engaging said last-mentioned supporting strip for the purpose of holding the same in position.

5. A third rail, comprising an outer metallic body provided with a depending portion, the lower edge of which is bent upward and inward, a supporting strip mounted upon said portion thus bent upward and inward, the third rail having one of its edges in engagement with said supporting strip, another supporting strip engaging the opposite edge of said rail member, and a strip of insulating material engaging both of said supporting strips and also engaging said rail member.

[Claims 6 and 7 not printed in the Gazette.]

873,523. LAWN-MOWER. IVAN ELLWOOD, Red Oak, Iowa. Filed May 29, 1907. Serial No. 376,284.

1. In a lawn mower, a frame provided with side members, each including a gear casing, ground wheels rotatably mounted on said side members and having hubs projecting into the casings, cutting mechanism, including stationary and rotary cutting devices, brackets detachably and adjustably connected with the casings and carrying said cutting mechanism, clutch gearing arranged within each casing, and gear trains at each side of the frame for operating the rotary cutter, each including a gear member supported upon the adjacent bracket for adjustment therewith.



2. In a lawn mower, the combination of a frame provided with side members, each including a gear casing, ground wheels rotatably mounted on said side members and provided with hubs projecting into the casings, clutch gearing within each casing connected with the hub of the drive wheel, power transmitting gears mounted within the casings and driven by the clutch gearing, a cutter frame provided with bracket arms detachably and adjustably mounted upon the casings, a stationary cutter carried thereby, a revoluble cutter supported by the bracket arms, and gears upon the bracket arms for transmitting motion to the revoluble cutter from the transmission gears.

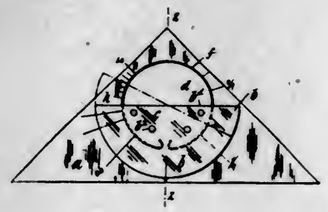
3. In a lawn mower, the combination of a frame provided with side members, each including a gear casing, ground wheels rotatably mounted on said side members and having hubs projecting into the casings, a supporting bar, brackets carrying said bar and mounted for adjustment in an arcuate path upon said respective gear casings, a stationary cutter carried by the supporting bar, a revoluble cutter having its shaft supported by the bracket arms and provided with gears, clutch gearing within each casing driven by the hub of the adjacent ground wheel, and a gear train upon each casing for transmitting motion from the clutch gearing to the contiguous gear on the cutter shaft.

4. In a lawn mower, a frame provided with side members, each including a gear casing, drive wheels rotatably mounted on said side members, clutch and transmission gearing within each casing driven from the associated drive wheel, bracket arms, cutting mechanism comprising relatively stationary and rotary cutters carried by said bracket arms, means adjustably and detachably connecting said arms for adjustment in an arcuate path on the casings, and gears supported by the bracket arms and driven by the transmission gearing for driving the rotary cutter.

5. In a lawn mower, the combination of a frame provided with side members, each including a gear casing, drive wheels rotatably mounted on said side members and having hubs projecting into the gear casings, gearing within each gear casing having a ratchet connection with the hub of the adjacent wheel, and including a transmission gear inclosed by a portion of said casing and arranged upon the inner side thereof, bracket arms, relatively stationary and rotary cutters carried by said bracket arms, said rotary cutter being revolubly mounted upon said arms and provided with gears meshing with the transmission gears, and means adjustably and detachably connecting the bracket arms with the casings above and below the gears upon the rotary cutter, said means being arranged to permit adjustment of said arms in an arcuate path to maintain a meshing engagement of said gears.

873,524. DRAWING INSTRUMENT FOR PARALLEL RULING. THOMAS ENGLISH, Hawley, near Dartford, England. Filed May 28, 1906. Serial No. 319,197.

1. An instrument of the class described comprising a set-square having an opening therein, a semi-circular protractor mounted upon said square, a semi-circular disk arranged within the opening and rotatably connected to the protractor at one side thereof, a correspondingly-shaped plate fixed to the opposite side of said disk, the edge of said plate adapted to overlap the edge of the circular opening, also the edge of the protractor adapted to overlap the edge of said opening thereby holding the same in position for rotary movement on the square, and a fixed device carried between the set-square and the protractor and engaging the edge of the opening for frictional engagement to hold the protractor in its adjusted position.



2. In an instrument of the class described involving a body forming a square and having an opening therein, a plurality of graduating marks arranged circumferentially at the edge of the opening, a semi-circular protractor plate at opposite side of the body and adapted to overlap the edge of the opening, a correspondingly-shaped plate at the opposite side of the body and adapted to overlap the opening therein, a semi-circular plate arranged intermediate the protractor plate and the correspondingly-shaped plate at the opposite side of the body, means for detachably securing the plates and disk together, and a spring member fixed between the protractor plate and the body and engaging the edge of the opening for frictionally holding the protractor plate in an adjusted position.

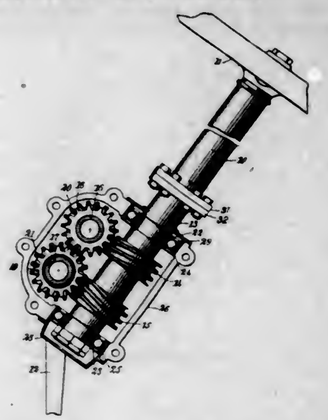
3. In an instrument of the class described, a body having an opening therein, a protractor plate rotatably mounted at one side of the body and adapted to overlie the edges of the opening, said body having circumferentially arranged graduating marks, a correspondingly-shaped plate at the opposite side of the body and adapted to overlie the edges of the opening, a disk interposed between the protractor plate and the oppositely disposed plate, screw members for locking the plates and disks together, and spring means coöperative with the body and plate for holding the protractor plate in an adjusted position, said protractor having a ruling edge.

873,525. GAS-BURNER. JAY W. FARNOFF, Buffalo, N. Y., assignor, by mesne assignments, to Shirley M. Stowell, Alden, N. Y. Filed Oct. 10, 1906. Serial No. 338,301.



In a gas-burner, a valve-casing having a chamber and an opening in its side, a vertically movable valve in said chamber provided with a circumferential groove, an actuating-spindle passing through said opening in the casing and having an eccentric stud entering the circumferential groove in said valve, said spindle having an annular groove in its projecting portion and a retainer having a lip at one end bearing against the valve-casing, a bifurcated portion at its other end fitting the annular groove in said spindle, and a fastening screw passing therethrough between its ends and entering the valve-casing.

873,526. STEERING-GEAR. THOMAS J. FAY, New York, N. Y., and JOHN M. ELLSWORTH, Bernardsville, N. J. Filed May 18, 1907. Serial No. 374,499.



1. In combination, an operating member, a movable operated member, gearing connecting said members, and means whereby said gearing may be rotated to bring new faces thereof normally into mesh independently of said operating and operated members.

2. In combination, an operating member, a movable operated member, gearing connecting said members, said gearing including a worm and a worm wheel, and means whereby said gearing may be rotated to bring new faces thereof normally into mesh independently of said operating and operated members.

3. In combination, an operating member, a movable operated member, gearing connecting said members whereby one may be oscillated by the other, and means permitting the entire gearing to be moved to bring new surfaces of the gears into mesh without disturbing the normal relationship of the operating and operated members.

4. In combination, an operating member, a movable operated member, gearing connecting said members, whereby one may be oscillated by the other, said gearing including a worm and a worm wheel, and means permitting the entire gearing to be moved to bring new surfaces of the gears into mesh without disturbing the normal relationship of the operating and operated members.

5. In combination, a steering column, an oscillating arm, gearing connecting said column to said arm, and means permitting the gearing to be rotated to bring new surfaces into normal engagement without disturbing the relationship of the column and the arm.

[Claims 6 to 16 not printed in the Gazette.]

873,527. MAIL DELIVERER AND RECEIVER. OLIVER FISHER, Sloan, Iowa. Filed Sept. 4, 1907. Serial No. 391,332.

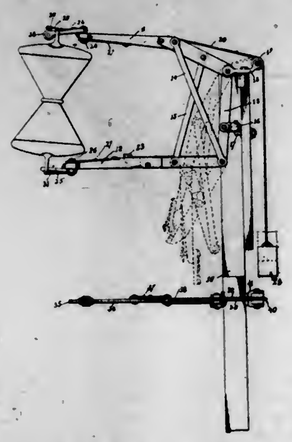
1. In a mail pouch deliverer, a frame adapted to be held in an extended position by the pouch, means adapting said frame to collapse in a substantially vertical plane when the pouch is removed, and counter-balancing means for breaking the fall of the said frame when it collapses.

2. In a mail pouch deliverer, arms for holding the pouch, one of which is composed of two jointed sections and a side-bar having a projection overhanging one of said sections, cross-bars connecting said arms together, and means for pivotally supporting said arms.

3. In a mail pouch deliverer, arms for supporting the pouch, cross-bars and a link connecting said arms together, and means carried by the link for pivotally attaching the arms.

4. In a mail pouch deliverer, arms, one of which is composed of two jointed sections and a side-bar having a projection overhanging one of said sections, a bar pivoted to

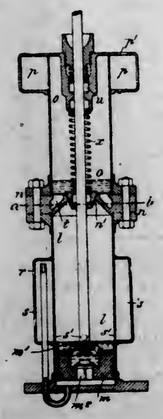
the other of said sections and to the other arm, a second bar pivoted to the side-bar and to one of said sections at one end and pivoted at its opposite end to the other arm, a link connecting the last-named arm with the said bar and means carried by the link for pivotally attaching the arm.



5. In a mail pouch deliverer, a finger to which the pouch is adapted to be applied having a roller journaled in its outer end, a spring attached to said finger, and a latch pivoted in the free end of said spring and normally forced into contact with the circumference of said roller.

[Claims 6 to 19 not printed in the Gazette.]

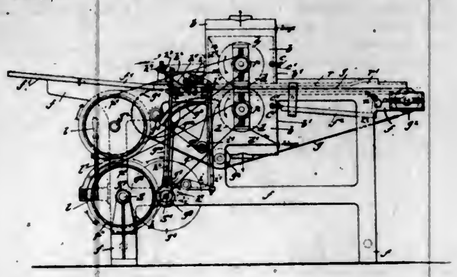
873,528. VAPOR-PUMP. HENRY A. FLEUSS, Reading, England, assignor to Pulsometer Engineering Company, Limited, Reading, England. Filed Sept. 15, 1905. Serial No. 278,668.



1. The combination of a pump having its delivery valve and piston covered with liquid and means for heating said liquid above the delivery valve.

2. The combination of a pump having its delivery valve covered with liquid, a chamber surrounding the delivery valve, having its upper surface formed of thin metal and forming part of the bottom of the oil containing chamber above the delivery valve and means for passing steam through the chamber to heat said liquid and thus prevent the condensation of vapor while passing through the pump.

873,529. MACHINE FOR REMOVING BRONZE-DUST. ALBERT J. FORD, New York, N. Y., assignor to The Fuchs & Lang Manufacturing Co., New York, N. Y., a Corporation of New York. Filed Aug. 16, 1907. Serial No. 388,786.



1. In a machine for removing bronze-dust, the combination of reciprocating gripper-chains, slides carried by said chains, a gripper-bar extending between said slides, a pivot-rod extending between said slides and rockable therein, a spring-actuated gripper-plate mounted on said pivot-rod to coact with said gripper-bar, links mounted on the ends of said pivot-rod, levers having rollers at their ends to engage the free ends of said links and thereby depress the gripper-plate, and mechanism for operating said levers.

2. In a machine for removing bronze-dust, the combination, with a supporting-frame provided with ways, of slides guided in said ways, reciprocating gripper-chains attached to said slides, a gripper-bar extending between said slides, a rockable pivot-rod connecting said slides, a spring-actuated gripper-plate mounted on said pivot-rod, links mounted on the pivot-rod at its ends, means to depress the links and thereby cause the gripper-plate to move down on the gripper-bar, a pin carried by each slide, gravity-hooks carried by said links and coacting with said pins to lock the gripper-plate in depressed position, and means at the delivery-end of said ways to abut against and release said gravity-hooks.

873,530. CARRIER FOR PNEUMATIC-TUBE APPARATUS. EDMOND A. FORDYCE, Boston, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J., a Corporation of New Jersey. Filed June 29, 1905. Serial No. 267,548.

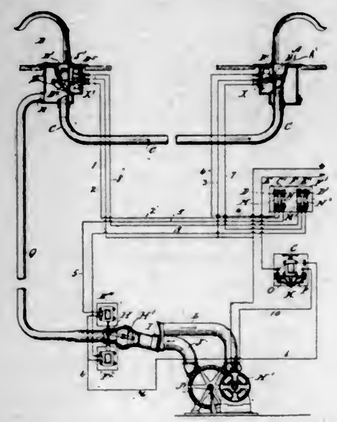


1. A carrier for pneumatic despatch tube apparatus having an outer body provided at its rear end with a recess, an inner lining for said body, a metallic ring adapted to fit said recess and hold the rear end open and ring-shaped, and means secured to said body for preventing displacement of said ring.

2. A carrier for pneumatic despatch tube apparatus having an outer body provided at its rear end with a recess, an inner lining for said body, a metallic ring adapted to fit said recess and hold the rear end open and ring-shaped, and yielding means secured to said body for preventing displacement of said ring.

3. A carrier for pneumatic despatch tube apparatus having an outer body provided at its rear end with a recess, an inner lining for said body, a metallic ring adapted to fit said recess and hold the rear end open and ring-shaped, and a leather band secured to said body for preventing displacement of said ring.

873,531. PNEUMATIC-DESPATCH APPARATUS. EDMOND A. FORDYCE, Boston, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J., a Corporation of New Jersey. Filed July 24, 1905. Serial No. 270,965.



1. In an apparatus of the character described, a single tube connecting two stations and through which carriers are transmitted, an air pump for said tube, a motor for operating said pump, electric circuits connecting both stations, a circuit maker and breaker in said circuits at each station adapted to be operated by the carriers to start or stop the pump, and means actuated by the electric current passing through said circuits for reversing the direction of the air current in the tube.

2. In an apparatus of the character described, a single tube connecting two stations and through which carriers are transmitted, an air pump for said tube, a motor for operating said pump, electric circuits connecting both stations, and an automatic circuit maker and breaker in said circuits at each station and adapted to be operated by the carriers to start or stop the pump.

3. In an apparatus of the character described, a single tube connecting two stations and through which carriers are transmitted, an air pump for said tube, a motor for operating said pump, electric circuits connecting both stations, an automatic circuit maker and breaker in said circuits at each station adapted to be operated by the carriers to start or stop the pump, and means actuated by the electric current passing through said circuits for reversing the direction of the current of air through said tube.

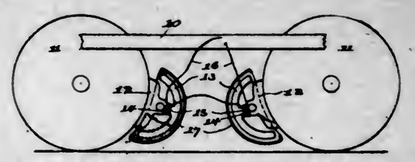
4. In an apparatus of the character described, a single tube connecting two stations and through which carriers are transmitted, an air pump for said tube, a motor for operating said pump, electric circuits connecting both stations, and an automatic circuit maker and breaker in said circuits at each station and adapted to be operated by the carriers to start the pump.

5. In an apparatus of the character described, a single tube connecting two stations and through which carriers are transmitted, an air pump for said tube, a motor for operating said pump, electric circuits connecting both stations, and an automatic circuit maker and breaker in said circuits at each station and adapted to be operated by the carriers to stop the pump.

[Claim 6 not printed in the Gazette.]

873,532. DUST-COLLECTOR. GEORGE H. FORSYTH, Chicago, Ill., assignor to Forsyth Brothers Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 2, 1906. Serial No. 309,463.

1. The combination with two or more abrasive surfaces generating dust, of means for attracting and arresting said dust, and means for receiving and retaining the dust subsequently released by said attracting and arresting means.



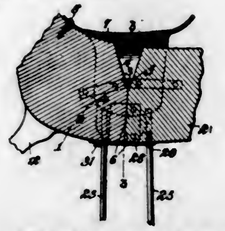
2. The combination with two or more abrasive surfaces generating metallic dust, of a magnet serving to attract and arrest said dust, and means for receiving and retaining the dust subsequently released by said magnet.

3. The combination with two or more abrasive surfaces generating metallic dust, of a magnet located in the vicinity of said surfaces and operating to attract and arresting said dust, and a receptacle so located relatively to said magnet as to catch and retain the dust released by the deënergizing of the latter.

4. The combination with a contact-shoe, and a metallic surface frictionally engaged thereby, of means located in the vicinity of said shoe for attracting and arresting the metallic dust generated by said parts, and means for retaining the dust subsequently released by said attracting and arresting means.

5. The combination with a contact-shoe, and a metallic surface frictionally engaged thereby, of magnetic means located in the vicinity of said shoe serving to attract and arrest the metallic dust generated by said parts, and a receptacle for retaining the dust subsequently released by the deënergizing of said magnetic means.

873,533. TRAVELING ROCKING-HORSE. BENJAMIN F. FOWLER, Minneapolis, Minn., assignor of one-half to Luke W. Northfield, Minneapolis, Minn. Filed Oct. 16, 1906. Serial No. 339,240.



1. A device of the class described comprising a body composed of sections hinged together and provided with front and rear legs, front and rear rockers, each constructed of a single piece of metal and provided with outer and inner loops arranged in vertical planes, the outer loops being connected with the front and rear legs and extending beyond the same, and the inner loops being provided with integral rods connecting the rockers with the inner portions of the sections.

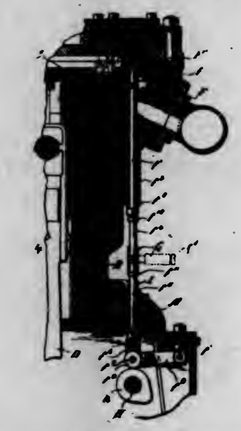
2. A device of the class described comprising a body having hinged front and rear sections provided with front and rear legs, and front and rear rockers having outer and inner loops arranged in vertical planes, the outer loops being connected with and extending beyond the front and rear legs, the inner loops of the rockers being overlapped, and the said rockers being provided with integral arms connected at their upper ends to the inner portions of the sections and having laterally bent portions at their lower ends connected with the inner loops.

3. A device of the class described comprising a body provided with front and rear legs, and front and rear rockers, each constructed of a single piece of metal and provided with outer and inner loops arranged in vertical planes, the outer loops being connected with and extending beyond the front and rear legs, and the inner loops being provided with integral rods connecting the rockers with the body.

4. A device of the class described comprising a body having front and rear legs, and front and rear rockers consisting of rods provided at their outer ends with terminal loops arranged in vertical planes and connected to and extending beyond the front and rear legs, said rockers being provided at their inner ends with overlapping loops and having integral arms connected at their upper ends to the body and provided at their lower ends with internally bent portions connected with the inner loops.

5. A device of the class described comprising a body composed of front and rear sections having their contiguous ends cut away from the top of the body to a point above the bottom thereof to form oppositely inclined faces and to provide an upper recess, a hinge connecting the sections and having its pintle located at the bottom of the recess, whereby the sections have a relative pivotal or oscillatory movement, a locking device arranged at the bottom of the body at a point below the recess for holding the sections rigid with each other, and rockers connected with the body.

873,534. ADMISSION-VALVE FOR EXPLOSIVE-ENGINES. HARRY C. FRICKE and GEORGE E. TURNER, Pittsburg, Pa., assignors to Turner-Fricke Manufacturing Company, Pittsburg, Pa. Filed Aug. 30, 1907. Serial No. 390,772.



1. In an explosive engine, the combination with a valve and its seat, and a valve actuating cam, of a valve rod interposed between the valve, and cam, said rod having a hinged part capable of being swung out of line with other portions of the rod, and a locking device for holding said hinged part rigidly in operative position, substantially as described.

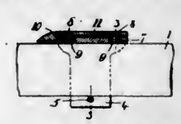
2. In an explosive engine, the combination with a valve and its seat, and a valve actuating cam, of a valve rod interposed between the valve, and cam, said rod having a hinged part capable of being swung out of line with other portions of the rod, and a locking device surrounding portions of said rod adjacent the said hinge connection, for holding said hinged part in operative position, said locking device being movable longitudinally on said rod, to release said hinged portion, substantially as described.

3. In an explosive engine, the combination with a valve and its seat, and a valve actuating cam, of a valve rod interposed between the valve, and cam, said rod having a hinged part capable of being swung out of line with other portions of the rod, a locking sleeve on said rod, adapted to engage portions thereof adjacent to said hinge connection, for holding said hinged part in operative position, and means for holding said sleeve in its operative position, substantially as described.

4. In an explosive engine, the combination with a valve and its seat, and a valve actuating cam, of a valve rod interposed between the valve, and cam, said rod having a hinged part capable of being swung out of line with other portions of the rod, and a gravity locking device having a sliding engagement with said rod and provided with portions adapted to surround the rod adjacent to its hinge connection, substantially as described.

5. In an explosive engine, the combination with a valve and its seat, and a valve actuating cam, of a valve rod interposed between the valve, and cam, said rod having a hinged part capable of being swung out of line with other portions of the rod, a locking sleeve on said hinged portion, and stops for limiting the movement of said sleeve, substantially as described.

873,535. GUN-SIGHT. GEORGE H. GARRISON, Olympia, Wash., and WILLIAM A. HILLIS, Portland, Oreg. Filed Apr. 9, 1907. Serial No. 367,181.

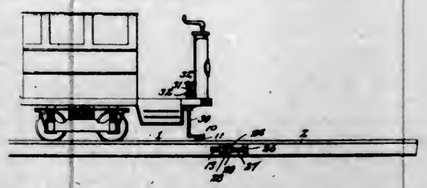


1. A gun sight, comprising a split ring having laterally-disposed flanges, and a screw adapted to force said flanges together, said split ring having an extension presenting a flat surface, a sight block having a groove and adapted to rest upon said flat surface, a shim between said sight block and said surface, and means for securing said sight block to said ring.

2. A gun sight, comprising a split ring, means for clamping said ring in position, said split ring having a substantially flat surface and an opening therethrough, said ring further having a recess on the inner side thereof adjacent to said opening, a sight block having a threaded opening, a screw adapted to be mounted in said opening of said ring and having a head in said recess, said screw being adapted to engage with said threaded opening of said sight block, said sight block having a sight groove, and a shim between said block and said extension.

3. A gun sight, comprising a split ring having laterally disposed flanges, and a screw pin adapted to force said flanges together, said split ring having an extension presenting a flat surface, and openings through said extensions, recesses on the inner side of said ring adjacent to said openings, a sight block having threaded openings, screws adapted to be mounted in said openings of said ring and having heads in said recesses, said screws being adapted to engage with the said threaded openings of said sight block, said sight block having a sight groove, and a shim between said sight block and said extension, and having openings to receive said screws.

873,536. RAILWAY-SWITCH. ROBERT F. GILMORE and WILLIAM C. COOK, Montpelier, Ind. Filed Mar. 16, 1907. Serial No. 362,783.



1. In a switch throwing mechanism, the combination of a switch rail, a stud extending therefrom, a longitudinally slotted bar, blocks engaging the said stud and slidable on the bar, springs acting on the blocks, a crank shaft connected with the bar and for moving the same, and a device controllable from the car for rocking the said shaft.

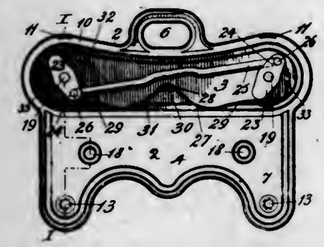
2. In a switch throwing mechanism, the combination of a switch rail, a stud extending therefrom, a spring connected with the stud and having latches oppositely disposed, and yielding members coöperating with the latches for yieldingly holding the rail in either of its operative positions.

3. A railway switch comprising a laterally movable switch rail, an automatic locking device for yieldingly holding the rail in either of its operative positions, a vertical rock-shaft mounted in the road-bed, a tripping head on said shaft, means operable by the car for moving said shaft lengthwise to set the tripping head thereof in position to be operated upon by a suitable device carried by the car, and a shifting bar connecting said shaft with the switch rail, said shifting bar being provided with cushioning means, substantially as and for the purpose described.

4. A railway switch comprising a laterally movable switch rail, a vertical extending and longitudinally movable rock-shaft mounted in the road-bed and adapted to be operated by a suitable device carried by the car, a shifting bar interposed between said rock-shaft and the switch rail and yieldingly connected with the latter, and latch mechanism for holding the switch rail in either of its two operative positions.

5. A railway switch comprising a laterally movable switch rail, a crank shaft mounted in the road-bed operable by a suitable device carried by the car, an operative connection between said crank and the switch rail, and latch mechanism for holding the switch rail in either of its two operative positions embodying a spring bar, latch teeth thereon, and spring-sustained dogs adapted to engage the latch teeth to hold the switch rail to one side or the other and also adapted to yield to allow the latch teeth to be disengaged therefrom under the action of the switch rail shifting mechanism.

873,537. ARCH-FILE. WILLIAM O. GOTTWALS, Philadelphia, Pa. Filed July 26, 1907. Serial No. 385,696.



1. In an arch file, the combination of the base struck up from sheet metal to form a deep inclosing space for the arch-operating mechanism and a shallow space for the covering plate, the said plate having an engagement at its rear part with the base, covering the said mechanism and fitting in the shallow space, the movable arch members pivotally mounted in the base and plate, mechanism connecting the said members and arranged in the deep space, and the fixed arch members passing through and securing together the forward parts of the base and plate, substantially as set forth.

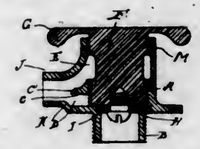
2. In an arch file, the combination of the base struck up from sheet metal to form a space for the reception of the operating mechanism and having a forward extension, a bottom plate engaged with the base at its rear part, covering the said mechanism and lying under the said forward extension of the base, movable arch members pivotally mounted in the said base and plate and having connecting operating mechanism in the said space of the base, and the fixed arch members passing through and securing together the forward parts of the base and plate, substantially as set forth.

3. In an arch file the combination of the base having the holes 13 for the fixed arch members and upwardly extending flanges around the said holes, the bottom plate having the holes 5, and the fixed arch members of tubular sheet metal having the outward circumferential bend which is upset downward over the said flanges, the lower ends of the fixed arch members being passed through the bottom plate and having the upset portions at the under side of the bottom plate, substantially as set forth.

4. The combination, in an arch file, of the base plate, the fixed and rotary arch members, the arms fixed on the rotary members, and the spring bearing on the said arms and having its ends formed to act as stops for the arms, substantially as set forth.

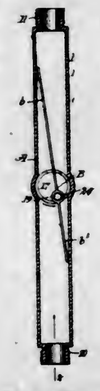
5. In an arch file provided with fixed and movable arch members, the base plate drawn from a single piece of metal and formed with the deep recess portion for the mechanism and with the forward extension having a shallow recess, and with a surrounding flange, combined with the covering plate fitting within the said flange, substantially as set forth.

873,538. FAUCET. JOHN W. GRANTLAND, Philadelphia, Pa. Filed Dec. 28, 1906. Serial No. 349,790.



A packless faucet consisting of a casing having a diaphragm therein forming two spaces, one space permitting the flow of water when the faucet is open and the other space tending to create a partial vacuum for drawing off any water leaking into the space, a valve and stem mounted in the casing, a portion of the casing wall being sufficiently larger than the stem to form therewith a chamber through which air may pass into the last named space and through which the plunger and valve may be withdrawn.

873,539. MACHINE FOR EXERTING PRESSURE. EDWARD P. GUENTHER, West Hoboken, N. J. Filed Sept. 5, 1907. Serial No. 391,459.



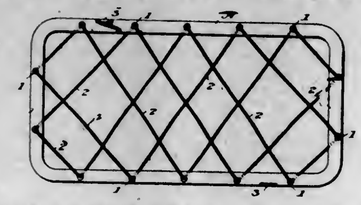
1. In a mechanism for exerting pressure, a conduit, a blade therein, and means eccentrically connected with the blade for vibrating said blade transversely to the conduit.

2. In a mechanism for exerting pressure, a conduit, a blade therein, a support eccentrically connected with the blade, and means for revolving the support.

3. In a mechanism for exerting pressure, a conduit, a pressure exerting blade disposed within the same, and provided with a bearing nearer one end than the other, and an actuating device comprising a crank disk and a driving mechanism therefor, a pin from the said disk extending within the bearing of the said blade, the said blade being unsupported between its bearing and its ends.

4. In a mechanism for exerting pressure, a conduit, a pressure exerting blade disposed therein, and a single actuating means for pivotal connection with the said blade at a point between its ends, one end of the blade being longer than the other, the said blade being reversibly located within the conduit.

873,540. TRAY FOR TRUNKS. LINCOLN GUYNN, Wabash, Ind. Filed Aug. 31, 1907. Serial No. 390,919.

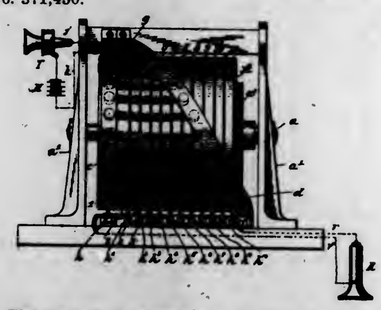


1. A tray for trunks consisting of a frame, and zig-zag wires crossing the latter and extending in planes at an angle to the plane of the frame.

2. A tray for trunks comprising a frame, and zig-zag wires extending diagonally across the same in planes at right-angles with the plane of the frame.

3. A tray for trunks, comprising a frame, with zig-zag wires crossing the same and extending in planes at an angle to the plane of the frame, and means for securing the tray within the trunk.

873,541. METHOD OF RECEIVING AND STRENGTHENING THE REPRODUCTION OF SPEECH, SIGNALS, &c. EMIL S. HAGEMANN, Copenhagen, Denmark. Original application filed June 19, 1900, Serial No. 20,816. Divided and this application filed Apr. 29, 1902, Serial No. 105,249. Renewed May 2, 1907. Serial No. 371,450.



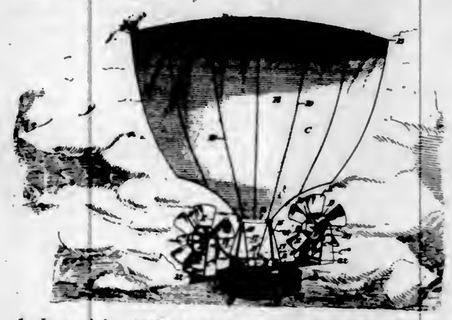
1. The method of reproducing electrical impulses corresponding to sound waves or signals, which consists in making magnetic records of such impulses in a plurality of para-magnetic bodies, then electro-magnetically generating corresponding electric impulses from each of said records and simultaneously impressing the latter impulses upon a receiving circuit.

2. A method of recording and strengthening the reproduction of speech, signals and so forth, which consists in impressing upon an electric circuit containing an electro-magnet, modulations of current corresponding to the sound waves of speech or to the signals or the like: simultaneously bringing successive portions of a magnetizable body under the influence of said electro-magnet and thereby establishing in said body successively varying magnetic conditions; communicating these magnetic conditions of the said magnetizable body to other magnetic bodies, subjecting electro-magnets connected in a circuit successively to the various magnetic conditions established in said bodies, and reproducing the speech, signals or the like in a receiver, substantially as described.

3. The method of operating electro-magnetic sound and signal recording and reproducing apparatus, which consists in making duplicate electro-magnetic records in a plurality of paramagnetic bodies and transferring the sum of such records to a circuit containing a receiver.

4. The method of operating electro-magnetic sound and signal recording and reproducing apparatus, which consists in producing electrical impulses corresponding to the sounds or signals, then making duplicate electro-magnetic records of such impulses and finally causing said duplicate records to simultaneously react upon a receiving circuit, substantially as described.

873,542. AERIAL VESSEL. GEORGE HALLIDAY, Superior, Wis., assignor of forty-five one-hundredths to Edmond Joseph St. Onge, Superior, Wis. Filed May 9, 1907. Serial No. 372,652.



1. In aerial vessels, a car, a sail from which the car is suspended, which sail is provided with an elliptical top constituting practically an aeroplane, a longitudinal reduced centrally located bottom and substantially straight side surfaces extending from a point between its top to its bottom, a steering arm pivoted on the car, propeller or motor wheels carried by the steering arm, means for rotating the said wheels, and means for shifting the steering arm whereby the wheels serve as rudders for the ship.

2. In aerial vessels, a car, a gas containing sail from which the car is suspended, which sail is provided with an elliptical top constituting practically an aeroplane, a longitudinal reduced centrally located bottom and substantially straight side surfaces extending from a point between its top to its bottom, a steering arm fulcrumed upon the car, and combined steering and propelling devices carried by the said arm.

3. In aerial vessels, a sail constructed of light, thin metal having an elliptical top, a contracted bottom, and a body portion reduced in thickness below the elliptical top, partitions within the sail dividing the same into compartments, a car suspended from the sail, and combined steering and propelling devices adjustably mounted with reference to the car.

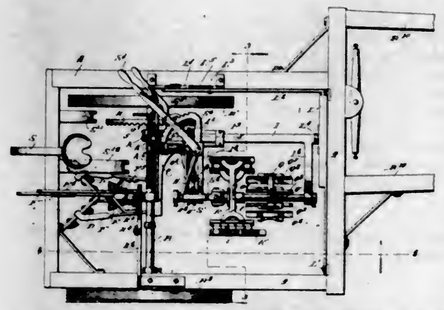
4. The combination with a vertical gas containing sail having an elliptical top constituting practically an aeroplane, and a car suspended from the said sail, which sail tends to maintain the car in perpendicular position, of a steering arm pivotally supported upon the car, a combined propelling and steering wheel rotatably adjustable at each side of the fulcrum of the said steering arm, driving mechanisms for the wheel, and means for swinging the steering arm to the right or to the left to direct the ship in the required direction.

5. In an aerial vessel, a perpendicularly located sail adapted to be charged with gas, a car suspended from the sail, a steering arm pivoted upon the car, bearings carried by said arm, devices for rotating said bearings and holding them in adjusted position, a wheel carried by each bearing, wings pivoted at the periphery of the wheels, mechanism for changing the angularity of the wings from a position at right angles to the direction of rotation to intermediate diagonal positions, including a position parallel with the direction of rotation of the wheel, a tiller for

the steering arm, and motors connected with the shafts of the said wheels.

[Claims 6 to 11 not printed in the Gazette.]

873,543. HOEING-MACHINE. WILLIAM A. HARRIS, Greenville, S. C. Filed Mar. 21, 1907. Serial No. 363,613.



1. A machine substantially as herein described, comprising a main frame, a drive shaft, a carrier frame slidable along and rockable on the drive shaft, a master gear keyed to the drive shaft and movable with the carrier frame along said shaft, a hoeing frame journaled at one edge to the carrier frame and movable up and down at its other edge and provided at said edge with hoeing devices and with a shaft supporting the same, a countershaft having a pinion meshing with the master gear, a belt connecting the said countershaft with the shaft of the hoeing devices, a trackway in which the front end of the hoeing frame is movable longitudinally, said trackway extending transversely of the main frame and pivoted at one end in connection therewith, means for adjusting the other end of the trackway up and down relative to the main frame, means for shifting the carrier frame along the drive shaft, and intermediate devices between the chopping frame and the carrier frame for raising and lowering the movable end of the hoeing frame, substantially as set forth.

2. The combination of the drive shaft, a carrier frame thereon, a hoeing frame pivoted at one edge and movable up and down at its other edge whereby it may be set toward and from the ground hoeing, devices carried at the movable edge of the hoeing frame, and a vertically adjustable support for the front edge of the hoeing frame whereby it may be set up and down for leveling said frame in the use of the implement, and means for raising and lowering the hoeing devices independent of the leveling adjustment at the front edge of the hoeing frame, substantially as set forth.

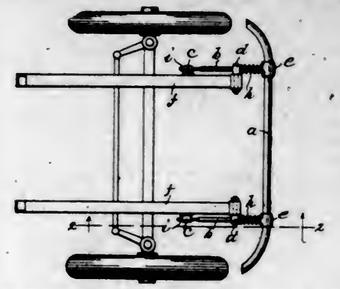
3. In a machine substantially as described, a hoeing frame pivoted at one edge on an axis in the direction of motion of the machine whereby its other edge may be raised and lowered with respect to the ground surface, and intermediate devices between said hoeing frame and main frame whereby the hoeing devices may be leveled with regard to the ground surface, substantially as set forth.

4. The combination substantially as herein described of the main frame, a drive shaft, a carrier frame sliding along and rocking on the drive shaft, hoeing devices supported by the carrier frame, means intermediate the drive shaft and hoeing devices for operating the latter, means for moving the carrier frame along the drive shaft, and means for rocking said frame on the drive shaft, substantially as set forth.

5. The combination of the supporting shaft, two sets of hoes having their carriers mounted on said shaft and one set being movable along the shaft independent of the other set whereby to vary the width of the cut, and means for sliding the movable set to and securing it in any desired position.

[Claims 6 to 24 not printed in the Gazette.]

873,544. AUTOMOBILE BUMPER. RAY W. HARROUN, Chicago, Ill. Filed Mar. 29, 1906. Serial No. 308,683.



1. In an automobile bumper, a rail extending across the front of an automobile attached to the frame by horizontal arms running through eye bolts at the frame ends and supported by brackets at the rear ends backed up by springs surrounding said horizontal arms.

2. In an automobile bumper or fender, the combination of a rail, two supporting rods connected at their ends to said rail, guides adapted to be secured to opposite sides of an automobile wherein said rods are slidingly supported between their ends, cushioning means for said rail, and guide brackets adapted to be secured to opposite sides of an automobile in which said rods are slidingly supported near their rear extremities.

3. In an automobile bumper or fender, the combination of a rail; two supporting rods connected to said rail and extending rearward therefrom; guides, adapted to be secured to opposite sides of an automobile, wherein said rods are respectively slidingly supported between their ends; other guides, adapted to be secured to opposite sides of an automobile, wherein said rods are respectively slidingly supported near their rear ends; and coiled springs, surrounding said rods, each with one end arranged for movement with the rod and its other end abutting against a guide.

4. In an automobile bumper or fender, the combination of a rail; two supporting rods connected with said rail and extending rearwardly therefrom, each said rod having its rear end reduced; guides wherethrough the larger part of the rods slide, adapted for connection to the sides of an automobile; other guides wherethrough the reduced ends only of said rods slide, adapted for connection to the sides of an automobile; stops near the extremities of said rods; and springs for yieldingly holding said rods in forwardmost position in the guides.

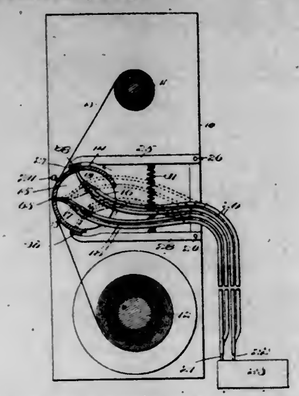
5. In a bumper for association with an automobile having side frames and springs joining at their extremities, the combination of eye-bolts, having guiding eyes, and stems for connecting the springs and frame members and being positioned thereby; bracket members for connection with the sides of an automobile in rear of said eye bolts; parallel rods extending through and sliding in said eye-bolts and brackets; a cross rail connected to and carried by the forward ends of said rods; and coiled springs surrounding the said rods and at opposite ends bearing against the rods and eye bolts respectively.

[Claims 6 to 8 not printed in the Gazette.]

873,545. TRACKER-BAR. JUSTUS HATTEMER, West New York, N. J., assignor to Hardman, Peck & Company, New York, N. Y., a Corporation of New York. Filed May 14, 1907. Serial No. 373,610.

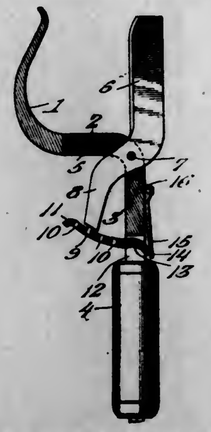
1. A tracker bar composed of a segment of a hollow cylinder, and provided with a plurality of series of openings extending in parallelism with the axis of the cylinder, nipples secured upon the inner surface of the segment and in communication with the openings of the several series, flexible tubes extending from the nipples, the tubes of corresponding openings of the several series communicating with each other, covering members engaging the exterior

surface of the cylinder, and means to move the cylinder to bring one of the covering members into engagement with one of the series of openings.



2. A tracker bar composed of a segment of a hollow cylinder provided with a plurality of series of openings extending in palallelism with the axis of the cylinder, a plurality of nipples rigidly secured to the interior surface of the cylinder in series corresponding to and communicating with the openings, flexible tubes secured to the nipples, and extending through the open side of the segment, means to rotate the segment upon its axis, and covering members bearing yieldingly upon the exterior surface of the segment, and positioned each to cover one of the series of openings when the segment is moved.

873,546. HOOF-PARER. JAMES HEDRICK, Favonia, Va. Filed Mar. 23, 1907. Serial No. 364,100.



1. A hoof parer comprising a handle, a crook connected rigidly therewith, a cutter pivotally related to the crook, and means for adjusting said cutter to vary the distance between the cutter and the bearing face of the crook.

2. A hoof parer comprising a bearing crook having a shank, a handle on said shank, a paring cutter pivotally connected to said shank and provided with a tang, and a spring sustained detent mounted on the shank and engaging the tang and permitting the cutter to be adjusted to vary the distance between the cutter and the crook.

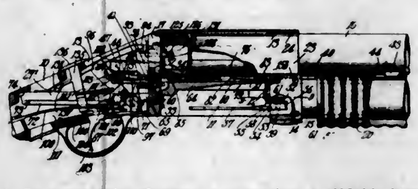
3. A hoof parer embodying a crook having a shank, a handle on said shank, a cutter pivotally connected to the shank, and provided with a projecting tang, and a pivotally mounted spring sustained detent connected with the shank and provided with a plurality of sockets to engage the tang of the cutter and render said cutter adjustable as to its angle and distance relatively to the crook.

4. A hoof parer embodying a crook having a shank, a handle mounted on said shank, a hoof parer pivotally connected to the shank and provided with a tang, a detent mounted on the shank and having an adjustable engagement with said tang, said cutter embodying a plurality of cutting blades.

5. A hoof parer embodying a paring crook having a shank, a handle on said shank, and an adjustable cutter embodying a tang pivotally connected to said shank, a detent for engaging and rendering said tang adjustable, oppositely arranged cutting blades having tangs removably fitted in dove-tail recesses in an extension of said tang, and a locking device connected with said extension and having means to engage the tangs of the cutting blades for fastening the same in place, substantially as described.

[Claim 6 not printed in the Gazette.]

873,547. MAGAZINE-FIREARM. JOHN J. HENRY, Watson, Ill. Filed June 15, 1907. Serial No. 379,256.



1. In a magazine firearm, a magazine, a slidable barrel, a carrier for lifting the shells or cartridges from the magazine to a position in alinement with the barrel, a lifting lever arranged on the carrier and on which the shell or cartridge rests, and means on the barrel for elevating said lifting lever to present the end of the shell or cartridge into position to enter the bore of the barrel after the carrier has reached the limit of its upward movement.

2. In a magazine firearm, a receiver, a magazine tube carried thereby, a slidable barrel, a carrier operating in the receiver to elevate the shells or cartridges from the magazine to the rear of the barrel, and a barrel operated means on the carrier for lifting the forward end of the shell or cartridge into a position in alinement with the bore of the barrel after the carrier has reached the limit of its upward movement.

3. In a magazine firearm, a receiver, a magazine tube carried thereby, a barrel slidable in the receiver, a carrier operating in the receiver to lift the shells or cartridges from the magazine to the rear of the barrel, and a barrel actuated means on the carrier for lifting the forward end of the shell or cartridge into a position in alinement with the bore of the barrel after the carrier has arrived at the limit of its upward movement.

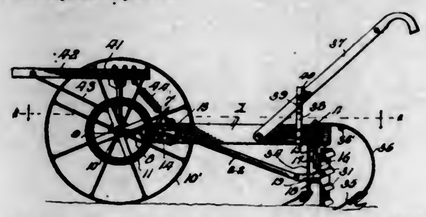
4. In a magazine firearm, a receiver, a magazine tube secured thereto, a barrel slidable in the receiver, a carrier for elevating the shells or cartridges from the magazine to the rear of the barrel, and a barrel operated cartridge lifter arranged on the carrier and adapted to lift the forward end of the shell or cartridge into a position in alinement with the bore of the barrel after the carrier has reached the limit of its upward movement.

5. In a magazine firearm, a pair of successively operable cartridge lifting devices, one of which is carried by the other, and a barrel for operating both of said lifting devices.

[Claims 6 to 33 not printed in the Gazette.]

873,548. COTTON CHOPPER AND CULTIVATOR. WILLIAM A. HIGGS and MORGAN S. HAMILTON, Davis, Tex. Filed Jan. 23, 1907. Serial No. 353,724.

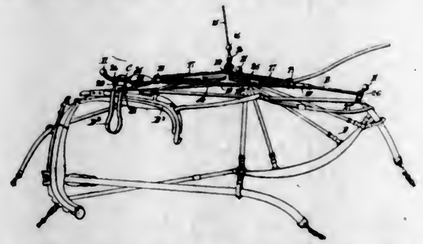
1. A cotton chopper comprising a main axle, ground wheels mounted thereon, a main frame movably supported on the axle, a chopping wheel supported on the main frame, and means for driving said wheel in the movement of the axle, said wheel being formed in its periphery with a depression, and a series of chopping blades regularly spaced about the periphery of the wheel with the exception of the depressed portion.



2. A cotton chopper comprising a main axle, ground wheels mounted thereon, a main frame movably supported on the axle, a chopping wheel adjustably supported on the main frame, means for driving said wheel in the movement of the axle, said wheel being formed in its periphery with a depression, and a series of chopping blades regularly spaced about the periphery of the wheel with the exception of the depressed portion.

3. A cotton chopper comprising a main axle, ground wheels mounted thereon, a main frame pivotally mounted on the axle and extending wholly in rear thereof, a chopping wheel adjustably secured to the main frame, a bevel gear fixed on the axle, a shaft carried by the main frame, a pinion on said shaft to engage the gear, a chopping wheel shaft adjustably supported on the main frame, a chopping wheel carried by said shaft, and an operating shaft movably connected with the pinion shaft and with the chopping wheel shaft.

873,549. HARNESS-HANGER. FRANK HOF, New York, N. Y. Filed May 29, 1907. Serial No. 376,257.



1. In a hanger for suspending a harness, a body bar having a slotted portion, and a rocker having a body pivoted in the slotted portion of the body bar and provided with rest members extending from the body, the end of one of said rest members being adapted to enter the slotted portion of the body bar.

2. In a hanger for suspending harness, a tubular body bar having slots produced in its upper and lower surfaces adjacent to one end thereof, a rocker having a body mounted to turn in the slotted portion of the body bar, and rest members extending from the lower portion of the rocker body and located one above the other, the outer end of the upper rest member being adapted to enter the slot in the lower face of the body bar.

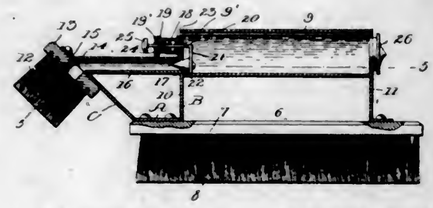
3. In a hanger for suspending a harness, a body bar having a slotted forward portion, a cross bar attached to the body bar, means carried by the cross bar for supporting the breeching section of a harness, and a rocker comprising a disk body pivoted in the slotted forward portion of the body bar, said disk body having an upper and a lower hook-shaped member extending from its lower peripheral portion and forming rests for parts of the forward portion of a harness, the end of the upper hook-shaped member being adapted to enter the slotted portion of the body bar.

4. In a hanger for suspending a harness, a body bar having slots in the upper and lower surfaces thereof at its forward portion, a cross bar attached to the body bar, means carried by the cross bar for supporting the breeching portion of a harness, a rocker pivoted in the slotted forward portion of the body bar, which rocker is provided with hook-shaped rests, one below the other, the upper rest being adapted to receive the snap of a rein and the lower rest the ring of the hame through which the rein passes, the said upper rest, when the rocker is in locking position, entering the lower slot in the body bar.

5. In a hanger for suspending a harness, a body bar, and a rocker comprising a body pivoted to the body bar, and hook-shaped rests extending from the pivoted body, one below the other, the free end of the upper rest when in closed position engaging an opening in the body bar, the said rest being carried to closed position by the weight of the harness and brought to discharge position by the withdrawal of a portion of the harness.

[Claims 6 and 7 not printed in the Gazette.]

873,550. BLACKING-BRUSH. ERVING C. HUDSON, Wilmington, N. C. Filed May 28, 1907. Serial No. 376,079.



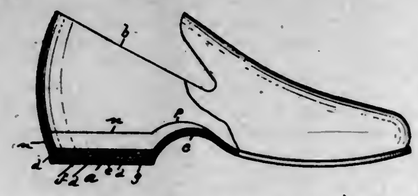
1. The combination with a brush of a bracket mounted upon the forward portion thereof, said bracket including an attaching portion, an upwardly extending vertical portion at the rear of the attaching portion, and an upwardly and forwardly inclined portion at the forward end of the said attaching portion, a second bracket secured to the brush rearwardly of the first named bracket, a reservoir mounted upon the vertical portion of the first named portion and upon the second bracket and extending therebetween to form a handle, a dauber secured to the outer face of the upwardly and forwardly inclined portion of the first named bracket, a supply tube communicating with the forward end of the reservoir and arranged to deliver blacking to the dauber, and a valve for the tube.

2. A fountain blacking brush comprising a brush proper, a bracket secured upon the forward portion of said brush and including the horizontal intermediate portion and an upwardly and forwardly inclined forward portion, said bracket also including a vertical rearward portion, a second bracket secured upon the rearward portion of the brush in parallel relation to the vertical portion of the first named bracket, a horizontally extending cylindrical reservoir secured upon the vertical portion of the first named bracket and upon the second named bracket, said reservoir lying in spaced relation to the brush proper to form a handle, a dauber secured to the forward space of the forward portion of the first named bracket, a tube communicating with the forward end of the reservoir and with the dauber, a forwardly extending sleeve secured to the forward end of the reservoir and disposed above the tube, a valve rod slidably arranged within the sleeve, the forward end of the valve rod having a finger-piece, the valve rod having a downwardly turned portion arranged within the reservoir and in line with the tube, a valve carried by the downwardly turned portion and arranged to close the inner end of the tube, and means for operating the valve.

873,551. RUBBER BOOT AND SHOE. TIMOTHY E. HURLEY, Beverly, Mass. Filed Apr. 18, 1907. Serial No. 368,858.

1. In a rubber over-shoe, a guard or lift of fibrous material comprising a horizontal flat portion located over the rubber heel, a flange extending up from the edges of said

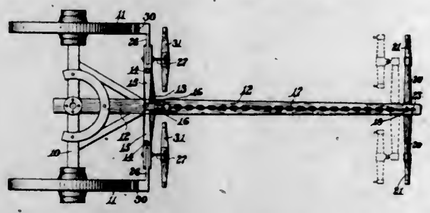
flat portion, and instep-guards or stays extending forward from said flange along and secured to the portions of the upper directly over the instep, for the purpose set forth.



2. In a rubber over-shoe, a guard or lift of fibrous material comprising a horizontal flat portion located over the rubber heel, a flange extending up from the edges of said flat portion, and instep-guards or stays extending forward from said flange along and secured to the portions of the upper directly over the instep and conforming to the curvature of said instep, for the purpose set forth.

3. In a rubber over-shoe, a guard or lift of fibrous material comprising a horizontal flat portion located over the rubber heel, a flange extending up from the edges of said flat portion, and instep-guards or stays extending forward from said flange along and secured to the portions of the upper directly over the instep conforming to the curvature of said instep and tapering toward their outer ends, for the purpose set forth.

873,552. VEHICLE-BRAKE. MARTIN JEWELL, Clinton, Me. Filed Feb. 11, 1907. Serial No. 356,758.



1. In a vehicle-brake, the combination of a cross-tree; a brake-lever pivoted to each end thereof; a whiffletree secured to each end thereof; means for operating said lever; and a wheel-engaging brake-shoe secured to said brake-lever by a horizontal pivot extending transversely of said lever and adapted to be thrown out of engagement with the wheel of the vehicle when backing.

2. In a vehicle-brake, the combination of a cross-tree; a brake-lever pivoted to each end thereof; means for operating said lever located at the outer end of the pole in front of the draft animals; and a wheel-engaging brake-shoe secured to said brake-lever by a horizontal pivot extending transversely of said lever and adapted to be thrown out of engagement with the wheel of the vehicle when backing.

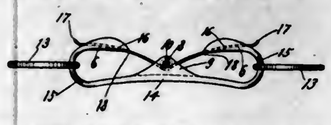
3. In a vehicle-brake, the combination of a cross-tree; a brake-lever pivoted to each end thereof; a member pivoted to said lever and adapted to move about its pivot in a vertical plane parallel with the axle; a brake-shoe secured thereto; a connector extending from said brake-lever to the end of the pole of the vehicle; and means at the front end of the pole for attaching said connector to the draft animal.

4. In a vehicle-brake, the combination of a cross-tree; a brake-lever pivoted to each end thereof; a member pivoted to said lever and adapted to move about its pivot in a vertical plane parallel with the axle; a brake-shoe secured thereto; a connector extending from said brake-lever to the end of the pole of the vehicle; and a whiffletree secured to the outer end of said connector in front of the draft animals.

5. In a vehicle-brake, the combination of a cross-tree; a brake-lever pivoted thereto and adapted to move about its pivot in a horizontal plane; means for operating said lever; a member pivoted to the outer end of said lever and movable about said pivot in a vertical plane parallel to the axle; a shoe on the end of said member; a whiffletree secured to each end of said cross-tree; and stops to limit the downward movement of said shoe member.

[Claims 6 and 7 not printed in the Gazette.]

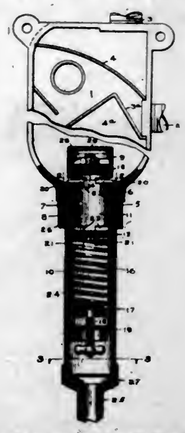
873,553. SNAP-HOOK. ABNER JOHNSON, Strandquist, Minn. Filed Apr. 29, 1907. Serial No. 370,785.



1. A snap-hook having adjacent the point of its hook an external longitudinal groove, and a spring arm extending from the body of the hook and resting in said groove, said spring arm projecting beyond the end of the groove to facilitate the raising of the arm by engaging its ends.

2. A snap-hook comprising an elongated body with externally grooved hooks one at each end thereof, lugs or lips upon the middle of the body, a pin passed through the lips in transverse direction to the body, a spring encircling the pin and having its ends resting in the grooves of the hooks.

873,554. AUTOMATIC FLUSHING DEVICE. OTTO F KADOW and JOSEPH H. LYONS, Cleveland, Ohio, assignors, by direct and mesne assignments, of one-third to said Kadow and two-thirds to Charles P. Salen, Cleveland, Ohio. Filed Jan. 28, 1907. Serial No. 354,387.



1. In a flushing device that is adapted to be applied to a receptacle or conduit for fluids wherein sediment may accumulate, a valve for permitting said sediment to escape, and means whereby said valve is opened and closed as the pressure of the fluid in the receptacle or conduit is varied.

2. In a flushing device that is adapted to be applied to a receptacle or conduit wherein sediment may accumulate, a valve that is subjected to the pressure of the fluid within said receptacle or conduit, means tending to lift said valve against said pressure, and a passage through which the sediment may escape from the receptacle or conduit when the pressure of the liquid therein falls below normal and the valve is moved against said pressure.

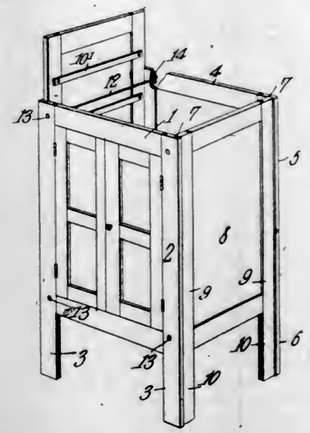
3. In a flushing device that is adapted to be applied to a receptacle or conduit wherein sediment may accumulate, a valve that is subjected to the pressure of the fluid within said receptacle or conduit, a spring tending to lift said valve against said pressure, means for varying the tension of said spring, and a passage through which the sediment may escape from the receptacle or conduit when the pressure of the liquid therein falls below normal and the valve is moved by the spring against said pressure.

4. In a flushing device that is adapted to be applied to a receptacle or conduit for fluids wherein sediment may accumulate, a tubular member, means for securing said tubular member to said receptacle or conduit, the end of said tubular member being open to the fluid in the receptacle or conduit, a valve in said tubular member, means for forcing said valve against the pressure of the fluid in the receptacle or conduit, and a passage through which the sediment may escape from the receptacle or conduit when the pressure therein falls below the normal and the valve is moved against said pressure.

5. In a flushing device that is adapted to be applied to a receptacle or conduit for fluids wherein sediment may accumulate, a tubular member, means for securing said tubular member to said receptacle or conduit, the end of said tubular member being open to the fluid in the receptacle or conduit, a valve in said tubular member, a spring for forcing said valve against the pressure of the fluid in the receptacle or conduit, means for varying the tension of said spring, and a passage through which the sediment may escape from the receptacle or conduit when the pressure therein falls below the normal and the valve is moved by the spring against said pressure.

[Claims 6 to 21 not printed in the Gazette.]

873,555. PROVISION-SAFE. OSCAR E. KEARNS, High Point, N. C., assignor to Kearns Furniture Company, High Point, N. C. Filed July 3, 1907. Serial No. 382,046.



1. An article of furniture having front, rear and side panels, said side panels having rounded edges, and said front and rear panels having rounded grooves designed to receive said edges, and means for binding the front and rear panels upon the side panels.

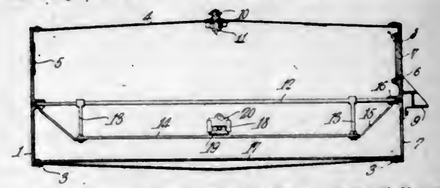
2. An article of furniture having front and rear panels each of said panels having longitudinal grooves curved in cross section, side panels interposed between the first mentioned panels and having rounded longitudinal edges disposed to fit and turn within the grooves, and tie rods engaging the front and rear panels and disposed to bind them upon the side panels.

3. An article of manufacture having front and rear panels, each of said panels having longitudinal grooves substantially semi-circular in cross section, side panels interposed between the first mentioned panels and having rounded longitudinal edges conforming in contour with and disposed to fit within the grooves, said side panels being mounted to swing in relation to the front and rear panels while seated in the grooves, tie rods engaging the grooved panels close to the side panels, and means engaging the rods for binding the grooved panels upon the side panels.

873,556. MANUFACTURE OF HIGH-PER-CENT.-MANGANESE STEEL. CHARLES H. KELSALL, Horwich, England. Filed Mar. 4, 1907. Serial No. 360,563.

A method of manufacturing a high percent. manganese steel which consists in treating a mild or low carbon steel overcharged with oxid while in the furnace to ferro-manganese, and then admixing therewith molten rich ferro-manganese, after tapping.

873,557. LIFE-BOAT. THOMAS B. KING, Ephrata, Wash. Filed Apr. 11, 1907. Serial No. 367,603.

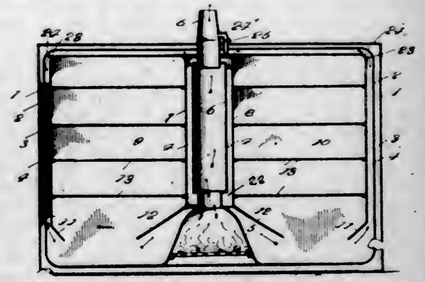


1. A boat comprising circular heads, a substantially cylindrical body secured at its ends to the heads, and a platform movably supported by the heads within the boat and disposed when subjected to weight, to right the boat when shifted out of normal position.

2. A boat comprising circular heads, a substantially cylindrical body secured at its ends to the heads, a shaft secured at its ends to the heads at points below the centers thereof, and a seat suspended from and pivotally connected to the shaft and constituting a weight to hold the boat normally upright.

3. A boat comprising circular heads, a substantially cylindrical body secured at its ends to the heads, an eccentrically mounted shaft connecting the heads at points below the centers thereof, hangers loosely supported by the end portions of the shaft, a seat carried by the hangers and constituting a weight to hold the body normally upright, said shaft constituting a handle for use by the occupant of the seat, a closure within one of the heads and above the shaft, and means in the top of the body and controlled by the occupant of the boat for ventilating the body.

873,558. PORTABLE OVEN. ALLAN B. KINGSLAND, Burlington, Vt. Filed Aug. 20, 1906. Serial No. 331,404.



1. A baking apparatus, comprising a casing, a fire pot within the casing, a flue conveying the products of combustion from the fire pot upwardly through the casing, and an oven within the casing and spaced a distance therefrom forming a hot air space surrounding the sides, top and bottom of the oven, and in which the heated air is adapted to circulate.

2. A baking apparatus comprising a casing, a fire pot within the casing, a flue conveying the products of combustion from the fire pot upwardly through the casing, and

an oven within the casing and spaced a distance therefrom forming a hot air space surrounding the sides, top and bottom of the oven and said hot air space in communication with the oven.

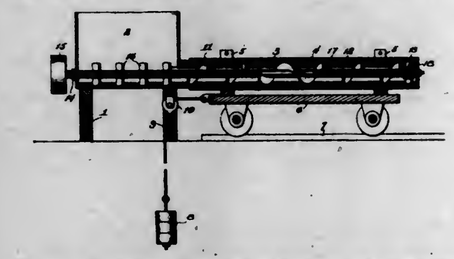
3. A baking apparatus comprising a casing, a fire pot within the casing, a flue conveying the products of combustion from the fire pot upwardly through the casing, an oven within the casing and spaced a distance therefrom forming a hot air space surrounding the sides, top and bottom of the oven and said hot air space in communication with the oven and the casing having an opening in communication with the outside atmosphere, and having a damper controlling the same, whereby the heat is regulated within the hot air space.

4. A baking apparatus comprising a casing an inner casing within the casing, an oven within the inner casing and spaced a distance therefrom forming a hot air circulating passage, said oven having an open bottom in communication with the passage, and a fire pot within the casing and adapted to heat the air within the passage and cause the circulation of air around the oven through the passage.

5. A baking apparatus, comprising a casing, a fire pot located centrally therein and extending across the casing, a flue in communication with the fire pot and extending upwardly through the casing, and an oven situated within the casing above the fire pot on each side of the flue, and spaced a distance from the casing to form passages surrounding the sides, top and bottom of the ovens, and said ovens having open lower ends in communication with the passages, whereby the air is caused to circulate around and through the oven, and dampers within the casing and communicating with the passages.

[Claims 6 and 7 not printed in the Gazette.]

873,559. MOLDING-MACHINE. JOHN H. KOONTZ, Stewardson, Ill. Filed May 3, 1907. Serial No. 371,599.



1. In a machine of the class described, the combination of a duct, a hopper connected therewith, a rotatable element extending through the hopper and duct, arms on the element at the portion disposed within the hopper for agitating the contents of the latter and assisting in discharging the contents into the duct, a spiral screw on the part of the element within the duct for forcing the contents from the latter, and a mold yieldingly mounted on the duct for receiving the material discharged from the latter.

2. In a machine of the class described, the combination of a duct, means for supplying plastic material thereto, a mold movable with respect to the duct, means for forcing the material through the duct to the mold and producing relative movement of the duct and mold, and a resistance device opposing the movement of the parts for causing the material to be compacted in the mold, said resisting device comprising a truck mounted wheels, and a weight and cable means connected with the truck for yieldingly opposing the movement thereof.

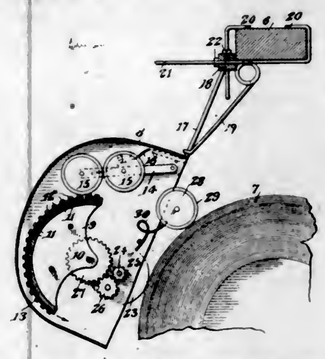
3. In a machine of the class described, the combination of a hopper, a duct connected therewith, a mold slidably mounted on the duct, means for conveying plastic material from the hopper to the mold through the duct and for progressively moving the mold during the feed of the material, a movable support for the mold, and a device for opposing the movement of the support, said means comprising a rotatable element extending through the hopper and duct, radial arms on the element suitably disposed for agitating the material and directing it from the hopper to the duct and a helical member on the shaft extending from one end of the duct to the other for discharging the material from the duct.

4. In a machine of the class described, the combination of a duct, a hopper connected therewith, a shaft extending through the duct and hopper, an agitator on one portion of the shaft, a screw on the other, and a mold operatively related with the duct.

5. In a machine of the class described, the combination of an approximately horizontal duct, a hopper connected with one end thereof, a shaft extending through the hopper and duct and rotatably mounted therein, agitator arms on the portion of the shaft extending through the hopper, a screw on the portion of the shaft in the duct, and a mold movably mounted with respect to the duct.

[Claim 6 not printed in the Gazette.]

873,560. PRINTING ATTACHMENT FOR PAPER-ROLL HOLDERS. JOHN L. LAMBOLEY, Fort Wayne, Ind. Filed Apr. 9, 1907. Serial No. 367,173.



1. In a device of the character described, the combination with a supporting frame, of means for mounting the same on a paper roll holder, a printing member having a shaft mounted in the supporting frame, said member being rotatable around said shaft concentrically thereto, a driving wheel journaled in the frame at one side of the shaft, and gearing connecting the wheel and printing member for transmitting motion from the former to the latter.

2. In a device of the character described, the combination with a movable support, and means for mounting it on a paper roll holder, of a revoluble printing member mounted thereon, and roll-engaging means separately mounted on the support and connected to the member for rotating it, the roll-engaging portion of said means being located nearer the axis of rotation of the printing member than the printing portion of said member.

3. In a device of the character described, the combination with a movable support, of means for movably mounting it on a paper roll holder, a revoluble printing member, and roll-engaging means geared to the member for rotating the same, the roll-engaging portion of said means being located nearer the axis of rotation of the printing member than the printing face of said member.

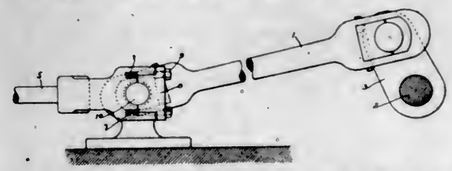
4. In a device of the character described, the combination with a supporting frame, of means for movably mounting the same on a paper roll holder, a printing member journaled in the frame, a roll-engaging driving wheel journaled in the frame at one side of the printing member, and gearing between the driving wheel and the printing member for transmitting motion from the former to the latter.

5. In a device of the character described, the combination with a supporting casing, of means for mounting the same on a paper roll holder, a rotatable printing member

journaled within the casing, and a roll-engaging driving wheel journaled outside the casing and having connections with the member for rotating it.

[Claims 6 to 11 not printed in the Gazette.]

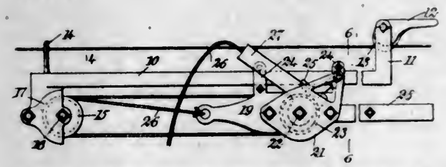
873,561. CROSS-HEAD. PAUL LANGER, Milwaukee, Wis. Filed Apr. 7, 1906. Serial No. 310,423.



1. The combination with a bifurcated cross-head of a connecting rod, a pin inserted in said rod and upon which said rod is adapted to oscillate, caps and bolts to bind said pin between said caps and said cross-head.

2. The combination with a bifurcated cross-head of a connecting rod, a pin inserted in said rod and upon which said rod is adapted to be oscillated, caps and bolts to bind said pin between said caps and said cross-head, the length of said pin being substantially not greater than the width of the bifurcated end of said cross-head.

873,562. WIRE-STRETCHER. ROBERT G. LARZELERE, Wathena, Kans. Filed Aug. 13, 1907. Serial No. 388,312.



1. In a wire stretcher, a beam, means for clamping the wire at one end of the beam, a slide carried by the beam, means for securing the slide in a fixed position, and means for shifting the beam longitudinally of the slide.

2. In a wire stretcher, a beam, means for clamping the wire at one end of the beam, means for suspending the beam from the wire at its opposite end, a slide carried by the beam, means for securing the slide in a fixed position, and means for shifting the beam longitudinally of the slide.

3. In a wire stretcher, a beam, means for clamping the wire carried by the beam, a slide carried by the beam, means for securing the slide in a fixed position, sheaves carried by both the slide and the beam, and a line attached to the slide and passing over said sheaves.

4. In a wire stretcher, a beam, means for clamping the wire carried by the beam, a slide carried by the beam, means for securing the slide in a fixed position, sheaves carried by both the slide and the beam, a line attached to the slide and passing over said sheaves, and a lever for operating the line.

5. In a wire stretcher, a beam, means for clamping the wire carried by the beam, a slide carried by the beam, means for securing the slide in a fixed position, sheaves carried by both the slide and the beam, a line attached to the slide and passing over said sheaves, a lever for operating the line, and a dog coacting with one of said sheaves for preventing the backward movement of the line.

[Claims 6 to 8 not printed in the Gazette.]

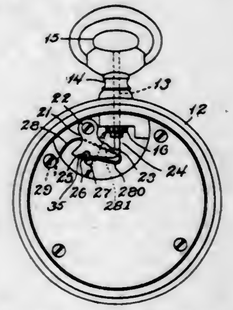
873,563. CASKET-HANDLE. JOHN D. LAWRENCE, Princeton, N. J. Filed July 15, 1907. Serial No. 383,767.

The combination of a head provided with a lug, having a thickness approximately equal to half the width of said head, means for securing said head to the side of a casket, a drop arm provided with a head and with a lug integral with said head, said last-mentioned lug having a thickness approximately equal to one-half the width of said last-mentioned head, a pin extending through said lugs and terminating substantially flush with the outer



edges thereof, and an inclosing member provided with an opening into which said lugs extend, said opening being further provided with surfaces against which the heads of said pins loosely fit.

873,564. PENDENT WINDING AND SETTING WATCH. DANIEL A. LINDGREN, Waltham, Mass. Filed May 15, 1907. Serial No. 373,710.



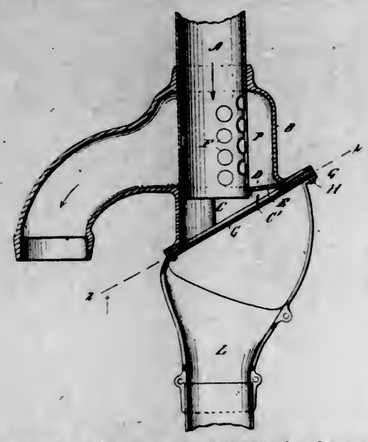
1. A watch comprising a winding and hands-setting mechanism, which includes a push pin or stem, and a swinging yoke carrying an intermediate winding wheel and an intermediate setting wheel, the yoke having an extended stud on which the intermediate setting wheel rotates, a lever movable in one direction by the stem, and provided with a cam face engaging said stud, and a locking face adjacent to the cam face, a spring adapted to move the lever in the opposite direction, and to cause a locking engagement between said locking face and stud, and a spring carried by the lever, and adapted to exert a yielding pressure on the yoke and on the intermediate winding wheel when the yoke is in its winding position, whereby said winding wheel is permitted to slip when rotated backwardly.

2. A watch comprising a winding and hands-setting mechanism, which includes a push pin or stem, and a swinging yoke carrying an intermediate winding wheel and an intermediate setting wheel, the yoke having an extended stud on which the intermediate setting wheel rotates, a lever movable in one direction by the stem, and provided with a cam face engaging said stud, and a locking face adjacent to the cam face, a spring adapted to move the lever in the opposite direction, and to cause a locking engagement between said locking face and stud, and a spring carried by the lever, and adapted to exert a yielding pressure on the yoke when the latter is in its winding position, the said springs being formed from a single piece which includes a connecting portion rigidly secured to the lever.

873,565. TERMINAL FOR PNEUMATIC-DESPATCH-TUBE APPARATUS. ISAAC W. LITCHFIELD, Boston, Mass., assignor to Lamson Consolidated Store Service Company, Newark N. J., a Corporation of New Jersey. Filed Dec. 9, 1905. Serial No. 291,043.

1. In a terminal for pneumatic despatch tube apparatus, a transmission tube, a valve normally closing the delivery opening of said terminal against atmospheric pressure, and a chamber located between the mouth of said transmission tube and said valve for relieving the vacuum in

front of said carrier upon the impact of the carrier upon said valve and for diverting and preventing the inrush of air from acting upon and retarding the delivery of the carrier.



2. In a terminal for pneumatic despatch tube apparatus, a chamber surrounding the transmission tube and connected with the source of power, perforations connecting said chamber with the transmission tube and located in said tube opposite the connection to the source of power, a relief chamber located at the mouth of said transmission tube and connected with the chamber surrounding the transmission tube, a valve normally closing the lower part of said relief chamber and adapted to open outwardly, said relief chamber operative upon contact of the carrier with said valve for relieving the atmospheric pressure exerted against said carrier upon the opening of said valve.

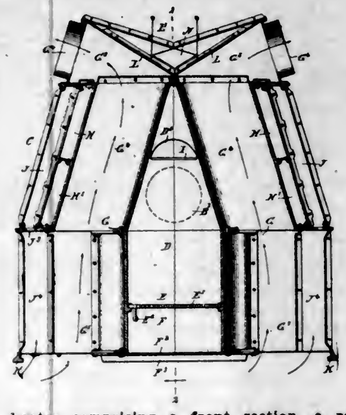
3. In a terminal for pneumatic despatch tube apparatus, a chamber surrounding the transmission tube and connected with the source of power, perforations connecting said chamber with the transmission tube and located in said tube opposite the connection to the source of power, a relief chamber located at the mouth of said transmission tube, a diaphragm with perforations therein connecting said relief chamber with the chamber surrounding the transmission tube, a valve normally closing the lower part of said relief chamber and adapted to open outwardly, said relief chamber operative upon contact of the carrier with said valve for relieving the atmospheric pressure exerted against said carrier upon the opening of said valve.

4. In a terminal for pneumatic despatch tube apparatus, the combination of a chamber surrounding the transmission tube and connected with the source of power, perforations connecting said chamber with the transmission tube and located in said tube opposite the connection to the source of power, a relief chamber located at the mouth of said transmission tube and connected with the chamber surrounding the transmission tube, and a valve normally closing the lower part of said relief chamber and mounted at angles with said transmission tube.

5. In a terminal for pneumatic despatch tube apparatus, a transmission tube, a relief chamber, located at the mouth of and connected with said tube, a valve normally closing the lower part of said relief chamber and the transmission tube to atmospheric pressure and adapted to open outwardly, said relief chamber operative upon contact of the carrier with said valve for relieving atmospheric pressure exerted against said carrier on the opening of said valve.

873,566. AIR-HEATER. ARTHUR H. LOVEJOY, Red Bank, N. J. Filed Feb. 21, 1907. Serial No. 358,549.

1. A heater comprising a plurality of sections, each having a fire box, grate and ash pit, air heating chambers on opposite sides of the fire box and ash pit of each section, each air heating chamber being independent and extending from the bottom of the heater and connecting directly with a room to be heated, each section having at each side a smoke chamber located at the outer side of the air heating chamber, the said heater also having at each side a fresh air chamber at the outer side of the smoke chamber, and an independent air inlet chamber at opposite sides of each section and communicating by ports with the said fresh air chambers.



2. A heater comprising a front section, a rear end section, and a plurality of intermediate sections one alongside the other, the sections forming a longitudinally extending fire box, grate and ash pit, the opposite side walls of the ash pit and fire box of each section being hollow and forming independent air heating chambers each having an inlet at the bottom of the section and a side outlet at the top, the upper portions of the said hollow side walls being inclined toward each other, each section having at each side a smoke chamber, communicating with the fire box, a fresh air chamber on each side of the heater, and an independent fresh air inlet chamber at opposite sides of each section and communicating by ports with the respective fresh air chambers.

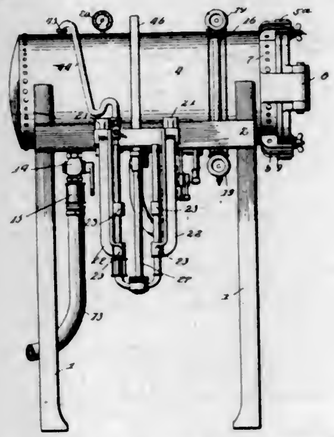
3. A heater comprising a front section, a rear section, and intermediate sections between the said front and rear sections, each of said sections forming a portion of the fire box, ash pit, and grate, the hollow side walls of the fire box and ash pit of each section forming air heating chambers extending from the bottom of the section and having an outlet at its upper end for direct connection with a flue leading to a room to be heated, the upper portions of said side walls being inclined toward each other, upper and lower smoke chambers communicating with each other and located at the outer sides of the upper portion of the hollow side walls, the upper portions of adjacent air heating chambers being spaced apart, the spaces between the chambers communicating by smoke passages with the upper smoke chamber.

4. A heater comprising a plurality of sections each having a fire box, grate, and ash pit, the side walls of the said fire box and ash pit being hollow forming air heating chambers, the upper portions of the side walls being spaced apart to form smoke passages for the escape of smoke from the fire box, smoke chambers on the outside of the hollow side walls and connected with the said smoke passages, one of the end sections of the heater being provided with a smoke outlet connected with the smoke chambers, the said end section having a space communicating directly with the fire box and provided with a valve controlled opening communicating with said smoke outlet.

5. A heater comprising a plurality of sections one alongside the other and each having a fire box, grate and ash pit, the side walls of the ash pit and fire box being hollow forming air circulating chambers each extending from the bottom of the section and connecting directly with a flue leading to a room to be heated, the upper portions of the side walls forming the air circulating chambers being inclined toward each other and spaced apart to form smoke passages for the escape of smoke from the fire box, smoke chambers on the outside of said hollow side walls and located one above the other, the upper smoke chambers being connected with the said smoke passages and with the front ends of said lower smoke chambers, the rear end section of said heater being provided with a smoke outlet connected with the rear ends of the lower smoke chambers, the said end section being formed with a space communicating with the fire box and provided with an opening communicating directly with said smoke outlet, and a manually controlled valve normally closing said opening.

[Claims 6 to 16 not printed in the Gazette.]

873,567. BEER-RACKER. IGNATZ LOWY and OSCAR F. ADELMAN, Chicago, Ill. Filed Apr. 16, 1907. Serial No. 368,519.



1. A device of the class described, comprising a support, a tank on the support, means for supplying beer to the tank, and means for delivering beer therefrom, comprising a valved discharge pipe leading from the bottom of the tank, arms depending from the support and provided with spaced bearings, a U-shaped frame having its arms slidable in the bearings, and having its body portion provided with a seal having a tubular opening therethrough, the lower edge of said opening being beveled, one of said arms being hollow and communicating with the opening, a valve connected with said hollow arm, a hose connecting the valve with the upper portion of the tank, a filling pipe slidable through the opening and having a beveled annular flange for coacting with the beveled edge of the tubular opening, said pipe having its lower end closed and being provided with openings above the flange, a hose connecting the valved discharge pipe and the filling pipe, a rack connected with the upper end of the filling pipe, a pinion meshing with the rack, manually controlled means for rotating the pinion whereby to raise and lower the rack, and a lost-motion connection between said means and the valve of the discharge pipe, whereby to open said valve at the end of the downward movement of the rack, and to close said valve at the beginning of the upward movement of the rack.

2. A device of the class described, comprising a support, a tank on the support, means for supplying beer to the tank, means for delivering beer therefrom, comprising a valved discharge pipe leading from the bottom of the tank, arms depending from the support and provided with spaced bearings, a U-shaped frame having its arm slidable in the bearings, and having its body portion provided with a seal having a tubular opening whose lower edge is beveled, one of said arms being hollow and communicating with the opening, a hose connecting said hollow pipe with the upper part of the tank, a filling pipe having a beveled annular flange for coacting with the beveled edge of the tubular opening, said pipe having its lower end closed and being provided with openings above the flange, manually controlled means connected with the filling pipe for raising and lowering the same, and a connection between said means and the valve of the discharge pipe, whereby to open the valve near the end of the downward movement of the filling pipe.

3. A device of the class described, comprising a support, a tank on the support, means for supplying beer to the tank, means for delivering beer therefrom, comprising a valved discharge pipe leading from the bottom of the tank, a U-shaped frame slidably mounted on the support, and having its body portion provided with a seal having a tubular opening whose lower edge is beveled, one of the arms of said U-shaped frame being hollow and communicating with the opening, a hose connecting said arm with the upper part of the tank, a filling pipe slidable through the opening and having a beveled annular flange for coacting with the beveled edge of the tubular opening, said tubular opening being of greater diameter than the filling pipe, a packing arranged between the filling pipe and the tubular opening at the upper end thereof, a connection between the filling pipe and the tank, means for raising and lowering the filling pipe, and a connection between said means and the valved discharge pipe whereby to open said pipe near the end of the downward movement of the filling pipe.

4. A device of the class described, comprising a support, a tank on the support, means for supplying beer to the tank, means for delivering beer therefrom, comprising a seal for the beer barrel slidably mounted on the support, and adapted to engage and close the bung hole of the barrel, said seal comprising a cylindrical casing having a beveled lower end, a filling pipe slidable through the seal and normally closing the lower end thereof, said pipe being of lesser diameter than the internal diameter of the seal, a packing arranged between the filling pipe and the seal at the upper end of said seal, a normally closed communication between the seal and the upper portion of the tank, a connection between the uper end of the filling pipe and the bottom of the tank, a valve normally closing said connection, means for raising and lowering the seal and the filling pipe, and a connection between said means and the valve for opening said valve near the end of the downward movement of the filling pipe.

5. A device of the class described, comprising a support, a tank on the support, means for supplying beer to the tank, means for delivering beer therefrom, comprising a seal adapted to engage and close the bung hole of the beer barrel, a filling pipe movable through the seal, said seal closing said filling pipe when the filling pipe is in its uppermost position, means in connection with the filling pipe for lowering the seal into engagement with the barrel, and for moving the filling pipe with respect to the seal whereby to open said filling pipe, a communication between the bottom of the tank and the filling pipe, a valve normally closing said communication, and a connection between the moving means and the valve whereby to open said valve near the end of the downward movement of the filling pipe.

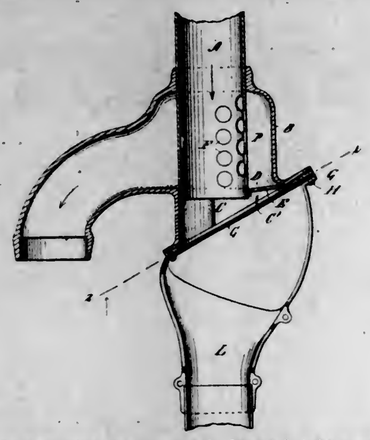
[Claims 6 to 8 not printed in the Gazette.]

873,568. METHOD OF TREATING BRICK. AUGUSTUS MAGOON, Logan, Ohio, assignor of one-half to John W. Jones, Haydenville, Ohio. Filed Nov. 15, 1906. Serial No. 343,599.

1. The method of treating colored brick which consists in introducing a large volume of air into the kiln containing said brick when the kiln is at its maximum temperature to oxidize the coloring matter in the brick.

2. The method of treating colored brick which consists in introducing a large volume of air under pressure into the kiln containing said brick when the kiln is at a high heat and continuing such supply of air to oxidize the coloring matter in the brick.

front of said carrier upon the impact of the carrier upon said valve and for diverting and preventing the inrush of air from acting upon and retarding the delivery of the carrier.



2. In a terminal for pneumatic despatch tube apparatus, a chamber surrounding the transmission tube and connected with the source of power, perforations connecting said chamber with the transmission tube and located in said tube opposite the connection to the source of power, a relief chamber located at the mouth of said transmission tube and connected with the chamber surrounding the transmission tube, a valve normally closing the lower part of said relief chamber and adapted to open outwardly, said relief chamber operative upon contact of the carrier with said valve for relieving the atmospheric pressure exerted against said carrier upon the opening of said valve.

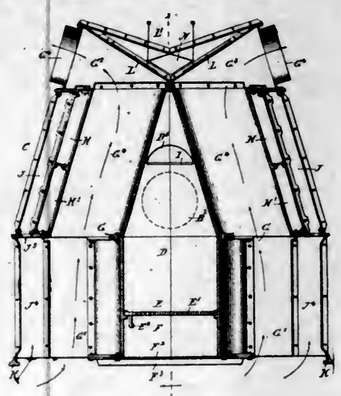
3. In a terminal for pneumatic despatch tube apparatus, a chamber surrounding the transmission tube and connected with the source of power, perforations connecting said chamber with the transmission tube and located in said tube opposite the connection to the source of power, a relief chamber located at the mouth of said transmission tube, a diaphragm with perforations therein connecting said relief chamber with the chamber surrounding the transmission tube, a valve normally closing the lower part of said relief chamber and adapted to open outwardly, said relief chamber operative upon contact of the carrier with said valve for relieving the atmospheric pressure exerted against said carrier upon the opening of said valve.

4. In a terminal for pneumatic despatch tube apparatus, the combination of a chamber surrounding the transmission tube and connected with the source of power, perforations connecting said chamber with the transmission tube and located in said tube opposite the connection to the source of power, a relief chamber located at the mouth of said transmission tube and connected with the chamber surrounding the transmission tube, and a valve normally closing the lower part of said relief chamber and mounted at angles with said transmission tube.

5. In a terminal for pneumatic despatch tube apparatus, a transmission tube, a relief chamber, located at the mouth of and connected with said tube, a valve normally closing the lower part of said relief chamber and the transmission tube to atmospheric pressure and adapted to open outwardly, said relief chamber operative upon contact of the carrier with said valve for relieving atmospheric pressure exerted against said carrier on the opening of said valve.

873,566. AIR-HEATER. ARTHUR H. LOVEJOY, Red Bank, N. J. Filed Feb. 21, 1907. Serial No. 358,549.

1. A heater comprising a plurality of sections, each having a fire box, grate and ash pit, air heating chambers on opposite sides of the fire box and ash pit of each section, each air heating chamber being independent and extending from the bottom of the heater and connecting directly with a room to be heated, each section having at each side a smoke chamber located at the outer side of the air heating chamber, the said heater also having at each side a fresh air chamber at the outer side of the smoke chamber, and an independent air inlet chamber at opposite sides of each section and communicating by ports with the said fresh air chambers.



2. A heater comprising a front section, a rear end section, and a plurality of intermediate sections one alongside the other, the sections forming a longitudinally extending fire box, grate and ash pit, the opposite side walls of the ash pit and fire box of each section being hollow and forming independent air heating chambers each having an inlet at the bottom of the section and a side outlet at the top, the upper portions of the said hollow side walls being inclined toward each other, each section having at each side a smoke chamber, communicating with the fire box, a fresh air chamber on each side of the heater, and an independent fresh air inlet chamber at opposite sides of each section and communicating by ports with the respective fresh air chambers.

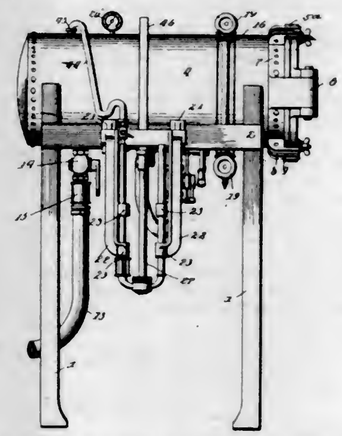
3. A heater comprising a front section, a rear section, and intermediate sections between the said front and rear sections, each of said sections forming a portion of the fire box, ash pit, and grate, the hollow side walls of the fire box and ash pit of each section forming air heating chambers extending from the bottom of the section and having an outlet at its upper end for direct connection with a flue leading to a room to be heated, the upper portions of said side walls being inclined toward each other, upper and lower smoke chambers communicating with each other and located at the outer sides of the upper portion of the hollow side walls, the upper portions of adjacent air heating chambers being spaced apart, the spaces between the chambers communicating by smoke passages with the upper smoke chamber.

4. A heater comprising a plurality of sections each having a fire box, grate, and ash pit, the side walls of the said fire box and ash pit being hollow forming air heating chambers, the upper portions of the side walls being spaced apart to form smoke passages for the escape of smoke from the fire box, smoke chambers on the outside of the hollow side walls and connected with the said smoke passages, one of the end sections of the heater being provided with a smoke outlet connected with the smoke chambers, the said end section having a space communicating directly with the fire box and provided with a valve controlled opening communicating with said smoke outlet.

5. A heater comprising a plurality of sections one alongside the other and each having a fire box, grate and ash pit, the side walls of the ash pit and fire box being hollow forming air circulating chambers each extending from the bottom of the section and connecting directly with a flue leading to a room to be heated, the upper portions of the side walls forming the air circulating chambers being inclined toward each other and spaced apart to form smoke passages for the escape of smoke from the fire box, smoke chambers on the outside of the upper inclined portion of said hollow side walls and located one above the other, the upper smoke chambers being connected with the said smoke passages and with the front ends of said lower smoke chambers, the rear end section of said heater being provided with a smoke outlet connected with the rear ends of the lower smoke chambers, the said end section being formed with a space communicating with the fire box and provided with an opening communicating directly with said smoke outlet, and a manually controlled valve normally closing said opening.

[Claims 6 to 16 not printed in the Gazette.]

873,567. BEER-RACKER. IGNATZ LOWY and OSCAR F. ADELMAN, Chicago, Ill. Filed Apr. 16, 1907. Serial No. 368,519.



1. A device of the class described, comprising a support, a tank on the support, means for supplying beer to the tank, and means for delivering beer therefrom, comprising a valved discharge pipe leading from the bottom of the tank, arms depending from the support and provided with spaced bearings, a U-shaped frame having its arms slidable in the bearings, and having its body portion provided with a seal having a tubular opening therethrough, the lower edge of said opening being beveled, one of said arms being hollow and communicating with the opening, a valve connected with said hollow arm, a hose connecting the valve with the upper portion of the tank, a filling pipe slidable through the opening and having a beveled annular flange for coacting with the beveled edge of the tubular opening, said pipe having its lower end closed and being provided with openings above the flange, a hose connecting the valved discharge pipe and the filling pipe, a rack connected with the upper end of the filling pipe, a pinion meshing with the rack, manually controlled means for rotating the pinion whereby to raise and lower the rack, and a lost-motion connection between said means and the valve of the discharge pipe, whereby to open said valve at the end of the downward movement of the rack, and to close said valve at the beginning of the upward movement of the rack.

2. A device of the class described, comprising a support, a tank on the support, means for supplying beer to the tank, means for delivering beer therefrom, comprising a valved discharge pipe leading from the bottom of the tank, arms depending from the support and provided with spaced bearings, a U-shaped frame having its arm slidable in the bearings, and having its body portion provided with a seal having a tubular opening whose lower edge is beveled, one of said arms being hollow and communicating with the opening, a hose connecting said hollow pipe with the upper part of the tank, a filling pipe having a beveled annular flange for coacting with the beveled edge of the tubular opening, said pipe having its lower end closed and being provided with openings above the flange, manually controlled means connected with the filling pipe for raising and lowering the same, and a connection between said means and the valve of the discharge pipe, whereby to open the valve near the end of the downward movement of the filling pipe.

3. A device of the class described, comprising a support, a tank on the support, means for supplying beer to the tank, means for delivering beer therefrom, comprising a valved discharge pipe leading from the bottom of the tank, a U-shaped frame slidably mounted on the support, and having its body portion provided with a seal having a tubular opening whose lower edge is beveled, one of the arms of said U-shaped frame being hollow and communicating with the opening, a hose connecting said arm with the upper part of the tank, a filling pipe slidable through the opening and having a beveled annular flange for coacting with the beveled edge of the tubular opening, said tubular opening being of greater diameter than the filling pipe, a packing arranged between the filling pipe and the tubular opening at the upper end thereof, a connection between the filling pipe and the tank, means for raising and lowering the filling pipe, and a connection between said means and the valved discharge pipe whereby to open said pipe near the end of the downward movement of the filling pipe.

4. A device of the class described, comprising a support, a tank on the support, means for supplying beer to the tank, means for delivering beer therefrom, comprising a seal for the beer barrel slidably mounted on the support, and adapted to engage and close the bung hole of the barrel, said seal comprising a cylindrical casing having a beveled lower end, a filling pipe slidable through the seal and normally closing the lower end thereof, said pipe being of lesser diameter than the internal diameter of the seal, a packing arranged between the filling pipe and the seal at the upper end of said seal, a normally closed communication between the seal and the upper portion of the tank, a connection between the uper end of the filling pipe and the bottom of the tank, a valve normally closing said connection, means for raising and lowering the seal and the filling pipe, and a connection between said means and the valve for opening said valve near the end of the downward movement of the filling pipe.

5. A device of the class described, comprising a support, a tank on the support, means for supplying beer to the tank, means for delivering beer therefrom, comprising a seal adapted to engage and close the bung hole of the beer barrel, a filling pipe movable through the seal, said seal closing said filling pipe when the filling pipe is in its uppermost position, means in connection with the filling pipe for lowering the seal into engagement with the barrel, and for moving the filling pipe with respect to the seal whereby to open said filling pipe, a communication between the bottom of the tank and the filling pipe, a valve normally closing said communication, and a connection between the moving means and the valve whereby to open said valve near the end of the downward movement of the filling pipe.

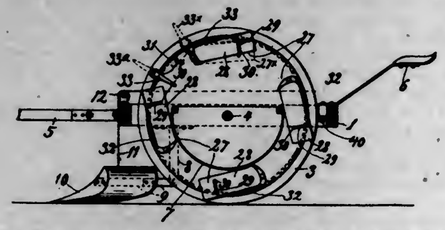
[Claims 6 to 8 not printed in the Gazette.]

873,568. METHOD OF TREATING BRICK. AUGUSTUS MAGOON, Logan, Ohio, assignor of one-half to John W. Jones, Haydenville, Ohio. Filed Nov. 15, 1906. Serial No. 343,599.

1. The method of treating colored brick which consists in introducing a large volume of air into the kiln containing said brick when the kiln is at its maximum temperature to oxidize the coloring matter in the brick.

2. The method of treating colored brick which consists in introducing a large volume of air under pressure into the kiln containing said brick when the kiln is at a high heat and continuing such supply of air to oxidize the coloring matter in the brick.

873,569. STREET-SWEEPING MACHINE. CHARLES MALMQUIST, Sioux City, Iowa. Filed May 17, 1907. Serial No. 374,278.



1. A street-sweeping machine comprising a yoke-shaped frame with draft-pole and a seat for the driver, an axle supporting the frame, supporting wheels on the ends of the axle, a receptacle pivotally supported on the axle, an inner wheel journaled on the axle between the receptacle and one of the supporting wheels, a series of shovels pivotally secured on the inner wheel and moving about a portion of the receptacle so as to take up dirt from the street and deposit it in the receptacle when they are inverted above it, a gear mechanism connecting the shovel-carrying wheel and the adjacent supporting wheel, and means for inverting the receptacle when it is to be emptied.

2. A street-sweeping machine comprising a yoke-shaped frame with draft-pole and a seat for the driver, an axle supporting the frame, supporting wheels on the ends of the axle, a receptacle pivotally supported on the axle, an inner wheel journaled on the axle between the receptacle and one of the supporting wheels, a series of shovels pivotally secured on the inner wheel and moving about a portion of the receptacle so as to take up dirt from the street and deposit it in the receptacle when they are inverted above it, a gear mechanism connecting the shovel-carrying wheel and the adjacent supporting wheel, and means for inverting the receptacle when it is to be emptied, and a rotary brush mounted in the rear of the frame work and operatively connected with the said gear mechanism.

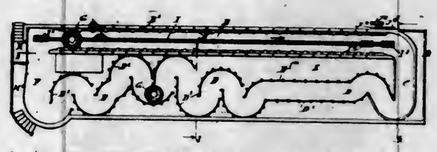
3. A street-sweeping machine comprising a yoke-shaped frame with draft-pole and a seat for the driver, an axle supporting the frame, supporting wheels on the ends of the axle, a receptacle pivotally supported on the axle, an inner wheel journaled on the axle between the receptacle and one of the supporting wheels, a series of shovels pivotally secured on the inner wheel and moving about a portion of the receptacle so as to take up dirt from the street and deposit it in the receptacle when they are inverted above it, a gear mechanism connecting the shovel-carrying wheel and the adjacent supporting wheel, means for inverting the receptacle when it is being emptied, and a hand lever arranged to throw the supporting wheel out of gear with the wheel carrying the shovels.

4. A street-sweeping machine comprising a yoke-shaped frame with draft-pole and a seat for the driver, an axle supporting the frame, supporting wheels on the ends of the axle, a receptacle pivotally supported on the axle, an inner wheel journaled on the axle between the receptacle and one of the supporting wheels, a series of shovels pivotally secured on the inner wheel and moving about a portion of the receptacle so as to take up dirt from the street and deposit it in the receptacle when they are inverted above it, a gear mechanism connecting the shovel carrying wheel and the adjacent supporting wheel, means for inverting the receptacle when it is to be emptied, and a hand lever arranged to throw the supporting wheel out of gear with the wheel carrying the shovels, said shovels having a limited swinging movement on their pivots, a ring carried by the shovel-carrying wheel and provided with arms engaging the shovels, and means for holding the ring turned in two different positions so as to hold the shovels away from the street or allow them to descend to the street as may be desired.

5. A street-sweeping machine comprising a yoke-shaped frame with draft-pole and a seat for the driver, an axle supporting the frame, supporting wheels on the ends of the axle, a receptacle pivotally supported on the axle, an inner wheel journaled on the axle between the receptacle and one of the supporting wheels, a series of shovels pivotally secured on the inner wheel and moving about a portion of the receptacle so as to take up dirt from the street and deposit it in the receptacle when they are inverted above it, a gear mechanism connecting the shovel-carrying wheel and the adjacent supporting wheel, means for inverting the receptacle when it is to be emptied, and a rotary brush mounted in the rear of the frame work and operatively connected with the said gear mechanism, and a hand lever for throwing the brush out of gear and raising it from the street.

[Claims 6 and 7 not printed in the Gazette.]

873,570. AMUSEMENT APPARATUS. WILLIAM F. MANGELS and CHARLES N. BREWSTER, New York, N. Y. Filed July 27, 1907. Serial No. 385,795.



1. An amusement apparatus, comprising a single inclined surface having a circuitous route laid out thereon from the upper end of the said inclined surface to the bottom thereof, and a car adapted to travel down the said inclined surface and confined in its downward travel along the said route.

2. An amusement apparatus, comprising an inclined surface having side walls provided with inwardly extending portions projecting alternately from opposite sides forming a circuitous route extending from the upper end of the said inclined surface to the bottom thereof, and a car adapted to travel down the said inclined surface and confined in its downward travel along the said route, the side walls of the said route being engaged by the outside of the car to cause the car to spin during its downward travel on the said route.

3. An amusement apparatus, comprising an inclined surface having side walls provided with inwardly extending portions projecting alternately from opposite sides, forming a circuitous route, extending from the upper end of the said inclined surface to the bottom thereof, and a car adapted to travel down the said inclined surface and confined in its downward travel along the said route, the said car being circular in shape and the outside of the car being adapted to bump against the side walls of the said route to cause the car to spin during its downward travel on the said route.

4. An amusement apparatus, comprising an up-track, an inclined guide path leading from the up-track, a single inclined surface having a circuitous route extending from its upper to its lower end, the lower end of the said path leading to the upper end of the said route, and a car adapted to travel over the said track, path and route.

5. An amusement apparatus, comprising an up-track, an inclined guide path leading from the up-track, a single inclined surface having a circuitous route extending from its upper to its lower end, the lower end of the said path leading to the upper end of the said route, a connecting track leading from the lower end of the said route to the beginning point of the said up-track, and a car adapted to travel over the said up-tracks, path and route.

[Claims 6 to 14 not printed in the Gazette.]

873,571. COMBINATION-TOOL. BENJAMIN A. MANSFIELD, Salem, Mass. Filed June 1, 1907. Serial No. 376,746.

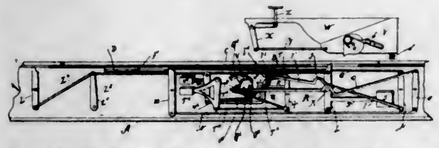
1. A combination tool comprising a handle forming an open ring and having parallel arms at the sides of the opening in one side of the ring, a U-shaped arm to lie in the open ring, having tangs bearing against the arms of

the handle and provided with implement devices, an inner implement of the size and shape to enable it to be disposed within the opening formed by the said U-shaped arm and having a tang extending between the tangs of such U-shaped arm the arms of the handle and the tangs of the U-shaped implement arm and the inner implement being pivotally connected together for the purpose set forth.



2. The herein described combination tool comprising a frame forming an open ring and having arms at the sides of the opening in the open side of such ring, a U-shaped arm having a can opener on one side thereof and a bottle cap remover on the other side thereof and further provided with parallel tangs bearing against the inner sides of the arms of the tang, a cork screw to lie in the opening in the said U-shaped arm and having a tang extending between the tangs of such arm, and a pivot extending through and connecting the arms of the handle and the tangs of the implement arm and the cork screw.

873,572. AUTOMATIC SWITCH. FRANK X. MANTSION, Philadelphia, Pa. Filed Oct. 26, 1906. Serial No. 340,753.



1. In an automatic railway switch, the combination of a pivoted switch point, a cam slide adapted to move said point in either direction, a lever H, a rod connecting said lever with the cam slide, a lever M adapted to actuate the cam slide in one direction, a lever O, a rod connecting the last named lever with the lever M, an actuating lever and means for alternately operating the levers H and O from the actuating lever, as and for the purpose set forth.

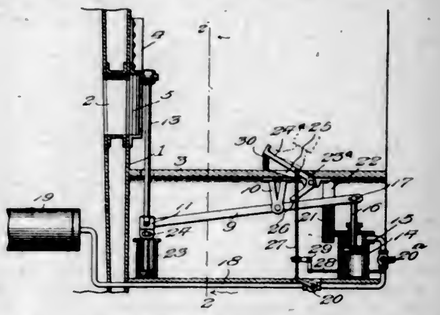
2. In an automatic switch, a pivoted switch point, a cam slide for throwing the switch point to one side or the other, a lever H, a rod connecting said lever with the cam slide so as to pull the latter in one direction, a lever M adapted to force the cam slide in the opposite direction, a lever O, a rod N connecting the last named lever with the lever M, two draft rods, one attached to each of the levers H and O, an actuating lever adapted to operate the draft rods, and means for bringing first one and then the other of the draft rods in position to be operated by the actuating lever, as specified.

3. In an automatic switch, a pivoted switch point, a cam slide for throwing the switch point to one side or the other, a lever H, a rod connecting said lever with the cam slide so as to pull the latter in one direction, a lever M adapted to force the cam slide in the opposite direction, a lever O, a rod N connecting the last named lever with the lever M, two draft rods, one attached to each of the levers H and O, an actuating lever adapted to operate the draft rods, means for bringing first one and then the other of the draft rods in position to be operated by the actuating lever and a spring actuated dog carried by the car for operating the actuating lever, as specified.

4. In combination with the movable switch point of a railway switch, a cam slide adapted to throw the switch point to one side or the other, two actuating levers connected together, two draft rods, a series of levers and rods connecting said draft rods with the cam slide, hooks formed upon the draft rods for engagement with one of the actuating levers and mechanism for putting first one and then the other of the draft rods into connection with the last named actuating lever, as specified.

5. In combination with the actuating lever of an automatic switch of the character described, two draft rods each having a hook formed therein for engagement with the stud upon said actuating lever, an extension formed upon each of the draft rods, a pin carried at the outer end of each extension, spring bars upon which each of the pins is adapted to travel, two inclined bars under which the pins are adapted to pass, a swinging dog arranged adjacent to each of the inclined bars, a sliding block located back of each of said inclined bars and means connected with the blocks for actuating the opposite dog whereby dogs will be swung out of their normal positions, as and for the purpose set forth.

873,573. AUTOMATICALLY-CLOSING FURNACE-DOOR AND DEVICE FOR OPERATING THE SAME. EMIL R. MARKMANN and JOHN MARKMANN, Chicago, Ill. Filed May 23, 1906. Serial No. 318,395.



1. In combination with a furnace, of automatically closing doors, a pivotally mounted lever, a connection between the operating end of said lever and the doors, an engine having connection with the power end of said lever, a pipe connecting the engine to an air tank, a valve interposed in said pipe between the engine and tank, another valve interposed between the engine and first named valve, and another lever connected to the valves and adapted to be operated to close one and open the other of said valves and to impart an initial movement to the first named lever.

2. The combination with an automatically closing furnace door, of a pivotally mounted lever, a connection between the operating end of the lever and the door, operating means connected to the power end of the lever, and means adapted to control the operating means and by which an initial movement can be imparted to the lever.

3. The combination with an automatically closing furnace door, of a pivotally mounted lever, a connection between the operating end of the lever and the door, an operating means connected to the power end of the lever, and another lever connected to the operating means and by which said operating means can be controlled, said other lever providing means by which an initial movement can be imparted to the first named lever.

4. The combination with an automatically closing furnace door, of a pivotally mounted lever, a connection between the operating end of the lever and the door, a dash pot connected to the operating end of the lever, operating means connected to the power end of the lever, and means adapted to control the operating means and by which an initial movement can be imparted to the lever.

5. The combination with an automatically closing furnace door, of a pivotally mounted lever, a connection between the operating end of the lever and the door, operating means connected to the power end of the lever, means adapted to control the operating means and by which an initial movement can be imparted to the lever, and a

spring acting upon the lever at a point adjacent its power end.

[Claims 6 to 8 not printed in the Gazette.]

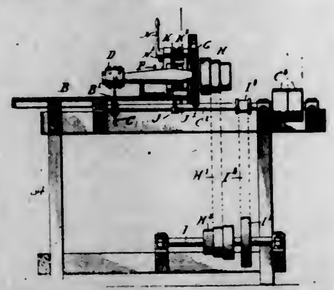
873,574. MOLDING PROCESS. AARON R. MARSTELLER, St. Louis, Mo., assignor of one-third to Delia Marsteller, St. Louis, Mo. Original application filed Dec. 10, 1906, Serial No. 347,151. Divided and this application filed Mar. 30, 1907. Serial No. 365,449.



1. The herein described process of producing molds which consists in forming in blocks of durable plastic material the positive and negative impressions of one side of a pattern, in then placing the said pattern conformable in said negatively impressed surface with its opposite side exposed, and finally in tamping plastic mold material upon said positively impressed surface, and upon said exposed side of said pattern, said mold material receiving negative impressions in its surface.

2. The herein described process of producing molds which consists in forming in blocks of durable plastic material the positive and negative impressions of one side of a pattern, in then placing the said pattern in said negatively impressed surface with its opposite side exposed, in placing upon said positively impressed surface a second pattern, and tamping plastic mold material upon said positively impressed surface and upon said pattern thereon, and upon said exposed side of said patern, said mold material receiving negative impressions in its surface.

873,575. SELF-FEEDING SAWING-MACHINE. JACOB A. MEEKS and FREDRICK C. KAISER, Muncie, Ind. Filed Mar. 20, 1907. Serial No. 363,413.



1. A self-feeding sawing machine comprising a circular saw, positively driven feed rollers located in front of the saw and the other in the rear thereof for feeding the material past the saw, swing arms in which the feed rollers are journaled, flexible connections with the said swing arms, and a manually controlled mechanism connected with said flexible connections for simultaneously swinging the said arms in or out of active position.

2. A self-feeding sawing machine comprising a circular saw, positively driven feed rollers, located one in front of the saw and the other in the rear thereof, for feeding the material past the saw, swing arms in which the feed rollers are journaled, stop screws for the swing arms to rest on, flexible connections with said swing arms, and means for simultaneously moving said flexible connections to swing the said arms in or out of active position.

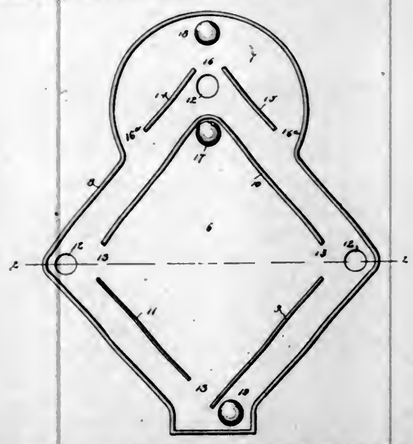
3. A self-feeding sawing machine comprising a circular saw, positively driven feed rollers located one in front of, the other in the rear of, the said circular saw, for feeding the material past the saw, swing arms in which the feed rollers are journaled, flexible connections with the said swing arms, drums engaged by the said flexible connections, and a manually controlled gearing for simultaneously rotating the said drums in opposite directions.

4. A self-feeding sawing machine comprising a circular saw, positively driven feed rollers located one in front of the other in the rear of, the said circular saw for feeding the material past the saw, swing arms in which the feed rollers are journaled, flexible connections with the said swing arms, drums engaged by the said flexible connections, beveled gear wheels on the said drums, an intermediate bevel pinion in mesh with both gear wheels, and a handle on one of the said drums for turning the same and rotating both drums simultaneously in opposite directions to swing the swing arms up or down.

5. A self-feeding sawing machine comprising a circular saw, positively driven feed rollers located one in front of, the other in the rear of, the said circular saw, for feeding the material past the saw, swing arms in which the feed rollers are journaled, flexible connections with the said swing arms, drums engaged by the said flexible connections, beveled gear wheels on the said drums, an intermediate bevel pinion in mesh with both gear wheels, a handle on one of the said drums for turning the same and rotating both drums simultaneously in opposite directions, to swing the swing arms up or down, and a locking device on one of the swing arms for locking the said handle in position when the feed rollers are in a raised inactive position.

[Claims 6 to 10 not printed in the Gazette.]

873,576. PUZZLE. MICHAEL E. MERTES, Chicago, Ill. Filed May 20, 1907. Serial No. 374,616.

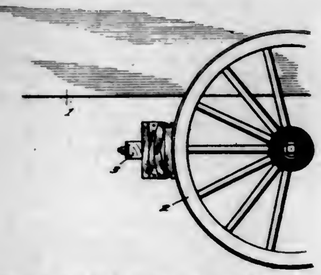


A puzzle comprising a board simulating a ball field and having a diamond and an outer field, a strip extending around the edge of the board, said strip being curved around said outer field, inner strips parallel to and spaced from the edge of the diamond to form a runway, the sides of the runway having openings opposite the bases or corners into the center of the diamond, and also an opening into the field, and the runway having holes at the bases, a ball to be rolled around in the runway, and other balls in the diamond and the field.

873,577. WAGON-BRAKE. FREDERICK MICK, Billings, Mont. Filed June 13, 1907. Serial No. 378,853.

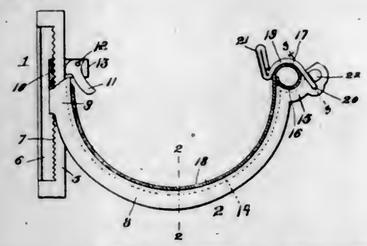
1. A vehicle brake comprising a brake beam, a brake shoe holder secured thereto, said brake shoe holder comprising pivoted members, each having a projecting lug to engage the brake shoe, and a single split bolt pivotally connected to the inner ends of said members and extending through the beam.

2. A vehicle brake comprising a plate secured to the beam, a pair of brake shoe holders pivoted to said plate and provided with projecting lugs to engage a brake shoe, a split bolt connected to the inner ends of said shoe holding members, said bolt having a nut applied thereto at the outer surface of the beam, and guide pins secured to said plate and having heads which fit recesses in the shoe holding members.



3. In a vehicle brake, the combination of a plate having recesses in its outer ends, brake shoe holding members pivoted in said recesses and provided with projecting lugs to engage the brake shoe, a split bolt provided with arms pivotally connected to said shoe holding members, said bolt extending through the plate and beam, and provided with a nut for adjusting said shoe holding members.

873,578. EAVES-TROUGH SUPPORT. CHARLES H. MOLYNEUX, Rochester, N. Y. Filed Jan. 19, 1907. Serial No. 353,109.



1. In an eaves trough support, the combination of a hanger comprising a slotted body bent longitudinally on the line of the slot to form a back plate and a forwardly-extending member which latter is provided with serrations along its inner edge, and means for securing the back plate to a support; a bracket for an eaves trough formed with a runner engaging around the said member and prevented from moving off the same by the end walls of the slot of the hanger, serrations on the runner adapted to engage those of the member, and a cam pivoted on and movable with the runner and disposed to engage the front edge of the member to lock the serrations together.

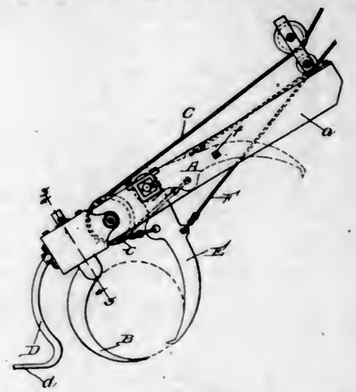
2. An eaves trough support comprising a hanger composed of sheet metal formed into a base and a right-angularly bent vertically disposed rack bar, an eaves trough supporting bracket having a runner with teeth to engage the rack bar, and a cam lever carried by the supporting bracket and adapted to force the teeth of the runner into engagement with the teeth of the rack bar, whereby the supporting bracket is rendered adjustable up and down on the hanger and capable of being fastened at any elevation.

3. An eaves trough support comprising a hanger, a supporting bracket adjustable up and down thereon and provided with a stop at its outer end, means for holding said bracket at any elevation, and a clasp for holding the outer edge of the trough, said clasp being pivotally connected with the bracket and having a spring portion which extends over the edge of the trough and engages under the stop and terminates in a finger piece.

4. An eaves trough support comprising a hanger, a supporting bracket adjustable up and down thereon, a clasp pivotally connected with said bracket and having a spring portion which embraces the outer edge of the trough, and a stop shoulder over which the clasp snaps and by means of which it is held in clamping position.

5. An eaves trough support comprising a hanger, a supporting bracket adjustable up and down thereon, a spring clasp having a jointed connection with said bracket and embracing the outer edge of the trough, an extension on the end of said clasp sharpened to form a cutter, and means for holding said clasp in clamping position.

873,579. LOG FINDER AND LIFTER FOR SUBMERGED LOGS, &c. JAMES M. MUNN, Evanston, Ill., assignor of one-half to Alexander A. Norton, Chicago, Ill. Filed Apr. 2, 1906. Serial No. 309,314.



1. A log-finder for submerged logs comprising a lower tooth adapted to engage with objects in the line of its progress, and an upper tooth automatically coöperating with the lower tooth, substantially as described and shown.

2. A log-finder, comprising a frame, a lower searching tooth attached to the frame and located in advance of the legs and adapted to engage with objects in the line of its progress, and two legs located, one on either side of the searching tooth, to maintain the machine in position, substantially as described and shown.

3. A log-finder, comprising a frame, a searching-tooth located to take against and seize objects in its progress, an auxiliary tooth, automatically operated to assist the searching tooth in its grasp of an object, and means to maintain the equilibrium of the device, substantially as described and shown.

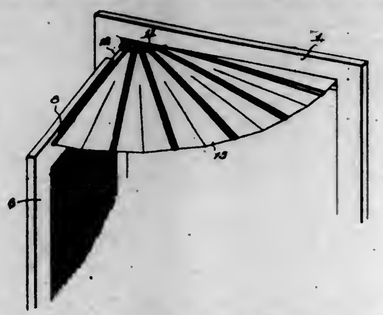
873,580. ATTACHMENT FOR SCREEN-DOORS. COVELLE S. MCELROY, Steppville, Kans. Filed June 8, 1907. Serial No. 378,037.

1. In a device of the class described, a pivotally supported rod or arm having a supporting bracket concentric with the pivot, a plurality of ribs pivoted upon said bracket, a flexible guard member connected with the arm and ribs, and supporting means for the latter.

2. In a device of the class described, a pivotally supported rod or arm having a supporting bracket, a plurality of ribs pivoted upon said bracket, means for supporting the ribs in approximately horizontal position, and a foldable guard connected with the ribs and with the rod or arm.

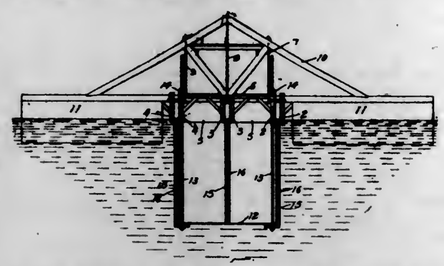
3. A door lintel, a rod pivoted upon the underside thereof and having a supporting bracket concentric with the pivot, a plurality of ribs pivoted upon said bracket, supporting means secured upon the lintel for supporting said ribs in approximately horizontal position, a door, means for securing the rod or arm slidably upon the door, and a flexible foldable guard member connected with the ribs at one edge upon the lintel and at the other edge upon the pivoted rod or arm.

4. A door lintel having a recess in its underside, a rod or arm pivoted in said recess and having a bracket concentric with the pivot, a plurality of ribs loosely mounted upon said bracket, a supporting member secured upon the lintel and engaging the ribs to support the latter in approximately horizontal position, a door having a recess at



its upper edge to accommodate the supporting member, means for connecting the pivoted rod or arm slidably with the door, and the flexible guard member carried by the ribs and having one edge connected with the pivoted rod or arm and the other edge secured in the recess of the lintel.

873,581. SUBAQUEOUS CONCRETE CONSTRUCTION. FINLAY R. MCQUEEN, Minneapolis, Minn., assignor of one-half to Charles H. Scott, Minneapolis, Minn. Filed Apr. 4, 1907. Serial No. 366,279.



1. The method of forming sub-aqueous concrete structures which consists in molding a section of said structure above the surface of the water, lowering said section into the water but leaving the top of the section above the water, molding another section on top of the first section, and so on successively until the bottom section rests upon the ground.

2. A process of sub-aqueous construction which consists in molding a section of plastic material at the surface of the water, lowering the bottom of the mold and the section thereon, then molding a second section upon the first and so on successively until the bottom of the structure rests upon the ground or bottom foundation.

3. A process of dock construction which consists in molding and reinforcing a section of plastic material at the surface of the water, lowering the bottom of the mold and the section thereon, then molding a second section upon the first, reinforcing each section as it is formed, and so on successively until the bottom of the structure rests upon the ground or bottom foundation.

4. A process of dock construction which consists in molding a section of plastic material at the surface of the water, lowering the bottom of the mold and the section thereon, then molding a series of sections successively upon the first one and upon one another, and bonding them together during the molding operation, and lowering all of the sections, as each one is molded, until the bottom one rests upon the ground.

873,582. PROCESS OF MANUFACTURING ARTIFICIAL LEATHER. LOUIS GEVAERT-NAERT, Bevere-Audenarde, Belgium, assignor to Société Anonyme des Cuirs et Courroles d'Audenarde, Audenarde, Belgium. Filed Jan. 31, 1907. Serial No. 355,086.

1. A process of manufacturing artificial leather and similar products comprising impregnating tissues with a solution of tanned albuminoid materials and drying said tissues, substantially as, and for the purpose set forth.

2. A process of manufacturing artificial leather and similar products comprising impregnating teazeled or felted tissues with a solution of tanned albuminoid materials and drying said tissues, substantially as, and for the purpose set forth.

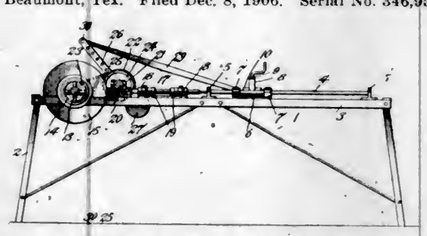
3. A process of manufacturing artificial leather and similar products comprising impregnating *in vacuo* tissues with a solution of tanned albuminoid substances and drying said tissues, substantially as and for the purpose set forth.

4. A process of manufacturing artificial leather and similar products comprizing impregnating *in vacuo* teazeled or felted tissues with a solution of tanned albuminoid substances and drying said tissues, substantially as, and for the purpose set forth.

5. A process of manufacturing leather and similar products which consists in dissolving an albuminoid substance in a suitable solvent, adding a tanning agent thereto, dissolving the tanned albuminoid in a suitable solvent, impregnating teazeled or felted tissues therewith and evaporating the solvent of the tanned albuminoid, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

873,583. POLISHING-MACHINE. CHARLIE M. NICHOLS, Beaumont, Tex. Filed Dec. 8, 1906. Serial No. 346,955.



1. In a machine of the class described, a frame, a carriage supported for reciprocation longitudinally of the frame, means for clamping a tube upon the carriage, a mandrel supported for rotation upon the frame, a tool holder connected with the mandrel, a tube engaging tool pivotally connected with the holder, and means for simultaneously rotating the mandrel and reciprocating the carriage.

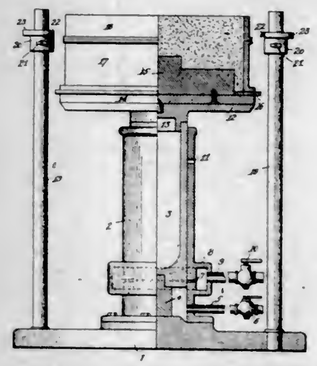
2. In a machine of the class described, a frame, a shaft mounted for rotation transversely upon the frame, a mandrel supported for rotation longitudinally of the frame, intermeshing bevel gears upon the transverse shaft and the mandrel, a countershaft driven from the transverse shaft, a carriage supported for reciprocation longitudinally of the frame, and having a laterally extending arm, a crank mounted upon the countershaft, a pitman connecting said crank with the arm extending from the carriage, means for clamping a tube upon the carriage, a tool holder connected with the mandrel, and a tube engaging tool pivotally connected with the holder.

3. In a machine of the class described, a frame, a carriage mounted for reciprocation longitudinally of the frame, means for clamping a tube upon the carriage, a mandrel supported for rotation upon the frame, a tool holder connected with the mandrel, a spring actuated tube engaging tool pivotally connected with the holder, and means for simultaneously rotating the mandrel and reciprocating the carriage.

4. In a machine of the class described, a frame, a carriage mounted for reciprocation longitudinally of the

frame, a driving shaft supported transversely upon the frame, a countershaft supported for rotation transversely of the frame, means for transmitting motion from the driving shaft to the countershaft, a counterweighted crank upon the countershaft, a pitman adjusting said crank with the carriage, a mandrel supported for rotation longitudinally of the frame, means for transmitting motion to the mandrel from the main driving shaft, means for clamping a tube upon the carriage, a tool holder connected with the mandrel, and a tube engaging tool pivotally connected with the holder.

873,584. SAND-MOLDING MACHINE. WILLIAM C. NORCROSS, Terre Haute, Ind., assignor to Norcross Moulding Machine Company, Terre Haute, Ind., a Corporation of Indiana. Filed Dec. 6, 1905. Serial No. 290,543.



1. In a sand molding machine, means for jarring the mold, comprising an upright cylinder having normally-open fluid pressure supply pipe and exhaust ports, and a piston controlling said ports in its up and down strokes, and arranged to strike the bottom of the cylinder on its down stroke.

2. In a sand molding machine, means for jarring the mold, comprising an upright cylinder having a normally-open fluid pressure supply pipe at its bottom and a plurality of exhaust ports in its walls, the area of said ports being considerably greater than that of the supply pipe, and a piston controlling said exhaust ports and supported normally by the bottom of the cylinder.

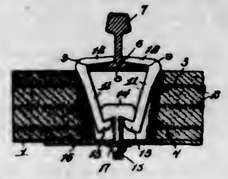
3. In a sand molding machine, means for jarring the mold, comprising an upright cylinder having a fluid pressure supply pipe entering it at its bottom, a plurality of exhaust ports in its walls, an annular chamber into which said ports open, an exhaust pipe leading from said chamber, stop valves in the supply pipe and exhaust pipe, and a piston in the cylinder controlling said exhaust ports.

4. In a sand molding machine, the combination with an upright cylinder having a supply port in its lower end and exhaust ports at a point above the supply, of a piston fitting in said cylinder and supported normally by the bottom of the cylinder at a point below said exhaust ports and serving to open said exhaust ports when it rises past them, and a pattern-supporting table carried on the upper end of said piston.

5. In a sand molding machine, the combination with suitable catches, of a table for supporting the pattern and the flask, an upright cylinder, a piston therein on which said table rests, and means for giving said piston rapid short strokes striking the end of the cylinder to pack the sand, a long up-stroke to raise the flask to a position to engage with the catches, and a long down-stroke to withdraw the pattern from the mold.

[Claims 6 and 7 not printed in the Gazette.]

873,585. RAIL-TIE. LOUIS R. NORDQUIST, Tampa, Fla. Filed Apr. 6, 1907. Serial No. 366,780.



1. A rail tie formed with socket openings, socket pieces secured within said openings, a bridge plate bridging the openings and engaging the edges of the tie, and locking means arranged between the bridge plate and the proximate walls of the socket pieces, and means for securing the locking means in place.

2. A tie molded of plastic material and formed with socket openings, socket pieces arranged within the openings, a bridge plate bridging each opening and engaging side edges of the tie, said plate being formed with rail engaging means, and locking means engaging the rails above the bridge plate, said locking means being mounted within the socket pieces.

3. A tie molded of plastic material and having an interior reinforce, said tie being formed with socket openings, socket pieces secured within the openings, a bridge plate bridging the openings and terminally engaging the edges of the tie, locking bars having rail flange engaging portions, a bed plate arranged beneath the tie, and means coöperating with the bed plate and engaging the locking bars.

4. A tie molded of plastic material and having an interior reinforce, said tie being formed with socket openings, socket pieces secured within the openings, a bridge plate bridging the openings and terminally engaging the edges of the tie, locking bars having rail flange engaging portions, a bed plate arranged beneath the tie, and means coöperating with the bed plate and engaging the locking bars, said means engaging the locking bars wholly within the socket pieces.

5. A tie molded of plastic material and having an interior reinforce, said tie being formed with socket openings, socket pieces secured within the openings, a bridge plate bridging the openings and terminally engaging the edges of the tie, locking bars having rail flange engaging portions, a bed plate arranged beneath the tie, and a bolt having a head to engage the locking bars and adapted to be secured to the bed plate.

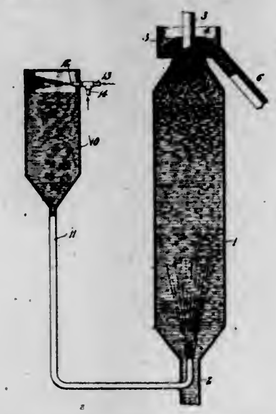
[Claim 6 not printed in the Gazette.]

873,586. APPARATUS FOR SEPARATING THE METALLIC PARTICLES OF ORES FROM THE ROCKY CONSTITUENTS THEREOF. DUDLEY H. NORRIS, New York, N. Y. Original application filed Nov. 10, 1906, Serial No. 344,041. Divided and this application filed Aug. 7, 1907. Serial No. 387,443.

1. An apparatus of the character described, comprising a receptacle having its upper end open to the atmosphere and adapted to receive a flowing mixture of pulverized ore and water, means for introducing a stream of water containing air in solution into the mixture in said receptacle to cause infinitesimally small nascent bubbles of air to form in said mixture and rise to the surface thereof to collect the metallic particles of the ore together, a member arranged at the upper end of said receptacle to receive the metallic particles of the ore, and a discharge pipe at the lower end of the receptacle out of which the water and the rocky particles of the ore pass; substantially as described.

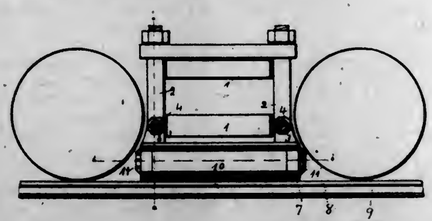
2. An apparatus for separating the metallic particles of ore from the rocky particles thereof, comprising a tank having contracted ends and adapted to receive a flowing mixture of pulverized ore and water, the upper end of said tank being open, a pipe for conducting said flowing mixture into said tank, means for charging water with air,

means for introducing this water in the form of a stream into said mixture after it has entered the tank to cause infinitesimally small nascent bubbles of air to form in said mixture and rise to the surface thereof to collect the metallic particles of the ore together, a cup arranged at the upper end of said tank to receive the metallic particles of the ore, a discharge pipe leading from said cup, and a discharge pipe at the lower end of the tank through which the water and rocky particles of the ore pass; substantially as described.



3. An apparatus for separating the metallic particles of ore from the rocky constituents thereof, comprising a receptacle having contracted ends, the upper end being open and the lower end being provided with a discharge pipe, means for conducting a flowing mixture of pulverized ore and water into the upper end of said receptacle, a tank for holding water, means for charging the water in said tank with air, a conduit leading from said tank to the lower end of said receptacle to introduce into the flowing mixture a stream of water containing air in solution, thereby causing infinitesimally small nascent bubbles of air to form continuously in said mixture and rise to the surface thereof to collect the metallic particles of the ore together, and a member arranged at the upper end of the receptacle to receive the metallic particles of ore; substantially as described.

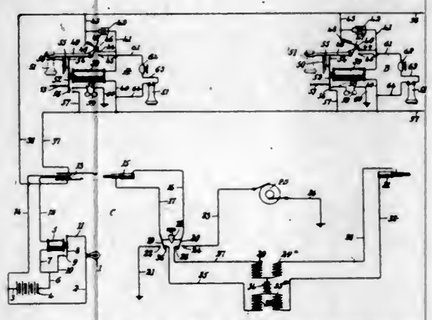
873,587. RAIL MAGNETIC BRAKE. VICTOR L. OCHOA, New York, N. Y., assignor of one-half to R. R. Fogel and one-fourth to Benjamin A. Jackson, New York, N. Y. Filed Feb. 23, 1907. Serial No. 359,015.



1. In a rail magnetic brake or traction increaser, an oblong magnet-core suspended in close proximity to the rail, said core being cut away for the reception of the winding wire, and having a head of substantially the width of the tread of the rail, as set forth and described.

2. A rail magnetic brake or traction increaser in which is comprised an oblong magnet-core cut away for the reception of the winding wire and having a head of substantially the width of the tread of the rail; winding wire around the cut away portion of the core; a protecting casing around the wire, and means for suspending the magnet from a car-truck, substantially as shown and described.

873,588. PARTY-LINE TELEPHONE SYSTEM. NORMAN S. PAGE, New York, N. Y. Filed Jan. 17, 1907. Serial No. 352,715.



1. The combination in a party line telephone system, of a relay provided with a movable armature, a lockout controllable by said armature, a contact for controlling said relay, a movable switch hook for automatically closing said contact, a source of electricity normally connected to the line and with said contact for energizing said relay, a circuit provided with a contact to be opened and closed by movements of said armature, and an electric alarm connected with said circuit and a second source of electricity, capable of operating both relay and alarm when connected to the line.

2. The combination in a party line telephone system of a switch hook, mechanism for preventing the movement thereof beyond a predetermined limit, a relay connected with said last-mentioned mechanism for the purpose of permitting the movement of said switch hook beyond said predetermined limit, said relay being energized automatically by a source of electricity normaly connected to the line through movements of said switch hook, and a normally open circuit provided with a contact to be closed by said mechanism.

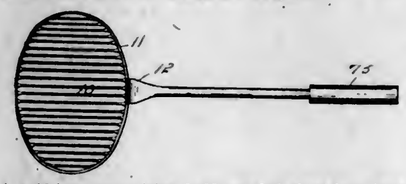
3. The combination in a party line telephone system of a movable switch hook, a movable armature for locking said switch hook in a predetermined position, a magnetic member controllable electrically through a contact at said switch hook for the purpose of attracting said armature and thereby releasing said switch hook, a contact to be closed by said armature, a bell circuit connected with said contact and controllable thereby, and means controllable from a distance for energizing said magnetic member and said bell circuit at practically the same instant.

4. The combination in a party line telephone system of a high resistance magnet, a direct current circuit for energizing said magnet, said circuit being normally open, a switch contact for closing said circuit, a lockout controllable by said magnet, an alternating current circuit for energizing said magnet, a contact to be actuated by said magnet, a high resistance circuit including a bell and adapted to be controlled by closure of said contact, and means controllable at will from distant station and common to said magnet and to said bell for energizing the same independently of said first-mentioned source of electricity.

5. The combination of line conductors, a high resistance magnet disposed at a subscriber's station, a lockout controllable by said high resistance magnet, a direct current source of electricity located at a central station and normally connected to said line conductors for signaling and talking purposes, said direct current source of electricity being controllable at will from a subscriber's station for energizing said magnet, an alternating current source of electricity located at said central station and controllable therefrom for the purpose of energizing said magnet independently of the will of the subscriber, and alarm and talking circuits located at said subscriber's station and both controllable by said high resistance magnet.

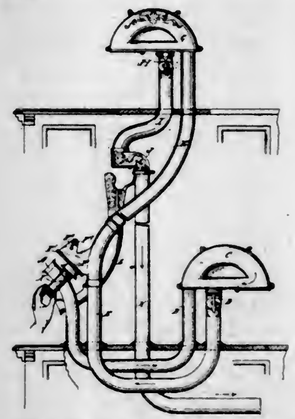
[Claims 6 to 20 not printed in the Gazette.]

873,589. GRIDIRON. ANNA C. PARRY, Wyncote, Pa. Filed Nov. 20, 1906. Serial No. 344,287.



A grid-iron comprising half-rounded sheet-iron bars, an upstanding rim integrally connected with the bars, legs for supporting the grid-bars and rim integrally connected therewith, a metal strip integrally connected with the rim and extending first vertically therefrom and then turned in a horizontal plane, the horizontal portion being bent into half-rounded form, and provided on its end with a wooden handle.

873,590. PNEUMATIC-DESPATCH-TUBE APPARATUS. ALBERT W. PEARSALL, Lowell, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J., a Corporation of New Jersey. Filed Nov. 8, 1905. Serial No. 286,339.



1. In a pneumatic despatch tube apparatus, an inlet having an opening for despatching carriers, a valve adapted to open inwardly and controlling said opening, spring actuated means for holding said valve normally closed, and means for regulating the tension of said spring actuated means.

2. In a pneumatic despatch tube apparatus, an inlet having an opening for despatching carriers, a pivoted valve adapted to open inwardly and controlling said opening, a lever pivoted to said valve, a pin mounted on the free end of said lever, a lever pivoted to the case at one end and having a slot at the other end adapted to guide and actuate said pin, and a spring adapted to apply tension to said slotted lever.

3. In a pneumatic despatch tube apparatus, an inlet having an opening for despatching carriers, a valve adapted to open inwardly for controlling said opening and normally closed, flexible means located at said opening actuated by atmospheric pressure against the face of said valve when normally closed for preventing leakage thereby.

4. In a pneumatic despatch tube apparatus, an inlet having an opening for despatching carriers, a valve adapted to open inwardly for controlling said opening and normally closed, a flexible gasket fixed to said inlet forming a seat for said valve and projecting slightly into said opening, said gasket being held by atmospheric pressure against the face of said valve when normally closed for preventing leakage thereby.

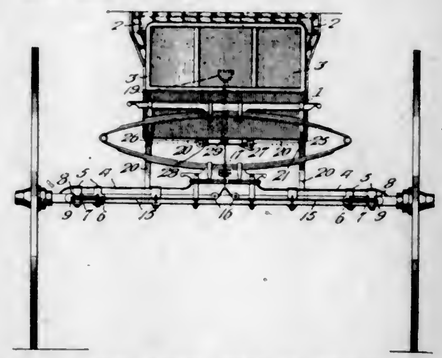
873,591. LIGHT-PROJECTING ATTACHMENT FOR FIREARMS. CHARLES R. PENFIELD, Chicago, Ill. Filed Sept. 17, 1906. Serial No. 335,002.



1. In combination with a fire arm, a light projecting attachment, comprising a tube, a source of light in the axis of the tube, a parabolic projector in the rear of said light adapted to project said light in substantially parallel lines, and an apertured reflector in front of said light adapted to reflect the light-rays which strike its reflecting surface back to the projector.

2. In combination with a fire arm, a light projecting attachment, comprising a source of light, a light projector and a centrally perforated light reflector, all coaxially arranged upon a suitable support, and a means for securing said attachment to said fire arm.

873,592. HORSE-DETACHER. PETER A. PETERSON and JAMES M. HAINES, Cedar Rapids, Iowa. Filed Dec. 19, 1906. Serial No. 348,590.



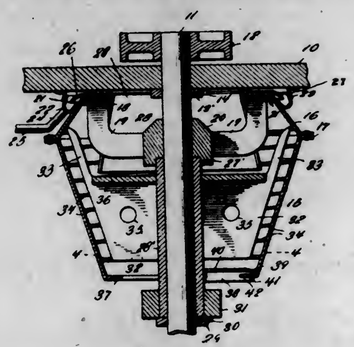
1. In a horse detacher, means for disconnecting the thills from the front axle, in combination with guide bars pivotally connected to brackets at opposite sides of and under the vehicle body, said guide bars being normally held out of operative position by spring bolts and means for releasing said guide bars and permitting them to drop to a position back of the front axle, to prevent the same from turning upon the fifth wheel, substantially as described.

2. In a horse detacher, means for disconnecting the thills from the front axle, in combination with guide bars pivotally connected to brackets under the vehicle body, spring seated bolts for holding said guide bars in horizontal positions, and flexible connections attached to said bolts and leading to a position within reach of the driver for withdrawing said bolts, and permitting said guide bars to drop behind the front axle on opposite sides of the fifth wheel, substantially as described.

873,593. CENTRIFUGAL SEPARATOR. JOHN W. PHILLIPS, Silver City, Nev. Filed Mar. 28, 1906. Serial No. 308,557.

1. A centrifugal separator comprising a rotatable shaft, a casing carried by the shaft for rotation therewith, said casing being composed of a pair of frusto conical sections

secured base to base, a sleeve shaft mounted for rotation upon the first named shaft, blades radiating from the sleeve shaft and having their upper edges cut away, a plate carried by the sleeve shaft and seated in the cut away portions of the blades, the blades including upwardly directed extensions which have their ends terminated above the plane of connection of the frusto conical sections of the casing, the lower frusto conical section of the casing having an inwardly directed flange formed integral therewith at its lower end, a scraper secured to the sleeve shaft for rotation therewith and adapted to scrape material from the flange, an annular trough supported in position to surround the upper end of the upper frusto conical section of the casing, the said section of the casing being provided adjacent its upper end with openings through which material may be discharged, and a pipe leading from the trough.



2. A centrifugal separator comprising a rotatable shaft, a casing carried by the shaft for rotation therewith, said casing being composed of a pair of frusto conical sections secured base to base, a sleeve shaft mounted for rotation upon the first named shaft, blades radiating from the sleeve shaft and having their upper edges cut away, a plate carried by the sleeve shaft and seated in the cut away portions of the blades, the blades including upwardly directed extensions which have their ends terminated above the plane of connection of the frusto conical sections of the casing, the lower frusto conical section of the casing having an inwardly directed flange formed integral therewith at its lower end, a scraper secured to the sleeve shaft for rotation therewith and adapted to scrape material from the flange, an annular trough supported in position to surround the upper end of the upper frusto conical section of the casing, the said section of the casing being provided adjacent its upper end with openings through which material may be discharged, a pipe leading from the trough, and means supported upon the top of the upper frusto conical section of the casing for directing such material into the trough.

3. A centrifugal separator comprising a rotatable shaft, a casing carried by the shaft for rotation therewith, said casing being composed of a pair of frusto conical sections secured base to base, a sleeve shaft mounted for rotation upon the first named shaft, blades radiating from the sleeve shaft and having their upper edges cut away, a plate carried by the sleeve shaft and seated in the cut away portions of the blades, the blades including upwardly directed extensions which have their ends terminated above the plane of connection of the frusto conical sections of the casing, the lower frusto conical section of the casing having an inwardly directed flange formed integral therewith at its lower end, a scraper secured to the sleeve shaft for rotation therewith and adapted to scrape material from the flange, an annular trough supported in position to surround the upper end of the upper frusto conical section of the casing, the said section of the casing being provided adjacent its upper end with openings through which material may be discharged, a pipe leading from the trough, and an annular deflector flange supported upon the upper end of the upper frusto conical section of the casing for directing such material into the trough.

4. A device of the class described comprising a rotatable shaft, a casing carried by the shaft for rotation therewith, a sleeve shaft mounted for rotation upon said first named shaft, a plate carried by the sleeve shaft, apertured wings radiating from said sleeved-shaft, and blades connected with said wings.

5. A centrifugal separator comprising a rotatable shaft, a casing carried by the shaft for rotation therewith, said casing being composed of a pair of frusto conical sections secured base to base, a sleeve shaft mounted for rotation upon the first named shaft, blades radiating from the sleeve shaft and having their upper edges cut away, a plate carried by the sleeve shaft and seated in the cut away portions of the blades, the blades including upwardly directed extensions which have their ends terminated above the plane of connection of the frusto conical sections of the casing, spirally directed blades arranged upon the inner wall of the casing and contacting at their edges with the outer edges of the blades and their upwardly directed extensions, the lower frusto conical section of the casing having an inwardly directed flange formed integral therewith at its lower end, a scraper secured to the sleeve shaft for rotation therewith and adapted to scrape material from the flange, and means surrounding the upper frusto conical section of the casing at the upper end thereof for collecting material discharged therefrom.

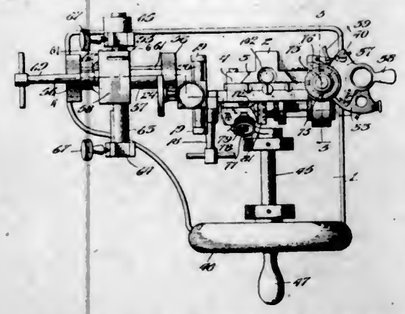
[Claims 6 to 8 not printed in the Gazette.]

873,594. PROCESS OF CARROTING HIDES AND SKINS. CHARLES PICHARD and EMILE PICHARD, Paris, France. Filed July 16, 1907. Serial No. 384,077.

1. The process herein described of carroting hides and skins, which consists in subjecting the hides and skins to the action of a jet of carroting liquid vaporized by steam so that the hairs are raised and their roots exposed by the action of the spray of carroting liquid.

2. The process herein described of carroting hides and skins, which consists in subjecting the hides and skins to the action of a jet of carroting liquid sprayed under pressure of steam while fed in the direction of an acute angle to the hides or skins, so that the hairs are raised and their roots exposed by the action of the spray of carroting liquid.

873,595. MICROTOME. RICHARD H. PIETZSCH, Washington, D. C. Filed Jan. 4, 1905. Serial No. 239,684.



1. In a microtome, the combination of a vertically reciprocating carriage, an object holder mounted thereon, a knife, and a movable means on which the knife is supported, said means being adjustable toward or away from the holder and about two angularly disposed horizontal axes.

2. In a microtome, the combination of a carriage, an object holder movably supported on the holder, a feed mechanism for advancing the holder, and common means for reciprocating the carriage with the holder and for actuating the feed mechanism, with a movably supported knife disposed with its length parallel to the holder, and a mounting for the knife for adjusting the same on two angularly disposed axes and laterally toward or away from the said holder.

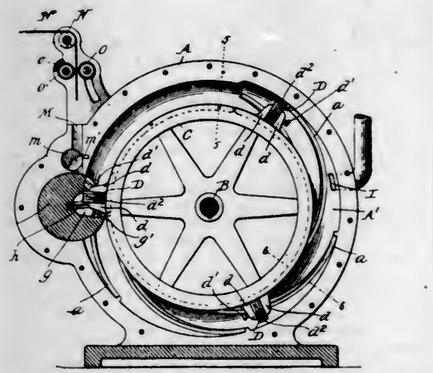
3. In a microtome, the combination of a reciprocating object holder, a knife, a rod, jaws relatively adjustable on the rod, means for clamping the knife in the jaws, and a mounting for the rod permitting lateral bodily movement of the rod.

4. In a microtome, the combination of a movable object holder, a stationary knife, a shaft disposed at right angles to the line of movement of the holder, and means laterally and angularly adjustable on the shaft for supporting the knife.

5. In a microtome, the combination of a reciprocating object holder, a stationary knife, a stationary element disposed at right angles to the line of movement of the holder, a mounting adjustable angularly and longitudinally of the element, a second element adjustably supported in the mounting and disposed at right angles to the first element, and means for supporting the knife on the second element.

[Claims 6 to 19 not printed in the Gazette.]

873,596. ROTARY ENGINE. VICTOR PINGRET, Rio Grande do Sul, Brazil, assignor, by mesne assignments, to The Pingret Turbo Piston Engine Co., Escanaba, Mich., a Corporation of Michigan. Filed Apr. 25, 1904. Serial No. 204,849. Renewed June 5, 1906. Serial No. 320,305.



1. In a rotary engine, the combination with the concentric cylinder having a reduced working area, a rotary carrier having pistons fitting said working area and of less diameter than the remaining portion of the cylinder and a rotary abutment adapted to contact with the piston carrier and having a chamber for the passage therethrough of the pistons mounted on the carrier; substantially as described.

2. In a rotary engine, the combination with the cylinder, the piston carrier mounted concentrically therein, and having a concentric tapering periphery, pistons mounted on said carrier and admission and exhaust ports in the cylinder, of a rotary abutment having a tapering peripheral surface adapted to contact with the periphery of the carrier, a chamber in said abutment for the passage therethrough of the pistons on the carrier, gearing connecting said abutment and carrier and imparting a coextensive peripheral movement to the contacting surfaces whereby friction between the contacting surfaces of the carrier and abutment is prevented; and means for adjusting the piston carrier and abutment longitudinally with relation to each other to take up wear, substantially as described.

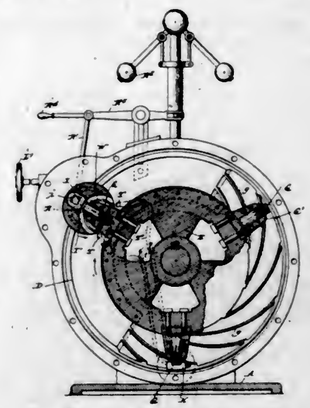
3. In a rotary engine, the combination with the cylinder having an annular piston chamber the working area of which is substantially cylindrical in cross-section and of less diameter than the remainder of the chamber, a carrier mounted concentrically in said cylinder, cylindrical pistons mounted on said carrier and fitting the working area of the piston chamber, a rotary abutment adapted to contact peripherally with the carrier and having a chamber therein for the passage of the pistons on the carrier, gearing interposed between said carrier and abutment for imparting uniform peripheral movement thereto whereby friction between their contacting faces is prevented and packings in the cylinder walls concentric with the working area and coöperating with the sides of the carrier; substantially as described.

4. In a rotary engine, the combination with the cylinder, piston carrier mounted concentrically therein and pistons mounted on said carrier, of a rotary abutment having a chamber therein for the passage of the pistons and having its exterior wall tapered, a tapered chamber in which said abutment is mounted and means for adjusting said abutment longitudinally of its axis in the chamber to compensate for wear; substantially as described.

5. In a rotary engine, the combination with the cylinder, the piston carrier mounted concentrically therein and having a tapered periphery, and pistons on said carrier, of a rotary abutment having a tapered periphery adapted to make rolling contact with the periphery of the carrier, a tapered chamber in which said abutment works and means for adjusting said abutment longitudinally of its axis in said chamber to compensate for wear; substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

873,597. ROTARY ENGINE. VICTOR PINGRET, Rio Grande do Sul, Brazil, assignor, by mesne assignments, to The Pingret Turbo Piston Engine Co., Escanaba, Mich., a Corporation of Michigan. Filed May 4, 1906. Serial No. 315,210.



1. In a rotary engine, the combination with the cylinder or casing, the rotary piston carrier and pistons thereon and the rotary abutment journaled in the casing, having a recess for the passage of the pistons therethrough, and having an inlet port therein, of a manually controlled valve having a port with which the inlet port in the abutment is adapted to register and a governor controlled valve for regulating the supply of pressure to the manually controlled valve; substantially as described.

2. In a rotary engine, the combination with the cylinder or casing, the rotary piston carrier and pistons thereon and the rotary abutment journaled in the casing, having a recess for the passage of the pistons therethrough and having an inlet port therein opening into said recess, of a valve having a port with which the inlet port in the abutment is adapted to register, a fixed plate having a port therein with which the port in the valve is adapted to register and a second valve having a port adapted to register with the port in the plate; substantially as described.

3. In a rotary engine, the combination with the cylinder

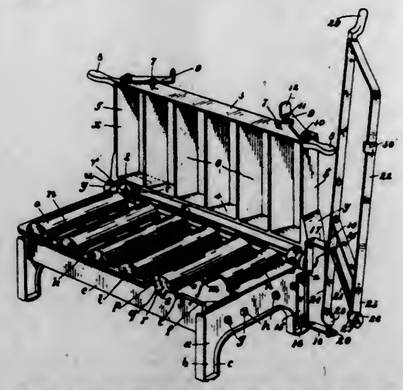
or casing, the rotary piston carrier and pistons thereon and the rotary abutment of frusto-conical form journaled in the casing and having the recess for the passage of the pistons therethrough and the inlet passage extending from said recess to the end face of the abutment, of the disk valve against which said end face of the abutment seats, said valve having a port therein with which the inlet in the abutment is adapted to register, means for moving said valve independently of the abutment and a fixed plate having a plurality of ports therein with which the port in the valve is adapted to register; substantially as described.

4. In a rotary engine, the combination with the cylinder and casing, the rotary piston carrier and pistons thereon and the rotary abutment journaled in the casing and having a recess for the passage of the pistons therethrough and the inlet passage extending from said recess to one end face of the abutment of a disk valve interposed between the end of the abutment and end of its chamber and having a port therein with which the inlet passage in the abutment is adapted to register and means for adjusting the abutment longitudinally towards the valve; substantially as described.

5. In a rotary engine, the combination with the cylinder and casing, the rotary piston carrier and pistons thereon and the rotary frusto conical abutment journaled in the casing and having a recess for the passage of the pistons therethrough and the inlet passage extending from the recess to the smaller end face of the abutment, of a disk valve interposed between the end of the abutment and end of its chamber and having a port therein with which the inlet passage in the abutment is adapted to register and means for adjusting the abutment longitudinally toward the valve; substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

873,598. MOLDING-MACHINE. HENRY POCOCK, London, Ontario, Canada. Filed Oct. 18, 1906. Serial No. 339,505.



1. In a molding machine, the combination with an open frame, of a plate or pallet resting on and covering in said frame and forming the bottom of the mold and having an opening therethrough, a core rigidly secured to and supported from said frame and rising through said opening in said pallet, and a mold frame closing down on said pallet, and forming the sides of the mold around said core and having a separable outer side adapted to be moved laterally, substantially as and for the purpose specified.

2. In a molding machine, the combination with the frame, of a plate or pallet supported from said frame and forming the bottom of the molds and having a plurality of openings therethrough, a plurality of cores rigidly secured to said frame and rising through the openings in said plate, and a mold frame hingedly secured to the aforesaid frame and closing down on said plate and having a plurality of laterally arranged divisions and a separable outer side secured thereto, and adapted to be moved laterally therefrom to clear the ends of said cores as and for the purpose specified.

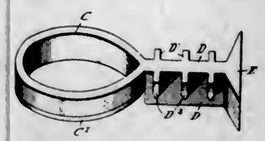
3. In a molding machine, the combination with a frame, of a plate or pallet resting upon the edges of said frame and forming the bottom of the molds and having reinforcing flanges from the underside thereof and a plurality of rectangular openings therethrough, a plurality of cores extending across said frame and rigidly secured thereto and rising through the openings in said plate, a mold frame hingedly secured to said frame and having a plurality of lateral divisions contacting with said plate in the closed position of said frame and a separable outer side secured to said divisions and abutting the outer ends thereof and adapted to be moved outwardly from the ends of said divisions, and means for holding said outer side closely abutting said arms and for releasing the said side, as and for the purpose specified.

4. In a molding machine, the combination with a frame, of a plate or pallet resting upon the edges of said frame and forming the bottom of the molds and having reinforcing flanges from the underside thereof and a plurality of rectangular openings therethrough, a plurality of cores extending across said frame and rigidly secured thereto and rising through the openings in said plate, a mold frame hingedly secured to said frame and having a plurality of lateral divisions contacting with said plate in the closed position of said frame and a separable outer side adapted to be moved outwardly from the ends of said divisions and having orifices therethrough, bolts secured to said mold frame and extending through the orifices in said separable side and having their heads to the outside thereof, and arms pivotally secured to said separable side having slots engaging the shanks an inner surface of the head of the said bolts and holding said separable side closely abutting the ends of the lateral divisions of said mold frame, as and for the purpose specified.

5. In a molding machine, the combination with a frame having separable sides and ends rigidly secured together said ends having rearwardly projecting brackets therefrom, of a plate or pallet resting upon the edges of said frame and forming the bottom of the molds and having longitudinal reinforcing flanges from the underside toward the edges and a plurality of lateral flanges from the underside joining said longitudinal flanges at intervals throughout the length thereof and a plurality of rectangular openings between said lateral flanges through said plate, a plurality of cores extending across said frame and rigidly secured to the sides thereof and rising upwardly therefrom through said openings and registering therewith, a mold frame having rearwardly projecting lugs therefrom registering with the brackets on the ends of the frame and hingedly connected therewith and a plurality of divisions contacting with the aforesaid plate in the closed position of said frame and a separable outer side secured to the outer ends of said divisions by suitable bolts adapted to be moved outwardly said bolts having shanks projecting outwardly through said side, arms pivotally secured to said separable side and having slots engaging the shanks and inner surface of the heads of said bolts and forcing said side inwardly to the end of said divisions, as and for the purpose specified.

[Claims 6 to 10 not printed in the Gazette.]

873,599. JOINING DEVICE. HENRY POHLMANN, New York, N. Y. Filed Apr. 13, 1907. Serial No. 367,943.



1. A device for joining wooden parts comprising a loop for engagement with one of the wooden parts, a shank projecting integrally from the loop and engaging the other wooden part, and a head integrally on the end of the shank for engaging the face of the part engaged by the said shank.

2. A device for joining wooden parts comprising a loop for engagement with one of the wooden parts, a shank projecting integrally from the loop and having lugs on the sides, the said shank and lugs engaging the other wooden part, and a head integrally on the end of the shank for engaging the face of the part engaged by the said shank.

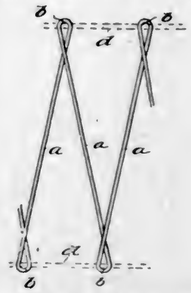
3. A device for joining wooden parts comprising a loop having its lower end beveled, for engagement with one of the wooden parts, a shank projecting integrally from the loop and engaging the other wooden part, and a head integrally on the end of the shank for engaging the face of the part engaged by the said shank.

4. A device for joining wooden parts comprising a loop for engagement with one of the wooden parts, a shank projecting integrally from the loop and engaging the other wooden part, and a head integrally on the end of the shank for engaging the face of the part engaged by the said shank, the said head being approximately triangular in shape, the base of the triangle forming the outer face of the head.

5. In combination, the wooden parts to be joined together, and a joining device for the said wooden parts and formed of a single piece of material, having a loop, a shank and a head, of which the loop is driven into one of the wooden parts and the shank and head fitting into corresponding recesses formed in the other wooden part.

[Claims 6 to 9 not printed in the Gazette.]

873,600. REINFORCED BUILDING BLOCK OR SLAB. EDWARD C. POOLE, Southampton, England. Filed Jan. 19, 1906. Serial No. 296,842.

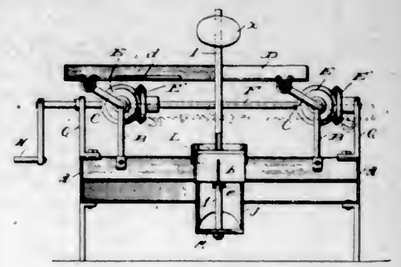


As a new article of manufacture, a building block comprising in its construction a reinforcing member and a body portion of plastic material within which said member is embedded, said member bent to form a series of diagonally-extending portions of greater length than the width of the block, said diagonally-disposed portions overlapping each other and forming thereby eyes projecting from the body portion of the block, the parts of the diagonally-disposed portions which overlap positioned within the block at a point removed from the side edges thereof, said eyes disposed in a plane with respect to each other so as to register with each other for freely receiving a bonding member.

873,601. SLICING-MACHINE. FINICE D. PRETTYMAN, Watsonville, Cal. Filed June 12, 1907. Serial No. 378,498.

1. A slicing machine, comprising a main frame, a stationary knife holder with knives and a stationary upwardly projecting guide post, for the perforated fruit to be sliced, centrally mounted on the knife holder, a follower for forcing said fruit through the cutter and means for giving said follower both an up and down and lateral movement.

2. A slicing machine, comprising a main frame, a knife holder with knives and a central upwardly projecting guide post, for the perforated fruit to be sliced, a follower frame with follower for forcing the fruit through the cutter, two crank axles supporting the follower frame and means for rotating the crank axles.



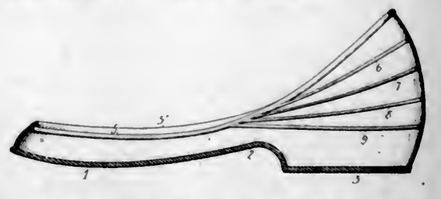
3. A slicing machine, comprising a main frame, a knife holder with knives and a central upwardly projecting guide post for the fruit, a skeleton follower frame having a vertical and sidewise motion and a slotted push plate moving into vertical alinement with the cutter and straddling the post and means for imparting the vertical and sidewise motion to the follower frame.

4. A slicing machine, comprising a main frame, a knife holder with knives and means for holding the fruit to be sliced on the knife holder, and a horizontal follower and means for imparting a parallel motion to it to move it laterally over the knife holder and then down upon the same to force the fruit through it.

5. A slicing cutter, comprising a cylindrical knife holder, radial knives in the holder and a stationary guide post fixed to the center of the knives and extending above the holder.

[Claims 6 to 8 not printed in the Gazette.]

873,602. OVERSHOE. JOHN D. PRICE, Cleveland, Ohio, assignor of one-half to H. G. Powell, Cleveland, Ohio. Filed Feb. 28, 1907. Serial No. 359,926.

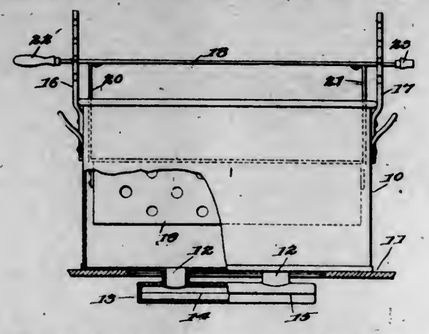


1. An overshoe having a low upper and a high heel portion provided on its inner face with an inelastic bead extending entirely around the shoe and on the edge of the shank and heel and having a plurality of vertically spaced inelastic beads extending longitudinally around the heel portion of said overshoe and merging into said edge cord at the shank of the overshoe.

2. An overshoe having a low upper extending slightly above the sole of the shoe with which it is to be worn and having a high heel portion extending above the counter of the shoe, an inelastic cord extending around the inner face of said overshoe and at the edge of its shank and heel, and a plurality of inelastic cords attached to the inner face of the heel portion of said overshoe and extending longitudinally therearound and terminating at the shank of the shoe, said cords being spaced vertically and curving slightly upward from said shank.

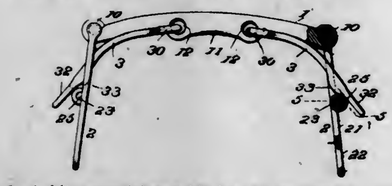
3. An overshoe having a low upper and a high heel portion provided with a plurality of cords or beads extending longitudinally around the heel portion on the inner face thereof, said beads being spaced vertically and converging toward each other from the heel to the upper edge of the shank and merging at the shank into a single bead to form a thickened reinforced shank portion.

873,603. FRUIT-CANNING DEVICE. THOMAS H. RANEY, Chapel Hill, N. C., assignor to Raney Canner Co., Chapel Hill, N. C. Filed Apr. 3, 1905. Serial No. 253,667.



A fruit-canning apparatus comprising a main boiler, conducting tubes projecting from the bottom thereof, and a supplemental boiler connected with the tubes and being double-convex in cross section to secure the maximum superficial heating area with the minimum interference to draft, and also to provide at the junctures between the upper and lower surfaces of the longitudinal edges of the boiler acute-angled water spaces, whereby water at the apices of the spaces will become heated in advance of the water at the intermediate portions of the boiler, thus to secure and maintain rapid circulation of heated water in the main boiler during canning operations.

873,604. BRIDLE-BIT. JOHN REICHERT, Racine, Wis. Filed Feb. 12, 1907. Serial No. 356,992.



1. A bit comprising a bit bar at the central portion of its length having a rear flange with vertical end perforations, swinging cheek pieces extending rearwardly from the ends of the bit bar and at their front portions pivotally confined thereto, outwardly extending levers passing through said cheek pieces and at their inner ends having eyes confined in said perforations, each lever having a rein loop rigid therewith and forming an outward continuation thereof beyond the cheek piece, said cheek pieces having lever stops limiting the rearward independent swing of the levers in the cheek pieces.

2. A bit comprising a bit bar, rearwardly extending swinging cheek pieces at their front portions pivotally joined to the ends of the bit bar, levers at their inner ends pivotally joined to intermediate portions of the bit bar and extending outwardly and loosely through the cheek pieces, each lever having a rein loop beyond its cheek piece, each cheek piece formed with a lever slideway and with an offset lever engaging stop provided with a roller and arranged intermediate the front and rear extremities of the cheek piece.

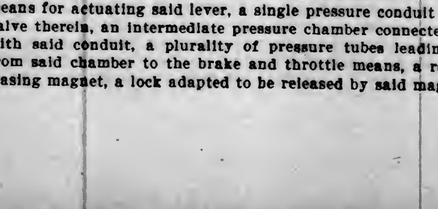
3. A bit comprising a mouth bar, swinging cheek pieces pivotally joined to and extending rearwardly from the mouth bar, and levers pivotally joined to the intermediate portion of the mouth bar and extending outwardly and loosely through the cheek pieces and at their outer ends adapted to receive the reins, each cheek piece formed with a lever stop, the outer portion of the rear edge of each lever being formed with a depression to receive said stop.

4. A bit comprising a mouth bar, swinging cheek pieces pivotally joined to and extending rearwardly from the mouth bar, and levers pivotally joined to the intermediate portion of the mouth bar and extending outwardly and loosely through the cheek pieces and at their outer ends adapted to receive the reins, each cheek piece being formed with an intermediate lever stop bar, each lever at its outer portion having a cam incline, said stop bars adapted to rest behind said inclines when the parts are in their normal positions.

5. A bit comprising a mouth bar, cheek pieces extending rearwardly from and pivotally joined to the ends of said mouth bar, each cheek piece formed with a rearwardly extending slideway and with an intermediate offset vertical cross bar, and levers pivotally joined to the mouth bar extending outwardly through said slideways and at their outer ends adapted to receive the reins, said levers adapted to engage said offset bars to press the cheek pieces inwardly.

[Claims 6 to 11 not printed in the Gazette.]

873,605. TRAIN-CONTROLLING MEANS. ERNEST RENAUD, Montreal, Quebec, Canada, assignor to J. B. Dupuis, Montreal, Canada. Filed Feb. 19, 1907. Serial No. 358,325.



1. In an apparatus for stopping trains, a movable throttle lever, a locking segment, a pawl adapted to engage said segment, pressure actuated pawl releasing means movable with said lever, pressure operated means for moving said lever and pressure operated means for operating emergency brakes, in combination with electro-mechanically operable means adapted to control a pressure supply therefor.

2. In an apparatus for stopping trains, a movable throttle lever, means for locking said lever, pressure operable means carried by said lever and adapted to release the lever, a rockable lever adapted to throw said throttle lever, pressure operable means adapted to actuate said rockable lever, pressure supply conduits connected with said pressure operable means, a valve adapted to control the supply of pressure to said conduits and electro-mechanical means adapted to actuate said valve.

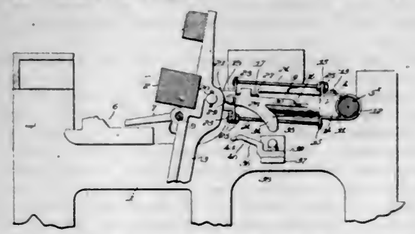
3. In a device of the character described, power operable emergency brake and steam supply regulating means, in combination with an electro-mechanically controlled torsional lock, a reciprocatory rod adapted to engage said lock, a power conduit, a valve therein connected with said rod, means for releasing said lock and a plurality of conduits for conducting pressure to the brake and steam supply regulating means.

4. In a device for stopping trains, separate pressure actuated means for simultaneously releasing and actuating a throttle lever and for supplying pressure to emergency brakes, in combination with a source of pressure supply, a single conduit leading therefrom, a pressure chamber, a plurality of conduits leading therefrom to said throttle lever and brakes, electro-mechanical means for supplying pressure to said plural conduits, a source of electric energy carried by the train, a second electro-mechanical device in normally open circuit and means carried by the train for closing said circuit, there being normally open circuit connections between said electro-mechanical means.

5. In a device for stopping trains, means for actuating emergency brakes, means for releasing a throttle lever, means for actuating said lever, a single pressure conduit a valve therein, an intermediate pressure chamber connected with said conduit, a plurality of pressure tubes leading from said chamber to the brake and throttle means, a releasing magnet, a lock adapted to be released by said magnet when energized, and spring actuated means, normally held by said lock, and adapted to actuate said valve.

[Claims 6 to 15 not printed in the Gazette.]

873,606. LAY-MOTION FOR LOOMS. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed May 2, 1907. Serial No. 371,365.



1. In a loom, in combination, the lay, the crank-shaft, spring-controlled, longitudinally compressible connections between them, a locking device to prevent compression of said connection, and means to release automatically the locking device at a predetermined point on each forward beat of the lay.

2. In a loom, in combination, the lay, the crank-shaft, a yielding connection between them, a device to normally prevent yielding of said connection, and means to render said device inoperative for a predetermined portion of each forward beat of the lay.

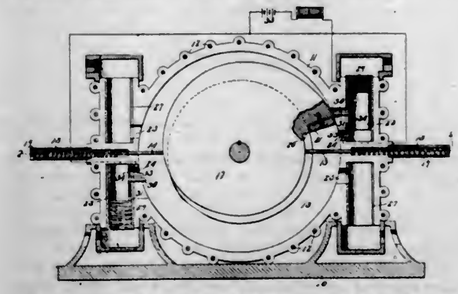
3. In a loom, in combination, the lay, the crank-shaft, a two-part connection between them, the members being relatively movable longitudinally, a spring to cushion such movement and normally acting to extend the members, a latch to positively lock said members from relative movement, and means to automatically release the latch at a predetermined point on the forward beat of the lay.

4. In a loom, in combination, a frog, a lay having a dagger to coöperate with the frog and stop the lay when the shuttle is improperly boxed, a crank-shaft, a direct connection between it and the lay, and automatic means operated independently of coöperation of the dagger and frog to permit said connection to yield when the movement of the lay is stopped by coöperation of the dagger and frog.

5. The combination in a loom of a lay, a crank-shaft, protection mechanism to stop the lay when the shuttle is improperly boxed, a compressible connection between the lay and the crank-shaft, a device to prevent compression of said connection, and means to automatically render said device inoperative just prior to the time for the protection mechanism to operate if the shuttle is improperly boxed.

[Claims 6 to 14 not printed in the Gazette.]

873,607. ROTARY ENGINE. ELBERT C. RHODES, Detroit, Mich. Filed Oct. 11, 1905. Serial No. 282,309.



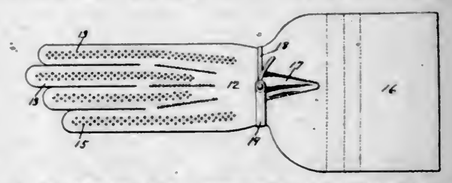
1. The combination in a rotary engine, of a cylinder having an annular working space of approximately circular form in cross section, a piston disk approximately in the form of a spiral cam and provided with a radial face, a piston wing circular in form and secured to the radial face of the disk, the disk having a radially arranged shoulder in alinement with the pressure face of the piston wing, and extending inward beyond the inner wall of the working space of the cylinder, a pair of abutments engaging with the periphery of a piston disk and movable inward to a point beyond the extreme inner edge of such working space, and piston controlled inlet valves located beyond the abutments and arranged to be operated by the periphery of the piston disk after the abutments have moved across and closed the working space of the cylinder.

2. The combination in a rotary engine, of a cylinder formed of a pair of castings arranged to form an annular working space and provided with recesses at points outside said working space, a piston disk, a wing carried thereby and arranged to travel in the working space of the cylinder, and inlet and discharge passages communicating with the working space of the cylinder and provided with solid tubular linings that are confined within said recesses to prevent leakage of the fluid between the members of the cylinder.

3. The combination in a rotary engine, of a cylinder, a movable piston disk arranged therein and having a cam shaped periphery, a piston inlet valve arranged to move in a line substantially tangential to the piston, and a pin projecting from said valve and disposed in the path of movement of the piston.

4. The combination in a rotary engine, of a cylinder, a piston disk arranged therein, a wing on the disk, an abutment, an inlet port adjacent to the abutment, a hollow cylindrical valve for controlling the flow of fluid through said port, and arranged to move in a line substantially tangential to the piston, and a pin projecting from the valve through a recess in the wall of the cylinder and arranged to be engaged by the periphery of the piston disk.

873,608. APPAREL-GLOVE. BENJAMIN J. RICKER, Grinnell, Iowa. Filed Sept. 10, 1906. Serial No. 333,943.



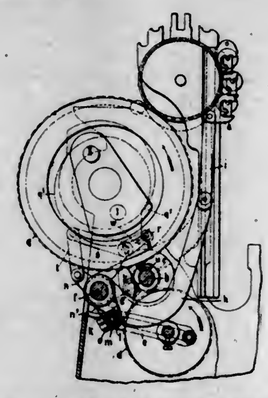
1. An apparel glove, comprising a hand portion, a gauntlet portion formed of relatively stiff and unyielding material, and designed to receive a wearer's sleeve and cuff, and formed with an opening extending from the forward end portion of the gauntlet portion to a point spaced apart from the rear end of the gauntlet portion, a flexible gore covering said opening, and means for adjusting the parts of the gauntlet portion adjacent to said opening, whereby the end of the gauntlet portion that is adjacent to the glove portion may be adjusted without affecting the rear end of the gauntlet portion.

2. An apparel glove comprising a hand portion, a gauntlet portion connected therewith, and made of relatively stiff and unyielding material, and formed with a tapered opening at the back thereof, said tapered opening having its wide end adjacent to the hand portion, and having its small end spaced apart a considerable distance from the free end of the gauntlet, a flexible gore secured in said opening, and straps attached on opposite sides of the opening for drawing together the end of the gauntlet adjacent to the hand portion, without affecting the body of the gauntlet.

873,609. PLATEN PRINTING-MACHINE. MAX ROCKSTROH, Klein-Sedlitz, near Pirna, Germany. Filed June 4, 1907. Serial No. 377,279.

1. In a platen printing machine, an inking mechanism, an operating shaft therefor, an actuating lever for said

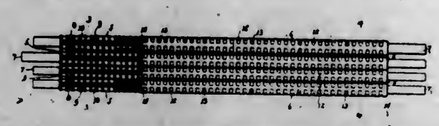
shaft loosely mounted thereon and having a quadrant-shaped portion and a socket, a lever fixed on said shaft and carrying a spring-pressed headed pin adapted to engage in said socket for coupling the actuating lever to the shaft, a lever loosely mounted upon said shaft and carrying a roller and a cam piece, said cam piece adapted to intermediately engage the head of the pin for shifting the pin out of said socket, thereby uncoupling the actuating lever from the shaft, a rotatable cam adapted to engage with said roller causing thereby the shifting of said loosely mounted lever and the engaging of the cam piece with the head of the pin, and means connected with the actuating lever for oscillating it.



2. A platen printing machine comprising the combination with an inking mechanism and an operating shaft for intermittently actuating said mechanism, of an actuating means for said shaft, said means comprising a lever fixed to the shaft, an actuating lever loosely mounted upon the shaft, means carried by the fixed lever and adapted to engage the actuating lever for coupling said actuating lever to the shaft, means for intermittently uncoupling the actuating lever from said fixed lever, and means connected with the actuating lever for oscillating it.

3. In a platen printing machine, the combination with an inking mechanism and an operating shaft for intermittently actuating said mechanism, of means for intermittently operating said shaft, said means comprising an actuating lever loosely mounted upon the shaft, a lever fixed to the shaft and carrying a spring-pressed coupling member adapted to engage the actuating lever for coupling the latter to the shaft, a cam and lever mechanism for intermittently shifting said coupling member from engagement with said actuating lever, and means for oscillating said actuating lever.

873,610. CORN-HUSKING ROLLS. AUGUST ROSENTHAL, West Allis, Wis., assignor to Rosenthal Manufacturing Company, Milwaukee, Wis. Filed Mar. 7, 1904. Serial No. 196,836.



1. A roll for a corn-husking machine, said roll at one end, for a desired distance, being smaller in diameter than the remaining major portion of the roll, whereby a shoulder is formed at the point of juncture between said two portions of the roll, the portion of the roll of greatest diameter provided with means for husking the ears of corn, and a continuous sleeve removably fitted to the reduced end of the roll and bearing at its inner end against the shoulder, said sleeve provided with means for engaging corn-stalks and separating said stalks from the ears.

2. A pair of rolls for a corn-husking machine, said rolls adapted to be rotated toward each other, and each roll at one end, for a desired distance, being smaller in diameter than the remaining major portion of the roll, whereby a shoulder is formed at the point of juncture between the said portions of the roll, the portion of the roll of greatest diameter provided with means for husking the ears of corn, and a continuous sleeve removably fitted to the reduced end of each roll, and bearing at its inner end against the shoulder, the said sleeve provided with means for engaging the corn-stalks and separating said stalks from the ears.

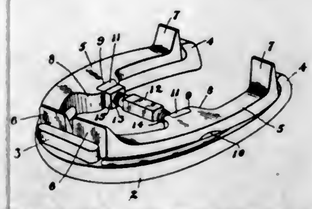
3. A pair of rolls for a corn-husking machine, said rolls adapted to be rotated toward each other, and each roll at one end, for a desired distance, being smalled in diameter than the remaining major portion of the roll, whereby a shoulder is formed at the point of juncture between said portions of the roll, the portion of each roll of greatest diameter provided with means for husking the ears of corn, and a continuous sleeve removably fitted to the reduced end of each roll and bearing at its inner end against the shoulder, one of said sleeves provided longitudinally with a groove, and the corresponding portion of the other sleeve with a co-acting projection, the projection adapted to enter the groove and thereby break or kink the corn-stalks, and cause the separation of the ears from said stalks.

4. A pair of rolls for a corn-husking machine, said rolls adapted to be rotated toward each other, and said rolls being provided circumferentially or transversely of the length thereof with recesses, one or more of said recesses provided with pins projecting from the bottom or bottoms thereof, the surface forming the separating walls between two lines of the recesses of each roll being in turn provided with a longitudinal recess, the said recesses of the two rolls being so disposed on the respective rolls as to meet, when the rolls are rotated toward each other.

5. A roll for a corn-husking machine, said roll at one end, for a desired distance, being smaller in diameter than the remaining major portion of the roll, whereby a shoulder is formed between the point of juncture of the said two portions of the roll, the said reduced end of the roll being tapered outwardly from the shoulder, and the portion of the roll of greatest diameter provided with means for husking the ears of corn, and a sleeve having a tapered bore removably fitting the tapered end of the roll and bearing at its inner end against the shoulder of the roll, said sleeve provided with means for engaging the corn-stalks and separating said stalks from the ears.

[Claim 6 not printed in the Gazette.]

873,611. HORSESHOE. HENRY J. ROSS, St. Catherines, Ontario, Canada. Filed Jan. 3, 1907. Serial No. 350,564.



1. A horse-shoe calk, comprising segmental lengths of metal having front and rear tread points and lugs projecting inwardly therefrom about midway of their length, said lugs each having a dove-tailed slot therein and ears from the upper edges for engaging the horse-shoe, nuts correspondingly dove-tailed loosely inserted in said slots, and a bolt having right and left hand threads turning in said nuts, substantially as described.

2. In a calk for horse-shoes, the combination with a horse-shoe having front and rear permanent calks, of segmental sections having front and rear tread points abutting said front and rear permanent calks respectively and inwardly projecting lugs about mid-way of the length of said sections, said lugs having dove-tailed slots at their inward extremities and upward extensions and ears from said upward extensions for engaging said horse-shoe, nuts correspondingly dove-tailed to said slots and loosely fitting therein, and a bolt having right and left hand screws and turning in said nuts, substantially as described.

3. In a calk for horse-shoes, the combination with a horse-shoe having front and rear permanent calks, of a pair of segmental sections having front tread points with flat faces abutting the front permanent calk and rear tread points with flat faces abutting the rear permanent calks and together corresponding to the shape of the horse-shoe, and lugs projecting inwardly and upwardly from said sections about mid-way of the length thereof having ears from the upper projections engaging the horse-shoe and vertically arranged opposing dove-tailed slots at their inward extremities and grooves leading in a flaring direction across the upper side of said sections from the said dove-tailed slots, nuts correspondingly dove-tailed and loosely fitting in said slots, and a squared bolt having reduced ends threaded right and left respectively and turning in said nuts and adapted to be locked, substantially as described.

873,612. CHAIR SUPPORT OR PROP. AUGUST ROTHFUCHS and GOTTLE BLISS, Hammond, Ind. Filed May 6, 1907. Serial No. 372,106.

1. A chair support or prop, comprising a pair of vertically disposed legs, a cross bar connecting said legs, pivot bolts adapted to be engaged with the upper ends of said legs to pivotally connect the same in a groove or channel formed in the rear side of the chair leg, and a wear plate arranged at the upper end of said groove or channel in which the upper ends of the legs of the support are engaged when the latter is swung to an operative position, substantially as described.

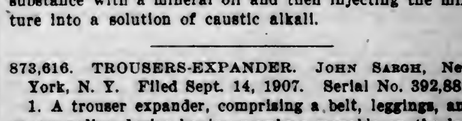
2. A chair having formed in the rear side of its supporting legs longitudinally disposed grooves or channels having at their upper ends curved recesses, and a groove or channel formed in the rear edge of the chair seat to connect with the grooves in the chair legs, a wear plate arranged in the curved recesses at the upper end of said leg grooves, a pivot bolt or pin arranged across the groove or channel in the chair legs adjacent to the recess formed therein, a prop or support comprising a pair of vertically disposed supporting legs pivotally mounted at their upper ends on said pivot pin and provided on their upper ends with extensions which project beyond said pivotal connection and engage said wear plates, a strengthening band or clip adapted to be engaged with the outer side of the chair legs and to receive the ends of the pivot bolt or pin therein, and a cross bar to connect the legs of said support, substantially as described.

873,613. PRODUCTION OF EFFECTS ON MIXED GOODS COMPOSED OF COTTON AND WOOL. GEORG RUDOLPH, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Apr. 18, 1907. Serial No. 368,987.

1. The process of producing variegated colored effects on fabrics composed of cotton and wool, which consists in chroming the wool and then dyeing the fabric with sulfur dyes, the chromed wool resisting the action thereof and remaining uncolored, substantially as described.

2. The process of producing variegated colored effects on fabrics composed of cotton and wool, which consists in chroming the wool, and then dyeing the fabric with sulfur dyes, the chromed wool resisting the action thereof and remaining uncolored, and then dyeing the fabric with any of the colors ordinarily employed for wool dyeing, substantially as described.

873,614. MOTOR-BOAT. VICTOR M. SALO and JOHN RÜKONEN, Chicago, Ill. Filed Jan. 25, 1907. Serial No. 354,160.



In a motor boat the combination consisting of a metallic fin keel tapering from the bow to a point below the propeller and from thence parallel with the water line to the stern, said keel having a step to support the end of a rudder post, an opening to permit the rotation of the propeller therein, bearings to support the propeller shaft and a connecting shaft tube extending from one of said bearings diagonally upwards into the hull; a propeller shaft supported in said bearings parallel with the water line; a propeller affixed on said shaft within the said opening in said keel; and a connecting shaft in said tube connected with said propeller shaft and a motor in said boat.

873,615. PROCESS OF SAPONIFICATION. MARCUS R. A. SAMUEL, London, England, assignor to The Karsam Soap Company, Limited, London, England. Filed Mar. 9, 1907. Serial No. 361,513.

1. In a process of saponification injecting a saponifiable substance simultaneously with a mineral oil into a solution of caustic alkali.

2. In a process of saponification introducing a saponifiable substance simultaneously with a mineral oil in one or more streams, each stream being of small volume, below the surface of a solution of caustic alkali.

3. In a process of saponification injecting a saponifiable substance simultaneously with a mineral oil in a finely divided state into a solution of caustic alkali.

4. In a process of saponification mixing a saponifiable substance with a mineral oil and then injecting the mixture into a solution of caustic alkali.

873,616. TROUSERS-EXPANDER. JOHN SARGH, New York, N. Y. Filed Sept. 14, 1907. Serial No. 392,882.

1. A trouser expander, comprising a belt, leggings, and an expanding device having members movable on the leg-

gings and flexible connections between the said members and the said belt.



2. A trouser expander, comprising a belt, leggings, and an expanding device having members movable on the leggings, flexible connections between the said members and the said belt, and suspenders connected with the said belt to support the latter from the shoulders of the wearer.

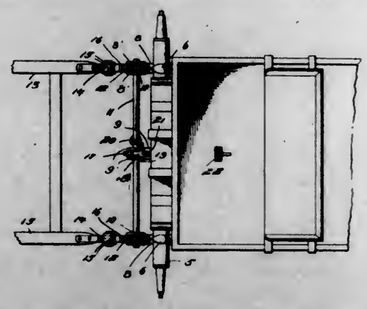
3. A trouser expander, comprising a belt, leggings, and an expanding device having members movable on the leggings, flexible connections between the said members and the said belt, suspenders connected with the said belt to support the latter from the shoulders of the wearer, and an elastic band connecting the shoulder straps of the suspenders with each other across the breast of the wearer.

4. A trouser expander, comprising a belt, leggings, expanding members mounted to swing on the leggings at the opposite inner faces thereof, and rope and pulley connections between the said expanding members and the said belt.

5. A trouser expander, comprising a belt, leggings, expanding members on the said leggings, each member being in the form of a frame mounted to swing on the legging, elastic bands pressing the said frame to normally hold the same in a folded position on the legging, and a flexible connection between each frame and the belt.

[Claims 6 to 11 not printed in the Gazette.]

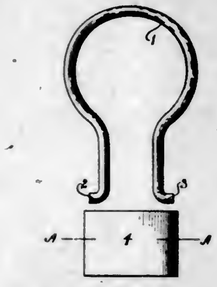
873,617. SHAFT-COUPLING. JOSEPH J. SCHMITT, Kinsley, Kans. Filed July 20, 1907. Serial No. 384,784.



1. In a coupling, the combination with a bracket comprising vertically extending arms, of a shaft, a rack bar the brackets, a pinion mounted upon the shaft, a rack bar arranged between the arms and beneath the shaft and disposed in engagement with the pinion, a rack wheel mounted upon the shaft, a dog for the wheel, and weighted means for holding the dog normally in engagement with the wheel.

2. The combination with a vehicle having an axle, of spaced end brackets secured to the axle, an intermediate bracket located between the end brackets, each of said brackets including spaced arms and a connecting portion, a shaft journaled in the arms of the several brackets, pinions mounted upon the shaft between the arms of the end brackets, thills including rack bars disposed with the bars in engagement with the pinions and between the pinions and the connecting portions of the brackets, a toothed wheel mounted upon the shaft between the arms of the intermediate bracket, a pivot pin mounted in the said bracket, a dog fixed upon the pin for movement therewith into and out of engagement with the wheel, said pin including a lateral extension, a weight connected with said extension and arranged to hold the dog normally in engagement with the wheel, and means for moving the dog.

873,618. SEAL. ALBERT B. SCHOFIELD, New York, N. Y., assignor, by mesne assignments, to The Corporation Trust Company, trustee, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 23, 1905. Serial No. 275,367.

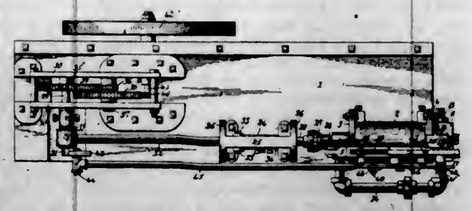


1. A seal comprising a shackle having its ends turned to form retaining hooks or shoulders and a body of soft metal having shackle receiving sockets entering it at one end and sockets entering the said body at the opposite end, the said last named sockets being off-set from the shackle receiving sockets and spaced from the sides of the body in position to join the shackle receiving sockets within the body of the seal, whereby the locking ends of the shackle may be completely housed within the body of the seal when the letter is pressed.

2. A seal comprising a shackle having outwardly turned ends for retaining it and a soft metal body provided with shackle receiving sockets in one end and flat sided sockets at the opposite end offset from the shackle receiving sockets and arranged to overlap and connect with the shackle receiving sockets.

3. A seal comprising a shackle having hooked retaining ends and a soft metal body having its opposite edges parallel and rounded, the said body being provided with shackle receiving sockets at one end and with sockets at the opposite ends spaced from the sides of the body and off-set from the shackle receiving sockets the said sockets being arranged to lap past the shackle receiving sockets and communicate therewith.

873,619. MOTOR. JOHN SCHROEDER, Davenport, Iowa. Filed Apr. 20, 1907. Serial No. 369,261.



1. In a motor, the combination of a cylinder having a piston, a driving shaft driven by said piston, a valve controlling the admission and the exhaust to the cylinder at each side of the piston, a pinion fixed to the valve, a rack bar slidably mounted in a guideway arranged longitudinally of the cylinder, in mesh with the pinion, and means slidable relatively to the rack-bar for operating it from said shaft.

2. In a motor, the combination of a cylinder having a piston, a rotary valve for controlling the admission and the exhaust to the cylinder, reciprocating means for oscillating said valve including a rack bar, and adjustable stops carried by said reciprocating means acting on said bar for regulating said oscillations.

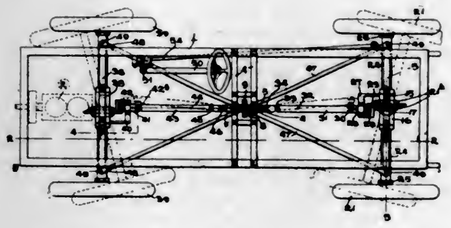
3. In a motor, the combination of a cylinder having a piston, a crank shaft driven by the piston, a rotary valve for regulating the admission and exhaust to the cylinder, a pinion fixed to said valve, a rack-bar in mesh with said pinion and having a projecting member, a slotted rod connected to said crank shaft and slidable on said member, and adjustable stops carried by said rod in the path of and at opposite sides of said member.

4. In a motor, the combination of a cylinder having a piston, a valve casing communicating with said cylinder at opposite sides of the piston, a three-way valve revolubly mounted in the casing, a pinion fixed to the valve, a rack bar in mesh with the pinion, and means having a sliding connection with the rack bar for reciprocating it to oscillate the valve in proper sequence with the operation of the piston.

5. In a motor, the combination of a cylinder having a piston, a valve casing communicating with the cylinder, a valve vertically and revolubly mounted in said casing, means for revolving the valve in proper sequence with the reciprocations of the piston, a bracket overhanging the valve casing, and a screw supported by said bracket and threaded into said valve for adjusting it longitudinally of the casing.

[Claims 6 and 7 not printed in the Gazette.]

873,620. MOTOR-VEHICLE. WILLIAM C. SCHWARZ, Edwardsville, Ill. Filed May 29, 1906. Serial No. 319,358.

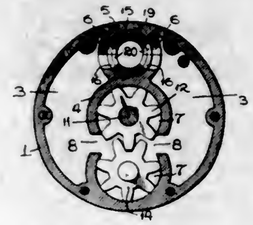


1. In a motor vehicle, a frame, front and rear axles pivotally mounted at their centers beneath the frame, traction wheels fixed on the ends of said axles, differential gearing arranged on the axles, pinions meshing with and driving said differential gearings, flexible extensible shafts arranged to drive the pinions, means carried by the frame for driving the flexible extensible shafts, a pair of cross rods pivotally connected at their ends to the ends of the axles, a rod pivotally connected to one of the cross rods, and means arranged on the frame for imparting longitudinal movement to the rod.

2. In a motor vehicle, a frame, front and rear axles, traction wheels arranged on said axles, differential gearing arranged on the axles, casings inclosing the differential gearing, arch bars pivotally mounted on the tops of the gear casings and supporting the ends of the vehicle frame, pinions meshing with and driving said differential gearings, flexible extensible shafts arranged to drive the pinions, means carried by the frame for driving the flexible extensible shafts, a pair of cross rods pivotally connected at their ends to the ends of the axles, a rod pivotally connected to one of the cross rods, and means arranged on the frame for imparting longitudinal movement to the rod.

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873,621. CONTROLLING-VALVE FOR HYDRAULIC TRANSMISSION DEVICES. WILLIAM C. SCHWARZ, Edwardsville, Ill. Filed Dec. 15, 1906. Serial No. 347,976.



1. The combination with a cylindrical casing divided into two compartments by a bifurcated partition, of a pair of meshing pinions arranged for rotation in the chambers within the bifurcated partition, a pair of perforated cylinders, one upon the other, to form an adjustable valve for controlling the flow of liquid from one compartment to the other, and a governor mechanism for automatically regulating the area of the opening through said valve.

2. The combination with a cylindrical casing, divided into two compartments by a bifurcated partition, of a pair of pinions arranged for rotation in the chambers within the bifurcated partitions, a pair of perforated cylinders, one upon the other, to form a valve for controlling the flow of liquid from one compartment to the other, means whereby said valve is opened or closed, and a governor mechanism actuated by the rotation of the casing for automatically opening or closing the valve.

3. The combination with a pair of alined shafts, of a hollow cylinder rigidly fixed on one of the shafts, which cylinder is formed into two compartments, a pair of meshing pinions arranged for operation within the cylinder between the compartments, one of which pinions is fixed on the shaft opposite the shaft to which the cylinder is fixed, a pair of perforated cylinders, one upon the other, to form a valve which is arranged between the two compartments in the cylinder, and an automatic governor mechanism for shifting the relative positions of the cylinders forming the valve to vary the area of the opening therethrough.

4. The combination with a pair of alined shafts, of a hollow cylinder rigidly fixed on one of the shafts, which cylinder is formed into two compartments, a pair of meshing pinions arranged for operation within the cylinder between the compartments, one of which pinions is fixed on the shaft opposite the shaft to which the cylinder is fixed, a pair of perforated cylinders, one upon the other, to form a valve arranged between the two compartments in the cylinder, an automatic governor mechanism for shifting the relative positions of the cylinders forming the valve to vary the area of the opening therethrough, and a separate means connected to the cylinders forming the valve for opening and closing the same.

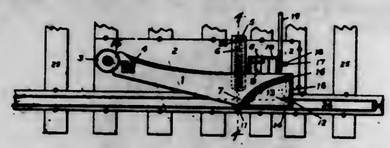
5. The combination with a cylindrical casing, divided into two compartments, which compartments are filled with fluid, means arranged between the compartments for delivering the fluid from one compartment to another, a pair of perforated cylinders, one upon the other, to form a valve arranged between the compartments for controlling the flow of liquid from one compartment to the other, and a governor mechanism actuated by the rotation of the casing for automatically regulating the area of opening through the cylinders forming the valve.

873,622. DERAILER. MARTIN C. SLODERBECK, Marion, Ind., assignor of one-half to Edward E. Leapley, Marion, Ind. Filed Aug. 23, 1907. Serial No. 389,877.

1. A derailer comprising a pivoted block having a curved bearing face at its end beyond the pivot thereof, and a bearing block having an oppositely curved face disposed to contact with the bearing face.

2. A derailer comprising a pivoted block, a bearing face

at one end of said block, and a circular pivoted bearing adapted to contact with the face of said block.



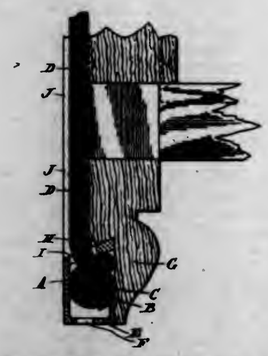
3. In a derailer, a pivoted block having a derailing face at its free end, a rigidly mounted rod extending through said block, a spring surrounding said rod and bearing upon the outer face of the block, a stop plate carried by the rod at the outer end of said spring, and a protecting casing surrounding the spring and rod.

4. In a derailer, a derailing block pivotally mounted at one end and provided with a downwardly curved derailing face at its free end, a slotted lateral extension from said free end, a guide pin in said extension, a pin extended from said extension, and an operating rod pivotally connected to said pin.

5. In a derailer, a derailing block pivotally mounted at one end and provided with a downwardly curved derailing face at its free end, a slotted lateral extension from said free end, a guide pin in said extension, a pin extended from said extension, an operating rod pivotally connected to said pin, a bearing block disposed in contact with the pivoted end of the derailing block, and a spring for normally holding said block in contact with the rail.

[Claims 6 to 8 not printed in the Gazette.]

873,623. SASH-CORD HOLDER. GEORGE C. SMITH, Clapham, London, England. Filed Aug. 2, 1907. Serial No. 386,773.

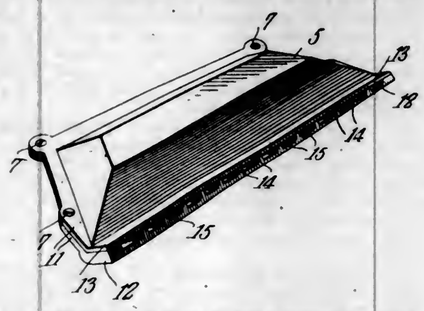


1. A device for attaching sash cords to sashes, comprising a hollow casing adapted to be inserted into a sash frame, the top of the casing being beveled and provided with a reduced opening for the passage of the sash cord, a side of the casing being provided with a relatively large opening to admit the knot of the sash cord to the casing, and the bottom of the casing being provided with a contracted opening to adapt it to receive a removing tool.

2. A device for attaching sash cords to sashes, comprising a hollow casing of substantially cylindrical form, one side of the casing being flattened to provide a stile engaging surface, and provided at its opposite side with an enlarged opening to admit the knot of the sash cord to the casing, the top of the casing being beveled downwardly toward the flat side thereof and provided with a reduced opening to permit the passage of the sash cord.

3. In a device of the character described, the combination with a sash frame provided with a vertical bore, the upper end of which is beveled in a direction downwardly and outwardly towards the stile-engaging surface, of a casing removably fitted into the said bore having a knot-receiving opening in one side, and having a beveled top to coöperate with the correspondingly beveled portion of the bore, the top being provided with an opening to receive the sash cord, and the bottom of the casing being accessible from the bottom of the sash and provided with an opening adapted to receive a removing tool.

873,624. GAS-BURNER. EDWARD S. SPRINGER and JOHN L. MALONEY, Leavenworth, Kans. Original application filed July 27, 1906, Serial No. 328,094. Divided and this application filed Aug. 20, 1907. Serial No. 389,391.



1. A gas burner including a casing provided with an inlet and having one longitudinal edge thereof bent upwardly to form spaced inclined lips, lugs formed on one of said lips and defining a plurality of intermediate jet orifices, and a shoulder formed on the mating lip at the juncture of said lip with the casing.

2. A gas burner including a casing comprising detachable sections each formed with a laterally extending perforated flange, the flanges on one side of the casing being longer than the flanges on the opposite side thereof and bent upwardly to form inclined lips, one of said lips being provided with spaced lugs adapted to engage the adjacent lip and defining intermediate jet orifices, a shoulder formed on the other lip at its juncture with the casing, and fastening devices extending through the perforations in the flanges for detachably securing the sections in engagement with each other.

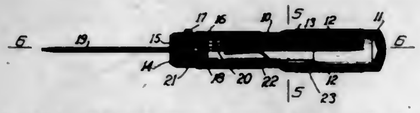
3. A gas burner including a casing having an interior gas chamber and provided with a flat lower wall pierced by an inlet opening, the lower longitudinal edge of the casing being bent upwardly to form inclined lips, lugs formed on one of the lips and extending from the free edge thereof to the flat base of the gas chamber, said lugs forming spaced jet orifices, there being a shoulder formed on the opposite lip at its juncture with the casing.

4. A gas burner including a substantially trapezoidal casing comprising two sections each formed with a laterally extending perforated flange, one of said sections being concaved to form a gas chamber and the opposite section provided with an inlet, the flanges on one longitudinal edge of the casing being longer than the flanges on the opposite edge thereof and bent upwardly at an angle to the horizontal plane of the casing to form parallel inclined lips, lugs formed integral with one of the lips and bearing against the adjacent lip to produce intermediate jet orifices, and means extending through the perforations in the flanges for detachably securing the sections in assembled position.

873,625. MAGAZINE SCREW-DRIVER. LEROY S. STARRETT, Athol, Mass., assignor to The L. S. Starrett Co., Athol, Mass., a Corporation of Massachusetts. Filed Dec. 28, 1906. Serial No. 349,903.

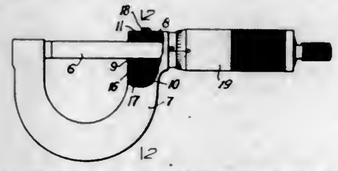
1. In magazine tool handles, the hollow body and its cap telescoping frictionally at the middle and there engaging positively to turn together, a series of blades inclosed therein and spring held to prevent rattling or falling out, the body having a terminal plug permanently secured in it with a socket fitting all blades of the series, for the purpose set forth.

2. The two part hollow handle for screw drivers and like tools, comprising the body having at one end a fixed terminal socket for the blade in use, internal space for the dormant blades and, at its other end, a plurality of longitudinal slots, in combination with the cap fitting frictionally over the slotted end to telescope the body, and provided with an internal projection adapted to engage in any one of said slots to insure the parts turning together, substantially as set forth.



3. In a magazine screw driver, a two-part hollow handle, comprising a body and a cap portion frictionally united and engaging positively to turn together, such body having a terminal plug and blade-socket permanently secured thereto, in combination with a series of blades therein having uniform flat shanks, and a bent sheet metal spring secured within the handle and bearing laterally on said shanks, substantially as set forth.

873,626. SPINDLE-LOCK FOR MICROMETER-GAGES, &c. LEROY S. STARRETT and JOHN A. ADELL, Athol, Mass., assignors to The L. S. Starrett Co., Athol, Mass., a Corporation of Massachusetts. Filed Sept. 9, 1907. Serial No. 391,885.



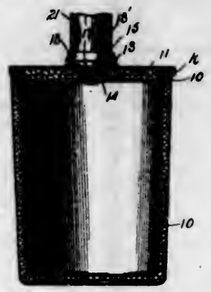
1. The described locking means for a movable shaft or spindle, comprising a bearing or tool head formed with a deep transverse slot, a tubular bushing having its face in the plane of the wall of said slot, said bushing being formed with a projection extending beyond its face into the slot, in combination with an annular yielding clamp and an actuating ring concentrically arranged in said slot, such clamp being laterally recessed, to engage with the bushing projection, and formed with a peripheral recess of diminishing depth inclosing a locking device operated by the actuating ring, substantially as set forth.

2. In a micrometer gage, the tool frame or head, the rotatable spindle and micrometer mechanism, a deep transverse slot in the tool head, a tubular bushing formed in two parts located at a distance from each other equal to the breadth of said slot, said bushing carrying a projecting stud extending into the slot, in combination with an annular yielding clamp and an actuating ring surrounding the clamp within said slot, and both laterally recessed, the clamp to engage with and the ring to pass freely by such stud, and with a minute locking roller held in a peripheral recess of diminishing depth in the clamping ring and adapted to be moved into locking or releasing position by a partial rotation of the actuating ring, substantially as set forth.

873,627. VALVE FOR HERMETICALLY-CLOSABLE JARS. GRAY STAUNTON, Chicago, Ill. Original application filed Sept. 22, 1905, Serial No. 279,630. Divided and this application filed Apr. 2, 1906. Serial No. 309,303.

1. In combination, a vessel, a closure therefor, said closure having a vent opening therein, and a valve arranged for coaction with said vent opening comprising a stem extending through the vent opening, and a convexo concave head overlying the area surrounding the vent opening.

2. In combination, with a package to be sealed, having a vent opening in a suitable part, a valve for closing said vent opening, comprising a convexo concave member of elastic material, adapted and arranged when in closing position to overlie said vent.



3. In combination with a package to be hermetically sealed, having a vent opening therein, a valve for said vent opening comprising a body of convexo concave shape tapering from its center toward its edge, and composed of resilient material, said valve being arranged to overlie the portion of the package surrounding said vent opening.

4. In a closure for vessels, a body portion having a vent opening therein, a rubber valve therefor having a convexo concave shape in cross section.

5. A closure for jars comprising a body having a vent opening, said valve head being of resilient material. prising a stem extending through the opening, and a convexo concave head of generally circular shape arranged to overlie the portion of the closure surrounding the vent opening, said valve head being of resilient material.

[Claims 6 to 10 not printed in the Gazette.]

873,628. DART FOR BLOW-GUNS. CHARLES E. STIVERS, Denver, Colo. Filed Aug. 13, 1907. Serial No. 388,309.

1. A dart for blow guns, having a hollow conical body of flexible material closed at the apex end.



2. A dart for blow guns, having a hollow conical body, the base end of which fits snugly into the bore of the gun, the apex end of the said body being closed.

3. A dart for blow guns, having a hollow conical body, the end of which fits snugly into the bore of the gun, the apex end of the said body being closed, and a point attached to the said apex end and projecting forwardly therefrom.

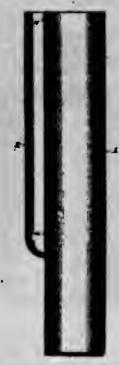
4. A dart for blow guns, having a hollow conical body made of paper, and having its base end arranged for yielding contact with the wall of the bore of the gun, the apex end of the said body being closed.

873,629. HYDROMETER TESTING-JAR. FRANCIS STORM, New York, N. Y. Filed Feb. 16, 1907. Serial No. 357,745.

1. A testing tube, comprising a hollow receptacle adapted to contain a hydrometer, an auxiliary hollow receptacle secured to said first mentioned hollow receptacle, said auxiliary receptacle being in communication with said first mentioned receptacle the entire length of said auxiliary receptacle, and lugs near the top and near the bottom of said auxiliary receptacle for holding centrally thereof a thermometer so as to permit free circulation of liquid about the same.

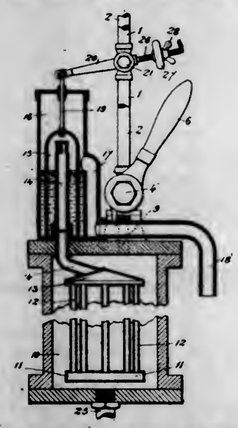
2. A device of the character described, comprising a primary tube adapted to contain a hydrometer, an auxiliary tube positioned parallel and formed integral with said

primary tube, said auxiliary tube being of less diameter and length than said primary tube, said primary tube and auxiliary tube contacting the entire length of the auxiliary tube, said tubes being formed with a slot at the point of



juncture thereof and communicating the entire length of said auxiliary tube, and a plurality of lugs near each end of said auxiliary tube for loosely supporting a thermometer centrally thereof.

873,630. WATER-HEATER. JAMES STOTT, Oldham, England. Filed July 2, 1907. Serial No. 381,870.

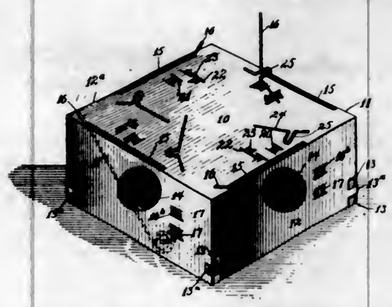


1. In a water heating apparatus, the combination with a receptacle, a boiler, and an upright pipe leading from the latter and into the receptacle, of a hollow float mounted within the receptacle and surrounding the upper end of the said pipe and serving to permit discharge of fluid from the latter, means for drawing hot water from the said receptacle at a predetermined level, and a valve operatively connected to the float and serving to control the flow of water to the boiler.

2. In a water heating apparatus, the combination with a boiler, and a pipe for conducting water to and from the latter, of a receptacle inclosing the discharge end of the water pipe and having a hot water outlet therein arranged above the bottom thereof, a hollow float arranged within the receptacle and surrounding a discharge end of the water pipe, a valve operatively connected to the float and source of water supply for controlling the flow of water to the boiler, and means for relieving abnormal pressure within the float.

3. In a water heater, the combination with a boiler, and a pipe for conducting water to and from the latter, of a hot water receptacle inclosing the discharge end of the pipe and having an outlet above the bottom thereof, a hollow float inclosed within the receptacle and surrounding the discharge end of the hot water pipe, a valve operatively connected to the float for controlling the supply of water to the boiler, and a valve fitted in the upper end of the float and operable by an abnormal pressure therein.

873,631. ANIMAL-TRAP. ALONZO T. SULLIVAN, Malcolm, Nebr. Filed July 17, 1907. Serial No. 384,189.



1. In an animal trap, a box body having openings in its sides for the reception of the head of an animal, a spiral bait carrier pivoted within the body at the rear of each of said openings, a trigger carried by the pivotal member of each spiral bait carrier, a spring-controlled choker arm mounted for movement in the body across each of said openings and in front of the spiral bait carrier, a locking arm for each choker arm adapted for engagement with the trigger of a spiral bait carrier when in locking engagement with the choker arm, and a stop for each locking arm.

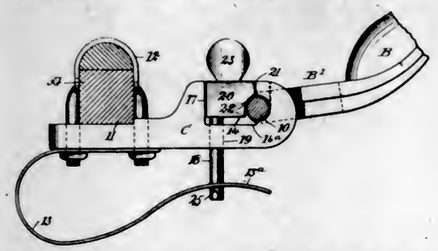
2. In an animal trap, a box body having an opening in its sides for the reception of the head of an animal and a slot in the top adjacent to said opening, a spring-controlled choker arm secured within the body and adapted to traverse said opening and travel in said slot, a spiral bait carrier pivotally suspended in the body back of said opening, a trigger constituting a portion of the spiral bait carrier and located at the top of the body, a stop adjacent to the trigger, and a locking arm adapted to simultaneously engage with the upper end of the choker arm and said trigger and stop.

3. In an animal trap, the combination with a body constructed of one piece of material and cut and bent upon itself to form four sides and a top, the sides at their abutting edges being provided with overlapping lips, each side having an opening therein for the reception of an animal's head, and a slot in the top above and adjacent to each side opening, of a bait carrier in the form of a spiral located within the body opposite each side opening, each spiral bait carrier being provided with an upper straight member pivoted to the top of the body, and a trigger that extends from said member and lies upon the upper face of the body, a stop adjacent to each trigger, a choker arm located between each side opening and accompanying spiral bait carrier, said arms being adapted to traverse said openings, each choker arm having an end extending out through a slot in the body, the other end being secured within the body, and each arm being provided with a coil between its ends within the body, a locking arm for each choker arm adapted for engagement with it and with the trigger, and a stop for each locking arm.

4. In an animal trap, a body provided with an opening for an animal and a slot in its top adjacent to the opening, a pivoted bait carrier in rear of the opening, and having an angular arm normally lying on the top of the body, a spring actuated choker arm working in the slot of the body, a stop on the top adjacent to the arm of the bait carrier and a pivoted locking arm on the top of the body, said locking arm being provided with a lateral member engaging the choker arm and having its free end extending across the angular arm of the bait carrier and engaging the said stop.

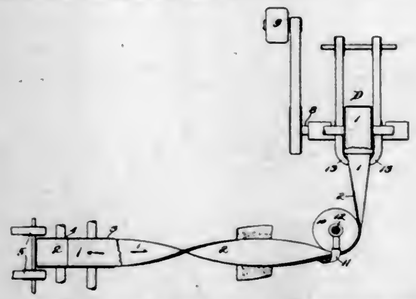
5. In an animal trap, a body provided with an opening, a pivoted bait carrier in rear of the opening and having a crank arm normally lying on the body, a spring actuated choker arm, a stop on the body adjacent to the crank arm of the bait carrier, and a pivoted locking arm engaging the choker arm and having its free end extending across the crank arm of the bait carrier and engaging the said stop.

873,632. THILL-COUPLING. JOHN L. TAYLOR, Dalton, Pa. Filed Apr. 29, 1907. Serial No. 370,829.



In a thill coupling the combination with the body of the coupling having a pocket formed in its upper surface, the forward wall of which pocket is rearwardly and upwardly curved, the upper portion of the said forward wall of said pocket having a vertical slot therein, and a shaft butt having a rear end cylindrical member adapted to fit in the said pocket at the forward end portion thereof, of a locking block fitted to the said pocket, which locking block is provided with a forward recessed surface adapted to engage with the cylindrical end member of the shaft butt, a nose extending from the forward end of the locking block, adapted to enter the slot in the forward wall of said pocket, a pin extending from the locking block downward, and loosely through the body of the coupling, and a spring secured to the rear portion of the body of the coupling, which spring is connected with the said pin, exerting downward tension thereof.

873,633. CONVEYER FOR NEWSPAPERS AND THE LIKE. EDWARD G. THOMAS, Boston, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J., a Corporation of New Jersey. Filed Sept. 19, 1906. Serial No. 335,230.



1. In a belt conveyer, two endless traveling belts having one or more twists in their adjacent portions which move in the same direction for the purpose of gripping and conveying articles such as newspapers and the like.

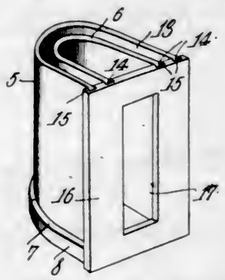
2. In a belt conveyer of the class described comprising two endless belts side by side and adapted to grip a paper or the like between them, and stationary means at the bends in said belts to support the projecting edges of the paper or the like.

3. In a belt conveyer of the class described comprising two endless belts side by side adapted to grip a paper or the like between them, and deflectors at the bends in said belts for supporting the projecting edges of the paper or the like and prevent jamming or clogging.

4. In a belt conveyer of the class described comprising two endless belts side by side adapted to grip a paper or the like between them, and deflectors at the bends in said belts arranged in the path of the projecting edges of the paper or the like adapted to support said edges and prevent jamming or clogging.

5. In a belt conveyer of the class described comprising two endless belts side by side twisted so as to grip a paper or the like between them, and deflectors at the bends in said belts and in the path of the projecting edges of the paper for supporting said edges and preventing clogging.

873,634. CONCRETE-TILE MOLD. WILLIAM S. THOMAS, Eaton, Colo. Filed Mar. 18, 1907. Serial No. 363,080.



A mold including a vertically disposed supporting frame provided with spaced longitudinal dove tailed grooves, and substantially U shaped open ended shells having their longitudinal edges provided with corresponding dove tailed flanges adapted to slidably engage the grooves in the supporting frame and each provided at one end with a lateral off-set, the inner shell being spaced from the outer shell to form an intermediate molding compartment and having its exterior walls provided with an intermediate circumferential rib extending laterally within the molding compartment and having its opposite ends terminating flush with the inner surface of the supporting frame, there being an elongated opening formed in the frame between the dove tailed flanges of the inner shell.

873,635. LAST. JOHN P. THURELL, North Adams, Mass. Filed Aug. 22, 1906. Serial No. 331,619.



1. A divided hinged last comprising a fore-part section and a heel section, a plate secured to one of the sections and movably extending into the other, a pivot device extending through portions of the two sections and the plate, and a hollow latch pivotally held on the upper portion of the plate and movable downwardly over the upper edge of the latter, the latch embracing the upper edge of the plate when fully depressed, one of the last sections having a stop device which is engaged by the free end of the latch.

2. A divided hinged last comprising a fore-section and a heel section, a plate secured to the heel section and movable into the fore section, a pivot device extending through portions of the two sections and the plate, a stop device in the upper rear portion of the fore section, a hollow latch secured to the heel section and movable over the plate and adapted to have its front extremity engage the said stop device, and a spring interposed between the plate and latch and inclosed by the latter.

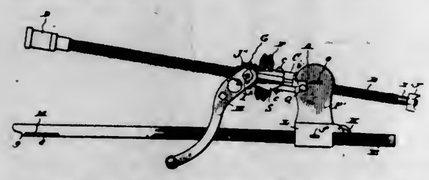
3. A divided hinged last comprising a fore-part section and a heel section, a plate for pivotally coupling the two

sections, a hollow latch movably connected at one extremity on the upper portion of the plate, the latch when moved to clearing position embracing the upper portion of the plate, and means carried by one of the last sections for engagement with the free end of the latch.

873,636. PROCESS OF DYEING. HANS TOEPFER, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed July 24, 1906. Serial No. 327,552.

The herein-described process for dyeing vegetable fibers with sulfur dyes, which process consists in dyeing vegetable fiber in a dyebath containing sulfur dyes, alkaline sulfids and ammonia, substantially as described.

873,637. BORING OR DRILLING MACHINE. WILLIAM TOPHAM, Westville, Ill., assignor of one-fourth to Joseph Barton, one-fourth to John Barton, and one-fourth to William Topham, Jr., Westville, Ill. Filed Sept. 7, 1905. Serial No. 277,363.



1. A machine of the character described, comprising a notched grip or base-bar, a carriage for a tool-carrying screw or mandrel and a slide or sleeve having a recess in the underside of its upper portion and having said carriage connected thereto said slide or sleeve also being provided with a detent engaging the notches of said grip-bar, and with a securing bolt having its head let into said recess, said bolt passing through an aperture in the bottom of said carriage and equipped with a holding nut at its upper end.

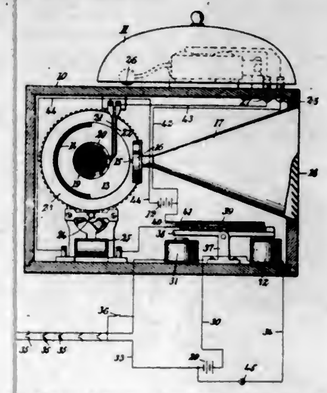
2. A machine of the character described, comprising a suitably upheld carriage composed of two members, one vertically adjustable with relation to the other, a tool-carrying screw or mandrel, means for supporting said mandrel carried by said vertically adjustable section or member, and means for the retention of said sections in fixed relation.

3. A machine of the character described, comprising a suitably upheld carriage composed of two members or sections having engaging vertical grooves and ribs, respectively, a tool-carrying mandrel or screw, means for supporting said screw or mandrel, carried by one of said sections or members, and means for fixing said sections or members in fixed relation.

4. A machine of the character described, comprising a carriage composed of two members or sections adjustable one with relation to the other, means for their retention in relatively fixed position, a tool-carrying screw or mandrel and means for supporting said screw or mandrel, carried by one of said sections or members.

873,638. BURGLAR-ALARM. CARLOS VAN BERGH, Winnipeg, Manitoba, Canada, assignor to The Van Bergh Electric Protection System Co., New York, N. Y., a Corporation of New York. Filed June 6, 1907. Serial No. 377,586.

1. In an alarm system, the combination of a primary circuit, including an electromagnet and an alarm circuit including a circuit closer, said circuit closer comprising a tube normally disposed horizontally, a liquid therein adapted to serve as an electric conductor, a terminal adjacent one end of the tube and uncovered by said liquid when the tube is in its horizontal position, said tube being so mounted as to be inclined to bring the liquid into engagement with said terminal and close the alarm circuit upon the energizing of the electromagnet of the primary circuit, and a second electromagnet for restoring said tube to its horizontal position.

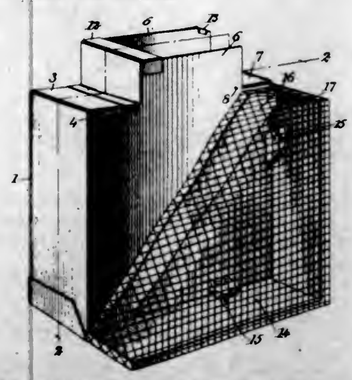


2. In an alarm system, a talking machine including a rotatable member, a reproducer, and a horn, a motor for operating said talking machine, a casing inclosing said talking machine and motor, said horn opening exteriorly of the casing, an electrically-operated signal adjacent said casing, and means for operating said signal and talking machine intermittently and in succession.

3. An alarm circuit, including a circuit closer and a motor, a talking machine including a rotatable member operated by said motor and a reproducer, the surface of the rotatable member being constructed to operate the reproducer during a portion only of each revolution, a branch circuit including an electric bell, and means operated by the motor for causing the branch circuit to ring the bell intermittently during that portion of each revolution of the rotatable member in which the reproducer is not operated.

4. In a burglar alarm system, an alarm circuit, including a circuit closer and a motor, a talking machine operated by said motor, and a primary circuit including terminals adapted to be brought into contact during the entrance of a burglar, and an electromagnet, said circuit closer of the alarm circuit comprising a horizontally disposed mercury tube adapted to be inclined by the closing of the primary circuit and the energizing of the electromagnet thereof.

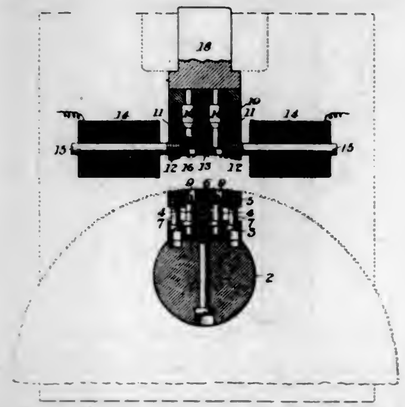
873,639. MOUSE-TRAP. JOSEPH A. VINCENT, Hastings-upon-Hudson, N. Y., assignor of one-half to William C. Koster, Hastings-upon-Hudson, N. Y. Filed Feb. 18, 1907. Serial No. 357,871.



1. The combination with a closed rectangular receptacle having its sides extended at their upper central portion to form an entrance chamber, and provided with a discharge aperture at the rear of said side extension and a landing at the front of said extension, a trap door pivoted in the entrance chamber, and a bait chamber having foraminated walls, one of which is inclined to serve as a run-way, and a landing adjacent to said run-way and the landing of said receptacle, substantially as shown and described.

2. The combination with a closed rectangular receptacle having its sides extended at their upper central portion to form an entrance chamber, and provided with a discharge aperture and a landing at the front of said extension, a trap-door pivoted in the entrance chamber, and a bait chamber having foraminated walls one of which is inclined to serve as a run-way, and a landing adjacent to said run-way and the landing of said receptacle, substantially as shown and described.

873,640. RIVETING APPARATUS. BENJAMIN WADDINGTON, New Castle, Pa., assignor to Lee M. Raney, New Castle, Pa. Filed Nov. 9, 1905. Serial No. 286,531.



1. In a riveting apparatus, a reciprocating die head having electro-magnetic holding means for the part to be riveted, and a relatively stationary die having rivet-holding means; substantially as described.

2. In a riveting apparatus, a reciprocating die head having an electro-magnetic holding device provided with a recess to receive a part to be riveted, and a relatively stationary die having rivet holding mechanism; substantially as described.

3. In riveting apparatus, a reciprocating die head having an electro-magnetic holding plate provided with a hole, a riveting die on the head movable through said hole, and a relatively stationary die head having a rivet-holding device; substantially as described.

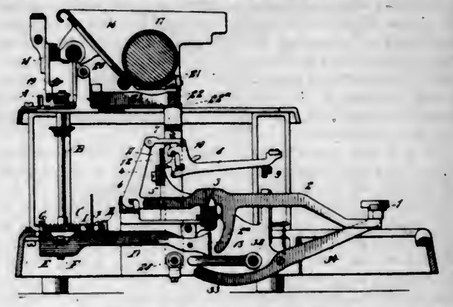
4. In riveting apparatus, a die or horn arranged to receive a vessel and having a spring-pressed plate with holes for rivets, a reciprocating die, and magnetic means for holding an ear or part to be riveted thereto; substantially as described.

5. In riveting apparatus, a stationary die head and a movable die head, at least one of said parts having a spring-pressed plate and the other having magnetic means for holding the part to be riveted thereto; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

873,641. TYPE-WRITING MACHINE. FRANZ X. WAGNER, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Original application filed Nov. 12, 1904, Serial No. 232,413. Divided and this application filed May 18, 1905. Serial No. 260,983.

1. In a typewriter, or like machine, a carriage, a shift frame for moving the carriage into different printing positions, bars connected with said frame, a pinion, a toothed sector engaging said pinion, a shaft carrying said pinion, and provided with eccentric portions engaging said shift bars, and a shift key for swinging said sector.



2. In a typewriter, or like machine, a shift frame for the platen portion of the carriage, a shaft carrying two arms, one of which is provided with a toothed sector, means operated by said toothed sector for shifting the platen section of the carriage, a latch adapted to hold one of said arms in its raised position, and shift keys arranged to engage the said arms, one of the shift keys being constructed to swing said latch out of its locking position.

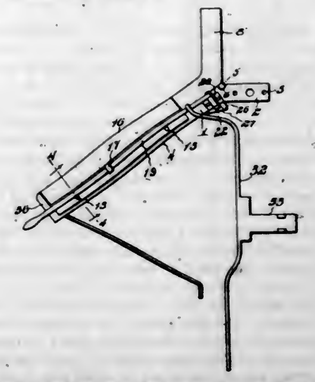
3. In a typewriter, or like machine, a shift key, a rocking arm adapted to be operated by said shift key and provided with a toothed sector lying in the same plane with the arms, a pinion engaging with said sector, and a shift frame for the platen section of the carriage, adapted to be moved by the turning of said pinion.

4. In a typewriter, or like machine, a removable carriage having a bar provided with recesses, stationary supports arranged to extend into part of said recesses, a pin and slot connection between said supports and said bar, and a latch extending into one of said recesses to lock the carriage to the frame of the machine.

5. In a typewriter, or like machine, stationary supports having open slots facing in the same direction, a removable carriage provided with a bar having recesses of greater width than said supports, and pins to fit into the slots of the supports, and a movable latch arranged to extend into one of said recesses between one of the supports and a wall of said recess.

[Claims 6 to 16 not printed in the Gazette.]

873,642. LINOTYPE-SLUG RECEIVER. GUSTAF E. WALLIN, Pocatello, Idaho, assignor to The Wallin Addressing Machine Manufacturing Company, Kansas City, Mo., a Corporation of Arizona. Filed Mar. 26, 1907. Serial No. 364,668.



1. In a slug receiving attachment for linotype machines, an inclined chute having guide flanges at the sides thereof,

said guide flanges being provided with upward extending terminal brackets adjacent to the receiving end of the chute, and a slug tilting lug pivoted between said brackets.

2. In a slug receiving attachment for linotype machines, a receiving chute comprising a bottom plate or bar bent at an obtuse angle to present an inclined portion and an approximately horizontal portion, guide flanges adjacent to said plate or bar provided at their upper ends with terminal extensions at approximately right angles to the horizontal portion of the bottom plate, and a slug tilting lug pivotally supported and vertically adjustable between said upward extensions.

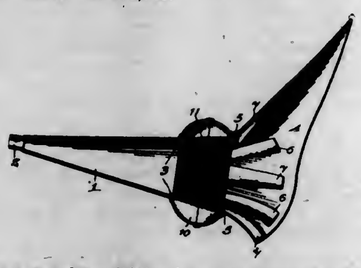
3. In a slug receiving attachment for linotype machines, a receiving chute comprising a bottom plate or bar bent at an obtuse angle to present an inclined portion and an approximately horizontal portion, guide flanges adjacent to said plate having upward extending terminal brackets at their upper ends disposed approximately at right angles to the horizontal portion of the bottom plate, a slug tilting lug supported pivotally and vertically adjustable between said brackets, and a guide roller supported at the angle of the bottom plate, adjacent to said brackets.

4. In a slug receiving attachment for linotype machines, a slug receiving chute having guide flanges provided with spaced terminal brackets adjacent to the receiving end of the chute, a guide roller supported in the receiving end of the chute adjacent to said brackets in the path of slugs emerging from the machines, and a pivoted slug tilting lug supported for vertical adjustment between the brackets and having a covering strip of relatively soft material to engage the faces of the slugs for the purpose of tilting the latter.

5. In a device of the class described, a chute having guide flanges provided with upwardly extended vertical portions, a guide roller disposed in the bottom of the chute adjacent to said flanges, and a slug tilting lug supported between the flanges.

[Claims 6 to 12 not printed in the Gazette.]

873,643. SOUND-AMPLIFYING HORN. JAMES F. WHEELER, Grand Valley, Colo., assignor of one-half to Frank W. De Witt, Grand Valley, Colo. Filed May 15, 1907. Serial No. 373,749.



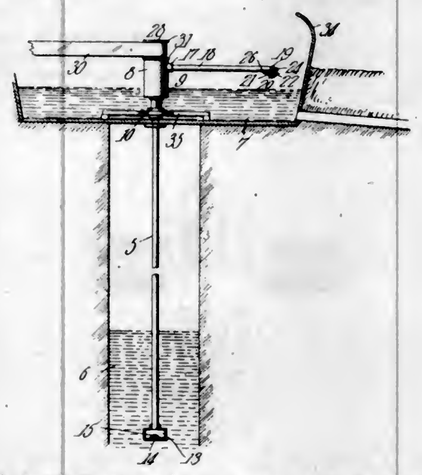
1. In a sound amplifying horn, the combination of the throat portion, adaptable for attachment to an instrument, a flaring bell mouth spacedly connected to said throat portion, an enlarged sounding drum spanning the space between said throat and bell, and sound recoiling devices arranged in said bell mouth, substantially as described.

2. In a sound amplifying horn, the combination with the throat portion, adapted for attachment to an instrument, a flaring bell mouth spacedly connected to said throat portion, an enlarged curved sounding drum spanning the space between said throat and said bell and sound recoiling pockets and sound channels alternately arranged upon the inner surface of said bell mouth, substantially as described.

3. In a sound amplifying horn, the combination of a gradually enlarging throat portion, adaptable for attachment at one end to an instrument, a flaring bell mouth spacedly connected to the other end of said throat portion, an enlarged circular sounding drum spanning the space between said throat and said bell, and a plurality of sound recoiling pockets and sound channels formed upon the inner surface of said bell mouth and radiating outwardly, substantially as described.

4. In a sound amplifying horn, the combination of a throat portion gradually increasing in diameter, and adaptable for attachment at its smaller end to an instrument, a flaring bell mouth spacedly connected to said throat portion, an enlarged circular sounding drum, curved in cross section, spanning the space between said throat portion and said bell mouth, a circular section of screening connecting said throat and said bell within said drum, and a plurality of sound recoiling pockets and sound channels alternately arranged upon the inner surface of said bell mouth and radiating outwardly, substantially as described.

873,644. CENTRIFUGAL PUMP. PETER J. WICKBLOM, Bishop Hill, Ill. Filed May 31, 1907. Serial No. 376,558.



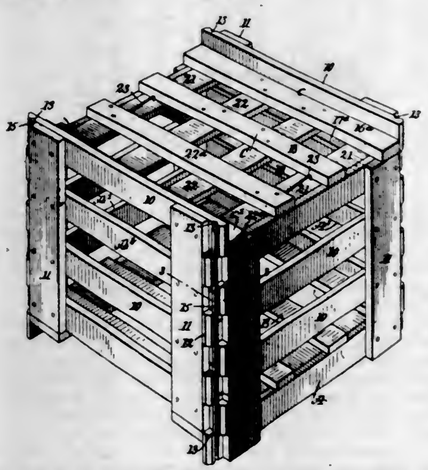
1. A centrifugal pump including a pipe having one end thereof communicating with a source of liquid supply, a casing mounted for rotation on the opposite end of the pipe, a tubular member communicating with the casing, brackets depending from the free end of the tubular member, and a weighted valve pivotally mounted in the brackets and adapted to normally close the adjacent end of the tubular member, said valve being movable to open position when the casing is rotated, and a stop pin for limiting the opening movement of the valve.

2. A centrifugal pump including a pipe having one end thereof communicating with a source of liquid supply and provided with a valve, a casing mounted for rotation on the opposite end of the pipe, a pulley secured to the casing and having a chamber formed therein for the reception of a priming fluid, a valve disposed in the bottom of the chamber, an auxiliary valve secured to the upper end of the pipe, a tubular member interposed between the valves and communicating with the interior of the casing between the adjacent valves, means for rotating the casing, brackets depending from the free end of the tubular member, a gravity actuated valve pivotally mounted between said brackets and adapted to normally close the adjacent end thereof, said valve being movable to open position when the casing is rotated, and means for limiting the opening movement of said valve.

3. A centrifugal pump including a pipe having one end thereof communicating with a source of liquid supply and its opposite end provided with an annular bearing flange, a casing mounted for rotation on the pipe, a collar secured to the lower end of the casing and bearing against said flange, a valve normally closing the upper end of the pipe, a pulley secured to the end of the casing and having a chamber formed therein for the reception of a priming fluid, a valve disposed in the bottom of the chamber, guide flanges extending laterally from the pulley for engagement with a driving belt, a tubular member communicating with the interior of the casing between the adjacent

valves, a receiving tank surrounding the casing, a bracket depending from the free end of the tubular member and a weighted arm pivotally mounted on the bracket and provided with a valve for normally closing the free end of the tubular member, said valve being movable to open position when the casing is rotated, and a pin extending laterally from the bracket and adapted to engage the weighted arm for limiting the opening movement of said valve.

873,645. KNOCKDOWN CRATE. ANTON WILLIMAN, Washington, Mass. Filed Feb. 21, 1907. Serial No. 358,536.



1. In a knockdown crate, independent side and end sections having interlocking knuckle connections, which connections are provided with vertically alining longitudinal grooves, retaining members carried by said section located between their knuckles, tie rods received by the grooves of the knuckles and said retaining members, a removable top section in two parts slidable one upon the other and adapted to be inserted between the side and end sections and expanded to retain said members in place, a locking device carried by one top section for engagement with the other, and a removable bottom supported by the body of the crate.

2. In a knockdown crate, interlocking and separable side and end sections, each section being constructed of end standards, and horizontal slats secured to the standards, the ends of the slats extending beyond the outer longitudinal edge of the standard, the projecting ends of the slats of adjoining sections being one above the other and said projecting ends being provided with alining grooves, tie rods passed through the grooves of the interlocking projecting ends of the slats, locking devices for the rods, a separable top constructed in sliding sections, and adapted to be inserted between the side and end sections and expanded to retain said members in place and a removable bottom supported by the said side and end sections.

3. In a knockdown crate, a body composed of separable side and end sections, each consisting of standards and slats crossing the standards and extending beyond the outer longitudinal edges of the outer standard, said projecting ends of the slats constituting knuckles, the knuckles of one section having interlocking connection with those of an abutting section, said knuckles being provided with alining longitudinal grooves, retaining members located between said knuckles, tie rods passed through the retaining members entering the said grooves, and a sectional slidable top for the body, and adapted to be inserted between the side and end sections and expanded to retain said members in place and a removable bottom therefor.

873,646. BOTTLE-CAP FASTENER. GEORGE A. WILLIAMS, Newcastle, Ind. Filed Mar. 12, 1907. Serial No. 362,055.

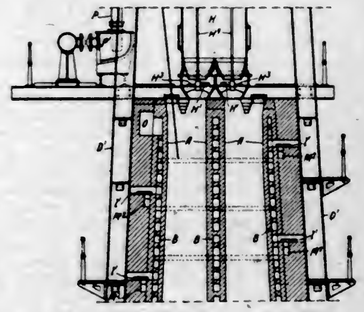


1. A bottle or jar closure comprising a cap having yielding sides provided with a bearing sleeve, a split ring loosely mounted in the lower ends of the sides provided with hooked ends, and a lever provided with converging rings mounted on the hooked ends of said ring, bearing against said bearing sleeve.

2. A bottle or jar closure comprising a cap having split sides, one of which is bent to form a bearing sleeve, of a ring loosely mounted in the lower ends of the sides provided with hooked ends, and a lever formed of a U-shaped wire frame bent to form converging rings mounted on the hooked ends of the ring, bearing against said bearing sleeve.

3. In a bottle or jar closure comprising a cap having a series of split sides forming segments provided with tubular lower ends, of a split ring mounted in said ends provided with hooked ends, the segment between the ends of the ring being bent upwardly and back upon itself, to form a bearing sleeve, and a lever formed of a U-shaped wire frame having its free ends twisted upon itself and its closed ends bent back upon itself to form converging rings on which the hooked ends of the lever operate, said rings bearing against said bearing sleeve.

873,647. APPARATUS FOR CARBONIZING COAL FOR THE PRODUCTION OF GAS. WILLIAM YOUNG, Peebles, Scotland, and SAMUEL GLOVER, St. Helens, England. Original application filed Nov. 13, 1906, Serial No. 343,268. Divided and this application filed Mar. 6, 1907. Serial No. 360,890.



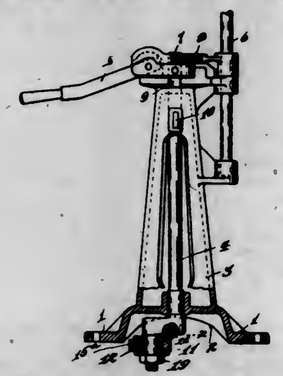
The hereindescribed apparatus for producing illuminating and heating gases, consisting of a retort comprising a lower chamber in which the material is supported and carbonized, and an upper chamber wherein the evolved gases are subjected to radiant heat from the walls of the retort, flues led around the retort, means for admitting producer gas and air into said flues for heating the retort externally, means for admitting secondary air at various levels so as to regulate the temperature of the retorts, the temperature being reduced towards the upper part of the retort, an overhead hopper, a heat exchanging chamber interposed between said hopper and said retort and open to the passage of gas from said retort, means for admitting coal from the hopper into said chamber, means for distributing the coals from said chamber into the retort, and means for withdrawing the gas from the drying chamber.

873,648. MAKING IRON FROM METALLIC SULFIDS. ROBERT H. AIKEN, Winthrop Harbor, Ill. Filed June 1, 1903. Serial No. 159,607.

1. The process of producing iron from material containing and heating gases, consisting of a retort comprising in fusing the material, electrolyzing the fused material, thereby depositing copper and nickel therefrom, segregating the residual material, and then electrolyzing said residual material to deposit the iron.

2. The process of producing iron from material containing iron and nickel sulfids which consists in fusing the material, electrolyzing the fused material until the nickel is deposited from its sulfid, removing the nickel, and further electrolyzing the residue until the iron is deposited from its sulfid.

873,649. SWITCH-STAND. WILLIAM W. ALLEN and JOHN METZGER, Cincinnati, Ohio, assignors to The Weir Frog Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Mar. 19, 1907. Serial No. 363,311.



1. In a switch-stand, a crank shaft and connecting rod, and an adjustable bushing adapted to be set to adjust the throw of the crank, substantially as described.

2. In a switch stand, a crank shaft, an eccentric sleeve mounted on said crank shaft, means for adjustably securing said eccentric sleeve to said crank shaft and a connecting rod journaled upon said sleeve, substantially as described.

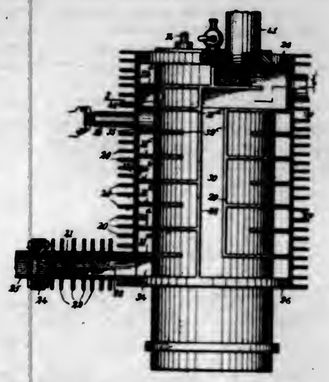
3. In combination with a crank shaft of a switch-stand, an eccentric, notches in the periphery of the eccentric, a keeper pin carried by the crank shaft and projecting in the path of the eccentric notches, and means for releasing the engagement of the keeper pin to allow the rotary adjustment of the eccentric, substantially as described.

4. In combination with a crank shaft of a switch-stand, an eccentric, notches in the periphery of the eccentric, a keeper pin carried by the crank shaft and projecting in the path of the eccentric notches, and a connecting rod journaled upon the eccentric hub, substantially as described.

5. In a switch-stand provided with a notched eccentric, a keeper pin engaging a notch in the eccentric, a connecting rod journaled upon the crank pin at one end and provided with a clevis threadedly engaged with the connecting rod, and a removable clevis pin forming a swiveled connection of the connecting rod with the switch-bar to which the switch-rails are connected, substantially as described.

873,650. INTERNAL-COMBUSTION ENGINE. HJALMAR S. ANDERSON, Pittsburg, Pa. Filed Dec. 28, 1906. Serial No. 349,824.

1. An internal combustion engine, including a cylinder, a carbureter, and two conduits, both of said conduits encircling said cylinder and exposed to the leading action thereof, and one of said conduits having the inlet end thereof in communication with a suitable source of air supply and the outlet end connected to the carbureter, and the other of said conduits having the inlet end thereof connected to said carbureter and the outlet end thereof connected to the interior of the cylinder.



2. An internal combustion engine, including a cylinder, a jacket surrounding the same and forming therewith two conduits, and a carbureter, one of said conduits serving to deliver uncarbureted air to said carbureter and the other conduit serving to deliver carbureted air from the carbureter to the interior of the cylinder.

3. An internal combustion engine, comprising a cylinder having a plurality of radial flanges, a jacket surrounding said cylinder and in engagement with said flanges, said flanges being so disposed as to form with the cylinder and jacket two independent passages, means for establishing communication between both of said passages and a carbureter, means for establishing communication between one of said passages and the interior of the engine cylinder, and means for establishing communication between the other of said passages and the outside atmosphere.

4. An internal combustion engine, comprising a cylinder, a jacket surrounding the same and spaced therefrom, a plurality of partitions intermediate said cylinder and said jacket and forming a plurality of independent passages, and a conduit connected to said jacket and having separate passages connecting to the corresponding passages between the cylinder and jacket, one of the passages of the jacket and one of the passages of the conduit serving for the delivery of uncarbureted air to the carbureter, and one of the passages of each serving for the delivering of the carbureted air to the cylinder.

5. An internal combustion engine, comprising a cylinder, means coöperating therewith to form two independent passages, and means for connecting one end of both of said passages to a carbureter, the opposite end of one of said passages communicating with the interior of the engine and the opposite end of the other passage communicating with a source of air supply.

[Claim 6 not printed in the Gazette.]

873,651. AUTOMATIC FIRE-EXTINGUISHER. WILLIAM G. ASMUS, Cleveland, Ohio. Filed Jan. 4, 1907. Serial No. 350,742.



1. A fire extinguisher, comprising a tubular body, a cover seated over the outer end of said body, a plurality of arms in engagement at their lower ends seated on said cover near the center thereof, and a single device adjustable on said body in engagement with both of said arms, operable to force the cover down on said body through the intermediary of said arms, whereby the pressure between said cover and tubular body is substantially uniform throughout their contacting area.

2. A fire extinguisher comprising a nozzle, a cap covering one end of the nozzle, a pair of arms in engagement near their lower ends and having sharpened extensions seated on said cap, a fusible joint connecting the upper ends of the arms together, and a yoke threaded on said nozzle in engagement with each of said arms, acting to force the cap down on said nozzle through the intermediary of said arms.

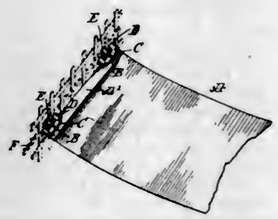
3. A fire extinguisher comprising a nozzle, a cap seated over one end of the nozzle, a pair of L-shaped arms seated on the cap said arms having upwardly-turned pointed portions, a fusible joint connecting the arms together, and a yoke in engagement with said pointed portions of said arms and adjustably connected with said nozzle.

4. A fire extinguisher comprising a nozzle, a cap seated over the upper end of the nozzle, arms seated on said cap, a fusible joint connecting the arms together, a yoke threaded on the cap, having lugs in engagement with said arms acting to force the cap down on said nozzle through the intermediary of the arms, a deflector carried by the yoke above said joint, a pin embedded in said joint and passing through the deflector, and a hood arranged above the deflector and fixed to said pin.

5. A fire extinguisher comprising a nozzle, a cap seated on the upper end of the nozzle, a pair of L-shaped arms having pointed extensions seated on said cap, a fusible joint connecting the upper ends of said arms together, and a yoke having lugs projecting at opposite sides thereof in engagement with said arms, and threaded on said nozzle.

[Claims 6 to 8 not printed in the Gazette.]

873,652. HAMMOCK-SUPPORT. CHARLES H. BANKS, Atlanta, Ga. Filed June 13, 1907. Serial No. 378,767.

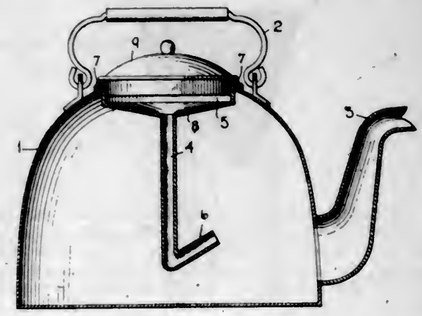


1. A hammock support comprising a U-shaped leaf, a pintle in the side arms of the leaf, and a hook slidingly and turnably mounted on the said pintle between the said side arms of the leaf.

2. A hammock support comprising a double U-shaped leaf straddling the doubled-up end of a hammock, means for securing the leaf to the hammock end, a pintle carried by the side arms of the said leaf, and a hook for engagement with a prison bar and having an eye mounted to turn and to slide on the said pintle between the said side arms.

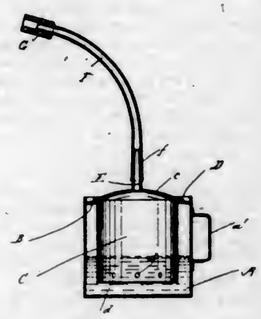
873,653. TEA-KETTLE. WINNER C. BELCHER, Colfax, Cal. Filed Mar. 25, 1907. Serial No. 364,471.

A kettle provided with a mouth and with a discharge spout, a funnel removably seated in said mouth and having an outturned supporting flange designed to rest on the marginal wall of the mouth for sustaining the funnel, the latter being provided with a vertical depending tube terminating near the bottom of the kettle in an upwardly inclined outlet portion opening toward said discharge spout, said tube including the outlet portion being wholly



open and unobstructed, and a cover for closing the mouth of the funnel.

873,654. VAPORIZER. GEORGE H. BELL, Brooklyn, N. Y., assignor to Hattie L. Bell, Brooklyn, N. Y. Filed Jan. 28, 1907. Serial No. 354,454.



1. In a vaporizer, the combination, with an outer vessel for holding hot water and a medicament, said vessel being provided at its top portion with an inwardly-projecting perforated ring, of a commingling-chamber slidable in the said ring and provided at its upper part with a projection which rests on the said ring, said commingling-chamber being also provided with air inlet-holes arranged below the normal level of the liquid in the said outer vessel, and an outlet pipe connected to the top of the said commingling-chamber.

2. In a vaporizer, the combination, with an outer vessel for holding a mixture of hot water and medicament, said vessel being provided at its upper part with an inwardly projecting support, of a cylindrical commingling-chamber open at its bottom and provided with holes adjacent to its bottom edge, said chamber being slidable within the said outer vessel and provided at its upper part with a projection which rests on the said support, and an outlet pipe for medicated vapor connected to the said commingling-chamber.

3. In a vaporizer, the combination, with an outer vessel for holding a mixture of hot water and medicament, of a cylindrical commingling-chamber open at its bottom and provided with holes adjacent to its bottom edge, said commingling-chamber being supported by the said outer vessel and an annular space being formed between them, and one of the said parts being provided with an air inlet which communicates with the said annular space, and an outlet pipe for medicated steam connected to the said commingling-chamber.

873,655. ELEVATOR-BUCKET. ADOLPH W. BERKNER, Cayuga, N. D. Filed Mar. 26, 1907. Serial No. 364,667.



1. An elevator bucket having an automatically opening and closing bottom, a flexible supporting strip extending continuously across the whole length of the bucket for supporting the bottom and serving as a shield, and means for yieldingly holding the bottom normally in closed position.

2. An elevator bucket provided with a bottom plate, a flexible strip to which the said plate is attached and extending continuously across the whole length of the bucket and serving as a shield, and a spring arranged to normally hold the bottom in closed position.

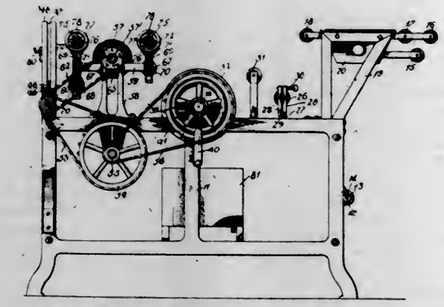
3. An elevator bucket provided with a bottom plate, a flexible strip attached to the top of the plate for supporting the same and extending continuously across the whole length of the bucket, and a leaf spring supported to normally hold the plate in closed position.

4. An elevator bucket comprising connected back and end plates, an inclined bottom plate, a band encircling the bucket at the upper edge thereof, a flexible strip secured to the band on which the bottom plate is secured and extending continuously across the whole length of the bucket, and a leaf spring attached to the band at one end and bearing at opposite end against the bottom plate to hold the latter yieldingly in closed position.

5. An elevator bucket comprising a sheet metal body bent into a back and end walls, a bottom plate disposed between the end walls and bearing against the bottom edge of the back wall, a flexible strip securing the bottom plate on the body and extending continuously across the whole length of the bucket, and means for yieldingly holding the bottom plate in closed position.

[Claims 6 and 7 not printed in the Gazette.]

873,656. CLOTH-SHRINKING MACHINE. ALBERT BLOCH, Chicago, Ill. Filed Jan. 12, 1907. Serial No. 351,953.



1. In a machine of the character described, a frame, a centrally supported steam cylinder, adjacent one end of the frame a delivery roll, and adjacent the opposite end of the frame a receiving roll, and napping devices intermediate the receiving roll and the steaming cylinder.

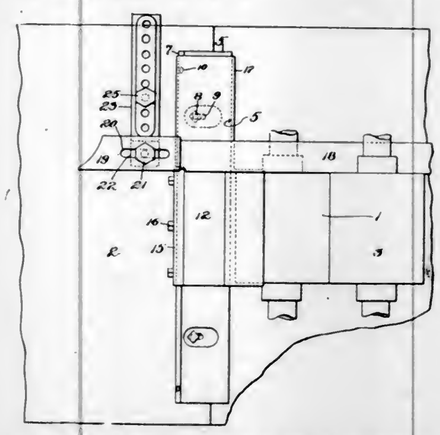
2. In a machine of the character described, a frame, a steam cylinder, a delivery roll arranged to deliver material to the steam cylinder, a receiving roll whereon fabric may be wound from the steam cylinder, a driving roll arranged to frictionally drive the receiving roll through the fabric being wound thereon, means for imparting power to said driving roll, and positive gearing, including a clutch, between the driving roll and steam cylinder, whereby the steam cylinder may be positively driven to draw material from the delivery roll and rotated by the material when the material is being transferred to the receiving roll.

3. In a machine of the character described, a frame, a centrally supported steam cylinder, a delivery roll adjacent one end of the frame, a receiving roll adjacent the other end of the frame, a driving roll for frictionally driving the receiving roll, and driving means including a clutch for positively connecting the driving roll and steam cylinder.

4. In a machine of the character described, a frame, a centrally supported steam cylinder, adjacent one end of the frame a delivery roll, between the delivery roll and cylinder a steaming tray, adjacent the other end of the frame a receiving roll, and between the receiving roll and steaming cylinder napping devices.

5. In a machine of the character described, a steaming cylinder, a receiving roll, means for driving said receiving roll, a napping brush, means for driving said brush, guides for directing the fabric in passage from the cylinder to the receiving roll to said napping brush, and means for adjusting said guides to control the operation of the brush upon the fabric.

873,657. WORK-SUPPORT FOR BOTTOM CUTTER-HEADS OF WOOD-PLANERS. CHARLES W. H. BLOOD and CARL G. OSTEMAN, Boston, Mass., assignors to S. A. Woods Machine Company, Boston, Mass. Filed Oct. 15, 1906. Serial No. 338,965.



1. A wood planer, comprising a bed, a cutter-head, a guide bar mounted adjacent and parallel to said cutter-head, means for adjusting said guide bar toward and from said cutter-head including set-screws adjustably mounted in said bar and shoulders in said bed for said set screws to engage for limiting the transverse adjustment of the bar on said bed, and a bar-after-the-cut carried by said bar.

2. A wood planer, comprising a bed, a cutter-head extending transversely of the bed, a long guide extending lengthwise of the bed adjacent said cutter-head, a guide bar secured to the bed of the machine parallel to said cutter-head and extending beneath said long guide, a bar-after-the-cut adjustably mounted on said guide bar to slide along the same, and supporting means secured to the bed supporting the long guide above and out of contact with the bar-after-the-cut to permit the latter to slide on its guide bar freely beneath said long guide in operative position with relation to said cutter-head.

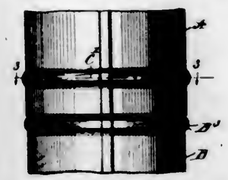
3. A wood planer, comprising a bed, a cutter-head extending transversely of the bed, a long guide extending lengthwise of the bed adjacent said cutter-head, a guide bar secured to the bed of the machine parallel to said cutter-head and extending beneath said long guide, a bar-after-the-cut adjustably mounted on said guide bar to slide along the same, and supporting means adjustably secured to the bed supporting the long guide above and out of contact with the bar-after-the-cut to permit the latter to slide on its guide bar freely beneath said long guide in operative position with relation to said cutter-head.

4. A wood planer, comprising a bottom cutter-head, a guide bar at the rear thereof extending across the machine adjacent said cutter-head, and a bar-after-the-cut adjustably secured to said guide bar to slide lengthwise of the latter, and provided beyond the end of the cutter head with a hood-like extension in the form of a shield plate permanently secured to move with the bar-after-the-cut for protecting the end of said guide bar beyond the bar-after-the-cut.

5. A wood planer, comprising a bed, a cutter-head, a guide bar mounted adjacent and parallel to said cutter-head, said bar being provided with transversely elongated slots, clamping bolts extending through said slots into said bed, set-screws angularly mounted in said bar to engage the bed for coöperating with the bolts in holding the bar in fixed adjustment, a bar-after-the-cut mounted to slide longitudinally on said guide bar, and means for clamping said bar-after-the-cut in adjusted position.

[Claims 6 to 10 not printed in the Gazette.]

873,658. STOVEPIPE-JOINT. HENRY S. BLOOD, Bottineau, N. D. Filed Jan. 24, 1907. Serial No. 353,806.

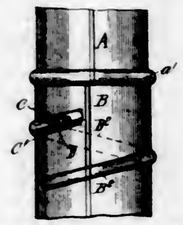


1. The improvement in pipe joints herein described comprising the outer section and the inner section fitted at one end within the adjacent end of the outer section, said inner section having a bead forming an abutment and stop for the end of the outer section and the telescoped portion of the inner and outer sections being provided with annular beads that on the inner section forming an annular groove in its outer side and that on the outer section forming an annular groove on its inner side registering with the annular groove on the inner section, and the outer head having an opening and a flap for closing the same, and a key introduced through said opening and made of a length approximately equal to the circumference of the pipe sections whereby the said key may encircle the inner pipe section within the channel formed by the grooves therein and in the outer section and have both its ends arranged opposite the opening in the outer bead, substantially as and for the purposes set forth.

2. A pipe joint composed of sections telescoped at their meeting ends and provided in their telescoped portions with coinciding grooves, that in the inner section being in its outer face and that of the outer section in its inner face and extending uninterruptedly around the joint whereby the said grooves combine to form a continuous channel around the inner pipe section, an opening being provided leading into the outer groove and a flap for closing said opening, substantially as set forth.

3. A pipe joint comprising the telescoping sections, the inner one having in its outer face an annular groove and the outer one having in its inner face an annular groove coinciding with that in the inner section, an opening being provided leading to the groove in the outer section and a key within the channel formed by the said groove and extending entirely around the inner section and having its opposite ends arranged in close proximity opposite the opening leading to the channel, substantially as and for the purposes set forth.

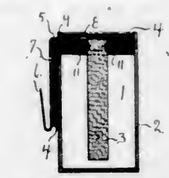
873,659. STOVEPIPE-JOINT. HENRY S. BLOOD, Bottineau, N. D. Filed Jan. 24, 1907. Serial No. 353,807.



1. A pipe joint comprising two telescoped sections the inner one having in its outer face a spiral groove and the outer one having in its inner face a spiral groove coinciding with that in the inner section and an opening leading to the groove in the outer section, and a key extending within the spiral channel formed by the grooves in the inner and outer sections whereby the sections may be fitted longitudinally together, the key introduced and the sections then screwed together to tighten the joint, substantially as set forth.

1. In an electrical battery, a sheet metal connection fasmeeting ends, one of said sections being provided with a stop to limit the extent to which the sections may telescope and the telescoped portions of the said inner and outer sections being provided with coinciding spiral grooves opening toward each other and forming a channel, and a key in said channel, substantially as set forth.

873,660. BATTERY CONNECTION. GEORGE P. BLOW, La Salle, Ill. Filed Apr. 11, 1907. Serial No. 367,652.



1. In an electrical battery, a sheet metal connection fastened to the carbon element and insulated from the zinc element, having its end bent forming a resilient member.

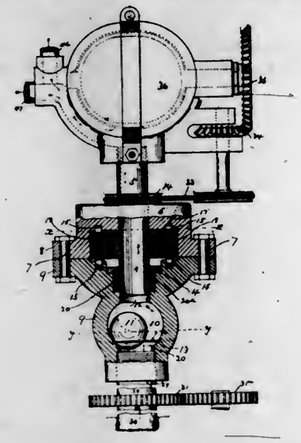
2. In an electrical battery, a metal container, a carbon element with a ball-shaped end within said container, a sheet metal connection, insulated from said container, having resilient lips embracing the ball-shaped end of said carbon, and a resilient member forming a part of said connection external to said container.

3. In an electrical battery, a metal container, a notch from the side of said container, a carbon element with a ball-shaped end, a connection passing through said notch and insulated from said container, resilient lips on said connection for embracing the ball-shaped end of said carbon element and a resilient member on said connection external to said container.

873,661. WATER-SWIVEL. KARMELL BROOKS, New York, N. Y. Filed Aug. 17, 1906. Serial No. 330,951.

1. The combination with the casing comprising separable parts and having a chamber 10 in its lower portion, and means for rotating said casing of a disk-like head inclosed by the casing and having a central vertical passage and tubular extensions alined therewith, a floatative valve arranged in the aforesaid chamber and adapted to seat up-

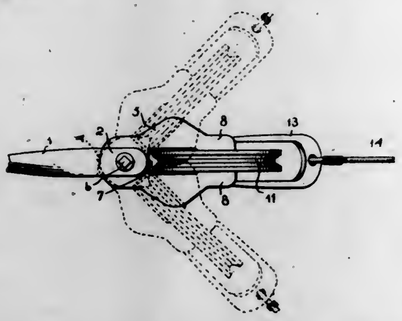
ward therein, and means for preventing the valve closing the lower outlet of the chamber, as shown and described.



2. The combination with the rotatable casing having upper and lower connected chambers, of a head arranged in said casing and having a central passage, of a floatable valve arranged in the lower chamber of the casing and adapted to seat upward as and for the purpose specified.

3. The combination with a casing comprising separable parts and means for rotating it, of the head having a central passage and tubular extensions 4, 5, alined with such passage, a shot-feed mechanism mounted on the upper extension of said head, and means oppositely connecting the head with the shot-feed mechanism, as shown and described.

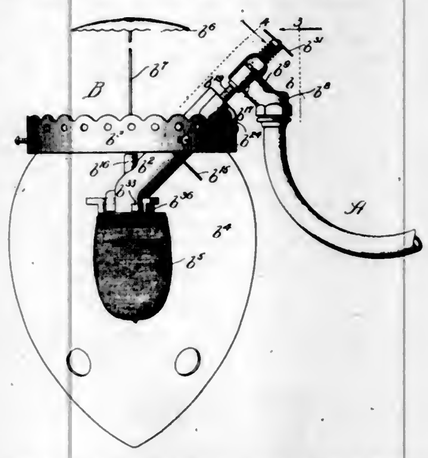
873,662. TROLLEY-HEAD. GARDNER P. COPP, Los Angeles, Cal., assignor of one-half to Allin L. Rhodes, Los Angeles, Cal. Filed Mar. 12, 1906. Serial No. 305,615.



1. In combination with a trolley pole, a trolley head pivotally connected thereto, extended rearwardly therefrom and bifurcated to form relatively laterally-broadened arms, said arms having bearings extending downwardly therefrom and overhung thereby, and a trolley wheel having its axle journaled in the said bearings and the ends of said axle also overhung by said arms, the latter also bearing closely against opposite sides of said wheel and coacting therewith to form a trolley finder.

2. In combination with a trolley pole, a trolley head pivotally connected thereto, extended rearwardly therefrom and bifurcated to form relatively laterally-broadened arms, said arms having bearings extending downwardly therefrom and overhung thereby, a trolley wheel having its axle journaled in the said bearings and the ends of said axle also overhung by said arms, the latter also bearing closely against opposite sides of said wheel and coacting therewith to form a trolley finder, and a V-shaped yoke link having its arms pivotally mounted on the ends of said axle and overhung at such pivotal points by said arms.

873,663. GAS-LAMP. EVAN W. CORNELL, Adrian, Mich., assignor of one-half to Frederick H. Knapp, Chicago, Ill. Filed Sept. 6, 1906. Serial No. 333,543.



1. The combination of a burner-tube having an inclined base portion and a depending tip portion, a globe support, a globe depending from said support and inclosing the tip portion and a part of the base portion of said burner-tube, and a transverse guard on said inclined base portion extending within the upper portion of said globe.

2. The combination of a nipple having an inclined gas outlet orifice, a burner-tube having an inclined base portion mounted on said nipple in alinement with said orifice and having, also, a depending tip portion forming an obtuse angle with said base portion, a globe support carried by said base portion, a globe depending from said support, and a guard within the upper portion of the globe mounted on said base portion of the burner tube and inclined in a direction opposite the direction of inclination of the base portion of the burner tube.

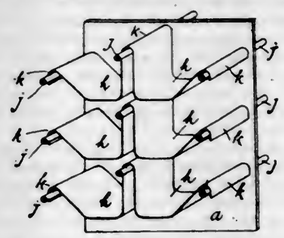
3. The combination of a nipple adapted to be applied to a chandelier-arm and provided with a lateral orifice, a valve connected with said nipple and controlling said lateral orifice, and a bodily-movable burner-tube adjustably supported on said nipple and having its base portion separated from the nipple by an air-admission space, said burner-tube having a depending tip forming an angle with the body portion of the burner tube.

4. The combination of a nipple having a vertical threaded bore and an inclined portion provided with a lateral inclined gas orifice, and a bodily-movable burner-tube adjustably carried by said inclined portion and having an inclined base portion presented to said gas orifice and a depending burner-tip forming an obtuse angle with said inclined portion.

5. The combination of nipple having a base portion provided with a vertical bore and an inclined portion carried thereby having a gas passage provided with a lateral orifice, a burner-tube having an inclined base portion adjustably connected with the inclined portion of said nipple and equipped with a depending burner-tip, and an external inclined guard carried by the inclined portion of the burner-tube and extending transversely thereof.

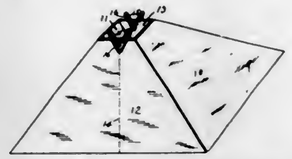
[Claims 6 and 7 not printed in the Gazette.]

873,664. STORE-BIN. PAUL T. J. ESTLER, London, England. Filed Apr. 15, 1907. Serial No. 368,373.



Store bins consisting of vertical partitions strung together on horizontal rods supporting wells or troughs of sheet metal bent to form vertical backs, floors partially flat, and fronts sloping upwards and forwards, the upper edges of the backs and fronts being bent into lips or hooks that engage with the horizontal rods connecting the vertical partitions, the whole being secured together by tightening the nuts at the ends of the horizontal rods.

873,665. FOLDING LAMP-SHADE. VICTOR FREYTAG, Des Moines, Iowa. Filed Feb. 25, 1907. Serial No. 359,079.



1. The combination of a lamp shade having two plain sides, and two sides provided with central creases or folds, and two spring metal holders detachably and adjustably mounted on the folded sides to engage the creases or folds thereof, and to hold said sides rigid, said holders being designed to support the lamp shade on a lamp chimney.

2. The combination with a lamp shade, comprising two rigid sides and two sides having longitudinal creases or folds, the sides being connected with each other and capable of folding at the connecting edges and two holders, each made of spring wire with an inner V-shaped portion and an outer V-shaped portion, said holders placed upon the top edges of the creased or folded sides with one member inside and the other outside, the adjacent ends of the holders projecting upwardly and toward each other to engage a lamp chimney.

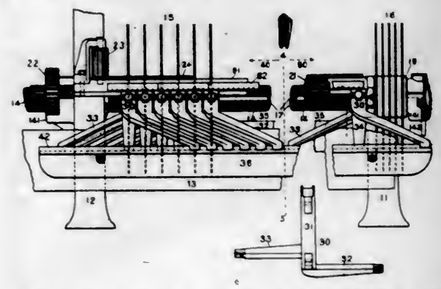
873,666. SAW. SIMON J. GRAY and JOHN HORNING, Oakland, Cal. Filed Sept. 5, 1906, Serial No. 333,344. Renewed Nov. 5, 1907. Serial No. 400,860.



1. A saw composed of a plurality of alined links, each link comprising parallel plates spaced apart from each other and provided upon one edge with teeth, a filling plate between the parallel plates provided with a single tooth, each of said parallel plates having a tooth registering with the tooth of the filling plate, whereby to form a drag tooth for the link, and a tie bar for connecting the adjacent links.

2. A saw composed of a plurality of alined links, each link comprising parallel plates spaced apart from each other and provided upon one edge with teeth, the teeth of the plates being staggered with respect to each other, a filling plate between the parallel plates provided with a single tooth, each of said parallel plates having a tooth registering with the tooth of the filling plate, whereby to form a drag tooth for the link, and a tie bar for connecting the adjacent links.

873,667. EDGER. GEORGE M. HINKLEY, Milwaukee, Wis., assignor of one-half to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey; Elizabeth J. Hinkley and Edgar L. Wood executors of said George M. Hinkley, deceased. Filed Apr. 13, 1905. Serial No. 255,295.



1. The combination in an edger of a saw arbor, a saw mounted loosely thereon for longitudinal movement with respect thereto, a guide engaged with said saw and extended horizontally therefrom, said guide being provided with two depending and downwardly diverging branches adapted to engage with a bar, said guide being further provided between said branches with a downwardly extended prop adapted to engage with said bar, and said bar.

2. The combination in an edger of a saw arbor, a plurality of saws loosely mounted thereon for longitudinal movement with respect thereto, a guide for each of said saws, a bar, each of said guides being provided with a horizontally extended portion and two downwardly diverging branches adapted to engage with said bar, each of said guides being further provided with a downwardly extended prop also adapted to engage with said bar, corresponding downwardly extended branches of each of the guides being disposed in the same general plane longitudinally of the saw arbor, the structure of each guide being the duplicate of the structure of each of the others, the diverging branches being adapted to nest when the guides are moved closely adjacent to each other.

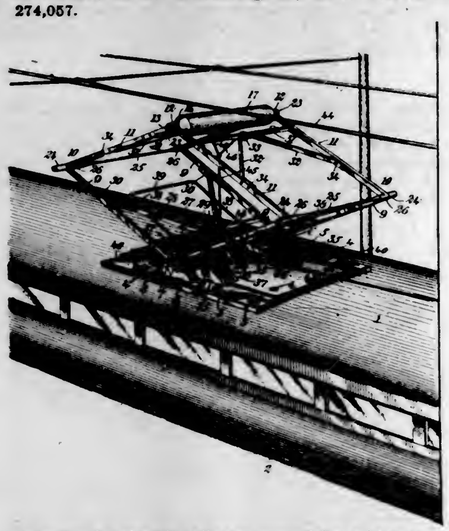
3. In a gang-edger, the combination of a saw-arbor, a plurality of saws longitudinally loosely mounted thereon, and guides for the saws having branches at the outer end of each guide, the guides nestable with their body portions side by side and their similar branches severally superposed.

4. In a gang-edger, the combination of a saw-arbor, a plurality of saws longitudinally loosely mounted thereon, equal and similar guides for the saws and gabled branches at the outer end of each guide, the guide bodies nestable with their body portions side by side and the similar gabled branches superposed.

5. The combination in an edger of a saw arbor, a plurality of saws loosely mounted thereon for longitudinal movement thereof, a guide for each of the several saws, a bar disposed longitudinally of the saw arbor for supporting the guides, each of said guides being provided with a horizontally extended portion and with downwardly extended diverging branches, said guide being further provided with a downwardly extended prop at a point intermediate said branches, said prop being adapted to engage with said bar, the upper surface of said branches being shaped to shed debris at the sides of said bar, and each of said branches being nestable with the corresponding adjacent branches of adjacent guides.

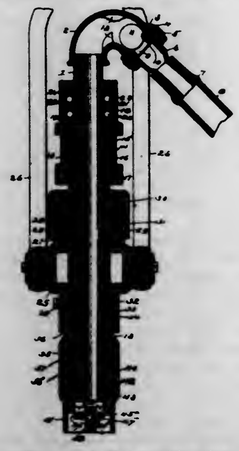
[Claims 6 to 10 not printed in the Gazette.]

873,668. ELECTRIC TROLLEY. ALBERT S. JANIN, New York, N. Y., assignor of one-third to William J. Cole, New York, N. Y. Filed Aug. 14, 1905. Serial No. 274,057.



A trolley for electric railways, comprising a base, an adjustable double diamond-shaped frame movably mounted on said base, said frame construction including reversibly disposed sets of upper and lower members, the upper members of each set being united by a brace, a pulley mounted on the base, a cable connected to each brace and passing beneath the pulley, the upper members of the frame being provided at their upper ends with a rotatable device for electrical contact with the conductor of the system, embodying a rotatable cylinder having removable heads of semi-spherical form, the latter having openings and concaved recesses therein, a shaft extending through said openings and provided with a cone entering each of said recesses, and rolling objects between the sides of each recess and cone.

873,669. HYDRAULIC SWIVEL. HORACE G. JOHNSTON and JOSEPH B. NORRIS, Corsicana, Tex.; assignors to The American Well & Prospecting Co., Corsicana, Tex. Filed Mar. 2, 1907. Serial No. 360,293.



1. In a hydraulic swivel, the combination, with a swivel stem and a hose stem discharging therethrough, of a check valve disposed contiguous to, and in axial alinement with the swivel stem and adapted to prevent the admission of back pressure to the hose stem.

2. In hydraulic swivel, the combination, with a swivel stem and a hose stem discharging therethrough and having a stuffing box disposed for preventing admission of fluid between the hose and swivel stem, of a packing gland for said stuffing box formed with a valve seat, and a check valve adapted to engage said seat for preventing the admission of back pressure to a hose stem.

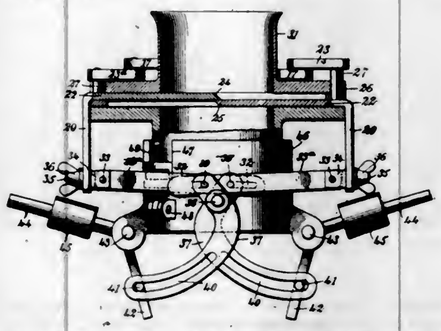
3. In a hydraulic swivel, the combination, with a swivel stem and hose stem discharging therethrough, of a check valve at one end of the hose stem for preventing the admission of back pressure thereto, and a check valve at the outside end of the hose stem for preventing the escape of back pressure through the hose stem.

4. In hydraulic swivel, the combination, with a swivel stem and a hose stem discharging therethrough, of a gooseneck fitting connected with the upper end of the hose stem and provided near its outer end with a removable valve seat and a stop spaced inwardly from said seat, and a valve disposed between said seat and stop and adapted to engage the seat for preventing the escape of back pressure through the hose stem.

5. In a hydraulic swivel, the combination with a threaded swivel stem and a hose stem revolubly connected therewith, of a supporting block for said swivel stem, means for revolubly supporting said swivel stem upon said block, sleeves threaded together and surrounding said swivel stem, the lower one of said sleeves being formed with threads engaging the threads of the swivel stem, and the upper one of said sleeves contacting with said supporting block, and a third sleeve threaded on to the swivel stem into contact with the lower one of the first mentioned sleeves for preventing displacement thereof.

[Claims 6 to 15 not printed in the Gazette.]

873,670. ATTACHMENT FOR MOLDS. HENRY A. KEEHN and HARRY W. KEEHN, Newark, Ohio. Filed Apr. 4, 1907. Serial No. 366,325.



1. The combination of a receptacle, blades connected therewith and adapted to cross said receptacle for the purpose of severing the material contained therein, a cup connected with said receptacle, means for adjusting said cup relatively to said receptacle for the purpose of varying the capacity of said receptacle, doors mounted upon said cup to allow the material to be ejected therefrom, and connections from said doors to said blades for the purpose of maintaining a predetermined working relation between said doors and said blades.

2. The combination of a head, blades slidably mounted therein, rods connected with said blades and provided with slots, levers provided with pivot pins entering said slots, a receptacle provided with doors, said doors being connected with said levers and adapted to be opened and closed thereby, said receptacle being so positioned relatively to said blades that the latter pass through said receptacle for the purpose of severing the material contained therein.

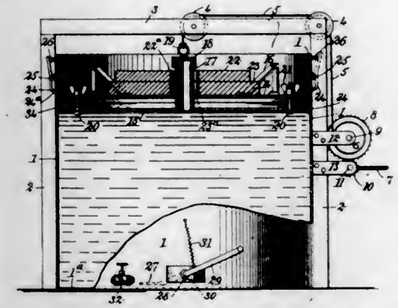
3. The combination of a cylinder, an extension therefor, said extension being separate from said cylinder, cutting mechanism disposed intermediate said cylinder and said extension for the purpose of severing a predetermined quantity of material contained within said extension, a pair of swinging doors normally closing said extension, and means controllable at will for actuating said cutting mechanism and for tripping said doors so as to allow material contained within said extension to drop out of the same.

4. The combination of a cylinder, an extension therefor, cutting mechanism disposed intermediate said cylinder and said extension for the purpose of severing a predetermined quantity of material contained within said extension, and doors connected with said extension for permitting the removal of said material therefrom.

5. The combination of a member serving as a guide for filling in material, an extension for said member, cutting mechanism disposed intermediate said member and said extension, means controllable at will for varying the capacity of said extension, and doors connected with said extension for permitting the removal of said material therefrom.

[Claims 6 to 10 not printed in the Gazette.]

873,671. PRESSURE-TANK. GEORGE LEWIS and DAVID A. SMITH, Alto Pass, Ill. Filed Aug. 30, 1906. Serial No. 332,561.



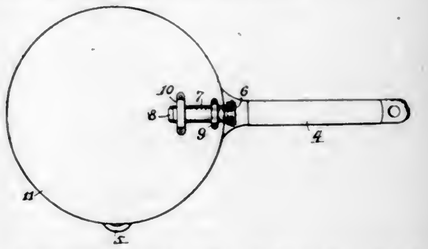
1. The combination with a tank, of a follower comprising two flat disks provided with beveled edges forming a joint annular groove on their peripheries, means attached to the outer portion of the disks adapted to adjust the peripheries of the disks relatively to each other, a ring of packing clamped between said edges, a tube secured to the inner member of the follower and extending through the outer member, a cap detachably secured to the outer end of said tube, auxiliary weights applied to the follower, guide bars attached to the follower in line with the inner edges of the tank, and means for raising the follower, substantially as shown and described.

2. The combination with a tank, of a follower comprising two flat disks provided with beveled edges and forming a joint annular groove on their peripheries, adjusting bolts attached to the outer portion of said disks, a ring of packing clamped between said edges, a tube secured to the inner member and extending through the outer member of the follower, catches pivoted to said tank adapted to extend within the tank to limit the outward movement of the follower, auxiliary weights applied to the follower, and means for raising the follower, substantially as shown and described.

3. The combination with a tank, of a follower comprising two flat disks provided with beveled edges forming a joint annular groove on their peripheries, adjusting bolts attached to the outer portion of said disks, a ring of packing clamped between said edges, a tube secured to the inner member of the follower extending through the outer member, a cap detachably secured to the outer end of said tube, auxiliary weights applied to the follower, and means for raising the follower, substantially as shown and described.

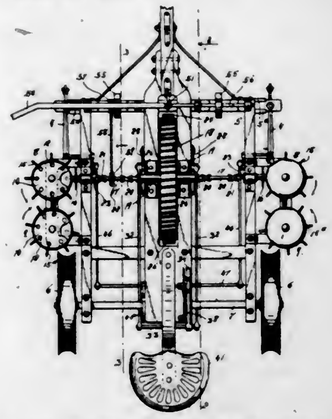
4. The combination with a tank, of a follower comprising two flat disks provided with beveled edges forming a joint annular groove on their peripheries, adjusting bolts attached to the outer portion of said disks, a ring of packing clamped between said edges, weights applied to the follower, a discharge valve having a pipe connection with said tank, a strainer secured to the lower portion of said tank, adjacent to said pipe section, and a spring-actuated stirrer attached to the side of said tank in close proximity to said strainer, substantially as shown and described.

873,672. COOKING UTENSIL. WILLIAM J. LOUDENSLAGER and JAMES E. MORRIS, Jacksonburg, W. Va.; L. L. Morris executor of said James E. Morris, deceased. Filed May 4, 1907. Serial No. 371,837.



The combination with a skillet having a projecting handle, of a clip provided with perforated up-turned ends secured to the base of the handle, and a cover having secured thereon a U-shaped spring metal wire having outwardly turned ends adapted to be inserted into and withdrawn from the perforations in said clip, as and for the purpose set forth.

873,673. CORN-PLANTER. CLAUDE E. MENTZER, Denver, Colo., assignor of twenty-four and one-half one-hundredths to Frank V. Johnson and seventy-five and one-half one-hundredths to Frank R. Mansfield, Denver, Colo. Filed Oct. 9, 1905, Serial No. 282,057. Renewed July 27, 1907. Serial No. 385,809.



1. In a corn planter, the combination with a suitable frame and the ordinary supporting ground wheels, of a centrally located ground wheel provided with journals, bearings in which the journals of the wheel are vertically movable, a shaft operated from the auxiliary ground wheel and connected with the journals of the latter by universal joints, the said shaft being also extensible to permit the raising and lowering of the ground wheel, a corn dropping

device, and a suitable operative connection between the shaft of the auxiliary ground wheel and the said device for the purpose set forth.

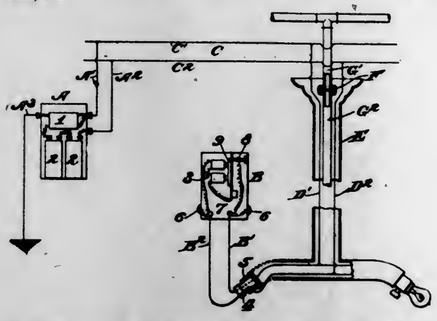
2. The combination with a frame work, supporting ground wheels and seed dropping devices mounted on opposite sides of the machine, an auxiliary centrally located ground wheel, an extensible shaft operated from said ground wheel, the said shaft being provided with jointed members, and a suitable operative connection between the said shaft and the corn dropping devices on both sides of the machine.

3. The combination with a frame work and supporting ground wheels, of seed receptacles mounted on opposite sides of the machine, corn dropping disks located on the bottom of said receptacles, the said disks being provided with peripheral pins, an operating shaft having pins disposed at right angles to the pins of the corn dropping disks, and a ground wheel for actuating the shaft, the said ground wheel having peripheral projections coinciding in position with the pins of the operating shaft, the said ground wheel being journaled to have a vertical adjustment on the frame work, and the shaft parts on opposite sides of the ground wheel being connected with the journals of the latter by universal joints, the operating shaft being also extensible for the purpose set forth.

4. In a machine of the class described, the combination with a suitable frame work and ground wheels, of shoes having their forward extremities pivotally connected with the frame work, and means for raising and lowering the rear extremities of the shoes comprising toggle joint connections between the frame and the rear extremities of the shoes, a hand lever and a connection between the hand lever and the toggle joints of the shoes, substantially as described.

5. In a machine of the class described, the combination with a suitable frame work and ground wheels, of shoes having their forward extremities pivotally connected with the frame and located on opposite sides of the machine, the said shoes being in alinement with the ground wheels of the machine, a toggle joint connection between the rear extremity of each shoe and the frame, rods connected with the joints of the toggle members, and a lever for actuating the said rods, whereby the rear extremities of the shoes may be raised and lowered at will.

873,674. ELECTRICAL TESTING SYSTEM. HOWARD E. MILLER, St. Louis, Mo. Filed Apr. 16, 1906. Serial No, 311,952.



1. An electrical testing system comprising an induction coil whose primary terminals and one of whose secondary terminals are connected to the circuit to be tested and whose other secondary terminal is grounded, and an electro-magnetic circuit breaker whose armature is in circuit with the circuit to be tested.

2. An apparatus for testing electrical circuits comprising an induction coil whose primary terminals are adapted for connection to said circuit, and whose secondary coil is electrically connected to the ground and to said circuit, respectively, a battery in circuit with the primary winding of said coil, and an electro-magnetic vibrating circuit breaker whose terminals are adapted for electrical connection with said first mentioned circuit.

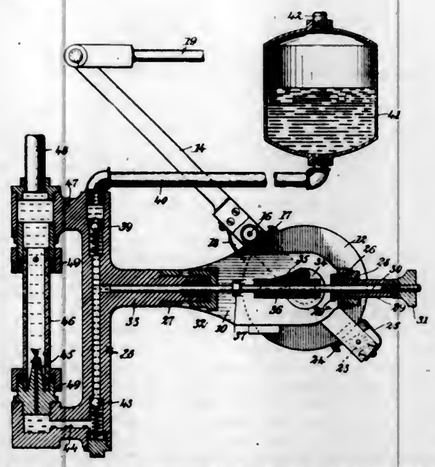
3. A system of testing incandescent lamp circuits comprising a normally open lamp circuit having a lamp socket therein, a test loop containing an electrical indicator and a contact plug adapted to fit into said socket and containing the terminals of said test loop in position to contact with the terminals of the lamp circuit in said socket, said test loop also having a contact surface adapted for contact with a fixture and a second loop comprising a battery and an induction coil, the primary winding of which is adapted for connection to the lamp circuit, and the secondary winding of which is connected at one end to the primary circuit and at the other end to the ground.

4. A system of testing incandescent lamp circuits comprising a normally open lamp circuit having a lamp socket therein, a test loop containing an electrical indicator and a contact plug adapted to fit into said socket and containing the terminals of said test loop in position to contact with the terminals of the lamp circuit in said socket, said test loop also having a contact surface adapted for contact with a fixture and a second loop comprising a source of electrical energy and an induction coil, the primary winding of which is adapted for connection to the lamp circuit, and the secondary winding of which is connected at one end to the primary circuit and at the other end to the ground.

5. A system of testing incandescent lamp circuits comprising a normally open lamp circuit having a lamp socket therein, a test loop containing an electrical indicator mounted on a block and a coutact plug adapted to fit into said socket and containing the terminals of said test loop in position to contact with the terminals of the lamp circuit in said socket, and a second loop containing a source of electrical energy and adapted for connection to the lamp circuit, said test loop also having contact pieces mounted on said block in each side of said indicator.

[Claim 6 not printed in the Gazette.]

873,675. SIGHT-FEED LUBRICATOR. NATHAN MCCOY, Marshalltown, Iowa. Filed July 17, 1905. Serial No. 269,949.



1. A lubricator, comprising a vertical chamber having lateral members, the lower member communicating with the chamber, and the upper one being tubular, automatic admission and outlet valves adjacent to the ends of the chamber, a pump barrel at right angles to and communicating with the chamber intermediate of its ends, a plunger in the barrel, means for operating the plunger, a reservoir connected with the admission end of the chamber and adapted to contain lubricant under pressure, a nipple secured to the lower member of the chamber, a transparent feed tube having its lower end secured to the nipple with the nipple projecting into the same and its upper end secured to the upper member, and a pipe connected with the said upper member of the chamber.

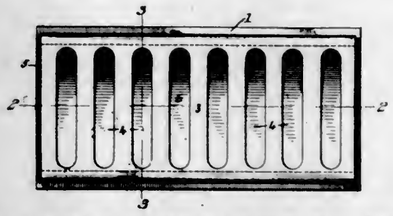
2. A lubricator, comprising a vertical chamber, admission and outlet valves adjacent to the ends of the chamber, a pump barrel at right angles to and communicating with the chamber intermediate of its ends, a plunger in the barrel, means for operating the plunger, a reservoir connected with the upper end of the chamber and adapted to contain a lubricant, a transparent feed tube supported at one side of and parallel with the chamber, and a nipple in communication with the lower end of the chamber and projecting into the feed tube.

3. In a lubricator, a chamber, automatic admission and outlet valves for the chamber, a feed pipe connected with one end of the chamber, a pump barrel extending at right angles from the chamber between the valves thereof, a frame having brackets to one of which the pump barrel is secured, a plunger in the pump barrel and projecting out through one end of the barrel and having guided movement in the other bracket of the frame, spaced stops on the projecting end of the plunger, a slide on the plunger between the stops thereon, a shaft mounted in the frame and having a crank at one end, a link connecting the crank with the slide, and means for operating the shaft.

4. In a lubricator, a pump, admission and outlet valves for the pump, a lubricant reservoir connected with the pump, a frame having oppositely arranged brackets, to one of which the pump is secured, a sleeve in the other bracket of the frame and having a flanged inner end, a plunger in the pump and having its outer end screw threaded and projecting through the said sleeve, a nut on the threaded end of the plunger, a collar secured to the plunger adjacent to the pump, a slide on the plunger between the collar and flange of the sleeve, a shaft mounted in the frame and having a crank at one end, a link connecting the crank with the slide and means for operating the shaft.

5. In a lubricator, a chamber, automatic admission and outlet valves for said chamber, a lubricant reservoir connected with the upper end of the chamber, a pump barrel communicating with the chamber, a plunger in the pump barrel, means for operating the plunger, a branch leading from the lower end of the chamber, a nipple carried by the branch, a feed pipe, and a transparent feed tube arranged between the branch and feed pipe and into which the nipple discharges.

873,676. TILE. PATRICK J. MCGUIRE, New York, N. Y., assignor of one-tenth to Leonard J. McGuinness and one-tenth to Edward A. Schminke, New York, N. Y. Filed Feb. 11, 1907. Serial No. 356,771.



1. A tile having its rear face provided with rabbeted opposite edges with undercut grooves formed therein, an independent perforated backing-plate for said tile slidable in said grooves, and means interposed between said plate and the rear face of the tile for holding the plate in position.

2. A tile provided with guide grooves at opposite edges, a perforated backing-plate slidable in said grooves, a water-proof coating covering the rear face of the tile, and a curved spring plate acting as a shield interposed between said coating and the backing-plate for holding the backing-plate in position.

3. A tile provided with guide grooves at opposite edges, a perforated backing plate slidable in said grooves, and a water-proof material coated on the back of the tile covered by said plate.

4. A block, tile or like body having a perforated plate spaced from and covering the rear face thereof, said plate being confined within the outline of the body whereby when a plurality of such tiles are set on a bed of cement or the like, their edges may be placed close together and the cement will enter the perforations of each plate and thus securely bind each tile in place.

5. A block, tile or like body having a perforated plate covering the rear face thereof, said plate being of slightly less extent than the rear face of the body and separated therefrom to provide a space therebetween, whereby when a plurality of such tiles are set on a bed of cement or the like, their edges may be placed close together and the cement will enter the perforations of each plate and thus securely bind each tile in place.

[Claims 6 to 8 not printed in the Gazette.]

873,677. INSTEP-SUPPORT. FRED N. MCKINNON, Boston, Mass. Filed Apr. 13, 1906. Serial No. 311,494.

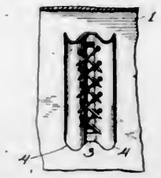


1. An instep support comprising an upwardly arched resilient plate having a rounded rear end to bear on the heel and a widened front end for engaging the sole, a rigid plate secured to the resilient plate at one edge and at approximately the center thereof and transversely thereof, the free end of said rigid plate being curved, and a cushion supported by the plates.

2. An instep support comprising an upwardly arched resilient plate having a rounded rear end to bear on the heel and a widened front end for engaging the sole, and a rigid plate secured to the resilient plate at one edge and at approximately the center thereof, the end of said rigid plate being curved upwardly.

3. An instep support comprising an upwardly arched resilient plate whose one end is adapted to bear on the heel and whose other end is adapted for engaging the sole, and a rigid plate secured to the resilient plate at one edge at approximately the center thereof, the end of said rigid plate being curved upwardly.

873,678. SAFETY DEVICE FOR COIN-RECEPTACLES. JOHN NUTRY, Brooklyn, N. Y., assignor to The Nutry & Cook Manufacturing Company, Brooklyn, N. Y. Filed Feb. 27, 1907. Serial No. 359,668.



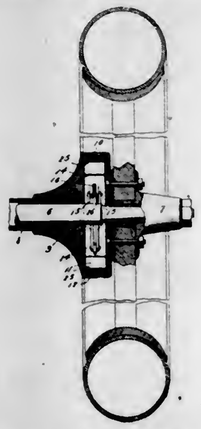
1. In a coin receptacle having a slot for the entrance of coin, a number of headed pins loosely held by the heads in perforations, in proximity to the coin slot, the pins swinging free so that the points tend to cross the coin slot, substantially as shown.

2. In a coin receptacle having a slot for the entrance of coin, an attachment on the inside of the receptacle, the attachment having perforations, headed pins held in the perforations so that the points of the pins swing freely across the coin entrance and also swing so as to allow a coin to pass into the receptacle, substantially as shown.

3. In a coin receptacle having a slot for the entrance of

coin, an attachment secured on the inside of the receptacle, having a slot or opening corresponding with the slot in the receptacle, and connected by bending the metal from the slot in the receptacle inward through the opening in the attachment, substantially as shown.

873,679. BAND-BRAKE. FRANK O'BRIEN, Jackson, Mich., assignor to Buick Motor Company, Flint, Mich. Filed Dec. 18, 1906. Serial No. 348,431.

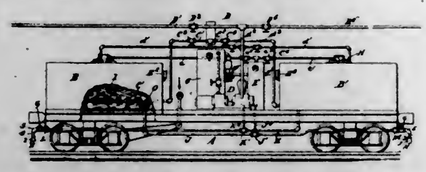


1. In a brake of the kind described, the combination of a wheel carrying a ring, an axle connected to the wheel, a tubular casing over the axle, having a circular head at the end fitting at its edge close to the ring, with a series of pins and a stop projecting into the ring, a split band supported upon the pins, with its ends arranged to abut the stop, and means to expand the band.

2. In a brake of the kind described, the combination of a wheel carrying a ring, an axle connected to the wheel, a tubular casing over the axle, having a stop projecting into the ring, a split band supported within the ring with its ends arranged to abut the stop, double toggle arms connected to the opposite ends of the band and having means to expand the same, and a pin projecting from the stop and between the toggle arms, to prevent lateral movement of said arms and band.

3. In an expanding band brake, in combination, an axle, a wheel thereon carrying a friction ring, a split brake band within the ring, toggle arms connected to opposite ends of the ring, an operating lever moving in a plane parallel to that of the band, and a bent link extending around the axle and pivotally connected at one end to the toggle arms and at the other to the lever, the respective connections being substantially diametrically opposite, and the axis of the pivots being parallel.

873,680. SPRAYING APPARATUS. JOHN V. PEARSE, Owensboro, Ky., assignor to Railway Chemical Sprayer Company, Owensboro, Ky., a Corporation of Kentucky. Filed Mar. 13, 1907. Serial No. 362,138.



1. The combination of a car, tanks thereon at its opposite ends and spaced apart, spraying devices at the opposite ends of the car, connections between the spraying devices at the ends of the car and the tanks at the opposite ends of the car, whereby the tank at one end of the car will supply liquid to the spraying devices at the opposite end thereof, valves in said connections midway their ends and adapted to be controlled from the space between the opposite tanks, a boiler on the car between the opposite tanks, steam pipes leading from said boiler to the opposite tanks, stirring nozzles within the opposite tanks and in communication with said steam pipes, a water pump operated from the boiler, pipes leading from said pump to the tanks, a supply pipe leading to the pump, an air reservoir on the car between the opposite tanks and connected therewith whereby to establish pressure in the said tanks and an air compressor operated from the boiler and connected with the reservoir for establishing pressure therein, all substantially as and for the purpose set forth.

2. An apparatus substantially as described comprising a car, tanks on the opposite ends thereof and spaced apart, means on the car between the tanks and connected with the latter for establishing pressure in the tanks, spraying nozzles at the opposite ends of the car and connections between said nozzles and the tanks, substantially as set forth.

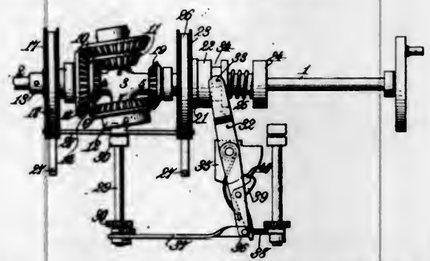
3. An apparatus substantially as described comprising a car, tanks on the car at the ends thereof and spaced apart, means on the car between the tanks for establishing pressure in the latter, discharge nozzles at the opposite ends of the car, a connection between the discharge nozzle at one end of the car and the tank at the opposite end of the car and a connection between the other discharge nozzle and the tank at the opposite end of the car and valves in said connections between their ends, substantially as set forth.

4. The combination of a car, a tank thereon, air compressing devices, connections between the same and the tank for establishing pressure therein and a heater within the tank for cooking the contents thereof, substantially as set forth.

5. The combination with a tank, and discharge devices connected therewith, of means for establishing pressure in the tank whereby the discharge therefrom may be regulated independently of the liquid contents of the tank, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

873,681. POWER-TRANSMISSION MECHANISM. JOHN H. PENDLETON, West Philadelphia, Pa., assignor of one-half to Edward A. Henkle, Philadelphia, Pa. Filed Apr. 25, 1906. Serial No. 313,630.

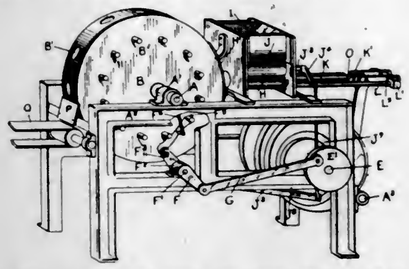


1. A power transmission mechanism comprising the combination with a driving element and driven element, of a pinion clutched to the driving element, a pinion fixed to the driven element, a gear loosely mounted upon said last-mentioned pinion, a rotatable shaft extending in an oblique direction with respect to said driven element and carried thereby, a gear fixed on one end of said obliquely-extending shaft and permanently meshing with the pinion clutched to the driving element, a gear and pinion fixed on the other end to said obliquely-extending shaft and permanently meshing, respectively, with the gear mounted loosely upon said fixed pinion and said fixed pinion, and means for unclutching said pinion from the driving element and for holding said loose gear stationary, causing thereby the rotation of the driven element in a direction opposite to the direction of movement of and at less speed than the speed of the driving element.

2. A power transmission mechanism comprising the combination with a driving element and a driven element, of a pinion loosely mounted upon the driving element, a pinion fixed to the driven element, a rotatable shaft extending in an oblique direction with respect to said driving element, a gear on one end of said obliquely-extending shaft permanently meshing with the pinion loosely mounted upon the driving element, a pinion on the other end of said obliquely-extending shaft and permanently meshing with said fixed pinion, and means for clutching said loose pinion to the driving element causing thereby the rotation of the driven element in the same direction and at the same rate of speed as the driving element.

3. A power transmission mechanism comprising the combination with a driving element and driven element, of a pinion loosely mounted on the driving element, means for clutching said pinion to the driving element, means for unclutching said pinion and for holding said pinion fast, a revoluble coupling carried by and moving with said driving element, a rotatable shaft extending obliquely through said coupling, a gear on said shaft permanently meshing with said pinion, a pinion on said shaft, another gear on said shaft, a pinion fixed to the driven element and permanently meshing with the pinion on said shaft, a gear loosely mounted on the pinion fixed to the driven element and permanently meshing with the gear on said shaft, and means for holding said loose gear stationary.

873,682. DOUGH-DIVIDING MACHINE FOR BREAD-MAKING. GEORGE T. PENDRITH, Toronto, Ontario, Canada. Filed Nov. 27, 1906. Serial No. 345,391.



1. The combination with the drum and radially arranged molds, a cam, and a disk provided with a rib surrounding the cam, said rib having a gate therein to which disk the cam is affixed, of the plungers and rods and rollers co-acting with the cam as and for the purpose specified.

2. The combination with the drum and radially arranged molds, a cam, and a disk provided with a rib surrounding the cam and having a removable portion and to which disk the cam is affixed, of the plungers and rods and rollers co-acting with the cam, and guides on the inner face of the drum for the rods as and for the purpose specified.

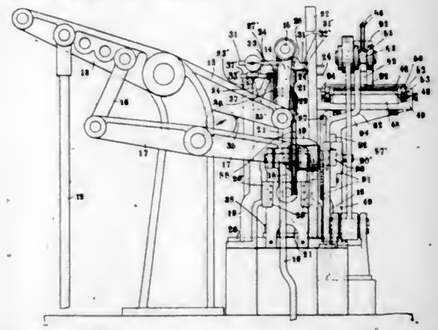
3. The combination with the drum and radially arranged molds, a cam, and a disk provided with a rib to which disk the cam is affixed, of a gate forming part of said rib, a pin connected to the gate and projecting through the disk for moving the gate, plungers and rods and rollers co-acting with the cam, and means for varying the position of the plungers in the mold at the point of feed of the dough as and for the purpose specified.

4. The combination with the drum and radially arranged molds, a cam, and a disk provided with a rib to which disk the cam is affixed, of the plungers and rods and rollers co-acting with the cam, a slot or opening in the disk, a plate provided with a concentric rib extending through the recess opposite the concentric portion of the cam or inner side of the recess, and means for adjusting such plate as and for the purpose specified.

5. The combination with the drum and radially arranged molds, a cam, and a disk provided with a rib to which disk the cam is affixed, of the plungers and rods and rollers co-acting with the cam, a slot or opening in the disk, a plate provided with a concentric rib extending through the recess opposite the concentric portion of the cam or inner side of the recess, a pin extending through a slot in the disk and secured in the plate aforesaid, a slotted arm provided with a central rod suitably held from longitudinal displacement and having a threaded end extending through the pin aforesaid as and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

873,683. APPARATUS FOR WEAVING IN NATURAL COLORS WITHOUT PATTERN-CARDS. AUGUST REGAL, Banjaluka, Austria-Hungary, assignor of one-third to Franjo Harazim and one-third to Eugen Karazej, Banjaluka, Austria-Hungary. Filed June 11, 1906. Serial No. 321,248.



1. The combination, with a plurality of transmitter plates each forming a circuit-making and breaking device, electro-magnets corresponding to said plates, a source of current, circuit connections between the magnets, the current source and the plates, each plate controlling a definite magnet, a part to be moved different distances, armatures actuative by the magnets, mechanism for transmitting the individual movement of each armature to said part, and means for causing said mechanism to transmit to said part the sum of the movements of any two or more armatures simultaneously actuated by their magnets, substantially as described.

2. The combination, with a plurality of transmitter plates each forming a circuit-making and breaking device, electro-magnets corresponding to said plates, a source of current, circuit connections between the magnets, the current source and the plates, each plate controlling a definite magnet, a part to be moved different distances, armatures actuative by the magnets, mechanism for transmitting the individual movement of each armature to said part, means for causing said mechanism to transmit to said part the sum of the movements of any two or more armatures simultaneously actuated by the magnets, and a moving support carrying said part and controlling the making and breaking of the circuit by said plates, substantially as described.

3. The combination, with a plurality of circuit-making and breaking devices, of a part to be moved different distances, separate electro-magnetic means respectively controlled by said devices, and separate mechanism, respectively controlled by said electro-magnetic means, adapted each to move said part a given distance, said mechanisms being also coöperative, upon simultaneous actuation of any two or more of them, to move said part a greater distance than it is moved by any one of said mechanisms, substantially as described.

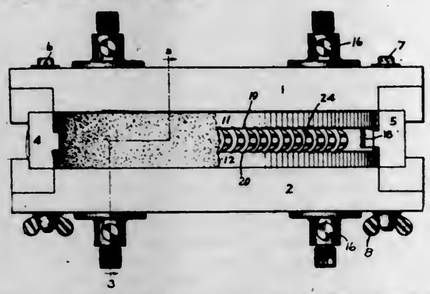
4. The combination, with a plurality of circuit-making and breaking devices, of a part to be moved different distances, a suitable support carrying said part and guiding

the same, separate electro-magnetic means, respectively controlled by said devices, separate armature levers respectively controlled by said electro-magnetic means, alined rotary parts arranged in said support and controlling the part to be moved, said parts having their adjoining faces cut at an angle to their axis of rotation and being respectively controlled by said armature levers, and a bar carried by one armature lever and extending over the other, substantially as described.

5. The combination, with the frame, the rows of hooks and the hook-raising and lowering means of a jacquard machine, of a sliding device appropriated to each row of hooks and carried by said hook-raising and lowering means and movable thereon lengthwise of the corresponding row of hooks, said device being adapted to engage and support any one hook in the corresponding row, a plurality of circuit-making and breaking devices, a suitable support, a receiver movable on said support transversely of the sliding devices and comprising a suitable movable part adapted to actuate each device, separate mechanism adapted each to move said part a given distance, and electro-magnetic means respectively controlled by said circuit-making and breaking devices and respectively controlling said mechanisms, said mechanisms being also coöperative, upon simultaneous actuation of any two or more of them, to move said part a greater distance than it is moved by any one of said mechanisms, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

873,684. CORE-BOX. WALTER F. RICE, Quincy, Mass., assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed Apr. 4, 1906. Serial No. 309,745.



1. A core-box having a chamber arranged to receive the article to be embedded in the core, a guide arranged to hold the said article in a definite position in the chamber while the core is partially formed, and a means for moving the guide and article relatively to each other to form an additional space to receive the material of which the core is composed.

2. A core-box having a chamber arranged to receive the article to be embedded in the core, guides situated on opposite sides of said article to hold it in place while the core is partially formed, and means for moving the guides independently to form spaces to receive additional core material.

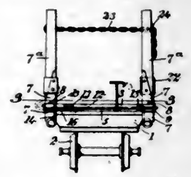
3. A core-box comprising a base, ends and sides, one of the latter being removable, a guide carried by the removable side, and means for moving the guide with respect to said side to afford space to receive additional core material.

4. A core-box comprising a base, ends and sides, means for securing the parts together, guides carried by the sides and adapted to engage and hold the article or articles to be molded into the core, and means for moving the guides one at a time out of engagement with the said article or articles to enable additional core material to be packed first on one side of said article or articles and then on the other.

5. A core-box comprising a base, ends and sides, means for removably securing the sides to the base, movable opposed guides, means on the guides to engage and hold the articles to be molded into the core, a device for moving one guide and its said means away from the other after the core is partially formed to provide additional space for core-forming material, and a second device for moving the other guide to afford additional space for core-forming material on the opposite side.

[Claims 6 to 14 not printed in the Gazette.]

873,685. LOG OR LUMBER CAR. MILO M. RUSSELL, Eau Claire, Wis., assignor of one-half to Roy C. Burger, Winter, Wis. Filed Feb. 14, 1907. Serial No. 357,313.



1. A railway car having a bunk provided with end pockets adapted to receive vertical stakes, latches hinged to the ends of said bunk and provided with elongated slots, locking levers rotatably mounted on the sides of said bunk and provided with off-set ends adapted to engage the slots of the latches, and with means for preventing rotary motion of said levers, substantially as shown and described.

2. A car having a bunk provided with end pockets adapted to receive vertical stakes, latches hinged to the ends of said bunks and provided with elongated slots, locking levers rotatably mounted on said bunks and provided with off-set ends adapted to engage the slots of said latches, and with handles pivotally attached to said levers so as to form projecting ends adapted to bear against the sides of said bunk, and prevent rotary motion of said levers thereon, substantially as shown and described.

3. A car having a bunk provided with pockets, a stake secured to one of said pockets comprising a stub lower section, an upper section having a beveled lower end bearing against the end of the stub section, a sleeve engaging the overlapping ends of said sections, locking mechanism adapted to hold said stake in engagement with said bunk, and means for releasing said locking mechanism from engagement with said stake, substantially as shown and described.

4. A car having a bunk provided with a pocket adapted to receive a vertical stake, a slotted latch pivoted to one end of said bunk, and a locking lever rotatably mounted on said bunk and provided at one end of the bunk with a handle and at the opposite end of the bunk with an offset keeper adapted to engage the slot of said latch, substantially as shown and described.

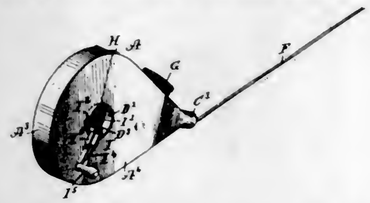
5. A car having a bunk provided with pockets adapted to receive vertical stakes, reversely arranged latches pivoted to the opposite ends of said bunk, and reversely arranged levers rotatably mounted on said bunk, each provided at one end of the bunk with an operating handle and at the opposite end of the bunk with a keeper, substantially as shown and described.

[Claim 6 not printed in the Gazette.]

873,686. CHALK-LINE HOLDER. ABEL B. SHARP, Atlanta, Idaho, assignor of one-half to Henry Crab, Atlanta, Idaho. Filed Apr. 27, 1906. Serial No. 314,006.

1. A chalk line holder, comprising a casing having a reel chamber and a chalk chamber terminating in an outlet and having an aperture communicating with the reel chamber, a reel removably held in the said reel chamber and having its line extending through the said aperture, the chalk chamber and the said outlet, the said reel having a hollow hub journaled in the sides of the casing, and a crank arm for turning the reel, the crank arm comprising hinged sections and mounted to slide within the hollow hub.

2. A chalk line holder, comprising a casing having a reel chamber and a chalk chamber terminating in an outlet, and having an aperture communicating with the reel chamber, a reel removably held in the said reel chamber and having its line extending through the said aperture, the chalk chamber and the said outlet, the said reel having a hub journaled in the sides of the casing and a crank arm for turning the reel, the crank arm comprising a disk fitted to slide axially of the said hub, a shank made in sections hinged together, the inner section being hinged to the said disk, and a knob on the end of the outer shank section.



3. A chalk line holder, comprising a casing having a reel chamber and a chalk chamber terminating in an outlet, and having an aperture communicating with the reel chamber, a reel removably held in the said reel chamber and having its line extending through the said aperture, the chalk chamber and the said outlet, the said reel having a hub journaled in the sides of the casing and a crank arm for turning the reel, the crank arm comprising a disk fitted to slide axially of the said hub, a shank made in sections hinged together, the inner section being hinged to the said disk, a knob on the end of the outer shank section, and stops in the said hub for limiting the sliding motion of the said disk.

4. A chalk line holder, comprising a casing having a reel chamber and a chalk chamber terminating in an outlet and having an aperture communicating with the reel chamber, the latter being made in sections hinged together, a reel removably held in the said reel chamber and having its line extending through the said aperture, the chalk chamber and the outlet, the hub of the reel being hollow and journaled in the sides of the said sections, and means for turning the reel, the said means being connected with the hollow hub and mounted to slide therein.

5. A reel provided with a hollow hub and a crank arm for turning the reel, and comprising a disk mounted to slide axially of the said hub, a shank made in sections hinged together, the end of the inner section being hinged to the said disk, and a knob on the outer section.

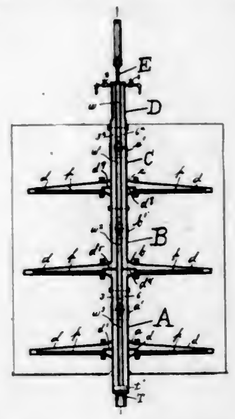
[Claims 6 to 11 not printed in the Gazette.]

873,687. ROASTING-FURNACE SHAFT. GRANT B. SHIPLEY, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Aug. 20, 1906. Serial No. 331,285.

1. A stirring shaft provided with a plurality of hollow arms, said shaft being also provided with passageways communicating with the interiors of said hollow arms for supplying a cooling medium thereto and with passageways communicating with the interiors of said arms for the discharge of the cooling medium therefrom, a separate discharge passageway being provided for each arm, said passageways of said shaft being adapted to convey the cooling medium in contact with said shaft to cool the same.

2. A stirring shaft provided with a plurality of hollow arms, said shaft being also provided with passageways communicating with the interiors of said hollow arms for supplying a cooling medium thereto and with passageways communicating with the interiors of said arms for the discharge of the cooling medium therefrom, a separate discharge passageway being provided for each arm, and separate means to control the escape of said medium from each of said discharge passageways, said passageways of said shaft being adapted to convey the cooling medium in contact with said shaft to cool the same.

3. A stirring shaft composed of a plurality of sections, some of said sections being provided with passageways which open through an end thereof, some of said sections being provided with hollow arms, the passageways which open through the end of a section being adapted to register with passageways which open through the end of the next adjacent section, some of said passageways communicating with the interiors of said hollow arms for supplying a cooling medium thereto and others of said passageways permitting a discharge of said medium from each individual arm separately.



4. A stirring shaft provided with a plurality of hollow arms, said shaft being also provided with passageways, one of which passageways communicates with the interiors of a plurality of said hollow arms for supplying a cooling medium thereto, other passageways communicating with the interiors of said arms for the discharge of the cooling medium therefrom, a separate discharge passageway being provided for each arm.

5. A stirring shaft provided with a plurality of hollow arms, said shaft being provided with an axially located passageway for supplying a cooling medium to an end thereof, said shaft being also provided with passageways in communication with the aforesaid axially disposed passageway and with the interiors of said hollow arms, said shaft being also provided with other passageways which are in communication with said axially disposed passageway through said hollow arms and said previously mentioned passageways.

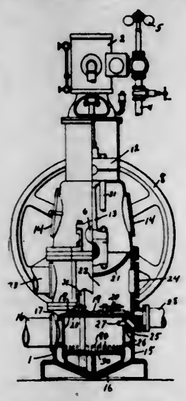
873,688. COMBINED WET AND DRY AIR PUMP. ROYAL D. TOMLINSON, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed July 25, 1907. Serial No. 385,425.

1. The combination with a pump barrel of a plunger reciprocatable therein, said pump barrel being provided with a port for the entrance of water at one end, the other end of said barrel being closed but provided with a port and an outlet valve, said last mentioned end of the barrel being provided with an air entrance port, a valve to control said port, means to reciprocate said plunger in said barrel, and means to actuate said air inlet valve according to the movements of said plunger.

2. The combination with a pump barrel of a plunger reciprocatable therein, said pump barrel being provided with ports for the entrance of water at one end, the other end of said barrel being closed but provided with ports and outlet valves, said last mentioned end of the barrel being provided with an air entrance port, a valve to control said port, means to reciprocate said plunger in said barrel, and means to mechanically actuate said air inlet valve according to the movements of said plunger.

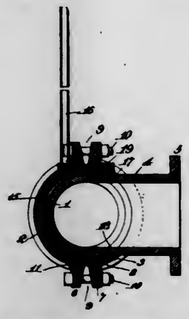
3. The combination with a pump barrel of a plunger reciprocatable therein, said pump barrel being provided with

a port for the entrance of water at one end, the other end of said barrel being closed but provided with a port and an outlet valve, said last mentioned end of the barrel being provided with an air entrance port, a valve to control said



port, an engine for reciprocating said plunger, said engine being provided with an eccentric, and an eccentric rod connecting said eccentric and said air admission valve to mechanically actuate the same.

873,689. APPARATUS FOR TAPPING MAINS. WALTER H. VAN WINKLE, Newark, N. J. Filed Oct. 30, 1905. Serial No. 284,943.



1. A sleeve for tapping machines having a cylindrical form conforming to the shape of the main and slightly larger than the main, said sleeve being divided into longitudinal parts having diverging flanges adjacent to the dividing edges, and with inset and narrow plane abutting surfaces and calking strips, the said strips lying between the abutting surfaces, bolts connecting the diverging flanges, the said bolts passing through the flanges outside of the abutting surfaces, the location of the bolts being considerably outside of the abutting surfaces whereby the strips may be the more effectually compressed between such surfaces, and the plane character of the surfaces permitting the strips to be calked against the main.

2. A sleeve for tapping machines having a cylindrical form conforming to the shape of the main and slightly larger than the main, and having a branch pipe connected thereto, calking hubs on the extremities of the sleeve, the said hubs having calking grooves on the inner side, tamping strips adjacent to the branch pipe, a tamping strip adjacent to each end of the sleeve and inside of the calking groove, a lead calking within each groove and outside of the last named tamping strip and a filling of cement between the sleeve and the main, the said filling occupying the space between tamping strips.

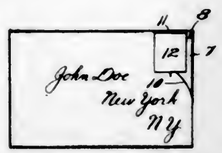
873,690. WELSBACH-MANTLE HOLDER. CHARLES R. WARNER, Portland, Oreg. Filed Nov. 30, 1906. Serial No. 345,850.



1. In a burner of the type described, the combination with a perforated burner tip provided with a depending hollow extension to form a socket, a mantle holder fitting loosely in the socket and extending upwardly therefrom, a shield of thin light material mounted on the mantle support above the perforated burner tip and having its central portion slightly spaced therefrom and its outer edge resting snugly on and supported by the burner tip said shield serving to protect the central portion of the burner tip and its socket against high temperature and corrosion.

2. In a burner of the type described, the combination with a perforated burner tip provided with a depending hollow extension to form a socket, a mantle holder fitting loosely in the socket, a convex shield of thin light material mounted on the mantle support above the perforated burner, the outer rim of the thin convex shield resting on and supported by the burner tip thereby providing an air space between the central part of the burner tip and the underside of the shield, to protect the central part of the burner tip and its depending socket against high temperature and corrosion.

873,691. COMBINED ENVELOP AND LETTER-SHEET. CARL A. W. WESTHOLM, Chicago, Ill. Filed Mar. 21, 1907. Serial No. 363,629.



A combined envelop and letter sheet comprising a blank of rectangular outline arranged for folding to provide a plurality of sections, one of the sections being formed with a tab and the adjacent section being formed with a slit to receive the end of the tab, said tab being cutaway on its lower edge to expose a portion of the section bearing the slit, said combined envelop and letter sheet being adapted to receive a sealing strip to be secured to the section formed with a slit and to the tab, whereby the sealing strip may engage the section carrying the slit on both sides of the latter and also engage the tab.

873,692. FASTENING MEANS. AMOS L. WHITE, Lexington, Mich., assignor of one-half to Rudolph Papst, Lexington, Mich. Filed Apr. 9, 1906. Serial No. 310,805.

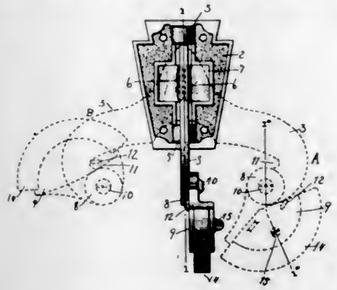
In a lace fastener, the combination with a shoe upper, of a plate having three fingers formed by two parallel cuts projected from one side partly across said plate, and with the two outer fingers bent to engage the upper adjacent

their ends and spaced from the upper intermediate their lengths, and with the middle finger bent backwardly and



curved toward the plate adjacent its end, and curved and spaced from the plate intermediate its length.

873,693. DOOR-CHECK. JOSEPH S. YOUNG, Pittsburg, Pa. Filed July 24, 1906. Serial No. 327,484.

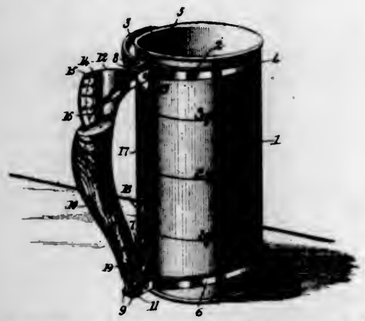


1. A door-check comprising a two-part bracket, one part being adapted to be arranged at a right angle to the face of the door, and a cam eccentrically pivoted to said part, and a stop carried by said cam to engage the end of said bracket, substantially as described.

2. A door-check comprising a bracket, a cam pivoted to the end of said bracket, said end portion being slotted on a curve concentric with the pivot, and a stop carried by the cam and adapted to enter the slot, as described.

3. A door-check comprising a hinged bracket provided with knuckles engaging a spring-plate, a cam pivoted to the swinging end of said bracket, and a stop carried by said cam to limit its pivotal movement.

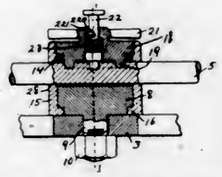
873,694. WEIGHING AND MEASURING DEVICE. AMBROSE E. ABBOTT, Twin Falls, Idaho. Filed Mar. 15, 1907. Serial No. 362,487.



1. A device for the purpose specified, comprising a receptacle for material, yoke members having pivotal connection with the receptacle at the upper and lower ends, a handle having pivotal connection with the yokes, a scale-plate on the upper end of the handle, a pointer carried by the upper yoke member and movable over said scale-plate, and a spring connection between said scale-plate and the lower yoke.

2. A device for the purpose specified, comprising a receptacle for material, a yoke member having pivotal connection with the upper portion of the receptacle, a yoke having pivotal connection with the lower portion of the receptacle, a handle, a graduated plate on the upper end of the handle and having pivotal connection with the upper yoke, a pointer on the upper yoke for moving over the scale, the said handle also having pivotal connection with the lower yoke, a spring extending from the graduated plate to said lower yoke, and means for adjusting the tension of the spring.

873,695. HOOK-ROD-DISCONNECTING DEVICE. DANIEL K. ALLISON and GEORGE F. DE WEIN, Milwaukee, Wis., assignors to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Apr. 7, 1906. Serial No. 310,411.



1. A plate, a rod, a head secured directly to the plate and having an opening therethrough for the rod, a collar surrounding the head, and means carried by said collar for preventing longitudinal movement of the rod with respect to the head.

2. A plate, a rod, a head secured directly to the plate and having a bearing surface between the rod and the plate and extending beyond the rod, a collar surrounding the head and having a bearing surface contacting with the bearing surface of the head, and means for locking the collar to the rod.

3. A member, a rod for operating said member, and a connecting means for securing the rod to the member, comprising a head secured to the member, a collar surrounding said head and means secured to said collar and extending within the outer end of said head for preventing longitudinal movement of the rod with respect to the member.

4. A member, a rod for operating said member, a head secured to the member, and means for preventing longitudinal movement of the rod with respect to the member, said means having a portion thereof rotatable on the head, and a second portion carried by the first mentioned portion and having a bearing surface fitting within the upper end of the head.

5. A member, a rod, a head rigidly secured to the member, and means clamped to the rod bearing upon the outer and inner surfaces of the head.

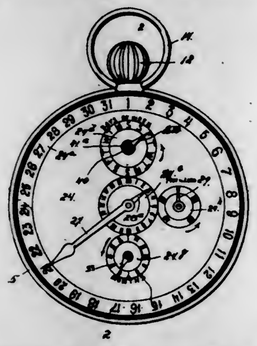
[Claims 6 and 7 not printed in the Gazette.]

873,696. CALENDAR. ANDERS ANDERSON, Broomfield, Colo. Filed Mar. 26, 1903. Serial No. 149,751.

1. In a calendar, the combination with a casing, of mechanism for registering time in days, months and years, a protruding stem connected to actuate said mechanism, and means also actuated from the stem and working in harmony with the other parts, for interrupting the operation of the day registering device at predetermined intervals, without interfering with the working of the other mechanism.

2. In a calendar, the combination with a casing, an arbor journaled in the casing, a main gear fast on said arbor, a sliding plate mounted in said casing and engaging said gear, the sliding plate being provided with a stem protruding from the casing for operating purposes, a spindle, a gear fast on the spindle and arranged to mesh with the main gear, a gear having a sleeve fitting loosely over said spindle, a dial plate through which the spindle

and sleeve protrude, a hand attached to the outer extremity of said sleeve, the days of the week for a fortnight being indicated on a portion of said plate, the arbor also passing through the dial plate, the days of the longest month being indicated on said dial plate, concentric with the arbor, a hand mounted on the arbor and pointing to the days-of-the-month indications, the mechanism being constructed to cause the two hands to move in harmony, the gear and sleeve mounted on the spindle communicating with the spindle by spring tension, an escapment lever normally out of engagement with the gear on the spindle, and means acting on said lever and operating in harmony with the rest of the mechanism, to cause the lever to stop the gear on the spindle at predetermined intervals, said means being actuated from the arbor.



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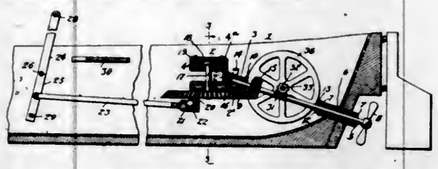
3. In a calendar, the combination with a casing, of an arbor journaled in said casing, a main gear on said arbor, a sliding plate mounted in said casing and engaging said gear, the sliding plate being provided with a stem protruding from the casing for operating purposes, a spindle, a gear fast on the spindle and arranged to mesh with the main gear, a gear having a sleeve fitting loosely over said spindle, a dial plate through which the spindle and sleeve protrude, a hand attached to the outer extremity of said sleeve, the dial plate being provided with days-of-the-week indications arranged concentric with the sleeve, the arbor also passing through the dial plate upon which are days of the month indications arranged concentric with the arbor, a hand mounted on the arbor, pointing to said days of the month indications, the mechanism being constructed to cause the two hands to move in harmony, the gear and sleeve mounted on the spindle being connected with said spindle by spring tension, and means actuated from the arbor for holding the gear on the spindle against movement with the spindle at predetermined intervals.

4. In a calendar, the combination with a casing, of an arbor journaled therein, a gear fast on the arbor, a sliding plate mounted on the said casing and engaging said gear, the sliding plate being provided with a stem protruding from the casing for operating purposes, a spindle, a gear fastened on the spindle and arranged to mesh with the main gear, a gear provided with a sleeve fitting loosely over said spindle, a dial plate through which the spindle and sleeve protrude, a hand attached to the outer extremity of said sleeve, days being indicated on said dial concentric with the sleeve, the gear and sleeve mounted on the spindle being connected with the latter by spring tension, and means actuated from the arbor for holding the gear on the spindle against movement with the latter, at predetermined intervals for the purpose set forth.

5. In a calendar, the combination with a casing, of an arbor journaled therein, a gear fast on the arbor, a sliding plate mounted on the said casing and engaging said gear, the sliding plate being provided with a stem protruding from the casing for operating purposes, a spindle, a gear fast on the spindle and arranged to mesh with the main gear, a gear provided with a sleeve fitting loosely over said spindle, a dial plate through which the spindle and sleeve protrude, a hand attached to the outer extremity of the sleeve, days being indicated on said dial plate, the gear and sleeve mounted on the spindle being connected with said spindle by spring tension, an escapement lever fulcrumed in the casing and normally out of engagement with the gear on the spindle, gears mounted in the casing actuated in harmony with the other parts of the mechanism and acting on the escapement to cause the latter to engage the gear on the spindle and lock it against movement with the spindle at predetermined intervals, days-of-the-month indications being formed on the dial plate concentric with the arbor, year indications being also formed concentric with the days-of-the-month indications, a loose gear mounted on the arbor, a hand mounted on the gear and pointing to the year indications on the dial, a second spindle, a gear fast on the last named spindle, a cog fast on the arbor and engaging the gear of the second spindle every time the arbor makes a revolution, and a cog fast on the second spindle and arranged to engage the loose gear on the arbor every time the second spindle makes a revolution.

[Claim 6 not printed in the Gazette.]

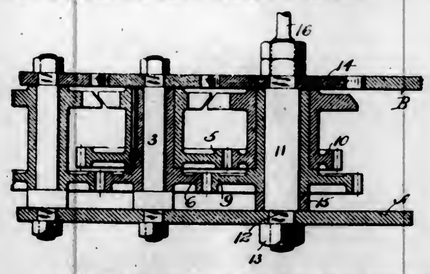
873,697. PROPELLING MECHANISM FOR BOATS. ALBERT J. FELL and JOHN A. MCIVER, Roodhouse, Ill. Filed May 28, 1906. Serial No. 319,220.



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In propelling mechanism for boats, a boat, a frame across the same near the stern provided with vertically arranged bearings and a rearwardly extending lip, a shaft in said bearings the upper end of which is provided with a disk and the lower end with an upwardly facing bevel wheel, a thrust bearing mounted on said lip, a propeller shaft journaled in said thrust bearing and in the stern of the boat, a propeller on the rear end of the propeller shaft and a bevel pinion on the forward end in engagement with said bevel wheel, a fly wheel adapted to be actuated by the propeller shaft, a pitman connected with said bevel wheel, and means for reciprocating the pitman.

873,698. CHANGE-GEARING FOR BRAIDING-MACHINES. HENRY JANSSEN, Wyomissing, Pa., assignor to Textile Machine Works, Incorporated, Wyomissing, Pa. Filed Dec. 4, 1905. Serial No. 290,108.



1. A braiding machine comprising a series of gear studs with meshing four-horn gears thereon an end one of which is a compound gear, and a terminal gear stud removably secured at a distance from said end four-horn stud which is intermediate between the normal distance for a five-horn and the normal distance for a six-horn gear, whereby different terminal horn-gears as described may be interchangeably mounted upon said terminal stud in required relation to said end four-horn gear substantially as set forth.

2. In a braiding machine having a series of gear studs with meshing four-horn gears thereon, and a terminal gear stud removably secured at a distance from the adjacent stud which is intermediate between the normal distance for a five-horn and the normal distance for a six-horn gear, a terminal gear for said terminal stud having bastard teeth adapted to mesh with the adjacent four-horn gear and the number of such teeth being properly proportioned to its carrier engaging horns, substantially as and for the purpose set forth.

3. In a braiding machine having a series of gear studs with meshing four-horn gears thereon, and a terminal gear stud removably secured at a distance from the adjacent stud which is intermediate between the normal distance for a five-horn and the normal distance for a six-horn gear, an idler gear and a terminal horn-gear jointly mounted upon said terminal stud and meshing with said adjacent compound gear substantially as set forth.

873,699. PROCESS OF DETINNING. ELMER A. SPERRY, Brooklyn, N. Y. Filed Apr. 13, 1906. Serial No. 311,560.

1. The method of de-tinning which consists in subjecting the raw material to the persistent action of a mixture of gaseous stannic chlorid and chlorin.

2. The method of de-tinning which consists in re-acting upon dry material to be de-tinned with a mixture of gaseous hydrated and anhydrous stannic chlorid and chlorin.

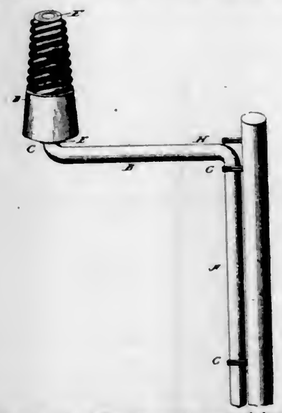
3. The method of de-tinning which consists in subjecting the raw material to the persistent action of a heated mixture of gaseous stannic chlorid and chlorin.

4. The method of de-tinning which consists in subjecting the raw material to the persistent action of a mixture of gaseous stannic chlorid and chlorin at a temperature above the congealing point of stannic chlorid hydrate.

5. The method of de-tinning which consists in subjecting the raw material to the persistent action of a mixture of gaseous stannic chlorid and chlorin and controlling the temperature.

[Claims 6 to 34 not printed in the Gazette.]

873,700. ROTATING BRACKET FOR THE SUSPENSION OF ELECTRIC WIRES. CHARLES E. BUCKBEE, Flushing, Mich. Filed Mar. 2, 1907. Serial No. 360,232.



An oscillating insulator support comprising an arm, a base to which said arm is pivoted, a second arm extending from one end of said first mentioned arm at an angle there to and provided on its opposite extremity with a member extending at an angle to said second arm and forming a pivot, an insulator pin rotatable upon said pivot, means for retaining said insulator pin in position and means for preventing the removal of the first mentioned arm from its pivotal connection with said base, said arms and pivot being integral throughout, substantially as set forth.

DESIGNS.

38,935. SIGNET. CHARLES E. HANSEN, Providence, R. I., assignor to Hansen-Bennett Company, a Corporation of Rhode Island. Filed Oct. 14, 1907. Serial No. 397,453. Term of patent 3½ years.



The ornamental design for a signet, as shown.

38,936. SIGNET. CHARLES E. HANSEN, Providence, R. I., assignor to Hansen-Bennett Company, a Corporation of Rhode Island. Filed Oct. 14, 1907. Serial No. 397,454. Term of patent 3½ years.



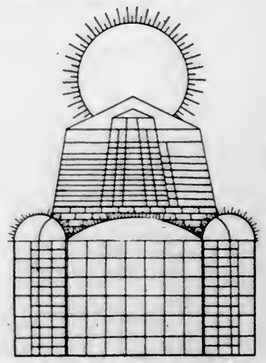
The ornamental design for a signet, as shown.

38,937. BOOK-PLATE. AUGUSTUS ELLSWORTH BACHERT, Robertsdale, Pa. Filed Oct. 1, 1907. Serial No. 395,467. Term of patent 7 years.



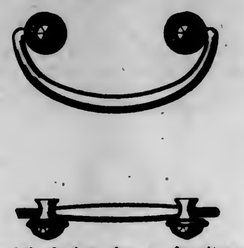
The ornamental design for a book plate as shown.

38,938. CALENDAR-BLANK. JONATHAN LEE KNIGHT, Kansas City, Mo. Filed Aug. 19, 1907. Serial No. 389,304. Term of patent 3½ years.



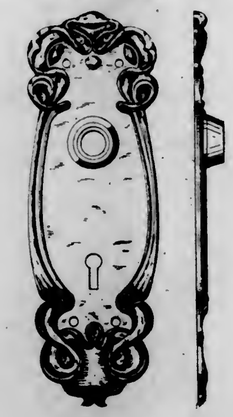
The ornamental design for a calendar blank as shown.

38,939. FURNITURE-HANDLE. LESTER W. BOND, New York, N. Y., assignor to Berlecker & Rowland Manufacturing Company, Waterville, Conn., a Corporation of Connecticut. Filed Oct. 26, 1907. Serial No. 399,384. Term of patent 7 years.



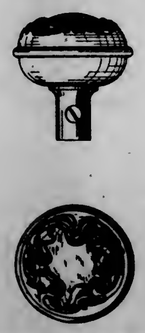
The ornamental design for a furniture handle, as shown.

38,940. LOCK-TRIMMING. EDWARD T. SCHOONMAKER, South Orange, N. J., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Oct. 10, 1907. Serial No. 396,858. Term of patent 14 years.



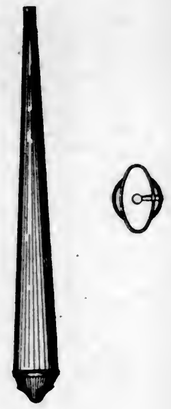
The ornamental design for a lock trimming, as shown.

38,941. DOOR-KNOB. EDWARD T. SCHOONMAKER, South Orange, N. J., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Oct. 10, 1907. Serial No. 396,859. Term of patent 14 years.



The ornamental design for a door knob, as shown.

38,942. PHONOGRAPH-HORN. EDWARD L. AIKEN, Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Oct. 11, 1907. Serial No. 397,031. Term of patent 7 years.



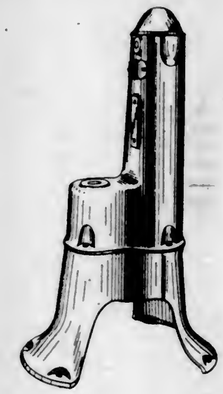
The ornamental design for a phonograph horn as shown.

38,943. PHONOGRAPH-HORN. EDWARD L. AIKEN, Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Oct. 11, 1907. Serial No. 397,032. Term of patent 7 years.



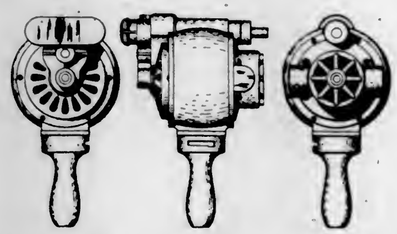
The ornamental design for a phonograph horn as shown.

38,944. CENTRIFUGAL CREAM-SEPARATOR. THOMAS W. MORGAN, Waterloo, Iowa, assignor to Wilbur W. Marsh, Waterloo, Iowa. Filed June 25, 1907. Serial No. 380,838. Term of patent 14 years.



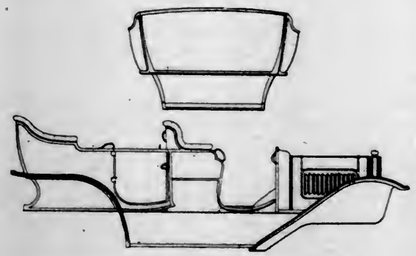
The ornamental design for a frame for a centrifugal cream separator, as shown.

38,945. HOUSING FOR ELECTRIC DRILLS. EDWARD F. SMITH, Cincinnati, Ohio, assignor to The Lektro Manufacturing Company, Cincinnati, Ohio, a Firm. Filed Nov. 2, 1906. Serial No. 341,803. Term of patent 7 years.



The ornamental design for a housing for electric drills as shown.

38,946. AUTOMOBILE-BODY. FRANK S. DAVIS, Detroit, Mich. Filed Mar. 1, 1907. Serial No. 360,112. Term of patent 7 years.



The ornamental design for an automobile body, as shown.

38,947. NECKWEAR FABRIC. LOUIS AUERBACH, New York, N. Y. Filed Sept. 18, 1907. Serial No. 393,565. Term of patent 3½ years.



The ornamental design for neckwear fabric, as shown.

38,948. WOVEN FABRIC. CHARLES H. LANDENBERGER, Philadelphia, Pa. Filed Oct. 2, 1907. Serial No. 395,649. Term of patent 3½ years.



The ornamental design for woven fabric, as shown.

38,949. WOVEN FABRIC. CHARLES H. LANDENBERGER, Philadelphia, Pa. Filed Oct. 9, 1907. Serial No. 396,672. Term of patent 3½ years.



The ornamental design for woven fabric, as shown.

TRADE-MARKS

PUBLISHED DECEMBER 10, 1907.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 3,845. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) TAYLOR & WILLIAMS, Louisville, Ky. Filed May 1, 1905.

YELLOW SPRING

Particular description of goods.—Whisky.

Ser. No. 5,837. (CLASS 54. SEA FOODS.) JASPER WYMAN & SON, Millbridge, Me. Filed May 16, 1905.

ISLAND BRAND

Particular description of goods.—Canned Clams and Canned Sardines.

Ser. No. 9,337. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JACOB CARTUN, Philadelphia, Pa. Filed June 28, 1905. Used ten years.



Particular description of goods.—Whisky, Brandy, Gin, and Cordials.

Ser. No. 10,455. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) NYE & WAIT, Auburn, N. Y. Filed July 17, 1905.

THREAD & THRUM WORKSHOP

Particular description of goods.—Hand-Woven Rugs, Portières, and Cushion-Covers.

Ser. No. 12,875. (CLASS 19. BOATS AND ROAD-VEHICLES.) THE VIQUEOT COMPANY, Long Island City, N. Y. Filed Sept. 21, 1905.

VIQUEOT

Particular description of goods.—Automobiles.

Ser. No. 14,703. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) GRINNELL WILLIS & CO., New York, N. Y. Filed Nov. 16, 1905.

Diamond Hill

Particular description of goods.—Shirtings, Cambrics, and Long-Cloth When Bleached, Finished, or Converted.

Ser. No. 15,391. (CLASS 72. MERCHANDISE NOT OTHERWISE CLASSIFIED.) WHITE CROSS TONSORIAL CO., New York, N. Y. Filed Dec. 13, 1905.

WHITE CROSS
TONSORIAL CO.

Particular description of goods.—Advertising-Signs.

Ser. No. 15,728. (CLASS 68. PUBLICATIONS.) GOOD HOUSEKEEPING CO., New York, N. Y. Filed Dec. 28, 1905.

PURE FOOD
GH

Particular description of goods.—Periodical Magazines.

Ser. No. 16,016. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) HIRAM WHEATON & SONS, New Bedford, Mass. Filed Jan. 8, 1906.

WHEATON'S SODA WATER
ESTABLISHED 1853

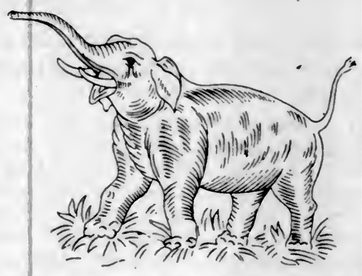
Particular description of goods.—Carbonated Beverages and Syrups for Carbonated Beverages.

Ser. No. 16,017. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) HIRAM WHEATON & SONS, New Bedford, Mass. Filed Jan. 8, 1906.

WHALING CITY PUNCH

Particular description of goods.—A Syrup for Carbonated Beverages.

Ser. No. 17,257. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) EXPOSITION COTTON MILLS, Atlanta, Ga. Filed Feb. 23, 1906.



Particular description of goods.—Sheetings and Drillings.

Ser. No. 18,426. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) WILLIAM A. LEACH, Cincinnati, Ohio. Filed Apr. 2, 1906. Used ten years.



Particular description of goods.—Remedies for Diseases of the Respiratory Organs and Kidneys and Rheumatic Troubles.

Ser. No. 20,228. (CLASS 68. PUBLICATIONS.) EDWARD WESTON, Newark, N. J. Filed June 12, 1906. Used ten years.

ELECTRICITY.

Particular description of goods.—A Magazine or Trade Journal.

Ser. No. 20,512. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) MINARD'S LINIMENT MANUFACTURING COMPANY, Framingham and Boston, Mass. Filed June 23, 1906.



Particular description of goods.—Liniment.

Ser. No. 21,249. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) WILLIAM E. ALLEN, Monroe, La. Filed July 30, 1906.

SLA

Particular description of goods.—Remedies for Headaches and Fevers.

Ser. No. 21,432. (CLASS 8. DETERGENTS.) FREDERICK E. FROST, Worcester, Mass. Filed Aug. 9, 1906.
The hand is black and the spot of a lighter color.



Particular description of goods.—Toilet Soap-Paste.

Ser. No. 22,110. (CLASS 63. MEASURING AND SCIENTIFIC APPARATUS, APPLIANCES, AND INSTRUMENTS.) CARL ZEISS, Jena, Germany. Filed Sept. 14, 1906.

Teleater

Particular description of goods.—Optical Instruments.

Ser. No. 22,947. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) MODEL HEATING COMPANY, Philadelphia, Pa. Filed Oct. 27, 1906. Used ten years.

MODEL

Particular description of goods.—Hot-Water Heaters and Steam-Boilers for Heating Purposes.

Ser. No. 23,084. (CLASS 14. METALS, UNWROUGHT AND PARTLY WROUGHT.) MERCHANT & EVANS COMPANY, Philadelphia, Pa. Filed Nov. 3, 1906.

M & C E

Particular description of goods.—Tin-Plate, Brass, Copper, Sheet-Iron, Lead, Zinc, Mixtures and Alloys of Said Metals, Solder, and Babbitt Metal.

Ser. No. 23,164. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) WENDELL PHARMACAL CO., Syracuse, N. Y. Filed Nov. 7, 1906.

Ambition for Ambitious People

Particular description of goods.—A Remedy for Dyspepsia, Bilious Affections, Headaches, Indigestion, Acidity of the Stomach, Constipation, Gout, Malaria, Rheumatism, Gravel, Gall-Stones, Nervous Debility, Uric Acid, All Affections of the Kidneys and Liver, and Obesity.

Ser. No. 23,474. (CLASS 47. CONFECTIONERY.) CHOOZIT MFG. CO., Chicago, Ill. Filed Nov. 19, 1906.



Particular description of goods.—Chewing-Gum.

Ser. No. 23,686. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) FRANK M. HOYT, Amesbury, Mass. Filed Nov. 30, 1906.



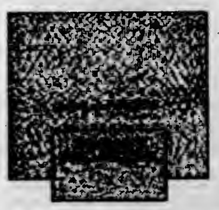
Particular description of goods.—Peanut-Butter.

Ser. No. 23,798. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) GEO D WITT SHOE CO., Lynchburg, Va. Filed Dec. 6, 1906.

Witt's
5.00 SHOE

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 24,236. (CLASS 60. INKS AND INKING MATERIALS.) A. LYMAN WILLISTON, Northampton, Mass. Filed Dec. 22, 1906. Used ten years.



The larger field being yellow and the smaller orange.
Particular description of goods.—Indelible Ink.

Ser. No. 25,773. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) JOHN LURIE, New York, N. Y. Filed Mar. 5, 1907.

The Auto Supply Co.

Particular description of goods.—Automobile-Lamps.

Ser. No. 26,381. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) LYNCHBURG SHOE CO., Lynchburg, Va. Filed Apr. 1, 1907.



Particular description of goods.—Leather Boots and Shoes.

Ser. No. 26,393. (CLASS 4. ABRASIVE AND POLISHING MATERIALS NOT INCLUDED IN CLASSES 8 AND 16.) NORTON COMPANY, Worcester, Mass. Filed Apr. 1, 1907.



Particular description of goods.—Abrasive and Polishing Materials, Tools, Implements, and Machinery, Comprising Abrasive Grains and Powders, Polishing Material and Compounds, Grinding Wheels and Stones, Hones, Whetstones, Tool-Sharpeners, Abrasive Cloth and Paper, and Articles Made of or Containing Abrasive Materials.

Ser. No. 26,685. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) THE NORTHWESTERN ELEVATOR & MILL COMPANY, Mount Vernon, Ohio. Filed Apr. 13, 1907. Used ten years.



Particular description of goods.—Wheat-Flour.

Ser. No. 27,109. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) ELIAS BLOCK & SONS, Cincinnati, Ohio. Filed May 4, 1907. Used ten years.

OAKLEY

Particular description of goods.—Whisky.

Ser. No. 27,538. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) WATSON & MACDONALD, Dayton, Ohio. Filed May 20, 1907.

PLENTIE

Particular description of goods.—Pies and Cakes.

Ser. No. 27,851. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) THE GERMAN AMERICAN COFFEE CO., New York, N. Y. Filed June 3, 1907.



Particular description of goods.—Coffee and Tea.

Ser. No. 27,989. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) JOSIE A. WANOUS, Minneapolis, Minn. Filed June 8, 1907.



Particular description of goods.—Hair-Tonic Compound.

Ser. No. 28,048. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) WM. O. FRAILEY, Lancaster, Pa. Filed June 11, 1907.

BRON-CHU-LINE

Particular description of goods.—Medicinal Preparations for Coughs and Colds.

Ser. No. 28,310. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) CU-CURA COMPANY, Tulsa, Ind. Ter. Filed June 22, 1907.

Cu-Cura

Particular description of goods.—A Hair-Tonic and Medicine for the Treatment of Dandruff and Scalp Diseases.

Ser. No. 28,386. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) ENRICO CIABURRI & FLI., Naples, Italy. Filed June 26, 1907.



Particular description of goods.—Liqueurs.

Ser. No. 28,406. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) WILLIAM B. MOORE, St. Louis, Mo. Filed June 26, 1907.

EROOM

Particular description of goods.—A Remedy for Indigestion and Diseases of the Stomach.

Ser. No. 28,607. (CLASS 65. MUSICAL INSTRUMENTS AND TALKING-MACHINES AND SUPPLIES THEREFOR.) ALONZO WOOKEY, Peoria, Ill. Filed July 5, 1907.

Copley

Particular description of goods.—Pianos, Guitars, and Mandolins.

Ser. No. 28,823. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE CRAWFORD, MCGREGOR & CANBY CO., Dayton, Ohio. Filed July 16, 1907.

TREDSTRATE

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 29,000. (CLASS 2. MINERAL.) JOHN WYATT DAWSON, Ward, W. Va. Filed July 27, 1907.

MOUNTAIN QUEEN

Particular description of goods.—Special Prepared Bituminous Coal.

Ser. No. 29,076. (CLASS 20. CUTLERY NOT INCLUDED IN CLASS 61, AND EDGE-TOOLS.) JOHN REDMOND BOYD, Corpus Christi, Tex. Filed July 27, 1907.

No Cussing

Particular description of goods.—Razors and Pocket-Knives.

Ser. No. 29,224. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE STARNER-COPELAND COMPANY, Columbus, Ohio. Filed Aug. 5, 1907.

FLEXOBALL

Particular description of goods.—Leather Shoes.

Ser. No. 29,343. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) SAMSON IRON WORKS, Stockton, Cal. Filed Aug. 10, 1907.

SAMSON

Particular description of goods.—Gas, Gasolene, and Oil Engines.

Ser. No. 29,366. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) BENJAMIN WEISBERG, Philadelphia, Pa. Filed Aug. 12, 1907.



Particular description of goods.—Neckties.

Ser. No. 29,433. (CLASS 72. MERCHANDISE NOT OTHERWISE CLASSIFIED.) OLIVE HILL FIRE BRICK COMPANY, Olive Hill, Ky. Filed Aug. 16, 1907.



Particular description of goods.—Fire-Brick.

Ser. No. 29,611. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BERT K. BLOCH, New York, N. Y. Filed Aug. 27, 1907.



Particular description of goods.—Whisky.

Ser. No. 29,617. (CLASS 5. ADHESIVES.) NEW MIRACULUM CORPORATION LD., Melbourne, Victoria, Australia. Filed Aug. 27, 1907.





Particular description of goods.—A Preparation for Automatically Stopping Punctures in Rubber Tires.

Ser. No. 29,679. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) JOSEPH F. MCCOY CO., New York, N. Y. Filed Aug. 30, 1907. Used ten years.

IRVING MAN'F'G & TOOL CO.

Particular description of goods.—Pulley-Blocks, Rail-Benders, Cargo-Winches, Derrick-Winches, and Ratchets.

Ser. No. 29,680. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) FARBENFABRIKEN VORM. FRIEDR. BAYER & CO., Elberfeld, Germany. Filed Aug. 30, 1907.

Metakalin

Particular description of goods.—Coal-Tar Dyes, Disinfectants, Preservatives for Food, Photographic Developers, and Chemicals Used in Printing, Dyeing, and Finishing.

Ser. No. 29,681. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) FARBENFABRIKEN VORM. FRIEDR. BAYER & CO., Elberfeld, Germany. Filed Aug. 30, 1907.

Metakalin

Particular description of goods.—A Substitute for Shellac for the Preparation of Furniture-Polish and Spirit Lakes.

Ser. No. 29,749. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE KUNER PICKLE COMPANY, Denver, Colo. Filed Sept. 4, 1907.

k

Particular description of goods.—Canned Fruits, Canned Vegetables, and Pickles.

Ser. No. 29,801. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE PECK JOHNSON COMPANY, Grand Rapids, Mich. Filed Sept. 9, 1907.

OVALACTOL

Particular description of goods.—Medicines Consisting of Blood-Purifiers and Medicinal Tonics.

Ser. No. 29,831. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE AGRICULTURAL REMEDY CO., Topeka, Kans. Filed Sept. 9, 1907.



Particular description of goods.—A Medicine for Scours and Thumps in Swine and Scours in All Kinds of Live Stock.

Ser. No. 29,834. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) THE GUGGENHEIM COMPANY, Cleveland, Ohio. Filed Sept. 9, 1907.



AUTO-WAIST

The automobile being printed in red.

Particular description of goods.—Ladies' Dress-Waists and Shirt-Waists.

Ser. No. 29,838. (CLASS 47. CONFECTIONERY.) THE AUGHINBAUGH CARAMEL COMPANY, Indianapolis, Ind. Filed Sept. 9, 1907.

HONEY DEW CONFECTIONS

Particular description of goods.—Candy.

Ser. No. 29,865. (CLASS 12. MASONRY MATERIALS.) ALBERT E. KIRK, Hoopeston, Ill. Filed Sept. 11, 1907.

CANVASBACK DUCK



ROOFING AND SIDING

Particular description of goods.—Composition Roofing and Siding.

Ser. No. 29,878. (CLASS 4. ABRASIVE AND POLISHING MATERIALS NOT INCLUDED IN CLASSES 8 AND 16.) GEORGE WM. SAMPLE, York, Pa. Filed Sept. 12, 1907.



Particular description of goods.—Abrasive Composition for Cleaning and Polishing Metals, Stone, Pottery-Ware, Woodwork, and Also for Cleansing the Skin.

Ser. No. 29,892. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) EUGENE W. THUMB, Chicago, Ill. Filed Sept. 12, 1907.

SUN SHINE

Particular description of goods.—Polishes and Dressings for Use on Varnished, Lacquered, and Enameled Surfaces to Clean, Restore, and Preserve the Said Surfaces.

Ser. No. 29,937. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) GOODYEAR'S INDIA RUBBER GLOVE M'F'G. CO., Naugatuck, Conn. Filed Sept. 13, 1907. Used ten years.



Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 29,952. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) CLIMAX COFFEE & BAKING POWDER COMPANY, Indianapolis, Ind. Filed Sept. 13, 1907.

CLIMAX

Particular description of goods.—Coffee.

Ser. No. 29,953. (CLASS 35. BELTING, HOSE, AND MACHINERY PACKING.) MOUNT VERNON BELTING COMPANY, Baltimore, Md. Filed Sept. 13, 1907.

MOUNT VERNON

Particular description of goods.—Stitched Canvas Machine-Belting.

Ser. No. 29,955. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) E. MERCK, Darmstadt, Germany. Filed Sept. 13, 1907.

PERHYDROSE

Particular description of goods.—A Solution of Hydrogen Peroxid in Water.

Ser. No. 30,003. (CLASS 1. ANIMAL.) FRANK A. HALL, New York, N. Y. Filed Sept. 16, 1907.

MACHINE PICKED
STEAM AND DRY AIR CLEANED
FEATHERS
NO DUST NO OIL OR NO ANIMAL MATTER
NO QUILLS

Particular description of goods.—Feathers.

Ser. No. 30,015. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) WOONSOCKET RUBBER COMPANY, Woonsocket, R. I. Filed Sept. 16, 1907.



Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 30,039. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) HENRY SOLOMON WELLCOME, London, England. Filed Sept. 18, 1907.

ENULE

Particular description of goods.—Medicinal Suppositories for Human and Veterinary Use, Medicinal Pessaries and Bougies.

Ser. No. 30,047. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) UDOLPHO WOLFE COMPANY, New York, N. Y. Filed Sept. 18,1907.

Schiedam Schnapps Aromatic

UW N.Y.

DE

U. WOLFE

Particular description of goods.—Aromatic Schiedam Schnapps.

Ser. No. 30,052. (CLASS 14. METALS, UNWROUGHT AND PARTLY WROUGHT.) THE SMITH & EGGE MFG. CO., Bridgeport, Conn. Filed Sept. 18, 1907. Used ten years.

GIANT

Particular description of goods.—Alloy of Metal.

Ser. No. 30,128. (CLASS 51. MALT PREPARATIONS NOT OTHERWISE CLASSIFIED.) THE STANDARD BREWERY, Chicago, Ill. Filed Sept. 21, 1907.

Old Export

The letters being dark blue and the shading gold.
Particular description of goods.—Beer.

Ser. No. 30,164. (CLASS 72. MERCHANDISE NOT OTHERWISE CLASSIFIED.) WILLIAM I. EWART, Seattle, Wash. Filed Sept. 23, 1907.

HUMANE

Particular description of goods.—Feed-Bags.

Ser. No. 30,174. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) NOXAL MEDICINE CO., St. Louis, Mo. Filed Sept. 24, 1907.

NOXAL



Particular description of goods.—A Female Tonic, Cough-Syrup, Liniment, Liver-Pills, Healing-Ointment, and Bowel-Remedy.

Ser. No. 30,228. (CLASS 37. PAPER AND PAPER MANUFACTURES NOT OTHERWISE CLASSIFIED.) UNION CARD & PAPER CO., New York, N. Y. Filed Sept. 26, 1907.

AGATE

Particular description of goods.—Bond-Paper and Linen Envelops and Bristol-Boards.

Ser. No. 30,229. (CLASS 37. PAPER AND PAPER MANUFACTURES NOT OTHERWISE CLASSIFIED.) UNION CARD & PAPER CO., New York, N. Y. Filed Sept. 26, 1907.

LINOLIN

Particular description of goods.—Bond-Paper and Bristol-Boards.

Ser. No. 30,309. (CLASS 72. MERCHANDISE NOT OTHERWISE CLASSIFIED.) ROBERT P. BEATTY, Cleveland, Ohio, assignor to The Beatty Stamping Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 30, 1907.

TOURIST

Particular description of goods.—Metallic Garment Hangers.

Ser. No. 30,330. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) REBECCA S. GLOVER, Dorchester, Mass. Filed Oct. 1, 1907.



Particular description of goods.—A Combination of the Extract of Various Herbs and Oils Made Into an Amber-Colored Fluid and Used as a Liquid Liniment or Ointment.

Ser. No. 30,360. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE THOS. MOORE DISTILLING COMPANY, McKeesport, Pa. Filed Oct. 2, 1907. Used ten years.

DOUBLE COPPER DISTILLED PURE RYE WHISKEY Thos. Moore. McKEESPORT PA.

Particular description of goods.—Whisky.

Ser. No. 30,364. (CLASS 54. SEA FOODS.) LORD BROTHERS COMPANY, Portland, Me. Filed Oct. 2, 1907.

SIRLOIN CUT

Particular description of goods.—Boneless Codfish.

Ser. No. 30,383. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) K. SOLOMON & COMPANY, Pittsburg, Pa. Filed Oct. 3, 1907.

"Fluffy Ruffles"

Particular description of goods.—Women's and Girls' Linen, Cotton, Woolen, and Silk Woven Fabric Suits and Skirts and Dress-Waists.

Ser. No. 30,403. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) GEO BORGFELDT & CO., New York, N. Y. Filed Oct. 3, 1907.

CORONET

Particular description of goods.—Rubber Combs.

Ser. No. 30,476. (CLASS 70. STATIONERY NOT OTHERWISE CLASSIFIED.) UNDERWOOD TYPEWRITER COMPANY, New York, N. Y. Filed Oct. 7, 1907.



Particular description of goods.—Stencilling-Machines and Waxed Stencil-Sheets.

Ser. No. 30,478. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) MORSE & ROGERS, New York, N. Y. Filed Oct. 7, 1907.



Particular description of goods.—Leather Boots, Shoes, and Slippers.

Ser. No. 30,486. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JULES PERNOD, Avignon, France. Filed Oct. 8, 1907.



Particular description of goods.—Absinthe.

Ser. No. 30,509. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) CHELLIS-HILLMAN COMPANY, Portland, Me. Filed Oct. 9, 1907.

CHELCO

Particular description of goods.—Metal Closures for Containing Vessels.

Ser. No. 30,523. (CLASS 68. PUBLICATIONS.) CHICAGO HERALD COMPANY, Chicago, Ill. Filed Oct. 10, 1907.

THE SUNDAY RECORD-HERALD.

Particular descriptions of goods.—A Sunday Newspaper.

Ser. No. 30,535. (CLASS 72. MERCHANDISE NOT OTHERWISE CLASSIFIED.) HOCH HAMES CO. INC., Freeland and Hazleton, Pa. Filed Oct. 10, 1907.



Particular description of goods.—Hames.

Ser. No. 30,550. (CLASS 47. CONFECTIONERY.) BORDEN'S CONDENSED MILK COMPANY, Jersey City, N. J., and New York, N. Y. Filed Oct. 11, 1907.

VICTOR

Particular description of goods.—Caramels and Chocolates.

Ser. No. 30,562. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) J. S. ELLIOTT, Newville, Pa. Filed Oct. 12, 1907.

Red Band

The bands being printed in red.
Particular description of goods.—Coffee.

Ser. No. 30,584. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) PACIFIC NOVELTY COMPANY, New York, N. Y. Filed Oct. 12, 1907.

FEATHER WEIGHT

Particular description of goods.—Ladies' Hair-Combs Made of Pyroxylin and Metal.

Ser. No. 30,627. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE DIX MANUFACTURING COMPANY, Lewistown, Pa. Filed Oct. 16, 1907.

DIX

Particular description of goods.—Medicines—Namely, Horse and Cattle Powder, Poultry-Powder, Penetrating Liniment, and Remedy for Colic.

Ser. No. 30,654. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) OLD KENTUCKY MFG. CO., Paducah, Ky. Filed Oct. 18, 1907.



Particular description of goods.—Remedies for Diseases of Live Stock, Hogs, and Poultry.

Ser. No. 30,656. (CLASS 48. DAIRY PRODUCTS.) THE MCELROY BROS. CO., Bridgeport, Conn. Filed Oct. 18, 1907. Used ten years.

THE McELROY BROS. CO.
STRICTLY FANCY

Particular description of goods.—Butter.

Ser. No. 30,657. (CLASS 33. GLASSWARE NOT OTHERWISE CLASSIFIED.) R. E. DIETZ COMPANY, New York, N. Y. Filed Oct. 18, 1907. Used ten years.

DIETZ

Particular description of goods.—Glass Globes and Chimneys for Lamps and Lanterns.

Ser. No. 30,658. (CLASS 64. MEDICAL AND SURGICAL APPARATUS, APPLIANCES, AND INSTRUMENTS.) WILLIAM B. WHITE, Quincy, Mass. Filed Oct. 18, 1907. Used ten years.

WHITE'S
Adjustable Eye Shades.



Particular description of goods.—Adjustable Eye-Shades.

Ser. No. 30,667. (CLASS 19. BOATS AND ROAD-VEHICLES.) THE TURNBULL WAGON COMPANY, Defiance, Ohio. Filed Oct. 19, 1907. Used ten years.

TURNBULL

Particular description of goods.—Farm and Truck Wagons.

Ser. No. 30,669. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE DAVIS CHEMICAL COMPANY, Denver, Colo. Filed Oct. 19, 1907.

Viburnicol

Particular description of goods.—A Uterine Tonic.

Ser. No. 30,673. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) DANNEMILLER COFFEE CO., Brooklyn, N. Y. Filed Oct. 19, 1907. Used ten years.

DANNEMILLERS

Particular description of goods.—Coffees and Teas.

Ser. No. 30,680. (CLASS 17. WOOD MANUFACTURES NOT OTHERWISE CLASSIFIED.) MARKHAM AND ROBERTS, LIMITED, Stafford, England. Filed Oct. 19, 1907.

VIK

Particular description of goods.—Boot and Shoe Heels Made of Wood.

Ser. No. 30,703. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) KAHN MANUFACTURING COMPANY, Mobile, Ala. Filed Oct. 21, 1907.



Particular description of goods.—Overalls.

Ser. No. 30,708. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) MARSHALL FIELD & COMPANY, Chicago, Ill. Filed Oct. 21, 1907.

Ivanhoe

Particular description of goods.—Gloves of Textile Fabrics.

Ser. No. 30,734. (CLASS 65. MUSICAL INSTRUMENTS AND TALKING-MACHINES AND SUPPLIES THEREFOR.) HAWTHORNE & SHEBLE MANUFACTURING COMPANY, Philadelphia, Pa. Filed Oct. 23, 1907.



Particular description of goods.—Records for Talking-Machines.

Ser. No. 30,735. (CLASS 65. MUSICAL INSTRUMENTS AND TALKING-MACHINES AND SUPPLIES THEREFOR.) HAWTHORNE & SHEBLE MANUFACTURING COMPANY, Philadelphia, Pa. Filed Oct. 23, 1907.

STAR

Particular description of goods.—Talking-Machines.

Ser. No. 30,760. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE DAVIS CHEMICAL COMPANY, Denver, Colo. Filed Oct. 24, 1907.

Relax

Particular description of goods.—A Remedy for Constipation, Narrowing or Compression of Localized Parts of the Bowels, Diseases of the Intestines, Disordered Conditions of the Digestive Organs, and Costiveness.

Ser. No. 30,773. (CLASS 47. CONFECTIONERY.) THE INDIANAPOLIS WAREHOUSE COMPANY, Indianapolis, Ind. Filed Oct. 24, 1907.

EIGHT HOUR UNION GUM

Particular description of goods.—Chewing-Gum.

Ser. No. 30,777. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE J. W. JAMES COMPANY, Wheeling, W. Va. Filed Oct. 25, 1907. Used ten years.

DR. JAMES'
"MINIATURE" HEADACHE POWDERS

Particular description of goods.—Powders for the Relief of Headache, Neuralgia, or Pain from Any Cause.

Ser. No. 30,780. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) BLACK DRUG AND CHEMICAL COMPANY, Akron, Ohio. Filed Oct. 25, 1907.

BLACK ★ STAR

Particular description of goods.—Extract of Vanilla, Extract of Lemon, Extract of Orange, Extract of Raspberry, Extract of Bitter Almond, Extract of Pineapple, and Extract of Strawberry.

Ser. No. 30,782. (CLASS 41. KNITTED, NETTED, AND LACE GOODS.) MARYVILLE HOSIERY MILLS, Maryville, Tenn. Filed Oct. 25, 1907.

BANNER

Particular description of goods.—Knitted Hosiery.

Ser. No. 30,784. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) MARY J. DODSON, Houston, Tex. Filed Oct. 25, 1907.



Particular description of goods.—Scalp Food.

Ser. No. 30,802. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ARTHUR M. DOWSLEY, Cando, N. D. Filed Oct. 26, 1907.

SALVATONE

Particular description of goods.—A Proprietary Medicine for Purifying the Blood.

Ser. No. 30,804. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) GEO Q MOON & CO. INC., Binghamton, N. Y. Filed Oct. 26, 1907.



Particular description of goods.—Wheat-Flour.

Ser. No. 30,805. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) HABICHT, BRAUN & CO., Chicago, Ill. Filed Oct. 26, 1907.

"LEMONINE"

Particular description of goods.—Flavoring Compounds.

Ser. No. 30,809. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) NATIONAL INDIA RUBBER COMPANY, Bristol, R. I. Filed Oct. 26, 1907. Used ten years.

NATIONAL

Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 30,815. (CLASS 47. CONFECTIONERY.) SOCIÉTÉ GENERALE SUISSE DE CHOCOLATS, Vevey, Switzerland. Filed Oct. 26, 1907.

GALAPETER

Particular description of goods.—Chocolate.

Ser. No. 30,816. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ALEXANDER ROBERTSON, Roseneath, Scotland. Filed Oct. 26, 1907. Used ten years.

FAIRY

Particular description of goods.—A Medicated Lotion for Human Use.

Ser. No. 30,819. (CLASS 23. HAND-TOOLS NOT OTHERWISE CLASSIFIED.) AMERICAN FORK & HOE COMPANY, Cleveland, Ohio. Filed Oct. 28, 1907.



Particular description of goods.—Agricultural Forks, Rakes, and Hoes.

Ser. No. 30,821. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) J. L. WALKER & CO., Lynn, Mass. Filed Oct. 28, 1907.



Particular description of goods.—Leather Shoes, Slippers, and Sandals.

Ser. No. 30,823. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) BLACK HAWK COFFEE & SPICE COMPANY, Waterloo, Iowa. Filed Oct. 28, 1907.



Particular description of goods.—Coffee.

Ser. No. 30,824. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) BLACK HAWK COFFEE & SPICE COMPANY, Waterloo, Iowa. Filed Oct. 28, 1907.

Dinner Party

Particular description of goods.—Coffee.

Ser. No. 30,833. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) DELMAR DRUG CO., Baltimore, Md. Filed Oct. 28, 1907.



Particular description of goods.—Headache-Tablets.

Ser. No. 30,836. (CLASS 54. SEA FOODS.) INTERNATIONAL FISHERIES CO., Tacoma, Wash. Filed Oct. 28, 1907.



Particular description of goods.—Salt, Dried, Smoked, and Fresh Fish.

Ser. No. 30,837. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) IGMANDI IMPORT COMPANY, New York, N. Y. Filed Oct. 28, 1907.

The King of Laxatives



BOTTLED AT THE SPRINGS

Particular description of goods.—Laxative Mineral Waters.

Ser. No. 30,838. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) HOLLINS SONS & CO., Nashville, Tenn. Filed Oct. 28, 1907.

Principal

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 30,841. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) PAUL HAASE, Boone, Iowa. Filed Oct. 28, 1907.



Particular description of goods.—A Liniment.

Ser. No. 30,850. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) RICE-STIX DRY GOODS COMPANY, St. Louis, Mo. Filed Oct. 29, 1907.



Particular description of goods.—Ladies' Muslin Undergarments.

Ser. No. 30,855. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) CORN PRODUCTS MANUFACTURING COMPANY, Chicago, Ill. Filed Oct. 29, 1907. Used ten years.

BUFFALO

Particular description of goods.—Stock Food.

Ser. No. 30,856. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) CORN PRODUCTS MANUFACTURING COMPANY, Chicago, Ill. Filed Oct. 29, 1907.



Particular description of goods.—Stock Food.

Ser. No. 30,884. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ELIAS MOLLOFF, St. Louis, Mo. Filed Oct. 30, 1907.



Particular description of goods.—Remedy for Eruptions on the Face and Body Caused by Impure Blood.

Ser. No. 30,891. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) ROSS W. WEIR & COMPANY, New York, N. Y. Filed Oct. 31, 1907.

RED RIBBON

Particular description of goods.—Coffee and Tea.

Ser. No. 30,892. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) ORBON STOVE AND RANGE CO., Belleville, Ill. Filed Oct. 31, 1907.

ORBON

Particular description of goods.—Stoves and Ranges.

Ser. No. 30,895. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) THE OSBORN MFG. CO., Cleveland, Ohio. Filed Oct. 31, 1907.

YR

Particular description of goods.—Wire Brushes.

Ser. No. 30,899. (CLASS 54. SEA FOODS.) INTERNATIONAL FISHERIES CO., Tacoma, Wash. Filed Oct. 31, 1907.

OPERA LUNCH
SLICED SMOKED
HALIBUT
PACKED BY
INTERNATIONAL FISHERIES COMPANY
TACOMA SEATTLE

Particular description of goods.—Smoked Halibut.

Ser. No. 30,902. (CLASS 54. SEA FOODS.) INTERNATIONAL FISHERIES CO., Tacoma, Wash. Filed Oct. 31, 1907.

Epicurean
SLICED SMOKED
HALIBUT
PACKED BY
INTERNATIONAL FISHERIES CO.
TACOMA SEATTLE

Particular description of goods.—Smoked Halibut.

Ser. No. 30,906. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) TIMOTHY A. BRESNAHAN, Lynn, Mass. Filed Nov. 1, 1907.

T.A.B. SHOE

Particular description of goods.—Leather and Canvas Boots and Shoes.

Ser. No. 30,907. (CLASS 41. KNITTED, NETTED, AND LACE GOODS.) JOHN W. SMITH, Chester, Pa. Filed Nov. 1, 1907.

EUTEX

Particular description of goods.—Laces Manufactured of Cotton, Linen, Silk, or other Material and Made by Machinery in Imitation of Hand-Made Lace.

Ser. No. 30,908. (CLASS 54. SEA FOODS.) HAAS, BARUCH & CO., Los Angeles, Cal. Filed Nov. 1, 1907.



Particular description of goods.—Canned Fish.

Ser. No. 30,910. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) JOHN BARTH COMPANY, Milwaukee, Wis. Filed Nov. 1, 1907.



Particular description of goods.—Bitters.

Ser. No. 30,953. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) ELLET-KENDALL SHOE COMPANY, Kansas City, Mo. Filed Nov. 2, 1907. Used ten years.

WORTHMORE

Particular description of goods.—Leather Boots, Shoes, and Leggings.

Ser. No. 30,959. (CLASS 51. MALT PREPARATIONS NOT OTHERWISE CLASSIFIED.) BEADLESTON & WOERZ, New York, N. Y. Filed Nov. 2, 1907.

Particular description of goods.—Beer, Ale, Porter, and Stout.

Ser. No. 30,960. (CLASS 51. MALT PREPARATIONS NOT OTHERWISE CLASSIFIED.) BEADLESTON & WOERZ, New York, N. Y. Filed Nov. 2, 1907.

Particular description of goods.—Beer, Ale, Porter, and Stout.

Ser. No. 30,961. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE MUTUAL DRUG COMPANY, Cleveland, Ohio. Filed Nov. 2, 1907.

ZOLAX

Particular description of goods.—Laxative and Cathartic Medicines.

Ser. No. 30,962. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) ERY SHOE CO., INC., Lititz, Pa. Filed Nov. 2, 1907.

BABY MINE

Particular description of goods.—Infants' and Children's Leather Shoes.

Ser. No. 30,969. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) HERBERT L. HERRING, Atlanta, Ga. Filed Nov. 2, 1907.

CAPITOLEUM

Particular description of goods.—Hair-Tonics.

Ser. No. 30,970. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) LOUIS O. LANGWORTHY, Bradford, Pa. Filed Nov. 2, 1907.

Rheostatcode

Particular description of goods.—Choke-Coils.

Ser. No. 30,972. (CLASS 5. ADHESIVES.) SAML. B. BOWEN, Philadelphia, Pa. Filed Nov. 2, 1907. Used ten years.

PECORA

Particular description of goods.—Adhesive Cements.

Ser. No. 30,976. (CLASS 8. DETERGENTS.) JOHN S. HARRIS, New York, N. Y. Filed Nov. 4, 1907.



ST. DENIS

Particular description of goods.—Soap.

Ser. No. 30,978. (CLASS 68. PUBLICATIONS.) POST PUBLISHING COMPANY, Boston, Mass. Filed Nov. 4, 1907.

The Boston Post

Particular description of goods.—A Newspaper Published Daily.

Ser. No. 30,979. (CLASS 68. PUBLICATIONS.) POST PUBLISHING COMPANY, Boston, Mass. Filed Nov. 4, 1907.

The Sunday Post

Particular description of goods.—A Newspaper Published on Sunday.

Ser. No. 30,988. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) GEORGE LISS & CO., New York, N. Y. Filed Nov. 4, 1907.

Highwood

Particular description of goods.—Coffee and Tea.

Ser. No. 30,990. (CLASS 32. FURNITURE AND UPHOLSTERY NOT OTHERWISE CLASSIFIED.) M. A. HUNT & CO., Cincinnati, Ohio; Chattanooga, Tenn.; Louisville, Ky., and Evansville, Ind. Filed Nov. 4, 1907.

ROYAL BLUE

Particular description of goods.—Spring-Beds.

Ser. No. 30,991. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) GEORGE SICHERT, New York, N. Y. Filed Nov. 4, 1907.

PANTAFIT

Particular description of goods.—Trousers.

Ser. No. 30,999. (CLASS 47. CONFECTIONERY.) NATIONAL CANDY COMPANY, St. Louis, Mo. Filed Nov. 4, 1907.

ONE MORE

Particular description of goods.—Candies.

Ser. No. 31,006. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) UNITED STATES RUBBER COMPANY, New Brunswick, N. J. Filed Nov. 4, 1907.

BRIDGE BRAND

Particular description of goods.—Rubber Boots and Shoes.

Ser. No. 31,010. (CLASS 68. PUBLICATIONS.) THE UNITED PUBLISHING CO., Washington, D. C. Filed Nov. 5, 1907.

The Bulletin.

Particular description of goods.—A Newspaper Published Tridaily.

Ser. No. 31,014. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) LEE BROOM & DUSTER COMPANY, Lincoln, Nebr. Filed Nov. 5, 1907.

PROGRESO

Particular description of goods.—Brooms.

Ser. No. 31,015. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) LEE BROOM & DUSTER COMPANY, Lincoln, Nebr. Filed Nov. 5, 1907.

AMERICAN BEAUTY

Particular description of goods.—Brooms.

Ser. No. 31,023. (CLASS 27. RAILWAY EQUIPMENT NOT OTHERWISE CLASSIFIED AND RAILWAY ROLLING-STOCK.) PRESSED STEEL CAR COMPANY, Pittsburg, Pa. Filed Nov. 5, 1907.

RELIANCE

Particular description of goods.—Car-Truck Bolsters.

Ser. No. 31,026. (CLASS 47. CONFECTIONERY.) TOURAINE CONFECTIONERY CO., Boston, Mass. Filed Nov. 5, 1907.



Particular description of goods.—Chocolates.

Ser. No. 31,032. (CLASS 8. DETERGENTS.) THOMAS WILLIAM HENRY, Des Moines, Iowa. Filed Nov. 6, 1907.

H AND H

Particular description of goods.—Detergent Composition Resembling Soap.

Ser. No. 31,037. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) AUGHINBAUGH CANNING CO., Baltimore, Md. Filed Nov. 6, 1907.



Particular description of goods.—Canned Fruits and Vegetables.

Ser. No. 31,054. (CLASS 56. CANES, PARASOLS, AND UMBRELLAS.) ARNOLD SCHIFF & COMPANY, New York, N. Y. Filed Nov. 7, 1907.

Fluffy Ruffles

Particular description of goods.—Umbrellas and Parasols.

Ser. No. 31,062. (CLASS 54. SEA FOODS.) SCHWABACHER BROS. & CO., INC., Seattle, Wash. Filed Nov. 7, 1907.



Particular description of goods.—Canned Fish.

Ser. No. 31,105. (CLASS 11. LEATHER BLACKINGS AND DRESSINGS.) R-N LEATHER DRESSING CO., Saylesville, R. I. Filed Nov. 9, 1907.



Particular description of goods.—Leather-Dressing.

TRADE-MARKS

REGISTERED DECEMBER 10, 1907.

66,494. CERTAIN FOOTWEAR. The Associated Shoe Company, Hartford, Conn., and Boston, Mass.
Filed August 24, 1907. Serial No. 29,558. PUBLISHED OCTOBER 8, 1907.

66,495. LEATHER SHOES. Bentley & Olmsted Company, Des Moines, Iowa.
Filed April 13, 1907. Serial No. 26,679. PUBLISHED OCTOBER 8, 1907.

66,496. RAZORS. Henry Berkele, New York, N. Y.
Filed August 10, 1907. Serial No. 29,341. PUBLISHED OCTOBER 8, 1907.

66,497. CERTAIN MEDICINES. Boericke & Tafel, Philadelphia, Pa.
Filed July 30, 1907. Serial No. 29,117. PUBLISHED OCTOBER 8, 1907.

66,498. CERTAIN REMEDY. The Burlingame Chemical Co., Los Angeles, Cal.
Filed March 14, 1906. Serial No. 17,828. PUBLISHED OCTOBER 8, 1907.

66,499. STOMACH-BITTERS. Charles Jacquin et Cie. Inc., New York, N. Y.
Filed June 2, 1905. Serial No. 7,242. PUBLISHED OCTOBER 8, 1907.

66,500. ORANGE BITTERS. Charles Jacquin et Cie. Inc., New York, N. Y.
Filed June 2, 1905. Serial No. 7,249. PUBLISHED OCTOBER 8, 1907.

66,501. MAGAZINE ISSUED WEEKLY. The Class Journal Co., New York, N. Y.
Filed August 28, 1907. Serial No. 29,627. PUBLISHED OCTOBER 8, 1907.

66,502. CERTAIN FUEL. Coalite Limited, London, England.
Filed February 19, 1907. Serial No. 25,413. PUBLISHED OCTOBER 8, 1907.

66,503. LEATHER BOOTS AND SHOES. Cosby Shoe Co. Incorporated, Lynchburg, Va.
Filed August 8, 1907. Serial No. 29,302. PUBLISHED OCTOBER 8, 1907.

66,504. CERTAIN MEDICINES. The Davis Chemical Company, Denver, Colo.
Filed July 31, 1907. Serial No. 29,131. PUBLISHED OCTOBER 8, 1907.

66,505. CERTAIN METAL ARTICLES. Alfred Dewsbury, Walsall, England.
Filed July 30, 1907. Serial No. 29,104. PUBLISHED OCTOBER 8, 1907.

66,506. CERTAIN MEDICINES. Dr. Rainey Medicine Co., Chicago, Ill.
Filed November 24, 1906. Serial No. 23,567. PUBLISHED FEBRUARY 5, 1907.

66,507. RUBBER HEELS. Dunham Bros., Brattleboro, Vt.
Filed July 9, 1907. Serial No. 28,692. PUBLISHED OCTOBER 8, 1907.

66,508. NEWSPAPER. The Evening Star Newspaper Co., Washington, D. C.
Filed August 1, 1907. Serial No. 29,149. PUBLISHED OCTOBER 8, 1907.

66,509. NEWSPAPER. The Evening Star Newspaper Co., Washington, D. C.
Filed August 1, 1907. Serial No. 29,150. PUBLISHED OCTOBER 8, 1907.

66,510. STORAGE BATTERIES AND STORAGE-BATTERY PLATES. General Storage Battery Co., Boonton, N. J., and New York, N. Y.
Filed August 14, 1907. Serial No. 29,388. PUBLISHED OCTOBER 8, 1907.

66,511. SILK GLOVES. The Gloversville Silk Mills, Gloversville, N. Y.
Filed May 10, 1907. Serial No. 27,278. PUBLISHED OCTOBER 8, 1907.

66,512. REMEDY FOR SLEEPLESSNESS. Samuel Goldberg, Cleveland, Ohio.
Filed July 3, 1907. Serial No. 28,585. PUBLISHED OCTOBER 8, 1907.

66,513. BRASS AND IRON PIPE-FITTINGS. H. Mueller Manufacturing Company, Decatur, Ill.
Filed June 10, 1907. Serial No. 28,028. PUBLISHED OCTOBER 8, 1907.

66,514. REMEDY FOR DISORDERS OF THE STOMACH, LIVER, AND BLOOD. Hall & Cummings, St. Louis, Mo.
Filed August 24, 1907. Serial No. 29,569. PUBLISHED OCTOBER 8, 1907.

66,515. OVERALLS, PANTS, AND DENIM JACKETS. Happ Brothers Company, Macon, Ga.
Filed July 31, 1907. Serial No. 29,134. PUBLISHED OCTOBER 8, 1907.

66,516. FRUIT-BUTTER. Hattie Estelle Harris, Newark, N. J.
Filed August 8, 1907. Serial No. 29,292. PUBLISHED OCTOBER 8, 1907.

66,517. WATERPROOFING-POWDER FOR CEMENT AND CONCRETE. Ideal Concrete Machinery Company, South Bend, Ind.
Filed August 5, 1907. Serial No. 29,241. PUBLISHED OCTOBER 8, 1907.

66,518. LEATHER BOOTS AND SHOES. J. H. Winchell & Co. Inc., Haverhill, Mass.
Filed August 9, 1907. Serial No. 29,319. PUBLISHED OCTOBER 8, 1907.

66,519. CANDIES OF ALL KINDS. Littlefield & Steere Co., Knoxville, Tenn.
Filed May 4, 1907. Serial No. 27,122. PUBLISHED OCTOBER 8, 1907.

66,520. KNITTED SHIRTS, SKIRTS, AND HOSIERY. George Lund, London, England.
Filed August 31, 1905. Serial No. 12,127. PUBLISHED OCTOBER 8, 1907.

66,521. CERTAIN DOG REMEDIES. Polk Miller Drug Co., Richmond, Va.
Filed August 31, 1907. Serial No. 29,709. PUBLISHED OCTOBER 8, 1907.

66,522. TOILET CREAM. Ogden and Shimer, Middletown, N. Y.
Filed September 3, 1907. Serial No. 29,718. PUBLISHED OCTOBER 8, 1907.

66,523. FIREWORKS. Henry J. Pain, New York, N. Y.
Filed December 17, 1906. Serial No. 24,082. PUBLISHED OCTOBER 8, 1907.

66,524. FIREWORKS. Henry J. Pain, New York, N. Y.
Filed December 17, 1906. Serial No. 24,083. PUBLISHED OCTOBER 8, 1907.

66,525. HOSIERY. Paramount Knitting Company, Chicago, Ill.
Filed August 10, 1907. Serial No. 29,337. PUBLISHED OCTOBER 8, 1907.

66,526. BRISTLES. C. SCHMITZ & Co., New York, N. Y.
Filed August 22, 1907. Serial No. 29,524. PUBLISHED OCTOBER 8, 1907.

66,527. SILK AND MUSLIN UNDERSKIRTS. ALEXANDER M. SCHNEIDER, North Manchester, Ind.
Filed August 13, 1907. Serial No. 29,374. PUBLISHED OCTOBER 8, 1907.

66,528. SEWING-MACHINES AND ATTACHMENTS. THE STANDARD SEWING MACHINE COMPANY, Cleveland, Ohio.
Filed August 31, 1907. Serial No. 29,693. PUBLISHED OCTOBER 8, 1907.

66,529. SEWING-MACHINES AND ATTACHMENTS. THE STANDARD SEWING MACHINE COMPANY, Cleveland, Ohio.
Filed August 31, 1907. Serial No. 29,695. PUBLISHED OCTOBER 8, 1907.

66,530. SEWING-MACHINES AND ATTACHMENTS. THE STANDARD SEWING MACHINE COMPANY, Cleveland, Ohio.
Filed August 31, 1907. Serial No. 29,697. PUBLISHED OCTOBER 8, 1907.

66,531. SEWING-MACHINES AND ATTACHMENTS. THE STANDARD SEWING MACHINE COMPANY, Cleveland, Ohio.
Filed August 31, 1907. Serial No. 29,699. PUBLISHED OCTOBER 8, 1907.

66,532. REMEDY FOR COUGHS AND COLDS OF HORSES AND MULES. HENRY E. TURPIN, Haywards, Cal.
Filed August 1, 1907. Serial No. 29,173. PUBLISHED OCTOBER 8, 1907.

66,533. PORTLAND CEMENT. UNION PORTLAND CEMENT COMPANY, Ogden, Utah.
Filed August 5, 1907. Serial No. 29,219. PUBLISHED OCTOBER 8, 1907.

66,534. SHOTGUN, RIFLE, AND PISTOL CARTRIDGES, CAPS, AND PRIMERS. THE UNION METALLIC CARTRIDGE COMPANY, Bridgeport, Conn.
Filed May 9, 1907. Serial No. 27,262. PUBLISHED OCTOBER 8, 1907.

66,535. STICK-FIREWORKS. EDWARD H. WAGNER, New York, N. Y.
Filed August 23, 1907. Serial No. 29,538. PUBLISHED OCTOBER 8, 1907.

66,536. STICK-FIREWORKS. EDWARD H. WAGNER, New York, N. Y.
Filed August 23, 1907. Serial No. 29,539. PUBLISHED OCTOBER 8, 1907.

66,537. STICK-FIREWORKS. EDWARD H. WAGNER, New York, N. Y.
Filed August 23, 1907. Serial No. 29,540. PUBLISHED OCTOBER 8, 1907.

66,538. NEWSPAPERS. THE WASHINGTON POST COMPANY, Washington, D. C.
Filed August 30, 1907. Serial No. 29,687. PUBLISHED OCTOBER 8, 1907.

66,539. NEWSPAPER. THE WASHINGTON TIMES CO., Washington, D. C.
Filed August 1, 1907. Serial No. 29,151. PUBLISHED OCTOBER 8, 1907.

66,540. CANNED CORN AND TOMATOES. WATKINS PACKING CO., Odessa, Del.
Filed July 3, 1907. Serial No. 28,579. PUBLISHED OCTOBER 8, 1907.

66,541. CERTAIN REMEDY. OTTO WICKE, Brooklyn, N. Y.
Filed July 8, 1907. Serial No. 28,640½. PUBLISHED OCTOBER 8, 1907.

66,542. PREPARATION OF CORN AND HONEY. JOHN A. WITT, Chicago, Ill.
Filed August 12, 1907. Serial No. 29,347. PUBLISHED OCTOBER 8, 1907.

66,543. BLEACHED, UNBLEACHED, DYED, AND PRINTED TEXTILE FABRICS. A. G. HYDE & SONS, New York, N. Y.
Filed August 22, 1907. Serial No. 29,519. PUBLISHED OCTOBER 8, 1907.

66,544. EARTHENWARE CLOSET-BOWLS. AMERICAN SANITARY WORKS, New York, N. Y.
Filed July 18, 1907. Serial No. 28,859. PUBLISHED OCTOBER 8, 1907.

66,545. ANIMATED AND MOVING PICTURE APPARATUS. JOS. BIANCHI, Toronto, Ontario, Canada.
Filed April 11, 1907. Serial No. 26,643. PUBLISHED OCTOBER 8, 1907.

66,546. ANIMATED AND MOVING PICTURE APPARATUS. JOS. BIANCHI, Toronto, Ontario, Canada.
Filed April 11, 1907. Serial No. 26,644. PUBLISHED OCTOBER 8, 1907.

66,547. CERTAIN CHEMICAL. CHEMISCHE FABRIK VON HEYDEN AKTIEN-GESELLSCHAFT, Radebeul, near Dresden, Germany.
Filed June 2, 1906. Serial No. 19,991. PUBLISHED OCTOBER 8, 1907.

66,548. SHEETINGS, SHIRTINGS, AND DRILLINGS. CLIFTON MANUFACTURING COMPANY, Clifton, S. C.
Filed July 3, 1907. Serial No. 28,583. PUBLISHED OCTOBER 8, 1907.

66,549. CERTAIN PAPER. GRAHAM PAPER CO., St. Louis, Mo.
Filed May 17, 1907. Serial No. 27,441. PUBLISHED OCTOBER 8, 1907.

66,550. CERTAIN PAPER. GRAHAM PAPER CO., St. Louis Mo.
Filed May 17, 1907. Serial No. 27,442. PUBLISHED OCTOBER 8, 1907.

66,551. CERTAIN PAPER. GRAHAM PAPER CO., St. Louis, Mo.
Filed May 17, 1907. Serial No. 27,445. PUBLISHED OCTOBER 8, 1907.

66,552. CERTAIN PAPER. GRAHAM PAPER CO., St. Louis, Mo.
Filed May 17, 1907. Serial No. 27,449. PUBLISHED OCTOBER 8, 1907.

66,553. CERTAIN PAPER. GRAHAM PAPER CO., St. Louis, Mo.
Filed May 17, 1907. Serial No. 27,453. PUBLISHED OCTOBER 8, 1907.

66,554. CERTAIN PAPER. GRAHAM PAPER CO., St. Louis, Mo.
Filed May 17, 1907. Serial No. 27,457. PUBLISHED OCTOBER 8, 1907.

66,555. CERTAIN PAPER. GRAHAM PAPER CO., St. Louis, Mo.
Filed May 17, 1907. Serial No. 27,459. PUBLISHED OCTOBER 8, 1907.

66,556. PARIS-GREEN. MORRIS HERRMANN & Co., New York, N. Y.
Filed August 29, 1907. Serial No. 29,658. PUBLISHED OCTOBER 8, 1907.

66,557. PARIS-GREEN. MORRIS HERRMANN & Co., New York, N. Y.
Filed August 29, 1907. Serial No. 29,659. PUBLISHED OCTOBER 8, 1907.

66,558. CERTAIN PAINT, VARNISH, AND ENAMEL. THE HOCKADAY PAINT COMPANY, Wichita, Kans.
Filed July 25, 1907. Serial No. 29,025. PUBLISHED OCTOBER 8, 1907.

66,559. WATCHES. MATHEY BROS., MATHEZ & Co., New York, N. Y.
Filed August 22, 1907. Serial No. 29,513. PUBLISHED OCTOBER 8, 1907.

66,560. PRESERVATIVE PAINTS IN LIQUID OR PASTE FORM. CLIFFORD L. MILLER & Co., New York, N. Y.
Filed November 2, 1905. Serial No. 14,203. PUBLISHED OCTOBER 8, 1907.

66,561. COTTON DUCK. MOUNT VERNON-WOODBERRY COTTON DUCK COMPANY, Baltimore, Md.
Filed July 18, 1905. Serial No. 10,496. PUBLISHED OCTOBER 8, 1907.

66,562. CIGARS. JULIUS C. NEWMAN, Cleveland, Ohio.
Filed July 24, 1907. Serial No. 29,015. PUBLISHED OCTOBER 8, 1907

66,563. SOAP. PACIFIC COAST BORAX COMPANY, Oakland, Cal., Chicago, Ill., and New York, N. Y.
Filed January 16, 1907. Serial No. 24,691. PUBLISHED OCTOBER 8, 1907.

66,564. DISINFECTANT MATERIALS. JOHANNES ARTHUR SANDER, Hamburg, Germany.
Filed October 14, 1905. Serial No. 13,604. PUBLISHED OCTOBER 8, 1907.

66,565. WATCHES AND WATCH-MOVEMENTS. BYRON L. STRASBURGER, New York, N. Y.
Filed August 28, 1907. Serial No. 29,651. PUBLISHED OCTOBER 8, 1907.

66,566. PRESERVATIVE AND WATERPROOF PAINT. WILLIAM J. WATSON, Oakland, Cal.
Filed May 18, 1907. Serial No. 27,500. PUBLISHED OCTOBER 8, 1907.

66,567. PREPARATION FOR PROMOTING COMBUSTION. LANCELOT WILKINSON, London, England.
Filed July 9, 1907. Serial No. 28,691. PUBLISHED OCTOBER 8, 1907.

66,568. PAINT AND VARNISH SOLVENTS AND REMOVERS. TOM RUSSELL WYLES, Chicago, Ill.
Filed August 24, 1906. Serial No. 21,735. PUBLISHED OCTOBER 8, 1907.

66,569. COTTON AND WOOLEN PIECE GOODS. DETMER WOOLEN COMPANY, New York, N. Y.
Filed July 2, 1907. Serial No. 28,573. PUBLISHED OCTOBER 8, 1907.

66,570. WINE. GREAT WESTERN WINE CO., Chicago, Ill.
Filed August 19, 1907. Serial No. 29,453. PUBLISHED OCTOBER 8, 1907.

66,571. WINE. GREAT WESTERN WINE CO., Chicago, Ill.
Filed August 19, 1907. Serial No. 29,454. PUBLISHED OCTOBER 8, 1907.

66,572. CHAMPAGNE-WINE. KRUG & Co., Rheims, France.
Filed August 20, 1907. Serial No. 29,486. PUBLISHED OCTOBER 8, 1907.

66,573. CHAMPAGNE WINE. KRUG & Co., Rheims, France.
Filed August 20, 1907. Serial No. 29,487. PUBLISHED OCTOBER 8, 1907.

66,574. WHISKY, BRANDY, AND GIN. B. S. FLERSHEIM MERCANTILE CO., Kansas City, Mo.
Filed August 19, 1907. Serial No. 29,450. PUBLISHED OCTOBER 8, 1907.

66,575. GENEVA. DE NEDERLANDSCHE GIST- & SPIRITUSFABRIEK, Delft, Netherlands.
Filed August 17, 1905. Serial No. 11,727. PUBLISHED OCTOBER 8, 1907.

66,576. RUBBER ERASERS. EBERHARD FABER, New York, N. Y.
Filed August 6, 1907. Serial No. 29,253. PUBLISHED OCTOBER 8, 1907.

66,577. BLACKBERRY AND APRICOT CORDIALS. HANNAH & HOGG, Chicago, Ill.
Filed August 19, 1907. Serial No. 29,463. PUBLISHED OCTOBER 8, 1907.

66,578. LEATHER BOOTS AND SHOES. OSCAR HENRY KRAEGER, New York, N. Y.
Filed January 5, 1907. Serial No. 24,471. PUBLISHED MARCH 19, 1907.

66,579. GIN. P. LOOPUYT & Co., Schiedam, Netherlands.
Filed March 20, 1907. Serial No. 26,109. PUBLISHED OCTOBER 8, 1907.

66,580. WHISKY. JULIUS H. MICHAEL, Detroit, Mich.
Filed August 19, 1907. Serial No. 29,468. PUBLISHED OCTOBER 8, 1907.

66,581. ABSINTHE AND VERMUTH. SOCIÉTÉ ANONYME DE LA GRANDE DISTILLERIE E. CUSENIER FILS AÎNÉ & CIE., Paris, France.
Filed June 7, 1906. Serial No. 20,135. PUBLISHED OCTOBER 8, 1907.

TRADE-MARK CANCELED.

57,324. WHISKY. MARTIN J. BLIGH, Logansport. Ind.
Registered November 13, 1906. Canceled December 3, 1907.

LABELS

REGISTERED DECEMBER 10, 1907.

13,914.—*Title:* "RED BAND." (For Cigars.) C. B. HENSCHEL MFG. CO., Milwaukee, Wis. Filed October 12, 1907.

13,915.—*Title:* "ST. ELMO." (For Cigars.) CHAS. F. KAISER, New York, N. Y. Filed September 19, 1907.

13,916.—*Title:* "PRIZE ELK." (For Cigars.) O. L. SCHWENCKE LITHOGRAPHIC CO., New York, N. Y. Filed October 7, 1907.

13,917.—*Title:* "GREAT AMERICAN." (For Cigars.) O. L. SCHWENCKE LITHOGRAPHIC CO., New York, N. Y. Filed October 7, 1907.

13,918.—*Title:* "PRINCESA." (For Cigars.) O. L. SCHWENCKE LITHOGRAPHIC CO., New York, N. Y. Filed October 7, 1907.

13,919.—*Title:* "ARDMORE BRAND." (For Coffee.) WOOLSON SPICE COMPANY, Toledo, Ohio. Filed November 13, 1907.

13,920.—*Title:* "EMINENCE HIGH PATENT." (For Wheat-Flour.) THE LEAVENWORTH MILLING COMPANY, Leavenworth, Kans. Filed November 6, 1907.

13,921. [WITHDRAWN.]

13,922.—*Title:* "THE PETRISCENT RAT AND MOUSE KILLER." (For a Rat or Mouse Poison.) ELIAS ZAITCHICK and CHARLES COOPER, New York, N. Y. Filed October 15, 1907.

13,923.—*Title:* "THE NATURAL HYGIENIC BUTTON." (For Hose-Supporter Buttons.) THE ECONOMY CORSET COMPANY, Syracuse, N. Y. Filed October 23, 1907.

PRINTS

REGISTERED DECEMBER 10, 1907.

2,172.—*Title:* "THE SWEET HEART OF THE CORN." (For Toasted Corn-Flakes.) TOASTED CORN-FLAKE CO., Battle Creek, Mich. Filed October 19, 1907.

2,173.—*Title:* "WATER MARK OF QUALITY." (For Paper.) L. L. BROWN PAPER COMPANY, Adams, Mass. Filed November 13, 1907.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

GUENIFFET, BENOIT AND NICAULT *v.* WICTORSOHN.

Decided May 15, 1907.

1. INTERFERENCE—PRIORITY—FOREIGN PATENT AS BAR NOT CONSIDERED.

Where the proofs of the junior party to an interference are insufficient to overcome the date of a foreign patent granted to the senior party, the question whether a foreign patent granted to such senior party stands as a bar to the allowance of his United States application will be left for *ex parte* consideration after the termination of the interference.

2. SAME—SAME—CONCEPTION—KNOWLEDGE IN THIS COUNTRY BY FOREIGN INVENTOR.

Mere knowledge of an invention in this country by a foreign inventor or his agent *Held* not equivalent to a conception of the invention in this country.

APPEAL from Examiners-in-Chief.

MACHINE FOR MAKING MOUTHPIECES.

Messrs. A. C. Fraser & Usina for Gueniffet, Benoit and Nicault.

Messrs. Philipp, Sawyer, Rice & Kennedy for Wictorsohn.

MOORE, *Assistant Commissioner, now Acting Commissioner:*

This is an appeal by Gueniffet, Benoit and Nicault from a decision of the Examiners-in-Chief affirming a decision by the Examiner of Interferences and awarding priority of invention to Wictorsohn.

The issue is as follows:

1. The combination of means for fringing one end of mouthpieces and bending tongues of said fringe, with means for rolling up said mouthpieces with the bent tongues extending inwardly.
2. The combination of means for feeding wrapper-tubes with rolled mouthpieces therein with a concave guide and a cylinder co-acting therewith to slightly unroll the mouthpieces.
3. In combination in a cigarette-machine, means for feeding the mouthpiece-paper, means for fringing the same and means for rolling the fringed papers.
4. Means for forming mouthpieces for cigarettes, said means including in combination a hollow casing, a rod arranged to turn in the interior of said casing, and an eccentric portion on said rod forming a nipper for gripping the paper against the inner periphery of the casing by the turning movement of said rod.
5. In a machine for making mouthpieces for cigarettes, the combination of means for producing teeth or serrations at one edge of a piece of paper, and for bending up said teeth, and means for rolling said paper to form a mouthpiece with said teeth projecting into its interior.

The invention relates to automatic mechanism adapted to form from a strip of paper a tubular mouthpiece for a cigarette, across the opening near one end of which extends a series of radial tongues cut from an edge of the strip, whereby the tobacco of the cigarette is prevented from passing into the smoker's mouth.

The parties to the interference are each citizens and residents of foreign countries, and the invention in each case was made abroad.

Wictorsohn filed his application on January 9, 1901. Gueniffet, Benoit & Nicault filed theirs on May 9, 1901. The parties have each secured foreign patents for the invention in controversy, the earliest granted to Wictorsohn being the French patent, No. 301,190, dated September 25, 1900, granted on an application filed June 13, 1900, and the earliest granted to Gueniffet, Benoit & Nicault being a French patent, dated January 26, 1901, on an application filed October 27, 1900. Wictorsohn also filed an application for the same invention in Austria on June 5, 1900, upon which a patent was granted on December 27, 1901.

The lower tribunals awarded priority of invention to Wictorsohn on the ground that Gueniffet, Benoit & Nicault's proofs failed to overcome the date of Wictorsohn's French patent.

One of the main questions urged on appeal relates to the status of Wictorsohn's application in view of the grant of his Austrian patent. It is to be observed that the application was filed here more than seven months after the filing of the Austrian application, upon which a patent was granted December 27, 1901. According to the provisions of section 4887, Revised Statutes, in force at the time this Austrian application was filed and the patent was granted thereon, said patent stood as an absolute bar to the grant of a valid patent on the United States application. However, on March 3, 1903, this statute was amended by extending the period of seven months to twelve months. Upon this state of facts appellant strenuously urges that Wictorsohn's application was either (1) unaffected by the amendment of the law, and was therefore permanently barred from eventuating in a patent, or (2) was revived after having been abandoned, the law not having been amended until more than a year after the existence of the bar created by the grant of the Austrian patent.

In the view which I take of the case, however, it is unnecessary to decide these questions in order to dispose of the question of priority of invention. It is believed that appellants' proofs fail to overcome the date of Wictorsohn's French patent, and as appellants cannot prevail whether their contentions are found to be correct or not the question of the appellee's right to a patent should be left for *ex parte* consideration after the termination of this proceeding.

It is claimed on behalf of appellants that the invention was introduced into this country by Julius N. Jaros, their agent, on September 17, 1900, eight days prior to the date of appellee's French patent, as shown by the testimony of Julius N. Jaros, corroborated as to what he saw in Paris by the testimony of Julien Gueniffet, one of the inventors, and as to what he did and communicated here by the testimony of his brother, Alfred L. Jaros.

It appears that Julius N. Jaros was in Paris from May to September, 1900, and during this time visited the Decouple works a number of times, where appellees were employed, who showed him a machine embodying the issue in controversy. He states that he saw it in operation and that the mechanism was fully explained to him. It further appears that he left Paris for New York, arriving on September 17, 1900, bringing with him a number of cigarettes which had been made with appellee's machine. It appears that after his arrival he said nothing about this machine or the product manufactured by it to any one prior to December, 1900, when he had a conversation with his brother, Alfred L. Jaros. It is unnecessary to consider what was disclosed to the latter at this time, as it is subsequent to the date of Wictorsohn's French patent. Alfred L. Jaros testified that his brother wrote him from Paris in May and June regarding the machine in question; but it does not appear that the mechanism was described in these communications, and they were destroyed before the testimony was taken. Appellants rely solely, therefore, for an introduction of the invention into this country prior to September 25, 1900, upon the knowledge possessed by Julius N. Jaros at the time of his arrival in New York. Assuming that Jaros remembered what he saw in Paris, is mere knowledge either by a foreign inventor or his agent equivalent to a conception of the invention in this country? In view of the following authorities I am of the opinion that it is not: *Brown & Taplin* v. *Birby*, (1891, C. D., 166;) *Gayler* v. *Wilder*, (10 Howard, 477;) *Searls* v. *Bouton*, (12 Fed. Rep., 140;) *Doyle* v. *Spaulding*, (19 Fed. Rep., 744–746;) *Acme Flexible Clasp Co.* v. *Cary Manufacturing Co.*, (96 Fed. Rep., 344;) *Chambers & Mendham* v. *Duncan, Wilson & Lauder*, (1876 C. D., 223.) Moreover, the evidence does not convincingly show that Jaros remembered the construction with sufficient clearness to have constructed the machine or to have imparted information to one skilled in the art sufficient to enable him to construct the same.

The decision of the Examiners-in-Chief is therefore affirmed, and priority of invention is awarded to Wictorsohn.

FIELD *v.* COLMAN.

PATENT INTERFERENCE.

Decided November 20, 1907.

1. INTERFERENCE—MOTION TO DISSOLVE A PROPER ANSWER TO ORDER TO SHOW CAUSE UNDER RULE 114.

A motion to dissolve on the ground of non-patentability of the issue is a proper answer to an order under Rule 114 to show cause why judgment of priority should not be rendered on the record.

2. SAME—MOTIONS TO DISSOLVE AND SHIFT BURDEN OF PROOF—ORDER OF CONSIDERATION.

The consideration of a motion to dissolve alleging non-patentability of the issue should not be postponed until after the determination of a motion to shift the burden of proof, as such practice would result in piecemeal prosecution of the motion to dissolve.

3. SAME—MOTION TO DISSOLVE—INDEFINITENESS OF ISSUE—HOW RAISED.

Vagueness and indefiniteness of the issue are proper questions to raise under allegations of informality or irregularity in the declaration of the interference.

APPEAL on motion.

WARP-DRAWING MACHINE.

Messrs. Geo. L. Roberts & Bro. and *Messrs. Emery & Booth* for Field. (*Messrs. Dodge & Sons* of counsel.)

Mr. L. L. Miller and *Mr. L. S. Bacon* for Colman.

MOORE, *Commissioner:*.

This is an appeal by Colman from a portion of the decision of the Examiner of Interferences transmitting Field's motion to dissolve in so far as the same is based upon the ground of non-patentability of the issue and informality in declaring the interference.

Field has been notified that judgment on the record will be rendered against him for the reason that the date of conception alleged by him in his preliminary statement is subsequent to Colman's filing date, unless good and sufficient cause is shown why such action should not be taken. In response thereto Field filed a motion to dissolve, which has been transmitted in part by the Examiner of Interferences.

Colman contends that an allegation of lack of patentable novelty is not a proper answer to an order under Rule 114 to show cause why judgment of priority should not be rendered, for the reasons (1) that it has no bearing on the question of priority, (2) that it places an unnecessary burden upon the Office and the senior applicant, and (3) that it does not tend to expedite the issue of a patent or to avoid expensive contests and the burden of considering voluminous records. Appellant admits that those grounds of motions to dissolve which are ancillary to the question of priority should be considered, but asserts that where the Office is in possession of undisputed facts upon which to base an award of priority the losing party should not be permitted to question the patentability of the issue broadly any more than any member of the general public.

Similar contentions made in the case of *Papendell* v. *Bunnell* v. *Reizenstein* v. *Gaisman* v. *Gillette* (131 O. G., 362) were held to be without merit. They fail to recognize the fundamental principle that one of the prerequisites of a proper interference proceeding is that it shall be based on a patentable issue. Unless the issue is patentable the interference should never have been declared, and it follows that no judgment of priority should be rendered. In *Oliver* v. *Felbel* (100 O. G. 2384) the Court of Appeals of the District of Columbia said:

> Patentability of the invention or device is a necessary prerequisite to a declaration of interference * * * that there must be an adjudication of patentability, final to all ordinary intents and purposes, before this court can be called upon to determine the right of ownership as between rival claimants, we must regard as the demand of the statute. Otherwise, we would be trying moot causes, which it is not the province of any court of justice under our judicial system to try.

Rules 122 and 114 provide that the question of the patentability of the issue may be raised at the outset of the interference proceeding as one of the questions involved in determining whether the interference should have been declared. Whether an affirmative determination of this question will be followed by an immediate award of priority or by judgment only after the taking of testimony appears to be immaterial to the right of any interferant to raise this question *inter partes*. The time provided for raising these questions is during the thirty days following the approval of the preliminary statements and the throwing open of each party's application to his opponent. Motions raising these questions cannot be intelligently made earlier in the proceeding, and the fact that the preliminary statement also discloses a basis for an immediate award of priority should not militate against this right, for unless the issue is patentable no judgment of priority should be rendered.

Moreover, it is by no means certain that such a judgment would expedite the issue of the patent, inasmuch as the defeated party may appeal from such judgment through the various Patent Office tribunals to the Court of Appeals of the District of Columbia. Appellant asserts that the public is protected against the issue of a patent with improper claims, since the Examiner of Interferences or the Examiners-in-Chief on appeal may call the Commissioner's attention to any statutory bar. That such a procedure would effect a material saving in time or expense over the present practice is seriously doubted.

Colman further objects to the consideration under the above ground of the motion, prior to the determination of a motion to shift the burden of proof, of certain patents issued subsequently to the filing date of Colman's original application, of which the present application has been held a continuation by the Examiner. Action on the motion to shift the burden of proof, however, in accordance with the usual practice has been postponed until the determination of the motion to dissolve. To permit this ground of the motion to dissolve to go over until after the decision on the motion to shift the burden of proof would result in piecemeal prosecution of the motion for dissolution. It is within the province of the Primary Examiner to consider the prior applications of Colman to determine whether they disclose the invention of the issue for the purpose of ascertaining whether the issue is patentable to Colman. Moreover, if the patents fail to show that the issue is unpatentable to Colman they may show it unpatentable to Field and that the interference should be dissolved without a decision on priority.

Colman also appeals from the transmission of the fourth ground of the motion in so far as it alleges informality in the declaration of the interference based upon indefiniteness and vagueness in the language of certain counts of the issue. Vagueness and indefiniteness of the issue have uniformly been held a proper question to raise under informality or irregularity in the declaration of the interference, and it is thought properly so held. (*Woodward* v. *Newton*, 86 O. G., 490; *Goodwin* v. *Smith*, 123 O. G., 998; *Anderson* v. *Vrooman*, 123 O. G., 2975.)

As stated in *Dinkel* v. *D'Olier*, (113 O. G., 2507:)

> It is the policy of the Office to avoid all contentions as to the scope of the issues, and when counts are so vague and indefinite that it is practically impossible to determine their scope such an irregularity has become apparent in the declaration of the interference as to preclude a proper determination of the question of priority.

The decision of the Examiner of Interferences is affirmed

EX PARTE HELBIG.

APPLICATION FOR PATENT.

Decided November 20, 1907.

1. EXAMINERS-IN-CHIEF—DECISION BY TWO MEMBERS.

A decision by two of the Examiners-in-Chief is a decision of the Examiners-in-Chief.

2. SAME—SAME—REHEARING.

A rehearing of an appeal to the Examiners-in-Chief is not necessary merely because one of the Examiners-in-Chief was not present. If the two members are present, the decision is valid. If they disagree, the case may be set for rehearing, as provided in Order No. 1664, (121 O. G., 1983.)

ON PETITION.

MILL FOR GRINDING AND SEPARATING CEMENT PRODUCTS.

Mr. John H. Whipple for the applicant.

MOORE, *Commissioner:*

This is a petition that a decision made by two of the Examiners-in-Chief (the third member not sitting) be held—

> * * * without authority of law and of no effect applicant not having waived his right to the hearing and determination of his appeal which the law gives him—

and that the Examiners-in-Chief be directed to rehear the case.

Section 476 of the Revised Statutes provides that there shall be in the Patent Office three Examiners-in-Chief, and section 482, Revised Statutes, prescribes their duties. The statutes, however, are silent as to what number of the Examiners-in-Chief shall constitute a quorum. In the absence of such a provision it is the practice of this Office to follow the general rule of judicial bodies stated in *Am. and Eng. Enc. of Law*, (vol. 23, p. 590,) as follows:

> A majority of the justices constituting a court are a quorum; and the act or decision of a majority of such quorum is the act or decision of the court.

Said practice is set forth in the following provision of Commissioner's Order No. 1664, (121 O. G., 1983:)

> During the absence of one member of the Board of Examiners-in-Chief the other two members may hear and determine cases and are not required to continue them at the mere request of the parties. Where the two members hearing the case are unable to agree, they may set the case down for rehearing before three members either before or after announcing judgment.

Where, as in the present case, the decision is concurred in by two of the Examiners-in-Chief, the presence or absence of the third member obviously cannot affect the conclusion, as the most that he could do would be to file a dissenting opinion. If the case is heard by only two members and they disagree, the above order provides that "they may set the case down for rehearing before three members;" otherwise the divided opinion must be treated as an affirmance of the decision below. (*Adams* v. *Murphy*, 91 O. G., 2207; *Potter* v. *McIntosh*, 120 O. G., 1823.)

If petitioner is dissatisfied with the conclusion reached in the decision of the Examiners-in-Chief, his remedy is by appeal to the Commissioner under section 4910 of the Revised Statutes.

A decision by two of the Examiners-in-Chief is believed to properly constitute a decision of the Examiners-in-Chief, and the petition is accordingly denied.

L. W. LEVY & CO. *v.* URI.

TRADE-MARK INTERFERENCE.

Decided November 5, 1907.

1. TRADE-MARK—"BROOKWOOD"—NOT GEOGRAPHICAL.

The mark "Brookwood" for whisky *Held* not geographical

2. SAME—APPLICATION—ALLEGATION UNDER TEN-YEAR PROVISO—TECHNICAL MARK.

Where the declaration of an application for the registration of a trade-mark contains the allegations requisite to obtain registration of the mark as a technical mark, it may be registered as such, notwithstanding the fact that other allegations are made sufficient to obtain registration under the ten-year proviso of the Trade-Mark Act, such additional allegations being in the nature of mere surplusage.

3. SAME—ASSIGNMENT OF BUSINESS AND TRADE-MARK AFTER FILING OF APPLICATION.

The assignment of the business with which a trade-mark is used, together with the trade-mark and good-will of the business after the filing of an application for the registration of such mark, does not work an abandonment of the application, but necessitates suitable action under section 10 of the Trade-Mark Act in order that registration may be issued to the assignee.

4. SAME—MISREPRESENTATION ON LABELS—REGISTRATION NOT REFUSED.

The use of the words "Pure Old Rye Whisky" on labels containing the trade-mark "Brookwood" adopted and used for whisky composed of rye and other whiskies *Held* not such deception as would warrant the refusal of registration, there apparently being no actual intent to deceive.

APPEAL from Examiner of Interferences.

TRADE-MARK FOR WHISKY.

Mr. Willis L. Gibson, Mr. Arthur P. Greeley, and *Mr. Francis B. James* for L. W. Levy & Co.

Mr. Arthur E. Wallace for Uri.

MOORE, *Commissioner:*

This is an appeal by Levy & Co. from a decision of the Examiner of Interferences awarding priority of adoption and use to N. M. Uri and holding that the successor of the latter was entitled to register the word "Brookwood" for whisky.

It is clear from the record that the Examiner of Interferences was correct in holding that N. M. Uri was the first to adopt and use the mark, and this holding does not appear to be questioned by appellant. A number of other objections are urged, however, as grounds for refusing registration to appellee. These objections are, first, that the mark is geographical; second, that appellee has not had ten years' exclusive use thereof; third, that appellee has no title to the mark, and, fourth, that registration should be refused to appellee on the ground that by means of statements on his labels he has been guilty of misrepresentation.

In support of appellant's first objection, that the mark is geographical, the only argument advanced is that the Examiner of Trade-Marks raised this objection in the prosecution of appellee's application, in response to which appellee canceled the original declaration and substituted a declaration bringing the mark within the ten-year proviso. The Examiner also made the same objection to appellant's mark, but it was not insisted upon and evidently was withdrawn. If the mark is not geographical in one case it is not in the other. No other reason being given why the mark is regarded as geographical, and as I see no reason why it should be so regarded, it is held that the mark in question is a technical mark.

Since the declaration of N. M. Uri contains the allegations requisite to obtain registration of his mark as a technical mark, it may be registered as such, notwithstanding the fact that other allegations, sufficient to obtain registration under the ten-year proviso, are made, these additional allegations being in the nature of surplusage. Appellee's mark being registrable as a technical mark, it is unnecessary to show that he has had exclusive use of the mark for ten years next preceding the passage of the act of February 20, 1905. This disposes of the second objection raised by appellant.

Upon the question of title to the mark, it appears that N. M. Uri was the owner of the mark at the time the application was filed, but that subsequently the entire business, including the trade-mark, was assigned to N. M. Uri & Company, a corporation. As held by the Examiner of Interferences, such transfer of the trade-mark right does not work an abandonment of the application, but necessitates suitable action under section 10 of the Trade-Mark Act of February 20, 1905, in order that the registration may be issued to the assignee. It is therefore held that the application of N. M. Uri is a proper basis for an award of priority of adoption and use.

The principal objection urged by appellant is that N. M. Uri or N. M. Uri & Company are not entitled to registration because the labels on which the trade-mark was displayed were deceptive.

It seems to be well settled that the courts will refuse injunctive relief to a complainant who in his labels or advertisements has been guilty of misrepresentation, although there is nothing misleading about the mark itself; but in the application of this doctrine a liberal attitude is generally assumed upon the question of what is and what is not a misrepresentation. It has also been held that injunctive relief will not be refused to one who has built up his business in part on misrepresentations where such misrepresentations have been discontinued. (*Moxie Nerve Food Company of New England* v. *Modox Co. et al.*, 153 F. R., 487.) It has been further held by the Court of Appeals of the District of Columbia in the case of *The Schuster Co.* v. *Muller* (126 O. G., 2191) that collateral misrepresentations furnish a sufficient ground for refusing registration. The question presented is therefore one which may be considered in this case.

There is nothing misleading in itself in the mark in controversy; but it appears from the record of appellee that the mark is used on a mixture of rye and Bourbon whiskies with some flavoring and coloring materials, while the labels represent "Brookwood" whisky to be a "Pure Old Rye Whisky." Strictly speaking, a pure rye whisky is a whisky made from rye grain; but in the administration of the internal-revenue laws a rye whisky is regarded as any whisky which is predominantly rye or has a rye flavor, and this is the understanding in the trade; but appellant contends that appellee has not only represented his whisky as a rye whisky, but as a "pure" rye whisky, and hence has clearly been guilty of deception. If a strictly pure rye whisky were a very desirable article which the public or a large number of individuals using whisky were anxious to secure, the contention might be of some weight; but as far as I have been able to ascertain a pure rye whisky is not agreeable to the taste of most users, and but a small amount of it is sold compared with the sale of what has been known as a blended whisky. This tends to indicate

that appellee used the word "pure" on his labels to convey the impression that "Brookwood" whisky was a *pure* whisky, rather than a strictly rye whisky, as no advantage would seem to be gained by creating the latter impression. For these reasons I am convinced that appellee did not use his labels with an actual intent to deceive. In any event I am of the opinion that the deception is not sufficient to warrant the refusal of registration.

The decision of the Examiner of Interferences is affirmed.

L. W. LEVY & COMPANY *v.* URI.

TRADE-MARK INTERFERENCE.

Decided November 25, 1907.

1. TRADE-MARKS—INTERFERENCE—SUBSTITUTION OF ASSIGNEE.

Where an application for registration of a trade-mark which is involved in an interference has been assigned and the assignment recorded in the Patent Office contains a request that the certificate of registration be issued to the assignee, *Held* that the assignee may be substituted for the nominal applicant in the interference proceedings.

2. SAME—SAME—SAME.

Held that the technical relation of plaintiff and defendant does not exist in trade-mark interference proceedings and that the substitution for the applicant of the party to whom the certificate of registration may be issued if the final decision in the interference should be adverse to the opposing party should not be refused even if the courts do not allow the substitution by a defendant of a party defendant.

ON MOTION.

TRADE-MARK FOR WHISKY.

Mr. W. L. Gibson, Mr. A. P. Greeley, and *Mr. F. B. James* for Levy & Co.

Mr. Arthur E. Wallace for Uri.

MOORE, *Commissioner:*

This case comes up on a renewal of the motion of Nathan M. Uri that N. M. Uri & Company, a corporation, be substituted for Nathan M. Uri in the above-entitled interference.

In my decision of November 14, 1907, I stated that the substitution might be permitted if a request for the recording of the assignment which accompanied the former motion were made and the fee for the recording of the assignment were tendered. These conditions have been complied with.

L. W. Levy & Company have renewed their protest to the grant of the motion, on the ground that the case is now in the jurisdiction of the Court of Appeals of the District of Columbina, due to a notice of appeal from my decision of November 5, 1907, having been filed, and also on the ground that Nathan M. Uri is the defendant in the proceeding and that there is no court practice which allows a defendant to substitute a party defendant in a proceeding.

As stated in my decision of November 14, 1907, I am of the opinion that I have jurisdiction to take the requested action, at least until the appeal is perfected.

It is evident that the substitution should not be allowed at this time if the rights of L. W. Levy & Company would be prejudiced by such action; but it is not seen that they would in any way be affected thereby. Section 10 of the Trade-Mark Act of 1905 provides that a mark for the registration of which application has been made and the application for the registration of the same shall be assignable in connection with the good-will of the business in which the mark is used, and section 11 provides that the certificate of registration may be issued to the assignee of the applicant if the assignment be entered of record in the Patent Office. These conditions have been complied with, and if it shall be found that Nathan M. Uri was entitled to registration when he filed his application then a certificate of registration could properly be issued to the assignee. The technical relation of plaintiff and defendant does not exist between these parties, and it is not believed, therefore, that the mere substitution for the applicant of the party to whom this certificate of registration may be issued, should the final decision be adverse to L. W. Levy & Company, should be refused even if the courts do not allow the substitution by a defendant of a party defendant.

It is contended by counsel for L. W. Levy & Company that they should have an opportunity to raise the question of the existence of the alleged corporation or the validity of the transfer from Nathan M. Uri thereto, which they were not enabled to do in this proceeding.

If this contention were well founded, it would necessitate the republication of the mark with a renewed opportunity for opposition or the requirement that an application be filed in the name of N. M. Uri & Company, a corporation, which mark would of course have to be published. It is not believed that under the statute any such proceeding is necessary. The question involved in this interference is the right of the respective parties to registration at the time their applications were filed. As stated above, if such question be finally determined in favor of Nathan M. Uri a certificate of registration can be issued upon his application, though in view of the assignment such certificate will be issued to N. M. Uri & Company, a corporation.

Furthermore, after the certificate of registration shall have been issued L. W. Levy & Company can file an application for the cancelation of the same if they deem that this transfer was such as to render the registration invalid.

The motion is granted.

MILLER *v.* WALLACE.

PATENT INTERFERENCE.

Decided November 15, 1907.

INTERFERENCE—PRELIMINARY STATEMENT—AMENDMENT—MISTAKE OF LAW.

An amendment to a preliminary statement will not be permitted upon the allegation of the moving party that at the time of the declaration of the interference he supposed that the issue was restricted to the machine shown in the application, but that he later learned that the Examiner construed it so broadly as to read on a prior application, where it did not appear that the Examiner had construed the issue except by declaring the interference, and that the Examiner had held, on a motion to shift the burden of proof, that the issue was not readable upon the earlier application. In any event the mistake was one of law and affords no ground for amendment.

APPEAL on motions.

BUTTON-MACHINE.

Messrs. Alexander & Dowell for Miller.

Mr. H. M. Richards and *Messrs. Offield, Towle & Linthicum* for Wallace.

BILLINGS, *Assistant Commissioner:*

This case comes up on appeal by Miller from two decisions of the Examiner of Interferences.

It appears that on September 26, 1907, Miller filed a series of motions, viz: (1) that he be permitted to file an amended preliminary statement; (2) that the burden of proof be shifted to Wallace, the senior party; (3) that he be granted a reasonable time to present a motion to dissolve the interference or that an accompanying motion be transmitted to the Primary Examiner.

The Examiner of Interferences denied these motions and set a limit of his appeal from his decision. Subsequent to the taking of his appeal from this decision Miller brought an amended motion to dissolve, which was denied transmission on the ground that it was not accompanied by a showing of satisfactory reasons for delay in filing the same.

The Examiner of Interferences properly refused to extend the time for filing a motion to dissolve, (*Egly* v. *Schulze*, 117 O. G., 276), and, as no reasons were given in support of the three grounds of dissolution alleged his action in refusing to transmit the motion to dissolve was correct.

From his decision in refusing to shift the burden of proof no appeal lies. (*Raulet and Nicholson* v. *Adams*, 114 O. G., 1827.)

In support of his motion to amend his preliminary statement Miller alleges that at the time of the declaration of the interference he supposed that the issue was restricted to the machine shown in his application involved in this interference and that he made his preliminary statement with reference to that machine, but that he later learned that the Examiner had so broadly construed the issue that it was readable on the construction of his prior application which had been involved in an interference with the application of Wallace.

It does not appear in what way the Examiner has construed the issue except by the declaration of the interference. It is to be noted in this connection that the Examiner of Interferences in denying the motion to shift the burden of proof has held that the issue is not readable on Miller's earlier application.

Without passing on this question applicant's mistake as to the scope of the issue is a mistake of law and affords no ground for granting the motion to amend the preliminary statement.

The second motion to dissolve was not accompanied by a showing of satisfactory reasons for the delay in bringing the same within the time set for bringing such motions, and it was properly refused transmission on that ground.

The decisions of the Examiner of Interferences are affirmed.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 31, 1907.

The Kittredge Company, its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Business Magazine Company, of Knoxville, Tenn., for registration of a trade-mark and a trade-mark registered to The Book-keeper Publishing Company, Limited, of 61 Fort street, Detroit, Mich., and a trade-mark registered to The Kittredge Company, of 800 Broad street, Newark, N. J., and 73 Reade street, New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said The Kittredge Company having been returned undelivered, notice is hereby given to The Kittredge Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE. *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 29, 1907.

Robert George, his assigns or legal representatives, take notice:

An interference has been declared by this Office between an application of The American Shoe Polish Company, of Chicago, Ill., for registration of a trade-mark and a trade-mark, No. 146,682, dated August 16, 1887, registered to Robert George, of Chicago, Ill. The notice of said declaration mailed by the Patent Office in the usual manner to the said Robert George at his known address, Chicago, Ill., has been returned by the Post-Office Department undelivered.

Notice is therefore hereby given to the said Robert George, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., October 26, 1907.

Mayer Sam & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of The Palace Clothing Company, of 709-711 Kansas avenue, Topeka, Kans., for registration of a trade-mark and a trade-mark registered to Mayer Sam & Company, of 24 West One Hundred and Twenty-fifth street, New York, N. Y., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Mayer Sam & Company having been returned undelivered, notice is hereby given to the said Mayer Sam & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.
[BY AUTHORITY OF CONGRESS.]

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Designs	8	No. 38,950 to No. 38,957, inclusive.
Trade-Marks	95	No. 66,582 to No. 66,676, inclusive.
Labels	20	No. 13,924 to No. 13,943, inclusive.
Prints	7	No. 2,174 to No. 2,180, inclusive.
Reissues	2	No. 12,732 to No. 12,733, inclusive.
Total	807	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	4	.....	New Hampshire	1	.....
Alaska, District of	.....	.....	New Jersey	31	3
Arizona Territory	.....	.....	New Mexico Ter't'y	.....	.....
Arkansas	4	.....	New York	113	20
California	15	5	North Carolina	1	.....
Colorado	5	.....	North Dakota	3	.....
Connecticut	14	13	Ohio	40	10
Delaware	2	.....	Oklahoma	1	.....
District of Columbia	4	.....	Oregon	4	2
Florida	.....	.....	Panama	.....	.....
Georgia	4	.....	Pennsylvania	76	5
Hawaii Territory	.....	.....	Philippine Islands	.....	.....
Idaho	2	.....	Rhode Island	9	1
Illinois	71	18	South Carolina	1	.....
Indiana	19	1	South Dakota	1	.....
Iowa	13	2	Tennessee	4	.....
Kansas	8	1	Texas	8	2
Kentucky	2	2	Utah	3	.....
Louisiana	1	.....	Vermont	1	.....
Maine	2	.....	Virginia	3	1
Maryland	9	.....	Washington	2	.....
Massachusetts	44	8	West Virginia	3	.....
Michigan	15	2	Wisconsin	10	4
Minnesota	12	4	Wyoming	.....	.....
Mississippi	1	.....	U. S. Army	.....	.....
Missouri	28	3	U. S. Navy	.....	.....
Montana	5	.....			
Nebraska	6	.....	Total to citizens of the United States	605	107
Nevada	.....	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina	1	.....	Natal	.....	.....
Austria-Hungary	3	.....	Netherlands	.....	.....
Belgium	1	.....	Newfoundland	.....	.....
Brazil	.....	.....	New South Wales	.....	.....
British West Indies	.....	.....	New Zealand	.....	.....
Canada	12	.....	Norway	.....	.....
Cape Colony	.....	.....	Persia	.....	.....
Chile	.....	.....	Queensland	.....	.....
China	.....	.....	Roumania	.....	.....
Costa Rico	.....	.....	Russia	.....	.....
Cuba	.....	.....	Scotland	2	.....
Denmark	.....	.....	South Australia	.....	.....
Ecuador	.....	.....	Spain	.....	.....
England	13	3	Sweden	2	.....
France	4	5	Switzerland	1	.....
Germany	35	6	Transvaal, South Africa	.....	1
Haiti	.....	.....	Victoria	1	.....
Ireland	.....	.....	Western Australia	.....	.....
Italy	2	.....			
Japan	1	.....			
Java	.....	.....	Total to citizens of foreign countries	78	15
Mexico	.....	.....			

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 11, 1907.

The Royal Shoe Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Selz, Schwab & Company, of Monroe and Market streets, Chicago, Ill., for registration of a trade-mark and a trade-mark registered to The Royal Shoe Company, of 290 Devonshire street, Boston, Mass., and the notice of said declaration mailed by the Patent Office in the usual manner to the said The Royal Shoe Company having been returned undelivered, notice is hereby given to the said The Royal Shoe Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

The notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

Attorneys.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 12, 1907.

This Office has been advised by the Secretary of the Interior of the disbarment of the following attorneys from practice before the Department or any Bureau thereof: J. Melvin Alderman Elmira and Thurston, N. Y., November 27, 1907; John J. McGillis, Marinette, Wis., November 27, 1907; Robert J. Strong, Washington, D. C., November 27, 1907; George A. Williams, Treadway, Tenn., November 27, 1907; Edwin D. Brandon, Kingston, N. Y., November 29, 1907.

A. L. POPE,
Acting Chief Clerk.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business December 10, 1907.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Toilet; Signals; Garment-Supporters.	Nov. 26	Sept. 23	613
303	XVII. Linotyping; Printing; Matrix-Making; Nut and Bolt Locks; Clutches.	Nov. 22	Nov. 14	178
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Nov. 20	Oct. 23	270
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Towers; Iron Structures.	Nov. 18	Nov. 8	184
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Measuring Instruments; Wind-Wheels; Engraving.	Nov. 13	Nov. 1	333
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Nov. 13	Oct. 21	261
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Nov. 12	Oct. 18	312
147	XXIX. Coopering; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking-Tools; Woodworking; Fire-Escapes; Ladders.	Nov. 12	Sept. 16	334
172	XXXI. Alcohol; Charcoal and Coke; Ammonia, Water, and Wood Distillation; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Oils, Fats, and Glue; Water Purification; Mineral Oils.	Nov. 11	Oct. 21	231
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Nov. 9	Aug. 15	384
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Nov. 8	Oct. 22	225
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Fishing and Trapping; Stationery; Stone-Working; Educational Appliances.	Nov. 6	Oct. 22	386
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Nov. 6	Oct. 14	241
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electricity, Medical and Surgical; Electric Signaling; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas and Canes.	Nov. 6	Oct. 2	299
167	V. Bookbinding; Harvesters; Jewelry; Music.	Nov. 5	Sept. 9	279
152	XXX. Lamps and Gas-Fittings; Fluid-Pressure Regulators; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Nov. 2	Oct. 11	211
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Nov. 1	Oct. 14	319
332	X. Carriages and Wagons	Oct. 30	Sept. 27	489
327	XVIII. Steam-Engines; Steam-Boilers; Steam-Engine Valves; Steam and Vacuum Pumps; Injectors and Ejectors.	Oct. 30	Sept. 12	258
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Presses; Tobacco; Store-Service; Pneumatics.	Oct. 28	Oct. 14	308
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Oct. 24	Oct. 21	368
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Oct. 22	Oct. 12	354
322	XII. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Oct. 22	Sept. 18	98
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heat-Engine Plants.	Oct. 19	Oct. 5	553

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus; Harness.	Oct. 19	Oct. 2	356
308	XV. Bread, Pastry, and Confection Making; Coating; Laminated Sheets and Fabrics; Fuel; Glass; Hydraulic Lime and Cement; Paper-Making; Paving; Plastics; Plastic Block and Earthenware Apparatus; Plastic Compositions; Photography.	Oct. 18	Sept. 19	642
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Oct. 16	Sept. 13	401
238	XIX. Furnaces; Stoves and Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel.	Oct. 12	Aug. 19	491
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Oct. 12	July 16	529
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Oct. 11	Oct. 9	537
142	IX. Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage; Air and Gas Pumps.	Oct. 7	Sept. 28	274
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Oct. 6	Aug. 10	539
307	XIV. Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal-Ware Making; Tools; Wire-Working; Compound Tools.	Oct. 2	Aug. 8	276
312	VII. Games and Toys; Mechanical Motors; Paper Manufactures; Velocipedes; Optics.	Sept. 28	Sept. 25	364
107	XXXVII. Electricity, Conductors; Electric Lighting; Electricity, General Applications.	Sept. 26	Aug. 1	730
280	XL. Deposit and Collection Receptacles; Special Receptacles and Packages; Check-Controlled Apparatus; Fine Arts; Paper Receptacles; Package and Article Carriers; Wooden Receptacles; Baggage; Lighting-Fixtures; Cloth, Leather, and Rubber Receptacles.	Sept. 25	Aug. 1	830
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Sept. 25	Aug. 1	625
321	XXXIX. Water Distribution; Baths and Closets.	Sept. 11	July 3	841
105	XXVI. Electricity, Generation; Electric Heating and Rheostats; Electric Railways; Motive Power.	Sept. 6	Aug. 2	472
109	XVI. Telegraphy; Telephony	Aug. 28	June 10	670
352	XLI. Railway Draft Appliances; Railway-Ties and Fasteners; Railway-Rails and Joints; Resilient Tires and Wheels.	Aug. 8	July 16	1204

Total number of applications awaiting action 17,769

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	Designs	Dec. 6	Nov. 18	53
	Labels and Prints	.....	.....	....

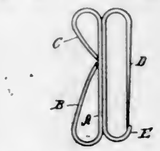
Delivery of Patent.

The patent will be delivered or mailed on the day of its date to the attorney of record, if there be one; if not, to the patentee; or, if the attorney so request, to the patentee or assignee of an interest therein.

PATENTS

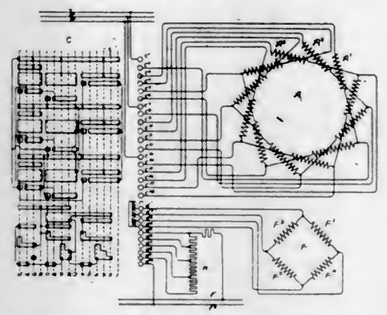
GRANTED DECEMBER 17, 1907.

873,701. EYEGLASS-HOOK. JOHN Q. ADAMS, Philadelphia, Pa., assignor to Thomas J. Skelly, Philadelphia, Pa. Filed June 12, 1906. Serial No. 321,310.



An eye-glass support consisting of a single piece of metal so bent as to form a body, a hook and a guard, the hook being bent inward, its end terminating in close proximity to the body, the guard being also bent inward, its end terminating in contact with the body and in close proximity to the end of the hook, and a pin carried by the body for attaching the device to a suitable object, as specified.

873,702. ALTERNATING-CURRENT MOTOR. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 15, 1904. Serial No. 193,512.



1. In combination, a dynamo-electric machine having a distributed winding on each member, the conductors of each winding being permanently connected in groups, an external circuit connected to each winding, and means for varying the number of poles of both members.

2. In combination, a dynamo-electric machine having distributed armature and field windings, the conductors of each winding being connected in groups, an external circuit connected to each winding, and means for varying the relative connections of said groups to said external circuits without disturbing the connections between said groups.

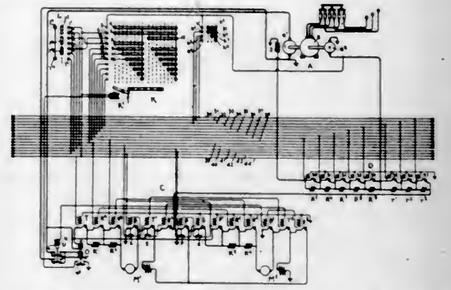
3. In combination, a synchronous dynamo-electric machine having one or more distributed windings on each member, all the conductors of each winding being permanently connected in series, an alternating-current circuit connected to the armature winding, a direct-current circuit connected to the field winding, and means for varying the number of poles of each winding by varying the points of connection of said circuits to said windings.

4. In combination, a synchronous motor for operation with different pole numbers having distributed windings on both members, a source of alternating-current for the armature winding, a source of direct-current for the field winding, means for varying the number of poles of both windings, and means for connecting portions of the armature winding in series and in parallel to the alternating-current source.

5. In combination, a synchronous motor for operation with different pole numbers having distributed windings on both members, a source of alternating-current for the armature winding, a source of direct-current for the field winding, means for varying the number of poles of both windings, and means for varying the connections of the armature winding to vary the impressed alternating voltage per turn.

[Claims 6 to 30 not printed in the Gazette.]

873,703. ELECTRICALLY-PROPELLED CAR OR LOCOMOTIVE. EDWARD H. ANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 5, 1906. Serial No. 310,059.



1. In an electric railway, a source of current supply, a vehicle having a motor-generator adapted to receive current from said source of current supply, series motors for driving said vehicle, and control apparatus for connecting said motors to said generator to cause the motors to operate to propel the vehicle and for connecting the motor armatures to said generator and separately exciting the series field windings of the motors to cause the motors to be driven as braking generators supplying current to the generator of the motor generator.

2. In an electric railway, a source of current supply, a vehicle having a motor-generator adapted to receive current from said source of supply, series motors for propelling said vehicle, and control apparatus adapted to connect said motors to said generator to operate on current supplied by said generator and to connect the motor armatures to said generator in parallel with each other and the series field windings in series with each other to a source of current supply independent of the motor armatures to cause the motors to operate as braking generators supplying the generator with current.

3. In an electric railway, a source of current supply, a vehicle having a motor-generator adapted to receive current from said source of supply, series motors for propelling the vehicle, and control apparatus adapted to vary the excitation of the generator field and arranged to connect the motors to said generator for operation as motors and to connect the motor armatures to said generator and the series field windings in a separately-ex-

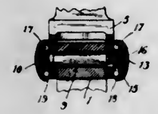
cited current to cause the motors to operate as braking generators supplying energy to said source of current supply.

4. In an electric railway, a source of current supply, a vehicle having a motor-generator adapted to receive current from said source of supply, series motors for propelling the vehicle, control apparatus adapted to vary the excitation of the generator field and arranged to connect the motors to said generator for operation as motors and to connect the motor armatures to said generator and the series field windings in a separately-excited circuit to cause the motors to operate as braking generators supplying energy to said source of current supply, and means for varying the excitation of the motor fields when the motors are operating as braking generators.

5. In an electric railway, a source of current supply, a vehicle having a motor-generator adapted to receive current from said source of supply, an auxiliary source of current supply on said vehicle for exciting the generator field, series motors for propelling said vehicle, a resistance in the generator field circuit, and control apparatus arranged to vary said resistance and also arranged to connect the said motors to the generator armature for operation as motors and to connect the motor armatures to the generator armature and the series field windings to said auxiliary source of current supply to cause the motors to operate as braking generators.

[Claims 6 to 22 not printed in the Gazette.]

873,704. HINGE. SAMUEL S. ARNOLD, Toronto, Ontario, Canada. Filed Mar. 5, 1907. Serial No. 360,655.

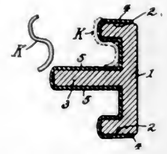


1. A hinge, comprising a central knuckle portion, end knuckle portions adjoining said central knuckle portion and having ball races in their outer faces, a pin non-rotatably secured in said central portion and extending through said knuckle portions and having a ball race in the head thereof to the outside of one of said end portions and opposing the ball race in said end portion, a nut secured to the end of said pin and having a ball race in its under face opposing the ball race in the other of said end portions, and balls inserted between the opposing annular grooves respectively, substantially as described.

2. A hinge, comprising end knuckle portions extending from the leaf portion and having on each of the outer faces thereof an annular groove surrounding the pin hole, said annular grooves having rounded beds and forming annular projections therearound, a central knuckle portion having a pin hole of smaller dimensions than the pin holes in said knuckle portions and a suitable leaf extending therefrom and a key-way in said pin hole, a pin having a key projecting therefrom corresponding to said key-way and fitting therein and an annular groove in the inner face of the head thereof opposing one of the aforesaid annular grooves, a nut screwing on to the end of said pin and having an annular groove in the inner face thereof opposing the other of the said annular grooves in the end knuckles, said grooves in said head and said nut having rounded beds corresponding to the rounded beds of the knuckle grooves, and balls inserted in said opposing groves, substantially as described.

3. In a device of the class described, in combination, end knuckle members extending from a suitable leaf and having projecting annular surfaces on the outer sides thereof extending from annular grooves in the side faces surrounding the pin holes, a central knuckle portion extending from a suitable leaf and having its pin hole of smaller dimensions than the aforesaid pin hole and a key-way longitudinally arranged therein, a pin of corresponding dimensions to said pin hole in the central knuckle portion and having a key projecting therefrom fitting into the aforesaid key-way and the inner face of the head grooved to form the annular projecting faces overlapping the aforesaid annular projecting faces from one of the end knuckles, a nut screwed on to the end of said pin and having a groove surrounding the central hole therein forming annular projecting faces overlapping the aforesaid projecting surfaces on the other of said end knuckles, and balls inserted in the opposing grooves so arranged, substantially as described.

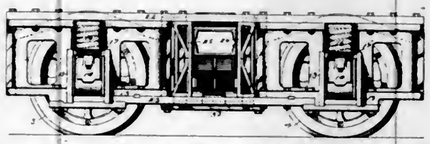
873,705. INSULATING COVERING OR SHEATHING FOR CONTACT-RAIL CONDUCTORS. WILLIAM H. BAKER, Lockport, N. Y., assignor of three-fifths to Jesse Peterson, Lockport, N. Y. Filed Oct. 19, 1905. Serial No. 283,389.



1. The combination with a rail, of an insulating sheath adapted to embrace the latter, a locking piece or key clamping between portions of the rail with the sheath between the rail and said key.

2. An insulating sheath for flanged contact rails formed of hardened fibrous material conforming to a portion of the said rail and adapted to embrace the same, in combination with a metallic locking piece or key adapted to be jammed between the flange covering portions of said sheathing to press the same closely against the said flanges.

873,706. MOTOR-TRUCK. ASA F. BATCHELDER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 28, 1906. Serial No. 319,115.



1. An electric truck comprising a plurality of motor field magnet frames having lengths approximately equal to the width of the truck, means for rigidly connecting said frames together, journal boxes supported in said frames, motor armatures arranged on shafts journaled in said bearings, and traction wheels on said shafts.

2. An electric truck comprising a pair of motor field magnet frames having lengths approximately equal to the width of the truck, means for rigidly connecting said frames together, a swing bolster supported between said frames, bearings carried by said frames, motor armatures arranged on shafts journaled in said bearings, and traction wheels on said shafts.

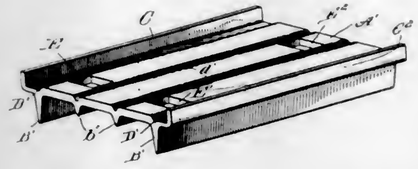
3. In an electric truck, a plurality of field magnet frames having lengths equal to the width of the truck, means for rigidly connecting said frames together, jaws in opposite ends of said frames, journal boxes seated in said jaws, motor armatures arranged in operative relation to said field frames and having their shafts seated in bearings in said journal boxes, and traction wheels on said shafts.

4. In an electric truck, a plurality of field magnet frames, means for rigidly connecting said frames together, jaws in opposite ends of said frames; journal boxes slidingly mounted in said jaws, springs between the journal boxes and frames, axles mounted in bearings in said journal boxes, traction wheels on said axles, and armatures mounted on said axles in operative relation to the field magnet frames.

5. An electric truck comprising a plurality of rectangular metal frames rigidly connected together to form a truck frame, pole pieces on said frames, motor armatures supported in operative relation to said pole pieces and having their shafts journaled in said frames, and traction wheels on said shafts.

[Claims 6 to 14 not printed in the Gazette.]

873,707. TIE-PLATE. EDWIN H. BELL, Chicago, Ill., assignor to The Railroad Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 13, 1906. Serial No. 343,220.



1. A tie plate comprising a flat body portion having a pair of longitudinal ribs projecting from one face near the side edges thereof and shallower intermediate ribs arranged parallel with the said pair of ribs and side flanges of less thickness than the body portion projecting laterally and then upwardly from the body portion to form shoulders adapted to engage with the base flange of a rail.

2. A tie plate having a series of longitudinal grooves formed in its upper face and having side portions of less thickness than the body portion, said side portions extending laterally and then upwardly so as to form shoulders to engage the base flange of a rail, a series of longitudinal ribs arranged on the under side of the plate directly beneath the longitudinal grooves, the intermediate ribs being of less depth than the outside ribs and the outside ribs being arranged at the intersection of the side portions with the main body portion.

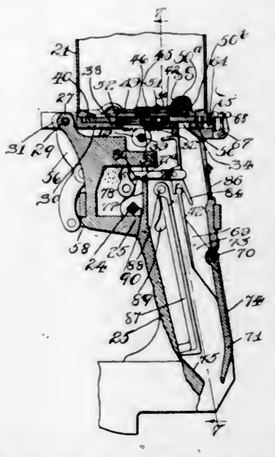
3. The process of manufacturing tie plates which consists in first rolling the metal to form a blank having parallel ribs on its under-surface, parallel grooves in its upper surface arranged in alinement with said ribs, and thin flanges projecting outwardly and upwardly along the side edges thereof, and subsequently shearing off portions of said flanges at planes at right angles to the surface of the blank to form shoulders projecting upwardly from the side edges of the plate.

873,708. CORN-PLANTER. WILSON M. BERING and RALPH L. FORD, Decatur, Ill., assignors to Chambers Bering Quinlan Company, Decatur, Ill., a Corporation of Illinois. Filed May 28, 1906. Serial No. 319,108.

1. In a corn-planter, the combination with cover-wheels, a seed-box, a seed-plate, and check-rower mechanism, of means for driving said seed-plate from said cover-wheels at a relatively slow speed, and mechanism operating directly upon said seed-plate and connected with said check-rower mechanism to impart to said seed-plate an accelerated movement with each throw of the check-rower mechanism.

2. In a corn-planter, the combination with cover-wheels, a seed-box, a seed-plate, check-rower mechanism, and gearing between said seed-plate and said cover-wheels adapted to drive said seed-plate at a relatively slow speed, of a slide-bar in proximity to said seed-plate, devices on said slide-bar adapted to engage said seed-plate, and connections between said slide-bar and said check-rower mechanism adapted to operate said slide-bar to engage said seed-plate and give it an accelerated rotation with each throw of the check-rower mechanism.

3. In a corn-planter, the combination with cover-wheels, a seed-box, and check-rower mechanism, of a seed-plate having ratchet-teeth, a driving gear, pawl mechanism on said driving-gear adapted to engage the ratchet-teeth on said seed-plate and rotate the same as said drive-gear is rotated, gearing between said drive-gear and said cover-wheels adapted to continuously rotate said seed-plate at a relatively slow speed, and mechanism operating on said seed-plate and connected with said check-rower mechanism adapted to give to said seed-plate an accelerated rotation with each throw of the check-rower mechanism.



4. In a corn-planter, the combination with cover-wheels, a seed-box, and check-rower mechanism, of a seed-plate having ratchet-teeth, a driving-gear, pawl mechanism on said driving-gear adapted to engage the ratchet-teeth on said seed-plate and rotate the same as said driving-gear is rotated, gearing between said driving-gear and said cover-wheels adapted to continuously rotate said seed-plate at a relatively slow speed, a slide-bar, connections between said slide-bar and said check-rower mechanism to throw said slide-bar as the check-rower mechanism is operated, and a pawl carried by said slide-bar and adapted to engage said seed-plate to impart to the same an accelerated rotation with each throw of the check-rower mechanism.

5. In a corn-planter, the combination with a runner shank having a sloping shelf at its heel, and check-rower mechanism, of a plunger adapted to be moved along said shelf, a spring-seated lower closure valve pivoted to said runner shank and adapted to be opened by the downward movement of the plunger, connections between said plunger and said check-rower mechanism, an arm on said lower closure valve extending upwards in said runner shank, a bar mounted in said runner shank, and an upper closure valve pivoted on said bar and having a lower extension adapted to engage with the upper end of said arm and to form an intermediate closure as said lower closure valve is operated.

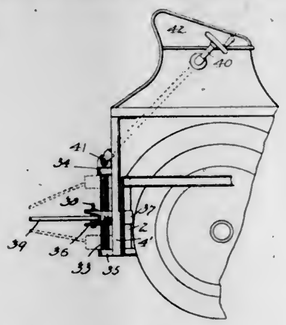
[Claims 6 to 8 not printed in the Gazette.]

873,709. TRACTION-VARYING DEVICE. BERNHARD BESKOW, New York, N. Y. Filed Oct. 2, 1906. Serial No. 337,111.

1. In a tractor, a frame provided with traction wheels, a vertically swinging draw bar for connecting a trailer with said frame, and means for shifting the forward end of the bar either above or below the level of its connection with the trailer.

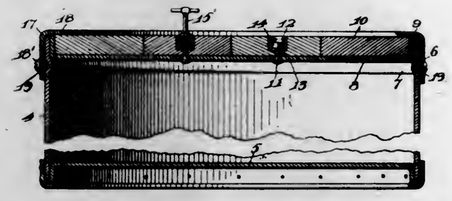
2. In a tractor, a frame provided with traction wheels, a vertically arranged screw-threaded shaft at the rear of said frame, a nut on the shaft and engaging with the rear end of said frame, a vertically swinging draw bar

pivoted to a trailer and having its free end connected with said nut, and means for rotating the shaft to move



the nut and the forward end of the draw bar vertically to shift the weight of the trailer to said traction wheels.

873,710. PACKAGE FOR DISTILLED SPIRITS. EDSON BRADLEY, Tuxedo Park, N. Y., assignor, by mesne assignments, to Standard Distilling and Distributing Company, a Corporation of West Virginia. Filed Mar. 22, 1906. Serial No. 307,493.



1. A package for distilled spirits comprising a metallic cylindrical shell having a fixed metallic bottom, a metallic cylinder-head having a peripheral up-turned flange, a wooden head seated upon said metallic cylinder-head and within the up-turned peripheral flange, bolts whereby the wooden head is secured to the metallic cylinder-head, the said wooden head being provided with countersunk openings wherein the bolts are seated, and an internal revenue stamp whereby the said countersunk openings are sealed, substantially as described

2. A package for distilled spirits comprising a metallic cylindrical shell having a fixed metallic bottom, a metallic cylinder-head having a peripheral up-turned flange, a wooden head seated upon said metallic cylinder-head and within the up-turned peripheral flange, and a chime-hoop having an inwardly turned flange and adapted to be secured to the shell to hold the head in position, substantially as described.

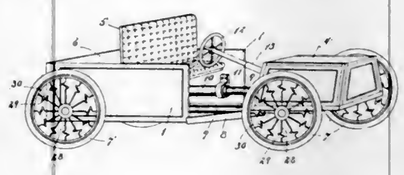
3. A package for distilled spirits comprising a metallic cylindrical shell having a fixed metallic bottom, a metallic cylinder-head having a peripheral up-turned flange, a wooden head seated upon said metallic cylinder-head and within the up-turned peripheral flange, bolts whereby the wooden head is secured to the metallic cylinder-head the said wooden head being provided with countersunk openings wherein the bolts are seated, an internal revenue stamp whereby the said countersunk openings are sealed, and a chime-hoop having an inwardly turned flange and adapted to be secured to the shell to hold the head in position, substantially as described.

4. A package for distilled spirits comprising a metallic cylindrical shell having a fixed metallic bottom, a metallic cylinder-head having a peripheral up-turned flange, a wooden head seated upon said metallic cylinder-head and within the up-turned peripheral flange, a chime-hoop having an inwardly turned flange and provided about its periphery with inwardly projecting screws, the shell having depressions wherewith the inner ends of the said screws are adapted to register, substantially as described.

5. A package for distilled spirits comprising a metallic cylindrical shell having a fixed metallic bottom, a metallic cylinder-head having a peripheral up-turned flange, a wooden head seated upon said metallic cylinder-head and within the up-turned peripheral flange, bolts whereby the wooden head is secured to the metallic cylinder-head, the said wooden head being provided with countersunk openings wherein the bolts are seated, an internal revenue stamp whereby the said countersunk openings are sealed, a chime-hoop having an inwardly turned flange and provided about its periphery with inwardly projecting screws, the shell having depressions wherewith the inner ends of the said screws are adapted to register, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

873,711. VEHICLE. EDWIN C. BRUEN, Brooklyn, N. Y. Filed Oct. 11, 1906. Serial No. 338,355.



1. An automobile body or chassis which can be adjusted to form a closed case of rectangular or other desirable shape and constitute a trunk or inclosing case for all parts of the automobile, comprising an adjustable top section and end section, and longitudinally adjustable slides having the front end of the body secured thereto, whereby said slides may be extended to complete the chassis or retracted when the inclosing case is formed, substantially as described.

2. An automobile body or chassis which can be adjusted to form a closed case of rectangular or other desirable shape and constitute a trunk or inclosing case for all parts of the automobile, comprising an adjustable top section, bottom section and end section, and longitudinally adjustable slides having the front end of the body secured thereto, whereby said slides may be extended to complete the chassis or retracted when the inclosing case is formed, substantially as described.

3. A case of substantially rectangular shape and having telescopic extensible tubular frames mounted longitudinally in brackets on the interior of each side thereof, and having a platform mounted on the outer ends thereof, said case being provided with an adjustable top section and end section, whereby said case can be opened and the tubular frames extended to form the body or chassis of an automobile, or closed to constitute a trunk or inclosing case, substantially as described.

4. A case of substantially rectangular shape and having telescoping extensible tubular frames mounted longitudinally in brackets on the interior of each side thereof and having a platform mounted on the outer ends thereof, said case being provided with an adjustable top section, bottom section and end section, whereby said case can be opened and the tubular frames extended to form the body or chassis of an automobile, or closed to constitute a trunk or inclosing case, substantially as described.

5. The combination with the material of which the frame or body is composed of a strengthening medium comprising interlaced hollow wire or interlaced wire fabric interposed or embedded in said material, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

873,712. TAPE-MEASURE. FRED BUCK, Saginaw, Mich., assignor to The Lufkin Rule Company, Saginaw, Mich., a Corporation of Michigan. Filed Nov. 3, 1906. Serial No. 341,901.



1. In a tape-measure, the combination with a case and revoluble drum for the tape line, of a crank attached to one end of said drum, and a crank-handle for said crank, such handle comprising a stud and a knob borne by said stud and having an aperture extending therethrough which permits said knob to be reciprocated on said stud, the upper or head portion of the stud serving as a stop for the knob when the latter is extended to its uppermost position to constitute an extensible handle.

2. In a tape-measure, the combination with a case and revoluble drum for the tape line, of a crank attached to one end of said drum, and a crank-handle for said crank, such handle comprising a stud and a knob of tapering form throughout borne by said stud, said knob having its end of greater diameter disposed upwardly, and an aperture in said knob which permits said knob limited reciprocable movement longitudinally on said stud, the upper or head portion of the stud serving as a stop for the knob when the latter is extended to its uppermost position to constitute an extensible handle.

3. In a tape-measure, the combination with a case and revoluble drum for the tape line, of a crank attached to one end of said drum, and a crank-handle for said crank, such handle comprising a fixed stud and a rotatable substantially pyriform knob borne by said stud, said knob having its end of greater diameter disposed upwardly, and a portion of the aperture in said knob having a diameter greater than that of the head of said stud, whereby a limited reciprocable movement is permitted said knob longitudinally of said stud, the upper or head portion of the stud serving as a stop for the knob when the latter is extended to its uppermost position to constitute an extensible handle.

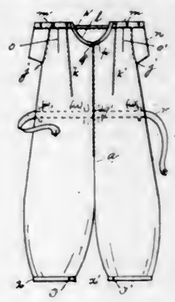
4. The combination with a crank, of a crank-handle therefor, such handle comprising a headed stud and a knob borne thereby and having an aperture which permits said knob limited reciprocable movement longitudinally on said stud, the upper or head portion of the stud serving as a stop for the knob when the latter is extended to its uppermost position to form an extensible handle.

5. The combination with a crank, of a crank-handle therefor, such handle comprising a headed stud and a rotatable knob of tapering form throughout, borne by said stud, said knob having its end of greater diameter disposed upwardly and an aperture which permits said knob limited reciprocable movement longitudinally of said stud, the upper or head portion of the stud serving as a stop for the knob when the latter is extended to its uppermost position to form an extensible handle.

[Claims 6 to 10 not printed in the Gazette.]

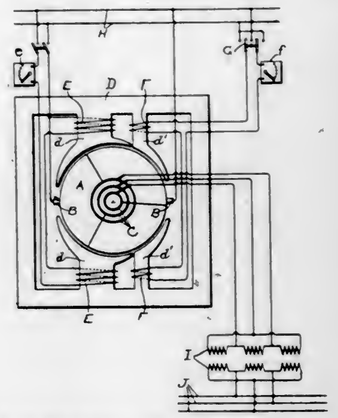
873,713. BATHING-SUIT. JANNETTE BULLIS, New York, N. Y. Filed Dec. 8, 1906. Serial No. 346,919.

A ladies' bathing-suit composed of two similar pieces, secured together on one edge for the major part of their length and on the other edge by short folded flaps, a shoulder band secured to the upper edges of said pieces



and neck band pieces joining the ends of said flaps and shoulder band, substantially as described.

873,714. DYNAMO-ELECTRIC MACHINE. JOSEPH L. BURNHAM, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 1, 1907. Serial No. 365,678.



1. In a dynamo-electric machine, an armature winding connected both to a commutator and to collector-rings, a field magnet having poles divided in planes substantially parallel with the armature axis into two unequal portions, a main field winding surrounding the greater portion of a pole, and a regulating winding surrounding the smaller portion.

2. In a dynamo-electric machine, an armature winding connected both to a commutator and to collector rings, a field magnet having poles divided in planes substantially parallel with the armature axis into two unequal portions, a main field winding surrounding the greater portion of the pole, a regulating winding surrounding the smaller portion, and current-controlling means in circuit with said regulating winding.

3. In a dynamo-electric machine, an armature winding connected both to a commutator and to collector rings, a field magnet having poles divided in planes substantially parallel with the armature axis into two unequal portions, a main field winding surrounding the greater portion of a pole, a regulating winding surrounding the smaller portion, and a rheostat in circuit with said regulating winding.

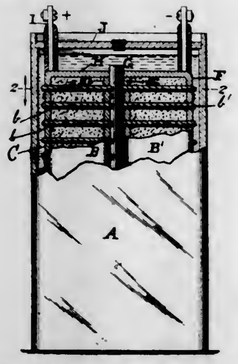
4. In a dynamo-electric machine, an armature winding connected both to a commutator and to collector rings, a field magnet having poles divided in planes substantially

parallel with the armature axis into two unequal portions, a main field winding surrounding the greater portion of a pole, a regulating winding surrounding the smaller portion, and switch contacts in circuit with said regulating winding.

5. In a dynamo-electric machine, an armature winding connected both to a commutator and to collector rings, a field magnet having poles divided in planes substantially parallel with the armature axis into two unequal portions, the smaller portion of one pole facing the smaller portion of an adjacent pole, a main field winding surrounding the greater portion of a pole, and a regulating winding surrounding the smaller portion.

[Claim 6 not printed in the Gazette.]

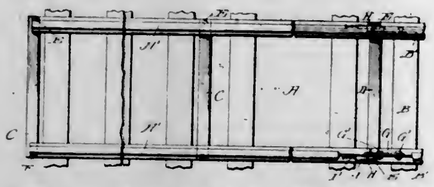
873,715. ELECTRICAL ACCUMULATOR. CHARLES BUSCH, New York, N. Y. Filed June 25, 1907. Serial No. 380,674.



1. In an electrical accumulator, electrodes consisting of metallic boxes, active material contained therein, said boxes enveloping the active material, perforations in opposite walls of the boxes and capillary material strung through the perforations sinuously in said walls and through the active material contained in the boxes.

2. In an electrical acumulator, an element consisting of a metallic envelop formed of a sheet of substantially non-corrosive metal folded so as to form a tube, active material contained within the said tube and the ends of the said envelop folded in so as to inclose the said active material, perforations in the walls of the envelop and a capillary lacing passing through the perforations and uniting the opposite walls in the manner of a sinuous winding.

873,716. PORTABLE SECTIONAL TRACK. BENJAMIN C. BUXTON, Buxton, Iowa. Filed Apr. 8, 1907. Serial No. 367,102.



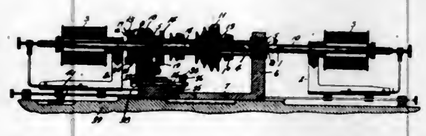
1. The combination with a sectional track, of fish-plates secured to the ends of one section, and pins carried by said fish-plates for engagement with an adjacent section.

2. A sectional track comprising track rails, bars spacing apart rails forming opposite sides of the track, fish-plates carried by one end of each section, and pins carried by said fish-plates, the ends of the sections opposite the fish-plates being provided with openings to receive said pins.

3. A sectional track comprising rails secured on flat bars by bolts, fish-plates secured to one end of said section provided with pins extending through openings in the adjacent section, and keys extending through said pins for the purpose set forth.

4. A sectional track comprising rails mounted on flat bars, having openings in their webs adjacent each end, bolts extending through the base of the rails and the bars, fish-plates secured to one end of the rails of each section by bolts, pins carried by said plates extending through the openings in the adjacent sections and provided with transverse slots, and wedge-shaped keys carried by chains secured to said sections, extending through said pins.

873,717. RECIPROCATING MECHANISM FOR SPOOLING-MACHINES. JOHN G. CALLAN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 8, 1905. Serial No. 259,313.



1. In an apparatus of the character described, the combination of two rotating elements, and means operatively connected between them to rotate one of them at a speed which is alternately higher and lower than the speed of the other of said rotating elements for imparting a reciprocating motion to one of said rotating elements relative to the other.

2. In an apparatus of the character described, the combination of two rotatable elements with means which causes one element to impart a rectilinear reciprocating motion to the other at one speed in one direction and a different speed in the other direction.

3. In an apparatus of the character described, the combination of two axially alining rotatable elements with means which causes one element to impart a rectilinear reciprocating motion to the other at one speed in one direction and a different speed in the other direction.

4. In an apparatus of the character described, the combination of a driving element comprising two rotating members splined together to permit relative reciprocating movement, a driven element, and a power-transmitting means for rotating the driven element at a speed which is alternately higher and lower than that of the driving element whereby the driven element causes relative reciprocating movement of the two members.

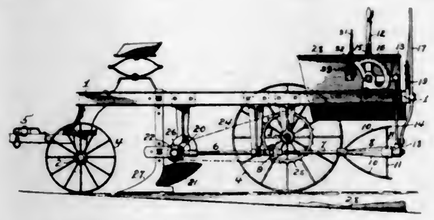
5. In an apparatus of the character described, the combination of two rotating elements, separate coöperating devices connected respectively with the elements to rotate therewith, and an automatically-actuated means which periodically changes the speed of one element relatively to that of the other and causes said coöperating devices to produce a regularly varying rectilinear movement between the elements.

[Claims 6 to 58 not printed in the Gazette.]

873,718. DITCHING AND GRADING MACHINE. OWEN E. CASEY, Nashua, Minn. Filed Sept. 3, 1907. Serial No. 391,158.

1. In a machine of the character described, the combination with a traveling frame, of a dirt-thrower mounted thereon and having an approximately horizontal axis, and means for rapidly rotating said dirt-thrower axially to cause it to throw dirt in a direction laterally from the machine.

2. In a machine of the character described, the combination with a traveling frame, of a dirt-thrower, means for rapidly rotating said dirt-thrower, and an adjustable guard to direct the dirt thrown laterally by the dirt-thrower.



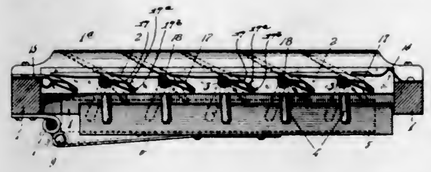
3. In a machine of the character described, the combination with a traveling frame, of a dirt-thrower mounted thereon and adapted to discharge dirt laterally from the machine, means for adjusting the dirt-thrower vertically, and means for rapidly rotating said dirt-thrower.

4. In a machine of the character described, the combination with a traveling frame, of a dirt-thrower mounted thereon and adapted to discharge dirt laterally from the machine, means for moving the dirt-thrower downwardly in contact with the ground, means for adjusting said dirt-thrower laterally, and driving means for the dirt thrower.

5. In a machine of the character described, the combination with a traveling frame, of a dirt-thrower having a general conical form and comprising a series of devices to engage the soil and throw the same laterally from the machine, and means for rapidly rotating said dirt-thrower.

[Claims 6 to 9 not printed in the Gazette.]

873,719. ADJUSTABLE SIEVE. CHARLES CLOSZ, Webster City, Iowa. Filed Jan. 15, 1906. Serial No. 295,871.



1. A sieve made up of a plurality of overlapping slats having, at their overlapping forward edges, finger portions and intervening notches, and which slats, at their intermediate portions, in line with said notches, are formed with primary and secondary dividing ridges, said secondary ridges being located below the intermediate portions of the overlying notches of the overlapping slats, substantially as described.

2. A sieve made up of a plurality of adjustable overlapped slats having, at their overlapping forward edges, longitudinally alined raised finger portions and longitudinally alined intervening notches, and which slats, at their intermediate portions, in line with said notches, are formed with primary and secondary dividing ridges, said secondary ridges being located below the intermediate portions of the overlying notches of overlapping slats, substantially as described.

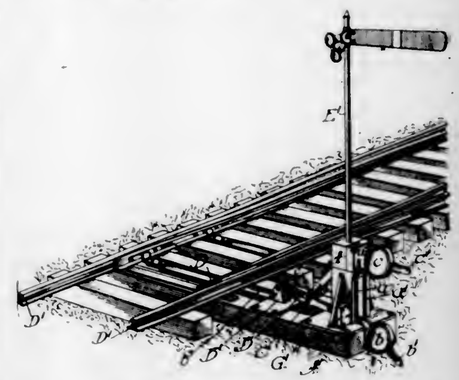
3. A sieve made up of a plurality of overlapped slats having, at their overlapping rear edges, finger portions and intervening notches and having, at their intermediate portions, primary and secondary dividing ridges, said secondary dividing ridges being located below the intermediate portions of the overlying notches of overlapping slats, the said slats further having, at the rear of the said secondary dividing ridges, raised abutments or ribs, substantially as described.

4. A sieve made up of a plurality of adjustable overlapped slats, having, at their overlapping forward edges, longitudinally alined raised finger portions and longitudinally alined intervening notches, and having, at their intermediate portions, primary and secondary dividing ridges, said secondary ridges being located below the intermediate portions of the overlying notches of overlapping slats, said slats further having at the rear of said secondary ridges, raised abutments or ridges, substantially as described.

5. A sieve made up of a plurality of adjustable slats having in their overlapping forward edges notches that diverge in a forwardly direction, at one angle from their rear to their intermediate portions and at an increased angle from their intermediate to their end portions, and the overlapped rear portions of said slats being formed on their upper surfaces with transverse ridges located intermediate of their pivots and rear edge portions, substantially as described.

[Claim 6 not printed in the Gazette.]

873,720. SWITCH-STAND. ARTHUR D. CLOUD, Chicago, Ill., assignor of one-third to Frank M. Patterson and one-third to Fred W. Rizer, Chicago, Ill. Filed Sept. 27, 1906. Serial No. 336,387.



1. In a switch stand and equipment, means for locking open an automatically closing switch, and a magnet circuit having opening and closing devices for releasing said locking means controlled by the passage of a train from a side track upon the main track.

2. In a switch stand and equipment, means for locking open an automatically closing switch, a magnet circuit having opening and closing devices for releasing said locking mechanism controlled by the passage of a train from the side track upon the main track, and means located adjacent to the switch for manually releasing said locking mechanism.

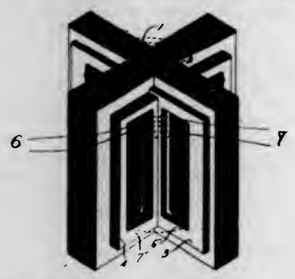
3. In a switch stand and equipment, means for opening and locking the switch open, and controlling means located adjacent to the stand designed to be operated by the last car of a train passing from the side track upon the main track, for releasing said locking means.

4. In a switch stand and equipment, means for opening and locking the switch open, and a magnet circuit for releasing the locking means which is controlled by a magnet circuit, including as a part thereof the rails of the main track adjacent to the switch.

5. In a switch stand and equipment, means operated at the stand for locking open an automatically closing switch, a signal device at the switch stand, means controlled by the passage of a train from the side track upon the main track for releasing the switch locking mechanism, and constructed to release the signal device to shift it to safety, and operative connections between the switch locking means and the signal, constructed and operating to shift the signal device only after the switch is closed.

[Claims 6 to 33 not printed in the Gazette.]

873,721. TRANSFORMER. JESSE COATES, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Feb. 12, 1906. Serial No. 300,594.



1. In a transformer, a core portion comprising a pair of parallel legs one leg having the corner of one end adjacent the other leg beveled off, and a connecting member having one end beveled off and engaging the beveled end of the said one leg, the other end of said member being parallel to and abutting against the side of said other leg.

2. In a magnetic core, a main body of magnetic material laminated in one direction, two other main bodies of magnetic material laminated transversely to the first-mentioned body and located one at each side thereof with the edges of their laminæ abutting against the end laminæ of the first-mentioned main body, the laminæ composing the first-mentioned main body being wider than the sides of the other bodies abutting against it, and one or more bodies of magnetic material composed of laminæ parallel to the laminæ in one of said main bodies located in the corner spaces between the first-mentioned main body and each of the said two other main bodies.

3. A transformer core comprising a central leg made up of the middle leg of a main bundle of E-shaped laminæ and of one leg of each of two main bundles of U-shaped laminæ extending transversely to the E-shaped laminæ from opposite sides of said middle leg and one leg of one or more other bundles of U-shaped laminæ each of which is adjacent and laminated parallel to one of said main bundles.

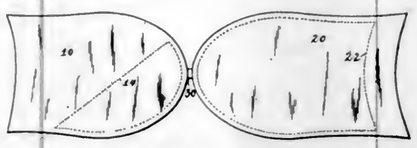
4. The method which consists in forming an E-punching having its middle leg wider than its outside legs, two substantially similar U-punchings one leg of each of which is equal in width to the space between the wide leg and either narrow leg of the E-punching, and the necessary end-members, which consists in cutting from stock equal in width to the length of the legs of the E-punching plus twice the width of a narrow leg of the E-punching a U-shaped punching from the material surrounding each narrow leg of the E-punching and forming the end-members for the U-punchings by cutting a portion off of the free ends of the legs of the U-punchings remote from the center leg of the E-punching and forming the end members for the E-punching out of material cut from the free end of the middle leg of the E-punching.

5. In a transformer, a pair of parallel core portions and a transverse connecting portion, fillets in the corners between said connecting portion and each parallel portion, and windings in the space between said core legs, said windings comprising low potential conductors adjacent each parallel portion and intermediate high potential windings.

873,722. INNERSOLE. HYMAN COHEN, New York, N. Y. Filed Oct. 12, 1906. Serial No. 338,551.

1. A device of the kind described, comprising two hingedly connected pieces one of which consists of a positioning layer, a protecting layer and a wedge and the other of a positioning layer and a wedge, said pieces adapted to be arranged to position the thicker portion of the wedge of one over either the thicker or thinner portion of the wedge of the other.

2. A device of the kind described, comprising one piece consisting of a positioning layer, a protecting layer and a wedge, and another piece consisting of a positioning layer and a wedge and united by a flexible hinge secured to both pieces at their rear.



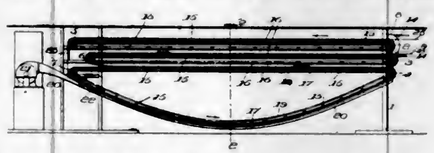
3. A device of the kind described, comprising a plurality of superimposed pieces each of which is provided with a wedge and one of which is movable with relation to the other to cause the thicker part of the wedge of one to be positioned over either the thinner or thicker part of the wedge of the other.

4. A device of the kind described, comprising a plurality of superimposed pieces each provided with a wedge and a flexible hinge connecting said pieces with each other and adapted to permit the pieces to be relatively adjustable to place the thicker part of the wedge of one over either the thicker or thinner part of the wedge of the other.

5. A device of the kind described comprising a plurality of superimposed pieces each of which is provided with a wedge which is thinned both laterally and longitudinally, one of said pieces being reversible to position the thicker part of its wedge over either the thicker or thinner part of the wedge of the other.

[Claims 6 to 13 not printed in the Gazette.]

873,723. DRYING-MACHINE. STANLEY A. COHEN, New York, N. Y. Filed Apr. 18, 1906. Serial No. 312,296.



1. In a drying machine, an endless blanket for receiving and carrying the web, a second endless blanket adapted to be driven in a curved path conforming substantially to the natural curve of the web when supported at each end of said path, means for holding the web by air currents against the second blanket and means for driving both blankets.

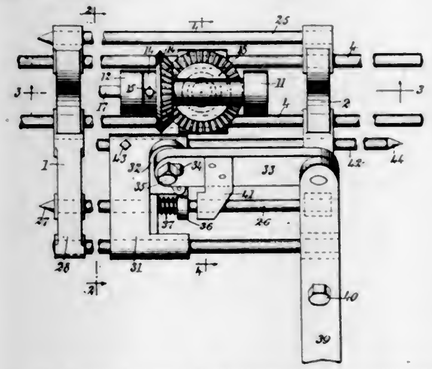
2. In a drying machine, an endless blanket, guides adapted to lead the blanket in a curved path conforming substantially to the natural curve of the web if supported only at each end of said path, means to drive the blanket and means to hold the web by air pressure against the lower surface of the driven blanket so that the web will be carried along by the blanket while being dried by the currents of air.

3. In a drying machine, an endless blanket to carry the web from the device where it has been moistened or coated, a second endless blanket upon which the web is held by currents of air against gravity, and means to drive both blankets.

4. In a dring machine, a plurality of endless blankets adapted to carry and feed the web during drying, stiffening rods transverse of said blankets, guides to support said rods and blankets, and positive means for driving said blankets in unison at the same speed by engagement at both ends of each blanket.

873,724. BORING DEVICE. JOHN W. CONE and FOREST R. MILLER, Barnesboro, Pa. Filed Feb. 26, 1907. Serial No. 359,443.

1. In a device of the class described, in combination, end frames, a carriage, means for mounting said carriage to slide on said end frames, means for mounting a tool on said carriage, means for driving said tool, members carried by one of said end frames and adapted to engage the face of a beam, a clamping bar guided through the opposite end frame, a cross head carrying said clamping bar, a lever for advancing said cross head, means for locking said cross head against a return movement, and means for releasing said locking means by a reverse movement of said lever.



2. In a device of the class described, in combination, end frames, a carriage, means for mounting said carriage to slide between said end frames, means for mounting a tool on said carriage, means carried by one of said end frames for engaging the face of a beam, clamping bars slidably mounted in the opposite end frame, a cross head slidably mounted between said end frames and carrying said clamping bars, a lever having a slot connection with said cross head and adapted to advance said cross head to operate said clamping bars, a clutch carried by said cross head and affording means for locking said clamping bars when advanced, and means carried by said link for disengaging said clutch by a reverse movement of said lever.

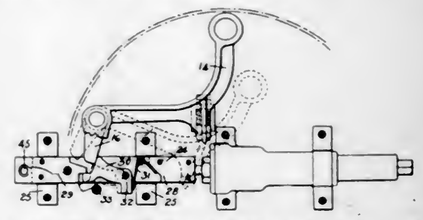
3. In a device of the class described, in combination, a pair of end frames, a carriage, means for mounting said carriage to slide therebetween, means for mounting a tool in said carriage, means for driving said tool, clamping bars connecting said end frames and having points projecting beyond one of said end frames and adapted to engage the face of a beam, a cross head slidably mounted on one of said clamping bars, a movable clamping bar carried by said cross head sliding through one of said end frames, a clutch on said cross head engaging the clamping bar on which said cross head slides and affording means for locking said cross head when advanced, means for advancing said cross head, and means for disengaging said clutch by a reverse movement of said clamping means.

4. In a device of the class described, in combination, an end frame, a second end frame, guide bars slidably mounted through said end frames, a carriage rigidly attached to said guide bars, means for mounting a tool in said carriage, means for driving said tool, a clamping bar connecting said end frames and having a point projecting beyond said first end frame, a second clamping bar connecting said end frames and having a point projecting beyond said first end frame, a guide bar adjacent to said second clamping bar, a cross head slidably mounted on said last guide bar and said second clamping bar, a movable clamping bar rigidly attached to said cross head and slidably mounted through said second end frame, a clutch carried by said cross head and coöperating with said second clamping bar to clamp said cross head after advancement, a link having a slot connection with said cross head, a lever mounted on said second end frame and connected with said link to advance said cross head, and a dog carried by said link and adapted to engage said clutch to release the same by a reverse movement of said lever.

5. In a device of the class described, in combination, end frames, guide bars slidably mounted therethrough, a carriage rigidly attached to said guide bars and presenting a hub, a sleeve slidably mounted in said hub, means for locking said sleeve in said hub against rotation, means for adjusting said sleeve in said hub, a bracket carried rigidly by said sleeve, and means for supporting a tool in said bracket.

[Claim 6 not printed in the Gazette.]

873,725. PNEUMATICALLY-OPERATED GONG. FRED B. COREY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 23, 1904. Serial No. 209,293.

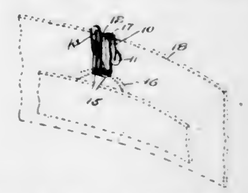


1. In combination with a gong, an automatic ringing mechanism comprising a spring-actuated hammer, a reciprocatory member carrying a pivoted spring pressed pawl arranged to coöperate with said hammer, fluid-operated means for reciprocating said member, and a fixed abutment which, near one limit of movement of said member, engages with said pawl and moves it out of engagement with said hammer to allow said hammer to strike said gong.

2. In combination with a gong, an automatic ringing mechanism comprising a hammer, a spring tending to move said hammer toward said gong, a reciprocatory member arranged adjacent said hammer, a spring tending to hold said member at one limit of its movement, a pawl carried by said member and normally held by a spring in engagement with said hammer, means for reciprocating said member, and a fixed abutment which engages with said pawl near one limit of movement of said member and moves said pawl out of engagement with said hammer allowing the spring attached to said hammer to bring said hammer into forcible contact with said gong.

3. In combination with a gong, an automatic ringing mechanism comprising a hammer, a spring tending to draw said hammer toward said gong, a reciprocatory member arranged adjacent said hammer, a pawl carried by said member and arranged to engage with said hammer while said member is moved in one direction, a fixed abutment for disengaging said pawl from said hammer when said member is near one of its limits of movement, a piston movable by fluid pressure for moving said member in one direction, a cylinder for said piston provided with supply and exhaust ports, a valve carried by said piston and movable over said ports, and a spring attached to said reciprocatory member and adapted to return said member and piston after they have been moved in one direction by the fluid pressure.

873,726. GARMENT-SUPPORTER. FRANK E. COULTER, Omaha, Nebr. Filed Sept. 10, 1906. Serial No. 333,983.

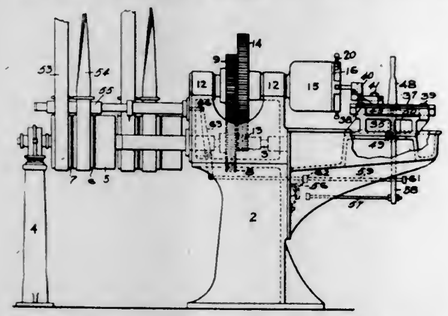


1. A garment supporter, comprising a wire bent to provide spaced hooked ends with means at their extremi-

ties positioned to constrict the interval, and a bill bent backwardly and positioned between the spaced portions.

2. A garment supporter comprising a wire bent to provide spaced hooked ends with loops at their extremities positioned to constrict the interval, and a bill bent backwardly and positioned between the spaced portions.

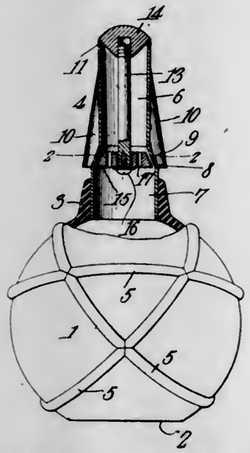
873,727. BOLT-MACHINE. HUBERT CREHAN, Sheridan, Pa., assignor to Oliver Iron and Steel Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed May 20, 1907. Serial No. 374,732.



1. In a bolt machine, the combination of a rotary hollow shaft, threading dies carried thereby, a rotary spindle in said shaft longitudinally movable thereof, a pointing device carried by said spindle, and means for independently rotating said spindle and said shaft.

2. In a bolt machine, the combination of a rotary hollow shaft, a rotary spindle in said shaft, a power shaft, a loose sleeve on said hollow shaft, a gear on said sleeve, a gear on said power shaft meshing therewith, connections between said sleeve and said spindle, and gearing connections between said power shaft and said hollow shaft.

873,728. SYRINGE. BENJAMIN F. CRISENBERRY, Elwood, Ind. Filed Feb. 27, 1907. Serial No. 359,577.



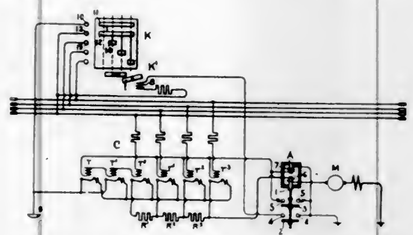
1. The combination in a syringe, of a compressible bulb, a nozzle leading therefrom and provided near its extreme end with a discharge opening for fluid from the bulb and near its inner end with an inlet opening for fluid to pass to the bulb, both openings communicating with the single passage of the nozzle, valve seats at said openings, and a pair of connected valves arranged to close in alternation on compression and release of said bulb.

2. A syringe comprising a resilient compressible receptacle, a nozzle having at each end a bore of different diameter connected by a tapering valve seat the latter being perforated, an external and an internal valve loosely connected by a stem and adapted to operate alternately to seat themselves, and external ribs on said nozzle.

3. A syringe comprising a resilient, compressible receptacle, a nozzle having a bore at one end larger than that at the other, said bores being connected by a tapering valve seat having circumferential openings through the wall of said seat, a valve for closing the smaller bore of said nozzle having a valve stem, and a valve having passages therethrough loosely mounted on the inner end of said stem and adapted to close said circumferential openings.

4. A syringe comprising a resilient, compressible receptacle, a nozzle having a bore at one end larger than that at the other, said bores being connected by a tapering valve seat having circumferential openings through the wall of said seat, a valve for closing the smaller bore of said nozzle having a valve stem, a valve having passages therethrough loosely mounted on the inner end of said stem and adapted to close said circumferential openings, and a series of longitudinally disposed tapering ribs on the outside of said nozzle arranged to form channels leading to said circumferential openings.

873,729. THROTTLE-RELAY. ARCHIBALD S. CUBITT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 31, 1906. Serial No. 309,124.



1. In a system of control, a motor, a controller for varying the motor circuit, a locking device for said controller including a throttle relay having one coil in series with the motor and another coil in shunt to the motor, together with contacts on said relay for controlling the circuit of the coil in shunt to the motor.

2. In a system of control, a motor, a controller for varying the motor circuit, a locking device for the controller including a throttle relay having a coil in series with the motor and an auxiliary coil in shunt to the motor, and contacts on the relay for controlling the circuit of said auxiliary coil, said coil being so proportioned that the cumulative efforts thereof serve to operate the relay upon a predetermined current in the motor circuit.

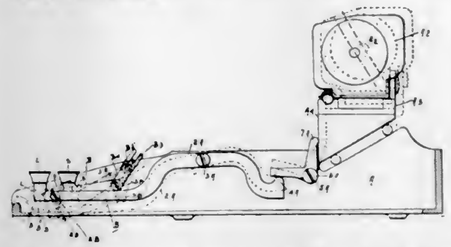
3. In a system of control, a motor, a controller for varying the motor circuit, a locking device for the controller including a throttle relay having a coil in the motor circuit and an auxiliary coil in shunt to the motor, and contacts on said relay for opening and closing the circuit containing said auxiliary coil, said coils being proportioned and arranged to operate the relay upon a predetermined value of the motor current and the effective pull upon the movable member of the relay to be diminished upon the operation of the relay.

4. In a system of control, a motor, a controller for varying the motor circuit, a locking device for the controller including a throttle relay having a coil in the motor circuit and an auxiliary coil in shunt to the motor, and contacts associated with the relay for deenergizing the auxiliary coil in one of the positions of the relay, said coils being so proportioned and arranged that the relay operates to cause the controller to be locked when the motor current reaches a predetermined value and the effective pull upon the movable member of the relay to be decreased upon the operation of the relay.

5. In a system of control, an electric circuit, means for varying the conditions of said circuit, a device for retarding the operation of said means including a throttle relay adapted to operate when the current in said circuit reaches a predetermined value, and means for weakening the effective holding force of the relay after the relay has operated.

[Claim 6 to 9 not printed in the Gazette.]

873,730. TYPE-WRITER SHIFT-KEY MECHANISM. MATTHEW S. CUMNER, New York. Filed Nov. 1, 1906. Serial No. 341,514.



1. In an inter-locking device for shift-keys of the character described and in combination with the shift lever, a brace carried thereby and pivotally secured thereto, means for locking the brace at one extremity thereof, and remote from the pivot and means carried by the brace oppositely situated from the former, with respect to the pivot for collapsing the brace.

2. In an inter-locking device for shift keys of the character described and in combination with the shift lever, a brace, pivotally secured to the operating extremity of said lever, means for locking the brace at one extremity thereof, and remote from the pivot and means co-acting by the brace, oppositely situated from the former with respect to the pivot for collapsing the brace.

3. In a shift key mechanism of the character described, the combination with the shift lever of a lock, pivotally secured thereto, and a fixed point on the frame-work comprising a brace, an operating key, co-acting with the brace, to move the same into a locking position, and a second operating key, co-acting with the brace, to move the same into an unlocking position.

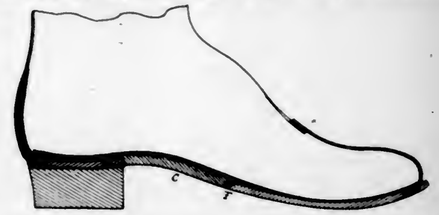
4. In a typewriter shift key mechanism of the character described, the combination with the frame-work and a stud carried thereby and a shift lever and a lock, pivotally secured thereto, and to a fixed point on the frame work, comprising a brace, having a knuckle and an operating key, carried by the brace to move the same into a locking position and a second operating key, carried by the brace to move the same into an unlocking position.

5. In a shift key mechanism of the character described, the combination with the frame work and the shift lever of a lock, co-acting between the frame work and the shift lever consisting of a pivoted lever secured to and carried by said shift key lever and a second lever carried by the frame work co-acting therewith, said lock constituting a brace between the said shift key lever and the said frame, an operating key carried by the said brace for erecting the same, and a second operating key carried by the said brace for collapsing the same, substantially as described.

873,731. BOOT AND SHOE. JAMES H. CUNNINGHAM, Brockton, Mass. Filed Dec. 6, 1906. Serial No. 346,582.

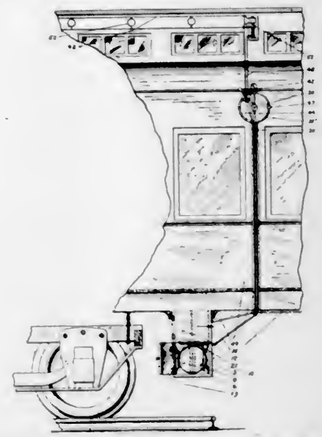
1. A boot or shoe, having an outer sole provided with a slot, a shank-piece upon the inner or upper side of said sole, and provided with a rigid rib lying in said slot and extending downward substantially flush with the outer or lower side of the outer sole.

2. A boot or shoe, having an outer sole provided with a slot extending from the breast of the heel, a shank-piece attached to the inner or upper side of the sole and provided with a rigid rib lying in said slot, and extending



downward substantially flush with the outer or lower side of the outer sole.

873,732. BATTERY TRAIN-LIGHTING SYSTEM. FRANK A. DECKER, Philadelphia, Pa., assignor, by mesne assignments, to Decker Electrical Manufacturing Company, Wilmington, Del. Filed Apr. 4, 1906. Serial No. 309,832.



1. A battery, a lamp circuit connected to said battery, a tank, a conduit having a detachable coupling connecting said tank and battery, a conduit connected with said tank so that pressure can be communicated to solution contained therein, a valve for controlling the said last named conduit and means for opening or closing said circuit and operating said valve.

2. A battery, a tank connected therewith, a circuit containing lamps connected with said battery, means for transferring solution between said tank and battery, and mechanisms for controlling said circuit and said transfer of solution by a single operation.

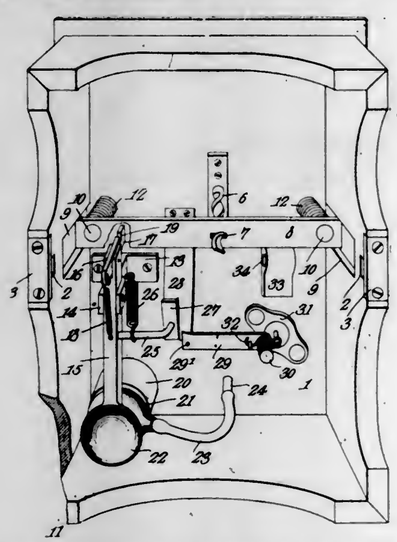
3. A battery, a tank connected therewith, a circuit containing lamps connected with said battery, a conduit leading to said tank for communicating pressure to the solution contained therein, and mechanism for controlling said circuit and said conduit.

4. A battery, a tank connected with said battery by a conduit having a detachable coupling, a conduit for conveying pressure to said tank, a car having housings for said battery and tank, a circuit containing lamps connected with said battery and disposed so as to illuminate the said car, and means for controlling said circuit and said fluid pressure conduit.

5. A tank in combination with a battery, a coupling member connected with conduits communicating with the interior of said tank, an eccentric revoluble in a bearing fixed with relation to the tank and having means for revolving it, and a member connected with said battery which registers with said coupling member and is clamped thereto by said eccentric.

[Claims 6 to 8 not printed in the Gazette.]

873,733. LIFTING-MACHINE. EDMOND DE MOULIN and ULYSSES S. DE MOULIN, Greenville, Ill. Filed Jan. 24, 1907. Serial No. 353,880.



1. The combination with a casing, a grip rigidly connected thereto, and a resistance device for retarding the movement of the grip; of mechanism operated by the release of the grip and resistance device for directing a jet of fluid beyond the casing.

2. The combination with a casing, a grip movably connected thereto, and a resistance device for retarding the movement of the grip; of means operated by the release of the grip and resistance device for exploding a cap.

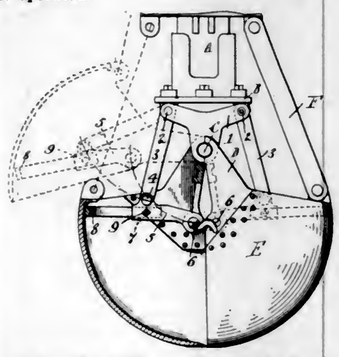
3. The combination with a casing, a grip movably connected thereto, and a resistance spring designed to be tensioned by the movement of the grip in one direction; of a container within and opening through the casing, a lever mounted within the casing, and means operated by the resistance spring when released for actuating the lever to force the contents of the container therefrom.

4. The combination with a casing, a cap holder therein, a spring actuated hammer, a nozzle, and a container therefor opening into the nozzle; of means for holding the hammer against movement, a lever, a grip movably mounted on the casing, a resistance spring for retarding the movement of the casing in one direction, and means operated by the resistance spring upon its release subsequent to the tensioning thereof for actuating the lever to release the hammer and expel the contents of the container.

5. The combination with a casing; of a cross strip movably mounted therein, resistance springs for retarding the movement of the cross strip in one direction, a lever fulcrumed within the casing, a spring pressed catch mounted upon the lever and normally bearing upon and disposed to engage the cross strip, a cap holder within the casing, a spring controlled hammer for exploding the cap, a depressible spring for locking the hammer against movement, a grip connected to the cross strip and disposed when drawn in one direction to tension the resistance springs and place the strip in engagement with the catch, and means operated by the resistance springs when released of stress for releasing the hammer.

873,734. EXCAVATOR-SCRAPER. LOUIS A. DÉSY, Montreal, Quebec, Canada, assignor to Joseph William Harris, Montreal, Canada. Filed Feb. 6, 1907. Serial No. 356,117.

1. In combination with an excavator bucket having a plurality of leaves, means connected with each of the leaves for scraping the inner wall of the bucket when the bucket is operated.



2. In combination with an excavator bucket comprising a plurality of leaves having means for opening and closing leaves, a scraper connected with each of the leaves and adapted to be moved over the leaves of the bucket when they are opened or closed.

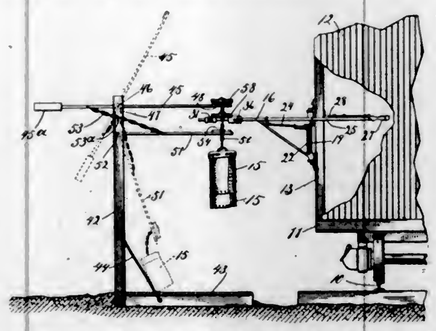
3. In combination with a bucket having pivoted sides and means for swinging the sides on their pivots, arms pivoted to the sides of the bucket, scrapers carried by the arms, and means for limiting the movement of the arms when the sides are moved.

4. In combination with a bucket having pivoted sides and means for swinging the sides on their pivots, arms pivoted to the sides of the bucket, yoke-shaped scrapers carried by the arms, and means for limiting the movement of the arms when the sides are moved.

5. In combination with a bucket having pivoted sides and means for swinging the sides on their pivots, arms pivoted to the sides of the bucket and provided with sockets, yoke-shaped scrapers having their ends disposed in the sockets, means for adjustably securing the ends in the sockets, and means for limiting the movement of the arms when the sides are moved.

[Claims 6 to 11 not printed in the Gazette.]

873,735. MAIL-POUCH DEPOSIT AND COLLECTION APPARATUS. MICHAEL C. DILLEN, Sandwich, Ill. Filed Jan. 16, 1907. Serial No. 352,580.

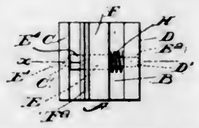


1. In combination, a railway car, an arm pivotally mounted upon the body wall of the car to swing in a horizontal plane, a sleeve rotatably mounted on the arm, mail pouch holding-jaws projecting laterally from the sleeve, and a stop for securing the sleeve in an angularly adjusted position.

2. The combination with a pair of rigid receiving jaws having a flaring mouth and a constricted throat, of a backwardly-inclined rigid prong carried by one of the jaws and guarding the throat for the purpose set forth.

3. The combination with a pair of rigid retaining jaws having a constricted delivery opening, of a yielding guard member projecting from each of the jaws to a point of contact within the delivery opening between the jaws, each of such members presenting a rounded face toward the base of the opening between the jaws for the purpose set forth.

873,736. CLAMP FOR PRINTING-PLATES. SAMUEL E. DITTMAN, New York, N. Y. Filed Mar. 8, 1906. Serial No. 304,871.



1. In a clamp for a printing plate, a main block, a movable block and a rod or pin to which the movable block is secured intermediate of the ends of the rod or pin, the main block having a recess or opening to receive said movable block, said movable block being so connected to the main block by the rod or pin as to permit it and the rod or pin to be removed from the main block and connected thereto upon a longitudinal movement of the rod.

2. In a clamp for a printing plate, a main block having a recess therein, a shaft, an adjustable block carried by the shaft, the shaft and the block carried thereby being fitted in the recess in the main block, and the shaft so connected to the main block that it may be removed therefrom by moving the shaft longitudinally and lifting it out of the main block.

3. In a clamp for a printing plate, a main block having a recess therein which forms two side walls, an opening in one of the walls, a shaft having one end thereof fitted in said opening, and the other end bearing against the other wall, a block carried by the shaft, the shaft and block being removable from the recess by moving the shaft longitudinally of its length and lifting it from the said recess.

4. In a clamp for a printing plate, a main block having a recess therein, said recess forming two walls, an opening in one of the walls and a recess in the face of the other, a shaft having one end resting in said opening and the other end in the recess, said shaft being screw threaded on a portion thereof, and an adjustable block having a jaw secured to said recessed portion, as and for the purpose set forth.

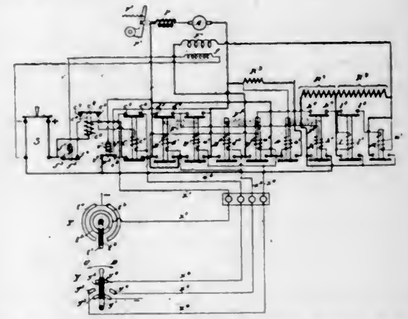
5. In a clamp for a printing plate, a main block having a recess therein, said recess forming two walls to the block, one of the walls having an opening therein, said opening being larger vertically than transversely, the other wall having a recess on the inner face thereof, a shaft having one end fitted in said opening and the other end resting in the recess, a portion of said shaft being provided with screw threads, an adjustable block having an opening therein provided with screw threads which mesh with the screw threads of the shaft, and a spring between one of the walls of the main block and the face of the movable block.

[Claims 6 to 9 not printed in the Gazette.]

873,737. AUTOMATIC CUT-OUT FOR ELECTRIC CONTROLLERS. ARTHUR C. EASTWOOD, Cleveland, Ohio. Filed Jan. 15, 1907. Serial No. 352,408.

1. In a controller for electric motors, the combination of an electro-magnet, a circuit breaker normally held closed by the electro-magnet, an operating switch, a cut-out switch adapted to open the circuit of the winding of the electro-magnet of said circuit breaker when said cut-out switch has been actuated in a predetermined manner, a master controller, and contacts adapted to cause said circuit breaker to close when said master switch has been returned to the off-position.

2. In a controller for electric motors, the combination of an electro-magnet, a circuit breaker normally held closed by the electro-magnet, a cut-out switch, adapted to open the circuit of the electro magnet of said circuit breaker when a predetermined limit of travel has been reached, and an electro-motive force switch, adapted to close the circuit opened by said cut-out switch when the motor has come to rest.



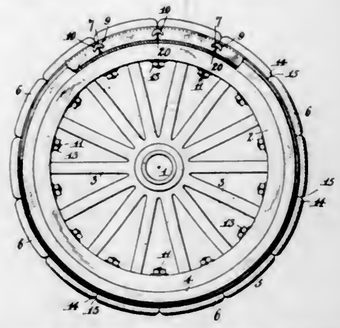
3. In an electric controller, a motor switch, a cut-out switch for opening the motor switch when a predetermined limit of travel has been reached, and a switch controlled by the armature of the motor and causing the closure of the circuits opened by the cut-out switch when the motor has come substantially to rest.

4. In an electric controller, a motor switch, a cut-out switch for opening the motor switch when a predetermined limit of travel has been reached, and automatic means for closing the circuits opened by the cut-out switch when the motor has come substantially to rest.

5. In an electric controller, a motor switch, a cut-out switch for opening the motor switch when a limit of travel has been reached, and a magnetically operated switch having its terminals connected to short circuit the contacts of the cut-out switch and having its operating winding connected in shunt to the armature of the motor.

[Claim 6 not printed in the Gazette.]

873,738. VEHICLE-TIRE. JOHN ECKHARD, Buffalo, N. Y. Filed Apr. 7, 1906. Serial No. 310,554.



1. A tire for wheels comprising a retaining-member held to the felly of the wheel, a multi-part tire within said retaining-member and each of the parts thereof having curved undercut grooves in the ends thereof, combined connecting and fastening-devices between the several parts of the tire comprising each a crescent-shaped transversely-disposed connector fitting the grooves in adjacent ends of two adjoining blocks and fastening bolts on said connector passing through said retaining-member and the felly of a wheel.

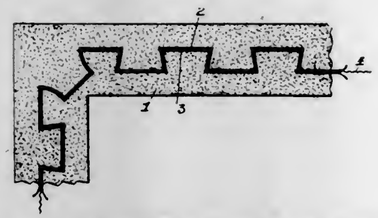
2. A multi-part tire having a reinforcing-device embedded in the base of each part, said reinforcing-device consisting of longitudinally-disposed members having apertures at intervals and transversely-disposed members passed through said apertures.

3. A multi-part tire having a reinforcing-device embedded in the base of each part, said reinforcing-device consisting of longitudinally-disposed members of T-formation in cross-section having apertures at intervals and transversely-disposed members passed through said apertures.

4. The combination with the wheel-felly, of a multi-part tire having a reinforcing-device embedded in each part thereof and having the ends of the parts provided with grooves, said reinforcing-devices including longitudinally-disposed bars extending from end to end of the tire-parts and connecting and fastening-devices between the tire-parts having each a transversely-disposed member entering the grooves in adjacent ends of two adjoining parts and bearing against the longitudinally-disposed bars of the reinforcing-devices in said parts, and bolts on said transversely-disposed members for securing the tire-parts to the wheel-felly.

5. The combination with the wheel-felly, of a multi-part tire having a reinforcing-device embedded in each part thereof and having the ends of the parts provided with curved undercut grooves, said reinforcing-devices including longitudinally-disposed bars extending from end to end of the tire-parts and having notches near their ends to correspond with the grooves in the ends of the tire-parts, and connecting and fastening-devices between the tire-parts having each a transversely-disposed member crescent-shaped in cross-secion and inwardly disposed bolts, said crescent-shaped member entering the grooves in adjacent ends of two adjoining tire-parts and the notches in the longitudinally-disposed bars in said parts, and said bolts serving to secure the tire to the wheel-felly.

873,739. REINFORCED INTERLOCKING CONCRETE WALL. ROBERT EDMONDSON, South Bend, Ind. Filed May 18, 1907. Serial No. 374,365.



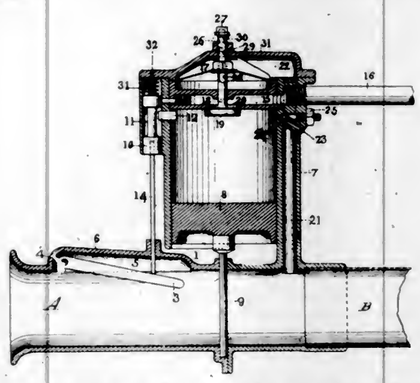
1. A reinforced concrete wall comprising cementitious material, interlocking metallic reinforcing members embedded in the wall, each member being of dovetail corrugated formation in cross section and fitting one within the other, and means arranged between the metallic members to provide a dead air space between the latter.

2. A reinforced interlocking concrete wall comprising cementitious material, metallic reinforcing members embedded in the wall, each member being of dovetail corrugated formation in cross section and fitting one within the other, and corrugated asbestos arranged between the metallic members to provide a dead air space between the latter.

3. A wall comprising sheet metal members spaced apart and arranged in alternating dovetailed channels and ribs, with the channels and ribs of one member interlocking with the channels and ribs of the other member, sheets of asbestos bent to conform to the configuration of the spaced metal plates and disposed between the same, and cementitious material applied to the outer faces of the ribs of the metal members and within the dovetailed interstices therebetween.

873,740. PNEUMATIC-DESPATCH-TUBE APPARATUS. EDMOND A. FORDYCE, Boston, Mass. Filed Nov. 9, 1906. Serial No. 342,642.

1. In a pneumatic despatch tube apparatus, a transit tube through which carriers are transmitted and a central or sending station into which carriers are inserted for transmission, means through which air is exhausted from said tube, a valve at the sending station normally closing said tube and adapted to open to admit air into the tube for driving carriers, a cylinder, a piston connected to said valve and operating in said cylinder and normally under atmospheric pressure on both sides thereof, means for exhausting air from one side of said piston whereby the atmospheric pressure on the opposite side will move said piston and open said valve, and mechanism operated upon the insertion of a carrier for causing the operation of said piston.



2. In a pneumatic despatch tube apparatus, a transit tube through which carriers are transmitted and a central or sending station into which carriers are inserted for transmission, means through which air is exhausted from said tube, a valve at the sending station normally closing said tube, and adapted to open to admit air into the tube for driving carriers, a cylinder, a piston connected to said valve and operating in said cylinder, means for exhausting air from one side of said piston whereby the atmospheric pressure on the opposite side will move said piston and open said valve, mechanism operated upon the insertion of a carrier for causing the operation of said piston, and means for timing the closing of said valve.

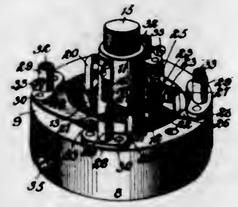
3. In a pneumatic despatch tube system, a transit tube through which carriers are transmitted and a central or sending station into which carriers are inserted for transmission, means through which air is exhausted from said tube, a valve at said sending station and normally closing the tube and adapted to open to admit air into the tube for driving the carrier, mechanism connected to said valve and normally under atmospheric pressure for holding said valve closed, a return or sub-station, a valve-controlled air-inlet at said return station, and mechanism for operating or opening said valve at the sending station upon the fluctuation of pressure within said tube upon the insertion of a carrier or carriers at the return station.

4. In a pneumatic despatch tube system, a transit tube through which carriers are transmitted and a central or sending station into which carriers are inserted for transmission, means through which air is exhausted from said tube, a valve at said sending station and normally closing the tube and adapted to open to admit air into the tube for driving the carrier, a return or sub-station, a valve-controlled air-inlet at said return station, mechanism for operating or opening said valve at the sending station upon the fluctuation of pressure within said tube upon the insertion of a carrier or carriers at the return station, and means for timing the closing of said valve.

5. In a pneumatic despatch tube apparatus, a transit tube through which carriers are transmitted and a central or sending station into which carriers are inserted for transmission, means through which air is exhausted from said tube, a valve at the sending station normally closing said tube and adapted to open to admit air into the tube for driving carriers, a cylinder, a piston connected to said valve and operating in said cylinder, means for exhausting air from one side of said piston whereby the atmospheric pressure on the opposite side will move said piston and open said valve, and mechanism operated upon the insertion of a carrier for causing the operation of said piston.

[Claims 6 to 8 not printed in the Gazette.]

873,741. SWITCH-OPERATING MECHANISM. EDWIN E. FREDERICK, Bellevue, Pa., assignor to The Frederick-Elder Co., Inc., Pittsburg, Pa. Filed Apr. 12, 1906. Serial No. 311,324.



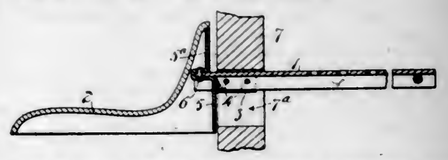
1. In a switch of the character described, the combination with a base, of a tubular standard carried thereby, a shaft journaled on the inner portion of the standard, a contact member carried by the shaft on one side of the standard, a ratchet wheel carried by the shaft on the other side of the standard, a plunger slidably mounted within the standard and projecting therefrom, said standard having a slot, a dog secured to the standard and operating in the slot, said dog coöperating with the ratchet wheel to move the same, and a spring arranged within the standard and engaging the plunger to yieldingly maintain the same in its outermost position.

2. In a switch of the character described, the combination with a standard having a bore in its outer portion, of a plunger slidably mounted on the bore and projecting from the outer end of the standard, a shaft journaled transversely in the inner end of the standard in line with the plunger and having its axis intersecting the axis of the bore, said shaft having its ends projecting on opposite sides of said standard, a contact member carried by one projecting end of the shaft on one side of the standard, and actuating means for the shaft located on the other side of the standard and connected to the other projecting end of the shaft and to the plunger.

3. In a switch of the character described, the combination with a tubular standard having a slot in one side provided with closed ends, of a rotary contact member, a reciprocatory plunger slidably mounted in the bore of the standard, and actuating means for the contact member including the dog secured to the side of the plunger and extending through the slot of the standard, said dog having a portion abutting against the end walls of the slot and constituting means for retaining the plunger within the standard and limiting the movement of said plunger.

4. In a switch of the character described, the combination with a base having an annular flange forming within it a recessed seat, of a standard secured to the base within the seat and surrounded by said flange, a shaft journaled transversely on the inner portion of the standard and projecting beyond opposite sides thereof, said shaft having a ratchet wheel on one projecting end, and a contact member on the other projecting end, said wheel and member being thus disposed on opposite sides of the standard and within the flange, a reciprocatory actuating plunger slidably mounted on the standard and having a dog coacting with the wheel, a plurality of spring contact elements mounted on the outer face of the flange of the base and disposed in the path of movement of portions of the rotatable contact member, and binding posts secured to said flange and engaging the contact springs to hold the same in position.

873,742. PIANO-PEDAL. LOUIS HAAS, New York, N. Y. Filed Apr. 17, 1907. Serial No. 368,635.



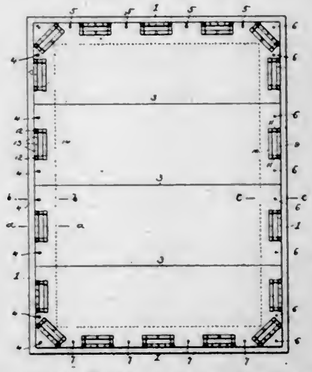
1. In a piano pedal, a shank member, a separate foot-piece hollowed out at the under side, means of connection between said foot-piece and said shank member, a separate guard-plate, means for securing said plate in the hollowed-out portion of said foot-piece, adjacent the connection between said foot-piece and shank, said guard-plate substantially closing the hollowed-out space where said pedal enters the piano case.

2. In a piano pedal, a shank member channeled on its under side, a separate foot piece recessed or hollowed out on its under side, cheek pieces projecting inwardly from said foot piece and embracing the shank member at opposite sides, and a guard-plate transversely located in the space at the inner end of the foot piece and extending substantially from the lower edge of the foot piece to the shank to protect the opening in the piano case through which the shank passes.

3. In a piano pedal, a shank, a foot piece hollowed out on ts under side, said foot piece embracing the shank on opposite sides, means for securing together the foot piece and shank member, and a guard-plate depending from the shank and protecting the passage in the piano case through which said shank extends.

4. In a piano pedal, a shank, a separate foot piece hollowed out at its under side, portions of said foot piece extending above and below the plane of the shank, said foot piece embracing the shank on opposite sides and secured thereto, and a guard-plate extending above and below the shank and closing the inner end of the foot piece.

873,743. STRETCHING DEVICE FOR CARPETS AND RUGS. HARRY HARDWICK, Philadelphia, Pa., assignor to Ivins, Dietz & Metzger Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 24, 1906. Serial No. 340,325.



1. The combination of a rug stretching frame having permanent pins, with removable clamps provided with pins for engaging the rug and frame independently of the fixed pins of the latter.

2. The combination of a rug stretching frame, with a clamp disconnected from said frame and having pins for passing through a rug stretched on the face of the frame, said pins engaging the frame after passing through the rug.

3. A rug holding clamp for stretching frames having

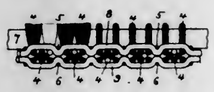
long pins for passing through the rug and engaging the frame, and short pins for engaging the rug only.

4. A rug holding clamp for stretching frames having pins at opposite ends, and a centrally disposed pin laterally separated from the end pins.

5. A rug holding clamp for stretching frames having long pins at opposite ends, intermediate shorter pins, and a centrally disposed long pin laterally separated from the end pins.

[Claims 6 to 8 not printed in the Gazette.]

873,744. PILE FABRIC. HARRY HARDWICK, Philadelphia, Pa., assignor to Ivins, Dietz & Metzger Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 2, 1906. Serial No. 341,758.



A pile fabric having a backing composed of sets of pile-forming warp threads, alternating with sets of binding warp threads interwoven with binding weft threads, and a plurality of multi-strand pile loops or tufts extending to the face of the fabric between successive weft threads and adjoining sets of binding warp threads, the pile threads of the set extending longitudinally through the backing web when they are not forming piles.

873,745. METAL ALLOY. ELWOOD HAYNES, Kokomo, Ind. Filed Apr. 23, 1907. Serial No. 369,870.

1. A metal alloy composed of a metal of the chromium group and cobalt.

2. A metal alloy composed of cobalt and more than ten per cent. of a metal of the chromium group.

3. A metal alloy composed of chromium and cobalt in the proportions of more than ten per cent. of the chromium.

4. A binary metal alloy composed of chromium and cobalt.

5. A metal alloy composed of chromium and cobalt in the proportions of more than ten per cent. and less than sixty per cent. of the chromium, the remainder of the alloy being cobalt.

873,746. METAL ALLOY. ELWOOD HAYNES, Kokomo, Ind. Filed May 3, 1907. Serial No. 371,573.

1. A metal alloy composed of nickel and more than thirty per cent. of a metal of the chromium group.

2. A metal alloy composed of nickel and more than thirty per cent. of chromium.

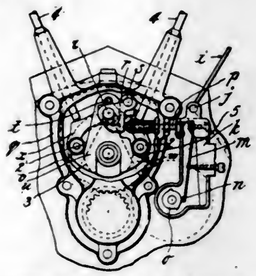
3. A metal alloy composed of pure chromium and pure nickel in the proportions of more than thirty per cent. and less than sixty per cent. of the chromium, the remainder of the alloy being nickel.

873,747. MEANS FOR OPERATING EXHAUST-VALVES. CARL O. HEDSTROM, Springfield, Mass. Filed May 28, 1907. Serial No. 365,136.

1. The combination with the exhaust valves of an internal combustion engine, a lift-cam having a plurality of arms, one of the arms being so arranged in relation to the connecting means between the lift-cam and exhaust valves that one of the exhaust valves is operated in advance of the other when the lift-cam is operated, as described.

2. The combination with the exhaust valves of an internal combustion engine, a lift-cam provided with oppositely disposed arms and in different planes, the arms being located at one end of the operating means for the exhaust valves, whereby when the lift-cam is operated one of the exhaust valves will be operated in advance of the other, as described.

3. The combination with the exhaust valves of an internal combustion engine, a lift-cam, means thereon for supporting the operative connection between the exhaust valves and lift-cam, the means being so arranged that one of the exhaust-valves will be operated in advance of the other, as described.

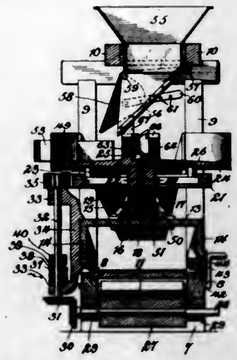


4. In combination with the exhaust valves of an internal combustion engine, an exhaust cam, a lift-cam, means normally engaging the exhaust cam and located between the exhaust valves and engaging the lift-cam, a cam for operating the lift-cam whereby the exhaust valve are independently operated.

5. In combination with the exhaust valves of an internal combustion engine, an exhaust cam, a lift-cam, means normally engaging the exhaust cam and located between the exhaust valves and engaging the lift-cam, a cam for operating the lift-cam, said means having one arm engaging the lift-cam and another arm spaced therefrom, whereby upon movement of the lift-cam one arm will be operated in advance of the other arm, as described.

[Claims 6 to 8 not printed in the Gazette.]

873,748. ORE-FEEDING MECHANISM. MARSHAL HENDERSON, Doe Run, Mo., assignor of one-third to Ulysses Hawk, Doe Run, Mo. Filed Feb. 27, 1907. Serial No. 359,581.



1. In feeding mechanism of the character set forth the combination with a downwardly and outwardly inclined table having a substantially upright axis of rotation, of a circular series of upstanding teeth carried by the central highest portion of the table, a vertically movable spout located above the table and engaged and operated by the teeth, and means for rotating the table.

2. In feeding mechanism of the character set forth, the combination with a table revoluble on its substantially upright axis and having a central boss, of a collar fitted in the boss and having upstanding teeth on its upper edge, a spout delivering to the table and having a portion engaged and operated by the teeth, and means for rotating the table.

3. In feeding mechanism of the character set forth

the combination with a movable delivery spout having an open mouth, of a swinging closure pivoted on the spout, a link pivoted to one, means carried by the other for securing the link in different positions thereon, a rotatable table carrier, and means mounted on the table for moving the spout.

4. In feeding mechanism of the character set forth, the combination with a movable delivery spout having an open mouth, of a swinging closure pivoted on the spout, a link pivoted to the closure and having notches, a projection on the spout that engages in the different notches to hold the closure at different positions, a movable carrier table, and means mounted on the table for moving the spout.

5. In feeding mechanism of the character set forth, the combination with a rotatable carrier table, of an annular wall surrounding the same, a chute extending from the wall and located at one side of the tube, a hopper supported above the table, a pivoted chute extending from the hopper and delivering on to the table, said chute having an open mouth, a closure for the mouth pivoted on the chute, means for holding the closure in different positions thereon, and a circular series of upstanding teeth carried by the table and rotatable therewith, said teeth successively engaging the hopper to swing the same.

[Claims 6 to 13 not printed in the Gazette.]

873,749. LATRINE FOR USE IN THE FIELD. FREDERICK C. HERRICK, Cleveland, Ohio. Filed Oct. 1, 1906. Serial No. 336,815.



1. In a latrine, the combination of a portable structure formed with a suitable seat-aperture, a duct suspended from said structure, and a receptacle formed by drilling an excavation in the soil, the lower end of said duct projecting into said receptacle, said duct presenting at all times an unobstructed passage from said aperture to said receptacle.

2. In a latrine, the combination of a portable structure formed with a suitable seat-aperture, a receptacle below said structure, and a duct detachably suspended from said structure, said duct presenting at all times an unobstructed passage from said aperture to said receptacle.

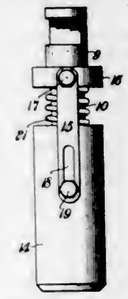
3. In a latrine, the combination of a structure provided with a suitable seat-aperture, a duct suspended and readily removable from said structure, and a receptacle, the lower end of said duct projecting into said receptacle.

4. In a latrine, the combination of a seat and seat-support forming a portable structure, a receptacle formed in the soil below said structure, and a duct detachably secured to the lower side of said structure and having its lower end projecting into said receptacle.

5. In a latrine, the combination of a seat and seat-support forming a portable structure, a receptacle formed in the soil below said structure, and a duct detachably suspended from the lower side of said support and having its lower end projecting into and readily removable from said receptacle, said duct presenting at all times an unobstructed passage from it to said receptacle.

[Claims 6 to 9 not printed in the Gazette.]

873,750. BOLT-HEADER. CHARLES H. HOPKINS, Butler, Pa., assignor of fifty-one one-hundredths to National Machinery, Co., Tiffin, Ohio. Filed Feb. 23, 1907. Serial No. 358,873.

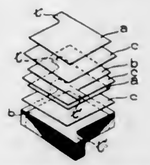


1. In a bolt heading machine, the combination with a heading tool, of a matrix slidably mounted on the heading tool, slotted links forming a connection between the matrix and heading tool, pins seated in the slots of the links, and means for yieldably supporting the matrix in advance of the heading tool.

2. A heading tool for up-setting machines including a die having its side walls off set to form a laterally extending flange, a tubular member slidably mounted on the die and coacting therewith to form a matrix, links secured to the flange and having their opposite ends provided with longitudinal slots, pins carried by the tubular member and seated in said slots, and a spring interposed between the flange and tubular member for normally and yieldably holding the member in advance of the die.

3. A heading tool for up-setting machines including a shank having one end thereof reduced to form a die having a solid angular face and provided with an intermediate stop shoulder, a flange extending laterally from the shank, a tubular member slidably mounted on the shank and coacting with the die to form a matrix, said tubular member being provided with an enlarged chamber and an annular shoulder, a spring seated in said chamber and having one end thereof bearing against the adjacent wall of the chamber and its opposite end engaging the flange, a pair of links each having one end thereof secured to the flange and its opposite end slotted, and pins carried by the tubular member and engaging the slots in the links.

873,751. CONDENSER. NELSON S. HOPKINS, Fort Wayne, Ind., assignor to General Electric Company, a Corporation of New York. Filed Nov. 15, 1902. Serial No. 131,476.



1. A condenser composed of sheets or strips of some conducting material arranged with edges parallel and separated by interposed strips of dielectric, the adjacent sheets or strips of conducting material being so placed that the distance between similar edges is greater than the distance between the bodies of said sheets or strips.

2. A condenser composed of sheets or strips of some conducting material arranged with edges parallel and separated by interposed strips of dielectric, adjacent sheets or strips of conducting material being so placed that the distance between parallel edges is greater than the distance between the bodies of said sheets or strips.

3. A condenser composed of sheets or strips of some conducting material separated by interposed sheets or

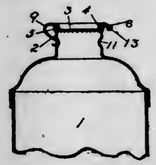
strips of dielectric, the sheets or strips of conducting material being so placed that similar edges are a uniform distance apart and so that no considerable extent of the edges of adjacent strips are as close together as the distance between the bodies of said sheets or strips.

4. A condenser composed of two or more sheets or strips of good conducting material arranged with edges substantially parallel and separated by strips of dielectric, adjacent sheets or strips of conducting material being bodily displaced laterally with respect to each other.

5. A condenser comprising active strips or sheets of conductive material arranged with edged parallel, interposed dielectric material, adjacent strips or sheets of different polarities being displaced laterally with respect to each other so that no considerable extent of the edges of adjacent strips are as close together as are the bodies of said strips.

[Claim 6 not printed in the Gazette.]

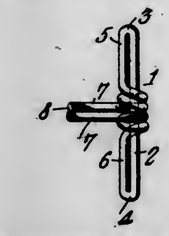
873,752. CLOSURE FOR CANS AND OTHER RECEPTACLES. WILLIAM F. HYATT, Brooklyn, N. Y. Filed Feb. 20, 1904. Serial No. 194,602.



1. In a sheet metal receptacle having a sheet metal mouth, the combination with the sheet metal mouth thereof, of a sheet metal cover having a slotted ear projecting therefrom and an ear or projection extending from and integral with the edge of the mouth and bent around through the slot in the projection on the cover, as and for the purpose described.

2. In a sheet metal receptacle, the combination of a sheet metal mouth or neck having an annular depression spun in it and provided with an ear or projection extending from the edge of the sheet metal mouth and integral with the metal of the mouth, and a cover having a depressed center provided with diametrically opposite ears or projections integral therewith, one of said ears having a slot with which the projection from the edge of the mouth is interlocked and the other extension from said cover being formed to lock in the annular depression spun in the sheet metal of the receptacle.

873,753. NOSE-RING. JOHN C. JACOBY, Ashland, Ohio. Filed Mar. 19, 1907. Serial No. 363,193.

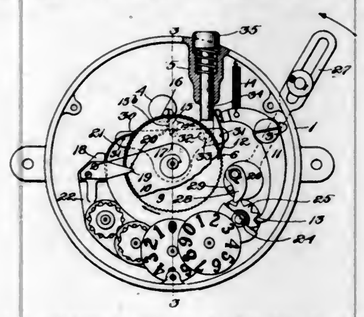


1. A nose ring comprising a horizontally disposed bar, and a hook formed at the longitudinal center of said bar projecting above it and a similar hook extending below it, said hooks being in a plane perpendicular to said bar.

2. A nose ring comprising a bar and two curved and pointed hooks at the center thereof extending in opposite directions therefrom and disposed approximately in the same plane at a right angle to said bar.

3. A nose ring constructed of a single piece of wire comprising a straight front bar and a rear strengthening brace at each end connected to said bar by a loop, said braces being wound about the center of the bar in opposite directions and their ends extended laterally and formed into curved hooks.

873,754. REGISTERING-COUNTER. PHILIP L. JOHNSON, Somerville, Mass., assignor to Crosby Steam Gage and Valve Company, Boston, Mass., a Corporation of Massachusetts. Filed May 11, 1906. Serial No. 316,388.



1. In a registering counter a case and a registering mechanism arranged therein including a ratchet wheel, a chain of geared counters, a star wheel engaging and actuating said geared counters, a lever operated by said star wheel, a pawl carried by said lever and adapted to actuate said ratchet wheel, with means extending through the case and operative from without for operating said star wheel; substantially as described.

2. In a registering counter a case and a registering mechanism arranged therein including a ratchet wheel, a chain of geared counters, a star wheel engaging and actuating said geared counters, a lever operated by said star wheel, a pawl carried by said lever and adapted to actuate said ratchet wheel, with means extending through the case and operative from without for operating said star wheel, together with means extending through the case and operative from without for disengaging said pawl from said ratchet wheel and means for resetting said ratchet wheel; substantially as described.

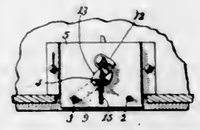
3. In a registering counter a case and a registering mechanism arranged therein including a ratchet wheel, a chain of geared counters, a star wheel engaging and actuating said geared counters, a lever operated by said star wheel, a pawl carried by said lever and adapted to actuate said ratchet wheel, a retaining pawl, with means extending through the case and operative from without for operating said star wheel, and means for resetting said ratchet wheel; substantially as described.

4. In a registering counter a case and a registering mechanism arranged therein including a ratchet wheel, a chain of geared counters, a star wheel engaging and actuating said geared counters, a lever operated by said star wheel, a pawl carried by said lever and adapted to actuate said ratchet wheel, a retaining pawl, with means extending through the case and operative from without for operating said star wheel, together with means extending through the case and operative from without for disengaging said pawls from said ratchet wheel and means for resetting said ratchet wheel; substantially as described.

873,755. CARD-INDEX DRAWER. BERTRAND P. KENYON, Grand Rapids, Mich., assignor to The Shaw Walker Company, Muskegon, Mich., a Corporation of Michigan. Filed Mar. 23, 1907. Serial No. 364,032.

1. In a card index drawer, a rock shaft, parallel arms rigidly attached to the rock-shaft, a flat locking bar journaled in the arms and carried thereby, means for raising and lowering the arms, and means for rotating and holding the bar.

2. In a card index drawer, vertically slotted plates, a flat locking bar having journals on its ends traversing the slots and rotative therein, a rock-shaft, parallel arms rigidly attached to the rock-shaft and having slots to receive the journals of the bar, means for raising and lowering the arms and means for turning and holding the bar.



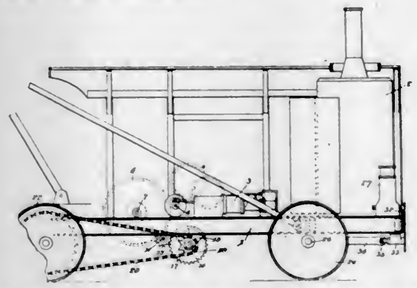
3. In a card index drawer, a rock-shaft, parallel arms rigidly attached to the rock-shaft, a manually rotated crank wheel, a rod connected to the wheel and to one of the arms, and a locking rod supported and adjusted by the arms.

4. In a card index drawer, a drawer, a vertically slotted plate attached to each end of the drawer, a flat locking bar, journals on the ends of the bar and traversing the slots in the plates and rotative therein, a rock-shaft, slotted arms rigidly attached to the respective ends of the shaft and engaging the journals of the bar, a knob having a shank journaled in the end of the drawer, a crank rotated by the shank, and a rod connecting the crank and one of the journals of the bar.

5. In a card index, a rock shaft, arms rigidly attached to the respective ends of the shaft, a flat locking bar having journals rotative in the arms, a knob having a rotative shank, a crank mounted on the shank and rotated thereby, a rod journaled on the crank and offset laterally and also extending above and below the crank to laterally engage the shank, the lower end of the rod also being connnected to one of the arms to raise and lower the bar.

[Claims 6 to 12 not printed in the Gazette.]

873,756. STEAM-SHOVEL. GEORGE W. KING, HARRY J. BARNHART, and CHARLES B. KING, Marion, Ohio, assignors to The Marion Steam Shovel Company, Marion, Ohio, a Corporation of Ohio. Filed Sept. 8, 1904. Serial No. 223,696.



1. In a steam shovel or the like, the combination, with a car body, and propelling mechanism mounted thereon, means for mounting said body on the usual railway trucks, and means for connecting said propelling mechanism therewith, of axles interchangeable with said trucks and provided with ground wheels, one of said axles having driving wheels operatively connected with the propelling mechanism, the other axle being provided with steering wheels, and steering mechanism controlling said steering wheels, substantially as described.

2. In a steam shovel or the like, the combination, with a car body, and propelling mechanism mounted thereon, means for mounting said body on the usual railway tracks, and means for connecting said propelling mechanism therewith, of non-rotating axles removably connected with said car body, one of said axles being fixed and having driving ground wheels mounted to rotate thereon, the other axle being swiveled and provided with steering ground wheels, means for connecting said driving ground wheels with the propelling mechanism, and a power steering mechanism controlling said swiveled axle, substantially as described.

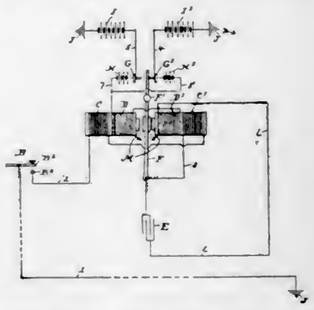
3. In a steam shovel or the like, a car body having ground wheels provided with sprockets, and a propelling shaft connected with the engines of the machine, said shaft having a clutch member secured thereon, in combination with a clutch pinion loosely mounted on the propelling shaft, a counter-shaft extending through the sides of said body, and provided with a gear to mesh with said pinion and having sprockets at its ends, and sprocket chains connecting said sprockets with the ground wheel sprockets, substantially as described.

4. In a steam shovel or the like, a car body having ground wheels provided with sprockets, and a propelling shaft connected with the engines of the machine, said shaft having a clutch member secured thereon, in combination with a clutch pinion loosely mounted on the propelling shaft, a counter-shaft provided with a gear to mesh with said pinion and having sprockets at its ends, and sprocket chains connecting said sprockets with the ground wheel sprockets, said clutch pinion and counter-shaft and its associated parts being removable, substantially as described.

5. In a steam shovel or the like, a steering mechanism comprising a swiveled axle having ground wheels, a steering shaft, a separate reversible engine operatively connected with said steering shaft, a sleeve nut rotated by said steering shaft, and a screw shaft connected to the axle and engaging said sleeve nut, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

873,757. TRANSMITTING DEVICE FOR ELECTRIC TELEGRAPHY. ISIDOR KITSEE, Philadelphia, Pa., assignor of one-half to William J. Latta, Philadelphia, Pa. Filed Mar. 16, 1905. Serial No. 250,387.



1. A transmitting device comprising the key proper, said key connected with one part to the line of transmission, a polarized relay, sources of current operatively connected with opposite poles to said relay, the coils of said relay connected with one terminal to part of the key proper and with the other terminal to the armature of said relay, and means whereby through the movement of the armature one or the other of the sources of current is alternately connected through the key proper to the line of transmission.

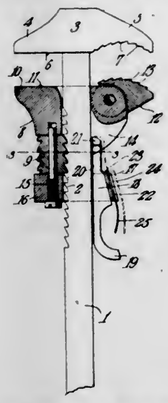
2. In telegraphy, a transmitting station embracing a transmitting key connected with the interposition of a polarized electro-magnetic device to the line of transmission, the polarized device provided on each side of the armature with contacts connected each with a source of current, two coils for said polarized electro-magnet, the coils connected in a manner, so as to connect automatically for each depression of the key the line of transmission with a different source of current.

3. In telegraphy a transmitting station embracing a transmitting key connected with the interposition of a polarized electro-magnetic device to the line of transmission, the polarized device provided on each side of the ar-

mature with contacts, provided also with means to connect a source of current with one polarity to the line when resting at one contact and to connect a second source of opposite polarity to the line when connecting with the second contact and electric means to alternately connect the armature with one or the other of said contacts through the depression of the key proper.

4. In telegraphy, a transmitting device embracing the key proper, a polarized relay operatively connected to the key and to two sources of current, the key operatively connected with the line of transmission, the coils of said relay arranged and connected so as to produce in the armature of said relay an automatic movement connecting alternatively with one or the other of the sources of current, and electro-static means to prolong the contact-period of the armature with one or the other of said sources.

873,758. WRENCH. JOHN W. KLINE, White Haven, Pa. Filed Apr. 25, 1907. Serial No. 370,244.



1. A wrench of the class described having a shank and a jaw frame movable thereon, a projection on said jaw-frame having a socket with an inclined wall, a wedge fitted to said socket and adapted to bear against said shank and said inclined wall, and a spring attached to said wedge to lock it in place in said socket and to tilt said jaw frame and hold it in tilted position when unlocked and the wedge withdrawn.

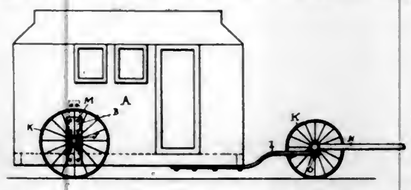
2. A wrench of the class described having a toothed shank, a jaw frame movable thereon and carrying a rotatable worm or screw adapted to engage the teeth in said shank, a projection on said jaw-frame opposite the side carrying the worm and having an inclined outer face and an interior through-socket with a wall parallel to said outer face, a wedge bolt fitted to said socket having a forwardly projecting strip, and a spring fastened to the end of said strip and extending over the outer face of said projection with a tensional bearing thereon.

3. A wrench of the class described having a toothed shank, a jaw-frame movable thereon and carrying a rotatable worm or screw adapted to engage the teeth in said shank, a projection on said jaw-frame on the side opposite that carrying the worm or screw having an inclined slot in its outer face and an interior through socket with a wall parallel to said inclined slot, a wedge bolt fitted to said socket and having a forwardly projecting strip and a rearwardly extending operating end, and a spring fastened at the extreme end only of said strip and lying in the exterior slot on said projection with a tensional bearing, said spring having an offset for locking the wedge in its socket to prevent the jaw tilting.

4. A wrench of the class described having a toothed shank, two fixed jaws and two coöperating movable jaws on a tiltable jaw frame, means for engaging said teeth to move said jaw frame longitudinally of the shank, a projection on the side of said jaw frame opposite the moving means having a socket with an inclined wall, a wedge bolt fitted to said socket and having a forwardly projecting strip, and a spring fastened to the end of said strip and arranged to press said projection against the wedge which latter when withdrawn from its socket permits the spring to tilt said jaw frame and disconnect said longitudinally moving means.

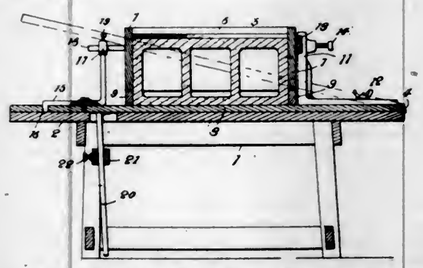
5. A wrench of the class described having a tiltable jaw frame and means for moving it longitudinally on the shank, a projection having a socket with an inclined wall, a wedge fitted to said socket provided with a forwardly extending strip, and a spring fastened to the end of said strip extending outside said projection and having an offset adapted to lock over the projection and hold the wedge in place and the jaw against tilting, but when the spring is disengaged from said projection, the wedge may be withdrawn from its socket causing said spring to bear on said projection and tilt the jaw frame to disengage the longitudinal moving means.

873,759. RUNNING-GEAR FOR PORTABLE HOUSES. WILLIAM F. KRAMER and CHARLES ANDERTON, Jr., Dayton, Ohio. Filed Feb. 2, 1907. Serial No. 355,357.



In a running gear for portable houses or voting booths, two angle brackets attached to opposite rearward sides of the house, one angle of said brackets extending under and attached to the bottom of the house, and the other angle of said brackets extending upright and attached to the sides of the house, integral spindles projecting from the upright angles of said brackets mid-way of the length of said upright angles, said spindles being adapted to support the rear carrying wheels with the bottom of the house in juxta-position to the ground, angle irons conforming to the shapes of said angle brackets and arranged on the inner sides of the house in alinement with the angle brackets and to which said angle brackets are secured by bolts penetrating the sides and bottom of the house.

873,760. MOLDING APPARATUS. CHARLES H. LATHAM, Bradford, Pa. Filed Mar. 28, 1907. Serial No. 365,015.



1. An apparatus of the character described, comprising a stand, a mold base mounted on the stand, a mold mounted on said base and consisting of knock-down members that are adapted to be separated by a sliding action in a plane parallel to the face of the article against which they are adapted to rest.

2. An apparatus of the character described, comprising a stand, a mold base mounted on said stand, a mold consisting of end and side members, strips 9 underneath and in line with the end members and provided with projecting ends supporting the side members in elevated position, and means for clamping the mold members together.

3. An apparatus of the character described, comprising a stand, a mold base mounted on said stand and provided with a plurality of holes, angular clamp members 11 mounted on said base and provided in their horizontal members with slots, adjusting bolts received in said slots and fitting in the holes of the base whereby the clamps may be slid longitudinally on the base and held in different adjusted positions, and complemental swinging clamps mounted on said base and adapted to face the sliding clamps.

4. An apparatus of the character described, comprising a stand, a mold base mounted on said stand and provided with a plurality of holes, clamps adjustably mounted on said base, and other clamps complemental to the first named clamps, said last named clamps being provided at one end with downwardly extending fingers adapted to take in any of the holes of the base and provided with upwardly extending opposite ends formed with collars, and clamping rods adjustably mounted in the respective collars.

873,761. RAILWAY-SWITCH STRUCTURE. HENRY R. LUTHER, Newton, and FREDERIC F. STOCKWELL, Jr., Somerville, Mass. Filed Apr. 20, 1906. Serial No. 312,900.



1. In a railway switch structure, a cast body part; rail extensions integrally secured in said cast body part; a plate provided with track surfaces formed to bridge the space between the inner ends of the extension rails; an inclined web formed on the bottom of said plate; ears formed on said plate; and means for attaching the plate to the body part by means of said web and said ears.

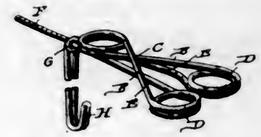
2. In a railway switch structure, a cast body part; rail extensions secured in said cast body part; a plate with track surfaces formed thereon arranged to bridge the space between the inner ends of the extension rails; an inclined web formed on the bottom of said plate; ears formed on the side of said plate; and means for removably attaching said plate to the cast body part.

3. A railway switch structure, comprising a body part; rail extensions integrally secured to said body part; a guard-rail integrally secured to said body part; a groove formed in the top of said body part and inclined at an angle with its top surface; a plate having track surfaces on its top and arranged to bridge the space between the inner ends of the rail extensions; a web on the bottom of said plate formed at an incline to its top surface; and means for securing the web of the plate in the groove, consisting of bolts and hard spelter.

4. A railway switch structure, comprising a body part having rail extensions and a guard-rail integrally secured thereto; an angular groove in the top of said body part; a plate provided with an angular web adapted to fit into said angular groove; and means consisting of bolts and hard spelter for securing the plate to the body part, as described.

5. A railway switch structure, comprising a cast body part, extension rails and a guard-rail integrally secured thereto; a groove in the top of said body part formed at an angle with its top surface; a plate having track surfaces thereon, and a web formed upon its bottom at an angle with the top surface of said plate; means for securing said plate in said body part comprising bolts and hard spelter; a tongue secured in said switch structure, its heel seated in said hard spelter; and a pivot bolt for securing said tongue in its seat.

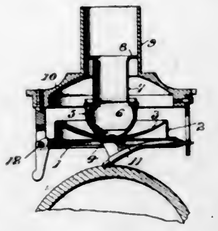
873,762. BROOM AND DUST-PAN HANGER. NOBLE LE R. LYONS, Akron, Iowa. Filed Dec. 17, 1906. Serial No. 348,171.



1. A device of the kind described formed from a single piece of wire comprising a threaded shank, and a hook depending therefrom, a pair of grasping members terminating at their forward ends in coils, and a central coil arranged remote from the forward end of the grasping members connected to each of said coils.

2. A device of the kind described formed from a single piece of wire and comprising a central coil, cross arms extending from said central coil and terminating in coils at their forward ends, rearwardly extending grasping members, one of said members terminating in a shank and the other in a depending hook member as set forth.

873,763. RECORDER AND REPRODUCER. THOMAS H. MACDONALD, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Apr. 8, 1907. Serial No. 367,097.



1. In a recorder or reproducer, a sound box with a dished or concave crown and a diaphragm supported with its central portion in close proximity to the central portion of said crown and its periphery relatively far removed from said crown.

2. In a recorder or reproducer, a sound box having an inwardly dished crown, and a diaphragm supported by the side walls of said sound box with the central portion of the diaphragm in close proximity to the central portion of said crown and the periphery thereof relatively far removed from said crown.

3. In a recorder or reproducer, a sound box having side walls and an inwardly dished crown or top with an opening at or near its center, a sound tube joined to said crown or top around said opening, and a diaphragm supported by the side walls of said sound box with its central portion in close proximity to the inner side of said dished crown and its peripheral portion relatively far removed from said crown.

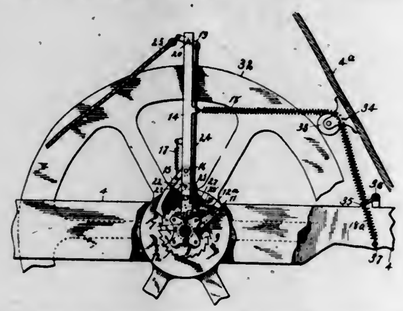
4. In a recorder or reproducer, a sound box having side walls and an inwardly dished crown or top with an opening at or near its center, a sound tube joined to said crown by a ball and socket joint surrounding said opening, and a diaphragm supported by the side walls of said sound box with its central portion in close proximity to the inner side of said dished crown at said opening and its peripheral portion relatively far removed from said crown.

5. In a recorder or reproducer, a sound box and a diaphragm supported by said sound box, the crown or top of the said box having a convex inner surface with an opening through its central portion, the central portion of the crown being in close proximity to said diaphragm

and retreating farther and farther from the diaphragm as it approaches the side walls of the box.

[Claim 6 not printed in the Gazette.]

873,764. MOTOR-STARTER. ADOLPH W. MANZ, Chicago, Ill., assignor to Paul H. Manz, Chicago, Ill. Filed Dec. 24, 1906, Serial No. 349,356. Renewed Nov. 4, 1907. Serial No. 400,548.



1. A motor starter, including a lever, a ratchet wheel removably mounted upon the motor shaft, a pawl attached to said lever, a plurality of rock-bars mounted on said lever and having flexible connection with each other and with said pawl, means for operating the lever, a dog adapted to engage the said ratchet-wheel during the reverse movement of the lever and means for holding the said dog out of engagement with the ratchet-wheel when the said lever is in its initial position.

2. A motor starter including a lever, a ratchet wheel mounted upon the motor shaft, an actuating pawl attached to said lever, a plurality of rock bars carried by the lever and having flexible connection with each other and with said pawl, a dog adapted to engage the teeth of the ratchet wheel during the backward movement of said lever, means for holding said dog out of engagement with the ratchet teeth when said lever is in its initial position, a tension spring attached to the lever and means for changing the direction of said sprlug.

3. A motor starter including a lever, a ratchet wheel mounted upon the motor shaft, an actuating pawl pivotally attached to said lever, means for operating the lever, a dog adapted to engage the teeth of said ratchet wheel during the backward movement of said lever, a tension spring secured to the lever, means for changing the direction of said tension spring and a connection between said spring and the lever of the motor compression release cock.

4. A motor starter, including an operating lever, detachably secured to a removable sleeve, an actuating pawl carried on said lever, means flexibly connected with said pawl for operating the lever, a dog adapted to engage the teeth of said ratchet-wheel during the backward movement of said lever, means for holding said dog out of engagement with the said ratchet teeth when the lever is in its initial position, a coiled spring attached to the lever and a pulley for changing the direction of said spring.

5. A motor starter including a lever, a ratchet wheel mounted upon the motor shaft, a pawl for actuating said ratchet wheel pivoted to the lever, rocking members carried by said lever, means for operating the lever attached to one of said rocking members, connection between the other of said members and said pawl, connection between said members, a dog carried by a fixed support, and adapted to engage the ratchet wheel, means for holding said dog out of engagement with the ratchet wheel when the lever is in its initial position, a spring attached to the lever and having operative connection with the lever of the motor compression release cock, and a second spring connecting the said lever to a fixed point.

[Claim 6 not printed in the Gazette.]

873,765. PIN. CHARLES F. MARKHAM, Providence, R. I. Filed Jan. 28, 1907. Serial No. 354,389.



1. An article of manufacture comprising a pin formed of sheet metal shaped to the desired form and provided with integral catch and joint ears which are of greater thickness than the body portion of said pin.

2. An article of manufacture comprising a pin formed of sheet metal shaped to the desired form and provided with an integral catch which is of greater thickness than the body of said pin.

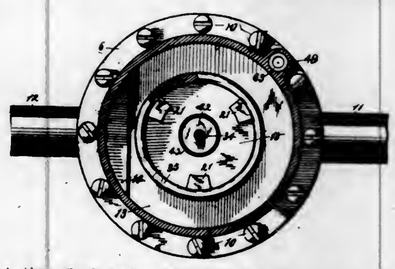
3. An article of manufacture comprising a pin formed of sheet metal shaped to the desired form and provided with integral joint ears which are of greater thickness than the body portion of said pin.

4. An article of manufacture comprising a pin formed of sheet metal shaped to the desired form and provided with integral catch and joint ears, said catch member and ears being thicker than the body of the pin, the thickened portions extending well down into said body.

5. An article of manufacture comprising a pin formed of sheet metal shaped to the desired form and provided with integral catch and joint ears which are of greater thickness than the body of said pin, and a fulcrum member notched to engage the thickened portions of said joint ears, the latter being bent to retain said fulcrum member in position.

[Claim 6 not printed in the Gazette.]

873,766. FLUSH-VALVE. CHARLES I. MATSON, Chicago, Ill. Filed Nov. 19, 1906. Serial No. 344,012.



1. A time flush valve, including a high pressure chamber, a variable pressure chamber, a flush valve located between said chambers, a timing valve located in said variable pressure chamber and arranged to open and close said flush valve, a by-pass in constant communication with said chambers, and a check valve for said by-pass.

2. A time flush valve, including a high pressure and a variable pressure chamber, a valve located between said chambers, a timing piston situated in said variable pressure chamber and arranged to open and close said valve, means for inhibiting the valve action, a by-pass constantly communicating with both of said chambers and a check valve for said by-pass.

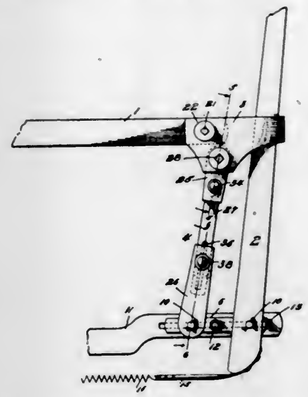
3. A valve for the purpose specified, including a casing having a high pressure and a variable pressure compartment, a flush valve between the compartments, a timing piston situated in the variable pressure chamber, yielding means for operating said piston in one direction, means for automatically operating said valve by the piston in another direction, a dash pot for inhibiting the valve movement, a by-pass between the compartments and a check valve for said by-pass.

4. A valve for the purpose specified, including a casing provided with a plurality of chambers, a flush valve located between said chambers, a piston adapted to reciprocate in one of said chambers and arranged to actuate said valve, a spring for operating said piston in one direction, a dash pot for retaining the valve movement, a by-pass between the chambers, and a check valve for the by-pass, said by-pass having a continuously open duct extending therethrough.

5. A valve for the purpose specified, including a high pressure and a variable pressure chamber, a flush valve located between said chambers, a piston adapted to reciprocate in said variable pressure chamber, a spring arranged to actuate said piston in one direction, operative connection between said piston and the flush valve, a dash pot for regulating the valve movement, a by-pass between the chambers, and a check-valve for the by-pass, said check valve and by-pass having a continuously open duct extending therethrough.

[Claim 6 not printed in the Gazette.]

873,767. POWER-GAGE AND LUG-STRAP FOR LOOMS. CHESTER A. MESSER, East Madison, Me. Filed May 19, 1906. Serial No. 317,730.



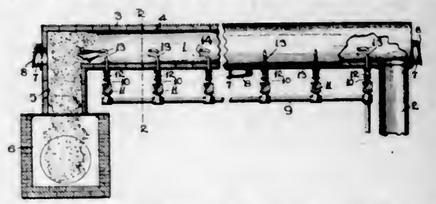
1. In a loom, the combination with a sweep-stick, a supporting arm, and a picker-stick mounted upon said supporting arm, of a lug strap carried by said sweep-stick and in engagement with said picker-stick, depending ears formed upon said lug strap, each ear provided with an elongated aperture, and means engaging the apertured portions of the ears and connecting said lug strap to said supporting arm.

2. In a loom, the combination with a supporting arm, and a sweep-stick, said supporting arm provided with an elongated aperture, of a stud-plate in engagement with said supporting arm, said stud-plate provided with a squared aperture and with laterally extending studs, fastening means positioned within the squared aperture of said stud-plate and within the elongated aperture of said supporting arm for securing said plate upon said arm, a picker-stick mounted upon one of said studs, a lug strap secured to said sweep-stick and in engagement with said picker-stick, and means engaging and connecting the other stud of said plate and said lug strap.

873,768. METHOD OF CLEANING GAS-PRODUCER CONNECTIONS. ROBERT H. MILLER, St. Louis, Mo., assignor to The Christy Fire Clay Company, St. Louis, Mo., a Corporation of Missouri. Filed Oct. 24, 1905. Serial No. 284,226.

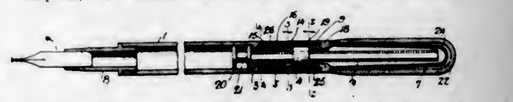
1. The herein described method of cleaning out gas producer connections, which consists in consecutively directing jets of fluid from a series of sets of jet pipes against the dust and other obstructions in said connections.

2. The herein described method of cleaning out gas producer connections, which consists in consecutively directing jets of fluid from a series of sets of jet pipes against the dust and other obstructions in said connections, thereby moving the dust and obstructions step by step toward a discharge opening, and then consecutively dis-



continuing the flow of fluid from the jet pipes as the obstructions are moved away from the same.

873,769. FOUNTAIN-PEN. JAMES P. MORRIS, Philadelphia, Pa. Filed Oct. 3, 1906. Serial No. 337,195.



1. In a fountain pen, the combination of a barrel, a piston fitting the cavity within the barrel, a stem connected with the piston and screw-threaded, a bushing closing the end of the barrel, the piston stem extending through the bushing and being held from rotation therein, a nut for engaging with the threaded part of the stem for operating the piston, the bushing constituting an abutment to prevent longitudinal movement of the nut in one direction, means for turning the nut, and means connected with the turning means and operating as an abutment to prevent longitudinal movement of the nut in the other direction, substantially as set forth.

2. The combination of a barrel, a bushing mounted in one end thereof and provided with guide-ways, a piston, a screw connected thereto and slidable in said guide-ways, a nut for operating the screw, a shoulder on the outer end of the bushing so arranged that there is formed an annular groove between the shoulder and the end of the barrel, a ring adapted to rotate in said groove, and connections between the ring and the nut for rotating the latter to operate the screw, substantially as set forth.

3. In a fountain pen, the combination of a barrel, a piston and a piston screw, a bushing mounted in one end of the barrel, formed with an exterior annular recess, a rotating member having a rib engaging with said recess, a nut mounted within the said member and rotatable therewith for operating the piston and piston screw, and a sheath covering the end of the piston screw and connected with the rotatable member and arranged to operate as an abutment for the nut to prevent the longitudinal movement thereof in one direction, substantially as set forth.

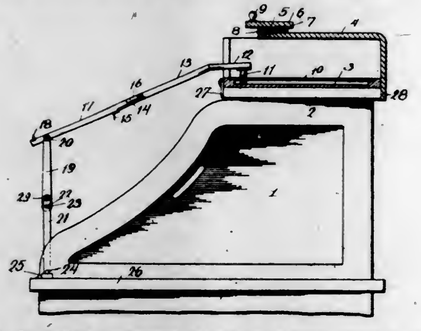
4. In a fountain pen, a barrel, a bushing, a piston-screw guide having an annular shoulder, a reciprocating piston-screw, a sheath housing said piston-screw and having a threaded projection, a rotary operating member, an interiorly-threaded nut, a means for attaching said nut to said operating member, a means for preventing longitudinal movement of said nut in regard to said operating member.

5. In a fountain pen, a barrel, a projection therefrom, a piston-screw guide bushing, having an annular shoulder, an interiorly-threaded nut having an exterior rib, a piston-screw, and a rotary operating member having a groove to receive said rib, said operating member having an interior rib received in a groove formed by the shoulder of said bushing and the projection from the barrel.

873,770. DESK ATTACHMENT. JENNINGS S. MCCOMB, Dobbs Ferry, N. Y. Filed Mar. 8, 1907. Serial No. 361,196.

1. In desk attachments for roll top desks, a casing provided with a depending rear flange and with pivoted buttons adjacent the front edge thereof, to engage the edges

of a desk cap and secure said casing thereto, said casing being provided with metallic guideways on the bottom of the same adjacent each end thereof and with a hinged door and flap covering the front thereof, a table provided with depending headed studs engaging said guides, a leaf hinged to said table and provided with a ledge and a spring clip, legs pivoted to said table leaf and connected at their lower portion with a rod having ends projecting through said legs, supports pivoted to said legs and provided with slots coöperating with the ends of said rod and having tips, and a connecting stay adjacent their lower ends, whereby said table and supporting members may be operatively supported from said casing and inclosed therein when in collapsed form.



2. In desk attachments, a casing having means to secure the same to the cap of a desk and provided with a door and with guides, a table provided with depending studs engaging said guides and having a leaf hinged thereto, legs pivoted to said leaf and connected at their lower portions, and supports pivoted to said legs and provided with tips whereby said table and supporting members may be operatively supported from said casing and inclosed therein when in collapsed form.

3. In desk attachments, a removable casing provided with means for holding it in alinement with respect to the desk cap, said casing being provided with guides, a table provided with means engaging said guides, a leaf hinged to said table, and pivoted supporting legs on said leaf to support said table from a desk top and to allow the sectional table and connected parts to be stored in said casing when in collapsed form.

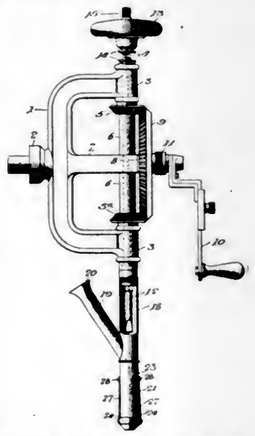
4. In desk attachments, a removable member provided with guides, a table having members coöperating with said guides, and supporting means movably secured to said table to support the same from the top of the desk and to allow said table to be moved rearward out of operative position when not in use.

5. A desk attachment for roll top desks, comprising a removable casing to fit upon the cap of the desk, means for removably holding the casing to the desk and a table normally inclosed within the casing but adapted to be withdrawn from it and supported above the top of the desk.

[Claim 6 not printed in the Gazette.]

873,771. SCREW-DRIVER. JOHN MCCOY, Vienna Cross Roads, Ohio. Filed Jan. 7, 1907. Serial No. 351,051.

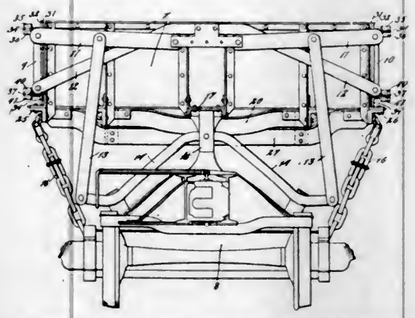
1. In a device of the character described, the combination, with a substantially U-shaped frame, an apertured member carried thereby between the arms of said U-shaped frame and extending substantially parallel with said arms, a shaft mounted in said arms and extending through said apertured member and having both a rotatory and a reciprocatory movement relatively to said frame, a bevel pinion mounted on said shaft to cause said shaft to rotate therewith and to permit the same to reciprocate independently thereof, a bevel gear mounted on said apertured member beyond said shaft and adapted to mesh with said bevel pinion, means for rotating said bevel gear, and a screw-driver bit carried by the lower end of said shaft, of a screw holder supported from said frame and adapted to receive said bit.



2. In a device of the character described, the combination, with a frame, a shaft mounted on said frame and having both ends extending beyond the same, means for imparting a rotatory movement to said shaft, a handle mounted on one end of said shaft to move the same longitudinally of said frame, a drill-chuck mounted on said shaft beyond said handle, a screw-driver bit mounted on the other end of said shaft, and a swiveled connection for securing said frame to a support, of a screw holder carried by said frame and adapted to receive said screw-driver bit.

3. In a device of the character described, the combination, with a frame and a screw-driver, of a screw holder comprising a casing, spring-pressed jaws mounted beneath said casing and having their inner faces beveled, a removable guide mounted within said casing and having its lower end tapered to correspond with the beveled inner faces of said jaws, substantially as described.

873,772. DUMP-CAR. THOMAS R. MCKNIGHT, Aurora, Ill., assignor to Western Wheeled Scraper Company, Aurora, Ill., a Corporation of Illinois. Filed Sept. 26, 1907. Serial No. 394,715.



1. A dump car platform comprising a frame formed of a center sill extending longitudinally thereof, said center sill being composed of a channel-iron longitudinal angle-irons at the sides of said center sill, and cross braces connected at their ends with said angle-irons and extending under said center sill, and a floor secured upon said frame.

2. A dump car platform comprising a frame formed of a center sill extending longitudinally thereof, said center sill being composed of a channel-iron longitudinal angle-irons at the sides of said center sill, and cross braces connected at their ends with said angle-iron and extending under said center sill, the cross braces being secured to said center sill, and a floor secured upon said frame.

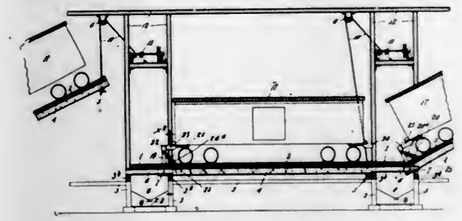
3. A dump car platform comprising a frame formed of a center sill extending longitudinally thereof, longitudinally-extending angle-irons forming the side edges of said frame, intermediately-disposed angle-irons extending longitudinally of said frame, cross braces connecting said first-mentioned angle-irons, and cross braces connecting said intermediate angle-irons, all of said cross braces extending under said center sill, and a floor secured upon said frame.

4. A dump car platform comprising a frame composed of an inverted channel-iron extending longitudinally at the center thereof, intermediate longitudinally-disposed angle-irons, cross braces connecting said intermediate angle-irons, said braces being secured together in the form of an X and extending under and being secured to said channel-iron, marginal supports for the frame, and cross braces connecting said marginal supports, and floor plates secured to said frame.

5. A dump car comprising a frame having a longitudinally-extending inverted channel-iron arranged centrally thereof, pivotal supports connected to said channel-iron, longitudinally-disposed braces for the side portions of the frame, and cross braces extending under the channel-iron and connected to said longitudinal braces, and a floor secured upon said frame.

[Claims 6 to 11 not printed in the Gazette.]

873,773. APPARATUS FOR UNLOADING GRAIN-CARS. FINLAY R. MCQUEEN, Minneapolis, Minn. Filed Mar. 10, 1906. Serial No. 305,277.



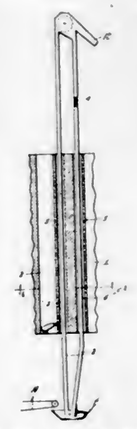
1. In a car unloading apparatus, the combination with a tilting platform pivoted at or in the vicinity of one end, and provided with rails that constitute sections of the rails of a railway track, of a hopper located below the pivoted end of said platform, and a bumper post pivotally mounted on the tilted end of said platform, between the rails thereof, and a link pivoted to said bumper post and engageable with a fixed stop on said platform, to limit the upward pivotal movements of said bumper post, substantially as described.

2. The combination with a plurality of tilting platforms interposed in a railway track in close proximity and provided with rails that constitute sections of the track rails, of means for independently raising and lowering corresponding ends of said platforms, and hoppers located below the other ends of said platforms, substantially as described.

3. The combination with an endwise tilting platform, of a car, the body of which has end doors that extend to the bottom thereof, and means for holding said car on said platform, while said platform is being tilted endwise thereby, to unload the car, substantially as described.

4. In an apparatus for unloading cars, the combination with a tilting platform pivoted at one end, of a bumping post pivotally connected to said platform on the axial line of its pivotal support, of means for raising and lowering said bumping post to and from operative position, and means for raising and lowering the free end of the tilting platform, substantially as described.

873,774. GRAIN-STORAGE ELEVATOR. FINLAY R. MCQUEEN, Minneapolis, Minn. Filed May 17, 1906. Serial No. 317,317.



1. A plurality of grain bins 1 arranged in rows in two directions, and having their adjoining sides rigidly united so as to form supplemental bins 2, certain of said bins 1 being tied together by vertical partitions or webs 5 that extend across angular portions of certain of said supplemental bins 2, and form vertical leg passages 6, in combination with bifurcated elevator legs having their branches extended vertically through adjacent leg passages 6, substantially as described.

2. A plurality of cylindrical grain bins forming a monolithic structure and having their adjacent peripheral portions rigidly connected, and forming supplemental storage bins in the intervening spaces, vertical webs extending through adjacent supplemental bins to form leg passages, in combination with bifurcated elevator legs extending from below said bins through adjacent leg passages, substantially as described.

873,775. INNERSOLE. BENJAMIN NATHAN, New York, N. Y. Filed Nov. 27, 1905. Serial No. 289,188.



1. An inner sole comprising a plurality of layers secured together and having between the same a substantially wedge shaped pocket which is open along the contiguous marginal edge of the inner sole, and a removable substantially wedge-shaped filling member for said pocket.

2. An inner sole comprising a plurality of layers secured together and having between the same a plurality of pockets which are open at the opposite marginal edges of the inner sole and are narrowed toward the longitudinal center of the same, and a removable substantially wedge shaped filling member which is adapted to either of said pockets.

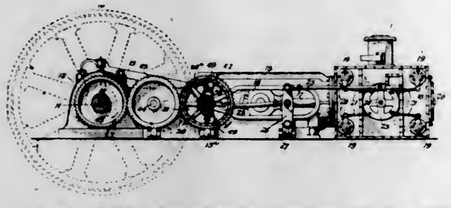
3. An inner sole, comprising a plurality of layers transversely stitched together, said stitches comprising a plurality of pairs of lines which converge from the marginal edge of the inner sole toward the longitudinal center of the same so as to form a plurality of wedge shaped pockets which are open at the opposite marginal edges of the inner sole and open into each other between said edges, and a removable wedge adapted to either of said pockets.

4. An inner sole comprising a plurality of layers connected with each other by a series of rows of transversely extending stitches each having converging diagonal lines, said lines relatively arranged to form a plurality of separate pockets at each side of the longitudinal center of the insole, and each of which is narrowed toward said center, and removable wedge-shaped filling members for said pockets.

5. An inner sole, comprising a plurality of layers stitched together to form separate pockets which are arranged along the length of the insole and are open along the marginal edges of the latter, said stitches extending in a series of lines, some of which converge toward the longitudinal center of the insole from opposite sides thereof and are arranged at the ball portion of the insole, others of which simtlarly converge at opposite sides of the longitudinal center of the instep portion of the insole, and others of which extend from one to the other marginal edge of the heel portion of the insole, and removable filling members for said pockets.

[Claims 6 to 10 not printed in the Gazette.]

873,776. REVERSING MECHANISM. SVEN T. NELSON, Chicago, Ill., assignor to Sullivan Machinery Company, Chicago, Ill., a Corporation. Filed Mar. 15, 1906. Serial No. 306,116.



1. A reversible valve-operating gear for engines comprising a valve operating shaft, a rotary member loosely and concentrically mounted on said shaft and driven from the engine independently of said shaft and having a segmental fluid pressure chamber therein, a wing piston fixed on said shaft and extending within said chamber and means for admitting fluid under pressure into said chamber on opposite sides of said piston.

2. The combination with an engine and its valve mechanism, of a reversible valve-operating gear comprising a shaft connected to and operating said valve mechanism, a rotary member loosely and concentrically mounted on said valve operating shaft and connected to and driven from the engine independently of said shaft, said rotary member having a segmental fluid pressure chamber therein, a wing-piston fixed to said shaft and extending within said chamber and means for admitting liquid under pressure to said chamber on opposite sides of said piston.

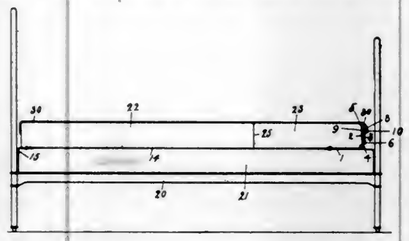
3. A reversible valve-operating gear for engines comprising a valve operating shaft, a rotary member loosely and concentrically mounted on said shaft and driven from the engine independently of said shaft and having a segmental fluid pressure chamber therein, a wing piston fixed on said shaft and extending within said chamber, passages in said rotary chamber opening into the opposite ends of said chamber, a sleeve on said shaft fixed to said rotary member and having longitudinally extending passages communicating with the passages thereof, bearings through which said sleeve extends, annular passages communicating with the passages of said sleeve and valve mechanism controlling the flow of fluid under pressure through said passages to the opposite ends of the segmental chamber of said rotary member.

4. A reversible valve-operating gear for engines, the combination with a valve operating shaft and a valve rod driven from said shaft, of a rotary member loosely and concentrically mounted on said valve operating shaft and driven from the engine independently thereof and having a segmental fluid pressure chamber therein, a wing piston fixed to said shaft and extending within said chamber, a sleeve on said shaft connected to said rotary member, bearings through which said sleeve extends having annular passages therein, said sleeve and rotary member having passages leading from the passages of said bearing to the opposite ends of said segmental chamber and valve mechanism controlling the flow of fluid under pressure through said passages and to and from the opposite ends of said segmental chamber.

5. In reversible valve-operating mechanism for engines comprising a valve operating shaft, a rotary member loosely and concentrically mounted on said shaft comprising heads and intermediate radial abutments forming a segmental fluid pressure chamber, a wing piston fixed to said shaft and arranged within said chamber, means for admitting fluid under pressure into opposite ends of said chamber to effect the shift of said piston within the same and adjustable stops in threaded engagement with said abutments for limiting the movement of said piston.

[Claims 6 to 12 not printed in the Gazette.]

873,777. MATTRESS AND BEDCLOTHES HOLDER. GEORGE E. PARKER and WILLIAM W. DICKSON, Amsterdam, N. Y. Filed Oct. 20, 1906. Serial No. 339,788.



1. A mattress-and-bed-clothes holder comprising a horizontal member adapted to bear against the underside of a mattress-section; an upright member integral with the horizontal member adapted to bear against the lower end of such mattress-section; a spring-actuated clamping section coöperative with the upright member in forming a clamp; and means for holding the horizontal member from slipping toward the lower end of the bed.

2. A mattress-and-bed-clothes holder comprising a single piece of wire bent to form a horizontal member and an upright member with pivot-eyes at the junction of such members; a second piece of wire bent to form pivot-ends inserted in the pivot-eyes; a pair of coil-springs and a clamping bar coöperative with the upright member to form a clamp; and means for securing such device from slipping toward the lower end of the bed.

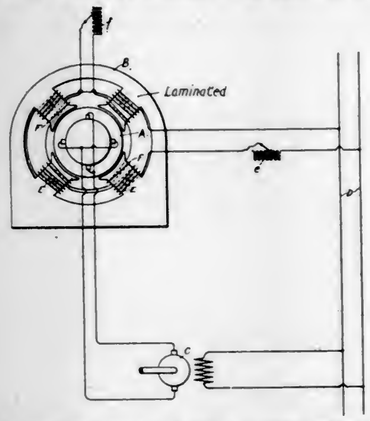
873,778. DYNAMO-ELECTRIC MACHINE. KARL A. PAULY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 18, 1907. Serial No. 374,423.

1. In combination, an electric generator, an electric motor supplied thereby, a separate source of current for the generator field winding, means for varying the field current of said generator, and means for adjusting the magnetic time-lag of the generator field.

2. In combination, an electric generator, an electric motor supplied thereby, a separate source of current for the generator field winding, means for varying the field strength of the generator, a short-circuited winding on the generator field structure, and a resistance included in the short-circuit.

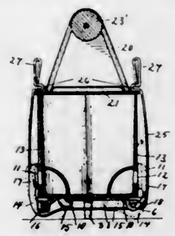
3. In combination, an electric generator, an electric motor supplied thereby, a separate source of current for the generator field winding, means for varying the field-strength of the generator, a short-circuited winding on the generator field structure, and means for varying the resistance of the short-circuit.

4. In combination, an electric generator having laminated field-poles, an electric motor supplied thereby, a separate source of current for the generator field winding, means for varying the field-strength of said generator, a short-circuited winding surrounding the generator field-poles, and a resistance included in the short-circuit.



5. In combination, an electric generator having laminated field poles, an electric motor supplied thereby, a separate source of current for the generator field winding, means for varying the field-strength of said generator, a short-circuited winding surrounding the generator field-poles, and a resistance included in the short-circuit.

873,779. SAD-IRON STAND. HORACE S. PEASE, Cincinnati, Ohio. Filed Aug. 1, 1904. Serial No. 218,982.



1. A stand having a damper provided with an arm adapted to engage the bottom of an iron when it is placed thereon and automatically press said damper against the side of said iron whereby a draft opening in said iron is adapted to be closed.

2. A stand having a top provided at each side with a bearing and having near each bearing an opening through said top, a damper having an arm journaled in each bearing and each arm having an end adapted to normally extend through the opening adjacent thereto and be depressed by a sad iron to automatically close the respective dampers over draft openings in the sides of the iron.

3. A stand having a damper pivoted at each side near its center to automatically close the draft openings in a sad iron when it is placed thereon, a flange on the upper edge of said stand in front of each damper to hold the iron in place and a flange on the lower edge of said stand in the rear of each damper to permit unobstructed placing of the iron upon the stand.

873,780. INSULATED COIL. CHARLES F. PETERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 22, 1907. Serial No. 380,227.

1. The process of forming coils for electrical uses which consists in winding a covered conductor into a coil and dipping said coil into an insulating material, heating the coil to remove the covering, then again dipping the coil into the material to fill up the pores and firing at a high temperature.



2. The process of forming coils for electrical uses which consists in winding a conductor into a coil with a combustible spacing material between the turns, dipping said coil into an insulating material, heating the coil to burn out the spacing material, again dipping the coil into the insulating material to fill up the pores and then firing at a high temperature.

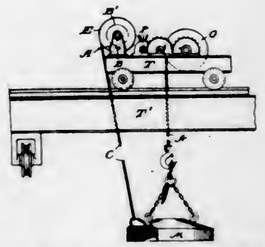
3. The process of forming coils for electrical uses which consists in winding a conductor into a coil with a combustible spacing material between the turns, dipping said coil into a silicious material, heating the coil to burn out the spacing material, again dipping the coil into the insulating material to fill up the pores and then firing at a high temperature.

4. The process of forming coils for electrical uses which consists in winding a conductor covered with a combustible material into a coil, dipping said coil into a vitreous material, heating the coil to burn out the conductor covering, again dipping the coil into the vitreous material to fill up the pores and then firing at a high temperature.

5. The process of forming coils for electrical uses which consists in winding a conductor into a coil with a combustible spacing material between the turns, dipping said coil into an insulating material comprising kaolin and silicate of soda, heating the coil to burn out the spacing material, again dipping the coil into the insulating material to fill up the pores and then firing at a high temperature.

[Claims 6 and 7 not printed in the Gazette.]

873,781. CABLE-DRUM MECHANISM. CLAIBORNE PIRTLE, Cleveland, Ohio. Filed Mar. 6, 1907. Serial No. 360,815.



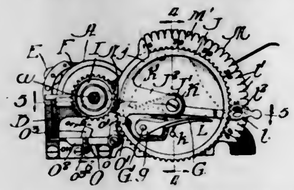
1. A tension device for cables, embracing a drum, an electric motor having its rotatable member connected in driving relation to said drum, and a resistance permanently in circuit with said motor in such manner as to limit the torque of said motor.

2. In an automatic tension device for cables, the combination of a rotatable cable-winding device, an electric motor for driving said winding device in such manner as to take up the slack as it occurs on the cable, and means for limiting the torque of said motor to a constant maximum value.

3. In a hoisting device, the combination of a lifting magnet carried by the said hoisting device, a cable for supplying electric current to said lifting magnet, a winding device for taking in and paying out said cable, an elec-

tric motor tending to drive said winding device in such a direction as to maintain a tension in said cable, and means for limiting the torque of said motor.

873,782. LINE-SPACE-INDICATING DEVICE. CHARLES C. POOLE, Evanston, Ill., assignor to The Oliver Typewriter Company, Chicago, Ill., a Corporation of Illinois. Filed May 3, 1907. Serial No. 371,587.



1. A line space indicator for typewriters comprising a gear pinion which turns with the platen, a rack member adapted to intermesh with the gear pinion and which passes out of mesh with the gear pinion in the forward turning movement of the platen and becomes reëngaged with the pinion in the backward turning movement of the platen, and means operated by such forward turning of the platen acting when the rack member passes out of mesh with the pinion to give further movement to said rack member in a direction to carry its end tooth entirely out of contact with the teeth of the pinion.

2. A line space indicator for typewriters comprising a gear pinion which turns with the platen, a rack member adapted to intermesh with the gear pinion and which has backward and forward endwise movement to carry its gear teeth into and out of mesh with the pinion, said rack member being arranged to be thrown out of intermeshing engagement with the gear pinion by the forward turning movement of the platen, means for causing said rack member to be brought into mesh with the pinion in the backward turning movement of the platen, a pointer, and a scale associated with said pointer for indicating the extent of movement of said rack member.

3. A line space indicator for typewriters comprising a gear pinion which turns with the platen, a rack member adapted to intermesh with the gear pinion and which has backward and forward endwise movement to carry its gear teeth into and out of mesh with the pinion, said rack member being arranged to be thrown out of intermeshing engagement with the gear pinion by the forward turning movement of the platen, means for causing said rack member to be brought into mesh with the gear pinion by the backward turning movement of the platen, and an adjustable stop for limiting the movement of said rack member.

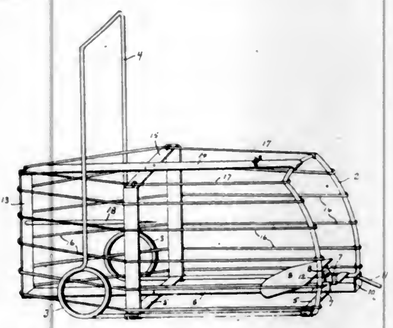
4. A line space indicator for typewriters comprising a gear pinion which turns with the platen, a rack member adapted to intermesh with said gear pinion and which passes out of mesh with the gear pinion in the forward turning of the platen and becomes reëngaged with the pinion in the backward turning of the platen and means maintaining frictional engagement between said gear pinion and rack member after the disengagement of said parts in the forward turning of the platen to carry the end tooth of the rack member entirely out of contact with the teeth on the gear pinion.

5. The combination with a pinion and a movable rack member adapted to intermesh therewith, of a part which turns with the pinion provided with an annular friction surface, and a friction shoe carried by the rack member and adapted for engagement with said friction surface.

[Claims 6 to 14 not printed in the Gazette.]

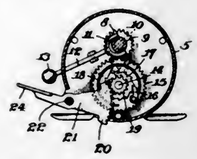
873,783. ANIMAL-TRAP. ROY C. RANDALL, Kirkwood, Ill. Filed May 3, 1907. Serial No. 371,731.

1. An animal trap, comprising an arch 2; side-pieces 1, integral therewith; springs 3, integral with the side-pieces 1; a loop 4, integral with the springs 3; cross-pieces 5, uniting the side-pieces 1; a bar 6, secured to the cross-pieces 5, and provided at its forward end with a support 10; a trigger 11, pivotally mounted on the support 10; a tongue 8, pivotally supported on the bar 6, and adapted to engage the trigger 11, to hold the loop 4 in depressed position; and a plate 9, fixed to the upper end of the tongue 8, substantially as shown and described.



2. An animal trap, comprising an arch 2; side-pieces 1, attached thereto; springs 3, integral with the side-pieces 1; a loop 4, integral with the springs 3; cross-pieces 5, uniting the side-pieces 1; a bar 6, secured to the cross-pieces 5; a support 13, fixed on the bar 6, at the rear end thereof; a bar 14, integral with the support 13 at its rear end, and attached to the arch 2 at its forward end; an arch 15, supported on the rear cross-piece 5; a plurality of spaced-apart bars, inclosing the sides and top of the trap; means for holding the loop 4 in lowered position, with the trap set; and means for releasing such loop, substantially as shown and for the purpose mentioned.

873,784. FISHING-REEL. HENRY C. REICHARDT, Pottsville, Pa. Filed Oct. 19, 1905, Serial No. 283,380. Renewed May 13, 1907. Serial No. 373,377.



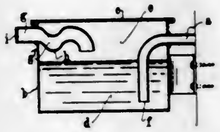
1. In a fishing reel, the combination with the rotatable line-receiving member, of a toothed reciprocative member, gearing between said members, and a pawl and ratchet wheel to actuate said gearing when the second named member is moved in one direction.

2. In a fishing reel, the combination with the rotatable line-receiving member, of a toothed reciprocative member, a gear wheel engaged therewith, a second gear wheel, a pawl and ratchet connection between said gear wheels, and gearing between the second named gear wheel and the first named member.

3. In a fishing reel, the combination with the rotatable line-receiving member, of a toothed reciprocative member, a gear wheel engaged therewith, a second gear wheel, a pawl and ratchet connection between said gear wheels, gearing between the second named gear wheel and the first named member, and means for connecting and disconnecting the second named gear wheel with and from said gearing.

4. In a fishing reel, the combination with the rotatable line-receiving member, of a toothed reciprocative member, a gear wheel engaged therewith, a second gear wheel, a pawl and ratchet connection between said gear wheels, a gear wheel connected to the first named member, a movable gear wheel engaged with the last named gear wheel, and means adapted to be operated to move the movable gear wheel into engagement with said second gear wheel.

873,785. APPARATUS FOR DEODORIZING THE EXHAUST-GASES OF MOTORS. ALFRED REICHEL, Dresden-Loschwitz, Germany. Filed Apr. 24, 1906. Serial No. 313,463.



Apparatus for deodorizing the exhaust gases of motors, comprising a tank partially filled with a suitable liquid, means for conducting the exhaust gases from the motor into the said tank close to the bottom thereof, outlet means for the deoderized gases communicating with the tank above the liquid level, comprising a double knee piece having perforations at the lower bend and means for preventing entrance of foreign matter into the outer end of said knee piece, and means for preventing the liquid from being violently thrown about within said tank, substantially as set forth.

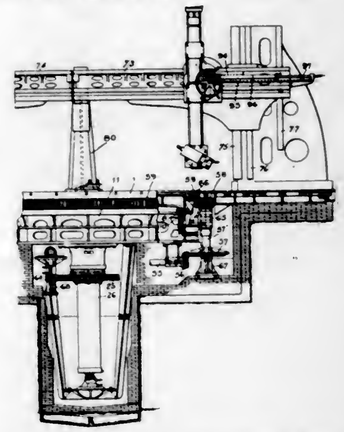
873,786. GUN-CASE. HERMAN C. REUTAR, Chicago, Ill., assignor to E. C. Cook & Bro., Chicago, Ill., a Corporation of Illinois. Filed June 18, 1906. Serial No. 322,360.



1. A gun case provided with a resilient partition dividing the interior of the case into separate compartments for the stock and barrel of the gun, whereby when the parts of the gun are placed within the case, the partition will bend to conform to the outlines thereof and force said parts against the side walls of said casing, substantially as described.

2. A gun case provided with a resilient partition hinged at one end to said case and having a covering of soft fabric, said partition dividing the interior of the case into separate compartments for the stock and barrel of the gun, whereby when the stock and barrel of the gun are placed within their compartments the partition is laterally bent and presses the stock and barrel against the sides of the case, substantially as described.

873,787. BORING AND TURNING MILL. JOHN RIDDELL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed June 27, 1903. Serial No. 163,319.



1. A boring and turning mill provided with a cross-rail having a rack secured thereto, a saddle carried by said rail and provided with a rack, gears of different sizes rigidly connected together and respectively engaging said racks, and means to move said gears lengthwise of said rail.

2. A boring and turning mill provided with a cross-rail having a rack secured thereto, a saddle carried by said rail and provided with a rack, gears of different sizes rigidly connected together and respectively engaging said racks, and hydraulic means for moving said gears lengthwise of said rail.

3. In a boring and turning mill, the combination of a bed plate, a revoluble table mounted thereon, a tool-supporting bar carried by said bed plate and journaled in said table, and means for rotating said bar independently of said table.

4. In a boring and turning mill, the combination of a bed plate, a removable table mounted thereon, a tool-supporting bar mounted upon said bed plate concentric with said table, and means for independently rotating and reciprocating said bar.

5. In a boring and turning mill, the combination of a revoluble table, a tool-supporting bar located concentrically therewith and normally below the surface thereof, and means for independently rotating and reciprocating said bar.

[Claims 6 to 12 not printed in the Gazette.]

873,788. DUPLICATING APPARATUS. FRANK RIES, Tiffin, Ohio, assignor of one-fourth to Lee Buckingham and one-fourth to John A. Bain, Tiffin, Ohio. Filed Feb. 4, 1907. Serial No. 355,651.

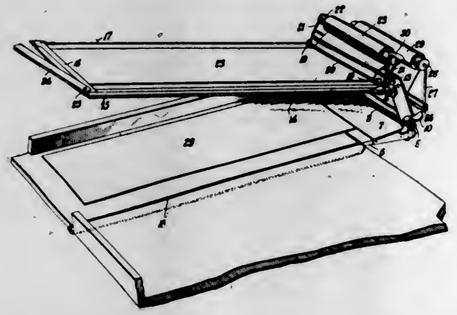
1. The combination with a base; of a leaf hinged thereto, a guide plate upon the leaf, and a duplicating strip carried by the leaf and extensible beneath the guide plate and across the base.

2. The combination with a base; of a leaf hinged thereto, a guide plate secured to the leaf, a roller supported above said plate and upon the leaf, and a duplicating strip supported by the roller and extensible beneath the guide plate and across the base.

3. The combination with a base; of a leaf hinged thereto, a duplicating strip carried by the leaf and extensible across the base, a guide for said strip and upon the leaf, a frame movably connected to the leaf, and a duplicating device carried by said frame.

4. The combination with a base; of a leaf hinged thereto, a duplicating strip carried by the leaf and extensible

across the base, a guide for said strip and upon the leaf, links pivotally connected to the leaf, a frame pivotally connected to the links, a duplicating strip carried by and extending longitudinally of the frame.



5. The combination with a base; of a leaf hinged thereto, a duplicating strip carried by the leaf and extensible across the base, a guide for said strip and upon the leaf, a frame movably connected to the leaf, a duplicating device carried by said frame, and means upon the base and frame for facilitating the folding of a sheet thereon.

[Claims 6 to 8 not printed in the Gazette.]

873,789. ARTIFICIAL-TOOTH CROWN AND BRIDGE-WORK. JAMES B. RIGHTER, River Falls, Wis. Filed Aug. 9, 1906. Serial No. 329,932.



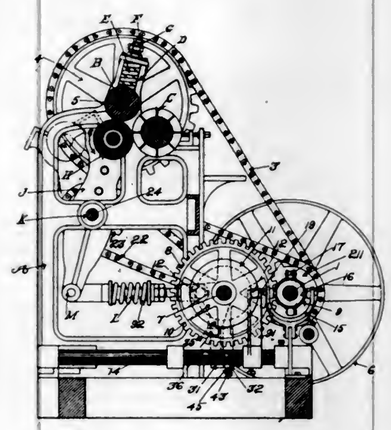
1. In tooth crown and bridge work of the character described, the combination with a coping, of a backing plate located upon the coping and having an undercut socket in its front face, investment located in rear of the plate and upon the coping and securing the two together, and a tooth dummy having a rearwardly projecting headed stud secured in the socket and interlocked with the undercut walls thereof.

2. In tooth crown and bridge work of the character described, the combination with space root-engaging devices, of a backing strip comprising a plurality of separate sections having sockets in their front faces, investment securing the sections of the strip together and securing said strip to the root-engaging devices, and tooth dummies located against the front side of the strip and having projections on their rear sides that are interlocked in the said sockets of the sections.

3. In tooth crown and bridge work of the character described, the combination with space root-engaging pins, of copings mounted thereon, a backing strip connecting the copings and comprising a series of sections, each section having an undercut socket extending from its inner end and terminating short of its outer end, investment connecting the sections on their rear sides, and tooth dummies located against the front side of the strip and having rearwardly projecting headed pins that interlock in the undercut sockets.

4. In tooth crown and bridge work of the character described, the combination with a backing strip comprising a plurality of separate sections, of investment securing the sections together edge to edge, tooth dummies interlocked with the front sides of the sections, and tooth engaging devices for securing the strip in place.

873,790. LEATHER-WORKING MACHINE. JOHN ROOD, Danvers, and FRANKLIN J. PERKINS, Woburn, Mass., assignors, by mesne assignments, to Turner Tanning Machinery Company, Boston, Mass., a Corporation. Filed May 24, 1905. Serial No. 262,014.



1. In a machine of the character described, in combination, an operating tool, a bed roll, vertically arranged levers pivoted intermediate their ends and in the upper ends of which said bed roll is mounted, a counter shaft, means for connecting the lower ends of said levers to said counter shaft to effect oscillation of said levers and bodily movement of said bed roll toward and from said operating tool, a main or driving shaft, means for connecting said main or driving shaft with said counter shaft, and means for effecting intermittent rotation of said counter shaft from said main shaft, substantially as described.

2. In a machine of the character described, the combination with an operating tool, a pinch-roll and a movable bed-roll, of a stop-shaft, a knocking lever thereon, a pair of dogs alternately engaged by the said knocking lever, and means intermediate the said dogs and the said bed-roll whereby the rotation of the said bed-roll is alternately stopped and started by the engagement of the said knocking arm with the said dogs.

3. In a machine of the character described, the combination with an operating tool, a pinch-roll, and a movable bed-roll, of a stop shaft, a knocking lever thereon, a rock shaft, a pair of dogs and clutch operating means thereon, and driving means for the said bed-roll controlled by the said clutch operating means whereby the driving means is stopped or started upon the engagement of the knocking lever with the said dogs.

4. In a machine of the character described, the combination with an operating tool, a pinch-roll, and a movable bed-roll, of a stop shaft, a knocking lever thereon, a rock shaft, a pair of dogs and clutch operating means thereon, a clutch and driving means for the said bed-roll controlled by the said clutch, and clutch operating means whereby the said driving means is stopped or started upon the engagement of the knocking lever with the said dogs.

5. In a machine of the character described, the combination with an operating tool, a pinch-roll, and a movable bed-roll, of a stop shaft, a knocking lever thereon, a rock shaft, a pair of dogs thereon one of which is adjustable with relation to the other, clutch operating means on the said rock shaft, and driving means for the said bed-roll controlled by the said clutch operating means whereby the driving means are stopped or started upon the engagement of the knocking lever with the said dogs.

[Claims 6 to 8 not printed in the Gazette.]

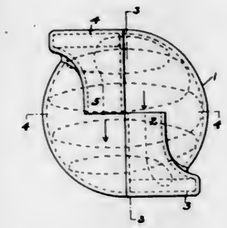
873,791. BUCKLE. MAX RUBIN, New York, N. Y. Filed Mar. 20, 1907. Serial No. 363,424.



1. A buckle made of a single piece of metal and having two side members, two end members and a longitudinal central member, the upper surfaces of said side members, end members and central member being substantially in the same plane and the longitudinal central member having two binding edges formed on its upper surface, the material between these edges being depressed to form said edges, and each side member having a binding edge formed on its underside and along the inner edge, substantially as set forth.

2. A buckle made of metal and having two side members, two end members and a longitudinal central member, the upper surfaces of said side members, end members and central member being all substantially in the same plane and the longitudinal central member having two binding edges formed on its upper surface and each side member having a binding edge formed along its inner side and on the under surface, the binding edges on the upper surface of the central member extending from the inner edge of one end member of the inner edge of the other end member, substantially as set forth.

873,792. PLUMBER'S TRAP. ALFRED J. RUDOLPH, Philadelphia, Pa. Filed Feb. 27, 1907. Serial No. 359,596.



1. A plumber's trap comprising a hollow, spherical body portion or member having an oblong, relatively-thin ingress opening which is parallel with the adjacent wall of the said member, the said opening being located upon one side of a central plane through the said member, and an oblong, relatively-thin egress opening located at the opposite end of a diametrical line drawn from the ingress opening through the said spherical member, and the said egress opening being located upon one side of a plane passed through the center of the said spherical member.

2. A plumber's trap comprising a hollow, spherical body portion or member, the said body portion or member being provided with an oblong ingress opening located at the bottom of the said spherical member and upon one side of a central plane through the said member, the walls of the said opening being substantially parallel with the adjacent portion of the wall of said member, and the said member being provided with an oblong egress opening located at the top of the said member and upon one side of a central plane through the said member.

3. A plumber's trap comprising a spherical, hollow body portion or member having an oblong, relatively-thin ingress opening which is parallel with the adjacent wall of the said member, the said opening being located at the bottom of the said member upon one side of a central plane through the same, and an oblong, relatively-thin egress opening located at the top of the said member and upon one side of a central plane through the same.

4. A plumber's trap comprising a hollow member, an ingress pipe entering said member tangentially, the opening of which pipe is oblong and of a width substantially equal to the radius of the said member, and an egress pipe, the opening of which is oblong and of a width substantially equal to the radius of the said member.

5. A plumbers trap comprising a hollow, spherical member, an ingress pipe entering said member tangentially, the opening of which pipe is oblong and of a width substantially equal to the radius of the said member, and an egress pipe, the opening of which is oblong and of a width substantially equal to the radius of the said member.

[Claims 6 to 11 not printed in the Gazette.]

873,793. SAFETY-FUSE INDICATOR. CAROLINE N. SACHS, Hartford, Conn. Filed Mar. 11, 1904. Serial No. 197,652.



1. The combination in an inclosed fuse, of a conductor fusible by the current, a member inclosed within the fuse structure and electrically inert as between the external contact of the fuse, but disruptible upon the rupture of the fusible conductor, and movable means in connection with the said member for indicating whether or not it is disrupted.

2. The combination in an inclosed fuse, of a conductor fusible by the current, an external indicator, a retainer inclosed within the fuse structure and electrically inert as between the external contacts, but directly disruptible by the heat of rupture of the conductor for holding the indicator in its position indicative of the normal condition of the fuse.

3. The combination in an inclosed fuse, of a conductor fusible by the current, an external indicator therefor, and a retainer inclosed within the fuse structure and electrically inert as between the external contacts, but arranged within the disrupting influence of the conductor for holding the indicator in its position indicative of the normal condition of the fuse.

4. The combination in an inclosed fuse, of a fusible conductor, an external indicator and a retainer inclosed within the fuse structure and electrically disconnected from the fuse, but subjected to disruption by the heat of rupture of the fuse, for holding the indicator in its position indicative of the normal condition of the fuse.

5. The combination in an inclosed fuse, of a fusible conductor, an indicator electrically disconnected from the fuse, and a retainer inclosed within the fuse structure and disruptible by and placed within the burning out influences of the fuse and connected with the indicator for holding it in the position indicative of the intact condition of the fuse.

[Claims 6 to 12 not printed in the Gazette.]

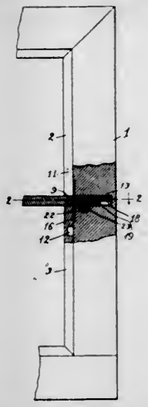
873,794. SASH-LOCK. FAYETTE SALTER, Atlanta, Ga., assignor of one-half to Moses Miller, Atlanta, Ga. Filed May 24, 1907. Serial No. 375,490.

1. The combination with a frame and a movable element having keeper seats, of a bolt arranged in the frame and adapted to be engaged with the keeper seats in said element, a shaft operatively connected to said bolt, and a locking member for said shaft spring actuated to an operative position and adapted to be retracted to an inoperative position by a key, substantially as described.

2. The combination with a frame and a movable element having keeper seats, of a bolt arranged in the frame and adapted to be engaged with said keeper seats, a shaft operatively connected to said bolt, a casing for the bolt, a locking sleeve for the shaft arranged upon the latter and within the casing, a spring for actuating said sleeve to an operative position, the latter being adapted to be retracted to an inoperative position by a key, substantially as described.

3. The combination with a frame and a movable element having keeper seats, of a bolt slidably mounted in the

frame and adapted to be projected into the keeper seat in said element, a rack upon said bolt, a tubular casing arranged in said frame and having its bore or opening adjacent to its inner end of reduced diameter to provide a shoulder, the inner end of said casing being formed with an annular groove and longitudinal grooves communicating with the annular one, a shaft arranged in said casing for rotary and sliding movement and having a longitudinal slot, a pinion upon the inner end of said shaft to mesh with said rack, a pin projecting from the shaft and into said slot in the casing, and adapted to engage said seats, a sleeve arranged upon the outer portion of the shaft, a transverse pin projecting through the slot in the shaft and through the sleeve and adapted to have its ends enter said grooves in the casing, and a coil spring surrounding the shaft and confined between the inner end of the sleeve and said shoulder casing, substantially as described.

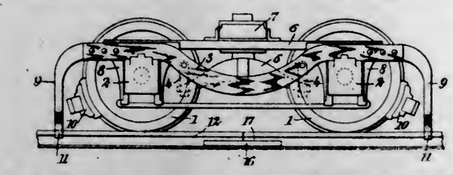


4. The combination with a frame and a movable element having keeper seats, of a bolt slidably mounted in the frame and adapted to be projected into said keeper seats, a tubular casing in the frame, a shaft adapted to actuate said bolt and arranged in said casing for rotary and sliding movement, a slot and pin connection between said bolt and said casing, a sleeve having a sliding movement on the shaft, a pin and groove connection between said sleeve and said casing, and a spring arranged above the casing for actuating the sleeve and the shaft in one direction.

5. In a locking device of the character described, the combination of a bolt provided with a rack, a casing to receive the bolt and formed of two separable half sections, the upper one having a top, depending side flanges and an apertured attaching ear at one end, and the lower section having a bottom formed with an opening to expose said rack, side flanges formed with alined bearing lugs and a shaft journaled in said lugs and carrying a pinion to mesh with said rack.

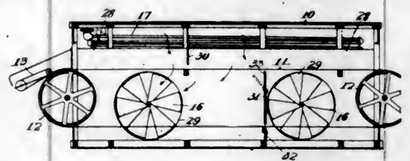
[Claims 6 and 7 not printed in the Gazette.]

873,795. RAILWAY-TRUCK GUARD. WILLIAM SANFORD, Vineland, N. J. Filed Jan. 24, 1907. Serial No. 353,827.



A railway truck having truss-beams mounted upon the axles thereof independent of spring action, and provided with depending arms serving as fenders, and with shoes formed on the ends of said arms adapted to freely engage the head of a rail.

873,796. DRIER. FREDERICK G. SARGENT, Westford, Mass., assignor to C. G. Sargent's Sons Corporation, Westford, Mass., a Corporation of Massachusetts. Filed May 22, 1907. Serial No. 375,123.



1. In a drier, the combination of a drying chamber, a screen therein for supporting a layer of material to be dried, means for causing air to circulate through said drying chamber to pass through the stock on the screen, and an outlet opening upwardly from the top of said chamber at one side and extending downwardly and entering the chamber below the screen, whereby the air which does not pass through the stock may be caused to flow back under the screen.

2. In a drier, the combination of a drying chamber, a screen therein for supporting a layer of material to be dried, means for causing air to circulate through said drying chamber to pass through the stock on the screen, an outlet opening upwardly from the top of said chamber at one side and extending downwardly and entering the chamber below the screen, whereby the air which does not pass through the stock may be caused to flow back under the screen, and a screen in the opening in the top of the chamber for preventing fibrous material from passing into said outlet.

3. In a drier, the combination of a drying chamber, a screen therein for supporting a layer of material to be dried, means for causing air to circulate through said drying chamber to pass through the stock on the screen, an outlet opening directly upwardly from the top of said chamber and extending downwardly and entering the chamber below the screen, whereby the air which does not pass through the stock may be caused to flow back under the screen, and a removable horizontal screen extending across said outlet and the opening in the top of the chamber.

4. In a drier, the combination of a drying chamber, a screen therein for supporting a layer of material to be dried, means for causing air to circulate down through the screen, an upwardly opening outlet in the top of the chamber at one side opposite said circulating means, a conduit from said outlet opening into the chamber below the screen and on the same side of the chamber, a substantially horizontal screen over said opening horizontal guides for said horizontal screen, and a damper in said outlet for controlling the amount of air passing therethrough.

5. In a drier, the combination of a chamber, a plurality of circulating devices arranged adjacent thereto for drawing air through the chamber, a screen longitudinally located in the chamber for supporting material to be dried, an outlet in the top of one side of the chamber near the center thereof, a conduit opening directly upwardly from said outlet and connected with the chamber below the screen, and a downwardly extending partition in the chamber adjacent to one end of said outlet to deflect the currents of air downwardly through the screen and secure a better circulation.

[Claims 6 to 16 not printed in the Gazette.]

873,797. RECEPTACLE. CHARLES J. SCHMIDT, Evanston, Ill. Filed Jan. 10, 1907. Serial No. 351,585.

1. In a receptacle comprising a body member and a cover member, said members having telescoping walls, an opening through one wall within the edge thereof so as to leave the edge intact, one edge of the opening being opposite an edge on the other wall whereby a suitable implement may be inserted between the opposite edges to force the members apart.

2. In a receptacle comprising a body member and a cover member, said members having telescoping walls, an opening through one wall within the edge thereof so as to leave the edge intact, one edge of the opening being opposite an edge on the other wall whereby a suitable implement may be inserted between the opposite edges to force the members apart, and sealing means for the opening through which sealing means the opening implement may readily be passed.



3. In a receptacle, the combination with a body member having a horizontal and a vertical wall, of a cover member having a horizontal wall and a vertical wall for engaging the vertical wall of the body member to close the receptacle, there being a rectangular opening through the vertical wall of one member inside the edge thereof to leave the edge intact, one edge of the rectangular opening being substantially in line with the outer edge of the other member to provide a thin entrance slit into the receptacle when the members are engaged to close the receptacle whereby a knife blade or other implement may be inserted into the box between the opposed edges of the slit to force the receptacle members apart.

4. In a receptacle, the combination with a body member having a horizontal and a vertical wall, of a cover member having a horizontal wall and a vertical wall for engaging the vertical wall of the body member to close the receptacle, there being a rectangular opening through the vertical wall of one member inside the edge thereof to leave the edge intact, one edge of the rectangular opening being substantially in line with the outer edge of the other member to provide a thin entrance slit into the receptacle when the members are engaged to close the receptacle whereby a knife blade or other implement may be inserted into the box between the opposed edges of the slit to force the receptacle members apart, and sealing material applied over the slit when the box is closed through which sealing material the knife blade or other implement may easily be passed.

5. A receptacle comprising a body part and a cover part, each having a horizontal and a vertical wall, there being a rectangular opening through the vertical wall of the cover part within the edge thereof to keep the edge intact, the upper edge of which opening is adapted to appear opposite and substantially coincident with the upper edge of the body member when the receptacle is closed, thereby providing a thin slit through which a knife blade or other implement may be inserted into the receptacle for forcing the members apart.

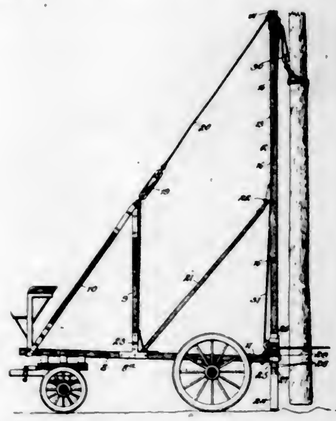
[Claims 6 to 10 not printed in the Gazette.]

873,798. RED AZO DYE AND PROCESS OF MAKING SAME. RUDOLPH SCHULE, Frankfort-on-the-Main, Germany. Filed Oct. 6, 1906. Serial No. 337,831.

1. The herein described improvement in the manufacture of dyestuffs which consists in combining the product of condensation of m. amidobenzaldehyde bisulfite and 1.2. diamido 5. oxynaphthalene 7. sulfoacid with a diazo compound and a naphthol sulfoacid.

2. The coloring matter obtained by combining a diazo-compound of a primary aromatic amin with the product of condensation of 1.2. diamido-5-oxynaphthalene-7-sulfonic acid and m. amidobenzaldehyde bisulfite, further diazotizing the monoazodyes and combining with a naphtholsulfoacid, which in a dry state forms a brown powder, dissolving in concentrated sulfuric acid with a claret-red color and dyeing unmordanted cotton in red shades fast to washing and acids, substantially as described.

873,799. HOISTING MECHANISM. BENJAMIN F. SHAFER, Chester, Pa. Filed Apr. 29, 1907. Serial No. 370,886.



1. In hoisting mechanism of the character set forth, the combination with a movable support, of a frame carried by the support, a swinging mast or derrick mounted on the support, means connecting the frame and mast or derrick for swinging the latter, and a brace connected at one end to the mast or derrick and having its other end movable into and out of engagement with said frame on the swinging of the derrick or mast.

2. In hoisting mechanism of the character set forth, the combination with a wheeled vehicle, of rearwardly projecting hooks arranged on the rear end of the vehicle, a mast or derrick including side members and a cross bar, said cross bar being journaled in the hooks, and means connecting the upper end of the mast or derrick and the vehicle for swinging said mast or derrick.

3. In hoisting mechanism of the character set forth, the combination with a support, of a mast or derrick having a cross bar pivotally mounted on the support, guides secured to the cross bar, leg members adjustably passing through the guides, and means for securing the leg members in different positions.

4. In hoisting mechanism of the character set forth, the combination with a wheeled vehicle, of a derrick including spaced side bars and a cross bar connecting the side bars, spaced bearing devices secured to the vehicle and having the cross bar journaled therein, guides located outside the side bars, certain of said guides being secured to the cross bar, legs slidably mounted on the guides outside the side bars, and means for holding the legs in different positions.

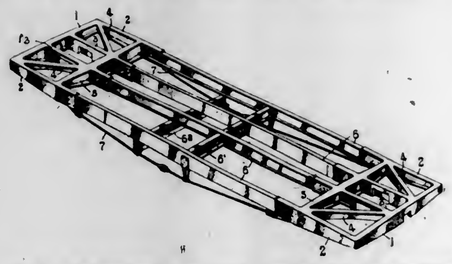
5. In hoisting mechanism of the character set forth, the combination with a wheeled vehicle, of a frame mounted on the front portion of said vehicle, a swinging mast or derrick mounted on the read end of said vehicle, means connecting the frame and mast or derrick for swinging the latter, and a brace hinged to the mast or derrick and having a free end movable into and out of engagement with the frame on the swinging of the mast or derrick.

[Claims 6 and 7 not printed in the Gazette.]

873,800. UNDERFRAME FOR CARS. CHARLES S. SHALLENBERGER, St. Louis, Mo. Filed Feb. 15, 1907. Serial No. 357,595.

1. An underframe for cars in the form of a trussed structure, the same comprising longitudinal sills which form the compression members of the truss, castings connected to the ends of said longitudinal sills, the tension members of the truss being connected to said casting, each of said castings consisting of a body bolster formed

integral with short longitudinal sills, and an end sill connecting said short sills; substantially as described.



2. An underframe for cars comprising longitudinal sills which form the compression members of a truss, and castings connected to the ends of said longitudinal sills, the tension members of said truss being connected to said castings, each of said castings consisting of a body bolster, end sill and short longitudinal sills; substantially as described.

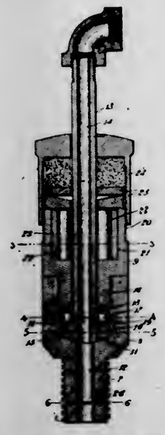
3. An underframing for cars comprising end portions in the form of castings, an intermediate portion in the form of a longitudinal sill or sills connected to said end portions, and truss rods also connected to said end portions and coöperating with the longitudinal sills at a point or points intermediate the end portions; substantially as described.

4. An underframing for cars, the same comprising end portions in the form of castings, each of said castings consisting of a bolster integrally connected to short longitudinal sills, an end sill connected to said short sills, and an intermediate portion in the form of truss rods and longitudinal sills connected to said end portions; substantially as described.

5. An underframing for cars, the same comprising end portions in the form of skeleton castings, each of said castings consisting of a bolster integrally connected to short longitudinal sills, an end sill connected to said short sills, and a trussed beam or beams connecting said end castings together; substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

873,801. SWIVEL FOR ROCK-DRILLS. SAMUEL A. SIZEMORE, Leadwood, Mo. Filed May 14, 1907. Serial No. 373,623.



1. In a swivel of the character described, the combination with relatively rotatable members, of an antifriction bearing interposed between the members for taking the longitudinal strain between them, and another antifriction bearing interposed between the members and receiving the lateral strain between said members.

2. In a swivel of the character described, the combination with relatively rotatable members, of an antifriction bearing interposed between the members for taking the longitudinal strain between them, and another antifriction bearing interposed between the members and receiving the lateral strain between said members, one of said bearings comprising rollers, the other comprising balls.

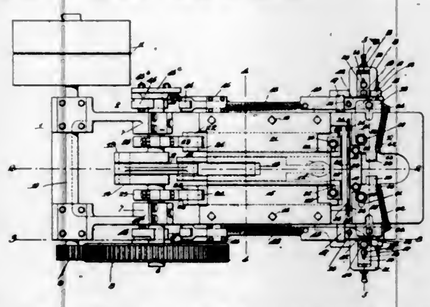
3. In a swivel of the character described, the combination with relatively rotatable members, of an antifriction bearing comprising balls that are interposed between the members for taking the longitudinal strain between them, and another antifriction bearing comprising an annular series of longitudinally disposed rollers interposed between the members and receiving the lateral strain between them.

4. In a swivel of the character described, the combination with relatively rotatable members, of an antifriction bearing interposed between the members for taking the longitudinal strain between them, and another antifriction bearing interposed between the members and receiving the lateral strain between said members, said bearings having their bearing portions disposed in angular relation.

5. In a swivel of the character described, the combination with relatively rotatable members, of an antifriction bearing interposed between the members and having its bearing surfaces disposed transversely of their axis of rotation, and another antifriction bearing interposed between the members, and having their bearing surfaces disposed longitudinally of said members.

[Claims 6 to 19 not printed in the Gazette.]

873,802. HORSESHOE-MACHINE. ARTHUR SMITH, Easton, Pa., assignor to American Horse Shoe Company, Phillipsburg, N. J., a Corporation of New Jersey. Filed Dec. 3, 1904. Serial No. 235,337.

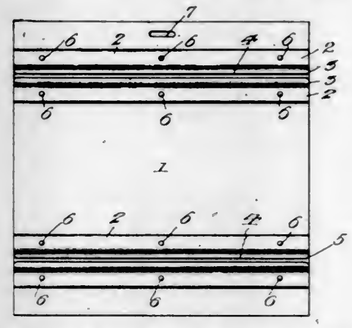


A machine for bending and forming billets into horseshoes, which has the bending die moved by a crank, whereby a continuous movement will be secured, and a forming die moved by a cam whereby an irregular movement will be secured, there being means for adjusting the position of the cam in relation to the crank, so that the time of forming in relation to the time of bending can be varied.

873,803. HEAD-BLOCK FOR BALING-PRESSES. GEORGE W. SPAULDING, Bozeman, Mont. Filed Feb. 26, 1907. Serial No. 359,377.

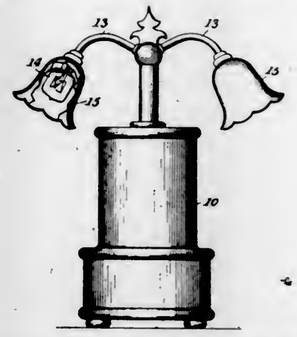
1. A head block having oppositely disposed transverse brace bars secured in alinement upon opposite sides of said block, said braces each having a groove therein for the tie wires, and said grooves having rounded outer corners to facilitate the insertion of the wire ties, substantially as described.

2. A head block for baling presses provided with brace bars extending across the block at two points upon opposite sides of the block, said brace bars projecting outward from the block and disposed in the same horizontal plane, and having oppositely disposed members providing a groove between them, said members having rounded terminal corners to facilitate the insertion of the tie wires, and the two brace bars upon opposite sides of the



head block being secured by the same bolts, said bolts passing through the brace bars and the head block, substantially as described.

873,804. ELECTRIC LIGHTING. ELMER A. SPERRY, Brooklyn, N. Y. Filed Dec. 31, 1906. Serial No. 350,154.



1. An electric lamp having a continuous weldable incandescent filament, a support for such lamp, a source of electrical supply, and means for agitating the support and imparting such a movement to the filament as will bring broken parts thereof together while the filament is connected with such source.

2. An electric lamp having a continuous weldable incandescent filament, a support for such lamp, a source of electrical supply, and means for imparting practically continuous motion to the support such as will bring broken parts of the filament together while the filament is connected with the said source.

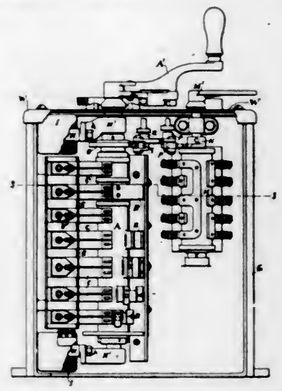
3. An electric lamp having a continuous weldable incandescent filament, a support for such lamp, a source of electrical supply, and means for imparting motion in a plurality of planes to the support such as will bring broken parts of the filament together while the filament is connected with such source.

4. An electric lamp having a continuous weldable incandescent filament, a support for such lamp mounted in equilibrium upon resilient members, a source of electrical supply for such lamp, and means for imparting motion to the support mounted as described while the filament is in connection with the said source.

5. An electric lamp having a continuous weldable incandescent filament, a support for such lamp mounted in equilibrium upon resilient members, a source of electrical supply for such lamp, and means for imparting vibration in a plurality of planes to the support while the filament is connected with such source.

[Claims 6 to 13 not printed in the Gazette.]

873,805. CONTROLLER. EMMETT W. STULL, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electrical Manufacturing Company, a Corporation of Ohio. Filed Mar. 31, 1906. Serial No. 309,027.



1. In a controller, a controlling drum, a shaft of magnetic material therefor, a blow-out magnet outside of the drum and having the controller shaft as part of the magnetic circuit, and plugs of magnetic material inserted in said drum.

2. In a controller, a controlling drum, a shaft of magnetic material therefor, a blow-out magnet not concentric with the drum and having the controller shaft as part of the magnetic circuit, and plugs of magnetic material inserted in said drum adjacent to the points where arcing is liable to occur.

3. In a controller, a controlling drum, a shaft of magnetic material therefor, a plurality of blowout magnets not concentric with the drum and having the controller shaft as part of the magnetic circuit, and plugs of magnetic material inserted in said controlling drum.

4. In a controller, a controlling drum, a shaft of magnetic material therefor, a plurality of blowout magnets outside of the drum and having the controller shaft as part of the magnetic circuit, and plugs of magnetic material inserted in said controlling drum adjacent to the circuit-breaking points of the controller.

5. In a controller, a controlling drum, a shaft, radial pole-pieces carried by said drum adjacent to the ends of the contact segments of the drum, and a plurality of coils for magnetizing said pole-pieces, said coils being energized whenever current is flowing through the controller.

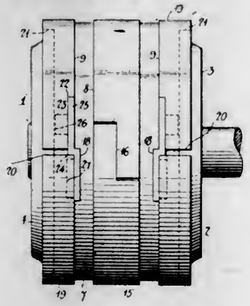
[Claims 6 to 14 not printed in the Gazette.]

873,806. PISTON AND PISTON-PACKING. MICHAEL H. SULLIVAN, Poughkeepsie, N. Y. Filed Apr. 9, 1907. Serial No. 367,284.

1. A piston having an annular circumferential channel, a bull ring in said channel and having annular circumferential central and side channels in the outer side, steam rings in the said side channels, a carrier ring in said central channel, means to adjust the bull ring with reference to the piston and means to adjust the carrier ring with reference to the bull ring.

2. A piston having an annular circumferential channel, a bull ring in said channel and having an annular circumferential channel in its outer side, a carrier ring in said channel of the bull ring, means to adjust the bull ring with reference to the piston, and means to adjust the carrier ring with reference to the bull ring.

3. A piston having an annular circumferential channel, a bull ring in said channel and having an annular circumferential channel in its outer side, screws, carried by the piston to adjust the bull ring, a carrier ring in the said channel of the bull ring, and screws, carried by the bull ring to adjust said carrier ring.

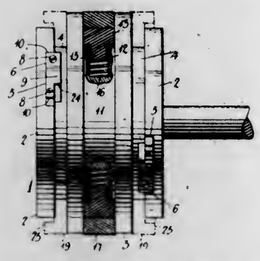


4. A piston having an element provided with an exterior annular circumferential channel and a recess at one side of said channel, an open steam ring in said channel, having a recess in the side opposed to the recessed side of said channel, and a stop element extending across the open side of said ring, lying in the said recesses, and connected to the end portion of said ring.

5. A piston having an element provided with an exterior annular circumferential channel and a recess at one side of said channel, an open steam ring in said channel, having a recess in the side opposed to the recessed side of said channel, and a stop element extending across the open side of said ring, lying in the said recesses and secured to one end portion of the ring and slidably secured to the other end portion of the ring to permit contraction and expansion of said ring.

[Claims 6 to 8 not printed in the Gazette.]

873,807. PISTON AND PISTON-PACKING. MICHAEL H. SULLIVAN, Poughkeepsie, N. Y. Filed July 2, 1906, Serial No. 324,380. Renewed June 8, 1907. Serial No. 378,004.



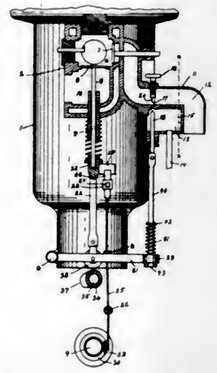
1. In combination with a piston having a reduced portion, an annular circumferential groove in said reduced portion, and a recess at the bottom and one side of said groove, a stop detachably secured in said recess and projecting into one side of the groove, and a steam ring in said groove having a laterally-extending flange and provided with recesses for the reception of said stop.

2. A piston having an annular circumferential groove, in combination with a segmental centering ring in the bottom of said groove, said piston and ring having segmental guiding devices, springs to move the segments of said ring outwardly, and an expansible carrying ring on the segmental ring, substantially as described.

3. In combination with a piston having an annular, circumferential groove and a stop in one side of said groove and projecting radially from said piston, a steam ring in said groove having its ends overlapped and recessed for the reception of said stop, substantially as described.

4. A piston having an annular, circumferential groove and radial recesses communicating with the bottom of said groove, in combination with a segmental centering ring in the bottom of said groove and having studs extending into said recesses, springs to normally move said segments of said centering ring outwardly, and an open carrying ring in said groove on said centering ring and having overlapped ends, substantially as described.

873,808. EXPLOSIVE-ENGINE. LLOYD E. THOMPSON, De Kalb, Ill. Filed Feb. 12, 1907. Serial No. 357,095.



1. A device of the class named, comprising an explosion chamber, provided with an exhaust-valve; an air passage, communicating with said explosion-chamber; a gasolene chamber, beneath such air passage, and provided with an opening into the same; a needle-valve, adapted to close said opening, and provided with a valve-rod; a valve-rod, adapted to open said exhaust-valve; a projecting plate, fixed to said exhaust valve-rod; a detent, suitably mounted on the cylinder of the engine, and adapted to engage the plate on said rod; means for simultaneously operating said exhaust-valve rod to open said valve and said needle-valve rod to close said valve; and means for actuating said detent to hold said rods in position, as described, while the engine is operating at a certain velocity, and release the same when such velocity has been sufficiently reduced, substantially as shown and set forth.

2. In a device of the class named, the combination of a reciprocating rod 22, adapted to actuate the exhaust valve of the explosion chamber, and provided with a projecting plate 24; a rod 40, adapted to operate the mechanism for shutting off the supply of gasolene in the carbureter; a lever 21, hingeably secured to the rod 22, and flexibly connected with the rod 40; the block 26, slidably mounted beneath the plate 24, and provided with the detent 28; and means for causing said detent to engage the plate 24 to prevent lowering of the rod 22 upon the engine attaining a certain velocity, and releasing the plate 24 upon such velocity being sufficiently reduced, substantially as set forth.

3. In an explosive engine, in combination with a carbureter, having a gasolene chamber and air passage, and opening connecting the two, and an explosion chamber, communicating with said carbureter, and provided with an exhaust valve; of a rod 22, adapted to operate said exhaust valve, and provided with the plate 24; a needle-valve 18, adapted to close said opening between the gasolene chamber and air passage; a rod 40, engaging the needle-valve 18; a lever 21, suitably mounted on the engine, such lever being hingeably secured to the rod 22 and flexibly connected with the rod 40; a block 26, slidably supported beneath the plate 24, and provided with the detent 28; a lever 25, engaging the block 26 at its upper end; means for actuating the lever 25 to move the block 26 inwardly and cause the detent 28 to engage the plate 24 when the speed of the engine exceeds a certain velocity, and move said block outwardly to release the plate 24 when such speed has been sufficiently reduced; and means for actuating the lever 21, to simultaneously open said exhaust valve and close said needle-valve, substantially as shown and for the purpose described.

873,809. PURIFICATION OF METALLIC COMPOUNDS. CHARLES VAN BRUNT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 12, 1906. Serial No. 325,938.

1. The process which consists in forming a solution containing a compound of an acid forming metal, fractionally precipitating this solution with an organic base, and calcining one of said precipitates to produce a pure oxid of the metal.

2. The process which consists in forming a solution containing an acid forming metal, fractionally precipitating the solution with a benzidin compound, and calcining one of said precipitates to produce a pure oxid.

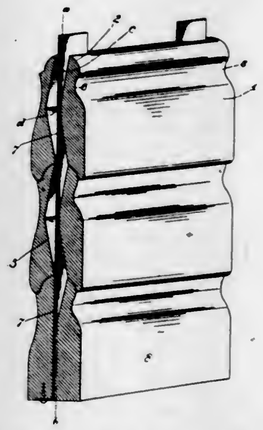
3. The process which consists in producing a solution of a tungsten compound, eliminating impurities therefrom by precipitating with benzidin hydrochlorid, and then producing pure tungsten trioxid from the treated solution.

4. The process which consists in forming an alkaline solution of a compound of an acid forming metal, neutralizing said solution, precipitating with an organic base, calcining the precipitate and reducing the calcination product to produce a finely divided pure refractory metal.

5. The process which consists in preparing a solution containing an acid forming metal, precipitating the solution with a benzidin compound, calcining the precipitate and reducing the calcination product to produce a finely divided refractory metal.

[Claims 6 to 8 not printed in the Gazette.]

873,810. FLEXIBLE CURTAIN. HERMAN E. VANCE, Columbus, Ohio. Filed May 26, 1906. Serial No. 318,897.



1. In a flexible rolling curtain, a plurality of slats each provided with a non-rectilinear passage, a flexible slat-connecting device in said passage, said passage having a substantially greater diameter than that of the flexible connecting device and having its axis substantially coinciding with a plane at right angles to the direction of the length of the slat, substantially as described.

2. A plurality of slats for the construction of a flexible rolling curtain, said slats each provided with a non-rectilinear passage to receive a flexible slat-connected device, said passage having its axis substantially coinciding with a plane at right angles to the direction of the length of the slat, the openings of the passages at the junction of the slats registering when the slats are in unrolled position.

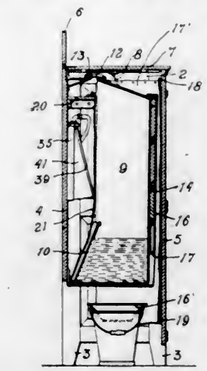
3. A plurality of slats for the construction of a flexible rolling curtain, said slats each provided with a non-rectilinear passage to receive a flexible slat-connecting device, said passage having an angular axis coinciding substantially with a plane at right angles to the direction of the length of the slat, the openings of the passages at the junction of the slats registering when the slats are in unrolled position.

4. A slat for the construction of flexible rolling curtains having a non-rectilinear passage for the reception of a flexible connecting device, said passage having the terminals of its axis located at one side of the axis of the slat while the apex of the axis of the passage is located on the opposite side of the axis of the slat, substantially as described.

5. A slat for the construction of flexible rolling curtains having a non-rectilinear passage for the reception of a flexible connecting device, said passage having the terminals of its axis located on one side of the axis of the slat while the apex of the axis of the passage is located on the opposite side of the slat, the opposite edges of the slat being convexed and concaved on an arc having for their respective centers points in the axis of the slat.

[Claims 6 to 9 not printed in the Gazette.]

873,811. BATH-CABINET. AXEL M. WALSTROM, Minneapolis, Minn. Filed Oct. 24, 1904. Serial No. 229,840.



1. The combination, with a cabinet, having side walls provided with legs, and a rear wall whose lower edge is a considerable distance above the floor, and doors hinged to said side walls and closing the front of the cabinet, and a cover hinged to said rear wall and normally locking said front doors in their closed position, of a bath tub hinged to said rear wall and adapted to be lowered to a horizontal position and rest upon the floor, or to be raised to a vertical position within said cabinet, substantially as described.

2. A bath cabinet, comprising side and rear walls and doors hinged to the front edge of said side walls, a bath tub hinged at one end within said cabinet and adapted to be dropped down to a horizontal position and rest upon the floor, waterproof hangings carried by said walls and doors, and towel racks hinged to said doors near their forward edges when open and supporting waterproof hangings arranged to conceal the interior of the cabinet when the tub is in its horizontal position, substantially as described.

3. In a device of the class described, a spraying apparatus comprising a frame adapted to rest upon the floor of the tub and having a gasket of flexible material with its edge bearing upon said floor, a plate hinged to one end of said frame, a spring normally holding said plate in its

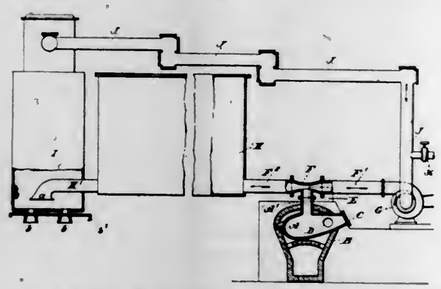
raised position, a flexible material connecting the sides and ends of said plate with said frame, a pipe having a valved opening within said frame near the lower edge thereof, a perforated tube adapted to be placed around the neck, and a pipe connecting said valved opening with said perforated tube, substantially as described.

4. The combination with a cabinet having side walls and a rear wall whose lower edge is a considerable distance above the floor, and doors hinged to said side walls and closing the front of the cabinet, of a bath tub hinged at one end to the lower edge of said rear wall and adapted to be swung to a vertical position within the cabinet, said tub having a wall at its hinged end overhanging said end when the tub is in a horizontal position and preventing the escape of water from the tub when it is raised to a vertical position, the hinged end of said tub being normally closed against the escape of water when the tub is raised, a faucet provided in said hinged end and there being a sufficient space between said hinged end and the floor to allow the insertion of a waste water pail beneath said faucet.

5. In a device of the class described, a spraying apparatus comprising a frame adapted to rest upon the floor of the tub and having a valved opening, a plate supported above said frame, a spring normally holding said plate in its raised position, a flexible material connecting the edges of said plate with said frame, a perforated tube adapted to be placed around the neck and having a pipe connection with said valved opening, substantially as described.

[Claim 6 not printed in the Gazette.]

873,812. APPARATUS FOR PRODUCING SUBLIMED SULFUR. ARTHUR WALTER, Naples, Italy. Filed Oct. 16, 1905. Serial No. 282,916.



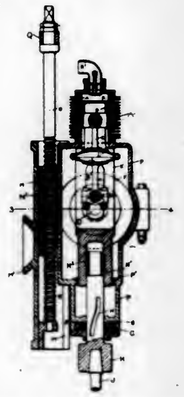
1. The apparatus for subliming sulfur, consisting of the retort A, communicating with boiler E, and with the blowing pipes F, F', and F², cooling chamber H, collector I and suction pipes J, a blower G being placed between the pipes J and F', all arranged to form a closed circulating system, as specified.

2. The combination of the cooling chamber H and means for forcing inert gases and powdered sulfur into it, with its discharge pipe H' having downward outlet *a*, and with the collector I and means for withdrawing gas therefrom, all for depositing sulfur on the bottom of the collector.

3. An apparatus for subliming sulfur, which comprises a boiler, a retort communicating therewith, an injector having a suction connection with the retort, a cooling chamber having a connection with the outlet of the injector, a collector connected with the outlet of the cooling chamber, and means for conveying the gases from the collector to the injector so as to form a continuous circuit.

4. An apparatus for subliming sulfur, which comprises a retort having an inlet connection and an outlet connection, a boiler connected with the inlet connection of the retort, a suction pipe communicating with the outlet connection of the retort to withdraw vapors therefrom, a collector for the gas and vapors from said retort and suction pipe, and means for conveying the gases from the collector back to the suction pipe so as to form a continuous circuit.

873,813. ROCK-DRILL AND OTHER PERCUSSION-TOOL. THOMAS WARSOP, Coniston, England. Filed Sept. 8, 1904. Serial No. 223,787.

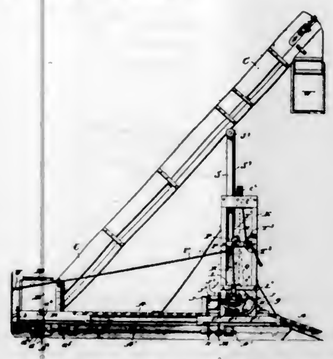


1. In a percussion tool the combination with a petrol motor having a cylinder and a piston operated therein, of a crank shaft, a flywheel on said crank shaft, a connecting rod formed of two parts connecting the crank and piston, a cushioning spring uniting the two parts of the connecting rod, a reciprocating drill spindle, and a saddle directly connecting the drill spindle to the piston.

2. In a percussion tool the combination with a petrol motor having a cylinder and a piston operating therein, of a drill spindle and a connection directly connecting the drill spindle and piston, a crank shaft, a fly-wheel on said crank shaft, and a connecting rod connecting said crank shaft and piston, said connecting rod having a cushioning spring forming a part thereof.

3. The combination in rock drills and the like, of cylinder A, piston B, coupling saddle K, connecting rod C, spring L, crank D, shaft D', fly wheels F F, with the drill spindle H, rotating gear G G², and casing P, substantially as shown hereinbefore for the purposes specified.

873,814. WAGON-DUMP. JOHN F. WHITE, Bloomington, Ill., assignor to Portable Wagon Dump and Elevator Company, a Corporation of Illinois. Filed Aug. 6, 1903. Serial No. 168,437.



1. In a wagon unloading apparatus, the combination with a suitable support, of an elevator removably connected therewith, a conveyer associated with the elevator, mechanism for actuating the elevator and the conveyer, and means whereby the position of the elevator can be changed from a position parallel with the support to a position outwardly at an angle to the support and the conveyer relative to the conveyer and actuated in its changed position.

2. In a wagon unloading apparatus, the combination with a platform, of an elevator arranged parallel therewith and mounted to be adjusted outwardly at an angle thereto, a drag arranged at an angle to the elevator, means for driving the drag and the elevator, and means for actuating the elevator when the latter is adjusted outwardly at an angle to the support.

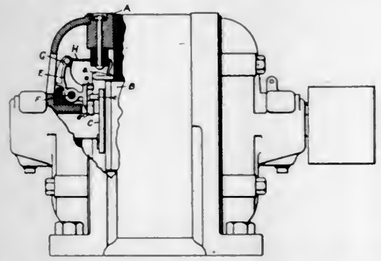
3. In a wagon unloading apparatus, the combination with a platform, of a driving shaft, a counter driving shaft geared thereto, an elevator, removably secured to the platform, a drag, and means on the driving and counter shafts for actuating the elevator.

4. In a wagon unloading apparatus, the combination with elevating means and a dumping means, of a power shaft having its opposite ends fashioned for coupling with a suitable motor, and a counter shaft geared to the driving shaft and also provided with means for coupling the same to the motor.

5. In a wagon dumping apparatus, the combination with an elevator having a removable member at its lower end, a drag arranged to project into the space occupied by the said removable member, a boxing surrounding the end of the drag and elevator, and means for driving the drag and elevator.

[Claims 6 to 27 not printed in the Gazette.]

873,815. SWITCHING DEVICE FOR ELECTRIC MOTORS. JOHN B. WIARD, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 23, 1907. Serial No. 375,196.



1. In an electric motor, a centrifugally actuated member carried by the rotor, a device carried by the stator adapted to be engaged by said member in a predetermined position thereof and moved by the momentum of the rotor, and switch contacts actuated by said device controlling the starting connections of the motor.

2. In an electric motor, a member carried by the rotor and adapted to have its path of rotation altered by centrifugal force, a device carried by the stator adapted to be engaged by said member in one of its rotational paths, and switch contacts actuated by said device controlling the starting connections of the motor.

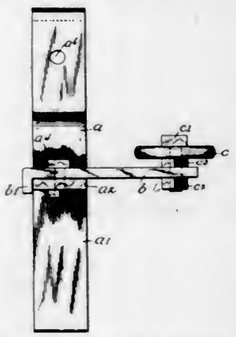
3. In an electric motor, a member carried by the rotor and adapted to have its path of rotation altered by centrifugal force, a device carried by the stator having two portions projecting respectively into the rotational paths of said member at starting and at speed, and switch contacts actuated by said device controlling the starting connections of the motor.

4. In an electric motor, a member carried by the rotor and movable with respect thereto by centrifugal force, a projection on said member extending at right angles to the direction in which said member is moved by centrifugal force, a device carried by the stator adapted to be engaged by said projection in a predetermined position of said member, and switch contacts actuated by said device controlling the starting connections of the motor.

5. In an electric motor, a member carried by the rotor and movable outwardly from the rotor axis by centrifugal force, an axially-extending projection on said member, a device adapted to be engaged by said projection in a predetermined position of said member, and switch contacts actuated by said device controlling the starting connections of the motor.

[Claims 6 and 7 not printed in the Gazette.]

873,816. STAY-ROLLER. GUSTAVUS WIDEMAN, Aurora, Ill., assignor to The Richards Manufacturing Company, Aurora, Ill. Filed Dec. 9, 1905. Serial No. 291,152.



1. In a stay-roller comprising a supporting hanger having a door slide-way therein, a roller arranged to project into said slideway, and means for mounting said roller on the hanger offset to the median line of the hanger without changing the distance between the axis of the roller and the slideway.

2. In a stay-roller comprising a supporting hanger having a door slideway therein, a roller and means for rotatably mounting said roller offset to said hanger and projecting into said slideway, said means consisting of an extension detachably and reversibly secured to said hanger.

3. In a stay-roller comprising a supporting hanger and a roller, means for supporting said roller offset to said hanger, said means consisting of an extension detachably secured to said hanger, and means for preventing the movement of said extension relative to said bracket.

4. In a stay roller comprising a bracket and a roller means for supporting the roller offset to the bracket consisting of an extension detachably and reversibly secured to said bracket, and a bolt or pin carrying said roller and secured to said extension.

5. In a stay-roller comprising a hanger and a roller, means supporting said roller offset to said hanger, consisting of an extension detachably, reversibly and adjustably secured to said hanger, and means for mounting said roller on said extension.

[Claims 6 and 7 not printed in the Gazette.]

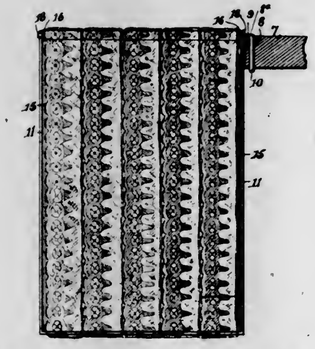
873,817. DISPLAY APPARATUS. JOSEPH WIEDEMEIER, Jr., and ANTON A. WIEDEMEIER, Carroll, Iowa. Filed May 27, 1907. Serial No. 376,041.

1. In a display holder of the character set forth, the combination with a holder upon which embroidery, lace and like material can be wrapped, said holder having a socket at one end, of a backing sheet arranged to be placed between the layers of material, devices for supporting the sheet, said devices engaging in the socket, and supporting means for the holder engaging in the socket.

2. In a display holder of the character set forth, the combination with a supporting arm, of a holding card having a transverse socket in one end that detachably receives the arm, a backing sheet, an elastic cord engaged with said backing sheet, and hooks secured to the ends of the cord and detachably engaging in the ends of the socket.

3. In a display holder of the character set forth, the combination with a holder upon which embroidery, lace and like material can be wrapped, of a backing sheet ar-

ranged to be placed between the layers of material, and means for detachably securing the backing sheet to the holder.

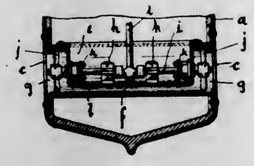


4. In a display holder of the character set forth, the combination with a holder upon which embroidery, lace and like material can be wrapped, of a backing sheet arranged to be placed between the layers of material, and hooks carried by the sheet and detachably engaging the holder.

5. In a display holder of the character set forth, the combination with a holder upon which embroidery, lace and like material can be wrapped, of a backing sheet arranged to be placed between the layers of material, devices that detachably engage the holder, and yielding means connecting the devices and sheet.

[Claims 6 to 8 not printed in the Gazette.]

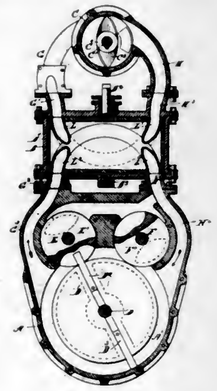
873,818. STEERING VESSELS. HERMANN W. WILKE, Long Island City, N. Y. Filed July 18, 1907. Serial No. 384,332.



1. The combination with a vessel, of transversely extending pipes at the fore and aft ends and secured to the side walls of the vessel and terminating in openings therein, the said pipes being cut out at the upper surface, cylindrical casings secured to said pipes and projecting downward through the cut out portion of the latter, crank shafts extending longitudinally through and supported in said casings, propellers arranged at each end of the said shafts, said propellers being adapted to draw in water at one side of the vessel and to throw the same out in a jet on the other side thereof, to steer the vessel, and means for operating said propeller shafts, substantially as and for the purpose specified.

2. The combination with a vessel, of transversely extending pipes at the fore and aft ends and secured to the side walls of the vessel and terminating in openings thereof, the upper surface of the said pipes being cut out, casings secured to the pipes and projecting downward through the cut out portion thereof, said casings forming between their circumference and that of the pipes a water channel and at both sides propeller chambers, crank shafts extending longitudinally through and supported in said casings, propellers at the outwardly projecting ends of said shafts, and means for operating the shafts, substantially as and for the purpose specified.

873,819. LIQUID-POWER-TRANSMISSION APPARATUS. LEANDER J. WING, Lexington, Mass., assignor to Hydraulic Power Controller Company, Portland, Me. Filed Mar. 30, 1906. Serial No. 309,002.



In a liquid transmitter apparatus; a pump whereby a current of liquid is forced into passages leading to and from the pump, and mediately to and from a motor, the said current of liquid imparting energy to the said motor; a current controlling device comprising a rotatable port-way carrier, and means for operating it, the said carrier having ports at each end constructed to register with the terminals of the said current passages, and having port-ways constructed to connect the passages between the said pump and said motor which cause the liquid to pass in the direct or reverse motion and also give neutral passages for the current both from the pump and from the motor, the said ports which register with the terminals of the current-ways being separated by a thin partition only, whereby it is impossible to close one without opening another, thereby preventing any shock or strain on any part of the apparatus, substantially as and for the purpose set forth.

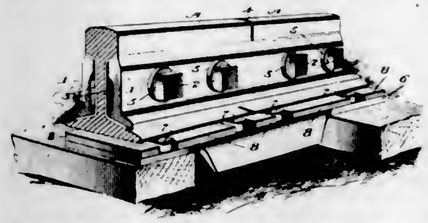
873,820. CLOTHES-PIN CLIP. MAX O. WINKLER, Hamilton, Ontario, Canada. Filed June 24, 1905. Serial No. 266,716.



A clothes pin clip consisting of a wire bent in the ends of a block, the two vertical portions curved in circular form to form a spring and the top ends formed with a double bend to form a spring hook, and a second shorter wire made to pass through a similar block, the ends of said wire made to bend around the circular portions of the main or first wire, and a removable band made to encircle the wires of both block jaws for clasping them together to securely hold any article placed previously between them.

873,821. INSULATED RAIL-JOINT. BENJAMIN WOLHAUPTER, New York, N. Y., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Filed Aug. 7, 1906. Serial No. 329,616.

1. In a rail joint, the combination with the rails and the joint proper, of a joint supporting base adapted to be engaged by the rails, and means for yieldingly maintaining a separation of the rails from said base.



2. In a rail joint, the combination with the rails, and the joint proper, of a joint supporting base adapted to be engaged by the rails, and means for normally maintaining a separation of the rails from the said base.

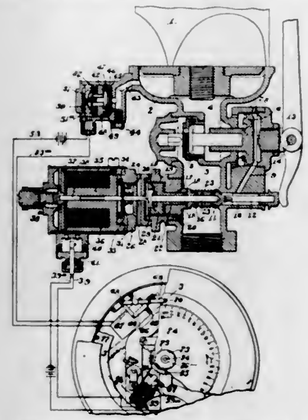
3. In a rail joint, the combination with the rails and the joint proper, of a joint supporting base adapted to be engaged by the rails, and means for normally and yieldingly maintaining a separation of the rails from the joint support.

4. In a rail joint, the combination with the rails and the insulated joint proper, of a joint supporting base adapted to be engaged by the rails, and means for insulating the rails from the base and for maintaining a normal separation of these parts.

5. In an insulated rail joint, the combination with the rails and the insulated joint proper, of a joint supporting base adapted to be engaged by the rails, means for insulating the rails from the base, and means for normally and yieldingly maintaining a separation of the rails from the base.

[Claims 6 and 7 not printed in the Gazette.]

873,822. WHISTLE-VALVE. FRANK L. WOLFE, Medford, Mass., assignor to Crosby Steam Gage and Valve Company, Boston, Mass., a Corporation of Massachusetts. Filed Dec. 5, 1905. Serial No. 290,416.



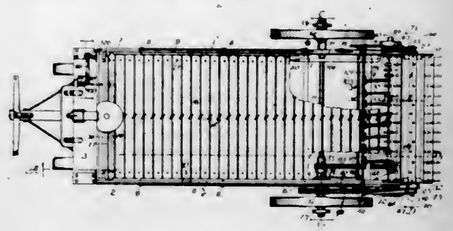
1. In a system of the character described a whistle valve with an inlet chamber and seated therein a valve, an outlet chamber communicating with said inlet chamber by a passage controlled by said valve, mechanism for opening and closing said valve, an electric circuit including and operating said mechanism, a clock in said circuit with mechanism for opening and closing said circuit, mechanism operated by steam passing through said outlet chamber, a second electric circuit including said last named mechanism and opened and closed thereby, and means arranged in said clock and included in said second circuit and operated thereby for recording such opening and closing of said second circuit; substantially as described.

2. In a system of the character described a whistle valve with an inlet chamber and seated therein a valve, an outlet chamber communicating with said inlet chamber by a passage controlled by said valve, mechanism for opening and closing said valve, an electric circuit including and operating said mechanism, a clock in said circuit with mechanism for opening and closing said circuit, mechanism operated by steam passing through said outlet chamber, a second electric circuit including said last named mechanism and opened and closed thereby, a rotary chart support in said clock operated by said clock mechanism, a rotary pencil in said clock and included in said second circuit and operated thereby for recording such opening and closing of said second circuit; substantially as described.

3. In a system of the character described a whistle valve with an inlet chamber and an outlet chamber connected by a valve controlled passage, such valve, mechanism for operating said valve, an electric circuit including and operating said mechanism, a clock in said circuit with mechanism for opening and closing said circuit, mechanism operated by steam passing through said outlet chamber, a second electric circuit including said last named mechanism and opened and closed thereby, and means arranged in said clock and included in said second circuit and operated thereby for recording such opening and closing of said second circuit; substantially as described.

4. In a system of the character described a whistle valve with an inlet chamber and an outlet chamber connected by a valve controlled passage, such valve, mechanism for operating said valve, an electric circuit including and operating said mechanism, a clock in said circuit with mechanism for opening and closing said circuit, mechanism operated by steam passing through said outlet chamber, a second electric circuit including said last named mechanism and opened and closed thereby, a rotary chart support in said clock operated by said clock mechanism, a rotary pencil in said clock and included in said second circuit and operated thereby for recording such opening and closing of said second circuit; substantially as described.

873,823. FERTILIZER-DISTRIBUTER. WILLIAM ZACHOW, Milwaukee, Wis., assignor to International Harvester Company, a Corporation of New Jersey. Filed May 1, 1905. Serial No. 258,300.



1. In a fertilizer distributer, the combination of a body, a movable flexible bottom mounted in said body, having its ends disconnected, means for moving said bottom in either direction longitudinally, and a supporting track for said bottom below the body, said track having a return bend at its forward end.

2. In a fertilizer distributer, the combination of a body comprising side sills, a movable flexible bottom mounted on said side sills and having its ends disconnected, means for moving said bottom in either direction longitudinally, and a supporting track for said bottom below said side sills, said track having an upwardly curved portion at its forward end.

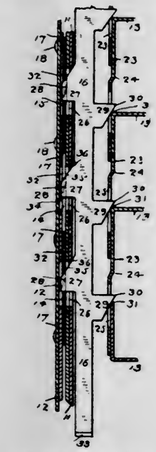
3. In a fertilizer distributer, the combination of a body comprising side sills, a movable flexible bottom mounted on said side sills and having its ends disconnected, means for moving said bottom in either direction longitudinally, and a supporting track for said bottom below said side sills, said track having a circular vertical section at its forward end.

4. In a fertilizer distributer, the combination of a body comprising side sills, a movable flexible bottom mounted on said side sills and having its ends disconnected, means for moving said bottom in either direction longitudinally, and a supporting track for said bottom below said side sills, said track having a circular vertical section and a horizontal return portion at its forward end.

5. In a fertilizer distributer, the combination of a body comprising side sills, a bottom having its ends disconnected comprising bars having their opposite ends connected with sprocket chains, castings secured to the rear ends of said side sills, a shaft journaled in said castings, sprocket wheels secured to said shaft and engaging with said chains in a manner to move them in either direction, annular rims forming part of said castings and partially surrounding said sprocket wheels, a supporting track for said bottom below said sills and forming a continuation of said annular rims.

[Claims 6 to 61 not printed in the Gazette.]

873,824. BALLOT-STRIP-LOCKING DEVICE. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed Apr. 27, 1907. Serial No. 370,607.



1. In a device of the character described, the combination with means for holding a ballot strip, of a ballot strip locking bar having a projection and means for forcing said projection into engagement with the back of a ballot strip, substantially as described, for the purpose specified.

2. In a device of the character described, the combination with means for holding ballot strips, of a ballot strip locking bar having projections on opposite sides and means engaged by said projections for forcing the ballot strip locking bar either backward or forward when said bar is moved upward or downward respectively.

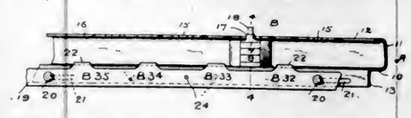
3. In a device of the character described the combination with means for holding ballot strips, of a ballot strip locking bar having projections on opposite sides provided with inclines and means engaged by said inclines for moving said locking bar backward when it is raised and for moving it forward to lock the ballot strips when it is drawn downward.

4. In a device of the character described, the combination with ballot strip holders consisting of strips of sheet metal with the edges curved over and turned toward each other, and ballot strips lying therein, of a ballot strip locking bar having projections and means for forcing said projections into engagement with the ballot strips.

5. In a device of the character described, the combination with a front plate and a backing plate having slots therethrough, a front strip having slots and blocks between the front plate and front strip leaving openings between said plate and strip, of ballot strip holders in alinement with said openings, ballot strips therein, a ballot strip locking bar having projections lying in said slots and means for forcing said projections into engagement with the ballot strips.

[Claims 6 to 9 not printed in the Gazette.]

873,825. MECHANISM FOR ATTACHING COUNTERS IN VOTING-MACHINES. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,607.



1. The combination with a counter having a rib, of a counter bar comprising a base, a backing portion, a top portion having a slot to receive the rib on the counter and a flange depending from the base and a locking slide secured to the flange and having locking projections extending above the plane of the base to secure the counters in the bar.

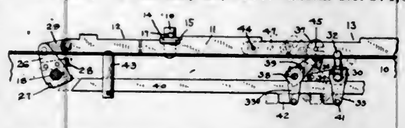
2. The combination with a counter bar adapted to support counters and having a flange and a top portion provided with slots, of a plurality of counters having ribs engaging the slots, a locking slide secured to the flange and having projections to secure the counters in place and means for locking the slide in the locking position.

3. The combination with a counter bar comprising a base, a backing portion, a top portion provided with slots and a flange depending from the base, of a plurality of counters provided with ribs adapted to engage the slots in the bar and a locking slide doubled about the flange and provided with locking projections which when placed in front of the counters secure them in place and a pin for locking the slide in the locking position.

4. The combination with a counter bar comprising a base, a backing portion, a top portion provided with slots 15, and a flange depending from the base and provided with slots 21, of a plurality of counters provided with ribs adapted to engage the slots in the bar and a locking slide doubled about the flange and provided with locking projections to retain the counters in place and rivets passing through the plates of the locking slide and through the slots in the flange which limit the movement of the slide in both directions.

5. The sheet metal counter bar A comprising a base, a backing portion, a top portion provided with slots and a flange depending from the base.

873,826. QUESTION-VOTING MECHANISM. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,608.



1. In a voting machine, the combination with a question voting member comprising a shaft, a connecting arm and a counter dog, of a secondary shaft carrying a connecting arm and a counter dog, a link to which said arms are pivoted and means for resetting said shafts after a voting operation.

2. In a voting machine, the combination with a question voting member comprising a shaft, a connecting arm, a resetting arm and a counter dog, and a secondary shaft carrying a connecting arm, a resetting arm and a counter dog, of a link to which the connecting arms are pivoted and a resetting bar which is engaged by the resetting arms.

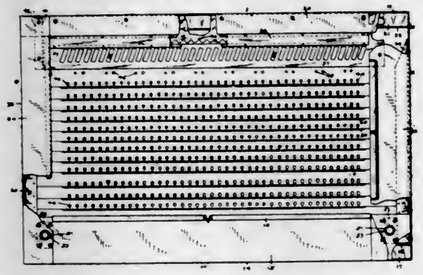
3. In a voting machine, the combination with a question voting member comprising a shaft, a connecting arm, a resetting arm and a counter dog, and a secondary shaft carrying a connecting arm, a resetting arm and a counter dog, of a link to which the connecting arms are pivoted and a resetting bar having angular projections which are engaged by the resetting arms.

4. In a voting machine, the combination with a question voting member comprising a shaft, a connecting arm, a resetting arm and a counter dog, and a secondary shaft carrying a connecting arm, a resetting arm and a counter dog, said connecting arms being formed from blanks of sheet metal bent upon themselves and secured to the shafts at their mid-lengths, of a link lying between the branches of the connecting arms and pivoted thereto and a resetting bar which is engaged by the resetting arms.

5. In a voting machine, the combination with a question voting member comprising a shaft, a connecting arm, a resetting arm and a counter dog, and a secondary shaft carrying a connecting arm, a resetting arm and a counter dog, said resetting arms being formed from blanks of sheet metal bent upon themselves and secured to the shafts at their mid-lengths, and the ends of the branches being provided with a cross pin, of a link to which the connecting arms are pivoted and a resetting bar lying between the branches of the resetting arm and provided with angular projections which are engaged by the cross pins.

[Claims 6 to 27 not printed in the Gazette.]

873,827. VOTING-MACHINE FRAME. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,609.



1. A voting machine frame comprising a base, a top piece, right and left end pieces, horizontals consisting of central portions, back portions and front portions which are made longer than the back portions, are offset toward the front to overlie the front portion of the contiguous horizontal and are provided with outwardly-turned flanges and means by which the horizontals are secured in place.

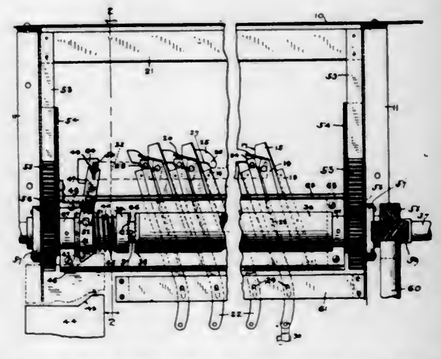
2. A voting machine frame comprising a base, a top piece, right and left end pieces, horizontals 25 consisting of central portions, back portions and front portions, a horizontal 31 lying within the front portion of the lowest horizontal 25 and brackets secured to the base upon which horizontals 31 rest and which are provided with strengthening flanges 33.

3. A voting machine frame comprising a base, a top piece, consisting of a horizontal portion, a front vertical portion and a back vertical portion provided at its lower end with an inwardly-turned flange, right and left end pieces and transverse vertical supports provided with slots which receive the flange upon the back vertical portion of the top piece.

4. A voting machine frame comprising a base, a top piece, right and left end pieces consisting of end portions and side portions, reinforcing plates on the inner sides of said side portions, said side portions and reinforcing plates being provided with holes, and tubes passing through said holes and headed down on the outer sides of the side portions to permit the passage of rods for carrying the machine.

5. In a voting machine frame of the character described, the combination with end pieces having side portions and reinforcing plates, of tubes passed through the side portions and reinforcing plates and headed down on the outer sides of the side portions, substantially as described, for the purpose specified.

873,828. INDEPENDENT-SHUTTER-LOCKING MECHANISM FOR VOTING-MACHINES. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed June 1, 1907. Serial No. 376,754.



1. In a voting machine, the combination with a sliding shutter and a pawl pivoted thereto, of a link provided with a hook and having a rack engaged by the pawl and an actuating bar having an incline engaged by the hook, substantially as described, for the purpose specified.

2. In a voting machine, the combination with a front plate having a voting aperture, and an aperture 25, a sliding shutter adapted to close the voting aperture and a pawl pivoted to the shutter, of a link having a hook projecting through aperture 25 and a rack engaged by the pawl and an actuating bar having an incline engaged by the hook, substantially as described, for the purpose specified.

3. In a voting machine, the combination with a front plate having a voting aperture and an aperture 25 comprising an incline, a sliding shutter adapted to close the voting aperture and having an incline, and a pawl pivoted to the shutter, of a link having a hook projecting through aperture 25 and having a bearing and a rack engaged by the pawl, and an actuating bar having an incline engaged by the hook, the opening of the shutter causing the incline thereon to engage the bearing on the hook and cause said hook to ride up the incline of aperture 25 and the hook engaging the incline on the actuating bar and imparting movement to said bar.

4. In a voting machine, the combination with a front plate having a voting aperture and an aperture 25 comprising an incline 26 and a portion 27, a sliding shutter adapted to close the voting aperture and a pawl pivoted to the shutter, of a link having a hook projecting through aperture 25 and having a bearing 28, adapted to engage incline 26 and portion 27, a portion 35 and a rack engaged by the pawl, and a bar 32 having an incline 34 engaged by portion 35 of the hook to actuate the bar when the shutter is opened.

5. In a voting machine, the combination with a sliding shutter and a pawl pivoted thereto, of a link having a rack engaged by the pawl to lock the shutter against backward movement and means for disengaging the pawl and permitting the shutter to drop to the closed position.

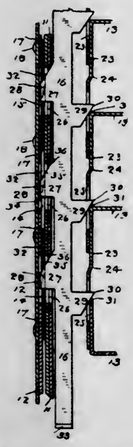
[Claims 6 to 32 not printed in the Gazette.]

4. In a fertilizer distributer, the combination of a body comprising side sills, a movable flexible bottom mounted on said side sills and having its ends disconnected, means for moving said bottom in either direction longitudinally, and a supporting track for said bottom below said side sills, said track having a circular vertical section and a horizontal return portion at its forward end.

5. In a fertilizer distributer, the combination of a body comprising side sills, a bottom having its ends disconnected comprising bars having their opposite ends connected with sprocket chains, castings secured to the rear ends of said side sills, a shaft journaled in said castings, sprocket wheels secured to said shaft and engaging with said chains in a manner to move them in either direction, annular rims forming part of said castings and partially surrounding said sprocket wheels, a supporting track for said bottom below said sills and forming a continuation of said annular rims.

[Claims 6 to 61 not printed in the Gazette.]

873,824. BALLOT-STRIP-LOCKING DEVICE. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed Apr. 27, 1907. Serial No. 370,607.



1. In a device of the character described, the combination with means for holding a ballot strip, of a ballot strip locking bar having a projection and means for forcing said projection into engagement with the back of a ballot strip, substantially as described, for the purpose specified.

2. In a device of the character described, the combination with means for holding ballot strips, of a ballot strip locking bar having projections on opposite sides and means engaged by said projections for forcing the ballot strip locking bar either backward or forward when said bar is moved upward or downward respectively.

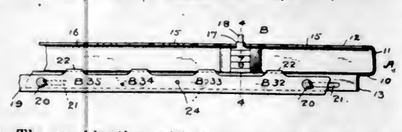
3. In a device of the character described the combination with means for holding ballot strips, of a ballot strip locking bar having projections on opposite sides provided with inclines and means engaged by said inclines for moving said locking bar backward when it is raised and for moving it forward to lock the ballot strips when it is drawn downward.

4. In a device of the character described, the combination with ballot strip holders consisting of strips of sheet metal with the edges curved over and turned toward each other, and ballot strips lying therein, of a ballot strip locking bar having projections and means for forcing said projections into engagement with the ballot strips.

5. In a device of the character described, the combination with a front plate and a backing plate having slots therethrough, a front strip having slots and blocks between the front plate and front strip leaving openings between said plate and strip, of ballot strip holders in alinement with said openings, ballot strips therein, a ballot strip locking bar having projections lying in said slots and means for forcing said projections into engagement with the ballot strips.

[Claims 6 to 9 not printed in the Gazette.]

873,825. MECHANISM FOR ATTACHING COUNTERS IN VOTING-MACHINES. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,607.



1. The combination with a counter having a rib, of a counter bar comprising a base, a backing portion, a top portion having a slot to receive the rib on the counter and a flange depending from the base and a locking slide secured to the flange and having locking projections extending above the plane of the base to secure the counters in the bar.

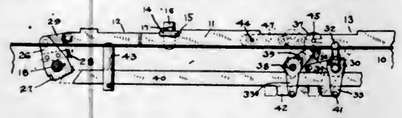
2. The combination with a counter bar adapted to support counters and having a flange and a top portion provided with slots, of a plurality of counters having ribs engaging the slots, a locking slide secured to the flange and having projections to secure the counters in place and means for locking the slide in the locking position.

3. The combination with a counter bar comprising a base, a backing portion, a top portion provided with slots and a flange depending from the base, of a plurality of counters provided with ribs adapted to engage the slots in the bar and a locking slide doubled about the flange and provided with locking projections which when placed in front of the counters secure them in place and a pin for locking the slide in the locking position.

4. The combination with a counter bar comprising a base, a backing portion, a top portion provided with slots 15, and a flange depending from the base and provided with slots 21, of a plurality of counters provided with ribs adapted to engage the slots in the bar and a locking slide doubled about the flange and provided with locking projections to retain the counters in place and rivets passing through the plates of the locking slide and through the slots in the flange which limit the movement of the slide in both directions.

5. The sheet metal counter bar A comprising a base, a backing portion, a top portion provided with slots and a flange depending from the base.

873,826. QUESTION-VOTING MECHANISM. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,608.



1. In a voting machine, the combination with a question voting member comprising a shaft, a connecting arm and a counter dog, of a secondary shaft carrying a connecting arm and a counter dog, a link to which said arms are pivoted and means for resetting said shafts after a voting operation.

2. In a voting machine, the combination with a question voting member comprising a shaft, a connecting arm, a resetting arm and a counter dog, and a secondary shaft carrying a connecting arm, a resetting arm and a counter dog, of a link to which the connecting arms are pivoted and a resetting bar having angular projections which are engaged by the resetting arms.

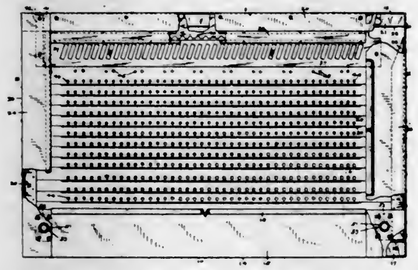
3. In a voting machine, the combination with a question voting member comprising a shaft, a connecting arm, a resetting arm and a counter dog, and a secondary shaft carrying a connecting arm, a resetting arm and a counter dog, of a link to which the connecting arms are pivoted and a resetting bar having angular projections which are engaged by the resetting arms.

4. In a voting machine, the combination with a question voting member comprising a shaft, a connecting arm, a resetting arm and a counter dog, and a secondary shaft carrying a connecting arm, a resetting arm and a counter dog, said connecting arms being formed from blanks of sheet metal bent upon themselves and secured to the shafts at their mid-lengths, of a link lying between the branches of the connecting arms and pivoted thereto and a resetting bar which is engaged by the resetting arms.

5. In a voting machine, the combination with a question voting member comprising a shaft, a connecting arm, a resetting arm and a counter dog, and a secondary shaft carrying a connecting arm, a resetting arm and a counter dog, said resetting arms being formed from blanks of sheet metal bent upon themselves and secured to the shafts at their mid-lengths, and the ends of the branches being provided with a cross pin, of a link to which the connecting arms are pivoted and a resetting bar lying between the branches of the resetting arm and provided with angular projections which are engaged by the cross pins.

[Claims 6 to 27 not printed in the Gazette.]

873,827. VOTING-MACHINE FRAME. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed May 20, 1907. Serial No. 374,609.



1. A voting machine frame comprising a base, a top piece, right and left end pieces, horizontals consisting of central portions, back portions and front portions which are made longer than the back portions, are offset toward the front to overlie the front portion of the contiguous horizontal and are provided with outwardly-turned flanges and means by which the horizontals are secured in place.

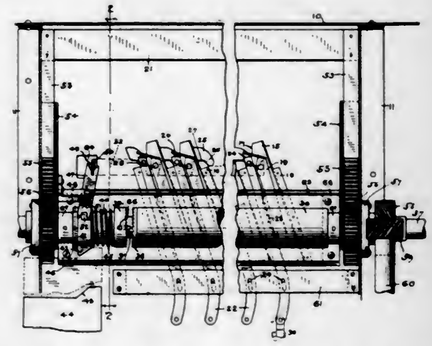
2. A voting machine frame comprising a base, a top piece, right and left end pieces, horizontals 25 consisting of central portions, back portions and front portions, a horizontal 31 lying within the front portion of the lowest horizontal 25 and brackets secured to the base upon which horizontals 31 rest and which are provided with strengthening flanges 33.

3. A voting machine frame comprising a base, a top piece, consisting of a horizontal portion, a front vertical portion and a back vertical portion provided at its lower end with an inwardly-turned flange, right and left end pieces and transverse vertical supports provided with slots which receive the flange upon the back vertical portion of the top piece.

4. A voting machine frame comprising a base, a top piece, right and left end pieces consisting of end portions and side portions, reinforcing plates on the inner sides of said side portions, said side portions and reinforcing plates being provided with holes, and tubes passing through said holes and headed down on the outer sides of the side portions to permit the passage of rods for carrying the machine.

5. In a voting machine frame of the character described, the combination with end pieces having side portions and reinforcing plates, of tubes passed through the side portions and reinforcing plates and headed down on the outer sides of the side portions, substantially as described, for the purpose specified.

873,828. INDEPENDENT-SHUTTER-LOCKING MECHANISM FOR VOTING-MACHINES. CHARLES C. ABBOTT, Pittsfield, Mass., assignor to Triumph Voting Machine Company, Pittsfield, Mass., a Corporation of New Jersey. Filed June 1, 1907. Serial No. 376,754.



1. In a voting machine, the combination with a sliding shutter and a pawl pivoted thereto, of a link provided with a hook and having a rack engaged by the pawl and an actuating bar having an incline engaged by the hook, substantially as described, for the purpose specified.

2. In a voting machine, the combination with a front plate having a voting aperture, and an aperture 25, a sliding shutter adapted to close the voting aperture and a pawl pivoted to the shutter, of a link having a hook projecting through aperture 25 and a rack engaged by the pawl and an actuating bar having an incline engaged by the hook, substantially as described, for the purpose specified.

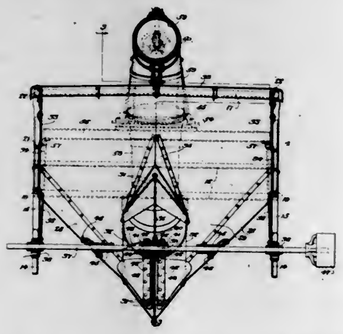
3. In a voting machine, the combination with a front plate having a voting aperture and an aperture 25 comprising an incline, a sliding shutter adapted to close the voting aperture and having an incline, and a pawl pivoted to the shutter, of a link having a hook projecting through aperture 25 and having a bearing and a rack engaged by the pawl, and an actuating bar having an incline engaged by the hook, the opening of the shutter causing the incline thereon to engage the bearing on the hook and cause said hook to ride up the incline of aperture 25 and the hook engaging the incline on the actuating bar and imparting movement to said bar.

4. In a voting machine, the combination with a front plate having a voting aperture and an aperture 25 comprising an incline 26 and a portion 27, a sliding shutter adapted to close the voting aperture and a pawl pivoted to the shutter, of a link having a hook projecting through aperture 25 and having a bearing 28, adapted to engage incline 26 and portion 27, a portion 35 and a rack engaged by the pawl, and a bar 32 having an incline 34 engaged by portion 35 of the hook to actuate the bar when the shutter is opened.

5. In a voting machine, the combination with a sliding shutter and a pawl pivoted thereto, of a link having a rack engaged by the pawl to lock the shutter against backward movement and means for disengaging the pawl and permitting the shutter to drop to the closed position.

[Claims 6 to 32 not printed in the Gazette.]

873,829. PNEUMATIC STACKER. BYRON G. BAKER, Minneapolis, Minn., assignor to J. I. Case Threshing Machine Company, Racine, Wis., a Corporation. Filed Oct. 10, 1906. Serial No. 338,210.



1. In a pneumatic stacker, the combination with the stacker trunk, of a vertical fan casing opening at its periphery into said trunk, said casing having walls that are inwardly inclined from its central plane to openings on opposite sides thereof, a hopper inclosing said casing and having inclined walls leading to the opposite side openings of said casing, a fan in said casing and a transverse horizontal shaft extending through said hopper and said fan casing whereon said fan is mounted, substantially as described.

2. In a pneumatic stacker, the combination with the stacker trunk, of a vertical fan casing opening at its periphery into said trunk, said casing being V-shaped in section and having walls inclined inwardly to openings on opposite sides thereof, a hopper inclosing said casing and having downwardly converging walls leading to the openings on the opposite sides of said fan casing, a fan in said casing having triangular shaped blades and a horizontal transverse shaft extending through said hopper and said casing whereon said fan is mounted, substantially as described.

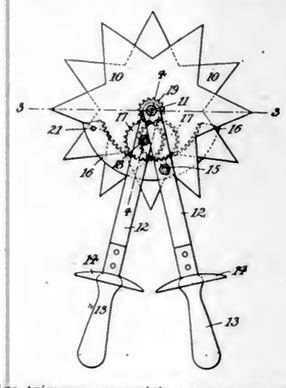
3. In a pneumatic stacker, the combination with the stacker trunk, of a vertical fan casing opening at its periphery into said trunk, said casing having walls inclined inwardly from its central plane to openings on opposite sides thereof, a hopper inclosing said casing and leading to the opposite side openings, a central partition dividing said fan casing, fan blades on opposite sides of said partition and a transverse horizontal shaft extending through the hopper and said fan casing whereon said fan blades are mounted, substantially as described.

4. In pneumatic stackers, the combination with the stacker trunk, of a vertical fan casing communicating at its periphery with the stacker trunk and having inlet openings at its opposite sides, a hopper inclosing said casing and having downwardly converging side walls leading to the side openings of said fan casing, a fan in said casing, a transverse horizontal shaft extending through said hopper and said casing whereon said fan is mounted and tubular sleeves fixed to the side walls of said hopper, extending inwardly therefrom and entirely surrounding said shaft, substantially as described.

5. In a pneumatic stacker, the combination with the stacker frame comprising sills and frame bars mounted thereon, of a stacker trunk and hopper on said frame, a fan casing in said hopper and having opposite side openings communicating with the interior thereof and a peripheral opening communicating with the stacker trunk, a fixed central partition dividing said fan casing, a transverse horizontal shaft extending through said hopper and fan casing, bearings for said shaft mounted on the sills of the stacker frame and on said partition and fans fixed to said shaft on opposite sides of said partition, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

873,830. HEDGE-TRIMMER. JOSEPH A. BECHTOLD, New York, N. Y. Filed Sept. 13, 1907. Serial No. 392,678.



1. A hedge trimmer comprising a pair of stellated cutting blades, a spindle on which said blades are rotatable, a pair of handles turning on the spindle, and means actuated by the handles for simultaneously rotating the blades in opposite directions, substantially as specified.

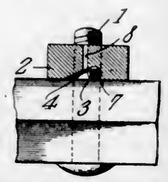
2. A hedge trimmer comprising a pair of stellated cutting blades, a spindle on which said blades are rotatable, a pair of forked handles turning on the spindle, and means actuated by the handles for simultaneously rotating the blades in opposite directions, substantially as specified.

3. A hedge trimmer comprising a pair of cutting blades, a common spindle therefor, a pair of forked handles turning on the spindle, a curved rack and a pinion on each of the handles, the rack of one handle engaging the pinion of the other handle, and means for operatively connecting the pinions to the blades, substantially as specified.

4. A hedge trimmer comprising a pair of cutting blades, a common spindle therefor, a pair of forked handles turning on the spindle, a curved rack and a pinion on each of the handles, the rack of one handle engaging the pinion of the other handle, and gear wheels fast on the blades and engaged by the pinions, substantially as specified.

5. A hedge trimmer comprising a pair of cutting blades, a common spindle therefor, a pair of forked handles turning on the spindle, a curved rack, a pinion and a guide on each of the handles, the rack of one handle engaging the pinion and guide of the other handle, and means for operatively connecting the pinions to the blades, substantially as specified.

873,831. NUT-LOCK. EDWARD C. BEVERAGE, Monterey, Va. Filed June 20, 1907. Serial No. 379,940.

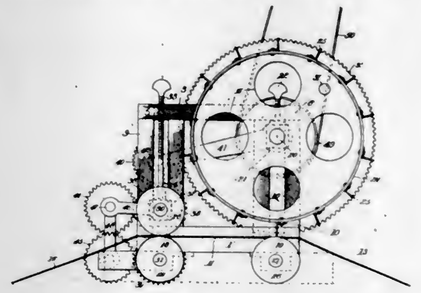


1. A nut lock comprising a bolt, a nut having an inclined recess in its under face and a projecting lip at one end of said recess and a ball movable in said recess and adapted to be supported on said lip.

2. A nut lock comprising a bolt, a nut having an inclined recess in its under face with an undercut portion forming a lip, and a ball movable in said recess and adapted to enter said recess and be supported by said lip.

3. A nut lock comprising a nut having an inclined recess in its under face with an undercut portion at one end and a key hole extending from its outer face to said recess, and a ball movable in said recess and adapted to be held in said undercut portion by a key passed through said slot.

873,832. MACHINE FOR SIZING, CUTTING, AND MARKING CANDY MATERIAL OR OTHER COMMODITIES. ALBERT H. BARTLETT, Buffalo, N. Y. Filed June 21, 1906. Serial No. 322,736.



1. A machine of the character described comprising a frame, a trough mounted upon the frame, upper and lower feed roller shafts, a feed roller mounted upon the corresponding ends of each of said shafts, a gear wheel mounted upon the opposite end of each of said shafts, another shaft, a combined cutting and marking wheel mounted upon one end of the last mentioned shaft, the wheel and the aforesaid rollers being arranged in alinement with the trough, a gear wheel mounted upon the end of the last mentioned shaft opposite the end upon which said wheel is mounted, the gear wheels of said roller shafts being in mesh, and a gear wheel interposed between the said roller gears and the gear of the cutting and marking wheel shaft.

2. A machine of the character described comprising a frame, a trough mounted upon the frame, a shaft arranged transversely of the frame beneath the trough, the latter having an opening above said shaft, a feed roller carried at one end of the shaft whose periphery works in said opening, a gear wheel carried by the opposite end of said shaft, a second shaft mounted above the aforesaid shaft in alinement with the latter, a feed roller carried at one end of the second shaft for disposition in the trough to coöperate with the aforesaid roller, a gear wheel carried at the opposite end of the second shaft for mesh with the aforesaid gear wheel, idler gears meshing with each other and the aforesaid gears, a third transverse shaft, a gear carried at one end of the third shaft, an intermediate gear meshing with the gears of the second and third shafts, a combined cutting and marking wheel mounted at one end of the third shaft to operate upon the material passed through the trough, and a roller coöperating with the combined cutting and marking wheel to pull the material through the trough.

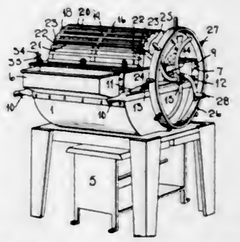
3. A machine of the character described comprising a frame, a trough mounted upon the frame, a shaft arranged transversely of the frame beneath the trough, the latter having an opening above said shaft, a feed roller carried at one end of the shaft and whose periphery works in said opening, a gear wheel carried by the opposite end of said shaft, a second shaft mounted above the aforesaid shaft and in alinement therewith, a feed roller carried at one end of the second shaft for coöperation with the aforesaid roller, a gear wheel carried at the opposite end of the second shaft for mesh with the aforesaid gear wheel, means for adjusting the second shaft toward and away from the first shaft, idler gears meshing with each other and the aforesaid gears, a third transverse shaft, a gear carried at one end of the third shaft, an intermediate gear meshing with the gears of the second and third shafts, a combined cutting and marking wheel mounted at one end of the third shaft to operate upon the material passed through the trough, means for adjusting the third shaft toward and away from the trough, a roller coöperating with the combined cutting and marking wheel to pull the material through the trough, and means for setting said gears in operation.

4. A portable machine of the character described comprising a frame, a trough mounted upon the frame, a shaft beneath the trough, the latter having an opening above said shaft, a feed roller carried at one end of the shaft whose periphery works in said opening, a gear wheel carried at the opposite end of said shaft, a second shaft mounted above the aforesaid shaft in alinement therewith, a feed roller carried at one end of the second shaft for coöperation with the aforesaid roller, a gear wheel carried at the opposite end of the second shaft for mesh with the aforesaid gear wheel, a third transverse shaft, a gear carried at one end of the third shaft, an intermediate gear meshing with the gears of the second and third shafts, a combined cutting and marking wheel mounted at one end of the third shaft to operate upon the material passed through the trough, said trough having a second opening, a roller loosely mounted in the frame beneath the second mentioned opening of the trough operable by the combined cutting and marking wheel to rotate it and pull the material through the trough, and means whereby the gears may be set in operation.

5. A machine of the character described comprising a frame, a trough mounted upon the frame, the trough having an opening at each end, means arranged adjacent one of the openings for operation to force the material through the trough, a combined cutting and marking member for operation upon the material in its passage through the trough, and an independent roller mounted adjacent the other of said openings for operation by and coöperation with the combined marking and cutting wheel to pull the material through the trough.

[Claims 6 to 9 not printed in the Gazette.]

873,833. WASHING-MACHINE. WILLIAM T. BOTTENFIELD, Nelson, Nebr. Filed Jan. 3, 1907. Serial No. 350,659.



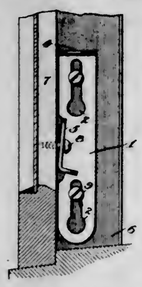
In a washing machine, the combination with a suds box, of a rotary rubber mounted therein and having end heads provided with radial recesses, spring retracter rods mounted in said recesses and clothes holding rods extended longitudinally of the rubber and having terminal engagement with the spring retracted rods.

873,834. STORM-WINDOW FASTENER. WILFRID BOURQUE, Sherbrooke, Quebec, Canada. Filed July 15, 1907. Serial No. 383,952.

1. A fastening device for window sash, etc., comprising, in combination with a window frame and sash, headed projections upon said frame, a fastening plate movably mounted upon said frame and engaged by said projection, said plate having a wing which is slotted, a headed projection upon the sash adapted to enter said slot as the plate is moved and frictionally engage said wing, as set forth.

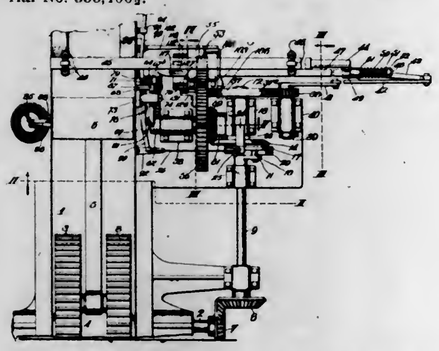
2. A fastening device for window sash, etc., comprising, in combination with a window frame and sash, headed projections upon said frame, a fastening plate movably mounted upon said frame and engaged by said projection.

said plate having a wing extending at right angles to the plate, and at an inclination to its length and provided with a slot adapted to receive the headed projection upon



said sash as the plate is moved, said wing adapted to have a wedging action against the head of the projection upon the sash, as set forth.

873,835. BALE-TYING MECHANISM FOR BALING-PRESSES. CLARENCE E. BOWER, Newton, Iowa, and HOWARD W. BOWER, Olney, Ill. Filed Feb. 2, 1907. Serial No. 355,400.



1. The combination with a baling press and means for causing a wire to encircle a bale formed in the press and form a pair of loops in the wire at one side of the bale, means for holding the portions of said loops at the opposite side of the points where they are doubled, from the bale, and means for twisting together the four portions of the doubled loops.

2. The combination with a baling press and means for causing a wire to encircle a bale formed in the press and form a pair of loops in the wire at one side of the bale, means for holding the portions of said loops at the opposite side of the points where they are doubled, from the bale, means for twisting the four portions of the doubled loops together, and means to effect the release of the twisted wire from the twisting means.

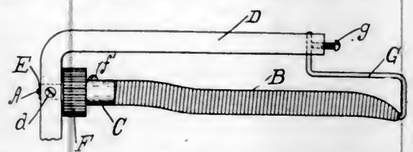
3. The combination with a baling press and means for causing a wire to encircle a bale formed in the press and form a pair of loops in the wire at one side of the bale, means for holding the portions of said loops at the opposite side of the points where they are doubled, from the bale, means for twisting the four portions of the doubled loops together, means to effect the release of the twisted wire from the twisting means, and means to sever one strand of each doubled portion between the twisted portion thereof and said holding means.

4. The combination with a baling press, of means for holding a coil of wire and means for holding the outer end of such wire at opposite sides of the baling case with the intermediate portion of the wire extending across the chamber thereof and engaging the opposite sides and front end of a bale formed therein, and means to engage the portion of the wire running from the coil to the bale and doubling it and also to engage that portion of the wire between the opposite side of the bale and said holding means and likewise doubling it.

5. The combination with a baling press, of means for holding a coil of wire and means to hold the outer end of such wire at opposite sides of the baling case with the intermediate portions of the wire extending across the chamber thereof and engaging the opposite sides and front end of a bale formed therein, means to engage the portion of the wire running from the coil to the bale and doubling it and also to engage that portion of the wire between the opposite side of the bale and said holding means and likewise doubling it and means to twist the four contiguous strands of doubled wire together.

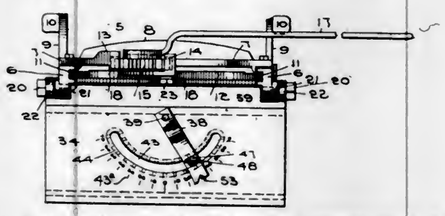
[Claims 6 to 32 not printed in the Gazette.]

873,836. ROLL FOR CIGAR-MACHINES. RICHARD A. BRIGHT and ARTHUR W. DAVIS, Cranston, R. I., assignors to The Acme Tobacco Company, a Corporation of Maine. Filed Mar. 22, 1906. Serial No. 307,526.



A tobacco roll comprising a core and a plurality of concentrically positioned spirally wound layers upon the core, the successive layers being wound in opposite directions.

873,837. WOOD-TRIMMING MACHINE. CLAUDE E. BROWN and WILLIAM J. GIBBS, Denver, Colo. Filed Apr. 18, 1907. Serial No. 368,977.

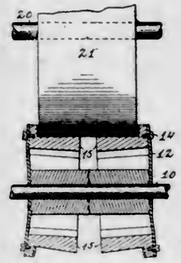


1. In a wood trimming machine the combination of a plane, vertically reciprocating member having cutting edges extending from its vertical edges upwardly to a central point of intersection and a bed having a shearing edge in coöperative proximity to the said member and movable about a horizontal axis, means connected with the bed to measure in angular magnitudes the angle between its upper surface and the face of the cutting member, and means to retain the bed in its adjusted position.

2. In a wood trimming machine, in combination, a vertically reciprocating, plane knife having two cutting edges extending from its vertical edges upwardly to a central point of intersection, a bed having a shearing edge in cooperative proximity to the said knife and movable about a horizontal axis, a table upon the said bed movable in parallel relation to the knife, a gage upon the said table movable about an axis at right angles to its upper surface, and means to hold the said gage in its adjusted position.

3. In a wood trimming machine, in combination a vertically reciprocating, plane knife having two cutting edges extending from its vertical edges upwardly to a central point of intersection, a bed having a shearing edge in cooperative proximity to the said knife and movable about a horizontal axis, a table upon the said bed movable in parallel relation to the knife, means connected with the bed to measure the angle between its upper surface and the face of the knife, a gage upon the table movable about an axis at right angles to its upper surface, and means upon the table to measure the angle between the said gage and a plane passing through its pivotal axis.

873,838. POWER-TRANSMITTING MECHANISM. FREDERICK BUCHERER, Bayonne, N. J. Filed Mar. 19, 1907. Serial No. 363,253.



1. A driving pulley provided with a lateral annular flange and a yielding surface whereby pressure of such surface against a second pulley will cause the lateral flange to project inwardly to engage the second pulley.

2. A driving pulley having a periphery of greater diameter near its center than at its edges, a lateral annular flange and a flexible support whereby the surface of the pulley may move inwardly to bring the flange toward the pulley center.

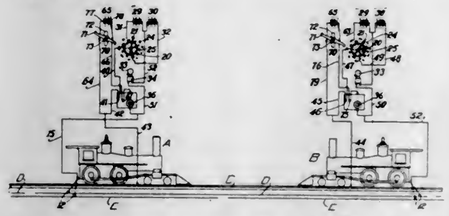
3. The combination with a driving shaft of two conical drums yieldingly mounted thereon, each drum being provided with a lateral annular flange.

4. The combination with a driving shaft of two conical drums yieldingly and independently mounted thereon, in close proximity to each other each drum being provided with a lateral annular flange.

5. A driving pulley comprising two conical drums, each independently and yieldingly mounted on a driving shaft and each provided with a lateral annular flange whereby any pressure against the bases of both drums will cause their flanges to be tilted toward each other.

[Claims 6 to 12 not printed in the Gazette.]

873,839. AUTOMATIC SIGNALING DEVICE. LOUIS CAPUTO, East Boston, Mass. Filed Aug. 23, 1907. Serial No. 389,853.



1. An automatic signaling apparatus consisting of signaling devices to be carried by moving vehicles, a track upon which said vehicles are adapted to run, means for connecting the signaling devices, and a clock carried by each signaling device whereby automatic signals are sounded in each of the vehicles on any one section of the track.

2. An automatic signaling apparatus consisting of signaling devices to be carried by vehicles, a track upon which said vehicles are adapted to run, alternating track wires electrically connected with said signaling devices, and a clock carried by each signaling device whereby automatic signals are sounded in each of the vehicles on the same track wire.

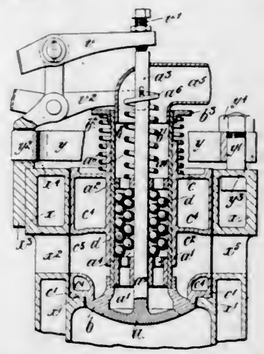
3. The combination with a track and moving vehicles thereon of signaling devices carried by said vehicles, each signaling device provided with a clock having a second hand 21, two metal rings 24, 25 surrounding its dial each provided with a series of equally spaced perforations, plugs 28 adapted to have their shanks frictionally held in said perforations, and the plugs arranged to varied combinations, and means for connecting the signaling devices of any two vehicles on any section of the track whereby automatic signals are sounded in each of said two vehicles when the second hand has reached certain plugs.

4. An automatic signaling apparatus consisting of a track, vehicles adapted to move upon said track, each vehicle provided with two or more batteries, a clock, a signaling device and a telephone, means for connecting the batteries with the clocks, signaling devices and telephones, alternating track wires, and means connecting the batteries, clocks, signaling devices and telephones with the track and track wires.

5. An automatic signaling apparatus consisting of signaling devices to be carried by vehicles, a track upon which said vehicles are adapted to run, a clock carried by each signaling device, alternating track wires electrically connected with said signaling devices so that when two of said vehicles are on the same track wire automatic signals are sounded in each, and a telephone system connected with the signaling devices which will enable the operators in said two vehicles to converse.

[Claims 6 to 8 not printed in the Gazette.]

873,840. INTERNAL-COMBUSTION ENGINE. ERIC H. CLIFT, West Kensington, England. Filed Mar. 25, 1907. Serial No. 364,556.



1. In an internal combustion engine, the combination of an exhaust valve having an enlarged stem with a centrally arranged passage through it forming an induction pipe, a detachable box having a seating for said valve, an inlet valve for closing the passage through the exhaust valve the stem of the said valve being of a smaller diameter than the bore of the stem of the exhaust valve, guides in the hollow stem of the exhaust valve for the stem of the inlet valve, a seating for said inlet valve in the head of the exhaust valve, a water jacket in the detachable box carrying the seating for the exhaust valve and surrounding the guide for said valve, a feed supply pipe fitting within the end of the hollow stem of the exhaust valve, springs operating to retain the valves on their respective seatings, and means for operating the said valves to open them by removing them from their seatings, as set forth.

2. In an internal combustion engine, the combination of an exhaust valve having an enlarged stem with a centrally arranged passage through it forming an induction pipe, a detachable box having a seating for said valve, an inlet valve for closing the passage through the exhaust valve the stem of the said valve being of a smaller diameter than the bore of the stem of the exhaust valve, guides in the hollow stem of the exhaust valve for the stem of the inlet valve, a seating for said inlet valve in the head of the exhaust valve, a water jacket in the detachable box carrying the seating for the exhaust valve and surrounding the

guide for the said valve, a feed supply pipe fitting within the end of the hollow stem of the exhaust valve, springs operating to retain the valves on their respective seatings, and means for operating the said valves to open them by removing them from their seatings, as set forth.

3. In an internal combustion engine, the combination of an exhaust valve having an enlarged stem with a centrally arranged passage through it forming an induction pipe, a detachable box having a seating for said valve, an inlet valve for closing the passage through the exhaust valve the stem of the said valve being of a smaller diameter than the bore of the stem of the exhaust valve, guides in the hollow stem of the exhaust valve for the stem of the inlet valve, a seating for said inlet valve in the head of the exhaust valve, a water jacket in the detachable box carrying the seating for the exhaust valve and surrounding the guide for said valve, a series of metal balls or spheres in the annular chamber in the hollow stem of the exhaust valve between the guides therein, a feed supply pipe fitting within the end of the hollow stem of the exhaust valve, springs operating to retain the valves on their respective seatings, and means for operating the said valves to open them by removing them from their seatings as set forth.

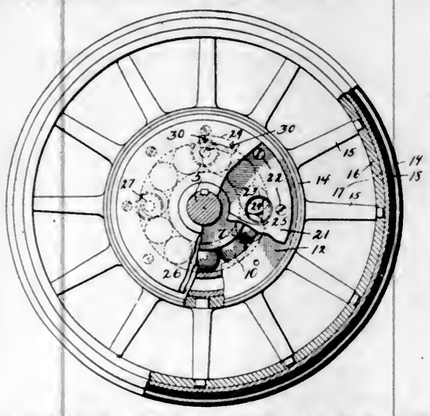
4. In an internal combustion engine, the combination of an exhaust valve having an enlarged stem with a centrally arranged passage through it forming an induction pipe, a detachable box having a seating for said valve, an inlet valve for closing the passage through the exhaust valve the stem of the said valve being of a smaller diameter than the bore of the stem of the exhaust valve, guides in the hollow stem of the exhaust valve for the stem of the inlet valve, a seating for said inlet valve in the head of the exhaust valve, a water jacket in the detachable box carrying the seating for the exhaust valve and surrounding the guide for said valve, means for regulating the flow of water through said jacket, a series of metal balls or spheres in the annular chamber in the hollow stem of the exhaust valve between the guides therein, a feed supply pipe fitting within the end of the hollow stem of the exhaust valve, springs operating to retain the valves on their respective seatings, and means for operating the said valves to open them by removing them from their seatings, as set forth.

5. In an internal combustion engine, the combination of an exhaust valve having an enlarged stem with a centrally arranged passage through it forming an induction pipe, a detachable box having a seating for said valve, an inlet vale for closing the passage through the exhaust valve the stem of the said valve being of a smaller diameter than the bore of the stem of the exhaust valve and extending completely through said hollow stem, guides in the hollow stem of the exhaust valve for the stem of the inlet valve, a seating for said inlet valve in the head of the exhaust valve, a water jacket in the detachable box carrying the seating for the exhaust valve and surrounding the guide for said valve, a series of metal balls or spheres in the annular chamber in the hollow stem of the exhaust valve between the guides therein, ridges or recesses on or in the stem of the inlet valve, a feed supply pipe fitting within the end of the hollow stem of the exhaust valve, springs operating to retain the valves on their respective seatings, and means for operating the said valves to open them by removing them from their seatings, as set forth.

[Claims 6 to 9 not printed in the Gazette.]

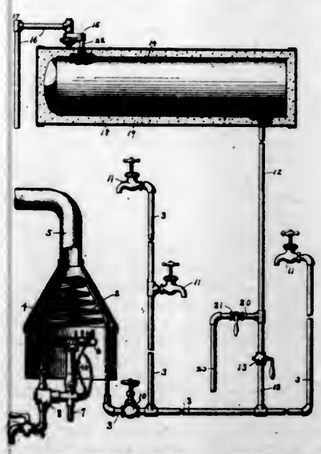
873,841. VEHICLE-WHEEL. CHARLES E. COLE, Cleveland, Ohio. Filed Dec. 26, 1906. Serial No. 349,423.

1. In a vehicle wheel, the combination with a pair of annular outer plates, of a shaft to which said plates are secured, a ring also secured to said shaft, said ring having a concaved outer periphery, a second ring surrounding the first named ring, said second ring having a concaved inner periphery, hollow rubber cushioning balls located between said rings, and plates secured to the outer ring which overlap the inner ring and which are entirely covered by the outer plates, openings formed in the plates that are carried by the outer ring, and projections carried by the outer plates which extend into said openings, said openings being larger than said projections.



2. In a vehicle wheel, the combination with a pair of annular outer plates, of a shaft to which said plates are secured, a ring also secured to said shaft, said ring having a concaved outer periphery, a second ring surrounding the first named ring, said second ring having a concaved inner periphery, hollow rubber cushioning balls located between said rings, and plates secured to the outer ring which overlap the inner ring and which are entirely covered by the outer plates, openings formed in the plates that are carried by the outer ring, and projections carried by the outer plates which extend into said openings, said openings being larger than said projections, one of said rings having a removable section which when removed permits the removal of the balls.

873,842. HOT-WATER SUPPLY. DWIGHT S. COLE, Detroit, Mich. Filed Oct. 13, 1906. Serial No. 338,696.



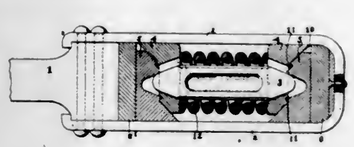
1. A hot water supply system, comprising a water heater including automatic means for controlling the action of the heating agent by the flow of water through the heater, a storage tank connected with the heater only through the hot water discharge pipe from the heater, means for restricting the amount of water passing from said heater into the storage tank and permitting the free discharge thereof, and a service pipe connecting to both heater and storage tank.

2. A hot water supply system, comprising a water heater including a heating coil and automatic means for controlling the action of the heating agent by the flow of water through the coil, one end of said coil being connected to the main water supply system, a storage tank connected into said system, and a service pipe of greater capacity than the heater coil connecting to both the storage tank and the delivery end of the heater coil and adapted to simultaneously convey the contents of the storage tank and the water passing through the heater.

3. A hot water supply system, comprising a water heater including a heating coil of limited capacity and a burner controlled by the flow of water through said coil, one end of said coil being connected to the water supply system, a receiver for hot water adapted to be alternately filled and emptied, a discharge pipe for said receiver having a capacity greatly in excess of that of the heater coil, and a connecting pipe extending from the delivery end of the heater coil to said discharge pipe, the flow of water to the hot water receiver being restricted to the limited capacity of the heater while the flow from the receiver is unrestricted.

4. In a hot water supply system, the combination of a water heater comprising automatic means for controlling the heating agent and a heating coil of limited capacity connected at one end to the water supply system, a storage tank, a delivery pipe of large capacity connecting to the delivery end of the coil and to said storage tank, and faucets or valves connected to said delivery pipe, said parts being so proportioned that when the faucets are closed, a restricted supply of water passing through the heater coil and delivery pipe will fill the tank, and when the discharge faucets are open, the discharge of water from the heater coil and from the tank will be simultaneous and unrestricted from the tank.

873,843. DRAFT-GEARING FOR RAILWAY-CARS. JOHN F. COURSON, Pitcairn, Pa. Filed Mar. 7, 1907. Serial No. 361,027.



1. In combination in a draft gear, a spring, a pair of friction blocks at the end of the spring and movable one upon the other transversely of the line of draft and wedge means for moving both of the said friction blocks transversely, substantially as described.

2. In combination in a draft gear, a spring, a pair of friction blocks at each end of the said spring under pressure thereof and movable on each other transversely of the line of draft and wedge means for moving the said friction blocks transversely when the gear is subjected to buffing or pulling strain, substantially as described.

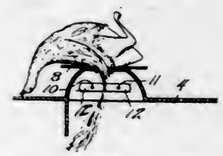
3. In combination in a draft gear, a spring, a pair of friction blocks arranged to move transversely of the line of draft having inclined surfaces in contact and having also inclined surfaces to coöperate with wedge means and wedge means for operating the said friction plates or blocks, substantially as described.

4. In combination in a draft gear, a spring, a pair of friction blocks or plates arranged at the end of the spring having tapered openings or recesses and a wedge member coacting therewith, substantially as described.

5. In combination in a draft gear, a spring, pairs of friction blocks or plates between which the said spring is interposed, a member within the spring and having tapered ends for operating the members of the pairs of friction blocks and abutment means, said friction blocks operating transversely one on the other and in opposite directions, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

873,844. POULTRY-PICKING DEVICE. EDWARD COVERT, La Prairie, Ill. Filed Nov. 21, 1906. Serial No. 344,468.

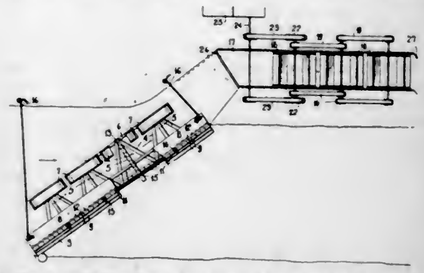


1. In a poultry picking device, the combination of a duct having an inlet in its side at a point intermediate its ends, a hood covering said opening and provided with a mouth, a deflector in the duct adjacent the hood and arranged to direct the incoming currents of air, a fan casing connected with the duct, a shaft mounted in the casing, a fan thereon rotated to produce a suction laterally into the duct through the said mouth, a pair of rotary picking blades arranged in the hood adjacent the mouth thereof, means connected with the blades for rotating them in opposite directions simultaneously, and a driving connection between the fan shaft and the said means.

2. In a poultry plucking device, a duct having a pair of inlet openings, hoods covering said openings and provided with inlet mouths, closures for said mouths, a fan casing connected with the forward end of the duct, a fan shaft journaled in said casing and carrying a suction fan, two pairs of picking blades arranged respectively in said hoods, the blades of each pair being connected for reverse rotation, means connecting the two pairs of blades for operation one from another, and operative connections between the fan shaft and one of the pairs of blades.

3. In a poultry plucking device, a fan casing, a duct communicating with and leading from said casing, a fan shaft arranged in the latter and carrying a suction fan, said duct being provided with an inlet opening, a hood covering said opening and provided with an inlet mouth, slides arranged to close said mouth, a pair of picker shafts journaled in the hood and carrying coöperating picking blades, means connecting the shafts for reverse rotation, and a pulley and belt connection between one of the picker shafts and the fan shaft.

873,845. PORTABLE POWER-DAM. WILLIAM H. CROW, Pueblo, Colo. Filed May 13, 1907. Serial No. 373,285.



1. In a portable dam, longitudinally arranged timbers, braces secured thereto, floats at the forward ends of said braces, and vertically movable members connected with the dam for deflecting water laterally.

2. In a portable dam, longitudinally arranged timbers spaced at a distance from each other, braces connected with said timbers, floats at the forward end of said braces, and vertically movable plank passed through the space between two of said timbers.

3. In a portable dam, longitudinally arranged timbers spaced at a distance from each other, sets of converging braces secured to said timbers, a float for each set of braces, and vertically movable plank between the space between the rear timbers.

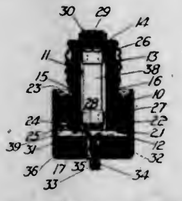
4. In a portable dam, longitudinally arranged timbers

having spaces therebetween, sets of converging braces secured to the forward timbers and having their ends joined at a distance therefrom, a brace extending from the point of each set of braces underneath said timbers to the rear timber, floats connected with the forward ends of said sets of braces, and vertically arranged planks in the space between the rear timbers.

5. In a portable dam, longitudinally arranged timbers at a distance apart, additional timbers on the adjacent edges of the rear timbers, inwardly extending braces secured to said timbers, floats connected with the forward ends of said braces, a plank walk secured to the forward timbers, and vertically arranged plank in the space between the adjacent edges of the rear timbers and the additional timbers thereon.

[Claims 6 and 7 not printed in the Gazette.]

873,846. CARTRIDGE-FUSE ATTACHMENT-PLUG. ROBERT A. CULTRA, Cambridge, Mass. Filed July 3, 1907. Serial No. 381,958.



1. In a device of the character described, an insulating body portion provided with a hole extending longitudinally therethrough, a screw-threaded shell surrounding said body portion adjacent to one end thereof, said shell provided with two ears, two terminal plates located on the other end of said body portion, a screw connecting one of said ears to one of said plates, a second screw which secures said other ear to said body portion, said screws extending parallel to said hole, a cartridge fuse located within said hole and electrically connected to one of said plates, and a cap fast to said last-named end of said body portion.

2. In a device of the character described, an insulating body portion provided with a hole extending longitudinally therethrough, a screw-threaded shell surrounding said body portion adjacent to one end thereof, said shell provided with two ears, two terminal plates located on the other end of said body portion, a screw connecting one of said ears to one of said plates, a second screw which secures said other ear to said body portion, said screws extending parallel to said hole, an insulating button located in the outer end of said shell, a screw extending through said button, a nut having screw-threaded engagement with said third-named screw, a cartridge fuse located within said hole electrically connected at one end to one of said plates and at its other end to said third-named screw, and a cap fast to said last-named end of said body portion.

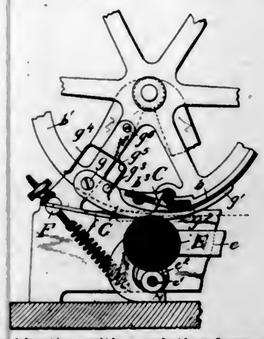
3. In a device of the character described, an insulating body portion provided with a hole extending longitudinally therethrough, a screw-threaded shell surrounding said body portion adjacent to one end thereof, said shell provided with two ears, two terminal plates located on the other end of said body portion, a screw connecting one of said ears to one of said plates, a second screw which secures said other ear to said body portion, said screws extending parallel to said hole, an insulating button located in the outer end of said shell, a screw extending through said button, a nut having screw-threaded engagement with said third-named screw, a spring clip secured to said button by said third-named screw, a second spring clip secured to one of said plates, a cartridge fuse located within said hole, the ends of said fuse being located in said spring clips, respectively, and a cap fast to said last-named end of said body portion.

4. In a device of the character described, an insulating body portion provided with a hole extending longitudinally therethrough, a screw-threaded shell surrounding said body portion adjacent to one end thereof, said shell provided with two ears, two terminal plates located on the other end of said body portion, a screw connecting one of said ears to one of said plates, a second screw which secures said other ear to said body portion, said screws extending parallel to said hole, an insulating button located in the outer end of said shell, a spring clip located on the inner face of said button, a screw extending through said clip and said button, a nut having screw-threaded engagement with said third-named screw, said nut bearing against the exterior face of said button, a second spring clip secured to the inner face of one of said plates, a cartridge fuse located within said hole, the ends of said fuse being located in said spring clips, respectively, a cap on said last-named end of said body portion, and a screw passing through said cap, said last-named screw having screw-threaded engagement with one of said plates.

5. In a device of the character described, an insulating body portion provided with a hole extending longitudinally therethrough, a screw-threaded shell surrounding said body portion adjacent to one end thereof, said shell provided with two ears, two terminal plates located on the other end of said body portion, a screw connecting one of said ears to one of said plates, a second screw which secures said other ear to said body portion, said screws extending parallel to said hole, an insulating button located in the outer end of said shell, a screw extending through said button, a nut having screw-threaded engagement with said third-named screw, a spring clip secured to said button by said third-named screw, a second spring clip secured to one of said plates, a cartridge fuse located within said hole, the ends of said fuse being located in said spring clips, respectively, a cap fast to said last-named end of said body portion, and a sheet of insulating material extending across said last-named end of said body portion, across one of said plates, and interposed between the other of said plates and said body portion.

[Claims 6 to 8 not printed in the Gazette.]

873,847. STENCIL-PRINTING MACHINE. ALBERT B. DICK, Lake Forest, Ill., assignor to A. B. Dick Company, Chicago, Ill., a Corporation of Illinois. Filed May 28, 1907. Serial No. 376,124.



1. The combination with a printing-drum and an underlying platen, of sheet-strippers adapted to coact with an impression-sheet fed to said drum, and means carried by said drum and operating, when in normal, fixed position, to increase the diameter thereof at points corresponding to the lateral edges of said sheet, substantially as described.

2. The combination with a printing-drum and an underlying platen, of guides mounted in position to coact with the lateral edges only of a sheet on said drum, said guides being secured to and normally extending in fixed position beyond the periphery of said drum, substantially as described.

3. The combination with a rotatable printing-drum and an underlying platen, of guides secured to the drum and

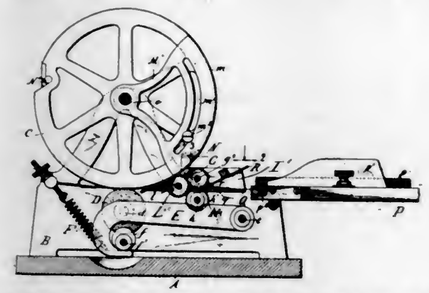
movable relatively thereto, independently of the rotation of the drum, to operative and inoperative positions, said guides normally and when in operative position extending fixedly beyond the periphery of the drum, substantially as described.

4. The combination with a movable printing-drum and an underlying platen, of guides secured to and extending beyond the periphery of said drum, and means independent of the movement of said drum for throwing said guides to operative and inoperative positions, in the former of which such guides extend fixedly beyond the periphery of said drum, substantially as described.

5. The combination with a printing-drum and an underlying platen, of guides secured to and extending beyond the periphery of said drum, means for throwing said guides to operative and inoperative positions, and mechanism for retaining said guides in either of said positions, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

873,848. SHEET-FEEDING APPARATUS. ALBERT B. DICK, Lake Forest, Ill., assignor to A. B. Dick Company, Chicago, Ill., a Corporation of Illinois. Filed May 28, 1907. Serial No. 376,125.



1. The combination with a printing-drum and an underlying pressure-roller, of two feed-rolls in vertical alinement and in juxtaposition to the point of coaction of said drum and roller, said rolls being connected for simultaneous operation to feed an impression-sheet direct to said drum and roller and at substantially the same speed as that of said drum and roller, a friction-sheave connected with one of said rolls, a clutch between the rolls and said sheave, and an adjustable sector carried by a moving part of the apparatus and having a curved periphery coöperating intermittently with said sheave, substantially as described.

2. The combination with a printing-drum and an underlying pressure-roller, of a sector pivoted upon and movable with said drum and having an enlongated slot concentric with its pivot, and sector-securing means coöperating with said slot and said drum, feed-rolls mounted in fixed bearings and connected for simultaneous operation, and means intermediate of said feed-rolls and said sector, and coöperating with both, whereby the movement of said sector simultaneously with said drum will transmit corresponding, but intermittent, feeding movement to said feed-rolls, substantially as described.

3. The combination with two feed-rolls, connected for simultaneous operation, one of said rolls having a plurality of separated roll-sections, and means for imparting movement to said rolls, of a plate having an opening therein through which the periphery of one of said rolls protrudes, and a guide located over said plate and at an angle thereto, said guide having fingers along one edge thereof terminating adjacent to the point of coaction of said rolls and in juxtaposition to said sections upon one of said rolls, substantially as set forth.

4. The combination with a printing-drum and a cooperating pressure-roller, of two feed-rolls in juxtaposition to the point of co-action of the drum and roller, gearing between said rolls, a friction-sheave, a connection between said sheave and one of said rolls, whereby the sheave drives the rolls, a clutch in said connection, and and an adjustable sector carried by said drum and having a curved periphery coöperating intermittently with said sheave, substantially as described.

5. The combination with a printing-drum and a cooperating pressure-roller, of a sector pivoted upon and movable with the drum and having an elongated slot concentric with its pivot, sector-securing means coöperating with said slot and said drum, a pair of feed-rolls, gearing between said rolls, a friction-sheave mounted in position to coöperate with said sector, a connection between said sheave and said rolls whereby the movement of the sector simultaneously with said drum transmits corresponding but intermittent feeding movement to the feed-rolls, and a clutch in said connection, substantially as described.

873,849. PROCESS FOR MAKING ARTIFICIAL STONE AND THE STONE. HARRY O. DUERR, Wilmington, Del. Filed Oct. 29, 1907. Serial No. 399,752.

1. The process of making artificial stone comprising the roasting of silicious material; grinding said roasted material with lime; the hydration of said mixture; grinding said mixture with cement; mixing said ground mixture with a coarser silicious material; adding sufficient water to said compound to render it plastic; molding it to any desired form, and then subjecting it to an indurating action, substantially as set forth.

2. The process of making artificial stone comprising the mixing of finely divided silicious material with lime; the hydrating of said mixture; mixing said mixture with a coarse silicous material and a cement; adding sufficient water to said compound to render it plastic; molding it to any desired form, and then subjecting it to the action of steam under pressure, substantially as set forth.

3. The process of making artificial stone comprising the grinding of silicious material and lime together; hydrating said mixture; mixing the product with a coarser silicious material and a cement; adding sufficient water to render the compound plastic; molding it to any desired form, and then subjecting it to the action of steam under pressure, substantially as set forth.

4. The process of making artificial stone comprising the roasting of silica; grinding said roasted silica with lime; the hydration of said mixture; grinding said mixture with cement; mixing said ground mixture with a coarser silica; adding sufficient water to said compound to render it plastic; molding it to any desired form, and then subjecting it to the action of steam under pressure, substantially as set forth.

5. The process of making artificial stone comprising the mixing of finely divided silica with lime; the hydrating of said mixture; mixing said mixture with a coarser silica and a cement; adding sufficient water to said compound to render it plastic; molding it to any desired form, and then subjecting it to the action of steam under pressure, substantially as set forth.

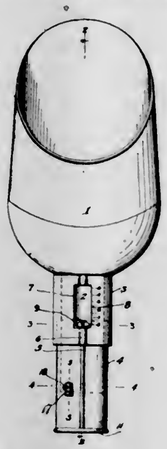
[Claims 6 to 12 not printed in the Gazette.]

873,850. COMBINATION SCOOP AND SCALE. THEOLA T. ELLIS, St. Louis, Mo. Filed Mar. 4, 1907. Serial No. 360,408.

1. A combination scoop and scale comprising a scoop bowl, concentric cylinders depending from said bowl, the outer one having a guide groove, a vertical opening and scale graduations adjacent to the latter, a cylindrical handle to enter between said cylinders, a guide rib upon the handle cylinder to slide in the guide groove in the outer cylinder, an indicator arranged in the opening in the outer cylinder and secured upon the handle cylinder to co-act with said scale graduations, a sliding dog carried by the handle cylinder to engage said inner cylinder and lock said parts together and a coil spring arranged within the inner cylinder and the handle cylinder, for the purpose specified.

2. A combination scoop and scale comprising a scoop

bowl, depending concentric cylindrical sleeves upon the bottom of said bowl, the inner sleeve being of greater length and having serrations upon its outer face and the outer cylinder being spaced from the inner one and having longitudinal guide grooves arranged at opposite points, a vertical opening intersecting one of said grooves and scale graduations adjacent to said opening, a handle cylinder arranged to slide between the inner and outer cylinders and having at opposite points outwardly projecting longitudinally extending guide ribs to enter the grooves in the outer cylinder, an indicator arranged in the opening in the outer cylinder and secured upon the upper end of one of the ribs of the handle cylinder for co-action with said scale graduations, a removable closure at the bottom of said handle cylinder, a coil spring arranged within the handle cylinder and the inner cylinder, a spring retracted push button stem mounted for radial sliding movement in the handle cylinder and a serrated head upon the inner end of said stem to engage the serrations upon the inner cylinder, substantially as shown and described.



3. A combination scoop and scale comprising a scoop bowl, inner and outer tubular stems depending from said bowl, the outer one having a longitudinally extending guide groove, said outer stem also having a vertical opening, scale graduations adjacent to said opening, a tubular handle to enter between said tubular stems, a longitudinally extending guide rib upon said handle to slide in said guide groove in the outer stem, an indicator carried by the handle and arranged in the vertical opening in the outer stem to co-act with said scale graduations and a coil spring arranged within the inner stem and said handle, substantially as described.

4. A combination scoop and scale comprising a scoop bowl, inner and outer tubular stems depending from said bowl, the outer one having longitudinal grooves, said outer stem also having a vertical opening intersecting one of said grooves, scale graduations adjacent to said opening, a tubular handle to enter and slide between said stems, longitudinal guide ribs upon said handle to enter said guide grooves in the outer stem, an indicator arranged in the vertical opening in the outer stem and secured to one of the guide ribs of the handle for co-action with said scale graduations and a coil spring arranged in the inner stem and handle, substantially as described.

5. A combination scoop and scale comprising a scoop bowl, inner and outer tubular stems depending from said bowl, the outer stem having longitudinal guide grooves, said outer stem also having a vertical opening intersecting one of said grooves, scale graduations adjacent to said opening, a tubular handle to slide between said stems, guide ribs upon said handle to enter and slide in the grooves in the outer stem, an indicator arranged in the vertical opening in the outer stem and secured upon one of said ribs of the handle for coöperation with said scale graduations, a coil spring arranged within the handle and the inner stem and means for locking the handle against sliding movement between said stems, substantially as described.

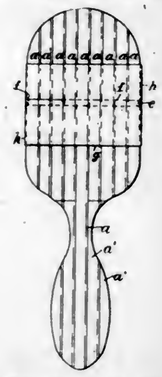
[Claim 6 not printed in the Gazette.]

873,851. SEWER-PIPE. CARL ESCHENBRENNER, Oberlahnstein, Germany. Filed Aug. 30, 1906. Serial No. 332,584.



In the construction of sewers, the combination of the angular shaped abutment pieces *a* adapted to build broad and narrow sewers, the iron toothed ribbons *b* projecting from a side of the angles of the abutment pieces adapted to lay in the intervening space breadthwise which are filled up with concrete *c* and bind and strengthen the sewer, the wire netting *d* laid in the intervening space lengthwise which is filled up with the said concrete and the beton plate which is used for covering the sewer, substantially as shown and described.

873,852. SECTIONAL HAIR-BRUSH. CHARLES A. FETTERS, New York, N. Y., assignor to Sanitary Sectional Brush Company, New York, N. Y., a Corporation of New York. Filed Mar. 2, 1907. Serial No. 360,236.



1. A brush-block wholly divided into straight longitudinal strips, each strip being provided with a row of bristle-tufts and the strips all having parallel edges with tongue and groove connections upon the adjacent edges for holding the strips in alinement, means for holding the strips from longitudinal movement when assembled, and means for clamping the strips detachably together for conjoint use, the sides and ends of the strips upon the edges of the block being trimmed to the contour desired.

2. A brush having the entire brush-block divided into straight longitudinal strips, each strip being provided with a row of bristle-tufts and the strips all having parallel edges and formed with a groove upon one edge and an integral corresponding rib upon the opposite edge for holding the strips in alinement, a rod extended through the strips to prevent longitudinal movement, and means operating upon the opposite outer strips of the block for clamping the strips together.

3. A brush having the entire brush-block divided into straight longitudinal strips, each strip being provided with a row of bristle-tufts and the strips all having parallel edges with a groove upon one edge and an integral corresponding rib upon the opposite edge for holding the strips in alinement, means for holding the strips from longitudinal movement when assembled, means operating upon the opposite outer strips of the block for clamping the strips together, and a handle connected with the middle strip at one end of the block.

4. A brush having the entire brush-block divided into straight longitudinal strips, each strip being provided with a row of bristle-tufts and the strips all having parallel edges with a groove upon one edge and an integral corresponding rib upon the opposite edge for holding the strips in alinement, means for holding the strips from longitudinal movement when assembled, means operating upon the opposite outer strips of the block for clamping the strips together, and a handle connected with the middle strip at one end of the block and having tongued and grooved strips like the strips of the block, glued together and rounded to form said handle.

5. A brush having the entire brush-block divided into straight longitudinal sections of graduated length to form an oval brush-block, each section being provided with a row of bristle-tufts, and the sections all having parallel edges to facilitate their manufacture in long strips with a groove upon one edge and an integral corresponding rib upon the opposite edge for holding the strips in alinement when assembled, a rod extended through the strips to prevent longitudinal movement, and a spring-clamp with jaws at opposite ends fitted to the opposite outer strips of the block for clamping the strips together.

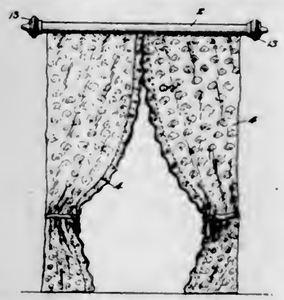
873,853. METHOD OF PRODUCING HYDROGEN FROM WATER-GAS. ADOLPH FRANK, Charlottenburg, Germany. Filed Nov. 15, 1906. Serial No. 343,522.

1. A method of producing practically pure hydrogen from water-gas, consisting in conducting water-gas over heated carbid.

2. A method of producing practically pure hydrogen from water-gas, consisting in removing carbonic acid and carbon monoxid from said water-gas by means of absorption and in conducting the residual gases over heated carbid.

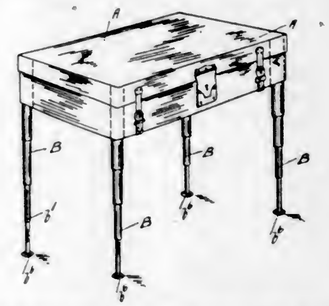
3. A method of producing practically pure hydrogen from water-gas, consisting in removing carbonic acid and carbon monoxid from said water-gas by means of absorption of the same in cuprous chlorid solution, in conducting the residual gases over heated carbid and in removing said carbonic acid and carbon monoxid from said cuprous chlorid solution, for re-use in absorbing carbonic acid and carbon monoxid.

873,854. CURTAIN-POLE. ALICE FREEDMAN, Hazelwood, Pa. Filed June 19, 1907. Serial No. 379,763.



A curtain pole comprising two half sections formed in their opposing faces with longitudinally extending recesses or grooves of less length than said sections, said faces of the sections being also formed with polygonal-shaped recesses or seats arranged at the ends of said grooves, a hinge plate secured by one of said seats in one of the sections, a curtain retaining rod hinged at one of its ends to said hinge plate and adapted to lie in the grooves in said half sections when the latter are in contact, curtain engaging pins projecting radially from said rod and upwardly in the grooves in said half sections, a polygonal head upon the free end of said rod adapted to be received by the opposing polygonal seats in the adjacent ends of the half-sections, whereby the curtain retaining rod will be prevented from twisting and removable caps or sleeves upon the ends of said half sections for securing them together, substantially as set forth.

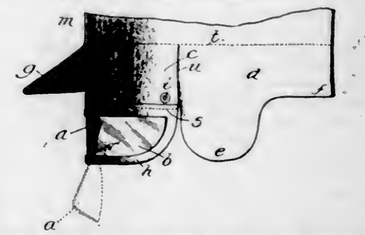
873,855. VALISE, DRESSING-CASE, AND THE LIKE. HORACE GOLDIN, London, England. Filed Sept. 27, 1906. Serial No. 336,388.



1. The hereinbefore described article comprising, a body part provided with a plurality of leg apertures, a collapsible leg movable through each leg aperture into the body part, each leg consisting of a plurality of sections telescoping one into the other and each section consisting of two tubes, the inner tube of each section having a slot therein, and the outer tube, a stud movable in the slotted inner tube of the next section.

2. The hereinbefore described article comprising a body part, provided with a plurality of leg apertures, and a collapsible leg for each leg aperture, each leg comprising a plurality of sections movable one into the other, each section comprising an internally slotted tube, with the slot formed into a helix at its lower end and a second tube inclosing the first mentioned one and having a stud movable in the slotted tube of the next section.

873,856. HEADWEAR. ADOLPH O. GORDON, Chicago, Ill. Filed Jan. 14, 1907. Serial No. 352,220.



1. A head covering comprising a crown, a forehead protector depending from the front thereof, and an ear and head protector depending from the rear, said protecting parts being so constructed that they may be folded to a position inside the crown or unfolded to their depending position, and means operative in either position for securing said protectors together.

2. A head covering comprising a crown, a depending part at the rear thereof of greater length at the sides than at the back, an eye shield depending from the forward part of the crown, and means for securing said eye shield to the rear depending part.

3. A head covering comprising a crown, a depending part at the rear of the crown of greater length at the sides than at the back, an eye shield depending from the forward

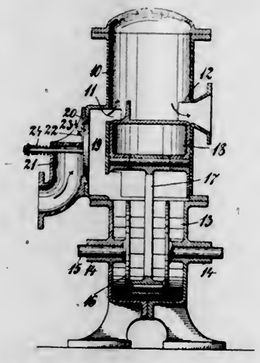
part of the crown, means whereby said depending parts may be folded to a position inside the crown, and means operative either in the depending or folded position of said parts for securing them together.

4. A head covering comprising a crown, a forehead protector hinged thereto, a transparent eye-shield hinged to said forehead protector, and a nose protector hinged to said eye-shield.

5. A head covering comprising a crown, a forehead protector hinged thereto, a transparent eye-shield hinged to said forehead protector, and a nose protector hinged to said eye-shield, said nose protector being curved to fit the nose of the wearer.

[Claims 6 and 7 not printed in the Gazette.]

873,857. EXPLOSIVE-ENGINE. HANS GRADE, Magdeburg, Germany. Filed Aug. 7, 1905. Serial No. 273,121.



1. In a two-stroke cycle explosion engine the combination with the combustion chamber and the crank chamber of a by-pass connecting them, a valve in said by-pass and means to admit air from the valve to said by-pass and combustible from substantially one-half of this valve nearest the crank chamber to said by-pass, substantially as described.

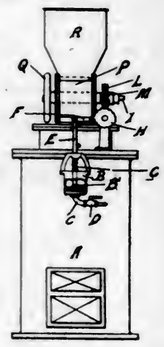
2. In a two-stroke cycle explosion engine the combination with the combustion chamber and crank chamber of a by-pass connecting them, a valve and valve seat in the side of said by-pass, means to admit air through the valve and fuel admission ports in a portion of the seat adjacent the crank chamber and controlled by said valve, substantially as described.

3. In a two-stroke cycle explosion engine the combination with the combustion chamber and the crank chamber acting as a pump chamber of a by-pass between them, a valve and valve seat in the side of said by-pass, means to permit the passage of air through the valve, an annular channel formed in the valve seat, fuel-outlet-openings from said passage through the seat over substantially only one-half the circumference thereof nearest the crank chamber, said openings controlled by the valve.

4. In a two-stroke cycle explosion engine the combination with the combustion chamber having inlet and exhaust ports controlled by the piston and a crank chamber of a by-pass extending from the inlet port to the crank chamber, a valve admitting both combustible and air to said by-pass, the combustible being admitted through substantially one-half of the valve nearest the crank chamber.

5. In a two-stroke cycle explosion engine, the combination with the combustion and the crank chambers; of a by-pass connecting them, a valve and a valve seat in said by-pass, means to supply both air and combustible to different portions of the valve and said valve controlling both the admission of air and combustible, the combustible being admitted through that portion of the valve nearest the crank chamber.

873,858. GAS-PRODUCER. SAMUEL GRIFFIN, Bath, England. Filed Feb. 1, 1906. Serial No. 299,035.

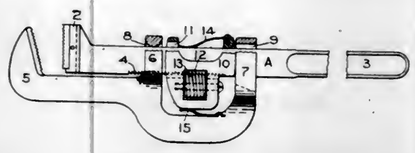


1. A gas producer comprising a cylinder, a spring pressed piston therein, a feed pipe for the cylinder to connect it with the exhaust of an engine cylinder, a gas generator, a fuel supply means for the gas generator, a feeding means for the fuel supply means, and means to actuate the feeding means operated by the movement of the piston.

2. A gas producer comprising a cylinder, a spring pressed piston therein, a feed pipe for the cylinder to connect it with the exhaust of an engine cylinder, a gas generator, a hopper, a feeder, and a motor mechanism driven by the piston intermittently actuating the feeder.

3. A gas producer comprising a cylinder, a spring pressed piston therein, a feed pipe for the cylinder to connect it with the exhaust of an engine cylinder, a piston rod for the piston, a gas generator, a hopper, a feeder conveying the fuel from the hopper to the generator, and a worm driven mechanism for the feeder driven by the piston rod.

873,859. WRENCH. FREDERICK HACHMANN, St. Paul, Minn., assignor to Adolph T. Rosen, St. Paul, Minn. Filed Feb. 20, 1905, Serial No. 246,376. Renewed Sept. 30, 1907. Serial No. 395,183.



1. A wrench of the class described consisting of a bar carrying a fixed jaw and provided with teeth upon one side, a jaw slidably supported upon said bar, a block cooperating with said jaw and slidable upon said bar, said block being turnable at one end away from said bar, a spring normally holding said block in alinement with said bar, and an adjusting screw carried by said block in position to engage the teeth of said bar when the same is in normal position.

2. A wrench of the class described consisting of a bar carrying a fixed jaw and provided with teeth upon one side, a jaw slidably supported upon said bar and turnable at one end away from said bar, a block arranged within said slidable jaw and slidable upon said bar, said block being turnable at one end away from said bar, a spring normally holding said block in alinement with said bar, an adjusting screw carried by said block in position to engage with the teeth of said bar when said block is in normal position, and a spring normally holding said jaw in alinement with said bar.

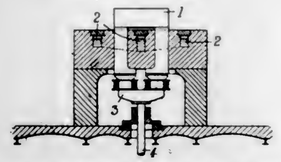
873,860. PHONOGRAPH. HORACE F. HOLMES, Concord, N. H. Filed July 7, 1905. Serial No. 268,673.



1. In a phonograph, the combination with a frame, of a diaphragm within the frame, means to clamp the diaphragm at its periphery to the frame, a weighted clapper pivoted to the frame, a reproducer lever pivoted to the clapper, an attaching plate 12 on the under side of the diaphragm, said attaching plate having a screw-threaded stem extending through the diaphragm and a perforated stem 15, a nut on the screw-threaded stem for clamping the attaching plate to the diaphragm, and a closed loop 16 connecting the reproducer lever and the perforated stem 15, said loop being made from a single piece of wire bent to the proper shape and having its ends secured together.

2. In a phonograph, a diaphragm, means to support the same, a pivoted reproducing lever, an attaching member on the under side of the diaphragm, said attaching member having a screw-threaded stem extending through the diaphragm, a clamping-nut on said stem above the diaphragm, and a closed loop connecting said attaching member to the reproducer-lever said loop being made from a single piece of wire bent to the proper shape and having its ends overlapping and secured together.

873,861. ELECTRIC FURNACE. GUSTAF HOLMGREN, Westerås, Sweden. Filed Mar. 6, 1907. Serial No. 360,983.



1. In an electric induction furnace the combination of a stationary iron core, a melting chamber inclosing said iron core, a rotary magnet, and a rotary shaft for said magnet.

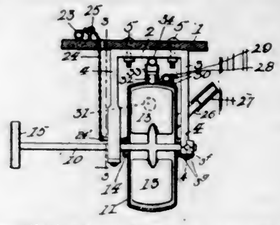
2. In an electric induction furnace the combination of a stationary iron core, poles being provided on said iron core for forming a number of magnetic circuits, a melting chamber, a rotary magnet, and a vertical shaft for said magnet.

3. In an electric induction furnace the combination of a stationary iron core, poles being provided on said iron core for forming a number of magnetic circuits, two concentric melting chambers, radial channels between the poles of the said iron core connecting the said chambers, a multi-pole rotary magnet, and a vertical shaft for said magnet.

4. In an electric induction furnace the combination of a stationary iron core, poles being provided on said iron core for forming a number of magnetic circuits, a melting chamber inclosing the said iron core, a rotary magnet, having a less number of poles than the stationary iron core, and a vertical shaft for said magnet.

873,862. VENTILATING APPARATUS FOR PASSENGER-CARS. OSCAR HOFFMAN and ERIK A. NEWMAN, Bingham Canyon, Utah. Filed Aug. 24, 1907. Serial No. 390,074.

1. In a ventilating apparatus, the combination with a car body and a truck provided with a traction wheel, of an inverted, substantially U-shaped bracket secured to said car body, a fan-casing positioned between the sides of said bracket, a shaft extending through said fan-casing and said bracket, a fan secured to said shaft within said casing, a friction-wheel fixedly secured to said shaft and being adapted to engage said traction-wheel for imparting rotary movement to said fan, means for elevating said shaft and friction-wheel, and means for securing said shaft and friction-wheel in an elevated position.



2. In a ventilating apparatus, the combination with a car body and a traction-wheel, of a bracket secured to said body, a fan-casing positioned within said bracket, a vertically-adjustable shaft extending through said fan-casing and supported upon said bracket, a fan positioned within said fan-casing and secured to said shaft, a friction-wheel secured to said shaft and adapted to engage said traction-wheel, and means for vertically adjusting said shaft for controlling the operation of said fan.

3. In a ventilating device, the combination with a support, of an inverted, substantially U-shaped bracket carried by said support, said bracket provided with a pair of sides, one of said sides provided at its lower end with a detachable section, said lower end and section provided with a socket, a pivotal bearing seated within said socket, the other side provided with a lower, bifurcated end, a sectional, vertically-movable bearing mounted within the bifurcated end, a spring interposed between the upper portion of said bifurcated end and said sectional bearing, a fan-casing mounted between said sides, a shaft journaled in said pivotal bearing and said sectional bearing, a fan positioned within said casing and secured to said shaft, means for rotating said shaft and thereby imparting movement to said fan, and means for lifting said shaft for placing the same out of operation.

4. In a ventilating apparatus, the combination with a support, a fan-casing carried by said support, of a bodily-movable fan positioned within said fan-casing, driving means for rotating said fan, a notched standard secured to said support, and means attached to said driving means and adapted to engage said notched standard for holding said driving means in an adjusted position, and thereby preventing rotation of said fan.

5. In a ventilating apparatus, the combination with a support, a fan-casing carried by said support, a bodily-movable fan positioned within said casing, a notched standard secured to said support, driving means for rotating said fan, and means adapted to engage the notch of said standard for holding said driving means in an inoperative position.

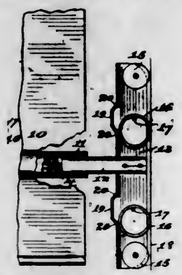
[Claims 6 to 17 not printed in the Gazette.]

873,863. CURTAIN-FIXTURE. CHARLES L. HOPKINS, Chicago, Ill., assignor to The Curtain Supply Company, Newark, N. J., a Corporation of New Jersey. Filed Aug. 19, 1904. Serial No. 221,414.

1. A curtain fixture comprising a curtain stick, a spring actuated head carried thereby, and a holding member carried by said head, the said head being provided with a projection onto and from which the holding member rocks and thereby forces the latter into contact with the window casing on the upward movement of the curtain, and a seat adjacent to the projection into which the holding member will move and remain out of frictional contact with the window casing upon the downward movement of the curtain.

2. In a curtain fixture, the combination with a curtain-stick, of a head carried thereby, a holding member mounted in and carried by said head and having both rotary and

bodily movement therein, a projection on said head onto and from which the holding member is adapted to rock to force the holding member into contact with the casing upon the upward movement of the curtain, and a seat adjacent to said projection which receives the holding member upon the downward movement of the curtain whereby the latter is released, substantially as described.



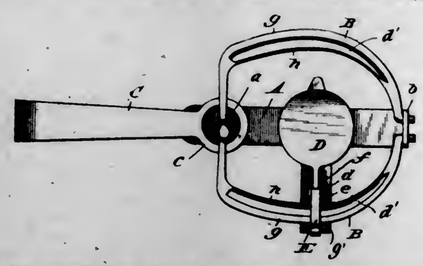
3. A curtain fixture comprising in combination a curtain-stick, a head at the end of the stick, a movable holding member mounted in said head, said head being provided with a seat or recess, and projections on opposite sides of the seat or recess onto and from which the holding member is adapted to rock whereby the holding member is forced into holding contact upon the upward movement of the curtain and released from holding contact upon the downward movement of the curtain, substantially as described.

4. In combination, a curtain-stick, a head at the end of the stick, a rotary and bodily movable holding member mounted in the head, a seat in and carried by the head into which the holding member may recede, and projections adjacent to the seat onto and from which the holding member rocks whereby to force the holding member into contact with the window-casing upon the upward movement of the head and out of holding contact therewith upon downward movement of the head, substantially as described.

5. A curtain fixture comprising a curtain-stick, a head at the end of the stick, a roller carried by the head and mounted for bodily and rotary movement in said head, a seat or recess in the head into which the roller may recede and be spaced from holding contact with the casing, and projections adjacent to the seat onto and from which the roller is adapted to rock to force the roller into contact with the casing upon the upward movement of the head, substantially as described.

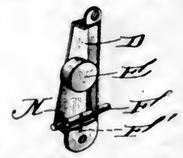
[Claims 6 to 27 not printed in the Gazette.]

873,864. ANIMAL-TRAP. WILLIAM H. HOWARD, New Canton, Ill. Filed Sept. 24, 1907. Serial No. 394,345.



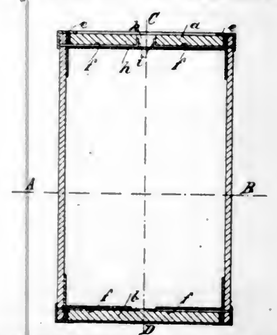
An animal trap having jaws channeled at their inner sides; the said channels being gradually diminished in width toward the forward ends of the jaws, and also having the upper or outer portions of the jaws comparatively thick and equipped with square meeting faces, and the lower or inner portions of the jaws thin and inclined downward and inward.

873,865. SASH-HOLDER. FRANK C. JACOBS, Bozeman, Mont. Filed Jan. 9, 1907. Serial No. 351,562.



A sash holder comprising, in combination with a window frame and sash slidingly mounted therein, a casing which is right angled in cross section fastened to the face of the sash and having the longitudinal edge of the outside closure of the casing positioned adjacent and parallel to the window frame, said frame forming a closure for the outer side of the casing, a flexible spindleless roller mounted within said casing and adapted to bear against the frame of the window and the inner longitudinal wall of said casing, said roller being limited in its movements by angled ends of the casing, as set forth.

873,866. PACKING-CASE. JOHAN H. S. JOHNSON, Malmo, Sweden, assignor to Aktiebolaget Celtic, Malmo, Sweden. Filed Aug. 10, 1906. Serial No. 330,063.



A box comprising a top and a bottom, two side pieces whose edges are flush with the ends and outer faces of the top and bottom, angle-strips secured to the top and bottom projecting beyond their edges and over the edges of the side-pieces forming grooves to receive the latter, end-pieces mounted between the side-pieces in recesses formed in said top and bottom, the outer faces of the ends flush with the edges of the top and bottom, angle-strips on the top and bottom engaging the last named edges and outer faces of the ends, bolts slidably mounted in grooves formed in the top and bottom and adapted to take into apertures formed in the sides, a head on each bottom bolt adapted to be turned into an offset which communicates with the bottom slots, and apertures in the top to permit access to the bolts therein.

873,867. BOTTLE-STOPPER. GEORG KIRKEGAARD, New York, N. Y. Filed Oct. 11, 1906. Serial No. 338,358.



1. A bottle stopper comprising a disk having an annular depending flange, fingers extending downward beyond the flange, said fingers being provided with holding portions adapted to engage with the neck of a bottle, and a handle or tail-piece extending from one of the fingers; said tail-piece being provided with a fracture groove below the holding portion of the finger from which it extends so that the lower portion of the tail-piece constitutes an indicating device.

2. A bottle stopper comprising a metallic cap containing a packing material and having a number of depending fingers around its periphery, each finger having an inwardly projecting lug for engaging the neck of a bottle, stiffening ribs surrounding said lugs and extending upward to the cap, and a handle or tail-piece extending from one of the fingers; said tail-piece being provided with a fracture groove below the inwardly projecting lug of the finger from which it extends so that the lower portion of the tail-piece constitutes an indicating device.

3. A bottle stopper comprising a sheet metal cap containing a packing material, said cap having a disk, a depending annular flange and fingers extending from the lower edge of said flange around its periphery, each of said fingers being provided with a reinforcement extending from its lower end upward through the width or depth of the flange and an inwardly projecting lug for engaging the neck of a bottle, and a handle or tail-piece extending from one of the fingers; said tail-piece being provided with a fracture groove below the inwardly projecting lug, of the finger from which it extends so that the lower portion of the tail-piece constitutes an indicating device.

873,868. WRENCH. EMIL R. KLEMM, Chicago, Ill. Filed Mar. 16, 1907. Serial No. 362,634.



1. A wrench comprising a shank and fixed jaw, a hollow movable jaw, a traveling nut in operative relation with said movable jaw, endwise stationary means for bringing said movable jaw into contact with any article between said jaws, and eccentric means for tightening the grip of said movable jaw.

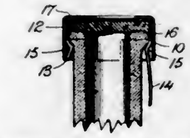
2. A wrench comprising a shank and fixed jaw, a hollow movable jaw, a traveling nut in operative relation with said movable jaw, endwise stationary means for bringing said movable jaw into contact with any article between said jaws, said means comprising a threaded rod seated in said shank, and eccentric means for tightening the grip of said movable jaw.

3. A wrench comprising a shank and fixed jaw, a hollow movable jaw, a traveling nut in operative relation with said movable jaw, endwise stationary means for bringing said movable jaw into contact with any article between said jaws, said means comprising a threaded rod seated in said shank, and means for tightening the grip of said movable jaw, said means comprising an eccentric in operative relation with said movable jaw, and a crank bar adapted to give the desired motion to said jaw through said eccentric.

4. A wrench comprising a shank and fixed jaw, a hollow movable jaw, a traveling nut in operative relation with said movable jaw, endwise stationary means for bringing said movable jaw into contact with any article between said jaws, said means comprising a threaded rod seated in said shank, and means for tightening the grip of said movable jaw, said means comprising an eccentric in operative relation with said movable jaw, and a crank bar having a stop thereon, adapted to give the desired motion to said jaw through said eccentric, said eccentric being provided with a peripheral groove, and a set-screw adapted to pass through the shank and into said peripheral groove holding said eccentric in place.

5. A wrench comprising a shank and fixed jaw, a hollow movable jaw, a traveling nut in operative relation with said movable jaw, endwise stationary means for bringing said movable jaw into contact with any article between said jaws, said means comprising a threaded rod seated in said shank, means for tightening the grip of said movable jaw, said means comprising an eccentric in operative relation with said movable jaw, a crank bar having a stop thereon, adapted to give the desired motion to said jaw through said eccentric, said eccentric being provided with a peripheral groove, and a set-screw adapted to pass through the shank and into said peripheral groove holding said eccentric in place, and adapted to engage the stop on the crank bar to limit the motion thereof.

873,869. BOTTLE-CLOSURE. REINHART KOCH, New York, N. Y. Filed Dec. 12, 1906. Serial No. 347,527.

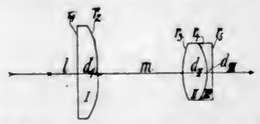


1. In a bottle closure the combination with a cap having dependent lips adapted to engage the neck of the bottle, and an elongated lip for releasing the cap and means adapted to fit about the cap and the lips when they engage the neck to lock them thereon.

2. In a bottle closure the combination with a bottle provided with a head, of a cap carrying a cork or similar sealing means and having depending lips with angles to engage the bead, a ring adapted to fit about the cap and force and hold the lips beneath the bead, and means for removing the ring and the cap.

3. The combination with a bottle provided with a bead, of a cap provided with means adapted to engage the bead to secure the cap in applied position, a member adapted to retain said means in engagement with the bead, and means by which said member may be displaced and the cap removed.

873,870. RAMSDEN OCULAR. ALBERT KÖNIG, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed Feb. 5, 1907. Serial No. 355,843.



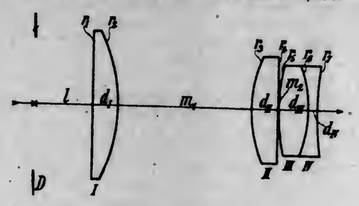
1. In a Ramsden ocular the combination with a field-lens of an eye-lens system in which two lenses having but little difference in refractive index are united in a chromatically correcting cemented surface which presents its concavity towards the field-lens.

2. In a Ramsden ocular the combination with a field-lens of a cemented double eye-lens, the front component of which is bi-convex and has an only slightly lower refractive index than the back component, the sum formed from the ratio of the front and back radii of the front component and from the tenfold difference of the refractive indices of both components varying between the limits 1.4 and 2.0.

3. In a Ramsden ocular the combination, with a field-lens of an eye-lens system, consisting of or comprising a double lens, the chromatically correcting cemented sur-

face of which has its concave side towards the field-lens and unites kinds of glass having but little difference in refractive index, the ratio of the focal distance of the eye-lens system to that of the whole ocular varying between the limits 1.1 and 1.45.

873,871. RAMSDEN OCULAR. ALBERT KÖNIG, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed May 25, 1907. Serial No. 375,606.



1. A Ramsden ocular, the eye-lens system of which is composed of a simple collective lens and a double lens, the components of the double lens being cemented together with curved surfaces concave towards the simple lens and the absolute value of the power of the double lens being less than half that of the power of the simple lens.

2. In a Ramsden ocular the combination with a field-lens of an eye-lens system composed of a simple collective lens located next to the field-lens and a double lens, the components of which are cemented together with curved surfaces concave towards the field-lens and the absolute value of the power of which is less than half that of the power of the simple lens.

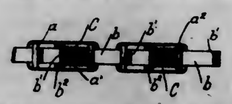
873,872. HOUSING. HUBERT KRANTZ, Brooklyn, N. Y. Filed Jan. 26, 1907. Serial No. 354,187.



1. A housing for electric conductors comprising a roof portion and side walls, provided with an opening through the roof portion and between the side walls adapted to permit the housing to be transversely removed from a binding post.

2. A housing for electric conductors comprising a roof portion and side walls, provided with an opening through the roof portion and between the side walls adapted to permit the housing to be transversely removed from a binding post, and turned-over lugs at the end of said walls depending below the edge thereof.

873,873. BRACELET. IRVING R. LEDEARR, Providence, R. I. Filed June 28, 1907. Serial No. 381,240.

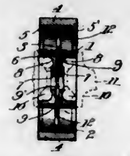


1. In a bracelet a plurality of guide links provided with ways, slide links connecting the guide links and slidable therein, projections upon the slide links registering in the ways, and spring means for holding the connected links in retracted position.

2. In a bracelet, a plurality of guide links provided with ways, slide links connecting the guide links and slidable therein, projections upon the slide links registering in the ways, and springs within the slide links pressing against the guide links.

3. In a bracelet, a plurality of guide links, each guide link consisting of plates, two posts connecting the guide plates, a slide link mounted in each guide link and pivotally connected at one end with a post of the adjacent guide link, stop projections upon the other end of the slide link adapted to contact with one post of the inclosing guide link, and a spring in the side link pressing against the other post of the inclosing guide link.

873,874. ROLLER-SKATE WHEEL. THOMAS S. LEITCH, Seattle, Wash. Filed June 22, 1907. Serial No. 380,340.



1. A wheel or roller, comprising a single-piece frame, said frame comprising a cylindrical hub and a cylindrical rim, a flange integrally connecting said hub and rim at their center, a depending, annular rib integral with the central portion of said hub, a tire positioned upon said rim, and ball-cups positioned within said hub and having their backs engaging said rib.

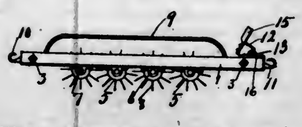
2. A wheel or roller comprising a single-piece frame, said frame comprising a rim and a hub, a flange integrally connecting said rim and hub, a reinforcing rib formed within and integral with the hub, a tire upon said rim, and ball-cups positioned within the said hub and having their backs engaging said reinforcing rib.

3. As a new article of manufacture, a roller-skate wheel, comprising a single-piece frame provided with a rim and a hub, a reinforcing rib formed within and integral with said hub, a flange integrally connecting said rim and hub at their centers, and ball-cups positioned within the hub and having their backs bearing against said rib.

4. A roller-skate wheel, comprising a single-piece frame, said frame comprising a rim and a hub integrally connected at their centers, a reinforcing rib formed in the center of and integral with said hub, ball-cups having bodies substantially L-shaped in cross-section, positioned entirely within said hub, and having their backs bearing against and reinforced by said rib and their outer ends or edges lying flush or parallel with the outer, vertical edges of said hub, and a tire engaging said rim.

5. A roller-skate wheel or roller, comprising a single-piece frame provided with a cylindrical rim and hub integrally connected intermediate their ends or edges, ball-cups positioned entirely within said hub and having their edges lying flush with the outer, edges of said hub, reinforcing and spacing means positioned between and engaging the backs of said cups and secured to the inner wall of said hub, and a tire positioned upon said frame.

873,875. ORCHARD-CULTIVATOR. JENS LINGAAS, San Francisco, Cal. Filed Mar. 25, 1907. Serial No. 364,320.



In a cultivator adapted to be pulled in either direction, the combination of a rectangular frame, a series of toothed rollers loosely journaled therein, a square bar carried by journals on the top of the frame, teeth carried by said bar, and a stop bar so placed as to permit the square bar to turn up above the frame and also to act as a stop bar when the square bar has been turned so its teeth point downwardly.

873,876. WHEEL. LOUIS LONG, Buchanan, N. Y. Filed Oct. 3, 1906. Serial No. 337,243.



1. In a wheel, a rim and tire construction comprising a rim member with which the spokes are connected, said spokes being crossed and the alternate spokes connected with the opposite side portions of said rim member, and a running tire of greater diameter than said rim member and having inwardly directed side portions which inclose said rim member, and inwardly directed spiral springs connecting said rim member and the inwardly directed portions of the running tire, substantially as shown and described.

2. In a wheel, a rim and tire construction comprising a rim member with which the spokes are connected, said spokes being crossed and the alternate spokes connected with the opposite side portions of said rim member, and a running tire of greater diameter than said rim member and having inwardly directed side portions which inclose said rim member, and inwardly directed spiral springs connecting said rim member and the inwardly directed portions of the running tire, said spiral springs being crossed and the alternate springs being connected with the opposite side portions of the running tire, substantially as shown and described.

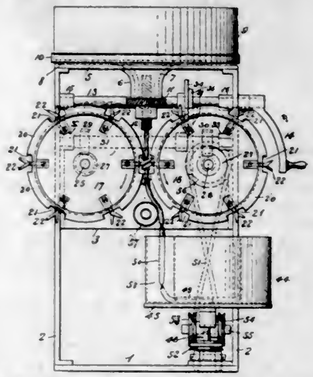
3. In a wheel, a rim and tire construction comprising a rim member with which the spokes are connected, said spokes being crossed and the alternate spokes connected with the opposite side portions of said rim member, and a running tire of greater diameter than said rim member and having inwardly directed side portions which inclose said rim member, and inwardly directed spiral springs connecting said rim member and the inwardly directed portions of the running tire, said spiral springs being crossed and the alternate springs being connected with the opposite side portions of the running tire, and the end connections of said springs being adjustable ball and socket connections, substantially as shown and described.

4. In a wheel, a rim and tire construction comprising a rim member with which the spokes are connected, said spokes being crossed and the alternate spokes connected with the opposite side portions of said rim member, and a running tire of greater diameter than said rim member and having inwardly directed side portions which inclose said rim member, and inwardly directed spiral springs connecting said rim member and the inwardly directed portions of the running tire, said spiral springs being crossed and the alternate springs being connected with the opposite side portions of the running tire, and the end connections of said springs being adjustable ball and socket connections, the inwardly directed side portions of the running tire being also connected by a flexible cover through which the spokes are passed and with which said spokes are connected, substantially as shown and described.

5. In a wheel, a rim and tire construction comprising a tread tire, inwardly directed annular side members connected therewith and the inner edges of which are separated by an annular space and curved inwardly, said tread tire and side members forming a circular chamber which opens inwardly, a rim placed in said circular chamber and of less diameter than said tread tire, and inwardly directed tension springs connected with the opposite sides of the rim and with the inwardly directed edges of said side members, the spokes of the wheel being passed into said annular chamber and connected with the rim.

[Claims 6 to 8 not printed in the Gazette.]

873,877. SAUSAGE LINKING AND TWISTING MACHINE. HENRY W. LOUDEN, Sr., Lebanon, Pa. Filed Mar. 20, 1907. Serial No. 363,432.



1. In a sausage linking and twisting machine, a sausage supply receptacle revoluble transversely to the line of feed of the sausages, means for linking sausages, means for imparting continuous rotary motion to said receptacle, and means for imparting rotary motion to the linking device.

2. In a sausage linking and twisting machine, a sausage supply receptacle revoluble transversely to the line of feed of the sausages, a linked sausage receptacle, means between said receptacles for linking sausages, means for imparting continuous rotary motion to the supply receptacle, and means for imparting rotary motion to the linking device and the latter receptacle.

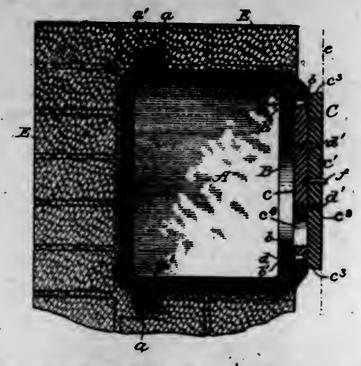
3. In a sausage linking and twisting machine, a sausage supply receptacle, a revoluble support for said receptacle having a passage for sausages through the center thereof, disks provided with means for dividing the sausages into links, means for imparting continuous rotary motion to said receptacle, and means for imparting rotary motion to said disks.

4. In a sausage linking and twisting machine, a sausage supply receptacle, a revoluble support for said receptacle having a passage for sausages through the center thereof, a receptacle for linked sausages, a revoluble support for said receptacles, disks provided with means for dividing the sausages into links, means for imparting continuous rotary motion to the supply receptacle, and means for imparting rotary motion to said disks and the latter receptacle.

5. In a sausage linking and twisting machine, a sausage supply receptacle, a revoluble support for said receptacle having a tubular extension thereon forming a passage for sausages, opposite disks having recesses in the rims thereof, bifurcated members in said recesses for dividing the sausages into links and holding the joint between the links while they are being twisted, means for imparting continuous rotary motion to the supply receptacle, a linked sausage receptacle, and means for imparting rotary motion to the linking disks, and to the linked sausage receptacle.

[Claims 6 and 7 not printed in the Gazette.]

873,878. WALL SAFE OR RECEPTACLE. HARVEY C. LOWAIE, New York, N. Y. Filed Sept. 26, 1906. Serial No. 336,300.



1. The combination with a wall safe or receptacle having an opening adapted to receive a permanent door-casing, of a temporary cover closing said opening and projecting beyond the wall of the safe for the purpose specified.

2. The combination with a wall safe or receptacle having an opening adapted to receive a permanent door-casing, of a temporary cover having an inwardly tapering projection beyond the wall of the safe to serve as a core for forming an opening in the plaster of the wall in which the safe is to be built.

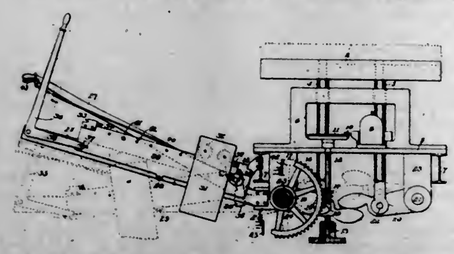
3. The combination with a wall safe or receptacle having a circular opening, the surrounding wall of the opening being stepped to form a seat for a permanent door-casing, of a temporary cover closing said opening, said cover comprising two circular blocks, one of which occupies the seat surrounding the opening, and the other of which is secured to the first mentioned block to form a circular projection beyond the wall of the safe.

4. The combination with a wall safe or receptacle having a circular opening the surrounding wall of which is provided with a seat for a permanent door-casing, of a temporary cover closing said opening, said cover comprising two circular blocks differing in size, the smaller block occupying the seat around said opening, and the larger block being secured to the smaller block with its outer edges covering the edge of said opening.

5. The combination with a wall safe or receptacle having an opening adapted to receive a door-casing, of a temporary cover closing said opening, said cover being provided with a pin or stud projecting centrally therefrom, for the purpose described.

[Claims 6 to 9 not printed in the Gazette.]

873,879. ROLLING-MILL SCALE. MARTIN MAURER, Pueblo, Colo. Filed May 7, 1906. Serial No. 304,630.



1. An article support, a weighing mechanism having means for lifting the article above its said support, an electric motor for operating said lifting means and means for automatically stopping the motor when the article has been lifted from said support.

2. An article support, a weighing mechanism having means for lifting the article above its said support, a motor for operating said lifting means and means for automatically stopping the motor when the article has been lifted from said support and means for stopping the motor when the article has been deposited upon said support.

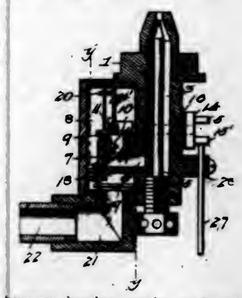
3. An article support, a weighing mechanism having means for lifting the article above its said support, a shaft for operating said lifting means, a worm gearing on said shaft for operating the same, a motor for operating the worm gearing, a hand-operated device for operating said shaft, independent of the worm gearing and means permitting the shaft to be operated by the said hand-operated device without operation of the worm gearing.

4. An article support, a weighing mechanism having means for lifting the article above its said support, a shaft for operating said lifting means, a worm gearing on said shaft for operating said shaft, means independent of the worm gearing for operating said shaft and a lost motion connection between last named means and said worm gearing.

5. An article support, a weighing mechanism having means for lifting the article above its said support, and alternative motor and hand devices for actuating said lifting means and means preventing the operation of the motor device during the operation of the hand-operated device.

[Claims 6 and 7 not printed in the Gazette.]

873,880. GAS-BURNER. AUGUST MEYER, Baltimore, Md., assignor to Automatic Gas Lighting Company, Baltimore, Md., a Corporation of Delaware. Filed Feb. 9, 1906. Serial No. 300,351.



1. A gas burner having main and pilot passages, a chamber located to one side of said passages, conduits leading from said passages and having suitable valve seats in the chamber, a rock shaft mounted in one side of the burner body and having one end thereof projecting beyond the body and the other end thereof carrying a valve located in the chamber and adapted to operate in conjunction with the valve seats to alternately open and close said passages.

2. A gas burner having main and pilot passages therethrough, a chamber located to one side of said passages, gas conduits leading from said passages and terminating in valve seats in the chamber, a rock shaft mounted in the burner with one end extending into the chamber and the other beyond the burner body, loosely mounted valves carried by the rock shaft and adapted to operate in conjunction with the valve seats to alternately open and close the passages.

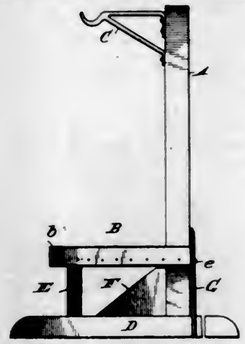
3. A gas burner having main and pilot passages therethrough, a chamber communicating with said passages, conduits leading from said passages and terminating in suitable valve seats in said chamber, a rock shaft mounted in one side of the burner body and having one end thereof projecting beyond the body and the other end thereof carrying a valve located in the chamber, and adapted to operate in conjunction with the valve seats to alternately open and close said passages.

4. A gas burner having main and pilot passages therethrough, a chamber communicating with said passages, gas conduits leading from said passages and terminating in valve seats in the chamber, a rock shaft mounted in the burner body with one end extending into the chamber and the other end beyond the burner body, and loosely mounted valves carried by the rock shaft and adapted to operate in conjunction with the valve seats to alternately open and close said passages.

5. A gas burner having main and pilot passages therethrough, a chamber located to one side of said passages, gas conduits leading from said passages and having valve seats in the chamber, a rock shaft mounted in the burner body with one end extending into the chamber and the other beyond said body, disk valves carried by the rock shaft and adapted to operate in conjunction with the valve seats to alternately open and close said passages.

[Claims 6 to 12 not printed in the Gazette.]

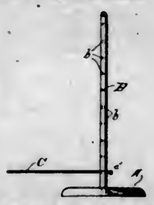
873,881. DISPLAY-STAND. WILLIAM D. MOLONY, Oneida, Kans. Filed Sept. 16, 1907. Serial No. 393,078.



1. A stand for holding and displaying fruit, comprising a base, a post or upright fixed to and rising from the base, a tray joined at its rear to the post or upright, means for supporting the tray, interposed between the tray and the base, an arm carried by the post and overhanging the tray, and an arch disposed crosswise of the stand at the back thereof and connected to the back of the post and having its ends arranged to hold the stand against lateral tilting.

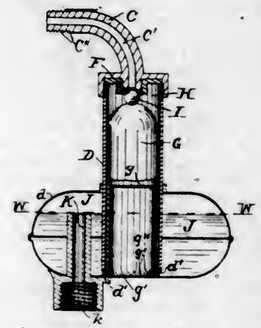
2. A stand for holding and displaying fruit, comprising a fore and aft disposed base or bed-piece, a post or upright, of angular form in cross-section, fixed to and rising from the base or bed-piece, a tray having an angular recess in its rear portion snugly receiving the post, and a marginal fruit-retaining flange extending back of and connected to the post, and also having lugs on its rear edge at points adjacent to its sides, means for supporting the tray, interposed between the tray and the base or bed-piece, and an arch disposed crosswise of the stand at the back thereof and connected to the back of the post and arranged immediately above the lugs on the tray and having its ends arranged to hold the stand against lateral tilting.

873,882. DRESS-SKIRT GAGE. JAMES LA MORE, Grand Rapids, Mich. Filed Aug. 21, 1905. Serial No. 275,152.



In a dress skirt gage, a base, a standard secured to said base at right angles thereto, and having a series of holes at right angles through the standard, at intervals, and a rod adapted to be supported at right angles to said standard by being placed into any of said holes, said rod being enlarged at one end whereby the rod is prevented from being accidentally separated from said standard when said enlarged part is drawn against the standard.

873,883. COMBINED VENT AND CHECK VALVE. DOCTOR F. MORGAN, Chicago, Ill. Filed Apr. 22, 1907. Serial No. 369,528.



1. In a combined vent and check valve, a float chamber provided with an inlet having a valve seat thereto, an additional chamber and a passage way communicating with such additional chamber, such chambers communicating with each other and arranged so that water of condensation contained therein flows from the chamber of greater pressure into the chamber of lesser pressure, in combination with a float in the float chamber and a valve on the float arranged to co-act with the valve seat, the passage way communicating with the additional chamber arranged to retain sufficient water of condensation in the chamber to immerse the valve when the water in the float chamber raises the float to seat such valve; substantially as described.

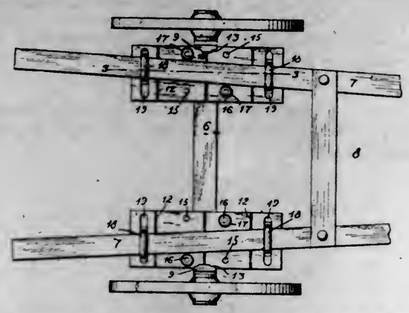
2. In a combined vent and check valve, a float chamber provided with an inlet having a valve seat thereto, an additional chamber and a passage way communicating with such additional chamber, such chambers communicating with each other and arranged so that water of condensation contained therein flows from the chamber of greater pressure into the chamber of lesser pressure, in combination with a float in the float chamber and a valve on the float arranged to co-act with the valve seat, the passage way communicating with the additional chamber arranged to retain sufficient water of condensation in the chamber to immerse the valve when the water in the float chamber raises the float to seat such valve, such float containing a closed chamber and an open chamber, such open chamber communicating with the float chamber; substantially as described.

3. In a combined vent and check valve, the combination of a casing provided with a float chamber and an additional chamber communicating with the float chamber, an inlet to the float chamber, such inlet provided with a valve seat and an outlet to the additional chamber, such outlet arranged to retain water of condensation in the casing, a float in the float chamber and a valve associated with the float and arranged to co-act with the valve seat, such float containing a closed chamber and an open chamber and the open chamber communicating with the float chamber; substantially as described.

873,884. WAGON-RACK FASTENER. JAMES I. MORGAN, Dwight, Kans. Filed June 10, 1907. Serial No. 378,311.

1. A coupling or fastening device of the character described, comprising a plate having transverse slots adjacent to its ends and apertures on opposite sides of its transverse axis, transverse ribs upon the upper face of said plate and depending arms or projections upon the

bottom face of said plate, substantially as and for the purpose set forth.



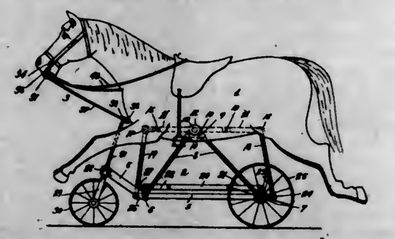
2. A coupling or fastening device of the character described comprising a plate having transverse slots adjacent to its ends and apertures on opposite sides of its transverse axis, and clamping devices engaged with said slots and apertures for the purpose set forth.

3. A coupling or fastening device of the character described, comprising a plate having transverse slots adjacent to its ends and apertures on the opposite sides of its transverse axis, means upon the upper face of said plate to prevent a beam engaged therewith from slipping longitudinally thereon, means upon the bottom face of said plate to engage a beam or bolster and prevent the same from slipping longitudinally of said plate and U-shape clips engaged with the slots and apertures in said plate for the purpose set forth.

4. The combination with cross beams or bars, of an interposed coupling plate formed with transverse slots, a clamp securing one of said beams or bars to said plate and clamps engaged with the other beam or bar and arranged in the slots in said plate to secure said beam or bar to the latter and to enable it to be adjusted thereon, substantially as and for the purpose set forth.

5. The combination with cross beams or bars, of an interposed coupling plate, means for securing said plate to one of the beams or bars and means for securing the other beam or bar to said plate whereby it may be adjusted transversely and angularly upon said plate, substantially as described.

873,885. VELOCIPEDE. ORSON A. MOASE, Arlington, N. J., assignor to Nelson H. Peppler, Arlington, N. J. Filed Mar. 15, 1906. Serial No. 306,219.

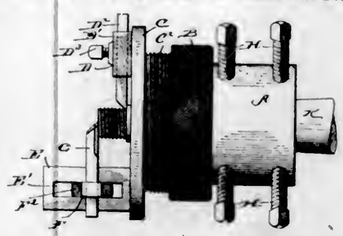


1. In the frame of a velocipede the combination of the front crank shaft 6, the rear crank shaft 7 parallel therewith, the longitudinal connecting bars 4 and 5, the divergent braces 8 extending upwardly therefrom and converging in the pivot head 9, the lugs 10 of said pivot head, and the bolt 13 operating in them, substantially as described.

2. In a velocipede the combination of the body of a running animal pivotally mounted on a cycle frame and adapted to rock back and forth thereon, a bearer supporting the same and pivotally connected at its extremities with pitmen; front and rear crank shafts on whose cranks the opposite ends of the pitmen are journaled, a rear crank shaft adapted to rotate driving wheels; the controlling bar connecting the crank shafts and adapted to produce a uniform revolution thereof, the steering post operating in a socket and connecting a steering fork and steering wheel to a steering lever moving in a nearly horizontal plane, steering rods with slotted rear extremities adapted to move the steering lever and to slide upon its extremities, the bits oscillating on the head portion of the body and pivotally connected to the steering rods and the reins controlling the bits, substantially as described.

3. In a velocipede a steering device comprising a steering fork, a steering wheel journaled to its branches, an inclined steering post on said fork and extending upwardly, a steering lever 33 rigidly mounted on the upper extremity of said steering post, the head portion of the body 1, the bits 35 pivotally mounted thereon and adapted to move independently of each other, the bolt 34 passing through and joining said bits, the reins 40 controlling said bits, the steering rods 37 moving said steering lever and operated by said bits, each rod being pivotally connected at its front extremity in the corresponding bit and provided at its rear extremity with slots cut longitudinally therein wherein the respective ends of the steering lever are adapted to play, substantially as described.

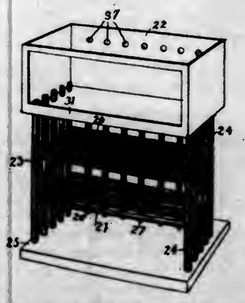
873,886. AXLE-CUTTER. DAVID W. MCCLAY, Schenectady, N. Y. Filed July 31, 1905. Serial No. 272,067.



1. An axle cutter comprising a cylinder, a disk having a hub adapted to slide and rotate on said cylinder, said hub being exteriorly threaded, an interiorly threaded ring carried by the cylinder and adapted to receive the hub, and a cutter carried by the disk.

2. An axle cutter comprising a cylinder having a circumferential shoulder, a flanged, internally threaded ring fitting over the cylinder, the flange engaging the shoulder, a disk centrally cut out and having an exteriorly threaded hub portion fitting within the ring, and coöperating cutters supported from the disk.

873,887. REFRIGERATOR. HOWARD C. NOTT and ALEXANDER W. RAU, New York, N. Y. Filed Jan. 14, 1907. Serial No. 352,068.



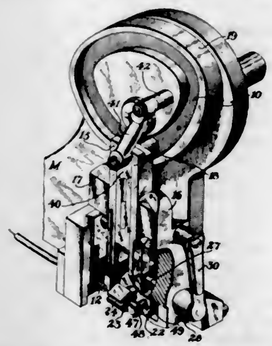
1. In a cooling apparatus, the combination of a closed bottom vessel, two series of parallel tubes projecting upward from the vessel, an ice receptacle connected with the upper ends of the vertical pipes one series on each of two opposite sides thereof, a plurality of series of horizontal tubes each series having a tube extending from one

of said vertical tubes to a corresponding opposite tube, a series of tubes extending vertically upward from the bottom vessel at the rear thereof, a horizontal tube connecting the upper end of the latter upright tubes, and an upright outlet tube for the latter horizontal tube.

2. In a cooling apparatus, the combination of a closed bottom vessel, two series of parallel tubes projecting upward from the vessel, an ice receptacle connected with the upper ends of the vertical pipes one series on each of two opposite sides thereof, a plurality of series of horizontal tubes each series having a tube extending from one of said vertical tubes to a corresponding opposite tube, a series of tubes extending vertically upward from the bottom vessel at the rear thereof, a horizontal tube connecting the upper end of the latter upright tubes, an upright outlet tube for the latter horizontal tube, and a second closed vessel located below said bottom vessel, with said outlet tube leading into the lower portion thereof.

3. In a cooling apparatus, the combination of a closed bottom vessel, two series of parallel tubes projecting upward from the vessel, one series on each of two opposite sides thereof, a plurality of series of horizontal tubes each series having a tube extending from one of said vertical tubes to a corresponding opposite tube, a series of tubes extending vertically upward from the bottom vessel at the rear thereof, a horizontal tube connecting the upper end of the latter upright tubes, an upright outlet tube for the latter horizontal tube, an ice receptacle connected with the upper ends of said opposite series of vertical tubes with the bottom of such vessel located above the said horizontal connecting tube, the ends of the said vertical tubes projecting a short distance above the bottom of the ice receptacle.

873,888. STAPLING-MACHINE. HENRY A. OLSSON, Brooklyn, N. Y., assignor of one-third to Albert Williamson and one-third to Edward Williamson, New York, N. Y. Filed Jan. 29, 1907. Serial No. 354,703.



1. In a stapling machine, a former guided to reciprocate, a slotted anvil organized to coöperate with the former, a wire guide, the anvil being supported for movement from a position to be engaged by the former to a position adjacent the wire guide to receive the wire in its slotted portion, means for moving the anvil to a position adjacent the guide, the machine being organized to move the anvil to the position for engagment with the former.

2. In a stapling machine, a former guided to reciprocate, a slotted anvil organized to coöperate with the former, and a wire guide, the anvil being supported for movement from a position to be engaged by the former to a position adjacent the wire guide to receive the wire in its slotted portion, the anvil being also movable in a path transverse to said movement.

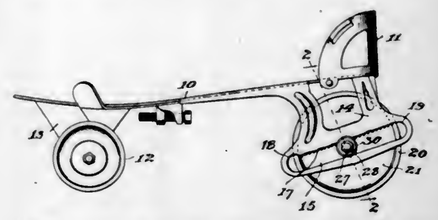
3. In a stapling machine, a former guided to reciprocate, a slotted anvil organized to coöperate with the former, a wire guide, the anvil being supported for movement from a position to be engaged by the former to a position adjacent the wire guide to receive the wire in its slotted portion, means for moving the anvil to the position adjacent the guide, and means for causing the advance of the former to engage the anvil to shift the anvil to position for engagement with the former.

4. In a stapling machine, a former guided to reciprocate, a slotted anvil organized to coöperate with the former, a wire guide, the anvil being supported for movement from a position to be engaged by the former to a position adjacent the wire guide to receive the wire in its slotted portion, a spring to yieldably retain the anvil adjacent the guide, the machine being organized to move the anvil to position for engagement with the former.

5. In a stapling machine, former guided to reciprocate, a slotted anvil organized to coöperate with the former, a wire guide, the anvil being supported for movement from a position to be engaged by the former to a position adjacent the wire guide to receive the wire in its slotted portion, a spring to yieldably retain the anvil adjacent the guide, and means for causing the advance of the former to engage the anvil to shift the anvil to position for engagement with the former.

[Claims 6 to 12 not printed in the Gazette.]

873,889. ROLLER-SKATE. CHARLES M. PALMER, Chicago, Ill. Filed Apr. 20, 1907. Serial No. 369,287.



1. In a roller skate, the combination with a foot-supporting frame having depending brackets and front rollers journaled therein on a fixed axis of rotation, of rear brackets beneath the heel portion of the skate frame having inclined slots with seats at both ends, and a rear roller the shaft whereof is mounted to have a rolling bearing in said inclined slots, substantially as described.

2. In a roller skate, the combination with a foot-supporting frame having depending brackets and front rollers journaled therein on a fixed axis of rotation, of rear brackets beneath the heel portion of the skate having inclined slots with seats at both ends and racks, and a rear roller the shaft whereof is mounted to have a rolling bearing in said inclined slots, said roller having pinions engaging said racks during the rolling engagement of the roller shaft in its slotted bearings, substantially as described.

3. In a roller skate, the combination with a foot-supporting frame and rollers supporting the forward end thereof, of rear brackets beneath the heel portion of the skate having inclined slots with seats at both ends and racks disposed alongside the upper edges of said slots; and a rear roller the shaft whereof is mounted to have a rolling bearing on the upper edges of said slot, said roller having pinions of substantially equal diameter with the slot-engaging portions of the shaft, said pinions engaging said racks during the rolling engagement of the roller shaft in its inclined bearings, substantially as described.

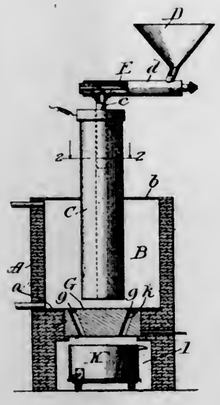
4. In a roller skate, the combination with a foot-supporting frame and rollers supporting the forward end thereof, of rear brackets beneath the heel portion of the skate having inclined slots with seats at both ends and also racks disposed alongside the upper edges of said slots, a rear roller the shaft whereof is mounted to have a rolling bearing on the upper edges of said slots, and pinions fast with said rear roller engaging said racks, said slots having a width exceeding the diameter of the roller shaft whereby said pinions are disengaged from said racks on the

return or downward movement of the rear roller relatively to its slotted bearings, substantially as described.

5. In a roller skate, the combination with a foot-supporting frame and rollers supporting the forward end thereof, of rear brackets beneath the heel portion of the skate having inclined slots the metal constituting the upper margins whereof is offset laterally to form smooth bearing surfaces and is formed along one edge of the latter with racks, a rear roller mounted between said rear brackets, the hub whereof is provided with pinions adapted to engage said racks, a shaft carrying said rear roller and extended through said slotted bearings, and washers secured on the ends of said shaft in rolling engagement with the smooth bearing surfaces of said slots, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

873,890. ELECTRIC SMELTING-FURNACE. WILLIAM R. PARKS, Chicago, Ill., assignor to Samuel Shaw Parks, Chicago, Ill. Filed Apr. 11, 1907. Serial No. 367,527.



1. In an electric furnace, the combination with a positive electrode, a negative electrode having a circular gutter in its upper surface concentric with the axis of said positive electrode, and having drains leading from said gutter arranged equi-distant from the center of said gutter.

2. In an electric furnace, the combination with a tubular positive electrode, of a negative electrode having a circular gutter in its upper surface concentric with the axis of said positive electrode, and having drains leading from said gutter arranged equi-distant from the center of said gutter.

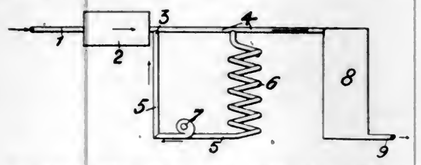
3. In an electric furnace, the combination with a tubular positive electrode, of a negative electrode having a circular gutter in its upper surface concentric with the axis of said positive electrode and having a series of drains leading from said gutter arranged equi-distant from the center of said gutter.

4. In an electric furnace, the combination with a tubular positive electrode, of a negative electrode having a circular gutter in its upper surface concentric with the axis of said positive electrode, and having a series of drains leading from said gutter the lower openings of which converge toward the axis of said negative electrode.

5. In an electric furnace, the combination with a positive electrode, of a negative electrode having a circular gutter in its upper surface concentric with the axis of said positive electrode, and having a series of drains leading from said gutter the lower openings of which converge toward the axis of said negative electrode.

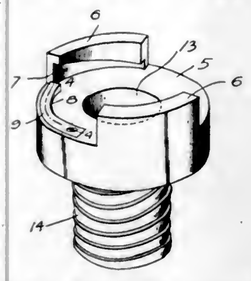
[Claims 6 to 10 not printed in the Gazette.]

873,891. PROCESS FOR THE PRODUCTION OF NITRIC ACID OR NITRIC OXID FROM ATMOSPHERIC AIR. HARRY PAULING, Gelsenkirchen, Germany, assignor to The Firm of Salpetersäure-Industrie-Gesellschaft, G. M. B. H., Gelsenkirchen, Germany. Filed Apr. 6, 1906. Serial No. 310,298.



The herein described process, consisting in heating air to a temperature of about 1200° C. and then immediately blowing into the air thus heated a cooled off portion of air previously heated to the said temperature and then immediately cooled down, substantially as set forth.

873,892. HOSE-COUPLING. GUSTAF E. PETTERSON, Pine Bluff, Ark. Filed Apr. 27, 1907. Serial No. 370,641.

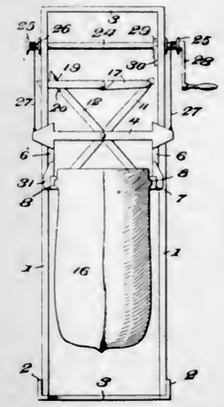


The combination of an annular coupling member provided with a pair of forwardly-projecting arcuate lugs disposed opposite each other, each lug having a wedge-shaped groove formed in its inner face and extending from side to side thereof, the lower edge of the groove coinciding with the front face of the coupling member, said member having a tapered arcuate seat formed in its front face and terminating at one end in close proximity to the larger end of one of said grooves, a second annular coupling member provided with a pair of oppositely-disposed laterally-projecting wedge-shaped shoulders adapted for interlocking engagement in said grooves, to prevent rotation of said members with respect to each other in one direction, and a tapered arcuate spring secured at its smaller end in said seat and having a length co-extensive therewith, the enlarged free end of the spring being disposed normally above said seat and adapted to contact with the larger end of the adjacent shoulder of the other member when in locked position, to prevent rotation of said members with respect to each other in the opposite direction.

873,893. BAG-HOLDER. OTTO A. PUST, Holloway, Minn. Filed May 22, 1907. Serial No. 375,186.

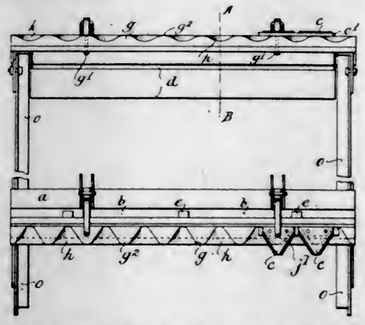
1. In a bag holder of the class described, comprising a pair of uprights, a beam having a socket at each end thereof, slidably mounted on said uprights, standards depending from said beam, bars on the lower ends of said standards, said bars having grooves on the inner faces thereof, crossed arms pivotally secured to said beam, clamping bars at the lower ends of said arms, fingers on said clamping bars, means at the upper ends of said bars to move said clamping bars into said grooves, and additional means to raise and lower said beam and parts carried thereby.

2. A bag-holder of the class described, comprising the combination with a pair of uprights, and means to support the same; of a beam, having a socket at each end thereof to receive said uprights, depending standards on said beam, a bar on the lower ends of each of said standards having longitudinally extending grooves on the inner faces thereof, a pair of crossed arms pivotally mounted on said beam, clamping bars on the lower ends of said arms adapted to enter said grooves, a latch pivotally secured to one of said arms, and having a slot in its opposite end to receive the other arm, notches at the upper end of the last mentioned arm, a shoulder on the latch adapted to engage said notches and hold the arms in their open position, means to release said shoulder from the notches and additional means to lower and raise said beam and parts carried thereby.



3. A bag-holder of the class described, comprising the combination with standards; of a beam slidably mounted on said standards, bars carried by said beam and having grooves on their inner faces, a pair of arms pivotally secured to said beam, clamping bars on said arms adapted to enter said grooves, upwardly and outwardly extending fingers on said clamping bars, a latch formed in two sections and pivoted together, one end of said latch being pivotally secured to one of the arms, the opposite end thereof having a slot to receive the upper end of the opposite arm, said last mentioned arm having a plurality of notches therein, means on the latch to engage said notches and additional means to limit the pivotal movement of the two sections of the latch in one direction.

873,894. APPARATUS FOR SHARPENING, REMOVING, AND REPLACING CUTTER-SECTIONS. WILLIAM RAWLINSON, East Ham, England. Filed Feb. 9, 1907. Serial No. 356,629.



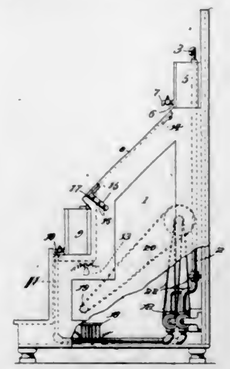
1. The improved apparatus for use in sharpening, removing and replacing the knife plates or sections of mowing and reaping machines and the like comprising the combination of a bed plate having a longitudinal slot therein, said slot being adapted to receive the knife blades while the back is supported on the bed plate during the operation of detaching the sections, a knife rest formed with alternating flat parts and intervening recesses corresponding to the position of the knife sections and the gaps between same, said recesses allowing of the passage of a tool for sharpening the knife sections, swinging clamps formed with two noses one nose for clamping the knife to the knife rest and the other for clamping the knife to the bed plate as and for the purpose set forth.

2. The improved apparatus for use in sharpening, removing and replacing the knife plates or sections of mowing and reaping machines and the like comprising the combination of a bed plate having a longitudinal slot therein, said slot being adapted to receive the knife blades while the back is supported on the bed plate during the operation of detaching the sections, a knife rest formed with alternating flat parts and intervening recesses corresponding to the position of the knife sections and the gaps between same, said recesses allowing of the passage of a tool for sharpening the knife section, a clamping block formed with two noses one for clamping the knife to the knife rest and the other for clamping the knife to the bed plate, a rearward extension to said clamping block, a clamping screw extending through said extension and bearing on the bed plate, a swinging arm pivoted at one end to said clamping block between the clamping screw and the clamping noses and pivoted at the other end to the bed plate whereby said clamp and arm may be swung from off the top of the bed plate when required substantially as set forth.

3. In apparatus for the purpose described, the combination with a plate adapted to support a knife-back, said bed plate having a slot in which the knife blades rest while being detached from the knife back, of a clamping block adapted to press a knife back against said bed plate, and a swinging arm pivotally connected to said clamping block and to the bed plate whereby the said clamp can be swung entirely clear of the top of the bed plate when required, substantially as set forth.

4. In apparatus for the purpose described the combination of a longitudinally slotted bed plate, a knife rest formed with flat parts with intervening recesses, and clamps formed with two noses one for clamping the knife plates on the knife rest and the other for clamping the knife to the bed plate, substantially as and for the purpose set forth.

873,895. APPARATUS FOR TESTING OILS. WILLIAM C. ROBINSON, Baltimore, Md. Filed Nov. 9, 1906. Serial No. 342,717.



1. In an oil testing machine, an oil circuit having as a part thereof a sloping transparent grooved plate, and a light behind the plate.

2. In an oil testing machine, an oil circuit having as a part thereof, an angularly adjustable transparent runway, and a light behind the runway.

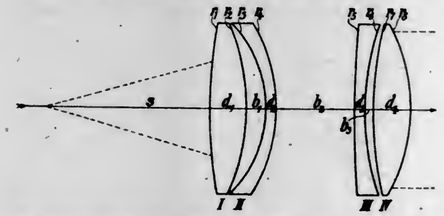
3. In an oil testing machine, an oil circuit having as a part thereof a sloping transparent runway, and means for regulating the temperature of the oil passing over the runway.

4. In an oil testing machine, an oil circuit having as a part thereof an angularly adjustable runway, and means for regulating the temperature of the oil in the runway.

5. In an oil testing machine, an oil circuit having as a part thereof an angularly adjustable transparent runway, a light behind the runway, and means for regulating the temperature of the oil in the runway.

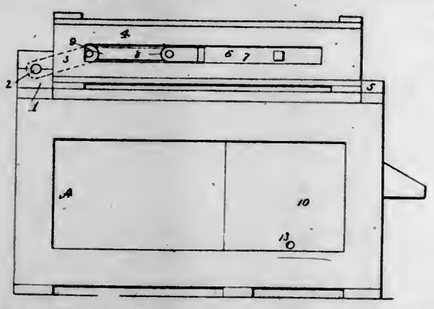
[Claims 6 to 17 not printed in the Gazette.]

873,896. DOULE OBJECTIVE. MORITZ VON ROHR, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed June 28, 1907. Serial No. 381,372.



A spherically and chromatically corrected double objective, the components of which consist each of two lenses including a dispersive pair of facing surfaces the curvatures of which are unequal, the inner one of both lenses being made of flint glass and turning a non-concave surface towards the other component, and the component from which the pencils emerge in parallel rays presenting a pair of facing surfaces of less power and a non-concave surface of less curvature.

873,897. MACHINE FOR WELDING COPPER. GEORGE ROSENBAUM, Harrisburg, Pa., assignor of one-half to Jesse B. Kennedy, Stewartstown, Pa. Filed Nov. 28, 1906. Serial No. 345,421.



In a welding machine, the combination of a main frame having a runway and having its sides slotted, a vise frame slidably mounted on the runway of the main frame, oppositely arranged rods threaded through the vise frame and passing through the slots of the main frame and faces carried by the opposing ends of the rods.

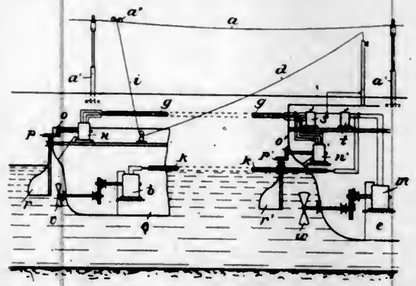
873,898. TELEPHOTOGRAPHIC OBJECTIVE. PAUL RUDOLPH and ERNST WANDERSLEB, Jena, Germany, assignors to The Firm of Carl Zeiss, Jena, Germany. Filed Mar. 2, 1906. Serial No. 303,818.

Chromatically and spherically corrected tele-photographic objective consisting of a positive cemented double lens in front and a negative cemented double lens behind, the focal length of the positive double lens exceeding that of the negative one, and each of both double lenses being chromatically corrected, but having a spherical error of the order of magnitude and of the sign of a simple lens



which has the same focal length positive and negative respectively.

873,899. CURRENT-SUPPLYING ARRANGEMENT. BERNHARD SALOMON, Frankfort-on-the-Main, Germany, assignor to Felten und Guilleaume-Lahmeyerwerke Aktien-Gesellschaft, Frankfort-on-the-Main, Germany. Filed Mar. 1, 1906. Serial No. 303,734.



1. The combination with a stationary electric conductor, and an electrically driven movable apparatus, of means for conducting current from the conductor to said apparatus including an independently propelled device supported independently of the conductor.

2. The combination with a stationary electric conductor, and an electrically driven movable apparatus, of means for conducting current from the conductor to said apparatus including an independently propelled device supported independently of the conductor and adapted to be controlled in its movements from said apparatus.

3. The combination with a stationary electric conductor, and an electrically driven movable apparatus, of means for conducting current from the conductor to said apparatus including an independently propelled device supported independently of and arranged to travel longitudinally of the conductor and between the same and said apparatus.

4. The combination with a stationary electric conductor extending along a waterway and a vessel in said waterway provided with electrically operated propelling mechanism, of means for conducting current from the conductor to said propelling mechanism of said vessel and including an independently propelled device supported independently of the conductor.

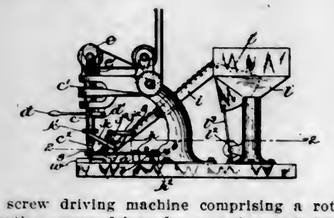
5. The combination with a stationary electric conductor extending along a waterway and a vessel in said waterway provided with electrically operated propelling mechanism, of means for conducting current from the conductor to said propelling mechanism of said vessel and including an independently propelled device supported independently of the conductor and adapted to be controlled in its movements from said vessel.

[Claims 6 to 8 not printed in the Gazette.]

873,900. SCREW-DRIVING MACHINE. FRANK W. SANFORD, Boston, Mass., assignor, by mesne assignments, to Marshall Electric Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Apr. 14, 1902. Serial No. 102,755.

1. A screw driving machine comprising means for rotating the screw to drive it into the work, a screw holder moving with the screw, and devices for opening the holder as it moves with the screw, substantially as described.

2. A screw driving machine comprising a rotary and reciprocating screw-driver for engaging and driving the screw, screw holding jaws arranged to underlie the head of the screw and guide it until engaged with the work, and devices whereby the movement of the jaws with the screw carries the jaws out of the path of the screw head, substantially as described.



3. A screw driving machine comprising a rotary and reciprocating screw driver for engaging and driving the screw, a feed chute for the screws, screw holding jaws separated by a slot extending in the same direction as and forming a continuation of the guiding slot of the feed chute, and forming a guideway along which the shank of the screw passes as the screw is fed into position, substantially as described.

4. A screw driving machine comprising a rotary and reciprocating screw driver for engaging and driving the screw, a feed chute for the screws, a screw holder comprising two screw supporting arms separated by a slot arranged in line with and extending from the slot in the feed chute to the ends of the arms by which the screws are guided to a position under the screw-driver, and devices for separating individual screws from the screws in the chute and delivering them to the holder, substantially as described.

5. A screw driving machine comprising a rotary and reciprocating screw-driver for engaging and driving the screws a feed chute for the screen, a screw holder comprising two yieldingly supported arms separated by a slot arranged in line with and forming a continuation of the slot in the feed chute by which the screws are guided as they pass from the chute to a position under the screw driver, devices for separating and delivering individual screws from the screws in the feed chute, and devices for separating the screw holder arms as they move downward with the screw, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

873,901. FABRIC FRAME FOR CASKETS. ANTHONY SAUER, Jr., Newark, N. J. Filed Apr. 26, 1907. Serial No. 370,368.



1. A frame having a channeled face in each side member with one side wall of the channel resilient, a member of sheet material, and a locking member inserted in the channel portion and pressed on opposite sides by the walls of the channel portion with the margins of the sheet material interposed between the locking member and the frame member.

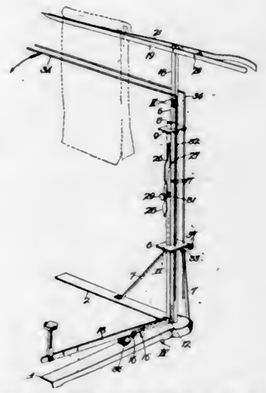
2. A frame having a channeled face in each side member with one side wall of the channel resilient, a member of sheet material, and a cylindrical locking member inserted in the channel portion and pressed on opposite sides by the walls of the channel portion with the margins of the sheet material interposed between the locking member and the frame member.

3. A frame having a channeled face in each side member with the opposite side walls of the channel resilient, a member of sheet material, and a locking member inserted in the channel portion and pressed on opposite sides by the walls of the channel portion with the margins of the sheet material interposed between the locking member and the frame member.

4. A frame having a channel in the inner face of each side member with one side wall of the channel resilient, a member of sheet material, and a locking member inserted in the channel portion and pressed on opposite sides by the walls of the channel portion with the margins of the sheet material interposed between the opposite sides of the locking member and the frame.

5. A resilient frame of substantially channel shape in cross section, a sheet material member having its margins extending into the channel of the frame, and a locking member inserted in the channel portion and bearing against the opposite resilient sides, with the margins of the sheet material secured between the locking member and the side walls of the frame.

873,902. COPY-HOLDER. NICHOLAS J. SCHLINGLOFF, Marion, Kans. Filed June 25, 1907. Serial No. 380,828.



1. A copy-holder, comprising a vertical tube having a slot in its front side, a second vertical tube secured against the front side of the first and provided with a registering slot, a support, having a vertical rack-bar fitting slidingly in the first named tube, a key-lever suitably arranged, a resilient dog pivoted at its lower end to said lever and extending up into said second tube and projecting through the slot of the same and of the first tube and engaging said rack-bar, and means to trip said dog from engagement with the rack-bar.

2. A copy-holder, comprising a base, a vertical tube mounted thereon and provided with a slot, a second tube having a registering slot, a spring-actuated pawl pivotally carried by the second tube and held yieldingly projected through said slots, a rack-bar fitting slidingly in the first-named tube and engaged by said pawl, a copy-holding means carried at the upper end of said rack-bar, a key lever mounted on the base, and a dog pivoted to said lever and extending up into the second tube and through said registering slots and yieldingly engaging the rack-bar.

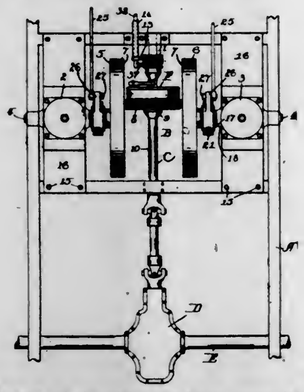
3. A copy-holder, comprising a base, a vertical tube mounted thereon and provided with a slot, a second tube having a registering slot, a spring-actuated pawl pivotally carried by the second tube and held yieldingly projected through said slots, a rack-bar fitting slidingly in the first-named tube and engaged by said pawl, a copy-holding means carried at the upper end of said rack-bar, a key-lever mounted on the base, a dog pivoted to said lever and extending up into the second tube and through said registering slots and yieldingly engaging the rack-bar, and means for simultaneously tripping the pawl and the dog from engagement with the rack-bar.

4. A copy-holder, comprising a base, a vertical tube mounted thereon and provided with a slot, a second tube having a registering slot, a spring-actuated pawl pivotally carried by the second tube and held yieldingly projected through said slots, a rack-bar fitting slidingly in the first-named tube and engaged by said pawl, a copy-holding means carried at the upper end of said rack-bar, a key-lever mounted on the base, a dog pivoted to said lever and extending up into the second tube and through said registering slots and yieldingly engaging the rack-bar, means for simultaneously tripping the pawl and the dog from engagement with the rack-bar, and a cushion carried by the base plate and underlying the rack-bar.

5. A copy-holder, comprising a vertical tube having a slot in its front side, a second vertical tube secured against the first and provided with a registering slot, a support having a vertical rack-bar fitting slidingly in the firstnamed tube, a key-lever suitably arranged, a resilient dog pivoted at its lower end to said lever and extending up into said second tube and projecting through the slot of the same and of the first tube and engaging said rack-bar, means to trip said dog from engagement with the rack-bar, and an adjustable device mounted on the base to limit the depression movement of the key.

[Claims 6 to 8 not printed in the Gazette.]

873,903. TRANSMISSION AND SPEED-CHANGING MECHANISM. EUGENE SCHMIDT, Stillwater, Minn. Filed Oct. 28, 1905. Serial No. 284,816.

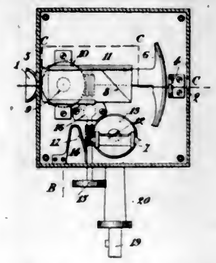


1. Apparatus of the class set forth, comprising a suitable frame, engines mounted upon said frame, a drive shaft and transmitting mechanism, comprising fly wheels carried by said engines and having frictional drive faces, a frictional drive wheel in continuous peripheral contact with each of said faces, a sleeve feathered and free to slide on said shaft upon which sleeve said frictional drive wheel is journaled, a clutch between said sleeve and frictional drive wheel, means for sliding said sleeve to move said drive wheel across the faces of said fly wheels, and means for throwing said clutch into and out of operation.

2. In a friction gearing, the combination with a driving shaft of a sleeve slidably mounted thereon; means for causing the sleeve to rotate in unison with the shaft, a friction gear rotatively mounted on the sleeve, clutch mechanism mounted on the sleeve and adapted to engage with the friction gear, and a friction disk mounted on a countershaft and adapted to contact with said friction gearing.

3. In a friction gearing, the combination with a driving shaft of a sleeve slidably mounted thereon; means for causing the sleeve to rotate in unison with the shaft, a friction gear rotatively mounted on the sleeve, clutch mechanism mounted on the sleeve and adapted to engage with the friction gear, and friction disks mounted parallel to each other on opposite sides of said friction gear, and means for causing the said friction disks to bear against the periphery of said friction gear.

873,904. APPARATUS FOR MEASURING THE ANGLES OF SIGHT. EUGENE SCHNEIDER, Le Creusot, France. Filed Apr. 15, 1907. Serial No. 368,278.



1. In apparatus for measuring angles of sight or inclination, the combination of a revoluble graduated cylindrical mirror, a stationary mirror having thereon a guide mark in the line of sight, a liquid level revolubly mounted in the plane of the first-named mirror, a third mirror for reflecting an image of the level into the plane of sight, and means for simultaneously rotating said cylindrical mirror and level to bring an image of the bubble of the level into the line of sight with the guide-mark, object and graduation.

2. In apparatus for measuring angles of sight or inclination, the combination of a revoluble graduated cylindrical mirror, a stationary mirror having thereon a guide mark in the line of sight, a liquid level revolubly mounted in the plane of the first-named mirror, a third mirror for reflecting an image of the level into the plane of sight, means for simultaneously rotating said cylindrical mirror and level to bring an image of the bubble of the level into the line of sight with the guide-mark, object and graduation, and a segmental eye-piece for magnifying the graduations.

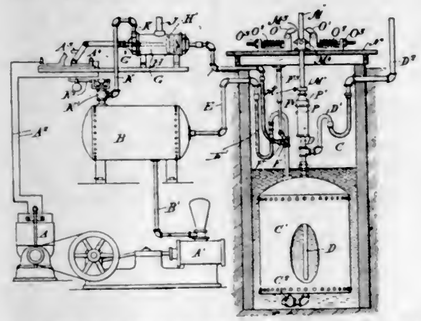
3. In an apparatus for measuring angles of sight or inclination, the combination of a revoluble graduated cylindrical mirror, a revoluble level in the plane of revolution of said mirror, a spring-pressed shaft having two worm gears and a ball and socket bearing intermediate the said gears to take up wear of the threads and gears meshing with said worms to rotate said mirror and level in opposite directions.

873,905. BRAKE MECHANISM. FRANCIS SEDZIAK, St. Louis, Mo. Filed Aug. 23, 1906. Serial No. 331,776.



In a brake mechanism, an oscillating lever, a pawl carried thereby, a shaft, a bearing therefor, a support for the bearing, and means for rotatably adjusting the position of the bearing on said support to vary the position of the plane of oscillation of the lever, substantially as set forth.

873,906. AUTOMATIC WATER-SUPPLY SYSTEM. HARRY C. SILLETT, Salt Lake City, Utah. Filed Dec. 31, 1906. Serial No. 350,161.



1. A device of the kind described comprising a buoyant submerged tank, an air reservoir in communication with said tank, a discharge pipe carried by the tank, a pump supplying compressed air to the reservoir, and means operated by the rising of the tank for starting the pump.

2. A system of water distribution comprising a submerged buoyant tank, a reservoir of compressed air having communication with said tank, a discharge pipe carried by the tank, means set in operation by compressed air for starting the pump, said means being controlled by the rise of the tank, and means operable by an overcharge of air in the reservoir for stopping the pump.

3. A water discharge system for cisterns and wells, comprising a tank submerged in said cistern or well and receiving water therefrom, means for forcing compressed air into the said tank, a discharge pipe conveying water therefrom, the tank rising as air is admitted and water discharged, means for cutting off a supply of compressed air from the tank when the tank has risen to a predetermined point, an air pump, a source of power driving the pump, means for starting and stopping said source of power, and means for conveying the air delivered to the tank to the starting means above referred to.

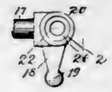
4. A system of the kind described the combination with a submerged buoyant tank, an air reservoir, an air pump connected thereto, an air pipe leading from the reservoir to the tank, a valve placed therein, a motor for driving the air pump, a cylinder having a double piston working therein, a valve controlled pipe leading from the air reservoir to said cylinder and admitting air to the cylinder when the pressure in the reservoir has reached a predetermined limit, an air pipe leading from an end of said cylinder and communicating with the air pipe leading from the reservoir to the tank through the valve in the said air pipe, the valve operating to close one pipe when the other is open, the cylinder above mentioned being provided with an exhaust opening midway the two air pipes leading thereto, an electrical switch in the motor circuit, and a piston rod connected to the double pistons and operating the said switch, the switch being closed by pressure of air from the tank.

5. In a device of the kind described comprising a buoyant submerged tank, an air reservoir, an air pump connected to said reservoir, a motor operating said pump, a normally open electric switch in the motor circuit, means for conveying compressed air from the reservoir to the tank, means for cutting off communication between the reservoir and the tank as the tank rises, and means for closing electric switch and starting the motor by pressure of air escaping from the tank after communication has been cut off between the reservoir and the tank.

[Claims 6 and 7 not printed in the Gazette.]

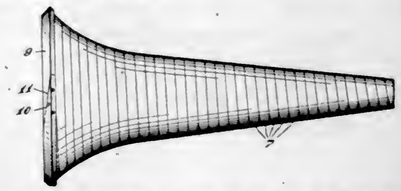
873,907. VEHICLE-WHEEL. WILLIAM E. SNEDIKER, New York, N. Y. Filed Nov. 1, 1906. Serial No. 341,542.

1. In combination in a wheel having a resilient tread, a stub axle forming the bearing for the wheel, a pivot block appurtenant to said stub axle, an axle eye curved to form an external vertical bearing for the pivot block, a pivot interposed between the axle eye and pivot block and forming the main internal bearing therefor, a recess formed about the pivot of the pivot block, and a resilient cushion arranged in said recess and interposed between the pivot block and axle eye.



2. In combination with a wheel, a stub axle forming a bearing for the wheel, a pivot block appurtenant to said stub axle, an axle eye curved to form a vertical external bearing for the pivot block, a pivot interposed between the axle eye and pivot block and forming an internal bearing therefor and a resilient cushion interposed between the pivot block and axle eye.

873,908. HORN FOR TALKING-MACHINES. ADOLPH G. SOISTMANN, Philadelphia, Pa. Filed May 5, 1906. Serial No. 315,272.

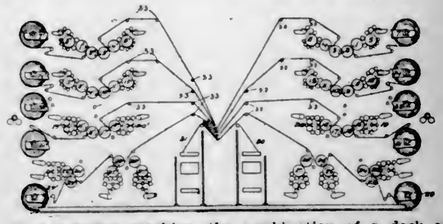


1. A horn composed of longitudinally extending tapered sections forming a structure contracted at one end and flaring at the other, and a thin band spirally wound about said structure.

2. A horn composed of longitudinally extending tapered sections, forming a structure contracted at one end and flaring at the other, a thin band spirally wound about said structure, and a ring member provided with an annular channel to receive the flaring end of said structure.

3. A horn composed of longitudinally extending tapered sections, forming a structure contracted at one end and flaring at the other, and a reinforcing band surrounding the body of the horn intermediate its two ends.

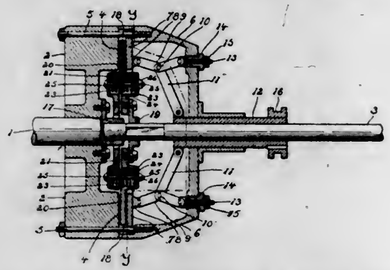
873,909. PRINTING-MACHINE. WILLIAM SPALCKHAVER, New York, N. Y., assignor to Robert Hoe, New York, N. Y. Filed Feb. 7, 1905. Serial No. 244,579.



In a printing machine, the combination of a deck of couples arranged on one side of the machine, said deck including a couple having a reversible printing cylinder and two impression cylinders, one of said impression cylinders coöperating with the printing cylinder when the cylinder is running in one direction, and the other of said impression cylinders coöperating with it when the cylinder is running in the opposite direction, a plurality of independent couples in said deck one of which may coöperate with said reversible printing cylinder couple to perfect a web and all of which may coöperate therewith to print in colors, a web roll for said deck, three decks each comprising printing and perfecting couples and web roll sup-

ports for said couples said decks being superposed, and all the decks forming a set, an offset web roll support, a similar set of decks and an offset web roll support on the opposite side of the machine, folders arranged back to back between the sets of decks, guides whereby the reversible couple deck of each set and the deck next it may be caused to act either as a combined color deck or as perfecting decks, guides whereby when all the decks of each set are acting as perfecting decks or partly as perfecting and partly as color decks the webs from both sets of decks may be led to one folder or the webs from each set may be led to the folder of that set, and guides for leading the offset webs through the reversible color deck and their coöperating decks when said decks are operating as color decks.

873,910. FRICTION-CLUTCH. EDMUND SPAUNG, Detroit, Mich. Filed Apr. 20, 1907. Serial No. 369,299.



1. In a clutch, the combination of a friction disk or member having a smooth contact surface, a second friction member formed from a disk consisting of segments yieldingly held with their friction surface in different planes but registering with each other, and means for moving said second friction members into the same plane and into frictional contact with the other member.

2. In a clutch, the combination of a friction disk or member having a smooth contact surface, a second friction member consisting of a separable disk having two or more parts, one or more of which parts is yieldingly held nearer the friction surface of said first named friction member than the other or others when said friction members are in inoperative position, and means for bringing said parts into the same plane and said friction members into contact with each other.

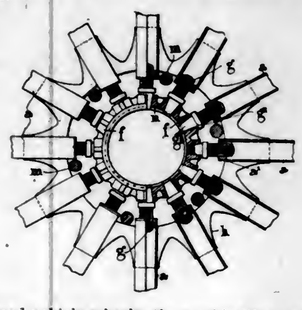
3. In a clutch, the combination of a friction disk or member having a smooth contact surface, a second friction member consisting of a separable disk having a multiplicity of parts each having a friction surface adapted to engage the friction surface of the other friction member and each part yieldingly held with its friction surface normally out of the plane of the friction surface of the other part, and means for moving said parts into the same plane and one of said friction members into contact with the other.

4. In a clutch, the combination of a friction member having a contact surface, a friction disk having a sectional rim, the sections of which have friction surface and each section is normally held with its friction surfaces out of the plane of the friction surface of the adjacent section and adapted to be moved to bring the friction surfaces into the same plane, and means for bringing said disk and friction member into frictional contact and so moving the sections.

5. In a clutch, the combination of a friction member having a contact surface, a friction disk consisting of separate segments forming a continuous rim portion having a contact surface, means for yieldingly holding the segments out of alinement with each other, laterally of the disk, and means for bringing said friction member and disk into contact.

[Claims 6 to 17 not printed in the Gazette.]

873,911. VEHICLE-WHEEL. HAROLD M. STABLEY, Coventry, England. Filed Sept. 18, 1906. Serial No. 335,124.



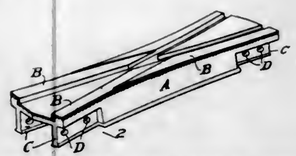
1. In road vehicle wheels, the combination consisting of a hub ring having circumferential seating apertures therein, screwed locking bolts seated within the said hub ring apertures, inwardly projecting driving studs secured to the wheel rim, and tubular metal spokes in engagement at their respective extremities with the said locking bolts and driving studs, as set forth.

2. In road vehicle wheels, the combination consisting of a hub ring having conical circumferential seating apertures therein, screwed locking bolts having conical ends seated within the said hub ring apertures, driving studs secured to and inwardly projecting from the wheel rim, and tubular metal spokes having their respective ends in engagement with the said driving studs and locking bolts as set forth.

3. In road vehicle wheels, the combination consisting of a hub ring having circumferential seating apertures therein, a rim with inwardly projecting driving studs secured thereto, tubular metal spokes in engagement at their outer extremities with the said studs, locking bolts screwed into the inner ends of the spokes and fitting within the aforesaid seating apertures of the hub ring, and stiffening plates embracing the inner extremities of the spokes and secured to the same, as set forth.

4. In road vehicle wheels, the combination consisting of a hub ring having circumferential seating apertures therein, inwardly projecting driving studs and embracing pieces secured to the wheel rim, tubular metal spokes in engagement at their outer extremities with the said driving studs and embracing pieces, locking bolts screwed into the inner ends of the spokes and fitting within the aforesaid seating apertures of the hub ring, stiffening plates embracing the inner extremities of the spokes, and retaining flanges for securing the said stiffening plates, as set forth.

873,912. RAILWAY-TRACK STRUCTURE. FREDERIC F. STOCKWELL, Jr., Somerville, and HENRY R. LUTHER, Newton Center, Mass. Filed Nov. 11, 1903. Serial No. 180,791.



The combination in a railway track structure of track surfaces composed of a cast hard malleable wearing material formed in the shape of track surfaces by casting as shown; a body part of cast soft malleable material shaped and welded to the wearing surfaces by casting, and formed to be supported on ties or other suitable foundation, said body part having projections integral therewith to which the rail ends may be secured by suitable means.

873,913. COMPOSITION TO BE USED IN SWEEPING. CHARLES M. VERNON and GEORGE VON VERNON, Zanesville, Ohio. Filed July 5, 1907. Serial No. 382,363.

1. The herein described composition of matter, consisting of oil meal, clay, light neutral oil, paraffin oil, lubricating oil, sand, sawdust, aniline cotton green, sodium chlorid, (common salt), and oil of mirbane, (nitrobenzene), substantially as described and for the purposes specified.

2. The herein described composition of matter, consisting of oil meal, light neutral oil, sand and sawdust, substantially as described and for the purposes specified.

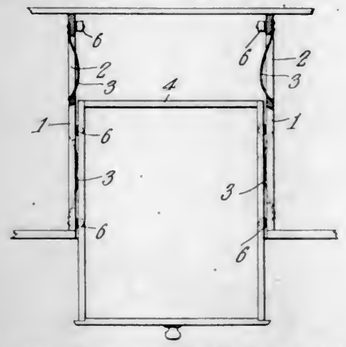
3. The herein described composition of matter, consisting of oil meal, sand, light neutral oil, paraffin oil and sawdust, substantially as described and for the purposes specified.

4. The herein described composition of matter, consisting of oil meal, sand, light neutral oil, lubricating oil and sawdust, substantially as described and for the purposes specified.

5. The herein described composition of matter consisting of oil meal, clay, light neutral oil, paraffin oil, lubricating oil and sawdust, substantially as described and for the purposes specified.

[Claims 6 and 7 not printed in the Gazette.]

873,914. FURNITURE. OLE VIKÖREN, Wilcox, Nebr. Filed July 2, 1907. Serial No. 381,857.



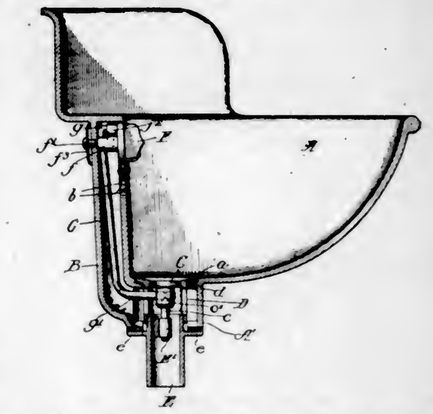
1. A drawer guide comprising a strip having a longitudinal slot, a bow spring secured at one end to the outer face of the strip and loosely contacting at its other end with one end of the slot, the intermediate portion of the spring projecting through the slot, and a drawer, said intermediate portion being disposed normally in the path of the drawer and movable thereby into the slot.

2. A drawer guide comprising oppositely disposed longitudinally slotted strips, oppositely disposed bow springs connected to each strip, each spring being secured at one end to the outer face of the strip and having its other end loosely resting upon and retained by one end of the slot, the intermediate portions of the springs extending through the slots, and a drawer movably mounted between the strips and disposed to contact with said intermediate portions and direct them into the slots.

3. The combination with a drawer; of longitudinally slotted guide strips at opposite sides of the drawer, springs secured to the strips, each spring being fastened at one end to the outer face of one of the strips and having its other end loosely contacting with one wall of a slot and retained thereby out of the path of the drawer, the intermediate portion of the spring extending through said slot and normally in the path of the drawer.

873,915. LAVATORY. EARL G. WATROUS, Chicago, Ill. Filed Jan. 2, 1903. Serial No. 137,518.

1. The combination with a wash basin or the like having a communicating overflow pipe or passage and having a valve governed outlet, of an operating rod arranged in such pipe or passage and operatively connected to the valve, and means for actuating the rod comprising a rotatable knob or button having a stem extending across the discharge pipe, a screw located at the rear side of the discharge pipe and engaging the said stem to hold it in operative position, and a connection between the knob and the said rod, substantially as described.



2. The combination with a wash basin or the like having a communicating overflow pipe or passage and having a valve governed outlet, of an operating rod arranged in such pipe or passage and operatively connected to the valve, and means for actuating the rod comprising a rotatable knob having a disk provided with an eccentrically arranged bearing lug on its inner face adjacent the overflow passage, in which lug an end of the operating rod bears, substantially as described.

3. The combination with a wash basin or the like having a communicating overflow pipe or passage and having a valve governed outlet, of an operating rod arranged in such pipe or passage and operatively connected to the valve, and means for actuating the rod comprising a rotatable knob having a disk provided with a stem extending across the overflow pipe or passage and a screw bearing against the rear side of the overflow pipe and engaging said stem, said disk also having a socket on its inner face within said passage into which socket the upper end of the operating rod bears, substantially as described.

4. The combination with a wash basin or the like having a communicating overflow pipe or passage and having a valve governed outlet, of an operating rod arranged in such pipe or passage and operatively connected to the valve, and means for actuating the rod comprising a rotatable knob having a disk provided on its inner side within said passage with a stem and also a lug having a socket in which an end of the operating rod bears, substantially as described.

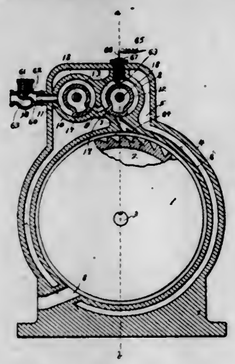
5. The combination with a wash basin or the like having a communicating overflow pipe or passage and having a valve-governed outlet, of an operating rod disposed within said pipe and having its upper end bent or cranked, the lower end thereof engaging said valve to operate it, and means for operating the rod comprising a rotatable disk having bearings in the opposite sides of the wall of said overflow pipe or passage and provided with an eccentrically arranged socket for engaging the upper bent end of the rod; substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

873,916. ROTARY EXPLOSIVE-ENGINE. GEORGE J. WEBER, Kansas City, Mo. Filed Dec. 2, 1904. Serial No. 235,215.

1. In explosive engines, the combination with the cylinder, of an explosion chamber provided with an inlet

port for admitting the charge and having an outlet port connecting the explosion chamber with the cylinder, a rocking valve controlling both ports, means for moving the valve so as to close the inlet port after the charge is admitted and so as to open the outlet port, and means for igniting the charge after the inlet port is closed and prior to the opening of the outlet port.



2. In explosive engines, the combination with the cylinder, of an explosion chamber provided with an inlet for admitting the charge and having an outlet port connecting the explosion chamber with the cylinder, a valve controlling both ports, means for rocking the said valve, and means independent of the running of the engine for regulating the degree that the outlet port is uncovered.

3. In explosive engines, the combination with the cylinder, of an explosion chamber provided with an inlet for admitting the charge and having an outlet port connecting the explosion chamber with the cylinder, a rocking valve mounted in the explosion chamber and provided with a face broad enough to simultaneously cover both ports, means for rocking the said valve over the said ports, and means for igniting the charge when the ports are both covered.

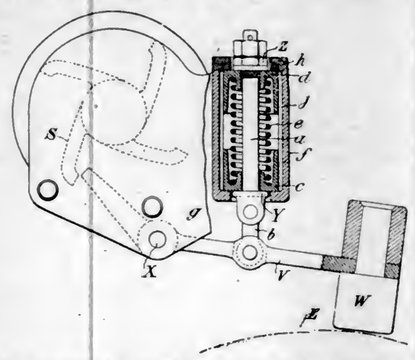
4. In explosive engines, the combination with the cylinder, of an explosion chamber provided with an inlet for admitting the charge and provided with an outlet through which the full charge in the chamber escapes after each explosion and connecting the explosion chamber with the cylinder, a rocking valve for opening and closing the said outlet, means for igniting the charge when the valve is in a closed position, and means for rocking said valve independently of the pressure of the charge in the explosion chamber.

5. In explosive engines, the combination with the cylinder, of an explosion chamber provided with an outlet connecting the said chamber with the cylinder, means for exploding a charge admitted to the explosion chamber, a supplemental chamber provided with an outlet connecting the said supplemental chamber with the explosion chamber and provided with an inlet for admitting the charge into the supplemental chamber, a valve controlling the said inlet, a rocking valve controlling the outlet of the supplemental chamber, and means by which the inlet and outlet to the explosion chamber may be held closed during an explosion.

[Claims 6 to 24 not printed in the Gazette.]

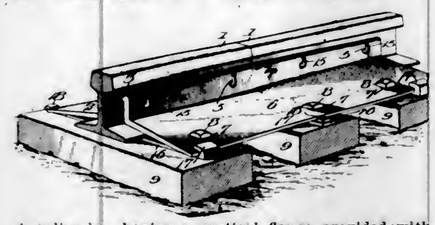
873,917. SIGNAL-BUOY. THOMAS L. WILLSON, Ottawa, Ontario, Canada, assignor, by mesne assignments, to United States Marine Signal Company, Jersey City, N. J., a Corporation of New Jersey. Filed July 26, 1905. Serial No. 271,288.

1. A bell-buoy including in combination a bell, a striker, a spring for forcing said striker toward the bell and a cam for retracting and suddenly releasing said spring, whereby the striker is forced toward the bell, a fixed stop to limit the forward movement of said spring before the striking movement is completed, and a stop carried by the striker and adapted to compress the spring against said fixed stop by the momentum of the striker to permit the completion of the stroke and then retract the striker.



2. A bell-buoy including in combination a striker, a rod connected thereto, a forward and a rear stop on said rod, a forward and a rear slide, a spring pressing said slides apart against said stops, a forward and a rear fixed stop adapted to be engaged by said forward and rear slide respectively, and means for moving said rod to press said rear slide against its fixed stop and to compress the spring, and then releasing said rod, whereby said spring throws said striker forward till the forward slide strikes the forward fixed stop, whereupon the acquired momentum carries the rod farther and presses the forward slide against its fixed stop and the spring then restores the parts to their normal positions.

873,918. SPLICE-BAR. ERICK E. ANDERSON, St. Louis, Mo. Filed Jan. 26, 1907. Serial No. 354,333.



A splice bar having a vertical flange provided with a series of apertures, an inwardly extending rib, and an inclined base flange, a fish plate having an inclined flange, double-ended hooks passing through the fish plate, the web of the rail and the splice bar, and hook bars, each having a hook at one end to engage said inclined flange, and the opposite ends of said hook bars being spiked to the ties, substantially as described.

873,919. PROTECTING SHIELD OR GUARD FOR PNEUMATIC TIRES. WILLIAM S. ARNOLD, San Francisco, Cal. Filed Feb. 18, 1907. Serial No. 357,880.



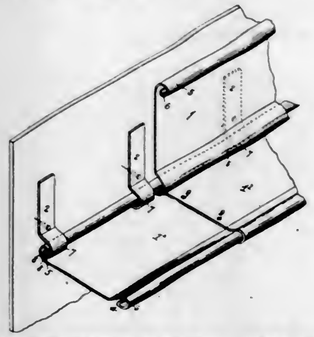
1. A flexible shield or guard for the protecting of pneumatic tires, the same comprising a series of independently movable segments shaped to embrace the tire to be protected, a tread shoe detachably united to the outer surface of each segment, and linked parallel chains on which the segments are strung and held circumferentially.

2. A flexible shield or guard for pneumatic tires, the same comprising a series of independently movable segments, each segment having its under surface cut away to conform substantially to the contour of the tire to be embraced thereby, a groove or channel in the outer end faces of the embracing portion of each segment composing the shield or guard, linked chains extending through the said grooves or channels to hold the series of segments circumferentially, and end plates for each segment to protect the grooves or channels and the end walls of the said segments.

3. A flexible shield or guard for pneumatic tires, the same comprising a series of independently movable segments shaped to conform to the contour of the tire to be embraced thereby, a groove or channel formed in the outer end faces of each of the said segments, linked chains extending through the said grooves or channels to hold the segments circumferentially, end plates for each segment to protect the said grooves or channels and the end walls of the segments, and strengthening means extended through the embracing portions of the segments to prevent the splitting thereof.

4. A flexible shield or guard for pneumatic tires, the same comprising a series of independently movable segments held circumferentially by parallel linked chains extended through each segment of the series of segments, the under face of each segment being shaped to conform substantially to the contour of the tire to be embraced by the shield or guard, the outer surfaces of the segments being curved from top to bottom to provide pivotal contact between adjacent segments, and a wear shoe detachably united to each segment.

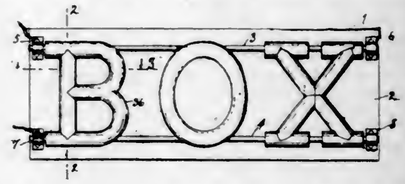
873,920. METALLIC SHEET-ROOFING. JOHN T. BURRISS and OLIVER G. BURRISS, Anderson, S. C. Filed July 16, 1907. Serial No. 384,032.



1. The above described shingles or roofing plates and stirrups formed of sheet metal, the right-hand edge of each shingle turned into a spiral curve 3, the bend rising upward from the face of the shingle, then turning to the right, then downwardly and to the left and finally terminating in a locking-arm 4, nearly on a vertical line to the face of the shingle, the left-hand edge turned into a spiral curve 5, somewhat in the shape of a C, having a locking-arm 6, terminating about the center of said curve and being on a line parallel with the shape of the shingle, the left-hand end of each stirrup straight and provided with nail holes, the right-hand end formed into a spiral curve 7, terminating in a locking-arm 8, the inside face of which bears against the locking-arm 6, of the curve 5 as the stirrup and sheet are brought into the same plane, substantially as shown and described and for the purposes set forth.

2. In a roofing, the combination of the above described shingles and stirrups, the right-hand edge of each shingle turned into a spiral curve 3, the bend rising upwardly from the face of the shingle, then turning to the right, then downwardly and to the left, terminating in an upturned locking-arm 4, nearly on a vertical line to the face of the shingle; the left-hand edge of said shingle turned into a spiral curve 5, somewhat in the shape of a C, having an inwardly turned locking-arm 6, terminating about the center of said curve; a stirrup 2, its curve 7, and locking-arm 8, slipped into the curve 5, with its locking-arm locking against the inside face of the locking-arm 6, of the curve 5, as said stirrup and sheet are brought into the same plane said stirrup and shingle being secured to the roof by nails; a twin shingle 1, slipped over the curve 7, and arm 8, of the stirrup and curve 5, and arm 6, of the shingle 1^2, its locking-arm 4, terminating in the center of said three spiral curves, said shingle completely covering said stirrup, substantially as shown and described and for the purposes set forth.

873,921. ILLUMINATED SIGN. JAMES CHESTER, New York, N. Y. Filed Nov. 20, 1906. Serial No. 344,242.



1. In an illuminated sign the combination of a background, a light producing means, one or more letters or symbols and means for causing the light to illuminate the said background and for preventing the light from illuminating the said letters and to produce the effect of an illuminated surface having thereon black letters.

2. In an illuminated sign the combination of a background, a light producing means, one or more letters or symbols located in front of the said light producing means, the said letters or symbols having means for preventing diffracted light from passing to the front of the said letters.

3. In an illuminated sign the combination of a background, one or more letters or symbols, a light producing means located in the rear of said letters and means whereby the rays of light may be reflected from the said letters to the said background and from the said background to the beholder of the sign.

4. In an illuminated sign the combination of a reflector background, one or more letters or symbols, a light producing means located behind the said letters or symbols, the said letters or symbols having on their rear faces reflector surfaces adapted to reflect the light to the said reflector background and contoured to prevent the diffractional diffusion of the light in front of the letters.

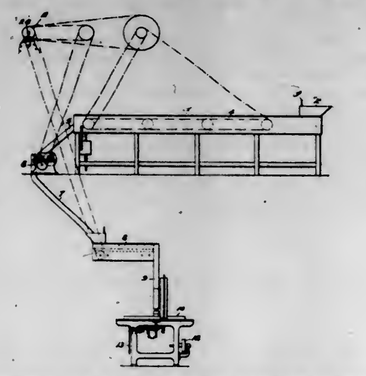
5. In an illuminated sign the combination of a reflector background, a light producing means, one or more letters or symbols, the said letters or symbols having reflector surfaces, the said light producing means being located in the vicinity of and in the rear of said letters or symbols, the said letters having means to prevent the light from being diffractionally diffused in front of the letters.

[Claims 6 to 10 not printed in the Gazette.]

873,922. APPARATUS FOR PREPARING AND PACKING SEEDED RAISINS. NEWTON B. CONVERSE, Fresno, Cal., assignor, by direct and mesne assignments, to himself and J. E. Dickinson, trustees, Fresno, Cal. Filed Oct. 23, 1905. Serial No. 283,979.

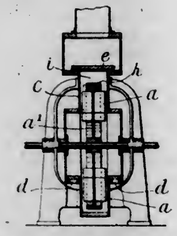
In an apparatus for preparing and packing seeded raisins, the combination of a sweating chamber, a seeding machine, a packing machine, means for feeding the raisins to the sweating chamber in a uniformly flowing stream, means for maintaining them in a uniformly flowing stream while in said chamber, means for transferring them in a uniformly flowing stream from the sweating chamber to the seeding machine, means for transferring

them in a uniformly flowing stream from the seeding machine to the packing machine, and means for simulta-



neously controlling all of the above mechanism, substantially as described.

873,923. CENTRIFUGAL FAN. LOUIS B. COUSANS, Lincoln, England. Filed Mar. 13, 1907. Serial No. 362,232.



1. The combination of a centrifugal fan wheel and casing therefor, a continuous shroud of not less than half the width of the blades and not greater width than the blades, said shroud being disposed around the periphery of the fan wheel blades and spaced apart therefrom so as to leave an annular space between the shroud and the tips of the fan wheel blades, said annular space being laterally open to the casing.

2. The combination of a centrifugal fan wheel and casing therefor, and a continuous shroud disposed around the fan wheel at a short distance from the tips of the fan wheel blades, so as to leave an annular space opening laterally into the casing, said shroud being of a width not less than half the width of the blades for the purpose of obtaining the silencing effect.

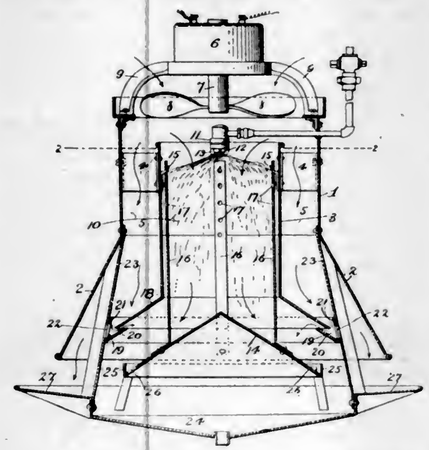
3. The combination of a centrifugal fan wheel and casing therefor, a continuous but perforated shroud of not less than half the width of the blades and not greater width than the blades, said shroud being disposed around the periphery of the fan wheel blades and spaced apart therefrom so as to leave an annular space between the shroud and the tips of the fan wheel blades, said annular space being laterally open to the casing.

4. In an incased centrifugal fan, a continuous but perforated shroud disposed around the fan wheel at a short distance from the tips of the fan wheel blades, so as to leave an annular space opening laterally into the casing, said shroud being of a width not less than half the width of the blades for the purpose of obtaining the silencing effect and not greater than the width of the blades to avoid detrimental back pressure in the discharge of air from the fan wheel, substantially as set forth.

5. The combination of a fan casing, a shaft, a hub thereon, a disk on said shaft, fan vanes on said disk, an extension of said disk and a continuous shroud mounted upon said extension of the disk and disposed circumferentially around the fan wheel between the casing and the tips of the blades, said continuous shroud being of a width not less than half the width of the fan blades for the purpose of obtaining the silencing effect and not greater than the width of the blades to avoid detrimental back pressure on the discharge of air from the fan wheel, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

873,924. HUMIDIFYING AND AIR-MOISTENING APPARATUS. STUART W. CRAMER, Charlotte, N. C. Filed Aug. 2, 1907. Serial No. 386,775.



1. In a humidifier, a casing, means for producing a current of air through the casing, a spray-chamber within said casing, means for supplying spray to the spray-chamber, an adjustable deflector at one end of the spray-chamber, and means for collecting surplus water at the discharge end of the casing.

2. In a humidifier, a casing, means for supplying air to the casing, a spray-chamber within said casing, means for supplying spray to the spray-chamber, a conical deflector at the outlet end of the spray-chamber, means for varying the area of the opening between the spray-chamber and a deflector, and means for collecting surplus water at the discharge end of the casing.

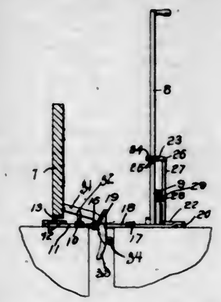
3. In a humidifier, an outer casing, and an inner wall forming a spray-chamber, an annular passage between said casing and said wall, means for supplying air to said annular passage, means for supplying spray to the spray-chamber, a conical deflector at the discharge end of the spray-chamber provided with means for regulating the amount of spray delivered to the air issuing from said annular passage, and means for collecting surplus water.

4. In a humidifier, an outer and an inner wall, an annular passage between said walls, a spray-chamber within the inner wall, means for supplying air to said annular passage, means for supplying spray to the spray-chamber, means for variably mixing the spray and the air, means for directing the mixed spray and air radially from said walls, and means for collecting surplus water.

5. In a humidifier, an outer and an inner wall, a passage between said walls, a spray-chamber within the inner wall, means for supplying air to the passage between said walls, means for supplying spray to the spray-chamber, means for directing the fine spray outward into the current of air as it issues from the walls, means whereby the air current beats downward and inward the coarser particles of water, and means for collecting surplus water.

[Claims 6 to 12 not printed in the Gazette.]

873,925. ELEVATOR-LOCK. MILTON DASHIELL, Baltimore, Md. Filed Mar. 25, 1907. Serial No. 364,465.

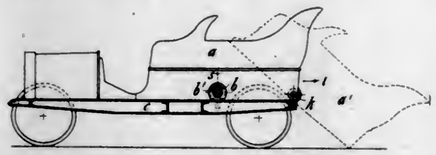


1. In a mechanism for locking the controlling levers of elevator cars, the combination with a sliding door, a controlling lever, and a segment for the lever, of an arm pivoted upon the lever, there being a friction element carried by the arm and adapted to frictionally engage the under side of the segment when the arm is swung in the direction of the lever, a sliding trip adapted for actuation by the movement of the door to open position, and means located in the path of the trip and connected with the arm for swinging the latter when engaged by the trip.

2. In a mechanism for locking the controlling levers of elevator cars, the combination with a sliding door, a controlling lever, and a segment for the lever, of an arm pivoted upon the lever, there being a serrated friction element carried by the arm and adapted to frictionally engage the under side of the segment when the arm is swung in the direction of the lever, a sliding trip adapted for actuation by the movement of the door to open position, and means located in the path of the trip and connected with the arm for swinging the latter when engaged by the trip.

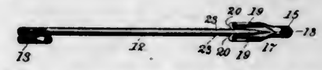
3. In a mechanism for locking the controlling levers of elevator cars, the combination with a sliding door, a controlling lever, and a segment for the lever, of an arm pivoted upon the lever, there being a serrated friction element carried by the arm and adapted to frictionally engage the under side of the segment when the arm is swung in the direction of the lever, a sliding trip adapted for actuation by the movement of the door to open position, a rocking bar, a link connecting one end of the bar and the lower end of the arm, and a bar pivoted to the other end of the rocking bar and having a cam head adapted for engagement by the trip, when the door is open.

873,926. LONGITUDINALLY-DISPLACEABLE CAR-BODY FOR MOTOR-VEHICLES. RUDOLF DIESEL, Munich, Germany. Filed Jan. 25, 1907. Serial No. 353,957.



In a motor car, a longitudinally displaceable car body, having rolls (*b*), approximately in the vertical transverse plane passing through its center of gravity, said rolls being swingingly or otherwise movably mounted on the car body for enabling a lifting of the car body from the frame, and catch pieces (*k*), mounted on the rear end of the underframing and arresting the rolls (*b*) when the car body, after having been displaced, is tilted towards the rear side.

873,927. LOCKING SAFETY-PIN. KARL G. DIETERICH, New York, N. Y. Filed Dec. 27, 1906. Serial No. 349,619.



1. A safety pin comprising a body portion, a pin extending therefrom, a cap secured to said body portion provided with inwardly and forwardly projecting lugs adapted to engage said pin and wedge the end thereof intermediate said lugs under tension of said pin, substantially as specified.

2. A safety pin comprising a body portion, a cap secured thereto provided with inwardly and forwardly projecting lugs, and a pin extending from said body portion adapted to be engaged by the lugs on said cap, substantially as specified.

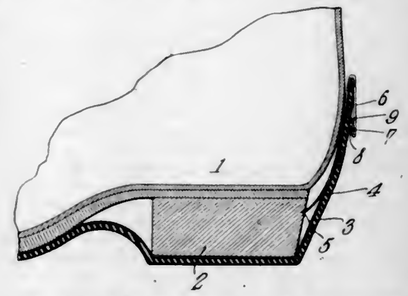
3. A safety pin comprising a body portion, a cap secured thereto provided with inwardly and forwardly projecting lugs having their inner edges arranged substantially parallel to each other, and a pin projecting from said body portion adapted to be engaged by the lugs on said cap, substantially as specified.

4. A safety pin comprising a body portion, a cap secured thereto provided at its rear end with inwardly and forwardly projecting lugs and a pin projecting from said body portion provided with recesses adapted to engage the lugs on said cap, substantially as specified.

5. A safety pin comprising a body portion, a cap secured thereto comprising a plurality of parallel side plates, inwardly and forwardly projecting lugs on said side plates, and a pin projecting from said body portion provided with recesses adapted to be engaged by the ends of the lugs on said side plates, substantially as specified.

[Claims 6 and 7 not printed in the Gazette.]

873,928. OVERSHOE-HOLDER. GEORGE W. DOPKINS, Morris, Minn. Filed May 4, 1907. Serial No. 371,866.



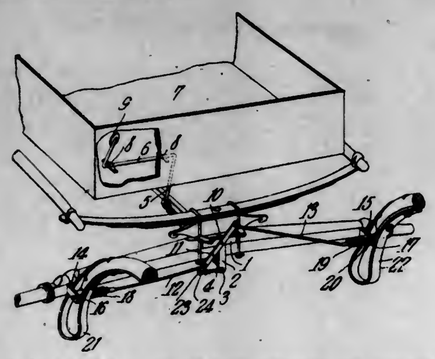
1. An overshoe fastener comprising a body portion terminating in downwardly-extending teeth, and having another elastic portion integral with and bent over to lie adjacent to the body portion and terminating in upwardly-extending teeth, the two portions being adapted to extend along the inner and outer walls, respectively, of the heel portion of an overshoe.

2. An overshoe fastener comprising an elastic strip terminating at one end in teeth or serrations and having the other end bent and returned on itself and again bent and returned substantially parallel to the main portion and having its end further bent toward the main portion and terminating in teeth or serrations.

873,929. HORSE-DETACHER. WILLIAM H. ECKMAN, Warren, Ind. Filed June 6, 1907. Serial No. 377,599.

1. In a device of the character described, the combination with the axle clips and coöperating coupling members, of a pair of locking rods having their outer ends

adapted to coöperate with the clips and coupling members, springs normally acting to move the rods to locked position, and means on one of the clips for retaining both rods in unlocked position.



2. In a device of the character described, the combination with the axle clips and coöperating coupling members, of a pair of operatively connected locking rods arranged to coöperate with the respective clips and coupling members to simultaneously lock and unlock them, and means on one of the clips coöperating with one of the rods for retaining both of them in unlocked position.

3. In a device of the character described, the combination with axle clips having inwardly extending flanges upon their proximate sides, one of the flanges being offset laterally of the pivot receiving apertures of its respective clip, and coupling members adapted to coöperate with the axle clips, of a pair of locking rods operatively connected and having their ends arranged to coöperate with the respective clips, one of the rod ends coöperating with the relatively offset flange as a seat for retaining both rods in unlocked position, and means normally acting to move the rods into locked position.

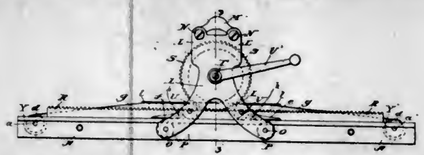
4. In a device of the character described, the combination with an attaching plate adapted to be secured to a vehicle axle and provided with a depending arm having a guiding device at its lower end, a pair of axle clips arranged at opposite sides of the attaching plate, and coupling members adapted to coöperate with the axle clips, of a pair of locking rods mounted in coöperative relation with the clips, a device on one of the latter for retaining the rods in unlocked position, an actuating lever pivotally connected to the attaching plate and having its opposite ends operatively connected to the respective locking rods, an operating cord connected to the actuating lever and coöperating with the guide on the lower end of the said arm, and a treadle adapted to be mounted beneath the vehicle seat and connected to the operating cord.

5. In a mechanism of the character described, the combination with the axle clips and thills adapted to be detachably coupled thereto, of supporting devices for the rear ends of the vehicle thills embodying strips of resilient material having their upper ends rigidly attached to the thills and their other ends unattached and having a normal tendency to straighten out, said strips being capable of being doubled longitudinally against their normal tendency and to be then extended through the axle clips when the thills are coupled thereto.

[Claims 6 to 8 not printed in the Gazette.]

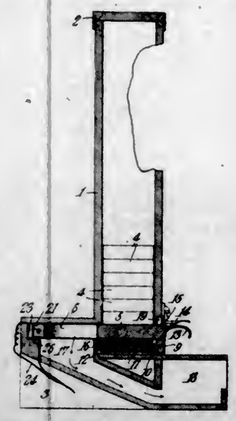
873,930. REPRODUCING AND IMITATING MACHINE. BENJAMIN O. FANSLOW, Los Angeles, Cal., assignor, by direct and mesne assignments, to The Universal Polygraph Company, (Incorporated,) a Corporation of Arizona. Filed Dec. 3, 1906. Serial No. 346,186.

1. A printing machine consisting of a base with grooved parallel sides, an intermittently moving printing ribbon, a carriage movable upon the base carrying an impression roller and provided with upper and lower rollers, the impression roller and its shaft, the lower rollers of the carriage operating in said grooves in the base, the upper rollers of the carriage operating upon the upper part of the metal of the base containing the grooves, the toothed wheels, one at each end of the shaft which carries the impression roller, the parallel toothed racks at the sides of the upper part of the base, the toothed wheels gearing into the parallel toothed racks, the printing or impression surfaces, the inking ribbon rollers, the ratchet wheels, one on one end of each inking ribbon roller, the changeable pawls on one end of the carriage for operating the inking ribbon rollers, substantially as described.



2. The combination with the traversing carriage of a printing machine operating upon a flat base and provided with upper and lower rollers, of an impression roller pressing the paper to be printed, upon an intermittently moving inking ribbon, and the inking ribbon to the type and printing surfaces, the toothed racks on the base of the machine, the toothed wheels on the axis of the impression roller, the inking ribbon, the inking ribbon rollers, the ratchet wheels, one on one end of each inking ribbon roller, the changeable pawls on one end of the carriage adapted to operate the ratchet wheels of the inking ribbon rollers, the lower rollers of the carriage operating in grooves in the bottom of the parallel guides of the base of the machine, the parallel guides, the upper rollers in each end of the carriage operating upon the top of the parallel guides of the base of the machine, the type and printing surfaces, the crank handle for operating the machine, all substantially as set forth.

873,931. REGISTER-OPERATING DEVICE FOR MASSAGE TREATMENTS. JOHN W. B. FARIS, Skidmore, Tex. Filed Feb. 18, 1907. Serial No. 357,992.



1. In a device of the character described, a reservoir for articles to be delivered, a sliding block movable to carry an article from the reservoir toward a delivery opening, circuit terminals bridged by the block at the limit of its movement to the position to discharge the article, and means for automatically moving the block to an intermediate position out of operative relation with both the reservoir and the delivery opening, and at the same time breaking the electric circuit.

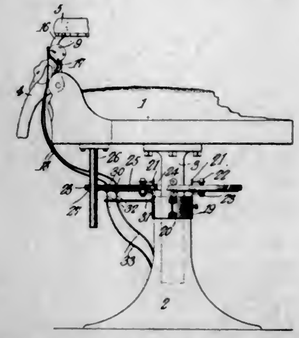
2. In a device of the character described, a reservoir for containing articles to be delivered, a sliding block having a through passage for the articles normally located in inoperative relation to both the reservoir and a delivery opening, an electric circuit closed by the block at its extreme limit of travel toward the delivery opening, and means for automatically returning the block to its normal position of inoperative relation to both the reservoir and delivery opening, and at the same time breaking the electric circuit.

3. In a device of the character described, a reservoir for containing articles to be delivered, a sliding block having an aperture therethrough for receiving the articles from the reservoir and normally out of operative relation to either the reservoir or a delivery opening located away from the reservoir, yielding means for maintaining the block in the said normally inoperative position, and electric circuit terminals closed by the movement of the block to the fully operative position with relation to the delivery opening and opened by the return of the block to its normal position.

4. In a device of the character described, a reservoir for containing articles to be delivered, a sliding block having its front end normally flush with the front of the reservoir and having means for receiving an article from the reservoir and carrying it to a point of delivery said means being normally out of operative relation to both the reservoir and point of delivery, said block being movable outward from said reservoir to receive an article therefrom and movable again to and beyond the normal position to deliver the article received from the reservoir, electric circuit terminals bridged by said sliding block when the latter is in operative relation to the point of delivery, and means for returning said block to its normal position out of operative relation to the reservoir and to the point of delivery.

5. In a device of the character described, a reservoir for the articles to be delivered, a conduit for receiving and delivering the same, a sliding block for carrying the articles from the reservoir to the conduit, a latch for holding the block normally out of operative relation with the reservoir, electric circuit terminals in the path of the block, a bridging contact for the circuit terminals carried by the block, and a spring resisting the movement of the block for a limited distance as its bridging contact approaches the circuit terminals.

873,932. SHAVE-REGISTER-OPERATING DEVICE. JOHN W. B. FARIS, Skidmore, Tex. Filed Feb. 18, 1907. Serial No. 357,994.



1. In a barber's chair of the reclining type, movable arm and foot-rest parts, a circuit terminal attached to a movable portion of the arm and another circuit terminal attached to a movable portion of the foot-rest and arranged in the path of the first-named terminal.

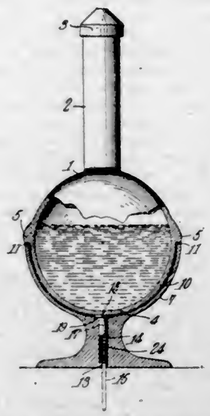
2. In a barber's chair of the reclining type, movable arm and foot-rest parts, a circuit terminal attached to a movable portion of the arm and another circuit terminal attached to a movable portion of the foot-rest and having a conducting member in the path of the first-named terminal during its movement in one direction and an insulating member in the path of the said last-named terminal during its movement in the other direction.

3. In a barber's chair of the reclining type, movable arm and foot-rest parts, a casing attached to the foot-rest part and containing an electric circuit terminal composed of a conducting member and an insulating member, and a circuit terminal carried by the movable arm and having a brush arranged to engage the conducting member of the other circuit terminal when the brush is moved in one direction and to engage the insulating member of the other circuit terminal when the brush is moved in the reverse direction.

4. A barber's chair having a seat rotatable in and movable vertically with reference to its pedestal or support, circuit terminals carried by the seat, rotatable conducting rings carried by the pedestal and connected to the circuit terminals on the seat, connections between the seat and conducting rings constraining the latter to rotate with the seat irrespective of its vertical movement and brushes carried by the pedestal in engagement with the conducting rings and included in an external circuit.

5. A barber's chair having a seat rotatable in and movable vertically with reference to its support or pedestal, circuit terminals carried by the seat, a rotatable insulated disk carried by the pedestal, conducting rings on the disk connected to the circuit terminals on the seat, anti-friction supports for the disk, brushes carried by the pedestal in contact with the rings on the disk and included in an external circuit, and a rod on the seat passing through a perforation in the disk and constraining the latter to move rotatably with the seat irrespective of the vertical adjustment of the said seat.

873,933. BARBER'S BOTTLE-HOLDER. JOHN W. B. FARIS, Skidmore, Tex. Filed Feb. 18, 1907. Serial No. 357,996.



1. In a device of the character described, a bottle having a body with a rounded bottom, a receptacle conforming in shape thereto and receiving the rounded bottom of the body of the bottle, and a longitudinally moving, indicator-actuating means having a normal tendency to enter the receptacle and movable out of the receptacle by the introduction of the bottle therein.

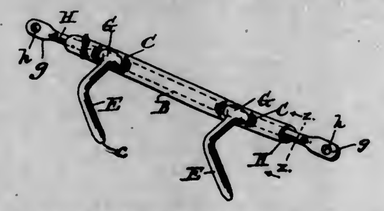
2. A device of the character described, a bottle having a body with a rounded bottom and a circumferential flange therefor, a receptacle for the rounded portion of the bottle and having its upper edge shaped to receive the flange on the bottle, and an indicator-actuating means carried by the receptacle and movable by the bottle.

3. In a device of the character described, a bottle, a re-

ceptacle therefor, a lining of soft material in the receptacle, and an indicator-actuating means extending into the receptacle through the soft lining and movable out of the receptacle by the introduction of the bottle into the latter.

4. In a device of the character described, a bottle having a rounded bottom or base, a circumferential flange at the junction of the rounded base and body of the bottle, a rounded or bowl-shaped receptacle conforming to the rounded base of the bottle, a soft lining for said receptacle overlapping the upper edges thereof and there receiving the circumferential flange on the bottle, a spring-actuated rod carrying a head normally constrained by the spring to enter the receptacle and pushed out of the same by the weight of the bottle, and connections from said rod for operating an indicating device.

873,934. BUCKLE-BAR. FRANK E. FARNHAM, Providence, R. I. Filed Apr. 8, 1907. Serial No. 366,993.



1. In a buckle bar, the combination of a tubular bar having on one side thereof a centrally perforated projection, and a prong having an annular shoulder and a dowel, the latter being inserted through the perforation of said projection and formed with a rivet head at its end in contact with the inner surface of said projection.

2. In a buckle bar, the combination of a cylindrical bar, a tubular bar rotatably mounted on the cylindrical bar and provided with a perforation through one side thereof and a concave seat concentric with said perforation on the inner surface of the tubular bar, and a prong having a rivet head secured in said seat and provided with a shoulder which bears against the outer surface of the tubular bar adjacent to said perforation.

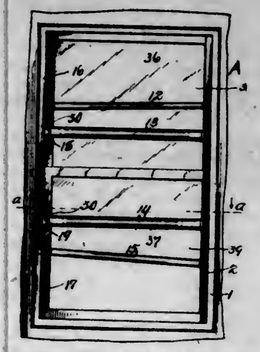
3. In a buckle bar, the combination of a cylindrical bar H having the perforated flattened ends *g*, the tubular bar B' mounted rotatably on the bar H and having the centrally perforated semi-ellipsoidal projections C, and the prongs E' each provided with a dowel whose end is formed into a rivet head seated in the concavity of the adjacent semi-ellipsoid C and also with a channeled head G held in contact with the exterior surface of the said semi-ellipsoid by means of said rivet head.

4. The improved blank for a buckle bar herein described, made of sheet metal and U-shaped in cross section, having the straight longitudinal edges *m n* capable of abutting in the same straight line when said blank is bent together in a true tubular form, and also provided with concavo-convex protuberances C extending outwardly and each having a central perforation *b*.

5. The improved prong for a buckle fastening herein described, made of metal and comprising a cylindrical shank E, a diametrically grooved knob or head G, and a central axial dowel *e* whose end has a central depression and a surrounding annular flange *f*.

873,935. ELECTRICAL ALARM SYSTEM. WILLIAM N. FAWCETT, Brooklyn, N. Y., assignor of one-half to Max Bernstein, New York, N. Y. Filed Jan. 15, 1907. Serial No. 352,362.

1. An alarm adapted for attachment to a window or the like, comprising a plurality of contacts in circuit with each other and normally closed, a plurality of separable bars adapted to keep said contacts closed and to allow said contacts to spring apart when said window is manipulated, said bars being wedged between said contacts and the sash of said window.



2. An alarm adapted for attachment to a window or the like, comprising a plurality of contacts in circuit with each other and normally closed, means adapted to keep said contacts closed and to allow said contacts to open when said window is manipulated, said means comprising a plurality of bars, one end of each bar being adapted to impinge upon one set of said contacts, the other ends of said bars having contacts adapted to impinge upon a contact carried by the window-frame, the contact last named being in circuit with the contact first named, through one of said bars, means adapted to establish a circuit between the ends of said bars, and movable means, included in said circuit, adapted to impinge upon the window-frame.

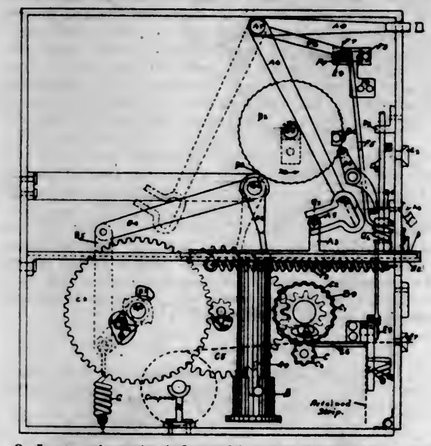
3. In an alarm, a box or casing, adapted for attachment to a window-frame, a plurality of contacts in said box electrically connected in series and normally closed, separable bars adapted to hold said contacts closed, said bars being adapted for actuation by the window, combined with a separable bar adapted, at one end thereof, to impinge upon the contacts in said box and at the other end thereof to impinge upon a contact carried by the window-frame, an electrical conductor in said means, movable contacts included in said conductor, and a pin adapted to bear against the window-pane and keep said movable contacts together, said contacts on said window-frame being in series with the contacts in said box or casing.

4. An alarm adapted for attachment to a window or the like, comprising a plurality of sets of independently operable contacts in circuit with each other and normally closed, a plurality of separable bars placed across the face of the window and wedged between the sash of the window on one side, and the contacts on the other side, thereby holding the contacts closed.

5. An alarm adapted for attachment to a window or the like, comprising a plurality of sets of independently operable contacts in circuit with each other and normally closed, a plurality of separable bars placed across the face of the wndow and wedged between the sash on one side and the contacts on the other side, thereby holding the contacts closed, and means also in circuit with a set of said contacts adapted to break the said circuit when a window pane is fractured.

873,936. VENDING-MACHINE. CHARLES B. FORD and JAMES N. WOOD, Richmond, Va. Filed Aug. 10, 1906. Serial No. 330,053.

1. In a coin actuated machine, a coin receiving slide, a lug and anti-friction roller on said slide, an exteriorly operating arm for operating said slide, a guide in which the slide moves, a tube and receiving cup attached thereto said cup being removable from the tube, an arm the end of which traverses a plane common to that of the slide, a shaft above said slide from which the before described arm is suspended, a pawl in the hub of the arm whereby it causes a ratchet wheel to move forward for a fractional part of its circumference at each movement of the said arm, a ratchet wheel carrying a cam lug, the said wheel receiving motion from the before described arm and pawl, a lock-pin arranged to close the coin slide, and a device actuated by the cam lug on the ratchet wheel for permitting the said lock pin to fall within the slot in the reciprocating slide, to prevent the introduction of more coins, as herein described.



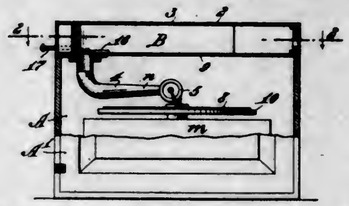
2. In a coin actuated machine, a coin receiving slide having a reciprocating movement, a lug and anti-friction roller on said slide, a tube and cup attached thereto for receiving the coins, a stationary guide in which the slide moves, an exteriorly operating arm for operating said slide, a shaft from which said arm is suspended, an arm the end of which traverses a plane common to that of the slide, a shaft above said slide from which the said arm is suspended, and a locking device to prevent the introduction of more coins, consisting of a ratchet wheel and cam lug thereon, a bell-crank operated by said ratchet and cam lug, a lock pin moving in guides, and having a groove in which a tooth in the end of the bell-crank fits to hold it in a position where it cannot affect the movement of the coin slide, and means for causing said tooth on the bell-crank to be withdrawn from the groove in the lock pin, permitting it to fall into a position that prevents the further operation of the coin-slide, as herein described.

3. In a coin actuated machine, a coin receiving slide, a stationary guide in which the coin slide moves, means for operating said slide consisting of an exteriorly operating arm hung on a shaft, an arm suspended from said shaft, a roller on the aforesaid slide with which the said suspended arm engages, a shaft above said slide and at right angles thereto, an arm suspended from a shaft, a pawl on said arm, a ratchet wheel with which said pawl engages, a cam lug on said ratchet wheel, a bell-crank, a lock pin having a groove in which one end of said bell-crank engages, and means for attaching a sign or warning device to said lock pin, whereby its motion when it drops in the path of the coin slide may be utilized to make known outside of the machine that the said machine is no longer operative, as herein described.

4. In a coin actuated machine, a coin receiving device, consisting of a slide, a lug and anti-friction roller attached thereto, a stationary guide, and an exteriorly operating arm for operating the slide, a shaft from which said arm is suspended, an arm on the same shaft that carries the operating arm engaging with the aforesaid roller on said slide, a shaft above said slide, an arm hung therefrom, the end of said arm traversing a path common to that of the slide and arranged to operate a locking device after a prearranged number of operations, a warning device visible from outside the machine attached to, and forming a part of, said locking device, and a coin receiving cap attached to the coin receiving device and removable therefrom, as herein described.

5. In a coin actuated machine, a coin receiving device consisting of a slide carrying a lug and anti-friction roller, a stationary guide in which the slide moves, a shaft, an exteriorly operating arm and an interiorly mounted arm, both suspended from the said shaft, for operating said slide, a removable coin depository attached to said stationary guide, an arm and pawl hung to traverse a plane common to that of said slide, and a combined locking and exteriorly visible warning device operated by the coin receiving device after the receipt of a prearranged number of coins, as herein described.

873,937. SOUND-REPRODUCING MACHINE. LUTHER T. HAILE, Philadelphia, Pa., assignor of nine one-hundredths to Joseph W. Shannon, one-tenth to Frederick J. Geiger, and one-tenth to Logan W. Mulford, Philadelphia, Pa. Filed May 27, 1907. Serial No. 375,766.



1. A machine for reproducing sounds from a record thereof and modifying their tone and timbre, comprising an inclosing cabinet and the following interiorly contained instrumentalities in operative combination, namely, mechanism for reproducing sound-waves from a sound-record, a resonance-box one wall of which is a sounding-board adapted to be vibrated sympathetically by said sound-waves, and forming a resonance-chamber which is substantially closed other than by sound-discharge openings, with connecting tubular means operatively mounted to convey said sound-waves from the reproducer to the interior of said resonance-chamber.

2. A machine of the character recited, comprising a containing cabinet, and the following interiorly-contained elements in operative combination, namely: mechanism for reproducing sound-waves from a record thereof, a contiguous resonance-chamber formed by a box one exterior wall of which is a sounding-board, the interior of said box containing outwardly-diverging partition walls operating primarily to form an amplifying passage for said sound-waves and secondarily to modify the tone thereof; with means for conducting the sound-waves from the sound-reproducing mechanism to said amplifying passage in the resonance-chamber.

3. A machine of the character recited comprising the following instrumentalities, in operative combination, namely a cabinet with interiorly-contained mechanism for reproducing sound-waves from a sound-record, a contiguously mounted box providing a resonance-chamber the exterior wall of which is a sounding-board, a pivotally-mounted hollow sound-conveying arm leading to an aperture in an oppositely-disposed wall of said box by which it is mounted in the cabinet, said arm operating to convey sound-waves from the sound-reproducer to the interior of the resonance-chamber, with valvular means governing the delivery thereof to said chamber.

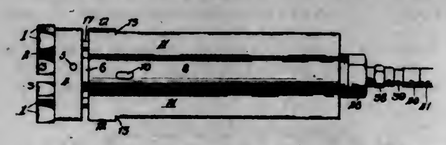
4. A machine of the character recited comprising the following instrumentalities, in operative combination, namely a machine for mechanically reproducing vibratory sound waves from a sound-record, a box providing a resonance-chamber one wall of which is a sounding-board, and having interior diverging partition walls, with a pivotally-mounted hollow sound-conveying arm leading said vibratory sound-waves to the diverging passageway within the resonance-chamber.

5. A machine of the character recited comprising the following instrumentalities, in operative combination, namely a machine for mechanically reproducing vibratory

sound-waves from a sound-record, a box providing a resonance-chamber to which said sound-waves are delivered and having a pair of oppositely-disposed sounding-boards and interior diverging partition walls, with a pivotally-mounted hollow sound-conveying arm leading said vibratory sound-waves to the diverging passageway within the resonance-chamber.

[Claims 6 to 10 not printed in the Gazette.]

873,938. PNEUMATIC HAMMER. MARTIN HARDSOCG, Ottumwa, Iowa. Filed Mar. 7, 1907. Serial No. 361,052.



1. In a pneumatic hammer, a frame consisting of a central barrel, and straight exterior flanges on opposite sides of the barrel with the flanges extending the length of the barrel, the barrel having a central chamber to receive the hammer, and each flange having a longitudinal passage at the receiving end for inducting pressure and a longitudinal passage at its discharge end for educting pressure with the passages independent of each other and in communication with the chamber of the barrel, substantially as described.

2. In a pneumatic hammer, a frame consisting of a central barrel and straight exterior flanges on opposite sides of the barrel with the flanges extending the length of the barrel, the barrel having a central chamber divided into sections, one section to receive a driven stem and another section to receive the driving hammer, and each flange having longitudinal passage at the receiving end for inducting pressure and a longitudinal passage at the discharge end for educting pressure, with the passages independent of each other and in communication with the chamber of the barrel, substantially as described.

3. In a pneumatic hammer, a frame consisting of a central barrel and straight exterior flanges on opposite sides of the barrel with the flanges extending the length of the barrel, the barrel having a central chamber divided into sections, one section to receive a driven stem and another section to receive the driving hammer, and the flanges each having a longitudinal induction passage and a longitudinal eduction passage for pressure, with the induction passages in communication with the chamber of the barrel for admitting pressure to operate the hammer, and with the eduction passages opening through the discharge end of the frame, substantially as described.

4. In a pneumatic hammer, a frame consisting of a central barrel and straight exterior flanges on opposite sides of the barrel with the flanges extending the length of the barrel, the barrel having a central chamber, divided into a plurality of sections, providing a section forming a bearing for a driven stem, a section forming an eduction chamber for discharging pressure, a section forming a bearing for a driving hammer, a section forming an induction chamber for pressure to act and recede the hammer, and a section forming a chamber to receive pressure for acting on and driving the hammer, substantially as described.

5. In a pneumatic hammer, a frame consisting of a central barrel and straight exterior flanges on opposite sides of the barrel with the flanges extending the length of the barrel, the barrel having a central chamber, divided into a plurality of sections, providing a section forming a bearing for a driven stem, a section forming an eduction chamber for discharging pressure, a section forming a bearing for a driving hammer, a section forming an induction chamber for pressure to act and recede the hammer, a section forming a chamber to receive pressure for acting on and driving the hammer, and each flange having a longitudinal induction passage for pressure in communication with the pressure induction chamber of the barrel, and a longitudinal eduction passage in communication with the eduction chamber of the barrel, substantially as described.

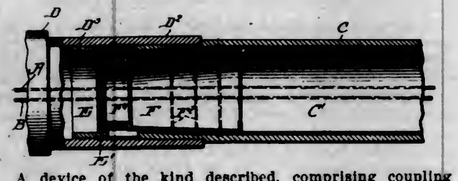
[Claims 6 to 17 not printed in the Gazette.]

873,939. CHAIR-SEAT. JOHN W. HENRY, New York, N. Y. Filed Aug. 13, 1906. Serial No. 330,423.



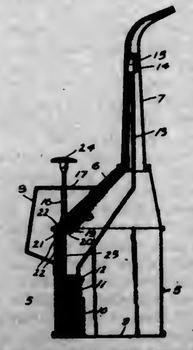
An article of the character described, consisting of a chair seat comprising a base, a covering secured thereto, a strip of gimp extending around the edge of said covering, and binding members extending through said gimp, covering and base, said binding members comprising an enlarged head, provided with a centrally disposed perforation therein and a pair of flat, flexible prongs spaced apart from each other to accommodate therebetween a nail or tack adapted to pass through said perforation to secure said seat to a support.

873,940. ELECTRICAL CONNECTION FOR HOSE-COUPLINGS. FREDRICK HOFFMAN, Cincinnati, Ohio. Filed June 30, 1906. Serial No. 324,172.



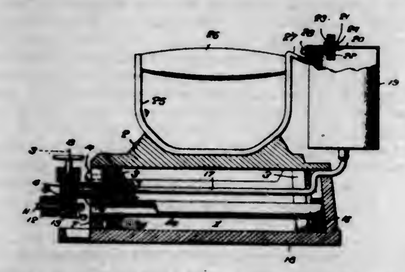
A device of the kind described, comprising coupling members, hose sections connected thereto, electric wires carried by said sections, a flat sectional ring carried by and within one of said coupling members, the wires of the adjacent hose sections being connected respectively to the sections of the ring, a flat sectional ring carried within the other coupling member, the wires of the connected hose section being connected to the sections of said ring, and a lip carried by each section of the last mentioned ring adapted to project within the first mentioned ring and slide upon a section thereof when the coupling members are partially coupled.

873,941. OIL-CAN. WILLIAM IRVING, Calgary, Alberta, Canada. Filed Apr. 17, 1907. Serial No. 368,703.



An oil can of the class described comprising a body, a neck portion, a spout, a handle secured to the body and to the neck portion, a valve seat arranged within the spout, a spring arranged within the body of the can, a valved rod supported by the spring, a valve carried by the rod at its upper end and designed to coöperate with the valve seat in the spout of the can, a sleeve extended through the neck of the can and secured thereto at its upper end to the handle for the can, a push rod supported by the spring at its upper end and extended through the sleeve to a point above the handle and provided at its upper end with a button, a packing element supported at the lower end of the sleeve and comprising a disk secured to the sleeve at the lower end thereof, a disk located beneath the first mentioned disk in spaced relation with respect thereto, an integral connecting portion between the two disks at one point only, and a packing disk received between the two first mentioned disks.

873,942. SELF-HEATING IRON. DANIEL A. JERALD, Osage, Iowa. Filed May 29, 1906. Serial No. 319,363.



The combination with the body portion, of a block resting on the base thereof at one end, a valve head at the other end resting on said base, a tubular burner supported in said block and valve head, a covering for said body having depending arms extending on the inner side of said body, means on said body engaging said arms to secure the covering in place, a retort extending longitudinally of the body above the burner, a controlling valve on the valve head, and a jet-piece in said head at right angles to said valve, and in line with the open end of said burner.

873,943. PROCESS OF TREATING ORES. FREDERICK M. JOHNSON, San Francico, Cal. Filed June 3, 1904. Serial No. 211,051.

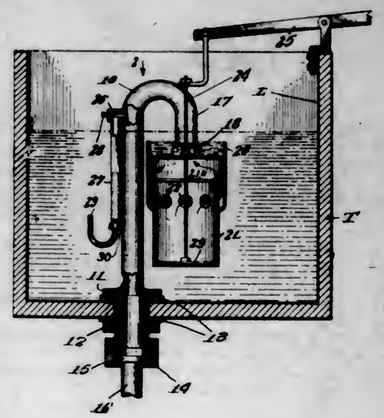
The hereindescribed method of treating sulfids and pyritic arsenical ores, which consists in placing the ores in a tank containing a solution of caustic soda, agitating the contents of the tank, during such agitation subjecting the contents to the action of an electric current of high amperage and low voltage, then transferring the entire mass or contents of the tank to a cyanid tank and subjecting it to the action of a solution of cyanid of potassium in the presence of caustic soda, substantially as described.

873,944. THREAD-GUIDE. NELSON JOHNSON, Chicago, Ill. Filed Mar. 29, 1907. Serial No. 365,273.



A thread guide and tension device for sewing machines, comprising a plate mounted upon the spool pin of the machine, under the spool, and free to turn on said pin, said plate having at its edge an upwardly-extending curved arm to engage the thread and also having a projecting spring finger to engage the lower flange of the spool.

873,945. SIPHON-VALVE FOR CLOSET-CISTERNS. NELSON B. JOHNSON, Webster, Mass. Filed Feb. 1, 1906. Serial No. 298,961.



1. The combination with a siphon for discharging liquid from a tank, of a starting chamber connected with the short leg of the siphon, said chamber having an open-bottomed casing provided with an open top and communicating freely with the short leg of the siphon, and side passages also communicating freely with the short leg of the siphon, a lifting disk mounted in said casing, and means connected with the disk for raising it to force liquid through the open top of the casing and holding it raised above the side passages, whereby the liquid may flow through said passages when the disk closes the top of the casing.

2. In a fixture of the class described, the combination of a siphon, a starting chamber comprising a body portion, a bottom casing of smaller diameter extending up inside the body portion and having outlet openings into the portion of larger diameter, a lifting disk, and means for raising the lifting disk above the outlet openings so that the disk will be out of the way during the flow of water through the siphon.

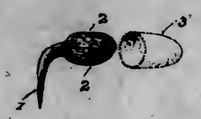
3. In a fixture of the class described, the combination of a siphon, a starting chamber of larger diameter connected at one side of its center to the inlet leg of the siphon, a lifting disk in the starting chamber, and a rod therefor extending up centrally through the body of the starting chamber at one side of the inlet siphon leg.

4. In a fixture of the class described, the combination with a tank, of a siphon therein, a starting chamber connected with the short leg of the siphon and having a substantially closed top with a perforation therethrough, a disk in the starting chamber, an operating rod for the disk passing freely and loosely through said perforation, and a flange on the top of the starting chamber for retaining sufficient water on the top thereof to supply the leakage through said perforation around the rod while the tank is being emptied by the siphon.

5. In a fixture of the class described, the combination of a siphon, a starting chamber connected at one side of its center to the inlet leg of the siphon, and comprising a body portion having a flange around its upper edge, a casing of smaller diameter extending up inside of the body portion and connected therewith by outlet passages, a lifting disk mounted in the inside casing, and a rod for raising the lifting disk above the openings so as not to interfere with the flow of water while the siphon is in operation, said rod extending up centrally through the starting chamber at the side of the starting leg of the siphon in position so that the water retained by the flange of the starting chamber will serve as a water-seal or packing therefor.

[Claims 6 and 7 not printed in the Gazette.]

873,946. COTTON-SEED FOOD. JOHN VON DER KAMMER, Prairie View, Ill. Filed June 20, 1906. Serial No. 322,536.



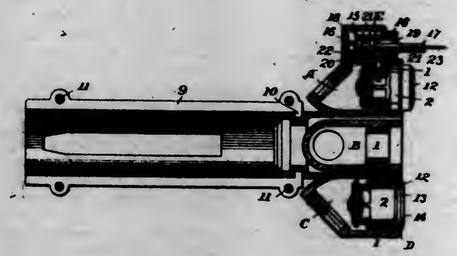
1. As a new article of food, a mass of cotton-seed the grains of which are artificially sprouted to a uniform condition and the sprouting arrested short of the growth of plumules thereon and a single radical developed on each grain.

2. As a new article of food, a mass of cotton-seed the grains of which are artificially-dehulled and sprouted to a uniform condition and the sprouting arrested short of the growth of plumules thereon and a single radical developed on each grain.

3. As a new article of food, dried and pulverized artificially-sprouted cotton-seed.

4. As a new article of food, a mass of dried artificially uniformly sprouted cotton-seed.

873,947. TRAIN-PIPE COUPLING. GEORGE E. KELLY and GEORGE F. ROYER, Wilkes-Barre, Pa., assignors to The Kelly-Arnold Manufacturing Company, Wilkes-Barre, Pa., a Corporation of Pennsylvania. Filed Oct. 3, 1906. Serial No. 337,258.



1. In an automatic steam and air coupling for railway cars, the combination with the head D having the air and steam conduits, of the sheet metal guide members suitably connected to said head, substantially as set forth.

2. In an automatic air and steam coupling for railway cars, the combination with the head D having the air and steam conduits, of the sheet metal shank or stem for supporting said head, the head having a swivel connection with the shank or stem.

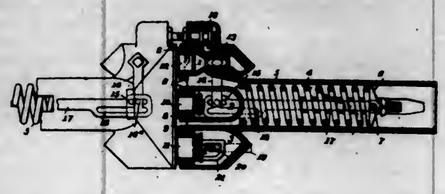
3. In an automatic air and steam coupling for railway cars, the combination with the head D having the air and steam conduits, of the sheet metal shank or stem consisting of two flanged portions suitably connected together and connected to the head by a swivel joint.

4. In an automatic air and steam coupling for railway cars, the combination with the head D having the air and steam conduits, of the complementary guide portions formed of sheet metal and secured upon opposite sides of the head, and the sheet metal shank or stem connected with the head by a swivel joint.

5. The combination with an automatic air coupler for train brake pipes, of a safety valve adapted and arranged to permit the escape of air from a car accidentally detached from a train, and means for adjusting the safety valve to prevent the discharge of air through said valve when desired.

[Claims 6 to 10 not printed in the Gazette.]

873,948. TRAIN-PIPE COUPLING. GEORGE E. KELLY and GEORGE F. ROYER, Wilkes-Barre, Pa., assignors to The Kelly-Arnold Manufacturing Company, Wilkes-Barre, Pa., a Corporation of Pennsylvania. Filed Jan. 16, 1907. Serial No. 352,644.



1. In a train pipe coupling, the combination of a coupling head provided with a fluid passage, a valve adapted to close said passage, and means adjustably connected with and adapted to automatically actuate said valve as the coupling head is engaged with or disconnected from another head, the adjustable connection between said means and valve permitting the latter to be manually operated at any time.

2. In a train pipe coupling, the combination of a coupling head supported to be bodily adjusted when engaged with or disengaged from another coupling and provided with a fluid passage, a valve adapted to close said passage, an arm connected with the valve for actuating it, and means adapted to automatically move said arm to operate the valve as the coupling head is adjusted in being engaged with or disengaged from another head, said means including an adjustable member whereby said arm and valve may be manually moved when desired.

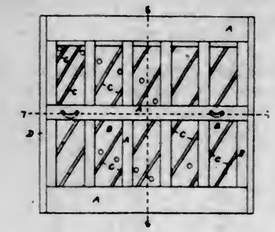
3. In a train pipe coupling, the combination of a coupling head supported to be bodily adjusted when engaged with or disengaged from another coupling and provided with a fluid passage, a valve adapted to close said passage, an arm connected with the valve for actuating it, a latch supported independently of the coupling head and engaging said arm, whereby when the coupling head is adjusted in being engaged with or disengaged from another head the valve will be actuated to open or close the fluid passage, the connection between said latch and arm permitting manual operation of the arm and valve at any time.

4. In a train pipe coupling, the combination of a coupling head supported to be bodily adjusted when engaged with or disengaged from another coupling and provided with a fluid passage, a rotary valve within said passage, an arm connected with and adapted to turn said valve to open and close the fluid passage, a latch supported independently of the coupling head and engaging said arm, whereby when the coupling head is adjusted in being engaged with or disengaged from another head the valve will be actuated to open or close the fluid passage, the connection between said latch and arm permitting manual operation of the arm and valve at any time.

5. In a train pipe coupling, the combination of a coupling head supported to be bodily adjusted when engaged with or disengaged from another coupling and provided with a fluid passage, a rotary valve within said passage, an arm connected with and adapted to turn said valve to open and close the fluid passage, a latch bar pivotally supported independently of the coupling head and having formed therein two communicating slots, and a projection on said arm normally entering one of said slots, whereby the latch and valve arm are connected to cause the latter to automatically actuate the valve to open or close the fluid passage as the coupling head is engaged with or disengaged from another head, and said arm and valve being adapted to be manually operated when the latch bar is moved to bring the projection on said arm into the other slot in the latch bar.

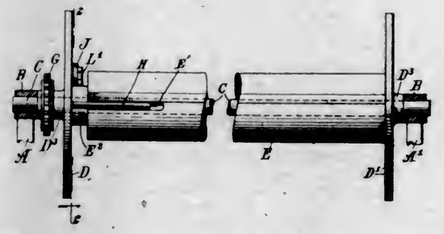
[Claims 6 to 8 not printed in the Gazette.]

873,949. PIANO SOUNDING-BOARD. WILLIAM H. KNIGHT, Boston, Mass. Filed Apr. 15, 1907. Serial No. 368,443.



The combination with a piano sounding-board, of a series of wooden ribs or bars which severally, at and along one and the edge of each by which it is secured to the board, are convex from end to end and at and along the other and opposite and unattached edge of each are substantially correspondingly concave from end to end, and a piano frame having opposite end-uprights, each of which has a convex face which extends in the direction of its height, and substantially corresponds to the convexity of said bars, and has the sounding-board attached thereto, all substantially as described and for the purposes specified.

873,950. MUSIC-ROLL. HENRY KOCH, Rahway, N. J., assignor to The Regina Company, Rahway, N. J., a Corporation of New Jersey. Filed Apr. 4, 1907. Serial No. 366,310.



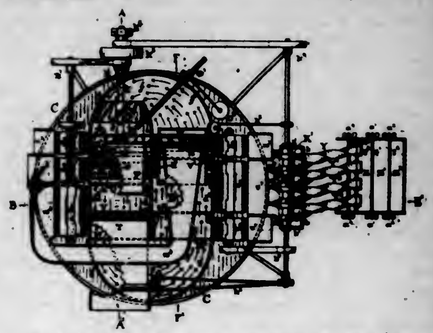
1. A spool for automatic musical instruments, comprising a shaft having a flange secured thereto at a distance from one end, and a pin projected from said flange parallel with the shaft toward the other end, and another flage arranged to be slipped on and off the said other end of the shaft.

2. A spool for automatic musical instruments, comprising a shaft with flanges adjacent to its ends, one of said flanges being arranged to be slipped on and off the shaft, and one of the flanges having an eccentric pin projected toward the other flange parallel with the shaft.

3. A music roll for automatic musical instruments, comprising a shaft with a fixed flange adjacent to one end and a removable flange adjacent to the other end, one of said flanges having an eccentric pin projected toward the other flange parallel with the shaft and a core having an axial bore to receive the shaft and an eccentric recess for said pin.

4. The combination with the spool shaft having flanges adjacent to each end and a pin projected from one of the flanges toward the other parallel with the shaft, of the core fitted between said flanges and having an axial bore to receive the shaft, a recess for said pin and a reduced portion adjacent to the flange from which said pin is projected, so as to expose a portion of the pin and mechanism arranged to be engaged by said exposed portion of the pin when the note sheet is unwound.

873,951. SEPARATOR FOR LUMP MATERIAL. ARTHUR LANGERFELD, Scranton, Pa. Filed Oct. 17, 1902. Serial No. 127,615.

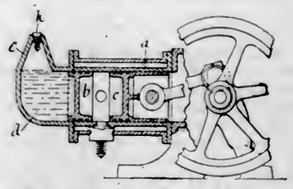


1. In a separator for lump material, a tank having main and return channels, means for maintaining a circulation of liquids through said channels, separating partitions arranged across the bottoms of said channels, means arranged at the head of the main channel for feeding material into said channel, devices for shooting the material into the return channel against the flow of liquid, and means for conveying the partly separated material from the main channel to said devices.

2. In a separator for lump material, a channel adapted to contain a flowing liquid stream, means for shooting pieces of material into said liquid stream against the current flow, and separating partitions arranged in the bottom of the channel under the current of the liquid.

3. In a separator for lump material, the combination with a channel adapted to contain a flowing liquid stream, and separating partitions in the bottom of the channel, of means for dropping the material to be separated into the flowing liquid in said channel, whereby the material becomes partly separated by dispersion, means for removing the so separated materials from the liquid, and means arranged to shoot part of the separated materials into the flowing liquid against the current of the liquid.

873,952. INTERNAL-COMBUSTION ENGINE. FRANCIS LYST, London, England. Filed Dec. 5, 1904. Serial No. 235,644.

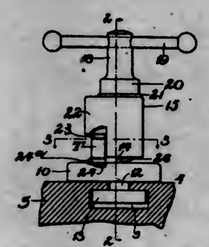


In an internal combustion engine, the combination with the cylinder, working piston, connecting rod, crank shaft and an air-cushioned recoil piston, of a water chamber to the rear of said recoil piston and a conical air chamber connected with said water chamber as and for the purpose set forth.

873,953. TOOL-HOLDER. WALTER B. MEHL, Waltham, Mass., assignor of one-half to William H. Sawtelle, Waltham, Mass. Filed Sept. 7, 1906. Serial No. 333,652.

1. A tool holder comprising a base having a flat under surface for direct support by the slide rest of a lathe and having elongated posts rising therefrom, a bolt extending through the base, a clamping member surrounding the bolt and having post-receiving openings and being recessed at one side to receive a tool between an overhanging portion of said clamping member and the base, said post-receiving openings being deep to permit different

sized tools to be clamped without disengagement from the posts, and a nut upon the bolt coöperating with the clamping member.



2. A tool holder comprising a base having a flat under surface for direct support by the slide rest of a lathe and having elongated posts rising therefrom, a bolt extending through the base, a clamping member surrounding the bolt and having post-receiving openings and having an intermedate opening to receive the said bolt, the lower portion of said intermediate opening being enlarged, the said clamping member being recessed at one side to receive a tool between the overhanging porton of said clamping member and the base, said post-receiving openings being adapted to permit different sized tools to be clamped without disengagement from the posts, a nut upon the bolt coöperating with the clamping member, and a spring surrounding the bolt and located in the enlargement of the intermediate opening of the clamping member.

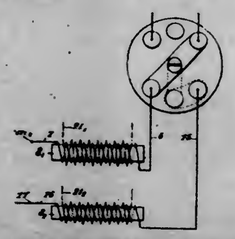
3. A tool holder comprising a base, a guide member rising from the base, a clamping member operating upon the guide member and having a tool recess beyond which the guide member extends to give lateral support to the tool, and means for drawing the clamping member and base toward one another.

4. A tool holder comprising a base, separated posts rising from the base, a clamping member having openings into which the posts pass, and means for drawing the clamping member and base toward one another.

5. A tool holder comprising a base, a member rising from the base, a clamping member having an opening to receive said base member and also being provided with a recess for the reception of a tool, the opening extending through the wall of the recess to allow contact between the tool and the base member, and means for drawing the clamping member and base toward one another.

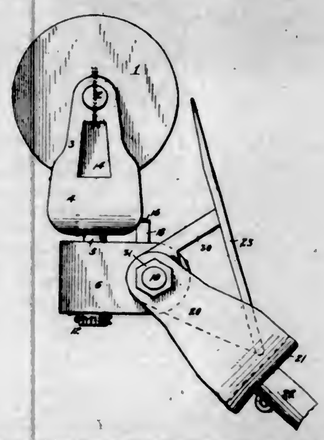
[Claim 6 not printed in the Gazette.]

873,954. SPARKING COIL WITH MULTIPLE WINDING FOR IGNITION AND LIKE PURPOSES. AUGUSTE MICHEL, Paris, France. Filed Nov. 20, 1905. Serial No. 288,129.



In an electric igniting system, the combination of an igniter and spark coil, a secondary winding on said spark coil connected to said igniter, a primary winding on said spark coil having its respective ends connected to a source of electric energy and to the earth, a second independent primary winding on said spark coil having its ends connected respectively to an independent source of electric energy and to the earth, an interrupter in the earth connection of said second primary winding, and a switch for controlling the connection of each of said primary windings to its source of electric energy, said switch constructed to connect said two primary windings in parallel upon the switch adjustment for connecting the first of said windings with its source of electric energy, substantially as described.

873,955. TROLLEY-HEAD. CHARLES C. MCCLINTOCK, Englewood, Colo. Filed June 25, 1907. Seral No. 380,703.



1. The combination with a trolley pole, of a trolley wheel carried thereby, a deflector for the wheel pivoted for swinging movement toward and from the wheel, and a fastening member for clamping said deflector rigidly in an adjusted position with respect to the wheel, substantially as described.

2. The combination with a trolley pole having a yoke, of a head or body carrying a trolley wheel, a deflector, and a fastening passed through said yoke, said head and said deflector for adjustably connecting the same, substantially as described.

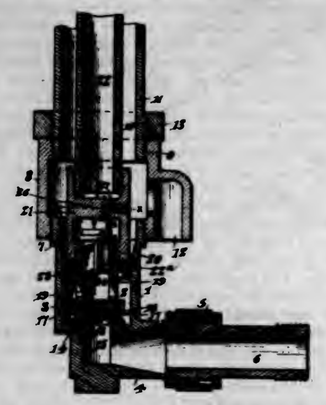
3. The combination with the trolley pole having a yoke formed with apertured arms, of a head or body carrying a trolley wheel and formed with an aperture and with serrations arranged on the opposite sides of said body adjacent to its aperture, a washer having projections to engage one of the arms of the yoke and serrations to engage the serrations on one face of the head, a deflector having an arm formed with an aperture and with serrations adapted to engage the serrations on the other face of said head and a bolt passed through the apertures or openings in said yoke, said washer, said head and said deflector, substantially as and for the purpose set forth.

4. The combination with a trolley pole, of a head or body carried by the pole, a trolley wheel mounted upon said head or body, a deflector for the wheel provided with an arm having serrations to engage said head or body and a pivot fastening passed through the arm of the deflector and into said head or body to adjustably clamp said arm upon the latter, substantially as described.

873,956. WASTE-VALVE FOR HYDRANTS. HORACE F. NEUMEYER, Macungie, Pa. Filed July 10, 1907. Serial No. 388,057.

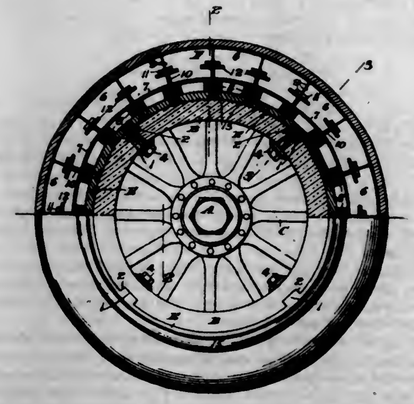
1. In a waste valve, the combination with a cylinder, and a discharge pipe, of a plunger valve operating in the cylinder, a coupling connecting the plunger valve with the discharge pipe and provided with a cross bar having a drain passage, and an automatic lifting valve operating within the coupling at a point below the cross bar and spaced from the walls of the sad coupling, said lifting valve being normally seated on the plunger valve and arranged to close the drain passage.

2. In a waste valve, the combination with a cylinder, and a discharge pipe, of a plunger valve operating in the cylinder, a coupling connecting the plunger valve with the discharge pipe and provided with a cross bar having a drain passage extending from the lower face of the cross bar at a point intermediate of the ends thereof to the exterior of the coupling, and an automatic lifting valve provided with a flanged stem guided in the upper portion of the plunger valve, said lifting valve being normally seated on the plunger valve and spaced from the walls of the coupling and arranged to close the drain passage.



3. In a waste valve, the combination with a cylinder, and a discharge pipe, of a plunger valve operating within the cylinder, a coupling connecting the plunger valve with the discharge pipe and provided with a cross bar having a flat lower face spaced from the plunger valve, said cross bar being also provided with a drain passage consisting of a vertical branch extending upwardly from the lower face of the cross bar, and a horizontal branch extending from the vertical branch to the exterior of the coupling, and an automatic lifting valve spaced from the walls of the coupling and provided with a flanged stem guided in the upper end of the plunger valve.

873,957. VEHICLE-TIRE. GEORGE A. PEARSE, Jr., New York, N. Y. Filed Mar. 9, 1907. Serial No. 361,474.

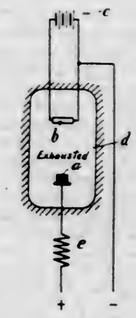


1. In a vehicle tire, the combination of a circular rim consisting of U shaped sections having an elastic outside covering, of a ring adapted to be mounted on the felly, means for securing the ring to the felly, and elastic blocks interposed between the ring and the U shaped sections comprising the ring, substantially as described.

2. In a vehicle tire, the combination of a covered rim consisting of U shaped sections, of a ring adapted to be mounted on the felly, means for securing the ring to the felly, of elastic blocks interposed between the ring and the U shaped sections comprising the rim, and means for retaining the ring, the U shaped sections and the elastic blocks in the proper relation one to the other, substantially as described.

3. In a vehicle tire, the combination of a covered rim consisting of U shaped sections, of a ring provided with inwardly projecting lugs, of a felly having recesses formed in the outer periphery thereof, and adapted to receive the said lugs, bolts for securing the ring and felly together, of elastic blocks interposed between the ring and the edges of the U shaped sections comprising the rim, and headed bolts secured to the ring and passing freely through the elastic blocks and engaging bars secured to the U shaped sections to prevent excessive outward movement of the said sections, substantially as described.

873,958. METHOD OF PRODUCING HOMOGENEOUS BODIES FROM TANTALUM OR OTHER HIGHLY-REFRACTORY METALS. MARCELLO VON PIRANI, Wilmersdorf, near Berlin, Germany, assignor to Siemens & Halsks Aktiengesellschaft, Berlin, Germany, a Corporation of Germany. Filed Mar. 18, 1907. Serial No. 362,821.



1. The method of producing homogeneous bodies from tantalum and other highly refractory metals which consists in creating a substantial vacuum, ionizing the residue of gas therein and subjecting the metal to the influence of an electric arc therein.

2. The method of producing homogeneous bodies from tantalum and other highly refractory metals, which consists in creating a substantial vacuum, ionizing the residue of gas therein, and forming therein an electric arc from the metal.

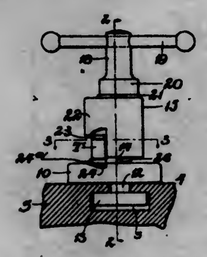
3. The method of producing homogeneous bodies from tantalum and other highly refractory metals, which consists in creating a substantial vacuum, ionizing the residue of gas therein, connecting the metal with the anode of an electric arc circuit therein and passing an electric current through said circuit.

4. The method of producing homogeneous bodies from tantalum and other highly refractory metals, which consists in creating a substantial vacuum, heating a metallic oxid therein and thereby ionizing the residue of gas therein, and subjecting the metal to the influence of an electric arc therein.

5. The method of producing homogeneous bodies from tantalum and other highly refractory metals, which consists in creating a substantial vacuum, heating a metallic oxid therein and thereby ionizing the residue of gas therein, and forming therein an electric arc from the metal.

[Claims 6 to 13 not printed in the Gazette.]

sized tools to be clamped without disengagement from the posts, and a nut upon the bolt coöperating with the clamping member.



2. A tool holder comprising a base having a flat under surface for direct support by the slide rest of a lathe and having elongated posts rising therefrom, a bolt extending through the base, a clamping member surrounding the bolt and having post-receiving openings and having an intermedate opening to receive the said bolt, the lower portion of said intermediate opening being enlarged, the said clamping member being recessed at one side to receive a tool between the overhanging porton of said clamping member and the base, said post-receiving openings being adapted to permit different sized tools to be clamped without disengagement from the posts, a nut upon the bolt cooperating with the clamping member, and a spring surrounding the bolt and located in the enlargement of the intermediate opening of the clamping member.

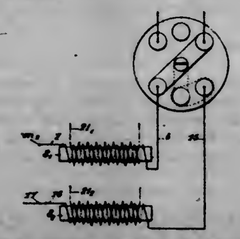
3. A tool holder comprising a base, a guide member rising from the base, a clamping member operating upon the guide member and having a tool recess beyond which the guide member extends to give lateral support to the tool, and means for drawing the clamping member and base toward one another.

4. A tool holder comprising a base, separated posts rising from the base, a clamping member having openings into which the posts pass, and means for drawing the clamping member and base toward one another.

5. A tool holder comprising a base, a member rising from the base, a clamping member having an opening to receive said base member and also being provided with a recess for the reception of a tool, the opening extending through the wall of the recess to allow contact between the tool and the base member, and means for drawing the clamping member and base toward one another.

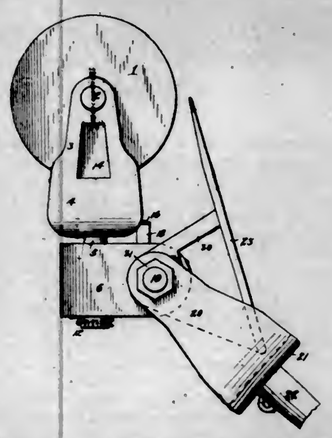
[Claim 6 not printed in the Gazette.]

873,954. SPARKING COIL WITH MULTIPLE WINDING FOR IGNITION AND LIKE PURPOSES. AUGUSTE MICHEL, Paris, France. Filed Nov. 20, 1905. Serial No. 288,129.



In an electric igniting system, the combination of an igniter and spark coil, a secondary winding on said spark coil connected to said igniter, a primary winding on said spark coil having its respective ends connected to a source of electric energy and to the earth, a second independent primary winding on said spark coil having its ends connected respectively to an independent source of electric energy and to the earth, an interrupter in the earth connection of said second primary winding, and a switch for controlling the connection of each of said primary windings to its source of electric energy, said switch constructed to connect said two primary windings in parallel upon the switch adjustment for connecting the first of said windings with its source of electric energy, substantially as described.

873,955. TROLLEY-HEAD. CHARLES C. MCCLINTOCK, Englewood, Colo. Filed June 25, 1907. Seral No. 380,703.



1. The combination with a trolley pole, of a trolley wheel carried thereby, a deflector for the wheel pivoted for swinging movement toward and from the wheel, and a fastening member for clamping said deflector rigidly in an adjusted position with respect to the wheel, substantially as described.

2. The combination with a trolley pole having a yoke, of a head or body carrying a trolley wheel, a deflector, and a fastening passed through said yoke, said head and said deflector for adjustably connecting the same, substantially as described.

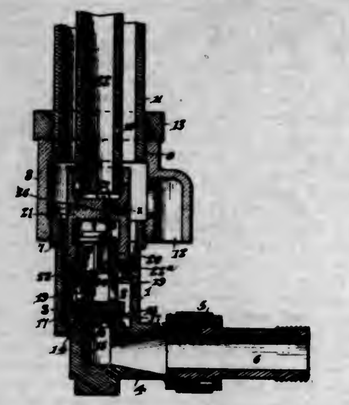
3. The combination with the trolley pole having a yoke formed with apertured arms, of a head or body carrying a trolley wheel and formed with an aperture and with serrations arranged on the opposite sides of said body adjacent to its aperture, a washer having projections to engage one of the arms of the yoke and serrations to engage the serrations on one face of the head, a deflector having an arm formed with an aperture and with serrations adapted to engage the serrations on the other face of said head and a bolt passed through the apertures or openings in said yoke, said washer, said head and said deflector, substantially as and for the purpose set forth.

4. The combination with a trolley pole, of a head or body carried by the pole, a trolley wheel mounted upon said head or body, a deflector for the wheel provided with an arm having serrations to engage said head or body and a pivot fastening passed through the arm of the deflector and into said head or body to adjustably clamp said arm upon the latter, substantially as described.

873,956. WASTE-VALVE FOR HYDRANTS. HORACE F. NEUMEYER, Macungie, Pa. Filed July 10, 1907. Serial No. 388,057.

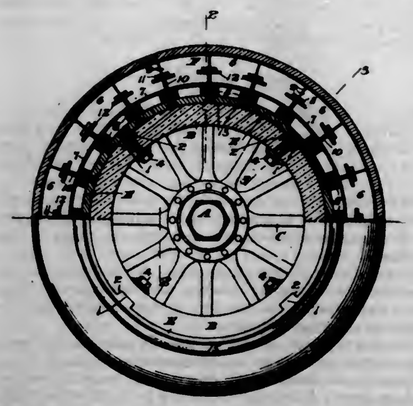
1. In a waste valve, the combination with a cylinder, and a discharge pipe, of a plunger valve operating in the cylinder, a coupling connecting the plunger valve with the discharge pipe and provided with a cross bar having a drain passage, and an automatic lifting valve operating within the coupling at a point below the cross bar and spaced from the walls of the sad coupling, said lifting valve being normally seated on the plunger valve and arranged to close the drain passage.

2. In a waste valve, the combination with a cylinder, and a discharge pipe, of a plunger valve operating in the cylinder, a coupling connecting the plunger valve with the discharge pipe and provided with a cross bar having a drain passage extending from the lower face of the cross bar at a point intermediate of the ends thereof to the exterior of the coupling, and an automatic lifting valve provided with a flanged stem guided in the upper portion of the plunger valve, said lifting valve being normally seated on the plunger valve and spaced from the walls of the coupling and arranged to close the drain passage.



3. In a waste valve, the combination with a cylinder, and a discharge pipe, of a plunger valve operating within the cylinder, a coupling connecting the plunger valve with the discharge pipe and provided with a cross bar having a flat lower face spaced from the plunger valve, said cross bar being also provided with a drain passage consisting of a vertical branch extending upwardly from the lower face of the cross bar, and a horizontal branch extending from the vertical branch to the exterior of the coupling, and an automatic lifting valve spaced from the walls of the coupling and provided with a flanged stem guided in the upper end of the plunger valve.

873,957. VEHICLE-TIRE. GEORGE A. PEARSE, Jr., New York, N. Y. Filed Mar. 9, 1907. Serial No. 361,474.

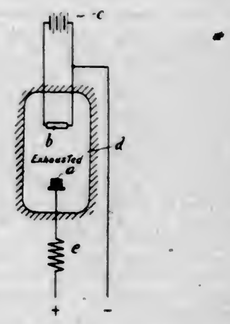


1. In a vehicle tire, the combination of a circular rim consisting of U shaped sections having an elastic outside covering, of a ring adapted to be mounted on the felly, means for securing the ring to the felly, and elastic blocks interposed between the ring and the U shaped sections comprising the ring, substantially as described.

2. In a vehicle tire, the combination of a covered rim consisting of U shaped sections, of a ring adapted to be mounted on the felly, means for securing the ring to the felly, of elastic blocks interposed between the ring and the U shaped sections comprising the rim, and means for retaining the ring, the U shaped sections and the elastic blocks in the proper relation one to the other, substantially as described.

3. In a vehicle tire, the combination of a covered rim consisting of U shaped sections, of a ring provided with inwardly projecting lugs, of a felly having recesses formed in the outer periphery thereof, and adapted to receive the said lugs, bolts for securing the ring and felly together, of elastic blocks interposed between the ring and the edges of the U shaped sections comprising the rim, and headed bolts secured to the ring and passing freely through the elastic blocks and engaging bars secured to the U shaped sections to prevent excessive outward movement of the said sections, substantially as described.

873,958. METHOD OF PRODUCING HOMOGENEOUS BODIES FROM TANTALUM OR OTHER HIGHLY-REFRACTORY METALS. MARCELLO VON PIRANI, Wilmersdorf, near Berlin, Germany, assignor to Siemens & Halsks Aktiengesellschaft, Berlin, Germany, a Corporation of Germany. Filed Mar. 18, 1907. Serial No. 362,821.



1. The method of producing homogeneous bodies from tantalum and other highly refractory metals which consists in creating a substantial vacuum, ionizing the residue of gas therein and subjecting the metal to the influence of an electric arc therein.

2. The method of producing homogeneous bodies from tantalum and other highly refractory metals, which consists in creating a substantial vacuum, ionizing the residue of gas therein, and forming therein an electric arc from the metal.

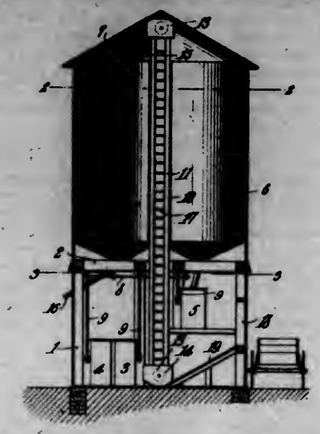
3. The method of producing homogeneous bodies from tantalum and other highly refractory metals, which consists in creating a substantial vacuum, ionizing the residue of gas therein, connecting the metal with the anode of an electric arc circuit therein and passing an electric current through said circuit.

4. The method of producing homogeneous bodies from tantalum and other highly refractory metals, which consists in creating a substantial vacuum, heating a metallic oxid therein and thereby ionizing the residue of gas therein, and subjecting the metal to the influence of an electric arc therein.

5. The method of producing homogeneous bodies from tantalum and other highly refractory metals, which consists in creating a substantial vacuum, heating a metallic oxid therein and thereby ionizing the residue of gas therein, and forming therein an electric arc from the metal.

[Claims 6 to 13 not printed in the Gazette.]

873,959. GRAIN-ELEVATOR. JOSEPH W. ROBERTS, Smithville, Mo. Filed Aug. 15, 1907. Serial No. 388,699.



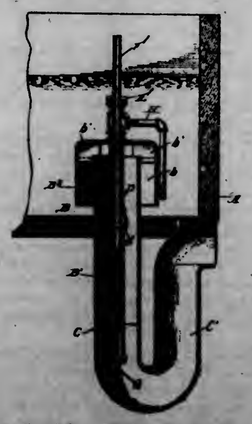
A bin having a shaft centrally located therein, inclosed bucket ways located at the opposite sides of the shaft, an endless elevator operating in the bucket ways and spaced ladder rounds attached at their ends to the sides of the bucket ways.

873,960. METHOD OF PRODUCING PLASTIC COMPOSITION. HERMANN SCHUDT, Charlottenburg, Germany. Filed Apr. 8, 1907. Serial No. 366,923.

1. A method of producing plastic composition, designed to be employed for applying stucco, or for insulating and impregnating purposes and the like, consisting in forming a sticky paste of infusorial earth and glue, mixing with this paste heated oil and resin, and adding to the mixture thus produced a strong solution of soap.

2. A method of producing plastic composition, designed to be employed for applying stucco or for insulating and impregnating purposes and the like, consisting in forming a sticky paste of infusorial earth and glue, mixing with this paste heated oil and resin, adding to the mixture a strong solution of soap and introducing tow in the mixture thus obtained.

873,961. SIPHON. WILLIAM S. SHIELDS, Chicago, Ill. Filed June 19, 1906. Serial No. 322,361.



1. An automatic siphon having a trap, an air vent having a down take leg and an uptake leg communicating at bottom to form a trap for confining air in the upper part of the siphon, the downtake leg being in communication with the siphon and the uptake leg being open to atmosphere for the escape of air, a drain pipe communicating with the uptake leg and extending downward from the point of communication, the two legs of the vent trap being relatively adjustable for the purpose of varying the depth of the seal in the said vent trap and therefore determining the height of the hydrostatic column necessary to force said seal and permit the escape of air from the siphon, substantially as described.

2. An automatic siphon having a trap, an air vent having a downtake leg and an uptake leg communicating at bottom to form a trap for confining air in the upper part of the siphon, the downtake leg being in communication with the siphon and the uptake leg being open to atmosphere for the escape of air, the uptake leg of the vent being adjustable vertically relatively to the downtake leg for the purpose of varying the depth of the seal in the vent trap and thereby determining the height of the hydrostatic column required to force said seal and permit the escape of air from the siphon.

3. An automatic siphon having a trap, an air vent having a downtake leg and an uptake leg communicating at bottom to form a trap for confining air in the upper part of the siphon, said uptake leg being located partly within the siphon and partly above it, the top of the siphon being provided with an opening through which said uptake leg passes, and means for adjustably securing said uptake leg in said opening whereby it may be moved up or down relatively to the downtake leg for varying the depth of the seal in the vent trap, and thereby determining the height of the hydrostatic column required for forcing the seal of the vent trap and permit the escape of air from the siphon, substantially as described.

4. A siphon having a trap, a vent pipe having a downtake leg and an up-take leg communicating at bottom to form a trap, the up-take leg extending both above and below the top of the siphon and its lower portion being located within the down-take leg, the down-take leg being in communication with the siphon and the up-take leg being open above the siphon for the escape of air, a drain communicating with the up-take leg, the up-take leg being adjustable relatively to the down-take leg for the purpose of varying the depth of the seal in the trap, substantially as described.

5. A siphon having a trap, a vent pipe having a downtake leg communicating with the siphon, means for closing the lower end of the down-take leg, an up-take leg extending both above and below the top of the siphon, the lower portion of said up-take leg being within the down-take leg, and a drain pipe passing through the bottom of the downtake leg and extending upward within the up-take leg, substantially as described.

873,962. TOY-RAILWAY TURN-TABLE. EDWARD F. SLATTERY, New York, N. Y., assignor to The Ives Manufacturing Corporation, Bridgeport, Conn., a Corporation of Connecticut. Filed Apr. 5, 1907. Serial No. 366,587.

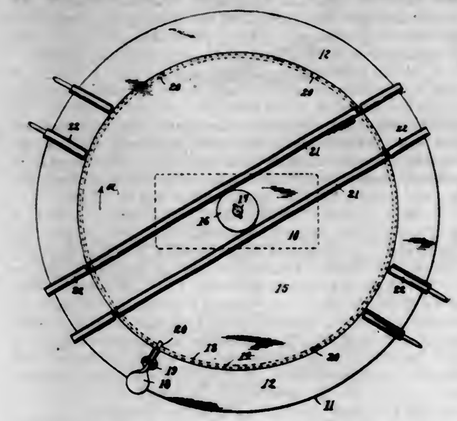
1. In a toy railway turn-table, the combination of a base having attached approaches, a table rotatably mounted upon said base and intermediate said approaches, and a clock spring movement connected with the table to rotate the same.

2. In a toy railway turn-table, the combination of a base plate, a support attached to said base, a table rotatably mounted upon the support, and a clock spring movement for rotating said table.

3. In a toy railway turn-table, the combination with a base having an annular casing supporting a flange, a table mounted in the casing and supported upon said flange, and a clock spring movement connected to operate the table.

4. In a toy railway turn-table, the combination with a sheet metal base plate, of an annular sheet metal support attached thereto, a sheet metal table rotatably mounted upon said support, and a transverse track upon the said table.

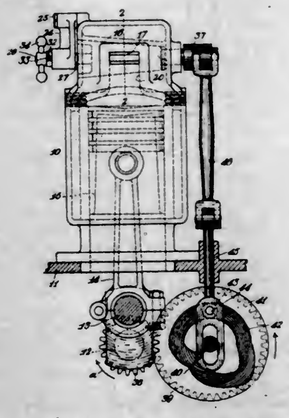
5. In a toy railway turn-table, the combination of a base having approaches attached to each side, a table rotatably mounted intermediate said approaches, a clock spring movement to operate the table, track sections



mounted at opposite points upon the approaches, and a track section upon the table adapted to register with the track sections of the approaches.

[Claims 6 to 14 not printed in the Gazette.]

873,963. INTERNAL-COMBUSTION ENGINE. BENJAMIN A. SLOCUM, Lynn, Mass., assignor to John R. Vaux, Swampscott, Mass. Filed Mar. 1, 1907. Serial No. 359,951.



1. In an internal combustion engine, a cylinder provided with a combustion space, a conical valve recess connected to said combustion space and an inlet passage leading into said conical recess, a conical valve rotatably mounted in said recess, said valve provided with a passage adapted to be moved into position to open communication from said inlet passage to said combustion space, an arm pivotally mounted on said cylinder, a plunger mounted on said arm, said plunger being slidable toward and away from said valve, a spring adapted to normally press said plunger against said valve, and mechanism for actuating said valve.

2. In an internal combustion engine, a cylinder provided with a combustion space, a conical valve recess connected to said combustion space and an inlet passage leading into said conical recess, a conical valve rotatably mounted in said recess, said valve provided with a passage adapted to be moved into position to open communication from said inlet passage to said combustion space, an arm pivotally mounted on said cylinder, a plunger slidably and rotatably mounted in said arm, a pin fast to said plunger adapted to engage said cam, a spring adapted to normally press said plunger against said valve, and mechanism for actuating said valve.

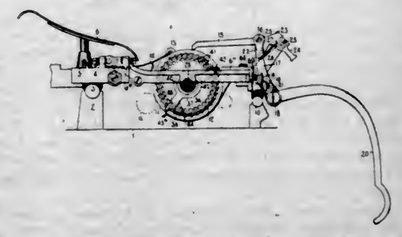
3. In an internal combustion engine, a cylinder provided with a combustion space, a conical valve recess connected to said combustion space and an inlet passage leading into said conical recess, a conical valve rotatably mounted in said recess, said valve provided with a passage adapted to be moved into position to open communication from said inlet passage to said combustion space, an arm mounted on said cylinder, said arm having a cam formed thereon, a plunger slidably and rotatably mounted in said arm, a pin fast to said plunger adapted to engage said cam, a spring adapted to normally press said plunger against said valve, and mechanism for actuating said valve.

4. In an internal combustion engine, a cylinder provided with a combustion space, a conical valve recess connected to said combustion space and an inlet passage leading into said conical recess, a conical valve rotatably mounted in said recess, said valve provided with a passage adapted to be moved into position to open communication from said inlet passage to said combustion space, an arm mounted on said cylinder, a plunger mounted in said arm, said plunger being slidable toward and away from said valve, a spring adapted to normally press said plunger against said valve, and means for withdrawing said plunger from engagement with said valve.

5. In an internal combustion engine, a cylinder provided with a combustion space, a valve recess connected to said combustion space and an inlet passage leading into said recess, a valve rotatably mounted in said recess, said valve provided with a passage adapted to be moved into position to open communication from said inlet passage to said combustion space, an arm pivotally mounted on said cylinder, said arm having a cam formed thereon, a plunger slidably and rotatably mounted in said arm, a pin fast to said plunger adapted to engage said cam, a spring adapted to normally press said plunger against said valve, and mechanism for actuating said valve.

[Claims 6 to 9 not printed in the Gazette.]

873,964. TYPE-WRITING MACHINE. CHARLES E. SMITH, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 7, 1906. Serial No. 310,450.



1. In a typewriting machine, the combination of a platen, a finger wheel connected to turn with and fixed against turning relatively to said platen, stop devices, a second finger wheel connected with certain of said stop devices, and means for directly connecting said finger wheels and thereby connecting the parts controlled by said finger wheels to rotate together.

2. In a typewriting machine, the combination of a rotary platen, a finger wheel connected to turn with and fixed against turning relatively to said platen, stop devices, a second finger wheel connected with certain of said stop devices, means for effecting a relative adjustment between certain of said stop devices, and means for directly

connecting said finger wheels and thereby connecting the parts controlled by said finger wheels to rotate together.

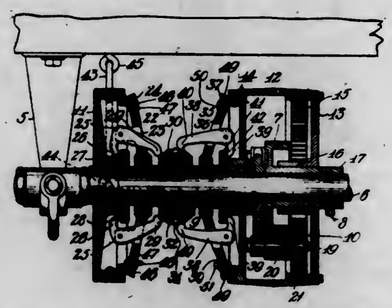
3. In a typewriting machine, the combination of a platen, stops for arresting the rotation of the platen in opposite directions, a clutch member connected with certain of said stops and adapted to remain fixed when the platen is turned, a finger wheel movable longitudinally of the platen and fixed against rotation independently of the platen, and a clutch member connected with said finger wheel and adapted to coöperate with said first mentioned clutch member to lock the finger wheel, platen and certain of said stops to rotate together.

4. In a typewriting machine, the combination of a platen, stops adapted to arrest the platen in its rotation in opposite directions, a two-part finger wheel, each part carrying a clutch member, one part of the finger wheel being connected to turn with said platen and the other of said parts being connected to certain of said stops and relatively to which the first mentioned part may receive a continuous rotation.

5. In a typewriting machine, the combination of a platen, a platen shaft, stops for arresting the rotation of the platen in opposite directions, certain of said stops being adapted to rotate around the platen shaft, a clutch member operatively and fixedly connected with certain of said stops, a finger wheel that is splined to the platen shaft, and a second clutch section fixedly connected with said finger wheel and by means of which it is moved into and out of clutching engagement with said first mentioned clutch section.

[Claims 6 to 23 not printed in the Gazette.]

873,965. POWER-TRANSMITTING MECHANISM. HOLLIS B. SMITH, Cambridge, Mass. Filed Nov. 3, 1906. Serial No. 341,819.



1. In a power transmitting mechanism, a shaft, a rotatable member journaled on said shaft, an external gear mounted on said shaft, an internal gear, two pinions of different diameters fast to each other and rotatably mounted on said member, the smaller of said pinions meshing into said external gear and the larger of said pinions meshing into said internal gear, a stationary member, and means for connecting said rotatable member to said stationary member and to said internal gear one at a time.

2. In a power transmitting mechanism, a shaft, a sleeve rotatably mounted on said shaft, an external gear mounted on said shaft, said gear provided with a hub, an integral gear member journaled on said sleeve and hub, two pinions of different diameters fast to each other and rotatably mounted on said sleeve, the smaller of said pinions meshing into said external gear and the larger of said pinions meshing into said internal gear, a stationary member, and means for connecting said sleeve to said stationary member and to said internal gear one at a time.

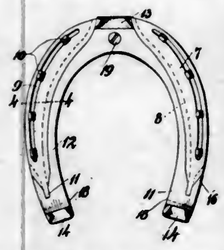
3. In a power transmitting mechanism, a shaft, a sleeve rotatably mounted on said shaft, an external gear fast to said shaft, said gear provided with a hub, an internal gear, constituting also a rotary clutch member, journaled on said sleeve and hub, two pinions of different diameters fast to each other and rotatably mounted on said sleeve, the smaller of said pinions meshing into said external gear and the larger of said pinions meshing into said internal gear, a stationary clutch member, two clutch members fast to said sleeve adapted to engage said rotary clutch member and said stationary clutch member, respectively, and means to operate said clutch members.

4. In a power transmitting mechanism, a shaft, a sleeve rotatably mounted on said shaft, a series of pinions rotatably mounted on said sleeve, a second series of relatively larger pinions fast to said first named series, respectively, an external gear mounted on said shaft, a stationary member, an internal gear member, and means for connecting said rotatable sleeve to said stationary member and to said internal gear member one at a time.

5. In a power transmitting mechanism, a shaft, a sleeve rotatably mounted on said shaft, said sleeve provided with a plurality of radial arms, a plurality of studs fast to said arms, respectively, an external gear fast to said shaft, said gear provided with a hub, an internal gear member journaled on said sleeve and hub, a plurality of pinions journaled on said studs, respectively, said pinions adapted to transmit motion from said internal gear to said external gear, a stationary member, and means for connecting said rotatable sleeve to said stationary member and to said internal gear one at a time.

[Claims 6 and 7 not printed in the Gazette.]

873,966. HORSESHOE. CHAUNCEY N. STEVENS, South Gliboa, N. Y. Filed Sept. 26, 1907. Serial No. 394,717.



1. A horse shoe comprising base and tread sections, the base section having a projecting part at the outer edge of each side, the projecting part being undercut at its inner edge, and the tread section being removably fitted between said projecting parts and being reduced at its outer side edges to fit said undercut parts and form a dovetail joint therewith, and having outwardly and forwardly extending projections at its heels, which fit around the ends of said projecting parts.

2. A horse-shoe comprising base and tread sections, the base sections having projecting undercut parts at opposite side edges and spaced apart at the toe, and the tread section having calks at toe and heels, and fitting at its toe in the space between the front ends of said parts, and being beveled at its outer edge to engage said undercut parts, the tread section being slidable in and out between the said parts from the rear, and means to fasten the same in place.

3. A horse shoe comprising base and tread sections, the base section having an undercut projecting part extending along the outer edge of each arm thereof and terminating in a tapered end at the rear, and the tread section having beveled edges fitting said undercut parts and forming a dovetail joint therewith, and having notches at the rear in which said tapered ends fit.

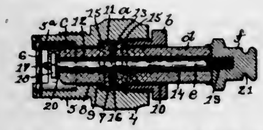
873,967. CLASP. MOSES M. STURM and JOSEPH SILVERSTEIN, New York, N. Y. Filed Apr. 2, 1907. Serial No. 366,027.

A clasp for hose or garment supporters comprising a body portion; a second apertured member hinged to the body member; a gripping member also hinged to the body member to press the second member towards the body member; an apertured spring secured to the body member at one of its ends and having the other end bearing



against the second member; a rubber button extending through the aperture in said spring and held between said spring and body member in position to pass into the aperture in the second member when the clasp is closed.

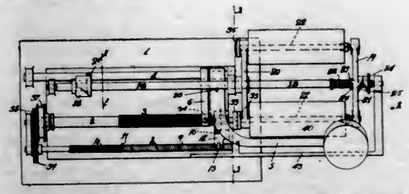
873,968. ELECTRIC SPARK-PLUG. FREDERICK B. THATCHER, Providence, R. I. Filed Jan. 31, 1907. Serial No. 355,035.



1. In a spark plug, an outer shell having one end formed with screw threads on its interior and its opposite end formed with screw threads on its exterior, a shoulder formed on the interior of said shell intermediate its length, an outer core member extending in one end of said shell, and having an inner annular lip, a packing sleeve around said outer member engaging said interior threads and abutting said lip, an inner core member extending within the other end of said shell and having a lip engaging said interior shoulder of the shell, the outer portion of said last named end of the shell being enlarged on its interior, a sparking point rod extending through said core members, a sparking point on said rod projecting into said enlarged interior of the shell, a collar on said rod to the rear of said point abutting said inner core member, said end of the shell surrounding the inner core member being formed with two oppositely disposed openings which expose said sparking point, and a wire terminal secured to said last named end of the shell at right angles to said openings thereof.

2. In a spark plug an outer shell, an inner and an outer core member in said shell, a sparking point rod extending through said members, a sparking point on said rod, a collar on the rod to the rear of said point abutting said inner core member, said shell being formed with an extension which incloses said inner core member and projects therebeyond, said extension being formed with a pair of oppositely disposed openings of a depth to expose said sparking point, and a wire terminal secured to said extension beyond said sparking point.

873,969. PHONOGRAPH. CHARLES THOMA, Jr., and WALTER THOMA, Carlstadt, N. J. Filed May 16, 1907. Serial No. 373,969.



1. In a phonograph, the combination of a record, a sound reproducing mechanism, and driving means for causing one of the said members to be reciprocated with relation to the other, comprising: a feed screw, a thread follower adapted to engage with the feed screw during the sound reproducing period, a double reversely threaded repeater screw, a second thread follower adapted to engage with the repeater screw, means for causing the first thread follower to disengage with the feed screw at the end of the sound reproducing period and the second thread follower to engage with one of the threads of the repeater screw thereby returning the parts to their original position, means for causing the second thread follower to engage with the other thread of the repeater screw at the end of the return movement so as to advance the parts prior to the sound reproducing period, and means for causing the second thread follower to disengage with the repeater screw and the first thread follower to engage with the feed screw at the beginning of the sound reproducing period.

2. In a phonograph, the combination of a record, a transversely movable sound reproducing mechanism, a feed screw, a thread follower, carried by the sound reproducing mechanism, a feed screw, a thread follower, carried by the sound reproducing mechanism, adapted to engage with the feed screw during the sound reproducing period a double reversely threaded repeater screw, a second thread follower, carried by the sound reproducing mechanism, adapted to engage with the repeater screw, means for causing the first thread follower to disengage with the feed screw at the end of the sound reproducing period and the second thread follower to engage with one of the threads of the repeater screw thereby returning the sound reproducing mechanism to its original position, means for causing the second thread follower to engage with the other thread of the repeater screw at the end of the return movement so as to advance the sound reproducing mechanism prior to the sound reproducing period, and means for causing the second thread follower to disengage with the repeater screw and the first thread follower to engage with the feed screw at the beginning of the sound reproducing period.

3. In a phonograph, the combination of a record, a sound reproducing mechanism, and driving means for causing one of the said members to reciprocate with relation to the other, comprising: a feed screw, a thread follower adapted to engage with the feed screw during the sound reproducing period, a double reversely threaded repeater screw whose threads are coarser than the threads of the feed screw, a second thread follower adapted to engage with the repeater screw, means for causing the first thread follower to disengage with the feed screw at the end of the sound reproducing period and the second thread follower to engage with one of the threads of the repeater screw thereby returning the parts to their original position at a greater speed than their speed during the sound reproducing period, means for causing the second thread follower to engage with the other thread of the repeater screw at the end of the return movement so as to advance the parts prior to the sound reproducing period at a speed greater than their speed during the sound reproducing period, and means for causing the second thread follower to disengage with the repeater screw and the first thread follower to engage with the feed screw at the beginning of the sound reproducing period.

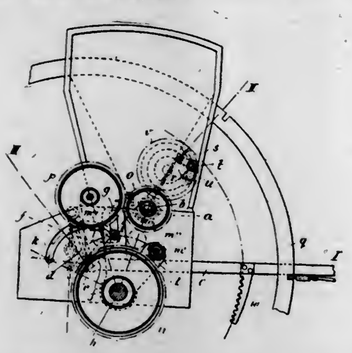
4. In a phonograph, the combination of a record, a transversely movable sound reproducing mechanism, a feed screw, a thread follower carried by the sound reproducing mechanism, adapted to engage with the feed screw during the sound reproducing period, a double reversely threaded repeater screw whose threads are coarser than the threads of the feed screw, a second thread follower, carried by the sound reproducing mechanism, adapted to engage with the repeater screw, means for causing the first thread follower to disengage with the feed screw at the end of the sound reproducing period and the second thread follower to engage with one of the threads of the repeater screw thereby returning the sound reproducing mechanism to its original position at a greater speed than its speed during the sound reproducing period, means for causing the thread follower to engage with the other thread of the repeater screw at the end of the return movement so as to advance the sound reproducing mech-

anism at a speed greater than its speed during the sound reproducing period, and means for causing the second thread follower to disengage with the repeater screw and the first thread follower to engage with the feed screw at the beginning of the sound reproducing period.

5. In a phonograph, the combination of a record, a transversely movable sound reproducing mechanism pivotally supported, a feed screw, a repeater screw, a stylus, and a thread follower for the feed screw, both carried by the sound reproducing mechanism and responding to the pivotal motion thereof, a second thread follower pivotally supported on the sound reproducing mechanism and adapted to engage with the repeater screw, means for turning the second thread follower around its pivot in one direction so as to cause it to engage with the repeater screw thereby lifting the sound reproducing mechanism around its pivotal support and raising the stylus out of engagement with the record and the first thread follower out of engagement with the feed screw, and means for turning the second thread follower around its pivot in the other direction so as to cause it to disengage with the repeater screw thereby allowing the sound reproducing mechanism to descend and the first thread follower to engage with the feed screw, and the stylus to engage with the record.

[Claims 6 to 9 not printed in the Gazette.]

873,970. GRAIN-DRILL. THEODOR UMRATH, Wysotschan, near Prague, Austria-Hungary, assignor to The Firm of Theodor Umrath Commanditgesellschaft, Wysotschan, near Prague, Austria-Hungary. Filed Apr. 12, 1905. Serial No. 255,083.



1. In a grain drill, the combination with a hopper and a feed wheel, of means for changing the direction of feed of the feed wheel.

2. In a grain drill, the combination with a hopper and seed feeding means carried therein, of means for rotating the feeding means and means for changing the direction of rotation of the feeding means.

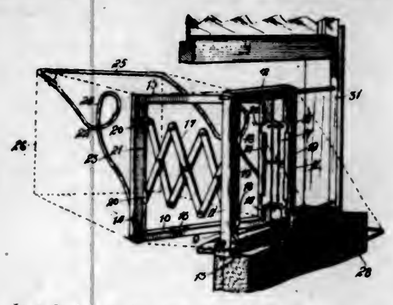
3. In a grain drill, the combination with a hopper, a feed wheel within the hopper, and a feed opening in the hopper, of means for continuously rotating the feed wheel, means for reversing the direction of rotation of the feed and means for regulating the feed opening.

4. In a grain drill, the combination with a hopper, a feed wheel within the hopper, and a feed opening in the hopper, of means for continuously rotating the feed wheel, means for simultaneously reversing the direction of rotation of the feed and for regulating the feed opening.

5. In a grain drill, the combination with a hopper, a feed wheel, a spur gear on the feed wheel shaft and an idler meshing with the spur wheel, of a main gear wheel, a pinion meshing with the main gear and means for causing the pinion to mesh with the feed wheel gear, and means for causing the pinion to mesh with the idler for causing the reversal of the direction of rotation of the feed wheel.

[Claims 6 to 8 not printed in the Gazette.]

873,971. WINDOW-TENT. WILLIAM E. WALSH, Morris, Ill. Filed Feb. 5, 1907. Serial No. 355,917.



1. In a device of the class described, a frame adapted to be held within a window, a canopy portion outwardly projecting from the frame, and a box portion secured to the frame and adapted to be swung at different angles with respect thereto, substantially as described.

2. In a device of the class described, the combination of a fixed frame, a canopy portion outwardly projecting from the fixed frame, a supporting bracket adjustably mounted with respect to the fixed frame, and a box portion carried by the bracket and adapted to be swung at different angles with respect to the fixed frame, substantially as described.

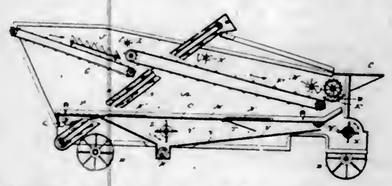
3. In a device of the class described, the combination of a fixed frame and a movable frame, a canopy secured to the fixed frame, a box secured to the movable frame, and an adjustable connection between the two frames for permitting the box to be swung at different angles, and a flexible covering for the connection, substantially as described.

4. In a device of the class described, the combination of a frame adapted to be held within a window, a bracket connected with the frame and adjustable to different angles with respect thereto, and a box carried by the bracket, substantially as described.

5. In a device of the class described, the combination of a fixed frame, a movable frame, a lazy tong connection between the two frames, a flexible covering between the two frames, and a box carried by the movable frame and adjustable to different angles with respect to the fixed frame, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

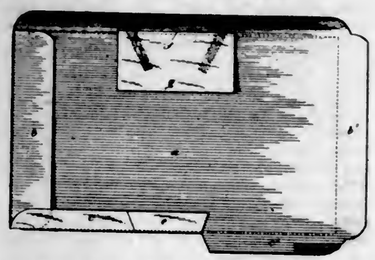
873,972. GRAIN-SEPARATOR. FRANCIS F. WELLS, Elkton, Oreg. Filed Dec. 29, 1905. Serial No. 293,844.



The combination with a grain separator, of a continuous shoe extending the full length of the machine having an upwardly inclined forward end and a tail rake formed at the rear end thereof, gratings formed in the shoe near its ends, reciprocating screens over the gratings to form riddles, the central portion of the shoe between the riddles having corrugations formed therein, an angular deflecting plate depending from the shoe beneath one of the riddles, a compartment beneath the shoe having inclined bottom walls and a groove-way formed in the lowest portion of the bottom, a grain auger located therein, independent fans to the riddles, one of the fans being located in the compartment between the two riddles, and the other fan being located in the front end of the machine beneath the upturned end

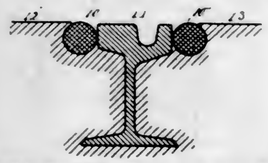
of the shoe, and a fine-mesh seed screen located in the inclined bottom of the compartment so as to receive material from the deflecting plate.

873,973. BOOK-COVER. IRA S. WOLCOTT, Tremont, Pa. Filed July 25, 1907. Serial No. 385,587.



A book cover of the character described adapted to books of various sizes and comprising a substantially rectangular body portion and infolding top, bottom and end portions, one end of the bottom portion and one end portion being folded and pasted together ready to receive the lid of the book, the remaining top and bottom sections being gummed on their inner surfaces, the cover having converging lines cut through a portion of the top and bottom as shown, forming two tongues, the upper one of which is gummed for pasting to the inside of the cover, the lower tongue being turned inward and fastened to the inside of the cover, in combination with a substantially rectangular piece of paper or other suitable material pasted over part of the inside of the upper tongue and some distance beyond its lower extremity and the converging sides as shown and described.

873,974. TRAMWAY. FERDINAND WOLFF, Mannheim, Germany. Filed Oct. 29, 1907. Serial No. 399,711.



1. A tramway provided with a rope extending between the rail and the road bed, substantially as specified.

2. A tramway provided with a rope extending between each side of the rail and the road bed, substantially as specified.

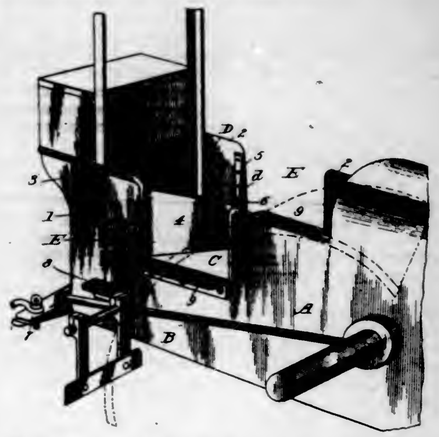
3. A tramway provided with a rope impregnated with a preserving material and extending between the rail and the road bed, substantially as specified.

4. A tramway provided with a rope extending between the rail and the road bed and projecting above said rail and road bed, substantially as specified.

873,975. ROAD-ROLLER. EDWARD T. WRIGHT and CHARLES LONGENECKER, New York, N. Y., assignors to Charles Longenecker & Company, New York, N. Y., a Corporation of New York. Original application filed Dec. 4, 1906, Serial No. 346,285. Divided and this application filed Apr. 2, 1907. Serial No. 365,967.

1. In a road roller tender, a tank at the rear end of the roller, and a fuel box over the rear end of the tank, said fuel box having its forward end inclined forwardly from both sides of the box to the center line of the machine.

2. In a road roller tender, a tank at the rear end of the roller, a fuel box over the rear end of the tank, said fuel box having its forward end inclined forwardly from both sides of the box to the center line of the machine, said forward end decreasing in height from the sides of the box toward the apex of the said forward end.



3. A road roller tender having an engineer's foot-board, entranceways in both sides of the tender, a V-shaped partition having its ends joining the sides of the tender at the rear of said entranceways and having its apex extending forwardly, said partition forming the forward end of the fuel box of the tender, a step at each entranceway, a draw-bar at the rear of the tender and projecting laterally therefrom at each side, the ends of said drawbar serving as steps, and steps arranged upon the sides of the tender between said drawbar and the steps at said entranceways.

873,976. METHOD OF MANUFACTURING TUBE APPARATUS. OTTO ZIMMERMANN, Ludwigshafen-on-the-Rhine, Germany. Filed Jan. 2, 1906. Serial No. 294,306.



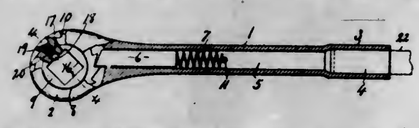
1. The method of forming tube apparatus which comprises providing a suitable mold in which the flue sheet metal is contained in a molten state, assembling the tubes in their proper relation to one another, protecting the inner surface of the tube ends from adhering to the flue sheet metal and then setting the tubes in molten metal and mold, allowing the flue sheet metal to enter the ends of the tubes and thereby heating the tube ends from the inside as well as the outside and allowing the molten metal to harden about the tube ends.

2. The method of forming tube apparatus which comprises providing a heated mold containing a suitable molten flue sheet metal, and setting the assembled tubes having the interior of their ends provided with temporary metal bushings, into the molten metal, thereby heating the tube ends both exteriorly and interiorly, allowing the molten metal to harden, removing the tubes and flue sheet from the mold and forcing out the metal bushings with their containing plug of flue sheet metal.

3. The method of forming tube apparatus which consists in assembling the tubes of a set with their casing in proper relation to one another, coating their end surfaces to which the flue sheet is to adhere with a soldering water and providing the interior of the tube ends with a bushing and the surfaces of the ends of the casing that are not to be connected to the flue sheet with a substance preventing the adhesion of metal, providing a mold containing the fluid metal for the flue sheet, setting the ends of the tubes and casing therein and allowing the molten

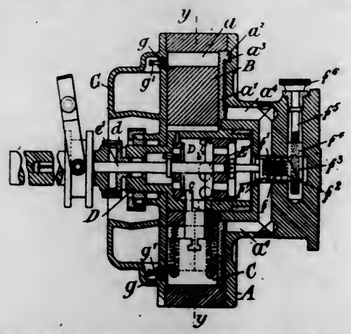
metal to cool and finally knocking out the bushings with the metal that has hardened in them, substantially as described.

873,977. RATCHET-WRENCH. JACOB J. ALBRECHT, Syracuse, N. Y. Filed Mar. 23, 1906. Serial No. 307,630.



In a ratchet wrench, a hollow malleable handle terminating at one end in diverging arms each provided with an aperture, a ratchet wheel having hubs journaled in said apertures of the arms and having a transverse opening, the inner end of which is of less diameter than the outer end and communicates with the axial opening of said ratchet wheel, a ball seated in said aperture and normally projecting partially into the axial opening of the ratchet wheel, a spring in the aperture bearing against said ball, and a plug threaded into the outer end of the aperture, as and for the purpose described.

873,978. CLUTCHING DEVICE ADAPTED FOR USE IN COMMUNICATING ROTARY MOTION AND IN CONTROLLING THE TRANSMISSION THEREOF. FRANK BAILEY and FREDERICK H. JACKSON, London, England. Filed Dec. 27, 1906. Serial No. 349,686.



1. In hydraulic clutch mechanism of the character herein referred to, the combination, with an eccentrically formed casing or chamber and a disk formed with radial slots in which slab-like pistons slide, of a packing-plate interposed between said disk and one wall of said chamber, and passages formed in said wall and leading from said plate to a controlling valve, whereby the liquid under pressure is admitted to the back of the plate, substantially as and for the purpose set forth.

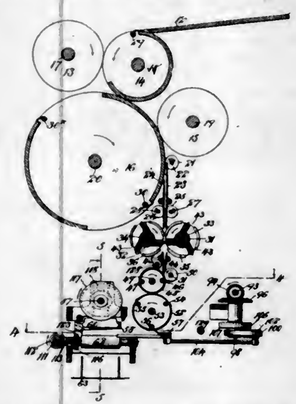
2. In hydraulic clutch mechanism, the combination, with an eccentrically formed liquid-chamber, a disk inclosed within said chamber and slab-like pistons which slide in radial slots formed in said disk, of a main controlling valve, a supplementary valve operated in unison with said controlling valve, and passages communicating between the liquid chamber and said supplementary valve, which latter serves to more rapidly relieve the pressure of the liquid in the chamber and correspondingly diminish the resistance.

3. In hydraulic clutch mechanism of the character herein referred to, the combination, with a liquid-chamber, a disk inclosed within said chamber and a packing-plate interposed between one wall of the liquid chamber and the disk, of means, such as a stop upon said plate working in a chase formed in said chamber, for enabling the plate to partake of a limited rotative movement in relation to the said casing when the direction of running or of power transmission is reversed, substantially as and for the purposes set forth.

4. In hydraulic clutch mechanism of the character herein referred to, the combination, with a liquid-chamber and a disk inclosed within said chamber, of a packing-plate interposed between one wall of the liquid-chamber and the disk, a valve-chamber in said wall, passages communicating between the back of said plate and the valve-chamber, and a relief-valve within said valve-chamber, whereby, upon a certain predetermined pressure being reached, the valve opens automatically and permits the liquid under pressure to escape from the back of the packing-plate to the exhaust or suction-side of the pump.

5. In hydraulic clutch mechanism of the character herein referred to, the combination, with a liquid-chamber, of an oil-reservoir formed upon one wall of said chamber, passages communicating between said reservoir and the exhaust or suction-side of the liquid-chamber, and non-return valves in said passages, the oil or other liquid passing from the reservoir to the pump-chamber under the influence of the suction or of centrifugal force, substantially as herein described.

873,979. ROTARY PRINTING-PRESS. HOWARD M. BARBER, Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 24, 1906. Serial No. 344,929.



1. A sheet feeding and cutting mechanism arranged to cut a sheet transversely into a plurality of smaller sheets, means for collecting the sheets into groups, a table, means for assembling a plurality of groups into a pile thereon, a cutting mechanism and means for advancing the table with its pile of sheets into engagement with the cutting mechanism.

2. A sheet feeding and cutting mechanism arranged to cut a sheet transversely into a plurality of smaller sheets, means for collecting the sheets into groups, a table, means for assembling a plurality of groups into a pile thereon, a cutting and folding mechanism and means for advancing the table with its pile of sheets into engagement with the cutting and folding mechanism.

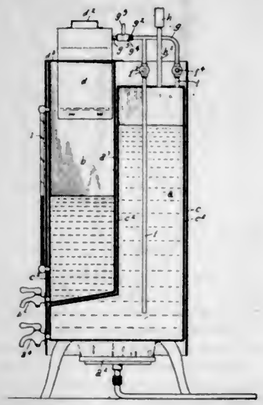
3. A sheet feeding and cutting mechanism, a sheet collecting and assembling mechanism, a sheet cutting and folding mechanism and a folding table arranged to feed a pile of sheets from the sheet collecting and assembling mechanism to the sheet cutting and folding mechanism.

4. A sheet feeding and cutting mechanism arranged to cut a sheet transversely into a plurality of smaller sheets, sheet collecting and assembling mechanism, a sheet cutting mechanism arranged to cut the sheets longitudinally and a table arranged to feed a pile of sheets from the sheet collecting and assembling mechanism to the sheet cutting mechanism.

5. A sheet feeding and cutting mechanism arranged to cut a sheet transversely into a plurality of smaller sheets, a sheet collecting and assembling mechanism, a sheet cutting and folding mechanism arranged to cut and fold the sheets longitudinally and a table arranged to feed a pile of sheets from the sheet collecting and assembling mechanism to the sheet cutting and folding mechanism.

[Claims 6 to 12 not printed in the Gazette.]

873,980. COFFEE AND TEA URN. CHARLES A. BARWISE, Brooklyn, N. Y. Filed Mar. 21, 1907. Serial No. 363,546.



1. An apparatus of the class described, comprising an upright boiler, in the front top portion of which is a vertically arranged recess, and the area of the base being greater than the area of the top, a liquid coffee jar or vessel placed vertically in said recess, a ground coffee receiver placed detachably in the top of the liquid coffee jar or vessel and forming a cover therefor, tubes forming a communication between the boiler and the top portion of the receiver and a casing inclosing said boiler and said liquid coffee jar or vessel and open at the top and bottom.

2. An apparatus of the class described, comprising an upright boiler, in the front top portion of which is a vertically arranged recess, and the area of the base of which is greater than the area of the top, a liquid coffee jar or vessel placed vertically in said recess, a ground coffee receiver placed detachably in the top of the liquid coffee jar or vessel and forming a cover therefor, a tube forming a communication between the top portion of the boiler and the top portion of the receiver, another tube communicating with the bottom portion of the boiler and with the first named tube, and means for detachably connecting the first named tube with the receiver.

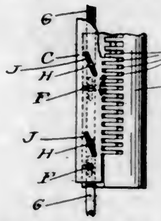
3. An apparatus of the class described, comprising an upright boiler, in the front top portion of which is a vertically arranged recess, and the area of the base of which is greater than the area of the top, a liquid coffee jar or vessel placed vertically in said recess, a ground coffee receiver placed detachably in the top of the liquid coffee jar or vessel and forming a cover therefor, a tube forming a communication between the top portion of the boiler and the top portion of the receiver, another tube communicating with the bottom portion of the boiler and with the first named tube, and means for detachably connecting the first named tube with the receiver, all of said parts being inclosed within a casing between which and the boiler and the coffee jar or vessel are air spaces.

4. An apparatus of the class described, comprising an upright boiler, in the front top portion of which is a vertically arranged recess, and the area of the base of which is greater than the area of the top, a liquid coffee jar or vessel placed vertically in said recess, a ground coffee receiver placed detachably in the top of the liquid coffee jar or vessel and forming a cover therefor, a tube forming a communication between the top portion of the boiler and the top portion of the receiver, another tube communicating with the bottom portion of the boiler and with the first named tube, and means for detachably connecting the first named tube with the receiver, all of said parts being inclosed within a casing between which and the boiler and the coffee jar or vessel are air spaces, and a similar air space being formed between the boiler and the coffee jar or vessel.

5. An apparatus of the class described, comprising an upright boiler, in the front top portion of which is a vertically arranged recess, and the area of the base of which is greater than the area of the top, liquid coffee jars or vessels placed vertically in said recess, coffee receivers detachably placed in the top of the liquid coffee jars or vessels and forming a cover therefor, tubes communicating with the top portion of the boiler and with the top portions of the coffee receivers, other tubes communicating with the bottom portion of the boiler and with the first named tubes, and means for detachably connecting the first named tubes with the coffee receivers.

[Claims 6 to 11 not printed in the Gazette.]

873,981. TRACKER-BOARD FOR LEGATO AND OTHER EFFECTS IN PNEUMATIC MUSICAL APPARATUS. HAROLD BINNEY, New York, N. Y., assignor to The Aeolian Company, New York, N. Y., a Corporation of Connecticut. Filed Jan. 13, 1906. Serial No. 295,849.



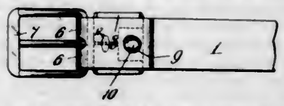
1. A tracker having duct mouths and means for adjusting their size.

2. A tracker provided with a series of tracker ducts and a slide for varying the openings or mouths of the said ducts.

3. A tracker provided with a series of tracker ducts and a slide for varying the openings or mouths of the said ducts, and longitudinally moving means for adjusting the said slide.

4. A tracker provided with tracker ducts and means for varying the openings or mouths of the said ducts, said means including a comb-shaped member the teeth of which fit into and slide in the mouth of the tracker ducts.

873,982. BELT END. CASPER BLOOMBERG, New York, N. Y. Filed July 27, 1907. Serial No. 385,833.

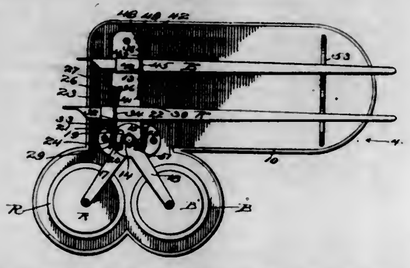


1. A belt end comprising a plate provided with a depressed aperture near one end and with means for engaging a buckle at the other end; a buckle therein; a covering for said plate connecting it with the bolt; a rivet adapted to pass through the aperture and engage the belt to hold the parts together, the head of said rivet entering and filling said depression.

2. A belt end comprising a plate provided with an aperture and with hooks at one end to engage a buckle; a buckle therein; a covering for said plate connecting it with the belt; and means passing through the aperture for securing the belt to the plate.

3. A belt end comprising a plate provided with an aperture and with hooks at one end; a buckle in said hooks; a covering on said plate connecting it with the belt; a retaining loop on the belt adjacent to the plate; and a rivet passing through the aperture to secure the belt to the plate and hold the retaining loop in position.

873,983. INK-WELL. ALEXANDER J. BLUNTACH, Winona, Minn., assignor of three-fourths to May A. Huffman, Cornelia D. Bonner, and Agnes H. Reed, Winona, Minn. Filed Mar. 15, 1907. Serial No. 362,525.



1. In a device of the class described, a plurality of ink wells, closures for the wells, a plurality of disks mounted adjacent the wells upon a common pivot, an arm carried by each disk, and each connected with a closure, a spring arranged to move the closures to an open position, and means to lock the closures shut against the tension of the spring.

2. In a device of the class described, a plurality of ink wells, closures for the wells, a plurality of disks mounted adjacent the wells, and upon a common pivot, an arm carried by each disk, and connected each with a closure, a spring carried by the pivot pin and arranged to move either disk independently, and means to lock either disk with its associated closure in a closed position.

3. In a device of the class described, an ink well, a closure for the well, an arm pivotally mounted and connected with the closure, and a toggle joint connected with and adapted to move the arm angularly about its pivot.

4. In a device of the class described, an ink well, a closure for the well, a disk pivotally mounted adjacent the ink well, an arm carried by the disk and connected with the closure, a spring arranged to move the arm to hold the closure in open position, and a toggle arranged to move and lock the arm against the tension of the spring.

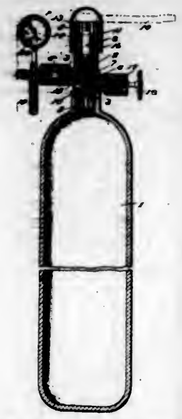
5. In a device of the class described, a plurality of ink wells, pivoted closures for the wells, toggles arranged to move the pivoted closures angularly about their pivots, and means whereby the opening of one closure closes the other closure.

[Claims 6 to 13 not printed in the Gazette.]

873,984. COMPRESSED-FLUID CHARGING AND DISCHARGING DEVICE. GABRIEL A. BOBRICK, Los Angeles, Cal. Filed Dec. 21, 1906. Serial No. 348,995.

1. A valve mechanism for controlling the charging of a fluid under pressure into and discharging the same from a reservoir, said mechanism consisting of a valve-casing having a single port for both charging the fluid and discharging it from the reservoir, with a large or free charging passage leading from said port into the reservoir, a valve controlling said charging passage, a restricted discharge passage between the said reservoir and port, and a valve controlling said discharge passage.

2. A valve mechanism for controlling the charging of a fluid under pressure into and discharging the same from a reservoir, said mechanism consisting of a valve-casing having a single port for both charging fluid into and discharging it from the reservoir, a large charging passage leading from said port to said reservoir, means closing said passage intermediate its ends, and discharging means permitting a restricted flow of gas from the reservoir to said port, whereby the compressed or liquefied gas may be readily charged into the reservoir and may be discharged therefrom at a reduced pressure.



3. A valve mechanism for controlling the charging of a fluid under pressure into and discharging the same from a reservoir, said mechanism consisting of a valve-casing having a single port for both charging fluid into and discharging it from the reservoir, a large charging passage leading from said port to said reservoir, means closing said passage intermediate its ends, a by-pass around said valve, and means permitting a restricted flow of gas through said by-pass, whereby the compressed or liquefied gas may be readily charged into the reservoir and may be discharged therefrom at a reduced pressure.

4. A valve mechanism for controlling the charging of a fluid under pressure into and discharging the same from a reservoir, said mechanism consisting of a valve casing having a port opening into the reservoir and another port opening exterior to the reservoir, with two passages of different capacity between said ports, and means controlling the flow of fluid through said passages, whereby fluid in liquid or highly compressed gaseous form may be readily charged into the reservoir, and may be discharged therefrom at a reduced pressure.

5. A valve mechanism for controlling the charging of a fluid under pressure into and discharging the same from a reservoir, said mechanism consisting of a valve casing having a port opening into the reservoir and another port opening exterior to the reservoir, with two passages of different capacity between said ports, means controlling the flow of fluid through said passages, whereby fluid in liquid or highly compressed gaseous form may be readily charged into the reservoir, and may be discharged therefrom at a reduced pressure, and a pressure-relief device communicating with said exterior port.

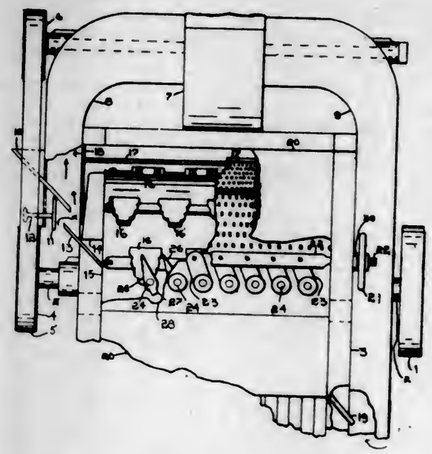
[Claim 6 not printed in the Gazette.]

873,985. GRAIN-CLEANER. ALLEN C. BRANTINGHAM, Toledo, Ohio. Filed May 2, 1907. Serial No. 371,557.

1. A cleaner comprising relatively movable outer and inner members, between which may be introduced the substance to be scoured, and one of which is provided with a normally overflowing axially extending trough wherein the substance through its own action receives effectual scouring.

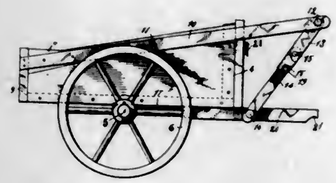
2. A cleaner comprising outer and inner members, one of which is rotatable, and between which the substance to be scoured is caused to flow, said outer member having a trough, and deflector means against which the substance acts before entering the trough to control its velocity of flow through the cleaner.

3. A cleaner comprising a revolving drum, forwardly pointing wedge shaped deflectors thereon, a casing for the drum having an overflow trough and adjustable deflector



means to advance the travel of the substance being cleaned as it is thrown toward the trough.

873,986. HAND-CART. BENJAMIN F. BROWN, Bridgeton, Ind. Filed Aug. 8, 1906. Serial No. 329,657.



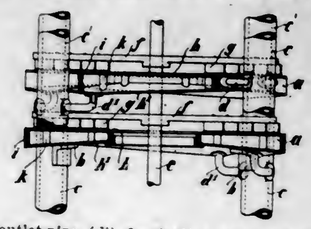
1. In a dump-cart, a box having suitable axle and wheels, the sides of the box having cut-away portions, pieces fitted to said cut-away portions, an end-gate for said box, levers secured to said pieces and end-gate, and pivoted on the sides of the box, and means for locking said levers against pivotal movement.

2. In a dump-cart, a box having suitable axle and wheels, an end-gate for said box, levers secured to said end-gate and pivoted on the sides of the box, and means for locking said members against pivotal movement, said means consisting of interlocking pivoted links connected with the levers and with the box, substantially as described.

3. In a dump-cart, a box having suitable axle and wheels, an end-gate for said box, levers secured to said end-gate and pivoted on the sides of the box, interlocking means for holding the levers against pivotal movement, said means adapted to be manually released, a leg hinged on said box and means for holding the leg in operative position.

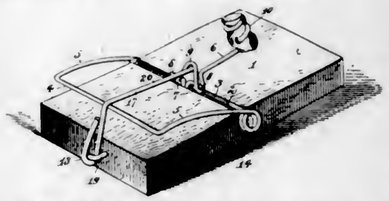
873,987. DRYING DEVICE. OSCAR BUSSE, Meiderich-Duisberg, Germany. Filed June 6, 1907. Serial No. 377,567.

Drying-device having several steam-plates arranged one above the other, and each being composed of several sectors each heated by itself, characterized by the bottom of each individual sector being formed sloping and with an inclination towards a part which is deepest, at which



part the outlet-pipe (*d'*) for feeding away the condensed water is connected.

873,988. ANIMAL-TRAP. RAPHAEL CHASSÉ, Middletown, N. Y., assignor to Chasse Manufacturing Company, Middletown, N. Y., a Corporation of New York. Filed July 3, 1907. Serial No. 382,000.



1. In an animal trap, the combination with a base provided with an opening extending through the same and a slot in the upper surface of said base communicating therewith, of a spring member having coiled ends contained within said opening, a baiting member, one end of which is adapted to retain the bait and the opposite end loosely connected with the coiled ends of said spring member, and a tripping arm pivoted to one end of said base and adapted to engage with the baiting member, substantially as described.

2. In an animal trap, the combination with a base provided with an opening extending through the same and a slot in the upper surface of said base communicating therewith, of a spring member having coiled spring ends contained within said opening, the extreme ends extending upwardly through said slot and bent outwardly to form supporting arms, a baiting member, one end of which is adapted to receive the bait and the opposite end engaging with the outwardly bent ends of said spring member and formed with an upwardly extending loop, and a tripping arm pivoted at one end to the base the opposite end adapted to engage with the loop on said baiting member, substantially as described.

873,989. CLOSURE FOR JARS, BOTTLES, AND LIKE RECEPTACLES. MASCHIL D. CONVERSE, Newark, N. J., assignor, by mesne assignments, to Howland Metallic Cap Company, New York, N. Y., a Corporation of New York. Filed Jan. 14, 1907. Serial No. 352,202.

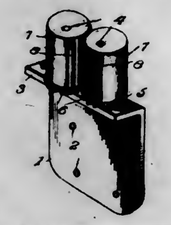


1. In a metallic closure of the class described, in combination, an inner cap, adapted to inclose a disk-shaped sealing medium and to be applied to receptacles as set

forth, having a non-resilient ductile dependent flange plurally divided its entire depth, and an outer separably fitted removable cap, inclosing the former, of greater interior diameter at its top than the external diameter of the top of the inclosed cap and in circumferential engagement at its lower edge with the flange sections of the latter just above the lower edges thereof.

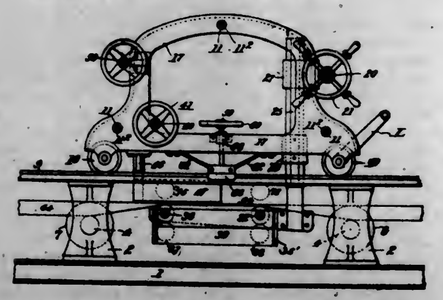
2. In a metallic closure of the class described, in combination, an inner cap, adapted to inclose a disk-shaped sealing medium and to be applied to receptacles as set forth, having a non-resilient ductile dependent flaring flange plurally divided its entire depth, and an outer separably fitted removable cap, inclosing the former, of greater interior diameter at its top than the external diameter of the top of the inclosed cap and in circumferential engagement at its lower edge with the flange sections of the latter just above the lower edge thereof.

873,990. REIN-HOLDER. CLARENCE M. CRUM, Hansboro, N. D. Filed July 16, 1906. Serial No. 326,373.



The herein described rein-holder comprising a right angular attaching plate having apertures in its vertical portion for the reception of fastening devices, parallel posts projecting vertically from the upper side of the horizontal portion of said plate, cylindrical drums eccentrically mounted upon said posts for rotary movement, said drums being formed upon their outer faces with vertically extending parallel ribs and intermediate grooves or channels, the ribs on one drum being adapted to enter the channels upon the other, to effectively clamp the reins between said drums, said drums being also provided upon their bottom edges with meshing cog teeth, studs depending from the bottoms of said drums, said bottoms of the drums being spaced from the horizontal portion of the attaching plate, spiral springs surrounding said posts between said drums and said plate and having their inner ends secured to the posts and their outer ends secured to the depending studs on the drums, substantially as shown and for the purposes set forth.

873,991. UNLOADING MECHANISM. WILLIAM R. CUNNINGHAM, Bucyrus, Ohio, assignor to The American Clay Machinery Company, Bucyrus, Ohio, a Corporation. Filed Sept. 16, 1907. Serial No. 393,030.



1. In an unloading mechanism, the combination with a belt conveyer and means for imparting thereto substantially a curved or trough-shape in cross section, of a movable scraper positioned above the belt, a frame suspended normally below the carrying-run of the belt, and means including a rack-bar fixed to said frame and a pinion engaging said bar, for raising the frame and carrying-run of the belt whereby the belt is straightened out transversely and its curved or trough-shape is changed to a plain flat surface for the scraper to operate over.

2. In an unloading mechanism, the combination with a belt-conveyer and a support for the carrying-run thereof, said support comprising means for uplifting the edges of the belt to thereby give the belt a curved form in cross-section, of means for elevating the belt out of engagement with said edge-uplifting means, and changing the cross-sectional form of said belt to substantially a level or flat surface, said elevating-means including a vertically-guided rack-bar and a pinion engaging said bar, and a scraper interposable in the range of action of the belt and adapted to direct the material laterally over the edge of the belt.

3. In an unloading mechanism the combination with a belt-conveyer and supporting means for the upper run thereof, of a track or guide above and substantially parallel with the belt, a carriage movably-mounted on said track or guide, a scraper turnably mounted on the carriage on an axis which is substantially at right-angles with the travel of said belt, and elevating-means supported on the carriage and adapted to lift the belt into the range of action of the scraper, said elevating means including a frame having members extending transversely below the lower side of the carrying portion of the belt, and vertically guided bars and actuating rotary members therefor.

4. In an unloading mechanism, the combination with a belt conveyer and supporting means for the upper run thereof, of a track or guide above and substantially parallel with the belt, a carriage movably-mounted on said track or guide, a scraper turnably mounted on the carriage on an axis which is substantially at right-angles with the travel of said belt, a roller frame beneath the upper run of the belt, and elevating means suspending said frame from the carriage and operable to lift the frame and cause it to lift the belt to straighten the latter out transversely, said elevating means also permitting the frame to be lifted above the plane of the belt supporting means to enable the frame to clear said supporting means when the carriage is moved from one point on the belt to another.

5. In an unloading mechanism, the combination with a belt conveyer and supporting rollers for the upper run thereof, certain of said rollers adapted to uplift the edges of the belt and thereby give the belt a curved form in cross-section, a track or guide above the belt, a carriage movably-mounted on said track or guide having a scraper at each side turnable in a horizontal plane across the range of travel of the material on the belt, whereby said material may be delivered to either, or both, sides of the belt, a roller-frame beneath the upper run of the belt, said carriage having rack-bars and actuating pinions for raising and lowering the roller-frame relative to the belt, and means for adjusting the position of the scrapers relative to the travel of the belt.

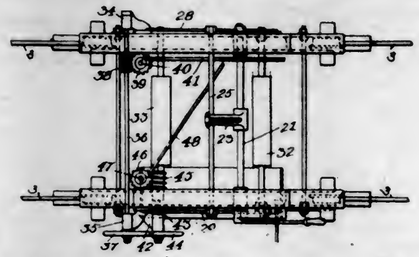
[Claims 6 and 7 not printed in the Gazette.]

873,992. UNLOADING MECHANISM. WILLIAM R. CUNNINGHAM, Bucyrus, Ohio, assignor to The American Clay Machinery Company, Bucyrus, Ohio, a Corporation. Filed Sept. 18, 1907. Serial No. 393,479.

1. In an unloading mechanism, the combination with a belt-conveyer and means for imparting thereto substantially a curved trough-shape in cross-section, of a horizontally-movable scraper positioned above the belt, means for changing the angle of the scraper relative to the surface of the belt over which said scraper operates, and means for elevating said belt relative to the scraper and coördinately changing the cross-sectional form of the belt to substantially a flat or level surface.

2. In an unloading mechanism, the combination with a belt-conveyer and a support therefor, said support having

means for uplifting the edges to thereby give the belt substantially a curved shape in cross-section, of means for raising the belt out of engagement with said edge-uplifting means, and changing the cross-sectional form of the belt to substantially a plane or level surface, and a scraper interposable in the range of action of the belt and adapted to direct said material laterally over the edge of the belt, said scraper being pivotally mounted at one portion and adapted to have an adjustment relative to the belt in a plane transversely of the travel thereof.



3. In an unloading mechanism, the combination with a belt-conveyer and supporting means therefor having members for normally uplifting the edges of the belt to cause the material to be retained on the belt, of a scraper positioned relative to the belt and adapted to be moved in a horizontal plane more or less diagonally across the carrying surface thereof, and means for elevating the carrying-portion of the belt into the range of action of the scraper and out of support of the edge-uplifting means, whereby the carrying surface of the belt is changed to a flat or level surface for the scraper to operate over.

4. In an unloading mechanism, the combination with a belt-conveyer and supporting means therefor having members for normally uplifting the edges of the belt to cause the material to be retained on the belt, of a scraper positioned relative to the belt and adapted to be moved in a horizontal plane more or less diagonally across the carrying surface thereof, and means for elevating the carrying portion of the belt into the range of action of the scraper and out of support of the edge-uplifting means, whereby the carrying surface of the belt is changed to a flat or level surface for the scraper to operate over, and a carriage movably mounted and shiftable from one position to another in the length of the belt, said belt-elevating means and scraper being mounted on said carriage.

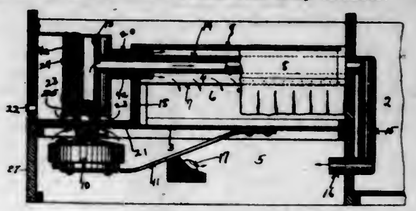
5. In an unloading mechanism, the combination with a belt-conveyer and a roller support therefor, of a guide fixed above the belt, a carriage movable over said guide to different points in the length of the belt, a scraper mounted on the carriage so as to have a swinging movement in a plane at right angles to the travel of the belt, and means for elevating the conveying-run of the belt into the range of action of the scraper and for straightening the portion of the belt passing under the scraper.

[Claims 6 to 11 not printed in the Gazette.]

873,993. BROODER. CHARLES A. CYPHERS, Buffalo, N. Y., assignor, by mesne assignments, to Model Incubator Company, Buffalo, N. Y., a Corporation of New York. Filed Jan. 2, 1906. Serial No. 294,199.

1. In a brooder the combination with a nursery of a hover, a source of heat, a nursery heating chamber surrounding said source of heat and leading directly into said nursery, a hover heating chamber extending over the length of the said hover, a perforate heat disseminating body interposed between said hover heating chamber and said hover, a waste flue leading from said source of heat and passing through said heating chamber.

2. In a brooder the combination with a nursery and a hover, of a lamp chamber located below the floor of said nursery, a lamp suspended in said lamp chamber and having its point of combustion immediately above the floor of said nursery and a waste flue leading from said lamp over said hover and thence back into said lamp chamber.



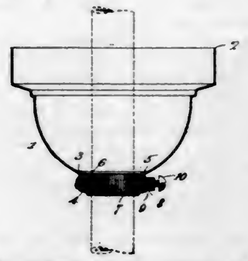
3. In a brooder the combination with a nursery and a hover, of a lamp chamber located below the floor of the said nursery, a lamp suspended in said lamp chamber and having its point of combustion immediately above the floor of said nursery, a waste flue leading from said lamp over said hover and thence back into said lamp chamber and means for preventing the products of combustion from reaching either said nursery or said hover.

4. In a brooder the combination with a nursery and a hover, of a lamp chamber located below the floor of said nursery, a lamp suspended in said lamp chamber and having its point of combustion immediately above the floor of said nursery a hover heating chamber extending over the length of said hover, a waste flue leading from said lamp and passing through said hover heating chamber and thence leading to said lamp chamber.

5. In a brooder the combination with a nursery and a hover, of a lamp chamber located below the floor of said nursery, a lamp suspended in said lamp chamber and having its point of combustion immediately above the floor of said nursery, a hover heating chamber, a waste flue leading from said lamp and passing through said hover heating chamber, a heating-flue surrounding the portion of the waste-flue from lamp to hover-heating chamber, and a nursery-heating chamber surrounding said last mentioned flue and leading directly into said nursery.

[Claims 6 and 7 not printed in the Gazette.]

873,994. CANOPY FOR ELECTRIC FIXTURES. JOHN H. DALE, New York, N. Y. Filed May 18, 1906. Serial No. 317,448.

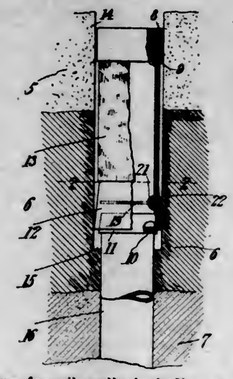


A canopy for electric fixtures comprising a sheet metal shell having a perforation, a beaded ring engaged in said perforation and having its inner edge turned over so as to closely embrace the wall of the shell about the perforation, said beaded ring having an opening on one side thereof, an insulating ring with a cylindrical bore of uniform transverse section fixed in said beaded ring and having a boss projecting through the opening of said ring, said boss having a threaded hole therethrough, and a set screw received in said threaded hole.

873,995. OIL-WELL PACKING. WARREN B. DAUGHERTY, San Luis Obispo, Cal. Filed July 29, 1907. Serial No. 386,041.

1. A packing for oil wells including a casing provided with a stop shoulder, a tapered sleeve secured to the cas-

ing, a correspondingly tapered shoe slidably mounted on the sleeve, and an expansible jacket interposed between the shoulder and shoe and movable to expanded position by engagement with said shoe.



2. A packing for oil wells including a casing provided with a stop shoulder, a relatively stationary tapered sleeve secured to the casing, a correspondingly tapered shoe slidably mounted on the sleeve, a compressible jacket surrounding the exterior walls of the casing and interposed between the stop shoulder and shoe, respectively, and means for locking the shoe against longitudinal movement on the casing.

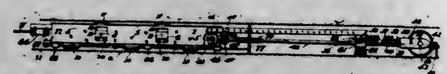
3. A packing for oil wells including a casing provided with a stop shoulder, a relatively stationary conical bearing sleeve threaded on the exterior walls of the casing, a correspondingly tapered movable shoe bearing against tapered walls of the sleeve, and an expansible jacket interposed between the stop shoulder and shoe, said jacket being movable to expanded position by engagement with the shoe.

4. A packing for oil wells including a casing having one end thereof provided with a stop shoulder and its other end formed with exterior threads, a relatively stationary conical bearing sleeve engaging the threaded walls of the casing, a correspondingly tapered shoe bearing against the sleeve, and an expansible jacket interposed between the stop shoulder and shoe and movable to expanded position by engagement with said shoe.

5. A packing for oil wells including a casing provided with a stop shoulder and having oppositely disposed openings formed therein, a tapered sleeve secured to the casing beneath the openings, a shoe slidably mounted on the casing and provided with sockets adapted to register with the openings in the casing, locking members extending transversely of the casing and having their inner ends united and their outer ends projected through the openings for engagement with the sockets, and a compressible jacket interposed between the stop shoulder and shoe and movable to expanded position by engagement with said shoe.

[Claim 6 not printed in the Gazette.]

873,996. CONDUIT-THREADING DEVICE. ALBERT H. DE VOE, Elizabeth, N. J. Filed Oct. 24, 1906. Serial No. 340,270.



1. A conduit threading device comprising a carriage with suitable bearing wheels, constantly acting means for yieldingly maintaining said wheels in driving relation with the conduit walls, and means adapted to be mechanically energised from a source of power distant from the carriage for turning the wheels to propel the carriage.

2. A conduit threading device comprising a carriage with suitable bearing wheels, a reciprocating actuator, connections between said actuator and the bearing wheels whereby the latter receive a turning movement for each movement of the actuator in one direction only, and means for operating said actuator.

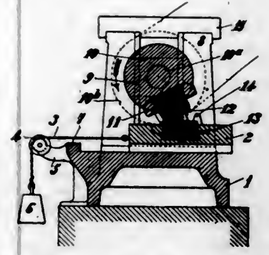
3. A conduit threading device comprising a carriage with oppositely projecting bearing wheels, constantly acting means for yieldingly maintaining said wheels in driving relation with the conduit walls, a to-and-fro moving actuator connected with the wire or cord to be threaded, and connections, including one-way acting clutches, intermediate said actuator and a bearing wheel, whereby the propulsion of the carriage is effected.

4. A conduit threading device comprising a carriage with oppositely projecting bearing wheels, constantly acting means for yieldingly maintaining said wheels in driving relation with the conduit walls, a rectilinearly reciprocating actuator connected with the wire or cord to be threaded, and connections, including one-way acting clutches, intermediate said actuator and a bearing wheel or wheels whereby the propulsion of the carriage is effected.

5. A conduit threading device comprising a carriage with oppositely projecting bearing wheels, constantly acting means for yieldingly maintaining said wheels in driving relation with the conduit walls, a rectilinearly reciprocating actuator connected with the wire or cord to be threaded, connections, including one-way acting clutches, intermediate said actuator and a bearing wheel or wheels whereby the propulsion of the carriage is effected, and means independent of said actuator for preventing retrograde movement of said carriage.

[Claims 6 to 26 not printed in the Gazette.]

873,997. ROLLING-MILL. EMIL EBINGHAUS and ALBERT SCHUMACHER, Gevelsberg, Germany. Filed Feb. 12, 1906. Serial No. 300,664.



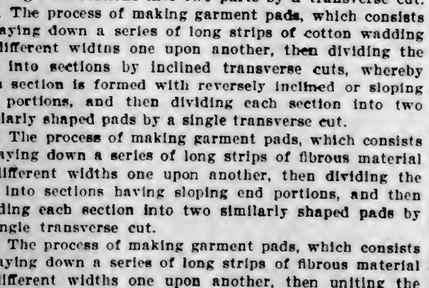
1. In rolling mill mechanism a longitudinally movable part and a die carried thereby, in combination with an axially movable part, a coöperating die carried by the latter, and a frame adapted to support said parts and permit and guide such movements, the axially movable part being free to move vertically upward for admitting greater thickness of material or preventing injury by sudden jars substantially as set forth.

2. In rolling mill mechanism a pair of coöperating die-carrying members, one moving axially, the other longitudinally, means for operating one of said members and means whereby this member causes the operation of the other member, the axially moving member and its die being free to rise in case of sudden jar or to provide for the admission of thicker material substantially as set forth.

873,998. HAIR-CUT REGISTER. JOHN W. B. FARIS, Skidmore, Tex. Filed Feb. 18, 1907. Serial No. 357,995.

1. In a barber's chair, a means for registering haircuts comprising a removable head-rest a fixed electric terminal, a movable electric terminal, a sliding block carrying the movable terminal and having one end beveled, and a spring tending to move the beveled end of the block into the path of the head-rest of the chair.

2. In a barber's chair, a means for registering haircuts comprising a removable head-rest a fixed electric terminal, a movable electric terminal, a sliding block carrying the movable terminal and having one end beveled, an elastic carrier for said block, and a spring tending to move the beveled end of the block into the path of the head-rest of the chair.



3. In a barber's chair, a means for registering haircuts comprising a removable head-rest a fixed electric terminal, a sliding block having one end beveled, a spring tending to move the beveled end of the block into the path of the head-rest of the chair, a movable electric terminal carried by the block and arranged in the path of the fixed terminal, and an insulating member also in the path of the fixed terminal and carried by the block and arranged to prevent the closure of the circuit at the electric terminals when the block is moved in one direction.

4. In a barber's chair, a means for registering hair-cuts comprising a removable head-rest a fixed electric terminal, a movable electric terminal, a sliding block carrying the movable terminal and arranged in the path of the head-rest of the chair, and a roller support for that portion of the sliding block adjacent to said head-rest.

873,999. METHOD OF MAKING GARMENT-PADS. GUSTAV GOLDMAN, Baltimore, Md. Filed Mar. 5, 1907. Serial No. 360,705.



1. The process of making garment pads, which consists in laying down a series of long strips of fibrous material of different widths one upon another, then dividing the pile into sections by inclined transverse cuts, and then dividing said sections into two parts by a transverse cut.

2. The process of making garment pads, which consists in laying down a series of long strips of cotton wadding of different widths one upon another, then dividing the pile into sections by inclined transverse cuts, whereby each section is formed with reversely inclined or sloping end portions, and then dividing each section into two similarly shaped pads by a single transverse cut.

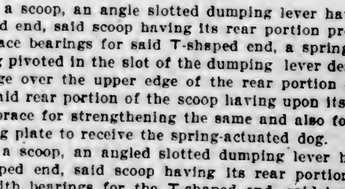
3. The process of making garment pads, which consists in laying down a series of long strips of fibrous material of different widths one upon another, then dividing the pile into sections having sloping end portions, and then dividing each section into two similarly shaped pads by a single transverse cut.

4. The process of making garment pads, which consists in laying down a series of long strips of fibrous material of different widths one upon another, then uniting the strips together, then dividing the pile into sections having sloping end portions, and then dividing each section into two similarly shaped pads.

5. The process of making garment pads, which consists in laying down a series of long strips of fibrous material of different widths one upon another, then stitching the strips together, then dividing the pile into sections having sloping end portions, and then dividing each section into two similarly shaped pads.

[Claims 6 to 12 not printed in the Gazette.]

874,000. GUARD-RAIL CLAMP. NATHANIEL O. GOLDSMITH, Norwood, Ohio, assignor to The Weir Frog Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Mar. 19, 1907. Seria No. 363,314.

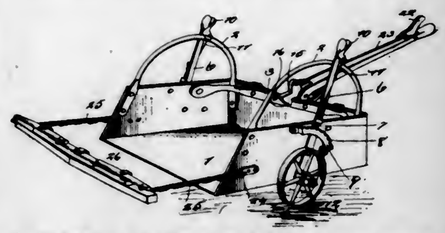


1. In a guard rail clamp, a yoke, a wedge-block lying adjacent to one jaw of said yoke, an angled key-way formed respectively in said wedge-block and adjacent yoke jaw, and a wedge adapted to be driven into said key-way for longitudinally and vertically clamping the parts, substantially as described.

2. In a guard rail clamp, a yoke, a clamp and wedge block lying adjacent to the jaws of said yoke, and provided with lugs to overlap said yoke, inner filling blocks lying between the rails to be clamped, the meeting faces provided with serrations, a key way formed respectively in the wedge block and one jaw of the yoke, and a wedge adapted to be driven into said key way for clamping the parts, substantially as described.

3. In a guard rail clamp, a yoke, the jaws of which are inclined upon their inner faces, a pair of outer blocks lying adjacent to said jaws, inner blocks lying between the rails to be clamped and outer blocks, provided with inclined meeting faces, serrations formed on said inclined faces adapted to intermesh with each other, a wedge adapted to be driven between one of the outside blocks, and one jaw of the yoke, and means projecting from the blocks and into the rails, substantially as described.

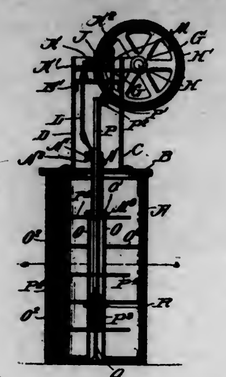
874,001. SCOOP. ALBERT C. GOUGH, Chester, Mont. Filed June 12, 1907. Serial No. 378,629.



1. In a scoop, an angle slotted dumping lever having a T-shaped end, said scoop having its rear portion provided with brace bearings for said T-shaped end, a spring-actuated dog pivoted in the slot of the dumping lever designed to engage over the upper edge of the rear portion of the scoop, said rear portion of the scoop having upon its inner face, a brace for strengthening the same and also forming a bearing plate to receive the spring-actuated dog.

2. In a scoop, an angled slotted dumping lever having a T-shaped end, said scoop having its rear portion provided with bearings for the T-shaped end, said bearings having extensions forming braces for the bottom of the scoop, a spring-actuated dog pivoted in the slot of the dumping lever designed to engage over the upper edge of the rear portion of the scoop, said rear portion of the scoop having upon its inner face a brace for strengthening the same and also forming a bearing plate to receive the spring-actuated dog, and lever adjustable operated wheels for the scoop.

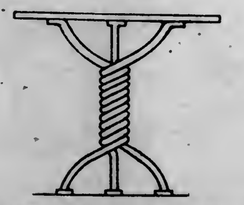
874,002. CHURN. ABNER H. GRAGG, Knoxville, Tenn. Filed Feb. 28, 1907. Serial No. 359,793.



1. In a churn, the combination with a body provided with a removable top, of frames mounted on said top, a shaft mounted in said frame provided with crank-arms, pitman rods carried by said crank-arms, a hollow shaft carried by one of said pitman rods, working through an opening in the said top, rods carried by said shaft, provided with a series of spaced blades, a shaft carried by the other pitman rod provided with a series of spaced blades, and means for operating said crank-shaft.

2. In a churn, the combination with a body provided with a removable top, of frames mounted on said top, a gear wheel mounted on said frame provided with a handle, a gear meshing with said gear mounted in the frame, a shaft mounted in the frame carrying a gear meshing with said gear, crank arms carried by said shaft, pitman rods carried by said crank-arms, a hollow shaft carried by one of said pitmen extending through said top, carrying rods provided with blades, and a shaft carried by the other pitman working through the hollow shaft provided with blades, and provided with a bore in its end working over a guide-pin projecting up from the bottom of the churn.

874,003. METAL FOLDING FURNITURE. HERMANN GRAUEL, Berlin, Germany. Filed Dec. 12, 1905. Serial No. 291,488.

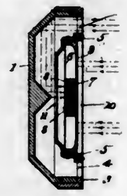


1. A folding support or standard for articles of furniture consisting of a plurality of metallic rods or the like, having portions bent out to form when extended suitable supporting portions for various purposes, the remaining portions of said rods being wound into coils, the coils of each rod interfitting with the coils of the other rods to form a central standard, said coils being adapted to slide over each other whereby the supporting portions may be rotated about the central standard to fold and extend the same.

2. A folding support or standard for articles of furniture consisting of a plurality of metallic rods or the like having their lower portions bent to form feet, the upper portions of said rods being wound into coils, the coils of each rod interfitting with the coils of the other rods to form a central standard, said coils being adapted to slide over each other whereby the feet may be brought together or extended and means at the upper end of the standard to support an article.

3. A folding support or standard for articles of furniture consisting of a plurality of metallic rods or bars having their lower portions bent to form feet, and their upper portions bent out to form supporting portions for various articles, the central portions of said rods being wound into coils, the coils of each rod interfitting with the coils of the other rods to form a central standard, said coils being adapted to slide over each other, whereby the feet and supporting portions may be rotated about the central standard to fold and extend the same.

874,004. TELEPHONE-TRANSMITTER. HOWELL W. HAFF, Richmond Hill, N. Y., assignor to General Acoustic Company, a Corporation of New York. Filed Apr. 15, 1907. Serial No. 368,285.



In a telephone transmitter, a cup-shaped body having openings near its edges and having its inner surface shaped to receive and concentrate sound waves therefrom, and finally direct them along the axis of the cup-shaped body, a sound receiving instrument having a cover or front portion with a large central opening through which said sound waves enter, said receiving instrument having a plate deflected at its outside edges and forming part of the casing of said instrument, said plate being thin and resilient at the middle portion thereof and constituting a diaphragm, a carbon block having cavities secured thereto, a diaphragm within said sound receiving instrument and adapted to be vibrated by the sound waves entering through said large central opening, and a plurality of carbon balls within said cavities, and establishing microphone contacts between said block and said last-mentioned diaphragm.

874,005. PROCESS OF PRODUCING PHOTOGRAPHS ON METAL, GLASS, PORCELAIN, &c. ALFRED HANS, Friedenau, near Berlin, Germany. Filed Jan. 16, 1907. Serial No. 352,641.

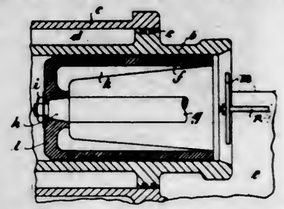
1. The process of producing photographs on metal, glass, porcelain and the like support, which consists in covering said support with a layer of chromatized glue mixed with a saccharine substance, covering the dried layer with a photographic negative, exposing, developing by washing with water, treating the developing image with a tanning agent and baking, substantially as and for the purpose stated.

2. The process of producing photographs on metal, glass, porcelain and the like supports which consists in covering said support with a layer of chromatized glue mixed with a saccharine substance, covering the dried layer with a photographic negative, exposing, developing by washing with water, fanning the developed image with an aqueous solution of hydroquinone, and baking, substantially as and for the purpose stated.

3. The process of producing photographs on metal, glass, porcelain and the like supports which consists in covering said support with a layer of chromatized glue mixed with a saccharine substance, covering the dried layer with a photographic negative, exposing, developing the image by washing with water, tanning the developed image with an aqueous solution of hydroquinone mixed with a black-deepening agent, and baking, substantially as and for the purpose stated.

4. The process of producing photographs on metal, glass, porcelain and the like supports which consists in covering said support with a layer of chromatized glue mixed with a saccharine substance, covering the dried layer with a photographic negative, exposing, developing by washing with water, tanning the developed image with an aqueous solution of hydroquinone mixed with log-wood extract, and baking, substantially as and for the purpose stated.

874,006. PISTON FOR INTERNAL COMBUSTION OR EXPLOSION ENGINES. JULIUS HASTOCH, Wiesbaden, Germany. Filed May 11, 1907. Serial No. 373,079.

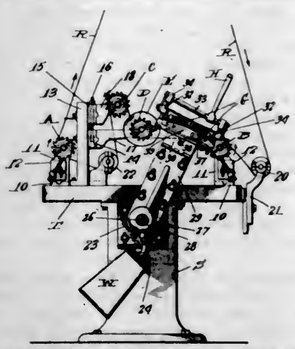


1. In internal combustion or explosion motors the combination of a hollow plunger piston being open at one end and having internal cooling ribs with a means for forcing out the air in the piston cavity.

2. In internal combustion or explosion motors the combination of a hollow piston being open at one end and having in its interior a system of cooling ribs forming a separate part of any suitable metal with a means for forcing out the air in the piston cavity.

3. In internal combustion or explosion motors the combination of a hollow piston being open at one end and having in its interior cooling ribs with a forcing plate arranged at the open end of the cylinder and of such a form that the movement of the piston and its rod is not impeded.

874,007. TENONING-MACHINE. WILLIAM H. HOBBY, Gardner, Mass. Filed Feb. 2, 1905. Serial No. 243,831.

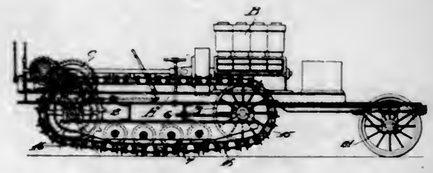


1. In a wood working machine, the combination of a pivotally mounted work-holding clamp, said clamp having curved jaws, said jaws each having a bearing surface constituting a part of a cylindrical surface substantially concentric with the pivot on which the clamp is mounted.

2. In a wood working machine, the combination of a pivotally mounted work-holding clamp, said clamp having curved jaws, said jaws each having a bearing surface constituting a part of a cylindrical surface whose center is on a line substantially co-incident with the pivot on which the clamp is mounted, said clamp being adjustable on a line normal to the surface of said cylinders.

874,008. TRACTION-ENGINE. BENJAMIN HOLT, Stockton, Cal. Filed Feb. 9, 1907. Serial No. 356,546.

1. In a traction engine, a main frame, parallel supplemental frames, with rollers mounted between and contiguous to the lower edges of said frames, sprocket-wheels journaled in line between the supplemental frames, a motor carried upon the main frame, and means for transmitting motion therefrom to the sprocket-wheels, chains passing around the sprocket-wheels, said chains formed of links having flanged inner edges upon which the bearing-rollers rest, independent platform shoes, and means uniting them to the chain links to form integral endless platforms driven by the sprockets.



2. A traction engine including a main frame, a motor mounted thereon, parallel supplemental side frames sprocket-wheels journaled in pairs upon each side between said frames, endless jointed platforms passing around the sprocket-wheels upon each side of the machine, a turnable steering mechanism by which the front of the frame is supported and guided, gearing through which motion is transmited from the motor to revolve the sprocket-wheels, mechanism whereby one of the traveling platforms may be driven independently of the other, and in unison with the turning of the steering apparatus, and means substantially as described to lubricate the platform link joints.

3. In a traction engine, a main frame having a motor mounted thereon, supplemental side frames sprocket-wheels disposed in pairs upon each side of and between the frame, endless jointed platforms passing around said sprockets to support the main portion of the apparatus, a turnable steering mechanism by which the front portion is supported, gearing through which motion may be transmitted from the motor to drive the traveling platforms either separately or in unison, rollers journaled upon the lower part of the main frame with their peripheries traveling upon the inner surface of the chain links of the platform as the latter are advanced, and means to prevent lost motion in forward or reverse movements.

4. In a traction engine, a main frame, a motor carried thereon, a steering mechanism connected with the front part of the frame, sprocket-wheels disposed in pairs upon opposite sides of the frame, an endless platform passing around the sprockets upon each side, said platform being composed of links pivoted together, and shoes fixed transversely to each of the link members, said shoes having transverse projections upon their bearing surfaces, and combined rivet bolts to unite the link elements and the exterior platform shoes.

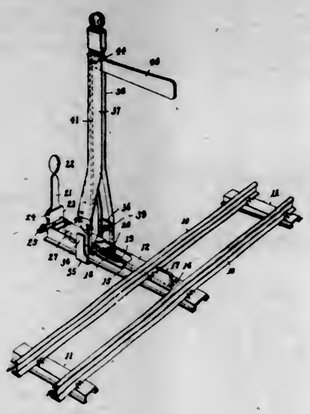
5. In a traction engine, a main frame with front steering apparatus, sprocket-wheels journaled upon the sides of the rear portion of the frame, a motor and gearing whereby the sprocket-wheels may be revolved, an endless traveling platform, said platform being composed of chain links with bearing shoes secured to the outer sides of the links, said links consisting of alternate male and female sections having transverse sleeves at their junction, pivot pins or bolts passing through the sleeves to form turnable joints between the links, and wheels or rollers mounted in the lower part of the main frame and adapted to travel upon the inner edges of the compound links.

[Claims 6 to 35 not printed in the Gazette.]

874,009. TOY-RAILWAY-TRAIN STOP AND SIGNAL. CHARLES A. HOTCHKISS, Bridgeport, Conn., assignor to The Ives Manufacturing Corporation, Bridgeport, Conn., a Corporation of Connecticut. Filed June 14, 1907. Serial No. 378,940.

1. In a toy railway train stop of the class described, the combination with a sleeper having attached rails, of a rocker shaft mounted in the sleeper having an arm disposed outwardly from the sleeper for engagement by a

train, a spring for normally holding the shaft and arm in one position, and means for shifting the shaft and arm to a second position.



2. In a toy railway train stop, the combination with a pair of rails and a sleeper attached thereto, of a rocker shaft journaled upon the sleeper and having an arm disposed outwardly intermediate the two rails and in the line of travel of a train when passing over the rails, means for normally holding the shaft and arm in one position, and a lever for operating said shaft and arm to shift them to a second position against the action of said holding means.

3. In a toy railway train stop, the combination with a pair of rails and a sleeper attached thereto, of a rocker shaft journaled upon the sleeper and having an arm disposed outwardly in the line of travel of a train when passing over the rails, means for normally holding the shaft and arm in one position and a lever for operating said shaft and arm to shift them to a second position against the action of said holding means, and means for retaining said lever, shaft and arm in a position opposite to that normally obtained by the action of said holding means.

4. In a railway train stop of the class described, the combination with a pair of rails having an attached sleeper, of a rocker shaft journaled in said sleeper having an arm disposed outwardly therefrom and intermediate of the said rails, a spring for normally holding the shaft and arm in a raised position and a connected lever for operating the shaft to raise the arm to lower position, and spring actuated means to engage the lever to hold the arm in such lowered position against the action of the before mentioned spring.

5. In a toy railway train stop the combination with a pair of rails, of a hollow sleeper attached thereto, a rocker shaft journaled longitudinally within the hollow sleeper and having an arm projected upward through the said sleeper, a spring engaged with both shaft and sleeper to normally hold the arm in one position, a lever connected with projecting end of shaft on outside of sleeper having a signal plate on upper end and disposed longitudinally with the said sleeper and means for retaining shaft and arm in a position opposite from that normally held by the action of the spring.

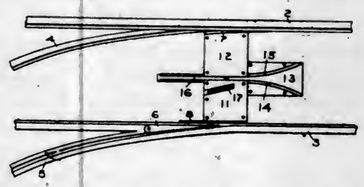
[Claims 6 to 16 not printed in the Gazette.]

874,010. TYPE-CLEANER. ELIZA A. JOHNSON, Washington, D. C. Filed Aug. 7, 1907. Serial No. 387,503.

A type-cleaner comprising a composite sheet having a face of cloth and a back of paper, the face and back being suitably united; such sheet having substantially the same width-wise dimension as a sheet of typewriting paper and of a suitable length whereby it can be adjusted longitudinally by the paper feed mechanism of the typewriting machine.



874,011. RAILWAY-SWITCH. JONATHAN S. JONES, West Bend, Iowa, assignor of one-half to Nicoll Y. Hasley, Peoria, Ill. Filed May 13, 1905. Serial No. 260,222.



1. In combination with a railway switch and car, means for actuating said switch consisting of a rearwardly extending arm pivotally supported underneath the car, a spring normally holding said arm in raised position, a bell crank lever fulcrumed upon the rear end of said arm and carrying a wheel at its lower end, and a spring support for the opposite end of said lever.

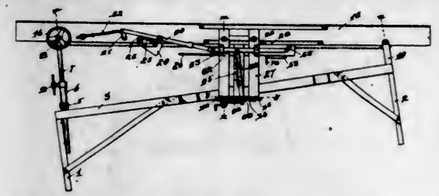
2. In combination with a railway switch and car, a chamber arranged alongside said switch and formed with a slot parallel therewith, a spring supported within said chamber and connected with said switch to hold the same in closed position, a lever arm fulcrumed in said chamber and connected with said switch, said arm extending into said slot, and a downwardly extending arm carried by said car in position to enter said slot and actuate said lever arm to open the connected switch.

3. In combination with a railway switch and car, a chamber arranged alongside said switch, a spring supported within said chamber and connected with said switch to hold the same in closed position, lever mechanism supported in said chamber and connected with said switch, a portion of said mechanism extending through a slot parallel with said switch, and a downwardly and rearwardly extending wheel supporting arm carried by said car platform in position to enter said slot and actuate said lever mechanism to open the connected switch.

874,012. CAN-LABELING MACHINE. JOHN H. KAIN, Milford, Ohio, assignor to Denis A. Reidy, Cincinnati, Ohio. Filed Nov. 12, 1906. Serial No. 343,147.

1. In a can labeling machine, an inclined can-way, can-gluing, label-feeding and label-gluing devices, and means actuated by the gravity of the can adapted to simultaneously operate said devices, substantially as described.

2. In a can labeling machine, an inclined can-way, a main actuating member operated by the gravity of the can, can-gluing, label-feeding and label-gluing devices, all connected to and operated by said main actuating member, substantially as described.



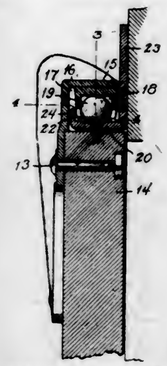
3. In a can-labeling machine, a can-way, a platen adapted to support a pile of labels with the upper label in the path of can travel, a platen feed consisting of screw, pawl and ratchet, and lever mechanism, a member actuated by the moving can adapted to reciprocate said lever, and means for adjusting the fulcrum of the leverage so as to regulate the amount of feed, substantially as described.

4. In a can-labeling machine, an inclined can-way, a rock shaft having a rocking member projected from the can-way and adapted to be rocked by the rolling can, a glue device actuated thereby to apply glue to the periphery of the can, a platen located below the gluing device and adapted to support a pile of labels with the upper label in the path of can travel, a platen feed, connections between said rock shaft and platen feed adapted to raise the platen each time a can passes over the rocking member, a label pasting device located in rear of the labels, and mechanism connected to and operated by the said rock shaft adapted to apply glue to the rear edge of the uppermost label at each operation, substantially as described.

5. In a can-labeling machine, a can-way, a bracket adjustably attached to said way, a platen, platen feed mechanism, and a gluing device in rear of the platen attached to said bracket, whereby said platen feed and gluing devices may be adjusted as a unit relative to the can-way and means actuated by the can for operating said feeding and gluing devices, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

874,013. DOOR-HANGER. MORRIS E. KANALY, Arlington, Mass. Filed Apr. 13, 1907. Serial No. 368,074.



1. In a door hanger, the combination with a shank adapted for attachment to a door and having a socketed head offset from its upper portion, the said head being separated from the shank by a recess adapted to receive a flange of a track, of a ball loosely engaged with the socket of the head, and projecting below the latter, the socket having means for retaining the ball.

2. In a door hanger the combination with a shank adapted for attachment to a door and having a socketed head offset from its upper portion, the said head being separated from the shank by a recess adapted to receive a flange of a track, of a ball loosely engaged with the socket of the head, and projecting below the latter, the socket having a contracted mouth the width of which is slightly less than the diameter of the ball, said mouth being slotted to make it expansible.

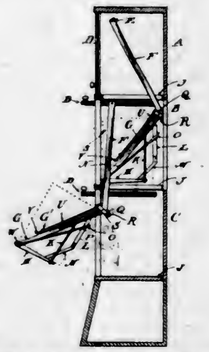
3. In a door hanger the combination of a track having a central hanger-supporting portion, and an upwardly projecting flange, and a door supporting hanger comprising a shank, a socketed head offset from the shank, and a ball seated in the socket of the head and projecting below the latter, the head and shank being separated by a recess which receives the track flange.

874,014. ADJUSTABLE BRACKET. MORRIS KURTZON, Chicago, Ill. Filed Jan. 25, 1906. Serial No. 297,751.



In combination with a standard having key-hole slots, a bracket comprising a vertical arm and a horizontal arm, said vertical arm having a perforation near its lower end and provided on its lower end with an integral hook adapted to enter one of said keyhole slots, a nut rotatably and non-removably mounted in said perforation, a brace connecting the said nut with the outer portion of the horizontal arm, and means for connecting the upper end of the vertical arm with the standard.

874,015. BOOKCASE. THOMAS J. LAMPING, Moline, Ill. Filed July 7, 1906. Serial No. 325,060.



1. In a book case, a shelf, suspending means therefor, a frame for carrying the same, the shelf arranged to move outward and upward, and means to engage said suspending means and thereby positively hold said shelf at various adjustments outside the frame through the shelf suspending means.

2. In a book case, a shelf, suspending means therefor, a frame for carrying the same, said shelf arranged to move outward and upward, mechanism for engaging the said suspending means by which to hold the shelf at various fixed adjustments outside the frame, and means in connection with said mechanism to alter its position to release said shelf.

3. In a book case, a shelf, suspending means therefor, a frame from which the shelf is hung said shelf arranged to move outward and upward, and mechanism adapted for automatically engaging the suspending means and positively holding the shelf in any one of a succession of positions though said suspending means as the shelf is drawn outward.

4. In a book case, a shelf, suspending means therefor, a frame from which the shelf is hung, said shelf arranged to move outward and upward, and means within the frame adapted to automatically engage the suspending means and positively hold the shelf outside the case in any one of a series of adjustments through the shelf suspending means.

5. In a book case, a shelf, suspending means therefor, a frame from which the shelf is hung, said shelf arranged to move outward, mechanism supported independent of the shelf and with which the shelf-suspending means automatically engages as it is drawn forward for holding the shelf in a desired adjustment outside the case, and means for at will disengaging said mechanism.

[Claims 6 to 41 not printed in the Gazette.]

874,016. TURN-BUTTON FOR ELECTRIC SWITCHES. HENRY E. LEPPERT, New Britain, Conn., assignor to The Hart Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Oct. 29, 1904. Serial No. 230,460.



1. In a device of the character described, a turn button or key, a cavity therein and extending only partially through the same, a spindle head slidable in said cavity and means to prevent the independent rotation of said key and spindle head, an abutment on the inner end of said spindle head, a second abutment at the inner end of said key, a spring located between said abutments and around said spindlehead.

2. In a device of the character described, a turn button or key, a cavity therein, a shell fixed within said cavity, a spindle head slidable therein, means for preventing the independent rotation of said shell and spindle head, a shoulder or abutment on said spindle head within said shell, a second shoulder or abutment secured to the outer end of said shell and forming an inwardly projecting shoulder or abutment, a spring between said abutments acting to press said spindle head into said key.

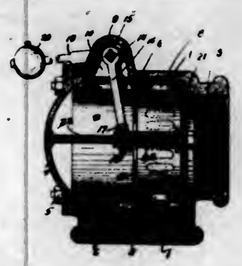
3. In a device of the character described, a turn button or key, a shell fixed therein, a passage in said shell of angular cross-section, a spindle head longitudinally movable in said shell, an abutment at the inner end of said spindle head of an outline corresponding to the cross-sectional outline of the interior of said shell, a second abutment or shoulder projecting inwardly from said shell and a spring arranged between said abutments and normally pressing said spindle head into said shell.

4. In a device of the character described, a key, a cavity therein, a shell anchored in said cavity against independent movement relatively to the key, a spindle head longitudinally movable in said shell but held against independent rotation relatively thereto, an outwardly projecting shoulder or abutment on said spindle head at or near its inner end, an inwardly projecting shoulder or abutment on said shell at or near its outer end, an expansion spring arranged between said spindle head and shell, the ends of said spring engaging said abutments and normally projecting said spindle head into said shell.

5. In a device of the character described, a handle or key, a cavity therein, a shell fixed in said cavity, a spindle head longitudinally movable in said shell, an outwardly extending abutment at the inner end of said spindle head, a retaining device for said spindle head secured to the outer edge of said shell and forming an inwardly projecting shoulder relatively thereto of smaller diameter than the shoulder on said spindle head, a spring located between said shoulder on the spindle head and said retaining member.

[Claims 6 to 10 not printed in the Gazette.]

874,017. GAS-REGULATOR. GEORGE L. LEWIS, Edgewood and JOHN R. FRANKENBERG, Pittsburg, Pa. Filed Mar. 20, 1907. Serial No. 363,369.



1. A gas regulator consisting of a cylindrical body portion having interiorly threaded nipples, said body portion having a bore or cylinder formed therein the side walls of which are provided with circumferentially arranged openings, said body portion having a chamber formed therein surrounding said bore or cylinder and communicating therewith and with one of said nipples, a cap carried by said body portion, a guide rod carried thereby, a head slidably mounted in said bore or cylinder and having a sleeve adapted to telescope said guide rod, and means to normally hold said head over said opening, said means consisting of a revoluble shaft, a weighted arm carried thereby, and a bifurcated lever connecting with said sleeve and with said shaft.

2. A gas regulator consisting of a cylindrical body portion having interiorly threaded nipples, said body portion having a bore or cylinder formed therein, the side walls of which are provided with circumferentially arranged openings, said body portion having a chamber formed therein surrounding said bore or cylinder and communicating therewith and with one of said nipples, a cap carried by said body portion, a guide rod carried thereby, a head slidably mounted in said bore or cylinder and having a sleeve adapted to telescope said guide rod, and means engaging said head to normally hold the same over said openings.

3. A gas regulator embodying a body portion having nipples, said body portion having a cylinder or bore formed therein eccentric with said body portion, a chamber surrounding said bore or cylinder and communicating therewith, a head slidably mounted in said bore or cylinder, a cap carried by said body portion, means carried by said cap to guide said head in its movement, means protruding into said body portion for normally holding said head in a fixed position, and means to adjust the last named means.

4. In a gas regulator, a body portion having a cylinder formed therein, a chamber surrounding said cylinder and communicating therewith, a head slidably mounted in the bore of said cylinder, and means engaging said head to normally hold the same in position to close the inlet to the cylinder of said body.

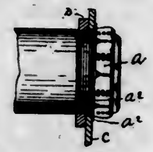
5. In a gas regulator, a body portion having an inlet and an outlet at right angles to each other, said body portion having a cylinder formed therein, a chamber surrounding said cylinder and communicating therewith, a stationary guide-rod extending axially of the cylinder, a head slidable on said guide-rod, and adjustable means for normally holding said head in position to close the inlet.

874,018. CHILLED CASTING. CHARLES J. MESTA, West Homestead, Pa., assignor to Mesta Machine Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Jan. 24, 1907. Serial No. 353,916.

1. As a new article of manufacture, a chilled cast iron article containing vanadium.

2. As a new article of manufacture, a chilled cast iron article having a small percentage of vanadium; substantially as described.

874,019. END CAP FOR ELECTRIC CONDUITS. HARRY P. MOORE, Newburyport, Mass. Filed Apr. 6, 1907. Serial No. 366,657.



1. An end cap for electric conduits struck up or drawn from ductile sheet metal having an attaching portion, a horizontal section of which is polygonal both exteriorly and interiorly, having eight or less faces which engage the threads in the pipe at points intermediate to their length only, and having on their inner faces, at such points of engagement, inwardly extended projections which enter the spaces between the threads, which are arranged to follow the threads as the cap is turned, to thereby move the cap along on the pipe, substantially as described.

2. The end cap for electric conduits struck up or drawn from ductile sheet metal having an attaching portion composed of a plurality of spring-acting ears or leaves with upturned ends and with inwardly extended projections adapted to enter the spaces between the threads on the pipe or conduit, substantially as described.

874,020. GUARD FOR NON-REFILLABLE BOTTLES. HANS J. MORTENSEN, Baltimore, Md., assignor of one-half to Hyland P. Stewart, Baltimore, Md. Original application filed Apr. 25, 1904, Serial No. 204,812. Divided and this application filed Apr. 6, 1907. Serial No. 366,794.

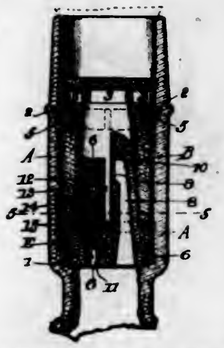


1. The combination with a bottle provided with a valve acting to prevent the passage of liquid into the bottle, of a guard secured within the neck of the bottle and comprising a central core, a plurality of radial webs projecting from said core, and a series of baffle plates arranged in the spaces between the webs and connected with the latter and the core, each of said plates extending but partially across the space in which it is arranged, and the several plates in each of said spaces being out of alinement with each other, whereby a plurality of tortuous passages are provided within the bottle neck, substantially as and for the purpose described.

2. The combination with a bottle provided with a valve acting to prevent the passage of liquid into the bottle, of a guard secured within the neck of the bottle and comprising a central core, a plurality of radial webs projecting from said core to the inner surface of the bottle neck, and a series of baffle plates formed integral with said core and webs and arranged in the spaces between the webs, each of said plates extending but partially across the space in which it is arranged, and the several plates in each of said spaces being out of alinement with each other, whereby a plurality of tortuous passages are provided within the bottle neck, substantially as and for the purpose described.

3. The combination with a bottle provided with a valve acting to prevent the passage of liquid into the bottle, of a guard secured within the neck of the bottle and comprising a central core, a plurality of radial webs projecting from said core to the inner surface of the bottle neck, a series of baffle plates arranged in the spaces between the webs and connected with the latter and the core, each of said plates extending but partially across the space in which it is arranged, and the several plates in each of said spaces being out of alinement with each other, whereby a plurality of tortuous passages are provided within the bottle neck, and a fastening ring fitted in and projecting from a groove in the bottle neck surrounding said guard and extending through notches in the webs of said guard, substantially as and for the purpose described.

874,021. NON-REFILLABLE BOTTLE. HARRY O. MCCLURG, Baltimore, Md. Filed Apr. 5, 1907. Serial No. 366,511.



1. In a non-refillable bottle the combination with a bottle neck of a stopper having means for holding it in position therein and comprising a part having a passage for air and a passage for liquid and a resilient valve adapted to open by pressure of liquid thereon, and an air vent comprising a valve seated in the air passage in the base of the stopper, a slidable weight applied to the valve, and a spring adapted to press on the weight and made of such tension that when the bottle is inverted the weight is sufficient to compress it and allow unseating of the air valve, substantially as described.

2. In a stopper for non-refillable bottles the combination with a stopper proper having a passage for discharge of liquid and a valve controlling such passage of an air vent formed by a separate passage in the stopper proper, a valve which is normally seated therein, a slidable weight applied to the stem of the valve, a guide in which the weight is arranged for vertical movement, a spring interposed between the weight and the outer end of such guide and another spring interposed between the weight and the head of the valve, such springs being of slight tension as and for the purpose specified.

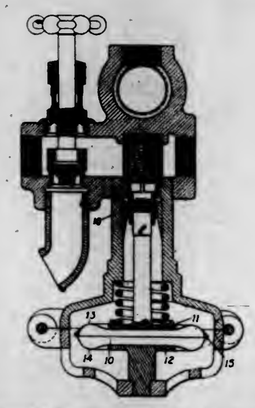
3. In a non-refillable bottle the combination with a stopper proper having an air vent and a passage for discharge of liquid and a valve for normally closing said passage, of an air valve which is normally seated in the air vent, and a spring actuated device applied to the valve for holding it normally seated but adapted to yield to allow unseating of the valve when the bottle is inverted, substantially as described.

4. In a non-refillable bottle, the combination with a stopper comprising a practically cylindrical body, a base having a passage for discharge of liquid, and a valve for controlling the same, of a part D which intervenes the base and body of the stopper and is provided with a vertical tube, an air valve whose stem projects into said tube, a weight which is applied to the valve stem and is slidable within the tube, and a spring pressing upon the weight and thereby imposing pressure on the valve, but made of such tension that the weight compresses it to a considerable degree when the bottle is inverted and thus allows the air valve to fall away from its seat, substantially as described.

5. A stopper for non-refillable bottles having an attachment for preventing admission of air under normal conditions and permitting ingress of the same when the bottle

is inverted, the same comprising a part having a tube which serves as a guide, a valve whose stem is adapted to slide in such tube, a weight also arranged within the tube and slidable on the valve stem, and springs between which the weight is balanced, substantially as described.

874,022. EXPANSIBLE CELL FOR THERMOSTATS. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car Heating Company, Albany, N. Y., a Corporation of West Virginia. Filed Apr. 7, 1906. Serial No. 310,406.



1. A thermostatic cell for steam traps or other controllers comprising a sealed flexible metal casing of flattened form containing a liquid and having walls with wide central seats on opposite sides for abutting the resistance pieces of the trap or other controller and a marginal flexing portion free from abrupt bends and of substantially the same sectional outline which a corresponding wall of perfect flexibility would tend to assume under the influence of internal pressure.

2. A sealed thermostatic cell containing a liquid of low boiling-point and having walls composed of two flexible metal diaphragms free from abrupt bends in their flexing portions and connected by their edges, said diaphragms having substantially-flat central portions and having marginal portions which together conform substantially to the major arc of a circle.

874,023. NON-INDUCTIVE RESISTANCE. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car-Heating Company, Albany, N. Y., a Corporation of West Virginia. Filed Feb. 21, 1907. Serial No. 358,649.

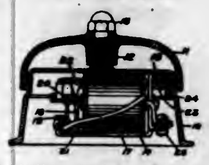


1. A non-inductive resistance comprising a support, and a conductor laid thereon in superposed layers having opposite polarities.

2. A non-inductive resistance comprising a wire conductor composed of concentric layers wound in opposite directions so as to neutralize their magnetic polarity.

3. A non-inductive resistance comprising a central supporting core, an electrical conductor wound thereon in concentric layers having an opposite direction and counterbalanced polarities, together with sheets of insulating material wrapped about the successive layers to provide insulation between said layers, the beginning of each succeeding coil forming, with the end of the preceding coil, a loop turned about the longitudinal edge of the interposed sheet of insulating material and anchored by said sheet.

874,024. ELECTRIC BELL. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car Heating Company, Albany, N. Y., a Corporation of West Virginia. Filed Feb. 21, 1907. Serial No. 358,650.



1. An electric bell comprising an inverted cup-shaped base with a sounding bell attached to the outer side of its bottom wall and overlapping the outer portion of the base, a magnet attached to the inner side of said bottom wall, a sliding hammer substantially parallel to the bottom wall and projecting through the side wall of the base to engage the inner side of the bell, a pivoted armature engaging said hammer, and a circuit interrupter operated by the armature.

2. An electric bell comprising a hollow base, a sounding-bell mounted thereon, a two-spool magnet contained within said base, a sliding hammer mounted between the magnet spools and having its striking end slidingly supported and projecting through the wall of the base to contact with the inner side of the sounding-bell, an armature pivoted by one end and having its opposite end pivoted to and supporting one end of the hammer, and a circuit interrupter operated by said armature.

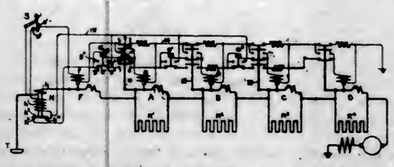
3. An electric bell comprising an inverted cup-shaped base with a sounding bell mounted on the outer side thereof, a substantially L-shaped sub-frame attached to the bottom wall of the base on the inner side thereof and having a portion at right-angles to said bottom wall and a portion parallel thereto, a magnet attached to the right-angled portion of the sub-frame between the parallel portion and the bottom wall, a hammer adjacent to and parallel with the bottom wall, an armature at right-angles to the bottom wall pivoted at one end to the sub-frame and at the other end to the hammer, and a circuit-interrupter operated by the armature.

4. An electric bell comprising an electromagnet, an armature therefor, a hammer connected with said armature and having a pair of insulating blocks, and an independently mounted spring vibrator arm interposed between said blocks for interrupting the magnet circuit and for producing and limiting the retracting movement of the hammer.

5. An electric bell comprising a hollow base, a sounding-bell mounted thereon, a sub-frame mounted within said base and carrying magnet-spools, a hammer mounted between said spools and having a pair of jaws at the end opposite the striking end, a spring vibrator-arm mounted between and insulated from said jaws for interrupting the magnet circuit and also insulated from the sub-frame, and an armature pivotally connected at one end with said sub-frame and pivotally connected at its opposite end with the jaw end of said hammer.

[Claim 6 not printed in the Gazette.]

874,025. SYSTEM OF MOTOR CONTROL. ALEXANDER MCIVER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 8, 1905. Serial No. 249,005.



1. In a controller, a series of switches arranged to close in automatic progression, and relays mechanically independent of the switches for positively causing a predetermined interval of time to elapse between the closing of successive switches.

2. In combination, a series of switches arranged to close in automatic progression, and means associated with each of certain of said switches mechanically independent thereof for causing a predetermined interval of time to elapse between the closing of each of said switches and the succeeding switches.

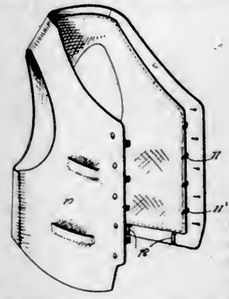
3. In a controller, a series of switches arranged to close in automatic progression, and a separate relay associated with each switch for controlling the operation of a succeeding switch.

4. In combination, a series of switches arranged to close in automatic progression, a relay associated with each of a plurality of the switches for controlling the operation of succeeding switches, and means operatively related to each of said switches for controlling its relay.

5. In a controller, a series of switches adapted to close in automatic progression, electromagnetic actuating means for said switches, and means mechanically independent of the switches for completing the circuit of the actuating means for one switch a predetermined interval of time after the preceding switch has been closed.

[Claims 6 to 13 not printed in the Gazette.]

874,026. LIFE-PRESERVER. ADOLF NECKER, Philadelphia, Pa. Filed Aug. 27, 1907. Serial No. 390,281.



1. A garment including a vest section and a lining, an inflatable member disposed betewen the lining and vest section, a strip secured to said member and arranged to be secured to the lining, said lining at its point of connection with the face section being formed in folds to provide an excess of material at such point, and means for securing the lining folds in collapsed condition.

2. A garment including a vest section and a lining, an inflatable member disposed between the lining and vest section, a strip secured to said member and arranged to be secured to the lining, the edges of the inflatable member being formed with a series of folds, and the edges of the lining being formed with similar folds, whereby to permit a spreading of the lining and member in inflating the latter.

3. A garment including a vest section and a lining, an inflatable member disposed between the lining and vest section, a strip secured to said member and arranged to be secured to the lining, the edges of the inflatable member being formed with a series of folds, the edges of the lining being formed with similar folds, whereby to permit a spreading of the lining and member in inflating the latter, and catches secured to the front flaps of the garment to hold the latter in applied position when in use as a life preserver.

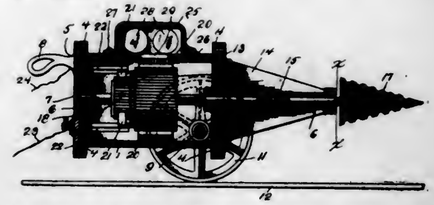
4. A garment including a vest section and a lining, an inflatable member disposed between the lining and vest section, a strip secured to said member and arranged to be secured to the lining, the edges of the inflatable member being formed with a series of folds, the edges of the lining being formed with similar folds, whereby to permit a spreading of the lining and member in inflating the latter, and catches secured to the front flaps of the garment to hold the latter in applied position when in use as a life preserver, and belt supports arranged below the catches.

874,027. TOOL-HOLDER. GEORGE NELSON, Chicago, Ill. Filed June 22, 1905. Serial No. 266,383.



In a tool-holder, the combination with a slotted bar and a slotted draw-bolt fitting the internal bore thereof, of means for varying the length of said draw-bolt and means for adjusting said draw-bolt relatively to said bar, in one direction.

874,028. COAL-MINING MACHINE. THOMAS J. NEWCOME, Jamisonville, Pa., assignor of one-half to John C. Hirst, Reynoldsville, Pa. Filed Dec. 15, 1906. Serial No. 348,050.



1. In a coal mining machine, a closed motor-carrying casing formed in sections, a reinforcing plate secured on each end of the casing, an extended bearing secured to the front reinforcing plate, a motor shaft mounted in the ends of said sections, said shaft extending longitudinally of the casing and through said extended bearing, said shaft being held from longitudinal movement, a motor for imparting rotary movement to the shaft, a pair of wheels on said casing adjacent the front end thereof, and a drill mounted on the end of the motor shaft.

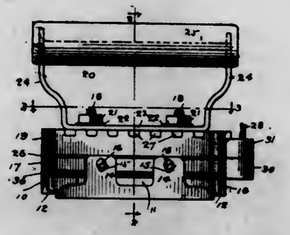
2. In a coal mining machine, comprising a motor-carrying casing formed in sections, each section comprising an intermediate portion U-shaped in cross-section, and ends formed integral therewith, said sections opposing each other to form a closed casing, the ends projecting outwardly beyond the plane of the intermediate portion to provide securing flanges, a reinforcing plate for each end, said plates abutting against the outer faces of the ends and secured to the projecting portions of the ends, an extended bearing secured to the front reinforcing plate, a motor shaft mounted in the ends of said sections, said shaft extending longitudinally of the casing and through said extended bearing, said shaft being held from longitudinal movement, a motor for imparting rotary movement to the

shaft, a pair of wheels on said casing adjacent the front end thereof, and a drill mounted on the end of the motor shaft.

3. In a coal mining machine, a closed motor-carrying casing formed in sections, a reinforcing plate secured on each end of the casing, an extended bearing secured to the front reinforcing plate, said bearing having strengthening ribs extending longitudinally of the bearing, a motor shaft mounted in the ends of said sections, said shaft extending longitudinally of the casing and through said extended bearing, said shaft being held from longitudinal movement, a motor for imparting rotary movement to the shaft, a pair of wheels on said casing adjacent the front end thereof, and a drill mounted on the end of the motor shaft.

4. In a coal mining machine, comprising a motor-carrying casing formed in sections, each section comprising an intermediate portion U-shaped in cross section, and ends formed integral therewith, said sections opposing each other to form a closed casing, the ends projecting outwardly beyond the plane of the intermediate portion to provide securing flanges, an opening formed in the top of the casing, a hinged cover for said casing, said cover forming a compartment above said opening, a reinforcing plate for each end, said plates abutting against the outer faces of the ends and secured to the front reinforcing plate, a motor shaft mounted in the ends of said sections, said shaft extending longitudinally of the casing and through said extended bearing, said shaft being held from longitudinal movement, a motor for imparting rotary movement to the shaft, a pair of wheels on said casing adjacent the front end thereof, and a drill mounted on the end of the motor shaft.

874,029. ELECTRIC HAT-CURLING IRON. JOSEPH L. O'BRIEN, South Norwalk, Conn. Filed July 1, 1907. Serial No. 381,715.



1. In a tool of the character described, the combination with a working section, of means for heating said section consisting of a laminated resistance member disposed adjacent to said working section, said resistance member extending longitudinally of the working section and being bent upon itself and extending backward, then bent upon itself and extending transversely, then bent upon itself and extending longitudinally and then bent upon itself and extending backward and insulating material between the laminæ of the resistance member and between the resistance member and other portions of the iron.

2. In a tool of the character described, the combination with a working section provided with a concave groove to receive a hat brim, of means for heating said section consisting of a laminated resistance member slotted alternately from opposite edges and extending longitudinally of the section in superposed laminæ, then transversely and then longitudinally again in superposed laminæ, one of said laminæ being curved outward toward the center of the groove, substantially as described, for the purpose specified.

8. A flattened resistance member consisting of continuous laminæ of metal slotted alternately from opposite sides, said member extending longitudinally being then bent upon itself and extending longitudinally again, then transversely, then longitudinally and then longitudinally again.

4. In a tool of the character described, the combination with a lower section having a concave groove to receive a hat brim, an intermediate section and a form for a hat brim lying in the groove and secured to the intermediate section, of a laminated resistance member slotted alternately from opposite edges for heating the said sections and insulating material between the laminæ of the resistance member and between the resistance member and the sections.

5. In a tool of the character described, the combination with a lower section, an intermediate section and an upper section, of heat insulating material between the upper and intermediate sections, a laminated resistance member slotted alternately from opposite edges lying between the intermediate and lower sections, and electrical insulating heat conducting material between the laminæ of the resistance member and between the resistance member and the lower and intermediate sections.

[Claims 6 and 7 not printed in Gazette.]

874,030. SIEVE-CLEANER. JOHN OLSEN, Milwaukee, Wis., assignor of one-half to William I. Greenleaf and one-half to John M. Beech, Milwaukee, Wis. Filed May 6, 1907. Serial No. 372,176.



1. A sieve cleaner having an elastic frame open on one side and provided with a wiper projecting upwardly therefrom, substantially as described.

2. A sieve cleaner comprising a curved elastic frame open on one side and provided with a number of separate upwardly projecting wipers, substantially as described.

3. A sieve cleaner comprising a frame consisting of a curved elastic metal band open on one side and having inwardly and upwardly bent lugs and wipers clasped between said band and lugs and projecting upwardly therefrom, substantially as described.

4. A sieve cleaner comprising a resilient frame consisting of a curved metal band open on one side and formed at intervals along its lower edge with downwardly extending bearings and between said bearings with inwardly and upwardly bent lugs, and wipers clasped between said band and lugs and projecting upwardly therefrom, substantially as described.

5. A sieve cleaner comprising a resilient frame consisting of an open elastic metal band bent into approximately annular shape, one of its free ends being bent inwardly and forming a transverse striking abutment opposite the other end, and a wiper secured to said band and projecting upwardly therefrom, substantially as described.

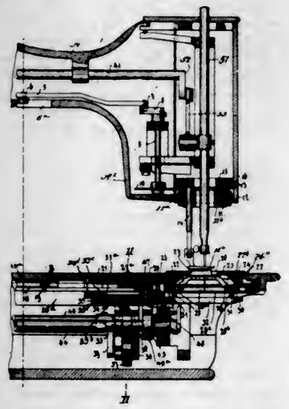
[Claims 6 and 7 not printed in the Gazette.]

874,031. HULL OF VESSELS. ISAAC E. PALMER, Middletown, Conn. Filed Jan. 12, 1904. Serial No. 188,708.



The combination with the hull of a vessel, of wings independently movable in a vertical direction and means for raising and lowering the said wings and for locking them in the desired adjustment, the said wings being hinged one on each of the opposite sides of the keel, their shanks extending thence rearwardly along the opposite sides of the keel and the blades of the wings gradually extending laterally as they pass under the overhanging stern of the vessel on opposite sides of the central vertical longitudinal plane thereof.

874,032. SEWING-MACHINE. ANTON PFEUFER, Landshut-Neustadt, Germany. Filed Apr. 23, 1906. Serial No. 313,329.

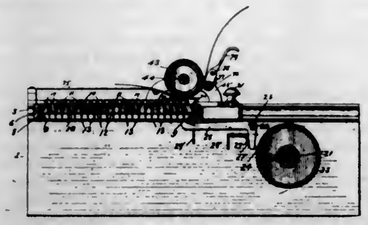


1. A sewing machine comprising in combination, a needle bar, a rotatable member provided with a gear, a presser foot secured to said rotatable member, an adjusting shaft, a movably pivoted crank rod and gear connection between said adjusting shaft and presser foot gear, a feeder, a rotatable member engaging said feeder and provided with a gear, a movably pivoted crank rod and gear connection between said adjusting shaft and feeder gear, and means for rotating said adjusting shaft whereby said presser and feeder are adjusted in unison.

2. A sewing machine comprising in combination, a rotatable feeder, means for rotating said feeder, a member associated with said feeder having universal movement in one plane, a reciprocating member for actuating said first mentioned member, and a shifting member operated by said means to adjust said reciprocating member in unison with said feeder.

3. A sewing machine comprising in combination, a rotatable feeder, means for rotating said feeder, a fulcrumed member associated with said feeder and adapted to have universal movement in one plane, a reciprocating member for operating said fulcrumed member and provided with an inclined stud, an actuated slide engaging said stud to operate said reciprocating member, and a shifting member operated by said means to adjust said reciprocating member in unison with said feeder.

874,033. PRINTING-MACHINE. JOHN H. PILLINGS, Columbus, Ohio. Filed Aug. 22, 1907. Serial No. 389,679.



1. In a printing machine, separate movable type, a frame provided with longitudinal grooves, a chase supporting the type in alinement and movable in the frame, a lever for each type in a line, and means supported by the sides of the frame for operating said levers and projecting the type.

2. In a printing machine, separate movable type, a frame provided with longitudinal grooves, a carriage movable in said grooves, a chase supporting the type in alinement and engaging said carriage, a lever for each type in a line, and means for operating the levers and projecting the type, said means and said levers supported by the sides of the frame.

3. In a printing machine, separate movable type, a chase for supporting the type in a plurality of parallel lines, a bank of levers comprising a lever for each type in a line and adapted to operate the type of each line consecutively, and means for operating said levers to project the type.

4. In a printing machine, separate movable type, a frame provided with longitudinal grooves, a carriage movable in said grooves, a chase supporting the type in alinement and engaging said carriage, a lever for each type in a line, and a revoluble member arranged transversely of the frame, and supported by the sides of the frame, for operating said levers consecutively.

5. In a printing machine, separate movable type, a chase for supporting the type, a frame, a carriage supporting the chase and longitudinally movable in said frame, means for projecting the type consecutively, means for moving the carriage intermittently and a revoluble member adapted to operate said means for projecting the type and the means for moving the carriage

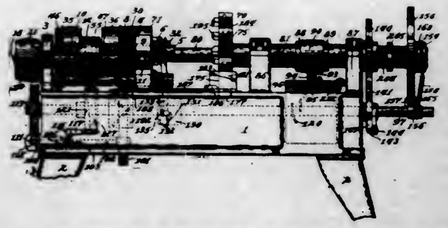
[Claims 6 to 12 not printed in the Gazette.]

874,034. DISCHARGE-VALVE FOR FLUID-COMPRESSORS. WILLIAM PRELLWITZ, Easton, Pa., assignor to The Ingersoll-Sergeant Drill Company, New York, N. Y., a Corporation of West Virginia. Filed Jan. 18, 1905. Serial No. 241,603.



A valve seat, its support, a discharge valve proper, its cage having a centrally arranged hollow post, a pin for yieldingly holding the valve seat in position, fitted to slide in said hollow post, a spring for holding the pin pressed against the said seat and an adjusting bolt having a screw-threaded engagement with the bore of the said hollow post and arranged as a stop for the pin to limit the movement of the seat away from its support.

874,035. MULTIPLE-SPINDLE AUTOMATIC TURRET-MACHINE. GEORGE G. PRENTICE, New Haven, Conn. Filed Oct. 27, 1905. Serial No. 284,624.



1. The combination with a series of tool spindles, of a series of tools carried thereby one of which is a threading

tool, a work holder, means for feeding the work holder toward said tools, means for feeding said threading tool toward the work holder, and means for concurrently operating said feeding means.

2. The combination with a series of tool spindles, of a work holder and a lead screw for feeding the same toward the spindles, a threading tool carried by one of the spindles and a lead screw for feeding the threading tool toward the work holder, the sum of the pitches of the said lead screws being equal to the pitch of the thread to be cut, and means for concurrently operating said lead screws.

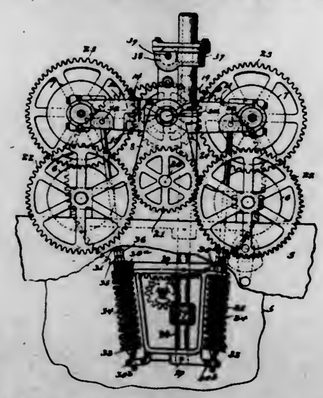
3. The combination with a number of tool spindles, of a work holder and a lead screw for feeding the same toward and a lead screw for withdrawing the same from the spindles, a threading tool carried by one of the spindles and a lead screw for feeding the threading tool toward the work holder, and a lead screw for backing the tool off the work, the sum of the pitches of the said feed lead screws being equal to the pitch of the thread to be cut, and the sum of the pitches of the backing lead screw and the work holder lead screw being equal to the thread cut, means for successively operating the threading tool lead screws and means for operating said work holder lead screws concurrently therewith.

4. The combination with a rotary spindle, and a turret, one of these being adapted to carry a tool and the other to carry the work for such tool, of means for feeding the turret toward and from the spindle, means for rotating the turret step-by-step, means for locking the turret after each rotative step, and a steady-rest for supporting the turret from the rotary thrust of the working engagement between the tool and the work.

5. In a machine tool having a frame, the combination with a turret provided with a series of stop faces, means for reciprocating the turret, means for rotating the turret step by step, a steady rest shiftably mounted on the frame for interposition between the frame and the stop faces on said turret, means for adjusting the height of said steady rest, and means for actuating the steady rest.

[Claims 6 to 27 not printed in the Gazette.]

874,036. FEED MECHANISM FOR PLANING-MACHINES. HARRY B. ROSS, Beloit, Wis., assignor to The Berlin Machine Works, Beloit, Wis., a Corporation of Wisconsin. Filed July 25, 1904. Serial No. 218,021.



1. In a feed mechanism for planing and similar machines, the combination with a lower roll, an upper roll, and a hinged carrier for the latter having a fixed hinge-center, of a roll-carrier supporting member, and a slidably-mounted screw adjusting said supporting member, said screw acting as a carrier for said supporting member in its vertical movements, substantially as described.

2. In a feed mechanism for planing and similar machines, the combination with a lower roll, an upper roll, and a hinged carrier for the latter having a fixed hinge center, of a roll-carrier supporting member, connecting-rods between said roll-carrier and supporting member through which the former is supported by the latter, and a slidably-mounted screw adjusting said supporting member, said screw acting as a carrier for said supporting member in its vertical movements, substantially as described.

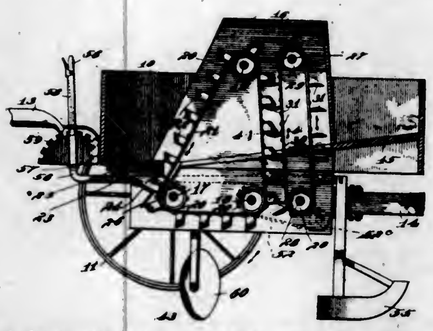
3. In a feed mechanism for planing and similar machines, the combination with a lower roll, an upper roll, and a hinged carrier for the latter, of a roll-carrier supporting member, a rod connecting the latter to the roll-carrier and transmitting the weight of said roll-carrier to said supporting member, means for vertically adjusting said supporting member, and means applied to said rod for yieldably maintaining the relative positions of said roll-carrier and its supporting member, substantially as described.

4. In a feed mechanism for planing and similar machines, the combination with a lower roll, an upper roll, and a hinged carrier for the latter, of a roll-carrier supporting member, a connecting-rod between the latter and the carrier through which said carrier is supported by said supporting member, a vertically adjustable rod carrying said supporting member, and means applied to said connecting-rod for yieldingly maintaining the relative positions of said roll-carrier and its supporting member, substantially as described.

5. In a feed mechanism for planing and similar machines, the combination with two pairs of upper and lower rolls, and hinged carriers for said upper rolls, of a yoke, connecting-rods between said yoke and each of said carriers, respectively through which the weight of the latter is transmitted to said yoke, a vertically-adjustable rod carrying said yoke, and means applied to said connecting-rods for yieldably maintaining the relative positions of said roll-carriers and yoke, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

874,037. POTATO-PLANTER. ERNST G. SCHREIBER, Hammond, Ind. Filed Sept. 11, 1907. Serial No. 392,345.



1. In a potato planter or similar device, the combination of a compartment adapted to contain pieces of potato, a feeding chain, and buckets or cups on said chain each adapted to pass into said compartment and receive or pick up a piece of potato, said buckets or cups being staggered to facilitate their filling by the pieces of potato, substantially as described.

2. In a potato planter or similar device, the combination of a compartment adapted to contain pieces of potatoes, a feeding chain, buckets or cups on said chain each adapted to pass into said compartment and receive or pick up a piece of potato, and a delivery chain carrying pockets or receptacles adapted to receive pieces of potato from the buckets or cups of said feeding chain and deliver them near the ground, substantially as described.

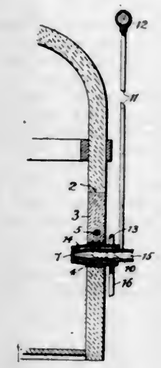
3. In a potato planter or similar device, the combination of a compartment adapted to contain pieces of potatoes, a feeding chain, buckets or cups on said chain each adapted to enter said compartment and receive or pick up a piece of potato, said buckets or cups being staggered to facilitate their filling by the pieces of potato, and a delivery chain carrying pockets or receptacles adapted to receive the pieces of potato from the buckets or cups of said feeding chain and deliver them near the ground, substantially as described.

4. In a device of the character described, the combination of a compartment adapted to contain a plurality of articles, a feed chain, and buckets or cups on said chain each adapted to pass into said compartment and receive or pick up one or more of said articles, said buckets or cups being staggered to facilitate their filling by said articles, substantially as described.

5. In a device of the character described, the combination of a conveyer, one or more conveying buckets or cups mounted on and movable with said conveyer, the size of the mouths of said buckets or cups being adjustable, and means to maintain the adjustment of said buckets or cups, substantially as described.

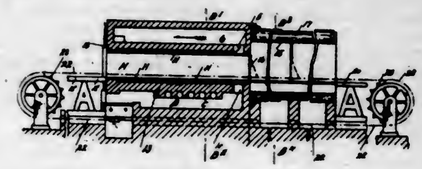
[Claims 6 to 9 not printed in the Gazette.]

874,038. KNOBBLING-FURNACE. WILLIAM SHARP, McKeesport, Pa. Filed Feb. 3, 1906. Serial No. 299,310.



In combination with a knobbling furnace, having an opening in one of its walls for the reception of a merit plate, a merit plate formed complementary to said opening for insertion thereinto and withdrawal therefrom, said merit plate having a conduit formed in the interior thereof adjacent to a twyer opening therethrough, said conduit having forwardly directed extensions opening to the exterior of the merit plate, a double walled twyer having a chamber between the walls thereof closed at its ends and having an inlet and an outlet opening, said twyer being formed for insertion into and withdrawal from the twyer opening in the merit plate, a fixed water supply pipe, an elongated flexible pipe connection connected to and forming a passage from said fixed supply pipe to one of the forwardly opening extensions of the conduit in the interior of the merit plate, an elongated flexible pipe connection connected to and forming a passage between the other of said forwardly directed extensions of said conduit and the inlet opening of the chamber surrounding the twyer, and a discharge pipe leading from the outlet opening of said chamber, said flexible pipe connections being of a length greater than the normal distance between the parts with which they communicate, whereby the merit plate and twyer may be adjusted relative to the fixed supply pipe, and the twyer and merit plate adjusted relative to each other while maintaining a continuous communicating passage from said supply pipe through the merit plate and twyer to the discharge pipe leading from the twyer.

874,039. MUFFLE OR FURNACE FOR ANNEALING. ALFRED SMALLWOOD, London, England, assignor to The Incandescent Heat Company, Limited, London, England. Filed Jan. 19, 1905, Serial No. 241,904. Divided and this application filed Dec. 18, 1906. Serial No. 348,494.



1. An annealing furnace comprising a combustion chamber, and an annealing chamber arranged above the combustion chamber, a horizontal partition separating the combustion chamber from the annealing chamber capable of becoming incandescent and forming the floor of the annealing chamber, in combination with one or more cooling chambers communicating by doors with the annealing chamber, and means whereby the articles being annealed can be conveyed from one chamber to another without the necessity of opening any or either of the chambers to the external atmosphere.

2. An annealing furnace comprising a combustion chamber, an annealing chamber arranged above the combustion chamber, a horizontal partition separating the combustion chamber from the annealing chamber capable of becoming incandescent and forming the floor of the annealing chamber, surface extensions forming part of the horizontal partition and of the same material and projecting into the combustion chamber in the path of the gases passing therethrough, one or more cooling chambers communicating by doors with the annealing chamber, and a carrying means whereby the articles can be conveyed from one chamber to another without the necessity of opening any of the chambers to the external atmosphere.

3. An annealing furnace comprising a combustion chamber, an annealing chamber arranged above the combustion chamber, a horizontal partition separating the combustion chamber from the annealing chamber capable of becoming incandescent and forming the floor of the annealing chamber, surface extensions forming part of the horizontal partition and of the same material thereas and projecting into the combustion chamber in the path of the gases passing therethrough, and extensions of the combustion chamber at the sides of the annealing chamber, the lower end of said extensions of the combustion chamber being enlarged to freely admit the gases in the combustion chamber into said extensions, in combination with, one or more cooling chambers communicating by doors with the annealing chamber and means whereby the articles being annealed can be conveyed from one chamber to another without the necessity of opening any or either of the chambers to the external atmosphere.

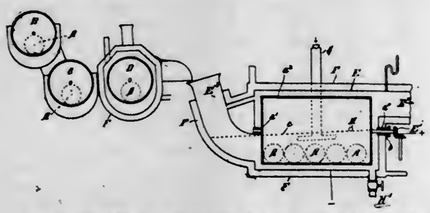
4. An annealing furnace comprising a combustion chamber, an annealing chamber arranged above the combustion chamber, a horizontal partition separating the cumbustion chamber from the heating chamber capable of becoming incandescent and forming the floor of the annealing chamber, surface extensions forming part of the horizontal partition and of the same material thereas and projecting into the combustion chamber in the path of the gases passing therethrough, and extensions of the combustion chamber at the sides of the annealing chamber, the lower end of said extensions of the combustion chamber being enlarged to freely admit the gases in the combustion chamber into said extensions, in combination with a plurality of successive cooling chambers communicating by doors with one another and with the annealing chamber, and means whereby the articles being annealed may be conveyed from one chamber to that succeeding it without the necessity of opening any or either of the chambers to the external atmosphere.

5. An annealing furnace comprising a combustion cham-

ber, and an annealing chamber arranged above the combustion chamber, a horizontal partition separating the combustion chamber from the annealing chamber capable of becoming incandescent and forming the floor of the annealing chamber, in combination with an annealing oven contained in the annealing chamber with a space between its walls and the wall of the annealing chamber, a plurality of successive cooling chambers, communicating by doors with one another and with the annealing oven and means whereby the articles being annealed may be conveyed from one chamber to that succeeding it without the necessity of opening any or either of the chambers to the external atmosphere.

[Claims 6 and 7 not printed in the Gazette.]

874,040. METHOD FOR DETINNING AND PRODUCING TIN COMPOUNDS AND OTHER PRODUCTS. ELMER A. SPERRY, New York, N. Y. Filed Nov. 29, 1905. Serial No. 289,081.



1. The process of detinning which consists in reacting on the masses to be detinned with chlorin in the presence of stannic chlorid hydrate.

2. The process of detinning which consists in reacting on the masses to be detinned with chlorin dissolved in or carried by stannic chlorid hydrate.

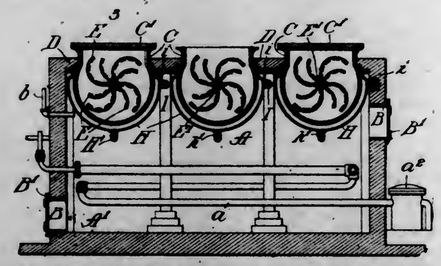
3. The process of detinning which consists in reacting on the mass to be detinned with chlorin in the presence of stannic chlorid hydrate and controlling the temperature.

4. The continuous process of detinning which consists in drying the tin scrap, reacting on same with chlorin in the presence of anhydrous stannic chlorid, continuously supplying the scrap and the chlorin and controlling the temperature of the reaction.

5. The process of detinning which consists in reacting on the masses to be detinned with chlorin and water vapor in the presence of an anhydrous liquid.

[Claims 6 to 46 not printed in the Gazette.]

874,041. APPARATUS FOR BREWING SOY. TOZABURO SUZUKI, Sunamura, Japan. Filed July 18, 1907. Serial No. 384,389.



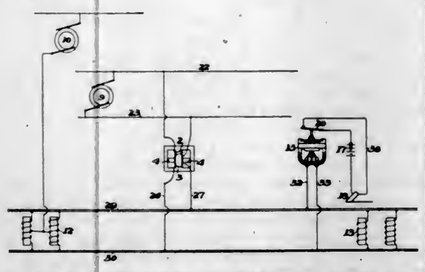
1. The combination with a closed heating chamber provided with ventilated ports, doors for said ports, heating coils for said chamber, one or more brewing tanks sunk within said chamber, draw-off pipes connected with said tanks and passing outwardly through the wall of said chamber, valves for said pipes, jacketed bottoms for said tanks, ingress and egress means for heating and cooling medium, stirring shafts passing centrally through said tanks, a plurality of stirrers mounted on said shaft, each stirrer comprising a plurality of pairs of radial stirring arms connected by transverse stirring slats, the arms of adjacent stirrers being of different radial lengths, the stirrers being separated from each other and the tank by relatively short intervals of space and arranged upon the shafts to bring the arms and slots of adjacent stirrers out of alinement thereby serving alternately to thrust the soy from the path of one stirrer laterally into the paths of adjacent stirrers.

2. The combination with a closed heating chamber, means for regulating the temperature of said chamber, one or more brewing tanks sunk in said chamber in a manner to be influenced by the temperature thereof, auxiliary means associated with the tanks for quickly changing the temperature of the contents thereof, means for admitting and discharging heating or cooling fluid to said auxiliary means, stirring shafts passing centrally through said tanks, stirrers mounted on said shafts, each stirrer comprising radial stirring arms connected by transverse slats, the arms of adjacent stirrers being of different radial length, the stirrers being separated from each other by relatively short intervals of space and arranged upon the shaft to bring the arms and slats of adjacent stirrers out of alinement thereby serving to alternately thrust the soy from the path of one stirrer laterally into the paths of the adjacent stirrers.

3. The combination with a closed heating chamber, means for regulating the temperature of said chamber, one or more brewing tanks sunk in said chamber and subjected to the temperature therein, auxiliary means for changing the temperature in said tanks, stirring shafts passing centrally through said tanks, stirrers mounted on said shafts, each stirrer comprising a plurality of pairs of radial stirring arms connected by transverse slats and arranged upon the shafts to bring the arms and slats of adjacent stirrers out of alinement thereby serving to alternately thrust the soy from the path of one stirrer laterally into the paths of adjacent stirrers.

4. The combination with one or more brewing tanks, means for applying a constant heat thereto, auxiliary means for quickly changing the temperature thereof, shafts for said tanks, and a plurality of stirrers mounted on said shafts out of alinement with each other thereby serving to alternately thrust the soy from the path of one stirrer laterally into the paths of adjacent stirrers.

874,042. BLOCK-SIGNALING APPARATUS. JOHN D. TAYLOR, Edgewood Park, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Aug. 24, 1907. Serial No. 389,981.



1. In a signaling system, a transformer having primary and secondary coils, a shunt magnetic path between said coils, and means for varying the reluctance of said magnetic path between the coils; substantially as described.

2. In a signaling system, a transformer having primary and secondary coils, and adjustable fillers forming a shunt magnetic path between said coils; substantially as described.

3. In a signal system, a transformer, primary and secondary coils connected respectively to the line and track circuits, a core therefor having a member extending between the coils, said member having portions which can be adjusted to vary the magnetic circuit thereof; substantially as described.

4. In a signaling system, a transformer, primary and secondary coils connected respectively to the line and track circuits, a core having a portion between said coils, said portion having adjustable fillers forming a shunt path for the magnetic potential through the core; substantially as described.

5. In a signaling system, a transformer, primary and secondary coils connected respectively to the line and track circuits, a core having a portion extending between said coils and formed with pockets or spaces therein, and fillers of magnetic material adjustably seated in said pockets or spaces and separated therefrom by air-gaps; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

874,043. BOX-COVER LIFTER. ROBERT L. TUDOR, Buffalo, N. Y. Filed Dec. 17, 1906. Serial No. 348,364.

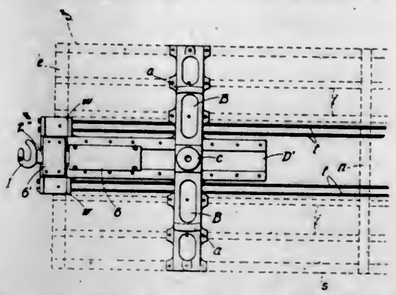


1. The combination of a box body having a circular side wall or flange, a box cover having a circular side wall or flange which fits over the edge of said body wall, an annular bead arranged on the outer side of the body wall and having a groove in its upper side, and a cam or eccentric pivoted on the cover wall and engaging with the groove of said bead, substantially as set forth.

2. The combination of a box body having its wall or flange provided with an annular bead, a cover fitting with its wall or flange over the wall of the body, and a cam or eccentric pivoted transversely on the wall of the cover and engaging its periphery with said bead and curved concentrically with the wall of the cover in the inoperative position of the cam or eccentric, substantially as set forth.

3. The combination of a box body having a circular side wall or flange, a box cover having a circular side wall or flange which fits over the edge of said body wall, an annular bead arranged on the outer side of the body wall and having a groove in its upper side, and a cam or eccentric pivoted transversely to the wall of the cover and engaging its periphery in the groove of said bead and normally curved in the direction of its major axis so that in its inoperative position the same is concentric with the wall of the cover, substantially as set forth.

874,044. BODY-BOLSTER. HENRY A. WAHLERT, St. Louis, Mo., assignor of one-half to John W. Addis, Marshall, Tex. Filed Sept. 6, 1907. Serial No. 391,642.

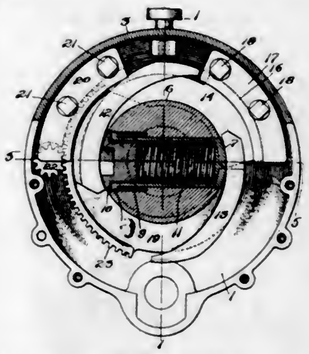


1. A body-bolster comprising a transverse truss-shaped bolster member, a longitudinal draft member extending forward thereof and partially rearward of said bolster, and substantially of channel cross-section, and a front cross buffer member projecting above the plane of the common upper surface of the first mentioned members, the whole being formed or cast of a single piece of metal.

2. A body-bolster comprising a transverse truss-shaped bolster member, a longitudinal draft member extending forward thereof and partially rearward of said bolster, and substantially of channel cross-section, a front cross buffer-member projecting above the plane of the common upper surface of the first mentioned members, and lateral wings extended from said surface and meeting the base of the buffer member, the whole being formed of a single piece of metal, substantially as set forth.

3. A body-bolster comprising a bolster member of truss-shaped design disposed transversely of the car, a longitudinal channel or draft member having a rearward extension formed integrally with the bolster member, an outer cross buffer member projecting above the plane of the upper surface of the bolster and draft member, lateral wings or formations forming extensions of said surface and connected to the base of the buffer member, a pocket formed in the upper wall of the draft member and having lateral offsets or ways, the forward end of the pocket terminating a suitable distance from the adjacent vertical wall of the buffer member, the latter member being formed integrally with the draft member, substantially as set forth.

874,045. MECHANICAL MOVEMENT. NATHANIEL B. WALES, Braintree, Mass. Filed Jan. 4, 1907. Serial No. 350,739.



1. A mechanical movement comprising a carrier, a plunger yieldingly mounted in the carrier, two cams arranged to successively retract and release the plunger, and a member shifted by the plunger when released by the cams.

2. A mechanical movement comprising a carrier, a plunger yieldingly mounted in the carrier, a cam for retracting and releasing the plunger, a member shifted by the plunger, and means for varying the position of the cam.

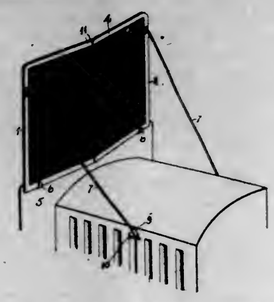
3. A mechanical movement comprising a carrier, a plunger yieldingly mounted in the carrier, two cams arranged to successively retract and release the plunger, members shifted by the plunger when released by the cams, and means for varying the positions of the cams.

4. A mechanical movement comprising a carrier, a plunger yieldingly mounted in the carrier, a cam for retracting and releasing the plunger, a member shifted by the plunger, and mechanism for varying the position of the cam during the movement of the carrier.

5. A mechanical movement comprising a carrier, a plunger yieldingly mounted in the carrier, two cams arranged to successively retract and release the plunger, members shifted by the plunger when released by the cams, and mechanism for varying the position of one of the cams during the travel of the carrier.

[Claims 6 to 9 not printed in the Gazette.]

874,046. SCREEN FOR MOTOR-VEHICLES. THOMAS H. WHITING, Rockford, Ill. Filed Nov. 12, 1906. Serial No. 343,135.

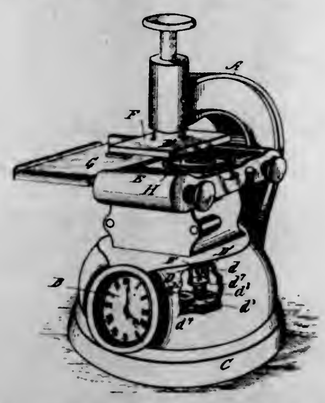


1. A screen for motor vehicles comprising two like sections hinged together, the meeting edges of the sections beveled to form a stop to the opening movement of the sections.

2. A screen for motor vehicles comprising two like sections hinged together, the meeting edges of the sections beveled to form a stop to the opening movement of the sections, and rods located at the meeting edges of the sections.

3. A screen for motor vehicles comprising two like sections hinged together, the meeting edges of the sections beveled to form a stop to the opening movement of the sections, and a single wire covering for both sections.

874,047. PRINTING-MACHINE OR TIME-STAMP. JOHN C. WILSON, Boston, Mass., assignor to Automatic Time Stamp Company, Portland, Me., a Corporation of Maine. Filed Feb. 6, 1904. Serial No. 192,301.



1. In a machine of the character described, a rotatable time-printing die provided with a time limit printing character consisting of two joined boundary lines or printing marks defining or circumscribing an intermediate space or vacancy to indicate or define an arbitrary or definite time period or limit, the said intermediate space or vacancy having a greater width or time value than that of either of the said joined boundary lines or printing marks, and an impelling clock train for the said rotatable time printing die to determine the time value of the said arbitrary or definite time limit or period.

2. In a machine of the character described, a rotatable time printing die provided with a time limit printing character, consisting of two joined boundary lines or printing marks defining or circumscribing an intermediate space or vacancy to indicate or define an arbitrary or definite time period or limit, the said intermediate space or vacancy having a greater width or time value than that of either of the said joined boundary lines or printing marks, an impelling clock train for the said rotatable time printing die to determine the time value of the said arbitrary or definite time limit or period, and a positioning device to enable a ticket or slip to be imprinted successively in the same position.

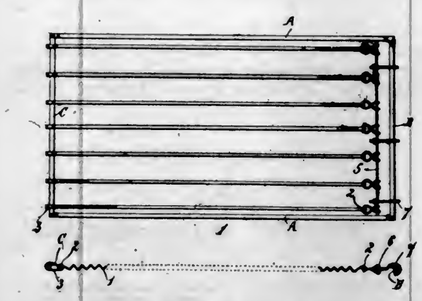
3. In a machine of the character described, a rotatable time printing die provided with a time limit printing character consisting of two joined boundary lines or printing marks defining or circumscribing an intermediate space or vacancy to indicate or define an arbitrary or definite time period or limit, the said intermediate space or vacancy having a greater width or time value than that of either of the said joined boundary lines or printing marks, an impelling clock train for the said rotatable time printing die to determine the time value of the said arbitrary or definite time limit or period, and an imprinting platen.

4. In a machine of the character described, a rotatable time printing die provided with a time limit printing character, consisting of two joined boundary lines or printing marks defining or circumscribing an intermediate space or vacancy to indicate or define an arbitrary or definite time period or limit, the said intermediate space or vacancy having a greater width or time value than that of either of the said joined boundary lines or printing marks, an impelling clock train for the said rotatable time printing die to determine the time value of the said arbitrary or definite time limit or period, and a stationary graduated printing clock dial die in juxtaposition with the said rotatable time printing die.

5. In a machine of the character described, a rotatable time printing die provided with a time limit printing character, consisting of two joined boundary lines or printing marks defining or circumscribing an intermediate space or vacancy to indicate or define an arbitrary or definite period or limit, the said intermediate space or vacancy having a greater width of time value than that of either of the said joined boundary lines or printing marks, an impelling clock train for the said rotatable time printing die to determine the time value of the said arbitrary or definite time limit or period, a positioning device to enable a ticket or slip to be imprinted successively in the same position, and an imprinting platen.

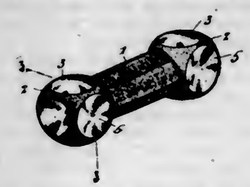
[Claims 6 to 11 not printed in the Gazette.]

874,048. BED-SPRING. WILLIAM R. BOISVERT, St. David de Levis, Quebec, Canada. Filed Feb. 7, 1907. Serial No. 356,261.



A bed spring comprising a flat corrugated body, hooks integrally formed on the opposite ends thereof connections between the hooks on one end of the spring and the framework of the bedstead, a spring loop removably secured to the other of said hooks, an adjusting bar, resilient arms extending from said loop and engaging said bar, and means for adjustably connecting said bar to the framework of a bedstead.

874,049. COMBINED PAPER-WEIGHT, KNIFE-REST, AND OPTICAL DEVICE. JOHN L. BORSCH, Philadelphia, Pa. Filed Sept. 17, 1907. Serial No. 393,396.



1. As a new article of manufacture, an elongated body having enlarged ends of transparent material, said ends having lens surfaces.

2. As a new article of manufacture, an elongated body having an enlarged end of transparent material, said end having lens surfaces the optical axis of which is transverse to the direction of elongation of the body.

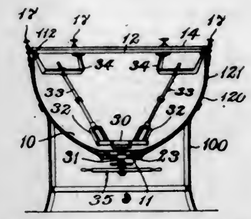
3. As a new article of manufacture, an elongated body having an enlarged end of transparent material, said end having two sets of lens surfaces with optical axes transverse to the direction of elongation of the body and at right angles to each other.

4. As a new article of manufacture, an elongated transparent body having ends formed with lens surfaces adapted to coöperate with each other as a telescope.

5. As a new article of manufacture, an elongated transparent body having enlarged ends one of which is formed with a convex lens surface, and the other of which is formed with a coöperating concave lens surface.

[Claims 6 and 7 not printed in the Gazette.]

874,050. TUNING DEVICE FOR TIMPANI. HARRY A. BOWER, Boston, Mass. Filed Apr. 26, 1905. Serial No. 257,453.



1. A timpano comprising a shell, a head, a skin-hoop encircling the rim of the shell, a plurality of tuning-keys in operative engagement with the hoop, and flexible members equal in number to said keys, said members being connected to said keys and engaging the rounded surface of said shell.

2. A timpano comprising a shell, a head, a skin-hoop encircling the rim of the shell, a plurality of tuning keys in operative engagement with said hoop, and a plurality of flexible members engaging the rounded portion of the shell and extending tangentially therefrom to and connected to said keys whereby tension may be applied to said hoop.

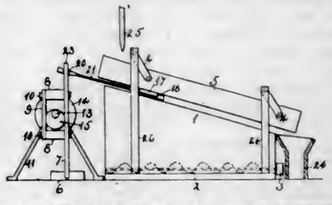
3. A timpano comprising a shell having a vibratory rim, a head, a skin-hoop encircling said rim, and adjustable means connected to said hoop and extending to and engaging the substantially non-vibratory portion of said shell whereby tension may be applied to said hoop.

4. A timpano comprising a shell having a vibratory rim, a head, a skin-hoop encircling said rim, a plurality of tuning-keys in operative engagement with said hoop, and a plurality of flexible members connected to said keys and extending to and engaging the substantially non-vibratory portion of said shell whereby tension may be applied to said hoop.

5. A timpano comprising a rotund shell having a vibratory rim, a skin-hoop encircling said rim, a head connected to said hoop, and flexible adjustable means connected to said hoop and engaging the non-vibratory portion of the shell and adapted to coöperate with said non-vibratory portion to exert tension on said hoop.

[Claims 6 to 19 not printed in the Gazette.]

874,051. SHAKING-SCREEN. NIMROD W. L. BROWN, Thomasville, Ala. Filed Apr. 18, 1907. Serial No. 368,970.

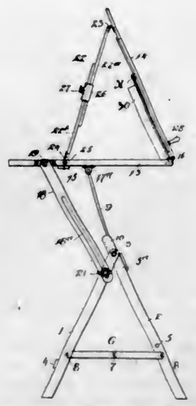


1. The combination of a sieve, means supporting the sieve in a manner to permit it to reciprocate, a vertically arranged bar having its lower end fixedly held in position, a link forming a connection between the upper portion of the bar and the sieve, and an eccentric located intermediate the ends of the bar for positively imparting movement to the bar in both directions.

2. The combination of a sieve, a vertically arranged bar having a notch in its upper end and its lower end fixedly held in position, means for imparting movement to the other end of the bar in both directions, and a notched link having its notched end located in the upper end of said vertical bar, the other end in fixed connection with the sieve, and a thinner neck portion intermediate its ends.

3. The combination of a sieve, a vertically arranged bar, means for imparting movement to the bar in both directions, and a link having one end connected with the sieve and its other end connected with the upper portion of the bar, the link having a thinner central portion.

874,052. TABLE OR EASEL. THOMAS J. CANTWELL, Great Neck, N. Y. Filed May 20, 1907. Serial No. 374,546.



1. A device of the character described, comprising folding legs, extension rods adjustably carried by said legs, guides on said legs for said rods, clips for holding said rods in positions of adjustment, a table top pivotally connected with the upper parts of said rods, braces pivotally connecting said table top with said legs, and means for holding said braces in positions of adjustment.

2. A device of the character described comprising folding legs, rods adjustably connected with said legs, means

to hold said rods in positions of adjustment, a support pivotally connected with the upper ends of said rods, braces pivotally connected with said support, means for adjustably connecting said braces with said legs, a table top hinged to said support near one edge, and a brace to connect said table top with said support to hold the table top at an angle to said support.

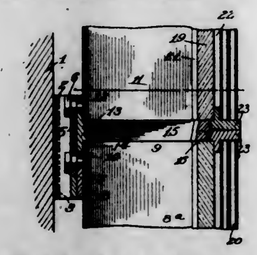
3. A device of the character described comprising folding legs, rods adjustably connected with said legs, means to hold said rods in positions of adjustment, a support pivotally connected with the upper ends of said rods, braces pivotally connected with said support, means for adjustably connecting said braces with said legs, a table top hinged to said support near one edge, and a brace to connect said table top with said support to hold the table top at an angle to said support, said brace comprising extensible bars fitted together and provided with means to permit adjustment of said bars lengthwise of each other and for holding said bars in positions of adjustment.

4. A device of the character described comprising folding legs, rods adjustably connected with said legs, means to hold said rods in positions of adjustment, a support pivotally connected with the upper ends of said rods, braces pivotally connected with said support, means for adjustably connecting said braces with said legs, a table top hinged to said support near one edge, and a brace comprising a pair of bars fitted together and means to permit said bars to be adjusted lengthwise of each other and for holding said bars in positions of adjustment, said brace being pivotally connected at one end with the table top near the side opposite its hinged connection with said support, and means for detachably connecting said brace with said support.

5. A device of the character described comprising folding legs 1, 2 pivotally connected together, extension rods adjustably attached to corresponding legs 2 at opposite ends of the device and arranged to be adjusted in the general direction of the length of said legs, means for holding said rods in positions of adjustment, a support provided with bearings pivotally connected with said extension rods, braces pivotally connected with said support, means for detachably connecting said braces with legs 1 and for holding said braces in positions of adjustment, and a table top connected with said support.

[Claims 6 to 8 not printed in the Gazette.]

874,053. MAIL-CHUTE. JOSEPH W. CUTLER, Rochester, N. Y., assignor to Cutler Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Jan. 6, 1906. Serial No. 294,825.



1. The combination with a mail chute, of a movable door or panel in the chute capable of being operated to afford access to the interior of the chute, and a protective member arranged at the inner side of said door or panel and extending beyond one of its ends.

2. The combination with a mail chute, of a movable door or panel in the chute for affording access to its interior, and a protective member constituting a fixed part of the chute, arranged at the inner side of the door or panel and extending beyond one of its ends.

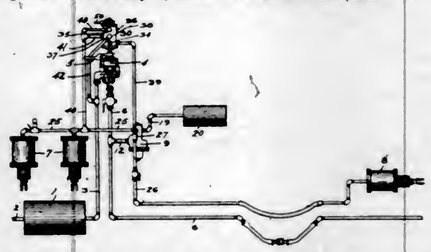
3. The combination with a mail chute embodying two or more superposed sections, of a movable door or panel in one of the sections operable to afford access to the interior of the chute, and a protective member arranged adjacent to the end of one of the sections its inner surface serving as a continuation of the interior surfaces of the chute sections, the said member being arranged at the inner side of the door and overlapping one of its ends.

4. The combination with a mail chute embodying two or more superposed sections, of a movable door or panel in one of the sections operable to afford access to the interior of the chute, and a protective member fixed to the chute adjacent to the abutting portions of the sections, the said member being arranged at the inner side of the door and extending beyond the adjacent end thereof.

5. The combination with a mail chute embodying two or more superposed sections, of a movable door or panel, operable to afford access to the interior of the chute, and a member extending transversely of the chute adjacent to the abutting portions of the chute sections, a beveled surface being provided at the inner side of said member for conducting postal matter from one chute section to the other, said member being arranged at the inner side of the door and projecting longitudinally beyond its end.

[Claims 6 to 20 not printed in the Gazette.]

874,054. AIR-BRAKE SYSTEM. FRANK H. DUKESMITH, Meadville, Pa., assignor to The Dukesmith Air Brake Company, Pittsburg, Pa., a Corporation of West Virginia. Filed May 6, 1905. Serial No. 259,181.



1. In air-brake apparatus, valve mechanism including a casing having ports adapted to communicate respectively with the main reservoir, the brake cylinder, and the release port of a triple valve on a locomotive, and having other ports adapted to communicate with the atmosphere, and a valve arranged to put the brake cylinder port and triple valve release port into communication with each other or either thereof in communication with the atmosphere, and also to put the brake cylinder port into communication with the main reservoir port.

2. In an air-brake system, the combination of a main reservoir, an engineer's valve, a driver brake cylinder and its triple valve, piping connecting these parts, and control valve mechanism connected to the main reservoir, to the driver brake cylinder, and to the triple valve exhaust port and arranged to put both the brake cylinder and the triple valve exhaust port into communication with the atmosphere or into communication with each other, or to put the triple valve exhaust port into communication with the atmosphere while keeping the brake cylinder port closed, or to put the main reservoir into communication with the brake cylinder.

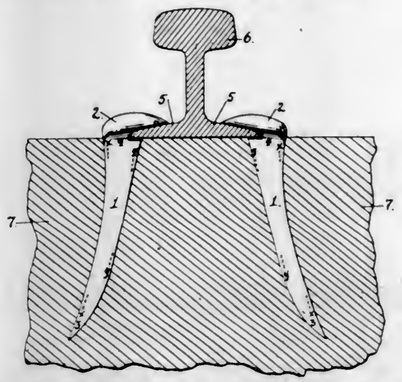
3. In an air-brake system, the combination of a main reservoir, an engineer's valve, a driver brake cylinder and its triple valve, piping connecting these parts, a tender brake cylinder connected to the exhaust port of said triple valve, and control valve mechanism connected to the main reservoir, to the driver brake cylinder, and to the exhaust port of the triple valve, and arranged to put either the driver brake cylinder or triple valve exhaust port into communication with the atmosphere or into communication with each other, or to put the driver brake cylinder into communication with the main reservoir.

4. In an air brake system, the combination of a main reservoir, an engineer's valve, a driver brake cylinder, a tender brake cylinder, a triple valve common to said driver and tender brake cylinders, piping connecting these several parts, and control valve mechanism arranged by the manipulation of a single handle and to put the driver brake and tender brake cylinders into communication with the atmosphere, put the triple valve exhaust port into communication with the atmosphere while keeping the driver brake cylinder port closed, or to put the driver brake cylinder into communication with the main reservoir.

5. In an air-brake system, the combination of a main reservoir, an engineer's valve, a driver brake cylinder, a triple valve, piping connecting these parts, a tender brake cylinder connected to the exhaust port of said triple valve, and control valve mechanism arranged in its different positions to put the driver brake cylinder and tender brake cylinder into communication with the atmosphere, or to put the same into communication with each other, or to keep the triple valve exhaust port closed or open to the atmosphere while keeping the brake cylinder closed, or to put the driver brake cylinder into communication with the main reservoir.

[Claim 6 not printed in the Gazette.]

874,055. RAILWAY-SPIKE. HUGH J. DYKES, Berkeley, Cal. Filed Feb. 9, 1907. Serial No. 356,544.



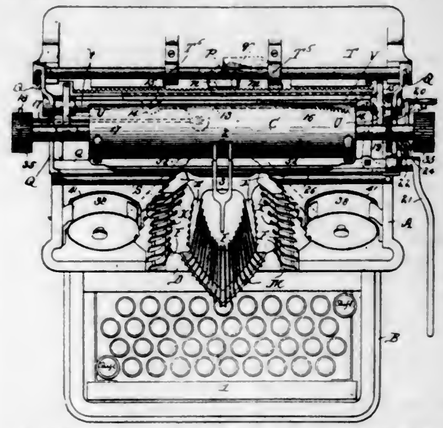
A railway-spike having a flanged head with an underlying throat to embrace the rail-flange, and a body inclined backwardly from said head, the back of the body being concave in the direction of and substantially throughout its length, and its front, from the lower wall of the throat, being a straight plane down to the vicinity of its point, and thence curved to said point.

874,056. TYPE-WRITER. HARVEY L. FISHER, Woodstock, Ill., assignor, by direct and mesne assignments, to Fisher Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 13, 1898, Serial No. 693,442. Renewed June 17, 1907. Serial No. 379,492.

1. In a typewriting machine, the combination of a transversely movable paper carriage frame, a rock-shaft mounted therein, a platen supported in arms fast upon said rock-shaft and adapted to be shifted from lower-case to upper-case position and vice versa by the rocking of said shaft, substantially as described.

2. In a typewriting machine, the combination of a transversely movable paper carriage frame, a rock-shaft mounted therein, a platen supported in arms fast upon said rock-shaft and adapted to be shifted from lower-case to upper-case position and vice versa by the rocking of said shaft, a pair of bell-crank levers and means for rocking the same, a shift-rod or bar connecting the ends of said levers, and an arm projecting from said rock-shaft and coöperating with the shift-rod, substantially as described.

3. In a typewriting machine, the combination of a transversely movable paper carriage frame, a rock-shaft mounted therein, a platen supported in arms fast upon said shaft and adapted to be shifted from lower-case to upper-case position and vice versa by the rocking of said shaft, a pair of bell-crank levers, a shift-rod or bar connecting their ends, an arm projecting from the rock-shaft and coöperating with said shift-rod, and a pair of shift-keys at opposite sides of the machine coöperating with the respective bell-cranks, substantially as described.



4. In a type-writing machine, the combination with a platen, a movable carriage, a rock-shaft therein, arms on said rock-shaft carrying said platen, and a shifting bar, of an arm connecting said bar and shaft comprising a pair of spring bars connected together at one end and adapted at their free ends to engage said bar and means for adjusting the free ends of said spring bars with relation to each other, substantially as described.

5. In a type-writing machine, the combination with a platen, a movable carriage, a rock-shaft therein, arms on said rock-shaft carrying said platen, and a shifting bar, of an arm connecting said bar and shaft comprising a pair of spring bars secured together at one end and at their free ends carrying anti-friction rollers engaging said shifting bar, and a set-screw passing through one of said spring bars and impinging against the other for adjusting the free ends of said spring bars with relation to each other, substantially as described.

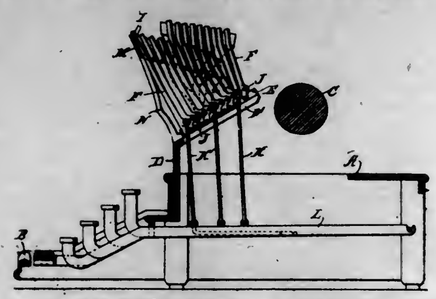
[Claims 6 to 54 not printed in the Gazette.]

874,057. TYPE-WRITER. HARVEY L. FISHER, Woodstock, Ill., assignor, by direct and mesne assignments, to Fisher Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Original application filed Oct. 13, 1898, Serial No. 693,442. Divided and this application filed Feb. 23, 1899, Serial No. 706,481. Renewed June 17, 1907. Serial No. 379,493.

1. In a typewriting machine, the combination of the bearing plates located in front of the platen and provided with the transverse bores having countersunk ends, the type-bar axles extending through said bores and provided at their opposite ends with bearing cones fitting the countersunk ends of the bores, said cones at one end of the axles being adjustable thereon, the type-bars secured to the opposite ends of the axles, and key-levers and connections for operating the type-bars, substantially as described.

2. In a typewriting machine, the combination of the bearing plates located in front of the platen and provided with the transverse bores having countersunk ends, the type-bar axles extending through said bores and provided at their opposite ends with cones fitting the countersunk ends of the bores, said cones at one end

of the axles being screwed upon the ends of the axles and held in position by lock nuts, the type-bars secured to the opposite ends of the axles, and key-levers and connections for operating said type-bars, substantially as described.



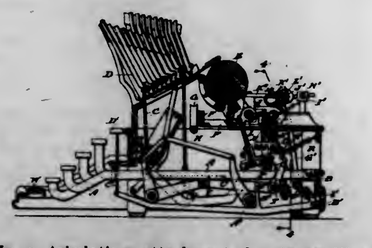
3. In a typewriting machine, the combination of the bearing plates located in front of the platen and provided with the transverse non-parallell bores, the type-bar axles extending through said bores and having their bearings in said plates, the straight type-bars secured to the ends of said axles at right-angles thereto and converging toward a common point, and key-levers and connections for operating said type-bars, substantially as described.

4. In a typewriting machine, the combination of the bearing plates located in front of the platen and provided with the transverse non-parallel bores, the type-bar axles extending through said bores and having their bearings in said plates, the type-bars secured to the ends of said axles at right-angles thereto and having straight bodies provided with angular extremities for the reception of double case characters, and key-levers and connections for operating said type-bars, substantially as described.

5. In a typewriting machine, the combination of the bearing plates located in front of the platen and provided with the transverse non-parallel bores having countersunk ends, the type-bar axles extending through said bores and provided with cones fitting the countersunk ends of the bores, said cones at one end of the axles being adjustable thereon, the straight type-bars secured to the opposite ends of said axles at right-angles thereto, and key-levers and connections for operating said type-bars, substantially as described.

[Claims 6 to 22 not printed in the Gazette.]

874,058. TABULATOR FOR TYPE-WRITING MACHINES. HARVEY L. FISHER, Chicago, Ill., assignor, by direct and mesne assignments, to Fisher Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed June 23, 1899, Serial No. 721,551. Renewed April 8, 1903. Serial No. 151,680.



1. In a tabulating attachment for typewriting machines, the combination of a stop, a rock-shaft extending transversely of the machine, a contact-piece mounted upon said shaft to turn with it but movable longitudinally thereof with the paper carriage, and means for turning said shaft different degrees to adjust the contact-piece to different positions for engagement with the stop, substantially as described.

2. In a tabulating attachment for typewriting machines, the combination of a plurality of stops located on the frame of the machine, a rock-shaft extending transversely thereof adjacent said stops, a contact-piece mounted upon said rock-shaft to turn with the same but movable longitudinally thereof with the paper carriage, and means for turning said shaft different degrees to adjust the contact-piece to different positions for engagement with the stops, substantially as described.

3. In a tabulating attachment for typewriting machines, the combination of a stop, an adjustable contact-piece moving with the paper carriage and adapted to cooperate with said stop, and a series of tabulator keys cooperating with such contact piece to adjust the same to different positions for engagement with said stop, substantially as described.

4. In a tabulating attachment for typewriting machines, the combination of a plurality of stops, an adjustable contact piece moving with the paper carriage and adapted to coöperate successively with said stops, and a series of tabulator keys coöperating with said contact-piece to adjust the same to different positions for engagement with said stops, substantially as described.

5. In a tabulating attachment for typewriting machines, the combination of a plurality of stops located on the frame of the machine and adjustable transversely thereof, a graduated contact-piece moving with the paper carriage and adapted to coöperate successively with said stops, and a series of tabulator keys coöperating with said contact-piece to set the same to different positions for engagement with said stops, substantially as described.

[Claims 6 to 101 not printed in the Gazette.]

874,059. TABULATOR FOR TYPE-WRITING MACHINES. HARVEY L. FISHER, Chicago, Ill., assignor, by direct and mesne assignments, to Fisher Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 22, 1901. Serial No. 56,923.



1. In a tabulating attachment for typewriting machines, the combination, with the transversely movable paper carriage, of a rock shaft, a plurality of stops mounted thereon and adapted to coöperate successively with the paper carriage to arrest the latter in different columnar positions, and a plurality of tabulator keys and connections for turning the rock shaft to adjust the stops to arrest the paper-carriage at the desired denominational positions in the different columns, substantially as described.

2. In a tabulating attachment for typewriting machines, the combination, with the transversely movable paper-carriage, of a rock shaft, a plurality of stops mounted upon said shaft and independently adjustable longitudinally thereof, and adapted to coöperate successively with the paper-carriage to arrest it in different columnar positions determined by such adjustment of the stops, and a plurality of tabulator keys and connections for turning said rock shaft to adjust said stops to arrest the paper-carriage at the desired denominational positions in the different columns; substantially as described.

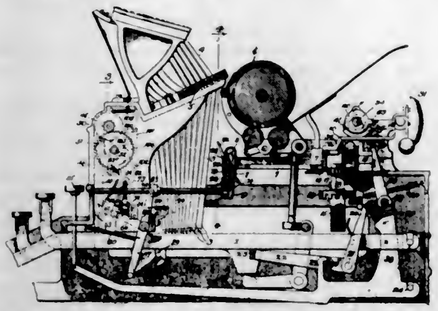
3. In a tabulating attachment for typewriting machines, the combination, with the transversely movable paper carriage provided with a graduated contact piece, of a rock shaft, a stop mounted thereon and adapted to cooperate with the graduated contact piece on the paper carriage, and a plurality of tabulator keys and connections for turning the rock shaft to adjust the stop relatively to the graduations of said contact piece; substantially as described.

4. In a tabulating attachment for typewriting machines, the combination, with the transversely movable paper carriage provided with a graduated contact piece, of a rock shaft, a stop mounted upon said shaft and adjustable longitudinally thereof and adapted to coöperate with the graduated contact piece on the paper-carriage, and a plurality of tabulator keys and connections for turning said rock shaft to adjust said stop relatively to the graduations of said contact piece; substantially as described.

5. In a tabulating attachment for typewriting machines, the combination, with the transversely movable paper-carriage provided with a graduated contact piece, of a rock shaft, a plurality of stops mounted upon said shaft and adapted to coöperate successively with the graduated contact piece on the paper-carriage, and a plurality of tabulator keys and connections for turning the rock shaft to adjust the said stops relatively to the graduations of said contact piece; substantially as described.

[Claims 6 to 87 not printed in the Gazette.]

874,060. ADDING ATTACHMENT FOR TYPE-WRITING MACHINES. HARVEY L. FISHER, Chicago, Ill., assignor to Fisher Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed June 3, 1902. Serial No. 110,015.



1. The combination of a movable paper-carriage, an adding mechanism mounted in fixed position relative to the transverse movement of the paper-carriage, operating keys therefor normally wholly out of coöperative relation therewith, and a tabulating mechanism controlling the movement of the paper-carriage and operable to bring the keys and adding mechanism into coöperative relation with each other.

2. The combination of a movable paper-carriage, an adding mechanism mounted in fixed position relative to the transverse movement of the paper-carriage, operating keys therefor normally wholly out of coöperative relation therewith, means operated by the movement of the paper-carriage to bring the keys and adding mechanism into cooperative relation with each other, and a tabulating mechanism controlling the movement of the paper-carriage.

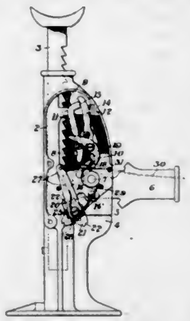
3. The combination of a movable paper-carriage, an adding mechanism mounted in fixed position relative to the transverse movement of the paper carriage, operating keys therefor normally wholly out of coöperative relation therewith, adjustable means operated by the movement of the paper-carriage to bring the keys and adding mechanism into coöperative relation with each other at any desired point in the travel of the paper-carriage, and a tabulating mechanism controlling the movement of the paper-carriage.

4. The combination of a movable paper-carriage, the regular type-keys and printing devices of the typewriter, an adding mechanism adapted to be positively operated by certain of said keys but normally wholly out of coöperative relation therewith, and a tabulating mechanism controlling the movement of the paper-carriage and operable to bring said keys and adding mechanism into coöperative relation with each other.

5. The combination of the paper-carriage, the regular type keys and printing devices of the typewriter, an adding mechanism adapted to be positively operated by certain of said keys but normally wholly out of coöperative relation therewith, and means for automatically bringing such keys and the adding mechanism into coöperative relation with each other.

[Claims 6 to 167 not printed in the Gazette.]

874,061. LIFTING-JACK. GEORGE F. FREED, Allegheny, Pa., assignor to The Duff Manufacturing Company, Allegheny, Pa., a Corporation of Pennsylvania. Filed Mar. 25, 1907. Serial No. 364,286.



1. In a step by step raising and lowering jack, a tripping plate, a rotatable member adapted to hold said plate in either one of two positions, and means for actuating said member to rotate it in one direction only; substantially as described.

2. In a step by step raising and lowering jack, a tripping plate, a toothed reversing wheel therefor, and means for rotating the wheel; substantially as described.

3. In a step by step raising and lowering jack, a tripping plate, a toothed reversing wheel therefor, lever and pawl and ratchet mechanism for operating said wheel, and means for operating the lever; substantially as described.

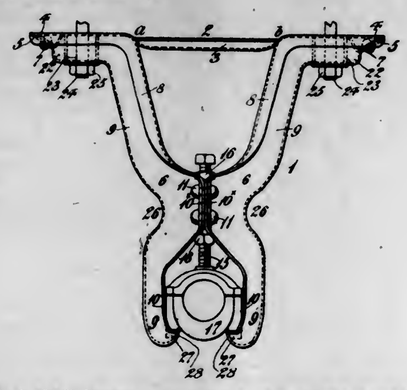
4. In a jack of the Barrett type having step by step raising and lowering mechanism, a pivoted tripping plate, a star wheel arranged to hold the tripping plate in either one of two positions, and means for actuating said wheel from the front of the jack; substantially as described.

5. In a step by step raising and lowering jack, a tripping plate, a rotatable member adapted to hold said plate in either one of two positions, said member having a plurality of plate actuating projections, and means for actuating said member to rotate it in one direction only; substantially as described.

874,062. SHAFT-HANGER. HARALD F. GADE, Philadelphia, Pa., assignor to Standard Pressed Steel Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 14, 1904. Serial No. 224,375.

1. A shaft hanger comprising a pair of legs spaced at the upper or foot ends and near the lower ends thereof,

each having a hollow longitudinally extending rib said legs bodily converging from both directions to approximately the center of the hanger and laterally extending portions at this point united to each other by suitable fastening devices and a journal box located between the lower ends of said legs.



2. A shaft hanger comprising a pair of legs spaced at the upper or foot ends and near the lower ends thereof, each having a hollow longitudinally extending rib, said legs bodily converging in each direction to approximately the center of the hanger, laterally extending portions at this point abutting each other, thereby making a central brace integral with the legs, and means passing through said abutting portions and rigidly securing the same together.

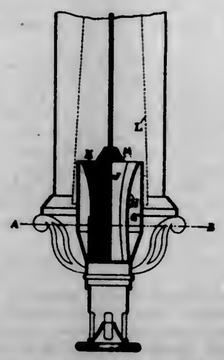
3. A shaft hanger formed of two longitudinally ribbed channels having laterally extending flanges united flange to flange near their centers and separated at one end to embrace and support a hanger box and spaced at the other end.

4. A shaft hanger comprising flanged opposed members ribbed upon the outside, the members being separated at both ends, the members being brought together within substantially the median line of the hanger and united through their flanges.

5. A sheet metal shaft hanger comprising a hollow foot with an aperture therein and a thimble supporting the foot around the aperture.

[Claims 6 and 7 not printed in the Gazette.]

874,063. GAS-BURNER. RUDOLF GEFÄLL, Vienna, Austria-Hungary, assignor, by mesne assignments, to Harry J. Reed, Chicago, Ill. Filed July 1, 1907. Serial No. 381,803.

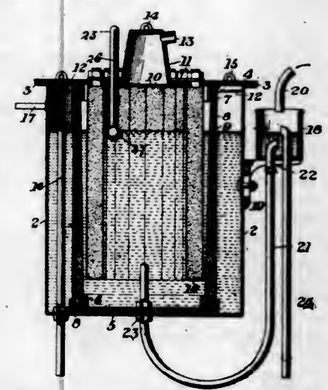


1. In a gas burner, the combination of a burner of the Bunsen type having a cylindrical escape pipe, a funnel placed within said escape pipe with its small end down, means within the funnel to spread the gas to the outside of the escape pipe, and means above the funnel to assist in the spreading of the gas as it escapes from the burner.

2. In a gas burner, the combination of a burner of the Bunsen type having a cylindrical escape pipe, a funnel open at both ends placed within said escape pipe and having its small end down, and a series of means within said funnel and adapted to cause the stream of gas to escape from the burner as an annulus.

3. In a gas burner, the combination of a burner of the Bunsen type having a cylindrical escape pipe, a funnel open at both ends placed within said escape pipe, and a series of radial plates placed within said funnel and adapted to cause the gas to escape from the burner as an annulus.

874,064. ELECTROLYTIC CELL. ARTHUR E. GIBBS, Wyandotte, Mich. Filed June 2, 1906. Serial No. 319,870.



1. In electrolytic apparatus, a diaphragm and a cathode having projections embedded in said diaphragm; substantially as described.

2. In electrolytic apparatus, a diaphragm and a metallic jacket surrounding the diaphragm and forming the cathode, said jacket having projections embedded in the diaphragm; substantially as described.

3. In electrolytic apparatus, a diaphragm and a cathode having projections embedded in the diaphragm, said projections having outlet channels for the products of electrolysis, substantially as described.

4. In electrolytic apparatus, a permeable diaphragm, a cathode having hollow projections extending within the wall of the diaphragm, the inner ends of the projections forming outlet channels for the products of electrolysis; substantially as described.

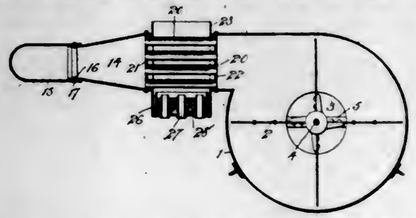
5. In electrolytic apparatus, a diaphragm, and a cathode having projections entering the diaphragm, said cathode having outlet channels for the products of electrolysis; substantially as described.

[Claims 6 to 25 not printed in the Gazette.]

874,065. HAIR-DRYING APPARATUS. RICHARD GRAPE, New York, N. Y. Filed May 6, 1907. Serial No. 371,979.

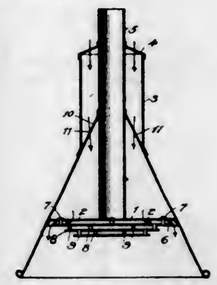
1. In a hair drying apparatus, a blower casing comprising a cylindrical portion and a hollow extension, a rotary fan within the cylindrical portion, a mouth adjustable on the outer end of the hollow extension, horizontally arranged tubes in the hollow extension, through which tubes the air is caused to pass on its way from the rotary fan to the mouth of the apparatus, and a lamp carried by the hollow extension in position to heat the said tubes and thereby the air as it passes through them.

2. In a hair drying apparatus, a blower casing, comprising a cylindrical portion and a hollow extension, a rotary fan within the cylindrical portion, a mouth adjustable on the outer end of the hollow extension, horizontally arranged tubes in the hollow extension, through which tubes the air is caused to pass on its way from the rotary fan



to the mouth, end plates for separating the space around the tubes from the interior of the casing and a lamp carried by the extension in position to cause the products of combustion to pass through said space and around said tubes for heating the tubes and thereby the air as it passes through them.

874,066. ATMOSPHERIC CLOTHES-POUNDER. SAMUEL D. GRIFFITH, Curwensville, Pa. Filed Sept. 3, 1907. Serial No. 391,254.



1. In a clothes pounder, a cup having a perforated partition, a plate-valve suspended from said partition for vertical movement to open and to close the air inlet openings therein, and including a depending plate suspended from, and movable with and of less area than the valve.

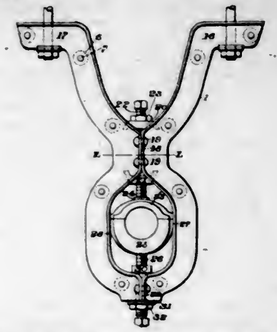
2. In a clothes pounder, a cup having a perforated partition, a plate valve suspended from said partition for vertical movement to open and to close the air inlet openings therein, and including a plurality of depending separated plates suspended one below the other movable with the valve and the lower one of relatively less area.

3. In a clothes pounder, a cup having a perforated partition, a plate-valve suspended from said partition for vertical movement to open and to close the air inlet openings therein and including a plurality of depending separated plates suspended one below the other from and movable with the valve, the depending plates being perforated and the under or lower one of relatively less area to the intervening plate.

4. In a clothes pounder and in combination with the pounding cup having a perforated partition, a valve for controlling the air inlet openings in the partition suspended therefrom and consisting of a plurality of separated plates fixed and movable together to open and close the partition openings—the upper plate having the greatest area and the under plates having relatively succeeding decreasing areas.

5. In a pounding washer, and in combination, a pounding cup having a perforated diaphragm partition, an imperforate plate suspended from the bottom and adapted to control its perforations, and a plurality of perforated plates depending from and movable with said imperforate plate.

874,067. SHAFT-HANGER. HOWARD T. HALLOWELL and HARALD F. GADE, Philadelphia, Pa., assignors to Standard Pressed Steel Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 10, 1906. Serial No. 316,082.

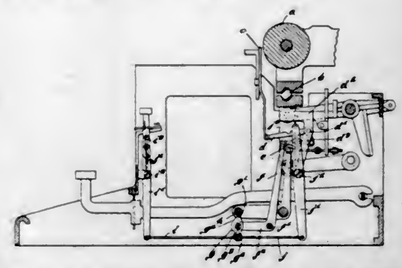


1. A shaft hanger made up of two halves, each half forming a leg containing a plurality of angle irons, one angle iron of each leg being connected with the companion angle iron of the same leg, said halves abutting at their intermediate portions forming a rigid brace, and said halves below this portion diverging and forming an aperture for the journal box.

2. A shaft hanger made up of two halves, each half forming a leg containing a plurality of angle irons, one angle iron in each leg being connected to the companion angle iron of the same leg, said halves being spaced apart at their upper portion and having feet, and said halves abutting at their intermediate portion forming a rigid brace and below this point diverging and forming an aperture for the journal box, and means securing them together.

3. A shaft hanger made up of two halves, each half forming a leg containing a plurality of angle irons, one angle iron of each leg being connected with the companion angle iron of the same leg, said halves being spaced apart at their upper ends and abutting together intermediate their ends, making a rigid brace, means securing these together and said halves diverging forming an aperture for the journal box and abutting beneath said journal box.

874,068. A TYPE-WRITING MACHINE. EDWARD B. HESS, New York, N. Y., assignor to Royal Typewriter Company, Hoboken, N. J., a Corporation of New Jersey. Filed Aug. 30, 1907. Serial No. 390,702.



1. Ribbon vibrating mechanism for a typewriting machine comprising a ribbon vibrator, a bell crank lever connected to it, a second bell crank lever connected with the first one, a universal bar arranged over the lower arm of the second bell crank lever and an adjustable block carried by said lower arm, located below the universal bar and having surfaces of different elevation adapted respectively to be brought into the path of the universal bar.

2. Ribbon vibrating mechanism for a typewriting ma-

chine comprising a ribbon vibrator, a bell crank lever connected to it, a second bell crank lever connected with the first one, a universal bar arranged over the lower arm of the second bell crank lever and an adjustable block acting on said lower arm, located below the universal bar, having surfaces of different elevation adapted respectively to be brought into the path of the universal bar and means within convenient reach of the operator for adjusting said block.

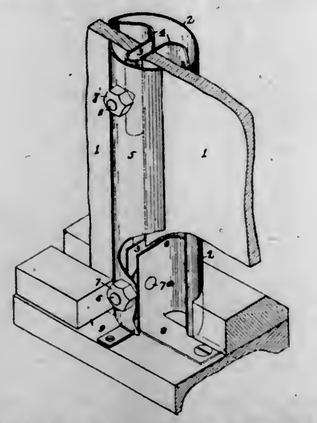
3. Ribbon vibrating mechanism for a typewriting machine comprising a ribbon vibrator, a bell crank lever connected to it, a second bell crank lever connected with the first one, a universal bar arranged over the lower arm of the second bell crank lever, an adjustable block acting on said lower arm, located below the universal bar and having surfaces of different elevation adapted respecon said lower arm, located below the universal bar and stop devices adjusted coincidently with the block and acting upon the bell crank lever to which the ribbon vibrator is attached to positively limit the upward throw of the vibrator.

4. Ribbon vibrator mechanism comprising a universal bar, a ribbon vibrator, an operating connection for the ribbon vibrator extending under the universal bar and located centrally of the machine, a block carried by said operating connection, located under the universal bar and having surfaces of different elevation, an adjusting lever located at the front of the machine and centrally thereof and an operative connection between it and the adjustable block.

5. Ribbon vibrator mechanism comprising a universal bar, a ribbon vibrator, an operating connection for the ribbon vibrator extending under the universal bar and located centrally of the machine, a block carried by said operating connection located under the universal bar and having surfaces of different elevation, an adjusting lever located at the front of the machine and centrally thereof, a link extending rearwardly from said block, a vertically disposed lever to which the link is connected and a stop with which the lever is provided acting upon the operating connection of the ribbon vibrator to positively determine the upward throw of the vibrator.

[Claims 6 to 10 not printed in the Gazette.]

874,069. SASH-BAR. GEORGE C. HESTER, Portland, Oreg. Filed May 27, 1907. Serial No. 375,939.



1. In a sash bar, the combination of a sheet metal bar or rail having grooved or channeled glass-engaging edges, and a clamp of bent sheet metal comprising T-shaped member having a tongue-like portion that passes between the sheets or panes and having flanges that engage the channels or grooves in said bar, and press the glass-engaging edges of the bar against the glass and means for applying pressure to said member.

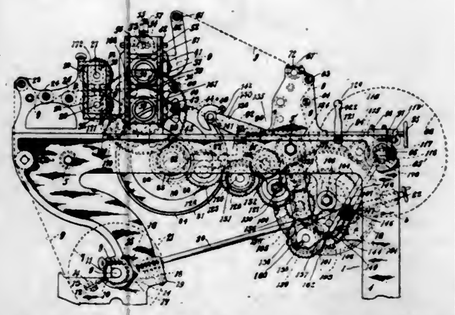
2. In a sash bar, the combination of a bar or rail having grooved or channeled glass-engaging edges, and a clamp comprising a member with flanges that engage the channels or grooves in said bar, and press the glass-engaging edges of the bar against the glass and having a tongue-like portion that passes between the sheets or panes, said clamp being of sheet metal bent to form the flanges and tongue-like portion and a bolt connected to said tongue-like portion.

3. In a sash bar, the combination of a bar or rail having grooved or channeled glass-engaging edges, and a clamp comprising a member having a tongue-like part that lies between the two sheets or panes, and two laterally and inwardly bent flanges whose edges interlock with the respective bar grooves or channels, and press the glass-engaging edges of the bar against the glass and a bolt connected with said tongue-like part.

4. In a sash bar, the combination of a concavo-convex bar having its opposite edges grooved to form rounded glass-engaging surfaces and grooves or channels, a clamp having a tongue-like part lying between two sheets or panes of glass, and provided with laterally and inwardly bent flanges that interlock with the respective bar grooves or channels, and press the glass-engaging edges of the bar against the glass a second bar situated opposite the first, and a bolt connected with said tongue-like part and engaging said second part.

5. In a sash bar, the combination of a bar or rail having grooved or channeled glass-engaging edges, and a clamp comprising a member having flanges that interlock with the respective bar grooves or channels, said clamp having an inwardly projecting foot for attaching the clamp to a window or other frame, and means independent of said foot for applying pressure to said member to press the glass-engaging edges of the bar or rail against the glass.

874,070. SLITTING AND WINDING MACHINE. HENRY P. HILBERT, Cincinnati, Ohio. Filed Aug. 3, 1907. Serial No. 386,891.



1. In a slitting and winding machine, the combination with knives and drawing-rollers, of a center-winding shaft and power means for turning the same, and a surface-winding roller and power means for turning the same, for combinedly acting upon the roll being wound simultaneously from its center and its surface, and means for permitting said surface-winding roller to recede automatically from said center-winding shaft as the diameter of the roll being wound increases, substantially as described.

2. In a slitting and winding machine, the combination with the cutters and means for turning the same, of drawing rollers and combined center-winding and surface-winding devices for winding the cut strips, and a common shaft and gearing driven thereby for driving said drawing rollers and center-winding and surface-winding devices from a common source of power, substantially as described.

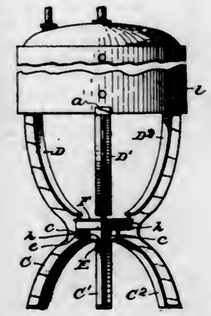
3. In a slitting and winding machine, the combination with slitting mechanism and drawing-rollers, of a center-winding shaft having a friction-drive, a surface-winding roller, a jointed rocker-frame for supporting said surface-winding roller and gearing on the respective limbs of said rocker-frame for driving said surface-winding roller, substantially as described.

4. In a slitting and winding machine, the combination with the cutters, of a center-winding arbor and means for driving the same for acting combinedly on the strip-rolls being wound from the inside thereof, and a surface-winding roller and means for driving the same, said surface-winding roller comprising relatively rotatable tubes and separator-flanges for differentiatingly acting on the surfaces of the separated strip-rolls, substantially as described.

5. In a slitting and winding machine, the combination with the slitting mechanism and means for supporting and driving the rewinding roll from its center, and a driven surface-winding roller yieldingly held against the rewinding roll, and means for permitting said surface-winding roller to recede from the axis of said rewinding roll as the diameter of said rewinding roll increases, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

874,071. RANGE-BOILER STAND. CHARLES L. HOLDEN, Indianapolis, Ind. Filed Sept. 10, 1906. Serial No. 333,911.



1. A stand comprising a plurality of combined leg-and-arm members each provided with a lateral extension having a plurality of tapering locking means at one side thereof, and a connector comprising a plate having a plurality of openings therein to receive the extensions, each opening having tapering locking means therein at one side thereof coöperating with the locking means of the extensions.

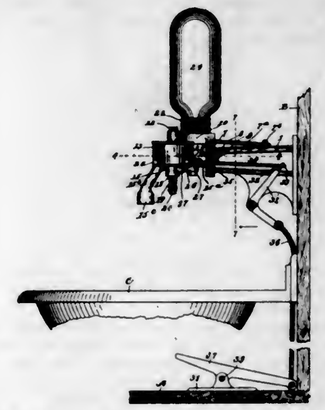
2. A stand comprising a plurality of combined leg-and-arm members each provided with a lateral extension having a plurality of tapering keys on one side thereof, and a connector comprising a plate having a plurality of openings therein to receive the extensions of the members, each opening having a tapering keyway therein to receive either one of said keys.

3. A range boiler stand comprising a plate having openings therein, arms having extensions adjustable in the openings towards or from the center of the plate, supporting legs for the arms, and coöperating locking means at sides of the extensions and the openings for adjustably securing the extensions in the openings at different distances from the center of the plate.

874,072. DISPENSING APPARATUS. GUSTAVE J. HOLL, Knoxville, Tenn. Filed Apr. 25, 1906. Serial No. 313,618.

1. In a dispensing apparatus, the combination of a wall bracket, a reservoir-supporting member rotatably secured to said wall bracket on a horizontal axis, and a spring arm for locking said supporting member against rotation, substantially as described.

2. In a dispensing apparatus, the combination of a wall bracket having an upright circular head, a reservoir-supporting member having a flanged circular plate bearing against the outer face of said head and surrounding the periphery thereof, and means for holding said plate against said head, and means for engaging said supporting member against rotation, substantially as described.



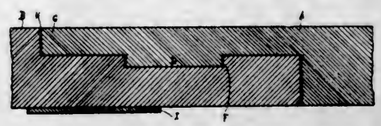
3. In a dispensing apparatus, the combination of a wall bracket having an upright circular head provided with a peripheral notch, a reservoir-supporting member having a flanged circular plate bearing against the outer face of said head and surrounding the periphery thereof, the interior of said flange having a notch adapted to register with the notch in said head, and a movable key entering said notches, substantially as described.

4. In a dispensing apparatus, the combination of an upright circular head provided with a peripheral notch, a reservoir-supporting member having a flanged circular plate bearing against the outer face of said head and surrounding the periphery thereof, the interior of said flange having a notch adapted to register with the notch in said head, and a spring arm having its free end extending into said notches, substantially as described.

5. In a dispensing apparatus, the combination of a reservoir-supporting member, a reservoir, a chambered measuring cylinder applied to said reservoir-supporting member and in communication with said reservoir, and a non-rotatable bottom plate beneath said cylinder, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

874,073. RAILWAY-RAIL AND JOINT THEREFOR. ALBERT H. HOOVER and EDGAR M. CLARK, Morribell, W. Va. Filed May 13, 1907. Serial No. 373,199.

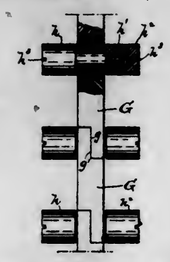


1. A rail joint consisting of the meeting ends of two rails, one of which has formed therein a groove, a lug formed in said groove, a tongue upon the end of the opposite rail adapted to fit within said groove, a notch formed in said tongue adapted to engage said lug, a nose G adapted to fit in a corresponding notch formed in the opposite rail and a chair having overhanging flanges for engaging the flanges of the base of the rails, as specified.

2. In combination with the meeting ends of two rails, one of which is provided with a tongue adapted to fit in

a groove formed in the opposite rail, a chair consisting of a base plate upon which the ends of the rails are seated and overhanging flanges for engaging the base flanges of the rails at their point of juncture, as specified.

874,074. PATTERN MECHANISM FOR KNITTING-MACHINES. HARRY A. HOUSEMAN, Philadelphia, Pa., assignor to Standard Machine Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 26, 1905. Serial No. 242,710.

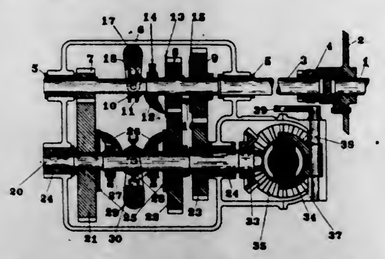


1. The combination of a toothed wheel, a chain formed of cam blocks, fixedly connected by connecting members, the blocks in the movement of the chain resting upon the facing of the wheel and the connecting members floating between and being moved by the teeth.

2. The combination with a toothed driving wheel, of a pattern link chain, the links being supported upon the face of the wheel and the connecting link members floating between the teeth of the wheel.

3. In combination, with a wheel having two sets of circumferential projecting teeth, of a plurality of blocks, bolts flexibly securing said blocks together, there being a portion of said blocks beneath said bolts, the bolts floating between contiguous projecting teeth and the blocks resting on the wheel between the sets of teeth.

874,075. VARIABLE-SPEED TRANSMISSION AND REVERSING GEAR. WILLIAM S. HOVEY, Three Rivers, Mich., assignor to Sheffield Car Company, Three Rivers, Mich. Original application filed Oct. 18, 1906, Serial No. 339,534. Divided and this application filed Jan. 16, 1907. Serial No. 352,645.



1. The combination with an engine crank shaft, of a transmission gear, comprising a driving transmission shaft 3 connected to said engine crank shaft by a universal joint; gears 7, 8 and 9 arranged on said driving transmission shaft, said gears 7 and 8 being fixed thereto, and said gear 9 being revolubly mounted thereon; a clutch for securing said gear 9 to said shaft; a transmission shaft 20; gears 21, 22 and 23 arranged on said transmission shaft 20 to mesh with said gears 7, 8 and 9, respectively, said gears 21 and 22 being revolubly mounted on said shaft and said gear 23 being fixed thereon; a clutch mechanism for securing said gears 21 and 22 to said shaft 20; a beveled gear on said shaft 20; a driven shaft; a pair of beveled gears revolubly mounted on said driven shaft arranged to mesh with said beveled gear on said shaft 20; and a clutch mechanism by which either of said gears on said driven shaft may be connected thereto, substantially as described.

2. The combination with an engine crank shaft, of a transmission gear, comprising a driving transmission shaft; gears 7, 8 and 9 arranged on said driving transmission shaft, said gears 7 and 8 being fixed thereto, and said gear 9 being revolubly mounted thereon; a clutch for securing said gear 9 to said shaft; a transmission shaft 20; gears 21, 22 and 23 arranged on said transmission shaft 20 to mesh with said gears 7, 8 and 9, respectively, said gears 21 and 22 being revolubly mounted on said shaft and said gear 23 being fixed thereon; a clutch mechanism for securing said gears 21 and 22 to said shaft 20; a beveled gear on said shaft 20; a driven shaft; a pair of beveled gears revolubly mounted on said driven shaft arranged to mesh with said beveled gear on said shaft 20; and a clutch mechanism by which either of said gears on said driven shaft may be connected thereto, substantially as described.

3. In a structure of the class described, a variable speed mechanism comprising a shaft 3; gears 7, 8 and 9 arranged on said shaft, said gears 7 and 8 being fixed thereto and said gear 9 being revolubly mounted thereon; a clutch for securing said gear to said shaft, consisting of a grooved collar arranged between said gears 7 and 9; a pivoted dog mounted on said shaft, arranged to be engaged by said collar; a friction plate arranged to engage said gear 9; a pin arranged through said gear 8; a plate slidably mounted on said shaft arranged to be clamped against said pin by said dog; and means for shifting said collar; a second shaft; gears 21, 22 and 23 arranged to mesh with said gears 7, 8 and 9, respectively, said gears 21 and 22 being revolubly mounted on said shaft and said gear 23 being fixed thereto; clutch mechanism for securing said gears 21 and 22 to said shaft comprising a pair of friction plates, a pair of pivoted dogs mounted on said shaft, and a collar slidably mounted on said shaft adapted to engage either of said dogs as desired.

4. In a structure of the class described, the combination of a driving shaft; gears 7, 8 and 9 arranged on said driving shaft, said gears 7 and 8 being fixed thereto and said gear 9 being revolubly mounted thereon; a clutch for securing said gear 9 to said shaft, arranged with its actuating mechanism between said gears 7 and 8; a second shaft; gears 21, 22 and 23 arranged on said second shaft to mesh with said gears 7, 8 and 9, respectively, said gears 21 and 22 being revolubly mounted on said shaft, and said gear 23 being fixed thereon; and a clutch mechanism arranged between said gears 21 and 22 for securing them to said shaft, for the purpose specified.

874,076. BUCKLE. CHARLES S. HUNTINGTON and ARTHUR S. HUNTINGTON, Omaha, Nebr. Filed May 16, 1906. Serial No. 317,154.



1. In a buckle, the combination of a frame made of a strip of wire or the like, the ends of which are interfitted and crimped or bent to interlock them together and form a seat for a tongue, and a tongue encircling said crimped or bent interfitted portions of the wire, substantially as described.

2. In a buckle, the combination of a frame made of a strip of wire or the like, the ends of which are overlapped and crimped or bent to interlock them together and form a seat for a tongue, and a tongue encircling said crimped or bent overlapped portions of the wire, substantially as described.

874,077. PENCIL. DE WITT C. HUNTLEY, Jr., Kansas City, Kans. Filed Apr. 23, 1906. Serial No. 313,208.

1. A pencil consisting of a lead-holding member and a crook member connected therewith, the lead-holding member being substantially longer than the crook member, whereby its use will not be interfered with by the crook member.

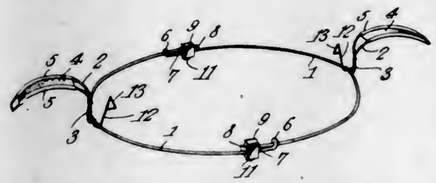


2. A pencil consisting of a lead-holding member and a crook member detachably connected therewith, the lead-holding member being straight and substantially longer than the crook member.

3. A pencil consisting of a lead-holding member and a crook member connected therewith, said crook member having portions approaching and receding from the pencil holding member, and means adapted to coöperate with the crook member to grip the article to which the device may be attached.

4. A pencil or pencil holder consisting of a hollow metallic body, a lead secured therein, a crook extension having one end secured to said body, and a rubber eraser secured at the junction of said extension and pencil body for the purpose set forth.

874,078. MILK-PAIL HOLDER. ARTHUR J. HURD, Wausau, Wis., assignor to Wilson & Hurd Manufacturing Co., Wausau, Wis. Filed Feb. 26, 1907. Serial No. 359,340.



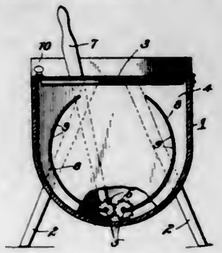
1. In a pail holder the combination with a coupling block having a keyhole slot therein; of oppositely disposed wire members, one of said members having a flattened end portion disposed within the contracted portion of the slot, the extremity of said end portion being bent to prevent withdrawal, and the other member being extended through the larger portion of the slot to support the flattened end portion within the contracted part of the slot and terminating in an eye surrounding the first mentioned member.

2. In a pail holder the combination with a coupling block having a keyhole slot therein; of oppositely disposed wire members, one of said members having a flattened end portion disposed within the contracted portion of the slot, the extremity of said end portion being bent to prevent withdrawal, and the other member being extended through the larger portion of the slot to support the flattened end portion within the contracted part of the slot and terminating in an eye surrounding the first mentioned member, means for binding together those portions of the members within the slot, an arched loop integral with and extending upwardly and outwardly from each member, and a flat protecting strip secured to the lower faces of and conforming in contour with each of the loops.

3. A pail holder comprising oppositely disposed similar non-detachable members, means for securing said members in adjusted position, arched loops between the end portions of and integral with the bowed members, said loops extending upwardly and outwardly from the members and being twisted adjacent said members, and flat knee protecting strips secured upon the lower faces of and conforming in contour with the loops.

874,079. WASHING-MACHINE. HENRY ISERMAN, Moran, Kans. Filed Mar. 29, 1907. Serial No. 365,362.

1. In a washing machine, the combination of a tank, a pair of oppositely swinging presser blades which are curved toward each other, and means for operating the presser blades to alternately compress and release the clothes placed between the same.

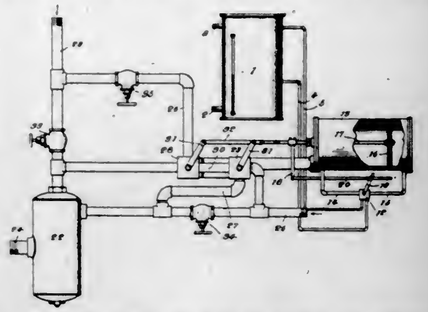


2. In a washing machine, the combination of a tank, a pair of shafts journaled in the tank, intermeshing gearing carried by the shafts whereby the same are caused to turn in opposite directions, oppositely swinging presser blades carried by the shafts, and means for operating the shafts to alternately compress and release any clothes placed between the presser blades.

3. In a washing machine, the combination of a tank, a partition arranged within the tank and spaced from one of the sides thereof, a pair of shafts journaled within the tank, a presser blade carried by each of the shafts, and means mounted within the space between the partition and the side of the tank for rotating the shafts and operating the presser blades to alternately compress and release any clothes placed between them.

4. In a washing machine, the combination of a tank, a partition arranged within the tank and spaced from one of the sides thereof, a pair of shafts journaled within the tank, the ends of the shafts extending within the space between the partition and the side of the tank, a presser blade carried by each of the shafts, intermeshing gearing carried by the said ends of the shafts whereby the latter are caused to turn in opposite directions, and a lever operating within the space between the partition and the side of the tank for operating the shafts to alternately compress and release any clothes placed between the presser blades.

874,080. BOILER-FEEDER. WILLIAM J. JEFFRIES, Oregon City, Oreg. Filed May 28, 1907. Serial No. 376,204.



1. In a feed water regulator for boilers, the combination of a cylinder, a piston operating within the cylinder, a double three-way valve for the cylinder, a pair of steam pipes leading from the double three way valve and having communication with the boiler, valves automatically regulating the admission of steam to the pipes, and means whereby the supply of feed water to the boiler is controlled by the piston.

2. In a device of the character described, the combination of a water column, a cylinder, a piston operating within the cylinder, a cylinder valve, steam pipes leading from the water column to the cylinder valve, float valves for automatically regulating the admission of steam to the

said steam pipes according to the level of the water within the water column, and means whereby the supply of feed water to the boiler is controlled by the piston.

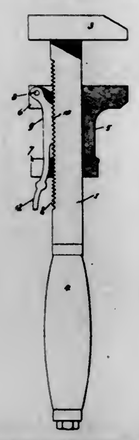
3. In a device of the character described, the combination of a water column, a cylinder, a piston operating within the cylinder, a cylinder valve, a pair of steam pipes leading from the water column to the cylinder valve, a float valve for one of the steam pipes whereby steam is admitted to the same when the water rises above a predetermined level, a float valve for the other steam pipe whereby steam is admitted to the same when the water falls below a certain level, and means whereby the supply of feed water to the boiler is controlled by the piston.

4. In a device of the character described, the combination of a water column, a cylinder, a piston operating within the cylinder, a double three-way valve communicating with opposite ends of the cylinder, means whereby the said double three-way valve is operated by the piston, a pair of steam pipes leading from the water column to the three-way valve, each of said pipes being thrown alternately into communication with one end of the cylinder and an exhaust, means whereby the admission of steam to the said pipes is automatically controlled by the height of water within the boiler, and means whereby the admission of feed water to the boiler is controlled by the piston.

5. In a feed water regulator for boilers, the combination of an injector, a steam supply pipe leading to the injector and provided with a by-pass, a water supply pipe leading to the injector and also provided with a by-pass, a valve for each of the by-passes, a cylinder, a piston operating within the cylinder, connecting means between the piston and the before mentioned valves, for simultaneously operating the same, a cylinder valve, steam pipes leading from the cylinder valve and having communication with the boiler, and valves for automatically regulating the admission of steam to the steam pipes

[Claim 6 not printed in the Gazette.]

874,081. WRENCH. GEORGE W. JESSOP, Pittsburg, Pa. Filed Aug. 17, 1907. Serial No. 388,989.

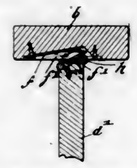


1. A wrench embodying a toothed shank, a detachable handle carried by said shank, a jaw slidably mounted upon said shank and having two sets of straps embracing the sides of said shank, a member pivotally mounted between one set of straps, teeth carried by said member for engaging said toothed shank, said member being bifurcated to provide resilient arms for frictionally engaging the other set of straps, and a coil spring interposed between said resilient arms, substantially as and for the purpose described.

2. A wrench embodying a toothed shank, a fixed jaw carried thereby, a jaw slidably mounted upon said shank, straps carried by said jaw, a pivoted toothed member carried by said straps for engaging said toothed shank, resilient arms carried by said member for frictionally engaging a pair of said straps, and means interposed between said arms for holding said arms in engagement with said pair of straps.

3. A wrench embodying a toothed shank, a handle carried thereby, a slidable jaw carried by said shank, two pairs of straps carried by said movable jaw and adapted to extend beyond the toothed edge of the shank, a gripping member pivotally connected to one pair of said straps, the free end of said gripping member being bifurcated, and means interposed between said bifurcations for holding said arms in frictional engagement with the other pair of said straps.

874,082. AUXILIARY CAR-SEAT. NIELS JOERGENSEN, West Hoboken, N. J. Filed Apr. 26, 1907. Serial No. 370,344.



1. In a car-seat, the combination of a standard having an inclined heel at its upper end, a seat hinged to said standard, and a flat spring applied to the under surface of said seat and coacting with said heel to normally maintain said seat in a vertical plane.

2. In a car-seat, the combination of a standard having an inclined heel at its upper end, a seat hinged to said standard at said end and having a recess in its under surface, and a flat spring applied to said seat within said recess and coacting with said inclined heel.

3. In a car-seat, the combination of a standard having a T-shaped upper end, a seat, hinges by which said seat is hinged to said end at either side of the center, said standard having an inclined heel between said hinges, and a spring coacting with said heel by which the seat is normally held in vertical position.

874,083. CARRIAGE-CURTAIN FASTENER. WILLIAM S. JONAH, Merrimac, Mass., assignor to Jonah & George, Merrimac, Mass., a Firm. Filed Mar. 16, 1907. Serial No. 362,748.



1. A carriage curtain fastener comprising a base, a shank formed thereon, the base and shank having a recess which is open at the under side of the base, a button mounted on the outer end of the shank, a stem affixed to the button, and adapted to rotate and move endwise in a bearing in the shank, said stem having a head at its inner end provided with locking members, a plate bearing on the head and provided with complemental locking members, adapted to engage the members on the stem, and a spring located in the recess, and adapted to hold the locking members of the plate in yielding engagement with the locking members of the head, the spring being compressible by outward pressure exerted on the button.

2. A carriage curtain fastener comprising a base, a shank formed thereon, a button having an inner end face formed to bear on the outer end face of the shank, and provided with a socket, the base and shank being provided with a recess, a stem inserted in said socket, and provided with recesses, the button being compressed to form projections or jaws engaging the recesses of the

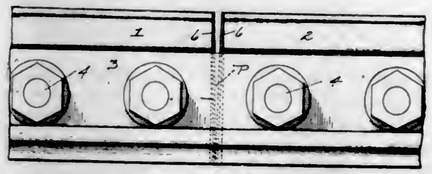
stem, the said stem having a head at its inner end provided with locking members, a plate bearing on the head and provided with complemental locking members, and a spring located in the recess, and adapted to hold the locking members of the plate in yielding engagement with the locking members of the head.

874,084. PROCESS FOR WELDING METALS. FELIX JOTTRAND, Uccle, near Brussels, and FREDERICK SCHMIDT, Namur, Belgium; Julia R. Jottrand, widow of Felix Jottrand, deceased, and Auguste Jottrand, associate guardian of the heirs-at-law, assignors of all of their rights to Société Anonyme l'Oxhydrique Internationale, a Corporation of Belgium. Filed July 23, 1903. Serial No. 166,663.



The process for uniting two pieces of metal of different thicknesses comprising the following steps: first forming in the thicker piece a notch or groove, thereby producing a lip having substantially the same thickness as the thinner piece, placing the two pieces together so that the parts of uniform thickness will coöperate and then applying a source of heat at the point of coöperation of the parts of uniform thickness whereby said parts will heat and fuse uniformly and become properly welded together.

874,085. RAIL-BOND FOR RAIL-JOINT CIRCUITS. WILLIAM E. KARNS, Parkers Landing, Pa. Filed Jan. 29, 1907. Serial No. 354,636.



1. A rail bond consisting of a metallic spring end post in the form of the cross section of a rail.

2. A rail bond, consisting of a metallic end post comprising a pair of yieldingly separated contact plates in the form of the cross section of a rail.

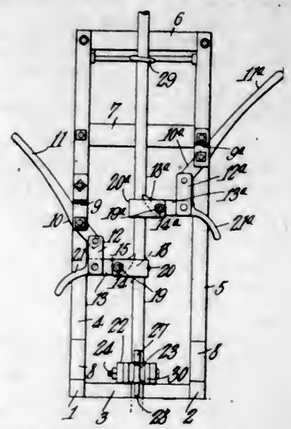
3. A rail bond, consisting of a metallic end post in the form of the cross section of a rail, and comprising a pair of yieldingly separated duplicate spring contact plates united at one end.

4. A rail bond, consisting of a metallic end post comprising a pair of yieldingly separated duplicate spring contact plates united at their bases and upwardly divergent from the latter, each of said plates having the form of the cross section of a rail.

5. A rail bond consisting of a metallic spring end post interposed between the rail ends and in the form of the cross section of the rails, whereby the side joint bars of the joint serve to secure the bond in place.

874,086. WELL-PIPE LIFTER. JOHN A. KIMBRO, Georgetown, Tex., assignor of one-half to Marvin Pate, Georgetown, Tex. Filed May 20, 1907. Serial No. 374,631.

A mechanism of the class described comprising a rigid movable frame having parallel vertical uprights, two clutches independent of each other between said uprights one above the other but in the same vertical plane, a hand lever intermediately pivoted in a bearing on each upright above each clutch, a link connection between the inner end of each hand lever and a member of each clutch,



a hand grip on the outer end of said members, and a foot lever adapted to uphold a pipe at the bottom of the frame.

874,087. CABINET. ERNEST U. KINSEY, Rutherford, N. J. Filed Apr. 20, 1907. Serial No. 370,774.



1. In a cabinet the combination with the frame of a drawer, of a series of parallel strips arranged from front to back of the drawer in a plane parallel with the surface of the frame and of gradually increasing distance from one another, a series of similar strips intermediate or in a staggered relation thereto below the same and occupying an inclined plane to the aforesaid strips, and a series of narrow parallel strips at right angles to the aforesaid strips parallel with one another and occupying a predetermined spaced apart relation so as to provide a drawer with a series of cells of corresponding width, of gradually increasing length and depth.

2. In a cabinet, a drawer for holding watch glasses and similar articles set edgewise, comprising a frame, parallel series of strips, the one having a relation intermediate to the other and a series of strips at right angles to the aforesaid strips and intersecting the same, and the various strips forming bottomless cells.

3. In a cabinet, a drawer for holding watch glasses and similar articles set edgewise, comprising a frame, parallel series of strips occupying an intermediate relation to one another of gradually increasing separation and an inclined relation of gradually increasing divergence, a series of strips extending at right angles to the aforesaid strips and intersecting the same, and the various strips forming bottom-less cells.

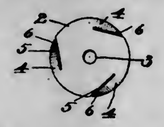
4. A cabinet for holding watch glasses or similar articles set edgewise, the same comprising an exterior shell of parts, a series of bottom-less drawers and a bottom drawer of usual character for receiving and retaining broken particles from the drawers above, each bottom-less drawer of the series comprising a frame, parallel series of strips, the one having a relation intermediate to the other and a series of strips at right angles to the aforesaid strips and intersecting the same, and the various strips forming in each drawer bottom-less cells.

5. A cabinet for holding watch glasses or similar articles set edgewise, the same comprising an exterior shell of parts, a series of bottom-less drawers and a bottom drawer of usual character for receiving and retaining

broken particles from the drawers above, each bottomless drawer of the series comprising a frame, parallel series of strips occupying an intermediate relation to one another of gradually increasing separation and an inclined relation of gradually increasing divergence and a series of strips extending at right angles to the aforesaid strips and intersecting the same, and the various strips forming in each drawer bottom-less cells.

[Claims 6 and 7 not printed in the Gazette.]

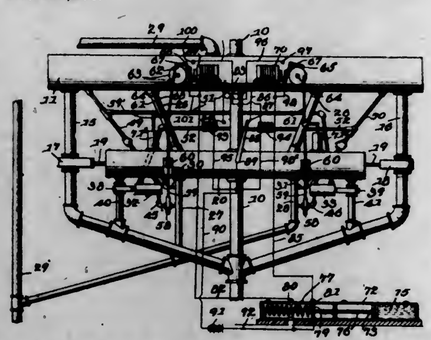
874,088. NOSE-RING. ASA A. LANDON, Milledgeville, Ill. Filed May 13, 1907. Serial No. 373,473.



1. In combination with a nose ring, a disk having a central hole therein mounted on the ring, and barbs formed at regular intervals around the edge of the disk and at equal distances from one another and from the central hole aforesaid, substantially as shown and described.

2. In combination with a nose ring, a disk having a central hole therein to receive the ring, said disk having cuts starting at the periphery thereof and extending along lines forming chords of the disk, the cut away portion bent downwardly forming barbs around the periphery of the disk, substantially as shown and described.

874,089. VALVE-OPERATING APPARATUS. JOHN C. LARKAM, Kansas City, Mo. Filed Aug. 27, 1906. Serial No. 332,267.



1. In apparatus of the class described, a pipe, arranged for the flow of a fluid under pressure, a cylinder connected in said pipe, a loose piston valve mounted in said cylinder and arranged to control the flow of fluid through the pipe, a discharge pipe also communicating with the cylinder and under the control of said valve, valved pipes for controlling the flow of a valve actuating fluid to said cylinder, and a thermostat controlling the operation of said valves.

2. In apparatus of the class described, a cylinder, a supply pipe connected thereto, service and discharge pipes also connected to the cylinder, a loose piston valve mounted in the cylinder and arranged in one position to place the supply and service pipes in communication, and in another position to establish communication between the service and the discharge pipes, valved pipes for controlling the flow of a valve actuating fluid to the cylinder, and a thermostat controlling the operation of said valves.

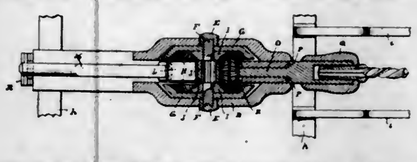
3. In apparatus of the class described, a cylinder, a supply pipe connected thereto, service and discharge pipes also connected to the cylinder, a loose piston valve disposed in the cylinder and controlling the flow of fluid from the supply pipe to the service pipe and from the service pipe to the discharge pipe, a second cylinder, pistons arranged therein, branched communication between the second cylinder and the supply pipe, auxiliary discharge pipes leading from the ends of the first cylinder and connected to the main discharge pipe, valves in said auxiliary discharge pipes and under the control of the pistons of the second cylinder, and thermostatically actuated valve mechanism for controlling the operation of the valves and pistons.

4. In apparatus of the class described, a trap drain pipe, a valve for closing communication between the trap and drain pipe, a piston connected to the valve, a cylinder in which said piston is contained, a spring tending to move the valve to open position, and a water supply pipe connected to the cylinder, and through which water under pressure is supplied to maintain the valve in closed position.

5. In apparatus of the class described, the combination with a fluid supply pipe, and a drain pipe, of a cylindrical casing to which the supply pipe is connected, a piston valve arranged in said casing, connecting pipes between the supply pipe and the opposite ends of the cylindrical casing, valves controlling said connection, springs tending to move said valves to open position, pistons connected to the valves, cylinders in which said pistons are contained, means for admitting fluid under pressure to said cylinder to effect closing of the valves, electro-magnets by which the opening movements of said valves are controlled, a thermostat, electric circuits connecting the thermostat to the electro-magnets, and means in the circuit for automatically breaking the circuit of an energized magnet immediately after each operation.

[Claim 6 not printed in the Gazette.]

874,090. BORING-MACHINE. THORVAL LEELAND, Newark, N. J. Filed Jan. 27, 1906. Serial No. 298,119.



In combination with a drilling mechanism, a frame in which said mechanism is carried, a rack bar upon which said frame is mounted so as to slide thereon, braces to which said rack bar is secured, a pinion journaled in the frame and meshing with the teeth of the rack bar, a lever pivoted concentric with the pinion, a pawl carried by said lever, a spring actuated plunger, a lug connecting said plunger with the lever, a detent pivoted in the frame and adapted to engage the teeth of the rack bar, and a link connecting the pawl with said detent, as specified.

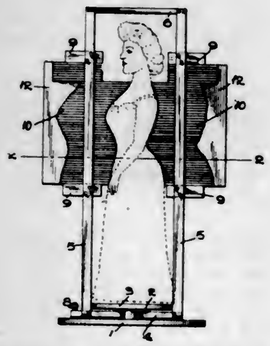
874,091. APPARATUS FOR CONSTRUCTING DRESS-FORMS. LOUIS LEMCKE, St. Louis, Mo., assignor of one-half to Alexander A. Eberson, St. Louis, Mo. Filed July 23, 1906. Serial No. 327,358.

1. In an apparatus of the class described, a vertically disposed rotating frame, a pair of sets of oppositely arranged horizontally disposed sliding fingers carried by said frame, and means whereby cardboard sheets are arranged in the frame at the ends of the fingers; substantially as specified.

2. In an apparatus of the class described, the combination wth a vertically disposed movable frame, of a series of horizontally sliding fingers independently operating in said frame, and which frame is constructed to receive cardboard sheets at the outer ends of said fingers; substantially as specified.

3. In an apparatus of the class described, a platform, a vertically disposed movable frame above said platform, and a series of independently operating movable fingers carried by the frame.

4. In an apparatus of the class described, a platform, a vertically disposed movable frame above said platform, a series of independently operating movable fingers carried by the frame, and means whereby the frame is locked at various points during its movement.



5. In an apparatus of the class described, a platform, a vertically disposed movable frame above said platform, a series of independently operating movable fingers carried by the frame, means whereby the frame is locked at various points during its movement, and means whereby cardboard sheets are arranged in the frame at the ends of the fingers.

[Claims 6 to 8 not printed in the Gazette.]

874,092. EAR-TIP FOR STETHOSCOPES AND OTHER AURAL INSTRUMENTS. COVAL H. LIVERPOOL, Boston, Mass. Filed June 16, 1906. Serial No. 322,009.



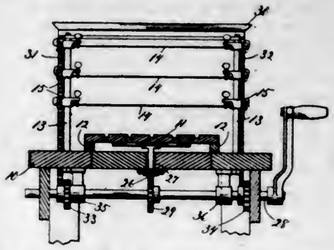
The above described tip made of a single piece of soft rubber and comprising a socket open at one end to receive the ends of the tube, and made at its opposite end with an abutment for engaging the outside of the ear socket to limit the entrance of the tip into the ear of the user, and a protuberance extending beyond the abutment to enter and fit itself to the ear socket so as to hold the tip against displacement laterally and furnish means of support for the instrument, said protuberance being of smaller diameter than the abutment, and the tip being tapered from the abutment to the open end of the socket and being of very slight thickness at that open end to provide a yielding but clinging joint with the tube and thereby prevent all sound from entering at the joint.

874,093. SASH-LOCK. GERTRUDE M. LOGAN, St. Louis, Mo. Filed Apr. 13, 1907. Serial No. 368,047.



The combination of a jamb having a transverse recess, a sash stop, a lower sash having a stile provided with a vertical groove at its upper end, an upper sash having a stile provided with a vertical groove at its lower end, a parting strip provded with a notch in front of the transverse recess, a single slidable lock-bar provided with inner and outer transverse tongues and a rod secured to the lock-bar in line therewith and extending through the sash stop.

874,094. BUTTER-CUTTER. JOHN M. LOW, Chicago, Ill. Filed May 24, 1907. Serial No. 375,482.



1. In a butter cutter, in combination, a cutting strand, supports for the strand, and means for adjustably deflecting the strand intermediate of its ends.

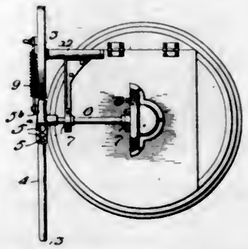
2. In a butter cutter, in combination, a cutting strand, a platen movable beneath the strand, and a set-screw bearing upon the strand adjacent one of its ends.

3. In a butter cutter, in combination, a pair of standards, a supporting head adjustably mounted on each of the standards, a cutting strand drawn between the standards, the ends of the strand being secured in the supporting heads, and a set-screw mounted in each of the supporting heads and bearing on the strand adjacent its end to deflect it.

4. In a butter cutter, in combination, a cutting strand, supports for the strand, means for drawing the strand taut, and means for adjustably deflecting the strand intermediate of its ends.

5. In a butter cutter, in combination, a cutting strand, supports for the ends of the strand, a set-screw out of line with the end supports and having a circumferential groove for receiving the strand, and a threaded support for the screw.

874,095. GEARING FOR WASHING-MACHINES. LAWRENCE W. MAMMEN, Chicago, Ill. Filed Apr. 3, 1907. Serial No. 366,117.



1. The combination of a driven shaft, a rock shaft geared thereto, an operating lever connected to the rock shaft, a fly wheel, and a longitudinally-yieldable pitman connecting the lever and fly wheel.

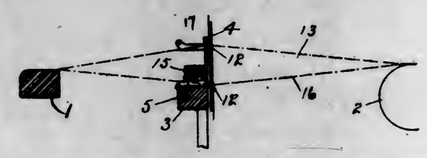
2. The combination of a driven shaft, a rock shaft geared at one end thereto, a head on the other end of the rock shaft, having a projecting lever handle and also a projecting arm, a fly wheel, and a longitudinally-yieldable pitman connecting the arm and the fly wheel.

874,096. REED FOR LOOMS. ANTONIO MARCANTE, Manville, R. I. Filed Nov. 21, 1906. Serial No. 344,485.

1. A reed for looms comprising a plurality of rigidly supported dents, a number of said dents being each provided with an integral arm extending at approximately right angles therefrom and arranged to form a grating, a supporting rod passed through the outer ends of said arms, and means for maintaining uniform-spaces between the outer ends of said arms.

2. A reed for looms comprising a plurality of dents, a

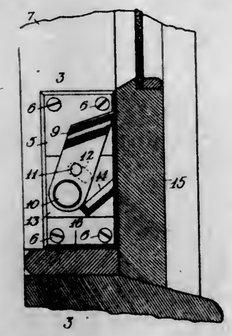
number of said dents being each provided with an integral arm extending at approximately right angles therefrom, said arms being arranged in sets, one set being located adjacent the top of the reed and the other set adjacent the bottom of the reed, and supporting rods passed through the outer ends of each set of arms.



3. A reed for looms comprising a plurality of rigidly supported dents, a number of said dents being each provided adjacent one end with an integral arm extending at right angles therefrom and arranged to form a grating, and means for preventing lateral movement of the outer ends of said arms.

4. A reed for looms comprising a plurality of dents, a number of said dents being each provided adjacent one end with an integral arm extending at right angles therefrom, said arms being arranged in sets, one set being located adjacent the top of the reed and the other set adjacent the bottom of the reed, and means for preventing lateral movement of the outer ends of said arms.

874,097. SASH-HOLDER. ALDIS H. MARDEN, Watertown, Mass. Filed Oct. 8, 1906. Serial No. 337,880.

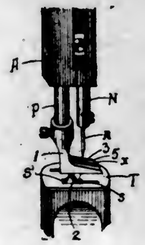


1. A sash holder comprising a plate adapted to be fastened to a window casing, a pivot rigidly fastened to said plate and extending therefrom parallel to the face of the sash, an arm mounted upon said pivot and adapted to rock thereon, and means rigidly fastened to one of said parts adapted to engage the other of said parts at the opposite ends, respectively, of the rocking movement of said arm, whereby the angle through which said arm may be rocked in opposite directions is limited.

2. A sash holder comprising a plate adapted to be fastened to a window casing, a pivot rigidly fastened to said plate and extending therefrom parallel to the face of the sash, an arm mounted upon said pivot and adapted to rock thereon, and a pin fast to said arm and projecting into a slot provided in said plate concentric with said pivot, whereby the angle through which said arm may be rocked in opposite directions is limited.

3. A sash holder comprising a plate adapted to be fastened to a window casing, a pivot rigidly fastened to said plate, an arm mounted upon said pivot and adapted to rock thereon, a pin fast to said arm and projecting into a slot provided in said plate, and a projection on said plate adapted to engage said arm at one end of the angular movement thereof, whereby the angle through which said arm may be rocked in opposite directions is limited.

874,098. SEWING-MACHINE ATTACHMENT. ROBERT P. MEES, St. Louis, Mo. Filed June 15, 1907. Serial No. 379,274.



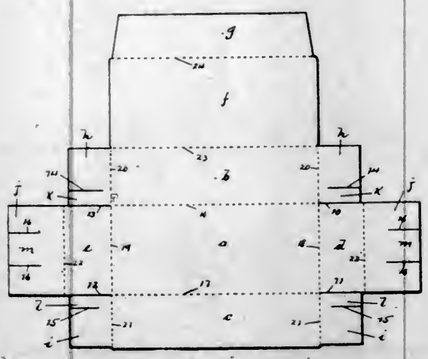
1. In combination with an open toe presser-foot, a rearwardly inclined depression or socket formed on the outer face of the inner toe, a blade received by said socket, and a clamping plate for securing the blade in position, the front end of the plate being located a suitable distance from the front end of the toe and forming an offset with the side of the toe to which said plate is secured, the edge of the toe projecting beyond said offset serving as a guide for the fabric or material operated on, substantially as set forth.

2. In combination with a presser-foot toe, a rearwardly inclined blade depending from and secured to the toe, and having one of its faces disposed diagonally to the line of feed of the material operated on, substantially as set forth.

3. In combination with a presser-foot toe, a blade depending from and secured to, and inclining rearwardly from said toe, the outer face of the blade being parallel to the line of feed of the material operated on, and the inner face being diagonally disposed to such feed line, whereby a shearing effect is produced, substantially as set forth.

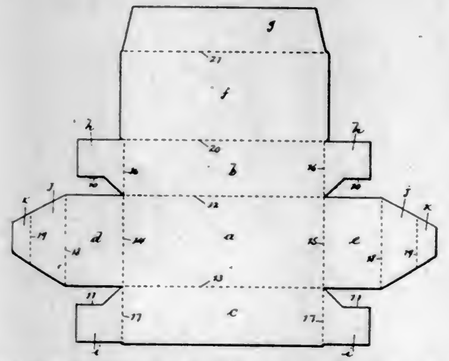
4. In combination with an open toe presser-foot having a rearwardly inclined socket formed on the outer face of the inner toe, a blade having a terminal head received by said socket, the inner face of the blade being disposed in the plane of the base of the socket, and the opposite face being disposed diagonally to said plane whereby a shearing effect is produced, and means for securing the blade in position to the toe, substantially as set forth.

874,099. BOX. AUGUST MERCKENS, New York, N. Y. Filed Mar. 13, 1907. Serial No. 362,096.



A box comprising a bottom member, side members, an end outer member and an end inner member at each end of the box and both integral with each other and with the said bottom member, a tongue cut in each of the said end inner members, end intermediate members integral with the said side members and extending beyond the ends of the same, and a tongue cut in each of the said end intermediate members and each adapted to pass through the end inner member and engage the tongue thereof to maintain the parts of the box in their set up relationship.

874,100. BOX. AUGUST MERCKENS, New York, N. Y. Filed Mar. 13, 1907. Serial No. 362,099.

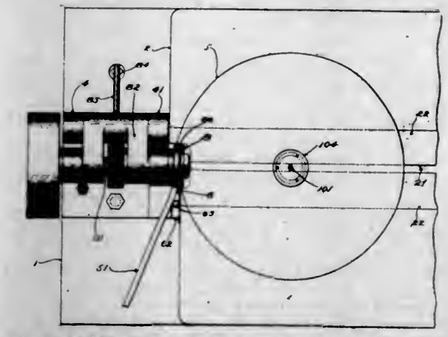


A box comprising a bottom member, side members integral therewith, an end outer member and a tapering end inner member extending from both ends of the said bottom member and integral therewith and with each other, end intermediate members integral with and extending from the ends of the said side members and each provided with an angular cut away portion along its lower edge, and a tapering tongue integral with and extending beyond each of the said tapering end inner members and adapted to be folded under the said angular cut away portions of the said end intermediate members adjacent thereto and to fit within the angular parts of the said cut away portions of the intermediate members and to lie in a position between the same and the adjacent end outer member to maintain the parts of the box in their set up relationship.

874,101. WATERPROOF FABRIC. EMILE MÉROU, Paris, France. Filed Jan. 16, 1907. Serial No. 352,635.

As a new article of manufacture, a fabric consisting of a foundation and at the back only thereof a layer of waterproofing material composed of whitening, zinc white, half raw oil and a siccative, a printed design on the front of said fabric, and a layer of varnish over said printed design.

874,102. MACHINE FOR CUTTING LEATHER, &c., INTO CONTINUOUS STRIPS. FRANK W. MERRICK, Boston, Mass. Filed Feb. 7, 1903. Serial No. 142,269.



1. A machine for cutting leather or other sheet-material into a continuous strip, comprising, essentially, a cutter, occupying a relatively fixed position, and means of producing a spiral feed of the sheet of leather or other material to the said cutter, the said means engaging with the uncut portion of the said sheet substantially as described.

2. A machine for cutting leather or other sheet-material into a continuous strip comprising, essentially, a cutter, feed-rolls adjacent the cutter engaging with the uncut marginal portion of the sheet to be cut, a centering device engaging with the said sheet, and a support on which the said centering device is movable toward said knife to occasion a spiral feed of the sheet to the knife, substantially as described.

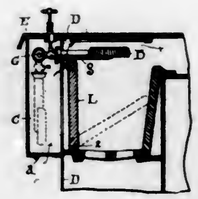
3. A machine for cutting leather or other sheet-material into a continuous strip comprising, essentially, a cutter, feed-rolls adjacent the cutter engaging with the uncut marginal portion of the sheet to be cut, a center engaging with the sheet, and means to feed said center toward the cutter, to cause a spiral feed of the sheet to the cutter by the combined action of the parts, substantially aa described.

4. A machine for cutting leather or other sheet-material spirally into a continuous strip, comprising, essentially, a cutter, feed-rolls engaging with the uncut marginal portions of the sheet material which is to be cut to advance such portion to the cutter, a centering device engaging with the said sheet material, and means acting positively to move the said centering device at a predetermined rate toward the cutter.

5. A machine for cutting leather or other sheet-material into a continuous strip comprising, essentially, a cutter, feed-rolls engaging with the uncut marginal portion of the sheet to be cut and means operated by the rotating sheet to feed the latter diametrically with relation to the cutter to occasion a continuous spiral cut in said sheet, substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

874,103. KITCHEN-RANGE. CARL H. MILLER, Jr., Cleveland, Ohio. Filed June 10, 1907. Serial No. 378,131.



1. A kitchen range having a chamber and a fire-pot open thereto at its side, and a fluid burner suspended in said chamber and adapted to be swung into using position in said fire-pot.

2. A kitchen range having a supplemental chamber next outside its fire-pot and a side wall for said pot pivoted at its bottom and adapted to swing from said pivot into the fire-pot and a fluid burner in said chamber.

3. A kitchen range having a fire-pot and a wall at one side thereof pivoted to turn inward at its top, combined with a burner chamber at the side of said fire-pot next to said wall and open at one side to said fire-pot.

4. A kitchen range provided with a fire-pot, in combination with a fluid burner pivotally supported and adapted to be swung into a horizontal position in the top of said fire-pot.

5. In kitchen ranges, a range having a fire-pot provided with a side wall pivoted at its bottom to swing into said pot, in combination with a fluid burner adapted to swing into horizontal position at the top of said fire-pot above said wall.

[Claims 6 to 11 not printed in the Gazette.]

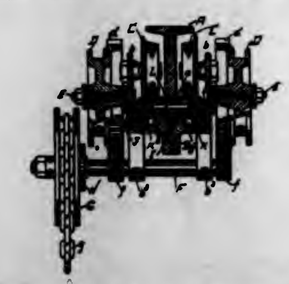
874,104. FOLDING OR COLLAPSIBLE EGG-CASE. MICHAEL MILLER, Brillion, Wis. Filed Jan. 10, 1906. Serial No. 295,510.



1. A folding box comprising a bottom having end and side cleats, end sections hinged to the inner edges of the end cleats, side sections hinged to the inner edges of the side cleats, flanges on the inner surfaces near the ends of the side sections, said flanges and the abutting edges of the end sections and end cleats holding said end sections in vertical position, catches for securing the end and side sections together, horizontal flanges located on the inner faces of the side sections below the top edges thereof, said horizontal flanges on each side section being spaced apart at their adjacent ends while the opposite ends of said flanges fit against the inner faces of the end sections, a partition fitting in the spaces formed by the horizontal flanges and resting on the bottom, a cover supported by the horizontal flanges, the upper surface of said cover being below the upper edges of the side and end sections, swinging catches pivoted to the cover and adapted to pass through the slots and engage the pins therein to secure the cover in place.

2. A folding box comprising a bottom having hinged end and side sections, certain of said sections having slots and pins extending across said slots, means between the end and side sections for holding the sections together, flanges on selected sections and located below the top edges of the said sections, a cover supported on the flanges and fitting within the side and end sections, swinging catches on the upper surface of the cover and below the top edges of the end and side sections to engage the slots and the pins therein to hold the cover in position.

874,105. TROLLEY-HOIST. EDWARD Y. MOORE, Cleveland, Ohio. Filed Feb. 1, 1907. Serial No. 355,255.



1. The combination with a hoist adapted to travel on a support, of a pair of clamping shoes carried by the hoist, and an oscillatable plate having eccentric slots through which members carried by said shoes extend.

2. The combination of a hoist frame, a rod carried thereby, a pair of clamping shoes slidable on said rod toward or from each other, and means for operating said shoes.

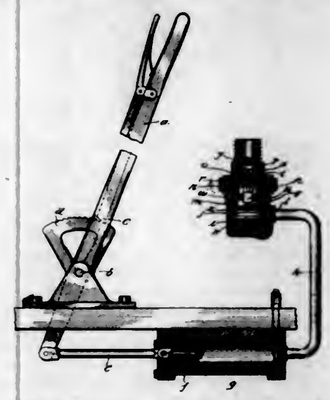
3. The combination of a hoist frame, a rod carried thereby, a pair of clamping shoes slidable on said rod toward or from each other, and a cam plate operatively connected with said shoes.

4. The combination with a hoist adapted to travel on an I-beam, of a guide carried by the hoist frame beneath the I-beam and transversely thereof, a pair of clamping shoes slidable on said guide toward or from the flange of the I-beam, and means for operating said shoes.

5. The combination with a hoist adapted to travel on an I-beam, of a guide carried by the hoist frame beneath the I-beam and transversely thereof, a pair of clamping shoes slidable on said rod toward or from the flange of the I-beam, and an operating member having eccentric slots through which extensions from said shoes project.

[Claims 6 to 13 not printed in the Gazette.]

874,106. MEANS FOR OPERATING VALVES OR COCKS. WILLIAM J. MCCARROLL, Philadelphia, Pa., assignor to Burnham, Williams & Co., Philadelphia, Pa., a Firm. Filed May 18, 1907. Serial No. 374,498.



1. In a valve operating means, in combination, a valve, a stem carried by or engaging said valve, a cylinder divided into two parts by a partition through which said stem passes the sides of said cylinder being furnished above and below said partition with perforations, a piston in the lower compartment of said cylinder having a movement in the direction of movement of said valve, a liquid carrying pipe one end of which communicates with said cylinder beneath said piston and the other end with a hydraulic cylinder, said latter cylinder, a piston in said latter cylinder, and means for operating said piston.

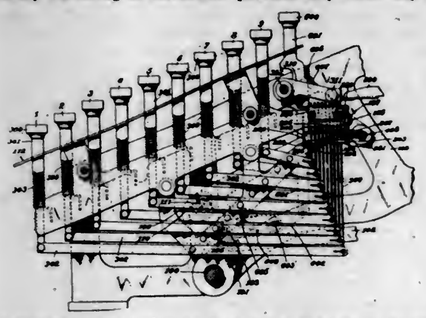
2. In a valve operating means, in combination, a valve, a stem or rod carried by or engaging said valve, a cylinder having an outlet in its side, a partition in said cylinder beneath said outlet through which partition said stem or rod passes, a piston in said cylinder beneath said partition, a liquid carrying pipe one end of which communicates with said cylinder beneath said piston and the other end with a hydraulic cylinder, said latter cylinder, a piston in said latter cylinder, and means for operating said piston.

3. In an apparatus of the character described, in combination, a cylinder having two outlets in its side, a partition across said cylinder between said outlets, a valve above said partition, a valve stem passing through said partition, a piston below said partition, and means for introducing and withdrawing a liquid to or from said cylinder beneath said piston.

874,107. DIGIT-REPEATING MECHANISM FOR ADDING-MACHINES. CHARLES N. MCFARLAND, Kingston, Pa., assignor to The Adder Machine Company, Kingston, Pa., a Corporation of Pennsylvania. Filed Sept. 21, 1906. Serial No. 335,571.

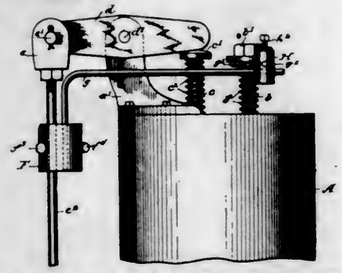
1. In a machine of the character described, numeral keys arranged in denominational series, each key under tension and each key having a stop carrying a cam lug, a latch adapted to engage with all of the lugs of the same series and which latch is under tension to hold the same against the stops, a restoring rock shaft adapted to actuate all of the latches of all of the series thereby restoring those which have been moved to their initial positions and means for interrupting the operation of said shaft comprising a key on the key board provided with a depending stem which when held depressed keeps the rock shaft inactive.

2. In a machine of the character described, numeral keys arranged in denominational series, each key under tension and each key having a stop carrying a cam lug, a latch adapted to engage with all of the lugs of the same series and which latch is under tension to hold the same against the stops, the depression of any key in a series thereby restoring to its initial position any other key in



the same series, a restoring rock shaft adapted to actuate all of the latches of all of the series thereby restoring those which have been moved to their initial positions and means for interrupting the operation of said shaft comprising a key on the key board provided with a depending stem which when held depressed keeps the rock shaft inactive.

874,108. VALVE ATTACHMENT FOR ENGINES. GEORGE B. MCKINNEY, Barry, Ill. Filed Feb. 6, 1905. Serial No. 244,364.



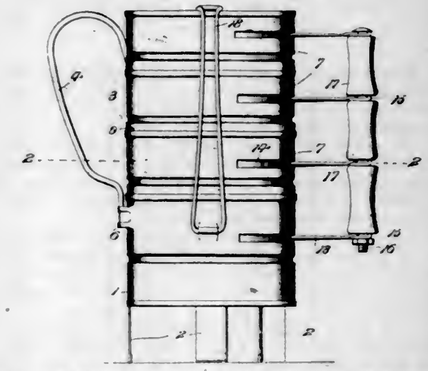
1. In a gas-engine, the combination with a cylinder provided with inlet and exhaust ports and valves therefor, the stems of said valves projecting from the cylinder, a lever having one end bearing upon and adapted to open the exhaust valve, a reciprocating rod operating said lever, and adjustable means rigidly connected with said rod and operated thereby, for holding the inlet valve on its seat when the exhaust valve is opened.

2. In a gas-engine, the combination with a cylinder provided with inlet and exhaust ports and valves therefor, the stems of said valves projecting from the cylinder, a lever pivoted on said cylinder and adapted to open the exhaust valve, a rod operating said lever, a collar detachably secured to said rod, and means connected with said collar for holding the inlet value on its seat when the exhaust valve is opened, said means comprising elements adjustable vertically and horizontally relative to said rod.

3. In a gas-engine, the combination with a cylinder provided with inlet and exhaust ports and spring-held valves therefor, the stems of said valves projecting from the cylinder, a lever adapted to open the exhaust valve, a rod operating said lever, a collar detachably and adjustably mounted on said rod and detachable and adjustable means connected with said collar and engaging the stem of the intake valve whereby the latter will be held on its seat when the exhaust valve is opened.

4. In a gas-engine, the combination with a cylinder provided with inlet and exhaust ports and spring-held valves therefor, the stems of said valves projecting from the cylinder, a rocking lever mounted on said cylinder and having one end bearing on the stem of the exhaust valve and adapted to depress the same against the tension of the valve spring, a rod connected with one end of said lever, a collar having an open slot therein to receive said rod, means for adjusting said collar on said rod, an angular rod adjustably mounted in said collar, a coupling member adjustably mounted on said angular rod, a hook member secured in said coupling and adapted to hold the inlet-valve on its seat in the manner and for the purpose set forth.

874,109. HOUSEHOLD-SIFTER. WILLIAM J. MCLONEY and EDITH B. PRESTON, Mexico, Mo. Filed Mar. 23, 1907. Serial No. 364,073.



1. In a device of the character described, the combination of a tubular body comprising a series of annular sections, the lower edge of each section being crimped and received within the upper portion of the adjacent section, each of the sections having a rib pressed outwardly therefrom to form a stop for limiting the telescopic movement of the sections and also having an annular seat pressed inwardly therefrom, a sifting screen carried by each of the sections and resting loosely upon the seat, and means for imparting movement to the sifting screens.

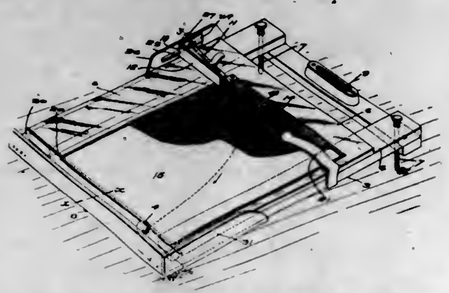
2. In a device of the character described, the combination of a tubular body portion provided with a series of annular seats and also with a series of slots, a sifting screen supported by each of the annular seats, a lateral arm carried by each of the sifting screens and operating within one of the slots, and a handle member connecting the lateral arms whereby the sifting screens can be moved in unison.

3. In a device of the character described, the combination of a tubular body portion comprising a series of annular sections, each of the sections being formed with a seat and also with a slot, a sifting screen carried by each of the sections and resting upon the seat, and an arm projecting from each of the sifting screens and passing through the respective slot in the annular section, the said arms being provided with eyes, and a rod connecting the arms and passing through the eyes thereof.

4. In a device of the character described, the combination of a tubular body portion comprising a series of annular sections, a sifting screen carried by each of the sections, a handle connected to one of the sections and provided with an extension, and a keeper carried by one of the sections for receiving the said extension upon the handle.

5. A household sifter comprising a series of superposed annular sections, a sifting screen loosely mounted within each of the sections, connecting means between the end sections, and a handle permanently connected to one of the end sections and detachably engaging the opposite end section.

874,110. APPARATUS FOR DETERMINING THE LAW OF FALLING BODIES. JOHN C. PACKARD, Brookline, Mass., assignor to L. E. Knott Apparatus Company, Boston, Mass., a Corporation of Massachusetts. Filed July 25, 1907. Serial No. 385,461.



1. In a device for determining the law of falling bodies, the combination with an inclined plane, of a ball, and means to project the ball onto the inclined plane in a direction at right angles to the inclination thereof.

2. In a device for determining the law of falling bodies, the combination with an inclined plane, of a ball, means to project the ball onto the inclined plane in a direction at right angles to the inclination thereof, and means to make a visible record of the course of the ball.

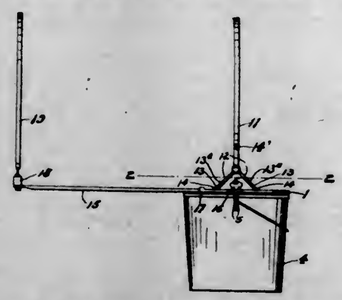
3. In a device of the class described, the combination with an inclined plane, of a ball to roll over said inclined plane, and a chute arranged to deliver the ball onto the inclined plane in a direction at right angles to the inclination thereof.

4. In a device of the class described, the combination with an inclined plane, of a ball to roll over said inclined plane, and a chute arranged to deliver the ball onto the inclined plane in a direction at right angles to the inclination thereof, said chute being adjustable in a direction at right angles to its length.

5. In a device of the class described, the combination with an inclined plane, of a ball to roll over said inclined plane, and a chute arranged to deliver the ball onto the inclined plane in a direction at right angles to the inclination thereof, said chute having a bottom inclined transversely to the surface of the inclined plane, and a side guard extending beyond the bottom.

[Claim 6 not printed in the Gazette.]

874,111. MILKING-MACHINE. CLARENCE C. PARSONS, Oberlin, Ohio. Filed Apr. 22, 1907. Serial No. 369,503.



1. A milking-machine, comprising a supporting-frame, a pair of longitudinal guide-bars mounted thereon and carrying a slidably-mounted operating-bar, outwardly-extending curved guide members mounted on said frame, adjusting-arms pivotally-secured to said operating-bar and carrying teat-cups slidably-mounted in said guide-members, teat-openers or dilators carried by said teat-cups, a teat-dilator operating-bar slidably-mounted beneath said first mentioned operating-bar, and connecting-bars connected to said teat-dilator operating-bar and said teat-openers or dilators.

2. A milking-machine, comprising a supporting-frame provided with guide-bars carrying a slidably-mounted operating-bar, outwardly-extending guide-members mounted on said frame, adjusting-arms secured to said operating-bar and carrying teat-cups slidably-mounted in said guide-members, and teat-openers or dilators carried by said teat-cups and provided with means for operating the same.

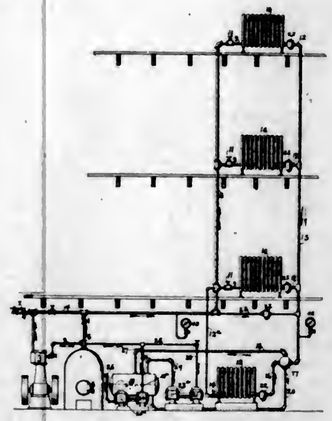
3. A milking-machine, comprising a frame, an operating-arm slidably-mounted on said frame, guide-members carrying slidably-mounted teat-cups, arms connecting said teat-cups to said operating-arm, teat-dilators carried by said teat-cups, and means for operating said teat-dilators.

4. A milking-machine, comprising a supporting-frame, a slidably-mounted operating-arm carried by said frame, guide members carrying slidably-mounted teat-cups, arms connecting said teat-cups to said operating-arm, teat-dilators carried by said teat-cups, and a second or dilator-operating-arm carried by said first mentioned operating-arm and connected to said teat-dilators.

5. A teat-dilator, comprising a dilator-shank, and a movable dilator member pivotally-mounted opposite said shank, said shank being pointed at its upper extremity and provided with an offset notch forming a seat or pocket for the upper end of said movable dilator member.

[Claims 6 to 9 not printed in the Gazette.]

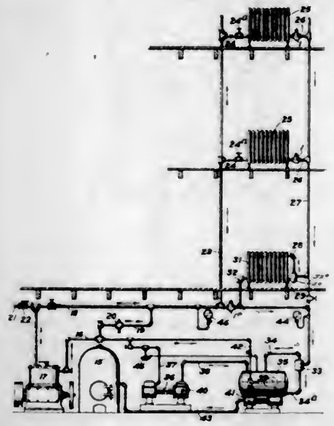
874,112. VACUUM HEATING APPARATUS. CASSIUS C. PECK, Rochester, N. Y. Filed July 31, 1906. Serial No. 328,630.



1. In a vacuum heating system and in combination, a source of steam supply; a supply conduit; a return conduit; a radiator; means establishing communication between said radiator and conduits; an air and water drainage valve for said radiator controlling differential pressure between the radiator and the return conduit; a closed air and water receiver at the return end of the system; separate air and water pipes communicating respectively with the air and water spaces of said receiver and with the return conduit; an air pump; a water pump; means establishing communication between said air and water pumps and the air and water spaces, respectively, of the receiver; and means for actuating said pumps.

2. In a vacuum heating system and in combination, a source of steam supply; a supply conduit; a return conduit provided with a separating chamber for air and water; a radiator; means establishing communication between said radiator and conduits; an air and water drainage valve for said radiator controlling differential pressure between the radiator and the return conduit; a closed air and water receiver at the return end of the system; separate air and water pipes communicating respectively with the air and water spaces of said receiver, and with said separating chamber; an air pump; a water pump; means establishing communication between said air and water pumps and the air and water spaces, respectively, of the receiver; and means for actuating said pumps.

874,113. VACUUM HEATING SYSTEM. CASSIUS C. PECK, Rochester, N. Y. Filed Sept. 24, 1906. Serial No. 335,980.



1. In a steam heating system the combination of a supply conduit, one or more radiators, and a return conduit; a return pipe from each radiator; a valve in said pipe having a permanently open passage of only sufficient size to keep each radiator drained of air and water, and adapted for such drainage; means for regulating the steam supply to said radiator; and means for maintaining a rarefaction of air in the return conduit at a uniform degree, said return conduit embracing a secondary radiator between said valves and the rarefying means.

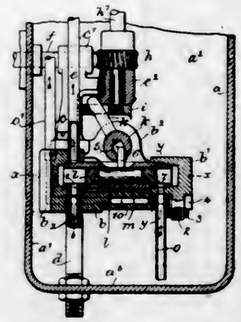
2. In a steam heating system the combination of a supply conduit, one or more radiators, and a return conduit; a drainage valve for each radiator, each having a chamber adapted to receive air and water from the radiator, and a permanently open passage for them both from said chamber to the return conduit; means for regulating the flow of air and water to the return conduit; and means for maintaining a rarefaction of air in said return conduit at a uniform degree, said conduit embracing a secondary radiator between the rarefying means and said valves.

3. In a steam heating system the combination of a supply conduit, one or more radiators, and a return conduit; a valve between each radiator and the return conduit, having a chamber adapted to receive air and water from the radiator, and a permanently open passage for them both from said chamber to the return conduit; means for regulating the flow of air and water from the radiator; a separator in the return conduit adapted to separate air and steam from the water in said return conduit; and means for maintaining a rarefaction of air in the return conduit at a uniform degree, said conduit embracing a secondary radiator between said valves and the rarefying means.

4. In a steam heating system the combination of a supply conduit, one or more radiators, and a separate return conduit; means for maintaining a rarefaction of air in the return conduit at a uniform degree, said conduit including a secondary radiator between the air exhausting means and the primary radiators; a drain pipe between said conduit and each primary radiator; a valve in said pipe having an inlet port and an outlet port nearly on the same level, a chamber for water on the inlet side and below said ports and connected with them by a valve the head of which is adapted to close a relatively large opening, and having a small valve in the head, means for raising and lowering said valve head, and an adjustable stem carried by the main valve stem and adapted to open and close the valve opening through the valve head.

5. In a steam heating system, the combination of a supply conduit, one or more radiators, a return conduit, a return pipe from each radiator, a valve in the pipe having a permanently open passage of only sufficient size to keep each radiator drained of air and water, means for regulating the steam supply to said radiators, and means for maintaining a rarefaction of air in the return conduit at a uniform degree, said return conduit embracing a condenser between said valves and the rarefying means.

874,114. LUBRICATOR. JOHANNES T. PEDERSEN, Woodside, N. Y., assignor to Pedersen Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Feb. 21, 1907. Serial No. 358,545.



1. In a lubricating device and in combination, a series of oscillating cylinders, a series of reciprocating and oscillating pistons within said cylinders, means for simultaneously moving the said cylinders and pistons, a power device for actuating the same, a body frame serving as a support for the said cylinders and means for conveying the oil to and from the respective ends of the cylinders and pistons with the movement of the pistons.

2. In a lubricating device and in combination, a series of oscillating cylinders, a series of reciprocating and oscillating pistons within said cylinders, means for simultaneously moving the said cylinders and pistons, a power device for actuating the same, a body frame serving as a support for the said cylinders, a pipe for the inlet of oil to one end of the said cylinders, a channel through the body portion from the same end of the cylinders and a pipe leading therefrom, a pipe leading into and a pipe leading out from the other end of said cylinder.

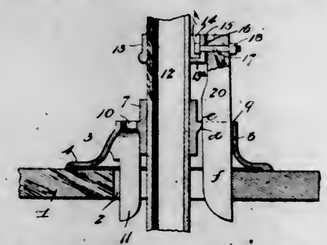
3. In a lubricating device and in combination, a series of oscillating cylinders, a series of oscillating and reciprocating pistons within said cylinders, means for simultaneously moving the cylinders and pistons of said series, a body frame receiving the cylinders of the series at one end, auxiliary frames adapted to receive the opposite ends of said cylinders and means for connecting the same in an adjustable relation to the body frame and means providing for the entrance of oil and its exit from the respective ends of the cylinders of said series with the movement of said pistons.

4. In a lubricating device and in combination, a series of oscillating cylinders, a series of oscillating and reciprocating pistons within said cylinders, means for simultaneously moving the cylinders and pistons of said series, a body frame receiving the cylinders of the series at one end, auxiliary frames adapted to receive the opposite ends of said cylinders and means for connecting the same in an adjustable relation to the body frame, a pipe for the inlet of oil to one end of the said cylinders, a channel through the body portion from the same end of the cylinders and a pipe leading therefrom, a pipe leading into and a pipe leading out from the other end of said cylinder.

5. In a lubricating device and in combination, a series of oscillating cylinders longitudinally and centrally apertured, a series of oscillating and reciprocating pistons within said cylinders, pins connected to the pistons and passing through slots of the cylinders, a reciprocating rock-shaft having a series of apertures in the under surface receiving the said pins, and power devices for rocking the said shaft and reciprocating the same for imparting an oscillatory movement to the cylinders and pistons and also a reciprocating movement to the pistons.

[Claims 6 to 15 not printed in the Gazette.]

874,115. PUMP-MOUNTING. SYLVENUS PENNELL, Girard, Ohio. Filed Sept. 13, 1907. Serial No. 392,756.



1. In a pump mounting, the combination with the well covering and the pump barrel, of a pump base having a binding engagement with the well covering, and an adjustable locking lever supported from the pump barrel, fulcrumed on the base, and also having a binding engagement with the well covering.

2. In a pump mounting, the combination with the well covering and pump barrel, of a pump base having binding lugs for engagement with the edge of the pump opening in the well covering, a lever locking device having engagement with the edge of said pump opening opposite said binding lugs, and a fastening connection between the base and the barrel.

3. In a pump mounting, the combination with the well covering and pump barrel, of a clamping bolt carried by said barrel, a pump base having binding lugs for engagement with the pump opening of the well covering, an adjustable lever carried by said clamping bolt for securing the base to the well covering, and a fastening connection between the base and barrel.

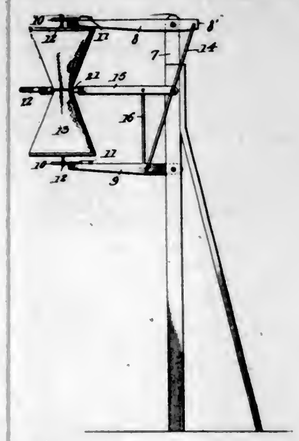
4. In a pump mounting, the combination with the well covering and pump barrel, of a collar carried by said barrel, a clamping bolt carried by said collar, a pump base having binding lugs for engagement with the pump opening of the well covering, an adjustable lever carried by said clamping bolt for securing the base to the well covering, and a fastening connection between the base and barrel.

5. In a pump mounting, the combination with the well covering and pump barrel, of a collar carried by said barrel, a clamping bolt carried by said collar, a locking lever adjustably mounted on said clamping bolt, a pump base provided with a lever slot through which the locking lever extends to have a binding engagement with the well covering, and a fastening connection between the base and barrel.

[Claims 6 and 7 not printed in the Gazette.]

874,116. MAIL CATCHER AND CRANE. OREN M. PERGRIN, McCoysburg, Ind. Filed Mar. 11, 1907. Serial No. 361,744.

1. A mail crane comprising a support, vertically spaced delivering arms pivoted to the support for vertical movement into and out of operative position, connection between the arms for simultaneous movement thereof out of operative position, catching means pivoted to the support for movement into and out of operative position, and means for moving the catching means into operative position when the delivering arms are moved into operative position.



2. In a mail crane, the combination with delivering means movable into and out of operative position, of catching means movable into and out of operative position, said catching means lying normally out of operative position, and means connected with the delivering means for holding the catching means in operative position when the delivering means is in such position.

3. In a mail catching device, the combination with an arm including spaced members, of spaced connecting pieces for the members, a catching hook having a shank revolubly engaged with the connecting pieces, a lateral projection carried by the shank and a stop arranged for engagement by the projection to limit the rotation of the shank in both directions.

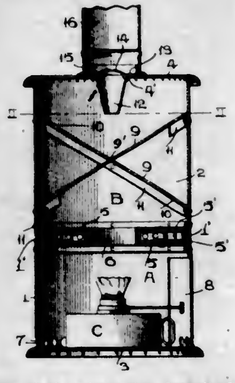
4. In a mail catching and delivering mechanism, the combination with a delivering frame mounted for movement into and out of operative position, of a revoluble shaft, a catching member carried by the shaft for movement therewith into and out of operative position, means carried by the shaft and arranged for engagement of the frame for movement therewith into operative position when the shaft is moved in one direction, and means for holding the frame yieldably out of operative position.

5. A mail catching hook including a yoke, a latch pivoted between its ends to one of the legs of the yoke for movement to bring either of its end portions into position to extend across the yoke, a stop carried by one leg of the yoke and arranged to receive one end of the latch thereagainst to limit its movement in one direction, and a spring secured to the other end of the latch and the stop, said spring being arranged to lie at times at one side of the pivot point of the latch and at times at the opposite side thereof.

874,117. LAMP HEATING-STOVE. WILLIAM W. PORTMANN, St. Louis, Mo. Filed May 20, 1907. Serial No. 374,569.

1. In a stove of the character described, the combination of a shell having a horizontal partition, formed with an orifice, and whereby it is sub-divided interiorly into a lamp compartment and a drum chamber and having an outlet opening at its top, and a pair of crossed segment shaped baffle plates mounted in said drum chamber, and arranged obliquely to each other, substantially as set forth.

2. In a stove of the character described, the combination of a shell having a horizontal partition, formed with an orifice, and whereby it is sub-divided interiorly into a lamp compartment and a drum chamber and having an outlet opening at its top, and a pair of crossed segment shaped baffle plates mounted in said drum chamber, and arranged obliquely to each other; said baffle plates being perforated, substantially as set forth.



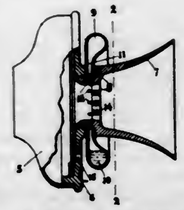
3. In a stove of the character described, the combination of a shell having a horizontal partition, formed with an orifice, and whereby it is sub-divided interiorly into a lamp compartment and a drum chamber and having an outlet opening at its top, and a pair of crossed segment shaped baffle plates mounted in said drum chamber, and arranged obliquely to each other; said baffle plates being so arranged as to overlap each other, substantially as set forth.

4. In a stove of the character described, the combination of a shell having a horizontal partition, formed with an orifice, and whereby it is sub-divided interiorly into a lamp compartment and a drum chamber and having an outlet opening at its top, and a pair of crossed baffle plates mounted in said drum chamber, and arranged obliquely to each other; said baffle plates being of segmental shape and overlapping each other, substantially as set forth.

5. In a stove of the character described, the combination of a shell having a horizontal partition, formed with an orifice, and whereby it is sub-divided interiorly into a lamp compartment and a drum chamber and having an outlet opening at its top, and a pair of crossed segment shaped baffle plates mounted in said drum chamber, and arranged obliquely to each other; said baffle plates being so arranged as to overlap each other and being provided with perforations, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

874,118. TELEPHONE-TRANSMITTER. CARL J. PAINTZ, Milwaukee, Wis. Filed Dec. 31, 1906. Serial No. 350,124.



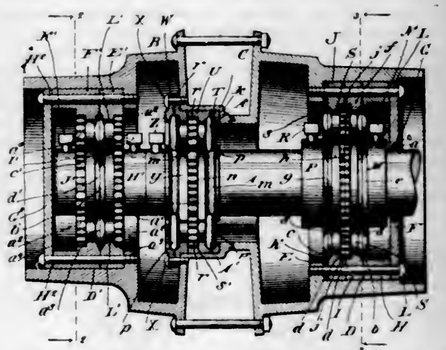
1. A telephone transmitter, comprising a mouth piece, a member with which the mouth piece is connected, and an annular disinfectant receptacle having a contracted inner edge fitting between the mouth piece and the said member and communicating with the interior of the mouth piece.

2. A telephone transmitter, comprising a mouth piece, and an annular disinfectant receptacle having a contracted inner edge with openings therethrough leading from the interior, said disinfectant receptacle surrounding the mouth piece and having its openings communicating with the interior of the mouth piece through openings in the mouth piece.

3. A telephone transmitter, comprising a mouth piece, a diaphragm box to which the mouth piece is connected a shoulder on the mouth piece, and an annular disinfectant receptacle surrounding the mouth piece with its contracted inner edge secured between the shoulder and the diaphragm box, there being a groove on the neck of the mouth piece and openings in the disinfectant receptacle and in the neck of the mouth piece connecting with the groove, whereby communication is made from the interior of the disinfectant receptacle to the interior of the mouth piece.

4. A telephone transmitter, comprising a diaphragm box, a mouth piece connected therewith, a disinfectant receptacle communicating with the interior of the mouth piece, there being openings in the front plate of the diaphragm box around the edge of the diaphragm to permit the disinfectant gas or vapor to pass out therethrough.

874,119. ROLLER-BEARING. JAMES E. SACKETT, Sparrow Bush, N. Y. Filed June 8, 1907. Serial No. 377,971.



1. In a roller bearing, the combination of a shaft or axle, a casing having a circular series of spoke sockets and abutments at the inner ends thereof and also having smooth bores at its ends and annular abutments at the inner ends of said smooth bores, bearing rings arranged side by side within the circular series of spoke sockets and forming annular smooth grooves and an annular toothed recess, means connected with the walls of the spoke sockets for detachably retaining said bearing rings in position, bearing rings arranged side by side in the end smooth bores of the casing and forming annular smooth grooves and annular toothed recesses, bolts detachably connecting one set of the latter bearing rings with the adjacent abutment of the casing, bolts detachably connecting the other set of the latter bearing rings to the adjacent abutment of the casing, sleeves detachably secured on the axle, within the casing, and forming circumferential grooves and circumferential toothed recesses, and three sets of anti-friction rollers interposed between the bearing rings and the sleeves and having smooth portions disposed in the opposed smooth grooves of the rings and sleeves and toothed portions arranged between and engaging the teeth of the rings and sleeves.

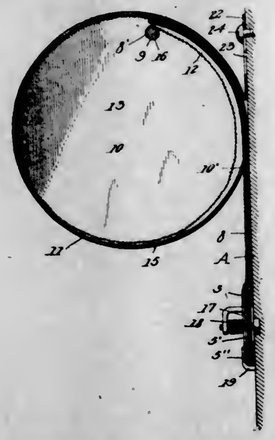
2. In a roller bearing, the combination of a casing having a circular series of spoke sockets and abutments at the inner ends thereof, bearing rings arranged side by side within the circular series of spoke sockets and forming annular smooth grooves and an annular toothed recess, means connected with the walls of the spoke sockets for detachably retaining said bearing rings in position, an axle extending through the casing and provided with a sleeve having circumferential grooves and a circumferential toothed recess, and anti-friction rollers interposed between the bearing rings and the sleeve and having smooth portions disposed in the opposed smooth

grooves of the rings and sleeve and toothed portions arranged between and engaging the teeth of the rings and sleeve.

3. In a roller bearing, the combination of a shaft or axle, a casing having interior, annular abutments and smooth bores extending from the said abutments to the ends of the casing, bearing rings removably arranged side by side in the smooth bores of the casing and each forming one-half of a smooth annular groove; some of said rings also forming annular toothed recesses, bolts detachably connecting one set of the said bearing rings with the adjacent abutment of the casing, bolts detachably connecting the other set of the bearing rings to the adjacent abutment of the casing, sleeves detachably secured on the shaft or axle, within the casing, and forming circumferential grooves and circumferential toothed recesses, and anti-friction rollers interposed between the bearing rings and the sleeves and having smooth portions disposed in the opposed grooves of the rings and sleeves and toothed portions arranged between and engaging the teeth of the rings and sleeves.

4. In a roller bearing, the combination of a casing having an interior annular abutment and a smooth bore at one side of the said abutment, bearing rings arranged side by side within the smooth bore and each forming one-half of an annular smooth groove and one of said rings also having an annular toothed recess, means detachably connecting the rings with the abutment, an axle extending through the casing and provided with a sleeve having a circumferential groove and a circumferential toothed recess, and anti-friction rollers interposed between the bearing rings and the sleeve and having smooth portions disposed in the opposed smooth grooves of the rings and sleeve and toothed portions arranged between and engaging the teeth of the rings and sleeve.

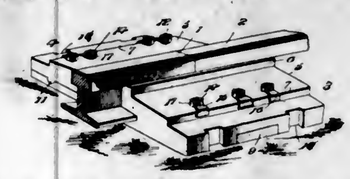
874,120. TRAP. CHARLES E. SELF, Richwood, Ohio. Filed Apr. 22, 1907. Serial No. 369,499.



1. A trap comprising a bottom member, vertical end members secured to the bottom member, said end members having their upper portions curved forwardly, foraminous material secured to the bottom and side members and having its upper portion rolled upon itself to form a chamber and a passage leading from its lower portion into said chamber, caps engaged with the ends of said rolled portion and with the upper portions of the end members, said caps having notches in which the end members are engaged, and a rod engaged in the caps and secured to the edge portion of the material within the chamber.

2. In a trap, the combination with connected bottom and end members, each including a plate bent upon itself to form two portions, of a piece of screen engaged at its edges between said portion, said end members having their upper end portions curved forwardly, said screen extending beyond said curved portions of the end members and being rolled upon itself to form a chamber and a passage leading from its lower portion into said chamber, and caps engaged with the ends of said rolled portion.

874,121. RAIL-JOINT. JOSEPH SEVCIK, New Era, Ore., assignor of one-half to E. F. Huggins, Portland, Oreg. Filed Apr. 2, 1907. Serial No. 365,946.



1. A chair for rail joints and the like comprising a pair of oppositely disposed wings, lateral extensions carried by each of the wings and forming the base of the chair, the said extensions fitting together and having their adjacent edges notched, and fastening members engaging the corresponding notches to produce an interlocking connection between the extensions.

2. A chair for rail joints and the like comprising a pair of oppositely disposed wings, a lateral extension carried by each of the wings and provided with a transversely disposed groove, the said extensions constituting the base of the chair, and a rib projecting from each of the wings and designed to engage the groove of the lateral extension carried by the opposite wing to hold the wings together.

3. A chair for rail joints and the like comprising a pair of oppositely disposed wings, a pair of spaced lateral extensions carried by one of the wings, the adjacent edges of the spaced extensions being flared, an extension carried by the opposite wing and fitting between the said spaced extensions and being contracted toward its extremity, the extensions upon each of the wings having an interlocking connection with the opposite wing and the said extensions constituting the base of the chair.

4. A chair for rail joints and the like comprising a pair of oppositely disposed wings, lateral extensions carried by each of the wings and having an interlocking connection with the opposite wing, and fastening members rigidly connecting the extensions of one wing with the opposite wing.

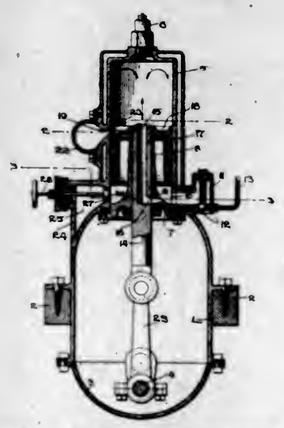
5. A chair for rail joints and the like comprising a pair of oppositely disposed wings, a pair of spaced lateral extensions carried by one of the wings, an intermediate extension carried by the opposite wing and fitting between the spaced extensions, the extensions of each wing having an interlocking connection with the opposite wing and being provided upon their adjacent faces with notches, and fastening members engaging the corresponding notches in the adjacent edges of the extensions and serving to secure the extensions of one wing to the opposite wing.

[Claim 6 not printed in the Gazette.]

874,122. INTERNAL-COMBUSTION ENGINE. OLIVER H. SHROYER, St. Louis, Mo. Filed Mar. 12, 1907. Serial No. 362,053.

1. An internal combustion engine, comprising a cylinder, a head plate closing the lower end thereof, a tubular piston rod operating through said head plate, a piston within the cylinder on the piston rod, means whereby an explosive charge is delivered to the combustion chamber in the cylinder through the tubular piston rod, and said cylinder being provided with an exhaust port.

2. An internal combustion engine, comprising a cylinder, the lower end of which is closed to form a compression chamber, a piston rod operating through the lower end of the cylinder, there being an inlet port formed through the piston rod, a piston fixed on the piston rod and operating in the cylinder, an inlet valve for controlling the inlet of gas to the compression chamber of the cylinder, and there being a port formed through the bearing for the piston rod at the lower end of the cylinder and leading from the compression chamber with which the port in the piston rod registers when the piston is at the end of its compression stroke.



3. An internal combustion engine, comprising a cylinder, the lower end of which is closed to form a compression chamber, a piston rod operating through the lower end of the cylinder, a piston operating through said cylinder on the piston rod, means whereby an explosive charge is drawn into the compression chamber on the lower end of the cylinder, and means whereby the explosive charge is delivered through the piston rod to the end of the cylinder opposite the compression chamber.

4. An internal combustion engine, comprising a cylinder, the lower end of which is closed to form a compression chamber, a tubular piston rod operating through the lower end of the cylinder, a piston fixed on the piston rod within the cylinder, there being a port formed through the bearing for the piston rod at the lower end of the cylinder and leading from the compression chamber and adapted to coincide with a port in the tubular piston rod, an auxiliary compression chamber arranged adjacent the cylinder and adapted to communicate with the compression chamber in said cylinder.

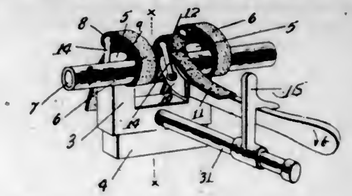
5. An internal combustion engine, comprising a cylinder, the lower end of which is closed to form a compression chamber, a piston rod operating through the lower end of the cylinder, a piston fixed on the piston rod within the cylinder, there being a port formed through a portion of the piston rod, there being a port formed through the bearing for the piston rod at the lower end of the cylinder and leading from the compression chamber, with which port the port in the piston rod is adapted to register, there being a gas inlet port into the compression chamber, there being an exhaust port leading from the interior of the cylinder, and a deflector plate carried by the piston for partially closing the exhaust port when the piston is at the lower end of its stroke.

874,123. PIPE-VISE. HARRY R. SINCLAIR, Worcester, Mass. Filed Apr. 6, 1903. Serial No. 151,355.

1. In a pipe vise, two opposed heads, each having a clamping nose, flexible pipe gripping means detachable from the heads but confined therebetween and having a loop to encircle the pipe, and means to clamp the pipe gripping means between the heads.

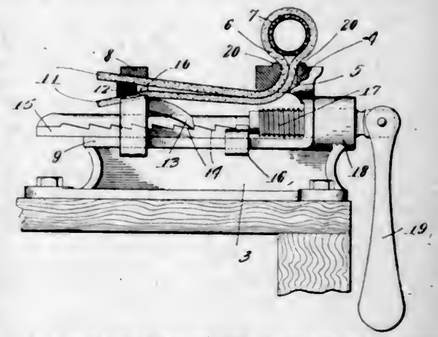
2. A pipe-vise having two opposed clamping edges or noses, a detachable flexible band doubled to form a loop to encircle a pipe, said band passing between the opposed clamping noses, and means operable independently from the noses to clamp said band to prevent it from being drawn out from between the noses when strain is put on it by turning the pipe.

3. A pipe vise having two pairs of opposed heads, each having a clamping edge or nose, a flexible band for each pair of opposed heads, said band being separate and detachable from both the heads and doubled to form a loop to encircle the pipe, the ends of the band loosely passing between the opposed clamping noses whereby the band



may be drawn down between the noses to form loops of different diameters, and means operable independently from said noses to clamp said band therebetween to prevent it from being drawn out when strain is put on it by the turning of the pipe.

874,124. PIPE-VISE. HARRY R. SINCLAIR and CARL EKMAN, Worcester, Mass.; said Ekman assignor to said Sinclair. Filed Mar. 23, 1906. Serial No. 307,751.



1. In a pipe vise, a slotted head, a band or strap doubled on itself to form a loop and extending through said slot, a toothed slide 15, a strap-engaging member 8 adjustable longitudinally of the slide and having a projection to engage any one of the teeth thereof, said strap-engaging member having means to engage the ends of the strap, and means acting on the slide to adjust the latter relative to the head thereby to tighten the strap about a pipe.

2. In a vise, a slotted head, a flexible gripping member doubled on itself, extending through the slot and adapted to encircle the pipe, a holding member having a wedge-shaped opening through which the ends of the gripping member pass, and a wedge-shaped key inserted between said ends for locking them in said opening.

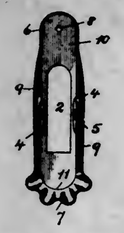
3. In a vise, a slotted head, a flexible gripping member doubled on itself, extending through the slot and adapted to encircle the pipe, a holding member having a wedge-shaped opening through which the ends of the gripping member pass, a wedge-shaped key inserted between said ends for locking them in said opening, and means for adjusting said holding member relative to the head.

874,125. SHEET-METAL PULLEY-CASING. FRANCIS E. SLOAN, Baltimore, Md. Filed Aug. 9, 1907. Serial No. 387,803.

1. A sash pulley casing stamped from a single sheet metal blank and having a face and parallel side portions extending laterally from the edge of the face and provided with perforations therein and a lower end portion formed integrally with and extending continuously from one side portion around and merging into the other side portion.

2. A sash pulley casing stamped from a single sheet metal blank and having a face the upper end portion of

which is provided with a perforation, parallel perforated side portions formed integrally with and extending laterally from said face and a lower end portion formed integrally with the face and side portions, and extending continuously from one side portion around to and merging into the other side portion and said end portion being joined to and bent laterally from the face and inclining downwardly therefrom.

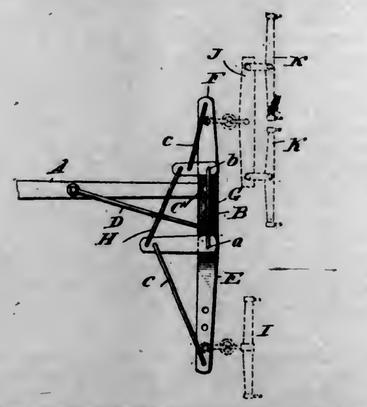


3. A sash pulley casing stamped from a single sheet metal blank and having a face, parallel side portions formed integrally with and extending laterally from said face and a lower end portion extending continuously from one side portion around to and merging into the other side portion and the metal of said continuous end portion being provided with folds.

4. A sash pulley casing stamped from a single sheet metal blank and having a face, a flange formed integrally with and extending laterally from the edges of said face and forming broad parallel side portions and a narrower rounded lower end portion which is joined to and inclines downwardly from the face, and also having an upper perforated portion above the broad side portions.

5. A sash pulley casing stamped from a single sheet metal blank and having a face with a slot therein and a perforation in the face above the slot, a lateral flange extending continuously from the edge of said face and having an irregular width,—said flange being narrowest at the upper end of the casing, widest between its ends and of an intermediate width at the lower end of the casing and the lowermost end of the flange being joined to and inclining downwardly from the face.

874,126. DRAFT-EQUALIZER. FRANKLIN M. SMILEY, Goshen, Ind. Filed May 3, 1907. Serial No. 371,644.



The herein described draft equalizer consisting essentially of a beam, a body connected at an intermediate point of its length with the beam, bell-crank levers having inner, rearwardly extending arms and outer, outwardly extending arms; one of the levers being larger than the other, a rod extending between and connecting the rearwardly extending arms of the bell-crank levers, a rod G extending lengthwise of the body and between the levers and having angular portions pivotally connecting the levers to the body; the said rod serving to connect the two bell crank levers and to lend strength to the same and the equalizer as a whole, and a stay rod connected at one end to the beam and at its opposite end to the body at a point intermediate the pivotal connections of the two bell crank levers.

874,127. REGISTER. LUTHER D. SMITH, Detroit, Mich. Filed May 11, 1906. Serial No. 316,257.



1. In a register, the combination of a valve pivoted upon a horizontal axis, a cam lever adapted to swing in a horizontal plane, and having cam surfaces engaging both sides of said valve, and a hot air flue having a delivery opening in which said register is mounted, said delivery opening being controlled by said valve.

2. In a register, the combination of the valve D^1 pivoted at d^1, the cam lever D^2 engaging respectively against opposite sides thereof, and a hot air flue having a delivery opening in which said register is mounted, said delivery opening being controlled by said valve.

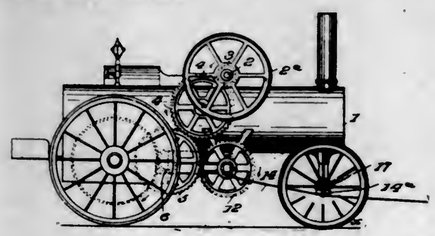
3. In a register, the combination of a valve pivoted to turn on an axis in one plane, a cam-lever adapted to swing in a plane at an angle with the plane of the axis of said valve and having cam surfaces engaging both sides of said valve, and a hot air flue having a delivery opening in which said register is mounted, said delivery opening being controlled by said valve.

4. The combination of the frame E provided with a lug E^2, a frame F, means on the frame E for limiting the inward motion of the frame F relative thereto, the frame F being adapted to engage inside of the lug E^2, a frame D located inside of the frame E, and means for securing the frame F to the frame D.

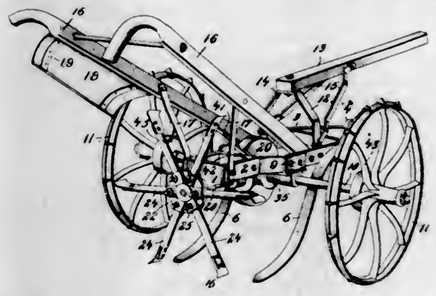
5. The combination of a frame B, the frame E adapted to cover the frame B and be secured thereto, the frame E being supplied with lugs *e*, and a lug E^2, a frame F inclosing ornamental openwork adapted to engage inside of the lug E^2 and outside of the lugs *e*, a frame D adapted to fit within the frame B, and means for securing the frame F to the frame D.

874,128. ATTACHMENT FOR SELF-PROPELLED VEHICLES. OSCAR SMITH, Milton, Kans. Filed Apr. 15, 1907. Serial No. 368,317.

The combination with a self-propelled vehicle and its engine and boiler, of hangers secured to and depending from the boiler in front of the rear traveling wheels of the vehicle, driving gears operatively connecting the engine with the rear traveling wheels, a capstan shaft mounted in bearings in the hangers, a capstan mounted on said shaft, said bearings being provided with removable sections whereby the capstan and its shaft may be detached, one end of said shaft being extended laterally, a spur gear longitudinally slidable on the extension of said shaft and adapted to be moved into or out of engagement with one of the drive gears, and a cable adapted to wind on said capstan.



874,129. COTTON-CHOPPER. NATHAN S. SODEKSON, Mineola, Tex., assignor of one-third to Sara R. McCamish, one-third to Lena R. Beaird, and one-third to Eva M. Sodekson, Mineola, Tex. Filed May 6, 1907. Serial No. 372,152.



1. In a cotton chopper, a rectangular frame provided with shaft bearings, forwardly extending side bars secured to the side faces of said frame, an independent triangular draft frame rigidly secured to the forward ends of said bars and provided with an integral cross bar connecting the side bars, angle irons in which the side bars are seated provided with depending bearings a driving axle mounted in said bearings, and a chopper shaft mounted in the frame and driven from said axle.

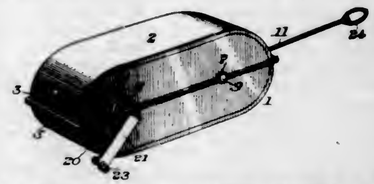
2. In a cotton chopper a frame provided with shaft bearings, forwardly extending side bars secured to said frame, a draft frame provided with a cross bar connecting the front ends of the side bars, a driving axle mounted upon said bars, a chopper shaft mounted in the frame and driven from said axle, attaching plates carried by the draft frame at the front of said bars and extended outwardly therefrom, and supporting springs secured to said plates and extending downwardly and rearwardly therefrom.

3. In a cotton chopper, a rectangular frame provided with shaft bearings, forwardly extending side bars secured to said frame, a draft frame provided with a cross bar connecting the front ends of the side bars, irons secured to the side bars and provided with depending bearings, a driving axle mounted in said bearings, a chopper shaft mounted in the frame and driven from said axle, outwardly extending attaching plates carried by the draft frame, supporting springs extending downwardly and rearwardly from said plates, rearwardly extended handles connected to said side bars, a yoke extended upward between the side bars, and a draft pole secured to the upper portion of said yoke.

4. In a cotton chopper, a supporting frame having bearings and forwardly extending side bars, an axle mounted upon said bars, driving wheels upon said axle, a chopper shaft carried by the frame and provided with chopping blades and driving gear, a loosely mounted driving gear upon said axle and having a clutch member, a clutch member mounted upon said axle to coöperate with said gear clutch member, and a protecting casing surrounding the chopper shaft gear and driving gear and having a pivoted cover portion.

5. In a cotton chopper, a frame, a driving shaft mounted thereon, a chopper shaft at an angle to the driving shaft and provided with a head, chopper blades carried by said head, rearwardly extending handles carried by said frame, and a fender extending laterally at one side of one of said handles.

874,130. CHALK-LINE HOLDER. FRANK J. STANLEY, Philadelphia, Pa., assignor of one-half to Richmond Parsons, Philadelphia, Pa. Filed Nov. 6, 1906. Serial No. 342,220.



1. In a device of the character described, a freely rotatably mounted body of chalk, a line which is adapted to contact against the side face thereof and rotate the same and means for holding the chalk in proper position with respect to said line.

2. In a device of the character described, a pair of rotatably mounted bodies of chalk, a line adapted to pass between said bodies and against the side surfaces of which it contacts, and means for holding said bodies in proper position with respect to said line.

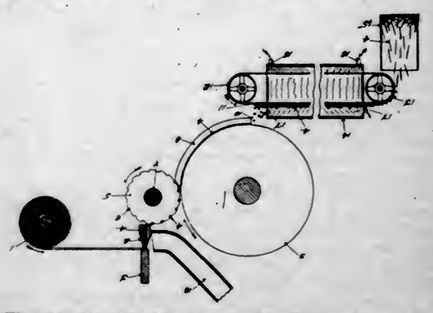
3. In a device of the character described, a pair of rotatably mounted bodies of chalk, a line adapted to pass therebetween and to rotate the said bodies in its passage whereby the side surfaces of said bodies are brought into contact with said line, and means for holding said bodies in proper position with respect to said line.

4. In a device of the character described, a pair of rotatably mounted bodies of chalk, a line adapted to pass therebetween and to rotate the said bodies in its passage whereby the side surfaces of said bodies are brought into contact with said line, means for holding said bodies in proper position with respect to said line, and a reel or radial support for said line.

5. In a device of the character described, a pair of rotatably mounted bodies of chalk, a line adapted to pass therebetween and to rotate the said bodies in its passage whereby the side surfaces of said bodies are brought into contact with said line, means for holding said bodies in proper position with respect to said line, a reel or radial support for said line, and a tension device for sad reel.

[Claims 6 to 8 not printed in the Gazette.]

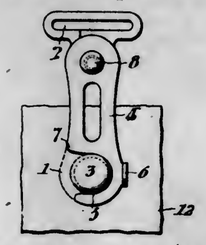
874,131. PROCESS OF MAKING TOOTHPICKS. GEORGE P. STANLEY and WILLIS W. TAINTER, Dixfield, Me. Filed Mar. 22, 1906. Serial No. 307,427.



The process of making wooden tooth picks consisting of forming the tooth pick blanks out of green wood, trim-

ming the blanks while in a green state into substantially the finished form, slowly drying the finished blanks in a drying chamber and then tumbling the dried picks to smooth them.

874,132. HOSE-SUPPORTER. MARC STERNBERG, Philadelphia, Pa. Filed Dec. 22, 1906. Serial No. 349,026.

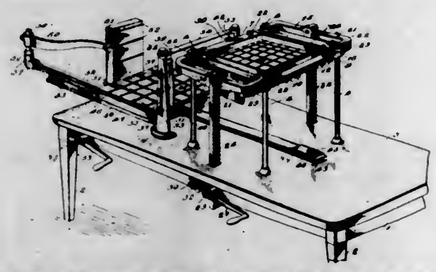


1. In a hose supporter, the combination with a plate provided with means for receiving a band support and a projection over which the hose is adapted to be placed; of a movable jaw pivoted to said plate and provided with a recess opening through one edge thereof, for clamping the hose firmly about said projection and between said jaw and plate.

2. In a hose supporter, the combination with a sheet metal plate having a projection over which the hose is adapted to be placed; of a sheet metal jaw pivoted to said plate and provided with a recess opening through one edge adapted to fit around said projection, said pivoted jaw being slightly bent so as to have frictional engagement with said plate around said projection.

3. In a hose supporter, the combination of a sheet metal plate provided with a projection over which the hose is adapted to be placed, said plate being bent to form a hollow substantially midway its length; a sheet metal jaw pivoted to said plate and provided with a recess in one side adapted to fit around said projection, said jaw being also bent to form a hollow oppositely disposed to the hollow in the plate, whereby said plate and jaw are adapted to be frictionally engaged about said projection.

874,133. MACHINE FOR CUTTING BUTTER. ROBERT W. STEVENS, Butte, Mont. Filed July 30, 1907. Serial No. 386,235.



1. In a butter cutter, the combination with a frame, cutting wires mounted in the frame and a spacing frame constructed of bars secured together at their ends and supported by said first mentioned frame and extending within the same and engaging the wires to hold the same properly spaced.

2. In a butter cutter, the combination with an open frame, cutting wires extending across the same, a spacing frame constructed of bars connected together at their ends and carried by said first mentioned frame and extending within the same and engaging the wires to hold the same properly spaced.

3. In a butter cutter, the combination with a frame, cutting wires crossing the same, a spacing frame constructed of bars connected together at their ends and removably mounted on said first mentioned frame and extending within the same, and provided with notches adapted to engage the wires to hold the same properly spaced.

4. In a butter cutter, the combination with a support, a plurality of posts extending upwardly from the support, a cutting frame slidably mounted on the posts, yokes provided with openings through which the posts pass, said yokes being also provided with slots into which the frame extends, racks carried by the yokes and extending down through the support and a gear mechanism for operating the racks to raise and lower the frame.

5. In a butter cutter, a frame provided with slots through its sides, and oppositely disposed hooks mounted in said slots with their hook portion extending within the frame, wires connecting the hooks means carried by the hooks and pressing against the exterior of the frame for adjusting the tension of the wires a spacing frame constructed of bars secured together at their ends and supported by said first mentioned frame and extending within the same and engaging the wires to hold the same properly spaced.

[Claims 6 and 7 not printed in the Gazette.]

874,134. TRUNDLING TOY. HENRY STUBERT, New Kensington, Pa., assignor of one-half to David Thomas, New Kensington, Pa. Filed May 17, 1907. Serial No. 374,237.



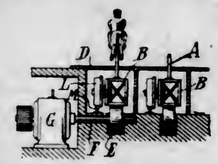
1. In a trundling toy, the combination with a wheeled vehicle having a platform bed or body, of an anvil supported on said platform, a plurality of toy figures on the platform at one side of the anvil, and a single toy figure at the opposite side of the anvil, said figures having pivoted arms carrying hammers, and mechanism operated from one of the axles of the vehicle for moving said hammers successively.

2. In a trundling toy, the combination with a wheeled vehicle having a platform bed or body, of an anvil supported on said platform, a plurality of toy figures on the platform at one side of the anvil, and a single toy figure at the opposite side of the anvil, said figures having pivoted arms carrying hammers, and mechanism operated from one of the axles of the vehicle for moving said hammers successively, comprising a drum fixed upon said axle and recessed to provide equidistant peripheral cams, tripping levers secured to the under surface of the platform on opposite sides of the longitudinal center thereof, a centrally-disposed tripping lever also secured to the under surface of the platform, and connections between said levers and the arms of the figures.

3. In a trundling toy, the combination with a wheeled vehicle having a platform bed, of an anvil supported on said platform, a plurality of hollow toy figures on the platform at one side of the anvil, and a single hollow toy figure at the opposite side of the anvil, said figures having pivoted arms, crank-arms projecting from the pivotal supports of the figures within the bodies thereof, rods loosely connected at their upper ends to said crank arms, tripping levers each secured at one end to the under side of said platform, and loosely connected at its opposite end to one of said rods, and a drum fixed on one of the axles, and provided with equidistant peripheral cams to engage said tripping levers successively.

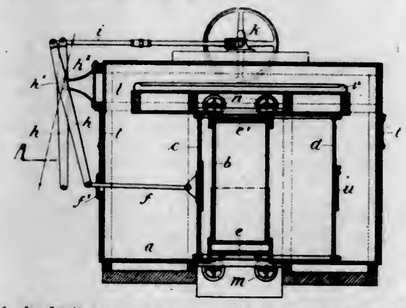
4. In a trundling toy, the combination with a wheeled vehicle having a platform bed, of an anvil supported on said platform, hollow toy figures arranged on opposite sides of said anvil, and having pivoted arms, rods extending within the figures and through said platform and connected at their upper ends to the pivotal supports of said arms, a pair of resilient tripping levers each secured at one end to the under side of said platform and formed with shoulders, said levers being connected to the lower ends of said rods, a drum fixed on one of the axles, and having equidistant peripheral cams, and a centrally-disposed resilient tripping lever secured at one end to the under side of the platform, and connected at its opposite end to one of said rods, and having a loop extending below said drum, and formed with a shoulder to engage the central cam of the drum.

874,135. AMUSEMENT APPARATUS. ERNEST T. SULZER, MAURICE GARANGER, and VALENTINE J. DEY, New York, N. Y. Filed June 6, 1906. Serial No. 320,388.



An amusement apparatus including in combination a plurality of carrying devices arranged alongside of each other, suporting rails Q, a common base carrying the supporting rails for all said devices, means for driving said common base, and means for connecting said carrying devices to said base so as to be driven therewith and for releasing them from said base so as to permit them to travel by their momentum independently of each other.

874,136. APPARATUS FOR DRYING MACARONI AND OTHER SUBSTANCES. LUDWIG VON SÜSSKIND, St. Georgen, near St. Gallen, Switzerland. Filed July 13, 1907. Serial No. 383,661.



1. In drying apparatus comprising a casing means within the casing for receiving the material to be dried, a piston on each side of said means, and mechanism for reciprocating said pistons, the combination of rods positively connecting the pistons and rollers in contact with said rods for the purposes hereinbefore set forth.

2. In drying apparatus comprising a casing means within the casing for receiving the material to be dried and a piston on each side of said means, rods for positively connecting said pistons, rollers engaging with said rods, a rocking lever having one arm longer than the other, means for connecting one piston to the end of the longer arm, and means for rocking said lever, said means being connected to the end of the shorter arm, substantially as and for the purpose set forth.

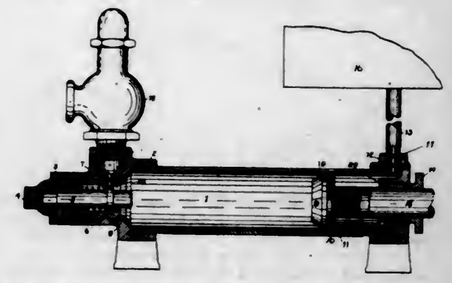
3. In a drying apparatus, the combination with a casing inclosing a frame for receiving the material to be dried, a piston on each side of said means, means connecting the pistons, mechanism for operating the pistons, and a partition in the casing to provide a passage to connect the spaces outside the heads of the pistons.

4. In a drying apparatus, the combination with a casing formed with a piston receiving space connected near its ends by a passage, a drying frame in the space, a piston operating in the space on one side the drying frame, a second piston in said space and on the opposite side of said drying frame, means connecting the two pistons, and means operating the pistons, the air in the space adjacent one piston being forced by said piston through the passage into the space opposite the other piston.

5. In a drying apparatus, the combination with a casing having a frame to receive the material to be dried, a piston on each side the casing to force air through the frame as said pistons are operated, means connecting the pistons, means for operating the pistons, and means for supplying the space between the pistons with air.

[Claims 6 and 7 not printed in the Gazette.]

874,137. AUTOMATIC PRESSURE-REGULATOR. CHARLES P. TOLMAN, New York, N. Y., assignor to Roteng Engineering Corporation, New York, N. Y., a Corporation of New York. Filed May 7, 1906. Serial No. 315,460.



1. In a pressure regulator the combination with a pressure reservoir of a cylinder, a piston, a by-pass in said piston, a piston seat, a plunger, an opposing element to said plunger, and a pressure relieving valve in communication with said cylinder.

2. In a pressure regulator the combination with a pressure reservoir of a cylinder, a piston, a by-pass of limited area in said piston, a piston seat, a plunger, an opposing element to said plunger, means for adjusting said opposing element, and a pressure relieving valve in communication with said cylinder through a suitable passage-way adapted to be closed by said piston.

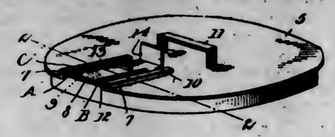
3. In a pressure regulator the combination with a pressure reservoir of a cylinder, a piston, a by-pass in said piston, a piston seat, a plunger normally protruding through said seat, an adjustable means opposing said plunger and a pop safety valve in communication with said cylinder.

4. In a pressure regulator the combination with a pressure reservoir of a cylinder, a piston, a by-pass in said piston, a piston seat in the cylinder head, a plunger movably mounted within said head and normally protruding through said seat, an opposing element to the plunger, means for adjusting said opposing element and a pop safety valve in communication with the cylinder.

5. In a pressure regulator the combination with a pressure reservoir of a cylinder, a piston, a by-pass in said piston, a piston seat, a plunger normally protruding through said seat and longitudinally movable in the cylinder head, a spring opposing said plunger, a means for adjusting said spring and a pop safety valve in communication with said cylinder through a passage-way which terminates in said piston seat.

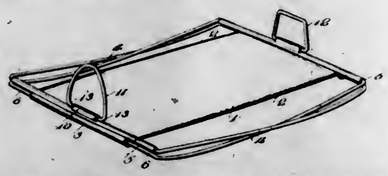
[Claims 6 to 10 not printed in the Gazette.]

874,138. KETTLE-LID. MINNIE J. TRETT, Arkansas City, Ark. Filed May 6, 1907. Serial No. 372,053.



The combination with a kettle lid having an opening therein adjacent to and opening through its periphery, said lid having portions thereof at opposite sides of the opening bent to form parallel guides, of a slide movably engaged in the guides and having its side edge portions bent inwardly upon itself and then upwardly and again inwardly to form guides, said slide having perforations between the guides and having its inner end portion bent upwardly to form a finger piece, a plate engaged in the guides of the slide for movement into and out of position to cover the perforations of the slide, said plate having its inner end portion bent upwardly to form a finger piece, and a handle for the lid located to receive the finger piece of the slide thereagainst to limit the inward movement of the slide.

874,139. CLIP. ANDREW W. ULLOM, Philadelphia, Pa. Filed July 1, 1907. Serial No. 381,722.



1. In a clip of the character described, the combination of a base, a jaw comprising side pieces having their outer ends connected, extensions projecting inwardly from the inner ends of the side pieces and overlapping each other, a coil spring carried by the extremity of each extension and surrounding the opposite extension, and a lateral arm at the termination of each coil spring, the said lateral arms engaging the base.

2. In a clip of the character described, the combination of a base having longitudinal sockets formed along opposite edges thereof, a jaw comprising side pieces having their outer ends connected, extensions projecting inwardly from the inner ends of the side pieces and overlapping each other, a coil spring carried by the extremity of each extension and surrounding the opposite extension, a lateral arm at the termination of each coil spring, the said lateral arms being designed to be received within the before mentioned longitudinal sockets in the edges of the base, and a tongue projecting from the base and designed to be bent around the said springs.

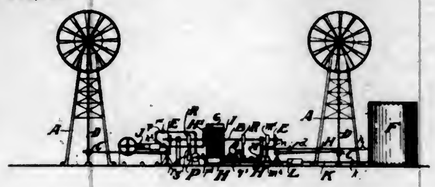
3. In a clip of the character described, the combination of a base formed of sheet material and provided at one end with a tongue, a jaw comprising side pieces having their outer ends connected, extensions projecting inwardly from the inner ends of the side pieces of the jaw and overlapping each other, a coil spring carried by the extremity of each extension and surrounding the opposite extension, and a lateral arm at the termination of each coil spring for engaging the base, the before mentioned tongue at one end of the base being bent around the springs to protect the same.

4. In a clip of the character described, the combination of a base having longitudinal sockets at opposite edges thereof, a jaw comprising side pieces having their outer ends connected, extensions projecting inwardly from the inner ends of the side pieces and overlapping each other, a coil spring carried by the extremity of each extension and surrounding the opposite extension, and a lateral arm at the termination of each coil spring, the said lateral arms being designed to be received within the before mentioned longitudinal sockets.

5. In a clip of the character described, the combination of a base, a pair of jaws carried by the base, and finger loops applied to the jaws, one of the finger loops being designed to be received within the opposite finger loop and to have an interlocking connection therewith for holding the jaws in an inoperative position.

[Claim 6 not printed in the Gazette.]

874,140. APPARATUS FOR CONVERTING, STORING, AND UTILIZING WIND-POWER. BENJAMIN VALIQUET, Chicago, Ill. Filed June 15, 1906. Serial No. 321,848.



1. The combination of a storage tank, a supplemental tank in communication with the storage tank, a coil in the supplemental tank, an engine, such coil in communication with the storage tank by means of a restricted passage way and in communication with the inlet port of the engine, a compressor in communication with the exhaust port of the engine and with the supplemental tank, a wind motor, a rotatable shaft, a connection between the wind motor and the rotatable shaft and a connection between the rotatable shaft and the compressor, substantially as described.

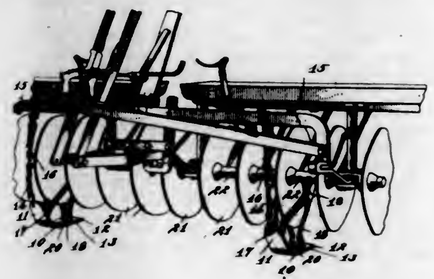
2. The combination of a storage tank, a supplemental tank in communication with the storage tank, a coil in the supplemental tank, an engine, such coil in communication with the storage tank by means of a restricted passage way and in communication with the engine, a compressor in communication with the exhaust port of the engine and with the supplemental tank, a wind motor and a connection between the wind motor and the compressor; substantially as described.

3. The combination of a storage tank, a plurality of wind motors, a supplemental tank, and an engine with means to apply force generated by the wind motors to the air discharged from the exhaust ports of the engine and to deposit such air, under pressure and while the temperature thereof is raised by such pressure above climatic temperature, in the supplemental tank, means to convey air from the storage tank to the inlet port of the engine and to subject such air, between such storage tank and such inlet ports to the compressed air at its raised temperature, means to limit the supply of air from the storage tank to the coil, and means to apply force generated by the wind motors to air at atmospheric pressure and to deposit such air under pressure and while the temperature thereof is raised by such pressure in the supplemental tank; substantially as described.

4. The combination of a plurality of wind motors, a shaft, means to drive the shaft by the combined action of the several motors which are in operation, a storage tank, a supplemental tank, a coil in the supplemental tank, an engine, a plurality of compressors, a conduit from the storage tank to the supplemental tank, conduits from the discharge ends of a plurality of compressors to the supplemental tank, a conduit from the storage tank to the coil, such conduit provided with a restricted opening therein, and provided with a by-pass, a pump interposed in the by-pass and means to cut out the by-pass, and a conduit from the coil to the inlet port of the engine; substantially as described.

5. The combination of a supply tank to contain air under pressure, an additional tank also arranged to contain air under pressure, a pipe communicating with the tanks, a coil in the additional tank, an engine, a pipe communicating with the first named tank and with the coil and a pipe communicating with the coil and with the inlet of the engine, compressors, pipes respectively communicating with the discharge pipe of the compressors and with the additional tank, a pipe communicating with the exhaust port of the engine and with the inlet of one of the compressors, and means to force air from the first named supply tank through the coil; substantially as described.

874,141. HARROW-TRANSPORTER. IRA A. WEAVER, Springfield, Ill., assignor to Racine-Sattley Company, Springfield, Ill., a Corporation of Illinois. Filed June 17, 1907. Serial No. 379,402.



1. A disk harrow transporter comprising a runner adapted to slide on the ground, and a supporting standard upstanding from said runner and having an open-top socket adapted to receive a portion of the harrow at one side of a disk, substantially as described.

2. A disk harrow transporter comprising a runner adapted to slide on the ground, a supporting standard upstanding from said runner and having an open-top socket adapted to receive a portion of the harrow, and means to attach the toe or forward end of said runner to the harrow frame, substantially as described.

3. A disk harrow transporter comprising a runner adapted to slide on the ground, and a supporting standard on the top of said runner comprising crossed bars adapted to receive a portion of the harrow in its upper forked end, substantially as described.

4. A disk harrow transporter comprising a runner adapted to slide on the ground, a supporting standard on the top of said runner comprising crossed bars adapted to receive a portion of the harrow in its upper forked end, and means to fasten the toe or forward end of said runner to the harrow frame, substantially as described.

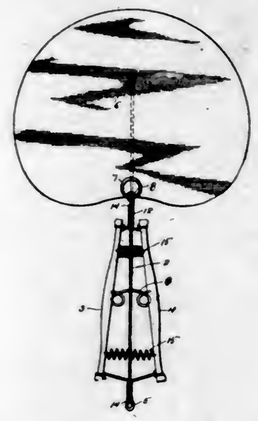
5. A disk harrow transporter comprising a runner having a flat portion adapted to slide on the ground and an upwardly turned toe, and a supporting standard upstanding from said runner and having an open-top socket adapted to receive a portion of the harrow at one side of a disk, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

874,142. FAN. SAMUEL WEBB, Glassport, and JAMES PEARSON, Duquesne, Pa. Filed Nov. 16, 1906. Serial No. 343,693.

1. The combination with a fan blade, of a piece of wire riveted thereto and having a loop engaging and supporting the lower edge of said fan blade, handle parts arranged upon opposite sides of said piece of wire and connected centrally to permit an oscillatory movement of the ends in opposite directions, springs connecting said handle parts on opposite sides of the central connection, and cords or strings connected to the ends of said handle parts and wound upon said piece of wire and attached thereto, said springs being of a form and so positioned relatively to the handle parts and to each other as to place a spring tension on both ends of the handle parts upon oscillation of said parts in either direction from a neutral position, substantially as described.

2. A fan consisting of a blade, a piece of wire connected thereto and having a loop supporting the lower edge of said blade, handle parts arranged parallel with said piece of wire and connected centrally to form a fulcrum upon which the parts may oscillate, springs connecting said handle parts on opposite sides of the central connection, and cords or strings connecting the ends of said handle parts to said piece of wire to impart a rotary movement thereto when the ends of said handle parts are oscillated, said springs being of a form and so positioned relatively to the handle parts and to each other as to place a spring tension on both ends of the handle parts upon oscillation of said parts in either direction from neutral position.



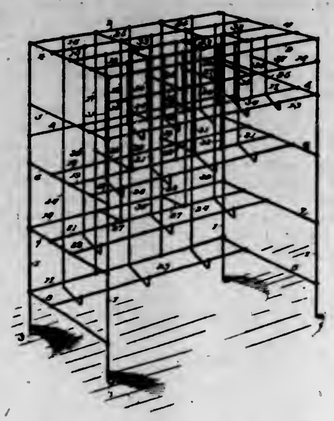
3. A fan consisting of a blade, a piece of wire secured to said blade, and having a loop supporting the lower edge thereof, handle parts mounted adjacent to and having their normal position parallel with said piece of wire and adapted to have their ends oscillated in opposite directions with relation to said piece of wire, each end of the handle parts having an independent tension support interposed between and connected to said parts and means actuated by the movements of the ends of said handle parts to impart a rotary movement to said blade.

4. The combination with a fan and a wire standard therefor, of handle members located on opposite sides of the standard, said members being mounted to provide an oscillatory movement of the ends in opposite directions, means connected with the ends of the members and to said standard for rotating the latter upon oscillation of the members, and tension devices between and connected to said members, said devices normally retaining said members parallel with said standard in positions substantially free from tension, the oscillatory movement of the members in either direction applying tension to both ends of the members.

874,143. PAPER-BAG HOLDER. FRANK D. WHITE, Alpena, Mich. Filed Aug. 16, 1907. Serial No. 388,886.

A rack or holder of the character specified, comprising complemental frames spaced apart, transverse ties connecting the upright members of said frames at intervals, longitudinal ties connecting both the transverse ties and the said upright members, a series of article supports having a progressive arrangement and forming compartments varying in length or depth, said compartments being arranged in different planes and one in front of the other, and vertical and transverse stays connecting the

longitudinal ties to strengthen the frame and to form the series of compartments between the said complemental



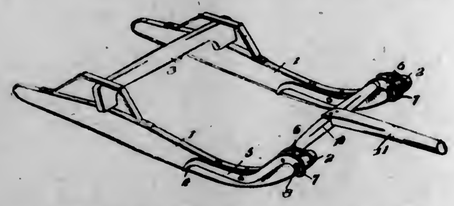
frames so as to retain the articles in the compartments against displacement.

874,144. ENVELOP. HARRY L. WHITE and FRANCIS J. ROGERS, Wheeling, W. Va. Filed June 5, 1906. Serial No. 320,244.



An envelop comprising a body portion, end flaps, a bottom flap, a sealing top flap, all of said flaps adapted to fold upon said body portion, downward angularly disposed tongues carried by said end flaps and extending with their inner edges parallel to the adjacent oblique edges of said carrying flaps, an upward vertically disposed gummed tongue carried by one of said end flaps, an elastic band to engage over said tongues in a triangular form within said envelop to connect said flaps together when said vertically disposed tongue is secured to said sealing flap, said band being freely slidable on each tongue.

874,145. BRAKE FOR SLEDS. JOHN WICKBERG, Fosston, Minn. Filed Mar. 20, 1907. Serial No. 363,485.



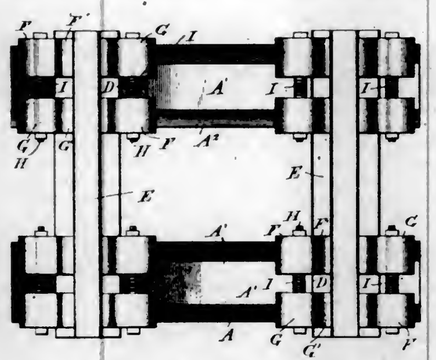
1. A sled brake comprising a lever pivotally connected at an intermediate point to a sled runner, one arm of the lever being provided with means for engaging the ice, while the opposite arm of the lever has a pin and slot connection with the runner, and draft means applied to the last mentioned arm of the lever whereby the brake is automatically applied when a rearward force is exerted upon the draft means.

2. A sled brake comprising a lever pivotally connected at an intermediate point to a sled runner, one arm of the lever extending rearwardly along the runner and being provided with means for engaging the ice, while the opposite arm of the lever extends forwardly along the runner and is provided with a downwardly inclined extension having a pin and slot connection with the runner, and draft means applied to the forwardly extending arm of the lever.

3. A sled brake comprising a lever pivotally connected at an intermediate point to the sled runner, one arm of the lever extending rearwardly along the runner and carrying an ice engaging prong, while the opposite arm is inclined upwardly and forwardly, a downwardly inclined extension carried by the forward arm, the said downwardly inclined extension having a pin and slot connection with the runner, and draft means applied to the forwardly extending arm of the lever.

4. A sled brake comprising a pair of levers applied to opposite sides of each sled runner, the rear arm of each of the levers extending along the sled runner and carrying means for engaging the ice, while the forward end of each of the levers is inclined upwardly, a sleeve connecting the forward ends of the levers applied to each runner, and a draft beam extending across the sled and provided at its ends with pins entering the sleeves.

874,146. RAILROAD-TIE. HORACE G. WILLITS, Davenport, Iowa. Filed Jan. 31, 1907. Serial No. 355,075.



1. The combination with a tie provided with a dove-tail tongue, of notched fastening members mounted on each side of said tongue provided with tongues adapted to fit over the base of the rails, and bolts connecting said members having springs arranged thereon, between said members.

2. The combination with a metal tie embedded in concrete having a dove-tail shaped tongue, of fastening members arranged on said tongue and means for securing said members on said tongue.

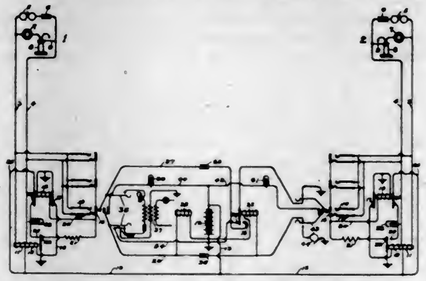
3. A railway tie consisting of a hollow tie filled with concrete and partly embedded in a concrete base forming supports for rails and fastening members mounted on said tie adapted to engage said rails.

4. A railway tie consisting of a hollow metal tie filled with concrete and partly embedded in a concrete base forming supports for rails, fastening members arranged on said tie and means for securing said members thereon against the rails.

5. A railway tie consisting of a hollow metal tie provided with a dove-tail tongue filled with concrete and partly embedded in a concrete base forming a support for the rails, notched fastening members mounted on said tongues and means for securing said members on said tongue against said rails.

[Claims 6 to 8 not printed in the Gazette.]

874,147. THREE-WIRE MULTIPLE SYSTEM. CHARLES S. WINSTON, Chicago, Ill., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 12, 1906. Serial No. 305,512.



1. In a telephone system, the combination with a pair of telephone lines, of a cord circuit for making connection therewith for conversation, a line relay permanently connected with the line, a third conductor at the central office, a cut-off relay permanently connected with said third conductor and controlling contacts normally in the circuit of the line, a supervisory signal in said third conductor associated with the cord circuit, and a low resistance path in parallel with the portion of said conductor associated with the line, said supervisory signal receiving insufficient current for its operation when said low resistance path is open, said path being closed at the contacts of said line relay when the subscriber's telephone is not in use and a connection exists with the line, whereby said signal is operated, substantially as described.

2. In a telephone system, the combination with a pair of telephone lines, of a cord circuit for making connection therewith for conversation, a line relay permanently connected with the line, a third conductor at the central office, a cut-off relay permanently connected with said third conductor and controlling contacts in the circuit of the line, a signal for the line having its circuit jointly controlled by the contacts of said relays, a supervisory signal in said third conductor associated with the cord circuit, and a low resistance path in parallel with the portion of said conductor associated with the line, said supervisory signal receiving insufficient current for its operation when said low resistance path is open, said path being closed at the contacts of said line relay when the subscriber's telephone is not in use and a connection exists with the line, whereby said signal is operated, substantially as described.

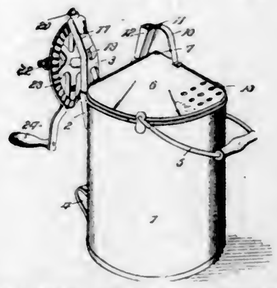
3. In a telephone system, the combination with a pair of telephone lines, of a cord circuit for making connection therewith for conversation, a line relay permanently connected with the line, two windings for said relay, one in the circuit of each line conductor, a central source of current at the central office, an impedance coil between said source and one strand of the cord circuit, a third conductor at the central office, a cut-off relay permanently connected with said third conductor, a supervisory signal in said third conductor associated with the cord circuit, and a low resistance path in parallel with the said conductor associated with the line, said supervisory signal receiving insufficient current for its operation when said low resistance path is open, said path being closed by the contacts of said line relay when the subscriber's telephone is not in use, said impedance coil being substituted in the line for one of the windings of said line relay when a connection is established with the line, substantially as described.

4. In a telephone system, the combination with a pair of telephone lines, of a cord circuit for making connection therewith for conversation, a line relay permanently connected in the path of current to the substation, a source of current associated with the cord circuit, a third conductor in the cord circuit containing a supervisory signal permanently connected with said source, a coöperating third conductor associated with the line having two parallel branches, a cut-off relay in one of said branches of sufficiently high resistance to prevent the operation of said signal and controlling contacts in the circuit of the line, the other of said branches being of sufficiently low resistance to permit the operation of the supervisory signal, and means associated with said line relay for closing said low resistance branch when the subscriber's receiver is not in use, substantially as described.

5. In a telephone system, the combination with a pair of telephone lines, of a cord circuit for making connection therewith for conversation, a line relay permanently connected in the path of current to the substation, and having one winding in the circuit of each line conductor, a source of current associated with the cord circuit, an impedance coil connected between one side of said source and one strand of the cord circuit, a third conductor in the cord circuit containing a supervisory signal permanently connected with said source, a coöperating third conductor associated with the line having two parallel branches, a cut-off relay in one of said branches of sufficiently high resistance to prevent the operation of said signal, the other of said branches being of sufficiently low resistance to permit the operation thereof, said impedance coil being substituted in the line circuit for one winding of said line relay during conversation, and means associated with said relay for closing said low resistance branch when the conversation has terminated, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

874,148. BUTTER-SEPARATOR. GEORGE W. WINTERS, De Queen, Ark. Filed July 2, 1907. Serial No. 381,833.



1. A rotary dasher for the purpose specified formed of a disk of sheet material crimped about a central point to provide a series of V-shaped flights and to give to the dasher an approximately conical form, said flights having openings in opposite sides, the openings in one side being in excess of those in the other side.

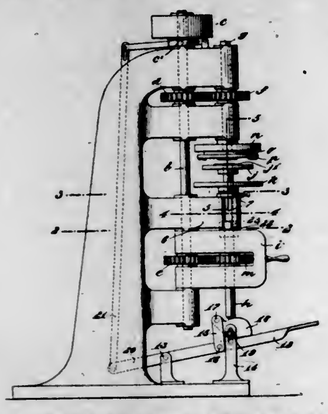
2. In a machine of the character set forth, the combination of a receptacle having a socket, a frame removably fitted in the socket and having bearings and an offstanding spindle, a hollow shaft mounted in bearings and provided with a pinion, a drive gear mounted upon said spindle and in mesh with said pinion, and a dasher having its shaft adjustable in the aforesaid hollow shaft adapted to be secured therein at an adjusted position.

3. A machine of the character specified, comprising a receptacle having a socket upon its side near its upper end, a cover having a central opening, a handle fitted to the cover and having an opening in line with the central opening formed in said cover and provided at one side with a socket corresponding to the socket of the receptacle, a frame adapted to be fitted in either one of said sockets and provided with operating mechanism, and a rotary dasher adapted to be adjustably fitted to the said frame to be driven by the operating mechanism.

4. In a machine of the character specified, the combination of a receptacle having a sloping bottom and a guide to one side of the center, a socket fitted to a side of the receptacle near the upper end thereof and at a point diametrically opposite to the guide of said bottom, a frame fitted in said socket and provided with op-

erating mechanism, and a dasher adapted to be adjustably fitted to said frame and passing through the receptacle at an inclination and having its lower end fitted in the aforesaid guide, the parts being arranged to operate substantially in the manner specified.

874,149. MACHINE FOR MAKING SHEET-METAL VESSELS. EMILE J. WITTEBOLLE, Camden, N. J., assignor to C. B. Porter & Co., Philadelphia, Pa., a Firm. Filed Apr. 9, 1907. Serial No. 367,222.



1. In a machine for making sheet metal vessels, in combination, a main frame, a main shaft carried by said frame, a head carrying shaft and head, a bottom centering ring carried by said head, a gearing connecting said main and head carrying shafts, a frame swinging around said main shaft as a center, a platen carrying shaft and platen carried by said swinging frame, a gearing connecting said main shaft and said platen carrying shafts means for bringing said platen and said head into operative contact, and means operated by the movement of said platen for lifting said centering ring clear of the bottom of said head when said head and said platen are in contact.

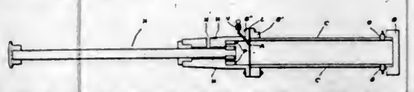
2. In a machine for making sheet metal vessels, in combination, a main frame, a main shaft carried by said frame, a shaft carried by said frame for carrying the bottom of the vessel, a frame swinging around said main shaft as a center, a shaft carried by said frame for carrying the body of the vessel, gear wheels connecting said main shaft and each of said other shafts, means carried by one of said latter shafts for carrying the body of the vessel and by the other shaft for carrying the bottom, means for bringing said bottom and body into contact, and means for seaming said bottom to said body.

3. In a machine for making sheet metal vessels, in combination, a head, a movable ring for centering a bottom carried by said head, pivoted arms carried by said head and engaging said centering ring, a platen for carrying a body, means for advancing said head and said platen into engagement, means operated by said movement for causing said arms to lift said centering ring away from the bottom of said head, and means for rotating said head and said platen.

4. In a machine of the character described, in combination, a body carrying platen, a spring supported plate carried by the top of said platen, a bottom carrying head, a centering ring movably carried by said head, arms pivoted to said head and engaging said ring, pins carried by said head engaging said arms and adapted to be engaged by said platen, and means for bringing said head and platen into contact.

5. The combination with the main frame, the swinging frame, the shaft carried by said latter frame, and means for lifting said shaft, of a collar on said shaft adapted to enter a corresponding recess in said main frame when said shaft is lifted.

874,150. SHOCK-ABSORBING MECHANISM. EDGAR J. YOUNG, Buenos Ayres, Argentina. Filed Jan. 22, 1906. Serial No. 297,388.



1. In a device of the character described, in combination, a cylinder, or plurality of cylinders, having closed ends adapted to contain liquid, the wall at one end of said cylinder being adapted to be ruptured, an extension of said cylinder beyond said last mentioned wall, a piston and piston rod in said extension, there being a liquid passage or passages from one side to the other of the piston and means to normally hold said piston away from said wall.

2. In a device of the character described, in combination, a cylinder, or plurality of cylinders, having closed ends adapted to contain liquid, the wall at one end of said cylinder being adapted to be ruptured, an extension of said cylinder beyond said last mentioned wall, a piston and piston rod in said extension, means to normally hold said piston away from said wall, there being openings from one side to the other of said piston.

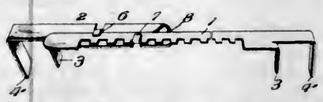
3. In a device of the character described, in combination, a cylinder, or plurality of cylinders, having closed ends adapted to contain liquid, the wall at one end of said cylinder being adapted to be ruptured, an extension of said cylinder beyond said mentioned wall, a piston and piston rod in said extension, means to normally hold said piston away from said wall, there being openings from one side to the other of said piston, rupturable material covering said openings, and means to rupture said material when the force holding said piston away from the cylinder wall is overcome.

4. In a device of the character described, in combination, a cylinder, or plurality of cylinders, having closed ends adapted to contain liquid, the wall at one end of said cylinder being adapted to be ruptured, an extension of said cylinder beyond said wall, a piston and piston rod in said extension, means to normally hold said piston away from said wall, there being openings from one side to the other of said piston, rupturable material covering said openings, and means to rupture said material and the rupturable wall of the cylinder when the force holding said piston away from the cylinder wall is overcome.

5. In a device of the character described, in combination, a two compartment cylinder or plurality of cylinders, the two compartments being separated by a rupturable wall, one of said compartments being adapted to contain liquid, a piston and piston rod in the other compartments, there being a liquid passage or passages from one side to the other of said piston, means to normally hold said piston away from said rupturable wall.

[Claims 6 to 10 not printed in the Gazette.]

874,151. COMBINED CLAMP AND SPREADER. JOHN R. ZEISER and ADLOW ZEISER, Berwick, Pa. Field Mar. 15, 1907. Serial No. 362,526.



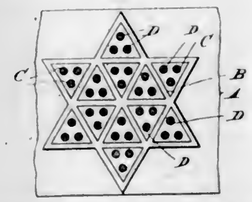
1. A combined clamp and spreader for the purpose specified comprising complemental members carrying means for engaging the sides of a form, one of said complemental members being formed with oppositely facing hook members and a stop, while the other complemental member is formed with a notched edge having an adjustable and interlocking connection with the hook members and normally held in engagement therewith by means of the before mentioned stop.

2. A combined clamp and spreader for the purpose specified comprising complemental members provided with means for engaging the sides of a form, one of the said complemental members being formed with teeth along an edge thereof while the other complemental member carries oppositely facing hook members and is provided with a stop, the said hook members having an adjustable and interlocking connection with the toothed member of the first mentioned complemental member and being held in engagement therewith by means of the stop.

3. A combined clamp and spreader for the purpose specified comprising complemental members provided with means for engaging the sides of a form, one of the complemental members having an edge portion thereof toothed, while the other complemental member is provided with a stop and a hook near one edge and an oppositely facing hook near the opposite edge intermediate the before mentioned stop and hook, the said hooks being designed to embrace opposite edge portions of the toothed member and interlocking connection with the toothed portion of the toothed member and coöperate with the hooks to hold the two members in an adjusted position.

4. A combined clamp and spreader for the purpose specified comprising complemental members provided with means for engaging the sides of a form, one of said complemental members carrying hook members and a stop while the opposite complemental member is reduced in width between its end portions, the edge thereof bordering upon the reduced portion being notched and having an interlocking connection with the before mentioned hook members, the before mentioned stop serving to retain the hook members and notched edge in engagement with each other.

874,152. EDUCATIONAL APPLIANCE. ALLAN J. BARBER, Woonsocket, R. I. Filed Sept. 16, 1907. Serial No. 393,079.



1. An educational appliance comprising a card having a plurality of sockets, and a plurality of disks, of contrasting color to the card, removably arranged in the said sockets.

2. An educational appliance comprising a card bearing on its face a pictured device and also having, in the pictured device, a plurality of sockets, and a plurality of disks, of contrasting color to the card, removably arranged in the said sockets.

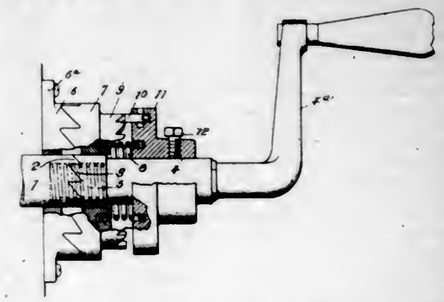
3. An educational appliance comprising a card having a plurality of sockets disposed to form the outline of a device, and a plurality of disks of contrasting color to the card, removably arranged in the said sockets.

4. An educational appliance comprising a card having a plurality of sockets extending throughout the thickness thereof, and a plurality of disks, of contrasting color to the card, corresponding in thickness to the card and snugly and removably arranged in the sockets thereof.

5. An educational appliance comprising a card having a plurality of sockets extending throughout the thickness thereof, and tapered downward, and a plurality of disks, of even diameter throughout its thickness, contrasting in color to the card and snugly and removably arranged in the sockets thereof.

[Claims 6 and 7 not printed in the Gazette.]

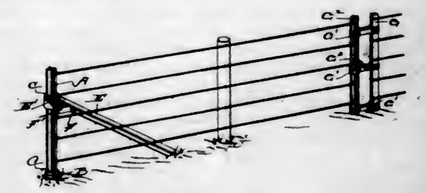
874,153. ENGINE-STARTING MECHANISM. JAMES T. BARBER, Brooklyn, N. Y. Filed June 8, 1907. Serial No. 377,998.



1. The combination of an engine shaft provided with a relatively fixed clutch member, a starting element provided with a relatively movable clutch member complemental to the fixed clutch member and adapted to engage the same, a relatively fixed ratchet disk encircling said shaft, a relatively movable and loose ratchet disk encircling the relatively movable clutch member and adapted to engage the relatively fixed ratchet disk, a toothed wheel movable with the relatively movable ratchet disk, a pawl mounted to travel ahead over the teeth of said wheel and designed to engage therewith upon a reverse movement, and a support for said pawl secured to the starting element.

2. The combination of an engine shaft, provided with a relatively fixed clutch member, a starting element provided with a relatively movable clutch member adapted to engage the fixed clutch member, a spring tending to separate the clutch members, a stationary ratchet disk encircling the shaft, a relatively movable ratchet disk adapted to engage the stationary ratchet disk and encircling the relatively movable clutch member, said movable clutch disk being provided with an outwardly projecting toothed wheel, a spring tending to force the movable ratchet disk into engagement with the stationary ratchet disk, a pivoted spring pressed pawl mounted to travel freely over the teeth of said wheel in one direction and to engage said teeth upon movement in the opposite direction, and a disk upon which said pawl is mounted, said disk being secured to the starting element, as and for the purpose set forth.

874,154. FENCE. ELI BARTH, Nevada, Ohio. Filed Nov. 13, 1905. Serial No. 287,080.



1. A fence of the kind described, comprising an angle post carrying bearing plugs mounted in bearings, and locking means connected to said post, for the purpose described.

2. A fence of the kind described, comprising an angle post provided with bearing plugs, adapted to fit in a bearing, a pawl adapted to engage the post, and prevent it from turning, for the purpose described.

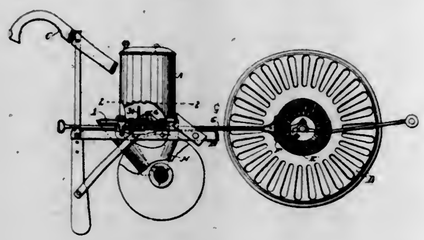
3. A fence of the kind described, comprising a casing provided with side plates, a post carrying bearing plugs,

adapted to fit in the casing, a loop fitting over the post connected to a brace and a pivoted pawl connected to the brace adapted to engage the post, for the purpose described.

4. A fence of the kind described, comprising a casing carrying outwardly projecting plates, an angle post carrying bearing plugs adapted to fit in said casing, a loop connected to a brace provided with a bearing plug and a spring actuated pawl connected to the brace adapted to engage the post, for the purpose described.

5. A fence of the kind described comprising an angle post mounted in bearings having openings in one of its tongues to receive wires, a winged brace connected to one of the said bearings, a bolt secured in one of the wings of the brace surrounded by a coil spring and a pawl mounted on said bolt between said spring and wing adapted to engage one of the wings of the post, for the purpose described.

874,155. SEED-PLANTER. TIMOTHY L. BEAMAN, Knoxville, Tenn. Filed Sept. 17, 1906. Serial No. 334,993.



1. In a machine of the nature described, a hopper, a horizontal, rotary plate at the bottom of said hopper, an opening in the wall of said hopper above said rotary plate, and a horizontal discharge member extending into said opening above said plate, substantially as described.

2. In a machine of the nature described, a hopper, a horizontal, rotary plate in the lower portion of said hopper, an opening in the lower portion of the rear wall of said hopper above said plate, and a discharge member extending into said opening above said plate, substantially as described.

3. In a machine of the nature described, a hopper, a shifting bottom for said hopper, an opening in the lower portion of the wall of said hopper above said plate, a horizontal discharge member extending into said opening, and means for actuating said member, substantially as described.

4. In a machine of the nature described, a hopper, a horizontal, rotary plate in the lower portion of said hopper, an opening in the lower portion of the wall of said hopper above said plate, and a horizontal rotary discharge member extending into said opening, substantially as described.

5. In a machine of the nature described, a hopper, a horizontal, rotary plate at the bottom of said hopper, an opening in the wall of said hopper above said rotary plate, a horizontal discharge member extending into said opening above said plate and in operative relation with said rotary plate to receive rotation therefrom, substantially as described.

[Claims 6 to 17 printed in the Gazette.]

874,156. SIGN. GEORGE BITTLE, Sharonville, Ohio. Filed Jan. 2, 1907. Serial No. 350,544. (Model.)

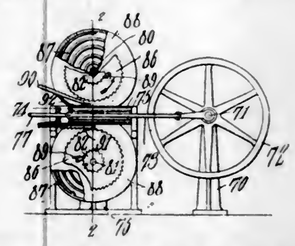
1. A sign consisting of a sheet of transparent celluloid with a character formed of metal foil adhesively secured to the rear face thereof, and a background formed behind the character and sheet, substantially as described.

2. A flexible transparent sheet, having a metal leaf character on the rear face, and a display back-ground in



rear of the sheet and character, substantially as described.

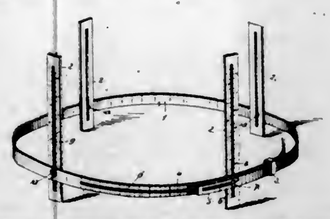
874,157. POWER-TRANSMITTING DEVICE. GEORGE E. BLAKE, Greencastle, Ind. Filed Dec. 11, 1906. Serial No. 347,293.



1. In apparatus for transforming reciprocating motion into intermittent rotative movement, a reciprocatory cross head, a rack carried thereby, a shaft, a ratchet wheel mounted loosely on the shaft and with which the rack engages, a spring casing surrounding the shaft, a spiral spring having its outer end secured to the casing and its inner end to the ratchet wheel, a ratchet pinion secured to the shaft, and a pawl carried by the ratchet wheel and engaging said pinion.

2. In mechanism of the class described, the combination with a reciprocatory cross head, of a cross head guide, a pair of spring pressed racks, pivotally connected to the cross head and having teeth facing in opposite directions, respectively, a pair of power shafts, ratchet pinions secured thereto, ratchet wheels mounted loosely on the shafts, pawls carried by the ratchet wheels and engaging said ratchet pinions, said ratchet wheels being arranged to be engaged alternately by the spring pressed racks, spiral springs having their inner ends secured to the ratchet wheels, and stationary spring casings to which the outer ends of said springs are secured.

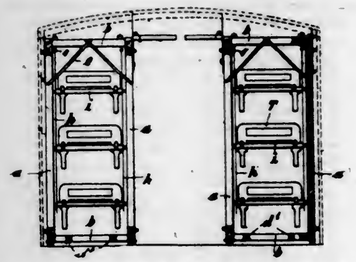
874,158. SKIRT-MEASURING DEVICE. MARY J. BOYARD, Oil City, Pa. Filed Aug. 8, 1906. Serial No. 329,786.



1. A skirt measuring device comprising a resilient circular metal band having slotted graduated ends, slotted graduated standards, and means comprising bolts carried by said circular resilient metal band, slidable in the slots of said standards, and a winged nut adapted to retain said standards in engagement with said metal band, substantially as described.

2. A device of the character described, a circular metal band, a plurality of slotted standards, and means slidable in said slots and carried by said circular band for adjustably securing said circular band to each of said standards substantially as described.

874,159. STRETCHER-SUPPORTING FRAME. HEINRICH BRUSIS, Soest, Germany. Filed Jan. 5, 1907. Serial No. 350,923.



1. In a compoundable stretcher supporting frame, the combination with four posts provided with longitudinal grooves, of four cross bars, four longitudinal bars, means for connecting said four posts with said four cross bars and said four longitudinal bars to form a parallelopipedal frame, braces for stiffening the frame, four elastic chains suspended from the ends of the two upper cross bars, horizontal bars engaging in said four elastic chains and guided in the grooves of said four posts and adapted to support a plurality of superposed stretchers, and means for securing the frame to a supporting foundation.

2. In a compoundable stretcher supporting frame, the combination of four posts having longitudinal grooves, of four cross bars, four longitudinal bars, means for connecting said four posts with said four cross bars and said four longitudinal bars to form a parallelopipedal frame, braces for stiffening the frame, four elastic chains suspended from the ends of the two upper cross bars, horizontal bars engaging in said four elastic chains and guided in the grooves of said four posts and adapted to support a plurality of superposed stretchers, four locks on said four posts for checking the upward motion of the two lowermost horizontal bars, and means for securing the frame to a supporting foundation.

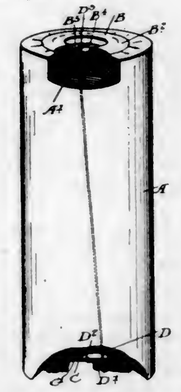
3. In a compoundable stretcher supporting frame, the combination with four posts having longitudinal grooves, of four cross bars, four longitudinal bars, means for connecting said four posts with said four cross bars and said four longitudinal bars to form a parallelopipedal frame, braces for stiffening the frame, four elastic chains suspended from the ends of the two upper cross bars, horizontal bars engaging in said four elastic chains and adapted to support a plurality of superposed stretchers, india rubber buffers for guiding the ends of said horizontal bars in the grooves of said four posts, four locks on said four posts for checking the upward motion of the two lowermost horizontal bars, and means for securing the frame to a supporting foundation.

4. In a compoundable stretcher supporting frame, the combination with four posts having longitudinal grooves, of four cross bars, four longitudinal bars, means for connecting said four posts with said four cross bars and said four longitudinal bars to form a parallelopipedal frame, braces for stiffening the frame, four elastic chains suspended from the ends of the two upper cross bars, horizontal bars engaging in said four elastic chains and guided in the grooves of said four posts and adapted to support a plurality of superposed stretchers, means for securing the frame to a supporting foundation, and means for connecting either end of the frame with the opposite end of a similar frame.

5. In a compoundable stretcher supporting frame, the combination with four posts having longitudinal grooves, of four cross bars, four longitudinal bars, means for connecting said four posts with said four cross bars and said four longitudinal bars to form a parallelopipedal frame, braces for stiffening the frame, four elastic chains suspended from the ends of the two upper cross bars, horizontal bars engaging in said four elastic chains and guided in the grooves of said four posts and adapted to support a plurality of superposed stretchers, means for securing the frame to a supporting foundation, means for connecting either end of the frame with the opposite end of a similar frame, and distance pieces with hooks connecting either side of the frame with the opposite side of another similar frame.

[Claims 6 to 10 not printed in the Gazette.]

874,160. FABRIC-ROLL PROTECTOR. PURLAN BUCKBOROUGH, Brantford, Ontario, Canada. Filed Mar. 21, 1907. Serial No. 363,782.



1. In a fabric roll protector, the combination with the top and bottom caps, the bottom cap having two holes and the top cap a slot and a hole, of a rod extending through one of the holes in one cap and provided with a spiral spring formed thereon, the primary end of which extends into the remaining hole in the aforesaid cap, and a hook at the opposite end designed to be pulled through the slot and hooked with the bent end into the hole and be held in position by the spring at the opposite end of the rod as and for the purpose specified.

2. The combination with the top and bottom caps having depressed central portions and annular flanges, the bottom cap having two holes in the depressed portions and the top cap a slot and a hole in the depressed portion, of a rod extending through one of the holes in one cap and provided with a spiral spring formed thereon, the primary end of which extends into the remaining hole in the aforesaid cap and a hook at the opposite end designed to be pulled through the slot and hooked with the bent end into the hole and be held in position by the spring at the opposite end of the rod as and for the purpose specified.

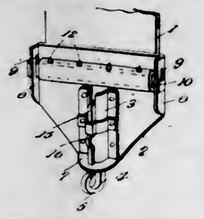
874,161. FASTENER-BUTTON FOR LACING TERMINALS. THOMAS F. BURKE, Lowellville, Ohio. Filed July 25, 1906. Serial No. 327,691.



A button of the class described, comprising a resilient grip shank provided at one end with an inner retaining head and at its opposite end with an outer guard head.

said shank being further provided with a longitudinal wedging kerf extending the full length thereof and also entirely cutting through the guard head, said guard head having projected from its inner face an offset boss located wholly at one side of the kerf along one edge of the head and provided with a curved surface merging directly into the kerf at one side edge of the guard head.

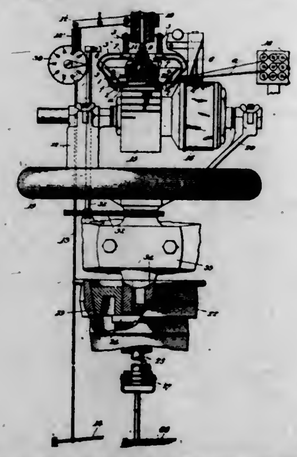
874,162. BACK-BAND BUCKLE. JOHN H. B. BUTTS, Pickard, Ga. Filed Aug. 10, 1906. Serial No. 330,089.



1. In a back band buckle, the combination of a plate, means at one end of the plate for connecting the same with a back band, a housing at the opposite end of the plate, a guide member carried by the housing on the exterior thereof, a hook having the shank portion thereof slidably mounted within the housing, a spring located within the housing and operating to normally hold the hook in a predetermined position, and an extension projecting from the plate and serving the double function of closing one end of the housing and also of normally closing the mouth of the hook.

2. In a back band buckle, the combination of a body portion, means at one end of the body portion for forming a connection with the back band, a housing at the opposite end of the body portion of the buckle, a longitudinally extending rod on the exterior of the housing, said rod being provided with a guide member, a hook having the shank thereof slidably mounted within the housing, and a spring located within the housing and coöperating with the shank to normally hold the hook in a predetermined position.

874,163. ARMATURE-WINDING MACHINE. PENROSE E. CHAPMAN, St. Louis, Mo. Filed Aug. 15, 1904. Serial No. 220,885.



1. In an armature winding machine, the combination with means for supporting an armature in position for winding, of wire directing guides whose directing surfaces are placed at an angle suited to direct coil forming wire within slots in said armature, means for supporting said guides in suitable relation thereto, and means for adjusting said guides relatively to said supports and said armature.

2. In an armature winding machine, the combination of means for supporting and rotating an armature in the plane of its shaft, with a saddle having ends beveled outwardly and away from the armature core, with sides having edges registering with inner edges of slots, gages or stops for compelling said registry with edges of slots receiving coil forming wire, substantially as described.

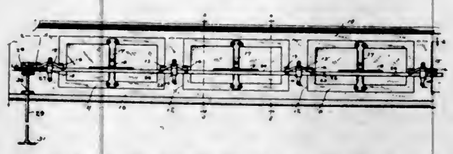
3. In an armature winding machine, the combination of means for supporting and rotating an armature in the plane of its shaft, with a saddle having beveled ends and sides registering with slots in said armature core, stops for compelling said registry, and guides adapted to carry coil forming wire into slots, said guides being beveled on their outward surface in such manner that coil forming wire will slip over them into the slots, substantially as described.

4. In an armature winding machine, the combination of means for supporting and rotating an armature in the plane of its shaft, with a saddle having beveled ends, sides registering with slots, stops for compelling said registry, guides for depositing wire within said slots, and adjustable guides for depositing said wire at proper and independent depths within said slots, means for retaining said adjustable guides in place, said adjustable guides and retainers being mounted on said saddle, substantially as described.

5. In an armature winding machine, the combination of means for supporting and rotating an armature in the plane of its shaft, with a saddle having beveled ends, sides registering with slots, stops compelling registry, guides for depositing wire within said slots, adjustable guides for depositing wire at different depths, retainers for said guides, and adjustable guides for carrying wire to its seat, said adjustable guides having a portion of their lower ends arranged to retain coil forming wire, said coil receiving part of its shape by means of said retaining surface, said guide being automatically adjustable to follow the surface of the winding already in place to form its coil directly against previously wound coils, said automatic adjustment being effected by means of springs forcing said guide against the winding previously formed, said guide and springs being carried upon said saddle, substantially as described.

[Claim 6 not printed in the Gazette.]

874,164. OPERATING MECHANISM FOR VENTILATING WINDOWS. STEPHEN E. CIBULAS, Bridgeport, Conn. Filed Sept. 19, 1907. Serial No. 393,668.



1. Operating mechanism for a plurality of windows, comprising eyes for attachment to the respective ends of windows, plates having angle slots for attachment to the mid-length of windows, rocker arms to be pivoted intermediate the windows and having at their ends hinge pins and an operating bar having operating pins which engage the angle slots and cams which engage the rocker arms and place the hinge pins in engagement with eyes when the bar is at its mid-position, and when the bar is moved in either direction tilt the rocker arms and disengage one hinge pin on each rocker arm from an eye, leaving the other hinge pin engaged, the operating pins causing all the windows in the series to swing to the open position from the engaged end.

2. Operating mechanism for a plurality of windows comprising pivoted rocker arms, means for detachably connecting each end of each rocker arm with the end of a window and means for tilting the rocker arms to disengage one end of each window leaving the other end engaged, substantially as described, for the purpose specified.

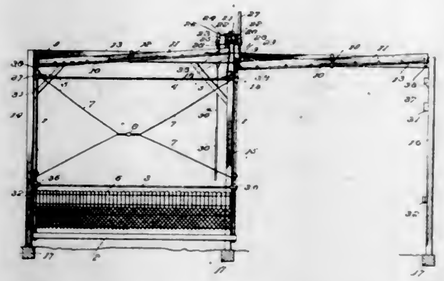
3. Operating mechanism for a plurality of windows, comprising pivoted rocker arms, means for detachably connecting each end of each rocker arm with the end of a window, an operating bar having cams for tilting the rocker arms, for the purpose set forth, and connections intermediate the operating bar and the mid-length of each window whereby the windows may be swung to the open position from either end.

4. The combination with a plurality of windows, eyes at the ends of the windows, and plates attached to the windows at their mid-length and provided with angle slots, of rocker arms pivoted intermediate the windows and having hinge pins detachably engaging eyes on contiguous windows and an operating bar having operating pins engaging the angle slots and cams engaging the rocker arms.

5. The combination with a plurality of windows, eyes at the ends of the windows, and plates attached to the windows at their mid-length and provided with angle slots having straight portions, of rocker arms pivoted intermediate the windows and having hinge pins detachably engaging eyes on contiguous windows and an operating bar having operating pins engaging the angle slots and cams engaging the rocker arms, whereby when the operating pins are in engagement with the straight portions of the angle slots the windows will be locked in the closed position and when the operating bar is moved in either direction the operating pins will pass into the portions of the angle slots toward the direction in which the bar is moved, the rocker arms will be tilted and the hinge pins at the ends of the windows in the direction the bar is moved will be disengaged from the eyes leaving the hinge pins at the other end of the windows engaged and swinging the ends of the windows in the direction in which the bar is moved to the open position.

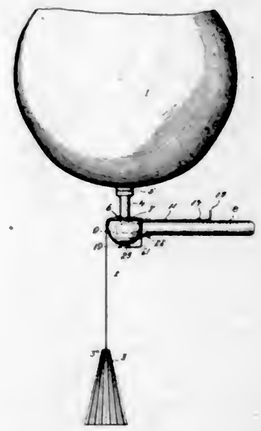
[Claims 6 to 8 not printed in the Gazette.]

874,165. GATE AND OPERATING MEANS THEREFOR. HENRY L. COATS, Moscow, Idaho. Filed Apr. 3, 1907. Serial No. 366,212.



In combination, a gate, elevated supports upon which said gate is mounted to glide horizontally, said supports including end posts and a pair of intermediate posts spaced from each other, transversely extending blocks mounted upon the middle posts at right angles to the gate, a pair of hanger straps extending across the ends of said blocks and each strap provided at its ends with upwardly facing hooks, two levers fulcrumed end to end in the two hooks on one side, another pair of levers fulcrumed in the respective hooks at the opposite side, each lever being provided at its inner end with a link, elevated beams mounted to rock about horizontal axes and located end to end and extending oppositely from the pair of intermediate posts, the said links being connected to the adjacent ends of said beams, tracks carried by the beams, rollers mounted to travel on the respective tracks, the gate being suspended from said rollers, and a connection between the adjacent ends of the two beams whereby both beams will be rocked in the same direction upon the actuation of either.

874,166. BALLOON-INFLATOR. FRANK J. CREQUE, Cuyahoga Falls, Ohio, assignor of one-half to F. W. Dodge, Ashland, Ohio. Filed June 21, 1907. Serial No. 380,146.



1. In a device of the class described, an inflating tube provided with an air chamber at one end, and a latch member carried by the tube for retaining a balloon connection in communication with said chamber.

2. In a device of the class described, an inflating tube provided with an air chamber at one end, a latch member carried by the tube for retaining a balloon connection in communication with said chamber, and an apertured elastic seat to receive said connection.

3. In a device of the class described, an inflating tube provided with an air chamber at one end, a latch member carried by the tube for retaining a balloon connection in communication with said chamber, an apertured elastic seat to receive said connection, and a flap valve disposed upon the wall of said chamber and extending across a communicating passage through the tube.

4. In a device of the class described, an inflating tube provided with an air chamber at one end having a seat to receive a balloon connection, and shiftable means carried by the tube to retain said connection in contact with said seat.

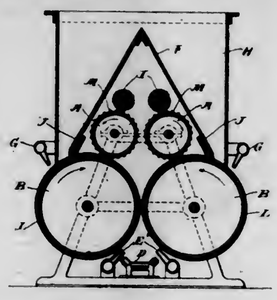
5. In a device of the class described, an inflating tube provided with an air chamber at one end, an apertured flexible seat secured to the upper face of said chamber, and a sliding latch provided with a bifurcated end disposed above said seat.

[Claims 6 to 16 not printed in the Gazette.]

874,167. MACHINE FOR MOLDING UNITS OF CLAY OR OTHER REFRACTORY MATERIAL TO BE USED IN THE MANUFACTURE OF CONCRETE. WILLIAM D. CROW, East Orange, N. J. Filed Mar. 21, 1907. Serial No. 363,588.

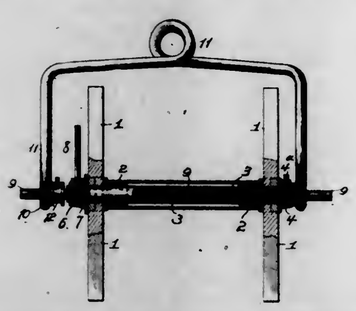
1. A molding machine, consisting of two parallel cylinders, concurrent depressions in said cylinders, two other cylinders mounted above and parallel with the aforesaid cylinders and with each other, studs on the surface of said cylinders arranged so as to engage the depressions

of said first pair of cylinders, a hopper arranged above all of said cylinders, a deflector in said hopper, scrapers arranged in said hopper to remove surplus material from the first of said pair of cylinders, lubricating jets mounted on said hopper, revolving brushes mounted above said second pair of cylinders aforesaid, a receptacle beneath said first pair of cylinders aforesaid, and dust jets arranged below said cylinders in the proximity of the said receptacle, substantially as described.



2. A molding machine, consisting of two cylinders B, two cylinders A above said cylinders B, all of said cylinders mounted on a frame and parallel with one another, a hopper H, mounted above said cylinders, a deflector F in said hopper, scrapers J in said hopper, lubricating jets G arranged on said hopper above said first pair of cylinders, depressions concurrent with said depressions L, a receptacle or conveyer D below said first pair of cylinders and dust jets E arranged below said cylinders B in the proximity of said receptacle D, substantially as described.

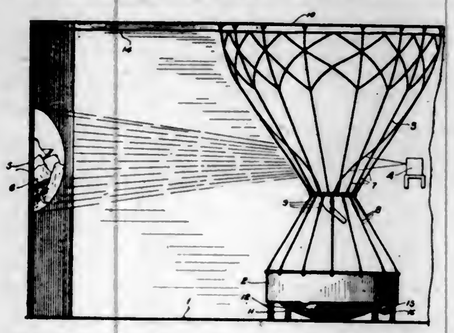
874,168. CORD OR TWINE HOLDER. HUGO M. DANKER, Austin, Ill. Filed Mar. 20, 1907. Serial No. 363,429.



1. In a holder for a ball of cord or twine, the combination with side members and a hollow thimble projecting inwardly from each side member, of a hollow shaft passing through both side members and said thimbles, locking devices secured to said shaft outside of the side members and engaging the latter, a rod passing through the hollow shaft, and a bail engaging the rod outside of said locking devices.

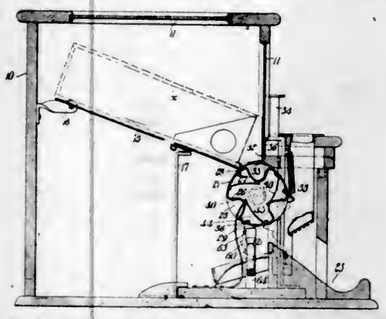
2. In a holder for a ball of cord or twine, the combination of side members each having an inwardly projecting hollow thimble, a hollow shaft passing loosely through said side members and thimble, locking devices secured to said shaft outside the side members, a rod passing through the hollow shaft, a bail engaging the rods near the ends of the latter and a collar secured to the rod between one end of the bail and adjacent side member of the holder.

874,169. ILLUSION APPARATUS FOR AMUSEMENT. FREDERICK DARCY and SIEGMUND LUBIN, Philadelphia, Pa. Filed Apr. 23, 1906. Serial No. 313,203.



In an illusory apparatus, the combination of a simulated balloon and its car, ropes connecting said balloon and car, and a supporting rocker and springs under said car.

874,170. CIGAR-VENDING MACHINE. HARRY J. DAVIDSON, Washington, D. C. Filed Apr. 15, 1907. Serial No. 368,273.



1. In a vending machine, a movable member having a delivery pocket, one wall of which is yieldable, and means for depressing said wall to prevent injury to the articles during the delivery movement.

2. In a machine of the class described, a movable delivery member having a pocket for the reception of an article to be delivered, one wall of the pocket being pivotally mounted, a yieldable means for holding the pivoted wall in place, and means for depressing such wall during the delivery movement.

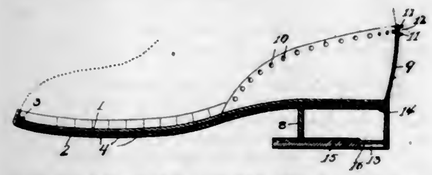
3. In a machine of the class described, a magazine, a frame, a revoluble delivery drum having peripheral pockets, one wall of each pocket being pivoted to the drum, a spring tending to hold the pivoted wall in place during the reception of the article, a lug carried by such pivoted wall, and a cam disposed in the path of movement of the lug and arranged to depress the wall during the delivery movement.

4. In a machine of the class described, a casing, a pivotally mounted magazine support, a revoluble delivery drum having a plurality of peripheral pockets, one wall of each pocket being movable, the movable wall having a rearwardly extending flange that forms a part of and is pivoted to the peripheral portion of the drum, a spring tending to hold the movable wall in place, means for depressing said wall to prevent damage to the contents of the magazine during the delivery movement, and lugs carried by said drum and arranged to engage and agitate the magazine support.

5. In a machine of the class described, the combination

with a casing, of a magazine, a revoluble delivery drum having peripheral pockets, a shaft carrying the drum, a pair of oppositely facing ratchet wheels secured to the shaft, a pinion and a disk loosely mounted on the shaft, a pawl carried by the disk and engaging one of the ratchet wheels, a movable slide carrying a rack for engagement with the pinion, a pawl engaging the opposite ratchet wheel and tending to prevent movement of the drum, said pawl being movable to release position to permit movement of the drum to discharging position.

874,171. METALLIC SOLE FOR BOOTS AND SHOES. JAMES A. DONAHUE, Everett, Wash. Filed Nov. 30, 1906. Serial No. 345,707.



1. In combination with foot-wear having a sole of relatively light material, of a yielding metallic plate for covering the entire sole, the said plate being marginally bent to engage with the sole and lock the same to the latter, a plurality of metal strips arranged transversely against the metal plate at one side and in parallelism and having their ends bent at an angle to protect the edge of the sole, and a heel section associated with the foot-wear.

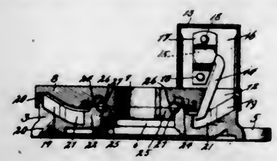
2. In combination with shoe or boot wear, having a sole of relatively light material, of a yielding metallic plate for covering the entire sole, the said plate being marginally bent to engage with the sole and lock the same to the latter, a plurality of metal strips arranged transversely against the metal plate at one side and in parallelism and having their ends bent at an angle to protect the edge of the sole, and a heel section associated with the boot or shoe wear, and a plurality of projections on each of the transverse metal strips.

874,172. EYEGLASS-CASE. ORLANDO DUCKER, Washington, D. C. Filed Oct. 2, 1906. Serial No. 337,128.



A guard plate for flexible eyeglass cases comprising an elongated strip of less width than the width of the case, said strip being formed with an offset portion arranged to be projected through and form a housing for an opening in the case.

874,173. CONTROLLER-REGULATOR. CYRUS P. EBERSOLE, Keokuk, Iowa, assignor to Electric Service Supplies Company, Camden, N. J., a Corporation of New Jersey. Filed Apr. 15, 1907. Serial No. 368,255.



1. In a controller regulator, a base, and a rotatable hood, means for controlling the movement of the hood in one direction, and a series of rollers for locking the parts against separation without interfering with the rotation of the hood.

2. In a controller regulator, a base, a hood mounted to rotate thereon, means for regulating the movement of the hood in one direction, while permitting free rotation of the hood in the reverse direction, and means, consisting of a series of rollers, for securing the base and hood against separation without interfering with the rotation of the hood.

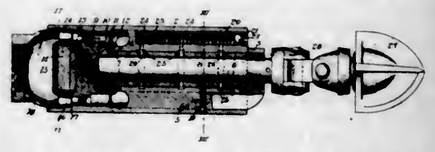
3. In a controller-regulator, a base, a hood mounted to rotate thereon, means for regulating the movement of the hood in one direction, while permitting free rotation of the hood in the reverse direction, and means for securing the hood and the base together without interfering with the rotation of the hood, said means forming a roller bearing between the hood and the base.

4. In a controller-regulator, a base provided with cams and stops, a hood mounted to rotate on said base, a pawl carried by the hood to coöperate with said cams and stops for compelling intermittent movement of the hood in one direction, and coupling means for securing the hood and the base together, said coupling means forming a roller bearing between the hood and the base.

5. A controller regulator comprising a base and a hood each having an annular groove which with the groove of the other provides a race-way concentric with the axis of rotation of the hood, means for effecting a step by step movement of the hood in one direction without interfering with the uninterrupted movement thereof in the opposite direction, and a series of rollers in the race-way to lock the hood and base together without interfering with the rotation of the hood.

[Claims 6 and 7 not printed in the Gazette.]

874,174. TURBINE. WILLIAM S. ELLIOTT and FRANK M. FABER, Pittsburg, Pa.; said Faber assignor to said Elliott. Filed May 4, 1905. Serial No. 258,779.



1. In a turbine, a barrel or casing having inwardly projecting longitudinal webs integral therewith, and a removable bushing or bearing supported by said webs; substantially as described.

2. In a turbine, a barrel or casing having inwardly projecting longitudinal webs integral therewith, a removable bushing or bearing supported by said webs, and a movable turbine member in the rear of the webs having a shaft extending through the bushing; substantially as described.

3. In a turbine, a barrel or casing having inwardly projecting longitudinal webs supporting a bearing, said bearing having a removable bushing; substantially as described.

4. In a turbine, a barrel or casing having inwardly projecting longitudinal webs supporting a bearing, said bearing having a removable bushing, and a movable turbine member in the rear of the webs having a shaft extending forwardly within the removable bushing; substantially as described.

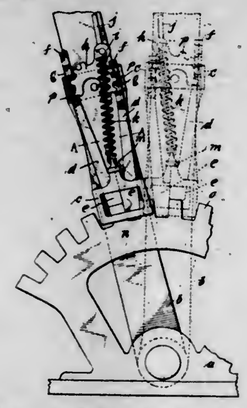
5. In a turbine, a barrel or casing having inwardly projecting integral webs supporting a bearing, said bearing having a removable bushing, a movable turbine member having a forwardly extending shaft within the removable bushing, and means for lubricating said shaft; substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

874,175. LEVER MECHANISM. FRANK A. FALK, Stacyville, Iowa. Filed May 23, 1907. Serial No. 375,217.

1. In a lever mechanism of the class described, the combination with a lever and a rack for holding said lever in position, of a pair of coöperating slidable pawls

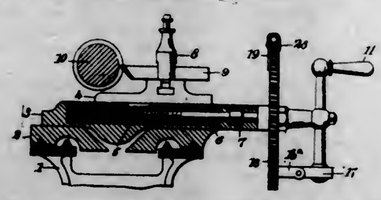
carried by said lever, the lower ends of said pawls being adapted to rub against each other and to engage alternately said rack and the upper ends of said pawls being separated; a device interposed between said upper ends and in engagement therewith; yielding means one end of which is secured to said device and the other end of which is secured to said lever; and means for moving said device to raise one of said pawls against the tension of said yielding means.



2. In a lever mechanism of the class described, the combination with a lever and a rack for holding said lever in position, of a pair of coöperating slidable pawls carried by said lever, the lower ends of said pawls being adapted to engage alternately said rack; a toothed device interposed between and in mesh with the upper ends of said pawls; yielding means one end of which is secured to said device and the other end of which is secured to said lever; and means for throwing said toothed device to raise one of said pawls against the tension of said yielding means.

3. In a lever mechanism of the character described the combination of a casing; a pair of coöperating pawls, the lower ends of which are adapted to rub together and the upper ends of which are separated; and a device for moving said pawls, said device being interposed between said upper ends and in engagement therewith.

874,176. ADJUSTABLE FEED-CARRIAGE FOR LATHES. CHRISTIAN A. FISCHER, Grand Forks, N. D. Filed Feb. 9, 1906. Serial No. 300,258.



1. The combination of a feed carriage for lathes, a tool slide laterally adjustable on said carriage, a cross feed screw adapted to effect the lateral movement of said tool slide and provided with means for turning the screw, a ring revolubly mounted upon the carriage and provided with a worm periphery, means carried by said ring for limiting the movement of the screw in one direction, a micrometer worm also supported by said carriage and arranged to be moved into and out of meshing engagement with the worm gear of said ring, and means for locking said worm in engagement with said worm gear.

2. The combination of a feed carriage for lathes, a tool slide laterally adjustable on said carriage, a cross feed screw adapted to effect the lateral movement of said tool slide and provided with means for turning the screw, a ring revolubly mounted upon the carriage and provided with a worm periphery, means carried by said ring for limiting the movement of the screw in one direction, and a micrometer worm also supported by said carriage and arranged to be moved into and out of meshing engagement with the worm gear of said ring.

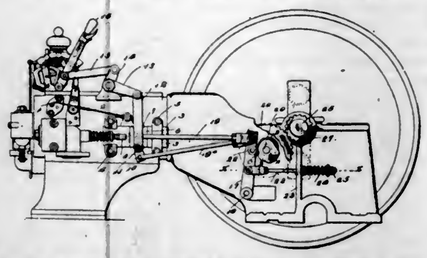
3. The combination of a feed carriage for lathes, a tool slide laterally adjustable on said carriage, a cross feed screw adapted to effect the lateral movement of said tool slide and provided with an actuating crank, a ring revolubly mounted upon the carriage and provided with a worm periphery, a finger carried by said ring and adapted to project out into the path of movement of said crank, a micrometer worm also supported by said carriage and arranged for meshing engagement with the worm gear of said ring, and means for locking said worm in engagement with said worm gear and for also holding said worm out of said engagement.

4. The combination of a feed carriage for lathes, a tool slide laterally detachable thereon, a cross feed screw adapted to effect the lateral movement of said tool slide and provided with an actuating crank, a supporting ring secured to said carriage, another ring mounted to turn about said supporting ring and provided with an arm projecting forwardly from its outer face, a pivoted finger carried by said arm and adapted to be swung into the path of movement of the said crank, the said ring being provided with a worm gear, a bracket pivotally mounted on said supporting ring, a micrometer worm journaled in said bracket and adapted to engage the said worm gear, and means engaging with the bracket, for locking the said worm in engagement with the said worm gear.

5. In a tool feed mechanism for lathes, the combination with a revoluble member provided with a worm gear periphery and a support for said member, of a pivoted bracket mounted on the support a micrometer worm journaled in said bracket and adapted to engage the worm gear, the bracket being formed at its free end with a notch and a beveled surface below said notch, and a spring pressed catch formed with a hooked end, adapted to enter said notch to lock the worm in engagement with the worm gear, said hooked end being provided with a beveled outer surface adapted to engage the outer surface of the bracket whereby to support the bracket with the worm out of engagement with the gear.

[Claim 6 not printed in the Gazette.]

874,177. REVERSE-GEAR FOR FOUR-CYCLE COMBUSTION-ENGINES. FREDERICK T. FLINCHBAUGH, York, Pa. Filed July 9, 1907. Serial No. 382,846.



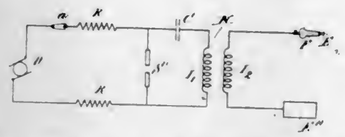
1. In a four cycle internal combustion engine and in combination with reverse gear therefor, like coöperating cams, each having a supplemental raised portion for actuating the sparker upon operation of the reverse gear to utilize the compressed charge of the engine to drive the piston in the opposite direction to give an initial impetus in the reverse direction.

2. In an internal combustion engine of the four cycle type, and in combination with the reverse gear embodying a link motion, independent rocker arms, and operating cams, each of the latter having a supplemental raised portion to effect an initial operation of the sparker to explode the charge in the cylinder upon operating the reverse lever to drive the piston in the opposite direction and thereby give an initial impetus to the engine in the opposite direction.

3. In an explosive engine of the type specified and in combination with a reverse gear comprising a slide, pivotally connected reverse links one having effective connection with the slide and the other at the same time being idle, rocker arms having independent connection with said reverse links, and two like cams for actuating the rocker arms and having a different relative angular arrangement, each of said cams having a supplemental raised portion to come into play the instant the engine is reversed to effect explosion of the charge to give an initial impetus to the engine in an opposite direction.

4. In an engine of the explosive type substantially as specified, the combination of reverse gear therefor comprising a slide, pivoted reverse links adapted to coöperate with said slide, the one being active and the other idle, means for shifting said links to bring the idle link into active operation and to throw the working link out of action, rocker arms, connecting means between said rocker arms and the reverse links, like cams for the rocker arms each having a supplemental raised portion, said cams having a different relative angular arrangement, whereby upon reversing the engine the supplemental raised portion of the idle cam comes into play to effect explosion of the compressive charge in the cylinder to give an initial impetus to the piston in the opposite direction, thereby utilizing the charge of the engine to effect reversing the rod, and means for holding said rocker arms in active coöperation with the said cams.

874,178. CAUTERY. LEE DE FOREST, New York, N. Y., assignor to George K. Woodworth, Brookline, Mass. Serial No. 309,235.



1. The combination with a source of high frequency electrical oscillations of a conductor associated with said source and an electrode connected with said conductor and so constructed and arranged that the electrical oscillations communicated thereto may be transmitted to a body to produce a burning effect on the surface thereof.

2. The combination with a source of practically continuous or undamped high frequency electrical oscillations of a conductor associated with said source and an electrode connected with said conductor and so constructed and arranged that the electrical oscillations communicated thereto may be transmitted to a body to produce a burning effect on the surface thereof.

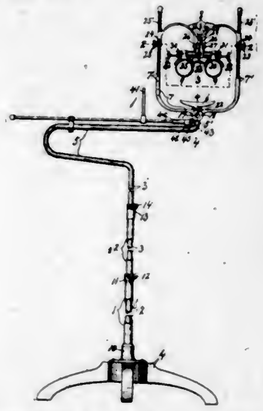
3. The combination with a source of high frequency electrical oscillations of a conductor associated with said source and an electrode connected with said conductor, said electrode consisting of a conducting member having its terminal area sufficiently small to permit the electrical oscillations passing therefrom to a body to produce a burning effect on the surface of such body.

4. The combination with a source of high frequency electrical oscillations of a conductor associated with said source and an electrode connected with said conductor, said electrode consisting of a conducting member terminating in a cutting edge.

5. The combination with a source of high frequency electrical oscillations of a conductor associated with said source, an electrode connected with one end of said conductor and so constructed and arranged that the electrical oscillations communicated thereto may be transmitted to a body to produce a burning effect on the surface thereof, and an electrode of relatively large area connected to the other end of said conductor.

[Claims 6 to 11 not printed in the Gazette.]

874,179. OPTICAL TESTING APPARATUS. JOHN F. FORTH and EDWARD J. LANGLEY, Syracuse, N. Y.; said Langley assignor to said Forth. Filed Mar. 31, 1906. Serial No. 309,235.



1. An optical testing apparatus comprising an upright standard and a supporting base therefor, said standard being composed of sections adjustable lengthwise of each other, means for clamping said sections in their adjusted positions, the upper section having a lateral return bend, the upper part of which lies in a substantially horizontal plane and intersecting the axis of the standard, upright arms mounted upon the free end of said horizontal portion, a yoke mounted upon said arms, and a trial frame mounted upon said yoke.

2. In an optical testing instrument, a pair of upright arms spaced apart and a support therefor, a yoke slidable vertically upon said arms and means for clamping the yoke in its adjusted position and a trial frame pivotally mounted upon said yoke between said arms.

3. In an optical testing instrument, a pair of upright arms spaced apart and a support therefor, a vertically adjustable chin-rest on the support, a yoke adjustable vertically upon said arms toward and from the chin-rest and a trial-frame pivotally mounted upon the yoke between said arms.

4. In a device of the class described, an upright frame, a yoke adjustable vertically thereon, means to clamp the yoke in its adjusted position, and a testing frame mounted on the yoke.

5. In an optical testing instrument, a vertically adjustable yoke and supporting means therefor, a trial-frame and a support therefor pivotally mounted upon the yoke.

[Claims 6 to 15 not printed in the Gazette.]

874,180. TILE GUTTER. JOSEPH FREUND, Crystal City, Mo. Filed Feb. 19, 1907. Serial No. 358,175.



1. A tile gutter comprising a series of sloping gutter sections of different depths, each gutter section being formed with an external transverse rib at each end extending across the gutter section to the longitudinal edges of the gutter section, and series of means supporting said gutter sections by the whole width of the ribbed ends; substantially as set forth.

2. A tile gutter comprising a series of sloping gutter

sections of different depths, each gutter section being formed with an external transverse rib at each end extending across the gutter section to the longitudinal edges of the gutter section, and series of means of different depths, corresponding to the depths of the gutter sections and supporting said gutter sections by the whole width of the ribbed ends; substantially as set forth.

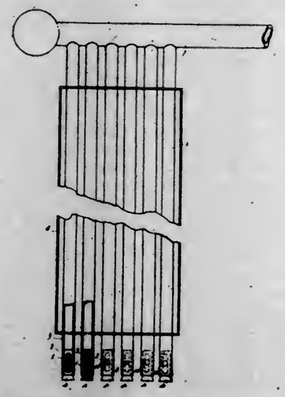
3. A tile gutter comprising a series of sloping gutter sections of different depths, each gutter section being formed with an external transverse rib at each end extending across the gutter section to the longitudinal edges of the gutter section, and series of brackets of different depths, corresponding to the depths of the gutter sections, each bracket being formed with a channel providing upturned flanges extending to the longitudinal edges of the gutter sections, and supporting said gutter sections by the whole width of the ribbed ends; substantially as set forth.

4. A tile gutter comprising a series of gutter sections, each gutter section being formed with an external transverse rib at each end extending across the gutter section to the longitudinal edges of the gutter section, series of brackets each being formed with a channel providing upturned flanges extending to the longitudinal edges of the gutter sections, and supporting said gutter sections by the whole length of the ribbed ends, and fillings between the ribbed ends of the gutter sections; substantially as set forth.

5. A tile gutter comprising a series of gutter sections having transverse end ribs at their lower sides, supporting brackets having channels or grooves for the reception of the ribs of said gutter sections, and an elastic filler interposed between the adjacent ends of two of said gutter sections, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

874,181. APPARATUS FOR UTILIZING THE WASTE OF CELLULOID AND SIMILAR SUBSTANCES. ERNESTO GARBIN, Genoa, Italy. Filed June 14, 1905. Serial No. 265,232.



1. In an apparatus for utilizing the waste of celluloid and similar substances, a series of containers for such substance, and stoppers adapted to be heated and placed in such containers for producing a combustion of such substances therein.

2. In an apparatus for utilizing the waste of celluloid and similar substances, a series of tubes, a series of cylinders fitting therein, and stoppers adapted to be heated and placed in such cylinders to produce a combustion of the substance therein.

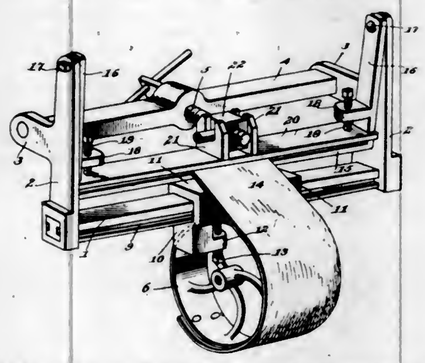
3. In an apparatus for utilizing the waste of celluloid and similar substances, a series of tubes, a series of cylinders fitting therein, stoppers adapted to be heated and placed in such cylinders to produce a combustion of the substance therein, and a refrigerator surrounding such tubes.

4. In an apparatus for utilizing the waste of celluloid and similar substances, a series of tubes, a series of cylinders fitting therein, stoppers adapted to be heated and placed in such cylinders to produce a combustion of the substance therein, a refrigerator surrounding such tubes, and a receiver connected with such tubes.

5. In an apparatus for utilizing the waste of celluloid and similar substances, a feeding mechanism comprising a rotating drum having a plurality of holes adapted to successively receive the material to be acted upon, and a feed pipe arranged beneath said drum and adapted to successively receive the contents of said holes and means for covering said holes when in coincidence with such feed pipe.

[Claims 6 to 10 not printed in the Gazette.]

874,182. MEANS FOR STRETCHING COVERING AROUND PULLEYS. ABRAHAM B. GERBRAND, Buhler, Kans. Filed Apr. 23 1907. Serial No. 369,822.



1. A machine for stretching covering around pulleys, the same comprising relatively movable frames each provided with clamp means, the one for attachment to the pulley and the other for gripping the covering and means for separating the said frames to subject the covering to tension.

2. A machine for stretching covering about pulleys, the same comprising relatively movable frames, means applied to one of the frames for clamping a covering, adjustable clamping means applied to the other frame for securing the same to the pulley and adapting the machine to pulleys of different widths, and means for moving the two frames apart for subjecting the covering to tension.

3. A machine for stretching covering about pulleys, the same comprising relatively movable frames, means for separating the frames to subject the covering to tension, means applied to one of the frames for gripping the covering, and clamp means applied to the other frame for securing the same to the rim of the pulley, said clamp means embodying a self adjusting clamp member to automatically conform to the nature of the pulley whether straight or beveled.

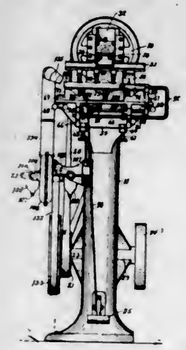
4. A machine for stretching covering about pulleys, comprising coöperating relatively movable frames, one of said frames being provided with means for gripping the covering, and clamp means applied to the other frame, said clamp means comprising pairs of adjustable clamps, each clamp formed of a self adjusting clamp member, and a complemental clamp member formed of a shank having a laterally extended end in which is fitted a clamp screw.

5. A machine for stretching covering about pulleys, comprising relatively movable frames, one of the frames provided with means for gripping the covering, means for separating said frames to subject the covering to tension, the other frame comprising a longitudinal bar having grooves in opposite sides, clamp members adjustable on the longitudinal bar and embracing opposite sides thereof and having inner projections to enter the grooves thereof

to retain said clamp members in place and admit of their turning, and coöperating clamp members slidable upon said longitudinal bar and provided with clamp screws.

[Claims 6 and 7 not printed in the Gazette.]

874,183. POWER-PUNCH. CHARLES GORDON and HARRY HART, Milwaukee, Wis., assignors to Milwaukee Harness Machinery Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 24 1905. Serial No. 251,763.



1. In combination, a frame, a punching mechanism thereon, a table on the frame, a punch bed adjustably mounted on the table, a flange on one side of the punch bed, clamping screws mounted on the other side of the punch bed, and strips of soft material clamped on the punch bed between the clamping screws and the flange thereof for receiving the material to be punched.

2. In combination, a frame, a punching mechanism thereon, a table carried by the frame, a punch bed adjustably mounted on the table, a flange on the punch bed, a clamping screw on the punch bed, a series of strips of soft material clamped to the punch bed between the clamping screw and the flange thereof, and a shelf secured to the flange of the punch bed at approximately the level of the surface of the strips of soft material.

3. In combination, a frame, a table thereon, a punching mechanism on the frame above the table, a punch bed mounted on the table, bolts connecting the punch bed with the table and passing through slots therein at an angle to each other so that the punch bed may be adjustably clamped thereby to the table, and means carried by the punch bed to support the material to be punched without injuring the cutting edges of the punching mechanism.

4. In combination, a frame, a punching mechanism thereon, a table on the frame, a punch bed mounted on the table, bolts connecting the punch bed with the table and passing through slots thereof at an angle to each other so that the punch bed may be adjusted and clamped to the table, a flange on the punch bed, a clamp screw on the punch bed, a number of strips of wood clamped to the punch bed between the clamp screw and the flange, and a shelf secured to the flange with its top plate overhanging the said flange and standing approximately in a plane with the top surface of the strips of wood.

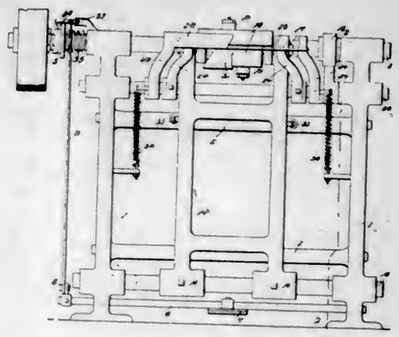
5. In combination, a frame, a punching mechanism thereon, a punching table on the frame, a plug rotatably mounted in the frame, a stem carried by the plug eccentric thereto, a gage carried by the stem, and means for holding the plug in its adjusted positions.

[Claims 6 to 24 not printed in the Gazette.]

874,184. CLAMP-SETTING MACHINE. BONIFACE A. GRASSBERGER, Richmond, Va. Filed May 7, 1907. Serial No. 372,350.

1. In a machine for applying a binder to an article, the combination of an article support, an article holder co-

operating therewith to secure the article, a bending blade arranged in the path of the article holder to support the same, means for bending and setting the binder, and means to admit of the bending blade clearing the binder setting mechanism in advance of the operation thereof and releasing the article holder, whereby the same may secure the article substantially as set forth.



2. In a machine of the character specified, the combination of an article support, an article holder adapted to coöperate therewith, a bending blade adapted to hold the article holder away from the article support, means for sustaining the bending blade in operative position, a mechanism for bending and setting the binder, the bending blade clearing the binder setting mechanism immediately after the bending of the binder and preliminary to the application and setting of the same.

3. In a machine of the character specified, the combination of a bending blade, clamping jaws, means for advancing the clamping jaws to effect a bending of the binding strip about the said bending blade, other means for retracting the clamping jaws and permitting the bending blade to clear the same, means for again advancing the clamping jaws to apply the folded binding strip to the article, and means for actuating the jaws to clamp the binding strip upon the article and set or fix the position thereof.

4. In a machine of the character set forth, the combination of a bending blade, a movable support, clamping jaws mounted on said movable support, operating means for said movable support to advance the clamping jaws to effect a folding of the binding strip about the bending blade, other means for operating said movable support for retracting the clamping jaws, means for again advancing the clamping jaws to apply the binding strip to the article, and actuating means for the clamping jaws to effect a setting or clamping of the binding strip upon the article.

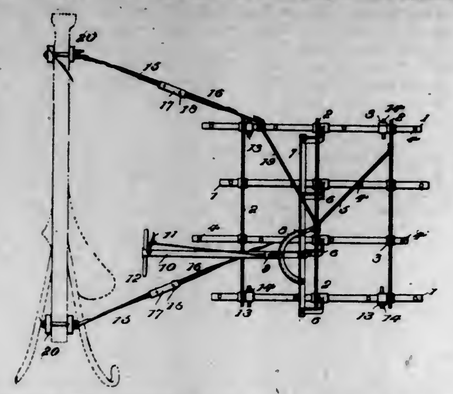
5. In a machine of the character set forth, the combination of a swinging frame, a bending blade, clamping jaws carried by said swinging frame, a drive shaft, and independent cams upon the drive shaft for actuating the swinging frame and the said clamping jaws.

[Claims 6 and 7 not printed in the Gazette.]

874,185. HARROW ATTACHMENT. HENRY C. GREEN, Port, Okla. Filed Oct. 29, 1906. Serial No. 341,096.

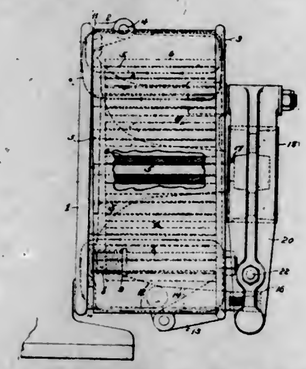
The herein described harrow attachment for plows comprising a plurality of spaced bars, rods journaled upon the bars and disposed transversely with respect to the same, teeth carried by the rods, means for rocking the rods within their bearings to adjust the inclination of the teeth, clamps upon the front and rear portions of the plow, and oppositely inclined draft bars extending from the harrow attachment and engaging the said clamps, each of the draft bars comprising sections the ends of

which overlap and are slotted, the said sections being held in an adjusted position by clamping blocks applied



to opposite sides thereof and actuated by bolts passing through the slotted portions of the sections.

874,186. MAGNETIC BRAKE. FREDERICK G. HALDY, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed June 17, 1907. Serial No. 379,477.



1. The combination of an electric motor and a brake, of a movable electrical resistance device interposed between the brake and motor and included in the circuit of the latter, said resistance device coöperating magnetically with the brake and coöperating mechanically with the brake to control the latter.

2. The combination of an electric motor, a movable resistance device comprising coils having iron cores to cooperate with the motor structure, and a mechanical brake connected with and operated by said movable resistance device.

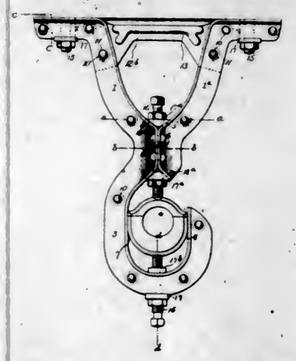
3. The combination with a motor case and a movable plate or hood located in proximity thereto, of a resistance element comprising a series of coils having cores of magnetic material, the poles of which are located in position to attract the motor case, and a brake actuated by said movable plate or hood.

4. The combination of a movable resistance element for electric motors and a brake for the motor shaft, the coils of said resistance element having cores of magnetic material, a stationary element to be attracted by said cores, and means connecting the movable resistance element with the brake for controlling the operation of the latter.

5. The combination of a motor frame a resistance element hinged thereto, the coils of said resistance element having cores of magnetic material adapted to attract the motor frame, a brake for the motor shaft and means connecting the hinged resistance element with the brake for controlling the movement of the latter.

[Claims 6 and 7 not printed in the Gazette.]

874,187. SHAFT-HANGER. HOWARD T. HALLOWELL and HAROLD F. GADE, Philadelphia, Pa., assignors to Standard Pressed Steel Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed May 17, 1906. Serial No. 317,379.



1. A shaft hanger of structural metal bent to shape, comprising a pair of legs each formed of two sections of angle iron, said legs being extended to a common point and there secured, and a J-haped journal support continuous with one of said legs and springing outwardly from its point of attachment with the other leg and having its supporting portion disposed centrally beneath the connection for said legs.

2. A shaft hanger of structural metal bent to shape, comprising a pair of legs each formed of two sections of angle iron, said legs being extended to a central point and there secured, and a journal-support continuous with one of said legs and springing outwardly from its point of attachment with the other leg and having its supporting portion disposed centrally beneath the connection for said legs.

3. A shaft hanger of structural metal, comprising two sections of similar size bent to shape and suitably secured together, said sections forming a pair of legs, a J-shaped journal-support continuous with one of said legs, and means for connecting said legs together centrally, the shorter leg serving to brace the other.

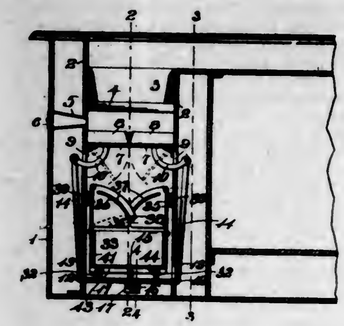
4. A shaft hanger of structural metal, comprising two sections of similar size bent to shape and suitably secured together, said sections forming a pair of legs, a journal-support continuous with one of said legs, and means for connecting said legs together centrally, the shorter leg serving to brace the other.

5. A shaft hanger of structural metal, comprising two sections of similar size bent to shape and suitably secured together, said sections forming a pair of legs, a J-shaped journal-support continuous with one of said legs, means for connecting said legs together centrally, the shorter leg serving to brace the other, and a plate securing said legs together, the latter having feet continuous with said legs to which said plate is secured.

[Claims 6 to 9 not printed in the Gazette.]

874,188. SELF-REGULATING ASH-PAN. CHARLES W. HAMEL and ERNEST C. HAMEL, St. Louis county, Mo. Filed July 29, 1907. Serial No. 386,170.

1. The combination with a stove or range, of a pair of hinged plates arranged beneath the fire box, movable means for normally maintaining the plates in open positions, and an ash pan supported by said movable means.



2. The combination with a stove or range, of an ash pan arranged for movement beneath the fire box, means arranged between the fire box and ash pan for cutting off the discharge of ashes from the fire box to the ash pan, and which cut off means is normally open, and means whereby the weight of the ashes in the ash pan is utilized to close the cut-off means.

3. The combination with a stove or range, of a removable ash pan, a movable platform supporting the ash pan, a counterbalance for the movable platform, and means arranged between the ash pan and the fire box of the stove or range for controlling the discharge of ashes from the fire box into the ash pan.

4. The combination with a stove or range, of a movable platform arranged beneath the fire box, a counterbalance for normally holding the platform elevated, an ash pan removably positioned on the platform, means arranged between the fire box and the ash pan for cutting off the discharge of ashes into the ash pan, and connections between the platform and the cut-off means.

5. The combination with a stove or range, of a movable platform arranged beneath the fire box, a counterbalance for normally holding the platform elevated, an ash pan removably positioned on the platform, means arranged between the fire box and the ash pan for cutting off the discharge of ashes into the ash pan, connections between the platform and the cut-off means, and means whereby the platform is locked at its lowermost limit of travel when the ash pan is removed from said platform.

874,189. DENTAL ARTICULATOR. WILLIAM HARE, Galesburg, Ill. Filed July 1, 1907. Serial No. 381,667.

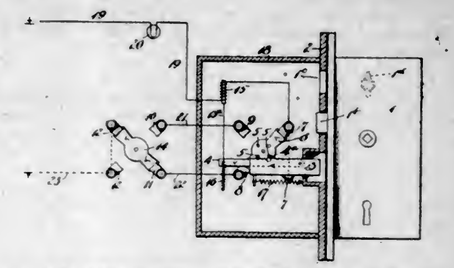


1. In combination, a lower plate, an upper plate pivoted thereto, and elastic means connected to the upper plate and the lower plate for elevating the upper plate

2. In combination, a lower plate, an upper plate pivoted thereto, an elastic means connected to the upper plate and the lower plate for elevating the upper plate, and means for adjusting the tension of the elastic means.

3. In combination, a lower plate, an upper plate pivoted thereto, a bar movably held by the lower plate, and an elastic medium secured to the bar and to the upper plate to elevate the upper plate.

874,190. AUTOMATIC CIRCUIT-BREAKER. GERALD W. HART, West Hartford, Conn., assignor to The Hart Manufacturing Company, Hartford, Conn., a Corporation of New Jersey. Filed Jan. 25, 1907. Serial No. 353,935.



1. In an electric circuit, manually operable means for closing said circuit, in combination with a door-lock bolt operated means for opening said circuit, only, and means for disconnecting said door bolt from the circuit operating means when the circuit is open.

2. In an electric circuit, a hand-operated controlling switch, in combination with a secondary switch operated by a door bolt and acting only to open said circuit after the same has been previously closed by means of said hand-operated switch, and means to operatively disconnect said bolt from said secondary switch at other times.

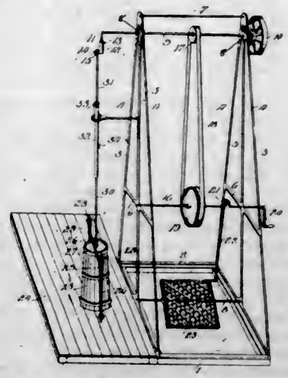
3. The combination with the wires forming an electric circuit of two circuit controlling means, one of said means being hand-operated for closing and opening said circuit, the other of said means operating only to open said circuit after the same has been manually closed, means to hold the latter operating means out of operative relation to the circuit at all other times.

4. In a circuit controlling system, the combination with the wires for forming an electric circuit of a hand-operated switch, a door bolt operated switch, and means whereby the operation of the door bolt operated switch becomes effective only when the circuit is closed.

5. In a circuit controlling system, the combination with the wires for forming a circuit of two-circuit controllers in series, and means whereby one of said circuit controllers become effective only when the circuit is closed.

[Claims 6 to 10 not printed in the Gazette.]

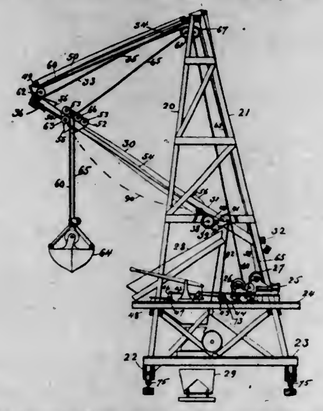
874,191. MOTOR. HENRY A. HATFIELD, Clarkson, Ky. Filed Jan. 6, 1906. Serial No. 294,930.



A motor comprising a base with standards rising from the opposite sides thereof, intermediate bars likewise se-

cured to the base and grouped at their upper ends with said standards, brace rods at the upper and lower ends of the standards, cross-bars with bearings therein secured at suitable distances apart to the standards and said intermediate bars, drive shafts mounted respectively in the bearings of the cross-bars, a pulley on each of said shafts, a belt connecting said pulleys, the upper shaft having a crank-arm, and means for driving the lower shaft, substantially as specified.

874,192. HOISTING-TOWER. WILLIAM J. HASKINS, New York, N. Y. Filed May 5, 1906. Serial No. 315,304.



1. The combination in a hoisting tower of a pair of sheaves at the head thereof, an inclined boom attached to the tower, a sheave at the outer end of the boom, a trolley on the boom, a pair of sheaves on the trolley, a holding rope leading from one of the sheaves at the head of the tower to the sheave at the outer end of the boom and then to one of the sheaves on the trolley, a bucket operating rope leading over the other sheave of the trolley and running over the second sheave at the upper end of the tower, a bucket suspended at the ends of both ropes below the trolley, the said inclination of the boom allowing the operating rope to remain taut while paying out with the holding rope, and permitting the trolley to run down the boom.

2. In a hoisting tower the combination of an inclined boom attached thereto, a trolley located on the boom, a pair of sheaves on the trolley, a rope leading over each sheave, a load suspended at the ends of the ropes below the trolley, one of the ropes leading from one of the sheaves on the trolley to the upper end of the inclined boom, and the other rope leading from the other sheave on the trolley to the head of the tower, so that the resultant of the forces due to one of the ropes will be in an opposite direction to the resultant of the forces of the other rope.

3. In a hoisting tower the combination of an inclined boom attached thereto, a trolley located on the boom, a pair of sheaves on the trolley, a holding rope extending from the upper end of the boom over one of the said sheaves, an operating rope leading from the top of the tower over the other sheave of the trolley, a load suspended at the ends of the ropes below the trolley, the inclination of the boom allowing the operating rope to remain taut while paying out with the holding rope, a drum journaled at one end of the boom, a sheave journaled at the other end of said boom, a rope extending from the trolley to the drum and wrapped around the same and then leading back to the trolley over the sheave at the other end of the boom, and means to lock the drum in different operative positions.

4. In a hoisting tower the combination of an inclined boom attached thereto, a trolley located on the boom, a pair of sheaves on the trolley, a holding rope extending from the upper end of the boom over one of the said sheaves, an operating rope leading from the top of the tower over the other sheave of the trolley, a load suspended at the ends of the ropes below the trolley, the inclination of the boom allowing the operating rope to remain taut while paying out with the holding rope, a drum journaled at one end of the boom, a sheave journaled at the other end of the boom, a rope extending from the trolley to the drum and wrapped around the same and then leading back to the trolley over the sheave at the other end of the boom, a brake connected with the drum, a foot lever in the tower and connections between said brake and the foot lever.

5. In a hoisting tower the combination of an inclined boom attached thereto, a trolley arranged to move on the boom, two sheaves journaled on the trolley, a pair of sheaves journaled at the outer end of the boom, a drum journaled at the other end of the boom, an engine on the tower, a holding rope extending from the engine and leading over a sheave at the head of the tower and then under one of the sheaves at the end of the boom and over one of the sheaves on the trolley, a load suspended by the holding rope, a second rope extending from the load passing over the second sheave on the trolley then over the second sheave at the head of the tower and leading to the engine of the tower, means to haul in and pay out both of said ropes, a rope extending from the trolley and leading around the second sheave at the end of the boom and then extending to the drum on the boom and wrapped around the same, and from thence leading back to the trolley, and means to lock the drum in different operative positions.

874,193. RAILWAY-TIE. JACOB C. HEINTZ, Buffalo, N. Y. Filed Apr. 1, 1907. Serial No. 365,849.



1. A metallic railway tie comprising a base, seats carried thereby having converging side-walls, and wooden rail-supports fitting in said seats.

2. A metallic railway tie comprising a base, seats carried thereby open at each end and having converging side-walls, and wooden rail-supports fitting in said seats.

3. A metallic railway tie comprising a base, seats carried thereby open at both ends and having converging side-walls, wooden rail-supports fitting in said seats, and means carried by said seats for preventing vertical displacement of the rail-supports.

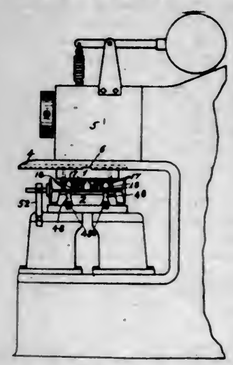
4. A metallic railway tie comprising a base, seats carried thereby open at both ends and having converging side-walls with overhanging upper portions, and wooden rail-supporting blocks shaped to fit in said seats.

5. A metallic railway tie comprising a base, seats carried thereby, and wooden rail-supporting blocks fitting in said seats, the several parts being so constructed that tendency of the rails to longitudinal movement by the travel of the train will wedge said blocks in the seats.

[Claim 6 not printed in the Gazette.]

874,194. STRUCTURAL-IRON-PUNCHING DEVICE. CHARLES H. HENDERSON, Chicago, Ill. Filed May 14, 1906. Serial No. 316,727.

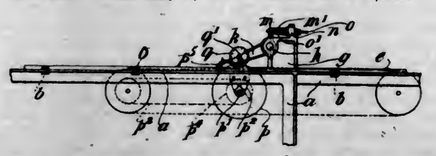
1. A punching device of the character described, comprising a female die block having a longitudinal projection provided with longitudinal guide ways, die members bearing upon said guide ways and provided with a plurality of openings, means for detachably clamping said die members to said female die block, a male die block having a plurality of threaded apertures and with an elongated slot, a head member engaging the slot in said male die block and provided with a plurality of threaded apertures, means for detachably clamping said head member in said slot, and punches adapted to be supported in the threaded apertures in said male die block and in said head member, said punches corresponding to and registering with the apertures in said die members.



2. A punching device of the character described comprising a frame including a bed and a movable plunger, a female die block bearing upon said bed and having a longitudinal projection provided with longitudinal guide ways, die members bearing upon said guide ways and provided with a plurality of openings, means for clamping said die members adjustably to said projections, a male die block having a plurality of threaded apertures and with an elongated slot, a head member bearing in said slot and provided with a plurality of threaded apertures, means for detachably connecting said head member in said slot, and a plurality of punches engaging said threaded aperatures in said male die blocks and in the threaded apertures in said head member, said punches corresponding to and registering with the openings in said die members.

3. A punching device of the character described comprising a frame including a bed and a movable plunger, said bed and plunger having spaced guide recesses, a female die block bearing upon said bed and provided with spaced ribs entering said guide recesses and having a longitudinal projection on its upper face provided with longitudinal guide ways, die members bearing upon said guide ways and provided with a plurality of openings, means for clamping said die members adjustably to said projections, a male die block bearing against said plunger and provided with spaced ribs entering the recesses therein and having a plurality of threaded apertures and with an elongated slot, a head member bearing in said slot and provided with a plurality of threaded apertures, means for detachably connecting said head member in said slot, and a plurality of punches engaging said threaded apertures in said head member, said punches corresponding to and registering with the openings in said die members.

874,195. MECHANISM FOR DETACHING BISCUITS FROM THEIR PANS. GEORGE HERBERT, Jr., Glasgow, Scotland. Filed May 6, 1907. Serial No. 372,024.



1. In the manufacture of biscuits a device for mechanically detaching the baked biscuits from their pans means for moving the pans, and means for raising said device out of the path of the pan-moving means.

2. In the manufacture of biscuits a device for mechanically and automatically detaching the baked biscuits from their pans means for moving the pans, and means for raising the said device out of the path of the pan-moving means.

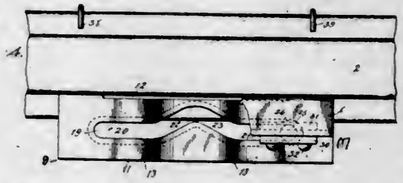
3. In the manufacture of biscuits, a device comprising, in combination, means for mechanically and automatically detaching the baked biscuits from their pans means for moving the pans and means for raising said device out of the path of the pan-moving means.

4. In the manufacture of biscuits, the combination with a metal strip for detaching the baked biscuits from their pans of means for holding the strip in position means for moving the pans and means for raising said device out of the path of the pan-moving means.

5. In the manufacture of biscuits the combination with a metal strip for detaching the baked biscuits from their pans, of arms between which the metal strip is stretched means for moving the pans and means for raising said device out of the path of the pan-moving means.

[Claims 6 to 21 not printed in the Gazette.]

874,196. DETECTOR-BAR. CASPER HERBINGER, New York, N. Y., assignor to The Federal Railway Signal Company, a Corporation of New Jersey. Filed Aug. 13, 1907. Serial No. 388,303.



1. A detector bar designed and adapted to move into two detecting positions, one detecting position being against the tread of a wheel and another detecting position being against the side face of a wheel; and means for guiding the bar in said movement.

2. A detector bar designed and adopted to move into two detecting positions, one detecting position being against the tread of a wheel and another detecting position being against the side face of a wheel; and means for guiding the bar in said movement, said means for guiding comprising one or more cam faces and a part for operatively engaging each cam face.

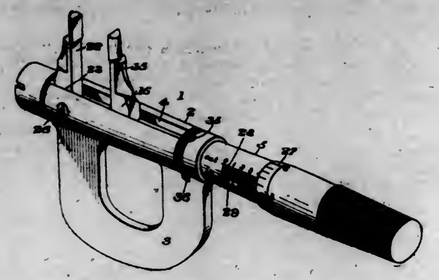
3. A detector bar designed and adapted to move into two detecting positions, one detecting position being against the tread of a wheel and another detecting position being against the side face of a wheel; and means for guiding the bar in said movement, said means for guiding also permitting a longitudinal movement of said bar relative to the rail.

4. A detector bar designed and adapted to move into two detecting positions, one detecting position being against the tread of a wheel and another detecting position being against the side face of a wheel; and means for guiding the bar in said movement, said means for guiding comprising one or more cam faces and a part for operatively engaging each cam face and said means for guiding also permitting a longitudinal movement of said bar relative to the rail.

5. In combination, a detector bar for railway rails, said detector bar having transverse movement relative to the rail in the movement of said bar from normal to detecting position, and means for guiding said transverse movement so that the wheel engaging edge of said detector bar shall have an upward and inward multi-direction movement transverse to the rail, said means for guiding comprising means for imparting an upward movement to said edge and means for imparting a subsequent inward movement to said edge, whereby said edge may be guided into two detecting positions.

[Claims 6 to 58 not printed in the Gazette.]

874,197. MICROMETER-CALIPERS. ERNEST HEYM, Philadelphia, Pa. Filed Nov. 22, 1906. Serial No. 344,530.



1. In a device of the character described, a body, a movable jaw, a stationary jaw, a single scale having two reading lines on the body, and a rotative sleeve connected with said movable jaw having a suitable scale thereon which is adapted to register at the proper time with either of said reading lines, whereby inside or outside measurements may be taken.

2. In a device of the character described, a body portion, a bushing in one end thereof, a sleeve sliding on said body, a spindle in threaded engagement with said bushing and carried by said sleeve, a movable jaw actuated by said spindle and connected therewith, a stationary jaw mounted in said body, and means for adjusting said stationary jaw to any degree of fineness.

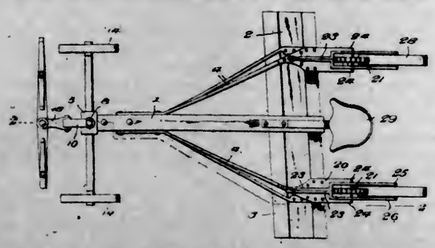
3. In a device of the character described, a body portion, a bushing in one end thereof, a spindle in threaded engagement with said bushing, a movable jaw actuated by said spindle and connected therewith, a stationary jaw mounted in said body, and means for adjusting said stationary jaw to any degree of fineness.

4. In a device of the character described, a body, a stationary jaw, a spindle in threaded engagement with said body, a pin carried by said spindle, a movable jaw carried by said body, and a bushing in engagement with said pin and serving to connect the jaw with said spindle.

5. In a device of the character described, a body, a stationary jaw, a spindle in threaded engagement with said body, a pin carried by said spindle, a movable jaw mounted in said body, a bushing in engagement with said pin and serving to connect the jaw with said spindle and means for locking said pin and bushing together.

[Claims 6 to 23 not printed in the Gazette.]

874,198. GRADER. ELMER F. HIGGINS, Mount Vernon, Ohio. Filed Oct. 14, 1907. Serial No. 397,415.

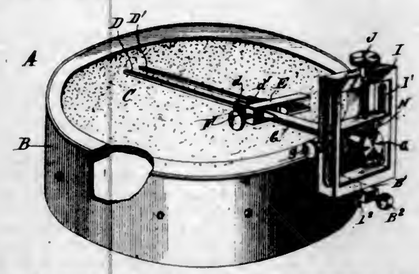


1. In a grader of the class described, the combination with a frame; of a beam at one end of said frame, a blade at the lower edge of said beam, bracing means interposed between said beam and frame, plates secured to said beam, adjacent each end thereof, a rack bar carried by said plates, ears on said plates and spaced from said rack, levers having bifurcated ends pivotally secured between said ears, wheels rotatably mounted between said bifurcated ends, said wheels being adapted to engage the earth's surface, whereby when the levers are moved over the rack bars, the beam will be correspondingly raised or lowered, a latch on said levers, adapted to coöperate with said rack bars and means to support the forward end of the frame.

2. In a grader of the class described, the combination with a frame, having a beam at one end thereof and means to raise and lower said beam; of a head at the opposite end of the frame, said head having sockets therein, a guide bar, arms at the upper and lower ends of said guide bar, a pivot pin carried by the lower arm, adapted to enter the socket in the lower end of the head, a bolt adjustably secured to the upper arm and adapted to enter the socket at the upper end of the head, said socket being elongated, an axle on the lower arm and below the pivot pin, wheels on said axle and means to attach draft animals to said bar, whereby the grader will be propelled and guided.

3. In a grader of the class described, the combination with a frame; of a beam at one end of said frame, bracing means between said frame and beam, plates carried by said beam, rack bars on said plates, levers pivotally secured to said rack bars, said levers having bifurcated lower ends, wheels rotatably mounted between said bifurcated ends, means carried by the levers adapted to engage the rack bars and hold the beam in its adjusted position, a head at the forward end of said frame, having sockets therein, a guide bar, arms at the upper and lower ends of said guide bar, a pivot pin in the lower arm, adapted to enter one of the sockets in the head, a bolt adjustably secured to the upper arm and adapted to engage the socket at the upper end of the head, said socket being elongated, an axle carried by the lower arm, supporting wheels for said axle and means to attach draft animals to the guide bar.

874,199. DENTAL SOLDERING APPARATUS. JACOB W. HORNER, Columbus, Ind. Filed Mar. 23, 1907. Serial No. 364,036.



1. An apparatus herein described comprising a pad, a pair of approximately parallel bars, a carrier for said bars, a screw supported in said carrier and operating to adjust the said bars relatively toward and from each other, a shaft extending from said carrier, a block in which the said shaft is journaled and movable longitudinally, a screw in the block and engaging the shaft for securing the same in different adjustments, a frame in which said block is movable vertically, a screw in the frame for moving the block vertically, a support to which said frame is pivoted vertically, and means for securing the frame in any desired adjustment on its said vertical pivot, substantially as and for the purposes set forth.

2. An apparatus substantially as described, comprising a work holder having means for securing the work and consisting of approximately parallel bars, and means for adjusting said bars relatively toward and from each other, a shaft supporting said work-holder and a block in which said shaft is movable longitudinally and may be turned.

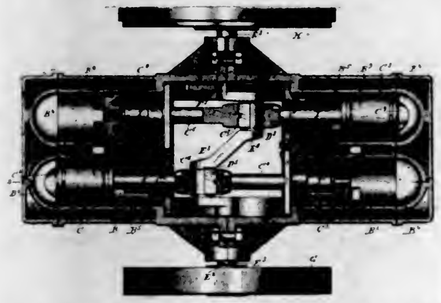
3. A work holder, comprising a pair of approximately parallel bars, and a carrier therefor having means for adjusting the bars relatively toward and from each other, a shaft supporting said work holder, a block in which said shaft is movable longitudinally and may be turned, a frame, and means securing the block adjustably in the frame.

4. An apparatus substantially as described comprising a pair of approximately parallel bars, a carrier therefor extending transversely of the bars and one of the bars being movable laterally, in said carrier, and a screw in the carrier and engaging the said bar whereby to adjust the same laterally.

5. The combination with the bed, of the main frame pivoted vertically in connection therewith whereby it may be swung on said pivot, a block adjustable vertically in the main frame, and a work holder having a shaft adjustable in said block.

[Claim 6 not printed in the Gazette.]

874,200. MOTOR. GABRIEL P. B. HOYT, New York, N. Y. Filed Nov. 16, 1905 Serial No. 287,621.

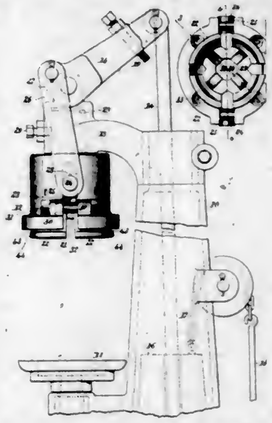


1. A two-cycle explosion engine, comprising pairs of oppositely arranged alined cylinders, the pistons of each pair being rigidly connected with each other, and all of said cylinders being in the same horizontal plane, means for constraining all of the pistons to move in unison, said cylinders being provided with a compression and explosion chamber at one end, having an exhaust port, and with a compression and mixing chamber at the other end provided with an inlet port, each of said cylinders having a by-pass connecting the chambers, said by-pass opening into the compression and explosion chamber at a point such that the contents of the compression and mixing chamber will be partly compressed before the piston uncovers said opening, to permit the passage of said contents to the compression and explosion chamber, the piston of the member of one pair being arranged to move synchronously with the piston of the diagonally opposite member of the other pair whereby to balance the engine.

2. An explosion engine comprising multiple sets of cylinders arranged one alongside the other and each set having two alined cylinders spaced apart, each cylinder being closed at its ends and having a compression and explosion chamber and a suction, mixing and compression chamber, and each cylinder having an exhaust port in the compression and explosion chamber and a by-pass connecting the said chambers of the cylinder with each other, the entrance end of the by-pass into the said compression and explosion chamber being opposite and partly in the rear of said exhaust port, pistons reciprocating in the said cylinders, a piston rod for the pistons of a pair of alined cylinders to connect the said pistons with each other, a guideway on each piston rod and at a right angle thereto, crank shafts transverse to the said cylinders and piston rods and having diametrically-disposed crank arms engaging the said guideways, and gear wheels secured on the said shafts and in mesh with each other.

3. An explosion engine comprising multiple sets of cylinders arranged one alongside the other and each set having two alined cylinders spaced apart, each cylinder being closed at its ends and having a compression and explosion chamber and a suction, mixing and compression chamber, and each cylinder having an exhaust port in the compression and explosion chamber and a by-pass connecting the said chambers of the cylinder with each other, the entrance end of the by-pass into the said compression and explosion chamber being opposite and partly in the rear of the said exhaust port, pistons reciprocating in the said cylinders, a piston rod for the pistons of a pair of alined cylinders to connect the said pistons with each other, a guideway on each piston rod and at a right angle thereto, crank shafts transverse to the said cylinders and piston rods and having diametrically-disposed crank arms engaging the said guideways, gear wheels secured on the said shafts and in mesh with each other, and a suction check valve for each cylinder.

874,201. MACHINE FOR SEALING BOTTLES, JARS, AND OTHER RECEPTACLES. JOSEPH V. HULL, Brooklyn, N. Y., assignor to Harry C. Blye, New York, N. Y. Filed Jan. 15, 1906. Serial No. 296,052.



1. In a machine of the character described, a chuck comprising a cap centering head having a recess to receive the body of the cap and a surrounding flange below said recess against which the laterally outwardly-extending bead on the cap may be disposed, combined with a series of segmental jaws encompassing said head and having a shoulder to engage the lower surface of said bead and side walls to confine the outer vertical edges of said bead, a vertically movable frame to which said jaws are pivotally secured, means for closing said jaws around said head and cap to carry their said shoulder below said bead, and means for moving said frame and jaws upwardly to carry said shoulder against said bead, for compressing the same; substantially as set forth.

2. In a machine of the character described, the chuck comprising a cap centering head having a recess to receive the cap and a surrounding flange below which the bead on the cap may be disposed, combined with segmental jaws encompassing said head and having a shoulder to engage the lower edge of said bead, means for closing said jaws so as to carry said shoulder below said bead, and means for effecting a compression of said bead between said shoulder and the edge of said flange, said centering head having a magnet to retain the cap therein; substantially as set forth.

3. In a machine of the character described, the chuck comprising a cap centering head having a recess to receive the cap and a surrounding flange below which the bead on the cap may be disposed, combined with segmental jaws encompassing said head and having a shoulder to engage the lower edge of said bead, a vertically movable frame to

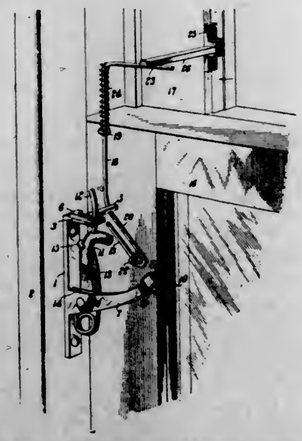
which said jaws are pivotally secured, springs contained within said frame and engaging said jaws for normally spreading them outwardly from the entrance to said head, means for closing said jaws so as to carry said shoulder below said bead, and means for moving said frame and jaws upwardly to carry said shoulder against said bead, for compressing the same; substantially as set forth.

4. In a machine of the character described, the chuck comprising the exterior casing, the cap centering head therein having a recess to receive the cap and a surrounding flange below which the bead on the cap may be disposed, and the segmental jaws encompassing said head and having an inner shoulder to engage the lower edge of said bead and an outer shoulder to engage the lower edge of said casing during the upward movement of said jaws, whereby said jaws are closed inwardly to bring said inner shoulder below said bead, combined with means for effecting a compression of said bead between said inner shoulder and the edge of said flange; substantially as set forth.

5. In a machine of the character described, the chuck comprising the exterior casing, the cap centering head therein having a recess to receive the cap and a surrounding flange below which the bead on the cap may be disposed, and the segmental jaws encompassing said head and having an inner shoulder to engage the lower edge of said bead and an outer shoulder to engage the lower edge of said casing during the upward movement of said jaws, whereby said jaws are closed inwardly to bring said inner shoulder below said bead, combined with means for effecting a compression of said bead between said inner shoulder and the edge of said flange, said casing having inserted within its lower edge the plugs of hardened metal for preventing undue wear of same; substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

874,202. BURGLAR-ALARM. GRANVILLE A. HUMASON, Natchez, Miss., assignor of one-fourth to Ellen O. Riordan, Washington, D. C. Filed Feb. 27, 1907. Serial No. 359,603.



1. A device of the character described comprising a base strip, an arm extending therefrom and having a cap receiving bore, a hammer pivotally connected to the arm and disposed to positively strike the cap, a spring secured upon the arm and exerting a constant pressure against the hammer, a stem extending from the hammer, a bracket upon the base strip having a stem receiving notch, and a trigger pivoted upon the bracket and comprising an arm and oppositely extending angular branches either of which is disposed to retain the stem within the notch.

2. A device of the character described comprising a cap holding device, a spring actuated hammer, a trigger for holding the hammer in retracted position, and means for actuating the trigger, said means comprising a spring supported rod having an inclined portion disposed to lap the trigger and designed to actuate the trigger when said inclined portion is moved thereagainst.

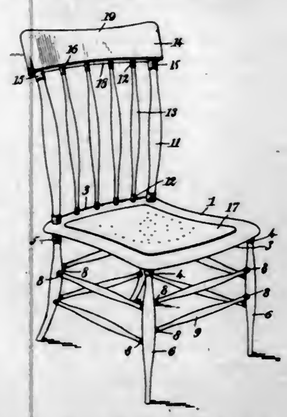
3. The combination with a cap holding device, a spring actuated hammer, and a trigger for holding the hammer in retracted position; of actuating means comprising a spring supported rod having an inclined portion, guiding means for connecting said rod and inclined portion to a sash, said inclined portion being disposed, when moved in one direction to shift the trigger and release the hammer.

4. The combination with a cap holding device, a hammer, and a trigger for holding the hammer in retracted position; of actuating means comprising a spring supported rod having an inclined portion, guiding means for connecting said rod and inclined portion to a sash, an arm extending from the rod, and an actuating arm disposed to be connected to a sash and overlap the arm of the rod, said inclined portion of the rod being disposed when moved in one direction to directly contact with and to shift the trigger, and means engaging said inclined portion whereby, when the rod is moved in the opposite direction, said rod will be directed against the trigger.

5. The combination with a cap holding device, a hammer, and a trigger for holding the hammer in retracted position; of upper and lower sashes, a spring supported rod slidably mounted upon one of the sashes and having an inclined portion disposed to actuate the trigger when said sash is raised, guides for the rod and its inclined portion, and means upon the other sash disposed, when said sash is lowered, to actuate the rod and direct it against the trigger.

[Claim 6 not printed in the Gazette.]

874,203. CHAIR. WILLIAM B. JACKSON, Newfield, Pa. Filed Dec. 4, 1906. Serial No. 346,207.

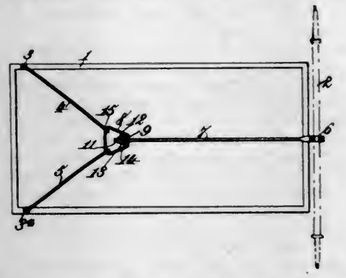


1. A chair, consisting of a sheet metal seat frame having a downwardly curved flange extending entirely around it and provided with a central opening, a bottom secured to the frame over the opening thereof, sockets projecting from the under face of the frame at the front and rear and between the margin and the central opening, legs engaging the sockets of the frame and provided with sockets projecting therefrom, rungs engaging the leg sockets, sockets projecting from the upper face of the seat frame at the rear thereof, the end sockets being larger than the intermediate sockets and in alinement with the rear leg sockets, a metal head rest having a curved flange at its upper edge and ends, and a base flange, sockets projecting from the under face of the base flange of the head rest, the end sockets being larger than the intermediate sockets, and side bars and slats engaging the sockets of the head rest and the sockets on the upper face of the seat frame.

2. A chair, comprising a seat frame, sockets projecting from the under face of the seat frame at the front and rear, the sockets being at a distance from the margin of the frame, legs engaging the sockets of the frame and provided with sockets projecting therefrom, rungs engaging the leg sockets, sockets projecting from the upper face of the seat frame at the rear thereof, the end sockets being larger than the intermediate sockets and in alinement with the rear leg sockets, a head rest provided with sockets projecting downwardly from its lower edge, the end sockets being larger than the intermediate sockets, and side bars and slats engaging the sockets of the head rest and the sockets on the upper face of the seat frame.

3. A chair, comprising a metal seat frame having a downwardly curved flange extending entirely around it, sockets secured to the under face of the seat frame at the front and rear, the sockets being at a distance from the margin of the frame, legs engaging the sockets of the seat frame and connected by rungs, sockets projecting from the upper face of the seat frame at the rear, the end sockets, being larger than the intermediate sockets and in alinement with the rear leg sockets, a metal head rest having a curved flange at its upper edge and ends and a base flange, sockets projecting downwardly from the base flange of the head rest, the end sockets being larger than the intermediate sockets, and side bars and slats engaging the sockets of the head rest and the sockets on the upper face of the seat frame.

874,204. VEHICLE-BRACE. PETER JESS, Sabula, Iowa. Filed July 3, 1907. Serial No. 382,108.



1. A vehicle brace for the purpose set forth comprising a link, a longitudinally-extending bar adapted to have the rear end connected to the rear axle and its forward end loosely connected to the rear end of the link, and a pair of diagonally-extending rods adapted to have the forward ends thereof connected to the forward portion of the vehicle body and the rear ends loosely connected to the forward portion of the link.

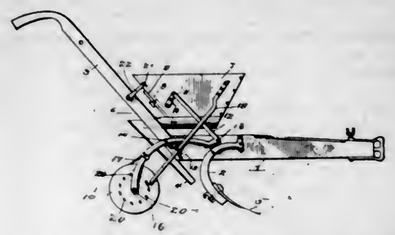
2. A vehicle brace for the purpose set forth, comprising a link, a pair of rods having the forward ends thereof connected to the forward part of the vehicle body and their rear ends loosely connected to said link, and an elongated longitudinally-extending bar having the rear end thereof adapted to be connected to the rear axle of the vehicle and the forward end loosely connected to said link.

3. A vehicle brace for the purpose set forth comprising a link, a pair of rods adapted to have the forward ends thereof connected to the sides of the vehicle body forwardly thereof and their rear ends loosely connected to said link, an elongated longitudinally-extending rod arranged centrally of the vehicle body and adapted to have the rear end thereof connected to the rear axle of the vehicle and the forward end thereof extend in said link, a nut carried by the forward end of said bar, and a spring interposed between the nut and the link.

4. A vehicle brace for the purpose set forth embodying a pair of diagonally-extending rods adapted to have their forward ends connected to the vehicle body forwardly thereof, a longitudinally-extending slidable bar adapted to have the rear end connected with the rear axle of the vehicle, and means for pivotally connecting said rods to said bar.

5. A vehicle brace comprising a pair of diagonally-extending rods, a longitudinally-extending slidable bar, and means for pivotally connecting the rear end of each of the rods with the bar.

874,205. FERTILIZER-DISTRIBUTER. JOHN J. JONES, Monticello, Ga. Filed July 30, 1907. Serial No. 386,222.



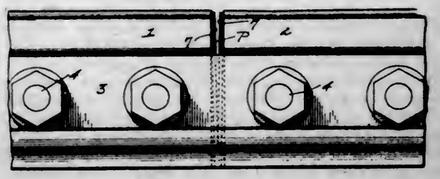
1. In a fertilizer distributer, the combination with a plow stock, of a hopper spaced above the same, standards pivotally supporting said hopper, each of said standards being connected to the said stock and being bent rearwardly from the point of connection and being connected a second time to the stock, and being bent rearwardly and downwardly, a wheel rotatably carried between the rear ends of said standards, pins projecting from said wheel, and a spring arm carried by said hopper and permanently projecting into the path of movement of said pins.

2. In a fertilizer distributer, the combination with a plow stock, of a hopper pivotally carried thereby, delivery chutes for said hopper, a wheel rotatably connected with said stock, a guiding loop fixed to said stock, pins projecting laterally from said wheel, and an arm fixed to said hopper and permanently extending through said guiding loop and to a position in the path of movement of said pins.

3. In a fertilizer distributer, the combination with a plow stock, of a hopper pivotally carried thereby, a spring arm secured to the hopper means for vibrating said arm, and a hook pivotally connected with said stock and adapted to engage the hopper for retaining the same against vibration.

4. In a device of the class described, a plow stock, a hopper arranged above the same, a wheel, and a frame supporting the hopper and wheel, said frame consisting of substantially horizontal portions serving as braces for the stock, a downwardly projecting member integral with each of said horizontal portions and provided with bearings for the wheel, and an upwardly extending member also formed integrally with each of said horizontal members and projecting therefrom at an acute angle, said upwardly extending members supporting the hopper and distributing the weight of the material therein between the stock and the wheel.

874,206. INSULATING END POST FOR RAIL-JOINT CIRCUITS. WILLIAM E. KARNS, Parkers Landing, Pa. Filed Jan. 29, 1907, Serial No. 354,635. Renewed Sept. 23, 1907. Serial No. 394,203.



1. An insulating end post for rail joints, consisting of an indurated body having a soft tip on the head thereof.

2. An insulating end post for rail joints having a soft tip.

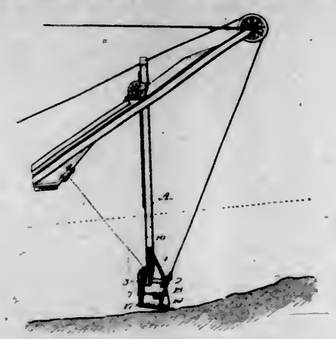
3. An insulating end post for rail joints having an integral soft tip.

4. An insulating end post for rail joints having a soft tip on the head thereof.

5. An insulating end post having a head element provided with an indurated portion and a soft portion.

[Claims 6 to 9 not printed in the Gazette.]

874,207. DIPPER AND DIPPER-HANDLE FOR EXCAVATORS. JAMES P. KARR and JOHN D. RAUCH, Logansport, Ind. Filed Feb. 12, 1907. Serial No. 357,018.



1. The improved dipper handle comprising, as to its body, two light pieces of flanged iron spaced apart but rigidly secured together, and a nose-piece comprising parts which are bent downwardly at their outer ends, the shanks or body portions being arranged between the exterior flanges of the said pieces and securely bolted in place, substantially as described.

2. The combination, with a dipper, a handle formed of I pieces, having a nose bent downward, and pivot blocks 121 secured between the flanges of said pieces, of braces 4 pivoted to the upper corners of the dipper back, and their opposite ends pivoted to said blocks and having a series of holes providing for adjustment of the pivot bolt, as shown and described.

3. The improved dipper body having a back which is and I-plate, the flanges of the same being riveted to the edges of the body, as shown and described.

4. The combination with the body of the dipper having brackets 2—2 and 3—3 attached at its corners, of the bottom arms 7, handle pieces 5, and braces 4, pivoted as described.

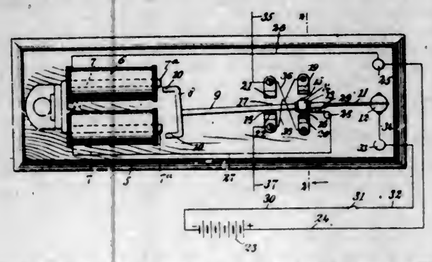
5. The combination with the body of the dipper, of a series of teeth projecting forward from its edge, the same being beveled on the upper and underside and made broadest at their outer ends and tapered rearward therefrom, the shanks of the teeth being slotted to embrace the edge of the dipper body, and the upper portion of the shank being extended across the side of the dipper, thus forming ribs on the interior of the dipper, as shown and described.

[Claims 6 and 7 not printed in the Gazette.]

874,208. POLE-CHANGER. LEE KIBLINGER, Jackson, La. Filed July 8, 1907. Serial No. 382,582.

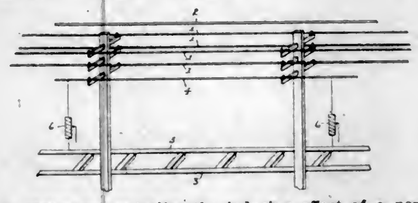
1. The combination of a magnet provided with a flat pole, an armature provided likewise with a flat pole adapted to register with said flat pole of said magnet, means for mounting said armature so that the same can swing in a plane crossing the short diameter of said flat poles, and a contact connected with said magnet, said contact being so disposed that the swing of said armature opens said contact.

2. The combination of a bi-polar magnet, a single swinging member disposed adjacent thereto, a substantially U-shaped armature mounted upon said swinging member and provided with poles adapted to mate the poles of said bi-polar magnet, said armature being mounted to



swing back and forth across the poles of said magnet without touching the same, and contact mechanism to be opened and closed by movements of said swinging member.

874,209. ELECTRIC TRANSMISSION OF INTELLIGENCE. ISIDOR KITSEE, Philadelphia, Pa. Filed Aug. 26, 1907. Serial No. 390,179.



1. Means to neutralize the inducing effect of a power wire on neighboring lines of transmission, said means comprising a conductor placed in the neighborhood of the lines of transmission and connected in shunt with the return of said power wire.

2. In combination with a series of lines useful for transmitting intelligence, a power wire positioned in the inducing region of said lines, a return for said power wire, a shunt circuit for said return, said shunt circuit positioned in the neighborhood of said lines of transmission.

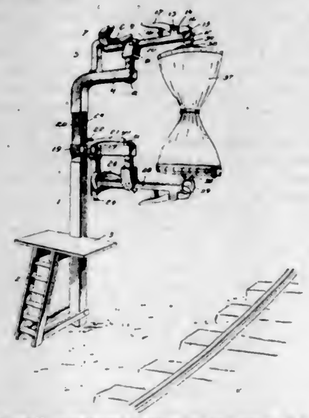
3. Means to neutralize the inducing effect of a power wire on neighboring lines of transmission, said means embracing a conductor positioned near said lines of transmission, said conductor forming a shunt around the return for said power wire and means in said shunt to vary the flow of the current in said conductor.

4. In a system of power transmission wherein the rails of travel are the return, means to neutralize the inducing effect of said power wire on neighboring lines of transmission, said means comprising a conductor positioned near said lines oif transmission, said conductor shunting part of said rails of travel.

874,210. MAIL-POUCH CRANE. HARRIS W. KLINE, Sells Station, Pa. Filed Sept. 13, 1907. Serial No. 392,732.

1. A mail pouch crane comprising a standard or post, mail pouch supporting arms pivotally supported upon said post curved cams for engaging the inner ends of said arms and means for supporting a mail pouch upon the outer ends of said arms.

2. A mail pouch crane comprising a standard, an arm projecting at one side of said standard, a bracket on said arm, a curved cam on said bracket, a mail pouch supporting arm pivotally connected to said standard with the rear end of said supporting arm engaging said curved cam, means for supporting a mail pouch on the outer end of said supporting arm, an arm adjustably connected to said standard, a bracket connected to said arm, said bracket carrying two curved cams, a pouch supporting arm pivoted to said adjustable arm with the rear end of said supporting arm disposed between said cams, and means upon the outer end of said supporting arm for engaging a ring on the mail pouch.



3. In a mail pouch crane the combination of a standard, curved cams, pivoted pouch supporting arms engaging said cams, and means for adjusting one of said supporting arms toward and from the other.

4. In a mail pouch crane, a standard, a pouch supporting arm pivoted upon said standard, a curved cam for normally supporting said arm in a horizontal position and means for engaging the lower end of the pouch.

5. In a mail pouch crane, the combination of a standard, a pouch supporting arm pivoted upon said standard, a cam for normally supporting said arm in a horizontal position, an adjustable arm, a pouch supporting arm pivoted thereto and a pair of curved cams between which the end of said supporting arm is disposed.

[Claim 6 not printed in the Gazette.]

874,211. NON-REFILLABLE BOTTLE. IRVING I. KREMER, New York, N. Y. Filed Sept. 27, 1907. Serial No. 394,832.

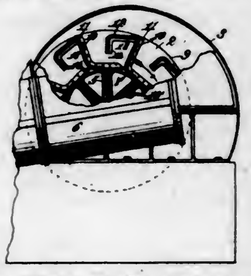


1. In a non-refillable bottle, the combination of a bottle neck presenting an annular valve seat, a valve seated thereon and having a hemispherical body and an oscillating portion extending therefrom, and means for engaging with said oscillating portion to limit its movement.

2. In a non-refillable bottle, the combination of a bottle neck presenting an annular valve seat, a valve seated thereon and having a hemispherical body and an upwardly-extending substantially conical oscillatory portion rigid therewith, and means engaging with said conical portion adjacent its outer end for limiting the oscillations thereof.

3. In a non-refillable bottle, the combination of a bottle neck presenting an annular valve seat, a valve seated thereon and comprising a hemispherical seating portion and an oscillating portion substantially conical in form and having its outer smaller end provided with a recess, and means for limiting the oscillation of the valve, said means presenting a projection extending into said recess but normally out of engagemnt with the sides thereof.

874,212. PNEUMATIC FAN. CHARLES KUDERER, Allegheny, Pa. Original application filed Jan. 9, 1906, Serial No. 295,284. Divided and this application filed Oct. 20, 1906. Serial No. 339,862.



1. A fan involving a casing and blades, blades extending rearwardly from the first-mentioned blades, near the outer edges thereof and provided with inwardly extending portions to furnish pockets on the rear of said first-mentioned blades.

2. A fan involving a casing and blades, said blades having pockets on their rear sides to receive and compress air which acts to cushion the air entering said fan.

3. A fan having spiders and sides, angular strips fastened to the sides and spiders, respectively, angular impelling blades connected to said strips and extending from one side to the other, and angular blades fastened to said sides and fitted respectively against the rear faces of the first-mentioned blades and forming with the latter pockets.

4. A fan having a shaft, spiders fastened to said shaft, sides united with said spiders, shanks or bodies extending outward from the shaft and disposed substantially radially of the fan, angular impelling blades joined to the outer ends of the respective shanks or bodies and integral with the latter, and substantially angular blades fastened to the rear faces of the impelling blades and forming with the latter pockets, all the blades extending from one of said sides to the other.

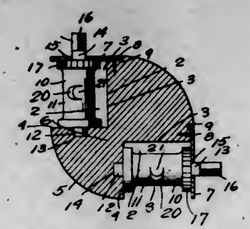
5. A fan wheel having sides provided with eyes and also having blades extending from the central portion of the fan uninterruptedly along irregular planes to the peripheries of the respective sides, and angular blades connected with the outer ends of the first mentioned blades on the rear sides thereof and their free portions extending substantially radially toward the axis of the wheel, the several blades presenting air-receiving pockets.

874,213. FENCE-POST. CHRISTOPHER LEMERE, Marshfield, Wis. Filed Apr. 24, 1907. Serial No. 369,952.

1. A fence post of the type set forth, comprising a body portion having a recess therein and presenting its sides to the surface of said body portion at an angle to one another, a bearing-plate secured to said post in parallelism to one of the sides of said recess, and spools having trunnions journaled in the material of said post and in said bearing plate.

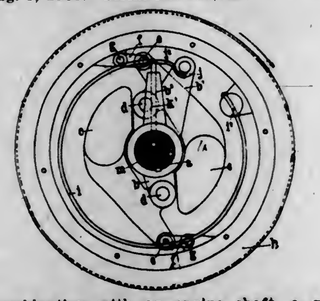
2. A fence post of the type set forth, comprising a body portion having a longitudinal recess therein provided with two angularly-disposed sides, a bearing plate detachably

secured to said body portion in parallelism to one of said sides, spools having trunnions journaled in the material of said body portion and in said bearing-plate, said spools having ratchet edges, and pawls pivoted to said bearing-plate above said ratchet edges and designed for engagement therewith.



3. A fence post of the type set forth, comprising a forwardly-projecting portion having outwardly-diverging sides defining the sides of respective longitudinal recesses, the other sides of said receses being cut into said posts at substantial right-angles to the sides of said forwardly-projecting portion, bearing-plates secured at each side of said post adjacent said recesses, spools having trunnions journaled in said bearing-plates and in the material of said forwardly-projecting portion, each of said spools having a ratchet edge at one side thereof, and pawls pivoted to said bearing-plates above said ratchet edges and designed for respective engagement therewith.

874,214. INERTIA-GOVERNOR. HUGO LENTZ, Halensee, near Berlin, and WILHELM VOIT, Berlin, Germany. Filed Aug. 1, 1906. Serial No. 328,721.



1. In combination with an engine shaft, a governor comprising a double arm rigidly keyed upon the shaft, two weights pivoted to the extremities of said double arm, an inertia ring surrounding the weights and connected therewith, a flection spring having one end rigidly fixed to the inertia ring and the other to the double arm, and means for varying the tension of the spring, substantially in the manner and for the purpose specified.

2. In combination with an engine shaft, a governor comprising a double arm rigidly keyed upon the shaft, two pendulums pivoted to the extremities of said double arm, an inertia ring surrounding the weights and connected therewith, a flection spring having one end rigidly fixed to the inertia ring and the other to the double arm, links connecting the ring with the pendulums and means for varying the tension of the spring.

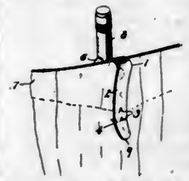
3. In combination with an engine shaft, a governor comprising a double arm rigidly keyed upon the shaft, two weights pivoted to the extremities of said double arm, an inertia ring surrounding the weights and connected therewith, a flection spring having one end rigidly fixed to the inertia ring and the other to the double arm, links connecting the ring with the weights, and means for varying the tension of the spring, consisting of a movable pin radially guided in a tubular portion rigidly fixed to the double arm, one extremity of said pin bearing against the spring.

4. In combination with an engine shaft, a governor comprising a double arm rigidly keyed upon the shaft, two weights pivoted to the extremities of said double arm, an inertia ring surrounding the weights and connected therewith, a flection spring having one end rigidly fixed to the inertia ring and the other to the double arm, links connecting the ring with the weights, means for varying the tension of the spring, consisting of a movable pin radially guided in a tubular portion rigidly fixed to the double arm, one extremity of said pin bearing against the spring, and means for displacing said pin radially.

5. In combination with an engine shaft, a governor comprising two arms rigidly keyed upon the shaft, a knife edge fitted to the extremity of one arm, two pendulums pivoted to the extremities of said arms, an inertia ring, a flection spring attached at one extremity to the inertia ring, the other extremity being hook-shaped and bearing against the knife edge of one arm, links connecting the ring with the weights, means for varying the tension of the spring consisting of a movable pin radially guided in a tubular portion rigidly fixed to the double arm, one extremity of said pin bearing against the spring, and means for displacing said pin radially.

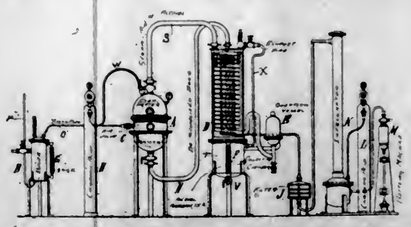
[Claim 6 not printed in the Gazette.]

874,215. PENCIL-HOLDER. STEPHEN M. LEWIS, Pittsburg, Kans. Filed Sept. 18, 1905. Serial No. 278,997.



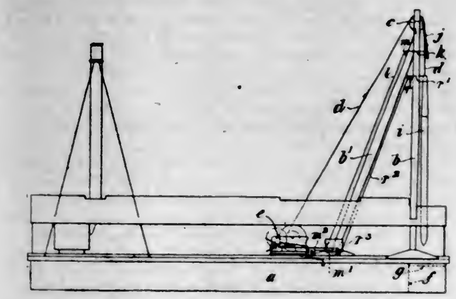
A pencil holder formed in a single piece of spring metal comprising a bowed body portion, a tongue extending from one end thereof, barbs integral therewith for engaging a fabric, said tongue having an out-turned extremity, a straight tongue extending from the other end of the body, elongated oval wings integral with said tongue and located adjacent the body, said wings being folded upon the tongue to form a substantially triangular passage, the lower portions of the wings being spaced from the tongue, said wings having their outer edges converging toward the centers thereof to form an elongated front inlet extending from one end of the triangular passage, said converging edges constituting guides for the point of a pencil inserted into the front inlet.

874,216. PROCESS FOR MAKING NON-ALCOHOLIC BEVERAGES FROM FERMENTED LIQUIDS. HERMANN LINZEL and CARL BISCHOFF, Berlin, Germany. Filed Nov. 3, 1904. Serial No. 231,322.



The herein described process for making a non-alcoholic drink from a fermented liquid, such as beer, consisting in passing a current of water vapor and a current of air together through the alcoholic liquid, under diminished air-pressure, in such manner that by means of a partial condensation of the water vapor the liquid is kept continuously at the same volume, and its alcohol is sucked off with the surplus water vapor and the rarefied air.

874,217. APPARATUS FOR BREAKING ROCKS, &c. FRED LOBNITZ, Renfrew, Scotland. Filed Apr. 30, 1906. Serial No. 314,488.



1. In rock cutting apparatus the combination with hoisting means for raising the cutter and allowing it to fall, of means for controlling the action of the hoisting means, said controlling means being set in action by the cutter when it strikes the rock (so as to again raise the cutter) and also when it is raised to a certain height (so as to let the cutter fall again.

2. In rock cutting apparatus the combination with a hoisting winch for raising the cutter and allowing it to fall, of means (set in action by the cutter when it strikes the rock) to automatically actuate a clutch, and, later, the winch-supply valve for actuating the winch so as to raise the cutter and means (set in action by the cutter when it reaches a certain height) for causing the hoisting winch to lower the cutter.

3. In rock cutting apparatus the combination with a hoisting winch for raising the cutter and allowing it to fall of means for automatically first actuating a clutch and later the winch-supply valve causing the winch to raise the cutter just after it strikes the rock and automatic means for causing the winch to drop the cutter when it is raised to a certain height.

4. In rock cutting apparatus the combination with a winch operated by fluid pressure for raising the cutter and allowing it to fall of means set in action by the cutter when it strikes the rock for automatically opening the fluid supply valve of the winch and means set in action by the cutter when it reaches a certain height, for automatically closing the fluid supply valve of the winch.

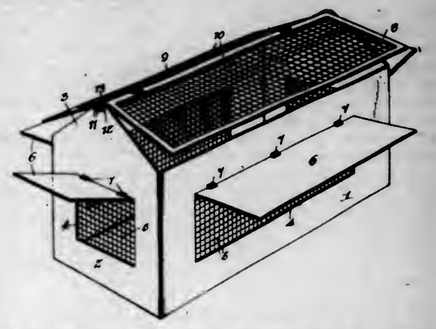
5. In rock cutting apparatus the combination with a steam winch for raising the cutter and allowing it to fall of means set in action by the cutter when it strikes the rock for automatically opening the steam supply valve of the winch and means set in action by the cutter when it reaches a certain height for automatically closing the steam supply valve of the winch.

[Claims 6 to 30 not printed in the Gazette.]

874,218. PLANT AND VEGETABLE BROODER AND GROWER. WILLIAM P. LUTZ, Elizabeth township, Miami county, Ohio. Filed Aug. 26, 1907. Serial No. 390,186.

1. In a device of the character described, the combination of a main frame comprising side and end walls having covered ventilating openings therein, said end walls extending above said side walls, and a cover frame comprising foraminous sections hinged to one another and removably secured between said upper portions of said end walls, above said side walls and resting upon the upper edge of said side walls, substantially as described.

2. In a device of the character described, the combination of a main frame comprising side and end walls having covered ventilating openings therein, said end walls extending above said side walls and tapering thereabove to form central apices, and a cover frame comprising foraminous sections hinged to one another and removably secured between said end walls adjacent their apices and having their outer portions resting on the upper edges of said side walls, substantially as described.

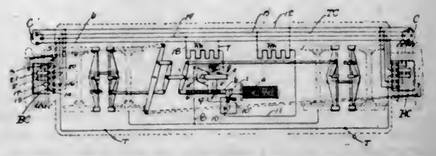


3. In a device of the character described, the combination of a main frame comprising side and end walls having ventilating openings therein covered with a foraminous material and provided with outer opaque covers hinged to said walls, said end walls extending above said side walls and tapering thereabove to form central apices, and a cover frame comprising foraminous sections hinged to one another and removably secured between said end walls adjacent their apices and a textile covering extending over both of said sections, substantially as described.

4. In a device of the character described, the combination of a main frame comprising side and end walls having covered ventilating openings therein, said end walls extending above said side walls and tapering thereabove to form central apices and having openings formed therein adjacent said apices provided with contracted mouths, and a cover frame comprising foraminous sections hinged to one another along their adjacent edges and provided with pins projecting therefrom adapted for insertion in said openings to hold said cover frame in position between said end walls, substantially as described.

5. In a device of the character described, the combination of a main frame comprising side and end walls having ventilating openings therein covered with a foraminous material and provided with outer opaque covers hinged to said walls, said end walls extending above said side walls and tapering thereabove to form central apices and having openings formed therein adjacent said apices, provided with contracted mouths, and a cover frame comprising foraminous sections hinged to one another along their adjacent edges and provided with pins projecting therefrom adapted for insertion in said openings to hold said cover frame in position between said end walls, and a textile covering extending over both of said sections, substantially as described.

874,219. BRAKE FOR POWER-DRIVEN VEHICLES. JOSEPH N. MAHONEY, Brooklyn, N. Y., assignor to himself, James D. Leys, and Samuel Jacobson, New York, N. Y. Filed October 30, 1905. Serial No. 284,987.



1. In vehicle brake mechanism the combination of a brake-spring under tension tending to apply the brakes, a motor adapted to impose further tension upon the spring to partially or wholly release the brakes, a non-reversing driving connection interposed between the motor and the spring and controllable variable clutch devices interposed between the non-reversing connection and the spring and adapted to be operated at will to partially release such

further tension of the spring and thereby variably or gradually apply the brakes.

2. In vehicle brake mechanism the combination of a brake-spring under tension tending to apply the brakes, a motor adapted to impose further tension upon the spring to partially or wholly release the brakes, an operative connection between the motor and the spring whereby when the motor is actuated the spring is subjected to further tension, such connection comprising controllable means for variably or gradually releasing such increased tension of the spring to variably apply the brakes without movement of the motor in reversed direction.

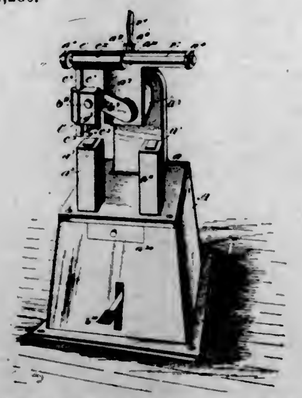
3. In vehicle brake mechanism the combination of a brake spring under tension, the reaction of which affords the entire braking power in all braking operations, a motor adapted to impose increased tension upon the spring to partially or wholly release the brakes, and means under control of the motorman for variably releasing such increased tension of the spring without reverse movement of the motor to thereby variably apply the brakes.

4. In vehicle brake mechanism the combination of a brake-spring under tension tending to apply the brakes, a motor adapted to impose further tension upon the spring to partially or wholly release the brakes, a non-reversing driving connection interposed between the motor and the spring and controllable friction clutch devices interposed between the non-reversing connection and the spring and adapted to be operated at will to partially release such further tension of the spring and thereby variably or gradually apply the brakes.

5. In vehicle brake mechanism, the combination of a brake spring under tension tending to apply the brakes, a rotary motor organized to be run in one direction only, and an operative connection between the spring and motor comprising a non-reversing driving connection, and power actuated clutch devices under the control of the motorman; whereby further tension imposed upon the spring by the action of the motor to release the brakes may be relieved by manipulation of the power clutch controlling devices to permit application of the brakes.

[Claims 6 to 14 not printed in the Gazette.]

874,220. LAUNDRY-MARKING MACHINE. CHARLES H. MAIBEN, Logansport, Ind. Filed Mar. 8, 1907. Serial No. 361,230.



1. A machine of the class described, comprising a base having integral therewith a hollow bracket provided with a horizontal arm having bearings at the ends thereof, a shaft journaled in the bearings, said shaft having at one end within the bracket a pulley, and at the other end a crank arm provided with a journal pin, a spring encircling the shaft within the horizontal arm and having one end thereof engaging said arm, a collar adjustably mounted on the shaft and provided with an opening for engaging the other end of the spring, a transverse arm secured to the end of the horizontal arm, said transverse arm being provided at each end with a lug having a bearing therethrough, a rod having its ends supported in the bearings, a block slidable on the rod and provided with a depending pin, a type block journaled on the crank pin of the shaft and provided with a vertical opening through which slides the pin, said block having a depending flange at one side thereof, and a pin projecting horizontally from the flange for supporting a type, an inking block on one side of the shaft in position to be engaged by the type, a printing block on the other side of the shaft in position for engagement by the type when the shaft is rotated a half turn, and means for partially rotating said shaft.

2. A machine of the class described, comprising a support, a shaft journaled on the support, said shaft having at one end a crank arm provided with a journal pin, a rod arranged above and transversely of the shaft, a block slidable on the rod and provided with a depending pin, a type block journaled on the journal pin and having a vertical opening in which slides the depending pin, said block having at one side thereof a depending flange and a pin projecting horizontally from the flange for supporting a type, an inking block on one side of the shaft in position to be engaged by the type, a printing block on the other side of the shaft in position for engagement by the type when the shaft is rotated a half turn, means for partially rotating the shaft, a spring for returning the shaft to its original position, and a locking arm engaging the sliding block for retaining the type block in a position midway between the inking block and the printing block.

3. A machine of the class described, comprising a support, a shaft journaled on the support, said shaft having at one end a crank arm provided with a journal pin, a rod arranged above and transversely of the shaft, a block slidable on the rod and provided with a depending pin, a type block journaled on the journal pin and having a vertical opening in which slides the depending pin, said block having at one side thereof a depending flange and a pin projecting horizontally from the flange for supporting a type, an inking block on one side of the shaft in position for engagement by the type, a printing block on the other side of the shaft in position for engagement by the type when the shaft is rotated a half turn, means for partially rotating the shaft, and a spring for returning the shaft to its original position.

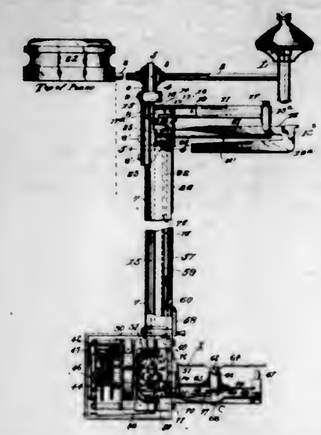
4. A machine of the class described, comprising a shaft having at one end thereof a crank arm provided with a journal pin, a rod arranged above the shaft and transversely thereto, a block slidable on the rod and provided with a depending pin, a type block journaled on the journal pin and having an opening through which slides the depending pin, means on the block for supporting a type, an inking block on one side of the shaft in position for engagement by the type, a printing block on the opposite side of the shaft in position for engagement by the type when the shaft is rotated a half turn, means for partially rotating the shaft, and means for returning the shaft to its original position.

5. A machine of the class described, comprising a shaft, having at one end thereof a crank arm, a transverse rod above the shaft, a block slidable on the rod and provided with a depending pin, a type block connected with the crank arm and having an opening through which slides the pin, means on the block for supporting a type, an inking block on one side of the shaft in position for engagement by the type, a printing block on the opposite side of the shaft in position for engagement by the type when the shaft is rotated a half turn, and means for partially rotating the shaft.

874,221. MUSIC-LEAF TURNER. CHARLES A. MATHENY, Montgomery, Ala. Filed Oct. 16, 1906. Serial No. 339,207.

1. A music leaf turner having sheet holders consisting of pivoted arms having attached at their outer ends two inwardly extending clamping wings arranged parallel to the arms and below the same.

2. A music leaf turner having sheet holders consisting of pivoted arms having attached to their outer ends two horizontal inwardly extending clamping wings and a clip for pinching the outer ends of said wings together.



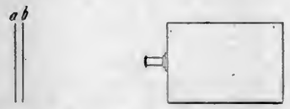
3. A music leaf turner having pivoted arms bearing swinging sheet holders for each sheet, each holder consisting of two horizontal wings attached at their outer ends to the pivoted arms and projecting inwardly beneath the same and a stationary semi-circular support located between the pivoted arms and inwardly projecting wings.

4. A music leaf turner having swinging sheet holders, each consisting of a pivoted arm made flat in cross section and twisted in its length and bearing at its outer end two horizontal and inwardly projecting clamping wings arranged to lie compactly against each other when folded together.

5. A music leaf turner having separate horizontally swinging sheet holders, a horizontally oscillating turning arm with a pivoted trip, a motor mechanism, and means for controlling the position of the trip.

[Claims 6 to 12 not printed in the Gazette.]

874,222. COMBINATION OF LINE AND SCREEN PHOTOGRAPHY. EDUARD MERTENS, Gross-Lichterfelde, near Berlin, Germany. Filed July 12, 1906. Serial No. 325,040.



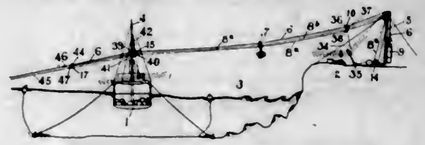
1. The herein described process of producing photographic images, consisting in producing whole-tones and half-tones, first one and then the other, on the same sensitized surface.

2. The herein described process of producing photographic images, consisting in successively exposing to the same sensitized surface whole-tone and half-tone images on grounds of non-actinic color.

3. The herein described process of producing photographic images, consisting in producing successively on a single sensitized surface whole and half-tone photographic images from images on transparent films of non-actinic color.

874,223. CONVEYING APPARATUS. THOMAS S. MILLER, South Orange, N. J. Filed Dec. 14, 1904. Serial No. 236,851.

1. In combination, a traction rope extending from the shore over and beyond a vessel, an anchorage seaward of the vessel whereby said traction rope is held distended, a load carriage operated by said traction rope and a support for said traction rope on the vessel between the load carriage and the seaward end of said traction rope.



2. In combination, a traction rope extending from the shore over and beyond a vessel and back again, a sheave in the seaward loop of said traction rope, an anchorage to which said sheave is secured, a load carriage operated by said traction-rope and a support on the vessel for said traction rope between the load carriage and sheave.

3. In combination, a traction rope extending from the shore over and beyond a vessel and back again, two friction drums with which the opposite ends of said traction rope are connected, a sheave in the seaward loop of said traction rope, an anchorage to which said sheave is connected and a support on the ship for said traction rope between said load carriage and sheave.

4. In combination a carrying cable extending from a stationary anchorage over a vessel to an anchorage seaward therefrom, a flexibly mounted support on the vessel forming a running engagement with said carrying cable, and a load carriage on said carrying cable.

5. In combination, a carrying cable extending from the shore over a vessel to an anchorage seaward therefrom, a traction rope extending from the shore over and beyond said vessel and connected with said anchorage and a support on said vessel forming a running engagement with both said cable and traction ropes and a load carriage operated on said cable by said traction rope.

[Claims 6 to 22 not printed in the Gazette.]

874,224. COLLAR-BUTTON. JAMES N. MILLS, Pittsburg, Pa. Filed Mar. 8, 1907. Serial No. 361,337.



A collar button having an elongated base plate provided at one end with a bent or folded portion constituting a hinge-knuckle, said folded portion being provided with oppositely disposed notches or recesses adjacent to the base plate, in combination with a clamping member consisting of an open link, the terminal ends of which engage the bent portion forming the knuckle, and the notches in the latter; said notches serving to secure the clamping member in extended position and when folded flat upon or in relation to the base plate.

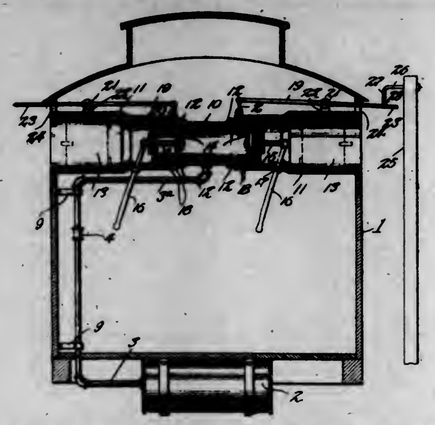
874,225. MAIL-BAG DELIVERER. JAMES MILLSAP, De Soto, Mo. Filed Oct. 17, 1907. Serial No. 397,840.

1. A mail bag deliverer comprising a cylinder, pistons mounted in said cylinder, discharge tubes connected to said cylinder, pistons in said cylinder, locking pins for holding said pistons in one position, levers connected to said pins and extending out through the car, and a compressed air reservoir connected to said cylinder between said pistons.

2. In a mail bag deliverer, a cylinder, pistons in said cylinder, discharge tubes connected to said cylinder, a compressed air reservoir connected to said cylinder between said pistons, and means for discharging air from the cylinder to said tubes.

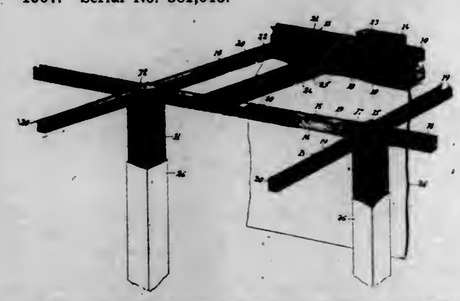
3. In a mail bag deliverer, the combination of a cylinder, pistons in said cylinder, means for locking said pistons, a lever connected to said means and extending out through openings in the sides of the car, a compressed air reservoir leading to the cylinder between the pistons, and

a post and trigger for operating the levers for discharging air from the cylinder to the tubes to deliver mail bags.



4. In a device of the character described, a cylinder, discharge tubes connected to said cylinder, a compressed air reservoir communicating with said cylinder, pistons in the cylinder, discharge tubes connected to the cylinder, and means for admitting the air from said cylinder to said tubes for discharging mail bags.

874,226. REINFORCED CONCRETE CONSTRUCTION. JOHN W. MULDOON, New York, N. Y. Filed June 27, 1907. Serial No. 381,045.



1. A reinforced concrete column, comprising a plurality of reticulated metal baskets placed one upon the other and each filled with concrete after having been placed in position and before the next successive basket is placed in position.

2. The method of forming reinforced concrete columns, consisting in placing in the desired position an open-topped metal basket, filling the same with concrete, superimposing thereon a second basket having a reticulated bottom, filling said second basket with concrete, whereby the concrete in one basket unites through the openings in the bottom with the concrete in the basket below, and repeating the operation until the desired height is attained.

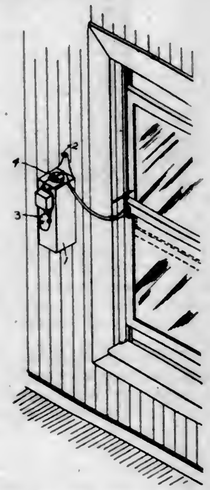
3. A reinforced concrete structure, including a wall formed of baskets filled with concrete, a column formed of baskets filled with concrete, and girders formed of baskets integral with the wall and the column and also filled with concrete.

4. A reinforced concrete structure, comprising a wall, including a basket having a girder-forming extension upon one side thereof, a column including a basket having a girder-forming extension upon one side thereof, said extensions being in alinement, and concrete filling said extensions and forming therewith a girder connecting said wall and said column.

5. A reinforced concrete structure, comprising a column formed of a plurality of baskets superimposed and filled with concrete, the concrete in one basket uniting through the openings in the bottom thereof with the concrete in the basket below, and a basket having a body portion similar in form to the baskets in the column and having a girder-forming extension integral therewith and filled with concrete to form a girder.

[Claims 6 to 10 not printed in the Gazette.]

874,227. PORTABLE BURGLAR-ALARM. JOSEPH L. MULRY, Pawtucket, R. I., assignor of one-third to Charles P. Rollings, Pawtucket, R. I. Filed Aug. 14, 1907. Serial No. 388,470.



1. In a portable burglar alarm, an electrically actuated alarm, an automatically actuated circuit closer, a resilient bridging member, a bar adjustably mounted in said member and adapted to be set in engagement with an object to hold said member out of electric contact, and means whereby the change of the relative positions of said object and said circuit closer will cause said bridging member to drop and complete the circuit and sound the alarm.

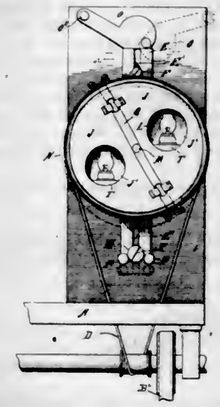
2. In a portable burglar alarm, an electrically actuated alarm, an automatic circuit closer, a bridging member, a jointed tripping bar adapted to be set in engagement with an object to hold said member out of electrical contact, and means whereby the change of positions of said object with relation to that of said circuit closer will allow said bridging member to complete the circuit and sound the alarm.

3. In a portable burglar alarm, an electrically actuated alarm, an automatic circuit closer, a bridging member, a jointed tripping bar adapted to be set in engagement with an object to hold said member out of electrical contact, and means whereby the change of position of said object with relation to that of said circuit closer will cause the jointed portion of said arm to be tripped and allow said bridging member to complete the circuit and sound the alarm.

4. In a portable burglar alarm, an electrically actuated alarm, an automatic circuit closer adapted to be readily attached in position, a bridging member, a jointed tripping bar adjustably mounted in said member and adapted to be set in engagement with an object to hold said members out of electrical contact, and means whereby the change of position of said object with relation to that of said circuit closer will cause the jointed portion of said arm to be tripped and allow said bridging member to complete the circuit and sound the alarm.

5. In a portable burglar alarm, an electrically actuated alarm, an automatically actuated circuit closer, a resilient bridging member, a bar adjustably mounted in said member, said bar being provided with a hinged end normally held in position by spring pressure and adapted to be set in engagement with an object to hold said member out of electrical contact, and means whereby the change of the relative positions of said object and said circuit closer will cause said bridging member to drop and complete the circuit and sound the alarm.

874,228. SIGNALING APPARATUS. WILLIAM L. MCWHORTER, Sterling, Ill. Filed May 18, 1907. Serial No. 374,345.



1. A visual signaling apparatus for cars, automobiles, etc., comprising, in combination with a rotable shaft, a rotary casing having openings therein, whereby lights may be disclosed therefrom, connections between said shaft and casing for rotating the latter, and means for lowering said casing to throw the same out of operative connection with said shaft, as set forth.

2. A visual signaling apparatus for cars, automobiles, etc., comprising, in combination with a rotatable shaft, a rotary casing having openings therein, whereby lights may be disclosed therefrom, connections between said shaft and casing for rotating the latter, a spring-pressed member upon which said casing is mounted, and means for moving said member, whereby it will be thrown out of operative connection with said shaft, as set forth.

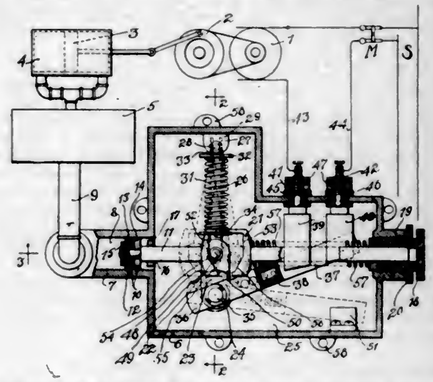
3. A visual signaling apparatus for cars, automobiles, etc., comprising, in combination with a rotatable shaft, a rotary casing having openings therein, whereby lights may be disclosed therefrom, connections between said shaft and casing for rotating the latter, a plate upon which said casing is rotatably mounted, a spring adapted to hold said plate at its highest throw, and a lever adapted to bear against the plate to move the same downward against the tension of said spring, whereby the casing may be thrown out of operative connection with said shaft, as set forth.

4. A visual signaling apparatus for cars, automobiles, etc., comprising, in combination with a rotatable shaft, a rotary casing having openings therein, whereby lights may be disclosed therefrom, connections between said shaft and casing for rotating the latter, a plate upon which said casing is rotatably mounted, a spring adapted to hold said plate at its highest throw, and a cam lever pivotally connected independent of the plate and adapted to bear against the end of the latter, whereby the plate may be moved against the tension of the spring to which it is connected, as set forth.

5. A visual signaling apparatus comprising, in combination with a car having a rotatable shaft, a longitudinally movable plate, a rotatable casing mounted thereon and provided with openings to disclose lights therethrough, belted connection between said shaft and casing, said plate having slots therein, pins projecting from the car frame and disposed in said slots, whereby the plate may be guided, a buffer fixed to the frame, and projections upon said plate adapted to contact with said buffer, as set forth.

[Claims 6 and 7 not printed in the Gazette.]

874,229. CONTROLLING MECHANISM. JOHN J. NEF, Chicago, Ill., assignor to National Brake and Electric Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Sept. 15, 1905. Serial No. 278,561.



1. In a fluid pressure governor, the combination of a reciprocating rod, means for moving the same in one direction by fluid pressure, a spring for moving the rod in the opposite direction, toggle-members pivotally connected at one end, a pivotal support for the other end of one of said members, a support for the other end of the other member permitting axial movement of said member as the toggle is buckled, parts on said rod adapted to engage the toggle when the rod is reciprocated and between which the toggle can move free of the rod, a spring acting on the toggle to continue movement thereof started by one of said parts, a movable circuit-controller independently pivoted on said pivotal support for one of the members of the toggle, and a loose connection between said toggle-member and controller whereby the former actuates the latter when operated by the spring acting thereon, substantially as set forth.

2. In a fluid pressure governor, the combination of a casing, a rod mounted to reciprocate therein, a piston on the rod, means within the casing for moving the rod in one direction by fluid pressure on said piston and in the other by a spring, toggle-members within the casing pivotally connected at one end, a pivotal support for the other end of one of said members, a support for the other end of the other member permitting axial movement of said member as the toggle is buckled, parts on said rod adapted to engage the toggle when the rod is reciprocated and between which the toggle can move free of the rod, a spring acting on the toggle to continue movement thereof started by one of said parts, a movable circuit-controller within the casing independently pivoted on said pivotal support for one of the members of the toggle, a loose connection between said toggle-member and controller whereby the former actuates the latter when operated by the spring acting thereon, and oil within the casing submerging said parts, substantially as set forth.

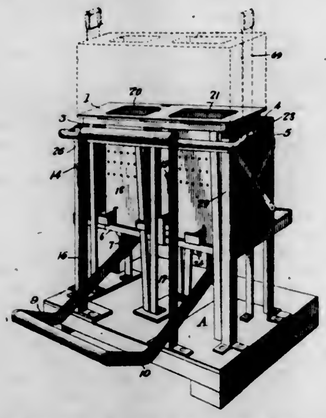
3. In a fluid pressure governor, the combination of a casing having an integral cylindrical extension, a piston reciprocating in said extension, a rod secured to said piston and extending across the casing, a spring for moving said rod in one direction, a toggle mounted within the casing, parts on said rod adapted to engage said toggle and spaced apart to permit movement thereof between them, a spring tending to buckle the toggle, a movable circuit-controller within the casing actuated by said toggle, and oil in said casing submerging the parts therein

and in said extension on both sides of the piston therein, substantially as set forth.

4. In a fluid pressure governor, the combination of a reciprocating rod, means for moving said rod in one direction by fluid pressure, a spring for moving the rod in the opposite direction, toggle-members pivotally connected at one end, a pivotal support for the other end of one of said members, a support for the other end of the other member permitting axial movement of said member as the toggle is buckled, parts on said rod adapted to engage the toggle when the rod is reciprocated and between which the toggle can move free of the rod, a spring tending to buckle the toggle, and a movable circuit-controller operated by the toggle, substantially as set forth.

5. In a fluid pressure governor, the combination of a reciprocating rod, means for moving said rod in one direction by fluid pressure, a spring for moving the rod in the opposite direction, toggle-members pivotally connected at one end, a pivotal support for the other end of one of said members, a support for the other end of the other member permitting axial movement of said member as the toggle is buckled, parts on said rod adapted to engage the toggle when the rod is reciprocated and between which the toggle can move free of the rod, a spring tending to buckle the toggle, a movable circuit-controller mounted on said pivotal support independently of the toggle-member thereon, and parts on said controller and toggle-member brought into engagement by buckling the toggle in either direction to actuate said circuit-controller, substantially as set forth.

874,230. MACHINE FOR MOLDING BUILDING-BLOCKS. ANDREW NELSON, Rock Island, Ill. Filed May 22, 1907. Serial No. 375,010.



1. In a machine for molding blocks, the combination with a mold box, of a removable partition plate arranged in said mold box for shaping one of the sides of the block to be molded, an abutment plate also removably placed within the mold box and adapted to abut against one of the walls thereof, and a hinge connection between the partition plate and said abutment plate.

2. In a machine for molding blocks, the combination with a mold box, of a removable partition plate arranged in said mold box for shaping one of the sides of the block to be molded, an abutment plate also removably placed within the mold box and adapted to abut against one of the walls thereof, and an adjustable hinge connection between the partition plate and said abutment plate.

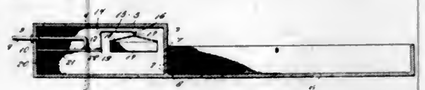
3. In a machine for molding blocks, the combination with a mold box, of a removable partition plate arranged in said mold box for shaping one of the sides of the block to be molded, an abutment plate also removably placed within the mold box and adapted to abut against one of the walls thereof, extensible supporting legs for the abutment plate, and a hinge connection between the partition plate and said abutment plate.

4. In a machine for molding blocks, the combination with a mold having removable sides, of a removable partition arranged in said mold, said partition comprising two plates adjustably connected together at an angle one to the other, an extension plate connected to the outer end of one of the partition-plates, and means connected with the partition for adjusting the same to various positions in the mold.

5. In a machine for molding blocks, the combination with a mold having removable sides and cores, of a bottom plate having openings therein through which the cores project when in position for molding, a plate for closing said openings and adapted to lie flush with the top face of the bottom plate, and means attached to the bottom of said closure plate for securing it in proper position, the same consisting of one or more strips 63 fastened to the bottom of the closure plate and a strip 65 pivoted to a depending stud 66 on said plate, between which strips 63 and 65 a portion of the machine frame is clamped.

[Claims 6 to 13 not printed in the Gazette.]

874,231. AUTOMATIC WATERING-TROUGH. THOMAS OLSON, Northwood, N. D. Filed Mar. 28, 1906. Serial No. 308,614.



A device of the class described comprising a closed casing, a trough leading from one end of the casing, the said end of the casing being provided with a plurality of openings, a wire screen stretched across the said end of the casing and having a mesh finer than the openings therein, a pipe leading into the casing at the end opposite to the perforated end and adjacent the top of the casing, the said pipe having its inner end turned downwardly at right angles and terminating in a plane slightly below the upper edge of the trough, a beam hinged to that end of the casing through which the pipe extends and projecting toward the perforated end of the casing, a leaf spring secured to the end of the casing to which the beam is hinged and extending upwardly and beneath the beam and having its end overturned, a valve fixed upon the beam and adapted to receive the lower end of the pipe and to be held yieldably in such engagement with the pipe by the action of the spring, a bracket secured to the upper face of the beam at its extreme inner end and extending upwardly and thence at right angles beneath the top of the casing, the end of the bracket being terminated short of the perforated end of the casing, and a float supported by flexible connection over the said end of the bracket substantially as described.

874,232. GARMENT-FORM. WILLIAM F. PALMENBERG and EMIL T. PALMENBERG, New York, N. Y. Filed June 19, 1907. Serial No. 379,788.

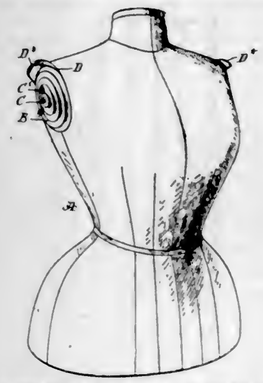
1. A garment form having a body, an arm-hole pattern, and an extender interposed between the body and the arm pattern.

2. A garment form provided with a shoulder padding extender, comprising a plate having its upper end rounded to conform with the arch of the shoulder.

3. A garment form provided with a padding extender at the terminal of the shoulder, said extender consisting of a plate having its end rounded to conform with the arch of the shoulder, and means for raising and lowering the plate.

4. A garment form comprising a body, an arm hole pattern attached to the body at the shoulder, and an extender comprising a plate having its upper end flanged and rounded to conform with the arch of the shoulder, and adjustable up and down on the said arm hole pattern.

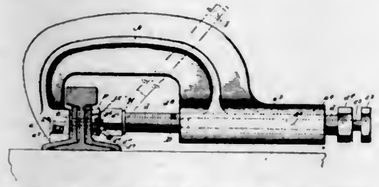
5. A garment form comprising a body, an arm-hole pattern attached to the body at the shoulder, and an extender adjustable up and down on the said arm-hole pattern, the



top of the extender being in the form of an upwardly, outwardly and downwardly curved flange.

[Claims 6 and 7 not printed in the Gazette.]

874,233. MECHANISM FOR LOCKING SPLIT BOLTS. WALLACE W. PARSONS, Mount Rainier, Md. Filed Oct. 3, 1907. Serial No. 395,754.



1. In a device for locking split-bolts, the combination with a jack provided with a supporting portion, a slidable member movably supported by said portion, a key-engaging member carried by said slidable-member, and a bending-tool supported and positioned by said slidable-member and provided with a depression formed with flat-faced walls which incline toward each other.

2. In a device for locking split-bolts, the combination with a jack provided with a supporting-portion, and a head-engaging arm, a slidable-member movably supported by said supporting-portion, a key-engaging-member carried by said slidable-member, and a bending-tool supported and positioned by said slidable-member and provided with a depression formed with flat-faced walls which incline toward each other.

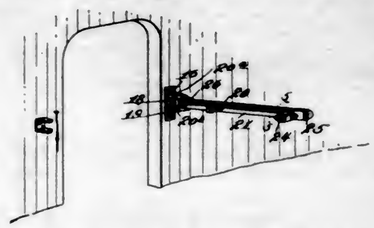
3. In a device for locking split-bolts, the combination with a jack provided with a supporting-portion, a slidable-member movably supported by said portion, a key-engaging-member carried by said slidable-member, and a bending-tool, supported and positioned by said slidable-member and provided with a depression formed with flat-face walls which incline toward each other, and additional means for supporting said jack.

4. In a device for locking split-bolts, a jack, jaw, or body, having arms or portions projecting therefrom, a bolt-bending or swaging-tool supported in one of said arms and provided, at one end, with a depression having converging, flat-surfaced walls.

5. In a device for locking split-bolts, a jack, jaw, or body, having arms or portions projecting therefrom, a longitudinally and axially movable bolt-bending or swaging-tool supported in one of said arms, and provided at one end with a depression having converging flat-surfaced walls.

[Claims 6 to 30 not printed in the Gazette.]

874,234. MAIL-POUCH CATCHER. JOHN W. PEPPLE, Hillsboro, Tex. Filed Aug. 12, 1907. Serial No. 388,188.



1. A mail pouch catcher comprising a swinging arm, a handle carried thereby, and a pouch-shifting arm slidably connected to the catcher arm and having its outer end provided with a hook.

2. A mail pouch catcher comprising a swinging catcher arm, a mail pouch shiftable member having a hook at one end, and a tongue and groove connection between the catcher arm and the said member.

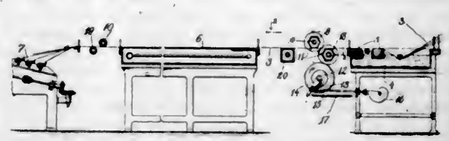
3. A mail pouch catcher comprising a swinging catcher arm, a mail pouch shiftable member having a hook at one end, a tongue and groove connection between the catcher arm and the said member, means carried by the said arm for limiting the shifting movement of said member in one direction.

4. A mail pouch catcher comprising a swinging catcher arm, a mail pouch shiftable member having a hook at one end, a tongue and groove connection between the catcher arm and the said member, and a handle connected to said catcher arm.

5. A mail pouch catcher comprising a swinging catcher arm, a mail pouch shiftable member having a hook at one end, a tongue and groove connection between the catcher arm and the said member, means carried by the said arm for limiting the shifting movement of said member in one direction, and a handle attached to the catcher arm.

[Claims 6 to 9 not printed in the Gazette.]

874,235. SILK-THREAD-FINISHING MACHINE. EDWARD POHL, Paterson, N. J. Filed Apr. 3, 1907. Serial No. 366,097.



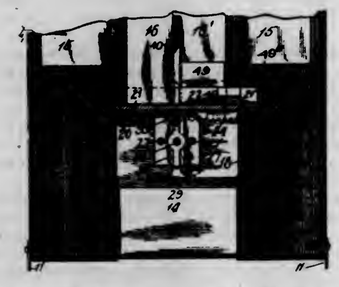
1. In a machine for finishing and lustering textile filaments, the combination with a bath for containing liquid in which the filaments are to be immersed, of a main heated contact surface over which the filaments are arranged to travel and by which they are dried and lustered, an auxiliary heated contact member for engaging the threads, and means for imparting step by step movements to the said member after predetermined periods of rest.

2. In a machine for finishing and lustering textile filaments, the combination with a bath for containing liquid in which the filaments are to be immersed, of a main heated contact surface over which the filaments are arranged to travel and by which they are dried and lustered, an auxiliary heated member arranged between the said main heated contact surface and the bath, said member having surfaces for successive engagement with the threads, and means for imparting step by step movements to the said member so as to bring the several surfaces successively into operation, the said member remaining at rest between such step by step movements.

3. In a machine for finishing and lustering textile filaments, the combination with a bath for containing liquid in which the filaments are to be immersed, of a main

heated contact surface over which the filaments are arranged to travel and by which they are dried and lustered, an auxiliary heated member having contact surfaces for engaging the portions of the threads opposite to those engaged by the main heated contact surface, and means for imparting step by step movements to the said member between intervals of rest so as to bring the several said surfaces successively into operative position.

874,236. VENDING-MACHINE. HARRY S. POND, Chicago, Ill. Filed Feb. 18, 1907. Serial No. 357,795.



1. A vending machine comprising a cabinet having two compartments for the articles to be vended, and a single delivery mechanism for said compartments comprising an ejector slide adapted to be reciprocated beneath said compartments, there being tables on said slide at each end thereof, and an ejector on the slide between said tables to move the articles alternately from said compartments on said tables.

2. A vending machine comprising a cabinet having two compartments for the articles to be vended, and a single delivery mechanism for said compartments comprising an ejector slide adapted to be reciprocated beneath said compartments, there being a table on said slide at each end thereof, and a pair of ejectors located between said tables and at opposite sides of said slide to move the articles alternately from said compartments.

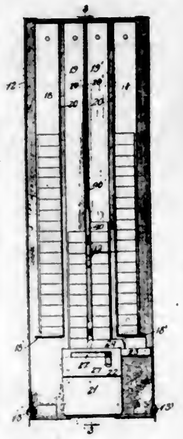
3. A vending machine comprising a cabinet having two compartments for the articles to be vended, and a single delivery mechanism for said compartments comprising a slide adapted to be reciprocated beneath said compartments, there being a table on said slide at each end thereof, an ejector carried by the slide between said tables to move the articles alternately from said compartments on said tables, and a device for locking said slide at the limit of its movement in either direction with one table beneath one of said compartments, the ejector beneath the other compartment and the other table supporting one of the articles from the last mentioned compartment in position to be delivered on the return movement of the slide.

4. A vending machine comprising a cabinet having two compartments for the articles to be vended, and a single delivery mechanism for said compartments comprising a slide adapted to be reciprocated beneath said compartments, there being a table on said slide at each end thereof, an ejector on the slide between said tables to move the articles alternately from said compartments on said tables, and means for discharging articles from said tables.

5. A vending machine comprising a cabinet having two compartments for the articles to be vended, and a single delivery mechanism for said compartments comprising a slide adapted to be reciprocated beneath said compartments, there being a table on said slide at each end thereof, an ejector on the slide between the tables to move the articles from the compartments alternately on the tables, and means for discharging the article on one table from one compartment as the ejector travels in the opposite direction to move an article from the other compartment on the other table into discharge position.

[Claims 6 to 12 not printed in the Gazette.]

874,237. VENDING-MACHINE CABINET. HARRY S. POND, Chicago, Ill. Filed Feb. 18, 1907. Serial No. 357,796.



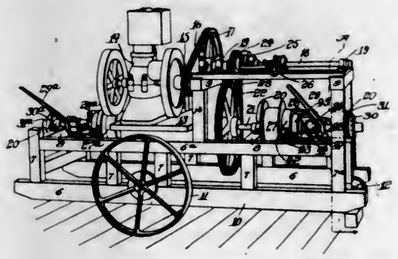
1. A vending machine cabinet comprising a back part, a front or cover part hinged to the back part and constructed to telescope thereon, a frame centrally disposed within the back part of the bottom thereof to support the delivery mechanism, two delivery compartments arranged above said frame and open at the bottom, a storage compartment between each side of the back part and the delivery compartments therein, said storage compartments being above the plane of movement of the delivery mechanism and closed at the bottom, and said front or cover part having delivery openings at its lower corners opposite the spaces below the storage compartments and between the sides of the back part and said frame.

2. A vending machine cabinet comprising a back part, a front or cover part hinged to the back part and constructed to telescope thereon, a frame centrally disposed within the back part at the bottom thereof to support the delivery mechanism, two delivery compartments arranged above said frame and open at the bottom, a storage compartment between each side of the back part and the delivery compartments therein, said storage compartments being above the plane of movement of the delivery mechanism and above the lower ends of the delivery compartments, said frame and said front or cover part having registering elongated horizontal slots to receive the handle of the delivery mechanism and said front or cover part having two delivery openings at its lower corners opposite the spaces below the storage compartments and between the sides of the back part and said frame.

874,238. HOISTING APPARATUS. EDMOND PUTNAM, Rossville, Ill. Filed Feb. 8, 1907. Serial No. 356,398.

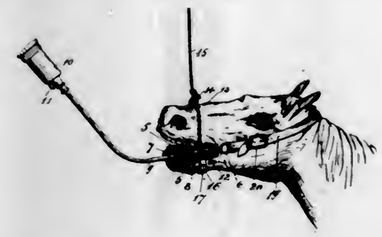
1. In a hoisting apparatus, the combination with the framework, of the parallel driving and driven shafts journaled in bearings therein, the motor carried by the framework adapted to rotate the driving shaft continuously in one direction, gearing connecting the driving and the driven shaft, a clutch included in said gearing, a winding drum loosely mounted on the driven shaft, a detent mechanism interposed between the framework and the driven shaft to prevent its backward rotation, and a clutch mechanism interposed between the winding drum and the driven shaft.

2. In a hoisting apparatus, the combination with the framework, of the parallel driving and driven shafts, the driven shaft being journaled in two end bearings as well as an intermediate bearing, the motor carried by the framework adapted to rotate the driving shaft continuously in one direction, gearing connecting the driving and the driven shaft and located adjacent the intermediate bearing, a clutch included in said gearing, a pair of winding drums located on the driven shaft toward the ends thereof, a detent mechanism interposed between the framework and one end of the driven shaft to prevent its backward rotation, and a pair of clutch mechanisms interposed between the winding drums and the driven shaft.



3. In a hoisting apparatus, the combination with the framework having the bottom and intermediate longitudinal sills extending the entire length of the framework, and the transverse bearing sills at the top of the framework on one end thereof, of the driving shaft journaled in bearings formed on the transverse sills, the gas engine mounted on a platform located on the other end from the driving shaft, gearing between the engine and the driving shaft, the driven shaft extending beneath the engine and journaled in bearings formed slightly above the level of the upper pair of elongated sills, gearing connecting the driving and the driven shaft, a clutch included in said gearing, a pair of winding drums loosely mounted on the driven shaft near the ends thereof, a pair of detent mechanisms interposed between the framework and the driven shaft at the ends of the shaft to prevent its backward rotation, and a pair of clutch mechanisms interposed between the winding drums and the driven shaft.

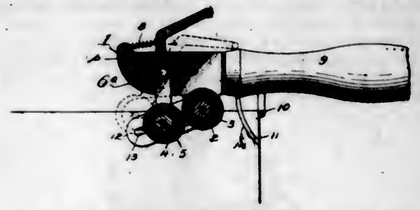
874,239. DRENCHING-BIT. GEORGE W. RATLIFF, Kyana, Ind., assignor of one-half to Joseph W. Haas, Schnellville, Ind. Filed June 27, 1907. Serial No. 381,037.



1. A drenching-bit comprising side-bars having attaching means and connected at one end by a cross-bar, a bit-bar extending between and connected to the side-bars, a reservoir, a tube carried by the cross-bar and the bit-bar and connected to the reservoir, loops on the side-bars adjacent to the bit-bar, and a bail connected to said loops.

2. A drenching-bit comprising side-bars connected at one end by a cross-bar and having loops at the opposite end, a strap connected to the loops, a bit-bar extending between and connected to the side-bars, top and bottom loops on the side-bars adjacent the bit-bar, a bail connected to the top loops, a strap connected to the bottom loops, a reservoir, and a tube carried by the bit-bar and the cross-bar and connected to the reservoir.

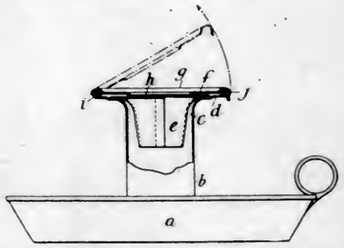
874,240. TOWEL-WRINGER. CHARLES M. REED, Nashville, Ohio. Filed July 31, 1907. Serial No. 386,396.



1. In a device of the class described, a frame having a handle, a wringer roller supported for rotation in said frame, a bucket or container, a hinge connecting said bucket with the handle of the roller carrying frame, spring actuated arms pivoted upon the side members of the roller carrying frame, a mating roller carried by said arms, and a cross bar connecting the arms and constituting a handle whereby they may be simultaneously operated.

2. In a device of the class described, a frame having a handle, a wringer roller supported for rotation in the frame, spring actuated arms pivoted upon the side members of the frame, a mating roller journaled upon said arms, cheek pieces pivoted upon the shaft of the roller carried by the frame and having slots engaging the shaft of the roller carried by the pivoted arms, and a cross bar connecting said arms.

874,241. CANDLESTICK AND CANDLE-HOLDER. MURIEL E. M. REISCHER, London, England. Filed Apr. 4, 1907. Serial No. 366,436.



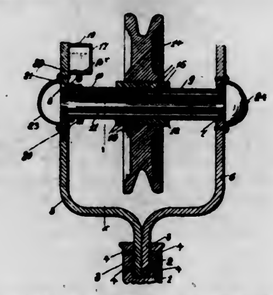
In a candlestick, the combination with a socket portion, of a resilient candle holder comprising a tube split longitudinally and having its edges overlapped, said candle holder fitting within said socket portion and having outwardly extending portions for engaging and bearing upon the upper edge of said socket portion and a cap hinged at one side to said socket portion and provided on its opposite side with a catch for detachably engaging said socket portion, said cap being adapted to clamp said holder to said socket portion and having an orifice therein in line with said tubular holder, substantially as described.

874,242. TROLLEY. CHARLES M. RHODES, Steubenville, Ohio. Filed Nov. 10, 1904, Serial No. 232,187. Renewed Sept. 20, 1906. Serial No. 335,481.

1. A device of the type described comprising a two piece harp, a spindle mounted in said harp, said spindle having an opening extending from end to end thereof, a wheel rotatably mounted upon said spindle, means carried by said harp for lubricating said wheel, and means carried by said harp for deflecting air into and through the opening in said spindle, substantially as described.

2. The combination with a trolley pole, of a two-piece harp secured to said pole, a spindle carried by said harp, a wheel journaled upon said spindle, means for ventilating said spindle, and means for lubricating the wheel, mounted upon said spindle through a longitudinal passage formed in the spindle.

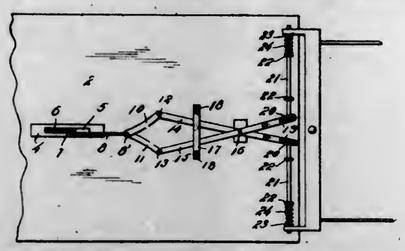
3. The combination with a trolley pole, of a two-piece harp secured to said pole, a hollow spindle mounted in said harp, a wheel journaled upon said spindle, receptacles carried by said harp and adapted to contain a lubricant, means for conveying said lubricant through said spindle and to the outside thereof at a point within the hub of the wheel, and means for ventilating said spindle, substantially as described.



4. The combination with a trolley pole, of a harp secured to said pole, a hollow spindle mounted in said harp, a wheel journaled upon said spindle, a receptacle carried by said harp and adapted to contain a lubricant, means for conveying said lubricant from said receptacles through the spindle to a point within the hub of the wheel journaled upon said spindle, and means for deflecting air into said hollow spindle, substantially as described.

5. In a device of the type described, the combination with a harp, of a spindle mounted in the arms thereof, said spindle having an opening extending through from end to end thereof, and an air deflector arranged at each end of the spindle, the air deflector at one end opening in a direction opposite to the deflector at the other end of the spindle, substantially as described.

874,243. HORSE-DETACHER. MICHAEL R. RITTS, McClure, S. D. Filed Apr. 24, 1907. Serial No. 370,010.

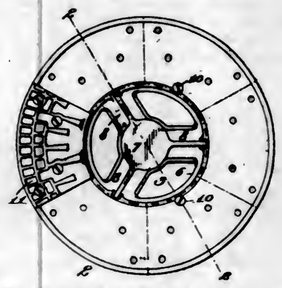


A device of the type set forth, comprising an operating lever pivoted to a stationary object along its body portion, a link pivoted to the lower end of said lever and at its other end having common pivotal connection with the end links of a lazy-tongs mechanism, said lazy-tongs mechanism including cross links pivoted to one another along their body portion, and pivoted to the ends of said end links, the pivot of said cross links being stationary, said cross links being provided at their other ends with slots, sliding members supported from the vehicle and adapted for engagement with an element which carries the swingle tree, and pivotal connections engaging in said slot between said sliding members and said cross links.

874,244. GRINDING-MILL. HARRY C. ROBINSON, Muncy, Pa. Filed Feb. 23, 1907. Serial No. 358,880.

1. A grinding mill disk having an eye, a hub in the eye, and arms extending from the hub to the wall of the eye combined with a shield removably associated with said disk and covering said arms and wall.

2. The combination of a grinding mill disk having an eye, a hub in the eye, and arms extending from the hub to the wall of the eye, and a shield removably associated with the disk and covering the hub, arms, and wall.



3. A grinding mill disk having an eye, a hub surrounded by the wall of the eye, and arms extending from said hub to the body of the disk, combined with a shield consisting of a hub, arms, and a rim, the hub and arms of the shield being adapted to fit the first mentioned hub and arms, and the rim of the shield being adapted to cover said wall, said shield being removably associated with the disk, and the arms of said shield having their side faces angular and converging toward the inner face of the disk.

4. As an article of manufacture, a shield comprising a hub, arms extending from the hub, and a rim united with the arms, the hub being of chambered form and the arms being of channel form.

5. As an article of manufacture, a shield comprising a hub, arms extending from the hub, and a rim united with the arms, the hub being of chambered form and the arms being of channel form, said arms having angular converging faces.

[Claims 6 and 7 not printed in the Gazette.]

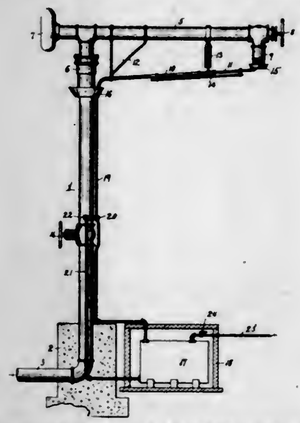
874,245. LAMP-SOCKET. JOHN J. ROONEY, Scarsdale, N. Y. Filed Jan. 10, 1906. Serial No. 295,334.



1. As a new article of manufacture, an incandescent lamp socket, comprising a piece of cylindrical tubing open at both ends, a conducting shell threaded to receive a lamp base and fitting within said tube, the ends of said tube being extended beyond the ends of said shell, an insulating base mounted in the bottom of said shell, an inner contact carried by said base, a cap or bushing mounted upon the rear end of said tube, conductors extending through said bushing, one attached to said inner contact and the other to said shell, and solid insulating material filling in the rear portion of said tube to hold the parts of the sockets in position and insulate conducting parts.

2. As a new article of manufacture, a lamp socket, comprising a cylindrical tube of insulating material, a conducting shell threaded to receive a lamp socket and fitting within said tube, said tube being prolonged beyond the ends of said shell, an insulating piece mounted in the bottom of said shell, an inner contact carried by said insulating piece, a bushing arranged upon the rear end of said tube, said bushing having a shank fitting into said tube and a bead or flange engaging the rear end of said tube, conductors passing through said bushing, one attached to said inner contact and the other to said contact shell, and a solid insulating material filling the rear portion of said tube and said bushing to hold parts of the socket in position, and insulate conducting parts.

874,246. OIL-COLUMN. WESLEY M. ROSE, Sacramento, Cal. Filed June 25, 1906. Serial No. 323,249.



1. The combination with a fluid stand pipe, of a waste receptacle, means connecting said receptacle with the delivery end of said pipe, and means connecting said receptacle with said stand pipe below the delivery end.

2. The combination with a fluid stand pipe, of a waste receptacle, means connecting said receptacle with the delivery end of said pipe, means connecting the receptacle with said stand pipe below the delivery end and means to discharge the waste from said receptacle into the supply pipe.

3. The combination with a fluid stand pipe, of means to collect the drippings from the delivery end of the pipe and means to discharge said drippings into the supply pipe of the stand pipe, whereby the waste of the fluid is prevented.

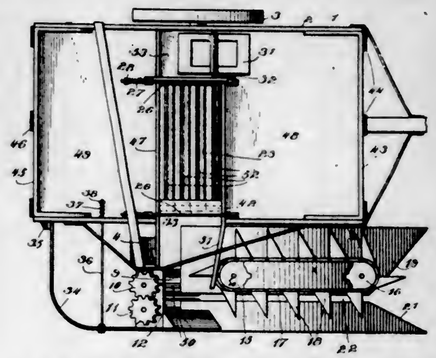
4. In a stand pipe, the combination with the delivery pipe, of a drip pan and pipe leading therefrom, and resiliently mounted on said delivery pipe.

5. In a stand pipe, the combination with a vertical pipe, a sump secured around the same, of a horizontal delivery pipe revolubly mounted on said vertical pipe, a drip pan adapted to close the end of the delivery pipe, a pipe connected to said pan and leading in said sump but free to move around the vertical pipe within said sump.

[Claims 6 to 9 not printed in the Gazette.]

874,247. CORN HARVESTING AND HUSKING MACHINE. JOSEPH ROSS, Vincennes, Ind. Filed July 25, 1906. Serial No. 327,681.

1. In a corn harvesting and husking machine, the combination of snapping rolls, a casing therefor, said snapping rolls being journaled in said casing, guide plates associated with said rolls and spaced apart from each other, means for leading the corn stalks between said guide plates, a brace 34 connected to the said casing, a rod 36 connected to said brace for applying tension to said snapping rolls to resiliently hold the same together, and a series of husking rolls associated with said snapping rolls, substantially as described.



2. In a corn harvesting and husking machine, the combination of snapping rolls, a casing therefor, one end of said snapping rolls being free to approach the other, means for applying tension to said rolls to resiliently hold the same together, said rolls being provided with a series of longitudinal grooves which grooves flare outwardly near the forward ends of said rolls, substantially as described.

874,248. LAMP-BURNER. JUSTIN E. ROSS, Springfield, Mo. Filed Feb. 28, 1907. Serial No. 359,844.

1. A lamp burner provided at the under side of its neck with a perforated cap hinged to the neck and having a wick passage in register with the lower end of the wick tube opening into the said cap, and means for locking the said cap in place against the under side of the neck.

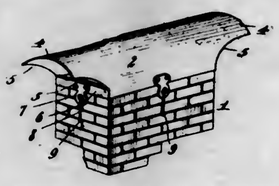
2. A lamp burner provided at the under side of its neck with a cap having perforations in its bottom and sides, the cap being hinged at one side to the under side of the said neck, fastening and alining means for holding the cap locked in place on the under side of the neck, and an eyelet in the cap for passage of the wick to the wick tube, the latter opening into the cap and registering with the said eyelet.

874,249. CHIMNEY CAP OR VENTILATOR. JOHN C. ROTHBARTH, Buffalo, N. Y. Filed May 11, 1907. Serial No. 373,190.

1. A chimney cap or the like consisting of a longitudinally curved body-portion adapted to fit over the top of the chimney with the longitudinal marginal portions thereof against opposite sides of the chimney, extensions at the ends of the body-portion curved to correspond to the latter and gradually narrowed toward their outer ends, and

connectors at the ends of said body-portion bearing against the remaining sides of the chimney.

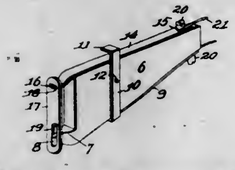
2. A chimney cap or the like consisting of a longitudinally curved body-portion adapted to fit over the top of the chimney with the longitudinal marginal portions thereof against opposite sides of the chimney, extensions at the ends of said body-portion curved to correspond to the latter and gradually narrowed toward their outer ends, and connectors of angle shape in cross section connecting the lower marginal portions of the body-portion at the ends thereof and bearing against the top and the remaining sides of the chimney.



3. As an article of manufacture, a metallic sheet or blank of substantially rectangular formation having two notches cut in each end, each notch having one side thereof in a straight line and parallel with the longitudinal edges of the blank and its other side curved to meet the inner end of the first-mentioned side, and an incision cut into the blank at the inner end of each notch at a right-angle to the straight-lined side thereof, substantially as and for the purpose set forth.

4. A chimney-cap or the like consisting of a longitudinal curved body portion having integral end extensions, end connecting-members formed by extensions of the body-portion bent inward to overlap and lie against opposite ends of a chimney, and depending clips at the sides of the body-portion and at the overlapped ends of said connecting-members whereby the cap may be fastened to the chimney.

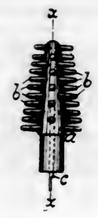
874,250. FIRE-ALARM AND SIGNALING DEVICE. LOUIS SACKWITZ, St. Louis, Mo. Filed May 14, 1907. Serial No. 373,689.



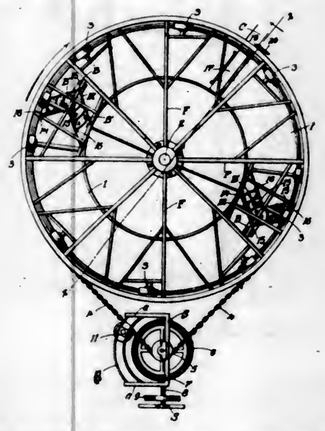
A device of the class described, comprising an elongated flattened head, a contact plate located on one edge of the head, a strip provided with a right angular projection connected to one side of the head and formed integral with the contact plate, a spring contact plate located on the opposite edge of the head, a tooth formed on the head, a fuse attached to the tooth and to the spring contact plate to hold the same out of contact with the right angular projection of the opposite contact plate, both of said contact plates being connected to wiring located in a building and the said heads arranged at intervals apart throughout the building to automatically create an alarm in the office as well as the fire company house whenever one of the fuses becomes detached from the head, substantially as specified.

874,251. IMPLEMENT FOR MASSAGE, SHAMPOOING, AND OTHER PURPOSES. HERMANN F. SCHELLING, Weehawken, N. J. Filed May 31, 1907. Serial No. 376,631.

An implement for massage and the like comprising a rotary body portion of hard rubber with soft rubber teeth, said body portion comprising two halves and a stem having a flattened portion secured between said halves.



874,252. MORTAR-MAKING MACHINE. PETER SCHWIETE, St. Louis, Mo. Filed Apr. 25, 1906. Serial No. 313,686.



1. In a mortar making machine, the combination of a suitable annular trough, with a frame rotatable above the same, blades connected to and depending from the frame into the trough, and disposed in two sets converging toward a point between the vertical bounding walls of the trough, and a cutter blade located in advance of the angle of convergence of the sets of blades aforesaid, substantially as set forth.

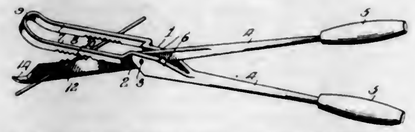
2. In a mortar making machine, the combination of an annular trough, with a rotatable frame superposed above the same, blades connected to and depending from the frame into the trough and disposed in sets converging along two sides of a triangle whose third side is disposed substantially along the radius of the rotatable frame, and a cutter blade in advance of the angle of convergence of the sets of blades aforesaid, substantially as set forth.

3. In a mortar making machine, the combination of an annular trough, with a rotatable frame superposed above the same, blades connected to and depending from the frame into the trough and disposed in sets converging along two sides of an isosceles triangle whose third side lies across the width of the trough, and a downwardly inclined blade independent of the converging sets located at and projecting a suitable distance in front of the angle of the converging sets, substantially as set forth.

4. In a mortar making machine, the combination of an annular trough, with a rotatable frame superposed above the same, a V-shaped apron carried by the frame the legs of the apron extending from the inner and outer walls of the trough and meeting at a point or apex intermediate the said walls, a blade connected to and projecting from the apron in front of the apex thereof, and blades disposed behind each leg of the apron, substantially as set forth.

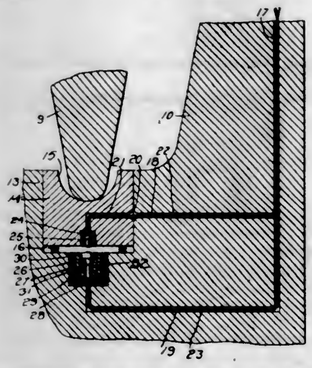
5. In a mortar making machine, the combination of an annular trough, with a rotatable frame superposed above the same, a V-shaped apron carried by the frame, the legs of the apron being substantially equal in length and spanning the space between the inner and outer walls of the trough, the apex of the legs meeting at the medial line of the trough, a cutting blade connected to the apron and projecting in front of the apex thereof and having a cutting edge bearing against the bottom of the trough, blades or followers disposed behind each leg of the apron and having horizontal wings or members provided with front cutting edges, and with upwardly deflected or vertical wings convexed from the apex of the apron, whereby there is formed a curved open ended passage-way between each pair of followers and the material operated on is subjected to a turning or revolving motion and the ingredients thoroughly mixed, substantially as set forth.

874,253. WIRE-STRETCHING TOOL. JOHN L. SCOTT, Pittsfield, Ill., assignor of one-half to Harry C. Miller, Pittsfield, Ill. Filed Jan. 7, 1907. Serial No. 351,161.



A device of the class described comprising a pair of cross members each consisting of a shank and a jaw, a pivot connecting the shanks at the inner ends of the jaws, and grips on the shanks, one jaw being composed of a loop having its outer end curved laterally and provided with serrations at a point intermediate its ends, and the other jaw being substantially straight throughout its length and of V-shaped cross section to enter the other jaw and having serrations coinciding with those of the looped jaw, and a stop on the extremity of the straight jaw which engages the laterally bent portion of the looped jaw.

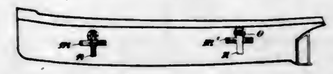
874,254. REGISTERING DEVICE. MARSHALL M. SHUMAKER, Terre Haute, Ind. Filed Jan. 14, 1907. Serial No. 352,297.



1. A registering mechanism of the class described, the combination with a punch head and means for actuating the head, of a block arranged within the head for sliding movement, means for holding the block normally at the limit of its upward movement, a contact member seated in the under face of the block, a contact member supported yieldably in the head and adapted to be engaged by the contact upon the block upon the initial downward movement of the block, an electric circuit in which the contacts are located, and a register located in the said circuit.

2. In a registering mechanism of the class described, the combination with a punch head provided with a recess, and means for actuating the head, of a block slidably received in the recess, means for holding the block at the limit of its upward movement, a contact member seated in the under face of the block, the punch head being provided with a bore opening into the recess therein, an insulated socket seated in the bore and arranged concentrically with respect to the contact member in the block, a contact slidably received in the socket, a stem formed upon the head and extending through the bottom of the socket, a spring engaged upon the stem and acting upon the head to normally hold the same in elevated position, the contact member carried by the block being designated to contact with the contact head upon the initial downward movement of the block prior to movement of the punch head, an electric circuit in which the contacts are interposed, and a register located in the circuit.

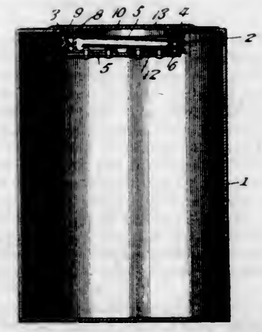
874,255. DEVICE FOR DIMINISHING THE ROLLING MOTION OF SHIPS. RUDOLF SKUTSCH, Brunswick, Germany. Filed Mar. 10, 1906. Serial No. 305,321.



1. A device for diminishing rolling movements of a vessel without simultaneously producing pitching movement, comprising a pair of rotatable elements mounted in swinging supports adapted to be braked, one of said elements rotating in an opposite direction with respect to the other, means for braking said supports whereby couples of force acting upon the vessel, are provided, those of the couples which attempt to produce a pitching movement counteract each other, thereby preventing pitching movement of the vessel.

2. A device for minimizing the rolling movements of a vessel without simultaneously producing pitching movement, comprising a pair of rotatable elements having the axis thereof capable of being angularly displaced, one of said elements rotating in an opposite direction with respect to the other of said elements, means whereby the axis of each of said elements can be angularly displaced, and braking means for arresting the angular displacement of said elements.

874,256. CAN-CLOSURE. SARAH B. SLEIGHT, Chicago, Ill. Filed Apr. 4, 1906. Serial No. 309,796.



A can closure comprising a can with its top portion having a screw threaded downwardly projecting flange with a surrounding marginal rabbeted portion, a central opening formed by said flange, a hollow cover for said opening having a solid bottom with a screw threaded rim, said rim being provided with a marginal offset above its screw threads, and further provided with a circumferential flange to contact with the can top, a handle for the cover secured to the bottom portion thereof and wholly inclosed within its hollow portion, a gasket seated in the offset of

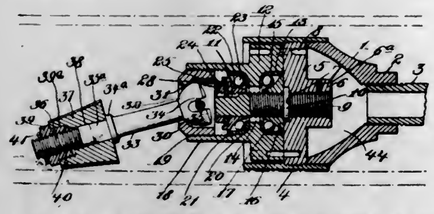
the cover and serving to contact with the rabbeted seat of the flange of the can top, and means for sealing the can secured to the handle and flange of the cover, and also to the top portion of the can, substantially as specified.

874,257. SUSPENDER. GEORGE W. SPOTSWOOD, Mobile, Ala. Filed June 24, 1904. Serial No. 214,020.



A garment suspender comprising an arch-shaped strip of flexible material embodying in its construction a pair of outwardly-projecting diverging terminal portions, said terminating in said terminal portions, and said strip further between the strip and the garment, said strip further comprising a pair of diverging portions of compound curvature terminating in said terminal portions, and said strip further formed with a horizontally-extending centrally disposed portion which terminates in said diverging portions of compound curvature.

874,258. TUBE AND FLUE CLEANER. HARRY S. STORMER, Johnstown, Pa. Filed Jan. 12, 1907. Serial No. 352,039.



1. A tube or flue cleaner comprising a casing, a fixed diaphragm in the casing provided with openings therethrough near the periphery, a stationary shaft secured to the diaphragm and projecting forwardly from the latter, a rotary motor element located close to the diaphragm and movable around the shaft, a rotary motor element also having openings therethrough near the periphery coinciding with those of the diaphragm and provided with an extension which projects beyond the end of the shaft, and a single cleaning head having a shank loosely and separably connected to the forward end of the extension in advance of the end of the shaft, the said cleaning head and shank having lateral movement in opposite directions in addition to the rotative movement imparted thereto by the motor element.

2. A tube or flue cleaner comprising a casing, a fixed diaphragm in the casing, a fixed shaft held by and projecting inwardly from the diaphragm, a rotary motor element loosely operating around the shaft and provided with a forwardly projecting rigid extension, antifrictional devices interposed between the shaft and the rotary motor element, and a single cleaning head having a shank loosely and separably connected to and within the forward end of the extension in advance of the shaft, the cleaning head and its shank having movement in opposite lateral directions in addition to the rotary movement imparted thereto by the rotary motor element.

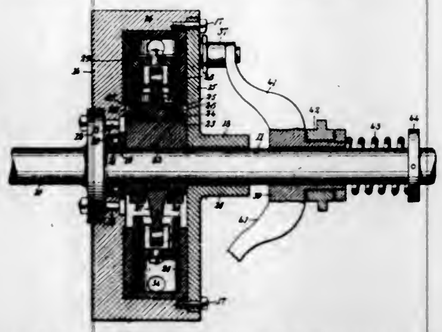
3. A tube or flue cleaner comprising a fixed diaphragm, a fixed shaft screw threaded from end to end and held by the diaphragm, a rotary motor element surrounding the shaft in advance of the diaphragm and provided with a tubular extension and having ball cups disposed therein in reverse positions, screw threaded cones engaging the shaft and also reversibly positioned, balls interposed between the cones and the cups, the rotary motor element being unconnected to the shaft except by the cups, cones and balls, and a cleaning head movably and separably secured in the forward extremity of the extension of the rotary motor element in advance of and in alinement with the said shaft.

4. A tube or flue cleaner comprising a fixed shaft, a rotary motor element disposed on the shaft, and provided with a forwardly projecting tubular extension terminating in advance of the end of the shaft, cones arranged in reverse positions on the shaft, cups carried by the rotary motor element and also disposed in reverse positions, balls between the cups and cones, the forward cone having a seat, a locking washer fitted in the seat of the forward cone and having an inner projection engaging a portion of the shaft, a locking nut engaging the shaft and bearing against the washer, a socket removably mounted in the free end of the extension, and a cleaning head movably secured in the said socket.

5. A tube or flue cleaner comprising a rotary motor element having a tubular extension, a shaft around which the said element operates, a tubular socket secured in the forward extremity of the extension and having an opening therethrough, a stem or shank provided with a rear hemispherical member fitted in the socket, the said head having a rear diametrically arranged slot therein, a pin extending across the socket and loosely engaging in the slot in the member, and a cleaning head mounted on the free extremity of the stem or shank.

[Claims 6 and 7 not printed in the Gazette.]

874,259. CLUTCH. OSCAR TORNFELT, New York, N. Y. Filed Mar. 20, 1907. Serial No. 363,387.



1. In a clutch, the combination of a cylindrical casing having oppositely disposed end walls, a plurality of cylinders detachably secured to one of said walls and carried thereby and fitting within recesses in the opposite wall, said cylinders being radially disposed, means coacting with said cylinders for causing the circulation of a fluid, and means for controlling said circulation.

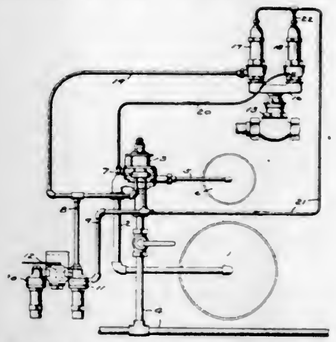
2. In a clutch, the combination of a cylindrical casing having oppositely disposed end walls, a plurality of radially disposed cylinders mounted within said casing and detachably secured to one of said end walls and fitting within radially disposed recesses in the opposite end wall, means coacting with said cylinders for causing the circulation of a fluid, and means for controlling said circulation.

3. In a clutch, the combination of a cylindrical casing having oppositely disposed end walls detachably secured together, a plurality of cylinders radially disposed within said casing and each having flanges detachably secured to one of said end walls, the other of said end walls being provided with recesses into which portions of said cylinders extend, means co-acting with said cylinders for causing the circulation of a fluid, and means for controlling said circulation.

4. In a clutch, the combination of a cylindrical casing having oppositely disposed end walls, and a plurality of cylinders radially disposed within said casing and having flanges detachably securing said cylinders to one of said end walls and the other of said end walls being provided with radially disposed recesses into which said cylinders extend, whereby the cylinders are carried by one end wall but supported against lateral movement by both end walls.

5. In a clutch, the combination of a cylindrical casing having oppositely disposed end walls, a plurality of cylinders detachably secured within said casing and radially disposed in respect thereto, valve casings integral with said cylinders, conduits connecting said cylinders and valve casings in series, and reciprocating valves disposed parallel to the axis of rotation and mounted within said valve casings for controlling the circulation of a fluid.

874,260. FLUID-PRESSURE BRAKE. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Mar. 23, 1906. Serial No. 307,666.



1. In a fluid pressure brake, the combination with a main reservoir, engineer's brake valve, and train pipe, of a pressure governor having a diaphragm chamber and diaphragm subject to the main reservoir pressure, and means for admitting air from the train pipe to the opposite side of the diaphragm.

2. In a fluid pressure brake, the combination with a main reservoir, engineer's brake valve, and train pipe, of a pressure governor having a diaphragm subject on one side to the main reservoir pressure and on the other side to a spring and the train pipe pressure.

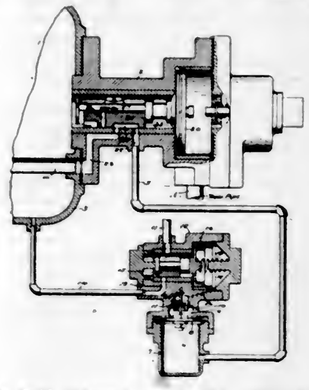
3. In a fluid pressure brake, the combination with a main reservoir, engineer's brake valve, and train pipe, of a pressure governor having a diaphragm chamber, a diaphragm subject on one side to the main reservoir pressure, means for admitting air from the train pipe to the opposite side of said diaphragm, and an adjustable feed valve device for regulating the normal degree of train pipe pressure.

4. In a fluid pressure brake, the combination with a main reservoir, engineer's brake valve, and train pipe, of a pressure governor having a diaphragm chamber, a diaphragm subject on one side to the main reservoir pressure, and on the other side to the train pipe pressure and an adjustable spring, and an adjustable feed valve device regulating the normal degree of train pipe pressure.

5. In a fluid pressure brake, the combination with a main reservoir, engineer's brake valve, and train pipe, of a duplex pressure governor having two diaphragms subject on one side to main reservoir pressure, and means for admitting fluid at train pipe pressure to the opposite side of one of said diaphragms.

[Claims 6 to 19 not printed in the Gazette.]

874,261. GRADUATED-RELEASE-VALVE MECHANISM FOR FLUID-PRESSURE BRAKES. WALTER V. TURNER, Wilkinsburg, Pa., assignor to The Westinghouse Air Brake Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed Mar. 27, 1906. Serial No. 308,309.



1. In a fluid pressure brake, the combination, with means for applying and releasing the brakes, of means for effecting a graduation of the release of the brakes by pressure of the exhaust from the brake cylinder.

2. In a fluid pressure brake, the combination, with means for applying and releasing the brakes, of means operated by pressure from the brake cylinder exhaust for controlling and graduating the release of the brakes.

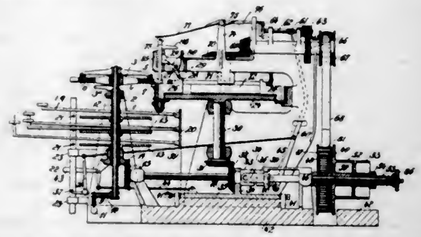
3. In a fluid pressure brake, the combination, with a triple valve device, of means controlled by fluid under pressure from the brake cylinder exhaust for effecting a graduation of the release of the brakes.

4. In a fluid pressure brake, the combination, with a valve device operated by variations in train pipe pressure for controlling the exhaust from the brake cylinder, of means for effecting a variation of pressure on said valve device, and mechanism operated by the brake cylinder exhaust for controlling said means.

5. In a fluid pressure brake, the combination, with a train pipe, auxiliary reservoir, and brake cylinder, and a valve device subject to the opposing pressures of fluid in the train pipe and in the auxiliary reservoir for controlling the exhaust from the brake cylinders, of means for effecting a variation in one of the pressures acting on said valve device, and mechanism operated by the brake cylinder exhaust for controlling said means.

[Claims 6 to 11 not printed in the Gazette.]

874,262. TYPE CASTING AND SETTING MACHINE. OSKAR UHLWORM, Berlin, Germany. Filed Nov. 5, 1906. Serial No. 342,012.



1. In a type-casting machine, the combination of a revoluble mold-disk provided with a plurality of mold slots, movable means adapted to close such slots successively, and a plurality of revoluble matrix-stocks adapted to co-act with such slots whereby type molds are formed, for the purpose specified.

2. In a type casting machine, the combination of a revoluble mold-disk, provided with a plurality of mold-slots in its edge, said slots being of various breadths, means at the side of said disk adapted to close such slots in succession, a plurality of revoluble matrix-stocks adapted to close in succession one end of said mold whereby a mold is formed, for the purpose specified.

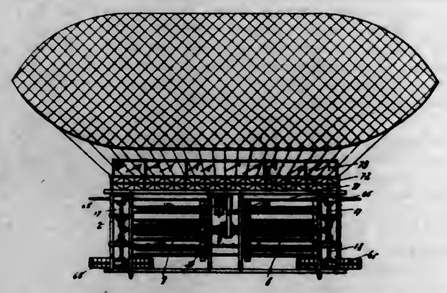
3. In a type casting machine, the combination of a revoluble matrix-disk, a plurality of revoluble matrix-stocks thereon, and means whereby the matrix-stocks may be rotated, for the purpose specified.

4. In a type casting and setting machine of the type described, the combination of a revoluble matrix-disk carrying a plurality of matrix-stocks, revoluble means carrying said matrix-disk, locking disks having detents on said revoluble means, keys adapted to engage said detents, a revoluble mold-disk having mold-slots adapted to be brought under said matrix-stocks, and key-controlled driving means whereby when a key is depressed said matrix-disk and said mold-disk are stopped, for the purpose specified.

5. In a type casting and setting machine of the type described, the combination of a revoluble matrix-disk, revoluble means carrying said matrix-disk, locking disks having detents on said revoluble means, keys adapted to engage said detents, a revoluble mold-disk, revoluble means carrying said mold-disk, a friction-coupling, a spring connected therewith, driving means engaging said spring adapted to normally drive the latter, and key-controlled means whereby when a key is depressed said matrix-disk and said mold-disk are stopped, and said spring is extended, for the purpose specified.

[Claims 6 to 22 not printed in the Gazette.]

874,263. PROPELLING APPARATUS. GUSTAV UNZER, New York, N. Y. Filed July 5, 1907. Serial No. 382,203.



1. A propelling apparatus comprising a frame divided into two horizontal sections and at each end thereof two vertical sections, vertical sets of reciprocating wings in each horizontal section, and horizontal sets of such wings in each vertical section, the wings in one horizontal section and those in one vertical section being adapted to travel in opposite directions to those of the other horizontal and vertical section respectively, each wing being capable of swinging from horizontal into vertical position and vice versa, means for imparting a reciprocating motion to said wings and means for reversing the position of said wings from vertical into horizontal position, and vice versa, substantially as and for the purpose specified.

2. A propelling apparatus comprising a frame divided into two horizontal sections, and at each end thereof two vertical sections, vertical sets of reciprocating wings in each horizontal section, and horizontal sets of reciprocating wings in each vertical section, the wings in one horizontal and one vertical section being adapted to travel in opposite directions to those of the other horizontal and vertical section respectively, each wing being capable of swinging from horizontal into vertical position and vice versa, and while the wings in one section travel in vertical position, those of the other section travel in horizontal position and vice versa, means for imparting a reciprocating motion to said wings and means for reversing the position of said wings from vertical into horizontal position, and vice versa, substantially as and for the purpose specified.

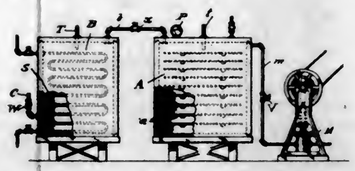
3. In a propelling apparatus, the combination with a main frame, of reciprocating frames therein, worm spindles rotatively mounted in the said main frame and carrying said reciprocating frames, of wings secured to said reciprocating frames and capable of swinging from horizontal into vertical position and vice versa, means for driving said spindles in alternate directions and means for reversing said wings from horizontal into vertical position and vice versa, substantially as and for the purpose specified.

4. In a propelling apparatus the combination with a main frame, of reciprocating frames therein, worm spindles rotatively mounted in the said main frame and carrying said reciprocating frames, sets of wings secured in the latter and capable of swinging from horizontal into vertical position and vice versa, means for allowing said reciprocating frames being fed along said spindles, means for driving the spindles in alternate directions, and means for reversing the position of the wings from horizontal into vertical position and vice versa, substantially as and for the purpose specified.

5. In a propelling apparatus, the combination with driving worm spindles, of reciprocating frames mounted on said spindles, sleeves formed in said frames to fit around said spindles and balls inclosed in said sleeves between the walls thereof and the thread, said sleeves and balls forming a nut whereby the reciprocating frames are fed along the spindles during rotation of the latter, substantially as and for the purpose specified.

[Claims 6 to 14 not printed in the Gazette.]

874,264. MANUFACTURE OF GUNPOWDER. CARL W. VOLNEY, Keyport, N. J. Filed June 22, 1906. Serial No. 322,800.

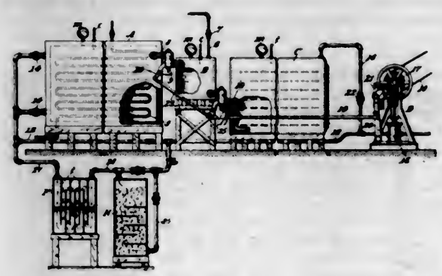


1. In the art of finishing powder containing cellulose nitrats with alcohol and ether as solvents the process of removing the alcohol and ether, consisting in subjecting the powder in a closed vessel to air heated to about 35° C. at normal pressure, and alternately subjecting the powder in the closed vessel to air heated to about 35° C. with the pressure reduced about 70 m. m., said steps being each continued for a considerable length of time.

2. In the art of finishing powder containing cellulose nitrates with alcohol and ether as solvents, the process of removing the alcohol and ether, consisting in subjecting the powder in a closed vessel to air heated to about 35° C. at normal pressure, and alternately subjecting the powder in the closed vessel to air heated to about 35° C. with the pressure reduced about 70 m. m., said steps being each continued for about the period of one hour.

874,265. ART OF TREATING MATERIALS. CARL W. VOLNEY, Keyport, N. J. Filed June 18, 1907. Serial No. 379,602.

1. The herein described process or method of drying or removing volatile substances from various materials, consisting in placing the material in a closed vessel and introducing into the vessel a heated gas that has been treated with hygroscopic material; and exhausting a portion of such charged gas from the closed tank to reduce the pressure therein, and alternately repeating the introduction of fresh quantities of said gas treated as aforesaid, and exhausting it from the said vessel.



2. The herein described process or method of drying or removing volatile substances from various materials, consisting in placing the material in a closed vessel and introducing into the vessel a heated gas that has been treated with hygroscopic materials, and exhausting a portion of such charged gas from the closed tank to reduce the pressure therein, and alternately repeating the introduction of fresh quantities of gas treated as aforesaid, and exhausting it from the said vessel, the pressure in the closed vessel being thereby caused to fluctuate about ten per cent.

3. The herein described process or method of drying or removing volatile substances from various materials, consisting in placing the material in a closed vessel and introducing into the vessel a heated gas that has been treated with hygroscopic material; and exhausting a portion of such charged gas from the closed tank to reduce the pressure therein, and alternately repeating the introduction of fresh quantities of such gas, and exhausting it from the said vessel, the temperature in the closed vessel being maintained at from 35 to 40 degrees centigrade.

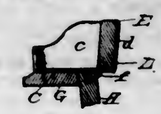
4. The herein described process or method of drying or removing volatile substances from various materials, consisting in placing the powder in a closed vessel and introducing into the vessel a heated gas that has been treated with hygroscopic materials; and exhausting a portion of such charged gas from the closed tank to reduce the pressure therein, and alternately repeating the introduction of fresh quantities of such gas, and exhausting it from the said vessel, the pressure in the closed vessel being thereby caused to fluctuate about ten per cent, the temperature in the closed vessel being maintained at from 35 to 40 degrees centigrade.

5. In the art of finishing powder containing cellulose nitrates, the process of removing from the powder in pressed form the volatile matter in the nature of solvents such as alcohol and ether, consisting in placing the powder in a closed vessel and introducing into the vessel heated air or other gas that has been treated with hygroscopic materials; and exhausting a portion of such charged gas from the closed tank to reduce the pressure therein, and alternately repeating the introduction of fresh quantities of such gas, and exhausting it from the said vessel, the pressure in the closed vessel being thereby caused to fluctuate about ten per cent, the temperature in the closed vessel being maintained at from 35 to 40 degrees centigrade.

[Claims 6 to 12 not printed in the Gazette.]

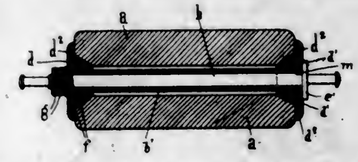
874,266. COMBINED WRINGER-TRAY AND DRIP-BOARD. WILLIAM H. VOSS, Davenport, Iowa. Filed July 26, 1906. Serial No. 327,889.

A wringer-tray for tubs consisting of a rectangular shaped metal box provided with an integral curved metal rib on its underside and having one longitudinal side-wall cut away; and a removable wooden-block secured to the



underside of said box between said rib and the edge of said open side.

874,267. MEANS FOR MOUNTNG STONE LITHOGRAPHIC ROLLERS. HUBERT WAGNER, Munich, Germany, assignor to Charlottenburger Farbwerke Atkien Gesellschaft, Charlottenburg, Germany. Filed Dec. 28, 1905. Serial No. 293,563.

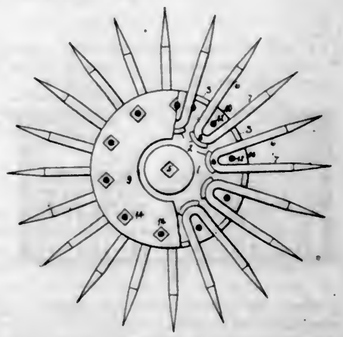


1. A device of the character described comprising a shaft, a detachable roller holder, adjustable locking means for securing said holder to the shaft, roller locking members provided with broad locking surfaces, and means to secure said members to the roller holder.

2. A device of the character described comprising a shaft, a detachable roller holder, adjustable locking means to secure said holder upon the shaft, roller locking members and means to secure said members to the roller holder and also to adjust one locking member with respect to the other locking member.

3. A device of the character described comprising a shaft, roller locking members, adjustable locking means to secure said members to a shaft, including means whereby the roller and locking members may be removed from the shaft without unlocking the roller from the locking members and means to adjust one locking member with respect to the other locking member.

874,268. HARROW-DISK. LEWIS E. WATERMAN, Rockford, Ill., assignor to Emerson Manufacturing Company, Rockford, Ill., a Corporation of Illinois. Filed Feb. 19, 1907. Serial No. 358,211.

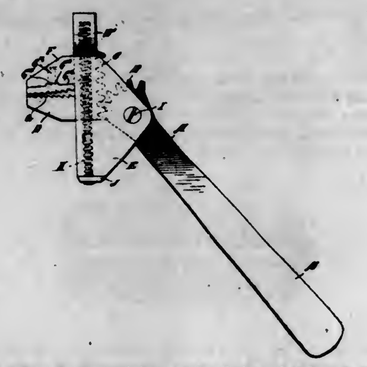


1. A harrow disk comprising a plate having curved projections and a segmental rim, a series of double-teeth held in position by the projections and rim, a cap located over the teeth, a removable section located between the branches of a tooth, and a bolt passing through the plate, removable section and cap.

2. A harrow disk comprising two plates, a series of double teeth, and means for holding the teeth in position

between the plates, said holding means permitting the removal of a double tooth without destroying the holding means of the other teeth.

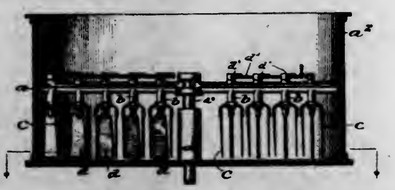
874,269. WRENCH. WILLIAM WEBB and WARNIE W. HILDRETH, Gloversville, N. Y. Filed Oct. 14, 1907. Serial No. 397,382.



1. A wrench comprising a fixed jaw having a shank made up of two walls spaced apart, a handle pivotally mounted between said walls and having rack teeth thereon, a sliding jaw having a shank movable between the walls to which said handle is pivoted and provided with rack teeth engaged by the teeth of said handle, the shank portion of the movable jaw being recessed, a plate connecting the ends of said walls, a spring positioned within the hollow shank of the sliding jaw and bearing against said plate, serving to normally hold the jaws closed, as set forth.

2. A wrench comprising a fixed jaw having a shank made up of two walls spaced apart, a handle pivotally mounted between said walls and having rack teeth thereon, a sliding jaw having a shank movable between the walls to which said handle is pivoted and provided with rack teeth engaged by the teeth of said handle, the shank portion of the movable jaw being recessed, a plate connecting the ends of said walls, a rod fixed to said plate and positioned within the recess of the shank of the sliding jaw, a spring mounted upon said rod and bearing at one end against the inner end of the shank of the sliding jaw and its other end against said plate, as set forth.

874,270. CHOPPING AND EXTRACTING APPARATUS. OTTO WEHRLE, Emmendingen, Germany. Filed Nov. 2, 1906. Serial No. 341,667.



1. In a device of the character described, a rotatable support, thin knives for cutting, and between said knives, rotatable thin blades adapted to serve for both cutting and extracting, said knives and blades being carried by said support.

2. In a device of the character described, a rotatable support, thin knives for cutting, and between said knives, rotatable thin curved blades adapted to serve for both cutting and extracting, said knives and blades being carried by said support.

3. In a device of the character described, rotatable arms, knives for cutting fixed relatively to said arms, and rotatable blades between said knives and adapted to serve for both cutting and extracting.

4. In a device of the character described, rotatable arms, knives for cutting fixed relatively to said arms, and rotatable curved, thin blades between said knives and adapted to serve for both cutting and extracting.

874,271. FIREPROOF LINING. FRANCIS O. WERTHER, Sydney, Nova Scotia, Canada. Filed Mar. 25, 1907. Serial No. 364,209.

1. A fire-proof lining for stoves or furnaces, consisting of magnesia, chrome ore, fire clay, slag and salt in or about the proportions named, all separated into small particles and thoroughly mixed and worked into a plastic state with the addition of water and a carbonaceous matter in said water, substantially as described.

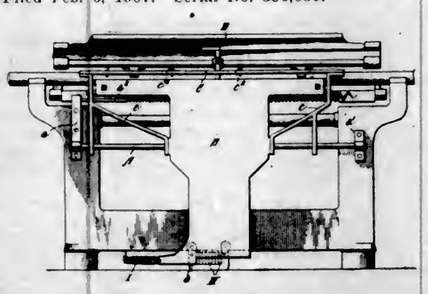
2. A fire-proof lining for stoves or furnaces, consisting of magnesia, chrome ore, silica, fire clay, open hearth basic slag and salt in or about the proportions named, all separated into particles and thoroughly mixed and worked into a plastic state with the addition of water and a suitable carbonaceous substance, substantially as described.

3. A fire-proof lining for stoves or furnaces, consisting of magnesia, chrome ore, silica, fire clay, open hearth basic slag, blast furnace slag, old fire brick, salt and flour in or about the proportions named, all separated into particles and thoroughly mixed and worked into a plastic state with the addition of water and a carbonaceous matter, substantially as described.

4. A fire-proof lining for stoves or furnaces, consisting of magnesia, chrome ore, silica, fire clay, open hearth basic slag, blast furnace slag, old fire brick, salt and flour in or about the proportions named, all ground and thoroughly mixed and water and molasses added to said ingredients and the whole worked into a plastic state and allowed to cool, substantially as described.

5. A fire-proof lining for stoves or furnaces, consisting of magnesia, chrome ore, silica, fire clay, open hearth basic slag, blast furnace slag, old fire brick, salt and flour in or about the proportions named, separated into small particles and thoroughly mixed and moistened with water and worked into a plastic state, substantially as described.

874,272. TABULATOR FOR TYPE-WRITERS. JESSE H. WHITAKER and FRANK H. HUBBARD, Washington, D. C. Filed Feb. 6, 1907. Serial No. 356,031.



1. A tabulating attachment for typewriters, comprising among its members a longitudinally movable column stop bar having stops thereon adjustable in respect to said bar, means for detaching the paper carriage from its step-by-step feeding devices and connecting it with the stop bar for joint movement, and means for arresting said column stop bar, substantially as described.

2. A tabulating attachment for typewriters, comprising among its members, a longitudinally movable column stop bar mounted on the frame of the machine and having stops thereon adjustable in respect to said bar, means for detaching the paper carriage from its step-by-step feeding devices and connecting it with the said column stop bar to move the latter and means for arresting the column stop bar, substantially as described.

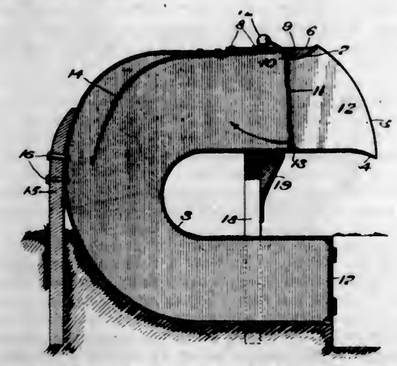
3. In a tabulator for typewriting machines, the combination with a column stop bar, capable of an endwise movement, of a movable stop on the paper carriage normally out of operative relation with the said stop bar, means for detaching the paper carriage from its step-by-step feeding devices and for moving the stop on the carriage into operative relation with the stops on the column stop bar to cause the carriage and stop bar to move in unison, and means for arresting the movement of the column stop bar, substantially as described.

4. In a tabulator for typewriting machines, the combination with a column stop bar capable of endwise movement, a stop on the paper carriage movable in a single vertical plane in respect to the paper carriage and normally out of operative relation with the stop bar, means for detaching the said carriage from its step-by-step feeding devices and for moving the carriage stop into operative relation with the column stop bar to cause the two to move in unison, and means for arresting the column stop bar, substantially as described.

5. In a tabulator for typewriters, the combination with a longitudinally movable column stop bar having stops adjustable longitudinally of the same, a stop lever on the paper carriage normally out of operative relation with the stops of the column stop bar, means for releasing the carriage from the control of its step-by-step feeding devices and for bringing the stop lever of the carriage into operative relation with the stops of the stop bar to cause the carriage and stop bar to move in unison, and means for arresting the movement of the stop bar, substantially as described.

[Claims 6 to 26 not printed in the Gazette.]

874,273. RECEPTACLE FOR MAIL-BAGS. GROVER C. WHITEFORD, Wilmington, Del. Filed Oct. 3, 1907. Serial No. 395,805.



1. In a device of the character described, a receptacle having a suitable opening for the reception of a mail bag, a closure for said opening adapted to be opened by the mail bag, means for normally holding said closure in a closed position and said receptacle gradually decreasing in size from said opening to a suitable point.

2. In a device of the character described, a receptacle having a suitable opening for the reception of a mail bag, a closure for said opening adapted to be opened by the mail-bag, means for normally holding said closure in a closed position said receptacle having a discharge opening, and a door controlling said discharge opening.

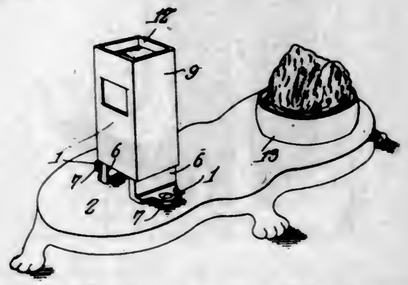
3. In a device of the character described, a receptacle having a suitable opening for the reception of a mail bag, the walls of said receptacle being flared at said opening, a weighted door controlling said opening and a spring carried within said receptacle and between which and the walls of the latter the mail bag is adapted to pass whereby the movement of the bag is retarded.

4. In a device of the character described, a receptacle having an opening for receiving a mail bag, the walls of said opening being flared, a rod pivotally mounted in said receptacle and carrying a door, a bar having a curved outer face adapted to be seated in front of said door for preventing the mail bag from coming in contact therewith, a spring on the interior of said receptacle between which and the walls of the latter the mail bag is adapted to pass whereby the movement of the bag is retarded.

5. In a device of the character described, a receptacle having an opening for the reception of a mail bag, a door for said opening, means for normally holding said door closed, and means for limiting the movement of said door.

[Claim 6 not printed in the Gazette.]

874,274. STAMP-AFFIXING DEVICE. EUGENE WILSON, Fort Smith, Ark. Filed Feb. 15, 1907. Serial No. 357,563.



A device for affixing stamps comprising a stationary inverted U-shaped open support having a flat top, and horizontally projecting feet, a rectangular casing open at each end slidably mounted on said support, tongues cut from opposite sides of said casing and bent inwardly to bear against the under side of said flat top for limiting the upward movement of said casing, and a spring pressing on said tongues tending to raise the casing.

874,275. HYDRAULIC WINCH. JOSIAH G. WINGER, Grand Valley Pa., assignor to Christoph Frederick Grettenberger, Tidioute, Pa. Filed Jan. 22, 1907. Serial No. 353,523.

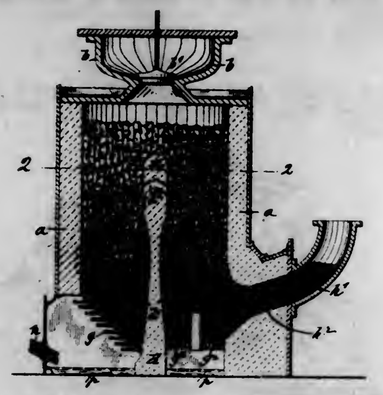


1. The combination with a horizontally turning and a vertically traveling lever, of a motor having a cylinder, a piston in the cylinder, and a base upon which the cylinder is pivotally mounted to rock in a vertical plane, a chain having one end secured to one end of the base of the motor and its other end anchored, and a second chain extending in an opposite direction to the first chain and having one end secured to the piston rod of the motor and its other end movably secured on the said lever, whereby the motor can shift its position to accommodate itself to the different vertical and horizontal positions the connection of the chain with the lever occupies in the various positions of said lever.

2. An apparatus for screwing together the sections of drills or like tools, comprising two wrenches for engaging the sections of the drill, a chain having one end secured

to one wrench and its other end anchored, a motor having a cylinder, a piston in the cylinder and a base upon which the cylinder is pivotally mounted to rock in a vertical plane, a chain having one end secured to the end of the base of the motor opposite that from which the piston rod of the cylinder projects and its other end anchored, and a chain having one end secured to the piston rod and its other end to the other wrench.

874,276. GAS-PRODUCER. OTTO K. ZWINGENBERGER, New York, N. Y. Filed Jan. 7, 1907. Serial No. 351,250.



1. A gas-producer having an upright partition in tht combustion-chamber thereof, a firing-grate at one side of said partition, a grate at the opposite side of said partition, an outlet adjacent said second grate, and a fire-bridge on the latter which lengthens the passage of the gases to said outlet.

2. A gas-producer provided within its combustion-chamber with an upright partition extending upwardly from the bottom thereof, a grate at each side of said partition, an outlet-passage leading laterally from said chamber adjacent and slightly above one of said grates, and a fire-bridge supported on said last-named grate at the middle portion thereof.

874,277. LARD-SCOOP. HARRY L. ADAMS and LAWRENCE O. WELLS. Bonneterre, Mo. Filed May 8, 1907. Serial No. 372,472.



1. A scoop of the class described having a barrel open below, a piston adapted to be advanced in said barrel to receive a substance into the lower end thereof, adjustable means for limiting the advance of said piston, and means for detaching the substance from the said piston.

2. A scoop of the class described having a barrel open at its lower end, a piston movably mounted in said barrel to receive a substance therein, a knife lying adjacent to the face of said piston and adapted to detach a substance adhering to the face thereof, and adjustable means for limiting the advance of said piston.

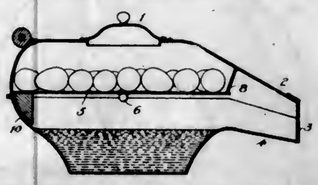
3. In a scoop of the class described, in combination a barrel open at one end, a piston movable in said barrel and adapted to advance to admit a substance into the interior of said barrel, a tubular piston rod carrying said piston and affording means for operating the same, a knife spindle extending upwardly through said piston rod, a handle formed on said piston rod for actuating the same, a member attached to said spindle beyond said handle and adapted to rotate said spindle, and a knife attached to said spindle and lying against the under face of said piston, said knife affording means for detaching a substance from the face of said piston.

4. In a scoop of the class described, in combination, a barrel open below, a piston adapted to slide therein, a tubular piston rod carrying said piston and adapted to operate the same, a knife spindle extending upwardly through said piston rod and having a threaded tip projecting beyond the upper end of said piston rod, a thumb-screw mounted on said tip, said piston rod having a handle formed thereon, and a knife carried by said spindle and lying against the lower face of said piston to detach a substance adhering thereto.

5. In a scoop of the class described, in combination, a barrel, a guide attached thereto, a piston having a rod moving in said guide, an adjustable sleeve on said rod adapted to limit the movement of said piston, said guide having means for limiting the movement of said sleeve, a pointer carried by said sleeve, and a scale formed on said guide and coöperating with said sleeve.

[Claims 6 and 7 not printed in the Gazette.]

874,278. EGG-STEAMER. JASPER L. ADAMS, St. George Island, Md. Filed June 19, 1907. Serial No. 379,742.



1. An egg steamer comprising a vessel having a spout, a perforated partition or shelf pivotally mounted within the vessel dividing it into a boiling and a steaming chamber and as a means for holding the eggs within the steaming chamber for delivery at the spout, means whereby the partition or shelf is maintained in its normal or horizontal position, and means for tilting said partition to deliver the eggs to the spout.

2. An egg steamer comprising a vessel having a spout, a perforated partition or shelf pivotally mounted within the vessel dividing it into a boiling and a steaming chamber and as a means for holding the eggs within the steaming chamber for delivery at the spout, and adapted to be tilted, a stop depending from the inner wall of the vessel to limit the upward tilting of the partition, a torsion spring connected to the outer wall of the vessel and to the pivotal mounting of the partition and adapted to maintain the partition in its horizontal or normal position against said stop, and means whereby the partition is tilted against the tension of the spring to deliver the eggs to the spout.

3. An egg steamer comprising a vessel having a spout, a horizontal perforated partition, or shelf pivotally mounted within the vessel and adapted to be tilted, a weight at the edge of the partition farthest from the spout whereby the partition or shelf is maintained in its normal or horizontal position, and means whereby the partition is tilted to deliver the eggs at the spout.

4. An egg steamer comprising a vessel having a spout, a horizontal perforated partition or shelf pivotally mounted within the vessel and adapted to be tilted, a stop depending from the inner wall of the vessel to limit the upward tilting of the partition, a torsion spring connected to the wall of the vessel and to the pivotal mounting of the partition, and a weight at that edge of the partition or shelf farthest from the spout whereby the partition is maintained in its normal or horizontal position against said stop, and means connected with the pivot of the partition whereby it is tilted to deliver the eggs to the spout.

5. An egg steamer comprising a vessel, a perforated partition pivotally mounted therein for supporting the eggs, means for holding the partition in its normal horizontal position, a spout adapted to deliver the eggs, a stop arranged to hold the eggs on the partition, and means whereby the partition is tilted to clear said stop and automatically deliver the eggs through the spout.

874,279. ART OF BAKING. ALEXANDER P. ANDERSON, New York, N. Y. Filed July 19, 1902. Serial No. 116,279.



1. In the art of baking, the process which consists in heating dried dough and permitting the sudden gasification of the liquid in the starch granules, whereby the starch granules are disrupted.

2. In the art of baking, the process which consists in submitting dry dough in which the starch-granules still retain their liquid to a baking temperature under pressure, and then suddenly reducing the pressure.

3. In the art of baking, the process which consists in baking substantially air-dry dough under pressure, and thereupon suddenly reducing or removing the pressure.

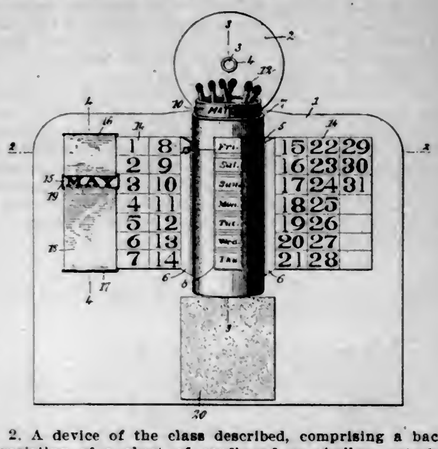
4. In the art of baking, the process which consists in baking thin masses of substantially air-dry dough under pressure, and thereupon suddenly reducing the pressure.

5. The process which consists in treating dough until substantially all of the moisture contained in the same, except the liquid or water contained in the starch-granules is removed, then baking the same at a heat above the boiling point under pressure, and then suddenly reducing the pressure.

[Claims 6 to 17 not printed in the Gazette.]

874,280. CALENDAR MATCH-SAFE. FRANK P. ANDRUS, Almont, Mich. Filed June 6, 1907. Serial No. 377,555.

1. A device of the class described, comprising a back consisting of a sheet or board and provided on its face with a plurality of figures indicating the successive days of the month and arranged in columns, said columns being divided into two divisions and with names of the months of the year arranged successively thereon, said sheet being provided with slots above and below the names of the months, a band passing through said slots and having its ends spaced apart and connected together thereby to permit the name of a month to show between said ends, said back being provided with an opening between said divisions, said opening having integral, outwardly bent flaps at opposite sides thereof, a substantially cylindrical frame mounted between said flaps and secured thereto, said frame being provided with a vertical slot at the front thereof, and a cylindrical container within said frame, the periphery of said container being divided into a plurality of columns each containing the days of the week arranged successively, each of said columns commencing with a different day, said frame having a stop to limit the movement of said container.



2. A device of the class described, comprising a back consisting of a sheet of cardboard or similar material having upon its face the names of the months of the year arranged successively, said back being provided with slots above and below the names of the months, a band passing through said slot and having its ends spaced apart and connected together thereby to permit the name of a month to show between said ends, said back having an opening formed therein provided with integral, outwardly bent flaps at opposite sides, means on the face of said back for indicating the days of the month, and means mounted between said flap for indicating the days of the week corresponding to the respective days of the month in the proper order.

874,281. DENTAL PLUGGER. ROBERT H. ANTES, Geneseo, Ill. Filed Feb. 10, 1904. Serial No. 193,022.



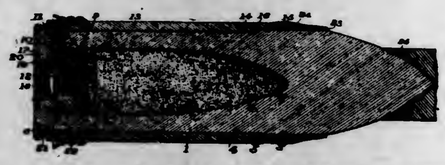
1. In a dental plugger, the combination of a reciprocable tool shaft provided at its forward end with means for holding a tool, a tubular stock in which said tool is mounted loosely both as to reciprocation and rotation, a casing constructed to be rotatively seated on said stock, means for connecting said casing and tool shaft to permit the latter to reciprocate therein and rotate therewith, and means for setting the casing at the desired adjustment.

2. In a dental plugger, the combination of a reciprocable tool shaft provided at its forward end with means for hold-

ing a tool, a tubular stock in which said tool is mounted loosely both as to reciprocation and rotation, said stock being provided in its forward part with an external annular groove, a casing constructed to be rotatively seated on said stock, means for connecting said casing and tool shaft to permit the latter to reciprocate therein and rotate therewith, and a set screw threaded through the casing with its inner end standing in said groove.

3. In a dental plugger, the combination of a reciprocable tool shaft provided at its forward end with means for holding a tool, a tubular stock in which said tool is mounted loosely both as to reciprocation and rotation, a casing provided with a longitudinal slot mounted on the forward part of the stock for rotatable adjustment thereon, means for setting the casing at the desired adjustment, and a screw standing loosely in said slot and threaded into the forward end of the tool shaft.

874,282. PROJECTILE. THOMAS S. AVERSON, Passaic, N. J. Filed June 19, 1906. Serial No. 322,416.



1. In a projectile, a core having differential diameters with an intermediate shoulder, an endwise detachable jacket having differential diameters with an intermediate shoulder, one end of said jacket being closed and provided with a removable closure, and a grooved rotation band disposed in a shouldered recess in and carried by said removable jacket.

2. In a projectile a core having a converging end, said core having differential diameters, and a jacket endwise detachably mounted on said core, the diameter of said jacket being greater than the greater diameter of said core, said core and jacket having interengaging shoulders at the forward end of the projectile and the jacket having a steadying band on its outer periphery in advance of said shoulders.

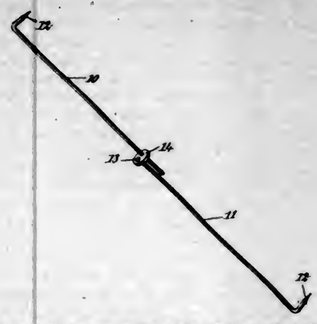
3. In a projectile, a core, and a jacket mounted on said core for endwise detachment by impact of the projectile, said core and jacket each provided with a removable closure at the rear end of said core and jacket each having a shoulder adapted to abut at the forward end of the jacket, said jacket having a steadying band in proximity to its shoulder, and a grooved rotation ring on the other end of said removable jacket and held in an annular groove therein.

4. In a projectile, a core, a jacket mounted on said core for endwise detachment by impact of the projectile, said core and jacket each having a shoulder adapted to abut at the forward end of the jacket, said jacket having an annular groove on the outer periphery thereof, and a removable grooved rotation band on said removable jacket forward of said groove and seated in an annular recess therein with its forward end engaging a shoulder to limit its forward movement.

5. In a projectile, a core, a jacket mounted on said core for endwise detachment by impact of the projectile, said core and jacket each having a shoulder adapted to abut at the forward end of the jacket, said jacket having an annular groove on the outer periphery thereof, and a rotation band on said jacket forward of said groove, said jacket having a closed rear end, and a removable plug in said closed end.

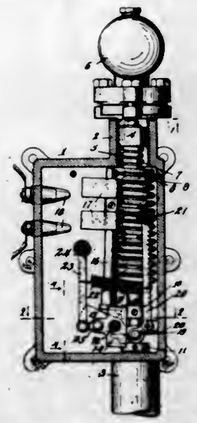
874,283. BRACE FOR SCREEN-DOORS OR THE LIKE. HARRY C. AXX, Napoleon, Ohio. Filed Sept. 21, 1907. Serial No. 394,004.

A brace comprising two rods extending in the same general direction and having one end of one rod lying adjacent to and substantially parallel with one end of the other rod, and a nut threaded on one of said rods and rotatably mounted on the other rod, the adjacent ends of said rods being rotated around each other to vary the effective length



of the brace and the opposite ends of the rods being pointed and bent at an angle, whereby the brace may be secured in place.

874,284. GOVERNOR. IRA J. BABCOCK, Chicago, Ill., assignor, by mesne assignments, to National Brake and Electric Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Nov. 7, 1906. Serial No. 342,345.



1. In a fluid pressure governor, the combination of a reciprocating rod, means for moving said rod in one direction by fluid pressure, a spring for moving the rod in the opposite direction, a toggle, a pivoted lever carrying one of the members of the toggle, parts moving with said rod adapted to engage said toggle and spaced apart to permit movement of the toggle between them, a spring action on the toggle to continue movement thereof started by one of said parts and a movable circuit controller actuated by said toggle, substantially as set forth.

2. In a fluid pressure governor, the combination of a casing, a rod mounted to reciprocate therein, means within the casing for moving said rod in one direction by fluid pressure and in the other by a spring, a toggle and a pivoted lever carrying one of the members thereof within the casing, parts on said rod adapted to engage said toggle and spaced apart to permit movement of the toggle between them, a spring acting on the toggle to continue movement thereof started by one of said parts, a movable circuit controller within the casing actuated by said toggle and oil within the casing submerging said parts, substantially as set forth.

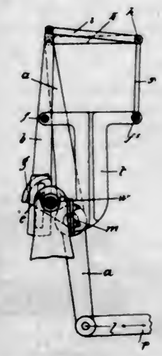
3. In a fluid pressure governor, the combination of a reciprocating rod, means for moving said rod in one direction by fluid pressure, a spring for moving the rod in the opposite direction, a toggle, a pivoted lever to which the free end of one of the toggle members is pivoted, parts moving with said rod adapted to engage said toggle and spaced apart to permit movement of the toggle between them, a spring acting on the toggle to continue movement thereof started by one of said parts and a movable circuit controller actuated by said toggle when the latter is operated by the spring acting thereon, substantially as set forth.

4. In a fluid pressure governor, the combination of a reciprocating rod, means for moving said rod in one direction by fluid pressure, a spring for moving the rod in the opposite direction, a toggle, a pivoted lever carrying one of the members of said toggle, parts moving with said rod adapted to engage said toggle and spaced apart to permit movement of the toggle between them, a spring acting on the toggle to continue movement thereof started by one of said parts, a movable circuit controller independently pivoted on the same axis as one of the members of said toggle and a loose connection between said toggle member and controller whereby the former actuates the latter when operated by the spring acting thereon, substantially as set forth.

5. In a fluid pressure governor, the combination of a reciprocating rod, a piston thereon, means for moving said rod in one direction by fluid pressure on said piston, means for moving the rod in the opposite direction, a toggle mounted transverse to said rod, a pivoted lever carrying one of the members of said toggle, parts moving with said rod adapted to engage said toggle on opposite sides of the pivotal connection of the members thereof, said parts being separated to permit movement of the toggle independently of the rod, a spring tending to buckle the toggle, a movable circuit controller and a loose connection between the toggle and controller whereby the former actuates the latter when buckled by said spring, substantially as set forth.

[Claims 6 to 15 not printed in the Gazette.]

874,285. SWINGING-LEVER CRANK MECHANISM. XAVER BAIER, Munich, Germany. Filed Feb. 5, 1907. Serial No. 355,892.



1. In a crank mechanism, a reciprocating member, an oscillating lever pivoted at one end thereto and fulcrumed at the other end, a rotary member, a crank connecting the rotary member with the lever at a point intermediate its ends, and means to shift the lever fulcrum in the direction of movement of the reciprocating member.

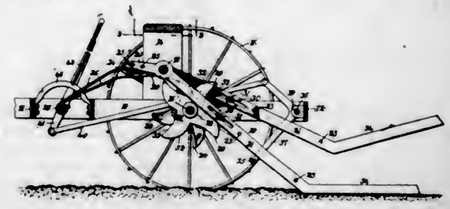
2. In a crank mechanism, a reciprocating member, an oscillating lever pivoted at one end thereto and fulcrumed at the other end, a rotary member, a crank connecting the rotary member with the lever at a point intermediate its ends, a second oppositely disposed crank connected with the rotary member, a second lever driven by the second crank and connected with the fulcrum of the first lever to shift the same in the direction of movement of the reciprocating member.

3. In a crank mechanism, a reciprocating member, an oscillating lever pivoted at one end thereto and fulcrumed at the other end, a rotary member, a crank connected with the rotary member and having oppositely disposed arms one connected with the lever intermediate its ends, a second oscillating lever fulcrumed to a fixed point and driven by the second crank arm, the free end of the second lever connected with the fulcrum of the first lever to shift the same in the direction of movement of the reciprocating member.

4. In a crank mechanism, a reciprocating member, an oscillating lever pivoted at one end thereto and fulcrumed at the other end, a rotary member, a crank connected with the rotary member and having oppositely disposed arms one connected with the lever intermediate its ends, a second oscillating lever fulcrumed to a fixed point and driven by the second crank arm, a swinging support, a link connection between the swinging support and fulcrum of the first lever and the free end of the second lever, whereby the fulcrum of the first lever is shifted in the direction of movement of the reciprocating member.

5. In a crank mechanism, a reciprocating member, an oscillating lever pivoted at one end thereto, and fulcrumed at the other end, a rotary member, a crank connected with the rotary member and having oppositely disposed arms one connected with the lever intermediate its ends, a second oscillating lever fulcrumed intermediate its ends to a fixed point and slotted at one end to receive the second crank arm, a swinging support pivoted to a fixed point, a link connection between the swinging support and the fulcrum of the first lever, and a link connection between the swinging support and the free end of the second lever, whereby the fulcrum of the first lever is shifted in the direction of movement of the reciprocating member to approximately equalize the crank-ways.

874,286. MACHINE FOR WORKING THE SOIL. LEMUEL F. BASSETT, Redding, Cal. Filed Apr. 20, 1907. Serial No. 369,280.



1. In a machine for working the soil, a frame, means for supporting said frame, a shaft mounted in said frame, a beater mounted on said shaft, a roller mounted at one end of said beater, a spring mounted on said frame and engaging said roller, said spring serving to press the other end of said beater downwards, a trip device provided with offsets for alternately lifting and releasing engagement with said beater, and means for actuating said trip device.

2. In a machine for working the soil, a wheel-supported frame, a shaft mounted in said frame parallel with the axle, a beater mounted on said shaft, a roller adjustably mounted on said beater, and a cam mounted to turn with the axle and formed with offsets for alternately lifting and releasing engagement with said roller.

3. In a machine for working the soil, a wheel-supported frame, a shaft mounted in said frame parallel with the axle, a beater mounted on said shaft, a roller adjustably mounted on said beater, a cam mounted to turn with the axle and formed with offsets for alternately lifting and releasing engagement with said roller, and a spring acting to press said beater downwards when said roller is released from engagement with said cam.

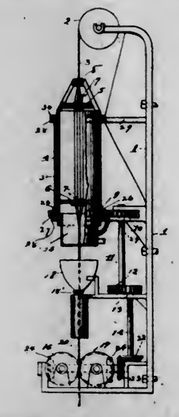
4. In a machine for working the soil, a wheel-supported frame, a shaft mounted in said frame parallel with the axle, a beater mounted on said shaft, a roller mounted at one end of said beater, a spring engaging said roller and acting to press the other end of said beater downwards,

a second roller adjustably mounted on said beater, and a cam mounted to turn with the axle and formed with offsets for alternately lifting and releasing engagement with said adjustably mounted roller.

5. In a machine for working the soil, a wheel-supported frame, a shaft mounted in said frame parallel with the axle, a beater mounted on said shaft, a roller mounted at one end of said beater, a spring engaging said roller and acting to press the other end of said beater downwards, a second roller adjustably mounted on said beater, a cam mounted to turn with the axle and formed with offsets for alternately lifting and releasing engagement with said adjustably mounted roller, and independent means for lifting said beater into inoperative position.

[Claims 6 to 9 not printed in the Gazette.]

874,287. MACHINE FOR COATING THE STRANDS OF A THREAD AND ALSO THE TWISTED THREAD. EUGENE D. C. BAYNE and LAWRENCE A. SUBERS, Cleveland, Ohio. Filed Apr. 25, 1907. Serial No. 370,138.



1. In a machine for the purpose described, an automatically acting device for momentarily untwisting and separating the fibrous strands of a thread, for coating the individual strands thereof while separated from each other, with a non-fibrous vulcanizable and tenacious material, for drying said coatings, for retwisting said strands to form a thread, for forming an exterior coating thereon of similar material, for drying the same, and for compressing and molding said exterior coating into a true cylindrical form, substantially as described.

2. In a machine for the purpose described, a device for momentarily untwisting the component fibrous strands of a thread, a bath for the untwisted threads, a device for drawing the strands therethrough and a retwisting device, substantially as described.

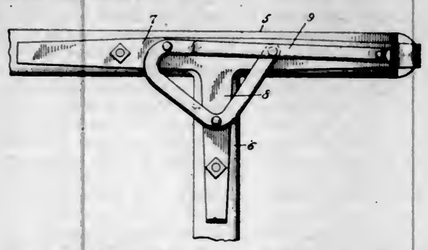
3. In a machine for the purpose set forth, a cylinder adapted to contain fluid coating material, a top and bottom plate therefor, said plates containing perforations, a central perforated guide and means for rotating said cylinder, substantially as described.

4. In a device for the purpose of forming a coating upon a thread and upon each individual fibrous strand thereof, a rotatable receptacle for the coating material, through which said strands in a separated condition, pass, means rotatable with the said receptacle for guiding and holding the said strands apart while passing therethrough and means for drying the several coatings on said strands, the said holding and guiding means forming also, untwisting and retwisting means for said strands, and instrumentalities for preventing the twisted thread from turning, substantially as described.

5. In a machine for the purpose described, a cylinder having lines of perforations in its top and bottom plates, and separated longitudinally into two equal portions, the line of parting passing through the lines of said perforations, a perforated guide at one end of said cylinder, a gear detachably secured to one end of said cylinder, and supports in which said cylinder is rotatable, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

874,288. COMBINED SHAFT AND CROSS-BAR BRACE. FRANK M. BELDEN, Sheridan, Ill. Filed Sept. 20, 1907. Serial No. 393,822.

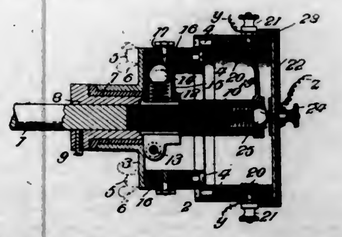


1. In combination with vehicle shafts connected together by a cross-bar and having downwardly-curved inner ends, a thill-iron secured to each of the shafts conforming to the curved ends thereof and having a tongue secured to the cross-bar, and a brace attached to the curved portion of the thill-iron at a point beyond the tongue, having the forward end thereof angularly bent and attached to both the tongue and the body of the iron.

2. In combination with a thill-iron having a curved rear end and provided with a tongue intermediate its length, of a bar attached to the curved portion of the iron and at a point beyond the tongue, from whence it is extended and angularly bent in substantially triangular form and attached to both the tongue and the body of the iron.

3. In combination with a thill-iron having a curved rear end and provided with a tongue, of a bar attached to the iron at the opposite sides of the curved portion thereof, said bar being extended at one end and angularly turned across the corners between the iron and tongue and attached thereto.

874,289. CIRCUIT-CLOSER FOR EXPLOSIVE-ENGINES. THOMAS A. BEMUS, Boston, Mass., assignor to T. Alton Bemus Company, Incorporated, Boston, Mass., a Corporation of Massachusetts. Filed Oct. 2, 1905. Serial No. 281,054.



1. The herein described circuit closer comprising a sleeve, a plug of insulating material carried by said sleeve, a casing mounted on and movable relative to said sleeve, a primary brush, a carrier therefor also mounted on said sleeve, a secondary brush carried by said plug, a secondary contact in engagement with said secondary brush, primary contacts mounted in said casing and with which said primary brush is designed to engage, secondary terminals also mounted in said casing in proximity to the plane of movement of said secondary brush, and a secondary binding post in engagement with said secondary contact.

2. The combination with a rotary shaft, of a primary brush mounted thereon, a plug of insulating material extended from said shaft, a secondary brush and secondary contact mounted on said plug, said contact being in the end of the latter, a casing detachably mounted on said shaft and inclosing said plug and brushes and having a series of contacts with which said primary brush is designed to engage, and also having a series of secondary terminals in proximity to the plane of travel of said secondary brush, and a binding post mounted in the end of said casing with which said secondary contact is designed to be in constant engagement.

3. The combination with a rotary shaft, of a primary brush mounted thereon, a plug of insulating material extended from said shaft, a secondary brush and secondary contact mounted on said plug, said contact being in the end of the latter, a casing detachably mounted on said shaft and inclosing said plug and brushes and having a series of contacts with which said primary brush is designed to engage, and also having a series of secondary terminals in proximity to the plane of travel of said secondary brush, a binding post with which said secondary contact is designed to be in constant engagement, and a glass disk removably secured over the end of said casing wherein said binding post is mounted.

4. The herein described circuit closer comprising a sleeve, a primary brush mounted thereon, a secondary brush and a secondary contact carried by, but insulated from, said sleeve, a casing of insulated material detachably mounted on said shaft, a series of contacts in said casing with which the primary brush is designed to engage, means electrically connecting all of said contacts, a binding post projecting from one of said contacts to which the wire of the primary or low tension circuit is designed to be secured, a series of secondary terminals also mounted in said casing to which are secured distributing wires, said secondary brush traveling in close proximity to said terminals, a disk over the end of said casing, and a binding post mounted in said disk to which a high tension wire is designed to be secured, said secondary contact engaging said latter binding post.

5. The herein described circuit closer comprising a sleeve, a plug of insulating material fitted in and projecting from said sleeve, a casing, an end plate therefor axially mounted on said sleeve to which said casing is detachably secured, a brush carrier mounted on said sleeve, said brush carrier serving to retain the end plate on the sleeve, a primary brush, a secondary brush and secondary contact carried by said plug, primary contacts mounted in said casing with which said primary brush is designed to engage, secondary terminals also mounted in said casing in proximity to the plane of movement of said secondary brush, and a secondary binding post with which said secondary contact is designed to engage.

[Claims 6 and 7 not printed in the Gazette.]

874,290. CAN-OPENER. BERNARD BIEHL, Newark, N. J., assignor to John L. Sommer, Newark, N. J. Filed Jan. 17, 1907. Serial No. 352,782.



1. As an article of manufacture, a can opener comprising a spring metal rod bent to U-form with straight parallel branches tending to spread apart at their disjoined ends, one branch being longer than the other and provided with an offset centering point and the shorter branch with a head, and a knife extending transversely of said frame and connected to and supported on both branches, thereby alone serving to overcome said spreading tendency.

2. As an article of manufacture, a can opener comprising a U-frame of spring-material, one branch of said frame having a centering point, and a knife having two bearings on one branch and one on the other and mounted to slide therealong and normally held in position frictionally by pressure of the sides of said frame due to the spring-action thereof.

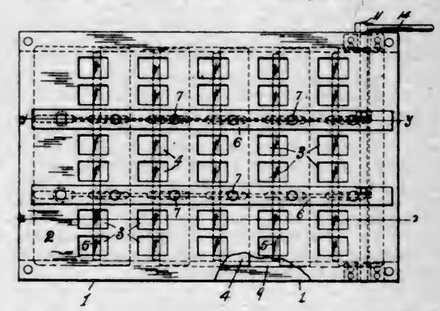
3. As an article of manufacture, a can opener comprising two members, to wit: a handle having two branches joined at one end only and adapted to form guides for a sliding cutter knife, one of said branches provided with a centering point, and a knife having a sliding bearing for one of said branches and two such bearings for the other.

4. As an article of manufacture, a can opener comprising a handle having two branches, adapted to form guides for a sliding cutter knife, one branch provided with a centering point, and a knife extending transversely across said handle and having sliding bearings for both said branches, the end of said knife distant from its cutting portion turned over lengthwise of the handle and having a second bearing thereon.

5. As an article of manufacture, a can opener comprising a handle formed of a metal rod bent to U-form, one branch longer than the other, provided with a centering point, and flattened and broadened in the plane of the handle to stiffen it, and a knife having bearings for the flattened part of the one branch and for the other branch and mounted to slide along both branches.

[Claims 6 and 7 not printed in the Gazette.]

874,291. SEPARATOR-SIEVE. WILLIAM C. BLACK, Plymouth, Ohio. Filed Nov. 15, 1906. Serial No. 343,497.



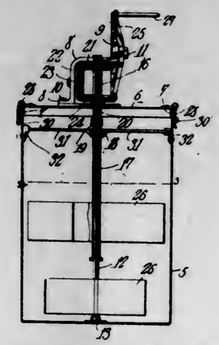
1. A sieve, comprising a frame, a separator sheet secured to the top of the frame, a plurality of parallel strips slidable on the upper surface of the separator sheet, a series of parallel bars slidingly held in contact with the under side of the separator sheet and attached to the strips transversely thereof whereby to move therewith, said bars having their ends slidingly supported by the frame and serving as truss members for supporting the separator sheet and also having depending wings each forming unbroken wind-guides for a plurality of alining sieve mesh, and mechanism for moving the strips to effect a movement of the bars to adjust the size of the associated mesh.

2. A screen or sieve comprising a suitably supported plate having a multiplicity of openings cut therein, longitudinally movable bars in contact with the upper surface of said plate, a plurality of metal strips in sliding contact with the under side of said plate and having fixed connection with said bars through slots in the plate whereby a movement of the bars effects a lateral movement of said strips across the openings in the plate, said strips forming supporting truss for the plate and each having a wing projecting downwardly from one side thereof for substantially its entire length, a rock-shaft associated with the sieve and carrying arms, and rods connecting the bars and rock-shaft arms to adapt an oscillation of the shaft to effect a movement of the shutters whereby to change the mesh of the sieve.

3. A sieve having a plurality of shutters adjustably carried at the under side thereof to permit a variance of

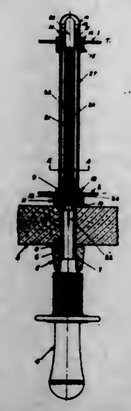
the size of the mesh, said shutters being supported by the sieve frame and each having a dependent wing provided on one side thereof and serving both as a wind-guide for a plurality of mesh and as a truss for the sieve.

874,292. REVOLVING-PADDLE CHURN. ERNEST BLACKFORD, Potomac, Ill. Filed Apr. 27, 1907. Serial No. 370,666.



A churn including a receptacle having supporting lugs secured to the interior wall thereof, a bar extending transversely across the receptacle and engaging said lugs, a cover, a vertically disposed shaft arranged within the receptacle and extending through the bar, a tubular shaft surrounding the vertically disposed shaft and also extending through the bar, dashers carried by the vertical and tubular shafts, a supporting bracket secured to the cover, a shaft section journaled in the supporting bracket and operatively connected with the vertically disposed shaft, a tubular member surrounding the vertical shaft and operatively connected with the tubular shaft, beveled gears carried by the shaft section and tubular member respectively, an intermediate gear journaled on the bracket and meshing with the beveled gears, and a master gear mounted for rotation on the bracket and engaging one of the beveled gears, the opposite beveled gear being free to rotate independently of the master gear.

874,293. CIRCUIT-BREAKER. FRANK W. BLAIR, New York, N. Y. Filed June 19, 1906. Serial No. 322,382.



1. An electric-circuit breaker comprising a plug, as a primary connection, a tube mounted upon and yieldingly connected with the plug by means of an open helical spring, and as a secondary connection, and primary and secondary socket-contacts to engage the plug and tube respectively.

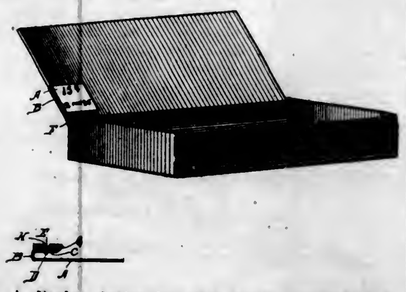
2. An electric circuit breaker comprising a plug, as a primary connection, a cylindrical tube mounted upon the plug, as a secondary connection, primary and secondary socket-contacts to engage the plug and tube respectively, and an open helical spring mounted upon the plug, and within the tube, seated at one end against a shoulder on the plug near the end thereof next the contacts and at the other end against a shoulder in the tube near the end thereof next the handle.

3. An electric-circuit breaker comprising a plug, as a primary connection, a cylindrical tube mounted upon the plug, as a secondary connection, primary and secondary socket-contacts to engage the plug and tube respectively, and an open helical spring mounted upon the plug, and within the tube, seated at one end against a shoulder on the plug near the end thereof next the contacts and at the other end against a shoulder in the tube near the end thereof next the handle, and acting upon the tube to retract it from its socket-contact as the plug is withdrawn and the spring sufficiently compressed.

4. A plug-switch comprising primary and secondary socket-contacts and primary and secondary connections consisting of a plug and tube respectively, the latter mounted upon the former and yieldingly connected therewith by means of an open helical spring mounted upon the plug and within the tube, the spring being seated at one end against a shoulder on the plug near the end thereof next the contacts and at the other end against a shoulder in the tube near the end thereof next the handle, and operating when the plug is withdrawn from its contact until contiguous turns of the spring are in contact, or nearly so, to retract the tube from its socket-contact.

5. A plug-switch comprising a movable plug, an insulating handle rigidly attached thereto, a spring contact, carried by the plug, to engage one terminal of the switch, and a cylindrical tube mounted upon and yieldingly connected with the plug by means of an open helical spring and adapted to frictionally engage a stationary secondary contact at the other terminal of the switch, the plug making the primary connection and adapted to frictionally engage a stationary primary contact at said last mentioned terminal of the switch.

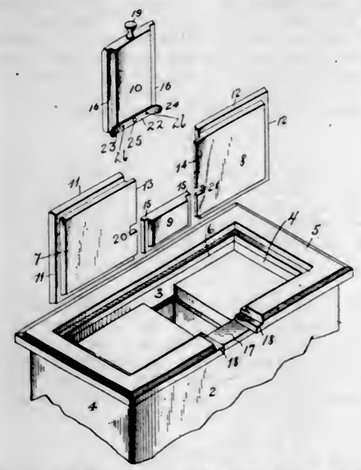
874,294. DISPLAY DEVICE FOR CIGAR-BOXES. WILDER P. BOWERS, Chicago, Ill. Filed May 14, 1907. Serial No. 373,612.



1. A display device for cigar boxes, comprising a U-shaped plate adapted to receive and engage one side edge of the box cover, an extension at one end of one flange of said plate adapted to bear at its free end portion against the rear wall of the box, the free edge of said flange and said extension and the free end of the latter being distorted outwardly to form reinforcing flanges disposed at their free ends in a common plane parallel with the plane of said flange, substantially as and for the purpose set forth.

2. A display device for cigar boxes, comprising a U-shaped plate adapted to receive and engage one side edge of the box cover, an extension at one end of one flange of said plate adapted to bear at its free end portion against the rear wall of the box, the free edge of said flange and said extension and the free end of the latter being distorted outwardly to form reinforcing flanges disposed at their free ends in a common plane parallel with the plane of said flange, and a projection on the inner face of said flange between the ends thereof adapted to bite into the cover to hold said plate against movement relatively thereto, substantially as and for the purpose set forth.

874,295. TOP FOR RANGES. ACHILL W. BRAND, Boise, Idaho. Filed Feb. 2, 1907. Serial No. 355,429.



1. In a range or stove top, a fixed frame, removable end sections supported thereby, and an approximately central sectional cover supported partly by the end sections and partly by the frame.

2. In a range or stove top, a fixed frame, removable end sections supported thereby, and a sectional cover slidably mounted on said end sections and movable to expose the fire-box.

3. In a range or stove top, a fixed frame, removable end sections supported thereby and having their adjacent ends spaced from each other, and a slidably mounted cover formed of inner and outer sections supported by the end sections, the frame being recessed to permit outward movement of the outer cover section to expose the fire-box.

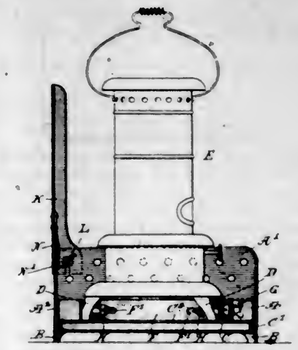
4. In a range or stove top, a fixed frame having a centrally disposed recess at the front, removable end sections supported by the frame, the adjacent edges of said sections being spaced from each other a distance approximately equal to the width of the recess, and a slidable cover section movable through the recess and supported partly by the end sections and partly by the frame.

5. In a range or stove top, a fixed frame having at its central front portion a recess the opposing walls of which are provided with ledges, removable end sections supported by the frame, the adjacent ends of said end sections being spaced from each other and provided with ledges in alinement with those of the recess, and slidably mounted covers supported by said ledges.

[Claims 6 to 8 not printed in the Gazette.]

874,296. OIL-HEATER PROTECTOR. EDWARD H. BROWN, New York, N. Y. Filed July 12, 1907. Serial No. 383,472.

1. An oil heater protector provided with a box-like stand, a platform in the said stand and having depending flanges resting on the bottom of the said stand, the said platform having a central drip opening, and a retaining device on the top of the said platform for engagement with the legs of the oil heater.



2. An oil heater protector provided with a box-like stand, a platform in the said stand and having depending flanges resting on the bottom of the said stand, lugs held adjustably on the said platform, and an adjustable ring attached to the said lugs.

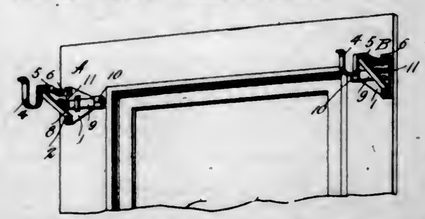
3. An oil heater protector provided with a box-like stand, a platform in the said stand and having depending flanges resting on the bottom of the said stand, the said platform having elongated slots, angular lugs, bolts engaging the said lugs and the said enlongated slots for adjustably securing the lugs in place on the said platform, and a ring or band having overlapping ends and provided with elongated slots, a bolt for fastening the said overlapping ends together, and bolts engaging the said angular lugs and the elongated slots in the said ring, to adjustably secure the ring to the said lugs.

4. An oil heater protector provided with a box-like stand, a platform in the said stand and having depending flanges resting on the bottom of the said stand, and a retaining device on the top of the said platform for engagement with the legs of the oil heater.

5. An oil heater protector comprising a box-like stand having legs, the sides and back being raised a distance above the front of the stand and the said sides being perforated, and an adjustable retaining ring in the said stand for engaging the legs of the heater to hold the oil heater in place in the stand.

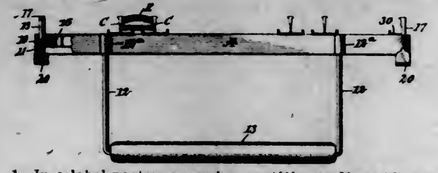
[Claims 6 to 8 not printed in the Gazette.]

874,297. COMBINED WINDOW-SHADE AND CURTAIN-POLE SUPPORT. GEORGE W. BUSH, Turtle Creek, Pa. Filed Apr. 13, 1907. Serial No. 367,993.



In a device of the class described, a base plate having a forwardly extending bracket, a bar slidably engaging the upper side member of said bracket and having laterally projecting lugs extending around said side member, said slide being provided with a pole supporting socket at its forward end, and a connecting sleeve embracing said slide and the side member of the bracket upon which it is supported.

874,298. LABEL-PASTER. GEORGE N. BYL and JOSEPH KOEHLER, Jersey City, N. J. Filed Feb. 12, 1907. Serial No. 357,048.



1. In a label paster, a carrier, partitions adjustable upon the carrier adapted to receive bunches of labels between them, and means for arching the labels of the bunches and for removably maintaining them in such position.

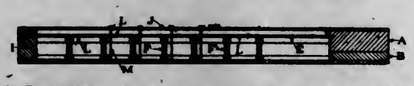
2. In a label paster, the combination with a carrier having a movable section, partitions adjustably supported by the said movable section of the carrier, said partitions being provided with flanged heads and adapted to hold bunches of labels between them in engagement with the said heads, means for arching the bunches of labels, which means engage with the under faces of the bunches of labels and force the uppermost labels in engagement with the heads of the partitions, and devices for securing the partitions in adjustment relatively to the said movable section.

3. In a label paster, a main frame, handles therefor, a feeding frame movable in the main frame, partitions adjustable on the feeding frame having flanged heads and adapted to hold labels between them, means for adjusting the partitions and preventing them from turning, and devices loosely mounted on the partitions that engage the under faces of the labels and force the outermost against the heads of the partitions arching the bunches of labels.

4. In a label paster, a main frame, handles therefor, a feeding frame movable in the main frame, partitions adjustable on the feeding frame having flanged heads and adapted to hold labels between them, means for adjusting the partitions and preventing them from turning, and devices loosely mounted on the partitions that engage the under faces of the labels and force the outermost against the heads of the partitions arching the bunches of labels, and means for holding the feeding frame and parts carried thereby in an upper position.

5. In a label pasting machine, a fixed element, a movable element, a movable partition adjustably carried by the movable element, the said partition being provided with flanged head sections, and means carried by the two elements, and loosely mounted with reference to the partitions for assisting the partitions in curving material placed between them.

874,299. PIANOFORTE. GEORGE CADDICK, Allegheny, Pa. Filed May 26, 1906. Serial No. 318,968.



1. In a piano forte, the combination of a main rectangular frame, inner bracing members located at diagonally opposite portions of the frame extending from the back to the front thereof and partially defining the outline of the intervening sound chamber, and a back board and a front board secured on opposite sides respectively of said frame, substantially as set forth.

2. In a piano forte, the combination with an upright main rectangular frame, a back board and a front board secured thereon and inclosing an intervening sound space, of an inner bracing member extending through the sound space and partially defining the edge thereof, projecting upwardly from the base and then outwardly to the side post of the main frame and joined to said base and side post, substantially as set forth.

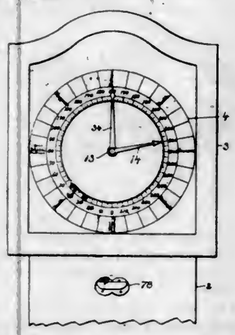
3. In a piano forte, the combination with a main rectangular frame provided with an upper wrest plank, sideposts and a base with back and front boards secured thereon; of an inner bracing member extending through the sound space and partially defining the edge thereof, projecting downwardly from the wrest plank and outwardly to the side post, with an intervening diagonal brace, said bracing members being joined to the main frame, substantially as set forth.

4. In a piano forte, the combination with the back and belly sound board, the outer side pieces, the wrest plank, the inner diagonally arranged braces extending across one corner, the inner vertically arranged outwardly curved brace at the diagonally opposite corner, and the base piece; of the outer metal plate bolted to the wrest plank and to the base piece and to said inner braces, substantially as set forth.

5. In a piano forte, the combination of a main frame, a back sound board secured upon the frame and provided with a series of inner ribs, a belly sound board provided with a series of inner ribs disposed angularly across the back sound board ribs, and sound posts secured to said ribs at their crossings, substantially as set forth.

[Claims 6 to 15 not printed in the Gazette.]

874,300. COIN-CONTROLLED WEIGHING-MACHINE. AUGUSTE A. CAILLE, GUY HAMILTON, and OTIS C. CURRIE, Detroit, Mich., assignors to The Caille Company, Detroit, Mich., a Copartnership. Filed Sept. 11, 1905. Serial No. 277,902.



1. The combination with coin controlled mechanism, of a spinning hand, means for actuating the spinning hand and permitting the same to turn freely separate means for moving the hand actuating means into one position, means operated by the coin which coin also operates the coin controlled mechanism, for releasing from said position the means for actuating the spinning hand, and mechanism released by said coin for stopping the spinning of said hand.

2. The combination with coin controlled mechanism, of locking means to prevent the actuation of the mechanism, a spinning hand, means for actuating the spinning hand, and a lever adapted to be turned by a coin to unlock the locking means and to release the means for actuating the spinning hand.

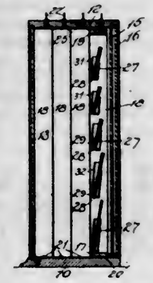
3. The combination with an indicating hand, and mechanism for turning the same, of locking mechanism to prevent the turning of the indicating hand, a spinning hand, means for actuating the spinning hand, means adapted to be operated by a coin for unlocking the locking mechanism and for releasing the means for actuating the spinning hand to permit the same to turn said hand, and mechanism automatically operated by the same coin for stopping the spinning of the hand.

4. The combination with an indicating hand and mechanism for turning the same, of locking mechanism to prevent the turning of the indicator hand, a spinning hand, means for actuating the spinning hand, a spring to actuate said means, a lever adapted to be engaged and operated by a coin to unlock the locking mechanism and release said spring, means for stopping and holding the spinning hand, and a lever adapted to be operated by the coin after said coin has operated the first lever to lock the locking mechanism and to release the means for stopping and holding the spinning hand.

5. The combination with coin controlled mechanism and means for locking the same, of a spinning member, means for actuating said member and permitting the same to spin freely, means for stopping the spinning member, and means operated by a coin for simultaneously operating the locking means and releasing the stopping means.

[Claims 6 to 26 not printed in the Gazette.]

874,301. DISPLAY-CASE FOR POST-CARDS, &c. ARTHUR C. CEDARBURG, Chicago, Ill. Filed Sept. 25, 1907. Serial No. 394,432.



1. In a display case for post-cards, etc., the combination with a rectangular casing having a transparent front and open only at the rear, and provided with a plurality of parallel guideways, of a plurality of display frames coöperating with the guideways and mounted to slide therein, said frames being shorter than the casing and each provided with a support adapted to carry an assortment of cards and display the same, and connections with the frames extending outside of the casing and so located that a person in front of the casing can move the frames and render any card visible through the transparent front of the casing, but cannot withdraw the card therefrom.

2. In a display case for post-cards, etc., the combination with a rectangular casing having a transparent front and open only at the rear, and provided with a plurality of horizontal parallel guideways, of a plurality of display frames coöperating with the guideways and mounted to slide therein, said frames being shorter than the casing and each provided with a plurality of intermediate supports adapted to carry an assortment of cards and display the same, and handles secured to the frame extending through parallel slots in the top of the casing so that a person in front thereof can move the frames to render any card visible through the transparent front, but cannot withdraw any card therefrom.

3. In a display case for post-cards, etc., the combination with a rectangular casing having a transparent front divided by a vertical strip and open only at the rear and provided with a plurality of horizontal parallel guideways, of a plurality of display frames one-half the length of the casing coöperating with the guideways and mounted to slide therein, each of said frames being provided with a plurality of supports adapted to carry an assortment of cards and display the same, and a handle secured to the frames extending through parallel slots in the top of the casing so that a person in front thereof can move the frames to render any card visible through the transparent front, but cannot withdraw any card from the casing.

4. In a display case for post-cards, etc., the combination with a rectangular casing having a transparent front and open only at the rear, provided with a plurality of horizontal, parallel guideways, of a plurality of display frames coöperating with the guideways and mounted to slide therein, said frames being shorter than the casing, and each provided with a plurality of through-like supports having a partition separating them into compartments to adapt them to carry an assortment of cards and display the same, and connections with the frames extending outside of the casing and so located that a person in front thereof can move the frames to render any card visible through the transparent front, but cannot withdraw any card from the casing.

5. In a display case for post cards, etc., the combination with a casing having a transparent front portion and open only at the rear, of a plurality of parallel display frames provided with supports adapted to carry an assortment of cards and display the same, and connections with the frames extending outside of the casing and so located that a person in front of the casing can move the frames in the plane of their faces and render any card visible from the transparent front of the casing, but cannot withdraw the card therefrom.

874,302. DRAWING-PEN. GEORGE H. CHAVEY, Winooski, Vt, Filed Mar. 12,1907. Serial No. 362,043.



1. A pen provided with a pair of blades normally tending to separate, an adjusting screw for setting the blades, and a device attached to the pen solely by the screw and coöperating with the latter to permit the blades to be opened or closed without adjusting the screw.

2. A pen provided with a pair of blades normally tending to separate, an adjusting screw for setting the blades, and a slidable member attached to the pen solely by the screw and slideable on the latter for permitting the pen blades to be quickly opened or closed without adjusting the screw.

3. A pen provided with a stiff and a spring blade, an adjusting screw for setting the blades, a wedge-shaped block coöperating with the screw and slidably mounted on the spring blade for permitting the latter to spring away from the other blade and for moving the spring blade toward the other, and a finger knob attached to the block.

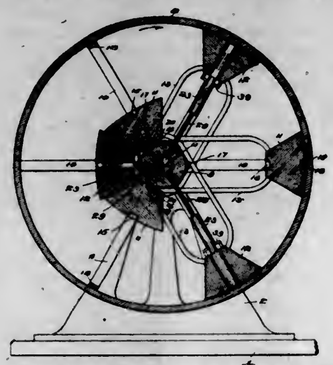
4. A pen provided with a stationary and a spring blade, a screw for setting the blades and provided with a head, a slotted slide member through the slot of which the screw extends and provided with an inclined surface forming a wedge and a flat surface forming a seat for the head of the screw, the under surface of the member being shaped to conform to the outer surfaces of either the spring or stationary blade to prevent the member from turning and a finger knob secured to the end of the member opposite from that having the wedge.

874,303. MOTOR. EZRA O. COCHRAN and LOUIS H. COCHRAN, Denver, Colo. Filed Mar. 15, 1906. Serial No. 306,227

1. In a machine of the class described, a wheel, a plurality of weights mounted in said wheels and to move in pairs diametrically thereof, cylinders and pistons carried by said weights, and means for admitting a fluid under tension to the said cylinders to move the pairs of weights alternately from the hub to the periphery of the wheel.

2. In a machine of the class described, a wheel pro-

vided with a plurality of radial spokes, a plurality of weights mounted to move upon said spokes as guides and connected in diametrical pairs, cylinders and pistons carried by said weights and connected with the hub, means for admitting fluid under tension to the hub, and means to control the flow of fluid to move the pairs of weights alternately from the hub to the periphery.



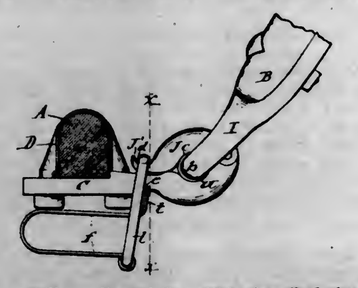
3. In a machine of the class described, a wheel provided with a plurality of radial spokes, weights equaling in number the spokes and mounted to move radially thereupon, means connecting opposite weights rigidly together, cylinders and pistons carried by one of each pair of the weights and connected with the hub and arranged to move the connected pair alternately in opposite directions, means carried by the hub for controlling the flow of fluid to the cylinders to produce reciprocation of the weights, and means to cushion the impact of the weights in either or both directions.

4. In a machine of the class described, a wheel, a plurality of weights mounted to move radially upon the wheel, cylinders and pistons carried by the weights, and means for admitting fluid under compression to the said cylinders.

5. In a machine of the class described, a wheel, a plurality of weights movably mounted upon the wheel, hollow telescoping members connecting the weights to the wheel, and means adapted to control the flow of fluid to and to actuate the telescoping members and the weights.

[Claims 6 to 9 not printed in the Gazette.]

874,304. THILL-COUPLING. DAVID W. COPELAND, Syracuse, N. Y. Filed Feb. 14, 1907. Serial No. 357,320.



1. In a thill-coupling of the within described class, the U-shaped spring connected at one end directly to the coupling-link and the opposite end of said spring passing through the link and terminating in an upwardly projecting tongue bearing with its transverse edge directly on the underside of the draft-iron.

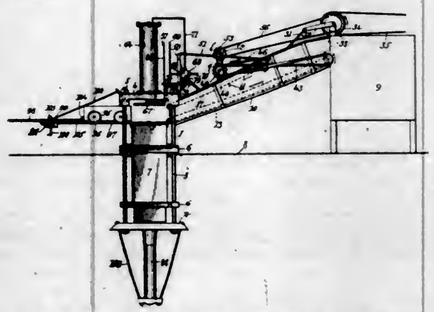
2. In a thill-coupling of the within described class, the draft-iron formed with a transverse recess in its underside, and the U-shaped spring having one end terminated in an upwardly projecting tongue inserted in the aforesaid recess and bearing by its transverse edge on the underside of the draft-iron.

3. In a thill-coupling of the within described class, the draft-iron formed convex transversely on its underside and with a transverse recess thereat and the U-shaped spring having one end terminated in an upwardly projecting tongue having its transverse edge formed with a notch engaging the convexed portion of the underside of the draft-iron at the aforesaid recess as set forth and shown.

874,305. COFFEE MIXTURE. ALVIN E. CROCKER, New York, N. Y. Filed May 7, 1907. Serial No. 372,419.

A coffee mixture consisting of ground roasted asparagus berries, finely chopped roasted Smyrna figs, and roasted coffee, substantially in the proportions specified.

874,306. BALING-PRESS. FREDERICK B. CUMPSTON, Blooming Grove, Tex. Filed Apr. 1, 1907. Serial No. 365,746.



1. In a baling press of the class described, in combination, a baling chamber, a feed chute, means for packing cotton in the lower portion of said feed chute adjacent to said baling chamber, and means for automatically advancing said cotton into said baling chamber when said feed chute becomes full.

2. In a baling press, in combination, a baling chamber, a feed chute disposed adjacent thereto, movable aprons mounted in said chute, means for packing cotton into the space between said aprons, and automatic means for starting said aprons when a quantity of cotton is packed into the space therebetween.

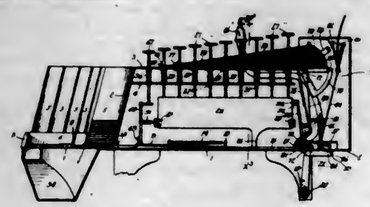
3. In a baling press, in combination, a baling chamber, a feed chute disposed adjacent to the upper end thereof, feeding mechanism mounted in said feed chute and comprising a continuous moving apron, fingers carried by said apron and adapted to rest normally at the lower end of said feed chute, and means for packing cotton into said feed chute and against said fingers whereby said fingers afford means for starting said apron when said chute is substantially full.

4. In a baling press, in combination, a baling chamber, a feed chute disposed adjacent thereto, feeding mechanism disposed within said feed chute and comprising a continuous apron, a movable member normally resting upon said apron, means carried by said movable member for driving said apron, and a member carried by said apron and adapted to move said movable member to disengage said driving means.

5. In a baling press, in combination, a baling chamber, a feed chute adapted to feed to said chamber, an apron mounted in said feed chute and adapted to advance cotton into said chamber, driving mechanism for said apron, members carried by said apron and extending across said chute, means for packing cotton against said members whereby said members may move said apron when said chute is full of cotton, and means for automatically connecting and disconnecting said driving means.

[Claims 6 to 11 not printed in the Gazette.]

874,307. MACHINE FOR ISSUING CASH. RUDOLPH A. DALLUGGE, Venice, Cal. Filed June 23, 1906. Serial No. 323,157.



1. In a machine for issuing cash, the combination of a plurality of pockets for holding coins of different denominations, ejector bars for said pockets, an operating means comprising a member movable in the line of the movement of the ejector bars, a plurality of selector arms pivoted on said member moving into and out of line with the ejector bars, pivoted wing members engaging the respective selector arms, and keys arranged in rows for units, tens, hundreds, etc., and provided with portions engaging the wings of said pivoted wing members for operation of the selector arms in different combinations.

2. In a machine for issuing cash, the combination of a plurality of pockets for holding coins of different denominations, ejector bars for said pockets, an operating means comprising a member movable in the line of the movement of the ejector bars, a plurality of selector arms pivoted on said member moving into and out of line with the ejector bars, pivoted members engaging the respective selector arms, and keys arranged in rows for units, tens, hundreds, etc., and provided with portions engaging the said pivoted members for operation of the selector arms in different combinations, said pivoted members and keys being provided with interengaging means to mutually lock each other in operated position and means for releasing said members from such locked position.

3. A machine for issuing cash comprising a plurality of pockets for holding coins of different denominations, ejector bars for said pockets, an operating means comprising a member movable in the line of the movement of the ejector bars, a plurality of selector arms pivoted on said member moving into and out of line with the ejector bars, pivoted members engaging the respective selector arms, keys arranged in rows for units, tens, hundreds, etc., and provided with portions engaging the said pivoted members for operation of the selector arms in different combinations, said pivoted members and keys being provided with interengaging means to mutually lock each other in operated position, means for releasing said members from such locked position, handle operating means for moving the selector arms for operation of selected ejector bars, and means operated by said handle operating means to operate the key-releasing means.

4. A machine for issuing cash comprising cash ejector bars, selector bars movable laterally into and out of line with the ejector bars, handle operated means for simultaneous operation of the selector arms, intermediate pivoted members having projections engaging said selector arms to move same into and out of operating relation with the ejector bars, each of such intermediate pivoted members having a projecting portion along one edge, a plurality of keys each provided with inclined portions for engaging such projecting portions and with shoulders taneous operation of the selector arms intermediate on such inclined portions to be caught by such projecting portions, and a releasing device extending across the plurality of intermediate pivoted members and provided with inclined portions for engaging the respective intermediate members to release the same from the keys.

5. A machine for issuing cash comprising coin holding means, ejector bars for the coin holding means, a plurality of selector arms movable laterally into and out of coöperative relation with the ejector bars, handle operating means carrying and operating the selector arms, intermediate pivoted members engaging the respective selector arms, keys provided with means for operating the said intermediate pivoted members and with detent parts engaged by said intermediate pivoted members to hold the said keys and members in mutually locked position, a releasing device extending across the said intermediate pivoted members and engaging the same to release them from the keys, resetting means operated by the handle operated means for operating said releasing means, and an error key provided with operating means for the said releasing means.

[Claims 6 to 14 not printed in the Gazette.]

874,308. FOLDING BABY-CARRIAGE. GEORGE E. DANN, New Haven, Conn., assignor to The Rattan Mfg. Co., New Haven Conn., a Corporation. Filed Aug. 28, 1907. Serial No. 390,471.



1. A folding baby carriage comprising side bars, arms extending downward therefrom, axle frames pivoted to said arms, axles and axle hooks carried by said frames, and braces connected with said side bars and adapted to engage with said axle hooks, substantially as described.

2. A folding baby carriage comprising side bars, arms extending downward therefrom, axle frames pivoted to said arms, axles secured to said frames and formed with inwardly extending integral hooks, and braces pivotally connected with said side bars and adapted to engage with said axle hooks, substantially as described.

3. A folding baby carriage comprising side bars, arms extending downward therefrom, axle frames pivoted to said arms, axles and axle hooks carried by said frames, rear and forward braces pivotally connected with said side bars and adapted to be engaged by said hooks, links connecting said braces, handle bars connected with said bars, and links connecting said handle bars with the said rear braces.

4. A folding baby carriage comprising side bars, arms extending downward therefrom, axle frames pivoted to said arms, axles and axle hooks carried by said frames, rear and forward braces pivotally connected with said side bars and adapted to be engaged by said hooks, links connecting said braces, handle bars connected with said bars, links connecting said handle bars with the said rear braces, and latches pivotally connected with the side bars and adapted to engage with said rear braces.

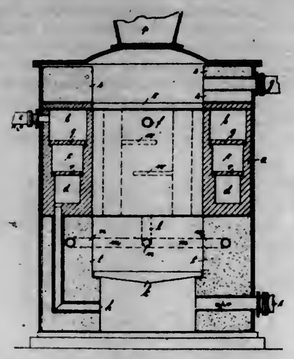
5. A folding baby carriage comprising side bars, arms extending downward therefrom and formed at their lower ends with stop lugs, axle frames pivoted to said arms, axles and axle hooks carried by said frames, braces pivotally connected with said side bars and adapted to engage with said axle hooks, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

874,309. GENERATOR FOR WATER-GAS. FRITZ DANNEAT, Berlin, Germany, assignor to Julius A. Hutmacher, Berlin, Germany. Filed Aug. 9, 1906. Serial No. 329,849.

1. In a generator for water gas, the combination, with a furnace having a lining of refractory material, of an annular hollow body supported on said lining and having

its walls decreasing in thickness toward the top of the furnace.



2. In a generator for water gas, the combination with a refractory lining forming the lower portion of the furnace, of a hollow annular body superposed on said lining and separate therefrom, and a detachable annular plate for closing said body at the top.

3. In a generator for water-gas, the combination, with a hollow body having the interior surfaces of its walls stepped, of plates supported on the steps of said walls and dividing said body into passages or channels.

4. In a generator for water-gas, a hollow superheating body stepped at the inner surfaces of its walls.

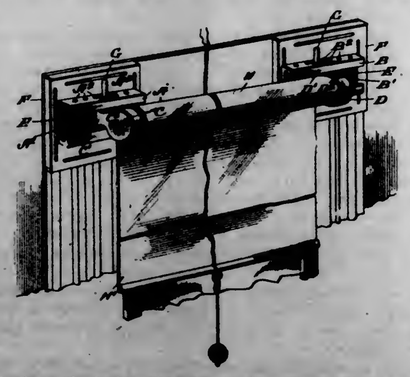
5. In a generator for water-gas, the combination, with a refractory lining, of an annular hollow body superposed thereon, the inner surfaces of the walls of said body being stepped, plates supported on the steps of said walls and dividing said body into passages or channels, and an annular covering plate for said body.

874,310. PHARMACEUTICAL COATING. EUGÈNE DONARD and HENRY LABBÉ, Paris, France. Filed Jan. 16, 1906. Serial No. 296,439.

1. An envelop consisting of malzin adapted to contain a therapeutical substance and to protect the latter from the action of the liquids of the stomach.

2. The herein described process of protecting substances against the injurious effect of certain agencies to which they are exposed, which consists in first dissolving malzin in an organic liquid solvent, and then inclosing the particles of the substance to be protected in the coating formed by the malzin thus dissolved.

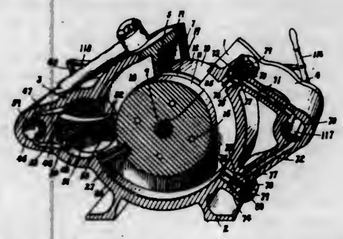
874,311. ADJUSTABLE CURTAIN-BRACKET. JULIA DORAN, Omaha, Nebr. Filed Feb. 10, 1906, Serial No. 300,507. Renewed Apr. 20, 1907. Serial No. 369,406.



1. In a shade bracket, the combination with a carrier block provided with grooves T-shaped in cross-section, of a bracket having bifurcated arms mounted in said grooves, and a pin mounted in said block adapted to fit in the bifurcation of one of the arms, for the purpose described.

2. In a shade bracket, the combination with a carrier block provided with a groove T-shaped in cross section and having openings formed in the upper edge of the block, communicating with the said groove, of a shade bracket provided with bifurcated arms slidably mounted in said groove, and a pin adapted to pass through one of the said openings and engage one of the said arms of the bracket, for the purpose described.

874,312. ROTARY ENGINE. ULRIC DUCHESNE and ERNEST DUCHESNE, Montreal, Quebec, Canada. Filed Apr. 3, 1907. Serial No. 366,141.



1. In a rotary engine, the combination with a casing having a lateral extension and a shaft journaled in suitable bearings in said casing and rotor mounted on said shaft and forming an expansion chamber within said casing, of a rocker head closing said opening and forming with either of its faces a continuation of the curve of the inner wall of said expansion chamber, a shaft journaled in suitable bearings in said extension and carrying said rocker head, a slidably arranged gear supported by said casing and connected to the shaft of and rocking said head at each revolution of the rotor shaft, and a blade extending from said rotor forming a piston within said expansion chamber, substantially as described.

2. In a rotary engine, the combination with a casing having a lateral extension and a shaft journaled in suitable bearings in said casing and rotor mounted on said shaft and forming an expansion chamber within said casing, of a rocker head closing the opening to said expansion chamber from the chamber contiguous thereto and having a curved face forming a continuation of the curve of the inner wall of said expansion chamber, a shaft journaled in suitable bearings in said extension and carrying said rocker head, a crank secured to the end of said shaft, brackets secured to a head of said casing in horizontal alinement with said shaft and having holes therethrough, a frame encircling said shaft and having rods projecting laterally therefrom through the holes in said brackets and a lug extending inwardly forming a journal bearing, a roller journaled in said bearing, a bracket clamped to one of said rods and adjustably arranged, a link pivotally securing said bracket to said crank, a cam mounted on the main shaft engaging said roller at each revolution of said main shaft, means for returning said frame after engagement with said cam, and a blade extending from said rotor and forming a piston within said expansion chamber, substantially as described.

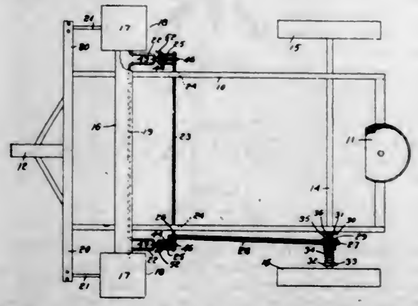
3. In a rotary engine, the combination with a casing having a lateral extension and a shaft journaled in suitable bearings in said casing and rotor mounted on said shaft and forming an expansion chamber within said casing, of a rocker head closing the opening to the expansion chamber from the chamber contiguous thereto and forming the continuation of the inner wall of said expansion chamber, a shaft journaled in suitable bearings in said extension and carrying said rocker head, a crank secured to the end of said shaft, brackets secured to a head of said casing and having squared holes therethrough and arranged in horizontal alinement with the main shaft, a frame encircling said main shaft and having squared rods extending therefrom and slidably arranged in said brackets and a lug extending inwardly from said circular part and having suitable journal bearings, a roller journaled in said lug bearings, a bracket clamped to one of said rods adjustably arranged thereon, a link pivotally joining said clamped bracket with said crank, a cylinder or pot secured to one of the brackets from the casing head and surrounding the hole therethrough, a plunger at the end of the other of said rods operating in said cylinder or pot, and a blade extending from said rotor and forming the piston within said expansion chamber, substantially as described.

4. In a rotary engine, the combination with a casing having a lateral extension and a shaft journaled in suitable bearings in said casing and rotor mounted on said shaft and forming an expansion chamber within said casing, of a rocker head having curved faces adapted to form a continuation of the curve of said expansion chamber in the opening from a contiguous chamber in said lateral extension, a shaft journaled in suitable bearings in said lateral extension and carrying said rocker head, packing plates encircling said shaft and rigid with said rocker head and adapted to turn in corresponding recesses in the walls of the said rocker head chamber, means for operating said rocker head connected to the shaft thereof, and a blade extending into said expansion chamber forming a piston operating therein, substantially as described.

5. In a rotary engine, the combination with a casing having a lateral extension and a shaft journaled in suitable bearings in said casing and a rotor mounted on said shaft and forming an expansion chamber within said casing, of a rocker head having curved faces forming the continuation of the curve of the inner wall of said expansion chamber across the opening from the chamber contiguous thereto and longitudinal slots in the end faces thereof, packing strips in said slots having transverse slots therein adjacent to each end thereof, a shaft journaled in suitable bearings in said lateral extension and carrying said rocker head, packing plates encircling said shaft and rigid with said rocker head and having circumferential slots, packing rings in said slots, said packing plates being adapted to turn in corresponding recesses in the walls of said rocker head chamber, means for operating said rocker head, and a blade extending from said rotor and forming the piston operating in said expansion chamber, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

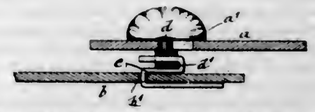
874,313. CORN-PLANTER. ELERT R. ELLEFSON and LOYD IHLAN, Hardwick, Minn. Filed July 31, 1907. Serial No. 386,368.



1. In a mechanism of the type set forth, the combination with a frame and seed dropping mechanism including a rock shaft having projecting arms, of a transverse shaft supported from said frame, driving means therefor, and mechanism for engagement with said arms comprising members hung from said transverse shaft and manually operated means for engaging said members with said transverse shaft for rotation therewith and for disengaging said members from said transverse shaft, whereby said members may hang idle without rotation.

2. In a mechanism of the type set forth, a wheeled frame, seed dropping mechanism, including a rock shaft having projecting arms, a transverse shaft, means for driving said transverse shaft, mechanism carried by said transverse shaft for engagement with said projecting arms to rock said rock shaft, said mechanism comprising plates having parallel arms formed to surround said transverse shaft, cog wheels carried by said transverse shaft between respective pairs of said arms, a slidable spring pressed stem supported between said arms for engagement between the teeth of said cog wheels and the lever having connection with said stem to move the latter out of engagement with said cog wheels.

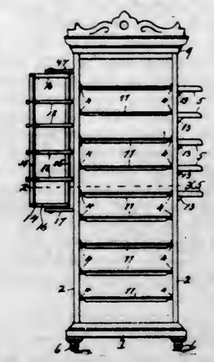
874,314. SHOE-BUTTON. EDWARD S. ELLIS, Upper Montclair, N. J. Filed June 21, 1907. Serial No. 380,036.



1. The combination, with the overlapping part of a shoe provided with transverse slits near its edge, of buttons provided with shanks and loop-shaped portions at the lower ends of said shanks passed through said slits, the lower underlapping portion of the shoe being provided with one or more rows of slits, and S-shaped catches provided with a lower longer portion inserted into said last-named slits and a shorter backwardly-bent portion adapted to interlock with the lower loop-shaped portions of the buttons.

2. The combination of the overlapping portion of a shoe provided with a row of slits near the edge, buttons inserted in said slits and provided with shanks and loop-shaped portions at the lower ends of said shanks passed through said slits, with the underlapping portion of the shoe provided with one or more rows of slits located at right angles to the slits of the overlapping portion, and S-shaped catches inserted into said slits and having longer lower portions and shorter upper portions, the latter being adapted to interlock with the loop-portion of the buttons.

874,315. DISPLAY-RACK. FRANK D. ENO, Auburn, and MANSFIELD J. COOK, Syracuse, N. Y.; said Cook assignor to said Eno. Filed Apr. 15, 1907. Serial No. 368,414.



1. A display-rack composed of a rectangular base plate, posts erected on the corners of said base-plate and disposed with openings between the posts, a top plate mounted on the posts, supplemental skeleton frames seated removably in the side openings of the main frame, and shelf-supporting bars attached to said supplemental frames.

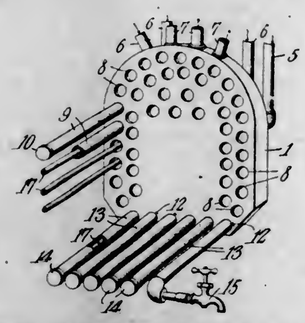
2. A display-rack composed of a rectangular base-plate,

main posts erected on the corners of said base-plate and disposed with openings between the posts, a top-plate mounted on said posts, supplemental frames each of which is composed of posts and transverse cleats tying said posts to each other at their ends and spacing the posts correspondingly to the side openings between the main posts, shelf-supporting bars attached to the posts of the supplemental frames, and means for sustaining said supplemental frames removably in their aforesaid position.

3. The combination of a rectangular base plate provided with a mortise at each of its corners and with sockets adjacent to the mortises at the shorter sides of the base plate, main posts secured in the mortises, a top-plate mounted on said posts, two supplemental frames each composed of two posts stepped removably in the aforesaid sockets, transverse cleats tying the latter posts to each other at their ends, transverse bars attached to the posts of the supplemental frame, and shelves mounted removably on said bars.

4. A display-rack composed of a rectangular base plate, main posts erected on the corners of said base plate and disposed with openings between the posts, a top plate mounted on said posts, supplemental frames each of which is composed of two posts seated removably on the base plate in the side opening between the main posts, transverse cleats tying the said supplemental posts to each other at their ends, shelf-supporting bars attached to the supplemental frames, means for sustaining said frames in position, and shelf-supporting bars adjustably connected to the main posts to move from a vertical position to an outwardly projecting position.

874,316. WATER-HEATER. HARVEY K. ERNSBERGER, Norwalk, Ohio. Filed Apr. 10, 1907. Serial No. 367,319.

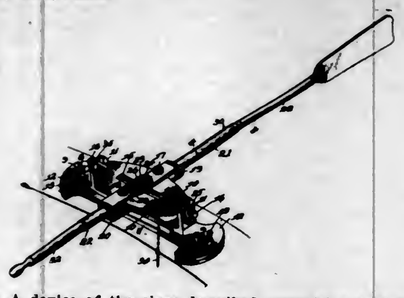


In a heater the combination with a header comprising a hot water compartment and a cold water compartment; of a plurality of return tubes communicating with and extending from the hot water compartment, a closure upon the free end of each tube, a return pipe extending from the cold water compartment and into each tube, said pipes being disposed to discharge water into the tubes adjacent their closures, certain of said tubes being disposed in a horizontal plane to constitute a grate and the remaining tubes being disposed along curved lines extending from the sides and over the grate, and a deflecting plate interposed between the grate tubes and the tubes thereabove for directing products of combustion laterally among the tubes.

874,317. BOW-FACING OAR. HENRY FLINT, St. Louis, Mo. Filed Feb. 26, 1907. Serial No. 359,497.

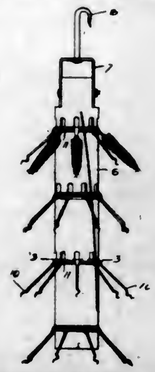
1. A bow-facing oar composed of two sections, a slotted tilting plate, each section pivoted on a line central to the slot and so fulcrumed as to move both sections in the same direction, so that a boat can be propelled in the facing direction of the oarsman by a pulling motion, substantially as specified.

2. A device of the class described comprising a plate tiltingly mounted in an oar socket, hooks for retaining the same in position, a pair of arms fulcrumed upon said plate, their ends adjustably connected together, each of said arms provided with sockets, in the socket of one of said arms is placed a paddle section, in the socket of the other arm is placed a handle whereby motion may be imparted to the paddle section and operated in the same direction as the handle section, the socket containing the paddle section provided with a slot for permitting lateral movement to the paddle and means for adjusting the entire mechanism upon the gunwale of a boat, substantially as specified.



3. A device of the class described comprising a slotted supporting plate adjustably mounted upon the gunwale of a boat, a tilting plate supported by the supporting plate, a pair of bifurcated arms pivotally connected to the plate, the ends of said arms provided with elongated slots, the tilting plate provided with an elongated slot through which is passed a sleeve and bolt whereby the ends of the arms are connected, a paddle connected to one of said arms and a handle to the other of said arms, and means for retaining both of said arms in rigid position when desiring to remove the same from the supporting plate, substantially as specified.

874,318. CORN-EAR RACK. MONS N. FLUGUM, Thompson, Iowa. Filed Mar. 4, 1907. Serial No. 360,449.



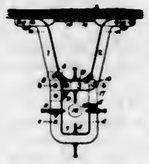
1. A rack for supporting ears of seed-corn consisting of a rod provided with swiveled supporting means at its upper end, and ear-supporting devices connected at their upper ends with the rack and extending outwardly at an obtuse angle, said ear supporting means having their terminals twisted into cork-screw-like form.

2. A seed-corn ear supporting rack consisting of a vertically supported and rotatable rod, provided with ear-supporting arms pivotally connected with the rod at their upper ends and extended outwardly at an obtuse angle, the terminals of the arms being adapted to engage the cob at the end of the ear and hold it in position.

3. A seed-corn ear supporting rack consisting of a vertically-supported rotatable rod having outwardly-extended ear-supporting arms adapted at their outer ends to be engaged with butts of ears of corn, pivotally connected at their inner ends with the rod, and constructed to engage and support ears of corn in separated position on their outer ends.

4. A seed-corn ear supporting rack consisting of a vertically-supported rod having outwardly-extended ear-supporting arms, pivotally connected at their inner ends with the rod, and having their outer ends made into corkscrew form to engage and support ears of corn in separated position.

874,319. SHAFT-HANGER. HARALD F. GADE, Philadelphia, Pa., assignor to Standard Pressed Steel Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 2, 1904. Serial No. 187,597.



1. A shaft-hanger made of structural metal, comprising a supporting portion having flaring legs formed of duplex sections of metal of similar shape, a depending portion of J-shape to receive the journal-box, also of duplex sections of structural metal, said depending portion being formed continuous with one of said legs and bent to form the journal-box support, flanged braces for the members of said hanger, portions of said braces lying between the parts comprising the hanger while the other portions of said braces abut the same, and means for securing said parts together

2. A shaft-hanger made of structural metal, having a main supporting portion formed of duplex sections of metal of similar shape, said portion being attachable to a wall or other solid support, a journal supporting portion of J-shape also of duplex sections of metal secured to said main portion, said journal supporting portion being continuous with part of the main supporting portion and having its end bent to form the journal-box support, a tie brace for the main support disposed between its duplex portions, reinforcing braces for the connection with the main support and the journal support, and means for securing said parts together.

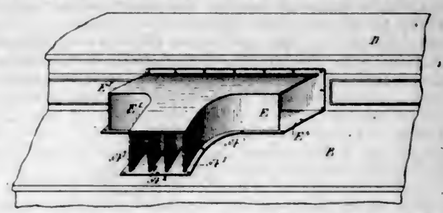
3. A shaft hanger made of structural metal, comprising a main supporting portion having flaring legs and formed of duplex flanged sections of similar shape suitably secured together, bent portions forming feet carried by the sections of said main supporting portion, a journal supporting portion of J-shape also formed of duplex sections of metal secured to said main portion, said journal supporting portion being continuous with part of the main supporting portion and having its free end bent to form said journal-box support, and an independent tie or brace for the main support having its ends disposed between and secured to the duplex sections forming the legs of the same.

4. A shaft-hanger made of structural metal having a main supporting portion formed of duplex parts of the same shape and having flaring legs, a J-shaped journal support also formed of duplex sections of the same shape, said journal support being continuous with part of the main supporting portion and having its end bent to form the journal-box support, the two parts being suitably secured together, braces for the angles of the structure, and a connecting brace for the ends of the flaring legs of the main supporting portion of the hanger.

5. A structural shaft-hanger comprising a plurality of angularly-shaped converging legs formed of duplex sections of metal of the same shape, said legs being united at their intermediate portions to form a brace and so shaped that said brace and one of said legs form an integral piece while the other leg is continuous and has its portion extending from said brace junction bent at right angles to form an open cradle of J-shape to receive a journal-box.

[Claims 6 to 14 not printed in the Gazette.]

874,320. CAR-VENTILATOR. THOMAS H. GARLAND, Chicago, Ill. Filed May 10, 1907. Serial No. 372,906.



1. A ventilator comprising two cowls having their entrance ends pointing in opposite directions, and a conductor into which extend the outlet ends of the said cowls, the said conductor having a plurality of passages in communication with each other at their inner ends.

2. A ventilator comprising two cowls having their entrance ends pointing in opposite directions, and a conductor into which extend the outlet ends of the said cowls, the said conductor having its inner end opening into the car and the said conductor having a plurality of passages in communication with each other at their inner ends.

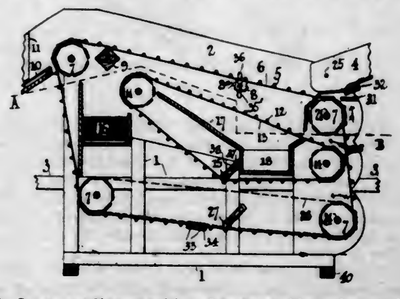
3. A ventilator comprising two cowls having their entrance ends pointing in opposite directions, and a conductor into which extend the outlet ends of the said cowls, the said conductor having a plurality of passages in communication with each other at their inner ends, the said outlet ends of the cowls leading into the outermost passages.

4. A car ventilator comprising two cowls having their entrance ends pointing in opposite directions, a conductor into which extend the discharge ends of the said cowls, and a suction duct extending from a berth in the car and opening into the inner entrance end of the said conductor.

5. The combination with a car, of a ventilator having double suction devices, one for connection with the clear story of the car, the other suction device having a suction duct extending to a berth.

[Claims 6 to 10 not printed in the Gazette.]

874,321. MACHINE FOR GRADING AND CLEANING POTATOES, ONIONS, AND OTHER PRODUCTS. JULES GASCARD and ROBERT SHIMMEN, Ballan, Victoria, Australia. Filed Aug. 8, 1907. Serial No. 387,698.



1. In a grading machine for vegetables, the combination of a hopper, an endless screen on to which said hopper delivers, a chute into which said screen delivers, a second endless screen, located entirely within the circuit of said first screen, a second chute into which said second screen delivers, and a third chute inside said second screen, provided with slats, substantially as described.

2. In a vegetable grading machine, the combination of a hopper, an endless screen into which said hopper delivers, a non circular roll to vibrate the upper portion of said screen, a chute into which said screen delivers, a second endless screen located entirely within the circuit of said first screen, a second chute into which said second screen delivers, and a third chute inside said second screen, provided with slats, substantially as described.

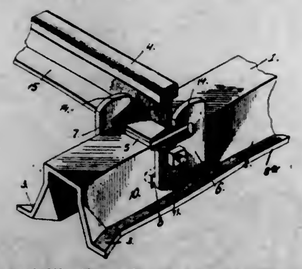
3. In a vegetable grading machine provided with a frame having slots, the combination of a hopper, an endless screen on to which said hopper delivers, a non circular roll having a spindle adjustable in said slots, said roll adapted to vibrate the upper portion of said screen, a chute into which said screen delivers, a second endless screen located entirely within the circuit of said first screen, a second chute into which said second screen delivers, and a third chute inside said second screen, provided with slats, substantially as described.

4. In a vegetable grading machine provided with a frame having slots, the combination of a hopper, an endless screen on to which said hopper delivers, a non circular roll having a spindle adjustable in said slots, a non-circular roll, said rolls adapted to vibrate the upper portion of said screen, a belt tightener for the lower portion of said screen, a chute into which said screen delivers, a second endless screen located entirely within the circuit of said first screen, a second chute into which said second screen delivers, and a third chute inside said second screen, provided with slats, substantially as described.

5. In a vegetable grading machine the combination of a frame having slots, a hopper, an endless screen on to which said hopper delivers, a non circular roll having a spindle adjustable in said slots, a second non circular roll, said rolls adapted to vibrate the upper portion of said screen, rollers around which said screen travels, a chute into which said screen delivers, a second endless screen located entirely within said first mentioned screen, a second chute into which said screen delivers, a third chute located entirely within the circuit of said second screen, a fourth chute into which said third chute delivers, and slats in said fourth chute, substantially as described.

[Claim 6 not printed in the Gazette.]

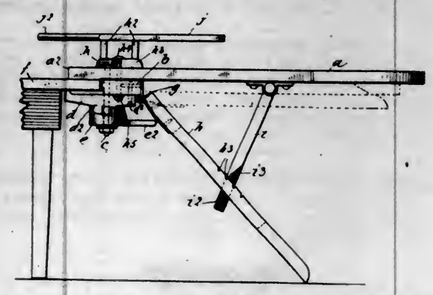
874,322. METALLIC TIE AND RAIL-FASTENER. ERASTUS L. GEER, Johnstown, Pa. Filed June 11, 1907. Serial No. 378,380.



1. In a metallic tie and rail fastener, the combination with the rail, of a tie consisting of a channel beam having its sides flanged, and flared at its ends, fasteners having inwardly extending flanges adapted to extend into the sides of said tie, hook-shaped clamps carried by said fasteners and adapted to engage the base flanges of said rails, a bolt passing through said fasteners and the sides of said tie, and a nut for holding said bolt in position.

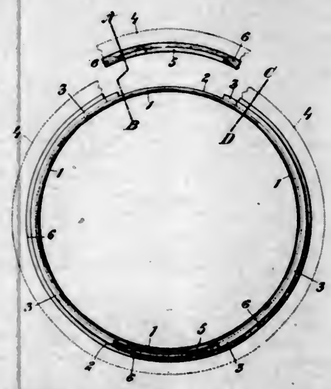
2. The combination of a rail, of an inverted channel-shaped beam for supporting said rail, the sides of said beam having openings formed therein, fasteners arranged at the sides of said beam, beveled flanges carried by said fasteners and extending through the openings of said beam, hook-shaped clamps carried by said fasteners and adapted to engage the base flanges of said rail, and means passing through said fasteners and beam for holding said fasteners in position at the sides of said beam.

874,323. IRONING-BOARD. FRANCIS C. GEIGER, Parkersburg, W. Va. Filed Sept. 26, 1906. Serial No. 336,227.



An ironing board provided adjacent to one end with a plate which is secured to the bottom thereof and beyond which said end of the board projects to form a stationary jaw of a clamp a bolt passing through said board and through said plate, a movable clamp jaw mounted on the lower end of said bolt and a cam block mounted on said bolt below said clamp jaw and provided with a handle and adapted to force said movable clamp jaw upwardly.

874,324. MEANS FOR ATTACHING TIRES TO VEHICLE-WHEELS. EMIL GERBERT,, Waltershausen, Germany. Filed Jan. 22, 1907. Serial No. 353,554.



1. In a vehicle wheel having a felly, a circumferential flange on said felly and having spaced recesses, a rim carried by the felly and having lateral projections at one edge for engagement in the recesses, a tire supported by the rim, and screw threaded means for engagement with the felly on the side opposite the flange for maintaining the rim in position against lateral displacement on said felly.

2. In combination with a vehicle wheel having a felly, of a flange having spaced recesses circumferentially arranged on said felly at one edge thereof, said felly provided with screw threads at the opposite edge, a rim for supporting a tire mounted on said felly and having edge projections at one side for engagement in the recesses, and a screw threaded member for engagement with the screw threads in the felly to lock said rim against lateral displacement on said felly.

874,325. PERPENDICULAR SWATH-DIVIDER ATTACHMENT. JESSE H. GILES, Salt Lake City, Utah. Filed May 10, 1904. Serial No. 207,294.

The combination with the knife-bar of a mower, said bar being formed with a socket, of a plurality of knives supported for reverse movement in contact, a rocking plate, links connecting the plate and knives, a shoe seating



in the socket in the knife-bar, and a link connecting the shoe and plate.

874,326. METHOD OF TREATING MANURE. FREDRICK A. GOECKELER, Worcester, Mass. Filed Mar. 18, 1907. Serial No. 362,804.

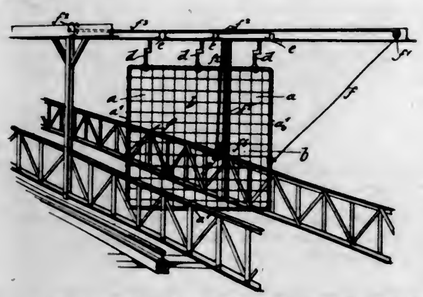
1. A method of treating manure which consists in applying to it while fresh a mixture containing muriatic and sulfuric acid.

2. A method of treating manure which consists in applying to it while fresh a mixture containing dilute commercial muriatic and sulfuric acids and ammonium salts.

3. The method of treating manure for preserving its fertilizing qualities, and deodorizing it, which consists in applying to it a mixture of acids and water in substantially the proportion of one-half pint of the mixed acids and three pailfuls of water to a cord of manure.

4. The method of treating manure for deodorizing it, which consists in applying to it a mixture in about these proportions, one half pint of a mixture of sulfuric acid and muriatic acid and three pailfuls of water to a cord of manure.

874,327. SAFETY-CURTAIN FOR PREVENTING RUNAWAY ACCIDENTS ON BRIDGES. MAX GOODMAN, New York, N. Y. Filed June 29, 1907. Serial No. 381,512.



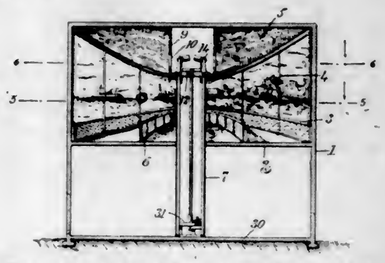
1. A safety-curtain for preventing runaway accidents on bridges, consisting of a curtain corresponding in width to the width of the roadway of the bridge and composed of an exterior frame and a web stretched across the frame, means for suspending the curtain, roller-carriages guided in slotted ways on the bridge-structure and connected with the upper ends of said suspension-means, and means for raising the curtain above the roadway or dropping it in position across the same.

2. A safety-curtain for preventing runaway accidents on bridges, comprising a curtain formed of an exterior frame and a web stretched across the same, rods for suspending the curtain, roller-carriages connected to the upper ends of the rods, slotted guide-ways on the bridge

structure for guilding said roller-carriages, and means for raising the curtain above the roadway or dropping it in position across the roadway.

3. A safety-curtain for preventing runaway accidents on bridges, consisting of a curtain composed of an exterior frame and a web of suitable material stretched across said frame, pivot-links for suspending the curtain, roller-carriages connected with the upper ends of the suspension-rods, longitudinally-slotted guide-ways on the bridge-structure for guilding said roller-carriages, said ways having inclined end-portions for permitting the curtain to be moved for a certain distance along the roadway of the bridge, and means for holding the curtain in raised position or dropping it in position across the road way.

874,328. CYCLORAMIC APPARATUS. ROBERT G. GORDON, Calgary, Alberta, Canada. Filed June 22, 1907. Serial No. 380,252.



1. In apparatus of the class described, in combination, a screen adapted to have a continuous picture cast thereupon, picture-projecting mechanism, and means for rocking a part of said mechanism to rock the picture on said screen.

2. In apparatus of the class described, in combination, a screen adapted to have a continuous picture cast thereupon, a frame, a plurality of picture-casting devices carried thereby, and means for rocking parts of said devices simultaneously to rock the pictures on said screen.

3. In apparatus of the class described, in combination, a frame, a plurality of slides, lanterns guiding said slides, and means for rocking said frame, and a screen receiving the pictures cast by said lanterns.

4. In apparatus of the class described, in combination, a screen adapted to have pictures cast thereupon, a frame mounted to rock on different axes, picture-casting devices partly carried by said frame, and means for rocking said frame.

5. In apparatus of the class described, in combination, a screen adapted to receive pictures, a frame mounted to rock on two axes substantially at right angles to each other, picture-casting slides mounted on said frame, and means for rocking said frame.

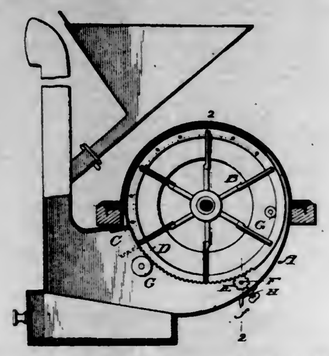
[Claim 6 not printed in the Gazette.]

874,329. CUT-OFF AND BLAST-REGULATOR FOR GRAIN, ORE, AND MINERAL SEPARATORS. WILLIAM GRAY, Lincoln, Nebr. Filed Oct. 23, 1906. Serial No. 340,122.

1. The combination with the fan, the fan casing and spout attached thereto, of the cut-off and blast regulator comprising the curved plate, circular parallel rack bars to which said plate is attached, a rotary shaft and pinions thereon meshing with the rack bars, and idler rollers which together with the pinions furnish supports for the cut-off and regulator, substantially as described.

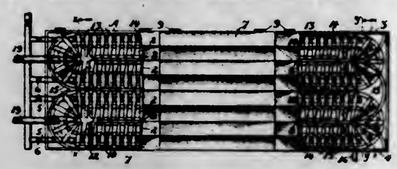
2. The combination with the fan, the fan casing and spout attached thereto, of a cut-off and blast regulator, comprising a plate curved concentrically with the axis of the fan, parallel circular bars spaced apart and attached to the ends of the said plates and provided on their lower side with teeth whereby they constitute racks, pinions

meshing with the racks and means for rotating the pinions whereby the cut-off may be adjusted as required, substantially as described.



3. The combination with the spout, fan, fan casing and the rotary cut-off arranged in the casing, and including circular rack bars, of pinions meshing with the racks, a rotary shaft on which the pinions are mounted, and a friction brake, the same consisting of a rotary threaded bolt, and a nut secured to the casing, the inner end of the bolt being arranged for contact with the shafts, substantially as described.

874,330. CONVEYING MEANS FOR CAN COOKERS AND EXHAUSTERS. MARSHALL W. GROOM, San Jose, Cal. Filed Feb. 23, 1906. Serial No. 302,521.



1. The combination with sprockets mounted on vertical axes, of an endless chain passing around said sprockets and composed of pivoted links having integral transversely extending slat-members, said members being narrower at one side of their pivots than at the other side thereof, and a track-way for supporting said slat-members.

2. A conveyer comprising sprockets mounted on vertical axes, a chain passing around said sprockets, said chain comprising links pivoted together and having integral transversely-extending slats, an endless track-way supporting said slats; said slats lying in substantially the same horizontal plane and being narrower at one side of their pivots than at the opposite side thereof to permit the slats to be placed close together and to turn around the sprockets.

3. A conveyer chain having links consisting of upper and lower spaced plates, said upper plates having integral laterally extending slat-member projections, said slat-members being narrower on one side of the pivots of the links than on the other.

4. The combination of sprockets mounted on vertical axes, a chain passing around said sprockets, the links of said chain comprising upper and lower spaced plates, said upper plates having laterally extending integral slat-projections, and an endless trackway supporting said slat-projections.

874,331. LOOM-SHUTTLE. ARNOLD GULDEMANN, Paterson, N. J., assignor to Isaac A. Hall, Paterson, N. J. Filed June 11, 1906. Serial No. 321,244.

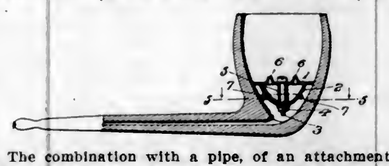
1. In a shuttle, the combination of the body, a spindle pivoted therein, a strip arranged substantially longitudinally in the spindle, said strip being toothed or serrated along one edge and movable toward and away from the longitudinal axis of said spindle, means for causing said strip to move to depress its toothed or serrated edge when the spindle is elevated, and a spring normally tending to raise said strip in the spindle, substantially as described.



2. In a shuttle, the combination of the body, a spindle pivoted therein, a strip arranged substantially longitudinally in the spindle, said strip being toothed or serrated along one edge and movable toward and away from the longitudinal axis of said spindle, means for causing said strip to move to raise its toothed or serrated edge when the spindle is depressed, and means for limiting the upward movement of said strip in the spindle in any of the various positions of said spindle, substantially as described.

3. In a shuttle, the combination of the body, a spindle pivoted therein, said spindle having a longitudinal slit and a seat adjacent one end of said slit, a strip pivoted in said slit and being toothed or serrated along one edge thereof, a spring interposed between said strip and the seat and normally tending to raise the strip in the spindle, and means for causing said strip to move to depress its teeth or serrations, when the spindle is raised, substantially as described.

874,332. SMOKING-PIPE. HENRY M. HALLETT, Ludington, Mich. Filed Jan. 17, 1907. Serial No. 352,748.



1. The combination with a pipe, of an attachment designed to fit in the bowl thereof, comprising a plate forming a rest or support for the tobacco load having a series of smoke outlets, a cup depending from said plate through which the smoke must pass in its outward travel; a screw uniting said cup to said plate and designed to transmit the heat of the latter to the underside of said cup, and a non-heat conductor surrounding said screw within said cup.

2. The combination with a pipe, of an attachment designed to fit in the bowl thereof, comprising a plate having a series of smoke outlet openings, means extending upwardly from such plate surrounding said openings to prevent ashes, nicotin, etc. from passing therethrough, a cup depending from the underside of said plate, with a circumferential space between it and the pipe bowl, said cup also having smoke outlet openings, and means protecting such openings for preventing saliva from entering said cup.

3. The combination with a pipe, of an attachment designed to fit in the bowl thereof, comprising a metallic plate having a series of smoke outlet openings formed by striking up the metal, the edges of the latter around said openings preventing ashes, nicotin, etc. from passing therethrough, a metallic cup depending from the underside of said plate, with a circumferential space between it and the pipe bowl, said cup also having smoke outlet openings formed by striking up the metal, the edges of the latter preventing saliva from entering said cup.

4. The combination with a pipe, of an attachment designed to fit in the bowl thereof, comprising a plate having a series of smoke outlets formed therein by openings struck up from the underside thereof, a cup depending from said plate having a series of smoke outlet openings formed by being struck up from the underside thereof, a circumferential space being left between said cup and the wall of the bowl, a screw connecting said cup to said plate, the heat of the latter being designed to be transmitted through said screw to the underside of the cup, and an asbestos sleeve surrounding said screw within the cup.

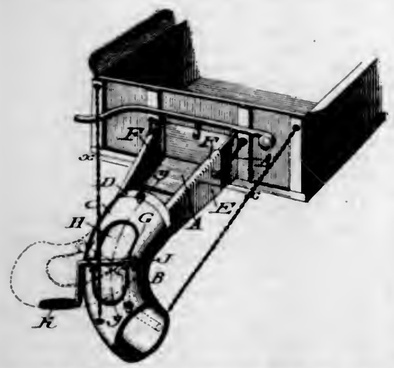
874,333. BAG OR SACK FASTENER OR CLOSURE. ALEXANDER T. HAMILTON, Etna, Ga., and WILLIAM B. LOWE, New York, N. Y. Filed Mar. 19, 1906. Serial No. 306,808.



1. A fastener or closure of the character described comprising a bar or member provided with two eyes or loops, said bar or member being arranged to be bent around an object to be fastened or closed, and a bar or member associated with said first mentioned bar or member arranged to be passed through an object to be fastened or closed and to engage the eyes or loops on said first mentioned bar or member, substantially as described.

2. A fastener or closure of the character described comprising a bar or member arranged to be passed through an object to be fastened or closed and to project therefrom, and a bar or member arranged to encircle the object to be fastened or closed, said projecting bar or member engaging the ends of said encircling member to secure and fasten the same in position, substantially as described.

874,334. DISCHARGE-CHUTE FOR WAGONS. JOHN HARBOLSHEIMER, Philadelphia, Pa. Filed July 22, 1907. Serial No. 384,847.



1. A discharge spout for a vehicle consisting of a laterally-deflected body having matched ends, a neck on which either end of said body may be removably mounted by reversal of said body, and means for connecting said neck with the outlet member of said vehicle.

2. An attachment for a discharge spout for a vehicle composed of a laterally-deflected body, a neck on which either end of said body may be removably mounted, and a member extending forwardly from said neck, and adapted to be removably connected with said spout, the upper portion of said member being open.

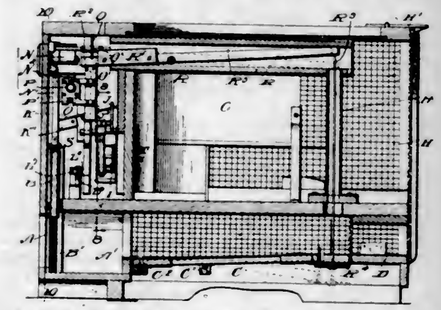
3. A discharge spout for a vehicle composed of a body, and a neck, with which latter said body is removably connected, said neck having lips adapted to be removably fitted on the outlet member of said vehicle.

4. A discharge spout for a vehicle having an agitating and pushing device thereon, the same being adapted to enter said spout and engage the contents thereof.

5. A discharge spout for a vehicle having a vane mounted thereon and adapted to enter the body of said spout.

[Claims 6 and 7 not printed in the Gazette.]

874,335. TRAP. WILLIAM H. HARDEN, Quitman, Ga., assignor of one-half to John E. Gibson, Quitman, Ga. Filed June 17, 1907. Serial No. 379,409.



1. A trap having an entrance chamber, a trap chamber, a passageway connecting the entrance chamber and the trap chamber, and a cage chamber combined with a door for the entrance chamber, a tilting platform in said chamber, means whereby the platform may operate to permit the door to close, a trap door between the trap chamber and the cage chamber, a clock train for opening the entrance door, a slide, means carried by the trap door for operating the slide in one direction, a restraining device for the clock train, means operated by the slide for releasing the restraining device, and means operated by the clock train for freeing the slide from engagement with the means carried by the trap door for operating the said slide, substantially as set forth.

2. The combination in a trap of an entrance chamber, a door therefor, a tilting platform, means operated from the platform for releasing the door to permit the latter to close, means for opening the door, a trap door arranged for operation by the trapped animal, a hanger plate pivoted at its upper end to the trap door and having a ratchet tooth, a slide plate having a portion for engagement by said tooth, means for releasing the ratchet tooth from engagement with the slide, a clock train for opening the entrance door, a restraining device for said train and means operated from the slide plate whereby to release the restraining device, substantially as set forth.

3. The combination in a trap of a tilting trap door, a hanger plate suspended therefrom and provided with a ratchet tooth, a slide having a portion for engagement by such ratchet tooth whereby the slide may be operated by the movement of the trap door, a clock train, means for restraining the same, means whereby the restraining means are released by the operation of the slide, and means operated by the clock train for releasing the hanger plate from engagement with the slide.

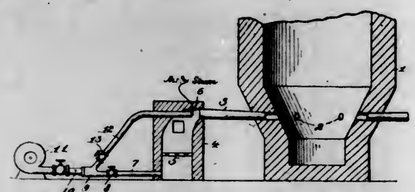
4. The combination in a trap of an entrance door, a clock train, means operated thereby for opening the door, a tilting platform, a tilting trap door, a slide, means in connection with the trap door for operating the slide in one direction, a restraining device for the clock train, means operated by the slide for releasing said restraining device, and means operated by the clock train for freeing the slide from engagement with the means on the trap door for operating said slide, substantially as set forth.

5. The combination in a trap with a tilting trap door and a hanger plate pivoted at its upper end to and depending from said trap door and provided with a ratchet tooth, of a slide having a portion for engagement by the

ratchet tooth, a push rod for freeing the tooth from engagement with the slide, an entrance door, a clock train, means whereby the clock train may operate to open the entrance door, a restraining device for the clock train, a lever operated by the slide whereby to free the restraining device from the clock train, and a lever operated by the clock train and arranged to move the push rod for freeing the hanger plate, substantially as set forth.

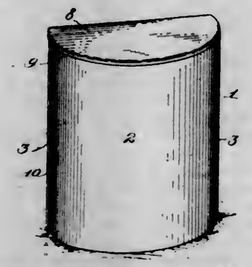
[Claims 6 to 15 not printed in the Gazette.]

874,336. METHOD OF SMELTING ORES. JOHN C. HARDIE, Helena, Mont. Filed Jan. 11, 1905. Serial No. 240,623.



A step in the reduction of a mass of ore in a chamber which consists in causing a direct blast of atmospheric air containing steam to enter directly into a gas generating chamber and to direct to the ore a carbon dioxid gas formed from the admixing in the upper portion of said generating chamber of the blast with a carbon monoxid gas formed by passing a blast of fluid containing air through an incandescent body of fuel.

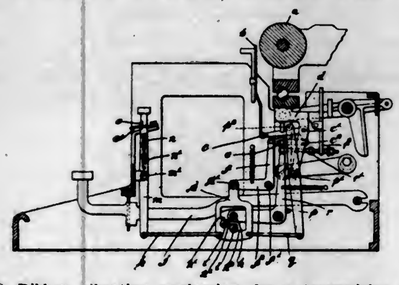
874,337. BOX. SAMUEL W. HELM, New York, N. Y. Filed Mar. 24, 1906. Serial No. 307,830.



A box having a convex front wall, a flat rear wall and convex end walls merging into said front and rear walls without sharp angles, the rear wall being provided at its upper edge with a plurality of cut away portions, a pintle co-extensive in length with the edge of said rear wall and secured thereto by folding the edge of the latter thereabout, portions of said pintle being exposed in said cut away portions, a cover provided with a plurality of tongues coincident with and folded about said exposed portions of the pintle whereby the lid is hinged to the box at separate points to provide a hinged connection co-extensive with the edge of the rear wall, said cover having a depending flange conforming to the outline of the front and end walls of the body, inwardly turned flanges at the lower edge of the front end and rear walls and a box bottom fitted within the box body against said inwardly turned flange.

874,338. TYPE-WRITING MACHINE. EDWARD B. HESS, New York, N. Y., assignor to Royal Typewriter Company, Hoboken, N. J., a Corporation of New Jersey. Filed Aug. 30, 1907. Serial No. 390,703.

1. Ribbon vibrating mechanism for a typewriting machine comprising the combination of a ribbon vibrator, a universal bar, means for operating the vibrator and an adjustable link having surfaces of different elevation operatively interposed between the ribbon vibrator operating devices and the universal bar and whose said surfaces are adapted to engage one of said parts whereby different ranges of movement may be imparted to the ribbon vibrator according to the adjustment of said link.



2. Ribbon vibrating mechanism for a typewriting machine comprising the combination of a ribbon vibrator, means for operating it comprising a bell crank lever, a universal bar and an adjustable link pivoted upon one of the two last named parts and having operating surfaces at different distances from its axis adapted to be engaged by the other of said parts whereby according to the adjustment of the link different ranges of movement may be imparted to the ribbon vibrator.

3. Ribbon vibrating mechanism for a typewriting machine comprising the combination of a ribbon vibrator, a universal bar, means for operating the vibrator, an adjustable link having surfaces of different elevation operatively interposed between the ribbon vibrator operating devices and the universal bar and whose said surfaces are adapted to engage one of said parts, whereby different ranges of movement may be imparted to the ribbon vibrator according to the adjustment of said link and means under the control of the operator for adjusting said link.

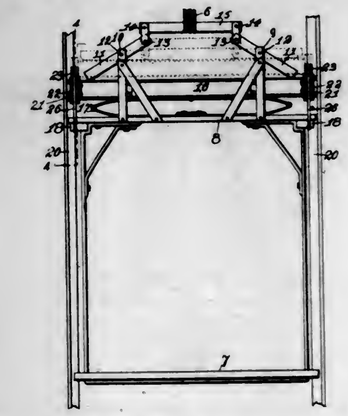
4. Ribbon vibrating mechanism for a typewriting machine comprising the combination of a ribbon vibrator, means for operating it comprising a bell crank lever, a universal bar and an adjustible link pivoted upon one of the two last named parts and having operating surfaces at different distances from its axis adapted to be engaged by the other of said parts whereby according to the adjustment of the link different ranges of movement may be imparted to the ribbon vibrator and means under the control of the operator for adjusting said link.

5. Ribbon vibrating mechanism for a typewriting machine comprising the combination of a ribbon vibrator, a universal bar, means for operating the vibrator, an adjustable link having surfaces of different elevation operatively interposed between the ribbon vibrator operating devices and the universal bar and whose said surfaces are adapted to engage one of said parts, said link being connected to one of said parts and adapted to be operated upon by the other whereby different ranges of movement may be imparted to the ribbon vibrator according to the adjustment of said link and means adjustable coincidently with the adjustment of said link for positively limiting the upward throw of the ribbon vibrator.

[Claims 6 to 12 not printed in the Gazette.]

874,339. ELEVATOR. PETER HINKEL, St. Louis, Mo. Filed Feb. 19, 1907. Serial No. 358,305.

1. An improvement in elevators comprising a shaft—a car; guides located in the shaft; a plurality of uprights secured to the top of the car; a movable transverse member supported between the uprights; a spring located between the transverse member and the top of the car; levers pivotally mounted in the top of the uprights the one end contacting with the upper surface of the transverse member; a bar connected to the opposite ends of the levers and to which is attached the cable; a slotted casting mounted on each end of the transverse member and a plurality of arms and grips carried in the casting, substantially as specified.



2. A device of the class described comprising an elevator shaft; guides located in the elevator shaft; a car slidably mounted upon the guides; a transverse member movably located upon the top of the car; a spring located between the transverse member and the top of the car; levers located above the transverse member, the outer ends held in depressed position by the weight of the car; a plurality of grips and arms pivotally connected together and carried by the ends of the transverse member and so arranged as to cause the grips to contact with the sides of the guides in the event the car should become detached from the cable, substantially as specified.

874,340. RUBBER OVERSHOE. FREDERICK C. HOOD, Boston, Mass. Filed Nov. 10, 1906. Serial No. 342,883.

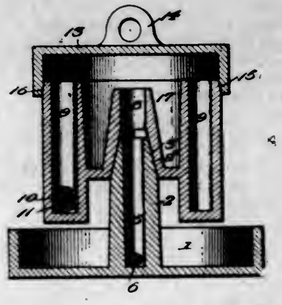


1. In a rubber overshoe the combination with the upper and sole of a reinforcing strip at the junction thereof comprising a bias strip of frictioned fabric having one edge provided with a facing of rubber said rubber being extended beyond the edge substantially as described.

2. In a rubber overshoe the combination with the elastic upper and the sole; of a reinforcing strip located at the junction of the upper and sole, said reinforcing strip comprising a layer of fabric and a layer of rubber, the rubber projecting above the upper edge of the fabric and secured to the upper, and the fabric extending below the lower edge of the rubber and engaging the sole.

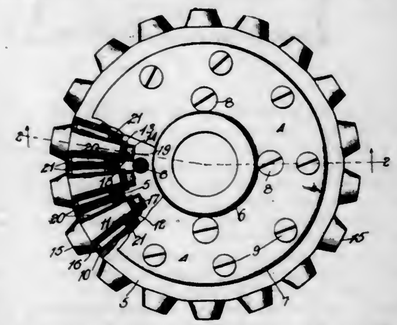
874,341. COMBINED GENERATOR AND BURNER. RALPH M. JACKSON, Fullerton, Cal. Filed Apr. 10, 1907. Serial No. 367,422.

A generator and burner of the class described comprising a retort having an inwardly extending nozzle, the inner wall of which is flaring, a tube communicating with the supply pipe and having a smooth tapered end to fit the nozzle, a cover for said retort and oppositely disposed gas chambers extending below the lower wall of the retort



and provided with burner tubes, said tubes being provided with burner caps having jet orifices.

874,342. ROLLER-TOOTH GEAR. CARL A. JANSON, Chicago, Ill. Filed Apr. 11, 1907. Serial No. 367,614.



1. A gear comprising a body having a series of tooth-sockets therein, teeth journaled in said sockets and each comprising an inwardly converging tapered shank seated in the socket and an integral head extending out of such socket, an anti-friction bearing for said shank near its head, and an end-bearing axially located at the inner end of said shank for resisting an inward thrust thereon.

2. A gear comprising an annular rim having therein a series of radially disposed tooth-sockets, rotatable teeth seated in said sockets, each of said teeth comprising an inwardly converging tapered shank and a head extending outward of the periphery of the body, and a series of tapered rollers interposed between each of said shanks and the surrounding walls of its respective socket.

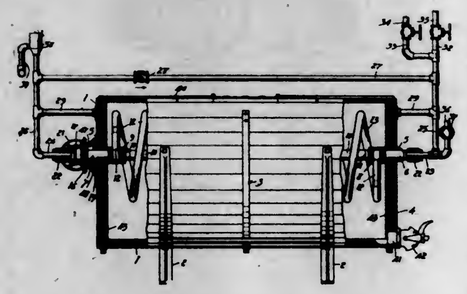
3. A gear comprising an annular rim having therein a series of radially disposed tooth-sockets, rotatable teeth seated in said sockets, each of said teeth comprising an inwardly converging tapered shank and a head extending outward of the periphery of the body, a series of tapered rollers interposed between each of said shanks and the surrounding walls of its respective socket, said body having a bearing surface opposed to the inner end of each of said shanks, and a rotatable bearing interposed between each of such bearing surfaces and its respective shank.

4. A gear comprising a body having a tooth-socket therein, a tooth comprising a shank seated in said socket and a head extending outwardly therefrom, an anti-friction roller bearing adapted to resist lateral pressure on said shank, said body having a bearing surface opposed to the inner end of said shank, and a rotatable bearing axially interposed between said bearing surface and the adjacent end of said shank.

5. A gear comprising a body having in its periphery a tooth-socket closed at its inner end, a tooth comprising a shank seated in said socket and a head extending outward of the periphery of said body, a series of rollers surrounding said shank and fitting between said shank and the walls of said socket, and an axially located thrust-ball interposed between the inner end of said shank and the body of the tooth-socket.

[Claims 6 to 18 not printed in the Gazette.]

874,343. LIQUID RIPENER, PASTEURIZER, AND COOLER. AAGE JENSEN, Eureka, Cal. Filed Sept. 16, 1907. Serial No. 393,045.



1. In an apparatus of the character described, the combination of a suitable receptacle for containing the liquid to be treated, a pipe therein in the form of a helical coil, connections with the ends of said pipe extending to the outside of the receptacle, means for rotating said coil, and means for conducting a heating or cooling medium into one end of said coil and out from the other end thereof, substantially as described.

2. In an apparatus of the character described, the combination of a suitable receptacle for containing the liquid to be treated, a pipe therein in the form of a helical coil, connections with the ends of said pipe extending to the outside of the receptacle, means for rotating said coil, means for conducting a heating or cooling medium to one end of said coil and out from the other end thereof, and a conduit connecting the outer end of said connections to provide a return circuit, substantially as described.

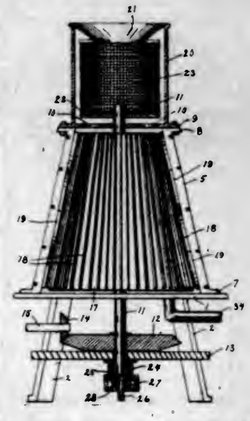
3. In an apparatus of the character described, the combination of a suitable receptacle for containing the liquid to be treated, a pipe therein in the form of a helical coil, connections with the ends of said pipe extending to the outside of the receptacle, means for rotating said coil, a pipe for supplying a liquid to said coil, an injector for injecting steam into said coil, and means for independently controlling said pipe and injector, substantially as described.

4. In an apparatus of the character described, the combination of a suitable receptacle for containing the liquid to be treated, a pipe therein in the form of a helical coil, connections with the ends of said pipe extending to the outside of the receptacle, bearings for said connections, a metallic lining for said receptacle, said bearings being connected fluid-tight to said lining, means for rotating said coil, and means for conducting a heating or cooling medium into one end of said coil and out from the other end thereof, substantially as described.

5. In an apparatus of the character described, the combination of a suitable receptacle for containing the liquid to be treated, bearings in the ends of said receptacle, hollow shafts therein, sleeves connected to said shafts, a helical coil of pipe connected at its ends with the respective sleeves, means for rotating said shafts, and means for supplying a heating or cooling medium to one of said shafts, and withdrawing it from the other, substantially as described.

[Claim 6 not printed in the Gazette.]

874,344. PAPER-STOCK-REFINING MACHINE. ARTHUR JONES and ARTHUR GREGG, Rock Falls, Ill. Filed Aug. 31, 1907. Serial No. 390,968.



1. A devicec of the class named, comprising a vertical cylinder, provided with a plurality of vertical, spaced-apart knives; a shell, inclosing said cylinder, and provided on its inner face with a plurality of knives, extending longitudinally thereof in a zigzag direction, said last-named knives being in proximity to the knives on said cylinder; and means for rotating said cylinder, substantially as shown and set forth.

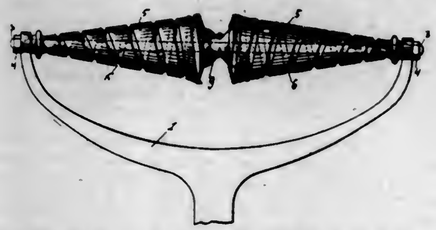
2. A device of the class named, comprising a shaft vertically mounted therein; a frustum shaped cylinder, fixed on said shaft, and provided on its periphery with a plurality of knives, longitudinally thereof; a shell, suitably mounted in said machine, so as to inclose said cylinder, formed of a plurality of sections, detachably secured to one another; a plurality of knives on the inner face of said shell, extending from top to bottom thereof in zigzag arrangement; and means for rotating said shaft; substantially as described.

3. A device of the class named, comprising a vertical shaft, suitably mounted therein; a metal cylinder, fixed on said shaft, and provided on its periphery with a plurality of knives, longitudinally thereof; a metal shell, supported in said machine, so as to inclose said cylinder, and provided with a plurality of knives on its inner face, extending longitudinally thereof in zigzag arrangement; said shell being formed of a plurality of detachably united sections; means for rotating said shaft, and means for vertically adjusting the same, substantially as shown and described.

4. A device of the class named, comprising a rotary shaft suitably mounted therein; a cylinder, fixed on said shaft, and provided on its periphery with a plurality of vertically disposed knives; a shell, removably supported in said machine, inclosing said cylinder, and provided on its inner face with a plurality of knives, extending from top to bottom thereof, in zigzag arrangement, said knives being in close proximity to the knives on said cylinder; a rotary screen, fixed to the upper end of said shaft; a cylinder, inclosing said screen, provided with an opening in its upper end, and communicating with the interior of said shell; and means for rotating said shaft, substantially as shown and for the purpose mentioned.

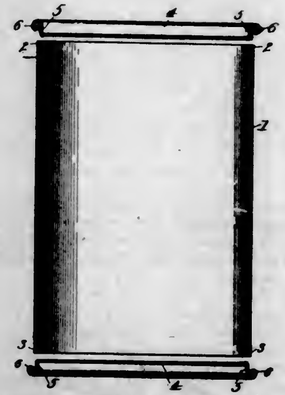
5. In a device of the class named, the combination of a frame; a vertical rotary shaft, supported in said frame, so as to be capable of vertical adjustment therein; a cylinder, fixed on said shaft, and provided on its periphery with a plurality of knives, longitudinally thereof; a stationary sectional shell, inclosing said cylinder, and provided on its inner face with a plurality of knives, in close proximity to the knives on said cylinder; said knives extending longitudinally of said shell in zigzag arrangement; a cylindrical screen, fixed on the upper end of said shaft; a cylinder, inclosing said screen, and communicating with the interior of said shell, and means for rotating said shaft, substantially as shown and set forth.

874,345. TROLLEY. GEORGE KERESZTES, Pittsburg, Pa. Filed Sept. 6, 1907. Serial No. 391,606.



In combination, a shaft having threaded ends, a pair of conoidal-shaped and peripheral-shaped sections having their opposing ends recessed, each of said sections provided with an axial bore extending from the vertical wall of its respective recess to its upper end, said bore of a diameter so as to have the wall thereof snugly fit the shaft throughout the length of the bore, a pair of collars carried by the shaft and abutting against the vertical walls of the recesses, a trolley wheel rotatably-mounted upon the shaft and capable of a longitudinal movement, said recesses providing means whereby the trolley wheel can shift longitudinally upon the shaft, said trolley wheel of a diameter less than the diameter of either of the recesses, a harp having its ends engaging the shaft and abutting against the outer ends of the sections, the ends of the harp in connection with the collars preventing the shifting of the sections upon the shaft, and nuts mounted upon the screw-threaded ends of the shaft for retaining the ends of the harp upon the shaft.

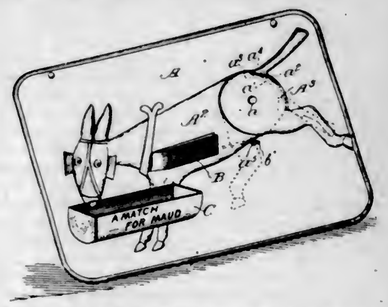
874,346. METHOD OF FORMING SHEET-METAL RECEPTACLES. LOUIS C. KRUMMEL, Clinton, Conn. Filed July 11, 1907. Serial No. 383,246.



1. The method of forming sheet metal receptacles, which includes the formation of a finished closing blank, with a completely curled edge, placing said blank upon the uncurled edge of the receptacle body, with the edge thereof extending into said curl, applying pressure so that the closing blank is given a movement relative to said body portion, the curled edge of the blank causing the edge of the body portion to be curled and interlocked with said curled edge on the closing blank.

2. The method of forming a sheet metal receptacle which includes the formation of a finished closing blank with a completely curled edge, providing said curled edge with a sealing material, placing said blank upon the uncurled edge of the receptacle body with the edge thereof extending into said curl, applying pressure so that the closing blank is given a movement relative to said body portion, the curled edge of the blank causing the edge of the body portion to be curled and interlocked with said edge on the closing blank.

874,347. MATCH SCRATCH AND RECEPTACLE. DIEGO LANGE, La Crosse, Wis. Filed June 19, 1907. Serial No. 379,759.



1. A match scratch or strike comprising, a figure of an animal having a movable limb or member, means for projecting the member, and a movable scratch having a catch to hold the said limb or member retracted until said scratch is struck as in the act of striking a match.

2. A match scratch or strike comprising, the figure of an animal having a pivoted hind leg, a spring for projecting the leg, and a yielding scratch having a catch in the path of the leg to hold it retracted against the action of the spring until the scratch is struck as in the act of striking a match.

3. A match scratch or strike comprising, the figure of an animal having a pivoted hind leg, a spring for projecting the leg, and a yielding scratch having a catch in the body of the animal and having a catch member projecting beyond the front side of the figure in the path of the leg to hold it retracted against the force of the spring until the scratch is pressed inwardly as in the act of striking a match.

4. A match scratch comprising, a panel bearing the figure of an animal, a pivoted hind leg therefor, a spring for projecting the leg, and a scratch punched out from the body of the animal and having a catch in the path of the leg to hold it retracted against the action of said spring until the scratch is pressed inwardly as in the act of striking a match.

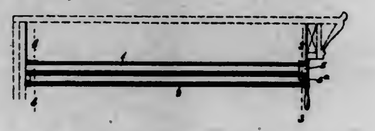
5. A match scratch comprising, a panel bearing the figure of an animal provided with a pivoted hind leg, the panel having a curved slot covered by said leg, the material punched out in forming the slot in turn forming a lug or projection, a lug or projection extending from the pivoted leg through said slot, a spring connecting said two lugs or projections, and a scratch or strike punched from the body of the animal and having a catch to hold the pivoted leg retracted against the action of the spring until said scratch is struck as in the act of lighting a match.

[Claims 6 and 7 not printed in the Gazette.]

874,348. ARTICLE-SUPPORT FOR WARDROBES. LOUIS RÉMOND, Grand Rapids, Mich., assignor to Grand Rapids Show Case Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Apr. 1, 1907. Serial No. 365,795.

1. An outer fixed rectangular tube having a longitudinal bottom slot, a second rectangular tube longitudinally movable within the first named tube and also having a

longitudinal bottom slot, a T-shaped member movable within the inner tube, a bar suspended from the T-shaped member, non-friction rollers within the tubes to support the inner tube and the T-shaped member, a band surrounding the outer tube and having downward extensions at the respective sides of the slot in said outer tube, and non-friction rollers supported on said extensions and supporting the inner tube.

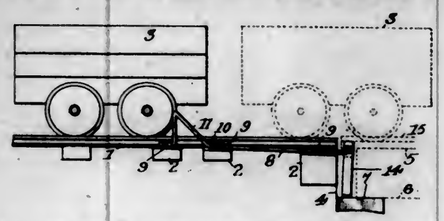


2. In a device of the class described, the combination of a rectangular tube having a longitudinal slot in its bottom wall extending from front to rear said tube adapted to be held stationary, a second rectangular tube having a longitudinal slot in its bottom wall extending from front to rear said second named tube telescopically traversing the slot of the first named tube partially within and partially below the plane of the same and provided with non-friction rollers at its rear end said rollers engaging the inner top or bottom walls of the first named tube, non-friction rollers at the outer end of and below the plane of the first named tube and in fixed relation thereto and adapted to engage the outside bottom wall of the second named tube and partially support the same, a T-shaped member adapted to telescopically move within the plane of the said second tube and provided with non-friction rollers at its rear end which rolls engage and traverse the inside top or bottom walls of said second tube, non-friction rollers journaled on the second named tube and extending inwardly from the side walls thereof and engaging the under side of the horizontal flange of said T-member supporting the same, brackets attached to each end of said T-member and extending downward through the slot in the second named tube, a bar supported on said brackets, and stops adapted to limit the outward movement of the second named tube and the T-member beyond predetermined points.

3. In a device of the class described, the combination of a rectangular tube having a longitudinal slot in its bottom wall, a second rectangular tube having a longitudinal slot in its bottom wall and telescopically traversing the slot of the first named tube partially within and partially below the plane of the same, non-friction rollers journaled at the rear end of the second named tube and traversing the top or bottom inside walls of the first named tube, a band fixed on the outer end of the first named tube and having lugs extending below the plane of the same, non-friction rollers journaled on said lugs and traversed by the bottom wall of the second named tube, a T-shaped member adapted to telescopically traverse within the plane of the second named tube, non-friction rollers journaled on and projecting inwardly from the side walls of the second named tube upon which the under side of the horizontal flange of the T-member are supported and traverse, non-friction rollers mounted on the rear end of the T-member and traversing the inside top or bottom walls of the second named tube, brackets attached to the respective ends of the T-member and extending downwardly and traversing the slot of the second named tube, a bar supported on said brackets, a stop to limit the outward movement of the second named tube, a second stop to limit the outward movement of the T-member and a handle attached to the outer end of the T-member for extending and retracting the same.

874,349. AUTOMATIC CAR-STOP. GEORGE H. RICHARDS, Terre Haute, Ind. Filed July 26, 1907. Serial No. 385,607.

1. In a device of the character described, a rock-shaft having an outstanding object-arresting arm, and having a weight adapted to normally hold the rock-shaft in a determined position, and having also an element adapted to be actuated to rotate the shaft from its normal position.



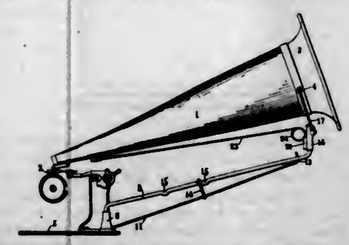
2. In a device of the character described, a rock-shaft having an outstanding car-arresting arm, and having also a trip and weight the trip being adapted to be struck to turn the shaft from its normal position and the weight being adapted to return the shaft to its normal position.

3. In a device of the character described, a rock-shaft having a portion thereof bent to form an outstanding knee, and having also a combined trip and resetting weight the trip portion being adapted to be struck to turn the rock-shaft and the weight portion being adapted to return the shaft to its normal position.

4. In a device of the character described, a rock-shaft mounted adjacent a track the shaft having an outstanding arm adapted to normally project into the path of a car rolling on the track, the rock-shaft having also a trip and resetting weight the trip being adapted to be struck to turn the shaft for the purpose of turning its arm out of the path of the car the weight being adapted to return the arm to its normal position when the trip has been freed.

5. In a device of the character described, the combination with a track, of bearings secured adjacent a rail thereof, a shaft mounted to turn in the bearings, the shaft having a portion bent outwardly to form a knee adapted to normally project into the path of a car wheel traveling on the adjacent rail, the shaft having also at one end a head forming a combined trip and resetting weight, a cage adapted to move transversely of the shaft and track and adapted to receive a car from the latter the cage being also adapted in traveling to its car-receiving position to strike the trip portion of the head thereby turning the shaft and removing its knee from the path of car the weight portion of the head being adapted to return the shaft and knee to its normal position when the cage retreats from its car-receiving position, means carried by the shaft contiguous to the bearings and adapted to maintain the shaft longitudinally therein, and means for limiting the movement of the cage transverse the shaft when the former is traveling to its car-receiving position.

874,350. REPRODUCING-TRUMPET SUPPORT. WALTER C. RUNGE, Camden, N. J., assignor to International Royal Phone Company, Boston, Mass., a Corporation of Maine. Filed July 3, 1906. Serial No. 324,608.

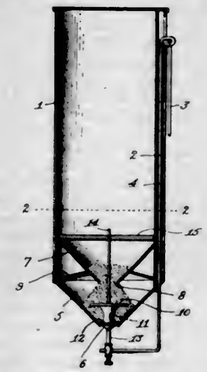


1. A reproducing trumpet support comprising an arm secured to a talking machine at one end, a brace secured to the machine at one end and to the arm at the other, and a link slidable on the arm and brace for the purposes set forth.

2. A reproducing trumpet support comprising an arm secured to a talking machine, a brace also secured to the machine at one end and to the arm at the other, a link slidable on the arm and brace and a yoke rotatably mounted on the arm and adapted to engage a reproducing trumpet.

3. A reproducing trumpet support comprising an arm secured to a talking machine at one end, a sleeve rotatably secured to the other end thereof, a yoke adapted to engage a reproducing trumpet, a clip plate secured to the sleeve and holding the yoke in position between it and the sleeve, and an elastic packing protecting said yoke where it engages the clip plate and sleeve for the purpose of affording a slight universal movement and providing an insulated joint.

874,351. CARBID-FEED VALVE. FRANK E. STOVER, Chattanooga, Tenn., assignor to The G. R. Lynch Manufacturing Company, Chattanooga, Tenn., a Corporation of Tennessee. Filed Aug. 1, 1907. Serial No. 386,679.



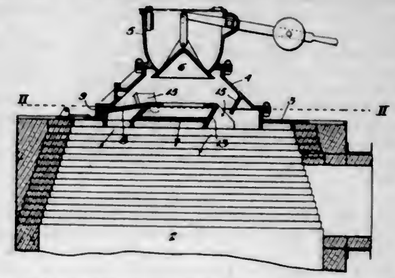
1. In combination with a carbid chamber having an unobstructed discharge opening in its bottom and a partition above said bottom provided with an unobstructed aperture therethrough, a feed valve located in the space between said bottom and partition and having a flat top surface, said feed valve adapted in its downward movement to close said bottom aperture, in its initial upward movement to augment the flow of carbid, and in its further upward movement to stop the flow of carbid.

2. In combination with a carbid chamber having a discharge opening in its bottom and an apertured partition above said bottom, a feed valve located in the space between said bottom and partition and having a flat top surface and a lower closing enlargement, said flat top surface acting upon the initial upward movement of said valve to force off therefrom the carbid piled thereon, and upon further upward movement to stop the flow of carbid through the aperture in said partition.

3. In combination with a carbid chamber having a funnel-shaped bottom with a central discharge opening therein, and a similarly shaped centrally apertured partition above said bottom, a feed valve located in the space between said bottom and partition and having a flat top surface and a lower closing enlargement, said flat top surface acting upon the initial upward movement of said valve to force off therefrom the carbid piled thereon, and upon further upward movement to stop the flow of carbid through the aperture in said partition.

874,352. FEEDING MECHANISM FOR GAS PRODUCERS, FURNACES, &c. JOHN A. WALDBURGER, McKeesport, Pa., assignor to Forter Miller Engineering Co., Pittsburg, Pa., a Corporation of Pennsylvania. Filed Nov. 12, 1906. Serial No. 343,081.

1. In combination with a furnace or producer, a transversely arranged distributer having outwardly and downwardly disposed deflecting faces and intermittently arranged openings adapted to permit portions of the charge to fall outwardly and inwardly respectively, means for fixedly supporting said distributer, and inwardly disposed deflecting abutments located outwardly beyond and opposite said openings, substantially as set forth.



2. In a furnace or producer, the combination with an upper charge-receiving and lowering structure, of a transverse frame having radially arranged arms and intervening clearance openings, with independent deflecting abutments located outwardly opposite said openings, substantially as set forth.

3. In a furnace or producer, the combination with an upper valve-controlled holder, of a lower transverse distributer having radially arranged arms and inclined faces with intervening inwardly directed clearance openings, and deflecting abutments located in proper relation to said openings for directing portions of the charge therethrough, substantially as set forth.

4. In a furnace or producer, the combination with an upper valve-controlled holder, of a lower transverse distributer having radially arranged arms and inclined faces with intervening inwardly directed clearance openings, and an outer shell having downwardly and inwardly deflected abutments, substantially as set forth.

5. In a furnace or producer, the combination with an upper valve-controlled holder, of a lower transverse distributer having radially arranged arms and inclined faces with intervening inwardly directed clearance openings, and an outer shell having separable downwardly and inwardly deflected abutments, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

874,353. PROCESS OF PRODUCING MATRICES. WILLIAM H. WELSH, Collingswood, N. J., assignor of one-third to Charlton H. Royal and one-third to James F. Gounley, Philadelphia, Pa. Filed Apr. 23, 1907. Serial No. 369,789.



1. The process of forming matrices for the production of electrotypes from combined half-tone and type forms, which consists in making a metal impression of the half-tone, assembling the type and half-tone impression in proper relative position, applying the usual wax plate for the type impression while the metal impression is in place, and then applying pressure to the wax plate, whereby the impressed-metal-plate is picked up therewith.

2. The process of forming matrices for the production of electrotypes from combined half-tone and type forms, which consists in making an independent metal impression of the half-tone, and then making a wax impression of the type, and combining the metal-impression with the wax impression in the operation of making the latter so that the parts to be reproduced are held in the proper relative position.

3. The process of forming matrices for the production of electrotypes from combined half-tone and type forms.

which consists in assembling the type and half-tone in proper relative position, making a metal impression of the half-tone *in situ*, placing the usual wax plate over the type and impressed-metal-plate, and then subjecting said wax plate to pressure sufficient to form the type impression and pick up the impressed-metal-plate.

4. The process of forming matrices for the production of electrotypes from combined half-tone and type forms, which consists in assembling the type and half-tone in proper relative position, placing a thin metal plate over the half-tone, applying pressure to said metal plate to form an impression of said half-tone, placing a wax plate for the type impression over said type and the impressed-metal-plate while the latter is in place, and then applying pressure to the wax plate whereby the type impression is formed and the impressed-metal-plate simultaneously picked up.

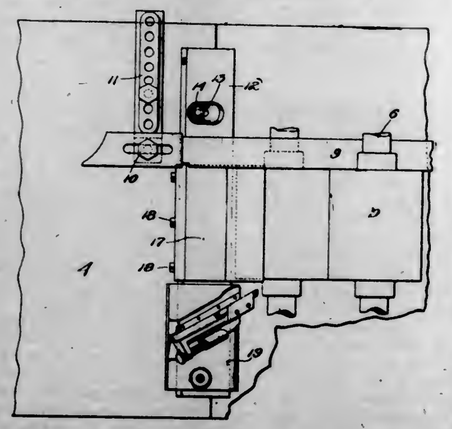
874,354. PROCESS OF PRODUCING MATRICES. WILLIAM H. WELSH, Collingswood, N. J., assignor of one-third to Charlton H. Royal and one-third to James F. Gounley, Philadelphia, Pa. Filed May 20, 1907. Serial No. 374,637.



1. The process of forming matrices for the production of electrotypes from half-tones, zinc etchings and the like, which consists in making a metal foil impression of the half-tone, zinc etching, etc., placing a body of plastic material over the foil impression to serve as a carrier therefor, and applying pressure to said plastic body whereby the impressed foil becomes firmly embedded in and attached thereto and may be stripped from said half-tone and the like.

2. The process of forming matrices for the production of electrotypes from half-tones, zinc etchings and the like, which consists in making a lead foil impression of the half-tone, zinc etching, etc., placing a waxed plate over such impression to serve as a carrier therefor, and applying pressure to said waxed plate whereby the impressed foil becomes firmly embedded in and attached thereto and may be stripped from the half-tone and the like.

874,355. KNIFE-JOINTER FOR THE BOTTOM CUTTER-HEADS OF WOOD-PLANERS. CHARLES W. H. BLOOD and CARL G. OSTEMAN, Boston, Mass., assignors to S. A. Woods Machine Company, Boston, Mass. Filed Oct. 15, 1906. Serial No. 338,964.



1. A wood planer, comprising a bed, a bottom cutter-head mounted in said bed, a guide bar fixedly mounted transversely of the bed of the machine at one side of said cutter-head parallel to the axis thereof and below the path of the lumber being planed, longitudinally movable grinding means including a carriage mounted to move lengthwise on said bar, having a grinding surface projecting in the path of movement of the cutter-head knives, and means extending over the guiding surface of said bar normally in line with and below said path of the lumber for protecting the guiding surface of said bar when the grinding means is not in use, and movable along said bar out of the way when the grinding means is operated.

2. A wood planer, comprising a bed, a bottom cutter-head mounted in said bed, a transverse guide bar extending transversely of the bed at one side of the cutter-head, a bar-after-the-cut for supporting the lumber being planed, longitudinally movable on said guide bar, said guide bar being longer than the cutter-head, a grinding carriage mounted on said guide bar and normally occupying a projecting end thereof beyond the cutter-head at one end of said bar-after-the-cut and movable lengthwise of said bar in front of the cutter-head when the latter is to be sharpened and the bar-after-the-cut has been slid out of the way on said guide bar, and a grinding device mounted on and movable with said carriage for reciprocation in the path of movement of the cutting edges of the cutter-head.

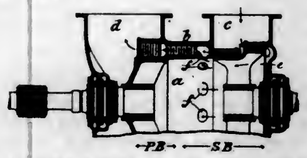
3. A wood planer, comprising a bottom cutter-head, a guideway mounted parallel thereto on the bed of the machine, a grinding carriage mounted to reciprocate on said bar, and a pencil-like grinding device mounted on said carriage and having its grinding point extending obliquely downward toward said cutter-head.

4. A wood planer, comprising a bottom cutter-head, a guideway mounted parallel thereto on the bed of the machine, a grinding carriage mounted to reciprocate on said bar, and a pencil-like grinding device mounted on said carriage and having its grinding point extending obliquely forward and downward toward said cutter-head.

5. A wood planer, comprising a bottom cutter-head and opposite overhanging head plate for guiding the upper side of the work being dressed by said cutter-head, and a reciprocable grinding device mounted at one side of said cutter-head parallel thereto and movable into the path of movement of the cutting edges thereof beneath said overhanging head plate when the latter is adjusted down for thin stock.

[Claims 6 to 10 not printed in the Gazette.]

874,356. MARINE TURBINE. EDWIN C. CARNT and ANDREW FORSTER, East Cowes, Isle of Wight, England, assignors of one-third to J. Samuel White and Company Limited, East Cowes, England. Filed Oct. 26, 1906. Serial No. 340,740.



1. A parallel flow single drum marine turbine oppositely bladed at the steam entry part thereby constituting a self balance and bladed at the remaining part in opposition to the propeller thrust and the whole interior of the drum of which turbine is in communication with the outlet ends of the blading of the self balance and the inlet end of the blading of the propeller balance and constitutes a passage for steam from one to the other.

2. A parallel flow single drum marine turbine oppositely bladed at the steam entry part thereby constituting a self balance and bladed at the remaining part in opposition to the propeller thrust and the drum of which turbine is of larger diameter at the forward part of the self balance than at the other part thereof and has the whole of its interior in communication with the outlet ends of the blading of the self balance and the inlet end of the blading of the propeller balance and constitutes a passage for steam from one to the other.

874,357. ELECTRIC GAS-LIGHTER. JOHN DICKENS, Passaic, N. J., assignor of one-half to James Brown, Philadelphia, Pa. Filed Apr. 2, 1907. Serial No. 366,037.



1. In an electric gas lighter, the combination of a hollow body, an electric circuit operatively associated with the body and including a resistance, an incandescible body and a battery, the battery being inclosed by said hollow body, and means also associated with the body for closing the circuit with either the resistance in or out of the same.

2. In an electric gas lighter, the combination of a tubular body, an electric circuit associated with said body and including a resistance, an incandescible body, and a battery, the battery being inclosed by said tubular body, and a switch carried by the body and having means for closing the circuit with either the resistance in or out of the same.

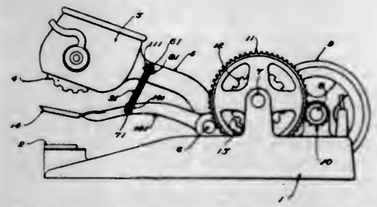
3. In an electric gas lighter, the combination of a tubular body, an electric circuit associated with said body and including a resistance, an incandescible body, and a battery, the battery being inclosed by said tubular body, and a spring switch connected with the body and provided with means for closing the circuit with either the resistance in or out of the same.

4. In an electric gas lighter, the combination of a hollow body, an electric circuit associated with said body and including a resistance, an incandescible body and a battery, the battery being inclosed by said hollow body, and a switch connected with the body exteriorly thereof and provided with a contact member adapted to close said circuit with the resistance therein, said contact member being adjustable to permit the switch to close the circuit without the use of said adjustable contact member and with said resistance cut out.

5. In an electric gas lighter, the combination of a hollow body, an electric circuit including a resistance, two contacts with which the resistance is connected, an incandescible body, and a battery, the battery being inclosed by said hollow body, and a switch supported exteriorly of the body and provided with an adjustable contact member for engaging one of said contacts to close the circuit with the resistance therein, the switch itself serving to engage the other contact to cut out the resistance, and the contact member being adjustable to carry it out of engagement with its coöperative contact member at will.

[Claims 6 to 8 not printed in the Gazette.]

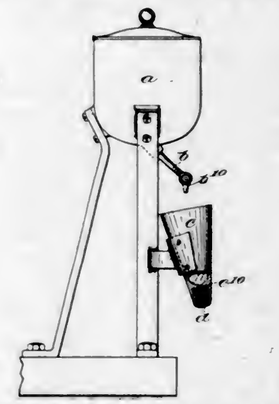
874,358. STAMPING AND NUMBERING MACHINE. JOSEPH FRENCH, Woonsocket, R. I., assignor of one-half to The Sewing Machine Supplies Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 7, 1907. Serial No. 352,676.



1. In a stamping or numbering machine, in combination, a stationary work-support, a printing-head movable toward and from the said stationary work-support for the purpose of numbering or marking an article thereon, a work- hold-down or presser, and means whereby the said hold-down or presser is operatively engaged with the said printing-head and actuated thereby, the said means embracing a spring intermediate the printing-head and the hold-down or presser and having its tension increased through the printing movement of the printing-head to bear the hold-down or presser with yielding force against the article placed upon the stationary work-support and thereby clamp the said article fixedly on the work-support as the carrier approaches, and at the time of the impression.

2. In a stamping or numbering machine, in combination, the swinging printing-head, the stationary work-support, the rigid work-holder or presser, the supporting arm for said work-holder or presser, and means for transmitting yielding pressure from the printing-head to the work hold-down or presser to thereby actuate the latter to clamp the article which is to be numbered or marked fixedly upon the stationary work-support as the printing head approaches the latter, and at the time of the impression.

874,359. LIQUID-APPLYING DEVICE. PERLEY R. GLASS, Quincy, Mass., assignor to Lorenz Muther, Boston, Mass. Filed Nov. 28, 1904. Serial No. 234,588.



In a liquid applying device, a main reservoir mounted on a standard, and having an outlet pipe from the bottom inclined with relation to the standard, and provided with a stop-cock; a conical collector open at the top and supported on the standard below the outlet pipe, the lower end of said collector being inclined outward and provided with a small outlet and a chamber below said outlet, and an applying portion of absorbent material partly contained in said chamber, and partly outside of the lower end of the collector, substantially as and for the purpose described.

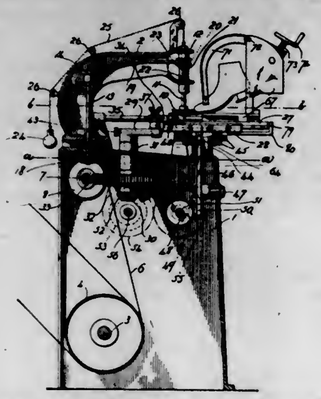
874,360. EDGE SETTING OR BURNISHING MACHINE. ALFRED HARRINGTON, Leicester, England, assignor to William Spiers, Leicester, England. Filed Oct. 25, 1905. Serial No. 284,360.

1. In an edge setting machine the combination with the finishing tool of a boot carrier provided with adjustable means for supporting the toe and heel respectively of a boot, means operable by a hand-wheel to hold said boot in position on the carrier, a slide to which the carrier is pivoted, cams fixed to a part of the machine and rollers on said carrier adapted to ride up the fixed cams to rock or vary the angle of inclination of the boot as the slide moves forward for the purpose described.

2. In an edge setting machine, the combination with a slide a boot carrier pivoted on the slide and adapted to be rocked as the latter moves forward, of a carrying head, a finishing tool adapted to rise and fall in said carrying head whereby said tool is caused to follow the contour of the edge of the sole of the boot as the latter is moved around and in contact with the same.

3. In an edge setting machine the combination with the finishing tool, of a slide, a boot carrier thereon comprising means for supporting and holding the boot and plungers

on the slide adapted to be pressed against a fixed part of the machine to keep the toe of the boot pressing in contact with the finishing tool substantially as described.

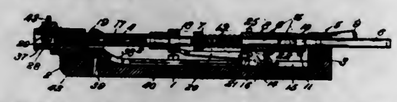


4. In an edge setting machine the combination with the finishing tool, of a boot carrier, a slide supporting the latter, a sliding link and rotating crank for moving the said slide backwards and forwards and a second slide on which the first slide is mounted, said second slide having movement at right angles to the movement of the first slide to cause the edge of a boot to move around in contact with the finishing tool for the purpose described.

5. In an edge setting machine the combination with the finishing tool of a boot carrier, a slide supporting the latter, a sliding link and rotating crank for moving the said slide backwards and forwards, a lower slide mounted on a fixed bed and weights or balancing means connected with said slide to maintain the sides of the edge of the boot in contact with the finishing tool as the lower slide moves laterally for the purpose described.

[Claim 6 not printed in the Gazette.]

874,361. NAILING MECHANISM FOR BASKET-MAKING MACHINES. EMMET HORTON, Elmira, N. Y. Original application filed Aug. 15, 1905. Serial No. 274,301. Divided and this application filed Feb. 27, 1906. Serial No. 303,285.



1. Nailing mechanism comprising a reciprocating hammer and a staple forming sleeve, having a removable and replacable block in its bore, in contact with which the hammer moves.

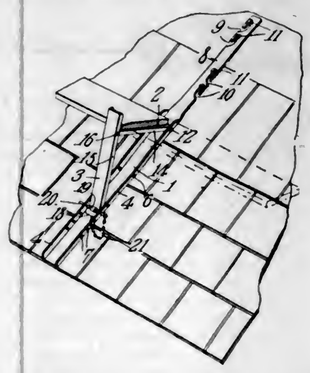
2. Nailing mechanism comprising a reciprocating hammer formed with a longitudinal rib and a staple forming sleeve having a removable and replaceable wearing block in its bore, formed with a groove corresponding with the rib on the hammer and in contact with which the hammer moves.

3. The staple-forming and cutting sleeve herein described, recessed to receive a replaceable cutter and having longitudinally groved removable blocks in its end for forming staples, subetantially as described.

4. A staple-forming sleeve having a longitudinal groove to receive an anvil, a removable cutter and detachable wearing blocks, substantially as described.

5. Nailing mechanism comprising a staple forming sleeve having a shoulder, 19, a hammer rod mounted to reciprocate in the sleeve and having a shoulder, d', a hammer, e, having a screw-threaded adjustable conection with the end of the hammer rod and a spring interposed between said shoulders.

874,362. SCAFFOLD-JACK. EDWARD D. HUNT and ALVA C. JAMES, Mount Victory, Ohio; said James assignor to Claude M. Osbun, Mount Victory, Ohio. Filed Aug. 26, 1907. Serial No. 390,216.



1. A scaffold jack comprising a base strip having an integral nail strip continuous with the base strip, said nail strip having a plurality of notches at each end on opposite sides, a scaffold board support hinged to said base strip, a brace hinged to said support and a pin adapted to fasten the lower end of said brace to the base strip at different points.

2. A scaffold jack comprising a base strip having an integral nail strip continuous therewith said nail strip having a plurality of notches at the lower end of said nail strip through which nails are driven between two slates into the sheathing, and a plurality of notches at its upper end and on the opposite side through which nails are driven directly into the sheathing above the slates, a scaffold board support, a brace therefor and means for fastening the lower end of said brace to the base strip.

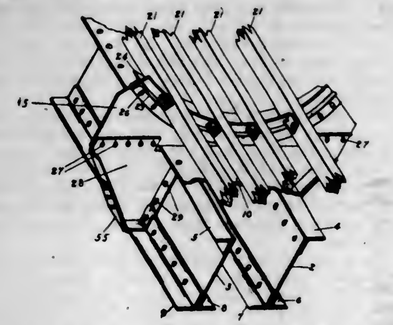
3. A scaffold jack comprising a flanged base strip, a nail strip without flanges continuous lengthwise of said body strip and having a plurality of notches on each side, a flanged scaffold board support hinged between the flanges of said base strip, a flanged brace hinged to the outer end of said support and having a foot adapted to slide on the base strip between its flanges and means for fastening said brace to the flanges of the base strip in different positions.

4. A scaffold jack comprising a flanged base strip having a nail strip continuous therewith and provided with slots for securing it temporarily to a roof by nails driven in said slots, a scaffold board support hinged to the flange of said base strip, a brace hinged to the free end of said support, a foot on the lower end of said support, a loop at the upper end of said foot and a pin adapted to engage one of a series of openings in each of said base flanges and said loop to hold said support in horizontal position.

5. A scaffold jack comprising a base strip having a nail strip continuous therewith provided with a plurality of notches or slots on each edge into which nails are to be driven for temporarily fastening the base strip to the roof whereby side play is prevented, a scaffold board support pivoted to said base strip, a brace pivoted to the end of said support and projecting above it, and means for adjustably attaching the lower end of said brace to the base strip.

874,363. TANK-CAR. FRANK L. IRWIN, Columbus, Ohio, assignor to The Ralston Steel Car Company, Columbus, Ohio, a Corporation of Ohio. Filed Oct. 4, 1907. Serial No. 395,940.

1. In a tank car a tank saddle comprising a plate with an upper concave edge having recesses formed therein, the portions of said plate adjacent said recesses being bent at practically a right angle with the plane of the plate, thereby forming a seat and side supports for a tank bearing member.



2. In a tank car a tank saddle comprising a plate having an upper concave edge with recesses formed therein at intervals, the portions of said plate adjacent said recesses being bent at practically a right angle with the plane of said plate, and a reinforcing member secured to said plate adjacent the lower edge of said recesses, a tank bearing member adapted to be positioned in each of said recesses upon said reinforcing member and to be supported laterally by said portions of said plate bent at a right angle.

3. In a tank car a tank saddle, comprising a plate member mounted upon the center sill of said car and having a concave upper edge, a plurality of recesses formed in said plate in said concave edge, the portions of said plate adjacent said recesses being adapted to be bent at a right angle with the plane of said plate, a reinforcing member secured upon said plate beneath said bent portions, and a tank bearing member adapted to be positioned in each of said recesses and to be supported from beneath by the lower edge of said recess and said reinforcing members, and adapted to be supported laterally by said bent portions of said plate.

4. In a tank car, a center sill construction having a recess formed in its upper edge, a reinforcing member bent to conform to the contour of said recess mounted upon said center sill construction and adapted to be secured thereto, and a tank block adapted to be let into said recesses to be supported by the lower edge of said recesses and by said reinforcing member from beneath, and adapted to be supported forwardly and rearwardly by the forward and rear edges of said recesses and by the forward and rear portions of said reinforcing member.

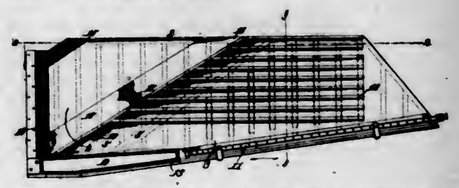
5. In a tank car, a center sill construction having a recess formed in the upper edge thereof, a plurality of reinforcing members conforming in contour to the edge of said recess and mounted upon said center sill construction adjacent said recess, and a tank block adapted to be let into said recess and to be supported therein from beneath and upon the forward and rearward sides thereof by the edges of said center sill adjacent said recesses and by said reinforcing member.

[Claims 6 to 9 not printed in the Gazette.]

874,364. ORE-CONCENTRATOR. ULYSSES S. JAMES, Newark, N. J., assignor to James Ore Concentrator Co., Newark, N. J., a Corporation of New Jersey. Filed Mar. 26, 1906. Serial No. 308,069.

1. An endwise reciprocatory ore concentrating table having a concentrating portion flexibly joined along a line diagonal to the line of motion of the table and a slime portion, the concentrating portion being adapted to concentrate the pulp and the slime portion being adapted to receive the slime from the pulp and having an inclined ledge extending obliquely thereacross, provided with a face inclined upward toward the tail of the table and oblique to the line of motion thereof combined with means for adjusting said concentrating portion angularly with respect to the slime portion.

2. An endwise reciprocatory ore concentrating table having a concentrating portion flexibly joined along a line diagonal to the line of motion of the table and a slime portion, the concentrating portion being adapted to concentrate the pulp and the slime portion being adapted to receive the slimes, said slime portion having a ridge extending angularly across the same, said ridge having an inclined face oblique to the line of motion and upwardly inclined toward the tail of the table, said slime portion also having means to hold the wash water supplied thereto substantially in a quiet condition combined with means for angularly adjusting said concentrating portion with respect to the slime portion.



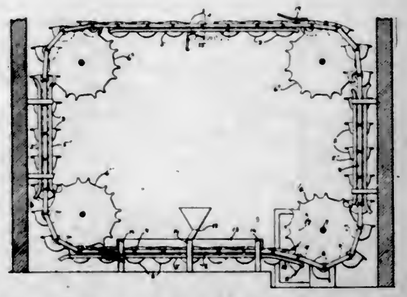
3. An ore concentrating table having a concentrating portion and a slime portion, the concentrating portion being adapted to concentrate the pulp and the slime portion to concentrate the slimes, said slime portion having a ridge extending angularly across the same provided with an inclined face oblique to the line of motion of the table and upwardly inclined toward the tail of said table, said slime portion having flanges extending along the head and front thereof, the front flange merging into said inclined face and extending short of the apex of the same to provide an outlet for mineral values between said front flange and the apex of said inclined face.

4. The combination of a supporting bed involving a stationary and a swinging member, a concentrating table involving two flexibly related sections, and supporting links connected flexibly with the sections of the supporting bed and with the sections of the table.

5. The combination of a supporting bed involving a stationary and a swinging section, a concentrating table comprising flexibly related sections, and supporting links extending between the sections of the table and the sections of the supporting bed.

[Claims 6 to 9 not printed in the Gazette.]

874,365. CONVEYER. SAMUEL F. JOOR, Morgan Park, Ill., assignor, by mesne assignments, to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Mar. 8, 1906. Serial No. 304,846.



1. In an endless conveyer, the combination with the chains, the freely-swinging buckets pivoted therein, the edges of adjacent buckets being arranged to overlap, and the turning wheels with which the chains engage where the direction of movement of the conveyer changes, of means carried by such turning wheels for preventing the buckets from interfering with each other and shifting the lap of the edges thereof as they move from one run to another, substantially as set forth.

2. In an endless swinging bucket conveyer, the combination of chains, buckets pivotally supported therein and provided with overlapping edges, means for loading the buckets arranged along one horizontal run of the conveyer, means for discharging the buckets arranged along another horizontal run, means for changing the direction of the conveyer from one run to the next, and means movable in a direction substantially parallel with that of the conveyer as it changes from one run to the next with which the buckets engage, such means being arranged to prevent the buckets from interfering with each other, and changing or shifting the lap of the edges thereof as the buckets pass such means, substantially as set forth.

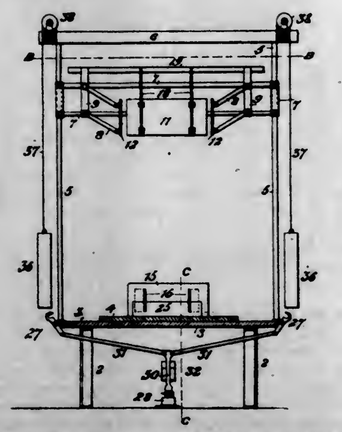
3. In an endless swinging bucket conveyer, the combination of endless chains, buckets pivotally supported therein and having overlapping edges, a device for turning or changing the direction of the conveyer where it passes from the descending vertical to the lower horizontal run, and means movable in a direction substantially parallel with that followed by the conveyer in passing the said turning device arranged to engage the buckets and separate them, whereby as they pass said turning device they do not interfere with each other, substantially as set forth.

4. In an endless swinging bucket conveyer, the combination of the endless chains, buckets pivotally supported therein and having overlapping edges, a track by which the conveyer is supported when moving along the lower horizontal run, the forward end of the track being inclined downward, a device for turning or changing the direction of the conveyer before it enters said lower horizontal run, and means movable in a path substantially parallel with that followed by the conveyer in passing the said turning device with which the buckets engage arranged to prevent them from interfering with each other before they engage with the inclined track portion of the lower horizontal run, substantially as set forth.

5. In a conveyer, the combination of endless chains, swinging buckets freely pivoted therein and having overlapping edges, a wheel with which the conveyer engages where it turns from one run to another, cross-bars 17 carried by the wheel and arranged to be engaged by the buckets as the conveyer moves past said wheel, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

874,366. CEMENT-BLOCK-MOLDING MACHINE. JAMES LAYFIELD and ALBERT V. CRISP, Vancouver, British Columbia, Canada, assignors to Victor Cement Block & Machine Co. Ltd., a Corporation. Filed Mar. 30, 1907. Serial No. 365,615.



1. In a cement block mold, the combination with a mold base plate, of a frame vertically movable there-over, plates for forming the side and end faces of the mold and the core space, means for connecting all of the mold plates to the mold carrying frame so that as the frame is lifted upward off the mold base plates, the mold plates will first be with-drawn from the faces of the block which has been molded, and means for lifting the mold carrying frame upward at times, substantially as shown and described.

2. In a cement block mold, the combination with a mold base plate of a frame vertically movable thereover, plates for forming the side and end faces of the mold and the core space, and means for so connecting the wall and core plates of the mold to the mold plate carrying frame that as the frame is lifted the plates are first withdrawn backward from the faces of the block which they have molded.

3. In a cement block mold, the combination with a table suitably supported at a convenient height from the floor and carrying the base plate for the mold, of guide columns extending upward from the table and suitably connected at the top, a mold plate carrying frame vertically slidable on the columns, front back and side mold plates each pivotally connected by parallel links to the carrying frame, a central frame supported on the carrying frame and having elongated apertures inclined downward toward the mid-plane of the core space and means for connecting the core plates by pins through the elongated apertures so that when the carrying frame is lifted the core plates will be drawn back from the faces of the core space to the mid-plane of the same.

4. In a cement block mold, the combination with a table suitably supported at a convenient height from the floor and carrying the mold base plate, guide columns extending upward from the table and suitably connected at the top, an open rectangular frame vertically slidable on the columns, mold plates connected by equal and parallel links pivotally connected to the rectangular frame and to the mold plates, means for limiting the pivotal movement of the links at the horizontal position and at an angular position below such, means for adjusting the length of the links, a central frame secured to the rectangular frame and having downwardly depending members, core plates secured by pins to the depending members in such a manner that as the frame is lifted the core plates will be drawn toward the mid-plane, means for counterweighting the rectangular frame and its connected parts means for securing the frame to the table of the machine, and means for releasing such securing means.

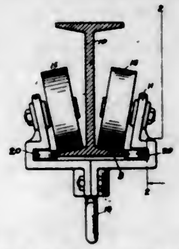
5. In a cement block mold, the combination with a mold base plate, of a frame vertically movable there-over, plates for forming the side and end faces of the mold and the core space, means for connecting all of the mold plates to the mold carrying frame so that as the frame is lifted upward off the mold base plates, the mold plates will first be with-drawn from the faces of the block which has been molded, means for lifting the mold carrying frame upward at times, means for normally holding said lifting means locked, and manually operated means for releasing the locking means, substantially as shown and described.

874,367. TROLLEY. EDWARD Y. MOORE, Cleveland, Ohio. Original application filed June 8, 1907, Serial No. 377,889. Divided and this application filed Sept. 6, 1907. Serial No. 391,548.

1. The combination with a trackway supported from above, of a trolley having wheels riding on a flange of the trackway, the trolley extending transversely beneath such flange, and guide wheels carried by the trolley and adapted to engage the edge of the flange.

2. The combination with an I-beam, of a trolley having a frame extending beneath the I-beam and above its lower flange, wheels carried by the upward extensions of the frame and adapted to ride on such flange, and other wheels carried by the frame and adapted to engage the edge of the I-beam.

3. In a mechanism adapted to travel on the lower flange of an I-beam and extend transversely beneath the beam, in combination, a frame, supporting wheels carried thereby adapted to ride on such flange, and guiding wheels carried thereby adapted to engage the edge of the flange.



4. In a mechanism adapted to travel on the lower flange of an I-beam, the combination of a frame adapted to extend beneath such I-beam and onto the opposite sides thereof, flangeless supporting wheels carried by said frame, and adapted to track on the upper surface of the I-beam-flange, and guide wheels carried by the frame and adapted to engage the edge of such flange.

5. In a mechanism adapted to travel on the lower flange of an I-beam the combination of an approximately U-shaped frame extending beneath the I-beam and onto opposite sides thereof, flangeless supporting wheels carried on the inner sides of the side members of the frame and inclining outwardly, and rollers carried on vertical pins mounted in the frame and adapted to engage the edge of the flange.

[Claims 6 to 14 not printed in the Gazette.]

874,368. BROOM. WILLIAM D. MCATLIN, Tullvania, Mo., assignor of one-half to Aaron Hyams, Sioux Falls, S. D. Filed Jan. 9, 1907. Serial No. 351,574.



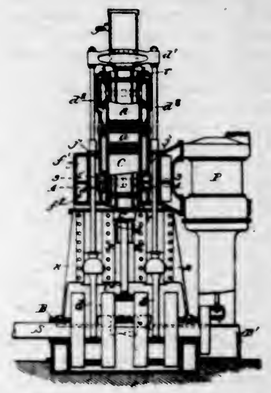
As an improved article of manufacture, a broom consisting of a handle, a head composed of two members provided with tapered extending shanks embracing one end of the handle and formed with ears by which they are pivoted to said handle, both of said members being provided with apertures at their free ends, a brush portion adapted to fit between said members, and screws passing through the apertures of said members and through the brush portion.

874,369. VERTICAL GAS-ENGINE. WILHELM VON OECHELHAEUSER, Dessau, and CARL STEINBECKER, Langfuhr, Germany. Filed Jan. 31, 1907. Serial No. 355,133.

1. In a vertical gas engine, the combination of a supporting frame, a working cylinder, oppositely moving pistons therein, having cross heads and connecting rods and air and gas receiving chambers around said working cylinder, with ferrules passing through said chambers for the passage of the side connecting rods.

2. In a vertical gas engine, the combination of a supporting frame, a working cylinder, oppositely moving pistons therein, air and gas receiving chambers, and inlet ports to said cylinder with means in said chamber for guiding the air and gas through the inlet ports to the working cylinder.

3. In a vertical gas engine, the combination of a supporting frame, a working cylinder, oppositely moving pistons therein with connecting rods, and means around said cylinder forming a receiving chamber, and ferrules in said chamber for the passage of the side connecting rods.



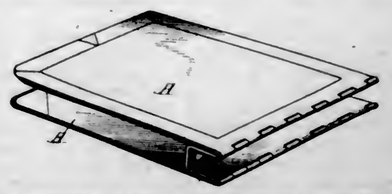
4. In a vertical gas engine, the combination of a supporting frame, a cylinder, oppositely moving pistons therein, means forming receiving chambers around said cylinder having inlet ports to the cylinder, and means for guiding the air or gas through the inlet ports to the cylinder.

5. In a vertical gas engine, the combination of a supporting frame, a working cylinder having oppositely moving pistons therein with cross heads and connecting rods, separate pieces for immediately connecting the pistons to the cross-heads, and guide shoes on said separate pieces.

874,370. PROCESS FOR WEAVING IN NATURAL COLORS WITHOUT PATTERN-CARDS. AUGUST REGAL, Banjaluka, Austria-Hungary, assignor of one-third to Franjo Harazim and one-third to Eugen Karazej, Banjaluka, Austria-Hungary. Filed June 11, 1906. Serial No. 321,249.

The process of weaving in natural colors without jacquard-cards which consists in preparing monochrome photographic negatives from the original to be copied, preparing a positive from each negative and making the part of each positive which was exposed to light electrically insulative and the part of each positive which was not exposed to light electrically conductive, and then employing said positives, individually and in changing combinations with each other, as circuit-makers and -breakers in an electro-magnetic apparatus controlling the warp selecting and actuating devices in a loom, substantially as described.

874,371. TEMPORARY BINDER FOR LOOSE LEAVES. HERMAN WIEDEMAN, Chicago, Ill., assignor to J. S. McDonald Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 18, 1907. Serial No. 363,127.



1. A temporary binder for loose leaves comprising front and back covers, two hinge-plates the rear portion of one of which is flanged transversely and the rear edges of both of which are removably articulated together and to one of which plates the rear edge of one cover is hinged,

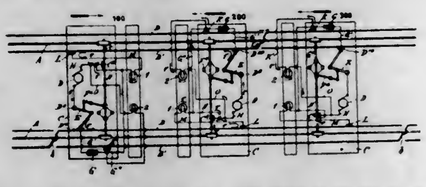
and a spring-clamp adapted to inclose and normally press said spring-plates together.

2. A temporary binder for loose leaves comprising front and back covers, two hinge-plates the rear portion of one of which is flanged transversely, and the rear edges of both of which are removably articulated together and to one of which plates the rear edge of one cover is hinged and to the other of which the rear edge of the other cover is hinged, and a spring-clamp triangular in cross section and adpated to inclose and normally press said spring-plates together.

3. A temporary binder for loose leaves comprising front and back covers, two hinge plates the rear edge of one of which is provided with a depressed seat and the rear edge of the other with projecting fingers whereby said plates are removably articulated together and to one of which plates the rear edge of one cover is hinged and to the other of which the rear edge of the other cover is hinged, and a spring-clamp adapted to inclose and normally press said hinge-plates together.

4. A temporary binder for loose leaves comprising front and back covers, two hinge-plates the rear portion of one of which is flanged transversely and is provided with depressed seats in its rear surface, and the rear edge of the other of which is provided with projecting fingers whereby said plates are removably articulated together and to one of which plates the rear edge of one cover is hinged and to the other of which the rear edge of the other cover is hinged, and a spring-clamp adapted to inclose and normally press said spring-plates together.

874,372. ELECTRICAL SIGNALING DEVICE. JAMES P. WILLIAMS, Latonia, Ky. Filed June 6, 1907. Serial No. 377,576.



1. In an electric signaling apparatus, a series of independent, alternately arranged conductor sections on opposite sides of a railway track, each conductor section having a bend, whereby portions of each section extend on opposite sides of each line of rails of the track, and signaling apparatus carried by engines, whereby signals may be given in each cab, as circuits are formed, by the approach of engines from opposite directions, on independent conductor wires.

2. In an electric signaling apparatus for locomotives, series of independent, alternately arranged conductor sections on opposite sides of a railway track, each conductor section having an elbow, whereby portions of each section extend on opposite sides of each line of rails of the track, and signaling apparatus carried by a locomotive, whereby signals may be given by the approach of engines in opposite directions, or in the same direction and on the same track, on independent conductor wires.

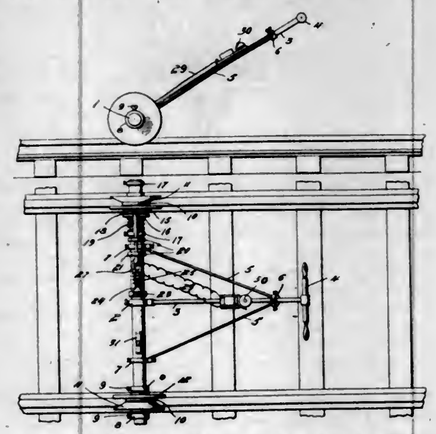
3. In combination with series of independent and alternately arranged conductor wires, an engine and tender, an electrical generator, a brush contacting with said conductor wires, and having electrical connection with said generator only when the latter is in operation.

4. In an electric signaling apparatus, a generator mounted on a suitable truck and adapted to be operated from the shafts of wheels running on the railway rails, a contact brush, and a governor mechanism designed to establish an electrical conection between said brush and generator, when said truck is moving.

5. In an electric signaling apparatus, a motor, a contact brush, a pivoted lever having electrical connection with said brush, a governor and connection between the same and said lever, whereby as the truck carrying the motor is moving, the latter is in operation, and electrical connection is established between the brush and motor.

[Claims 6 to 10 not printed in the Gazette.]

874,373. TRACK-GAGE. EDGAR W. FORDYCE, Anniston, Ala. Filed Apr. 8, 1907. Serial No. 367,027.



1. A track gage comprising an axle and a frame carried thereby, gage wheels on the axle, said wheels each having straight and inclined flanges for gripping engagement with the rails.

2. The combination with a track gage, of gage wheels having a tread portion, an inclined flange tapering therefrom, and a straight flange.

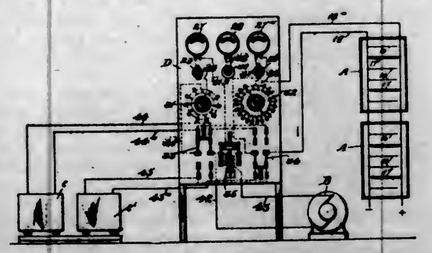
3. A track gage comprising a frame and axle, gage wheels on the axle having inclined flanges for gripping engagement with the rails, suitable connections, and an alarm mechanism actuated by the gage wheels through the said connections.

4. A track gage comprising a frame and axle, relatively stationary and slidable gage wheels mounted on the axle, said wheels having inclined flanges for gripping engagement with the rails, and an alarm mechanism actuated through suitable connections by the movable gage wheel.

5. A track gage comprising a frame and axle, gage wheels on the axle having inclined flanges for gripping engagement with the rails, an alarm mechanism and suitable connections therefor so as to be actuated by the gage wheels, and a level attachment.

[Claims 6 to 8 not printed in the Gazette.]

874,374. APPARATUS FOR ELECTRODEPOSITING METALS. WILHELM MÜLLER, Offenbach-on-the-Main, Germany, and CHARLES R. MURRAY, Chicago, Ill., assignors to Actiengesellschaft fur Schriftgiesserei und Machinenbau, Offenbach, Germany, a Corporation of Germany. Filed May 13, 1904. Serial No. 207,853.



The combination of a tank, a pair of slide rods running lengthwise of the tank, bearings on the side of the tank for said slide rods, a set of cross rods 4, 4 carried by said slide rods, the tank being provided with longitudinal slots 5, 5 for said cross rods, the latter being to support the articles to be plated, eccentric rods 6, 6 pivotally connected with the ends of the slide rods, a cross shaft 8 at the end of the tank provided with crank disks 7, 7 to which the eccentrics 6, 6 are connected, and means for rotating the shaft 8.

874,375. CURTAIN-POLE. ALBERT J. BOYERS, Mount Morris, Pa. Filed Apr. 6, 1907. Serial No. 366,821.



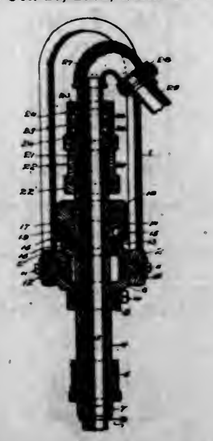
1. A curtain pole made from a sheet metal blank having fingers projecting from one edge thereof, said blank being bent into tubular form and provided with a flaring opening and an inner circular portion to engage a supporting rod.

2. A curtain pole formed from sheet metal and comprising a curved outer portion, a curved inner portion, fingers diverging from said inner portion and provided with outturned lugs or flanges, in combination with a supporting rod for the curtain seated in the curved inner portion of the pole.

3. A curtain pole comprising a curved outer portion, a curved inner portion, a wall connecting said inner and outer portion, and fingers projecting from the inner portion toward the outer portion and provided with outturned lugs, in combination with a cuurtain supporting rod, substantially as described.

REISSUES.

12,732. HYDRAULIC SWIVEL. HORACE G. JOHNSTON, Corsicana, Tex., assignor of one-half to William P. Sturm and Jacob W. Sturm, Corsicana, Tex. Filed June 12, 1905. Serial No. 264,964. Original No. 742,667, dated Oct. 27, 1903, Serial No. 153,650.



1. In a hydraulic swivel, the combination with a trunnion-block and a ball supporting the same, of a swivel-stem extending through said block, a hose-stem within said swivel-stem, a collar surrounding said swivel-stem above said block, a similar collar spaced above the first-mentioned collar, antifriction means interposed between said collar and a housing carried by said swivel-stem inclosing said collars.

2. In a hydraulic swivel, the combination with a suitable support, of a swivel-stem, a collar surrounding the same, a collar carried by said stem, antifriction-bearings interposed between said collars, a nut threaded on said swivel-stem above the uppermost collar, and a housing depending from said nut inclosing said antifriction means.

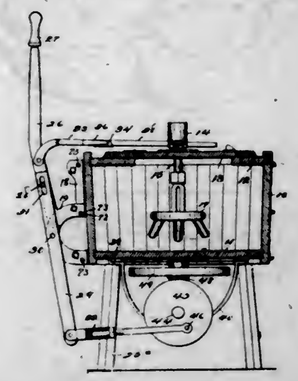
3. In a hydraulic swivel, the combination with a suitable support, of a swivel-stem, a collar surrounding the same and rotatably mounted upon said support, an annular depending housing carried by said swivel-stem inclosing said collar, and a hose-stem rotatably mounted independently of said swivel-stem.

4. A hydraulic swivel, comprising a trunnion block, means for lifting the same swiveled thereto, a swivel stem passed through said trunnion block, a hose stem within the same, means for supporting said trunnion block, adjustable vertically with relation to said swivel stem, an annular collar surrounding said swivel stem above said trunnion block, a similar collar above the same, antifriction means interposed between said collars, and means for retaining said collars and antifriction means in position.

5. A hydraulic swivel, comprising a swivel-stem, a hose-stem, within the swivel-stem, means for revolubly supporting the swivel-stem, a bushing threaded upon the upper end of said swivel-stem, closing the upper end thereof, the said upper end of the swivel-stem being formed with an inner, annular space forming a stuffing-box between the said stem and the hose-stem, means for closing said stuffing-box, and means at the lower end of said swivel-stem for preventing water from entering between said swivel and hose stems.

[Claims 6 to 11 not printed in the Gazette.]

12,733. WASHING-MACHINE. BERT A. STOCKING and HIRAM MENDENHALL, Audubon, Iowa. Filed Feb. 14, 1905. Serial No. 245,626. Original No. 762,851, dated June 14, 1904, Serial No. 164,416.



1. The combination of a washing machine body, an agitator, a lever, means connected with the lever for imparting an alternating rotary motion to the agitator, a pitman connected with the lever, a large gear wheel connected with the pitman, a small gear wheel in mesh with the large one, and a balance wheel connected with the small gear wheel.

2. The combination of a washing machine body, an agitator, a pinion on the agitator shaft, a balance wheel arranged in a plane parallel with that of said pinion, a small pinion connected with the balance wheel, a large pinion in mesh with the small one and an operating device including a rack in mesh with the pinion on the agitator and a pitman connected to the large gear wheel.

3. The combination of a washing machine body, an agitator mounted in the top thereof, a balance wheel

beneath the bottom thereof, a reciprocating lever, means connected with the lever for imparting an alternating rotary motion to the agitator and means connected with the lever for imparting a continuous rotary motion to the balance wheel, said means including a speed increasing gearing device.

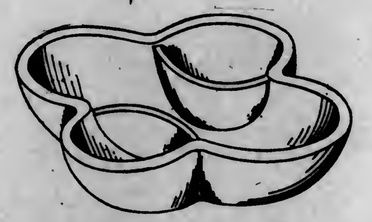
4. A washing machine body, an agitator mounted in its top, a balance wheel under the body and an operating device passed around the side of the body and connecting the agitator and balance wheel and capable of operating both, said operating device including a speed increasing gearing for the balance wheel.

5. The combination of a washing machine body, an agitator mounted in the top thereof, a balance wheel mounted beneath the bottom thereof, two connected levers at the side of the body, the upper one fulcrumed to the body, means connected with the upper lever for imparting an alternating rotary motion to the agitator, the lower lever fulcrumed to the machine body and pivotally and slidingly connected with the upper one and means connected with the lower lever for imparting a continuous rotary motion to the balance wheel.

[Claims 6 and 7 not printed in the Gazette.]

DESIGNS.

38,950. DISH. WILLIAM C. ANDERSON, Lansing, Mich., assignor to American Cut Glass Company, Lansing, Mich., a Corporation of Michigan. Filed Oct. 5, 1907. Serial No. 396,119. Term of patent 7 years.



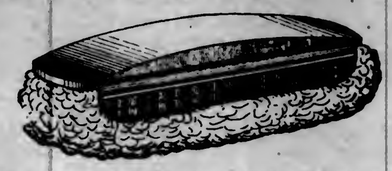
The ornamental design for a dish, as shown.

38,951. HANDLE FOR NUTCRACKERS, NUT-PICKS, AND SIMILAR DESSERT CUTLERY. MARSHALL N. JARVIS, Portland, Conn. Filed Nov. 8, 1906. Serial No. 342,582. Term of patent 7 years.



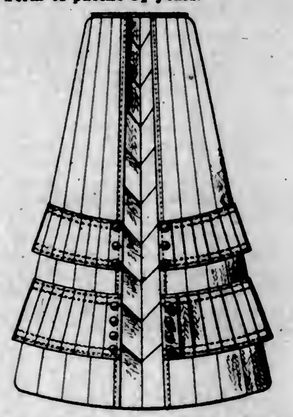
The ornamental design for a handle for nut crackers, nut picks or similar articles, as shown.

38,952. SHOE-POLISHING BRUSH. JOHN ADAM KREAG, Rochester, N. Y. Filed July 11, 1904. Serial No. 216,175. Term of patent 3½ years.



The ornamental design for a shoe polishing brush as shown.

38,953. SKIRT. DAVID CRYSTAL and MAX TISCHLER, New York, N. Y. Filed Sept. 4, 1907. Serial No. 391,408. Term of patent 3½ years.



The ornamental design for a skirt as shown.

38,954. PLAYING-CARD. SAMUEL ROY BEAL, Adrian, Mich. Filed Dec. 10, 1906. Serial No. 347,214. Term of patent 14 years.



The ornamental design for a playing card, as shown.

38,955. GAS-BURNER. THOMAS J. LITTS, Jr., Gloucester City, N. J., assignor to Welsbach Light Company, Gloucester City, N. J., a Corporation of New Jersey. Filed Oct. 27, 1906. Serial No. 340,925. Term of patent 14 years.



The ornamental design for a gas burner, as shown.

38,956. GAS-BURNER. TOWNSEND STITES, Gloucester City, N. J., assignor to Welsbach Light Company, Gloucester City, N. J., a Corporation of New Jersey. Filed Oct. 27, 1906. Serial No. 340,924. Term of patent 14 years.



The ornamental design for a gas burner, as shown.

38,957. CASING FOR TEMPERATURE AND PRESSURE GAGES. HENRY W. MAURER, Rochester, N. Y., assignor to Hohman & Maurer Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed May 31, 1907. Serial No. 376,744. Term of patent 14 years.



The ornamental design for a casing for temperature and pressure gages as shown.

TRADE-MARKS

PUBLISHED DECEMBER 17, 1907.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

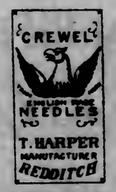
"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 3,709. (CLASS 20. CUTLERY NOT INCLUDED IN CLASS 61, AND EDGE-TOOLS.) THE W. BINGHAM COMPANY, Cleveland, Ohio. Filed May 1, 1905.



Particular description of goods.—Hatchets, Scythes, Broadaxes, Adzes, Pocket-Knives, Auger-Bits, Handsaws, Hacksaws, and Files.

Ser. No. 4,724. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THOS. HARPER & SONS LTD., London, England. Filed May 8, 1905.



Particular description of goods.—Crewel-Needles for Hand-Sewing.

Ser. No. 5,062. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) L. WOLFF MFG. Co., Chicago, Ill. Filed May 11, 1905.



Particular description of goods.—Metal Kitchen-Boilers, Sinks, Bath-Tubs, Water-Closets, and Tanks.

Ser. No. 7,586. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE THOMSON WOOD FINISHING CO., Philadelphia, Pa. Filed June 7, 1905.

PORCELITE

Particular description of goods.—Varnishes, Enamels, and Varnish-Paints.

Ser. No. 13,286. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) EDNUR PHARMACAL CO., St. Louis, Mo., and Kampsville, Ill. Filed Oct. 6, 1905.



Particular description of goods.—A Remedy for Coughs and Colds.

Ser. No. 14,621. (CLASS 20. CUTLERY NOT INCLUDED IN CLASS 61, AND EDGE-TOOLS.) NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Nov. 14, 1905.

BLUE DIAMOND

Particular description of goods.—Auger-Bits.

Ser. No. 14,622. (CLASS 23. HAND-TOOLS NOT OTHERWISE CLASSIFIED.) NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Nov. 14, 1905.

BLUE DIAMOND

Particular description of goods.—Hammers.

Ser. No. 14,623. (CLASS 20. CUTLERY NOT INCLUDED IN CLASS 61, AND EDGE-TOOLS.) NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Nov. 14, 1905.

BLUE DIAMOND

Particular description of goods.—Axes, Hatchets, Cane-Knives, and Razors.

Ser. No. 14,624. (CLASS 63. MEASURING AND SCIENTIFIC APPARATUS, APPLIANCES, AND INSTRUMENTS. NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Nov. 14, 1905.

BLUE DIAMOND

Particular description of goods.—Measuring-Tapes.

Ser. No. 14,625. (CLASS 37. PAPER AND PAPER MANUFACTURES NOT OTHERWISE CLASSIFIED.) NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Nov. 14, 1905.

BLUE DIAMOND

Particular description of goods.—Wrapping-Paper.

Ser. No. 14,626. (CLASS 63. MEASURING AND SCIENTIFIC APPARATUS, APPLIANCES, AND INSTRUMENTS.) NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Nov. 14, 1905.

BLUE DIAMOND

Particular description of goods.—Dividers and Squares.

Ser. No. 14,629. (CLASS 20. CUTLERY NOT INCLUDED IN CLASS 61, AND EDGE-TOOLS.) NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Nov. 14, 1905.

BLACK PRINCE

Particular description of goods.—Axes, Hatchets, Cold-Chisels, Scythes, Grass-Hooks, Hedge-Trimmers, Corn-Knives, and Razors.

Ser. No. 14,630. (CLASS 23. HAND-TOOLS NOT OTHERWISE CLASSIFIED.) NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Nov. 14, 1905.

BLACK PRINCE

Particular description of goods.—Scoops.

Ser. No. 15,220. (CLASS 19. BOATS AND ROAD-VEHICLES.) GEO. M. HENDEE, Springfield, Mass. Filed Dec. 5, 1905.

INDIAN

Particular description of goods.—Bicycles and Motor-Cycles.

Ser. No. 18,475. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) JOSEPH MEYER DAVIDSEN, Paris, France. Filed Apr. 3, 1906.

"LENIX"

Particular description of goods.—Parts of Machinery for Transmission Purposes, Comprising Bases in the Form of Supports or Metallic Chairs Intended to Sustain the Standards, Standards for Sustaining the Pulleys, and Grooved Pulleys to be Mounted on the Standards.

Ser. No. 18,630. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) HENRY P. CANNON, Bridgeville, Del. Filed Apr. 9, 1906.

CANNON BRAND



Particular description of goods.—Canned Fruits and Canned Vegetables.

Ser. No. 18,800. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) EDWARD J. RIFFLE, Allegheny, Pa. Filed Apr. 14, 1906.

SAM RIFFLE
PENNSYLVANIA
RYE

Particular description of goods.—Whisky.

Ser. No. 18,871. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE MOTHER SEIGEL'S SYRUP COMPANY, New York, N. Y. Filed Apr. 17, 1906.

LAXOL

Particular description of goods.—Laxative Compounds.

Ser. No. 23,347. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) JOHN CAMPBELL HAGAN, Richmond, Va. Filed Nov. 14, 1906.



Particular description of goods.—Flavoring Extracts.

Ser. No. 24,256. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) NORTHROP COBURN AND DODGE CO., New York, N. Y. Filed Dec. 24, 1906.

NoCoDoSteel
TRADE MARK

Particular description of goods.—Metal Ceilings and Side Walls.

Ser. No. 24,881. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) WESTERN LEATHER MFG. CO., Chicago, Ill. Filed Jan. 24, 1907.

WELEMACO

Particular description of goods.—Leather Medicine-Cases, Obstetric Bags, Emergency-Bags, Pocket Vial-Cases, Saddle-Bags, Veterinary Medicine Cases and Bags, and Similar Physicians' Leather Cases.

Ser. No. 25,625. (CLASS 8. DETERGENTS.) THE MODOC COMPANY, Chester, Pa. Filed Feb. 26, 1907. Used ten years.



MODOC
Liquid Car Cleaner

Particular description of goods.—Liquid Car-Cleaners.

Ser. No. 25,917. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) G. W. NICHOLSON COMPANY, Grand Junction, Iowa. Filed Mar. 11, 1907.

G.W.N.CO.

Particular description of goods.—Fresh and Storage Eggs.

Ser. No. 26,903. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) SARANAC GLOVE COMPANY, Littleton, N. H. Filed Apr. 25, 1907.



Particular description of goods.—Leather Gloves.

Ser. No. 27,076. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) GEORGE A. TRUESDELL, Winthrop Harbor, Ill. Filed May 2, 1907.



Particular description of goods.—An Antiseptic Medicinal Preparation for External Use on Animals.

Ser. No. 27,170. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) THE MONA MANUFACTURING CO., Boston, Mass. Filed May 6, 1907.

MONA

Particular description of goods.—Corsets, Corset Waists and Covers, Dress-Waists, and Underwaists Other Than Knitted Underwaists.

Ser. No. 27,656. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) SAGINAW MEDICINE CO., Saginaw, Mich. Filed May 25, 1907.

Sag-Me-To

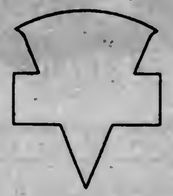
Particular description of goods.—Remedies for Scrofula, Salt-Rheum, Erysipelas, Eczema, Skin and Scalp Eruptions, Old Sores, Rheumatism, Catarrh, Weak Heart, Kidney and Liver Troubles, Indigestion, Dyspepsia, Biliousness, Sick and Nervous Headaches, Stomach Complaints, Loss of Appetite, General Debility, Fever and Ague, Constipation, Sour Stomach, Sickness or Pain in the Stomach or Bowels, Torpid Liver or Bowels, Gas in the Stomach or Bowels, Lame Back, Stiff Joints, Neuralgia, Toothache, Sprains, Cuts, and Burns, Piles, Rectal Fistula, Ulceration, Fissures, Cracks, and All Rectal Troubles, Either Acute or Chronic, Coughs, Colds, Croup, Sore Throat, Hoarseness, Bronchitis, Influenza, Asthma, Night Sweats, and All Diseases of the Throat, Chest, and Lungs, Diseases of the Kidneys and Bladder, Bladder Irritation, Old Prostatic Troubles, Congestion of the Kidneys, Diabetes, Gravel, Bright's Disease, Non-Retention of Urine, and All Inflamed and Irritated Conditions of the Bladder, Kidney and Urinary Tract; Diseases of the Heart and Nerves, and Disorders of the Heart, Brain, and Nerves, Palpitation, Heart Failure, Loss of Memory, Brain-Fag, Hysteria, Nervous Prostration, Wakefulness, Weakness, Lassitude, Nervous Debility, Impotence, Sexual Weakness, Fainting Spells, Dizziness, Rush of Blood to the Head, Irregular Heart, and All Weakness and General Loss of Power Due to Irregularity or Affections of the Heart, Brain, and Nervous System, Catarrhal Deafness, Hay Fever, La Grippe, Heartburn, Catarrh of the Stomach, Flatulency, Malassimilation of Food, Impaired Digestion and Derangements of the Digestive Organs, Worms, Corns, Sciatica, Coated Tongue, Jaundice, Belching of Gas from the Stomach, Poor Blood, Pimples, Blackheads, Poor Complexion, Nervousness, and All Diseased Conditions Arising from Chronic Constipation, Diseased Conditions of the Scalp and Hair, Dandruff, Itching, Irritation, and Falling Hair, Salve or Ointment, Lotions, Creams, and Powders for Curing and Preserving the Skin, Complexion Powders, Shampoo-Jelly, Tooth-Powder Dentifrice in Soap Form, Cold-Cream, and Perfumery.

Ser. No. 27,884. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) HODGE & BAILEY, Little Rock, Ark. Filed June 8, 1907.



Particular description of goods.—A Remedy for the Cure of Malaria and Diseases of the Blood and Kidneys.

Ser. No. 28,014. (CLASS 20. CUTLERY NOT INCLUDED IN CLASS 61, AND EDGE-TOOLS.) SIMMONS HARDWARE COMPANY, St. Louis, Mo. Filed June 10, 1907.



Particular description of goods.—Adzes, Cutting-Tools of Awl and Tool Sets, Axes, Nut-Augers, Ship-Augers, Auger-Bit Sets, Boring-Bits, Expansive Bit-Cutters, Bit Extensions, Knife-Edge Can-Openers, Chisels, Cold-Chisels Provided with Cutting Edges, Cleavers, Hand-Drills, Bit-Stock Drills, Breast-Drills, Files, Table-Forks, Hand Food-Choppers, Food-Chopper Parts, Gimlets, Glass-Cutters Provided with a Cutting Edge, Gouges, Hand Hair-Clippers, Hair-Clipper Parts, Hatchets, Hand Horse-Clippers, Grass-Hooks, Bush-Hooks, Kraut-Cutters, Knives of All Kinds Except Machine-Knives, Hand Meat-Cutters, Meat-Cutter Parts, Mattocks, Turf-Edgers, Nail-Nippers, Apple-Parers, Cutting-Pincers, Planes, Plane-Irons, Cutting-Pliers, Tree-Pruners, Cutting-Punches, Shoe-Rasps, Horse-Rasps, Razors, Safety-Razors, Saws, Wood-Saw Blades, Ice-Saws, Scissors, Cabinet-Scrapers, Box-Scrapers, Scythes, Shears of All Kinds Except Machine-Shears, Tinners' Snips, Sharpening-Steels, Hand Tobacco-Cutters, and Lamp-Trimmers.

Ser. No. 28,209. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) FRANK B. TYLER, Richmond, Va., assignor to The Prophytol Dentifrice Co., Inc. Filed June 20, 1907.

PRO PHY TOL

Particular description of goods.—Tooth Powder and Paste.

Ser. No. 28,216. (CLASS 58. GAMES AND TOYS, AND SPORTING GOODS NOT OTHERWISE CLASSIFIED.) MARGARETE STEIFF, G. m. b. H., Giengen a/Brens, Germany. Filed June 22, 1907.

STEIFF

Particular description of goods.—Dolls and Stuffed Toy Figures.

Ser. No. 28,410. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) GEORGE LEWIS AND COMPANY, Chicago, Ill., assignor to G. H. Adamick, Chicago, Ill. Filed June 26, 1907.

UANDI TEA

Particular description of goods.—Tea.

Ser. No. 28,420. (CLASS 52. PACKING-HOUSE PRODUCTS.) KINGAN AND COMPANY, LIMITED, Belfast, Ireland, and Indianapolis, Ind. Filed June 27, 1907.

LA PERLA

Particular description of goods.—Cured Meats and Sausage.

Ser. No. 28,520. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) PHILIPPE DESTREMPES, Lowell, Mass. Filed July 1, 1907.



Particular description of goods.—Curative Ointments.

Ser. No. 28,664. (CLASS 47. CONFECTIONERY.) PHOTIOS BOONDAS, New York, N. Y. Filed July 8, 1907.



Particular description of goods.—Candy.

Ser. No. 28,844. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) THE CRAVENETTE COMPANY LIMITED, Bradford, England. Filed July 17, 1907. Used ten years.

CRAVENETTE

Particular description of goods.—Hats and Caps Made of Felt, Hair, and Fur and of Textile Materials, and Overcoats, Coats, Vests, Trousers, Pants, Outer Shirts, Outer Waists, Underwaists, Outer Skirts, Underskirts, Cloaks, Jackets, and Petticoats Made of Textile Materials.

Ser. No. 29,089. (CLASS 41. KNITTED, NETTED, AND LACE GOODS.) BIRKIN & CO., Nottingham, England. Filed July 29, 1907.

B.B.

Particular description of goods.—Cotton Laces Made by Machinery in Imitation of Hand-Made Laces.

Ser. No. 29,194. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) COVERT MANUFACTURING CO., Watervliet, N. Y. Filed Aug. 3, 1907.



Particular description of goods.—Harness Formed of Web, Rope, or Leather, Comprising Hitching Devices, Leads, Ties, Lariats, Breeching-Straps, Weight-Cords, Breast-Straps, Bridles, Checkreins, Girths, Halters, Traces and Trace-Carriers, and Reins.

Ser. No. 29,240. (CLASS 57. DENTAL MACHINES, APPARATUS, AND SUPPLIES.) JOHN F. SCHOTZ, Chicago, Ill. Filed Aug. 5, 1907.

ODONTOGRAPHIC ALLOY

Particular description of goods.—A Dental Alloy.

Ser. No. 29,553. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) DOMESTIC SCIENCE MFG. CO., Boston, Mass. Filed Aug. 28, 1907.

Domestic Science

Particular description of goods.—Flavoring Extracts.

Ser. No. 29,554. (CLASS 20. CUTLERY NOT INCLUDED IN CLASS 61, AND EDGE-TOOLS.) HYDE MANUFACTURING CO., Southbridge, Mass. Filed Aug. 23, 1907. Used ten years.

I.P.HYDE

Particular description of goods.—Certain Cutlery and Edge-Tools.

Ser. No. 29,573. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) AMALGAMATED GUM COMPANY, Troy, N. Y. Filed Aug. 26, 1907.

SILKENE

Particular description of goods.—A Chemical Starch Preparation for Finishing Textiles and for Laundry Purposes.

Ser. No. 29,575. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) AMALGAMATED GUM COMPANY, Troy, N. Y. Filed Aug. 26, 1907.

Giantine

Particular description of goods.—A Chemical Starch Preparation Used for Sizing Textiles.

Ser. No. 29,596. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) M. C. MIGEL & Co., New York, N. Y. Filed Aug. 26, 1907.

MANDARIN

Particular description of goods.—Broad Silks.

Ser. No. 29,598. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) M. C. MIGEL & Co., New York, N. Y. Filed Aug. 26, 1907.

MOTORA

Particular description of goods.—Broad Silks.

Ser. No. 29,599. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) M. C. MIGEL & Co., New York, N. Y. Filed Aug. 26, 1907.

Tussorah

Particular description of goods.—Broad Silks.

Ser. No. 29,600. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) M. C. MIGEL & Co., New York, N. Y. Filed Aug. 26, 1907.

PAGODA

Particular description of goods.—Broad Silks.

Ser. No. 29,618. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) MCCLAVE-BROOKS CO., Scranton, Pa. Filed Aug. 27, 1907. Used ten years.

ARGAND

Particular description of goods.—Steam-Blowers.

Ser. No. 29,619. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) MCCLAVE-BROOKS CO., Scranton, Pa. Filed Aug. 27, 1907. Used ten years.

MC CLAVE

Particular description of goods.—Grates.

Ser. No. 29,622. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) L. & E. STIRN, New York, N. Y. Filed Aug. 27, 1907.

CONCORDIA SILK MILLS—INIMITABL

Particular description of goods.—Silk Piece Goods.

Ser. No. 29,628. (CLASS 68. PUBLICATIONS.) THE CLASS JOURNAL CO., New York, N. Y. Filed Aug. 28, 1907.

THE AUTOMOBILE

Official

BLUE BOOK

Particular description of goods.—A Periodical Issued Annually.

Ser. No. 29,669. (CLASS 63. MEASURING AND SCIENTIFIC APPARATUS, APPLIANCES, AND INSTRUMENTS.) THE WHITE-HAINES OPTICAL COMPANY, Columbus, Ohio. Filed Aug. 29, 1907.

ECLIPTIC BIFOCAL

Particular description of goods.—Eyeglasses.

Ser. No. 29,670. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) FRANK F. NEWELL, Burlington, Wis. Filed Aug. 29, 1907.

SERO-CURO

Particular description of goods.—Pills, Tablets, and Powders for Internal Application, Liquid Compounds for Both Internal and External Application, and Salves; Powders, Pastes, and Liquids for Cleaning and Hardening the Teeth, and Powders and Pastes for External Application for Skin and Scalp Diseases.

Ser. No. 29,799. (CLASS 68. PUBLICATIONS.) THE SYSTEM COMPANY, Chicago, Ill. Filed Sept. 9, 1907.

FACTORY

Particular description of goods.—Magazines.

Ser. No. 29,866. (CLASS 68. PUBLICATIONS.) OUTDOOR NEWS COMPANY, New York, N. Y. Filed Sept. 11, 1907.

RECREATION

Particular description of goods.—A Monthly Magazine.

Ser. No. 29,873. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) DR. MAX LEHMANN & Co., Berlin, Germany. Filed Sept. 11, 1907.

Glättolin.

Particular description of goods.—Prepared Talcum in Block Form for Smoothing the Edges of Collars and the Like.

Ser. No. 29,965. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) CARTER-COREY COMPANY, Bangor, Me. Filed Sept. 14, 1907.



MOOSE-HEAD BRAND

The head printed in red.

Particular description of goods.—Potatoes.

Ser. No. 29,966. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) CHRISTIAN ECKARDT, Johannishof, Germany. Filed Sept. 14, 1907.

Gladiator

Particular description of goods.—Dried and Preserved Fruits, and Vegetable Oils Used as Foods.

Ser. No. 29,969. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) COMMERCIAL ELECTRICAL SUPPLY COMPANY, St. Louis, Mo. Filed Sept. 14, 1907.



Particular description of goods.—Cable Compound, (an Insulating Substance,) Insulating-Tape of All Kinds, and Electrical Lamps, All of the Merchandise Being for Electrical Purposes.

Ser. No. 30,102. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) THE JOSEPH & FEISS CO., Cleveland, Ohio. Filed Sept. 20, 1907.



Particular description of goods.—Ready-Made Suits, Coats, Vests, Trousers, Also Overcoats, for Men and Boys.

Ser. No. 30,104. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) CONCRETE-STEEL ENGINEERING COMPANY, New York, N. Y. Filed Sept. 20, 1907.

DIAMOND

Particular description of goods.—Metal Bars for Reinforcing Concrete.

Ser. No. 30,289. (CLASS 65. MUSICAL INSTRUMENTS AND TALKING-MACHINES AND SUPPLIES THEREFOR.) THE CUNDY-BETTONEY COMPANY, Boston, Mass. Filed Sept. 28, 1907.

C&B

Particular description of goods.—Flutes, Clarinets, Drums, Cornets, and Their Cases.

Ser. No. 30,292. (CLASS 53. SACCHARINE FOODS NOT INCLUDED IN CLASS 47.) HALPEN, GREEN & Co., Philadelphia, Pa. Filed Sept. 30, 1907. Used ten years.

PERFECTION

Particular description of goods.—Table-Syrup.

Ser. No. 30,318. (CLASS 24. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) COMSTOCK CASTLE STOVE CO., Quincy, Ill. Filed Sept. 30, 1907.

ECONOMY

Particular description of goods.—Stoves, Ranges, Gas-Heaters, and Parts Thereof.

Ser. No. 30,332. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) STROHMEYER & ARPE COMPANY, New York, N. Y. Filed Oct. 2, 1907.



Particular description of goods.—Olive-Oil.

Ser. No. 30,333. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) STROHMEYER & ARPE COMPANY, New York, N. Y. Filed Oct. 2, 1907.



Particular description of goods.—Salad-Oil.

Ser. No. 30,334. (CLASS 54. SEA FOODS.) STROHMEYER & ARPE COMPANY, New York, N. Y. Filed Oct. 2, 1907.

ELITE

Particular description of goods.—Sardines, Sprats, Anchovies, Herrings, Mackerel, and Fish-Balls.

Ser. No. 30,405. (CLASS 58. GAMES AND TOYS, AND SPORTING GOODS NOT OTHERWISE CLASSIFIED.) HORACE A. WHITTEMORE, Boston, Mass. Filed Oct. 3, 1907.

ISAAC WALTON.

Particular description of goods.—Fishing-Tackle,—viz., Lines, Spoon-Baits, Leaders, Swivels, Reels, Rods, Flies, Minnows, Fly-Books, and Hooks.

Ser. No. 30,444. (CLASS 66. OBJECTS OF ART AND ORNAMENT.) J. WARD HERITAGE, Philadelphia, Pa. Filed Oct. 5, 1907.

DIREC-BLAC PRINTS

Particular description of goods.—Photographic Prints of Plans, Specifications, and Surveys.

Ser. No. 30,463. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) LASH'S BITTERS COMPANY, San Francisco, Cal. Filed Oct. 7, 1907. Used ten years.

HOMER'S CALIFORNIA GINGER BRANDY

Particular description of goods.—A Specific for Cramps, Colic, Flatulency, Diarrhea, Dyspepsia, and All Pains of the Stomach.

Ser. No. 30,472. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) WALTON AND LOGAN COMPANY, Lynn, Mass. Filed Oct. 7, 1907.



Particular description of goods.—Leather Boots and Shoes.

Ser. No. 30,475. (CLASS 4. ABRASIVE AND POLISHING MATERIALS NOT INCLUDED IN CLASSES 8 AND 16.) THE 6-5-4 CO., Detroit, Mich. Filed Oct. 7, 1907.



Particular description of goods.—Stove-Polish in Liquid and Paste Form.

Ser. No. 30,514. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) COHEN & ROSENBERG, Boston, Mass. Filed Oct. 9, 1907.

KING RICHARD

Particular description of goods.—Wheat-Flour.

Ser. No. 30,543. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) CORTWRIGHT COMPANY, New York, N. Y. Filed Oct. 11, 1907.



Particular description of goods.—Whisky.

Ser. No. 30,547. (CLASS 19. BOATS AND ROAD VEHICLES.) NEW YORK TAXI-CAB COMPANY, New York, N. Y. Filed Oct. 11, 1907.

TAXICAB

Particular description of goods.—Motor-Cabs.

Ser. No. 30,570. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) EDWARD KORY CO., New Orleans, La. Filed Oct. 12, 1907.

RABBIT FOOT LINE

Particular description of goods.—Boys' and Men's Coats, Pants, Vests, and Jackets, Overalls, Textile Storm-Coats, Textile Shirts, and Textile Drawers.

Ser. No. 30,592. (CLASS 61. JEWELRY AND SOLID AND PLATED PRECIOUS-METAL WARE.) HANSEN-BENNETT COMPANY, Providence, R. I. Filed Oct. 14, 1907.



Particular description of goods.—Jewelry for Personal Adornment.

Ser. No. 30,596. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) Bo-Bo MANUFACTURING CO., New York, N. Y. Filed Oct. 14, 1907.

Bo-Bo

Particular description of goods.—A Laxative Candy.

Ser. No. 30,603. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) JAMES GRACE BRAY, Laurium, Mich. Filed Oct. 15, 1907.

JOB

Particular description of goods.—Remedy for the Treatment of Rheumatism.

Ser. No. 30,604. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) REUBEN S. CLYMER, Allentown, Pa. Filed Oct. 15, 1907.



Particular description of goods.—Remedies for Fatty Degeneration of the Heart, Heart Weakness, Cardiac Asthenia, Indigestion, Nervous Debility, Constipation, Dyspepsia, Dizziness, Eczema, Impotence, Wasting, Decay, and Predisposition to Consumption.

Ser. No. 30,660. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE HAYDEN-CORBETT CHAIN CO., Columbus, Ohio. Filed Oct. 18, 1907.

XX

Particular description of goods.—Chains, Chain-Links, and Chain-Hooks.

Ser. No. 30,694. (CLASS 35. BELTING, HOSE, AND MACHINERY PACKING. CHICAGO BELTING COMPANY, Chicago, Ill. Filed Oct. 21, 1907.



Particular description of goods.—Leather Belting.

Ser. No. 30,697. (CLASS 48. DAIRY PRODUCTS.) WILLIS J. ELDRIDGE, Aurora, Ohio. Filed Oct. 21, 1907. Used ten years.

IMPERIAL

Particular description of goods.—Cheese.

Ser. No. 30,698. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) AUGUST A. FISCHER, Paterson, N. J. Filed Oct. 21, 1907.



Particular description of goods.—Waterproofed Textile Fabrics.

Ser. No. 30,707. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) MARSHALL FIELD & COMPANY, Chicago, Ill. Filed Oct. 21, 1907.

LA FAYETTE

Particular description of goods.—Leather Gloves of All Kinds.

Ser. No. 30,718. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) JAMES L. WILSON & CO., New York, N. Y. Filed Oct. 21, 1907.

Puritan



Particular description of goods.—Cotton Diaper-Cloth.

Ser. No. 30,730. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) BOSTON RUBBER COMPANY, Boston, Mass. Filed Oct. 22, 1907. Used ten years.



Particular description of goods.—Rubber Boots and Shoes and Rubber Coats, Rubber Hats, Rubber Caps, Rubber Leggings, Rubber Blankets, and Rubber Horse-Covers.

Ser. No. 30,748. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE M. A. WINTER CO., Washington, D. C. Filed Oct. 23, 1907.



Particular description of goods.—Laxative Tablets.

Ser. No. 30,754. (CLASS 58. GAMES AND TOYS, AND SPORTING GOODS NOT OTHERWISE CLASSIFIED.) A. J. REACH COMPANY, Philadelphia, Pa. Filed Oct. 23, 1907.



Particular description of goods.—Base-Balls, Bats, Masks, Mitts, and Protectors, Lawn-Tennis Rackets and Balls, Boxing-Gloves, Striking-Bags, Striking-Bag Gloves, Striking-Bag Swivels, and Striking-Bag Platforms, Foot-Balls, Foot-Ball Bladders, Foot-Ball Shin-Guards, Foot-Ball Head-Harness, Foot-Ball Nose-Masks, Foot-Ball Pads, Basket-Balls, Medicine-Balls, Hand-Balls, Hand-Ball Gloves, Fencing Gloves and Plastrons, Golf-Balls, and Golf-Sticks.

Ser. No. 30,790. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) INDIANA COTTON MILLS, Cannelton, Ind. Filed Oct. 25, 1907. Used ten years.

OHIO VALLEY
SHEETINGS.
CANNELTON, IND.

Particular description of goods.—Cotton Sheetings.

Ser. No. 30,791. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) INDIANA COTTON MILLS, Cannelton, Ind. Filed Oct. 25, 1907. Used ten years.

HOOSIER
SHEETINGS
CANNELTON, IND.

Particular description of goods.—Cotton Sheetings.

Ser. No. 30,817. (CLASS 71. TOBACCO PRODUCTS.) ALFRED M. WOLF, New York, N. Y. Filed Oct. 26, 1907.

COLLEGE BRAND

Particular description of goods.—Cigarettes.

Ser. No. 30,844. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) WILLIAM R. WARNER & CO., Philadelphia, Pa. Filed Oct. 28, 1907.

TRILOIDS

Particular description of goods.—Medicines in Tablet Form.

Ser. No. 30,845. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE TUCKER PHARMACAL CO., Brooklyn, N. Y. Filed Oct. 28, 1907.

Bromo Adonis

Particular description of goods.—A Remedy for Epilepsy.

Ser. No. 30,847. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) J. H. SNYDER MED. CO., Jonesboro, Ark. Filed Oct. 29, 1907.



Particular description of goods.—Liniment.

Ser. No. 30,859. (CLASS 68. PUBLICATIONS.) GUY T. KETCHESON, Portland, Oreg. Filed Oct. 29, 1907. Used ten years.

Pacific Drug Review

Particular description of goods.—A Drug Journal.

Ser. No. 30,872. (CLASS 48. DAIRY PRODUCTS.) HERBERT HENRY BROWN, Philadelphia, Pa. Filed Oct. 30, 1907.

GURNSE

Particular description of goods.—Butter.

Ser. No. 30,875. (CLASS 71. TOBACCO PRODUCTS.) THE AMERICAN TOBACCO COMPANY, New York, N. Y. Filed Oct. 30, 1907.

BLUE
RIBBON

Particular description of goods.—Chewing and Smoking Tobacco.

Ser. No. 30,881. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) THE WINTERBOTTOM BOOK CLOTH COMPANY, LTD., Manchester, England. Filed Oct. 30, 1907.

"WINVIS BRAND"

Particular description of goods.—Bookbinders' Cloth.

Ser. No. 30,885. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) ALCOHOL LIGHT, HEAT AND POWER COMPANY, Meriden, Conn. Filed Oct. 30, 1907.

"Gipsy"

Particular description of goods.—Alcohol Gas Burners, Lamps, Heaters for Heating Rooms, Stoves for Cooking Purposes, Torches, and Ventilating Apparatus.

Ser. No. 30,893. (CLASS 72. MERCHANDISE NOT OTHERWISE CLASSIFIED.) WILLIAM C. BAIRD, New York, N. Y. Filed Oct. 31, 1907. Used ten years.

WILSON

Particular description of goods.—Fire-Escapes.

Ser. No. 30,896. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) J. C. DOWD & Co., New York, N. Y. Filed Oct. 31, 1907. Used ten years.

IVOROYD

Particular description of goods.—Hair-Brushes and Nail and Tooth Brushes.

Ser. No. 30,897. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) JOHN H. LEONARD, New York, N. Y. Filed Oct. 31, 1907.



Particular description of goods.—An Antiseptic Wash.

Ser. No. 30,903. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) HEIDLAND BAKING CO., St. Louis, Mo. Filed Oct. 31, 1907.



Particular description of goods.—Bread Made from Wheat-Flour.

Ser. No. 30,912. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) LUDWIG BOTHO SCHENCK, New York, N. Y. Filed Nov. 1, 1907.



Particular description of goods.—Facial Lotions, Hair-Tonics, Nasal Washes and Gargles, and Liquid Creams for the Complexion.

Ser. No. 30,916. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

DUNFORD

Particular description of goods.—Whisky, Rum, Gin, Brandy, Cocktails, and Punches.

Ser. No. 30,917. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

TRESCOTT

Particular description of goods.—Whisky, Rum, Gin, Brandy, Cocktails, and Punches.

Ser. No. 30,918. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

FALCON

Particular description of goods.—Whisky, Rum, Gin, Brandy, Cocktails, and Punches.

Ser. No. 30,919. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

MEDRIC

Particular description of goods.—Whisky, Rum, Gin, Brandy, Cocktails, and Punches.

Ser. No. 30,920. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

HERMES

Particular description of goods.—Whisky, Rum, Gin, Brandy, Cocktails, and Punches.

Ser. No. 30,921. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

ARROW

Particular description of goods.—Whisky, Rum, Gin, Brandy, Cocktails, and Punches.

Ser. No. 30,922. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

WINTON

Particular description of goods.—Whisky, Rum, Gin, Brandy, Cocktails, and Punches.

Ser. No. 30,923. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

EXCHANGE

CLUB

Particular description of goods.—Whisky, Rum, Gin, Brandy, Cocktails, and Punches.

Ser. No. 30,924. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

WENDOVER

Particular description of goods.—Whisky, Rum, Gin, Brandy, Cocktails, and Punches.

Ser. No. 30,925. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

MALCO

Particular description of goods.—Whisky, Rum, Gin, Brandy, Cocktails, and Punches.

Ser. No. 30,926. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

CHEWINK

Particular description of goods.—Whisky, Rum, Gin, Brandy, Cocktails, and Punches.

Ser. No. 30,927. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

WISTAR

Particular description of goods.—Whisky, Rum, Gin, Brandy, Cocktails, and Punches.

Ser. No. 30,928. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

FAIRVIEW

Particular description of goods.—Whisky, Rum, Gin, Brandy, Cocktails, and Punches.

Ser. No. 30,929. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

ELSMERE

Particular description of goods.—Whisky, Rum, Gin, Brandy, Cocktails, and Punches.

Ser. No. 30,930. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

STANMORE

Particular description of goods.—Whisky, Rum, Gin, Brandy, Cocktails, and Punches.

Ser. No. 30,932. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

PARMENTOR

Particular description of goods.—Whisky, Rum, Gin, Brandy, Cocktails, and Punches.

Ser. No. 30,933. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

BRUMMER

Particular description of goods.—Whisky, Rum, Gin, Brandy, Cocktails, and Punches.

Ser. No. 30,934. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

DORRANCE

Particular description of goods.—Whisky, Rum, Gin, Brandy, Cocktails, and Punches.

Ser. No. 30,937. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

DORSET

Particular description of goods.—Whisky, Rum, Gin, Brandy, Cocktails, and Punches.

Ser. No. 30,938. (CLASS 55. WINES.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

WALTON

Particular description of goods.—Port and Sherry Wines.

Ser. No. 30,939. (CLASS 55. WINES.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

RICHFIELD

Particular description of goods.—Port and Sherry Wines.

Ser. No. 30,940. (CLASS 55. WINES.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

MELTON

Particular description of goods.—Port and Sherry Wines.

Ser. No. 30,941. (CLASS 55. WINES) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

ALECTO

Particular description of goods.—Port and Sherry Wines.

Ser. No. 30,942. (CLASS 55. WINES.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

ALPHA

Particular description of goods.—Port and Sherry Wines.

Ser. No. 30,943. (CLASS 55. WINES.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

ORDWAY

Particular description of goods.—Port and Sherry Wines.

Ser. No. 30,944. (CLASS 55. WINES.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

DEXTER

Particular description of goods.—Port and Sherry Wines.

Ser. No. 30,945. (CLASS 55. WINES.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

RHODA

Particular description of goods.—Port and Sherry Wines.

Ser. No. 30,946. (CLASS 55. WINES.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

DIGHTON

Particular description of goods.—Port and Sherry Wines.

Ser. No. 30,947. (CLASS 55. WINES.) BOSTON WINE & SPIRITS CO., Boston, Mass. Filed Nov. 1, 1907. Used ten years.

DORCHEN

Particular description of goods.—Port and Sherry Wines.

Ser. No. 30,977. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) JOHN S. HARRIS, New York, N. Y. Filed Nov. 4, 1907.



ST. DENIS

Particular description of goods.—Textile Collars.

Ser. No. 31,001. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) THE MOND NICKEL COMPANY, LIMITED, Westminster, England. Filed Nov. 4, 1907.



Particular description of goods.—Copper Sulfate.

Ser. No. 31,004. (CLASS 11. LEATHER BLACKINGS AND DRESSINGS.) SOVEREIGN POLISH CO., Boston, Mass. Filed Nov. 4, 1907.

SOVEREIGN

Particular description of goods.—Shoe Blackings and Dressings for Black and Tan Shoes.

Ser. No. 31,009. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) BAY STATE MILLING CO., Boston, Mass. Filed Nov. 4, 1907.

PARTHENON T. T. T. FLOUR MINNESOTA

Particular description of goods.—Wheat-Flour.

Ser. No. 31,042. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) CARMEL WINE COMPANY, New York, N. Y. Filed Nov. 7, 1907.

B.R.P.

Particular description of goods.—Cognacs and Cordials.

Ser. No. 31,044. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) CARMEL WINE COMPANY, New York, N. Y. Filed Nov. 7, 1907.

MIZPAH

Particular description of goods.—Cognac and Cordials.

Ser. No. 31,045. (CLASS 55. WINES.) CARMEL WINE COMPANY, New York, N. Y. Filed Nov. 7, 1907.

REHOBOTH

Particular description of goods.—Wines.

Ser. No. 31,046. (CLASS 55. WINES.) CARMEL WINE COMPANY, New York, N. Y. Filed Nov. 7, 1907.

MISRA

Particular description of goods.—Wines.

Ser. No. 31,047. (CLASS 55. WINES.) CARMEL WINE COMPANY, New York, N. Y. Filed Nov. 7, 1907.

RISHON

Particular description of goods.—Wines.

Ser. No. 31,048. (CLASS 55. WINES.) CARMEL WINE COMPANY, New York, N. Y. Filed Nov. 7, 1907.



Particular description of goods.—Wines.

Ser. No. 31,051. (CLASS 55. WINES.) CARMEL WINE COMPANY, New York, N. Y. Filed Nov. 7, 1907.

ESRA

Particular description of goods.—Wines.

Ser. No. 31,060. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) GARNER & Co., New York, N. Y. Filed Nov. 7, 1907.

TN

Particular description of goods.—Printed and Dyed Cotton Piece Goods.

Ser. No. 31,061. (CLASS 68. PUBLICATIONS.) THE MORSE-BROUGHTON COMPANY, New York, N. Y. Filed Nov. 7, 1907.

L'ART DE LA MODE

Particular description of goods.—A Monthly Magazine.

Ser. No. 31,083. (CLASS 43. THREAD AND YARN.) BERNHARD ULMANN & Co., New York, N. Y. Filed Nov. 8, 1907.



Particular description of goods.—Yarns.

Ser. No. 31,084. (CLASS 14. METALS, UNWROUGHT AND PARTLY WROUGHT.) AMERICAN IMPROVED ANTI-FRICTION METAL COMPANY, Mobile, Ala. Filed Nov. 8, 1907.



Particular description of goods.—Antifriction Metal.

Ser. No. 31,085. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) J. B. SPEED & COMPANY, Louisville, Ky. Filed Nov. 8, 1907.

LOUISVILLE SALT ELEVATOR CO. J.B.SPEED & Co.

Particular description of goods.—Salt.

Ser. No. 31,096. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) JOHN S. HARRIS, New York, N. Y. Filed Nov. 8, 1907. Used ten years.



ST. DENIS

Particular description of goods.—Laundry Starch.

Ser. No. 31,110. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) JOHN WILSON, Sacramento, Cal. Filed Nov. 4, 1907.

Entomocide

Particular description of goods.—A Disinfectant, Deodorizer, and Insect and Germ Killer.

Ser. No. 31,110. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) WILL H. FOX, Graysville, Tenn. Filed Nov. 11, 1907.



Particular description of goods.—Fresh Fruits and Vegetables.

Ser. No. 31,133. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) LYLE & KINAHAN LTD., Belfast, Ireland. Filed Nov. 12, 1907.



Particular description of goods.—Whisky.

Ser. No. 31,146. (CLASS 47. CONFECTIONERY.) THE WALTER M. LOWNEY COMPANY, Boston, Mass. Filed Nov. 13, 1907.



Particular description of goods.—Chocolates and Bonbons.

Ser. No. 31,153. (CLASS 71. TOBACCO PRODUCTS.) WILLIAM ROBERT ALLEN, Manchester, England. Filed Nov. 13, 1907.

THE CHAIRMAN

Particular description of goods.—Cigarettes, Cigars, Smoking-Tobacco, and Chewing-Tobacco.

Ser. No. 31,155. (CLASS 47. CONFECTIONERY.) DAVID H. REEDER, Laporte, Ind. Filed Nov. 13, 1907.

MASTICO

Particular description of goods.—Chewing-Gum and Candy.

Ser. No. 31,169. (CLASS 71. TOBACCO PRODUCTS.) HEINEMAN BROTHERS, Baltimore, Md. Filed Nov. 14, 1907.



Particular description of goods.—Cigars, Cheroots, and Little Cigars.

Ser. No. 31,182. (CLASS 47. CONFECTIONERY.) THE WALTER M. LOWNEY COMPANY, Boston, Mass. Filed Nov. 15, 1907.



Particular description of goods.—Milk-Chocolate.

Ser. No. 31,207. (CLASS 47. CONFECTIONERY.) CEDAR RAPIDS CANDY COMPANY, Cedar Rapids, Iowa. Filed Nov. 16, 1907.

ACME

Particular description of goods.—Chocolate Candy.

TRADE-MARKS

REGISTERED DECEMBER 17, 1907.

66,582. CANDIES. ADAMS ARGOOD CHOCOLATE CO., Philadelphia, Pa.
Filed March 5, 1907. Serial No. 25,766. PUBLISHED OCTOBER 15, 1907.

66,583. CANDIES. ADAMS ARGOOD CHOCOLATE CO., Philadelphia, Pa.
Filed March 22, 1907. Serial No. 26,146. PUBLISHED OCTOBER 15, 1907.

66,584. CERTAIN EDGE-TOOLS. G. W. BRADLEY'S SONS, Weston, Conn.
Filed April 24, 1905. Serial No. 2,830. PUBLISHED DECEMBER 11, 1906.

66,585. IMPREGNATING AGENTS FOR PRESERVING AND COATING WOOD. CHEMISCHE FABRIK FLÖRSHEIM, DR. H. NOERDLINGER, Flörsheim-on-the-Main, Germany.
Filed August 30, 1907. Serial No. 29,675. PUBLISHED OCTOBER 15, 1907.

66,586. CERTAIN ROAD-VEHICLES. THE COLUMBIA CARRIAGE CO., Hamilton, Ohio.
Filed June 19, 1905. Serial No. 8,567. PUBLISHED OCTOBER 15, 1907.

66,587. WHEAT-FLOUR. CRESCENT MILLING COMPANY, Minneapolis, Minn.
Filed July 13, 1907. Serial No. 28,797. PUBLISHED OCTOBER 15, 1907.

66,588. ROOFING-SLATE. GENUINE BANGOR SLATE CO., Easton, Pa.
Filed September 6, 1907. Serial No. 29,778. PUBLISHED OCTOBER 15, 1907.

66,589. WHEAT-FLOURS. GLOBE MILLING CO., Lockport, N. Y.
Filed July 1, 1907. Serial No. 28,530. PUBLISHED OCTOBER 15, 1907.

66,590. PRINTING AND WRITING PAPERS. GRAHAM PAPER CO., St. Louis, Mo.
Filed May 17, 1907. Serial No. 27,444. PUBLISHED OCTOBER 15, 1907.

66,591. PRINTING AND WRITING PAPERS. GRAHAM PAPER CO., St. Louis, Mo.
Filed May 17, 1907. Serial No. 27,450. PUBLISHED OCTOBER 15, 1907.

66,592. PRINTING AND WRITING PAPERS. GRAHAM PAPER CO., St. Louis, Mo.
Filed May 17, 1907. Serial No. 27,458. PUBLISHED OCTOBER 15, 1907.

66,593. ROCK-DRILLING MACHINES. THE KONOMAX ROCK DRILL SYNDICATE LIMITED, Johannesburg, Transvaal.
Filed June 18, 1907. Serial No. 28,236. PUBLISHED OCTOBER 15, 1907.

66,594. A SURGICAL LUBRICANT. HERMANN MELZER, Meiningen, Germany.
Filed November 6, 1906. Serial No. 23,139. PUBLISHED OCTOBER 15, 1907.

66,595. CEREAL BREAKFAST FOODS. AURELIO M. PEREYRA, San Francisco, Cal.
Filed July 12, 1907. Serial No. 28,761. PUBLISHED OCTOBER 15, 1907.

66,596. WHEAT BREAKFAST FOODS. THE PORTLAND FLOURING MILLS CO., Portland, Oreg.
Filed April 27, 1907. Serial No. 26,954. PUBLISHED OCTOBER 15, 1907.

66,597. ICE-CREAM FREEZERS. SNOW FLAKE MANUFACTURING COMPANY, New York, N. Y.
Filed August 26, 1907. Serial No. 29,578. PUBLISHED OCTOBER 15, 1907.

66,598. ROQUEFORT CHEESE. SOCIÉTÉ ANONYME DES CAVES ET DES PRODUCTEURS RÉUNIS DE ROQUEFORT (AVEYRON), Roquefort, Aveyron, France.
Filed July 16, 1907. Serial No. 28,828. PUBLISHED OCTOBER 15, 1907.

66,599. CERTAIN FOOD. TROPON GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Mülheim-on-the-Rhine, Germany.
Filed August 7, 1905. Serial No. 11,318. PUBLISHED OCTOBER 15, 1907.

66,600. CERTAIN FOOD. TROPON GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Mülheim-on-the-Rhine, Germany.
Filed August 7, 1905. Serial No. 11,319. PUBLISHED OCTOBER 15, 1907.

66,601. FERTILIZERS. F. W. TUNNELL & CO., Philadelphia, Pa.
Filed August 31, 1907. Serial No. 29,710. PUBLISHED OCTOBER 15, 1907.

66,602. CERTAIN CHEMICAL PREPARATION. BIDTEL CHEMICAL WORKS, Jersey City, N. J.
Filed August 23, 1907. Serial No. 29,545. PUBLISHED OCTOBER 15, 1907.

66,603. EMBROIDERY COTTON. CARSON PIRIE SCOTT & CO., Chicago, Ill.
Filed August 26, 1907. Serial No. 29,576. PUBLISHED OCTOBER 15, 1907.

66,604. PAPER OYSTER-PAILS. CHICAGO FOLDING BOX CO., Chicago, Ill.
Filed August 17, 1907. Serial No. 29,440. PUBLISHED OCTOBER 15, 1907.

66,605. PAPER BAGS. THE CLEVELAND-AKRON BAG CO., Cleveland, Ohio.
Filed August 29, 1907. Serial No. 29,671. PUBLISHED OCTOBER 15, 1907.

66,606. AUTOMOBILES. THE DE LUXE MOTOR CAR COMPANY, Detroit, Mich.
Filed March 1, 1907. Serial No. 25,684. PUBLISHED OCTOBER 15, 1907.

66,607. CERTAIN MACHINERY. RUDOLF KRON, Golzern, near Grimma, Germany.
Filed October 9, 1906. Serial No. 22,609. PUBLISHED OCTOBER 15, 1907.

66,608. CHOCOLATE AND COCOA. PENNSYLVANIA CHOCOLATE COMPANY, Pittsburg, Pa.
Filed June 26, 1906. Serial No. 20,579. PUBLISHED SEPTEMBER 17, 1907.

66,609. TOOTH-BRUSHES. R. HUDNUT'S PHARMACY, New York, N. Y.
Filed September 4, 1907. Serial No. 29,745. PUBLISHED OCTOBER 15, 1907.

66,610. CERTAIN CEREAL FOODS. SHANNON & MOTT COMPANY, Des Moines, Iowa.
Filed May 9, 1905. Serial No. 4,526. PUBLISHED OCTOBER 15, 1907.

66,611. AUTOMOBILES. SOCIÉTÉ ANONYME ARTUS, Villeneuve la Garenne, France.
Filed December 26, 1906. Serial No. 24,288. PUBLISHED OCTOBER 15, 1907.

66,612. AUTOMOBILES. Société Anonyme Arès, Villeneuve la Garenne, France.
Filed December 28, 1906. Serial No. 24,289. PUBLISHED OCTOBER 15, 1907.

66,613. CHAIRS, ROCKERS, SETTEES, AND SOFAS. The Taylor Chair Company, Bedford, Ohio.
Filed April 12, 1907. Serial No. 26,667. PUBLISHED OCTOBER 15, 1907.

66,614. WHEAT-FLOUR. Washburn Crosby Company, Minneapolis, Minn.
Filed May 31, 1906. Serial No. 19,970. PUBLISHED OCTOBER 15, 1907.

66,615. CERTAIN FOODS. Zane & Gill, Swedesboro, N. J.
Filed August 16, 1907. Serial No. 29,419. PUBLISHED OCTOBER 15, 1907.

66,616. ROLLED OATS. Albers Bros. Milling Co., Portland, Oreg.
Filed April 14, 1906. Serial No. 18,816. PUBLISHED NOVEMBER 20, 1906.

66,617. BRANDY. The Barton Vineyard Company, Limited, Fresno, Cal.
Filed November 28, 1906. Serial No. 23,641. PUBLISHED OCTOBER 15, 1907.

66,618. CERTAIN WINES. The Barton Vineyard Company, Limited, Fresno, Cal.
Filed November 28, 1906. Serial No. 23,642. PUBLISHED OCTOBER 15, 1907.

66,619. COATS, VESTS, TROUSERS, AND OVERCOATS. Alfred Decker & Cohn, Chicago, Ill.
Filed July 20, 1907. Serial No. 28,921. PUBLISHED OCTOBER 15, 1907.

66,620. TROUSERS, VESTS, COATS, AND OVERCOATS. The Graves & Meade Co., Dayton, Ohio.
Filed August 2, 1907. Serial No. 29,176. PUBLISHED OCTOBER 15, 1907.

66,621. CERTAIN RUBBER GOODS. The H. O. Canfield Company, Bridgeport, Conn.
Filed May 13, 1907. Serial No. 27,320. PUBLISHED OCTOBER 15, 1907.

66,622. RUBBER WHEEL-TIRES. The Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y.
Filed April 4, 1907. Serial No. 26,459. PUBLISHED OCTOBER 15, 1907.

66,623. RUBBER WHEEL-TIRES. The Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y.
Filed April 4, 1907. Serial No. 26,460. PUBLISHED OCTOBER 15, 1907.

66,624. RUBBER WHEEL-TIRES. The Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y.
Filed April 4, 1907. Serial No. 26,461. PUBLISHED OCTOBER 15, 1907.

66,625. RUBBER WHEEL-TIRES. The Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y.
Filed April 4, 1907. Serial No. 26,462. PUBLISHED OCTOBER 15, 1907.

66,626. RUBBER WHEEL-TIRES. The Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y.
Filed April 4, 1907. Serial No. 26,464. PUBLISHED OCTOBER 15, 1907.

66,627. DRESS AND NEGLIGÉE SHIRTS MADE OF WOVEN CLOTH. J. H. Rice & Friedmann Co., Milwaukee, Wis.
Filed June 21, 1907. Serial No. 28,286. PUBLISHED OCTOBER 15, 1907.

66,628. HAIR TONICS AND RENEWERS. Tom Bailey Latimer, Brownwood, Tex.
Filed September 6, 1907. Serial No. 29,775. PUBLISHED OCTOBER 15, 1907.

66,629. OVERCOATS, DRESS-COATS, OUTER COATS, VESTS AND TROUSERS. Moos, Berman & Co., Cincinnati, Ohio.
Filed July 27, 1906. Serial No. 21,212. PUBLISHED OCTOBER 15, 1907.

66,630. CERTAIN MEDICINES. James S. Ramage, Chicago, Ill.
Filed August 7, 1907. Serial No. 29,276. PUBLISHED OCTOBER 15, 1907.

66,631. CORSETS. Royal Worcester Corset Co., Worcester, Mass.
Filed July 9, 1907. Serial No. 28,683. PUBLISHED OCTOBER 15, 1907.

66,632. AN AROMATIC LIQUID PREPARATION OF CASCARA SAGRADA. Henry Solomon Wellcome, London, England.
Filed August 23, 1907. Serial No. 29,551. PUBLISHED OCTOBER 15, 1907.

66,633. BALSAMS, PURGATIVES, PASTILS AND ANESTHETICS. Jules Benguè, Paris, France.
Filed June 7, 1906. Serial No. 20,117. PUBLISHED OCTOBER 15, 1907.

66,634. TOILET POWDER. Charles Boucher, Paris, France.
Filed August 20, 1907. Serial No. 29,490. PUBLISHED OCTOBER 15, 1907.

66,635. RUBBER BOOTS AND SHOES. Bourn Rubber Co., Providence, R. I.
Filed August 16, 1907. Serial No. 29,427. PUBLISHED OCTOBER 15, 1907.

66,636. CEMENTS, GLUES AND ADHESIVES. Cæmentium (Parent) Co. Ltd., London, England.
Filed August 24, 1907. Serial No. 29,560. PUBLISHED OCTOBER 15, 1907.

66,637. RED WINE, BURGUNDY TYPE. Chas. A. Zahn Co., Chicago, Ill.
Filed May 27, 1907. Serial No. 27,668. PUBLISHED OCTOBER 15, 1907.

66,638. WHITE WINE, RHINE WINE TYPE. Chas. A. Zahn Co., Chicago, Ill.
Filed May 27, 1907. Serial No. 27,669. PUBLISHED OCTOBER 15, 1907.

66,639. A REMEDY FOR EPILEPSY. Dr. W. Towns Medical Company, Fond du Lac, Wis.
Filed May 2, 1907. Serial No. 27,079. PUBLISHED OCTOBER 15, 1907.

66,640. RUBBER WHEEL-TIRES. The Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y.
Filed April 4, 1907. Serial No. 26,465. PUBLISHED OCTOBER 15, 1907.

66,641. RUBBER WHEEL-TIRES. The Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y.
Filed April 4, 1907. Serial No. 26,466. PUBLISHED OCTOBER 15, 1907.

66,642. RUBBER WHEEL-TIRES. The Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y.
Filed April 4, 1907. Serial No. 26,468. PUBLISHED OCTOBER 15, 1907.

66,643. RUBBER WHEEL-TIRES. The Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y.
Filed April 4, 1907. Serial No. 26,470. PUBLISHED OCTOBER 15, 1907.

66,644. RUBBER WHEEL-TIRES. The Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y.
Filed April 4, 1907. Serial No. 26,472. PUBLISHED OCTOBER 15, 1907.

66,645. REMEDY FOR RHEUMATISM AND GOUT. John Hampden Howarth, New Haven, Conn.
Filed July 19, 1907. Serial No. 28,909. PUBLISHED OCTOBER 15, 1907.

66,646. WASHBOARDS. Manchester Furniture Co., Manchester, Va.
Filed September 9, 1907. Serial No. 29,802. PUBLISHED OCTOBER 15, 1907.

66,647. COUGH MIXTURE. Ogden and Shimer, Middletown, N. Y.
Filed September 5, 1907. Serial No. 29,763. PUBLISHED OCTOBER 15, 1907.

66,648. LAXATIVE AND DIGESTIVE MEDICINES. The Spirine Extracting Co., Chicago, Ill.
Filed April 25, 1907. Serial No. 26,927. PUBLISHED OCTOBER 15, 1907.

66,649. NIPPERS AND PLIERS PROVIDED WITH A CUTTING EDGE. Utica Drop Forge and Tool Co., Utica, N. Y.
Filed May 16, 1907. Serial No. 27,426. PUBLISHED OCTOBER 15, 1907.

66,650. LUNG-TONIC. W. T. Owbridge Ltd., Hull, England.
Filed August 17, 1905. Serial No. 11,740. PUBLISHED OCTOBER 15, 1907.

66,651. DYSPEPSIA MEDICINE. Louis C. Wedgefuth, New York, N. Y., assignor to himself and Adrian D. Adriance, composing the firm of The Bell Company, New York, N. Y.
Filed March 31, 1906. Serial No. 18,388. PUBLISHED MAY 7, 1907.

66,652. COUGH-DROPS. Wessel Bros. Candy Co., St. Paul, Minn.
Filed August 27, 1907. Serial No. 29,626. PUBLISHED OCTOBER 15, 1907.

66,653. CERTAIN MEDICAL AND SURGICAL APPLIANCES AND INSTRUMENTS. The B. F. Goodrich Company, Akron, Ohio.
Filed October 13, 1906. Serial No. 22,675. PUBLISHED OCTOBER 15, 1907.

66,654. CHAINS. Bates & Bacon, Attleboro, Mass.
Filed April 12, 1906. Serial No. 18,737. PUBLISHED OCTOBER 15, 1907.

66,655. LEATHER. F. Blumenthal & Company, New York, N. Y.
Filed March 27, 1907. Serial No. 26,277. PUBLISHED OCTOBER 15, 1907.

66,656. LARD. Charles Wolff Packing Company, Topeka, Kans.
Filed December 28, 1906. Serial No. 24,311. PUBLISHED JUNE 18, 1907.

66,657. SOAP. Compagnie Ray mit Beschränkter Haftung, Berlin, Germany.
Filed June 5, 1905. Serial No. 7,519. PUBLISHED MARCH 26, 1907.

66,658. CERTAIN BOOTS, SHOES, AND SLIPPERS. James Donovan & Co., Everett, Mass.
Filed February 13, 1907. Serial No. 25,287. PUBLISHED APRIL 2, 1907.

66,659. WHISKY. E. Martin & Co., San Francisco, Cal.
Filed May 4, 1907. Serial No. 27,126. PUBLISHED JUNE 25, 1907.

66,660. CARD GAMES. Arthur J. Fall, Anamosa, Iowa.
Filed August 30, 1907. Serial No. 29,674. PUBLISHED OCTOBER 15, 1907.

66,661. BEER. The George Wiedemann Brewing Co., Newport, Ky.
Filed November 16, 1906. Serial No. 23,426. PUBLISHED OCTOBER 15, 1907.

66,662. PUZZLE. Richard Haldenwang, Jr., New York, N. Y.
Filed September 11, 1907. Serial No. 29,868. PUBLISHED OCTOBER 15, 1907.

66,663. STOVES AND RANGES. Helena Stove and Range Co., Louisville, Ky.
Filed July 5, 1907. Serial No. 28,600. PUBLISHED OCTOBER 15, 1907.

66,664. FELTS IN THE PIECE. Chas. W. House & Sons, New York, N. Y.
Filed August 17, 1907. Serial No. 29,438. PUBLISHED OCTOBER 15, 1907.

66,665. NON-INTOXICATING TONIC MALT LIQUOR. Houston Ice & Brewing Co., Houston, Tex.
Filed May 25, 1907. Serial No. 27,550. PUBLISHED OCTOBER 15, 1907.

66,666. MAGAZINE. The International Sunshine Society, New York, N. Y.
Filed August 3, 1907. Serial No. 29,203. PUBLISHED OCTOBER 15, 1907.

66,667. LEATHER BOOTS, SHOES, AND SLIPPERS. M. D. Wells Co., Chicago, Ill.
Filed July 31, 1905. Serial No. 11,077. PUBLISHED OCTOBER 2, 1906.

66,668. CERTAIN KNITTED GOODS. Michigan Knitting Co., Lansing, Mich.
Filed July 27, 1907. Serial No. 29,077. PUBLISHED OCTOBER 15, 1907.

66,669. DRESS-SHIELDS. The Mona Manufacturing Company, Boston, Mass.
Filed September 3, 1907. Serial No. 29,737. PUBLISHED OCTOBER 15, 1907.

66,670. SUSPENDERS AND BELTS. Monarch Suspender Co., New York, N. Y.
Filed September 11, 1907. Serial No. 29,867. PUBLISHED OCTOBER 15, 1907.

66,671. BELTS. Adolph Nahass, Boston, Mass.
Filed August 28, 1907. Serial No. 29,650. PUBLISHED OCTOBER 15, 1907.

66,672. KNIT UNDERSHIRTS. Rubens & Marble, Chicago, Ill.
Filed December 13, 1905. Serial No. 15,377. PUBLISHED OCTOBER 15, 1907.

66,673. PIANOS, AND INTERIOR MECHANICALLY-OPERATED PIANOS. S. W. Miller Piano Co., Sheboygan, Wis.
Filed August 21, 1907. Serial No. 29,498. PUBLISHED OCTOBER 15, 1907.

66,674. LEATHER BOOTS AND SHOES. Selz, Schwab & Company, Chicago, Ill.
Filed July 19, 1907. Serial No. 28,896. PUBLISHED AUGUST 27, 1907.

66,675. CERTAIN MEASURING INSTRUMENTS. Stanley Rule & Level Company, New Britain, Conn.
Filed September 4, 1907. Serial No. 29,747. PUBLISHED OCTOBER 15, 1907.

66,676. BOOTS AND SHOES MADE OF LEATHER. The Tracy Shoe Co., Portsmouth, Ohio.
Filed August 27, 1907. Serial No. 29,625. PUBLISHED OCTOBER 15, 1907.

LABELS

REGISTERED DECEMBER 17, 1907.

13,924.—*Title:* "LA BUNA." (For Cigars.) A. C. HENSCHEL & Co., Chicago, Ill. Filed November 16, 1907.

13,925.—*Title:* "LA POSA." (For Cigars.) A. C. HENSCHEL & Co., Chicago, Ill. Filed November 16, 1907.

13,926.—*Title:* "LA FREGATA." (For Cigars.) A. C. HENSCHEL & Co., Chicago, Ill. Filed November 16, 1907.

13,927.—*Title:* "LA MORENDA." (For Cigars.) A. C. HENSCHEL & Co., Chicago, Ill. Filed November 16, 1907.

13,928.—*Title:* "DAISY." (For Beer.) GARDEN CITY BREWERY, Chicago, Ill. Filed November 18, 1907.

13,929.—*Title:* "ZUMALWEISS." (For Beer.) MINNEAPOLIS BREWING COMPANY, Minneapolis, Minn. Filed November 5, 1907.

13,930.—*Title:* "FORT DEAR-BORN." (For Whisky.) JAMES C. JOHNSTON, Chicago, Ill. Filed September 11, 1907.

13,931.—*Title:* "SPARKLING YOSEMITE MINERAL WATER." (For Mineral Water.) YOSEMITE MINERAL WATER COMPANY, Los Angeles, Cal. Filed September 11, 1907.

13,932.—*Title:* "EPSOM SALT TABLETS." (For a Medicine.) HARRY G. SCHMUELLING, Cincinnati, Ohio. Filed November 16, 1907.

13,933.—*Title:* "VOICELETS." (For a Medicinal Compound.) GRANDFATHERS CURE CO., Mount Vernon, N. Y. Filed November 5, 1907.

13,934.—*Title:* "LIQUID VOICELETS." (For a Medicinal Compound.) GRANDFATHERS CURE CO., Mount Vernon, N. Y. Filed November 5, 1907.

13,935.—*Title:* "LYDIA E. PINKHAM'S SANATIVE WASH." (For Medical Preparations for Women's Use.) LYDIA E. PINKHAM MEDICINE CO., Saco, Me., and Lynn, Mass. Filed November 15, 1907.

13,936. [WITHDRAWN.]

13,937.—*Title:* "DICK'S DIAMOND DUST." (For Polishing-Powders.) J. F. O'BRIEN, New York, N. Y. Filed November 9, 1907.

13,938.—*Title:* "CLEAN-ALL." (For a Preparation for the Removal of Dirt and Grease from Cloth.) ELBERT H. NICHOLS, Liberty, N. Y. Filed July 22, 1907.

13,939.—*Title:* "F. C & CO. FLUFFY RUFFLES PARASOLS." (For Parasols.) FOLLMER CLOGG & CO., INC., New York, N. Y. Filed November 16, 1907.

13,940.—*Title:* "F. C & CO. FLUFFY RUFFLES UMBRELLA." (For Umbrellas.) FOLLMER CLOGG & CO., INC., New York, N. Y. Filed November 16, 1907.

13,941.—*Title:* "WILHELMINA CORSETS." (For Corsets.) HERBERT LINCOLN ADAMS, Worcester, Mass. Filed October 18, 1907.

13,942.—*Title:* "COLLINS HEALTH UNDERWEAR." (For Underwear.) W. E. TILLOTSON MANUFACTURING COMPANY, Pittsfield, Mass. Filed October 29, 1907.

13,943.—*Title:* "FLYING DIABLE." (For a Game Apparatus.) EDWARD C. WEEKS, New York, N. Y. Filed October 26, 1907.

PRINTS

REGISTERED DECEMBER 17, 1907.

2,174.—*Title:* "GOLDBLUME." (For Beer.) THE F. W. COOK BREWING CO., Evansville, Ind. Filed November 9, 1907.

2,175.—*Title:* "THE DYSPEPTIC'S DREAM." (For Dyspepsia-Tablets.) DR. RICHARDS DYSPEPSIA TABLET ASSOCIATION, New York, N. Y. Filed November 9, 1907.

2,176.—*Title:* "HOYT'S IMPROVED PILE REMEDY." (For a Pile Remedy.) C. H. HOYT & CO., Toledo, Ohio. Filed November 14, 1907.

2,177.—*Title:* "MEN'S AND BOYS' APPAREL." (For Men's and Boys' Apparel.) H. C. LYTTON, Chicago, Ill. Filed November 14, 1907.

2,178.—*Title:* "606. COLLEGE SERIES CONGRESS PLAYING CARDS." (For Playing-Cards.) THE UNITED STATES PLAYING CARD CO., Norwood, Ohio. Filed November 14, 1907.

2,179.—*Title:* "LEXARD." (For Soap.) SWIFT AND COMPANY, Chicago, Ill. Filed November 8, 1907.

2,180.—*Title:* "HAS THE POWER OF NIAGARA." (For Automobiles.) WILLIAM H. GELSTON, Camden, N. J. Filed November 19, 1907.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

MARCONI V. SHOEMAKER.

PATENT INTERFERENCE.

Decided October 4, 1907.

1. APPLICATION—COMPLETION—DRAWINGS SIGNED BY ATTORNEY WITHOUT FULL POWER.

Where all papers necessary for a complete application are filed on October 30, 1902, but the drawings were signed by substitute attorneys who had not full power, and on November 28, 1902, full power is given to such attorneys, upon whose request the date of the application is changed to November 28, 1902, *Held* that the application is entitled to the date of October 30, 1902, as a constructive reduction to practice, the informality being one which could be cured, and was in fact cured, by subsequent ratification by the persons delegating the power.

2. INTERFERENCE—PRIORITY—CONSTRUCTIVE REDUCTION TO PRACTICE OVERCOME BY PUBLICATION.

A published description of an invention by the inventor describing the invention in such full and intelligible manner as to enable persons skilled in the art to understand the operation of the invention and to carry it into practical use is sufficient to overcome the filing date of the application of the opposing party.

3. SAME—ACTUAL REDUCTION TO PRACTICE—EVIDENCE OF SUCCESS OF TESTS.

In view of the failure of the inventor to testify as to the character or results of tests of a magneto receiver for wireless telegraphy and the testimony of a witness who assisted in the tests that the signals were faint, the unsupported statement of an electrical engineer who tested the device that his operator received intelligible messages is not sufficient to establish the operativeness of the device, especially where it does not appear with what certainty or rapidity the signals or messages were received.

4. SAME—SAME—SAME—CONSTRUCTION OF ANOTHER DEVICE.

The construction of another device to obviate defects in a prior device tends to show that the first device was unsatisfactory.

5. SAME—SAME—SAME—SAME.

Where it is claimed that the form of device described and illustrated in the application produced the most satisfactory results, and it appears that a device of this construction was built and tested and afterward several modifications of such device were made and tried without success, and that a prior construction was finally reverted to, and that a number of devices of the latter construction were built for use in preference to the former, the presumption is warranted, in the absence of testimony establishing a satisfactory test, that such device was not successful.

6. SAME—SAME—SAME—EX PARTE TEST DURING REBUTTAL TESTIMONY.

A test by a party during the taking of rebuttal testimony out of the presence of the opposing party or his agent is entitled to no consideration as proof of the operativeness of the device several years previous under different conditions.

7. SAME—CONCEALMENT OR SUPPRESSION AFTER REDUCTION TO PRACTICE.

Where a party constructed a device in October, 1900, but allowed it to remain entirely within the knowledge of the inventor and his co-employees until knowledge was obtained of the invention of the opposing party when the application in interference was filed showing a different form, apparently suggested by such knowledge, *Held* that such party's rights were forfeited by concealment.

APPEAL from Examiners-in-Chief.

SIGNALING BY ELECTROMAGNETIC WAVES.

Messrs. Betts, Betts, Sheffield & Betts and *Mr. Thos. E. Robertson* for Marconi.

Mr. Philip Farnsworth and *Messrs. Foster, Freeman & Watson* for Shoemaker.

MOORE, *Commissioner:*

This is an appeal by Shoemaker from the decision of the Examiners-in-Chief affirming the decision of the Examiner of Interferences and awarding priority of invention to Marconi upon an issue the following count of which sufficiently illustrates the nature of the invention:

1. The method of detecting electrical oscillations which consists in receiving said oscillations by means of a coil maintained in a magnetic field, which field is continually varied independently of the oscillations, substantially as described.

The invention in issue relates to magnetic detectors or receivers for wireless telegraphy. This invention is based upon the principle that a rod of magnetic material placed in the vicinity of a conductor leading to the aerial and ground of a wireless-telegraph station while not sensibly affected by high frequency electrical oscillation under ordinary circumstances becomes sensitive to them when placed in a varying magnetic field. In utilizing this principle each of the inventors, as disclosed in his application, has inclosed the armature of a magnet in a coil one end of which is connected to the aerial and the other to the ground. Another coil surrounding the armature is connected with a telephone-receiver. The magnet and armature are movable relative to one another, thus varying the magnetic field. By reason of this construction the variations in the current induced by the sudden varying magnetizations of the core are caused to vibrate the diaphragm of the telephone, and thus produce audible signals.

This interference as originally declared involved three parties—Marconi, Shoemaker, and Fessenden. The Examiner of Interferences awarded priority of invention to Marconi.

Fessenden having taken no appeal from that decision is no longer a party to this case.

Shoemaker's application involved in this interference, Serial No. 138,228, filed January 8, 1903, is a division of an earlier application, Serial No. 130,492, filed November 8, 1902.

Marconi's application Serial No. 141,339, which embodies the claims in issue, was filed February 2, 1903, and is a division of an earlier application Serial No. 132,974, which bears the filing date of November 28, 1902.

It appears from the record that the petition, specification, oath, and drawing of application Serial No. 132,974 were filed on October 30, 1902, and that the case was originally given the Serial No. 129,395, and the filing date of October 30, 1902, and was forwarded to the Primary Examiner. When the Primary Examiner took up the case for examination, he discovered that the attorneys who signed the drawings had not been given a full power of attorney in the case and expressed a doubt that the case should receive the status of a complete application.

It appears that Marconi originally gave a power of attorney to the firm of Baldwin, Davidson & Wight, with full power of substitution and revocation. A paper was filed in conjunction with the application papers in which Baldwin, Davidson & Wight purported to "consent" to the substitution of the firm of Betts, Betts, Sheffield & Betts in their place and stead as attorneys for Marconi. The drawings were signed by the latter firm. Subsequently, on November 28, 1902, a formal paper was filed by Baldwin, Davidson & Wight, substituting Betts, Betts, Sheffield & Betts as attorneys, and a request was also filed by the latter that the case be given a new date of filing and serial number. This request was complied with and the case given the Serial No. 132,974 and date of November 28, 1902.

After the declaration of this interference, in view of the fact that Shoemaker's parent application was filed November 8, 1902, Marconi brought a motion before the Primary Examiner that he be given the date October 30, 1902, upon which he originally filed the papers of his application, as his date of constructive reduction to practice of the invention and that the burden of proof thereupon be shifted to Shoemaker. The Primary Examiner denied this motion. The same question was presented before the Examiner of Interferences at the final hearing of the case, and he held that inasmuch as Marconi had, through his attorneys, requested in the *ex parte* prosecution of his case that the case be given a new serial number he should not in an *inter partes* proceeding ask that this action be set aside.

This point was not decided by the Examiners-in-Chief; but in my opinion it is material to a complete determination of the question of priority and will therefore be considered.

The question to be determined is whether Marconi's application as filed on October 30, 1902, was an application upon which a valid patent could have been granted. If so, the refiling of the application constituted merely a substitution for the original application, and under the well-settled practice of the Office Marconi is entitled to the date upon which he filed his original application. (*Silverman* v. *Hendrickson*, 99 O. G., 1171; *Lotterhand* v. *Hanson*, 110 O. G., 861; *Duryea and White* v. *Rice*, 126 O. G., 1357.)

The record shows that the present application has the identical disclosure which was filed October 30. The only thing lacking was the authorization of the act of the substitute attorneys in signing the drawing. This informality is one which could be remedied by the ratification of the act either by the principal attorneys or by the inventor himself. Both have been done. The filing of a formal substitute power of attorney by Baldwin & Wight clearly validated all acts done by Betts, Betts, Sheffield & Betts under the power given by the paper consenting to their substitution. Upon June 15, 1904, Marconi over his own signature ratified the acts of Betts, Betts, Sheffield & Betts. In view of these facts it is clear that a valid patent might have issued on Marconi's original application, and it is not believed that he should be deprived of the benefit of his earlier date of filing merely because he, of his own volition, requested that his case be given a new serial number and filing date. It is therefore held that Marconi should have been given the date of October 30, 1902, as the date of his constructive reduction to practice of the invention and the burden of proof shifted to Shoemaker.

Shoemaker alleges in his preliminary statement that he conceived the invention August 15, 1900, that he reduced the same to practice September 3, 1900, and that he used apparatus embodying the invention for the reception of wireless messages in long-distance signaling on or about June 1, 1901, and subsequently thereto.

Marconi in his preliminary statement alleges conception on December 10, 1901, disclosure to others in the United States in January, 1902, and the publication of a full disclosure of the invention in the *Electrical World and Engineer* at New York city July 12, 1902. He also refers to various patents taken out by him in foreign countries, the earliest one of which to be published is his Brazilian patent, dated August 19, 1902. He also refers to a British application filed May 5, 1902.

The Examiner of Interferences and the Examiners-in-Chief concurred in finding that Marconi's invention was fully disclosed in an article published in the United States in the *New York Electrical World and Engineer* on July 12, 1902, and also in the Brazilian patent to Marconi, published August 19, 1902, and constituted constructive reduction to practice. He held that Shoemaker had established conception of the invention as early as November, 1900, but that he had failed to establish a reduction to practice of the invention prior to the date upon which he filed his application and that he was lacking in diligence at and subsequent to the time Marconi entered the field and reduced the invention to practice. He also held that if Shoemaker could be accorded a reduction to practice in 1900, as alleged, he had forfeited his right by concealment of the invention under the principle stated in *Matthes* v. *Burt*, (114 O. G., 764.)

The Examiners-in-Chief agreed with the conclusions of the Examiner of Interferences, but in addition thereto expressed the opinion that it was doubtful whether Shoemaker ever had, prior to Marconi's disclosure, a definite conception of the principle upon which his apparatus operated, if it operated at all.

Marconi contends that he is entitled to the date of filing of his British application, May 5, 1902, as his date of constructive reduction to practice of the invention, under the provisions of the International Convention for the Protection of Industrial Property and of the act of March 3, 1903. For the reasons stated in *Stiff* v. *Galbraith* (107 O. G., 2532) I am of the opinion that the second clause of section 4887 of the Revised Statutes, as amended March 2, 1903, was not intended to have, and should not be given, a retroactive effect. The date of filing of Marconi's British application is not therefore available to him as his date of constructive reduction to practice of this invention.

The disclosure of the invention in the articles published in the *Electrical World and Engineer* of New York on July 12, 1902, was a reproduction of a part of an article by Marconi read before the Royal Institute of Great Britain in England on June 13, 1902. Copies of the *Electrical World and Engineer* of July 12, 1902, and of the published proceedings of the Royal Institution for June 13, 1902, are in evidence. Each comprises a description of the form of apparatus described in Figures 3 and 4 of Marconi's parent application Serial No. 132,974, together with a full description of the theory of its operation. Reference is also made to the successful use of this apparatus in the reception of wireless messages over distances of 30 and 152 miles.

The disclosure in the *Electrical World and Engineer* is clearly sufficient to enable any person skilled in the art to construct and use the invention described therein.

The Brazilian patent to Marconi, published August 19, 1902, a certified copy of which is in evidence, likewise contains a full and complete disclosure of the invention in issue.

It is contended by Shoemaker that these publications have not the force of constructive reduction to practice of the invention and that the publication of the invention by Marconi prior to Shoemaker's filing date is insufficient to overcome Shoemaker's filing date.

This contention is believed to be untenable. Under section 4886 of the Revised Statutes the disclosure of an invention in any prior printed publication in this or in any foreign country is an absolute bar to the granting of a patent to one who subsequently makes that invention. It is well settled, however, that in order to constitute such a bar the earlier printed and published description must exhibit the invention in such full and intelligible manner as to enable persons skilled in the art to which the invention relates to understand the operation of the invention and to carry it into practical use. (*Seymour* v. *Osborne*, 11 Wall., 516; Cohen v. *United States Corset Co.*, 93 U. S., 366, 370; *Downton* v. *Yeager Milling Co.*, 108 U. S., 466, 471; *Eames* v. *Andrews*, 122 U. S., 40, 66.) When, therefore, a publication is sufficient to constitute a bar against all later inventors, it should manifestly be accepted as establishing the rights of the one who made that disclosure and who with reasonable promptness filed his application for patent in the United States. As was well stated by Commissioner Mitchell in the case of *Depres and Carpenter* v. *Bernstein* v. *Hunter* v. *Gaulard and Gibbs*, (54 O. G., 1711, C. D. 1841, 53)—

> If a patent or printed publication foreign or domestic were evidence of conception only, the law would extend to it that tolerance and generosity which are extended, to private drawings and descriptions representing the inceptive stages of an invention. It is because a patent or printed publication is evidence, when it is evidence at all of a perfected invention, that it is required to speak in unequivocal language and fully, clearly and exactly describe the invention against which it is urged whether as a bar to a patent granted or as a basis for a patent asked.

Shoemaker claims to have conceived the invention in August, 1900, and to have disclosed it to others by means of sketches at that time. He also claims to have had certain apparatus constructed to embody his invention at various times during the latter part of the year 1900 and in the year 1901. Several of these sketches and devices are offered in evidence. The testimony relative to the dates upon which these sketches and devices were made has been fully discussed by the Examiner of Interferences and there appears to be no doubt that the true dates are ascribed to them.

The first of these exhibits which needs to be considered for the purpose of this case is a device which was made in October, 1900, marked "Exhibit No. 5," "Device No. 2," and a sketch and description of this apparatus dated November 2, 1900. (Exhiblt No. 6.)

The device comprises a core of iron or steel wires surrounded by two coils or wire, one of which is adapted to be connected to the ground and to the aerial of a wireless station, the other coil being adapted to be connected to a telephone-receiver. A magnet having down-turned ends is rotatably supported over the cores in such a manner that the poles of the magnet alternately pass in close proximity to the ends of the core. This device corresponds closely in construction with the structure shown in Figs. 1 and 2 of Marconi's application.

In his description of the operation of this device in "Exhibit No. 6" Shoemaker states:

> The object of the magnet is to magnetize the core as the high-frequency oscillations demagnetize them. There are other methods by which I can magnetize the core as by passing an alternating current of very low frequency through one of the coils on the core. The frequency must be low enough so as not to cause signals in the telephone-receiver which is connected to the secondary parts 7 and 8.
>
> When the magnet is revolved and signals are sent the high-frequency oscillations set up in the primary, Ariel A and Ground G, demagnetize the core 5 as it is passing through varing (varying) magnetic state and the change of magnetic lines being very rapid a click is heard on the telephone which corresponds to the signal sent and the telephone responds to the period at which the transmitting-coil is run.
>
> The signals received are very faint and I have not been able yet to use a relay instead of the telephone and receive the signal on a Sounder.

It is contended by Marconi that Shoemaker did not, prior to the date of filing of his application, nor even at that time, have a conception of the true principles upon which the invention in issue is dependent. It is not denied by Shoemaker that the vibration of the diaphragm of the telephone-receiver in magnetic detectors of the character in controversy is dependent upon variations in the magnetic hysteresis in a varying magnetic field due to the influence of the received oscillations. Marconi therefore urges that because Shoemaker, as shown by his testimony, and that of his associate, Midgley, believed that the effect of the received oscillations was a demagnetizing effect he constructed his apparatus accordingly and endeavored to

remagnetise the core as fast as the received oscillations demagnetized it, and that such a construction was not adapted to utilize hysteresis effects, although such effects might be produced in the apparatus as constructed. He further contends that Shoemaker's apparatus is constructed to provide for the rotation of the magnet at such speed as would prevent the desirable hysteresis effects, and is therefore inoperative.

This contention is not without force, and in the light of Shoemaker's unsuccessful endeavors to obtain a satisfactory operation of this apparatus, as will hereinafter appear, I am constrained to agree with the statement of the Examiners-in-Chief that—

> It may well be doubted whether Shoemaker ever had, prior to Marconi's disclosure, a definite conception of the principle upon which the apparatus operated, if it operated at all.

In view, however, of the fact that the issue of this interference is not specifically limited to effects caused by magnetic hysteresis, but relates broadly to the method of detecting electrical oscillations by receiving such oscillations by means of a coil maintained in a continually varying or moving magnetic field, it is believed that any doubt as to the sufficiency of Shoemaker's conception of the invention should be waived in his favor. I therefore agree with the conclusion of the Examiner of Interferences that Shoemaker is entitled to a date of conception not later than November 2, 1900, which is the date appearing upon his "Exhibit No. 6," above quoted.

Shoemaker's efforts toward reducing the invention in issue to practice are represented by four devices, which are in evidence.

The first "Exhibit No. 2," which was constructed in September, 1900, consists of a core formed of a number of wires which is surrounded by a primary and a secondary coil. The varying magnetic field was provided in this device by passing a magnet, held in the hand, across the end of the core.

The second device was "Exhibit No. 5," above referred to, which was constructed in October, 1900, and is described in "Exhibit No. 6," dated November 2, 1900.

The third device, "Exhibit No. 7," constructed in December, 1900, consists of a ring of iron wire over which two coils are wound, one to be connected to the aerial and the ground and the other to be connected to the telephone-receiver to detect the changes in the core, caused by the electrical oscillations, and also to be used to vary the magnetism in the core by passing an alternating current of low frequency through this coil, as suggested in "Exhibit No. 6," above quoted.

The fourth and last device, "Exhibit No. 8," is similar to "Exhibit No. 5," except that instead of a U-shaped magnet a ring so magnetized as to have its poles at the ends of a diameter is used, the core and surrounding coils lying in the plane of ring. This device was made in the latter part of 1901.

The testimony relative to the operation of these devices is unsatisfactory. Shoemaker and Midgley, the mechanic who constructed these devices, testify that they were able to receive signals on "Exhibit No. 2;" that more satisfactory signals were received on "Exhibit No. 5" at the time it was made; that "Exhibit No. 7" was less efficient than "Exhibit No. 5," and that "Exhibit No. 8" gave more distinct responses to the electrical oscillations than "Exhibit No. 5." There is, however, no satisfactory testimony that any of these exhibits were actually used to receive telegraphic messages or that any of them were adapted for practical use under normal conditions. The history of the construction and use of these devices, moreover, leads to the conclusion that all were unsatisfactory, and that until Shoemaker had been made aware of Marconi's successful use of similar apparatus he deemed this invention of little importance.

The statement in "Exhibit No. 6," above quoted, that "the signals received are very faint," which is borne out by the testimony of Midgley (Q. 43) and of Gehring, (Q. 2, p. 218, Shoemaker's record,) who was Shoemaker's employer, clearly indicates that at the time "Exhibit No. 5" was constructed it was not satisfactory, and this is emphasized by the fact soon afterward, in December, 1900, an entirely different form of apparatus, "Exhibit No. 7," was constructed. Upon the failure of the latter to give better results Shoemaker returned to "Exhibit No. 5," and in June, 1901, tested the same at a wireless station at Brielle, N. J., which was in communication with a similar station at Galilee, N. J.

Midgley testifies (p. 65, Shoemaker's record,) that these experiments extended over a period of five or six weeks. He does not, however, state whether complete messages were received or what proportion of the signals could be detected.

Gehring testifies that during these tests he listened for the signals from the Galilee station, but that "the signals came just as faint as before." He further states that Mr. Pickard, an electrical engineer, also tested it at that time, and that

> "He (Pickard) kind of discouraged me saying that it was not as good as his carbon receiver."

Pickard, who is called as a witness by Shoemaker, testifies (Q. 3) that he tested this device during June and July, 1901, and also in the fall of 1901, and says in respect thereto that:

> Because of its simplicity of construction and reliability of operation, we realised from the first that it was a promising line of investigation, and I personally gave much time to its investigation and experiment. Although from the first the magnetic detector showed itself to be sufficiently sensitive for commercial work, yet there were several objectionable features. Prominent among these objectionable features was the great variation in the magnitude of the response at certain points in the rotation of the magnet. This variation in response had the effect of creating two dead points, or points of very faint response, in each cycle or rotation of the permanent magnet.

Upon cross-examination he was asked:

> X-Q. 7. Do you wish to be understood as testifying that "Shoemaker Exhibit No. 5," "Shoemaker Device No. 2," was, in June and July, 1901, in such a state of completion that satisfactory commercial messages could be transmitted from a transmitting circuit and received by it?

and replied:

> A. I do not wish to be understood that the device was entirely satisfactory. In my previous testimony I have stated that this particular form of magnetic detector had the objectionable feature of varying the intensity of the response according to the relative positions of the rotating magnet and the core. It was, however, a sensitive instrument and with the addition of a suitable motor to maintain the rotation of the magnet, could have been used for commercial work.

It appears, however, from cross-question 12 that when provided with a suitable motor it was still subject to the objectionable features above referred to.

Pickard states (X-Qs. 8, 9) that during these tests

intelligible messages were received by his operator, Rodebaugh, while he, Pickard, who is not a Morse operator, listened in a second receiver. Rodebaugh is not called as a witness, and Pickard's statement stands uncorroborated.

In view of the failure of Shoemaker to testify as to the character or results of these tests and the testimony of Gehring that the signals were as faint as when he first used the device in November, 1900, Pickard's unsupported statement that his operator received intelligible messages is clearly insufficient to establish the operativeness of the device, especially since it does not appear with what certainty or rapidity the signals or messages were received.

That this device was not satisfactory is further evidenced by the fact that in December, 1901, the device having an annular form of magnet, "Exhibit No. 8," was constructed in the endeavor to obviate the dead-points in the rotation of the magnet referred to by Pickard in his testimony above quoted.

It was urged at the hearing, and is commented upon at length in Shoemaker's brief, that the testimony establishes the successful operation of the device "Exhibit No. 8" and, further, that its operativeness is not disputed by Marconi or the expert witnesses called in his behalf.

A careful scrutiny of the testimony presented by Shoemaker fails to disclose any sufficient evidence of the successful use of this device. Midgley says the results obtained with "Exhibit No. 8" "were rather more satisfactory than were the results with Shoemaker 'Exhibit No. 5,' 'Device No. 2' we being able to get more even signals with this device than with 'Exhibit No. 5,' 'Device No. 2,'" (X-Q. 143;) but the testimony shows that several modifications of device No. 8 were tried without success and that the original construction as shown in "Exhibit No. 5" was finally reverted to. It further appears from Midgley's testimony that in the summer of 1903 Shoemaker had a number of devices constructed for use at Annapolis on the principles and lines of "Exhibit No. 5," "this device being much easier to construct than 'Exhibit No. 8' * * * which was a slight improvement on Shoemaker 'Exhibit No. 5.'" (Midgley, X-Q. 144.)

It is a significant fact that although the device "Exhibit No. 8" is the only one of those offered in evidence which is illustrated in the drawings of Shoemaker's application and is the form of the invention in which it is alleged the most satisfactory results were obtained, no sufficient testimony is adduced to establish any specific satisfactory test of the device, and the further fact that it was, after its alleged successful operation, discarded in favor of the less efficient form "Exhibit No. 5," clearly warrants the inference that it was unsuccessful.

There is some testimony concerning a test made by Pickard during the taking of Shoemaker's rebuttal testimony; but Marconi was not represented at this test. An *ex parte* test of this character is entitled to no consideration and, furthermore, constitutes no proof, even if successful, of the operativeness of the apparatus when tested under different conditions several years previous. As pointed out by the Examiner of Interferences, it is also doubtful whether at this test more than a small fraction of the predetermined signals sent were received.

The character of the present invention is such that the operativeness of the apparatus for performing the method claimed is not obvious. It clearly belongs to that class of inventions which requires actual use or thorough tests to demonstrate its practicability, and in the absence of satisfactory proof of actual use or successful tests it must be held that the devices offered in evidence by Shoemaker were merely experimental in character and that none of them constitute a reduction to practice of the invention in issue. (*Dashiell* v. *Tuska*, 103 O. G., 2174; *MacDonald* v. *Edison*, 105 O. G., 1263; *McKenzie* v. *Cummings*, 112 O. G., 1481; *Gallagher* v. *Hien*, 115 O. G., 1330; *Ocumpaugh* v. *Norton*, 115 O. G., 1850.)

Shoemaker is therefore entitled to no earlier date of reduction to practice than the date upon which he filed his application, November 8, 1902.

It remains to be seen whether Shoemaker was active at the time Marconi entered the field and exercised due diligence thereafter in reducing the invention to practice.

Midgley states that Shoemaker and himself experimented with "Exhibits No. 5" and "No. 8" up to the latter part of the year 1903, but makes no specific statement as to any work or test between February, 1902, and November 8, 1902, the date upon which Shoemaker filed his application. Gehring does not refer to any work done after April, 1902. Pickard says that during the summer and fall of 1902 he made several visits to Shoemaker's laboratory and was shown certain models of magnetic detectors embodying alterations in dimensions and material; but he does not describe the devices he saw, nor are the dates of these visits specified. Shoemaker merely states that he conducted tests with "Exhibit No. 8" during April, May, and the summer months of 1902. It does not appear what such tests comprised, nor when nor where they were made.

During the period intervening between October, 1900, when Shoemaker's "Exhibit No. 5" was constructed, and the date upon which he filed his application for patent upon this invention Shoemaker filed applications for a large number of patents in wireless telegraphy, (Shoemaker's record, pp. 36–39,) and it is apparent from Gehring's statements (Q. 2) that no application for patent upon the invention in issue was made during this time because it was not considered to be satisfactorily developed. It also appears that an application for patent was finally made because of the knowledge of Marconi's published disclosure of the invention in the *Electrical World and Engineer*.

In view of the facts above stated it is clear that Shoemaker was lacking in diligence and cannot prevail.

It is alleged that Shoemaker's invention was disclosed to Marconi through Gehring. This allegation is denied by Marconi. The testimony relative to the interview between Gehring and Marconi is fully discussed by the Examiner of Interferences in his decision and need not be repeated. I agree with his conclusion that the testimony fails to establish this disclosure.

The lower tribunals have each held that if it could be admitted that Shoemaker reduced his invention to

practice in the device "Exhibit No. 5," which was made in October, 1900, he is guilty of concealment under the doctrine stated in *Mathes* v. *Burt*, (114 O. G., 764,) and with this conclusion I also concur. So far as can be gathered from the testimony, Shoemaker's invention was seen only by co-employees of the company with which he was connected. It appears that his device "Exhibit No. 5" was as complete in October, 1900, as at any time thereafter, but that it remained within the knowledge of these few until Shoemaker was stimulated by knowledge of Marconi's publication to make application for a patent. (Gehring, Q. 2, p. 221, Shoemaker's record.) In this connection it is to be observed that Shoemaker discloses in his applications only the form of the invention embodied in his later "Exhibit No. 8" and mechanism corresponding to an apparatus described in Marconi's publication, which, so far as appears from the testimony, was not thought of by Shoemaker prior to the date of that publication.

For the reasons stated I fully concur with the conclusions of the lower tribunals that Marconi is the prior inventor of the subject-matter in issue.

The decision of the Examiners-in-Chief is affirmed.

TRADE-MARKS.

CLASSIFICATION OF MERCHANDISE.

1. Raw or partly-prepared materials.
2. Receptacles.
3. Baggage, horse equipments, portfolios, and pocketbooks.
4. Abrasive, detergent, and polishing materials.
5. Adhesives.
6. Chemicals, medicines, and pharmaceutical preparations.
7. Cordage.
8. Smokers' articles, not including tobacco products.
9. Explosives, firearms, equipments, and projectiles.
10. Fertilizers.
11. Inks and inking materials.
12. Masonry materials.
13. Hardware and plumbing and steam-fitting supplies.
14. Metals and metal castings and forgings.
15. Oils and greases not intended for food.
16. Paints and painters' materials, not including oils and polishes.
17. Tobacco products.
18. Agricultural and dairy machinery and parts thereof.
19. Vehicles, not including engines.
20. Linoleum and oiled cloth.
21. Electrical apparatus, machines, and supplies.
22. Games, toys, and sporting goods.
23. Cutlery, machinery, and tools, and parts thereof.
24. Laundry appliances and machines.
25. Locks and safes.
26. Measuring and scientific appliances.
27. Horological instruments.
28. Jewelry and precious-metal ware.
29. Brooms, brushes, and dusters.
30. Crockery, earthenware, and porcelain.
31. Filters and refrigerators.
32. Furniture and upholstery.
33. Glassware.
34. Heating, lighting, and ventilating apparatus, not including electrical apparatus.
35. Belting, hose, machinery packing, and nonmetallic tires.
36. Musical instruments and supplies.
37. Paper and stationery.
38. Publications.
39. Clothing.
40. Fancy goods, furnishings, and notions.
41. Canes, parasols, and umbrellas.
42. Knitted, netted, and textile fabrics.
43. Thread and yarn.
44. Dental, medical, and surgical appliances.
45. Beverages, nonalcoholic.
46. Foods and ingredients of foods.
47. Wines, except medicated.
48. Malt extracts and liquors.
49. Distilled alcoholic liquors.
50. Merchandise not otherwise classified.

Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 14, 1907.

The classes of merchandise contained in the foregoing schedule are approved and will take effect upon the 18th day of March, 1908, with respect to all applications registered after that date, in lieu of the classification of merchandise established July 2, 1906, under the provisions of section 2 of the act of July, 1906, entitled "An act to amend the laws of the United States relating to the registration of trade-marks."

EDWARD B. MOORE,
Commissioner.

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., November 14, 1907.

Levy, Diamant, Oppenheimer & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Ainsworth Shoe Company, of 209-211 St. Clair street, Toledo, Ohio, for registration of a trade-mark and a trade-mark registered to Levy, Diamant, Oppenheimer & Company, of 107 Battery street, San Francisco, Cal., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Levy, Diamant, Oppenheimer & Company having been returned undelivered, notice is hereby given to the said Levy, Diamant, Oppenheimer & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

[BY AUTHORITY OF CONGRESS.]

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Designs	6	No. 33,958 to No. 33,963, inclusive.
Trade-Marks	103	No. 66,677 to No. 66,779, inclusive.
Labels	10	No. 13,944 to No. 13,953, inclusive.
Prints	7	No. 2,181 to No. 2,187, inclusive.
Reissues	2	No. 12,734 to No. 12,735, inclusive.
Total	672	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	1	.....	New Hampshire	3	2
Alaska, District of	.....	.....	New Jersey	17	6
Arizona Territory	1	.....	New Mexico Ter't'y	1	.....
Arkansas	4	.....	New York	71	23
California	30	5	North Carolina	5	.....
Colorado	7	.....	North Dakota	1	.....
Connecticut	13	2	Ohio	37	9
Delaware	1	1	Oklahoma	1	.....
District of Columbia	1	.....	Oregon	3	.....
Florida	.....	.....	Panama	.....	.....
Georgia	3	.....	Pennsylvania	48	7
Hawaii Territory	.....	.....	Philippine Islands	.....	.....
Idaho	2	.....	Rhode Island	2	3
Illinois	64	7	South Carolina	1	1
Indiana	25	.....	South Dakota	2	1
Iowa	9	2	Tennessee	3	2
Kansas	7	1	Texas	11	1
Kentucky	6	2	Utah	.....	.....
Louisiana	2	.....	Vermont	1	.....
Maine	3	.....	Virginia	3	.....
Maryland	5	3	Washington	6	1
Massachusetts	27	8	West Virginia	2	.....
Michigan	17	3	Wisconsin	12	3
Minnesota	9	8	Wyoming	.....	.....
Mississippi	2	.....	U. S. Army	.....	.....
Missouri	16	3	U. S. Navy	.....	.....
Montana	2	.....			
Nebraska	4	4	Total to citizens of the United States	491	108
Nevada	.....	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	2	.....	Netherlands	.....	.....
Belgium	.....	.....	Newfoundland	.....	.....
Brazil	.....	.....	New South Wales	.....	.....
British West Indies	.....	.....	New Zealand	.....	.....
Canada	6	1	Norway	.....	.....
Cape Colony	.....	.....	Portugal	1	.....
Chile	.....	.....	Queensland	.....	.....
China	.....	.....	Roumania	.....	.....
Costa Rico	.....	.....	Russia	.....	.....
Cuba	.....	.....	Scotland	.....	.....
Denmark	.....	.....	South Australia	.....	.....
Ecuador	.....	.....	Spain	.....	.....
England	16	2	Sweden	.....	.....
France	11	1	Switzerland	.....	1
Germany	18	2	Transvaal, South Africa	1	.....
Haiti	.....	.....	Victoria	.....	.....
Ireland	.....	5	Western Australia	1	.....
Italy	3	.....			
Japan	.....	.....			
Java	.....	.....	Total to citizens of foreign countries	89	12
Mexico	.....	.....			

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 11, 1907.

The Royal Shoe Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Selz, Schwab & Company, of Monroe and Market streets, Chicago, Ill., for registration of a trade-mark and a trade-mark registered to The Royal Shoe Company, of 200 Devonshire street, Boston, Mass., and the notice of said declaration mailed by the Patent Office in the usual manner to the said The Royal Shoe Company having been returned undelivered, notice is hereby given to the said The Royal Shoe Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

The notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

Full Names of Applicants.

* * * All applications which disclose the full name of the applicant in the preamble of the specification will be received and considered as a sufficient compliance with Rule 40 of the Rules of Practice. (Order 521.)

When the full first name of the applicant does not appear either in his signature or in the preamble to the specification, the Examiner will, in his first official letter, require an amendment supplying the omission, and he will not pass the application to issue until the omission has been supplied, unless an affidavit shall have been filed setting forth that the full first name of the applicant is the one originally given by him. (Order 600.)

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business December 17, 1907.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
303	XVII. Linotyping; Printing; Matrix-Making; Nut and Bolt Locks; Clutches.	Dec. 3	Nov. 19	190
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Toilet; Signals; Garment-Supporters.	Dec. 3	Sept. 30	581
172	XXXI. Alcohol; Charcoal and Coke; Ammonia, Water, and Wood Distillation; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Oils, Fats, and Glue; Water Purification; Mineral Oils.	Dec. 2	Oct. 31	191
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Nov. 29	Oct. 23	276
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Towers; Iron Structures.	Nov. 20	Nov. 18	203
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Nov. 20	Nov. 1	305
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Nov. 20	Oct. 29	221
167	V. Bookbinding; Harvesters; Jewelry; Music.	Nov. 20	Sept. 16	288
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Nov. 19	Sept. 6	380
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Nov. 16	Oct. 23	232
147	XXIX. Coopering; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking-Tools; Woodworking; Fire-Escapes; Ladders.	Nov. 16	Sept. 16	357
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Nov. 14	Oct. 28	265
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Fishing and Trapping; Stationery; Stone-Working; Educational Appliances.	Nov. 12	Oct. 26	368
118	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Nov. 11	Oct. 14	314
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electricity, Medical and Surgical; Electric Signaling; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas, and Canes.	Nov. 8	Oct. 11	307
364	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Measuring Instruments; Wind-Wheels; Engraving.	Dec. 7	Nov. 14	369
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus; Harness.	Nov. 6	Oct. 8	372
223	X. Carriages and Wagons.....	Nov. 4	Oct. 4	440
183	XXX. Lamps and Gas-Fittings; Fluid-Pressure Regulators; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Nov. 2	Oct. 14	238
227	XVIII. Steam-Engines; Steam-Boilers; Steam-Engine Valves; Steam and Vacuum Pumps; Injectors and Ejectors.	Nov. 1	Oct. 2	265
273	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cases; Movable Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Nov. 1	Aug. 5	544
370	XXIII. Accounting; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Oct. 31	Sept. 13	395

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Presses; Tobacco; Store-Service; Pneumatics.	Oct. 30	Oct. 21	287
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Oct. 28	Oct. 26	337
308	XV. Bread, Pastry, and Confection Making; Coating; Laminated Sheets and Fabrics; Fuel; Glass; Hydraulic Lime and Cement; Paper-Making; Paving; Plastics; Plastic Block and Earthenware Apparatus; Plastic Compositions; Photography.	Oct. 26	Oct. 2	657
322	XII. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Oct. 26	Oct. 1	597
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Oct. 23	Oct. 14	360
312	VII. Games and Toys; Mechanical Motors; Paper Manufactures; Velocipedes; Optics.	Oct. 23	Sept. 26	349
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heat-Engine Plants.	Oct. 22	Oct. 7	544
238	XIX. Furnaces; Stoves and Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel.	Oct. 22	Aug. 19	513
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Oct. 16	Aug. 13	517
307	XIV. Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal-Ware Making; Tools; Wire-Working; Compound Tools.	Oct. 14	Aug. 8	259
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Oct. 11	Oct. 12	530
280	XL. Deposit and Collection Receptacles; Special Receptacles and Packages; Check-Controlled Apparatus; Fine Arts; Paper Receptacles; Package and Article Carriers; Wooden Receptacles; Baggage; Lighting-Fixtures; Cloth, Leather, and Rubber Receptacles.	Oct. 9	Aug. 8	798
142	IX. Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage; Air and Gas Pumps.	Oct. 7	Oct. 1	273
107	XXXVII. Electricity, Conductors; Electric Lighting; Electricity, General Applications.	Sept. 27	Aug. 16	728
105	XXVI. Electricity, Generation; Electric Heating and Rheostats; Electric Railways; Motive Power.	Sept. 26	Aug. 2	472
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Sept. 25	Aug. 15	624
321	XXXIX. Water Distribution; Baths and Closets.	Sept. 19	July 3	829
109	XVI. Telegraphy; Telephony.....	Sept. 9	June 12	666
352	XLI. Railway Draft Appliances; Railway-Ties and Fasteners; Railway-Rails and Joints; Resilient Tires and Wheels.	Aug. 15	July 16	1218

Total number of applications awaiting action 17,659

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS.			
	Trade-Marks.....	Dec. 10	Nov. 21	267
	Designs.....	Dec. 14	Nov. 18	63
	Labels and Prints.....	.....	.....	.....

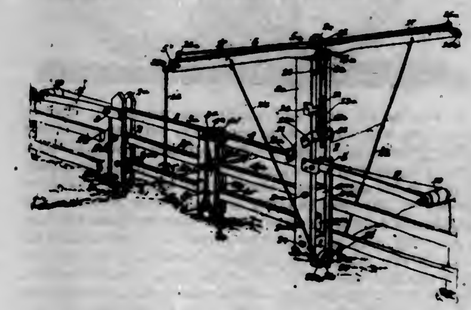
Examiners' Letters and Amendments.

Examiners are directed to recite in each letter in an application the date of the action by the applicant to which it is a reply, and applicants are requested to indicate in their actions on an application the date of the last Office letter.

PATENTS

GRANTED DECEMBER 24, 1907.

874,376. GATE. ADOLF E. ARSCHLIMANN, Taylor, Tex. Filed Aug. 27, 1907. Serial No. 390,288.



1. A gate comprising a pair of gate sections, means for mounting said sections to be swung in a vertical plane to open the gate, means carried by one of said gate sections for locking said sections in its open or closed position, means carried by one of said gate sections and coöperatively engaging the other gate section for locking the gate sections together when closed, combined with means for first releasing said first mentioned locking means and then upon further movement swinging the gate sections to their open position, substantially as shown and described.

2. The combination with a pair of vertically tiltable gate sections, and means coöperatively connecting said sections together to move in unison, of counterbalances for each section, a pivoted latch member carried by one of said gate sections and adapted to engage a fixed latch bar to lock the gate sections in its open or closed position, and means for first releasing said gate sections to open or close the same, substantially as shown and described.

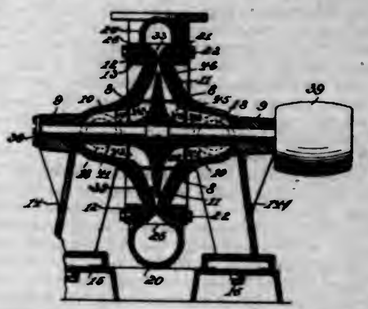
3. The combination with the gate posts, of gate sections vertically tiltably mounted on said posts, a rotatable shaft and crank and pitmen connections between the rotatable shaft and the gate sections, a rocking lever fulcrumed on one of said posts, connections between said rocking lever and said rotatable shaft, means carried by one of said gate sections for locking the same in its closed position, and means carried by the tiltable lever and coöperatively connected with the locking means for releasing said locking means, substantially as shown and described.

4. The combination with the gate posts, of gate sections vertically tiltably mounted on said posts, a rotatable shaft and crank and pitmen connections between the rotatable shaft and the gate sections, a rocking lever fulcrumed on one of said posts, connections between said rocking lever and said rotatable shaft, means carried by one of said gate sections for locking the same in its closed position, and means carried by the tiltable lever and coöperatively connected with the locking means for releasing said locking means before the tilting lever begins its tilting movement, substantially as shown and described.

5. The combination with the gate posts, of gate sections vertically tiltably mounted on said posts, a rotatable shaft and crank and pitmen connections between the rotatable shaft and the gate sections, a rocking lever fulcrumed on one of said posts, connections between said rocking lever and said rotatable shaft, means carried by one of said gate sections for locking the same in its closed position, and means carried by the tiltable lever and coöperatively connected with the locking means for releasing said locking means, and means carried by one of said gate sections for engaging the other gate section when closed to lock the same in its closed position, substantially as shown and described.

[Claims 6 to 9 not printed in the Gazette.]

874,377. PUMP. NICHOLAS W. AKIMOFF, Philadelphia, Pa. Filed July 18, 1907. Serial No. 384,343.



1. In a pump of the character described, a housing, a shaft arranged in said housing, an impeller carried by said shaft within said housing, a suction-sleeve removably supported by said shaft and interposed between said impeller and said housing, said suction-sleeve having means engaging said housing so as to prevent transmission of movement from said impeller to said sleeve.

2. In a pump of the character described, a housing having a cup-shaped and outwardly flaring dish-shaped section and an inlet for fluid arranged in the cup-shaped portion of the section, a shaft arranged in said housing, an impeller carried by said shaft within said housing, a suction-sleeve removably supported by said shaft and interposed between said impeller and housing, said suction-sleeve having laterally projecting blades connected at their free ends by a ring-shaped portion and said ring-shaped portion arranged to frictionally engage said housing so as to prevent transmission of movement from said impeller to said sleeve.

3. In a pump of the character described, a housing consisting of sections, each section having a partially cup-shaped and outwardly flaring dish-shaped portion, a shaft supported by said section, an impeller carried by said shaft within said housing, suction-sleeves removably supported by said shaft and respectively arranged between said impeller and said housing, each of said sleeves having means engaging said housing so as to prevent by the same transmission of movement from said impeller to said sleeve.

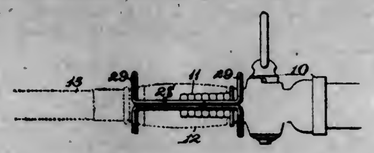
4. In a pump of the character described, a housing, consisting of sections of uniform outline, each of said sections having a partially cup-shaped and outwardly flaring dish-shaped portion, a diffuser supported by said sections, a shaft centrally arranged in said sections, a suction-sleeve arranged at each side of said impeller and removably supported by said shaft and each of said sleeves having means engaging the respective section of said housing so as to prevent by the same transmission of movement from said impeller to said sleeves.

5. In a pump of the character described, a housing, a

volute casing supported by said housing, a diffuser, consisting of sections removably secured to said casing, each of the sections of said diffuser having ends inclined with respect to the outer and inner faces thereof, to permit of the assembling of the sections from the interior of said casing, a shaft carried by said housing, and an impeller carried by said shaft.

[Claims 6 to 9 not printed in the Gazette.]

874,878. CONNECTION FOR GAS-TUBES. WILLIAM H. ALLEN, Newark, N. J. Filed Dec. 26, 1906. Serial No. 349,508.



1. In combination with a gas cock having a reduced portion and a tube sliding on the end of the gas cock, of a clamp formed of wire having open ended transverse spring arches on the ends, one arch being adapted to embrace the reduced portion of the gas cock, and the other arch being adapted to clamp the tube, the clamp being thus adapted to be rotatably arranged on the tube and to have the arches applied simultaneously, the arches clamping by their own spring action.

2. In combination with a gas cock having a reduced portion and a tube sliding on the end of the gas cock, of a clamp formed of wire having open ended transverse spring arches on the ends, one arch being adapted to embrace the reduced portion of the gas cock, and the other arch being adapted to clamp the tube, the clamp being thus adapted to be rotatably arranged on the tube and to have the arches applied simultaneously, the arches clamping by their own spring action, each arch consisting of curved side members, loops on the ends of the members and merging from the loops into an arch.

874,879. DENTAL CROWN-DRIVER. CLARENCE R. AVERILL, Webster, N. Y. Filed Aug. 24, 1907. Serial No. 389,947.

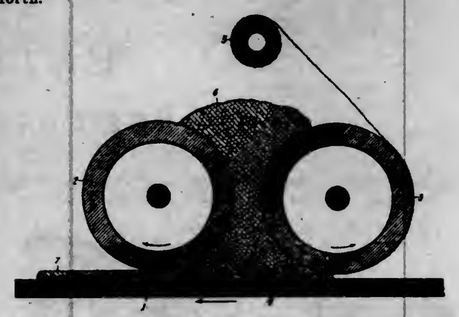


1. A dental crown driver comprising a suitable support and a container carried thereby and having opposite portions of its wall provided with cut-away portions.

2. A dental crown driver comprising a suitable support, a container carried thereby and having opposite portions of its walls provided with cutaway portions, and a plastic substance arranged in the container.

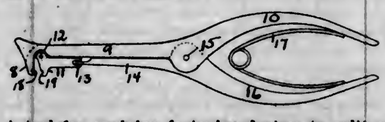
874,880. METHOD OF MAKING WIRE-GLASS. ARTHUR J. BALDWIN, East Orange, N. J. Filed Aug. 2, 1906. Serial No. 328,881.

1. The herein described method of making wire glass, which consists in depositing between oppositely rotating rolls and upon a longitudinally movable wire fabric passing under said rolls a mass of glass sufficiently plastic to pass by its own weight through the spaces or meshes of the fabric, whereby the latter is embedded in the glass, and progressively drawing out from the mass of glass portions thereof on both sides of the fabric, simultaneously advancing the fabric and causing a continual passing of glass through the fabric at the rear of the mass, as set forth.



2. The herein described continuous process of making wire glass, which consists in depositing between oppositely rotating rolls and upon a longitudinally movable fabric passing under said rolls a mass of glass sufficiently plastic to pass by its own weight through the spaces or meshes of the fabric, whereby the latter is embedded in the glass; and progressively drawing out from the mass of glass portions thereof on both sides of the fabric, simultaneously advancing the fabric and causing a continual passing of glass through the fabric at the rear of the mass; and replenishing the mass of glass from time to time as required; as set forth.

874,881. TOOL FOR APPLYING FASTENING DEVICES TO SPLIT CARNATIONS, &c. ARMIN J. BAUR, Mill Creek township, Erie county, Pa. Filed Jan. 7, 1907. Serial No. 351,058.



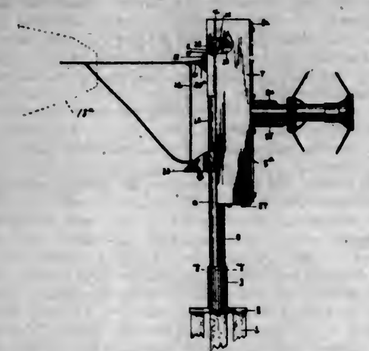
1. A tool for applying fastening devices to split carnations and the like, comprising pincer jaws, one of which is adapted to be pressed within the calyx, said jaw being provided with a prong face for the purpose described; and handles for operating the jaws arranged at approximately right angles to the jaws.

2. A tool for applying fastening devices to split carnations and the like, comprising pincer jaws having transverse grooves in the ends thereof to adapt them for picking up a fastener, one of the jaws being adapted to be inserted within the calyx and having the pronged end for guiding the petals as it is inserted; and handles for operating the jaws arranged approximately at right angles to the jaws.

3. A tool for applying fastening devices to split carnations and the like, comprising the jaw 8, the shank 9 secured to the jaw 8 and approximately at right angles thereto; the handle 10; the jaw 11 pivoted at 12 on the jaw 8 and having the grooved end 13; the shank 14 pivoted on the shank 9 at 15 and acting in the groove 18; the handle 16 for the shank 14, the jaw 8 being provided with the groove 20 on its face and the jaws 8 and 11 having transverse grooves 18 and 19 near their ends for the purpose described.

874,882. WINDMILL. JOHN A. BELL and SYDNEY W. REYNOLDS, Lathrop, Cal. Filed Nov. 7, 1906. Serial No. 342,342.

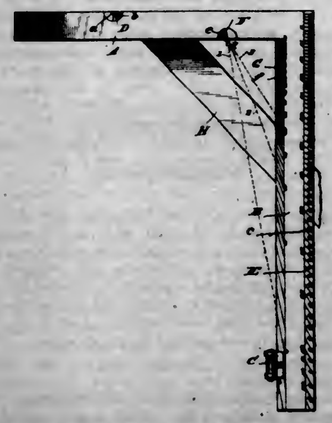
1. In a wind mill, a casing having spaced interior guide chambers, a drive shaft journaled in said casing and carrying a gear wheel operating between said guide chambers, a frame having rollers for operating in said guide chambers and with a laterally extending operating roller, an endless gear rack carried by said frame and operatively engaged by said gear, and an operating rod having a transverse slot and adapted to be engaged by said lateral bearing roller.



2. In a device of the class described, a casing having elongated interior chambers spaced apart and with rounded ends and with a lateral chamber communicating with one of said elongated chambers, a drive shaft journaled in said casing between said chambers and carrying a gear wheel, a frame having rollers for operating in said guide chambers and with a lateral bearing roller extending into said laterally communicating chamber, an endless gear rack carried by said frame and operatively engaged by said gear, and an operating rod movably disposed in said lateral chamber and provided with a transverse slot adapted to be engaged by said lateral bearing roller.

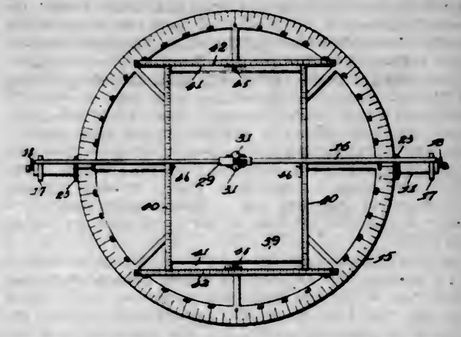
3. In a wind mill, a casing having spaced elongated guide chambers having rounded ends with the outer end of one of said chambers adjustable longitudinally thereof and with a lateral chamber communicating with the other of said elongated chambers, a shaft provided with a gear operating between said elongated chambers, a frame having rollers operating in said guide chambers and with a bearing roller extending into said lateral chamber, an endless gear rack carried by said frame and operatively engaged by said gear, and an operating rod movable in said lateral chamber and having a transverse slot adapted to be engaged by said lateral bearing roller.

874,883. SQUARE. WADE H. BISHOP, Birmingham, Ala. Filed May 18, 1907. Serial No. 374,367.



The herein described square comprising a tongue, a blade, and a spirit level carried by and extending in the direction of the length of the blade and constituting a permanent part of the square; the said square having positioning points on the tongue at opposite edges and at different distances from the outer end thereof and also having on the blade, at opposite edges thereof, angle scales, comprising lines disposed for use in combination with the respective positioning points and numbered in regular sequence to indicate the degrees of the angles.

874,884. DRAFTING INSTRUMENT. JOSEPH H. BLAIR, Bowling Green, Mo. Filed June 26, 1907. Serial No. 380,949.



1. In a drafting instrument, the combination with a polygonal shaped base mounted on legs, and comprising a central horizontal circular plate, with a circular rim projection and a central cylindrical projection on its upper surface, with a central and circular vertical orifice through the cylindrical projection, ribs extending horisontally from the edge of the body of the plate and attaching to the sides of the base at their angles, the upper surface of the ribs and sides of the base lying in the same plane as the upper surface of the body of the plate two horizontal arms, oppositely placed and extended outward from the upper portion of the sides of the base, having a vertical rectangular orifice through each near the outer ends to receive the vertical supports, of a vertical support attached to each arm near its outer end, all of said supports being retained in said orifices by set-screws; of a disk, centrally and rotatably mounted thereon, consisting, of a central horisontal circular plate, having a circular rim projection and a central cylindrical projection on its under surface, with a central shaft fixed therein and extending vertically downward and adapted to operate in the central orifice of the base, the outer and inner edges of the rim projection and periphery of the cylindrical projection coinciding with the similar projections of the base, horisontal ribs extending from the edge of the body of the plate and attaching to an outer circular rim, on the outer and upper surface of which is inscribed a compass circle, figured each way from 0° to 90° from the north and south points, the upper surface of the plate, ribs and outer rim lying in the same plane, the under surface of the projections lying in the same plane, but the under surface of the ribs slant upward and outward from the plate to the outer rim; of a rectangular rule, extending across, above and along the center of the horisontal plane of the disk, having inscribed on each side a scale of linear measurement graduated as desired, the ends adjustably attached to the upper ends of the vertical supports on the horisontal arms of the base, substantially as described.

2. In a drafting instrument, the combination with a base mounted on legs, having a central horisontal circular plate with a rim and cylindrical projections on its upper surface, with a central circular vertical orifice through the cylindrical projection, horisontal ribs extending from the body of the plate and attaching to the sides of the base, the upper surface of the sides, ribs and body of the plate lying in the same plane, two horisontal arms, oppositely placed and extended from the upper

support attached to each arm near its outer end, of a disk, centrally and rotatably mounted thereon, consisting, of a central and horizontal circular plate having a rim projection and a cylindrical projection on its under surface, and a central shaft therein extending downward and adapted to operate in the central orifice of the base, the periphery of the projections coinciding with the similar projections of the base, horizontal ribs extending from the outer edge of the body of the plate and attaching to the outer circular rim, on the upper and outer surface of which is inscribed a compass circle, graduated each way from 0° to 90° from the north and south points, the upper surface of the plate, ribs and rim lying in the same plane, the under surface of the ribs slant upward and outward from the plate to the rim, of a rectangular rule extending across, above and along the center of the horizontal plane of the disk, on each side of which is inscribed a scale of linear measurement, graduated as desired, the ends adjustably attached to the upper ends of the vertical supports on the horizontal arms of the base, of a drawing-board mounted on the upper surface of the disk, comprising a rectangular frame, slidably adjusted by means of end bars, and a slide therein adjusted to move in and over the ends of the frame, substantially as set forth.

3. In a drafting instrument, the combination with a base mounted on legs, having a central horizontal circular plate with a rim and cylindrical projections on its upper surface, with a central circular vertical orifice through the cylindrical projection, horizontal ribs extending from the body of the plate and attaching to the sides of the base, the upper surface of the sides, ribs and body of the plate lying in the same plane, two horizontal arms, oppositely placed and extended from the upper and outer portion of the sides of the base, of a vertical support attached to each arm near its outer end, of a disk, centrally and rotatably mounted thereon, consisting, of a central and horizontal circular plate having a rim projection and a cylindrical projection on its under surface, and a central shaft fixed therein extending downward and adapted to operate in the central orifice of the base, the periphery of the projections coinciding with the similar projections of the base, horizontal ribs extending from the body of the plate and attaching to the outer circular rim, on the upper and outer surface of which is inscribed a compass circle, graduated each way from 0° to 90° from the north and south points, the upper surface of the plate, ribs and rim lying in the same plane, the under surface of the ribs slanting upward and outward from the plate to the rim, of a rectangular rule extending across, above and along the center of the horizontal plane of the disk, on each side of which is inscribed a scale of linear measurement, graduated as desired, the ends adjustably attached to the upper ends of the supports on the horizontal arms of the base, of a drawing-board mounted on the upper surface of the disk, comprising, a rectangular frame slidably mounted on end bars, and a slide therein, adjusted to move in and over the ends of the frame, the upper surface of each side of the frame having a scale of linear measurement inscribed thereon, in divisions corresponding with the divisions of the rule, and end bars having inscribed on their upper surface a scale of linear measurement, the divisions corresponding with the divisions of the rule, verniers centrally located on each side of the slide and ends of the frame, substantially as set forth.

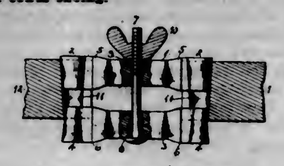
4. In a drafting instrument of the character described, the combination with a base mounted on legs, having, horizontal arms oppositely placed and extended from its outer sides, of two vertical supports attached to the arms near their outer ends, of a disk centrally and rotatably mounted thereon, having a compass circle inscribed thereon, figured each way from 0° to 90° from the north and south points, of a rectangular rule extending across, above and along the center of the horizontal plane of the disk, on each side of which is inscribed a scale of linear measurement, graduated as desired, the ends adjustably attached to the upper ends of the vertical supports, of a drawing-pen support attached to each arm near its outer end, of a disk, centrally and rotatably mounted thereon, consisting, of a central and horizontal circular plate having a rim projection and a cylindrical projection on its under surface, and a central shaft therein extending downward and adapted to operate in the central orifice of the base, the periphery of the projections coinciding with the similar projections of the base, horizontal ribs extending from the outer edge of the body of the plate and attaching to the outer circular rim, on the upper and outer surface of which is inscribed a compass circle, graduated each way from 0° to 90° from the north and south points, the upper surface of the plate, ribs and rim lying in the same plane, the under surface of the ribs slant upward and outward from the plate to the rim, of a rectangular rule extending across, above and along the center of the horizontal plane of the disk, on each side of which is inscribed a scale of linear measurement, graduated as desired, the ends adjustably attached to the upper ends of the supports on the horizontal arms of the base, of a drawing-board mounted on the upper surface of the disk, comprising, a rectangular frame slidably mounted on end bars, and a slide therein, adjusted to move in and over the ends of the frame, the upper surface of each side of the frame having a scale of linear measurement inscribed thereon, in divisions corresponding with the divisions of the rule, and end bars having inscribed on their upper surface a scale of linear measurement, the divisions corresponding with the divisions of the rule, verniers centrally located on each side of the slide and ends of the frame, substantially as set forth.

5. In a drafting instrument, of the kind described, the combination, of a base having two horizontal arms, oppositely placed and extended from the outer sides of the base, of two vertical supports attached to the upper surface of the arms near their outer ends, of a disk centrally and rotatably mounted thereon, having a compass circle inscribed on the upper surface of its outer rim, figured each way from 0° to 90° from the north and south points, a rectangular rule extending across, above and along the center of the horizontal plane of the disk, graduated as desired on each side in scales of linear measurement, the ends adjustably attached to the upper ends of the vertical supports, of a drawing-pen attachment operating on the rule, comprising, a slide with an aperture on each side and a vernier on the lower slant of each aperture, a cross device centrally mounted on the upper portion of the slide, with extended ends, a vertical shaft operatively fixed in each extended end and extending down into a slot in the lower end of the downward extension and attaching to a pen-holder adapted to operate in said slot, and a stop with means of locking the attachment; of a vernier attachment on each arm of the base, and comprising, a vertical support, a hinged inner piece, and a horizontal bar attached to its upper end, its inner surface being the arc of a circle of the same periphery as the outer edge of the disk, its upper surface lying in the same plane as the upper surface of the rim of the disk, with a vernier inscribed thereon, graduated each way from or to a central division, and adjusted contiguously against the edge of the disk by means of a spiral spring encircling a pin fixed in the vertical support and operating through the hinged inner piece, and one of said vernier attachments having a stop attached to a lever, the lower end of which is attached to the end of a screw entering the outer side of the vertical support, the stop being adjusted to operate through an orifice in said support, thence through a spiral spring by which it is actuated and through an orifice in the horizontal vernier bar and enter an orifice in the edge of the disk, substantially as set forth.

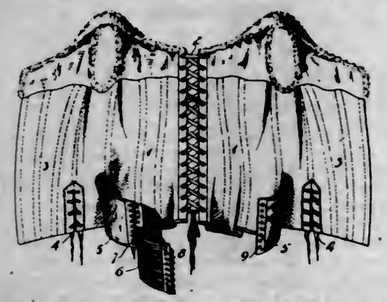
[Claims 6 to 10 not printed in the Gazette.]

874,385. COUPLING FOR IRON BEDSTEADS. GUST E. BLOMQUIST, Rockford, Ill. Filed Sept. 9, 1907. Serial No. 392,087.

A coupling for iron bedsteads comprising two sections adjustably connected, each section having its ends in inner rectangular opening throughout, a rectangular aperture in each side extending to near its ends, the edges slanting outward, a vernier inscribed on the lower slant of each aperture, a device centrally mounted on the upper portion of the slide, its under surface elevated above the upper surface of the slide, an upward extension at each end and also a downward and longitudinal extension along the upper portion of the slide, the ends of the longitudinal extension slanting diagonally inward and outward, each downward extension having a vertical slot extending from its lower edge, a pen-holder adapted to operate therein, and each extended end having a shaft, its head projecting above the upper surface of the extension, operatively fixed in a circular vertical orifice extending down into said slot and attaching to the upper end of the pen-holder, the lower end of the holder having a vertical orifice adapted to receive the shaft of a drawing-pen, which is retained by set-screws, the upper portion of each shaft being encircled by a spiral spring, a stop cylindrical in shape at the top and rectangular at the bottom, operatively inserted through a spiral spring and the central cross portion of the device, the rectangular end extending down through the upper portion of the slide into a transverse groove in the upper surface of the rule, a slide, actuating the stop, operating in an orifice in the upper rectangular portion of the stop, having its upper surface slanting from near one end toward the other, vertical posts at the ends, and a longitudinal slot, through the end not slanting, to receive a guide post fixed in the upper portion of the pen-slide, substantially as set forth.



874,386. CORSET AND CORSET-WAIST. IDA M. BOND, Forest Hill, N. J. Filed May 9, 1907. Serial No. 372,790.



1. In a corset, a body portion provided with adjustable extension means at the hips, and an abdominal pad secured to the inside of the body portion at the back and provided with elastic extension means at one side of the center of the abdominal region for adjusting said extension, the front of the body portion of the corset being adapted to be fastened outside of and substantially covering the abdominal pad whereby the strain on the lower front portion of the corset is relieved.

2. In a corset, a body portion comprised of two halves adjustably connected together in back and provided with fastening means in front, means for adjustably extending the lower edges of the two halves, an abdominal pad having its rear ends secured to the inside of the two rear halves of the body portion, and means for adjustably extending said pad, the front of the body portion extending down over and substantially covering said pad in the abdominal region whereby the strain on the lower front portion of the corset is relieved.

874,387. VENTILATOR. FRANKLIN H. BURR, Atlantic, Iowa, and GUY ADAMS, Chicago, Ill. Filed Feb. 26, 1906. Serial No. 303,060.



1. In combination with the wall of a chamber, a casing extending therethrough adapted to conduct air from one side of said wall to the other, said casing having a closure at each end, (means for controlling said closures), and means whereby air traveling transversely of said casing may be injectively directed into said casing upon the opening of said closure.

2. In combination with the wall of a chamber, a casing extending therethrough adapted to conduct air from one side of said wall to the other, said casing having a closure at each end, (means for controlling both of said closures from the same side of the wall), and means whereby air traveling transversely of said casing may be injectively directed into said casing upon the opening of said closures.

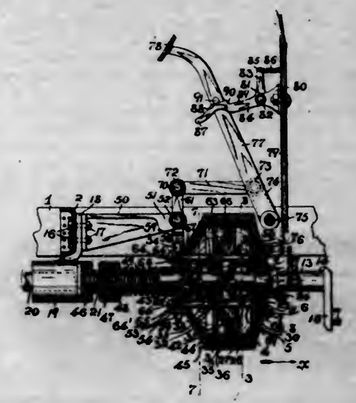
3. In combination with the wall of a chamber, a cylindrical casing extending therethrough, a cover-section over one end of said casing extending from the edge of the opening at one side thereof, and axially beyond the end of the casing.

4. In combination with the wall of a chamber, a cylindrical casing extending therethrough, a cover-section over one end of said casing extending from the edge of the opening at one side thereof, and axially beyond the end of the casing, and another and movable cover-section adapted to move to and from and coöperate with said first-named cover-section to effect complete closure of the end of the casing.

5. In combination with the wall of a chamber, a cylindrical casing extending therethrough, a cover-section over one end of said casing extending from the edge of the opening at one side thereof, and axially beyond the end of the casing, and another and movable cover-section adapted to move to and from and coöperate with said first-named cover-section to effect complete closure of the end of the casing, said sections adapted to produce a shearing effect between their contiguous edges when the movable section is moved toward the first section to effect closure of the casing.

[Claim 6 not printed in the Gazette.]

874,388. CLUTCH. THOMAS J. BUTLER, Harrison, N. J. Filed Jan. 24, 1907. Serial No. 353,913.



1. A clutch comprising a driving cone, a driving shaft connected with a portion of said cone, a shaft to be driven, said shaft being normally disconnected from said driving cone and said driving shaft, a positive clutch disk, and a series of independently acting friction-cones, all arranged to be successively operated for producing a combined active engagement of said clutch disk and said friction-cones, and each friction cone receiving its maximum amount of thrust before the next following cone-section is brought in operative contact, substantially as and for the purposes set forth.

2. A clutch comprising a driving cone, a driving shaft connected with a portion of said cone, a shaft to be driven, said shaft being normally disconnected from said driving cone and said driving shaft, a positive clutch disk, and a series of independently acting friction-cones, all arranged to be successively operated for producting a combined active engagement of said clutch disk and said friction-cones, and each friction cone receiving its maximum amount of thrust before the next following cone-section is brought in operative contact, combined with means for producing an inactive relation of the clutch disk, while the friction-cones are in their active engagement, substantially as and for the purposes set forth.

3. A clutch comprising a driving cone, a driving shaft connected with a portion of said cone, a shaft to be driven, said shaft being normally disconnected from said driving-cone and said driving shaft, a positive clutch disk, and a

series of independently acting friction-cones, all arranged to be successively operated for producing a combined active engagement of said clutch disk and said friction-cones, and each friction cone receiving its maximum amount of thrust before the next following cone-section is brought in operative contact, combined with means for producing an inactive relation of the clutch disk, means for producing an inactive relation for one of said friction-cones while the remaining friction-cone is still in engagement, substantially as and for the purposes set forth.

4. A clutch comprising a driving cone, a driving shaft connected with a portion of said cone, a shaft to be driven, said shaft being normally disconnected from said driving cone and said driving shaft, a positive clutch-disk, and a series of independently acting friction-cones, all arranged to be successively operated for producing a combined active engagement of said clutch disk and said friction-cones, and each friction cone receiving its maximum amount of thrust before the next following cone-section is brought in operative contact, and means for successively forcing said clutch disk and all of said friction-cones into inactive relations, substantially as and for the purposes set forth.

5. A clutch comprising a driving cone, a driving-shaft connected with a portion of said cone, a shaft to be driven, said shaft being normally disconnected from said cone and said driving-shaft, a spring-controlled positive clutch disk, and a series of spring-controlled and independently acting friction-cones, all arranged to be successively operated for producing a combined active engagement of said clutch-disk and said friction-cones, and each friction cone receiving its maximum amount of thrust before the next following cone-section is brought in operative contact, substantially as and for the purposes set forth.

[Claims 6 to 26 not printed in the Gazette.]

874,389. STEAM-GENERATOR. THOMAS R. BUTMAN, Lake Bluff, Ill. Filed Dec. 10, 1906. Serial No. 347,164.



1. In a steam generator, a shell, fire tubes taking longitudinally through a portion of the shell, a longitudinal drum communicating with the shell, and a grate structure beneath the drum spaced from the shell a distance substantially as great as the length of the tubes of the shell.

2. In a steam generator, a shell, fire tubes taking longitudinally through a portion of the shell, a longitudinal drum communicating with the shell, a front support for positioning the free end of the drum without substantially restraining its freedom for longitudinal movement, and a saddle disposed beneath the shell for substantially supporting the shell and drum.

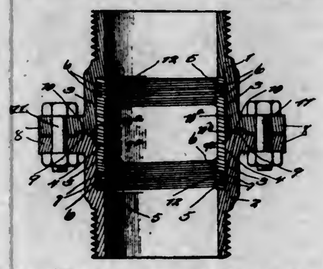
3. In a steam generator, a shell, fire tubes taking longitudinally through a portion of the shell, a longitudinal drum communicating with the shell, a front wall for positioning the free end of the drum without substantially retarding its freedom for longitudinal movement, and a saddle disposed beneath the structure substantially below its center of gravity for supporting the shell and drum.

4. In a steam generator, a series of parallel, relatively thin metal drums, water connections between said drums near one end, a shell of relatively thick metal of greater cross sectional area than the combined cross sectional areas of the drums, wherewith said drums connect to open freely into the upper part thereof, fire tubes extending through the lower portion of the said shell, and a grate beneath the drums.

5. In a steam generator, a shell, fire tubes taking longitudinally through the lower portion of the shell, a plurality of drums projecting from and communicating with said shell, one of said drums being arranged part above and part below the calculated water line, and another wholly below the water line, separated from the first for heat circulation therebetween, water circulation connections between said drums, a grate below the drums, and means for directing the heat from the grate to the fire tubes through a path including the water filled parts of the drums and excluding the part of the drum above the water line.

[Claims 6 and 7 not printed in the Gazette.]

874,390. PIPE-COUPLING. JOHN O. CARRL, Duluth, Minn. Filed Jan. 31, 1907. Serial No. 355,026.



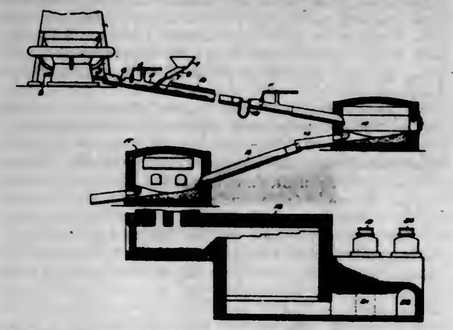
1. A pipe-coupling comprising two flanged sections of a pipe, the flange of one of said sections having an annular convex portion, the flange of the other section having an annular concave portion to receive said annular convex portion each section being recessed, a sleeve to be received by said recesses when the sections are fixed together, said sleeve having annular recesses at each end thereof, expansible rings carried by said annular recesses, said recesses of the sections having annular depressions to partially receive said expansible rings, said sleeve having a plurality of threads upon its inner circumference at each end thereof to facilitate the insertion of a plug for the removal of the sleeve, the said sections having annular recesses adjacent the concave and convex portions of the said sections, a suitable packing fixed therein, and nuts and bolts securing said flanges together.

2. A pipe-coupling comprising two flanged sections of a pipe, each section being recessed, a sleeve to be received by said recesses when the sections are fixed together, said sleeve having annular recesses at each end thereof, expansible rings carried by said annular recesses, said recesses of the sections having annular depression to partially receive said expansible rings, said sleeve having a plurality of threads upon its inner circumference at each end thereof, to facilitate the insertion of a plug for the removal of the sleeve.

3. A pipe-coupling comprising two flanged sections of a pipe, the flange of one of said sections having an annular convex portion, the flange of the other section having an annular concave portion to receive said annular convex portion, each section being recessed, a sleeve to be received by said recesses when the sections are fixed together, said sleeve having annular recesses at each end thereof, expansible rings carried by said annular recesses, said recesses of the sections having annular depression to partially receive said expansible rings, said sleeve having a plurality of threads upon its inner circumference at each end thereof, to facilitate the insertion of a plug for the removal of the sleeve, and nuts and bolts to fasten the flanges of the sections.

874,391. PROCESS OF MAKING STEEL. HARRY O. CHUTE, Cleveland, Ohio. Filed Jan. 14, 1907. Serial No. 352,269.

1. The process of making steel which consists in smelting iron from a basic charge containing phosphorus and manganese under proper thermal conditions to produce a superheated pig iron rich in silicon and phosphorus and a sulfurous slag, contacting the superheated pig iron with sufficient oxid of iron to remove silicon and then treating the desiliconised iron to remove phosphorus and carbon.



2. The process of making steel which consists in smelting iron from a basic charge containing phosphoric and manganic slag from a later operation under proper thermal conditions to produce a superheated pig iron rich in silicon and phosphorus and a sulfurous slag, contacting the superheated pig iron with sufficient oxid of iron to remove silicon and removing and reserving the produced slag for subsequent use in the smelting, and then treating the desiliconised iron to remove phosphorus and carbon and produce a basic slag.

3. The process of making steel which consists in smelting silicious non-bessemer ores under proper thermal and fluxing conditions to produce a superheated pig iron rich in silicon and prosphorus and a sulfurous slag, contacting the superheated pig iron with sufficient oxid of iron to remove silicon, and then treating the desiliconized iron to remove phosphorus and carbon.

4. The process of making steel which consists in smelting iron from a basic charge containing phosphorus and manganese under proper thermal conditions to produce a superheated pig iron rich in silicon and phosphorus and a sulfurous slag, producing a flowing current of such molten superheated pig iron and contacting it in transit with sufficient oxid of iron to remove silicon, and then treating the desiliconised iron to remove phosphorus and carbon.

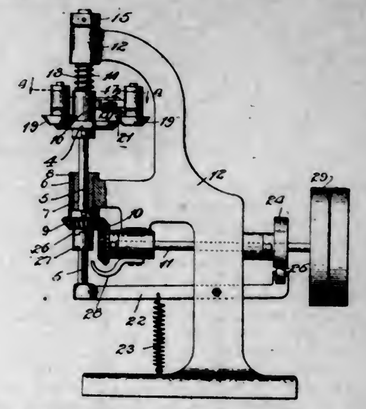
5. The process of making steel which consists in smelting silicious non-bessemer ores in the presence of basic slag containing phosphorus and a silicate slag containing manganese under proper thermal conditions to produce a superheated pig iron rich in silicon and phosphorus and a sulfurous slag, producing a flowing current of such molten superheated pig iron and contacting it in transit with sufficient oxid of iron to remove silicon and form a silicate slag containing manganese, and then treating the desiliconised iron to remove phosphorus and carbon and form a basic slag containing phosphorus.

[Claims 6 to 8 not printed in the Gazette.]

874,392. PIE-CRUST-TRIMMING MACHINE. OLIVER COLBORNE, Chicago, Ill. Filed June 24, 1907. Serial No. 380,534.

1. In a crust trimming machine, the combination of a pair of members mounted in axial alinement and movable axially toward and away from each other, one of said members being adapted to support a pie tin and the other being adapted to engage the edge of such tin for trimming a pie crust thereon, means for rotating one of said members relatively to the other and controlling means adapted to automatically start and stop such relative rotation when said members are moved toward or away from each other.

2. In a pie machine, the combination of a pair of members movable toward and away from each other, one of said members being adapted to support a pie tin, a trimming roller on the other of said members adapted to engage the edge of such tin for trimming a pie crust thereon, mechanism adapted to rotate one of said members relatively to the other, and means controlled by the relative movement of said members toward and away from each other for starting and stopping the operation of said mechanism.



3. In a pie machine, the combination of a pair of members movable toward and away from each other, one of said members being adapted to support a pie tin, a plurality of trimming rollers on the other of said members, arranged symmetrically about the axis of such tin and adapted to engage the edge of such tin for trimming a pie crust thereon, mechanism adapted to rotate one of said members relatively to the other, and means controlled by the relative movement of said members toward and away from each other for starting and stopping the operation of said mechanism.

4. In a crust trimming machine, the combination of a pair of members movable toward and away from each other, one of said members being adapted to support a pie tin and the other being adapted to engage the edge of such tin for trimming the crust thereon through the relative rotation of said members, mechanism for rotating one of said members relatively to the other when they are brought together, and means for preventing such relative rotation when said members are separated.

5. The combination of a support for a pie tin, trimming mechanism adapted to engage the edge of a tin on said support, said support and trimming mechanism being relatively movable toward and away from each other, means for rotating said support relatively to the trimming mechanism, and a clutch controlling the operation of said means and adapted to be automatically closed and opened during the relative movement of said support and trimming mechanism respectively toward and away from each other.

[Claims 6 to 16 not printed in the Gazette.]

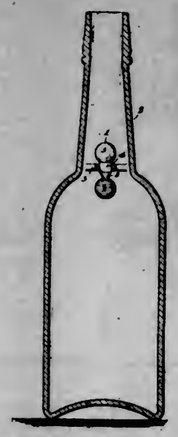
874,393. INDICATOR FOR BOTTLES. JOSEPH COLLINS, New York, N. Y. Filed Apr. 6, 1907. Serial No. 366,683.

1. An indicator device for bottles comprising means for indicating the approximate ratio of the amount of fluid poured out of the bottle to the original contents of the bottle.

2. An indicator device for bottles comprising two communicating chambers; a fluid substance in one of said chambers adapted to be gradually transferred into the second chamber; and means to prevent the return of said fluid into the first chamber.

3. In combination with a bottle, an indicator device comprising two communicating chambers; and a fluid substance in one of said chambers adapted to be transferred into the second chamber commensurately with the out flow of the liquid contents of said bottle.

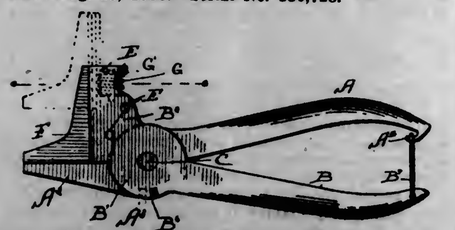
4. In combination with a bottle, an indicator device comprising two communicating chambers; and a fluid substance in one of said chambers adapted to be transferred into the second chamber commensurately with the out flow of the liquid contents of said bottle, and means to prevent the return of the transferred fluid into said first chamber.



5. In combination with a bottle, an indicator device comprising two communicating chambers; and a fluid substance in one of said chambers adapted to be transferred into the second chamber commensurately with the out flow of the liquid contents of said bottle, and a one way valve to prevent the return of the transferred liquid into said first chamber.

[Claims 6 to 13 not printed in the Gazette.]

874,394. COMBINATION WRENCH AND PLIERS. PEARL CORK and DWIGHT NAGLEE, Weston, W. Va. Filed Aug. 15, 1906. Serial No. 330,723.



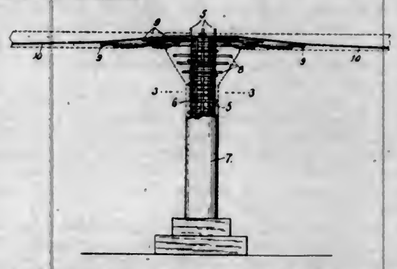
1. The combination with a pair of handles provided with enlargements pivoted together, a jaw formed on the enlargement of one handle, an upwardly projecting portion formed on the enlargement of the other handle, a complemental member secured to said upwardly projecting portion, forming a guide-way, a jaw slidably mounted in said guide-way and means for adjusting said jaw, substantially as described.

2. The combination with a pair of handles, provided with enlargements pivoted together, of a jaw projecting out from the enlargement of one of the handles, an upwardly projecting portion formed on the enlargement of the other handle and provided with a groove, a complemental member secured to said upwardly projecting portion and provided with a groove, a jaw provided with a tongue having a rack edge mounted in the grooves of the said upwardly projecting portion and member, and a worm-gear mounted in said member and adapted to engage said rack tongue, for the purpose described.

3. The combination with a pair of handles provided with enlargements pivoted together, the enlargement of one handle fitting into a corresponding recess in the enlargement of the other handle, a jaw projecting from said recessed enlargement, an upwardly projecting portion formed integral with said enlargement fitting into said recess and provided with a vertical groove and a transverse groove, a complemental member secured to said upwardly projecting portion, a jaw slidably mounted in said upwardly projecting portion and provided with a rack, a worm-gear mounted in said transverse groove and meshing with said rack of said jaw, substantially as described.

4. The combination with a pair of handles provided with enlargements pivoted together, the enlargement of one handle fitting into a corresponding recess in the enlargement of the other handle, a jaw projecting from said recessed enlargement, an upwardly projecting portion formed on the enlargement fitting into said recess and provided with a vertical groove and a transverse groove, a complemental member secured to said upwardly projecting portion and also provided with a vertical and a transverse groove, a jaw provided with a T-shaped tongue mounted in said vertical grooves, a rack formed on said tongue and a worm-gear mounted in said grooves, meshing with said rack, substantially as described.

874,395. COLUMN CONSTRUCTION. DANIEL B. DANIELSON, Milwaukee, Wis. Filed May 25, 1907. Serial No. 375,588.



1. A column construction, comprising a series of vertical rods arranged in circular formation, tie wires connecting the vertical rods and forming a framework therewith, circular metal frames at the end of the column increasing in size as they approach the end of the column, and a concrete body formed within and upon the framework.

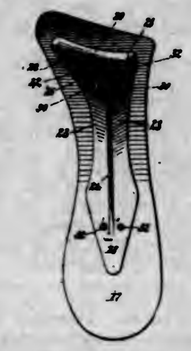
2. A column construction, comprising a framework formed of a series of vertical rods arranged in circular formation, tie wires of isosceles triangular shape connecting different sets of vertical rods at intervals and forming a framework therewith, circular metal frames at the end of the column increasing in size as they approach the end of the column, and a concrete body formed within and upon the framework.

3. A column, comprising a framework of vertical rods arranged in circular formation, tie wires connecting different sets of vertical rods at intervals and forming a framework therewith, circular metal frames near the end of the column, a series of square metal frames surrounding the vertical rods and being of successively smaller size and each differing in position by an eighth of a turn from the adjacent square frames, the vertical rods being bent outwardly and radially from the axis of the column to engage the square frames, and a concrete body formed on the framework.

4. A column, comprising a framework formed of a series of vertical rods arranged in circular formation, tie wires connecting the vertical rods together, the vertical rods being bent radially to the axis of the column and downwardly from the end of the column, a series of square metal frames secured on the outwardly bent ends of the vertical bars and being of successively smaller size and each having its corners overlapping and bearing upon the sides of the next square frame, connecting rods connecting the largest square frames of adjacent columns each passing diagonally across one of said square frames and secured to the near corner of the next square frame, and a concrete body formed on the framework.

5. A column, comprising a framework formed of a series of vertical rods arranged in circular formation, tie wires connecting the vertical rods at intervals, circular metal frames at the end of the column, the ends of the vertical bars being bent outwardly and radially and slightly inclined, square metal frames of different sizes mounted on said bent ends of the vertical rods and arranged in the order of their size with the corners of each frame overlapping and engaging the sides of the next larger frame, and connecting bars connecting the square frames of each column with the square frames of adjacent columns and each passing diagonally across one square frame and connected to the near corner of the next square frame, some of said vertical rods passing through the square metal frames and between the diagonally crossing connecting bars and extending above the column to serve as means for alining the column of one floor with the column of the next floor.

874,396. MANUFACTURE OF SHOES. FRANK G. DELBON, Brooklyn, N. Y., assignor to Hygienic Shoe Shank Company, New York, N. Y., a Corporation of New York. Filed Nov. 20, 1906. Serial No. 344,212.



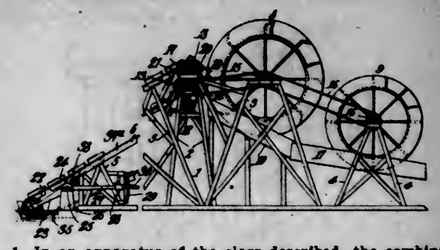
1. A metal shank-stiffener of a length to extend from above the heel to the inner end of the tread of the sole of a shoe and formed with downwardly converging sides 23 creating a longitudinal angular ridge 24 and with a broadened forward end having angular ridges 28 extending from the ridge 24 and an upwardly curved section 29 intermediate said ridges 28 and extending upwardly and forwardly therefrom; substantially as set forth.

2. A metal shank-stiffener for shoes adapted to extend from the heel to the inner end of the tread of the sole and formed with downwardly converging sides creating a longitudinal angular ridge 24 and with a broadened forward end having ridges 28 extending from the ridge 24, and a pin at the junction of said ridges 24, 28 adapted to enter the main sole; substantially as set forth.

3. A metal shank-stiffener for shoes adapted to extend from the heel to the inner end of the tread of the sole and formed with downwardly converging sides creating a longitudinal angular ridge 24 and with a broadened forward end having ridges 28 extending from the ridge 24, a pin at the junction of said ridges 24, 28 to enter the sole, and a filler within the recess formed at the inner side of the stiffener above said pin; substantially as set forth.

4. A metal shank-stiffener of a length to extend from above the heel to the inner end of the tread of the sole of a shoe and formed with downwardly converging sides and a broadened forward end having an upwardly and forwardly curved section 29, and a short stiff inner sole 17 fastened thereto and covering and extending beyond the edges of the same and adapted to the surfaces of the main sole surrounding said metal stiffener; substantially as set forth.

874,397. WATER-CONVEYER. JOHN O. DOVE, Coolidge, and CHARLEY WIRSING, Fort Worth, Tex. Filed Mar. 2, 1907. Serial No. 360,176.



1. In an apparatus of the class described, the combination of an endless conveyer, a motor for driving the same, and means for loading the conveyer gradually.

2. In an apparatus of the class described, the combination of an endless conveyer, a motor for driving the same, and means for adjusting the conveyer at its loading end for varying the quantity of material taken up thereby.

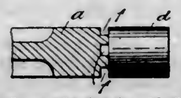
3. In an apparatus of the class described, the combination of an endless conveyer having a plurality of receptacles, a motor for driving the conveyer, an adjustable means for supporting one end of the conveyer, and a locking means for holding the said means in adjusted position.

4. In an apparatus of the class described the combination of an endless conveyer, and a wheel independent of and outside the line of travel of said conveyer on which the conveyer buckets directly discharge.

5. In an apparatus of the class described, the combination of a conveyer, a wheel, a motor, power transmission means between the motor and conveyer wheel, and means for adjusting the conveyer for gradually loading the same in starting the apparatus.

[Claims 6 to 9 not printed in the Gazette.]

874,398. BLADED TURBINE ELEMENT. SEBASTIAN ZIANI DE FERRANTI, Grindleford Bridge, Sheffield, England. Original application field May 14, 1904, Serial No. 208,034. Divided and this application filed July 22, 1907. Serial No. 385,056.



1. A turbine blade carrier having blades welded directly thereto.

2. A turbine blade carrier with blades attached thereto wholly by welding.

3. A turbine blade carrier having blades attached thereto by welds, certain working stresses on said blades being transmitted to said carrier through said welds.

4. A turbine blade carrier having blades attached thereto by welds, certain bending stresses due to impact of fluid on said blades being transmitted to said carrier through said welds.

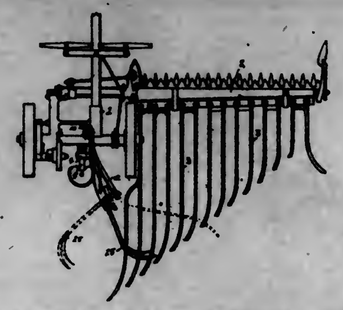
5. A turbine rotor having blades attached thereto by welds, certain working stresses on said blades being transmitted to said rotor through said welds.

[Claims 6 to 15 not printed in the Gazette.]

874,399. BUNCHING DEVICE FOR WINDROWING ATTACHMENTS. WILLIAM GATERMAN, Manitowoc, Wis. Filed Nov. 23, 1906. Serial No. 344,689.

1. In a bunching device for windrowing attachments, the combination with a set of windrowing bars having upturned rear ends, of a laterally swinging fork provided with outwardly curved arms adapted, in one position of adjustment, to extend over the inner windrowing bars in front of their rear end portions, means for holding the fork temporarily in such position, and means for swinging

it laterally to positively withdraw the collected material from the windrowing bars.



2. In a bunching device for windrowing attachments, the combination with a set of windrowing bars having upturned rear ends, of a laterally swinging fork provided with outwardly curved arms adapted, in one position of adjustment, to extend over the inner windrowing bars in front of their rear end portions, means for holding the fork temporarily in such position, and means for swinging it laterally to positively withdraw the collected material from the windrowing bars; the lower arm of said fork having a greater degree of curvature than the upper arm.

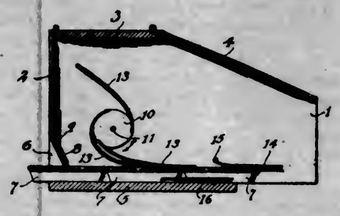
3. In a bunching device for windrowing attachments, the combination with a set of windrowing bars having upturned rear ends, of a laterally swinging fork provided with outwardly curved arms adapted, in one position of adjustment, to extend over the inner windrowing bars in front of their rear end portions, means for holding the fork temporarily in such position, and means for swinging it laterally to positively withdraw the collected material from the windrowing bars; said fork having an elbowed shank a pivotal support therefor, an actuating lever linked to the shank, and a retracting spring connecting the link with the support, and arranged to normally pull upon the link in a direction to swing the fork outwardly.

4. The combination with a mowing or reaping machine having a wind-rowing attachment, of a supporting bar, a fork having its shank connected with the bar by a substantially vertical pivot pin and having forked arms extending rearwardly in substantially horizontal planes, a foot lever pivoted to the bar, a link connecting the foot lever with the fork shank, and a spring arranged to normally swing the fork laterally away from the wind rowing bars substantially in a horisontal plane,—said foot lever being arranged to act in opposition to the pull of the spring.

5. The combination with a mowing or reaping machine, having a wind-rowing attachment comprising a set of trailing bars with upwardly curved rear ends, of a fork supporting bar, a fork having its shank pivotally connected with the bar and arranged with the forked arms extending rearwardly and having extremities curved toward the wind-rowing bars and terminating at a point between the pivot and the upwardly curved portions of the longer wind-rowing bars, whereby the material moving laterally from the bars engages between the fork arms and over the free ends thereof, a foot lever connected with the fork and adapted to swing the same in one direction, and a spring adapted to swing the fork in the other direction, said fork being arranged to swing laterally toward and away from said wind rowing bars.

874,400. MACHINE FOR CLEANING ERASERS. GEORGE G. GREMER, Moorhead, Minn. Filed Mar. 7, 1907. Serial No. 361,157.

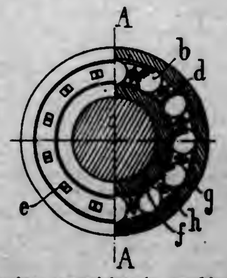
1. In a machine for cleaning erasers, the combination with a casing having laterally spaced sides, a bottom board, an inlet passage and an outlet passage for the erasers, of a drum mounted within said casing, a plurality of beater straps attached to said drum at one end, and means for rotating said drum, and which beater straps are approximately as wide as the distance between the laterally spaced sides of the said casing and under rotation of said drum serve to loosen the dust from said erasers and to produce a blast in a direction to deliver the dust out through the discharge opening of said casing, substantially as described.



2. The combination with a casing having laterally spaced sides, a bottom board, an inlet passage and an outlet passage, of a yieldingly mounted gate in said inlet passage operative to close the gate opening and to engage the erasers and to prevent backward movement thereof, a drum mounted in said casing, means for rotating said drum, and a plurality of beater straps attached to said drum at one end and operative under rotation of said drum to loosen the dust from said erasers, and to produce a blast in a direction to carry the loosened dust out through the discharge opening of said casing, substantially as described.

3. In a machine for cleaning erasers, the combination with a casing having laterally spaced sides, a bottom board, an inlet passage and an outlet passage for the erasers, of a rotary drum mounted in said casing, a plurality of beater straps attached to said drum at one end and operative under rotation of said drum to loosen the dust from said erasers and to produce a blast in a direction to carry the loosened dust out through the discharge opening of said casing, and laterally spaced guide rods engageable with the sides of the erasers for preventing jumping thereof under the beating action of said beater straps, substantially as described.

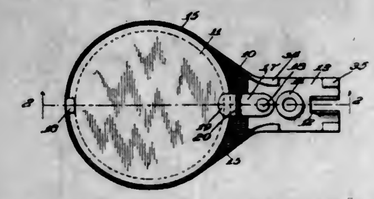
874,401. BALL-BEARING. FRIEDRICH GREINER, Berlin, Germany, assignor to The Firm of Maschienbau-Anstalt Altenessen, A. G., Altenessen, Germany. Filed July 23, 1907. Serial No. 385,144.



1. A ball-bearing comprising in combination an inner ring, an outer ring, large balls in the annular space between said rings, two flat rings having a plurality of slots arranged between said rings covering said balls in said annular space, a plurality of bridges having holes and small pins on their ends arranged between said balls and at right angles to said flat rings, said pins passing through said slots and connecting said flat rings together, and small balls in said holes between said large balls.

2. A ball-bearing comprising in combination an inner ring, an outer ring, large balls in the annular space between said rings, two flat rings having a plurality of slots arranged between said rings covering said balls in said annular space, a plurality of bars in pairs arranged between said balls and at right angles to said flat rings and passing through said slots connecting said flat rings together, said bars having holes at their centers being played about the holes and having small balls in said holes between said large balls.

874,402. SIGNAL LAMP OR LANTERN GLASS HOLDER. WILLIAM S. HAMM, Lakeside, Ill. Filed July 14, 1905. Serial No. 269,660.



1. In a signal-lamp or lantern, an apertured frame-arm for a color-glass having an angular rim extending around the major portion of the periphery of the glass, a finger overturned from the rim at one side and a pivoted plate at the opposite side with an offset free end to pass over the edge of the glass.

2. In a signal-lamp or lantern, an apertured frame-arm for a color-glass having an angular rim extending around the major portion of the periphery of the glass, a finger overturned from the rim at one side, a pivoted plate at the opposite side with an offset free end to pass over the edge of the glass, and means for holding the said pivoted plate in place free from accidental displacement by vibration.

3. In a signal-lamp or lantern, an apertured frame-arm for a color-glass having an angular rim extending around the major portion of the periphery of the glass, a finger overturned from the rim at one side, a pivoted plate at the opposite end with an offset free end to pass over the edge of the glass, the frame-arm being provided with a recess and the pivoted plate with an interlocking projection for holding said pivoted plate in an initial position of use free from accidental displacement by vibration.

4. In a signal-lamp or lantern, an apertured frame-arm, composed of an apertured sheet-metal part and a plate connected thereto by rivets, a rim formed on the sheet-metal part bounding the major portion of the aperture therein and into which rim the color-glass is adapted to be received and fit, a finger overturned from the rim at one side and a pivoted plate with an offset free end to extend over the opposite edge of the color-glass, secured to the plate portion of the frame-arm and adapted to be turned toward the glass to hold the same, or away from the glass to release the same.

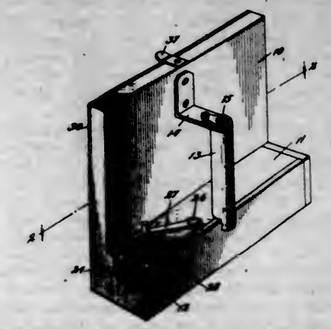
5. In a device of the kind described, in combination, a frame having a seat for a plate of glass; and a two-arm plate pivoted to the frame, the free ends of the plate arms extending over the seat and being spaced apart axially so that they will engage opposite faces of a plate of glass on the seat.

[Claims 6 to 12 not printed in the Gazette.]

874,403. FLASH-LIGHT APPARATUS. JOHN E. HARE, Chicago, Ill. Filed Jan. 7, 1907. Serial No. 351,259.

1. A flashlight apparatus, comprising a vertically-disposed plate having means for supporting a cartridge at one side thereof, said plate having electric contacts adapted to engage corresponding contracts carried by the cartridge when the cartridge is in position on the plate, and means carried by the plate for closing the circuit through said contacts after the cartridge is in position.

2. A flashlight apparatus, comprising a vertically-disposed plate having means for supporting a cartridge at one side thereof, said plate having electric contacts adapted to engage corresponding contacts carried by the cartridge when the cartridge is in position on the plate, and a switch carried by the plate for closing the circuit through said contacts after the cartridge is in position, and an auxiliary safety switch for preventing accidental closing of the circuit through the cartridge.



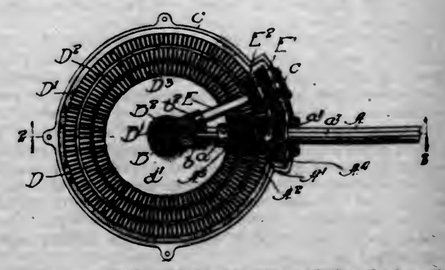
3. A flashlight apparatus, comprising a plate having means for securing a cartridge at one side thereof, a handle at the opposite side thereof, contacts carried by the plate and adapted to engage corresponding contacts carried by the cartridge for making electrical connection therewith, and a switch carried by the handle for closing the circuit through the cartridge.

4. A flashlight apparatus, comprising a plate having means for securing a cartridge at one side thereof, a handle at the opposite side thereof, contacts carried by the plate and adapted to engage corresponding contacts carried by the cartridge for making electrical connection therewith, a switch carried by the handle for closing the circuit through the cartridge, and a safety switch carried by the plate for preventing accidental closing of the circuit through the cartridge.

5. A flashlight apparatus, comprising a plate, means at one side thereof adapted to engage the edges of a flat cartridge to secure said cartridge at one side of said plate, contacts carried by said plate and adapted to engage corresponding contacts carried by the cartridge, a handle at the opposite side of said plate, and means for closing the circuit through the cartridge.

[Claims 6 and 7 not printed in the Gazette.]

874,404. VARIABLE-SPEED POWER-TRANSMITTING GEAR. PETER HESSELIUS and JOHN JADERLUND, Chicago, Ill. Filed Mar. 12, 1907. Serial No. 361,959.



1. In a variable speed power transmitting device, the combination with two rotative shafts arranged at an angle to each other, of a plurality of annular concentric gears mounted on one shaft, a plurality of gear wheels meshing therewith and loosely mounted on the other shaft, means for separately locking said gear wheels to their shaft, an intermediate shaft and two connected gears mounted thereon, one of said two connected gears meshing with a gear wheel on said gear wheel bearing shaft and the other meshing with one of said annular gears for the purpose set forth.

2. In a variable speed power transmitting device, the

combination with two rotative shafts arranged at an angle to each other, of a plurality of annular concentric gears mounted on one shaft, a plurality of gear wheels meshing therewith and loosely mounted on the other shaft, means for separately locking said gear wheels to their shaft, an intermediate shaft arranged radially of said annular gears, and two connected gears mounted thereon, one of said two connected gears meshing with a gear wheel on said gear wheel bearing shaft, and the other meshing with one of said annular gears for the purpose set forth.

3. In a variable speed power transmitting device, the combination with a driving and a driven shaft arranged at an angle to each other, of a wheel or disk mounted on one of said shafts and provided on its lateral face with a plurality of annular, concentric beveled gears, a plurality of beveled gear wheels meshing therewith and loosely mounted on the other shaft, means for separately locking the gear wheels to their shaft, an intermediate shaft arranged radially of said annular gears and provided with two connected beveled gear wheels, one of which meshes with one of the annular beveled gears of the disk, and a beveled gear wheel normally loose on the shaft carrying the loosely mounted gears and adapted to be locked thereto, and meshing with the other gear of the intermediate shaft.

4. In a variable speed power transmitting device, the combination with a shaft, of a gear wheel rotatively mounted on said shaft and provided in its bore with a radial notch and with an annular recess, a ring detachably secured in said recess and adapted to close the adjacent end of said notch, and means for non-rotatively securing said gear wheel to its shaft, comprising a radially and longitudinally movable key mounted on the shaft and adapted to engage said notch.

874,405. AUTOMOBILE. HARRY L. IDE, Springfield, Ill. Filed Aug. 15, 1906. Serial No. 330,746.



1. An automobile including its frame mounted upon wheels, a rocking cradle mounted upon the frame, and an operating engine mounted upon the cradle, said cradle having two bearings displaced longitudinally of the automobile and disposed substantially midway between the sides of the frame.

2. An automobile including its frame mounted upon wheels, a rocking cradle mounted upon the frame, an operating engine mounted upon the cradle, cushioning means interposed between the cradle and frame, and two bearings also interposed between the cradle and frame.

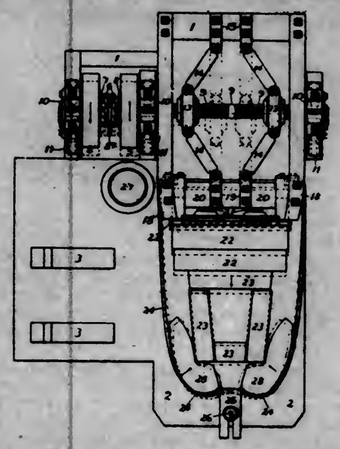
3. An automobile including its frame mounted upon wheels, a rocking cradle mounted upon the frame, and an operating engine mounted upon the cradle, said cradle having two bearings displaced longitudinally of the automobile, one of said bearings substantially preventing relative longitudinal movement between the cradle and frame, while the other of said bearings permits such longitudinal movement.

4. An automobile including its frame mounted upon wheels, a rocking cradle mounted upon the frame, an operating engine mounted upon the cradle, cushioning means interposed between the cradle and frame, and two bearings also interposed between the cradle and said frame, one of said bearings substantially preventing relative longitudinal movement between the cradle and frame, while the other of said bearings permits such longitudinal movement.

5. An automobile including its frame mounted upon wheels, and an operating engine mounted upon the frame, said engine having two centrally disposed bearings displaced longitudinally of the automobile, upon which the engine may rock.

[Claims 6 to 12 not printed in the Gazette.]

874,406. CLAMPING-MACHINE. ARTHUR L. JOHNSON, Chicago, Ill. Filed June 26, 1907. Serial No. 380,941.



1. In a clamp, the combination of a cross bar, or head and means to advance and retract the same, a flexible loop opposite said head, and a pair of angular blocks located within the loop, the work being clamped between the said head and blocks.

2. In a clamp, the combination of a cross bar or head, a loop opposite said head and consisting of a strip of flexible material secured at its ends on opposite sides of the head, a pair of angular knuckles or blocks located opposite to each other within the loop, the work being received between said knuckles which clamp the same at the end and sides thereof, when the head is advanced, and means to advance and retract the head.

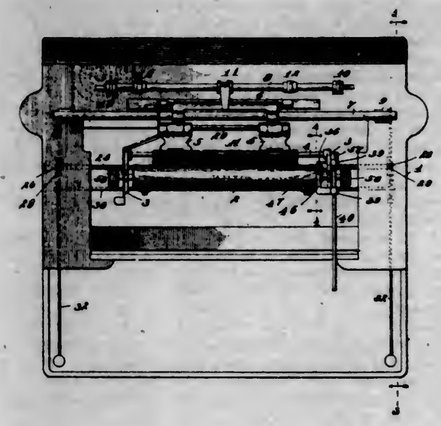
3. In a clamp, the combination of a table, a head slidable thereover, a loop of flexible material fastened at its ends to the table on opposite sides of the head and extending around in front of the same, clamping blocks located on opposite sides of and within the loop and means to advance or retract the head.

4. In a clamp, the combination of a table, a head slidable thereon, a flexible band fixed at its ends to the table on opposite sides of the head and extending around in front of the head and upon the table, and angular blocks resting upon the table within the band, the work to be clamped being held upon the table between the blocks and the head.

5. The combination of a clamping head, a shaft having right hand and left hand threads, toggles connected to the head, to advance and retract the same and having nuts at the joint which travel on said threads, oppositely driven pulleys on the shaft, a clutch between the pulleys and the shaft, a shifter for the clutch, springs bearing oppositely on the shifter and normally holding the clutch in disengaged position, latches connected to the shifter and arranged to hold the same with the clutch in engagement with either pulley, and means actuated by the movement of the nuts to release either latch.

874,407. TYPE-WRITING MACHINE. JAMES W. KENNEDY, Chicago, Ill., assignor, by mesne assignments, to The Kennedy Typewriter Company of Manhattan, New York, N. Y., a Corporation of New York. Filed Apr. 2, 1904. Serial No. 201,284.

1. In a typewriting machine, the combination of a platen frame comprising end plates and transverse rods rigidly connecting the same at their rear upper and lower edges, a carriage, guides on which said carriage is movable transversely of the machine and upper and lower links pivotally connected to rear upper and lower platen frame rods at one end and to said carriage at the other, substantially as described.



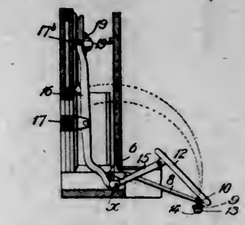
2. In a typewriting machine, the combination of a platen frame, comprising end plates and transverse rods rigidly connecting said end plates, a carriage, guide rods on which said carriage is movable transversely of the machine, a central arm on said carriage in which the bearing for one of said guide rods is formed, adjustable stops on said guide rod, upper and lower links pivotally connected to platen frame rods at one end and to said carriage at the other, a bar on which said platen frame is supported and means to raise and lower said bar, substantially as described.

3. In a typewriting machine, the combination of a platen frame, a carriage to which said platen frame is pivoted, guides on which said carriage is movable transversely of the machine, a bar on which said platen frame is supported, guide slots to which the ends of said bar are fitted, stops which limit the movement of said bar in said guide slots and means to raise and lower said bar, substantially as described.

4. In a typewriting machine, the combination of a platen frame, a carriage to which said platen frame is pivoted, guides on which said carriage is movable transversely of the machine, a bar on which said platen frame is supported, guide slots to which the ends of said bar are fitted, the ends of said slots being closed and forming stops which limit the movement of said bar, a transverse rod, levers secured thereto at both sides of the machine, links which connect said levers with said bar, a shift lever, a lever arm on said transverse rod and a link which connects said lever arm with said shift key, substantially as described.

5. In a typewriting machine, the combination of a platen frame, a carriage to which said platen frame is pivoted, guides on which said carriage is movable transversely of the machine, a bar on which said platen frame is supported, guide slots to which the ends of said bar are fitted, the ends of said slots being closed and forming stops which limit the movement of said bar, a transverse rod, levers secured thereto at both sides of the machine, links which connect said levers with said bar, shift levers at both sides of the machine, lever arms on said transverse rod and links which connect said lever arms with said shift keys, the connection between said lever arms and links comprising slots in one thereof and pins secured in the other which engage said slots, substantially as described.

874,408. PEDAL MECHANISM. PAUL B. KLUGE, Chicago, Ill., assignor to The Cable Company, Chicago, Ill., a Corporation of Illinois. Filed June 21, 1907. Serial No. 380,082.



1. In pedal mechanism, side arms pivoted at their inner ends to stationary supports, treadles pivoted at their forward ends to the outer ends of said arms, swinging bellows levers, links pivoted to the ends of said levers and the rear ends of said treadles, the pivotal points of said links and levers being substantially below and forward of the pivotal points of the inner ends of said side arms, the lever bearing normally against a stop, and the parts being so proportioned that during the folding movement the lever is pressed against its stop, whereby the distance between said pivotal points remains constant during folding or unfolding of said treadles, substantially as described.

2. In pedal mechanism, side arms pivoted at their rear ends to stationary supports, treadles pivoted at their forward ends to the forward ends of said arms, vertical bellows levers having their lower ends curved and extended below and forward of the pivotal points at the rear of said side arms and links pivoted to the lower or forward ends of said levers and the rear ends of said treadles, substantially as described.

3. In pedal mechanism, side arms pivoted at their inner ends to stationary supports, treadles pivoted at their forward ends to the outer ends of said arms, bellows levers, links pivoted to the ends of said levers and the rear ends of said treadles, the lever bearing normally against a stop, and the parts being so proportioned that during the folding movement the lever is pressed against its stop, whereby the distance between the pivotal points of said links and levers and the pivotal points of the inner ends of said side arms remains constant during folding and unfolding, and said parts may be folded or unfolded without preliminary arrangement, substantially as described.

4. In pedal mechanism, a swinging bellows member, a lever pivoted to swing in a plane at a tangent to the cylinder in which the free end of said bellows member swings and adapted to operate said bellows member, tension means for opposing said operation, and a treadle adapted to rock said lever.

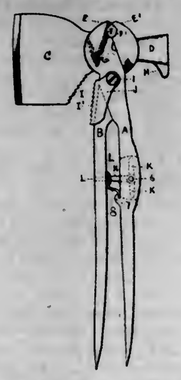
5. In combination with rigid supports, side arms pivoted at their inner ends thereto, a bar connecting their outer ends, treadles hinged at their lower ends to said bar, vertical levers fulcrumed intermediate of their ends and having their lower ends bent or curved in the direction of said treadles and links pivoted to the upper ends of said treadles and the lower ends of said levers, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

874,409. COMBINATION-TOOL. JONATHAN L. KNIGHT, Kansas City, Mo., assignor to Millard F. Brown, Kansas City, Mo. Filed July 9, 1907. Serial No. 382,904.

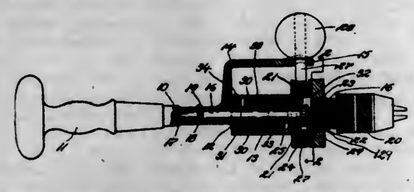
In a combination tool consisting essentially of a pair of crossed and pivotally connected levers, the clevis shaped fulcrum brace attached at the crossing portion of said levers, the under side of said clevis brace being serrated with saw-tooth notches adapted to coöperate with a

companion series of saw-tooth notches, said notched or serrated portions forming the two walls of graduated



size tap or nut wrench, substantially as shown and described.

874,410. RATCHET-DRILL. CHARLES W. KOHLER, Arlington, and THOMAS E. O'BRIEN, Watertown, Mass.; said Kohler assignor to said O'Brien. Filed July 5, 1904. Serial No. 215,207.



1. A ratchet drill comprising a frame having a handle and a longitudinal bore and formed adjacent its end with a boss and a reduced portion concentric with the bore, a spindle journaled in the bore, a drum journaled on the spindle and formed with a reduced portion substantially the same diameter as the reduced portion of the frame abutting against the same, a spring connected at its ends to said boss and coiled about the said reduced portions, a casing mounted externally on the boss and inclosing the spring, means attached to the drum for rotating the same in opposition to the tension of the spring, and a ratchet and pawl connection between the spindle and drum.

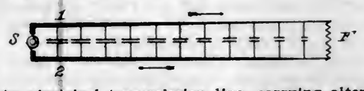
2. A ratchet drill comprising a frame having a handle and a longitudinal bore and formed adjacent its end with a boss and a reduced portion concentric with the bore, a spindle journaled in the bore, a drum journaled on the spindle recessed at its forward end and formed at its other end with a reduced portion of substantially the same diameter as the reduced portion of the frame abutting against the same, a spring connected at its ends to said boss and coiled about the said reduced portions, a casing mounted externally on the boss and inclosing the spring, means attached to the drum for rotating the same in opposition to the tension of the spring, and a ratchet and pawl clutch mounted in the recess on the drum for connecting the drum and spindle.

3. A ratchet drill comprising a frame having a handle and a longitudinal bore and formed adjacent its end with a boss and a reduced portion concentric with the bore, a spindle journaled in the bore, a drum journaled on the spindle and formed with a reduced portion of substantially the same diameter as the reduced portion of the frame abutting against the same, a spring connected at its ends to said boss and coiled about the said reduced portions, a casing mounted externally on the boss and inclosing the spring, a band attached to the drum for rotating the same, flanges formed on the drum adjacent opposite edges of the band and separated by approximately the width of the band, the drum being also formed with a recess at its forward end, a ratchet fixed on the spindle in said recess, and a pawl mounted on the drum in said recess and arranged to engage the ratchet for connecting the drum and spindle.

4. In a ratchet drill, the combination of a frame having a handle, a spindle journaled in said frame, a drum journaled on said spindle and recessed at its forward end, a ratchet-and-pawl clutch mounted in said recess for connecting the drum and spindle, a chuck member, a head or boss on the spindle forward of the drum fixed to the chuck member and constituting both a cover for the recess in the drum and a holder for retaining the chuck stationary while inserting or removing a tool, means for rotating the drum, a casing surrounding a part of the drum, and a spring external to the drum and within the casing for returning the drum when released by said rotating means.

5. In a ratchet drill, a frame having a handle, a boss and an internal bore, a spindle journaled in the bore, a drum journaled thereon and formed with a portion abutting against a portion of the frame, a clutch detachably connecting the drum and spindle, a stationary casing mounted on the boss and extending over a portion of the drum, and a spring contained in the space between the casing, the drum and the boss, being attached at its ends to the drum and boss and coiled helically about the spindle in a plurality of concentric windings, one winding being outside of another.

874,411. SYSTEM OF ELECTRICAL TRANSMISSION AND PROPULSION. MAURICE LEBLANC, Paris, France, assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 31, 1904. Serial No. 200,908.



1. An electrical transmission line, carrying alternating currents of a wave length which is short with reference to the length of the line, which has the ratio of its capacity to its self induction artificially increased at points along the line in a manner to prevent the superelevation of voltage, the consecutive distances between which points are short with reference to a half wave length of the current, substantially as described.

2. An electrical transmission line, carrying alternating currents of a wave length which is short with reference to the length of the line, which has the ratio of its self induction to its capacity gradually varied in an increasing manner toward the line terminal, at points along the line the consecutive distances between which are short with reference to a half wave length of the current, substantially as described.

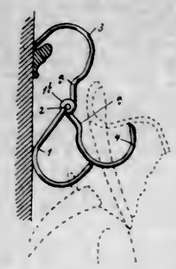
3. An electrical transmission line, carrying alternating currents of a wave length which is short with reference to the length of the line, and capacitances added at points along the line to artificially increase the ratio of its capacity to its self induction in a manner to prevent the superelevation of voltage, the consecutive distance between the capacitances being short with reference to a half wave length of the current, substantially as described.

4. An electrical transmission line carrying alternating currents of a wave length which is short with reference to the length of the line, and capacitances of gradually diminishing capacity at points along the line to artificially increase the ratio of its capacity to its self induction, and to gradually vary the ratio of its self induction to its capacity in an increasing manner toward the line terminal, the consecutive distances between which points are short with reference to a half wave length of the current, substantially as described.

5. An electrical transmission line, carrying alternating currents of a wave length, which is short with reference to the length of the line, comprising a terminal circuit of a character to absorb the electrical energy transmitted to it, whereby reflected waves are avoided, substantially as described.

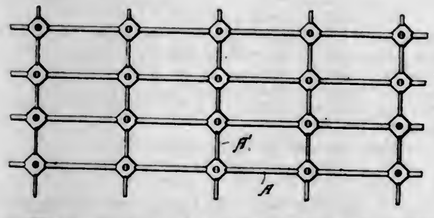
[Claims 6 to 18 not printed in the Gazette.]

874,412. FOLDING POCKET COAT AND HAT HOOK. WILLIAM H. LEWIS, Rome, N. Y. Filed June 10, 1907. Serial No. 378,102.



The combination in a device of the character described, of the double outside hook, an inside hook pivoted to and adapted to fold between the parts of the outside hook and provided with a projection *a* for displacing same from folded position, substantially as set forth.

874,413. MEANS FOR REINFORCING COMPOSITION CONSTRUCTION OF CEILINGS, WALLS, &c. WALLACE C. LYON, Hyattsville, Md. Filed Feb. 27, 1907. Serial No. 359,573.

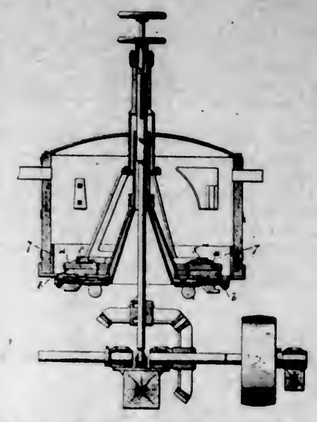


1. The combination of a reinforcement of a concrete building block, slab or beam and an anchoring means for ceilings, walls, etc., comprising two series of intersecting rods, and junction members, the corners of which are cut away, the remaining portions of the edges being bent to form wings between which said rods pass and by which said rods are held together, said wings being bent at such an angle to the body of the member as to form an undercut or dovetailed receptacle for the reception of an additional material in applying a finishing surface to said concrete building block, slab or beam, as set forth.

2. A reinforcing and anchoring means for ceilings, etc., comprising two series of intersecting rods, loops formed in one of said series of rods, members each having an aperture adapted to receive one of said loops, the corners of the members being cut away and forming wings which are adapted to be bent to form an inclosure for the reception of a material employed in applying a finishing surface, said wings having openings at the ends thereof for the reception of said intersecting rods, as set forth.

3. A reinforcing and anchoring means for ceilings, etc., comprising two series of intersecting rods, loops formed in one of said series of rods, members each having an aperture adapted to receive one of said loops, the corners of the members being cut away and forming wings which are bent over one of the faces of the member at inclinations with openings intermediate the ends thereof for the reception of said intersecting rods, as set forth.

874,414. GRINDING SHOE AND DIE. WILLIAM MIDDLETON and HERVIC N. G. COBBE, Kalgoorlie, Western Australia, Australia. Filed Aug. 28, 1905. Serial No. 276,130.



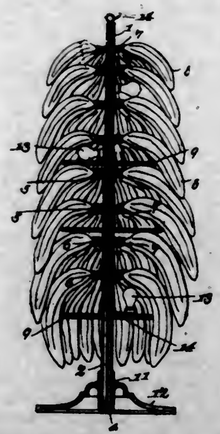
1. In a grinding pan, a grinding shoe and a die having their sides provided with serrations to prevent the grinding faces from becoming over or under shot.

2. In a grinding pan, a grinding shoe and a die having their sides provided with substantially parallel serrations.

3. In a grinding pan, the combination with a shoe having lateral serrations beveled in one direction; of a die having lateral serrations beveled in an opposite direction.

4. In a grinding pan, a grinding die having peripheral serrations substantially parallel with the grinding face and beveled in one direction, in combination with a grinding shoe having peripheral serrations also substantially parallel with its grinding face and beveled oppositely to those on the die and means to rotate the shoe relatively to the die.

874,415. ARTIFICIAL FRUIT. SAM MILLER, Marshfield, Wis. Filed May 15, 1906. Serial No. 317,037.



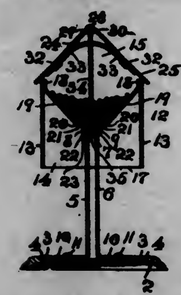
1. A display device comprising a stem consisting of tubular sections having engaging ends, means extending longitudinally through the sections for binding them together, a supporting disk upon each section and having a notched periphery, a collar upon each section and above the supporting disk, artificial fruit connected to each collar and bearing within the notches thereunder, said artificial fruit being disposed in contacting tiers, and illu-

minating devices upon the disks and concealed by the artificial fruit.

2. A display device comprising a sectional stem, means extending through the stem for holding the sections rigidly connected, a collar upon each section, artificial fruit disposed around the collar, securing means threaded through the collar and the fruit thereabout for fixedly connecting said fruit to the collar, and a disk secured to each section and below the collar thereon, said disk having recesses in its periphery to receive the artificial fruit.

3. A display device comprising a stem consisting of tubular sections having engaging ends, means extending longitudinally through the sections for binding them together, a supporting disk upon each section and having a notched periphery, a collar upon each section above the supporting disk, artificial fruit connected to each collar and bearing within the notches thereunder, said artificial fruit being disposed in contacting tiers, and illuminating devices concealed by the artificial fruit.

874,416. MATCH-SAFE. ROBERT R. MONT, New York, N. Y. Filed Sept. 24, 1906. Serial No. 335,959.



1. A match-safe comprising a base, a vertically extending post provided at the top with a match-receiving means, a shell or casing movably arranged upon said post, means in said shell or casing for retaining matches in quantity within said shell or casing, a pair of angularly arranged top-plates pivotally connected at their upper edges in a hinge-like manner with portions of said shell or casing, each top-plate having a movement independent of the other and said top-plates being cut away along the adjacent longitudinal edges, so as to provide an opening through which the upper portion of said post and its match-receiving means projects when said shell or casing is in its lower position upon the base, and springs arranged upon the under faces of said top-plates for normally forcing said plates down upon said shell or casing and permitting said top-plates to be used as finger-pieces for lifting said shell or casing, substantially as and for the purposes set forth.

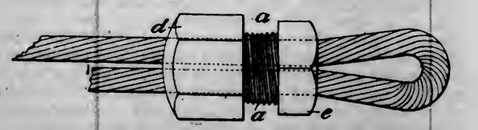
2. A match-safe comprising a base, a vertically extending post provided at the top with a match-receiving means, a shell or casing movably arranged upon said post, inclined plates within said shell or casing forming with portions of said shell or casing a match-receptacle, and means extending along the lower portions of said plates, for forcing the matches away from the sides of said post during the sliding movements of said shell or casing, a pair of angularly arranged top-plates pivotally connected at their upper edges in a hinge-like manner with the upper portions of said shell or casing, each top-plate having a movement independent of the other, and said top-plates being cut away along their adjacent longitudinal edges, so as to provide an opening through which the upper portion of said post and its match-receiving means projects when said shell or casing is in its lowered position upon the base, and springs arranged upon the under faces of said top-plates for normally forcing said plates down upon the said shell or casing and permitting said top-plates to be used as finger-pieces for lifting said shell or casing, substantially as and for the purposes set forth.

3. A match-safe comprising a base, a vertically extending post provided at the top with a match-receiving means, a shell or casing movably arranged upon said post, inclined plates within said shell or casing forming with portions of said shell or casing a match-receptacle, and means, consisting of a channel-shaped part 20 and a convex marginal edge 21, extending along the lower marginal edge of each plate, and on opposite sides of the post, for forcing the matches away from the sides of the post during the sliding movements of said shell or casing, substantially as and for the purposes set forth.

4. A match-safe comprising a base, a vertically extending post provided at the top with a match-receiving means, a shell or casing movably arranged upon said post, inclined plates within said shell or casing forming with portions of said shell or casing a match-receptacle, and means consisting of a channel-shaped part 20 and a convex marginal edge 21, extending along the lower marginal edge of each plate, and on opposite sides of the post, for forcing the matches away from the sides of the post during the sliding movements of said shell or casing, top-plates pivotally connected with the upper portions of said shell or casing, said top-plates being cut away along their adjacent edges, so as to provide an opening through which the upper portion of said post and its match-receiving means projects when said shell or casing is in its lowered position upon the base, substantially as and for the purposes set forth.

[Claims 6 to 8 not printed in the Gazette.]

874,417. MEANS FOR GRIPPING AND COUPLING WIRE ROPES, RODS, &c. JAMES MOSS, Manchester, England. Filed Mar. 25, 1904. Serial No. 200,064.



For gripping two lashings or the like side by side and by one adjustment, the combination of a conical metal block with its exterior of conical formation and screw-threaded, and also having a nut-like boss at one end, and said block formed with borings extending from end to end of the block and also grooved internally and said block also slit longitudinally in part and a nut with tapered and screw-threaded interior for contracting the block simultaneously upon the two lashings passing through the borings, as set forth.

874,418. STRAINING-PLUG. JOSEPH H. MCEVOY, Houston, Tex. Filed Feb. 21, 1907. Serial No. 358,623.

1. A straining plug having a body provided with slits separated by intervening bars one face of each of which is spread laterally to form a pointed overhanging edge deflected from the plane of the side wall of the bar and approaching a similar edge upon a parallel bar to reduce the width of said slits between the apices of the opposite edges.

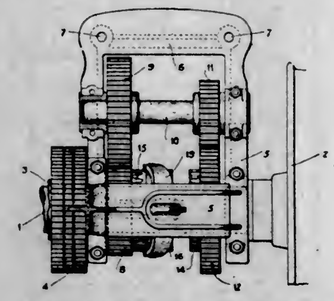


2. In a well strainer, a cap plug comprising a plurality of disks each having a body provided with slits separated by intervening bars one face of each of which is spread laterally to form a pointed overhanging edge deflected from the plane of the side wall of the bar and approaching a similar edge upon a parallel bar to reduce the width of said slits between the apices of the opposite edges.

3. A straining plug comprising a plurality of slitted disks in contact with each other, and a strengthening rim surrounding said disks.

4. A straining plug comprising a plurality of slitted disks disposed with their slits in alinement, and a strengthening rim surrounding said disks and having an inwardly extending flange to engage the face of one thereof.

874,419. CLUTCH MECHANISM. WILLIAM R. MCKEEN, Jr., Omaha, Nebr., assignor to Edward H. Harriman, Arden, N. Y. Filed Oct. 2, 1905. Serial No. 280,922.



1. In a device of the class described, in combination, a pair of clutch-members provided with means adapted on said members being thrown into engagement one with another automatically to tend to draw the same together, said means comprising a plurality of teeth upon each member, the space between contiguous teeth upon a member increasing in a direction toward the roots thereof.

2. In a device of the class described, in combination, a clutch-member, a second clutch-member adapted to be thrown laterally toward the same, and means upon the lateral surface of one of said clutch-members adapted to engage the other thereof and tend to draw said members together, said means comprising a plurality of teeth upon said member, the space between contiguous teeth upon the member decreasing and then increasing in a direction toward the roots thereof.

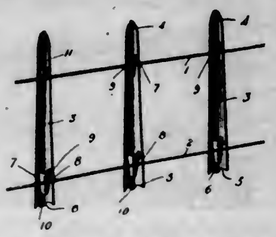
3. In a device of the class described, in combination, a clutch-member, a second clutch-member adapted to be thrown laterally toward the same, and means upon the lateral surface of each of said clutch-members adapted to engage and positively interlock with the other of said clutch-members and tend to draw said members together, said means comprising a plurality of teeth upon each member, the space between contiguous teeth upon a member decreasing and then increasing in a direction toward the roots thereof and the minimum space being sufficient to permit the passage of the thickest portions of the teeth upon the opposite member.

4. In a device of the class described, in combination, a clutch-member, a second clutch-member adapted to be thrown laterally toward the same, and interlocking, teeth upon said members each of said teeth being undercut upon each side and being adapted to engage another tooth and tend to draw said members together.

5. In a device of the class described, in combination, a clutch-member, a second clutch-member adapted to be thrown laterally toward the same, and means upon the lateral surface of one of said clutch-members adapted upon being placed in a predetermined relation to the other of said clutch-members to tend to draw said members together, said last mentioned means being adapted to operate irrespective of the direction of rotation of said members.

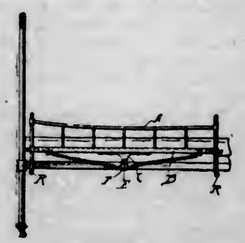
[Claims 6 to 15 not printed in the Gazette.]

874,420. FENCE-PICKET. DANIEL B. MCKENZIE, Elkhorn, W. Va. Filed July 5, 1907. Serial No. 382,215.



The combination with the parallel fence wires of a picket for uniting said wires and spacing them apart, said picket being formed from a piece of sheet metal tapered from its bottom to its top and curved transversely into concavo-convex form, the edges of the picket being formed at opposite points with the downwardly and inwardly curved grooves 7 having the enlargements or seats 8 at their lower ends to receive the fence wires, the square bottom of the picket being formed at its center with the depending ear 6, said picket being also formed with the aperture 10 formed in the depending ear and the aperture 11 formed adjacent to the upper end of the picket, and the concavo-convex sheet metal wedges inserted between the concave side of the picket and said wires with their convex sides engaged with the wires whereby the latter will be simultaneously stretched and retained in said seats, substantially as shown and described.

874,421. BABY-CRIB. JOSEPH A. NAIL, Chicago, Ill. Filed June 11, 1907. Serial No. 378,465.



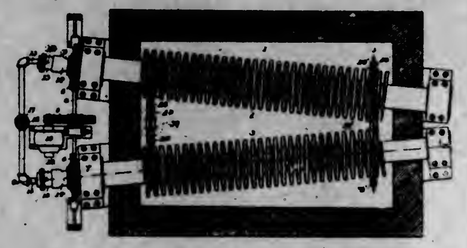
1. In a device of the kind specified, a frame adapted to be removably secured to the side rail of a bed-stead, a shaft carried thereby, a baby-crib mounted on said shaft between its ends and adapted to rock thereon, and spiral tension springs secured at one end to said frame below said shaft and at their outer ends to the end portions of said crib.

2. In a device of the kind specified, a frame adapted to be removably secured to the side rail of a bed-stead, a shaft carried thereby, a baby-crib mounted on said shaft between its ends and adapted to rock thereon, rods longitudinally movable in the free end portions of said crib and carrying adjusting means, and spiral tension springs

secured at one end to said rods and at their other ends to said frame below said shaft.

3. In a device of the kind specified, a frame adapted to be removably secured to the side rail of a bed-stead, a shaft carried thereby, a baby-crib mounted on said shaft between its ends and adapted to rock thereon, springs disposed in operative relation to said frame and said crib for balancing the latter, and means for adjusting the relative strains exerted by said springs.

874,422. CONTINUOUS HEATING-FURNACE. EDWIN NORTON, New York, N. Y. Filed Feb. 27, 1907. Serial No. 359,589.



1. In a continuous furnace, a pair of oppositely arranged screws extending longitudinally within the furnace chamber, means for mounting the screws with their axes inclined one toward the other, and means for rotating the screws, whereby blanks may be supported between the corresponding threads of the screws and conveyed longitudinally of the furnace without binding on the threads or distorting the blanks.

2. In a continuous furnace for heating packs or sheets on edge, a rotary screw in the chamber of the furnace for supporting and conveying the packs or sheets, the threads of said screw having such depth that the thread walls maintain said packs or sheets on edge.

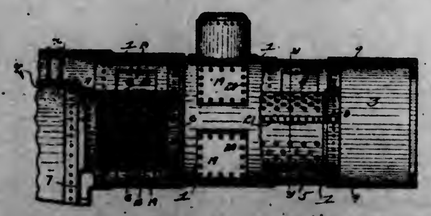
3. In a continuous furnace for heating packs or sheets on edge, a pair of oppositely arranged rotary screws in the furnace chamber for supporting and conveying packs or sheets, the threads of said screws having such depth that the thread-walls maintain said packs or sheets on edge.

4. In a continuous furnace, having an opening in the roof thereof, a blank transferring device reciprocable in the furnace chamber and through the said opening.

5. In a continuous furnace, a rotatable screw located within the furnace chamber and adapted to receive blanks in its threads, a reciprocable blank carrier having means for receiving blanks and means for moving the carrier with a contained blank transversely of the screw, whereby a blank may be delivered to said screw or removed therefrom.

[Claims 6 to 8 not printed in the Gazette.]

874,423. BOILER. WILLIAM J. OGAN, Dayton, Ohio, assignor to Ogan Mechanical Appliance Co., Dayton, Ohio, a Firm. Filed Feb. 21, 1907. Serial No. 358,619.

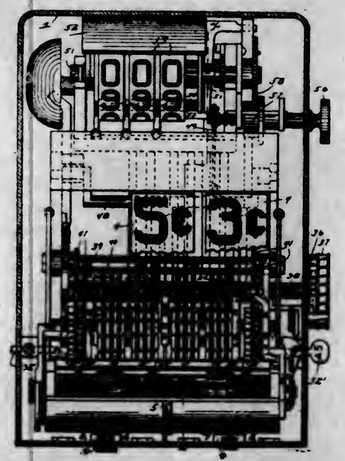


1. In a boiler, a shell having a series of openings throughout its length closed by removable plates, one end of said shell having a smoke box thereat and the other end having a fire box therein, a fire tube formed of upper and lower curved plates and substantially oval in cross section, one end of said fire tube terminating in a bell-shape, an end plate within the shell and to which said bell end of the fire tube is connected, the other end of the fire tube being connected to the fire box within said shell, and a series of water tubes mounted in the fire tube transversely of the length thereof, substantially as specified.

2. In a boiler, a shell, a fire tube formed of upper and lower curved plates within said shell, one end of said fire tube terminating in a bell-shape, means for supporting said bell end within the shell, a fire box to which the other end of the fire tube is connected, and a series of water tubes extending across the fire tube throughout its length, substantially as described.

3. In a boiler, a shell, a fire tube formed of upper and lower curved plates, one end of said fire tube terminating in a bell, water tubes extending from the upper to the lower plates across the interior of the fire tube, and end plates supporting said fire tube within the shell.

874,424. FARE-REGISTER. JOHN F. OHMER, Dayton, Ohio. Filed Nov. 26, 1906. Serial No. 345,031.



1. In a fare register, four sets of counters mounted upon a common axis of rotation, two reciprocating members, each one of which is adapted to simultaneously actuate two of said counters, and means for taking impressions from said counters.

2. In a fare register, four sets of counters mounted upon a common axis of rotation, two reciprocating members each one of which is adapted to simultaneously actuate two of said counters, and an indicator associated with each two of said counters to indicate the fares registered thereon.

3. In a fare register, four sets of printing counters mounted upon a common axis of rotation, two reciprocating members each one of which is adapted to actuate two of said counters in a single operation thereof, an indicator associated with each two of said counters, a printing device designating the class of fare registered on each two of said counters, and means for taking impressions or statements from each two of said counters and from the printing device.

4. In a fare register, four sets of printing counters mounted upon a common axis of rotation, two reciprocating members each one of which is adapted to impart simultaneous movement to two of the printing counters, a printing device associated with each set of counters so movable in unison to indicate in duplicate the class of fare registered thereon, a printing device to indicate the conductor, and means for taking statements from each two of said counters so actuated in unison and from said printing devices to show the duplicate registrations of fares, the class of fare so registered, and an identification of the conductor.

5. In a fare register, four sets of printing counters mounted upon a common axis of rotation, two reciprocating members each one of which is adapted to impart simultaneous movement to two of said counters, a printing device for printing in duplicate the fares of each two of said counters so operated in unison, a total counter for counting the totals of the fares registered on all of said counters, and means for taking statements from each two of said counters and from the printing device associated therewith.

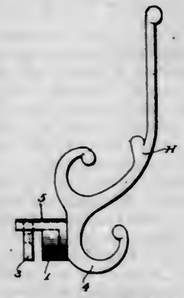
[Claims 6 to 32 not printed in the Gazette.]

874,425. TEA MIXTURE. HENRY S. W. PALMER, London, England. Filed Sept. 22, 1905. Serial No. 279,690.

1. The herein-described tea mixture, consisting of tea prepared in the usual manner and fired shredded malt, the latter being in a form simulating that of the tea leaves.

2. The herein-described method of making a tea mixture, which consists in shredding and firing malt, and mixing the same with tea of similar form prepared in the usual manner.

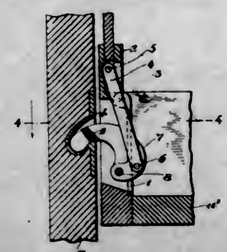
874,426. COMBINED TRAP-DOOR ABUTMENT AND LOCKING MEMBER. HENRY PEARSON, Springfield, Mass., assignor to George A. Denham, Boston, Mass. Filed May 8, 1907. Serial No. 372,531.



1. As a new article of manufacture, a combined abutment and locking member comprising a base portion having opositely-disposed, abutment-forming side walls; and a bolt-receiving chamber or space thereinbetween.

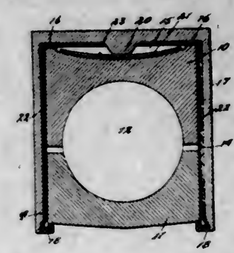
2. As a new article of manufacture, a combined abutment and locking member comprising a base portion having oppositely-disposed abutment-forming side walls; and a bolt-receiving chamber or space thereinbetween; said abutment having an integral garment-support on its front side.

874,427. HINGE. HENRY PEARSON, Springfield, Mass., assignor to George A. Denham, Boston, Mass. Filed May 8, 1907. Serial No. 372,534.



The herein-described hinge, comprising a pair of leaves jointed together and combined with a link and coupling member.

874,428. DUST-GUARD. JOHN PEARSON, Chicago, Ill. Filed Oct. 13, 1905. Serial No. 282,543.



1. In a dust guard, the combination with a pair of sections, each of which is provided with a recess which with the recess of the other section provides the axle opening, of a yoke for the sections, and a packing strip interposed between the sections and yoke and having its edges extended beyond the faces of the sections.

2. In a dust guard, the combination with a pair of sections provided with an axle opening, of a yoke, the said sections and yoke being provided with complementary tongue and groove, and one of the sections having a recess formed in the edge thereof, a boss on the yoke entering the recess, and a leaf spring reacting between the boss and bottom of the recess.

3. In a dust guard, the combination with upper and lower sections having a continuous groove at the side edges thereof and at upper edge of the upper section, a yoke extending along the side edges of both sections and across the top of the upper section and having a tongue entering the groove, the ends of the yoke being provided with inwardly extending seats on which the lower section rests, the tongue of the yoke opposite the upper edge of the upper section being provided with a boss, and a spring reacting between the boss and the bottom of the groove to permit of automatic adjustment of the sections.

4. In a dust guard, the combination with the upper and lower sections having overlapping extensions at their meeting edges, the sections being grooved at their side edges and the upper section having a recess in continuation of the groove, a yoke having vertical arms extending along the side edges of the sections and a horizontal portion extending along the upper edge of the upper section, a tongue on the yoke entering the groove, such tongue centrally of the horizontal portions of the yoke being enlarged to provide a boss, a leaf spring reacting at its ends against the bottom of the recess and at its center against the boss, and a packing strip in the groove between the tongue and sections.

5. The combination with a journal box having a pocket, of a dust guard located in the pocket and comprising a pair of sections, a yoke for the sections, and a packing strip interposed between the yoke and sections and having its edges extended beyond the faces of the sections and engaging the walls of the pocket.

[Claim 6 not printed in the Gazette.]

874,429. SPINNING AND TWISTING RING. GEORGE L. PIERCE, Manchester, N. H., assignor, by mesne assignments, to High Speed Ring Company, Boston, Mass., a Corporation of Maine. Filed Apr. 7, 1906. Serial No. 310,485.



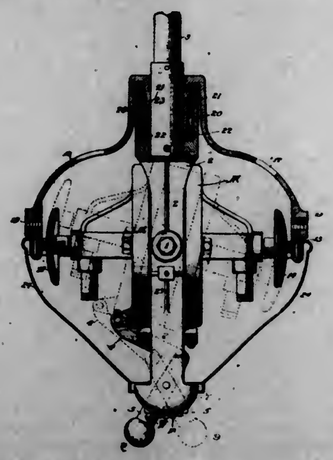
1. A spinning ring comprising a shell having imperforate side walls and an inturned flange at its upper end and an anti-friction member lining the shell and flange, combined with a traveler made as a ring having flat-top and bottom faces and having an upwardly extended thread guide provided with an eye and a plate having a flange

upturned within said anti-friction member and sustaining the circular part of said traveler substantially throughout its length to thereby prevent the displacement of the traveler in the ring.

2. A spinning ring comprising a shell having imperforate side walls and an inturned flange at its upper end, and an anti-friction member within said shell, combined with a traveler sustainer comprising a plate having an upturned flange provided with openings situated entirely below its upper edge on which the circular part of the traveler moves, said openings enabling any lint within the ring to be discharged therefrom toward the yarn load from which it is later thrown by centrifugal action.

3. The combination with a spinning ring comprising a shell having imperforate side walls and an inturned flange at its upper end, an anti-friction member lining the shell and flange, and an inner member having an upturned flange within the anti-friction member, of a traveler received between said upturned flange and the anti-friction means, said traveler comprising a circular base having smooth top and bottom faces and having integral therewith an upturned arm provided with an eye formed by bending the end of said arm inwardly, downwardly and outwardly beyond the body of the arm, said upturned flange of the inner member having a bearing to sustain the traveler substantially throughout its length.

874,430. CEILING-FAN MOTOR. THOMAS H. PITHER, Chicago, Ill., assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 22, 1907. Serial No. 389,621.



1. The combination with a frame, of a motor adjustably mounted therein, a driving gear driven by said motor, a casing mounted to rotate about said frame, said casing having an annular portion engaging with said driving gear, and means for adjusting said motor and thereby adjusting the engagement of said driving gear with said annular portion.

2. The combination with a frame, of a motor mounted therein, a driving gear driven by said motor, a casing rotatably mounted about said frame, said casing having an annular portion coöperating with said driving gear, said driving gear being adjustably mounted with relation to said casing, to adjust its engagement with said annular portion, and thereby to control the speed of rotation of said casing, and means for adjusting said driving gear.

3. The combination with a frame, of a motor pivotally mounted therein, a driving gear driven by said motor, a casing rotatably mounted about said frame, said casing having an annular portion in engagement with said driving gear, said driving gear being adjustable through the adjustment of said motor on its pivots to control the speed at which said casing is driven, and means for adjusting said motor on its pivots.

4. The combination with a frame, of a motor pivotally mounted therein, a driving gear driven by said motor, a rotatable casing having bearings in said frame, and provided with an annular flange having frictional engagement with said driving gear, and means for adjusting said motor on its pivots to vary the adjustment between said driving gear and said flange to control the speed of rotation of said casing.

5. The combination with a ring-like frame, of a motor adjustably mounted therein, a driving disk carried upon the end of the motor shaft, a casing mounted to rotate about said frame, said casing having an annular portion frictionally engaging with said driving disk, and means for adjusting said motor and thereby adjusting the radial engagement of said driving disk with said annular portion.

[Claims 6 to 17 not printed in the Gazette.]

874,431. FAN. JULIAN H. PITKIN, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Feb. 3, 1906. Serial No. 299,229.



1. In a device of the class described, in combination, a fan casing having openings in the ends thereof, radially extending, spirally arranged fan blades mounted at each end of said casing, and auxiliary blades secured to and connecting the outer ends of said radial blades, substantially as and for the purpose specified.

2. In a device of the class described, in combination, a cylindrical fan casing provided with openings in the ends thereof, a shaft journaled in suitable bearings in said casing, radially extending, spirally arranged fan blades mounted at each end of said casing, the inclination of the blades being opposite at the opposite ends of the fan casing, and auxiliary blades secured to and connecting the outer ends of said radial blades, substantially as and for the purpose specified.

3. In a device of the class described, in combination, a cylindrical fan casing provided with openings in the ends thereof, a shaft journaled in suitable bearings in said casing and eccentrically disposed relative thereto, hubs secured to said shaft, radially extending, spirally arranged fan blades fixed to said hubs, the inclination of the blades being opposite at the opposite ends of the fan casing, and auxiliary blades secured to and connecting the outer ends of said radial blades, substantially as and for the purpose specified.

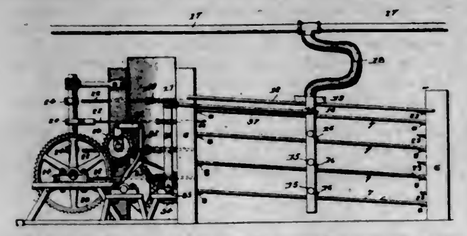
874,432. TURBINE. HEINRICH P. R. L. PÖRSCKE, Hamburg, Germany. Filed May 3, 1907. Serial No. 371,634.



In a turbine the combination of "S" curved blades alternated with straight blades of narrower width.

874,433. SLIME-CONCENTRATOR. EDWARD C. PORTER, Telluride, Colo. Filed May 3, 1907. Serial No. 371,680.

1. In a slime concentrator, the combination with a table, of a valved jet pipe extending across over the same, means to reciprocate the pipe from the head to the tail of the table and automatic means to open and close the valve at the head and tail of the table, respectively.



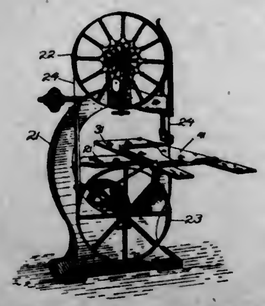
2. In a slime concentrator, the combination of a plurality of tables placed one above the other, a rack of jet pipes corresponding to the tables and extending across above the same, means to sweep the pipes back and forth from the head to the tail of the tables, means to automatically supply water to selected pipes during each stroke, and means to automatically cut off said supply at the tail of the tables.

3. In a slime concentrator, the combination of a plurality of tables placed one above the other, a rack of jet pipes corresponding to the tables and extending across above the same, said pipes having valves with projecting stems, means to sweep the pipes back and forth from the head to the tail of the tables, selective devices at the head of the tables, arranged to strike selected valve stems and open the valves, and projections at the tail of the tables, arranged to strike the stems of the open valves and close the same.

4. In a slime concentrator, the combination of a table, a jet pipe extending across above the same and movable back and forth from the head to the tail thereof, a valve in said pipe, having a projecting stem, a push rod at the head of the table arranged to strike the stem and open the valve, means to operate the push rod, and a projection at the tail of the table arranged to strike the stem and close the valve.

5. In a slime concentrator, the combination of a plurality of superposed tables, a header extending vertically beside the tables and having jet pipes extending therefrom over across the respective tables, means to move the header and pipes back and forth from the head to the tail of the tables, valves between the header and the respective pipes, means at the head of the tables to open the valves in succession, and means at the tail of the tables to close the open valves.

874,434. ATTACHMENT FOR BAND-SAWS. ALBERT M. PORTTEUS, Indianapolis, Ind., assignor of one-half to Philip G. Basso, Indianapolis, Ind. Filed May 27, 1907. Serial No. 375,953.



1. The combination of a saw table provided with curved ways, and a carriage having projections which extend into and engage with said ways, and also provided with suitable stops against which the stock will rest while being sawed, and a curved slit through which the saw will pass corresponding to the shape of the desired finished article.

2. The combination of a saw table having irregular guides or ways, a carriage mounted thereon and having projections which engage with said ways, said projections being positioned toward opposite sides of said carriage and also toward opposite ends thereof.

3. The combination with a saw table having guides or ways thereon, of a carriage engaging with one of said ways near one end and with the other of said ways near the other end, the movements of the opposite ends of said carriage being thus guided by said two separate ways.

4. The combination of a saw table or bed plate having irregular guides or ways, of a carriage mounted thereon and having separate engaging points with said guides or ways, one of said engaging points being upon one side of a plane taken longitudinally of the carriage and also of a plane taken transversely of the carriage, and the other of said engaging points being upon the other side of each of said planes.

874,435. ADJUSTABLE CHAIR. JESSE PRESCOTT, Webster, Mass. Filed July 9, 1907. Serial No. 382,875.



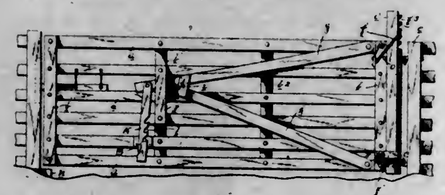
1. An adjustable chair, comprising means permitting it to swing in a vertical plane, consisting of a transversely apertured vertical plate having vertical edges and a rounded end concentric of said aperture, a coöperating vertical plane transversely apertured in line with the aperture of the opposite plate, said two plates having interlocking serrations on their adjacent faces, an approximately semicylindrical housing projecting from the second plate over and around the rounded end of the other plate, and a pivot bolt extending through said aperatures for clamping the two plates together.

2. An adjustable chair, containing means permitting it to swing in a vertical plane, consisting of a transverse apertured vertical plate having a rounded end concentric of said aperture, a coöperating vertical plate transversely apertured in line with the aperture of the opposite plate, said two plates having interlocking serrations on their adjacent faces, a housing projecting from one plate over the rounded end of the other plate, and a pivot bolt extending through said apertures for clamping the two plates together, the second plate having a pair of obliquely extending bracing ribs on its outer side spaced apart the width of the bolt head to protect and strengthen the plate and restrain the bolt head from turning.

3. An adjustable chair, comprising a base plate having a vertically projecting pivot plate rounded concentrically of the pivot, having locking serrations on one side and oblique bracing ribs on its opposite side, a hollow post terminating at its lower end in an arched housing fitting over the rounded end of said vertical base plate, and a depending pivot plate at one side of said housing provided at its adjacent side with locking serrations

to coöperate with those of the base plate and on its opposite side having a thickened rounded semi-cylindrical contour, a pivot bolt adjustably connecting said two plates, an upper standard portion having a central depending pin fitting said hollow post and longitudinally adjustable therein, terminating at its upper end in a vertical pivot plate and housing constructed substantially the same as the corresponding parts at the lower end of the post, a chair bottom, a securing plate fast on the under side thereof, a top plate pivotally connected to said securing plate to permit the chair bottom to turn horizontally, said top plate having a depending pivot plate serrated on one side, provided with oblique ribs on its opposite side and rounded at its lower end to fit into the adjacent housing, and a transverse pivot adjustably connecting said depending pivot plate and the vertical pivot plate of said standard portion.

874,436. FARM-GATE. JAMES W. PRICE, Covington, Ind. Filed Sept. 30, 1907. Serial No. 395,267.



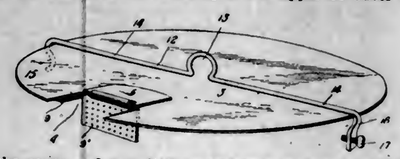
1. In a lifting and swinging gate having bars and rails pivotally connected together, the combination with a main supporting post, of a swinging hinge post on which the gate is vertically adjustably supported, a crane comprising a hanger and a brace pivotally secured to the upper and lower bars respectively adjacent to the rear edge of the gate and having their front ends rigidly united together, the hanger extending beyond the front end of the brace, a rail pivotally secured to the gate in position to form a vertical guide slot through which the front end of the hanger projects, a notched suspension bar pivotally secured to the front end of the hanger and a pin projecting from the face of one of the lower bars in position to engage with the notches of the suspension bar.

2. In a lifting and swinging gate having bars and rails pivotally connected together, the ends of the bars being connected by rails on both sides of the bars, the combination with a main supporting post, of a swinging hinge post on which the gate is supported vertically adjustably and formed with a vertical groove in its inner edge into which the rear ends of the bars are adapted to project, a crane composed of a hanger bar and a brace bar pivotally secured to the upper and lower bars of the gate respectively adjacent to the rails, at the rear end and extending beyond the middle of the gate, the hanger bar and brace bar being united near their inner ends with the hanger bar projecting beyond the inner end of the brace bar, a guide rail pivotally secured to the bars at its ends and forming a vertical guide slot for the free end of the hanger bar, a suspension bar pivotally secured to the free end of the hanger bar and provided with a series of notches and a pin secured to one of the lower bars in position to engage with the notches of the suspension bar, the latter extending downwardly towards the ground in position to be operated with the foot.

874,437. KETTLE-COVER. LOUISE E. PUCKETT, Vermillion, S. D. Filed Aug. 7, 1907. Serial No. 387,519.

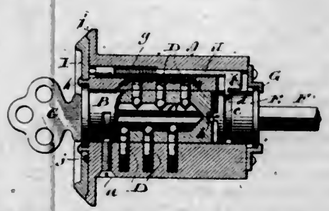
1. A cover of the character described having in its edge, an opening, a closure for the same, spring hooks upon the under side of the cover adjacent to said opening, and a stringer having eyes detachably engaged with said spring hooks, said strainer being adapted to swing over said opening, substantially as described.

2. A cover of the character described having in its edge an opening, the latter having at its ends shoulders and at its inner edge an integral tongue bent to form a pivot loop or eye, a closure for said opening in the form of a plate having a straight inner edge and a longitudinal slot adjacent to said edge to provide a pintle, the latter being arranged in the loop or eye formed by said tongue to hingedly secure said closure upon the upper or outer face



of the cover and permit it to swing down and engage said shoulders to close the opening in the cover, spring hooks upon the under side of the cover adjacent to said opening and a strainer having eyes detachably engaged with said hooks, said strainer being adapted to swing over said opening, substantially as described.

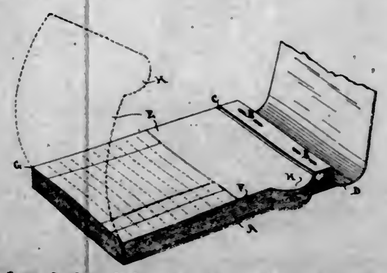
874,438. LOCK. ZEBULON RAUTBORD, Milwaukee, Wis., assignor of one-half to Samuel Berlowitz and David Rothman, Milwaukee, Wis. Filed June 8, 1907. Serial No. 377,862.



1. A key-actuated lock comprising a casing, a rotatable barrel and spring-controlled plungers in connection with the casing and barrel, in combination with a supplementary barrel-section, a rotatory dial in connection with said casing, and locking-means in connection with the barrel and supplementary barrel section the locking means being controlled by the dial.

2. A key-actuated lock comprising a casing, a rotatable barrel having a clutch-faced end, and spring-controlled plungers in connection with the casing and rotatable barrel, in combination with a supplementary barrel-section, having a clutch-face adapted to engage the clutch-face of the aforesaid barrel, a spring-controlled bolt in connection with the barrel-section, a rotatory dial carried by the casing, and actuating means for the bolt carried by the dial.

874,439. MANIFOLDING COPY BOOK OR PAD. DANIEL A. ROBERTS, Elmira, N. Y. Filed Aug. 18, 1906. Serial No. 331,206.



1. In a device of the class described, a pad comprising a plurality of leaves each of which is provided with a portion which projects beyond the body of the pad, said projecting portions lying one above the other and in register with one another.

2. In a device of the class described, a pad comprising a plurality of leaves connected together at the stub end of the pad, and an overlying carbon sheet, each of said leaves being provided with a portion which projects outwardly beyond the body of the pad.

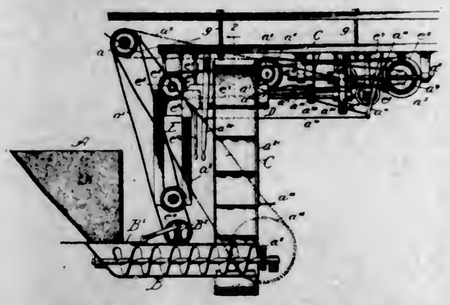
3. In a device of the class described, a pad comprising a plurality of leaves connected together at the stub end of the pad, an overlying transfer sheet, and an ear upon each of said leaves which extends outwardly therefrom beyond the body of the pad and said transfer sheet, whereby said leaves may be grasped and manipulated without touching said transfer sheet.

4. In a device of the class described, a pad comprising a plurality of sheets each of which is folded into a plurality of leaf portions, said sheets being secured together at the stub end of the pad, a transferring medium attacned to said sheets and adapted to be inserted between the leaf portions thereof, and an ear provided upon one of the leaf portions of each sheet by means of which the sheet may be grasped and manipulated with relation to the transferring medium without touching the latter.

5. In a device of the class described, a pad comprising a plurality of leaves connected together at the stub end of the pad, an overlying transfer sheet attached thereto, each of said sheets being folded at a point remote from the stub end of the pad into a plurality of leaf portions between which the transfer sheet may be inserted, and an ear upon one of the leaf portions of each sheet whereby said sheet may be grasped and drawn from beneath the transfer sheet without touching the latter.

[Claims 6 to 13 not printed in the Gazette.]

874,440. MOLDING APPARATUS. ALBERT C. ROGERSON, Chicago, Ill., assignor to Automatic Molding Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 17, 1905. Serial No. 287,806.



1. In molding apparatus, power actuated sand projecting means, a pivotally-suspended frame carrying the same, means for feeding sand into the path of said projecting means, and means for maintaining said sand in such path between the points of admission and discharge.

2. In molding apparatus, power actuated sand projecting means, a pivotally-suspended universally movable frame carrying the same, means for feeding sand into the path of said projector, and means for maintaining the sand in such path between the points of admission and discharge thereof.

3. In molding apparatus, power actuated sand projecting means, a pivotally-suspended frame carrying the same, means for feeding sand into the path of said projecting means, means for maintaining said sand in such path between the points of admission and discharge, and means for varying the speed of said projecting means.

4. In molding apparatus, power actuated sand projecting means, a pivotally-suspended universally movable frame carrying the same, means for feeding sand into the path of said projecting means, means for maintaining said sand in such path between the points of admission and discharge, and means for varying the speed of said projecting means.

5. In molding apparatus, a suspended packer comprising a freely movable laterally shiftable casing, and power actuated sand projecting means disposed within said casing and serving to deliver the sand at high velocity into a mold box.

[Claims 6 to 14 not printed in the Gazette.]

874,441. BOTTLE. MARY B. SAMUEL, Bryn Mawr, Pa. Filed Sept. 7, 1907. Serial No. 391,839.



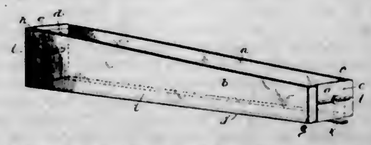
1. The combination with a bottle having a valve arranged to prevent filling the bottle in its upright position, and having a filling orifice at its lower end, of a seal extending over said orifice and one or more pieces of flexible material extending from said seal upwardly on the side of the bottle and secured to the side of the bottle.

2. The combination with a bottle having a valve arranged to prevent filling the bottle in its upright position, and having a filling orifice at its lower end, of a seal extending over said orifice and one or more pieces of flexible material extending from said seal upwardly on the side of the bottle and a seal securing said material to the side of the bottle.

3. The combination with a bottle having a valve arranged to prevent filling the bottle in its upright position, and having a filling orifice at its lower end, of a seal extending over said orifice and one or more pieces of distinctive paper extending from said seal upwardly on the side of the bottle and secured to the side of the bottle.

4. The combination with a bottle having a valve arranged to prevent filling the bottle in its upright position, and having a filling orifice at its lower end, of a seal extending over said orifice, one or more pieces of distinctive paper extending from said seal upwardly on the side of the bottle and a seal securing said material to the side of the bottle.

874,442. SHELVING-TRAY FOR BOTTLES. CALEB SANDEL, Powhatan, La. Filed Mar. 28, 1907. Serial No. 365,116.

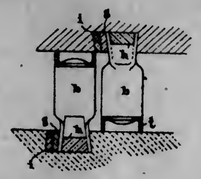


1. Means for shelving bottles in rows comprising a sectional box adapted to receive the bottles, said box having four vertical walls with its side walls adjustable towards and away from each other, in combination with means for locking said sectional box in adjusted positions, substantially as described.

2. A box or tray formed of two sections one within the other and each section comprising a side wall, two end walls and a bottom, the end walls of one section being turned over the upper edge of the end walls of the other

section to form a tongue and slot sliding connection therebetween to allow the adjustment of said sections relatively to each other, and means for locking said sections in their adjusted position, comprising pins secured at one end to the end walls of said inner section and projecting outwardly through lateral slots formed in the end walls of the outer section, said pins being screw-threaded on their outer ends to receive a milled binding nut, substantially as described.

874,443. STEAM-TURBINE. MATTHEW H. P. R. SANKEY, Bilton, near Rugby, England. Filed Sept. 20, 1905. Serial No. 279,273.



1. In an elastic fluid turbine the combination of a blade carrying member having an annular dovetailed groove formed therein, a strip in the groove, transverse cuts on the outer face of said strip extending from side to side, blades inserted within the cuts of the strip, side portions on the blades straddled over the strip and means for holding the blades in place.

2. In an elastic fluid turbine, the combination of a blade carrying member having a dovetailed groove therein, a dovetailed ring in such groove having transverse grooves or cuts therein, blades each having a central portion adapted to fit into such transverse grooves or cuts, extending side portions projecting into the annular groove between the ring and the carrying member and a calking ring for securing the blades in position.

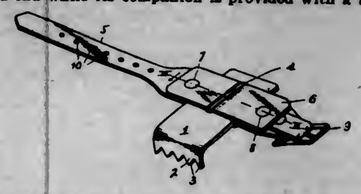
3. In combination in an elastic fluid turbine, blade carrying strips having cross grooves cut in the outer faces part way through the strips, blades in the strips, each of which blades is stamped at the root end so that its middle portion is flattened to conform to the groove in the strip, into which it is set, while the two sides are longer than the central part, and are bent back at right angles to the middle so as to embrace the strip, grooves in the drum and casing into which the strips are inserted, and means whereby the blades are held firmly in the strips, and the strips are held in the grooves.

4. In combination in an elastic fluid turbine, blade carrying strips having cross grooves cut in the outer faces part way through the strips, blades in the strips, each of which blades is stamped at the root end so that its middle portion is flattened to conform to the groove in the strip, into which it is set, while the two sides are longer than the central part, and are bent back at right angles to the middle so as to embrace the strip, grooves in the drum and casing into which the strips are inserted, and a calking lug and a dummy lug whereby the blades are held firmly in the strips, and the strips are firmly in the grooves.

5. A turbine blade formed with a single plate of pressed metal having its root end bent into three planes, the outer two of which are at substantially right angles to the third and extend beyond the end thereof and that of an acute angle to each other, forming thereby a dovetailed projection by which the blade is secured to the turbine blade carrying member.

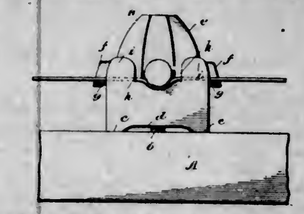
874,444. HUSKING-TOOL. WILLIAM SCHREIBER, Leavenworth, Kans. Filed May 10, 1907. Serial No. 373,143.

A device of the character described consisting of a broad metallic slotted blade adapted to fit longitudinally against the wearer's thumb and provided with a serrated hook extending substantially at right angles thereto, and a pair of straps extending through the slot in said blade to which they are secured, one of said straps having a perforated tapered end while its companion is provided with a buckle



for the reception of the perforated tapered end, substantially as shown and described.

874,445. INSULATOR. ALBERT L. SHEARS, Seattle, Wash. Filed Mar. 5, 1907. Serial No. 360,749.



An insulator having a lateral projection and wire-receiving slots diverging from the projection; the outer side of the projection and the outer sides of the outer walls of the slots being inclined upward and inward, and also having a portion tapered or inclined upward and inward from the upper side of the projection and the mouths of the wire-receiving slots.

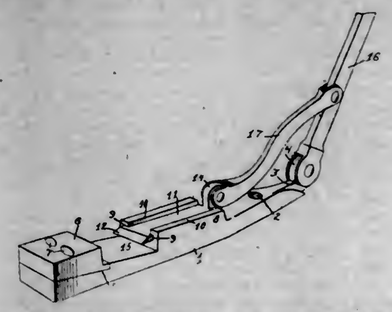
874,446. SURGICAL SPLINT. STANLEY C. SLATER, Bolton, England. Filed Jan. 21, 1907. Serial No. 353,308.



1. In a surgical splint the combination with two tubular rods each slit at the ends and provided with screws and nuts to screw thereon of a hip pad, rods projecting therefrom to enter the hollow rods A and capable of adjustment therein, and a foot rest with rods to enter the other ends of the hollow rods and be secured therein substantially as described and shown.

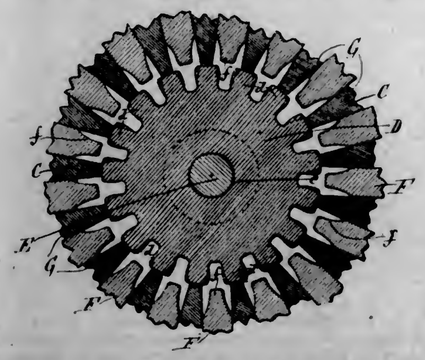
2. In a surgical splint the combination with two tubular rods each slit at the ends and provided with screws, and nuts to screw thereon of a hip pad, rods projecting therefrom to enter the hollow rods A and capable of adjustment therein, and a foot rest with rods to enter the other ends of the hollow rods and be secured therein, a body girth and a bar to attach it to the hip pad, substantially as described.

874,447. WEDGE-CUTTING MACHINE. ALBERT B. SMITH, Sutter, Cal. Filed June 17, 1907. Serial No. 379,476.



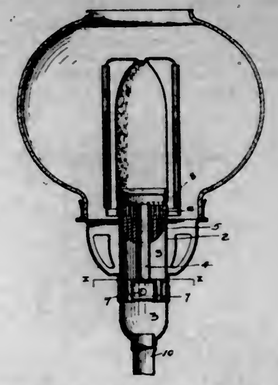
The herein described machine for making wooden wedges comprising a base plate tapered at one of its ends and formed with an outwardly projecting apertured ear, the intermediate portion of said base plate being formed with an enlargement having upon its top longitudinally extending parallel ribs formed integral with said enlargement and having in their opposing faces longitudinal guide grooves, said base plate being also formed at the outer ends of said ribs with a transverse recess to receive the block of wood to be cut into wedges, a stop block arranged upon the top of the base plate between said recess and the outer end of the plate, fastening bolts passed vertically through said stop block and the base plate to removably secure the stop block in position, a knife blade having its side edges slidably engaged in the guide grooves in said ribs and having its outer end beveled to provide a cutting edge and its inner end formed with an integral upwardly projecting apertured ear, a hand lever pivoted at its lower end to the apertured ear on the base plate, and a link pivoted at one end to said lever and at its other end to the ear upon the knife blade, substantially as described.

874,448. METHOD OF MAKING GEAR-WHEELS. WILLIAM H. SMITH, Buffalo, N. Y., assignor of one-half to John R. Keim Mills, Inc., Buffalo, N. Y., a Corporation of New York. Filed Aug. 8, 1906. Serial No. 329,666.



The hereindescribed method of making gear wheels consisting in first rough forming a circular metal blank with an annular row of gear teeth, then heating the blank sufficiently to permit swaging of the same, then subjecting the blank to radial forging pressure simultaneously between all of its teeth for truing the bottom and sides of the teeth, and at the same time limiting the outward movement of the metal at the heads of the teeth so as to true these parts of the teeth, substantially as set forth.

874,449. GAS AND VAPOR BURNER. WILLIAM T. SOLOMON, Pittsburg, Pa., assignor to Robert C. Hall, Pittsburg, Pa. Filed Jan. 30, 1907. Serial No. 354,913.



1. In a gas burner, the combination of a gas passage and a gas pressure regulator comprising a series of concentrically arranged apertures which are smaller at the base and larger at the top, the upper ends of said apertures opening into the surface of the burner.

2. In a gas burner, a gas passage, a gas pressure regulator provided with concentrically arranged tapering apertures smaller at the bottom and larger at the top and opening into the surface of the burner, and an air passage separated from the gas passage and communicating with the gas passage above the gas pressure regulator.

3. In a gas burner, the combination of a gas passage and a gas pressure regulator having apertures which are smaller at the base and larger at the top distributed over the entire area of the burner, said apertures decreasing in length from the center of the burner outward.

4. In a gas burner, the combination of a gas passage, a gas pressure regulator comprising a series of concentrically arranged apertures which are smaller at the base and larger at the top, said apertures opening into the surface of the burner and a series of openings in the wall of the burner above the regulator.

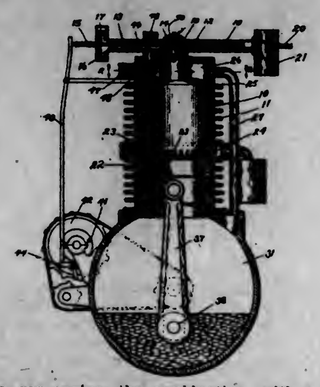
5. In a gas burner, a gas passage, a gas pressure regulator provided with concentrically arranged tapering apertures smaller at the base and larger at the top, and an air passage separated from the gas passage and communicating with the gas passage above the gas pressure regulator, and a series of openings in the wall of the burner above the regulator.

874,450. GAS-ENGINE. ANDREW J. SPICER, Franklin, Ind., assignor, by mesne assignments, of one-half to Elmer C. Russell, Indianapolis, Ind. Filed Oct. 22, 1906. Serial No. 340,011.

1. In a gas engine, the combination, with a combustion chamber having a smaller tubular extension, and a piston mounted in said chamber, of a cooling chamber surrounding the tubular extension, said cooling chamber having a valved inlet and outlet communicating with said chamber at one side of the tubular extension, and a passage forming a communication between that side of the piston opposite the combustion chamber and the cooling chamber at that side of the tubular extension opposite the inlet and outlet, whereby a cooling stream of air is propelled in alternately opposite directions through the cooling chamber, said cooling stream of air being divided and deflected by the tubular extension.

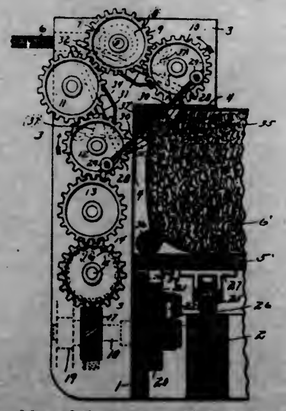
2. In a gas engine, the combination, with a cylinder having a smaller tubular extension, and a piston mounted in said cylinder dividing the same into a combustion chamber communicating with the tubular extension, and a circulation chamber, of a cooling chamber surrounding the tubular extension and having an inlet and outlet com-

municating with said cooling chamber at one side of the tubular extension, a passage extending from the cooling chamber, at a point on the other side of the tubular extension, to the circulation chamber, a fuel inlet leading into the combustion chamber, an air inlet leading into the combustion chamber, a normally closed valve arranged in said air inlet, and means for alternately opening said last mentioned valve intermittently, substantially as and for the purpose set forth.



3. In a gas engine, the combination, with a cylinder having a smaller tubular extension, and a piston mounted in said cylinder dividing the same into a combustion chamber communicating with the tubular extension, and a circulation chamber, of a cooling chamber surrounding the tubular extension and having an inlet and outlet provided with suitable valves and having their outer ends at separated points, said inlet and outlet communicating with said cooling chamber at one side of the tubular extension, a passage extending from the cooling chamber, at a point on the other side of the tubular extension, to the circulation chamber, a fuel inlet leading into the combustion chamber, an air inlet leading into the combustion chamber, a normally closed valve arranged in said air inlet, means for opening said last mentioned valve intermittently, said air inlet passage having valved inlet and outlet branches with outer ends separated, substantially as and for the purpose set forth.

874,451. MACHINE FOR GATHERING THE EDGES OF MATTRESSES FOR STITCHING. HENRY A. STENGEL, Dayton, Ohio. Filed Apr. 10, 1907. Serial No. 367,309.



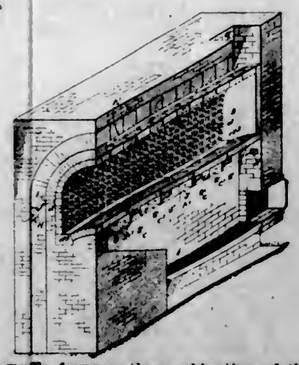
1. In a machine of the type specified, devices adapted to penetrate the edge of a mattress to compress the portion of the mattress filling lying therein, gathering fingers adapted to gather the mattress edge after the filling has been so compressed, means for actuating the compressing devices, and further means for actuating the gathering fingers after the compressing devices have penetrated the mattress.

2. In a machine of the type specified, needles adapted to penetrate opposite sides of the edge of a mattress to compress the mattress filling therein, gathering fingers adapted to engage opposite sides of the edge of a mattress to gather the edge in which the filling has been compressed, rotatable means upon which each of the needles are swiveled, cams for actuating the gathering fingers, and means for actuating said rotatable supports for the needles, and the cams for the gathering fingers.

3. In a machine of the type specified, a table adapted to support a mattress, inclosing guides for the edges of the mattress, piercing devices passing through openings in said inclosing guides and adapted to penetrate opposite sides of the edges of the mattress to compress the mattress filling therein, means for actuating said piercing devices to cause them to penetrate and withdraw from the mattress, gathering fingers penetrating openings in the inclosing guides and adapted to engage the opposite sides of the edges of the mattress after the piercing devices have been made to engage said edges, means for actuating said gathering fingers and said piercing devices from a common source of power, and means for actuating the mattress table from the same source of power.

4. In a machine of the type specified, a mattress table, means for actuating the same, an apertured guide inclosing the upper side edge of the mattress, needles penetrating openings in said guide and adapted to penetrate the portion of the mattress inclosed within the guide, means for actuating said needles to cause them to penetrate the mattress and withdraw therefrom, gathering fingers penetrating said guide and adapted to gather the edge of the mattress at a point lying inwardly from the point of penetration of the needles, and means for actuating said fingers to cause them to engage the edge of the mattress after the needles have penetrated the same.

874,452. MUFFLE-FURNACE. EDWARD L. STINE, Buffalo, N. Y., assignor to The Republic Metalware Company, Buffalo, N. Y., a Corporation of New York. Filed May 23, 1906. Serial No. 318,412.



1. In a muffle furnace, the combination of the combustion chamber, a muffle arranged above said chamber lengthwise of the furnace and separated from the furnace-walls by an intervening longitudinal exit-flue for the products of combustion, and a hot air flue arranged in the side wall of the furnace lengthwise of the muffle and adjacent to said exit-flue, said hot air flue communicating with the atmosphere and leading to the combustion chamber, substantially as set forth.

2. In a muffle furnace, the combination of the combustion chamber, a muffle arranged above said chamber lengthwise of the furnace and separated from the furnace-walls by an intervening longitudinal exit-flue for the products of combustion, the muffle being closed at its top and sides to isolate its interior from said flue, and hot air flues arranged in the side walls of the furnace lengthwise of the muffle and adjacent to said exit flue, said hot air flues extending from the end of the furnace throughout the length of the exit flue and communicating at their rear ends with the combustion chamber, substantially as set forth.

3. In a muffle-furnace, the combination of the combustion chamber, a muffle arranged above said chamber lengthwise of the furnace and separated from the furnace-walls by an intervening exit flue for the products of combustion, and longitudinal hot air flues arranged in the side walls of the furnace adjacent to said exit flue and extending from the front end of the furnace throughout the length of said exit flue and thence inwardly and downwardly adjacent to the closed rear end of the muffle and into the combustion chamber, substantially as set forth.

4. In a muffle furnace, the combination of the combustion chamber, and a muffle separated from the furnace-walls by an intervening flue for the products of combustion, the walls of the muffle being constructed of comparatively thick refractory blocks laid in courses and provided in their inner sides which face the interior of the muffle with recesses terminating short of their backs, the closed backs of the blocks forming the inner wall of said flue and preventing communication between the same and the muffle, substantially as set forth.

874,453. CEMENT FENCE-POST. WILLIAM W. STOUT, Somerset, Ind. Filed Aug. 13, 1907. Serial No. 388,393.



In a fence post, composed of cement having transverse apertures, said posts having metallic cores provided with corrugations or serrations 12, fastening means for the line wires, comprising a single piece of wire bent in its center and upon itself to form a loop, adapted to be inserted through said apertures, the said loop having a plurality of serrations to engage the line wires to prevent longitudinal displacement thereof, the portion of the wire beyond the loop surrounding the body of the post and having its ends coiled about the line wires, as and for the purpose specified.

874,454. RAILWAY-SPIKE. ERNEST SWANSON, Bay City, Mich. Filed May 10, 1906. Serial No. 316,091.

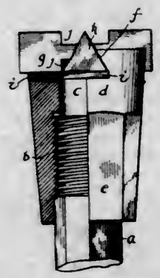
1. A spike comprising an overhanging head, a rectangular neck, a triangular body and projecting divergent wings on that face of the spike opposite the overhanging head, the wings extending from points near the lower end of the rectangular neck and merging into the triangular body.

2. A spike comprising an overhanging head, a rectangular neck, a triangular body, that side of the body furthest removed from the overhang of the head being provided with a sharp angular edge, the upper end of the angular edge merging into the rectangular neck, and divergent projecting wings springing from points near the lower end of the rectangular neck furthest removed from the overhang of the head and on opposite ends of the upper end of the angular edge, the wings merging into the triangular body on opposite sides of the angular edge thereof and laterally of the overhanging head, the wings adapted to automatically incline the head of the spike toward the rail.



3. The combination in a triangular spike, of a point comprising a chisel edge, one face of the spike at its point being unrelieved, a rib gradually increasing in size springing from the chisel edge opposite the unrelieved face and from a point near the center thereof, the unrelieved face of the point of the spike being curved toward the ribbed face to form a scooped point, those portions of the ribbed face lying between the rib and the side edges of the unrelieved face coöperating to form gradually disappearing recesses on opposite sides of the rib at the point of the spike.

874,455. ROCK-DRILL. FREDERICK V. W. SWANTON and BURT PRICE, Braamfontain, Johannesburg, Transvaal. Filed July 12, 1907. Serial No. 383,545.



1. In a rock drill, a bit stock having undercut grooving on the face, triangular cutting means located in the grooved face and having an interlocking relation with each other and means for applying pressure to the underside of such cutting means to lock the same in position.

2. A rock drill comprising in combination a shank, a bit stock movable longitudinally thereupon and having undercut grooving on the face triangular cutting means located in the grooved face and having an interlocking relation with each other and means operating upon relative movement of shank and stock to apply pressure to the underside of the cutting means to lock the same in position.

3. A rock drill comprising in combination a threaded shank, a bit stock threaded to screw thereon, said stock having undercut grooving in the face, triangular bits fitting therein and so disposed as to be engaged by the extremity of the shank and to interlockingly engage each other.

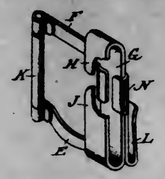
4. A rock drill comprising in combination a threaded shank, a bit stock screwed thereon and having under cut

grooving in the face, triangular bits fitting therein, pressure plates under the bits, said plates being adapted to be engaged by the extremity of the shank and to distribute the pressure therefrom evenly over the bits.

5. A "star" rock drill comprising a threaded shank, a bit stock screwed thereon and having two intersecting undercut grooves formed in the face, short triangular bits located in one such groove, a long triangular bit located in the other groove and having recesses for locking with the short bits, resilient pressure plates under the bits adapted to be engaged by the extremity of the shank and being initially curved so as to distribute the pressure from the shank evenly over the bits.

[Claim 6 not printed in the Gazette.]

874,456. TIE-SLIDE. WILLIAM TEMPLIN, Chicago, Ill. Filed Jan. 28, 1907. Serial No. 354,457.



1. In a tie slide the combination of a frame detachably secured to the collar and comprising a roller over which and a holder through which the tie passes.

2. A tie slide comprising a frame, a clamp thereon to secure it to the collar, a roller mounted in one end of the frame, and a tie holder in the other end of the frame.

3. A tie slide comprising a frame adapted to lie along the collar with a vertically sliding adjustable spring or yielding clamp on one side of the collar, and a tie holder through which the tie passes on the other side.

4. A tie slide comprising a central open frame, with top and bottom pieces connected together at one end and carrying the roller at the other end of the slide, a holder formed on one end of the frame through which the tie passes, and a collar clamp to hold the slide to the collar.

5. In a tie slide the combination of a frame detachably secured to the collar and comprising a roller over which and a holder through which the tie passes, said collar clamp movably mounted on the frame.

[Claims 6 to 10 not printed in the Gazette.]

874,457. CAN-OPENER. LOUIS P. THERRIAULT, Bonfield, Ontario, Canada. Filed Aug. 10, 1907. Serial No. 388,021.

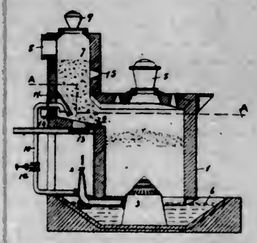


1. A can opener comprising the combination of a handle, a tang carried by the handle and provided with a shoulder, a body provided with a bifurcated end disposed over the shoulder, a pin disposed through the bifurcated end of the body and the shoulder, and a cutting blade adjustably secured on the body.

2. A can opener comprising the combination of a handle provided with a pocket in one side, a tang carried by the handle, a body pivotad to the tang and provided with an offset pointed end, a sleeve adjustably disposed on the body and provided with a cutting blade, adapted to enter said pocket when the body is folded against the handle, and a set-screw carried by the sleeve adapted to lock the same on said body.

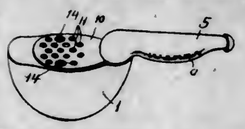
874,458. GAS-PRODUCER. WILLIAM TOWNS, Liverpool, England. Filed Nov. 18, 1905. Serial No. 287,152.

1. The combination with a gas producer of a vertical purifying chamber arranged laterally to the gas producer and provided with a gas outlet at its upper end and constructed to contain nonbituminous material and having approximately horizontal lateral passage from the lower part into the upper part of the producer and regulable air supply to the chamber disposed on the opposite side thereof to the crude gas inlet and separated therefrom by the mass of nonbituminous carbonaceous material substantially as described.



2. The combination with a gas producer of a vertical purifying chamber arranged laterally to the gas producer and provided with a gas outlet at its upper end and constructed to contain nonbituminous material and having an approximately horizontal lateral passage from the lower part into the upper part of the producer, a grate disposed on the opposite side of the chamber to the crude gas inlet and separted therefrom by the mass of nonbituminous carbonaceous material, and a regulable air supply to the chamber under the grate, substantially as described.

874,459. PIPE. LORING UNDERWOOD, Belmont, Mass. Filed July 22, 1907. Serial No. 385,011.



1. As an article of manufacture, a pipe for smoking comprising a bowl formed with a tobacco pocket, a stem swiveled to the bowl so as to swing directly over and cover the pocket thereof, and a perforated plate also swiveled to the bowl on the pivot of the stem so as to extend across the pocket, being retained by the stem.

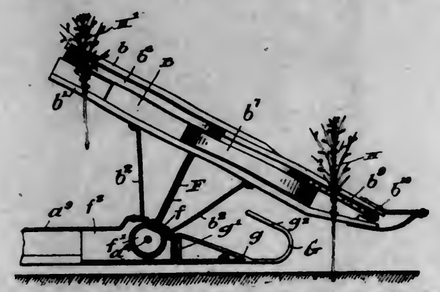
2. As an article of manufacture, a pipe for smoking comprising a bowl formed with a tobacco pocket, a stem swiveled to the bowl and projecting laterally from the swivel so as to swing directly over and cover the pocket thereof, and a perforated plate secured pivotally to the top of the bowl coaxially with the stem so that it may be swung over the pocket and be covered by the stem.

3. A pipe comprising a bowl having a tobacco pocket, a perforated plate pivoted to the bowl so as to swing over the pocket and formed with rounded protuberances adapted to swing into the pocket and engage opposite sides thereof to prevent displacement, and a stem swiveled to the bowl above said plate, bearing upon the latter so as to hold it against the top of the bowl.

4. A pipe comprising a bowl having a tobacco pocket, a socket beside the same, and a passage between the pocket and socket; a stem having a nipple contained in said socket, about which the stem is adapted to turn swivelly so as to extend over the tobacco pocket, said stem having also an enlargement forming a cover for the pocket; and a perforated plate arranged to swing about said stem nipple and to extend over said pocket between the top of the bowl and the stem, being held against the top of the bowl by the stem.

5. A pipe comprising a bowl having a tobacco pocket, a perforated plate pivoted to the bowl so as to swing across the pocket or away therefrom to uncover the same, and a stem swiveled coaxially with the cover to the bowl bearing upon the cover so as to hold it on the top of the bowl, and so shaped and extended as to be capable of extending over and covering both the plate and the pocket, the stem being provided with an intermediate enlargement for that purpose.

874,460. FLAX-PULLING MACHINE. CHARLES H. VESSOT, Ottawa, Ontario, Canada. Filed Dec. 29, 1905. Serial No. 293,866.



1. In a device of the class described the combination with two abutting flax pulling belts, of means for rotating the same and a means for shaking the mud from the roots of the flax suitably placed below said belts as and for the purpose specified.

2. In a device of the class described the combination with a suitable upper and lower covering of a plurality of rollers, slidably supported bearing blocks for the same, compression springs normally holding said bearing blocks in their outermost position, a rod abutting the opposite ends of the springs of all the bearing blocks on one side of the casing, and cam means for moving said rod to compress said springs as and for the purpose specified.

3. In a device of the class described the combination with the flax pulling belts of a mud shaker located below the flax pulling belts comprising an oscillating arm provided with an upwardly extending portion and means for oscillating said arm as and for the purpose specified.

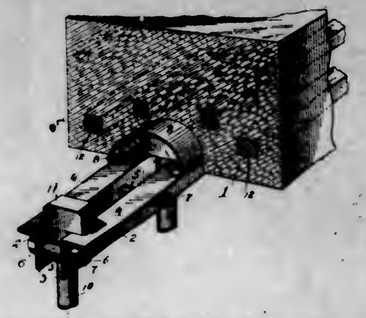
4. In device of the class described the combination with a plurality of pulling and carrying means of a plurality of mud shakers located below the same, comprising pivoted arms provided with upwardly extending portions, a rod connecting all of said arms and means for communicating a reciprocating movement to said rod as and for the purpose specified.

5. In a flax pulling machine the combination with two central driving pulleys and means for rotating the same of contacting flax pulling belts extending partially around the pulleys and forwardly and downwardly at an angle to the horizontal and contacting carrying belts also extending around the central pulleys and rearwardly therefrom and adapted to carry the flax after it has been pulled by the first belts, and engaging belts extending forward from the front ends of the pulling belts and horizontal carrying belts transversely extending beneath the rear ends of the pulling belts, as and for the purpose specified.

874,461. CONCRETE STRUCTURE AND HANGER-SUPPORT. ARTHUR F. WALKER, Atlanta, Ga. Filed Mar. 27, 1907. Serial No. 364,886.

1. The combination of a mass of concrete, a pair of parallel angle bars embedded therein and arranged along the lower edge thereof, one member of each angle iron being vertical and the other member being horisontal, the vertical members of the angle irons being parallel and separated a suitable distance from each other and the horisontal members extending outwardly from the upper edge of the vertical members and over a mass of concrete, and means for spacing the vertical members from each other.

2. The combination of a mass of concrete, a pair of parallel angle bars embedded therein and arranged along the lower edge thereof, one member of each angle iron being vertical and the other member being horisontal, the vertical members of the angle irons being parallel and separated a suitable distance from each other and the horisontal members extending outward from the upper edge of the vertical members, tubular spacing devices between the vertical members, and bolts passing through the vertical members and through said spacing devices to hold said members against the spacing means.



3. The combination of a mass of concrete, a pair of parallel angle bars embedded therein and arranged along the lower edge thereof, one member of each angle iron being vertical and the other member being horisontal, the vertical members of the angle irons being parallel and separated a suitable distance from each other and the horisontal members extending outward from the upper edge of the vertical members, tubular spacing devices between the vertical members, and bolts passing through the vertical members and through said spacing devices to hold said members against the spacing devices.

4. The combination of a mass of concrete, a pair of parallel angle bars embedded therein and arranged along the lower edge tnereof, one member of each angle iron being vertical and the other member being horisontal, the vertical members of the angle irons being parallel and separated a suitable distance from each other and the horisontal members extending outward from the upper edges of the vertical members, means for spacing the vertical members from each other, and a cap piece secured to the horizontal members.

5. The combination of a mass of concrete, of a pair of parallel angle bars embedded therein and arranged along the lower edge thereof, one member of each angle iron being vertical and the other member being horisontal, the vertical members of the angle irons being parallel and separated a suitable distance from each other and the horisontal members extending outward from the upper edges of the vertical members, means for spacing the vertical members from each otner, and means to prevent the concrete entering the space between the angle irons.

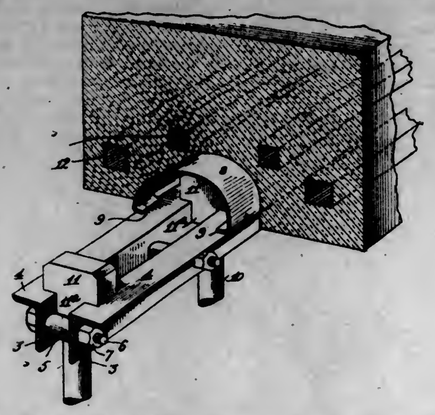
[Claims 6 to 12 not printed in the Gazette.]

874,462. CONCRETE STRUCTURE. ARTHUR F. WALKER, Atlanta, Ga. Filed Aug. 15, 1907. Serial No. 388,724.

1. In combination, a concrete structure having embedded in its under side metallic means forming a channel therein opening downwardly, and a hanger-bolt having a head portion at its upper end adapted to pass up into said channel and be supported therein when turned, said hanger bolt having an angular portion 11^a between said head and the main shank of the hanger bolt, said portion being adapted to fit down between the vertical side walls of the channel and thus lock the hanger bolt against rotation.

2. In combination, a concrete structure, a channel-forming device embedded in the under side thereof and consisting of sheet metal bent to form vertical separated members or plates whose lower edges terminate approximately at the lower face of the concrete structure, horisontal members projecting laterally from the upper edges of said

vertical members and resting directly upon the main mass of concrete, and a cap or arch portion connecting the outer edges of the horizontal members and forming a closed channel.



3. In combination, a concrete structure, a channel-forming device embedded in the under side thereof and consisting of sheet metal bent to form vertical separated members or plates whose lower edges terminate approximately at the lower face of the concrete structure, horizontal members projecting laterally from the upper edges of said vertical members and resting directly upon the main mass of concrete, and a cap or arch portion connecting the outer edges of the horizontal members and forming a closed channel, said lower edges of the vertical members being provided with upturned flanges embedded in the concrete mass and having anchoring rods connected thereto.

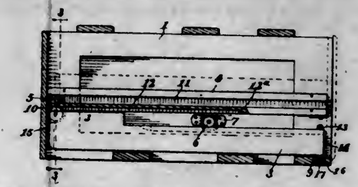
4. In combination, a concrete structure, a channel-forming device embedded in the under side thereof and consisting of sheet metal bent to form vertical separated members or plates whose lower edges terminate approximately at the lower face of the concrete structure, horizontal members projecting laterally from the upper edges of said vertical members and resting directly upon the main mass of concrete, and a cap or arch portion connecting the outer edges of the horizontal members and forming a closed channel, said lower edges of the vertical members being provided with upturned flanges embedded in the concrete mass and terminating short of the horizontal members and having anchoring rods connected thereto and extending up into the beam.

5. In combination, a concrete structure, a channel-forming device embedded in the under side thereof and consisting of sheet metal bent to form vertical separated members or plates whose lower edges terminate approximately at the lower face of the concrete structure, horizontal members projecting laterally from the upper edges of said vertical members and resting directly upon the main mass of concrete, and a cap or arch portion connecting the outer edges of the horizontal members and forming a closed channel, the lower edges of the aforesaid vertical members being turned abruptly upward and terminated short of the horizontal members and provided with anchoring rods extending up into the beam, and reinforcing rods embedded in the beam under said horizontal members.

874,463. DRAWER-GUIDE. LAWRENCE H. WALKER, Muskegon, Mich., assignor to The Shaw Walker Company, Muskegon, Mich., a Corporation of Michigan. Filed Mar. 23, 1907. Serial No. 364,012.

1. The combination of a case, ways fixed on the sides of the case, slides longitudinally movable between the ways and the bottom of the case and guided thereby, a drawer movably supported near the middle by the slides, and means for movably supporting the rear end of the drawer upon the ways.

2. The combination of a case, ways fixed on the sides of the case and having grooves in their lower edges, slides longitudinally movable beneath the ways, wheels journaled near the rear upper corners of the slides and traversing the grooves, a drawer movably supported near the middle by the slides, and means for movably supporting the rear end of the drawer on the ways.



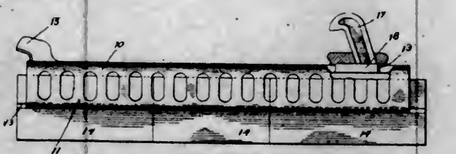
3. The combination of a case, ways fixed on the sides of the case and having grooves in their inner sides, slides longitudinally movable between the ways and the bottom of the case and guided thereby, a drawer movably supported near the middle on the slides, and wheels journaled on the sides of the drawer near the rear thereof and traversing the grooves in the ways.

4. The combination of a case, ways fixed on the sides of the case and having grooves in their lower edges and grooves in their inner sides, slides longitudinally movable beneath the ways, wheels journaled on the rear ends of the slides and traversing the grooves in the lower edges of the ways, a drawer, wheels on the sides of the drawer near the middle thereof and traversing the upper edges of the slides, and wheels on the sides of the drawer near the rear thereof and traversing the grooves in the inner sides of the ways.

5. The combination of a case, ways fixed on the sides of the case and having grooves in their lower edges and grooves in their inner sides, slides longitudinally movable beneath the ways and having vertically reduced forward ends, wheels journaled on the rear ends of the slides and traversing the grooves in the under edges of the ways, a drawer, wheels on the sides of the drawer and traversing the grooves in the inner sides of the ways, wheels on the sides of the drawer traversing the upper edges of the forward ends of the slides, and casings for the last named wheels, said casings having downwardly projecting outer sides slidably engaging the outer sides of the slides.

[Claims 6 to 8 not printed in the Gazette.]

874,464. ARCH-HANGER FOR FURNACES. HENRY E. WALLIS, Terre Haute, Ind., assignor to Wallis Stoker and Manufacturing Co., Terre Haute, Ind., a Corporation of Indiana. Filed Apr. 12, 1907. Serial No. 367,808.



1. An arch-hanger, comprising a main body having a pair of depending fingers each provided with an inwardly projecting lug, and a pair of hanger hooks carried by the main body, one of said hooks being movable.

2. An arch-hanger, comprising a main body having a pair of depending fingers each provided with an inwardly projecting lug, an inwardly projecting hook carried by said body at one end, and a movable hook projected through the main body at the other end.

874,465. KNIT MUFFLER. JOHN H. WAY, St. Davids, Pa. Filed June 4, 1907. Serial No. 377,159.

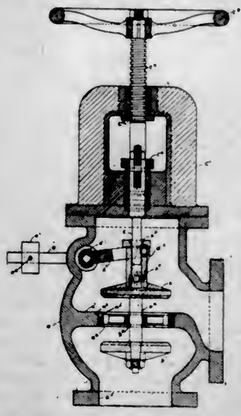
4. A knit muffler having a body portion of laterally elastic knit fabric, and a collar portion centrally united to the top of the body portion consisting of similar fabric folded over to form a collar, and edged by courses of rack stitch, whereby the collar portion is caused to flare, while the body portion remains flat.



2. A knit muffler having a body portion of laterally elastic knit fabric, and a collar portion centrally united to the top of the body portion consisting of similar fabric folded over to form a collar and edged by courses of rack stitch, whereby the collar portion is caused to flare, and short lines of radial stitching which maintain the collar portion in flat annular shape.

3. A knit muffler having a body portion, of laterally elastic knit fabric and a collar portion with a welt course across the collar, along which the collar is folded, said collar portion being edged by courses of rack stitching whereby the collar portion is caused to flare, while the body portion remains flat.

874,466. VALVE. HENRY F. WEINLAND, Springfield, Ohio, assignor to The Lagonda Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed May 13, 1907. Serial No. 373,294.



1. A valve, a valve casing having an inlet and outlet, devices to hold the valve in open position against a predetermined pressure in either direction, and means accessible while the valve is under pressure, to adjust said devices to varying pressures.

2. A valve casing having an inlet and outlet, a valve adapted to close either the inlet or outlet, devices to hold the valve in open position against a predetermined pressure in either direction, and means, accessible while the valve is under pressure, to adjust said devices to varying pressures.

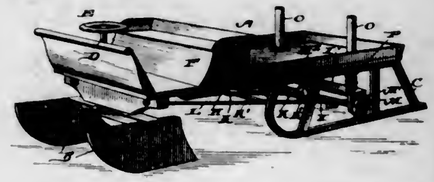
3. A valve, a valve casing having an inlet and outlet, an elastic stop having a connection with the valve and adapted to resist the movement of the valve, and means, accessible while the valve is under pressure, to adjust the stop to varying pressures.

4. A valve, a valve casing having an inlet and outlet, a spring having a connection with the valve and adapted to resist the movement of the valve, and means, accessible while the valve is under pressure, to adjust the spring to varying pressures.

5. A valve, a valve casing having an inlet and outlet, a tension device having a connection with the valve and adapted to resist the movement of the valve, and means, accessible while the valve is under pressure, to adjust the tension device to varying pressures.

[Claims 6 to 27 not printed in the Gazette.]

874,467. AUTOMOBILE-SLEIGH. WILLIAM C. WEISS, Milwaukee, Wis. Filed Dec. 31, 1903. Serial No. 187,329.



The combination with a sleigh body mounted on runners, of spaced rods mounted in said body carrying a beam with downwardly projecting ends, springs surrounding said rods between said beam and body, an axle mounted in the downwardly projecting ends of the beam provided with spur wheels at its ends, side bars connecting said axle to said body provided with cross bars, a shaft mounted on said cross bars provided with a bevel gear at each end, a bevel gear carried by the axle meshing with one of the gears of the shaft and a drive shaft provided with a bevel gear meshing with the bevel gear at the other end of the shaft, for the purpose described.

874,468. SHUTTER STAY AND ADJUSTER. THOMAS A. WESTON, Arden, N. C. Filed Oct. 31, 1903. Serial No. 179,385.



1. A shutter stay having slidable stay rods, a friction bracket and two superposed pivoted connections at right angles to each other between said bracket and stay rods whereby said parts have universal motion with relation to each other, substantially as described.

2. A shutter stay having slidable stay arms, a bracket, a plug adapted for frictional action within aforesaid bracket, said plug being provided with a vertically slotted base adapted to receive the end of the stay arm and further provided with a pivot whereby the said stay arm and bracket are universally jointed to each other.

3. A pivot pedestal for shutter stays and the like, having a base adapted to fit on any angle and a stationary pivot part adapted to occupy a vertical position irrespective of the base, substantially as described.

4. A pivot pedestal for shutter stays and the like, comprising a cupped base having a central opening, a screw, a ball fitting the screw, said ball occupying a position in said opening and said screw securing the base to the sill, substantially as described.

5. A pivot pedestal for shutter stays, comprising a disk secured to the sill, a cupped base embracing said disk and a central pivot screw passing through the cup and disk.

874,469. SELF-HEATING SOLDERING-IRON. JAMES B. WHEATLEY, Kansas City, Mo. Filed Mar. 2, 1905. Serial No. 248,172.



1. The combination with a reservoir having two outlets, of a closure for one of said outlets, and a movable weight actuated by gravity for alternately moving said closure to open and close its outlet.

2. The combination with a reservoir having two outlets, of a closure for one of said outlets, and a slidable weight connected to said closure and movable to and fro by the tilting of the reservoir.

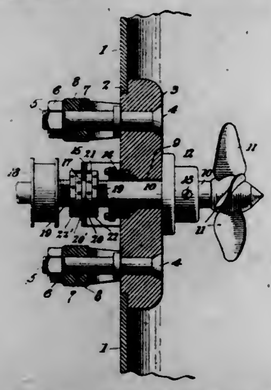
3. The combination with a reservoir having two outlets one of which is always open, of a closure for the other outlet, and a slidable weight connected to said closure.

4. The combination with a reservoir having two outlets of a burner communicating with said outlets, a closure for one of said outlets, and a gravity actuated weight connected with said closure.

5. The combination with a reservoir having two outlets of a burner communicating with said outlets, a closure for one of said outlets, and a slidable weight connected with said closure.

[Claims 6 to 13 not printed in the Gazette.]

874,470. CIRCULATOR FOR STEAM-BOILERS. EDWIN J. WHEELER, Brooklyn, N. Y. Filed Mar. 26, 1907. Serial No. 364,591.

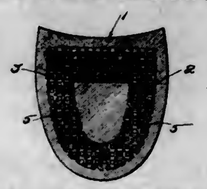


1. The combination of a boiler provided with a man-hole having a removable cover, means for securely locking the cover in place, a rotary shaft 10 extending through said man-hole cover and having a bearing thereon, an agitator mounted upon the inner part of said shaft so as to be maintained within the body of water within the boiler.

2. The combination of a boiler provided with a man-hole having a removable cover, means for securely locking the cover in place, a rotary shaft 10 extending through the said man-hole cover and having a bearing thereon, an agitator mounted upon the inner part of said shaft so as to be maintained within the body of water within the boiler, a collar 12 mounted upon the inner part of said shaft, and an adjustable bearing for the shaft located upon the exterior of the said man-hole cover.

3. The combination of a boiler provided with a man-hole having a removable cover, means for securely locking the cover in place, a rotary shaft 10 extending through said man-hole cover and having a bearing thereon, an agitator mounted upon the inner part of said shaft so as to be maintained within the body of water within the boiler, a collar 12 mounted upon the inner part of said shaft, a bracket 15 secured upon the exterior of said cover and provided with a perforation 17 through which said shaft passes, nuts 20 and 22 mounted upon said shaft 10 upon opposite sides of the bracket 15, for receiving the end thrust of the shaft.

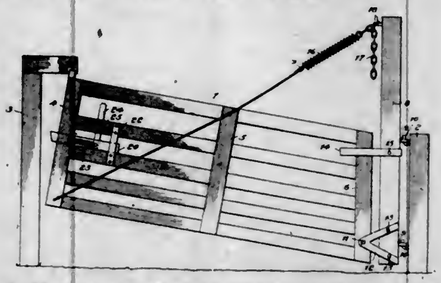
874,471. RUBBER HEEL, FRANK W. WHITCHER, Boston, Mass. Filed Oct. 24, 1906. Serial No. 340,250.



1. A rubber heel provided with a meshed plate embedded therein, said plate being integral in itself and formed with a large number of holes in close proximity to one another more than the number of nails to be used in attaching the heel to the shoe, the intermediate portion of the plate between the perforations being constructed to form partitions between the holes on all sides thereof with sloping sides and narrow edges, whereby nails driven into the heel at any point against the mesh plate will be deflected into one of the holes in the mesh plate.

2. A rubber heel provided with a meshed plate embedded therein formed with holes for the passage of nails, the partitions between the perforations being V-shaped in cross-section towards the wearing surface of the heel.

874,472. FARM-GATE. CLYDE F. WILSEY, Ashley, Ind. Filed May 15, 1907. Serial No. 373,785.



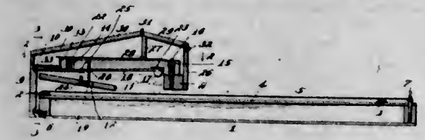
1. In a gate, a swinging upright, brackets upon the lower end of the same, guide arms projecting from said upright intermediate its ends, a gate body having an angular inner end pivoted at its lower and inner corner between said brackets and adapted to have its inner end swing between said arms, a hook upon the upper portion of said upright, a spring connected at one end to the outer portion of said gate and a chain connected to the other end of the spring and adapted to engage said hook to adjustably support the gate body, substantially as described.

2. In a gate, a hinge post, a latch post, an upright hinged to the hinge post, a gate body having an angular inner end pivoted at its lower corner to said upright, a guide for the upper portion of the inner end of the gate body, an inwardly extending arm upon the latch post provided with a keeper, means upon the upper and outer portion of the gate body to engage said keeper and means for adjustably supporting the body in a tilted position, substantially as described.

3. In a gate, a hinge post, a latch post, an upright hinged to the hinge post, a gate body having an angular inner end pivoted at its lower corner to said upright, a guide for the upper portion of the inner end of the gate body, an inwardly extending arm upon the latch post provided with a keeper recess, a projection upon the upper and outer portion of the gate body to engage said keeper

recess and an adjustable connection between the outer portion of the gate body and the upper portion of said upright for holding the gate body in a tilted position, substantially as described.

874,473. DULCIMER-ACTION. NICHOLAS J. WINLUND, Rockford, Ill. Filed July 30, 1907. Serial No. 386,296.



1. In combination, a key, a hammer and its stem and a spring connecting and normally maintaining the hammer and stem in close contact with the under side of the key, substantially as described.

2. In combination, a key-rail, a key mounted thereon, a hammer-rail, a hammer mounted thereon by means of its stem and a spring connecting and normally maintaining the hammer and its stem in close contact with the under side of the key, and said key at its upper limit of travel, substantially as described.

3. In combination, a key-rail, a key mounted thereon, a hammer-rail, a hammer mounted thereon by means of its stem, a spring connecting and normally maintaining the hammer and its stem in close contact with the under side of the key and said key at its upper limit of travel and an adjusting-screw for limiting the downward travel of the hammer and its stem, substantially as described.

874,474. WEATHER-STRIP FOR DOORS. WILLIAM L. WISE, Kansas City, Mo., assignor of one-half to Gustavus W. Smith, Kansas City, Mo. Filed Aug. 22, 1906. Serial No. 331,666.

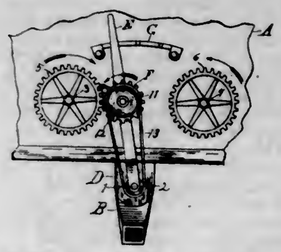


1. A weather strip for doors, comprising a spring metal angle plate having one arm disposed vertically and secured to the outer side of the door and its other arm extending downwardly and outwardly, a reinforce bar, means for securing the same to the upper and outer side of the last-named arm below the longitudinal center of the latter, and a molding secured to the outer side of the door and having its lower edge concaved or hollowed and overhanging the upper edge of said reinforce bar and adapted to limit outward movement of said edge.

2. A weather strip for doors, comprising a spring metal angle plate having one arm disposed vertically and secured to the outer side of the door and its other arm extending downwardly and outwardly, a reinforce bar, means for securing the same to the upper and outer side of the last-named arm below the longitudinal center of the latter, and a molding secured to the outer side of the door and having its lower edge concaved or hollowed and overhanging the upper edge of said reinforce bar and adapted to limit outward movement of said edge, in combination with means secured to the jamb of the door frame at the hinge side of the door and adapted to be engaged by the reinforce bar and force the latter with the lower arm of the angle plate down upon the door sill.

3. A weather strip for doors, comprising a spring metal angle plate having one arm disposed vertically and secured to the outer side of the door and its other arm extending downwardly and outwardly, a reinforce bar, means for securing the same to the upper and outer side of the last-named arm below the longitudinal center of the latter, and a molding secured to the outer side of the door and having its lower edge concaved or hollowed and overhanging the upper edge of said reinforce bar and adapted to limit outward movement of said edge, in combination with means secured to the jamb of the door frame at the hinge side of the door and adapted to be engaged by the reinforce bar and force the latter with the lower arm of the angle plate down upon the door sill, and a coöperating stop secured to the opposite jamb and adapted to engage the opposite end of the reinforce bar.

874,475. GRAIN-AUGER MECHANISM. HENRY P. YOST, Tekonsha, Mich. Filed Jan. 14, 1907. Serial No. 352,120.



1. In a device of the class, two oppositely-revoluble shafts, a grain auger and means by which said auger may be reversed by engagement from one of said shafts to another.

2. In a device of the class, two oppositely-revoluble shafts, a grain auger, a lever, means by which said auger may be reversed by the shifting of said lever in its relation, from one of said shafts to another.

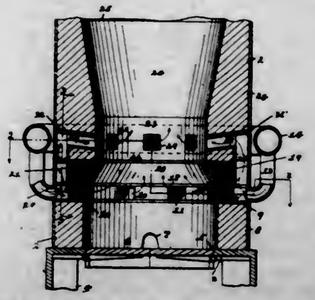
3. In a device of the class, two oppositely-revoluble shafts, a grain auger, a lever pivotally suspended between said shafts, and means by which said auger may be reversed by the shifting of said lever in its relation, from one of said shafts to another.

4. In a device of the class, two oppositely-revoluble shafts, a grain auger, a lever axially supported from said auger and means by which said auger may be reversed by the shifting of said lever in its relation, from one of said shafts to another.

5. In a device of the class, two oppositely-revoluble shafts, a grain auger situated therebetween, a lever and means by which said auger may be reversed by the shifting of said lever in its relation to and from one shaft to another.

[Claims 6 to 8 not printed in the Gazette.]

874,476. CUPOLA-FURNACE. MICHAEL ZIPPLER, Allegheny, Pa. Filed Mar. 13, 1907. Serial No. 362,206.



1. A cupola-furnace having a casing, a lining within said casing formed with an inwardly projecting fire-brick or clay portion at the base thereof and having air supply flues leading through said lining into said furnace below said projecting portion, and compound twyers in said lining and against said casing having air supply flues connecting said first named flues and leading up from the same and into the furnace through said projecting portion.

2. A cupola-furnace having a casing, a lining within said casing formed with an inwardly projecting fire-brick or clay portion at the base thereof and having air supply flues leading through said lining into said furnace below said projecting portion, and compound twyers in said lining and against said casing having a vertical air supply flue connecting said first named flues and leading up from the same and a horizontal air supply flue connecting said vertical flue and leading into said furnace and through said projecting portion.

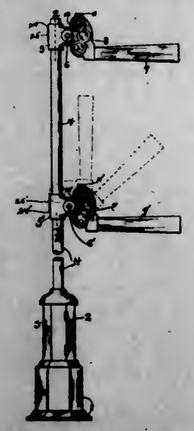
3. A cupola-furnace having its lining formed with an inwardly projecting fire-brick or clay portion at the base thereof and having air supply flues leading up through said lining and into the furnace below said projecting portion, and compound twyers in said lining and against said casing having a vertical passage-way leading up from said first named flues and a horizontally inclined passage-way connecting said vertical passage-way and leading into the furnace through said projecting portion.

4. A cupola-furnace having a casing, a lining formed with an inwardly projecting fire-brick or clay portion at the base thereof and having air supply flues leading through said lining into the furnace below said projecting portion, and compound twyers in said lining and against said casing formed of metal flue boxes for connecting said flues and having a vertical passage-way leading up from said first named flues and a horizontally inclined passage-way connecting said vertical passage-way and leading into the furnace through said projecting portion.

5. A cupola-furnace having its lining formed with an inwardly projecting fire-brick or clay portion at the base thereof and having air supply flues leading through said lining into the furnace below said projecting portion, and metal flue boxes connecting said flues and formed of a vertical portion and a substantially horizontal twyer portion leading into the furnace through said projecting portion and said twyer portion being removably connected to said vertical portion.

[Claim 6 not printed in the Gazette.]

874,477. RAILWAY-SIGNAL. HARRY M. ABERNETHY, Cleveland, Ohio, assignor to The American Railway Signal Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 3, 1906. Serial No. 309,674.



1. In a railway signal, the combination of a signal mast, two signals mounted on said mast, independent operating mechanism for each signal, an electric motor, means for independently connecting the operating mechanism of each signal with said motor, independently electrically controlled devices for operating the said means, independently electrically controlled devices for locking the operating mechanism of each signal, a signal circuit for supplying the current to said motor and said devices, track circuits opened and closed by the passing of trains, means arranged in the track circuits for opening and closing the signal circuit and means actuated by each signal operating mechanism for opening and closing the signal circuit and cutting out the part of the signal circuit which controls the other signal.

2. In a railway signal, the combination of a signal mast, two signals mounted on said mast, an electric motor, clutch members mounted on each end of said motor shaft, independent operating mechanism connected with each signal and arranged to be connected with the motor by the operation of said clutch members, two solenoids, plungers arranged in the solenoids and operatively connected with the clutch members, a signal circuit for supplying the current to said motor and said solenoids, track circuits opened and closed by the passing of trains, means arranged in the track circuits for opening and closing the signal circuit, and means actuated by each signal operating mechanism for opening and closing the signal circuit.

3. In a railway signal, the combination of a signal mast, two signals mounted on said mast, an electric motor, clutch members mounted on each end of said motor shaft, independent operating mechanism connected with each signal and arranged to be connected with the motor by the operation of said clutch members, two solenoids, plungers arranged in said solenoids and operatively connected with the clutch members, a trip latch for locking said operating mechanism of each signal, an arm arranged to trip said latch, an electro-magnet arranged to hold said arm away from said latch, a signal circuit for supplying the current to said motor, said solenoid and said electro-magnet, track circuits opened and closed by the passing of trains, means arranged in the track circuits for opening and closing the signal circuit and means actuated by each signal operating mechanism for opening and closing the signal circuit and cutting out the part of the signal circuit which controls the other signal.

4. In a railway signal, the combination of a signal mast, two semaphores journaled on said mast and counterweighted so as to assume the danger position, means for locking each semaphore in the danger position, independent operating mechanism connected with each semaphore, means for automatically unlocking each semaphore when the mechanism for operating the semaphore is set in motion, an electric motor, means for independently connecting the operating mechanism of each semaphore with said motor, independently electrically controlled devices for locking the operating mechanism of each semaphore, a signal circuit for supplying the current to said motor and said devices, track circuits opened and closed by the passing of trains, means arranged in the track circuits for opening and closing the signal circuit and means actuated by each semaphore operating mechanism for opening and closing the signal circuit and cutting out the part of the signal circuit which controls the other signal.

5. In a railway signal, the combination of a signal mast, two semaphores journaled on said mast and counterweighted so as to assume the danger position, means for locking each semaphore in the danger position, independent operating mechanism connected with each semaphore, means for automatically unlocking each semaphore when the mechanism for operating the semaphore is set in motion, an electric motor, means for independently connecting the operating mechanism of each semaphore with said motor, independently electrically controlled devices for locking the operating mechanism of each semaphore, a signal circuit for supplying the current to said motor and said devices, track circuits opened and closed by the passing of trains, means arranged in the track circuits for opening and closing the signal circuit, two movable and two stationary switch members arranged in the signal circuit and means for connecting one movable switch member with each of the signal operating mechanisms.

[Claim 6 not printed in the Gazette.]

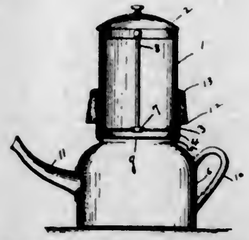
874,478. CATTLE-POKE. THOMAS E. ADAMS, Darlington, La. Filed Aug. 13, 1906. Serial No. 330,367.

An animal poke comprising in its construction a metallic yoke, substantially U-shaped, the bend being adapted to extend around the end of the animal's nose and the arms to extend as side-straps along the cheeks on both sides of the animal's head, the end portions of said side straps being provided with holes, a head strap having its ends secured in said holes, a curb-chain also connected at its ends in said holes of the cheek straps, and adapted to pass under the rear portion of the under jaw, a strap adapted to be passed over the nose of the animal and



secured at its ends to the said side straps, and a poke projecting forward from the nose end of the yoke, whereby the lower jaw of the animal forward of the curb-chain may be free of any obstruction or device, and whereby also by the depression of the forward end of the poke the curb-chain will be operated to inflict a degree of punishment on the animal.

874,479. TEA AND COFFEE POT. ROBERT J. ANSON, New York, N. Y. Filed May 7, 1907. Serial No. 372,429.

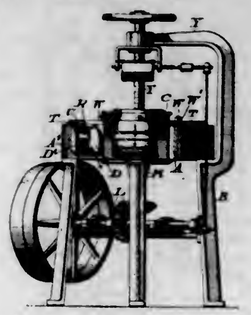


1. A tea or coffee pot comprising a lower receptacle having an inner annular shoulder and a portion extending upward from said shoulder, an upper receptacle having a diaphragm located above the bottom forming with the lower edge of the upper receptacle a depending flange adapted to rest on said annular shoulder, said diaphragm having a valve opening, and a valve to close said opening.

2. A tea or coffee pot comprising a lower receptacle having an inner annular shoulder and a portion extending upward from said shoulder, an upper receptacle having a diaphragm located above the bottom forming with the lower edge of the upper receptacle a depending flange adapted to rest on said annular shoulder, said diaphragm having a valve opening, a valve to close said opening, and a cloth strainer extending across the bottom of the upper receptacle and secured between the downwardly extending flange thereof and said annular shoulder.

3. A coffee or tea pot comprising a lower receptacle having a pouring spout and an inner annular shoulder and a portion extending upward from said shoulder, an upper receptacle having an open top and a diaphragm located above the bottom forming with the lower edge of the upper receptacle a depending flange adapted to rest on said annular shoulder, said diaphragm having a valve opening, a valve to close said opening, said valve being unattached to the receptacle and having a stem extending to a point near the top of the upper receptacle, a cover removably fitted to said upper receptacle, and a cloth strainer extending across the bottom of the upper receptacle and secured between the downwardly extending flange thereof and said annular shoulder.

874,480. MACHINE FOR KNEADING AND MOLDING DOUGH. GEORGE P. BAILEY, Philadelphia, Pa. Filed Mar. 12, 1907. Serial No. 361,984.



1. In a dough kneading and molding machine, a pan, a runner therein, and a relatively stationary upper member, forming together a dough receiving chamber, said member being provided upon its face with dough-turning and kneading shouldered pockets and means for exerting yielding pressure on said member.

2. In a dough kneading and molding machine, a pan, a runner therein, and a relatively stationary upper member, forming together a dough receiving chamber, said member being provided upon its face with dough-turning and kneading shouldered pockets, means for exerting pressure on said member, and means for adjusting said pressure means.

3. In a dough kneading and molding machine, a pan, a runner therein, and a relatively stationary upper member, forming together a dough receiving chamber, said member being provided upon its face with dough-turning and kneading shouldered pockets, means for rotating said runner, and a support for said member.

4. In a dough kneading and molding machine, a pan, a runner, the latter being formed of a side wall and base, separated from the side wall of the pan, a top member, and a rim projecting inwardly from the side wall of the pan and adapted to freely overhang the edge of said base.

5. In a dough kneading and molding machine, a pan, a runner, therein, and a relatively stationary upper member, forming together a dough receiving chamber, means for rotating said runner, a support for said member, a pressure device adapted to bear upon said support, a movable plate adapted to engage said device, and means connected with said plate to adjust said device.

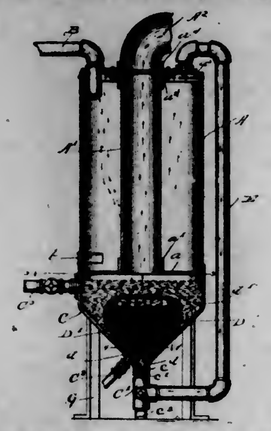
[Claims 6 to 13 not printed in the Gazette.]

874,481. FILTER OR SEPARATOR FOR PNEUMATIC CLEANERS. CHARLES E. BAKER, Chicago, Ill. Filed May 9, 1906. Serial No. 315,874.

1. In a device of the class described the combination with a fluid tank of a dry tank above the same, an exhaust passage opening from the wet tank and leading axially through the dry tank, a pipe affording communication between said tanks, granular material covered by water through which the air from said pipe passes to the exhaust passage, an air inlet pipe opening into the dry tank and a door in the side of the dry tank near the bottom thereof.

2. In a device of the class described the combination with a tank containing fluid, a removable receptacle in said tank affording a space between the same and wall of the tank and supplied with fluid from said tank, filtering material in said receptacle, a pipe supplying air to the receptacle from below, an exhaust passage through which the air from said receptacle passes and independent clean out pipes opening from the tank and receptacle.

3. In a device of the class described the combination with a dry separating tank of a water tank, a pipe connecting said tanks, an exhaust pipe extending through the dry tank and communicating with the wet tank, a receptacle rigidly engaged in the bottom of the wet tank, a screen on each end thereof and material contained within the receptacle and surrounded by water for breaking up the air bubbles passing through the same.

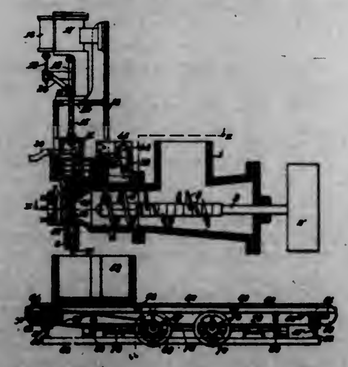


4. In a device of the class described the combination with a receptacle having water therein, of a water tank communicating with the top of the receptacle only, a dry tank, an exhaust passage leading from the water tank, a pipe communicating with the top of the dry tank and with the receptacle from below and granular material inclosed within the receptacle adapted by agitation thereof to thoroughly break the air bubbles to mix the particles of matter carried thereby with the water in said receptacle and to permit the escape of the air to the exhaust passage.

5. In a device of the class described the combination with a dry separating tank of a water tank supporting the same and filled with water, a pipe extending centrally through the dry tank and opening into the wet tank, means for conducting air from the dry tank through the water tank and into said pipe, finely divided material in said water tank covered by the water therein, and through which said air passes, said material adapted by agitation of the same to separate the dirt therefrom.

[Claims 6 to 14 not printed in the Gazette.]

874,482. BRICKMAKING-MACHINE. JOSEPH E. BOND, Maywood, Ill. Filed July 27, 1906, Serial No. 328,123. Renewed May 16, 1907. Serial No. 373,975.



1. In a brick molding machine, a clay reservoir provided with a discharge spout or barrel; means for detaching a slug of clay from the mass within the reservoir, and means for discharging the slug from the spout by fluid pressure in said spout, substantially as described.

2. In a brick molding machine, a clay reservoir provided with a discharge spout, means for pressing the mass of clay within the reservoir toward said spout, means for detaching a slug of clay from the mass, and means for discharging the slug from the spout by fluid pressure in the said spout, substantially as described.

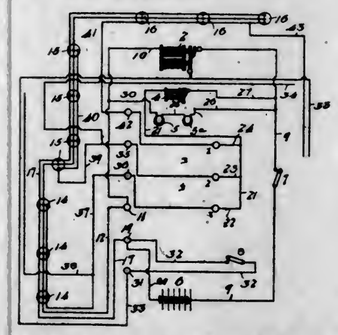
3. In a brick molding machine, a clay reservoir having a discharge spout; a plunger for detaching a slug of clay from the mass, and means for discharging a slug from the spout by fluid pressure in the said spout, substantially as described.

4. In a brick molding machine, a clay reservoir having a discharge spout; means for pressing the mass of clay toward said spout, a plunger for detaching a slug of clay from the mass, and means for discharging the slug from the spout by fluid pressure in the said spout, substantially as described.

5. In a brick molding machine, a clay reservoir provided with a plunger space and a discharge spout, a hollow plunger working in said spout, means for momentarily admitting a fluid under pressure into the spout at each stroke of said plunger, whereby a slug of clay will be suddenly and forcibly discharged through said spout, and means for feeding the clay into the plunger space, substantially as described.

[Claims 6 to 35 not printed in the Gazette.]

874,483. ELECTRIC FIRE AND BURGLAR ALARM. MELANCTHON J. BRIGGS, Philadelphia, Pa. Filed Apr. 25, 1906. Serial No. 313,610.



1. In an apparatus of the class set forth, the combination with audible and visual signals, the visual signals including electric incandescent lights, and an annunciator, of a battery or other source of electrical generation, a plurality of independent circuits each controlling some of the signals and arranged to extend through different sections of a building, boat or other place to give distinctive fire and burglar alarm indications in addition to, and independent of the annunciator, one conducting member of the fire and burglar alarm circuits extending continuously throughout the whole series of sections and connecting with a common lead from the battery, and automatically operating circuit controlling devices in both the fire and burglar alarm circuits.

2. In an apparatus of the class set forth, the combination of audible and visual signal devices, a source of electrical generation, normally open circuits controlling the said audible and visual signal devices independently and arranged in sections, and automatic circuit closing devices arranged in said circuits, some of which are operative by differences in temperature to close the circuits of the several sections.

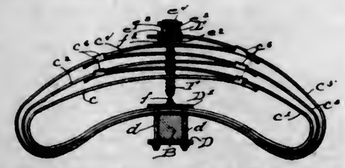
3. In an apparatus of the class set forth, the combination of a plurality of signal devices of different types, a source of electrical generation, circuits including the said devices and arranged in sections, the signal devices being operative to indicate both fire and burglar conditions and capable of individual or simultaneous operation, and automatic circuit closing devices included in the several sections, some of which devices are operative by variations in temperature.

4. In an apparatus of the class set forth, the combination with a plurality of audible signals, visual signals, a source of electrical generation, circuits including the said signals and source of electrical generation, all of the audible signals being operated to give a fire alarm, and one signal being operated to give a burglar alarm, and means for automatically closing different portions of the circuits to designate the location of a fire or the attempt of a burglar to enter a building or other place.

5. In an electric signaling system, a plurality of groups of juxtaposed signals, each group comprising a plurality of signals of a different type from any other group, circuits and a common battery for operating said signals, and means for actuating one or more signals of each type, simultaneously.

[Claims 6 to 8 not printed in the Gazette.]

874,484. VEHICLE AND SPRING THEREOF. ELMER L. BRILLHART, Pentwater, Mich. Filed Sept. 27, 1906. Serial No. 336,429.



1. A spring comprising oppositely disposed leaves each fulcrumed on the top of the other at the free extremity thereof.

2. A spring comprising oppositely disposed leaves each movably supported upon and above the outer extremity of the next lower and means preventing lateral slip of one leaf with respect to another.

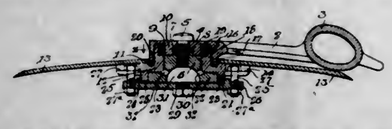
3. A spring comprising oppositely and inwardly directed leaves each projecting past the center and affording a fulcrum for a similar higher leaf, and tapered flanged ends on said leaves acting to engage a superposed leaf.

4. A spring comprising a plurality of oppositely directed tapered leaves, each engaged at the end with the next above and affording a fulcrum therefor.

5. A spring comprising a plurality of right and left inwardly directed leaves, each extending beyond the center, and affording a fulcrum for the next higher leaf, and a flange near the end of each leaf, acting to hold the same in engagement.

[Claims 6 to 8 not printed in the Gazette.]

874,485. DISK-BEARING. ARTHUR F. BROWN, Springfield, Ohio, assignor to P. P. Mast and Company, Springfield, Ohio, a Corporation of Ohio. Filed Jan. 30, 1907. Serial No. 354,837.



1. In a disk bearing, the combination, with a disk having a central aperture, a support for said disk having a recess therein, and a bearing block rigidly secured to said support, of a hub rigidly secured to said disk and having a sleeve portion adapted to extend through the aperture in said disk into the recess in said support and having that portion within the recess rabbeted to form a seat and a packing mounted in said seat and closing the joint between said hub and said bearing block, substantially as described.

2. In a disk bearing, the combination, with a disk having a central aperture, a support for said disk, a bearing block rigidly secured to said support, and an annular flange carried by said support and surrounding the end of said bearing block, of a hub rigidly secured to said disk and having a sleeve portion adapted to extend through the aperture in said disk and to enter the space between said bearing block and said annular flange and having an annular recess in the inner wall thereof, said sleeve portion being of less diameter than the aperture in said disk, thereby forming an annular recess adapted to receive the end of said annular flange and a packing mounted in said recess between said sleeve and said bearing block, substantially as described.

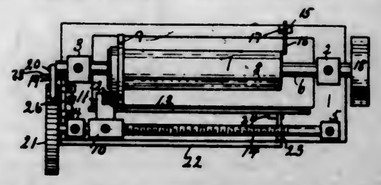
3. In a disk bearing, the combination, with a disk having a central aperture, a support having an annular recess therein, the outer wall of said recess being extended to form a flange, and a bearing block rigidly and detachably secured to said support, of a hub rigidly secured to said disk and having a sleeve portion adapted to extend through said aperture into the recess in said support, an annular recess in the inner end of said sleeve portion and a packing within said recess, said sleeve portion being of less diameter than the aperture in said disk, thereby forming an annular recess adapted to receive the end of said flange, substantially as described.

4. In a disk bearing, the combination, with a disk having a central aperture, a bearing hub rigidly secured to said disk and extending through said aperture, of a support for said disk having an annular recess therein adapted to receive the end of said hub and having an aperture within said annular recess, an angular recess in the inner wall thereof and surrounding said aperture, a bearing block fitting within said hub and having a screw-threaded aperture therein, an angular boss on said bearing block adapted to enter the angular recess of said support, and a screw-threaded bolt adapted to extend through the aperture in said support and engage the screw-threaded aperture in said bearing block, substantially as described.

5. A disk bearing comprising a support having a recess therein, a disk having an aperture, a hub rigidly secured to said disk, having a slot therein and having a portion extending through said aperture into the recess in said support, an outwardly extending flange carried by said hub, a bearing block fitting within said hub and said flange and rigidly secured to said support, of a cap provided with a bolt hole and having an inwardly extending flange adapted to fit over the flange on said hub, a headed bolt adapted to engage the slot in said hub and extend through the bolt hole in said cap and provided with a nut on its outer end.

[Claims 6 to 8 not printed in the Gazette.]

874,486. ZINC-LATHE. RALPH S. BROWNE, Alameda, Cal. Filed July 3, 1907. Serial No. 381,998.



1. In a zinc lathe, the combination of a bed, a revoluble work holding mandrel, a collar carried by and slidable on the mandrel, a means adapted to move the collar along the mandrel, and a fixed cutting tool at the end of the mandrel.

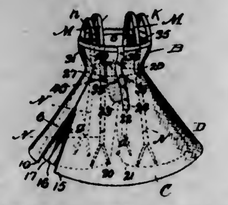
2. In a zinc lathe, the combination of a bed, a revoluble work holding mandrel, a collar carried by and slidable on said mandrel, a feed arm adapted to move said collar along the mandrel, a rest rail under the feed arm, and a fixed cutting tool at the end of the mandrel.

3. In a zinc lathe, the combination of a bed, a revoluble work holding mandrel, a slidable collar carried by the

mandrel, a feed arm extending from a threaded block toward the mandrel and in contact with the collar, a feed screw carrying said threaded block and arm, and means to drive the feed screw from the mandrel shaft.

4. In a sinc lathe, the combination of a bed, a revoluble work holding mandrel, a slidable collar carried by the mandrel, a feed arm extending from a threaded block and in contact with the collar, a feed screw on which said block is carried, a rest rail for said feed arm extending along the bed, and means to drive the feed screw from the mandrel shaft.

874,487. COMBINATION-GARMENT. JOHN W. P. BUNNING, Philadelphia, Pa. Filed May 28, 1906. Serial No. 319,018.



1. A combined skirt and drawers formed integrally from a single piece of fabric.

2. A combined garment formed integrally from a single piece of fabric comprising a waist portion, a skirt portion and leg portions, the sides of each leg being permanently attached to the side of said skirt below the waist line.

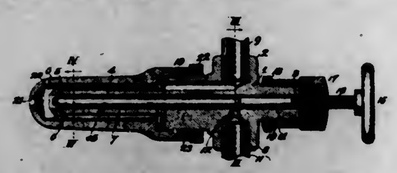
3. A combined garment formed integrally from a single piece of fabric comprising a skirt portion and leg portions, the outside of each leg being attached to the skirt for a part of its length, and means at the top of each leg for securing the same to the waist of the wearer.

4. A combined garment comprising a skirt portion and leg portions, the outside of each leg being attached to the skirt for a part of its length, and a waistband separate from the skirt permanently attached to the top of the leg portions and means separate from said waistband to support said skirt.

5. A combined garment formed integrally from a single piece of fabric comprising a waist, a skirt and legs stitched to the side of the skirt by a single seam.

[Claims 6 to 27 not printed in the Gazette.]

874,488. OIL-BURNER. JOSEPH L. CAUSEY, Kansas City, Mo., assignor to North American Biscuit Company, Kansas City, Mo., a Corporation of New Jersey. Filed May 19, 1906. Serial No. 317,761.



1. A burner comprising a body portion provided with an oil passage, and a reduced extension through which said passage continues and provided also with a fluid passage exterior to said extension and with tubular bosses communicating respectively with the oil passage and the fluid passage, a packing nut on the rear end of the body portion, an enlargement at the front end of the reduced extension provided with nicks or slits, a cap fitting around said reduced extension and snugly engaging the enlargement thereof and screwed at its rear end to the body portion of the burner and provided at its front end with a jet orifice, and a valve comprising a threaded portion extending through said packing nut and bearing a threaded relation with said oil passage, a non-threaded portion having a liquid-tight joint with the oil passage and adapted to cut off communication between the same and the tubular-boss passage communicating therewith, and a reduced extension fitting loosely in the forward portion of said oil passage and adapted to project through the jet orifice and cut off the supply of fluid therethrough.

2. A burner comprising a body having a reduced extension and provided with oil and fluid passages, the oil passage extending through the extension and the fluid passage extending outside the extension, a cap secured to the body and inclosing the extension and provided with a jet orifice in alinement with said extension, a skeleton partition within the cap around the end of the extension, and a valve arranged in and movable through the extension to successively cut off the flow of oil through the extension and to close the said jet orifice.

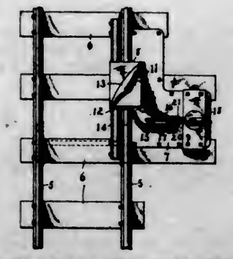
874,489. DENTAL PLIERS. GILBERT J. CLARK, Mayville, Wis. Filed Dec. 24, 1906. Serial No. 349,299.



1. A pair of dental pliers comprising a set of operating handles and jaws pivotally connected together, a male die conforming in shape to the vertical walls of a dental crown and inversely conforming to the shape of the vertical walls of a tooth, said die being formed integrally with or rigidly affixed to one of said jaws, a female die conforming in shape to and adapted to register with the male die and also formed integrally with or rigidly affixed to the opposing jaw of said pliers.

2. A pair of dental pliers comprising a set of operating handles and jaws pivotally connected together, a male die conforming in shape to the vertical walls of a dental crown and inversely conforming to the shape of the vertical walls of a tooth, said die being formed integrally with or rigidly affixed to one of said jaws, a female die conforming in shape to and adapted to register with the male die and also formed integrally with or rigidly affixed to the opposing jaw of said pliers, the back of one of said jaws being shaped to conform to one side of the vertical walls of a dental crown, whereby one side of a metallic band held by said pliers may be given the desired shape by the action of the two opposing jaws and said band simultaneously held by said jaws, while the opposite side of the metallic band is pressed and burnished to conform to the back of the crown-shaped jaw, all substantially as and for the purpose specified.

874,490. DERAILING DEVICE. WILLIAM O. CLEGG and OSCAR J. ASMANN, Palestine, Tex. Filed May 6, 1907. Serial No. 371,965.



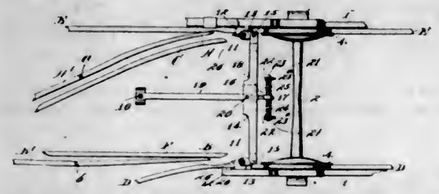
1. In a derailing device, the combination with a rail of a railway line, of a plate provided with a wheel deflecting flange, a depending flange interlocking with said rail, a slotted arm formed integral with said plate, a pivot engaging the slot in said arm, and operative means connected with said arm for moving the plate.

2. A derailing device, including a rail of a railway, a movable plate, a deflecting flange formed integral with said plate, a depending flange adapted to interlock with

the lateral surface of said rail, a slotted arm for the plate, a pivot engaging said slotted arm, and a switch operatively connected with said arm.

3. A derailing device, including a rail of a railway line, a bed-plate, a movable plate having a deflecting flange and a depending flange adapted to interlock with the lateral surface of said rail, an auxiliary rail for supporting said movable plate when in its operative position, an arm formed integral with said plate and provided with a slot, a pivot bolt secured to the base plate and engaging said slot, a switch stand secured to the bed-plate adjacent to said movable plate and operative connection between the switch and the said arm.

874,491. SWITCH FOR STREET-CARS. WILLIAM H. COOMBS, Rockford, Ill. Filed Aug. 26, 1907. Serial No. 390,088.



1. In mechanism of the class described, in combination, two vertically-arranged rock-shafts; two cranks, each fast by one end to one of the rock shafts; a yoke having its ends pivot-jointed to the free ends of the cranks; two bevel-edged switching-shoes arranged parallel to each other; a vertically-arranged rock-shaft located in front of the first-mentioned rock-shafts; a bar rigidly connected by one end to the front rock-shaft and pivotally connected by its other end to the central portion of the yoke; and supporting means and bearings for all of said parts substantially as described.

2. In mechanism of the class described, in combination, two vertically-arranged rock-shafts; two cranks, each fast by one end to one of the rock-shafts; a yoke having its ends pivot-jointed to the free ends of the cranks; two bevel-edged switching-shoes arranged parallel to each other; a vertically-arranged rock-shaft located in the front of the first-mentioned rock-shafts; a bar rigidly connected by one end to the front rock-shaft and pivotally connected by its other end to the central portion of the yoke; springs normally acting, through the yoke cranks and rock-shafts operated by said cranks, to maintain the switching-shoes at right angles to said yoke and supporting means and bearings for all of said parts substantially as described.

874,492. BLOWPIPE. CYRILLE DELCAMPE, Quincy, Mass. Filed Mar. 13, 1907. Serial No. 362,230.

1. In a blow-pipe to which a combustible gas and a gaseous supporter of combustion are supplied under pressure, a gas supply pipe terminating in a head containing a mixing chamber, a detachable main nozzle in said head forming an outlet from the mixing chamber and a second gas supply pipe terminating in said head and provided with a detachable injector nozzle of a definite capacity with relation to the main nozzle and which discharges directly into the mixing chamber, whereby when it is desired to change the size of the flame both detachable nozzles may be removed and replaced by other nozzles of different capacity, but having the same definite relation, substantially as described.

2. In a blow-pipe, a gas supply pipe terminating in a head containing a gas chamber and a mixing chamber, a detachable main nozzle in said head forming an outlet from the mixing chamber, a partition in said head between the gas chamber and mixing chamber, gas ports in said partition, and a second gas supply pipe terminating in said head and provided with a detachable injector nozzle having a definite capacity with relation to the main nozzle and which discharges into the mixing chamber, whereby when it is desired to change the size of the flame both detachable nozzles may be removed and replaced by other nozzles of different capacity but having the same definite relation, substantially as described.



3. In a blow-pipe, a gas supply pipe terminating in a head containing a gas chamber and a mixing chamber, a detachable main nozzle in said head forming an outlet from the mixing chamber, a second gas pipe extending into said head and terminating in a nozzle support, a detachable injector nozzle in said support of a definite capacity with relation to the main nozzle, a chimney surrounding said injector nozzle and forming a partition between the gas chamber and the mixing chamber, and gas ports in said chimney, whereby when it is desired to change the size of the flame both detachable nozzles may be removed and replaced by other nozzles of different capacity but having the same definite relation, substantially as described.

4. In a blow-pipe, a gas supply pipe terminating in a head containing a gas chamber and a mixing chamber, a nozzle in said head forming an outlet from the mixing chamber, a partition in said head between the gas chamber and the mixing chamber, gas ports in said partition, and a second gas supply pipe terminating in said head and provided with an injector nozzle which discharges into the mixing chamber, the partition and the injector nozzle being so constructed and arranged that the direction of flow from the gas ports in the partition is at right angles to the direction of flow from the injector nozzle, whereby an intimate mixture of the gases is secured, substantially as described.

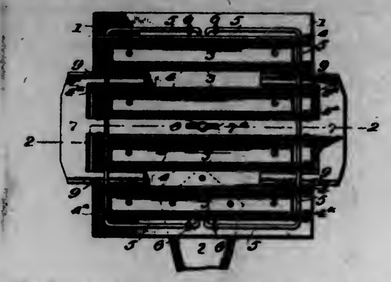
5. In a blow-pipe, a gas supply pipe terminating in a head containing a gas chamber and a mixing chamber, a nozzle in said head forming an outlet from the mixing chamber, a partition in said head between the gas chamber and mixing chamber, gas ports in said partition having a progressively reduced diameter from the gas chamber toward the mixing chamber, and a second gas supply pipe terminating in said head and provided with an injector nozzle which discharges into the mixing chamber, whereby the flashing back of the flame into the gas chamber is prevented, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

874,493. CURRYCOMB. PATRICK J. FAUGHNAN, Locust Gap, Pa. Filed Apr. 12, 1907. Serial No. 367,832

1. The improved curry-comb consisting of a back, toothed plates attached thereto, cleaning devices applied to said plates and adapted to slide thereon from and toward the back, springs for holding them normally depressed, and a movable cam secured to the back and adapted when

actuated to slide the cleaning devices outwardly, substantially as described.



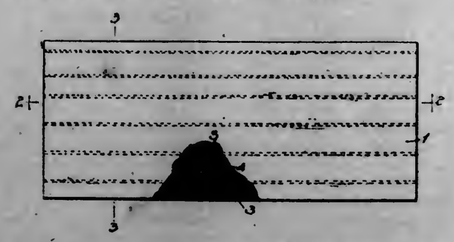
2. The improved curry-comb comprising a back having toothed plates attached, cleaning devices applied to the toothed plates and movable thereon, means for connecting the ends of the same and holding the devices normally retracted, and a slidable cam plate arranged to co-act with said means for actuating the cleaning devices in the manner described.

3. The improved curry-comb comprising a back having toothed plates secured thereto, cleaning devices applied to the said plates and movable thereon, spring rods secured to the back of the curry-comb and passing through the cleaning devices, and a slidable cam plate attached to the back and arranged between it and the rods, whereby, when the cam is moved, the rods are separated further from the back, and the cleaning devices thereby moved outward on the toothed plates, substantially as set forth.

4. The improved curry-comb comprising a back having toothed plates secured thereto, cleaning devices applied to the several plates and comprising metal strips, spring wires secured at their ends to the back of the comb and passing intermediately through the end portions of the cleaning devices, a cam plate arranged between the rods and the back of the comb and having the end portions provided with teeth upon whose inclined sides the aforesaid rods are adapted to slide when the cam plate is forced in either direction, substantially as described.

5. The combination, with the curry-comb back and teeth of cleaning devices applied to the several teeth and comprising strips arranged on opposite sides of the teeth, means for connecting their ends and holding them normally retracted, and a slidable cam plate arranged adjacent to the back and having means for limiting its endwise movement, the end portions of the plate being provided with teeth constituting cams adapted to act on the aforesaid means for connecting the cleaning devices, in the manner described.

874,494. PACKING-PAD. JOHN D. FREESE, Chicago, Ill. Filed Mar. 19, 1907. Serial No. 363,232.



1. A wrapping and packing pad comprising an upper and lower sheet, a filling of packing material secured between said sheets, and a plurality of cords secured between said filling and the upper sheet without passing through the filling, said cords extending toward each end of the pad and being arranged to prevent longitudinal stretching thereof.

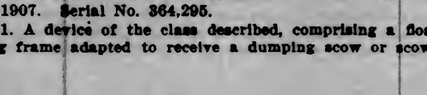
2. A packing pad comprising an upper and lower sheet, a filling of packing material secured between said sheets and a plurality of cords secured to the inner side of said upper sheet and extending in straight parallel lines from end to end thereof.

3. A wrapping and packing pad comprising a layer of packing material, a covering sheet pasted upon said layer, and a plurality of cords held entirely between said sheet and packing material and extending toward each end of the pad, said cords being arranged so as to prevent longitudinal stretching of the pad.

4. A wrapping and packing pad comprising a filling of packing material, two covering sheets pasted upon opposite sides of said filling, and a plurality of cords held entirely between said filling and one of said sheets and extending toward each end of the pad, said cords being arranged so as to prevent longitudinal stretching of the pad.

5. A packing pad comprising a filling of packing material, two covering sheets pasted upon opposite sides of said filling, and a plurality of cords secured to the inner surface of one of the covering sheets and extending in straight lines from end to end thereof between said sheet and said filling.

874,495. SURGICAL INSTRUMENT. WILLIAM GATERMAN, Manitowoc, Wis. Filed Nov. 23, 1906. Serial No. 344,668.



In a tool of the described class, the combination of a handle and a series of prongs connected with one end thereof and arranged to form an open cage, the free ends of the prongs being bent inwardly in broad open curves.

874,496. PROCESS OF RENDERING SOLUBLE IN WATER THE NICKEL AND COPPER CONTAINED IN SULFID ORES AND MATTES. WALTER S. GATES and HERBERT H. DOW, Midland, Mich., assignors, by mesne assignments, to The Ontario Nickel Company, Limited, Worthington, Canada, a Corporation of Canada. Filed Mar. 22, 1906. Serial No. 307,379.

1. In a process of rendering soluble in water the nickel and copper which are contained in sulfid ores and mattes, the steps which consist, in roasting the ore; and, then, treating the same with a haloid solution containing free halogen.

2. In a process of rendering soluble in water the nickel and copper which are contained in sulfid ores and mattes, the steps which consist, in roasting the ore; and, then, treating the same with a haloid solution containing free bromin.

3. In a process of rendering soluble in water the nickel and copper which are contained in sulfid ores and mattes, the steps which consist, in roasting the ore; lixiviating with water; and, then, treating the residue with a haloid solution containing free halogen.

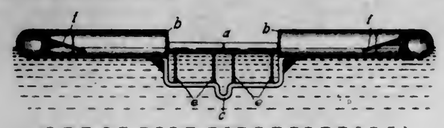
4. In a process of rendering soluble in water the nickel and copper which are contained in sulfid ores and mattes, the steps which consist, in mixing the ore with a chlorid; roasting said mixture; and, then, treating the same with a haloid solution containing free halogen.

5. In a process of rendering soluble in water the nickel and copper which are contained in sulfid ores and mattes, the steps which consist, in mixing the ore with a chlorid; roasting said mixture; and, then, treating the same with a haloid solution containing free bromin.

[Claims 6 to 32 not printed in the Gazette.]

874,497. DEVICE TO PREVENT SEA-DUMPED GARBAGE FROM BEING THROWN ONTO THE BEACH. SAMUEL E. GLADDING, Jersey City, N. J. Filed Mar. 25, 1907. Serial No. 364,295.

1. A device of the class described, comprising a floating frame adapted to receive a dumping scow or scows, said floating frame being provided at its sides with downwardly inclined plates which extend into the water in which the frame floats.



2. A device of the class described, comprising a floating frame adapted to receive a dumping scow or scows, said floating frame being provided at its sides with downwardly inclined plates which extend into the water in which the frame floats and being also provided at the ends with gate-ways having floating gates.

3. In a device of the class described, comprising a floating frame adapted to receive a dumping scow or scows, said floating frame being provided at its opposite ends with gate-ways through which said scow or scows may pass and floating gates for closing the same, and said frame being also provided on the inner sides of the parts thereof with downwardly inclined plates which extend into the water in which the frame floats.

874,498. CAN-CRIMPING MACHINE. CHARLES W. GRAHAM, Rome, N. Y., assignor to Utica Industrial Company, Rome, N. Y., a Corporation of New York. Filed Feb. 9, 1905. Serial No. 244,835.

1. In a machine of the class described, in combination, crimping means and means provided with an inclined surface adapted to engage a can and hold the same against said crimping means, with the can resting at its edge upon said surface.

2. In a machine of the class described, in combination, means adapted to receive a can, therebetween, said means being relatively adjustable in the direction of the length of said can, crimping means upon said means, and means provided with an inclined surface adapted to engage a can and hold the same in operative relation to said crimping means.

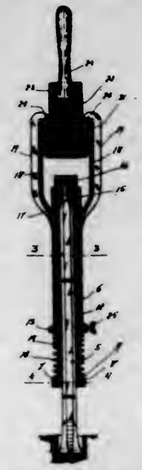
3. In a machine of the class described, in combination, a pair of members adapted to receive a can body therebetween, said members being relatively adjustable in the direction of the length of the can, crimping means upon said members, and a pair of members provided with surfaces inclined with respect to a can in operative relation to said crimping means, adapted to engage a can and hold the same against said crimping means, said last members being relatively adjustable in the direction of the length of the can and being positioned to engage the can at its edges with their inclined surfaces.

4. In a machine of the class described, in combination, crimping means, and a pair of relatively adjustable members provided with inclined surfaces adapted to engage a can at its edges and hold the same by said edges in operative relation to said crimping means.

5. In a machine of the class described, in combination, crimping means, and a pair of conical members the surfaces of which are inwardly inclined toward one another and adapted to hold a can against said crimping means.

[Claims 6 to 26 not printed in the Gazette.]

874,499. HAND ROCK-DRILL. CHARLES H. GUNN, Oroville, Cal. Filed Dec. 3, 1906. Serial No. 346,184.



1. The combination with a drill bit, of a sleeve through which the drill bit passes, a casing surrounding the sleeve and reciprocable thereon, a spring engaging the sleeve at one extremity and the casing at the opposite extremity, a hammer connected with the upper extremity of the casing, the latter being provided with a handle to permit a reciprocating movement of the casing upon the sleeve whereby the hammer is brought forcibly in contact with the upper extremity of the drill bit which lies in the path of the hammer.

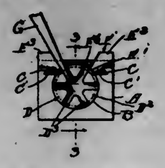
2. The combination of a drill bit provided with a cap at its upper extremity, a sleeve through which the drill bit passes, the sleeve and drill bit being connected to move longitudinally independently of each other but arranged to rotate in unison, a casing which engages the sleeve and is reciprocable thereon, the casing being provided with a hammer, a coil spring interposed between the sleeve and the lower extremity of the casing whereby the latter is normally held in such position that its hammer is above the upper extremity of the drill bit.

3. The combination with a drill bit, of a sleeve through which the drill bit passes, a casing surrounding the sleeve and reciprocable thereon, a hammer connected with the upper extremity of the casing, the hammer being in alinement with the upper extremity of the drill bit and adapted to be brought into forcible contact therewith, the casing, sleeve and drill bit being connected to rotate together, substantially as described.

874,500. REGISTER-BOOK. WILLIAM L. HAMILTON, Chicago, Ill. Filed Apr. 29, 1907. Serial No. 371,001.

1. A device of the kind described consisting of the main body having a bore, guideways, end wall, and transverse holes; the screw rotatably supported in said bore, said screw having radial end channels, a series of radial holes and an annular channel; the rod insertible in said transverse holes adapted to extend through said annular channel and hold said screw in said bore; the clutch slidably supported in said guideways in said body, said clutch having an arched threaded under surface adapted to mesh

into said screw and said clutch being thereby adapted to be moved in said guideways by the rotation of said screw.



2. In a device of the kind described, the combination with the main body, said body having a longitudinal bore therein, adapted to admit a screw, longitudinal guideways adapted to support a clutch, and holes adapted to support a rod extending transversely through said body and bore therein; of a screw adapted to fit said bore in said body, said screw having a plurality of radial channels in the front end and an annular channel in the threaded surface adapted to admit part of said rod and to be thereby retained in said bore in said body; and a clutch adapted to fit and slide in said guideways and to be engaged by said screw and to be moved in said guideways by the rotation of said screw.

3. In a device of the kind described, the combination with the main body having a longitudinal bore and guideways, and a rod insertible transversely through said body and bore therein; of a screw rotatably supported in said bore, said screw having a plurality of radial channels in the front end, an annular channel adapted to admit said rod and a series of radial holes in the surface of said screw between said front end and said channel; and a clutch slidably supported in said guideways in contact with the surface of said screw and adapted to be moved by the rotation of said screw in said body.

4. In a device of the kind described, the combination with the main body having a longitudinal bore and guideways, and a screw rotatably supported in said bore, said screw having a plurality of radial channels in the front end, a series of radial holes and an annular channel in the threaded surface; of means insertible transversely in said body adapted to enter said annular channel and to thereby retain said screw in rotatable position in said bore; and a clutch slidably supported in said guideways in contact with part of the threaded surface of said screw and thereby adapted to be moved in said guideways by the rotation of said screw.

5. In a device of the kind described, the combination with the main body, the screw rotatably supported therein, said screw having an annular channel, and means insertible in said body and said channel adapted to hold said screw in said body; of a clutch slidably supported in guideways in said body, said clutch having an arched threaded under surface adapted to engage the threaded surface of said screw, said clutch being moved in said guideways by the rotation of said screw in said body in contact with the arched under surface of said clutch.

[Claim 6 not printed in the Gazette.]

874,501. FIREPROOF WINDOW. MILLARD F. HAMSLEY, Brooklyn, N. Y. Filed Aug. 13, 1907. Serial No. 388,369.

1. A fireproof window embodying a casing formed of sheet metal and internal longitudinal core pieces of flat bar metal along the salient edges held in place by the folds and bends of the sheet metal passing around both edges of the bar.

2. A fireproof window embodying a casing formed of sheet metal having channels in its outer and inner faces and an internal core of bar metal held by the walls of said channels to form a backing for the intermediate face of the casing.

3. A fireproof window, embodying a casing, formed of sheet metal and including a sheet metal sill having an internal angle bar core about both the edges of which the sheet metal is folded to retain the core in position.

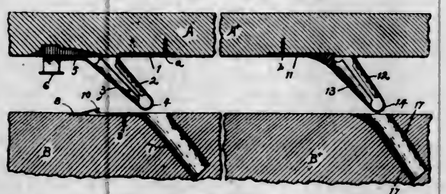
4. In a fireproof window a sheet metal sill embodying an internal core of bar angle iron forming a backing for two of the faces of the sill.



5. In a fireproof window, a sheet metal sill embodying an internal core of bar angle iron forming a backing for two of the faces of the sill, folds of said sheet metal embracing the core to retain the same in position.

[Claims 6 to 14 not printed in the Gazette.]

874,502. BODY-CATCH FOR CASKETS OR THE LIKE. LEWIS W. HARRIS and WILLIAM M. PARKER, Richmond, Ind. Filed Aug. 21, 1907. Serial No. 389,457.

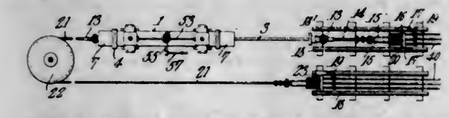


1. Body catches for caskets or the like, comprising a plurality of devices each comprising male and female members connected to the lid and the upper edge of the casket respectively, the male member composed of a plate secured to the lid, two half-round members integral with the plate and connected at their outer end by a spring loop and disposed at an angle to the lid, the female member comprising a tube fitted in an aperture therefor in the edge of the casket and disposed at an angle corresponding with the angle of said tongues, a spring catch for the two forward devices to lock the lid in position, and means for releasing said catches when the lid is to be removed, all substantially as shown and described.

2. Means for securing casket-lids on caskets, a plurality of thimbles disposed at an angle in the edges of the casket, a tongue for each of said thimbles, said tongues being formed of two substantially half-round portions connected integrally by a loop, one of said members of the tongues being secured to the lid and the other being free to move, a plate carried by the free end of two of said tongues, a finger-hold extending out from each of said two plates, and a tooth to engage each of said plates, said teeth being rigidly connected to the casket body, all substantially as shown and described and for the purposes set forth.

874,503. CAR-DUMPING APPARATUS. ROBERT HAY, Mount Pleasant, Pa. Filed May 29, 1907. Serial No. 376,360.

1. A car dumping apparatus comprising a cylindrical support for the cars mounted for rotation upon a fixed longitudinal axis, a plurality of flexible operating means extending therefrom to a distant point, and a single reciprocating power element acting simultaneously through all the flexible means to turn the cylindrical support upon its longitudinal axis from the initial position to a position to invert the cars and to then turn it again to its initial position.



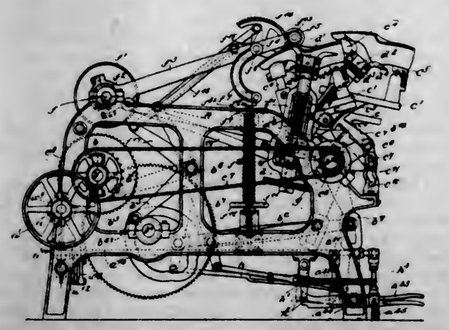
2. In a car dumping apparatus, a cylindrical support for the cars mounted for rotation upon a longitudinal axis at a number of points along its length, a plurality of flexible operating means connected at spaced points along the cylindrical support and extending therefrom to a distant point and there united into two groups, and a single reciprocating power element connected at opposite ends to a corresponding group of flexible operating means to act thereon simultaneously to turn the cylindrical support on its axis in one direction to invert the cars and to turn it in the other direction back to its initial position.

3. In a car dumping apparatus, a cylindrical support for the cars mounted to turn upon a longitudinal axis, annular metal tracks peripherally disposed upon the cylindrical support, annular brackets adjacent to said annular tracks, and annular non-metallic sheaves confined between the brackets and the tracks for receiving operating ropes or cables.

4. In a car dumping apparatus, a cylindrical support for the cars comprising segmental, longitudinally disposed side plates separated at top and bottom, annular peripheral tracks connecting said side plates, annular brackets adjacent to the tracks, annular sheaves between the brackets and tracks, longitudinal car tracks within the cylinder, and longitudinally disposed strips within the cylinder overhanging portions of the cars when introduced within the cylinder and confining them to the car tracks when the cylinder is rotated on its longitudinal axis.

5. In a car dumping apparatus, a rotatable cylinder for the cars, a plurality of flexible connections secured to the cylinder at spaced points there-along and extending to a distant point, trucks, each connected to all the like ends of the flexible connections, and a single reciprocating power element connected to both the trucks for moving them simultaneously, together with the flexible connections, first in one direction and then in the other to impart opposite movements of rotation to the cylinder.

874,504. AUTOMATIC BOOT AND SHOE LEVELING MACHINE. JOHN J. HEYS, Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed June 19, 1905. Serial No. 265,844.



1. A leveling machine provided with a jack, leveling means, and means to change the relative positions thereof to cause said leveling means to enter upon or leave the shoe sole at the side thereof.

2. A leveling machine provided with a jack, vibratable shank leveling means, and means to change the relative positions thereof to cause the vibrations of said shank leveling means to enter upon or leave the sole at the side thereof.

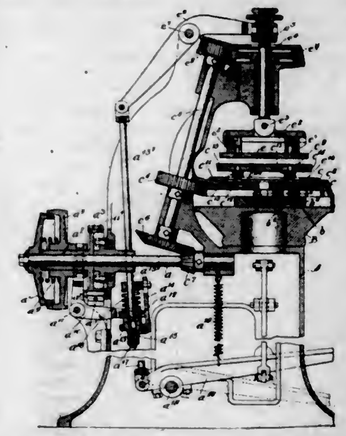
3. A leveling machine provided with a jack, shank leveling means, and means to sweep the latter in a curved path over the sole of the shoe and entering upon or leaving said sole at the side thereof.

4. A leveling machine provided with a jack, a vibratable shank leveler, and means to swing the same over the sole surface so as to enter or leave the sole at the side thereof.

5. A leveling machine provided with a jack and a plurality of shank levelers, and means to move the same and said jack one relative to another to cause said levelers to enter upon or leave a shoe sole at the side thereof.

[Claims 6 to 69 not printed in the Gazette.]

874,505. SOLE-ROUNDING MACHINE. JOHN J. HEYS, Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J., a Corporation of New Jersey. Filed Oct. 23, 1905. Serial No. 283,912.



1. A sole rounding machine comprising, in combination, a cutter; opposed cutter and work carrying heads; means for moving one head; and variable-speed transmitting mechanism intermediate the heads to cause an accelerated relative cutting movement between the heads at a portion of a sole to be cut.

2. A sole rounding machine comprising, in combination, a cutter; opposed cutter and work carrying heads; means for moving one head; and transmitting mechanism intermediate the heads to impart an independent elliptical movement to the other head.

3. A sole rounding-machine comprising, in combination, a cutter; opposed cutter and work carrying heads; means for moving one head; and transmitting means intermediate the heads for imparting an elliptical movement to the other head, the resultant relative movement of the two heads being accelerated at a portion of a sole.

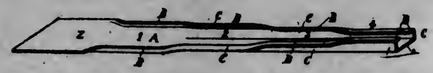
4. A sole rounding machine comprising, in combination, a cutter; opposed cutter and work carrying heads; means for moving one head; and transmitting means intermediate the heads for causing elliptical motion of the other head, the resultant relative motion of the two heads being varyingly accelerated at different portions of a sole.

5. A sole rounding machine comprising, in combination, opposed heads; cutting means sustained by one of said heads; means for moving one head; and transmitting means intermediate the heads for causing elliptical motion

of the other head, at maximum and minimum speeds in the general directions of the major and minor axes of the path of said elliptical motion.

[Claims 6 to 58 not printed in the Gazette.]

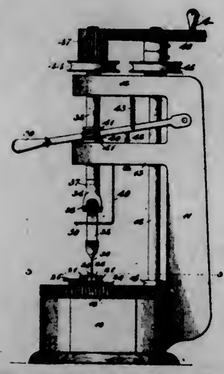
874,506. PROCESS OF MAKING BRACE-IRONS OR STRENGTHENING-IRONS FOR PERCHES AND FOR ANALOGOUS ARTICLES. HENRY HIGGIN, Newport, Ky., assignor to The Higgin Manufacturing Company, Newport, Ky., a Corporation of West Virginia. Filed Feb. 23, 1906. Serial No. 302,638.



1. The herein described process, which consists in forming flanges upon the sides of a blank, bending up the sides of the blank, upwardly curving the bottom of the blank, and finally straightening the bottom of the blank and thereby forcing the sides into a substantially vertical position, substantially as described.

2. The herein described process, which consists in forming flanges upon the sides of a rectangular metal blank, bending the blank after said flanges have been formed so that it has inclined sides, upwardly curving the bottom of the blank, and straightening the bottom thereof, thereby bringing said flanges into a substantially horizontal position and bringing said inclined sides into a substantially vertical position, substantially as described.

874,507. LENS-DRILLING MACHINE. ZEBULON F. HIGHSMITH, Sumter, S. C. Filed Apr. 7, 1906. Serial No. 310,469.



1. In a drilling machine, in combination, a drill spindle formed in sections with a universal joint therebetween, means for rotating the spindle, a holder for the work upon which the drill operates, and means for revolving the holder without substantially varying the relative angle of any line passing through the holder with respect to the axis of the drill.

2. In a drilling machine, in combination, a drill spindle formed of upper and lower sections with a universal joint therebetween, a work holder under the drill, and means to relatively revolve the work holder and upper spindle section with respect to each other, without rotating the work holder with respect to the axis of the drill.

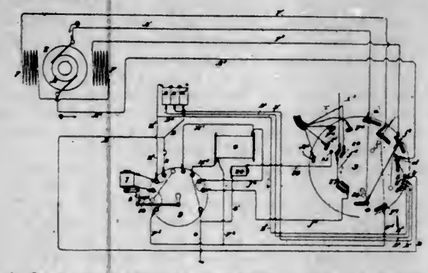
3. In a drilling machine, in combination, a sectional drill spindle having a universal joint between the sections, a revoluble work holder opposite the drill, for revolving the work and revolving the spindle section carrying the drill around the axis of the other spindle section, and means to prevent rotation of the work holder.

4. In a drilling machine, in combination, a base, a wheel mounted on the base, a revolving work holder supported eccentrically and revolved by the wheel, means to prevent rotation of the holder, a sectional drill spindle opposite the work holder, and gearing between the wheel and the spindle.

5. In a drilling machine, in combination, a base, a rotatable support mounted on the base and having an eccentric socket, a slotted bracket on the base, a work holder mounted on the support and having depending pins fitting in the socket and slot, respectively, a flexible drill spindle, and means for simultaneously rotating the spindle and the aforesaid support.

[Claim 6 not printed in the Gazette.]

874,508. BRAKE FOR ELECTRIC CARS. MOSES G. HUBBARD, Jr., Austin, Ill. Filed Nov. 18, 1896. Serial No. 612,560.



1. In a car brake, the combination of an electro-magnetic brake-actuating motor, having a normally open circuit, a generator driven by motion of the car for generating current for the brake motor, and a switch having an electro-magnetic operative device in said generator circuit, said switch being arranged to close the circuit of the brake-actuating motor and to put the same in series with the generator when sufficient current is generated; substantially as described.

2. In a car brake, the combination of an electro-magnetic brake-actuating motor, a generator driven by motion of the car for generating current therefor, a switch which normally disconnects the brake-actuating motor from the circuit of said current-generator, and an electro-magnetic operating device adapted to operate said switch to include said brake-actuating motor in the circuit when sufficient current is generated; substantially as described.

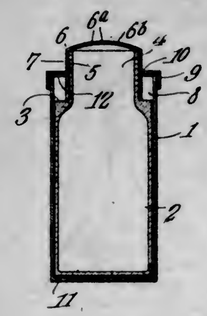
3. In a car brake, the combination of an electro-magnetic brake-actuating motor, a generator driven by motion of the car for generating current, a switch which normally disconnects the resistance from the circuit of said current generator, and an electro-magnetic operating device constantly included in the generator circuit adapted to operate said switch to include said resistance in the circuit when sufficient current is generated; substantially as described.

4. In an electric brake, a brake controller included in the circuit between the source of power and the car motors when the brake controller is put off, and arranged to open said circuit and close a circuit between said source of power and the brake motor and reverse the terminals of the car motor when put on, in combination with an automatic switch arranged to open the circuit between the source of power and the brake motor and arranged to include the car motor in the brake motor circuit as soon as said car motor or motors build up and generate current; substantially as described.

5. In a car brake, the combination with a car and brake mechanism therefor, of means for actuating said brake mechanism and mechanism independent of said means arranged to automatically regulate the brake pressure to conform substantially to the variation in the coefficient of friction as the speed varies, and to retain part of said pressure after the car is stopped, whereby the retarding effect is maintained substantially uniform as the car slows down and stops and the car is held after it has stopped; substantially as described.

[Claims 6 to 80 not printed in the Gazette.]

874,509. SALT-CELLAR. STERLING P. ISBELL, Ukiah, Cal. Filed Mar. 18, 1907. Serial No. 362,952.

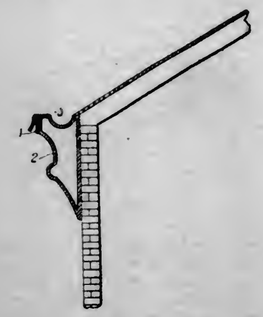


1. A salt shaker comprising an exterior receptacle, an interior receptacle for holding salt shorter than the exterior receptacle and adapted to move endwise therein when shaken in an axial direction and strike against the top and bottom, a closure on the open end of the exterior receptacle having an opening for the neck of the interior receptacle, and a perforated cap closing the neck of the interior receptacle.

2. A salt shaker comprising an exterior receptacle, and an interior receptacle for holding salt shorter than the exterior receptacle and adapted to move freely therein in an endwise direction when shaken axially and strike with a blow the top and bottom of said exterior receptacle, and cushions between the striking faces at both ends of the receptacles.

3. A salt shaker comprising an exterior receptacle closed at one end, a cap for the open end having an opening, a shorter interior receptacle for holding salt movable freely endwise within said exterior receptacle and having a neck projecting through the opening in the cap thereof, an end perforated closure for the neck of the interior receptacle, and cushions at each end of said exterior receptacle to break the force of the blow of the inner receptacle.

874,510. CORNICE-PROTECTOR. THEOPHILUS JOHNSTON, East Orange, N. J. Filed Jan. 10, 1907. Serial No. 351,717.



A house cornice attachment, comprising a guard or plate doubled or folded downwardly and having a forward outstanding portion provided with a lower free edge standing outwardly and spaced off from the cornice, forming an unbridged chasm between said free edge and said cornice for the purpose set forth.

874,511. INTERRUPTER. WILLIAM KAISLING, Chicago, Ill., assignor to Milo G. Kellogg, Chicago, Ill. Filed Jan. 3, 1907. Serial No. 350,575.



1. An interrupter comprising a movable contact member, an actuating member having a primary movement in the same general direction as said contact member and a secondary movement transverse thereto, and means including coöperating engaging parts on said actuating and contact members whereby said contact member is moved when said actuating member reaches a definite point in its primary movement.

2. An interrupter comprising a movable contact member, means for limiting the stroke of said member, an actuating member having a primary movement in the same general direction as said contact member and a secondary movement transverse thereto, means for limiting the primary movement of said actuating member, means for yieldingly pressing said actuating member toward said contact member, and means including cooperating engaging parts on said actuating and contact members whereby the said contact member is moved when said actuating member reaches a definite point in its primary movement.

3. An interrupter comprising an electro-magnet, an armature therefor, a movable contact member having a movement in the same general direction as said armature, an actuating member for said contact member moved by said armature in a primary direction and independently of said armature in a direction transverse thereto and means including coöperating engaging parts on said actuating and contact members whereby said contact member is moved when said actuating member reaches a definite point in its primary movement.

4. An interrupter comprising an electro-magnet, an armature therefor, a movable contact member having a movement in the same general direction as said armature, an actuating member for said contact member moved by said armature in a primary direction, and independently of said armature in a direction transverse thereto, means for yieldingly pressing said actuating member in its secondary direction of movement toward said contact member, and means including coöperating engaging parts on said actuating and contact members whereby said contact member is moved when said actuating member reaches a definite point in its primary movement.

5. An interrupting device comprising an electromagnet, an armature therefor, a movable contact member having a movement in the same general direction as said armature, an actuating member for said contact member moved by said armature in a primary direction and independently of said armature in a direction transverse thereto, and means including coöperating engaging parts on said actuating and contact members whereby said contact member is moved when said armature practically reaches the end of its stroke.

[Claims 6 to 19 not printed in the Gazette.]

874,512. WASTE-PIPE TOOL. THEODORE KOCH, Milwaukee, Wis. Filed June 22, 1906. Serial No. 322,915.

1. A tool consisting of a staff, a hook secured at one end of said staff, a spring-held clamping device secured at the opposite end of said staff, and means for releasing said clamping device, said means comprising a chain and a pulley on said staff.

2. A tool consisting of a staff, a spring-held clamping device secured at one end of said staff, means for operating said clamping device, a hook secured to the opposite end of said staff, and means for providing illumination ad-

jacent to said hook and clamping device respectively for the purpose described.



874,513. PLASTIC FENCE-POST. HUGH P. LIBHART, Troup, Tex., assignor of one-half to Henry Edwards, Troup, Tex. Filed Mar. 2, 1907. Serial No. 360,206.



A fence post comprising a body of plastic material and a reinforcing frame embedded therein and consisting of longitudinal reinforcing members arranged in angular relation and a plurality of wedge shaped blocks arranged between and secured to said members, said blocks being spaced apart by said members and each having one of its faces arranged adjacent to one face of the post and covered by a thin layer of plastic material of which the body is composed, whereby fastening devices may be driven through said layer and into the blocks, substantially as described.

874,514. JOIST-HANGER. WESLEY F. LINDOW, Detroit, Mich. Filed May 31, 1907. Serial No. 376,492.

1. A joist hanger formed of a rectangular blank of sheet metal which is centrally divided longitudinally for a portion of its length and spread into a pair of divergent arms whose outer marginal portions are bent forward at right angles on parallel lines which are continuations of the upper marginal lines of the blank, the flanges thus formed being interturned at right angles and secured together and the undivided part of the blank being bent back transversely at right angles.

2. A joist hanger formed of a rectangular blank of sheet metal which is divided at one end on its longitudinal axis for a portion of its length and spread into a pair of divergent arms whose outer marginal portions are bent forward at right angles on parallel lines which are continuations of the lateral marginal lines of the undivided portion of the blank, and interturned at right angles near their ends and secured together, the undivided part of the blank being bent back transversely at right angles.



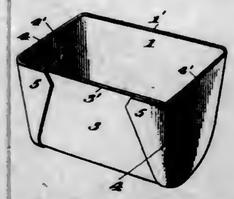
3. A joist hanger formed of a rectangular blank of sheet metal which is centrally divided longitudinally for a portion of its length and spread into a pair of divergent arms whose outer marginal portions are bent forward at right angles on parallel lines which are continuations of the upper marginal lines of the blank, the flanges thus formed being interturned at right angles and secured together and the undivided part of the blank being bent back transversely at right angles, and stiffening members formed up in the blank around the transverse bends.

4. A joist hanger comprising a vertically disposed sheet metal body whose lower portion is centrally divided and spread into a pair of divergent arms, whose lateral marginal portions are bent forward at right angles to the body for flanges thereto, on spaced parallel lines intersecting with the lines of the inner divergent margins, the flanges being horizontally interturned near the intersection of the lines and secured together, and the body being bent horizontally back near its upper end.

5. A joist hanger formed of a rectangular blank of sheet metal which is centrally divided longitudinally for a portion of its length and spread into a pair of divergent arms whose outer marginal portions are bent forward at right angles on parallel lines which are continuations of the upper marginal lines of the blank, the flanges thus formed being interturned at right angles below the point of disappearance of the web of each arm into its respective flange and secured together, and the undivided part of the blank being bent transversely at right angles.

[Claims 6 and 7 not printed in the Gazette.]

874,515. METHOD OF MAKING BUCKET-BLANKS. PETER A. LORENZ, Chicago, Ill. Filed June 5, 1905. Serial No. 263,748.



1. The method of producing, from an elongated strip of metal, a series of blanks of the character described, which consists in forming a series of openings on the central line of the strip whose ends represent edges of the body portions of adjacent blanks and whose sides represent edges of the wing portions of adjacent blanks and then separating the blanks on the lines of the end portions of said openings prolonged.

2. The method of producing, from an elongated strip of metal, a series of blanks of the character described, which consists in forming a series of openings on the central line of the strip whose ends represent edges of the body portions of adjacent blanks and whose sides represent edges of the end or wing portions of adjacent blanks, said openings being disposed at the same angle to the central line of the blank but alternately inclined in opposite directions, and subsequently separating the blanks by shearing on the lines of the end portions of said openings prolonged.

3. The method of producing from an elongated strip of metal, a series of blanks of the character described, which consists in punching a series of openings on the central line of the strip, whose ends represent edges of the body portions of adjacent blanks and whose sides represent edges of the wing portions of adjacent blanks, separating the blanks from each other and then trimming the upper edges of the wing portions.

4. The method of producing, from an elongated strip of metal, a series of blanks of the character described, which consists in forming a series of openings on the central line of the strip, whose ends represent edges of the body portions of adjacent blanks and whose sides represent edges of the wing portions of adjacent blanks, separating the blanks from each other, then shearing the blanks adjacent to the junction of the wings with the body portion and then trimming the upper edges of the wing portions.

5. The method of producing from an elongated strip of metal a series of blanks of the character described, which consists in producing an opening on the central line of the blank whose ends represent edges of the body portion of adjacent blanks and whose sides represent edges of the end or wing portions of adjacent blanks by feeding the strip to a punch of appropriate form at an angle to the axis of the strip, then turning the strip and feeding the same to the said punch at the same angle as before, whereby the adjacent openings are given the same angle to the axis of the strip, but oppositely inclined thereto, then separating the blanks from each other on the lines of the end portions of said openings prolonged.

874,516. CUTTING IMPLEMENT. ABBOT A. LOW, Horseshoe, N. Y. Filed May 4, 1907. Serial No. 371,783.



1. In an implement of the character designated, the combination of a rigid knife blade and shank formed integral therewith, of a pivoted pressure guard formed on its inner side with a cutting edge opposed to the knife blade, for the purpose described.

2. In an implement of the character designated, the combination of a rigid knife blade and shank formed integral therewith, a pressure guard opposed to the knife blade and pivoted to the shank thereof by a fulcrum mounted upon a flat spring, for the purpose described.

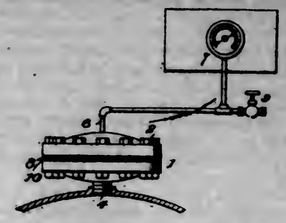
3. In an implement of the character designated, the combination of a rigid knife blade and shank formed integral therewith, a pressure guard opposed to the knife blade and pivoted to the shank thereof by a fulcrum mounted upon a flat spring, said spring and fulcrum being countersunk in the shank substantially in the manner and for the purpose described.

4. In an implement of the character designated, the combination of a rigid knife blade and shank formed integral therewith, a pivoted pressure guard opposed to the knife blade and formed with a rear arm, and a spring bearing against said rear arm, said rear arm and said spring being countersunk in the shank of the knife blade, for the purpose and substantially in the manner described.

5. In an implement of the character designated, the combination of a rigid knife blade and shank formed integral therewith, and a pressure guard pivotally attached to the shank and formed with a cutting edge opposed to the knife edge and inclined with relation thereto, substantially in the manner and for the purpose described.

[Claims 6 to 8 not printed in the Gazette.]

874,517. DIAPHRAGM. CUTHBERT B. LOWRY, Lexington, Ky. Filed June 2, 1906. Serial No. 319,947.

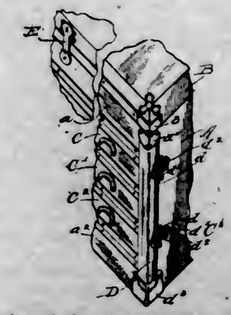


1. The combination with a tank, retort, or the like, and an indicator, of a diaphragm casing interposed between said tank or retort and the indicator, a diaphragm within said casing, and a stop plate spaced from but in close proximity to the diaphragm for limiting the inward movement of the flexible portion thereof upon the creation of a vacuum within such tank or retort, said stop plate having perforations formed therein.

2. The combination with a tank, retort, or the like, and an indicator, of a diaphragm casing interposed between said tank or retort and indicator, a metallic diaphragm within said casing, and a stop plate arranged in close proximity to said diaphragm, between it and the tank or retort, said plate having perforations, and serving to limit the inward movement of the flexible portion of the diaphragm upon the creation of a vacuum within said tank or retort.

3. The combination with a casing composed of two corresponding plates united at their edges, of a metallic diaphragm plate of flexible metal held between said edges, and a perforated disk of inflexible metal also held between said edges, said disk being in close relation to, but spaced apart from, said diaphragm plate.

874,518. LOCKING MEANS FOR BUREAU-TRUNKS. JAMES C. LYNCH, Chicago, Ill. Filed Nov. 21, 1906. Serial No. 344,416.



1. In a device of the class described the combination with a trunk of a bumper rigidly engaged to each lower front corner and to the lid, a locking bar, a knuckle rigidly engaged to the top thereof adapted to fit over the top of the trunk, said locking bar being vertically adjustably and its lower end seating in the lower bumper and its upper end engaged beneath the lid.

2. The combination with a trunk and lid of a bumper rigidly engaged to each front corner of the lid and trunk, a vertically adjustable locking bar comprising an angle bar, a knuckle rigidly engaged to the top of said bar, an integral transverse flange on said knuckle adapted to fit over the corner of the trunk and beneath the lid thereby firmly preventing vertical movement of the locking bar when said trunk is locked.

3. The combination with a trunk, and slidable drawers in the front of the same, of a locking bar comprising an angle bar adapted to fit around the front edges of said

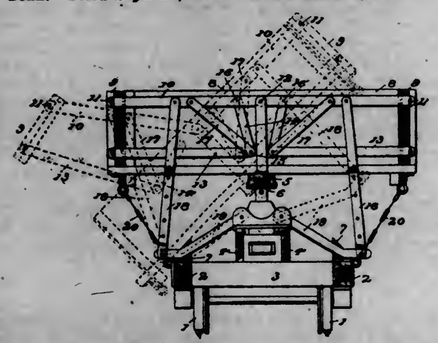
drawers and trunk, a leaf hinge engaged to the angle bar having a long pintle, a shorter hinge engaged to the trunk and permitting vertical adjustment of the angle bar, but preventing removal of the same, and a knuckle on the top of the locking bar adapted to engage around the top corners of the trunk and beneath the lid thereof.

4. A locking bar comprising an angle bar, open at the bottom, a knuckle rigidly engaged to the top adapted to engage between the lid and top of the trunk, a vertical adjustable but non-separable hinge engaged one leaf to the trunk and one to the angle bar thereby permitting vertical adjustment of the locking bar and preventing the removal thereof from the trunk.

5. A locking bar of the class described embracing an angle bar having on the rear edge thereof a hinge, one leaf of which is provided with long pintle, the other leaf of which is adapted to be rigidly engaged to the trunk and is relatively short, thus permitting vertical adjustment of the locking bolt to engage in recesses in the bumpers.

[Claims 6 to 10 not printed in the Gazette.]

874,519. DUMP-CAR. EDWARD S. MACLIN, Knoxville, Tenn. Filed Sept. 10, 1907. Serial No. 392,238.



1. In a dump-car or similar structure, the combination of a car-body having a displaceable wall, a toggle connecting said wall and a relatively fixed part of the body, and a link connected to said toggle to forcibly spread the same upon dumping of the car.

2. In a dump-car or similar structure, the combination of a car-body having a displaceable wall, a toggle connecting said wall and a relatively fixed part of the body, and means engaging the knuckle of said toggle to forcibly spread the latter upon dumping of the car.

3. In a dump-car or similar structure, the combination of a car-body having a displaceable wall, a link and a toggle connecting said wall and a relatively fixed part of the body, and a second link secured to said first-mentioned link and connected to said toggle to forcibly spread the same upon dumping of the car.

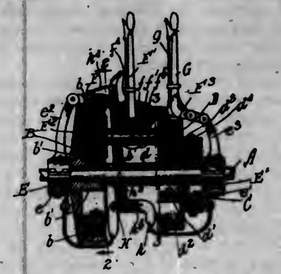
4. In a dump-car or similar structure, the combination of a car-body having a displaceable wall, a link and a toggle connecting said wall and a relatively fixed part of the body, and a second link secured to said first-mentioned link and to the knuckle of the toggle and adapted to forcibly spread the toggle when the car is dumped.

5. In a dump-car or similar structure, the combination of a car-body having a displaceable wall, a toggle connecting said wall and a relatively fixed part of the body, and a link connected to the toggle and adapted to forcibly spread the same upon dumping of the car and to lock said toggle when the car-body is righted.

[Claims 6 to 10 not printed in the Gazette.]

874,520. CHANGE-SPEED AND REVERSING MECHANISM. GEORGE W. MANSIR, Chicago, Ill., assignor of one-half to William R. Donaldson, Chicago, Ill. Filed Jan. 16, 1906. Serial No. 296,872.

1. A friction speed transmission device embodying a continuously rotating shaft, a wheel rigidly secured thereon having a friction face at its hub and within its periphery, an oppositely facing friction disk or wheel slidably engaged upon the shaft and having a friction face adjacent the hub and within its periphery, a shaft journaled between said disks or wheels, a friction wheel rigidly secured on each end thereof, one extending into position to engage either friction face of the rotatable friction wheel, the other to engage either friction face of the rotatable friction wheel and means for shifting said friction wheels into engagement with the respective friction faces.



2. In a friction transmission device the combination with a shaft of the balance wheel secured thereon having a friction face at the hub and a friction face within the periphery of the same, a friction wheel rotatably secured upon the shaft and facing the balance wheel, a shaft extending substantially parallel of the main shaft, a friction wheel rigidly secured on each end thereof, one of the same adapted to engage the friction faces on the balance wheel, the other to engage the rotatable friction wheel there being sprocket teeth on said rotatable friction wheel.

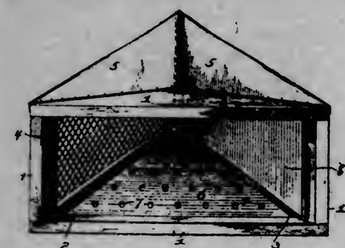
3. A friction transmission device embracing a main shaft, oppositely facing friction wheels thereon, one rigidly secured to the shaft, the other rotatable and slidable thereon longitudinally, a fixed friction wheel at the rear of said movable friction wheel and adapted to engage a friction face thereon when the latter is moved longitudinally, a shaft journaled substantially parallel with the main shaft, a friction wheel on each end thereof, adapted to engage both the first named fixed friction wheel and the rotatable friction wheel, means for adjusting said shaft to reverse the rotatable friction wheel on the main shaft, means for adjusting said shaft to drive said rotatable wheel at different speeds and means for shifting the rotatable friction wheel into engagement with the fixed friction wheel at the rear thereof thereby driving the rotatable wheel at the same rate of speed as the main shaft.

4. A friction transmission device embracing the combination with a rotative shaft of a balance wheel thereon having inner and outer friction faces, a friction wheel rigidly engaged on the shaft opposite said balance wheel, a transmitting friction wheel rotatable on the shaft and having sprocket teeth and inner and outer friction faces thereon oppositely disposed with reference to those on the balance wheel, a shaft journaled between said transmitting friction wheel and balance wheel, a friction pulley on each end thereof, a lever for inclining said shaft to bring said friction pulleys into engagement with one face on the balance wheel and one face on the transmitting friction wheel and means for shifting the transmitting friction wheel bodily on the shaft into positive engagement with the fixed friction wheel on said shaft.

5. In a friction transmission device the combination with the driving shaft and a balance wheel thereon having an inner and an outer friction face, of a transmission friction wheel facing the same and rotatable and longitudinally movable on the shaft and also having an inner and an outer friction face, a rotating shaft having its ends extending between said friction faces, a friction pulley on each end of said shaft, a lever for adjusting said friction pulleys to simultaneously engage one face on the balance wheel and one face on the transmission wheel, a lever for forcing said shaft bodily inwardly or outwardly to engage simultaneously corresponding friction faces on said wheels, a tapered friction wheel rigidly secured on the driving shaft behind the transmission friction wheel, said transmission friction wheel having a flange thereon provided with sprocket teeth and complemental with the tapered friction wheel and adapted to engage thereon and means for shifting the transmission friction wheel bodily on the shaft and into engagement with said fixed friction wheel.

[Claims 6 to 40 not printed in the Gazette.]

874,521. COLD-AIR-INLET REGULATOR FOR FURNACES. THOMAS J. MARCH, Pottstown, Pa. Filed Apr. 4, 1907. Serial No. 366,382.



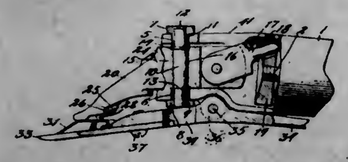
1. A cold air inlet regulator for furnaces, comprising a frame having open work sides, and a pivotally supported vane arranged to cover one or the other of the open-work sides or to occupy an intermediate position according to the direction of the wind.

2. A cold air inlet regulator for furnaces, comprising a frame, a closed roof and means operating automatically to control the passage of air through one or the other of the open-work sides, or through both of said sides simultaneously.

3. A cold air inlet regulator for furnaces, comprising a frame work having outwardly-projecting convergent open-work sides, and a swing vane pivotally supported at the convergent end of the framework, said vane adapted to be made to cover one or the other open work side, or occupy an intermediate position by the action of the wind.

4. A cold air inlet regulator for furnaces, comprising a framework having convergent open-work sides, a closed top and a perforated bottom, and a vane pivotally supported at the convergent end of the frame-work and adapted to be swung by air currents to close one or the other of said open-work sides or to occupy an intermediate position.

874,522. ANIMAL-SHEARS. THOMAS A. MARTIN, Chicago, Ill., assignor to Davis-Martin Company, Chicago, Ill., a Corporation of Illinois. Filed June 15, 1907. Serial No. 379,108.



1. In an animal shears, in combination, a supporting member; a movable cutter; a lever pivoted to said supporting member; a stationary cutter carried by said lever; and means for adjusting the position of said lever.

2. In an animal shears, in combination, a supporting member; a movable cutter; a lever pivoted to said supporting member at a point between its ends; a cutting element carried at one end of said lever; and an adjusting means carried at the other end of said lever.

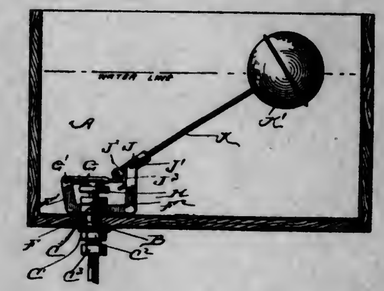
3. In an animal shears, in combination, a supporting member; a movable cutter; a lever pivoted to said supporting member at a point between the ends of said lever; a cutter carried at one end of said lever; and an adjusting screw mounted in the other end of said lever.

4. In an animal shears, in combination, a casing adapted to be held in the hand of the operator; a movable cutter; means in said casing for moving said movable cutter; a lever pivoted at a point between its ends near the forward end of said casing, one end of said lever extending to a point near the rear end of said casing; an adjusting screw in said end of said lever adapted to bear upon an adjacent portion of the casing; and a stationary cutting member carried at the other end of said lever.

5. In an animal shears, in combination, a supporting member; a lever pivotally mounted therein; means for pivotally moving said lever, said lever comprising a forwardly-extending finger; a member mounted upon said finger; a cutting element attached to said last mentioned member; a stationary cutting element; and means for pressing said stationary cutting member against said first mentioned cutting element.

[Claims 6 to 11 not printed in the Gazette.]

874,523. BALL-COCK. JAMES E. MEAGHER, Burlington, Vt. Filed July 26, 1906. Serial No. 327,872.

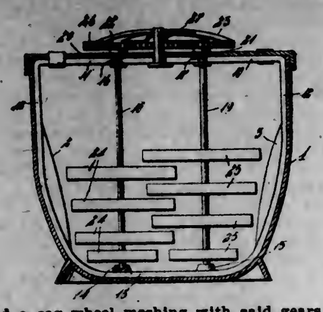


The combination with a tank provided with an opening in its bottom, of a pipe secured in said opening provided with an enlarged end having bores of two diameters, one of said bores being threaded, a pipe provided with a threaded central flange adapted to be screwed into said threaded bore, a perforated disk seated on the shoulder formed by the small bore, provided with oppositely disposed upwardly extending arms having angled ends adapted to rest on the shoulders formed by the threaded bore under the flange of the pipe, a collar mounted on said pipe under the enlarged head, provided with oppositely disposed upwardly extending bifurcated arms of different lengths, the walls of which are apertured, an arm pivotally mounted between the bifurcation of the shorter arm provided with a cap forming a valve adapted to fit over the end of the pipe secured in the head, the end of said bar being flattened at its free end, a lever mounted in the bifurcation of the longer arm provided with a fork carrying a roller adapted to engage the top of the flattened end of said bar, a curved arm projecting downwardly from said lever, adapted to engage the under side of the flattened end of the arm, a rod secured in said head carrying a float, and means for securing said pipe in said tank, for the purpose described.

874,524. FOOD-MIXER. REINHOLD MOOS, Placerville, Cal. Filed Oct. 18, 1906. Serial No. 339,524.

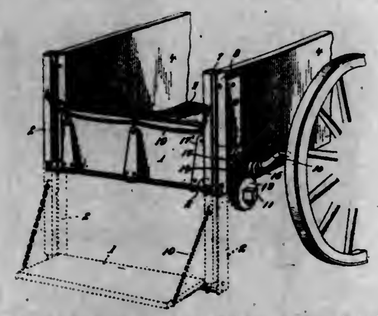
A food beater or mixer comprising a containing vessel provided with oppositely-disposed guides on the inner face of the sides thereof, a lid for said vessel, a beater frame secured to said lid and removable therewith from said vessel, and comprising a cross bar having depending legs connected by a transverse bar, said legs fitting between and held in position by said guides prevent rotation of said frame, dashers journaled at one end in said transverse bar

with their free ends projecting through apertures in said cross bar and through said lid, gears on said projecting



ends, and a cog wheel meshing with said gears and provided with operating means.

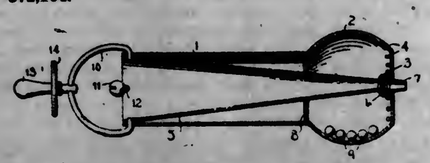
874,525. ELEVATING-WAGON. LAURIATON G. MCGRANOR and JOHN W. BEALL, Irwin, Pa. Filed July 24, 1907. Serial No. 385,338.



1. The combination with a vehicle, of an end gate carried upon vertically movable uprights, racks carried on said uprights, pinions rigidly carried on a transverse shaft engaging said racks, and means for operating said shaft for lowering and raising said end gate, substantially as described.

2. The combination with a vehicle, of an end gate carried upon vertical uprights movably carried upon the rear ends of the sides of the vehicle, racks carried upon said uprights, pinions engaging said racks rigidly carried on a transverse shaft, a crank arm geared to said transverse shaft for operating same for lowering and raising the end gate, substantially as described.

874,526. TOY. LUTHER E. MCLAUGHLIN and ROBERT J. PARSONS, Priceburg, Pa. Filed May 6, 1907. Serial No. 372,104.

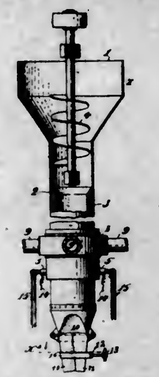


1. In a toy of the type described, a tubular casing having a wall at one end and its other end open, a horn extended longitudinally through and housed within the casing and having its open end disposed toward the open end of the latter, said horn being provided with a mouthpiece arranged to project outwardly through the end wall of the casing.

2. In a toy of the type described, a tubular casing having a wall at one end and its other end open, a conical horn extended longitudinally through and housed within the casing and having its mouthpiece projecting through an opening in the end wall of the casing, the enlarged open end of the horn being disposed toward the open end of the casing, a partition disposed at an intermediate point within the latter and forming a rattle-receiving compartment, and a plurality of rattles arranged within said compartment.

3. In a toy of the type described, a tubular casing having a wall at one end and its other end open, a horn extending longitudinally through and housed within the casing, said horn having a mouthpiece projected through the end wall of the casing and its open end disposed at the open end of the latter, the casing and horn being provided with alined transverse perforations, and a semicircular bail having inturned terminal portions journaled in said perforations for pivoting the bail to the casing and holding the horn in position within the latter.

874,527. ORE-REDUCING FURNACE. JAMES MCLOUGHLIN, Rye, N. Y. Filed Mar. 21, 1906, Serial No. 307,239. Renewed May 18, 1907. Serial No. 374,352.



1. A furnace for the reduction of zinc-bearing ores, having an elongated furnace body open at both ends, one open end serving for the admission of the ore and the other serving as an outlet for the solid products of the reduction, means for axially constricting the alined outlet of the furnace, means for feeding the material in the ore-chamber of the furnace from the receiving to the discharging end, and means for producing an electric arc in the ore-chamber, said chamber having in its walls fume-apertures disposed between the reduction point and the charging end of the furnace and extending from the ore-chamber obliquely outward and toward the receiving end of the chamber.

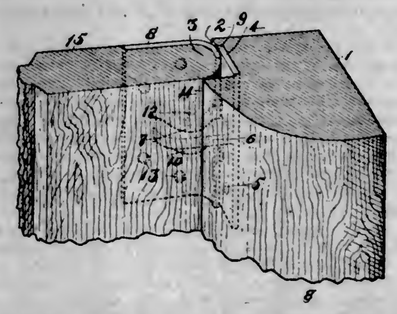
2. A furnace for the continuous reduction of zinc-bearing ores, comprising an elongated, upright furnace-body, having in it an ore-chamber with fume-apertures in its walls, and an alined outlet at is bottom for the solid products of the reduction, and means for producing an electric arc to extend transversely across the ore-chamber below the fume apertures, means for axially constricting the outlet at the bottom, and means in the ore-chamber for forcing the ore downward therein.

3. A furnace for the reduction of zinc-bearing ores, having an elongated, upright furnace-body, provided with a recess 6 in its walls and outlets 7 therefrom for the fumes, means below said recess for producing a transverse electric arc in the furnace, and an outlet below for the solid products of the reduction, said outlet being provided with means for constricting it from opposite sides.

4. A furnace for the continuous reduction of ores containing a vaporizable metal, consisting of an elongated furnace-body having fume-outlets in its walls, means for feeding the ore through the furnace, means for producing an electric arc in the furnace for reducing the ore, and means for constricting the outlet of the furnace, said means consisting of the hinged sections 11, and means for pressing them together for reducing the area of the outlet.

5. A furnace for the purpose specified, having an elongated furnace-body disposed with its axis upright and provided with a fume-recess 6 and fume-outlets 7 therefrom, a hopper 1 at the upper end of said body, a screw 4 for feeding the ore downward in a continuous manner, metal electrodes 5, set in the furnace-walls below the fume-recess, and means for constricting the open discharge end of the chamber in the furnace so as to regulate the discharge of the scoria, ashes and the like.

874,528. DOOR AND HINGE. JOHN MCMULLEN, Kent, Ohio. Filed Aug. 15, 1907. Serial No. 388,706.

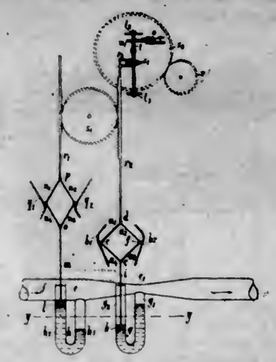


1. The combination with a rabbeted door frame, of a hinge member provided with a laterally-extending perforated portion, the perforation being in alinement with the edge formed by the intersection of said rabbet with one side of said frame and also equidistant from both of the side edges of said rabbet, a door provided with a convex edge, the axis of curvature of which is approximately coincident with the axis of revolution of said door, a hinge member carried by said door provided with an extended portion lapping the laterally-extending portion of the other member provided with an opening registering with the opening in the opposite member, the convex portion of the other member, provided with an opening registering tion of said door being of such a thickness as to approximately constantly contact with one of the side edges of said rabbet whereby no open space exists between said rabbet and said door when said door is open.

2. The combination with a door frame provided with a rabbet and a door positioned therein provided with a convex rear edge, a hinge member carried by said door, said members being provided with lapping portions having registering openings, a pintle constituting an axis for said door, the position of said pintle being in alinement with the edge formed by the intersection of said rabbet with one side of said frame and equidistant from both side faces of said rabbet, the convex side of said door extending into said rabbet and arranged to constantly contact with one face thereof when said door is moved.

874,529. DEVICE FOR TRANSFORMING VARIABLE MOTIONS INTO UNIFORM MOTIONS. HENRI NIEBUHR, Hanover, Germany, assignor to Siemens & Halske Aktiengesellschaft, Berlin, Germany. Filed Mar. 19, 1907. Serial No. 363,275.

1. Device for transforming a motion variable according to a mathematical function into a uniform motion and for registering the latter comprising an element for producing variable motion, an element for registering uniform motion, a transformer consisting of a link movement having one end suitably guided and connected with the element of uniform motion and the other end suitably guided and connected with the element of variable motion and also having an intermediate joint, and means for guiding said intermediate joint in the path corresponding with the change in motion required.



2. Device for transforming a motion variable according to a mathematical function into a uniform motion, and for registering the latter, comprising an element for producing variable motion, an element for registering uniform motion, a transformer consisting of a jointed linkage connecting said elements of uniform and variable motion, means for guiding the end of the link connected to the element of variable motion, means for guiding the end of the link connected to the element for registering uniform motion, and means for guiding the other ends hinged together in a path corresponding with the change in motion required, to transform the variable motion into the uniform motion.

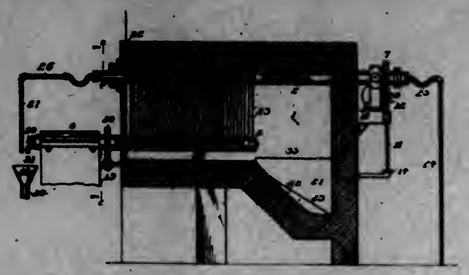
3. Device for transforming a motion variable according to a mathematical function into a uniform motion and for registering the latter, comprising a transformer having a jointed linkage and a curved guide suitably shaped to guide the hinged ends of said jointed linkage to cause the variable motion of a point of one link to be transformed into a uniform motion of a second link; a water-meter arrangement working on the Venturi principle and imparting to the said point of the first link the variable motion; and means for registering the uniform motion of the above mentioned second link of the transformer, substantially as described.

4. Device for transforming a motion variable according to a mathematical function into a uniform motion and for registering the latter, comprising a transformer, having a jointed linkage and a curved guide suitably shaped to guide the hinged ends of said jointed linkage to cause the variable motion of a point of one link to be transformed into a uniform motion of a point of a second link; a tube having two shanks and containing a liquid, the alterations in height of one level of said liquid, caused by the alterations in height of the other liquid level, being imparted to the first mentioned link of the motion transformer; and means for registering the uniform motion of the above mentioned second link of the transformer, substantially as described.

5. Device for transforming a motion variable according to a mathematical function into a uniform motion and for registering the latter, comprising a motion transformer having a jointed linkage and a curved guide suitably shaped to guide the hinged ends of said jointed linkage to cause the variable motion of a point of one link to be transformed into a uniform motion of a second link; a tube having two shanks and containing a liquid, the one shank opening into the restricted portion of a fluid conduit, so that the level height of the liquid level in this shank is influenced by the fluid pressure present at said restriction; means for imparting the alterations in height of the other liquid level of the tube, to a point of one link of said transformer, and means for registering the produced uniform motion of a second link of said transformer, substantially as described.

[Claim 6 not printed in the Gazette.]

874,530. CONTINUOUS FURNACE. EDWIN NORTON, New York, N. Y., and HENRY C. SHAW, Glenshaw, Pa. Filed Apr. 18, 1905, Serial No. 256,825. Renewed June 6, 1907. Serial No. 377,609.



1. In a furnace for heating metal sheets or plates, a pair of rotary screws arranged to advance the opposite edges of the sheets or plates along the furnace chamber, and means for supporting the plates.

2. In a furnace for heating metal sheets or plates, a pair of rotary screws arranged to advance the opposite edges of the sheets or plates along the furnace chamber, means for supporting the plates, the said support being interrupted at a suitable point, whereby the sheets or plates are removed from the zone in which they were heated.

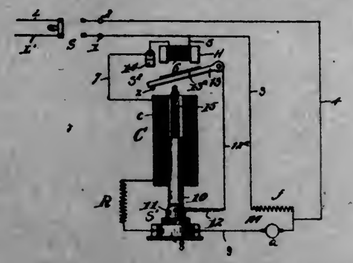
3. In a furnace for heating metal sheets or plates, a pair of rotary screws arranged to advance the opposite edges of the sheets or plates along the furnace chamber, and screw-threaded means to support and advance similarly a horizontal edge of each sheet or plate.

4. In a furnace for heating metal sheets or plates, a pair of rotary screws arranged to advance the opposite edges of the sheets or plates along the furnace chamber, and screw-threaded means to support and advance similarly a horizontal edge of each plate or sheet, the said screw-threaded means being interrupted at a suitable point, whereby the sheets or plates are removed from the zone in which they were heated.

5. In a furnace means for advancing metal sheets or plates therein, said means including screws in the threads of which the opposite edges of the sheets or plates are positioned.

[Claims 6 to 10 not printed in the Gazette.]

874,531. AUTOMATIC MOTOR-STARTER. WILLIAM C. O'BRIEN, Baltimore, Md., assignor to Monitor Manufacturing Company, Baltimore, Md., a Corporation of Maryland. Filed Oct. 23, 1905. Serial No. 284,105.



1. In an automatic starter for electric motors, a starting resistance in the armature circuit, a normally open low-resistance circuit in shunt to said starting resistance, two movable switch members in said shunt circuit, an electro-magnetic device adapted to move one of said members to closed position each time the line switch is closed, and an electro-magnetic device adapted to move the other member to open position only when the armature current at starting is above a predetermined quantity.

2. In an automatic starter for electric motors, a starting resistance in the armature circuit, a normally open low-resistance circuit in shunt to said starting resistance, two movable switch members in said shunt circuit, an electro-magnetic device adapted to move one of said members to closed position each time the line switch is closed, and an electro-magnetic device adapted to move the other member to open position only when the armature current at starting is above a predetermined quantity, said electro-magnetic devices being connected so as to be simultaneously energised when the line switch is closed.

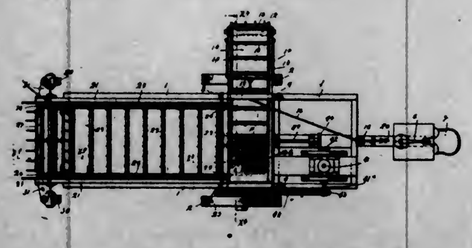
3. In an automatic starter for electric motors, a starting resistance in the armature circuit, an electro-magnetic device having coils in said circuit, a normally open low-resistance circuit in shunt to said coils and resistance, two movable switch members in said shunt circuit, one adapted to be opened by said device when the armature current at starting exceeds a predetermined quantity, and an electro-magnetic device arranged to move the other member to closed position each time the line switch is closed.

4. In an automatic starter for electric motors, a starting resistance in the armature circuit, an electro-magnetic device having coils in said circuit, a normally open low-resistance circuit in shunt to said coils and resistance, two movable switch members in said shunt circuit, one adapted to be moved to open position by said device when the armature current at starting exceeds a predetermined quantity, and an electro-magnetic device arranged to move the other member to closed position each time the line switch is closed.

5. In an automatic starter for electric motors, a starting resistance in the armature circuit, an electro-magnetic device having coils in said circuit, a normally open low-resistance circuit in shunt to said coils and resistance, two movable switch members in said shunt circuit, one adapted to be moved to open position by said device when the armature current at starting exceeds a predetermined quantity, and an electro-magnetic device responsive to currents of less strength than said predetermined quantity adapted to move the other switch member to closed position.

[Claims 6 to 17 not printed in the Gazette.]

874,532. LOADING-MACHINE. WILLIAM J. OHM, Minneapolis, Minn. Filed Dec. 31, 1906. Serial No. 350,107.

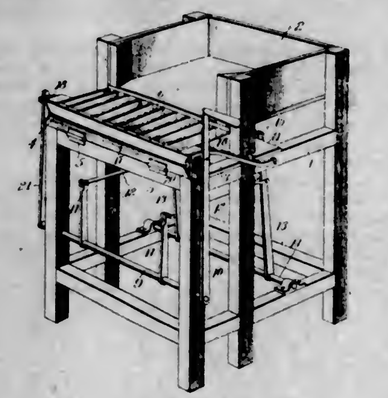


1. In a loading machine, the combination with a main frame and wheels supporting the same, of a forwardly and downwardly projecting supplemental frame pivotally connected at its rear upper portions to said main frame and provided with supporting wheels at its forwardly projecting free end, a pick-up device rotatively mounted in the free end of said supplemental frame, and an endless toothed slat and belt conveyer mounted on said supplemental frame and running over said rotary pick-up device and driving the latter, substantially as described.

2. In a loading machine, the combination with a main frame and wheels supporting the same, of a forwardly and downwardly projecting supplemental frame pivotally connected at its rear upper end to said main frame and provided with supporting wheels at its forwardly projecting free end, a rotary toothed pick-up device mounted in the free end of said supplemental frame, an endless toothed slat and belt conveyer mounted on said supplemental frame and running over and driving said rotary pick-up device, and an adjustable deck and belt tightening device mounted on said supplemental frame and over which said endless elevator runs, substantially as described.

3. In a loading machine, the combination with a main frame and wheels supporting the same, of a forwardly and downwardly projecting supplemental frame pivotally connected at its rear upper portion to said main frame and provided with supporting wheels at its forwardly projecting free end, a toothed rotary pick-up device mounted in the free end of said supplemental frame, an endless elevator belt mounted on said supplemental frame and running over and driving said rotary pick-up device, and a shoe plate supported below said rotary pick-up device, substantially as described.

874,533. BLOCK-MOLDING MACHINE. MILTON J. PALMITER, South Bend, Ind. Filed Feb. 7, 1907. Serial No. 356,211.



1. A block molding machine comprising a bed plate, front and rear sides, the front side being hingedly mounted and movable out of operative position automatically and the rear side being slidable into and out of operative position, a plurality of partitions connected to the rear side and movable into and out of coöperative relation with the hinged side, and means for moving the partitions and rear side into and out of operative position.

2. A block molding machine comprising a bed plate, a hinged front side movable to inoperative position automatically, a plurality of partitions, locking means for the hinged side, and means for moving the partitions, connected with the locking means to release the front side.

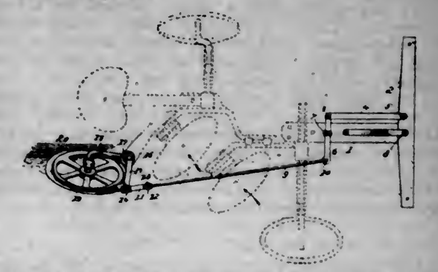
3. A block molding machine comprising a bed plate, a hinged front side movable to inoperative position automatically, a plurality of sliding partitions, pivoted latches for holding the front side against movement, and means for moving the partitions, connected to the latches to release the front side.

4. A block molding machine comprising a hopper open at its front; a mold arranged below and in front of the hopper and formed of a bed plate, a hinged and weighted front side, a plurality of sliding partitions, a back side connecting the partitions, and latches for holding the front side against the ends of the partitions; an oscillatory shaft arranged below the mold and connected to the sliding partitions; and a pair of levers having means to engage the latches to operate them.

5. A block molding machine, comprising a bed plate, a downwardly swinging front side, latches for the front side, movable partitions for the bed plate, an oscillatory shaft below the bed plate, levers on the shaft, adapted to operate the latches, and connection between the shaft and the movable partitions for moving the latter.

[Claim 6 not printed in the Gazette.]

874,534. WHEEL-PLOW. WILLIAM H. PARLIN, Canton, Ill., assignor to Parlin & Orendorff Company, Canton, Ill., a Corporation of Illinois. Filed May 11, 1906. Serial No. 316,370.

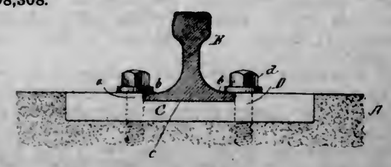


1. In a wheel plow, the combination of a plow frame, a draft evener pivotally connected with the front end of the plow frame, a caster wheel mounted on a rearward extension of a vertical shaft journaled in a bearing in the rear end of the plow frame, an arm secured to the upper end of the caster wheel shaft and extended sidewise therefrom, a lever fulcrumed between its ends on the plow frame, a connection between the arm of the caster wheel shaft and one end of the lever upon the same side of their respective pivotal points, and a connection between the other end of the lever and the evener upon the same side of their respective pivotal points, substantially as described.

2. In a wheel plow, the combination of a plow frame, a draft evener pivotally connected with the front end of the plow frame, a caster wheel mounted on a rearward extension of a vertical shaft journaled in a bearing in the rear end of the plow frame, an arm secured to the upper end of the caster shaft and extended sidewise therefrom, a collar swiveled in the swinging end of the arm, a strut rod extended through the collar and having a stop adapted to engage the front side of the collar, a cross lever with one end of which the front end of the strut rod is connected, and a link connecting the other end of the cross lever with the evener at a point to one side of the draft hitch, substantially as described.

3. In a wheel plow, the combination of a plow frame, a draft evener pivotally connected with the front end of the plow frame, a caster wheel mounted on a rearward extension of a caster shaft having a bearing in the rear end of the plow frame, an arm secured to the upper end of the caster shaft, a collar swiveled in the swinging end of the arm, a strut rod extended through the collar, a swingable stop arm pivotally connected with the strut rod at some distance in front of the collar and adapted to lie with its swingable end in contact with the collar, a cross lever with one end of which the front end of the strut rod is connected, and a link connecting the other end of the cross lever with the evener, substantially in the manner and for the purpose described.

874,535. RAIL-FASTENING. HERBERT E. PERCIVAL, Galveston, Tex., assignor of one-half to Brewer W. Key, Woodward, Okla. Filed Jan. 29, 1906. Serial No. 298,308.

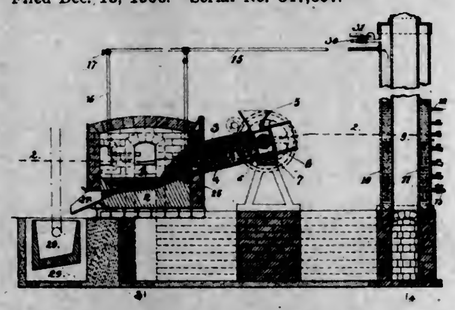


1. In combination with a railroad tie, a cushion resting thereon, a rail resting on said cushion and fitting into a slot cut therein, which slot is cut so deep that the upper surface of the flange of the rail will be on a line with the surface of said cushion, and means for fastening said

rail to said tie, which means is adapted to engage partly with the flange of said rail and partly with the surface of said cushion and be supported thereby, substantially as described.

2. In combination with a cement railroad tie having a recess cut in the top thereof, a cushion fitting within said recess, a rail resting on said cushion and fitting into a slot cut therein, which slot is cut so deep that the upper surface of the flange of the rail will be on a line with the upper surface of said cushion, and means alongside the flange of said rail fastening down through said cushion into said tie, which means is adapted to engage partly with the flange of said rail on the inside and the surface of said cushion on the outside, whereby said means may be supported by said cushion so as to be held in proper engagement with the flange of said rail.

874,536. PROCESS OF MANUFACTURING WROUGHT IRON OR STEEL. JOHN A. POTTER, Los Angeles, Cal. Filed Dec. 13, 1906. Serial No. 347,607.



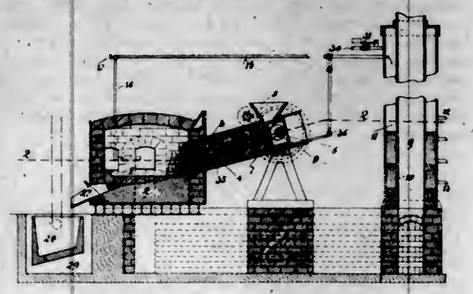
1. The process of manufacturing, direct from iron oxid ore, iron comparatively free from carbon, which consists in passing through a furnace the flames of combustion of fuel sufficient to melt the iron reduced by the hereinafter recited steps, feeding ore into the furnaces to expose the advancing surface of the ore to the heat of said flames, passing reducing gas through the ore and through its advancing surface into the furnace to reduce the ore, conducting away together the gaseous products of said combustion and reduction, and collecting the molten products of the reduction, substantially as described.

2. The process of manufacturing, direct from iron oxid ore, iron comparatively free from carbon, which consists in passing through a furnace the flames of combustion of fuel sufficient to melt the iron reduced by the hereinafter recited steps, continuously feeding ore into the furnace to expose the advancing surface of the ore to the heat of said flames, continuously passing reducing gas through the ore and through its advancing surface into the furnace to reduce the ore, continuously conducting away together the gaseous products of said combustion and reduction, and continuously collecting the molten products of the reduction, substantially as described.

874,537. APPARATUS FOR PRODUCING WROUGHT IRON OR STEEL DIRECT FROM ORE. JOHN A. POTTER, Los Angeles, Cal. Filed Jan. 7, 1907. Serial No. 351,237.

1. In a smelting apparatus, the combination of a furnace, means for feeding ore thereto, a stack connected with the furnace, a still, heated by the stack, for distilling crude oil, a pipe for supplying the crude oil to the still, a pipe for drawing off the liquid residues, and a pipe leading from the still to the furnace to conduct thereto the gas so distilled, substantially as described.

2. In a smelting apparatus, the combination of a furnace, means for feeding ore thereto, a still for distilling hydrocarbonaceous material, means for utilizing the residue heat of the furnace to heat said still, air conduits, connected with opposite sides of the furnace, a stack, and means for selectively connecting the conduits with the stack to serve as flues, connections between the upper portion of the still and the opposite sides of the furnace, and means for selectively controlling the flow of the gas in said branches, substantially as described.

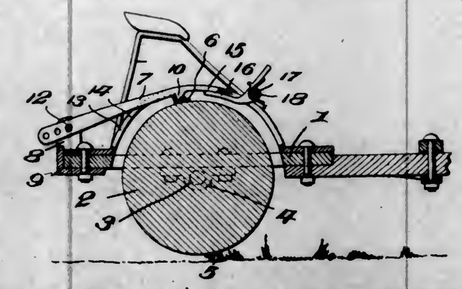


3. In a smelting apparatus, the combination of a furnace, means for charging ore into said furnace, means for highly heating the front surface of the ore body, and means for passing combustible gas through the body of ore in the direction towards the furnace at a point behind, but adjacent to, said front surface, substantially as described.

4. In a smelting apparatus, the combination of a furnace, means for charging ore into said furnace, means for highly heating the front surface of the ore body, and means for passing a reducing gas into the ore body, and through its front surface into the furnace, substantially as described.

5. In a smelting apparatus, the combination of a furnace, means for supplying, to said furnace, fuel and air for the combustion of said fuel means for charging ore into said furnace, means for highly heating the front surface of the ore body, and means for preventing escape, except through said front surface into the furnace, of reducing gas in contact with said ore, substantially as described.

874,538. COMBINED SAGE-BRUSH DIGGER AND LAND-ROLLER. JAMES W. POWELL, Arleta, Oreg. Filed May 22, 1907. Serial No. 375,072.



1. The combination with a roller, and a frame thereon; of a pair of angle bars diametrically oppositely disposed and extending longitudinally on said roller, means to engage one of said bars and hold said roller against rotation whereby the opposite angle bars will engage the soil.

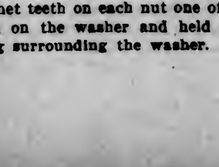
2. In a device of the class described, the combination with a roller and a frame thereon; of a pair of angle bars oppositely disposed on said roller, a latch carried by said frame adapted to engage one of said angle bars and hold the opposite angle bar in engagement with the soil.

3. In a device of the class described, the combination with a roller and a frame therefor; of angle bars on said roller, a latch pivotally and adjustably secured to said frame, a detent on said latch adapted to engage one of said angle bars and hold the roller against rotation, and means to release the detent from the angle bar.

4. In a device of the class described, the combination with a roller and a frame therefor; of angle bars on said roller, a latch, means to adjustably mount one end of said latch on said frame, a detent at the free end of said latch adapted to engage said angle bars, a finger at the extreme outer end of said latch and means to engage said finger and elevate the latch, whereby the detent will be disengaged from the angle bar.

5. In a device of the class described, the combination with a roller, having a frame therefor; of angle bars on said roller, a bridge carried by said frame, and extending over said roller, said bridge having a slot therein, a head secured to said frame, a latch pivotally and adjustably secured to said head, a detent on said latch adapted to engage said angle bars and hold the roller against rotation, a lever pivotally mounted on said bridge and adapted to engage the extended end of said latch, and means to hold said lever in its normal position.

874,539. MARKING-PEN. WILFORD D. PREST, WILLIAM C. LYNGE, and GEORGE C. KNUDSEN, Chicago, Ill. Filed May 27, 1907. Serial No. 375,789.

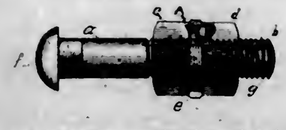


1. In a pen of the class described, a pair of bow shaped blades held in a suitable handle and having ink holding recesses formed in their ends, substantially as described.

2. In a device of the class described, a handle, a pair of bow shaped blades held therein, and straight nibs on said blades having recesses in said nibs, substantially as described.

3. In a device of the class described, a handle, in combination with a pair of German silver bow shaped blades held therein and having an ink holding recess near the end of each said blade and formed therein, substantially as described.

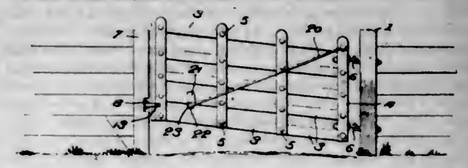
874,540. NUT-LOCK. JAMES H. RAMSDELL, Newton Falls, Ohio. Filed Oct. 26, 1906. Serial No. 340,788.



1. In a nut lock the combination of a longitudinally slotted bolt, a plurality of nuts thereon, the adjacent faces thereof having ratchet teeth, the lower nut being also provided with notches in its threaded bore adapted to register with the bolt slot, a spring washer located between the nuts and having a tooth engaging in the bolt slot and a spring tooth adapted to engage the ratchet teeth of one of the nuts.

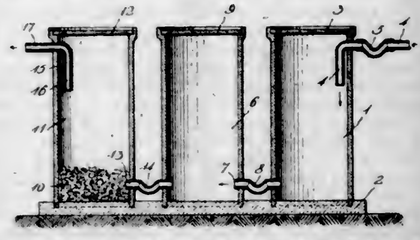
2. In a nut lock the combination of a longitudinally slotted bolt, a plurality of nuts thereon the adjacent faces thereof having ratchet teeth, the lower nut being also provided with notches in its threaded bore adapted to register with the bolt slot, a spring washer located between the nuts and having a lug engaging in the bolt slot and registering lower nut notch and spring teeth adapted to engage the ratchet teeth on each nut one of the spring teeth being pivoted on the washer and held in position by a protector ring surrounding the washer.

874,541. GATE. RANKIN B. REECE, Knightstown, Ind. Filed June 10, 1907. Serial No. 378,247.



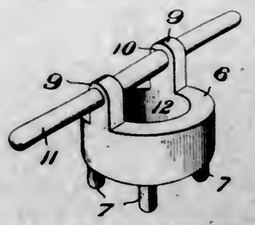
In a gate of the class described, the combination with a gate, consisting of a plurality of horizontally disposed bars, vertically disposed standards at each side of said bars and means to pivotally secure the bars and standards together; of means to hold said bars in various positions above the horizontal, comprising a pair of rods, a stirrup extending over one of said bars, a bolt extending through eyes on said rods and through the lower end of the stirrup, whereby when weight is directed on said rods, the stirrup will be clamped in engagement with said bar and means to secure the upper ends of said rods to parts of the gate.

874,542. APPARATUS FOR LIQUEFACTION AND PURIFICATION OF SEWAGE. CORNELIUS W. RUSSELL, Burlington, Iowa. Filed June 20, 1907. Serial No. 379,932.



In an apparatus of the character described, a series of upright substantially air-tight cells, trapped pipes from one to the other of the cells at their lower ends for establishing communication therebetween, a trapped inlet communicating with the upper end of the first cell of the series, an outlet pipe communicating with the upper end of the last cell, the ends of said inlet and outlet pipes upon the interior of the cells depending toward the bottom of said cells, and a filter in the lower end of the last cell over the end of the trapped pipe at the bottom thereof.

874,543. WRENCH FOR OPERATING BUSHINGS. JOHN P. SCHEUER, Mishicot, Wis. Filed June 14, 1907. Serial No. 379,090.

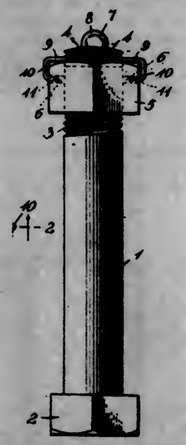


1. A wrench for operating bushings comprising a cylindrical body having a bore therethrough of greater diameter than the bore in said bushing, a plurality of prongs extending from the lower end of said body adapted to engage sockets in a bushing, oppositely disposed ears extending upwardly from the opposite end of said body, said ears having alining openings therein, and a bar extending through said openings and projecting a distance from each

side of said ears to form handles whereby said wrench may be readily operated and the bushing rotated.

2. A wrench for operating bushings comprising a cylindrical body having a bore therethrough of greater diameter than the bore in said bushing, oppositely disposed ears extending upwardly from one end of said body and formed by the continuation thereof, said ears having alining openings therein, a bar extending through said openings and from each side of said ears to form handles and a plurality of prongs extending downwardly from the opposite end of said body adapted to engage sockets in a bushing whereby said bushing may be rotated.

874,544. NUT-LOCK. PAUL C. SCHMIDT, Hartford, Conn. Filed July 25, 1907. Serial No. 385,537.



In a nut lock, a bolt provided at its forward end with a transverse groove or channel, a nut threaded onto the bolt and having a pair of opposed radial sockets, a spring metal locking ball designed to seat in said channel and having a pair of oppositely extended elongated arms provided with right angularly extended portions having terminal inturned fingers to seat respectively in said sockets, said locking member being provided with an outwardly folded spring loop connecting said arms and adapted to contract and hold the arms under tension when the locking member is applied.

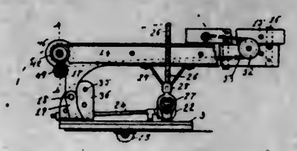
874,545. PIPE-WRENCH. ELBRIDGE L. SCRIBNER, Amesbury, Mass. Filed Apr. 23, 1906. Serial No. 313,293.



1. A pipe wrench comprising a hollow stock, a fixed jaw formed on the outer edge of said stock, a pivotally-mounted, movable jaw arranged to coact with said fixed jaw, said movable jaw having an elongated shank projected into said hollow stock, a spring-retracted operating rod slidably mounted in said stock and connected at one end with the shank of said movable jaw and normally projecting through and beyond the end of said stock opposite to that on which the jaws are mounted.

2. A pipe wrench comprising a stock having formed therein a longitudinal recess open through both ends thereof, a fixed jaw on one end thereof, a movable jaw pivotally mounted in said stock in position to coact with said fixed jaw, a shank on the inner end of said movable jaw projecting into the recess of said stock, an operating rod loosely connected at one end to said shank and slidably mounted at its other end in a guide passage formed in the end of the stock opposite to that on which the jaws are mounted and normally projecting beyond said end, a knob or handle formed on the projecting end of said rod by means of which the rod is moved forward and the movable jaw opened, and a coiled pull spring connected at one end to said rod and at its other end to the stock to exert a pulling action on said rod to retract it and close the movable jaw.

874,546. AERIAL LADDER. WILLIAM H. SHAFER, Cincinnati, Ohio. Filed Apr. 28, 1906. Serial No. 314,161.



1. An extensible member fulcrumed at a fixed point and provided with an actuating windlass having in combination a stationary drum, a crank shaft journaled thereis, a rotative cable drum mounted concentric therewith and inclosing the stationary drum, gears engaging the crank shaft therewith, and a spring for yieldingly resisting the rotation of the shaft.

2. An extensible member provided with an actuating windlass having in combination a crank shaft, a rotative cable drum mounted concentric therewith, a spring for yieldingly resisting the rotation of the shaft, and differential gears arranged to rotate the drum and shaft at different speeds.

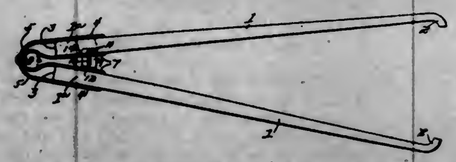
3. The combination of an extensible member fulcrumed at a fixed point, a crank shaft and a cable drum journaled thereon, gears for rotating the drum and shaft at respective different speeds, and a spring arranged to yieldingly resist the movement of the drum in relation to the shaft.

4. The combination of an extensible member fulcrumed at a fixed point, a drum journaled thereon, a cable actuated by the drum for extensibly adjusting the member, a crank shaft journaled in the axial line of the drum, differential speed gears actuated thereby for driving the drum, and a spring arranged to yieldingly resist the difference in the speed of the shaft in relation to the drum.

5. The combination of a turn-table, a main shaft and a secondary shaft journaled thereon, gears connecting them together an extensible member secured to the main shaft and movable in a vertical plane, a series of springs mounted on each of said shafts and arranged to collectively exert a yielding resistance to the movement of said shafts, by the descending movement of said member.

[Claims 6 to 8 not printed in the Gazette.]

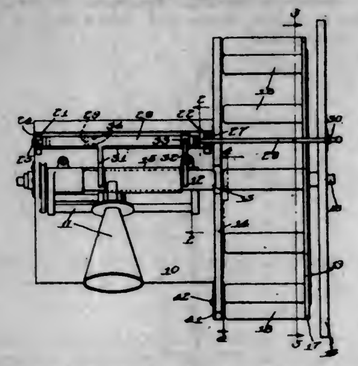
874,547. CLOTHES-LIFTER. GEORGE A. SHAW, Dayton, Ohio. Filed June 14, 1907. Serial No. 378,944.



A clothes lifter comprising two gripping arms with inturned engaging ends, an outer leaf spring attached to the outer sides of said arms and uniting the same by extending from one arm to the other in the form of a bow, an inner leaf spring united to the inner sides of said arms and extending from one arm to the other in the form of a bow, said outer and inner springs being rigidly united beyond the ends of the arms, and the width of said springs being equal to the widths of the arms, a slotted plate having one end attached to the inner leaf spring and the other end penetrating a slot in the other side of the inner leaf spring

and in the arm, and a pin penetrating the slot in the arm and the slot in said plate and providing means to limit the spreading movement of the arms under the combined action of the two springs, as herein shown and described.

874,548. RECORD HOLDING AND SHIFTING ATTACHMENT FOR PHONOGRAPHS. THOMAS V. SKELLY, Chicago, Ill. Filed May 25, 1906. Serial No. 318,614.



1. The combination of a phonograph having a mandrel for supporting a tubular record, a magazine adapted to support a plurality of such records and movable to bring successive records in alinement with said mandrel, a shifter movable longitudinally of said mandrel for shifting a record to and from said mandrel, and means actuated by said shifter and having interlocking engagement with said magazine whereby said magazine will be locked against movement while a record is displaced from said magazine by said shifter.

2. The combination of a phonograph having a mandrel for supporting a tubular record, a magazine adapted to support a plurality of such records and movable to bring successive records in alinement with said mandrel, a shifter movable longitudinally of said mandrel for shifting a record to and from said mandrel, and means carried by said shifter and having slidable interlocking engagement with said magazine whereby said shifter will be locked against operation except when one of the records in said magazine is in alinement with said mandrel.

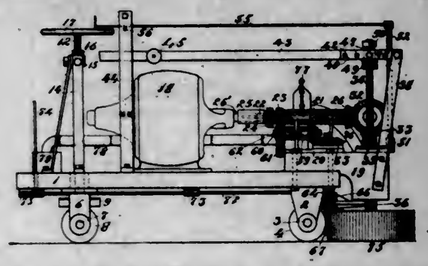
3. In a device of the class described the combination of a phonograph containing a record support, a support journaled adjacent the end of the record support, a plurality of record holders carried thereby and adapted to individually aline with the record holder, said holder support being provided with a plurality of apertures, means for shifting the record from the holder to the record support, and means operatively related to the first said means, and adapted to enter one of the apertures in the holder support to lock the same against movement when the record is being shifted.

4. In a device of the class described the combination of a phonograph, containing a record support, a plurality of record holders journaled adjacent the end of the support and adapted to individually aline with the support, a perforated disk carried by the holders, a movably supported bar, shifting fingers thereon adjacent the record support for moving the record from the holder to the support when the latter is in alinement with said support, and a locking bar, carried by said first bar and adapted to enter one of the perforations in the disk to lock the holders against movement and permit the removal of the record when the holder and record supports are in alinement.

5. In a device of the class described the combination of a phonograph containing a record support, spaced supports adjacent the end of the record support, one of said spaced supports being provided with an aperture adjacent to the end of the record support, a plurality of record holders journaled between the spaced supports and adapted to aline with the record support, a perforated disk carried by the holders, a bar adjacent the record holder, and passing through the spaced supports, fingers carried by the bar, and adapted to engage the ends of the record, a handle connected to one end of the bar, and a locking rod connected to the handle and passing through one of the spaced supports, said locking rod being adapted to enter one of the perforations in the disk to lock the holders, when the fingers are moved to shift the record.

[Claims 6 to 12 not printed in the Gazette.]

874,549. SURFACING-MACHINE. JOHN F. STOLL, Cuyahoga Falls, Ohio. Filed July 30, 1906. Serial No. 328,372.



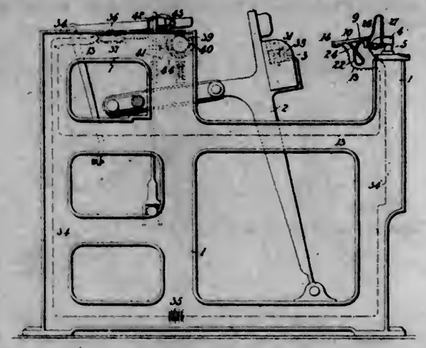
1. A self propelled surfacing machine comprising a truck, means carried by the truck for propelling it, a frame depending from the forward portion of the truck, bearings secured to the frame, a vertical shaft extending through said bearings and depending below the frame, a surfacing tool carried by the shaft, motion transmission mechanism driven from said means and adapted to operatively connect with said shaft intermediate the ends thereof for rotating it and embodying a clutch device for operatively-connecting and disconnecting said mechanism to and from said shaft, a pressure device engaging with the shaft for maintaining a predetermined pressure upon the tool, means for regulating said pressure device, a housing for the tool, a suction device mounted upon the truck at a point removed from the forward end thereof, said suction device independent of said tool carrying shaft whereby the said device can be operated independent of the tool, mechanism for transmitting motion from said propelling means to the suction device, and a conduit between said suction device and said housing.

2. A self-propelled surfacing machine comprising a truck, means carried by the truck for propelling it, a frame depending from the forward portion of the truck, bearings secured to the frame, a vertical shaft extending through said bearings and depending below the frame, a surfacing tool carried by the shaft, motion transmission mechanism driven from said means and adapted to operatively connect with said shaft intermediate the ends thereof for rotating it and embodying a clutch device for operatively connecting and disconnecting said mechanism to cover said shaft, a pressure device engaging with the shaft for maintaining a predetermined pressure upon the tool, means for regulatiug said pressure device, a housing for the tool, a suction device mounted upon the truck at a point removed from the forward end thereof, said suction device independent of said tool carrying shaft whereby the said device can be operated independent of the tool, mechanism for transmitting motion from said propelling means to the suction device, a conduit between said suction device and said housing, a receptacle carried by the truck, and a conducting pipe between said suction device and said receptacle.

874,550. CONTROLLING DEVICE FOR AUTOMATIC WEFT-REPLENISHING LOOMS. ALBERT E. WALKER, ARTHUR WALKER, and GEORGE WALKER, Norwood Green, near Halifax, England. Filed Oct. 16, 1905. Serial No. 283,025.

1. In automatic weft-replenishing looms, and in combination, a controlling device comprising a feeling finger, a

separate part carried thereby and having recesses therein, a number of independently movable positive and negative electric terminals arranged alternately and located partly within said recesses, springs within said recesses for controlling the movement of said terminals, stop pieces also within the recesses for limiting said movement, electric connections between said terminals and a source of electric supply, a bobbin having a conductive part thereon with which said terminals are adapted to contact to complete the circuit, weft-replenishing mechanism, and means operable on the completion of said circuit for actuating said weft-replenishing mechanism.



2. In automatic weft-replenishing looms and in combination a movable feeling finger, a number of movable feeling points carried thereby to form the terminals of an electric circuit, a source of electric supply, electric connections between the latter and the terminals, a bobbin, a conductive part thereon with which said terminals are adapted to contact to complete the circuit, means for moving said finger to bring said terminals into contact with the bobbin, means comprising springs and a loss on the feeling finger having undercut angular faces thereon adapted to contact with a face on a depending part for controlling the movement of the finger, weft-replenishing mechanism and means operated by the completion of the circuit for actuating said weft-replenishing mechanism.

874,551. DRESS-SKIRT. SAMUEL L. WALLIS, Pasadena, Cal. Filed Aug. 7, 1906. Serial No. 329,611.



1. A placket protector, comprising a piece of cloth of substantially semi-circular shape; and a stiffening wire secured in the circular edge thereof and projecting beyond the straight edge at the upper portion.

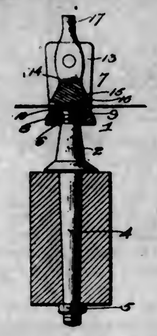
2. A placket protector, comprising a piece of cloth substantially semi-circular provided with a stiffening wire secured to the edges thereof, said cloth being adapted to be secured to the garment at one side of the placket and pass across the same.

3. A placket protector, comprising a semi-circular pocket having a stiffening wire secured to the circular edge thereof, the cloth forming the pocket being secured to the garment at one side of the placket and being adapted to pass across the same and beneath that portion of the garment on the other side of said opening.

4. A placket protector, comprising a pocket having a stiffening wire in one side thereof, the cloth forming the pocket being secured to the garment at one side of the placket and being adapted to pass across the same and beneath that portion of the garment on the other side of said opening.

5. A placket protector, comprising a pocket having a stiffening wire in the edge thereof and adapted to be secured to the skirt band at the placket, the cloth forming the pocket being secured to the garment at one side of the placket and being adapted to pass across the same and beneath that portion of the garment on the other side of said opening.

874,552. WIRE-FASTENER. SYLVESTER WILBURN and THOMAS E. SMITH, Tunis, Tex. Filed Sept. 9, 1907. Serial No. 392,035.



1. A fastening device for telegraph wires and the like comprising a head, means to secure the same to the arm of a telegraph pole, a clamping member secured to and insulated from said head, means whereby the wire may be automatically fastened by said clamp, substantially as described.

2. A wire fastener of the character described comprising a head, a shank or bolt formed on said head whereby the same is secured to the arm of the telegraph pole, a clamping device secured to and insulated from said head, said clamping device comprising a base portion having a corrugated upper surface and a pivotally mounted clamping head having a corrugated lower surface to coact with the corrugated surface of said base, substantially as described.

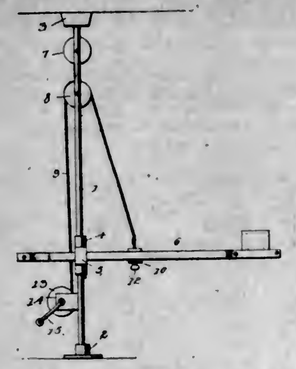
3. A wire fastener of the character described, comprising a head having an annular flange on its lower end, a fastening bolt or shank formed on the lower end of said head, a clamping device secured to and insulated from the upper end of the head, said clamping device comprising a base having a curved and corrugated upper surface, an upwardly projecting detent formed on one end of said base plate, an upwardly projecting arm formed on the other end of the base plate, a clamping member pivotally mounted on said arm, a head formed on the lower end of said member, said head having a curved and corrugated lower surface to coact with the corrugated upper surface of the base plate and a handle portion on the upper end of said pivoted clamping member, substantially as described.

872,553. SAGGAR-CRANE. LEWIS H. WILLIAMS, Zanesville, Ohio. Filed June 10, 1907. Serial No. 378,813.

1. A saggar crane comprising a standard, a hoisting sleeve slidably mounted on said standard, a boom carried by said sleeve, a hoisting cable, means for adjustably connecting said cable to said boom and means to raise or lower said boom and sleeve, substantially as described.

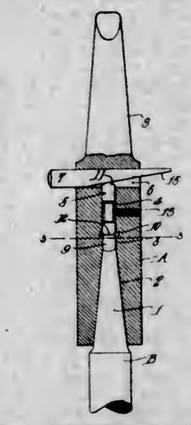
2. A saggar crane comprising a pivoted standard, a hoisting sleeve slidably mounted thereon, a boom secured to said sleeve, a hoisting cable, means to adjustably connect said cable to the boom, and means whereby the cable is wound up to raise the boom and sleeve, substantially as described.

3. A saggar crane comprising a standard, hoisting pulleys revolubly mounted on the upper portion of said standard, a hoisting sleeve slidably mounted on the standard, a boom connected to said sleeve, a clamp adjustably connected to said boom, a hoisting cable having one end connected to said clamp and adapted to pass over one or the other of said hoisting pulleys, and a windlass adapted



to wind up said cable and thereby raise said sleeve and boom, substantially as described.

874,554. DRILL-SOCKET. NORMAN E. WOODS, Richmond, Va. Filed Jan. 11, 1907. Serial No. 351,884.

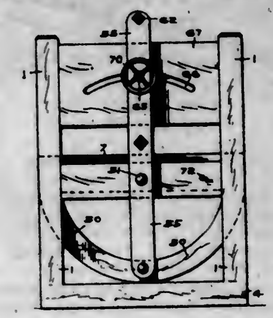


The combination of a drill socket having a longitudinally extending bore terminating in a transversely extending drift receiving passage, an extractor pin arranged in the bore of the socket and having a reduced central portion forming spaced shoulders, and a removable retainer in the socket which extends at its inner end between the shoulders to limit the movement of the extractor pin and retain the latter in position.

874,555. INVALID'S BED. OLIVE K. WOOLLEN, Franklin, Ind. Filed Aug. 19, 1907. Serial No. 389,199.

1. An invalid's bed comprising a head and foot member secured together and each of said members being provided with a projecting base, a bed-frame arranged between the head and foot members, means for pivotally mounting said bed-frame between the head and foot members, semi-circularly formed supports secured to the underside of the bed-frame and adapted to ride upon the projecting portions of the bases, means for changing the position of the bed-frame, and means for locking the bed-frame in the desired position.

2. An invalid's bed comprising a head and foot member secured together, each of said members being provided with a projecting base, a bed-frame arranged between the head and foot members, means for pivotally mounting said bed-frame between the head and foot members, semi-circularly formed supports secured to the underside of the bed-frame and adapted to ride upon the projecting portions of the bases, means for changing the position of the bed-frame, a woven-wire spring supporting frame comprising a plurality of sections in which the middle sections are adapted to normally lie in a horisontal position while the end sections are susceptible of being moved into an inclined position, means for hingedly securing the end sections to the middle sections, means for holding the end sections when raised, and means for locking said bed-frame in a desired position.



3. An invalid's bed comprising a head and foot member secured together, each member being provided with a projecting base, a bed-frame arranged between the head and foot members, means for pivotally mounting said bed-frame between the head and foot members, semi-circularly formed supports secured to the underside of the bed-frame and adapted to ride upon the projecting portions of the bases, means for changing the position of the bed-frame, a woven-wire spring provided with a centrally located aperture and its supporting frame comprising a plurality of sections in which the middle sections are adapted to normally lie in a horizontal position while the end sections are susceptible of being moved into an inclined position, means for hingedly securing the end sections to the middle sections, means for holding said end sections when raised, a head-plate adapted to register with the central aperture in the woven-wire springs, means for changing the position of said head-plate, and means for locking said bed-frame in a desired position.

4. An invalid's bed comprising a head and foot member, each of said members being provided with a projecting base, a bed-frame arranged between the head and foot members, means for pivotally mounting said frame between the head and foot members, semi-circularly formed supports secured to the underside of the bed-frame and adapted to ride upon the projecting portions of the bases, a plurality of uprights secured to and adapted to move with the bed-frame, said uprights straddling the head member, and a clamping device passing through the uprights and the head member, for locking the bed-frame in the desired position.

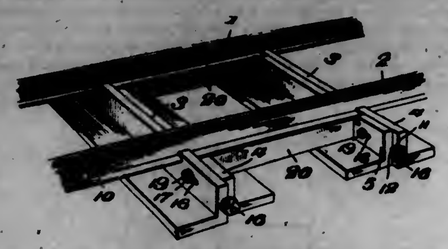
874,556. METAL RAILWAY-TIE. JOHN H. AKIN and CHARLES C. ANDERSON, Creston, Iowa. Filed Apr. 30, 1907. Serial No. 371,133.

1. The combination with railway rails, of a supporting tie, said tie consisting of angular sections said sections having notches therein, lips at each end of said notches and means to direct said lips into engagement with the rail.

2. A tie of the class described comprising angular sections, the vertical portion of said sections having notches in the upper edges thereof to receive rails, lips at each end of said notches adapted to be directed into engagement with the base of the rails, a locking bar between the meeting faces of said sections adapted to move said sections longitudinally in opposite directions and the lips into engagement with the rails.

3. The herein described rail tie comprising sections, per-

tions of said sections being horizontal and portions thereof vertical, the vertical sections having a pair of notches in the upper edge thereof, lips at the end of said notches and means to move said sections longitudinally in opposite directions to engage the lips with rails placed in said notches.

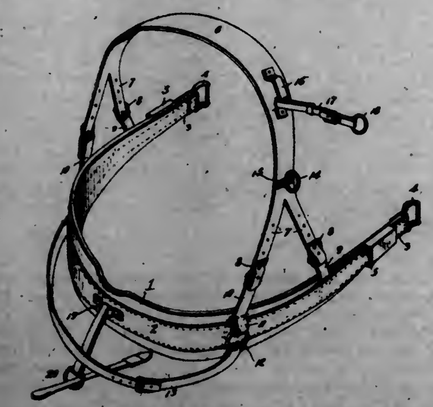


4. The herein described rail tie comprising a pair of angular sections the meeting faces of which are provided with registering channels, notches in said sections, lips at the ends of said notches adapted to extend over and engage the base of rails placed in said notches, a locking bar seated in said channels one end of which is adapted to engage one end of one of the sections and means at the opposite end thereof to engage the end of the opposite section, whereby said sections may be moved longitudinally in opposite directions.

5. The herein described rail tie comprising a pair of angular sections the meeting faces of which are provided with registering channels, notches in said sections adapted to receive rails, lips at the ends of said notches, a locking bar seated in said channels, an angular extension at one end of said bar adapted to engage the end of one section, a binding nut for the opposite end of said bar adapted to engage the opposite end of the other section whereby when the nut is directed on to said bar, the sections will be moved longitudinally and in opposite directions, and a portion of said lips into engagement with said rails and means to lock said sections in their adjusted position.

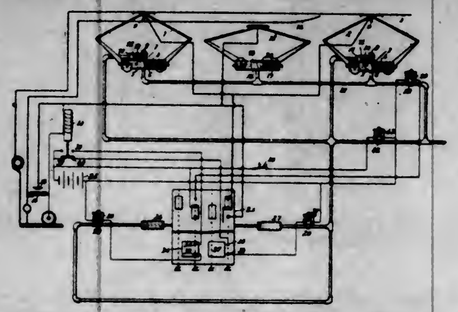
[Claim 6 not printed in the Gazette.]

874,557. HARNESS. GEORGE A. ANDERSON, Coal Harbor, N. D. Filed Apr. 30, 1907. Serial No. 371,202.



A device of the character described comprising a breast collar consisting of a broad band and a reinforcing member stitched upon the outer face of said band, a neck saddle having at its ends diverging straps formed with apertures, pairs of connecting straps having their lower ends inserted between the collar band and its reinforcing member and secured therebetween by the stitching which unites said parts, the foremost strap of each pair being folded upon itself and secured to provide a loop, a ring arranged in said loop for a neck yoke connection, and buckles arranged upon the upper ends of said connecting straps and adapted to receive the apertured brace straps upon the neck saddle, substantially as described.

874,558. ALTERNATING-DIRECT-CURRENT SYSTEM OF CONTROL. HOWARD L. BEACH, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 3, 1906. Serial No. 304,096.



1. The combination with distributing conductors for direct and alternating current, respectively, a collector device for direct current that is normally maintained out of engagement with the corresponding distributing conductor, and a collector device for alternating current that is normally maintained in engagement with the corresponding distributing conductor, of means for moving the collector devices into and out of engagement with the respective conductors, a change-over switch having positions corresponding to the different characters of energy, and means actuated thereby for controlling the operating means for the collector devices.

2. The combination with distributing conductors for direct and alternating current, respectively, a collector device for direct current that is normally maintained out of engagement with the corresponding distributing conductor, and a collector device for alternating current that is normally maintained in engagement with the corresponding distributing conductor, of means for moving the direct current collector device into engagement with its conductor, similar means subjected to a like operating force for moving the alternating current collector device away from its conductor, a change-over switch having positions corresponding to the different characters of energy and means, dependent in operation upon the position of one of the current collector devices, for governing the change-over switch.

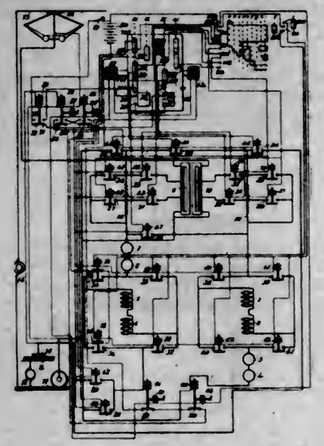
3. The combination with distributing conductors for direct and alternating current, respectively, a collector device for direct current that is normally maintained out of engagement with the corresponding distributing conductor, and a collector device for alternating current that is normally maintained in engagement with the corresponding distributing conductor, of means for simultaneously moving the direct current collector device into engagement and the alternating current collector device out of engagement with their respective conductors, a change-over switch having positions corresponding to different characters of energy, means, dependent in operation upon the position of the direct current collector devices, for governing the change-over switch, and manually controlled means for further governing the operation of the change-over switch.

4. In an electric railway system having alternating current and direct current supply conductors for different sections, the combination with a collector for each kind of current, a change-over switch and pneumatic means for operating the same, of an automatic relay switch and a manually-operated switch for governing said operating means.

5. In an electric railway system having alternating current and direct current supply conductors for different sections, the combination with a collector for each kind of current, pneumatically-actuated means for controlling the operation of one or more of said collectors, a pneumatically-operated change-over switch, electro-magnetically controlled valves, an automatic relay switch and a manually-operated switch for controlling the application of pneumatic pressure to said change-over switch.

[Claims 6 to 8 not printed in the Gazette.]

874,559. SYSTEM OF CONTROL. HOWARD L. BEACH, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 3, 1906. Serial No. 304,097.



1. In a system of control, the combination with sources of direct and alternating current, translating devices and means for arranging the circuits of the system for operation thereof by the one character of energy or the other, of a switch that permits operation of the said means to arrange the circuits of the system for direct current operation only when the system is supplied with direct current.

2. In a system of control, the combination with sources of direct and alternating current, and translating devices, of a change-over switch for arranging the circuits of the system for operation of the devices by the one character of energy or the other, and a switch that permits operation of the change-over switch to arrange the circuits for direct current operation only when the system is supplied with direct current.

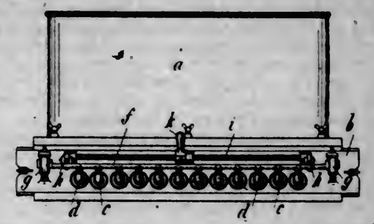
3. In a system of control, the combination with distributing conductors that are supplied, respectively, with direct and alternating current, current collectors to engage the respective conductors, and translating devices, of means for arranging the circuits of the system for operation of the devices by the one character of energy or the other and a switch that prevents the said means from operating to arrange the circuits for direct current operation except when the collector for direct current engages the corresponding conductor.

4. In a system of control, the combination with sources of direct and alternating current, and translating devices, of a change-over switch for arranging the circuits of the system for operation of the devices by the one character of energy or the other, controlling magnet windings therefor, and a circuit-governing switch that prevents the change-over switch from operating to arrange the circuits for operation by direct current except when direct current is supplied to the system.

5. In a system of control, the combination with distributing conductors that are supplied, respectively, with direct and alternating current, current collectors to engage the respective conductors, and translating devices, of a change-over switch for arranging the circuits of the system for operation of the devices by the one character of energy or the other, and a switch that prevents the change-over switch from operating to arrange the circuits for direct current operation except when the collector for direct current engages the corresponding distributing conductor.

[Claims 6 to 16 not printed in the Gazette.]

874,560. MACHINE FOR DEPOSITING LIQUID CONFECTIONERY MATERIAL. LUDWIG A. BEBO, Hamburg, Germany. Filed June 25, 1906. Serial No. 323,357.

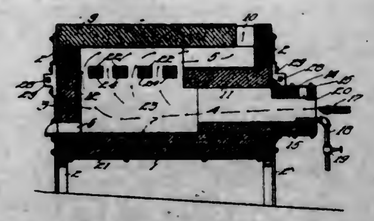


1. In a machine for depositing liquid or plastic confectionery material a tank for containing the material, provided at its bottom with a number of discharge-nozzles, each being cut off at an angle to form oval openings, in combination with a corresponding number of stoppers for closing the discharge openings, a bar to which the stoppers are attached, and means for raising and lowering the bar to open and close the nozzles simultaneously.

2. In a machine for depositing liquid or plastic confectionery material two tanks for containing material, of different description each tank being provided with discharge nozzles, the nozzles of one tank standing opposite those of the other tank, in combination with stoppers each adapted to close the nozzles of the tanks opposite each other.

3. In a machine for depositing liquid or plastic confectionery material, discharge-nozzles cut off at the end at an angle, thus forming oval openings, in combination with stoppers for closing the nozzles provided with a longitudinal central bore and a lateral opening, to allow liquor to run out in vertical streams, and means to move the stoppers in their longitudinal direction.

874,561. FURNACE FOR HEATING AND WELDING. WILLIAM N. BEST, Los Angeles, Cal., assignor to John H. Best and Ezra Best, Quincy, Ill. Filed Sept. 20, 1904. Serial No. 226,523.



1. A furnace body provided with superposed inlet and outlet and a partition between them at one end and a combustion chamber at the other, one of the side walls of the body being provided with apertures above the combustion chamber and between it and the outlet and constituting means for holding articles to be heated at the top of the combustion chamber.

2. A furnace body provided with superposed inlet and outlet at one end and a combustion chamber at the other, and a horizontally arranged partition between the inlet and the outlet, one of the side walls of the body being

provided with apertures between the partition and the rear wall above said combustion chamber, said apertures constituting means for holding articles to be heated at the top of the combustion chamber.

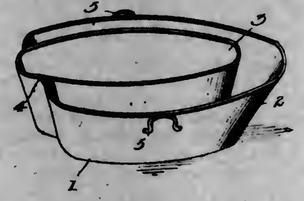
3. An elongated furnace body provided with superposed inlet and outlet at one end and a combustion chamber at the other, and a flat horizontal partition between the inlet and the outlet, one of the side walls of the body being provided with apertures between the partition and the rear wall above the combustion chamber and substantially in the same plane with the partition and constituting means for holding articles to be heated at the top of the combustion chamber.

4. A rearwardly-inclined elongated furnace body provided with a superposed inlet and outlet at the forward end and a combustion chamber at the rear end, the rear wall of the furnace being provided with a slag outlet and one of the side walls with apertures above the combustion chamber, said apertures constituting means for holding articles to be heated at the top of the combustion chamber below the level of the outlet.

5. A furnace body provided with an inlet and an outlet at one end and a combustion chamber at the other, the front wall of said body having a hollow extension forming a portion of the inlet, the top of said extension being provided with an opening, one of the side walls of the body being provided with apertures above the combustion chamber, the same being adapted to hold the bars at the turn in the course to the heated gases, an air blast at the bottom of the inlet, and a burner adapted to project a flame into the inlet between the opening in the top wall of the extension and the air blast at the bottom.

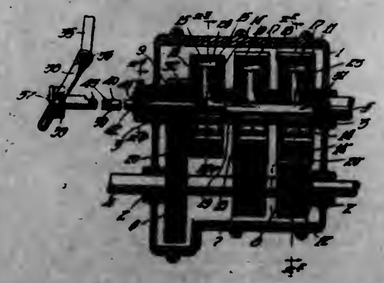
[Claims 6 and 7 not printed in the Gazette.]

874,562. DOUBLE PAN. FRED BLISS, Hammond, Ind., assignor of one-half to Gottle Bliss, Hammond, Ind. Filed May 20, 1907. Serial No. 374,642.



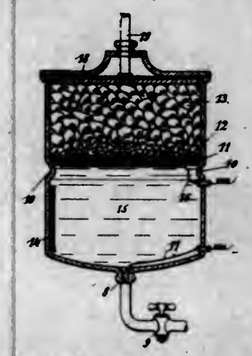
An outer pan and an inner pan arranged within said outer pan to project through one side of the same, substantially as described.

874,563. POWER-TRANSMISSION DEVICE. ANDREW BOULANGER, Los Angeles, Cal. Filed Mar. 26, 1906. Serial No. 307,984.



A power transmission means comprising a driving shaft, a plurality of gears carried thereby, a driven shaft, a plurality of gears rotatably mounted on the driven shaft and continually in driven connection with the driving gears, clutch drums connected to the respective driven gears and having rims with internal friction faces, clutch members mounted on and connected to rotate with the driven shaft and extending within the faces of the aforesaid drums, each clutch being provided with an elastic device in the form of a nearly complete ring, one end of which is fastened to the inner clutch member, the said ring extending within the annular drum rim and having an inclined end, an actuating member in each clutch moving radially and provided with an inclined portion for engaging the inclined end of the clutch ring to distend said ring, and an operating bar axially movable in the driven shaft and provided with an inclined portion to engage the said actuating member of each clutch, said operating bar being cylindrical and having flatted portions on each side of its inclined portion, said bar having notches in its flatted portion and a spring actuated device having a projection for engaging in said notches.

874,564. ELECTROLYTIC APPARATUS FOR THE MANUFACTURE OF NITROCELLULOSE. GASTON C. DE BRIAILLES, Paris, France. Filed Mar. 10, 1906. Serial No. 305,345.



1. The combination with a receptacle, of a perforated diaphragm dividing it into upper and lower chambers, positive and negative electrodes in the lower chamber, and a drain pipe leading from said lower chamber.

2. The combination with a receptacle, of a perforated diaphragm dividing it into upper and lower chambers, a positive electrode located adjacent to the underside of the diaphragm, and a negative electrode located near the bottom of the receptacle.

3. The combination with a receptacle, of a perforated diaphragm dividing it into upper and lower chambers, and electrodes of gilded platinum wire located in the lower chamber.

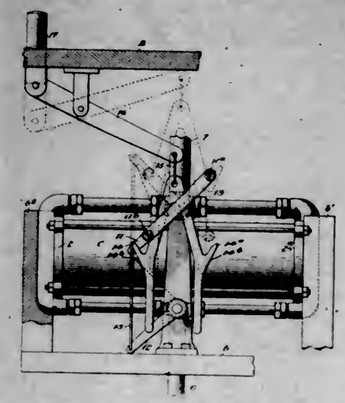
4. The combination with a receptacle, of a perforated diaphragm dividing it into upper and lower chambers, wire electrodes in the lower chamber, and a piston normally placed at the top of the upper chamber, and means for operating said piston from outside of the receptacle.

5. The combination with a receptacle, of means adapted to retain a charge of cellulose in the upper part of the same, means for conveying a current of electricity into the liquid contents of the lower part of said receptacle, and means for compressing the cellulose to extract the liquid therefrom.

874,565. FLUSH-TANK. RALPH E. BRISTOW, Denver, Colo., assignor of one-fourth to William Burkart and one-fourth to Harvey A. Williams, Denver, Colo. Filed Mar. 29, 1907. Serial No. 365,400.

1. In a flush-tank, the combination of a tank-chamber, a piston therefor, inlet and outlet ways which communicate with the tank-chamber on both sides of the piston, valves for controlling said inlet and outlet ways, and means for operating said valves to cause the water to pass through said ways and the tank-chamber.

2. In a flush-tank, the combination of a tank-chamber, a piston therefor, inlet and outlet ways which communicate with the tank-chamber on both sides of the piston, valves for controlling said inlet and outlet ways, and means for operating said valves to cause the water to pass through said ways without entering the tank-chamber.



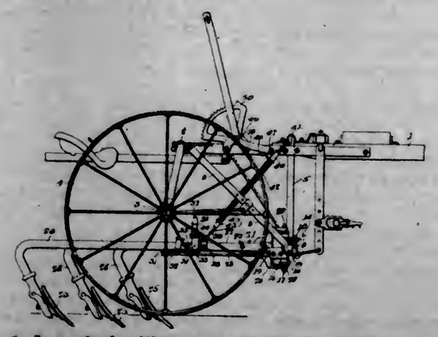
3. In a flush-tank, the combination with a tank-chamber, having inlet and outlet ways which communicate with the tank-chamber, and valves for controlling said inlet and outlet ways, said valves being coupled together, of a cross arm connected with one of said valves, and means for engaging the cross arm on opposite sides of its point of connection with the valve, for operating said valves.

4. In a flush-tank, the combination with a tank-chamber, inlet and outlet ways which communicate with the tank-chamber, and valves for controlling said ways, said valves being coupled together, of a cross arm connected to one of said valves and provided with posts on opposite sides of its connection with the valve, twin-hooks for alternately engaging each of said posts, and means for operating the twin hooks.

5. In a flush-tank, the combination with a tank-chamber, inlet and outlet ways which communicate with said tank-chamber, valves for controlling said ways, said valves being coupled together, of a cross-arm connected with one of said valves and provided with posts, twin-hooks for actuating said cross arm, and a guard for preserving the operative relation of the twin hooks and cross arm.

[Claims 6 and 7 not printed in the Gazette.]

874,566. WHEEL-CULTIVATOR. ARTHUR F. BROWN, Springfield, Ohio, assignor to P. P. Mast and Company, Springfield, Ohio, a Corporation of Ohio. Filed Jan. 30, 1907. Serial No. 354,838.



1. In a wheel cultivator, the combination, with a frame, a gang beam supported from said frame and capable of movement in a direction transverse to the line of travel of said cultivator, and means for moving said gang beam, of a member carried by said frame, fixed against lateral movement and having one end adjacent to said gang beam and adapted to form a support for the means for moving said beam, substantially as described.

2. In a wheel cultivator, the combination, with a frame, a gang beam supported from said frame and capable of movement in a direction transverse to the line of travel of said cultivator, and a lever for moving said gang beam, of a member carried by said frame, fixed against lateral movement and having one end adjacent to said gang beam and adapted to form a fulcrum for said lever, substantially as described.

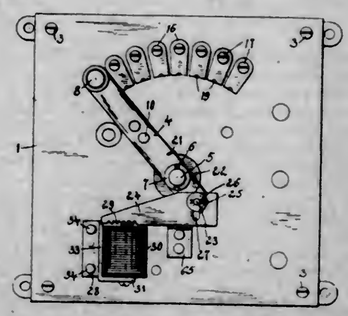
3. In a wheel cultivator, the combination, with a frame, a gang beam pivotally connected to said frame, and an arm supported from said frame adjacent to said gang beam extending substantially parallel therewith and fixed against lateral movement, of a lever fulcrumed near one end of said arm and connected to said gang beam.

4. In a wheel cultivator, the combination, with a frame, a gang beam supported from said frame and capable of longitudinal and vertical movement relatively thereto, and an arm supported from said frame and extending substantially parallel with said gang beam, said arm being capable of a vertical movement relatively to said frame and fixed against lateral movement, of a lever fulcrumed near one end of said arm and connected with said gang beam, substantially as described.

5. In a wheel cultivator, the combination, with a frame, a gang beam pivotally supported therefrom and capable of horizontal and vertical movement relatively thereto, and an arm supported from said frame and capable of a vertical movement relatively thereto and fixed against horizontal movement, of a lever fulcrumed near the outer end of said arm and connected with said gang beam, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

874,567. ELECTRIC CONTROLLER. ROY W. BROWN, Amsterdam, N. Y. Filed Feb. 19, 1907. Serial No. 358,300.



1. In an electric controller the combination of a bar a ratchet connected with the said bar, an electro magnet adapted to engage the said ratchet.

2. In a rheostat the combination of a magnet, a spring actuated contact, a plurality of fixed contacts, a body connected to the said spring actuated contact and having teeth adapted to engage the said electro magnet to hold the said spring actuated contact upon the said fixed contacts.

3. In a rheostat the combination of an electro magnet, a spring actuated contact, a plurality of fixed contacts, a rack movable over the said electro magnet and so arranged that the said spring actuated contact will be permitted to move to such a position that the said spring actuated contact will make contact with one of the said fixed contacts and will be held in the said position against the retractive power of the spring actuated contact when the said magnet is energized and directly engages the said rack.

4. In a rheostat the combination of a spring actuated contact, a plurality of fixed contacts, a magnet, the said magnet having a notched armature connected to the said spring actuated contact and so arranged as to engage mechanically and magnetically with the poles of the said magnet when the magnet is energized.

5. In a rheostat the combination of a spring actuated switch, an electro magnet and a notched armature, one of the poles adapted to engage with the notches of the said armature.

[Claims 6 to 16 not printed in the Gazette.]

874,568. CAR. EZRA S. BUCKNAM, Philadelphia, Pa., assignor to John A. Brill, Philadelphia, Pa. Filed Feb. 7, 1907. Serial No. 356,176.



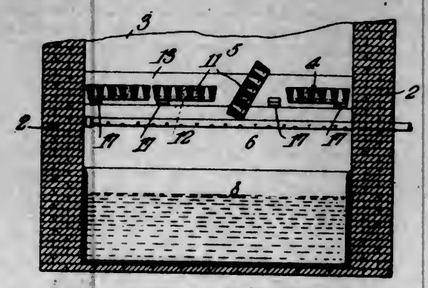
1. In a car or similar structure, stanchions provided with two separate slideways, upper and lower sashes moving in said slideways so that each never moves in the slideway of the other, means for causing the lower sash to raise the upper sash when the two are shifted into the storage space in the roof of the car and means for causing one sash to positively move the other on their downward movement.

2. In a car or similar structure, stanchions with independent slideways, upper and lower sashes moving in said slideways, so that neither can get in the slideway of the other, means on the upper sash for engaging the lower sash so that when the lower sash is raised, the upper is carried with it, and means on both sashes for causing the lower sash to force the upper sash down when the sashes are removed from the storage chamber.

3. In a car or similar structure, stanchions with separate, curved and widened slideways, upper and lower sashes moving in said slideways so that neither can get into the slideway of the other, a hook on the upper sash adapted to engage the lower sash so that when the lower sash is raised the upper is carried with it and means for causing one sash to positively move the other on their downward movement.

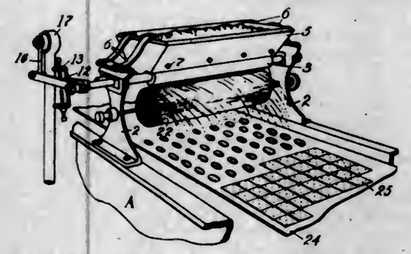
4. In a car or similar structure, stanchions with separate slideways, upper and lower sashes moving in said slideways, so that neither can enter the slideways of the other, means for causing the lower sash to raise the upper when the sashes are raised into their storage chamber, a recessed plate with crossings let into the inner face of the upper sash and a lug adapted to engage said crossing projecting from the outer face of the lower sash, said lug and crossing being adapted to inter-engage when the sashes are raised, whereby the lower moves the upper.

874,569. FURNACE GRATE AND ASH-PIT. CHARLES BUSH, Hammond, Ind. Filed Feb. 4, 1907. Serial No. 355,646.



In a furnace the combination with side walls, a bridge wall, a basin arranged between the walls, and a front wall extending into the basin and having an opening thereunder; of supporting bars surrounded by the walls, a grate composed of removable sections supported on the bars, separate means for each section for holding the sections against tilting movement in one direction, and lapping doors upon the front wall and having openings therein adjacent the front ends of the bars, said openings being disposed to receive means for engagement with the respective bars to tilt the bars, each of said bars being tiltable transversely to direct ashes solely toward the center of the basin thereunder.

874,570. SALTING APPARATUS. ANDREW S. CAIRNCROSS, St. Paul, Minn. Filed Mar. 30, 1907. Serial No. 365,584.



1. In an apparatus of the class described, the combination of a pair of parallel feed rollers, means for imparting alternate rotary movement to said rollers, a hopper supported above and intermediate of said rollers, and a revoluble brush centrally supported below said rollers, for the purpose set forth.

2. In an apparatus of the class described, the combination of a pair of parallel feed rollers, means for imparting alternate rotary movement to said rollers, a hopper supported upon said rollers, spring means holding said hopper in contact with said rollers, and a revoluble brush journaled below said rollers, for the purpose set forth.

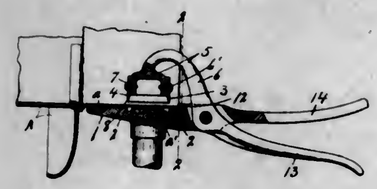
3. In an apparatus of the class described, the combination with a traveling apron, of a pair of parallel feed rollers journaled above the same, means for imparting alternate rotary movement to said rollers, a hopper resting upon said rollers, spring means holding said hopper in position, and a revoluble brush journaled between said rollers and apron.

4. In an apparatus of the class described, the combination with a traveling apron, of a pair of parallel feed rollers journaled above said apron, a resilient covering for said rollers, a hopper supported above said rollers, downwardly extending side walls carried by said hopper and contacting with said rollers, adjustable means for imparting alternate rotary movement to said rollers, and a revoluble brush supported between said rollers and apron.

5. In an apparatus of the class described, the combination with a traveling apron, of a pair of parallel feed rollers journaled above the same, a resilient covering for said rollers, adjustable means for imparting alternate rotary movement to said rollers, a hopper arranged above said rollers and having downwardly extending side walls resting upon said rollers, a resilient covering for said side walls bearing against said rollers, and a revoluble brush journaled between said rollers and apron.

[Claim 6 not printed in the Gazette.]

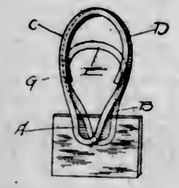
874,571. DEVICE FOR CUTTING FLAPS OF SWEAT-BANDS. HENRY B. CRAMPTON, Syracuse, N. Y. Filed Mar. 12, 1907. Serial No. 361,965.



1. A device for cutting flaps of sweat bands comprising two shearing elements, one of said elements being movable toward and from the other and provided with a lengthwise serrated cutting edge, and additional cutters projecting at substantially right angles from the ends of the serrated cutter.

2. A device for cutting flaps in sweat bands comprising a bed having lengthwise and transverse grooves therein, a cutter supporting head movable to and from the bed, and provided with a lengthwise serrated cutter entering one of the grooves, and transverse cutters entering the other groove.

874,572. WIRE PAPER-CLIP. WALTER L. CURTIS, Worcester, Mass. Filed Oct. 10, 1906. Serial No. 338,253.



1. A paper fastener comprising a clip having a central coil, and adjacent jaws having extensions, the said extensions being separated whereby pressure on the said extensions opens the jaws.

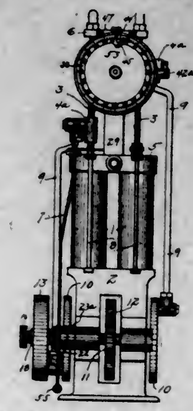
2. A paper fastener comprising a clip consisting of a strip of metal coiled to form two jaws, and adjacent extensions beyond the jaws having extremities overlying and pressing on the coiled portion.

3. A paper fastener comprising a clip formed of a strip of metal coiled to form jaws, with adjacent extensions overlapping beyond the coiled portion, and extremities overlying the coiled portion and exerting pressure thereon below the pivotal points.

4. A paper fastener comprising a spring clip consisting of a strip of metal coiled centrally to form jaws the said strip being then bent in opposite directions to overlap beyond the coil, and inwardly bent extremities overlying the coiled portion and exerting pressure thereon.

5. In a spring clip, a strip of metal coiled to form jaws, and extensions forming means for manipulating the jaws, the said extensions having extremities which are bent to overlie and exert pressure on opposite sides of the coiled portion, substantially as described.

874,573. POWER-PUMP FOR MEASURING OIL. JOHN B. DAVIS, Dayton, Ohio, assignor to The National Oil Pump & Tank Co., Dayton, Ohio, a Corporation of Ohio. Filed Feb. 6, 1907. Serial No. 355,989.



1. In a power pump for measuring oil, a cylinder, a piston and rod movable therein, a cross head on the upper end of said piston rod, a pitman connected to the cross head, a driving crank connected to the pitman, a dial and coöperating means to indicate the quantities of oil dispensed from the cylinder, and means controlled through the ascending movement of the cross head to cut off the power from the pump at the completion of each discharge of oil as per the indication on the dial.

2. In a power pump for dispensing oil, a cylinder, a piston and piston rod, a cross head to which the piston rod is connected, a crank, and a pitman connected with the crank and cross head, a computing dial to indicate each discharge of oil from the cylinder, and means interposed between said computing dial and said cross head whereby said cross head imparts movement to the dial to record thereon each discharge of oil from the cylinder.

3. In a power pump for dispensing oil, a cylinder, a piston and piston rod, a cross head a pitman and crank connection with said cross head, a clutch controlling the power admitted to the crank, a lever controlling the clutch, said lever being manually operated, means for locking said lever in position, a computing dial to indicate the quantities of oil discharged from the cylinder, means interposed between the cross head and the computing dial whereby said dial is actuated from the cross head to indicate each discharge of the cylinder, and means actuated by the computing dial to release the operating lever and whereby the clutch devices are thrown out of engagement and the pump is stopped at the completion of its operation, in discharging the quantity of oil indicated upon the dial.

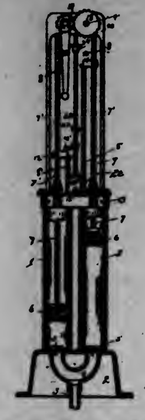
4. In a power pump for dispensing oil, a cylinder, a piston and piston rod, a cross head to which the piston rod is connected, means for driving said cross head to actuate the piston, a computing dial upon which the quantity of oil to be dispensed is indicated in advance of the operations of the pump, and means interposed between said computing dial and the cross head whereby said computing dial is returned to zero position step by step from the cross head in each operation of the pump from the point indicated upon the dial when the dial is set.

5. In a power pump for dispensing oil, twin cylinders, a piston and piston rod for each cylinder, a cross head connected to the piston rod of each cylinder, a pitman and crank connection with each cross head, clutch devices controlling the power transmitted to said crank, a compating, dial to indicate in advance of the operations of the pump, the amount of oil to be dispensed from both cylinders, means interposed between one of the cross heads and the dial mechanism whereby said dial is actuated from said cross head to indicate the quantity of oil discharged from both cylinders in each operation of said cylinders, and

means actuated from the computing dial mechanism when said dial is returned to its zero position by the successive operations of the pump and whereby the power is automatically cut off from the pump when the dial is so moved to zero.

[Claims 6 to 9 not printed in the Gazette.]

874,574. SELF-MEASURING OIL-PUMP. JOHN B. DAVIS, Dayton, Ohio, assignor to The National Oil Pump & Tank Co., Dayton, Ohio, a Corporation of Ohio. Filed Aug. 3, 1907. Serial No. 386,885.



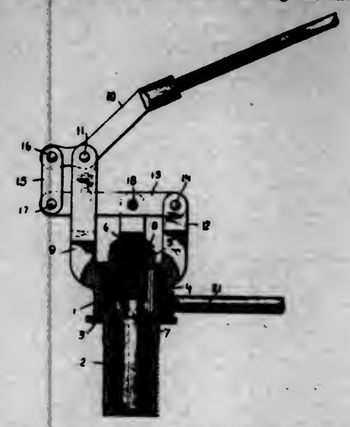
1. In a self-measuring oil pump, the combination of two cylinders, pistons with plunger rods therein, adjustable pieces on the upper ends of said plunger rods, a pulling-down chain connected to the inner ends of said adjustable pieces, a sub-base, a sprocket wheel mounted in the sub-base and around which said pulling-down chain passes a lifting chain, the ends of which are attached to the upper ends of the plunger-rods, sprocket wheels mounted in the top of the machine and over which said last-named chain passes, a crank handle, and gearing operated by said crank handle and by which said sprocket wheels are rotated to reciprocate the plunger rods and therewith the pistons in the cylinders through the pull and lift chains as specified.

2. In a self-measuring oil pump, a supporting frame having a head, two pump cylinders, two pistons and plunger rods, a sub-base above the cylinders having a sprocket housing thereon, an adjustable piece secured to the upper end of each plunger rod, a pulling-down chain having its ends secured to said adjustable pieces, a sprocket wheel mounted in the sprocket housing on the sub-base and around which said pulling-down chain passes, a lifting chain secured to the upper ends of the plunger rods, sprocket wheels mounted in the head of the machine and over which said lifting chain passes, intermeshing gear wheels on the shafts of said sprocket wheels, and a crank handle to initially drive one of said gear wheels to transmit the lifting and pulling power to said chains.

3. In a self-measuring oil pump, two pump cylinders, a piston and plunger rod in each pump cylinder, a lifting chain having its ends attached to the upper ends of the plunger rods, adjustable pieces carried on the upper ends of the plunger rods, a pulling-down chain having its ends attached to the adjustable pieces, said pulling-down chain extending downwardly from the ends of the plunger rods, and means to actuate the lifting chain to elevate a plunger rod, and the pulling-down chain therewith, and whereby the other plunger rod is lowered.

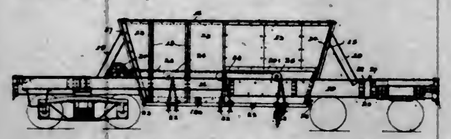
874,575. BALL-COCK. JOHN H. DAVIS, Hamilton, Ohio, assignor to The Sanitary Manufacturing Company, Hamilton, Ohio. Filed Aug. 10, 1905. Serial No. 273,509.

In a ball cock, a valve chamber having a supply inlet and valve seat in its base and an opening concentric therewith in its roof and having a discharge outlet sidewise in its base, a valve-plug with its foot resting upon and closing said valve-seat and having its body projecting through the opening in the roof free of contact therewith, an umbrella flange carried by the valve plug above the annular discharge opening within the roof opening around the valve-plug so as to permit free sidewise discharge of the water passing upwardly through said annular opening, a lever mounted on a fixed pivot and crossing the valve plug



at its upper end and having sidewise engagement therewith so that the valve plug may not shift sidewise relative to the lever, and a pivot engaging and fitting the lever and upper end of the valve plug in such manner as to prevent the shifting of the upper end of the valve plug endwise of the lever, combined substantially as set forth, whereby when the valve plug is raised it is freely suspended by its upper end and whereby the flowing water is given a low side outlet at the valve-seat and an upward and sidewise outlet above the valve chamber.

874,576. METAL ORE-CAR. ETHAN I. DODDS, Pullman, Ill., assignor to The Pullman Company, Chicago, Ill., a Corporation of Illinois. Filed June 24, 1905. Serial No. 266,811.



1. In a car of the class described, the combination with the side sills, of a series of side stakes secured to the inner faces of said side sills, and a load-holding receptacle having its side walls secured to said side stakes, substantially as described.

2. In a car of the class described, the combination with the side sills, of a series of side stakes secured to the inner faces of said side sills and extending below the latter, and a load-holding receptacle having the full depth of said side stakes and secured through its side walls to the latter, substantially as described.

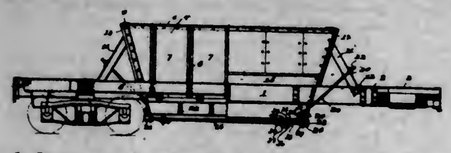
3. In a car of the class described, the combination of side sills, side stakes disposed inside of and secured to said side sills, and a car body whose sides are attached to said side stakes, substantially as described.

4. In a car of the class described, the combination of side sills, side stakes having inner and outer flanges, said outer flanges being secured to the inner surfaces of said side sills, and a car body fastened to the inner flanges of said side stakes, substantially as described.

5. In a car of the class described, the combination of channel side sills disposed with their flanges extended outwardly, side stakes having short outer flanges and long inner flanges, the webs of said stakes tapering from the ends of said short outer flanges to said inner flanges, said outer flanges being fastened to the inner surfaces of said channel side sills, and a car body secured to the inner flanges of said side stakes, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

874,577. METALLIC ORE-CAR. ETHAN I. DODDS, Pullman, Ill., assignor to The Pullman Company, Chicago, Ill., a Corporation of Illinois. Filed July 24, 1905. Serial No. 270,993.



1. In a car of the class described, the combination of center sills having flanges along their lower edges, a car body extending below said sills on each side thereof, said lower portions each having downwardly converging bottom walls secured to a flange of said center sills and to a side wall of said car body, substantially as described.

2. In a car of the class described, the combination of flanged center sills, and a car body extending below said center sills on each side thereof, said lower portions each having downwardly convergent bottom walls secured to a flange of said center sills and to a side wall of the car body, one of the bottom walls of each of said lower portions constituting a load discharging door, substantially as described.

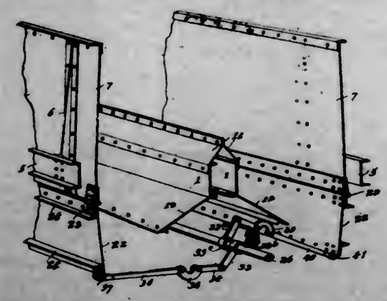
3. In a car of the class described, the combination of flanged center sills, a car body extending below said sills on each side thereof, said lower portions each having downwardly converging bottom walls secured to a flange of said center sills and to a side wall of said car body, the outer bottom walls of said lower portions being hinged to form load discharging doors, substantially as described.

4. The combination in a car having a longitudinal sill and a car body, of a bar secured to the end of the car body, and a strut riveted to the bar and sill, substantially as described.

5. The combination in a car having a longitudinal sill and a car body, of a flanged bar secured to the end of the car body, and a strut riveted to the flange of the bar and to the sill, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

874,578. DOOR-OPERATING MECHANISM FOR DUMPING-CARS. ETHAN I. DODDS, Chicago, Ill., assignor to The Pullman Company, Chicago, Ill., a Corporation of Illinois. Original application filed July 24, 1905, Serial No. 270,993. Divided and this application filed July 1, 1907. Serial No. 381,662.



1. In a railway car, the combination of a dumping door, and an operating mechanism therefor including a rotary shaft, an arm fixed thereto and rotatable therewith, a curved link, means connecting one end of said curved link to the door, means connecting the other end of said curved link to said arm, said last-mentioned connecting means and curved link being adapted to embrace said shaft in the closed position of said door, substantially as described.

2. In a railway car, the combination of a dumping door, and an operating mechanism therefor including a rotary shaft, an arm having a hub or sleeve fastened on said shaft, an arcuate link the internal diameter of which is substantially equal to the external diameter of said hub or sleeve, means connecting one end of said arcuate link to said arm, and means joining the other end of said arcuate link to said door, said arcuate link during a portion of the closing of said door fitting over said hub or sleeve and turning therewith, substantially as described.

3. In a railway car, the combination of a dumping door, and an operating mechanism therefor, including a rotary shaft, an arm fixed thereto and rotatable therewith, a substantially semi-circular link, means connecting one end of said semi-circular link to said door, and means connecting the other end of said semi-circular link to said arm, said last-mentioned connecting means and link being adapted to embrace said shaft in the closed position of said door with the end of said arm between said shaft and door, substantially as described.

4. In a railway car, the combination of a pair of dumping doors, a rotary shaft, an operating mechanism for each of said doors including an arm fixed to said shaft and rotatable therewith, a curved link, means connecting one end of said curved link to its door, and means connecting the other end of said curved link to said arm, said last-mentioned connecting means and curved link being adapted to embrace said shaft in the closed position of said door, said arms projecting in opposite directions from said shaft, substantially as described.

5. In a railway car, the combination of a pair of dumping doors, a rotary shaft, and an operating mechanism for each of said doors including an arm having a hub or sleeve fastened on said shaft, an arcuate link, the internal diameter of which is substantially equal to the external diameter of said hub or wheel, a link connecting one end of said arcuate link to said arm, and means joining the other end of said arcuate link to its door, said arcuate link during a portion of the closing of said door fitting over said hub or sleeve and turning therewith, said arms projecting in opposite directions from said shaft, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

874,579. BEEHIVE. PETER J. ECKMAN, Long Lake, Minn. Filed Dec. 19, 1906. Serial No. 348,557.

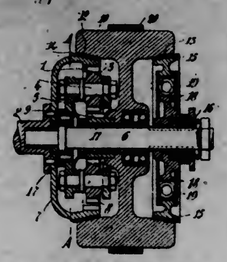


1. A hive, comb-retaining frames therein, and a cage removably supported in said hive and having comb-retaining frames therein, and means for inclosing said cage and its frames.

2. A hive, comb-retaining frames therein, and a reticulated cage removably supported in said hive and having comb-retaining frames therein, and means for inclosing said cage and its frames, said cage having a hinged cover of reticulated material.

3. A hive, comb-retaining frames therein, and a reticulated cage removably supported in said hive and having comb-retaining frames therein, and means for inclosing said cage and its frames, the frames of the cage having extensions at their ends.

874,580. GEARING. ARMAND FARKAS and JOSEPH KIEFFER, Billancourt, France. Filed Jan. 22, 1907. Serial No. 353,353.



1. The combination of a driving shaft, a driven shaft, a fly-wheel normally rotating in unison with said shafts and means whereby motion is imparted from the driving shaft to the fly-wheel when the driven shaft is disconnected from the driving shaft.

2. The combination of a driving shaft, a driven shaft, a fly-wheel normally rotating in unison with said shafts, and means whereby motion is imparted from the driving shaft to the fly-wheel to cause the fly-wheel to rotate at a greater speed than the driving shaft when the driven shaft is disconnected from the driving shaft.

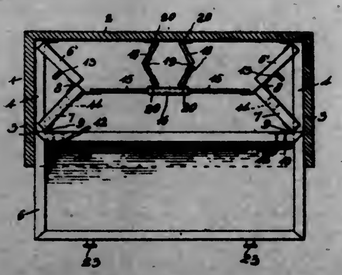
3. The combination of a driving shaft, a driven shaft, a fly-wheel normally rotating in unison with said shafts, means whereby motion is imparted from the driving shaft to the fly-wheel when the driven shaft is disconnected from the driving shaft, and means for transmitting the motion from the fly-wheel to the driven shaft.

4. The combination of a driving shaft, a driven shaft, a fly-wheel normally connected to both of said shafts to rotate in unison therewith, means for breaking the connection between the fly-wheel and the driven shaft, and means whereby the fly-wheel is rotated by the driving shaft when the connection is broken between the fly-wheel and the driven shaft.

5. The combination of a driving shaft, a driven shaft, a fly-wheel, a connection between the fly-wheel and the shafts causing the parts to rotate in unison, means for interrupting said connection, and a gearing between the driving shaft and the fly-wheel whereby the motion is transmitted to the fly-wheel only when said connection is interrupted.

[Claim 6 not printed in the Gazette.]

874,581. ATTACHMENT FOR DRAWERS. WILLIAM H. FLOOD, Ilion, N. Y. Filed July 11, 1907. Serial No. 383,296.



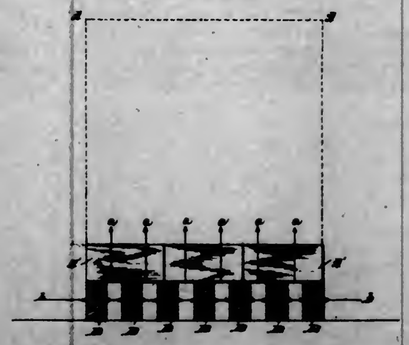
1. An attachment for drawers comprising strips arranged in pairs and connected to the rear side of the drawer, and to the back of the casing to guide the drawer and prevent the same from being entirely withdrawn from the casing, rack bars hingedly connected to said strips, and a gear pinion revolubly mounted in said drawer casing and adapted to be engaged by said rack bars, substantially as described.

2. An attachment for drawers comprising strips arranged in pairs and connected to the rear side of the drawer, and to the back of the casing to guide the drawer and prevent the same from being entirely withdrawn from the casing, rack bars hingedly connected to said strips, a gear pinion revolubly mounted in said drawer casing and adapted to be engaged by said rack bars whereby said strips are caused to move in unison and hinged supporting strips adapted to hold said rack bars in position, substantially as described.

3. An attachment for drawers comprising pairs of strips, the strips of each of said pairs being hingedly connected together at their inner ends whereby the same are folded and unfolded by the inward and outward movement of the drawer, a hinge connection between the outer ends of the rear strips and the back of the drawer casing, a hinge connection between the outer ends of the forward strips and the rear side of the drawer, means to detachably secure said hinges with the rear side of the drawer, right-angularly projecting studs formed on the outer side of the rear strips, said studs being adapted to engage a passage formed in the adjacent strip when said bars are folded together by the inward movement of the drawer, rack bars hingedly connected to said strips, a casing adapted to receive the free ends of said rack bars, a gear pinion revolubly mounted in said casing and adapted to be engaged by said rack bars, and means to hold said casing and pinion in operative position, substantially as described.

4. An attachment for drawers comprising upper and lower supporting cleats adapted to be secured to the inner walls of the opposite sides or end pieces of the drawer casing to support and guide said drawer, pairs of hingedly connected strips arranged adjacent to each side or end of the casing, a hinge connection between the outer ends of the rear strips of said pairs and the back of the casing, a detachable hinge connection between the outer ends of the forward strips and the rear side of the drawer, means to prevent said pairs of strips from being entirely straightened out or brought into alinement, a pair of rack bars, one of which is hingedly connected at its outer end to one pair of said strips, while the other rack bar is hingedly connected to the opposite pair of strips, a casing adapted to receive the free ends of said rack bars, a pinion revolubly mounted in said casing to engage the teeth of said bars, pairs of hingedly connected supporting strips having a hinge connection at one end with said casing and at their opposite ends to the rear side of the drawer casing, substantially as described.

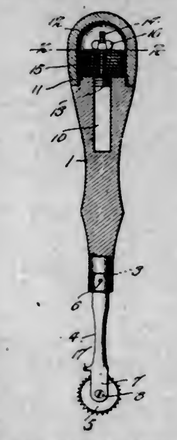
874,582. METHOD OF TRANSPORTING BRICKS, &c. WILLIAM H. FRANCIS, Cherryvale, Kans., assignor of one-half to Charles Francis, Independence, Kans. Filed June 17, 1907. Serial No. 379,367.



1. The method of transporting masses of material in bulk, which consists in applying the lifting strain at a point below the center of gravity of the bulk but above the basic layer of the material and at the same time lifting the basic layer by a pinching strain applied below the plane of application of the lifting strain and at right angles to the same but above the basic surface of the mass.

2. The method of transporting separate blocks of material in stacked-up bulk, which consists in spacing apart the basic layer of such blocks, applying the lifting strain below the center of gravity of the mass above the basic layer and between the units of the basic layer and at the same time pinching and lifting the basic layer by a horizontal strain at right angles to the lifting strain and moving the entire pile intact.

874,583. TRACING IMPLEMENT. JEAN GARRET, Pittsburg, Pa. Filed Apr. 3, 1907. Serial No. 366,236.



1. A device of the character described comprising a handle having a chamber therein opening through the upper end thereof, a closure for said chamber carrying a support for tracing wheels, and a cap applicable to the handle to inclose the support.

2. A device of the character described comprising a handle, a supporting stem upon the upper end of the handle, securing means associated with the stem, and a cap upon the handle inclosing said stem.

3. A device of the character described comprising a handle, a screw stem supported by the upper end of the handle and adapted to carry a series of tracing wheels, means for confining the wheels upon the stem, and a cap applicable to the handle to inclose said stem and the wheels supported thereby.

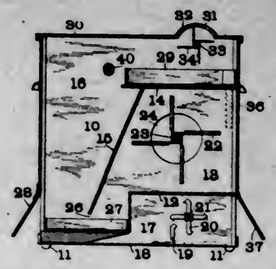
4. A device of the character described comprising a handle, a supporting stem upon the upper end of the handle, a clamping nut carried by the stem, and a cap removably mounted on the handle and inclosing the stem.

5. A device of the character described comprising a handle having a chamber therein, a stopper closing the chamber, a screw stem projecting from the stopper, a nut upon the stem to clamp a series of tracing wheels thereon, and a cap detachably mounted on the handle and inclosing the stem.

[Claims 6 and 7 not printed in the Gazette.]

874,584. CARPET-CLEANER. GEORGE F. GODDARD, St. Louis, Mo. Filed Apr. 28, 1906. Serial No. 314,134.

1. A carpet cleaner provided with a dust-collecting chamber, a beater-chamber provided with means for beating the carpet, a fan casing provided with a fan, the said dust chamber extending above, to one side of and to the bottom of said fan casing, said fan casing being located intermediate between said dust and beater chambers and communicating with said dust chamber near the lower part thereof and also communicating with said beater chamber, whereby the fan serves to suck the dust from the beater-chamber and discharge it into the dust-chamber, and a dust collecting tray or pan located within the bottom of said dust chamber, and a second dust collecting tray or pan located in the upper part of said dust chamber above said fan casing.



2. A carpet cleaner provided with a dust-collecting chamber, a beater-chamber provided with means for beating the carpet, a fan casing provided with a fan, said fan casing being located intermediate between said dust and beater chambers and communicating with each respectively, whereby the fan serves to suck the dust from the beater-chamber and discharge it into the dust chamber, said cleaner being provided with a return passage leading from said dust chamber to the intake of the said fan chamber, and also provided with an air outlet for said dust chamber adapted to permit a less outflow of air than is introduced by the fan to said dust chamber, whereby the surplus air is returned through said return passage.

3. A carpet cleaner provided with a dust-collecting chamber, a beater-chamber provided with means for beating the carpet, a fan casing provided with a fan, said fan casing being located intermediate between said dust and beater chambers and communicating with each respectively, whereby the fan serves to suck the dust from the beater-chamber and discharge it into the dust-chamber, said cleaner being provided with a return passage leading from said dust-chamber to the intake of the said fan chamber, and also provided with an air outlet for said dust chamber adapted to permit a less outflow of air than is introduced by the fan to said dust chamber, whereby the surplus air is returned through said return passage, and the communication between said beater chamber and said fan chamber having a portion of their path in common.

4. A carpet cleaner provided with a dust collecting chamber, a beater-chamber, a fan casing provided with a fan communicating with both said dust and beater chambers and serving to suck the air from the beater chamber and deliver it into the dust chamber, a plurality of independent beaters in said beater chamber, and normally held out of close contact with the carpet, and means for successively actuating said beaters.

5. A carpet cleaner provided with a dust collecting chamber, a beater-chamber, a fan casing provided with a fan and communicating with both said dust and beater chambers and serving to suck the air from the beater chamber and deliver it into the dust chamber, and a set of beaters comprising flexible strips provided with means for flexing each strip and releasing the same to snap it against the carpet.

[Claim 6 not printed in the Gazette.]

874,585. STRAW-RACK FOR GRAIN-SEPARATORS. JOHN B. HALE, Omaha, Nebr. Filed July 6, 1905. Serial No. 268,581.

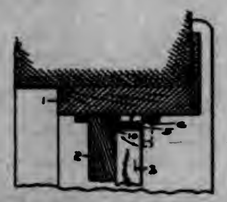
In a device of the character described, the combination with a supporting frame, of a driving crank shaft, two suitably supported rock shafts, a grain pan held by said rock shaft, a pitman extending from said driving crank shaft and secured to said grain pan, a plurality of loop shafts supported by said frame, a finger bar secured to each upper loop member to each of said shafts, fingers extending from each of said finger bars, a suitably sup-

ported rock shaft, a straw rack secured at one end to said last mentioned rock shaft, and at the opposite end to the upper member of the first of said loop shafts, a set of two additional straw racks, each straw rack at its lower end being secured to the lower member of one of said loop shafts, and at the opposite end to the upper member of one of said loop shafts, an end straw rack secured at its forward end to the lower member of the last of said



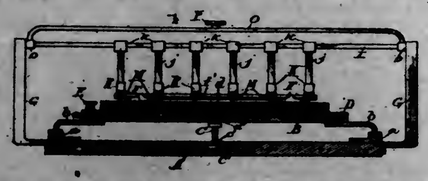
loop shafts, a rock shaft, said end straw rack being supported by said last mentioned rock shaft, a shield below said last mentioned rack, emptying upon aforesaid grain pan, a pitman extending from said driving crank shaft and secured to one of aforesaid loop shafts, and a plurality of fingers extending from the first three of aforesaid straw racks, all arranged substantially as and for the purpose set forth.

874,586. WINDOW-FASTENER. HARRY L. HAMMOND, Indianapolis, Ind. Filed Aug. 13, 1907. Serial No. 388,299.



In a window fastening device, the combination with the casing and sash, of a movable strip hinged securely to the casing and susceptible of being moved over the upper edge of the lower sash and extending to and abutting the upper end of the window-casing, said strip being provided with a notch, and means on the upper sash adapted to engage the notch on the strip.

874,587. PAPER-RULING MACHINE. JOSEPH W. HAYS, Chicago, Ill., assignor of one-half to George L. Simonds, Chicago, Ill. Filed Mar. 6, 1907. Serial No. 360,945.



1. A ruling machine comprising a reciprocal carrier having a bearing therein and having a series of openings arranged around said bearing, a bed-plate having a pivotal stud engaging said bearing whereby said bed-plate is rotatively mounted upon said carrier, a bolt carried by said bed-plate and adapted to engage said openings, and a superimposed depressible series of ruling devices adapted to engage the paper on said bed-plate.

2. A ruling machine comprising a suitable base-plate, tracks thereon adjacent to the longitudinal edges thereof, a longitudinally reciprocal carrier, runners therefor the outer longitudinal edges of which engage said tracks, a bed-plate rotatively mounted on said carrier, and a superimposed depressible series of ruling devices adapted to engage the paper on the bed-plate.

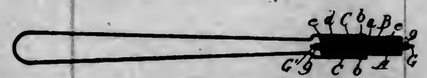
3. A ruling machine comprising a suitable base-plate, tracks thereon adjacent to the longitudinal edges thereof, a longitudinally reciprocal carrier, runners therefor the outer longitudinal edges of which engage said tracks, a bed-plate mounted on said carrier, means for rotatively adjusting said bed-plate on said carrier, and a superimposed depressible series of ruling devices adapted to engage the paper on the bed-plate.

4. A paper ruling machine comprising a suitable base-plate, a bed-plate reciprocally mounted thereon, oppositely located brackets secured to and arising from said base-plate, a transverse bar the ends of which are vertically movable in the upper portions of said brackets, a series of ruling devices adjustable on said bar and means for restoring said bar to its original position after it is depressed.

5. A paper ruling machine comprising a suitable base-plate, a bed-plate reciprocally mounted thereon, oppositely located brackets secured to and arising from said base-plate, a transverse bar the ends of which are vertically movable in the upper portions of said brackets, a series of ruling devices removably adjustable on said bar and means for restoring said bar to its original position after it is depressed.

[Claims 6 to 8 not printed in the Gazette.]

874,588. RULING DEVICE. JOSEPH W. HAYS, Chicago, Ill. Filed July 13, 1907. Serial No. 383,641.



1. A ruling device comprising a suitable receptacle having an inking element contained therein, and a ruling disk journaled in the side face of said receptacle and receiving its ink supply from said inking element.

2. A ruling device comprising a rotatable receptacle having an inking element contained therein, and ruling disks journaled in the side face of said receptacle and receiving their ink supply from said inking element, the periphery of said disks being of different construction from each other.

3. A ruling device comprising a rotatable receptacle having an inking element contained therein, ruling disks journaled in the side face of said receptacle and receiving their ink supply from said inking element, the periphery of said disks being of different construction from each other, and means for temporarily holding said receptacle in an adjusted position.

4. A ruling device comprising a suitable handle, a rotatable receptacle journaled in the end of said handle and provided with compartments each containing an inking element, a series of seats on the side face of said receptacle, and a boss on one of the divided ends of said handle adapted to engage said seats and retain said receptacle in an adjusted position.

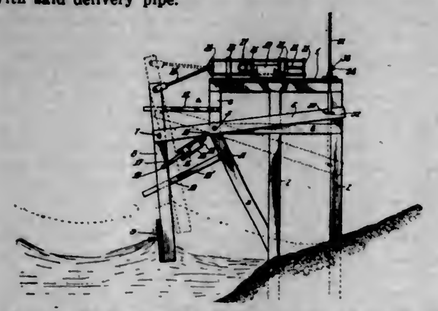
5. A ruling device comprising a suitable receptacle divided into two compartments each containing a separate inking element, and ruling disks journaled in the side face of said receptacle, one adjacent to one of said compartments and the other adjacent, to the opposite compartment, and each receiving its ink supply from the inking element in its respective compartment.

[Claim 6 not printed in the Gazette.]

874,589. WAVE-MOTOR. JOHN R. HENDERSON, Los Angeles, Cal. Filed Aug. 19, 1907. Serial No. 389,299.

1. In a wave motor, a standard, levers pivoted to the standard, a paddle beam pivoted to the outer end of each lever, a paddle on each paddle beam, racks connected to the respective levers, pinions meshing with the respective racks, a shaft supporting all of said pinions, and means for operating said shaft.

2. In a wave motor, a standard, levers pivoted to the standard, a paddle beam pivoted to the outer end of each lever, a paddle on each paddle beam, racks connected to the respective levers, pinions meshing with the respective racks, a shaft supporting all of said pinions, a series of air compressors, a connection between each air compressor and its respective paddle beam, a delivery pipe connected to all of the air compressors, an air motor connected to said shaft for operating it and having an air connection with said delivery pipe.



3. In a wave motor, a standard, levers pivoted to the standard, a paddle beam pivoted to the outer end of each lever, a paddle on each paddle beam, racks connected to the respective levers, pinions meshing with the respective racks, a shaft supporting all of said pinions, means for operating said shaft, a cylinder having an air passage pivoted to each lever, and a piston in each cylinder with its piston rod pivoted to the associated paddle beam for regulating the stroke of the paddle beam.

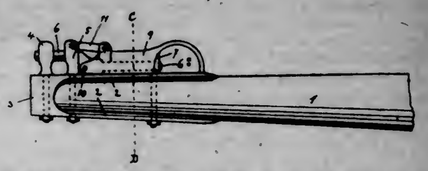
4. In a wave motor, a standard, levers pivoted to the standard, a paddle beam pivoted to the outer end of each lever, a paddle on each paddle beam, racks connected to the respective levers, pinions meshing with the respective racks, a shaft supporting all of said pinions, means for operating said shaft, a cylinder having an air passage pivoted to each lever, a piston in each cylinder with its piston rod pivoted to the associated paddle beam for regulating the stroke of the paddle beam, guides on each side of each paddle beam and pivoted to said standard, said guides being below the fulcrum of the paddle beams, and guides above said fulcrum attached to the standard for guiding the upper end of the paddle beam.

5. In a wave motor, a standard, levers pivoted to the standard, a paddle beam pivoted to the outer end of each lever, a paddle on each paddle beam, racks connected to the respective levers, pinions meshing with the respective racks, a shaft supporting all of said pinions, a series of air compressors, a connection between each air compressor and its respective paddle beam, a delivery pipe connected to all of the air compressors, an air motor connected to said shaft for operating it and having an air connection with said delivery pipe, and a storage reservoir connected to the first named pipe for supplying air to various power plants.

874,590. WHIFFLETREE TRACE-FASTENER. THOS. A. HENDRICK, Sauquoit, N. Y., assignor, by direct and mesne assignments, to J. R. Fretz, Sauquoit, N. Y., and Florence L. Rogers, Warrington, Pa. Filed May 17, 1907. Serial No. 374,159.

1. In a trace fastener, the combination of a reciprocating bolt adapted to be projected across a trace-receiving space therein and supported in eyes at either side of said space, a spring adapted to move the bolt to its position spanning said space, a lever for releasing the bolt and arranged to form a housing for the bolt when in closed position, substantially as set forth.

2. The combination in a trace fastener of a reciprocating bolt, a trace-receiving space across which the bolt is adapted to be projected, eyes at either side of said space receiving the bolt, a spring arranged to move the bolt to closed position and mounted on a stem or shank of the bolt, a lever for operating the bolt arranged to provide a housing for the shank or stem of the bolt and spring, substantially as set forth.



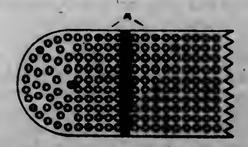
3. The combination in a whiffle tree fastener of a reciprocating bolt, a trace-receiving space across which the bolt is adapted to be projected and having eyes at either side of said space to receive the bolt, a spring for operating the bolt to closed position mounted on an inwardly extending stem portion of the bolt, a bolt operating lever pivoted at one end to the bolt and connected by a link with a fixed portion of the fastener and arranged to provide a housing for the spring and stem portion of the bolt, substantially as set forth.

874,591. LOCK WHIP-SOCKET. CARL M. HOERRGOTT and HENRY C. EBY, Jolley, Iowa. Filed Aug. 6, 1906. Serial No. 329,500.



The combination with a socket having a rounded bottom and an opening through the extreme lower end thereof, of a whip resting on said bottom, said socket being of greater diameter than the portion of the whip inclosed thereby, a shaft entering the lower end of said whip and extending longitudinally axially thereof, prongs at the inner end of said shaft extended laterally beyond the shaft and adapted to engage the contiguous parts of the whip and hold the shaft embedded therein, an eye integral with and extending beyond the end of the whip and adapted to extend entirely through the opening in the socket and a lock adapted to engage said eye and secure the whip within the socket said lock being of greater dimensions than the opening in the bottom of the socket.

874,592. CULINARY SCRAPER. GEORGE M. HOGMIRE, Joliet, Ill. Filed Apr. 9, 1906. Serial No. 310,657.

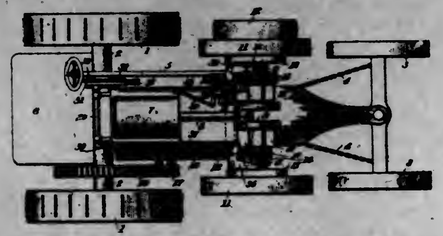


1. A culinary scraper, composed of a flat strip of sheet metal doubled over near its center and the two halves connected together to form a handle, the end portions of

said strip being bent out at right angles to said handle in opposite directions, and scraping projections formed on the faces of said end portions opposite the handle.

2. A culinary scraper, composed of a flat strip of sheet metal doubled over near its center and the two halves rigidly united near said point of folding to form a handle portion, a free rounded loop being formed at the point of folding, the end portions of said strip being bent out at an angle to said handle portion to form scraping blades, and the edges of the strip at one side of said loop being cut out to form a scraping hook, all as described and set forth.

874,593. TRACTION-ENGINE. EDWARD D. HUSTON, Chaplin, Ky. Filed May 2, 1907. Serial No. 371,413.



1. In a traction-engine, an engine and its shaft adapted to be driven in the same direction at all times, gear-wheels loosely mounted upon the opposite ends of said shaft, an intermediate shaft arranged between the engine-shaft and the driving-axle, a gear-wheel fast on one end of said intermediate shaft and an idler interposed between said gear-wheel and one of the gear-wheels upon one side of the engine-shaft, a gear-wheel loosely mounted upon the other end of said intermediate shaft and directly engaging the gear-wheel upon the other side of the engine-shaft, a train of gears interposed between the fixed gear-wheel on the intermediate shaft and the driving-axle, and means for clutching and unclutching the loose gears alternately upon opposite sides of the engine-shaft, whereby the machine may be propelled backward or forward as desired.

2. In a traction-engine, an engine and its shaft adapted to be driven in the same direction at all times, gear-wheels having outwardly extending sleeves loosely mounted upon the engine-shaft upon opposite ends thereof, clutches splined to said sleeves and adapted to engage the fly-wheels of the engine-shaft, an intermediate shaft arranged between the engine-shaft and the driving-axle of the machine, a gear-wheel fixed to one end of said intermediate shaft and an idler interposed between said gear-wheel and one of the gear-wheels of the engine-shaft, a gear-wheel loosely mounted upon the other end of the intermediate shaft and directly engaging the gear-wheel upon the opposite end of the engine-shaft, a train of gears interposed between the fixed gear-wheel on the intermediate shaft and the driving-axle, and means for alternately shifting the clutches upon opposite sides of the machine to effect their engagement with the fly-wheels of the engine to propel the machine forward or backward as desired, and means for maintaining both of said clutches disengaged from the fly-wheels whereby the engine may be driven independently of all of said gear-wheels.

3. In a traction-engine, an engine and its shaft adapted to be driven in the same direction at all times, gear-wheels loosely mounted upon opposite ends of said shaft, clutches for alternately engaging said gear-wheels with the fly-wheels of said shaft, an intermediate shaft arranged between the engine-shaft and the driving-axle, a gear-wheel fixed to one end of said intermediate shaft and an idler interposed between said gear-wheel and one of the gears on the engine-shaft, a gear-wheel loosely mounted upon the opposite end of said intermediate shaft and directly engaging the gear-wheel upon the other end of the engine-shaft, a clutch for locking said loosely mounted gear-wheel to the intermediate shaft, a train of gear-wheels interposed between the fixed gear-wheel of the intermediate shaft and the driving-axle of the machine, means for alternately shifting the clutches upon opposite sides of the machine to propel the machine either forward or backward as desired, and means for maintaining the several clutches in unclutched position whereby the engine and its shaft may be driven entirely independently of the propelling gears.

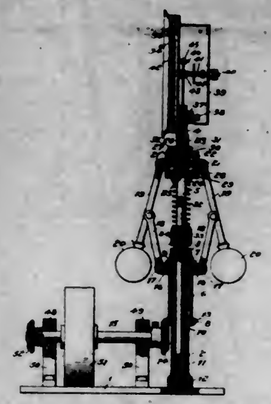
4. In a traction-engine, an engine and its shaft adapted to be driven in the same direction at all times, gear-wheels loosely mounted upon opposite ends of said shaft, spring-actuated clutches for alternately engaging said gear-wheels with the fly-wheels of said shaft, an intermediate shaft arranged between the engine-shaft and the driving-axle, a gear-wheel fixed to one end of said intermediate shaft and an idler interposed between said gear-wheel and one of the gears on the engine-shaft, a gear-wheel loosely mounted upon the opposite end of said intermediate shaft and directly engaging the gear-wheel upon the other end of the engine-shaft, a spring-actuated clutch for locking said loosely mounted gear-wheel to the intermediate shaft, a train of gear-wheels interposed between the fixed gear-wheel of the intermediate shaft and the driving-axle of the machine, knuckle-jointed bell-crank levers and means for operating them for shifting said spring-actuated clutches to alternately lock the gear-wheels with the engine-shaft upon opposite sides of the machine to propel the machine either forward or backward and permitting the several clutches to remain in an unclutched position whereby the engine and its shaft may be driven entirely independently of the propelling gears.

5. In a traction-engine, an engine and its shaft adapted to be driven in the same direction at all times, gear-wheels loosely mounted upon opposite ends of said shaft, spring-actuated clutches for alternately engaging said gear-wheels with the fly-wheels of said shaft, an intermediate shaft arranged between the engine-shaft and the driving-axle, a gear-wheel fixed to one end of said intermediate shaft and an idler interposed between said gear-wheel and one of the gears on the engine-shaft, a gear-wheel loosely mounted upon the opposite end of said intermediate shaft and directly engaging the gear-wheel upon the other end of the engine-shaft, a spring-actuated clutch for locking said loosely mounted gear-wheel to the intermediate shaft, a train of gear-wheels interposed between the fixed gear-wheel of the intermediate shaft and the driving-axle of the machine, knuckle-jointed bell-crank levers and means for operating them for shifting said spring-actuated clutches to alternately lock the gear-wheels with the engine-shaft upon opposite sides of the machine to propel the machine either forward or backward and permitting the several clutches to remain in an unclutched position whereby the engine and its shaft may be driven entirely independently of the propelling gears.

874,594. SPEED-INDICATOR. FRED F. INGRAM, San Francisco, Cal., assignor of one-half to Albert S. Wilson, San Diego, Cal. Filed May 28, 1907. Serial No. 376,112.

1. In an indicator of the character described, an upright having a transverse longitudinally extending slot and a longitudinal opening extending from said slot to its top, a sliding sleeve surrounding said upright, a cross piece carried by said sleeve and extending through said transverse slot in the upright, an indicating mechanism, a rod extending through the longitudinal opening in the upright and connected at its upper end to said mechanism and at its lower end to said cross piece, a rotary sleeve upon said upright, a rotary sleeve upon said sliding sleeve and links connecting said rotary sleeves and carrying centrifugal weights.

2. In an indicator of the character described, an upright having a transverse longitudinally extending slot and a longitudinal opening extending from said slot to its top, a sliding sleeve surrounding said upright, a cross piece carried by said sleeve and extending through said transverse slot in the upright, an indicating mechanism, a rod extending through the longitudinal opening in the upright and connected at its upper end to said mechanism and at its lower end to said cross piece, a rotary sleeve upon said upright beneath said sliding sleeve, a rotary sleeve upon said sliding sleeve, centrifugal devices connecting said rotary sleeves, a coil spring surrounding said upright and engaged with the lower end of said sliding sleeve and an adjusting nut upon said upright and engaged with the lower end of said coil spring.



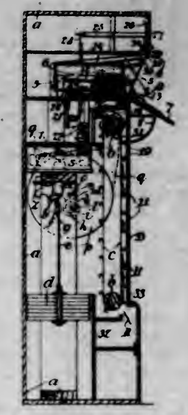
3. In an indicator of the character described, an upright having a transverse longitudinally extending slot and a longitudinal opening extending from said slot to its top, a sliding sleeve surrounding said upright, a cross piece carried by said sleeve and extending through said transverse slot in the upright, an indicating mechanism, a rod extending through the longitudinal opening in the upright and connected at its upper end to said mechanism and at its lower end to said cross piece, a rotary sleeve upon said upright, a rotary sleeve upon said sliding sleeve, weight carrying arms pivoted to the upper rotary sleeve, links pivotally connecting the lower rotary sleeve and said arms, a coil spring surrounding said upright and engaged with the lower end of said sliding sleeve and an adjusting nut upon said upright and engaged with the lower end of said coil spring.

4. In an indicator of the character described, an upright having a transverse longitudinally extending slot and a longitudinal opening extending from said slot to its top, a sliding sleeve surrounding said upright, a cross piece carried by said sleeve and extending through said transverse slot in the upright, an indicating mechanism, a rod extending through the longitudinal opening in the upright and connected at its upper end to said mechanism and at its lower end to said cross piece, a rotary sleeve upon said upright, a rotary sleeve upon said sliding sleeve, centrifugal weight carrying links connecting said rotary sleeves, anti-friction ball bearings for each of said rotary sleeves, a shaft, anti-friction ball bearings therefor, a fly wheel upon said shaft and gearing connecting said shaft and said rotary sleeve upon the upright.

5. In an indicator of the character described, an upright having a transverse longitudinally extending slot and a longitudinal opening extending from said slot to its top, a sliding sleeve surrounding said upright, a cross piece carried by said sleeve and extending through said transverse slot in the upright, a centrifugal device for actuating said sliding sleeve, a dial plate having an apertured portion to receive the upper end of said upright, a set screw for clamping said dial plate upon said upright, a concentric shaft mounted in said dial plate, a pointer upon said shaft, a pinion upon said shaft, a gear segment to mesh with said pinion, a link connected to said segment and having an aperture to receive the upper end of said rod and a set screw for clamping said rod in said aperture.

874,595. ADVERTISING-MACHINE. HAROLD A. IRONSIDE, Upper Norwood, England. Filed Nov. 15, 1906. Serial No. 343,530.

1. In a card exhibitor, the combination, with a showcase having a display window, of an endless carrier provided with means for supporting the cards and arranged behind the said window, a motor for keeping the said carrier in motion, a retractable platform for supporting a card in the said case above the said carrier, a door in the said case permitting the card to be placed on the said platform, and a connection between the said door and platform which retracts the said platform and permits the card to drop therefrom onto the said carrier when the said door is closed.



2. In a card exhibitor, the combination, with a showcase having a display window, of an endless carrier provided with means for supporting the cards and arranged behind the said window, a motor for keeping the said carrier in motion, a retractable platform for supporting a card in the said case above the said carrier, a door in the front of the said case provided with locking mechanism for normally holding it closed, a receptacle for cards arranged behind the said door and provided with spring-pressed feed-mechanism, and a connection between the said door and platform which retracts the said platform and permits the card to drop therefrom onto the said carrier when the said door is closed.

3. In a card exhibitor, the combination, with a showcase having a display-window, of an endless carrier provided with means for supporting the cards and arranged behind the said window, a motor for keeping the said carrier in motion, a retractable platform for supporting a card in the said case above the said carrier, a door in the said case for permitting the said card to be placed on the said platform, indicating mechanism operatively connected with the said door and provided with a visual signal to show when the machine is in use, and a connection between the said door and platform which retracts the said platform and permits the card to drop onto the said carrier when the door is closed.

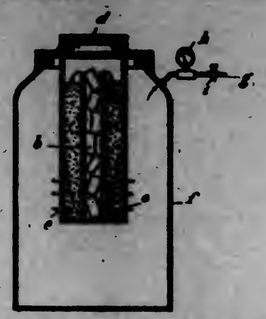
874,596. PROCESS OF PRODUCING OXYGEN. ARMAND JANET, Paris, France. Filed May 14, 1904. Serial No. 208,111.

1. The hereinbefore described process of producing oxygen which consists in commingling pulverised carbonaceous material, a highly chemically active oxidising salt and comminuted inert refractory material, burning the mixture in a closed vessel and retaining the gas produced in a receiving vessel.

2. The hereinbefore described process of producing oxygen which consists in commingling a pulverised carbonaceous material, a finely comminuted highly chemically active oxidising salt and finely pulverised inert refractory material, briqueting the mixture and burning the briquets in a closed chamber.

3. The hereinbefore described process of producing oxygen which consists in commingling pulverised carbonaceous material, pulverised highly chemically active oxidising salts and finely comminuted inert refractory material, briqueting the mixture, burning the briquets in a closed

chamber and passing the products of combustion through the purifying materials.

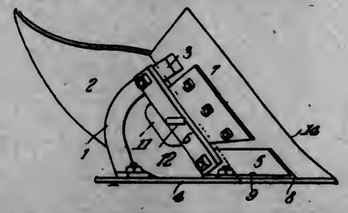


4. The hereinbefore described process of producing oxygen which consists in commingling finely comminuted carbonaceous material, pulverized highly chemically active oxidising salts and finely comminuted inert refractory material, briqueting the mixture, burning the briquets in a closed chamber and passing the products of combustion through a layer of lime.

5. The hereinbefore described process of producing oxygen, consisting in mixing a relatively small quantity of combustible comminuted carbonaceous material with a relatively large quantity of a potassium chlorate and finely powdered inert noncombustible material, this mixture being lighted and burned in a closed vessel and removing the carbon dioxid from the oxygen so produced.

[Claim 6 not printed in the Gazette.]

874,597. PLOW. EDWIN JARRELL, Riverdale, Kans. Filed Jan. 31, 1907. Serial No. 355,169.

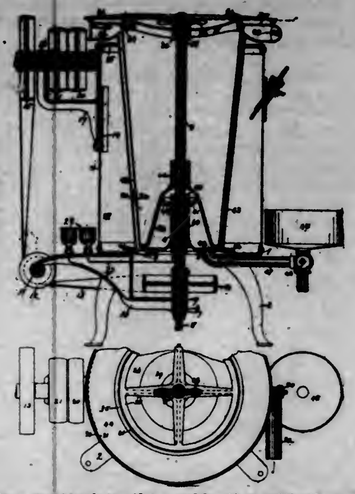


In a plow, the combination with the land side and the mold board, of a brace connecting the parts, a clip disposed at the intersection of the mold board and the land side and provided with elongated orifice, a keeper bolted to the mold board and spaced at both ends therefrom, a share having a nose piece carrying a stud to engage the orifice of the clip and with a shank to project between the keeper and the mold board, and a locking bolt carried by the keeper and engaging a seat formed in the shank.

874,598. PASTEURIZER. AAGE JENSEN, Eureka, Cal. Filed Jan. 17, 1907. Serial No. 352,729.

1. In a pasteurizer, the combination with the upwardly flaring conical inner wall of the chamber for a heating medium, and means for supplying heating fluid to said chamber, of a conical impeller, a vertical shaft, means for rotating the same, a casting secured upon the upper end of said shaft, having an annular shoulder to which the upper edge of the impeller is secured, and a bell shaped base formed at its upper end into a sleeve closely surrounding the shaft, the lower edge of said impeller being secured to said base, substantially as described.

2. In a pasteurizer, the combination with the upwardly flaring conical inner wall of a chamber for a heating medium, of a conical impeller, a vertical shaft, means for rotating the same, a bell shaped base formed at its upper end into a sleeve closely surrounding the shaft, said base having an inwardly and downwardly extending rib, and an apron secured upon said rib, substantially as described.



3. In a pasteurizer, the combination with the upwardly flaring conical inner wall of a chamber for a heating medium, of a conical impeller, means for rotating said impeller within said inner wall, means for supplying heating fluid to said chamber, and means for heating said fluid comprising an apertured stand pipe within the heating chamber, and means for admitting steam to said stand pipe, said apertures opening in the opposite angular direction to that of the impeller, substantially as described.

4. In a pasteurizer, the combination of a heating medium chamber, an impeller rotating within the same, means for rotating said impeller, and means for imparting to the heating fluid in said chamber a rotary motion in the opposite angular direction to that of the impeller, substantially as described.

5. In a pasteurizer, the combination of a heating medium chamber having an inner wall, and a trough connected with the upper edge of said wall, an impeller rotating within said chamber, and comprising a casting at the top thereof, said casting extending circumferentially into close proximity to the outer wall of the trough, and said casting having a circular wall and an annular cover closing said trough, the inner edge of which extends into close proximity with said circular wall, substantially as described.

[Claim 6 not printed in the Gazette.]

874,599. INDEXED BALLOT AND BALLOT-BOOK. FRANK A. JOHNSON, New Bedford, Mass. Filed Nov. 16, 1897. Serial No. 658,734.



1. A ballot book having a separable leaf for each candidate, the leaves for each office having a common distinguishing characteristic, differing from the leaves for the other offices, whereby the selection of leaves to form a ballot is facilitated.

2. A ballot book having a separable leaf for each candidate for the same office bearing the same designating mark, the mark corresponding to the different offices constituting a series, whereby the selection of leaves to form a ballot is facilitated.

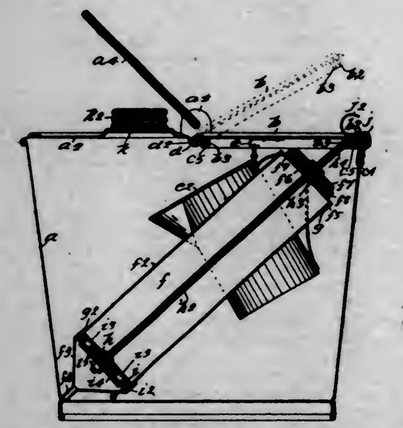
3. A ballot book having a separable leaf for each candidate, the leaves for each office being of uniform size and having a uniform distinctive mark, and the leaves for different offices being of different sizes and having different distinctive marks, for the purpose set forth.

4. A ballot book having a separable leaf for each candidate, the leaves for each office being of uniform size and the leaves for different offices being of different sizes, for the purpose set forth.

5. A ballot book having a separable leaf for each candidate, the leaves for each office being of uniform size and color and the leaves for different offices being of different sizes and colors, for the purpose set forth.

[Claims 6 to 18 not printed in the Gazette.]

874,600. FIRE-EXTINGUISHING APPARATUS. WALTER R. JOHNSTON, New York, N. Y., assignor to The Walter R. Johnston Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Dec. 7, 1905. Serial No. 290,706.



1. In a fire extinguishing apparatus, a bucket adapted to hold a chemical compound and provided with a stationary cover having at one side of the bucket and flush therewith an opening around which is a plurality of grooves designed to contain a sealing material, and a cover for said openings provided with a plurality of flanges adapted to enter said groves.

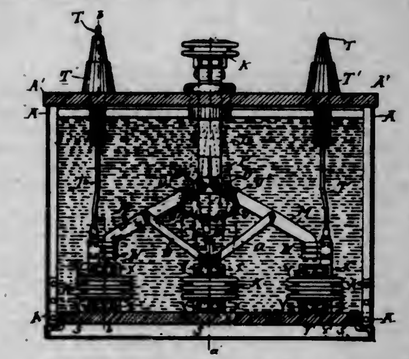
2. In a fire extinguishing apparatus, a bucket adapted to hold a chemical compound and provided with a stationary cover having at one side of the bucket and flush therewith an opening provided with a hinged cover, a plurality of grooves around said opening adapted to contain a sealing material, and said cover being provided with a plurality of flanges adapted to enter said grooves.

3. In a fire extinguishing apparatus, a bucket adapted to hold a chemical compound and provided with a stationary cover having at one side of the bucket and flush therewith an opening provided with a hinged cover, a plurality of grooves around said opening adapted to contain a sealing material, and said cover being provided with a plurality of flanges adapted to enter said grooves, and means for holding said cover in a closed position.

4. In a fire extinguishing apparatus, a bucket adapted to hold a chemical compound and provided with a stationary cover having at one side and flush therewith an opening around which is a plurality of grooves designed to contain a sealing material, said opening being provided with a hinged cover having a plurality of flanges adapted to enter said grooves, and supplemental fire extinguishing devices adapted to be inserted into said bucket and removed therefrom through said opening and to be used in throwing a fire extinguisher liquid.

5. In a fire extinguishing apparatus, a bucket adapted to hold a chemical compound and provided with a stationary cover having at one side of the bucket and flush therewith an opening around which is a plurality of grooves designed to contain a sealing material, said opening being provided with a hinged cover having a plurality of flanges adapted to enter said grooves, and supplemental fire extinguishing devices adapted to be inserted into said bucket and removed therefrom through said opening and to be used in throwing a fire extinguishing liquid, the cover of the bucket being also provided with a test opening and means for closing the same.

874,601. SWITCH FOR HIGH-POTENTIAL CIRCUITS. JOSEPH N. KELMAN, Los Angeles, Cal. Filed Apr. 8, 1907. Serial No. 367,124.

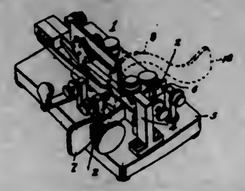


1. The switch and circuit breaker for high potential circuits, consisting of two or more pairs of horizontally projecting poles or contact pieces with which oppositely operating switch blades make and break contact, the upper ends of each pair of said blades being connected to a rod of wood or equivalent insulating material, said switch blades being pivotally connected near their center of length by links to pivotal connections on an insulator, attached to a beam of wood at the bottom of the tank, the fixed pieces or contact pieces being also attached to insulators fastened to a wooden beam within the tank, the conductors from the fixed poles or contact pieces extending through insulators carried in the top cover of the tank, consisting of non-conducting material, the ferrules of insulating material at the center of the cover of the tanks, the wooden rods operating in said ferrules, the clips connecting an insulator with the top of the wooden rod, the clips connecting the insulator to the channel iron, the connecting pieces and pivots by which the lower end of the wooden rods are connected to the upper parts of the switch blades, a flexible connection between the upper ends of the switch blades, the frames and guides between the center tank and each of the side tanks, the vertical rods operating in said frames and guides, the shaft, the lever and links and the counter weight for opening and closing the switch or circuit breaker, all operating in the manner and for the purposes substantially as hereinbefore described.

2. The combination of the channel iron, the clips connecting the channel iron to the upper parts of the insulators, clips connecting the lower part of the upper insulators with the upper end of each wooden rod, the wooden rods, the connecting piece at the lower end of each wooden rod, to which the switch blades are pivoted, the flexible metallic connection between the upper pivoted ends of the switch blades, the switch blades, the links piv-

otally connecting the switch blades to the stationary insulator, so that the ends of the switch blades operate horizontally, or nearly so, in opening and closing the circuit to the fixed poles or contact pieces, substantially as hereinbefore described.

874,602. TELEGRAPH-KEY. JOHN P. KINNEY, Pocatello, Idaho. Filed Apr. 23, 1907. Serial No. 369,746.

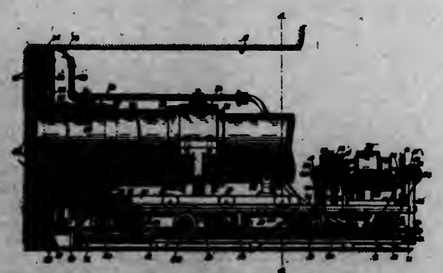


1. The combination with a telegraph instrument having a key lever projecting from one side of the same, of an operating member carried by the key lever and arched to span the instrument, whereby the latter may be operated from its side opposite that from which the key lever projects, substantially as described.

2. The combination with a telegraph instrument having a key lever projecting from one side of the same, of an operating bar arched to span the instrument and having at each of its ends a finger piece, one end of said bar being attached to the projecting end of the key lever and its other end being arranged upon the opposite side of the instrument, substantially as and for the purpose set forth.

3. The combination with a telegraph instrument having a vertical pivot and a horizontally swinging key lever arranged upon said pivot and having one end projecting from one side of the instrument, of an operating bar arched to span the instrument and having at each of its ends a finger piece, one end of said bar being attached to the projecting end of the key lever and its other end being arranged upon the opposite side of the instrument, substantially as and for the purpose set forth.

874,603. ROCK-DRILLING MACHINE. ALVA D. LEE, Brookline, and FRANCIS J. E. NELSON, Jr., East Boston, Mass. Filed Nov. 14, 1906. Serial No. 343,322.



1. In a rock drilling machine, the combination of an annular face plate pivoted with a plurality of depressions in its face; means for rotating said plate; and a plurality of cutters secured in said depressions with their axes radial to the axis of said plate and at different distances from said center thereby effecting in the revolution of said plate a cutting from the central opening to the outer periphery of said plate.

2. In a rock drilling machine, the combination of an annular plate; a plurality of frames distributed at various distances from the center over the face thereof; and a plurality of cutters in each frame each mounted upon an independent axis.

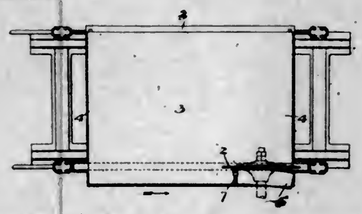
3. In a rock drilling machine, the combination of an annular plate; a plurality of frames secured to the face thereof at different distances from the center; a plurality of cutters in each frame, and means for adjusting said frames relative to the axis of said plate.

5. In a rock drilling machine, the combination of an annular plate; a plurality of frames secured to the face thereof; a plurality of series of cutters on the face thereof; and a plurality of forms of cutters in each series.

5. In a rock drilling machine, the combination of an annular plate; a plurality of frames secured to the face thereof; a plurality of overlapping series of cutters on the face thereof; and a plurality of forms of cutters in each series.

[Claims 6 to 23 not printed in the Gazette.]

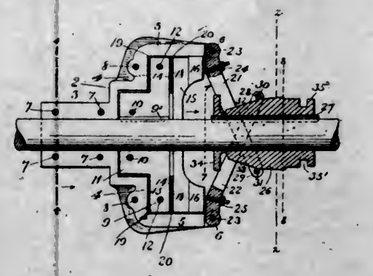
874,604. METHOD OF FINISHING ARMOR-PLATE. EDWIN W. LEWIS and JOHN S. UNGER, Munhall, Pa., assignors to Carnegie Steel Company, Pittsburg, Pa., a Corporation of New Jersey. Filed May 19, 1903. Serial No. 157,766.



1. The method of finishing armor plate, consisting in carburizing its face and liquid-hardening the same, subjecting the plate to two cutting operations, one before and one after liquid quenching, and cold sawing the plate in carrying out the latter step; substantially as described.

2. In a device of the class described, a separable base carburizing the face of the plate, rough cutting the plate, water-hardening the carburized face, and then cold sawing the plate to final form; substantially as described.

874,605. FRICTION-CLUTCH. JOHN S. LOSCH, Reading, Pa. Filed June 12, 1907. Serial No. 378,560.

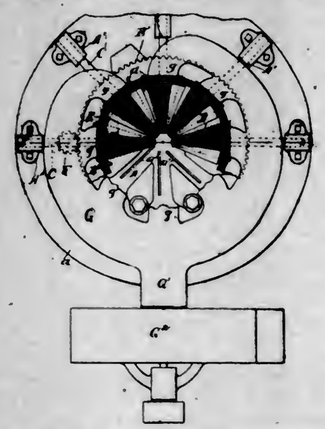


1. In a device of the class described, a base having an annular seat, and arms integral therewith, an annular plate, a ring of flexible material between said seat and plate and within said arms, levers connected to the outer ends of said arms, and a movable head engaging the free ends of said levers.

2. In a device of the class described, a separate base having an annular fixed seat and provided with external arms intergral therewith, an annular plate, a ring of flexible material between said seat and plate, a supplemental plate, a ring of flexible material between said plates, said plates and rings being separable transversely, levers connected to the outer ends of said arms, and a movable head engaging the free ends of said levers.

3. In a device of the class described, a separable base having a hub and an annular seat integral therewith, and provided with arms, an annular plate having lugs engaging said arms, a ring of flexible material between said seat and plate, a supplemental plate, a ring of flexible material between said plates, said plates and rings being separable transversely, levers connected to said arms, and a movable head having curred bearing surfaces engaged by said levers.

874,606. COMBINED CONDENSER AND FEEDER MECHANISM FOR PRESSES. GEORGE A. LOWRY, Chicago, Ill., assignor, by mesne assignments, to Planters Compress Company, a Corporation of Maine. Filed Nov. 15, 1900. Serial No. 36,603.



1. In a press, and in combination with a compressing device, a hopper arranged to deliver material by gravity, a screen within the hopper adjacent to the compressing device, and means for drawing air through the screen, a constant area of screen surface being exposed to the action of the exhaust means, and the exhaust means being constant in action.

2. In a press, and in combination with a compressing device a hopper arranged to deliver material by gravity, a screen within the hopper adjacent to the compressing device, and means for drawing air through the screen, a constant area of screen surface being exposed to the action of the exhaust means, the exhaust means being constant in action, and means to guide material from the screen to the compressing device.

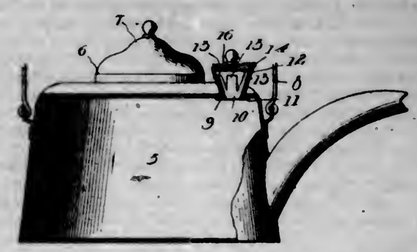
3. In a press, and in combination with a compressing device, a hopper arranged to deliver material by gravity, a moving screen within the hopper adjacent to the compressing device, and means for drawing air through the screen, a constant area of screen surface being exposed to the action of the exhaust means and the exhaust means being constant in action.

4. In a press, and in combination with a compressing device, a hopper arranged to deliver material by gravity, a moving screen within the hopper adjacent to the compressing device, and means for drawing air through the screen, a constant area of screen surface being exposed to the action of the exhaust means, the exhaust means being constant in action, and means to guide material from the screen to the compressing device.

5. In a press, and in combination with a compressing device, a hopper arranged to deliver material by gravity, a moving screen within the hopper adjacent to the compressing device, and means for drawing air through the screen, a constant area of screen surface being exposed to the action of the exhaust means, the exhaust means being constant in action, means to relieve from the action of said exhaust means that portion of the screen adjacent to the compressing device, and means to guide material from the screen to the compressing device.

[Claims 6 to 23 not printed in the Gazette.]

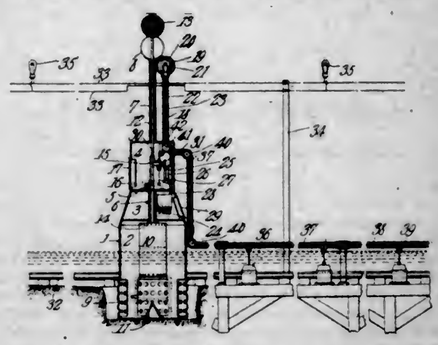
874,607. KETTLE-FILLER. JOHN B. LOYND, West Philadelphia, Pa. Filed July 3, 1907. Serial No. 382,021.



1. The combination with a receptacle having an opening therein, of a tube engaged in said opening and having a retaining flange at its inner end, a funnel surrounding the tube outwardly of the receptacle, said tube being split to form resultant tongues within the funnel to hold the funnel against removal, and a lid for the funnel.

2. The combination with a receptacle having an opening therein, of a tube engaged in said opening and having a retaining flange at its inner end, and a funnel surrounding the tube outwardly of the receptacle, said tube being split within the funnel to form tongues to hold the funnel against removal.

874,608. DANGER-SIGNAL. CLEVIA J. LUTHER, Desloge, Mo., assignor of two-fifths to James T. Mayberry, Desloge, Mo. Filed Aug. 13, 1907. Serial No. 388,386.



1. A danger signal comprising a float, a target carried thereby, means for hiding said target when the float is in its lowermost position, an electric switch separate from the float and parts carried thereby but within the path of and actuated by the float when raised or lifted, and an electric circuit including said switch and electric translating devices capable of producing signals.

2. A danger signal comprising an electric circuit, a switch in said circuit, a float, connections between the float and switch for closing the latter when the float is lifted, a target carried by the float, electric signal indicating devices rendered active on the closure of the electric circuit, and gravity operated means located upon and supported by structures subject to dangerous conditions, and a common connection between all the gravity means and the electric switch whereby the latter is operated when any one of the gravity means becomes active.

2. A danger signal comprising an electric circuit, a switch in said circuit, a float, connections between the float and switch for closing the latter when the float is lifted, a target carried by the float, electric signal indicating devices rendered active on the closure of the electric circuit, and gravity operated means located upon and supported by structures subject to danger conditions, and a common connection between all the gravity means consisting of a wire separately connected to each gravity

means and also connected to that part of the float structure operating to engage the switch.

4. A danger signal comprising a casing having a chamber communicating with the exterior of the casing, a float within said chamber, a rod carried by said float, a target carried by said rod, means carried by the casing for hiding the target, a pawl and ratchet detent for permitting the float to rise but preventing its return movement, an electric switch within the casing, an arm carried by the rod for engaging said switch to close the same, an electric lamp carried by the casing, a source of current carried by the casing, and electric connections from the source of current including the lamp and switch.

5. A danger signal comprising a casing having a chamber communicating with the exterior of the casing, a float within said chamber, a rod carried by said float, a target carried by said rod, means carried by the casing for hiding the target, a pawl and ratchet detent for permitting the float to rise but preventing its return movement, an electric switch within the casing, an arm carried by the rod for engaging said switch to inclose the same, an electric lamp carried by the casing, a source of current carried by the casing, and electric connections from the source of current including the lamp and switch, a pipe or conduit leading from the casing and along a structure subject to dangerous conditions, weights located on and supported by said structure, a wire connected to the arm carried by the rod and leading to the pipe or conduit, and branch conections from the wire to each of the weights.

874,609. RAILROAD-TIE AND FASTENER. JAMES H. LYNCH, Belle Vernon, Pa., assignor of four-tenths to Frank G. Myers and one-tenth to Thomas E. Cunningham, Pittsburg, Pa. Filed May 6, 1907. Serial No. 371,987.



1. A tie and fastener for rails comprising a tie having a flange extending out from the sides of the same, a removable clamping portion on said tie for engaging with one side of said rail, a slidable clamping portion on said tie and fitting around said flanges for engaging with the other side of said rail, means for holding said slidable portion in place, and guides or arms on said slidable portion for fitting under said flanges and within said removable clamping portion.

2. A tie and fastener for rails comprising a tie having a flange extending out from the sides of the same, a removable clamping portion on said tie for engaging with one side of the rails and having downwardly projecting sides thereon, a slidable clamping portion on said tie for engaging with the other side of said rail and fitting around said flanges by downwardly projecting sides thereon, means for holding said slidable portion in place, and guides or arms on the sides of said slidable portion for fitting under said flanges and within the sides on said removable portion.

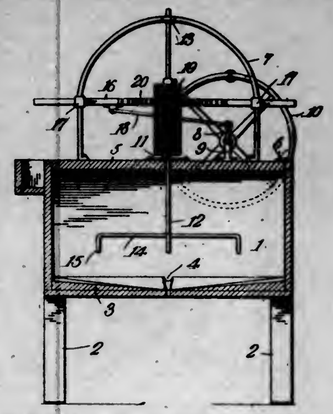
3. A tie and fastener for rails comprising ties, clamping portions for the rails on said ties, and a liner plate fitting between said ties and within the said clamping portions for engaging with the rail.

4. A tie and fastener for rails comprising ties, clamping portions for the rails on said ties, a liner plate fitting between said ties and within said clamping portions, and slidable clamping portions on said ties and engaging with said liner plate.

5. A tie and fastener for rails comprising ties, clamping portions for the rails on said ties, a liner-plate fitting between said ties and within said clamping portions, and slidable clamping portions on said ties having guides or arms engaging with said liner plate.

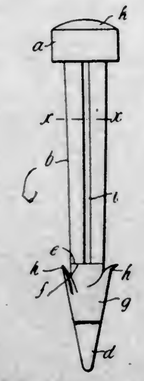
[Claim 6 not printed in the Gazette.]

874,610. WASHING-MACHINE. BERT MINGUS, Novinger, Mo. Filed Aug. 18, 1906. Serial No. 331,193.



A washing machine comprising a box, a top carried thereby and provided with a bearing, a yoke secured to the top and having a vertical bearing alined with that in the top and with two horizontally alined bearings, a rack bar supported for sliding movements in a horizontal plane in the latter bearings, means for reciprocating the rack bar, a dasher shaft journaled for sliding movements in the vertical bearing of the yoke and in the bearing of the top, and an elongated gear carried by the shaft and reciprocatory therewith across the rack bar, whereby to permit the dasher to adjust itself to the contents of the box.

874,611. BOLT FOR FIXING RAILWAY CHAIRS, RAILS, AND THE LIKE. WALTER E. G. MORTIMORE, Gosport, England. Filed Feb. 4, 1907. Serial No. 355,663.

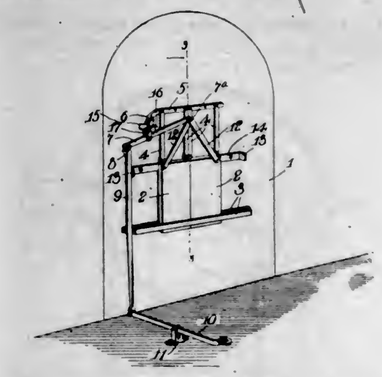


1. A bolt for fixing railway chairs, rails and the like, consisting of a head and shank, the shank having a screw-threaded reduced portion terminating in a driving point, a shoulder formed by such reduction and means on said shank to prevent the rotation thereof.

2. A bolt for fixing railway chairs, rails and the like, consisting of a head and taper shank, the shank having a screw-threaded reduced portion terminating in a driving point, a shoulder formed by such reduction, a cone adapted to be screwed on to said reduced portion of shank to engage the shoulder thereof and means on said shank to prevent the rotation thereof.

3. A bolt for fixing railway chairs, rails and the like, consisting of a head and taper shank, the shank having a screw-threaded reduced portion terminating in a driving point, a shoulder formed by such reduction, a screw-threaded cone having upwardly and outwardly extending tongues, projections or barbs to engage the reduced portion of the shank for the purpose of keeping the cone up to the shoulder and means on said shank to prevent the rotation thereof.

874,612. FURNACE-DOOR OPENER. CHARLES W. MCCANDLESS, Allegheny, Pa. Filed Sept. 23, 1907. Serial No. 394,196.



1. In a furnace door opener mechanism, the combination of horizontally sliding doors, a supporting bar above said doors, a pair of suspending links pivotally connected at their lower ends with each door and at their upper ends with the supporting bar above mentioned, one end of the supporting bar being extended to form a supporting arm, a lever pivoted between its ends to said arm, toggle links connected at their upper ends with one end of said lever, each toggle link being connected at its lower end with one of the doors, and means for actuating the lever to cause ready movement of the toggle links and opening movement of the doors.

2. In a furnace door opener mechanism, the combination of horizontally sliding doors, a supporting bar above said doors, a pair of suspending links pivotally connected at their lower ends with each door and at their upper ends with the supporting bar above mentioned, one end of the supporting bar being extended to form a supporting arm, a lever pivoted between its ends to said arm, toggle links connected at their upper ends with one end of said lever, each toggle link being connected at its lower end with one of the doors, means for actuating the lever to cause ready movement of the toggle links and opening movement of the doors, and a lock device arranged to prevent movement of the lever aforesaid after the same has been operated, to prevent closing movement of the doors.

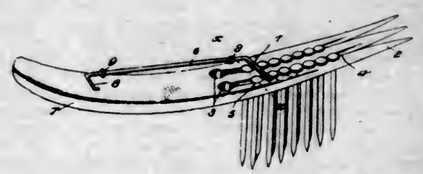
3. In a furnace door opener mechanism, the combination of horizontally sliding doors, a supporting bar above said doors, a pair of suspending links pivotally connected at their lower ends with each door and at their upper ends with the supporting bar above mentioned, one end of the supporting bar being extended to form a supporting arm, a lever pivoted between its ends to said arm, toggle links connected at their upper ends with one end of said lever, each toggle link being connected at its lower end with one of the doors, means for actuating the lever to cause ready movement of the toggle links and opening movement of the doors, and a dog pivotally mounted upon the arm of the supporting bar and arranged to engage the lever carried thereby to lock the doors in an open position.

4. In a furnace door opener, the combination of a supporting bar, a pair of oppositely sliding doors, pairs of links connected to the supporting bar, one pair of the links having connection with one door and the other pair with the other door, a bifurcated arm extending from one end of the supporting bar, a lever pivoted between the bifurcate portions of said arm, toggle links connected with one end of the lever and each having connection at the other end with one of the doors, means for actuating the lever to open the doors, a dog pivoted between the bifurcate portions of the arm of the supporting bar, and adapted to engage said lever to lock the doors in an open position, and means for holding said dog normally in position out of engagement with the lever.

5. In a furnace door opener, the combination of doors, a pair of links connected with each door, a support with which said links are pivotally connected, toggle links connected together at one end, and each connected at its other end with one of the doors, a lever connected with the connected ends of the toggle links for actuation thereof, means for actuating the lever, and a lock device arranged to engage the lever to prevent movement thereof and hold the doors in open position.

[Claim 6 not printed in the Gazette.]

874,613. NAIL HOLDER AND SET. JOHN A. MCCOLM, New Plymouth, Idaho. Filed June 8, 1907. Serial No. 377,995.



1. A nail holder comprising spaced tines tapered at their ends and having a set opening and a clearance opening in the length of the space formed between said tines, and a separator mounted to receive both an axial and a longitudinal movement and adapted to sweep over said set opening.

2. A nail holder and set, comprising tines longitudinally curved and tapered at their ends, and having a set opening and a clearance opening in the length of the space formed between the tines.

3. A nail holder and set longitudinally curved throughout its length and comprising a hand piece and spaced tines, the latter tapered at their ends and having a set opening and clearance opening in the length of the space formed between them, and a separator mounted at one side of the holder and comprising a blade to rest upon the tines, and a finger piece, said separator having both an axial and a longitudinal movement.

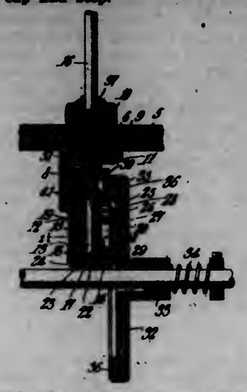
874,614. SPINDLE-DRIVING MECHANISM. WILLIAM T. NOAH, Elon College, N. C. Filed Mar. 30, 1907. Serial No. 365,575.

1. The combination with a bolster rail, of a bolster secured to the rail and having an opening formed in one side thereof, a step carried by the bolster, a spindle journaled in the step and provided with a whirl disposed at the opening of the latter, and a cap secured to one end of the bolster and forming a support for the step.

2. The combination with a bolster rail, of a bolster secured to said rail and having an opening formed in one side thereof, a step carried by the bolster and provided with spaced disks forming an intermediate oil chamber, there being an opening formed in the upper disk and communicating with the oil chamber, a spindle journaled in the step and provided with a whirl disposed at said opening, and a cap secured to one end of the bolster and forming a support for the step.

3. The combination with a bolster rail, of a bolster secured to the rail and having its lower end threaded and one side thereof provided with an opening, a step disposed within the bolster, a spindle journaled in the step and provided with a whirl disposed at the opening in the bolster, a cap engaging the threads on the bolster and

forming a support for the step, and a washer interposed between the cap and step.

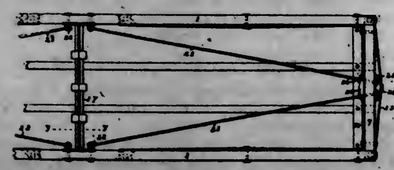


4. The combination with a bolster rail, of a bolster secured to the rail and having an opening formed in one side thereof, a cylindrical extension depending from the bolster at said opening and having its exterior walls threaded, a step disposed within the cylindrical extension and provided with spaced disks defining an intermediate oil chamber, a spindle journaled in the step and provided with a whirl disposed at the opening in the bolster, and a cap engaging the threads on the cylindrical extension and forming a support for the step, there being a recess in the step forming a source of communication between the bearing and oil chamber.

5. The combination with a bolster rail, of a bolster secured to the rail and having an opening formed in one side thereof, a step disposed within the bolster at one end thereof, a bearing carried by the opposite end of the bolster, a spindle passing through said bearing and journaled in the step, a whirl carried by the spindle, a cap detachably secured to the bolster and forming a support for the step, an operating shaft, and a friction disk having a cushioned face for engagement with the whirl.

[Claims 6 to 8 not printed in the Gazette.]

874,615. FREIGHT-CAR. WILLIAM H. NUNAMACHER, Newark, N. J. Filed Sept. 11, 1907. Serial No. 392,271.



1. In a box car, the combination with the top and end chords and the sills of the car body, of a metallic end plate spanning the end of said body and secured to said chords and sills.

2. In a box car, the combination with the timbers of the car body, of a metallic plate, secured within the car to the end timbers, and diagonal metallic braces extending from the upper corners of said plate to the side sills.

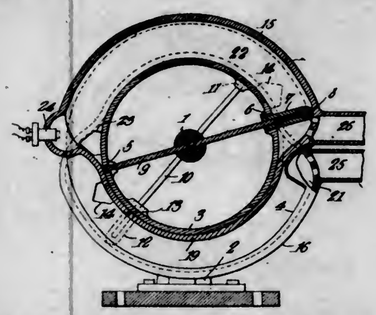
3. In a box car, the combination with the corner posts, end and side sills of a car body, of a metallic plate covering the end of the car, and secured to said posts and sills, and a pair of metal braces secured to the upper corners of said plate and extending diagonally and secured to said side sills respectively.

4. In a device of the class described, the combination with the side and end sills and top end chord of a car body, of a metallic end plate within said body and secured to said sills and top chord, a pair of tension braces connected at their upper ends respectively to the upper corners of said plate and extending diagonally downward and secured to the side sills approximately midway of their length.

5. In a device of the class described, the combination with the usual timbers of a car body, of a metallic plate secured to and covering the end of said body upon its inside, a metallic brace secured at one end to the door jamb of the car body, and extending parallel with the side girth of said body and having its opposite end secured between the end girth and said metallic plate.

[Claims 6 to 11 not printed in the Gazette.]

874,616. ROTARY ENGINE. THOMAS C. OAKMAN, Philadelphia, Pa. Filed Mar. 11, 1907. Serial No. 361,747.



1. An engine, having oppositely disposed arcuate compartments spaced laterally and having lapping ends, each compartment having an inlet at one end and an outlet at its other end, revoluble element intersecting the planes occupied by said compartments and constituting the inner walls of the compartment, and a piston carried by said element and mounted to travel within each compartment, each piston comprising telescopic sections and yieldable spacing means interposed therebetween.

2. In a rotary engine a revoluble member, an arcuate compartment partly surrounding said member, and disposed to receive an explosive mixture, said member constituting one wall of the compartment, a piston movable with said member and longitudinally of the compartment and disposed to compress and expel the mixture within the compartment, a second oppositely disposed arcuate compartment partly surrounding the revoluble member and disposed to receive the expelled mixture, said member constituting one wall of said compartment, a piston movable with said member and longitudinally of the compartment, and means for exploding the mixture to drive the last mentioned piston and propel the revoluble member.

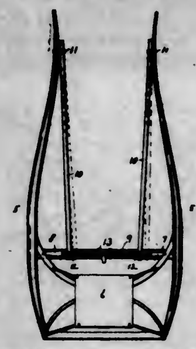
3. In a rotary engine the combination with a revoluble member, a compressing piston movably mounted therein and revoluble therewith, and an impact receiving piston movably mounted within and revoluble with said member; of an arcuate compression compartment partly surrounding the revoluble member, said member constituting one wall thereof and said compression piston being movable longitudinally of said compartment, and an oppositely disposed arcuate explosion compartment partly surrounding the revoluble member and disposed to receive compressed fluid from the compression compartment, said impact receiving piston being movable longitudinally of the compression compartment.

4. In a rotary engine the combination with a revoluble member, a valve member integral and revoluble therewith, and compressing and impact receiving pistons movably mounted within and revoluble with said member at opposite sides of the valve member; of a fixed casing surrounding said revoluble member and formed with oppositely disposed laterally spaced arcuate compression and explosion compartments partly surrounding opposite portions of the revoluble member and disposed at opposite sides of the valve member, said pistons being disposed to work within the respective compartments and said member constituting the inner wall of each compartment.

5. An engine comprising a wheel, oppositely disposed compression and explosion compartments concentric with and closed by the wheel, said compartments having alining ports, a compression piston and an impact receiving piston movable with the wheel, and a flange upon the wheel and movable between the compartments, said flange having a port between the pistons adapted to register with and permit communication between the alining ports.

[Claims 6 to 8 not printed in the Gazette.]

874,617. GAITING ATTACHMENT FOR SULKIES OR OTHER VEHICLES. WILLIAM L. OGDEN, Burlingame, Kans. Filed Apr. 13, 1907. Serial No. 367,925.



1. A gaiting attachment comprising two side poles, the forward ends being attachable to the respective shafts and the ends being attached to the attachment cross-bar, a cross-bar adjustably secured to the forward portion of the vehicle, so that said attachment may be used to throw the rear portion of the horse to one side or the other and to prevent him from swerving to either side of his intended position.

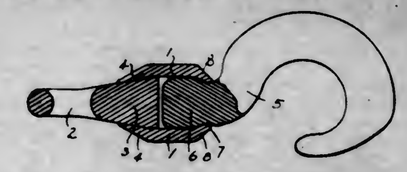
2. A gaiting attachment comprising two side poles and a cross-bar, the forward ends of the poles being attachable to the vehicle shafts, and the rear ends being attached to the ends of the cross-bar and being laterally adjustable thereon, the cross-bar being adjustably attachable to the forward portion of a vehicle.

3. A gaiting attachment comprising two side poles and a cross-pole, the forward ends of the side poles being attachable to the respective shafts of a vehicle, and their rear ends being laterally adjustably attachable to the cross-pole, and said cross-pole being adjustably attachable to a cross-bar of the vehicle, so as to control the position of the horse in traveling and prevent him from swerving in either direction.

4. A gaiting attachment for vehicles having shafts, comprising two side poles and a cross-pole, straps for attaching the forward ends of the side poles to the shafts of the vehicle, straps for adjustably fastening the side poles to the cross-pole, and a strap for adjustably securing the cross-pole of the attachment to the cross-bar of the vehicle; whereby the attachment is adjustable to horses having hind-quarters of different widths and whereby said attachment may be shifted from side to side so as to positively control his position in traveling; substantially as set forth.

5. A gaiting attachment for vehicles having a pair of shafts, comprising the combination of two side poles and a cross-pole, straps for attaching the ends of the side poles to the shafts, straps for adjustably fastening the rear ends of the side poles to the ends of the cross-pole, and a means for securing the cross-pole to the cross-bar of the vehicle so that said cross-pole shall be laterally adjustable so that thereby the hind-quarters of the horse may be thrown to either side and confined in any desired position within the shafts; substantially as set forth.

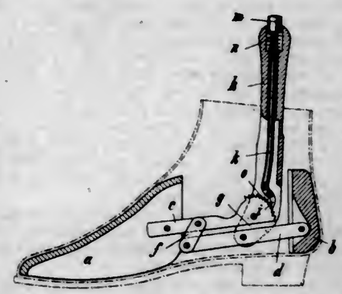
874,618. METHOD OF MAKING SWIVEL-JOINTS. ARLIE D. OSTER and LAWRENCE MAIN, Centralia, Wash. Filed Mar. 12, 1907. Serial No. 362,035.



1. The method of making a swivel-connection consisting of welding a fixed link into the end of a ring, and forging the other end of the ring around the enlarged end of the swivel-link.

2. The method of making a swivel-connection consisting of welding a fixed link into the end of a ring, forging the other end of the ring around the enlarged end of the swivel-link, and turning the swivel-link relatively to the ring during the forging of the ring therearound.

874,619. TREE FOR BOOTS AND SHOES. FRIEDRICH G. PABST, Hamburg, Germany. Filed July 19, 1906. Serial No. 326,852.



1. A tree for boots and shoes comprising a toe-piece, a heel-piece, articulated rods adapted to move parallel to each other and carrying the toe and heel-pieces and a detent adapted to engage teeth on one of the rods.

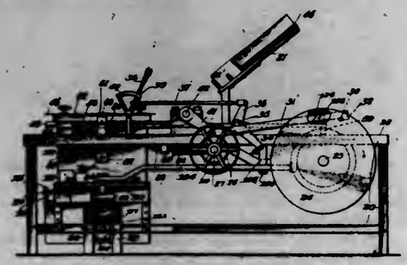
2. A tree for boots and shoes comprising a toe-piece, a heel-piece, articulated rods adapted to move parallel to each other and carrying said toe and heel-pieces, a handle connecting said rods, a pawl adapted to engage teeth on one of said rods and a rod carried by the handle adapted to operate the pawl.

3. A tree for boots and shoes comprising a toe-piece, a heel-piece, articulated rods movable parallel to each other carrying the toe and heel-pieces, a handle connecting the rods, a pawl pivoted on the handle adapted to engage teeth on one of the rods, a rod slidable in the handle pivotally connected to the pawl, a spring to normally raise the rod and thereby hold the pawl in engagement with the teeth.

4. The combination with a toe-piece and a heel-piece, of a toothed member connected to one of said pieces, a member connected to the other piece substantially parallel to the toothed member, links connecting said member, means to automatically lock each member against movement in one direction, and means to release the locking means.

5. The combination with a toe-piece and a heel-piece, of a toothed rod connected to one of said pieces, a rod parallel to the toothed rod connected to the other piece, links connecting the rods, a pawl to automatically engage the teeth during the movement of the toothed rod in one direction and means carried by one of the links to actuate the pawl.

874,620. WRAPPING-MACHINE. JAMES M. PATTERSON, Los Angeles, Cal., assignor, by direct and mesne assignments, to National Wrapping Machine Co., Los Angeles, Cal., a Corporation of California. Filed Mar. 2, 1906. Serial No. 303,802.



1. A wrapping machine, comprising a frame having a top forming a table; a trap door in said table; top-folding plates slidably mounted on said table, one on each side of said trap door; edge-end folding slides secured to said top-folding plates; and mechanism for reciprocating said plates.

2. In a wrapping machine, a frame having a top forming a table; a trap door in said table; ledges at the sides of said trap door; top-folding plates slidably mounted on said table, one on each side of said trap door; edge-end folding slides secured to said top-folding plates; a shaft mounted below said table; two cam wheels having irregular grooves in the faces thereof mounted on said shaft, a portion of said grooves being on a straight line around the circumference thereof and the other portion curving away from the straight portion and then back to straight portion, the curved portion of the groove of one cam being offset as to the curved portion of the groove of the other cam; two levers pivotally secured upon said table top, the ends of said levers being operatively connected with said top-folding plates and said cams.

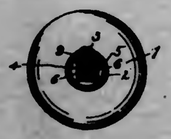
3. In a wrapping machine, a frame having a top forming a table; a trap door in said table, said trap door being pivotally connected to said table; and means for locking and unlocking said trap door.

4. In a wrapping machine, a frame having a top forming a table; a trap door in said table, said trap door being pivotally connected to said table; counter-balancing means operatively connected to said trap door; and means for locking and unlocking said trap door.

5. In a wrapping machine, edge-end folding slides having pointed front ends and having the adjacent portions of the pointed ends curving away from each other, said slides being longitudinally and horizontally and centrally divided and being adjustably secured together; and mechanism for reciprocating said slides.

[Claims 6 to 10 not printed in the Gazette.]

874,621. KNOB. GEORGE B. PICKOP, New Britain, Conn., assignor to P. & F. Corbin, New Britain, Conn., a Corporation of Connecticut. Filed July 26, 1907. Serial No. 385,659.



1. A knob shank filling comprising a circular outer wall arranged to fit within the knob shank, and an angular yielding inner wall arranged to receive a spindle of angular cross section, and spaces between the outer wall and inner wall of the filling, to provide clearance to permit said wall to yield.

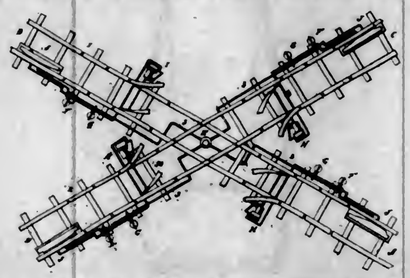
2. A knob shank filling comprising a wrought metal strip bent to form an outer wall of cylindrical form and an inner wall of angular form.

3. A knob shank filling comprising a cylindrical outer wall, and an angular inner wall, said walls being spaced apart but secured together at one point.

4. A knob shank filling comprising a cylindrical outer wall, an angular inner wall, and means for yieldingly supporting the angular inner wall relatively to the cylindrical outer wall.

5. In a knob, a hollow shank, a filling piece therein comprising an outer wall adapted to the knob shank, and an angular inner wall adapted to a knob spindle, and a screw-passage extending through the knob shank and both the inner and outer wall of the knob shank filling one of said walls adjacent to the screw passage in the knob shank being yielding.

874,622. PNEUMATIC SIGNAL FOR RAILWAY-CROSSINGS. JAMES W. PIPKIN and HILLARD S. MITCHELL, Wilton, Ark. Filed May 14, 1907. Serial No. 373,583.



1. A signal for railway crossings comprising a compressor for each railway approach to the crossing, signal devices for each approach to the crossing, a pipe line connecting the compressors and signaling devices, means for actuating the compressors from a moving train to charge the pipe lines and operate the signal devices, and a relief for the pipe line adapted to be tripped by the train after passing the crossing and receding therefrom to permit the signal devices to return to normal position.

2. A signal for railway crossings comprising a compressor for each railway approach to the crossing, signal devices for each approach to the crossing, a pipe line connecting the compressors and signaling devices, means for actuating the compressors from a moving train to charge the pipe lines and operate the signal devices, valves interposed in the pipe lines at the point of connection of the signaling devices therewith to close by the blast of air through the pipe line in one direction, and to open by said blast of air moving in the opposite direction to admit of cutting out certain signals and the actuation of certain other signals according to the direction of approach of the train towards the crossing, and a relief valve for the pipe line adapted to be tripped by the train after passing the crossing and receding therefrom to permit the signaling devices to return to normal position.

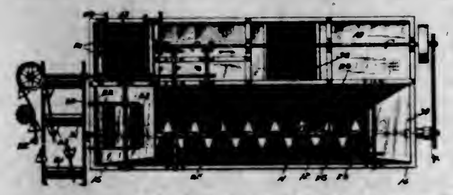
3. In railway signal appliances, the combination of a fluid compressor, a signal device, a pipe line between the signal device and compressor, means for operating said compressor from a moving train, a check valve in the pipe line for preventing back pressure, and a trip between said check valve and the compressor, operating means to effect a bleeding of the pipe lines to permit the parts to return to normal position.

4. In railway signal appliances, the combination of a signal device, a compressor, a pipe line connecting the compressor with the signal operating means, a check valve in the length of the pipe line, a compressing spring adapted to actuate the compressor upon the moving of a train in one direction, a trip for said check valve adapted to be operated when the train is moving in the opposite direction.

5. In signal appliances for railways, the combination of a signal device, a compressor, a pipe line between said compressor and the actuating means of the signal, and a valve in the pipe line having an inclined portion to receive the impact of the current passing through said pipe line, whereby the valve is held closed when the current is in one direction and is opened when the current is in the opposite direction.

[Claims 6 to 10 not printed in the Gazette.]

874,623. APPARATUS FOR GRADING FRUITS AND VEGETABLES. RALPH B. POLK, Greenwood, Ind. Filed Apr. 29, 1907. Serial No. 370,810.



1. In a vegetable grader, the combination, with a tank, of a conveyer mounted in the bottom of said tank and adapted to feed the vegetables from one end of the tank to the other, a second conveyer arranged in the upper portion of the tank, and a pair of elevators arranged at the delivery end of the tank and adapted to remove the vegetables therefrom at different levels, and means for preventing the deep level elevator from engaging the high level vegetables.

2. In a vegetable grader, the combination, with a tank of considerable volume, having a passage-way formed therein and of comparatively small volume, said passage-way having free communication with the main body of the tank but confining vegetables thereto, of a conveyer arranged at a low level in said passage-way, a second conveyer arranged at a higher level in said passage-way, a pair of elevators, one projecting into said tank at a lower level than the other in position to receive vegetables from the low level conveyer, and a guard for preventing vegetables at the higher level from passing to the low level conveyer.

3. In a vegetable grader, the combination, with a tank of considerable volume, having a passage-way formed therein and of comparatively small volume, said passage-way having free communication with the main body of the tank but confining vegetables thereto, of a conveyer arranged at a low level in said passage-way, a second conveyer arranged at a higher level in said passage-way, and a pair of elevators, one projecting into said tank at a lower level than the other in position to receive vegetables from the low level conveyer.

4. In a vegetable grader, the combination, with a tank of considerable length, of a conveyer mounted in the bottom of said tank and adapted to feed the vegetables from one end of the tank to the other, means for driving said conveyer, a second conveyer arranged in the upper portion of the tank, and a pair of discharging means adapted to remove the vegetables from the tank at different levels.

5. In a vegetable grader, the combination, with a brine tank of considerable volume, having a passage-way formed therein and of comparatively small volume, said passage-way having free communication with the main body of the tank but capable of retaining the vegetables, of a conveyer arranged at a low level in passage-way, a second conveyer arranged at a higher level in said passage-way, means for driving said conveyers in the same direction, and a pair of elevators, one projecting into said tank at a lower level than the other in position to receive vegetables from the low level conveyer while the other of said elevators receives vegetables from the high level conveyer.

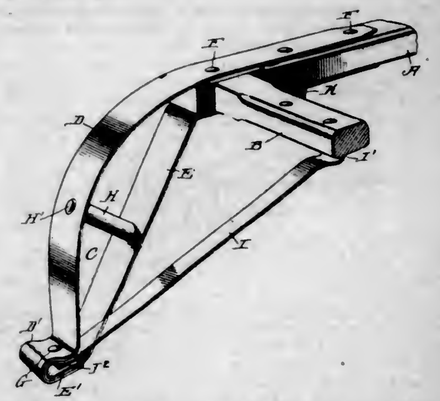
874,624. PROCESS OF MAKING A FOOD PRODUCT FROM LUPINE BEANS. ADOLPHO DE SOUSA REIS, Oporto, Portugal. Filed Mar. 28, 1906. Serial No. 307,672.

1. The hereindescribed process of making a food product from the lupine-bean which consists in heating the same in a solution of acetic acid and salt in the proportions substantially as specified and macerating the material in water.

2. The hereindescribed process of making a food product from the lupine-bean which consists in boiling the same in water containing acetic acid and salt in the proportions substantially as specified, macerating the material in running water and drying the resulting product.

3. The hereindescribed process of making a food product from the lupine-bean which consists in boiling the same in water containing acetic acid and sea salt in the proportions substantially as specified, macerating the material in running water to remove soluble undesired portions, grinding the purified material and drying the resulting product.

874,625. SHAFT AND THILL IRON. WILLIAM REMICH, Sinking Spring, Pa. Filed Sept. 26, 1907. Serial No. 394,729.



1. A shaft connection comprising the upper curved bar and the lower straight bar, the rear ends thereof being bent or looped and adapted to fit one with the other, means for fastening said bent or looped ends together, means for connecting forward ends to the shaft or thill, and the intermediate strut or brace.

2. A shaft connection comprising the curved upper bar and the straight lower bar, the rear ends of said bars being bent or looped and adapted to fit one within the other, the intermediate brace connecting the upper and lower bars and the angular brace having its rear end fastened within the bent or looped ends of the upper and lower bars as specified.

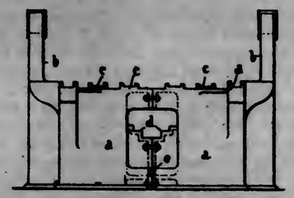
3. The combination with a shaft and cross piece, of the upper curved bar bent downwardly at its rear end, the lower straight bar bent upwardly at its rear end and fitting within the bend at the end of the upper bar, the intermediate strut or bridge piece, the angular brace having its rear end secured within the bend of the upper and lower bars, and the horizontal member of said brace being connected to the bottom of the cross piece, and the supplemental brace connecting the shaft and cross piece and also the brace and bars together with bolts for fastening the said parts together as specified.

874,626. BED-PLATE FOR PRINTING MACHINERY. MAX ROCKSTROH, Klein-Sedlitz, Germany. Filed Aug. 1, 1906. Serial No. 328,746.

1. In a printing press, a frame composed of two side sections having standards forming bearings for a cylinder, said sections also forming a bed plate, guide ribs arranged longitudinally of the bed plate, said sections provided with grooves forming carriage slide, means for connecting the sections, and wedge members for securely holding the sections together.

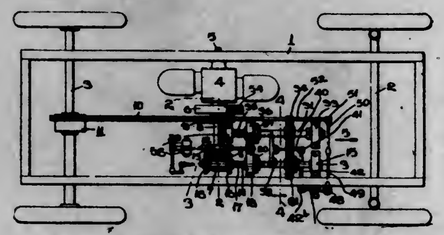
2. In a printing press involving a frame, two sections forming a ribbed bed plate, each of said sections having standards forming bearings for a printing press cylinder,

said sections having guide-ways forming carriage slides, each of said sections being formed in a single piece, means



for joining the sections to each other, and wedges interposed between the sections to rigidly hold the latter in proper position with respect to each other.

874,627. TRANSMISSION-GEAR FOR AUTOMOBILES. CHARLES W. SMART, Memphis, Tenn. Filed Apr. 30, 1906. Serial No. 314,576.



1. In an apparatus of the class described, the combination with a driving shaft, of a friction disk arranged for rotation on said driving shaft, a pair of shafts mounted for rotation, one each side of the friction disk, and one of which shafts is arranged to be shifted longitudinally, and both of the shafts being driven from the driving shaft, a pair of opposed friction wheels mounted on the shafts and engaging on the side faces of the friction disk, means whereby one end of one of the shafts is moved to and from the friction disk, and means arranged upon the longitudinally moving shaft and upon the shaft carrying the friction disk for reversing the motion of said disk when the longitudinally moving shaft is shifted from one position to another.

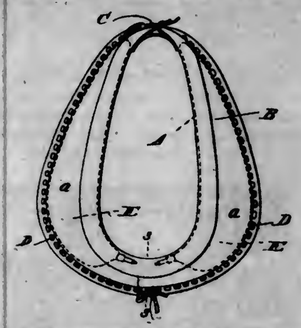
2. In an apparatus of the class described, the combination with a driving shaft, of a friction disk arranged for rotation on said driving shaft, a pair of shafts mounted for rotation one on each side of the friction disks, which shafts are driven from the driving shaft, one of which shafts is mounted to move longitudinally, a pair of opposed friction wheels mounted on the shafts and arranged to engage the side faces of the friction disk, means whereby the friction wheels are moved longitudinally upon the shafts, means whereby one end of one of the shafts is moved to and from the friction disk, means arranged on the longitudinally moving shaft and upon the shaft carrying the friction disk for reversing the motion of the shaft carrying the friction disk when the longitudinally moving shaft is shifted, and means whereby said last mentioned shaft is shifted.

874,628. PROCESS OF PRODUCING STEEL. GEORGE O. SEWARD, East Orange, N. J., and FRANZ VON KUGELGEN, Holcombs Rock, Va., assignors to Virginia Laboratory Company, New York, N. Y., a Corporation of New York. Filed July 6, 1907. Serial No. 382,484.

1. The process of producing steel, which consists in fusing iron as an electrode in presence of a refining slag, substantially as described.

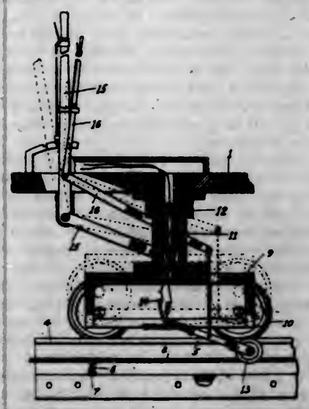
2. The process of producing steel, which consists in fusing iron as an electrode in presence of a refining slag, while blowing air into the furnace in order to oxidise a part of the impurities.

847,629. HORSE-COLLAR. ANDREW J. SIMMONS, Farmington, Mo. Filed Aug. 20, 1907. Serial No. 389,409.



A horse collar comprising a fore-wale closed at its bottom and open at its top, an after-wale fixed to the fore-wale and closed at the bottom of the collar and open at the top thereof; the said after-wale being made up of front walls having their lower end portions lapped, back walls having their lower end portions lapped, and laces connecting the outer edge portions of the front and back walls together and also connecting the lower lapped end portions of the walls together and detachably connected together at their lower ends, whereby when the laces are disconnected and loosened an opening is afforded between the lapped lower end portions of the front walls and the corresponding end portions of the back walls, and inflatable pads positioned in the side portions of the after-wale; the said inflatable pads being provided at their lower ends with inflation tubes arranged entirely within the after-wale and located adjacent to the said opening in the lower portion of the after-wale to permit of access being gained to the tubes through the opening.

874,630. THIRD-RAIL ATTACHMENT FOR ELECTRIC CARS. GEORGE H. SOHN, Lincoln, Cal. Filed June 10, 1907. Serial No. 378,152.



1. In a device of the character set forth, a hollow rail provided with a longitudinal slot in its upper face, a current carrying wire disposed in said rail, a dummy car carrying wheels normally running on said rail, a hollow tube upward from said car, an electric car, a tube on the under side of said electric car and telescoping said first named tube and means disposed within said dummy car and said tubes, conveying the current from said wire to said electric car, as set forth.

2. In a device of the character described a hollow rail provided with a longitudinal slot in its upper face, a current carrying wire disposed in said rail, a dummy car

carrying wheels normally running on said rail, a trolley carried by said car engaging said wire, an electric car means connecting said dummy car to said electric car, and means for raising and lowering said trolley through said slot, as set forth.

3. In a device of the character described a hollow rail provided with a longitudinal slot in its upper face, a current carrying wire disposed in said rail, a dummy car carrying wheels running normally on said rail, a trolley pivotally mounted in said dummy car and normally engaging said wire, an electric car means connecting said dummy car to said electric car, means for raising and lowering said dummy car and means for raising and lowering said trolley, as set forth.

4. In a device of the character described a hollow rail provided with a longitudinal slot in its upper face, a current carrying wire disposed in said rail, a dummy car carrying wheels normally running on said rail, a hollow tube upward from said car, an electric car means slidably connecting said tube with the under side of an electric car, a trolley pivotally mounted with said dummy car and engaging normally with said wire, wires connected with said trolley and extending through said tube and hence to a point on said electric car, and means for raising and lowering said dummy car and said trolley, as set forth.

5. In a device of the character described, a dummy car, a hollow tube swiveled in the top thereof, an electric car, means slidably connecting said tube to said electric car, and means disposed in operative connection with said dummy car for conveying electric current to a point in said electric car, as set forth.

874,631. STACK-KILN. HENRY S. SPACKMAN, Ardmore, and ELLIS W. LAZELL, Philadelphia, Pa., assignors to The Henry S. Spackman Engineering Company, Philadelphia, Pa., a Corporation of New Jersey. Filed July 27, 1907. Serial No. 385,859.

1. In stack kilns, a kiln shaft provided with a goose neck and suction pipe adjacent its upper end to carry off the kiln gases, a plurality of separate producer furnaces communicating with the kiln shaft, each of said furnaces being provided with a grate, a combustion arch and a coöperating bridge wall having an opening substantially in line with said grate and having a relieved inner face adjacent the stack to prevent the burned material entering the furnace throat, a cooler substantially in line with and receiving the burned material from the kiln shaft, said cooler having a corrugated metallic discharge cone provided with a gate, a substantially inclosed air chamber around said cooler, flues conducting the heated air from said air chamber to said ash-pits, separate supplemental flues from said air chamber communicating with secondary ports in the kiln stack adjacent said furnaces and communicating with supplemental ports in the kiln stack above the level of said furnaces and blast devices in said flues to control the air-blast passing therethrough.

2. In stack kilns, a kiln shaft provided with a suction pipe adjacent its upper end to carry off the kiln gases, a plurality of separate producer furnaces communicating with the kiln shaft, each of said furnaces being provided with a grate, a combustion arch and a coöperating bridge wall having a relieved inner face adjacent the stack, an inclosed ash-pit below said grate having an ash-chute below the same and closed by an ash-pit door, a cooler substantially in line with and receiving the burned material from the kiln shaft, said cooler having a corrugated metallic discharge cone, a substantially inclosed air chamber around said cooler, flues conducting the heated air from said air chamber to said ash-pits, separate supplemental flues from said air chamber provided with ports entering the kiln stack adjacent said furnaces, injectors in said flues to control the air blast passing therethrough and means to admit external air to said flues.

3. In stack kilns, a kiln shaft having a plurality of communicating separate producer furnaces, each of said furnaces being provided with a grate, a combustion arch and a coöperating bridge wall having a relieved inner face adjacent the stack, an inclosed ash-pit below said grate, a cooler substantially in line with and receiving the burned material from the kiln shaft, a substantially inclosed air chamber around said cooler, flues conducting the heated air from said air chamber to said ash-pits, separate supplemental flues from said air chamber communicating with ports entering the kiln stack adjacent and above the furnaces and means to control the air blast passing through said flues.

4. In stack kilns, a kiln shaft having a plurality of communicating separate producer furnaces, each of said furnaces having a constricted throat, means to prevent the access of the burned material to said throat and an inclosed ash-pit, a cooler below said furnaces to receive the burned material from the kiln shaft, a substantially inclosed air chamber around said cooler, and means to force heated air from said air chamber to said ash-pits and to said kiln shaft adjacent and above the throats of said furnaces in regulated quantities.

5. In stack kilns, a kiln shaft having a plurality of communicating separated producer furnaces, each of said furnaces having a constricted throat, means to prevent the access of burned material to said throat and an inclosed ash-pit, a cooler constituting a continuation of said kiln shaft and substantially inclosed to form an air-heating chamber and means to supply air of regulated temperature and amount from said air chamber to said ash-pits and to the kiln shaft adjacent or above the throats of said furnaces.

[Claims 6 to 14 not printed in the Gazette.]

874,632. SPRING-CLASP. MARC STERNBERG, Philadelphia, Pa. Filed Sept. 2, 1905. Serial No. 276,837.

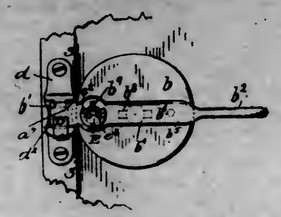


In a spring clasp formed of stamped sheet metal, the combination with an attaching plate provided with an attaching loop and integral flanges forming hinge bearings and having a cross bar intermediate said loop and flanges; of a hook comprising trunnions fitted to said bearings; a separate spring plate having recesses registering with said trunnions having a cross bar corresponding to the cross bar in said attaching plate; and lugs integral with one of said plates folded about the cross bar of the other of said plates.

874,633. SPRING-LATCH. THEODORE B. STEVENS, Cleveland, Ohio. Filed Sept. 24, 1906. Serial No. 335,914.

1. In a latch, the combination of a base plate and a latch member pivoted to said base plate and capable of being disconnected therefrom only when in certain posi-

tions, and a spring acting to turn said latch member in the latching direction,—said base plate and latching member having, the one two shoulders and the other a movable device capable of being moved between said shoulders after the latching member has been pivoted to the base plate and has been turned into operative position, whereby the latch member is held in operative position and prevented from being turned relative to the base plate to a position where it can be disconnected therefrom.



2. In a latch, the combination of a base plate and a latch member pivoted to said base plate and capable of being disconnected therefrom only when in certain positions, and a spring acting to turn said latch member in the latching direction,—said base plate and latching member having, the one two shoulders and the other a movable device capable of being moved between said shoulders after the latching member has been pivoted to the base plate and has been turned into operative position, whereby the latch member is held in operative position and is prevented from being turned relative to the base plate to a position where it can be disconnected therefrom, and a spring for moving said movable device into the described position between said shoulders.

3. In a latch, the combination of a base plate provided with two shoulders and a forwardly projecting post a^5, a latch pivoted to said base plate and having a rearwardly projecting post b^6, a coil spring surrounding the axis of the latch and engaging at its ends respectively with the posts b^6 and a^5, and a movable device carried by the latch and adapted to be moved between said shoulders whereby through the engagement with said shoulders the movement of said latch member upon its axis is limited and the latch held in operative position.

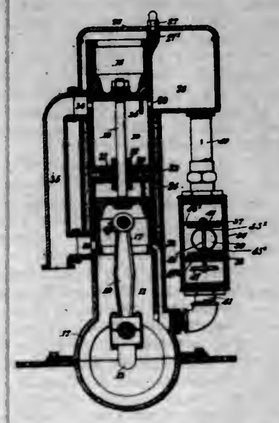
4. In a latch, the combination of a base plate having two shoulders a^5, a latch member pivoted thereto, a spring operated to turn it in the latching direction, a spring bolt carried by said latching member and capable of being moved endwise and being turned upon its axis and having a narrow downwardly projecting rib on its under side which projects between the said shoulders.

5. In a latch, the combination of a base plate having two shoulders a^5, a latch member pivoted thereto, a spring operated to turn it in the latching direction, a spring bolt which passes through a hole in said latching member and is capable of being moved endwise and being turned in the same, and having a narrow downwardly projecting rib on its under side which projects between the said shoulders,—said latch member having radiating grooves adjacent to said hole and said bolt having a beveled lug adapted to enter either of said grooves.

[Claims 6 to 16 not printed in the Gazette.]

874,634. TWO-CYCLE ENGINE. WILLIAM A. ST. GERMAIN, Greenville, Me. Filed May 24, 1906. Serial No. 318,570.

1. In an internal combustion engine, a pair of cylinders arranged head to head and in alinement with each other, pistons in said cylinders, a piston rod extending through the head cylinder and to which both pistons are secured, a crank shaft connected to one of the pistons, upper and lower compression chambers connected to the open ends of the cylinders, inlet ports leading from the compression chambers through the walls of the cylinders, exhaust ports leading from the cylinders and arranged to be uncovered by the pistons at the outer limits of their strokes, all of said ports being controlled by the pistons, a valve chamber intermediate the compression chambers and having a fluid inlet, and valves arranged in said valve chamber and controlling communication between the latter and the compression chambers.



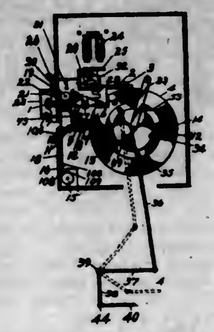
2. In an internal combustion engine, a pair of cylinders arranged tandem and having their explosion chambers adjacent to each other, a crank casing in communication with the open end of the inner cylinder, and forming a compression chamber, a second compression chamber in free communication with the open end of the other cylinder, piston controlled inlet ports leading from the compression chambers to the respective cylinders, exhaust ports leading from the cylinders, a valve casing in communication with a source of supply and with the two compression chambers, and connected and simultaneously acting valves arranged in said casing for alternately placing the chambers in communication with the source of supply.

3. In an internal combustion engine, a pair of cylinders arranged tandem, compression chambers in communication with the open ends of the cylinders, ports leading from the compression chambers through the walls of said cylinders, exhaust ports also leading through the walls of the cylinders, a pair of connected pistons disposed in said cylinders and controlling the ports, a valve casing in communication with a source of supply, and with the two compression chambers, and a pair of valves arranged in said valve chamber, said valves being simultaneously acted upon by the pressure from one chamber and the suction or partial vacuum formed in the other chamber, whereby the valves are moved to alternately place said chambers in communication with the source of supply.

4. In an internal combustion engine, a pair of cylinders arranged tandem, having their explosion chambers adjacent to each other, the heads of the explosion chambers being separated by a a water space, stuffing boxes in said heads, a piston rod extending through the stuffing boxes, pistons secured to the rod and arranged within the cylinders, upper and lower compression chambers in communication with the open ends of the cylinders, piston controlled inlet ports leading from said chambers to the cylinders, piston controlled exhaust ports leading from the cylinders, a valve casing, having ported partitions and provided with valve seats, said casing being in communication with a source of supply and with the upper and lower compression chambers, and a pair of connected valves adapted to the seats, said valves being exposed to the pressure of one chamber and the suction or partial vacuum simultaneously formed in the other chamber.

5. In an internal combustion engine, the combination with a pair of cylinders, pistons therein, a pair of chambers connected to said cylinders, the pistons operating to simultaneously produce a partial vacuum in one of the chambers, and a compression in the other chamber, a branched supply conduit connected with the chambers, a valve casing at the point of branching of the conduit, valves in the casing for controlling the supply through each branch of the conduit, and means for connecting the valves to move simultaneously by the combined effect of the vacuum in one chamber and the compression in the other.

874,635. REGISTERING DEVICE. RALPH STORM, JOSEPH F. UNDERWOOD, and ROBERT JACKSON, Waterloo, Iowa. Filed May 10, 1907. Serial No. 372,867.



1. A device of the character described, consisting of an electrical circuit between two stations, an electro-magnet inserted in said circuit at one station, a make-and-break device inserted in said circuit at the other station, a semaphore-signal device at the former station, means at the same station for actuating said semaphore-signal device, locking-means operatively engaged between the armature of said electro-magnet and said semaphore-actuating means adapted to lock the latter in one position, recorders separately connected with the said locking-means and with said semaphore-actuating-means adapted to independently record the action of their said connections on a tape, a movable tape adapted to receive successive records from said recorders, and inclosures for said tape adapted to prevent alterations in the records impressed therein.

2. A device of the character described, consisting of an electrical circuit between two stations, an electro-magnet inserted in said circuit at one station, a make-and-break device inserted in said circuit at the other station, a semaphore-signal device at the former station, means at the same station for actuating said semaphore-signal device, locking-means operatively engaged between the armature of said electro-magnet and said semaphore-actuating-means, a movable tape, means for progressively moving said tape in connection with said locking-means, and recorders separately connected with said locking-means and with said semaphore-actuating-means adapted to independently record the action of their said connections on said tape.

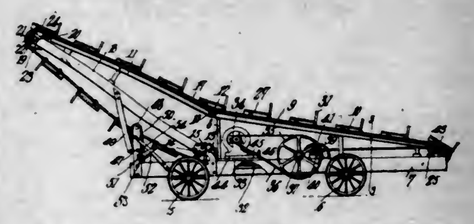
3. A device of the character described, consisting of two electrical circuits between separated stations, a make-and-break device in each circuit at each station, an electro-magnet in one circuit at one station, an electro-magnet in the other circuit at the other station, a semaphore at each station, means at each station for actuating its semaphore, locking-means at each station adapted to lock its semaphore in one position and adapted to be released only by the adjacent electro-magnet connected thereto when the circuit is closed through said device by the use of both of the make-and-break devices at said stations, and means at each station connected to said locking-means and to said semaphore-actuating-means independently adapted to record the action of either of said connections.

4. A device of the character described, consisting of an electrical circuit between two stations, an electro-magnet inserted in said circuit at one station, a semaphore-signal device at the same station, a rotatable disk having engaging means thereon and operatively connected with said semaphore-signal device, a slide adapted to lock into said engaging means when in a predetermined position, an armature adapted to engage and lock said slide into its said predetermined position when the circuit is broken through said electro-magnet and to be released from said slide when the circuit is closed, and a make-and-break device inserted in said circuit at the other station.

5. A device of the character described, consisting of an electrical circuit between two stations, an electro-magnet inserted in said circuit at one station, a semaphore-signal device at the same station, a rotatable disk having engaging means thereon and operatively connected with said semaphore-signal device, a slide adapted to lock into said engaging means when in a predetermined position, an armature-stop actuated by said electro-magnet and adapted to hold said slide in a desired position when said circuit is broken and to be disengaged therefrom when the circuit is closed, and make-and-break devices inserted in said circuit at each station.

[Claims 6 to 15 not printed in the Gazette.]

874,636. CONVEYER. LEE S. STRAIGHT, Fonda, Iowa. Filed Aug. 12, 1907. Serial No. 388,192.



1. The combination with a truck, of an inclined track secured to the truck and formed of main and auxiliary sections, wheels disposed at the opposite ends of the track, an endless conveyer connecting said wheels and provided with a plurality of load receiving cars, a boom pivotally mounted on the truck and forming a support for the adjacent wheels, means for raising and lowering the boom, and means for rotating the conveyer.

2. The combination with a truck, of a boom pivotally mounted on the truck, a wheel journaled on the truck frame, an endless conveyer engaging said wheels, an arm depending from the boom, a windlass, a flexible connection between the arm and windlass for raising and lowering the boom, and means for rotating the conveyer.

3. The combination with a truck, of an inclined track mounted on the truck and formed of pivotally connected sections provided with vertical guide flanges, a boom pivotally mounted on the truck and having a sprocket wheel journaled in the free end thereof, a similar sprocket wheel journaled on the truck frame, a connection between the boom and one of the track sections, sprocket chains engaging the sprocket wheels, load receiving cars secured to the sprocket chains and provided with terminal rollers adapted to bear against the guide flanges, means for raising and lowering the boom, means for locking the boom in adjusted position, and means for rotating the chains.

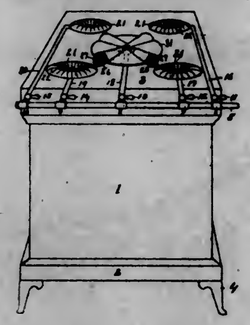
4. The combination with a truck, of a main track section mounted on the truck and provided with a laterally extending pin, an auxiliary track section pivotally connected with the main track section and provided with an elongated slot for the reception of the pin, an endless conveyer mounted for rotation on the track, spaced load receiving cars forming a part of the conveyer and provided with rollers adapted to engage said track sections, means for raising and lowering the auxiliary track sections, and means for rotating the conveyer.

5. The combination with a truck, of a main track section mounted on the truck, an auxiliary track section pivotally connected with the main track section, brackets

secured to the truck, a transverse shaft connecting said brackets, a boom pivotally mounted on said shaft and extending beneath the auxiliary track section, a wheel journaled on the free end of the boom, a similar wheel journaled on the rear end of the truck, an endless conveyer connecting said wheels, load receiving cars forming a part of the conveyer and provided with rollers for engagement with the track, stationary track sections secured to the truck beneath the main track sections, means for raising and lowering the auxiliary track section, and means for rotating the conveyer.

[Claim 6 not printed in the Gazette.]

874,637. SELF-IGNITING GAS-STOVE. OTTO STRULLER, New York, N. Y., assignor of one-half to F. J. Oscar Scoda, New York, N. Y. Filed Aug. 5, 1905, Serial No. 272,839. Renewed Oct. 9, 1907. Serial No. 396,659.



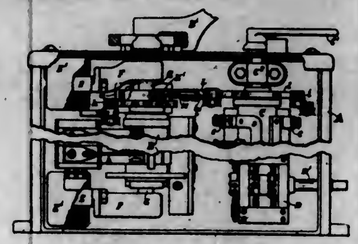
1. A self igniting gas stove, having a burner, an ignition cylinder with one end adjacent to the burner, said end of the cylinder being open and the sides of the cylinder being perforated, a gas supply tube, a cap communicating therewith, a tubular channel connecting said cap with the second or remaining end of the ignition cylinder and an ignition pill located within the ignition cylinder adjacent to said second end thereof.

2. A self igniting gas stove, having a plurality of burners, a gas supply pipe located approximately equidistant from the burners, a plurality of ignition cylinders having open ends respectively juxtaposed to the burners, the sides of the cylinders being perforated and the opposite end of the cylinders being adjacent to the gas supply pipe, means establishing communication between the said pipe and the second named ends of the cylinders, an ignition pill located in each ignition cylinder adjacent to the gas supply end thereof, and a cover plate arranged over the ignition cylinders and the said gas supply means.

3. A self igniting gas stove, comprising a plurality of burners, a gas supply pipe located approximately equidistant from said burners, a cap secured to the discharge end of said pipe, a series of tubular channels communicating with the cap ignition cylinders projected respectively toward the burners and having open ends adjacent thereto, the sides of the cylinders being perforated and an adjacent pill located at each ignition cylinder adjacent to the gas supply end thereof.

4. A self igniting gas stove comprising a plurality of burners, a gas supply pipe located approximately equidistant from said burners, a cap secured to the discharge end of said pipe, a series of tubular channels communicating with the cap ignition cylinders projected respectively toward the burners and having open ends adjacent thereto, the sides of the cylinders being perforated, an ignition pill located in each ignition cylinder adjacent to the gas supply end thereof, and a cover plate fastened to the said cap and protecting the ignition device and the gas connections thereto.

874,638. CONTROLLER. EMMETT W. STULL, Norwood, Ohio, assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed May 3, 1906. Serial No. 314,919.



1. In a controller, a controlling drum, a reversing switch, and a magnetically operated interlock between the controlling drum and the reversing switch.

2. In a controller, a controlling drum, a reversing switch, a blowout magnet, and an interlocking device between the controlling drum and the reversing switch, operated by the blowout magnet.

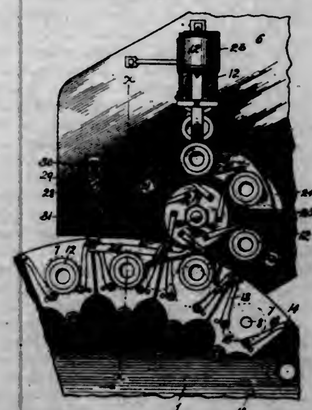
3. In a controller, a controlling drum, a reversing switch, and a magnetically operated device for locking the reversing switch against movement whenever current is flowing through the controller.

4. In a controller, a controlling drum, a reversing switch, a blowout magnet, and a device operated by the blowout magnet for locking the reversing switch in whatever position it may be when the blowout magnet is energized.

5. In a controller, a controlling drum, a reversing switch, a locking device for the reversing switch, and a blowout magnet which also operates said locking device.

[Claims 6 to 26 not printed in the Gazette.]

874,639. FILLING-MACHINE. BURT E. TAYLOR, Wauseon, Ohio, assignor to C. D. Chewning, Randolph, N. Y. Filed Mar. 7, 1907. Serial No. 361,185.



1. In a filling-machine, the combination with a rotary element having a circular series of can-carrying pockets, of machanism for successively feeding cans to the pockets as the element revolves, and an adjustable yieldingly mounted member for centering the cans when fed to the pockets.

2. In a filling-machine, the combination with a rotary element having a circular series of receptacle-carrying pockets, and the feed-mechanism therefor, of a receptacle centering member pivoted at one end adjacent the feed mechanism, and adjustable means for causing said member to have yielding contact with the receptacles as they are fed to the pockets.

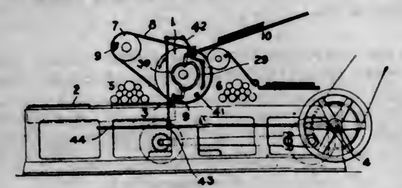
3. In a filling-machine, a receptacle carrying pocket having side bars forming the pocket walls pivoted at one end to the base and each having its other end adjustably secured thereto, the adjustably secured ends being more contracted than the pivoted ends.

4. In a filling-machine, a can-carrying pocket comprising a base plate and spaced bars forming side walls, the forward ends of the bars being pivoted to the plate to provide a broadened receiving mouth and their rear ends being contracted and adjustably secured to the plate.

5. In a filling-machine, a rotary table, a plurality of can-carrying pockets mounted for vertical movement relative to the table, each pocket comprising a stem projected through the table, a base plate carried by the stem above the table, side-bars adjustably secured to the plate, means for preventing a turning of the pocket relative to the table, and means coöperating with the stem to effect a properly timed vertical movement of the pocket when the table revolves.

[Claim 6 not printed in the Gazette.]

874,640. PRINTING-MACHINE. ELMER Z. TAYLOR, London, England, assignor to The Multi-Colour Printing Company (1904) Limited, London, England. Filed June 18, 1907. Serial No. 379,557.



1. In a printing machine the combination with a carrier and a series of gripper bars attached thereto, of means for adjusting the length of such carrier comprising eccentric studs connecting two of the links thereof and a pawl engaging ratchets mounted on such eccentric studs, substantially as and for the purpose specified.

2. In a printing machine the combination with a carrier of a gripper bar provided with a series of gripper blades, springs for holding such blades normally open, a shaft mounted in such gripper bar, and formed with depressions, and cranks adapted to be actuated by such depressions and acting against the inner ends of the gripper blades, substantially as and for the purpose specified.

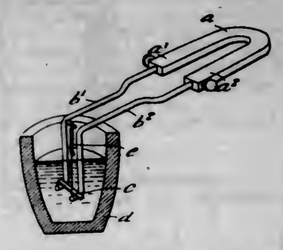
3. In a printing machine the combination with a carrier of a gripper bar provided with a series of gripper blades, springs for holding such blades normally open, a shaft mounted in such gripper bar, and formed with depressions, cranks adapted to be actuated by such depressions and acting against the inner ends of the gripper blades, and means for adjusting the contact between the cranks and gripper blades and thereby the pressure of the latter on the sheet held by the gripper bar, substantially as specified.

4. In a printing machine, the combination of a carrier, a gripper bar provided with a series of gripper blades and a plurality of projections, springs for holding said blades open, a shaft mounted in said gripper bar, a cylinder for said carrier provided with projections adapted to be engaged by said bar projections, and means for engaging and disengaging said bar projections with and from said cylinder projection.

5. In a printing machine the combination of a carrier, a gripper bar, dovetailed projections formed thereon, a cylinder, similar projections carried thereby, and a series of clamps operated by a cam and links and each adapted to fit around the projections on the gripper bar and cylinder to adjust the position of such gripper bar and hold it firmly in place, substantially as specified.

[Claim 6 not printed in the Gazette.]

874,641. APPARATUS FOR USE IN THE HARDENING OF STEEL. WILLIAM TAYLOR, Leicester, England. Filed Mar. 11, 1907. Serial No. 361,794.



1. An apparatus applicable to the hardening, tempering or annealing of steel, comprising a magnet having polar extensions of soft iron rigidly connected therewith, said extensions being adapted to support magnetically the mass of steel under treatment and means for varying the distance between said polar extensions.

2. An apparatus applicable to the hardening, tempering or annealing of steel, comprising a magnet having polar extensions of soft iron adapted to be rotated so as to vary the distance between said polar extensions and to be rigidly fixed in the poles of said magnet, said extensions being adapted to support magnetically the mass of steel under treatment.

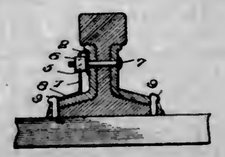
3. In hardening, tempering or annealing steel, an apparatus comprising a magnet having soft iron pole pieces extending normally parallel with each other, clamping screws in the poles of said magnet adapted to secure said pole pieces against rotation and said pole pieces adapted by rotation in the poles of said magnet to vary the distance between the said pole pieces.

4. In hardening, tempering, or annealing steel, an apparatus comprising a horse-shoe magnet, soft iron pole pieces extending normally in line with the limbs of said magnet clamping screws in the poles of said magnet adapted to secure said pole pieces against rotation and said pole pieces adapted by rotation in said limbs to vary the distance between the said pole pieces.

5. In hardening, tempering or annealing steel, an apparatus comprising a magnet having soft iron polar extensions, one of which is cranked and rotatably connected with the magnet.

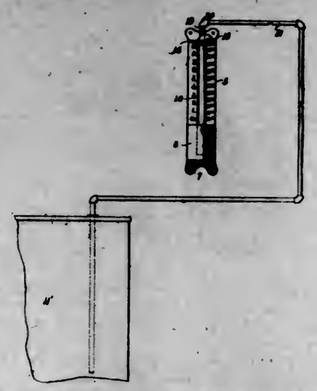
[Claims 6 to 11 not printed in the Gazette.]

874,642. NUT-LOCK. HENRY A. THOMPSON, Loogootee, Ind. Filed June 3, 1907. Serial No. 377,022.



A nut lock for rail joints and the like comprising a locking plate provided along one of its edges with notches and along the opposite edge with a plurality of laterally extending flexible tongues, each of the tongues having a bolt receiving opening formed in its end portion and a nut engaging opening formed adjacent its base, the said locking plate being held in an inverted position when being applied and being bent downwardly to throw the nuts within the before mentioned nut engaging openings after the nuts have been tightened, the locking plate having the notched edge thereof deflected outwardly to extend along the base of the rails and throw the notches into engagement with the spikes.

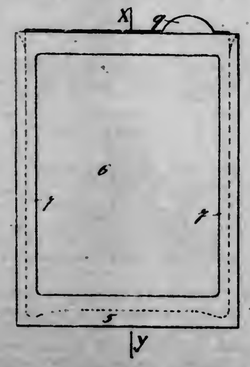
874,643. FLUID GAGE OR INDICATOR. JOHN J. TOKHEIM, Cedar Rapids, Iowa. Filed Feb. 14, 1907. Serial No. 357,371.



1. The combination with a storage tank, of an indicator including a casing having its lower end enlarged to form a fluid reservoir and its upper end provided with an air chamber, the exterior wall of the air chamber being provided with a longitudinal seating groove, an indicating tube seated within the groove and having its lower end communicating with the interior of the reservoir, the upper end of said tube being provided with a vent opening, and a pipe forming a source of communication between the air chamber and storage tank.

2. The combination with a storage tank, of an indicator including a casing, having a reservoir and provided with an air chamber communicating with the reservoir, there being a seating groove formed in one wall of the air chamber and a scale arranged on said wall at the seating groove, an indicating tube seated within the groove and having one end thereof extended within the reservoir and its opposite end projected laterally and provided with a vent opening, and a pipe forming a source of communication between the tank and reservoir.

874,644. SENSITIVE-PLATE PACKAGE. PIETRO TORRANI, Milan, Italy. Filed Nov. 7, 1905. Serial No. 286,271.



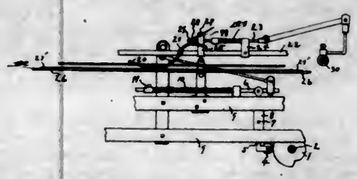
1. An article of manufacture having a back sheet, a plate-inclosing frame attached to said back sheet, a second frame attached to the plate-inclosing frame, the inner portion of which extends inwardly beyond the edges of the opening in the plate-inclosing frame, a third frame attached to the second frame and having two opposite sides, and a slide adapted to move between the sides of said third frame.

2. An article of manufacture having a back sheet, a plate inclosing frame attached to said back sheet, a second frame attached to the plate inclosing frame, the inner portion of which extends beyond the edges of the opening in the plate inclosing frame, a third frame consisting of sides and an end and attached to the second frame, a slide adapted to move between the sides of said third frame, and a fourth frame attached to the third frame and overlying the marginal portion of the slide when the latter is in.

3. An article of manufacture having a back sheet, a plate inclosing frame attached to said back sheet, a second frame attached to the plate inclosing frame, the inner portion of which extends beyond the edges of the opening in the plate inclosing frame, a third frame consisting of sides and an end and attached to the second frame, a slide adapted to move between the sides of said third frame, and a fourth frame having inwardly folded marginal portions attached to the sides and end of the third frame.

4. An article of manufacture having a back sheet, a plate inclosing frame against the back sheet, a second frame against the plate inclosing frame, and the inner portion of which extends beyond the edges of the opening of the plate inclosing frame, a third frame consisting of sides and an end and lying against the second frame, a fourth frame lying against the third frame and having inwardly folded sides and end flaps, said parts being suitably attached together, and a slide adapted to move between the sides of the third frame and having a light excluding flap.

874,645. PAPER-FOLDING MACHINE. JOSEPH TRISKA, Omaha, Nebr. Filed June 28, 1906. Serial No. 323,855.



1. In paper folding machine having movable sheet-bearing tapes and an end-guide, the combination with the downwardly movable folding-knife, of a contact-leaf movably supported upon said end-guide and having a connection with and adapted to normally prevent operation of the downwardly movable folding-knife, the construction and arrangement being such that a moving sheet upon the tapes will cause a swinging movement of said contact-leaf in the direction of said end-guide to permit operation of the downwardly movable folding-knife.

2. In a paper-folding machine having movable sheet-bearing tapes and an end-guide, the combination with the actuating lever of the folding-knife and cam by which said lever is operated, of adjacently-disposed contact-leaves movably supported upon said end-guide and having a connection with and adapted to normally hold the lever out of operative position with relation to the cam, the construction and arrangement being such that a moving sheet upon the tapes will cause a swinging movement of said contact-leaves in the direction of said end-guide to permit operation of said actuating lever and said cam.

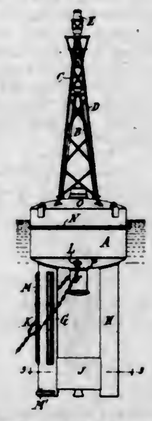
3. In a paper-folding machine having movable sheet-bearing tapes, an end-guide and a side-guide; the combination with the actuating lever of the folding-knife and cam by which said lever is operated, of adjacently-disposed contact-leaves movably supported upon said end-guide, a contact-leaf movably supported upon the side-guide, each contact leaf upon the end-guide and the contact-leaf upon the side-guide having a connection with and adapted to normally hold the lever out of operative position with relation to the cam, the construction and arrangement being such that a moving sheet upon the tapes will cause a swinging movement of the adjacently-disposed contact-leaves upon the end-guide in the direction of said end-guide and a swinging movement of the contact-leaf upon the side-guide in the direction of said side-guide to permit operation of said actuating lever and said cam.

4. In a paper-folding machine having movable sheet-bearing tapes and an end-guide, the combination with the swinging blade arm of the longitudinal pasting-blade, of adjacently-disposed contact-leaves movably supported upon said end-guide and having a connection with and adapted to normally prevent operation of the swinging blade arm; the construction and arrangement being such that a moving sheet upon the tapes will cause a swinging movement of said contact-leaves in the direction of said end-guide to permit operation of the swinging blade-arm of said longitudinal pasting-blade.

5. In a paper-folding machine having movable sheet-bearing tapes, an end-guide and a side-guide; the combination with the swinging blade-arm of the longitudinal pasting-blade, of adjacently-disposed contact-leaves movably supported upon said end-guide, a contact-leaf movably supported upon the side-guide, each contact-leaf upon the end-guide and the contact-leaf upon the side-guide having a connection with and adapted to normally prevent operation of said swinging blade-arm; the construction and arrangement being such that a moving sheet upon the tapes will cause a swinging movement of the adjacently-disposed contact-leaves upon the end-guide in the direction of said end-guide and a swinging movement of the contact-leaf upon the side-guide in the direction of said side-guide to permit operation of the swinging blade-arm of said longitudinal pasting-blade.

[Claims 6 to 15 not printed in the Gazette.]

874,646. BUOY. THOMAS L. WILLSON, Ottawa, Ontario, Canada, assignor, by mesne assignments, to United States Marine Signal Company, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 9, 1905. Serial No. 273,443.



1. A combined gas and whistling buoy having a whistle, a flotation chamber, a tubular portion at its center constituting a gas chamber, and air compressing means surrounding said gas chamber for operating the whistle and symmetrically arranged about the center.

2. A combined gas and whistling buoy having a whistle, a tubular portion at its center constituting a gas chamber, and separate air compressor tubes outside of said gas chamber operating the whistle and balancing each other.

3. A combined gas and whistling buoy having a whistle, a tubular portion at the center constituting a gas chamber, and two air compressor tubes outside of said gas chamber operating the whistle and diametrically opposite to and balancing each other.

4. A whistling buoy having a whistle, two air compressor tubes operating the whistle and diametrically opposite each other, and mooring chains attached fixedly to the buoy and extending in the direction of the plane of the two tubes so as to hold the edge of such plane to the current.

5. A combined gas and whistling buoy having a whistle, a tubular portion at the center constituting a gas chamber, and two air compressor tubes operating the whistle and diametrically opposite to and balancing each other, and mooring chains attached fixedly to the buoy and extending in the direction of the plane of the air compressor tubes and the central tubular portion so as to hold the edges of such plane to the current.

[Claims 6 to 8 not printed in the Gazette.]

874,647. SAFETY-HOOK. ERNST WLATNIGG, Klagenfurt, Austria-Hungary. Filed Oct. 19, 1906. Serial No. 339,694.



1. A safety hook composed of a fixed member and a movable member pivotally connected thereto, in combination with a casing having upturned edge walls closely contacting with the edges of the fixed member and the movable member of the hook, substantially as described.

2. A safety hook composed of a fixed member and a movable member pivotally connected thereto, in combination with a casing having upturned edge walls closely contacting with the edges of the fixed member and the movable member of the hook, and a lip *h* projecting from the edge of the casing to overlap the movable hook member substantially as described.

3. A safety hook composed of a fixed member and a movable member pivotally connected thereto, in combination with a casing having upturned edge walls closely contacting with the edges of the fixed member and the movable member of the hook, a lock secured to the casing the hook being provided with a hole adapted to receive the bolt of the lock, substantially as described.

4. A safety hook composed of a fixed member and a movable member pivotally connected thereto, in combination with an open faced casing having upturned edge walls closely contacting the edges of the hook, and pivots connecting the hook to the edge walls of the casing, substantially as described.

5. A safety hook composed of a fixed member and a movable member pivotally connected thereto, in combination with an open faced casing having upturned edge walls closely contacting the edges of the hook, and pivots connecting the hook to the edge walls of the casing, and a lip *h* projecting from the edge of the casing to overlap the movable hook member substantially as described.

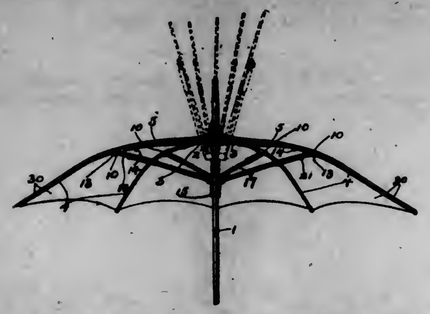
[Claim 6 not printed in the Gazette.]

874,648. UMBRELLA STRUCTURE. JOHN WOLFE, Cleveland, Ohio, assignor, by direct and mesne assignments, to The Aurora Specialty Co., Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 9, 1907. Serial No. 356,506.

1. In a reversible umbrella, the combination of a rod and the cover supporting frame arranged on said rod, said frame comprising a plurality of members arranged to form ribs and stretcher rods, said members having a fixed length when the umbrella is open or closed, and means for permitting a relative elongation and contraction of said members when a pressure is exerted on the inside of said frame tending to reverse said frame.

2. In a reversible umbrella the combination of a rod and a cover supporting frame comprising a notch rigidly mounted at the upper end of said rod, a series of ribs

pivotally secured to said notch and free to swing through an arc greater than ninety degrees, a runner arranged on said rod, stretcher rods pivotally secured to said runner and an operative connection arranged between each stretcher rod and the rib to be extended thereby, said connection having the same fixed position on the rib when the umbrella is in its normal open or closed position and capable of moving on said rib when a pressure is exerted on the inside of said frame tending to reverse said frame.



3. In a reversible umbrella, the combination of a rod and a cover supporting frame arranged thereon, said frame comprising a notch secured at the upper end of said rod, a series of ribs pivotally secured to said notch, each rib comprising two telescoping sections arranged so that the rib has a fixed length when the frame is in its normal open position or its closed position and capable of contraction when the frame is opened beyond its normal position, a runner arranged on said rod and a series of stretcher rods, each stretcher rod being secured at one end to said runner, and at its opposite end to a rib.

4. In a reversible umbrella, the combination of a rod, and a cover supporting frame comprising a notch mounted at the upper end of said rod, a series of ribs pivotally secured to said notch, a runner arranged on said rod and a series of stretcher rods, each stretcher rod being secured at one end to said runner, and at its opposite end to a rib and comprising two telescoping sections capable only of elongation beyond their normal length.

5. In a reversible umbrella, the combination of a rod and a cover supporting frame comprising a notch mounted at the upper end of said rod, a series of ribs pivotally secured to said notch, a sliding member arranged on each rib, means for limiting the movement of said sliding members on said ribs, a runner arranged on said rod, and a series of stretcher rods, each stretcher rod being secured at one end to said runner, and at its opposite end to a rib and comprising two telescoping sections capable only of elongation beyond their normal length.

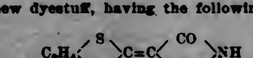
[Claims 6 to 11 not printed in the Gazette.]

874,649. THIO-INDOXYL DERIVATIVES AND PROCESS OF MAKING SAME. KARL ALBRECHT, Biebrich, Germany, assignor to The Firm of Kalle and Company, Aktiengesellschaft, Biebrich, Germany. Filed July 30, 1906. Serial No. 328,366.

1. The herein described process of manufacturing a red coloring matter consisting in combining thioindoxyl carboxylic acid with isatin.

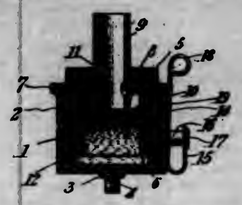
2. The herein described process of manufacturing a red coloring matter consisting in combining thioindoxyl with isatin.

3. The new dyestuff, having the following constitution



consisting of scarlet red needles, possessing a metallic luster, being insoluble or difficultly soluble in the usual solvents, soluble in concentrated sulfuric acids with a brown color, and which may be transformed by reducing agents into a leuco compound, capable of being reoxidized and precipitated as the dyestuff from its aqueous solution by exposure to air.

874,650. LUBRICATOR. SWAN ANDERSON, Ottumwa, Iowa. Filed June 29, 1907. Serial No. 381,485.



1. A lubricator comprising a suitable cup or container, and a loose plunger in said cup or container operating by inertia to exert pressure upon the lubricant to force the same from the container to the part to be lubricated, said cup coacting with the plunger to form an air cushion at that end of the cup remote from the end containing the lubricant.

2. A force-feed lubricator comprising a suitable cup, a closure for the same provided with a cylindrical extension, and a plunger contained and movable in said cylindrical extension and provided with a hollow guiding stem having perforations therethrough spaced a distance from the head of the plunger.

3. A force-feed lubricator comprising a cup having interior threads at its upper end, a closure provided with a threaded sleeve fitting the threads in the cup and extending therebeyond, and a plunger fitting the sleeve and having a hollow guiding stem extending to the exterior of the cup through the closure and provided with perforations spaced a distance from the head of the plunger.

4. A lubricator adapted for use upon moving parts, comprising a suitable cup, a closure for the same, a plunger having a relative movement with relation to the cup and acting by inertia to force the lubricant from the cup, and a spring catch for the closure comprising a spring arm hinged to one side of the cup and movable into and out of a recess in the closure.

874,651. CLASP. FREDERICK A. BAGNALL, Attleboro, Mass. Filed July 12, 1907. Serial No. 383,469.

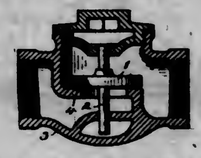


1. A clasp comprising two members, one of which has on its face a protuberance, and the other member carrying a projecting pin having its point adjacent the base of the protuberance when the clasp is closed, and a pivotal connection between said members perpendicular to their faces.

2. A clasp comprising pivotally connected members, one of which has on its face a protuberance, and the other member having an opening registering therewith when the clasp is closed, and a pin on the member having the opening, said pin being presented toward the other member and having its point adjacent the base of the protuberance when the clasp is closed.

3. A clasp comprising two jaw-members, one of which has on its face a protuberance, and the other member having an opening registering therewith when the clasp is closed, a rearward bend in one of the members, a pivotal connection between said bend and the other member, said pivot being perpendicular to the faces of the members, and a pin on the member having the opening, said pin being presented toward the other member, and having its point adjacent the base of the protuberance when the clasp is closed.

874,652. VALVE. GEORGE W. BAILEY, Washington, D. C. Filed Apr. 19, 1907. Serial No. 369,160.

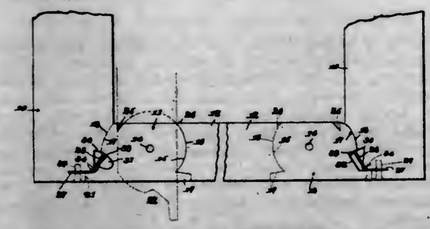


1. In a valve, a valve plate of greater diameter than the port surrounded by the valve seat, an annular groove in the face of the valve plate near its edge and opposite the valve seat an enlargement or widening of the groove near its opening edges, metallic bearing surfaces on the sides of said edges, an annular packing ring or gasket in said groove and normally projecting beyond the face of the valve plate to receive the impact thereof, and adapted to be distended laterally into the enlargements by contact with the valve seat, and under the full load of pressure bearing upon the valve plate.

2. In a valve a valve plate of greater diameter than the port surrounded by the valve seat, an annular groove in the face of the valve plate near its edge and opposite the valve seat having a bottom of semi-cylindrical cross-section and an enlargement or widening of the groove near its opening edges, metallic bearing surfaces on the sides of said edges, an annular packing ring or gasket of cylindrical cross-section in said groove and normally projecting beyond the face of the valve plate to receive the impact thereof, and adapted to be distended laterally into the enlargements by contact with the valve seat, and under the full load of pressure bearing upon the valve plate.

3. In a valve a valve plate of greater diameter than the port surrounded by the valve seat, an annular groove in the face of the valve plate near its edge and opposite the valve seat having a bottom of semi-cylindrical cross-section and an enlargement or widening of the groove near its opening edges, a metallic bearing surface on the inside of the opening of said groove, an annular packing ring or gasket of cylindrical cross-section in said groove and normally projecting beyond the face of the valve plate to receive the impact thereof, and adapted to be distended laterally into the enlargements by contact with the valve seat, and under the full load of pressure bearing upon the valve plate.

874,653. SQUARE. EZRA E. BATHROW, Prince Albert, Saskatchewan, Canada. Filed Mar. 10, 1906. Serial No. 305,373.



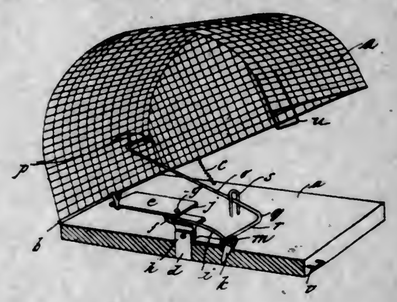
1. In an implement of the class described, the blade portion having a projection extending at right angles therefrom and of less thickness than the same and with a lug extending from its free end and a recess in the blade at the inner end of the projection, the tongue portion having a plate at one end less in thickness than the tongue and overlapping said projection and pivotally united thereto, said plate having a lug for bearing within the recess of said blade and said tongue having a recess for receiving the lug of said projection, and means for locking said projection and plate in position.

2. In an implement of the class described, the blade portion having a projection at one end with a lug extending therefrom and inclined at one side and a recess in the blade formed with one inclined side, a tongue portion having a plate at one end overlapping said projection and pivotally united thereto, said plate having a lug for bearing within the recess of said blade and inclined to correspond therewith and said tongue having a recess for receiving the lug of said projection and inclined to correspond thereto, and means for locking said projection and plate in position.

3. In an implement of the class described, the blade portion having a projection at one end, the tongue portion having a plate at one end overlapping said projection and pivoted thereto and with a recess having an inclined end, and a spring carried by said blade and disposed with its free end bearing against the inclined end of said recess.

4. In an implement of the class described, the blade portion having a projection at one end and an aperture partly in the blade and partly in the projection and a slot extending from the aperture, the tongue portion having a plate at one end overlapping said projection and pivoted thereto and with a recess having an inclined end, and a spring secured in said slot and bearing at its free end against the inclined end of said recess.

874,654. MOUSE-TRAP. FREDERICK BEAUDRY, Springfield, Mass. Filed July 8, 1907. Serial No. 382,569.



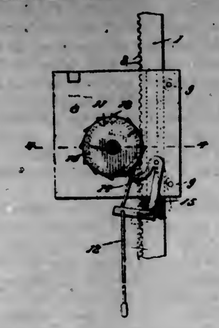
1. In a trap of the kind described comprising a base-piece, a cover pivotally secured to the same, a link extending between the cover and base-piece, and trip mechanism carried by the base-piece and engaged by the link, a bait-plate, the trip mechanism comprising a post to which the bait-plate is secured, said bait-plate having an overhanging part, a trigger pivotally connected to the base-piece and adapted to engage the overhanging part of the bait-plate.

2. In a trap of the class described having in combination a platform, a cover pivoted thereto, a bait-plate pivotally connected to the platform and provided with an overhanging end, a trigger also pivotally connected to the platform and adapted to engage the overhanging end of the bait-plate, a plate extending between the trigger and said plate, and a link connection pivotally connected to the cover and having a bent end for engaging the plate extending between the trigger and the bait-plate, whereby when the trigger is released the cover will be permitted to fall as described.

874,655. WINDOW-SHADE BRACKET. CHARLES E. BENNETT, Topeka, Kansas. Filed July 25, 1907. Serial No. 385,543.

1. In a device of the character described, the combination of a rack bar, means for supporting the rack bar, a bracket movable upon the rack bar, a pinion carried by the bracket and engaging the rack bar, a reel and cord for actuating the pinion, and means for locking the reel

against movement, the said locking means being controlled by the before mentioned cord.



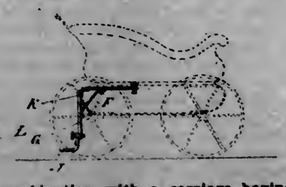
2. In a device of the character described, the combination of a rack bar, means for supporting the rack bar, a bracket movable upon the rack bar, a pinion carried by the bracket and engaging the rack bar, a reel and cord for actuating the pinion, a pawl for locking the reel against movement, and an arm carried by the pawl and loosely engaging the cord.

3. In a device of the character described, the combination of a rack bar, end posts supporting the rack bar, an intermediate brace provided with a lateral arm engaging the rack bar, a movable bracket provided with an under-cut groove receiving the rack bar, the mouth of the groove being designed to receive the arm of the brace when the bracket is moved past the brace, and a pinion carried by the bracket for meshing with the rack bar.

4. In a device of the character described, the combination of a guide bar, a bracket movable upon the guide bar, means for sliding the bracket upon the guide bar, a reel mounted upon the bracket and controlling the means for sliding the same upon the guide bar, a cord coöperating with the reel, and a pawl engaging the reel for locking the same against movement, the said pawl being controlled by the cord.

5. In a device of the character described, the combination of a rack bar, a bracket slidable upon the rack bar, a pinion journaled upon the bracket and engaging the rack bar, a reel for actuating the pinion, the said reel being provided upon its periphery with teeth, a gravity pawl normally engaging the teeth to lock the reel against movement, a cord coöperating with the reel, and an arm carried by the pawl and loosely engaging cord to throw the pawl into an operative position when a pull is exerted upon the cord.

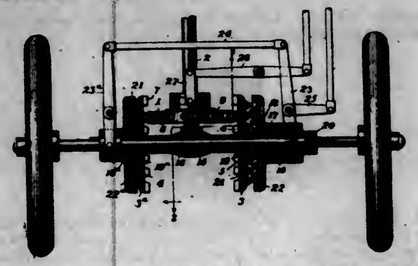
874,656. ATTACHMENT FOR BABY-CARRIAGES. HENRY BENNING, Chicago, Ill. Filed Sept. 9, 1907. Serial No. 392,055.



1. The combination with a carriage having a spring-supported body, of an attachment comprising a clamp secured to the bottom of the body, and a depending bar and foot piece supported by the clamp.

2. The combination with a spring-supported carriage body, of an attachment comprising a clamp bar extending across under the bottom of said body and secured thereto, a rearwardly extending arm fastened to the clamp bar, and a downwardly extending bar fastened to the rear end of said arm and provided with a foot piece.

874,657. VARIABLE GEARING. FRANZ BURGER, Fort Wayne, Ind., assignor of three-fourths to Henry M. Williams, Fort Wayne, Ind. Filed Apr. 17, 1907. Serial No. 368,722.



1. The combination with a wheel having a plurality of concentrically arranged rings of friction surfaces thereon and channels between said rings, of a pinion having a friction surface to engage said friction surfaces.

2. The combination with a wheel having a plurality of concentrically arranged rings of friction surfaces thereon and channels between said rings, of a pinion having a friction surface wider than said channels to engage said friction surfaces.

3. The combination with a wheel having a plurality of concentric rows of spaced friction surfaces thereon and concentric channels between said rows, of a pinion having a friction surface to engage said friction surfaces.

4. The combination with a wheel having a plurality of concentric rows of spaced friction surfaces thereon and concentric channels between said rows, of a pinion having a friction surface wider than said channels to engage said friction surfaces.

5. The combination with a wheel having a plurality of concentrically arranged rings of friction surfaces thereon and having a concentric channel between said rings, of a pinion adapted to shift across the face of said wheel and having a friction surface to engage the friction surfaces of said rings, the surface of said pinion being wider than said channel whereby the former will straddle the latter as the pinion is shifted from one ring to another.

[Claims 6 to 20 not printed in the Gazette.]

874,658. CARRIER-FRAME FOR BASKETS. JAMES H. CAMERON, Paris, Tex. Filed July 22, 1907. Serial No. 384,986.

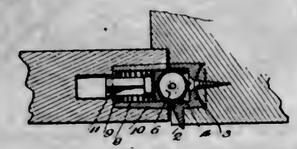


1. In a carrier frame, the combination with a side member having a plurality of interiorly threaded laterally-projecting lugs on one face, of wheels journaled to said member outwardly of its lugs, and a second side member having enlarged end portions provided with guard flanges and a plurality of apertures adapted to register with the lugs of said first-mentioned side member and screws working through the apertures in the second-mentioned member and screwing in the lugs of the first-mentioned member for removably fastening said members together.

2. In a carrier frame of the character described, the combination of a side member having spaced axles, of wheels journaled to said axles and a second side member having enlarged end portions with outwardly extending guard flanges and recesses or sockets in its inner face to receive the adjacent ends of the wheel hubs removably positioned to said first mentioned side member.

3. In combination with wheels, side frames arranged on opposite sides of the wheels, one of the frames having ribs formed on its inner face immediately under the wheels and the other having recesses or sockets in its inner face to receive the hubs of the wheels and means for removably securing said frames together.

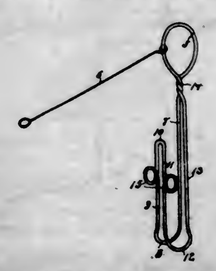
874,659. DOOR CHECK AND TIGHTENER. EDWARD CONKLIN, Channahon, Ill. Filed Sept. 17, 1907. Serial No. 393,294.



1. In a fastener of the character specified the combination of a casing having one end closed and provided with an angular opening, a plunger slidably fitted within said casing and comprising an angular stem fitting the angular opening of said casing and having its opposite end forked to receive a pulley wheel, and a coil spring mounted upon the plunger and confined between a shoulder thereof and a corresponding shoulder at one end of the said casing.

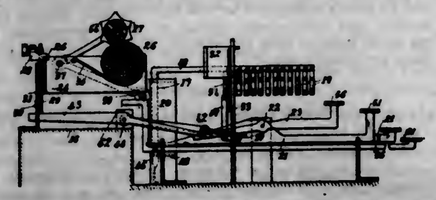
2. A fastening of the character substantially as specified the same comprising two parts, one consisting of a plate having a cylindrical projection and an inclined lug and having a depression forming a socket, the other part comprising a cylindrical casing closed at one end and having an angular opening formed therein, and having oppositely disposed ears at its opposite ends, and a spring actuated plunger mounted in said casing and comprising an angular stem forked at one end to receive a pulley wheel and having its angular portion fitted in said angular opening of the casing.

874,660. CLOTHES-PIN. JASPER N. COOKE and JOHN C. MOELLER, Davilla, Tex. Filed May 23, 1907. Serial No. 375,228.



A clothes-pin comprising parallel bars having an eye at one end thereof, a forward return bend at the other end of the bars, and looped bars extending from said bends and connected at their extremities.

874,661. TYPE-WRITER. OCTAVE CORD, Montélimar, France. Filed Dec. 12, 1905. Serial No. 291,497.



1. In a typewriting machine the combination with a type-bar having a helical formation for a portion of its length, of a key-lever engaging the type-bar and adapted to operate it vertically, a frame supporting, and adapted to guide the type-bar, one of the guide portions of the frame being formed with a slot which engages the type-bar and causes its rotation as it is carried vertically therethrough by the key-lever.

2. In a typewriting machine, the combination with a type-bar formed with a vertically disposed arm bearing a plurality of vertically arranged characters and formed also with another vertically disposed arm formed for a portion of its length with a helical twist of a key-lever engaging the type-bar and adapted to reciprocate it vertically, a frame supporting the type-bar and adapted to guide it the frame having an upper plate and a lower plate, each plate being provided with alining openings for the reception of the type-bar the opening in one of the plates being formed to engage the helical portion of the type-bar and causes its rotation as it is carried vertically therethrough by the key-lever, a platen, a hinged carriage carrying the platen, and a rock-shaft having an arm adapted to oscillate the carriage about its hinge to secure the proper elevation of the platen, to receive the printing impression of any of the characters carried by the type-bar.

3. In a typewriting machine the combination with a spacing bar, of a plurality of type-bars each formed with two vertically disposed arms and a horizontal arm connecting the vertical arms one of the vertical arms bearing a plurality of vertically arranged characters and the other vertical arm being formed for a portion of its length with a helical twist, of key-levers engaging the type-bars and adapted to reciprocate them vertically, a frame supporting the type-bars and adapted to guide them, the frame having an upper plate and a lower plate each plate being formed with alining openings for the reception of the type-bars, the openings in the lower plate being formed to engage the helical portion of each type-bar and to cause their oscillation as they are carried vertically therethrough by the key-levers, a hinged carriage, a platen mounted in the carriage, an open rectangular frame, one side of the frame forming the hinge upon which the carriage is mounted and the opposing side of the rectangle forming a support for the free end of the carriage, a rock-shaft, having an arm upon which the supporting side of the rectangle rests, this arm being adapted to be lowered to bring the platen to a proper printing position for the lower characters, a second rock-shaft having an arm adapted to engage the supporting side of the rectangle to elevate the platen to a proper printing position for the upper characters, a toothed rack formed on the rear of the carriage, a bell-crank lever, a pawl carried by one arm of the bell-crank-lever and adapted to engage the rack, a lever pivoted intermediate its ends and supporting the other arm of the bell-crank-lever, and a hinged bar resting upon the key-levers and upon the spacing-bar, and also resting upon the other end of the lever which supports the pawl lever.

4. In a typewriting machine the combination with oscillatory type-bars and key-levers adapted to actuate the type-bars, of an inking pad formed with obliquely disposed inking faces and with a lower plate, a hinged bar resting upon the key-levers and having an outstanding arm, and a bell-crank frame having one of its arms engaged by the outstanding arm to hold the other arm of the bell-crank lever in engagement with the lower plate of the inking pad.

5. A type-bar consisting of a vertically disposed type bearing arm, a horizontal arm, and a second vertically disposed arm the latter having an upper circular part, a contracted neck, and a lower flat portion formed with a helical twist.

[Claim 6 not printed in the Gazette.]

874,662. SPINNING-MACHINE. JOHN A. DE VITO, Boston, Mass. Filed Mar. 26, 1906. Serial No. 308,007.

1. In a spinning and twisting machine, in combination, a hollow rotatable member upon the interior of which the yarn or thread is wound, a tubular yarn guiding member

coöperating with said hollow rotatable member, one of said members being movable with relation to the other, a cutting member fixed to said guiding member and having a hole or opening which registers with the passage in said guiding member, a coöperating movable cutting member having a hole or opening eccentrically located with relation to the passage in said guiding member and normally communicating therewith through the hole in the fixed cutting member, a tube surrounding said guiding member and to which the movable cutting member is secured to move therewith, a collar loose on said guiding member, means to secure said surrounding tube to said collar, a spring interposed between said tube and guiding member to maintain the cutting members in contact, and means to rotate said surrounding tube, substantially as described.



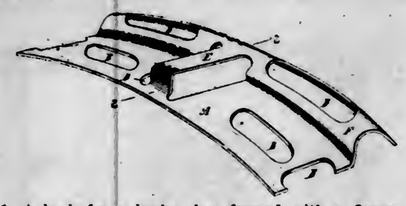
2. In a spinning and twisting machine, in combination, a hollow rotatable member upon the interior of which the yarn or thread is wound, a tubular yarn guiding member coöperating with said hollow rotatable member, one of said members being movable with relation to the other, a cutting member fixed to said guiding member, and a cooperating cutting member movable with relation to the fixed cutting member, substantially as described.

3. In a spinning and twisting machine, in combination, a hollow rotatable member upon the interior of which the yarn or thread is wound, a tubular yarn guiding member coöperating with said hollow rotatable member, one of said members being movable with relation to the other, a cutting member fixed to the said guiding member at its lower end and having a hole or opening through it which communicates with the passage in the guiding member, a rotatable cutting member arranged in line with the fixed cutting member and provided with a hole or opening through it eccentric to the passage in the guiding member and normally communicating therewith through the hole in the fixed cutting member, and a rotatable carrier for said rotatable cutting member, substantially as described.

4. In a spinning and twisting machine, in combination, a hollow rotatable member upon the interior of which the yarn or thread is wound, a tubular yarn guiding member coöperating with said hollow rotatable member, one of said members being movable with relation to the other, and a rotatable cutting member to sever the portion of the yarn in the passage of the guiding member from the portion of the yarn outside thereof, substantially as described.

5. In a spinning and twisting machine, in combination, a hollow rotatable member upon the interior of which the yarn or thread is wound, a tubular yarn guiding member coöperating with said hollow rotatable member, one of said members being movable with relation to the other, and a cutting member having its cutting edge movable transversely with relation to the passage of the guiding member, substantially as described.

874,663. BRAKE-SHOE. WILLIAM E. DE VOE, Chicago Heights, Ill., assignor to Edward H. Fallows, trustee, New York, N. Y. Filed July 17, 1907. Serial No. 384,154.



1. A back for a brake shoe formed with a flange and tread portions, and a reinforcing strip formed partially from each, substantially as described.

2. A back for a brake shoe formed with a flange and tread portions, and a reinforcing strip struck up from the metal of said flange and tread portions, substantially as described.

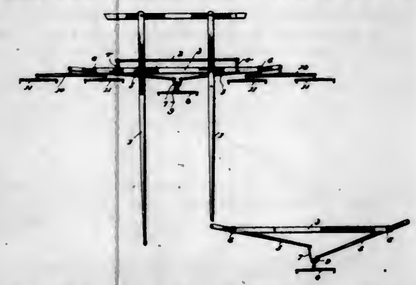
3. A back for a brake shoe formed with a flange and tread portions, and a reinforcing strip, one end of said strip being connected with said flange and the other with said tread portion, substantially as described.

4. A back for a brake shoe formed with a flange and tread portions, and an integral reinforcing strip, one end being integral with said flange and the other with said tread portion, substantially as described.

5. A back for a brake shoe formed with a flange and tread portions, and a key-lug formed partly of the metal of said flange and partly of the tread portion, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

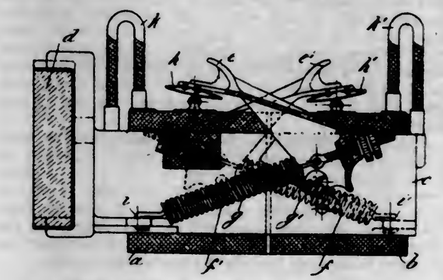
874,664. DRAFT-EVENER. ALBERT W. DUSENBERY, Ionia, Kans. Filed July 8, 1907. Serial No. 382,766.



In a draft evener, the combination of transversely spaced longitudinal bars, a timber extended across said bars and connected thereto, a bar paralleling and spaced from said timber and similarly connected to said longitudinal bars and having its extremities terminating a distance from the extremities of the said timber and connected at its extremities thereto, equalising levers pivoted to the extremities of the said timber to provide short and long arms, the latter extending inward, a flexible connection uniting the inner ends of said long arms, a swingle-tree having a sheave pulley supported in the bight of said flexible connection, and double-trees connected to the extremities of the short arms of said equalising levers and provided with pairs of swingle-trees.

874,665. BRUSH-HOLDER FOR ELECTRIC MACHINES. GIORGIO FINZI and EMILIO TALLERO, Milan, Italy. Filed Apr. 2, 1906. Serial No. 309,531.

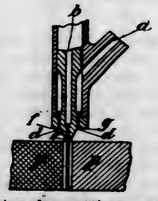
1. A brush holder, a plurality of springs situated in planes containing the commutator axis and each of which is provided with a pressure finger having a portion thereof extending parallel to said axis, said fingers being alternately disposed with respect to each other and the point of attachment between one spring and a support being alternately disposed with respect to the point of attachment between the other spring and the support.



2. A brush holder comprising two independent systems of springs, and pressure fingers provided on the side faces of the brush holder and situated in planes containing the commutator axis and acting upon two different points of the brush.

3. A brush holder comprising two independent system of springs, pressure fingers provided on the side faces of the brush holder and situated in planes containing the commutator axis and acting upon two different points of the brush, and pivots for the pressure fingers, one of said pivots arranged near the base of the brush holder and commutator and the other pivot at a distance therefrom.

874,666. APPARATUS FOR PERFORATING AND CUTTING METALS. EMILE GAUTHIER and CAMILLE RODRIGUES-ELY, Paris, France. Filed Apr. 5, 1907. Serial No. 366,548.



1. In an apparatus for cutting metals by means of a heating jet, and an oxidising jet, a mouth piece having an oxidising gas current outlet and several combustible gas outlet openings arranged and adapted to discharge combustible gas in streams substantially parallel to the stream of oxidising gas substantially as and for the purpose set forth.

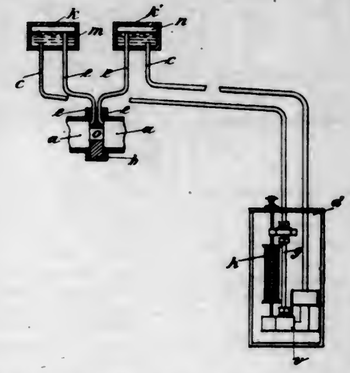
2. In an apparatus for cutting metals by means of a heating jet, and an oxidising jet, a mouth-piece having outlet openings for the current of oxidising gas and combustible gas in different planes respectively, all said openings being formed and adapted to direct streams of gas in parallel lines.

3. In an apparatus for cutting metals by heating and oxidising jets, a mouth-piece having an oxidising gas outlet and a plurality of combustible outlet openings of different diameters, substantially as and for the purpose set forth.

4. In an apparatus for cutting metals by heating and oxidising jets, a mouth-piece having an oxidising gas outlet and having a plurality of combustible gas outlet openings only at one side of the oxidising gas current outlet, substantially as and for the purpose set forth.

874,667. APPARATUS FOR MEASURING THE SUPPLY OF STEAM FROM A BOILER. MAX GEHRE, Dusseldorf-Rath, Germany. Filed Feb. 3, 1905. Serial No. 244,052.

1. An apparatus of the character described, comprising a mercury column, a steam conduit, means interposed in said conduit for contracting the passage therethrough, a plurality of water chambers, means for establishing communication between one of said chambers and one end of the mercury column, means for establishing communication between the other of said chambers and the other end of the mercury column, means for establishing communication between one of said chambers and one side of said contracted portion of the passage through the conduit, means for establishing communication between the other of said chambers and the other side of said contracted portion of the passage through the conduit, and an adjustable scale arranged in operative relation with respect to said mercury column.



2. An apparatus of the character described, comprising a mercury column, a steam conduit, means interposed in said conduit for contracting the passage therethrough, a plurality of water chambers, means for establishing communication between one of said chambers and one end of the mercury column, means for establishing communication between the other of said chambers and the other end of the mercury column, means for establishing communication between one of said chambers and one side of said contracted portion of the passage through the conduit, and means for establishing communication between the other of said chambers and the other side of said contracted portion of the passage through the conduit.

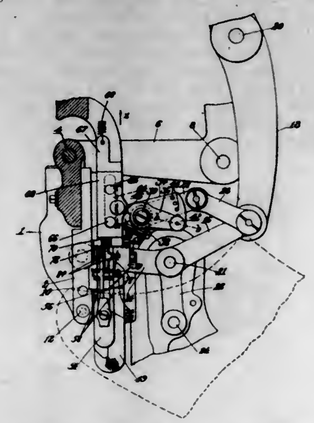
874,668. PROCESS OF TREATING WASTE OAKUM AND SIMILAR MATERIALS. CHRISTIAN L. GELLERT, Dusseldorf, and CARL BUNSE, Rocholt, Germany. Filed Feb. 28, 1907. Serial No. 359,817.



1. Process of treating waste oakum and similar material, which consists in carding it, beating it, treating it in a bath, dehydrating it by centrifugal action, again carding it, and finally drying it, substantially as specified.

2. Process of treating waste oakum and similar material, which consists in carding it, beating it, treating it in a first bath containing ammonia soda, washing it, treating it in a second bath containing caustic lye, again washing it, dehydrating it by centrifugal action, again carding it, and finally drying it, substantially as specified.

874,669. EYELETING-MACHINE. GEORGE GODDU, Winchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 27, 1907. Serial No. 364,803.



1. In an eyeleting machine, the combination with a guide-plate, of means located on opposite sides thereof for determining the position of the work relative to said guide-plate, and means for automatically changing the position of said first mentioned means to vary the spread of the eyelets.

2. In an eyeleting machine, the combination with a guide-plate, of means located on opposite sides thereof for determining the position of the stock relative to said guide-plate, and means for automatically changing the position of said first mentioned means after the first eyelet in a series has been set.

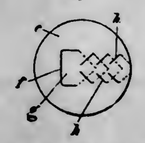
3. In an eyeleting machine, the combination with a guide-plate, of means for determining the position of stock relative to said guide-plate, means for automatically changing the position of said first mentioned means to vary the spread of the eyelet, and means for preventing change in the position of said first mentioned means when a uniform spread is desired.

4. In an eyeleting machine, the combination with a guide-plate, of edge-gages on opposite sides thereof, and means for automatically changing the position of said edge-gages to vary the spread of the eyelets.

5. In an eyeleting machine, the combination with a guide-plate, of edge-gages secured on opposite sides thereof, and means for automatically changing the position of said edge-gages and guide-plate to vary the spread of the eyelets.

[Claims 6 to 13 not printed in the Gazette.]

874,670. BOTTLE CAP OR CLOSURE FOR BOTTLES, JARS, OR OTHER RECEPTACLES. ELISE GOLTSTEIN, Cologne, Germany. Filed Sept. 10, 1907. Serial No. 392,089.

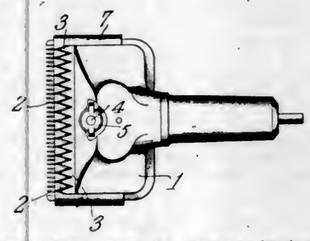


1. A closure for bottles, jars, or other receptacles, comprising a capsule made of a metal which can easily be torn and adapted to be secured to the mouth of said receptacle and formed with a slit providing a thumb-piece, and with weakened portions located at a distance from the ends of said slit and extending from the lines of rent produced when pulling said thumb-piece and diverging therefrom towards the rim of the capsule.

2. A closure for bottles, jars, or other receptacles, comprising a capsule made of a metal which can easily be torn and adapted to be secured to the mouth of said receptacle and formed with a slit providing a thumb-piece, and with a plurality of successively arranged weakened portions located at a distance from the ends of said slit and at a distance from one another and extending from the lines of rent produced when pulling said thumb-piece and diverging therefrom towards the rim of the capsule.

3. A closure for bottles, jars, or other receptacles, comprising a capsule made of a metal which can easily be torn and adapted to be secured to the mouth of said receptacle and formed with a slit providing a thumb-piece, and with further slits located at a distance from the ends of said first named slit and extending from the lines of rent produced when pulling said thumb-piece and diverging therefrom towards the rim of the capsule.

874,671. CLIPPING-SHARPENING MACHINE. EDWIN J. GOULD, Boulder, Colo., assignor of one-half to Thomas E. Sawdey, Boulder, Colo. Filed Sept. 4, 1906. Serial No. 333,246.



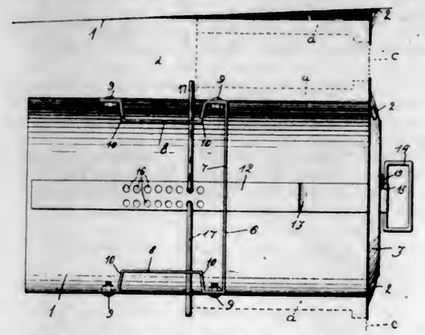
1. A sharpening means for clippers having parallel blades consisting of a plate having parallel faces and end flanges, one of the faces being adapted to lie against the cutting face of one of the blades with the end flanges embracing the sides of said blades to prevent movement of the plate with relation to said blade and with the other face engaging and relatively movable over the cutting face of the other blade.

2. A sharpening means for clippers having parallel blades consisting of an aluminium plate having parallel faces adapted to lie between the cutting faces of the blades of the clipper when the blades are still assembled but separated sufficient for the purpose, said plate being provided with means for holding it in immovable relation to one blade and in relatively movable relation to the other blade.

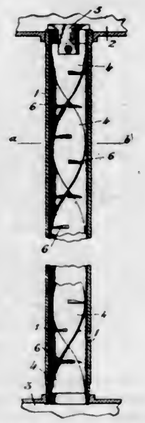
874,672. FLUE-STOP. ARNEST E. GOWIN, Morrisonville, Ill. Filed Feb. 21, 1907. Serial No. 358,740.

1. In a device of the class described, a scoop designed for entrance into a flue opening, a cap plate attached to the outer end of the scoop for closing said flue opening, a longitudinally slidable bar sustained in the scoop and projecting through cap-plate, bearing arms attached to the inner faces of the scoop and each pivoted with a plurality of perforations, the side walls of the scoop having longitudinal slots arranged opposite said perforations and locking bolts pivotally connected at their inner ends with the bar and arranged for their outer ends to project outwardly through the perforated bearing arms and slots.

2. In a device of the class described, a scoop designed for entrance into a flue opening and having one of its side walls provided with a longitudinal slot, a bearing arm attached to the inner face of the scoop and having a perforation disposed coincident with said slot, a cap plate attached to the outer end of the scoop for closing the flue opening, a longitudinally slidable bar sustained in the scoop and projecting outward through said plate and a locking bolt pivotally connected at its inner end with the bar and having its outer end arranged to project outwardly through the perforated bearing arm and slot.



874,673. AIR-HEATER. FRANCIS W. GREEN, Wakefield, England. Filed Jan. 17, 1907. Serial No. 352,799.

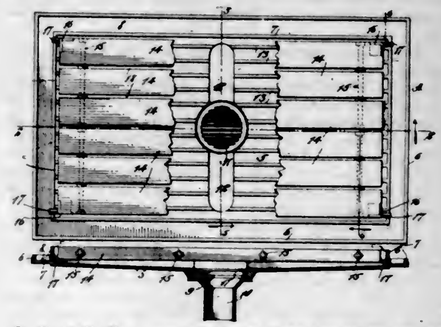


1. A heater of the class described comprising a pipe forming a passage-way therethrough, a spiral member arranged within the pipe and extending throughout the longitudinal extent thereof, and laterally extending wings with respect to the longitudinal extent of the pipe projecting from said spiral member within the latter and adapted to deflect the heat passing through the pipe intermediate the said spiral and the inner wall of the latter to cause said heat to be dispersed against said inner wall.

2. In combination with a plurality of heating tubes, of spiral members within said tubes and extending throughout the longitudinal extent thereof, a T-element secured to one end of each spiral member and in friction contact with the piping at one extremity thereof for suspending said spiral members within the pipes, and a plurality of wings secured to said spiral members and extending laterally therefrom with respect to the longitudinal extent of the tubes.

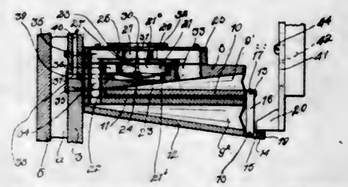
874,674. STALL-FLOOR. OTTO GRUNEWALD, Jr., Trenton, N. J., and ROBERT ALTING, New York, N. Y. Filed July 24, 1907. Serial No. 385,351.

1. A stall floor comprising a frame-member formed with a groove extending around the border of the frame, which groove is adapted to receive the material of the ordinary stable floor, ribs projecting upwardly from the frame member, a plurality of separated slat-members bridging and supported by pairs of said ribs, providing spaces beneath the slat-members and between the slat-supporting ribs, said floor having ventilator openings in communication with said spaces at the ends of said slats.



2. A stall floor comprising a frame-member formed with a groove extending around the border of the frame, which groove is adapted to receive the material of the ordinary stable floor, longitudinally arranged ribs projecting upwardly from the base of the frame-section and spaced apart to form drain-ducts in conjunction with such base, a plurality of separated slat-members bridging and supported upon pairs of said ribs, said floor having ventilator openings at the ends of said slat-members communicating with the drain-ducts between the slat-supporting ribs, and a drain for the floor.

874,675. AUTOMATIC-PLAYING PIANO. AXEL G. GULBRANSEN, Chicago, Ill. Filed Aug. 20, 1906. Serial No. 331,230.



1. In an automatic playing instrument, the combination with a piano having abstract rods, of automatic playing mechanism, a plurality of pneumatic action mechanisms for the automatic playing mechanism in the form of units, each unit comprising a plurality of bellows arranged in a tier, a common mounting block from which the bellows are supported, and primary valve mechanism in the block for simultaneously controlling the bellows to cause cumulative operation thereof, the movable parts of each set of bellows being connected with one of the piano abstract rods.

2. In a pneumatic action mechanism for mechanically operated pianos, the combination with a common mounting block, of a plurality of bellows supported below the mounting block, a common primary valve mechanism for the bellows arranged in the mounting block, said mounting block, bellows and valve mechanism comprising an individual unitary structure, the movable members of the bellows being connected together and adapted for connection with key operating mechanism of the piano.

3. In an automatic playing piano the combination with the abstract rods and the hammer actuating mechanism of the piano, of a plurality of individual action mechanism units one for each of the abstract rods, a plurality of bellows for each unit having their movable members connected together and adapted for connection with the corresponding abstract rod, a common mounting block from which the bellows are supported, a common primary valve

mechanism arranged in the mounting block and connected through suitable channels with the bellows, and a flat rectangular wind chest extending across the piano in front of the ends of the abstract rods, said pneumatic action units being removably supported from the rear wall of the wind chest, said bellows acting cumulatively and their combined force upon operation causing movement of the abstract rod and the hammer mechanism connected therewith.

4. A pneumatic action mechanism unit for mechanically operated pianos comprising a common mounting block 8, a plurality of bellows arranged in a vertical tier below said mounting block and supported therefrom, links 16 connecting together the movable members of the bellows at the exterior thereof, a shelf 19 on one of the bellows adapted for association with hammer actuating mechanism of the piano, primary valve mechanism mounted in the block 8 and common to all the bellows, operation of the valve mechanism causing cumulative operation of the bellows.

5. In an automatic playing instrument comprising an upright piano and automatic playing mechanism, the combination with vertical abstract rods for the piano, of a wind chest for the automatic playing mechanism extending along the interior of the piano in front of the lower ends of the abstract rods, a plurality of pneumatic action mechanisms for the automatic playing mechanism in the form of units, each unit comprising a plurality of bellows arranged in a tier, a common mounting block for each unit from which the bellows are supported, a primary valve mechanism in each mounting block for simultaneously controlling the bellows to cause cumulative operation thereof, said units being supported in rows from the rear wall of the wind chest, and the movable parts of each set of bellows being connected with one of the abstract rods.

[Claims 6 and 7 not printed in the Gazette.]

874,676. EXHAUST-MUFFLER. EDWARD J. GULICK, Mishawaka, Ind. Filed Feb. 13, 1907. Serial No. 357,153.

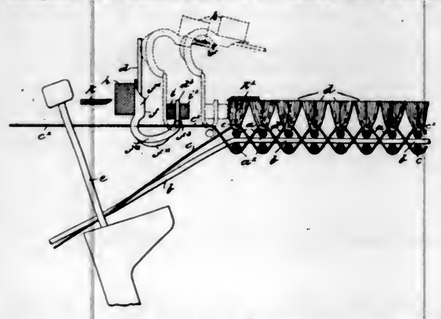


1. An exhaust muffler comprising a main chamber into which exhaust gases are expelled, a series of auxiliary chambers surrounding said main chamber and communicating therewith by perforations formed in said main chamber, the total area of the perforations communicating with each auxiliary chamber varying, said auxiliary chambers being in communication with each other at their ends, a discharge port in one of said auxiliary chambers whereby exhaust gases discharged into said main chamber pass into said auxiliary chambers and are expelled through said discharge port, substantially as described.

2. In an exhaust muffler an outer and an inner casing, a series of auxiliary chambers formed between said casings and communicating with each other at their ends to form a continuous zig-zag passage through all of said auxiliary chambers, each of said auxiliary chambers communicating with said inner casing, a port in said inner casing for admitting exhaust gases therein and a port in one of said auxiliary chambers through which the exhaust gases are expelled, substantially as described.

3. In an exhaust muffler, the combination of an outer casing and an inner casing, a series of partitions radially interposed between said casings and secured thereto, to form auxiliary chambers, each of said auxiliary chambers communicating with said inner casing by communications of unequal area, said auxiliary chambers being in communication at their ends with each other, and a discharge port in one of said auxiliary chambers whereby exhaust gases discharged into said main chamber pass into said auxiliary chambers and are expelled through said discharge port, substantially as described.

874,677. WOVEN PILE FABRIC. FRANK J. HALL Philadelphia, Pa. Filed July 3, 1906. Serial No. 324,559.

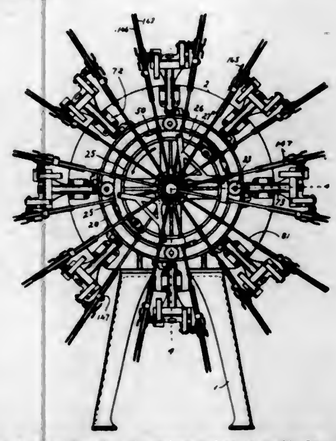


1. In a woven pile fabric, two binder warp-threads, weft-threads, and interwoven separately cut pile tufts or threads bound by the warp-threads occupying a raised position in each shed and said separately cut pile tufts or threads tied to said warp-threads.

2. In a woven pile fabric, two binder warp-threads, a stuffer warp-thread, and separately cut pile tufts or threads bound by a warp-thread occupying a raised position in each shed, weft-threads introduced above and below the stuffer warp-thread, the upper weft-thread located beneath the cut pile tufts or threads and said separately cut pile tufts or threads tied to the warp-threads to form a cut pile face in the fabric.

3. In a woven pile fabric, binder warp-threads, a stuffer warp-thread, pile tufts or threads bound by the warp-thread occupying the raised position in each shed, weft-threads introduced above and below the stuffer warp-thread, the upper weft-thread introduced below the cut pile tufts or threads, said stuffer warp-thread and weft-threads bound together by said binder warp-threads to form the backing of the fabric, and said separately cut pile tufts or threads tied or bound in each shed by the binder warp-threads to the backing to form a dense cut pile tuft face.

874,678. MACHINE FOR WEAVING TUBING. WINFRED W. HARRIS, Winthrop, Mass., assignor to Emma M. Wilson, Chelsea, Mass. Filed Nov. 18, 1904. Serial No. 233,327.

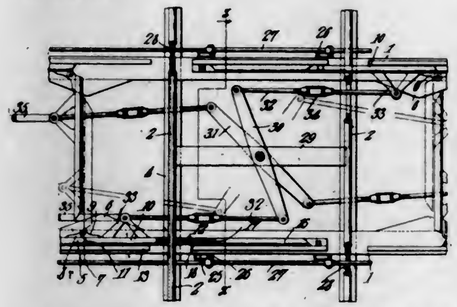


1. In a machine for forming tubes, a cylinder or throat, a series of warp guiding members arranged about said throat, means connected to each member for reciprocating it to form a shed, arranged to maintain a substantially constant distance between said member and said throat, a shuttle device arranged to travel in the shed so formed, and means for operating said shuttle device.

2. In a machine for forming tubes, a cylinder or throat, a weft shuttle arranged to travel about said throat, a series of warp spools arranged about said throat, each formed with a thread-eye or warp-guide, an inwardly and forwardly inclined member connected with each spool, and means for reciprocating said members, whereby the movement of said spools to form a shed does not substantially vary the length of the warp from said eye to the work.

3. In a machine for forming tubes, a horizontal cylinder or throat, a warping arranged about said cylinder, a series of pairs of warp spools, a series of pairs of members supported by said ring, and each connected to one of said spools, a cam-ring supported by said cylinder, and connections between said cam-ring and said members.

874,679. RAILROAD-CROSSING. WILLIAM E. HAWORTH, Ridge Farm, Ill. Filed Aug. 22, 1907. Serial No. 389,702.



1. A railroad crossing comprising a lower track, an upper track, movable sections constituting portions of the upper track and normally alining therewith and extending across the rails of the lower track, a locking head in the path of each movable section and disposed to project thereinto, and means for actuating the heads to bind them upon the sections.

2. A railroad crossing comprising a lower track and an upper track, movable sections constituting portions of the upper track and normally alining therewith and extending across the rails of the lower track, vertically movable locking devices in the paths of the movable sections, said sections having sockets to receive said devices, and means for successively actuating said devices to bind them upon a wall of each socket.

3. A railroad crossing comprising a lower track, an upper track, movable sections constituting portions of the upper track and normally alining therewith and extending across the walls of the lower track, a locking device in the path of and disposed to engage each section, and means for simultaneously actuating the locking devices.

4. A railroad crossing comprising a lower track, an upper track, movable sections constituting portions of the upper track and normally alining therewith and extending across the rails of the lower track, each of said sections having a socket, the bottom of each socket being recessed and slotted, a locking device in the path of each movable section and disposed to be seated within each slot and socket, and means for simultaneously actuating said devices to seat them within the recesses.

874,680. MOSQUITO-TRAP. WILLIAM S. HULL, Jackson, Miss. Filed Sept. 30, 1907. Serial No. 395,264.

1. A mosquito trap comprising a casing having a closure and its interior surface of a dark color, collecting curtains within said casing, and means for agitating said curtains.



2. A mosquito trap comprising a casing having a closure and its interior surface of a dark color, and parallel hanging curtains within said casing at opposite sides of said closure.

3. A mosquito trap comprising a casing having a closure and its interior surface of dark color, curtains within said casing and of a dark color, and a removable casing provided with collecting curtains and adapted to communicate with the upper portion of the main casing.

4. A mosquito trap comprising a casing having a closure and its interior surface of dark color, curtains within said casing and of a dark color, a removable casing adapted to communicate with the upper portion of the main casing, and means within the main casing for agitating said curtains.

5. In a mosquito trap, a collecting casing, a removable casing having an extension inserted therein, a pivoted bottom disposed in said extension, an operating handle for said bottom disposed at the outer face of the removable casing, and means in the collecting casing for driving insects into the removable casing.

[Claims 6 to 10 not printed in the Gazette.]

874,681. BAIL ATTACHMENT. CHARLES D. HUNGATE, Camp Creek, Va. Filed May 3, 1907. Serial No. 371,707.



1. In a device of the character described, the combination of a clamping band, operating levers applied to the ends of the band, a bail, and connecting means between the bail and the operating levers.

2. In a device of the character described, the combination of a clamping band, bell crank levers applied to the ends of the band for drawing the same together, a bail, and connecting means between the bail and the bell crank levers.

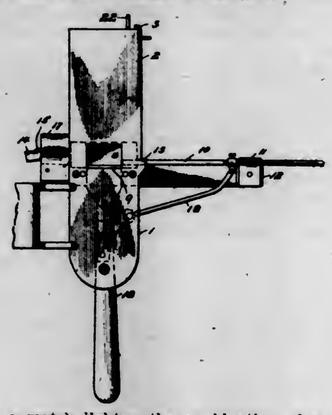
3. In a device of the character described, the combination of a clamping band, operating levers applied to the ends of the band for drawing the same together, link members connected to the operating levers, a bail, and connecting means between the bail and the link members.

4. In a device of the character described, the combination of a clamping band, bell crank levers applied to the ends of the band to draw the same together, the said bell crank levers having one pair of arms pivotally connected while the opposite pair extend outwardly in opposite directions, link members connected to the extremities of the second mentioned pair of arms, a bail, and connecting means between the bail and the said link members.

5. In a device of the character described, the combination of a clamping band, bell crank levers applied to the ends of the band, the said bell crank levers having one pair of arms pivotally connected while the opposite pair of arms extend outwardly in opposite directions, link members loosely connected to the extremities of the second mentioned pair of arms, a keeper connected to the link members, and a bail applied to the keepers.

[Claim 6 not printed in the Gazette.]

874,682. MATCH-LIGHTING DEVICE. WALLACE C. JOHNSON, Ivy, and WILLIAM B. HURT, Stockton, Mo. Filed Feb. 15, 1907. Serial No. 357,579.

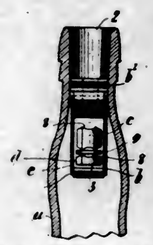


1. In a match lighter, the combination of a frame, a hopper carried thereby, a vertically disposed chute, a vertically movable plate therein, a plunger movable in the chute, an igniter, a lever for actuating the plunger, a cam formed on the bottom of the plate, and a lug on the lever adapted to engage the cam to raise the plate.

2. In a match lighter, the combination of a frame, a hopper thereon, a vertically disposed chute leading from the hopper, a plunger adapted to move in the chute to eject the match therefrom, an igniter arranged in the path of the ejected match, a vertically movable plate in the chute for assisting in the feed of the matches, a cam formed at the edge of the plate, a lever pivoted below the plate, a lug on the lever adapted to engage the cam for raising the plate, a link connecting the lever with the plunger, and a lug on the plate adapted to engage the link for holding the plate in elevated position during the movement of the plunger.

3. In a match lighter, the combination of a frame, a hopper thereon, a vertically disposed chute leading from the hopper, a plunger adapted to move in the chute to eject the match therefrom, an igniter arranged in the path of the ejected match, a vertically movable plate in the chute for assisting in the feed of the matches, a cam formed at the edge of the plate, a weighted lever arranged below the said plate which normally assumes a depending position, a link connecting the lever with the plunger and arranged to hold the latter in withdrawn position when the lever is depending, and means on the lever for raising the said plate and permitting the same to fall by gravity.

874,683. NON-REFILLABLE BOTTLE. HAROLD W. E. JOSLING, London, England. Filed Dec. 28, 1906. Serial No. 349,884.



1. In a non-refillable bottle, a hollow tube secured within the neck of the bottle, a ring forming a valve seat fixed in one end of said tube, a valve member having an irregular face and also a substantially plain face slidable in the tube, a movable member having opposite irregular faced ends coöperative with the valve member, and a washer interposed between the valve and the movable member.

2. In a non-refillable bottle, a hollow tube having a ring at one end and a shoulder at the opposite end, a valve element having a flat face and an irregular face slidable in said tube, a movable member operative upon said valve element and having opposite irregularly shaped ends to afford a fluid passage-way.

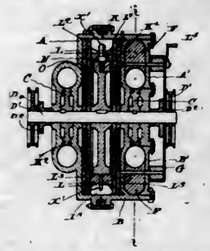
3. In a non-refillable bottle, a hollow tube having a ring at one end and a shoulder at the opposite end, a valve element having a flat face and an irregular face slidable in said tube, and a movable member operative upon said valve element and having opposite irregularly shaped ends to afford a fluid passage-way, and a washer intermediate the movable member and the valve element.

4. In a non-refillable bottle, a hollow shell arranged within the neck of the same, a ring forming a valve seat fixed in one end of said shell, a valve having an irregular face slidable in the shell, and irregularly shaped elements also slidable within the shell and operative upon the valve.

5. In a non-refillable bottle, a hollow tube carried within the neck of the bottle and having a ring at one end to form a valve seat, a shoulder at the opposite end of said tube, a plurality of movable elements having irregularly shaped faces arranged within the tube between the said shoulder and valve seat, one of said elements having a substantially plain face adapted to disengage and engage with the valve seat for opening and closing the neck of the bottle when moved in different positions, and a washer element interposed between two of the irregularly faced elements.

[Claims 6 to 11 not printed in the Gazette.]

874,684. ROTARY ENGINE. HOMER A. KING, Colton, Cal. Filed Oct. 15, 1906. Serial No. 339,108.



1. In a rotary engine, a cylinder-head operated by sprocket-chain and cam-mechanism on the revolving shaft, when running in one direction.

2. A cylinder-head, in a rotary engine, oscillated by sprocket-chain and cam-mechanism on the revolving shaft to run the engine in either direction.

3. Two cylinder-heads, each one near the periphery but on opposite extremities of the annular cylinder of a rotary engine, oscillated by sprocket-chain and cam-mechanism on the revolving shaft for running the engine in one direction.

4. Two or more cylinder-heads, in a rotary engine, oscillated by sprocket-chain and cam mechanism on the revolving shaft for running the engine in either direction.

5. In a rotary engine, a revolving disk bearing adjustable valves admitting motive-fluid alternately through inlets into the annular cylinders of two or more engines.

[Claims 6 and 7 not printed in the Gazette.]

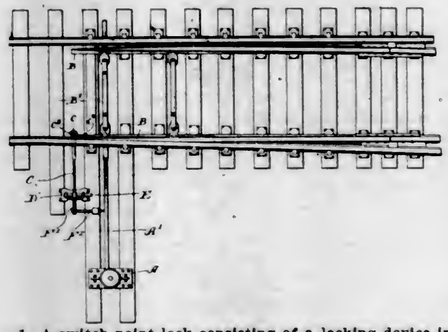
874,685. BOTTLE-STOPPER. GEORG KIRKEGAARD, New York, N. Y. Filed Oct. 5, 1906. Serial No. 337,507.



1. A bottle stopper comprising a metallic cap containing a packing material and having a number of depending fingers around its periphery, a handle or tail-piece extending from one of the fingers, each finger having an inwardly extending lug for engaging the neck of a bottle and stiffening ribs surrounding said lugs and extending upward to the top of the cap; the inner surface of the flange being provided with fracture grooves parallel to the fingers, one of said grooves being on either side of the finger from which the handle extends.

2. A bottle stopper comprising a sheet metal cap containing packing material and having a depending flange, fingers extending from the lower edge of said flange and provided with a reinforcement extending from their lower ends upward through the width or depth of the flange, one of said fingers having a handle or tail-piece provided with a reinforcement extending through its handle and continuing through the length of the finger to which it is attached and the width of the flange, the inner surface of the flange being provided with fracture grooves, one of said grooves being on each side of the finger from which the handle extends.

874,686. SWITCH-POINT LOCK. JAMES B. LATIMER, Chicago, Ill., assignor to Arthur D. Cloud, Frank M. Patterson, and Fred W. Rizer, Chicago, Ill. Filed Oct. 2, 1906. Serial No. 337,094.



1. A switch point lock consisting of a locking device independent of the switch actuating mechanism, a longitudinally reciprocating lock-rod fixed at its inner end to the switch points and adapted for locking engagement at its outer end with said locking device and means controlled by the shifting of the switch points to automatically move said locking device from an intermediate or unlocking position to a locking position.

2. A switch point lock consisting of an endwise movable lock-rod attached to and extending laterally from the switch-points, a locking device coöperating with the outer end of the rod for positively locking the switch-points, means for setting the locking device in a lock-set position to release the switch-points, and means controlled by movement of the switch-points for automatically locking the switch in a position towards which said points are shifted.

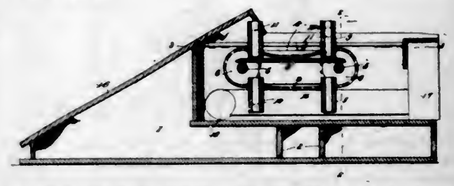
3. A switch-point lock consisting of an endwise movable lock-rod attached to and extending laterally from the switch-points, a locking device coöperating with the outer end of the lock-rod for positively locking the switch-points, means for setting the locking device in a lock-set position to release the switch points and gravity acting means controlled by movement of the switch-points for automatically locking the switch in a position towards which said points are shifted.

4. A switch-point lock consisting of a locking device for positively locking the switch-points and embracing an operating lever which swings in a plane transverse to the direction of movement of the switch-points, means whereby said lever is arrested in a releasing or lock-set position, and means whereby the lever swings to its locking position upon subsequent movement of the switch-points.

5. A switch-point lock comprising, in combination with the switch-points and an endwise movable rod attached to and extending laterally therefrom, a locking device coöperating with the outer end of said rod including a swinging operating lever and means whereby said lever is arrested in a lock-set position to release the switch-points, constructed upon subsequent shifting of the switch-points and endwise movement of said rod to permit said lever to automatically swing into position to lock the switch-points in place.

[Claims 6 to 19 not printed in the Gazette.]

874,687. WAVE OR TIDE MOTOR. HENRY J. LAWRENCE, Longbeach, Cal. Filed June 18, 1907. Serial No. 379,625.



1. In a hydraulic motor, the combination of a casing provided with a ballast receiving chamber, and a motor mechanism mounted upon the casing.

2. In a hydraulic motor, the combination of a casing provided with a ballast receiving chamber, endless belts mounted within the casing, floats carried by the endless belts, and means for directing the water against the floats.

3. In a hydraulic motor, the combination of a casing having an upwardly inclined wall at one end thereof and a mouth at the opposite end, endless belts mounted within the casing, and floats carried by the endless belts, the said inclined wall directing the water against the floats when moving in one direction while the water entering through the before mentioned mouth acts upon the floats when moving in an opposite direction.

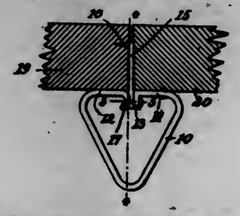
4. In a hydraulic motor, the combination of a casing comprising sides connected by a transverse partition, endless belts mounted within the casing, floats carried by the endless belts and moving in opposite directions upon opposite sides of the transverse partition, and means for directing the water against the oppositely moving floats.

5. In a hydraulic motor, the combination of a casing comprising sides connected by a transverse partition, the said casing having an upwardly inclined wall at one end thereof and a mouth at the opposite end, endless belts mounted within the casing, floats carried by the endless belts and moving in opposite directions upon opposite sides of the transverse partition, the before mentioned

inclined walls serving to direct the water against the floats upon one side of the partition while the water entering through the before mentioned mouth acts upon the floats upon the opposite side of the partition.

[Claims 6 to 8 not printed in the Gazette.]

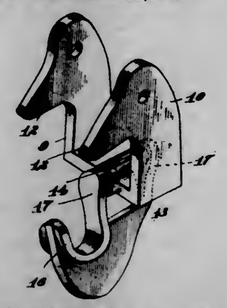
874,688. DOOR-FASTENER. ARTHUR L. LEE, New York, N. Y., assignor of one-half to Gaston Lacomme, Brooklyn, N. Y. Filed Oct. 17, 1907. Serial No. 397,791.



1. In a door fastener, a resilient bail having a pair of axially opposed shanks, combined with a hook pivoted to one of said shanks and engaged by the other shank, substantially as specified.

2. In a door fastener, a resilient triangular bail having a pair of axially opposed shanks, of which one terminates in a lug and the other terminates in a catch, combined with a hook pivoted to the lug and having a recess adapted to be engaged by the catch, substantially as specified.

874,689. CAR-DOOR HOOK. TALBOT LENNOX, Chicago, Ill., assignor to McGuire-Cummings Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 31, 1904. Serial No. 239,156.



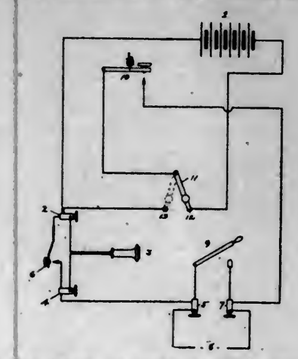
1. The combination with a car, of a car-door hook having an upper member pivotally connected with the upper portion of the car, and having an arm projecting toward the car door, and a lower retaining member pivotally connected with said upper member and arranged to swing in a plane lying at an angle with the plane of movement of the upper member.

2. The combination with a car, of a hook comprising an upper member pivotally mounted in the upper portion of the car to swing toward and from the car door, and having an arm projecting toward the car door, and a lower retaining member pivotally connected with the upper member so as to swing longitudinally of the car.

3. A car-door hook, comprising an upper member arranged to swing toward and from the car door and having an arm projecting toward the door, and a lower member pivotally connected with said upper member so as to swing only longitudinally of the car, said lower member having a retaining hook adapted to engage the door.

874,690. LINE-TESTER. EDWIN S. LINCOLN, Brookline, Mass. Filed Feb. 11, 1907. Serial No. 356,852.

1. In a line tester, in combination, a source of electrical energy and a telephonic receiver, or the like, adapted to be placed in circuit under test, and means for short circuiting the terminals of said circuit under test.

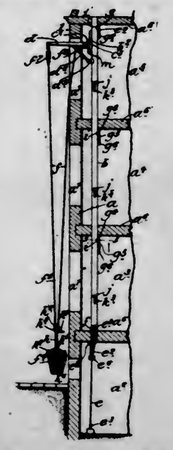


2. In a line tester, in combination, a source of electric energy, a telephone receiver, or the like, in circuit with said source of energy, a make and break device in said circuit, means for connecting into said circuit terminals of a line to be tested, and a short-circuiting device intermediate the said terminals.

3. In a line tester, in combination, a source of electric energy contained in said tester, a telephonic receiver or the like in circuit therewith, means for short circuiting said receiver, and selective means whereby said receiver may be put in circuit either with said source of electric energy contained in the tester, or with a source of electric energy contained in the line under test.

4. In a line tester in combination, a source of electrical energy, a telephone receiver or the like, means for short circuiting said receiver, means for putting in circuit with said receiver the line to be tested, means for short circuiting said line, selective means by which said telephone receiver may be put in circuit either with source of electric energy in the line tester or with source of energy in line under test, and a make and break device for controlling passage of current through said receiver.

874,691. FIRE-ESCAPE. CHARLES L. LINDQUIST, Brooklyn, N. Y. Filed Sept. 5, 1907. Serial No. 391,414.



1. A fire-escape apparatus, comprising a stand pipe, a casing connected with the upper end portion of the stand pipe, a slide movable vertically in said casing and provided with an arm which passes outwardly therethrough, means for locking said slide in its lowest position, a supplemental arm pivoted to said first named arm, a brace pivoted to the supplemental arm and to the stand pipe, a rope connected with the supplemental arm and adapted to support a cage or basket, said rope being passed around a pulley mounted in the end of the brace adjacent to the supplemental arm and over a pulley at the lower end of said casing and into and downwardly through said stand pipe, and means for operating said rope to raise and lower the cage or basket.

2. A fire-escape apparatus, comprising a stand pipe, a casing connected with the upper end portion of the stand pipe, a slide movable vertically in said casing and provided with an arm which passes outwardly therethrough, means for locking said slide in its lowest position, a supplemental arm pivoted to said first named arm, a brace pivoted to the supplemental arm and to the stand pipe, a rope connected with the supplemental arm and adapted to support a cage or basket, said rope being passed around a pulley mounted in the end of the brace adjacent to the supplemental arm and over a pulley at the lower end of said casing and into and downwardly through said stand pipe, means for operating said rope to raise and lower the cage or basket, and devices to control the descent of said cage or basket.

3. In an apparatus of the class described, a stand pipe which passes vertically through the separate stories of the building and into the basement, two vertically arranged rods mounted in the basement on the opposite sides of the stand pipe, a vertically movable weight mounted on said rods, sheaves connected with said weight, sheaves supported between the tops of said rods, a rope wound on said sheaves and one end of which is secured and the other end passed up through said stand pipe, and another rope connected with said weight and passed up through said stand pipe.

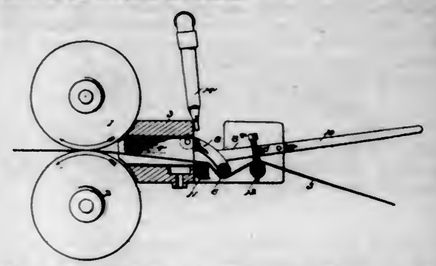
4. In an apparatus of the class described, a stand pipe which passes vertically through the separate stories of a building and into the basement, two vertically arranged rods mounted in the basement and on the opposite sides of the stand pipe, a vertically movable weight mounted on said rods, sheaves connected with said weight, sheaves supported between the tops of said rods, a rope wound around said sheaves and one end of which is secured and the other end passed up through said stand pipe, an arm connected with the top portion of the stand pipe and adapted to be projected through a window and folded inwardly thereof and with the outer end portion of which said rope is connected, a cage or basket adapted to be raised and lowered by said rope, and means for controlling the movement of said parts.

5. In an apparatus of the class described, a stand pipe which passes vertically through the separate stories of a building and into the basement, two vertically arranged rods mounted in the basement and on the opposite sides of the stand pipe, a vertically movable weight mounted on said rods, sheaves connected with said weight, sheaves supported between the tops of said rods, a rope wound around said sheaves and one end of which is secured and the other end passed up through said stand pipe, an arm connected with the top portion of the stand pipe and adapted to be projected through a window and folded inwardly thereof and with the outer end portion of which said rope is connected, a cage or basket adapted to be raised and lowered by said rope, means for controlling the movement of said parts, and devices for raising said weight when in its lowest position and sounding an alarm from the various floors or stories of the building.

[Claims 6 and 7 not printed in the Gazette.]

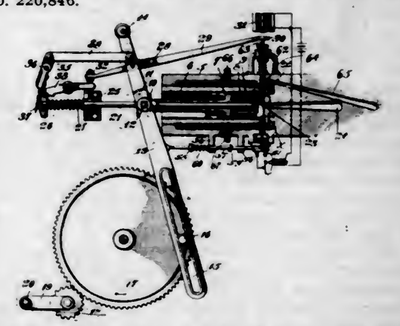
874,692. MACHINE FOR SLAG-BREAKING. CARL G. LINDSTRAND, Bisbee, Ariz. Filed July 29, 1907. Serial No. 386,125.

1. The herein-described slag breaking apparatus, comprising a casing adapted to be supported in front of the rollers of a mill, a frame pivotally mounted on said casing and embodying a transversely extending rod, a pair of spaced beams mounted in front of said casing on opposite sides of said rod, a lever secured to said frame and adapted to move the rod downwardly between the beams, and a blast nozzle mounted above the casing adapted to direct a blast of air towards the beams.



2. A slag breaking apparatus comprising a casing adapted to be mounted in front of the rollers of a mill, transversely extending spaced beams supported in front of said casing, and a frame pivotally mounted on said casing at the front thereof and consisting of a transversely extending rod adapted to move between the beams, and two side arms connected to said rod, one of said side arms being formed with a lever extension.

874,693. EXPLOSIVE-TURBINE. FREDERICK W. LUEDKE, Trenton, N. J. Filed Aug. 15, 1904. Serial No. 220,846.



1. In a device of the class described, the combination with a turbine wheel, of an explosion cylinder having an exit adapted to deliver its charge to the turbine wheel for operating said wheel, means controlling the passage of the exploded charge through said exit to the turbine wheel, and means for exploding a charge within the cylinder, said charge exploding means being adapted to release the means controlling the passage of the exploded charge to the exit.

2. In a device of the class described, the combination with a turbine wheel, of an explosion cylinder having an exit adapted to deliver its charge to said turbine wheel for operating same, a valve closing the exit, means for exploding a charge within the cylinder, said means operating means whereby the valve is released, and auxiliary means adapted to operate the valve should the last mentioned means fail to act.

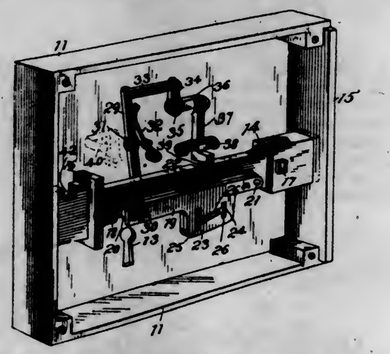
3. In a device of the class described, the combination with a turbine wheel, of an explosion cylinder having an exit adapted to deliver a charge to the turbine wheel, means controlled by the turbine wheel for closing the exit, means automatically operated by the turbine wheel for releasing said closing means, and auxiliary means operated by the expanded gases of the explosion adapted to release said closing means should the turbine operated means fail to act.

4. In a device of the class described, the combination with a turbine wheel, of explosion cylinders having exits adapted to deliver their charges direct to the turbine wheel, valves closing said exits, and automatic electric means controlling the release of said valves at a predetermined time.

5. In a device of the class described, the combination with a turbine wheel, of explosion cylinders having exits adapted to deliver their charges direct to the turbine wheel, valves closing said exits, and electrical means operated by the turbine wheel for automatically releasing said valves at a predetermined time.

[Claims 6 to 23 not printed in the Gazette.]

874,694. LOCK. FRANK F. MILLER, New York, N. Y., assignor to Martin B. Falsey, New York, N. Y. Filed Apr. 22, 1907. Serial No. 369,516.



1. In a lock, the combination with a casing, of a bolt slidingly held in said casing, a plurality of tumblers pivotally held to said bolt, means for limiting the movement of the tumblers to hold the same and prevent movement of the bolt, a detent movable toward the bolt and adapted to engage a part thereof, a lever, and means operatively connected to the lever and to the detent whereby the latter may be operated to engage the bolt and rigidly hold the same when said means is moved by a key or other device.

2. In a lock, the combination with a casing, of a bolt slidingly held in said casing, a detent movable toward the bolt and adapted to engage a part thereof, a lever pivotally held to the casing and having one end thereof arranged adjacent to the bolt, a spring normally forcing the lever in one direction, a bell-crank connected at one end to the detent, and a link connecting the bell-crank at its other end to the lever whereby the detent may be operated to lock the bolt when the lever is moved.

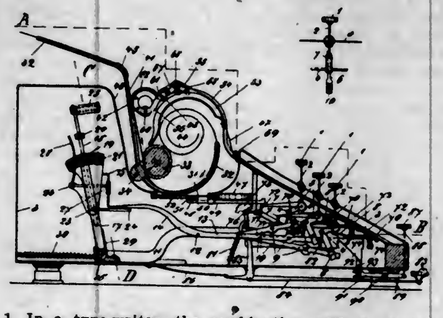
3. In a lock, the combination with a casing, of a bolt held in said casing and provided with an engaging part, a detent movable toward the bolt and adapted to engage a part thereof, a lever pivotally held to the casing and having one end thereof arranged adjacent to the bolt, a spring normally forcing the lever in one direction, a bell-crank connected at one end to the detent, and means connecting the bell-crank at its other end to the lever whereby the detent may be operated to lock the bolt when the lever is moved.

4. In a lock, the combination with a casing, of a bolt slidingly held in said casing and provided with a slot, a detent movable toward the bolt and adapted to enter the slot, a lever pivotally held to the casing and having one end thereof arranged adjacent to the bolt, a spring normally forcing the lever in one direction, a plurality of tumblers carried by the bolt, a bell-crank connected at one end to the detent, and a link connecting the bell-crank at its other end to the lever whereby the detent may be operated to lock the bolt when the lever is moved.

5. A lock comprising a casing, a bolt slidingly held in said casing and provided with a ward or fixed tumbler part, a plurality of tumblers pivotally held to the bolt and each provided with an I-shaped slot arranged lengthwise thereof, a projection on the casing entering the slot and adapted to prevent the bolt from being thrown unless the projection registers with the longer or horizontal part of the slots, springs normally forcing the tumblers downward, means for limiting the throw of the bolt, and mechanism independent of the tumblers and bolt adapted to engage the latter unless the bolt is thrown by a properly made key.

[Claims 6 and 7 not printed in the Gazette.]

874,695. TYPE-WRITER. EHRENFRIED MIRUS, Cologne, Germany. Filed July 6, 1905. Serial No. 268,551.



1. In a type-writer, the combination with a carriage, of means for guiding the paper in said carriage, a stationary holder with a printing block which faces a nearly vertical part of the paper from the front, an inking band guided over said printing block in front of the paper, a movable type carrier adapted to strike the paper from behind against said inking band on said printing block, and means for actuating said movable type carrier.

2. In a type-writer, the combination with a carriage, of means for guiding the paper in said carriage, a stationary block holder provided with a cross recess, a printing block of hard material (ivory and the like) which is adapted to be introduced from a side into the cross recess of said stationary block holder and faces the paper from the front, an indicator on said stationary block holder, an inking band guided over said printing block in front of the paper, a movable type carrier adapted to strike the paper from behind against said inking band on said printing block, and means for actuating said movable type carrier.

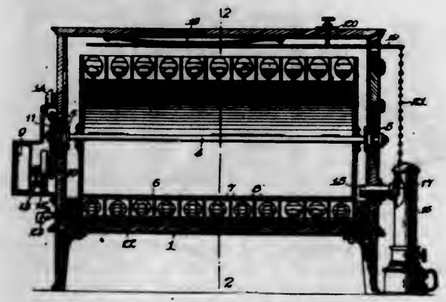
3. In a type-writer, the combination with a carriage having a slot, of means for guiding the paper in said carriage over the slot, a stationary holder with a printing block which faces the paper over the slot from the front, an inking band guided over said printing block in front of the paper, an oscillating type segment adapted to strike the paper from behind against said inking band on said printing block, and means for adjusting and actuating said oscillating type segment.

4. In a type-writer, the combination with a carriage having a horizontal slot extending nearly over the whole width, of means for guiding the paper in said carriage, an axle on said carriage along one edge of its slot, a plurality of elastic arms adjustable on said axle and adapted to guide narrow papers, a stationary holder with a printing block which faces the paper from the front, an inking band guided over said printing block in front of the paper, an oscillating type segment adapted to strike the paper from behind against said inking band on said printing block, and means for adjusting and actuating said oscillating type segment.

5. In a type-writer, the combination with a carriage, of a paper holder on said carriage and being bent on the front to form a trough open at the sides and being bent rearwardly in the upper part of its rear wall, a slot in the rear wall of said paper holder and extending nearly over the whole width, a cover secured on the frame and bent rearwardly over the trough of said paper holder, a pair of guiding rollers on both sides of the rear wall of said paper holder beneath said slot, a block holder on said cover provided with a recess opposite to said slot, a printing block in the recess of said block holder, two band rollers on the lower and upper sides of said block holder, an inking band adapted to be vertically led from one to the other of said two band rollers over said printing block in front of the paper, an oscillating type segment adapted to strike the paper from behind against said inking band on said printing block, and means for actuating said oscillating type segment.

[Claims 6 to 11 not printed in the Gazette.]

874,696. AUTOMATIC INCUBATOR. WILLIAM F. M. MCCARTY, Pleasantville, N. Y. Filed Apr. 11, 1907. Serial No. 367,546.



1. In an automatic incubator, the combination of a rotatable egg carrying cylinder, a moistening device arranged in the path of travel of the eggs, and means for imparting periodic rotations to said cylinder, substantially as described.

2. In an automatic incubator, the combination of a rotatable cylinder, egg holding pockets formed on the circumference thereof, a moistening device arranged in the path of travel of the eggs within said pockets, and means for imparting periodic rotations to said cylinder, substantially as described.

3. In an automatic incubator, the combination of a rotatable cylinder, egg holding pockets formed on the circumference thereof, spring cages mounted within said pockets, and adapted to loosely hold the eggs, a moistening device arranged in the path of travel of the eggs within said pocket, and means for imparting periodic rotation to said cylinder, substantially as described.

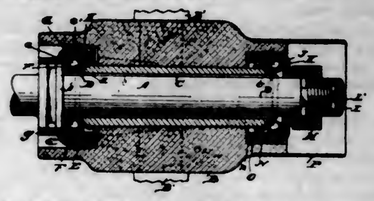
4. In an automatic incubator, the combination of a suitably mounted casing, having a transparent section, means for supplying heat thereto, a rotatable egg carrying cylinder mounted therein, a moistening device arranged in the path of travel of the eggs, and means for imparting periodic rotation to said cylinder, substantially as described.

5. In an automatic incubator, the combination of a suitably mounted casing provided with a thermostatically regulated heat supply, a rotatable egg carrying cylinder mounted therein, a moistening device arranged in the path of travel of the eggs, and means for imparting periodic rotation to said cylinder, substantially as described.

[Claim 6 not printed in the Gazette.]

874,697. VEHICLE-HUB. GEORGE A. MCKEEL, Jackson, Mich., assignor to George A. McKeel & Company, Limited, Jackson, Mich., a Partnership Association of Michigan. Filed June 29, 1907. Serial No. 381,397.

1. In a ball bearing for vehicles, a wood portion, an axle, a sleeve adapted to loosely encircle the axle set in the wood portion, said sleeve beveled at its forward end to receive a cone shaped cup, the cone shaped cup supported on the end of the sleeve, a ball cup sleeved over the axle, a plurality of balls housed therein bearing on the inner walls of the ball cup, a nut designed to engage the end of the axle, provided with a projecting flange, and a lock nut having a screw-threaded engagement with the ball cup and adapted to engage the flange of the nut engaging the end of the axle.

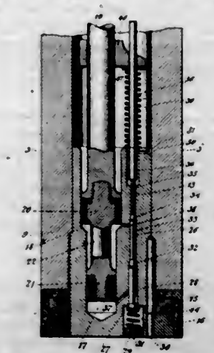


2. In a ball bearing for vehicles, a wood portion, an axle, a sleeve adapted to loosely encircle the axle set in the wood portion, said sleeve beveled at its forward end to receive a cone shaped cup, the cone shaped cup supported on the end of the sleeve, a ball cup sleeved over the axle, a plurality of balls housed therein bearing on the inner walls of the ball cup, a nut designed to engage the end of the axle, provided with a projecting flange, means for limiting the movement of the nut, and a lock nut having a screw-threaded engagement with the ball cup and adapted to engage the flange of the nut engaging the end of the axle.

3. In a ball bearing for vehicles, a wood portion, an axle, a sleeve adapted to loosely encircle the axle set in the wood portion being beveled at one end to receive a cone shaped cup, the cone shaped cup supported on the end of the sleeve, a ball cup sleeved over the axle, means for securing the ball cup in position, a plurality of balls housed therein, a ball retainer sleeved in the ball cup having an inwardly projecting flange to confine the balls and extending beyond the end of the ball cup and provided with an outwardly extending flange to support an annular dust guard, and the dust guard housed within the channel formed by the flange of the ball retainer and the end of the ball cup.

4. In a ball bearing for vehicles, a wood portion, an axle, a sleeve to encircle the axle housed within the wood portion and rotating therewith, said sleeve beveled at both ends, a pair of cone shaped cups encircling the ends of the sleeve, a ball cup, a reinforcing cup within which the ball cup is housed having an annular collar adapted to engage the axle, a ball cup for the outer end of the hub, a nut adapted for screw-threaded engagement with the end of the axle to adjust the ball cup, means for controlling the movement of said nut, and a lock nut having a screw-threaded engagement with the ball cup also adapted to control the movement of said nut.

874,698. HYDRAULIC JACK. JAMES W. NELSON, New York, N. Y. Filed May 21, 1906. Serial No. 317,865.



1. A self-contained, multiple-pump hydraulic jack having a fluid-passage not including the pump-bores and providing the only means of communication between reservoir and ram-chamber.

2. A multiple-pump hydraulic jack having a valved fluid-passage separate from the pump-bores and communicating therewith and means for holding all of the valves off their seats.

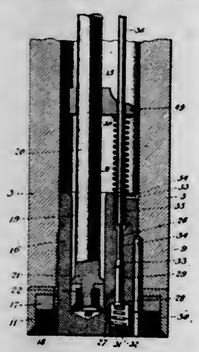
3. A self-contained multiple-pump hydraulic jack having a continuous and straight fluid-passage from the reservoir to ram-chamber and providing the only means of communication therebetween.

4. A multiple-pump hydraulic jack having a fluid passage from reservoir to ram chamber separate from pump bores and means for controlling the direction of flow through said passage.

5. A multiple-pump hydraulic jack having a continuous straight fluid-passage from reservoir to ram chamber, valves in said passage coöperating with the pump to force liquid from said reservoir to said ram chamber, and means for positively unseating all of said valves.

[Claims 6 to 21 not printed in the Gazette.]

874,699. HYDRAULIC JACK. JAMES W. NELSON, New York, N. Y. Filed May 21, 1906. Serial No. 317,866.



1. A hydraulic jack having a continuous and straight fluid-passage from reservoir to ram chamber and providing the only means of communication therebetween.

2. A hydraulic jack having a passage providing the only means of communication between reservoir and ram chamber, said passage not including the pump chamber but communicating therewith.

3. A hydraulic jack having a passage from reservoir to ram chamber and providing the only means of communication therebetween, said passage not including the pump chamber but communicating therewith and serving for the flow of liquid in both directions.

4. In a hydraulic jack having a passage which does not include the pump chamber but communicates therewith and provides the only means of communication between reservoir and ram chamber, the combination, with the pump, of valves in said passage coöperating with said pump to force liquid into said ram chamber, and means for positively unseating said valves.

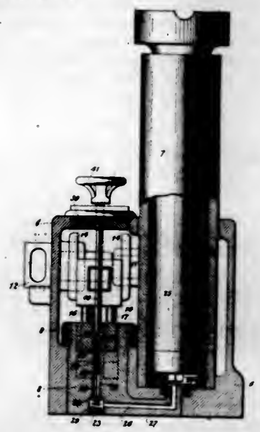
5. In a hydraulic jack having a continuous and straight fluid-passage from reservoir to ram chamber, the combination, with the pump, of superposed valves in said passage coöperating with said pump to force liquid through said passage to the ram chamber, and means acting against one of said valves only to positively unseat all of said valves.

[Claims 6 to 9 not printed in the Gazette.]

874,700. HYDRAULIC JACK. JAMES W. NELSON, New York, N. Y. Filed June 14, 1906, Serial No. 321,621. Renewed Oct. 31, 1907. Serial No. 400,071.

1. In a hydraulic jack, a pump-block provided with a plurality of parallel pump-bores and a fluid-passage from reservoir to ram-chamber separate from said pump-bores but communicating therewith.

2. In a hydraulic jack, a plurality of parallel pump-pistons, a passage from reservoir to ram chamber separate from the pump-chambers but communicating therewith, valves in said passage, and means for holding all of said valves off their seats.



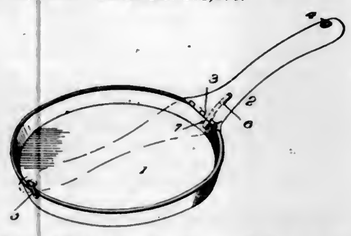
3. In a hydraulic jack, a plurality of parallel pump-pistons, a series of check-valves to control the flow from reservoir to ram chamber and means for positively unseating all of said valves by one operation.

4. In a hydraulic jack, the combination, with two parallel pumps, of a series of valves for controlling flow from reservoir to ram chamber and the first of which checks backflow from one of said pumps only, and means for positively unseating said first valve, said means being further operable to unseat all of said valves.

5. In a hydraulic jack, the combination, with two parallel pumps, of a pump-block having corresponding pump bores and a separate fluid-passage from reservoir to ram chamber separately communicating with each pump-chamber, an initial inlet valve to said passage, a final outlet valve therefrom, a valve intermediate of said pump-chambers, and means for rendering inoperative said inlet valve only or all of said valves.

[Claims 6 and 7 not printed in the Gazette.]

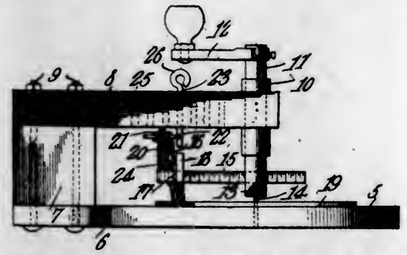
874,701. FRYING-PAN AND FOLDING HANDLE THEREFOR. FRANK P. O'NEILL, Dell, Oreg. Filed Apr. 15, 1907. Serial No. 368,276.



1. As an improved article of manufacture, a saucepan, a handle having a hinged connection with the saucepan, the handle being provided with a spring hook at its hinged end the said hook being adapted to extend across the hinge with the handle in extended position, and the saucepan being provided with a loop underneath the hinge and with which the said hook is designed for engagement, whereby to hold the handle rigidly in extended position, relative to the saucepan.

2. As an improved article of manufacture, the herein-described saucepan and handle therefor, the handle having a hinged connection with the saucepan and adapted to fold over the same and be extended from the rim of the saucepan, the saucepan being provided at one side of the hinge with a loop, and the handle being provided on the opposite side of the hinge with a spring hook adapted to extend across the hinge and be snapped into the loop.

874,702. GASKET OR WASHER CUTTER. ELIAS J. PATTON, Hastings, Nebr. Filed Mar. 25, 1907. Serial No. 364,352.



1. A machine of the class described including a work supporting table, an overhanging arm secured to the table and provided with a plurality of spaced openings, an operating shaft journaled in the free end of the arm, a cutter bar extending transversely through the operating shaft, a cutting tool secured to one end of the bar, a threaded rod carried by the cutter bar, a nut engaging the threaded end of the rod and provided with spaced radiating fingers, a spring interposed between the nut and cutter bar and operatively connected with the cutter, and a pin projecting through one of the openings in the over-hanging arm and adapted to engage the fingers on the nut for feeding the cutter to the work when the shaft is rotated.

2. A machine of the class described including a work supporting table having an over-hanging arm secured to one end thereof, a sleeve carried by the free end of the arm, an operating shaft journaled in the sleeve and provided with a terminal socket, a work centering pin secured to the table and engaging the socket, a cutter bar mounted for rotation with the shaft, a cutting tool slidably mounted for vertical movement on one end of the cutter bar, a threaded rod carried by the cutter bar, a nut engaging the threads on the rod and provided with spaced radiating fingers, a spring interposed between the nut and cutter bar and operatively connected with the cutter, and a stop pin depending from the over-hanging arm and adapted to engage the fingers on the nut for automatically feeding the cutter to the work.

874,703. INCANDESCENT GAS-LAMP. ALCORN RECTOR, New York, N. Y., assignor to Rector Gas Lamp Company, New York, N. Y., a Corporation of Connecticut. Filed July 11, 1906. Serial No. 325,686.

1. A structure such as described, comprising a burner having a central draft tube, the lower end of said draft tube being enlarged a wall concentric with the draft tube forming a flue between itself and the draft tube, said wall being adapted to enter the lower end of the mantle, a second wall concentric with the first wall and forming a circular flue delivering outside the mantle, tubes delivering air from the enlarged portion of the draft tube to the outer flue, a bunsen tube, tubes delivering air and gas from the bunsen tube to the inner flue, and a motor mounted in the enlarged end of the draft tube and operated by the draft therethrough.

2. A structure such as described comprising a burner having a central draft tube, a wall concentric with the draft tube forming a flue between itself and the draft tube, said wall being adapted to enter the lower end of a mantle, a second wall concentric with and spaced around the first wall and forming a second flue, air connections between the lower part of the draft tube and the second flue, a motor mounted in the draft tube and driven by the draft therethrough, a blower driven by the motor, and a connection between the discharge pipe of the blower and the first flue.



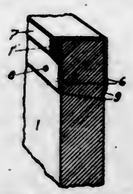
3. A structure such as described, comprising a central draft tube open at both ends, a wall concentric with the draft tube and forming a flue discharging at the top, a second wall around the first wall and forming a second flue between the two, the second flue also delivering at the top, air connections between the lower part of the draft tube and the second flue, a bunsen tube having connections with the first flue, a motor mounted in the draft tube and driven by the shaft therethrough, and a blower operated by the motor and discharging into the bunsen tube.

4. A structure such as described comprising a central draft tube open at both ends, a wall surrounding the draft tube and forming a flue discharging at the top, the said wall being adapted to enter the lower end of a mantle, a second wall concentric with the first mentioned wall and forming a second flue delivering outside the mantle, a bunsen tube, pipes leading from the bunsen tube and delivering into the first named flue, pipes leading from the lower part of the draft tube and delivering into the second flue, a motor in the draft tube operated by the draft therethrough, a blower operated by the motor, and a pipe leading from the blower to the lower part of the bunsen tube.

5. A gas lamp having a central draft tube open at the bottom, a wall concentric with and outside of the draft tube around which the mantle fits, said wall forming a flue a second wall outside the mantle and forming a flue, said second wall being inclined towards but terminating a distance from the mantle, a bunsen tube, a series of tubes leading from the bunsen tube to the flue formed around the draft tube, and a blower for creating a draft through the flue formed by the second wall.

[Claims 6 to 11 not printed in the Gazette.]

874,704. WAGON-BOX. OLIVER B. REYNOLDS, Elgin, Ill. Filed Jan. 20, 1906. Serial No. 296,959.



1. A wagon box having the edges of the side boards thereof covered with channel bars, which are clenched securely thereto, said channel bars being provided with a laterally extending bead, substantially as and for the purpose specified.

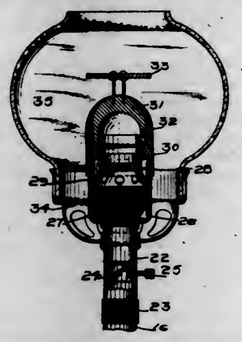
2. A wagon box having the edges of the side boards thereof covered with channel bars, which are clenched securely thereto, said channel bars being provided with in-

wardly projecting tongues on the lower edge of the flanges thereof, substantially as and for the purpose specified.

3. A wagon box having the edges of the side boards thereof covered with channel bars, which are clenched securely thereto, said channel bars being provided with laterally extending beads at the upper side and with inwardly projecting tongues on the lower edge of the flanges thereof, substantially as and for the purpose specified.

4. A wagon box having the edges of the side boards thereof covered with channel bars, which are clenched securely thereto, said channel bars being provided with inwardly projecting tongues on the lower edge of the flanges thereof, the said flanges being turned in at their end to form a continuous flange about the corners of the wagon box substantially as and for the purpose specified.

874,705. INCANDESCENT GAS-BURNER. WILLIAM T. SOLOMON, Pittsburg, Pa., assignor to Robert C. Hall, Pittsburg, Pa. Filed July 31, 1906. Serial No. 328,533.



1. An incandescent gas-burner comprising an imperforate chamber, a refractory body surmounting the chamber having a frusto-conical lower portion provided with apertures for the passage of gas and an upper portion constituting a support for a refractory light-producing mantle, substantially as specified.

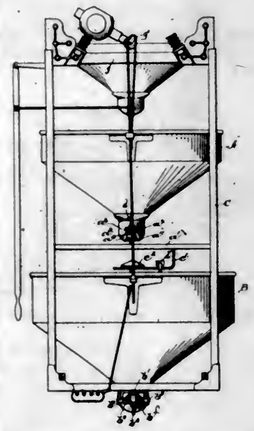
2. An incandescent gas-burner comprising an imperforate chamber, a refractory body surmounting the chamber comprising a tubular portion having a frusto-conical base provided with apertures for the passage of gas, and a removable cap portion fitting over the tubular portion and constituting a support for a refractory light-producing mantle, substantially as specified.

3. An incandescent gas-burner comprising an imperforate chamber, a refractory body surmounting the chamber comprising a tubular portion having a frusto-conical base provided with apertures for the passage of gas, a disk or diaphragm closing the top of said frusto-conical base, and a removable cap portion fitting over the tubular portion and constituting a support for a refractory light-producing mantle, substantially as specified.

874,706. GRAIN-METER. ANDREW SONANDER, Springfield, Ohio, assignor to The American Grain Meter Company, Springfield, Ohio, a Corporation of Ohio. Filed Sept. 8, 1906. Serial No. 333,762.

1. In a grain meter, the combination of hoppers including a movable weighing hopper, a rock shaft common to said hoppers, bearings for said rock shaft, connections between the hoppers supported by the rock shaft, gates for the hoppers, and means for operating the gates, a spreader below the shaft and above the bottom of said weighing hopper, substantially as specified.

2. In a grain meter, the combination of a plurality of hoppers including a weighing hopper, a supporting shaft common to said hoppers being the sole support for said hoppers, bearings at each end of the shaft, means for discharging grain from said hoppers at a predetermined time, a spreader located above the weighing hopper in the path of the grain and free from the discharging means for the grain or overcoming the impact force of the grain, substantially as specified.



3. In a grain meter, the combination of a plurality of hoppers including weighing hopper, a support, a shaft common to said hoppers, said shaft being the sole support for said hoppers, gates for said hoppers, and means for operating the gates, a source of supply for said hoppers, and a spreader located above the weighing hopper independent of the gates, substantially as specified.

4. In a grain meter, the combination of a stationary frame, a plurality of hoppers movably suspended from said frame, gates for said hoppers, and gate operating means including a slotted operating device formed with a minimum amount of friction engaging surfaces, and a spreader device located below one of said hoppers, for the purpose specified.

5. In a grain meter, the combination of an upper receiving hopper and a weighing hopper, a stationary frame, and means for supporting said hoppers from said frame, gates for said hoppers, and means for operating the gates of the upper hopper having a preliminary amount of movement before the gates are operated, and means for operating the gates of the lower hopper at the commencement of the movement of said hopper, substantially as specified.

[Claims 6 to 13 not printed in the Gazette.]

874,707. ELECTROLYTIC REFINING OF TIN. ELMER A. SPERRY, Brooklyn, N. Y. Filed Sept. 15, 1906. Serial No. 334,754.

1. The method of refining tin which consists in dissolving a tin bearing material in a suitable electrolyte passing an electric current through an electrolytic diaphragm within electrolyte, and depositing tin at the cathode.

2. The method of refining tin which consists in electrolytically dissolving tin bearing material at the anode in the suitable electrolyte and depositing tin at the cathode, and suitably isolating the cathode from contact with the residues of such solution.

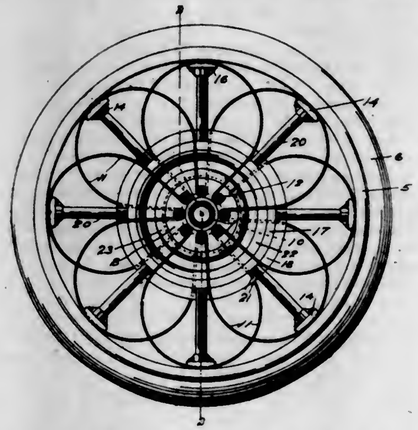
3. The method of refining tin which consists in dissolving a tin bearing material in a suitable electrolyte passing an electric current through an electrolytic diaphragm within the electrolyte depositing tin at the cathode and circulating the electrolyte.

4. The method of refining tin which consists in dissolving a tin bearing material in a suitable compound electrolyte passing an electric current through an electrolytic diaphragm within the electrolyte depositing tin at the cathode and circulating the anolyte.

5. The method of refining tin which consists in melting the raw alloy, bringing the molten material to a high temperature, thus changing its electro depositing characteristics and electro depositing the mass so treated in a suitable electrolyte.

[Claims 6 to 17 not printed in the Gazette.]

874,708. VEHICLE-WHEEL. CHARLES W. STAPLETON, New York, N. Y. Filed Oct. 7, 1905. Serial No. 281,822.



1. A vehicle wheel having elastic spokes, and a buffer interposed between the ends of said spokes adapted to limit the action of the same.

2. A vehicle wheel having a plurality of spokes composed of spring metal, and a buffer interposed between the ends of said spokes adapted to limit both the vertical and lateral action of the same.

3. In a vehicle wheel, a plurality of spokes composed of spring metal curvilinear in form, extending between and connecting the hub and felly, and a buffer interposed between said spokes thereby limiting the spring action of the same.

4. In a vehicle wheel, a plurality of spokes curvilinear in form composed of spring metal extending between and connecting the hub with the felly, and a buffer mounted between the ends of said spokes intermediately between the hub and the felly, as and for the purpose set forth.

5. In a vehicle wheel a plurality of spokes composed of spring metal, curvilinear in form, having both ends thereof secured in the hub, said spokes overlapping each other and the ends thereof being on opposite ends of said hub, and a buffer intermediate between the hub and the felly.

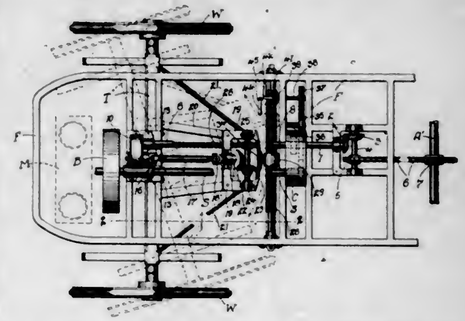
[Claims 6 to 10 not printed in the Gazette.]

874,709. STEERING-GEAR. PETER STEINHAUER, St. Louis, Mo. Filed July 25, 1907. Serial No. 385,504.

1. In a vehicle having a fixed truck and a horizontally oscillating truck, axles on the trucks, means for imparting rotation to the axles for any position of the oscillating truck, and a fulcrum piece for permitting an oscillation of the horizontally oscillating truck, during the travel of the vehicle in a vertical plane disposed transversely to the axle of said truck, substantially as set forth.

2. In a vehicle, a truck rotatable horizontally about a fixed axis, and a fulcrum plate having a knife-edge about which the truck may oscillate in a vertical plane, substantially as set forth.

3. In a vehicle, a body-frame, a stud depending therefrom, a rounded head at the lower end of the stud, a truck having a pocket for the reception of the stud-head, a fulcrum plate interposed between the stud-head and bottom of the pocket, said plate having plane bottom faces meeting in an edge resting on the pocket-bottom, means for maintaining the fulcrum edge in parallel relation to the truck-axle, whereby the truck is capable of horizontal oscillation about the axis of the stud, and of vertical oscillation about the edge of the fulcrum-plate, substantially as set forth.



4. In a vehicle, a body-frame, a stud depending therefrom, a rounded head at the lower end of the stud, a truck having a pocket for the reception of the stud-head, a fulcrum-plate interposed between the stud-head and bottom of the pocket and having a knife-edge resting on said bottom, means for maintaining said knife-edge permanently in parallel relation to the truck-axle, whereby the truck is at all times susceptible of horizontal oscillation about the stud-axis, and of vertical oscillation about the knife-edge, a motor, and intermediate gearing between the motor and truck for imparting rotation to the axle thereof and oscillation about the stud aforesaid, substantially as set forth.

5. In combination with a vehicle body-frame, a truck having a central pocket, a stud projecting from the frame and entering the pocket, a knife-edge fulcrum plate in the pocket supporting said stud, and a locking pin carried by the fulcrum-plate and loosely engaging a socket in the bottom of the pocket for maintaining the knife-edge in permanent relation to the truck-axle, substantially as set forth.

[Claim 6 not printed in the Gazette.]

874,710. NECKTIE. ALFRED SWANSON, Albuquerque, N. Mex. Filed Oct. 29, 1906. Serial No. 341,132.



In a necktie, a fastening plate having a lug at each end and provided with a slot adjacent to one edge and a curved opening substantially at its center, a strip of folded material passed through said slot and tied into a knot to simulate a four-in-hand tie, the plate being then turned back upon the rear side of the knot so as to be substantially longitudinal of the tie and secured thereto by means of threads passing over said lugs.

874,711. CLOTHES STICK AND CATCHER. AGNES THUESON, Anaconda, Mont. Filed June 11, 1906. Serial No. 321,216.

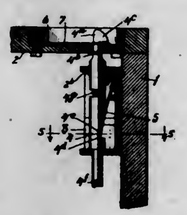
As a new article of manufacture, a clothes stick consisting of a straight cylindrical wooden stick with a relatively long tapered end finished with a rounded point and having

a plurality of radially disposed pins projecting from said stock above the tapered end, said pins being disposed in



different parallel planes perpendicular to the axis of said stock.

874,712. SEAL-LOCK. EMIL TYDEN, Hastings, Mich. Filed June 11, 1906. Serial No. 321,092.



1. A seal lock comprising a bolt which is mounted for two movements, one longitudinal and the other transverse to the longitudinal movement; an element which is adapted to be engaged by the bolt in said transverse movement for securing a closure said bolt having means for engaging such element; a rupturable seal lodged in position obstructing movement of said elements for opening the closure, the bolt having means engaging the seal by longitudinal movement of the bolt inward for retaining the seal in such obstructing position, and automatic means engaging the bolt to retain it at such seal-retaining position.

2. A seal lock comprising a bolt which has two movements, one longitudinal and the other transverse thereto said bolt being provided with means for engaging a closure; a closure which is engaged in said transverse movement of the bolt and a rupturable seal lodged outside the closure and obstructing the opening movement of the latter, the bolt having means for engaging the seal by longitudinal movement of the bolt inward and automatic means engaging and retaining the bolt at the limit of such inward movement.

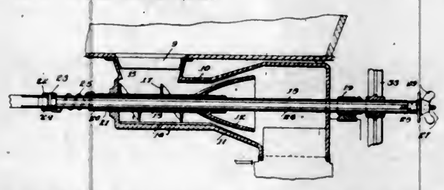
3. In a seal lock comprising a bolt which is mounted for two movements, one longitudinal and the other transverse to the longitudinal movement, an element which is adapted to be engaged by the bolt in said transverse movement for securing a closure said bolt having means for engaging such element; a spring which reacts to cause such movement; a rupturable seal lodged in position obstructing the movement of said element for opening the closure, the bolt having means for engaging the seal by longitudinal movement of the bolt inward for retaining the seal in such obstructing position, said spring being adapted for engaging the bolt to retain it at seal-retaining position.

4. A seal lock comprising a bolt which has two movements, one longitudinal and the other transverse thereto said bolt being provided with means for engaging a closure; a closure which is engaged in the transverse movement of the bolt; a spring which reacts to cause such movement; a rupturable seal lodged outside the closure and obstructing the movement of the latter, the bolt having means for engaging the seal by longitudinal movement of the bolt inward, and being adapted also for engagement by the spring for retention thereby at the limit of such inward movement.

5. A seal lock comprising a bolt which is mounted for two movements, one longitudinal and the other transverse thereto; a plate which is apertured to permit the bolt to be thrust through it, the bolt having a projection which engages the margin of the aperture by the transverse movement of the bolt after it is thus thrust through the plate to secure the plate against movement relative to the bolt; a rupturable seal lodged in position obstructing such movement of the plate, the bolt having means engaging the seal by inward longitudinal movement of the bolt and adapted by such engagement to retain the seal in said obstructing position, and automatic means engaging the bolt to retain it at such seal-retaining position.

[Claim 6 not printed in the Gazette.]

874,713. MILL. ADOLFO WEBER, Milan, Italy. Filed Apr. 16, 1906, Serial No. 312,019. Renewed June 8, 1907. Serial No. 378,003.



1. In a mill, the combination of a grinding mechanism embodying a stationary shell and a rotary bur, a rotary shaft having the bur mounted thereon and splined thereto, a sleeve mounted on said shaft to move longitudinally thereon and to rotate therewith, a tension spring between the sleeve and bur, and means for adjusting the said sleeve to vary the tension of the spring.

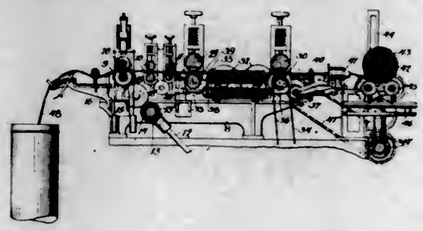
2. In a mill, the combination of the grinding mechanism embodying a stationary shell and a rotary bur, a hollow shaft having the bur mounted thereon and splined thereto, a sleeve mounted on said shaft to turn therewith and move longitudinally thereon, a tension spring interposed between said sleeve and the rotary bur, a rod located in said hollow shaft and having connection with the said sleeve, and means for moving said rod longitudinally and securing the same in the adjusted position.

3. In a mill, the combination of the grinding mechanism embodying a stationary shell and a rotary bur, a hollow shaft having the rotary bur mounted thereon and splined thereto, a sleeve mounted on the hollow shaft, to turn therewith and to move longitudinally thereon, a tension spring between said sleeve and the rotary bur, a rod arranged within the hollow shaft, a key connecting the said sleeve and rod and passed through longitudinal slots in opposite sides of the hollow shaft to cause the rod, shaft and sleeve to rotate together while admitting of relative longitudinal movement of the rod and sleeve, a set nut threaded upon a projecting end of said rod, and a jam nut for securing the part in adjusted position.

874,714. METHOD OF MAKING WORSTED YARNS. VALORUS S. WESTCOTT, Pawtucket, and FRANK W. POTTER, Central Falls, R. I. Filed Nov. 14, 1906. Serial No. 343,410.

1. The herein described process for the production of worsted yarns comprising the evening of the sliver preparatory to drawing and spinning.

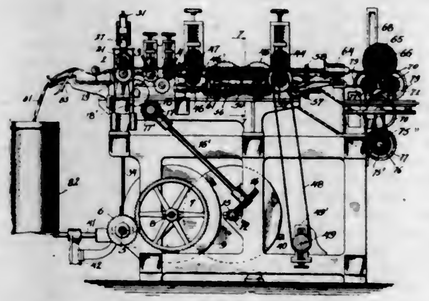
2. The method of producing a yarn of wool of substantially uniform weight for a given unit of length comprising the automatic evening of the sliver preparatory to the drawing operation.



3. The herein described yarn process comprising the usual carding, combing, gilling, drawing and spinning operations, and an intermediate process connected therewith for evening the sliver to a substantially uniform weight for a given unit of length.

4. The herein described yarn process comprising the usual carding, combing, gilling, drawing and spinning operations, and as a step intermediate the combing and drawing automatically evening the sliver to a substantially uniform weight for a given unit of length.

874,715. WOOL EVENING AND DRAWING MACHINE. VALORUS S. WESTCOTT, Pawtucket, and FRANK W. POTTER, Central Falls, R. I. Filed Nov. 14, 1906. Serial No. 343,411.



1. A machine of the character described comprising a gill box, and mechanism for delivering thereto a sliver of substantially uniform weight for a given unit of length.

2. A machine of the character described comprising a gill box having back drawing rolls and means for rotating the same, and mechanism for delivering to said rolls a sliver of substantially uniform weight for a given unit of length.

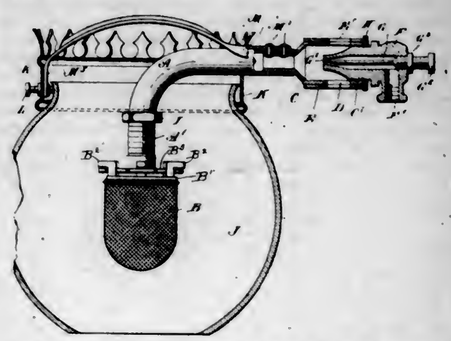
3. A machine of the character described comprising front and back drawing rolls, means for rotating said rolls at different but constant rates of speed, fallers intermediate said rolls, and mechanism for delivering to said back rolls a sliver of substantially uniform weight for a given unit of length.

4. In a machine of the character described the combination of a gill box comprising drawing rolls and means for rotating the same, a sliver evening mechanism comprising evening and drawing rolls, and means for varying the speed of rotation of the rolls of said evening mechanism.

5. In a machine of the character described the combination of a gill box comprising drawing rolls and fallers, means for actuating said rolls and fallers, and means for varying the rate of feed of the sliver entering the gill box as the sliver varies in weight.

[Claims 6 to 16 not printed in the Gazette.]

874,716. INCANDESCENT GAS-LAMP. ELIAS R. WILNER, New York, N. Y. Filed Apr. 5, 1906. Serial No. 309,960.

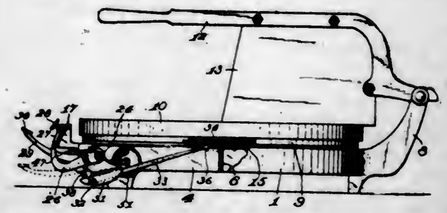


1. An incandescent gas lamp capable of being adjusted either to an upright or an inverted position, means for securing said lamp in either position, and means for retaining the mantle in proper location in either position of the lamp.

2. In an incandescent gas lamp, a burner tube, mantle supported adjacent to the free end of said burner tube, a mixing chamber in communication with said burner tube, means for regulating the amount of air which enters said mixing chamber, and means for regulating the amount of gas which enters said mixing chamber, said gas regulating means being in close proximity to the air regulating means.

3. An incandescent gas lamp capable of being adjusted either to an upright or an inverted position, a lock-nut for retaining said lamp in either position and another lock-nut for securing the mantle in proper location in either position of the lamp.

874,717. COMPUTING CHEESE-CUTTER FOR VENDING CHEESE. JOHN WINKELMEYER, Anderson, Ind., assignor of one-half to Thomas S. Gettle and one-half to Alfred L. Reed, Anderson, Ind. Filed July 5, 1907. Serial No. 382,207.



1. A cheese cutter including a cutting knife, a rotary table to coöperate with the cutting knife and provided with a series of teeth, a movable controlling device to cooperate with the teeth for moving the table rotatively, and means for forcing the controlling device fixedly into engagement with one of the teeth to positively lock the table.

2. A cheese cutter including a cutting knife, a rotary cheese table to coöperate with the cutting-knife and provided with a circular series of teeth, a movable controlling device to coöperate with the teeth for moving the table rotatively, adjustable means for limiting the movement of the controlling device, and means for temporarily holding the controlling device fixedly in engagement with one of the teeth to lock the table.

3. A cheese cutter including a cutting knife, a rotary cheese table to coöperate with the cutting knife and provided with a series of teeth, a movable controlling device to coöperate with the teeth for moving the table rota-

tively, an operating lever for the controlling device, an indicator bar having a plurality of rows of sockets, and adjustable means for limiting the movement of the controlling device and provided with a clamp-screw for entering either one of the sockets.

4. A cheese cutter including a cutting knife, a rotary cheese table to coöperate with the cutting-knife, a controlling device for moving the table rotatively and adjusting the positions thereof, an operating lever for the controlling device, means for limiting the movements of the controlling device to control the extent of movement of the table, a register to indicate the amount of cheese cut off by the cutting-knife, and means actuated by the movements of the operating lever for actuating the register.

5. A cheese cutter including a cutting-knife, a rotary cheese table to coöperate with the cutting-knife, a controlling device for moving the table rotatively and adjusting the positions thereof, an operating lever for the controlling device, means for limiting the movements of the controlling device, to control the extent of movement of the table, a bell to announce the movements of the table, and means actuated by the movements of the operating lever for causing the bell to sound.

[Claims 6 to 16 not printed in the Gazette.]

874,718. MAIL-BOX. GEORGE A. WIRT, Greensburg, Ind. Filed Sept. 17, 1906. Serial No. 334,832.



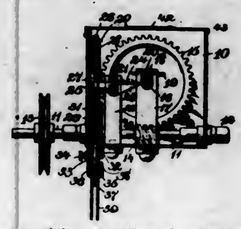
1. The combination, in a mail box, of a main substantially cylindrical receptacle, having an upwardly inclined mouth in one side thereof, a support therefor, a cover member incasing said main receptacle and extending below the lower edge of the mouth thereof, and a pivotal connection between the incasing cover and the receptacle to the rear of the receptacle and substantially parallel with the mouth thereof, said pivotal connection being so located with relation to the mouth of the receptacle that, when the cover is thrown to open position, it will expose the mouth of the receptacle.

2. The combination, in a mail box, of a main substantially cylindrical receptacle, having an upwardly inclined mouth in one side thereof, a support therefor, a cover member incasing said main receptacle and extending below the lower edge of the mouth thereof, said casing having a substantially vertical portion adapted to engage the receptacle when in closed position and extend below the lower edge of the mouth thereof, and a pivotal connection between the incasing cover and the receptacle to the rear of the receptacle and substantially parallel with the mouth thereof, said pivotal connection being so located with relation to the mouth of the receptacle that, when the cover is thrown to open position, it will expose the mouth of the receptacle.

3. The combination, in a mail box, of a main substantially cylindrical receptacle having a longitudinally upwardly presented mouth, a holder therefor comprising the sheets 14 and 15, secured thereto and forming to the rear of the receptacle and parallel therewith, a chamber 17, a cover embracing said main receptacle, and a pivot pin extending through said chamber 17 and engaging the cover, substantially as and for the purposes set forth.

4. The combination, in a mail box, of a main substantially cylindrical receptacle having a longitudinally upwardly presented mouth, a holder therefor, comprising the sheets 14 and 15, secured thereto and forming to the rear of the receptacle and parallel therewith, a chamber 17, a cover embracing said main receptacle, and a longitudinal pivotal connection between the cover and holder in line with said chamber 17, substantially as and for the purposes set forth.

874,719. FORCE-FEED OILER. GEORGE WOOD, Newark, N. J. Filed Mar. 5, 1907. Serial No. 360,730.



1. An oiler comprising a casing, a series of pump cylinders in the casing, a reciprocating piston in each pump cylinder and projecting therefrom, a spring encircling each piston and bearing thereon, the other end of the spring bearing on the casing, a lever engaging each piston, and means for individually engaging each lever to compress the spring and then to release the lever to allow the spring to operate the pump.

2. An oiler comprising a casing, a series of pump cylinders in the casing, pistons in the pump cylinder and projecting therefrom, a spring engaging each piston and adapted to operate it, a lever for each piston for compressing the spring, and means for operating and releasing the levers.

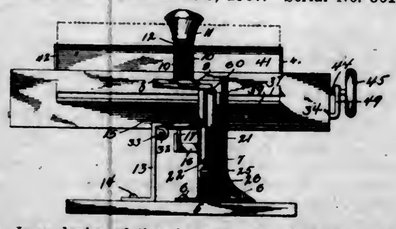
3. An oiler comprising a casing, a series of pump cylinders therein, a piston in each pump cylinder and projecting therefrom, a spring on each piston, levers pivoted in the casing, one lever engaging each pump piston, a shaft adapted to rotate in the casing, and studs on the shaft, each stud being arranged with a lever in its path of travel.

4. An oiler comprising a casing, a series of pump cylinders therein, a piston in each pump cylinder, a spring encircling each piston to operate it in one direction, a lever for each piston having a forked end engaging the piston and each lever being pivoted intermediate of its ends, a shaft in the casing, and a stud on the shaft for each lever and arranged to operate the lever to compress its spring.

5. An oiler comprising a casing, a series of pump cylinders therein, a lever engaging each pump cylinder, a spring on each pump, a second spring on each pump to receive the reverse motion of its lever, and means for operating the levers.

[Claims 6 to 9 not printed in the Gazette.]

874,720. STAMP-AFFIXER. EDWIN C. YAUCK, Columbus, Ohio. Filed Mar. 9, 1907. Serial No. 361,560.



1. In a device of the character described, the combination with a supporting frame, of a vertically movable plunger, means normally tending to elevate said plunger, said plunger being provided with a cutting edge, a longitudinally movable carriage, a cutting edge formed upon said carriage with which the cutting edge of the plunger co-acts means carried by the carriage for feeding a sheet of stamps between said cutting edges, an atomizer, and an air pump actuated by the depression of the plunger for spraying liquid from said atomizer upon said stamps, said pump serving to retard the movement of the carriage.

2. In a device of the character described, the combination with a supporting frame, of a vertically movable plunger, means normally tending to elevate said plunger, said plunger being provided with a cutting edge, a longitudinally movable carriage, a cutting edge formed upon said carriage with which the cutting edge of the plunger co-acts, means carried by the carriage for feeding a sheet of stamps between said cutting edges, an atomizer, an air pump actuated by the depression of the plunger for spraying liquid from said atomizer upon said stamps, means actuated by the plunger for imparting a step by step movement to the carriage, and a stop member for preventing retrograde movement of said carriage, the air pump serving to retard the movement of the carriage.

3. In a device of the character described, the combination with a supporting frame, of a vertically movable plunger, a spring normally tending to hold said plunger in an elevated position, a longitudinally movable carriage, a cutting edge formed upon said carriage which extends the width of the sheet of stamps to be cut, a feed roller carried by the carriage and adapted to feed said sheet of stamps over said cutting edge, an atomizer arranged to spray said stamps, and an air pump actuated by the depression of the plunger and adapted to force air through said atomizer to spray said stamps, said air pump serving to retard the movement of the carriage.

4. In a device of the character described, the combination with a supporting frame, of a vertically movable plunger, a spring normally tending to hold said plunger in an elevated position, a longitudinally movable carriage, a cutting edge formed upon said carriage which extends the width of the sheet of stamps to be cut, a feed roller carried by the carriage and adapted to feed said sheet of stamps over said cutting edge, means for moistening said stamps, a ratchet bar journaled for rocking movement upon said carriage, a member actuated by the depression of the plunger and adapted to engage said ratchet bar to impart a step by step longitudinal movement to the carriage, and a stop member for preventing retrograde movement of the carriage.

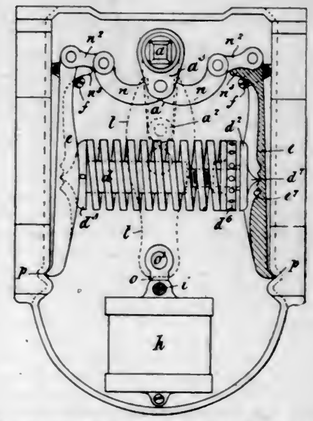
5. In a device of the character described, the combination with a supporting frame, of a vertically movable plunger, a spring normally tending to hold said plunger in an elevated position, a longitudinally movable carriage, a cutting edge formed upon said carriage which extends the width of the sheet of stamps to be cut, a feed roller carried by the carriage and adapted to feed said sheet of stamps over said cutting edge, means for moistening said stamps, a ratchet bar journaled for rocking movement upon said carriage, and a member actuated by the depression of the plunger and adapted to engage said ratchet bar to impart a step by step longitudinal movement to the carriage.

874,721. DOOR CLOSER AND CHECK. ROBERT ADAMS, London, England. Filed June 28, 1904. Serial No. 214,525.

1. In a door closer, the combination with a casing, of a door pivot rotatably mounted in said casing, links operatively connected with and adapted to be actuated by the pivot, plates having one end thereof operatively connected to the said links, and the other ends fulcrumed in the casing, an arm on said pivot, a lever operatively connected to said arm, an adjustable actuating spring engaging the plates for returning the pivot to its normal position, and adjusting devices for regulating the tension of said spring.

2. In a combined door closer and check, the combination with a casing, of a door pivot rotatably mounted in said casing, links operatively connected with and adapted to be actuated by the pivot, plates having one end thereof operatively connected to the said links, and the other ends fulcrumed in the casing, an arm on said pivot, a lever operatively connected to said arm, a checking device actuated by the latter for retarding the movement of the pivot in one direction, an adjustable actuating spring engaging the plates for returning the pivot to its normal position, and adjusting devices for regulating the tension of said spring.

3. In a door closer and check, the combination with a recessed casing, of a movable pivot, links fulcrumed in the recessed portion of the casing and operatively connected with and adapted to be actuated by the movable pivot, actuating plates operatively connected to said links, an adjustable spring contacting with the plates intermediate their extremities and adapted to control the movement of the pivot, and a checking device operatively connected to and actuated by the pivot and working in opposition to the spring for retarding the movement of the pivot.

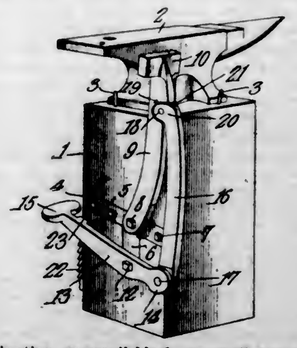


4. In a combined door closer and check, the combination with a casing having recesses in its sides, a rotary pivot mounted therein and provided with laterally extended arms, links connected with and adapted to be actuated by the arms of the pivot, plates having one extremity mounted in the recessed portion of the casing, and the other extremity connected to the links, an adjustable spring intermediate the extremities of the said plates and in contact therewith, and a checking device operatively connected with and adapted to be actuated by the pivot for retarding the movement thereof.

5. In combination, a casing, a movable pivot mounted therein, links operatively connected with and adapted to be operated by the same, a spring, and plates in contact with the spring at one side thereof intermediate their extremities and with the casing at the opposite side of one extremity.

[Claim 6 not printed in the Gazette.]

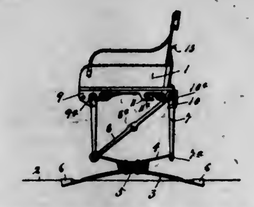
874,722. ANVIL-VISE. ERASTUS ALDERSON, North Yakima, Wash. Filed Mar. 22, 1907. Serial No. 363,852.



In combination, an anvil block, an anvil mounted thereon and secured thereto, a T-shaped bearing bolted to said

block, a vise lever pivoted to said bearing, a foot lever also pivoted to said bearing, a connecting link between the rear end of the foot lever and the upper end of the vise lever, and a ratchet plate attached to said block adapted to engage said foot lever and hold the vise jaw against the anvil.

874,723. ADJUSTABLE VEHICLE-SEAT. ALFRED C. ANDERSON, Atwater, Minn. Filed May 23, 1907. Serial No. 375,215.



1. The combination with a seat, of means for adjustably supporting the same, comprising a base support, a pair of crank rods, the bodies of which are connected to said seat with their arms arranged to clear the ends thereof, and with said arms connected to said base support by bearings located outside of said arms, and oblique links or braces connecting diagonally opposite portions of said crank rods and holding said crank rods in their set adjustments, substantially as described.

2. The combination with a seat, of means for adjustably supporting the same, comprising a base support, a pair of crank rods, the bodies of which are connected to said seat, with their arms arranged to clear the ends thereof, and with said arms connected to said base support by bearings located outside of said arms, and a pair of toggle-acting obliquely extended links connecting the end portions of said crank rods, substantially as described.

3. The combination with a seat, of means for adjustably supporting the same, comprising a base support, a pair of crank rods, the bodies of which are connected to said seat, with their arms arranged to clear the ends thereof, and with side arms connected to said base support by bearing located outside of said arms, and a pair of toggle links connecting the body portion of the rear crank rods to the lower end of the front crank rod, and adapted when straightened out to lock said crank rods against pivotal movements, in respect to each other, substantially as described.

4. The combination with a seat, of means for adjustably supporting the same, comprising a base support, a pair of crank rods, the body portion of which are detachably pivoted to said seat, and the arms of which are provided with trunnions pivotally mounted in said base support, toggle links connecting the body portion of the rear crank rod to the trunnions of said front crank rod, and rest lugs on the forward end portions of the seat engageable with the arms of said front crank rod when the seat is adjusted into an intermediate position, substantially as described.

5. The combination with a seat, of means for adjustably supporting the same, comprising a base support, a pair of crank rods, the arms of which are pivotally connected to said base support, and the body portions of which are detachably pivoted to said seat, of an oblique brace connecting the body portion of the rear crank rod to the arms of the front crank rod, and hooks or open brackets on the back and bottom of said seat engageable, respectively, with the body portions of the rear and front crank rods, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

874,724. CLAMP-BAR. EUGENE BARKER, Batavia, N. Y. Filed Apr. 5, 1907. Serial No. 366,599.

1. A clamp bar comprising a core having a flat metallic portion disposed longitudinally upon one face thereof, and corrugations integral with said metallic portion and flush with the outer face thereof.

2. A clamp bar comprising a core, and a metallic jacket secured thereto and having a flat surface, said jacket having corrugations integral and flush with said surface.

3. A clamp bar comprising a core and a metallic jacket having a longitudinal series of transverse corrugations, said corrugations being flush with the outer face of the core.

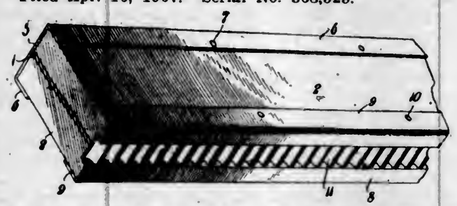


4. A clamp bar comprising a core, a longitudinally reinforced jacket thereon, and a longitudinally extending series of transverse corrugations having their outer portions flush with one face of the jacket.

5. A clamp bar comprising a core, a metallic jacket surrounding the core and having lapping portions, and securing means extending through the core and lapping portions, said jacket having a longitudinally extending series of transverse corrugations.

[Claim 6 not printed in the Gazette.]

874,725. CLAMP-BAR. EUGENE BARKER, Batavia, N. Y. Filed Apr. 16, 1907. Serial No. 368,525.



1. A clamp bar comprising a metallic core, members secured upon opposite faces thereof, and a rack interposed between said members and contacting with one edge of the core.

2. A clamp bar comprising a metallic core, members secured upon opposite faces of the core, a back plate secured upon the members and contacting with one edge of the core, and a rack secured to said members and contacting with the opposite edge of the core.

3. A clamp bar comprising a metal core, members secured upon opposite faces thereof, and a plate secured upon said members and having a longitudinal series of transverse corrugations projecting between said members.

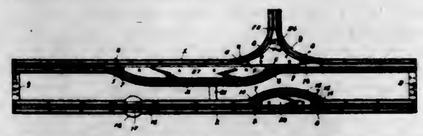
4. A clamp bar comprising a transversely corrugated metal core, oppositely disposed members fitting snugly against opposite faces of the core, and plates embracing and secured upon opposite faces of said members, one of said plates having a longitudinal series of transverse corrugations.

5. A clamp bar comprising a transversely corrugated metal core, members clamped upon opposite faces of said core, and plates secured upon the members along opposite edges of the core, one of said plates having a longitudinal series of transverse corrugations.

[Claims 6 to 9 not printed in the Gazette.]

874,726. RAILWAY GAME APPARATUS. JOHN J. BARNES, Herington, Kans. Filed Mar. 26, 1906. Serial No. 308,105.

1. In a railway game apparatus, the combination with a base, of a main track mounted thereon, a siding track having its ends joined to the main track, two curved tracks having one set of ends joined to the main track, the other set of ends meeting at right angles to the main track, thus forming, with the main track, a "Y", and a plurality of devices representing cars longitudinally movable from end to end of the main track and divertible each from the main to any one of the other tracks, each of said devices having means for engaging the track upon which it is mounted to prevent the upward removal of the device from the track.

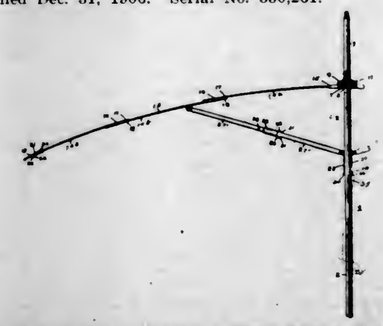


2. In a railway game apparatus, the combination with a base, of a main track mounted thereon, a siding track having its ends joined to the main track, two curved tracks having one set of ends joined to the main track and the other set of ends meeting at right angles to the main track, thus forming, with the main track, a "Y", switches connecting the main track with the connecting ends of the other tracks, and a plurality of devices representing cars movable lengthwise from end to end of the main track and divertible therefrom to any one of the other tracks, each device having means for engaging the track upon which it is mounted to prevent the upward removal of said device from the track.

3. In a railway game apparatus, the combination with a base, of a main track and a siding track mounted thereon, the siding track having its ends joined to the main track and the main track having a horizontally rotatable reversible section forming a turn-table, and a plurality of devices representing cars movable lengthwise from end to end on the main track and divertible therefrom to the siding track at either end thereof, each of said devices having means for engaging the track upon which it is mounted to prevent the upward removal of the device from the track.

4. In a railway game apparatus, the combination with a base, of a main track and a siding track mounted thereon, the siding track having its ends joined to the main track and the main track having a horizontally rotatable reversible section forming a turn-table, switches for connecting the ends of the siding with the main track, and a plurality of devices representing cars movable lengthwise from end to end upon the main track and divertible therefrom to the siding track at either end thereof, each of said devices having means for engaging the track upon which it is mounted to prevent the upward removal of the device from the track.

874,727. UMBRELLA. ARTHUR BIBBY, Rochester, Pa., assignor of one-half to Charles Renner, Monaca, Pa. Filed Dec. 31, 1906. Serial No. 350,261.



1. An umbrella comprising a frame formed of a stick having detachable sections, a crown-piece, a runner on said stick, sectional ribs pivotally secured to said crown-piece, sectional supporting braces pivotally secured to one of said rib sections and to said runner, lugs on one of the adjacent ends of said brace sections and means on the adjacent ends of the other brace sections for engaging with said lugs to detachably connect the same together.

2. An umbrella comprising a frame formed of a stick having detachable sections, a crown-piece, a runner on said stick, sectional ribs pivotally secured to said crown-piece, sectional supporting braces pivotally secured to one of said rib sections and to said runner, lugs on one of the adjacent ends of said brace sections, and a spring connection on the ends of the other brace sections for engaging with said lugs to detachably connect the same together.

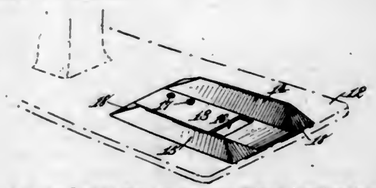
3. An umbrella comprising a frame formed of a stick having detachable sections, a crown-piece, a runner on said stick, sectional ribs pivotally secured to said crown-piece, sectional supporting braces pivotally secured to one of said rib sections and to said runner, lugs on one of the adjacent ends of said brace sections, and a spring plate on the adjacent end of the other brace section engaging with said lugs for detachably connecting the brace sections together.

4. An umbrella comprising a frame formed of a stick having detachable sections, a crown-piece, a runner on said stick, sectional ribs pivotally secured to said crown-piece, sectional supporting braces pivotally secured to one of said rib sections and to said runner, lugs on one of the adjacent ends of said brace sections, a spring plate on the adjacent end of the other brace section, and projections on said plate engaging with said lugs for detachably connecting the brace sections together.

5. An umbrella comprising a frame formed of a stick having detachable sections, a crown-piece, a runner on said stick, sectional ribs pivotally secured to said crown-piece, sectional supporting braces pivotally secured to one of said rib sections and to said runner, lugs on one of the adjacent ends of said brace sections, means on the adjacent ends of the other brace sections for engaging with said lugs to detachably connect the same together, and a guiding sleeve on one of the adjacent ends of said brace sections for fitting around the adjacent end of the other brace section.

[Claims 6 and 7 not printed in the Gazette.]

874,728. WORK-GUIDE FOR SEWING-MACHINES. LOUIS N. BISHOP, Dayton, Ky. Filed Oct. 26, 1906. Serial No. 340,767.

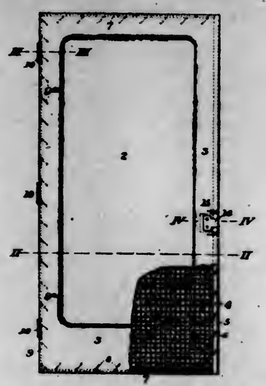


1. A work guide for sewing machines having a pair of side portions and a depressed intermediate portion, said side portions having beveled ends.

2. A work guide for sewing machines comprising a guiding surface having a flat intermediate portion terminating in side portions, each of which extends upwardly and outwardly at an inclination, said intermediate portion constituting a seat for the presser foot and in connection with the sides adapted to impart a curvilinear shape to the work, said intermediate portion of the guiding surface having a slot at its bottom to allow of the operation of the needle and feed.

3. A work guide for sewing machines having a pair of upwardly extending side portions, the outer and inner faces of which extend at an inclination, and a flat intermediate portion terminating at the bottom of the inner face of each of the side portions, said intermediate portion having a slot to allow of the operation of the needle and feed.

874,729. REINFORCED CONCRETE DOOR STRUCTURE. TITUS DE BOBULA, Pittsburg, Pa. Filed Oct. 11, 1906. Serial No. 338,347.



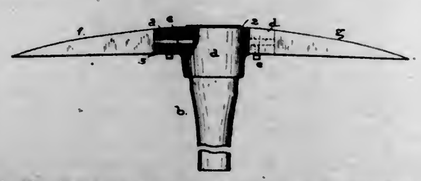
1. A concrete door having a metal reinforcement embedded therein and extending across substantially the entire body of the door and having a V-shaped portion embedded in one vertical edge portion of the door, the free edges of said V extending to the surface at the corner edges of the door, and a reinforcing piece at the opposite edge of the door, said piece and the V-shaped portion providing means for the attachment of lock and hinge fixtures; substantially as described.

2. A concrete door having a metal reinforcement embedded therein, and extending across substantially the entire body of the door, and having a V-portion at one edge, the edges of the V extending to the surface at the corner edges of the door; substantially as described.

3. A concrete door structure having a V-shaped edge reinforcing strip formed with fingers extending into and embedded in the body portion of the door, and forming openings through which the concrete fills said strip; substantially as described.

4. A concrete door structure having a reinforcement embedded therein and extending throughout substantially the entire body of the door composed of expanded metal having a flat strip or flange at one edge portion and a V-shaped flange at the opposite edge portion; substantially as described.

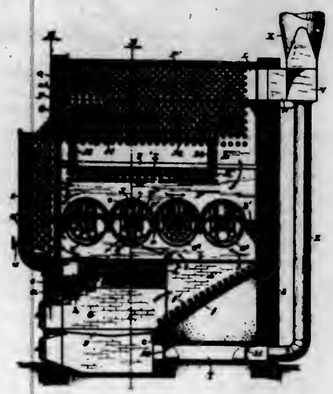
874,730. MINER'S PROSPECTING-TOOL. DOMINIK BÖLDERL, Oakland, Cal. Filed Feb. 8, 1907. Serial No. 356,492.



1. The herein described prospecting tool comprising a head having a tapering central socket, a handle removably fitted thereto and provided with cavities, the bosses on the head having squared ends, each boss being provided with a socket extending longitudinally from its end to the central socket, a detachable tool-point or member and a tang secured to the inner end of the tool and adapted to slide into a longitudinal socket, the tang being of a length greater than the socket and arranged to extend therethrough and into a cavity in the handle.

2. In a convertible tool for miners' use, the combination of a head formed with a tapering central socket and having bosses on opposite sides of the central socket in which are formed apertures, a removable handle therefor provided with cavities arranged to register with the said apertures in the bosses, a detachable tool arranged to be fitted to one of said bosses having a tang secured thereto and arranged to extend through an aperture and into a cavity in the handle to interlock the handle and head, and a set screw carried by the bosses for securing the tang thereto, substantially as set forth.

874,731. STEAM-PRODUCER. ISAAC H. BOYER, Muncie, Ind. Filed Feb. 5, 1906. Serial No. 299,487.



1. A steam producer including a horizontal cylindrical evaporator shell with headers connected thereto, stirrups supported in the shell and extending near the lowermost portion thereof, and a plurality of tubes arranged on the stirrups and having their ends turned up and opening into the headers.

2. A steam producer including a horizontal cylindrical shell with headers connected thereto, stirrups supported in the shell, superheating tubes connected to one of the headers, a steam chamber connected to the superheating tubes, and a plurality of tubes arranged on the stirrups and having their ends turned upwardly, one end of each tube opening into the steam chamber and the other end opening near the uppermost portion of the evaporator shell.

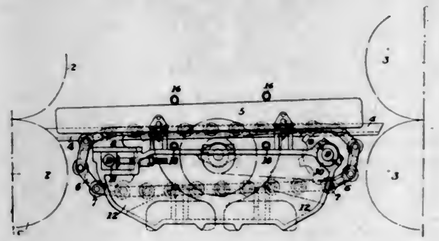
3. A steam producer including a furnace with front and rear walls and also side walls, a pair of main headers mounted on the side walls, evaporator shells attached to the headers, a secondary heater mounted on the front wall and having communication with the main headers and provided with regulators at the communicating passages, a superheater extending above the evaporator-shells, arches and a combustion chamber floor extending collectively under the evaporator shells, a draft passage from the furnace through the rear wall, a primary heater in the draft passage above the superheater having communication with the secondary heater, and a chimney connection communicating with the draft passage.

4. A steam producer including a furnace with front and rear walls and also side walls, a pair of main headers mounted on the side walls, evaporator shells attached to the headers, a pair of narrow upright headers on the front wall attached to and extending higher than the main headers at ends thereof, tubes connected to the upright headers, feed passages provided with regulators between the upright headers and the main headers, superheating tubes connected to the main headers, a steam chamber in connection with the superheater tubes, and a primary heater mounted on the main headers and having communication with one of the narrow upright headers.

5. A steam producer including a furnace with walls, a front header and a rear header mounted on the walls, the rear header having a lower chamber and an upper chamber therein, evaporator shells connected to the front header and also with the lower chamber of the rear header, water-divider tubes supported in the evaporator shells and having upturned ends, superheating tubes connected to the front header and also with the upper chamber of the rear header, and ducts connecting upturned ends of the water divider tubes with ends of the superheater tubes.

[Claims 6 to 9 not printed in the Gazette.]

874,732. METHOD OF TREATING PACKS. CHARLES W. BRAY, Pittsburg, Pa., assignor to American Sheet & Tin Plate Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Mar. 18, 1907. Serial No. 362,888.



1. The method of opening or loosening the sheets or plates of a pack in which the said sheets or plates stick together, which consists in applying a cooling fluid to the pack while heated; substantially as described.

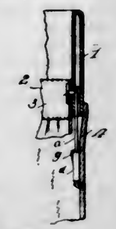
2. The method of loosening sheets or plates of a pack in which the said sheets or plates stick together, which consists in feeding the pack forwardly while heated, and at the same time applying a cooling fluid thereto; substantially as described.

3. The method of opening or loosening sheets or plates of a pack, in which said sheets or plates stick together, which consists in applying a cooling fluid to the top and bottom faces of the pack while heated; substantially as described

4. The method of opening or loosening the sheets or plates of a pack in which the said sheets or plates stick together, which consists in applying separate streams of cooling fluid to the pack while heated; substantially as described.

5. In the manufacture of sheet metal, the method which consists in rolling the heated pack, and then subjecting said heated pack to the action of a cooling fluid, thereby loosening the sheets of the pack from each other; substantially as described.

874,733. VEST-HOLDER. OSCAR H. BROWN, Eastport, Me. Filed July 2, 1907. Serial No. 381,852.

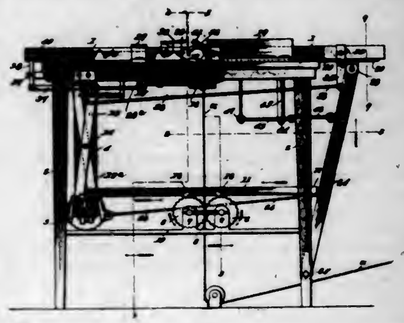


1. A vest holder comprising a stationary plate having an aperture therein to engage the rear collar button, upwardly extending pronga upon the lower end of said plate, a sliding member provided with a prong adapted to engage the material between the prongs on the plate, and a spring latch for holding said sliding member in operative position, substantially as described.

2. A vest holder comprising a member adapted to engage a collar button, a sliding member mounted on said first mentioned member and provided with a prong, and a spring latch for holding said sliding member in operative position.

3. A vest holder comprising a stationary member and a sliding member mounted thereon, prongs on said members, a spring latch secured to the stationary member and provided with an angular toe normally extending through an opening in said stationary member to engage the sliding member and prevent its movement upon the stationary member.

874,734. BAG-CLOSING MACHINE. THOMAS J. BROUGH, Baltimore, Md. Filed May 11, 1907. Serial No. 373,181.



1. The combination with a table, an interiorly curved former arranged thereon and a movable wire-compressing device coacting therewith, of a reciprocating cutter arranged beneath the said former, and means for advancing it for severing the wire after the same has been applied to the bag for closing it, substantially as described.

2. The combination with a former and means for advancing the wire thereinto, of a movable device for compressing the wire upon the mouth of a bag, a wire cutter applied beneath the former, means for reciprocating the cutter, and means for shifting the same laterally for distributing the wear on the cutting edge, substantially as described.

3. The combination with a former and means for feeding a wire thereinto and compressing it as described, of a wire cutter and means for reciprocating it, a ratchet-and-cam mechanism operatively connected with the beveled end of the cutter, whereby it is moved intermittently laterally while being reciprocated, substantially as described.

4. The combination with means for feeding and bending and clamping a wire upon the mouth of a bag, of a cutter adapted to reciprocate and work in contact with the projecting end of the bag, and means for imparting movement thereto, substantially as described.

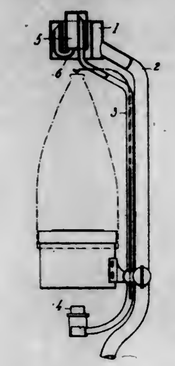
5. The combination with a former and means for advancing a wire thereinto and clamping it upon a bag, of reciprocating cutters arranged horizontally opposite each other and means for reciprocating the same whereby they are advanced simultaneously in opposite directions for severing the projecting end of a bag, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

874,735. VAPOR-BURNER. JOHN BRUNEAU, Clichy, Paris, France. Filed May 26, 1906. Serial No. 318,972.

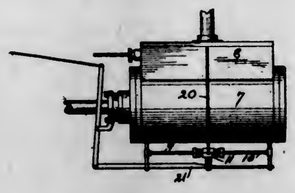
In a vapor burner a closed vessel of annular cross-section connected with the oil supply and arranged centrally above the burner, a second closed vessel of cylindrical

cross-section of smaller diameter than the inner space of the annular vessel centrally inserted in the latter, a pipe of communication starting from the bottom of said cylindrical vessel and reaching up into the annular space to near the top of the annular vessel, a feed pipe leading



to the burner from a point near the top of the cylindrical vessel, substantially as described.

874,736. AUTOMATIC RELIEF-VALVE. THOMAS J. BUCKLEY, Chicago, Ill. Filed Apr. 13, 1906. Serial No. 311,593.



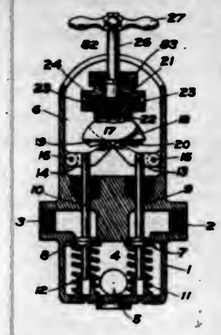
1. In a device of the class described, a cylinder having a blowoff pipe, a valve mounted in a suitable casing, one side of said valve exposed to, and controlling the flow of the fluid in said blow-off pipe and the remaining side of said valve exposed to an inclosed chamber and a pipe forming constant communication between said inclosed chamber and the steam chest of said cylinder.

2. In a device of the class described, a cylinder having a blow-off pipe, a valve mounted in a suitable casing, one side of said valve exposed to and controlling the flow of the fluid in said blow-off pipe said valve exposed to an inclosed chamber, a pipe forming constant communication between said inclosed chamber and the steam supply to said cylinder and a passageway controlled by a valve forming communication between said inclosed chamber and the exterior atmosphere.

3. In a device of the class described, a cylinder, a relief pipe entering said cylinder, a valve to control the exit of said relief pipe, a second valve of larger area arranged to move said first named valve, a pipe connected to the steam supply for said cylinder leading to one side of said second named valve, a third valve to control the exit of said second named pipe and means for moving said third named valve.

4. In a device of the class described, a hollow body portion, a hollow nipple screwed into one end of said body portion, a plurality of radial holes through said nipple a valve controlling communication between said pipe and said holes and a steam pressure pipe leading to the interior of said body portion to control said valve.

874,737. FLUID-MIXER. HARRY BUCKLIN, Rochester, N. Y. Filed Sept. 26, 1905. Serial No. 280,165.



1. A mixer comprising a chamber having two separate inlets, and an outlet; valves adapted to move in one direction to close said inlets and in the opposite direction to open them; cams pivotally supported within said mixer to swing together, and adapted when rocked in one direction to depress one of the valve stems, and when rocked in the opposite direction to depress the other valve stem; springs controlling, respectively, the movement of said valves in one direction; a hand operating lever attached to said cams whereby they are rocked; and means for moving said cams vertically when in any position, whereby said valves are depressed simultaneously and to the same extent.

2. A mixer comprising a chamber having two separate inlets, and an outlet; valves adapted to move in one direction to close said inlets and in the opposite direction to open them; a hand operated lever; connections between said lever and the valve stems, whereby, as said lever is rocked in one direction, said valves are moved at the same time in the same direction at different velocities; means also operated by said lever whereby said valves are opened simultaneosuly and to the same extent; and springs controlling, respectively, the movement of said valves, in one direction.

3. A mixer comprising a chamber having two separate inlets, and an outlet; valves adapted to move in one direction to close said inlets and in the opposite direction to open them; a hand operated lever; connections between said lever and the valve stems, whereby, as said lever is rocked in either direction, both of said valves are moved at the same time in the same direction but one with a greater velocity than the other, according to the direction in which the lever is moved; means also operated by said lever, whereby said valves are opened simultaneously and to the same extent; and springs controlling, respectively, the movement of said valves in one direction.

4. A mixer comprising a chamber having two separate inlets, and an outlet; valves adapted to move in one direction to close said inlets and in the opposite direction to open them; levers pivoted to the mixer casing and attached to the valve stems, respectively; a block pivotally supported within said mixer, having two cam surfaces adapted, respectively, to engage the free ends of said levers, and, when said block is rocked in one direction, to depress one lever and valve stem, and, when said block is rocked in the opposite direction, to depress the other lever and valve stem; springs controlling, respectively, the movement of said valves in one direction; and means for rocking said block.

5. A mixer comprising a chamber having two separate inlets, and an outlet; valves adapted to move in one direction to close said inlets and in the opposite direction to open them; levers pivoted to the mixer casing and attached to the valve stems, respectively; a block pivotally supported within said mixer, having two cam surfaces adapted, respectively, to engage the free ends of said levers, and, when said block is rocked in one direction, to depress simultaneously both levers and valve stems at different

velocities; springs controlling, respectively, the movement of said valve stems in one direction; and means for rocking said block.

[Claim 6 not printed in the Gazette.]

874,738. FOUNTAIN-PEN. LAFAYETTE F. CRAWFORD, Denver, Colo. Filed July 3, 1906. Serial No. 324,686.



1. A fountain pen comprising a pen holder and having an ink filling plunger fitted to the bore of the holder, said plunger comprising a head and threaded stem with a shoulder therebetween, a flexible washer mounted on the stem against the shoulder and the holder having an internal flange at its outer end, between which and the shoulder on the plunger the washer is adapted to be held and compressed, and a removable cap adapted to be screwed to the stem of the plunger whereby the plunger and cap are held in position and the washer is compressed to form an air and ink tight joint at the end of the pen.

2. In a fountain pen, the combination with a barrel and a plunger having a threaded stem of sufficient length to protrude through an end of the barrel when in one of its extreme positions, of a key adapted to be removably secured to the protruding end of the plunger and a cap constructed and adapted to screw upon the protruding end of the plunger when the key is removed whereby to fasten the plunger and cap in position.

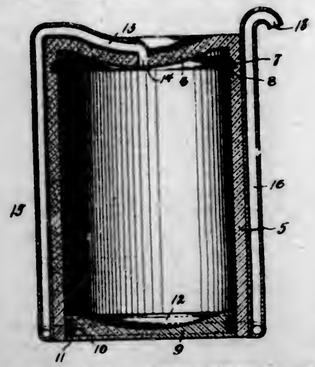
3. In a fountain pen, the combination with a barrel and a plunger the barrel having an orifice at one end and the plunger provided with a threaded stem adapted to protrude through said orifice, said stem having an orifice which extends only partly through it and a key adapted to be removably secured in said orifice in the stem.

4. In a fountain pen, the combination with the barrel, of a key secured to a part of the pen and normally lying alongside the latter whereby space is formed between the pen and key to receive the pocket for fastening the pen to the pocket.

5. In a fountain pen, the combination with the barrel, of a key secured to a part of the pen and normally lying alongside the latter whereby space is formed between the pen and key to receive the pocket for fastening the pen to the pocket, said key having a joint formed therein whereby it may be folded.

[Claims 6 to 8 not printed in the Gazette.]

874,739. NON-REFILLABLE RECEPTACLE. ROY N. CUNNINGHAM and JOHN W. MCPHERSON, Columbus, Ohio. Filed Apr. 1, 1907. Serial No. 365,695.



1. In a device of the character described, the combination with a body portion closed at the top and open at the bottom, of an outlet tube leading from the upper portion of said receptacle to a point adjacent the lower end of the receptacle, said tube then being returned to a point adjacent the upper end of the receptacle, and a piston-like bottom disposed within the receptacle.

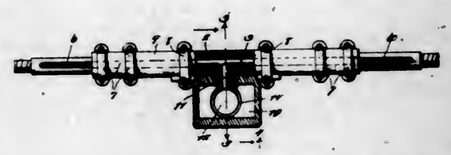
2. In a device of the character described, the combination with a body portion closed at the top and open at the bottom, of an outlet tube leading from the upper portion of said receptacle to a point adjacent the lower end of the receptacle, said tube then being returned to a point adjacent the upper end of the receptacle, a piston-like bottom disposed within the receptacle, and means for locking said piston-like bottom against retrograde movement after it reaches its limit of movement toward the top of the receptacle.

3. A non-refillable receptacle, comprising a body portion open at the bottom and closed at the top, an outlet tube leading from the upper portion of the receptacle, and a piston-like bottom for the receptacle which is slidably disposed within said receptacle, the lower face of the top being convex and the upper face of the bottom being concaved.

4. A non-refillable receptacle comprising a body portion open at the bottom and closed at the top, an outlet tube leading from the upper portion of the receptacle, a piston-like bottom for the receptacle which is slidably disposed within said receptacle, and means for locking said piston-like bottom against retrograde movement after it reaches its limit of movement toward the top of the receptacle, the lower face of the top being convex and the upper face of the bottom being concave.

5. In a device of the character described, the combination with a body portion closed at the top and open at the bottom, of an outlet tube leading from the tube which extends down one side of the receptacle to a point adjacent the bottom thereof, then partially around said receptacle and then up to a point above the top of the receptacle, there being an annular groove formed in the wall of the receptacle adjacent the top thereof, a piston-like bottom slidably disposed within the receptacle, and an annular packing ring carried by said bottom which is adapted to expand into said annular groove when the bottom reaches its limit of movement toward the top.

874,740. LUBRICATING-AXLE. WILLIAM E. DALBY, Hester, N. C. Filed June 12, 1907. Serial No. 378,638.



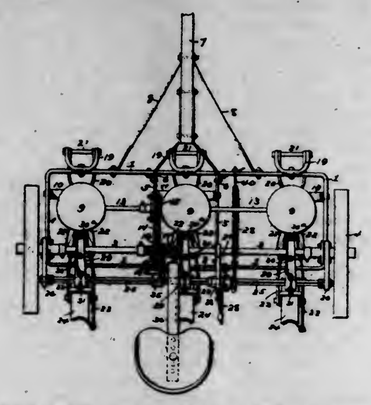
1. In a lubricant device, an axle, a bolster carried thereby, a T-shaped duct fixed therebetween, and a valve-controlled reservoir communicating with said duct.

2. In a lubricant device, an axle, a bolster carried thereby, a T-shaped tubular duct fixed therebetween, and a valve-controlled reservoir communicating with said duct, and a double closure for the said reservoir.

3. In a lubricant device, an axle having a longitudinal recess, a bolster carried thereby, a T-shaped tubular duct, having its ends perforated, seated in said recess and between the axle and bolster, a reservoir communicating with said duct, said reservoir having a valve-controlled well, and a double closure for the said reservoir.

4. In a lubricant device, an axle having a longitudinal recess, a bolster carried thereby, a T-shaped tubular duct having its ends perforated seated in said recess, a reservoir communicating with said duct, said reservoir having a well, a valve having a screw-threaded shank for closing said well, a pair of closures for the reservoir, one of which, is provided with a threaded aperture to receive said shank, while the other is hinged to the outer portion of the reservoir, and a lock for one of said closures.

874,741. CORN-PLANTER. CALVIN R. DAVIS, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Filed Sept. 24, 1906. Serial No. 335,997.



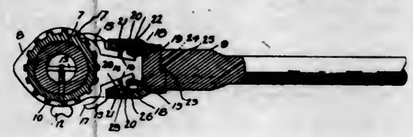
1. In a planter, the combination with a frame, of a series of rearwardly projecting drag bars secured to the frame, furrow opening disks secured to the drag bars, follower wheels, drag bars for the follower wheels pivotally secured to the rear ends of the first mentioned drag bars, a shaft, a lever to move the same, arms on the shaft, yokes on the follower wheel drag bars, rods on said yokes and on the first mentioned drag bars projecting through holes in the arms, springs on the rods below the arms, means for adjusting the tension of said springs, collars on the rods above the arms, and a counterbalance spring tending to turn the shaft to lift the drag bars and parts connected therewith.

2. In a planter, the combination with a frame, of a drag bar secured thereto, furrow opening disks secured to the drag bar, a follower wheel drag bar pivotally secured to the rear end of the first-mentioned drag bar, a follower wheel connected with its drag bar, a fork straddling the follower wheel and secured to its drag bar, a rod secured to said fork, a shaft, a crank arm thereon having an opening to receive the rod, a coiled spring on the rod, an adjusting nut on the rod at the lower end of the spring to adjust the tension of the latter, a collar secured on the rod above the arm, and a lever to turn the shaft to raise and lower the drag bars and vary the spring pressure thereon.

3. In a corn planter, the combination with a frame, a series of hangers at the front thereof, drag bars pivotally secured to the hangers and extending rearward below the frame, and furrow opening disks secured to the drag bars, of follower wheel drag bars pivotally secured to the rear ends of the first-mentioned drag bars, follower wheels connected with the last mentioned drag bars, forks secured to the last-mentioned drag bars and straddling the follower wheels, upwardly projecting spring rods on the forks, a shaft, crank arms thereon connected with the spring rods, a depending crank arm on the shaft, a lifting spring connecting the depending crank arm with the front of the planter frame, a lever to turn the shaft, a toothed sector on the frame, and a spring pressed detent to engage the sector and lock the lever.

874,742. WRENCH. HENRY P. DECKERT, Marion Junction, S. D. Filed June 14, 1907. Serial No. 378,963.

A wrench of the class described comprising a head, a handle, the head being reduced to substantially one-half its length and provided with a nut receiving opening in its unreduced end, a two-part collar portion formed integral with one end of the handle and receiving the reduced portion of the head, an annular ratchet fixed upon the reduced portion of the head between the collars of the said collar portion, the handle being bifurcated at that end at which the two-part collar portion is formed, pawls pivoted in the bifurcation and adapted to coöperate independently with the ratchet, springs tending to hold the pawls in such engagement, a lug formed integral with each of the pawls, and a sleeve rotatably fixed upon the



handle and inclosing the said bifurcated portion thereof, the sleeve being provided interiorly with an annular groove which is contracted to form a cam portion which is adapted to ride over one or the other of the pawl lugs to move the corresponding pawl from engagement with the ratchet.

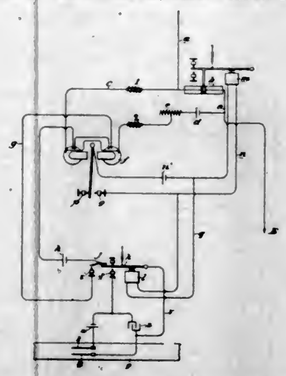
874,743. ANTHRACENE DYE. JOSEPH DEINET, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Aug. 15, 1907. Serial No. 388,643.

The herein-described new dyestuff which can be obtained by treating a solution of anthraquinone in sulfuric acid with copper, which dyestuff is a black paste soluble in concentrated sulfuric acid with a dull brown color, and giving a dull-violet vat with hydrosulfite and caustic soda lye, which vat dyes unmordanted cotton brown shades, substantially as hereinbefore described.

874,744. ANTHRACENE DYE. JOSEPH DEINET, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Aug. 15, 1907. Serial No. 388,694.

The herein-described new dyestuff which can be obtained by treating a sulfuric acid solution of alpha-methylaminoanthraquinone with aluminum, which dyestuff is a dark greenish-black paste soluble in concentrated sulfuric acid with a dull violet color; and giving a reddish vat with hydrosulfite and caustic soda lye, which vat dyes unmordanted cotton olive-green shades, substantially as hereinbefore described.

874,745. TELEGRAPHY. PATRICK B. DELANY, South Orange, N. J. Filed June 13, 1903. Serial No. 161,348.



1. In wireless telegraphy, the combination with the primary variable resistance device, of a receiver instrument having a movable part, a local circuit including the instrument and controlled by variation of resistance of the primary device; whereby said part is moved to make a signal on the reception of a signal wave or impulse that affects the variable resistance device, and means for, on the completion of the signal, developing a force locally for returning the movable part to normal position.

2. In wireless telegraphy, the combination of the primary variable resistance device, an electro magnetic device, its armature, a local circuit including the electromagnetic device and controlled by the variable resistance device; to cause attraction of the armature on reception of a signal wave or impulse, and a second local circuit acting on the completion of the signal to retract the armature to its normal position.

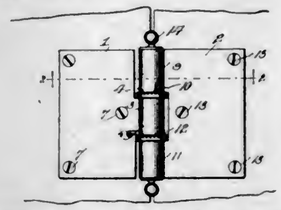
3. In wireless telegraphy, the combination with the primary variable resistance device, of a receiver instrument having a movable unbiased part, a local circuit including said instrument and controlled by variation of resistance of the primary device, whereby said part is moved to make a signal on reception of a signal wave or impulse and means for, on the completion of the signal, developing a force locally for returning the movable part to normal position.

4. In wireless telegraphy, the combination with a coherer, resistance of which is decreased on the reception of a signal wave or impulse, a local circuit controlled thereby, an armature attracted from normal position to signaling position by such local circuit on the reception of a signal wave or impulse, and a second local circuit normally open but closed on the completion of a signal and acting to retract the armature to its normal position.

5. In wireless telegraphy, the combination with a coherer, resistance of which is decreased on the reception of a signal wave or impulse, a local circuit controlled thereby, an unbiased armature attracted from normal position to signaling position by such local circuit on the reception of a signal wave or impulse, and a second local circuit normally open but closed on the completion of a signal and acting to retract the armature to its normal position.

[Claims 6 and 7 not printed in the Gazette.]

876,746. HINGE. LYDIA H. DENNIS, Gratz, Ky. Filed Aug. 17, 1907. Serial No. 389,025.

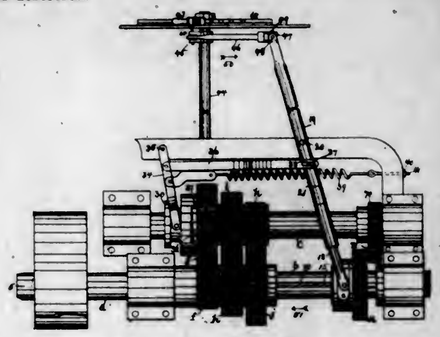


1. A hinge comprising a leaf having a central pintle bearing, ratchet teeth on the upper edge of said bearing, and a pivoted pawl near the lower end of said bearing, and the other hinge member provided with an upper pintle bearing having a pawl pivoted thereto and a lower pintle bearing having ratchet teeth at its upper edge, and a pintle for holding said pintle bearings in alinement with the pawls in positions to engage with the ratchet teeth.

2. A hinge comprising two members provided with ratchet teeth and pawls for adjustably holding the members at any required angle, one from the other.

874,747. VARIABLE-SPEED-TRANSMITTING GEARING. JOHN A. DE VITO, Boston, Mass. Filed Jan. 12, 1906. Serial No. 295,698.

1. In an apparatus of the character described, in combination, a driving shaft, a gear fast thereon, a driven shaft in alinement with said driving shaft, a plurality of gears loose thereon, a counter-shaft, a gear normally loose thereon and meshing with the gear on said driving shaft, a plurality of gears fast on said counter-shaft and meshing with the gears on said driven shaft, a clutch coöperating with the gear normally loose on the counter-shaft to render the same fast thereon, a clutch mechanism coöperating with the gears normally loose on the driven shaft to render said gears fast on said driven shaft, and mechanism for operating said clutches, substantially as described.



2. In an apparatus of the character described, in combination, a driving shaft, a gear fast thereon, a driven shaft having a key-way, a plurality of gears loose on said shaft and having an annular recess on their inner circumference provided with a lug or projection, a counter-shaft, a gear normally loose thereon and meshing with the gear on the driving shaft, a clutch to render the loose gear on said counter-shaft fast thereon, a plurality of gears fast on the counter-shaft and meshing with the gears on the driven shaft, a pivoted key movable in the said key-way and coöperating with the lugs of the gears on said driven shaft to clutch the said gears to said driven shaft, and means to move said key, substantially as described.

3. In an apparatus of the character described, in combination, a main shaft, a gear fast thereon, a driven shaft provided with a longitudinal key-way, a plurality of gears normally loose on said driven shaft, a counter shaft, gears thereon in mesh with the gears on said driving and driven shafts, a key movable in said key-way and coöperating with the gears on said driven shaft to couple the said gears to said shaft, a gear movable longitudinally on said driven shaft and keyed thereto, a gear fast on said counter shaft, and an intermediate gear meshing with the gear on said counter shaft and adapted to be engaged by the gear movable on said driven shaft, a lever to move the gear longitudinally on said driven shaft, a rock shaft, means to connect the said lever to said rock shaft, a handle on said rock shaft, a notched bar, a pawl or dog, carried by said handle and coöperating with the notches in said bar, and a second pawl or dog carried by said handle and engaging said bar to prevent movement of the said handle to reverse rotation of the driven shaft until said second pawl or dog is disengaged from said bar, substantially as described.

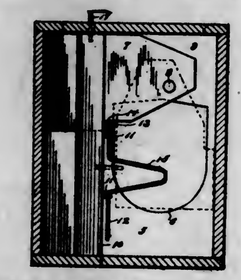
4. In an apparatus of the character described, in combination, a rotatable shaft having a longitudinal key-way, a gear normally loose on said shaft, a key movable in said key-way and coöperating with said gear to couple the same to said shaft when said key is moved in one direction, a second gear secured to said key to move therewith, a third gear with which the gear attached to the key coöperates when said key is moved in the reverse direction, means to rotate said third gear and produce reverse rotation of the said rotatable shaft when said sliding gear is in mesh with said third gear, mechanism for moving said key and the gear attached thereto longitudinally on said shaft, and means for limiting the movement of said mechanism to prevent accidental reversal of the rotatable shaft, substantially as described.

5. In an apparatus of the character described, in combination, a driving shaft, a gear fast thereon, a counter-shaft, a gear normally loose on said counter-shaft, a

clutch on the counter-shaft to render the said loose gear fast thereon, a gear fast on said counter-shaft, a driven shaft, a gear normally loose thereon and meshing with the gear fast on said counter-shaft, a key coöperating with the gear loose on the driven shaft to render the same fast on said shaft and also coöperating with the gear fast on the driving shaft to connect the driven shaft directly with said driving shaft, a lever to move said key, a lever to operate the clutch on the counter-shaft, and means to connect said clutch-operating lever with said key-operating lever, substantially as described.

[Claim 6 not printed in the Gazette.]

874,748. TRAP-NEST. WILLIAM DIX, Lakewood, N. J. Filed Mar. 16, 1907. Serial No. 362,636.

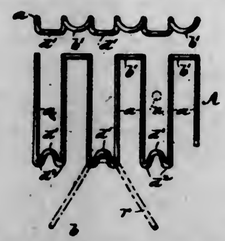


1. In a nest-box having a door pivoted above the entrance thereto, a rotatable rod having an arm engageable with the door for holding it open, and means extending across the entrance for rotating the rod to withdraw the arm from the door.

2. In a nest-box having a door pivoted above the entrance thereto, a rotatable rod having an arm engageable with the door for holding it open, and a looped portion extending across the entrance for rotating the rod to withdraw the arm from the door.

3. In a trap-nest, a door for the entrance thereto, means operated by the fowl for closing the door, and a signal device carried by the door.

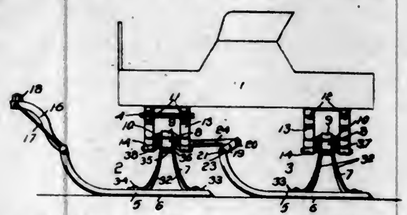
874,749. SUPPLEMENTAL METALLIC PICTURE-HOLDING STRIP. GEORGE F. DREW, Brunswick, Me. Filed Mar. 6, 1907. Serial No. 360,979.



1. As a new and improved article of manufacture the picture holding strip substantially as herein described, the same consisting of a continuous length of wire formed into alternate up and down loops having parallel intermediate connecting portions lying in a single plane, the upper and lower bends of the strip being bent toward the front at suitable angles, the upper bends adapted when in use to engage a picture molding proper and the lower ones forming picture cord hooks.

2. The combination with a picture molding proper, of a supplemental picture holding strip placed behind the same and comprising a continuous length of wire formed into a series of alternate upper and lower loops united by parallel intermediate members lying in a single plane, the upper loops being bent to engage and be supported by said molding and the lower loops to project in front and form picture cord holders, substantially as set forth.

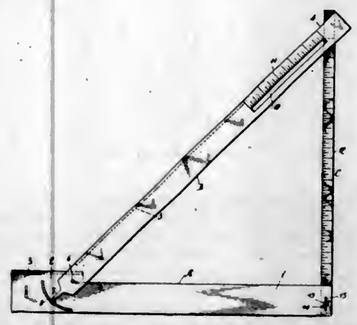
874,750. SLEIGH. WELFORD G. EDWARDS, Plainview, Minn. Filed Mar. 25, 1907. Serial No. 364,322.



1. In a sleigh, the combination with a body, a front steering sled and a rear fixed sled, of a connection between said sleds comprising a tubular member fixed to the rear sled, a member slidable within said tubular member, a thimble threaded on said tubular member and surrounding said slidable member, said slidable member having a head at one end and a hook at the other end, an expansive coil spring surrounding said slidable member within said tubular member and bearing against said head and said thimble, and a hook carried by said steering sled for engagement with said first named hook.

2. In a sleigh, the combination with a body, a front steering sled and a rear sled connected thereto, of a beam disposed between the front ends of the runners of said rear sled, a back member fixed to said beam and having projecting ends, headed bolts projected through said ends and through the ends of the runners adjacent thereto, nuts on the outer ends of said bolts, expansive coil springs interposed between said projecting ends and the headed ends of said bolts, and a connection between said beam and the front sled.

874,751. MEASURING IMPLEMENT. EDMUND W. ELLINGTON, Owensboro, Ky. Filed Aug. 30, 1907. Serial No. 390,778.

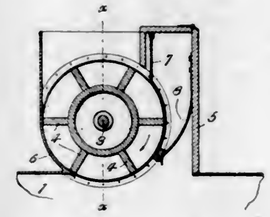


1. In a measuring implement, a base comprising parallel side members having upward extending flanges connected by a bridge piece, a level arm comprising side members connected by a bridge piece and carrying a spirit level, and a pin pivotally connecting the level arm with the base; one side member of the level arm being provided with an index or pointer, and the base being provided with an arcuate scale coöperating therewith.

2. In a measuring implement, a base comprising spaced parallel side members having flanges connected by a bridge piece, a level arm connected pivotally with the base and having side members connected by a bridge piece, said level arm being provided with a slot having one edge radial to the pivot and provided with a scale; and a scale arm supported pivotally between the side members of the base and capable of extending between the slotted free ends of the side members of the level arm.

3. In a measuring implement, a base comprising spaced parallel side members having flanges connected by a bridge piece, a level arm pivotally connected with the base and comprising side members connected by a bridge piece, one of said side members being provided with an index and the base being provided with an arcuate scale coöperating therewith, and said level arm being provided with a spirit level and with a longitudinal slot having one edge radial to the pivot; and a scale arm pivoted between the side members of the base and capable of extending between the slotted free ends of the side members of the level arm.

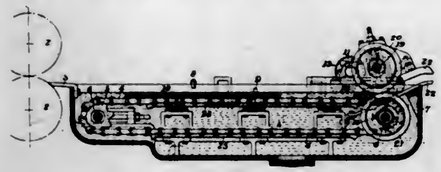
874,752. VALVE-DISCHARGE. WILLIAM E. ETHRIDGE, Schlater, Miss. Filed Apr. 2, 1907. Serial No. 366,031.



1. In combination, a pneumatic discharge, a feeder, a rotary valve located intermediate the feeder and pneumatic discharge, and a spring actuated apron held in contact with said rotary valve to prevent air from the pneumatic discharge passing into the feeder.

2. In combination, a pneumatic discharge, a feeder and a valve mechanism between the feeder and pneumatic discharge, the same comprising a box having a bottom portion made rounding, a rotary compartment valve located within the box and closely fitting the rounded bottom portion of the same, and a spring actuated apron in contact with the valve at a point opposite to the rounded portion of the box, thereby preventing air from the pneumatic discharge finding its way into the feeder and insuring positive and regular discharge of the feeder into the pneumatic conveyer.

874,753. METHOD OF OPENING PACKS. GEORGE D. EVANS, Sharon, Pa., assignor to American Sheet & Tin Plate Company, Pittsburg, Pa., a Corporation of New Jersey. Filed Mar. 25, 1907. Serial No. 364,473.

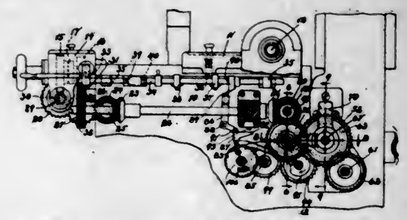


1. In the manufacture of sheet metal, the method of opening or loosening the sheets of a pack, consisting in rolling a heated pack and then subjecting the heated pack to a cooling liquid bath; substantially as described.

2. In the manufacture of sheet metal, the method which consists in rolling a heated pack, and then feeding the heated pack through a bath of water; substantially as described.

3. In the manufacture of sheet metal, the method which consists in rolling a heated pack, then subjecting the heated pack to a liquid bath, and thereafter reducing the plates or sheets by further rolling in packed form; substantially as described.

874,754. INDEXING MECHANISM. ERNEST J. FLATHER, Nashua, N. H. Filed Jan. 10, 1906. Serial No. 295,468.



1. A gear-cutting machine comprising a blank-holding shaft, a reciprocating cutter-carriage having a cutter adapted to act on the blank, an indexing mechanism adapted to communicate motion to the blank-holding shaft, said mechanism including a loose driving member, and a clutch member which is movable into and out of engagement with the driving member to render the indexing mechanism operative and inoperative, mechanism operated by the carriage in its backward movement for engaging the clutch member with the driving member, and positive operating means driven by the indexing mechanism, for first separating the clutch member from the driving member and then locking the indexing mechanism.

2. A gear-cutting machine comprising a blank-holding shaft, a reciprocating cutter-carriage having a cutter adapted to act on the blank, an indexing mechanism adapted to communicate motion to the blank-holding shaft, said mechanism including a loose driving member, and a clutch member which is movable into and out of engagement with the driving member to render the indexing mechanism operative and inoperative, a locking gear meshing with a gear of the indexing mechanism and provided with a cam-groove having a locking shoulder, a detent movable into engagement with the said shoulder, and mechanism operated by a backward movement of the carriage for first removing the detent from the shoulder and then moving the clutch member into engagement with the driving member, the said cam-groove having an eccentric portion which is caused by the rotation of the locking gear to move the detent to first separate the clutch member from the driving member, and then engage the detent with the shoulder of the locking gear.

3. A gear-cutting machine comprising a blank-holding shaft, an indexing mechanism to impart motion thereto, said mechanism including a loose driving member and a movable clutch member coöperating therewith, and clutch-operating mechanism including a longitudinally movable shaft to which the clutch member is affixed, a sleeve loosely mounted on said shaft and having oblique slots engaging studs on the shaft, means for confining said sleeve against endwise movement, and means for partially rotating said sleeve in opposite directions, and thereby imparting endwise movements to the shaft and clutch member for connecting the driving and clutch members together and subsequently disconnecting them.

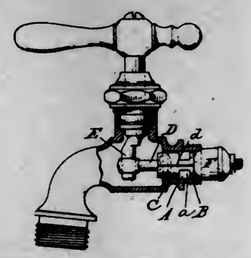
4. A gear-cutting machine comprising a cutter carriage, a blank-holding shaft, an indexing mechanism to impart motion thereto, and including a loose driving member, and a movable clutch member coöperating therewith, a longitudinally movable shaft engaged with said clutch member, a gear loosely mounted on the said shaft and confined against movement lengthwise of the shaft, connections between said gear and shaft for imparting endwise movements from the gear to the shaft, a lever having a gear-segment engaged with said gear, a detent-arm affixed to said lever, a locking gear meshing with a member of the indexing mechanism and having a groove receiving the detent-arm, said groove having a stop-shoulder to arrest the detent, a rod reciprocated by the carriage and provided with a pawl, and an oscillatory arm or striker located in the path of said pawl and connected as described with the said lever and detent-arm, the groove of

the locking gear having an eccentric portion formed to move the detent-arm and the lever connected therewith.

5. Indexing mechanism for metal-cutting machines comprising a driving gear train, a driven feeding gear train, a disconnectible coupling between said trains, an endwise movable shaft to which one of the coupling members is fixed, mechanism for moving said shaft to connect the coupling and thereby set in operation the feeding train, and means positively operated by the latter train for reversely moving said mechanism and shaft to disconnect the coupling.

[Claims 6 to 25 not printed in the Gazette.]

874,755. FAUCET. EDWIN C. FLEISCHMAN and JOHN F. JENNINGS, Cleveland, Ohio, assignors to The Monarch Brass Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 23, 1905. Serial No. 279,756.



1. In a faucet, the combination of a fluid way, a final valve which seats against the inlet end of such way, an initial valve having a hollow stem, said initial valve and stem having a fluid vent in their exterior formation, substantially as set forth.

2. In a faucet, the combination of a fluid way, a final valve which seats against the inlet end of such way, an initial circular valve having a tubular stem of substantially same circular size as said initial valve, said initial circular valve and tubular stem having a fluid outlet vent in their exterior circular formations, substantially as set forth.

3. In a faucet, the combination of a fluid way, a final valve which seats against the inlet end of such way, an initial circular valve having a tubular stem of substantially same circular size as said initial valve, a link having one end inclosed within and pivoted to said tubular stem, a crank shaft journaled to the opposite end of said link, said initial circular valve and tubular stem having a fluid outlet vent in their exterior circular formations, substantially as set forth.

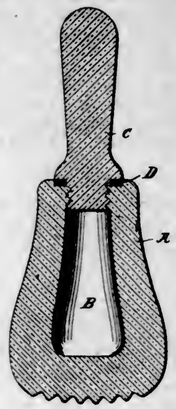
4. In a faucet, the combination of a fluid way, a final valve which seats against the inlet end of such way, an initial circular valve having a hollow stem provided with a lateral inlet port and having an outlet end, a link loosely jointed to said stem, a crank shaft connected to said link, said initial circular valve and tubular stem having a fluid outlet vent in their exterior circular formations, substantially as set forth.

5. In a faucet, the combination of a fluid way, a final valve which seats against the inlet end of such way, an initial circular valve having a hollow stem provided with two inlet ports respectively in opposite sides of its end adjacent to the initial valve, and having its opposite end provided with an outlet, a link having its one end loosely jointed to said outlet end of said stem, a crank shaft connected to such link, said initial circular valve and tubular stem having a fluid outlet vent in their exterior circular formations between said two ports, substantially as set forth.

[Claim 6 not printed in the Gazette.]

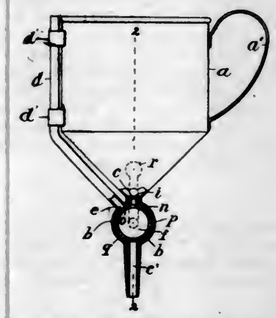
874,756. POTATO-MASHER. MARY E. FRENCH, Clyde, Ohio. Filed Sept. 26, 1906. Serial No. 336,370.

In a potato masher, the combination with a body portion having an internal opening of considerable size formed therein, said body portion being formed of heat conducting material and being adapted to contain a heating fluid and said body portion having its lower face serrated or fluted, a handle which forms a closure for the opening of the



body portion at the upper end thereof, and a gasket adapted to form a fluid tight joint between said handle and the body portion of the masher, substantially as shown and described.

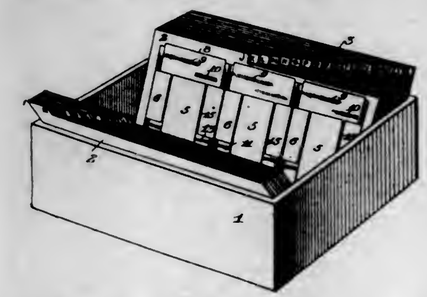
874,757. SYRUP-MEASURE FOR CHARGING BEVERAGE-BOTTLES. JOHN H. FOX, New York, N. Y. Filed Feb. 25, 1907. Serial No. 359,259.



1. The portable syrup measuring funnel herein described, comprising the funnel *a* having handle *a'* at the side and its lower end tapered and provided with the cock-casing *b* having a nozzle with discharge outlet *c'* at the bottom and passage *e* with vent-tube *d* extended to the top of the funnel upon the outside of the same, the hollow plug *g* having the inlet *n* for filling the same, with the vent-hole *o* connecting with the vent-tube *d* during the filling of the plug, and having the hole *p* for discharging the same, with vent-hole *q* for admitting air to the plug during the emptying of the same.

2. The portable syrup measuring funnel herein described, comprising the funnel *a* having handle *a'* at the side and its lower end tapered and provided with the cock-casing *b* having a nozzle with discharge outlet *c'* at the bottom and passage *e* with vent-tube *d* extended to the top of the funnel upon the outside of the same, the plug *g* having the hollow block *m* fitted adjustably to the same for varying the contents of the plug without materially contracting its capacity, a stop to regulate the rotations of the plug *g*, and holes for emptying and venting such plug when moved in accordance with the stop.

874,758. PAPER-FILE. GEORGE GARNY, Rochester, N. Y. Filed July 31, 1907. Serial No. 386,335.



1. A filing device comprising a backing, an upwardly extending flap secured at its lower edge to the backing and terminating at a point below the upper edge of the latter, an abutment at one side of said flap and a vertically extending flap at the other side having a lateral edge secured to the backing, the two flaps lying in the same plane when both are pressed simultaneously against the backing and being movable independently.

2. A filing device composing a backing, an upwardly extending flap secured at its lower edge to the backing at a point above the bottom edge of the latter and terminating at a point below the upper edge thereof, an abutment at one side of said flap and a vertically extending flap at the other side having a lateral edge secured to the backing, the two flaps lying in the same plane when pressed against the backing and being movable independently.

3. A filing device comprising a backing, an upwardly extending flap secured at its lower edge to the backing and terminating at a point below the upper edge of the latter, and an abutment at one side of said flap and a vertically extending flap at the other side having a lateral edge secured to the backing, and its lower end arranged to form an opening located above the corresponding extremity of the other flap.

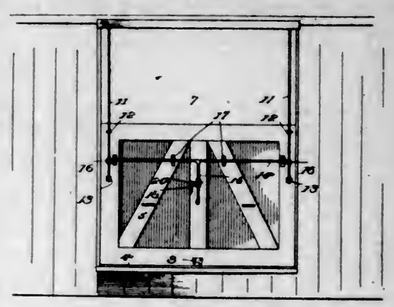
4. A filing device comprising a backing, an upwardly extending flap secured at its lower edge to the backing and terminating at a point below the upper edge of the latter, and vertically extending flaps arranged at both sides of said flap having their lateral edges secured to the backing and their lower edges terminating at points above the corresponding extremity of the first mentioned flap, all of said flaps lying in the same plane when pressed against the backing and being movable independently.

5. In a filing device the combination with a backing, of an envelop having one side secured thereto and forming a continuous surface and the opposite or outer side divided into a central flap having its attached edge at the bottom and above the corresponding edge of the backing and its upper free edge terminating at a point below the upper edge of the inner side of the envelop and vertically extending flaps arranged one on each side of the central flap, all of said flaps lying in the same plane when the envelop is flattened or compressed and being independently movable.

874,759. GRAIN-DOOR. EDGAR B. GILLELAND, Nevada, Mo., assignor of seven-sixteenths to Jay Rinehart, Nevada, Mo. Filed Feb. 6, 1907. Serial No. 356,088.

1. In combination with a sliding door a guide rod therefor, and lock means for securing the door at any adjusted position, said lock means consisting of a locking rod mounted to receive a movement around its axis and provided with a clutch member to grip the said guide rod and means for turning said rod and securing the same in an adjusted position.

2. In combination a sliding door, guide rods therefor, a locking rod mounted upon the said door and adapted to have a movement imparted thereto around its longitudinal axis and provided with clutch members coöperating with said guide rods, and means for turning said locking rod to effect release of the clutch members, or to cause the same to grip the said guide rods.

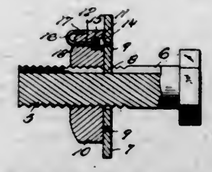


3. In combination a door slidably mounted and adapted to close a door opening, swinging guide rods, connecting means between said guide rods and door, a locking rod mounted upon the door and provided with eyes embracing said guide rods and constituting clutch members, and means for imparting a movement to said locking rod about its longitudinal axis to cause the clutch members either to release the guide rods or grip the same.

4. In combination with a sliding door, a guide rod therefor, and lock means for securing the door at different adjusted positions, said lock means consisting of a rod mounted upon the door to receive a movement around its axis and provided with a clutch member to grip the said guide rod, a handle secured to the locking rod, the door being provided with a keeper and the handle being adapted to be sprung into engagement with said keeper, a fastening being provided to hold the handle in the keeper.

5. In combination with a sliding door, guide rods therefor, a rod mounted upon the said door and adapted to have a movement imparted thereto around its longitudinal axis and provided at its ends with eyes encircling the guide rods and adapted to clutch the same by the turning movement of the rod formed with the eyes, a handle formed on the last named rod, the door being provided with a keeper with which the said handle is adapted to engage by torsional strain of the said last named rod, and a fastening for securing the handle to the keeper.

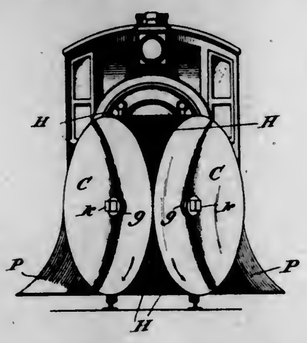
874,760. NUT-LOCK. JOHN H. GLOSAP, Nottawa, Mich. Filed Dec. 3, 1906. Serial No. 346,105.



A device of the class described comprising a bolt, a washer locked to the bolt against rotation with respect thereto, but movable longitudinally thereon, said washer being provided with a plurality of openings, a nut engaged upon the bolt, said nut being provided with a bore adapted to register with the openings in the washer, the nut being provided with a convexed outer face through which the bore opens, a pin slidably seated in the bore in the nut and adapted for the engagement of one of its ends interchangeably in the openings in the washer, a

collar on said pin adapted to contact with the washer, and a spring engaged upon the pin and bearing at one of its ends against the collar and at its other end against a shoulder formed by reducing the bore, the opposite end of the pin being bent over upon itself, there being a seat formed in the nut for the reception of the end of the bent over portion of the pin when the same is in engagement with the openings in the washer, and the pin being maintained against other than vertical and rotary movements in the holes in the nut and washer.

874,761. SNOW-PLOW. GEORGE GRAHAM and JOHN C. MARTIN, Rounthwaite, Manitoba, Canada. Filed May 27, 1907. Serial No. 375,898.



1. A snow plow comprising carrying means, and disks mounted on said carrying means and arranged when moved against a mass of snow, to be rotated by the friction between their faces and the snow, and to move the snow.

2. A snow plow comprising a frame, and disks loosely mounted on the frame and arranged in front of the frame and at acute angles to each other, with the inner portions of their perimeters in close proximity, and having concave faces, whereby when pressed against a mass of snow they will be rotated by the friction between their faces and the snow and will move the snow.

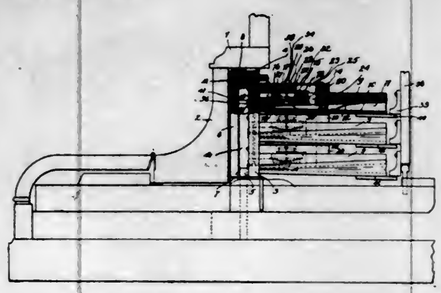
3. A snow plow comprising a frame, upper and lower vertical central deflectors fixed on the frame, guide wings fixed to the frame and arranged in rear of the lower central vertical deflector, and disks loosely mounted on the frame immediately in front of the deflectors and guide wings and disposed at acute angles to each other, with the inner portions of their perimeters adjacent to each other, and having concave faces, whereby when forced against a mass of snow, they will be rotated by the friction between their faces and the snow and will move the latter.

4. A snow plow comprising a frame of general acute angle form, upright shafts mounted in the said frame and equipped with antifriction wheels extending outward beyond the planes of the frame sides, and disks mounted on the frame and against the antifriction wheels, and arranged when moved against a mass of snow, to be rotated by the friction between their faces and the snow, and to move the snow.

5. As snow plow comprising a frame of general acute angle form, upright shafts mounted in said frame and equipped with antifriction wheels extending outward beyond the planes of the frame sides, vertical central deflectors of acute angle form fixed on the prow of the frame, guide wings fixed on the rear portions of the frame sides and arranged in the same horisontal plane as the lower deflector, and disks mounted on the frame in front of the deflectors and guide wings and against the anti-friction wheels, and arranged when moved against a mass of snow to be rotated by the friction between their faces and the snow, and to move the snow.

[Claim 6 not printed in the Gazette.]

874,762. MECHANICAL PIANO-PLAYER. AXEL G. GULBRANSEN, Sycamore, Ill. Filed Feb. 19, 1906. Serial No. 301,964.



1. In a mechanically operated piano, the combination with the abstract rods of the piano, of a vertical flat main air chamber, a plurality of pneumatic mechanisms, each mechanism being a unitary structure and comprising a main mounting block, actuating bellows secured below the block and primary pneumatic valve mechanism mounted in the block, each unitary structure being secured to the rear wall of the main air chamber by means of screws inserted from the front through the rear wall of the main chamber whereby each structure may be readily and independently removed, said pneumatic mechanisms being arranged in vertical and horizontal rows and each having operative connection with an abstract rod of the piano.

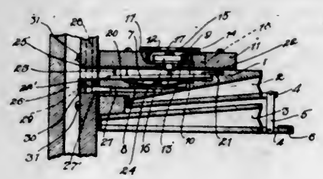
2. In a mechanically operated piano, the combination with the abstract rods of the piano of a main air chamber having a rear wall and a front hinged wall, pneumatic mechanisms arranged in vertical and horizontal rows in front of the foot of the abstract rods of the piano, a mounting block for each pneumatic mechanism, primary valve mechanism disposed in and on said mounting block, actuating bellows supported below the block and having direct operative connection with one of the abstract rods, each unitary mechanism being secured from the rear wall of the main air chamber by means of screws inserted from the front through said wall upon opening of the hinged front wall of the chamber.

3. In a mechanically operated piano, the combination with a main air chamber having the rear vertical wall 3 and the hinged cover 6, a mounting block 9 extending from and secured to the rear wall 3 by means of screws 41 passing through the wall 3, an actuating bellows 11 supported from the under side of the mounting block, an abstract rod for the piano, an abutment on said abstract rod, an extension 40 from the bellows for engaging with said abutment, and primary controlling valve mechanism supported on the mounting block, said mounting block, valve mechanism and bellows forming a compact unitary structure readily removable from the supporting wall 3 upon withdrawal of screws 41.

4. In a mechanically operated piano, the combination of a vertical, flat, main air chamber extending across the piano, abstract rods at the rear of the piano, pneumatic mechanisms supported from the rear wall of the main air chamber, a mounting block for each mechanism, actuating bellows supported below the mounting block and having direct connection with one of the abstract rods, valve mechanism for controlling the operation of the bellows, a valve chamber for the valve mechanism, a passageway leading from the valve chamber to the main air chamber, a disk within the main air chamber applied over the end of the passageway for each pneumatic mechanism, and a pin hole through each disk communicating with the corresponding passageway.

5. In a mechanically operated piano, the combination with a single, flat, main air chamber extending across the piano at the front thereof, abstract rods for the piano to the rear of the chamber, pneumatic mechanisms extending rearwardly from and removably secured to the rear wall of the main air chamber, each pneumatic mechanism being in the form of a compact unitary structure and comprising a mounting block, valve mechanism and actuating bellows, each actuating bellows having direct connection with the corresponding abstract rod.

874,763. PNEUMATIC-ACTION MECHANISM. AXEL G. GULBRANSEN, Chicago, Ill. Filed Dec. 11, 1906. Serial No. 347,306.



1. In pneumatic action mechanism for mechanically operated instruments, the combination of a mounting block, a bellows supported from the under side of the mounting block, said mounting block forming one member of said bellows, a valve block on said mounting block, a valve supported on said valve block, a diaphragm mounted in the mounting block, a lever pivoted at one end to the mounting block and engaged by the diaphragm and by the valve, movements of the diaphragm being transmitted through the lever to the valve.

2. In pneumatic action mechanism for automatically operated instruments, the combination of a mounting block, a bellows mounted below said block, said block forming one of the members of said bellows, a diaphragm mounted in said block, a valve block on the mounting block, a valve chamber in the valve block connected with the bellows, a valve in said valve chamber, a lever disposed between the valve and diaphragm and pivoted at one end to the mounting block whereby movements of the diaphragm are transmitted through the lever to the valve, and guiding means for the lever.

3. In pneumatic action mechanism for automatically operated pianos, the combination of a mounting block, a diaphragm mounted in said block, a bellows supported below the block, a valve block on the mounting block, a valve chamber in said valve block having connection with the bellows, a lever pivoted at one end to the mounting block and extending between the diaphragm and valve, engagement of the diaphragm and valve with the lever upon movement of the diaphragm being at different points, whereby the movements of the diaphragm are either multiplied or reduced before reaching the valve.

4. In pneumatic action mechanism for automatically operated pianos, the combination of a mounting block, a bellows supported from the mounting block, a diaphragm chamber in said block, a diaphragm in said diaphragm chamber, a valve block on said mounting block, a valve chamber in said valve block having connection with the bellows, a valve in said valve chamber, a lever pivoted at one end to the mounting block and extending across the diaphragm chamber between the diaphragm and valve, movement of the diaphragm causing engagement of the diaphragm and valve with the lever and thereby transmission of motion from the diaphragm to the lever, the points of engagement of the valve and diaphragm with the lever being in different planes.

5. In pneumatic action mechanism for automatically operated instruments, the combination of a mounting block 1, a bellows 2 supported below the mounting block, a diaphragm chamber 8, a diaphragm 9, a valve block 11 having a valve chamber 12, a valve in the chamber, a lever 20 having a bifurcated end 22, said lever being pivoted to the mounting block at one end and extending between the diaphragm and valve, whereby movements of the diaphragm are transmitted through the lever to the valve, and a guide post 23 engaging in the bifurcated end 22' of the lever for guiding said lever.

874,764. GRINDING-MILL. WILLARD HALSTEAD, Syracuse, N. Y., assignor to The Engelberg Huller Co., Syracuse, N. Y., a Corporation of West Virginia. Filed Dec. 1, 1904. Serial No. 235,066.



1. A cast metal, reversible, segmental plate for attrition mills having a body portion of uniform thickness and formed with continuous or unbroken annular ribs and continuous or unbroken intersecting, straight, radial ribs on both sides, the ribs on one side of the plate being directly opposite those on the opposite side thereof.

2. A cast metal, reversible, segmental plate for attrition mills having a body portion of uniform thickness and formed with annular, concentric, unbroken ribs, and intersecting, straight, radial ribs on both sides, the ribs on one side of the plate being directly opposite those on the opposite side and the outer curved ribs being at the extreme ends of the radial ribs while the inner ends of the radial ribs project inwardly from the inner curved ribs and are of different lengths.

874,765. ATTACHING DEVICE. ADOLPH HAMPE, New York, N. Y. Filed Feb. 4, 1907. Serial No. 355,599.



1. In an attaching device, a rectangular plate having an opening approximately midway of the length of the plate, and also having struck-up portions extending laterally of the plate and from the edges of the plate to the opening, said struck-up portions forming bearings having an open side, a stud on one side of said plate, said stud being spaced from said opening, a clasp member having laterally extending arms adapted to rest within the bearings of the plate, said member having an opening to receive the stud when the member is in one position, and also having an extension adjacent said arms, and a spring member secured to the opposite side of the plate from the stud, the point of securing of the spring member and the stud being on opposite sides of the opening in the plate, said spring member having a bearing contact on the extension of the clasp member to retain the latter in either an open or closed position.

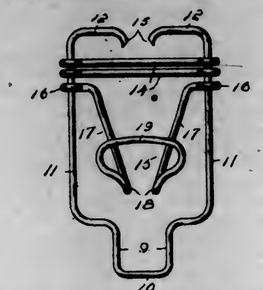
2. In an attaching device, a flexible support, a plate secured thereto, a clasp member pivotally secured to said plate said member having an opening, a stud secured to said plate and adapted to be received within said opening, said stud comprising a metallic support and a yielding facing therefor, said facing extending beyond the front plane of the metallic support to prevent contact of a stocking with the metallic support.

3. In an attaching device, a flexible support, a plate secured thereto, a clasp member pivotally secured to said plate, said member having an opening, a stud secured to said plate and adapted to be received within said opening, said stud comprising a metallic eyelet secured to the plate and having a projecting portion, and a rubber facing for the outer periphery of the eyelet, said facing extending beyond the plane of the projecting portion of the eyelet and preventing contact of a stocking with the eyelet.

4. A stud for attaching devices comprising an eyelet having spaced flanges adapted to receive a plate therebetween, one of said flanges being located intermediate the ends of the eyelet, the free end of the eyelet being flared, and a cylindrical rubber facing for the eyelet, said facing being in the form of a tube and of a length greater than the length of the projecting portion of the eyelet to provide a yielding surface projecting beyond the plane of the flared end of the eyelet, whereby the material to

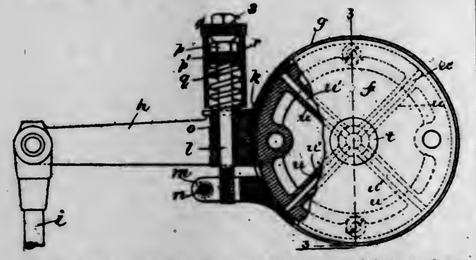
be clamped is held from contact with the eyelet portion of the stud.

874,766. HOSE-SUPPORTER. ETHEL M. HAYNES, Normal, Ill. Filed Nov. 8, 1906. Serial No. 342,552.



In a garment supporter, a U-shaped body portion having the free ends of its arms bent laterally inwards towards each other, the terminals of said bent ends being directed downwards and sharpened, and a pair of transversely disposed coacting bars adapted to have the end of a strip of fabric twisted therearound, and having their ends slidably engaged with said arms, said bars being designed for movement towards said sharpened terminals to cause the same to penetrate and engage the fabric.

874,767. SHOCK-ABSORBING DEVICE. GEORGE S. HILL, Bradford, Mass. Filed Mar. 5, 1906. Serial No. 304,155.



1. A shock absorber for vehicles, comprising a drum and a band engaging the same, constituting coöperating frictional members, one of which is attached to the spring supported body of the vehicle and the other to the supporting base, said members being constructed and arranged to loosen the band when the body and base approach each other and to tighten the band when they separate, and adjustable means for limiting the loosening movement of said band.

2. A shock absorber for vehicles, comprising a drum, a strap frictionally engaging the periphery of the drum, the drum and strap being attached respectively to different relatively movable parts of a vehicle, and arranged so that relative movement of said parts in one direction may loosen the strap and in the other may tighten the strap, to check such motion, and adjustable means for limiting the loosening movement of said strap.

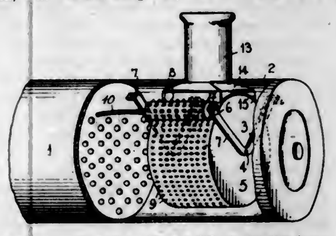
3. A shock absorber for vehicles, comprising a drum, a strap frictionally engaging the periphery of the drum, the drum and strap being attached respectively to different relatively movable parts of a vehicle, and being rotatable to each other when movement between said parts occurs, being also constructed so that relative movement of said parts in one direction may loosen the strap and in the other may tighten the strap, to check such motion, and adjustable means for limiting the loosening movement of said strap.

4. A shock absorber for vehicles, comprising a drum, a flexible strap, yielding means tending to hold said strap in frictional engagement with the drum, the latter being mounted on one of the relatively movable parts of the vehicle, and means on another of such parts connected to the strap, arranged to loosen the same against the tension of the yielding means when movement between the parts in one direction occurs, and to permit tightening of the strap during movement in the opposite direction to check such movement, and adjustable means for limiting the loosening movement of said band.

5. A shock absorber for vehicles, comprising a drum, a flexible strap, yielding means tending to hold said strap in frictional engagement with the drum, the latter being mounted on one of the relatively movable parts of the vehicle; means on another of such parts connected to the strap, arranged to loosen the same against the tension of the yielding means when movement between the parts in one direction occurs, and to permit tightening of the strap during movement in the opposite direction to check such movement; and a stop limiting the movement of the yielding means.

[Claims 6 to 12 not printed in the Gazette.]

874,768. SPARK-ARRESTER. JOSEPH H. HINES, Philadelphia, Pa. Filed Aug. 19, 1907. Serial No. 389,212.



1. In a locomotive provided with a smoke box, a rotary screen journaled therein, and a rotary cleaner in engagement with the periphery of said screen.

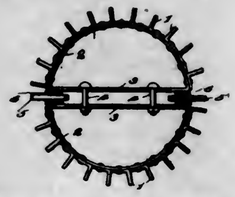
2. In a spark-arrester, a locomotive provided with a smoke box, V-shaped brackets secured therein, a rotary screen journaled in said brackets, a rotary cleaner journaled in two arms of said brackets and provided with means for engaging with the screen and thereby cleansing and rotating the same.

3. In a spark arrester, a locomotive provided with a smoke box, a smoke stack extending down into said box with its lower end extended and scalloped, brackets in the smoke box, a rotary screen journaled in said brackets with its periphery adjacent to said extended and scalloped portion of the smoke stack, and a rotary cleaner journaled in position for engaging with the screen and simultaneously rotating and cleaning the same, said cleaner being provided with projections.

4. In a spark arrester, a locomotive provided with a smoke box, a smoke stack extending down into the same, having its lower end expanded and scalloped, V-shaped brackets secured to the wall of the smoke box, one of the arms of each of which is perforated near its upper end, a shaft journaled in the lower ends of said brackets, a cylindrical screen on said shaft having its periphery adjacent to the lower end of the smoke stack, a shaft journaled in the perforations of said arms, having a pulley on one end, a cylindrical cleaner mounted on said second-mentioned shaft provided with projections for engaging with the screen, and means connected with said pulley for rotating said cleaner and screen.

874,769. CORE-BAR. CHARLES S. HUMPHREY, Bellefontaine, Ohio. Filed July 11, 1907. Serial No. 383,301.

1. A collapsible core bar constructed in sections, each of which consists of a series of longitudinally extending bars and segmental rings to which said bars are connected, the said segmental rings embodying straight sides B constituting retaining bars, the said retaining bars of one section extending parallel with the corresponding bars of the other section, and wedges adapted to be inserted between said retaining bars to hold the sections in extended relation, and means for limiting the spreading movement of said sections.



2. A collapsible core bar constructed in sections, each of which consists of segmental rings having straight portions that connect together the ends of their curved portions and a series of longitudinally extending angle bars secured to the curved portions of said rings, one member of the respective longitudinally extending bars projecting out from the rings and the other members that are secured to said rings being spaced from each other, wedges adapted to be inserted betwen the straight bars of corresponding sections to hold the sections in extended relation, and means for limiting the spreading movement of said sections.

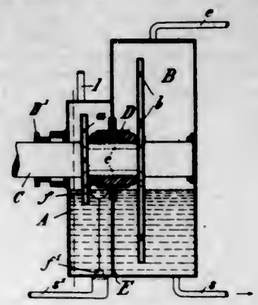
3. A collapsible core bar constructed in sections, each of which consists of a series of longitudinally extending bars and segmental rings to which said bars are connected, said wings being provided with retaining bars that extend parallel with each other on the respective sections, retaining bolts extending through said bars and limiting the outward movement of one section from the other, and wedge-bars adapted to be inserted endwise between the ends of the retaining bars of the respective sections, each of said wedge-bars being provided with longitudinally disposed wedge blocks adapted to engage the said retaining bars, whereby a longitudinal movement of the wedge bars, after being inserted between the ends of the retaining bars will effect a wedging action against the retaining bars, as and for the purpose set forth.

874,770. TWINE-HOLDER FOR BINDING CORN, GRAIN, &c. HENRY G. HURST and WILLIAM H. ROTH, Ozora, Mo. Filed June 20, 1907. Serial No. 379,964.



A device for securing the free ends of a flexible binder comprising an elliptical body open to form engaging hooks at each end of the major diameter of said body, a pair of diverging fingers secured to one of said hooks and extending substantially parallel to a line through the major diameter of the body, said fingers being wedge-shaped in cross section and disposed in close proximity to each other.

874,771. COMPRESSED-AIR MOTOR. THOMAS L. JONES, Hamburg, Germany. Filed June 17, 1907. Serial No. 379,483.



1. A compressed air motor comprising a casing having a high pressure chamber and a low pressure chamber provided respectively with an inlet and an outlet, a rotatable shaft in said chambers, a plurality of short tubes mounted on the shaft in the high pressure chamber and a plurality of longer tubes mounted on the shaft in the low pressure chamber communicating with the short tube.

2. A compressed air motor comprising a casing having a high pressure chamber and a low pressure chamber provided respectively with air and water inlets and air and water outlets, a rotatable shaft in the chambers provided with longitudinal passages, a plurality of short radial tubes on the shaft in the high pressure chamber communicating with the passages, and a plurality of longer curved tubes on the shaft in the low pressure chamber communicating with the short tubes through said passages.

3. A compressed air motor comprising a casing having two chambers, a rotatable shaft projecting into said chambers having longitudinal passages connecting the chambers, radial tubes attached to the shaft at both ends of the passages, and disks of different diameter on each set of tubes forming radial passages.

4. A compressed air motor comprising a casing having two chambers, a rotatable shaft projecting into said chambers having longitudinal passages reaching from one chamber to the other and radial tubes attached to the shaft at both ends of the passages one set of tubes being shorter than the other, the longer tubes being bent in one direction within the plane of the set of tubes.

5. A compressed air motor comprising a casing, an imperforate partition in the casing forming a high pressure chamber and a low pressure chamber, a shaft rotatably mounted in the partition having a plurality of longitudinal passages connecting the chambers, a plurality of short radial tubes on the shaft in the high pressure chamber communicating with the passages and a plurality of longer curved tubes on the shaft in the low pressure chamber communicating with the short tubes through said passages.

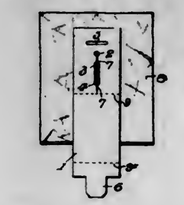
[Claim 6 not printed in the Gazette.]

874,772. PIN-TICKET FOR FABRICS AND THE LIKE. ALONZO KIMBALL, New York, N. Y., assignor to A. Kimball Company, a Corporation of New York. Filed Mar. 20, 1906. Serial No. 307,007.

1. The combination with a material to be marked, of a pin-ticket attached to one side only thereof, the said ticket comprising a portion attached to the said material and adapted to receive a removable fastener for effecting the attachment of the ticket to the material, a flap adapted to be folded directly upon such portion, so as to completely cover the fastener, and means independent of the fastener to fasten the folded flap to the portion of the ticket in which the fastener is inserted.

2. The combination with a material to be marked, of a pin-ticket attached to one side only thereof, the said

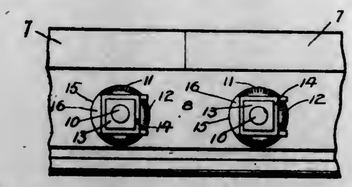
ticket comprising a portion attached to the said material, and adapted to receive a removable fastener for effecting the attachment of the ticket to the material, a flap adapted to be folded directly upon such portion, so as to completely cover the fastener, and means for fastening the folded flap to the portion of the ticket in which the fastener is inserted, said means comprising a tongue formed on one end of the ticket to enter a slot formed in the ticket near its other end.



3. The combination with a material to be marked, of a pin-ticket attached to one side only thereof, the said ticket comprising a portion attached to the said material, the said portion being provided with openings to receive a removable fastener, the latter penetrating the attached material between the openings, a flap adapted to be folded upon the fastener-receiving portion, so as to cover the said fastener, and means independent of the fastener for securing the folded-over flap to the portion of the ticket in which the fastener is inserted.

4. A pin-ticket having a pin-carrying portion adapted to be attached to the fabric and provided with three alined openings to receive a removable fastener, two of the openings receiving the body of the fastener at each side of the portion of the attached material penetrated by the fastener, and the other opening receiving the head thereof, a flap adapted to be folded over and to cover the said fastener, and means for fastening the folded over flap down upon the portion of the ticket in which the fastener is inserted.

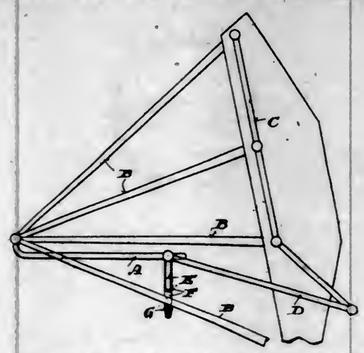
874,773. NUT-LOCK. HERMAN B. LAKE, Rapid River, Mich. Filed Apr. 13, 1907. Serial No. 367,966.



1. The combination, with a bolt having a threaded end, of a plate carried upon said bolt end, and provided with a corrugated outer face; a nut having the edges of its inner face provided with seats extending from side to side; and a U-shaped key interposed between said plate and nut, said key consisting of a pair of arms fitting in opposite seats in said nut and a bight portion fitting in a third seat therein and provided with a corrugated inner face engaged with the corrugations on said plate.

2. The combination, with a bolt having a threaded end, of a circular plate provided with a radially toothed outer face; a nut having the several edges of its inner face provided with seats extending from side to side; and a resilient U-shaped key interposed between said plate and nut, said key consisting of a pair of arms fitting in opposite seats in said nut, and a transversely widened bight portion fitting in a third seat therein and having a series of radially arranged teeth formed on its inner face for engagement with the toothed face of said plate.

874,774. BUGGY-IRON. WILLIAM A. LANGJAHR, Plymouth, Wis. Filed Aug. 22, 1907. Serial No. 389,625.



1. A shifting-rail of a buggy having depending rear supports for the swung back top of the vehicle below the fulcrums of the side-braces of said top.

2. A shifting-rail of a buggy having a stationary depending rear yoke at each side, and a reversible yoke in slip-fit connection with the one aforesaid for the support of said top when swung back, the support being at one elevation or another according to the arrangement of the reversible yokes.

3. A shifting-rail of a buggy having a stationary depending rear yoke at each side, and a reversible buffer-carrying yoke in sliding fit connection with each stationary yoke for the support of the buggy-top when the same is swung back.

4. A shifting-rail of a buggy having a stationary depending rear yoke at each side provided with an upper outer stud upon which to confine the lower end of a side-brace of the buggy-top, and a reversible buffer-carrying yoke in sliding-fit connection with each stationary yoke for the support of said buggy-top when the same is swung back.

874,775. ROTARY ENGINE. FREDERICK H. LATHROP, Chicago, Ill., assignor of one-half to John J. McCarthy, Chicago, Ill. Filed Mar. 24, 1905. Serial No. 251,707.



1. In a rotary engine, the combination of a cylinder, a rotary piston-member having a chamber for explosive mixture and a valveless exit passage, and a valve controlling the admission to said chamber, for the purpose set forth.

2. In a rotary engine, the combination of a cylinder, a rotary piston-member having a chamber for compressed explosive mixture and equipped with a valve controlling the admission to said chamber said chamber having a valveless exit passage, and admission and exhaust valves for the engine, for the purpose set forth.

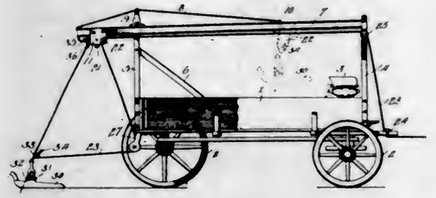
3. In a rotary engine, the combination of a cylinder, a rotary piston-member having a valved chamber for explosive mixture, an exhaust valve, and admission means comprising a spring-held check-valve, a cam-actuated rod, valves on said rod controlling separate fuel and fuel and air admission passages, for the purpose set forth.

4. In a rotary engine, the combination of a cylinder, a valved hollow piston-member movable therein, an exhaust valve, a suitably actuated abutment movable into said cylinder, and admission means comprising a passage equipped with a check valve, a valve-casing connected therewith and provided with two valve-seats and having air-admission passages on opposite sides of said valve-seats, an oil-chamber having a passage opening into the valve-casing adjacent to one air inlet thereof, a plunger projecting into the oil-chamber and serving to eject the oil, and valves on said plunger coacting with said valve-seats, for the purpose set forth.

5. In a rotary engine, the combination of a casing provided with an annular chamber having a recess in one wall thereof and an admission port adjacent to said recess, a valved hollow piston-member movable in said annular chamber and provided with an opening registering with said recess during a part of the movement of the piston-member, a movable abutment adapted to enter the annular chamber, and admission and exhaust controlling means, for the purpose set forth.

[Claims 6 to 12 not printed in the Gazette.]

874,776. MANURE-LOADER. HENRY J. LAWRENCE, Elmore, Minn., assignor of one-half to Oscar E. Seastrom, Elmore, Minn. Filed Sept. 27, 1907. Serial No. 394,898.



1. A manure loader comprising a spreader box, arches secured to said spreader box, a track supported upon said arches, a sliding block mounted to travel on said track, a roller provided with a spiral groove mounted on a bracket secured to the spreader box, a hay fork and a rope passing over pulleys and around a pulley on the block and around the spirally grooved roller and connected to the fork, said block being provided with a pivoted latch and a trigger, and a trip on the fork for operating said trigger and latch.

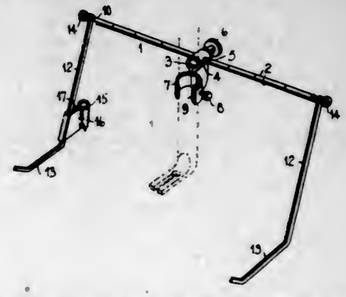
2. In a manure loader, the combination of a track, a traveling block, a hay fork, a spirally grooved roller and a rope passing over pulleys and around a pulley on the block and engaged with said grooved roller and fork.

3. In a manure loader, the combination of a track, a sliding block, a hay fork and a spirally grooved roller and a rope passing over pulleys and connected to the block, to the roller and to the fork.

4. A manure loader comprising an I-beam track, a sliding block mounted to travel on said track, a pulley on said block, a pivoted latch carried by said block, a pivoted trigger carried by said block and adapted to engage said latch, a keeper for said latch, a spirally grooved roller, a hay fork provided with a trip to engage said trigger and a rope passing around pulleys, around the pulley on the block, around the grooved roller and connected to the trip.

5. In a manure loader, a track, a traveling block mounted to move on said track, a hay fork and a roller provided with a spiral groove and a rope connected to the block, passing around the grooved roller and connected to the fork, said rope adapted to run off of said grooved roller for the purpose described.

874,777. GUIDING AND MARKING DEVICE FOR SEWING-MACHINES. CHRISTINA LINDBORG, Galeton, Pa. Filed Aug. 8, 1907. Serial No. 387,672.



1. A guiding and marking attachment for sewing machines comprising a pair of adjustably connected supporting bars, having arranged thereon a scale of measurements, means to secure said bars to the presser foot bar of the machine, guide feet removably secured to the opposite end of said supporting bars, a chalk holder, and a spring clamp on said holder whereby the same is detachably secured to either of said guide feet, substantially as described.

2. A guiding and marking attachment for sewing machines comprising a pair of adjustably connected supporting bars having arranged thereon a scale of measurements, a fastening bolt having formed therein a transversely disposed passage to receive said bars, a fastening clip having an apertured bolt engaging portion through which said bars are adapted to project, a clamping nut adapted to be screwed onto the threaded end of said bolt, whereby the supporting bars are rigidly held together in their adjusted positions, guide feet standards adapted to be secured upon the outer end of said supporting bars, guide feet on the lower ends of said standards, and a chalk holder adapted to be secured to said standards, substantially as described.

3. A guiding and marking attachment for sewing machines, comprising a pair of adjustably connected supporting bars adapted to be lengthened or shortened to adjust the device, a fastening clip adapted to be engaged with the presser foot bar of a machine, a clamping screw arranged in said clip, a clamping plate swiveled on the inner end of said screw and adapted to be engaged thereby with the presser foot bar, reduced threaded ends formed on said bars to provide shoulders, guide feet supports adapted to be engaged with said reduced threaded ends, clamping nuts adapted to be screwed onto said ends to hold said standards in engagement with said shoulder, and guide feet formed on the lower end of said standards, substantially as described.

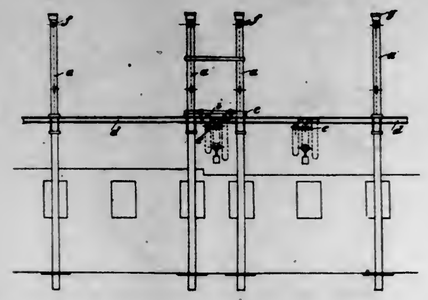
874,778. COMBINED ELEVATOR AND BUILDER'S CRANE FOR MOVING HEAVY BUILDING MATERIALS. EMIL LÜBCKE, Merseburg, Germany. Filed Jan. 12, 1907. Serial No. 352,059.

1. A builder's crane, consisting of posts erected in front of the building to which brackets overhanging towards the building are attached vertically adjustable and carrying the ways for a traveling crane, two of said brackets being arranged nearer to each other and extending also in the direction away from the building, as described.

2. A builder's crane, consisting of posts erected in front of the building to which brackets overhanging towards the building are attached vertically adjustable and carrying the ways for a traveling crane, two of said brackets being arranged nearer to each other and extending also in the direction away form the building, a truck traveling on the crossways formed by said two brackets, as described.

3. A builder's crane, consisting of posts erected in front of the building to which brackets overhanging towards

the building are attached vertically adjustable and carrying the ways for a traveling crane, two of said brackets being arranged nearer to each other and extending also in the direction away from the building, a truck traveling



on the crossways formed by said two brackets, said truck carrying the portion of the main longitudinal ways between said two brackets as described.

874,779. WRAPPER FOR METAL SHEETS. HERBERT E. MARKS, Poughkeepsie, N. Y., assignor to American Sheet & Tin Plate Company, Pittsburg, Pa., a Corporation of New Jersey. Filed July 10, 1905. Serial No. 268,901.



1. A rectangular wrapper having opposite free edges turned inwardly to define a side of the wrapper and then folded back across the outside thereof to form sealing wings, and a sealing strip having inturned edges embracing the sealing flaps substantially as described.

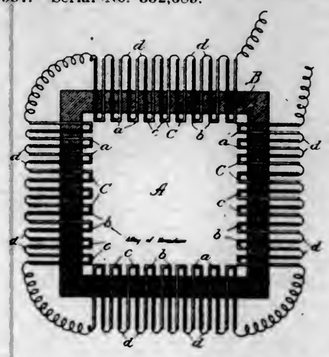
2. A rectangular wrapper consisting of a blank folded to form three sides of the wrapper, the free ends of the blank being turned inwardly to define the fourth side of the wrapper and then folded back across the outside thereof to form sealing wings, and a sealing strip having inturned edges embracing the sealing flaps substantially as described.

3. A rectangular wrapper comprising a sheet metal blank folded to form three sides of the wrapper, the free ends of the blank being folded inwardly to define the fourth side of the wrapper and then folded back across the outside thereof to form sealing wings, and a sheet metal sealing strip having inturned edges embracing the sealing flaps, the sealing strip and the flaps being pressed together to interlock them and connect the ends of the blank substantially as described.

4. A rectangular wrapper having opposite free edges turned inwardly and defining a side of the wrapper and then folded back across the outside thereof to form sealing wings, and a sealing strip having inturned edges embracing the sealing wings and connecting the same by a single seam, the width of the sealing strip being substantially equal to the width of the adjacent side of the wrapper, substantially as described.

5. A rectangular wrapper formed of a blank which is bent to form an end and opposite sides, the free ends of the wrapper being bent inwardly to define the other end of the wrapper and then bent outwardly to form sealing flaps, and a sealing strip having inturned edges embracing the sealing flaps and connecting the same by a single seam, the width of the sealing strip being substantially equal to the width of the adjacent side of the wrapper, substantially as described.

874,780. THERMO-ELECTRIC ELEMENT. ALBERT L. MARSH, Lake Bluff, Ill., assignor to Wm. A. Spinks & Co., Chicago, Ill., a Copartnership Firm. Filed Jan. 17, 1907. Serial No. 352,689.

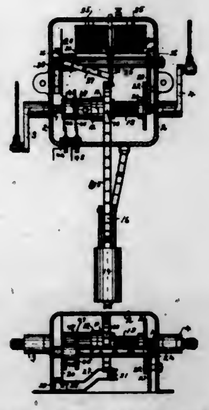


1. A thermo-electric couple, one element of which consists of an alloy of vanadium and another metal, which when alloyed with vanadium forms an alloy which is electro-negative to nickel.

2. A thermo-electric couple, one element of which consists of an alloy of vanadium and nickel.

3. A thermo-electric couple, one element of which consists of an alloy of vanadium and nickel and the other element of an alloy of nickel and copper.

874,781. TEMPERATURE-CONTROLLING DEVICE FOR FURNACES. ALLAN G. MATHER and ERNEST C. SHAW, Milwaukee, Wis. Filed Apr. 7, 1905. Serial No. 254,303. Renewed Nov. 14, 1907. Serial No. 402,210.



1. The combination with the draft and check dampers of a furnace, of a crank shaft provided with oppositely projecting cranks connected with the respective dampers, a sprocket wheel loose on the crank shaft and provided with a one-way acting clutch member, a weight provided with a sprocket wheel, a sprocket chain passing around said sprocket wheels and connected at one end to a fixed point of support, a clutch member fixed on said crank shaft and adapted to be engaged by the clutch member on the sprocket wheel when the latter is turned in the direction of the pull exerted by the weight, a spring arranged to normally hold said clutch members in mutually engaging contact, a brake mechanism normally preventing the rotation of said crank shaft, a thermostatic switch, and an electrically operated device for releasing said brake mechanism when the circuit is closed by said switch, and devices carried by the crank shaft for breaking said electrical circuit.

2. The combination with the draft and check dampers of a furnace; of a motor arranged to open and close the said dampers in succession; a rotary disk driven by said motor; and a gravity actuated brake lever provided with a notch in which the margin of said disk is entered; said brake lever being pivotally supported at one end near the notch and normally adapted to drop by gravity to an angular position with the sides of said notch binding upon the disk; an electro-magnet provided with a movable armature; a screw adjustably connecting said armature with the brake lever; a thermostatic switch for closing electrical circuits through the electro-magnet; and means, operated by the motor, for breaking such circuits.

3. The combination with the draft and check dampers of a furnace of a crank shaft provided with oppositely disposed cranks connected to the respective dampers, fast and loose clutch members mounted on the crank shaft, a sprocket wheel mounted on the loose clutch member, a weight provided with a corresponding sprocket wheel, a chain passed around said sprocket wheels and having one end connected with a fixed point of support above the weight, a thermostatic switch, and means, in operative relation thereto, for releasing and holding the crank shaft, said clutch members being arranged for motion transmitting engagement in one direction only, whereby said weight may be periodically lifted by pulling upon the sprocket chain in the opposite direction without operating the crank shaft.

874,782. METALLIC CRATE. JOSEPH MATHY, Hot Springs, Ark. Filed Apr. 11, 1907. Serial No. 367,569.

1. The herein described metallic crate, having its side walls formed with an offset depending flange provided with a horizontally projecting foot-portion, an inset bottom piece provided with a depending flange closely fitting the depending flange of the side walls and having a horizontal flange extending under and lapped over and upon the said foot-portion, the vertical portion of said flanges forming a double wall supporting flange upholding the bottom above the surface upon which the crate rests and the horizontal portions of said flanges forming a triple walled bearing-flange having a broad bearing surface on its underside, substantially as described.

2. The herein described metallic crate comprising two opposite metal portions bent into approximately U-shape and united at their ends to form the side and end walls of the crate, said walls being formed with an offset depending flange at their base, said depending flange having a horizontally extending foot-portion; and a bottom piece stamped from sheet metal having a depending flange fitted closely within the offset flange of the walls, and having a horizontally extending portion underlying the said foot-portion, and turned over and lapped upon said foot-portion and forming therewith a bearing flange broad on its under surface and extending entirely around the base of the crate, the walls of the crate being inclined inwardly from bottom to top so that the top of one crate is adapted to fit within the supporting flanges of a like crate, substantially as described.

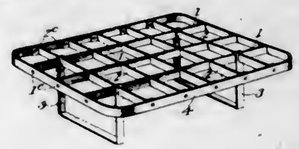
3. The herein described metallic crate having its side and end walls formed of two opposite metal portions bent into approximately U-shape, the crate having rounded corners, and said side walls being inclined so that the upper end of the crate is smaller than the base portion, said walls being formed with an offset depending base flange having a horizontally extending foot-portion; a bottom piece having a depending flange fitted closely within the offset flange of the walls, and having a horizontally extending portion underlying and turned over and lapped upon said foot-portion, the vertical portions of the said flanges forming a double walled supporting flange and the said foot-portion inclosing flanges forming a double walled bearing flange, said bearing flange being broad on its under surface and extending entirely around the base of the crate, the top of one crate being adapted to fit within the supporting flange of a like crate, substantially as described.

4. In combination with a crate, a grating therefor, comprising a series of intersecting straps arranged edgewise, one set of said straps having tongued slots through which the other set of straps are passed, the free ends of the tongues being forced back to lock the straps in the slots.

5. A grating composed of a plurality of parallel straps arranged edgewise and having tongued slots formed by partially punching tongues therefrom, and a plurality of intersecting straps also arranged edgewise and extending through the slots in the first series of straps, the second set of straps having indentations at the intersecting points, and the free ends of the tongues being forced into said indentations to lock the straps.

[Claims 6 to 8 not printed in the Gazette.]

874,783. GRATE FOR METALLIC CRATES. JOSEPH MATHY, Hot Springs, Ark. Filed Apr. 11, 1907. Serial No. 367,570.



1. The combination of a grate composed of intersecting straps, with supports attached to the grate at points of intersection of the straps and locking straps together, substantially as described.

2. The combination of a grate composed of longitudinal and transversely arranged series of straps, with supports having slotted upper ends embracing one of the straps at points of intersection, and their extremities turned over the intersecting straps to lock the same, substantially as described.

3. The combination of a grate composed of longitudinal and transversely arranged series of bars notched at their points of intersection, with supports having slotted upper ends embracing one of the straps at intersecting points and having their extremities turned over the adjacent intersecting straps to lock the same, substantially as described.

4. The combination of a grate composed of longitudinal and transversely arranged series of straps, with supports having slotted upper ends embracing one of the straps at points of intersection, and their extremities turned over the intersecting straps to lock the same, and bands surrounding the intersecting straps and attached to the ends thereof.

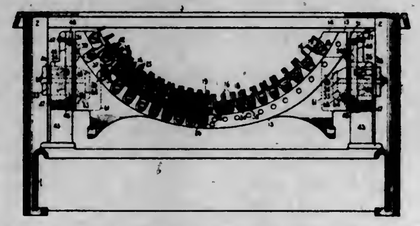
5. The combination in a grate, of a series of parallel straps notched on their upper side, a series of intersecting transversely arranged straps notched on their under side, said straps being fitted together at their notched intersecting points, with a locking device embracing the edge of one of the straps at an intersecting point and having its extremities turned over and down upon the opposite edge of the intersecting strap to lock the straps together, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

874,784. TYPE-WRITING MACHINE. HENRY W. MERRITT, Syracuse, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed May 25, 1904. Serial No. 209,619.

1. In a front-strike typewriting machine, the combination of two bearing faces, one arranged forwardly of the other, two sets of type bar hangers, one set alone being

mounted on each of said bearing faces and the hangers of the forward set extending upwardly and overlapping those of the rear set, and type bars pivoted to each set of hangers.



2. In a front-strike typewriting machine, the combination of a segment having its front face formed in two steps, one above and back of the other; a series of hangers secured to the upper or back step by screws; and a series of hangers secured to the lower or forward step and bent so as to permit of access to the screws of the other series of hangers.

3. In a typewriting machine, the combination of a segment having an integral stepped face, one step of said face being back of and of less radius than the other; and a series of hangers mounted on said steps in staggered arrangement, the forward series of hangers extending upwardly and radially past the hangers of the rearward series.

4. In a front-strike typewriting machine, the combination of a segment having a stepped face, one step of said face being back of and of less radius than the other; a series of hangers mounted on said steps, the hangers on the front step having their pivot points nearer the center of the segment than those on the other step; and type bars pivoted to said hangers.

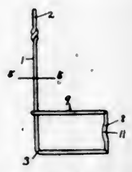
5. In a front-strike typewriting machine, the combination of a segment; a series of type bar hangers mounted thereon in a plurality of sets, the hangers of one set having their pivot points back of and farther from the center of the segment than those of the front set; type bars pivoted to said hangers, those type bars which are pivoted to the back set of hangers curving over the hangers of the front set; slots in the upper edges of said type bars; links pivoted to said type bars in said slots; and keys connected with said links.

[Claims 6 to 44 not printed in the Gazette.]

874,785. SWITCH-STAND. AURELIUS B. MOSER, Los Angeles, Cal. Filed June 5, 1907. Serial No. 377,371.

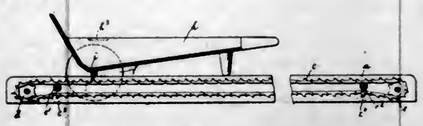
A switch stand of the class described comprising a tubular vertically disposed casing, a shaft mounted vertically within the casing for turning movement, a crank arm secured to the shaft at its extreme lower end and beneath the base of the casing, a switch rod pivoted to the crank arm, a segmental gear fixed to the shaft for rotation therewith, a shaft journaled in the front side of the casing, a pinion carried by the last named shaft and meshing with the segmental gear, a bracket fixed upon the said front side of the casing and extending to each side of the same, a lever arm secured to the last named shaft, lever rests formed at the ends of the bracket and designed for the reception of the hand lever when at either limit of its movement, a lock associated with one of the rests for locking the lever thereto, a shaft journaled in the front side of the casing adjacent the upper end thereof, a semaphore arm carried by the said shaft, a pinion carried by the shaft, a segmental gear fixed to the first named shaft and meshing with the said pinion, a lamp bracket fixed upon one side of the casing, a lamp supported from the bracket and having bull's eyes which are presented in opposite directions, a bracket secured to the inner end of the semaphore arm and including pairs of right angularly extending arms, targets of one color carried by each of the arms of one pair, and targets of another color carried by each of the arms of the other pair, the targets of either pair being adapted to be brought into position in front of the bull's eyes of the lamp.

874,786. SUSPENDING DEVICE. CHARLES R. MUELLER, Jr., Detroit, Mich. Filed Feb. 18, 1907. Serial No. 357,805.



A suspending device formed of a wire having a ring at one end, and bent to form a four-sided loop, one of the sides extending and having the ring at its free end, the side opposite being arched to facilitate bending the wire.

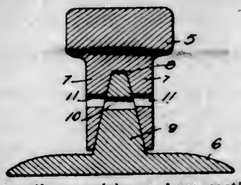
874,787. AUXILIARY POWER DEVICE. JOHN G. MURPHY, New York, N. Y. Filed May 17, 1907. Serial No. 374,147.



1. In a device of the character described, the combination of a platform longitudinally slotted, angle pieces secured to the side of the platform forming a track below the plane of the platform surface, an endless chain mounted upon sprocket rollers at each end of the platform, and lying below the upper surface, supporting rollers intermediate of the ends of the platform, and a truck having a stud secured to its under side and lying within the slot to engage the endless chain, when the wheels of the truck are on the tracks, substantially as shown and described.

2. In a device of the character described the combination of a platform longitudinally slotted, angle pieces, secured to the side of the platform, forming a track below the plane of the platform surface, and engaging medium within the slot movable from the lower end of the platform toward the upper end, and lying below the upper surface, a truck having a stud secured to its under side and lying within the slot to engage the movable medium when the wheels of the truck are on the tracks substantially as shown and described.

874,788. RAILROAD-RAIL. WALTER MCCAFFERTY, Butte, Mont. Filed Jan. 29, 1907. Serial No. 354,653.



A compound rail comprising a base section having an upstanding flange which is wedge-shaped in cross-section, said flange being provided at points with bolt openings, a tread section provided with a depending bifurcated flange the inner walls of the bifurcations of which extend in inclined planes, the said bifurcated flange being provided with bolt openings which aline, the bifurcation in the flange of the tread section being of such dimensions as to completely receive the upstanding flange of the base section only when initial pressure has been applied upon the said tread section, the bolt openings in the flange of the base and tread sections being adapted to register only after such pressure has been applied, and bolts adapted for engagement through the openings at such time.

874,789. ORNAMENT. MICHAEL E. MCDONNELL, Leominster, Mass. Filed Dec. 14, 1906. Serial No. 347,886.

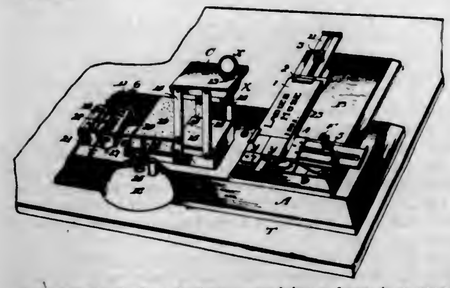


1. An article of personal wear comprising a non-opaque body of relatively dark color having a slit in its upper edge, and an insert of material of different shade than the body adapted to change the shade of that portion of the article in which it is placed.

2. An article for personal wear comprising an integral non-opaque body having greater length and breadth than thickness, a longitudinal channel formed between the front and back of said body and throughout a part thereof, and an insert cemented within said channel of a different shade than the body.

3. A personal wear comb comprising a non-opaque body, teeth carried by said body, a longitudinal channel formed in the edge of said body above the teeth, and an insert secured within said channel of a different shade than that of the body.

874,790. PRINTING DEVICE. ARTHUR L. PATTERSON, Albemarle, N. C. Filed May 10, 1907. Serial No. 372,887.



1. A label printing device, comprising a base A, a parallel motion type-carrier mounted thereon and having two swinging links on each side and a base B mounted on the base A and provided with means for adjustment in two directions, a label holder arranged on the base B beside said type carrier and an ink pad arranged on the base A on the other side, of the type carrier.

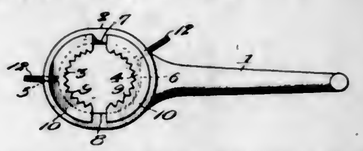
2. A label printing device, comprising a sub-base A, a swinging type carrier mounted on the middle of the same, a superposed base B mounted on the end of the sub-base and provided with means for adjustment in two directions, and a label holder arranged on the superposed base within the limits of the swing of the type carrier.

3. A label printing device, comprising a sub-base A, a parallel motion type carrier having a slot, a type bed having a screw threaded stem extended through the slot of the carrier, a screw threaded handle turned upon said threaded stem above the type carrier and adjustably clamping the type bed, a base B mounted on and adjustable in relation to the sub-base and bearing a label holder arranged beside and adapted to register with the type carrier.

4. A label printing device, comprising a sub base A, a swinging type carrier mounted thereon, a holder for holding a stack of labels while being printed, consisting of a plate having at one end an adjustable overhanging lip for the ends of the labels, an elastic presser for pressing down upon the other end of the stack of labels, and an adjustable gage plate at the side and a base B for said label holder adjustably mounted on the sub base.

5. In a label printing device, the combination with an oscillating type carrier; of a label holder arranged beside the type carrier and adapted to hold a stack of labels, said label holder having a gage plate arranged to adjust the stack of labels to the circular swing of the type carrier to insure continued and accurate registration as the labels of the stack are successively printed and removed.

874,791. LATHE-DOG. ROSS R. PENN, Flora, Ind. Filed Mar. 26, 1907. Serial No. 364,743.



1. A tool of the character described comprising a shank having a ring-shaped head providing cam surfaces, jaws slidably mounted within the head and provided with retaining flanges to engage one side thereof, and holding devices on the jaws to engage the opposite side of the head, said devices being adapted to permit removal of the jaws through one side of the head.

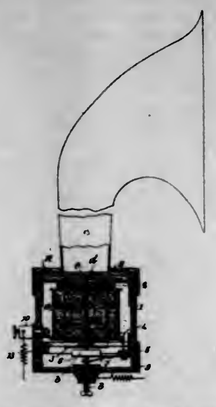
2. A device of the character described comprising a shank provided with a ring-shaped head forming a receiving chamber having cam walls, jaws slidably engaging said walls, said jaws being provided at one side with retaining flanges engaging one side of the head, and retaining screws on the opposite side of the jaws engaging the reverse side of the head, said screws being removable to permit lateral detachment of the jaws.

874,792. ELECTRIC HORN. LÉON CHALAS, EDOUARD REQUILLART, and CAMILLE CONTAL, Levallois-Perret, France. Filed Sept. 20, 1905. Serial No. 279,299.

1. In an electric horn, the combination of a vibrating plate, an electro-magnet, an armature, a spring plate adapted to press the armature towards the electro-magnet, a rod loosely mounted between the armature and the vibrating plate, the said rod being adapted to maintain the armature slightly away from the electro-magnet against the action of the said spring plate, and means for producing intermittent currents in the electro-magnet.

2. An electric horn comprising a tube in the shape of a trumpet, a casing on the smaller end of the tube, a vibrating plate within the casing, an electro-magnet in

said casing, an armature, a spring for pressing said armature toward said electro-magnet, a rod to hold said armature away from said electro-magnet, means for transmitting the vibrations of the armature to said vibrating plate, and means for producing intermittent currents in said electro-magnet.



3. In an alarm device, a horn, a diaphragm arranged in operative relation thereto, an electro magnet, an armature influenced by said electro magnet, a circuit interrupter operated by said armature and a connection between said armature and said diaphragm whereby vibrations of the armature are mechanically transmitted to the diaphragm.

874,793. LOCK. WELLINGTON S. ROBINSON, Chicago, Ill., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Sept. 3, 1907. Serial No. 391,157.



1. The combination with a bolt, outside mechanism for retracting same and means for dogging the latter, of a yielding means secured to the inner face of the door and devices connecting the bolt and said yielding means, whereby when pressure is applied to the latter the bolt will be retracted.

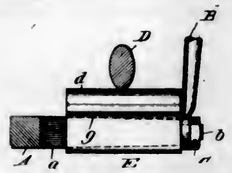
2. The combination with a bolt, mechanism for retracting same from the outside of the door the said bolt having free movement independent of said outside mechanism, and means for dead-locking the outside mechanism, of a yielding device exposed at the inner side of the door and means connecting said bolt and yielding device whereby when pressure is applied to the latter, the bolt will be retracted.

3. The combination with an outside knob, knob mechanism and a bolt, the latter having a free movement independent of the knob mechanism, of a yielding device exposed at the inner side of the door and means connecting said bolt and yielding device, whereby when pressure is applied to the latter the bolt will be retracted.

4. The combination with a door, outside means for retracting the bolt, means for deadlocking said outside means and a bolt actuated by the latter, of a plate hinged to the inner face of the door and means connecting said plate and bolt, whereby when pressure is applied to the former, the bolt will be retracted.

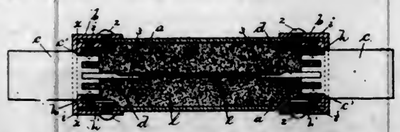
5. The combination with a door, outside means for retracting a bolt, means for deadlocking said outside means and a bolt actuated by the latter, of a plate hinged at its upper end to the inner face of the door, and a pivoted lever engaging the inner face of the hinged plate and the bolt, whereby when the plate is swung toward the door, the bolt will be retracted.

874,794. TOP-REST FOR CARRIAGES. WILLIAM R. ROOTE, Guelph, Ontario, Canada. Filed July 17, 1907. Serial No. 384,226.



The combination of a carriage rail having a lateral projection of rectangular form in cross-section, a top-locking member and a retaining device secured on the outer portion of the said lateral projection, a top bow, and a rest for the said bow interposed between the top-locking member and the carriage rail; the said rest comprising a sleeve-like body, of general rectangular form in cross-section, receiving the lateral projection of the rail and formed of a single piece of thin and resilient sheet metal and having a bottom wall *e* and side walls *f* inclined slightly outward from said bottom wall, whereby they are put under tension and have a tendency to spring inward, and also having inwardly directed flanges *g* on the upper portions of the side walls *f*, and a cushion having base flanges arranged under the flanges of the body and between the latter flanges and the lateral projection of the carriage rail, and also having a portion extending upward between the flanges *g* and above the sleeve-like body.

874,795. SAFETY-FUSE. JOSEPH SACHS and FRANK D. REYNOLDS, Hartford, Conn., assignors to The Sachs Company, Hartford, Conn., a Corporation of Connecticut. Filed Mar. 19, 1906, Serial No. 306,723. Renewed May 16, 1907. Serial No. 373,980.



1. A safety fuse comprising a casing, end caps therefor, flat blade contact terminals, a fuse strip electrically connected to the flat blade terminals, and means passing through the walls of the casing but not through the end caps and engaging the flat blade terminals to maintain the same in position within the casing independent of the said end caps.

2. A safety fuse comprising a casing, end caps therefor, flat blade contact terminals, a fuse strip electrically connected to the flat blade terminals, means independent of the said end caps and co-acting with the flat blade terminals to position the same, and means passing through the walls of the casing but not through the end caps and engaging the flat blade terminals to maintain the same in position within the casing independent of the said end caps.

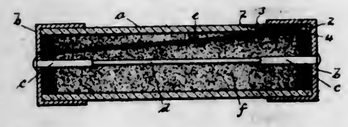
3. A safety fuse comprising a casing, end caps therefor, flat blade contact terminals, a fuse strip electrically connected to the flat blade terminals, means independent of the end caps for co-acting with the flat blade terminals to position the same, means passing through the walls of the casing but not through the end caps and engaging the flat blade terminals to maintain the same in position withing the casing independent of the said end caps, and means for securing the end caps in position on the casing.

4. A safety fuse comprising a casing, end caps therefor, flat blade contact terminals, a fuse strip electrically connected to the said flat blade terminals and extending between the same, means independent of the end caps for co-acting with the flat blade terminals to position the same, and means co-acting with the walls of the casing and independent of the end caps and engaging the flat blade terminals to maintain the same in position within the casing and independent of the said end caps.

5. A safety fuse comprising a casing, end caps therefor, flat blade contact terminals, fuse terminals electrically connected to the said fuse terminals and extending between the same, an anchor having inturned ends received within the end of the casing and extending across the same, and means passing through the walls of the casing, through the inturned ends of the anchor and engaging a flat blade terminal to maintain the same in position within the casing independent of the end caps.

[Claims 6 to 11 not printed in the Gazette.]

874,796. SAFETY-FUSE. JOSEPH SACHS and FRANK D. REYNOLDS, Hartford, Conn., assignors to The Sachs Company, Hartford, Conn., a Corporation of Connecticut. Filed Apr. 5, 1906, Serial No. 310,045. Renewed May 16, 1907. Serial No. 373,981.



1. A safety fuse comprising a tube, end caps therefor, a fuse strip within the tube, a wire electrically connected at one end to one of the said end caps, and indicating means electrically interposed between the other end of said wire and the other end cap.

2. A safety fuse comprising a tube, end caps therefor, fuse strip terminals electrically connected to the said end caps, a fuse strip extending between and electrically connected with the said fuse strip terminals, a wire electrically connected at one end to one of the said end caps, and an indicating means electrically interposed between the other end of the said wire and the other end cap.

3. A safety fuse comprising a tube, end caps therefor, a fuse strip, a wire electrically connected at one end to one of the said end caps, and an indicating connection interposed between and electrically connected to the other end cap and the other end of said wire.

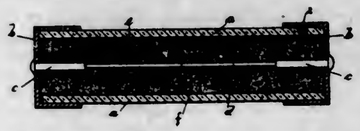
4. A safety fuse comprising a tube, end caps therefor, fuse strip terminals electrically connected to said end caps, a fuse strip extending between and electrically connected with the said fuse strip terminals, a wire electrically connected at one end to one of the said end caps, and an indicating connection interposed between and electrically connected to the other end cap and the other end of the said wire.

5. A safety fuse comprising a tube provided with a recess in its outer surface and at one end thereof, end caps for the said tube, a fuse strip, a wire connected at one end to one of the said end caps, and an indicating

connection within the said recess in the casing, and interposed between the other end cap and the opposite end of the said wire.

[Claims 6 to 16 not printed in the Gazette.]

874,797. SAFETY-FUSE. JOSEPH SACHS and FRANK D. REYNOLDS, Hartford, Conn., assignors to The Sachs Company, Hartford, Conn., a Corporation of Connecticut. Filed Apr. 18, 1906, Serial No. 312,303. Renewed June 15, 1907. Serial No. 379,181.



1. A safety fuse comprising a tube, terminals therefor, one of which is provided with an aperture, a fuse strip, a conductor, and an indicating means electrically interposed between one terminal and one end of the said conductor and located at the said aperture in the terminal.

2. A safety fuse comprising a tube, end caps therefor, one of which is provided with an aperture, a fuse strip, a conductor, and an indicating means electrically interposed between one of the said end caps and one end of the said conductor and located at the aperture in the end cap.

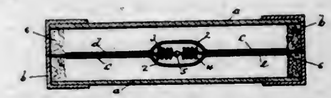
3. A safety fuse comprising a tube, terminals thereon, a fuse strip, a conductor, and an indicating connection electrically interposed between one terminal and one end of the said conductor and extending into an aperture in the said terminal.

4. A safety fuse comprising a tube, end caps therefor, a fuse strip, a conductor, and an indicating connection electrically interposed between one end cap and one end of the said conductor and extending into an aperture in said end cap.

5. A safety fuse comprising a tube, terminals therefor, a fuse strip, a conductor, and an indicating means interposed between one terminal and one end of the said conductor and extending into an aperture in the said terminal.

[Claims 6 to 15 not printed in the Gazette.]

874,798. SAFETY-FUSE. JOSEPH SACHS, Hartford, Conn., assignor to The Sachs Company, Hartford, Conn., a Corporation of Connecticut. Filed Apr. 18, 1906, Serial No. 312,302. Renewed Sept. 11, 1907. Serial No. 392,369.



1. A safety fuse comprising terminals, a holder of insulating material, a pocket integral with said holder and wires connected at one end with the respective terminals, and at the other electrically connected with each other by a fusible joint within the said pocket.

2. A safety fuse comprising terminals, a two-part holder of insulating material, a pocket in said holder, and high resistance wires electrically connected at one end to the respective terminals and coiled within said pocket at their other ends with the extremities of the coils electrically connected by a fusible joint.

3. A safety fuse comprising terminals, a two-part holder of insulating material with the parts thereof secured together, a pocket formed by the parts of said holder, and high resistance wires electrically connected at one end with the respective terminals and passing between the parts of said holder and at the other ends coiled and electrically connected by a fusible joint within said pocket.

4. A safety fuse comprising a tube, terminals therefor, a holder of insulating material, a pocket in said holder and wires connected at one end with the respective ter-

minals and passed into said holder and at the other electrically connected with each other by a fusible joint within the said pocket.

5. A safety fuse comprising a tube, terminals therefor, a holder of insulating material, a pocket in said holder, and high resistance wires electrically connected at one end to the respective terminals and passed into said holder and at the other coiled with their extremities electrically connected by a fusible joint within said pocket.

[Claims 6 to 12 not printed in the Gazette.]

874,799. RIB ANR RIB-JOINT FOR UMBRELLA AND PARASOL FRAMES. FREDERICK W. SCHROEDER, Strand, London, England. Filed May 7, 1907. Serial No. 372,402.



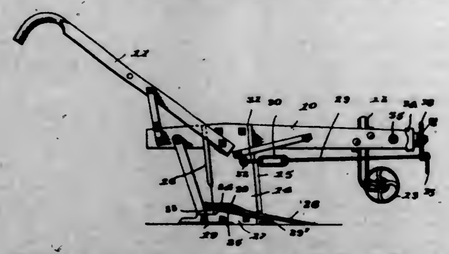
1. In umbrella frames a main rib of substantially U-shaped section, a joint piece of substantially U-shaped section adapted to fit within the said rib, but having its sides projecting beyond the edges of the sides of the rib, locking indentations in the sides of the rib and of the joint piece, inwardly projecting indentations in the projecting portion of the joint piece, and a stretcher rib having its end formed to engage pivotally with the said inwardly projecting indentations; substantially as described.

2. In umbrella frames, a rib of substantially U-shaped section but having the sides thereof formed with longitudinal corrugations to strengthen said rib; substantially as described.

3. In umbrella frames, a main rib of substantially U-shaped section but having the sides thereof formed with longitudinal corrugations, a joint piece of substantially U-shaped section adapted to fit within the said rib and having indentations engaging the said corrugations, a stretcher rib having a transverse hole formed in the end thereof, and inwardly projecting indentations in the sides of the joint piece engaging the hole in the stretcher rib; substantially as described.

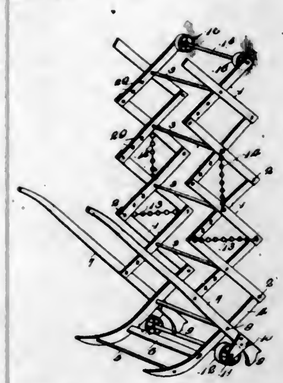
4. In umbrella frames, a rib of substantially U-shaped section but having the sides thereof formed with outwardly projecting longitudinal corrugations, a joint piece of substantially U-shaped section having outwardly projecting longitudinal corrugations engaging the corrugations in the rib, said joint piece being inclosed within the sides of the rib but having its sides extending beyond the edges of the sides of the rib, and having shouldered portions abutting on the said edges, inwardly projecting indentations in the said shouldered portions of the joint piece, and a stretcher rib having its end formed to engage pivotally with the said inwardly projecting indentations; substantially as described.

874,800. BEET-HARVESTER. EDWIN E. SHAW, Edgewood, Mich. Filed Sept. 13, 1906. Serial No. 334,469.



In a beet harvester of the type set forth, combination with a longitudinal beam, and a standard fixed thereto and depending therefrom of a foot-piece comprising a vertical web having horizontal lower flange, and the forwardly and downwardly inclined upper flange, fastening means for securing said web to said standard, a mold board formed at the ends of one of its sides with shoulders designed to engage said standard at the front and rear vertical edges thereof, said mold board being imposed, and fixed upon said forwardly inclined flange, and having its front end terminating short of the front end of said foot-piece, and a point having its upper surface of the same inclination as the upper flange of said foot-piece, and being formed with a rearwardly projecting portion overlying said flange, and secured thereto, and with a shoulder abutting the end of said foot-piece.

874,801. EXTENSION-LADDER. HENRY C. SIEMS and HEINRICH DEWITZ, Wheatley, Ark. Filed June 28, 1907. Serial No. 381,265.



1. In a ladder, the combination of collapsible side pieces, foot pieces connecting the side pieces, and coöperating levers and supporting bars pivotally connected to the side pieces of the ladder and to each other, one of said members carrying wheels and the said member coöperating to form a truck for the ladder when collapsed.

2. In a ladder, the combination of collapsible sides, foot pieces connecting the side pieces, coöperating levers and supporting bars pivotally connected to the side pieces of the ladder and to each other for controlling the collapsing of the side pieces, and means carried by the levers for coöperation with the same and the supporting bars to form a truck for the ladder when collapsed.

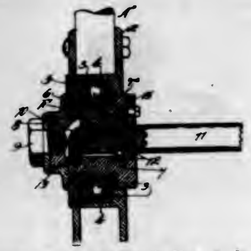
3. In a ladder, the combination of side pieces having a lazy tong construction, footpieces connecting the side pieces, a lever pivoted to one end of the ladder, a wheel carried by the lever, and a supporting bar also pivoted to the ladder and coöperating with the lever to form a support for the ladder when extended and a truck for the ladder when folded.

4. In a ladder, the combination of side pieces having a lazy tong construction, footpieces connecting the side pieces, a lever applied to one end of the ladder, a supporting bar applied to one end of the ladder, and a wheel carried by the lever, the lever and supporting bar forming a truck for the ladder when folded.

5. In a ladder, the combination of side pieces having a lazy tong construction, foot pieces connecting the sides pieces, levers pivotally connected to the side pieces of the ladder, wheels carried by the levers, and supporting bars pivotally connected to the side pieces of the ladder and to the levers, the free ends of the supporting bars being curved outwardly and connected by a rod upon which the foot is placed when extending the ladder, the said levers and supporting bars coöperating to form a truck for the ladder when collapsed.

[Claims 6 and 7 not printed in the Gazette.]

874,802. VEHICLE STEERING-GEAR. JOHN P. SIMMONS, San Francisco, Cal. Filed Mar. 20, 1907. Serial No. 363,368.



1. A steering mechanism including a fixed wheel axle having horizontal disk-shaped tables at each end, and ball-bearings fitted around the lower side of said disks, a chambered wheel-center within which said horizontal bearing is contained, means entering one side of said chamber and bearing directly upon one side of the disk-shaped table ends of the axle to maintain a bearing contact between the opposite side of the chamber and the contiguous side of the table ends, a vertically disposed ball-bearing, a wheel hub within which it is fitted, said bearing enabling the wheel to turn freely around the horizontally adjustable portion.

2. In a bearing and steering mechanism, a wheel having a hollow hub, a ball-bearing, and sectional race, one portion of which is fitted within the hub, a sleeve upon which the other portion of the race is fitted, rings fitting the hub and sleeve whereby the bearing is adjusted, a hollow central portion, and means securing it within the ball-race carrying ring, a rigid axle having horizontal circular tables at opposite ends, ball-races interposed between said table, and a corresponding bearing surface within the wheel, means by which the wheels may be turned to change their direction with relation to the axle, said wheels being turnable upon the bearing, which is in their plane of rotation.

3. The combination with a wheel having an interior anti-frictional bearing about which it is revoluble, of an axle having a rigid horizontal disk or table at its end, a hollow wheel center within which the table is located, a sleeve inclosing the table, an anti-frictional bearing between the table and the sleeve, and upon which the wheel is turnable about the vertical axis of the table, and means entering one side of the hollow wheel center and bearing directly upon one side of the disk or table ends of the axle to maintain a bearing contact at the opposite side between the table and the contiguous surfaces of the sleeve.

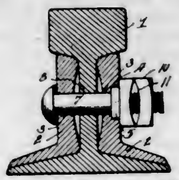
4. The combination with a wheel having an interior anti-frictional bearing about which it is revoluble, of a central horizontally channeled portion, an axle having a flat horizontal circular disk rigid therewith and located within the horizontal channel of the wheel, an anti-frictional bearing between the table and the hub about the vertical axis of which the wheel is turnable, and means entering one side of the horizontal channel of the wall and bearing directly upon one side of the table to maintain a bearing contact between the wheel and the table bearing.

5. In wheels and axles of the character described, a rigid axle with fixed tables at its ends, horizontally channeled wheel centers between which and the tables turnable joints are formed having common axes with the tables, sectional anti-frictional bearings between said centers and the wheels, about which the wheels are revoluble, and sectional collars within the wheel hubs to adjust the bearings.

[Claim 6 not printed in the Gazette.]

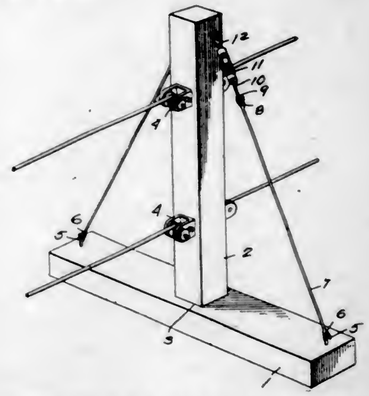
874,803. NUT-LOCK. ALFRED K. SPINNEY, Toledo, Ohio. Filed May 24, 1907. Serial No. 375,533.

1. A nut lock comprising a bolt, members secured together by the bolt and one having a non-circular countersunk opening, a washer having a concavity on one side and a non-circular projection on the opposite side engaging in the countersunk opening, and a nut screwed on the bolt and having a concaved surface presented to that of the washer.



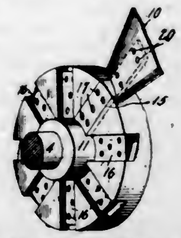
2. The combination of rail sections, fish plates one having non-circular countersunk openings, bolts passing through the fish plates and rail sections, washers on the bolts having non-circular projections engaging in the countersunk openings, and nuts on the bolts bearing against the washers, the opposed faces of the nuts and washers being concaved.

874,804. PORTABLE WIRE-FENCE POST. WILLIAM B. STAMBAUGH, Woodsboro, Md. Filed June 18, 1907. Serial No. 379,588.



In combination with a fence post base and a fence post having a seating thereon centrally thereof, hooks carried by said base at opposite ends thereof, turn buckles hung pivotally from the upper end of said post at opposite sides thereof, hooks having threaded shanks and forming a part of said turn buckles and braces connecting said turn buckles with said respective first named hooks, said braces each comprising a rod formed at its ends with eyes for detachable engagement with said respective hooks.

874,805. POWER-FAN. JOSEPH C. STINE, Osceola Mills, Pa. Filed Jan. 21, 1907. Serial No. 353,272.

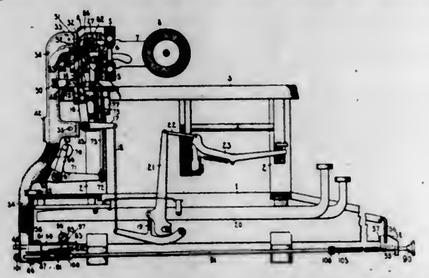


1. In a power fan, the combination with a hub provided with a series of radial recesses, of vanes disposed about said hub as an axis, and a vane and hub uniting member for each vane, consisting of a projection upon one end, fitting with a recess in the hub, and a plate upon the

other end secured to the vane, and an intermediate shoulder, whereby the desired inclination with respect to the hub may be imparted to the vane.

2. In a power fan, the combination with a hub provided with a series of radial angular recesses, of vanes disposed about said hub as an axis, and a vane-and-hub-uniting-member for each vane comprising a projection, an intermediate shoulder, and a plate, said projection and intermediate shoulder fitting within a recess in the hub, and said plate being secured to the vane, substantially as described.

874,806. TYPE-WRITING MACHINE. ROBERT H. STROTHER, Montclair, N. J., assignor to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Sept. 24, 1906. Serial No. 336,004.



1. The combination with a carriage, of tabulator mechanism comprising a plurality of column stops and a plurality of separately operable column selecting stops, said column stops and selecting stops having relative motion during the travel of the carriage and said selecting stops having their contacting surfaces in the same plane transverse to the direction of such relative motion.

2. The combination with a carriage, of tabulator mechanism comprising a plurality of column stops and a plurality of separately operable column selecting stops, said column stops and selecting stops having relative motion during the travel of the carriage, said selecting stops having their contacting surfaces in the same plane transverse to the direction of such relative motion, and said column stops having their contacting surfaces in different lines parallel to the direction of such relative motion.

3. In a typewriting machine, the combination with a carriage, of tabulator mechanism comprising column stops mounted to move in unison with the travel of the carriage and having contact faces that move in different paths, and separably operable column selecting stops for coöperation with said column stops, all of said column selecting stops having their contacting surfaces in the same plane transverse to the direction of motion of said column stops.

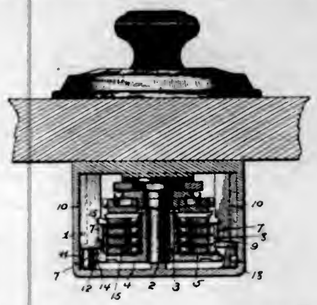
4. In a typewriting machine, the combination with the carriage, of tabulator mechanism comprising column stops, denomination stops and column selecting stops, all of said column selecting stops and one of said denomination stops having their working faces in the same plane perpendicular to the direction of travel of the carriage.

5. In a typewriting machine, the combination with a carriage, of tabulator mechanism comprising column stops and a plurality of denomination selecting devices, and a plurality of column selecting devices both coöperating with the same column stops, said column selecting devices being so situated as to arrest the carriage at one of the denominational positions determined by said denomination selecting devices.

[Claims 6 to 11 not printed in the Gazette.]

874,807. COMBINATION-LOCK. WARREN H. TAYLOR, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Apr. 8, 1907. Serial No. 366,977.

1. In a combination lock, the combination with a lock case and tumbler post, of a series of connected tumblers and a tumbler curb the latter being wholly within the lock case, means carried by said curb, engaging means on the lock case for locking the curb and tumblers in position on the post, and means for rotating the tumblers.



2. In a combination lock the combination with a lock case and tumbler post, of a series of assembled tumblers and a tumbler curb the latter being wholly within the lock case, means for holding said tumblers and curb on the post, means for preventing the curb from rotating and means for rotating the tumblers.

3. In a combination lock, the combination with a lock case and tumbler post, of a series of nested tumblers and a tumbler curb mounted on said post, the said curb being wholly within the lock case means on the curb engaging means on the case for preventing the tumbler and curb from moving lengthwise of the post, a spring catch engaging the curb for preventing the latter from rotating on the post and means for rotating the tumblers.

4. In a combination lock the combination with a lock case and a tumbler post, of a series of nested tumblers and a tumbler curb mounted on said post, a shoulder on a part projecting from the curb engaging a shoulder on the case for preventing movement of the tumbler and curb endwise of the post, a spring catch for preventing rotation of the curb when the parts are assembled, and means for rotating the tumblers.

5. In a combination lock the combination with a lock case, and a tumbler post, of a series of nested tumblers and a tumbler curb mounted on said post, lugs projecting forwardly from said curb, washers interposed between the tumblers and engaging said lugs, means for locking said curb against movement in the direction of the length of the post, means for preventing the curb from rotating on the post, and means for rotating the tumblers.

[Claim 6 not printed in the Gazette.]

874,808. CYLINDER-LOCK. WARREN H. TAYLOR, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Oct. 1, 1907. Serial No. 395,434.

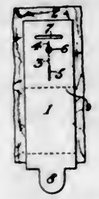


1. As a new article of manufacture, a pin tumbler lock having a protecting armor located within the cylinder in advance of the pins.

2. As a new article of manufacture, a pin tumbler lock having a protecting armor located within the cylinder and plug in advance of the pin.

3. As a new article of manufacture, a pin tumbler lock having a protecting armor located within the cylinder, and a protecting armor located within the plug, the armor in the plug being slotted for the passage of the key, the armors in the cylinder and plug being located in advance of the pin tumblers.

874,809. PIN-TICKET. GUSTAV A. WALLIN, New York, N. Y., assignor to A. Kimball Company, a Corporation of New York. Filed Apr. 25, 1906. Serial No. 313,551.



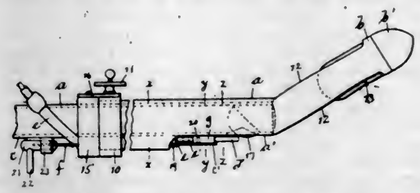
1. The combination with a material to be marked, of a pin-ticket attached to one side only thereof, the said pin-ticket comprising a portion having a flexible pin permanently attached thereto and having an opening for receiving the said pin after passing through the said material, a portion adapted to be folded directly upon the pin-carrying portion, so as to cover the said pin, and means for fastening the said folded portion to the portion to which the pin is attached.

2. A pin-ticket attachable to one side only of a material to be marked, said pin-ticket comprising a portion lying in a single plane and a pin permanently attached thereto, a flap adjoining and adapted to cover the said portion and its attached pin, and means for fastening the flap to the portion to which the pin is attached, said means comprising two elements between which the pin is attached to the ticket.

3. A pin-ticket comprising a portion having a pin permanently attached thereto, and provided with a slot, a flap adapted to fold over directly upon the pin-carrying portion to cover the pin carried thereby, and a tongue on the flap to extend into the slot and maintain the flap folded upon the pin-carrying portion, the pin being attached to the ticket between the slot and the tongue.

4. A pin-ticket comprising a portion having a pin permanently attached thereto, a flap adapted to fold over directly upon the pin-carrying portion to cover the free end of the pin, and means to fasten the flap folded upon the pin-carrying portion independently of the pin, said means comprising two elements located at opposite ends of the ticket.

874,810. CYSTOSCOPE. REINHOLD H. WAPPLER, New York, N. Y. Filed Mar. 25, 1907. Serial No. 364,306.



1. In a cystoscope, the combination with a telescopic tube, of means for conveying a catheter, means for engaging and directing the path of the forward end of the catheter, and means revolubly adjustable for actuating the last aforesaid means.

2. In a cystoscope, the combination with a telescopic tube, of means running parallel with and secured to the said telescopic tube for conveying a catheter, a rod revolubly mounted on the aforesaid means, and means operative upon turning said rod for engaging and directing the path of the catheter.

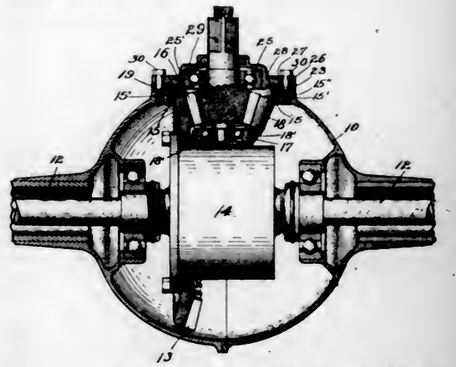
3. In a cystoscope, the combination with a telescopic tube, of a pair of tubes parallel with each other and with the said telescopic tube and connected to the same and through each of which a catheter is passed, a rod journaled between the said pair of tubes, a guide bar pivotally connected to the said rod, and means for revolubly adjusting the position of said rod to cause the said guide bar to engage and direct the path of the catheter in either of the said pair of tubes.

4. In a cystoscope, the combination with a telescopic tube, of a pair of tubes parallel with each other and with the said telescopic tube and connected to the same and through each of which a catheter is passed, a rod journaled between the said pair of tubes, a guide bar at the inner ends of said pair of tubes, means for pivotally connecting the said guide bar to the end of the said rod to cause the said guide bar to engage and direct the path of the catheter in either of the said pair of tubes.

5. In a cystoscope, the combination with a telescopic tube, of a pair of tubes placed side by side and parallel with the said telescopic tube and through each of which a catheter is passed, the outer ends of the said pair of tubes passing around the telescopic tube to the opposite side thereof, a rod journaled between said pair of tubes, a guide bar at the inner ends of said pair of tubes, means for pivotally connecting the said guide bar to the end of the said rod to cause the said guide bar to engage and direct the path of a catheter in either of the said pair of tubes.

[Claims 6 to 9 not printed in the Gazette.]

874,811. MOTOR-VEHICLE DRIVING-GEAR. GEORGE A. WEIDELY, Indianapolis, Ind., assignor of one-half to Harold O. Smith, Indianapolis, Ind. Filed June 1, 1907. Serial No. 376,825.



1. In an automobile, the combination, with an axle casing and a driving pinion, of an inner bearing and an outer bearing for said pinion, and supporting means for both of said bearings fitted upon the same portion of the axle casing.

2. In an automobile, the combination, with an axle casing having a shaft opening, of a bearing cup fitted to the casing in said opening and having a portion lying within the casing, a bearing mounted in said cup for the inner end of a driving pinion, a second bearing cup also fitted to the casing in said opening, a bearing in said second cup, and the driving pinion supported between said bearings.

3. In an automobile, the combination, with a supporting-structure having an opening, of a bearing cup fitted to said opening, a bearing carried by said cup, a second bearing cup fitted to the first cup, a bearing carried by said second cup in alinement with the first bearing, and a driving member journaled between said bearings.

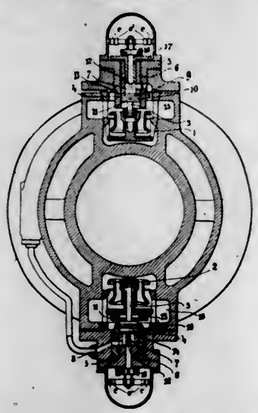
4. In an automobile, the combination, with a supporting-structure having a finished opening, of a bearing cup fitted into said finished opening, a bearing carried by said cup, a second bearing cup fitted to the first cup, a bearing car-

ried by said second cup in alinement with the first bearing and a driving member journaled between said bearings.

5. In an automobile, the combination with a hollow axle structure having a finished shaft opening, the shaft sections journaled therein, and the driving connection between said shaft sections comprising a driving gear, of a driving pinion meshing with said gear, and a pair of bearings for supporting the inner and outer ends of said driving pinion, a cup having a radial flange fitting the finished opening of the axle casing and supporting the inner bearing, a bearing cup having a radial flange fitted upon the flange of the first cup and supporting the outer bearing, and means for clamping the two bearing cups on to the casing.

[Claims 6 to 8 not printed in the Gazette.]

874,812. APPARATUS FOR THE CONTROL OF VALVES. MATTHIAS WEISS, Mariafeld, near Laibach, Austria-Hungary, assignor of one-half to Stanislaus-Jungwirth, St. Stefan, Styria, Austria-Hungary. Filed May 6, 1907. Serial No. 372,249.



1. In a valve controlling mechanism, a valve, a piston connected thereto having faces of different area, a cylinder containing the piston open on one side of the piston and having an admission port and exhaust port on the other side of the piston, and a rotatable valve mounted in the cylinder adapted to alternately establish communication between the admission ports and exhaust port.

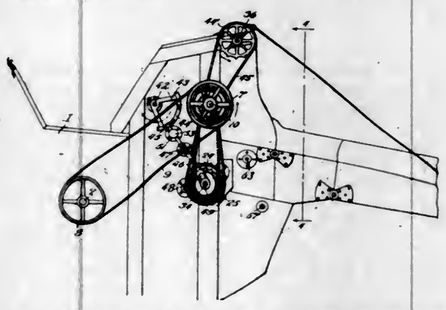
2. In a valve controlling mechanism, a valve, a piston connected thereto having faces of different area, a cylinder containing the piston open on one side of the piston and having an admission port and an exhaust port on the other side of the piston, and a rotatable valve having a groove in its side parallel to its axis adapted to alternately establish communication between said admission port and cylinder and between the cylinder, and exhaust port.

3. In a valve controlling mechanism, a cylinder open at one end having an exhaust port and an admission port, a piston mounted in the cylinder having faces of different area the face of smallest area directed towards the open end, a valve cylinder mounted in the piston cylinder having ports communicating with the aforesaid ports, a valve connected to the piston, and a valve in the valve cylinder adapted to alternately open and close the exhaust and admission ports.

4. In a valve controlling mechanism, a cylinder open at one end having an exhaust port and an admission port, a piston mounted in the cylinder having faces of different area the face of smallest area directed towards the open end, a valve cylinder in the piston cylinder having ports communicating with the aforesaid ports, a valve connected to the piston, and a cylindrical valve rotatably mounted in the valve cylinder, having a peripheral groove parallel to its axis adapted to alternately establish communication between the admission port and piston cylinder and between the piston cylinder and exhaust port.

5. In a valve control, a valve, a cylinder having an admission port and an exhaust port, a piston in the cylinder connected to the valve and having one face subjected to the pressure of steam in the cylinder, and a valve co-axial with the piston controlling the admission port and exhaust port whereby the opposite face of the piston can be subjected either to full steam pressure or to atmospheric pressure.

874,813. FEEDER AND CUTTER FOR THRESHING-MACHINES. ROBERT S. WHITE, Jr., Osceola, and CHARLES A. FEY, Grand, Okla. Filed Apr. 24, 1907. Serial No. 370,058.



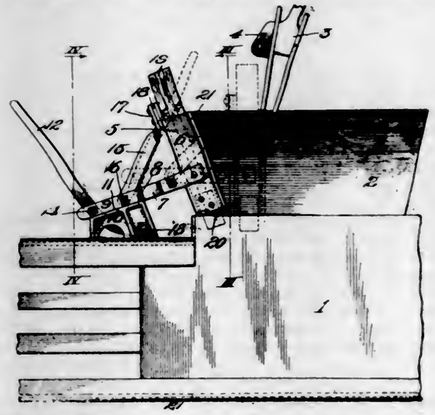
1. In a feeder and band cutter for threshing machines, a shaft supported for rotation, band cutting knives upon said shaft, a countershaft having cranks, serrated feeder bars pivoted upon the cranks, a rock shaft having crank arms, links connecting said arms with the free ends of the feeder bars, a segment upon the rock shaft having a cam edge, a rock lever having an anti-friction member engaging the cam edge of the segment, a countershaft driven from the band cutter shaft, an emergency governor including sprocket wheels of different diameters mounted loosely thereon and driven from the band cutter shaft and means actuated by the rocking lever whereby said sprocket wheels may be operatively connected with the countershaft.

2. In a band cutter and feeder for threshing machines, a cutter carrying shaft having a governor including a plurality of sprocket wheels, a countershaft, an emergency governor on said countershaft including two sprocket wheels of different diameters loose upon said shaft and driven direct from the governor upon the cutter carrying shaft, a lever operatively connected with the countershaft, shoulders upon the inner faces of the sprocket wheels adapted to be engaged by said lever, vibratory feeder bars having vertically movable free ends, and connecting means between the feeder bars and the lever connected with the countershaft whereby said lever will be rocked to engagement with either of the sprocket wheels or to an intermediate non-engaging position as the free ends of the feeder bars rise or fall to different positions.

3. In a band cutter and feeder for threshing machines including a countershaft having cranks, serrated feeder bars pivoted upon the cranks, a rock shaft having crank arms, and links connecting said arms with the free ends of the feeder bars, an emergency governor including a countershaft, a sleeve upon said shaft, sprocket wheels of different diameters journaled loosely upon the sleeve, bearing lugs extending from the sleeve adjacent to a slot in the latter, a lever pivoted upon said lugs, shoulders upon the inner faces of the sprocket wheels adapted to be engaged by the outer end of the lever, a shaft section mounted slidably in the sleeve and having a slot engaging the inner end of the lever, and means actuated by the rock shaft having crank arms, link-connected with the feeder bars whereby the shaft section is moved longitudinally in the sleeve.

4. In a band cutter and feeder for threshing machines, an emergency governor including a countershaft, a sleeve upon said shaft, sprocket wheels of different diameters mounted loosely upon the sleeve and having shoulders upon their inner faces, a lever carried by and extending through a slot in the sleeve, the outer end of said lever being adapted for engagement with the shoulders upon the sprocket wheels, a shaft section slidable in the sleeve and having a slot engaging the inner end of the lever, a crank shaft supporting a plurality of feed bars, a rock shaft having cranks, links connecting the latter with the free ends of the feeder bars, a segment upon the rock shaft having a cam edge, a lever having a bifurcated end engaging an annular groove upon the sliding shaft section of the emergency governor, an anti-friction member upon the opposite end of said lever engaging the cam edge of the segment, and a spring engaging said lever to hold the anti-friction member in engagement with the cam edge of the segment.

874,814. BALING-PRESS. HENRY L. WHITMAN, St. Louis, Mo. Filed June 24, 1907. Serial No. 380,464.



1. In a baling press, a block holder or dropper, a yoke to which the holder is secured, a pivoted lever connected to the yoke, and a casting or stand to which the lever is pivoted and which has an inclined upper face upon which the yoke is adapted to bear, substantially as set forth.

2. In a baling press, a block holder or dropper consisting of channel bars adapted to receive a block and which are normally held in an inclined position, and means for moving the bars from such inclined position to a vertical position and at the same time move the bars forwardly so as to bring the block into position to be engaged by the feeder arm of the press, substantially as set forth.

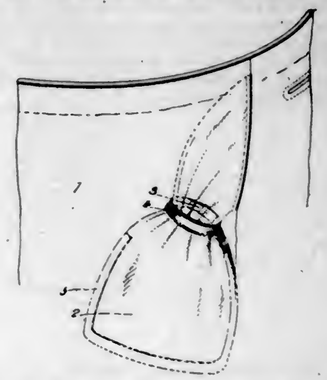
3. In a baling press, a block holder consisting of channel bars adapted to receive the block, a yoke secured to the channel bars, an inclined bed upon which the yoke is adapted to bear when in normal position, and a lever pivoted to the bed and to said yoke; whereby, when the lever is operated the holder is moved forwardly and to an upright position, substantially as set forth.

4. In a baling press, a block holder consisting of channel bars having springs secured to their inner lower faces, a yoke secured to the channel bars, an inclined bed upon which the yoke is adapted to rest to hold the channel bars in an inclined position normally, and a lever pivoted to the bed and to said yoke, substantially as and for the purpose set forth.

5. In combination with a baling press having a hopper with inclined side pieces, a block holder having wings fitting the inclined sides of the hopper, and means for moving the block holder forwardly and from an inclined to an upright position, substantially as set forth.

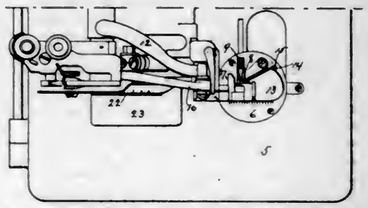
[Claims 6 to 9 not printed in the Gazette.]

874,815. SAFETY-POCKET. JAMES R. WILLIAMS, New York, N. Y. Filed Mar. 13, 1907. Serial No. 362,195.



The herein described safety pocket comprising a body portion, an elastic band inclosing the neck of the body portion and operating to normally contract the said neck, and a stiffening strip applied to the bottom and side edges of the lower portion of the pocket and serving to maintain the same in a distended position.

874,816. GUIDE FOR OVEREDGE SEWING-MACHINES. JAMES B. WRIGHT, New York, N. Y., assignor to Willcox and Gibbs Sewing Machine Company, New York, N. Y., a Corporation of New York. Filed May 9, 1906. Serial No. 315,949.



1. The combination of the needle and looper of an overseaming machine with a presser foot having an inclined edge guide, a needle hole plate slotted for the passage of the looper and inclined edge guide, together with a second edge guide immediately beyond the inclined edge guide and attached to the needle hole plate, substantially as described.

2. The combination of the needle and looper of an overseaming machine with a presser foot having an edge guide, an upright guard plate behind the presser foot and a horizontal guard carried by the upright plate above the cloth plate, as and for the purpose described.

874,817. MUSIC-BOOK ROLL. DON H. YORK, New York, N. Y. Filed June 25, 1907. Serial No. 380,715.

1. A device of the character described, consisting of a flexible cover comprising two members adapted to receive a book or sheet between them, one of said members being provided at its edge with a pair of members of a separable fastener, the other member being also provided near its edge with a pair of members of a separable fastener, and a detachable handle provided with pairs of the complemental members of said fasteners adapted to coact with the fastening members of the cover.

2. A device of the character described, consisting of a flexible cover comprising two members adapted to receive a book or sheet between them, one of said members being provided at its edge with a pair of members of a separable

fastener, the other member being also provided near its edge with a pair of members of a separable fastener, and a detachable handle provided with pairs of the complemental members of said separable fasteners adapted to coact with the fastening members of the cover, the fastening members of the handle being farther apart than the corresponding fastening members of the cover, the length of the handle being considered.

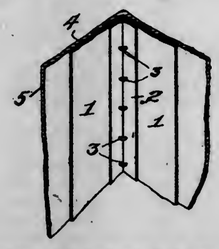


3. A device of the character described, consisting of a flexible cover comprising two members adapted to receive a book or sheet between them, one of said members being provided at its outer and inner ends, respectively, with a pair of members of a separable fastener, and a detachable handle provided with complemental members of such fastener adapted to engage with the fastening members of the cover.

4. A device of the character described, consisting of a flexible cover comprising two members adapted to receive a book or sheet between them, one of said members being provided with three pairs of members of a separable fastener, said pairs being located, respectively, at the two ends and at the middle of said cover members, and a detachable handle provided with fastening devices adapted to coact with the fastening devices of the cover.

5. A device of the character described, consisting of a flexible cover comprising two members provided at their adjoining edges with eyelets designed to receive temporary binding devices, one of said members being provided at its outer end with a pair of sockets, the other member being provided with three pairs of sockets, one pair at its inner end, one pair at its middle, and another pair at its outer end, said last named member being also provided with a fly and said fly provided with a pair of spring studs, and a detachable handle provided at its ends with transversely extending rows of spring studs adapted to engage the various sockets of the cover members.

874,818. GARMENT-CREASING DEVICE. ALBERT ABRAMS, Paris, France. Filed Mar. 21, 1907. Serial No. 363,675.

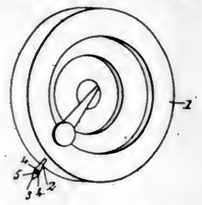


1. As an article of manufacture, a crease-retaining device comprising a pair of separate strips of elastic webbing, a strip of rubber secured to the strips at their meeting edges to hingedly connect the strips together, and adhesive material on the outer surfaces of the webbing strips whereby the device can be secured to a garment by applying heat to the strips.

2. As an article of manufacture, a crease-retaining device comprising a pair of strips arranged with their edges in proximity, a strip of elastic material glued or cemented to the strips for hingedly connecting them, and strips of gutta percha sheeting applied to the outside of the strips, and elastic cords connecting the meeting edges of the strips together.

3. As an article of manufacture, a crease-retaining means comprising strips of elastic material arranged with their edges in proximity, a strip of rubber cemented to the inner surfaces of said strips to hingedly connect them, and pieces of gutta percha sheeting applied to the outside of the first-mentioned strips.

874,819. RECORD-NEEDLE. HARVEY H. ALLISON, New York, N. Y. Filed Mar. 18, 1907. Serial No. 362,037.



1. In a talking machine, the combination of a sounding box, and a needle having a shank and a head broader than said shank, provided with a point, and with arms spaced apart connecting the point and the shank of the needle.

2. The combination of a sounding box, and a needle having a shank, and a head provided with a point, and with arms spaced apart connecting the point and the shank of the needle.

3. The combination of a sounding box and a needle having a shank, and a head provided with a point, and with an aperture forming arms segmental in cross section connecting said point with the shank of the needle.

4. In a talking machine, the combination of a sounding box, and a needle having a shank, and a head provided with oppositely disposed longitudinal grooves, and an aperture extending through said grooves.

874,820. GARMENT-SUPPORTING CLASP. JAMES F. ATWOOD, Claremont, N. H. Filed July 10, 1907. Serial No. 383,026.



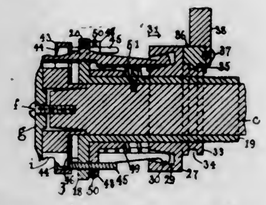
1. In a clasp of the character described, a stationary jaw comprising a plate provided with a horizontal slot near its upper end and a pair of horizontal slots near its lower end, a webbing extending rearwardly through the highest slot, around the lower edge of the stationary jaw and rearwardly through the lowest slot, and forward and back through the higher of the two lower slots; a movable jaw pivotally connected with the stationary jaw and provided with an inwardly or rearwardly extending lip which when the clasp is closed is opposite the portion of the stationary jaw which is between the two lower slots, the lower ends of the two jaws being at different heights and provided with inwardly bent horizontal edges one of which overlaps the other, and means for closing the jaws and maintaining them in clamping relation for the purpose set forth.

2. In a clasp of the character described, a stationary jaw comprising a plate provided with a horizontal slot near its upper end and a pair of horizontal slots near its lower end, whereby the web may be applied by passing it rearwardly through the highest slot, around the lower edge of the stationary jaw and rearwardly through the lowest slot, and forward and back through the higher of the two lower slots; a movable jaw pivotally connected with the stationary jaw and provided with an inwardly or rearwardly extending lip which when the clasp is closed is opposite the portion of the stationary jaw which is between the two lower slots, and with a slot adapted to accommodate the portion of the web which projects forward through and in front of the upper of the two lower slots in the stationary jaw, the lower ends of the two jaws being at different heights and provided with inwardly bent horizontal edges one of which overlaps the other, and means for closing the jaws and maintaining them in a clamping position, for the purpose set forth.

3. In a clasp of the character described, a stationary jaw; a movable jaw pivotally connected near its upper end with the corresponding portion of the stationary jaw, and provided with a horizontal slot having an upward extension which is of less length than the main portion of the slot, whereby shoulders or ledges are produced at opposite ends of the said extension; and a locking lever consisting of a short arm pivotally connected with the stationary jaw, and a long arm at substantially right angles with the short arm and extending through said slot, said long arm being broader than the length of the extension to the slot, whereby when the lever is swung upward to force the movable jaw against the stationary jaw the short arm thereof is moved into said extension of the slot and the long arm bears against the shoulders or ledges at the opposite ends of the said extension, for the purpose set forth.

4. In a clasp of the character described, a stationary jaw; a movable jaw pivotally connected near its upper end with the corresponding portion of the stationary jaw, and provided with a horizontal slot having an upward extension which is of less length than the main portion of the slot, whereby shoulders or ledges are produced at opposite ends of the said extension; a locking lever consisting of a short arm pivotally connected with the stationary jaw, and a long arm at substantially right angles with the short arm and extending through said slot, said long arm being broader than the length of the extension to the slot, whereby when the lever is swung upward to force the movable jaw against the stationary jaw the short arm thereof is moved into said extension of the slot and the long arm bears against the shoulders or ledges at the opposite ends of the said extension; and a wedging-arm extending from the long arm near its outer end and bearing against the upper edge of the stationary jaw when the jaws are closed, for the purpose set forth.

874,821. EDGE-TRIMMING MACHINE. ALBERT A. AYER, Chelsea, Mass., assignor to Ruth L. Vose, Brookline, Mass. Filed May 6, 1907. Serial No. 372,002.



1. In a machine of the class described, in combination, a rotary cutter carrier having a plurality of knives or cutters, a shaft on which said carrier is mounted to rotate therewith, a sleeve or hub on said shaft having an annular flange provided with a series of pivot projections, a plurality of levers pivoted on said projections and having ends coöperating with said knives or cutters, a retaining ring for said levers, means to secure said ring to said flange, a ring having an inclined slot into which the said levers extend, means to move said ring longitudinally of said shaft to rock the said levers on their pivots and thereby uncover more or less of the said knives, substantially as described.

2. In a machine of the class described, in combination, a rotary cutter carrier having a plurality of knives or cutters, a shaft on which said carrier is mounted to rotate therewith, a sleeve or hub on said shaft having an annular flange provided with a series of pivot projections, a plurality of levers pivoted on said projections and having ends coöperating with said knives or cutters, a retaining ring for said levers, means to secure said ring to said flange, a ring having an inclined slot into which the said levers extend, means to move said ring longitudinally of said shaft to rock the said levers on their pivots and thereby uncover more or less of the said knives, a feather edger ring coöperating with said knives and provided with pins or rods extended through said retaining ring, a sleeve loose on said hub and provided with radial arms, and means to secure said rods or pins to said arms, substantially as described.

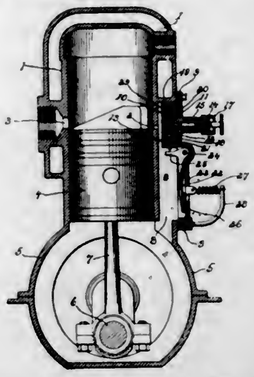
3. In a machine of the class described, in combination, a rotary cutter carrier provided with a plurality of cutters or knives, guard levers extended between said cutters, a ring loosely mounted to slide bodily with relation to said levers and connected with the latter to turn the same by sliding movement of said ring, and means coöperating with said ring to slide it bodily toward and from the said levers to move the latter and uncover more or less of the cutters or knives while the machine is in operation, substantially as described.

4. In a machine of the class described, in combination, a rotatable cutter or knife, a guard lever coöperating therewith, a ring loosely mounted to slide bodily with relation to said lever and connected with the latter to turn the same by sliding movement of said ring, and means coöperating with said ring to slide it bodily toward and from the said lever to move the latter and uncover more or less of the cutter or knife while the machine is in operation, substantially as described.

5. In a machine of the class described, in combination, a sleeve provided with a flange having a plurality of pivot projections, levers pivoted upon said projections, a retaining ring for said levers secured to said flange, and a slotted ring coöperating with said levers to turn them on their pivots, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

874,822. CARBURETER. HARRY D. BAIRD, Detroit, Mich., assignor to Saint Clair Motor Co., Detroit, Mich., a Corporation of Michigan. Filed Feb. 14, 1907. Serial No. 357,323.



1. The combination with an engine of the base-compression type having a passage leading from its base to its inlet port, of a valve for admitting charges of gasolene to said passage, a valve for admitting air operated by the suction stroke of the engine piston and the movement of

which valve opens the gasolene valve, and a gauze cage within the passage to receive and hold the gasolene through which the air passes on its way to the inlet port.

2. The combination with an engine of the base-compression type having a passage leading from its base to its inlet port, a valve operated by the stroke of the engine piston for admitting air to said passage, a valve for admitting charges of gasolene to said passage having a stem adapted to be engaged by the air valve to open the gasolene valve, and a foraminous cage within the passage surrounding the gasolene nozzle to receive the gasolene.

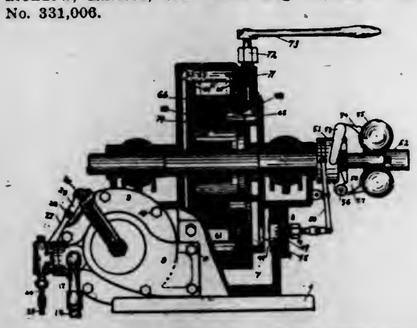
3. The combination with an engine of the base-compression type having a passage leading from its base to its inlet port and one side of which passage is open, of a plate to close said opening, means for admitting charges of gasolene to said passage carried by said plate, and a valve carried by said plate to operate by the stroke of the engine piston for admitting air to the passage and operating to actuate said means.

4. The combination with an engine of the base-compression type provided with a passage leading from its base to its inlet port, said passage having an open side, of a plate to close said open side of the passage formed with a gasolene inlet passage, a valve to control said gasolene passage, and means operated by the suction stroke of the engine piston for admitting air to the passage and operating the gasolene valve.

5. The combination with an engine of the base-compression type provided with a passage leading from its base to its inlet port, said passage having an open side, of a plate to close said open side formed with an opening and with a gasolene passage, a valve to close the opening in the plate operated by the stroke of the engine piston to admit air to said engine passage, a valve to control the gasolene passage, and a stem on said valve operated by the opening of the air valve.

[Claims 6 to 9 not printed in the Gazette.]

874,823. FLUID-PRESSURE ENGINE. IRVIN E. BARRICKLOW, Antioch, Cal. Filed Aug. 17, 1906. Serial No. 331,006.



1. A fluid pressure engine, comprising a generator cylinder, a piston reciprocating therein, an impact cylinder, a runner therein adapted to be revolved by fluid pressure, a conduit between the two cylinders, a conduit leading to the generator cylinder for supplying the compressed air and fluid fuel thereto, and a pump operated in unison with the piston for supplying the fuel to said conduit, substantially as described.

2. A fluid pressure engine, comprising a generator cylinder, a piston reciprocating therein, an impact cylinder, a runner therein adapted to be revolved by fluid pressure, a conduit between the two cylinders, a conduit leading to the generator cylinder for supplying the compressed air and fluid fuel thereto, a pump operated in unison with the piston for supplying the fuel to said conduit, and means also operated in unison with the piston for igniting said fuel, substantially as described.

3. A fluid pressure engine comprising a generator cylinder, a piston reciprocating therein, an impact cylinder, a runner therein adapted to be revolved by the fluid pressure, a conduit leading to the latter cylinder from each end of the former, means for supplying compressed air to each end of the generator cylinder, a conduit for fuel leading to each end of the generator cylinder, means, operated in unison with the piston, for igniting said fuel, and means for simultaneously closing the compressed air inlet and opening the conduit to the impact cylinder at either end of the cylinder, and for opening said inlet and closing said conduit at the other end, substantially as described.

4. A fluid pressure engine comprising a generator chamber having a valve seat at each end, a hollow valve sliding in each seat, a yoke connecting said valves whereby they move in unison, and a piston reciprocating in said cylinder and adapted to abut against each valve alternately, substantially as described.

5. A fluid pressure engine comprising a generator cylinder having a valve seat at each end, a valve at each end for controlling the inlet and outlet to said end, a yoke connecting the two valves whereby they move in unison, and a piston reciprocating in the cylinder and adapted to abut against said valves alternately, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

874,824. METHYLENE CITRYL OXYTOLUIC ACID. RUDOLPH BERENDES and JÜRGEN CALLSEN, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed June. 11, 1907. Serial No. 378,329.

1. The herein-described new methylenecitryl oxytoluic acids obtainable by the action of the acid dichlorid of methylene citric acid upon oxytoluic acids, which in the acid form are white crystalline powders, soluble in acetone and alcohol, scarcely soluble in water, and which by heating with caustic alkalies are decomposed into oxytoluic acids, forming salts with bases which retain the valuable therapeutic properties exhibited by the acids, substantially as hereinbefore described.

2. The herein-described new methylene citryl para-oxytoluic acid, obtainable by the action of the acid dichlorid of methylene citric acid upon para-oxytoluic acid, which in the acid form is a white crystalline powder, melting at from 175 to 178° C., soluble in alcohol, acetone, benzene and ether, scarcely soluble in water, and which by heating with caustic alkalies is decomposed into para-oxytoluic acid, forming salts with bases which retain the valuable therapeutic properties exhibited by the acids, subas hereinbefore described.

874,825. OXYALKYL DERIVATIVE OF THE XANTHIN BASES. RUDOLPH BERENDES and FELIX HERWIG, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed June 25, 1907. Serial No. 380,783.

1. The herein described new oxyalkyl derivates of xanthin bases obtainable by treating xanthin bases containing replaceable hydrogen in the imino groups, with halogen hydrins with the addition of agents capable of binding acids, and being crystalline compounds easily soluble in water acting like alcohol, forming esters with acid chlorids, and by the action of chlor-formic acid ester and subsequent treatment with ammonia being converted into urethanes; and exhibiting valuable therapeutic properties, substantially as hereinbefore described.

2. The herein described 1.3-dimethyl-oxyethylxanthin obtainable by treating theophyllin with glycolchlorhydrin, and crystallizing from alcohol in the shape of colorless leaflets melting at 158—160° C., being easily soluble in water more difficultly soluble in alcohol, scarcely soluble in ether and benzene, acting like an alcohol, forming esters with acid chlorids, and by the action of chlor-formic acid ester and subsequent treatment with ammonia being converted into the corresponding urethane; and exhibiting valuable therapeutic properties, substantially as hereinbefore described.

874,826. NULLIFYING DISTURBANCES IN TELEGRAPHIC OR OTHER SIGNALING CIRCUITS. EDWARD BLAKENEY, Ossining, N. Y., and ROBERT E. CHETWOOD, Jr., Elizabeth, N. J., assignors to American Telephone and Telegraph Company, a Corporation of New York. Filed May 29, 1906. Serial No. 319,388.



1. In a telegraphic circuit organized for operation by the slowly recurring current impulses of manually transmitted Morse signals, the combination of a line conductor; branches in parallel with one another forming jointly an extension of said line conductor in series therewith; a bridge conductor uniting said parallel branches; an inductive connection in each parallel branch on different sides of the said bridge, respectively, rendering such portion of each branch impassable to steady currents and to the said slowly recurring normal current impulses, but permitting the passage therethrough of relatively high frequency induced alternating currents; and means for maintaining a potential difference at the extremities of said bridge for the said normal currents, and a condition of equipotential for said induced currents.

2. A telegraph system comprising a main circuit, a Wheatstone-balance system having its branches connected in the main circuit, a receiving instrument in the bridge of the balance, and a condenser connected in a portion of each branch at each side of the bridge, and rendering said portions impassable to steady currents.

3. A telegraphic system comprising a main circuit, a Wheatstone-balance circuit having its branches connected in the main circuit, a receiving device in the bridge of the balance, a condenser connected in a portion of each branch at each side of the bridge, and rendering said portions impassable to steady currents and means associated with the branches for adjusting the balance, substantially as described.

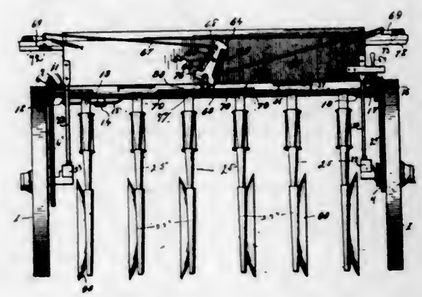
4. The combination in a telegrahic circuit with a line conductor, of parallel conductors forming an extension thereof, a bridge conductor connecting the parallel conductors, a receiving element in the bridge conductor, a condenser in each of the said parallel conductors, said condensers being upon opposite sides of the bridge conductor, respectively, and a sending element in one of the parallel conductors at the opposite sides of the bridge conductor from the condenser.

5. In a system for nullifying the disturbing effects in telegraphic circuits organized for operation by the normal slowly recurring current impulses of standard Morse transmission, of induced alternating currents of relatively high frequency, the combination of the telegraph line conductor; with an inductive circuit station section for the said higher frequency induced currents, comprising two parallel branches each composed of a conductive and an inductive portion in series, the said inductive portion being conductively discontinuous; a conductive circuit station section for the said normal telegraphic currents constituted of the conductive portions of said parallel branches, and an interposed bridge or cross conductor joining said parallel branches at points equipotential with respect to said higher frequency induced currents and between the conductive and inductive portions thereof, said conductively discontinuous inductive portions being on different sides of the bridge in their respective parallel branches; and a receiving telegraph instrument connected in the said bridge.

[Claims 6 to 8 not printed in the Gazette.]

874,827. CHECK-ROW AND HILL MARKER. WINFIELD J. BOTTS, Havre de Grace, Md. Filed June 14, 1907. Serial No. 379,049.

1. A combination check row planter, comprising a frame, driving wheels and harrow disks mounted thereon, a seed trough, spouts leading from the trough, valves mounted in the spouts, a rod connecting the valves and adapted to tilt the same simultaneously in opposite directions, a slide adapted to regulate the feed of the seed, a slotted plate pivotally mounted upon the seed trough, rods having sliding pivotal connection with said plate, and check row actuated mechanism for moving said rods whereby the plate may be tilted, as set forth.



2. A combination check row planter, comprising a frame, driving wheels and harrow disks mounted thereon, a seed trough, spouts leading from the trough, valves mounted in the spouts a rod connecting the valves and adapted to tilt the same simultaneously in opposite directions, a slide adapted to regulate the feed of the seed, a slotted plate pivotally mounted upon the seed trough, said plate having slots therein, rods with anti-friction rollers mounted thereon and which latter are mounted in said slots, and check row actuated mechanism for operating said rods, as set forth.

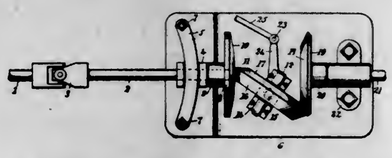
3. A combination check row planter comprising a frame, driving wheels and harrow disks mounted thereon, a seed trough, spouts leading from the trough, valves mounted in the spouts a rod connecting the valves and adapted to tilt the same simultaneously in opposite directions, a slide adapted to regulate the feed of the seed, a slotted plate pivotally mounted upon the seed trough, said plate having slots therein, rods with anti-friction rollers mounted thereon and which latter are mounted in said slots, check row actuated mechanism for operating said rods, and means adapted to move said anti-friction rollers from one end of the slot to the other after the plate has been tilted by the check row mechanism, as set forth.

4. A combination check row planter, comprising a frame, driving wheels and harrow disks mounted thereon, a seed trough, spouts leading from the trough, valves mounted in the spouts a rod connecting the valves and adapted to tilt the same simultaneously in opposite directions, a slide adapted to regulate the feed of the seed, a plate pivotally mounted upon the seed trough, said plate having slots therein, the ends of said slots being enlarged, anti-friction rollers adapted to move in said slots, rods, said anti-friction rollers mounted on the latter and positioned in said slots, check row mechanism for moving said rods whereby said plate may be tilted, and means for moving the anti-friction rollers from one end of the slots to the other after the plate has been tilted, as set forth.

5. A combination check row planter, comprising a frame, driving wheels and harrow disks mounted thereon, a seed trough, spouts leading from the trough, valves mounted in the spouts a rod connecting the valves and adapted to tilt the same simultaneously in opposite directions, a slide adapted to regulate the fed of the seed, a plate pivotally mounted upon the seed trough, said plate having slots therein, the ends of said slots being enlarged, anti-friction rollers adapted to move in said slots, rods connected to said anti-friction rollers, check row mechanism for moving said rods whereby said plate may be tilted, tilting check row operated levers to which said rods are connected, springs connected to said tilting levers and fastened to the seed box of trough, as set forth.

[Claims 6 to 10 not printed in the Gazette.]

874,828. POWER-TRANSMISSION MECHANISM. WILLIAM L. BUCK, New York, N. Y. Filed Mar. 30, 1907. Serial No. 365,473.



1. In a power transmission mechanism, the combination of a pivoted shaft, a drive wheel mounted thereon and provided with a convex surface, a driven wheel having a beveled face, and an intermediate wheel provided with a double bevel arranged between said wheels.

2. In a power transmission mechanism, the combination with a pivoted shaft, of a drive wheel mounted on said shaft and provided with a convex face, a driven shaft, a wheel mounted on said driven shaft and provided with a beveled face, a pivoted frame intermediate said wheels, and a wheel provided with a double bevel journaled in said frame.

3. In a power transmission mechanism, the combination with a pivoted shaft, of a bearing box for said shaft, curved guide ways adapted to seat said box, a drive wheel mounted on the free end of said shaft and provided with a convex face, a driven shaft, an oppositely disposed driven wheel mounted on said shaft and provided with a beveled face, and an intermediate friction wheel provided with a double bevel engaging the faces of said wheels.

4. In a power transmission mechanism, the combination with a pivoted shaft, of arc guide ways, a bearing box adapted to receive said shaft and slide in said guide ways, a driven wheel mounted on the free end of said shaft and provided with a convex face, a driven shaft, an oppositely disposed driven wheel mounted on said shaft and provided with a beveled face, a yoke intermediate said wheels, and a wheel provided with a double bevel journaled on said yoke.

5. In a power transmission mechanism, the combination with a pivoted shaft, of curved guide ways, a bearing box for said shaft adapted to slide on said guide ways, a drive wheel mounted on the free end of said shaft and provided with a convex face, a driven shaft, a wheel mounted on said driven shaft and provided with a beveled face, a pivotally mounted yoke, an intermediate friction wheel provided with a double bevel and journaled on said yoke, and means for rotating said yoke on its pivotal support.

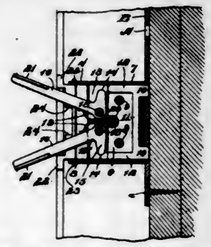
[Claim 6 not printed in the Gazette.]

874,829. COMBINED CUTTER AND BASTER. SARAH E. CANTRALL, Athens, Ill. Filed May 20, 1907. Serial No. 374,688.



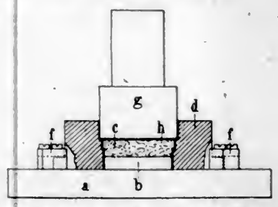
A combined cutter and baster comprising shear-members pivotally connected with each other and having studs, a needle mounted on one of the shear-members, a presser plate mounted on the same shear-member and adapted to permit the passage of the cutting edge of the complemental shear-member, a table fixed on the complemental shear-member, a looper mounted on the complemental shear-member and adapted to coöperate with the needle, arms pivotally connected with each other and with the studs on the shear-members, and a rod connecting the looper with said arms.

874,830. SASH-LOCK. FRED A. CARROLL, Penn Yan, N. Y. Filed Apr. 7, 1906. Serial No. 310,544.



The herein described sash lock comprising a casing, a yoke, a pair of bolts carried by said yoke and mounted to slide within the casing, said yoke having oppositely arranged, inwardly extending lugs, a pair of finger levers pivoted within the casing and provided with outwardly extending elbow projections coöperating with said lugs of the yoke for shifting said yoke and the bolts carried thereby, a separating spring mounted within the casing between said elbow projections, said spring being mounted upon a pin and having two arms which bear outwardly against the finger levers, and a latch for holding said levers and maintaining the bolts in a retracted position.

874,831. APPARATUS FOR THE MANUFACTURE OF PASTEBOARD BOXES BY PUNCHING. HENRI M. P. CATOIRE and JOSEPH A. M. MARRET, Paris, France. Filed May 2, 1906. Serial No. 314,789.



1. An apparatus for forming pasteboard boxes, consisting of a base, a mandrel on the base, a disk of compressible material on the mandrel, a mold formed of a single piece and removably secured to the base with the mandrel projecting into the same, the face of the mold being of the contour of the box to be formed, and a second mandrel adapted to enter the mold and compress the disk on the first named mandrel.

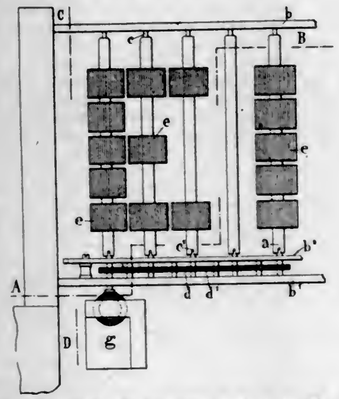
2. An apparatus for forming pasteboard boxes, comprising a mold of a single piece and having the contour of the box to be formed, an elastic mandrel projecting into one end of the mold, and a rigid mandrel adapted to enter the other end of the mold.

3. In an apparatus for forming pasteboard boxes, a base provided with lips, a mandrel carried by the base, and a mold on the base and into which projects the mandrel, said mold being provided with lugs for engaging the lips of the base to secure the mold thereto.

874,832. ANNOUNCING OR ADVERTISING APPARATUS. EMILE CHARLES, Paris, France. Filed Jan. 27, 1904. Serial No. 190,836.

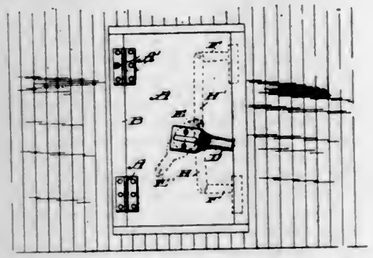
1. The combination of a plurality of spindles, a series of display devices mounted thereon and arranged to form a letter, the said display devices having a plurality of faces presenting the same form, whereby the letter remains constant when different faces are presented, the said faces being differently colored, and means for rotating said spindles.

2. In a display apparatus, the combination of a plurality of display devices arranged to produce a design the form of which remains constant, each display device having a number of faces of the same constant form, but of different appearances, each face being adapted to be brought into position to form part of the design, and means for moving said display devices simultaneously to present a different set of faces to the front.



3. An advertising device comprising a series of blocks arranged to produce an inscription or design, the several faces of each block presenting a different color, but the inscription or design or the part thereof on the several faces remaining constant in form, and means for simultaneously moving the blocks.

874,833. FASTENER FOR REFRIGERATOR-DOORS. LOUIS G. COON, Pueblo, Colo. Filed Apr. 18, 1907. Serial No. 368,941.



1. The combination of a door frame, wedge blocks having longitudinal slots, screws passed through said slots and securing the blocks adjustably to the door frame, a door fitted to said frame, a shaft in said door and having a lever at its inner end and a handle at its outer end, bolts pivoted between their ends to the inner side of the door near its opposite ends and arranged at their outer ends to engage upon the wedge blocks, a link pivoted at one end to the inner arm of one of said bolts and at its other end to the lever at the inner end of the shaft, and a link pivoted at one end to the inner arm of the other bolt and at its other end to the first said link, substantially as set forth.

2. The combination with the door frame having the wedge blocks and the door fitted to said frame of opposite bolts pivoted to the door and engaging upon the wedge blocks, an operating lever on the door between the bolts, a link pivoted at one end to one of the bolts and at its other end to the lever and a link pivoted at one end to the other bolt and extended at its other end past the lever and pivoted at its said end to the first link at a point between the pivots thereof, substantially as set forth.

3. The combination of a door frame, a door fitted thereto, bolts pivoted to the inner face of the door, a lever connected with and operating said bolts, wedge blocks having longitudinal slots, screws passing through said slots into the door frame, and securing the wedge blocks adjustably thereto and in position for engagement by the bolts on the door, substantially as set forth.

4. The combination of a door frame, a door fitted thereto, wedge blocks secured to the door frame, bolts pivoted to the door in position to engage their respective wedge blocks, operating means between said bolts, and intermediate devices between the bolts and operating means substantially as set forth.

5. The combination with a door and pivoted bolts thereon of links pivoted together and also pivoted independently to their respective bolts, and means between the bolts for operating the links, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

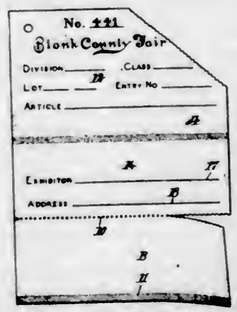
874,834. INSULATOR AND PROTECTOR FOR ELECTRIC CONDUCTORS. THOMAS C. COPPING, Houston, Tex. Filed Jan. 24, 1906. Serial No. 297,586.



1. An improved insulator and protector for electric conductors, comprising longitudinal sections each having its respective edges provided with a longitudinal groove and rib, and a series of notched transverse supports for a conductor, the said supports being arranged staggered and means for securing the sections firmly together, substantially as described.

2. The improved insulator and protector for electric conductors comprising longitudinal sections, which are separable from each other and provided with transverse supports for a conductor, and a plug of material adapted to absorb moisture, the same being made in separable sections and located adjacent to one end of the insulator, substantially as described.

874,835. ENTRY-TAG. ROBERT H. COSGROVE, Spokane, Wash. Filed Nov. 27, 1906. Serial No. 345,301.



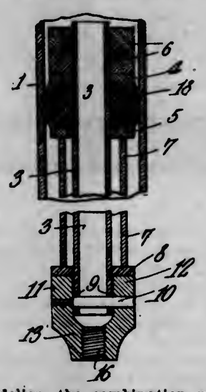
1. An entry tag for fairs and other places of display exhibitions, provided with a main panel at one end having a corner panel separated from the main panel by a weakened line, a concealing panel at the other end of the tag, and a name panel between the main and the concealing panel, the said concealing panel being separated from the name panel by a weakened line and arranged to be folded over the name panel and secured thereto to conceal the entries thereon.

2. An entry tag for use at fairs and other display exhibitions, sub-divided into a main entry panel at the

top of the tag, having a detachable corner panel, a name panel, and a concealing panel at the bottom of the tag and forming a portion of the tag proper, being partially separated from the body panel by a line of perforations located below the name panel, the said concealing panel being adapted to be folded over upon the name panel to conceal the same, and a cementing material carried by the concealing panel on its front face at its bottom edge.

3. An entry tag provided with a main entry panel at one end thereof having a corner panel divided from the body of the main panel by a line of perforations, an intermediate panel, and a detachable concealing panel at the other end of the tag, and adapted to be folded over the intermediate panel and secured in said folded position.

874,836. ADJUSTABLE CHANDELIER. OWEN DODGE and SAMUEL G. CAMP, Colorado Springs, Colo. Filed Apr. 10, 1907. Serial No. 367,387.



1. In a chandelier, the combination with a relatively stationary section embodying a tubular casing, of a relatively adjustable section mounted telescopically of the casing and provided with a stem having an abutment fixed on the upper end thereof, a sleeve adjustable longitudinally of the stem, an annular body of expansible material surrounding the stem and having one end engaging the said abutment on the stem and its opposite end engaging the upper end of the sleeve, and a device for adjusting the stem longitudinally of the sleeve to compress the expansible medium longitudinally and expand it transversely.

2. In a chandelier, the combination with a stationary section embodying a tubular casing, of a relatively adjustable section mounted to operate longitudinally thereof and embodying a stem having an abutment at its upper end adjustable longitudinally thereof, and a sleeve surrounding the stem and movable longitudinally thereof, an expansible medium having its ends engaging the said abutment and the upper end of the sleeve respectively and arranged to be compressed longitudinally and expanded transversely when the stem and sleeve are operated relatively, and a cam pivoted on the lower end of the stem and coöperating with the lower end of the sleeve for adjusting the latter and the stem longitudinally.

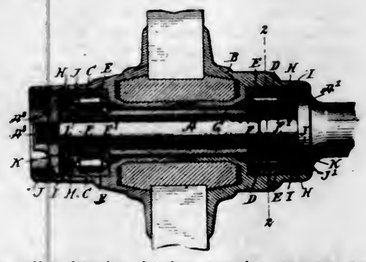
3. In a chandelier, the combination with a stationary section embodying a tubular casing, of a relatively adjustable section embodying a stem having an abutment at its upper end and adapted to operate longitudinally of the casing, a sleeve surrounding the stem and adjustable longitudinally thereof, an annular expansible body surrounding the stem and interposed between the abutment thereon and the upper end of the sleeve, and an adjustable member pivotally attached to the lower end of the stem and having arms arranged at opposite sides thereof and provided with cam surfaces adapted to coöperate with the lower end of the sleeve to operate the latter and the stem longitudinally to compress the annular body longitudinally and expand it transversely.

4. In a chandelier, the combination with a stationary section embodying a tubular casing, of an adjustable section adapted to carry lamp attaching devices and embodying a stem having its upper end threaded, and an abutment fitted to operate on said threads, a pair of coöperatively arranged washers loosely fitted on the stem, an annular body of expansible material surrounding the stem between the washers, a sleeve mounted to operate longitudinally of the stem having its upper end engaging one of the washers, and a device connecting the lower ends of the stem and sleeve for adjusting them longitudinally to compress the expansible body axially.

5. In a chandelier, the combination with a supporting section embodying a tubular casing, a relatively adjustable section mounted telescopically within the casing and embodying a sleeve, a hollow stem movable axially therein, lamp attaching devices supported on the stem, an annular body of expansible material having its ends engaging portions of the sleeve and stem, means for adjusting the stem axially relatively to the sleeve to compress the said body axially and expand it transversely into engagement with the casing, and conducting cords having their lower ends movable with the stem and arranged to permit a relative longitudinal movement between the adjustable and supporting sections.

[Claim 6 not printed in the Gazette.]

874,837. ROLLER-BEARING. ELLSWORTH J. EDWARDS, Los Angeles, Cal. Filed Jan. 12, 1906. Serial No. 295,721.

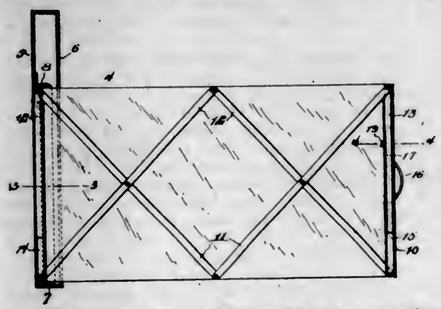


1. A roller bearing having annular grooves approximately V-shaped in cross section, the bearing being formed of an outer bearing ring and an inner bearing ring, the latter made of two ring-shaped members, one containing the other, a set of main rollers having conical ends in engagement with the said annular grooves, and a set of spacing rollers having conical ends in engagement with the said annular grooves, the said spacing rollers alternating with the said main rollers, and the said main rollers and the said spacing rollers having their axes traveling in the same circular path.

2. A roller bearing having annular grooves approximately V-shaped in cross section, the bearing being formed of outer and inner bearing rings, one of said rings being composed of two ring shaped members, one containing the other, a set of main rollers having their ends in engagement with said annular grooves, and a set of spacing rollers having their ends in engagement with said annular grooves, the said spacing rollers alternating with the said main rollers, and the said main rollers and the said spacing rollers having their axes traveling in the same circular path.

3. A roller bearing comprising inner and outer rings having on each end beveled shoulders, the adjacent shoulders of the inner and outer rings forming approximately V-shaped annular grooves, one of said rings being composed of two ring-shaped members, one containing the other, a set of main rollers having their ends in engagement with the said grooves, and a set of spacing rollers having their ends in engagement with the said grooves, the said spacing rollers alternating with the said main rollers, and the said main rollers and the said spacing rollers having their axes traveling in the same circular path.

874,838. WIND AND DUST SHIELD FOR RAILROAD-COACHES. BASSETT FERGUSON, Moores, Pa. Filed Apr. 3, 1907. Serial No. 366,192.



1. In a device of the class described, the combination of a flexible shield, a foldable frame concealed by and supporting the same, and a locking device for holding the frame in unfolded position.

2. In a device of the class described, the combination of an automatically winding curtain, a frame associated therewith for holding the curtain in extended position, and a locking device for adjustably holding the same in fixed position.

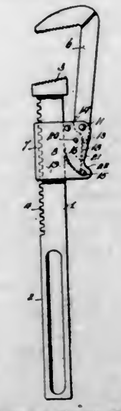
3. In a device of the class described, the combination of a casing, a self-winding curtain mounted therein, a frame foldable into and unfoldable from the casing and connected with the curtain for holding the latter distended, and a locking device for holding the frame in extended position.

4. In a device of the class described, the combination of a pair of self-winding curtains, a foldable frame disposed between them and connected with the free ends thereof, and a locking device for holding the frame in extended position.

5. In a device of the class described, the combination of a housing having a longitudinal slot, a pair of self-winding curtains movable in and out of the slot of the housing and lazy tongs mounted in the housing and connected with and disposed between the curtains to hold the latter in outdrawn position.

[Claim 6 not printed in the Gazette.]

874,839. PIPE-WRENCH. CHARLES H. FOSTER, West Duluth, Minn. Filed Mar. 21, 1907. Serial No. 363,696.



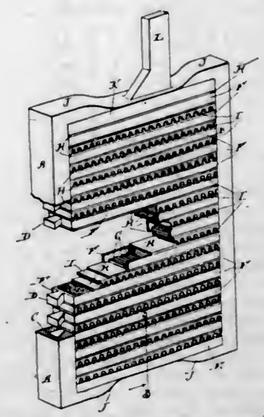
A wrench comprising a shank with a toothed fixed jaw having longitudinal teeth, a sleeve having teeth slidably mounted on the shank and serving to contact with the longitudinal teeth of the fixed jaw, a movable jaw pivotally mounted at its rear upon the upper front corner of the sleeve, said movable jaw having a short arm extending below its pivotal point and provided with a curved recess, a cross-pin secured upon the upper rear corner of said sleeve, a coiled spring mounted on said pin and having diverging arms of different lengths, the shorter one of which contacts with the fixed jaw, and the longer arm being extended upwardly and having its terminal curved to contact with the curvature of the short arm of the movable jaw, and said fulcrum of said spring being arranged below the fulcrum of the movable jaw to permit of the normal tendency of the spring to exert a greater pressure on the shank of the fixed jaw, a stop pin for engaging the shank of the fixed jaw to limit the movement of the sleeve, and a stop pin for engaging the curvature of the longer arm of the spring to hold the fixed jaw in normal gripping position and also permit of a limited outward movement of the same.

874,840. TOY. CHARLES G. FUCHS, Jersey City, N. J. Filed June 8, 1907. Serial No. 377,844.



In a toy, a board, a plurality of objects, each comprising a flat strip having screw-eyes affixed to its rear face, and wire supports attached to said board having angularly-turned ends engaging said screw-eyes.

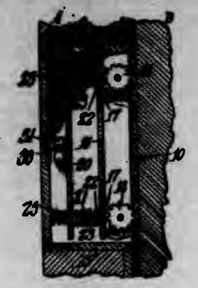
874,841. STORAGE-BATTERY PLATE. WILLIAM GARDINER, Chicago, Ill., assignor, by mesne assignments, to Commercial Storage Battery Co., Chicago, Ill., a Corporation of Illinois. Filed Apr. 26, 1906. Serial No. 313,778.



1. A storage battery plate comprising a frame, a plurality of receptacles having spaced transverse bars constituting bottom supports of the same, a plurality of dividing members having spaced transverse ribs, and sheets of absorbent material interposed between said receptacles and rigid plates.

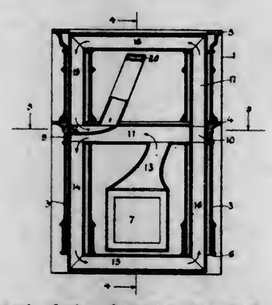
2. A storage-battery plate comprising a bar, a spacing-member mounted on said bar, a receptacle having a transversely slotted bottom and adapted to contain active material, and mounted on said spacing member, an absorbent sheet mounted between each of said receptacles and said spacing-members, and a frame cast integral with each of said members after the same have been assembled, substantially as described.

874,842. SASH-FASTENER. WILLIAM A. GODLEWSKI, St. Louis, Mo. Filed Oct. 3, 1907. Serial No. 395,703.



In a device of the class specified, a rack, a box or casing, a pair of parallel inner and outer plates arranged within said box or casing, pinions supported by the outer plate and intermeshing with the rack, locking dogs or pawls carried by the inner plate and arranged to pass through openings in the outer plate into locking engagement with the pinions, springs acting on the inner plate and tending to force the same outward, a pair of compression springs between the inner and outer plates and tending to keep the dogs or pawls in release position, and a cam arranged to engage the inner plate and force said dogs or pawls to locking position.

874,843. HEAT-RADIATING MANTEL. ALEXANDER HAGER, Jamestown, N. Y. Filed May 2, 1907. Serial No. 371,523.

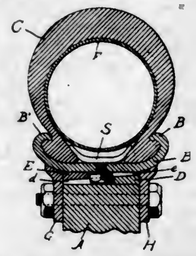


1. A mantel of the character described, comprising a back section, hollow supporting columns and shelves arranged on said back, a hollow base portion arranged beneath said columns, said hollow parts forming a continuous passage, a smoke box arranged in the lower shelf of the mantel, a series of smoke conducting tubes or pipes connected with said smoke box and the fire place and adapted to pass around through the hollow parts of the mantel to form a continuous smoke conducting tube or pipe, and a discharge pipe connected with said smoke box and adapted to be connected with the chimney flue, substantially as described.

2. A fire place mantel comprising a metal back, a fire place arranged in said back, of hollow metal supporting columns, shelves and a hollow metal base section arranged on said back to form a continuous passage, a series of smoke conducting tubes or pipes arranged in said hollow portion of the mantel and connected together to form a continuous smoke and heat conducting tube from said fire place to the chimney flue, and a cold air register arranged in said base section of the mantel, whereby cold air is supplied to the hot air passage of the mantel, where it is heated by contact with the hot air tubes in said passages, and is discharged at the top of the mantel, substantially as described.

3. A fire place mantel comprising a metallic back, a fire place arranged therein, upper and lower shelves arranged on said back, hollow supporting columns connected with said hollow shelves, a hollow base section arranged below said columns and connected therewith, a removable cover in said base section, a smoke box arranged in the lower shelf of the mantel, said box having formed therein a series of compartments, a discharge pipe connecting one of said compartments with the fire place, a series of smoke conducting tubes or pipes arranged in said columns, upper shelf and base section, and connecting with the other compartments in said lower shelf to provide a continuous smoke and heat conducting passage through said hollow parts of the mantel, and a cold air register arranged in the base of the mantel to admit cold air, which passes upwardly through the hollow parts of the mantel connected with said base, and is discharged in a heated condition from the open upper side of the top shelf, substantially as described.

874,844. DETACHABLE WHEEL-RIM. RAYMOND HEALY, Brooklyn, N. Y. Filed Dec. 28, 1906. Serial No. 349,759.



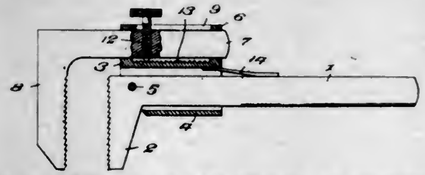
1. The combination of a tire-carrying rim, a felly, a pair of side plates having inclined bearing edges for the rim expanded outwardly and having their inside faces between the felly and rim flush as described, and a pair of circumferential liners superposed in the space between the felly and inside of the rim, all as described to form an expansible solid bearing for the rim extending continuously from the outside of the edge of one plate to the outside edge of the opposite plate, as and for the purpose described.

2. The combination of a metal tire-carrying rim, a felly, side plates having expanded edges adapted to form a bearing or support for the rim, the inside of which bearing is flush with the vertical face of the side plate outside the felly, a pair of circumferential liners superposed upon one another and filling the space between the felly and rim and between the vertical faces of the side plates and clamping bolts adapted to draw said side plates together and expand the liners by engagement of said vertical faces with the larger edges of the liners, all as described so as to form the expansible solid bearing for the rim extending continuously from the outer edge of one side plate across the space between the bearing faces to the outer edge of the opposite side plate.

3. The combination substantially as described of a tire-carrying metallic rim, a wheel felly, a pair of side plates each affording a bearing at its edge for the rim and having a flat inner face extending from the edge of the felly to the edge of the bearing surface for the rim, a pair of circumferential liners filling the space bounded by the side plates, rim and felly, and means for drawing the side plates together, as and for the purpose described.

874,845. WRENCH. EARL HENRY, Allegheny, Pa. Filed Oct. 14, 1907. Serial No. 397,422.

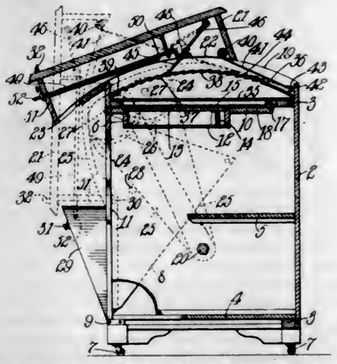
1. A wrench of the class described, comprising a shank, a fixed jaw at one end of said shank, a housing on said shank having a socket, an elongated slot in the outer wall of the socket and counter-sinks on the inner wall thereof, a movable jaw, a shank for said movable jaw adapted to extend through said socket, said shank having a threaded seat therethrough and a threaded bolt extending through said seat and the slot in the outer wall of the housing and adapted to engage the counter-sinks in the inner wall of the socket and hold the movable jaw in its adjusted position.



2. In a wrench of the class described, the combination with a shank having a fixed jaw, a housing on said shank, said housing having a socket therethrough, the outer wall of which is provided with an elongated slot and the inner wall with counter-sinks; of a shank longitudinally movable through said socket, a jaw at one end of said shank and means extending through the movable shank and slot in the outer wall of the housing adapted to engage the counter-sinks and lock the movable shank in its adjusted position.

3. A wrench of the class described, comprising a shank, a jaw on said shank, said shank having a socket thereon, the outer wall of which is provided with a slot and the inner wall with notches, a shank slidably mounted in said socket, a locking bolt extending through the movable shank and slot in the outer wall of the socket and adapted to engage the notches on the inner wall of the socket, said bolt being movable with the shank.

874,846. COMBINED TABLE AND DESK. EDMUND HIGGINS, Soldiers Home, Cal. Filed July 30, 1907. Serial No. 386,227.



1. The combination in a desk, of a main frame, pivot members carried thereby, the top of the frame being arranged on a curved line struck from the center of said pivots, an adjustable top section, arms mounted on said pivots, pivotal connections between the arms and the top section, a rack carried by the main frame, and a pawl carried by the top section and engaging said rack.

2. The combination in a desk, of a main frame, an adjustable top section, pivotal connections between the top section and the main frame whereby the top section may be moved in different degrees of inclination, and supports on the main frame for receiving the top section when moved to a substantially upright position.

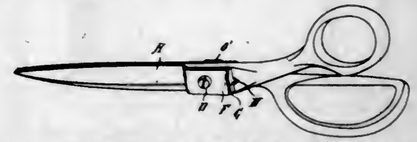
3. The combination in a desk, of a main frame, pivot arms carried thereby, an adjustable top section pivotally secured to the pivot arms, and pawl-and-ratchet adjusting means for the top section.

4. The combination in a desk, of a main frame, pivot arms carried thereby, a top section, the meeting edges of the top section and main frame being curved on an arc struck from the axis of the pivotal connections between the arms and the main frame, pawl-and-ratchet detents for holding the top in the adjusted positions, and brackets carried by the main frame for supporting the top when moved to one side of the main frame.

5. In a desk, a main frame, a top therefor movable with relation to the main frame and from engagement with the upper end thereof, a compartment concealed between the top of the desk and the main frame and carried by said main frame, and a member connected to the desk top and movable thereby over and concealing the compartment when the said desk top is moved with relation to the main frame.

[Claims 6 to 8 not printed in the Gazette.]

874,847. AUTOMATICALLY-SHARPENING SHEARS. JEROME E. HULSE, Albany, N. Y. Filed Sept. 12, 1907. Serial No. 392,511.



1. In combination with the blades of shears, a screw upon which the blades are pivoted, a nut upon the screw, a leaf spring engaged by said screw and held against the face of one of the blades, a coil spring interposed between the leaf spring and one of the blades, a washer mounted upon the screw adapted to engage the edges of one of the blades, and means for preventing the nut from turning independent of the washer, as set forth.

2. In combination with the blades of shears, a screw upon which the blades are pivoted, a nut upon the screw, a leaf spring engaged by said screw and held against the face of one of the blades, a coil spring interposed between the leaf spring and one of the blades, a washer mounted upon the screw adapted to engage the edges of one of the blades, and wings upon said washer adapted to engage the opposite edges of said nut, as set forth.

3. In combination with the blades of shears, a screw upon which the blades are pivoted, a nut upon the screw, a leaf spring engaged by said screw and held against the face of one of the blades, a coil spring interposed between the leaf spring and one of the blades, a washer mounted upon the screw adapted to engage the edges of one of the blades, and one end of said leaf spring being angled and adapted to bear against the face of one of the blades, as set forth.

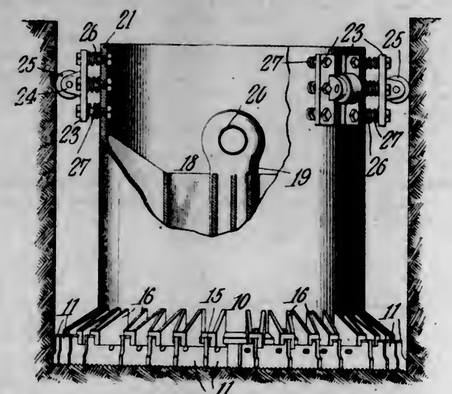
4. In combination with the blades of shears, a screw upon which the blades are pivoted, a nut upon the screw, a leaf spring engaged by said screw and held against the face of one of the blades, a coil spring interposed between the leaf spring and one of the blades, a washer mounted upon the screw adapted to engage the edges of one of the blades, and the opposite end of the leaf spring having a lug adapted to engage an indenture in the face of the blade, as set forth.

5. In combination with the blades of shears, a screw passing through registering apertures therein, a nut upon said screw, means for preventing the nut moving independent of the screw, a leaf spring having an aperture through which said screw passes, one end of the leaf spring having a lug, an indenture in the outer face of one of the blades engaged by said lug, the opposite end of the leaf spring being angled and conforming to the outer surface of the blade against which it contacts, a coiled spring mounted upon the screw and interposed between the leaf spring and the shear blade, as set forth.

874,848. SINK-SHAFT DRILL. JOHN P. KARNS, Boulder, Colo., assignor to J. P. Karns Tunneling Machine Co., Boulder, Colo. Filed Mar. 15, 1907. Serial No. 362,532.

1. A percussive drilling mechanism for sinking shafts of large diameter, comprising an open drill head, a flange extending upward from the drill head and of less diame-

ter than the latter, said flange forming a casing into which the material disintegrated by the action of the drills and the water may pass, said flange forming a sand pump guide.



2. A percussive drilling mechanism for sinking shafts of large diameter, comprising a drill carrying head open for the passage of water and other material, a casing extending upward from the drill head and into which such material may pass, a drill head carrying shaft, and connecting webs extending from the shaft to the casing.

3. A percussive drilling mechanism for sinking shafts of large diameter, comprising a drilling head open for the passage of water and other material, an annular flange extending upward from the head and forming a casing into which such material will pass, a shaft carrying the drill head, webs connecting the shaft to the casing, and spring mounted guiding rollers carried by the upper portion of said flange and arranged to engage with the wall of the shaft being drilled.

4. In drilling mechanism for sinking shafts of large diameter, an open drill head having a vertically extended casing open at the top, a shaft, a plurality of ribs extending from the shaft to the casing, and a series of spring pressed anti-friction rollers carried by said casing and arranged to engage the wall of the shaft at a point above the drill head.

5. In percussive drilling mechanism for sinking shafts of large diameter, a drill head arranged to carry a plurality of cutting bits at its lower face, said drill head being open to permit the free passage of water and other material, and an upwardly extending open flange carried by the drill head and of less diameter than the latter, the flange forming a sand pump guide.

[Claims 6 and 7 not printed in the Gazette.]

874,849. BARGE. JAMES P. KARR and JOHN D. RAUCH, Logansport, Ind. Filed Feb. 12, 1907. Serial No. 357,012.

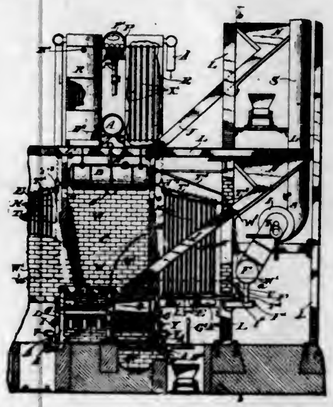


1. The improved barge comprising a frame formed in sections consisting of side planks whose ends are scarfed and fitted together, longitudinal bulkheads extending from end to end, transverse deck beams secured to the side planks and intervening bulkheads, and bottom beams arranged transversely and extending through mortises in the lower side planks, vertical bolts passing through the parts named and binding them together and longitudinal straining rods and truss rods arranged, substantially as described.

2. An improved barge composed of longitudinal sections which are detachably connected, the meeting ends of the side planks being jointed together, top and bottom beams and ribs arranged transversely and planking applied to form the deck and the bottom of the hull and screw bolts passing vertically through the top and bottom beams and ribs, substantially as described.

3. The improved barge constructed in longitudinal sections adapted to be separated and each comprising side planks whose ends are scarfed and fitted together; bolts passing vertically through the meeting scarfed ends and thus connecting the said sections; top beams arranged transversely; bottom-covering sections comprising planking, transverse ribs which are fitted in mortises in the lowest side planks, screw-bolts passing through the side planking and the top and bottom beams or ribs; and straining rods arranged longitudinally of the barge and passing over supports at the center of the same and extending to the bottom and end portions of the barge, as shown and described.

874,850. GENERATOR. JOSEPH M. W. KITCHEN, East Orange, N. J. Filed Mar. 15, 1906. Serial No. 306,223.



1. In a steam generator, the combination with a boiler, of means for producing power by gas explosion, means for utilizing said power in re-using the heat of exhaust steam, and a means for economizing the waste heat of said first named means.

2. In a steam generator, the combination with a boiler, of a first means for generating and exploding gas, a second means for heating air for combustion, a third means for producing steam from waste heat, means for separately drawing said waste through each of the second and third named means and for accurately applying said heat to said means in any desired amounts, means for the storage of a compressed medium for power transmission and for equalizing the pressure of an outflow of said medium from said storage means, means for inducing a partial vacuum in said generator, and means for compressing a medium for power transmission, all of said means co-acting with said boiler in producing steam economically, and for reducing the heat wastes in power production, substantially as shown and described.

3. In a steam generator, the combination with a boiler, of a first means for condensing waste steam and heating air, said steam being introduced at a high level and said air at a low level and being conveyed to a high level in said means, a means for exhausting air and water in said first named means, a means for purifying and evaporating water and for exhausting vapor and steam from said means and for compressing said vapor and steam, and means for conveying said vapor and steam into the first named means and under and into the fuel burned in said generator, for the purpose of economically producing power substantially as shown and described.

4. In a steam generator having a boiler, the combination of means for taking exhaust steam from a motor and for condensing said steam and for heating air with said steam, and means for taking some of said steam and passing it through a bed of burning fuel for producing a vacuum in the said first named means and for producing purified water for steam generation and for the disengagement of steam into its chemical elements preparatory to their burning in said generator, substantially as herein shown and described.

5. In a power generator, the combination of (1) means for burning fuel, (2) means for perfecting the combustion of volatilized gases comprising a vertically disposed combustion perfecting chamber having a sufficiently high run to perfect the combustion of the volatilized gases before said gases make contact with heat absorbing surfaces transmitting heat into the water contained in said generator, (3) means for converting water into steam in said generator, said means comprising provision for receiving and absorbing into said water the heat of a perfected combustion at a level above said means for perfecting combustion and for the disengagement of steam on a broad surface of water at said high level, and (4) means for heating water in divided vertically moving currents with the heat of gases traveling downwardly from a high level to a low level, said water traveling from a low level to a high level, said generator being constructed to receive cold feed water at a low temperature and to progressively heat said feed water in the travel of said water from a low level to a high level where the water is being disengaged into steam at said high level of said generator.

[Claims 6 to 26 not printed in the Gazette.]

874,851. BASE-BALL GLOVE OR MITTEN. ELWIN LITTLE, Granville, Ohio. Filed Aug. 17, 1907. Serial No. 389,037.



1. A baseball glove or mitten having a seam crossing the palm thereof, the edges forming said seam having the one a projection and the other a recess receiving said projection whereby a cavity or recess is formed in said palm.

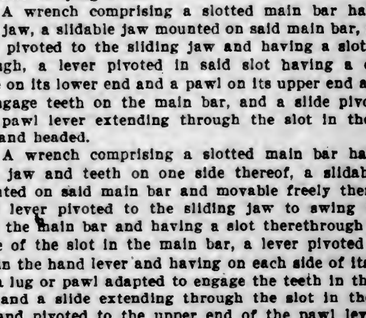
2. A base ball glove or mitten having a seam passing from the angle between the fore-finger and the next finger to the wrist, the material of the palm being puckered inwardly at said seam to form a cavity or recess.

3. A base ball glove or mitten having a palm formed of two sections, the adjacent edges whereof unite to form a seam extending from the angle between the fore-finger and the next finger to the wrist, the edges forming said seam having projections and recesses uniting to form a cavity or recess in the face of the glove.

874,852. DIFFERENTIAL GEARING. WILHELM LORENZ, Karlsruhe, Germany, assignor to The Firm of Daimler Motorengesellschaft, Unterturkheim-Stuttgart, Germany. Filed June 17, 1907. Serial No. 379,392.

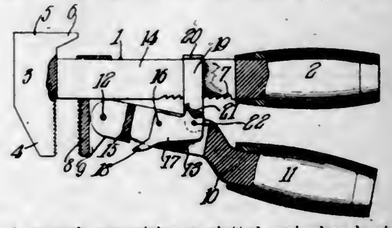
1. A differential gearing comprising a driving shaft provided with a cylindrical part and a central differential shaft carrying a toothed wheel, coaxially arranged with the driving shaft, and a second differential shaft inclosing the central shaft, and provided with a casing having teeth, and planet wheels carried by the said cylindrical part and meshing with said teeth and the said central toothed wheel.

2. A differential gearing comprising a driving shaft provided with a cylindrical head made integral with the driving shaft, pivots carried in recesses by the driving shaft, a central differential shaft provided with teeth, a hollow shaft loosely mounted on said central shaft and provided with an internally toothed ring, planet wheels loosely carried by said pivots and meshing with the teeth of the central shaft and the internally toothed ring.



3. A differential gearing comprising a driving shaft provided with a cylindrical head carrying pivots, and a central pivot made integral with the said head, a central shaft having a toothed head (g), in which a recess is provided to serve as a bearing for said central pivot, a hollow shaft loosely mounted on the central shaft and provided with an internally toothed ring, planet-wheels loosely mounted on said pivots and meshing with the internally toothed ring and the toothed head of the central shaft.

874,853. WRENCH. JAMES LOSEY, Grand Rapids, Mich. Filed Oct. 24, 1907. Serial No. 398,984.



1. A wrench comprising a slotted main bar having a fixed jaw, a slidable jaw carried by the main bar, a hand lever pivoted to the sliding jaw and having a slot therethrough in the same plane as the slot in the main bar, a lever pivoted to rock in the hand lever slot carrying a pawl adapted to engage teeth on the main bar, and a slide extending through the slot in the main bar and pivoted to the pawl carrying lever.

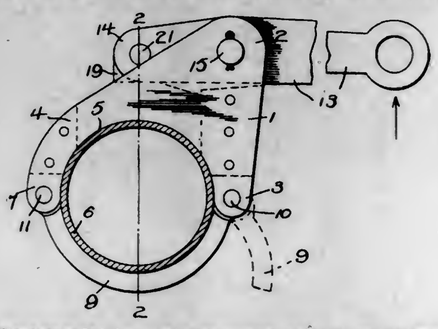
2. A wrench comprising a slotted main bar having a fixed jaw, a slidable jaw mounted on said main bar, a hand lever pivoted to the sliding jaw and having a slot therethrough, a lever pivoted in said slot having a cutting blade on its lower end and a pawl on its upper end adapted to engage teeth on the main bar, and a slide pivoted to said pawl lever extending through the slot in the main bar, and headed.

3. A wrench comprising a slotted main bar having a fixed jaw and teeth on one side thereof, a slidable jaw mounted on said main bar and movable freely thereon, a hand lever pivoted to the sliding jaw to swing to and from the main bar and having a slot therethrough in the plane of the slot in the main bar, a lever pivoted in the slot in the hand lever and having on each side of its upper end a lug or pawl adapted to engage the teeth in the main bar, and a slide extending through the slot in the main bar and pivoted to the upper end of the pawl lever, the opposite end of said slide projecting beyond the main bar, and headed.

874,854. PIPE-TONGS. HAROLD H. MADDREN, Hollywood, Cal. Filed May 13, 1907. Serial No. 373,446.

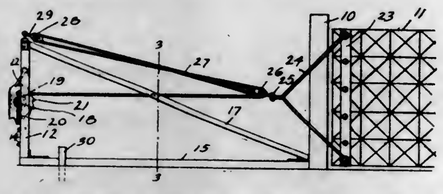
A device of the type set forth, comprising a lever, having a bifurcated end, a member pivotally suspended from

said lever at a distance from said bifurcated end and having forwardly projecting jaws formed with curved lower faces, a curved link pivoted at one end to said member, and designed to have its other end detachably engaged with the ends of said jaws, and a gripping member pivot-



ally suspended from said bifurcated end and disposed for movement between said jaws, said member being formed with a wide curved face having gripping dies embedded therein.

874,855. WIRE-FENCE STRETCHER. WILLIAM B. MARSHALL, Paris, Iowa. Filed Mar. 25, 1907. Serial No. 364,454.

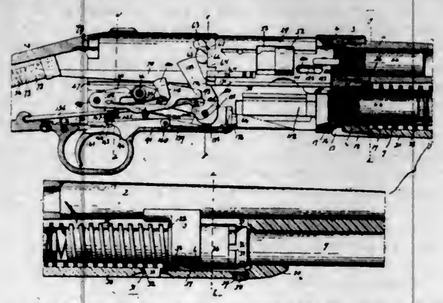


1. A wire-fence stretcher comprising two uprights and their cross bars, a reel shaft journaled in the uprights and provided with a reel and crank to operate it, a rope attached at one end to the reel, a pulley and means upon which it is swiveled connected with the end of the fence to be stretched, a second pulley swiveled on a hook adapted to be engaged with one of said cross-bars, the said rope being passed about the first-mentioned pulley and then about the second, and carried back and connected with the fence-engaging means and means to sustain the uprights in position.

2. A wire-fence stretcher comprising two uprights and their cross bars, a plank brace extending between the lower ends of the uprights and the post to which the fence is to be fastened, brace-bars extending from the tops of the uprights to the rearward edges of the plank-brace, a reel-shaft journaled in the uprights and provided with a reel and crank to operate it, a rope attached at one end to the reel, a pulley and means upon which it is swiveled connected with the end of the fence to be stretched, a second pulley swiveled on a hook adapted to be engaged with one of said cross-bars, the said rope being passed about the first-mentioned pulley and then about the second, and carried back and connected with the fence-engaging means.

874,856. TUBULAR-MAGAZINE AUTOMATIC GUN. WILLIAM MASON, New Haven, Conn., assignor to Winchester Repeating Arms Co., New Haven, Conn., a Corporation. Filed Feb. 18, 1907. Serial No. 358,111.

1. In an automatic gun, the combination with the receiver thereof, of a barrel and barrel-extension, a tubular magazine adapted to be detachably connected with the forward end of the receiver, a guide-fork carried by the barrel, and a bearing-sleeve mounted in the fork and embracing the magazine and adapted when disconnected from the fork to permit the magazine to be laterally separated therefrom.



2. In an automatic gun, the combination with the receiver thereof, of a recoiling barrel and barrel-extension, a tubular magazine, a take-down head located at the rear end thereof and adapted to be removably connected with the receiver, a downwardly opening guide-fork depending from the barrel and embracing the magazine, a bearing-sleeve located in the said fork to form a bearing for the magazine which it holds in the fork.

3. In a take-down gun, the combination with the receiver thereof, of a barrel and barrel-extension, a tubular magazine having its rear end detachably connected with the receiver, a downwardly opening take-down guide-fork depending from the barrel, having its opening larger than the diameter of the magazine, a bearing-sleeve larger in diameter than the said opening mounted in the fork into which it is inserted from rear to front, a barrel-closing spring encircling the magazine, and means for retracting the sleeve from the fork against the tension of the spring, whereby the magazine may be laterally connected from the barrel and receiver.

4. In an automatic gun, the combination with the receiver thereof, of a recoiling barrel and barrel-extension, a tubular magazine adapted to be detachably connected with the receiver, a guide-yoke depending from the barrel, a bearing sleeve for the magazine mounted in the said yoke from which it is laterally movable, a barrel-closing spring encircling the magazine and holding the sleeve in place in the yoke, a forearm, and a latch mounted in the forearm and adapted to be engaged with the sleeve when the spring is compressed for removing the sleeve from the yoke preparatory to laterally separating the magazine and barrel.

5. In an automatic gun, the combination with the receiver thereof, of a recoiling barrel-extension mounted therein, a barrel detachably connected with the barrel-extension, a tubular magazine, connection between the barrel and magazine whereby they may be separated at pleasure, a take-down head mounted upon the rear end of the magazine and adapted to be removably connected with the receiver, and a magazine lock mounted in the said head for engagement with the receiver.

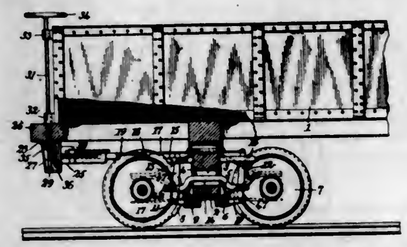
[Claims 6 to 23 not printed in the Gazette.]

874,857. BRAKE. JOHN H. MEREDITH, Altoona, Pa. Filed Apr. 3, 1907. Serial No. 366,169.

1. In a brake mechanism, in combination, a link, means actuated thereby for applying the brakes, a movable member adapted to actuate said link, a stop for said movable member, and means for automatically adjusting said stop as the brake wears.

2. In a brake mechanism, in combination, a link, means actuated thereby for applying the brakes, a nut, means for guiding the same, a connection between said nut and said link for actuating said link, a member limiting the movement of said nut, and means for adjusting said member automatically with the wear of the brakes.

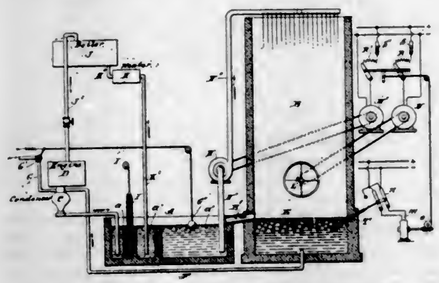
3. In a brake mechanism, in combination, a link, means actuated thereby for applying the brakes, a bracket, a nut guided therein and connected with said link, a rack having means for engaging said nut to determine the position of travel thereof, a screw controlling said nut, and means for holding said rack in a more advanced position as the brakes wear.



4. In a brake mechanism, in combination, a link, means actuated thereby for applying the brakes, a bracket, a screw mounted therein, a nut guided in said bracket and connected with said link, and a rack engaging said nut and permitting a limited travel thereof, said rack having teeth projecting toward the brake and adapted to compensate for the wear of the brakes, said bracket having a tooth adapted to engage the teeth of said rack to lock the same against a backward movement.

5. In a brake mechanism, in combination, a link, means for applying the brakes through said link, a bracket, a screw mounted therein, a nut on said screw guided in said bracket and connected with said link, a rack engaging said nut and permitting a limited movement thereof, said rack having a plurality of teeth projecting rearwardly with respect to the direction of advance of said rack in applying the brakes, and a transverse dog bar adapted to engage said teeth to lock said rack against a rearward movement.

874,858. SYSTEM OF COOLING FOR CONDENSING STEAM PLANTS. HENRY E. MCGOWAN, New York, N. Y. Filed May 17, 1907. Serial No. 374,156.



1. In a cooling system for condensing steam plants, a condenser, a hotwell for receiving the discharge from the condenser, a cooling tower discharging into the condenser, and a multiple water circulation between said hot-well and the tower and automatic means for varying the said circulation.

2. In a cooling system for condensing steam plants, a condenser, a hot well for receiving the discharge from the condenser, a cooling tower discharging into the condenser and means for delivering the water from said hot-well to the tower in excess of that furnished to the condenser and an overflow from the tower to the well.

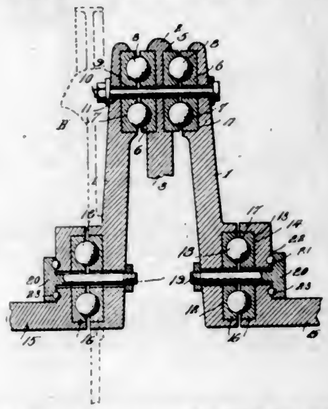
3. In a cooling system for condensing steam plants, a condenser, a hot well for receiving the discharge from the condenser, a cooling tower discharging into the condenser and a multiple water circulation between the said hot well and the tower.

4. In a cooling system for condensing steam plants, a condenser, a hot well for receiving the discharge from the condenser, a cooling tower discharging into the condenser and a reservoir connected to the base of the tower feeding such condenser.

5. In a cooling system for condensing steam plants, a condenser, a hot well for receiving the discharge from the condenser, a cooling tower discharging into the condenser and a multiple water circulation between said hot well and the tower and automatic means responsive to the temperature in the hot well for varying the said circulation.

[Claims 6 to 15 not printed in the Gazette.]

874,859. ANTIFRICTION DEVICE FOR CRANKS AND PITMEN. WILLIAM W. NEIGHBOUR, Denison, Tex. Filed Feb. 14, 1907. Serial No. 357,278.



1. In a device of the class described, the crank arms and the pitman head provided with circular recesses in their opposing faces, circular disks or cups fitted in said recesses and having annular grooves or ball races in their opposing faces, anti-friction balls fitted in said grooves and spacing the disks or cups apart, and a connecting member extending through the crank arms and the pitman head, and axially through the disks or cups.

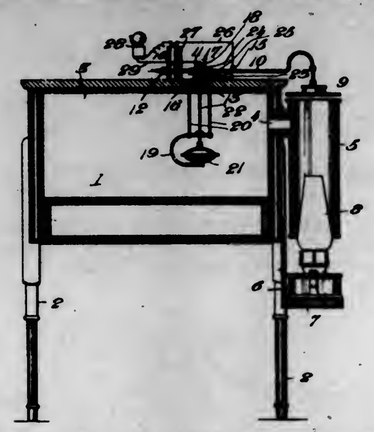
2. In a device of the class described, a pair of crank arms having circular recesses, bearing members opposed to said crank arms and having corresponding circular recesses, disks or cups fitted in said circular recesses and having annular grooves in the faces thereof, anti-friction members fitted in said grooves and spacing the disks apart, headed connecting members extending axially through the disks, and anti-friction balls interposed between the heads and the connecting members and the adjacent surfaces.

874,860. INCUBATOR. OLIVER P. PHILLIPS, Amo, Ind. Filed Oct. 24, 1906. Serial No. 340,372.

1. In a device of the class described, a casing provided with a chamber, means for heating the latter, means including a regulating lever for governing the amount of heat supplied to the chamber, a contact arm connected for movement with the lever and disposed at right angles to the latter, a contact member pivoted on the casing and having a pair of spaced contact portions curved in a plane parallel with the lever and between which said arm is arranged for movement, said contact member being movable to a position out of the path of movement of the arm, a normally open circuit including the contact member and arm, and an alarm contained in said circuit.

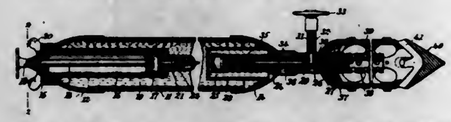
2. In a device of the class described, the combination of a heated chamber, a thermostat therein having a reciprocating member, a swinging plate actuated by the member, a means carried on the swinging plate for regulating the heat supplied to the chamber, a contact on the swinging

plate disposed parallel with the axis on which the latter moves, a stationary contact provided with oppositely



curved extremities between which the swinging contact is disposed, and a signal circuit controlled by the contacts.

874,861. SOLDERING-IRON. RAYMOND POCKMAN, Yolo, Cal. Filed May 31, 1906. Serial No. 319,524.



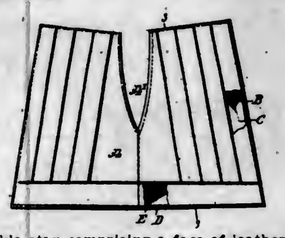
1. A soldering iron, comprising a reservoir for liquid fuel, an air pump in the reservoir, a perforated hood within the reservoir at the inner end thereof; an outlet tube secured to the inner end of the reservoir and extending into the hood, a generator tube secured to the outlet tube, a spring-pressed valve for the generator tube, means for operating the valve, a cup secured to the generating tube and having a Bunsen tube projecting centrally therefrom, a perforated shell secured to the cup and projecting beyond the same, and a head secured to the shell.

2. A soldering iron, comprising a reservoir for liquid fuel, means for forcing liquid fuel therefrom, an outlet tube extending into the reservoir and having means therein for obstructing the flow of the liquid fuel, a generator tube secured to the outlet tube and projecting beyond the reservoir, a valve for the generator tube, means for operating the valve, a Bunsen tube projecting beyond the end of the generating tube, a cup at the base of the Bunsen tube, a perforated shell secured to the cup and inclosing the Bunsen tube, and a head secured to the shell, and having rearwardly inclined discharge passages.

3. In a soldering iron, a reservoir for liquid fuel, means for forcing the fuel from the reservoir, an outlet tube projecting into the reservoir, a generating tube projecting beyond the end of the reservoir, a valve for the generator tube, said valve being provided with a stem projecting into the outlet tube and having a member provided with an inclined surface, a spring surrounding the stem in the outlet tube, a tubular boss on the generator tube, an adjustable pin in the boss and engaging the inclined surface of the member of the valve stem, a burner carried by the generator tube, and a head adjacent to the burner.

874,862. ANKLE-STAY FOR SHOES. ABRAHAM POSNER, New York, N. Y. Filed June 4, 1907. Serial No. 377,191.

1. An ankle stay comprising a face of leather and lining of canvas secured together at their edges, said stay having a portion adapted to rest upon each side of the ankle, said portions being each provided with a plurality of vertical parallel pockets, and said stay being provided with a horizontal pocket at the bottom extending across the width thereof, stiffening members in each of the pockets, said stay being cut away at the back of the shoe approximately to the vertical center, and an elastic connecting the lower corners of the stay.

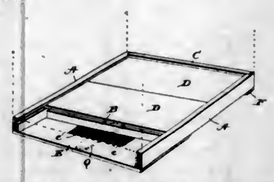


2. An ankle stay comprising a face of leather and a lining of canvas secured together at their edges, said stay having a portion adapted to rest upon each side of the ankle, said portions being each provided with a plurality of vertical parallel pockets, and said stay being provided with a horizontal pocket at the bottom extending across the width thereof, stiffening members in each of the pockets, said stay being cut away at the back of the shoe approximately to the vertical center.

3. An ankle stay comprising a flexible body having a portion adapted to rest upon each side of the ankle, a plurality of vertical stiffeners arranged in each ankle portion and extending from the top to the bottom thereof, and a horizontal resilient strip at the bottom of the stay and extending the full width thereof, said stay being cut away at the back from the top approximately to the vertical center.

4. An ankle stay comprising a flexible body having a portion adapted to rest upon each side of the ankle, a plurality of vertical stiffeners arranged in each ankle portion and extending from the top to the bottom thereof, a horizontal resilient strip at the bottom of the stay and extending the full width thereof.

874,863. BOTTOM BOARD FOR BEEHIVES. EUGENE L. PRATT, Swarthmore, Pa. Filed July 12, 1906. Serial No. 325,967.



1. A bottom board for bee hives having its upper surfaces in different horizontal planes, the surface in the lower plane being the bottom of a relatively deep chamber that opens at the end of the bottom board and is uncovered at the top, and having means for removably supporting attachments.

2. A bottom board for bee hives, comprising side rails, grooves in the inner sides of the side rails, a piece or pieces situated in said grooves and closing the space between the side rails for a portion of their length only from front to rear, and attachments fitted for engagement with the grooves for the remaining portion of the length of the bottom board.

3. A bottom board for bee hives having a chambered end forming a bee entrance, and an alighting board movably placed in such end, and adjustable to different positions therein, said alighting board having a member or members that are placed in different relations to the bee entrance by adjustment of the alighting board therein.

4. The combination of a hive having an entrance opening and an alighting board slidably and tiltingly shiftable in the hive entrance, and having means to coöperate with such entrance to vary the size of the entrance opening.

5. An alighting board for bee hives, having strips of different width separated by a space, and shiftable to change the position of said strips with reference to the entrance, to vary the size of the entrance opening.

[Claims 6 to 10 not printed in the Gazette.]

874,864. ELECTROLYTIC PROCESS FOR REFINING NICKEL. JOHN N. PRING, New York, N. Y., assignor to Elmer A. Sperry, Brooklyn, N. Y. Filed Nov. 8, 1906. Serial No. 342,491.

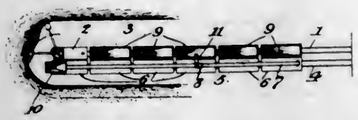
1. The method of refining impure or crude nickel which consists in treating it in a suitable solution with a soluble sulfid, treating the liquid which bears the resulting solids with a solvent for the foreign bodies, separating the remaining solids and electrolyzing them.

2. The method of refining impure or crude nickel which consists in treating it in a suitable solution with a soluble sulfid, treating the liquid which bears the resulting solids with a solvent for the foreign bodies, separating the remaining solids and electrolyzing them in the presence of a chlorid.

3. The method of refining impure or crude nickel which consists in treating it in a suitable solution with a soluble sulfid, treating the liquid which bears resulting solids with a solvent for the foreign bodies, separating the remaining solids and electrolyzing them in a compartment cell and in the anode compartment of such cell.

4. The method of refining impure or crude nickel which consists in treating it in a suitable solution with a soluble sulfid, treating the liquid which bears the resulting solids with a solvent for the foreign bodies, separating the remaining solids and electrolyzing them in an electrolytic cell in contact with an inert anode and depositing nickel at the cathode.

874,865. APPARATUS FOR EXCAVATING AND REMOVING MATERIAL. ARTHUR B. PROAL, Jr., New York, N. Y. Filed Apr. 1, 1907. Serial No. 365,855.



1. The combination with excavating apparatus, of a conveyer adapted to receive material from the excavating apparatus, and means for delivering material from said conveyer to cars adjacent to said conveyer.

2. The combination with excavating apparatus, of a receiving hopper into which said excavating apparatus is adapted to deliver, a conveyer on to which said receiving hopper discharges, and means for discharging material from conveyers to cars adjacent to said conveyer.

3. The combination with excavating apparatus, of a conveyer to which said excavating apparatus is adapted to deliver, said conveyer having a portion thereof elevated, and means for delivering material from the elevated portion of said conveyer to cars adjacent to said conveyer.

4. The combination with excavating apparatus, of a conveyer adapted to receive material from said excavating apparatus, and a traveling tripper or deliverer for said conveyer whereby material may be delivered from said conveyer to cars standing alongside of said conveyer.

5. The combination with excavating apparatus, of a conveyer adapted to receive material from said excavating apparatus and a tripper or deliverer for discharging material from said conveyer into the cars arranged alongside of said conveyer, said tripper having a discharge chute provided with a closure, whereby the delivery of material through said discharge chute may be arrested when said tripper or deliverer is in transit from one car to another.

[Claims 6 and 7 not printed in the Gazette.]

874,866. METALLIC COMPOSITION. CHARLES J. REED, Philadelphia, Pa. Filed Mar. 23, 1906. Serial No. 307,697.

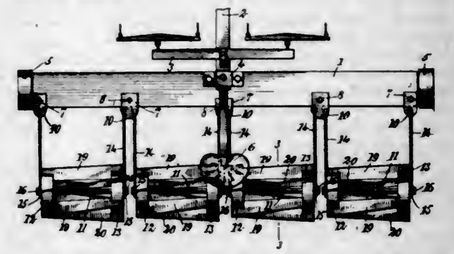
1. The herein described composition comprising lead, arsenic, and copper combined together.

2. The herein described composition comprising lead, arsenic and copper, the proportion of arsenic being not less than ten per cent.

3. The herein described composition comprising lead, arsenic and copper, the proportion of copper being less than the proportion of lead.

4. An anti-friction metal comprising lead, arsenic and copper, the proportion of arsenic being less than the proportion of lead and greater than the proportion of copper.

874,867. WEEDER AND STALK-CUTTER. HENRY RICHELDERFER, Wasco, Oreg. Filed June 19, 1907. Serial No. 379,733.



1. In a device of the class described, drums of different sizes arranged to travel upon the ground and having a common projecting cutting blade arranged at an angle with the longitudinal axes of said drums and carried at the peripheries of said drums.

2. In a device of the class described, drums of different diameters rigidly connected and arranged to travel upon the ground, said drums having a common projecting cutting blade of helical form carried at the peripheries of said drums.

3. In a device of the class described, a shaft having drums of different sizes arranged to travel upon the ground, and cutting blades projecting beyond the peripheries of said drums, said blades being disposed at an angle to said shaft.

4. In a device of the class described, a shaft having drums of different diameters arranged to travel upon the ground, and cutting blades projecting beyond the peripheries of said drums and connecting the same, said blades being of helical form.

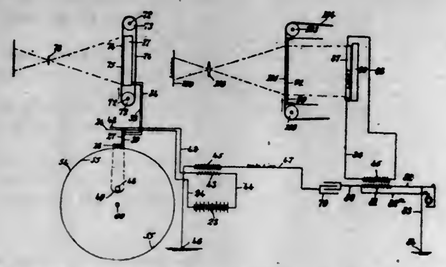
5. In a device of the class described, a shaft, spaced drums rigid with said shaft and arranged to travel upon the ground, said drums being of different diameters and having radial recesses, said recesses of one of said drums being arranged intermediate of the recesses of the other of said drums, and cutting blades arranged in said recesses, said blades projecting beyond the peripheries of said drums.

[Claims 6 to 8 not printed in the Gazette.]

874,868. TELAUTOPHOTE. SIDNEY ROTHSCHILD, New York, N. Y. Filed Sept. 6, 1906. Serial No. 333,423.

1. The combination of a light-controlled cell, a belt movable relatively thereto and provided with a slot, means for defining an image upon said belt and upon so much of said cell as is left exposed by said slot, a light-controlled switch for shifting an electric current to different parts of said light-controlled cell for the purpose of enabling the light passing through said slot to said cell to produce variations in said electric current, a line wire energized by said variations of said current, and mechanism controllable by said currents passing through said line wire for the purpose of reproducing at a distance an image

simulating that thrown upon said belt and said light-controlled cell.

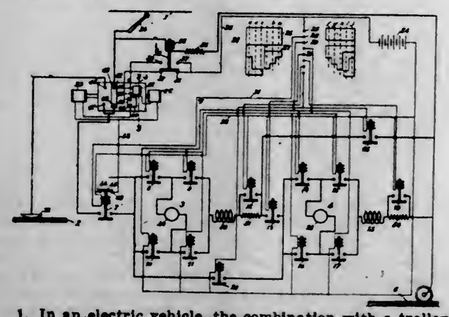


2. The combination of a line wire, means for impressing thereupon electric impulses analogous to variations in the light of an image, an electric lamp controllable by variations of current in said line wire, a movable belt disposed adjacent to said lamp and provided with a slot, a movable wheel disposed adjacent to said lamp and provided with a slot crossing said slot in said belt, means for moving said belt and said wheel in planes crossing each other so as to direct the movements of a beam of light passing from said lamp through said slots thus crossed, and a screen for receiving said beam of light thus controlled.

3. The combination of a pair of synchronizing motors, one disposed at a receiving station and the other at a transmitting station, a light-controlled cell and a light-controlled switch disposed at said transmitting station and connected with the synchronizing motor at said transmitting station, a line connected with said light-controlled cell and with said light-controlled switch for conveying to a distance electric impulses produced by the conjoint action of said light-controlled switch and said light-controlled cell, and mechanism connected with said synchronizing motor at said receiving station for reproducing an image.

4. The combination of a line wire, means for energizing the same by electric currents, the intensity of said currents representing the relation between lights and shadows of an image to be transmitted, a vacuum tube located at the receiving station and adapted to be energized by said currents from said main line, and means for energizing said vacuum tube to a predetermined normal extent independently of said currents from said main line.

874,869. CONTROL SYSTEM FOR ELECTRIC VEHICLES. OLOF A. SANDBORGH, Swissvale, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed Mar. 3, 1906. Serial No. 304,121.



1. In an electric vehicle, the combination with a trolley, and a second current collecting device and supply conductors therefor, of means independent of the current collecting device for automatically completing a circuit through either the trolley or the current collecting device.

2. In an electric vehicle, the combination with two current collectors, of means for automatically interrupting the circuit through one of the devices and completing the circuit through the other after the latter has come into engagement with its supply conductor, said means comprising a main circuit selective switch, and a selective relay which is energized from the latter of said current collecting devices and which determines the position of the main circuit selective switch.

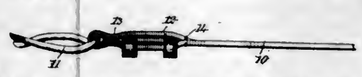
3. In an electric vehicle, the combination with a motor circuit, two current collecting devices, supply conductors therefor, and a selective switching device for connecting either one of the collecting devices to the motor circuit, of means independent of one collecting device and dependent upon the engagement or disengagement of the other collecting device with or from its supply conductor for governing the operation of the selective switching device.

4. The combination with electric motors, supply conductors therefor, a switching device for selecting one of said conductors, and independent current collecting devices for connecting each conductor with the switching device, of means for automatically actuating said switching device, said means being dependent upon the engagement or the disengagement of one of the independent collecting devices with or from its supply conductor and independent of the other device.

5. In an electric railway system having dissimilarly located supply conductors for different sections, the combination with current collectors adapted to engage the respective supply conductors, a change-over switch, and operating electro-magnets therefor, of automatic means independent of one of the current collectors for selectively energizing said magnets in accordance with the engagement or disengagement of the other current collector with or from its supply conductor.

[Claims 6 to 10 not printed in the Gazette.]

874,870. BELT, BAND, AND THE LIKE. RALPH SCHEUER, New York, N. Y. Filed July 10, 1907. Serial No. 382,998.



1. A strap having a portion thereof formed of two layers, means for securing said layers together at two points spaced apart longitudinally of the strap, and a plurality of loops encircling one of said layers and having their ends secured together and each loop connected to the adjacent one independently of said layers and between the same, said loops being disposed intermediate said securing means.

1. In combination with a strap, a plurality of loops encircling the same and formed of a single piece of material having an opening therein to form the loops portions at opposite sides of said opening, and means independent of said strap for securing together the adjacent edges of the piece of material on the opposite side of the strap from said opening.

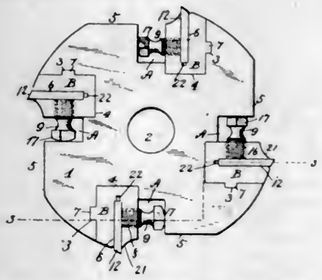
874,871. ROTARY CUTTER-HEAD. ELMER S. SHIMER, Milton, Pa., assignor to Samuel J. Shimer and Sons, Incorporated, Milton, Pa. Filed May 24, 1907. Serial No. 375,479.

1. A cutter head having a longitudinal recess, a longitudinally slotted bit holder slidably engaging the recess, a blade or bit held in the slot and clamping screws engaging the bit holder and having heads adapted for engagement with one wall of the recess.

2. A cutter head having a longitudinal recess provided with grooves or offsets, a longitudinally slotted bit holder slidably engaging the recess and having portions engaging the grooves or offsets, a blade or bit held in the slot and clamping screws engaging the bit holder and adapted to be tightened against one wall of the recess.

3. A cutter head having a longitudinal recess, a bit holder engaging the recess and having a longitudinal bit receiving groove, and clamping screws extending through one wall of the bit holder and having heads adapted for engagement with one wall of the recess.

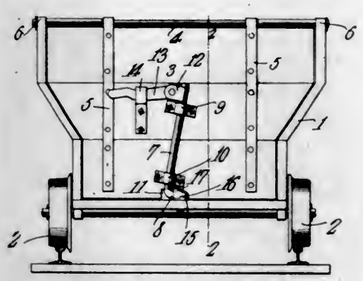
4. A bit holder for cutter heads, consisting of a block having a longitudinal bit receiving recess and slots whereby one of the side walls of said recess is sub-divided into a plurality of wings or leaves, and clamping screws engaging the individual wings or leaves.



5. A bit holder for cutter heads, consisting of a grooved block one side of which is subdivided into a plurality of bit engaging wings or leaves.

[Claims 6 to 17 not printed in the Gazette.]

874,872. LATCH FOR MINE-CAR DOORS. CHRISTIAN H. SMITH, Tranger, Pa. Filed Aug. 27, 1907. Serial No. 390,323.



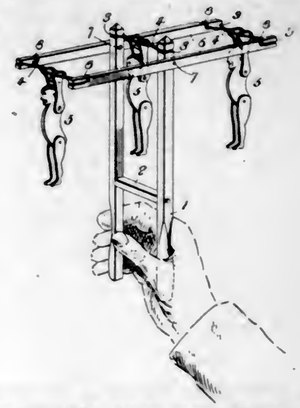
1. Combined with a door, an inclined latch bar having a laterally projecting tapering finger on its lower end, bearings for said bar, parallel arms on said bar above and in contact with said upper bearing, a lever pivoted between said arms and a keeper on said door for retaining the latch in closed position.

2. Combined with a swinging door, an inclined bar having a laterally projecting tapered finger on its lower end, bearings for said rod, parallel arms projecting from said rod in an opposite direction to said finger and resting on one of said bearings, a hand lever pivoted between said plates and having a limited upward movement, and a fixed stop plate having a curved end against which said finger bears, the angular position of said bar being such as to cause the finger to rise when it is turned inwardly on its axis.

3. A latch for mine-car door, comprising an inclined latch bar mounted to turn in bearings on said door having a lateral projection on its lower end a hand lever on its upper end and a stop plate on the car having its outward end, with which said finger contacts, upwardly curved the inclination of said lock bar causing said finger to move inwardly and upwardly when said latch is moved to disengage the door.

874,873. TOY. VAN SUMERLIN, Pinetops, N. C. Filed Mar. 13, 1907. Serial No. 362,180.

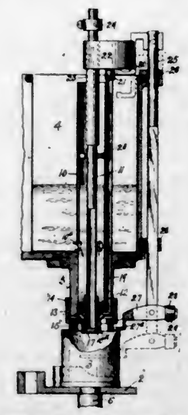
1. A toy comprising spaced pressure bars, supporting bars connected intermediate of their ends to said pressure bars, spaced strands attached to said supporting bars upon opposite sides of the pressure bars, and toy figures mounted upon said strands, the strands of the several pairs being twisted and adapted to impart motion to the figures supported thereby when subjected to linear tension.



2. A toy comprising spaced pressure bars, supporting bars pivotally connected midway of their ends to said pressure bars and adapted to be turned to any relative angular position, toy figures and twisted strands connecting said toy figures to said supporting bars.

3. In a toy the combination of spaced pressure bars, supporting bars having connection with said pressure bars and having under cut notches or grooves, companion strands fitted in said undercut grooves and being twisted and jointed figures mounted upon said strand and having motion imparted thereto by the tendency of said strands to straighten when subjected to linear tension.

874,874. FILLING-NOZZLE FOR CANNING-MACHINES. BURT E. TAYLOR, Wauseon, Ohio, assignor to C. D. Chewning, Randolph, N. Y. Filed Mar. 7, 1907. Serial No. 361,184.

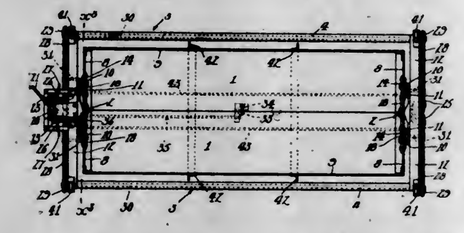


1. The combination with a tank, of a filling-nozzle having a discharge opening and an air-vent channel having an annular mouth surrounding the discharge-opening, a valve associated with the vent, a valve for closing the discharge-opening, a movable element associated with said two valves and adapted when raised to effect an opening first of the vent valve and then the other valve, a reciprocatory member, having a finger to coact with said element for raising it, a roller carried by the member, a cam track for the roller, said track being fashioned to

effect a movement of the member to open the valves, a foot carried by the member for coacting with the receptacle whereby a raising of the receptacle will elevate the roller in position to engage the track, and a gasket on the nozzle with which the receptacle abuts.

2. In combination, a valve chamber having its lower end provided with a restricted discharge-opening, an annular air-vent mouth and an inner valve seat, a valve stem projecting down within the casing and normally having its lower end projecting within the discharge opening, a disk-like valve member carried by the stem to seat on the inner valve seat of the chamber when the stem is down, an air-vent tube leading from the annular mouth to adjacent the upper end of the valve chamber, a weighted member slidingly carried by the stem and having a part fashioned to close the upper end of the vent tube when the member is down, a stop for limiting the upward movement of the member on the stem, and mechanism for imparting an initial raising movement to the member to open the upper end of the vent and then a continuing movement thereof to cause the member to engage the stop and raise the valve from its seat and the stem free from the discharge opening, substantially as described.

874,875. DUMP-BED. CHARLES C. TAYLOR, GEORGE W. WOOD, and MAYHEW A. VINCENT, San Diego, Cal. Filed Sept, 4, 1906. Serial No. 333,258.



1. An automatic dump bed comprising two members pivoted together to swing outwardly and inwardly to open the bed at the center thereof, in combination with operating means comprising flexible elements connected to each bed member, devices operating simultaneously upon the flexible elements to open both bed members, and means for disconnecting the operating means from one of said flexible elements.

2. A dump bed comprising two dump bed members pivotally connected together to swing outwardly and upwardly to open the dump bed at the center thereof, and a supporting frame for said dump bed, each dump bed member comprising a fulcrum member adjustable relatively to the dump bed member to shift the point of support of the dump bed member relatively to the center of gravity thereof.

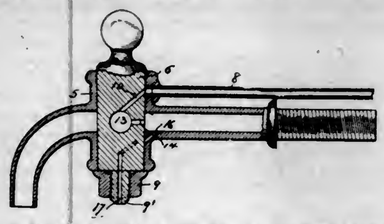
3. A dump bed comprising two dump bed members pivoted together to swing outwardly and upwardly to open the dump bed at the center thereof, a supporting frame, a fulcrum member adjustable on the frame, and a link pivotally connected to said fulcrum member and to a dump bed member.

4. A dump bed member, a movable fulcrum therefor, operating means connected to the bed to swing the bed member on the fulcrum, and to move the fulcrum in the movement of the bed member, and means for adjusting the position of the fulcrum connection to the bed member.

5. A dump bed comprising two dump bed members pivoted together to swing outwardly and upwardly to open the dump bed at the center thereof, a supporting frame, a supporting member pivoted to the frame, a fulcrum member pivoted to the dump bed member and having said supporting member pivoted thereto, and clamping means for securing said fulcrum member in variant positions.

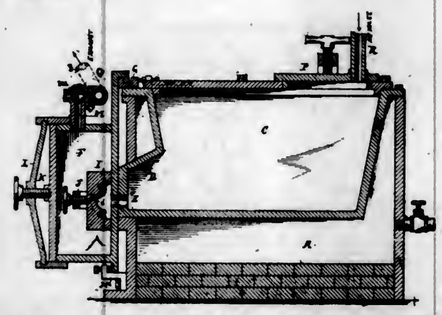
[Claims 6 to 9 not printed in the Gazette.]

874,876. FAUCET FOR BEER AND OTHER CARBONATED BEVERAGES. ROBERT W. TAYLOR, Chicago, Ill. Filed Apr. 7, 1906. Serial No. 310,539.



In a faucet for beer and other carbonated beverages, the combination with a valve casing including a liquid supply pipe having a branch passage and a gas supply pipe, of a valve in said casing having a central beverage opening designed to be alined with said liquid supply pipe, a gas passage communicating with said beverage opening and designed to be alined with said gas supply pipe, a branch gas passage leading at an angle from said beverage opening to said liquid supply pipe, and a gas vent passage extending to the exterior of said valve and designed to be alined with said branch passage.

874,877. METHOD OF CASTING. HERBERT G. UNDERWOOD, Stamford, Conn. Filed Jan. 26, 1904. Serial No. 190,669.



1. A method of casting which consists in compressing the air above the surface of an inclosed mass of molten metal, and maintaining said pressure therein without forcing additional air therein exhausting the air from the interior of a mold, and opening connection between said mold and the metal whereby the molten metal will be forced and drawn into the mold by both pressure and exhaustion, substantially as described.

2. A method of casting which consists in compressing the air above the surface of an inclosed mass of molten metal, and maintaining said air under pressure therein without forcing additional air above the surface of the inclosed metal inclosing a mold in an inclosed chamber, exhausting the air from the interior of the chamber and therefore from its contained mold, opening connection between said mold and the molten metal and thereby forcing the metal into the mold, substantially as described.

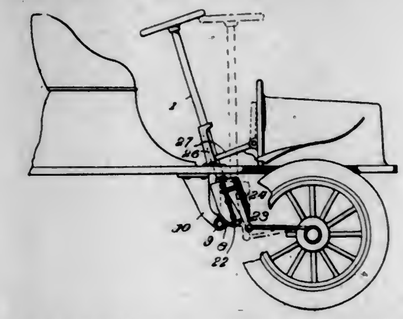
3. A method of casting which consists in sealing a metal pot or other receptacle containing metal from outside air, charging the space above the metal with a compressed gas and cutting off the supply of gas until the melted metal has been forced from the melting pot, thus preventing continued oxidation of the metal in the pot.

4. A method of casting which consists in sealing a metal pot or other receptacle containing molten metal from outside air, charging the space above the molten metal with compressed air, and cutting off the supply of compressed air until all the metal has been forced from the melting pot, thus preventing continued oxidation of the metal in the pot, substantially as described.

5. A method of casting which consists in sealing from out-side air a melting pot or other receptacle containing metal to be melted and cast, charging the space above the metal with a compressed gas, cutting off the supply of gas, exhausting air from a mold and bringing the exhausted mold into communication with the sealed melting pot, whereby the metal will be drawn and forced from said melting pot into the mold.

[Claim 6 not printed in the Gazette.]

874,878. VEHICLE STEERING DEVICE. EDWARD J. VRAALSTAD, Buffalo, N. Y. Filed May 29, 1906. Serial No. 319,367.



1. In a steering gear for vehicles, the combination with a steering rod, and a duplex screw-thread thereon, of two nuts, one for each thread, a swinging member carried wholly by said nuts and actuated by the movements thereof.

2. In a steering gear for vehicles, the combination with a steering rod, and a duplex screw-thread controlled thereby, of two nuts, one for each thread, a swinging member pivotally secured to one of said nuts, and a link pivotally secured to said swinging member and to the other of said nuts.

3. The combination with a rod having right and left hand screw threads, of nuts working on said threads, means for preventing said nuts from turning axially, a swinging member pivotally mounted on one of said nuts, and a link connecting said swinging member to the other of said nuts.

4. The combination with a rod having right and left hand screw-threads, and a guide bar parallel with the threaded portion of such rod, of nuts working on said threads and guided by said bar, a swinging member having arms connected to one of said nuts, and a link connecting said arms to the other of said nuts.

5. In a steering gear for vehicles, the combination with the rod having right and left hand screw-threads, of a frame through which such rod is passed, nuts working on said threads and guided by said frame, a casing inclosing all of said parts and the lower portion of said rod, said casing having openings in its sides, a swinging member comprising corresponding arms projected through said openings and secured to one of said nuts and connected to the other.

[Claims 6 to 11 not printed in the Gazette.]

874,879. DRESS-SHIELD. CHARLES N. WAITE, Wilmington, Del. Filed Nov. 20, 1906. Serial No. 344,217.



As a new article of manufacture, a dress-shield, composed of a film of substantially transparent, softened cellulose ester, provided with an incorporated and inclosed supporting core of open mesh fine fabric.

874,880. STOCKING-PROTECTOR. GEORGE V. WALLACE, Wakefield, Mass., assignor to Barclay, Brown and Bird, Incorporated, Boston, Mass., a Corporation of Massachusetts. Filed July 10, 1907. Serial No. 383,006.



1. As a new article of manufacture, a stocking-protector, consisting of two end-parts or sections and a central-part or section, severally of flexible sheet material and having each of the two end-parts, at one end, pivoted to one end of the central-part, and the opposite end of each free and unconnected so as to overlap each other, substantially as described, and for the use specified.

2. As a new article of manufacture, a stocking-protector, consisting of two end-parts or sections, and a central-part or section, severally of flexible sheet material and having each of the two end-parts, at one end, pivoted to one end of the central-part, and the opposite ends of each free and unconnected, and also having each of said end-parts tapered from their pivoted-end to their free end, and rounded off at their opposite ends, and the said central part rounded off at its opposite ends and therebetween concaving along each of its edges.

874,881. WALL. FRANK J. BAKER, San Francisco, Cal. Filed July 18, 1906. Serial No. 326,714.



1. A wall having embedded therein a longitudinal reinforcement comprising a group of wires spaced from each other adjacent to each side of the wall, and a tie wire connecting all of said wires, substantially as described.

2. A wall having embedded therein a longitudinal reinforcement comprising a group of wires spaced from each other, adjacent to each side of the wall, and a zigzag tie wire obliquely connecting all of said wires, substantially as described.

3. A wall having embedded therein a longitudinal reinforcement comprising a group of wires adjacent to each side of the wall, and a tie wire connecting said groups, said tie wire being looped around each wire in turn, substantially as described.

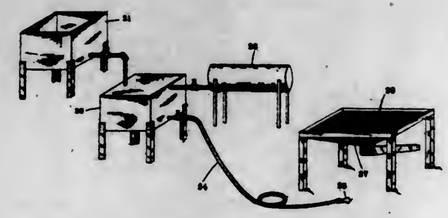
4. A metallic frame comprising two groups each containing parallel strands of wire, spaced from each other, all substantially in the same plane, the strands of each group being comparatively close to each other relative to the distance between the groups, and a tie wire connecting the several strands obliquely, substantially as described.

5. A metallic frame comprising two groups of parallel strands of wire, all substantially in the same plane, the strands of each group being comparatively close to each other relative to the distance between the groups, and a

tie wire connecting the several strands obliquely and being looped around each wire, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

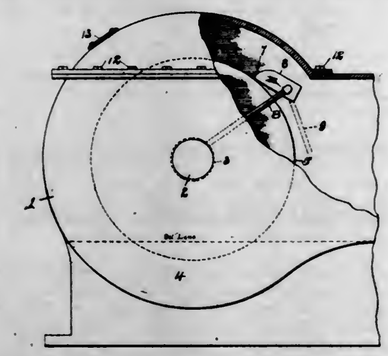
874,882. PROCESS OF STUFFING LEATHER AND APPARATUS THEREFOR. GEORGE BEARHOPE, Columbus, Ind., assignor of one-third to William A. Mooney and one-third to Thomas Mooney, Columbus, Ind. Filed July 14, 1905. Serial No. 269,718.



1. An apparatus for stuffing leather consisting of a melting tank, a compression tank, means whereby pressure is generated within said tank, a hose connected to said tank, a spray nozzle on said hose, and a perforated-topped table on which to place the hides while the mixture is being applied from said nozzle.

2. An apparatus for stuffing leather consisting of a melting tank, a compression tank, means whereby pressure is generated within said tank, a hose connected to said tank, a nozzle on said hose, and a suitable table on which to place the hides while the mixture is being applied from said nozzle.

874,883. LUBRICATING DEVICE. ARTHUR F. CLARKE, Butler, Pa. Filed Aug. 14, 1906. Serial No. 330,522.



1. The combination with an oil chamber, of a rotary shaft, an oil collector in the form of a disk mounted on said shaft, to rotate therewith and extending into said oil chamber, an oil gatherer adapted to scrape the oil from the periphery of said disk, and pipes supporting said oil gatherer and communicating therewith at opposite sides thereof, the said pipes in addition to their function as a support for the oil gatherer serving as feed pipes to conduct the oil from the gatherer to the parts to be lubricated.

2. The combination with a crank case, having an oil chamber, of a shaft revolubly mounted within said crank case, a disk mounted on said shaft, and projected into the oil chamber, an oil gatherer adapted to scrape oil from the periphery of said disk, one or more pipes leading from said oil gatherer, and means for supporting the oil gatherer adjustably, comprising a threaded pipe extending through the crank case and through the oil gatherer, and a jam-nut on said pipe.

874,884. SHOE-SHANK STIFFENER. FRANK G. BELSON, Brooklyn, N. Y., assignor, by direct and mesne assignments, to Hygienic Shoe Shank Company, New York, N. Y., a Corporation of New York. Filed Nov. 23, 1904, Serial No. 233,931. Renewed May 10, 1907. Serial No. 372,895.

1. A shank-stiffener in one integral piece of metal having the longitudinal depressed rib portion 14 commencing at a point 16 at the lower end of the shank and extending upwardly to near the upper end thereof, said shank at its lower end having a somewhat triangularly shaped portion sharply defined by outlines 18 diverging from said point and from which the shank arches upwardly toward its upper end, the sides of said shank being extended upwardly and outwardly in a transverse direction from the said rib portion; substantially as set forth.



2. A shank-stiffener in one integral piece of metal having the longitudinal depressed rib portion commencing at a point 16 at the lower end of the shank and extending upwardly to near the upper end thereof, said shank at its upper end being flat and rounded at its edges and at its lower end having a somewhat triangularly shaped portion sharply defined by outlines 18 diverging from said point and from which the shank arches upwardly toward its upper end, and said shank having inwardly curved side edges and sides which extend upwardly and outwardly in a transverse direction from said rib portion and are upwardly arched; substantially as set forth.

3. A boot or shoe comprising an outer sole having a flat tread which forms an irregular obliquely arranged ridge by its junction with the shank portion, and a shank piece the body portion of which is longitudinally curved to conform to the shank portion of the outer sole, the forward portion of the shank piece having a flat face which forms an irregular obliquely arranged ridge by its junction with the bottom surface of the body portion, and supports the ridge and the rear portion of the flat tread of the outer sole.

874,885. FILM. OZIAS DODGE, Norwich, Conn. Filed Aug. 30, 1906. Serial No. 332,623.

1. A semi-transparent grained film adapted to be rendered transparent.

2. A semi-transparent, grained, gelatin film adapted to receive drawings, which may be rendered permanent by flowing the film with flexible collodion, and adapted to be rendered transparent.

3. A grained film adapted to receive drawings directly upon its surface.

4. A grained film adapted to receive drawings which may be rendered permanent; which film is adapted to be rendered transparent.

5. A grained film adapted to receive drawings and to use as a negative in photography.

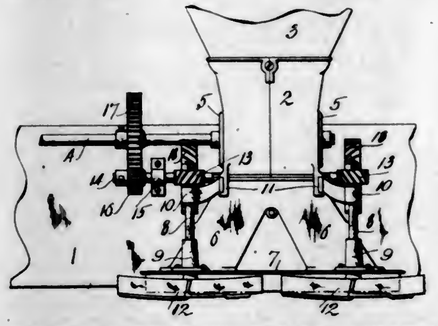
874,886. GEAR-CUTTER. FREDERICK L. EBERHARDT, Newark, N. J. Filed May 25, 1907. Serial No. 375,713.



1. As a new article of manufacture, a circular metal cutter, with radially projecting teeth, having peripheral and lateral cutting edges the continuity of said peripheral cutting faces slightly reduced in the direction of their radii on alternate sides of consecutive teeth, said reduction constituting slightly less than one half the total width of said peripheral cutting faces.

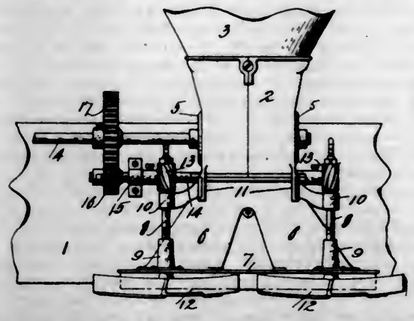
2. As a new article of manufacture, a circular metal cutter, with radially projecting teeth, having peripheral and lateral cutting edges the continuity of said peripheral cutting faces slightly reduced in the direction of their radii on alternate sides of consecutive teeth, said reduction constituting rectangular portions slightly less than one half of the total width of said peripheral cutting faces.

874,887. BROADCAST SEEDING-MACHINE. FERDINAND J. FELDT, Peoria, Ill. Filed Mar. 12, 1906. Serial No. 305,578.



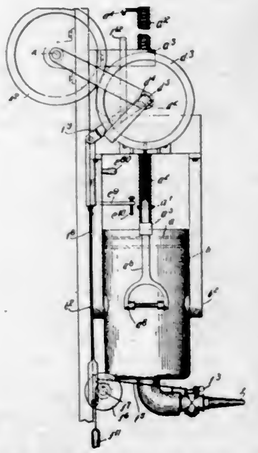
In a device of the class described, a supporting member, a combined shield and bracket extending laterally from said supporting member, a hopper support having a hopper extending from one end and feed spouts depending from the other end and connected to said shield and bracket, a drive shaft and a counter shaft journaled through said hopper support and spaced apart, arms extending from said hopper support, hangers connected to said arms and provided with vertical shaft bearings in their free ends, shaft bearings carried by said shield and bracket in vertical alinement with the bearings of said hangers, vertical shafts carried by said shield and bracket and by said hanger bearings, distributer devices carried by the lower ends of said vertical shafts, means for communicating the motion of said drive shaft to said counter shaft, and means for transmitting the motion from said counter shaft to said vertical shafts.

874,888. SEEDING-MACHINE. FERDINAND J. FELDT, Peoria, Ill. Filed May 29, 1906. Serial No. 319,239.



In a device of the class described, a supporting member, a combined shield and bracket extending laterally from said supporting member, a hopper support having a hopper extending from one end and feed spouts depending from the other end and connected to said shield and bracket, a drive shaft and a counter shaft journaled through said hopper support, arms extending from said hopper support, hangers connected to said arms and provided with vertical shaft bearings in their free ends, shaft bearings carried by said shield and bracket in vertical alinement with the bearings of said hangers, vertical shafts carried by said shield and bracket bearings and by said hanger bearings, distributer devices carried by the lower ends of said vertical shafts and operating beneath said combined shield and bracket, pinions having obliquely disposed spaced teeth, gears carried by said counter shaft and provided with spaced semi-spherical peripheral teeth adapted to engage the oblique teeth of said pinions, and means for transmitting the motion from said drive shaft to said counter shaft.

874,889. SAUSAGE-STUFFING MACHINE. EDMUND HAHN, Everett, Mass. Filed May 31, 1906. Serial No. 319,427.



1. In a sausage stuffing machine, a meat cylinder; a plunger working therein to express the meat therefrom; a stuffing nozzle leading from the meat cylinder; a faucet controlling said nozzle; a controlling device connected with the machine and operated in response to the opening or closing of said faucet to start or stop the plunger; and independent means also connected with the machine for controlling the backward movement of the plunger.

2. In a sausage stuffing machine, a meat cylinder provided with a plurality of stuffing nozzles; a faucet for each nozzle; a mechanically operated plunger working in the cylinder; a controlling device for said plunger connected with the machine; an automatic member connected with said device to operate the same and stop the plunger; and flexible connections between said member and each faucet, whereby said member is operated by opening the faucet to start the plunger.

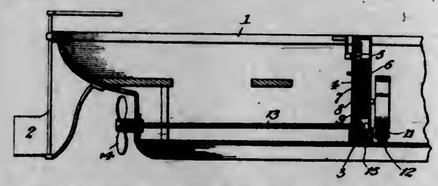
3. The combination with the meat cylinder; of a plurality of stuffing nozzles leading therefrom; a device cooperating with each stuffing nozzle to control the operation thereof; an expressing plunger working in the cylinder; means connected with the machine for starting the forward movement of said plunger in response to the opening of any of the nozzle controlling devices; and independent means also connected with the machine for stopping the forward movement of said plunger when all the nozzle controlling devices are closed.

4. The combination with the meat cylinder; of the expressing plunger working therein; a driving member for said plunger; means connected with the machine for controlling the operation of said driving member; a rock

shaft suitably mounted on the machine and connected with said controlling means and being provided with a yielding force as that of a weight or spring, the tendency of which is to stop the plunger; a plurality of stuffing nozzles leading from the meat cylinder; a faucet for each nozzle; and a flexible connecting member extending from said nozzle to said rock shaft substantially as and for the purpose described.

5. The combination with the meat cylinder; of the plunger working therein; the friction pulley mounted on the machine for driving said plunger; the rock shaft connection mounted on the machine for controlling said friction pulley; a stuffing nozzle leading from the cylinder; a faucet therefor; a flexible connection between said faucet and said rock shaft; and means for varying the point of connection between said faucet and said flexible connection.

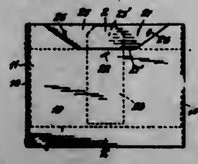
874,890. MEANS FOR PROPELLING BOATS. LOUIS A. HARTMANN, Brooklyn, N. Y. Filed Aug. 10, 1906. Serial No. 330,006.



1. In a boat, a propelling shaft provided on one end with a screw-propeller and on the other end with a worm-gear, a base, a frame mounted on said base, short shafts journaled in said frame, and the ends of a plurality of said shafts projecting through said frame and being squared to receive a crank, a train of graduated speed changing gears secured on said shafts, the lower gear of said train meshing with the gear on the propeller shaft, a fly wheel secured on one of said shafts and a foot operated brake-lever adapted to be forced upwardly to engage said fly-wheel to stop the movement of said gears and be automatically drawn downwardly out of engagement with the fly-wheel, substantially as described.

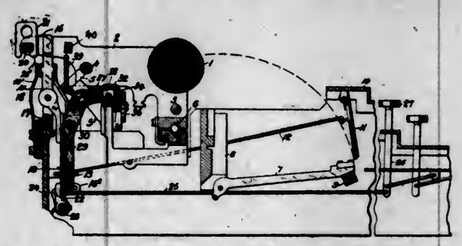
2. In a boat, a propelling shaft provided on one end with a screw propeller and on the other end with a worm gear, a base, a frame mounted on said base, short shafts journaled in said frame and the ends of the plurality of said shafts projecting through said frame and being squared to receive a crank, a train of graduated speed changing gears secured on said shafts the lower gear of said train meshing with the gear on the propeller shaft, a fly wheel secured on one of said shafts and a foot operated pivoted brake lever located beneath the fly wheel and having a shoe on one end adapted to be forced upwardly to engage said fly wheel to stop the movement of the gears, and a spring for automatically drawing said shoe out of engagement with said fly-wheel substantially as described.

874,891. FRUIT-BOX. PETER HENRICH, Hoquiam, Wash., assignor, by mesne assignments, of one-half to Garry H. Linder, Hoquiam, Wash. Filed July 23, 1906. Serial No. 327,263.



A box of the class described, comprising an outer part forming the front rear and side walls with recesses in the upper edges of two opposite walls, elongated tongues connected to said recessed walls and projecting into the recesses of the same, an inner part comprising a central portion constituting the bottom of the box and with end flaps bearing against the recessed walls thereof, and strips connected at the ends to said flaps and forming sockets for bearing over said tongues.

874,892. WRITING-MACHINE. EDWARD B. HESS, New York, N. Y., assignor to Royal Typewriter Company, Hoboken, N. J., a Corporation of New Jersey. Filed Feb. 3, 1905. Serial No. 244,022.



1. In a writing machine, coöperating tabulator stops adapted to arrest the carriage in a plurality of positions for multiple column printing, combined with line lock devices and an operating connection therefor actuated by engagement of the tabulator stops to actuate the line-lock devices to prevent printing, and by disengagement of the stops to restore the line-lock devices to normal position.

2. In a writing machine, tabulator devices comprising a rail adapted to carry a plurality of tabulator stops arranged for multiple column printing, a stop adapted to coöperate with the respective tabulator stops and means for jumping the carriage from one tabulator stop to another, combined with line-lock devices and an operative connection between the latter and the tabulator devices whereby the line-lock devices are put into operation whenever the carriage is arrested by the coöperating stops.

3. In a writing machine, tabulator devices comprising a rail adapted to carry a plurality of tabulator stops arranged for multiple column printing, a stop adapted to coöperate with the respective tabulator stops and means for jumping the carriage from one tabulator stop to another, combined with a type-bar intercepter adapted to be interposed in the paths of and to lock the type bars and an operative connection between it and the tabulator devices whereby the type bars are locked whenever the carriage is arrested by the coöperating stops.

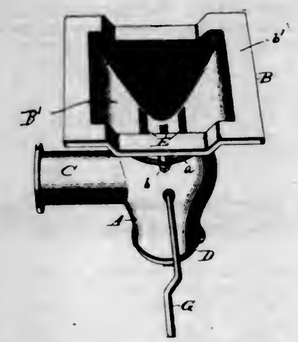
4. In a writing machine, tabulator devices comprising a tabulator stop rail, stops adjustably mounted thereon, a movable stop, carried by the frame, composed of two members one mounted upon the other and movable relative thereto and spring held away therefrom, a tabulator key in the key board and an operative connection between it and the two part movable tabulator stop on the frame whereby the latter on the depression of the key may be moved into such position that the spring held member thereof will engage the tabulator stops on the bar to arrest the carriage, in combination with means for locking the type bars and an operative connection between said means and the spring held member of the frame tabulator stop whereby when the carriage is arrested the type bars are locked and are unlocked when the tabulator stops are disengaged.

5. In a writing machine, the combination of a tabulator bar mounted in the carriage parallel with the axis of the platen, adjustable tabulator stops thereon, a spring cushioned tabulator stop movable transversely to the tabulator bar and mounted in the frame, means for moving the rack of the machine out of engagement with the escapement pinion, a tabulator key, an operative connection between it and the spring cushioned tabulator stop and the means for disengaging the rack whereby on actuation of the key the rack is disengaged and the spring cushioned tabulator stop is moved into position to engage the adjustable tabulator

stops on the carriage, means for locking the type bars and an operative connection between the latter and the spring cushioned tabulator stop, for the purpose set forth.

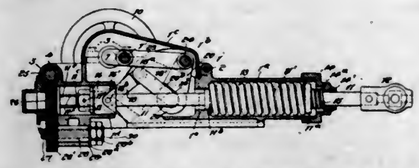
[Claims 6 to 30 not printed in the Gazette.]

874,893. TWYER. HENRY B. KEIPER, Lancaster, Pa. Filed Mar. 1, 1905. Serial No. 247,884.



A twyer comprising a hollow pot-shaped body having a flaring upper portion interiorly formed with a deep pocket-shaped partition constituting a nest and having oppositely inclined sides extending downward from the opposite side walls of said body, said partition being integral with the walls of said body and merging therewith near the top thereof, and the bottom of said partition being provided with elongated parallel slots arranged longitudinally of the sides of said nest and extending substantially the full length of the bottom thereof, the middle slot being in the lowest part of the nest and the others at opposite sides thereof being arranged to deliver their blasts convergingly upward into the blast issuing from the middle slot, and said body having a blast-inlet below said partition.

874,894. DRILL. GEORGE E. LYNCH, Columbus, Ohio, assignor to Joseph A. Jeffrey, Columbus, Ohio. Filed Apr. 6, 1905. Serial No. 254,169.



1. In a reciprocating drill, the combination of a rod that carries the tool, a frame or casing in which the rod is mounted formed with a guide, a cross-head on the rod and movable in the said guide of the frame, a spring arranged to actuate the rod in one direction, a toggle-joint having one of its links connected with the said cross-head and the other mounted to swing about a fixed pivot or axis, and means for straightening out the joint to compress the spring and for permitting the flexing of the joint after the compression has been effected, whereby the spring may act to drive the rod forcibly forward, substantially as set forth.

2. In a reciprocating drill, the combination of a rod that carries the tool, a frame or casing in which the rod is mounted provided with a guide, a spring for actuating the rod in one direction, a cross-head arranged to move in the said guide of the frame, through which the rod passes, an abutment secured to the rod against which the cross-head is held, a toggle-joint having one of its links connected with the said cross-head and the other mounted to swing about a fixed pivot or axis, and means for straightening out the joint to compress the spring and for permitting the flexing of the joint after the compression has been effected, whereby the spring acts to move the piston forcibly forward, substantially as set forth.

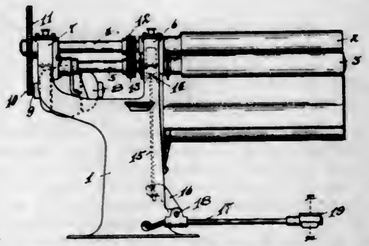
3. In a reciprocating drill, the combination of a rod that carries the tool, a frame in which the rod is mounted, a spring for actuating the rod in one direction, a toggle-mechanism for moving the rod interposed between it and the frame in which it is supported, means for straightening out the joint to compress the spring and for permitting the flexing of the joint after the said compression has been effected, and a rotary driven part connected with and operating the last said means, substantially as set forth.

4. In a reciprocating drill, the combination of a rod for carrying the tool, a frame in which the rod is mounted, a spring for actuating the rod in one direction, a cross-head mounted upon the rod, a pair of toggle-joints, said pairs being arranged upon opposite sides of the rod and one link of each pair connected with the said cross-head and the other link of each pair mounted upon a fixed pivot or casing, and means arranged to straddle the said rod and connected with both of the toggle joints, for simultaneously straightening out the said toggle-joints to compress the spring and for permitting the flexing thereof after the compression has been effected, substantially as set forth.

5. In a reciprocating drill, the combination of a rod for carrying the tool, a frame in which the rod is mounted, a spring for actuating the rod to deliver its blow, a toggle-joint having one of its links connected with the rod and its other link pivotally supported on a fixed pivot or axis, a lever 20 recessed on one of its sides to form the walls or faces 20^b and 20^c, the link of the toggle mounted on a fixed pivot resting in the said recess, and means for actuating the lever 20, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

874,895. MOTOR-CONTROLLING TREADLE. ALBERT B. MANN, Cincinnati, Ohio, assignor to The American Laundry Machinery Company, Norwood, Ohio, a Corporation. Filed Dec. 4, 1906. Serial No. 346,349.



1. A treadle for controlling a motor operated machine, consisting of a two-part boxing pivotally connected and held in a given normal position, switch mechanism having contacts on said two members within the box adapted to be alternately made and broken by rocking one of the members, and electric connections between said contacts, motor, armature, and the source of supply, whereby the polarity of the armature is reversed when said member is rocked, substantially as described.

2. A treadle for controlling a motor operated machine, adapted to be actuated for operating the machine, and having a foot piece formed of two parts pivotally connected, tension means holding said parts normally in a given position, contacts supported by said parts, and electric connections between said contacts, motor, armature, and the source of supply, whereby the polarity of the armature may be reversed when one of the parts is rocked, substantially as described.

3. A treadle for controlling a motor operated machine adapted to be actuated for operating the machine, a foot piece formed of two members pivotally connected and forming a housing for switch mechanism, tension means holding said parts normally in a given position, four contacts

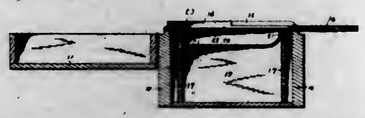
in the first member, two on each side of the pivot, the diagonally opposing contacts being electrically connected, the second member having two contacts extended on opposite sides of the pivot in position to alternately engage two of the contacts of the first member, the said contacts of the second member being appropriately electrically connected to the armature of a motor, substantially as described.

4. In a motor operated machine having working elements, a treadle for mechanically controlling said elements, connecting mechanism between said treadle and said working elements, said treadle comprising a relatively stationary member, a relatively movable member pivotally connected to said stationary member, fixed electrical contacts formed in one of said members, movable contacts formed in the other member, electric connections between said fixed contacts and movable contacts arranged to rotate the armature of the motor in one direction when the movable contacts are brought to one electric circuit closing position, and reverse the rotation of the armature when the movable contacts are brought in a second electric circuit closing position, substantially as described.

5. A treadle for mechanically controlling the working elements of a motor operated machine, comprising a relatively stationary member, a relatively movable member, pivotally connected to said stationary member, fixed electrical contacts formed in one of said members, movable contacts formed in the other member, electric connections between said fixed contacts and movable contacts arranged to rotate the armature of the motor in one direction when the movable contacts are brought to one electric circuit closing position, and reverse the rotation of the armature when the movable contacts are brought in a second electric circuit closing position, and means in connection with said treadle adapted to be actuated independent of the motor control actuation to mechanically control the working elements of the machine, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

874,896. RURAL-MAIL-CARRIER'S CABINET. EDWARD L. MATHISON, Panora, Iowa. Filed Apr. 18, 1907. Serial No. 368,841.



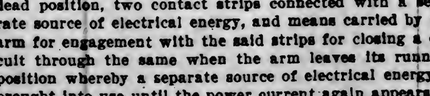
1. In a device of the class described, the combination of a box shaped portion, a hinged cover, a tray hinged to the box shaped body portion, and having a writing table hinged to the top of the tray, and capable of being extended to position, projecting forwardly from the front of the tray.

2. In a device of the class described, the combination of a box shaped body portion, a hinged cover, a coin receptacle open only at the forward portion of its top surface, and hinged at its rear end, and having its front end normally resting upon a stationary support, to hold the tray in a horizontal position.

3. In a device of the class described, the combination of a box shaped body portion, a hinged cover, two longitudinal partitions arranged near the front and rear of the box, a transverse partition between said longitudinal partitions near one end, a coin receptacle open only at the forward portion of its top, hinged at its rear end to one of the longitudinal partitions, and contained between the transverse partitions and the adjacent end of the box, said coin receptacle being of such depth as to leave a large receptacle beneath it, and a series of longitudinal partitions extending from the transverse partitions to the end of the box opposite from the coin receptacle.

4. A rural mail carriers' cabinet comprising a box shaped body portion, a hinged cover therefor, a tray hinged to the rear of the box shaped body, with its forward end resting on the front of the box shaped body, said tray formed with notches in the forward portions of the ends thereof, a writing table hinged to the front side of the tray, normally resting in said notches, and spaced apart from the bottom of the tray, and capable of being extended forwardly beyond the tray, to form a long support, two longitudinal partitions within the box shaped body, beneath the tray, a transverse partition extended between the longitudinal partitions near one end thereof, a coin holder in the upper portions of the receptacle, formed by said partitions, said coin holder open only at the forward portion of its top, hinged at its rear end to the longitudinal partition, and having its forward end resting upon the other longitudinal partition, and a series of short longitudinal partitions extended from the transverse partition to the end of the box shaped body, opposite from the coin receptacle.

874,897. FOUNTAIN-PEN. MORRIS W. MOORE, Everett, Mass., assignor to Atlantis Fountain Pen Company, Everett, Mass., a Corporation of Massachusetts. Filed Mar. 21, 1907. Serial No. 363,737.



1. In a pen of the class described, a barrel, a pen held against movement therein, a valve in the rear of said pen and a movable member operatively associated with said valve and having a by-pass of greater length than said valve.

2. In a pen of the class described, a barrel, a pen held against movement therein, a valve in the rear of said pen, a movable sleeve having a by-pass of greater length than said valve and operatively associated with said valve, and means for positively moving said member.

3. In a pen of the class described, a barrel, a pen held against movement therein, a valve in the rear of said pen and a movable sleeve between said valve and barrel and having a by-pass of greater length than said valve.

4. In a pen of the class described, a barrel having a by-pass, a pen supported therein, a valve in the rear of said pen, said by-pass being of greater length than said valve, a cap for the end of the barrel, and means operable by said cap for securing relative positionings of said valve and by-pass.

5. In a pen, a barrel, a shoulder on said barrel, a cap for the end of said barrel and rotatable thereon in longitudinal abutment with said shoulder, a movable member within said barrel, and means for engagement between said cap and member for moving said member longitudinally.

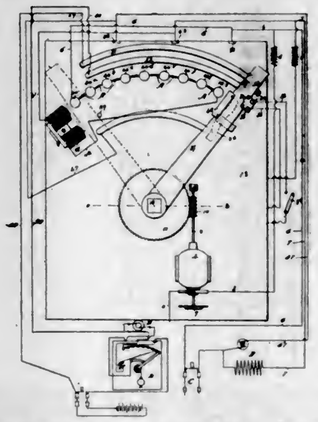
[Claim 6 not printed in the Gazette.]

874,898. AUTOMATIC STARTING-BOX. THOMAS M. MORRIS, New Haven, Conn., assignor of one-fourth to Frederick P. Lewis and one-fourth to Edward H. Everit, New Haven, Conn. Filed May 3, 1907. Serial No. 371,598.

1. In an automatic starting box, the combination with the movable arm thereof, of means for automatically moving the said arm from its dead to its running position and for cutting the said arm-moving means out of and into operative position according to the position of the arm, and means for utilizing the arm to close a circuit through an emergency machine when the arm is not in its running position the said emergency machine then taking the place of the power machine.

2. In an automatic starting box, the combination with the movable arm thereof, of means for automatically moving the said arm from its dead to its running position and for cutting out such means when the arm reaches its running position to permit it to automatically go back to its dead position, two contact strips connected with a separate source of electrical energy, and means carried by the arm for engagement with the said strips for closing a circuit through the same when the arm leaves its running position whereby a separate source of electrical energy is brought into use until the power current again appears on the mains.

3. In an automatic starting box, the combination with the movable arm thereof, of means for automatically moving the said arm from its dead to its running position, and for cutting out such means when the arm reaches its running position to permit it to automatically go back to its dead position, and two emergency motor contact strips extending nearly throughout the sweep of the arm, and a contact plate carried by the arm and in contact with the said strips except when the arm is in its running position whereby an emergency motor connected with a separate source of electrical energy is brought into use until the power current again appears on the mains.

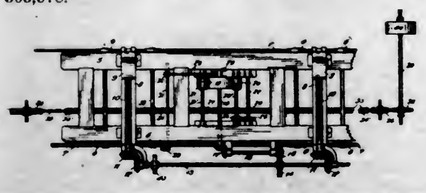


4. In an automatic starting box, the combination with the movable arm thereof, of self-controlled means for automatically moving the arm from its dead to its running position, means operated by the arm for closing a circuit through an emergency motor, and a switch operated synchronously with the arm for turning to the running machine, whichever it may be, the secondary leads to the switch-board.

5. In an automatic starting box, the combination with the movable arm thereof, of self-controlled means for moving the said arm from its dead to its running position and for releasing it in its running position when the power leaves the main lines, means controlled by the arm for closing the circuit through an emergency machine when the arm leaves its running position, and a wheel-switch operating synchronously with the said arm and turning the secondary leads to the switch-board to the running machine, whichever it may be, in consonance with the movement of the arm.

[Claims 6 to 8 not printed in the Gazette.]

874,899. SAWMILL SET-WORKS. JOSEPH ROBINSON, Centralia, Wash. Filed Mar. 21, 1907. Serial No. 363,578.



1. In combination with a saw mill carriage, a chain therebeneath, a set shaft and knees and connections between said shaft and knees, shafts having sprocket wheels to engage said chain, connections between said set shaft and said shafts of the sprocket wheels, and means for movably mounting said carriage whereby the same may be moved in the direction of the length of said chain and beyond the same to cause said sprocket wheels to become disengaged therefrom.

2. The combination with a saw-mill carriage provided with a set-shaft and knees and connections between the shaft and knees, of a chain traveling in a channel, said channel, means for imparting motion to the chain, mechanism for imparting rotary motion in either direction to the set-shaft, said mechanism including two sprocket wheels adapted to engage with the chain and means for movably mounting said carriage whereby the same may be moved beyond the extremities of the chain to cause said sprocket wheels to become disengaged therefrom.

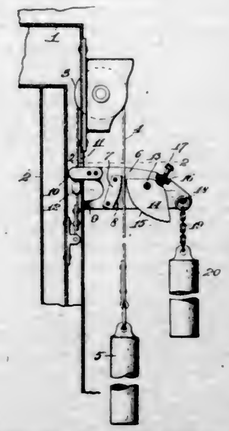
3. In combination with a saw mill carriage, a chain therebeneath, knees on the carriage, means on the carriage for actuating said knees including a pair of sprocket wheels which project downwardly to engage said chain, means for supporting a part of the uppermost part of said chain, and means for movably mounting said carriage whereby the same may be moved beyond the extremities of said chain supporting means to cause said sprocket wheels to become disengaged therefrom, the supported part of said chain being of sufficient length to engage both of said sprockets at the same time.

4. In combination with a saw mill carriage, an elongated chain supporting element having a horizontal disposition, an endless chain having its uppermost part in said element, knees on the carriage, means for actuating said knees including sprocket wheels which project downwardly to engage said chain, and means to movably mount said carriage whereby the same may be moved to and from said chain to engage and disengage said sprocket wheels with respect to said chain.

5. The combination with a saw-mill carriage provided with a set-shaft and knees and connections between the shaft and the knees, of a chain traveling in a channel, said channel which has its ends resiliently supported, sprocket wheels driven by said chain, a shaft for each said sprocket wheel, a friction wheel upon one of these shafts, the other of these shafts being geared to another shaft provided with a friction wheel, the last named shaft and friction wheel, a pulley disposed between said friction wheels, means to effect the engagement between the pulley and either of the friction wheels, and operative connections between the pulley and the set-shaft.

[Claims 6 and 7 not printed in the Gazette.]

874,900. AUTOMATIC WINDOW-CLOSING DEVICE. JOHN F. RUTH, St. Louis, Mo. Filed Apr. 1, 1907. Serial No. 365,766.



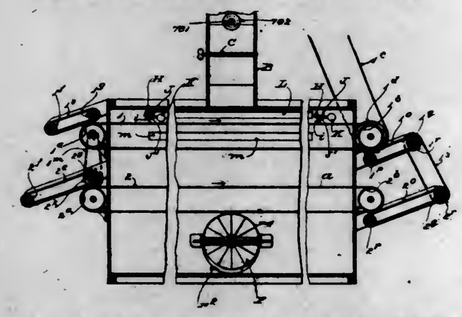
1. The combination with a window frame and sash arranged to slide therein, of a counterbalancing weight, a flexible connection between the upper sash and the weight, an auxiliary weight, a clutch supporting said auxiliary

weight, a pair of clamping jaws arranged in the clutch for engaging the flexible connection when the clutch is released, and a fusible connection on the clutch for holding the same and the auxiliary weight in normal positions.

2. The combination with a window frame and sash arranged to slide therein, of a counterbalancing weight, a flexible connection between the upper sash and said weight, an auxiliary weight, a clutch through which the flexible connection passes and which clutch supports the auxiliary weight, a jaw fixed in the clutch on one side of the flexible connection, a pivoted jaw in the clutch on the opposite side of the flexible connection, and a fusible connection arranged on the clutch for holding the same and the auxiliary weight in normal positions.

3. The combination with a window frame and sash arranged to slide therein, of a counterbalancing weight, a flexible connection between the upper sash and said weight, an auxiliary weight, a clutch through which the flexible connection passes and which clutch supports the auxiliary weight, a jaw fixed in the clutch on one side of the flexible connection, a pivoted jaw in the clutch on the opposite side of the flexible connection, means whereby the engaging face of the pivoted jaw is adjusted to and from the engaging face of the fixed jaw, and a fusible connection arranged on the clutch for holding the same and the auxiliary weight in normal positions.

874,901. DRYING-MACHINE. FREDERICK G. SARGENT, Graniteville, Mass., assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass., a Corporation of Massachusetts. Filed Sept. 20, 1906. Serial No. 335,348.



1. In a drier, in combination, the drying-chamber, a carrier-apron which carries the stock through the said chamber, and the swinging fingers *i*, *i*, *i*, arranged to yield under pressure and operating to open up the said stock in its travels.

2. In a drier, the combination with the drying-chamber, and the carrier-apron which carries stock through the said chamber, of a series of swinging-fingers *i*, *i*, *i*, a shaft carrying the said fingers, and an adjustable pressure-device connected with the said shaft.

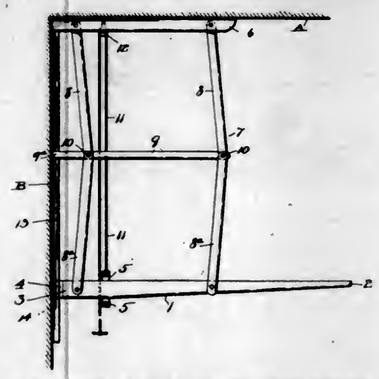
3. In a drier, the combination with the casing having a drying-chamber, and an outlet-duct or box for the escape of air from said chamber, of a fan in connection with said outlet-duct or box for withdrawing air from the chamber and discharging the same from the machine, and a damper for closing the outlet-duct or box beyond its communication with the said fan.

4. In a drier, the combination with the casing having a drying-chamber, an outlet-duct or box for the escape of air from said chamber, and a damper for regulating the rate of such escape, of a fan in communication with said outlet-duct or box beyond said damper, for withdrawing air from the chamber and discharging the same from the machine, and a damper for closing the outlet-duct or box beyond its communication with the said fan during the operation of the latter.

5. In a drier, the combination with the casing having a drying chamber, air-heating means, a fan for producing a circulation of air within the machine, and an outlet-duct or box for the escape of air from the said chamber, of a fan in communication with said outlet-duct or box for withdrawing air from the chamber and discharging the same from the machine, and a damper in connection with the outlet-duct or box beyond its communication with the said fan.

[Claim 6 not printed in the Gazette.]

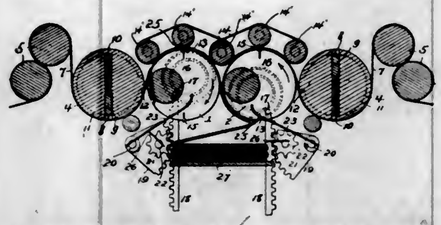
874,902. CLOTHES-DRIER. FRANKLIN B. WEITERSHAUSEN, Pittsburg, Pa., assignor of one-half to George G. Blakey, Pittsburg, Pa. Filed June 7, 1907. Serial No. 377,797.



1. In a clothes drier, a clothes frame suspended by articulated rods at each end, a cross-rod connecting the joints of said rods at each end of the frame, and means to raise and lower the frame, substantially as shown and described.

2. In a clothes drier, a clothes frame consisting of a plurality of parallel arms secured at one end to a cross-rod, said frame suspended from a suitable support by means of articulated rods, cross rods connecting the joints of said articulated rods, guide strips suitably secured, cleats secured to the cross rod of the frame to engage said guide strips, and means secured to the clothes frame to raise and lower it, substantially as shown and described.

874,903. APPARATUS FOR CUTTING, FOLDING, AND INTERFOLDING SHEETS OR UNITS. SETH WHEELER, Albany, N. Y., assignor to Maximilian Moriz and Heinrich Kummer, Berlin, Germany. Filed Dec. 31, 1904. Serial No. 239,274.



1. In an apparatus of the character described, the combination with two rolls, of rolls beside said first-mentioned rolls, and carrying cutters, means for feeding sheets between said rolls, flanged cam disks controlling the operation of the cutters, and means compelling the interfolding of the sheets or cut units.

2. In an apparatus of the character described the combination with two rolls, rolls located beside the first-mentioned rolls and having longitudinal grooves therein, bars in said grooves projecting at their ends beyond the rolls, cutters on said bars, springs behind the bars pressing them outward, flanged disks into which the ends of the bars project and which hold the cutters in the rolls, and said flanged disks having notches or recesses which permit the cutter to be forced outward by its springs to sever the strip and means for folding said severed sheets.

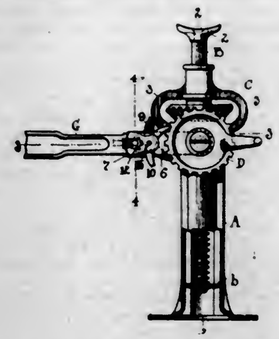
3. In an apparatus of the character described, the combination with two rolls and means for feeding sheets over the respective rolls, of V-shaped longitudinal ribs on both rolls to press the paper sheets into grooves in the other roll and impress folds in the sheets, and means for timing the feed of sheets or units between the rolls to compel the overlapping and interfolding of the sheets or units passing over one roll with the sheets or units passing over the other roll.

4. In an apparatus of the character described, the combination with two rolls, means for cutting strips into sheets or units of several sheets, and feeding the same over both rolls and down between them, and timing the feed of the sheets or units to compel them to overlap, of means for forming impression lines of fold in said sheets or units, vertical racks reciprocated vertically, strippers operated by the racks and entering grooves in the rolls to strip the sheets or units therefrom, and folders operated by said racks for pressing down the folds or the sheets or units.

5. In an apparatus of the character described, the combination with two rolls having longitudinal grooves therein, of pins or points beside the grooves, cutters constructed to sever a strip or strips into a sheet or units of several sheets, and means for forming folding impressions in the sheets and for forcing the same onto the points, tapes for feeding said sheets or units down between the rolls, and the cutting operation so timed as to compel the sheets or units to overlap, strippers constructed to force the sheets or units from the pins or points, a table or platform to receive the folded sheets, and folders constructed to fold and press down the folded sheets thereon.

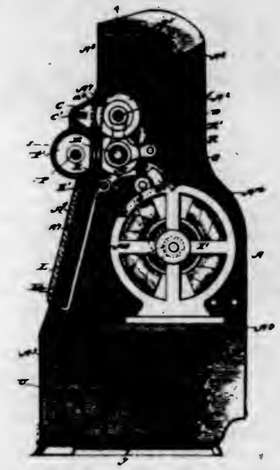
[Claim 6 not printed in the Gazette.]

874,904. LIFTING-JACK. JOHN H. BURKHOLDER, Ashland, Ohio, assignor to Elite Manufacturing Company, Ashland, Ohio, a Partnership. Filed June 10, 1907. Serial No. 378,130.



In lifting jacks, a standard A, a lift member B therein and a rotatable actuating gear C screwed onto said lift member and seated in the upper end of said standard, gears E rotatably mounted on opposite sides of said standard adapted to rotate in opposite directions and meshing with said actuating gear, an operating handle G having a cross head and a substantially yoke shaped extension 6 therefor supported on opposite sides of standard A, and double engaging pawls 9 and 10 pivoted between said cross-head and extension 6 and adapted to engage said side gears at one or the other end according to their position, a connecting rod 12 between said pawls, a bolt 13 socketed in the base of said cross head and having said rod 12 extending through the same, a spring 17 about said bolt and pressing against said rod 12, and pawls having extensions outside their pivots engaged by said rod, whereby said pawls are jointly thrown into raising and lowering engagement for said lift member and held by a torsional action of said spring.

874,905. MACHINE FOR HOLDING, STAMPING, AND DISPLAYING CHECKS. EDWARD F. CHANDLER, Brooklyn, N. Y., assignor of one-third to Edward Russell Van Tassel and one-third to Alexander Edward Leighton, Brooklyn, N. Y. Filed Nov. 23, 1905. Serial No. 288,765.



1. A check displaying device comprising a casing having a hopper and a sight opening below the hopper, means for successively passing checks from the hopper and bringing them into alinement with the sight opening, holding means adapted to retain the check before the sight opening stamping devices for stamping checks during their passage from the hopper to the holding means and means for automatically withdrawing the holding means after a predetermined interval of time.

2. A device of the kind described comprising a check holding receptacle, means for successively withdrawing one check at a time from the said receptacle, visible check holding means adapted to receive the check after it has been withdrawn from the receptacle, means for stamping the checks after they have been withdrawn from the hopper and means for discharging the check from the receiving means after a predetermined time.

3. In a check displaying device comprising a casing provided with a hopper and a sight opening below the hopper, feeding means for successively passing checks from the hopper and bringing them into alinement with the sight opening, a segregating device co-acting with the feeding means, stamping devices for engagement with the checks, holding means adapted to retain the check before the sight opening, and means for automatically withdrawing the holding means after a predetermined interval of time.

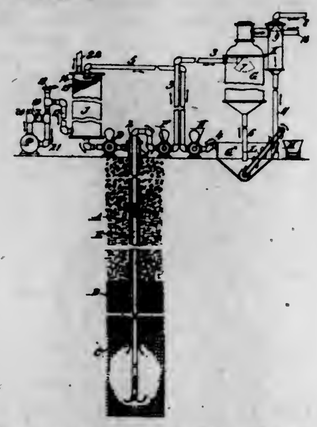
4. The combination of a casing having a sight opening and a hopper, feeding devices arranged in the casing and projecting into the hopper, segregating devices held adjacent the feeding devices, a stamping cylinder, rack-arms aliining with the sight opening, and means for operating the feeding devices, stamping cylinder, and rack-arms.

5. The combination of a casing having a sight opening and a hopper, intermittently operating feeding disks mounted within the casing, an intermittently operated stamping cylinder arranged adjacent the disks, means for simultaneously operating the feeding disks and stamping cylinder, intermittently operated rack-arms, and means

for operating the rack-arms alternately with the feeding disks and stamp cylinder.

[Claims 6 to 21 not printed in the Gazette.]

874,906. MINING SALT. HERMAN FRASCH, Cleveland, Ohio, assignor to The United Salt Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 16, 1899. Serial No. 705,604.



1. The improvement in mining salt, consisting in introducing unsaturated brine into a natural deposit of salt, removing it charged with salt from said deposit, recovering salt by cooling and partially evaporating the charged brine, preparing the residual brine for reuse by heating and dilution, and so continuing, substantially as described.

2. The improvement in mining salt, consisting in introducing into a natural gypsum containing deposit of salt unsaturated brine heated above the temperature of maximum solubility of calcium sulfate, removing it charged with salt from said deposit, recovering salt by cooling and partially evaporating the charged brine in such manner as to leave a residual brine whose temperature is nearer to that of said maximum solubility than is the temperature of the brine supplied to the deposit, preparing the residual brine for reuse by diluting and heating, and so continuing, substantially as described.

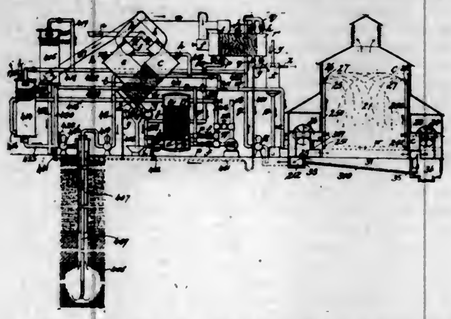
3. The improvement in mining salt, consisting in introducing into a natural deposit of salt unsaturated brine heated above the atmospheric temperature, removing it charged with salt from said deposit, recovering salt by cooling and partially evaporating the charged brine, preparing the residual brine for reuse by heating and dilution, and so continuing, substantially as described.

4. The improvement in mining salt, consisting in introducing unsaturated brine into a natural deposit of salt, removing it charged with salt from said deposit, recovering salt by evaporation at the expense of heat in said brine when it leaves the deposit, so as to effect thereby a lowering of temperature as well as a partial evaporation, preparing the residual brine for reuse by heating and dilution, and so continuing, substantially as described.

5. The improvement in mining salt, consisting in introducing into a natural gypsum containing deposit of salt unsaturated brine heated above the temperature of maximum solubility of calcium sulfate, removing it charged with salt from said deposit, recovering salt by evaporation at the expense of heat in said brine when it leaves the deposit, so as to effect thereby a lowering of temperature as well as a partial evaporation and the lowering of temperature being such as to leave a residual brine whose temperature is nearer to that of said maximum solubility than is the temperature of the brine supplied to said deposit, preparing the residual brine for reuse by heating and dilution, and so continuing, substantially as described.

[Claims 6 to 32 not printed in the Gazette.]

874,907. MINING SALT. HERMAN FRASCH, Cleveland, Ohio, assignor to The United Salt Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 13, 1899. Serial No. 736,841. Renewed May 20, 1907. Serial No. 374,725.



1. The method of recovering salt or like substance from a natural deposit, by circulating outside of the deposit a stream of brine which is heated at a suitable point in the circulation, introducing an aqueous solvent liquid at super-atmospheric temperature into the salt deposit, removing the brine formed by the solvent action of said liquid still at super-atmospheric temperature, separating salt out of solution by an evaporation at the expense of heat stored partly in the brine from the salt deposit and partly in the brine circulating outside, and uniting the two brines, substantially as described.

2. The method of recovering salt or like substance from a natural deposit, by circulating outside of the deposit a stream of brine which is heated at a suitable point in the circulation, introducing an aqueous solvent liquid at super-atmospheric temperature into the salt deposit, removing the brine formed by the solvent action of said liquid still at superatmospheric temperature, separating salt out of solution by the exposure of the heated brine from the said deposit and of the outside circulation unsupported in drops to an evaporation-promoting atmosphere in such manner as to effect an evaporation at the expense of heat stored partly in the brine from the salt deposit and partly in the brine circulating outside, and uniting the two brines, substantially as described.

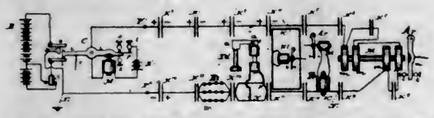
3. The method of recovering salt or like substance from a natural deposit, by circulating outside of the deposit a stream of brine which is heated at a suitable point in the circulation, introducing an aqueous solvent liquid comparatively free from salt and at superatmospheric temperature into the salt deposit, removing the brine formed by the solvent action of said liquid still at superatmospheric temperature, separating salt out of solution by an evaporation at the expense of heat stored partly in the brine from the salt deposit and partly in the brine circulating outside, and uniting the two brines, substantially as described.

4. In recovering salt or like substance from a natural deposit by means of an aqueous solvent, the improvement consisting in introducing water comparatively free from salt after a working volume of brine has been secured while the cavity in the deposit is comparatively small, and when the cavity is larger introducing water holding a larger proportion of salt in solution and formed of brine heated and diluted by direct condensation of steam therein, substantially as described.

5. In recovering salt or like substance from a natural deposit by means of an aqueous solvent, the improvement consisting in introducing water comparatively free from salt and at superatmospheric temperature when the cavity in the deposit is comparatively small, and when the cavity is larger introducing water holding a larger proportion of salt in solution and formed of brine heated and diluted by direct condensation of steam therein, the salt being separated from the brine from the deposit by an evaporation at the expense of heat stored in the said brine previous to its removal from the deposit, and heated and diluted brine introduced into the deposit being residual brine from said evaporation, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

874,908. APPARATUS OR MEANS FOR THE PRODUCTION, TRANSMISSION, AND DISTRIBUTION OF ELECTRIC CURRENTS. CHARLES E. FRITTS, New York, N. Y.; Josephine H. Fritts, administratrix of said Charles E. Fritts, deceased, assignor of one-third to Spencer B. Prentiss, Washington, D. C. Filed Nov. 23, 1886. Serial No. 278,855.



1. An organized system for the production and transmission of electrical energy by repeated inductions, consisting of the combination, substantially as set forth, of an electric generator producing normally straight or unipolar currents, electromotive force or potential, and expending a certain amount of energy in "charging" condensers connected to its poles; two or more sections of conductor arranged in line or series; condensers, inductively uniting the sections into a line whose ends are connected to the terminal or polar condensers, and having capacities suitable for discharging over the sections connected to them currents having the stated amount of electrical energy; and apparatus properly reversing or varying the charges of said polar condensers; the whole arranged and operating to reproduce the original amount of electrical energy in each of the sections by the repeated inductions and electrical attractions and repulsions at the several con densers.

2. In a system for transmitting electrical energy by repeated inductions, the combination of a line-section consisting of one or more conductors whose joint resistance is suitable for conveying currents having a certain amount of electrical energy; any desired number of similar sections of approximately equal resistance arranged in series or line with it; and condensers inductively connecting said sections into a line, and having capacities suitable for discharging currents with the stated amount of electrical energy over the sections connected to them; the whole arranged and operating to transmit and deliver said amount of electrical energy for utilization in each of the sections of the line by means of section conductors and condensers which are separately suitable for conveying and delivering only the original amount.

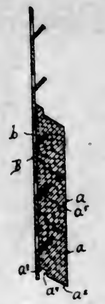
3. The combination of apparatus for producing suitably varying currents, electromotive force or potential and therewith charging one or more polar condensers; means for regulating the speed and action of said apparatus; and one or more lines consisting of sections united by condensers and having their ends connected to said poles through said polar condensers.

4. The combination of an electric generator producing normally straight or unipolar currents, electromotive force, or potential; apparatus for suitably varying the same and therewith charging one or more polar condensers; means for regulating the speed and action of said apparatus and the nature of the currents sent by said condensers over the line; and one or more lines having their ends connected to the other sides or armatures of said polar condensers, and conveying the currents induced and discharged thereon by said condensers.

5. The combination of an electric generator producing normally straight or unipolar currents, electromotive force or potential; apparatus uniformly varying the same and therewith charging one or more condensers connected to the poles of the generator; and one or more lines having their ends connected to said poles through said condensers.

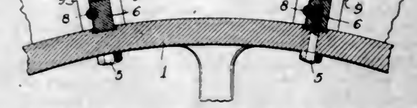
[Claims 6 to 199 not printed in the Gazette.]

874,909. TILE CONSTRUCTION. PETER J. FISCHER, Cincinnati, Ohio, assignor of one-third to Nicholas Fischer and one-third to Edward J. Fischer, Cincinnati, Ohio. Filed Aug. 6, 1906. Serial No. 329,340.



The combination of a vertical sheet metal wall with metal lugs struck upward at an angle therefrom and arranged in a series of horizontal lines, tiles with flat faces to fit against the metal wall with upwardly inclined slots extending inward from said faces and with their edges inclined from the said faces downward, the lower edges of each row of tiles fitting over the upper edges of the next lower row of tiles.

874,910. COTTON-GIN ROLLER. JOHN W. GRAVES, Covington, Tenn., assignor to International Cotton Company, Boston, Mass., a Corporation of South Dakota. Original application filed Oct. 12, 1904, Serial No. 228,195. Divided and this application filed Mar. 3, 1905. Serial No. 248,232.



1. A main gin cylinder having bars fixed upon its periphery parallel with its axis, and combing plates bifurcated to fit upon said bars, in combination with rods located in grooves formed in said bars and notches in said plates.

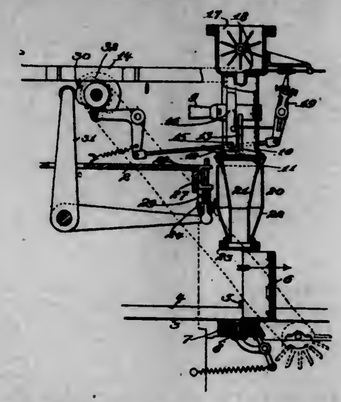
2. A cotton gin roller comprising a cylinder and friction and combing sections arranged alternately on the periphery of said cylinder, said combing sections having shoulders which are constructed to overhang the friction sections and interlock therewith for holding the same against outward movement on the cylinder.

3. The combination with a cylinder, of bars fixed to its surface, bifurcated plates straddling said bars and having overhanging shoulders, means removably locking said plates to said bars, and leather sheets supported on edge upon said cylinder's surface and held in place by extending beneath said shoulders.

874,911. WEIGHING AND CAN-FILLING APPARATUS. FREDERICK J. HEYBACH, Savannah, Ga., assignor of one-half to Morehouse Manufacturing Company, Savannah, Ga., a Corporation of Georgia. Filed Apr. 11, 1906. Serial No. 311,157.

1. The combination of a weighing device including a bucket, means for supporting a can in position to receive a charge of material from the bucket, a tubular device carried by the bucket for directing material from the bucket into the can, and means for closing the space between the tubular device and the can to prevent waste of material therethrough.

2. The combination of a weighing device including a bucket, means for supporting a can in position to receive a charge of material from the bucket, a funnel depending from the bucket for delivering material into the can, and means for closing the space between the funnel and the can to prevent waste of material therethrough.



3. The combination of a weighing device including a bucket, means for supporting a can in position to receive a charge of material from said bucket, a tubular device to direct the material from the bucket into the can, a tubular member surrounding and movable relatively to said tubular device and provided with a packing, and means for operating the tubular member to carry the packing into contact with the can on the flow of material into the latter, for preventing waste of material between the tubular device and the can.

4. The combination of a weighing device including a bucket, means for supporting a can in position to receive a charge of material from said bucket, a tubular device to direct the material into the can and carried by the bucket, a tubular member surrounding the tubular device, supported independently of the bucket and provided with a packing, and means for operating the tubular member with respect to the tubular device to carry said packing into contact with the can on the delivery of material into the latter, said packing serving to prevent waste of material, when it engages the can between the latter and the tubular device.

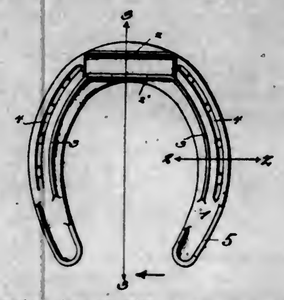
5. The combination of a weighing device including a bucket, means for supporting a can in position to receive a charge of material from said bucket, a funnel pendent from the bucket for directing the material from said bucket into the can, a tubular member surrounding the funnel and provided with a packing at its lower edge, and means for operating the tubular member on the delivery of material into the can to carry said packing against the upper edge of the can and prevent the waste of material between the can and the funnel.

[Claims 6 to 12 not printed in the Gazette.]

874,912. HORSESHOE. MICHAEL KANE, Cincinnati, Ohio. Filed Mar. 14, 1907. Serial No. 362,841.

1. A horseshoe formed with a pair of elongated spaced parallel toe ridges extending across the toe, heel ridges which are U-shaped and arranged along the sides of the shoe sides, and integral side ridges forming continuations of the innermost of the toe ridges and extending between and spaced from the side edges of the shoe sides, said side ridges terminating at points alining with the heel ridges, all of said ridges being of the same height.

2. A horseshoe formed with a pair of spaced parallel toe ridges, heel ridges of J-shape disposed to have the legs thereof flush with the side edges of the shoe sides, and arc-shaped side ridges, said ridges being continuations of the innermost of said toe ridges and extending to points to aline with the space between the legs of said heel ridges, said side ridges being located within the space between the side edges of the shoe sides so as to leave greater space between the outer side edges of the shoe sides and the side ridges than between the latter and the inner edges of the shoe sides, all of said ridges being of the same height.

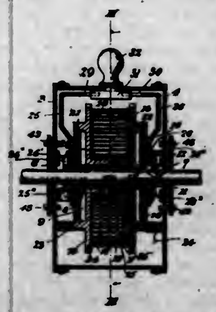


3. A horseshoe formed with a pair of spaced parallel toe ridges, the inner of said ridges terminating at points between the inner and outer sides of the shoe sides, and side ridges forming continuations of said inner toe ridge and terminating adjacent the heels of the shoe, and heel ridge having oppositely disposed sides which are out of longitudinal alinement with said side ridges.

4. A horseshoe formed with spaced toe ridges, heel ridges having two legs, and side ridges which at one end terminate at points between the inner ends of said legs of the heel ridges, all of said ridges being of the same height and forming wearing treads on their outer faces of substantially the same thickness.

5. A horseshoe formed with a toe ridge, heel ridges having legs of unequal length, and side ridges of arcuate form leading from said toe ridge to points adjacent the inner terminations of the heel ridges, said side ridges being located closer to the inner side faces of the shoe than to the outer side faces thereof.

874,913. STARTER FOR EXPLOSION-MOTORS. HERMAN J. S. LEWIS, New York, N. Y., assignor of one-half to John H. Dale, New York, N. Y. Filed Mar. 4, 1907. Serial No. 360,846.



1. A spring operated starter for explosion engines comprising two parts or members independently revoluble on the crank shaft of the engine, a power spring impelling said members angularly with respect to one another, and a lever pivoted coaxially with said members and movable in one direction to engage one member to the shaft and movable in the other direction to engege the other member to said shaft, said directions being in the plane of rotation of said shaft, and means for holding the non-engaged member stationary in each case.

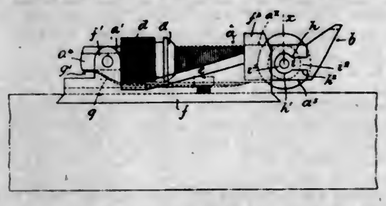
2. A spring operated starter for explosion engines comprising two parts or members independently revoluble on the shaft to be actuated, a power spring impelling said members angularly with respect to one another, friction clutches for engaging either member with said shaft, means for holding the non-engaged member stationary, and means including cams angularly movable coaxially of said members for engaging either of said clutches selectively.

3. A spring operated starter for explosion engines comprising two parts or members independently revoluble on the shaft to be actuated, a power spring impelling said members angularly with respect to one another, clutches for engaging either of said members to the shaft, and a single part movable in the plane of rotation of the members for engaging either one of said clutches and simultaneously disengaging the other clutch.

4. A spring operated starter for explosion engines comprising two parts or members independently revoluble on the shaft to be actuated, a power spring impelling said members angularly with respect to one another, clutches for engaging either member to said shaft, a pair of levers abutting against said clutches, said levers having cam inclines and adjustable stationary cam inclines coöperat- with whereby the clutches are engaged when said levers are moved.

5. A spring operated starter for explosion engines comprising two parts or members independently revoluble on the shaft to be actuated, a power spring impelling said members angularly with respect to one another, clutches for engaging either member to said shaft, a pair of levers abutting against said clutches, said levers having cam inclines and adjustable stationary cam inclines cooperating therewith whereby the clutches are engaged when said levers are moved.

874,914. BACK SIGHT FOR SMALL-ARMS. GEORGE NORMAN, Small Heath, near Birmingham, England, assignor of one-half to The Birmingham Small Arms Company Limited, Small Heath, near Birmingham, England. Filed Jan. 13, 1906. Serial No. 295,925.

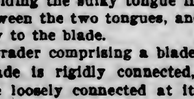


1. In a back sight for fire arms, the combination with the sight bar having a hinged screw stem, of a nut rotatable upon and traversing the said stem, and inclined ramps carried on the bed of the sight and upon which the said nut rides for obtaining elevation adjustment.

2. In a back sight for fire arms, the combination with the sight bar having a hinged screw stem, of a nut rotatable upon and traversing the said stem, inclined ramps carried on the bed of the sight and upon which the said nut rides for obtaining elevation adjustment, and a spring permanently influencing the hinged stem and adapted to act upon the same at a point beyond its center so as to oppose the upward angular movement which the said stem is constrained to make by the traversing of the adjusting nut along the ramps, thereby holding the sight absolutely steady in all positions.

874,915. CARRIER FOR SANDPAPERING-MACHINES. JAMES L. PERRY, Smithville, N. J., assignor to H. R. Smith Machine Company, Smithville, N. J., a Corporation of New Jersey. Original application filed Sept. 24, 1906, Serial No. 336,059. Divided and this application filed Apr. 10, 1907. Serial No. 367,301.

1. In a sand papering or analogous machine, the endless carrier comprising transverse lags, lugs on the inner face of each lag, a pair of circular orifices in each lug, a pin in each lug orifice, and links each having two orifices in which adjacent pins of two adjacent lugs extend, said pins turning freely in the lug orifices but held from turning in the link orifices.

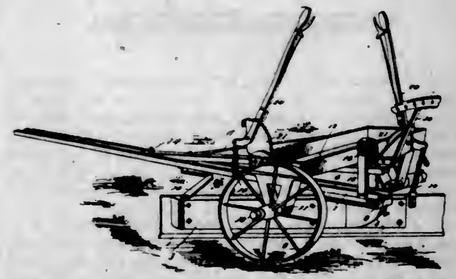


2. In a sand papering or analogous machine, the endless carrier comprising transverse lags, lugs on the inner face of each lag, a pair of circular orifices in each lug, a pin in each lug orifice, and pairs of links, each pair having two orifices in which adjacent pins of two adjacent lugs extend, each pin being held from turning in one at least of the two corresponding orifices of a pair of links.

3. In a sand papering or analogous machine, the endless carrier comprising transverse lags, lugs on the inner face of each lag, a pair of circular orifices in each lug, a pin in each lug orifice, links connecting adjacent pins of adjacent lugs, the lugs having recesses intersecting their pin orifices, said recesses being adapted to receive a lubricating material.

4. In a sand papering or analogous machine, the endless carrier comprising transverse lags, lugs on the inner face of each lag, a pair of circular orifices in each lug, a pin in each lug orifice, and pairs of links, each pair having two orifices in which adjacent pins of two adjacent lugs extend, one at least of the two corresponding orifices of a pair of links being non-circular, there being recesses in, and extending longitudinally of the lugs to receive a lubricating material, each recess intersecting both pin orifices.

874,916. ROAD-GRADER. EDWIN C. SHERWIN, Brandon, Wis., assignor of one-half to Edgarton H. Sherwin, Brandon, Wis. Filed Apr. 11, 1907. Serial No. 367,622.



1. A road grader comprising a blade, a main tongue from which said blade is directly suspended, a sulky provided with a tongue having a loose connection with the main tongue, a guide secured to the base of the main tongue and guiding the sulky tongue in relatively vertical movement between the two tongues, and suspension means from the sulky to the blade.

2. A road grader comprising a blade, a main tongue to which the blade is rigidly connected, a sulky provided with a tongue loosely connected at its front end to the main tongue, the main tongue being provided with a vertically extending arched guide, which embraces the rear end of the sulky tongue, independently movable hand levers fulcrumed on the sulky, and suspension chains connecting said levers with the blade.

3. A road grader comprising a blade adapted to be held in a plane oblique to the length of the machine, or direction in which it is adapted to travel, a foundation block to which said blade is secured, said block acting in a capacity of weight in the blade and being thicker at its front end than at its rear end, whereby to impose a greater amount of its weight on the cutting end of the blade, said foundation block being formed with a rearwardly extending bracket, a main tongue secured at its base to the bracket, and a sulky provided with means

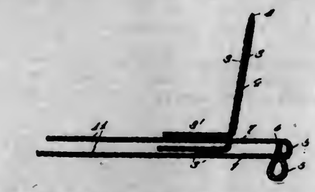
for raising and lowering the blade and having a relatively vertical movement with the tongue, as and for the purpose set forth.

4. A road grader comprising a blade, a main tongue to which said blade is secured, a sulky provided with a tongue having a loose connection with the main tongue, a guiding connection between the bases of the two tongues, said sulky including an axle in the form of a box, whereby weights may be disposed in said box, for the purpose specified, and hand levers fulcrumed on the sulky and having suspension connections with the blade.

5. A road grader comprising a blade, a main tongue to the base of which said blade is rigidly connected, said tongue being provided at its base with an upwardly extending arched guide, a sulky comprising traveling wheels located one in the rear and the other in front of the blade and also comprising an axle supported by and connected to the traveling wheels and constructed of channel stuff forming a box adapted to be weighted, a tongue rigidly secured to said axle and loosely connected at its front ends to the main tongue, the rear end of the sulky tongue extending through and snugly fitting the arched guide, independently operable hand levers fulcrumed on the sulky, and suspension chains connecting said hand levers with the blade near the ends of the latter.

[Claim 6 not printed in the Gazette.]

874,917. DISPLAY-RACK. JOHN B. TIMBERLAKE, Jackson, Mich. Filed Dec. 23, 1903. Serial No. 186,360.



1. A display rack comprising a base formed of wire and having horizontal portions 7 upon which the edge of the article may rest formed with feet at each end and having a cross connecting piece, and an upright rest against which the article may lean formed of a piece of wire separate from the base and having its ends intertwisted with the horizontal portions of the base, substantially as set forth.

2. A display rack comprising a base formed of a single piece of wire and having approximately horizontal members with feet at their opposite ends, and an upright rest 2 formed of another piece of wire having its ends extended forward of the rest and inter-twisted with the horizontal members of the base, substantially as set forth.

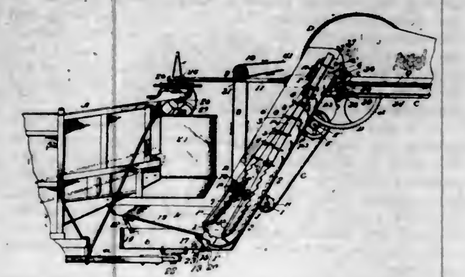
3. A display rack formed of wire and comprising horizontal portions 7 with feet at their ends, an upright rest against which the article displayed may lean, and shoulders arranged in front of the rest and rising above the horizontal portions 7 of the base to serve as abutments for the article, the ends of the rest being inter-twisted with the horizontal portions of the base between the upright rest and the said shoulders, substantially as set forth.

4. A display rack formed of a single piece of wire bent to form horizontal portions 7 and having feet at the ends thereof, and an upright rest 2 formed of another piece of wire having its ends extended to one side of the upright portion of the rest and there inter-twisted with the horizontal portions of the base between the upright and the feet at one end of the base, substantially as set forth.

5. A display rack comprising a base 1 formed of a single piece of wire having approximately horizontal supporting members and rests for feet, and an upright rest 2 formed of another piece of wire having its ends intertwisted with the horizontal members of the base, and rubber sheathings covering the inter-twisted portions of the base and rest, substantially as set forth.

[Claim 6 not printed in the Gazette.]

874,918. STRAW-STACKER. JOHN B. BARTHOLOMEW, Peoria, Ill., assignor, by mesne assignments, to The Sattley Stacker Company, Indianapolis, Ind., a corporation of Maine. Original application filed May 26, 1900, Serial No. 18,097. Renewed Oct. 27, 1904, Serial No. 230,261. Divided and this application filed May 1, 1905. Serial No. 258,428.



1. In a straw stacker, the combination with a thresher having straw delivery means and the inner elevator section having the upwardly extending frame, of the reciprocating carrier devices within the said upwardly extending frame, the swinging section connected to the upper end of the inner frame, the straw carrying devices supported therein, and a power mechanism connected with said straw carrying devices and with said reciprocating carrier devices to cause their coöperation, substantially as described.

2. In a straw stacker, the combination of a thresher having straw delivery means, an inner stacker section oscillatory in horizontal planes and comprising a reciprocating elevator and a hopper movable towards and from the lower end of said elevator, means for actuating said parts, and a vertically swinging section connected with the upper end of said inner section, and adapted to receive the straw from said reciprocating elevator, substantially as set forth.

3. In a straw stacker, the combination of a thresher having straw delivery means, an inner stacker section a reciprocating elevator therein comprising alternating bars, a vertically swinging stacker section connected with said inner section, a guiding means whereby the upper end of said reciprocating bars are directed and confined to form a throat for the exit of the straw to said swinging section, means for delivering the straw to the lower end of said elevator, and means for reciprocating the parts of said elevator, substantially as set forth.

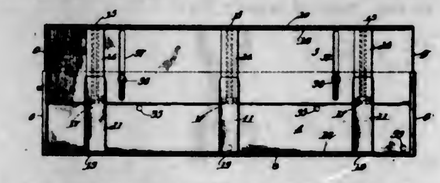
4. In a straw stacker, the combination of a thresher having straw delivery means, the reciprocating elevator comprising bars having movable fingers for engagement with the straw, the upper swinging elevator section, and straw carrying devices therein for receiving the straw from said fingers, substantially as set forth.

5. In a straw stacker, the combination of an inner horizontally swinging stacker section, means for elevating the straw, an inwardly and outwardly moving hopper having an inclined bottom to deliver the straw to said elevator and a reciprocating mechanism connected both with said straw elevating means and with said hopper.

[Claims 6 to 27 not printed in the Gazette.]

874,919. LOOSE-LEAF LEDGER. WILLIAM BOEHNER, Chicago, Ill., assignor of one-half to Jacob Ahlberg, Chicago, Ill. Filed Aug. 29, 1906. Serial No. 332,448.

1. In a binder, in combination, two back members; means for moving said back members with relation to each other comprising a rotatable element; a ratchet wheel arranged to move with said rotatable element; two independently movable pawls adapted to engage said ratchet wheel, said rotatable element being adapted for rotation by means of a key; and an arm adapted to engage said pawls and extending to a point adjacent to said rotatable element and in position to be engaged and moved by said key.



2. In a binder, in combination, two plates each provided upon its forward side with a longitudinal side flange; leaf-holding means secured to said longitudinal side flanges; and means located upon the rear side of said plates for moving said plates toward and away from each other.

3. In a binder, in combination, two plates each provided with a longitudinal side flange upon its forward side; leaf-holding members secured to said side flanges, one of said leaf-holding members having rack teeth formed thereon; a pinion rotatably mounted upon the rear side of one of said plates, and adapted to mesh with said rack teeth; and means for rotating said pinion.

4. In a binder, in combination, two flat plates arranged to slide one upon the other; leaf-holding means secured to said plates upon one side thereof; and means upon the other side of said plates for moving said plates toward and away from each other.

5. In a binder, in combination, two plates arranged to slide one upon the other; leaf-holding members fixed with relation to said plates upon one side thereof, one of said members having rack teeth formed upon its lower side; a pinion mounted upon the rear side of one of said plates, and adapted to mesh with said rack teeth; and means for rotating said pinion.

[Claims 6 to 8 not printed in the Gazette.]

REISSUES.

12,734. PNEUMATIC MILKING APPARATUS. ALEXANDER GILLIES, Heidelberg, Victoria, Australia. Filed Mar. 8, 1907. Serial No. 361,423. Original No. 744,188, dated Nov. 17, 1903. Serial No. 161,717.



1. In a pneumatic milking apparatus a teat-cup consisting of a rigid casing, a flexible lining therefor, a cup at the bottom of said lining, and a cap and nut for connecting the flexible lining to the cup at the bottom thereof, said cap having a boss adapted to fit into the base of said rigid casing, substantially as described.

2. In a pneumatic milking apparatus a teat-cup consisting of a rigid casing, a flexible lining therefor, a cap connected to the lower end of said lining and provided with an opening, in combination with a ferrule connected to the rigid casing for the admission of the pulsations between the lining and casing, said ferrule being below the middle of said lining, a pulsator communicating with said ferrule, and a milk-receptacle communicating with the said opening in said cap.

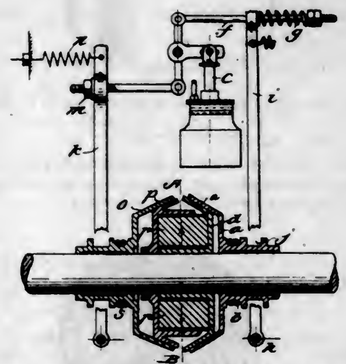
3. In a pneumatic milking apparatus a teat-cup consisting of a rigid casing, a mouth-piece therefor provided with a conical, annular rigid reinforcement, a flexible lining for the said casing, a small cup at the bottom of said lining, and a cap and nut for connecting said cup to said lining, said cap having a boss adapted to fit in the base of said casing.

4. In a pneumatic milking apparatus a teat-cup having a mouthpiece provided with a conical annular rigid reinforcement and a small air-inlet through the said mouthpiece for admitting atmospheric pressure behind the milk, said teat-cup further provided with a lining, a pulsator communicating with said cup back of the lining thereof, and a milk-receptacle communicating with the space between the said lining.

5. Pneumatic milking apparatus having teat-cups with inflatable linings and provided with a milk passage leading from the upper end thereof to the milk receiver, said passage having an air inlet to permit atmospheric pressure to assist in the flow of the milk.

[Claims 6 to 12 not printed in the Gazette.]

12,735. RAILWAY-BRAKE. PAUL HALLOT, Vincennes, France. Filed Aug. 25, 1904. Serial No. 222,073. Original No. 730,115, dated June 2, 1903, Serial No. 130,198.



1. In a brake for vehicles, a series of revolving centrifugal masses, correlated mechanism arranged to transmit the energy of said masses to the brake, a regulating device interposed between said masses and mechanism, and means for applying the brake to control the rotation of the wheels.

2. In a vehicle brake, the combination with a revolving part of the vehicle, of a drum arranged thereon, a cord connected with said drum and with brake mechanism, a clutch mounted to rotate with the revolving part, a piston under the control of the operator, and connections between said piston and drum, whereby the latter is made to engage and disengage with said clutch, substantially as described.

3. In combination with brake mechanism, a brake regulating device consisting of a pulley loosely arranged on the axle, means for bringing the same into operation, and revolving centrifugal masses longitudinally immovable with respect to the axle and arranged to engage said regulating device with a force that automatically increases and decreases in proportion to the speed of rotation of the centrifugal masses.

4. In a brake mechanism, the combination with centrifugally acting revolving masses, means actuated by the live force of the car and surrounding said masses to create additional brake power proportionately to the speed of the car, and an intermediate regulating device whereby the braking power or action decreases automatically in proportion to the reduction of the rotary speed of the revolving masses.

5. In a brake, the combination with a rotary part and centrifugally acting revolving masses within said part, means for operating the brake, and a regulating element interposed between the revolving masses and the brake operating means.

[Claims 6 to 23 not printed in the Gazette.]

DESIGNS.

38,958. POTTERY JAR. GEORGE R. THIEME, Monmouth, Ill. Filed May 18, 1907. Serial No. 374,515. Term of patent 14 years.



The ornamental design for a pottery jar as shown.

38,959. HEATER AND FOOD-RECEPTACLE. LOUISA POLSKY, Stockton, Cal. Filed July 22, 1907. Serial No. 385,095. Term of patent 14 years.



The ornamental design for a heater and food receptacle, as shown.

38,960. PADLOCK. CHARLES E. JOHNSON, New Britain, Conn., assignor to Corbin Cabinet Lock Company, New Britain, Conn., a Corporation of Connecticut. Filed Apr. 25, 1907. Serial No. 370,333. Term of patent 14 years.



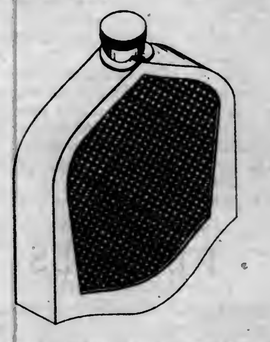
The ornamental design for a padlock as shown.

38,961. GAS-BURNER PILLAR. ARTHUR K. MILLER, Peekskill, N. Y. Filed Oct. 17, 1907. Serial No. 397,940. Term of patent 7 years.



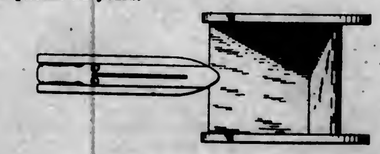
The ornamental design for a gas burner pillar, as shown.

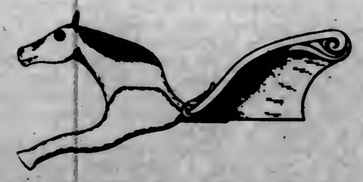
38,962. AUTOMOBILE-RADIATOR. PAUL ARTHUR, Detroit, Mich. Filed Feb. 11, 1907. Serial No. 356,985. Term of patent 3½ years.



The ornamental design for automobile radiator, as shown.

38,963. VEHICLE-BODY. EDWARD L. GONYER, Mendon, Mich. Filed Oct. 11, 1907. Serial No. 397,030. Term of patent 14 years.





The ornamental design for a vehicle body, substantially as shown.

TRADE-MARKS

PUBLISHED DECEMBER 24, 1907.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 9,266. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE COOK & BERNHEIMER CO., New York, N. Y. Filed June 27, 1905. Used ten years.

Diadem

Particular description of goods.—Whisky.

Ser. No. 9,267. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE COOK & BERNHEIMER CO., New York, N. Y. Filed June 27, 1905. Used ten years.

GOLD LION

Particular description of goods.—Cocktails.

Ser. No. 9,269. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE COOK & BERNHEIMER CO., New York, N. Y. Filed June 27, 1905. Used ten years.

CABINET

Particular description of goods.—Gin.

Ser. No. 9,810. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) MECHANISCHE WEBEREI ZU LINDEN, Hannover-Linden, Germany. Filed July 6, 1905.



Particular description of goods.—Velveteens.

Ser. No. 12,580. (CLASS 20. CUTLERY NOT INCLUDED IN CLASS 61, AND EDGE-TOOLS.) SAML. OSBORN & Co., Sheffield, England. Filed Sept. 14, 1905. Used ten years.



Particular description of goods.—Cutlery in General, and other Hand Tools Having a Cutting Edge.

Ser. No. 12,581. (CLASS 14. METALS, UNWROUGHT AND PARTLY WROUGHT.) SAML. OSBORN & Co., Sheffield, England. Filed Sept. 14, 1905. Used ten years.



Particular description of goods.—Steel and Iron in Bars, Sheets, Rods, Plates, and other Unwrought and Partly-Wrought Forms.

Ser. No. 12,876. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) P. F. W. BARELLA, Berlin, Germany. Filed Sept. 21, 1905. Used ten years.



Particular description of goods.—Stomachic Powder.

Ser. No. 15,061. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) VEREINIGTE CHEMISCHE WERKE AKTIENGESELLSCHAFT, Charlottenburg, Germany. Filed Nov. 29, 1905.

Dartring

Particular description of goods.—Cold-Cream and Pomades Made from Wool-Fat.

Ser. No. 16,561. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) WILLIAM A. KRAEMER, Los Angeles, Cal. Filed Dec. 27, 1905.



Particular description of goods.—Shirt-Waists, Kimonas, Corset-Covers, and Collars and Cuffs of Textile Material.

Ser. No. 17,228. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) ELIOT & MATTHEWS, Los Angeles, Cal. Filed Feb. 21, 1906.



Particular description of goods.—Worsteds and Cheviots.

Ser. No. 18,080. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE COLUMBIAN HARDWARE COMPANY, Cleveland, Ohio. Filed Mar. 21, 1906. Used ten years.

OXFORD

Particular description of goods.—Spring-Hinges and Spring-Hinge Blanks.

Ser. No. 18,965. (CLASS 61. JEWELRY AND SOLID AND PLATED PRECIOUS-METAL WARE.) THE WILKINSON SWORD COMPANY, LIMITED, London and Sheffield, England. Filed Apr. 21, 1906.



Particular description of goods.—Flat Ware, Tableware, and Hollow Ware of Nickel, Silver, or Electroplate, or a Combination of Both These Metals.

Ser. No. 19,736. (CLASS 70. STATIONERY NOT OTHERWISE CLASSIFIED.) CHARLES E. SHEPPARD, New York, N. Y. Filed May 21, 1906.



Particular description of goods.—Loose-Leaf Binders.

Ser. No. 20,331. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) SOCIÉTÉ ANONYME DES PRODUITS CHIMIQUES SPÉCIAUX, Lyon-Monplaisir, France. Filed June 16, 1906.



Particular description of goods.—Medicines for the Treatment of Anorexia, Tuberculosis, Neurasthenia, Overwork, Rickets, Dyspepsia, All Ills Caused by Overfeeding, Tubercular Fevers, Dothienenteritis, La Grippe, Erysipelas, Smallpox, Eruptive Fevers, Rheumatism, Pneumonia, Pleurisy, Hectic Fevers, Typhoid Fever, Tubercular Rheumatism, Chloro Anemia, Cancer, Paludism, and Hemorrhages.

Ser. No. 20,332. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) SOCIÉTÉ ANONYME DES PRODUITS CHIMIQUES SPÉCIAUX, Lyon-Monplaisir, France. Filed June 16, 1906.

HEMOPLASE

Particular description of goods.—Medicines and Plasters for Use in Treating Chloro Anemia, Cancer, Paludism, Hemorrhages, Weakness During Convalescence, and All Tubercular Affections.

Ser. No. 20,333. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) SOCIÉTÉ ANONYME DES PRODUITS CHIMIQUES SPÉCIAUX, Lyon-Monplaisir, France. Filed June 16, 1906.

CRYOGENINE

Particular description of goods.—Medicines for the Treatment of Tubercular Fever, Dothienenteritis, La Grippe, Erysipelas, Smallpox, Eruptive Fevers, Rheumatism, Pneumonia, Pleurisy, Hectic Fevers, Typhoid Fever, and Tubercular Rheumatism.

Ser. No. 20,334. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) SOCIÉTÉ ANONYME DES PRODUITS CHIMIQUES SPÉCIAUX, Lyon-Monplaisir, France. Filed June 16, 1906.

PERSODINE

Particular description of goods.—Medicines for the Treatment of Anorexia, Tuberculosis, Neurasthenia, Overwork, Rickets, Dyspepsia, and All Ills Caused by Overfeeding.

Ser. No. 21,564. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE AMERICAN WASHBOARD COMPANY, Cleveland, Ohio, assignor, by mesne assignments, to The National Washboard Company, a Corporation of Illinois. Filed Aug. 15, 1906.

SEAL GLOBE

Particular description of goods.—Washboards.

Ser. No. 22,447. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) EMIL SEELIG, A. G., Heilbronn, Germany, and Jersey City, N. J. Filed Oct. 3, 1906. Used ten years.



Particular description of goods.—Chicory and Coffee Substitute Consisting Largely of Chicory.

Ser. No. 23,494. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) INTERNATIONAL PATENT CORPORATION, Pierre, S. D., and Jersey City, N. J. Filed Nov. 20, 1906.

F. R. V.

Particular description of goods.—Lubricators and Mechanical Oilers.

Ser. No. 23,705. (CLASS 23. HAND-TOOLS NOT OTHERWISE CLASSIFIED.) THE CHILLINGTON TOOL COMPANY LIMITED, Wolverhampton, England. Filed Dec. 1, 1906.



Particular description of goods.—Hoes, Spades, Shovels, Picks, Wood-Splitting Wedges, Crowbars, Mining-Bars, Coffee-Diggers, Plowshares, Hammers, Trowels, and Pitchforks.

Ser. No. 24,180. (CLASS 9. EXPLOSIVES.) NITRODALS TÆNDSTIKFABRIK, Grönvold, in Östre Aker, near Christiania, Norway. Filed Dec. 21, 1906.



Particular description of goods.—Matches.

Ser. No. 25,777. (CLASS 32. FURNITURE AND UPHOLSTERY NOT OTHERWISE CLASSIFIED.) PAINE FURNITURE COMPANY, Boston, Mass. Filed Mar. 5, 1907.



Particular description of goods.—Mattresses, Upholstered Springs, Pillows, and Bolsters.

Ser. No. 26,617. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) LOUIS PELOSI, Washingtonville, N. Y. Filed Apr. 10, 1907.



Particular description of goods.—A Cordial Composed of Dilute Alcohol, Sugar, and Fruit Extract.

Ser. No. 26,722. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) PACIFIC MILLING COMPANY, INCORPORATED, San Francisco, Cal. Filed Apr. 15, 1907.



Particular description of good.—Wheat-Flakes.

Ser. No. 26,991. (CLASS 61. JEWELRY AND SOLID AND PLATED PRECIOUS-METAL WARE.) ADOLPH ROSENBERG, Newark, N. J. Filed Apr. 29, 1907.

AR

Particular description of goods.—Rings, Chains, Bracelets, and Jewelry Composed of Gold, Silver, Platinum, or Alloys Thereof.

Ser. No. 27,194. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) JACOB COHEN SON & Co., New York, N. Y. Filed May 7, 1907.

Character Clothes

Particular description of goods.—Men's Coats, Vests, Trousers, and Overcoats.

Ser. No. 27,805. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) RIPPE GRAIN & MILLING Co., Fairmont, Minn. Filed May 31, 1907.



Particular description of goods.—Wheat-Flour.

Ser. No. 28,016. (CLASS 28. HAND-TOOLS NOT OTHERWISE CLASSIFIED.) SIMMONS HARDWARE COMPANY, St. Louis, Mo. Filed June 10, 1907.

KEEN KUTTER

Particular description of goods.—Hammers, Screw-Driver Bits, Bit-Braces, Brace-Jaws, Carpenters' Pinch-Bars, Carpenters' Wrecking-Bars, Screw-Drivers, Putty-Knives, Ice-Picks, Potato-Hooks, Manure-Hooks, Metal-Handling Ladles, Wood-Choppers' Mauls, Nail-Pullers, Pick-Eyes, Picks, Sledges, Non-Cutting Carpenters' Pincers, Non-Cutting Blacksmiths' Pincers, Hoes, Shovels, Hand-Rakes, Hay-Forks, Header-Forks, Manure-Forks, Garden-Forks, Rivet-Sets, Nail-Sets, Saw-Sets, Saw-Frames, Saw-Clamps, Garden-Trowels, Awls, Coal-Wedges, Wood-Choppers' Wedges, Implements for the Laying and Finishing of Granitoid, Cement, and Mortar, Non-Cutting Tools of Awl and Tool Sets, and Coal-Shovels.

Ser. No. 28,347. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) BARTH & MYER, Oklahoma, Okla. Filed June 24, 1907.

The B & M ONE PRICE CLOTHING HOUSE

Particular description of goods.—Hats Made of Felted or other Fibrous Materials, Gloves Made of Hides, Skins, Furs, and Woven Materials, Overshirts, Collars, and Underwear Made of Woven Materials, Overalls, and Trousers.

Ser. No. 28,364. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) WILMARTH & MORMAN Co., Grand Rapids, Mich. Filed June 24, 1907.

THE NEW YANKEE DRILL GRINDER

Particular description of goods.—Drill-Grinding Machines.

Ser. No. 28,833. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) CHRISTIAN CEDERROTH, Gefle, Sweden. Filed July, 19, 1907.

SAMARIN

Particular description of goods.—Iron Compound Used as a Remedy for Rheumatism, Nervousness, Gastric Catarrh, Loss of Appetite, Sleeplessness, and Stomach Trouble.

Ser. No. 28,913. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) WAKE CHEMICAL COMPANY, Raleigh, N. C. Filed July 20, 1907.

Nerv-u

Particular description of goods.—A Non-Alcoholic Tonic Beverage.

Ser. No. 28,924. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JOHN QUACK and GERHARD H. SANDHEGER, Cincinnati, Ohio, executors of the estate of C. Sandheger, deceased. Filed July 22, 1907.



Particular description of goods.—Whisky.

Ser. No. 28,996. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) STEVENSON & HOWELL, LIMITED, London, England. Filed July 23, 1907.



The disk being red.

Particular description of goods.—Flavoring Essences and Flavoring Extracts.

Ser. No. 29,035. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) STRAWSONS, London, England. Filed July 25, 1907.

VAPORITE

Particular description of goods.—Insecticides.

Ser. No. 29,045. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) AARON WALTER ROSEMAN, Philadelphia, Pa. Filed July 26, 1907.

"DEVIL'S PASTE"

The mark being printed in red.

Particular description of goods.—Paste for Destroying Rats, Mice, and Roaches.

Ser. No. 29,195. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) COVERT MANUFACTURING Co., Watervliet, N. Y. Filed Aug. 3, 1907. Used ten years.

COVERT

Particular description of goods.—Harness Formed of Web, Rope, or Leather, Comprising Hitching Devices, Leads, Ties, Lariats, Breeching-Straps, Weight-Cords, Breast-Straps, Bridles, Checkreins, Girths, Halters, and Trace and Trace-Carriers and Reins.

Ser. No. 29,735. (CLASS 32. FURNITURE AND UPHOLSTERY NOT OTHERWISE CLASSIFIED.) JOHN L. TANDY, Kansas City, Mo. Filed Sept. 3, 1907.



Particular description of goods.—Iron Beds, Folding Beds, Couches, Cots, Davenports, Bed-Springs, and Wool, Cotton, Felt, Excelsior, and Spring Mattresses.

Ser. No. 29,840. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) STEVENSON & HOWELL, LIMITED, London, England. Filed Sept. 9, 1907.



The disk being red.

Particular description of goods.—Essential Oils, Colorings, (Being Vegetable or Mineral Extracts Which are Used for Coloring Food Substances,) Caramel, Beer-Clarifiers, and Preparations for Producing Froth on Beers, and Preservatives and Soda Bicarbonate for Use in the Manufacture of Beverages and in the Preparation of Food Products.

Ser. No. 29,857. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) ROBERT BOSCH, Stuttgart, Germany. Filed Sept. 10, 1907.



Particular description of goods.—Electric Igniting Devices for Explosive-Engines, Electric Sparks-Plugs, Magnectic Spark-Plugs, Electric-Current-Distributing Devices, Electric Controlling Devices for Igniters in Multicylinder Explosive-Engines, Electric Igniter-Flanges, Electric Interrupter Devices, Magneto-Electric Clutches, and Magneto-Electric Machines.

Ser. No. 29,861. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) W. B. COSGRAVE SHOE CO., Zanesville, Ohio. Filed Sept. 11, 1907.



Particular description of goods.—Leather Boots and Shoes.

Ser. No. 29,862. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) W. B. COSGRAVE SHOE CO., Zanesville, Ohio. Filed Sept 11, 1907.



Particular description of goods.—Leather Boots and Shoes.

Ser. No. 29,864. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) ALBERT E. KIRK, Hoopeston, Ill. Filed Sept. 11, 1907.



PAINT

Particular description of goods.—Paint.

Ser. No. 29,918. (CLASS 48. DAIRY PRODUCTS.) THE LACTO-BACILLINE COMPANY OF NEW YORK, New York, N. Y. Filed Sept. 12, 1907.



Particular description of goods.—Milk.

Ser. No. 29,919. (CLASS 48. DAIRY PRODUCTS.) THE LACTO-BACILLINE COMPANY OF NEW YORK, New York, N. Y. Filed Sept. 12, 1907.



Particular description of goods.—Milk.

Ser. No. 30,076. (CLASS 18. AGRICULTURAL AND DAIRY MACHINERY AND PARTS OF SUCH MACHINERY.) HARRY O. SECREST, Cleveland, Ohio. Filed Sept. 19, 1907.

CAPITOL

Particular description of goods.—Lawn Trimmers and Edgers.

Ser. No. 30,196. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JOHN QUACK and GERHARD H. SANDHEGER, Cincinnati, Ohio, executors of the estate of C. Sandheger, deceased. Filed Sept. 25, 1907.

OLD SHORTS

Particular description of goods.—Whisky.

Ser. No. 30,297. (CLASS 71. TOBACCO PRODUCTS.) DANIEL W. SIMMONS, Seattle, Wash. Filed Sept. 30, 1907.

SEATTLE SPIRIT

Particular description of goods.—Cigarettes and Cigars.

Ser. No. 30,306. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE FERMO COMPANY, Cincinnati, Ohio. Filed Sept. 30, 1907.



Particular description of goods.—Remedies for the Correction of Stomach, Liver, and Bowel Disorders.

Ser. No. 30,319. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) WILLIAM H. STERLING, New York, N. Y. Filed Sept. 30, 1907.



Particular description of goods.—A Plastic Compound to be Used as a Tire-Filler.

Ser. No. 30,409. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) THE W. W. HARPER CO., Zanesville, Ohio. Filed Oct. 3, 1907.



Particular description of goods.—Spices.

Ser. No. 30,411. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) THE W. W. HARPER CO., Zanesville, Ohio. Filed Oct. 3, 1907.



Particular description of goods.—Coffee.

Ser. No. 30,465. (CLASS 9. EXPLOSIVES.) CAMPBELL M. HUNTER, London, England. Filed Oct. 7, 1907.

LYTO

Particular description of goods.—Compositions Applied to Strips of Suitable Material and Constituting Safety Match-Ignition Strips.

Ser. No. 30,498. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) N-M-C-R COMPANY, New York, N. Y. Filed Oct. 9, 1907.

N-M-C-R

Particular description of goods.—Ink-Dividing Bands for Use for the Purpose of Dividing Inks of Different Colors or Kinds One from Another on Inking-Rollers.

Ser. No. 30,587. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE CLEVELAND VARNISH COMPANY, Cleveland, Ohio. Filed Oct. 14, 1907. Used ten years.

CLEVELAND

Particular description of goods.—Varnishes, Japans, Varnish-Oils, Lacquers, Enamels, and Paints.

Ser. No. 30,589. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE CLEVELAND VARNISH COMPANY, Cleveland, Ohio. Filed Oct. 14, 1907.

Frelastic

Particular description of goods.—Varnishes, Japans, Varnish-Oils, Lacquers, Enamels, and Paints.

Ser. No. 30,590. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE CLEVELAND VARNISH COMPANY, Cleveland, Ohio. Filed Oct. 14, 1907.

PERMANERE

Particular description of goods.—Varnishes, Japans, Varnish-Oils, Lacquers, Enamels, and Paints.

Ser. No. 30,620. (CLASS 70. STATIONERY NOT OTHERWISE CLASSIFIED.) BENJAMIN FRANKLIN CALLENDER, Rochester, N. Y. Filed Oct. 15, 1907.



Particular description of goods.—Crayons.

Ser. No. 30,665. (CLASS 63. MEASURING AND SCIENTIFIC APPARATUS, APPLIANCES, AND INSTRUMENTS.) THE VIASCOPE MFG. CO., Chicago, Ill. Filed Oct. 19, 1907.

VIASCOPE

Particular description of goods.—Moving-Picture Machines, Films, and Attachments.

Ser. No. 30,679. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) GLENN SPRINGS COMPANY, Spartanburg, S. C. Filed Oct. 19, 1907. Used ten years.

GLENN SPRINGS

Particular description of goods.—Mineral Water.

Ser. No. 30,699. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) H. J. HEINZ COMPANY, Allegheny, Pa. Filed Oct. 21, 1907.



The circle being printed in red.

Particular description of goods.—Pickles, Chow-Chow, Sauer-Kraut, Pickled Onions, Vinegar, Baked Beans, Soup, Catchup, Chutney, Sauces, Relishes, Mustard, Olives, Olive-Oil, Horse-Radish, Fruit Preserves, Fruit Butters, Fruit Jellies, Euchred Figs, Cranberry Sauce, and Mince-Meat.

Ser. No. 30,747. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) L. ERSTEIN & BRO., New York, N. Y. Filed Oct. 23, 1907.

"RUCHIFFON"

Particular description of goods.—Chiffons.

Ser. No. 30,857. (CLASS 59. HOROLOGICAL INSTRUMENTS.) SOUTH BEND WATCH COMPANY, South Bend, Ind. Filed Oct. 29, 1907.



Particular description of goods.—Watches.

Ser. No. 30,861. (CLASS 35. BELTING, HOSE, AND MACHINERY PACKING.) KUSCHNITZKY & GRÜNHUT, Vienna, Austria. Filed Oct. 29, 1907.

Greenit

Particular description of goods.—Steam or Machinery Packing.

Ser. No. 30,865. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) CHARLES E. KEELER, Atlantic City, N. J. Filed Oct. 29, 1907.



Particular description of goods.—Cold-Cream.

Ser. No. 30,894. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CHARLES NEUNSINGER, Baltimore, Md. Filed Oct. 31, 1907.

Bongo

Particular description of goods.—A Carbonated Beer Free of Alcohol.

Ser. No. 30,968. (CLASS 20. CUTLERY NOT INCLUDED IN CLASS 61, AND EDGE-TOOLS.) A. BALDWIN & CO., LTD., New Orleans, La. Filed Nov. 2, 1907.

SOUTHERN BELLE

Particular description of goods.—Saws, Scissors, Shears, Chisels, Axes, Hatchets, Pliers Having Cutting Edges, Files, Augers, and Auger-Bits.

Ser. No. 30,974. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) HARRIS SUSPENDER COMPANY, New York, N. Y. Filed Nov. 4, 1907.

RED.

Particular description of goods.—Garters.

Ser. No. 30,995. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) LYCURGUS SMITH, Mineral Wells, Tex. Filed Nov. 4, 1907.

CTW

Particular description of goods.—Mineral Waters.

Ser. No. 31,007. (CLASS 60. INKS AND INKING MATERIALS.) FOUNTAIN INK PAD COMPANY, Chicago, Ill. Filed Nov. 4, 1907.

Geyser

Particular description of goods.—Inks and Ink-Pads.

Ser. No. 31,008. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) CAMPHO CROUP CO., Wheeling, W. Va. Filed Nov. 4, 1907.



Particular description of goods.—A Remedy for Croup, Coughs, and Colds.

Ser. No. 31,016. (CLASS 72. MERCHANDISE NOT OTHERWISE CLASSIFIED.) U. S. HAME COMPANY, Buffalo, N. Y. Filed Nov. 5, 1907.



Particular description of goods.—Hames and Trimmings Therefor.

Ser. No. 31,025. (CLASS 51. MALT PREPARATIONS NOT OTHERWISE CLASSIFIED.) BRADLEESTON & WOERZ, New York, N. Y. Filed Nov. 5, 1907. Used ten years.

EMPIRE BREWERY

Particular description of goods.—Beer, Ale, Porter, and Stout.

Ser. No. 31,027. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) THOMAS LITWILLER, Tremont, Ill. Filed Nov. 5, 1907.

CRESCENT

Particular description of goods.—Wire Fence.

Ser. No. 31,029. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) HANS SCHWARZKOPF, Charlottenburg, near Berlin, Germany. Filed Nov. 6, 1907.



Particular description of goods.—Cosmetics for the Hair.

Ser. No. 31,040. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ACME CHEMICAL CO., Detroit, Mich. Filed Nov. 7, 1907.

ACME

Particular description of goods.—Massage-Cream.

Ser. No. 31,059. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE STANDARD MFG. CO., Shelby, Ohio. Filed Nov. 7, 1907.

CHAMPION

Particular description of goods.—Spring-Hinges.

Ser. No. 31,066. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) HARRY MOLE, Pottstown, Pa. Filed Nov. 7, 1907.

MOLEINE

Particular description of goods.—A Remedy for Whooping-Cough and All Colds.

Ser. No. 31,067. (CLASS 12. MASONRY MATERIALS.) ROCKLAND-ROCKPORT LIME CO., Rockland, Me. Filed Nov. 7, 1907.



Particular description of goods.—Lime and Ready-Mixed Mortar.

Ser. No. 31,068. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) THE CONQUEROR FIRE EXTINGUISHER COMPANY, Portland, Me. Filed Nov. 7, 1907.

CONQUEROR

Particular description of goods.—Fire-Extinguishers.

Ser. No. 31,069. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) DE MIRACLE CHEMICAL CO., New York, N. Y. Filed Nov. 7, 1907.

DeMiracle

Particular description of goods.—Toilet Cream and Freckle-Eradicator.

Ser. No. 31,086. (CLASS 47. CONFECTIONERY.) CADBURY BROTHERS, LIMITED, Birmingham, England. Filed Nov. 8, 1907.

BOURNVILLE

Particular description of goods.—Cocoa and Chocolate.

Ser. No. 31,101. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) JOSEPH FRIEDLANDER, New York, N. Y. Filed Nov. 9, 1907.

CERTANTO

Particular description of goods.—A Remedy for Eczema, Pimples, Blotches, Humors, Acne, Red Nose, Scaly Scalp, and Ordinary Skin Troubles.

Ser. No. 31,103. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) MINTON COMPANY, INC., Rochester, N. Y. Filed Nov. 9, 1907.

CANTAB

Particular description of goods.—Hose-Supporters and Garters.

Ser. No. 31,106. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) H. AND T. DAILEY, Fall River, Mass. Filed Nov. 9, 1907.

TRISOME

Particular description of goods.—A Tonic Beverage.

Ser. No. 31,106. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) NETTIE M. HOON, Mercer, Pa. Filed Nov. 9, 1907.

SAVOL-CREAM

Particular description of goods.—An Ointment.

Ser. No. 31,111. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) HULMAN & Co., Terre Haute, Ind. Filed Nov. 11, 1907.

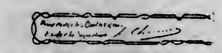
FARMERS PRIDE



Particular description of goods.—Apple-Butter, Jam, Vinegar, Crushed Fruits, Fruit Preserves, Jelly, Mustard, and Mince-Meat.

Ser. No. 31,116. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) PAUL CHEVREUX, Gouhenans, (Haute-Saone,) France. Filed Nov. 11, 1907.





Particular description of goods.—Medicines for the Treatment of Gravel, Gout, Rheumatic Gout, Rheumatism, Dyspepsia, Neuralgia, and Diseases of the Liver and Kidneys.

Ser. No. 31,117. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) FARBENFABRIKEN OF ELBERFELD Co., New York, N. Y. Filed Nov. 11, 1907. Used ten years.

BAYER

Particular description of goods.—Coal-Tar Dyes, Disinfectants, Preservatives for Food, Photographic Developers, and Chemicals Used in Printing, Dyeing, and Finishing.

Ser. No. 31,126. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) BRIDGE & BEACH MANUFACTURING COMPANY, St. Louis, Mo. Filed Nov. 11, 1907.

ALAMO

Particular description of goods.—Stoves and Ranges.

Ser. No. 31,127. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) BRIDGE & BEACH MANUFACTURING COMPANY, St. Louis, Mo. Filed Nov. 11, 1907.

FORTUNE

Particular description of goods.—Stoves and Ranges.

Ser. No. 31,129. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) BRIDGE & BEACH MANUFACTURING COMPANY, St. Louis, Mo. Filed Nov. 11, 1907.

MELROSE

Particular description of goods.—Stoves.

Ser. No. 31,144. (CLASS 11. LEATHER BLACKINGS AND DRESSINGS.) CORRY CHEMICAL Co., Corry, Pa. Filed Nov. 12, 1907.



Particular description of goods.—Shoe-Polish.

Ser. No. 31,145. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) JOHN WANAMAKER, Philadelphia, Pa. Filed Nov. 13, 1907.

LILLIAN STRAIGHT BACK

Particular description of goods.—Ladies' Corsets.

Ser. No. 31,152. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) ROBERTS & MATHEWS, Ansonia, Ohio. Filed Nov. 13, 1907.

NIGHT DRIVERS FRIEND

Particular description of goods.—Vehicle-Lamps.

Ser. No. 31,157. (CLASS 37. PAPER AND PAPER MANUFACTURES NOT OTHERWISE CLASSIFIED.) CASE BROTHERS, Highland Park, Conn. Filed Nov. 13, 1907.

EXCELSIOR PRESS BOARD

Particular description of goods.—Press-Boards.

Ser. No. 31,161. (CLASS 23. HAND-TOOLS NOT OTHERWISE CLASSIFIED.) WITHINGTON & COOLEY MANUFACTURING COMPANY, Jackson, Mich. Filed Nov. 14, 1907. Used ten years.

WARREN

Particular description of goods.—Hoes.

Ser. No. 31,162. (CLASS 23. HAND-TOOLS NOT OTHERWISE CLASSIFIED.) WITHINGTON & COOLEY MANUFACTURING COMPANY, Jackson, Mich. Filed Nov. 14, 1907. Used ten years.

IVAN HOE

Particular description of goods.—Hoes.

Ser. No. 31,168. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) MARIANI & Co., New York, N. Y. Filed Nov. 14, 1907.

MUCANTI

Particular description of goods.—A Medicinal Preparation Used in the Treatment of Intro-Colitis, Muco-Membraneous Discharges, Diseases of the Intestinal Tract, Certain Typhoid and Colonial Fevers, and Diseases Resulting from Abuse of Purgatives and Injections.

Ser. No. 31,173. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) COMMERCIAL ELECTRICAL SUPPLY COMPANY, St. Louis, Mo. Filed Nov. 14, 1907.



Particular description of goods.—Soldering-Paste, Soldering Salts, and Soldering-Sticks.

Ser. No. 31,176. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) C. H. HOYT & Co., Toledo, Ohio. Filed Nov. 14, 1907.



Particular description of goods.—A Pile Remedy.

Ser. No. 31,180. (CLASS 63. MEASURING AND SCIENTIFIC APPARATUS, APPLIANCES, AND INSTRUMENTS.) BUILDERS IRON FOUNDRY, Providence, R. I. Filed Nov. 15, 1907.

VENTURI

Particular description of goods.—Water-Meters.

Ser. No. 31,189. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) LEE BROOM & DUSTER COMPANY, Lincoln, Nebr. Filed Nov. 15, 1907.

LASTRO

Particular description of goods.—Brooms.

Ser. No. 31,190. (CLASS 43. THREAD AND YARN.) THE AMERICAN THREAD COMPANY, Jersey City, N. J. Filed Nov. 15, 1907.

KNOXALL

Particular description of goods.—Spool-Cotton, Sewing-Cotton, and Thread.

Ser. No. 31,191. (CLASS 43. THREAD AND YARN.) THE AMERICAN THREAD COMPANY, Jersey City, N. J. Filed Nov. 15, 1907.

SX

Particular description of goods.—Spool-Cotton, Sewing-Cotton, and Thread.

Ser. No. 31,192. (CLASS 43. THREAD AND YARN.) THE AMERICAN THREAD COMPANY, Jersey City, N. J. Filed Nov. 15, 1907.

KISMET

Particular description of goods.—Spool-Cotton, Sewing-Cotton, and Thread.

Ser. No. 31,194. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ROBINSON BROS. & COMPANY, INCORPORATED, Portland, Me., and Malden, Mass. Filed Nov. 15, 1907.

PINEOL
FOR THE SKIN
The Balsamic Properties of Southern Pines

Particular description of goods.—Ointment.

Ser. No. 31,196. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ROBINSON BROS. & COMPANY, INCORPORATED, Portland, Me., and Malden, Mass. Filed Nov. 15, 1907.

PINEOL
COLOGNE
The Balsamic Fragrance of Southern Pines

Particular description of goods.—Medicinal and Toilet Cologne.

Ser. No. 31,202. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) THE C. S. MOREY MERCANTILE COMPANY, Denver, Colo. Filed Nov. 16, 1907.

Cabinet

Particular description of goods.—Tea.

Ser. No. 31,203. (CLASS 54. SEA FOODS.) WARFIELD PRATT HOWELL CO., Des Moines, Iowa. Filed Nov. 16, 1907.

DANDELION

Particular description of goods.—Canned Fish.

Ser. No. 31,204. (CLASS 18. AGRICULTURAL AND DAIRY MACHINERY AND PARTS OF SUCH MACHINERY.) A. B. FARQUHAR COMPANY LIMITED, York, Pa. Filed Nov. 16, 1907.

O. K.

Particular description of goods.—Potato-Diggers.

Ser. No. 31,208. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THEOLINE CHEMICAL COMPANY, New York, N. Y., and Bridgeport, Conn. Filed Nov. 16, 1907.

THEOLINE

Particular description of goods.—Liniments.

Ser. No. 31,232. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) FAIRCHILD BROS. & FOSTER, New York, N. Y. Filed Nov. 18, 1907.

Lacfōd

Particular description of goods.—A food for Infants and Invalids.

Ser. No. 31,237. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) GENERAL GAS LIGHT CO., Kalamazoo, Mich. Filed Nov. 18, 1907.



Particular description of goods.—Mantles for Gas-Lamps.

Ser. No. 31,260. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE GILLETTE-VIBBER CO., New London, Conn. Filed Nov. 20, 1907.



Particular description of goods.—Cable-Caps, Pipe-Caps, Molding-Boxes, Molding-Box Covers, and Ground-Clamps.

Ser. No. 31,262. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) BRY-BLOCK MERCANTILE CO., Memphis, Tenn. Filed Nov. 20, 1907.

GOROSIS

Particular description of goods.—Corsets.

Ser. No. 31,283. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) THE PHILADELPHIA DRYING MACHINERY COMPANY, Philadelphia, Pa. Filed Nov. 21, 1907.

HURRICANE

Particular description of goods.—Compresses for Cotton, Wool, Hair, Rags, Leather, Scrap-Iron, Veneer, Tobacco, and other Materials.

Ser. No. 31,284. CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) THE PHILADELPHIA DRYING MACHINERY COMPANY, Philadelphia, Pa. Filed Nov. 21, 1907.

HURRICANE

Particular description of goods.—Machinery for Drying, Cooling, Ordering, or Treating Tobacco.

Ser. No. 31,285. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) THE PHILADELPHIA DRYING MACHINERY COMPANY, Philadelphia, Pa. Filed Nov. 21, 1907.

HURRICANE

Particular description of goods.—Machinery for Washing, Scouring, Bleaching, Dyeing, Chroming, Oxidising, and Finishing.

TRADE-MARKS

REGISTERED DECEMBER 24, 1907.

66,677. WHEAT-FLOUR. AMERICAN TRADING COMPANY (PACIFIC COAST), San Francisco, Cal.
Filed July 19, 1907. Serial No. 28,879. PUBLISHED OCTOBER 22, 1907.

66,678. COATS, VESTS, TROUSERS, AND OVERCOATS. I. DRESNER, San Francisco, Cal.
Filed July 31, 1907. Serial No. 29,146. PUBLISHED OCTOBER 22, 1907.

66,679. CANNED FISH. JED FRYE & Co., New York, N. Y.
Filed August 22, 1907. Serial No. 29,526. PUBLISHED OCTOBER 22, 1907.

66,680. CANNED FISH. JED FRYE & Co., New York, N. Y.
Filed August 22, 1907. Serial No. 29,527. PUBLISHED OCTOBER 22, 1907.

66,681. CANNED SARDINES. JED FRYE & Co., New York, N. Y.
Filed August 22, 1907. Serial No. 29,528. PUBLISHED OCTOBER 22, 1907.

66,682. CANDY AND CHOCOLATES. HESS BROS., INC., New York, N. Y.
Filed August 27, 1907. Serial No. 29,613. PUBLISHED OCTOBER 22, 1907.

66,683. CERTAIN CANNED GOODS. THE HOLBROOK GROCERY CO., Keene, Woodsville, and Nashua, N. H.
Filed June 3, 1907. Serial No. 27,846. PUBLISHED OCTOBER 22, 1907.

66,684. CERTAIN SEA FOODS. THE HOLBROOK GROCERY CO., Keene, Woodsville, and Nashua, N. H.
Filed June 3, 1907. Serial No. 27,847. PUBLISHED OCTOBER 22, 1907.

66,685. COATS, VESTS, AND TROUSERS. ISAAC ISAACS, Kansas City, Mo.
Filed July 3, 1907. Serial No. 28,589. PUBLISHED OCTOBER 22, 1907.

66,686. CURED MEATS AND SAUSAGE. KINGAN AND COMPANY, LIMITED, Belfast, Ireland; Indianapolis, Ind.; Baltimore, Md., and Richmond, Va.
Filed June 27, 1907. Serial No. 28,412. PUBLISHED OCTOBER 8, 1907.

66,687. CURED, COOKED, CANNED, AND SALTED MEATS, LARD, AND SAUSAGE. KINGAN AND COMPANY, LIMITED, Belfast, Ireland; Indianapolis, Ind.; Baltimore, Md., and Richmond, Va.
Filed June 27, 1907. Serial No. 28,413. PUBLISHED OCTOBER 8, 1907.

66,688. COCOA AND CHOCOLATE. THE MAZAWATTEE TEA COMPANY LIMITED, London, England.
Filed May 29, 1907. Serial No. 27,768. PUBLISHED OCTOBER 22, 1907.

66,689. CELLULOID, ANIMAL AND VEGETABLE MATTER HAIR-COMBS. RADIGAN, RICH & Co., New York, N. Y.
Filed August 6, 1907. Serial No. 29,265. PUBLISHED OCTOBER 22, 1907.

66,690. BEER. THE RUEHL BROS. BREWING CO., Chicago, Ill.
Filed September 10, 1907. Serial No. 29,849. PUBLISHED OCTOBER 22, 1907.

66,691. SARDINES. EDWIN SHIVELL, Boston, Mass., assignor to Delong, Seaman & Company, Boston, Mass., a Firm.
Filed September 13, 1907. Serial No. 29,957. PUBLISHED OCTOBER 22, 1907.

66,692. CHILDREN'S TEXTILE BANDS, UNDERSHIRTS, AND CAPS. ALBERT DWIGHT SMITH, Springfield, Mass.
Filed August 23, 1907. Serial No. 29,548. PUBLISHED OCTOBER 22, 1907.

66,693. BREAD. GEORGE S. WARD, Pittsburg, Pa.
Filed December 11, 1906. Serial No. 23,942. PUBLISHED OCTOBER 22, 1907.

66,694. CATSUP, MINCE-MEAT, APPLE-BUTTER, PICKLES, AND VINEGAR. WICHITA VINEGAR WORKS, Wichita, Kans.
Filed July 15, 1907. Serial No. 28,811. PUBLISHED OCTOBER 22, 1907.

66,695. WHEAT-FLOUR. ZWONECHEK & AKSAMIT, Wilber, Nebr.
Filed September 12, 1907. Serial No. 29,888. PUBLISHED OCTOBER 22, 1907.

66,696. WHEAT-FLOUR AND CORNMEAL. ZWONECHEK & AKSAMIT, Wilber, Nebr.
Filed September 12, 1907. Serial No. 29,889. PUBLISHED OCTOBER 22, 1907.

66,697. CERTAIN CUTLERY. A. R. JUSTICE COMPANY Philadelphia, Pa.
Filed August 14, 1905. Serial No. 11,631. PUBLISHED MAY 14, 1907.

66,698. TOOTH-BRUSHES. DEITSCH BROTHERS, New York, N. Y.
Filed May 18, 1906. Serial No. 19,647. PUBLISHED OCTOBER 22, 1907.

66,699. CURED AND SALTED MEATS. KINGAN AND COMPANY, LIMITED, Belfast, Ireland; Indianapolis, Ind.; Baltimore, Md., and Richmond, Va.
Filed June 27, 1907. Serial No. 28,415. PUBLISHED OCTOBER 8, 1907.

66,700. CURED AND SALTED MEATS. KINGAN AND COMPANY, LIMITED, Belfast, Ireland; Indianapolis, Ind.; Baltimore, Md., and Richmond, Va.
Filed June 27, 1907. Serial No. 28,417. PUBLISHED SEPTEMBER 24, 1907.

66,701. CURED MEATS. KINGAN AND COMPANY, LIMITED, Belfast, Ireland; Indianapolis, Ind.; Baltimore, Md., and Richmond, Va.
Filed June 27, 1907. Serial No. 28,419. PUBLISHED OCTOBER 8, 1907.

66,702. HOSIERY. PARAMOUNT KNITTING CO., Chicago, Ill.
Filed March 16, 1906. Serial No. 17,936. PUBLISHED MAY 1, 1906.

66,703. FERTILIZERS. VIRGINIA-CAROLINA CHEMICAL COMPANY, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn.
Filed March 6, 1906. Serial No. 17,598. PUBLISHED OCTOBER 22, 1907.

66,704. NON-ABRASIVE SCOURING-POWDER. AZIE MANUFACTURING COMPANY, North Adams, Mich.
Filed July 26, 1907. Serial No. 29,182. PUBLISHED OCTOBER 22, 1907.

66,705. STATUARY. DAPRATO STATUARY COMPANY, Chicago, Ill.
Filed July 17, 1907. Serial No. 28,853. PUBLISHED OCTOBER 22, 1907.

66,706. KNITTED AND NETTED UNDERCLOTHING. ELMIRA KNITTING MILLS, Elmira Heights, N. Y.
Filed August 19, 1907. Serial No. 29,461. PUBLISHED OCTOBER 22, 1907.

66,707. WATCHES. Fabrique d'Horlogerie Beau-Site Vve Ferdinand Bourquin, St. Imier, Switzerland.
Filed August 31, 1905. Serial No. 12,121. PUBLISHED OCTOBER 22, 1907.

66,708. VULCANIZED FIBER FOR THE MANUFACTURE OF COMBS. Hall-Heffernan Brush Co., North Adams, Mass.
Filed August 21, 1907. Serial No. 29,496. PUBLISHED OCTOBER 22, 1907.

66,709. TOILET AND LAUNDRY SOAP. Alfred Hons, Berwick, Pa.
Filed August 8, 1907. Serial No. 29,293. PUBLISHED OCTOBER 22, 1907.

66,710. CIGARS. Louis Kindling Co., Milwaukee, Wis.
Filed September 12, 1907. Serial No. 29,914. PUBLISHED OCTOBER 22, 1907.

66,711. ICE AND ROLLER SKATES. The Samuel Winslow Skate Mfg. Co., Worcester, Mass.
Filed June 26, 1907. Serial No. 28,404. PUBLISHED OCTOBER 22, 1907.

66,712. WATCH-BOWS AND WATCH-PENDANTS. The Wachter Manufacturing Company, Hartford, Conn.
Filed September 9, 1907. Serial No. 29,800. PUBLISHED OCTOBER 22, 1907.

66,713. GLUES MADE FROM SEAWEEDS. The Arabol M'f'g Co., New York, N. Y.
Filed September 13, 1907. Serial No. 29,949. PUBLISHED OCTOBER 22, 1907.

66,714. ABRASIVE METAL-POLISHES. Armiger Chemical Co., Chicago, Ill.
Filed August 30, 1907. Serial No. 29,684. PUBLISHED OCTOBER 22, 1907.

66,715. FERTILIZERS. Ashepoo Fertilizer Company, Charleston, S. C.
Filed August 9, 1907. Serial No. 29,323. PUBLISHED OCTOBER 22, 1907.

66,716. CALCIUM-SILVER AND QUININ SALTS. Fischer Chemical Importing Co., New York, N. Y.
Filed August 2, 1905. Serial No. 11,117. PUBLISHED OCTOBER 22, 1907.

66,717. ANTISEPTIC AND GERMICIDE PREPARATION FOR DENTAL USE. John C. Graft, Newark, N. J.
Filed June 22, 1907. Serial No. 28,311. PUBLISHED OCTOBER 22, 1907.

66,718. MINERAL WATERS. St. John Harmsworth, London, England.
Filed July 23, 1907. Serial No. 28,998. PUBLISHED OCTOBER 22, 1907.

66,719. PARIS-GREEN. Morris Herrmann & Co., New York, N. Y.
Filed August 29, 1907. Serial No. 29,657. PUBLISHED OCTOBER 22, 1907.

66,720. POWER-TRANSMITTING APPARATUS, CLUTCHES, AND SPEED-GEARS. International Patent Corporation, Pierre, S. D., and Jersey City, N. J.
Filed November 23, 1906. Serial No. 23,557. PUBLISHED OCTOBER 22, 1907.

66,721. HAIR, FLESH, AND TOOTH BRUSHES. Jenkins M. Lawton, New York, N. Y.
Filed July 27, 1907. Serial No. 29,066. PUBLISHED OCTOBER 22, 1907.

66,722. INSECTICIDES. Leggett & Brother, New York, N. Y.
Filed August 21, 1907. Serial No. 29,497. PUBLISHED OCTOBER 22, 1907.

66,723. REFRIGERATORS. The Lockland Lumber Co., Lockland, Ohio.
Filed September 13, 1907. Serial No. 29,934. PUBLISHED OCTOBER 22, 1907.

66,724. CERTAIN KNITTED GARMENTS. M. Halff & Bro., San Antonio, Tex.
Filed September 3, 1907. Serial No. 29,727. PUBLISHED OCTOBER 22, 1907.

66,725. STOCKINGS, KNITTED, NETTED, AND LACE UNDERWEAR AND WAISTS. The Mona Manufacturing Company, Boston, Mass.
Filed September 3, 1907. Serial No. 29,738. PUBLISHED OCTOBER 22, 1907.

66,726. PRESERVING AND DISINFECTING AGENTS. Montana Gesellschaft mit beschränkter Haftung, Strehla, Germany.
Filed July 31, 1907. Serial No. 29,138. PUBLISHED OCTOBER 22, 1907.

66,727. HIDES, SKINS, AND FURS. Offene Handelsgesellschaft Schröder, Smidt & Co., Bremen, Germany.
Filed July 26, 1907. Serial No. 29,051. PUBLISHED OCTOBER 22, 1907.

66,728. SEWING-MACHINES AND ATTACHMENTS. The Standard Sewing Machine Company, Cleveland, Ohio.
Filed August 31, 1907. Serial No. 29,694. PUBLISHED OCTOBER 22, 1907.

66,729. SEWING-MACHINE NEEDLES. The Standard Sewing Machine Company, Cleveland, Ohio.
Filed August 31, 1907. Serial No. 29,698. PUBLISHED OCTOBER 22, 1907.

66,730. RAZOR-HONES. The Sunset Hone Co., Los Angeles, Cal.
Filed July 8, 1907. Serial No. 28,675. PUBLISHED OCTOBER 22, 1907.

66,731. CERTAIN ADHESIVE COMPOSITION. Toronto Type Foundry Co., (Limited,) Toronto, Canada.
Filed May 10, 1907. Serial No. 27,286. PUBLISHED OCTOBER 22, 1907.

66,732. ELECTRICAL BELLS AND ELECTRICAL PUSH-BUTTONS. U. S. E. M. Co., New York, N. Y.
Filed June 6, 1907. Serial No. 27,906. PUBLISHED OCTOBER 22, 1907.

66,733. HAND-OPERATED GILDING-WHEEL. W. H. Coe Manufacturing Co., Providence, R. I.
Filed May 20, 1907. Serial No. 27,521. PUBLISHED OCTOBER 22, 1907.

66,734. HAND-OPERATED GILDING-WHEEL. W. H. Coe Manufacturing Co., Providence, R. I.
Filed May 20, 1907. Serial No. 27,522. PUBLISHED OCTOBER 22, 1907.

66,735. HAND-OPERATED GILDING-WHEEL. W. H. Coe Manufacturing Co., Providence, R. I.
Filed July 6, 1907. Serial No. 28,616. PUBLISHED OCTOBER 22, 1907.

66,736. HAIR-TONICS, FACE-POWDER, PERSPIRATION-POWDER, TALCUM POWDER, AND BATH-POWDER. Anna Clyde Aydelott, McKenzie, Tenn.
Filed April 30, 1907. Serial No. 27,035. PUBLISHED OCTOBER 22, 1907.

66,737. COLD-CREAM, MASSAGE-CREAM, AND TOILET CREAM. Louis W. Bartel, St. Louis, Mo.
Filed September 11, 1907. Serial No. 29,877. PUBLISHED OCTOBER 22, 1907.

66,738. CERTAIN REMEDIES AND TONICS. Berg Medicine Company, Des Moines, Iowa.
Filed March 18, 1907. Serial No. 26,056. PUBLISHED OCTOBER 22, 1907.

66,739. FILLED GELATIN CAPSULES. Fischer Chemical Importing Co., New York, N. Y.
Filed August 2, 1905. Serial No. 11,120. PUBLISHED OCTOBER 22, 1907.

66,740. CHIFFONS, MALINES, RIBBONS, AND VELVETS. Friedmann & Distillator, New York, N. Y.
Filed July 20, 1907. Serial No. 28,912. PUBLISHED OCTOBER 22, 1907.

66,741. WHISKY. Geo. Benz & Sons, St. Paul, Minn.
Filed February 16, 1907. Serial No. 25,338. PUBLISHED OCTOBER 22, 1907.

66,742. KNIT STOCKINGS. Glidden, Hyde & Co., Boston, Mass.
Filed May 7, 1906. Serial No. 19,377. PUBLISHED SEPTEMBER 25, 1906.

66,743. REMEDY FOR CERTAIN DISEASES. Hampden Mfg. Co., Baltimore, Md.
Filed August 14, 1907. Serial No. 29,391. PUBLISHED OCTOBER 22, 1907.

66,744. AROMATIC MEDICINAL ELIXIR. Hawes Chemical Company, Louisville, Ky.
Filed August 26, 1907. Serial No. 29,585. PUBLISHED OCTOBER 22, 1907.

66,745. WHISKY. John J. Hermann, Zanesville, Ohio.
Filed April 28, 1905. Serial No. 3,499. PUBLISHED OCTOBER 23, 1906.

66,746. WHISKY. I. L. Lamm Co., Superior, Wis.
Filed July 22, 1907. Serial No. 28,933. PUBLISHED OCTOBER 22, 1907.

66,747. HAIR-GROWER AND DANDRUFF-ERADICATOR. Thomas J. Joyce, New York, N. Y.
Filed August 8, 1907. Serial No. 29,690. PUBLISHED OCTOBER 22, 1907.

66,748. LINIMENT AND MEDICINES FOR CATARRH, HAY-FEVER, AND DEAFNESS. Kane Chemical Company, Cleveland, Ohio.
Filed August 19, 1907. Serial No. 29,457. PUBLISHED OCTOBER 22, 1907.

66,749. TONIC. Hartland Law, Herbert E. Law, San Francisco, Cal.
Filed April 11, 1907. Serial No. 26,635. PUBLISHED OCTOBER 22, 1907.

66,750. CERTAIN PHARMACEUTICAL PREPARATIONS. H. Hatten Lepper, Chicago, Ill.
Filed July 25, 1907. Serial No. 29,029. PUBLISHED OCTOBER 22, 1907.

66,751. SALVE. P. W. Lerch & Co., South Canaan, Pa.
Filed November 9, 1905. Serial No. 14,471. PUBLISHED OCTOBER 22, 1907.

66,752. COLD-CREAM AND REMEDY FOR DYSPEPSIA. Frank N. Pond, New York, N. Y.
Filed September 4, 1907. Serial No. 29,751. PUBLISHED OCTOBER 22, 1907.

66,753. CERTAIN MEDICINAL PREPARATION. Sapa Chemical Co., St. Louis, Mo.
Filed September 14, 1907. Serial No. 29,968. PUBLISHED OCTOBER 22, 1907.

66,754. CERTAIN MEDICINES. Société "Le Ferment," Paris, France.
Filed August 20, 1907. Serial No. 29,489. PUBLISHED OCTOBER 22, 1907.

66,755. WHISKY, GIN, BRANDY, CORDIALS, AND COCKTAILS. Wilson P. Strader, Lexington, Ky.
Filed February 2, 1907. Serial No. 25,066. PUBLISHED OCTOBER 22, 1907.

66,756. WHISKY. W. A. Ross & Brother, Incorporated, New York, N. Y.
Filed July 17, 1907. Serial No. 28,847. PUBLISHED OCTOBER 22, 1907.

66,757. CERTAIN PAINTERS' MATERIALS. Acme White Lead & Color Works, Detroit, Mich.
Filed August 24, 1907. Serial No. 29,559. PUBLISHED OCTOBER 22, 1907.

66,758. CERTAIN STOVES, HEATERS, AND OVENS. American Stove Company, Jersey City, N. J., and St. Louis, Mo.
Filed April 6, 1907. Serial No. 26,516. PUBLISHED MAY 7, 1907.

66,759. GAS-STOVES, GAS-RANGES, GAS-HEATERS, AND COAL-RANGES. American Stove Company, Jersey City N. J., and St. Louis, Mo.
Filed April 8, 1907. Serial No. 26,546. PUBLISHED MAY 7, 1907.

66,760. GAS-STOVES, GAS-RANGES, GAS-HEATERS, AND COAL-RANGES. American Stove Company, Jersey City, N. J., and St. Louis, Mo.
Filed April 8, 1907. Serial No. 26,547. PUBLISHED MAY 7, 1907.

66,761. FURNACES, STOVES, AND RANGES. E. B. Colby & Co., Jersey City, N. J.
Filed May 29, 1905. Serial No. 6,861. PUBLISHED OCTOBER 22, 1907.

66,762. PACKING. Edward C. Garratt, Seattle, Wash.
Filed July 29, 1907. Serial No. 29,096. PUBLISHED OCTOBER 22, 1907.

66,763. BLEACHED ABSORBENT GAUZE IN THE PIECE. The Jacobus & Carlisle Co., New York, N. Y.
Filed August 13, 1906. Serial No. 21,519. PUBLISHED OCTOBER 22, 1907.

66,764. PRINTED BOOKS. John Murphy Company, Baltimore, Md.
Filed October 1, 1906. Serial No. 22,404. PUBLISHED OCTOBER 22, 1907.

66,765. LEATHER BOOTS AND SHOES. Sue E. Lang, Pittsburg, Pa., executrix of Henry J. Lang, deceased, assignor to H. J. Lang Shoe Company, Pittsburg, Pa., a Firm.
Filed June 6, 1907. Serial No. 27,899. PUBLISHED OCTOBER 22, 1907.

66,766. LEATHER BOOTS AND SHOES. Sue E. Lang, Pittsburg, Pa., executrix of Henry J. Lang, deceased, assignor to H. J. Lang Shoe Company, Pittsburg, Pa., a Firm.
Filed June 6, 1907. Serial No. 27,900. PUBLISHED OCTOBER 22, 1907.

66,767. LEATHER BOOTS AND SHOES. Luddy & Currier, Lynn, Mass.
Filed August 13, 1907. Serial No. 29,378. PUBLISHED OCTOBER 22, 1907.

66,768. VARNISHES, FILLERS, AND COLORS GROUND IN OIL. The Moore Paint Co., Cleveland, Ohio.
Filed June 29, 1907. Serial No. 28,472. PUBLISHED OCTOBER 22, 1907.

66,769. STITCHED CANVAS MACHINE-BELTING. Mount Vernon Belting Co., Baltimore Md.
Filed August 21, 1907. Serial No. 29,506. PUBLISHED OCTOBER 22, 1907.

66,770. CERTAIN PAINTERS' MATERIALS. The Patterson Sargent Co., Cleveland, Ohio.
Filed June 28, 1907. Serial No. 28,456. PUBLISHED OCTOBER 22, 1907.

66,771. PASTEBOARD CASES, BOXES, AND CARTONS. Charles C. Rahn, Thompsonville, Conn.
Filed August 1, 1907. Serial No. 29,169. PUBLISHED OCTOBER 22 1907.

66,772. STOVES, RANGES, AND PARTS THEREOF. Smith & Anthony Company, Boston, Mass.
Filed October 22, 1906. Serial No. 22,837. PUBLISHED OCTOBER 22, 1907.

66,773. SUBSTITUTE FOR TURPENTINE. Southern Substitute Turpentine Company, Wilmington, Del., and Highlandtown, Md.
Filed May 4, 1907. Serial No. 27,130. PUBLISHED OCTOBER 22, 1907.

66,774. MEDICATED AND ANTISEPTIC PADS FOR EXTERNAL TREATMENT OF THE ANUS. Frederick Albert Steele, New Rochelle, N. Y.
Filed October 19, 1906. Serial No. 22,790. PUBLISHED OCTOBER 15, 1907.

66,776. MONTHLY MAGAZINE. The System Company, Chicago, Ill.
Filed September 9, 1907. Serial No. 29,798. PUBLISHED OCTOBER 22, 1907.

66,776. CERTAIN MEDICINES. Teraqua Mineral Company, Memphis, Tenn.
Filed August 16, 1907. Serial No. 29,424. PUBLISHED OCTOBER 22, 1907.

66,777. LEATHER BOOTS AND SHOES. W. B. Cosgrave Shoe Co., Zanesville, Ohio.
Filed September 11, 1907. Serial No. 29,860. PUBLISHED OCTOBER 22, 1907.

66,778. LEATHER BOOTS AND SHOES. W. B. Cosgrave Shoe Co., Zanesville, Ohio.
Filed September 11, 1907. Serial No. 29,863. PUBLISHED OCTOBER 22, 1907.

66,779. GOLD PAINT. Welsh and Jones, Philadelphia, Pa.
Filed February 23, 1907. Serial No. 25,569. PUBLISHED OCTOBER 22, 1907.

LABELS

REGISTERED DECEMBER 24, 1907.

13,944.—*Title:* "LA IMPERIALE BOUQUET." (For Cigars.) McLEAN CIGAR MFG. CO., Minneapolis, Minn. Filed October 17, 1907.

13,945.—*Title:* "KREMLIN RUSSIAN CIGARETTES M'F'G BY VLADIMIR F. GNESIN 'THE RUSSIAN STORE.'" (For Cigarettes.) VLADIMIR F. GNESIN, New York, N. Y. Filed November 23, 1907.

13,946.—*Title:* "OLD GERMAN LAGER." (For Beer.) WILMANNS BROS. CO., Milwaukee, Wis., assignor to Schuster Brewing Company, Rochester, Minn., a Corporation of Minnesota. Filed November 20, 1907.

13,947.—*Title:* "GOSSIP CHOP." (For Tea.) UPHAM BRO'S., New York, N. Y. Filed November 20, 1907.

13,948.—*Title:* "BUNTE." (For Chocolate and Cocoa.) BUNTE BROTHERS, Chicago, Ill. Filed September 19, 1906.

13,949.—*Title:* "FARRELL'S WEDDING BREAKFAST CANE AND MAPLE SUGAR SYRUP." (For Cane and Maple-Sugar Syrup.) FARRELL & COMPANY, Omaha, Nebr. Filed November 20, 1907.

13,950.—*Title:* "FARRELL'S PRIDE OF COLORADO FANCY TABLE SYRUP." (For Table-Syrup.) FARRELL & COMPANY, Omaha, Nebr. Filed November 20, 1907.

13,951.—*Title:* "ZEROLENE." (For Oils.) STANDARD OIL COMPANY, San Francisco and Oakland, Cal. Filed November 23, 1907.

13,952.—*Title:* "MONTY KRYSTO." (For a Preparation for the Hair.) JOSEPH MONTAGUE, Buffalo, N. Y. Filed September 3, 1907.

13,953.—*Title:* "COLLEGIAN." (For Shoes for Men.) E. B. PIEKENBROCK & SONS, Dubuque, Iowa. Filed November 20, 1907.

PRINTS

REGISTERED DECEMBER 24, 1907.

2,181.—*Title:* "BEAR DESIGN." (For a Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed November 22, 1907.

2,182.—*Title:* "THE NEWSBOY." (For a Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed November 22, 1907.

2,183.—*Title:* "THERE IS MORE CREAM OF WHEAT." (For a Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed November 22, 1907.

2,184.—*Title:* "RAISED ON CREAM OF WHEAT." (For a Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed November 22, 1907.

2,185.—*Title:* "CUTE KIDS." (For a Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed November 22, 1907.

2,186.—*Title:* "BOY WHISPERING TO SISTER." (For a Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed November 22, 1907.

2,187.—*Title:* "THE JAPILLUSION." (For a Remedy for Diseases of the Eyes.) THE EYE-FIX REMEDY CO., Detroit, Mich. Filed November 23, 1907.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

WEIDMANN v. KNUP.

Decided January 28, 1907.

1. INTERFERENCE—ORIGINALITY—FAILURE TO ASSERT CLAIM TO INVENTION.

Where W. stated in the presence of K. and a witness that he proposed to file an application for patent for an invention which each now claims to have made and K. at that time made no protest, but a few days later went to W. and asked to have his name in the patent, *Held* that as it appeared that W. was at the head of the business and was a man of violent temper and that K. made it a practice not to dispute W. in the presence of others, and in view of the fact that K. was an intelligent man at the head of a large department, his request to have his name in the patent indicated that he regarded himself at that time to be the inventor of the process in issue.

2. SAME—SAME—SILENCE AFTER FILING APPLICATION.

A failure to assert the origination of an invention by a subordinate officer against the claims of his superior cannot be regarded as acquiescence in the superior officer's claims to the invention where prior to that time the subordinate officer had filed an application for such invention.

APPEAL from Examiners-in-Chief.

DYEING.

Mr. R. G. Dyrenforth for Weidmann.

Mr. Otto Munk and *Mr. William F. Hall* for Knup.

MOORE, *Assistant Commissioner, now Commissioner:*

This is an appeal by Weidmann from a decision of the Examiners-in-Chief affirming the decision of the Examiner of Interferences and awarding priority of invention to Knup, the senior party.

The issue is stated in two counts, which read as follows:

1. The process of dyeing tin-weighted silk a uniform blue black which consists in weighting the silk with tin, then subjecting it to a bath of black iron, and finally treating it with suitable vegetable extracts or dyes.

2. The process of dyeing silk blue black, obtaining a product of any desired weight, which consists in weighting the silk with tin, subjecting it in sequence to an acidulated bath, a black-iron bath, a black-iron gambier-bath, containing matter for coloring according to the shade desired, and, then, to the dye-bath, substantially as described.

The issue relates to dyeing silk, and particularly to the process of dyeing silk a blue black, which has been previously treated with a solution of tin to increase its weight. The invention consists in the application to silks which have been weighted with tin of a process which had been previously considered applicable only to unweighted silks.

Weidmann alleges conception and disclosure in the early part of the fall of 1903 and reduction to practice in the early part of the winter of 1903–4. Knup alleges conception and reduction to practice on November 18, 1903, and disclosure on December 9, 1903.

The controversy between the parties is one of originality rather than priority of invention, each alleging disclosure to the other.

Knup's application was filed December 28, 1903, and Weidmann's application, which eventuated in his Patent No. 780,924, here involved, was filed January 7, 1904. Weidmann's patent was inadvertently granted, and hence the possession thereof gives him no advantage, the burden of proof resting upon him by virtue of Knup's earlier filing date.

The Examiner of Interferences found in favor of Knup, and his conclusion was sustained by all of the members of the Board of Examiners-in-Chief, one of the members, however, writing a separate opinion, stating reasons for his conclusion, which differed in some respects from the majority opinion. In view of the facts that the burden of proof is upon Weidmann and that three separate opinions have been written below, each finding in favor of Knup, the conclusions of the lower tribunals will not be disturbed unless error is made to appear clearly.

At the time the invention was made both parties were connected with the Weidmann Silk Dyeing Company, Weidmann being the president of the company and Knup the foreman of the black-dyeing department. Knup left the employ of the company in January, 1904.

The evidence submitted on behalf of Weidmann clearly shows that the process of the issue was successfully carried out on December 11 and December 12, 1903, by Knup or by the workmen in his department under his supervision, two samples being produced, which are in evidence and known as "Weidmann's Exhibit No. 1" and "Weidmann's Exhibit No. 2." Weidmann claims that these samples were produced by Knup under his (Weidmann's) directions, while Knup claims that although Weidmann told him to make these samples he did so only after Knup had told him of his previous successful practice of the process in connection with an order received some time in November, 1903, from one of their regular customers. The controversy therefore turns on the question whether Weidmann told Knup how to produce these samples at the time in question or whether the process was disclosed to Knup by Weidmann at some previous time.

The lower tribunals found that Weidmann's proofs

failed to show that he disclosed the invention to Knup or to any one else prior to December 14, 1903. In accordance with the well-established practice this conclusion of fact will not be disturbed unless it is clearly against the weight of evidence. (*Flora* v. *Powrie*, 109 O. G., 2443.) The evidence on this point has been carefully examined, but no reason is found for coming to a different conclusion. Since Knup is proved to have been in possession of the invention on December 11, 1903, and since he is *prima facie* an original inventor, he must prevail unless his own record or the circumstances surrounding the parties clearly indicate the contrary.

Appellant assigns as an error of the Examiners-in-Chief their failure to give proper weight to the silence of Knup in the presence of an assertion by Weidmann of ownership of the invention and his intention to take out a patent therefor and to Knup's failure to assert claim to the invention until he had made arrangements to leave the Weidmann Silk Dyeing Company; but the claim on behalf of appellant that Knup laid no claim to the invention in the face of Weidmann's assertion that he was the inventor thereof is not borne out by the evidence. It appears that in a conversation between Weidmann, August Hunziker, and Knup about December 14, 1903, Weidmann stated that he intended to take out a patent for the invention in controversy, and Knup at this time made no protest or claim to the invention; but it further appears from the testimony of both Weidmann and Knup that a few days after this occurrence Knup went to Weidmann and asked to have his name in the patent. On behalf of Weidmann it is claimed that Knup made this request not because he had any part in the inventive act, but because he was the head of the black-dyeing department and performed the physical acts of the reduction to practice or directed their performance. On behalf of Knup it is claimed that he wanted his name in the patent because he was the inventor of the process. It is scarcely probable that a man of the intelligence of Knup, who was an expert chemist and at the head of a department employing three hundred or four hundred men and drawing a salary of $5,000 per year, would ask his employer to put his name in a patent to be granted for an invention made solely by the employer and with which he had nothing to do except to perform the physical acts necessary to its reduction to practice under his employer's direction. These circumstances are believed to be a sufficient basis for the conclusion that Knup's request to have his name in the patent was an assertion that he claimed the invention as his own. Knup's explanation of the reason for failing to assert his rights in the presence of Weidmann and Hunziker on the occasion of the conversation about December 14, 1906, appears to be reasonable. It appears from the evidence that Weidmann has a violent temper, and Knup states that he made it a practice not to dispute Mr. Weidmann on any matter in the presence of others. For this reason he awaited a more opportune time to assert his claims, in the meantime talking the matter over with his wife to determine the best way to proceed under the circumstances. It does not appear that at the time this conversation took place between Weidmann, Knup, and Hunziker, Knup had any fixed intention to resign his position. This is the only time that Weidmann asserted his intention, in the presence of Knup and others, to take out a patent for the invention in controversy up to the time of the filing of Knup's application, after which, it is believed, mere silence on the part of Knup would not create a presumption against him. Under all the circumstances Knup's explanation seems reasonable, and it is deemed sufficient to negative any presumption arising from his failure to assert his rights at the time in question.

It is contended by appellant that the Examiners-in-Chief erred in the conclusions which they drew from the evidence submitted to show Knup's use of the process in issue in connection with certain samples alleged to have been made by Knup on an order from Givernaud Brothers in November, 1903. It is evident from the opinion of the Examiners-in-Chief that they fully considered the evidence relating to this transaction, and they found as a fact that Knup reduced the invention to practice at the time this order was filled in November, 1903. No reason is seen for disturbing this conclusion, which seems to be in accordance with the evidence. Moreover, there is no evidence to overcome the *prima facie* reduction to practice by Knup on December 11, 1903.

It is further contended by appellant that the Examiners-in-Chief erred in giving undue weight to the fact that Knup preceded Weidmann only by ten days in the filing of an application. The rule is well established that the junior party must establish his case by a fair preponderance of evidence in order to prevail, and this rule seems to have been followed in this case.

No error is found in the conclusion reached by the Examiners-in-Chief, and their decision awarding priority of invention to Knup is affirmed.

EX PARTE KEIL.

APPLICATION FOR PATENT.

Decided November 25, 1907.

DRAWINGS—ELIMINATION OF UNNECESSARY ILLUSTRATIONS.

Held that the requirement by the Examiner that unnecessary figures be canceled and that the remaining figures be reduced to a reasonable scale and placed on a single sheet was right.

ON PETITION.

LOCK.

Mr. J. Odell Fowler for the applicant.

MOORE, *Commissioner:*

This is a petition from the requirement of the Examiner that applicant reduce the number of sheets of drawings in this case.

It appears that the application as originally filed contained five sheets of drawings. The applicant has canceled three of these in response to the Examiner's requirement. The Examiner now requires that all the figures of the drawings be placed on one sheet.

From an inspection of the drawings it is not seen that the large perspective view of Figure 2 is necessary to a complete illustration of the invention. The invention disclosed in the application consists in making the opening in the escutcheons larger than the knob-spindle, and while this is shown in dotted lines in Fig. 2 it could be so shown in original Fig. 7, or that

figure could be modified so as to show a section through one of the escutcheons in the plane of the knob-spindle, which would show the opening larger laterally than the spindle, as it is shown larger vertically in original Fig. 8. However, if applicant desires to retain a perspective view the same could be placed on a sheet with the other figures by making it of reasonable size and omitting the knobs of original Figs. 7 and 8.

The petition is denied.

EX PARTE ALART AND MCGUIRE.

APPLICATION FOR REGISTRATION OF TRADE-MARK.

Decided December 12, 1907.

1. TRADE-MARKS—DECEPTIVE.

A mark containing the legend "Guaranteed under the Food and Drugs Act of June 30, 1906," *Held* deceptive, since the registration of such a mark would lead the public to believe that the Government had guaranteed the purity of the article upon which the mark was used.

2. SAME—PUBLIC POLICY.

It is believed to be against public policy to register a mark which indicates or suggests that the Government has given its official approval of the character or quality of the merchandise to which such mark is affixed.

ON APPEAL.

TRADE-MARK FOR PICKLES, ETC.

Messrs. Arthur C. Fraser and Usina for the applicant.

MOORE, *Commissioner:*

This is an appeal from the decision of the Examiner of Trade-Marks refusing to register a trade-mark consisting of a red seal bearing an arbitrary device and also containing the legend "Guaranteed under the Food and Drugs Act, June 30, 1906, Serial Number 1,281."

The ground upon which registration was refused is that—

> * * * registration of the mark in its present form would lead to confusion and convey the idea that the guaranty clause is protected by the registration of the mark claimed. This is contrary to the reason and spirit of the law and it is believed to be contrary to public policy to grant a registration to any person which includes the specific form of notice which the Government permits manufacturers to use in giving the notice of guaranty under the Food and Drugs Act of June 30, 1906.

It is contended by the appellant that under section 5 of the Trade-Mark Act of 1905 registration of an arbitrary trade-mark permits the inclusion of matter not registrable *per se* and that registration of a mark which includes a descriptive phrase written in a particular manner should be permitted in order that the benefit of this arrangement may be obtained in any suit of unfair competition in trade in which such arrangement might be simulated in the mark of the adverse party. It appears from this contention that the guaranty clause is intended to be an integral part of the trade-mark sought to be registered.

It is well settled that no property can be claimed in a trade-mark so constructed or worded as to contain a false or misleading representation. In the case of the *Schuster Co.* v. *Muller* (126 O. G., 2192) the court of appeals said:

> Recent salutary laws restrain manufacturers and dealers from imposing upon the public, preparations injurious to health. The courts grow increasingly careful and cautious in restraining false representations as to the public in vending such preparations. Where any symbol or label claimed as a trade-mark is so worded as to contain a distinct assertion which is false, no property right can be claimed nor can the right to the exclusive use of it be maintained by a court of equity. Courts of equity will not interfere by injunction where there is any lack of proof in the applicant's case or any misrepresentation in his trade-mark or label, nor will the courts uphold in any one a privilege of deceiving the public. An exclusive privilege to deceive the public is not one that a court of equity can sanction nor one which the Commissioner of Patents should aid. While there is a right of property in a trade-mark in connection with a vendible commodity it is essential that the vender should not in his trade-mark or in the printing connected therewith, or in the business use of the trade-mark, himself be guilty of any false or misleading representations. It is settled that where the owner of such a trade-mark applies for an injunction to restrain another, his petition will be denied. (See *Worden* v. *California Fig Syrup Co.*, 187 U. S., 516; *California Fig Syrup Co.* v. *Stearns & Co.*, 73 Fed. Rep., 812; *Leathercloth Co.* v. *American Leathercloth Co.*, 4 De Gex, J. & S., 137; *Eleven House of Lords Cas.*, 523; *Fetridge* v. *Wells*, 4 Abbott, N. Y., 144; *Manhattan Medicine Co.* v. *Wood*, 23 O. G., 1925; 108 U. S., 218; *Siegert et al.* v. *Gandolfi et al.*, 139 Fed. Rep., 917.)

Rule 19 of the Trade-Mark Rules provides that no deceptive mark shall be registered, and the provisions of this rule have been rigidly enforced by this Office.

While the guaranty clause included in the applicants' trade-mark is in the terms prescribed by the Secretaries of the Treasury, Agriculture, and Commerce and Labor, under the authority vested in them by the Food and Drugs Act, its use as an integral part of a trade-mark is unwarranted in view of the rulings of the Department of Agriculture.

At the time the Food and Drugs Act first became effective various manufacturers, either intentionally or inadvertently, so included the guaranty clause with other printed matter upon their labels as to make it appear that the Government had guaranteed the purity of the articles upon which these labels were affixed. This having been called to the attention of the Secretary of Agriculture, the following order was issued by him:

> No other word should go upon this legend or accompany it in any way. Particular attention is called to the fact that nothing should be placed upon the label, or in any printed matter accompanying it, indicating that the guaranty is made by the Department of Agriculture. The appearance of the serial number with the phrase above mentioned upon a label does not exempt it from inspection nor its guarantor from prosecution in case the article in question be found in any way to violate the Food and Drugs Act of June 30, 1906.

It is believed that if the trade-mark now presented for registration should be registered in its present form and if the applicant should place in connection therewith the words "Registered in the U. S. Patent Office," as he is required to do by section 28 of the Trade-Mark Act of 1905, and as the specimen labels filed with his brief shows he has done, the public would be led to believe that the Government had, by registering this trade-mark, guaranteed the purity of the article upon which it was used. Registration of the mark is therefore refused upon the ground that the mark is deceptive in its nature.

It is also believed that registration of the mark here presented should be refused upon the ground that its registration is contrary to public policy. The Court of Appeals of the District of Columbia *in re Cahn, Belt & Co.*, (122 O. G., 354) cited with approval several decisions of the Commissioner of Patents which refused registration of national flags and coats-of-arms of States upon the ground that the registration of such marks was contrary to public policy. (*Ex parte Schmachtenburg Bros.*, 51 MS. Dec., 204; *New Prague Flouring Mill Co.*, 62 MS. Dec., 437; *ex parte Penny*, 67 MS. Dec., 136; *ex parte Standard Fashion Co.*, 89 O. G., 189; *ex parte Ball*, 98 O. G., 2366; *ex parte Brandeville Fruit Farm Company*, 103 O. G., 660.) It is believed that for equally cogent reasons public policy demands the refusal of

registration of any trade-mark which indicates or suggests that the Government has given its official approval of the character or quality of the merchandise to which such mark is affixed.

The decision of the Examiner of Trade-Marks is affirmed.

BAY STATE BELTING COMPANY *v.* KELTON-BRUCE MANUFACTURING COMPANY.

OPPOSITION.

Decided August 20, 1907.

1. TRADE-MARK—MARK MUST BE AFFIXED TO THE GOODS.
   In order that a party may acquire a trade-mark right, it must be shown that he affixed the mark to the goods.
2. SAME—EVIDENCE—COMPETENCY OF WITNESS.
   The fact that the witnesses testifying in behalf of a corporation were officers of the corporation furnishes no sufficient reason for disregarding their depositions.

ON APPEAL.

TRADE-MARK FOR BELT AND LACE LEATHER.

Mr. George N. Goddard for the opposer.

Messrs. Pennie & Goldsborough for the applicant.

BILLINGS, *Acting Commissioner:*

This is an appeal from the decision of the Examiner of Interferences sustaining the opposition of the Bay State Belting Company and holding that the Kelton-Bruce Manufacturing Company is not entitled to register the words "Indian Tanned" as a trade-mark for belt and lace leather.

The Examiner of Interferences found that the testimony fails to establish the use of the mark in question as a trade-mark by the Kelton-Bruce Company or its predecessors prior to 1892. He found that the Bay State Belting Company adopted in 1885 a mark of which the words "Indian Tanned" formed a prominent part and has continuously used the mark. The Examiner of Interferences thereupon held that the Kelton-Bruce Company has no right to register the mark of its application as a trade-mark.

The testimony of both Rowbotham and Carter is to the effect that they assisted in the organization of the Bay State Belting Company in 1884 and have ever since been officers of the company. Both witnesses testify that the Bay State Belting Company began in March, 1885, to mark its sides of lace-leather with the figure of an Indian and the words "Indian Tanned," the work being that shown in the Bay State Belting Company's certificate of registration No. 23,185, issued on June 6, 1893. They testify that the mark has been used continuously by said company and that the leather was sold under the name "Indian Tanned." A bill for a stencil, dated March 24, 1885, was introduced in evidence which these witnesses state was for a stencil bearing the mark above. The stencil was not introduced in evidence; but the witnesses state that it was worn out long ago and has been supplanted by a rubber stamp.

Rowbotham testified to sales of lace-leather by the company marked "Indian Tanned," some of them to customers outside the State of Massachusetts. He produced the books at the examination for the inspection of applicant's counsel containing entries of such sales.

The testimony in behalf of the Bay State Belting Company is believed to satisfactorily establish its continuous use of the mark since 1885.

Although the testimony in behalf of the Kelton-Bruce Manufacturing Company shows that its predecessor, the Kelton & Bruce Company, sold lace-leather under the name of "Indian Tanned" from the time of the organization of the company in 1886 and subsequently used these words on their bill-heads and in advertisements, there is no testimony as to the actual use of the mark on the goods prior to 1892. This is admitted by counsel for the Kelton-Bruce Manufacturing Company in the following statement, (p. 6 of brief:)

> The remark of the Examiner of Interferences that there is no proof in the record of actual marking of the goods by Kelton & Bruce prior to 1892 is well founded only if it be taken to mean actual testimony to that effect. It was impossible for us to find any employee of Kelton & Bruce who could have had any knowledge of such marking, but the witnesses Pennoyer and Nichols testified that when they first entered the employ of Kelton & Bruce in 1892 and 1893, respectively, the goods were being marked. The only proof of marking prior to that date is the natural inference from the fact that the words were being used on all the stationery of Kelton & Bruce, and from the fact that the goods were being sold and were known to the trade as "Indian Tanned" leather.

Under section 16 of the act of 1905 in order that a party may be found guilty of infringing a registered trade-mark it must be established that he has affixed the mark "to merchandise," and it is equally true that in order to acquire a trade-mark right the mark must be affixed to the goods. A mere possibility or presumption that the mark was so affixed is not sufficient to establish the existence of the right.

It is contended by the Kelton-Bruce Manufacturing Company that the unsupported testimony of Rowbotham and Carter does not amount to proof, because they are officials of the Bay State Belting Company, and therefore interested parties. The mere fact, however, that they are interested parties is no reason for disregarding their depositions where their testimony was not discredited or impeached on cross-examination, nor is it true that their testimony is entirely unsupported, as appears from the brief analysis of the evidence heretofore made.

The evidence is found to establish the conclusions reached by the Examiner of Interferences, and his decision is accordingly affirmed.

DEITSCH BROTHERS *v.* LOONEN.

CANCELATION PROCEEDING.

Decided December 17, 1907.

1. TRADE-MARKS—CANCELATION—MOTION TO SUPPRESS TESTIMONY—OBJECTION INDEFINITE.
   An objection that "the proceedings about to be taken are contrary to the statutes and the rules in these cases made and provided" *Held* too indefinite to warrant suppressing testimony where no other notice of the real ground of objection was given prior to the hearing on the motion.
2. SAME—SAME—TESTIMONY—PRINTING EXHIBITS.
   The printing or reproduction of paper exhibits will not be required, since if the case should be appealed to the Court of Appeals of the District of Columbia these exhibits can be sent to the court as physical exhibits.
3. SAME—SAME—MOTIONS—APPEAL.
   An appeal from a decision of the Examiner of Interferences to which no limit of appeal was set will not be dismissed because the appellant did not first ask leave of the Commissioner to file such appeal.

4. SAME—MOTION TO SUPPRESS EVIDENCE OR TO PRINT EXHIBITS—APPEAL.
   Appeals will not hereafter be allowed from a decision of the Examiner of Interferences denying a motion to strike out testimony or a motion to require the printing of exhibits prior to the appeal from the decision on the merits rendered after final hearing.

APPEAL from Examiner of Interferences.

TRADE-MARK FOR TOOTH-BRUSHES.

Mr. Joseph L. Levy and *Mr. Howard A. Coombs* for Deitsch Brothers.

Messrs. Goepel & Goepel for Loonen.

BILLINGS, *Assistant Commissioner:*

This case comes up on appeal by Deitsch Brothers from a decision of the Examiner of Interferences denying a motion (1) to suppress the entire deposition of certain witnesses for Loonen; (2) to require Loonen to print or reproduce as part of his printed record all the exhibits offered in his behalf capable of printing or reproduction; (3) to stay proceedings pending the determination of the motion. Loonen has filed a motion to dismiss the appeal.

It appears that the Examiner of Interferences denied the motion of Deitsch Brothers, but did not set a limit of appeal from his decision. Loonen's motion to dismiss is based on this fact. He contends that, no limit of appeal having been set, Deitsch Brothers should have applied to the Commissioner for leave to take an appeal or for an order restoring the jurisdiction to the Examiner of Interferences, so that he could hear argument as to whether he would permit an appeal.

This appeal being in proper form, it is believed that it would be highly technical to dismiss it for the reason urged by Loonen. For this reason the motion to dismiss must be denied.

In view of the fact that it has heretofore been the practice to entertain appeals from decisions of the Examiner of Interferences on a motion to suppress testimony and to require exhibits to be printed the present appeal will be considered.

The motion to suppress the testimony was, as appeared from a brief filed at the hearing, based on the ground that the notice of taking testimony did not give the names of the witnesses, as required by Rule 154.

The record shows that counsel for Deitsch Brothers attended the examination of the witnesses and objected on the ground that the—

> proceedings now to be taken on behalf of the party Loonen are contrary to the statutes and the rules in these cases made and provided.

It does not appear from this general objection what the real ground of objection was, and the motion to strike out does not state therein the specific objection. The decision of the Examiner of Interferences was clearly right, since it was not made to appear that the moving party was injured or inconvenienced by the failure to give the names of the witnesses and, as pointed out above, due notice of the objection was not given. (Rule 159.)

The second part of the motion asks that Loonen be required to print or reproduce his exhibits. No reason is seen for making such a requirement. It is true that the rules of the Court of Appeals of the District of Columbia require that the transcript of the record shall be printed; but these exhibits can go to the court as physical exhibits and need not be included in the transcript. Counsel for Deitsch Brothers in his affidavit filed in support of his motion states that owing to the nature of these exhibits it would be exceedingly expensive to reproduce them. This same question was before Commissioner Duell in *Freeman* v. *Bernstein*, and in a decision reported in 83 O. G., 155, he refused to require that the paper exhibits be printed.

It is believed that it will be in the interest of good practice and will work no hardship to the parties if hereafter no appeal be allowed from a decision of the Examiner of Interferences denying a motion to suppress testimony or a motion to require the other party to print exhibits prior to the appeal from his decision on priority rendered after final hearing. The question of the correctness of his decision on the motion can of course be raised on such appeal.

The setting of times for hearings of necessity rests in the discretion of the Examiner of Interferences, and his decision on this question will be reviewed only in a case where the circumstances are such as to call for the exercise of the supervisory authority of the Commissioner.

The decision of the Examiner of Interferences denying the motion of Deitsch Brothers is affirmed, and the motion of Loonen to dismiss the appeal of Deitsch Brothers is denied.

DECISIONS OF THE U. S. COURTS.

Supreme Court of the United States.

MARY V. CORTELYOU AND JAMES G. CORTELYOU, ADMINISTRATORS OF THE ESTATE OF JOHN G. CORTELYOU, DECEASED; NEOSTYLE COMPANY, AND BRODRICK COPYGRAPH COMPANY OF NEW JERSEY, PETITIONERS, *v.* CHARLES ENEU JOHNSON & COMPANY.

Decided December 2, 1907.

1. INFRINGEMENT—CONTRIBUTORY—SALE OF UNPATENTED SUPPLIES FOR USE WITH PATENTED MACHINE.
   Where a machine is sold under the restriction that it was to be used only with supplies made by the vendor, a defendant who sells supplies which are used with such machine cannot be held liable as a contributory infringer of the patent for the machine where it does not appear that the defendant ever solicited an order for such supplies, or was ever notified by the plaintiffs of the rights which they claimed, or that the executive officers of defendant had knowledge of the special character of such machines or the restrictions on the purchase of supplies.
2. SAME—NOTICE—NOTICE TO SALESMAN NOT NOTICE TO COMPANY.
   Notice to a salesman of a company who was not an officer or general agent of the company is not such notice as will bind the principal with respect to all future transactions.

Mr. Edmund Wetmore and *Mr. S. O. Edmonds* for the petitioners.

Mr. Francis T. Chambers for the respondents.

Mr. Justice BREWER delivered the opinion of the Court.

This is a suit to restrain an alleged infringement of a patent granted June 22, 1897, for the stencil-duplicating machine known as the rotary Neostyle. The plaintiffs below, petitioners here, represent the entire interest in the patent. There is no claim of any infringement by using or selling the patented machines, but

of an indirect infringement in the following manner: For the last few years the rotary Neostyle has been sold subject to this license, which was plainly disclosed on the base-board of the machine:

License agreement. This machine is sold by the Neostyle Company with the license restriction that it can be used only with stencil paper, ink and other supplies made by the Neostyle Company, New York city.

The defendant company (which is engaged in the manufacture and sale of ink) is, it is contended, engaged in selling ink to the purchasers of these machines for use thereon; that it is thus inducing a breach of the license contracts and is responsible as indirectly infringing the patent rights of plaintiffs. The circuit court sustained the contention and entered an interlocutory decree for an injunction and an accounting. (138 Fed. Rep., 110.) On appeal the Circuit Court of Appeals for the Second Circuit reversed this decree and remanded the case to circuit court, with instructions to dismiss the bill (76 C. C. A. 455,) whereupon the case was brought here on certiorari.

The three judges of the circuit court of appeals concurred in reversing the decree of the circuit court on the ground that the evidence was not sufficient to show that the defendant had notice that the machines for which the ink was ordered had been sold under any restrictions, but they differed upon the question whether there was any liability in case sufficient notice of the license agreement had been brought home to the defendant. The majority were of the opinion that the doctrine of contributory infringement, which they conceded to exist, should not be extended beyond those articles which are either parts of a patented combination or device, or which are produced for the sole purpose of being so used, and should not be applied to the staple articles of commerce. In that view of the case the article supplied being ink, a thing of common use, its sale to a purchaser of the Neostyle machine would be no infringement.

While in *Bement* v. *National Harrow Company* (186 U. S., 70) this Court held, in respect to patent rights, that with few exceptions—

any conditions which are not in their very nature illegal with regard to this kind of property, imposed by the patentee and agreed to by the licensee for the right to manufacture or use or sell the article, will be upheld by the courts—

it is unnecessary to consider how far a stipulation in a contract between the owner of a patent right and the purchaser from him of a machine manufactured under that right, that it should be used only in a certain way, will sustain an action in favor of the vendor against the purchaser in case of a breach of that stipulation. So although—

if one maliciously interferes in a contract between two parties, and induces one of them to break that contract to the injury of the other, the party injured can maintain an action against the wrongdoer—

Angle v. *Chicago, St. Paul &c. Railway*, (151 U. S. I, 13,) it is also unnecessary to determine whether this states the full measure of liability resting upon a party interfering and inducing the breaking of a contract, for we concur in the views expressed by all the judges of the court of appeals that there is no sufficient evidence of notice. True the defendant filled a few orders for ink to be used on a rotary Neostyle, but it does not appear that it ever solicited an order for ink to be so used, that it was ever notified by the plaintiffs of the rights which they claimed, or that anything which it did was considered by them an infringement upon those rights. Further, none of the chief executive officers of the company had knowledge of the special character of the rotary Neostyle machine or the restrictions on the purchase of supplies. The case of the plaintiffs in this respect rests mainly on the testimony of the witness, Gerber, who testified that at the instance of the manager of the Neostyle Company he wrote to the defendant for a one-pound can of black ink for use on the rotary Neostyle, saying—

I will be at my office Friday afternoon, between 1:30 and 3:30, and if convenient, have your representative call at that time.

A salesman of the defendant, named Randall, did call. The witness directed Randall's attention to the restrictions on the single machine he had in his office, and asked if he would have any trouble with the Neostyle Company if he used the defendant's ink, Randall replied in the negative, and added that—

the ink in question was not patented, that anybody could make or use it; that no trouble would come to me from the use of the ink which he sold.

The restriction on the machine shown to Randall was one formerly used by plaintiffs, but which had been discarded prior to this transaction and for it the present license agreement had been substituted. The restriction shown to Randall stated that the machine was sold "with the express understanding that it is licensed to be used only with stencil paper and ink (both of which are patented) made by the Neostyle Company of New York city." Evidently from his reply Randall's attention was drawn to the question of a patent on the ink. Further he was not an officer or general agent of the defendant company, but simply a salesman and it cannot be that this talk with him is notice to and binding on his principal in respect to all future transactions.

After reviewing all the minor considerations to which our attention has been called by the plaintiffs, we see no sufficient reason for disagreeing with the unanimous opinion of the circuit court of appeals in respect to the matter of notice, and its decree is affirmed.

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., November 14, 1907.

Levy, Diamant, Oppenheimer & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of the Ainsworth Shoe Company, of 209–211 St. Clair street, Toledo, Ohio, for registration of a trade-mark and a trade-mark registered to Levy, Diamant, Oppenheimer & Company, of 107 Battery street, San Francisco, Cal., and the notice of said declaration mailed by the Patent Office in the usual manner to the said Levy, Diamant, Oppenheimer & Company having been returned undelivered, notice is hereby given to the said Levy, Diamant, Oppenheimer & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.
[BY AUTHORITY OF CONGRESS.]

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Designs	16	No. 38,964 to No. 38,979, inclusive.
Trade-Marks	112	No. 66,780 to No. 66,891, inclusive.
Labels	10	No. 13,954 to No. 13,963, inclusive.
Prints	1	No. 2,188.
Reissues	2	No. 12,736 to No. 12,737, inclusive.
Total	900	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	1	.....	New Hampshire	1	.....
Alaska, District of	.....	.....	New Jersey	29	4
Arizona Territory	.....	.....	New Mexico Ter't'y	1	.....
Arkansas	8	.....	New York	148	35
California	17	4	North Carolina	4	2
Colorado	12	.....	North Dakota	4	.....
Connecticut	28	4	Ohio	40	5
Delaware	.....	.....	Oklahoma	6	.....
District of Columbia	8	.....	Oregon	3	.....
Florida	.....	.....	Panama	.....	.....
Georgia	3	2	Pennsylvania	69	15
Hawaii Territory	.....	.....	Philippine Islands	.....	.....
Idaho	1	.....	Rhode Island	2	.....
Illinois	66	7	South Carolina	1	.....
Indiana	16	1	South Dakota	4	1
Iowa	11	1	Tennessee	3	.....
Kansas	5	.....	Texas	9	2
Kentucky	9	4	Utah	2	.....
Louisiana	2	.....	Vermont	1	.....
Maine	4	.....	Virginia	4	.....
Maryland	13	4	Washington	5	3
Massachusetts	40	8	West Virginia	4	.....
Michigan	17	5	Wisconsin	27	.....
Minnesota	13	3	Wyoming	.....	.....
Mississippi	2	.....	U. S. Army	.....	.....
Missouri	24	4	U. S. Navy	.....	.....
Montana	2	.....			
Nebraska	5	.....	Total to citizens of the United States	675	114
Nevada	1	.....			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks and Prints.	Countries.	Patents and Designs.	Trade-Marks and Prints.
Argentina	.....	.....	Natal	.....	.....
Austria-Hungary	3	.....	Netherlands	3	.....
Belgium	1	.....	Newfoundland	1	.....
Brazil	.....	.....	New South Wales	4	.....
British West Indies	.....	.....	New Zealand	2	.....
Canada	18	2	Norway	.....	.....
Cape Colony	.....	.....	Persia	.....	.....
Chile	.....	.....	Queensland	1	.....
China	.....	.....	Roumania	.....	.....
Costa Rica	.....	.....	Russia	2	.....
Cuba	.....	.....	Scotland	1	.....
Denmark	1	.....	South Australia	.....	.....
Ecuador	.....	.....	Spain	.....	.....
England	14	5	Sweden	1	.....
France	13	.....	Switzerland	1	.....
Germany	27	2	Transvaal, South Africa	.....	.....
Haiti	.....	.....	Tasmania	1	.....
India	1	.....	Victoria	2	.....
Italy	2	.....			
Japan	.....	.....			
Java	.....	.....	Total to citizens of foreign countries	100	9
Luxemburg	1	.....			
Mexico	.....	.....			

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 11, 1907.

The Royal Shoe Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Selz, Schwab & Company, of Monroe and Market streets, Chicago, Ill., for registration of a trade-mark and a trade-mark registered to The Royal Shoe Company, of 220 Devonshire street, Boston, Mass., and the notice of said declaration mailed by the Patent Office in the usual manner to the said The Royal Shoe Company having been returned undelivered, notice is hereby given to the said The Royal Shoe Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that the notices of declaration heretofore sent by and returned to the Office may be forwarded to them.

The notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B. MOORE, *Commissioner.*

Full Names of Applicants.

* * * All applications which disclose the full name of the applicant in the preamble of the specification will be received and considered as a sufficient compliance with Rule 40 of the Rules of Practice. (Order 321.)

When the full first name of the applicant does not appear either in his signature or in the preamble to the specification, the Examiner will, in his first official letter, require an amendment supplying the omission, and he will not pass the application to issue until the omission has been supplied, unless an affidavit shall have been filed setting forth that the full first name of the applicant is the one originally given by him. (Order 600.)

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business December 24, 1907.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. Amended	New.	No. of applications awaiting action.
303	XVII. Linotyping; Printing; Matrix-Making; Nut and Bolt Locks; Clutches.	Dec. 10	Nov. 25	166
244	XXXV. Buckles, Buttons, and Clasps; Card, Picture, and Sign Exhibiting; Toilet; Signals; Garment-Supporters.	Dec. 10	Sept. 30	624
172	XXXI. Alcohol; Charcoal and Coke; Ammonia, Water, and Wood Distillation; Gas, Heating and Illuminating; Hides, Skins, and Leather; Liquid Coating Compositions; Oils, Fats, and Glue; Water Purification; Mineral Oils.	Dec. 5	Oct. 28	200
304	XXXIV. Railways; Railway-Brakes; Railway Rolling-Stock.	Dec. 3	Oct. 23	324
179	XX. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Nov. 29	Nov. 6	200
232	IV. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Towers; Iron Structures.	Nov. 27	Nov. 22	216
144	XXIV. Apparel; Apparel Apparatus; Sewing-Machines; Surgery.	Nov. 25	Nov. 4	338
247	XXII. Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Nov. 25	Oct. 23	236
378	XXXVIII. Artesian and Oil Wells; Bottles and Jars; Care of Live Stock; Fishing and Trapping; Stationery; Stone-Working; Educational Appliances.	Nov. 23	Oct. 26	368
167	V. Bookbinding; Harvesters; Jewelry; Music.	Nov. 20	Sept. 23	323
135	VIII. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture.	Nov. 18	Sept. 13	407
164	XXXIII. Cutlery; Domestic Cooking Vessels; Electricity, Medical and Surgical; Electric Signaling; Fireproof Buildings; Masonry; Tents, Canopies, Umbrellas and Canes.	Nov. 16	Oct. 26	314
147	XXIX. Coopering; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking-Tools; Woodworking; Fire-Escapes; Ladders.	Nov. 16	Sept. 16	356
313	I. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Nov. 15	Nov. 1	287
312	VII. Games and Toys; Mechanical Motors; Paper Manufactures; Velocipedes; Optics.	Nov. 13	Oct. 8	396
318	VI. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Nov. 11	Oct. 29	312
154	XI. Boot and Shoe Making; Boots, Shoes, and Leggings; Button Eyelet, and Rivet Setting; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus; Harness.	Nov. 8	Oct. 19	365
264	XXXVI. Curtains, Shades, and Screens; Drafting; Driers; Measuring Instruments; Windwheels; Engraving.	Nov. 7	Nov. 20	420
382	XXVIII. Internal-Combustion Engines; Miscellaneous Heat-Engine Plants.	Nov. 5	Oct. 7	560
375	XXVII. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Nov. 4	Nov. 4	370
327	XVIII. Steam-Engines; Steam-Boilers; Steam-Engine Valves; Steam and Vacuum Pumps; Injectors and Ejectors.	Nov. 4	Oct. 2	303
379	XXIII. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Nov. 4	Sept. 13	309
308	XV. Bread, Pastry, and Confection Making; Coating; Laminated Sheets and Fabrics; Fuel; Glass; Hydraulic Lime and Cement; Paper-Making; Paving; Plastics; Plastic Block and Earthenware Apparatus; Plastic Compositions; Photography.	Nov. 3	Oct. 2	665
152	XXX. Lamps and Gas-Fittings; Fluid-Pressure Regulators; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Nov. 2	Oct. 14	251
322	XII. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Nov. 2	Oct. 1	638
315	XXV. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Nov. 1	Oct. 14	388
278	XXXII. Carbonating Beverages; Dispensing Beverages; Dispensing-Cans; Metallic Shipping and Storing Vessels; Packaging Liquids; Refrigeration.	Nov. 1	Aug. 19	570
128	II. Bee Culture; Dairy; Label-Affixers; Paper Files and Binders; Presses; Tobacco; Store-Service; Pneumatics.	Oct. 31	Oct. 21	307
238	XIX. Furnaces; Stoves and Furnaces; Heating and Cooking Stoves, Liquid and Gaseous Fuel.	Oct. 26	Oct. 1	534
112	XXI. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving.	Oct. 22	Aug. 20	541
329	XIII. Arms, Projectiles, and Explosive Charges, Making; Metal-Working, etc.	Oct. 19	Oct. 12	585
307	XIV. Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal-Ware Making; Tools; Wire-Working; Compound Tools.	Oct. 15	Aug. 8	296
332	X. Carriages and Wagons	Oct. 14	Oct. 9	457
280	XL. Deposit and Collection Receptacles; Special Receptacles and Packages; Check-Controlled Apparatus; Fine Arts; Paper Receptacles; Package and Article Carriers; Wooden Receptacles; Baggage; Lighting-Fixtures; Cloth, Leather, and Rubber Receptacles.	Oct. 9	Aug. 10	805
142	IX. Fire-Extinguishers; Hydraulic Motors; Pumps; Sewerage; Air and Gas Pumps.	Oct. 7	Oct. 14	261
175	III. Annealing and Tempering; Coating with Metal; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Oct. 4	Aug. 23	616
105	XXVI. Electricity, Generation; Electric Heating and Rheostats; Electric Railways; Motive Power.	Oct. 4	Aug. 2	468
107	XXXVII. Electricity, Conductors; Electric Lighting; Electricity, General Applications.	Oct. 3	Aug. 17	753
321	XXXIX. Water Distribution; Baths and Closets.	Sept. 19	July 8	839
109	XVI. Telegraphy; Telephony	Sept. 16	June 12	715
352	XLI. Railway Draft Appliances; Railway-Ties and Fasteners; Railway-Rails and Joints; Resilient Tires and Wheels.	Aug. 15	July 29	1228
	Total number of applications awaiting action			18,410
161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS.			
	Trade-Marks	Dec. 19	Nov. 23	392
	Designs	Dec. 6	Nov. 27	83
	Labels and Prints	Dec. 23	Dec. 19	10

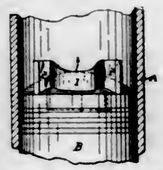
Money by Mail.

Money sent by mail to the Patent Office will be at the risk of the sender. Letters containing money should be registered.

PATENTS

GRANTED DECEMBER 31, 1907.

874,920. INTERNAL-COMBUSTION ENGINE. GEORGE J. ALTHAM, Fall River, Mass., assignor to Aero and Marine Motor Company, Boston, Mass., a Corporation of Massachusetts. Filed Feb. 2, 1907. Serial No. 355,525.

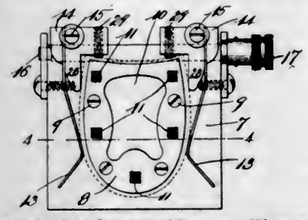


1. A deflector for an explosion-engine having a greater height at its ends than at its center.

2. In a device of the class described, a radial port and a deflector therefor having a greater height at its ends than at its center.

3. In a device of the class described, a pair of oppositely disposed radial ports and a deflector therebetween having a greater height at its ends than at its center.

874,921. TOP-LIFT OR HEEL HOLDER FOR HEEL-ATTACHING MACHINES. JOHN W. BADDOCK, Lynn, Mass. Filed Jan. 30, 1907. Serial No. 354,846.



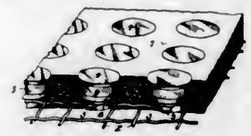
1. In a machine for attaching top lifts or heels to boots a support for a boot, a holder for said top lift or heel, said holder having a projecting portion thereon adjacent to the tread of said top lift or heel, and mechanism for moving said holder toward and away from said supports, whereby said projecting portion may be forced into said top lift or heel.

2. In a machine for attaching top lifts or heels to boots by nails or the like, a support for a boot, a holder for said top lift or heel, said holder having a projecting portion thereon adjacent to the tread of said top lift or heel adapted to engage the heads of said nails or the like and also the tread of said top lift or heel, and mechanism for moving said holder toward and away from said support, whereby said projecting portion may be forced into said top lift or heel and said nails driven into said shoe with the heads thereof partly driven through said top lift or heel.

3. A holder for a top lift or heel, for heel attaching machines comprising in its construction a block and a plate fast thereto and projecting from the face of said block toward a top lift or heel held thereon, said plate having a recess in its lower face, and means for holding said top lift or heel on said block consisting of two clamp plates adjustable laterally of said block, and springs fast to said clamp plates adapted to engage and hold therebetween a top lift or heel.

4. A holder for a top lift or heel, for heel attaching machines, comprising in its construction a block and a plate fast thereto and projecting from the face of said block toward a top lift or heel held thereon, said plate having a recess in its lower face, means for holding said top lift or heel on said block consisting of two clamp plates adjustable laterally of said block, springs fast to said clamp plates adapted to engage and hold therebetween a top lift or heel, and a screw in each of said clamp plates adapted to bear against the breast of said heel for the purpose specified.

874,922. VAULT-LIGHT CONSTRUCTION. JULIUS BAKER, Allegheny, Pa. Filed Mar. 29, 1907. Serial No. 365,243.



1. The combination of a resilient reinforcement having annular openings, and circular glasses each having a portion adapted to bear upon the reinforcement, and bulges beneath said portion adapted to enter the corners of the opening and when turned bear outwardly against the walls of the opening.

2. The combination of reinforcing rods arranged crosswise with relation to each other to form square glass-receiving openings, the rods being woven together in mesh form and providing a reinforcement of the thickness or depth of two of the rods, and glasses adapted to be secured in the square openings of the reinforcement, each glass having lateral projections spaced apart vertically a distance equal to the thickness or depth of the reinforcement, the uppermost projection being adapted to bear against the top of the reinforcement, and the under projections consisting of lugs adapted to be disposed toward the corners of the reinforcement opening when the glass is inserted and when the glass is turned adapted to bear against the under side of the reinforcement.

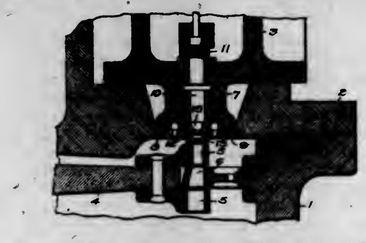
3. The combination of reinforcing rods arranged to form square glass receiving spaces, a circular glass having a flange adapted to rest on the top of the rods, lugs projecting from the glass beneath the flange for passing beneath the rods, the glass being bulged above the lugs for the purpose described.

4. The combination of resilient rods spaced apart to form glass receiving spaces, and glasses formed with lateral enlargements, the glasses being adapted to enter between the rods when the enlargements are not disposed toward the same, the enlargements being adapted when the glasses are turned to impinge the rods and be thus held therebetween.

874,923. NOZZLE FOR ELASTIC-FLUID TURBINES. HENRY S. BALDWIN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 27, 1907. Serial No. 381,007.

1. In a nozzle structure, the combination of a divided nozzle, means uniting the parts of the nozzle at the ends, a support for the nozzle, and abutments which engage the nozzle parts and hold them in contact.

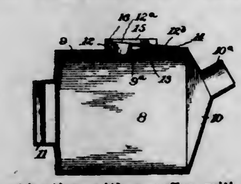
2. In a nozzle structure, the combination of a nozzle divided into two principal parts, the line of division being in the same general direction as the steam flow, devices clamping the members at the ends, a support for the nozzle, abutments engaging the members on opposite sides and holding them in contact, and means which pass through the parts of the nozzle into the support for securing them in place.



3. In a nozzle structure, the combination of a sectionalized nozzle divided in a cylindrical plane into two principal parts, devices at the ends of the parts for uniting them, a support for the nozzle abutments formed on the support which have opposed concentric surfaces that engage the parts of the nozzle and hold them in contact throughout their length, and bolts that pass through the nozzle parts into the support for holding the same in place.

4. In a nozzle structure, the combination of a nozzle divided into two principal parts in a cylindrical plane and provided with a plurality of fluid-discharging passages, means located at each end of the nozzle for holding the parts together, a support having a recess with concentric side walls into which the nozzle may be inserted or withdrawn as a unit, the said walls holding the parts of the nozzle in contact, means for uniting the nozzle and support, and conduits in the support for supplying fluid to the nozzle passages.

874,924. RECEPTACLE FOR COFFEE-MILLS. FRANK BARTZ and FREDERICK A. WYGANT, Hornell, N. Y., assignors to Bartz, Wygant & Brown, Hornell, N. Y., a Corporation. Filed June 5, 1907. Serial No. 377,423.



1. The combination with a coffee mill having a spout, of a receptacle, a support therefor, said receptacle having an opening in its top, and a funnel let into said opening and adapted to yieldingly engage the spout when the receptacle is placed upon the support.

2. The combination with a coffee mill having a spout, of a receptacle, a support therefor, said receptacle having an opening in its top, and a spring-actuated funnel attached to the receptacle to extend into the opening and adapted to engage the spout when said receptacle is slid upon the support into position under said spout.

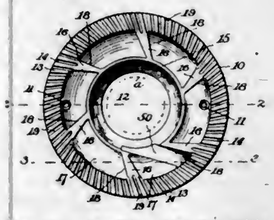
3. The combination with a coffee mill having a spout, of a receptacle, a support therefor, said receptacle having an opening in its top, a spring-actuated funnel attached to the receptacle to extend into the opening, and a guide-flange extending around the funnel, said funnel being adapted to engage the spout when the receptacle is slid upon the support into position under the spout.

4. The combination with a coffee mill having a spout, of a receptacle, a support therefor, said receptacle having an opening in its top, a spring-actuated funnel attached to the receptacle to extend into the opening and having an operating-member at one side, and a guide-flange extending partially around the funnel, whereby said funnel will engage the spout when the receptacle is slid upon the support into position under the spout.

5. The combination with a coffee mill having a spout, of a receptacle, a support therefor, said receptacle having an opening in its top, and a spring-actuated funnel attached to the receptacle to extend into the opening and having an operating member at one side, whereby said funnel will be depressed by the spout and yieldingly engage the same when the receptacle is slid upon the support into position under said spout.

[Claims 6 to 11 not printed in the Gazette.]

874,925. COFFEE-MILL. FRANK BARTZ and FREDERICK A. WYGANT, Hornell, N. Y., assignors to Bartz, Wygant & Brown, Hornell, N. Y., a Corporation. Filed June 17, 1907. Serial No. 379,416.



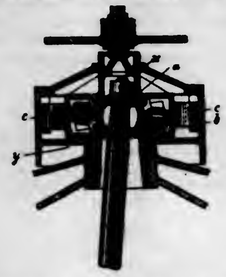
1. A grinding or pulverizing disk for mills, the face of which disk is provided with a marginal series of tangentially disposed teeth having cutting edges, a circular rib surrounding a central feed-opening in the disk and having its outer surface flush with the outer surface of the teeth, ribs extending tangentially from said circular rib to the marginal series of teeth, pockets formed between the ribs and teeth, and a recess extending across the circular rib to connect the feed opening with one of the pockets and feed the coffee beans thereto.

2. A grinding or pulverizing disk for mills, the face of which disk is provided with a marginal series of shallow channels tangentially disposed and forming teeth 13, a circular rib surrounding a central feed opening in the disk and having its outer surface flush with the outer surface of the teeth, ribs extending tangentially from the circular rib to the marginal series of teeth and each having a cutting edge, pockets between the ribs and teeth and inclined upward towards the teeth, and a recess for feeding the coffee beans to one of the pockets cutting across the circular rib and extending alongside the cutting edge of one of the tangential ribs, the bottom of said recess being inclined upward to the marginal series of teeth, as herein shown and described.

3. A grinding disk having a marginal series of shallow channels forming teeth each having a cutting edge at one side, a circular rib surrounding a central feed opening in the disk, ribs extending tangentially from the circular rib to the marginal series of teeth and each rib having a cutting edge at one side, pockets between the ribs and teeth and inclined upward to the teeth, and a recess cutting across the circular rib; combined with a disk 20 having shallow channels tangentially disposed and extending inward from the periphery of the disk, and a recess in said disk at the central portion thereof.

4. A grinding disk having a marginal series of shallow channels forming teeth each having a cutting edge at one side, a circular rib surrounding a central feed opening in the disk, ribs extending tangentially from the circular rib to the marginal series of teeth and each having a cutting edge at one side, pockets between the ribs and teeth and inclined upward to the teeth, and a recess cutting across the circular rib and extending alongside the cutting edge of one of the tangential ribs combined with a companion grinding disk having shallow channels tangentially disposed and extending inward from the periphery of the disk, and a recess extending parallel with a diameter of the disk and presenting a cutting edge at one side.

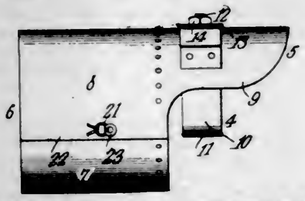
874,926. RESILIENT CONNECTION FOR PENDULUM-MILLS. HERMANN BEHR, Magdeburg-Sudenburg, Germany. Filed May 15, 1907. Serial No. 373,757.



1. In a pendulum mill, the combination of a driving pulley, a frame mounted in said pulley and free to slide bodily therein, a pendulum connected by a universal joint with said frame, and yielding connections between said sliding frame and driving pulley.

2. In a pendulum mill, the combination of a driving pulley, a frame mounted in said pulley and free to slide bodily therein in any horizontal direction, a pendulum connected with said frame by a universal joint, and elastic blocks between said frame and pulley.

874,927. SAND-BAND FOR VEHICLES. FRANK BENNETT, Mineral Wells, Tex. Filed May 1, 1907. Serial No. 371,319.



1. A sand band for vehicles comprising a fixed upper portion, an under portion movably connected thereto, said portions being disposed to surround a hub, a laterally displaced portion integral and concentric with the upper portion and constituting an overhang, and means connected to the overhang for securing the band to an axle.

2. A sand band for vehicles comprising a fixed upper portion, an under portion movably connected thereto, said portions being disposed to surround a hub, an extension integral with the upper portion of the band and concentric therewith, an abutment within the overhang, and means engaging the overhang for clamping the abutment upon an axle.

3. A sand band for vehicles, comprising a two part cylindrical portion, the upper half extending inwardly to form an overhang, the lower half hinged to the upper half at one side and provided with a temporary securing means on the other side, a partition attached to the inner end of each part of said cylindrical portion and adapted to overlap, a registering slot being formed in each partition, and securing means connected with the overhang.

4. A sand band for vehicles comprising a cylindrical portion divided horizontally, hinged together at one side and having a separable fastening at the other side, a semi-circular portion connected to the inner end of each of said divided portions and arranged to overlap and a registering slot in each partition, an overhang continuous with said upper portion of the sand band and a clip connecting the sand band to the axle.

5. A sand band for vehicles comprising a horizontally divided cylindrical portion hinged together, a divided partition at the inner end of said cylindrical portion, an overhang forming part of said sand band, a bearing plate within the overhang, a plate on top of the overhang and a fastening means coöperating with said plates for securing the overhang to an axle.

874,928. SUCCINYL-DIOXYTOLUIC ACID. RUDOLPH BERENDES and JÜRGEN CALLSEN, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed July 22, 1907. Serial No. 385,045. (Specimens.)

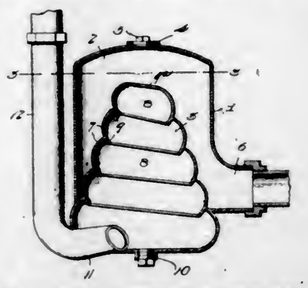
1. The herein-described new succinyl-dioxytoluic acids obtainable by the action of the acid dichlorid of succinic acid upon oxytoluic acids, which in the acid form are white crystalline powders soluble in alcohol and acetone, scarcely soluble in water and which by heating with caustic alkalies are decomposed into succinic acid and oxytoluic acids, forming salts with bases which retain the valuable therapeutic properties exhibited by the acids, substantially as hereinbefore described.

2. The herein-described new succinyl-diparaoxytoluic acid obtainable by the action of the acid dichlorid of succinic acid upon para-oxytoluic acid, which in the acid form is a white crystalline powder melting at 193°–195° C., soluble in hot alcohol and glacial acetic acid, scarcely soluble in water and which by heating with caustic alkalies is decomposed into succinic acid and para-oxytoluic acid, forming salts with bases which retain the valuable therapeutic properties exhibited by the acid, substantially as hereinbefore described.

874,929. SUCCINYL-DISALICYLIC ACID. RUDOLPH BERENDES and JÜRGEN CALLSEN, Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed July 22, 1907. Serial No. 385,046. (Specimens.)

The herein-described new succinyl-di-salicylic acid obtainable by the action of the acid dichlorid of succinic acid upon salicylic acid, which in the acid form is a white crystalline powder melting at 178–180° C., soluble with difficulty in cold alcohol and glacial acetic acid, scarcely soluble in water and which by heating with caustic alkalies is decomposed into succinic acid and salicylic acid, forming salts with bases which retain the valuable therapeutic properties exhibited by the acid, substantially as hereinbefore described.

874,930. ANTISIPHON-TRAP. ADOLPHUS L. BOWER, Lima, Ohio. Filed Apr. 24, 1907. Serial No. 370,053.



1. A fluid seal trap comprising an outer casing having a bottom outlet neck, an inner sealing cone projecting upwardly within the casing and provided with a top outlet opening, and means for imparting a whirling motion to the fluid and material passing through said sealing cone.

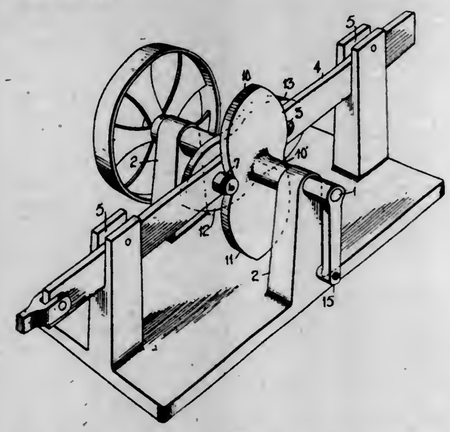
2. A trap comprising an outer casing having a bottom outlet, and a spirally grooved inner cone projecting upwardly within the casing and having a bottom inlet and a top outlet.

3. A trap comprising an outer casing inclosing an air space and having a bottom outlet, and an inner sealing cone projecting upwardly into said air space from the bot-

tom of the casing, said inner cone being provided with a spirally corrugated shell forming interior spiral grooves winding from the bottom to the top of the cone, said cone being further provided with a bottom tangential inlet, and with a top opening at its apex.

4. A trap comprising an outer casing, and an inner sealing cone provided with interior spiral grooves and inwardly and downwardly projecting baffle lips overhanging said grooves, said cone being further provided with a bottom inlet and a top outlet.

874,931. MECHANICAL MOVEMENT. GODFREY BRENNER, Poughkeepsie, N. Y. Filed May 23, 1907. Serial No. 375,336.



1. In a mechanical movement, the combination of a supporting frame, a reciprocating member mounted thereon, a rotary shaft journaled on said frame, and two spaced cam members secured to said shaft at different angles to each other and arranged to engage and reciprocate said reciprocating member, said cam members being each composed of oppositely disposed heart-shaped cams.

2. In an apparatus of the class described, the combination of a supporting frame, a reciprocating member mounted thereon, a rotary shaft journaled on said frame and extending transversely relatively to said reciprocating member, two cam members fixed to said shaft on opposite sides of said reciprocating member and each composed of oppositely disposed heart-shaped cams, said cam members being arranged at different angles to each other, and means on opposite sides of said reciprocating member arranged to be engaged by said cams and impart a constant reciprocating motion to said member.

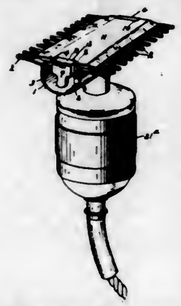
3. In a mechanical movement comprising a suitably driven shaft, a reciprocating member, a pair of cam members composed of oppositely disposed heart-shaped cams and mounted on said shaft on either side of said reciprocating member, and means carried by said member on opposite sides thereof with which said cams engage to impart a constant reciprocating movement thereto.

4. In a mechanical movement comprising a suitably driven shaft, a reciprocating member having formed therein a slot through which said shaft projects, oppositely disposed heart-shaped cams spaced from each other and arranged on said shaft adjacent each side of said reciprocating member, and rollers arranged on opposite sides of said member in position to be alternately engaged by the oppositely disposed heart-shaped cams on each side of said member to impart a constantly reciprocating motion to the latter.

5. A mechanical movement comprising a suitably driven shaft, a reciprocating member, oppositely projecting heart-shaped cams mounted on said shaft adjacent to one side of said member, similarly disposed cams mounted on said shaft adjacent to the other side of said member, the last-mentioned cams being arranged at right angles to the first-mentioned cams, rollers secured to the opposite sides of the plate and adapted to be alternately engaged by the opposite projecting cams on each side of said member to impart a reciprocating motion to said member, and a connecting rod secured on said reciprocating member.

[Claim 6 not printed in the Gazette.]

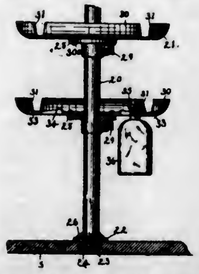
874,932. HAIR-CLIPPING DEVICE. ISAAC N. BRIGHAM, Melrose Park, Ill., assignor to The Electro Automatic Safety Razor Company, Orange, Cal., a Corporation of California. Filed Apr. 23, 1907. Serial No. 369,837.



1. In a hair cutting device the combination of a housing provided with guide ways and guard fingers, a blade carrying a head, guided by the guide ways of the housing, one end of said carrying head provided with an inclined faced lug, a pivoted clip located at the opposite end of the carrying head and a spring adapted to hold the clip in engagement with the blade and means for imparting a reciprocating movement to the blade, substantially as and for the purpose specified.

2. In a hair cutting device, the combination of a housing a blade carrying head carried and guided by said housing, a cutting blade provided with parallel cutting edges, one of said edges located at the horizontal center line and the opposite edge located at one side of the horizontal line, and means for imparting reciprocating movement to the blade, substantially as and for the purpose specified.

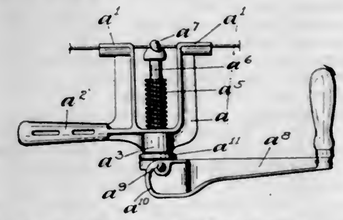
874,933. MEDICINE-CASE. JOSEPH BRISTOW, Jr., Oak Park, Ill. Filed Feb. 25, 1907. Serial No. 359,057.



2. In a bottle holding device, rotatable disks and means disks adjustably mounted on said shaft and adapted to rotate therewith, said disks formed of sheet metal with an upturned periphery and with radial openings, the margins of said openings being inclined substantially as described.

2. In a bottle holding device, rotatable disks and means for supporting said disks, each of said disks having peripheral and radial openings formed therein, the margins of the radial openings being inclined toward the outer edge of the disk, and the outer edge of the disk being curved upwardly.

874,934. FENCE-WIRE TIGHTENER. HENRY BROOME and CHARLES J. BOWLUS, Springfield, Ohio. Filed Apr. 8, 1907. Serial No. 367,083.



1. In a device for tightening fence wire, the combination of a frame, a movable member supported by said frame, a hook member slidingly mounted in said movable member, means connected with the hook member for operating said hook member independent of the movable member, and connections between the movable member and the hook member for operatively connecting said members so that they will rotate in unison, substantially as specified.

2. In a device of the character mentioned, the combination of a frame, a movable member supported by said frame, a hook member slidingly mounted in said rotatable member, a crank connected to said hook member for sliding said member to and from the fence wire, means for connecting the hook member and the rotatable member whereby the crank will rotate said members in unison, substantially as specified.

3. In a device of the character mentioned, the combination of a frame, a rotatable member supported by said frame and the member for causing a longitudinal movement of the member when it is rotating, a hook member supported by the frame, a single crank arm connected with the member for giving the hook member a longitudinal movement independent of the movable member, and connections between the hook member and the rotatable member for causing same to be moved in unison by the crank, substantially as specified.

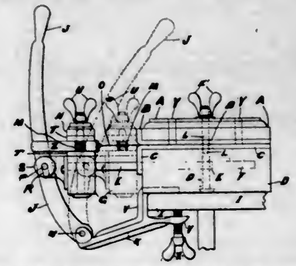
4. In a device of the character mentioned, the combination of a frame, a rotatable screwthreaded member supported by said frame, a hook member slidingly mounted in the rotatable member, operating means connected to the hook member for sliding same independent of the rotatable movement, and connections between the hook member and the rotatable member for causing said members to be rotated and simultaneously moved longitudinally by the operating means.

5. In a tightening device for fence wire, the combination of a frame, projecting supports pivotally connected to said frame, a rotatable member, a hook member supported by the rotatable member, means for rotating said rotatable member, and connections between the rotatable member and said projecting supports whereby said supports will be moved simultaneously with the rotation of said rotatable member.

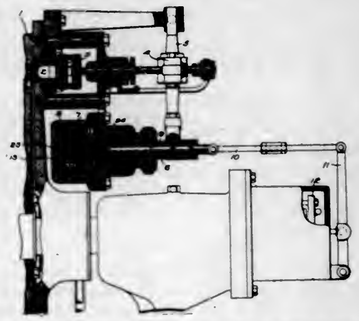
874,935. KNIFE-CLEANER. JOHN BROWN, Auckland, New Zealand. Filed Oct. 8, 1906. Serial No. 338,010.

1. The combination of a knife cleaning member in sections provided, respectively, with knife cleaning facings, an extension on one of said sections, provided with means for fastening said knife cleaning member to a table or other support, a hand lever fulcrumed to said extension, and a longitudinal piece connected with and operable by said lever, said longitudinal piece having knife clamping means and also having rods, and that section of the knife cleaning member which is provided with said extension, being furnished with channels to receive said rods.

2. The combination of a knife-cleaning member in upper and lower sections provided respectively with knife-cleaning facings, the upper section having elongated slots for the supply of cleaning powder to the facings thereof, and an extension on the lower section provided with means for fastening the knife-cleaning member to the table or other support, a hand-lever fulcrumed to said extension, a longitudinal piece connected with and operable by said lever, said longitudinal piece having knife-clamping means and also having rods, and the upper section having channels to receive said rods, and thumb-screw means for clamping said sections together.



874,936. GOVERNING MECHANISM FOR TURBINES. JOHN G. CALLAN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 16, 1906. Serial No. 321,993.



1. In a governing mechanism, the combination of a regulator, a governor controlling it, and a device which cooperates with and assists in moving the governor in its action on the regulator.

2. In a governing mechanism, the combination of a regulator, a motor for moving it, a governor for controlling the movements of the motor, and a device coöperating with the governor to reduce the load thereon as it controls the motor.

3. In a governing mechanism, the combination of a regulator, a motor for moving it, a means for controlling the motor, a governor for varying the position of said means as the load requirements change, and a device cooperating with and reducing the load on the governor as it acts on said means.

4. In a governing mechanism, the combination of a regulator, a hydraulic motor for moving it, a pilot valve controlling the motor, a governor regulating the movements of the pilot valve, and a device coöperating with the governor to move the pilot valve.

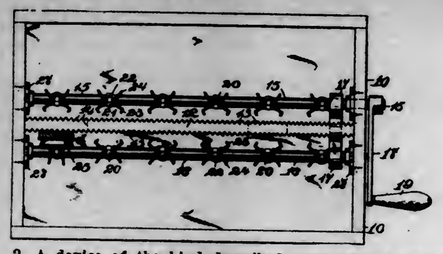
5. In a governing mechanism, the combination of a regulator, a motor for moving it, a speed governor controlling the motor, and a device responding to unbalanced pressures for assisting the governor.

[Claims 6 to 12 not printed in the Gazette.]

874,937. APPARATUS FOR CLEANING BLACKBOARD-ERASERS. STEPHEN M. CASE, Newark, N. J. Filed Aug. 23, 1907. Serial No. 389,783.

1. A device of the kind described comprising a casing having a vertical beating surface therein, a shaft rotatable in the casing, a series of eraser holders radially arranged on the shaft, and means for manually operating

the shaft to cause a contact of the eraser holders in unison on the beating surface.



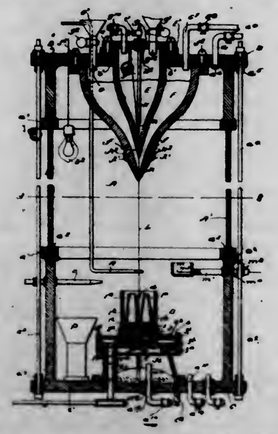
2. A device of the kind described comprising a casing having a partition therein, a shaft on each side of the partition and parallel therewith, holders on the shafts for grasping an eraser, mechanism connecting the shafts to move them in unison, and a handle connected with one of the shafts for its manual manipulation.

3. A device of the kind described comprising a casing having a partition therein, shafts parallel with the partition, segmental gears on the shafts and in mesh, a handle on one shaft, posts projecting up from the shafts, and eraser holders on the ends of the posts.

4. A device of the kind described comprising a casing having a partition therein, shafts parallel with the partition, segmental gears on the shafts and in mesh, a handle on one shaft, posts projecting up from the shaft, spring clasps on the tops of the posts, and a pair of finger pieces on each clasp.

5. A device of the kind described comprising a casing having a partition therein, a shaft parallel with the partition, a series of posts mounted on the shaft, a spring plate encircling the shaft and projecting therefrom on either side, grasping portions on the projecting ends of the spring plates, finger pieces on the spring plates for spreading the holding portions thereof, and a handle on the shaft for reciprocating it.

874,938. MACHINE AND APPARATUS FOR MANUFACTURING FILAMENTS FOR ELECTRIC INCANDESCENT LAMPS. FRANCIS M. F. CAZIN, Hoboken, N. J. Filed Aug. 27, 1903. Serial No. 170,940.



1. In an apparatus of the character stated, an exhaustible receptacle, means for squirting a prospective fillet or glower into said receptacle for the purposes specified and means for air exhausting said receptacle.

2. In an apparatus of the character stated, an exhaustible receptacle, a plurality of fillet squirters arranged to squirt a prospective fillet or glower into said receptacles, and means for air exhausting said receptacle.

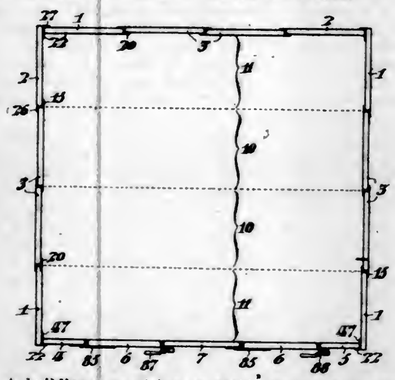
3. An apparatus of the character stated, an exhaustible receptacle, means for squirting a prospective fillet or glower into said receptacle and means for simultaneously forming said fillet into its final shape substantially as shown and described.

4. An apparatus of the character stated comprising a chamber, means for simultaneously squirting a core and cover therefor into said chamber and means for forming such squirted parts into their final shape, and means for simultaneously exhausting said chamber.

5. In an apparatus of the character stated, an exhaustible vessel, a plurality of receptacles having concentrically arranged squirting mouths, said receptacles adapted to receive semi-plastic material, means for maintaining such material in the semi-plastic liquid condition and for forcing such material out of the squirting mouths in the receptacles, said receptacles having their squirting mouths arranged to discharge into said exhaustible vessel and means for simultaneously forming such squirted fillet into the final shape desired.

[Claims 6 to 23 not printed in the Gazette.]

874,939. REFRIGERATOR-BUILDING. FRANK B. CLAYTON and GEORGE D. SPIELBERGER, Philadelphia, Pa. Filed June 22, 1907. Serial No. 380,216.



1. A building comprising separable hollow wall panels formed of opposed sheet metal plates interlocked to form flanges at their margins whereby said panels are connected, substantially as set forth.

2. A building comprising a series of unit wall panels formed of opposed sheet metal plates interlocked at their margins to form flanges which overlap adjoining panels, substantially as set forth.

3. A building comprising a series of unit wall panels formed of opposed sheet metal plates maintained in spaced relation by brace bars, and interlocked at their margins to form flanges which overlap the adjoining panels, substantially as set forth.

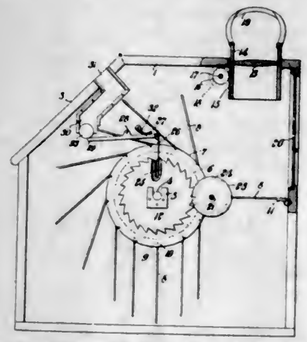
4. A building comprising a series of unit wall panels, formed of opposed sheet metal plates, maintained in spaced relation by brace bars and interlocked at their margins; a filling which is a nonconductor of heat inclosed between said plates; and flanges on said panels which overlap adjoining panels, substantially as set forth.

5. A building comprising a series of panels having flanges extending in a plane with one of their faces, so arranged that the alternate panels have their flanges respectively within and without said building and overlapping the opposite faces of the adjacent panels, substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

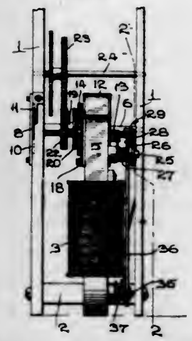
874,940. PICTURE-EXHIBITING MACHINE. ROUDY BUSH COLE, Fredericktown, Mo. Filed Feb. 28, 1907. Serial No. 359,812.

1. In an apparatus of the class described, a rotatable member, a ratchet wheel movable with the rotatable member and provided with peripheral ratchet teeth, a radial groove or slot in the ratchet wheel in the plane of the peripheral teeth and adjacent to one of said teeth, a lever having at one end a pivoted dog or locking member movable into and out of the groove or slot in the ratchet wheel and acting as a back-stop for said ratchet wheel, and a coin chute having its inner end adjacent to the other end of the lever and arranged to direct a coin into engagement with the other end of the lever.



2. In a coin-controlled apparatus, a locking and releasing mechanism therefor, comprising a ratchet wheel having peripheral teeth and a radial groove or slot extending into the body of the ratchet wheel in the radial plane of and to a greater extent than the ratchet teeth, a lever carrying at one end a dog movable into and out of the groove or slot in the ratchet wheel and coacting with the ratchet teeth to act as a back-stop for said ratchet wheel, and means coacting with the lever in opposition to the weight of a coin to permit a movement of the lever by the coin to an extent sufficient to carry the dog out of the slot but not out of the path of the ratchet teeth.

874,941. ELECTRIC CLOCK. ULYSSES L. COLLINS, St. Louis, Mo., assignor to Collins Electric Clock Company, St. Louis, Mo., a Corporation of Missouri. Filed Mar. 13, 1907. Serial No. 362,119.

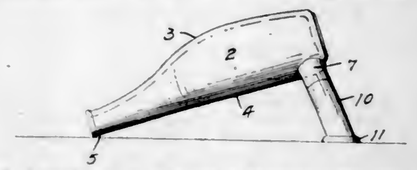


1. In an electric clock, a pair of magnet coils, the cores of which are extended, a shaft journaled between the ends of the cores, an armature fixed on said shaft, a spring fixed to and adapted to be wound by the shaft when rotated in one direction, connections between the shaft and the clock gearing, an electric circuit in which the coils are located, an arm pivoted to one of the magnet cores for opening and closing the circuit, an arm pivoted at its lower end to the magnet frame, a pin carried by the upper end of said arm for engaging beneath the contact arm to hold the same elevated when the circuit is open, and means carried by the armature for actuating the pin carrying arm to release the contact arm.

2. In an electric clock, a pair of magnet coils, the cores of which are extended, an armature arranged for operation between the extended ends of the cores, a power spring connected to and arranged to be wound up for moving the armature in one direction, suitable driving connections actuated by the power stored in the spring for moving the clock mechanism, an electric circuit in which the coils are located, an arm pivoted to one of the magnet cores for opening and closing the electric circuit, an arm pivoted to the magnet frame, a pin carried by the upper end of the arm to engage beneath the contact arm to hold the same elevated when the circuit is open, and means carried by the armature for actuating the pin carrying arm to release the contact arm, and which means also elevates the contact arm.

3. In an electric clock, a pair of magnet coils, the cores of which are extended, a shaft journaled between the ends of the cores, an armature fixed on said shaft, a spring fixed to and adapted to be wound by the shaft when rotated in one direction, means connected to the outer end of said spring whereby the tension of the same is varied, connection between the shaft and the clock gearing, an electric circuit in which the coils are located, an arm pivoted to one of the magnet cores for opening and closing the circuit, an arm pivoted to the magnet frame, a pin carried by the upper end of said arm for engaging beneath the contact arm to hold the same elevated when the circuit is open, and means carried by the armature for actuating the pin carrying arm to release the contact arm, and which means is adapted to elevate the contact arm.

874,942. NURSING-BOTTLE. THEODORE H. COOK, Minneapolis, Minn. Filed Aug. 2, 1907. Serial No. 386,726.



1. A nursing bottle having a flattened lower wall extending from end to end of the bottle, whereby the complete drainage of the bottle when tilted slightly is insured and legs provided on said wall and adapted to elevate the lower portion of the bottle above the neck thereof when the device is in use, substantially as described.

2. A nursing bottle having lugs or pins formed thereon at one end, and legs removably mounted on said lugs or pins and adapted to support the bottle in an inclined position.

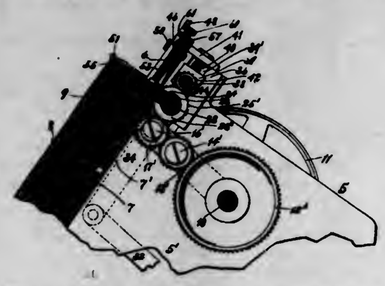
3. A nursing bottle having a lower wall that is in substantially the same plane as the lower portion of the bottle neck, whereby a flat even surface will be formed from the bottom of the bottle to the orifice, and said wall having a longitudinal centrally arranged depression, and legs provided on said wall and adapted to elevate the lower portion of the bottle above the neck thereof when the device is in use, substantially as described.

874,943. MECHANISM FOR FEEDING PAPER. HENRY B. COOLEY, New Britain, Conn., assignor to The American Paper Goods Company, Kensington, Conn., a Corporation of New Jersey. Filed Feb. 8, 1905. Serial No. 244,740.

1. The combination, with a support for a pile of sheets, of a picker movable beneath the pile, and adapted to seize the lower sheet thereof; feed rolls sleeved on the picker-shaft; means for driving said feed-rolls; and means co-operating with said feed-rolls to seize and advance the sheet delivered by the picker.

2. The combination, with a support for a pile of sheets,

a pneumatic picker adapted to seize a sheet from said pile; a rotary shaft carrying the picker; feed-rolls sleeved on the picker-shaft for advancing the sheet delivered by the picker; complemental feed-rolls; and means for continuously rotating all of said feed-rolls.



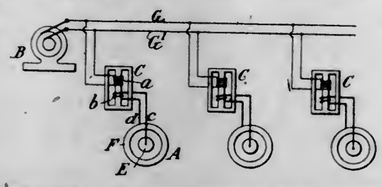
3. The combination, with a support composed of a pair of slides, of means for simultaneously actuating the slides; feed-rolls movable with the slides; gearing for continuously driving the feed-rolls; and a device carried by the shaft of one of the feed-rolls for delivering a sheet to said feed-rolls.

4. The combination, with a sliding support, of feed-rolls movable with said support; a table for receiving a pile of sheets; a picker also movable with the support, and upon the shaft of which two of the feed-rolls are sleeved; and means for actuating said picker to cause it to detach a sheet from the pile, and deliver said sheet to the feed rolls.

5. The combination, with a stationary table for receiving a pile of sheets, of a movable support, spring-controlled levers movable with the support; and buffers carried by said levers, and adapted to engage the end of the pile.

[Claims 6 to 32 not printed in the Gazette.]

874,944. ART OF ELECTRIC SMELTING. FRANK CREELMAN, New York, N. Y., assignor to The Willson Carbide Works Company of St. Catherines, Limited, St. Catherines, Canada, a Corporation. Filed Jan. 5, 1904. Serial No. 187,794.



1. The process of electric smelting which consists in subjecting the material to be smelted to the heat of an electric current of substantially uniform amperage notwithstanding variations in the internal resistance of the furnace, and regulating the furnace to restore the normal internal voltage and maintain an approximately uniform expenditure of energy.

2. The process of electric smelting which consists in subjecting the material to be smelted to the heat of an electric arc maintained by electric energy of substantially uniform amperage notwithstanding variations in the internal resistance of the furnace, and regulating the furnace to restore the normal internal resistance and thereby maintain an approximately uniform expenditure of energy.

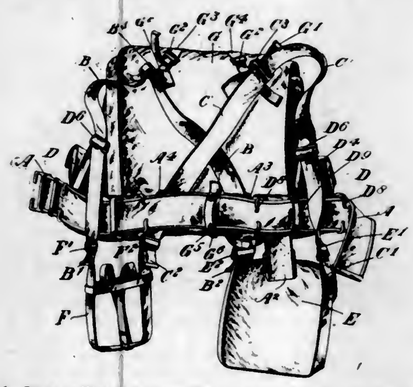
3. The process of electric smelting which consists in subjecting the material to be smelted to electric energy of substantially uniform amperage notwithstanding variations in the internal resistance of the furnace, and regulating the furnace by means of the variations in electromotive force occurring at its terminals to restore the normal internal resistance.

4. The production of calcium carbid by subjecting the mixture to the heat produced by a current of electricity of substantially uniform amperage notwithstanding variations in the internal resistance of the furnace, and regulating the furnace to restore the normal internal resistance and thereby restore the normal voltage and maintain an approximately uniform expenditure of energy.

5. The production of calcium carbid by fusing the entire mixture in a zone of fusion produced by an electric arc maintained by a source of energy of substantially uniform amperage notwithstanding variations in the internal resistance of the furnace, and discharging the fused carbid as a crustless pig.

[Claims 6 and 7 not printed in the Gazette.]

874,945. MILITARY EQUIPMENT. ARTHUR J. DAVEY, Westminster, London, England. Filed Jan. 28, 1907. Serial No. 354,582.



1. In a military equipment, the combination of a belt, cartridge carriers detachably connected to the belt, sling members, a haversack and a support for a water bottle or other articles to which the ends of the sling members are respectively cross connected, and means for connecting the sling members to the belt at the back and to the cartridge carriers in the front as set forth.

2. In a military equipment, the combination of a belt, cartridge carriers detachably connected to the belt, sling members, a haversack and a support for a water bottle or other articles to which the ends of the sling members are respectively cross connected, means for connecting the sling members to the belt at the back and to the cartridge carriers in the front, a knapsack and means for attaching it to the sling members as set forth.

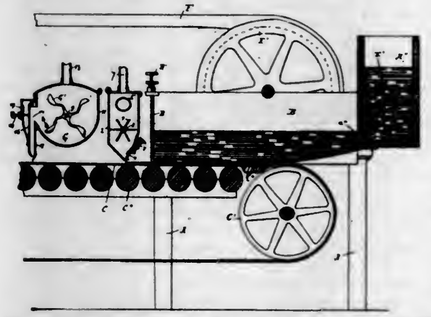
3. In a military equipment, the combination of a belt, cartridge carriers detachably connected to the belt, sling members, a haversack and a support for a water bottle or other articles to which the ends of the sling members are respectively cross connected, means for connecting the sling members to the belt at the back and to the cartridge carriers in the front, a knapsack, means for attaching it to the sling members, and steadying straps crossing the knapsack and connected at their upper ends to the knapsack and at their lower ends to the rear lower edges of the cartridge carriers as set forth.

4. In a military equipment, the combination of a belt, cartridge carriers connected with the belt, independent sling members connected with the belt at the back and with said cartridge carriers at the front, the connections between said sling members and the belt and cartridge carriers being at points in the length of the sling members distant from the ends thereof, and the ends of the sling members extending below the belt towards the front and back of the sides of the wearer, substantially as and for the purpose described.

5. In a military equipment, the combination of a belt, cartridge carriers connected with the belt, sling members

crossing each other freely at the back and detachably connected with the belt at the back and connected with the cartridge carriers at the front, the points of connection between said sling members and the belt and cartridge carriers being at points distant from the ends of the sling members and both ends of each sling member extending below the belt, whereby each sling member is adapted to be directly connected with two articles arranged substantially opposite each other with relation to the belt.

874,946. PAPER-MAKING MACHINE. CARL EICHHORN and CLARENCE W. CAMPBELL, Dexter, N. Y., assignors to Eichhorn-Campbell Company, Dexter, N. Y. Filed May 4, 1905. Serial No. 258,863.



1. In a device of the character described comprising a feed box, a means of carrying stock therefrom through a paper machine, a feed box transverse the screen of said machine and having a longitudinal outlet at the bottom thereof and being pivotally mounted to adjust the angle of discharge therefrom onto the screen and conduit means for supplying said feed, substantially as described.

2. In a device of the character described comprising a feed box and a screen adapted to carry paper stock therefrom, through the paper making machinery, a plurality of independent feed boxes, pivotally mounted and extending substantially transverse the screen and means for applying pressure to the contents of the said feed boxes, substantially as described.

3. In a device of the character described, a plurality of feed boxes located substantially transverse the screen, each pivotally mounted and each provided with a close cover and each being adapted to receive pressure therein to drive the contents thereof onto the stock passing beneath the boxes, substantially as described.

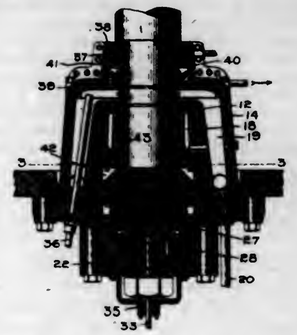
4. In a paper making machine, having as an element thereof means for carrying paper stock through the machine, a feed box mounted substantially transverse of the screen, having its sides converging at the bottom into a longitudinal opening facing against the travel of the stock carrying means, means for limiting the extent of said opening, and means for altering the direction of the fluid discharged therefrom, substantially as shown.

5. In a device of the character described, a transverse feed, conduits for supplying stock thereto, means for ejecting the stock therefrom under pressure, and means for governing the direction and extent of the discharge of stock therefrom, substantially as shown.

[Claims 6 to 22 not printed in the Gazette.]

874,947. BEARING FOR ELASTIC-FLUID TURBINES. WILLIAM L. R. EMMET and OSCAR JUNGGREN, Schenectady, N. Y., assignors to General Electric Company, a Corporation of New York. Filed June 25, 1903. Serial No. 163,060.

1. In a step bearing for a turbine, the combination of a shaft, a chambered base, a shell which is detachably secured to the under side of and rises above the level of the base, a step and a guide-bearing mounted in the shell, and means for conveying lubricant under pressure to the step-bearing.



2. In a step bearing for a turbine, the combination of a shaft, a chambered base, a shell which is detachably secured to the under side of and rises above the level of the base, a bearing block which is attached to the end of the shaft, a second bearing block in line with the first and supported by the shell, there being a chamber formed between the blocks, and a means for delivering a lubricating fluid to the chamber under pressure for supporting the wheel shaft and maintaining a lubricating film between the adjacent surfaces of the blocks.

3. In a step bearing for a turbine, the combination of a shaft, a chambered base, a shell which is detachably secured to the under side of and rises above the bottom of the base, a detachable plate secured to the shell, a bearing block secured to the end of the shaft, a second block supported by the plate and secured against rotation, means for maintaining a film of lubricant between the adjacent surfaces of the bearing blocks, and a means for adjusting the shaft longitudinally.

4. In a step bearing for a turbine, the combination of a shaft, a chambered base, a shell which is detachably secured to the under side of the base, a guide-bearing carried by the upper part of the shell, a bearing block secured to the lower end of the shaft, a plate detachably secured to the lower part of the shell, a bearing block supported by the plate, an adjusting means passing through the plate and sustaining the weight on the lower bearing block, and a means for preventing the lower block from turning.

5. In a step bearing for a turbine, the combination of a shaft, a chambered base, a shell which is secured to the base, a bearing block that is attached to the end of the shaft, a second bearing block in line with the first, a plate secured to the shell for supporting the second block, an adjusting device for the second block which passes through the plate, and a means for conveying lubricant through the adjusting device for lubricating the adjacent surfaces of the blocks.

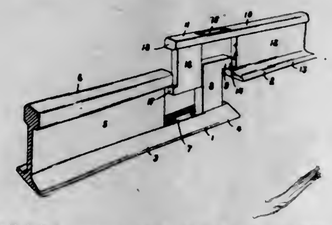
[Claims 6 to 31 not printed in the Gazette.]

874,948. RAIL-JOINT. JAMES L. FENN, Jr., Bracebridge, Ontario, Canada. Filed July 3, 1907. Serial No. 382,062.

1. A rail joint comprising a rail having its base extending beyond its head and web and a slot in said base forward of said web and a lug forward of said slot projecting upwardly to the level of said head, and a rail having its head extending beyond its web and base and a slot in said forward extensions and a lug forward of said slot projecting downwardly into the slot in said base, said slot in said head receiving the said lug from said base, substantially as described.

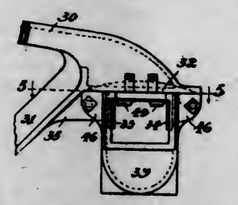
2. In a rail joint, the combination of two rails joined longitudinally and having the head and base shortened

and slotted correspondingly and downward and upward projections registering with and entering the aforesaid slots and extending to the lower surface level of the said base and the upper surface level of said head, substantially as described.



3. A rail joint, comprising a rail having its base extending beyond its head and web and said head projecting slightly beyond the web and a slot through said base having its inner end wall in alinement with the end face of said head and a lug extending vertically from said base at the other end of said slot and rigid with said base and having an ear projecting outwardly therefrom at its upper end, a rail having its head extending beyond its base and web, said base projecting slightly beyond said web and a slot through said head having its inner end wall in alinement with the end face of said base and a lug extending downwardly from said head at the forward end of said slot, said lug being rigid with said head and partially extending over the distance between said slot and the end of said rail and having at its lower end an ear extending outwardly therefrom, and a locking bar having side walls joined by an end wall and an intermediate wall towards the open end, said side walls having a flaring lower end spreading over the base of said rail, substantially as described.

874,949. TRUCK SIDE FRAME AND JOURNAL-BOX. GEORGE G. FLOYD, Granite, Ill., assignor to American Steel Foundries, New York, N. Y., a Corporation of New Jersey. Filed Mar. 25, 1907. Serial No. 364,303.



1. A car truck side frame having a part adapted to project into the interior of an independent journal box or casing, substantially as described.

2. A car truck side frame having a portion integral therewith adapted to project into the interior of an independent journal box or casing, substantially as described.

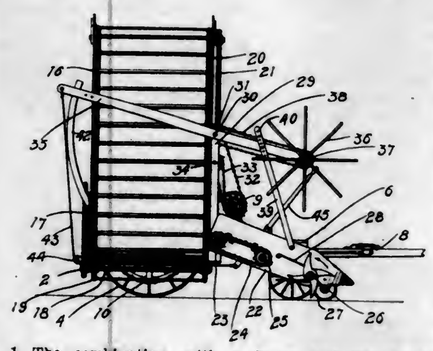
3. The combination of a car truck side frame and a journal box or casing, the latter having an aperture through which a part of said side frame projects into the interior thereof, substantially as described.

4. The combination of a car truck side frame having a lug integral therewith and a journal box or casing having an aperture through which said lug projects into the interior of said box or casing, substantially as described.

5. The combination of a car truck side frame having a lug or projection integral therewith, a journal box or casing having an aperture through which said lug projects into the interior of said box or casing, an axle the end of which extends into said box or casing, and a bearing for the said axle having a shoulder co-acting with said lug or projection of the side frame to prevent said bearing from moving transversely to the side frame in one direction, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

874,950. SHOCK AND HAY LOADER. FRANK FORMAN, Wahpeton, N. D. Filed Aug. 1, 1906. Serial No. 328,715.



1. The combination, with a frame and its carrying wheels, of horizontal and inclined carrier belts operating transversely with respect to the draft line, a frame section hinged on said frame in front of said horizontal carrier belt, a carrier belt operating in said frame section parallel with the draft line, a series of revolving gathering fingers mounted in said frame section and arranged to pick up the bound bundles or shocks and deliver them to said belt, and a revolving reel located above said gathering fingers and adapted to engage the tops of the shocks or bundles and direct them backward upon said frame section substantially as described.

2. The combination, with a frame, having carrying wheels and belts operating transversely with respect to the draft line, a frame section hinged on said frame, a series of gathering fingers provided at the forward end of said frame section, a reel mounted above said frame section and adapted to engage the tops of the shocks or bound bundles and direct them backward into said frame section, and means connecting said frame section and reel, and whereby their simultaneous vertical movement is permitted, substantially as described.

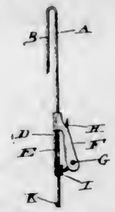
3. The combination, with a frame having carrying wheels and a transversely operating belt, of a frame section, gathering fingers mounted in said frame section, bars pivotally supported above said frame section, a reel mounted in the forward ends of said bars over said gathering fingers, means for tilting said bars and adjustable connections provided between said bars and said frame section.

4. The combination, with a frame having carrying wheels, of a belt operating transversely therein, a frame section pivoted on said frame, gathering fingers mounted in the forward end of said frame section, upright standards provided near the rear of said frame section, a rod connecting said standards, bars mounted on said rod and projecting in the front and the rear of same, a reel mounted on the forward end of said bars and overhanging said fingers, and means for tilting said bars to raise and lower said reel, substantially as described.

5. The combination, with a frame having carrying wheels, and a transversely operating carrier belt, of a frame section pivoted in front of said belt, gathering fingers mounted in the forward end of said frame section, bars pivotally supported above said frame section, a reel mounted in the forward end of said bars and overhanging said frame section, links adjustably connecting said frame section and said bars, and whereby the distance between said reel and frame section can be changed and said frame section and reel moved vertically simultaneously and means for operating said bars.

[Claims 6 to 14 not printed in the Gazette.]

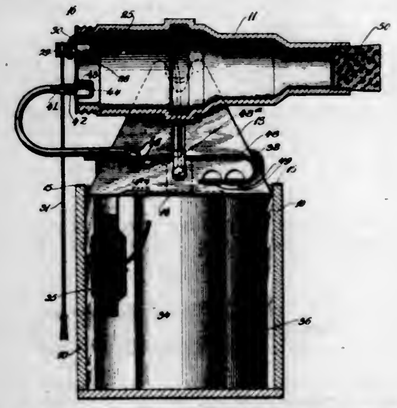
874,951. OVERSHOE-RETAINER. ROBERT F. FRAIZER, Cloverdale township, Putnam county, Ind. Filed Apr. 5, 1907. Serial No. 366,577.



1. A retainer for overshoes comprising a hooked bar having a series of holes therein, and a clamping member slidably mounted thereon having a lug to engage the holes in the bar, prongs extending upwardly from said clamping member to engage the sides of said bar to hold one end of the clamping member on the bar and also to engage the inside of the overshoe, and a tongue pivotally secured to said clamping member to hold the overshoe in engagement with said prongs, substantially as shown and described.

2. A retainer for overshoes comprising a hooked bar having a series of holes therein, and a clamping member slidably mounted thereon consisting of a base portion, two arms extending from said base portion and bent over said bar to form slides, said arms being then twisted and extended on substantially parallel planes and provided with holes in their ends, a clamping tongue pivotally mounted in the holes in said arms, a lug on said base portion to engage the holes in said bar, and prongs extending at right angles to said base portion, substantially as shown and described.

874,952. GAS-GUN. WILLIAM S. FRANKLIN, Bethlehem, Pa. Filed Feb. 19, 1907. Serial No. 358,256.



1. In a toy, the combination of a gun-body having a thread on its rear end, a breech-plate having a thread adapted to engage the thread of the gun-body, a gas nozzle and an igniter apparatus carried by said breech-plate, and a gas generator connected with said nozzle.

2. In a toy, the combination of a gun-body open at both ends, a breech-plate adapted to be secured to the rear end of the gun-body, an igniter and a gas nozzle carried by said plate, and a gas generator connected with said nozzle.

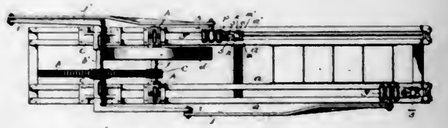
3. In a toy, the combination of a gun, a gas generator, connected to said gun, a stationary binding-post on said gun and having a projection within said gun, said binding-post being connected with a battery, a second binding-post having a spring within said gun, said binding-post being also connected with said battery, one of said connections having a spark-coil therein, and means for moving said projection across the path of said spring to produce sparks in the gun for exploding the gas.

4. In a toy, the combination of a gun, a headed rod projecting into said gun and having a spring between its head and the gun, adapted to thrust the rod inward, means outside of the gun by which the rod can be drawn outward, a spring mounted within the gun in the path of said head, a battery, to the poles of which said spring and headed rod are respectively connected, a spark-coil interposed in the circuit thus formed, a gas generator, and a connection between said generator and the gun for introducing gas into the gun.

5. In a toy, the combination of a gun, a gas generator connected to said gun, a binding post on said gun having a projection within the gun, and connected to a battery, a binding-post on said gun having a spring within the gun, and connected with said battery, one of said connections having a spark coil therein, and means for causing a relative movement between said spring and said projection to produce sparking in the gun, for exploding the gas.

[Claims 6 to 11 not printed in the Gazette.]

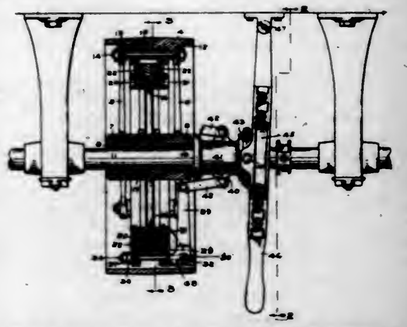
874,953. METAL-DRAWING MACHINE. GEORGE W. FROHLICH, Chicago, Ill. Filed Jan. 28, 1907. Serial No. 354,354.



1. A gripping device comprising a carrying block, a pair of clamping jaws pivotally mounted thereon, inclined slots near the forward ends of said clamping jaws, and a movable wedge member engaging said slots to operate said clamping jaws.

2. A gripping device comprising a carrying block, a pair of clamping jaws pivotally mounted upon said carrying block, inclined slots in the forward ends of said clamping jaws, and a wedge member having two pairs of inclined surfaces adapted to engage corresponding inclined surfaces in the slots in said clamping jaws.

874,954. FRICTION-CLUTCH PULLEY. LEE H. GEISENDORF, Indianapolis, Ind. Filed Dec. 26, 1906. Serial No. 349,406.

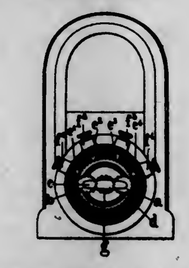


1. In a clutch-pulley, a loosely mounted belt pulley having one integral and one removable set of radial arms spaced apart from each other, a fixed friction wheel mounted inside the belt pulley between the two sets of arms, clutch means for clamping the belt pulley to the friction wheel, and means for connecting the removable set of arms to the belt pulley comprising flanges on the inside of the rim of the belt pulley extending transversely

from the junctions of the integral arms, said flanges having longitudinal grooves and terminating with abrupt ends to form bearing shoulders for the ends of the removable arms and bolts passing through the corresponding arms of both sets and through the longitudinal groove in the flange between the two arms being bolted.

2. The combination with a shaft, of a belt pulley loosely mounted thereon, said pulley having two sets of parallel arms spaced apart from each other, one set being removably secured to the pulley, a friction wheel mounted in a fixed manner on said shaft between the two sets of arms of the loosely mounted belt pulley, a pair of clamping rings one on each side of the friction wheel, said rings carried by the belt pulley, friction plates carried by the clamping rings, a pair of eye-bolts passing through the clamping rings at diametrically opposite points of said rings, plate extensions from one of the rings in pairs inclosing the eye of each eye-bolt, fulcrum pins carried by the eyes of said eye-bolts grooves in said plates parallel with the eye-bolts in which the ends of the fulcrum pins are seated, levers having bifurcated cam shaped ends embracing said eye-bolts and fulcrumed on said fulcrum pins, and means for moving the cam levers toward and from the belt pulley to move the clamping rings toward or from the friction wheel.

874,955. SPARKING MECHANISM FOR EXPLOSION-ENGINES. LOUIS A. GIANOLI, Paris, France. Filed Jan. 29, 1907. Serial No. 354,782.



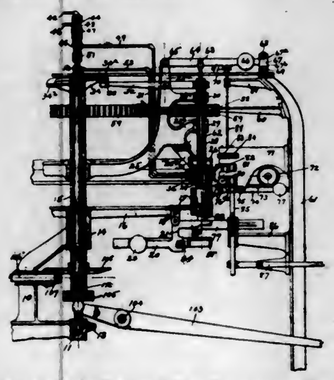
1. The combination with the rotary and stationary elements of a magneto generator, of a stationary insulating ring having an internal rack and contacts, a rotary gear connected to said rotary element to be driven thereby, a planet gear of conducting material meshing with said rack and rotary gear, and adapted in its planetary movement to make electrical connection with said contacts, and a wire in which current is induced by the relative movement of the rotary and stationary elements, said wire being electrically connected to said rotary gear, substantially as described.

2. The combination with the rotary and stationary elements of a magneto generator, of a stationary insulating ring having an internal rack and a plurality of contacts on one side of the center thereof, a rotary gear connected to said rotary element to be driven thereby, a pair of planetary gears of conducting material meshing with said rack and rotary gear and adapted in their planetary movement to make electrical connection with said contact, and a wire in which current is induced by the relative movement of the rotary and stationary elements, said wire being electrically connected to said rotary gear, substantially as described.

874,956. CAN-CAPPING MACHINE. GEORGE G. GLASS, Hoopeston, Ill. Filed July 22, 1905. Serial No. 270,781.

1. In a machine for operating upon cans, the combination with means for lifting and supporting a can, of an automatically operating can-centering mechanism comprising a plurality of pivoted devices having parts adapted to be struck and raised by the upper end of the can, and other parts adapted to be moved inwardly thereby against the sides of the can, substantially as described.

2. In a machine for operating upon cans, the combination with a rotary can-carrier, of a rotary annular member mounted above said can-carrier, and a plurality of pivoted centering devices mounted on said rotary annular member automatically engaging and centering the upper ends of the cans, substantially as described.



3. In a can-soldering machine, the combination with a rotary can-carrier and a superposed annular soldering iron guide carrying the soldering irons, of a plurality of counterweighted bell-crank levers mounted on the under side of said guide around the lower end of each soldering-iron and serving to engage and automatically center the cans as the latter are raised into engagement with said soldering-irons, substantially as described.

4. In a can-soldering machine, the combination with a soldering-iron and means for presenting a can thereto, of communicating gas and air chambers adjacent to and heated by said soldering-iron, means for introducing gas and air to said chambers, and a burner communicating with said gas chamber and directed against the iron, substantially as described.

5. In a can-soldering machine, the combination with a soldering-iron and means for presenting a can thereto, of communicating gas, air and mixing chambers all located adjacent to and heated by said soldering-iron, means for introducing gas and air to said gas and air chambers, and a burner connected with said mixing chamber and directed against the iron, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

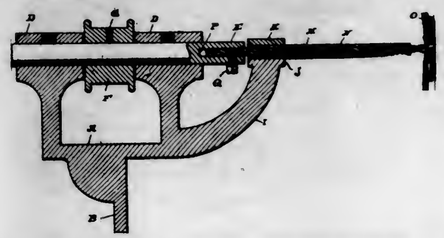
874,957. JEWELRY-CLASP. GEORGE GODLEY, Sarnia, Ontario, Canada. Filed Oct. 4, 1906. Serial No. 337,367.



1. A clasp comprising an outer clasp member provided with a cylindrical bore extending from one end and with slots extending through the walls of said member at a point above the end of said bore, the forward and rear walls of said slots being inclined toward the forward, or open, end of said bore, an inner clasp member adapted to be rotatably and slidably supported within said cylindrical bore, and heads projecting from said inner member, said heads provided with independent inclined faces for engagement, respectively, with the forward and rearward inclined walls of said slots, substantially as described.

2. A clasp comprising an outer clasp member provided with a cylindrical bore extending from one end and with slots extending through the walls of said member at a point above the end of said bore, the forward and rear walls of said slots being inclined toward the forward, or open, end of said bore, an inner clasp member adapted to be rotatably and slidably supported within said cylindrical bore, and resilient latches projecting from said inner member, said latches provided with independent inclined faces for engagement, respectively, with the forward and rearward inclined walls of said slots, substantially as described.

874,958. BOTTLE-WASHING MACHINE. GEORGE W. GOEHNS, Philadelphia, Pa. Filed Jan. 27, 1906. Serial No. 298,103.



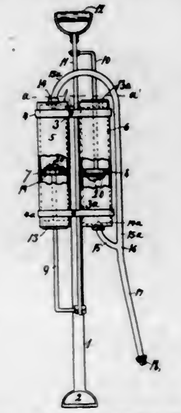
A bottle washing machine consisting of a frame formed with a horizontal base, a foot depending therefrom at an intermediate point and disposed at right angles thereto, a pair of spaced parallel uprights integral with said base, said uprights each terminating in integral enlarged bearings which project beyond the sides of said uprights, a curved arm formed integral with said base and with the inner of said uprights at the juncture of the latter with said base, said arm terminating in an enlarged seat aligning with said first named bearings and spaced from said bearing of the inner upright, a mandrel in said seat, a plate-like clamp engaging said mandrel, bolts secured to said clamp for securing said mandrel, a spindle in said bearings having an opening in one end, a brush having a shank extending through said mandrel and into said opening and a set screw extending through the spindle to engage the brush shank.

874,959. AUTOMATIC REGULATOR FOR STEAM-PIPES. FRANK W. GOVE, Essex Junction, Vt. Filed July 15, 1905. Serial No. 269,814.



A device of the character described, comprising a line of supply pipe vertically arranged, a branch pipe connected thereto, a cap-shaped member connected to said branch pipe, a cylinder screwed within the upper end of the cap and in communication therewith, a turning plug in the pipe line above the cylinder, a piston within the cylinder, a cylinder-head carried by the upper end of the cylinder and vertically adjustable, a piston rod carried by the piston and extending through the cylinder-head, a coil-spring surrounding the piston rod intermediate the cylinder-head and piston and normally exerting a downward pressure upon the piston, a bracket carried by the pipe line and surrounding the upper end of the cylinder and supporting the same, a sleeve surrounding the upper end of the piston-rod and rigidly secured thereto, an arm formed integral with the sleeve and extending inwardly towards the pipe line, a laterally-extending horizontally-arranged pin carried by the outer end of the arm, and a lever adjustably carried by the stem of the turning plug and extending inwardly and having a bent portion intermediate its ends to bring the outer end in a line with the arm carried by the piston, and the extreme outer end of the lever bifurcated and adapted to receive and retain the pin therein during the reciprocation of the piston-rod.

874,960. AIR-PUMP. BENJAMIN HAMANN, Detroit, Minn. Filed Feb. 27, 1907. Serial No. 359,684.



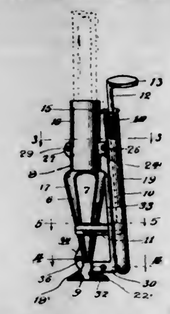
1. In an air-pump, a suitable frame work, two parallel single-acting cylinders secured thereto and having each an air outlet valve in an end opposite from where the other cylinder has it, a pumping rod sliding in the frame work and extending beyond the opposite ends of the cylinders, a piston in each cylinder, a piston-rod extending from each piston and fixed beyond the end of the cylinder to the pumping rod, and means for gathering the air from the two outlets into a single tube; said frame-work consisting of two S-shaped yokes embracing the cylinders and a standard secured to the yokes and a bolt through each yoke between the cylinders for closing it tightly about the cylinders.

2. A pump of the class described, comprising a standard with a stirrup at its lower end, two horizontally disposed S-shaped yokes fixed on the standard, a vertically sliding rod guided in the middle of the yoke and provided at its upper end with a handle, two cylinders clamped in the yokes, one at each side of the rod, a piston with a piston-rod, in each cylinder, one of said piston-rods extending downward and the other upward, and being beyond the cylinders secured by a transverse or lateral arm to the sliding rod, and means for letting air into the cylinders and means for gathering the expelled air into a single tube.

874,961. PENCIL-SHARPENER. WILLIAM F. HERDRICH, Chicago, Ill. Filed Mar. 22, 1907. Serial No. 363,990.

1. A pencil sharpener comprising a tapered body having in one side a tapered opening, a knife blade extending transversely of the opening, a tubular guideway adjacent to the openings, a shank within the tubular guideway to which the knife blade is secured, and a coil spring surrounding the shank and adapted to return it to normal position after each stroke, substantially as described.

2. A pencil sharpener comprising a tapered body formed of front and rear sections and a tubular guideway adjacent to the body and similarly formed, the front and rear sections of the body being connected with the corresponding sections of the guideway by means of tongues, rivets for connecting the tongues together, the body being provided with an opening adjacent to the guideway, a knife blade extending transversely of the opening, a knife shank connected with the blade and slidably mounted within the tubular guideway, and a spring, within the tubular guideway, adapted to return the knife to normal position after each stroke, substantially as described.



3. A pencil sharpener comprising a tapered body having at its upper end a cylindrical neck, the tapered body being provided with a tapered opening, a tubular guideway adjacent to the opening, the body, neck and guideway being each formed of front and rear sections, the front sections being all integrally formed and the rear sections being all integrally formed, rivets for connecting the front and rear sections together, a knife blade extending transversely of the tapered opening, a shank slidably mounted within the tubular guideway, and a spring within the tubular guideway for returning the knife to normal position after each stroke, substantially as described.

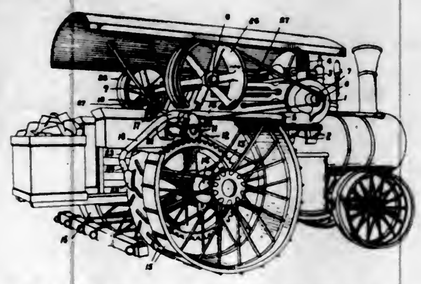
4. A pencil sharpener comprising a tapered body having therein a tapered opening, a flared base at the lower end of the body, a cylindrical neck at the upper end of the body, and a tubular guideway adjacent to the opening in the body, the body, base, neck and guideway being all formed of front and rear sections, the front sections being all integral with one another and the rear sections being likewise integral with one another, means for securing together the front and rear sections, and a knife slidably mounted within the tubular guideway, substantially as described.

5. A pencil sharpener comprising a tapered body having therein a tapered opening, a flared base at the lower end of the body, a cylindrical neck at the upper end of the body, a tubular guideway adjacent to the opening in the body, the body, base, neck and guideway being all formed of front and rear sections, the front sections being all integral with one another and the rear sections being likewise integral with one another, means for securing together the front and rear sections, and a knife comprising a blade extending transversely of the opening in the body, a shank in transverse relation to the blade and extending through and out of the tubular guideway, and a spring within the guideway for returning the knife to normal position after each stroke, substantially as described.

[Claim 6 not printed in the Gazette.]

874,962. DUST-PROTECTOR FOR TRACTION-ENGINES. SAMUEL HUGHES, Lindsay, Ontario, Canada. Filed Mar. 25, 1907. Serial No. 364,478.

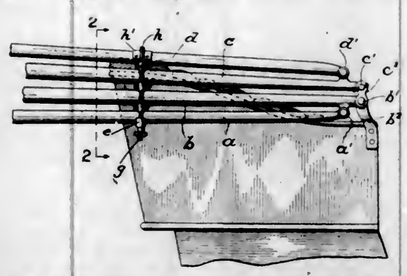
1. In a dust protector for traction engines and the like, the combination with the body and the driving mechanism, of a rotary fan suitably incased and supported from said body and having a screened in-take pipe and suitable outlet, a pipe extending rearwardly from said outlet and terminating in a bell-shaped nozzle in proximity to a main driving wheel, a branch pipe extending from said pipe and communicating therewith and having flaring mouths extending downwardly therefrom and directing a flow of air over certain driving parts, deflectors in connection with said driving parts and coacting with said blanket of air, and means for operating said fan, substantially as described.



2. In a dust protector for traction engines and the like, the combination with the body, the main driving wheels and the gear mechanism operating said wheels, of a rotary fan suitably incased and having a screened intake pipe and an outlet and supported from said body, pipes extending from said outlet rearwardly, pipes of smaller diameter connected to said pipes and terminating in outwardly extending lengths having bell-shaped nozzles in proximity to said main driving wheels, branch pipes extending from the joints connecting said larger and smaller pipes and having flaring mouths arranged to the outer and inner sides of said gear mechanism and directing a flow of air downwardly completely covering the gear wheels of said mechanism, deflectors arranged in proximity to said gear mechanism and coacting with the flow of air, and means for operating said fan, substantially as described.

3. In a device of the class described, in combination, a power driven fan having a suitable in-take and outlet, and a pipe leading from the outlet opening of said fan and having flaring mouth openings therein arranged and blanketing parts of the machine, substantially as described.

874,963. HOLDER FOR AUTOMOBILE-TOP BOWS. STEPHEN D. HUNTER, Philadelphia, Pa. Filed Aug. 24, 1907. Serial No. 389,940.



1. A holder for the bows of an automobile top, comprising a rod, a member carried at one end of the rod against which one outside bow is adapted to abut, a series of spacing plates supported by, and freely movable along, said rod and adapted to be arranged alternately with respect to the bows, and an end plate carried by the rod and adapted to abut against the other outside bow and means to move the end plate toward said end member, thereby moving all the plates along the rod and clamping the bows.

2. A holder for the bows of an automobile top, comprising an upright rod, spacing plates freely movable thereon and adapted to be arranged alternately with respect to the bows, and adjusting means adapted to move said plates along the rod and relatively toward each other, thereby clamping the bows.

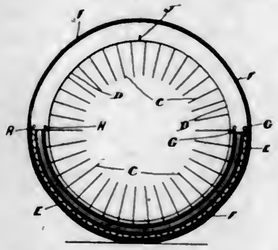
3. A holder for the bows of an automobile top, comprising an upright rod, spacing plates freely movable thereon and adapted to receive said bows, one between each two adjacent plates, and a nut engaging said rod and one of said plates.

4. A holder for the bows of an automobile top comprising an upright threaded rod, an end member carried by said rod and adapted to engage one of said bows, spacing plates sleeved and freely movable thereon, and a nut on said rod engaging one of said plates.

5. A holder for the bows of an automobile top comprising a lower end plate, an upright rod extending through said plate, an upper end member carried by said rod, a series of spacing plates sleeved and freely movable on said rod between said lower end plate and upper end member, and means to adjustably move said rod vertically with relation to the lower end plate.

[Claim 6 not printed in the Gazette.]

874,964. PNEUMATIC-TIRE PROTECTOR. WILLIAM M. JAMIESON, Te Papa, near Onehunga, New Zealand. Filed July 11, 1906. Serial No. 325,728.



1. In a pneumatic tire protector, the combination of a box having a transversely corrugated plate adapted to be fitted to said tire, and means for securing a solid tire to the box.

2. In a pneumatic tire protector, the combination of a sectional box having a transversely corrugated plate adapted to be fitted to said tire, and means for securing a solid tire to the box.

3. A pneumatic tire protector comprising a box having a transversely corrugated plate adapted to be fitted to said tire, said box furthermore constituting a felly for the reception of a solid tire.

4. A pneumatic tire protector comprising a sectional box having a transversely corrugated plate adapted to be fitted to said tire, said box furthermore constituting a felly for the reception of a solid tire, and means for connecting the sections.

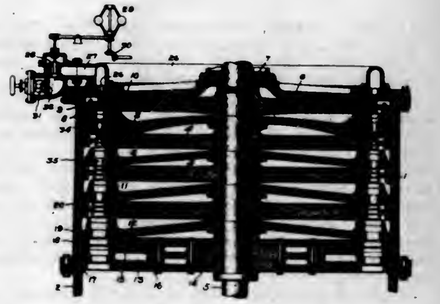
5. A pneumatic tire protector comprising a box having a transversely corrugated plate adapted to be fitted to said tire, said box having braces and being furthermore provided with means for the reception of a solid tire.

[Claim 6 not printed in the Gazette.]

874,965. MULTIPLE-STAGE IMPACT-TURBINE. OSCAR JUNGGREN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 9, 1905. Serial No. 273,361.

1. In an elastic-fluid turbine, the combination of a casing, diaphragms dividing the casing into a plurality of stages, a nozzle for each stage that converts a certain portion of the pressure of the motive fluid into velocity and simultaneously discharges it in the form of an unbroken cylindrical column to all of the wheel buckets, wheel buckets in the high-pressure stage that are short and narrow, and wheel buckets in the low-pressure stage that are relatively long and wide, all of said buckets abstracting wholly or in large part the velocity of the motive fluid due to the preceding nozzle and at the same time preserving the continuity of the fluid column, substantially as set forth.

2. In an elastic-fluid turbine wherein portions of the pressure of the motive fluid are successively converted into velocity and the velocity abstracted by stages, the combination of the sectionalized nozzle in each stage for discharging motive fluid in an unbroken cylindrical column against all of the buckets adjacent thereto to produce rotation and also to prevent bucket losses, and rows of wheel and intermediate buckets for abstracting the energy of the motive fluid by stages and for fractionally abstracting the energy of the fluid in each stage, the diameter of the wheel in the high pressure stage being less than that of the wheel in the low-pressure stage.



3. In an elastic-fluid turbine wherein portions of the pressure of the motive fluid are successively converted into velocity and the velocity abstracted by stages, the combination of a plurality of stages, rows of wheel and intermediate buckets for abstracting the energy of the motive fluid in said stages, single rows of wheel buckets for the low pressure stages and one or more nozzles for each stage which convert the pressure of the motive fluid into velocity and simultaneously discharge it against all of the buckets in an unbroken column to produce rotation and at the same time reduce bucket losses, the said nozzles and buckets being arranged in axial alinement so that the motive fluid enters the first wheel and leaves the last in the form of a hollow cylinder.

4. In an elastic-fluid turbine wherein portions of the pressure of the motive fluid are successively converted into velocity and the velocity abstracted by stages, the combination of a casing, diaphragms for dividing it into stages, one or more sectionalized nozzles for each stage which convert the pressure of the motive fluid into velocity and simultaneously discharge it with its velocity unimpaired against all of the wheel buckets to produce rotation and prevent bucket losses, buckets in the stages, and wheels and bases for the buckets presenting smooth unbroken surfaces to the nozzles and diaphragms of the stages to decrease rotation losses.

5. In an elastic-fluid turbine wherein portions of the pressure of motive fluid are successively converted into velocity and the velocity abstracted by stages, the combination of one or more nozzles for each of the stages, which convert the pressure of the fluid into velocity and simultaneously discharge it against all of the wheel buckets to produce rotation, and in an unbroken cylindrical column to prevent bucket losses, wheel buckets in the stages revolving in front of the nozzles all of which are active at all times, the buckets increasing in width and depth from the high- to the low-pressure stage, supports for the buckets presenting smooth unbroken surfaces to the fluid in the stages, and surfaces adjacent the wheel periphery, to prevent rotation losses.

[Claim 6 not printed in the Gazette.]

874,966. METHOD OF MAKING SOUND-RECORDS. ISIDOR KITSEE, Philadelphia, Pa. Filed June 7, 1907. Serial No. 377,753.

1. The method of producing copies of phonographic records, which consists in, first, producing a master record, producing a reverse therefrom, enlarging the lines of the master record, and producing copies by compressing a material between the master record and its reverse.

2. A method of producing copies of phonographic records, which consists in, first, producing a master record; in, second, taking an electro-plating reverse from said master record; third, deepening the recording lines of the master record and, fourth, compressing suitable material between the two records.

3. The process of producing a copy of a master record, which consists in, first, producing a master record and taking a reverse of said record, then enlarging the lines on said master record, and then subjecting a suitable metal to pressure between the master record and its reverse.

874,967. GREENISH-BLACK AZO DYE. WALTER KÖNIG, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Filed Aug. 26, 1907. Serial No. 390,245.

1. The herein-described new azo-dyestuffs having the above given formula, obtainable by combining in alkaline solution sulfonic acids of 1-naphthylamin compounds with alkylated 1-amino-7-naphthol, which dyestuffs are, after being dried and pulverized, in the shape of their alkaline salts dark powders soluble in water; yielding upon reduction with stannous chlorid and hydrochloric acid sulfonic acids of 1-naphthylamin compounds and alkylated 1-amino-7-oxy-8-naphthylamin, and dyeing wool from acid baths generally from brown to black shades, substantially as described.

2. The herein-described new azo-dyestuff obtainable by combining in alkaline solution the diazocompound of 1-naphthylamin-5-sulfonic acid with 1-benzylamino-7-naphthol, which dyestuff is, after being dried and pulverized, in the shape of its sodium salt a dark powder soluble in water with a grayish-blue color and being soluble in concentrated sulfuric acid with a bluish-violet color; yielding upon reduction with stannous chlorid and hydrochloric acid 1-naphthylamin-5-sulfonic acid and 1-benzylamino-7-oxy-8-naphthylamin; and dyeing wool from acid baths greenish-black shades, substantially as described.

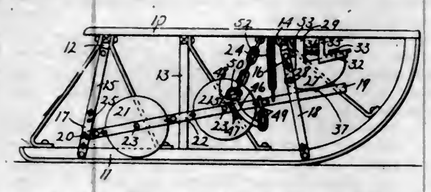
874,968. VIOLET-BLACK AZO DYE. WALTER KÖNIG, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Filed Aug. 26, 1907. Serial No. 390,246.

1. The herein-described new azo-dyestuffs having the above given formula, obtainable by combining in alkaline solution sulfonic acids of 1-naphthylamin compounds with 1-amino-7-naphthol, which dyestuffs are, after being dried and pulverized, in the shape of their alkaline salts dark powders soluble in water; yielding upon reduction with stannous chlorid and hydrochloric acid sulfonic acids of 1-naphthylamin compounds and 1.8-naphthylenediamin-7-naphthol; and dyeing wool from acid baths generally from brown to black shades, substantially as described.

2. The herein-described new azodyestuff obtainable by combining in alkaline solution the diazocompound of 1-naphthylamin-4-sulfonic acid with 1-amino-7-naphthol, which dyestuff is, after being dried and pulverized, in the shape of its sodium salt a dark powder soluble in water with a violet color and being soluble in concentrated sulfuric acid with a violet color; yielding upon reduction with stannous chlorid and hydrochloric acid 1-naphthylamin-4-sulfonic acid and 1.8-naphthylenediamin-7-naphthol; and dyeing wool from acid baths violet-black shades, substantially as described.

874,969. ATTACHMENT FOR SLED-RUNNERS. WILLIAM J. LA FLEUR, Northampton, Mass. Filed June 17, 1907. Serial No. 379,338.

1. The combination, in an attachment for sled-runners, with a sled, of a lever provided with a roller between its ends and having one end pivotally connected with the sled, and a spring having one end attached to the sled and the other end attached to said lever to normally retain the latter in its elevated position, the arrangement being such that the lever is retained normally by said spring above a horizontal line passing through its pivotal point.



2. The combination, in an attachment for sled-runners, with a sled, of a lever provided with a roller, means for attaching one end of such lever to the sled at different elevations, and a spring arranged between the sled and said lever to normally retain the forward terminal of the lever in an elevated position.

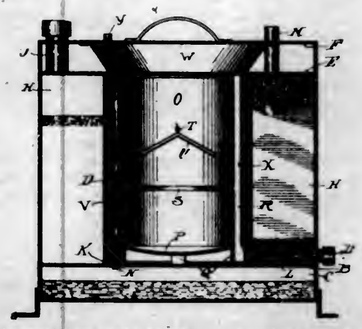
3. The combination, in an attachment for sled-runners, with a sled, of a lever provided with a roller between its ends and having one end pivotally connected with the sled, means to depress said lever into a substantially horizontal position, and a spring arranged between the sled and the lever to swing the latter upward on its pivot above such horizontal position when released from said means.

4. The combination, in an attachment for sled-runners, with a sled, of a lever provided with a roller in fixed bearings and having one end pivotally connected with the sled, a cam pivoted to the sled above the other terminal of said lever and adapted to depress the lever into a substantially horizontal position, and a spring arranged between the sled and the lever to swing the latter upward on its pivot above such horizontal position when released from said cam.

5. The combination, in an attachment for sled-runners, with a sled, of a lever provided with a roller and having one end pivotally connected with the sled, a cam pivoted to the sled above the other terminal of said lever and adapted to depress the lever, such cam having a receiving part for an operating bar.

[Claims 6 to 13 not printed in the Gazette.]

874,970. ACETYLENE-GAS GENERATOR. THOMAS F. LITTLE, Chicago, Ill. Filed Sept. 7, 1907. Serial No. 391,796.



1. An acetylene gas generator comprising a casing having a central compartment open at its upper end, a chamber in lower end communicating with the upper end of said central compartment through a stand pipe, a water chamber partly surrounding said central compartment and communicating at its lower end with the lower end of the later, a purifier chamber communicating with said lower compartment and with the service pipes, a horizontal partition wall in said casing closing the upper end of the water chamber and the purifier chamber, a carbid bucket open at its upper end disposed in said central compartment, a cylinder open at its lower end entering said central compartment and receiving said carbid bucket and said stand pipe, a chamber above said cylinder communicating with the lower end of the latter, and a vent communicating with said chamber.

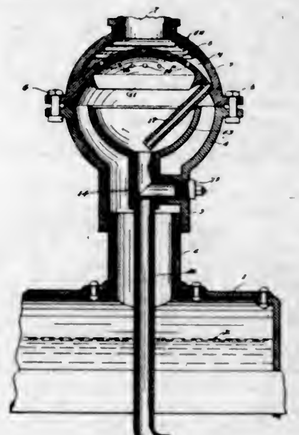
2. An acetylene gas generator comprising a casing having a central compartment open at its upper end, a chamber in lower end communicating with the upper end of said central compartment through a stand pipe, a water chamber partly surrounding said central compartment and communicating at its lower end with the lower end of the latter, a purifier chamber communicating with said lower compartment and with the service pipes, a horizontal partition wall in said casing, closing the upper end of the water chamber and the purifier chamber, a carbid bucket open at its upper end disposed in said central compartment, a cylinder open at its lower end entering said central compartment and receiving said carbid bucket and said stand pipe, a chamber above said cylinder communicating with the lower end of the latter, and a vent communicating with said chamber.

3. An acetylene gas generator comprising a casing having a central compartment open at its upper end, a chamber in lower end communicating with the upper end of said central compartment through a stand pipe, a water chamber partly surrounding said central compartment and communicating at its lower end with the lower end of the latter, a purifier chamber communicating with said lower compartment and with the service pipes, a horizontal partition wall in said casing closing the upper end of the water chamber and the purifier chamber, a carbid bucket open at its upper end disposed in said central compartment, and provided between its ends with perforations through which water is admitted, inverted V-shaped troughs disposed in the path of the admitted water to divide and distribute the same to various parts of said bucket, a cylinder open at its lower end entering said central compartment and receiving said carbid bucket and said stand pipe, a chamber above said cylinder communicating with the lower end of the latter, and a vent communicating with said chamber.

4. An acetylene gas generator comprising a casing having a central compartment open at its upper end, a chamber in lower end communicating with the upper end of said central compartment through a stand pipe, a water chamber partly surrounding said central compartment and communicating at its lower end with the lower end of the latter, a purifier chamber communicating with said lower compartment and with the service pipes, a horizontal partition wall in said casing closing the upper end of the water chamber and the purifier chamber, a carbid bucket open at its upper end disposed in said central compartment, a tapered chamber above said cylinder of larger diameter at its upper than at its lower end, and communicating at its lower end with the lower end of said cylinder, and a vent communicating with said chamber at its upper end, the upper end of said tapered chamber fitting said central opening in the upper wall of said casing.

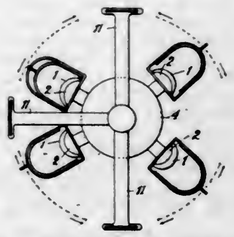
[Claim 6 not printed in the Gazette.]

874,971. WATER-ELIMINATOR FOR STEAM-BOILERS. JAMES LONG, Minot, N. D. Filed July 11, 1907. Serial No. 383,211.



The combination with a boiler and a steam conduit leading therefrom, of a water eliminator comprising a two-part hollow bulb rigidly secured together, a drip cup in the lower section of said bulb having a drain pipe depending into the boiler, a perforated dome-like partition in the upper section of said bulb, forming a supplemental condensation chamber in the top of the bulb, a drain tube secured to said perforated dome-like partition at a point outside of said perforations and leading from the lower portion of said supplemental condensation chamber into said drip cup, an annular deflecting rib on the under surface of said dome-like partition, outward of the perforations thereof, and one or more annular deflecting ribs on the upper interior surface of said supplemental condensation chamber, substantially as described.

874,972. MILKING-MACHINE. AUGUST H. LOQVIST, Söderköping, Sweden. Filed Aug. 3, 1906. Serial No. 328,993.



1. In a milking-machine, the combination with pistons adapted to be placed up to the teats to successively act

upon the same from the roots thereof toward their extremities, of a driving shaft, a number of disks carried by the said driving shaft, each disk having two slots communicating with each other, one slot being eccentric and the other concentric to the driving shaft, lugs projecting from the pistons into the slots, and means for causing the said lugs to engage the eccentric slot, when the driving shaft is rotated in one direction, and for causing the said lugs to engage the concentric slot, when the shaft is rotated in the opposite direction, substantially as and for the purpose set forth.

2. In a milking machine, the combination with pistons adapted to be placed up to the teats to successively act upon the same from the roots thereof toward their extremities, of a casing having holes through which the pistons project, a driving shaft journaled within the said casing, a number of disks attached to the said shaft, each disk having an eccentric slot as also a second slot concentric with the driving shaft, said latter slot communicating, at its ends, with the eccentric slot, lugs projecting from the pistons into the slots of the disks, and tongues placed at one end of the concentric slots adjacent to the eccentric slot, said tongues being adapted to cause the lugs to engage the eccentric slot when the machine is working, substantially as and for the purpose set forth.

3. In a milking machine, the combination of a frame, teat-cups mounted in the said frame in such a manner as to be able to swing away from and toward one another, pistons extending through the walls of the teat-cups to successively act upon the teats, and a number of slotted disks connected to the pistons in such a manner as to cause the pistons to successively move, substantially as and for the purpose set forth.

4. In a milking machine, the combination of a frame, a shaft mounted in the said frame, arms loosely mounted on the shaft, said arms having oblong holes allowing them to be also moved at right angles to the said shaft, means for keeping the arms in position, milking organs carried by the arms, pistons movably mounted in the milking organs, and disks connected to the pistons in such a manner as to cause the latter to successively move, substantially as and for the purpose set forth.

5. In a milking-machine, the combination of a frame, a shaft mounted in the said frame, arms having oblong holes embracing the shaft so as to allow the said arms to be moved at right angles to the shaft, a ratchet-wheel loosely mounted on the shaft, pawls attached to the arms, a lever journaled about the shaft, a pawl carried by the said lever, the different pawls engaging the ratchet-wheel in such a manner, that, when the lever is turned, the arms are caused to move inwardly, milking organs carried by the arms, pistons mounted to move in the milking organs, and disks connected to the pistons in such a manner as to cause the latter to successively move, substantially as and for the purpose set forth.

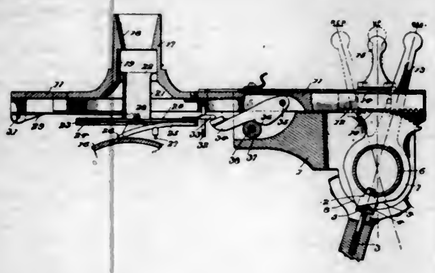
[Claim 6 not printed in the Gazette.]

874,973. COMBINED RECORDER AND REPRODUCER FOR TALKING-MACHINES. THOMAS H. MACDONALD, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed Mar. 27, 1907. Serial No. 364,849.

1. The combination of a diaphragm, a recording stylus and a reproducing stylus attached thereto, a slide supporting said diaphragm, and means elevating the diaphragm relative to the slide at a point intermediate the extremes of movement of the slide.

2. The combination of a diaphragm, a recording stylus and a reproducing stylus connected thereto, a slide, means supporting said diaphragm on said slide and parallel therewith, means elevating the diaphragm upon the movement of the slide, and means maintaining the diaphragm parallel with the slide during the elevating movement.

3. The combination of a diaphragm, a recording stylus and a reproducing stylus connected thereto, a slide supporting said diaphragm, and means moving the diaphragm from and permitting it to move by gravity towards the record, and means maintaining the diaphragm substantially parallel with the slide during said movements.

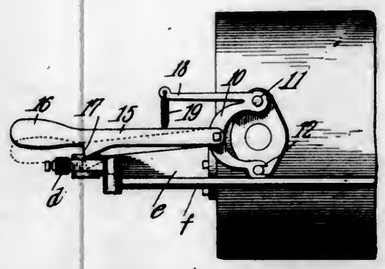


4. The combination of a slide, a diaphragm supported by said slide, a style carried by the diaphragm and in contact with the record tablet, and means carried by the slide and lifting the diaphragm upon the movement of the slide.

5. The combination of a slide and means for reciprocating the same, a diaphragm, a stylus carried thereby and resting by gravity on the record, means lifting the diaphragm from and permitting it to return by gravity towards the record while maintaining the diaphragm at all times substantially parallel with the slide.

[Claims 6 to 12 not printed in the Gazette.]

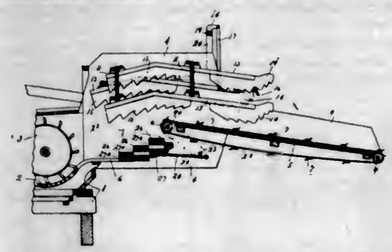
874,974. EXHAUST-CONTROL MECHANISM FOR GAS-ENGINES. ERNEST C. MADDOX, Woodward, Okla., assignor of one-half to Charles A. Hoops, Woodward, Okla. Filed Aug. 26, 1907. Serial No. 390,195.



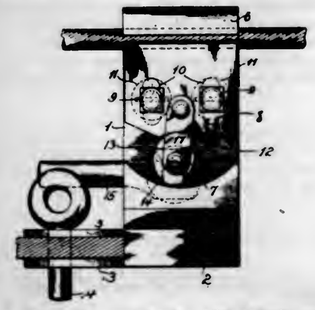
An internal combustion engine including an exhaust valve, an exhaust valve stem, a tappet arm for engaging the stem, a bracket secured to a stationary portion of the engine, an arm projecting from the bracket, a lever pivoted to the bracket at a point above the tappet, and provided with a concaved lower surface and with a locking shoulder curved on an arc struck from the center of movement of the lever, and a spring connecting the lever to the arm and serving to hold said lever normally inactive.

874,975. BAND-CUTTER AND FEEDER. ANTON MAHLEN, Superior, Wis. Filed Oct. 4, 1906. Serial No. 337,413.

In a band cutter and feeder, the combination with a pair of crank shafts, each having a plurality of cranks, set one in advance of the other, of gyrating bars carried by the corresponding cranks of said two shafts, serrated knives and serrated toothed blades carried by said bars, tedder acting hooks pivoted to the outer ends of the outer members of said bars and forming extensions thereof, links connecting said tedder acting hooks to relatively fixed supports, and a conveyer working below said knives, substantially as described.



874,976. CLAMP. BOLCER H. MEESE, Brownsville, Pa. Filed June 15, 1907. Serial No. 379,235.



1. In a clamp, the combination with a body portion provided with a fixed jaw, of a movable jaw mounted on the body portion, a cam for operating the movable jaw and a link pivoted at one end to the movable jaw and at the other end to the cam.

2. In a clamp, the combination with a body portion having elongated slots and provided at one end with a fixed jaw, of a movable jaw, pins secured to said movable jaw and passing through the elongated slots in the body portion, a cam supported by the body portion, under the movable jaw, for operating the latter, and a lever connected with the said cam.

3. In a clamp, the combination with a body portion provided at one end with a fixed jaw and at the other end with a base portion, of arms projecting from the base portion adapted for attachment to a support, a movable jaw mounted on the body-portion, a cam supported by the body-portion over the base and under the movable-jaw for operating the latter, and a lever for operating the cam.

874,977. INCANDESCENT ELECTRIC LAMP. CHARLES L. R. E. MENGES, The Hague, Netherlands. Filed May 22, 1899. Serial No. 717,842.

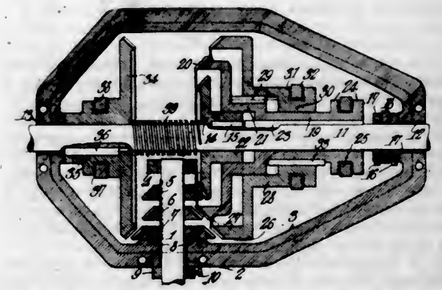
1. The process of producing incandescent conductors or filaments for electric lamps, consisting in intimately mixing a material having electric conductivity with a non-conducting substance, by producing in the shape of the incandescent conductor, a mixture of the non-conducting substance, carbon, and an oxygen compound of a metal and heating said mixture by an electric current until the carbon by its combination with the oxygen of the named compound parts in the gaseous state, leaving the metallic material in the filament.

2. The process of producing incandescent conductors or filaments for electric lamps, consisting in intimately mixing titanium with a non-conducting substance, by producing in the shape of the incandescent conductor, a mixture of the non-conducting substance, carbon, and an oxygen compound of titanium, and heating said mixture by an electric current until the carbon by its combination with the oxygen of the named compound parts in the gaseous state, leaving the metallic titanium in the filament.

3. The process of producing incandescent conductors for electric lamps formed by an intimate mixture of metallic electric conductive titanium with a non-conducting substance which consists in producing in the shape of the incandescent conductor, a mixture of an oxygen compound of titanium carbon and the non-conducting substance and heating said mixture by an electric current until the metallic titanium is reduced from its compound.

4. The process of producing incandescent conductors for electric lamps formed by an intimate mixture of metallic electric conductive titanium with a non-conducting substance, which consists in producing a paste formed by mixing an oxygen compound of titanium in a fluid condition, carbon, and a non-conducting substance, shaping said paste into an incandescent filament, heating said filament until it becomes an electric conductor, and further heating the same by an electric current until the metallic titanium is reduced from its compound.

874,978. POWER-TRANSMISSION GEARING. VERNON D. MUNGER, Beach City, Ohio. Filed Mar. 29, 1907. Serial No. 365,342.



1. A power transmission gearing comprising a drive shaft, beveled pinions fixed thereon, a longitudinally-adjustable driven shaft, a beveled gear wheel fixed thereon, and other beveled gear wheels mounted on said driven shaft and movable longitudinally thereon, each gear wheel being nested in the next gear wheel of larger size.

2. A power transmission gearing comprising a drive shaft, bevel pinions fixed thereon, a driven shaft having its axis of rotation at right angles to the drive shaft and movable longitudinally in the plane of said axis of rotation, a bevel gear wheel fixed on the driven shaft, and other bevel gear wheels mounted and longitudinally movable on said driven shaft and fixed thereto for rotation therewith, each gear wheel being provided with a hub housed in the hub of the gear wheel of next larger size.

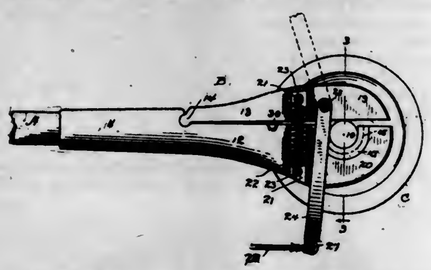
3. In a power transmission gearing, a drive shaft, bevel pinions fixed thereon, a longitudinally movable driven shaft, a gear wheel fixed thereon and movable into mesh with one of the bevel pinions by the longitudinal movement of the driven shaft, another gear wheel movable in the opposite direction to the first gear wheel into mesh with another bevel pinion on the driven shaft, and a spring interposed between said gear wheels on the driven shaft.

4. A power transmission gearing comprising a drive shaft, bevel pinions fixed thereon, a longitudinally movable driven shaft, nested gear wheels carried thereby in operative relation to the pinions on the drive shaft, and another gear wheel also in operative relation to one of the pinions on the drive shaft and connected and movable on said driven shaft for reversing its direction of rotation.

5. A power transmission gearing comprising a drive shaft, pinions fixed thereon, a driven shaft having its axis of rotation at right angles to the axis of rotation of the drive shaft, a fixed gear wheel on said driven shaft, another gear wheel thereon fixed for rotation therewith but

longitudinally movable with relation to said driven shaft, another bevel gear wheel mounted on said second gear wheel and fixed thereto for rotation therewith but longitudinally movable with relation thereto, another gear wheel mounted upon said driven shaft for rotation therewith and movable with relation thereto for engagement with one of the pinions on the drive shaft, and a spring interposed between the fixed gear wheel on the driven shaft and the last-named gear wheel thereon.

874,979. TROLLEY-HARP. WILLIAM J. MURPHY, Bridgeport, Conn., assignor to Frank B. Kennedy, New Haven, Conn. Filed July 20, 1904, Serial No. 217,346. Renewed Oct. 31, 1907. Serial No. 400,069.



1. A trolley harp comprising a shank, a fixed arm provided with bearings, a trolley wheel provided with unitary trunnions which engage the bearings and a hinged upper arm the free end of which rests over the trunnions.

2. A trolley harp comprising a fixed bifurcated arm provided with bearings, a bifurcated upper arm hinged to the fixed arm, a trolley wheel lying between the branches of the arms and having unitary trunnions engaging the bearings, and springs connecting the corresponding branches of the arms, and acting to retain the branches of the upper arm in engagement with the trunnions.

3. A trolley harp comprising a fixed bifurcated arm provided with bearings, a bifurcated upper arm hinged to the fixed arm, spring pockets in the corresponding branches of the arms, springs in said pockets whose opposite ends are connected to the respective arms, and a trolley wheel having unitary trunnions which engage the bearings.

4. A trolley harp comprising a fixed arm provided with bearings, an upper arm hinged thereto, a trolley wheel having unitarian trunnions engaging the bearings and a ball pivoted to the upper arm and adapted to swing under the lower arm and serve as a lock to prevent the trolley wheel from being thrown from its bearings and as a guard to prevent the wheel from engaging the wire from above.

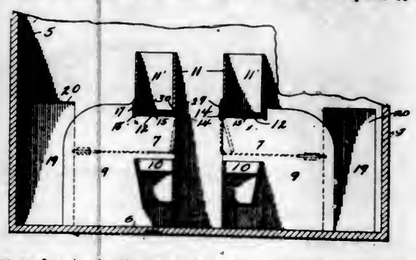
5. A trolley harp comprising a fixed bifurcated arm having recesses provided with ribs, bearings having grooves in their underside engaging the ribs, a bifurcated upper arm hinged to the fixed arm and a trolley wheel lying between the branches of the arms and having unitary trunnions engaging the bearings.

[Claims 6 to 9 not printed in the Gazette.]

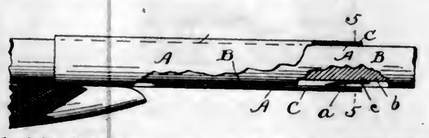
874,980. STOCK-FEEDING APPARATUS. EDWARD MCGLINCHAY, Galloway, Ohio. Filed Mar. 1, 1907. Serial No. 359,975.

1. In a device of the character described, the combination with a plurality of feed bins, of doors hinged to said feed bins and adapted to form bottoms therefor when closed, latches pivoted to said doors and extending across said doors, fixed members adapted to be engaged by said latches to support the doors in their closed positions, a rigid member bodily movable with relation to the bins and carrying a plurality of members which are adapted to engage and actuate the latches, and a flexible member secured to said rigid member for actuating said rigid member from a distant station.

2. In a device of the character described, the combination with a plurality of feed bins, of doors hinged to said feed bins and adapted to form bottoms therefor when closed, latches pivoted to said doors and extending across said doors, fixed members adapted to be engaged by said latches to support the doors in their closed positions, a rigid member bodily movable with relation to the bins and carrying a plurality of members which are adapted to engage and actuate the latches, a flexible member secured to said rigid member for actuating said rigid member from a distant station, an inclosure for said bins, the walls of said inclosure supporting said bodily movable member, a door for said inclosure, and a flexible member connected to said bodily movable member for releasing said door.



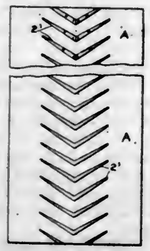
874,981. GUN HAND-PROTECTOR. PAUL NORTH, Lakewood, Ohio, assignor to The Chamberlain Cartridge & Target Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 29, 1906. Serial No. 308,764.



1. A hand protector for double barreled guns comprising a covered spring metal body of substantially C-shape in cross section having near its end an inwardly extended and forwardly projecting spring latch which is in the plane of the rib between the gun barrels, and whose end extends beyond the end of the protector, there being a hole in said latch for engagement with a pin secured to said rib.

2. A hand protector for double-barreled guns comprising a covered spring metal body of substantially C-shape in cross section, having near its end and midway between its sides an integral tongue which is bent inward and then forward upon itself and extends beyond the end of the body, said latch tongue having a hole for engagement with a pin secured to the rib between the two barrels of the gun.

874,982. CONVEYER-BELT. HENRY C. NORTON, San Francisco, Cal. Filed Sept. 10, 1907. Serial No. 392,161.



1. A conveyer belt of the trough type, having a central wearing surface corrugated with the outer ends of the corrugations terminating a considerable distance from the side edges of the belt.

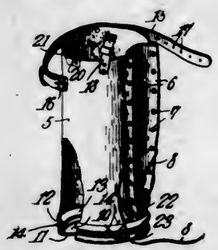
2. A conveyer belt, having its longitudinal central portion only corrugated with the corrugations of tapering form and the widest portions thereof located in the center of the belt.

3. A conveyer belt having a transversely corrugated wearing surface, the corrugations being thickest and widest in the middle of the belt, and tapering off to nothing towards the edges of the belt and terminating a considerable distance from said edges.

4. A conveyer belt, having pockets along its central wearing surface, said pockets formed by diagonally disposed intersecting riffles which decrease in horizontal width outwardly towards the edges of the belt and whose outer ends terminate a considerable distance short of said edges.

5. A conveyer belt having pockets along its central wearing surface, said pockets formed by diagonally disposed intersecting riffles, said riffles being thickest at their lower ends adjacent to the center of the belt.

874,983. FOOT AND LEG BATH FOR HORSES. HARRY R. O'BRIAN and JOHN R. COULTER, Oxford, Ohio. Filed Feb. 18, 1907. Serial No. 357,973.



1. A foot bath for live stock including a flexible receptacle having means for attachment to the leg of an animal, spaced reinforcing plates constituting the bottom of the receptacle and having their peripheral edges bent upwardly to produce vertically disposed flanges, the side walls of the receptacle being interposed between the flanges and the several parts crimped together to form a circumferential bead.

2. A foot bath for live stock including a receptacle having flexible side walls and a reinforced bottom, the side walls of the receptacle being extended laterally to form longitudinal ribs, eyelets piercing the ribs, a lacing strip threaded through the eyelets, and a strap secured to the walls of the receptacle and adapted to embrace the leg of an animal.

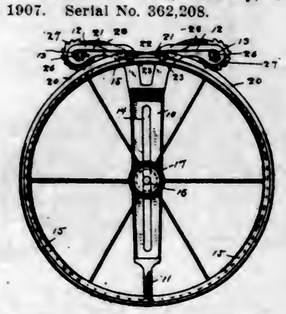
3. A foot bath for live stock including a flexible receptacle having its bottom reinforced and formed of spaced metallic plates, the peripheral edges of which are bent upwardly and spaced apart for the reception of the side walls of the receptacle, and the several parts crimped together to form a circumferential bead there being a drain opening formed in the up-turned ends of the reinforced plates, a valve seated in the drain opening, and a strap secured to the receptacle for securing the latter in position on the leg of an animal.

4. A foot bath for live stock including a flexible receptacle, spaced plates constituting the bottom of the receptacle and having their peripheral edges bent upwardly to form vertically disposed flanges, the side walls of the receptacle being interposed between said flanges and the latter crimped to form a circumferential bead, there being a drain opening formed in the flanges and communicating with the interior of the receptacle, a strap secured to the upper end of the receptacle for securing the latter in position on the leg of an animal, and a plug for normally closing the drain opening.

5. A foot bath for live stock including a receptacle having flexible side walls and a reinforced bottom, a filling spout secured to the open end of the receptacle, a drain opening formed in the lower end of the receptacle, a plug normally closing the drain opening, an attaching strap secured to the open end of the receptacle and adapted to embrace the leg of an animal, and an auxiliary strap secured to said receptacle and disposed at substantially right angles to the attaching strap.

[Claims 6 and 7 not printed in the Gazette.]

874,984. IMPLEMENT FOR APPLYING RUBBER TIRES. SABBATH A. OLIVA, Danbury, Conn. Filed Mar. 13, 1907. Serial No. 362,208.



1. An implement of the character described, comprising a standard having one end formed to be removably clamped in a vise and having its other end bifurcated and forming upwardly and outwardly extending arms having a space between them, means for securing the wheel to be operated upon, abutments against which the rim of the wheel and the ends of the tire rest and tension shafts for tightening the wire, said abutments and shafts being carried by said arms.

2. An implement of the character described, comprising a standard having one end formed to be removably clamped in a vise and having its other end bifurcated and forming upwardly and outwardly extending arms having a space between them, means for securing the wheel to be operated upon, abutments against which the rim of the wheel and the ends of the tire rest and tension shafts for tightening the wire, said abutments and shafts being carried by said arms, the said abutments being provided with front and top grooves to receive the wire.

3. An implement of the character described, comprising a standard having at its lower end a lug for engagement with a vise and having a longitudinal slot, the upper end of the standard being bifurcated and forming upwardly and outwardly extending arms having a space between them, a wheel supporting stud adjustably mounted in the slot of the standard, and an abutment and a tension shaft carried by each of said arms.

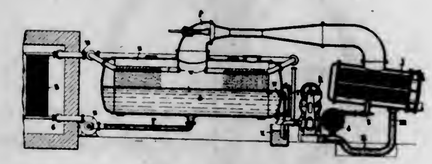
874,985. TALKING-MACHINE. ARTHUR J. O'NEILL, Chicago, Ill., assignor to The Aretino Company, Chicago, Ill. Filed Apr. 11, 1907. Serial No. 367,541.



1. The combination of a phonograph turn table, a stud upwardly extending from the center of the turn table, a supplemental disk shaped plate provided in its center with an opening to receive the stud, the opening being of suitable size to permit the supplemental plate to be slipped down over the stud to lie in facial contact with the turn table, the supplemental plate being removable from the stud and removably mounted on the turn table, a ring-shaped flat record having in its center an opening of suitable size to permit the record to be laid in facial contact with the turn table and closely surround the disk-shaped plate, the plate serving to properly center the record and being of a size and shape to permit the removal of the record without disturbing the supplemental plate, substantially as described.

2. The combination of a talking machine turntable, a stud upwardly extending from the turntable, a supplemental disk-shaped plate provided with an opening adapted to receive the stud, the supplemental plate being removable from the stud and removably mounted on the turntable, and a ring shaped flat record, having in its center an opening of suitable size to permit the record to be laid in facial contact with the turntable, said record being removable from said turntable and said disk while said disk remains upon said turntable, substantially as described.

874,986. VACUUM-PRODUCING APPARATUS. CHARLES A. PARSONS, Newcastle-upon-Tyne, England. Filed June 17, 1905. Serial No. 265,740.



1. In combination for the production of high vacua, a chamber to be evacuated, a plurality of vacuum intensifiers arranged to draw from said chamber in series said intensifiers being diminishingly graded in size from the chamber outward, condensers alternating with said intensifiers, substantially as described.

2. In high vacua, cooling or condensing plant, a chamber to be evacuated, a vacuum intensifier drawing directly from said chamber, a condenser into which the air and vapor from the chamber and intensifier are discharged, an air pump connected by a passage to the lower part of the condenser, a vacuum intensifier drawing from the condenser and discharging into the passage connecting the air pump with the condenser, and a dip seal in said passage, substantially as described.

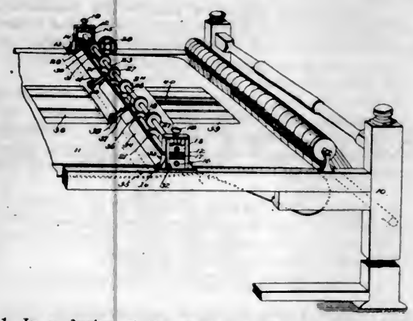
3. In high vacua, cooling or condensing plant, a chamber to be evacuated and a condenser, a passage connecting said chamber and condenser, a vacuum intensifier in said passage drawing from the chamber, means for cooling the circulating fluid in said condenser, a second condenser, a passage connecting the two condensers and a second vacuum intensifier in the passage drawing from the first condenser, an air pump drawing condensed fluid through a dip seal from the second condenser and a third intensifier operating in series with said air pump, and a passage having a dip seal connecting the air pump with the first condenser, substantially as described.

4. In high vacua, cooling or condensing plant, a chamber to be evacuated and a condenser, a passage connecting said chamber and condenser, a vacuum intensifier in said passage drawing from the chamber, an evaporative cooler for cooling the circulating medium in said condenser, a second condenser, a passage connecting the two condensers and a second vacuum intensifier in the passage drawing from the first condenser, an air pump drawing condensed fluid through a dip seal from the second condenser and a third intensifier operating in series with said air pump, and a passage having a dip seal connecting the air pump with the first condenser, substantially as described.

5. In high vacua, cooling or condensing plant, a chamber to be evacuated and a condenser connected therewith by a passage, a vacuum intensifier in said passage drawing from the chamber, a second condenser connected by a passage with the first condenser, a vacuum intensifier in this passage discharging from the first into the second condenser, a circulating fluid cooling chamber, a passage connecting the cooling chamber with the second condenser and a vacuum intensifier in said passage drawing from the circulating fluid cooling chamber, an air pump and an intensifier working in series with the air pump and passages having dip seals connecting both condensers with the air pump, substantially as described.

[Claim 6 not printed in the Gazette.]

874,987. CRIMPING ATTACHMENT FOR RULING-MACHINES. ALFRED PETERSON, Denver, Colo., assignor of one-fourth to Frank J. Dunst, Denver, Colo. Filed Apr. 6, 1907. Serial No. 366,782.



1. In a device of the class described, the combination with a ruling machine having a traveling felt, of shafts extending transversely of the machine, crimping rolls carried by the shafts, and means engaging the felt and adapted to lift a sheet therefrom and feed it to the crimping rolls.

2. In a device of the class described, the combination with a ruling machine having a traveling felt, of crimping rolls journaled above and intermediate the sides of the felt, an apron engaging the felt and adapted to direct the sheet to the rolls, and means to feed the sheet upon the apron.

3. The combination with a ruling machine having a traveling felt, of crimping rolls journaled above and intermediate the sides of the felt, an apron adapted to bear at one edge upon the surface of the felt, and with its opposite edge adjacent the rolls, and feed rollers bearing normally upon the felt, and adapted to feed a sheet upon the apron.

4. The combination with a ruling machine having parallel shafts, means to rotate the shafts, and crimping rolls carried and adjustable longitudinally upon the shafts, and feed disks mounted upon opposite sides of the crimping rolls and adjustable longitudinally of the shafts.

5. The combination with a ruling machine having parallel shafts disposed one above the other, interengaging rolls carried by the shafts and provided with corrugated peripheries, and feed disks mounted upon opposite sides of the rolls and adjustable longitudinally of the shafts.

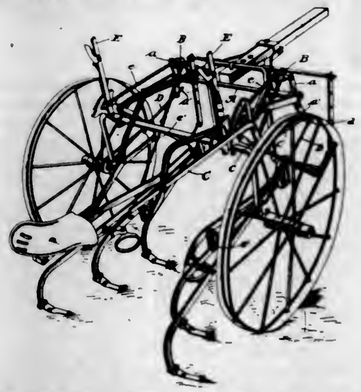
[Claims 6 to 9 not printed in the Gazette.]

874,988. WHEELED CULTIVATOR. STALEY D. POOLE and JOHN KIEL, Moline, Ill., assignors to Deere & Company, Moline, Ill., a Corporation of Illinois. Filed June 28, 1907. Serial No. 381,266.

1. A gang plow or cultivator comprising a wheeled supporting frame to which the gangs are hinged, and gang elevating and machine-balancing mechanism mounted thereon, adapted to be actuated by the draft of the team and including as a part thereof depth-regulating and gang-leveling devices adapted to operate independently of said elevating and balancing mechanism for changing the depth of penetration and leveling the gangs.

2. In combination with a supporting frame having its axle-spindles arranged to swing backwardly with the wheels, a multiple-armed rock-shaft on said frame having upright and pendent arms the latter being connected with vertical portions of said axle, a lever connected with one of said arms for rocking said shaft, and a flexible connection extending from a fixed point on the machine frame over the free end of an upright arm on said rock-shaft to a cultivator gang, whereby the latter may be raised by the draft of the team and the wheels simultaneously thrown back to balance the machine.

3. In combination with a wheeled supporting frame having the vertical portions of an axle arranged to swing backwardly with the wheels, a multiple-armed rock-shaft on said frame having an upright arm carrying an anti-friction device and depending arms connected with the vertical portions of said axle, a hand-lever connected with one of said depending arms for rocking said shaft, and a second lever having a flexible connection extending therefrom over said anti-friction device and secured to a cultivator gang, whereby the depth of penetration may be regulated, the draft of the team utilized in raising the gang and the wheels thrown back to balance the machine when the gangs are raised.



4. In combination with a supporting frame and axle-spindles secured thereto so that the wheels may swing backwardly, a rock-shaft on said frame having a pair of arms extending in opposite directions therefrom, one of said arms carrying an anti-friction device, a hand-lever and connections between the same and one of said arms for rocking said shaft, and a depth-regulating device including a lever having a flexible connection extending therefrom around said anti-friction device and secured to a gang, whereby said regulating device and the draft of the team are utilized in raising the gang and preserving the balance of the machine.

5. In combination with a supporting frame and axle-spindles arranged to swing backwardly with the wheels, a rock-shaft on said frame having arms extending in opposite directions therefrom, a hand-lever and a rod or bar connecting the same with one of said arms for rocking said shaft, and a depth-regulating lever having a flexible connection extending therefrom around a sheave carried by another arm of said rock-shaft and secured to a cultivator gang, substantially as and for the purpose described.

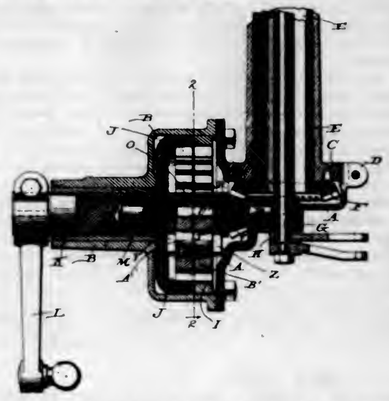
[Claims 6 to 12 not printed in the Gazette.]

874,989. STEERING-GEAR. GEORGE G. PORTER, Syracuse, N. Y., assignor to The Porter-Cable Machine Co., Syracuse, N. Y., a Corporation of New York. Filed June 10, 1907. Serial No. 378,202.

1. In combination with a steering member; a steering-post; a gear secured to the steering member; a fixed gear provided with a greater number of teeth than the first gear; a pinion meshing with both of said gears; and connections between the steering-post and the pinion for moving the latter over the gears.

2. In combination with a steering member; a toothed member connected thereto and movable therewith; a fixed toothed member, one of said toothed members having a greater number of teeth than the other; a pinion meshing with both of said toothed members; a steering-post; and connections between said post and the pinion for traversing the same over the toothed members.

3. In combination with a steering-post; a steering member; a gear movable with said member; a fixed gear, the number of teeth upon one gear being greater than that on the other; a pinion meshing with both of said gears; a pinion-carrier; and connections intermediate the steering-post and carrier for moving the latter and thereby causing the pinion to traverse the gears.

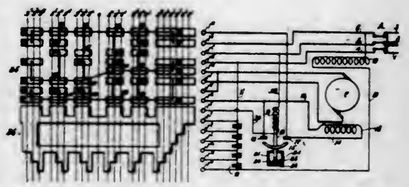


4. In combination with a steering post; a steering member; an internal gear movable with said member; a fixed internal gear, the number of teeth upon said gears being different; a pinion meshing with both of said gears; a pinion-carrier mounted within the gears; and means interposed between said carrier and the steering-post for actuating the carrier.

5. In combination with a steering-post; a steering member; an internal gear movable with said member; a fixed internal gear, the number of teeth upon said gears being different; a pinion meshing with both of said gears; a rotatable pinion-carrier having its axis coincident with the axis of the gears; a beveled pinion for rotating said carrier; and a beveled gear secured to the steering-post and meshing with the pinion.

[Claims 6 to 10 not printed in the Gazette.]

874,990. MULTIPLE-VOLTAGE SYSTEM OF MOTOR CONTROL. WILLIAM H. POWELL, Norwood, Ohio, assignor to The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Oct. 19, 1905. Serial No. 283,535.



1. In combination, a motor having an armature and field, means for increasing the voltage at the armature terminals, and means for simultaneously increasing the effective field windings of the motor beyond what they were just prior to making such increase in voltage.

2. In a system of control for electric motors, means for changing the potential at the motor armature terminals, means for simultaneously changing the normal field strength of the motor, and means for automatically restoring the field strength to its previous normal condition after a predetermined interval of time.

3. In combination, a motor having an armature, a main field winding and an auxiliary field winding, means for effecting changes in the potential on the leads of the armature circuit, means for cutting the auxiliary field

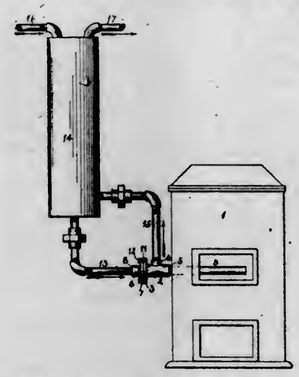
winding into the motor circuit on a change of potential and an automatic time device for cutting said auxiliary field winding out of circuit.

4. In a switch for dynamo-electric machinery, the combination with a motor, field and armature circuits therefor, an auxiliary field winding, means for effecting a change in potential on the leads of the armature circuit, means for cutting said auxiliary winding into circuit, and an automatic time device for cutting the auxiliary winding out of circuit.

5. In a switch for dynamo-electric machinery, the combination with a motor, a main field winding and armature, circuits therefor, an auxiliary field winding, means for changing the resistance of the main field circuit and for changing the potential at the armature terminals for effecting changes in the speed of the motor, means for cutting the auxiliary field winding into circuit on a change of potential at the armature terminals, and an automatic time device for cutting the auxiliary field winding out of circuit.

[Claims 6 to 21 not printed in the Gazette.]

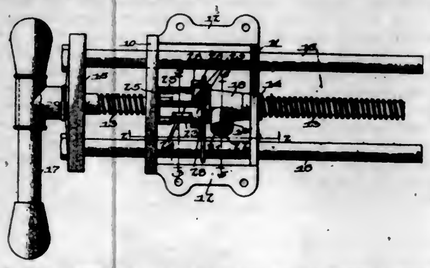
874,991. WATER-HEATER. RUDOLPH B. PRIEN, Rockford, Ill. Filed Mar. 8, 1905. Serial No. 249,130.



A water heater comprising a hollow body portion open at each end and having a peripheral flange at one end and at its other end having the inner face cut away, said cut-away portion provided with screw threads, said body portion further having intermediate its ends a screw threaded opening, an interiorly screw threaded flanged cap-piece connected to the flange of the body portion and of less diameter than the diameter of the body portion, a packing interposed between the flange of the cap-piece and the flange of the body portion, a pipe secured to the screw threaded opening of the body portion, a pipe secured to the screw threaded end of the body portion and having the inner face thereof flush with the inner face of the body portion, said pipe projecting from that end of the body portion to which it is secured and having its free end closed, an open pipe secured to the cap-piece and extending through the body portion and into that pipe secured to one end of the body portion, and a pipe secured to the cap piece, projecting outwardly therefrom and forming a continuation of the other pipe connected with the cap piece.

874,992. QUICK-ACTING VISE. THEODORE C. PROUTY, Aurora, Ill., assignor to Wilcox Manufacturing Company, Aurora, Ill., a Corporation of Illinois. Filed Oct. 24, 1907. Serial No. 399,039.

1. The combination with a frame and a screw-threaded rod adapted to be moved longitudinally therethrough without turning, of a device frictionally held in engagement with said rod, a nut-member pivotally connected with said friction device and adapted to partially rotate around said rod with said friction device, and means for causing said nut-member to turn on its pivot.



2. The combination with a frame and a screw-threaded rod adapted to be moved longitudinally therethrough without turning, of a device frictionally held in engagement with said rod, a nut-member pivotally connected with said friction device and adapted to partially rotate around said rod with said friction device, and stationary means for causing said nut-member to turn on its pivot.

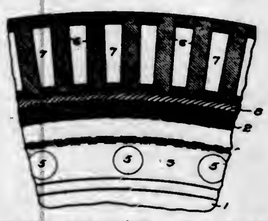
3. The combination with a frame and a screw-threaded rod adapted to be moved longitudinally therethrough without turning, of a device frictionally held in engagement with said rod, a nut-member pivotally connected with said friction device and adapted to partially rotate around said rod with said friction device, and means for engaging said nut-member to cause it to turn on its pivot and be held either away from or in engagement with said rod.

4. The combination with a frame and a screw-threaded rod adapted to be moved longitudinally therethrough without turning, of a device frictionally held in engagement with said rod, a pin secured to and projecting from said friction device, a threaded nut-member mounted on said pin, and stationary means for causing said nut-member to turn on its said pin.

5. The combination with a frame and a screw-threaded rod adapted to be moved longitudinally therethrough without turning, of a device frictionally held in engagement with said rod, a pin secured to and projecting from said friction device, a threaded nut-member mounted on said pin, a cam formed on said nut-member and a stationary device adapted to bear on said cam as said friction device and nut-member are turned to cause said nut-member to turn on its said pin.

[Claims 6 to 12 not printed in the Gazette.]

874,993. BUCKET FOR TURBINES. WALTER F. RICE, Quincy, Mass., assignor, by mesne assignments, to General Electric Company a Corporation of New York. Filed July 9, 1906. Serial No. 325,219.



1. In an elastic fluid turbine, the combination with separately formed buckets, of a connector passing through the same, and a mass of metal cast on said buckets.

2. In an elastic fluid turbine, the combination with separately formed buckets, of a connector passing through the same, and a mass of metal cast on said buckets and fused thereto.

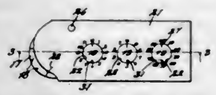
3. In an elastic fluid turbine, the combination with separately formed buckets, of a connector passing through the same, and a mass of metal cast on said buckets and fused thereto and to said connector.

4. In an elastic fluid turbine, the combination with separately-formed buckets, of a connector passing through their ends, and a mass of metal cast thereon and extending beyond said connector.

5. In an elastic fluid turbine, the combination with separately formed buckets, of a cable passing through their ends, and a support cast thereon and enveloping said ends and said cable.

[Claims 6 to 11 not printed in the Gazette.]

874,994. ROTARY MEASURING DEVICE. MYRON H. RICHARDSON, Chicago, Ill. Filed Mar. 16, 1907. Serial No. 362,629.



1. In a hand rotary measuring device, the combination of a support provided with a projection extending beyond the surface thereof, a register disk provided with an upstruck portion to form a recess adapted to receive the projection to pivotally support the disk, means for preventing displacement of the disk, an operating member rotatably mounted on the support, and means operatively related to said member for moving the disk about its pivot when the member is operated, said member being adapted to engage and move across the surface to be measured.

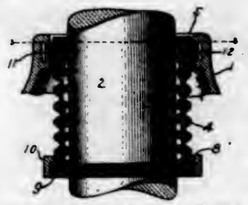
2. In a hand rotary measuring device, the combination of a support provided with a projection, a register disk provided with an upstruck portion forming a recess adapted to receive the projection to form a pivot for the disk, a casing for the support and disk, said casing being provided with an aperture adapted to receive the upstruck portion to prevent displacement of the disk, a rotatably supported operating member, and means operatively related to the said member for moving the disk when the member is rotated, the periphery of said member being adapted to be moved in engagement with and across the surface to be measured.

3. In a hand rotary measuring device, the combination of a support provided with a projection, a register disk provided with an upstruck portion forming a recess adapted to receive the projection to form a pivot for the disk, a casing for the support and disk, said casing being provided with an aperture adapted to receive the upstruck portion to prevent displacement of the disk, a rotatably supported operating member, means operatively related to the said member for moving the disk when the member is rotated, a portion of the periphery of the operating member projecting beyond the casing, the periphery of the member being adapted to be moved in engagement with, and across the surface to be measured, and means for retaining the register disk in its adjusted position.

4. In a hand rotary measuring device, the combination of a casing, provided with an aperture and having a series of indicating characters surrounding the aperture, a disk rotatable within the casing and having a projecting portion extending into the aperture, said portion being provided with an indicator adapted to coöperate with said indicating characters surrounding the aperture, an operating member rotatably mounted in and projecting beyond the casing, means operatively related to the member for rotating the disk to successively indicate the characters when the member is rotated and separate means for adjusting the disk.

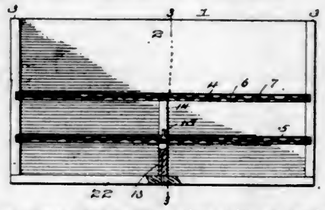
874,995. SHAFT-PACKING. FREDERICK SAMUELSON, Rugby, England, assignor to General Electric Company, a Corporation of New York. Filed June 20, 1906. Serial No. 322,602.

1. The combination of a shaft, a flexible sleeve surrounding and secured at one end to the shaft to rotate therewith and arranged with its body spaced from the shaft to permit of relative transverse movement, a stationary packing ring engaging the free end of the sleeve, and a support for the packing ring which is independent of the sleeve.



2. The combination of a shaft, a flexible sheet metal sleeve surrounding the shaft with a space between and provided with a transversely-extending portion, an abutment on the shaft forming a seat for the transversely-extending portion, means engaging the transversely-extending portion for securing it to the abutment and forming therewith a fluid-tight joint, a packing ring engaging the free end of the sleeve, and a support for the packing which is independent of the sleeve.

874,996. KNOCKDOWN CRATE. JOSEPH F. SCHOEPPL, Baltimore, Md. Filed Oct. 22, 1906. Serial No. 340,062.



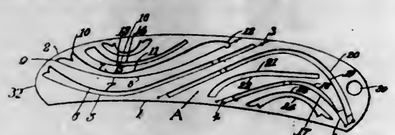
1. In a crate, the combination with a boxing, of a plurality of grates mounted in said boxing, means for supporting the ends and sides of said grates, and means for supporting the central portion of said grates, said means comprising an upper and lower member formed with notches therein for accommodating the wires of said grating, and a plurality of shouldered portions for firmly holding the sides of said gratings in engagement with the side supports of said gratings.

2. A crate, comprising a boxing formed with a plurality of grooves extending entirely around the same, a plurality of grooves positioned centrally of the sides of said boxing and at right angles to said first mentioned grooves, gratings mounted within said grooves, said gratings being formed with side and end members that are designed to rest in said first mentioned grooves, said side members being formed with hooked portions for preventing any longitudinal movement thereof and a plurality of supporting members secured in said second mentioned grooves for rigidly supporting the central portions of said gratings, one of said supporting members being formed with a tongue and the other of said separating members being formed with a groove for holding the said supporting members in proper relation to each other, each of said separating members being formed with notches for engaging the wires of said gratings for preventing any lateral movement thereof, and shouldered portions on each of said separating members and engaging said side members for holding the same in some of said first mentioned grooves.

3. A crate comprising a housing formed with a plurality of horizontal grooves and a vertical groove on each side of said housing, grating mounted in said horizontal grooves and supporting members mounted in said vertical grooves for supporting and holding in position said grating, said supporting members comprising a plurality of members formed with notches and shoulders,

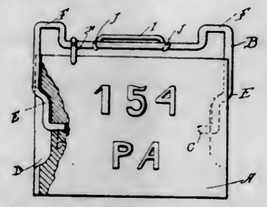
said notches being designed to engage the central wires of said grating and said shoulders being designed to accommodate the side wires of said grating whereby the said side wires will be confined in said horizontal grooves.

874,997. TAILOR'S TEMPLET FOR MAKING PATTERNS. JOSEPH F. SCHOEPPL, Baltimore, Md. Filed Feb. 19, 1907. Serial No. 358,231.



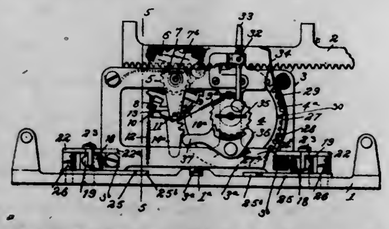
A tailor's templet consisting of a flat elongated body bounded along one side by a concave edge and along the opposite side by a convex edge of varying curvature, and having cut in its interior a plurality of elongated, closely-adjacent slots, some of which are of varying curvature, the edges of some of the slots being prolonged by means of small holes formed through the body, and the slots being so grouped that each end half of the body is occupied by a set of slots all arranged with the concave edge of one slot opposed to the convex edge of the next slot, substantially as described.

874,998. REVERSIBLE SIGN FOR AUTOMOBILES AND LIKE PURPOSES. WILLIAM SCHUMACHER, Camden, N. J. Filed Aug. 2, 1906. Serial No. 328,856.



In combination, a sign board having two of its edges grooved, a hanger to which the board is pivoted, the ends of said hanger being so bent as to lie within the grooves in the board and lock said board against accidental displacement, a latch pivoted to the hanger and adapted to embrace the upper edge of the board, and a clip adapted to be sprung unto the upper portion of the hanger for attaching the same to an object, as specified.

874,999. CARRIAGE-FEED MECHANISM FOR TYPEWRITING MACHINES. JEROME B. SECOR, Derby, Conn., assignor to Williams Typewriter Company, Derby, Conn., a Corporation of Iowa. Filed Apr. 7, 1906. Serial No. 310,480.



1. In a typewriting machine the combination of a feed-movement spring-cylinder removable from the machine-frame, a spring detent automatically locking the cylinder against rotation when removed from the frame and a fastening device serving the combined purpose of securing the spring cylinder in the frame and retracting the spring detent to release the spring cylinder and restore it to operative condition.

2. In a typewriting machine the combination of a removable housing, feed and escapement mechanism mounted in said housing, a detent automatically locking the feed device against movement when removed from the machine-frame, and a clamp securing the housing in normal position in the frame and retracting the detent so as to release the feed device in the act of securing the housing in the frame.

3. In a typewriting machine the combination of a removable housing, a spring cylinder mounted therein, an automatic detent locking the spring cylinder against rotation when removed from the machine-frame an alarm bell-hammer mounted in the housing and an arm on the detent acting on the bell-hammer to retract it in the act of locking the spring-cylinder in order to facilitate removal of the housing from the frame.

4. In a typewriting machine the combination with a suitable escapement device, of a connected pair of arms one receiving impact from a suitable actuating device and the other transmitting the movement to the escapement, and means for changing the relative prominence of said arms so as to regulate the effect on the escapement, substantially as described.

5. In an escapement apparatus for typewriting machines, a transmitting device comprising a pair of connected arms rocking on a common center, one of said arms receiving the impact of an actuating device and the other communicating movement to the escapement, and means varying the relative prominence of said arms whereby the effect of the movement on the escapement may be varied, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

875,000. CAN FOR HANDLING MILK. WILLIAM SEIDEL, Wheeling, Ill. Filed Mar. 10, 1906. Serial No. 305,299.



1. In a milk handling can, the combination of a conical body, an in- and out- curved bottom for the body, and a band having continuous edge scallops and encircling and extending below the in- and out- curved bottom of the can, substantially as described.

2. In a can for handling milk, the combination of a conical body, a neck at the apex of the body and having on its exterior interlocking means, a cap having an inner band and an outer band at the bottom, interlocking means on the inner face of the outer band coöperating with the interlocking means on the neck of the can, a strainer on the interior of the inner band, and a hood carried by the inner band, substantially as described.

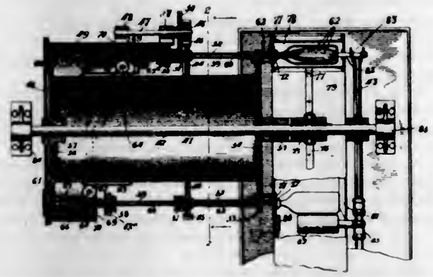
3. In a can for handling milk, the combination of a conical body, a neck at the apex of the body and having on its exterior interlocking means, a cap having an inner band and an outer band at the bottom, interlocking means on the inner face of the outer band coöperating with the interlocking means on the neck of the can, a strainer on the interior of the inner band, and an elongated hood carried by the inner band and having an open mouth on one side, substantially as described.

4. In a can for handling milk, the combination of a

conical body, a neck at the apex of the body, opposing beads on the exterior of the neck, a cap having at the bottom an exterior band and inner band, opposing lugs on the inner face of the outer band, each lug having a groove to interlock with the exterior beads of the neck of the can, a strainer on the interior of the inner band, and a hood carried by the inner band, substantially as described.

5. In a can for handling milk, the combination of a conical body, a neck at the apex of the body, opposing beads on the exterior of the neck, a cap having at the bottom an exterior band and an inner band, opposing lugs on the inner face of the outer band, each lug having a groove to interlock with the exterior beads of the neck of the can, a strainer on the interior of the inner band, and an elongated hood carried by the inner band and having an open mouth on one side, substantially as described.

875,001. BOTTLE-SCRUBBING MECHANISM. WILLIAM SEIDEL, Wheeling, Ill. Original application filed Mar. 30, 1906. Serial No. 308,836. Divided and this application filed Oct. 2, 1906. Serial No. 337,090.



1. In a machine of the class described, the combination of a feed trough, constantly movable feeding mechanism located within the feed trough, a scrubber adjacent to the trough and comprising a plurality of sealing mouths adapted to have the mouths of bottles inserted thereinto, a constantly revoluble support for the sealing mouths, brushes carried by the revoluble support and adapted to be thrust into the mouths of the bottles, and means for revolving the brushes within the bottle mouths, substantially as described.

2. In a machine of the class described, the combination of a feed trough, an endless chain adjacent to the trough, suitably spaced feed members secured to the chain and projecting into the trough and providing spaces for the admission of bottles, a drum laterally adjacent to the trough provided with a series of sealing mouths arranged in a circle and adapted to have the bottle mouths inserted thereinto, slidably mounted brushes entered through the sealing mouths, a gear wheel for actuating each of the brushes, a fixedly positioned gear wheel located in the line of circular travel of the brush gear wheels and adapted to give an intermittent rotation thereto, means for advancing and retracting the brushes, substantially as described.

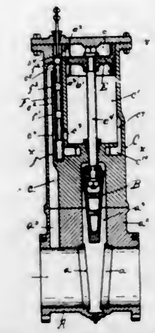
3. In a machine of the class described, the combination of a feed trough, traveling feed members within the trough providing spaces for the admission of bottles between them, a drum laterally adjacent to the trough and provided with a series of sealing mouths adapted to have the bottle mouths inserted thereinto, slidably mounted brushes entered through the sealing mouths, a gear wheel for actuating each of the brushes, a fixedly positioned gear wheel located in the line of circular travel of the brush gear wheels and adapted to give an intermittent rotation thereto, a slidably mounted rack connected with each of the brushes, a companion fixed rack on the drum, a gear wheel mounted in a yoke and meshing with the two racks, a stationary cam track for moving the yoke, substantially as described.

4. In a machine of the class described, the combination of a feed trough, a feed mechanism within the trough, a revoluble drum laterally adjacent to the trough and provided with sealing mouths extending therefrom and adapted to have the bottle mouths entered thereinto, slidably mounted brushes carried by the drum and entered through the sealing mouths, said brushes each consisting of a brush tube having entered into its end a plurality of flexible brush wires adapted to be thrust into and expanded within the bottles, a clutch member on the brush tube, a gear clutch member adapted to be clutched thereto, a fixedly positioned gear wheel adapted to mesh with the gear clutch member when brought into proper position by the rotation of the drum, and means for thrusting forward and retracting the brushes, substantially as described.

5. In a machine of the class described, the combination of a feed trough, a revoluble drum laterally adjacent thereto and provided with a plurality of sealing mouths adapted to have bottle mouths inserted thereinto, a feed mechanism in the trough, a slidably mounted brush tube having a plurality of flexible brush wires secured thereto and adapted to be entered into and expanded within the bottles, a movable clutch member secured to the brush tube, a gear clutch member rotatably mounted and adapted to be clutched to the movable clutch member, a slidable rack secured to the movable clutch member, a fixed rack on the drum adjacent to the slidable rack, a gear wheel between the two racks, a yoke within which the gear wheel is mounted, and a fixed cam track for moving the yoke to give a forward thrust and retraction to the brush tube, substantially as described.

[Claim 6 not printed in the Gazette.]

875,002. VALVE FOR STAND-PIPES. WILLIAM H. SELLEW, Detroit, Mich. Filed Dec. 4, 1905. Serial No. 290,049.

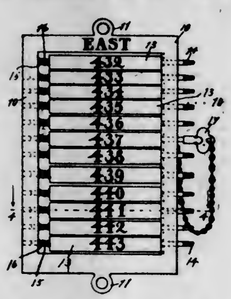


1. In a valve construction for stand pipes the combination of a cylindrical housing having a longitudinal channel for fluid under pressure, a gate-valve for intercepting the channel, a second housing secured to the said cylindrical housing and containing a pressure chamber and an auxiliary chamber located at the side of the pressure chamber the pressure chamber having ports at its upper and lower ends leading into the auxiliary chamber and at its lower end an elongated port communicating with the exhaust, the auxiliary chamber having at its upper end a port leading to the exhaust and communicating near its upper and lower ends with the fluid under pressure, a slide-valve located in the auxiliary chamber and having collars thereon which put the upper end of the pressure chamber alternately into communication with the fluid under pressure and with the exhaust and the lower end into communication with the fluid under pressure, a piston within the pressure chamber with a flange which gradually closes the exhaust at the lower end of said chamber, and a means for connecting the gate-valve and the piston.

2. In combination with a gate-valve to be interposed in a channel for conveying fluid under pressure, the combination of a housing containing a pressure chamber and

an auxiliary chamber, the auxiliary chamber having ports putting it into communication with the fluid under pressure and with an exhaust, the exhaust, the pressure chamber having ports connecting it with the auxiliary charmer, a valve in the auxiliary chamber for putting the opposite ends of the pressure chamber alternately in communication with the fluid under pressure and with the exhaust respectively, a piston within the pressure cylinder, means for connecting the piston and the gate-valve, and an automatic means operated by the piston for gradually choking the exhaust as the gate-valve approaches its seat.

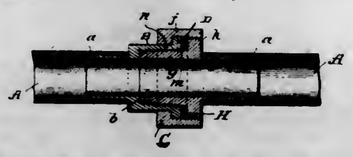
875,003. BULLETIN-BOARD. THOMAS M. SHANK, Hurricane, W. Va. Filed May 23, 1907. Serial No. 375,208.



1. A railway bulletin board including a frame, and a number of independent bulletin bars mounted therein with the names and numbers of the stations arranged consecutively on said bars, each bar having the name of a station on one side and the number of said station on the other side thereof.

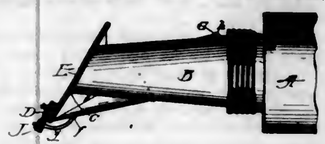
2. A railway bulletin board including a frame, and a number of independent bulletin bars mounted therein with the names and numbers of the stations arranged consecutively on said bars, each bar having the name of a station on one side and the number of said station on the other side thereof, the directions of the travel of the trains being indicated on the frame of the bulletin board, one direction on one end and the other direction on the opposite reverse end.

875,004. DETACHABLE PIPE-COUPLING. ALBERT L. SHEARS, Seattle, Wash. Filed Apr. 19, 1907. Serial No. 369,088.



In a detachable coupling, a male member comprising a tubular portion having an interior abutment, and also having a rearwardly tapered bore extending to said abutment, diametrically opposite lugs extending circumferentially on the outer side of the tubular portion and tapered at their rear sides in a common direction, and a longitudinally disposed spring strip connected to the tubular portion and extending outward and forward from the point of connection and provided with an apex and terminating in a forwardly and inwardly inclined free end portion, in combination with a female member comprising a peripheral portion, lugs arranged at the inner side of the peripheral portion and having inclined rear sides, recesses formed in the inner side of the peripheral portion immediately adjacent to the smaller ends of the lugs, a central tubular portion extending beyond the peripheral portion and exteriorly tapered toward its forward end to snugly occupy the rearwardly tapered bore of the first mentioned member, and a gasket arranged in the peripheral portion and surrounding the central tubular portion at the rear of the latter.

875,005. FOUNTAIN-BRUSH. ROBERT L. SHORT, Fostoria, Ohio. Filed May 5, 1906. Serial No. 315,446.



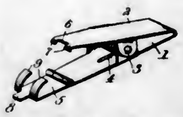
1. A fountain brush comprising, in combination, a receiver provided with an outlet, a flap-valve adapted to control said outlet, a brush mounted upon said valve, a portion of said valve adapted to contact with the surface operated upon and to open said valve outward from said receiver under pressure applied thereto.

2. A fountain brush comprising, in combination, a receiver provided with an outlet, a flap-valve yieldingly held in position to control said outlet, a brush mounted upon said valve, a portion of said valve adapted to contact with the surface operated upon and to open said valve outward from said receiver under pressure applied thereto.

3. A fountain brush comprising, in combination, a receiver provided with an outlet, a flap-valve pivotally mounted upon said receiver and adapted to close said outlet when moved in one direction, a spring operative to hold said valve in its closing position, a brush mounted upon said valve, a portion of said valve adapted to contact with the surface operated upon and to open said valve outward from said receiver under pressure applied thereto.

4. A fountain brush comprising, in combination, a receiver provided with an outlet, a detachable neck forming a conduit for the liquid and having one end connecting with said outlet and its opposite end provided with an opening, a flap-valve operative to control said opening, a brush carried by said valve, a portion of said valve adapted to contact with the surface operated upon and to open said valve outward from said opening under pressure applied thereto.

875,006. CLASP FOR CUFF-HOLDERS. STEPHEN G. SMITH, Hannibal, Mo. Filed June 10, 1907. Serial No. 378,188.

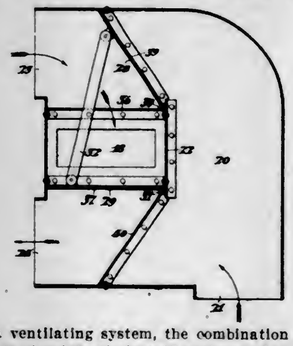


1. The combination, with a clasp comprising two jaws pivoted together intermediate of their ends, of a clamping plate hinged to the free end of one of said jaws and adapted to engage the free end of the other jaw to hold said free ends apart, said plate having a projection adapted to abut against the opposite jaw and an inwardly inclined projection adapted to spread the free ends of said jaws as said plate is brought into position between them, a portion of the end of said opposite jaw being bent downward slightly to retain the end of said plate in contact therewith.

2. The combination with a clasp comprising two jaws pivoted together intermediate of their ends, of a clamping plate hinged to the free end of one of said jaws and adapted to engage the free end of the other jaw to hold said free ends apart, said plate having a central projection in line therewith adapted to engage a notch in the end of the opposite jaw, the side portions of the end of said notched jaw being bent downward slightly to retain the end of said plate in contact therewith.

3. The combination, with a clasp comprising two jaws pivoted together intermediate of their ends, of a clamping plate hinged to the free end of one of said jaws and adapted to engage the free end of the other jaw to hold said free ends of said jaws apart, said plate having a central projection in line therewith adapted to engage a notch in the end of the opposite jaw and inclined projections on each side of said central projection adapted to spread the free ends of said jaws as said plate is brought into position between them, the side portions of the end of said notched jaw being bent downward slightly to retain the end of said plate in contact therewith.

875,007. VENTILATOR. GEORGE D. SPIELBERGER, Philadelphia, Pa. Filed June 22, 1907. Serial No. 380,199.



1. In a ventilating system, the combination with a fan arranged to circulate air in said system; of a door within said system arranged to be shifted to permit the entry of fresh air thereto, and to permit the saturated air to escape from said system; and, means arranged to actuate said door, substantially as set forth.

2. In a ventilating system, the combination with means arranged to circulate air in said system; of means arranged to reverse the direction of flow of air in said system; and means within said system arranged to renew the supply of air, substantially as set forth.

3. In a ventilating system, the combination with a fan arranged to circulate air in said system; of means distinct from said fan, arranged to reverse the direction of the flow of air in said system; and, means within said system, distinct from said fan, arranged to be shifted to close the normal passageway in said system, and thereby direct the air therefrom to the atmosphere, and renew the supply of air, substantially as set forth.

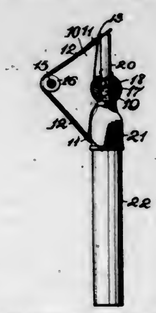
4. In a ventilating system, the combination with a fan arranged to circulate air in said system; of means comprising a flap valve arranged to reverse the direction of circulation; and, means comprising a door within said system arranged to be shifted to renew the supply of air, and to intercept the passage of air through said system, and direct it therefrom to the atmosphere, substantially as set forth.

5. In a ventilating system, comprising an air inlet and outlet, the combination with a fan arranged to circulate air in said system; of means comprising opposed flap valves arranged to reverse the direction of circulation; and, means comprising a door arranged to normally close said air inlet, but capable of being shifted to contemporaneously open said inlet and intercept the normal passage of air through said system, and thereby discharge air from said system through said outlet, substantially as set forth.

[Claims 6 to 17 not printed in the Gazette.]

875,008. SAFETY-RAZOR. JOSEPH J. STEINHARTER, Newark, N. J., assignor, by direct and mesne assignments, to The Newark Safety Razor Company, Newark, N. J., a Corporation of New Jersey. Filed Mar. 16, 1907. Serial No. 362,609.

1. A razor comprising a casing, a pair of blades arranged in the casing at an angle to one another and with their cutting edges close together, and a roller arranged in the casing and adapted to rotate between the blades and in close proximity to their cutting edges.



2. A safety razor comprising a casing formed of a pair of members on each end, the members being arranged in hinged relation, blades in the casing, one being arranged in each member, and a roller arranged between the members and arranged to rotate between the blades and in close proximity to their cutting edges.

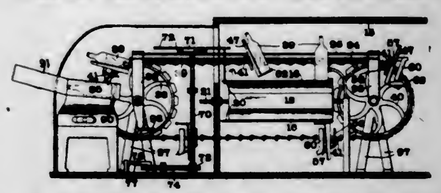
3. A safety razor comprising a pair of hinged members, and blades in the members with their cutting edges adjacent to the axis of the hinges.

4. A safety razor comprising a pair of hinged members, blades in the members with their cutting edges adjacent to the axis of the hinges, and one adapted to act as a guard for the other when the hinged members are swung apart.

5. A safety razor comprising a pair of hinged members, blades in the members with their cutting edges adjacent to the axis of the hinges, and one adapted to act as a guard for the other when the hinged members are swung apart, and a roller between the members and adapted to roll adjacent to the cutting edges of the blades.

[Claim 6 not printed in the Gazette.]

875,009. CARRYING AND SETTING-UP MACHINE FOR BOTTLES AND THE LIKE. HARRY J. STIEBEL, St. Louis, Mo. Filed June 28, 1907. Serial No. 381,329.



1. In a carrying and setting up machine, the combination with a conveyer, of a holder for the article to be carried mounted on said conveyer, an abutment for said holder, and means for moving said holder laterally to cause said abutment to discharge the article.

2. In a conveying and setting up machine, the combination with a conveyer, of a holder for the article to be conveyed tiltingly mounted on said conveyer, an abutment for said holder, and means controlled by the tilting of said holder for causing relative movement between said holder and abutment to discharge the article.

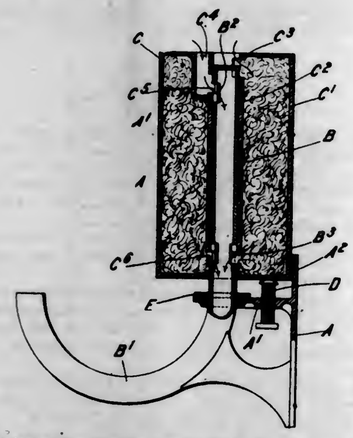
3. In a conveying and setting up machine, the combination with a conveyer, of a spring mounted holder on said conveyer for the article to be carried, an abutment for said holder, and means for releasing said holder to discharge the article.

4. In a conveying and setting up machine, the combination with an endless conveyer, of a spring mounted holder on said conveyer for the article to be carried, an abutment for said holder, and means for releasing said holder to discharge the article.

5. In a conveying and setting up machine, the combination with an endless conveyer, of a second conveyer moving at an angle to said first conveyer, a spring mounted holder on said first conveyer for the article to be carried, an abutment for said holder, and means for releasing said holder to discharge the article on said second conveyer.

[Claims 6 to 15 not printed in the Gazette.]

875,010. LAMP FOR BURNING CARBURETED AIR. FRANK W. SUTER, London, England. Filed May 17, 1907. Serial No. 374,202.



1. In a lamp for burning carbureted air, the combination of a support, a tube part of which projects upwardly from the support while part passes therefrom and is constructed to terminate in a burner, a carbureting chamber surrounding but movable in relation to the upwardly directed portion of the tube, absorbent material within the carbureting chamber, an air inlet to the carbureting chamber, an air inlet to the tube, a port in the tube, a corresponding port in the carbureting chamber and means for regulating the flow of air and vapor by moving the carbureting chamber with relation to the tube as set forth.

2. In a lamp for burning carbureted air the combination of a support, a tube part of which projects upwardly from the support while part passes therefrom and is constructed to terminate in a burner, a carbureting chamber, a tube running through and forming an inner wall to the carbureting chamber this tube fitting closely around the upwardly directed portion of the support tube, absorbent material within the carbureting chamber, means for moving the carbureting chamber in relation to the support tube, an air inlet to the carbureting chamber, an air inlet to the support tube, a port in the support tube and a corresponding port in the tube within the carbureting chamber as set forth.

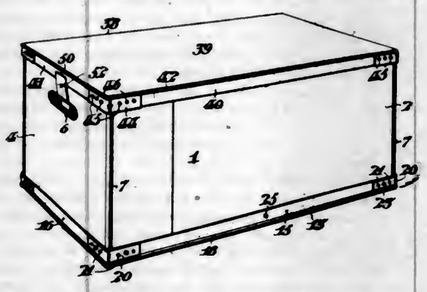
3. In a lamp for burning carbureted air the combination of a support, a tube part of which projects upwardly from the support while part passes therefrom and is constructed to terminate in a burner, a carbureting chamber, a tube running through and forming an inner wall to the carbureting chamber, this tube fitting closely around the upwardly directed portion of the support tube, absorbent material within the carbureting chamber, means for moving the carbureting chamber in relation to the support tube, an air inlet to the carbureting chamber controlled by the upper end of the support tube, an air inlet to the support tube controlled by a port and passage through the carbureting chamber, a port in the support tube and a corresponding port in the tube within the carbureting chamber as set forth.

4. In a lamp for burning carbureted air the combination of a support, a straight tube projecting upwardly from the support, a continuation of this tube passing out from the support and constructed to terminate in a burner, a separable carbureting chamber surrounding the upwardly directed portion of the support tube, absorbent material within the carbureting chamber, means for moving the carbureting chamber in relation to the support tube, an air inlet to the carbureting chamber, an air inlet to the support tube, a port in the support tube, a corresponding port in the carbureting chamber, the air inlets and ports being so positioned with relation to each other that movement of the carbureting chamber simultaneously regulates the passage of air and vapor to the burner as set forth.

5. In a lamp for burning carbureted air the combination of a support, a tube part of which projects upwardly from the support while part passes therefrom and is constructed to terminate in a burner, a carbureting chamber, a tube running through and forming an inner wall to the carbureting chamber this tube fitting closely around the upwardly directed portion of the support tube, absorbent material within the carbureting chamber, means for preventing rotary movement of the carbureting chamber in relation to the support, means carried by the support for imparting longitudinal movement to the carbureting chamber on the support tube, an air inlet to the carbureting chamber, an air inlet to the support tube, a port in the support tube and a corresponding port in the tube within the carbureting chamber as set forth.

[Claims 6 to 11 not printed in the Gazette.]

875,011. PAPER BOX. GEORGE W. SWIFT, Jr., Bordentown, N. J. Filed Nov. 27, 1906. Serial No. 345,300.



1. A collapsible box, comprising a base, a body and a lid which are distinct and primarily separate; said base having a partition provided with a flap secured to said base, and having opposite side flanges fitted to said body; registered apertures being provided in said body and partition flanges; distinct attaching means connecting said body and partition through said registered apertures; marginal flanges on said base and lid; right angular reinforcing plates fitted to said base and lid flanges at the corners thereof; distinct means permanently connecting said plates with said flanges; said corner plates being provided with apertures adapted to register with apertures in said body; distinct devices connecting said body and base through said registered apertures in said corner plates; and clasps each having one end connected with said lid and the other end adapted to detachably engage said body through a hole in the latter, substantially as set forth.

2. A collapsible box comprising a base, a body, and a lid, which are distinct and primarily separate; said base having a partition provided with a flap secured to said base, and having opposite side flanges fitted to said body; registered apertures being provided in said body and partition flanges; distinct attaching means connecting said body and partition through said registered apertures; marginal flanges on said base and lid; right angular reinforcing plates fitted to said base and lid flanges at the corners thereof; distinct means permanently connecting said plates with said flanges; said corner plates being provided with apertures adapted to register with apertures in said body; and distinct devices connecting said body and base through said registered apertures in said corner plates, substantially as set forth.

3. In a collapsible box, comprising a base, a body, and a lid which are distinct and primarily separate; said base comprising a plane panel and marginal flanges; right angular reinforcing plates fitted to said base flanges at the corners thereof; distinct means permanently connecting said plates with said flanges, said flanges being provided with open apertures adapted to receive attaching means distinct from the means securing said plates to said flanges; and, a partition having a flap fitted to said panel; distinct means permanently connecting said flap with said panel; said flanges on said partition extending parallel with the side flanges on said panel, and, said partition flanges being provided with open apertures adapted to receive distinct attaching means, substantially as set forth.

4. In a collapsible box, comprising a base, a body, and a lid which are distinct and primarily separate; said base comprising a plane panel and marginal flanges; right angular reinforcing plates fitted to said base flanges at the corners thereof; distinct means permanently connecting said plates with said flanges, said flanges being provided with open apertures adapted to receive attaching means distinct from the means securing said plates to said flanges, substantially as set forth.

5. A collapsible box, comprising a base member, a body member, and a lid member, which are distinct and primarily separate; said base and lid having reinforcing corner plates permanently secured therein; and said body and said base plates having apertures adapted to register with each other, and, distinct devices connecting said body and base through said registered apertures, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

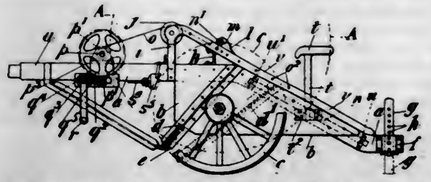
875,012. EXTRACTION OF COPPER AND OTHER METALS FROM ROASTED PYRITES. AUGUSTE TIXIER and CASIMIR TORTEL, Paris, France, assignors to Les Produits Chimique de Croissy (J. Basler & Co.), Paris, France. Filed Aug. 31, 1906. Serial No. 332,855.

1. Method or process for the extraction of copper from iron pyrites, comprising roasting of the pyrites and treatment of the roasted pyrites with nascent chlorin in a warm acid liquor, whereby the copper is separated and the iron is substantially unattacked.

2. Method or process for the extraction of copper from iron pyrites, comprising roasting of the pyrites and treatment of the roasted pyrites with nascent chlorin in an acid liquor at a temperature of about 70° to 80° C., whereby the copper is separated and the iron is substantially unattacked.

3. Method or process for the extraction of copper from iron pyrites, comprising roasting of the pyrites, and treatment of the roasted pyrites at a temperature of about 70° to 80° C., with a mineral acid, as hydrochloric acid, in the presence of an alkali compound capable of liberating chlorin under the action of the acid, whereby the copper is separated and the iron is substantially unattacked.

875,013. CARRIAGE FOR CONVEYING DRUMS OF ELECTRIC CABLES. WILLIAM A. TURNER, Glasgow, Scotland. Filed Feb. 11, 1907. Serial No. 356,833.



1. A carriage for conveying the drums of electric cables and such like comprising, in combination, a frame mounted on two wheels, which is open at its rear end and which is also inclined, shoes slidably fitted on the frame and adapted to support the drum and means whereby the shoes can be locked in different positions on the inclined frame.

2. A carriage for conveying the drums of electric cables and such like comprising, in combination, a frame mounted on two wheels which is open at its rear end and which is also inclined, shoes slidably fitted on the inclined part of the frame, means whereby the shoes can be locked in different positions on the inclined frame, and means for raising and lowering the shoes on the incline.

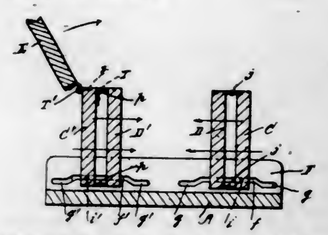
3. A carriage for conveying the drums of electric cables and such like comprising, in combination, a frame mounted on two wheels, which is open at its rear end and which is also inclined, sliding shoes which can be raised or lowered on the inclined frame, means whereby the shoes can be locked in different positions on the inclined frame, and gearing for moving the shoes.

4. A carriage for conveying the drums of electric cables and such like comprising, in combination, a frame mounted on two wheels, which is open at its rear end and which is also inclined, sliding shoes having projections thereon for supporting the ends of a removable spindle which can be passed through the drum to allow of the latter being raised off the ground and means for moving the shoes.

5. A carriage for conveying the drums of electric cables and such like comprising, in combination a frame built up of channels with depending plates at each side thereof, a strap connecting said channels, sliding shoes in the channels and means for raising and lowering said shoes.

[Claims 6 to 11 not printed in the Gazette.]

875,014. FOLDABLE BOX. JAMES E. TURTON, Jr., and JAMES T. HENSHAW, Washington, D. C. Filed Nov. 7, 1906. Serial No. 342,404.



1. In a foldable box, the combination, with a bottom, of guide-plates secured to the said bottom, each of the said guide-plates being provided with a guide-slot having a cam-shaped end portion arranged adjacent to one extremity of the said bottom and having its main portion arranged farther above the said bottom than its said end portion, a side member provided with pivot pins which engage with the said guide-slots, one edge of the said side member being pressed against the said bottom by the cam-shaped end portions of the said slots when the box is in use, and foldable box members to complete the box also operatively connected with the said bottom.

2. In a foldable box, the combination, with a bottom, of stationary guide-plates secured to the said bottom, each guide-plate having two similar slots and each slot having its middle portion arranged farther above the said bottom than its opposite end portions, a front and a back each provided with pivot pins which engage with the said slots, and ends operatively connected with the said front and back.

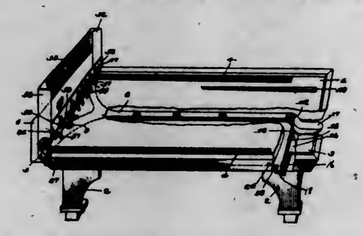
3. In a foldable box, the combination, with a bottom, of guide-plates secured to the said bottom, each said guide plate being provided with two slots having their middle portions arranged above the level of their end portions, a front and a back provided with pivot pins which are slidable in the said slots, ends operatively connected with the said front and back parts, a top hinged to the said

back, and spring-catches secured between the adjacent ends of the said slots and engaging with the said box-ends when the box is in use and with the said top when the box is folded up.

4. In a foldable box, the combination, with a bottom, and sides foldably connected therewith, of ends hinged at one end to the said box sides, said sides having grooves adjacent to the pivots of the hinges and arranged at an acute angle to their inner faces, and guard-plates secured to the said ends and provided with inclined projecting portions which engage with the said grooves when the box is opened up and in use.

5. In a foldable box, the combination, with a foldable body portion provided with a back, of a lid, double-hinges connecting the said back and lid, each double-hinge having a middle plate which rests on the top edge of the back when the box is not folded and having also two pivot pins, and spring-tongues secured to the outside of the said back and engaging with slots in the said middle plates and preventing the accidental movement of the said middle plates.

875,015. POOL BOWLING-TABLE. THOMAS A. UPTON, Toledo, Ohio. Filed Mar. 20, 1905. Serial No. 251,149.



1. In combination with a game table of the character described, a score indicating device thereon comprising uprights secured to the table, a cross-piece held by the uprights, a shaft mounted on the cross-piece, posts pivotally held by the shaft intermediate their lengths, signal posts pivoted to the lower portion of the first named posts, and latches carried by the first named posts above their pivots for holding said posts vertical.

2. In combination with a game table of the character described, a score indicating device thereon comprising uprights secured to the table, a cross-piece adjustably secured to the uprights, a shaft mounted on the cross-piece, posts held by the shaft intermediate their lengths, signal posts pivoted to the lower portions of the first named posts, and latches carried by the first named posts above their pivots for holding said posts vertical.

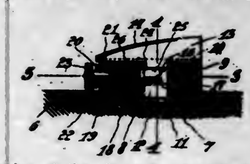
3. In combination with a game table of the character described, a score indicating device thereon comprising uprights secured to the table, a cross-piece secured to the uprights, a shaft mounted on the cross-piece, posts pivotally held by the shaft intermediate their lengths, signal posts pivoted to the lower portions of the first named posts, latches carried by the first named posts above their pivots for holding said posts vertical, and means for returning said posts to their vertical position after the latches have been released.

4. In combination with a game table of the character described, a score indicating device thereon comprising uprights secured to the table, a cross-piece secured to the uprights, a shaft mounted on the cross-piece, posts pivotally held by the shaft intermediate their lengths, signal posts pivoted to the lower portions of the first named posts, latches carried by the first named posts above their pivots for holding said posts vertically, and a tension cable secured to the uprights and contacting with the latches to hold said latches in operative position.

5. In combination with a game table of the character described, a score indicating device thereon comprising uprights secured to the table, a cross-piece secured to the uprights, a shaft mounted on the cross piece, posts pivotally held by the shafts intermediate their length, signal posts pivoted to the lower portions of the first named posts, a second cross-piece arranged adjacent the first named cross piece, latches carried by the first named post, engaging the second named cross-piece for holding said posts vertical.

[Claims 6 to 9 not printed in the Gazette.]

875,016. REMOVABLE GUN-SIGHT. JAMES B. UREN and ARTHUR W. A. PHAIR, Lillooet, British Columbia, Canada. Filed Apr. 19, 1906. Serial No. 312,564.



1. In a device of the character described, a supporting block, means for rigidly securing the block to the barrel of a firearm, a sight provided with a lug having recesses therein the lower walls of said recesses being inclined and slidable means carried by the block and adapted to engage in said recesses and lock said sight to the block.

2. In a device of the character described, a supporting member, means for rigidly securing the supporting member to the barrel of a firearm, a sight carried by the supporting member, a pin provided with a bifurcated extremity and adapted to lock the sight on the supporting member, and a spring adapted to actuate the pin.

3. In a device of the character described, a supporting member, means for rigidly securing the supporting member to the barrel of a firearm, a sight carried by the supporting member and provided with recesses having inclined lower walls, a pin provided with a bifurcation having one of its sides inclined and adapted to engage the inclined walls of said recesses, and means for normally causing said pin to engage the sight.

4. In a device of the character described, a supporting member, means for rigidly securing the supporting member to the barrel of a firearm, a sight carried by the supporting member, and a pin slidably disposed at one end with a milled nut and at its other end with a bifurcation adapted to engage the sight.

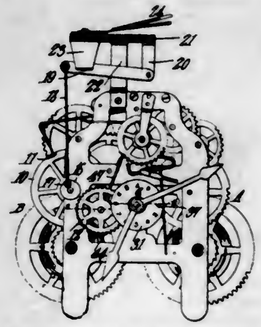
5. In a device of the character described, a supporting block provided with a vertical bore and with a horizontal bore, a sight provided with a lug disposed in the vertical bore, a pin slidably disposed in the horizontal bore, a spring disposed on the pin, a member disposed in the horizontal bore and adapted to guide the pin and receive the thrust of the spring, and a retracting member on the pin.

[Claim 6 not printed in the Gazette.]

875,017. ELECTRIC TIME-SWITCH. JOHN C. VAN SLYKE, Fort Collins, Colo. Filed July 12, 1907. Serial No. 383,498.

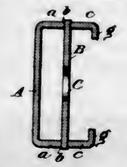
1. In an electric time switch, a clock train including an hour hand arbor, a sleeve frictionally mounted thereon and independently adjustable, a numeral bearing disk at the outer end of said sleeve, and adjustable relatively to the hour hand, a pinion secured to the sleeve, a second pinion frictionally mounted on the sleeve and adjustable independently thereof, an adjusting arm secured to the second pinion and terminating adjacent to the periphery of the disk, a pair of independently revoluble gears intermeshing with said pinions and provided with trip pins extending inward from the adjacent faces of said gears, a switch member, an actuating device therefor, and a locking means for said actuating device, said locking means being under the control of said trip pins.

2. In an electric time switch, a clock train including an hour hand arbor, a sleeve frictionally mounted thereon and adjustable independently thereof, a numeral bearing disk at the outer end of said sleeve and adjustable relatively to the hour hand, a pinion secured to the sleeve, a second pinion frictionally mounted on the sleeve, a spring disposed between the two pinions and tending to force the second pinion against a shoulder on the sleeve, said second pinion being independently adjustable, an arm secured to the second pinion and having its outer end bent over the periphery of the disk, a pair of stop pins carried by the disk for limiting move-



ment of the arm, a pair of independently revoluble gears intermeshing with the pinions and provided with trip pins extending inward from the adjacent faces of said gears, a switch member, an actuating device therefor, and a locking means for said actuating device, and a single tripper arm arranged to be successively engaged by both of the trip pins and serving to control said locking means.

875,018. SHAPED IRON OR STEEL FOR AUTOMOBILE-FRAMES. EDOUARD C. F. VERSCHAVE, Paris, France. Filed Apr. 2, 1907. Serial No. 365,940.



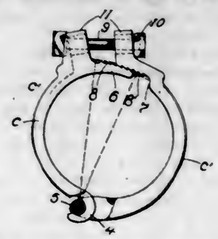
1. A metal structure comprising a U-shaped iron provided with small arms, and a vertical core extending from one to the other of said arms and united thereto by autogenous welding, said arms being extended beyond said core and being integral and of uniform thickness throughput their width.

2. A metal structure comprising a U-shaped iron provided with small arms, a vertical core fitted against the said arms, the height of which is greater than that of the U-shaped iron, and two small supplementary wings in line with the arms of the U so that the extremities of the core are interposed between the extremities of the arms of the U and of the said wings, the parts being united by autogenous welding.

3. A metal structure comprising a U-shaped iron provided with small arms, and a vertical core extending from one to the other of said arms and united thereto by autogenous welding, said arms being extended beyond said core and being integral and of uniform thickness throughout their width, the extremities of the extreme wings being turned down.

875,019. HOSE-CLAMP. HENRY A. WAHLERT, St. Louis, Mo. Filed July 11, 1907. Serial No. 383,277.

1. A hose-clamp comprising two sections hinged at one end, lugs terminating the opposite ends, a nose formation on one of the sections having serrations disposed on its outer surface, corresponding serrations formed on the inner surface of the opposite section, said serrations being disposed along an arc described from the joint between the sections as a center, substantially as set forth.



2. A hose clamp comprising two substantially semi-circular sections hinged together at one end, their inner surfaces being disposed about arcs described from the center of the clamp, lugs terminating the opposite ends of the sections, a nose formation extending beyond the lug of one section and having outer ratchet teeth disposed transversely to the plane of oscillation of the sections, a shoulder on the opposite section for engaging the end of the nose, a similar series of ratchet teeth formed on the inner surface of the opposite section for engaging the teeth on the nose aforesaid, the edges of the teeth being disposed along a curve described from the hinge-joint of the sections as a center, substantially as set forth.

875,020. AUTOMATIC STOKER. HENRY E. WALLIS, Terre-Haute, Ind., assignor to Wallis Stoker and Manufacturing Co., Terre Haute, Ind., a Corporation of Indiana. Filed Mar. 18, 1907. Serial No. 362,977.



1. In a stoker of the chain grate type, the combination, with a suitable supporting frame, a pair of chain-supporting shafts journaled one at each end of said frame, and an endless chain grate carried by said shafts, a substantially horizontal support for said chain grate between said shafts, of means for driving the shaft at the inner end of the structure whereby the tight side of the belt will be the live side, a coking plate arranged above the chain grate, a pivoted tail-plate forming a connection between the inner end of said coking plate and the chain grate, and means for successively delivering small quantities of fuel to the coking plate.

2. In a stoker of the chain grate type, the combination, with a suitable supporting frame, a pair of chain-supporting shafts journaled one at each end of said frame, and an endless chain grate carried by said shafts, of means for driving the shaft at the inner end of the structure whereby the tight side of the belt will be the live side, a coking plate arranged above the chain grate, a feeding hopper adapted to deliver to said coking plate, a plunger arranged in said hopper and adapted to deliver to said coking plate, a rolling gear having a rolling meshing engagement with said plunger and a rolling meshing engagement with a stationary member, and means for rolling said gear.

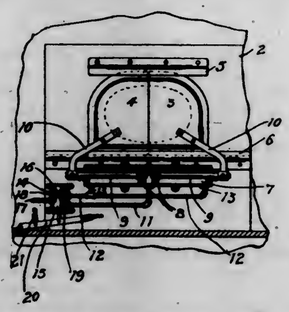
3. In a stoker of the chain grate type, the combination, with a suitable supporting frame, a pair of chain-supporting shafts journaled one at each end of said frame, and an endless chain grate carried by said shafts, of means for driving the shaft at the inner end of the structure whereby the tight side of the belt will be the live side, a coking plate arranged above the chain grate, a pivoted tail plate forming a connection between the inner end of said coking plate and the chain grate, a feeding hopper adapted to de-

liver to said coking plate, a plunger arranged in said hopper and adapted to deliver to said coking plate, a rolling gear having a rolling meshing engagement with said plunger and a rolling engagement with a stationary member, and means for rolling said gear.

4. In a stoker of the chain grate type, the combination, with a suitable supporting frame, a pair of chain-supporting shafts journaled one at each end of said frame, and an endless chain grate carried by said shafts, of means for driving the shaft at the inner end of the structure whereby the tight side of the belt will be the live side, a coking plate arranged above the chain grate, a feeding hopper adapted to deliver to said coking plate, a plunger arranged in said hopper and adapted to deliver to said coking plate, a rolling gear having a rolling meshing engagement with said plunger and a rolling meshing engagement with a stationary member, a segment arm carried by said rolling gear, an actuating arm pivoted on the axis of said gear, a pair of stops carried by said segment arm and to which said operating arm may travel, and means for adjusting one of said stops toward the other.

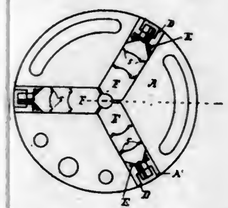
5. In a stoker of the chain grate type, the combination, with a suitable supporting frame and a pair of chain-supporting shafts journaled one at each end of said frame, an endless chain grate carried by said shafts, of means for driving the shaft at the inner end of the structure whereby the tight side of the belt will be the live side, a coking plate arranged above the chain grate, a pivoted tail-plate forming a connection between the inner end of said coking plate and the chain grate, a feeding hopper adapted to deliver to said coking plate, a plunger arranged in said hopper and adapted to deliver to said coking plate, a rolling gear having a rolling meshing engagement with said plunger and a rolling engagement with a stationary member, a segment arm carried by said rolling gear, an actuating arm pivoted on the axis of said gear, a pair of stops carried by said segment arm and to which said operating arm may travel, and means for adjusting one of said stops toward the other.

875,021. FIRE-BOX DOOR. WILLIAM D. WESTBROOK, Glenwood, Minn. Filed July 25, 1906. Serial No. 327,757.



The combination, with a locomotive boiler firebox having a fuel opening, of doors 3 and 4 arranged to close said opening, guides 5 and 6 between which said doors are slidable in a vertical plane, a cylinder 7 horizontally arranged beneath said doors and near the same, said cylinder having pistons 8 and stems 9 therefor projecting through the ends of said cylinder, straps connecting the outer ends of said pistons with said doors respectively, whereby when said pistons are separated said doors will be opened, and closed when said pistons are moved toward each other, there being a space provided between said pistons near the middle of said cylinder, a pipe 11 communicating with said space, a pipe 12 having branches leading to the ends of said cylinder, a valve casing 14 communicating with said pipes 11 and 12 and with a source of fluid supply, a sliding valve within said casing and arranged to alternately admit fluid pressure through said pipes 11 and 12 to the middle of said cylinder and to the ends thereof and a treadle connected to said valve and whereby the fireman can control the opening and closing of said doors, substantially as described.

875,022. CHUCK. JAMES H. WESTCOTT, Oneida, N. Y., assignor of one-half to Westcott Chuck Company, Oneida, N. Y., a Corporation of New York. Filed Jan. 8, 1906. Serial No. 295,015.



1. In a chuck provided with a cradle, a screw and a dog in engagement therewith, the dog being slidably mounted to admit complete outward movement thereof, a lug on the cradle at its inner end providing a stop to the inward movement of the dog, substantially as described.

2. A scroll-chuck comprising a scroll-ring, a cradle, a screw and a dog severally arranged in coöperative engagement, the said cradle and dog having means to stop the inward movement of the latter on the former whereby the operation of the connected members is effective to take up lost motion in the operation of the chuck, the said parts being constructed and arranged to permit complete outward movement of the dog relative to the cradle.

875,023. PROJECTILE. CHARLES VAN CISE WHEELER, Pittsburg, and ALEXANDER G. MCKENNA, Braddock, Pa., assignors to The Firth Sterling Steel Company, a Corporation of Pennsylvania. Filed Nov. 2, 1905. Serial No. 285,601.



1. A projectile having a cap of a weight not less than $\frac{2W+400}{100}$ (W being the weight of the uncapped projectile and the weights being expressed in pounds.)

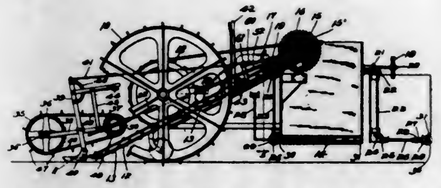
2. A shell having a cap of a weight not less than $\frac{2W+400}{100}$ (W being the weight of the uncapped projectile, the weights being expressed in pounds) and of frusto-conical form.

3. A shell having a point the radius of curvature of the base portion of the point of which is not less than 2.25 times its caliber surmounted by a cap of a weight not less than $\frac{2W+400}{100}$ (W being the weight of the uncapped projectile, the weights being expressed in pounds) and of frusto-conical form.

4. A shell having a point the radius of curvature of the base portion of the point of which is not less than 2.25 times its caliber surmounted by a cap of a weight of not less than $\frac{2W+400}{100}$ (W being the weight of the uncapped shell, the weights being expressed in pounds) and gradually tapered from rear to point.

5. A capped projectile combining an armor piercing projectile and an attached cap upon the point of the said projectile, the said cap exceeding the weight $\frac{2W+400}{100}$ where W is the weight of the uncapped projectile, whereby the momentum of the said cap at impact substantially in advance of the projectile itself may materially affect the resisting powers of the plate to the projectile in contradistinction to the heretofore known or assumed effect of lubrication.

875,024. PEA-HARVESTER. JAMES F. WHEELER, Southport, Ind., assignor of one-half to Augustin Boice, Indianapolis, Ind. Filed Mar. 29, 1907. Serial No. 365,346.



1. The combination, with a portable carriage and cutter bar carried thereby, of a conveyer arranged at the rear of said cutter bar and adapted to receive material therefrom, means arranged in advance of the cutter bar for engaging the crop to be cut immediately prior to the cutting action thereon, and means for driving said engaging means in either direction relative to the line of transportation of the cutter.

2. The combination, with a portable carriage and cutter bar carried thereby, of a conveyer arranged to the rear of said cutter bar in position to receive material therefrom, an endless carrier arranged above said cutter bar and in advance thereof, means carried by said carrier for engaging the material to be cut, and means for driving said carrier in either direction.

3. The combination, with a portable carriage and cutter bar carried thereby, of a conveyer arranged to the rear of said cutter bar in position to receive material therefrom, an endless carrier arranged above said cutter bar and in advance thereof, means carried by said carrier for engaging the material to be cut, and means for driving said carrier in either direction, substantially parallel with the line of transportation of the cutter.

4. The combination, with a portable carriage and cutter bar carried thereby, of a conveyer arranged at the rear of said cutter bar and adapted to receive material therefrom, means arranged in advance of the cutter bar for engaging the crop to be cut immediately prior to the cutting action thereon, means for driving said engaging means in either direction relative to the line of transportation of the cutter, a transversely movable conveyer arranged to the rear of the first mentioned conveyer, and means for driving said last-mentioned conveyer.

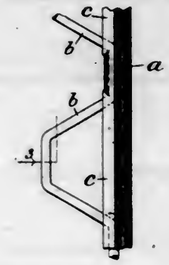
5. The combination, with a portable carriage and cutter bar carried thereby, of a conveyer arranged to the rear of said cutter bar in position to receive material therefrom, an endless carrier arranged above said cutter bar and in advance thereof, means carried by said carrier for engaging the material to be cut, means for driving said carrier in either direction, a transversely movable conveyer arranged to the rear of the first mentioned conveyer, and means for driving said last-mentioned conveyer.

[Claims 6 to 12 not printed in the Gazette.]

875,025. CURB-PROTECTOR. SAMUEL WHINERY, East Orange, N. J. Filed Apr. 16, 1907. Serial No. 368,576.

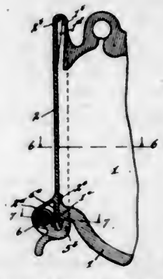
1. A concrete curb protector comprising a metal face plate and a continuous rod or wire anchoring member bent to form open loops and permanently secured to the face plate at intervals between the loops.

2. A concrete curb protector comprising a metal face plate provided with a lip on its inner face and a continuous rod or wire anchoring member bent to form open



loops and permanently engaged at intervals by the lip of the face plate between the loops.

875,026. JOURNAL-BOX LID. CHARLES D. WHITING, Minneapolis, Minn., assignor of one-half to Thomas J. Murphy, St. Paul, Minn. Filed Jan. 21, 1907. Serial No. 353,219.



1. In a lid for journal boxes, the combination of means for slidably mounting the lid on a journal box and a pivoted member adapted to secure the lid in a closed position.

2. In a lid for journal boxes, the combination of means for slidably mounting the lid on a journal box, a pivoted member adapted to secure the lid in closed position, and elastic means for controlling said pivoted member.

3. In a lid for journal boxes, the combination of means for slidably mounting the lid on a journal box, there being a housing on said lid adjacent to one end thereof, a pivoted locking member secured therein, and elastic means for controlling said pivoted member.

4. In a lid for journal boxes, the combination of means for slidably mounting the lid on a journal box, there being a housing on said lid and a pivoted member mounted therein and adapted to secure the lid in closed position.

5. In a lid for journal boxes, the combination of means for slidably mounting the lid on a journal box, there being a housing on said lid, a pivoted member carried in said housing and adapted to secure the lid in a closed position, and elastic means for controlling said pivoted member.

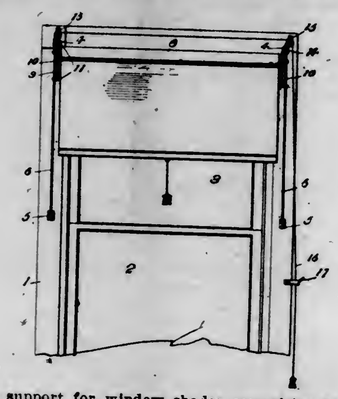
[Claims 6 to 15 not printed in the Gazette.]

875,027. WINDOW-SHADE FIXTURE. SIDNEY T. WILLIAMS, Paducah, Ky. Filed Apr. 20, 1907. Serial No. 369,318.

1. A support for window shades comprising a bracket having a slot extending inwardly from one edge thereof to receive the journal upon the shade roller, a keeper carried by the bracket, a guard arm pivotally mounted upon the bracket and detachably engaging the keeper, the said guard arm being designed to extend across the slot to retain the journal of the shade roller in position within the slot.

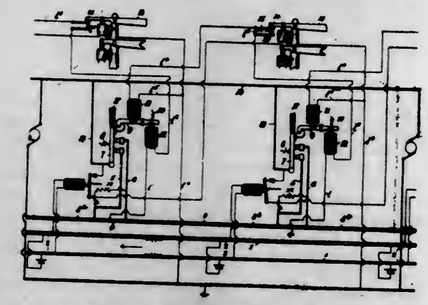
2. A support for window shades comprising a bracket

having a slot extending inwardly from one side thereof to receive the journal upon the shade roller, a keeper upon the bracket, and a spring guard arm pivotally mounted upon the bracket and detachably engaging the keeper.



3. A support for window shades comprising a bracket having a slot extending inwardly from one side thereof to receive the journal upon the shade roller, a keeper upon the bracket, and a curved spring guard member pivotally connected to the bracket and detachably engaging the keeper.

875,028. TRAIN-STOP FOR ELECTRIC RAILWAYS. ERNST WOLTMANN, New York, N. Y. Filed Feb. 23, 1907. Serial No. 358,989.



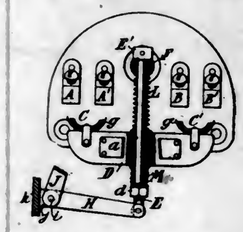
1. In an electric railway system, a sectional power rail or trolley wire normally constituting a line conductor for the power current transmission and at every point of its length forming part of the main current carrying circuit for all the trains of the entire system, danger signals corresponding to the terminations of the sections, and means actuated conjointly by a signal at danger and a train passing on to the section protected by such signal, for lowering the potential of said section without interfering with the current carrying function of the remainder of the rail or trolley wire.

2. In an electric railway system, a sectional power rail or trolley wire normally electrically continuous throughout its length and constituting a line conductor for the power current transmission, and at every point of its length forming a part of the main current carrying circuit for all the trains of the entire system, means for rendering any selected section temporarily non-electrified, and a separate conductor for carrying the line current temporarily past any such non-electrified section.

3. In an electric railway system, a sectional power rail or trolley wire normally electrically continuous throughout its length and constituting a line conductor for the power current transmission, and at every point of its length forming part of the main current carrying circuit for all the trains of the entire system, short insulated sections located between the main sections of said rail or trolley wire, and circuit connections from said insulated sections for cutting out an adjacent main section from the power circuit.

4. In an electric railway system, a sectional power rail or trolley wire normally electrically continuous throughout its length and constituting a line conductor for the power current transmission, and at every point of its length forming part of the main current carrying circuit for all the trains of the entire system, short insulated sections between the main sections, and electric circuits from said short sections operated to cut out the adjacent main section of the power rail or trolley wire when said circuits are completed.

875,029. ELECTRIC SWITCH. JAMES J. WOOD, Fort Wayne, Ind. Filed Apr. 28, 1905. Serial No. 257,838.



1. An electric switch comprising two pairs of contact terminals, two conducting bridges for uniting the two terminals of the respective pairs, a cross-bar carrying said bridges, and actuating means engaging said cross-bar between said bridges with sufficient looseness to enable the cross-bar to rock and divide the pressure applied thereto between said bridges.

2. An electric switch comprising two pairs of contact terminals, two metallic bridges for electrically uniting the two terminals of the respective pairs, a cross-bar to which said bridges are pivotally connected, and actuating means loosely engaging said cross-bar between the bridges, whereby the pressure applied thereby to said cross-bar is divided and distributed equally to the four contact terminals.

3. An electric switch comprising two pairs of circuit terminals, two metallic bridges for connecting the two terminals of the respective pairs, a rocking cross-bar carrying said bridges, a movable rod loosely engaging said cross-bar between them, and means for moving said rod to displace the cross-bar and open or close the switch.

4. In an electric switch, the combination of a cross-bar carrying the circuit closing contacts, a movable rod carrying said cross-bar, a spring L tending constantly to open the switch, an actuating part engaging said rod to close the switch against said spring, a stronger spring M, and an adjustable part *d* between which and said cross-bar said spring is confined, and whereby its stress may be adjusted.

5. In an electric switch, the combination with the movable element thereof, of a rod E carrying it having a pivot hole, and a detachable actuating lever arm H in front of said rod having fixed to it rearwardly projecting pin *h* freely entering said pivot hole, whereby the lever may be disconnected and displaced forwardly by withdrawing its pin from said hole.

875,030. SWITCH FOR ELECTRIC METERS. JAMES J. WOOD, Fort Wayne, Ind. Filed Sept. 19, 1905. Serial No. 279,140.

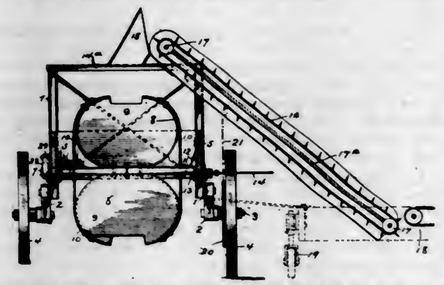
1. The combination of a switch tending to open, a cam for closing it by a forward movement, a catch for holding it closed, and means in connection with said cam adapted, upon the backward movement of the cam to its starting point, to trip said catch.



2. The combination of a switch tending to open, a lever arm connected thereto, a cam having a recess *b* and peripheral surface *c* for engaging said arm, a catch applied to said arm for holding the switch closed, and means in connection with said cam for tripping said catch.

3. The combination of a switch tending to open, a lever arm J connected thereto, a cam having a recess *b* and peripheral surface *c* for engaging said arm, a catch P carried by said arm, and a projection *t* for tripping said catch.

875,031. SHOCKER. ROBERT WOODS, Minto, N. D. Filed Feb. 26, 1907. Serial No. 359,458.



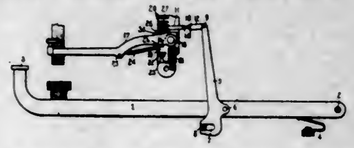
1. In a shocker, the combination with a frame, of a dump revolubly mounted in said frame, and comprising two shock receiving receptacles secured back to back and each having an open front and one open end.

2. In a shocker, the combination with a wheeled frame, of a vertically movable frame on the wheeled frame, a shock forming dump having two shock-receiving receptacles, trunnions on the dump having rotary mounting in the vertically movable frame, an eccentric on one of said trunnions, and a band brake engaging said eccentric to retard rotary movement of the dump.

3. In a shocker, the combination with a wheeled frame, of a vertically movable frame on the wheeled frame, a shock forming dump provided with two shock-receiving receptacles and having rotary mounting in the vertically movable frame, means for holding the dump in horizontal position to receive a shock, a top plate on the frame, a spout on the top plate to guide bundles or stalks into the shock forming dump, a harvester, an inclined frame or platform connecting the top of the shocker frame with the harvester, an endless conveyer on the platform or frame to carry the bundles or stalks to the spout, and mechanism driven by one of the wheels of the shocker for driving said conveyer.

4. In a shocker, the combination with a wheeled frame, of a shock forming dump having rotary support in the frame and comprising two receptacles secured back to back, each receptacle having one closed end and an open front, said openings in the front being comparatively narrow at the closed end of the receptacle and very wide at the open end thereof, and said dump adapted to turn to dump a shock and bring the lower receptacle into position to receive a shock.

875,032. TYPE-WRITING MACHINE. WILLIAM B. WOODHOUSE, Syracuse, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Mar. 11, 1904. Serial No. 197,662.



1. In a typewriting machine, the combination of a type bar having an engaging hook, the plane of which is in the plane of movement of the type bar, an actuating connection adapted to engage and be disengaged from said hook, and a spring for preventing the accidental disengagement of the actuating connection from said hook.

2 In a typewriting machine, the combination of a type bar having a snap-hook thereon, the plane of the hook being in the plane of movement of the type bar, and an actuating connection adapted to engage and to be disengaged from said snap-hook.

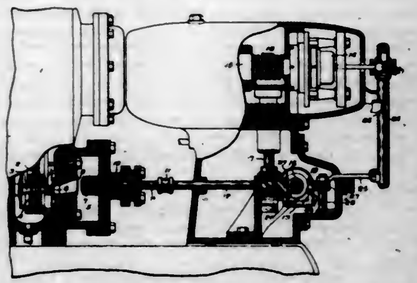
3. In a front strike typewriting machine, the combination of an upwardly and rearwardly swinging type bar, a hook that is carried by said bar and opens forwardly, and an actuating link that extends fore and aft of the machine and engages said hook and is adapted to be disengaged therefrom.

4. In a front-strike typewriting machine, the combination of an upwardly and rearwardly swinging type bar, a hook that is carried by said bar and opens forwardly, an actuating link that extends fore and aft of the machine and engages said hook and is adapted to be disengaged therefrom, and a spring for preventing the accidental disengagement of the link from said hook.

5. In a front-strike typewriting machine, the combination of a type bar that swings upwardly and rearwardly to the printing position, a hook formed on said bar at the upper edge thereof and which opens forwardly, an actuating link that straddles and engages said hook and which moves fore and aft of the machine, and a spring carried by the type bar and adapted to bear against the link to prevent an accidental disengagement of the link from the hook.

[Claims 6 to 15 not printed in the Gazette.]

875,033. GOVERNING MECHANISM FOR TURBINES. CHARLES H. WORSEY, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 22, 1906, Serial No. 322,812. Renewed July 13, 1907. Serial No. 383,624.



1. The combination with a regulator of a shiftable device for opening and closing the regulator, an actuator for the device, a governor, and means positioned by the governor for causing the movements of said actuator to shift the device into positions in which it will open or close the regulator to satisfy load requirements.

2. The combination with a valve of a shiftable cam for opening and closing the valve, an actuator for the cam,

a governor, and a device positioned by the governor which causes the actuator to shift the cam laterally to open or close the valve to satisfy load requirements.

3. The combination with a driving shaft and a cam shaft driven thereby, of a cam on the latter shaft, a valve, means for transmitting motion from the cam to the valve, a speed responsive device, and means positioned by the device which causes the driving shaft to shift the cam shaft longitudinally to vary the action of the cam on the valve to satisfy load requirements.

4. In a governing mechanism, the combination of a regulator, means for moving the regulator in one direction or the other, and a load-responsive device for controlling the operation of said regulator including a lever having stepped ends.

5. In a governing mechanism, the combination of a plurality of regulators, means for opening and closing said regulators, and a load-responsive device for controlling the operation of said regulators including a tilting lever having stepped ends.

[Claims 6 to 19 not printed in the Gazette.]

875,034. TRIPOD-HEAD. EMMETT R. WRIGHT, Park City, Utah. Filed Apr. 15, 1907. Serial No. 368,131.



1. A tripod head, including a base-plate, a supporting plate connected with said base-plate by a universal joint, a hollow post pivotally mounted upon said supporting plate, means for adjusting said post upon its pivot, a leveling plate, a stem for the leveling plate adapted to engage the bore of said hollow post, and means for adjusting said stem longitudinally in said post.

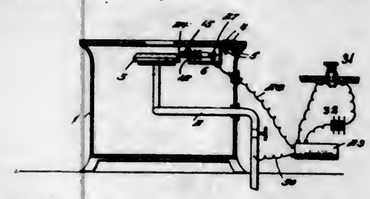
2. A tripod head including a base-plate, a supporting plate connected with said base-plate by a universal joint, a hollow post pivotally mounted upon said supporting plate, graduated sectors carried by said supporting plate, adjusting screws connecting said post with the sectors, a leveling plate provided with a stem adapted to engage the bore of said hollow post, and means for adjusting said stem axially and rotatably in said post.

3. A tripod head, including a base plate, a supporting plate connected with said base plate by means of a universal joint, a hollow post pivotally mounted upon said supporting plate, graduated sectors carried by said supporting plate, adjusting screws connecting said post with the sectors, a leveling-plate provided with a graduated stem adapted to engage the bore of said hollow post, a graduated boss attached to the said leveling plate concentric with the stem, and means for adjusting said stem axially and rotatably in said post.

4. In a tripod head, the combination with a base-plate, of a leveling plate, a connecting member between said plates, said member consisting of a supporting plate connected to the base plate by a universal joint, a post pivoted to said supporting plate, and means for varying the distances between the centers of said base and leveling plates.

5. In a tripod head, the combination with a base-plate, of a leveling plate, a member connecting said plates, said member consisting of a supporting plate connected by a universal joint to the base plate, a post pivoted to said supporting plate, means for adjusting said post upon its pivot, means for varying the distance between the center of said base and leveling plates, and means for rotatably adjusting said leveling plate relatively to the supporting plate.

875,035. ELECTRICAL IGNITING DEVICE FOR GAS-STOVES. VINCENT C. DE YBARRONDO, Los Angeles, Cal. Filed May 20, 1907. Serial No. 374,791.



1. In a device of the character described, the combination with a gas stove provided with a burner, of a bracket positioned within and depending from a portion of said gas stove, a standard secured to said bracket, a spark-plug provided with an insulating portion, engaging said standard, said spark-plug provided with an outer, metallic end positioned contiguous to said burner, and means for supplying a current of electricity to the metallic end of said spark-plug and to said burner.

2. In a device of the character described, the combination with a support, a burner carried by said support, of a bracket provided with a pair of horizontal portions, one of said horizontal portions secured to said support, a spark-plug, means supporting said spark-plug upon the other horizontal portion of said bracket, and means for supplying an electric current to said spark-plug and burner.

3. In an electrical igniting device, the combination with a support provided with a burner, of a bracket attached near one end to said support and having its opposite end spaced from said support, a removable standard carried by said last-mentioned end, a spark plug supported entirely upon said standard and positioned contiguous to said burner, and means for supplying a current of electricity to said spark-plug and to said burner.

4. In an electrical igniting device, the combination with a gas stove provided with a burner, of a spark-plug positioned within said stove and contiguous to said burner, means for adjustably securing said spark-plug to said stove, and means for supplying an electric current to said spark-plug and burner.

5. In a device of the character described, the combination with a support, a burner carried by said support, of a standard positioned contiguous to said burner, means supporting said standard upon said support, a member threaded into said standard, an insulating member provided with a shoulder, extending through said first-mentioned member, means for holding said shoulder of said insulating member against said first-mentioned member, and means carried by and adapted to conduct an electric current through said insulating member.

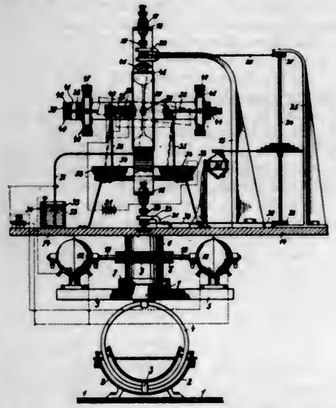
[Claim 6 not printed in the Gazette.]

875,036. GYROSCOPE. NARCISS ACH, Marburg, Germany. Filed Aug. 30, 1906. Serial No. 332,723.

1. A gyroscope comprising an arbitrary number of spinning bodies, a rotatable frame, an axle supporting said spinning bodies and revolubly mounted in said rotatable frame, pivots for said frame, supporting means for said pivots and frame, means for rotating said axle with said spinning body, at least one part of the mass of the spinning body adapted to be displaced with relation to the carrying an axle by certrifugal force.

2. A gyroscope comprising an arbitrary number of spinning bodies, an axle supporting same, a rotatable frame, said axle revolubly mounted in said rotatable frame, pivots for said frame, supporting means for said pivots and frame, means for rotating said axle with said spinning body, at least one part of the mass of the spinning body adapted to be displaced with relation to the carrying axle by centrifugal force, and means for securing permanent connection between the axle of rotation of the spinning body and the displaceable parts of its mass.

3. A gyroscope comprising at least one spinning body provided with at least one cavity, filling material in said cavity adapted to be displaced on rotation of the spinning body, an axle supporting said spinning body, said axle revolubly mounted in a rotatable frame and supporting means for said last named frame.

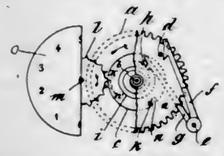


4. A gyroscope comprising at least one spinning body provided with at least one cavity forming a ring, filling material in said cavity adapted to be displaced on rotation of the spinning body, an axle supporting said spinning body, said axle revolubly mounted in a rotatable frame and supporting means for said last named frame.

5. A gyroscope comprising at least one spinning body provided with at least one cavity forming a ring filling material of liquid condition in said cavity, an axle supporting said spinning body, said axle revolubly mounted in a rotatable frame and supporting means for said last named frame.

[Claims 6 to 28 not printed in the Gazette.]

875,037. COUNTING MECHANISM. HERMANN ARON, Charlottenburg, Germany. Filed May 27, 1904. Serial No. 210,023.



1. A counting mechanism for meters and similar instruments comprising a driving member, a relatively-movable driven member, a resilient connection intermediate said members, a detent pin or shoulder carried by said driven member, a tripping pin or shoulder carried by said driving member, and rigidly-connected vibrating detent and tripping arms adapted to engage respectively said detent pin or shoulder and said tripping pin or shoulder.

2. A counting mechanism for meters and similar instruments comprising a rotary driving member provided with a lateral tripping pin, a driven member mounted concentrically therewith for independent rotary movement in respect thereof, and provided with a lateral detent pin, a torsional spring having its ends connected respectively with said detent pin of the driven member and the driving member, a rock-shaft, and two vibrating arms fixed thereon, the one having a detaining shoulder adapted to engage the lateral pin of the driven member and the other normally lying in the path of movement of the tripping pin of said driving member by which the same is periodically engaged to lift the detaining arm from engagement with the lateral pin of the driven member.

3. A counting mechanism for meters and similar instruments comprising the rotary driving wheel *a* provided with a laterally projecting hub and an oppositely projecting lateral tripping pin *d*, the shaft *b* upon which said wheel is mounted, the driven wheel *c* loosely mounted upon said shaft *b* and provided with a lateral detent pin upon the face nearest the driving wheel and the lateral gear tooth or pin *k* upon the opposite face, the spiral spring *i* having one end connected with the detent pin *h* and the other end attached to the hub of the driving wheel, the rock-shaft *e*, the arm *f* fixed upon said rock-shaft and lying in the path of movement of the tripping pin *d*, the detaining arm *g* also fixed to the rock-shaft *e* and having a shoulder normally engaging the detent pin *h*, a peripherally toothed indicator-wheel *l* disposed in operative relation with the gear tooth or stud *k* upon the driven wheel *c*, and a dial-plate or disk *o* fixed to and rotatable with said indicator-wheel *l*.

875,038. FINISHING MEMBER FOR TILING. GUSTAV AYRES, Washington, D. C., assignor to Alfred du Montier, Alexandria, Va. Filed Apr. 17, 1907. Serial No. 368,690.



1. A finishing member for tiling comprising a body portion, and combs of teeth converging rearwardly from said body portion for impression in a plastic backing, whereby such plastic backing will enter between said teeth and provide a support positively locked between the entire length of said converging combs, substantially as described.

2. A finishing member for tiling comprising a metal body portion, and combs of resilient teeth converging rearwardly from said body portion for impression in a plastic backing, whereby such plastic backing will enter between said teeth and provide a support positively locked between the entire length of said converging combs, substantially as described.

3. A finishing member for tiling comprising a body portion provided with means for supporting adjacent tiling, and combs of teeth converging rearwardly from said body portion for impression in a plastic backing, whereby such plastic backing will enter between said teeth and provide a support positively locked between the entire length of said converging combs, substantially as described.

4. A finishing member for tiling comprising a body portion formed to adjustably overlap the faces of adjacent tiling, whereby the extent of such overlapping can be adjusted to meet varying conditions of practice, and combs of teeth converging rearwardly from said body portion, substantially as described.

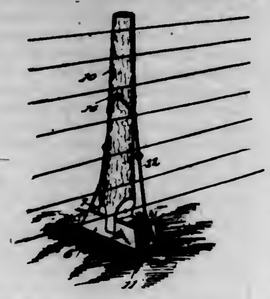
5. A finishing member for tiling comprising a metal body portion formed to adjustably overlap the faces of adjacent tiling, whereby the extent of such overlapping can be adjusted to meet varying conditions of practice, and combs of resilient teeth converging rearwardly from said body portion, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

875,039. FENCE-POST. CHARLES S. BEEBE, Peru, Ind. Filed Oct. 12, 1906. Serial No. 338,625.

1. In combination, a plastic material base provided at its upper end with a post receiving slot extending completely across the same and formed with an arched floor,

and a post secured to the base and fitted in said slot and having its lower end notched to receive said floor.



2. In combination, a plastic material base formed across the central portion of its upper end with a post receiving slot open at the top and both ends and formed with a floor diverging downwardly from its central portion, a post fitted in said slot and having its lower end edge formed to fit said floor, and guys between the post and base and arranged on opposite sides of the post.

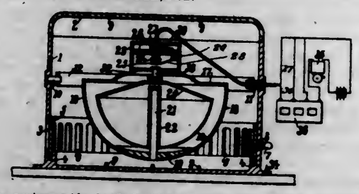
3. In combination, a plastic base having an intermediate post receiving slot, said base provided at each end with separated wire fastening means having metal reinforces embedded in the base, a post seated in said slot and having wire receiving projections a distance above said lower end, and twisted guy wires from said projections to said separated wire fastening means.

4. In combination, a plastic base having an intermediate post socket in its upper end, portions of the base on opposite sides of said socket having separated projecting metal wire fastening means, a post seated in said socket and a distance above its lower end having wire securing projections at its opposite sides, and guys arranged on opposite sides of the post between said projections and said means, each guy comprising wire lengths tightly twisted together between the post and said means.

5. A plastic base, having a post receiving slot open at the top and ends and extending across the central portion of the upper end of the base, in combination with a post at its lower end seated in said slot, and guys from the post to opposite end portions of the base.

[Claims 6 to 18 not printed in the Gazette.]

875,040. AUTOMATIC LEAK-INDICATOR FOR SHIPS. CHARLES BERGSTRÖM Tammerfors, Russia. Filed July 5, 1907. Serial No. 382,342.



1. In automatic leak-indicator for ships the combination of a casing, a float suspended in said casing by means of a Cardan's suspension, means for opening and shutting off access to said casing and electric contacts adapted to be closed by said float.

2. In automatic leak-indicator for ships the combination of a casing, a float suspended in said casing by means of a Cardan's suspension, means for opening and shutting off access to said casing and electric contacts adapted to be closed on said float rising by the water entering said casing.

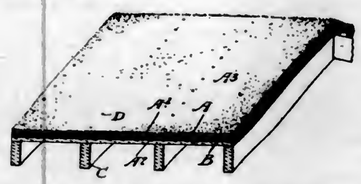
3. In automatic leak-indicator for ships the combination of a casing, provided with slots at its circumference, a revoluble ring in said casing also provided with slots adapted to open and close said slots in said casing, a float suspended in said casing by means of a Cardan's suspension and electric contacts adapted to be closed on said float rising by the water entering said casing.

4. In automatic leak-indicator for ships the combination of a casing provided at its circumference with slots, a revoluble ring in said casing also provided with slots adapted to open and close said slots in said casing, of horizontal pins oppositely arranged in regard to each other, a ring revolubly supported on said pins, of pins provided in said latter ring at right angles to said first pins and a basket revolubly supported on said latter pins provided with openings for the access of water, a float in said basket adapted to move up and down therein and electric contacts adapted to be closed by said float.

5. In automatic leak-indicator for ships the combination of a casing provided at its circumference with slots, a revoluble ring in said casing also provided with slots adapted to open and close said slots in said casing, a a ring revolubly supported in said casing, a basket revolubly supported in said ring about an axis at right angles to the axis of revolution of said ring, a float in said basket adapted to move up and down therein and electric contacts adapted to be closed by said float.

[Claim 6 not printed in the Gazette.]

875,041. COMPOSITE ROOFING. GEORGE F. BISHOPRIC, Toronto, Ontario, Canada. Filed Mar. 21, 1907. Serial No. 363,716.



1. A composite roofing comprising an inner foundation layer, coatings of adhesive material on the upper and lower sides of the same, a superimposed coating of sand or the like on the upper adhesive coating and a bottom reinforcement secured to the lower coating, consisting of strips located at desired intervals apart as and for the purpose specified.

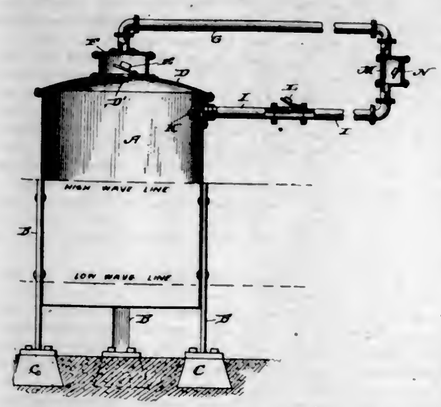
2. A composite roofing comprising a foundation layer comprising an inner foundation layer, coating of adhesive material on the upper and lower sides of the same, a superimposed coating of sand on the upper adhesive coating, a bottom reinforcement secured to the lower coating consisting of strips located at desired intervals apart and a base formed of a layer of suitable material having an upper and lower adhesive coating and superimposed strips adhering to the upper coating and interlocking with the strips forming the reinforcement in the composite roofing above as and for the purpose specified.

875,042. WAVE-MOTOR. EDWARD J. BISSELL, Bay City, Mich. Filed May 21, 1906. Serial No. 318,056.

1. A wave motor comprising a tank open at the bottom, closed at the top, the upper end of the tank being provided with an outwardly opening valve, an air pipe leading from the said upper end of the tank and a return pipe leading into the tank adjacent its upper end an inwardly opening valve arranged at the inner end of said return pipe means for admitting additional air, and means for liberating air from said air pipes.

2. A wave motor comprising a tank open at the bottom, closed at the top, said top having an outwardly opening valve, a pipe leading from said upper end, a motor into which said pipe leads, an exhaust pipe leading from the motor back to the air tank at a point adjacent the upper end, a relief valve in said pipe and an inwardly opening valve arranged at the inner end to said return pipe.

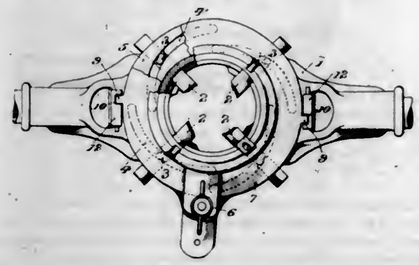
3. A wave motor comprising a tank open at the bottom and closed at the top, said tank being so arranged that its upper end is above the normal crest line of the wave, and its lower end below the normal trough line of the wave, the top of the tank having an outwardly opening valve, an air pipe leading from said upper end, a valve therein, a motor into which the said pipe leads, an exhaust pipe leading from the motor back into the air tank at a point adjacent the upper end of said tank, a relief valve in said pipe and an inwardly opening valve arranged at the end of said pipe.



4. A wave motor comprising a tank open at the bottom, closed at the top and having an outwardly opening valve, an air pipe leading from said upper end, a motor to which the said pipe leads, a return pipe leading from the motor to the air tank and having an inwardly opening valve, at its inner end, a safety outlet valve arranged between the motor and tank and an emergency inlet valve arranged between the tank and motor as set forth.

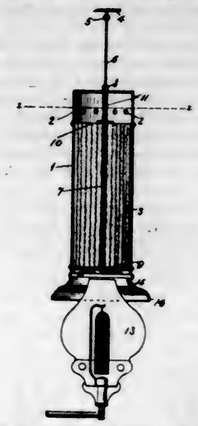
5. A device of the kind described consisting of a downwardly open tank partially submerged, an air pipe, said air pipe having communication at each end with said tank, an air motor arranged in said air pipe, means for admitting additional air other than that in the tank to said air pipes, means for liberating surplus air from said pipes, air being forced through said air motor upon rise of water in the tank and sucked through the motor upon fall of water in the tank, the air passing through the motor at all times in one direction.

875,043. TAPER-THREAD-CUTTING TOOL. BRADFORD BORDEN, Warren, Ohio, assignor to The Borden Company, Warren, Ohio, a Corporation of Ohio. Filed Dec. 19, 1906. Serial No. 348,649.



In a pipe threading device, a series of radially-arranged chasers, and means for allowing the chasers to recede during the cutting operation, the cutting face of each chaser being beveled to a degree greater than the ratio of recession of such chasers.

875,044. HEATER. COTTER T. BRIDE, Washington, D. C. Filed Apr. 24, 1907. Serial No. 369,927.

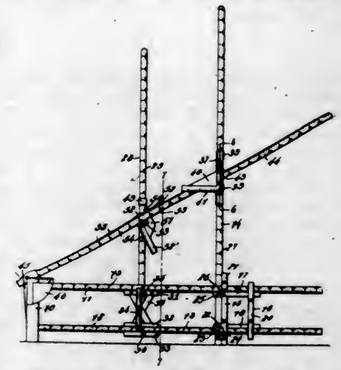


1. In a device of the character described, a main inclosing casing formed with outlets at its upper portion and a flared lower end, a netting adapted to be received within the casing, means sustaining and holding the netting below the outlets, and a collar adapted to be received and sustained upon the flared portion of the casing.

2. In a heater, a main casing, a supported netting within the same, a rod upon which the netting is coiled, a tube upon the upper portion of the rod to hold the netting in its proper position, and sustaining means for the device.

3. The main inclosing casing, a supported netting within the same, a rod upon which the netting is held, and means for holding the netting in its proper relative position upon the rod.

875,045. GAGE. MIDDLETON D. BROWN, Grand Chain, Ill. Filed Aug. 13, 1906. Serial No. 330,368.

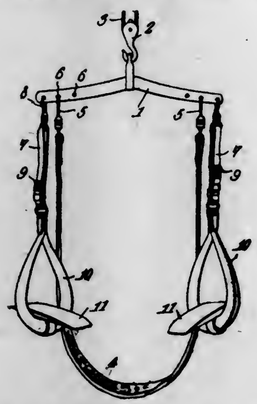


1. An instrument of the class described comprising a block, a pair of parallel beams carried by the block, a frame supported by the beams for sliding movement thereon and having a pointer to register with a scale upon one of the beams, a beam pivoted to the block, a vertically extending beam supported by the frame, a plate arranged for sliding movement upon the vertical beam, and guide members carried by the plate for the reception of the pivoted beam whereby the same will be swung vertically when the frame is slid upon the first named beams.

2. An instrument of the class described comprising a

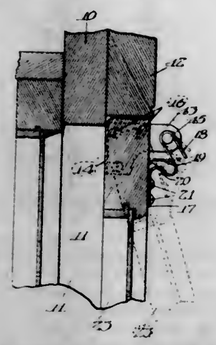
block, a pair of parallel beams carried by the block, a frame supported by the beams for sliding movement thereon and having a pointer for registration with a scale upon one of the beams, a beam pivoted to the block, a plate carried by the block and having calibrations thereon, a vertically extending beam carried by the frame, a second frame detachably supported for sliding movement upon the first named beams, a vertically extending calibrated beam carried by the last named frame, and means carried by each of the vertically extending beams for supporting the pivoted beam for vertically swinging movement when either of the frames is slid upon the first named beams.

875,046. GYNECOLOGICAL SLING. MADISON C. BURRUS, New Franklin, Mo. Filed Dec. 29, 1906. Serial No. 350,028.



A sling comprising a pendent yard arm provided near each terminal with a plurality of orifices, a hips sling, swiveled hooks carried by the sling to engage a pair of the orifices, leg-supporting stirrups, adjustable straps connected therewith, swiveled hooks carried by the straps and engaging a second pair of the orifices, and pallets carried by the stirrups.

875,047. HANGER OR SEPARABLE HINGE FOR STORM-SASH. FRANK BURSICK, Chicago, Ill. Filed Apr. 24, 1907. Serial No. 369,975.



1. A hanger or separable hinge for sashes and the like, comprising two members, one of which is adapted to be secured to a window frame or its blind stop and the other to the sash, and a sash stop adjacent and spaced from the face of the sash, one of the members being elastic, whereby a tension will be exerted upon the sash when the members are in engagement and the sash is closed, to force the latter against the stop.

2. A hanger or separable hinge for sashes and the like, comprising two members, one of which is adapted to be secured to a window frame or its blind stop, and the other to the sash, one of the members being provided with a pintle and the other with a yielding extremity adapted to engage and move against the pintle, said pintle being located adjacent and out of engagement with the face of the sash and so spaced with relation to the sash stop that when the sash is closed the said yielding extremity will be placed under tension between the pintle and the sash stop to force the sash against the stop.

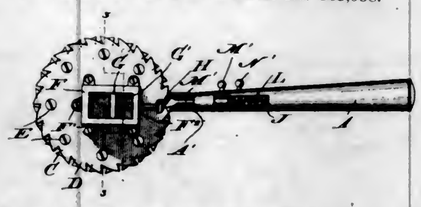
3. A hanger or separable hinge for sashes and the like, comprising two members, one of which is adapted to be secured to the sash and provided with a yielding extremity out of engagement with the sash, the other member being adapted to be secured to the window frame or its blind stop and provided with a pintle adjacent the outer face of the sash and spaced therefrom and adapted to be engaged by the yielding extremity of the other member, said pintle being so disposed with relation to the sash stop that when the sash is moved into a closed position the said yielding extremity will be placed under tension.

4. A hanger or separable hinge for sashes and the like, comprising two members, one of which is adapted to be secured to the sash and provided with a yielding hook shape extremity adjacent and out of engagement with the outer face of the sash, and the other member being adapted to be secured to the window frame or its blind stop and provided with a pintle extending across and spaced from the outer face of the sash, said pintle being adapted to be engaged by the hook shaped extremity of the other member and being so disposed with relation to the sash stop that when the sash is in engagement with the stop the hook shaped extremity will be placed under tension.

5. A hanger or separable hinge for sashes and the like, comprising two members, one of which is adapted to be secured to the sash and provided with a yielding hook shape extremity adjacent and out of engagement with the outer face of the sash and the other member being adapted to be secured to the window frame or its blind stop and provided with a pintle extending across and spaced from the outer face of the sash, said pintle being adapted to be engaged by the hook shaped extremity of the other member and being so disposed with relation to the sash stop that when the sash is in engagement with the stop the hook shaped extremity will be placed under tension and disposed between the outer face of the sash and the said pintle.

[Claims 6 to 10 not printed in the Gazette.]

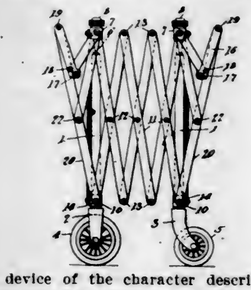
875,048. WRENCH. MILTON CLEVENSTINE, Kimberton, Pa. Filed Mar. 30, 1907. Serial No. 365,558.



1. In a wrench, the combination with a handle, provided with an offset arm at one end, of a pair of oppositely toothed ratchet wheels secured together loosely mounted on the end of said arm, a jaw secured on the face of the outer ratchet wheel and spring actuated pawls mounted in the ends of the handle carrying pins working in bayonet-slots formed in the handle.

2. The combination with a handle, provided with spaced bores at one end, communicating with bayonet-slots formed in the handle, of an offset arm extending out from said end, oppositely toothed ratchet-wheels mounted on the end of the said arm, an adjustable jaw secured on the face of the outer ratchet wheel, spring actuated pawls mounted in said bores, and pins carried by said pawls working in said bayonet-slots.

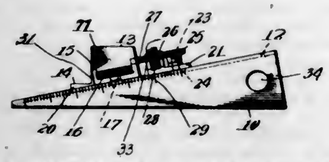
875,049. TRUCK FOR UNDERTAKERS' USE. WILLIAM U. COLTHAR, Springfield, Ohio, assignor to The Champion Chemical Company, Springfield, Ohio, a Corporation of Ohio. Filed May 31, 1906. Serial No. 319,505.



1. In a device of the character described, four independent corner posts each composed of two members, one slidable within the other, side frames each composed of lazy-tongs bars, each frame pivoted at its upper and lower corners to the corresponding respective members of the posts, and extensions, one at either end of the device, each composed of an extension bar, a brace pivoted to said extension bar and to one member of the adjacent post, and a supplemental brace pivoted to the other member of said post and to said brace, substantially as described.

2. In a device of the character described, four independent posts, each composed of two members, one slidable within the other, two side frames composed each of intersecting bars, with the lower end of the outer bars pivoted to one member of the adjacent post and the upper end of the outer bars pivoted to the other member of the adjacent post, and end frames composed each of intersecting bars with the lower end of each bar pivoted to one member of the adjacent post and the upper end of each bar pivoted to the other member of the adjacent post.

875,050. MEASURING DEVICE. DANIEL E. CONLON, Worcester, Mass. Filed Apr. 15, 1907. Serial No. 368,179.



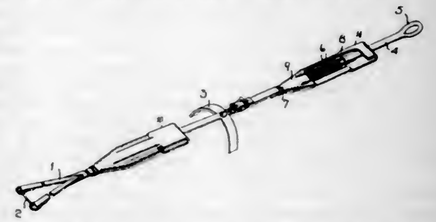
1. In a measuring tool, the combination of a wedge-shaped base having a dove-tailed slot in one edge thereof, an adjusting block having a guiding projection along said slot, a screw having a dove-tailed shaped head in said slot, said screw passing through the block, a nut for clamping said screw for holding the block in any adjusted position on the base, a gage block mounted on the base and guided by said slot, means for holding the gage block on the base in said slot, and an adjusting device mounted on the gage block and connected with the adjusting block.

2. In a measuring tool, the combination of a base having a slot in one edge thereof, an adjusting block having a guiding projection in said slot, a screw passing through said block and having a head in said slot, a nut for clamping said screw to hold the block in adjusted positions on the base, a gage block having a guiding projection mounted in the slot and having a gaging surface parallel with the bottom of the base, a screw mounted in the gage block and having a head located in said slot, a nut for said screw mounted in the gage block for tightening the same, and an adjusting screw connecting the gage block with the adjusting block.

3. In a measuring tool, the combination of a base having a slot in one edge thereof, an adjusting block movable along said slot, means for securing the adjusting block in adjusted positions along said slot, a gage block having a guiding projection mounted in the slot and provided with a gaging surface, a screw having a head located in said slot for fixing the gage block in adjusted positions thereon, a nut for said screw mounted on the gage block and projecting beyond the side surfaces thereof, and an adjusting screw connecting the gage block with the adjusting block.

4. In a measuring tool, the combination of a wedge-shaped base having a dove-tail slot in one edge thereof, an adjusting block having a guiding projection entering said slot, a screw having a dove-tail shaped head in said slot passing through said block, a nut for clamping said screw for holding the block in any adjusted position on the base, a gage-block having a guiding projection also mounted in said slot, and having a plurality of gaging surfaces at different elevations parallel with the bottom of said base, a screw having a dove-tail head located in said groove, a nut for said screw mounted in the gage-block for tightening the same, said nut projecting beyond the side surfaces of the gage-block, and an adjusting screw mounted on the gage-block and connected with the adjusting block.

875,051. HARNESS. ROBERT T. CUMMINGS, Maysville, Ky., assignor of one-half to Charles W. Zweigart, Maysville, Ky. Filed Dec. 3, 1906. Serial No. 346,103.



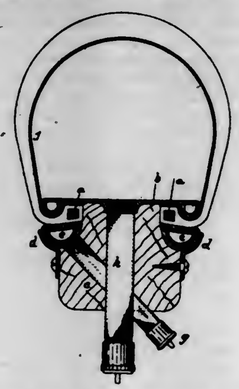
A harness attachment comprising a flat flexible sheath consisting of a single length of pliable material folded upon itself to form a looped keeper at its folded end, said folded end being provided with an aperture and the edges of the sheath being secured together throughout the major portion of their length to provide a housing, a pair of coiled springs arranged within the casing and terminally connected together by means of end loops, and a two-part strap having its members terminally engaged with said loops, one member of the strap being projected through the aperture in the folded end of the sheath.

875,052. BOW-REST. WILLIAM J. DECKER, Detroit, Mich. Filed May 17, 1907. Serial No. 374,235.



A set of spacers for the bows of a vehicle top, comprising pairs of cup and stud pieces secured to the bows and located therebetween, respective pieces of each pair being attached to opposite sides of the bow by a single fastening device extending through the bow, the studs being located to enter the cups when the top is folded.

875,053. PNEUMATIC TIRE. CHARLES E. DURYEA, Reading, Pa. Filed Apr. 8, 1907. Serial No. 366,982.



1. A pneumatic tire having thickened edges, in combination with a rim grooved along its sides and provided with inflatable tubes adapted to firmly lock the edges of the tire within the grooves.

2. In combination with a pneumatic tire, having thickened edges a metal rim cylindrical on the outside, grooves along each side of the wheel felly and inflatable tubes within the groove, said tubes being adapted to firmly force the thickened edges of the tire against the inner circumference of the metal rim.

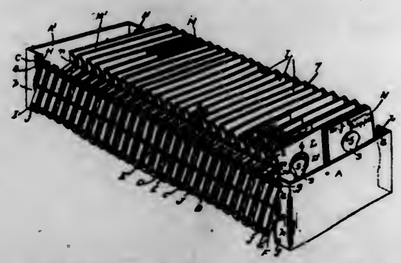
3. In combination with a pneumatic tire having thickened edges, inflatable locking tubes and a wheel felly grooved along its sides and provided with a metal rim and side flanges, so shaped and placed as to form grooves of a cross section larger than the opening between a flange and rim and adapted to receive the thickened edges of the tire.

4. In combination with a pneumatic tire having thickened edges and a metal rim, cylindrical outside and provided with inwardly turned beads, a wooden felly grooved along its outer edges and provided with flanges along its sides, and inflatable tubes held by said flanges.

5. In combination with a pneumatic tire having thickened edges, inflatable locking tubes and a grooved felly adapted to receive said edges and tubes and provided with valve holes for the inflation of the locking tubes and for the inflation of the tire.

[Claims 6 and 7 not printed in the Gazette.]

875,054. CREDIT-ACCOUNT-FILING DEVICE. WILLIAM EACRETT, Toronto, Ontario, Canada, assignor of one-half to Charles W. Smith, Toronto, Canada. Filed Feb. 23, 1907. Serial No. 358,832.



1. A credit-account filing-device designed to be longitudinally extended and closed comprising a plurality of supporting-members or holders placed one behind the other, and means, such as a plurality of levers or bars designed essentially to be moved apart longitudinal of the device when the same is extended, associated with the lower and upper portions of said supporting members or holders whereby, as the device is longitudinally extended, the said means will be moved apart so as to move said supporting members or holders apart and make them assume a backwardly-inclined position, so as to clearly expose the heading of the contents carried thereby.

2. A credit-account filing-device designed to be longitudinally extended and closed, comprising a plurality of supporting-members or holders placed one behind the other, and a plurality of levers or bars pivoted together and pivoted to the lower portions of said supporting-members or holders and pivoted to the upper portions of said supporting-members or holders whereby, as the device is longitudinally extended, the said supporting-members or holders will be moved apart and made to assume a backwardly-inclined position so as to clearly expose the heading of the contents carried thereby.

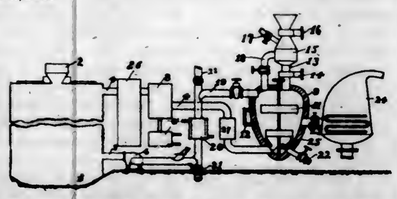
3. A credit-account filing-device designed to be longitudinally extended and closed comprising two end members; a plurality of supporting-members or holders situated between said end members and one behind the other, and a plurality of levers or bars associated with said end members and pivoted to said supporting-members or holders at their lower portions and pivoted to said supporting-members or holders at their upper portions whereby, as the device is longitudinally extended, the said supporting-members or holders will be moved apart and made to assume a backwardly-inclined position so as to clearly expose the heading of the contents carried thereby.

4. A credit-account-filing-device designed to be longitudinally extended and closed, comprising two end members; a plurality of supporting members or holders situated between said end members and one behind the other, and a plurality of levers or bars associated with said end members and pivoted to said supporting-members or holders at their lower portions and pivoted to said supporting-members or holders at their upper portions whereby, as the device is longitudinally extended, the said supporting-members or holders will be moved apart and made to assume a backwardly-inclined position so as to clearly expose the heading of the contents carried thereby, and retaining-means associated with said supporting-members or holders.

5. A credit account filing device designed to be longitudinally extended and closed, comprising two end members; a plurality of supporting members or holders situated between said end members and one behind the other; a plurality of levers or bars associated with said end members and with each other and with the lower portions of said supporting members or holders, and a plurality of links hinged to the top of the majority of pairs of said levers or bars, and near the top of said supporting members or holders so that as the device is longitudinally extended, the said supporting members or holders will be moved apart and made to assume a backwardly-inclined position so as to clearly expose the heading of the contents carried thereby.

[Claims 6 to 9 not printed in the Gazette.]

875,055. PROCESS OF MAKING FORMATES. CARLETON ELLIS, White Plains, N. Y., and KARL P. MCELROY, Washington, D. C. Filed June 11, 1906. Serial No. 321,129.



1. In the manufacture of formates, the process which consists in suspending in water a metallic basic body substantially insoluble in water, treating said suspended body with carbon monoxid under high pressure and at a high temperature till a formate is formed in substantial amount, allowing the excess of basic body to settle out of the clear solution so formed, removing a portion of the solution, replacing with water and repeating the operation.

2. In the manufacture of formates, the process which consists in treating an insoluble carbonate suspended in water with carbon monoxid at a high temperature and under high pressure.

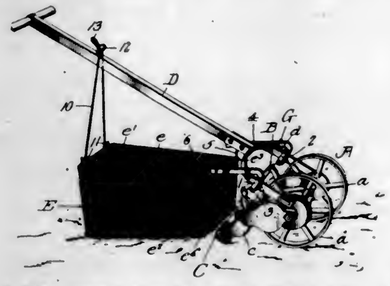
3. In the manufacture of formates, the process which consists in treating an insoluble metallic carbonate suspended in water of high temperature with carbon monoxid under pressure.

4. In the manufacture of formates, the process which consists in treating an insoluble metallic carbonate suspended in water of high temperature with producer gas under pressure.

5. In the manufacture of calcium formate, the process which consists in treating calcium carbonate suspended in water with carbon monoxid at a high temperature and under high pressure.

[Claims 6 to 14 not printed in the Gazette.]

875,056. GRASS-CATCHER FOR LAWN-MOWERS. DANIEL FERGESEN, Aurora, Ill. Filed July 10, 1906. Serial No. 325,555.



1. A lawn mower having a handle with a bail, and a grass catcher having hangers, arranged rearward of the operating mechanism of the mower and each comprising a plurality of arms arranged at an angle with each other, one of said arms extending rearwardly; means for securing the hangers to the handle-bail, a receiver having supporting means extending from its forward upper end pivotally connected with the rearwardly-extending arm of each hanger, said receiver being free to turn pivotally relatively to the hangers and mower, and means for turning the receiver on its pivots, whereby its contents are dumped clear of the operating mechanism of the mower.

2. A lawn mower, having a handle with a bail, and a grass catcher having hangers, arranged rearward of the operating mechanism of the mower and each comprising two arms arranged at an angle with each other, one of said arms extending rearwardly and the other extending downward from the forward end thereof and secured to the handle bail; a receiver having supporting means which extend above its top, at its forward end, and are pivotally attached at their upper ends to the rearwardly extending arms of the hangers, and a supporting means for the rear end of the receiver, adapted to suspend the rear end of the same from the handle and to move relatively to the handle and turn the receiver on the pivots connecting it with the hangers.

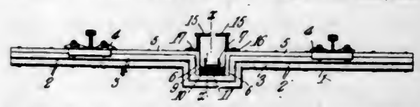
3. A grass catcher for a lawn mower, comprising a receiver having an open forward end and means adapted to support the same from the propelling handle of the mower, said means including a hanger having means at one end for attaching it to the handle-bail of the mower and an arm extending rearwardly from the attaching means, a pivoting means extending from the receiver and connected, above the top of the latter, with said arm of the hanger at a place which is rearward of the attaching means, and a suspending and elevating means for the rear end of the receiver adapted to be supported from the mower-handle and when moved to turn the receiver about its pivotal connection with the hanger and thereby cause the contents of the receiver to be dumped through said open forward end.

4. A grass catcher for a lawn mower, comprising a receiver having an open forward end, and means adapted to support the same from the propelling handle of the mower, said means including a plurality of hangers, each of which comprises two arms extending at an angle with each other, one of said arms provided with means for attaching the hanger to the mower and the other extending rearward therefrom, pivoting means connecting the upper forward end of the receiver with each of said rearwardly extending arms at a place rearward of said attaching means, and a suspending and elevating means for the rear end of the receiver, adapted to be supported from the mower handle.

5. A grass catcher for a lawn mower, comprising approximately L-shaped hangers, a plate and securing means adapted to coöperate with the forward member of each of said hangers to clamp the arms adjustably to the handle-bail of the mower, a receiver having means extending from its forward upper end and pivotally connected with the rear ends of the other members of the hangers, and means for movably suspending the rear end of the receiver from the handle.

[Claims 6 to 8 not printed in the Gazette.]

875,057. RAILWAY-TIE. ELI T. FORRESTER, Washington, D. C. Filed June 29, 1907. Serial No. 381,462.



1. A railway tie having an angular depressed portion constituting a yoke, an insulating device resting upon and detachably engaging the bottom of the yoke, a conductor and means integral with said device for engaging the conductor.

2. A railway tie having an angular depressed portion constituting a yoke, an insulating base bearing upon the yoke, means integral with the base and engaging the yoke to prevent displacement of the base, a conductor, and means integral with the base for engaging the conductor.

3. A railway tie having a depressed portion constituting a yoke, angular slot rails secured upon the tie adjacent opposite sides of the yoke, a conductor, and insulating means within and detachably mounted upon the yoke for engaging the conductor.

4. A railway tie having a depressed portion constituting a yoke, an insulating base within and bearing upon the bottom of the yoke, retaining flanges depending from the base and lapping the bottom of the yoke, a conductor, and means upon the base for engaging the conductor.

5. A railway tie having a depressed portion constituting a yoke, an insulating base detachably engaging the bottom of the yoke, a longitudinal rib upon the base, laterally extending flanges integral therewith, a conductor, and side flanges coöperating with the lateral flanges to retain the conductor upon the base.

[Claims 6 and 7 not printed in the Gazette.]

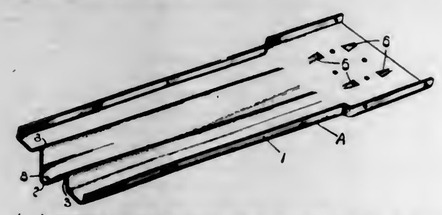
875,058. SPRING-PLANK. ROBERT E. FRAME, St. Louis, Mo., assignor of one-half to Herbert W. Wolff, St. Louis, Mo. Filed July 8, 1907. Serial No. 382,658.

1. A spring plank formed of pressed metal and provided with pairs of integral lugs or projections which embrace the side faces of the arch bars of a truck; substantially as described.

2. A pressed metal spring plank having an approximately V-shaped corrugation extending longitudinally through the center thereof; substantially as described.

3. A pressed metal spring plank having an approximately V-shaped corrugation extending longitudinally through the center thereof, said corrugation diminishing

in depth from the center towards the ends of the plank; substantially as described.

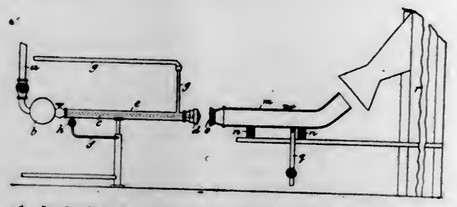


4. A pressed metal spring plank provided with a longitudinally extending corrugation, an oppositely disposed corrugation at each side of the corrugation first referred to, and upwardly projecting side flanges; substantially as described.

5. A pressed metal spring plank having an approximately V-shaped corrugation extending longitudinally through the center thereof, and inverted V-shaped corrugations arranged parallel to the corrugation first referred to and on each side thereof, all of said corrugations being of greatest depth at the middle of the plank and diminishing in depth toward the ends of the plank; substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

875,059. HYDRO-ELECTRIC MACHINE. HENRY E. FRY, Dorchester, England. Filed Apr. 15, 1907. Serial No. 368,368.



1. In hydro-electric machines, the combination of a series of diaphragms having slits in them placed one in advance of the other with spaces between them, the area of the slits increasing progressively, and means for directing the steam to the slits.

2. In hydro-electric machines, the combination of a series of vertical diaphragms having horizontal slits in them placed one in advance of the other with spaces between them, and means for directing the steam to the slits.

3. In hydro-electric machines, the combination of a series of diaphragms having horizontal slits in them placed one in advance of the other with spaces between them, the area of the slits increasing progressively, and means for directing the steam to the slits.

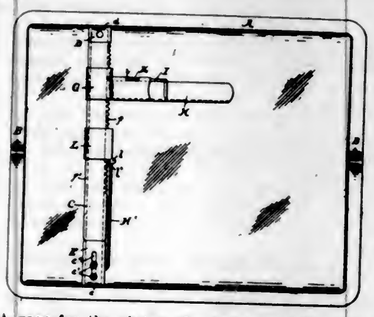
4. In hydro-electric machines, the combination of a series of steam pipes, a separate water jacket round each pipe, means for supplying water to each jacket, and nozzles at the ends of the steam pipes.

5. In hydro-electric machines, the combination of a series of steam pipes, a separate water jacket round each pipe, means for supplying water to each jacket, and a series of friction surfaces placed one in advance of the other at the end of each steam pipe.

[Claims 6 to 8 not printed in the Gazette.]

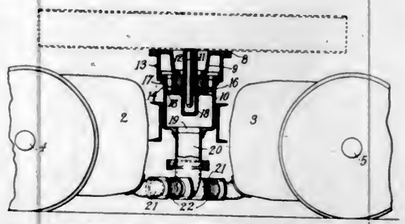
875,060. GAGE ATTACHMENT FOR PRINTING-PRESSES. JOHN T. GAY, Binghamton, N. Y. Filed Apr. 22, 1907. Serial No. 369,624.

1. In a gage for printing presses, a catch bar having ends for engagement with the platen, one of said ends being extensible, teeth arranged on one side of the catch bar, an arm disposed at right angles to the said catch bar, a spring pressed rod connected with said arm engaging the teeth on the catch bar, substantially as described.



2. A gage for the platen of printing presses, comprising a catch bar having ends adapted for connection with the platen and having a serrated or notched edge, an arm disposed at right angles thereto, and adjustably connected therewith, a movable slide also mounted upon said catch bar, a projecting blade upon said movable slide extending lengthwise of the catch bar, and means for locking said slide with its projecting blade upon the catch bar, substantially as described.

875,061. VENTILATION OF ELECTRIC RAILWAY-MOTORS. GEORGE GIBBS, New York, N. Y. Filed July 24, 1907. Serial No. 385,381.



1. In a system for the ventilation of electric railway motors, the combination with a car, a truck swiveled thereto, and one or more motors carried in the truck, of a blower carried by the car, a casing carried by the car, concentric with the swivel connection of the car and truck and providing an annular chamber, an air duct connecting said chamber with the blower and a pipe or pipes carried by the truck, in communication with said chamber and directing the current of air thereform upon the motor or motors, as set forth.

2. In a system for the ventilation of electric railway motors, the combination with a car, a truck swiveled thereto, and one or more motors carried in the truck, of a blower carried by the car, an annular casing carried by the car, concentric with the swivel connection of the car and truck, an air-seal interposed between the casing and the adjacent portion of the truck, an air-duct leading from the blower and discharging air into said casing, and means carried by the truck for leading air from said chamber to the motor or motors, as set forth.

3. In a system for the ventilation of electric railway motors, the combination with a car, a depending pivot-member carried on the bottom thereof, a truck having a bearing for said pivot-member and provided with air-passages outside said bearing, and one or more motors carried in the truck, of a blower carried by the car, a casing carried by the car, inclosing the said passages and forming an air chamber in conjunction with said pivot member, an air-duct leading from the blower into said chamber, and means for leading air from the said air passages, outside of the said bearing, to the motor or motors, as set forth.

4. In a system for the ventilation of electric railway motors, the combination of the depending pivot-member of a car, a truck having a hollow bolster provided with a bearing for said pivot-member, and with air-passages outside of said bearing and leading to the interior of the bolster, a casing concentric with the pivot-member, extending downward into juxtaposition to the said air-passages of the bolster to inclose the same, and an air-pipe leading from the hollow bolster, as set forth.

5. In a system for the ventilation of electric railway motors, the combination with the swivel connection of a car and a truck, comprising a pivot-member carried by the car and a bearing therefor carried by the truck; of a casing concentric with said swivel connection, stationary relatively to one of the parts thereof and forming in conjunction with the swivel connection an air chamber, and means for leading air from the said air-chamber to one or more motors carried in the truck, as set forth.

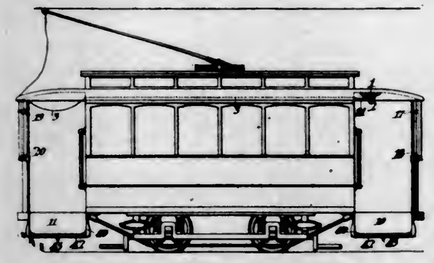
[Claims 6 to 9 not printed in the Gazette.]

875,062. METHOD OF PRODUCING CAMPHOR FROM CAMPHENE, ISOBORNEOL, OR OTHER CAMPHOR-PRODUCING SUBSTANCES. CHARLES GLASER, Baltimore, Md. Filed Jan. 26, 1906. Serial No. 298,055.

1. The process of obtaining camphor which consists in suspending isoborneol in a solution of an alkali metal chlorid, passing an electric current through the mixture, and separating the camphor.

2. The process of obtaining camphor, which consists in suspending isoborneol in a solution of sodium chlorid, passing an electric current through the mixture and separating the champhor.

875,063. SAFETY CAR SIGNALING DEVICE. GEORGE W. GODDARD, Philadelphia, Pa. Filed Jan. 15, 1907. Serial No. 352,450.



1. In a car signaling device, the combination with an audible signal; of a mechanical connection for operating said signal; means for preventing the normal operation of said signal; means located upon a selected portion of the car for controlling said preventive means; and connections between said controlling and preventive means.

2. In a car signaling device, the combination with an audible signal; of a signal of a different character; means for preventing the normal operation of said audible signal; controlling mechanism for said means, adapted to be actuated by weight upon a selected portion of the car; and means for substituting for said audible signal said signal of a different character.

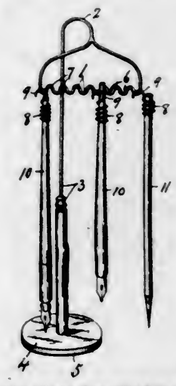
3. In a car signaling device, the combination with a gong; of a signal of a different character; means for preventing the normal operation of said gong; controlling mechanism for said means, adapted to be actuated by weight upon a selected portion of the car; and means for substituting for said gong said signal of a different character.

4. In a car signaling device, the combination with an audible signal; of a mechanical connection for operating said signal; electrical means for preventing the normal operation of said signal; means located upon a selected portion of the car for controlling said preventive means; and electrical connections between said controlling and preventive means.

5. In a car signaling device, the combination with an audible signal; of a signal of a different character; means for operating said audible signal; electrical means for preventing the normal operation of said audible signal; controlling mechanism for said electrical means, adapted to be actuated by weight upon a selected portion of the car; and means for substituting for said audible signal said signal of a different character.

[Claims 6 to 14 not printed in the Gazette.]

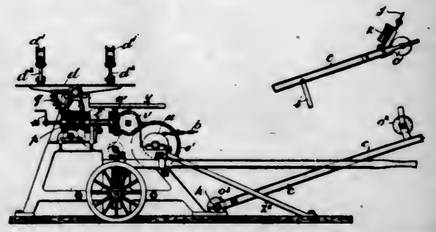
875,064. PEN AND PENCIL HOLDER. GEORGE B. GRAVES, Albany, N. Y. Filed Dec. 26, 1906. Serial No. 349,394.



1. A device of the class described consisting of a frame formed from a single piece of wire with its intermediate portion bent into oppositely extending corrugations and bent at the ends of the corrugated portion at right angles thereto and united in a stock portion adapted to be engaged with a supporting member.

2. A device of the class described consisting of a frame formed from a single piece of wire with its intermediate portion bent into oppositely extending corrugations and bent at the ends of the corrugated portion at right angles thereto with one terminal of the wire coiled around the body of the wire near the other terminal and said other terminal threaded to provide means for connecting the device to a supporting member.

875,065. POLE AND LIKE ERECTING MACHINE. JOHN H. GREEN, Salford, England. Filed Sept. 30, 1907. Serial No. 395,204.



1. In a pole erecting or lowering machine, the combination with two side frames, means for holding the frames together and a table axially supported by the said frames of a lifter pivotally supported by the frames, a barrel also axially supported by the said frames, and a chain secured at one end to the barrel and at the other end to the axle of the table after engaging the lifter, and means for simultaneously operating the table and barrel, the said barrel being formed to a shape whereby as the lifter is raised to the vertical about its pivot the chain wraps on

to the barrel at a rate corresponding to the angular movements of the lifter, substantially as herein set forth.

2. In a pole erecting or lowering machine, the combination with the two side frames, means for holding the said frames together, a table axially supported by the said frames, a barrel also axially supported by the said frames, a chain secured to the barrel at one end and to the table axle at the other end and a lifter composed of two lengths of angle iron braced together for a portion of their length and for the other portion bent in divergent directions, the ends of the last named portion being pivotally connected to the machine pulleys carried by the lifter and around certain of which the said chain passes, substantially as herein set forth.

3. In combination in a pole erecting or lowering machine two side frames, means for holding the frames together, a table axially supported by the said frames, a lifter with bifurcated portion pivotally supported by the frames and pulleys carried by the lifter, a barrel also axially supported by the said frames, a chain secured at one end to the barrel and at the other end to a fixed part of the machine after passing over certain of the pulleys carried by the lifter, a set of gear wheels and shafts giving a treble purchase and when rotated serving to rotate the barrel, a segmental worm quadrant on the table axis, a shaft alongside the machine frame, and in a bearing carried by the frame, a worm and bevel wheels on said shaft, and a further bevel wheel on one of the gear wheel shafts which is capable of being moved into and out of gear with the bevel wheel on the said worm carrying shaft, substantially as herein set forth.

4. In combination, two side frames, means for holding the frames together, a table axially mounted in said frames, a barrel also axially mounted in the frames, a lifter pivotally mounted upon a connecting member of the frames means for rotating the table and barrel, pulleys carried by the lifter, a chain secured to the barrel at one end and to the table axle at the other after passing over certain of the pulleys carried by the lifter, and a fitment carried by the lifter consisting of a pair of arms or horns arranged in a plane at right angles to the lifter, rollers carried by the said arms, a bar-like member hinged at one end to one of the arms, and means for adjustably fastening the other end to the other arm, said means comprising a pin, a long releasing chain connected to said pin and a pulley carried by the lifter over which the chain passes, substantially as herein set forth.

875,066. ABSORBENT MATERIAL. WILLARD R. GREEN, Muscatine, Iowa. Filed Dec. 27, 1905. Serial No. 263,505.

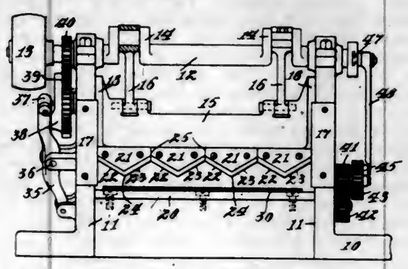


1. An absorbent material for surgical purposes, comprising a body or frame-work made up of curled ribbons or strands of fibrous paper and having intermingled therewith a filling of fibers and filaments.

2. An absorbent material for surgical purposes, comprising a body or frame-work made up of curled ribbons or strands of paper having intermingled therewith a filling of vegetable fibers such as cotton or linen fibers or filaments.

3. An absorbent material for surgical purposes, comprising a body or frame work made up of ribbons or strands of paper having intermingled therewith a filling of fibers, such for instance as vegetable fiber.

875,067. MACHINE FOR MAKING FIBER STRANDS. WILLARD R. GREEN, Muscatine, Iowa. Filed Jan. 13, 1906. Serial No. 295,907.



1. In mechanism for shearing sheet material, the combination with means for feeding the sheet by the resultant of a combined advancing and lateral movement, a pair of members having complemental sinuous shear edges, means for bringing these together at an incline one relative to the other, and adapted and timed for cutting the sheet on lines out of parallelism with the lines of the preceding cutting.

2. In a mechanism for the manufacture of curved, curled paper fiber-strands, the combination with complemental sinuous relatively inclined shears, of means for feeding sheet material thereto by the resultant of a forward and sidewise movement, and comprising feed rolls and means for rotating these, and means for axially shifting the rolls prior to each successive cut.

3. The combination with a bed having a sinuous shear edge, of a complemental sinuous knife, feed rolls for feeding sheet material over the bed and said shear edge, and means for axially shifting said rolls for bringing the cut edge of the material out of parallelism with said shear edge prior to each successive cut.

4. The combination with a bed having a sinuous shear edge, of a complemental sinuous knife, means for bringing these together at a relative incline, feed rolls for feeding sheet material over the bed and said shear edge, and means for axially shifting said rolls for bringing the cut edge of the material out of parallelism with said shear edge prior to each successive cut.

5. The combination with complemental sinuous shears, of means for feeding sheet material between the same and laterally to bring the sinuous cut line of the sheet into such relation to the sinuous cut line of the shears that the said cut line will at places coincide with the cutting line and at other places extend beyond the same.

[Claims 6 to 12 not printed in the Gazette.]

875,068. PAPER MANUFACTURE. WILLARD R. GREEN, Muscatine, Iowa. Filed Jan. 13, 1906. Serial No. 295,908.



1. A paper manufacture for surgical purposes, comprising a mass of self-sustaining and mat-resisting paper fiber strands intermingled to form distinct open distribution spaces, each fiber strand having a non-soluble adhesive coating on one side thereof.

2. A paper manufacture for surgical purposes, comprising a mass of self-sustaining and mat-resisting paper fiber strands made up from wood fiber intermingled to form distinct open distribution spaces, each fiber strand having a non-soluble adhesive substance on one side thereof, and tapering toward its ends.

3. A paper manufacture for surgical purposes, comprising a mass of self-sustaining and mat-resisting curled paper fiber strands intermingled to form distinct open distribution spaces, each fiber strand having a non-soluble adhesive coating on one side thereof.

4. A paper manufacture for surgical purposes, comprising a mass of self-sustaining and mat-resisting paper fiber strands, each comprising intermingled wood fiber and vegetable fiber, and each of said strands having an adhesive stiffening coating on one side thereof.

5. A paper manufacture for surgical purposes, comprising a sinuously formed strip of absorptive paper.

[Claims 6 to 13 not printed in the Gazette.]

875,069. ART OF PAPER MANUFACTURE. WILLARD R. GREEN, Muscatine, Iowa. Filed Jan. 13, 1906. Serial No. 295,909.

1. The art of manufacturing paper fiber strands for surgical purposes which consists in feeding a sheet into position to be cut and simultaneously with such feeding moving the sheet edgewise, and then cutting the sheet of fibrous material into independent and separated fiber strands of sinuous form in the direction of the plane of the sheet.

2. The art of manufacturing paper fiber strands for surgical purposes, which consists in preparing a sheet of fibrous material, then feeding said sheet into position to be cut and simultaneously with such feeding moving it edgewise, then cutting the sheet into independent and separated fiber strands each tapering toward its ends and of sinuous form in the direction of the plane of the sheet, and simultaneously curling said strands.

3. The art of manufacturing paper fiber strands for surgical purposes, which consists in applying to one surface of a sheet of fibrous paper a reinforcing coating, then feeding said sheet into position to be cut and simultaneously with such feeding moving it edgewise, and then cutting the sheet into independent and separated fiber strands each of sinuous form in the direction of the plane of the sheet.

4. The art of manufacturing paper fiber strands for surgical purposes, which consists in applying to one surface of a sheet of fibrous paper a coating of reinforcing adhesive material, then feeding said sheet into position to be cut and simultaneously with such feeding moving it edgewise, then cutting the sheet into independent and separated fiber strands each of sinuous form in the direction of the plane of the sheet, and simultaneously with the cutting thereof curling said strands.

5. The art of manufacturing paper fiber strands for surgical purposes, which consists in applying to one surface of a sheet of fibrous paper a reinforcing coating of adhesive material non-soluble in water, then feeding said sheet into position to be cut and simultaneously with such feeding moving it edgewise, and then cutting the sheet into independent and separated fiber strands each tapering toward its ends and of sinuous form in the direction of the plane of the sheet and simultaneously curling said strands.

[Claim 6 not printed in the Gazette.]

875,070. APPARATUS FOR CORRESPONDENCE IN CIPHER. CARL HAAS, Mannheim, and HEINRICH STUDT, Heidelberg, Germany. Filed July 30, 1907. Serial No. 386,194.



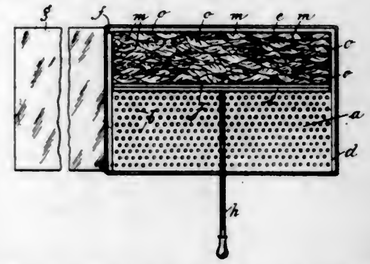
1. In a cipher apparatus the combination of a casing, a roller rotatable within said casing and provided with rows of characters, a feeding device adapted for rotating said roller step by step, a single key operating upon said feeding device, said casing having a longitudinal slot and a scale with alphabet characters and numerals, 1—9—0, arranged below said slot, substantially as set forth.

2. In a cipher apparatus the combination of a casing, a roller rotatable within said casing and provided with rows of characters, a feeding device adapted for rotating said roller step by step, a single key operating upon said feeding device, said casing having a longitudinal slot, a scale with the characters arranged below said slot and means for rotating said roller independently of its rotation step by step by the key feeding mechanism, substantially as set forth.

3. In a cipher apparatus the combination of casing, a roller rotatable within said casing and provided with rows of characters, a feeding device adapted for rotating said roller step by step, a single key operating upon said feeding device, said casing having a longitudinal slot, a scale with the characters arranged below said slot, said casing having also an index opening and index characters of the character-rows on the roller, substantially as set forth.

4. In a cipher apparatus the combination of a casing, a roller rotatable within said casing and provided with rows of characters, a feeding device adapted for rotating said roller step by step, a single key operating upon said feeding device, said casing having a longitudinal slot, a scale with the characters arranged below said slot, said casing having also an index opening, index-characters of the character-rows on the roller and means for rotating said roller independently of its rotation step by step by the key feeding-mechanism, substantially as set forth.

875,071. METHOD OF PRODUCING CIGAR-BUNCH STRUCTURES. OSCAR HAMMERSTEIN, New York, N. Y. Filed Oct. 29, 1902. Serial No. 128,200.



1. The herein described process of producing bunch structures which consists in forming a complete unbroken single sheet of leaf tobacco, joining the edges of each leaf laterally to the adjacent ones, so as to form a continuous unbroken sheet of a single thickness of leaf tobacco and then compacting the entire sheet of tobacco laterally by pressure into a bunch structure.

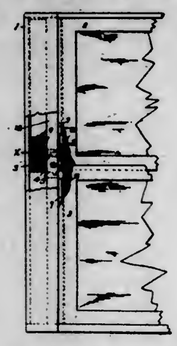
2. The herein described process of producing bunch structures which consists in forming a complete unbroken single sheet of leaf tobacco, joining the edges of each leaf laterally to the adjacent ones so as to form a continuous sheet of a single thickness of leaf tobacco and compacting the said tobacco laterally by mechanical pressure into a confined space.

3. The herein described process of producing bunch structures which consists in placing leaf tobacco with edges in contact upon a suitable support in an unbroken sheet of a single thickness of leaf tobacco, in the presence of air suction, and compacting the sheet of tobacco laterally into a bunch structure.

875,072. SASH-BALANCE. FLORIN HARBACH, Reading, Pa. Filed Nov. 17, 1905. Serial No. 287,764.

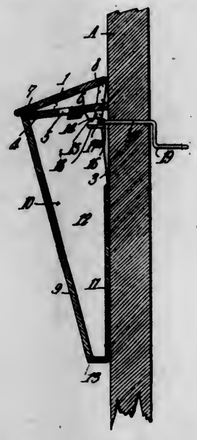
A window comprising a frame, guides located upon the inner side of the frame, vertically arranged strips located within the frame, wheels journaled between the strips, sashes arranged to move vertically along the frame and having their edges in engagement with said strips and being provided at their edges with longitudinally dis-

posed grooves having indentations at their inner sides said grooves receiving the peripheries of said wheels and also receiving and housing the guides, and weights ar-



ranged to move vertically within the frame and having their edges in engagement with said strips, said wheels having contact with the sashes and the weights.

875,073. MAIL-BOX. CHARLES M. HARTWELL, Marion, Ohio. Filed Jan. 26, 1907. Serial No. 354,344.



1. A mail box having a hinged closure, a strip extending into the box from the closure and having a notch, a locking bail within the box and normally seated by gravity within the notch, and means for lifting the bail from engagement with said strip.

2. A mail box having a movable closure, a notched strip extending from the closure and movable into the box, a bail normally seated by gravity within the notch to lock the closure, and a bail lifting device within and extending from the box.

3. A mail box having a movable closure, a notched strip extending therefrom and projecting into the box, said strip having a beveled portion, a pivoted bail within the box and adapted to be contacted and raised by said beveled portion, said bail being normally seated within the notch, and manually operated means for unseating the bail.

4. A mail box having a hinged closure, a notched strip movable therewith and adapted to project into the box, a bail pivoted within the box and normally seated in the notch, a crank for lifting the bail from its seat, and manually operated means for actuating said crank.

5. A mail box having a closure hinged thereto, a pocket movable with the closure and into the box, the sides of said pocket having notches, a bail pivoted within the box and normally seated within the notches, and means for unseating the bail.

[Claim 6 not printed in the Gazette.]

875,074. RECEPTACLE-SEALING CAP. WILLIAM E. HEATH, Baltimore, Md. Filed Jan. 14, 1907. Serial No. 352,231.



1. A sealing cap having an expansible depending locking flange, said cap being partially severed through said flange and across its top and formed with a connecting portion normally preventing spreading of the cap where partially severed, a finger piece for breaking said portion, said cap being resilient and contracting under tension when secured on a receptacle mouth.

2. A cap having a depending locking flange divided by a slot extending into and partly across the top of said cap, the cap top being cut to form a finger piece and a horizontal top flange, said top flange divided by one or more slots.

3. A cap having a locking flange divided by a single slot extending into and partly across the top of said cap, the cap top being cut to form a top horizontal flange divided by one or more slots, and a finger piece integral with said horizontal flange, and a flanged metal disk within said cap.

4. A sealing device comprising a stiff metal cap having an expansible depending locking flange, said cap being severed through said flange and partially across the cap top, and finger operated means for breaking the non-severed portion of the cap top which holds the cap against opening or spreading when bent or locked on a bottle mouth, substantially as described.

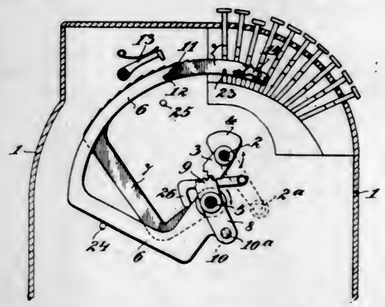
5. A sealing device comprising a stiff metal cap having a depending locking flange adapted to be bent under the locking shoulder of a bottle mouth to lock and contract the cap under tension on the bottle, said cap being severed completely across the top and through the flange except for an unbroken connecting portion holding the cap against spreading, and means for severing or breaking said portion, and thereby permitting the cap, when locked on the bottle mouth, to spring open or spread for removal from the bottle by the fingers.

[Claims 6 to 16 not printed in the Gazette.]

875,075. CASH-REGISTER. WOLDEMAR R. HEINITZ, Chemnitz, Germany, assignor to The Firm of Schubert & Salzer Maschinenfabrik Aktiengesellschaft, Chemnitz, Germany. Filed July 11, 1906. Serial No. 325,701.

1. In a cash register, in combination, a shaft; an actuating-segment mounted thereon and presenting an operating part having a hooked end, and an operated part advanced by the operating part; two spring-actuated latches pivoted to the operated segment-part, one of which latches engages with the said hooked segment end; a spring-actuated safety-block pivoted to the operated segment-part and supporting the ends of the two latches; means for introducing an obstruction into the path of the latches, whereby the latch which does not engage with the operating segment-part is first depressed and pushes back the safety-block from below the hooked latch, which is then depressed and uncoupling of the segmental parts thus effected; means for rotating the operating segment-part on its shaft; and means for retracting it after the uncoupling operation; substantially as described.

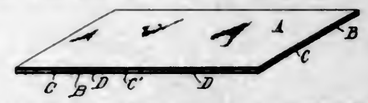
2. In a cash register, in combination, a shaft; an actuating-segment mounted thereon and presenting an operating part having a hooked end, and an operated part advanced by the operating part; two spring-actuated latches pivoted to the operated segment-part, one of which latches engages with the said hooked segment end; a spring-actuated safety-block pivoted to the operated segment-part and supporting the ends of the two latches; means for introducing an obstruction into the path of the latches, whereby the latch which does not engage with the operating segment-part is first depressed and pushes back the safety-block from below the hooked latch, which is then depressed and uncoupling of the segmental parts thus effected; means for rotating the operating segment-part on its shaft; means for retracting it after the uncoupling operation; substantially as described.



3. In a cash register, in combination, a shaft; an actuating-segment presenting an operating part having a hooked end, and an operated part advanced by the operating part; two spring-actuated latches pivoted to the ends of the operated segment-part, one of which latches has a rounded finger, while the other has a hooked finger which engages with the said hooked segment end; a spring-actuated safety-block pivoted to the operated segment-part and supporting the ends of the two latches; means for introducing an obstruction into the path of the latches, whereby the latch with the rounded finger is first depressed and pushes back the safety-block from below the hooked latch, which is then depressed and the two segment-parts thus uncoupled; a double-armed lever mounted on the said shaft one arm of which lever constitutes a toothed segment, while the other arm is pivoted to the arm of the operating segment-part; a second shaft, having a crank; a toothed segment mounted thereon, meshing with the said toothed segment; a lever mounted intermediately of the two said shafts and reposing upon the arm of the operating segment-part; and a cam mounted on the crank-shaft and bearing upon the said lever on rotation; substantially as described.

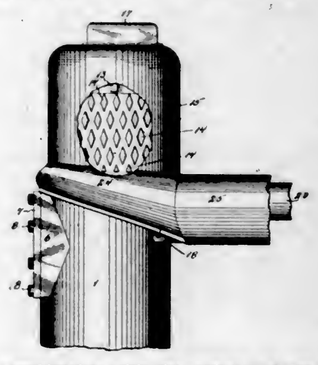
4. In a cash register, in combination, a shaft; an actuating segment presenting an operating part having a hooked end, and an operated part, having a toothed back, advanced by the operating part; two spring-actuated latches pivoted to the ends of the operated segment-part, one of which latches has a rounded finger, while the other has a hooked finger which engages with the said hooked segment end; a spring-actuated safety-block pivoted to the operated segment-part and supporting the ends of the two latches; means for introducing an obstruction into the path of the latches, whereby the latch with the rounded finger is first depressed and pushes back the safety-block from below the hooked latch, which is then depressed and the two segment-parts thus uncoupled; a double-armed lever mounted on the said shaft one arm of which lever constitutes a toothed segment, while the other arm is pivoted to the arm of the operating segment-part; a second shaft, having a crank; a toothed segment mounted thereon, meshing with the said toothed segment; a lever mounted intermediately of the two said shafts and reposing upon the arm of the operating segment-part; a cam mounted on the crank-shaft and bearing upon the said lever on rotation; a stop on the hooked latch adapted to engage with the said obstructions and a spring-actuated pawl engaging with the toothed back of the operated segment-part; substantially as described.

875,076. TABLE-MAT. HOWARD M. HINMAN, Cleveland, Ohio. Filed June 28, 1906. Serial No. 323,962.



In a table mat having corners, in combination, two sheets of heat-resisting material, thin separating strips secured between the sheets with their outer edges flush with the outer edges of the sheets, said separating strips being located along opposite edges of the mat and passing integrally around the corners thereof, and there being space between the ends of such strips to provide admission openings into the interior of the mat.

875,077. GAS-ENGINE. JACOB B. HOOVER, Columbus, Ohio. Filed Feb. 10, 1906. Serial No. 300,360.



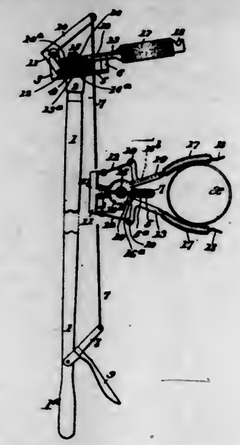
1. The combination with the cylinder of an explosive engine, of a plurality of diamond shaped projections formed upon the exterior face of the cylinder, a casing surrounding the cylinder and in contact with the projections, means for conducting air to one end of said casing, means for conducting air from the other end of said casing, and an exhaust pipe leading from the engine, the last named air conducting means surrounding said exhaust pipe.

2. In a device of the character described, the combination with the cylinder of an explosive engine, of a plurality of diamond shaped projections extending from the outer face of the cylinder, a casing extending around the cylinder the inner wall of which lies in contact with the projections, means for conducting air to the upper portion of the casing, said casing being bulged outwardly at its lower portion to form an enlargement of said casing that extends around the cylinder, an exhaust passage leading from the cylinder, and an air conduit leading from the bulging portion of the casing which surrounds said exhaust pipe.

875,078. GOODS-HANDLER. JOHN C. HOOVER, Cincinnati, Ohio. Filed Apr. 22, 1907. Serial No. 369,493.

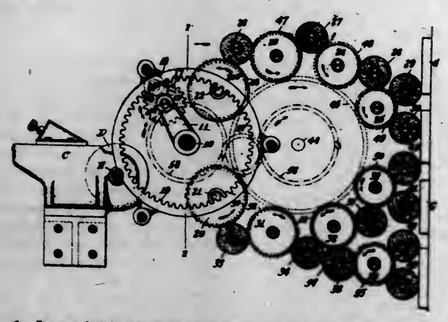
1. A goods-handler, comprising a pole, a ferrule having a platform and an upright arm, a lever having lateral arms at its inner end which is pivoted to said arm on the ferrule, jaw-arms pivotally connected at their inner ends and, in turn, pivotally connected together to the platform of said ferrule, a thumb-lever pivotally connected to the pole at its lower, handle end, a vertical rod connecting the thumb-lever with the first-named lever and

links connecting the jaw-arms with the arms on said first-named lever.



2. A goods-handler, comprising a pole, a ferrule having a platform and an upright forked arm and mounted on the top of said pole, a lever having lateral L-shape arms and pivotally-mounted at its inner end on the forked arm of the ferrule, a pair of jaw-arms one of which has a plane orificed head at its inner end and the other one of which has a barrel with a center bearing for said plane-head of the other jaw-arm, a coil-spring on the barrel of one of said jaw-arms with its opposite ends exerting tension on said jaw-arms for maintaining them in a closed position, a thumb-lever pivotally-mounted on said pole at its lower handle-end, a vertical rod pivotally-connected at its opposite ends to said thumb-lever and the outer end of the first-named lever, means for pivotally-connecting the jaw-arms with the pole and means for connecting the jaw-arms with the first-named lever whereby they are spread apart for engagement with the goods to be handled.

875,079. INKING APPARATUS. ROBERT T. JOHNSON, Plainfield, N. J., assignor to The Campbell Printing Press & Manufacturing Company, New York, N. Y., a Corporation of New York. Filed February 13, 1904, Serial No. 193,428. Renewed May 13, 1907. Serial No. 373,879.



1. In an inking apparatus for printing presses, the combination of a fountain-roller, a distributing roller, and an orbitally moving ductor-roller arranged to engage the fountain-roller and distributing roller when moving at different relative speeds.

2. In an inking apparatus for printing presses, the combination of a fountain-roller, a distributing-roller, a ductor roller, and means for moving the ductor-roller in a non-circular orbit so as to engage the fountain roller and the distributing roller when moving at different relative speeds.

3. In an inking apparatus for printing presses, the combination of a ductor-roller, and means for moving the ductor-roller in a substantially hypo-cycloidal orbit.

4. In an inking apparatus for printing presses, the combination of a fountain-roller, a plurality of distributing rollers, and an orbitally moving ductor-roller arranged to engage the fountain-roller and the plurality of distributing rollers when moving at different relative speeds.

5. In an inking apparatus for printing presses, the combination of a fountain-roller, a plurality of distributing rollers, a ductor-roller, and means for moving the ductor-roller in a non-circular orbit so as to engage the fountain roller and said plurality of distributing rollers when moving at different relative speeds.

[Claims 6 and 7 not printed in the Gazette.]

875,080. SAFETY-PIN. HENRY KASPAR and JOSEPH KREJCI, Tyndall, S. D., assignors to Double Pointed Safety Pin Mfg. Co., Tyndall, S. D. Filed Mar. 5, 1907. Serial No. 360,659.



1. A safety pin including relatively stationary and movable members one of which is provided with a piercing point, a guard secured to the stationary member and provided with a keeper for the reception of the piercing point, and a spring locking tongue carried by one end of the guard and having its free end spaced from and disposed in alinement with the adjacent longitudinal edge of the keeper.

2. A safety pin including relatively stationary and movable members one of which is provided with a piercing point, a guard secured to the stationary member and having its free end bent to form a keeper for the reception of the piercing point, locking tongues depending from the fixed end of the guard and connected by an integral tubular member for the reception of the stationary member, the free ends of the tongues being deflected laterally and disposed in alinement with the adjacent longitudinal edges of the keeper.

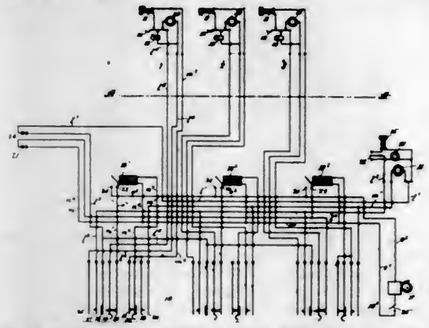
3. A safety pin including relatively stationary and movable members one of which is provided with a piercing point, a guard rigidly secured to the stationary member and having its opposite end bent to form a keeper, a tubular member interposed between the stationary member and guard, and diverging spring locking tongues depending from the tubular member and having their free ends spaced from and disposed in alinement with the adjacent longitudinal edges of the keeper.

4. A safety pin including relatively stationary and movable members one of which is provided with a piercing point, a guard secured to the stationary member and having its free end bent to form a keeper, a spring locking member formed of a single piece of metal bent to form a tubular portion for the reception of the stationary portion of the pin and provided with depending spring locking tongues of less width than the tubular member and disposed one on each side of the keeper.

5. A locking member for safety pins formed of a single piece of metal having an intermediate portion thereof bent to produce a tubular member and its opposite ends deflected laterally to form diverging spring tongues, one end of the tubular member being extended laterally beyond the adjacent edges of the locking tongues.

875,081. TELEPHONE-DICTATING SYSTEM OR APPARATUS. JOHN W. KELLY, Jr., Camden, N. J., assignor to General Acoustic Company, a Corporation of New York. Filed Apr. 15, 1907. Serial No. 368,303.

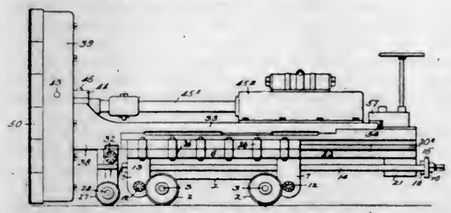
1. In a telephone system, a manager's station having a plurality of keys, and a plurality of stenographers' stations each having a receiver and a three-wire circuit leading therefrom and joined to the blades of the keys corresponding to the respective stations, a telephone set including a sensitive transmitter and a loud ear piece at the manager's station, and means actuated by the depression of any key for putting said transmitter and loud ear piece in a three-wire circuit with the stenographer's station corresponding to such key, one of said wires being excluded from the manager's loud ear piece circuit, and another of said wires being excluded from the stenographer's receiver circuit.



2. In a telephone system, a manager's station having a plurality of keys, a plurality of stenographer's stations each having a receiver and a three-wire connection with the manager's station, a signal at each stenographer's station, a plurality of signals at the manager's station corresponding to the respective stenographer's stations, said signals being actuated over their respective three-wire connections, a loud ear piece at the manager's station, and means for establishing talking circuits over said three-wire connections in lieu of said signal circuits, one of said wires being excluded from the manager's loud ear piece circuit and another of said wires being excluded from the stenographer's receiver circuit.

3. In a telephone system, a manager's station having a plurality of keys, a plurality of stenographers' stations each having a receiver and a three-wire connection with the manager's station, signals at the manager's station completed over said three-wire circuits from the respective stenographer's stations, and means at the manager's station and at the stenographer's stations, said means including a loud ear piece at the manager's station, for establishing separate talking circuits therebetween over said three-wire connections, one of said wires being excluded from the manager's loud ear piece circuit and another of said wires being excluded from the stenographer's receiver circuit, said signals being eliminated from the circuits when the talking circuits are established.

875,082. TUNNELING-MACHINE. SILAS A. KNOWLES and WALTER E. CARR, Idaho Springs, Colo. Filed Jan. 7, 1907. Serial No. 351,187.



1. In a tunneling machine, a wheeled carriage, a feed frame slidably mounted in said carriage, means including a feed screw for feeding said feed frame reciprocally in said carriage, a depending front end portion on said feed frame extending down over the forward end of said carriage, and a supporting wheel mounted in said end and adapted to support said forward end of said feed frame on the floor of the tunnel.

2. In a tunneling machine, a wheeled carriage adapted to run on the floor of a tunnel, a feed frame having its forward end extending over the forward end of said carriage towards the floor of a tunnel, wheels rotatably journaled in the forward end of said feed frame and adapted to support the forward end of said feed frame on the floor of the tunnel, and means for reciprocally feeding said feed frame on said carriage and tunnel floor independent of said carriage.

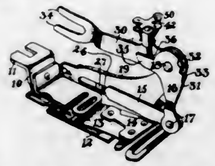
3. In a tunneling machine, a supporting carriage, a feed frame mounted on said carriage, provided with a forwardly and downwardly extending end, a floor engaging wheel, journaled in the forward and downwardly extending end of said feed frame, and a feed screw connected to said carriage and feed frame and arranged to feed said feed frame reciprocally in said carriage.

4. In a tunneling machine, a rectangular-shaped reciprocating cutter-head having a slideway therein and having also a plurality of parallelly arranged drill-bit supporting recesses arranged a short distance apart, two of which extend into and along the opposite corners of said cutter-head and are positioned to point outward at an angle beyond the sides of said cutter-head, drill-bits adapted to fit said recesses and arranged to project beyond the sides and the ends of said cutter-head, means including bolts for securing said drill-bits end to end in a continuous row in each recess of said cutter-head, a supporting guideway for said cutter-head on which said cutter-head is reciprocally mounted and means including any suitable reciprocating movement motor for reciprocating said cutter head on said guideway.

5. In a tunneling machine, a reciprocating cutter-head having a slideway therein, a plurality of chisel-edge rock-cutting bits adapted to be secured to the face of said cutter-head in rows, the outside rows of which and the outside bits of which are arranged to project beyond said cutter-heads, a supporting carriage, a feed frame slidably mounted on said carriage, a supporting guide arm pivotally mounted on said feed frame, means including a manually operated screw for feeding said guide frame and cutter-head on said carriage operatively in rock-cutting relation to the rock breast of a tunnel.

[Claims 6 to 12 not printed in the Gazette.]

875,083. RUFFLER ATTACHMENT FOR SEWING-MACHINES. AMHERST G. LAMB, Torrington, Conn., assignor to Excelsior Needle Company, Torrington, Conn., a Corporation of Connecticut. Filed Feb. 5, 1907. Serial No. 355,807.



1. In a ruffler, the combination with a frame, of a ruffler blade carrier, a link pivoted to the frame and to said carrier, a separator plate carried by the frame, a ruffler blade mounted upon the carrier above said plate, said carrier having a transversely disposed neck and an offset head, said neck and head being integral with said carrier, said frame being provided with a slot for guiding said neck, and means for oscillating the link for reciprocating the carrier.

2. In a ruffler, the combination with a frame, of a ruffler blade carriage, a link pivoted to the frame and to said carrier, a separator plate carried by the frame, a ruffler blade carried by the carrier above said separator plate, said frame being provided with a cam slot, a neck or stud on the carrier traversing said cam slot, an arm for throwing the link and having a portion for engaging the

link and shifting this in one direction, a set screw carried by the arm for directly engaging the link and shifting the same in the reverse direction, and means for holding the set screw in its positions of adjustment.

3. In a ruffler, the combination with a frame, of a ruffler blade carrier, a link pivoted to said frame and to said carrier and provided at its forward and backward sides with engaging faces, a ruffler blade carried by the carrier, means for guiding the carrier, an arm pivoted to the frame and having a face for engaging one of the faces upon said link, a tapped boss mounted upon the arm and having a number of faces disposed in planes parallel to the tap therein, a set screw mounted in said boss, spring fingers carried by said set screw for engaging said faces upon the boss and holding the set screw in its positions of adjustment, said set screw being adapted for engaging the other of said link engaging faces.

4. In a ruffler attachment for sewing machines, the combination with a frame, of a ruffler blade carrier mounted upon the frame for reciprocation, a link pivoted to said frame and to said carrier and having engaging faces at its front and rear sides, an arm pivoted to the frame and having a face for engaging the engaging face upon the rear of said link, a tapped boss square in cross section mounted upon said arm, a set screw in said tapped boss for engaging the engaging face upon the forward side of said link, spring arms carried by said set screw for engaging the side faces of the boss, a head carried by the set screw and a scale of four characters upon the head for indicating the angular adjustment of the screw relative to the sides of the boss.

875,084. AUTOMATIC WINDOW-CLOSURE. THOMAS LEE, Home City, Ohio. Filed Apr. 27, 1907. Serial No. 370,559.

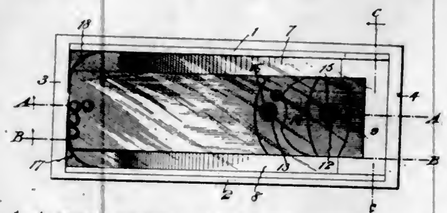


1. In fire-retarding window-construction, the combination of a sash, a window-frame in which it is movably supported and which has a perforation, means provided on both sides of the window attached also to the sash and passing through the perforation in the window-frame which means are heat-controlled and adapted to operate to close the sash automatically and a cut-off adapted to operate by these heat-controlled means for the purpose of closing the perforation in the window-frame.

2. In a fire-retarding window-construction, the combination of a sash, a window-frame in which it is movably supported, a tube set transversely into this frame and open at both ends, connecting means attached on one side of the frame by means of a fusible joint and extending through the tube mentioned to the other side where they are attached to the sash and a cut-off supported in the tube and held inoperative by the part occupying the tube and adapted to close the tube when this latter is cleared by the part therein.

3. In a fire-retarding window-construction, the combination of a sash, a frame in which it is movably supported, a tube set transversely into this frame and open at both ends, a fusible joint provided near one of the open ends of this tube, a chain connecting this joint with the sash and also occupying the tube, and a flap supported on the upper side of the tube and adapted to close this latter when the chain therein after its release from the fusible joint has been pulled out of the tube by the dropping sash.

875,085. GAME APPARATUS. HOWARD C. LOUDON, New York, N. Y. Filed May 17, 1907. Serial No. 374,139.



1. A game apparatus, comprising a tiltable box having a transparent cover, a bottom having inclined alleys adjacent to the sides of the box and a run-way between said alleys, said run-way being provided with a recess opening into the alleys, and balls free to roll within the box.

2. A game apparatus comprising a tiltable box having a transparent cover, a bottom having inclined alleys adjacent to the sides of the box and a run-way between said alleys, said run-way having a recess opening into the alleys, a transparent plate provided with a hole over said recess and balls free to roll within the box.

3. A game apparatus, comprising a tiltable box having a transparent cover, a bottom having inclined alleys adjacent to the sides of the box and a run-way between said alleys, said run-way having a recess opening into the alleys, the walls of the recess being concave, a transparent plate provided with a hole over said recess and balls free to roll within the box.

4. A game apparatus comprising a tiltable box having a transparent cover, a bottom having inclined alleys adjacent to the sides of the box and a run-way between said alleys, said run-way having a recess opening into the alleys, the walls of the recess being concave, a transparent plate having a hole over said recess, balls free to roll within the box and curved guides for directing the balls onto the run-way from the alleys.

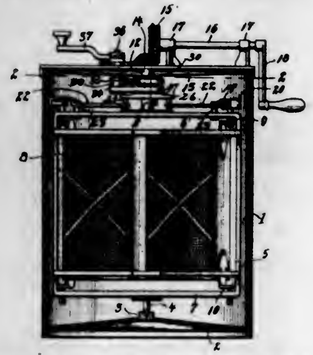
5. A game apparatus comprising a tiltable box having a transparent cover, a bottom having inclined alleys adjacent to the sides of the box and a run-way between said alleys, said run-way having recesses opening into the alleys, a transparent plate provided with holes over said recesses and balls free to roll within the box.

[Claims 6 to 9 not printed in the Gazette.]

875,086. HONEY-EXTRACTOR. CHRISTIAN G. LUFT, Forest, Ohio. Filed May 22, 1906. Serial No. 318,200.

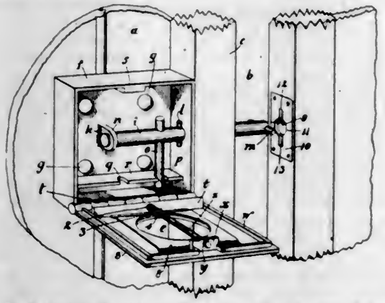
1. In a honey extractor, the combination of a revoluble carrier frame, pivotal comb-baskets carried thereby, and a reversing mechanism having a pair of intergeared brake members arranged to transfer motion from one to the other, and reversing connections between one of said brake members and the baskets, and means for separately braking the brake members.

2. In a honey extractor, the combination with a revoluble carrier frame having a driving journal, and pivotal comb-baskets carried by said frame, of a reversing mechanism comprising a pair of complemental brake members mounted on said driving journal and having toothed surfaces, a transmitting pinion having a fixed support on the driving journal and interposed between and meshing with said separate brake members, a separate brake band for each of said brake members, and a controlling shaft carrying a brake lever and having reversed connections respectively with the separate brake bands whereby a movement of the shaft in one direction simultaneously tightens one band and loosens the other.



3. A centrifugal honey extractor comprising a revoluble frame, pivotal comb-baskets carried thereby, reversing mechanism for said comb-baskets, said reversing mechanism comprising hub members connected to one another so as to have an opposite rotation, one of said hub members having a connection with the comb-baskets, a reversing lever, and connections between said reversing lever and the said hub members, the said connections being so arranged whereby a movement of the reversing lever causes a relative opposite movement of the hub members.

875,087. SEAL-LOCK. HENRY B. MACKINTOSH, Rossland, British Columbia, Canada. Filed Nov. 1, 1906. Serial No. 341,639.



1. In a seal lock, the combination with a door and door jamb, of a casing secured to one of said members and open at the front, a cover hinged to said casing and having a central opening therethrough, a draw-bar sliding within said casing and therebeyond and engaging the other of the said members, means engaged by said cover for locking said draw bar, means for locking said cover to the casing, and removable means for closing said opening in the cover, substantially as described.

2. In a seal lock, the combination with a door and door jamb, of a casing secured to one of the aforesaid members and open at the front, a cover hinged to said casing having a central opening therethrough, a draw-bar slidably arranged in said casing and extending therebeyond and engaging the other of the aforesaid members, and having an arm extending laterally therefrom and retained by said cover in its closed position, means for locking said cover to the casing, and destructible means for closing said central opening in the cover, substantially as described.

3. In a seal lock, the combination with a door and door jamb, of a casing secured to said wall and open at the front and having a lug projecting outwardly from the inner face of its rear wall, a draw-bar slidably arranged in said lug terminating in a T shaped end beyond the casing, an operating bar extending laterally therefrom within the casing, a plate extending across said casing therewithin and secured to the sides thereof towards the lower end and having a plurality of open slots from its outer side adapted to receive said operating bar from the draw-bar, a cover hinged to said casing and having a central opening therethrough, a latch mechanism locking said cover to the casing and having its bolt extending across said central opening and a destructible cover closing up said central opening and closing in said bolt of latch mechanism, substantially as described.

4. In a device of the class described, in combination, a post having a recess in one of its faces, a plate covering said recess having an orifice therethrough and vertical slots extending from said orifice diametrically arranged in relation one to the other, an opposing post having an orifice therethrough, a casing adjacent to the opposing post and having an orifice through its side wall registering with the orifice through said post and a lug projecting from the rear wall thereof, a draw-bar having a T shaped outer end slidably arranged in said orifices through the side of the casing and the said opposing post and slidably supported at its inner end in said lug, an operating bar rigid with said draw-bar extending downwardly therefrom, a plate extending across said casing and secured to the sides thereof in proximity to the lower end having open slots in its outer edge, a cover hinged to said casing and having an inward projection thereacross adapted to close said slots in said plate and a flange surrounding the inner edge fitting within said casing, said cover also having a central opening therethrough surrounded by a raised backing of suitable sheet material, a bolt spring-held to its upper position sliding in suitable supports from the inside of the cover across said opening and beveled at the upper end to engage a suitable catch on said casing, and a destructible cover inserted between said backing and the inner face of the aforesaid cover and closing in said bolt and latch mechanism, substantially as described.

875,088. PROCESS OF CLARIFYING AQUEOUS SOLUTIONS. JEAN A. MAIGNEN, Philadelphia, Pa. Filed Apr. 18, 1900. Serial No. 13,293.

1. The hereinbefore described process of producing practically neutral potable water which consists in subjecting soft dirty water to the contemporaneous action of sulfate of alumina and soda ash, mixed in definite proportions, by adding said chemicals in a dry comminuted state to the water, substantially as set forth.

2. The hereinbefore described process of producing practically neutral potable water, which consists in subjecting soft dirty water to the contemporaneous action of sulfate of alumina and soda ash, by mixing said chemicals in the proportions of 2.9 of the former and 3.1 of the latter and adding said mixture in a dry comminuted state to the water, substantially as set forth.

3. The process of producing practically neutral potable water which consists in adding to soft dirty water sulfate of alumina and soda ash, in a dry comminuted state, previously mixed in predetermined definite proportions, substantially as set forth.

875,089. GARMENT-SUPPORTER CLASP. JULIUS MALTBY and JOHN J. BUCHANAN, Waterbury, Conn., assignors to The Waterbury Buckle Company, Waterbury, Conn., a Corporation. Filed May 29, 1905. Serial No. 262,849.

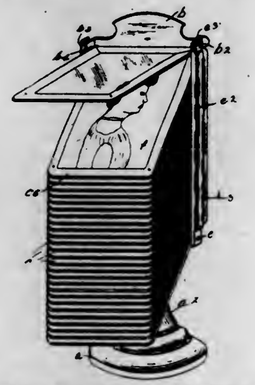
In a garment-supporter clasp, the combination with a front jaw transversely bowed inwardly to form a semi-circular seat co-extensive with the full width of the jaw; of a back jaw having forwardly projecting ears receiving the said semi-circular seat between them, and the operating-lever having a long and a short arm, the latter being furnished at its ends with trunnions entering perforations in the said ears of the back jaw, whereby the lever is pivoted in a substantially central position with respect to the said semi-circular seat of the front jaw so that there will be no letting up of the pressure exerted by the lever on the front jaw when the edge of the short

arm of the lever has passed the center of the seat at which time the said edge is further from the fulcrum of the said



front jaw than the fulcrum of the said lever, substantially as and for the purpose set forth.

875,090. PICTURE-HOLDER. HYMAN MELTZER and LOUIS KARRON, New York, N. Y. Filed Mar. 9, 1907. Serial No. 361,455.



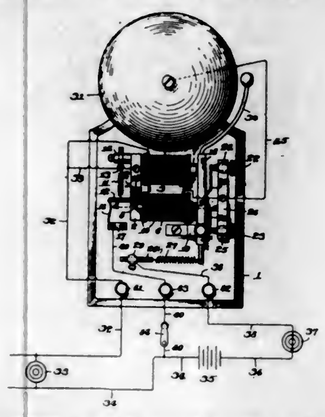
1. A picture holder, comprising a base, a main rectangular support connected therewith and provided at its opposite sides with forwardly directed members one of which is U-shaped in cross section, said members being provided with apertures, picture frames provided with pins adapted to enter said apertures whereby said frames are pivotally supported, and means for locking said frames in position.

2. A picture holder, comprising a base, a main rectangular support connected therewith and provided at its opposite sides with forwardly directed members one of which is U-shaped in cross section, said members being provided with apertures, picture frames provided with pins adapted to enter said apertures whereby said frames are pivotally supported, and means for locking said frames in position, consisting of an arm pivoted at the bottom of one side of the main support and adapted in one position to engage one of the forwardly directed members at the sides thereof and the corresponding pins of the picture frames.

3. A picture holder, comprising a base having an upright member, a main support movably mounted on said base and adapted to be held in different positions, and picture frames detachably and pivotally connected with the opposite sides of the main support and adapted to swing therein, said picture frames being composed of parallel sides and parallel top and bottom members all U-shaped in cross section and the top member being detachable and provided with end pins which form the pivotal supports of said frames.

875,091. ELECTRICAL ALARM DEVICE. BURNETT MENKIN, New Haven, Conn. Filed July 18, 1905. Serial No. 270,244.

1. The combination with normally open first and second circuits, of an electro-magnet included in and common to each of said circuits, means to close the first circuit, means to open the second circuit, a contact device to open and close the second circuit, means under the control of the electro-magnet to automatically close said contact device upon the closing of the first circuit and to automatically open said contact device upon the opening of the second circuit by the second named means.



2. The combination with normally open first and second circuits of an electric bell including an electro-magnet and a hammer operated thereby, said electro-magnet being included in and common to each of said circuits, means to close the first circuit, means to open the second circuit, a contact device to open and close the second circuit, means under the control of the electro-magnet to automatically close said contact device upon the closing of the first circuit and to automatically open said contact device upon the opening of the second circuit by the second named means.

3. The combination with normally open first and second circuits, of an electro-magnet included in and common to each of said circuits, means to close the first circuit, means to open the second circuit, a contact device to open and close the second circuit, means under the control of the electro-magnet to automatically close said contact device upon the closing of the first circuit and to automatically open said contact device upon the opening of the second circuit by the second named means, and means to be set to prevent the closing of the second circuit by the closing of the first circuit.

4. The combination with normally open first and second circuits of an electric bell including an electro-magnet and a hammer operated thereby, said electro-magnet being included in and common to each of said circuits, means to close the first circuit, means to open the second circuit, a contact device to open and close the second circuit, means under the control of the electro-magnet to automatically close said contact device upon the closing of the first circuit and to automatically open said contact device upon the opening of the second circuit by the second named means, and means to be set to prevent the closing of the second circuit by the closing of the first circuit.

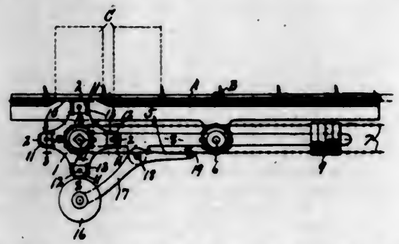
5. The combination with the pivoted hammer-carrying armature of an electric bell, of two spring contact arms carried by the armature, an adjustable contact screw to contact with one of said arms, the axis of said screw being arranged on a line extending from the pivot point of said armature, an adjustable contact screw to contact with the other of said arms away from the pivot point of the armature, and an electric circuit including said screws and arms for operating the bell.

[Claim 6 not printed in the Gazette.]

875,092. CAN-MARKING MACHINE. IRVING S. MERRELL, Syracuse, N. Y., assignor to Merrell-Soule Company, Syracuse, N. Y., a Corporation of New York. Filed July 11, 1905. Serial No. 271,976.

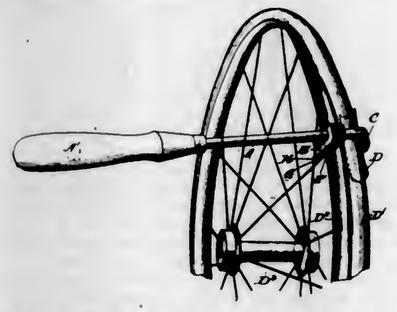
A can marking machine comprising a can supporting bed having an opening therein, means to feed the cans right side up along the bed and across said opening, a rotary type carrying disk having its type traveling in said

opening and making rolling contact with the bottoms of the cans as the latter are successively presented to said



opening, a yielding support for the type carrying disk and means to rotate said disk.

875,093. TIRE-TOOL. GUSTAVE MOHME and AARON V. HADLOCK, Chicago, Ill. Filed Feb. 8, 1907. Serial No. 356,458.



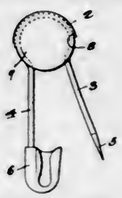
1. A tire tool of the kind described consisting of a handle bar; a slidable fulcrum block supported on said bar and having a grooved end adapted to rest on the edge of the rim of a wheel; a pendent hook pivotally secured to the end of said bar; a tire holder transversely secured to the inside curve of said hook, the concave curved surface of said holder being towards said fulcrum block on said bar, substantially as described.

2. In a tire tool of the kind described, the combination with the handle bar; of the fulcrum block supported on said bar, said block extending at right angles to the length of said bar and secured thereon by a set screw supported in said block and adapted to engage said bar, the end of said block being grooved transversely to the axis of said bar; the hook pivotally supported on the end of said bar, said hook being adapted to support a tire holder; the tire holder, said tire holder being affixed transversely on the inside of the curved part of said hook, said holder being formed to fit the cylindrical and circumferential curves of said tire as described.

3. In a tire tool of the kind described, the combination with the handle bar and fulcrum block supported thereon; of a hook pivotally attached to the end of said bar, and the transverse piece affixed in the inside of the ends of said hook, said piece being curved longitudinally and transversely as described.

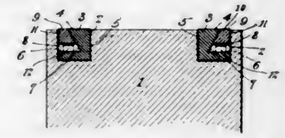
4. In a tire tool of the kind described, the combination with the handle bar and fulcrum block supported thereon said block having an end groove at right angles to the axis of said handle bar, and the hook pivotally secured to the end of said handle bar; of a tire holder, said tire holder being affixed in the inside curve of said hook and curved longitudinally and transversely and thereby adapted to fit the curves of the tire it is adapted to engage and to lift into the rim of the wheel on which said fulcrum block rests as described.

875,094. MARKING-PIN. WILLIAM W. MORRELL, Meriden, Conn., assignor of one-half to Fred Rees, Meriden, Conn. Filed Mar. 5, 1906. Serial No. 304,220.



In a marking or identification pin, the combination with a piece of wire bent upon itself to form a substantially circular spring and two substantially parallel ends, the separation between the said ends being less than the diameter of the said spring, and one of the said ends being pointed and the other being adapted to carry a guard; of a sheet-metal guard fastened to the guard-carrying end of the wire and adapted to receive and protect the said pointed end of the wire, and a sheet-metal marking-plate made wider than the said guard and applied to the said spring so that its main portion or body lies in a plane to one side of the plane of the spring and provides an unobstructed surface for the reception of the mark of identification.

875,095. PUMP PISTON-PACKING. JOHN J. MCGEE, New York, N. Y., assignor of one-half to Anthony F. S. Geoghegan, New York, N. Y. Filed Sept. 16, 1907. Serial No. 392,974.



1. A packing for pistons comprising a main ring having a conical wall, and a supplemental ring fitting thereagainst, and springs intermediate the rings whereby said conical wall exerts a wedging action to spread the rings laterally.

2. A composite ring having a generally rectangular transverse section and composed of two separate parts each with a conical face fitting against the other, and intermediate springs to spread the parts laterally by the wedging action of the conical faces.

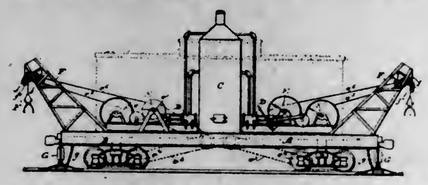
3. A packing for pistons comprising a main ring having a V-shaped recess with a conical wall, said recess having depressed portions, a supplemental ring fitting in said recess and bearing against said conical wall, and springs in said depressed portions of the recess and bearing against both rings whereby said conical wall exerts a wedging action to spread the rings laterally.

4. A composite ring having a rectangular transverse section and composed of two separate parts each with a conical face fitting against the other, one of said parts having depressed portions, and springs located in said depressed portions and operating to spread the respective parts laterally by the wedging action of the conical faces.

5. A packing for pistons comprising a main ring having a V-shaped recess with one conical wall and one cylindrical wall co-axial with the exterior surface of the ring, and a supplemental ring fitting in said recess and engaging both of said walls, said cylindrical wall having spaced depressed portions, and springs in said depressed portions and bearing against both rings whereby said conical wall exerts a wedging action to spread the wings laterally.

[Claims 6 to 9 not printed in the Gazette.]

875,096. LOG-SKIDDING MACHINE. JOHN R. McGIFFERT, Duluth, Minn., assignor to Clyde Iron Works, Duluth, Minn., a Corporation of Minnesota. Filed Dec. 30, 1904. Serial No. 238,979.



1. In a log skidding machine, the combination of a car movable upon a track, two masts supported upon opposite ends of said car, pulleys mounted in said masts, two cables passing around the pulleys in each mast, and means interposed between the two masts for winding-in each of the two cables supported upon each mast independently of each other.

2. In a log skidding machine, the combination of a car movable along a track, two masts supported upon opposite ends of said car, guiding means for two cables mounted in each such mast, a cable guided by each of such guiding means and means intermediate the two masts for winding each cable independently of all the others.

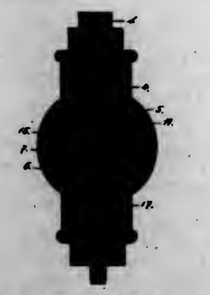
3. In a log-skidding machine, the combination of a base; a mast supported thereon; four pulleys mounted upon said mast in oppositely disposed pairs; two cables, one between each two oppositely disposed pulleys; and means for operating said cables.

4. In a log-skidding machine, the combination of a base; a derrick-frame supported thereon; four pulleys mounted upon such frame in oppositely disposed pairs having parallel axes; a cable passing between each two oppositely disposed pulleys; and means for winding in said cables.

5. In a log skidding machine, the combination of a car movable along a track, two masts supported upon opposite ends of said car, two oppositely disposed sets of pulleys mounted upon each mast, a pair of cables guided by the pulleys upon each mast, and means for winding-in said cable.

[Claims 6 to 12 not printed in the Gazette.]

875,097. COLLAPSIBLE CORE. GEORGE F. McKEE and WILLIAM F. SCHILLING, Aspinwall, Pa. Filed Aug. 16, 1906. Serial No. 330,829.

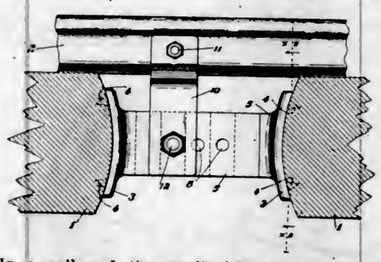


1. A collapsible core comprising a tapering central pin or plug of yielding material, and a plurality of tapering core sections arranged around the plug, each abutting the central pin or plug and arranged around the latter with their tapering ends extending in the opposite direction to the tapering end of the pin or plug, and having their meeting faces so disposed that all of the said core sections will move towards the center and collapse, when the central pin or plug is removed.

2. A collapsible core comprising a central pin or plug of yielding material, tapering from one end to the other, and a plurality of core sections arranged around the plug, and each abutting the plug, the said core sections having their meeting faces so disposed as to match neatly with each other and with the central pin or plug and with the latter to form a practically solid core when the sections are in assembled position, the said meeting faces of the core sections being also disposed so that all of the sections will move toward the center and collapse when the tapering plug or pin is removed.

3. A collapsible core comprising a tapered central pin or plug of yielding material, and a body portion consisting of separable core sections arranged around the center core of plug with their meeting faces so disposed as to engage throughout with the plug and adjacent core sections to form a practically solid core, the said meeting faces of the core sections being so disposed that all of said core section will tend to move towards the center and collapse when the tapering pin or plug is withdrawn.

875,098. RAIL AND TIE COUPLING. PETER A. OLSON, Cloquet, Minn. Filed Apr. 25, 1907. Serial No. 370,162.



1. In a rail and tie coupling, the combination with clamping heads adapted to engage laterally spaced ties, said heads having longitudinally adjustable arms adapted to overlap one with the other, of a rail coupling secured to said rail, and means for securing said overlapping arms and said rail coupling together, substantially as described.

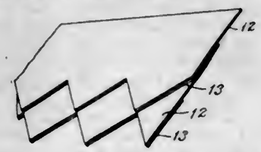
2. In a rail and tie coupling, the combination with a pair of clamping heads adapted to engage laterally spaced ties, said heads being provided with reversely projecting arms, the free ends of which are cut on a bevel and adapted to overlap, of a rail coupling device secured to the base of the rail, and means for securing the said arms and rail coupling device together, substantially as described.

3. In a rail and tie coupling, the combination with a pair of barbed clamping heads adapted to engage laterally spaced ties, said heads being provided with reversely projecting arms, the free ends of which are cut on a bevel and provided with a plurality of stop shoulders in staggered arrangement, the free ends of said arms overlapping, and the stop shoulders of the one adapted to engage the stop shoulders of the other, of a rail coupling device secured to the base of the rail, and means for securing the said arms and rail coupling device together, substantially as described.

4. In a rail and tie coupling, the combination with a pair of barbed clamping heads adapted to engage laterally spaced ties, said heads being provided with reversely projecting and longitudinally adjustable arms, the free ends of which are cut on a bevel and provided with a plurality of reversely projecting stop shoulders in staggered arrangement, the free ends of said arms overlapping, and the stop shoulders of the one adapted to engage the stop shoulders of the other in their different set adjustments, perforations through said arms adapted to register one with the other, of a rail coupling comprising a pair of straps secured to each side of the web of the rail by a nutted bolt and bent to conform to the base of said rail, and a second nutted bolt passed through perforations in the depending ends of said straps and through the perforations of said arms to secure said rail coupling and said arms together, substantially as described.

5. In a tie spacing device, the combination with clamping heads adapted to engage laterally spaced ties, of longitudinally adjustable arms projecting from said heads, said arms adapted to overlap, and means for securing said arms together in their different set adjustments, substantially as described.

875,099. ROOFING-STRIP. FREDERICK C. OVERBURY, New York, N. Y., assignor to Flintkote Manufacturing Company, Rutherford, N. J., a Corporation of New Jersey. Filed Apr. 2, 1907. Serial No. 365,926.



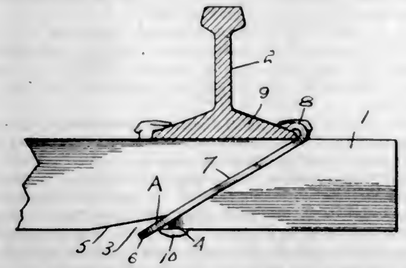
1. A roofing strip of flexible material and having a serrated edge, the strip comprising a body layer of the full width of the strip, and a narrower reinforcing layer attached to the under side of the body layer and extending from the serrated edge partly across the strip.

2. A roofing strip of flexible material, composed of a body layer of the full width of the strip, and a narrower reinforcing layer attached to one side of the body layer and extending partly across the same, the reinforced portion of the strip being serrated.

3. A roofing strip of flexible material, composed of a body layer of the full width of the strip, and a narrower reinforcing layer attached to one side of the body layer and extending partly across the same, the reinforced portion of the strip having serrations which are entirely within the width of the reinforcing strip.

4. A flexible longitudinally divisible roofing strip blank, composed of a body layer of the full width of the blank and a narrower reinforcing layer attached to one side of the body layer and having its edges within the edges of the body layer, said blank being adapted to be divided into a plurality of roofing strips each having one edge thicker than the other.

875,100. RAIL-FASTENER. SIMON G. PETTERSON, Pine Bluff, Ark. Filed Apr. 17, 1907. Serial No. 368,682.

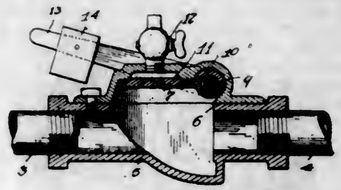


1. A brace for preventing the lateral displacement or spreading of railway rails, comprising a U-shaped yoke, the bight of which is adapted to engage a railway tie and the arms to extend along the sides of the latter, the terminals of said arms being formed into hooks to engage the edge of the base of the rail on the opposite side to that at which the bight of the brace is engaged with the tie.

2. A brace for preventing the lateral displacement or spreading of railway rails, comprising a U-shaped yoke, the bight of which is adapted to engage a notch formed in one of the faces of the tie and the arms to extend along the sides of the said tie, the terminals of the arms being formed into hooks to engage the edge of the base of the rail on the opposite side to that at which the bight of the base is engaged with the tie.

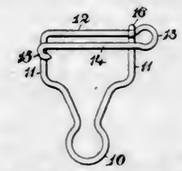
3. The combination, with a tie having a notch on its under side with an abrupt shoulder or wall on its outer side and a bolt in the tie in line with the said wall, of a U-shaped rail-brace having its yoke portion engaged with said notch, its arms extending upwardly along the sides of the tie and provided with hook-shaped ends to engage the edges of the base-flange of the rail.

875,101. AUTOMATIC VALVE. SEYMOUR W. PERRIGRINE, Portland, Me. Filed May 15, 1906, Serial No. 317,241. Renewed Nov. 20, 1907. Serial No. 403,073.



A device for automatically cutting off the flow of liquid through a service pipe comprising a valve casing having an ingress opening upon one side and an egress opening upon the opposite side, said casing having a recess in the upper part thereof, a flap valve pivoted in said recess and arranged when open to lie wholly out of the line of the ingress and egress pipes and when dropped to close said egress pipe, and a vent in the wall of the recessed portion and a supplemental recess in said wall providing a space in rear of the valve which is closed against the escape of fluid from the casing by said valve while it is elevated said recess having inclined walls and said valve inclined shoulders corresponding thereto, substantially as described.

875,102. CLASP. CARL E. PETERSON, Newark, N. J. Filed May 8, 1907. Serial No. 372,646.



A buckle made of a single piece of wire bent to form a main loop with side members, one side member extending from the loop into a straight strand and formed on its free end into an embracing hook, the second side member extending from the main loop, then bent to form a transverse strand passing through the hook, then bent into a loop beyond the hook and the first side member and toward the main loop, and then forming a second transverse strand between the first transverse strand and the main loop and contacting with both side members, and the second transverse strand having its end bent into a curved end and forming a retaining hook to permit the side insertion of a loop of material thereon.

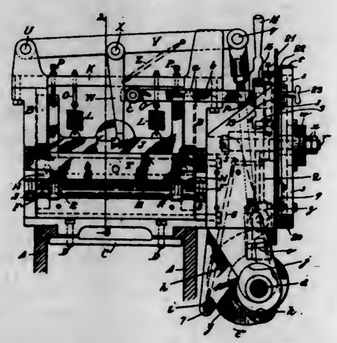
875,103. CUTTING-MACHINE. CASIMIR VON PHILP, New York, N. Y. Filed July 22, 1907. Serial No. 384,879.

1. In a cutting machine, the combination of a driving shaft adapted to rotate continuously at a given rate, cutting devices adapted to be periodically actuated from said shaft, and means for varying the ratio between the revolutions of the shaft and the strokes of the cutting devices.

2. In a cutting machine, the combination of cutting devices, one of which reciprocates, a lever and trigger pivoted thereon, a pusher bar connected to move said trigger into engagement with the reciprocating cutting de-

vice, and means for varying the rate at which said pusher bar is actuated.

3. In a cutting machine, the combination of cutting knives, a driving shaft, a trigger for actuating one of said knives, an operating lever connected to said trigger and connected to be actuated by said driving shaft, a pusher bar having an adjustable eccentric pin at one end, a ratchet wheel having cams adapted to engage said pin, a pawl lever and pawl, and means for actuating said pawl lever from the driving shaft.



4. In a cutting machine, the combination of cutting knives, a driving shaft, a trigger for actuating one of said knives, an operating lever connected to said trigger and connected to be actuated by said driving shaft, a pusher bar having an adjustable eccentric pin at one end, a ratchet wheel having cams adapted to engage said pin, a pawl lever and pawl, an adjustable shield adapted to control the effective stroke of said pawl, and means for actuating said pawl lever from the driving shaft.

5. In a cutting machine, the combination of cutting knives, a driving shaft, connections adapted to actuate one of said knives at each revolution of the driving shaft, and means for varying the ratio between the strokes of said knife and the revolutions of the shaft.

[Claims 6 to 10 not printed in the Gazette.]

875,104. STOP-MOTION FOR LOOMS. FRIEDRICH PICK, Vienna, Austria-Hungary. Filed July 19, 1905. Serial No. 270,365.

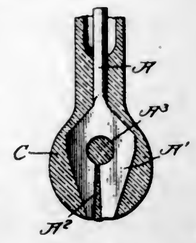


1. A stop motion for looms comprising in combination, coöperating upper and lower heddle bars, a heddle cord for said bars, a loop or ring of electrical conducting material carried by said cord and surrounding the lower bar, and a contact strip for said lower bar, the portion of the loop adapted to engage said strip being inclined.

2. A stop motion for looms comprising in combination, coöperating upper and lower heddle bars, a heddle cord for said bars, the lower bar having means for assisting in arresting the operation of the loom, and a gravity acting device normally supported by the heddle cord out of operative relation to said means and having an inclined portion serving upon breakage of a warp thread to automatically engage said means.

3. A stop motion for looms comprising in combination, coöperating upper and lower heddle bars, a heddle cord for said bars, said lower bar being provided with a contact strip, and a loop formed of conducting material carried by said cord and adapted to loosely encircle said lower heddle bar in a manner to leave an intervening clearance, said loop having an inclined portion adapted upon breakage of a warp thread to engage said strip, said clearance permitting lateral movement of said loop and effecting lateral engagement of said loop with said lower bar.

875,105. ELECTROLYTIC RECEIVER. FRED C. PICKETT, Kansas City, Mo. Filed Mar. 12, 1907. Serial No. 362,060.



1. A receiving point of the kind described having a flattened end portion, said flattened portion being split and an envelop of viscid material inclosing said point and forming a bridge by extending into the split portion.

2. A duplex point of the kind described consisting of a piece of wire having an end flattened and split longitudinally thus forming two points, and an envelop inclosing said point and extending into the split portion and forming a bond between the two points.

3. A receiver of the kind described consisting of a wire having a flattened end portion, said flattened end portion being split into two points of unequal surface area and an envelop inclosing said points and extending into the split portion.

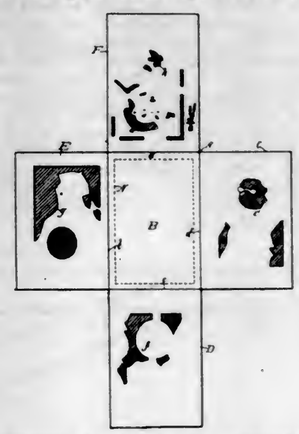
4. A device of the kind described comprising a piece of wire having an end portion flattened into a thin sheet, and split longitudinally upon one side of its longitudinal center forming a smaller and larger point, and an envelop of viscid material inclosing both of the points so formed.

5. A device of the kind described consisting of a wire having flattened thin portion, said portion being centrally cut-out, and the said flattened portions being split longitudinally into two points of unequal surface area, the split extending from edge of the points to the cut-out portion, and an envelop inclosing said flattened portion, and extending into the cut-out portion and into the space between the two points, formed by splitting the flattened portion, as and for the purpose set forth.

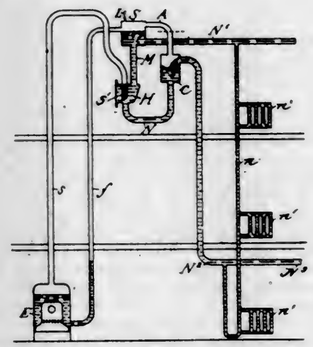
875,106. APPARATUS FOR STENCILING DESIGNS ON POST-CARDS, &c. ALBERT G. PIRKIS, London, England. Filed Apr. 13, 1906. Serial No. 311,529.

1. An apparatus for stenciling designs on postcards and the like, in one or more colors, consisting of the combination of base B, with folding perforated flaps C, D, E, F, constructed and operating as described and illustrated in accompanying drawings.

2. An apparatus for stenciling in one or more colors, consisting of the combination of base B having the central portion, indicated by dotted lines N, adapted to be removed, and folding perforated flaps C, D, E, F, constructed and operating as described and illustrated in accompanying drawings.



875,107. HOT-WATER HEATING APPARATUS. ANDERS B. RECK, Copenhagen, Denmark. Filed Feb. 18, 1905. Serial No. 245,501.

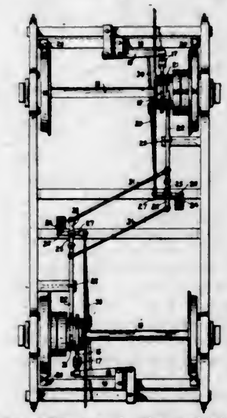


1. In a heating system, the combination of a hot-water circuit comprising suitable flow and return pipes, radiating devices, a condensing chamber, a steam heating chamber and a separating chamber with a boiler, a pipe leading from the steam space of the boiler to the heating chamber, a pipe leading from the upper portion of the separating chamber to the condenser, a pipe communicating with the separating chamber below the entrance to the last named pipe and leading to the water space of the boiler, and suitable pipe connections leading from the condensing chamber to the heating chamber and from the heating chamber to the separating chamber respectively, the parts being so arranged that in operation the flow in the hot-water circuit is toward the separating chamber from the heating chamber.

2. In a heating system, the combination of a hot-water circuit comprising suitable flow and return pipes, radiating devices, a condensing chamber provided with an air vent, a steam heating chamber and a separating chamber with a boiler, a pipe leading from the steam space of the boiler to the heating chamber, a pipe leading from the upper portion of the separating chamber to the condenser, a pipe communicating with the separating chamber below the entrance to the last named pipe and leading to the water space of the boiler, and suitable pipe connections leading from the condensing chamber to the heating chamber and from the heating chamber to the separating chamber respectively, the parts being so arranged that in operation the flow in the hot-water circuit is toward the separating chamber from the heating chamber.

3. In a heating system, the combination of a hot-water circuit comprising suitable flow and return pipes, radiating devices, a condensing chamber, a steam heating chamber and a separating chamber with a boiler, a pipe leading from the steam space of the boiler to the heating chamber, a pipe leading from the upper portion of the separating chamber to the condenser, a pipe communicating with the separating chamber below the entrance to the last named pipe and leading to the water space of the boiler, a pipe rising from the condenser and an air valve on said pipe on a higher level than the entrance on the separating chamber to the said pipe that leads to the water space of the boiler, and suitable pipe connections leading from the condensing chamber to the heating chamber and from the heating chamber to the separating chamber respectively, the parts being so arranged that in operation the flow in the hot-water circuit is toward the separating chamber from the heating chamber.

875,108. BRAKE FOR RAILWAY AND OTHER VEHICLES. AUBREY J. REID, North Sydney, New South Wales, Australia. Filed Dec. 1, 1906. Serial No. 345,929.



1. A brake for railway and other vehicles having a plurality of rotating members, a clutch connected with each, means controlled by the movement of the clutches for applying the brakes to the peripheries of the rotating members, and means for simultaneously actuating the clutches.

2. A brake for railway and other vehicles having a rotating member carrying one member of a clutch, a second clutch member adapted to engage with the first clutch member and connected to mechanism to apply the brake to the periphery of the rotating member, and a spring for moving the clutch members into engagement, the said spring being under compression when the members are disengaged.

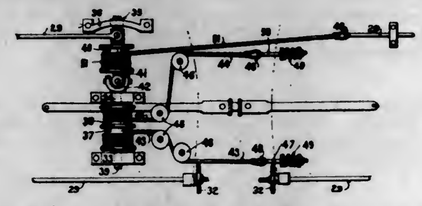
3. A brake for railway and other vehicles having a clutch member connected to and rotating with a rotating member of the vehicle, and a second clutch member adapted to engage therewith, means actuated by the engagement of the clutch members for applying the brakes to the rotary member, a spring under compression while the clutch members are out of engagement, and a controlling rod in tension for compressing said spring.

4. A brake for railway and other vehicles, which comprises clutch members, one of such members being connected to rotate with the wheels, means for engaging clutch members and connections between one of the clutch members and a brake shoe engaging with the periphery of the wheel, the said connections comprising a lever pivoted to a fixed portion of the vehicle and to the brake beam and a link connecting the lever and the moving clutch member.

5. A brake for railway and other vehicles, which comprises two clutch members, and means for applying the brakes by engagement of the clutch members, a lever for engaging the clutch members, and a double bell-crank lever having one arm connected to the clutch operating member, a second arm connected to a push rod, which in turn is connected to the brake operating mechanism, and a third arm connected to a spring under tension when the clutch members are separated.

[Claims 6 and 7 not printed in the Gazette.]

875,109. COUPLING FOR CONTROLLING-RODS OF BRAKES BETWEEN RAILWAY AND OTHER VEHICLES. AUBREY J. REID, North Sydney, New South Wales, Australia. Filed Dec. 3, 1906. Serial No. 346,016.



1. Improvements in brakes for railway and other vehicles, having in combination with two coupled vehicles, a longitudinally movable brake-applying member on each vehicle, flexible couplings connecting the members of the two vehicles, and a compensating device including the drum connected to the members for maintaining the operative length of the members constant under all conditions.

2. A brake for railway and other vehicles having in combination two coupled vehicles and a longitudinally movable brake-applying member on each, connections between the members, such connections including a drum, a flexible connection with the drum, and a brake-applying member of the coupled vehicle, and means for rotating the drum as the distance between the vehicles and their alinement varies.

3. A brake for railway and other vehicles having in combination a longitudinally movable brake-applying member upon each vehicle, a drum connected to and operated by a member on one vehicle and a flexible connection between said drum and the member of the coupled vehicle, a second drum connected to and adapted to rotate the first drum, and a flexible connection between the second drum and the coupled vehicle for rotating the said drum as the distance between the vehicles and their alinement varies.

4. A brake for railway and other vehicles having in combination a longitudinally movable brake-applying member on each vehicle, a plurality of drums carried by one vehicle and carried to the brake-applying member thereon, a flexible connection between one of said drums and the brake-applying member on the coupled vehicle, and flexible connections between the other drums and the coupled vehicle, the said connections being connected to the coupled vehicle on opposite sides of the coupling.

5. A brake for railway and other vehicles having in combination a shaft upon one of the vehicle, and carrying a drum, a second shaft connected to the first shaft by a universal joint, and carrying a drum, a flexible connection with the second drum and a brake-applying mechanism for the coupled vehicle, a flexible connection between the coupled vehicle and the first of the drums, means for keeping the second flexible connection under tension, and means for bending the second shaft at the universal joint.

[Claim 6 not printed in the Gazette.]

875,110. RAILWAY SWITCH. FRANCES J. REILLY, Jerico, Iowa. Filed July 1, 1907. Serial No. 381,609.

1. In a railway switch, the combination with the moving ends or switch tongues of the rails and a switch bar connecting them in parallel position, of a link-rod or pitman controlling the switch tongues, a switch stand near the track, an oscillating upright shaft therein, a pulley fixed on the lower end of the shaft, a crank-pin fixed in the pulley and engaging the pitman, two operating stands near the main track in opposite directions from the switch stand, one of the operating stands being operable by cars moving on the main track the other being operable also from the side track or branch track by being positioned in the "Y" of the two tracks, a vertical rock-shaft in each operating stand, a pulley fixed on each of said shafts, a cable engaging said pulleys and the pulley of the switch stand, a pair of rocker-arms fixed on each shaft of the operating stands and means carried by the trains for engaging the rocker-arms so as to close and open the switch by the approaching trains.



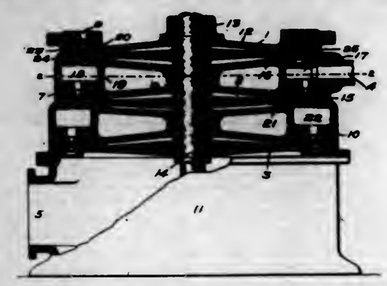
2. In a railway switch, the combination with the moving ends or switch tongues of the rails and a switch bar connecting them in parallel position, of a link-rod or pitman controlling the switch tongues, a switch stand near the track, an oscillating upright shaft therein, a pulley fixed on the lower end of the shaft, a crank pin fixed in the pulley and engaging the pitman, two operating stands near the main track in opposite directions from the switch stand, one of the operating stands being operable by cars moving on the main track the other being operable also from the side track or branch track by being positioned in the "Y" of the two tracks, a vertical rock shaft in each operating stand, a pulley fixed on each of said shafts, a cable engaging said pulleys and the pulley of the switch stand, a pair of rocker-arms fixed on each shaft of the operating stands, and means carried by the trains for engaging the rocker arms so as to close and open the switch by the approaching trains, and signaling means mounted on the top of the shaft of the signal stand to indicate when the switch is open and when it is closed.

3. An automatic switching device comprising a switching stand acting on the switch and two operating stands some distance in opposite directions therefrom and operatively connected with the switch stand, said operating stands having each a rock shaft with two rocker arms projecting therefrom, a touching device carried by the train and having at each side of the train a finger adapted to engage the rocker-arms, a hand lever on the train and means operated thereby for shifting and holding said fingers simultaneously at both sides of the train in the same one of three positions, namely in position to pass clear of the rocker-arms, or to engage the arm closing the switch, or the arm opening the switch, and means for holding said hand lever against accidental motion.

875,111. ELASTIC-FLUID TURBINE. FREDERICK SAMUELSON, Rugby, England, assignor to General Electric Company, a Corporation of New York. Filed May 28, 1907. Serial No. 376,083.

1. An elastic fluid turbine comprising a plurality of stages working at different pressures, each stage having fluid discharging devices and wheel buckets for extracting energy from the motive fluid, in combination with stage fluid discharging devices which are shut off from receiving fluid from a higher pressure stage, and a conduit which supplies low pressure fluid to said stage devices.

2. An elastic fluid turbine comprising a plurality of stages working at different pressures, bucket wheels therefor, admitting and discharging devices for the first stage receiving high pressure fluid, in combination with two sets of fluid discharging devices for an intermediate stage, one set receiving fluid exhausting from a wheel, the second being shut off from the first, and a conduit that supplies low pressure fluid to the second set of devices only.



3. An elastic fluid turbine comprising a plurality of stages working at different pressures, rows of wheel buckets therefor, high pressure fluid admitting and discharging devices for the first stage, and an inclosing casing, in combination with a diaphragm between two of the stages containing chambers, one of which receives fluid from the preceding row of buckets, the other being shut off from said supply, a conduit for admitting fluid at low pressure to the last mentioned chamber, and stage fluid discharging devices which receive fluid from both chambers and discharge it against the adjacent row of buckets.

4. An elastic fluid turbine comprising a plurality of stages operating at different pressures, main stage nozzles which are cut off from receiving high pressure fluid, a conduit for admitting low pressure fluid thereto, nozzles for a stage of higher pressure receiving high pressure fluid, secondary stage nozzles that are cut off from the main stage nozzles and receive motive fluid exhausting from a wheel, wheel buckets for extracting energy from the high and low pressure motive fluids, and an exhaust conduit that is common to all of the nozzles.

5. An elastic fluid turbine comprising stages working at different pressures, each containing a wheel compartment, fluid discharging devices and bucket wheels for the stages, in combination with a conduit for supplying high pressure motive fluid, a chamber which receives motive fluid from a wheel, a second chamber which is shut off from receiving motive fluid from a wheel, a conduit admitting low pressure fluid to the second chamber only, a third chamber that receives motive fluid from both the high and low pressure supply conduits and equalizes the pressures thereof, and an exhaust conduit common to all of the wheel buckets.

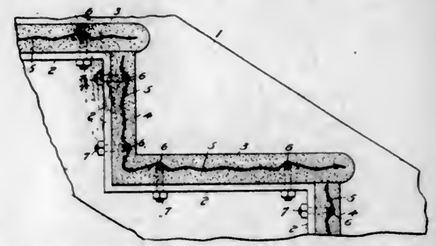
[Claim 6 not printed in the Gazette.]

875,112. TIME-LIMIT ANNUNCIATOR. ADOLPH SANDERS, New York, N. Y. Filed Dec. 6, 1906. Serial No. 346,544.



In a device of the character designated, the combination of the clock movement, a disk on the main spindle of the clock movement, a series of equi-distant tripping shoulders on said disk and concentric to the main spindle, a pointer on said spindle moving with the said tripping disk, a stationary index concentric to and adjoining the periphery of said tripping disk, a hammer lever arranged to be actuated successively by said tripping shoulders, a retractile spring which tends to hold the hammer lever in its normal position, a bell arranged to receive the stroke of said hammer lever, and a hand device for stopping and releasing the clock movement, substantially in the manner and for the purpose described.

875,113. FIREPROOF STAIR STRUCTURE. EDWARD E. SCHACHNER, Denver, Colo. Filed Aug. 9, 1907. Serial No. 387,880.



1. As a new article of manufacture, a tread and its riser for stair-steps molded as an entirety of plastic material and having an embedded reinforcing metallic trellis-frame, a plurality of rods extending lengthwise of the tread and of the riser and terminating at each end in screw threaded nutted bends at the back of the molded body and at right angles thereto.

2. As a new article of manufacture, a tread and its riser for stair-steps molded as an entirety of plastic material and having embedded therein a plurality of rods extending lengthwise of the step and terminating at each end in screw threaded nutted bends standing at right angles to the back of the body.

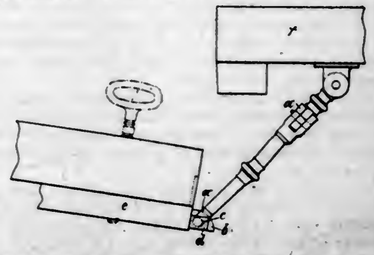
3. As a new article of manufacture, a stair-step composed of a tread and its riser molded as an entirety of plastic material and having embedded therein a plurality of rods extending lengthwise of the step and terminating at each end in screw-threaded nutted bends standing at the back of the body, and angle rods embedded therein at right angles to the nutted rods, and crossing the angle of the step.

4. A reinforcing frame for the integral tread and riser of a stair-step composed of a plurality of rods extending lengthwise of the tread and of the riser and a plurality of angle-rods at right angles to the nutted rods and crossing the angle of the step.

5. In a fireproof stair structure and in combination a pair of stringers, a tread and its riser molded as an entirety of plastic material and a plurality of rods embedded in the body and terminating at each end in screw-threaded bends standing at right angles to the back of the body and adapted to engage said stringers.

[Claims 6 and 7 not printed in the Gazette.]

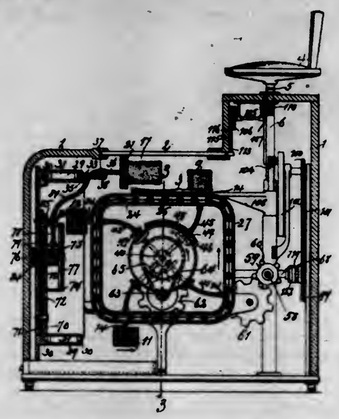
875,114. DOOR-HOLDER. THEODOR C. SCHELD, Hamburg, Germany. Filed Feb. 14, 1907. Serial No. 357,233.



A door provided with a locking bolt and a perforated spring latch, combined with a door frame having a pivoted

hook adapted to engage the spring latch and to be engaged by the locking bolt, substantially as specified.

875,115. BOOT AND SHOE POLISHING MACHINE. MAX SCHUPPE, New York, N. Y., assignor to Bernard F. Seadler, New York, N. Y. Filed Jan. 7, 1905. Serial No. 240,089.



1. In a boot or shoe polishing machine, the combination of a boot rest, two rubbing devices, means for giving one of said rubbing devices a movement part of the course of which is adjacent to and substantially parallel with said rest, and the remainder of which is away from said rest, and part of such remainder transverse to the plane of the rest, to bring said rubbing device along the side of a shoe when in position in the machine, and then to move it out of the way of the other rubbing device, and means for moving the other rubbing device transversely across the toes in front of a shoe when in position in the machine, and then to move it out of the way of the other rubbing device, whereby two separate and distinct rubbing devices can be used having intersecting paths but without interference with each other.

2. In a boot or shoe polishing machine, the combination of a boot rest, two rotary rubbing devices, means for rotating them on their axes, means for giving one of said rubbing devices a movement part of the course of which is adjacent to and substantially parallel with said rest, and the remainder of which is away from said rest, and part of such remainder transverse to the plane of the rest, to bring said rubbing device along the side of a shoe when in position in the machine, and then to move it out of the way of the other rubbing device, and means for moving the other rubbing device transversely across the toes and front of a shoe when in position in the machine, and then to move it out of the way of the other rubbing device, whereby two separate and distinct rubbing devices can be used having intersecting paths but without interference with each other.

3. In a boot or shoe polishing machine, the combination with a rotary rubbing device, of an endless movable chain supporting said device, all as and for the purposes described.

4. In a boot or shoe polishing machine, the combination with a rotary rubbing device, an endless movable chain supporting said device, and means for producing a rotary movement of said device of greater velocity than the movement of the chain.

5. In a boot or shoe polishing machine, the combination with a rotary rubbing device, of an endless movable chain supporting said device, and means for giving the rotary movement of said device during only a certain part of the course of its movement with the chain.

[Claims 6 to 16 not printed in the Gazette.]

875,116. VIBRATING DISTRIBUTING-ROLLER FOR PLATEN-PRESSES. JOHN H. SCHUSSLER, Chicago, Ill. Filed Mar. 10, 1906, Serial No. 305,212. Renewed May 8, 1907. Serial No. 372,614.



1. The combination with a platen printing press having an inking surface and a printing surface, of an inking roll, means for moving said roll relatively to the inking and printing surfaces, an ink distributing roll engaging the surface of the inking roll, an axially immovable shaft upon which said distributing roll is rotatably mounted, an integral closed bracket within which an end of said shaft is secured, a box surrounding said shaft within said bracket, and means supported by said bracket for adjusting the position of said box therein to regulate the pressure of the distributing roll upon the inking roll.

2. The combination with a platen printing press having an inking surface and a printing surface, of a pair of inking rolls, means for moving the inking rolls relatively to the inking surface and printing surface, an ink distributing roll mounted intermediate of and in contact with the surfaces of the inking rolls, a fixed shaft upon which the distributing roll is rotatably mounted, a pair of coöperating members interposed between said shaft and distributing roll for axially moving the roll relatively to the shaft, means for locking one member of said pair to the shaft during a predetermined axial movement of the distributing roll, and means for locking said member to rotate with said roll relatively to said shaft after said predetermined axial movement of the distributing roll.

3. The combination with a platen printing press having an inking surface and a printing surface, of an inking roll, means for moving said roll relatively to the inking surface and printing surface, an ink distributing roll mounted adjacent and in contact with the surface of the inking roll, a fixed shaft upon which the distributing roll is rotatably mounted, a member mounted upon said shaft, a second member carried by the distributing roll and engaging said first member to axially move said roll relatively to said shaft, means for locking said first member to the shaft during a predetermined axial movement of said distributing roll, and means for locking said first member to rotate with the distributing roll relatively to said shaft after said predetermined movement of the distributing roll.

4. The combination with a platen printing press having an inking surface and a printing surface, of an inking roll, means for moving said roll relatively to the inking surface and printing surface, an ink distributing roll mounted adjacent and in contact with the surface of the inking roll, a fixed shaft upon which said distributing roll is rotatably mounted, a pair of coöperating members interposed between said shaft and distributing roll for axially moving the roll relatively to the shaft, means for locking one of said coöperating members to the shaft during a predetermined axial movement of the distributing roll, and means for locking said member to rotate with the distributing roll relatively to the shaft after said predetermined axial movement of the distributing roll.

5. The combination with a platen printing press having an inking surface and a printing surface, of an inking roll, means for moving said roll relatively to the inking surface and printing surface, an ink distributing roll mounted adjacent and in contact with the surface of the inking roll, a fixed shaft upon which said distributing roll is rotatably mounted, an interiorly screw-threaded ring fixed within said distributing roll, a screw-threaded sleeve around said shaft engaged by said ring for axially moving said distributing roll upon said shaft, means for locking said sleeve to the shaft to effect a predetermined axial movement of the distributing roll, and means for locking said sleeve to rotate with the distributing roll relatively to said shaft after said predetermined movement of the distributing roll.

[Claims 6 to 12 not printed in the Gazette.]

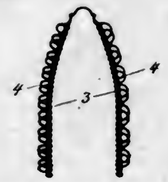
875,117. ROASTING-PAN. PERCY SCOTT, Montreal, Quebec, Canada. Filed Nov. 25, 1905. Serial No. 289,067.



1. A roasting pan formed with an outer main encircling wall and a bottom, the latter having an integral central portion raised to about half the height of the main wall of the pan and formed with a concave depression therein, the space between the main wall and the wall of the central raised portion forming an encircling depression lower than the depression in such central raised portion, substantially as and for the purposes set forth.

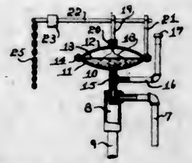
2. A roasting pan formed with an outer main encircling wall and a bottom, the latter having an integral central portion raised to about half the height of the main wall of the pan and formed with a concave depression therein, and a plate extending across and closing the opening to the space beneath said raised central portion, the space between the main wall and the wall of the central raised portion forming an encircling depression lower than the depression in such central raised portion, substantially as and for the purposes set forth.

875,118. INCANDESCENT MANTLE. GERRIT J. SECKEL, Enschede, Netherlands. Filed Apr. 29, 1907. Serial No. 370,957.



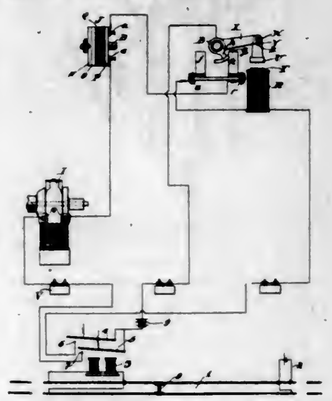
An incandescent mantle composed of woven threads that form the mantle-body, and integral loops which stand off laterally from such body, substantially as specified.

875,119. HEATING SYSTEM. SAMUEL V. SHAROOD, Brockton, Mass., assignor of one-half to Lucius R. Churchill, Brockton, Mass. Filed Mar. 8, 1906. Serial No. 304,888.



In a steam heating system, the combination with a pump, a source of water supply and a boiler, of a combination chamber connected at one end by a valved pipe to the boiler below the normal water level thereof and at its other end to said boiler above the normal water level, a pipe leading from said combination chamber at a point opposite the normal water level of the boiler, a controller chamber with which said pipe communicates, a pipe leading from said controller chamber and connected with the pipe leading from the lower end of the combination chamber, a shell having a diaphragm therein, a closed pipe extending into said controller chamber and communicating with the shell below said diaphragm, a by-pass valve, and a follower resting on said diaphragm and connected to a lever for opening the valve.

875,120. AUTOMATIC ELECTRIC BLOCK-SIGNAL. WILLIAM A. D. SHORT, Lexington, Ky., assignor to Continental Signal Company, a Corporation of Illinois. Filed Nov. 25, 1905. Serial No. 289,034.



1. In an automatic electric block signal, the combination of a signal shaft, a power shaft arranged in line therewith, an electro-magnetic clutch for connecting one with the other, means for controlling said clutch and means for transmitting power to the power shaft, said clutch under normal conditions being adapted to be deënergized after the movement of the signal due to the source of power is completed.

2. In an automatic electric block signal, the combination with a signal shaft, a power shaft arranged in line therewith, an electro-magnetic clutch for connecting one with the other, means for controlling said clutch and means for transmitting power to the power shaft.

3. In an automatic electric block signal, the combination of a signal shaft, a switch arm connected thereto and insulated therefrom, insulated switch contacts, a lever arm connected to said shaft, provided with an armature, retaining magnets for controlling said armature, a power transmission shaft, an electro-magnetic clutch for connecting the two shafts and a source of power.

4. In an automatic electric block signal, the combination of signal and transmission shafts, an electro-magnetic clutch for connecting the same, retaining magnets, means on the signal shaft controlled by said retaining magnets means on the signal shaft controlled by said retaining magnets for maintaining the shaft in a given position, a source of power and an electric switch controlled by the signal shaft for controlling the retaining magnets, the clutch and the source of power.

5. In an automatic electric block signal, the combination of an inclosing casing, a signal shaft supported by said casing, a transmission shaft supported in line therewith within the casing, an electric clutch mechanism for connecting one shaft to the other, a source of power for driving the transmission shaft, retaining magnets for maintaining the signal in a given position, and an electric switch controlled by the position of the signal shaft for controlling said retaining magnets, the clutch mechanism and the source of power.

[Claims 6 to 12 not printed in the Gazette.]

875,121. ROPE-CLAMP. LEONARD D. SHRYOCK, Marietta, Ohio. Filed Feb. 13, 1907. Serial No. 357,194.

1. The combination with clamp members and a wedge, of a cable against which the wedge bears with frictional contact and anti-frictional devices between the back of the wedge and clamp member whereby the compressibility of

the cable with the frictional contact of the wedge thereagainst and the anti-frictional engagement on the opposite side of the wedge causes a firm engagement of the cable.



2. A clamp for ropes or cables comprising a jaw, a pair of clamp members, one at least of which is provided with a dove-tailed groove of varying depth from one end of the clamp member to the other, a sliding wedge fitted to the groove, anti-friction devices interposed between the bottom of the groove and the adjacent surfaces of the wedge, stops for limiting the upward and downward movement of the wedge, and means for preventing the displacement of the anti-friction devices at either end of the clamp member.

3. A clamp for ropes or cables, comprising a jaw, clamp members held therein, one at least of which clamp members is provided with a sliding wedge, anti-friction devices interposed between the wedge and the clamp member, and a bolt attached to the wedge whose primary function is to hold the same in position when the clamp members are being tightened, said bolt having the secondary function of protecting the anti-friction devices from displacement when the clamp is not in use, and the wedges are at their lowest position.

4. A clamp for ropes or cables comprising a jaw, clamp members pivotally held therein, and a sliding wedge in one at least of said clamp members.

5. A clamp for ropes or cables comprising a jaw, clamp members having grooves on their inner faces, and wedges fitted to said grooves, anti-friction devices between the wedges and clamp members, and means on the clamp members and wedges to prevent the anti-friction devices from becoming displaced.

[Claim 6 not printed in the Gazette.]

875,122. TRUSS. BENSON S. SILLS, Belleville, Ontario, Canada. Filed July 22, 1907. Serial No. 385,067.

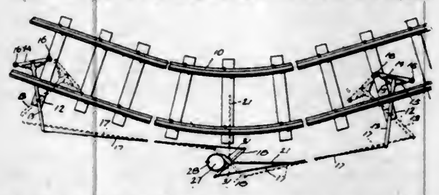


1. A truss comprising a base member, a curved brace having one end secured to the base member, a pair of springs having one of their ends secured to the base, a pad carried by the free end of one of the springs, a casing disposed over the base and the pad, a filling disposed in the casing means for attaching the casing to the body of a wearer, and means for securing the free end of the brace.

2. A truss comprising a base member, a curved brace having one end secured to the base member, a pad resiliently secured to the base member, a casing disposed over the base and the pad, a filling within the casing, a link having one end pivoted to the brace, a belt having one end secured to the base and its opposite end removably attached to the link, and means for securing the free end of the brace.

3. A truss comprising a base member, a curved brace having one end secured to the base member, a pad resiliently secured to the base, a casing disposed over the base and the pad, a filling within the casing, means for attaching the casing to the body of a wearer, and a strap having one of its ends secured to the free end of the brace and having its opposite end attached to said means for attaching the casing.

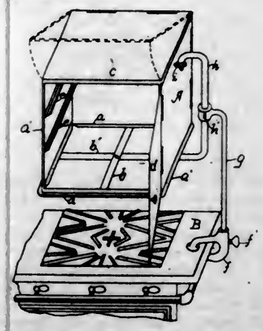
875,123. RAILWAY-SIGNAL. PERRY H. SLAUGHTER, Manasses, Ga., assignor of one-third to W. T. S. Slater, Broxton, Ga. Filed May 2, 1907. Serial No. 371,481.



1. A signal of the class described comprising trips adapted to be struck by the pilot of an engine, a signal post, a vertically disposed rock shaft carried by the post, a semaphore arm carried by the shaft for swinging movement with the shaft when the same is rocked, a lamp supported upon the post, a casing inclosing the lamp and having openings adapted to be brought into position in front of the lenses of the lamp, connections between the trips and the rock shaft for rocking the latter when the former are struck, and a connection between the rock shaft and the casing surrounding the lamp for turning the same.

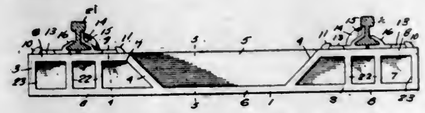
2. A trip for a signal of the class described comprising a pivoted arm, a cross arm pivoted to the said arm, springs connecting the cross arm upon opposite sides of its pivot and the said arm, and rotatable rollers carried by the ends of the cross arm.

875,124. COLLAPSIBLE WARMING-OVEN. WINIFRED E. SLOAN, Sioux City, Iowa. Filed May 25, 1907. Serial No. 375,646.



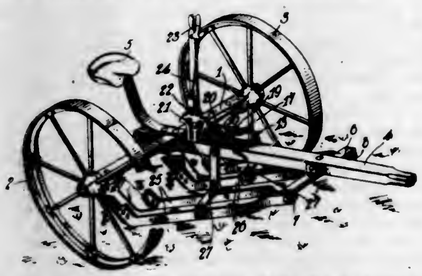
In a warming oven, the combination of a collapsible frame jointed or hinged at the corners, cross-pieces at the bottom pivotally secured to the side pieces of the oven, a hinged cover adapted to fold over the back of the oven, a bracket formed from one of said cross pieces and pivotally secured to the side of the oven, and a standard for the support of the oven adapted to be secured to the stove and adjustably secured to the bracket, substantially as described.

875,125. RAILROAD-TIE. CLARENCE S. SMALLWOOD, Granite City, Ill. Filed Apr. 24, 1907. Serial No. 370,030.



A rail tie comprising a central portion having a longitudinal web and angular base flanges on each side thereof and end portions each comprising a central longitudinal web, upper and lower flanges projecting on each side thereof, said upper flanges being provided with downwardly inclined inner portions extending to said first named flanges on each side of said first named web, of rail fastening means provided on said end portions and vertical ribs between said upper and lower flanges on each side of said webs.

875,126. BEET-PULLER. EDWARD A. SMITH, Loveland, Colo. Filed Apr. 18, 1907. Serial No. 368,928.



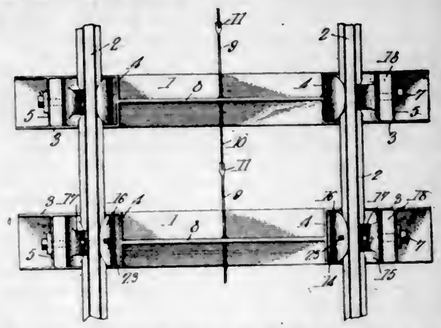
1. A beet-puller comprising a frame having supporting wheels, a tongue secured thereto, a cross bar secured to said tongue and having its opposite ends down-turned, puller beams pivotally connected with said down-turned ends, and having upwardly-inclined puller bars at their free ends, an inverted U-shaped yoke straddling said tongue and having its ends pivoted to said puller beams, and means connected with said yoke for raising and lowering the puller bars.

2 In a beet puller the combination of a frame having supporting wheels, a tongue secured thereto, a cross bar secured to said tongue, puller beams hinged to said cross bar and having their outer ends inclined upwardly, puller bars secured to said inclined ends, a yoke pivoted to said puller beams, and a bell-crank lever mounted on said tongue and connected with said yoke, and means for locking said lever in adjusted position for raising and lowering the puller bars.

875,127. METALLIC RAILWAY-TIE AND FASTENER. JULIUS G. SMITH, Liberty, N. Y. Filed Apr. 30, 1907. Serial No. 371,105.

1. In a metallic railway tie the combination with a base, and integral holders upon the base; of a cushion disposed flat upon the bottom of each holder, rail engaging devices insertible into the holders and disposed entirely above and upon the cushions, and means within each holder for securing said members in engagement with the rails.

2. In a metallic railway tie the combination with a base, and holders integral with the base; of rail engaging and supporting members insertible into each holder, each holder having rail engaging means, cushions disposed entirely beneath said members and upon the bottoms of the holders, means within each holder for securing said members in engagement with the rails, and a separate spacing device interposed between one wall of the holder and the cushion and one of the members.



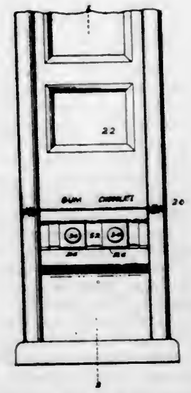
3. The combination with a tie having a holder; of rail engaging members insertible into the holder, means for clamping said members upon a rail, and means for preventing the withdrawal of the members from the holder when in clamping position.

4. The combination with a tie having upstanding walls constituting a holder; of a cushioning block seated within the holder, rail supporting and engaging members insertible into the holder and onto the cushion, a spacing device interposed between one of said members and a wall of the holder, and means engaging a wall of the holder for binding the members upon a rail.

5. The combination with a tie having upstanding walls constituting a holder; of a cushion within the holder, rail supporting and engaging members insertible into the holder and onto the cushion, one of said members being movable within the holder out of engagement with a rail, and means within the holder for securing said member against movement.

[Claims 6 to 13 not printed in the Gazette.]

875,128. COIN-CONTROLLED VENDING-MACHINE. ELIJAH F. SPAULDING, New York, N. Y. Filed Jan. 12, 1907. Serial No. 351,951.



1. In a coin-controlled vending machine, a holder for the stack of confections to be sold, an operating slide having a vertical coin-slot, a support adapted to maintain the lower end of said slot closed while the slide is at its normal posi-

the cable with the frictional contact of the wedge thereagainst and the anti-frictional engagement on the opposite side of the wedge causes a firm engagement of the cable.



2. A clamp for ropes or cables comprising a jaw, a pair of clamp members, one at least of which is provided with a dove-tailed groove of varying depth from one end of the clamp member to the other, a sliding wedge fitted to the groove, anti-friction devices interposed between the bottom of the groove and the adjacent surfaces of the wedge, stops for limiting the upward and downward movement of the wedge, and means for preventing the displacement of the anti-friction devices at either end of the clamp member.

3. A clamp for ropes or cables, comprising a jaw, clamp members held therein, one at least of which clamp members is provided with a sliding wedge, anti-friction devices interposed between the wedge and the clamp member, and a bolt attached to the wedge whose primary function is to hold the same in position when the clamp members are being tightened, said bolt having the secondary function of protecting the anti-friction devices from displacement when the clamp is not in use, and the wedges are at their lowest position.

4. A clamp for ropes or cables comprising a jaw, clamp members pivotally held therein, and a sliding wedge in one at least of said clamp members.

5. A clamp for ropes or cables comprising a jaw, clamp members having grooves on their inner faces, and wedges fitted to said grooves, anti-friction devices between the wedges and clamp members, and means on the clamp members and wedges to prevent the anti-friction devices from becoming displaced.

[Claim 6 not printed in the Gazette.]

875,122. TRUSS. BENSON S. SILLS, Belleville, Ontario, Canada. Filed July 22, 1907. Serial No. 385,067.

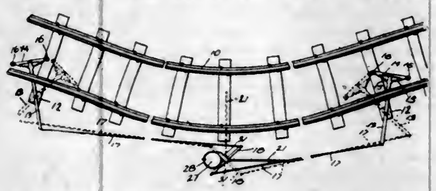


1. A truss comprising a base member, a curved brace having one end secured to the base member, a pair of springs having one of their ends secured to the base, a pad carried by the free end of one of the springs, a casing disposed over the base and the pad, a filling disposed in the casing means for attaching the casing to the body of a wearer, and means for securing the free end of the brace.

2. A truss comprising a base member, a curved brace having one end secured to the base member, a pad resiliently secured to the base member, a casing disposed over the base and the pad, a filling within the casing, a link having one end pivoted to the brace, a belt having one end secured to the base and its opposite end removably attached to the link, and means for securing the free end of the brace.

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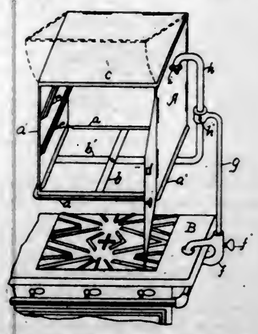
875,123. RAILWAY-SIGNAL. PERRY H. SLAUGHTER, Manasses, Ga., assignor of one-third to W. T. S. Slater, Broxton, Ga. Filed May 2, 1907. Serial No. 371,481.



1. A signal of the class described comprising trips adapted to be struck by the pilot of an engine, a signal post, a vertically disposed rock shaft carried by the post, a semaphore arm carried by the shaft for swinging movement with the shaft when the same is rocked, a lamp supported upon the post, a casing inclosing the lamp and having openings adapted to be brought into position in front of the lenses of the lamp, connections between the trips and the rock shaft for rocking the latter when the former are struck, and a connection between the rock shaft and the casing surrounding the lamp for turning the same.

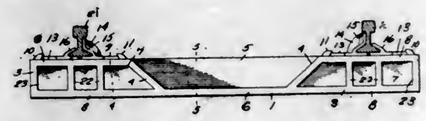
2. A trip for a signal of the class described comprising a pivoted arm, a cross arm pivoted to the said arm, springs connecting the cross arm upon opposite sides of its pivot and the said arm, and rotatable rollers carried by the ends of the cross arm.

875,124. COLLAPSIBLE WARMING-OVEN. WINIFRED E. SLOAN, Sioux City, Iowa. Filed May 25, 1907. Serial No. 375,646.



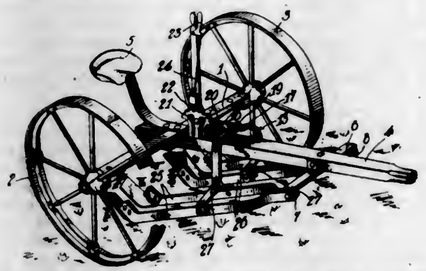
In a warming oven, the combination of a collapsible frame jointed or hinged at the corners, cross-pieces at the bottom pivotally secured to the side pieces of the oven, a hinged cover adapted to fold over the back of the oven, a bracket formed from one of said cross pieces and pivotally secured to the side of the oven, and a standard for the support of the oven adapted to be secured to the stove and adjustably secured to the bracket, substantially as described.

875,125. RAILROAD-TIE. CLARENCE S. SMALLWOOD, Granite City, Ill. Filed Apr. 24, 1907. Serial No. 370,030.



A rail tie comprising a central portion having a longitudinal web and angular base flanges on each side thereof and end portions each comprising a central longitudinal web, upper and lower flanges projecting on each side thereof, said upper flanges being provided with downwardly inclined inner portions extending to said first named flanges on each side of said first named web, of rail fastening means provided on said end portions and vertical ribs between said upper and lower flanges on each side of said webs.

875,126. BEET-PULLER. EDWARD A. SMITH, Loveland, Colo. Filed Apr. 18, 1907. Serial No. 368,928.



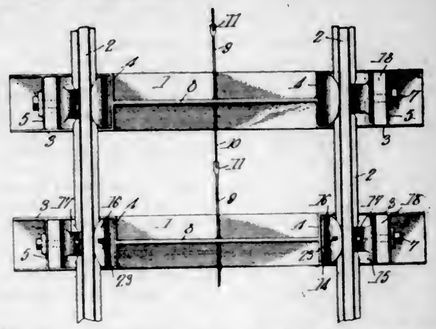
1. A beet-puller comprising a frame having supporting wheels, a tongue secured thereto, a cross bar secured to said tongue and having its opposite ends down-turned, puller beams pivotally connected with said down-turned ends, and having upwardly-inclined puller bars at their free ends, an inverted U-shaped yoke straddling said tongue and having its ends pivoted to said puller beams, and means connected with said yoke for raising and lowering the puller bars.

2 In a beet puller the combination of a frame having supporting wheels, a tongue secured thereto, a cross bar secured to said tongue, puller beams hinged to said cross bar and having their outer ends inclined upwardly, puller bars secured to said inclined ends, a yoke pivoted to said puller beams, and a bell-crank lever mounted on said tongue and connected with said yoke, and means for locking said lever in adjusted position for raising and lowering the puller bars.

875,127. METALLIC RAILWAY-TIE AND FASTENER. JULIUS G. SMITH, Liberty, N. Y. Filed Apr. 30, 1907. Serial No. 371,105.

1. In a metallic railway tie the combination with a base, and integral holders upon the base; of a cushion disposed flat upon the bottom of each holder, rail engaging devices insertible into the holders and disposed entirely above and upon the cushions, and means within each holder for securing said members in engagement with the rails.

2. In a metallic railway tie the combination with a base, and holders integral with the base; of rail engaging and supporting members insertible into each holder, each holder having rail engaging means, cushions disposed entirely beneath said members and upon the bottoms of the holders, means within each holder for securing said members in engagement with the rails, and a separate spacing device interposed between one wall of the holder and the cushion and one of the members.



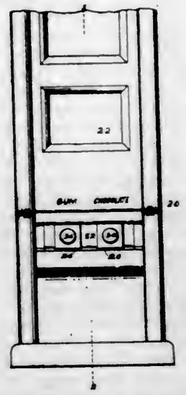
3. The combination with a tie having a holder; of rail engaging members insertible into the holder, means for clamping said members upon a rail, and means for preventing the withdrawal of the members from the holder when in clamping position.

4. The combination with a tie having upstanding walls constituting a holder; of a cushioning block seated within the holder, rail supporting and engaging members insertible into the holder and onto the cushion, a spacing device interposed between one of said members and a wall of the holder, and means engaging a wall of the holder for binding the members upon a rail.

5. The combination with a tie having upstanding walls constituting a holder; of a cushion within the holder, rail supporting and engaging members insertible into the holder and onto the cushion, one of said members being movable within the holder out of engagement with a rail, and means within the holder for securing said member against movement.

[Claims 6 to 13 not printed in the Gazette.]

875,128. COIN-CONTROLLED VENDING-MACHINE. ELIJAH F. SPAULDING, New York, N. Y. Filed Jan. 12, 1907. Serial No. 351,951.



1. In a coin-controlled vending machine, a holder for the stack of confections to be sold, an operating slide having a vertical coin-slot, a support adapted to maintain the lower end of said slot closed while the slide is at its normal posi-

tion and during its inward movement to a definite point at which the coin will fall from the slot, a goods-ejector carried by said slide, means to be actuated by said slide for moving said ejector to position behind the lower piece in the stack while the slide is at an inner position, and means operable by the coin after it leaves said slot to render operable the ejector actuating means carried by the slide, said ejector being adapted to be moved to its inoperative position by the weight of the contents of the holder upon it after said lower piece has been discharged; substantially as set forth.

2. In a coin-controlled vending machine, a holder for the stack of confections to be sold, an operating slide having a vertical coin-slot, a support adapted to maintain the lower end of said slot closed while the slide is at its normal position and during its inward movement to a definite point at which the coin will fall from the slot, a goods-ejector carried by said slide, means to be actuated by said slide for moving said ejector to position behind the lower piece in the stack while the slide is at an inner position, and means operable by the coin after it leaves said slot to render operable the ejector actuating means carried by the slide, said ejector being adapted to be moved to its inoperative position by the weight of the contents of the holder upon it after said lower piece has been discharged, and comprising two connected side members in sufficiently firm frictional engagement with the supporting surfaces they engage to enable the ejector to normally remain in the position to which it may be moved; substantially as set forth.

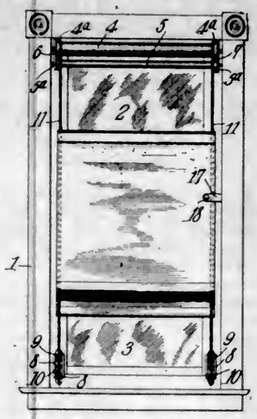
3. In a coin-controlled vending machine, a holder for the stack of confections to be sold, an operating slide having a vertical coin-slot, a support adapted to maintain the lower end of said slot closed while the slide is at its normal position and during its inward movement to a definite point at which the coin will fall from the slot, a goods-ejector carried by said slide, means to be actuated by said slide for moving said ejector to position behind the lower piece in the stack while the slide is at an inner position, and means operable by the coin after it leaves said slot to render operable the ejector actuating means carried by the slide, said ejector being adapted to be moved to its inoperative position by the weight of the contents of the holder upon it after said lower piece has been discharged, and consisting of a spring bar bent to form two side members straddling the slide and a lower connecting member, said side members having a tension from each other and against the surfaces retaining them; substantially as set forth.

4. In a coin-controlled vending machine, a holder for the stack of confections to be sold, an operating slide having a vertical coin-slot, a support adapted to maintain the lower end of said slot closed while the slide is at its normal position and during its inward movement to a definite point at which the coin will fall from the slot, a goods-ejector carried by said slide, means to be actuated by said slide for moving said ejector to position behind the lower piece in the stack while the slide is at an inner position, a tiltable coin-receiver into which the coin falls from said slot and the rear end of which when tilted upwardly renders operable the goods-ejector actuating means carried by the slide, and a coin-ejector carried by the slide for dislodging the coin from said receiver on the outward movement of the slide; substantially as set forth.

5. In a coin-controlled vending machine, a holder for the stack of confections to be sold, an operating slide having a vertical coin-slot, a support adapted to maintain the lower end of said slot closed while the slide is at its normal position and during its inward movement to a definite point at which the coin will fall from the slot, a vertically movable goods ejector carried by said slide, a pivoted plate carried by the slide and having a downwardly extending shoulder and a lifting-toe in position to engage said goods-ejector, and a tiltable coin-receiver into which the coin falls from said slot to tilt the rear end of said receiver upwardly to a position in front of said shoulder, whereby upon the outward movement of said slide said lifting toe is caused to elevate the goods-ejector to its operative position; substantially as set forth.

[Claims 6 to 17 not printed in the Gazette.]

875,129. WINDOW-SHADE. ERRETT B. STEPHENSON, Wawaka, Tex. Filed Aug. 9, 1907. Serial No. 387,865.



1. A device of the character described comprising inner and outer endless belts, each belt comprising a curtain and a flexible connection between the ends of the curtain, said outer belt being extended around the inner curtain and each belt being movable in the direction of its length, and revoluble means for supporting the belt to permit independent movement thereof.

2. A window shade embodying a pair of upper curtain guiding rollers, pairs of independently operable cords passing over the said rollers, a set of lower rollers adapted to coöperate with the lower portions of the operating cords, and a flexible curtain carried by each pair of operating cords.

3. A window shade embodying a pair of upper and lower curtain guiding rollers journaled one above the other, a pair of brackets adapted to be secured to the lower portion of the window casing and each having a pair of upper and lower cord guiding rollers journaled therein, a pair of operating cords passing over the upper curtain guiding roller and over the lower pair of cord guiding rollers, a second pair of cords passing over the lower curtain guiding roller and coöperating with the upper pair of cord guiding rollers, and a flexible curtain carried by each pair of operating cords.

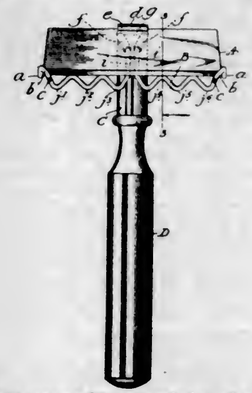
4. A window shade embodying a pair of upper curtain guiding rollers, pairs of independently operable cords passing over the said rollers, a set of lower rollers adapted to coöperate with the lower portions of the operating cords, and a flexible curtain carried by each pair of operating cords, and a locking device adapted to coöperate with the operating cords to secure them in fixed relation and prevent movement of the curtains.

875,130. SAFETY-RAZOR. PHILIP K. STERN, New York, N. Y. Filed Oct. 8, 1907. Serial No. 396,368.

1. In a safety razor, a guard formed of crimped wire provided with terminal loops adapted to engage the corners of the blade at the cutting edge thereof, and the intermediate portion of the guard being bent backwardly from the edge of the blade in the manner of a loop, and a ferrule provided with a hooked extension clamped to the loop of said guard.

2. In a safety razor, a frame consisting of a split ferrule, and a wire guard secured thereto and carried thereby, said wire guard being bent intermediately in the manner of a loop and laterally therefrom along the edge of the blade in both directions from the center thereof into a series of crimps, and the terminals of said guard being bent in the manner of loops and adapted to grip the corners of the blade at its cutting edge, and a hooked extension carried by the ferrule for gripping the blade intermediately at the opposite edge, and a handle provided with a neck and shoulder for the split ferrule.

3. In a safety razor a yielding frame consisting of a crimped wire guard and a split ferrule secured thereto, said guard having an intermediate loop secured to the ferrule and a plurality of crimped portions extending in both directions along the edge of the blade and terminal loops formed at the extremities of the guard for gripping the corners of the blade at its cutting edge and a hooked extension formed upon a terminal of the ferrule for gripping the back of the blade intermediately.

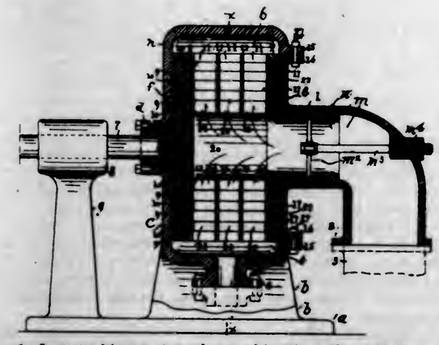


4. In a safety razor a frame consisting of a ferrule, provided with a handle at one extremity, and a crimped wire guard at the opposite extremity thereof, a clip extending from the ferrule to grip the back of the razor blade, and a pair of intermediately situated crimped arms extending from the guard in opposite directions along the edge of the blade provided with terminal loops for gripping the corners of the blade at its cutting edge.

5. In a safety razor, a frame, provided with a handle connection, consisting of a blank of sheet metal bent into the form of a tube provided with a pair of securing clips and a crimped wire guard secured to said clips, and a third clip intermediately situated with respect to the former clips, adapted to engage the back of the razor blade intermediately, said wire guard being provided with a pair of crimped arms extending in opposite directions along the edge of the blade, having the crimped portions of said guard in juxtaposition to the edge of the said blade, and a pair of oppositely situated loops formed on the respective terminals of said crimped arms, adapted to engage the corners of the blades at its cutting edge.

[Claims 6 to 8 not printed in the Gazette.]

875,131. TURBINE. BYRON STEVENS, Oakland, Cal. Filed Sept. 7, 1907. Serial No. 391,780.

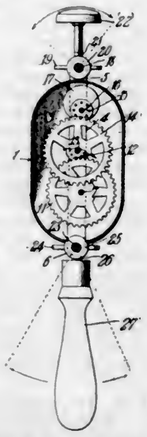


1. In a turbine motor, the combination of a tubular casing, a shaft entering the same on one side, a rotatable disk in the casing on the end of the shaft close to one wall thereof having a series of concentric tubes provided with openings or blades on the inner face of said disk, a second series of concentric tubes with openings or blades connected to the opposite wall of the casing the inner tube of which incloses a chamber extending to the face of said disk on one end and communicating at the opposite end with an intake or supply pipe, with a slide valve in the pipe.

2. In a turbine motor, the combination of a tubular casing, a shaft entering the same on one side, a rotatable disk in the casing on the end of the shaft close to one wall thereof having a series of concentric tubes provided with openings or blades on the inner face of said disk, a second series of concentric tubes with openings or blades connected to the opposite wall of the casing the inner tube of which incloses a chamber extending to the face of said disk on one end and communicating at the opposite end with an intake or supply pipe, a slide valve in said pipe, with a peripheral space of the casing surrounding said tubes provided with an exhaust pipe.

3. In a turbine motor, the combination of a tubular casing, a shaft entering the same on one side, a rotatable disk in the casing on the end of the shaft close to one wall thereof having a series of concentric tubes with openings or blades connected to the opposite wall of the casing interleaving with the tubes of the first series, its inner tube entering said chamber and forming its circular wall, the central face of said disk being an end wall of the chamber, with a supply or intake pipe communicating with the opposite end of the chamber provided with a slide valve.

875,132. VIBRATOR. JOHN W. SWINDELL, Greenville, Tex. Filed Aug. 6, 1907. Serial No. 387,372.



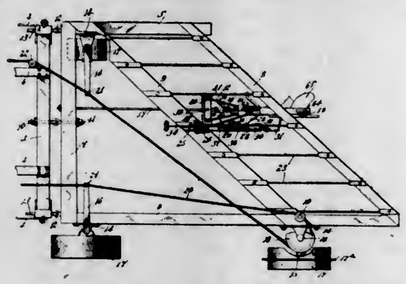
1. A vibrator comprising a suitable casing, a train of gearing therein, a vibrator element also housed in the casing and driven by said train of gearing, means for imparting motion to said train of gearing, a vibrator head adjustable with relation to its angle of projection from the support, and a handle also adjustable with relation to its angle of projection from the support.

2. A vibrator comprising a suitable casing, a train of gears within the casing, an eccentrically supported weight driven by said gears and also housed in the casing and constituting a vibrator element, a contact head exterior to the casing and adjustable with relation to its angle of projection from said support, and a handle also adjustable with relation to its angle of projection from the support.

3. A vibrator comprising a suitable casing having parallel front and rear walls, straps on said walls extending longitudinally thereof and beyond the ends of the casing,

a train of gearing having its arbor journaled in said straps and having a driving arbor projecting beyond the walls of the casing, a vibrator element comprising an eccentrically mounted weight housed within the casing on that element of the gearing remote from the drive arbor, rotatable blocks or cylinders mounted between the projecting ends of the straps, screw clamps for the blocks or cylinders, a contact head carried by one cylinder, and a handle carried by the other cylinder.

875,133. PLOW. WILLIAM TAYLOR, Carman, Manitoba, Canada. Filed Oct. 22, 1906. Serial No. 339,947.



1. In a gang plow, the combination comprising a wheeled frame, means for guiding the movement of the frame, a plurality of telescopic plow beams supported on the frame, means for locking the telescopic parts of the plow beams together to withstand a predetermined strain, means for locking the plow beams against movement with relation to the frame, and an independent draft member from the frame to each plow beam.

2. In a gang plow, the combination comprising a wheeled frame, means for guiding the movement of the frame, a plurality of telescopic plow beams supported on the frame, resilient adjustable means for locking the telescopic parts of the plow beams together to withstand a predetermined strain, means for locking the plow beams against movement with relation to the frame, and an independent draft member from the frame to each plow beam.

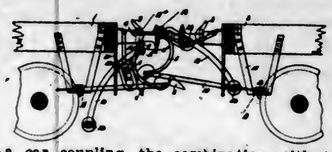
3. A gang plow comprising the combination of a front frame member, a side frame member secured thereto, a side frame member of greater length than the first-named side member, an obliquely disposed rear frame member connecting the ends of the side frame members, upper and lower obliquely disposed intermediate frame members connected with the side member, longitudinal braces disposed on the obliquely disposed members, a plurality of plow beams supported on the longitudinal braces, shares on the beams, and means for raising and lowering the plow beams.

4. In a gang plow, the combination comprising a wheeled frame, longitudinal braces carried by the frame, cranked members carried by the braces, plows supported from said crank members, each comprising a telescopic beam, a share carried by the beam, and means for raising and lowering the beam.

5. In a gang plow, the combination comprising a wheeled frame, longitudinal braces carried by the frame, cranked members carried by the braces, plows supported from said cranked member, each comprising a telescopic beam, a share carried by the telescopic beam, a bell crank lever on the cranked member, a link connecting the bell crank lever and the beam, a rod connected to the bell crank lever, a pivoted lever secured to the rod, and provided with a bent end, a slotted link on said bent end, a slidable member secured to the slotted link and connected to the forward end of the beam, a segmental rack adjacent the lever, and a pawl on the lever adapted to engage said rack.

[Claims 6 to 18 not printed in the Gazette.]

875,134. AUTOMATIC COUPLING FOR RAILWAY-VEHICLES. WILLIAM THORN and MARCUS F. MANN, Exeter, England. Filed Jan. 28, 1907. Serial No. 354,548.



1. In a car coupling, the combination with two cars each provided with a coupling-chain and a coupling-hook; of jointed arms pivotally connected with the said cars and normally supporting the said links in an uncoupled position, and cams carried by the said arms at their joints and operating automatically to place the coupling-chain of one car in engagement with the coupling-hook of the other car when the said cars are moved together.

2. In a car coupling, the combination, with two cars each provided with a coupling-chain and a coupling-hook; of guide-plates secured to the said cars, arms 10 pivotally connected with the said cars and slidable in the said guide-plates, arms 5 pivoted to the said arms 10 and normally supporting the said links in an uncoupled position, and cams connected with said arms 5 and operating automatically to place the coupling-chain of one car in engagement with the coupling-hook of the other car when the said cars are moved together.

3. In a car coupling, the combination, with two cars each provided with a coupling-chain and a coupling-hook; of guide-plates secured to the said cars, arms 10 pivotally connected with the said cars and slidable in the said guide-plates, arms 5 pivoted to the said arms 10 and normally supporting the said links in an uncoupled position, weighted arms 19 connected to the said arms 5 and slidable in the said guide-plates and operating to retract the said chains automatically when disengaged from the said hooks, and cams connected with the said arms 5 and operating automatically to place the coupling-chain of one car in engagement with the coupling-hook of the other car when the said cars are moved together.

4. In a car coupling, the combination, with two cars each provided with a coupling-chain and a coupling-hook; of jointed arms pivotally connected with the said cars and normally supporting the said links in an uncoupled position, uncoupling-poles pivoted to the said cars for uncoupling the said chains from the said hooks, weighted arms for retracting the said chains when uncoupled by the said poles, and cams carried by the said arms at their joints and operating automatically to place the coupling-chain of one car in engagement with the coupling-hook of the other car when the said cars are moved together.

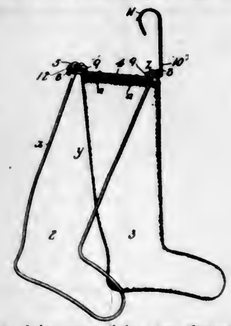
5. In a car coupling, the combination, with two cars each provided with a coupling-chain and a coupling-hook; of jointed arms pivotally connected with the said cars, swivels pivoted to the free end portions of the said arms and slidable longitudinally on the end links of the said chains, and cams carried by the said arms at their joints and operating automatically to place the coupling-chain of one car in engagement with the coupling-hook of the other car when the said cars are moved together.

[Claim 6 not printed in the Gazette.]

875,135. STOCKING-DRIER. PAUL J. TIMBERLAKE, Jackson, Mich., assignor to J. B. Timberlake & Sons, a Corporation of Michigan. Filed July 8, 1907. Serial No. 382,745.

1. A stocking drier comprising two frames for supporting each a stocking, the frames being pivotally united at their upper ends, to swing freely around a common axis of revolution lying in the planes of both frames, and a cross-piece at the upper ends of the frames, substantially as set forth.

2. A stocking drier comprising two frames shaped to receive articles of hosiery, said frames being pivotally secured together at their upper ends, to swing freely around a common axis of revolution lying in the planes of both frames and means for holding said frames apart at an angle to each other, substantially as set forth.



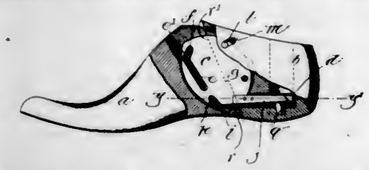
3. A stocking drier comprising two frames shaped to receive articles of hosiery, said frames being pivotally secured together at their upper ends, to swing freely around a common axis of revolution lying in the planes of both frames means for holding said frames apart at an angle to each other, and means for suspending the drier, substantially as set forth.

4. A stocking drier comprising two frames shaped to receive articles of hosiery, said frames being pivotally secured together at their upper ends to swing freely around a common axis of revolution lying in the planes of both frames and adapted to lie flat together one upon the other, and means for holding said frames apart at an angle to each other, substantially as set forth.

5. A stocking drier comprising two frames shaped to receive articles of hosiery, said frames being secured together at their upper ends, means for holding said frames apart at an angle to each other, and means for holding the side wires of each frame respectively at a constant distance from each other, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

875,136. LAST. WALTER E. TRUFANT, Whitman, Mass., assignor, by mesne assignments, to Krentler-Arnold Hinge Last Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 21, 1898. Serial No. 678,338.



1. A last, comprising two sections having opposed sliding faces, a movable latch pivotally secured in one of said sections and projecting into the other section, said latch being formed with a slot, and a pin on the other section occupying said slot.

2. A hinged last comprising two sections, a movable member pivotally secured in one of said sections and projecting into the other section, said member being formed with a slot extending in the general direction of swinging movement of said member, and a pin on the other section occupying said slot when the sections are locked.

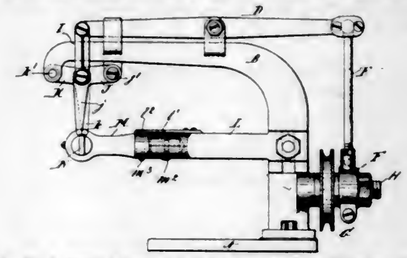
3. A last comprising two sections having opposed sliding faces, a movable member pivoted to one of said sections and formed with a slot having a pin-guiding portion and a pin-locking portion, the former movable into parallelism with said faces by rotation of said member, and a pin on the other section occupying said slot.

4. A hinged last, comprising two sections, a latch pivotally connected to both sections, and means coöperating with said latch for locking said sections rigidly together in lengthened position.

5. A hinged last comprising a fore section and a heel section, the latter being formed with a spindle socket, said sections having opposed sliding faces, a latch pivoted to said heel section and arranged for release by the spindle entering said socket, said latch projecting into the fore section, and a complemental locking member or keeper on the fore section.

[Claims 6 to 22 not printed in the Gazette.]

875,137. BUTT-SEAMING MACHINE. CHARLES L. TURNER, Reading, Mass., assignor to The Davidson Rubber Company, Boston, Mass., a Corporation of Massachusetts. Filed Feb. 14, 1907. Serial No. 357,377.



1. In a butt seaming machine, the combination of an anvil and opposed fingers pivoted to swing in successive oppositions near one face of the anvil to butt a portion of the edges of the material together at each successive opposition, substantially as described.

2. In a butt seaming machine, the combination of bell crank lever fingers, pivoted at one end to the machine and at the angle of the bell-crank to an actuating lever and an anvil coöperatively supported with relation to the bell crank lever fingers.

875,138. TELEPHONE-TRANSMITTER. CHRISTIAN UMBACH, New York, N. Y., assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 8, 1907. Serial No. 356,399.



1. In a telephone transmitter, a button provided with a movable electrode having a stud projecting therefrom, a diaphragm, means for supporting said button and diaphragm, and means for securing said diaphragm to said stud, said means being self-adjusting to adapt itself to the angle at which the stud and diaphragm are assembled.

2. In a telephone transmitter, a button provided with a movable electrode having an angular stud projecting therefrom, a diaphragm, means for supporting said button and diaphragm in angular relation to each other, said diaphragm having an opening through which said stud projects, and means for securing said diaphragm to said stud, said means being self-adjusting to adapt itself to the angle at which the stud and diaphragm are assembled.

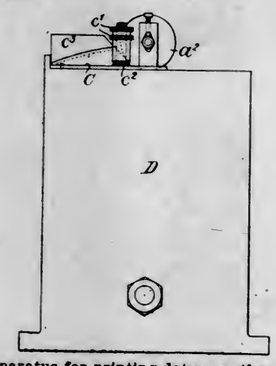
3. In a telephone transmitter, a button provided with a movable electrode having an angular stud projecting therefrom, a diaphragm, means for supporting said button and diaphragm in angular relation to each other, said diaphragm having an opening through which said stud projects, and a ball and socket clamping means for securing said diaphragm to said stud.

4. In a telephone transmitter, a button provided with a movable electrode having a stud projecting therefrom, a diaphragm, means for supporting said button and diaphragm, said diaphragm having an opening through which said stud loosely projects, a washer upon each side of said opening, said washers each having a concave seat or socket

upon its outer face, and a pair of opposing nuts for clamping said diaphragm in place, said nuts each having a rounded head fitting in the socket of the corresponding washer.

5. In a telephone transmitter, a button provided with a movable electrode having an angular stud projecting therefrom, a diaphragm, means for supporting said button and diaphragm in angular relation to each other, said diaphragm having a central opening through which said stud loosely projects, a washer upon each side of said opening, said washers each having a concave seat or socket upon its outer face, and a pair of opposing nuts for clamping said diaphragm between said washers, said nuts each having a rounded head fitting in the socket of the corresponding washer.

875,139. TICKET-PRINTING APPARATUS. JAMES A. WALTON, Hull, England. Filed Mar. 29, 1907. Serial No. 365,318.



1. In apparatus for printing dates or other matter upon the opposite ends of tickets, the combination, with a casing formed with a slot, of a spring controlled arm whereof the one end is pivotally mounted in the casing while the opposite end projects through the slot in said casing, a type carrier mounted on said arm and furnished with radially projecting printing type, means for inking said type, an adjustable pressure roller, and a stop on said carrier against which as also against the said arm the ticket abuts, while the type carrier is vibrated for the purpose of printing the ticket.

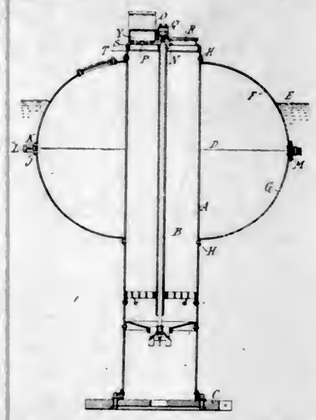
2. In ticket-printing apparatus of the kind herein referred to, the combination with a pivotally mounted type-carrier and an inking ribbon supported upon the type, of a pressure roller mounted upon a bracket secured to the casing of the apparatus a nut and a spring-washer for securing said bracket, whereby the pressure of the roller upon the type may be regulated.

875,140. BUOY. THOMAS L. WILLSON, Ottawa, Ontario, Canada, assignor, by mesne assignments, to United States Marine Signal Company, Jersey City, N. J., a Corporation of New Jersey. Application filed Aug. 5, 1905, Serial No. 272,903. Renewed Nov. 16, 1907. Serial No. 402,532.

1. An acetylene buoy having a gas chamber, and a purifier projecting above the top of said chamber, the gas chamber being provided with a head N having integrally formed therewith a casing O, and having a series of apertures P in the portion of said head which constitutes the base of said casing.

2. An acetylene buoy having a gas chamber, and a purifier projecting above the top of said chamber, the gas chamber being provided with a head N having integrally formed therewith a casing O, and having a sereis of apertures P in the portion of said head which constitutes the base of the casing, the said head having also a downward flange S closely fitting the upper end of the generating chamber.

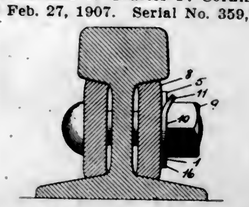
3. A gas buoy comprising a vertical, tubular, central gas-containing portion, two hemi-spheroidal plates united to each other along a horizontal plane and each connected at its center to said vertical portion and braced thereby, a suitable bottom for said vertical tube and a top closing the same and containing a purifying material through which the gas passes previous to burning, as and for the purpose specified.



4. A buoy comprising in combination a central vertical tubular gas-containing portion, two hemi-spheroidal plates circumferentially united together and each connected at its center to said vertical portion and braced thereby, a weighted bottom for said vertical portion, and a head adapted to contain purifying material secured to said vertical portion, as and for the purpose specified.

5. A buoy comprising in combination a central, vertical tubular gas-containing portion, two hemi-spheroidal plates circumferentially united to each other and each connected at its center to said vertical portion and braced thereby, a weighted bottom for said vertical portion, a head for said vertical portion, and a purifier-containing box formed integral with said head and through which the gas is led, as and for the purpose specified.

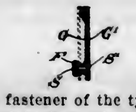
875,141. NUT-LOCK. HENRY J. BERKLEY, Baltimore, Md., assignor of one-half to Charles F. Corning, Baltimore, Md. Filed Feb. 27, 1907. Serial No. 359,541.



The herein described nut-lock consisting of a split circular plate having a central opening and a cross-slot which increases in width as it extends from the periphery of the circular plate where the slot is narrowest and which opens into the inner circular opening,—said plate being of a uniform thickness from one side of the slot around to the opposite side of said slot and the plate having a single prong formed at one end which lies within the periphery of the plate and which increases in width as it recedes circumferentially from the slot, said prong being concavo-convex longitudinally.

875,142. HOSE-SUPPORTER CLASP. HAROLD BINNEY, New York, N. Y., assignor to Nealon Company, a Corporation of New York. Filed Nov. 30, 1904. Serial No. 234,906.

1. In a clasp or fastener of the type having an embracing and an embraced member, the said embraced member comprising an integral yielding button head, shank and base, a relatively rigid reinforcement located wholly within said head.



2. In a clasp or fastener of the type having an integral yielding button and back member and an embracing external member between which members the fabric is engaged, a reinforcing plate within the head of the button portion of the said first named member and disposed transversely of its longitudinal axis.

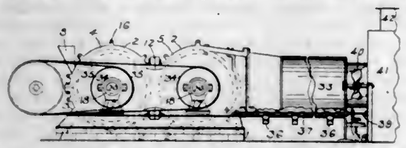
3. In a clasp or fastener of the type having a yielding button member and an embracing external member between which members the fabric is engaged, a relatively rigid reinforcing portion located entirely within the head of said button for increasing its resistance to lateral displacement.

4. In a clasp or fastener of the type having an integral yielding button and back member and an embracing external member provided with a loop portion, between which members the fabric is engaged, a reinforcing plate located within the button portion of said first-named member, the diameter of said reinforcing plate being approximately equal to the width of the loop portion of said embracing member.

5. In a hose supporter clasp, a loop, a rigid disk for cooperating therewith as a button or button head, and a back plate member of yielding material having an extension which extends through the loop and encircles, cushions and holds said disk.

[Claim 6 not printed in the Gazette.]

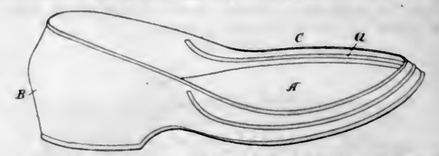
875,143. GRINDING-MILL AND PULVERIZER. JAMES W. BOILEAU, Detroit, Mich., assignor of one-sixth to Joseph T. Belanger and one-sixth to John L. Cochrane, Detroit, Mich., and one-sixth to Eugene O. Spaulding, Caro, Mich. Filed Sept. 7, 1906. Serial No. 333,705.



1. A mill of the class described having a casing provided with an annular runway on its inner side, said runway having an annular ball track substantially semi-cylindrical in cross section and plain annular surfaces on opposite sides of said ball track, a roller located and revoluble in said casing, said roller having a main portion cylindrical in form and of a width exceeding that of the ball track and projecting portions cylindrical in form, of less diameter than and projecting from opposite sides of said main portion and concentric therewith, said main portion having semi-spherical, peripheral pockets, passages extending from said pockets to its sides and further provided with wings on its sides intermediate said pockets, projecting radially from said main portion, diverging in the direction of the rotation of the roller, disposed opposite the plain annular surface of the runway, and overhanging the projecting portions of the roller, and centrifugally-acting grinding balls partly in said pockets and partly in said ball track and retained in said pockets by said ball track, substantially as described.

2. A mill of the class described, having a plurality of casings, each communicating with the one adjacent thereto, the first of said casings having a feed opening and the last having a screened discharge opening, each of said casings having a lining formed with an annular runway on its inner side having a ball track, said lining having grated openings in their opposing sides to permit the passage of reduced material from one lining to another, a roller located and revoluble in each casing and having peripheral pockets and concentrically-acting revoluble grinding balls partly in said pockets and partly in the ball track, substantially as described.

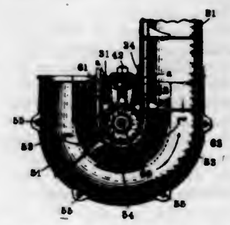
875,144. RUBBER SANDAL. AUGUSTUS O. BOURN, Bristol, R. I. Filed June 16, 1906. Serial No. 322,045.



1. A man's sandal having a low vamp and a low quarter and provided with an internal rib above the inner face of the sole and parallel therewith and curved upward at the ends above the shank at each side said curved portions being forward of the heel.

2. A man's sandal having a low vamp and low quarter and a flexible but inelastic strip embedded in the vamp above the sole and extending upward at the ends above the shank said curved portions being forward of the heel.

875,145. ELEVATOR-BOOT. CHESTER BRADFORD, Indianapolis, Ind. Filed Sept. 11, 1905. Serial No. 277,949.



1. The combination, in an elevator boot, of two approximately semicircular side members, one of which contains a hand hole, a rim between the edges thereof, a removable cover for said hand hole, the edges of said hole being provided with flanges between which said cover is adapted to enter, and lugs or stops by which said cover is kept in place when inserted.

2. The combination, in an elevator boot, of two side members, one of which has a hand hole therein, a cover to said hand hole seated in suitable flanges at the edge thereof, stops for said cover from which said cover will escape when pressed inwardly, and a finger pocket in said cover by means of which it may be manipulated.

3. The combination, in an elevator, of the legs thereof, a plate secured to the lower ends of said legs, a bearing structure secured centrally to said plate, and a shell structure independently secured in place surrounding said bearing structure and the mechanism carried thereby and removable and replaceable independently thereof.

4. The combination, in an elevator, of the legs thereof, a plate secured thereto, a boot shell also secured thereto independently of said plate, and a bearing structure secured centrally to said plate and carrying a shaft in its lower end, the legs of said bearing structure being longitudinally perforated to provide for the supply of a lubricant, and said perforations registering with corresponding perforations in the plate to which said said structure is secured, whereby the shaft bearings may be lubricated from the outside.

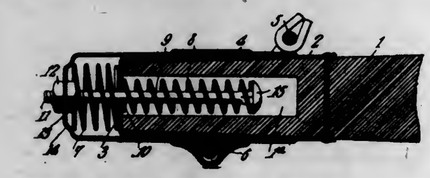
5. The combination, in an elevator, of the elevator legs, a central plate secured to said legs, a bearing structure secured to said plate, and a boot shell secured to said legs independently of said plate and adapted to be removed and replaced or reversed without disturbing said plate or the mechanism carried thereby.

[Claims 6 and 7 not printed in the Gazette.]

875,146. SHOCK-ABSORBER FOR NECK-YOKES. PETER E. BRECKHEIMER, Elkhart Lake, Wis. Filed July 3, 1907. Serial No. 382,043.

1. In a device of the character described, the combination with the neck yoke having a guide thereon, of a slide mounted to operate longitudinally of the guide,

cushioning devices for easing the relative movements of the guide and slide in both directions longitudinally of the yoke, and means for simultaneously adjusting the resisting power of both cushioning devices.



2. In a device of the character described, the combination with a neck yoke having a guide thereon, of a slide mounted to operate longitudinally of the guide, cushioning devices of different degrees of resistance for easing the relative movements of the guide and slide in both directions longitudinally of the yoke, and means for simultaneously adjusting the resisting power of both of he cushioning devices.

3. In a device of the character described, the combination with a neck yoke or other support, and a tubular casing secured thereon and having a transversely arranged spring seat at its outer end provided with an aperture, of a sleeve mounted to slide longitudinally of the casing and having a head closing its outer end, a stem connected to the head of the sleeve and extending through the aperture of the spring seat and having a follower on its inner end, a helical spring interposed between the follower and spring seat of the casing, and a second helical spring interposed between the said spring seat and the head of the outer end of the sleeve, the springs resisting the movements of the sleeve in opposite directions.

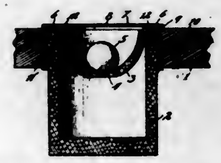
875,147. TIRE-TIGHTENER. JAMES H. CAMERON, Paris, Tex. Filed Dec. 6, 1906. Serial No. 346,623.



As a new article of manufacture, a tire tightener comprising a wedge-shaped block designed to be introduced between the adjacent ends of a wheel rim and having a longitudinally extending tenon receiving recess opening toward the front entrance end of the block, the inclined side faces of the block being provided with rearwardly pitched engaging teeth designed to engage the contiguous ends of the rim and to serve as the sole means for holding the block in engagement with the latter, the teeth on one side of the block being disposed alternately with respect to those on the other for facilitating entrance of the block between the rim ends, a protecting cap-plate formed on the rear base end of the block, and protecting side plates formed on the side edges of the latter and joined at their rear ends to the cap plate, the latter and side plates being arranged to fit respectively on the inner and side faces of the rim for effectually preventing the entrance of foreign matter into the wedge-receiving space.

875,148. INK-WELL. HARRY G. CAMPBELL, Chicago, Ill., assignor of one-half to Union School Furnishing Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 1, 1907. Serial No. 365,802.

1. In an inkwell, the combination with an ink receptacle, of a closure for the same comprising a cap-piece having a flange, a glass runway adapted to lie within the flange of the cap-piece, a ring within the flange of the cap-piece and engaging with the same and with the runway to hold the latter in position against the cap-piece, and a rolling valve inclosed between the cap-piece and the runway.



2. In an inkwell, the combination with an ink receptacle, of a closure for the same comprising a metallic cap-piece having an internally screw-threaded flange, a dish-shaped glass runway having a perforation disposed within the flange of the cap-piece, a screw-threaded ring adapted to be screwed into the flange of the cap-piece, and against the runway, so as to hold the latter against the cap-piece, and a rolling valve inclosed between the cap-piece and the runway.

3. In an inkwell, the combination with an ink receptacle having a screw-thread formed at its mouth, of a closure for the same comprising a metallic cap-piece having a screw-threaded flange, a glass runway having a flange and located within the flange of the cap-piece, a screw-threaded, flanged ring adapted to be screwed into the flange of the cap-piece and against the flange of the runway, the runway being dish-shaped, so as to form a relatively narrow space between it and the flange of the cap-piece, whereby the ring when screwed in position cannot be removed by hand, and a rolling valve inclosed between the runway and the cap-piece.

4. In an inkwell, the combination with an ink receptacle having an exterior screw-thread at its mouth, of a closure adapted to be screwed on to the receptacle and comprising a metallic cap-piece having a rib by means of which the inkwell may be suspended and a screw-threaded flange, a glass dish-shaped runway having a flange and located within the flange of the cap-piece, a screw-threaded securing ring having a flange and adapted to be screwed into the flange of the cap-piece and against the flange of the runway and to afford means by which the closure may be screwed on to the receptacle, and a rolling valve inclosed between the runway and the cap-piece.

5. In an inkwell, the combination with an ink receptacle, of a closure for the same adapted to engage with the receptacle and comprising a cap-piece having a flange, a runway adapted to lie within the flange of the cap-piece, a ring within the flange of the cap-piece and engaging with the same and with the runway to hold the latter in position against the cap-piece, and a rolling valve inclosed between the cap-piece and the run-way, said cap-piece having a dome-like top provided with a plurality of radial slits through which a pen may be inserted.

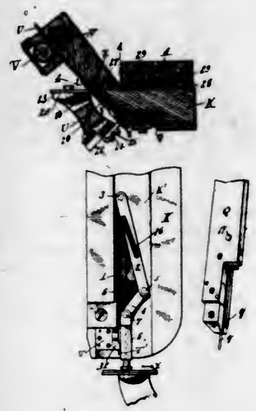
875,149. PEGGING-MACHINE. JOSEPHINE A. CARON, Montreal, Quebec, Canada. Filed Jan. 30, 1907. Serial No. 354,827.

1. In a pegging machine, having peg cutting and driving mechanism, an anvil and a peg guiding throat, and means coöperating with the peg driving mechanism for maintaining the throat on the anvil.

2. In a pegging machine, having peg cutting and driving mechanism, an anvil and a peg guiding throat, and pivotally connected means actuated by the peg driving mechanism for maintaining the throat on the anvil.

3. In a pegging machine having a rockable head provided with recesses, a link pivoted to the head and disposed in one of the recesses, a second link pivoted to the first link and disposed in the other recess, a throat pivoted to the second link, an anvil disposed beneath the head, peg cutting, feeding and driving mechanism coöperating with the throat, and means for rocking the first link laterally on its pivot.

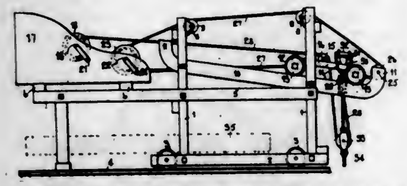
4. In a pegging machine, the combination with an oscillatory head carrying punching, and peg driving and guiding mechanism, of a knife block having vertical sides disposed at an angle to each other, and knives carried by said sides.



5. In a pegging machine, the combination with an oscillatory head carrying punching, and peg driving and guiding mechanism, of a knife block having vertical sides disposed at an angle to each other and said block being provided with a slotted shank, attaching bolts disposed through the slots, and knives carried by said sides.

[Claims 6 to 9 not pinted in the Gazette.]

875,150. LOADING-MACHINE. THOMAS N. CARTER, Norton, Va. Filed July 22, 1907. Serial No. 384,987.

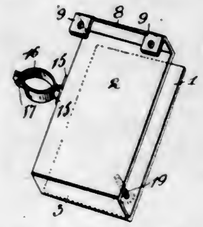


1. In a hoisting and loading machine, a frame equipped with transporting wheels, a pair of guide rails connected therein, a carriage arranged for travel on said rails, a drum sustained for rotation in rear of the guide rails, a carriage operating cable wound between its ends on the drum and terminally engaged with the front and rear portions of the carriage, a hoisting cable connected for movement with the carriage, and a hoisting drum for operating said cable.

2. In a hoisting and loading machine, a frame equipped with transporting wheels, a pair of downwardly and forwardly inclined guide rails connected therein, a load-shifting carriage arranged for travel on said rails, said carriage being adapted for movement automatically by gravity in one direction, and means for positively moving the carriage in the reverse direction.

3. In a hoisting and loading machine, a frame, a pair of inclined rails connected therein, a load-shifting carriage arranged for travel on said rails and provided with a cross rail, a shifting roller arranged for travel on said cross rail in a direction transversely of the carriage, a yoke depending from said roller, a load-hoisting device suspended from the yoke, means for operating said hoisting device, and means for positively moving the carriage in one direction on the rail, the carriage being adapted for automatic travel by gravity in a reverse direction.

875,151. TELEPHONE ATTACHMENT. DAVID A. CASH, Jamaica, and WILLIAM H. SMITH, Richmond Hill, N. Y. Filed Feb. 11, 1907. Serial No. 356,761.



1. In a device of the class described, the combination of a plurality of supporting plates secured together at one end by a vertical plate, a series of index sheets pivoted between the said supporting plates by a set screw near one corner thereof and near the vertical connecting plate, a flange on the upper supporting plate projecting over the top thereof and a tablet secured on the said upper plate by a set screw which passes through the said flange, and means for securing the plates to a telephone.

2. In a device of the class described, the combination of a plurality of supporting plates secured together at one end and free at their other ends, a series of stepped index sheets pivoted between the supporting plates, near one corner, and at the end where said plates are connected and having their stepped ends extending beyond the free ends of the supporting plates and means for securing the plates to a telephone.

875,152. SHOE-LACE AND FASTENER. PONSONBY M. CHARTRES, Bathbeach, N. Y. Filed June 28, 1907. Serial No. 381,231.



1. The combination of a shoelace having a permanent ornamental bow on one end thereof, said bow being made up of an integral part of the shoelace, a fastener for the other end of the lace, and an elastic connection between the fastener and the end of the lace on which is the bow.

2. The combination of a shoelace, having a permanent ornamental bow on one end thereof a fastener therefor, said fastener comprising one member through which the free end of the lace is adapted to pass and another member pivoted to the first member, and a connection between the fastener and the end of the shoelace on which is the bow.

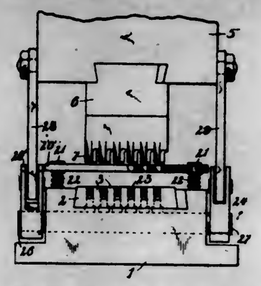
3. The combination of a shoelace having an ornamental bow on one end thereof, said bow being made up of an integral part of the shoelace, comprising a pair of members pivoted together and arranged to clasp the free end of the lace, and an elastic loop connecting the pivoted portion of the fastener with the end of the shoelace on which is the bow.

875,153. METAL-WORKING MACHINE. NORRIS E. CLARK, Plainville, Conn. Original application filed Feb. 23, 1906. Serial No. 302,406. Divided and this application filed Apr. 13, 1907. Serial No. 368,112.

1. In a metal working machine, means for slitting a sheet and producing alternating bonds and bent strands and means for flattening the strands and opening the slits laterally.

2. In a metal working machine, means for slitting a sheet of metal and forming strands in staggered arrangement, with parts of the strands inclined relative to the

general plane of the sheet, and means for straightening the strands and opening the slits laterally.



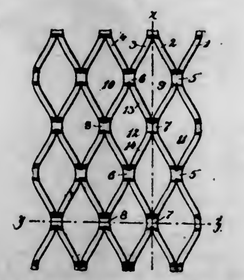
3. A metal working machine, including means for forming alternating raised and depressed strips side by side, and means for slitting parts of the strips to form strands connected at intervals by bonds arranged in staggered relation.

4. In a metal working machine, means for producing a series of parallel depressed strips laterally separated by similiar raised strips and means for slitting the ends of the adjacent raised and depressed strips to form strands in staggered arrangement.

5. A metal working machine, including means for forming alternating raised and depressed strips, parts of which are slitted to form strands connected at intervals by bonds arranged in staggered relation, and means for opening the slits laterally.

[Claims 6 to 39 not printed in the Gazette.]

875,154. EXPANDED METAL. NORRIS E. CLARK, Plainville, Conn. Original application filed June 26, 1906, Serial No. 323,451. Divided and this application filed May 15, 1907. Serial No. 373,702.



1. A corrugated sheet metal fabric consisting of flat strands and bonds with openings in alternating arrangement, the edges of the strands and bonds being rounded.

2. A sheet metal fabric consisting of a plurality of strips regularly spaced apart at alternating intervals to form elongated openings and having inclined flat platforms at the ends of the openings.

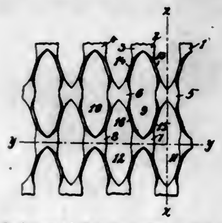
3. A sheet metal fabric consisting of a plurality of strips regularly spaced apart at alternating intervals to form elongated openings and having inclined flat platforms at the ends of the openings, the corners of the edges of the openings being rounded.

4. A corrugated expanded metal fabric consisting of flat strips bonded at intervals and with elongated openings between, the corrugations being at the ends of the bonds and extending transversely of the openings.

5. A corrugated expanded metal fabric consisting of flat strips bonded at intervals and with elongated openings between, the corrugations being at the ends of the bonds and extending transversely of the openings, and the edges of the openings being rounded.

[Claims 6 to 13 not printed in the Gazette.]

875,155. EXPANDED METAL. NORRIS E. CLARK, Plainville, Conn. Original application filed June 26, 1906, Serial No. 323,451. Divided and this application filed May 15, 1907. Serial No. 373,703.



1. An expanded metal fabric consisting of a plurality of rows of bonds connected by strands, the bonds being round on the edges and alternating in the adjacent rows, all the strands in the alternate rows being turned from the plane of the bonds.

2. An expanded metal fabric consisting of strands connected at intervals by bonds and spaced apart intermediate the bonds to form openings, all the edges of the strands bounding the openings in alternate rows being turned in the same direction from the plane of the bonds.

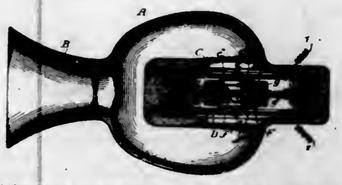
3. An expanded metal fabric consisting of strands connected at intervals by bonds and spaced apart intermediate the bonds to form openings, all the edges of the strands bounding the openings in alternate rows being turned in the same direction from the plane of the bonds, the edges of the strands being rounded.

4. An expanded metal fabric composed of twisted strands, the corners of whose edges are rounded, and flat bonds connecting the strands.

5. An expanded metal fabric composed of twisted strands connected by flat bonds compressed on the edges.

[Claims 6 to 10 not printed in the Gazette.]

875,156. TELEPHONE-TRANSMITTER. HENRY P. CLAUSEN, Chicago, Ill., assignor to American Electric Telephone Company, Chicago, Ill., a Corporation. Filed Aug. 20, 1902, Serial No. 120,283. Renewed Apr. 6, 1905. Serial No. 254,110.



1. A telephone transmitter comprising a pair of main diaphragms, a mouth-piece and a casing adapted to direct sound waves against both of said main diaphragms a pair of supplemental diaphragms arranged between said main diaphragms, each diaphragm supported independently of the others, electrode surfaces carried by said supplemental diaphragms, said electrode surfaces thereby being movable toward and away from each other, and granular carbon interposed between said electrode surfaces, said main diaphragms being firmly held and rigidly separated at their edges.

2. A telephone transmitter comprising a pair of main diaphragms, a mouth-piece and a casing adapted to direct sound waves against both of said main diaphragms a pair of supplemental mica diaphragms, each diaphragm supported independently of the others, carbon blocks carried by said mica supplemental diaphragms, said carbon blocks thereby being movable toward and away from each other, means for connecting the supplemental diaphragms with the said main diaphragms, and granular carbon interposed between said carbon blocks said main diaphragms being firmly held and rigidly separated at their edges.

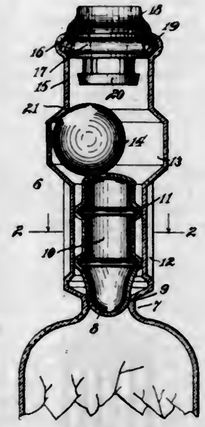
3. A telephone transmitter comprising a pair of main diaphragms, a pair of supplemental diaphragms arranged between said main diaphragms, each diaphragm supported independently of the others, a ring separating the two supplemental diaphragms, clamping rings for clamping the two supplemental diaphragms upon said separating ring, electrode surfaces carried by said supplemental diaphragms, both electrode surfaces thereby being vibratory or movable toward and away from each other, means for connecting the supplemental diaphragms with the main diaphragms, and granular carbon interposed between said electrode surfaces said main diaphragms being firmly held and rigidly separated at their edges.

4. In a telephone transmitter, the combination of a pair of main diaphragms, a pair of supplemental diaphragms between said main diaphragms, each diaphragm supported independently of the others, a support for holding the marginal portions of the supplemental diaphragms against movement, granular carbon interposed between the supplemental diaphragms, oppositely arranged vibratory electrode surfaces carried by said supplemental diaphragms, and non-yielding connections between said supplemental diaphragms and said main diaphragms said main diaphragms being firmly held and rigidly separated at their edges.

5. A telephone transmitter comprising a pair of main diaphragms, a pair of springy supplemental diaphragms arranged between said main diaphragms, each diaphragm supported independently of the others, movable electrodes carried by said supplemental diaphragms and connected with said main diaphragms, granular carbon between said electrodes, and a mouth-piece and a casing adapted to direct sound waves against both of said main diaphragms said main diaphragms being firmly held and rigidly separated at their edges.

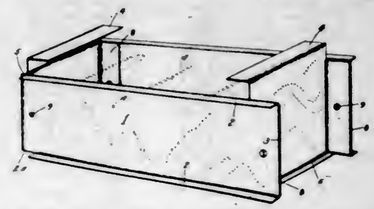
[Claims 6 to 30 not printed in the Gazette.]

875,157. NON-REFILLABLE BOTTLE. CONRAD M. CONRADSON, New York, N. Y., assignor to Vernette E. Prentice, New York, N. Y. Filed Apr. 13, 1906. Serial No. 311,463.



In a non-refillable bottle, the combination with a bottle having a neck, a valve seat at the bottle end of the neck, a buoyant valve for seating thereon, the neck of the bottle having means for guiding the valve and a chamber above the normal upper position of the said valve, a spherical weight in said chamber, said neck having an integral ridge at the upper portion of said chamber for holding the weight against the valve and away from the walls of such chamber when the bottle is in certain positions, and an abutment in the neck beyond such ridge and at a distance from the same less than the radius of said spherical weight and at a sufficient distance from said ridge to permit the weight to move from the valve when the bottle is in other tilted positions.

875,158. REINFORCING-FRAME FOR CONCRETE BUILDING CONSTRUCTION. MARTIN L. COOPER, Modesto, Cal. Filed Apr. 22, 1907. Serial No. 369,636.



1. Reinforcing frames comprising the frames proper, outwardly projecting edges on the sides of said frames, said frames tapering from one end to the other, the sides of said frames projecting beyond the widest ends of said frames.

2. In building construction, reinforcing frames for concrete consisting of the frames proper, interlocking means carried by the ends of said frames and angularly projecting anchoring means carried by the sides and top of said frames.

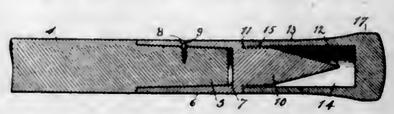
3. In building construction, reinforcing frames for concrete consisting of the frames proper, one upwardly projecting end thereon, said end curving slightly inward forming a shelf, an overhanging projection from the top of said end, the other end thereof having outwardly projecting side and bottom flanges, and an inwardly projecting top flange.

4. In building construction, reinforcing frames for concrete consisting of the frames proper of rectangular cross section, upwardly projecting ends thereon, overhanging projections on the tops of said ends, and outwardly projecting edges on the lower ends of said ends of the frames.

5. In building construction, reinforcing frames for concrete consisting of the frames proper of rectangular shape, upwardly projecting ends thereon, overhanging projections on the tops of said ends, outwardly projecting edges on the bottoms of said ends, the sides of said rectangular frames projecting beyond one of said ends, said frames slightly tapering from said projecting side portions to the other end of said frames.

[Claim 6 not printed in the Gazette.]

875,159. TOOL-HANDLE. HERBERT M. CROW, Oakdale, Cal. Filed Sept. 12, 1906. Serial No. 334,273.



A tool handle comprising a ferrule having a threaded portion and a pointed portion, in combination with a hollow tamping member having a threaded engagement with the threaded portion of the ferrule.

875,160. TRUNK-FASTENER. EDWIN J. DAVIS, Los Angeles, Cal. Filed Feb. 27, 1907. Serial No. 359,686.

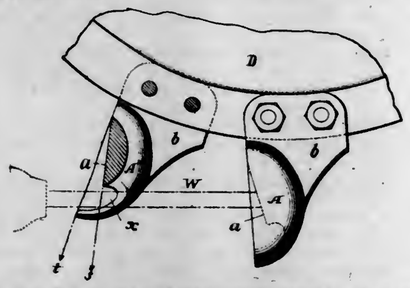
The trunk fastener consisting of an upwardly and downwardly sliding member, whose upper part engages with openings in the downward projections of that part of the device fastened to the lid or cover of a trunk, the projecting pins of the sliding member, the retaining loop operating rotatively in bearings in the sides of the casing of the device, the crank portions of this loop engaging

with the aforesaid projecting pins of the sliding member, operating said member slidably when the retaining loop is rotated upon its axis into or from the bolted position,



the spring within the casing, all operating in the manner and for the purposes substantially as hereinbefore described.

875,161. BUCKET FOR IMPACT-WHEELS. WILLIAM A. DOBLE, San Francisco, Cal. Filed Mar. 2, 1907. Serial No. 360,168.



A bucket for impact wheels consisting of a shell having side pockets and an intermediate rib the edge of which is inclined backward on a line at an angle to the plane of the edge of the shell, and with a recess *s*, *s*, formed by cutting away the outer portion of the rib and adjacent portions of the shell, as set forth.

875,162. WATER-TROUGH. ISAAC S. EARHART, near Caldwell, Kans. Filed May 28, 1907. Serial No. 376,054.



1. A device of the class described, comprising a support, a trough consisting of a bowl portion and an arm portion, means for pivotally mounting said trough in said support, said arm portion having a groove merging with the water bowl portion, a valved source of water supply, means carried by the arm portion of the trough for tripping the water supply valve as the trough is rocked, means for normally holding the trough in a position with its valve tripping member out of engagement with the valve, and means for holding the trough in its support and forming a stock guard for the source of water supply substantially as shown and described.

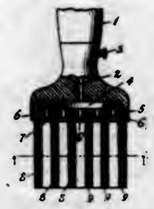
2. A device of the class described, comprising a support, a trough consisting of a bowl portion and an arm portion, means for pivotally mounting said trough in said support, said arm portion having a groove merging with the water bowl portion, a valved source of water supply, means carried by the arm portion of the trough for tripping the water supply valve as the trough is rocked, means for normally holding the trough in a position with its valve tripping member out of engagement with the valve, and a relatively immovable skeleton guard plate removably held within the water bowl, substantially as shown and described.

3. A device of the class described, comprising a support, a trough consisting of a bowl portion and an arm portion, means for pivotally mounting said trough in said support, said arm portion having a groove merging with the water bowl portion, a valved source of water supply, means carried by the arm portion of the trough for tripping the water supply valve as the trough is rocked, means for normally holding the trough in a position with its valve tripping member out of engagement with the valve, means for holding the trough in its support and forming a stock guard for the source of water supply, and a relatively immovable skeleton guard plate removably held within the bowl portion, substantially as shown and described.

4. A device of the class described, comprising in combination with a support having sides and ends and bearing notches in such sides, said sides having cut-away portions at their rear ends, a trough member having a bowl portion and an elongated arm portion, trunnions projecting from said arm portion to coöperate with the bearing notches of the support, said arm portion having an elongated groove merging with the trough portion, a valved source of water supply, means carried by the arm portion for tripping the supply valve at times, a fence or guard held over the cut-away portion of the sides to retain the trunnions of the trough member in their bearings substantially as shown and described.

5. A device of the class described, comprising in combination with a support having sides and ends bearing notches in said sides, said sides having cut-away portions at their rear ends, a trough member having a bowl portion and an elongated arm portion, trunnions projecting from said arm portion to coöperate with the bearing notches of the support, said arm portion having an elongated groove merging with the trough portion, a valved source of water supply, means carried by the arm portion for tripping the supply valve at times, a fence or guard held over the cut-away portion of the sides of said support to retain the trunnions of the trough member in their bearings, and a removable skeleton plate held in said bowl portion and spaced from the bottom thereof, substantialy as shown and described.

875,163. PROCESS OF APPLYING PAINT-REMOVERS. CARLETON ELLIS, Larchmont, N. Y., assignor to Chadeloid Chemical Company, New York, N. Y., a Corporation of West Virginia. Filed Aug. 6, 1907. Serial No. 387,275.



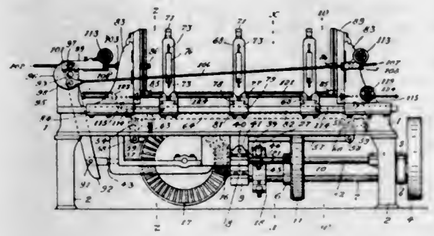
1. A process of the character described, consisting in conveying the liquid paint or varnish remover from a source of supply, then applying it to the surface to be treated without the escape of any part thereof.

2. A process of the character described, consisting in conveying the liquid paint or varnish remover from a source of supply, then applying it to the surface to be treated without the loss of any part thereof by evaporation.

3. A process of the character described, consisting in conveying the liquid paint or varnish remover from a source of supply, then projecting it upon the surface to be treated while preventing any loss by splashing.

4. A process of the character described, consisting in conveying the liquid paint or varnish remover from a source of supply and applying it to the surface to be treated by passing it through a covered passageway so as to avoid any loss by evaporation, splashing or otherwise.

875,164. BOX-SETTING-UP MACHINE. JOHN E. ERICKSON, St. Paul, Minn. Filed Aug. 5, 1907. Serial No. 387,137.



1. In a machine for setting up dovetail boxes, means for supporting the box sides and ends in planes at right angles to each other, means for clamping the side boards, means under control of an operator for starting the machine, and automatic mechanism operated thereby in a cycle of movements, namely, first to clamp the side boards, next to thrust the end board supports to unite the end to the side boards, next to retract the end board supports, next to open the clamps, and lastly to return the mechanism to initial position and stop it, substantially as set forth.

2. In a machine for setting up dovetail boxes, means for supporting the box sides and ends in planes at right angles to each other, means for clamping the side boards, means under control of an operator for starting the revolution of a wheel providing a cam surface and a crank, mechanism operated by the cam surface for clamping and releasing the side boards, and reciprocating mechanism operated by the crank for uniting the end to the side boards, for returning the parts to initial position and for stopping the wheel, substantially as set forth.

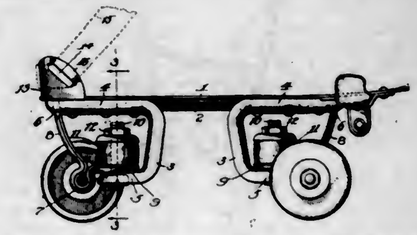
3. In a machine for setting up dovetail boxes, means for supporting the box sides and ends in planes at right angles to each other, means for clamping the side boards, a driven wheel, a cam surface and crank provided thereon, and mechanism actuated by the cam surface for operating the side board clamps, reciprocating carriers for the end boards and mechanism actuated by said crank for operating such carriers, substantially as set forth.

4. In a machine for setting up dovetail boxes, means for supporting the box sides and ends in planes at right angles to each other, means for clamping the side boards, a driven wheel, a cam surface and crank provided thereon, and mechanism actuated by the cam surface for operating the side board clamps, reciprocating carriers for the end boards and mechanism actuated by said crank for operating such carriers, and a brake device also actuated by said crank for stopping the wheel upon completion of a revolution, substantially as set forth.

5. In a machine for setting up dovetail boxes, a driving-shaft, a driven shaft, friction-wheels thereon, a lever for bringing them into engagement, a driven wheel provided with a cam surface and a crank; clamps for the side boards, means actuated by said cam surface for operating them; and supports for the end boards and means connected with said crank for reciprocating them, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

875,165. ROLLER-SKATE. CLAUDE M. FAUST and MARTIN B. GROUT, Chicago, Ill. Filed Sept. 5, 1907. Serial No. 391,417.



1. In a roller-skate, the combination with the foot-plate, of a hanger extending downward from said foot-plate, said hanger having a convex upper surface at its lower end, a roller-carrier provided with an arm extending upward and pivoted at its end beneath said foot-plate and with a carrier-plate with a convex surface bearing on the convex end of said hanger, and means for connecting said carrier-plate to the end of said hanger, whereby their convex surfaces may have a rolling bearing on each other.

2. In a roller-skate, the combination with the foot-plate, of a hanger extending downward from said foot-plate, said hanger having an angular, horizontal extension or shelf with an approximately convex upper surface, a roller-carrier provided on one side of the roller-axle with an upwardly extending arm, pivoted beneath said foot-plate, and on the other side thereof with a carrier-plate having a convex bottom surface overlying the upper surface of said shelf, and a bolt pivotally connecting said carrier-plate to said shelf.

3. In a roller-skate, the combination with the foot-plate, of a hanger extending downward from said foot-plate, said hanger having a convex upper surface at its lower end, a roller-carrier provided with an arm extending upward and pivoted at its end beneath said foot-plate and with a carrier-plate with a convex surface bearing on the convex end of said hanger, and a yielding pivotal connection between said carrier-plate and the end of the hanger.

4. In a roller-skate, the combination with the foot-plate, of a hanger extending downward from said foot-plate, said hanger having an angular, horizontal extension or shelf with an approximately convex upper surface, a roller-carrier provided on one side of the roller-axle with an upwardly extending arm pivoted beneath said foot-plate, and on the other side thereof with a carrier-plate having a convex bottom surface overlying the upper surface of said shelf, and a bolt, provided with cushioning means, for yieldingly connecting said carrier-plate to said shelf.

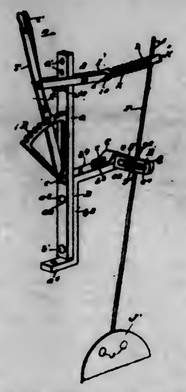
5. In a roller-skate, the combination with a foot-plate, of a hanger extending downward from said foot-plate, said hanger having an angular, horizontal extension or shelf, a roller-carrier provided on one side of the roller-axle with an upwardly extending arm pivoted beneath said foot-plate, and on the other side thereof with a horizontal plate overlying said shelf, a bolt extending upwardly through said horizontal plate and shelf, a nut upon the free end of said bolt, and a cushion interposed between said nut and said horizontal plate.

[Claims 6 to 9 not printed in the Gazette.]

875,166. ADJUSTABLE SCRAPER ATTACHMENT FOR DISK PLOWS. JULIUS P. FELL, Berclair, Tex. Filed May 18, 1906, Serial No. 317,444. Renewed May 27, 1907. Serial No. 375,881.

1. A scraper attachment for plows, which comprises the following elements in combination; the supporting member B, the bar *a* adjustably mounted thereon, a bracket mounted on the member B, laterally and rotatably adjustable with respect to the said member B, means for effecting such adjustments, a scraper carrying rod, means for adjustably connecting the said rod to the adjustable bracket and adjustable tension devices carried by the

member *a* for applying pressure to the said scraper member.



2. In a scraper attachment for disk plows, the combination with a scraper carrying rod and a supporting means which includes an adjustable fulcrum bearing for the said rod; of a slotted member adjustably connected to the supporting means, the slot of which is adapted to receive the outer end of the scraper carrying rod, a tension spring mounted on the slot member and devices also mounted on the slot member for regulating the tension of the said spring, as set forth.

3. In an attachment of the character described, the combination with a supporting bar, a scraper carrying rod, a fulcrum for the said rod sustained by the supporting bar and having lateral and vertical adjustment with respect to the said bar; of a slotted bar H having a threaded portion, means for adjustably connecting the said portion to the supporting bar, a coil spring mounted on the bar having one end arranged to engage the scraper rod, a hub piece slidable on the threaded portion of the bar H, and an adjusting means that engages the said hub member, for the purposes described.

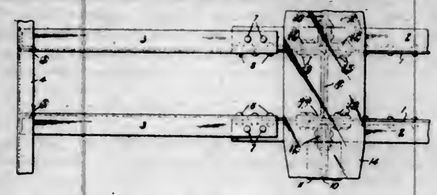
4. In an attachment for disk plows, a supporting frame, a rod carrying a scraper at one end having a fulcrum bearing midway its ends, a guide for the other end of the rod, a tension spring on the guide that engages the said rod, a sliding hub on the guide that engages the spring, a ratchet held lever on the support and a link connection that joins the said lever with the sliding hub, for the purposes described.

5. The combination with the supporting frame, a scraper rod, and a bracket having a bearing for the said rod pivotally and adjustably connected to the supporting frame; of an adjustable tension device that engages the upper end of the scraper rod and which consists of a slot member secured to the supporting frame, a hub slidably mounted on the said member, a spring on the said member between the rod and the hub, actuating lever pivotally connected to the supporting frame, and link connections that join the lever and the sliding hub, all being arranged substantially as shown and for the purposes described.

875,167. CAR-UNDERFRAME. ROBERT E. FRAME, St. Louis, Mo., assignor to American Car & Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Sept. 18, 1907. Serial No. 393,466.

1. A car underframe comprising built-up center sills of channel-shape in cross section, and pressed metal channel-shaped draft sills embracing the end portions of the center sills and secured to the webs and to the top and bottom flanges thereof; substantially as described.

2. A car underframe comprising built-up center sills of channel-shape in cross section arranged with their flanges projecting outwardly, pressed metal channel-shaped draft sills telescoped over the end portions of the center sills beyond the bolster, and fastening devices passing through the webs and the top and bottom flanges of the center sills and draft sills; substantially as described.



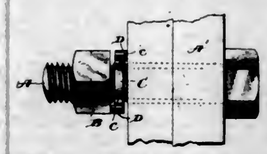
3. A car underframe comprising a bolster, center sills projecting beyond the bolster and each consisting of a vertically disposed web plate having angles secured to the upper and lower edge portions thereof to produce a channel-shaped structure, pressed metal draft sills of channel-shape in cross section telescoped over the end portions of the center sills, and fastening devices passing through the webs and the top and bottom flanges of the center sills and draft sills; substantially as described.

4. A car underframe comprising a bolster, center sills projecting beyond the bolster and each consisting of a vertically disposed web plate and angles secured to the upper and lower edge portions thereof and arranged with their flanges projecting outwardly, channel-shaped pressed metal draft sills telescoped over the end portions of the center sills, and fastening devices passing through the webs and the top and bottom flanges of the draft sills and center sills; substantially as described.

5. A car underframe comprising a bolster, channel-shaped center sills projecting beyond the bolster and each consisting of a vertically disposed web plate having angles secured to the outside faces thereof, the upper and lower edges of said plate extending flush with the horizontal legs of said angles, and pressed metal channel-shaped draft sills telescoped over the end portions of the center sills and secured to the webs and to the top and bottom flanges thereof; substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

875,168. NUT AND SCREW-BOLT LOCK. ALANSON D. GASTON, Washington, D. C. Filed May 10, 1905, Serial No. 259,747. Renewed Oct. 5, 1906. Serial No. 337,626.



1. The combination with a bolt, of a lock designed to embrace a part of the bolt, and having an inclined substantially V-shaped portion, the inclination of which is different from that of the inclination of the threads of the bolt, said V-shaped portion having transverse teeth on its inclined face.

2. The combination with a bolt, of a lock designed to embrace a part of the bolt, and having an inclined portion, the inclination of which is different from that of the inclination of the threads of the bolt, and the said inclined portion having transverse teeth on its flat face.

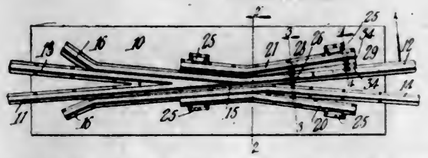
3. A lock consisting of a substantially ring shaped member having an inclined V-shaped portion designed to enter between the threads of the bolt, the said inclined V-shaped portion having a series of transverse biting teeth arranged along its flat side.

4. A lock consisting of a substantially ring-shaped member having an inclined V-shaped inner portion, a cutting edge, and a series of transversely arranged teeth on the inclined surface of the V-shaped portion.

5. A lock consisting of a substantially-ring-shaped member having a substantially V-shaped inner edge formed with biting projections on its inclined flat faces and the inclination of the V-shaped edge being different from that of the threads of the bolt for which it is designed.

[Claims 6 to 30 not printed in the Gazette.]

875,169. RAILWAY-SWITCH FROG. JOHN E. GRAHAM, Salem, Va., assignor to American Flange Frog and Railway Improvement Company, Gainesville, Fla., a Corporation of Florida. Filed Apr. 30, 1907. Serial No. 371,106.



1. A spring frog including a spring rail, and a guard flange arranged to be engaged by the outer face of the wheel rim, whereby the wheel flange is forced to engage the spring rail and move the latter to open position.

2. A spring frog including a spring rail, and a guard flange arranged to be engaged by the outer face of the wheel rim, said guard flange being oblique to the tread of the traffic rail and acting as a cam to move the wheel laterally, whereby the wheel flange is forced to engage the spring rail and move the latter to open position.

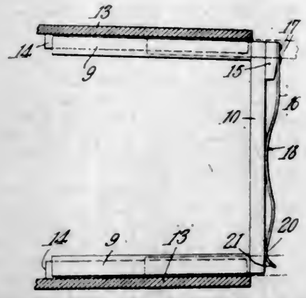
3. A spring frog including a movable spring rail, and a rigid guard flange arranged to engage the outer face of the wheel rim and force the wheel flange against the spring rail.

4. A spring frog including a spring rail, and permanent guard flanges arranged on opposite sides of said spring rail to be engaged by the outer faces of the wheel rims, one of said flanges serving to assist the wheel in moving the spring rail to open position.

5. A spring frog including a spring rail, a spring normally holding the same in closed position, and an obliquely disposed wheel engaging guard flange serving to force the wheel over and thus move the spring rail into open position, and acting, also, to prevent contact of the wheel flange with the frog point.

[Claims 6 to 9 not printed in the Gazette.]

875,170. COPY-HOLDER. JOHN GRAMELSPACHER, Jasper, Ind. Filed Sept. 9, 1907. Serial No. 391,970.



1. The combination with a desk having a compartment the opposite walls of which are arranged at an angle to each other, a frame slidably mounted between said walls and adapted to frictionally engage the same for supporting the frame in extended position, and a work engaging member carried by one end of the frame.

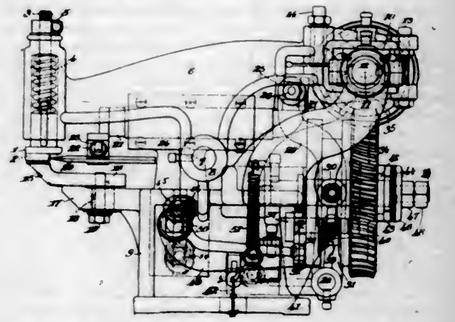
2. The combination with a desk having a compartment, the opposite walls of which are arranged at an angle to each other, guides secured to the interior walls of the compartment, a frame slidably mounted on the guides and adapted to frictionally engage the walls of the compartment for supporting the same in extended position, and a spring clamping arm secured to one end of the frame and having its free end bent laterally to form a terminal finger piece.

3. The combination with a desk having a compartment the opposite walls of which are arranged at an angle to each other, guides secured to said walls, a frame slidably mounted on the guides and provided with spaced longitudinally disposed bars adapted to frictionally engage the inclined walls of the compartment for supporting the frame in extended position, and a work engaging member carried by the closed end of the frame.

4. The combination with a desk having a compartment, guides secured to the interior walls of the compartment, a frame slidably mounted on the guides and including spaced longitudinally disposed bars connected by a transverse bar, a wedge shaped block secured to one end of the transverse bar, and a spring clamping arm secured to the block and having its intermediate portion concaved and one end thereof deflected laterally to form a terminal finger piece.

5. The combination with a desk having a compartment the opposite walls of which are arranged at an angle to each other, guides secured to said walls, a frame slidably mounted on the guides and including spaced inclined bars adapted to frictionally engage the inclined walls of the compartment when the frame is moved to extended position, a transverse bar connecting the longitudinal bars of the frame, and a work engaging member secured to the transverse bar, said frame being movable to inoperative position within the compartment.

875,171. MACHINE FOR OPERATING ON WELTS. JOHN B. HADAWAY, Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 19, 1903. Serial No. 177,557.



1. A machine for operating upon welts, having, in combination, means for beating out the welt after attachment to the shoe, and means for simultaneously forming in the welt a series of slits extending partially through the thickness of the welt, substantially as described.

2. A machine for operating upon welts, having, in combination, a work support shaped to support the welt after attachment to the shoe, a vibrating welt beating hammer, means for actuating the hammer to beat out the welt, and means for simultaneously slitting the welt, substantially as described.

3. A machine for operating upon welts, having, in combination, a work support shaped to support the welt after attachment to the shoe, a welt slitting knife arranged to reciprocate transversely across the welt in substantially the plane of the welt provided with a cutting edge shaped to cut a slit in the welt extending partially through the thickness of the welt, and means for actuating the welt slitting knife, substantially as described.

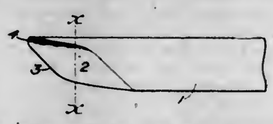
4. A machine for operating upon welts, having, in combination, a welt beating hammer, a work support shaped to support the welt after attachment to the shoe, a welt slitting knife, and means for actuating the hammer and

knife arranged to impart to the hammer a plurality of welt beating movements while the knife is out of engagement with the welt, substantially as described.

5. A machine for operating upon welts, having, in combination, a welt beating hammer, a work support shaped to support the welt after attachment to the shoe, a welt slitting knife, means for actuating the hammer, and means for actuating the knife arranged to impart a welt cutting stroke to the knife while the welt is clamped between the hammer and work support and hold the knife out of engagement with the welt during a plurality of welt beating movements of the hammer, substantially as described.

[Claims 6 to 28 not printed in the Gazette.]

875,172. KNIFE FOR WELT-SLITTING MACHINES. JOHN B. HADAWAY, Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 27, 1904. Serial No. 195,630.



1. A knife for welt-slitting machines having a cutting edge shaped to cut a transverse inclined slit in a welt when the knife is laterally inclined to the surface of the welt and is reciprocated longitudinally in substantially the plane of the welt, substantially as described.

2. A knife for welt-slitting machines having a cutting edge shaped to cut slits of substantially the same length in welts of various thicknesses when the knife is laterally inclined to the surface of the welt and is reciprocated in substantially the plane of the welt, substantially as described.

3. A knife for welt-slitting machines consisting of a flat bar having an inclined surface at one end meeting the bottom surface of the knife to form a cutting edge oblique to the length of the knife shaped to cut a transverse inclined slit in a welt when the knife is reciprocated longitudinally in substantially the plane of the welt, substantially as described.

4. A knife for welt-slitting machines having a cylindrical lower surface and an inclined surface at one end meeting the lower surface to form a curved cutting edge shaped to cut a transverse inclined slit in a welt when the knife is reciprocated longitudinally in substantially the plane of the welt, substantially as described.

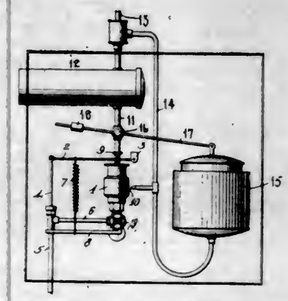
5. A knife for welt-slitting machines consisting of a flat bar having a cutting edge at its end comprising two portions arranged at an angle with each other, and shaped to cut a transverse inclined slit in a welt when the knife is reciprocated longitudinally in substantially the plane of the welt, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

875,173. MEANS FOR AUTOMATICALLY REGULATING THE SUPPLY OF OIL TO GAS-GENERATORS. HANS C. HANSON, Albert Lea, Minn. Filed Mar. 8, 1907. Serial No. 361,293.

1. In combination, a gas generator provided with external heating means, an oil supply pipe leading to the interior of the generator provided with two valves, means for normally holding the valve farthest from the generator seated, a lever pivotally mounted adjacent to the generator and adapted to engage therewith, and means for connecting the normally seated valve with said lever so as to automatically open the valve only when the generator reaches a temperature sufficiently high to volatilize the oil.

2. In combination, a gas generator provided with external heating means, an oil supply pipe leading to the interior of the generator, two valves in said pipe, the one nearest the generator being movable toward and from its seat, means for normally holding the last mentioned valve on its seat, a lever pivotally mounted adjacent to the generator and adapted to adjustably engage therewith, and means for connecting the free end of the lever with the normally seated valve so as to unseat the valve whenever the generator reaches a temperature sufficiently high to volatilize the oil.



3. In combination, a gas generator provided with external heating means, an oil supply pipe communicating with the interior of the generator and provided with two valves, the valve nearest the generator being hand actuated and the other one being movable toward and from its seat, an arm projecting from the bottom of the generator, the outer end of which engages with said pipe, a lever pivotally mounted adjacent to the generator, a screw in the lever for engaging with the generator, means for connecting the lever with the normally seated valve, and a spring engaging with the lever at one end and with said arm at the other and adapted to hold said valve on its seat until the generator reaches a temperature sufficiently high to volatilize the oil.

875,174. BRANDING OR MARKING COMPOSITION. JULIUS HAUSER, Los Angeles, Cal. Filed Mar. 16, 1905. Serial No. 250,439.

1. A branding or marking composition for meats, consisting of hydrochlorate of nitrobenzene compounded with muriatic acid and glycerin.

2. A branding or marking compound for meats, consisting of hydrochlorate of nitrobenzene, muriatic acid and glycerin, compounded in substantially the proportions of one ounce of hydrochlorate of nitrobenzene, to one-half ounce of muriatic acid and three ounces of glycerin.

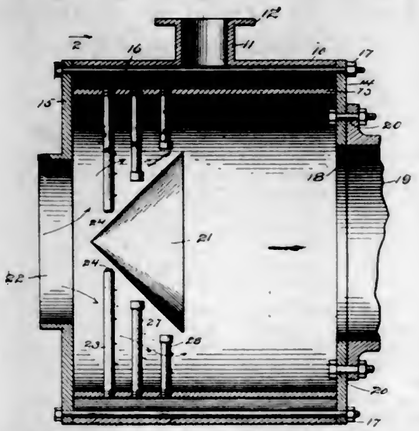
875,175. AIR AND GAS MIXER. WILLIAM H. HESS, Dewey, Okla., assignor of one-half to Herbert F. Tyler, Junction City, Kans. Filed June 4, 1907. Serial No. 377,278.

1. In a device of the class described, concentric shells defining a chamber, means to admit gas to the chamber, pipes extending radially from the inner shell toward but stopping short of the center, an air inlet adjacent the pipes, and a baffle positioned to deflect air from the inlet and gas from the pipes.

2. In a device of the class described, spaced casings provided with an air inlet through one end, and an air outlet through the opposite end communicating with the interior of the inner casing, means to admit gas between the casings, pipes inserted through the inner casing and extending toward the center and with outlet openings formed in the pipes upon their sides opposite the air inlet.

3. In a device of the class described, concentric casings defining an annular chamber, and with an air inlet through one end and an air outlet through the opposite end communicating with the interior of the inner casing, means to admit gas to the chamber, pipes inserted through the inner casing and in communication with the annular chamber, and with outlet openings formed upon their sides opposite the air inlet, and a baffle disposed adjacent the pipes.

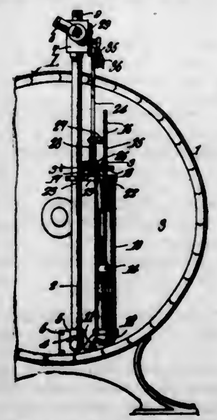
4. In a device of the class described, concentric cylinders spaced apart and defining an annular chamber therebetween, and with an air inlet through one end and an air outlet through the opposite end communicating with the interior of the inner casing, means to admit gas to the chamber, tubes inserted through the inner casing and in communication with the annular chamber and disposed adjacent the air inlet, and a baffle disposed within the inner cylinder adjacent to the pipes but on the side opposite the air inlet.



5. In a device of the class described, concentric cylinders spaced apart and defining an annular chamber therebetween, and provided with a gas inlet, heads formed upon opposite ends of the cylinder, and one provided with an air inlet and the other with an air outlet, a baffle disposed within the cylinder and adjacent the air inlet, and pipes inserted through the inner cylinder and in communication with the annular chamber, and between the air inlet and the baffle, said pipes being provided with gas outlets upon their sides opposite the air inlet.

[Claim 6 not printed in the Gazette.]

875,176. AUTOMATIC SHUT-OFF-VALVE MECHANISM. JOSEPH HUEBSCH, Milwaukee, Wis. Filed Feb. 12, 1907. Serial No. 357,022.



1. In a fluid regulating apparatus of the character described, the combination with a receptacle, of a pair of valves communicating therewith and connected to sources of liquid supply, a locking member mounted in movable relation to the valves and having sets of graduated notches therein, latches operatively connected to the valves and coöperating with the respective sets of notches of the locksmitting opening and preventing closing of the valves, and means controlled by the volume of liquid in the receptacle for operating the locking member to simultaneously release the valves.

2. In a fluid regulating apparatus of the character described, the combination with a receptacle, of a pair of valves communicating therewith and connected to sources of liquid supply, a locking member mounted in movable relation to the valves and having sets of graduated notches therein, latches operatively connected to the valves and cooperating with the respective sets of notches of the locking member for permitting independent setting of the valves in open position and preventing closing thereof, and means controlled by the volume of liquid in the receptacle for operating the locking member to release the valves.

3. The combination with a suitable fluid receptacle, and a source of fluid supply connected thereto, of a valve for controlling the fluid supply and having an operating portion thereon, a plate having a series of graduated notches thereon adapted to coöperate with the operating portion of the valve to retain the latter in open position, a member normally operating to disengage the notched plate from the operating portion of the valve, and a device controlled by a volume of fluid in the receptacle for retaining the operating member in inoperative position.

4. The combination with a fluid receptacle and a source of fluid supply connected therewith, of a valve for controlling the fluid supply and having a handle thereon provided with a retaining device, a plate movable relatively to the valve and provided with a series of graduated notches arranged to coöperate with the retaining device on the valve handle, a member operatively connected to said plate and normally acting to disengage it from said retaining device, a trigger coöperating with said member to hold it in inoperative position, and a device for tripping the trigger.

5. The combination with a fluid receptacle, and means for conducting fluid thereto from independent sources, of a valve for controlling the fluid from each source of supply, each having an operating portion, a locking plate having notches thereon adapted to coöperate with the operating portions of said valve, means normally operating to disengage the notched plate from the operating portions of the valves, and a device controlled by the volume of fluid in the receptacle for retaining the plate in engagement with the operating portions of the valves.

[Claims 6 to 8 not printed in the Gazette.]

875,177. LOCK AND LATCH. NORMAN B. HURD, New Britain, Conn., assignor to Russell & Erwin Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed July 3, 1907. Serial No. 381,976.

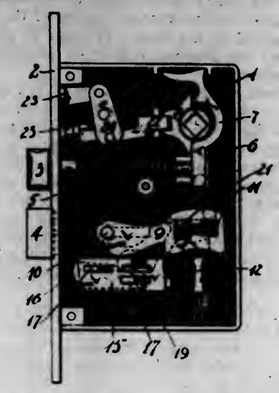
1. In a lock and latch, a latch bolt, a dead bolt, tumbler mechanism including one tumbler carried by the case for locking the dead bolt, and another tumbler slidingly mounted on the dead bolt for locking the latch operating mechanism.

2. In a device of the character described, a dead bolt, a latch bolt, a knob-controlled roll-back for operating the latch bolt, stop-work for said roll-back, means for operating both the latch bolt and the dead bolt, tumbler mechanism for locking the dead bolt, and other tumbler mechanism for locking the latch retracting mechanism, the latter being slidingly mounted on the dead bolt.

3. In a device of the character described, a dead bolt, a tumbler therefor, a latch bolt, a key-actuated means for retracting said latch bolt, a tumbler for locking said means, said tumbler being slidingly mounted on the dead bolt.

4. In a device of the character described, a dead-bolt tumbler, a latch bolt, key-actuated means for retracting said latch bolt, a reciprocating sliding tumbler for locking said key-actuated latch bolt operating means, and a shift-

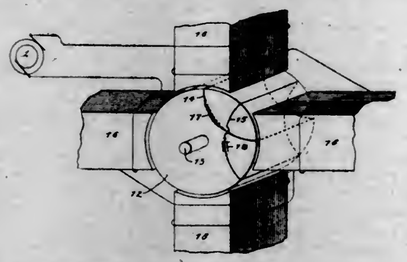
able carrier for the last-mentioned tumbler arranged to shift it to a non-operating position when the dead-bolt tumbler is projected.



5. In a lock and latch, a latch bolt, a dead bolt, two independent means for operating the latch bolt, stop-work for dogging one of said means, a reciprocating tumbler for dogging the other of said means, a reciprocating support for the last-mentioned tumbler, a separate tumbler for the dead bolt, and a single means for operating both of said tumblers.

[Claims 6 to 8 not printed in the Gazette.]

875,178. ELECTRIC MOTOR. DUGALD C. JACKSON, Madison, Wis. Filed Feb. 20, 1901. Serial No. 48,056.



1. In an induction motive device, the combination with means for creating a single phase alternating field, of an armature provided with electric circuits having different time constants subjected to said single phase alternating current field, the said field inducing out of phase currents in said armature circuits, substantially as described.

2. In an induction motive device, the combination with means for creating a single phase alternating field, of an armature subjected to the action of said single alternating field provided with a plurality of electric circuits, and phase modifying means associated with one of said circuits whereby out of phase currents are induced in said armature circuits, substantially as described.

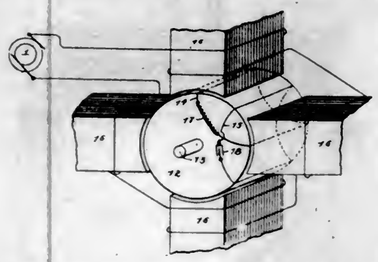
3. In an induction motive device, the combination with means for creating a single phase alternating field, of an armature subjected to the action of said single phase alternating field provided with a plurality of electric circuits, and phase modifying means to enable the armature to start from a state of rest associated with said circuits for the purpose of creating out of phase currents in said armature, substantially as described.

4. In an induction motive device, the combination with means for creating a single phase alternating field, of an armature provided with electric circuits of unlike impedance subjected to said single phase alternating field, the said field inducing out of phase currents in said armature circuits, substantially as described.

5. In an induction motive device, the combination with means for creating a single phase alternating field, of an armature provided with electric circuits of unlike reactance subjected to said single phase alternating field, the said field inducing out of phase currents in said armature circuits, substantially as described.

[Claims 6 to 30 not printed in the Gazette.]

875,179. ALTERNATING-CURRENT MOTOR. DUGALD C. JACKSON, Madison, Wis. Filed Apr. 1, 1901, Serial No. 53,835. Renewed Mar. 17, 1904. Serial No. 198,658.



1. The herein described method of operating induction motors which consists in creating a single phase alternating field, subjecting a closed revolubly mounted electric conducting circuit of given time constant to the action of said field, and subjecting a second closed revolubly mounted electric conducting circuit of different time constant and fixed with relation to the first aforesaid circuit to the action of said single phase alternating field, substantially as described.

2. The herein described method of operating induction motors which consists in creating a single phase alternating field, subjecting a revolubly mounted electric conducting circuit to the action of said field and subjecting a second revolubly mounted electric conducting circuit of different time constant fixed relatively to the first aforesaid circuit, to the action of said field, substantially as described.

3. The herein described method of operating induction motors which consists in creating a single phase alternating field, and subjecting a plurality of revolubly mounted electric conducting circuits of relatively different reactance or resistance to the action of said field in its normal unmodified condition, substantially as described.

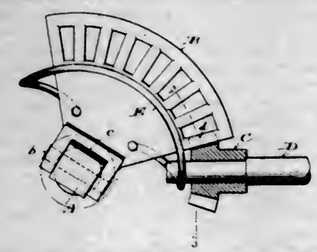
4. The herein described method of operating induction motors which consists in creating a single phase alternating field, subjecting a rotatably mounted armature core to said field, said core having electric conducting circuits associated and revoluble therewith, and inducing in said electric circuits relatively out-of-phase currents, substantially as described.

5. The herein described method of operating induction motors, which consists in creating a single phase alternating field, subjecting a rotatably mounted armature core to said field, said core having independent electric conducting circuits associated and revoluble therewith, and inducing in said electric circuits currents which are relatively out of phase with respect to each other, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

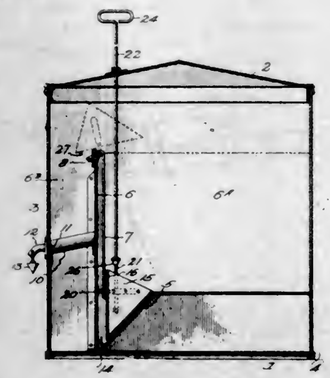
875,180. MECHANICAL MOVEMENT. MATHIAS JOHN, Milwaukee, Wis. Filed Apr. 15, 1907. Serial No. 368,149.

1. The combination of a driven shaft and a drive-shaft at a right-angle to each other, a segmental rack-plate in pivotal connection with the driven shaft and having open spaces between its teeth, a pinion fast on the drive-shaft in mesh with the rack portion of the plate, and a wire fastened at its ends to said plate to constitute a guard-yoke in opposition to an end of the drive-shaft extending inward beyond the pinion, a portion of the wire being approximately concentric with the aforesaid plate parallel thereto back of the rack-portion of same and other portions of said wire approximately semi-circular opposite the radial plate-edges.



2. The combination of a driven-shaft and a drive-shaft at a right-angle to each other, a segmental rack-plate having a forked and beveled end straddling the driven shaft to which it is pivotally connected, the spaces between rack-teeth of the plate being open; a pinion fast on the drive-shaft in mesh with the rack-portion of the plate, and a guard-yoke in connection with said plate to oppose an end of said drive-shaft extending inward beyond the pinion.

875,181. LIQUID-MEASURING DEVICE. HENRY V. JOHNSON, Denver, Colo. Filed Dec. 10, 1906. Serial No. 347,176.



1. In a liquid measuring machine, a tank having a liquid holding compartment extending from near its bottom to near its top, and a discharging compartment containing a discharge spout at one side of said liquid holding compartment, a partition separating said liquid holding compartment from said discharging compartment, a dipper guide-way in said liquid compartment along said partition arranged to extend above said partition, a bucket in said liquid compartment connected to said guide-way, a bail and hand operating rod pivotally connected to said dipper to cause it to over-balance towards said guide-way and partition, said guide-way being arranged to permit said dipper to tilt over the top edge of said partition when lifted to the top of said guide-way by said hand operating rod.

2. In a liquid measuring machine, the combination of a tank provided with a discharging compartment and with a liquid compartment separated from said discharging compartment by a partition, the front portion of said liquid compartment being deeper than the other portion, said partition being arranged vertically across said tank from its deepest part to a predetermined distance from its top and adapted to form a liquid holding compartment in said tank, a dipper arranged to stand normally in the deeper portion of said tank, a dipper guide-way connected to the upper end of said partition, a slide-way on said dipper adapted to fit over said guide-way, a bail pivotally connected to said dipper in a position to over-balance it to lean against said guide-way and towards said partition, a hand operating rod slidably mounted in said bail to bear against the bottom of said dipper when pushed downward, and adapted to engage said bail and raise said dipper when lifted upward, said guide-way being extended far enough above said partition to permit said bucket to be lifted far enough above said partition to tilt over it into said discharging compartment, a cover to said tank, and a guide-way through said cover for said hand operating rod.

3. In a liquid measuring machine, the combination with the tank, provided with the liquid holding and the discharge compartments and provided with a dipper pocket, of the dipper fitting in said pocket, the partition extending between said liquid holding compartment and said discharge compartment, the hand operating rod journaled to said dipper to over-balance said dipper against said partition, the cover upon said tank, having a guide aperture through which said rod extends, a loop slide-way on said bucket, a U-shaped guide-way connected to the upper end of said partition and extending down parallel with said partition and at a short distance from it and extending into said dipper's slide-way, the upper end of each member of the guide-way being curved and extended far enough above said partition to allow said dipper to tilt over the edge of said partition and discharge into said discharge compartment.

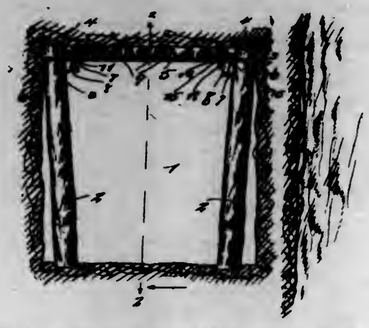
4. In a liquid measuring machine, the combination of a tank having a floor portion arranged in two planes and an angular floor portion connecting the two floor portions, a vertical partition extending up into said tank and across the same from the junction of the lower end of said angular floor portion with the lower floor portion of said tank, to within a predetermined distance from the top of said tank, and extending across said tank, and adapted to form a liquid holding compartment, said angular shaped recess in the floor of said liquid holding compartment being adapted to form a liquid dip pocket, a triangular shaped dipper adapted to fit into and rest normally in said dip pocket at the bottom of said partition, and provided with a discharge spout, a guide-way on said partition, a slide-way on said dipper connected to said partition's guide-way, means including a manually operated rod for lifting said dipper, means connected with said partition's guide-way for tilting said dipper over the upper edge of said partition when said dipper is lifted to the top of said partition, a liquid discharging compartment in said tank on the opposite side of said partition from said liquid compartment, a stop arranged to define the tilting angle of said dipper, a discharge spout connected with said discharge compartment, a movable drip cup connected to said spout and a removable cover over said tank provided with a guide slot through which said hand operating rod extends.

5. A liquid measuring device, comprising a tank having a liquid holding compartment, and a discharge compartment separated by a partition, the floor of said liquid compartment being constructed to form a triangular pocket adjacent to the partition; a plurality of U-shaped guides, the free ends of which are curved and secured to the upper end of the partition; a plurality of triangular buckets in said pocket, having loops on their front sides through which the U-shaped guides pass; a bail on each of said buckets; lift rods having a vertical sliding movement in the horizontal member of said bails, and provided with knobs upon their lower ends; said loops on said buckets, being adapted to engage the curved upper ends of the guides, when the buckets reach the limit of their upward movement, and tilt therein.

875,182. MINE-ROOF SUPPORT. FREDERICK C. KEIGHLEY, Uniontown, Pa. Filed Oct. 16, 1907. Serial No. 397,625.

1. In a roof support for mines, a plurality of standards arranged in opposite rows, timber-supporting means con-

necting opposite standards, and wedges to prevent downward displacement of said means.



2. In a roof support for mines, a plurality of standards arranged in opposite rows, timber-supporting tie rods or stretchers connecting opposite standards, and wedges to prevent downward displacement of said tie rods or stretchers.

3. In a roof support for mines, a plurality of standards arranged in opposite rows, tie rods or stretchers having loops engaging and connecting opposite standards, timbers supported by said tie rods or stretchers and means inserted in said loops to prevent downward displacement of the tie rods.

4. In a roof support for mines, a plurality of standards arranged in opposite rows, tie rods having loops engaging and connecting opposite standards, timbers supported by said tie rods, and wedges inserted in said loops to prevent downward displacement of the tie rods.

5. In a roof support for mines, a plurality of standards arranged in rows and oppositely disposed so as to diverge outwardly at their upper portions and adjacent the longitudinal walls of the mine, tie rods or stretchers connecting opposite standards and provided with loops to engage the circumference of the standards, said tie rods having means for holding the loops properly formed, wedges to be inserted in said loops and engage said standards to prevent downward displacement of the loops and timbers supported by said tie rods or stretchers for supporting the roof of the mine.

875,183. AUTOMATIC GAS-REGULATOR. DON H. KENT, Urbana, Ohio, assignor to The American Automatic Light Company, Urbana, Ohio, a Corporation of Ohio. Filed Oct. 22, 1906. Serial No. 339,940.



1. In a gas supply regulator, a flexible diaphragm, a gas supply opening therein, a thermostat connected with diaphragm, and means for regulating the size of said opening by the movement of said diaphragm, substantially as specified.

2. In a gas supply regulator, a flexible diaphragm, a gas supply opening therein, a thermostat connected with said diaphragm, means for regulating the size of said opening by the movement of said diaphragm, and means for adjusting said thermostat, substantially as specified.

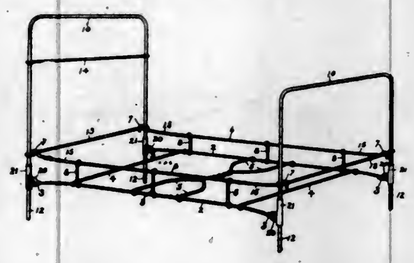
3. In a gas supply regulator, a flexible diaphragm, a gas supply opening therein, a fixed projection extending into said opening, and a thermostat connected with said diaphragm, substantially as specified.

4. In a gas burner, a gas supply conduit, a flexible diaphragm, having a central opening, in said conduit, a fixed cone-shaped valve in said conduit extending into the opening in said diaphragm, and a thermostatic rod supported adjacent to the flame of the burner having a connection to said diaphragm, substantially as specified.

5. In a gas burner, a gas supply conduit, a flexible diaphragm in said conduit having a central opening, a reinforcing cap about said opening having a projecting perforated ear, a thermostatic rod supported adjacent to the gas flame and having a connection to said perforated ear, substantially as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

875,184. BED. CHARLES E. KILBOURNE, Troy, N. Y. Filed Feb. 4, 1907. Serial No. 355,563.

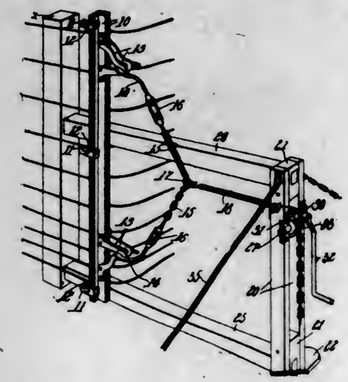


1. In a bed, the combination with a horizontal frame; a pair of end frames, each having a horizontal cross-bar, and, hinged, respectively, to the opposite ends of the horizontal frame and foldable thereon from vertical planes; a pair of side frames, each having at its ends spring arms projecting in line with the swinging edges of such frames, and provided at their projecting ends with U-shaped hooks adapted to receive the cross-bars of the end frames, respectively, whereby the projecting arms will bear upon the cross-bars of the end frames when the end and side frames are all folded down upon the horizontal frame, and the swinging movement of the end frames to vertical planes will automatically swing the side frames into vertical planes and lock all the swinging frames in vertical planes by the engagement of the cross-bars with the U-shaped hooks.

2. In a bed, the combination with a horizontal frame having at each of its four corners an eye; a pair of end frames, each frame having corner posts provided with a U-shaped hook, adapted to be inserted in the corner eyes of the horizontal frame until such corners enter the U-shaped hooks; and means for pivotally locking the corners in such hooks.

3. In a bed, the combination with a horizontal frame made of wire bent to form eyes at the four corners of the frame; of a pair of end frames made of wire bent to form corner posts; and a U-shaped hook in each post adapted to receive the wire forming the corner eyes when the corner posts are inserted in such eyes, and the wire forming the eyes has entered the hooks; and a slide on each corner post having a projection adapted to open and close the U-shaped hook when the slide is moved back and forth on the post.

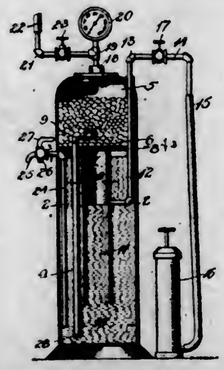
875,185. FENCE-MACHINE. ROBERT KIRKWOOD and JOHN W. KIMBERLING, Moran, Ind., assignors, by direct and mesne assignments, of one-fourth to Lewis A. Sheets, Michigantown, Ind., and one-fourth to William J. Nees, Moran, Ind. Filed July 24, 1907. Serial No. 385,363.



1. In a fence stretching machine, a pair of loosely hinged separable angle bars forming clamps, brackets having their inner ends rigidly secured to said bars, the brackets being extended to form operating handles in the preliminary clamping of the fence, a hook arranged to engage each pair of brackets and exercising a cam-like action thereon to draw the clamping bars together, a central draft member to which the hooks are connected, and means for adjusting the distance between the hooks and draft member to maintain uniform stress on both sets of brackets.

2. A clamp for use in connection with fence stretching machines, said clamp comprising a pair of angle bars, one angle bar having hooks and the other being provided with eyes to form a readily detachable hinged connection, and a pair of sets of brackets having their inner ends rigidly secured to the angle bars and extending rearwardly therefrom to form operating handles in the preliminary closing of the clamp upon the fence.

875,186. GAS-GENERATOR. WILLIAM KIRKWOOD, Chicago, Ill. Filed May 20, 1907. Serial No. 374,540.



1. In a gas generator apparatus, the combination of a liquid-holding reservoir, a gas-generating chamber, means for supporting gas producing solids in said generating chamber, means maintaining a continuous return circulation of the liquid throughout said reservoir and chamber, and means whereby an excess of pressure of gas is automatically neutralized by an opposing pressure of air, substantially as described.

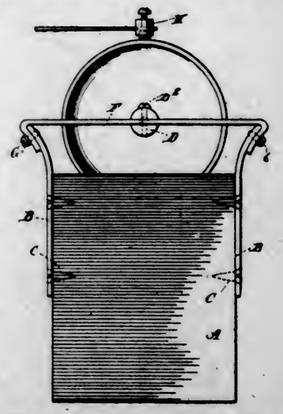
2. In a gas generator apparatus, the combination of a liquid-holding reservoir, a gas-generating chamber, a separating diaphragm therefor provided with perforations in open communication with said reservoir and chamber and adapted to support solid substances, and means whereby air under pressure is utilized to move the surface of the main body of the liquid upward to contact with said substances, substantially as described.

3. In a gas-generator apparatus, the combination of a liquid-holding reservoir, a gas-generating chamber, a separating diaphragm provided with perforations in open communication with said reservoir and chamber, and supporting solid substances, a tube closed at one end, submerged in said liquid, and provided with an air chamber in the upper part thereof, and means supplying air under pressure to said tube at or towards the lower end of said air chamber, whereby liquids entering said tube are forced therefrom and the normal level of the liquid in the reservoir is shifted to a point submerging said solid substances but not above the upper end of the gas-chamber.

4. In a gas-generator apparatus, the combination of a liquid-holding reservoir, a gas-generating chamber, a pipe in and extending well towards the bottom of said reservoir provided with a discharge opening in a plane with the normal level of the liquid in said reservoir, means for opening and closing said opening, whereby in filling the reservoir, the normal level of the liquid is automatically indicated by its discharge out of said pipe, and means for supplying air under pressure to the reservoir whereby the reservoir may be substantialy discharged of its liquid contents by air pressure above atmospheric pressure, substantially as described.

5. In a gas generator-apparatus, the combination of a liquid holding reservoir, a gas-generating chamber, a separating diaphragm therefor provided with perforations, a tube located below the diaphragm closed at its upper end, means for supplying air thereto, and a pipe open at both ends and projecting therefrom into the liquid of the reservoir and above the diaphragm and forming a passage, whereby heavy liquid is conducted directly from the generating-chamber to near the botom of the reservoir before mixing with the contents of the reservoir.

875,187. BELL. HENRY KOCH, Rahway, N. J., assignor to The Regina Company, Rahway, N. J., a Corporation of New Jersey. Filed Dec. 4, 1905. Serial No. 290,106.



1. The combination of a bell, an inelastic carrier, to the central portion of which said bell is secured, said carrier extending radially of the bell and beyond the periphery thereof, and an elastic support to which the ends of said carrier are secured.

2. The combination of a bell, a rod on which said bell

is mounted, an inelastic member to which said rod is secured arranged on the side toward which the opening of the bell faces, and an elastic support for said inelastic member.

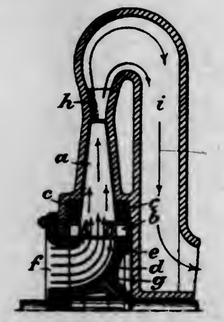
3. The combination of a bell, stationary elastic supports and an inelastic carrier, the ends of which are secured to said supports, the bell being secured to the central portion of the carrier.

4. The combination of a bell, means for carrying said bell, an inelastic member to which said carrying means is secured and an elastic support for said inelastic member.

5. The combination of a bell, a rod on which said bell is mounted, an inelastic member to which said rod is secured and an elastic support for said inelastic member.

[Claims 6 and 7 not printed in the Gazette.]

875,188. ROTARY BLADE-COMPRESSOR. CONRAD KOHLER, Zurich, Switzerland. Filed Feb. 4, 1907. Serial No. 355,712.



1. In a rotary compressor for elastic fluids, stationary walls laterally confining the bucket passages; a running wheel, having flat radial blades which are located between the said walls and present a cylindrical terminal surface having inlet openings, and have lugs on each side of their inner ends; and rings fitting over the lugs and holding the assembled blades together on the wheel; substantially as described.

2. In a rotary compressor for elastic fluids, stationary walls laterally confining the bucket passages; a running wheel, having flat radial blades which are located between the said walls and present a cylindrical terminal surface having inlet openings, the inner ends of each blade being provided with lugs at both sides, whereby the assemblage of blades presents continuous annular flanges; rings fitting over the lugs and holding the assembled blades together on the wheel boss; and a laterally located anular keeper retaining the blades in place on the boss; substantially as described.

3. In a rotary compressor, a compressor wheel comprising flat radial blades having lateral lugs thicker than the blade and a boss to which said blades are secured.

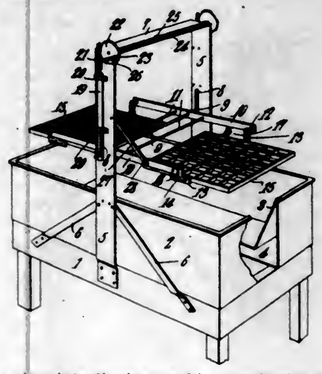
4. In a rotary compressor, a compressor wheel having a boss with a flaring wall, flat radial tapered blades having lateral lugs at their roots, the roots of the blades being substantially parallel to the axis of rotation of the wheel, and securing rings shrunk around said lugs.

875,189. CANDY-DIPPING MACHINE. ADOLPH KUNITZ, Norfolk, Nebr. Filed May 21, 1907. Serial No. 374,861.

1. In a chocolate dipping machine, a rotatable carrier, confection-holding trays pendently supported therefrom and independently rotatable in the pendent supports, and means for locking the trays against independent rotation in their supports.

2. A chocolate dipping machine comprising a rotatable carrier, confection trays pendently supported therefrom and capable of being independently rotated in the pendent supports, and a staple lock for holding said trays against independent rotation in their supports.

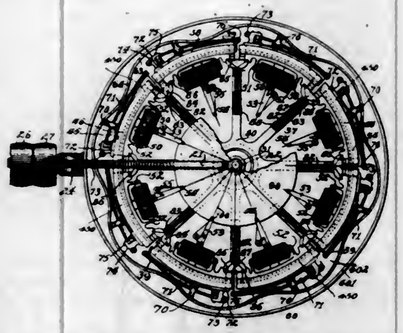
3. In a chocolate dipping machine, a rotatable carrier, confection trays pendently supported therefrom and removable from the pendent supports, and locks on the pendent supports for maintaining the trays in operative relation to the supports.



4. In a chocolate dipping machine, confection trays, supports therefor, and means for removing surplus chocolate from the dipped confections comprising vertically movable carrier for the tray supports provided with gear teeth, and mutilated gears acting thereon to elevate and then release the supports.

5. A chocolate dipping machine comprising a chocolate receptacle, a rotatable carrier in operative relation to said receptacle, pendently-hung confection trays on said carrier, and means for imparting shocks or jars to said trays comprising supports for the carrier having gear teeth formed on one end, and mutilated gears engaging said teeth and alternately elevating the carrier and permitting it to fall.

875,190. BRAIDING-MACHINE. ALEXIS LE BLANC, Brooklyn, N. Y. Filed Jan. 20, 1906. Serial No. 296,933.



1. In a braiding machine, the combination with a rotary bobbin carriage, means fast therewith for supporting and orbitally moving a series of bobbins, said carriage having a bobbin carrier track, a series of bobbin carriers supportedly mounted upon said track, each of said carriers having two sets of forwarder engaging faces, a series of forwarders each for engaging a set of said faces on two adjacent carriers, and having a by-pass for threads, means for actuating said forwarders for opening the by-pass between the carriers at predetermined intervals, and means for passing the threads of one series of bobbins through said by-passes when opened.

2. In a braiding machine, the combination with a rotary bobbin carriage, means fast therewith for supporting and orbitally moving a series of bobbins, said carriage having a bobbin carrier track, a series of bobbin carriers supportedly mounted upon said track, each of said carriers having two sets of forwarder engaging faces, a series of forwarders each for engaging a set of said faces on two adjacent carriers and having a by-pass for threads, means for actuating said forwarders for opening the by-pass between the carriers at predetermined intervals, vibratory arms and means for moving these with accelerated speed between the dead centers in proper timing for passing the threads from one series of bobbins through said by-pass at the accelerated portion of its movement for alternately bringing the threads from the respective series of bobbins at the outer side of the threads of the other series, and passing the threads through said by-pass at its accelerated movement.

3. In a braiding machine, the combination with a rotary bobbin carriage, means fast therewith for supporting and orbitally moving a series of bobbins, said carriage having a bobbin carrier track, a series of bobbin carriers supportedly mounted upon said track, each of said carriers having two sets of forwarder engaging faces, a series of forwarders each for engaging a set of said faces on two adjacent carriers and comprising a rotary member having a recess constituting a thread by-pass, means for revolving said forwarders, for revolving the carriers, means for rotating the forwarders for opening the by-pass between the carriers, and means for passing the threads from one series of bobbins through said by-pass when opened alternately in opposite directions.

4. In a braiding machine, the combination with means for orbitally moving a series of bobbins, means for supporting carriers for a second series of bobbins, each carrier having driver engaging faces, a series of rotary orbitally movable bobbin carrier drivers each embodying an annular member for engaging said driver engaging faces on adjacent carriers and each having an open segment constituting a thread by-pass of sufficient width to effect the release of the engagement of the driver with the engaging faces on each carrier once during each rotation of said driver, vibratory arms revolubly with the first series of bobbins and means for vibrating these in proper timing with the presentation of the open segments of the drivers upwardly and downwardly respectively, the arms moving the thread down during the period of the downward movement of the open segments and moving the thread up during the upward movement of said open segments.

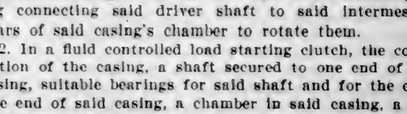
5. In a braiding machine, the combination with a rotary bobbin carriage embodying means for orbitally moving a series of bobbins, a series of bobbin carriers supported on said carriage for carrying a second series of bobbins, a rotary spider concentrically disposed relative to said carriage, means for rotating said carriage and spider in opposite directions, each of said carriers being provided at its ends with driver engaging faces, a series of shafts mounted upon said spider, each carrying at one end a bevel pinion and at its opposite end an annular member for engaging said driver engaging faces on the adjacent ends of two of said carriers, and each having an open segment constituting a thread by-pass between the carriers of sufficient width to effect the release of the engagement of the driver with the engaging faces on each of the carriers once during each rotation of said driver, arms pivoted to the bobbin carriage and having eyes for the passage of the thread from the first series of bobbins, a cam frame disposed adjacent to said arms and having a pair of cam faces for engaging said arms for positively raising and lowering these for passing the threads guided thereby through the open segments of the carrier drivers, and a stationary gear track for said pinions.

[Claims 6 and 7 not printed in the Gazette.]

875,191. SCREEN OR GRATING. MAX LEVY, Philadelphia, Pa. Filed Mar. 2, 1907. Serial No. 360,132.

1. The combination with a grating or screen made up of lined plates and provided with a margin of less thickness than its field, of a frame that incases the reduced margin of the grating or screen, for the purpose set forth.

2. The combination with a grating or screen that is made up of lined glass plates which are cemented one to the other and are provided with a margin, of less thickness than its field, of a frame that incases the reduced margin of the grating or screen the thickness of the frame being such as not to exceed the thickness of the field, for the purpose set forth.



3. The combination with a grating or screen having a margin of less thickness than the field of the screen, of a frame which incases the margin of the grating or screen and is connected thereto by cement.

4. A grating or screen made up of lined or ruled plates which are cemented to each other and provided with reduced margins, and a rigid frame which is cemented to the margin of the grating or screen, the frame not exceeding in thickness the thickness of the grating or screen.

5. A screen or grating for use in photo-mechanical engraving consisting of lined or ruled glass plates which are cemented together and provided with a marginal tongue, in combination with a grooved frame which does not exceed in thickness the thickness of the screen or grating, and an interposed adhesive medium between the tongue and groove.

875,192. FLUID-CONTROLLED CLUTCH. JOHN G. LEYNER, Denver, Colo. Filed Mar. 26, 1907. Serial No. 364,659.

1. In a fluid controlled clutch, the combination with a revolubly mounted casing, of a gear chamber provided with a supply of any suitable fluid, a pair of intermeshing gears rotatably mounted in said chamber and fluid, a valve controlled port in said casing connected with opposite edges of said gears, and said chamber provided with a manually operated valve, a driver shaft rotatably mounted in said casing, means for driving said shaft, and gearing connecting said driver shaft to said intermeshing gears of said casing's chamber to rotate them.

2. In a fluid controlled load starting clutch, the combination of the casing, a shaft secured to one end of said casing, suitable bearings for said shaft and for the opposite end of said casing, a chamber in said casing, a port in said casing connected to the opposite sides of its axial center, a valve disk seat in said port, a valve seated in said port seat to control said port, a valve stem connected to said valve and slidably mounted in the axial center of said shaft, a lever connected to said valve stem to operate said valve to close or open said port, intermeshing gears in said chamber, a body of any suitable liquid in said chamber, and means independent of said casing, for driving said intermeshing gears.

3. In a fluid controlled starting clutch, the combination of a casing comprising a body portion containing a chamber provided with a supply of oil, a pair of intermeshing gears rotatably mounted in said chamber, a partition secured to said chamber, a cover secured to said partition provided with a chamber, a pair of intermeshing rotating

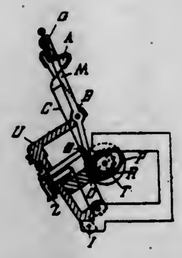
gears in said cover's chamber, a driver shaft connected to one of said cover's gears, a shaft connecting the other cap cover's gear with one of the gears of the chamber of said casing, a port extending through the body of said casing, and connected at its opposite ends with the opposite ends of said chamber in the body of said casing, a valve arranged to control said port, and suitable bearings arranged to rotatably support said combined body portion and cover of said casing.

4. In a fluid controlled load starting clutch the combination of the body portion of the casing, provided with a gear housing chamber, the partition member secured to said body portion to cover said chamber, the cover member secured to said partition member, and also provided with a gear chamber, with the intermeshing gears rotatably arranged to rotate in said chambers, a driver shaft rotatably mounted in said cover and connected to one of its gears, and a shaft extending through both chambers and operatively connecting the gears of each chamber.

5. In a liquid controlled load starting clutch, the combination of the casing, rotatably mounted in suitable bearings, the port extending across the axial center of said casing at one end, the oil and gear chamber arranged to connect to said port and adapted to hold a supply of oil or other suitable fluid, the valve seat at the axial center of said port, the manually operating valve and valve stem arranged at the axial center of said casing to control said port, the intermeshing gears in said oil chamber, the driving shaft rotatably mounted in the opposite end of said casing, and means connected to said driving shaft for rotating the gears in said oil chamber.

[Claim 6 not printed in the Gazette.]

875,193. MECHANICAL STRINGED INSTRUMENT WITH SPRING-HAMMERS. PAUL LOCHMANN, Zeulenroda, Germany. Filed Oct. 2, 1906. Serial No. 337,115.



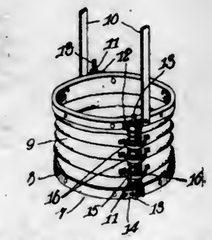
1. A mechanical stringed instrument comprising a spring-supported hammer, an adjustable frame with tappet shaft, a cam disk for setting the adjustable frame, a ratchet and pawl for setting the disk, note-sheet-engaging levers, one of said levers being made to actuate the ratchet and pawl and the other having a flexible connection with the hammer.

2. In a stringed instrument the combination with spring supported hammers, note sheet engaging levers and flexible connections to the spring supported hammers from the note-sheet engaging levers, of a rotary tappet shaft for imparting rapidly recurring vibrations to the hammers and adjustable bearing members for the tappet shaft.

3. In a stringed instrument the combination with spring supported hammers, note-sheet engaging levers and flexible connections to the spring supported hammers from the note sheet engaging levers, of a rotary tappet shaft for imparting rapidly recurring vibrations to the hammers, an adjustable bearing for the tappet shaft and means actuated by a note sheet for setting or shifting the bearing.

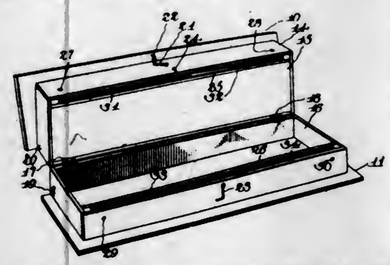
4. In a stringed instrument the combination with spring supported hammers and note-sheet engaging levers with a flexible connection to the spring supported hammers from the note-sheet engaging levers of a rotary tappet shaft for vibrating the hammers and a frame to which the hammers are pivoted, said frame being hinged so as to allow said frame with the hammers to be swung away from the strings.

875,194. FEED-BAG. HUGH E. LOCKE and WALTER A. SCOTT, Chicago, Ill. Filed Apr. 24, 1907. Serial No. 370,101.



A collapsible feed bag having a rim at the top and depending tubes fixed to opposite sides of the rim, rods slidable within said tubes and fixed at their lower ends to the bottom of the bag, coiled springs around the tubes and rods and connected at opposite ends to the top and bottom of the bag, and loops connected to the body of the bag and extending around said springs.

875,195. COMBINED FOLDING TABLE AND RECEPTACLE. JOHN E. LOFTIN, Rockford, Wash. Filed Dec. 4, 1906. Serial No. 346,286.



1. A foldable table comprising two box-like receptacles of similar shape, one receptacle having a top section hinged thereto along one side and a closed bottom, the other receptacle having a top section fixed thereto and an open bottom, the bottom edge of said first receptacle on the same side as that to which the said top section is hinged being hinged to the corresponding edge of said second receptacle, whereby both receptacles are readily accessible when the table is folded, and supporting legs pivoted to the sections.

2. A foldable table comprising two box-like receptacles, one receptacle having a top section hinged thereto and a closed bottom, and the other receptacle having a top section attached thereto, said receptacles being hinged together along a corresponding bottom edge of each, whereby the first named receptacle is readily accessible at both the closed and open positions of the table, and supporting legs pivoted to the sections.

875,196. METHOD OF PRODUCING COAL-TAR PITCH. JOHN F. LOVEJOY, New York, N. Y., assignor of one-half to Abraham Stein, New York, N. Y. Filed Mar. 5, 1906. Serial No. 304,343.

1. The method of producing pitch, consisting in distilling coal-tar in the presence of an abnormal percentage of water.

2. The method of producing pitch, consisting in combining coal-tar and water in substantially the proportions specified and distilling the same, at the same time subjecting the mass to agitation.

3. The method of producing pitch, consisting in commingling coal-tar with a substantial percentage of water to the exclusion of other substances, and subjecting the mass to distillation until the resulting pitch has a melting point of 155 degrees Fahrenheit, more or less.

4. The method of producing pitch, consisting in distilling coal-tar in the presence of an abnormal amount of water, and passing steam through the mass during distillation.

5. The method of producing pitch, consisting in distilling coal-tar in the presence of an abnormal amount of water, mechanically agitating the mass during distillation to insure distribution of the water through the mass and at the same time passing steam upward through the mass.

[Claims 6 and 7 not printed in the Gazette.]

875,197. BURGLAR-ALARM. UMBERTO MAGNI, San Francisco, Cal. Filed June 25, 1907. Serial No. 380,732.



1. An apparatus of the class described, comprising a casing, having an internal bore, a firing pin held therein, trigger devices within the casing for coöperating with the firing pin, a cartridge holder detachably screwed to one end of said casing, means for holding said firing pin cocked, means for releasing said holding means, said holding means comprising a U-shaped trigger pivotally secured to said casing at one end, a laterally projecting rod carried by said firing pin and projecting through slots in said casing, said trigger having means for coöperatively engaging said rod for holding the trigger cocked, means interposed between the trigger and the casing for normally holding the trigger in its cocking position, substantially as shown and described.

2. An apparatus of the class described, comprising a casing having an internal bore terminating at its front end in a reduced threaded portion, a cartridge holder having threads for coöperating with said reduced threaded portion, a firing pin held within said casing and having a head of greater diameter than the diameter of the reduced portion of the casing and having an elongated shank portion, a coil spring held within said casing and around said shank portion and in engagement with the head portion of the firing pin, said casing having slots in its sides, a rod projecting through said firing pin and slots, and having finger engaging ends, a substantially U-shaped trigger pivoted at one end to said casing and having bayonet slots through which said rod projects, means interposed between the trigger and the casing for normally holding the trigger in one position and separate means coöperatively connecting the trigger with the door for moving the same to another position as the door is opened, substantially as shown and described.

3. A device of the class described comprising a casing, a cartridge holder removably fastened at one end of the casing, a firing pin held within the casing, a substantially U-shaped trigger member pivoted on the outside of the casing and embracing the same, means carried by the firing-pin for coöperatively engaging the trigger member, separate means adapted to be engaged by the door or other movable article and in engagement with said trigger for depressing the trigger to release the firing pin and means for normally tending to elevate the trigger substantially as shown and described.

875,198. ELECTRIC BOND FOR RAILS. FRANK M. MARCY, Worcester, Mass. Filed May 3, 1906. Serial No. 314,971.

1. An electric bond comprising a conductor and two holders, each having a hole or pocket to receive the conductor, each pocket presenting a thin wall which is driven in or forced against the conductor by preasure sufficient to flatten the same and secure the conductor in the holder.



2. An electric bond comprising a conductor and a holder therefor provided with a conductor-receiving pocket and presenting a projecting blow-receiving portion at one side of the pocket whereby when said holder is driven into a rail by a blow delivered on the blow-receiving portion the wall of the pocket is flattened at said side and forced into intimate contact with the conductor.

3. An electric bond comprising a conductor having a series of projections at each end, and holders having corresponding recesses engaging the projections of the conductors, the holder and the conductor near its ends being out of round to restrain a rotation of the conductors in the holder.

4. An electric bond, presenting a holder screw-threaded internally, a conductor threaded externally that the threads of the conductor may engage the threads of the holder, a contacting portion of the holder and conductor being flattened or thrown out of round to prevent the conductor from being rotated in the holder.

5. An electric bond presenting a holder having a hole or pocket extended but partially therethrough, and presenting a thin wall substantially parallel with said hole or pocket, and a conductor in said hole or pocket, a portion of the holder and conductor being thrown out of round to prevent the rotation of the conductor in the hole.

875,199. CONVEYING APPARATUS. THOMAS S. MILLER, South Orange, N. J. Filed Apr. 21, 1906. Serial No. 312,946.



1. In a conveying apparatus, in combination, connected outgoing and incoming traveling ropes, an engine whereby the same are moved inversely, a tension tail sheave around which they pass, a load carriage engaging both of said ropes and stops on one of said ropes on opposite sides of the load carriage.

2. In a conveying apparatus, in combination, an outgoing rope, an incoming rope, an engine whereby they are moved inversely, stops on one of said ropes and a load carriage engaging said rope between said stops and also engaging the other rope.

3. In a conveying apparatus, in combination an outgoing rope, an incoming rope, two parts of the rope carriage engaging said ropes respectively and a vibratory connection between said carriage parts.

4. In a conveying apparatus, in combination, an outgoing rope, an incoming rope, two parts of the rope carriage engaging said ropes respectively, a vibratory connection between said carriage parts and two stops on opposite sides of the carriage part engaging one of said ropes.

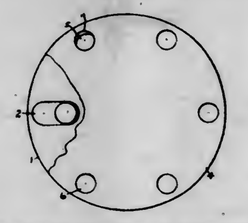
5. In a conveying apparatus, in combination, an outgoing and an incoming rope forming a loop at the tail end, a tension sheave in said loop, two load rests and a haul-down rope at each of said load rests.

[Claims 6 to 13 not printed in the Gazette.]

875,200. PUZZLE NOVELTY. LOUIS J. MONOHAN, Oshkosh, Wis. Filed Mar. 8, 1907. Serial No. 361,276.

1. In a novelty puzzle the combination with a disk of cardboard having a number of oblong holes therethrough arranged radially therein, a bottom piece adapted to cover

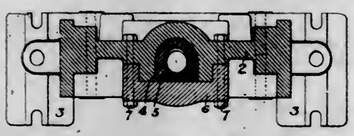
the holes, a top piece having a similar number of holes therethrough above the said first named holes but of smaller size, disks arranged loosely in the said oblong holes and capable of sliding therein but not capable of passing through the holes in the top piece for the purpose set forth.



2. A puzzle novelty comprising three circular or other shaped cards pasted together, the center card having a number of oblong holes therethrough, the upper card having a similar number of holes therethrough above the said first named holes but of smaller size, disks or pieces arranged loosely in the oblong holes, the said disks being capable of covering the openings of the upper card when the device is quickly revolved.

3. A puzzle novelty consisting of a cardboard piece 1 of circular form and having holes 2 therethrough, a bottom card 3 pasted to the card 1, a top card having holes 6 therethrough and arranged over and above the holes 2, disks 5 of suitable form arranged to slide in the holes 2 but not capable of passing through the holes 6 for the purpose set forth.

875,201. ROLL-HOUSING. RICHARD MOON, Homestead, Pa. Filed Nov. 3, 1906. Serial No. 341,865.



1. A roll housing comprising a housing frame, a housing-screw nut and a recess in the housing frame having an open side in which said nut is secured; substantially as described.

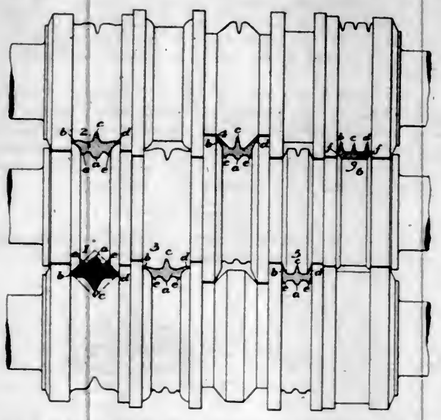
2. A roll housing comprising a housing frame, a housing screw nut, a recess having an open side in the housing and a side cap by which said nut is screwed in said recess, said side cap having an oil box and an opening from said box registering with a similar opening in said nut and communicating with the threaded portion thereof; substantially as described.

3. A roll housing comprising a housing frame, a housing-screw nut, an open recess in said housing and a side cap by which said nut is secured in said recess; substantially as described.

4. A roll housing comprising a housing frame, a housing-screw nut having an annular shoulder portion, an open sided recess in the housing frame also having an annular shoulder portion in which the nut is secured, and means for holding said nut in said recess; substantially as described.

875,202. METHOD OF ROLLING TIE-PLATES. ANDREW MORRISON, Pittsburg, Pa. Filed July 24, 1906. Serial No. 327,473.

1. The method of rolling tie-plate bars having a body portion and longitudinal flanges projecting at substantially right angles thereto, which consists in first reducing the corner portions of a rectangular billet to form a body portion having rudimentary flanges, then rolling the shape in successive passes with its body portion in a plane parallel to the axis of the rolls, in which passes said flanges are acted upon by combined lateral and vertical pressure to reduce them and bring them at substantially right angles to the body portion, said body portion being at the same time reduced and shaped; substantially as described.



2. The method of rolling tie plate bars having right-angled longitudinally-extending middle and lateral flanges, which consists in first passing a rectangular billet through an initial pass in diagonal position to form rudimentary flange portions, working two opposite corner portions of the bar into the middle flange and the other two corners into the lateral flanges, and subsequently rolling the shape to reduce and shape such flanges; substantially as described.

3. The herein described method of rolling longitudinally flanged tie plate bars, which consists in first simultaneously reducing the four corner portions of a rectangular billet to form a body portion with four rudimentary flanges, then rolling the bar in successive passes to reduce and shape its body portion and three of said flanges, and at the same time remove the fourth flange by rolling it into the body of the bar; substantially as described.

4. The method of rolling tie plate bars having a body portion and longitudinally-extending middle and lateral flanges which project at substantially right angles to the body portion, which consists in first passing a rectangular billet through an initial pass in diagonal position to form rudimentary flange portions from the corner portions of the rectangular billet, working two opposite rudimentary flange portions of the bar into the body portion and into a middle flange and the other two rudimentary flange portions into the lateral flanges, and subsequently rolling the shape to reduce and shape such flanges and to reduce and shoulder the body portion of the tie plate; substantially as described.

5. The method of rolling longitudinally-flanged tie plate bars, which consists in first reducing the corner portions of a rectangular billet to form four rudimentary flanges at least one of which is temporary and auxiliary bumps adjacent to the temporary flange, then rolling in a series of subsequent passes to remove said bumps and temporary flange by rolling the metal thereof into the body portion and into the other flanges, and at the same time reducing and shaping the body portion of the other flanges into final angular flanges, substantially as described.

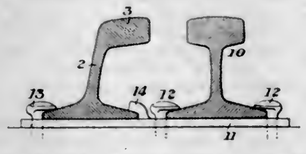
[Claims 6 to 8 not printed in the Gazette.]

875,203. GUARD-RAIL. ANDREW MORRISON, Pittsburg, Pa. Filed Apr. 11, 1907. Serial No. 367,683.

1. As a new article of manufacture, a rolled guard rail having a head lying entirely to one side of its web; substantially as described.

2. As a new article of manufacture, a rolled guard rail having an inclined web, and a head lying entirely to one side of the web; substantially as described.

3. As a new article of manufacture, a rolled guard rail having rolled base flanges of unequal width, a web, and a head portion lying entirely to one side of the web and overhanging the narrower base flange; substantially as described.

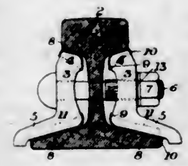


4. As a new article of manufacture, a rolled guard rail having base flanges, a web, a head lying entirely to one side of the web and overhanging one of the base flanges, the vertical plane of the edge of said flange passing through the head at a point beyond the juncture of the head and flange; substantially as described.

5. As a new article of manufacture, a rolled guard rail having one of its flanges narrower than the other, an inclined web, and a head lying entirely to one side of the web and overhanging the narrower base flange, the vertical plane of the edge of said flange passing through the head of the rail at a point beyond its juncture with the web; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

875,204. INSULATED RAIL-JOINT. ANDREW MORRISON, Pittsburg, Pa. Filed Apr. 11, 1907. Serial No. 367,684.



1. In an insulated rail joint, a splice bar having a rail bearing at both head and base, insulating material interposed between the bearing surfaces of the bar and rails, the insulating material at the heads and bases being separate and independent pieces, and the inner edge portions of the insulating material being bent to engage the inner portions of the splice bar; substantially as described.

2. In an insulated rail joint, a splice bar having a rail bearing at both head and base, insulating material interposed between the bearing surfaces of the bar and rails, the insulating material at the heads and bases of the rails being in separate and independent pieces, those portions between head of rail and top of bars being thicker than the portions between base of rail and base of bars, and the inner edge portions of the insulating material being bent to engage the inner portions of the splice bar; substantially as described.

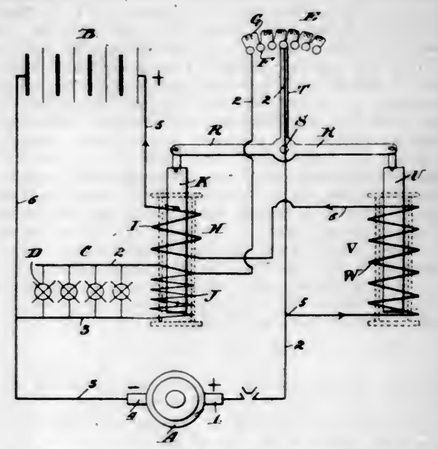
3. In an insulated rail joint, a splice bar having a rail bearing at both head and base, and insulating material interposed between the bearing surfaces of the bar and rails, the insulating material at the heads and bases being separate and independent of each other and having edge portions bent into securing engagement with the splice bars; substantially as described.

4. In an insulated rail joint, a splice bar having a rail bearing at both head and base, and insulating material interposed between the bearing surfaces of the bar and rails, the insulating material at the heads and bases being separate and independent of each other and having edge portions bent into securing engagement with the splice bars and the rails; substantially as described.

5. In a rail joint, a splice bar having a bearing at its upper edge underneath the head of the rail, and having a piece of insulating material interposed between these bearing surfaces, said material being of uniform thickness throughout and terminating at its inner or lower edge at a point above the bolt holes of the joint; substantially as described.

[Claim 6 not printed in the Gazette.]

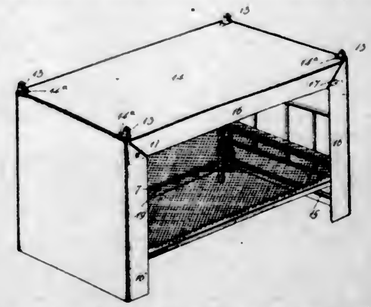
875,205. ELECTRIC REGULATION. MORRIS MOSKOWITZ, New York, N. Y., assignor to The United States Light & Heating Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 5, 1906. Serial No. 294,717.



1. The combination of a generator, a storage battery in multiple therewith, a work circuit, means for varying the voltage of the work circuit, and opposing electro-responsive devices controlling said voltage varying means, one of said devices being compound wound and each having a coil in the battery circuit.

2. The combination of a generator, a storage battery in multiple therewith, a work circuit, means for varying the voltage of the work circuit, and opposing electro-responsive devices controlling said voltage varying means, one of said devices being compound wound and each having a coil in the battery circuit, the coils of the compound wound device acting cumulatively or differentially according to the direction of current in the series coil.

875,206. CANOPY FOR BEDS. LEWIS E. OSBORNE, Brooklyn, N. Y. Filed Sept. 12, 1907. Serial No. 392,535.



1. A canopy for beds comprising a supporting frame formed in separable parts, means to detachably secure said frame to the bedstead, a canopy adapted to be stretched over and secured to said frame, and slidably mounted curtains adapted to close one side of the canopy, substantially as described.

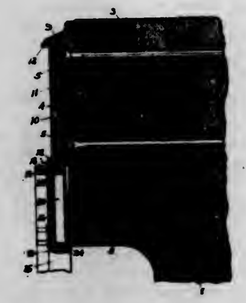
2. A canopy of the character described, comprising a

supporting frame formed of separable parts, means to detachably connect said frame to a bedstead, a canopy comprising integrally formed top and end pieces, means to secure said top and end pieces to the frame, and a curtain slidably supported by said frame to close one side of the same, substantially as described.

3. A canopy of the character described, comprising a frame consisting of vertically disposed corner posts, clamping devices arranged on said posts whereby the same are detachably secured to the corner posts of a bedstead, upper and lower end cross pieces, and upper and lower longitudinal side pieces connected with said corner posts, means to detachably secure said end and side bars to the post, a canopy adapted to be stretched over said frame to cover the top and ends thereof, and curtains slidably mounted on said frame to close one side, substantially as described.

4. A canopy for beds comprising a supporting frame consisting of corner posts connected at their upper and lower ends by upper and lower end cross bars, and by upper and lower longitudinal side bars, clamping devices adapted to detachably connect said corner posts with the posts of a bedstead, a canopy comprising integrally formed top and end pieces adapted to be engaged with the end and side bars of a frame, projecting hems formed on said end and top pieces of the canopy and adapted to be folded in over the sides of the frame, curtains slidably mounted on the side bars of one side of the frame, whereby said side may be closed or opened, and a fastening flap on one of said curtains whereby the same may be secured in closed position substantially as described.

875,207. FIELD-MAGNET. WILLIAM D. POMEROY, Norwood, Ohio, assignor, by mesne assignments, to The Bullock Electric Company, a Corporation of Ohio. Filed Oct. 30, 1903. Serial No. 179,191.



1. In a dynamo electric machine, the combination of a frame, a pole piece secured thereto, a coil on the pole piece, and a separately removable compressible seat at one end of the coil and encircling the pole piece.

2. In a dynamo electric machine, the combination of a frame, a pole piece secured thereto, a coil on the pole piece, and a separately removable compressible seat between the coil and said frame.

3. In a dynamo electric machine, the combination of a frame, a pole piece secured thereto, a coil on the pole piece, and means encircling the pole piece at one end of the coil and comprising separately removable yieldable material, substantially as described.

4. In a dynamo electric machine, the combination of a frame, a pole piece secured thereto, a coil on the pole piece, and a compressible seat between the coil and said frame, said seat comprising a frame and compressible material.

5. In a dynamo-electric machine, the combination of a frame, a pole piece secured thereto, said pole piece having projecting portions, a coil on the pole piece, and a compressible seat between the coil and said frame, said seat comprising a frame having pockets and compressible material in said pockets.

[Claims 6 to 10 not printed in the Gazette.]

875,208. PROCESS OF REDUCING FERROVANADIUM. EDGAR F. PRICE, Niagara Falls, N. Y., assignor, by mesne assignments, to Central Trust Company of New York, trustee, a Corporation of New York. Filed Dec. 29, 1906. Serial No. 350,067.

1. The process of producing ferro-vanadium, which consists in providing a charge containing vanadium oxid, a source of iron and carbon, passing an electric current through the charge, surrounding the zone of reduction and protecting the electrode or electrodes by a considerable body of the charge, and withdrawing the products and supplying the charge-mixture as required.

2. The process of producing ferro-vanadium, which consists in providing a charge containing vanadium oxid, a source of iron and carbon, in the minimum proportion required to effect reduction, passing an electric current through the charge, surrounding the zone of reduction and projecting the electrode or electrodes by a considerable body of the charge, and withdrawing the products and supplying the charge-mixture as required.

3. The process of producing low-silicon ferro-vanadium, which consists in producing a high-silicon ferro-vanadium by electrically smelting a charge containing vanadium oxid, silica, a source of iron and carbon, surrounding the zone of reduction and protecting the electrode or electrodes by a considerable body of the charge, and reacting on the high-silicon product with an oxidizing agent.

4. The process of producing low-silicon ferro-vanadium, which consists in producing a high-silicon ferro-vanadium by electrically smelting a charge containing vanadium oxid, silica, a source of iron and carbon, surrounding the zone of reduction and protecting the electrode or electrodes by a considerable body of the charge, and reacting on the high-silicon product with an oxid of a constituent of ferro-vanadium.

5. The process of producing ferro-vanadium, which consists in treating a vanadium sulfid ore to convert the metal into an oxid, mixing the oxid with a source of iron and carbon, passing an electric current through the charge, surrounding the zone of reduction and protecting the electrode or electrodes by a considerable body of the charge, tapping out the alloy, and supplying the charge-mixture as required.

[Claim 6 not printed in the Gazette.]

875,209. AUTOMATIC FIREARM. CARL L. H. PRINKE, Baltimore, Md. Filed Mar. 28, 1907. Serial No. 364,954.



1. An automatic firearm, comprising a receiver, a magazine for automatically feeding cartridges thereto, a firing bolt adapted to engage a cartridge in the receiver on its forward movement to feed it to the cartridge chamber of the barrel and to fire it and which bolt is provided with a spring for advancing it but which is free to recoil by the pressure of gases developed immediately after firing, an ejector carried by but movable independently of the firing bolt, means for automatically cocking the bolt on its recoil and devices for releasing the bolt.

2. An automatic firearm, comprising a receiver, a firing bolt therein, a spring tending to move the firing bolt forwards, a firing point fixed to the firing bolt, trigger mechanism for cocking and releasing the bolt, an ejector carried by the firing bolt, means for withdrawing the ejector into the bolt as the latter moves forward and means for projecting the ejector from the front end of the firing bolt when the latter reaches the limit of its rearward movement.

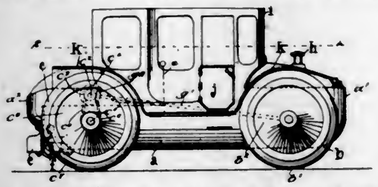
3. An automatic firearm, comprising a receiver, a magazine connected therewith and feeding thereto, a firing bolt reciprocating in the receiver having a firing point adapted to engage the topmost cartridge in the magazine and feed it to the barrel on its forward movement and to simultaneously fire it, an ejector carried by and movable independently of the firing bolt, a sear for automatically cocking the bolt when it reaches the limit of its rearward movement, and trigger mechanism for releasing the sear.

4. The combination of a receiver, a firing bolt reciprocating therein, a spring tending to move the bolt forwards, an ejector mounted eccentrically within the bolt and adapted to protrude from the front end thereof, a spring for retracting the ejector when the bolt is in its forward position, and means for causing the ejector to protrude from the bolt when the latter reaches its retracted position.

5. The combination with the barrel of a tubular receiver detachably connected therewith and having a solid or integral rear end provided with a shoulder near its rear end and a socket in the rear of said shoulder, a reciprocating firing bolt of less diameter than the front end of the receiver, an action spring engaging the firing bolt and having its rear end arranged in said socket at the rear end of the receiver, and an action spring guide loosely arranged within the receiver having its rear end in said socket, said bolt, spring and guide being removable through the front end of the receiver when the latter is detached from the barrel.

[Claims 6 to 12 not printed in the Gazette.]

875,210. CANOE-CARRIAGE. JULES J. RAVAILLIER, Paris, France. Filed Jan. 28, 1907. Serial No. 354,543.



1. In a combined motor vehicle and boat, the combination of a boat body provided with solid front wheels and propelling rear wheels having tapering angularly-disposed blades c^5, a pair of screw propellers f attached to said body, a rudder between the same, a motor, and connections between the motor and said front wheels said rear wheels and said propellers, substantially as described.

2. In a combined motor vehicle and boat, the combination of a vehicle body i, having the doors j and seats i', of a boat body having the solid front wheels b, the propelling rear wheels c, provided with the tapering and angularly-disposed blades c^5, the pair of propellers f, the rudder e between the same, the motor g, driving connections between the motor and said front wheels, the driving shaft g', bevel gearing g^2, c', and sprocket connections c^4, c^6 connecting said motor to the rear wheels, and additional independent connections between said motor and the said propellers, substantially as described.

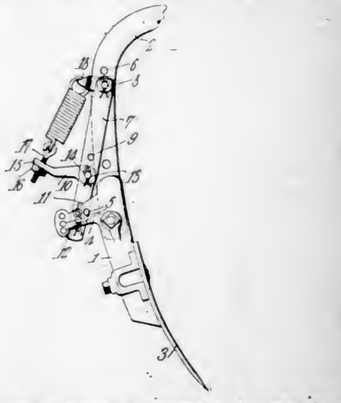
3. In a combined motor vehicle and boat, the combination of a vehicle body i, having the doors j, and seats i', of a boat body having the solid front wheels b, the propelling rear wheels c, provided with the tapering and angularly-disposed blades c^5, the pair of propellers f, the rudder e between the same, the motor g, driving connections between the motor and said front wheels, the driving shaft g', bevel gearing g^2, c', and sprocket connections c^4, c^6 connecting said motor to the rear wheels, and additional independent connections between said motor and the said propellers consisting of the shafts f' and the connections f^2, substantially as described.

4. In a combined motor vehicle and boat, the combination of a boat body provided with solid front wheels and propelling rear wheels having tapering angularly-disposed blades c^5, a pair of screw propellers f attached to said body, a rudder between the same, a motor, a windlass h, connections between the same and said motor, and connections between the motor and said front wheels said rear wheels and said propellers, substantially as described.

5. In a combined motor vehicle and boat, the combination of a vehicle body i having the doors j, and seats i', of a boat body having the solid front wheels b, the propelling rear wheels c, provided with the tapering and angularly-disposed blades c^5, the pair of propellers f, the rudder e between the same, the motar g, a windlass h, connections between the same and said motor, driving connections between the motor and said front wheels, the driving shaft g', bevel gearing g^2, c' and sprocket connections c^4, c^6 connecting said motor to the rear wheels, and additional independent connections between said motor and the said propellers, substantially as described.

[Claim 6 not printed in the Gazette.]

875,211. SPRING-TRIP FOR CULTIVATORS. LEWIS REEVES and GEORGE K. GILCHRIST, Vinton, Iowa. Filed May 13, 1907. Serial No. 373,423.



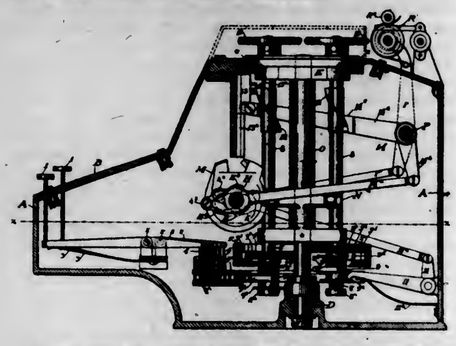
A spring trip for cultivators comprising a shovel support pivoted to the cultivator standard and having rearwardly extending shanks which straddle and lie upon opposite sides of the standard, a pair of toggle links pivoted to the standard and located one upon each side thereof, a single toggle lever pivoted at its lower end between said shanks and lying wholly in the rear of the standard, said toggle lever being angular and being fulcrumed at an intermediate point between the lower ends of said links and having a portion interposed between the fulcrum bolt and the edge of the standard, said lever being substantially of the same transverse thickness as the standard, and a spring connected at its ends with the toggle lever and the toggle links and extending across the fulcrum between the links and the lever.

875,212. TYPOGRAPHIC MACHINE. FRANCIS H. RICHARDS, Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation, a Corporation of New Jersey. Filed Jan. 13, 1902. Serial No. 89,419.

1. The combination of a plurality of trains of selective mechanism, an intermittently and variably operative driven member carrying a cam, a cam operator engageable with the cam at any point in the operation of the driven member and operating said cam and its connections, for effecting a normal adjustment of the driven member relative to the several trains of selective mechanism.

2. The combination of a plurality of trains of selective mechanism, an intermittently and variably rotative driven member carrying a cam, a cam operator engageable with the cam at any point in the rotation of the driven mem-

ber and operating said cam and its connections, for effecting a normal adjustment of the driven member relative to the several trains of selective mechanism.



3. The combination of a plurality of trains of selective mechanism, a plurality of intermittently and variably operative driven members each carrying a cam, a cam operator engageable with any one of the cams at any point in the operation of its connected driven member and operating said cam and its connections, for effecting a normal adjustment of the driven member relative to the several trains of selective mechanism.

4. The combination of a plurality of trains of selective mechanism, a plurality of differential impression devices mounted upon an intermittingly and variably operated driven member carrying a cam, a cam operator engageable with the cam at any point in the operation of the driven member and operating said cam and its connections, for effecting a normal adjustment of the impression devices relative to the several trains of selective mechanism.

5. The combination of a plurality of trains of selective mechanism, a plurality of differential impression devices mounted upon an intermittingly and variably rotated driven member carrying a cam, a cam operator engageable with the cam at any point in the rotation of the driven member and operating said cam and its connections, for effecting a normal adjustment of the impression devices relative to the several trains of selective mechanism.

[Claims 6 to 63 not printed in the Gazette.]

875,213. SECONDARY OR STORAGE BATTERY. HUGH RODMAN and GEORGE M. HOWARD, Philadelphia, Pa., assignors to The Electric Storage Battery Company, a Corporation of New Jersey. Filed Dec. 22, 1905. Serial No. 293,042.

1. Active material or material adapted to become active for the negative pole plates of storage batteries consisting of lead or lead oxid containing non-setting insoluble and inert sulfate, substantially as described.

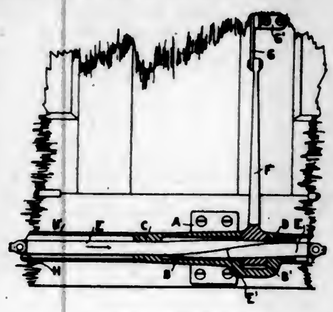
2. Active material or material adapted to become active for the negative pole plates of storage batteries consisting of lead or oxid of lead containing sulfate of barium, substantially as described.

3. Active material or material adapted to become active for the negative pole plates of storage batteries consisting of lead or an oxid of lead containing precipitated sulfate of barium, substantially as described.

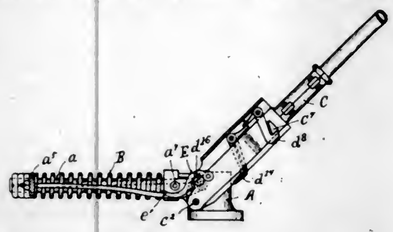
4. Active material or material adapted to become active for the negative pole plates of storage batteries consisting of lead or an oxid of lead containing sulfate of barium precipitated from a cold solution, substantially as described.

875,214. TRANSOM-LIFTER. THOMAS ROLLEY, East Brisbane, Queensland, Australia. Filed Apr. 25, 1907. Serial No. 370,307.

A transom lifter comprising a reciprocating square rod having a twisted portion forming a helix, bearings for holding the rod against turning and a radial arm connected to the transom and having an opening therein through which passes the helical portion of the rod.



875,215. TROLLEY-POLE. FREDERICK M. ROSS, Newport, Ky. Filed Mar. 4, 1907. Serial No. 360,342.



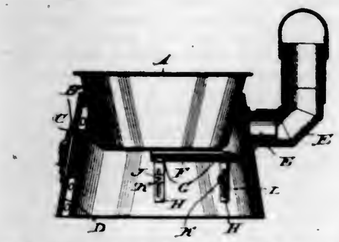
1. In a trolley pole, the combination of a pivot post, a yoke pivoted upon the post, a spring for exerting a normal pressure upon the yoke for carrying it upward, a trolley pole pivoted upon the pivot post, a latch carried by the yoke for coupling the pole and the yoke together and a trigger carried by the yoke for actuating the latch to disengage the pole and the yoke when the same have been carried upward beyond a pre-determined point.

2. In a trolley pole, the combination of a pivot post, a yoke pivoted upon the post, a spring for exerting a normal pressure upon the yoke for carrying it upward, a trolley pole pivoted upon the post, a latch carried by the yoke for coupling the yoke and the pole together and a means carried by the pole for engaging the yoke and drawing it downward and reëngaging the latch with the pole when the pole is dawn downward below a pre-determined point.

3. In a trolley pole, the combination of a pivot post, a spring supporting rod projecting from the post, a pivot pin supported on the post, a yoke and a trolley pole journaled upon the pivot pin, a latch carried by the yoke and engaging the trolley pole, a trigger carried by the yoke engaging the latch and adapted to contact the pivot post and disengage the latch and the trolley pole when the yoke and trolley pole have been carried upward beyond a predetermined point, a plate carried by the spring supporting rod, a coiled spring located between the plate and the pivot post, rods carried by the yoke passing through the plate and rods carried by the pole and passing through the plate, the rods connecting the yoke and the plate being adjusted so that when the pole and the yoke are held together by the latch, the rods carried by the yoke are held by the spring coil and the rods carried by the pole are free and are put under tension only when the pole and the yoke are disconnected.

4. In a trolley pole, the combination of the pivot post, a yoke and a pole pivoted upon the pivot post, a latch coupling the yoke and pole, a means carried by the yoke for disengaging the latch from the pole when the yoke is carried upward beyond a pre-determined point, a cam lever pivoted upon the pole, a lug projecting from the yoke beneath the cam lever, a lug secured to the pivot post and projecting outward above the outer end of the cam lever, so that when the pole is thrown downward below a predetermined point, the yoke is carried down into alinement with the pole so that the latch engages the pole and re-sets the parts in their normal positions relatively to each other.

875,216. PORTABLE FURNACE. GUSTAVE E. RUHMANN, Schulenburg, Tex. Filed Aug. 13, 1907. Serial No. 388,349.



1. The combination of a furnace, of a casing having an inlet in its lower portion for the admission of air to support combustion, a smoke conduit leading from the upper portion of the casing at a point opposite to the said inlet, and a flue strip extending inward at an angle from the inner side of the casing and also extending around the inner side of the casing from a point above and at one side of and adjacent to the air inlet to a point at the opposite side of and adjacent to said air inlet; the said flue strip being connected with and arranged to be adjusted bodily up and down on the casing.

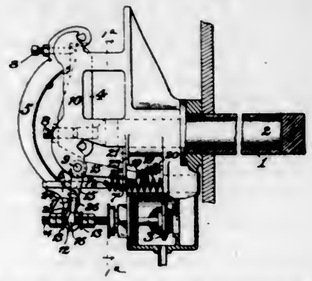
2. The combination in a furnace, of a casing tapering or gradually diminished in diameter upward and having an opening and a door controlling the same and also having an inlet for air disposed below said opening, a smoke conduit leading from the upper portion of the casing at a point opposite said opening and air inlet, and a flue strip extending around the inner side of the casing from a point at one side of and adjacent to the opening to a point at the opposite side of and adjacent to said opening and disposed at an angle to the casing; the said flue strip being connected with and arranged to be adjusted bodily up and down on the casing.

3. The combination in a furnace, of a casing tapering or gradually diminished in diameter upward and having an opening and a door controlling the same and also having an inlet for air disposed below said opening, a smoke conduit leading from the upper portion of the casing at a point opposite said opening and air inlet, a flue strip extending around the inner side of the casing from a point at one side of and adjacent to the opening to a point at the opposite side of and adjacent to said opening and disposed at an angle to the casing, angular brackets connected to the said flue strip and having depending, slotted arms, and bolts extending through the slots of the bracket arms and the casing and equipped with nuts, whereby both brackets and flue strip may be adjustably fixed at various heights.

875,217. THERMOSTATIC-VALVE-OPERATING MECHANISM. EDWIN RUUD, Pittsburg, Pa. Filed July 6, 1906. Serial No. 324,933.

1. In a water heater system, the combination of a fuel supply valve, a thermostatic regulator, means having a lost motion connection with said valve and controlled by said regulator for immediately fully opening or completely closing, respectively, the fuel supply valve, means having a positive connection with said valve and a spring acting to move said last-mentioned means in either direction, whereby it tends to hold said valve either fully open or completely closed.

2. In a water heater system, the combination of a fuel supply valve, a thermostatic regulator, snap spring mechanism, controlled by the thermostatic regulator, for immediately fully opening or completely closing, respectively, the fuel supply valve, and a second snap spring mechanism, controlled by the movements of said valve, for holding the latter in either of said positions.



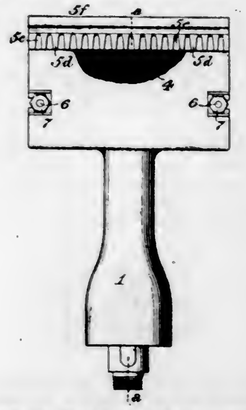
3. In a water heater system, the combination of a fuel supply valve, a thermostatic regulator, a spring actuated lever, controlled by the thermostatic regulator, for immediately fully opening or completely closing, respectively, the fuel supply valve, and a spring actuated lever, controlled by the said movement of the valve, for holding the latter in open or in closed positions, respectively.

4. In a water heater system, the combination of a fuel supply valve, a thermostatic regulator, a spring actuated lever which is tripped from neutral or inoperative position by the thermostatic regulator and thereupon actuated by its spring to immediately fully open or completely close, respectively, the fuel supply valve, and a spring actuated lever which is tripped from neutral or inoperative position by the movement of the lever first specified, as effected by the thermostatic regulator and is thereupon actuated by its spring to hold the fuel supply valve in open or in closed positions, respectively.

5. In a water heater system, the combination of a fuel supply valve, a valve stem fixed thereto, a thermostatic regulator, a spring actuated lever coupled positively to the thermostatic regulator and connected loosely with the valve stem, a lever having one arm coupled positively to the valve stem, a spring arranged to act on the other arm of said lever to throw it in either direction from a central position and means to limit the movement of said lever in one direction.

[Claims 6 to 8 not printed in the Gazette.]

875,218. GAS-BURNER. EDWIN RUUD, Pittsburg, Pa. Filed May 9, 1907. Serial No. 372,809.



1. The combination, with a gas and air mixing chamber, of an expanded discharge chamber open directly to the mixing chamber and having an open front, a foraminous burner plate extending across the front of said discharge

chamber, a cap plate secured to the discharge chamber in front of the burner plate and forming therewith an elongated narrow burner opening, said cap plate having formed on its inner side a plurality of separate and independent discharge channels at and near its top and leading to the outer end of the burner opening.

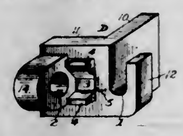
2. The combination, with a gas and air mixing chamber, of an expanded discharge chamber open directly to the mixing chamber and having an open front, a foraminous burner plate extending across the front of said discharge chamber, a cap plate secured to the discharge chamber in front of the burner plate and forming therewith an elongated narrow-burner opening, said cap plate having a lip at its top which projects over the burner opening and the joint between the discharge chamber and burner plate and prevent access of water to the inside of the burner opening.

3. The combination, with a gas and air mixing chamber, of an expanded discharge chamber open directly to the mixing chamber and having an open front, a foraminous burner plate extending across the front of said discharge chamber, a cap plate secured to the discharge chamber in front of the burner plate and forming therewith an elongated narrow burner opening said cap plate having a lip at its top which projects over the burner opening and the joint between the discharge chamber and burner plate, said cap plate provided with a plurality of separate and independent discharge channels between said lip and the burner plate and extending to the outer edge of burner opening.

4. The combination, with a gas and air mixing chamber, of an expanded discharge chamber open directly to the mixing chamber and having an open front, a foraminous burner plate extending across the front of said discharge chamber, a cap plate covering the front of said discharge chamber and separated therefrom by an intervening space and forming therewith an elongated narrow burner opening, said plate having a plurality of separated ribs or projections extending from its inner face to the burner plate at and near the top thereof, means projecting over and shielding the burner opening and connections by which the burner plate is clamped in position between the discharge chamber and the ribs of the cap plate.

5. The combination, with a gas and air mixing chamber, of an expanded discharge chamber open directly to the mixing chamber and having an inclined open front, a foraminous burner plate extending across and inclined correspondingly with the front of said discharge chamber, a cap plate covering the front of said discharge chamber, and separated therefrom by an intervening space and forming therewith an elongated narrow burner opening, said plate having a plurality of separated ribs or partitions extending from its inner face to the burner plate and a lip at its top which projects over the joint between the burner plate and the inclined face of the discharge chamber and prevents access of water to the inside of the burner opening, and connections by which the burner plate is clamped in position between the discharge chamber and the cap plate.

875,219. CLAMPING DEVICE FOR BUILDING CONSTRUCTIONS. CHARLES H. SCAMMELL, New York, N. Y., assignor to The New Jersey Wire Cloth Company, Trenton, N. J., a Corporation of New Jersey. Filed May 17, 1907. Serial No. 374,145.



1. An angle clamp having its two sides provided with lugs for holding the bolts parallel with the clamp sides, one lug being provided with a bolt hole and the other with an open bolt slot.

2. An angle clamp having its two sides provided with lugs for holding the bolts parallel with the clamp sides, one lug being provided with a bolt hole and the other with an open bolt slot, the bolt hole and bolt slot being in line.

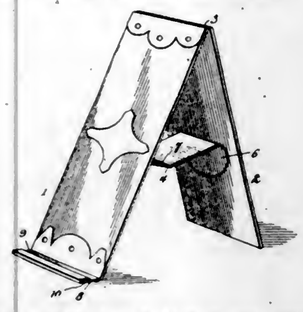
3. A clamp having two sides at an angle to each other, one side being provided with a lug having a bolt hole and a head holding recess and bolt stop between the bolt hole and clamp corner, and the other side having a lug with an open bolt slot.

4. A clamp having two sides at an angle to each other, one side being provided with a lug having a bolt hole, and a bolt stop between the bolt hole and clamp corner, and the other side having a lug with an open bolt slot.

5. An angular frame work consisting of lagging B and battens C held together by bolts E and clamps D, said clamps D having their sides provided, respectively, with bolt holding lugs, one having a bolt hole and the other an open bolt slot.

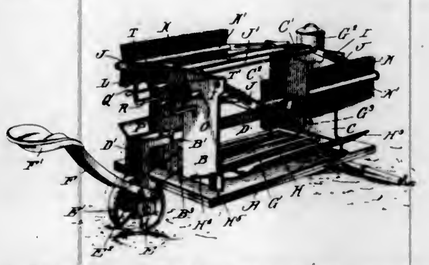
[Claims 6 to 11 not printed in the Gazette.]

875,220. EASEL. WALTON D. SMITH, Prophetstown, Ill., assignor of one-half to Julius H. Tascher, Prophetstown, Ill. Filed Oct. 4, 1906. Serial No. 337,442.



An easel provided with a foldable foot constructed of flexible material and provided at its outer portion with a strip forming a shoulder and secured to the foot within a fold of the flexible material.

875,221. CREMATOR FOR INSECTS. SAMUEL F. SNYDER, Canton, Ohio. Filed Feb. 15, 1907. Serial No. 357,546.



1. In a device of the kind described the combination with a platform, of collecting plates pivotally mounted thereon and means for operating said plates.

2. In a device of the kind described, the combination with a platform provided with a pan of burners arranged to each side of said pan and collecting means carried by said platform.

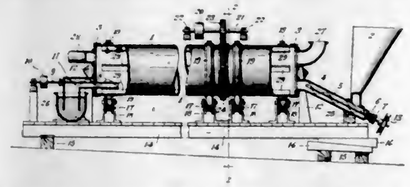
3. In a device of the kind described, the combination with a platform mounted on a wheel, of a receiving pan carried by said platform, burners arranged over said pan to each side, and collecting means carried by the platform.

4. In a device of the kind described, the combination with a wheeled platform, of a pan mounted on said platform provided with burners, collecting plates mounted on said platform and brushes mounted over said plates.

5. In a device of the kind described, the combination with a wheeled platform provided with a receiving pan, of collecting plates, brushes mounted over said plates and means for operating said plates.

[Claims 6 to 20 not printed in the Gazette.]

875,222. PROCESS FOR TREATING SMELTER SMOKE AND EXTRACTING VALUES FROM ORES OR METALLURGICAL WASTE PRODUCTS. STANLEY S. SORENSEN and GEORGE C. WESTBY, Murray, Utah. Filed Jan. 25, 1906. Serial No. 297,920.



1. The hereinbefore described process of purifying smelter smoke and extracting values from ores or metallurgical waste products consisting in preparing the materials to be treated by comminuting the same, and then causing sulfurous smoke to come in contact with the materials in the presence of moisture or water while they are being agitated, whereby the valuable bases or metals of the slag, are converted into sulfates, thionates, thionites, and sulfites by means of the sulfur dioxids and sulfuric acid of the smoke.

2. The herein described process for purifying smelter smoke and extracting values from ores or metallurgical waste products consisting in preparing the materials to be treated by comminuting the same and then causing the sulfurous smoke to come into direct contact with the materials in the presence of moisture or water while they are being agitated, whereby the sulfur dioxid and sulfuric acid of the smoke with the aid of solutions present in the mass resultant from the reactions between the materials being treated and the smoke combine with the bases, metals and salts of the materials being treated, and pass into solution, substantially as set forth.

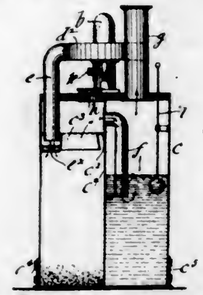
3. The hereinbefore described process of purifying smelter smoke and extracting values from ores or metallurgical waste products, consisting in causing such ores or products or any mixture thereof, suitably prepared by grinding, shredding, granulating or otherwise finely comminuting, to come in a moistened or wet state, into direct and intimate contact with the smoke, by substantially continuous minutely subdividing agitation or movement of said ores or products by means of spilling in fine streams or drops in suitable receptacles whereby fresh surfaces of such ores or products are exposed at frequent intervals, and the sulfur dioxid and sulfuric acid of the smoke are caused to combine with the valuable bases or metals of the material to be treated and become converted into sulfates, thionates, thionites and sulfites and the flue dust is extracted, and subsequently treating the residual liquor and undissolved residues for the recovery of the values therein, in any desired manner.

4. The hereinbefore described process of purifying smelter smoke and extracting values from ores or metallurgical waste products, consisting in causing such ores or products or any mixture thereof, suitably prepared by grinding, shredding, granulating or otherwise finely comminuting, to come in a moistened or wet state, into direct and intimate contact with the smoke, by substantially continuous minutely subdividing agitation or movement of said ores or products by means of spilling in fine streams or drops in suitable receptacles whereby fresh surfaces of such ores or products are exposed at frequent intervals, and the sulfur dioxid and sulfur acid of the smoke with the aid of solutions present in the mass resultant from the reactions between the material being treated and the smoke, combine with the metals, bases and salts of the materials being treated and go into solution, and subsequently treating the residual liquor and indissoluble residues for the recovery of the values therein, in any desired manner.

5. The herein described process of purifying smelter smoke and extracting values from slag, slimes, tailings or ores, consisting in preparing the materials to be treated by comminuting the same, in causing the sulfurous smoke to come into direct contact with the materials in the presence of moisture or water, while they are being agitated, whereby the valuable bases or metals of the materials are converted into sulfates, thionates, thionites and sulfites by means of the sulfur dioxid and sulfuric acid of the smoke, and collecting the valuable residual concentrates left after the solution of the bulk of the material.

[Claims 6 to 16 not printed in the Gazette.]

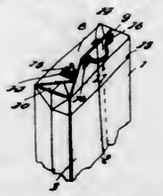
875,223. CINDER-COLLECTING ATTACHMENT FOR LOCOMOTIVES. JOB SPEIER, New York, N. Y. Filed Mar. 30, 1907. Serial No. 365,538.



1. The combination, with a locomotive-boiler, of a cinder-collecting attachment provided with a transverse partition so as to form two compartments, one for collecting the coarser particles and the other filled with water for collecting the finer particles, an up-take in the first compartment, a downwardly-extending conducting-pipe connecting the upper part of the first compartment with the lower part of the water-compartment, a ventilator supported on the locomotive, a motor for operating the same, a curved smokestack connected with the center of the fan-casing, and a curved pipe for connecting the ventilator-casing with the first compartment of the cinder-collecting attachment.

2. In a cinder-collecting attachment for locomotives, a casing provided with a central partition, a supply-pipe connected with the smokestack for supplying the products of combustion to the first compartment of the casing, a deflecting-plate below the lower end of the supply-pipe, a horizontal partition at the upper end of the first compartment provided with an up-take, a downwardly-extending pipe connecting the upper part of the first compartment with the lower part of the water-compartment, and a chimney at the upper part of the second or water-compartment.

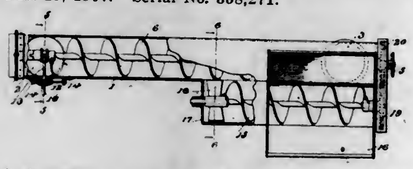
875,224. PAPER BAG. CAROLINE UNDERWOOD, Riddle, Oreg. Filed July 31, 1906. Serial No. 328,610.



A bag having a closed bottom, sides and ends, said sides and ends being creased to form inwardly folding flaps, the

end flaps first folding, a first side flap folding over the end flaps and a second side flap folding over the said end flaps and first side flap, and a closure for the bag comprising a pair of plates having openings formed therein and provided with prongs by means of which they are secured to the second side flap, a strip of tape having opposite ends thereof engaged by the prongs of the two plates, and corresponding plates secured to the first side flap and carrying flexible tangs designed to engage the openings in the first mentioned pair of plates.

875,225. GRAIN-CONVEYER. EDWARD J. VRAALSTAD, Buffalo, N. Y., assignor of one-half to Buffalo Pitts Company, Buffalo, N. Y., a Corporation of New York. Filed Feb. 19, 1907. Serial No. 358,271.



1. A conveyer comprising a rotating screw, a casing therefor having outlets at its opposite ends, means for changing the direction of rotation of the screw, a hopper, and means for feeding grain from the hopper into said casing, said means located wholly at a point intermediate said outlets.

2. A conveyer comprising a rotating screw, a casing therefor having outlets at its opposite ends, means for changing the direction of rotation of the screw, a hopper, and constantly operated means for feeding grain from the hopper into said casing, said means located wholly at a point intermediate said outlets.

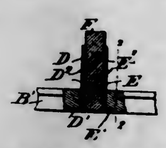
3. A conveyer comprising a rotating screw, a casing therefor having outlets at its opposite ends, means for changing the direction of rotation of the screw, a grain-receiving casing opening into the former casing at a point intermediate said outlets, and means in said grain-receiving casing for feeding grain into the first mentioned casing.

4. A conveyer comprising a rotating screw, a casing therefor having outlets at its opposite ends, means for changing the direction of rotation of the screw, a grain-receiving casing opening into the former casing intermediate said outlets, and a second screw located in said grain-receiving casing for feeding grain into the first mentioned casing.

5. A conveyer comprising a shaft designed to be continuously operated in one direction, a screw concentric to and operated by said shaft, means for causing said screw to rotate with, or in reverse direction to, said shaft, a casing for said screw having outlets at its opposite ends, a grain-receiving casing opening into the former casing intermediate said outlets, and a second screw located in said grain-receiving casing and operated by said shaft.

[Claims 6 and 7 not printed in the Gazette.]

875,226. WINDOW-SASH CLAMP. JAMES S. WALLACE, Rockport, Mass. Filed Mar. 22, 1907. Serial No. 363,923.

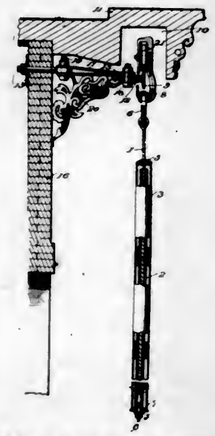


1. In a sash, the combination with the bottom rail provided with a mortise, of braces secured in said mortise and a mullion arranged in said mortise secured to said brace.

2. In a sash, the combination with the bottom rail having recesses formed in the under side adjacent to the mortise, braces secured in said mortise having angled ends fitting in said recesses and mullions arranged in said mortises secured to said braces.

3. In an upper sash, the combination with the bottom rail provided with mortises having recesses formed in its under side adjacent the mortises, tenons formed on the end of mullions arranged in said mortises, braces extending through said mortises provided with angled ends fitting in said recesses, and screws or nails passing through said braces into said mullions.

875,227. FIRE-ESCAPE. ROBERT WATSON, Vancouver, British Columbia, and CHARLES E. STEVENSON, Toronto, Ontario, Canada. Filed Nov. 9, 1906. Serial No. 342,719.



1. In a fire escape, a slide pole of composite construction, comprising a suspended flexible strain sustaining core piece, a stiffener fitted to the core piece and supported thereby, a casing encircling the core piece and its stiffener and having its outer side smooth and free from projecting parts to admit of a person sliding down thereon freely, and positive connecting means between the core piece and casing to support and space the latter from the said core piece.

2. In a fire escape, a slide pole comprising a flexible strain sustaining core, a tube encircling said core and comprising sections and adapted to stiffen the said core, and a casing enveloping the said core and its strengthening or stiffening tube and polished upon its exterior and giving to the slide pole the desired diameter to enable the user to obtain a safe hold.

3. In a fire escape, a slide pole comprising a flexible strain sustaining core piece, a stiffening tube encircling said flexible core piece and composed of jointed sections, and a sliding casing inclosing the core piece and its stiffening tube and likewise composed of jointed sections, the joints of the casing being arranged out of register with the joints of the tube.

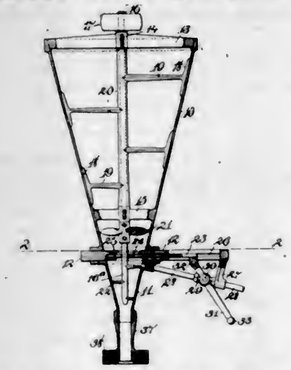
875,228. APPARATUS FOR FILLING CORE-BOXES. ERVIN E. WITHAM, Newark, N. J. Filed Dec. 12, 1906. Serial No. 347,412.

1. An apparatus for filling core-boxes comprising a hopper, a gate to close the hopper, a pipe to convey compressed fluid to the hopper beneath the gate, a valve in the pipe, and means for simultaneously closing the gate and opening the valve, and vice versa.

2. An apparatus for filling core-boxes comprising a hopper, a swinging gate adapted to close the hopper, a pipe entering the hopper beneath the gate, a valve in the pipe, and means for simultaneously opening the valve and closing the gate, and vice versa.

3. An apparatus for filling core-boxes comprising a hopper having a reduced portion therein, a swinging gate adapted to close the reduced portion, a pipe conveying

pressure to the hopper beneath the reduced portion, a valve in the pipe, means for operating the valve, and a



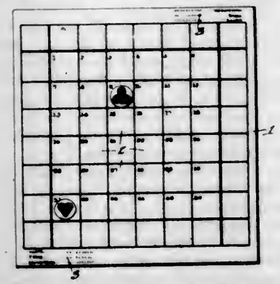
connection from the valve to the gate acting to close the gate when the valve is opened.

875,229. RAIL-JOINT. JAMES O. WRENCH, Beloit, Kans. Filed Mar. 23, 1907. Serial No. 364,006.



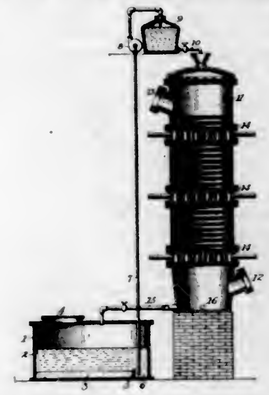
In a rail joint, the combination of abutting rail ends meeting between a pair of ties, a base plate arranged between the ties and fitting against the lower side of the joint, longitudinal ribs projecting upwardly from opposite sides of the base plate and spaced from the base of the rail ends, longitudinal arms projecting from opposite ends of the base and forming continuations of the before mentioned ribs, the said arms resting upon the respective ties and having openings formed therein, fish plates applied to opposite sides of the rail ends and formed with horizontal wings projecting laterally beyond the base of the rails and engaging the before mentioned ribs upon the base plate, the projecting edges of the wings being provided toward opposite ends thereof and over the ties with spike receiving notches having the mouths thereof closed by the before mentioned arms projecting from the base plate, fastening members passing through the openings in the arms to secure the base plate to the ties, and fastening members engaging the notches in the fish plates to secure the rail ends and fish plates in position.

875,230. GAME-BOARD. THOMAS H. YOUNGMAN, Mitchell, S. D. Filed Aug. 22, 1907. Serial No. 389,715.



A game apparatus consisting of a board marked with progressively numbered blocks, a series of game pieces progressively numbered correspondingly to the blocks, and a pair of game pieces having fanciful designs thereon distinguishing them from the numbered pieces.

875,231. PROCESS OF MAKING CHLORIDS OF SULFUR. CHARLES E. ACKER, Niagara Falls, N. Y., assignor, by mesne assignments, to Marcus Stine, New York, N. Y. Filed July 18, 1904. Serial No. 217,126.



1. The process of making sulfur chlorids, which consists in dissolving sulfur in sulfur chlorid, and subjecting the solution in the absence of undissolved sulfur to the action of a gaseous body containing chlorin and a diluent, as set forth.

2. The process of making sulfur chlorid, which consists in dissolving sulfur in sulfur chlorid contained in a suitable receptacle, passing such solution into a reaction chamber, subjecting it therein to the action of a gaseous body containing chlorin, returning the product thus produced to the container, dissolving more sulfur in the product, and repeating the cycle of operations.

3. The process of making sulfur chlorids, which consists in dissolving sulfur in sulfur chlorid, subjecting the solution in the absence of undissolved sulfur to the action of a gaseous body containing chlorin and a diluent, and withdrawing the heat produced by the reaction, as set forth.

4. The process of making sulfur chlorids, which consists in dissolving sulfur in sulfur chlorid, subjecting the solution to the action of a gaseous body containing chlorin, withdrawing the heat produced by the reaction, dissolving more sulfur in the product and repeating the cycle of operations, as set forth.

5. The process of making sulfur chlorids which consists in dissolving sulfur in sulfur chlorid in a suitable dissolving chamber, transferring said solution to a re-action chamber, passing fine streams of the solution through an atmosphere containing chlorin therein, returning the product to the dissolver and dissolving more sulfur in the product, as set forth.

[Claims 6 to 10 not printed in the Gazette.]

875,232. REFINING CARBON TETRACHLORID. CHARLES E. ACKER, Niagara Falls, N. Y., assignor, by mesne assignments, to Marcus Stine, New York, N. Y. Filed Jan. 8, 1906. Serial No. 295,051.

1. In the process of purifying carbon tetrachlorid, the step of reacting upon the same with a solution of a reagent containing the hypochlorous radicle.

2. In the process of purifying carbon tetrachlorid, the step of reacting upon the same with an aqueous solution of a reagent containing the radicle of hypochlorous acid.

3. The process of refining impure carbon tetrachlorid which consists in acting upon it with an aqueous solution of a reagent comprising the radicle of hypochlorous acid at a temperature of about 35° C. until the impurity is destroyed.

4. The process of refining impure carbon tetrachlorid which consists in acting upon it with an aqueous solution of a reagent comprising the radicle of hypochlorous acid at a temperature of about 35° C. until the impurity is destroyed, and distilling off the pure carbon tetrachlorid from the reaction mixture.

5. The process of refining impure carbon tetrachlorid, which consists in acting upon it with an aqueous solution of calcium hypochlorite.

[Claims 6 and 7 not printed in the Gazette.]

875,233. EYEGLASS NOSE-GUARD. LEO F. ADT, Albany, N. Y. Filed Mar. 24, 1906. Serial No. 307,773.

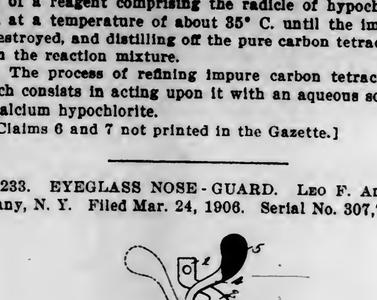


1. An eyeglass guard formed of flat stock embodying an attaching portion, a downwardly-extending arm having a free end forming a lower nose-bearing portion or pad thereon and a resilient arm bent in the direction of the edge of the stock crossing the downwardly-extending arm and having a nose-bearing portion or pad arranged above the lower bearing pad or portion.

2. An eyeglass guard formed from a single stamping of sheet material embodying an attaching portion, an arm extending rearwardly and downwardly from said attaching portion and having a bearing pad or portion thereon and an arm extending directly from the attaching portion and bent in the direction of one edge of the stock crossing the lower bearing arm and having the upper end formed into a bearing portion or pad for engaging the nose of the wearer.

3. An eyeglass guard formed from a single stamping of flat stock embodying the attaching end, the downwardly and rearwardly-extending arm having the lower bearing portion or pad at its lower end and the arm extending from the edge of the downwardly-extending arm formed into a flat loop thence crossing the downwardly-extending arm and extended above the latter, the end being widened to form the upper bearing pad or portion.

875,234. MIXING-MACHINE. MOIS H. AVRAM, New York, N. Y., assignor to Avram-Leet Engineering Company, New York, N. Y., a Corporation of New York. Filed Dec. 15, 1906. Serial No. 347,946.



1. In a mixer, the combination of a pan, a revoluble sleeve concentric therewith, a frame carried thereby, paddles carried by said frame and revoluble relatively thereto, a shaft within said sleeve geared to said paddles said sleeve being revoluble relatively to said shaft, and means for causing said sleeve to revolve about its own axis.

2. In a mixer, the combination of a pan, a revoluble sleeve concentric therewith, a frame carried by said sleeve, paddles carried by said frame and revoluble relatively thereto, a shaft within said sleeve geared to said paddles said sleeve being revoluble relatively to said shaft, and means for causing said sleeve and said shaft to revolve relatively to one another and to the pan about the axis of said shaft.

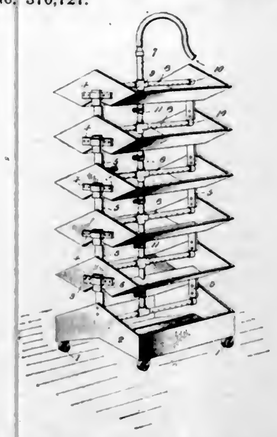
3. In a mixer, the combination of two pans, each having a bottom, a revoluble frame in said lower pan, and a revoluble frame in said upper pan carried by the frame in said lower pan and fixed relatively to said lower frame, paddles carried by said frames and revoluble relatively thereto, a shaft concentric with the axis of revolution of said frames and revoluble relatively thereto, and means for causing said frames and said shaft to revolve independently.

4. In a mixer, the combination of a pan having a central boss arising from its bottom to a considerable distance, a frame resting thereon and having a depending sleeve extending through said boss, paddles rotatably mounted in said frame, a shaft passing through said sleeve, said shaft having a bearing supported on top of said frame and geared to said paddles, and means for revolving said shaft and said frame respectively relatively to one another and to the pan.

5. In a mixer, the combination of a pan, a frame therein, a sleeve connected thereto, a shaft passing through said sleeve, paddles carried by said frame and revoluble relatively thereto, gearing connecting said paddles to said shaft, a cover for said gearing also carried by said frame and revoluble with said frame, and means for driving said frame connected to the lower end of said sleeve.

[Claims 6 to 8 not printed in the Gazette.]

875,235. PORTABLE STAND FOR FLOWERS, &c. JOSEPH F. BASTEL, St. Louis, Mo. Filed Apr. 27, 1907. Serial No. 370,727.



1. A stand comprising a series of superposed trays, each tray having opposite ends parallel and adapted to occupy a vertical position and having opposite sides upwardly and outwardly inclined and supporting means for the several trays applied to the end pieces thereof and off-set between their ends to provide supporting shoulders.

2. A stand comprising a series of superposed trays and brackets having end portions attached to opposite sides of corresponding portions of adjacent trays and having off-set portions between their ends to form supporting shoulders, and having the extensions above said shoulders embracing outer sides of the trays resting thereon and held thereto to maintain the several trays in fixed position when placed together.

3. A stand comprising a plurality of superposed trays, keepers applied to opposite sides of the trays, and brackets likewise secured to opposite sides of the trays and having off-set portions to provide supporting shoulders and having the ends above said shoulders adapted to engage said keepers, whereby the trays when assembled are held in fixed position.

4. In combination, a series of vertically arranged trays, each tray comprising oppositely inclined portions, a centrally disposed feeder pipe, and a series of distributing pipes having connection with the main feeder pipe and located at a point intermediate of the oppositely inclined portions of the trays.

875,236. FASTENING DEVICE FOR SPLIT CARNATIONS. ARMIN J. BAUR, Millcreek township, Erie county, Pa. Filed Jan. 7, 1907. Serial No. 351,059.

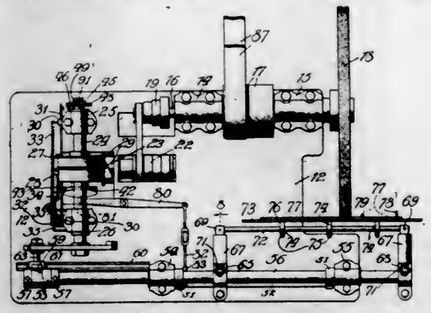


1. In a fastening for split carnations and the like, the combination with the calyx and petals of the flower of a metallic fastener comprising parts extending through the edges of the calyx and laterally between the calyx and the petals for securing the edges of the calyx.

2. In a fastening for split carnations and the like, the combination with the calyx of the flower of means comprising a metal device having the laterally extending base; a tongue extending intermediate the ends of the base; and prongs on the tongue, the base being arranged at one side of the edges of the calyx, the tongue extending between the edges and the prongs being secured to the edges.

3. A fastening for securing the edges of the calyx of split carnations and the like comprising a metal base portion; a tongue extending therefrom intermediately of the ends of the base; and prongs extending from the tongue in position to be closed on the edges of the calyx for securing the same.

875,237. CUTLERY-GLAZING MACHINE. JOHN G. BLESSING, Chicago, Ill., assignor to American Cutlery Company, a Corporation of Illinois. Filed Oct. 15, 1906. Serial No. 338,933.



1. In a machine of the character described, the combination with the abrading-wheel and work-holder, of means for reciprocating the work-holder comprising, in combination, a rotary shaft, an eccentric sliding connection on the shaft operatively engaging a shaft carrying the holder, means for changing the eccentricity of said connection, and means for rotating said shaft.

2. In a machine of the character described, the combination with the abrading-wheel, of a work-holder comprising a shaft and a frame and work-carrier thereon, and means for reciprocating the work-holder comprising a rotary shaft, a vertically-disposed guide-bar on said shaft, a sliding block on the said bar eccentrically connected with said shaft, and means for rotating said shaft.

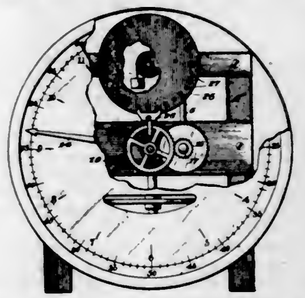
3. In a machine of the character described, the combination with the abrading-wheel, of a work-holder comprising a shaft and a frame and a work-carrier thereon, means for reciprocating the work-holder comprising a rotary shaft, a vertically-disposed guide-bar on said shaft, a sliding block on the said bar eccentrically connected with the said shaft, means for varying the eccentricity of said block to increase or diminish the stroke of the work-holder, and means for rotating said shaft.

4. In a machine of the character described, the combination with the abrading-wheel, of a work-holder comprising a rocking-frame, a rock-shaft journaled in said frame, means for reciprocating the rock-shaft in the frame, a work-holder frame fastened to said rock-shaft and sliding against said rocking-frame, and means for rocking said first-named rocking frame.

5. In a machine of the character described, the combination with the abrading-wheel and workholder comprising a rocking-frame, a rock-shaft journaled in said frame, means for reciprocating the rock-shaft in the frame, a workholder-frame fastened to said rock-shaft and sliding against said rocking-frame and means for rocking said rocking-frame comprising a shaft, means for intermittently rotating said shaft, a cam on said shaft having its cam surface on a lateral face thereof, and lever mechanism connected with the workholder and engaging said cam surface, for the purpose set forth.

[Claims 6 to 15 not printed in the Gazette.]

875,238. COMPUTING-METER. WARREN E. BOYCE, Pierce City, Mo., assignor of three-twelfths to William F. Gatewood, Pierce City, Mo., and four-twelfths to Ethelbert P. Lampkin, St. Louis, Mo. Filed Oct. 8, 1906. Serial No. 337,230.



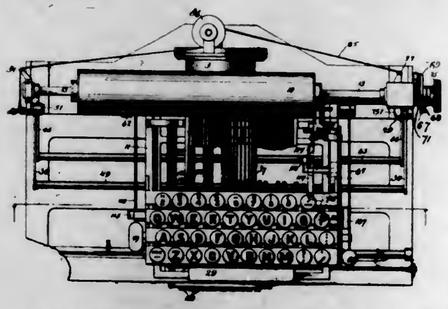
1. In an electric meter, the combination of an indicating mechanism actuated by a meter-motor, with an auxiliary dial mechanism operated by a suitable weight, and an escapement regulator controlling the auxiliary mechanism, substantially as shown and described.

2. In a computing meter, the combination with a meter frame, of a main dial indicating mechanism comprising a hanger C fixed to the meter frame; a horizontal shaft mounted in the said hanger; means for transmitting rotary motion from the meter shaft to the said horizontal shaft; a worm wheel on the said horizontal shaft to engage a gear wheel on a vertical shaft; the said gear wheel exchangeable and of a size regulated to the price rate for the current; the said vertical shaft and worm wheel thereon; the bracket D fixed to the meter frame; a lower short horizontal shaft and gear wheel thereon to engage with the worm on the vertical shaft; a long pointer hand and a pinion and loose gear and sleeve on the said lower horizontal shaft; a main recording dial, and a stud secured to the meter frame; a gear and pinion on said stud to respectively engage the pinion on the horizontal shaft and the gear on the loose sleeve; a lug on said sleeve, and a

short pointer hand to record each complete revolution of the long pointer hand; an escapement adapted to be rocked by the said lug; and an auxiliary dial mechanism controlled by the said escapement, substantially as set forth.

3. In a computing meter, the combination with a meter frame, a main dial secured to the meter frame, a main recording mechanism, and an escapement regulator; the said escapement regulator adapted to control an auxiliary mechanism comprising an upper short horizontal shaft mounted in a bracket; the said bracket secured to the meter frame; a sheave wheel mounted on the said horizontal shaft; a suitable weight suspended from a cord leading over and around the said sheave and designed to give rotation to the said horizontal shaft which is provided on its outer extremity with an auxiliary dial in inner position to the main dial; the said dial provided on its outer face with the multiple numerals of the highest amount recorded by the main dial; pins spaced between the said numerals to engage the escapement regulator permitting the multiples to appear successively through the opening formed in the main dial indicating the computed value, which added to the amount registered by the main dial gives the total value of the current flow through the meter circuit, substantially as set forth.

875,239. TYPE-WRITING MACHINE. HERBERT A. BAIGGS, New York, N. Y. Filed Dec. 4, 1900. Serial No. 38,606.



1. In a typewriting machine, the combination of a movable paper carriage, and a type carriage connected to move simultaneously with the paper carriage, the direction of the movement of the type carriage being opposite to that of the paper carriage and in line with the longitudinal axis of the latter.

2. In a typewriting machine the combination of a traveling type carriage, a paper carriage and a spring controlled by the type keys for imparting movement to said carriages in opposite directions.

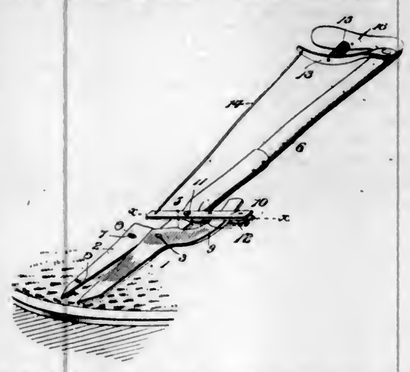
3. In a typewriting machine the combination of a traveling paper carriage, a traveling carriage which carries the type and type keys, a connection between said carriages, so arranged that the movement of one carriage will simultaneously move the other carriage in the opposite direction, and a spring controlled by the type keys for imparting movement to said carriages.

4. In a typewriting machine the combination of a traveling paper carriage, a traveling carriage which carries the type and type keys, connections between said carriages by which the movement of one carriage will be imparted to the other in the opposite direction, a spring for imparting movement to said carriages and a device controlled by the type keys for releasing and locking the carriages.

5. In a typewriting machine the combination with the shaft which supports the paper carriage, a pinion upon said shaft, two separate but positively connected gears, connections between said gears and the paper feed lever and means for shifting the position of the paper carriage and throwing said pinion into engagement with one or the other of said gears.

[Claims 6 to 21 not printed in the Gazette.]

875,240. LAWN-SHEARS. FRANK C. BROWN, Asheville, Kans. Filed Aug. 3, 1907. Serial No. 386,971.

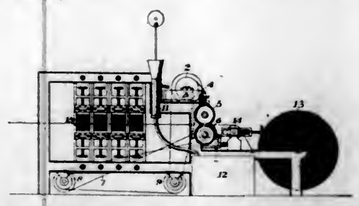


1. In an implement of the character set forth, the combination of a shear blade, a second shear blade having pivotal connection with the first mentioned shear blade and provided with a curved arm, an operating lever having a slot to receive the curved arm of the pivoted shear blade, spaced pulleys mounted upon the operating lever and receiving the said curved arm between them, and means for imparting oscillatory movement to the operating lever to effect opening and closing of the shear blade.

2. In combination, a shear blade, a second shear blade having pivotal connection with the first mentioned shear blade, and provided with a curved arm, an operating lever, spaced pulleys mounted upon the operating lever and receiving the said curved arm between them, and means for imparting oscillatory movement to said operating lever.

3. In combination, a relatively fixed shear blade, a handle extended therefrom, a pivoted shear blade coöperating with the fixed shear blade and having a curved arm, an operating lever pivoted between its ends to the said handle and having an end portion coöperating with the said curved arm to impart an oscillatory movement to the pivoted shear blade, a lever pivoted to said handle, and connecting means between the said lever and the operating lever.

875,241. MACHINE FOR COATING PAPER. MARTIN CANTINE, Saugerties, N. Y. Filed Apr. 6, 1906. Serial No. 310,245.



1. A web coating machine having a pair of mutually contacting positively driven hard face color rolls which are also feed rolls, substantially as described.

2. A web coating machine having a pair of superimposed mutually contacting and positively driven hard face color rolls, which are also feed rolls substantially as described.

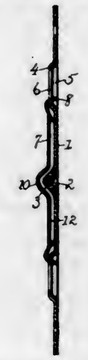
3. A machine for coating paper comprising coating rolls between which the paper passes and by which the color is applied to its opposite sides, a color-box and color-roll, a plate disposed to receive the color from the surface of the color-roll and deliver it to the surface of the upper coating-roll, and a color-box in which the lower coating-roll rotates and by which the color is supplied thereto substantially as described.

4. A web coating machine having a pair of mutually contacting positively driven hard face color rolls, which are also feed rolls, and brushes for opposite sides of the work after it passes from the rolls substantially as described.

5. A web coating machine having a pair of mutually contacting superimposed positively driven hard face color rolls, which are also feed rolls, and brushes for opposite sides of the work after it passes from the rolls substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

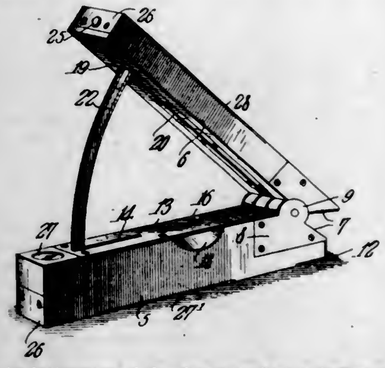
875,242. HINGE. WILBUR R. CORBIN, New Britain, Conn., assignor to The Corbin Cabinet Lock Company, New Britain, Conn., a Corporation of Connecticut. Filed Sept. 19, 1906. Serial No. 335,204.



1. Two hinge sections pivotally united and duplicates each of the other, each having a small opening through its upper surface and located at the outer end thereof, and a bar extending along the center of the leaves and having T-shaped ends each engaging within and movable lengthwise along said openings.

2. Two hinge sections pivotally united and duplicates each of the other, each having a small recessed projection at its upper surface forming a pocket underneath with a slot projecting through into said pocket, and a bar extending along the center of the leaves and having T-shaped ends each engaging within and movable lengthwise along said pockets.

875,243. LEVEL AND SQUARE. CHARLES J. CRAMER, Sedro Woolley, Wash. Filed Sept. 5, 1907. Serial No. 391,502.



1. An instrument of the class described including pivotally united members one of which is provided with an elongated opening, a graduated segment pivotally mounted on the opposite member and adapted to enter the opening when the pivoted members are folded, there being a transverse recess formed in one of the members and intersected by the elongated opening for the reception of the free end of the segment when said members are in open position.

2. An instrument of the class described including pivotally united members one of which is provided with intersecting longitudinal and transverse openings, a graduated segmental plate pivotally mounted on the other member and adapted to engage the longitudinal opening in the mating member when said members are folded, the free end of the plate being adapted to enter the transverse opening when the members are moved to open position, and a clamping screw carried by said mating member and adapted to engage the segmental plate at the transverse opening.

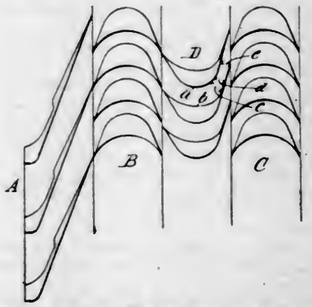
3. An instrument of the class described including pivotally united members one of which is provided with a plate having spaced elongated slots formed therein, there being openings formed in the body of the member and communicating with said slots, a graduated segmental plate pivotally mounted in one of the openings and having its free end normally extended through the adjacent slot and seated in the opposite opening, there being a longitudinal opening formed in the adjacent pivoted member and adapted to receive the intermediate portion of the segmental plate when the pivoted members are moved to folded position.

4. An instrument of the class described including pivotally united members movable to a position at right angles to each other to form a square, one of said members being provided with a spirit tube and the other member having a longitudinal slot formed therein, a graduated segment pivotally mounted on one of the members and adapted to enter the opening in the opposite member when said members are moved to closed position, there being a transverse opening formed in one of the members and intersecting the longitudinal opening for the reception of the free end of the segmental plate.

5. An instrument of the class described including pivotally united members movable to a position at right angles to each other to form a square, one of said members being provided with a spirit tube and the mating member with a longitudinally disposed opening, a graduated segment pivotally mounted on the tube carrying member and adapted to enter the opening in the mating member when said members are moved to folded position, there being a transverse opening formed in the mating member and intersecting the longitudinal opening for the reception of the free end of the segment, a clamping screw carried by the mating member and adapted to engage and clamp the segmental plate at the transverse opening, and a compass countersunk in the upper face of the tube carrying member.

[Claim 6 not printed in the Gazette.]

875,244. ELASTIC-FLUID TURBINE. CHARLES G. CURTIS, New York, N. Y., assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed Dec. 3, 1903. Serial No. 183,597.



1. An elastic-fluid turbine having a wheel provided with buckets, such buckets having their inlets of greater area in cross-section than their outlets, and an expansion-nozzle arranged to deliver the elastic fluid to such buckets.

2. In an elastic fluid turbine, an element having a vane

space acting to convert residual pressure into velocity, having its discharging end provided with a throat, and straight walls beyond the throat, and having anterior to the throat a curved portion of undiminished cross-sectional area from the receiving end of the vane space to the throat, substantially as set forth.

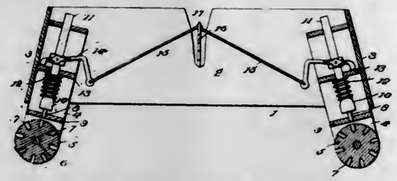
3. In an elastic fluid turbine, an intermediate stationary element having a vane space acting to convert residual pressure into velocity, having its discharging end provided with a throat, and straight walls beyond the throat, and having anterior to the throat a curved portion of undiminished cross-sectional area from the receiving end of the vane space to the throat, substantially as set forth.

4. In an elastic fluid turbine, an element having a vane space having parallel curved front and rear walls provided with a contracted throat beyond the center of the vane space and extending in straight parallel lines to the discharging end of the vane space, substantially as set forth.

5. In an elastic fluid turbine, an intermediate stationary element having a vane space having parallel curved front and rear walls provided with a contracted throat beyond the center of the vane space and extending in straight parallel lines to the discharging end of the vane space, substantially as set forth.

[Claim 6 not printed in the Gazette.]

875,245. BASE OF COOK-STOVES. ALICE DARROW, Simpson, Kans. Filed Aug. 28, 1907. Serial No. 390,562.



1. A stove base, legs projecting downwardly from said base and secured thereto, roller casters journaled in the lower ends of said legs and provided with notched peripheries, locking pins adapted to enter the notches of said casters, stems having a vertical movement in the respective legs and carrying said pins, said stems being spring pressed downwardly, and means for moving said stems upwardly so as to carry the pins out of engagement with the casters.

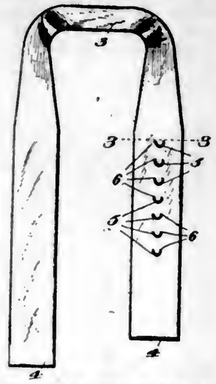
2. A stove base, bifurcated legs secured thereto and projecting below the base, roller casters journaled in the lower ends of said legs and provided in their peripheries with notches, cross bars secured within the respective legs above the casters, stems mounted to move vertically within the legs and spring pressed in a downward direction, pins projecting from the respective stems and adapted to extend through the cross bars into engagement with the notches of the casters, forks pivotally connected to said stems to raise the same, supports for said forks, and means for rocking said forks on their supports.

3. A base for stoves, provided with bifurcated legs, roller casters journaled in said legs, vertically movable stems mounted in said legs and provided with locking devices arranged to engage the casters to hold the same stationary, means for raising the stems out of engagement with the casters, link rods connected to the raising means of opposite stems, and operating levers operatively connected to the adjoining ends of the link rods.

875,246. NECKTIE. CHARLES W. T. DAVIES, New York, N. Y., assignor to The Good Form Manufacturing Company, New York, N. Y., a Corporation of New York. Filed Apr. 26, 1904, Serial No. 204,990. Renewed May 29, 1907. Serial No. 376,415.

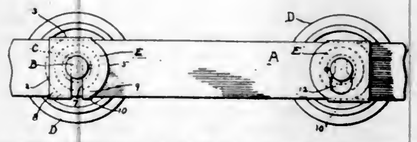
1. A necktie having a plurality of indepenrent retaining devices permanently sewed to the neck-tie at intervals lengthwise of the front loose depending portion thereof and adapted to be engaged with the shirt bosom fastening.

2. A necktie having sewed thereto a plurality of elastic loops disposed at intervals lengthwise of the front loose



depending portion of the necktie and adapted to be engaged with the shirt bosom fastening.

875,247. CONVEYER-CHAIN. JOSEPH DIERDORFF and WILLIAM W. WILLSON, Columbus, Ohio, assignors, by mesne assignments, to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Apr. 7, 1906. Serial No. 310,508.



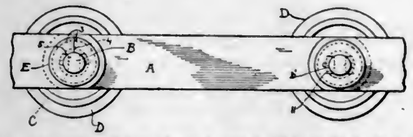
1. The combination with the side bars and connecting pintles of a chain, the pintles being formed with reduced necks, of locking or securing washers, each slotted to engage with the neck of a pintle and formed along its opposite edges with flanges arranged to engage with the opposite edges of a side bar of the chain and prevent movement of the washer relative to the pintle, substantially as set forth.

2. The combination with a chain having side bars and connecting pintles, the pintles being formed with reduced necks, of washers for locking the pintles in place, each slotted to engage with the neck of a pintle and having along one edge a flange adapted to engage with the upper edge of a side bar of the chain, the opposite edge of the washer extending beyond the lower edge of the side bar and being arranged to be bent inward to be engaged therewith, substantially as set forth.

3. The combination with a chain having side bars and connecting pintles, the pintles being formed with reduced necks, of washers for locking the pintles in place, each washer being formed with a flange 6 along one edge and with a centrally disposed slot 7 adapted to engage with the neck of a pintle and serve to divide the washer to form two legs, 8, 9, the lower ends of which are arranged to be bent to form flanges 10, substantially as set forth.

4. A locking washer for holding in place a connecting pintle of a conveyer or drive chain, consisting of a plate having a straight rear edge 2 and a front edge 5 shaped to conform with the end of a side bar of a chain link, the upper edge of the plate being provided with an in-turned flange and the lower edge extending beyond the lower edge of the said side bar to permit of its being bent inward under the lower edge thereof, and the plate being formed with a slot extending in a direction at right angles to the said upper and lower edges and arranged to engage with the pintle which the washer is to hold in position, substantially as shown.

875,248. CONVEYER-CHAIN. JOSEPH DIERDORFF and WILLIAM W. WILLSON, Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Manufacturing Company, a Corporation of Ohio. Filed Apr. 7, 1906. Serial No. 310,509.



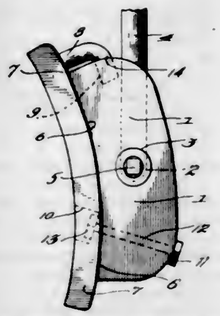
1. The combination with a chain having side bars and connecting pintles, the exposed ends of the pintles being formed with reduced necks, of securing washers, each slotted to engage with the neck of a pintle to prevent endwise movement thereof, and provided with bendable parts lying alongside of the slot and arranged to be forced into the neck of a pintle to prevent the disengagement of the washer from the pintle by transverse movements of the former, substantially as set forth.

2. The combination with a chain having side bars and connecting pintles, the exposed ends of the pintle being formed with reduced necks, of securing washers each formed with a central aperture adapting it to engage with the neck of a pintle and prevent endwise movement thereof and having bendable wings adjacent to the aperture arranged when bent out of the plane of the washer to open or enlarge the aperture to permit the washer to be applied to the pintle and when bent into the plane of the washer to contract the aperture and enter the said neck of the pintle to secure the washer in place, substantially as set forth.

3. The combination with a chain having side bars and connecting pintles, the exposed ends of the pintles being formed with reduced necks, b^2, and heads b', of securing washers for preventing endwise movements of the pintles, each formed with a central aperture and with bendable wings arranged to be bent out of the plane of the washer as a whole and away from the center of the aperture, whereby the latter is enlarged, the ends of the wings being adapted to enter the neck of the pintle behind the head b' when they are forced down into the plane of the washer substantially as set forth.

4. The combination with a chain having side bars and connecting pintles, the exposed ends of the pintles being formed with reduced necks b^2 and heads b', of securing washers for preventing endwise movements of the pintles each formed with a central aperture having opposite straight edges, and with bendable wings arranged between one end of the aperture and the periphery of the washer, substantially as set forth.

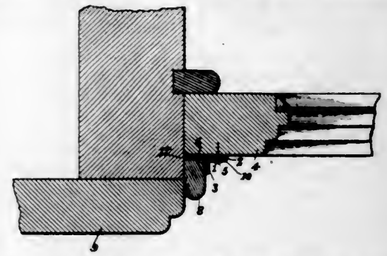
875,249. BRAKE-SHOE. CHARLES J. EGLER, New York, N. Y. Filed May 13, 1907. Serial No. 373,342.



1. A device of the character described including a brake block, a support therefor, a brake shoe, a hook formed on said brake shoe, a socket formed in said brake block adapted to receive said hook, and a reception socket formed in said brake shoe adapted to receive a diagonally mounted bolt carried by said brake block.

2. A device of the character described including a brake shoe having formed on its upper end an engaging hook adapted to engage a reception socket in a brake block, and at an intermediate portion thereof a reception socket adapted to receive a diagonally mounted bolt carried by said brake block.

875,250. WEATHER-STRIP. WILLIAM H. ETTER, Marietta, Ohio. Filed Jan. 27, 1906. Serial No. 298,160.



1. The combination with a window frame, and a sash, of a combined guide and weather strip consisting of an exteriorly arranged substantially L-shaped body portion fitting in the angle formed by the sash and the window frame and having its sides or wings rigid with each other, one of the sides or wings constituting an attachment portion and the other a guiding portion, and a resilient tongue or flange extending from the body portion into the space between the sash and the window frame or casing to form a tight joint or connection.

2. The combination with a sash, and a window frame, of a combined guide and weather strip comprising an exterior body portion arranged in the angle formed by the sash and the window frame and having an exteriorly arranged guiding flange or wing, said body portion being folded to form a plurality of plies or thicknesses, and a resilient tongue secured within the fold of the body portion and extending into the space between the sash and the window frame to form a tight joint.

3. The combination with a sash, and a window frame, of a combined guide and weather strip comprising a body portion arranged exteriorly in the angle formed by the sash and the window frame and provided with an exterior guiding flange projecting from and rigid with the body portion, and a resilient tongue extending into the space between the sash and the window frame.

4. A combined guide and weather strip comprising an exteriorly arranged body portion having an attachment flange and provided with a projecting guide flange, said body portion being folded to form a plurality of plies or thicknesses, and a resilient tongue secured within the fold of the body portion and extending therefrom.

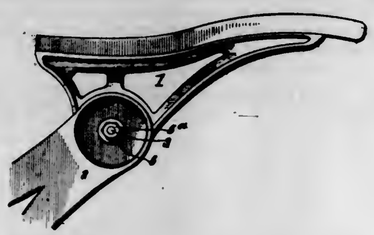
5. A combined guide and weather strip comprising a substantially L-shaped body portion arranged exteriorly in the angle formed by the sash and the window frame and having two sides or wings folded to form a plurality of plies or thicknesses, one of the sides being secured to the sash and the other side or wing being slidable on the exterior of the window frame, and a resilient tongue extending from the body portion at the angle of the same and clamped between the folds of the body portion and secured by the fastening devices for securing the body to a window, said tongue projecting into the space between the sash and the window frame to form a tight joint.

[Claims 6 and 7 not printed in the Gazette.]

875,251. FOLDING JOINT FOR SCHOOL-DESKS. JOHN F. FIELD, Ionia, Mich., assignor to E. H. Stafford Manufacturing Company, Ionia, Mich., a Corporation of Illinois. Filed Mar. 11, 1907. Serial No. 361,751.

1. In a hinge-joint, the combination of opposite members having radially disposed ribs on their opposed faces,

the ribs on the members alternating in position; a buffer-ring interposed between the ribs of the opposed members, and means for holding the ribs in contact with the buffer ring.



2. In a hinge-joint, the combination of a member having a journal stud, and ribs radiating from the stud, an opposed member having radial ribs, and a central aperture to accommodate the stud of the first member, and a buffer-ring interposed between the opposed members and engaged by the ribs thereof.

3. In a hinge-joint, the combination of opposed members, radially disposed ribs on each member provided with enlarged heads or stops on their outer ends and with tapering parts on their inner faces, a buffer-washer interposed between the members and pressed by the ribs; a bolt transfixing the members, and a securing nut on the end of the bolt.

4. In a hinge-joint, the combination of opposite members having radially disposed ribs on their opposed faces, the ribs on the members alternating in position; a stud on one member engaging in a corresponding aperture in the other member, a buffer-ring or washer interposed between the ribs of the opposed members, and means for holding the members in contact with the washer, substantially as described.

5. In a hinge-joint, the combination of opposed members, an axial stud on one member engaged by a corresponding aperture on the other member, radially disposed ribs on each member provided with enlarged heads or stops on their outer ends and with inclined ribs on their inner faces, a buffer-washer interposed between the members and pressed by the ribs; a bolt transfixing the stud, and a securing nut on the end of the bolt, substantially as and for the purpose described.

[Claims 6 to 8 not printed in the Gazette.]

875,252. APPARATUS FOR MANUFACTURING UPHOLSTERY. GEORGE M. FINCKEL, Columbus, Ohio, assignor to The E. M. Hulse Company, Columbus, Ohio, a Corporation of Ohio. Filed Dec. 12, 1906. Serial No. 347,424.



1. In an apparatus for the manufacture of upholstery, the combination of a table upon which the upholstery can be supported, a holder at the edge of said table for the reception of a strip of material to be added to the upholstery and through which strip fastening devices are to be passed, said holder comprising two parts, one part being a clamping bar movable with reference to the other part to engage said strip.

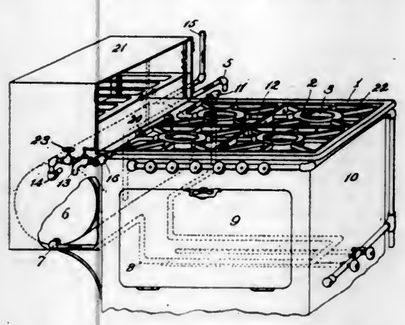
2. In apparatus for the manufacture of upholstery, the combination of a table upon which the upholstery can be supported, a holder at the edge of said table for the reception of a strip of material to be added to the upholstery and through which strip fastening devices are to be passed, said holder comprising two parts, one part being a clamping bar movable with reference to the other part to engage said strip, and means to retain said parts in engagement with the strip.

3. In apparatus for the manufacture of upholstery, the combination of a table upon which the upholstery can be supported, a holder at the edge of said table for the reception of a strip of material to be added to the upholstery and through which strip fastening devices are to be passed, said holder comprising two parts, one part being a clamping bar movable with reference to the other part to engage said strip, and means to retain said parts in engagement with the strip, and means for moving them jointly with reference to the edge of the table.

4. In apparatus for the manufacture of upholstery, the combination of a table upon which the upholstery can be supported, a holder at the edge of said table for the reception of a strip of material to be added to the upholstery and through which strip fastening devices are to be passed, said holder comprising a bar of U form in cross section and provided with lips, said bar containing a second bar, and means for moving the second bar toward said lips to clamp the strip between it and the lips.

5. In apparatus for the manufacture of upholstery, the combination of a table upon which the upholstery can be supported, a holder at the edge of said table for the reception of a strip of material to be added to the upholstery and through which strip fastening devices are to be passed, said holder comprising two parts, one part being movable toward the other part to clamp the strip, and one of said parts provided with a concave tack-clenching surface.

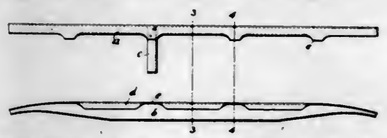
875,253. HOT-WATER ATTACHMENT FOR STOVES. MORDECAI P. FREEBEY, and GRANT MOORE, Los Angeles, Cal. Filed May 21, 1906. Serial No. 317,959.



1. A hot water attachment for stoves and the like comprising a stove proper and the burners, a boiler and a top hingedly connected with said stove, said top having a plurality of water-distributing passages consisting of interconnected annular hollow bodies having divergent walls, said passages being connected with said boiler by a swiveled connection to permit of the movement of said top, together with its water-receiving passages in a vertical position, an inlet to and an outlet from said water-receiving passages, a faucet located intermediate the terminus of the water outlet and the return to the boiler, and a rectangular victuals-warming receptacle located directly over the boiler.

2. A hot water attachment for stoves and the like comprising a stove proper and the burners, a boiler and a top hingedly connected with said stove, said top having a plurality of water-distributing passages consisting of interconnected annular hollow bodies having divergent walls, said passages being connected with said boiler by a swiveled connection to permit of the movement of said top, together with its water-receiving passages, in a vertical position, an inlet to and an outlet from said water-receiving passages, and a faucet located intermediate the terminus of the water outlet and the return to the boiler.

875,254. AUTOMOBILE-FRAME MEMBER. MATTHEW W. GARTSHORE, Reading, Pa., assignor to Parish Manufacturing Company, Reading, Pa., a Corporation of New Jersey. Filed Apr. 5, 1906. Serial No. 309,971.



1. An automobile frame comprising pressed-steel side members each having an inwardly extending bearing flange the edge portion of which is turned approximately parallel with the vertical web at intervals and the unbent intermediate portions of which form inwardly extending transom-connecting brackets with integral ribs *f*, and separate transom members extending between the vertical web portions of said side members and said bracket ribs and rigidly bolted to said brackets substantially as set forth.

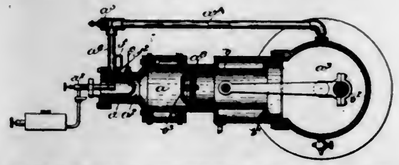
2. An automobile frame comprising pressed-steel side members each having a vertical web and an inwardly-extending bearing flange the edge portion of which is turned approximately parallel with the vertical web at intervals and the unbent intermediate portions of which form transom-connecting brackets extending inward beyond the turned portions, and separate members extending between the vertical web portions of said side members and rigidly bolted to said brackets substantially as set forth.

875,255. HOOK AND EYE. CLAUDE H. GASKINS and WILLIAM H. KEISER, Shamokin, Pa. Filed Nov. 21, 1905. Serial No. 288,406.



A garment hook formed of wire bent to produce shank members terminating at one end in eyes, said shank members being coiled intermediate their ends and merging into a bill extending across the coils, said bill and coils forming a constricted passage, and a hump formed integral with one of the shank members and adjacent the coils and the terminal of the bill, said hump extending above the coils and close to the bill.

875,256. OIL-ENGINE. OSCAR GASSETT, Boston, Mass. Filed Mar. 9, 1903. Serial No. 146,890.



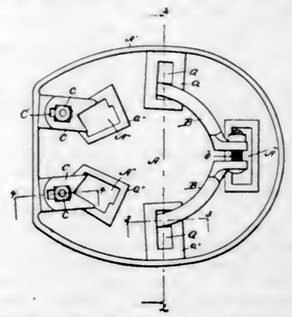
1. In an internal combustion engine, a cylinder and piston; means for introducing compressed air to the cylinder, behind the piston, at the end of the outstroke thereof; means for introducing fuel to the cylinder; means for causing the operation of said introducing means substantially at the time when the piston has completed its stroke; a vaporizing deflector projecting into the cylinder behind the piston; and a supplemental chamber independent of the oil introducing means and of the vaporizing deflector, said chamber opening into the cylinder.

2. In an internal combustion engine, a cylinder and piston; a vaporizer projecting into the cylinder behind the piston; means for introducing air into the cylinder; means for introducing fuel into the cylinder; and a supplemental chamber opening into the cylinder, said chamber being independent of said vaporizer.

3. In an internal combustion engine, a cylinder and piston; a vaporizer projecting into the cylinder behind the piston; a closed compressing chamber in front of the piston; an air pipe leading from said chamber to the rear end of the cylinder; inlet and outlet check valves near the cylinder ends of said pipe; means for introducing fuel to the cylinder; a vaporizing deflector projecting into the cylinder; and a supplemental chamber communicating with the cylinder, said supplemental chamber being independent of the means for introducing the fuel and of the vaporizer.

4. In an internal combustion engine, the combination with the cylinder and piston; of means for introducing compressed air into the cylinder when the piston is substantially at the end of its outstroke; an oil inlet; means for forcing oil into the cylinder through said inlet; and a supplemental independent chamber having a jet orifice communicating with the cylinder.

875,257. HORSESHOE. MICHAEL GATES, Decatur, Mich. Filed May 12, 1905. Serial No. 260,084.

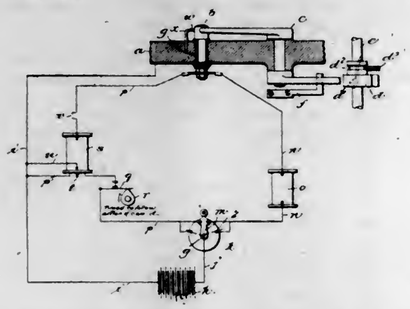


1. A soft ground shoe, comprising a concavo-convex plate having a pair of transverse slots therethrough, with countersinks in its under face about said slots; a clamp consisting of a pair of curved bars adapted to embrace the front of a hoof, arranged through said slots in said plate, having heads on their lower ends adapted to fit into said countersinks so that the heads of said clamping-bars are above the plane of the circumference of the shoe; a clamping-bolt for said bars; a pair of slotted clamping blocks adapted to engage the heel of a shoe; and bolts arranged through slots in said plate and through said slotted clamping blocks for securing them adjustably in position, said plate being counter-sunk on its under side to receive the heads of said bolts, for the purpose specified.

2. A soft ground shoe comprising a concavo-convex plate having a pair of transverse slots therethrough, with countersinks in its under face about said slots; a clamp consisting of a pair of curved bars adapted to embrace the front of a hoof, arranged through said slots in said plate, having heads on their lower ends adapted to fit into said countersinks so that the heads of said clamping-bars are above the plane of the circumference of the shoe; and a pair of clamping-blocks adapted to engage the heel of the shoe, adjustably mounted on said plate, for the purpose specified.

3. A flat ground shoe comprising a concavo-convex plate having a pair of transverse slots at each side thereof; a clamp consisting of a pair of curved bars adapted to embrace the front of a hoof, arranged through said slots in said plate, having heads on their lower ends adapted to engage under the convex surface of the plate, the heads of said clamping-bars being within the plane of the circumference of the shoe; a clamping-bolt for said bars; and a pair of clamping-blocks adapted to engage the heel of a shoe, adjustably mounted on said plate.

875,258. COMBINED JUMP-SPARK AND CONTACT-SPARK DEVICE. CHARLES R. GREUTER, Wilkes-Barre, Pa., assignor to Matheson Motor Car Company, Wilkes-Barre, Pa., a Corporation. Filed June 5, 1906. Serial No. 320,324.



1. In an internal combustion engine, a contact-sparking device, and a jump-spark device, and one spark-plug in the cylinder constituting the common terminal for said sparking devices, and means to operate said two devices either singly or in substantial unison.

2. In an internal combustion engine, an electric igniter comprising a jump-spark device and a contact-sparking device each being comprised in a suitable electrical circuit, means to make and break each of said circuits periodically, either separately or in substantial unison.

3. The combination with the cylinders of an internal combustion engine, of a spark-plug located in the wall thereof in the usual manner; an electrode, and devices to reciprocally move the same against and away from the plug, an electric circuit comprising a source of electricity, and a suitable spark-coil, said plug and electrode constituting the terminals of said circuit, together with a second circuit comprising an induction coil, and a source of electricity, and an interrupter in said second circuit to make and break the latter, said spark-plug constituting one terminal of said second circuit, the opposite end of the circuit being grounded on the cylinder.

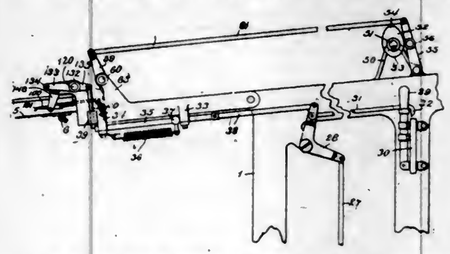
4. The combination in an internal combustion engine, of two sparking devices included in circuits carrying primary and secondary currents respectively, and means to actuate said devices substantially at the same time, or separately.

875,259. METHOD OF EXTRACTING METALLIC ORES AND MATTE. EMIL GÜNTHER and RUDOLF FRANKE, Eisleben, Germany. Filed June 18, 1907. Serial No. 379,536.

1. The method of extracting metals from ores and matte consisting in subjecting copper and nickel containing matte or concentrated copper nickel regulus to electrolytic action as anode in an electrolytic bath containing sulfate of copper containing free sulfuric acid, roasting the formed anode slime, treating the roasted slime with spent electrolyte of said electrolytic process and using the solution obtained in this way as electrolyte in an electrolytic process with copper nickel regulus anodes.

2. The method of extracting metals from ores consisting in smelting together garnierite and nickel and copper containing magnetic pyrites so as to form concentrated copper nickel regulus, subjecting said copper nickel regulus to electrolytic action as anode in an electrolytic bath containing copper sulfate and free sulfuric acid, roasting the formed anode slime, treating the roasted product with spent electrolyte of such electrolytic process using the solution obtained in this way as electrolyte in an electrolytic process with copper nickel regulus anodes, purifying the electrolyte when rich in nickel from copper, the last portions of copper and other impurities being thrown down by suboxid of nickel containing substances and electrolyzing the resulting solution of pure sulfate of nickel with insoluble anodes.

875,260. AUTOMATIC STOP MECHANISM FOR PAPER-SHEET-HANDLING MACHINES. BERNHARD GUSTAFSON, Boston, Mass., assignor to The United Printing Machinery Company, Boston, Mass., a Corporation of Maine. Filed Jan. 26, 1906. Serial No. 298,071.



1. In a printing-machine, a press-guide, a sheet-handling mechanism, automatic means for stopping the machine upon the failure of the machine to present a sheet at said guide, automatic means for stopping the machine upon the buckling of a sheet being delivered from the cylinder, and provisions whereby the first mentioned means are rendered inactive during the delivery of the sheet from the printing cylinder.

2. In a printing-machine, a press-guide, an impression cylinder, an automatic stop or release, means for maintaining said stop inactive, a device connected to said means and adapted to be rendered inoperative by a sheet of paper at said guide, and a part connected to said means adapted to be operated by the buckling of a sheet of paper, at the delivery fingers.

3. In a printing-machine, a press-guide, an impression cylinder, an automatic stop or release, means for holding said stop inactive, a device connected to said means and adapted to be rendered inoperative by a sheet of paper at said guide, a part connected to said means adapted to be operated by the buckling of a sheet of paper at the delivery fingers, and provisions whereby said device is rendered inoperative when a sheet of paper is passing said part.

4. In a printing-machine, a press-guide, an impression cylinder, an automatic stop, means for holding said stop inoperative, a finger connected to said means adapted to be moved to said guide at predetermined times, and to drop through a slot, unless prevented by a sheet of paper, a second finger connected to said means arranged at the delivery side of the cylinder, and adapted to be operated by the buckling of a sheet of paper.

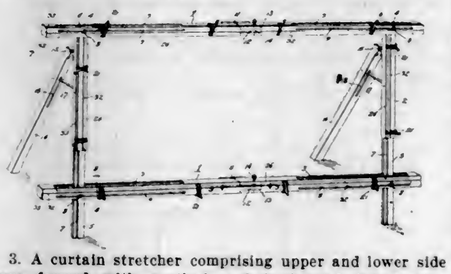
5. In a printing-machine a press-guide, a slidable bar, connected to the trip-levers of the press, a spring for moving said bar in one direction, a stop arranged to engage the end of said bar and hold the latter against the tension of said spring, a normally stationary lever, connected to said stop and carrying a lip, and a reciprocating finger, the end of which is adapted to engage a sheet of paper at said guide, said finger being arranged to slide on said lip, and being formed with a shoulder, arranged to engage said lip to rock said lever, when the end of said finger is not sustained by a sheet of paper at said guide.

[Claims 6 to 8 not printed in the Gazette.]

875,261. CURTAIN-STRETCHER. MOSES W. HEARN, Cobleskill, N. Y. Filed Feb. 14, 1907. Serial No. 357,363.

1. A curtain stretcher comprising two side bars, one of which is formed with longitudinal slots intersecting each other in planes at right angles, end bars suitably connected at one end to one of said side bars and having their opposite ends reduced and formed with longitudinal slots, said reduced ends being adapted to enter one of the slots in said slotted side bar and to have their longitudinal slots intersecting the other slot in said slotted side bar, and means inserted in the last mentioned intersecting slots for adjustably securing the slotted side bar to the end bars.

2. A curtain stretcher comprising side bars formed with vertical and horizontal intersecting slots, end bars having reduced ends formed with longitudinal slots and adapted to project through and slide in the vertical slots in the side bars, the slots in said end bars intersecting the other or horizontal slots in the side bars, means inserted in the last mentioned intersecting slots for retaining said bars in adjusted position, and means for supporting the stretcher in a substantially upright position.



3. A curtain stretcher comprising upper and lower side bars formed with vertical and horizontal intersecting slots, end bars having reduced ends formed with longitudinal slots and adapted to project through and slide in the vertical slots in the side bars, the slots in said end bars intersecting the horizontal slots in the side bars and clamping devices passed through the last mentioned intersecting slots.

4. A curtain stretcher comprising upper and lower side bars formed with vertical and horizontal intersecting slots, end bars having reduced ends formed with longitudinal slots and adapted to project through and slide in the vertical slots in the side bars, the slots in said end bars intersecting the horizontal slots in the side bars and clamping bolts passed through the last mentioned intersecting slots.

5. A curtain stretcher comprising a frame having side bars each consisting of two sections, one of said sections being formed at one end with the centrally disposed longitudinally extending slot 13, the centrally arranged and longitudinally projecting tongue 12 formed upon the other of said sections by cutting away the opposite faces of the same, the hinge 11 connecting the two sections of the side bar and having one of its leaves projecting across the slot 13 to serve as a stop for the tongue 12 when the latter enters said slot, and the removable locking pin 14 passed through alining apertures in the tongue 12 and the walls of the slot 13, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

875,262. TYPE-WRITING MACHINE. WILLIAM F. HELMOND, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 12, 1907. Serial No. 397,049.

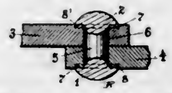


1. In a typewriting machine, the combination with a platen having an axle and a frame in which the axle is journaled, of a line space wheel upon said axle, a spring detent having a roll, a lever mounted to turn upon said axle and having a finger piece, and also having means to throw said detent away from said wheel, a brake arm mounted upon said axle by the side of said lever to bear upon the face of said wheel, and having a slot in engagement with the axle of said detent roll, to prevent the arm from turning, said arm having a cam portion, and said lever having a normally idle part, which at the releasing movement of the lever engages said cam portion to force the brake to act upon the wheel.

2. In a typewriting machine, the combination of a platen, a line space-wheel, a detent, a detent spring, a lever having a finger-piece, and also having means to force and hold said detent away from the wheel against the pressure of said spring, an arm, and a finger extending from said arm for bearing upon the face of said wheel to oppose the movement of the latter and of the platen, said arm having a cam portion, and said lever having a normally idle device which at the detent-releasing movement of the lever engages said cam portion to transmit force from the lever to the brake to force the latter against the wheel independently of the detent spring.

3. In a typewriting machine, the combination with a platen having an axle and a frame in which the axle is journaled, of a line-space wheel upon said axle, a spring detent having a roll, a lever mounted to turn about said axle and having a finger piece, and also having means to throw said detent away from said wheel, and an arm mounted upon said axle by the side of said lever and having a slot in engagement with the pin of said detent roll, to prevent the arm from turning, fingers extending from said arm to bear upon the face of said wheel to oppose the movement of the latter and of the platen, said arm having a cam portion bent or stamped therein, and said lever having a normally idle projection which at the releasing movement of the lever engages said cam portion to force the brake fingers to bear against the wheel.

875,263. RIVETED JOINT. AUGUST HERTWIG, Aix-la-Chapelle, Germany. Filed Nov. 29, 1905. Serial No. 289,697.



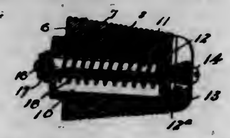
1. A riveted joint comprising metallic parts provided with rivet-holes in register and having a recess adjacent each of said rivet-holes, a rivet provided with heads having a flat inner surface each, and a projection upon said flat inner surface of each of said rivet-heads for filling said recesses to increase and safeguard the sliding resistance and the tightness of the joint.

2. A riveted joint comprising metallic parts provided with countersunk rivet-holes in register, said parts provided with a recess in each and independent of the countersink of each rivet hole, a rivet provided with a shank of a lesser diameter than said rivet-holes and with heads each having a flat inner surface, and a projection upon said flat inner surface of each of said rivet-heads for filling said recesses to increase and safeguard the sliding resistance and the tightness of the joint.

3. A riveted joint comprising metallic parts provided with countersunk rivet-holes in register, said parts provided with a plurality of recesses in each and independent of the countersink of each rivet hole, a rivet provided with a shank of a lesser diameter than said rivet holes and with heads each having a flat inner surface, and a plurality of projections upon said flat inner surface of each of said rivet-heads for filling said recesses to increase and safeguard the sliding resistance and the tightness of the joint.

4. A riveted joint comprising a plurality of external metallic parts and an internal metallic part provided with rivet holes in register of which those of said external parts are countersunk, said external parts provided with a recess in each and independent of the countersink of each rivet-hole in said external parts, a rivet provided with a shank of lesser diameter than the rivet-holes in said external parts and of the same diameter as the hole of said internal part and provided with heads each having a flat inner surface, and a projection upon said flat inner surface of each of said rivet-heads for filling said recesses to increase and safeguard the sliding resistance and the tightness of the joint.

875,264. AUTOMATIC CUT-OFF. FERDINAND HOELDER and CHARLES J. WELZIN, New York, N. Y. Filed Aug. 10, 1906. Serial No. 330,060.



1. In a device of the type set forth, a T-coupling formed in its interior surface adjacent one leg with a valve seat, a hollow removable plug mounted in the opposing leg and confronting said valve seat, a sleeve slidably mounted in said plug axially thereof, a valve stem terminating in an enlarged portion threaded within the end of said sleeve and a circular flange beyond said sleeve, a flexible head removably secured on said flange, said valve stem projecting through said plug and being held therein by exterior fusible connections secured to the projecting end of said stem, and an expansive coil spring surrounding said stem and bearing with one end against said plug.

2. In a device of the type set forth, a T-coupling formed in its interior surface adjacent one leg with a valve seat, a hollow removable plug mounted in the opposing leg and confronting said valve seat, a sleeve slidably mounted in said plug axially thereof, a valve stem terminating in an enlarged portion threaded within the end of said sleeve and a flexible valve head beyond said threaded portion, said valve stem projecting through said plug and being held therein by exterior fusible connections secured to the projecting end of said stem, an expansive coil spring surrounding said stem and bearing with one end against said plug and a valve head carried by said valve stem.

875,265. ANIMAL-TRAP. HENRY J. HOUTSINGER, Sterling, Ill. Filed Feb. 27, 1907. Serial No. 359,563.



1. An animal trap, comprising a base-plate; a spring-controlled jaw, mounted on such plate, so as to contact therewith, and provided with rearwardly extending arms; a foot-plate, pivoted on said base-plate at one end, and resting on said arms at the opposite end, and adapted to throw such arms into a vertical position to elevate said jaw; means for holding such foot-plate in depressed position; and means for releasing the same by operation of the animal, substantially as set forth.

2. An animal trap, comprising a base-plate; a spring-controlled jaw, mounted on such plate, and adapted to contact therewith; a foot-plate, pivotally supported on said base-plate, and adapted to actuate said jaw, to open the same; a bait-lever, hingeably mounted on said base-plate, and provided with means for locking the same to said foot-plate; means for raising said bait-lever coincidently with the depression of said foot-plate, and means for locking said bait-lever to said foot-plate when it is fully depressed, substantially as and for the purpose mentioned.

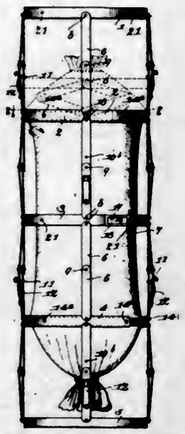
3. In a device of the class named, embodying a base-plate and spring-jaw suported thereon; a foot-plate, pivotally supported on said base-plate, provided with a central opening, and adapted to engage said jaw, to open the same; a bait-lever, hingeably mounted on said base-plate, and provided with means for engaging said foot-plate; and a spring-arm, fixed at one end to said bait-lever and extending at the other end into the opening in said foot-plate, substantially as shown and described.

4. In an animal trap, the combination of the base-plate 1; a spring-controlled jaw 5 pivotally supported thereon, and provided with the arms 6; and the foot-plate 10, pivotally supported on the plate 1, and provided with an angle-plate 12, engaging the arms 6 to elevate the jaw 5, substantially as shown and set forth.

5. In an animal trap, the combination of the base-plate 1; a spring-controlled jaw 5 pivotally supported thereon, and provided with arms 6; the foot-plate 10, pivotally supported on the plate 1, such foot-plate being provided with a central opening 11, and engaging the arms 6 to elevate the jaw 5; a bait-lever 14, hingeably mounted on the plate 1, and provided with the spring-arm 17, extending rearwardly into the opening 11; and means for locking the lever 14 to the plate 10 when such plate is fully depressed, substantially as set forth and for the purpose named.

[Claims 6 and 7 not printed in the Gazette.]

875,266. BANANA-CRATE. CHARLES HOWE and HARRY H. ELDREDGE, Guthrie, Okla. Filed June 23, 1906. Serial No. 323,125.



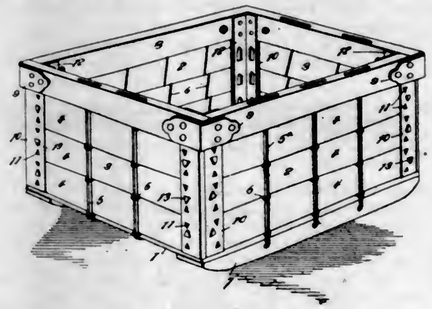
1. A banana crate comprising a plurality of bands, a series of individual toggle connections between adjacent bands, means on certain toggles of each series to hold the bands to which said series of toggles are connected separated or brought close together, removable hoops carried by certain of the bands, a sack, and means for removably securing said sack to said hoops.

2. A banana crate comprising a plurality of bands, a plurality of individual toggle connections between adjacent bands only, latches on certain toggle connections between each pair of bands for holding any pair of bands separated or in close contact independently of all other bands, removable hoops adapted to be temporarily connected to any of said bands, removable bolts for connecting said bands and hoops, and a sack removably secured to said hoops.

3. A banana crate comprising a plurality of bands, individual toggle connections between adjacent bands adapted to extend or collapse adjacent pairs of bands independently, hoops within certain of said bands and removably attached thereto, a sack within said bands removably but unyieldingly secured to a plurality of said hoops, whereby said sack is placed under tension when the crate is extended, and individual means for locking said toggle connections.

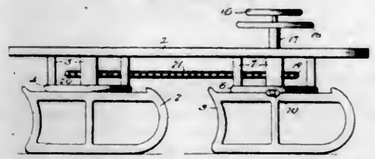
875,267. CRATE STRUCTURE. EDWIN F. HULBERT, Kenosha, Wis., assignor of one-half to L. C. Brooks, Kenosha, Wis. Filed Apr. 2, 1906. Serial No. 309,505.

A crate structure embodying slatted walls, the edges of the walls being provided with U-shaped binding clips embracing the ends of the slats and overlapping and abutting against each other, means for securing said slats together, top rails and skid pieces for said walls, means for securing the rails and skid pieces to the walls, corner brackets secured to the corners of the top rails at the outside thereof, and inner corner posts of angular formation, said posts being provided with tangs extending outwardly through the respective binding clips and through the slats



and bent over against the outer sides of said clips, the fastening means for the corner brackets extending through and secured to the upper ends of said corner posts.

875,268. SLED. LEWIS D. HYATT, St. Louis, Mo. Filed Apr. 10, 1907. Serial No. 367,396.

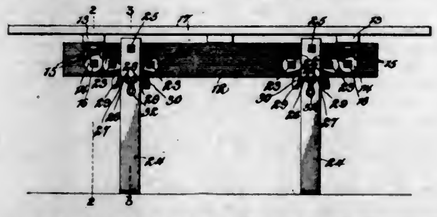


1. In a vehicle, a frame or body, front and rear bogie trucks pivoted thereto, a hand wheel connected with said front truck, and a concentric hand wheel connected with said rear truck whereby each truck may be guided independently.

2. In a vehicle, a frame or body, front and rear bogie trucks, a vertical shaft connected to said front truck and carrying a hand wheel at its upper end, a sleeve surrounding said shaft and also carrying a hand wheel at its upper end, and means connecting said sleeve with said rear truck.

3. In a vehicle, a frame or body, front and rear bogie trucks, a vertical shaft connected to the front truck and carrying a hand-wheel at its upper end, a shaft on the rear bogie truck, a sprocket wheel carried by the shaft, an outer sleeve carried by the vertical shaft a sprocket wheel carried by the outer sleeve, and a sprocket chain connecting the two sprocket wheels.

875,269. TABLE. DAVID W. INMAN, Versailles, Ohio. Filed Mar. 30, 1907. Serial No. 365,510.



1. In a table of the character set forth, the combination with a supporting bar, of a bracket secured to one side of the same and having a bottom wall that projects beyond the inner face of the bracket forming a bearing lip that is located beneath the bar, a leg movably mounted on the outer side of the bracket, and means for securing the leg against movement on the bracket.

2. In a table of the character set forth, the combination with a supporting bar, of a bracket secured to the bar and having a bottom wall, and an outer inclined wall that projects beyond the bottom wall, a leg located against the outer inclined wall, a pivot connecting the leg and the inclined wall above the bottom wall, and means for detachably connecting the leg and the inclined wall below the bottom wall for holding said leg against its pivotal movement.

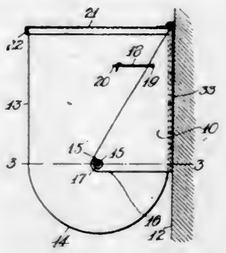
3. In a table of the character set forth, the combination with a supporting bar, of a bracket comprising an outer inclined wall, outstanding ears secured to one side of the bar, webs connecting the ears and inclined wall, and a bottom wall connecting the webs and projecting beyond the inner edges of the webs forming a bearing lip that is located beneath the bar, said outer inclined wall extending below the bottom wall, a leg located against the outer face of the inclined wall, a pivot connecting the upper end of the leg and the inclined wall above the bottom wall, and means mounted on the leg and detachably engaging the inclined wall below the bottom wall for holding the leg against pivotal movement.

4. In a table of the character set forth, the combination with a supporting bar, of a bracket comprising outstanding portions secured to the bar and an outer inclined wall that projects downwardly beyond the securing means, a leg located against the outer side of the inclined wall, a pivotal connection between the upper end of the leg and the inclined wall, and holding means movably mounted on the leg and detachably engaging with the lower portion of the inclined wall, said holding means having a portion that underlaps the under side of said lower end.

5. In a table of the character set forth, the combination with a supporting bar, of a bracket having an inclined wall, a leg pivoted to the bracket and operating against the inclined wall, and a latch pivoted to the leg and having stems located on opposite sides of the same and detachably engaging with the bracket.

[Claims 6 and 7 not printed in the Gazette.]

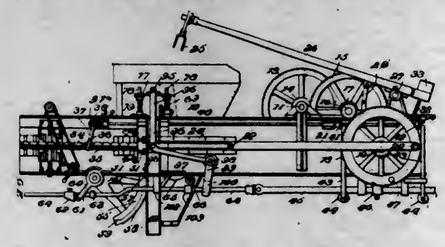
875,270. REFUSE-RECEPTACLE. ELMER E. IRISH, Winthrop, Mass. Filed May 12, 1906. Serial No. 316,528.



1. A refuse receiver comprising in its construction a U-shaped stationary bracket adapted to be secured to a wall, a receptacle having a semi-cylindrical bottom located between the legs of said bracket and pivoted thereto with its axis substantially horizontal, whereby said receptacle may be inverted to discharge its contents, said axis located below the center of gravity of said receptacle, a cover for said receptacle, said cover pivoted to said bracket, and means to hold said receptacle in position to receive and hold refuse.

2. In combination, a refuse receiver comprising in its construction a stationary bracket adapted to be secured to a wall, a receptacle pivoted thereto with its axis substantially horizontal, whereby said receptacle may be inverted to discharge its contents, a cover for said receptacle, said cover pivoted to said bracket; and a latch adapted to be secured to said wall, said latch adapted to hold said cover in its raised position.

875,271. BALING-PRESS. GEORGE E. JACKSON, Newark, Ill. Filed May 9, 1907. Serial No. 372,813.



1. A baling press comprising a baling chamber, a plunger adapted to compress the material therein, means for actuating the plunger, a separating block adapted to close the front end of the baling chamber at the completion of the compressing operation, means for moving said block to operative position, and means actuated by the movement of the material in the baling chamber for bringing the block moving means into operation.

2. A baling press comprising a baling chamber, a plunger adapted to compress material therein, means for actuating said plunger, a separating block adapted to close the front end of the baling chamber at the completion of the compressing operation, actuating means for moving said block to operative position, said actuating means being normally out of operative relation to the plunger moving means, and means actuated by the movement of the material in the baling chamber for automatically moving the block moving means into operative position for actuation by the plunger moving means.

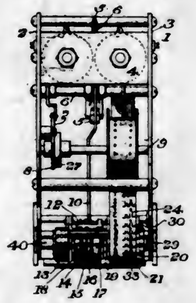
3. A baling press comprising a baling chamber, a plunger adapted to compress material therein, means including a revoluble element for actuating said plunger, said revoluble element being provided with a cam, a separating block adapted to close the front end of the baling chamber at the completion of the compressing operation, means for actuating said block, the said last named means including a pull rod and a cam block, means for suspending said pull rod with its cam block out of the path of movement of the cam of the revoluble element, and means actuated by the movement of the material in the baling chamber for automatically moving said pull rod so as to bring its cam block into the path of movement of said cam.

4. A baling press comprising a baling chamber, a plunger adapted to compress material therein, means for actuating said plunger, a separating block adapted to close the front end of the baling chamber at the completion of the compressing operation, means including a pull rod for moving the separating block to operative position, said pull rod being provided with a cam block, and plunger actuating means including a revoluble element provided with a cam, vertically-movable supports adapted to hold said pull rod and upon which said rod has a longitudinal movement, automatic means for raising the said supports for the pull rods, means for holding said supports raised, the raising of the supports bringing the cam block of the pull rod into the path of movement of the cam of the revoluble element, whereby to effect a longitudinal movement of said rod and the subsequent movement of the separating block, and means for automatically releasing said pull rod supports and permitting them to move downwardly at an interval for the disengagement of the cam of the revoluble element, from the cam block of the pull rod.

5. A baling press, comprising a baling chamber, a plunger mounted to move therein, means for actuating said plunger, said means including a revoluble element provided with a cam, a separating block adapted to close the front of the baling chamber at the completion of the compressing operation, said block being provided with a rack, a toothed segment meshing with said rack, pull rods adapted to operate said segment, and provided with a cam block, hanger arms supporting said pull rods for longitudinal movement and normally holding said rod with its block out of the path of movement of the cam of the revoluble element, a rod mounted to turn about its longitudinal axis, and provided with disks with which said hanger arms have eccentric connection, a support for said rod, and means actuated by a movement of the material in the baling chamber, for turning said rod.

[Claims 6 to 17 not printed in the Gazette.]

875,272. TIME-STAMP. HENRY O. JACKSON, Norfolk, Va., and HARRY W. PIDGEON, Chicago, Ill., assignors to American Clock Company, a Corporation of Illinois. Filed Nov. 13, 1906. Serial No. 343,312.



1. In a time stamp, a type ribbon having thereon characters indicative of the months and the days of the month, a series of reels over which said ribbon passes and upon which it is alternately wound and unwound from one to the other, a tension device for said ribbon, a drum over which the ribbon passes, a shaft supporting said drum, wheels on said shaft, date and time indicating devices on said wheels, and electric time controlled means for actuating said ribbons and wheels.

2. In a time stamp, a type ribbon having thereon characters indicative of the months and the days of the month, a series of reels over which said ribbon passes and upon which it is alternately wound and unwound from one to the other, a tension device for said ribbon, a drum over which the ribbon passes, a shaft supporting said drum, wheels on said shaft, date and time indicating devices on said wheels, electric time controlled means for actuating said ribbons and wheels, and an ink ribbon located below said wheels.

3. In a time stamp, a type ribbon having thereon characters indicative of the months and the days of the month, a series of reels over which said ribbon passes and upon which it is alternately wound and unwound from one to the other, a tension device for said ribbon, a drum over which the ribbon passes, a shaft supporting said drum, wheels on said shaft, date and time indicating devices on said wheels, electric time controlled means for actuatmittently actuating said ribbons and wheels.

4. In a time stamp, a type ribbon having thereon characters indicative of the months and the days of the month, a series of reels over which said ribbon passes and upon which it is alternately wound and unwound from one to the other, a tension device for said ribbon, a drum over which the ribbon passes, a shaft supporting said drum, wheels on said shaft, date and time indicating devices on said wheels, electric time controlled means for actuating said ribbons and wheels, an ink ribbon located below said wheels, and means for locking said type ribbon and wheels.

5. In a time stamp, a shaft having a drum thereon, a plurality of reels above said shaft, a type ribbon passing around said drum and adapted to be wound or unwound with respect to each of said reels, said type ribbon having thereon characters indicative of the months and days of the months, devices in alinement with said drum having thereon characters indicative of the hours and time of day

and the year, and an electrically operated device for effecting the actuation of said type ribbon and its adjuncts.

[Claims 6 to 11 not printed in the Gazette.]

875,273. EXERCISE-BAT. CHARLES E. KIMBLE, Columbus, Ohio. Filed Apr. 1, 1907. Serial No. 365,719.



In an exercise bat, the combination with a body portion which conforms in shape to an ordinary base ball bat, of a tube which is filled with a very heavy and easily melted material, said tube being located in an opening formed in the end of the body, and a plug which closes the end of said opening and prevent the displacement of said tube, the weight formed by the tube and the metal with which it is filled rendering the bat much heavier than the ordinary base ball bat.

875,274. PROTECTOR FOR SAFETY-RAZOR BLADES. FREDERICK B. KING, Bridgeport, Conn., assignor, by mesne assignments, to Gillette Safety Razor Company, Boston, Mass., a Corporation of Maine. Filed May 8, 1907. Serial No. 372,462.



1. In a safety razor, a handle, a back plate, a flexible blade, a guard and a protector comprising a removable shield for frictionally retaining the back plate, the blade and the guard in assembled adjustment by the spreading apart of the back plate and guard owing to the tendency of the blade to return to its normal position when the parts are released from the handle.

2. In a razor, a back plate, a flexible blade having a cutting edge, a guard and a removable shield for inclosing the cutting edge of the blade, engaged and frictionally held in position by the back plate and guard.

3. In a razor, a back plate, a flexible blade having two opposite cutting edges, a guard and a removable shield for inclosing the cutting edges of the blade, engaged and frictionally held in position by the back plate and guard.

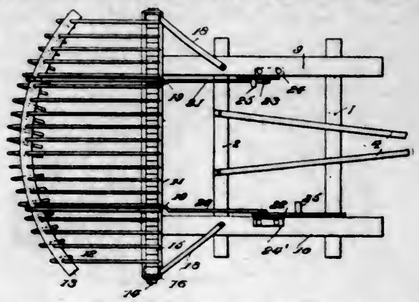
4. In a razor, a back plate, a flexible blade having a cutting edge, a guard and a removable shield for inclosing the cutting edge of the blade, arranged to be frictionally held in position by the spreading apart of the back plate and guard by the tendency of the blade to return to its normal position.

5. In a razor, a back plate, a flexible blade having two opposite cutting edges, a guard and a removable shield for inclosing the cutting edges of the blade arranged to be frictionally held in position by the spreading apart of the back plate and guard by the tendency of the blade to return to its normal position.

[Claims 6 to 9 not printed in the Gazette.]

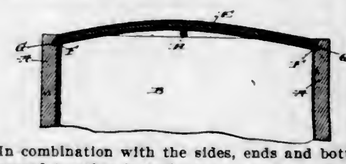
875,275. ATTACHMENT FOR BEAN-HARVESTERS. GERSHAM E. LEWIS, Dewey, Okla., assignor of one-half to W. H. Hess, Dewey, Okla. Filed Mar. 27, 1907. Serial No. 364,937.

A bean harvester embodying a traveling framework, bean cutting shares carried thereby, a transverse shaft mounted on said framework, a series of grooved spools on said shaft, a series of longitudinally bowed teeth suspended from said shaft and spaced by said spools, a bowed rod connecting together said series of teeth at points intermediate of their ends, bell cranks fulcrumed on said shaft, one arm of each of said bell cranks being connected to said



rod, and levers fulcrumed on the framework and operatively connected to the other arms of said bell cranks.

875,276. BOX. CHARLES C. MENGEL, Louisville, Ky. Filed May 20, 1904. Serial No. 208,870.



1. In combination with the sides, ends and bottom of a box secured together in such manner as to produce a substantially unyielding structure and to preclude their separation without indicating that such parts have been tampered with, a flexible closure sprung into place.

2. A substantially unyielding, rectangular box provided with grooves or channels in the inner face of two of its opposing members, combined with a rectangular flexible cover or closure formed of veneer, said cover being of a length greater than the distance between the walls of the grooved members and adapted to be sprung into said grooves or channels.

3. A substantially unyielding box provided with grooves or channels formed in two of its opposite walls, combined with a flexible cover or closure of a size sufficient to close the box, said cover having integrally-formed ribs projecting beyond the cover and adapted to pass into said grooves as the cover is flexed in the act of putting it in place.

4. A substantially unyielding box provided with grooves or channels formed in two of its opposite walls, combined with an unbroken, flexible, veneer cover or closure the main body of which is of a size sufficient to close the box, while one layer projects beyond the body at each end thereof, forming ribs which enter the grooves as the cover is flexed in the act of putting it in place.

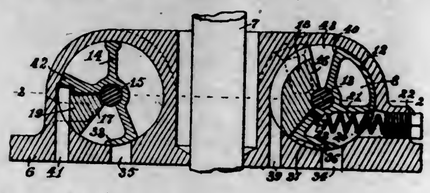
5. In combination with the bottom, sides and ends of a box secured together in such manner as to produce a substantially unyielding structure and to preclude the separation of such parts without indicating that they have been tampered with; a flexible veneer cover or closure, the main body of which is of a size sufficient to close the box, said cover having ribs upon its ends adapted, when the cover is flexed in the act of putting it in place, to pass into grooves or channels formed in opposite members of the box near the upper edge thereof, whereby the closure will be substantially flush with the upper edge of the box.

[Claims 6 and 7 not printed in the Gazette.]

875,277. ROTARY VALVE FOR AIR-COMPRESSORS. GEORGE W. MEYER, Sparrows Point, Md. Filed Mar. 5, 1907. Serial No. 360,750.

1. In an air compressor, the combination with the compressor cylinder of a rotary valve constructed with radial wings and inclosed within a cylindrical valve chamber,

and an abutment within said chamber, an air chamber being formed between said abutment and one of said wings, and said chamber being provided with a port in communication with the interior of said cylinder for the passage of air through the compressor and another port also in communication with the interior of said cylinder and opening into said air chamber, whereby through varying pressure the valve may be opened.



2. In an air compressor, the combination of a cylindrical valve chamber having a principal port communicating with the compressor cylinder and having an auxiliary port, a rotary valve fitted to said chamber and controlling said principal port, and having a wing forming a wall of the compartment into which said auxiliary port opens for the purpose specified, and a spring for rotating the valve into closed position.

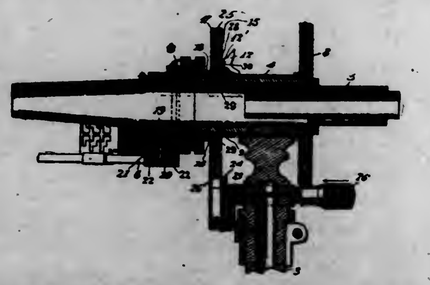
3. In an air compressor, the combination of a cylindrical valve chamber having a port communicating with the compressor cylinder, a rotary valve fitted to said chamber, and having a wing forming a wall of the compartment into which said port opens and a spring located transversely of the valve chamber and bearing tangentially on the hub of the valve whereby to rotate the valve into closed position.

4. In an air compressor, the combination with the compressor cylinder, of rotary inlet and outlet valves in cylindrical valve chambers formed in the head of said cylinder and each chamber provided with a port communicating through the head with the cylinder for the passage of air through the compressor, and another port also communicating through the head with the cylinder and opening against a wing of the respective valve, whereby through varying pressure the valve may be opened.

5. In a compressor valve, the combination of a cylindrical chamber, a stationary segmental abutment fixed along one side of said chamber and having a journal bearing along its edge near the center of the chamber, and a segmental valve in said chamber having a rod extending from end to end thereof through its axis and serving as a journal in the bearing upon said abutment for the purpose set forth.

[Claims 6 to 9 not printed in the Gazette.]

875,278. OPHTHALMOMETER. EMIL B. MEYROWITZ, New York, N. Y., assignor to The Meyrowitz Manufacturing Company, a Corporation of New Jersey. Filed May 29, 1906. Serial No. 319,271.



1. In an ophthalmometer having a telescope and mires adjustable with relation thereto, axial means for adjusting the separation of the mires, said means having an unvarying axial position during the turning of the telescope.

2. In an instrument of the class described having a telescope and mires adjustable with relation thereto, a mire adjustment co-axial with the telescope, whereby its axial position is unchanged when the telescope is turned.

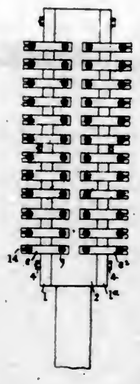
3. In an instrument of the class described having a telescope and mires adjustable with relation thereto, a mire adjustment co-axial with the axis of the telescope, said adjustment having a dial also concentric with the telescope.

4. In an instrument of the class described having a telescope with a dial, and mires adjustable with relation to the telescope, a mire adjustment co-axial with the telescope and having a dial, said dial being co-axial with the dial of the telescope.

5. In an instrument of the class described a telescope having a sleeve adjustable thereon, said sleeve having a portion with gear teeth, a pinion movable into and out of mesh with said gear teeth, and means whereby said pinion may be moved into intermeshing relation when desired.

[Claims 6 to 10 not printed in the Gazette.]

875,279. JUNCTION OR CONNECTING BOX. JOHN A. MCCOY, Somerville, Mass. Filed Mar. 19, 1906. Serial No. 306,744.

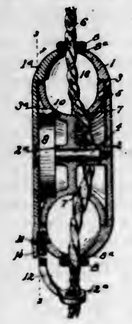


1. A junction or connection box having end walls formed with channels, clips each having one end projecting into said channel, the other ends of the clips projecting into the box for connection with conducting wires, bolts securing the clips in position, said bolts passing through the walls of the box, and outside fuses and connections between said fuses and the bolts.

2. A junction or connection box having end walls formed with channels, clips each having one end projecting into said channel and the other ends of the clips projecting into the box for connection with conducting wires, bolts securing the clips in position and passing through the wall of the box, metal springs each connected at one end with said bolts, and fuses outside the box and supported by said springs.

3. A junction or connection box having end walls formed with channels, clips each having one end projecting into said channel and the other ends of the clips projecting into the box for connection with conducting wires, bolts securing the clips in position and passing through the wall of the box, metal springs each connected at one end with said bolts, said springs being arranged in pairs, one spring of each pair having a hole near its outer end and the other spring of the pair having a slit, and fuses mounted in the holes and slits of the springs.

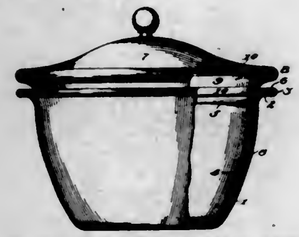
875,280. ADJUSTABLE HANGER FOR ELECTRIC LIGHTS. JAMES MCGAVIN, Springfield, Ill. Filed Mar. 2, 1906. Serial No. 303,898.



1. In an electric light hanger equipped with a revoluble sheave provided with circumferential teeth, and a cable connected to wind on the sheave; the means for accurately controlling the turning of the sheave, consisting of an oscillative curved lever, one member of which has an eye accommodating the said cable, a screw extending through the other member of the lever and adapted to engage the circumferential teeth of the sheave and adjustable toward or away from said teeth, a jam nut adapted to secure said screw and a spring acting to hold the point of the screw in engagement with the teeth of the sheave.

2. In a hanger for electric lights, disk-shaped shell-members having notches adapted to accommodate insulators, recesses adapted to accommodate the flanges of a sheave, internal concavities matching each other and the groove of the sheave to form a circular chamber adapted to accommodate a cable wound upon the sheave, and internal hubs adapted to accommodate a stud-bolt; in combination with insulators fitting in the notches of said shell-members, a stud-bolt, connecting said shell-members and adapted to serve as a spindle for a sheave, and a sheave revoluble on said bolt between the hubs of said shell-members and having flanges fitting in the recesses of said shell-members and a circumferential groove matching the concavities of the shell-members.

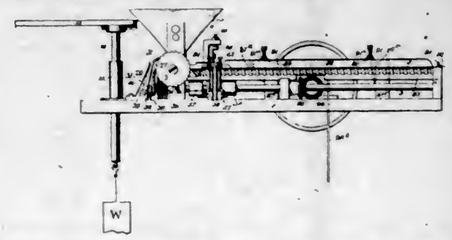
875,281. PROCESS OF MAKING ENAMELED VESSELS. HOMER T. MCGREGOR, Wheeling, W. Va. Filed Sept. 6, 1906. Serial No. 333,511.



1. The process of making an enameled vessel having a polished exterior surface which consists in applying enamel composition to the interior of the metallic body, applying a heat-resisting coating to the exposed portions of the body, firing the enamel, and removing said heat-resisting coating, substantially as described.

2. The process of making an enameled vessel having a polished exterior surface which consists in applying enamel composition to the interior of a metallic body, applying a heat-resisting coating to the exposed portions of the body, firing the enamel, removing said heat-resisting coating, and electro-plating the metallic surface of the vessel, substantially as described.

875,282. NEEDLE-THREADING MACHINE. HERBERT E. NOON, Brooklyn, N. Y., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Jan. 3, 1907. Serial No. 350,618.



1. In a needle-threading machine, the combination with a thread-carrying threading implement, and an intermittingly acting multi-jawed holder therefor, of means whereby eyed needles may be presented to and threaded upon said threading implement.

2. In a needle-threading machine, the combination with a thread-carrying threading implement, of means for presenting a plurality of eyed needles in succession to the same and imparting a relative movement between the needles and said implement lengthwise of and in excess of the length of the latter.

3. In a needle-threading machine, the combination with a thread-carrying threading implement, of means for presenting a plurality of eyed needles in succession to the same and imparting a relative movement between said needles and threading implement in a direction lengthwise of and of greater length than the latter, and means for turning said needles to bring their eyes in alinement with the threading implement.

4. In a needle-threading machine, the combination with a thread-carrying threading implement, and alternately operative holding jaws at opposite ends thereof, of a needle-carrier adapted to carry a succession of eyed needles over said threading implement and intermediate its holding jaws.

5. In a needle-threading machine, the combination with a thread-carrying threading implement and alternately operative holding jaws at opposite ends thereof, of a pair of feed-screws disposed parallel with and adjacent to said threading implement, and adapted to carry a succession of eyed needles over said threading implement and intermediate its holding jaws.

[Claims 6 to 36 not printed in the Gazette.]

875,283. CHUTE AND CONTROLLING MECHANISM THEREFOR FOR ELEVATORS, BINS, AND THE LIKE. ROBERT A. OGLE, Chicago, Ill. Filed Aug. 15, 1907. Serial No. 388,601.

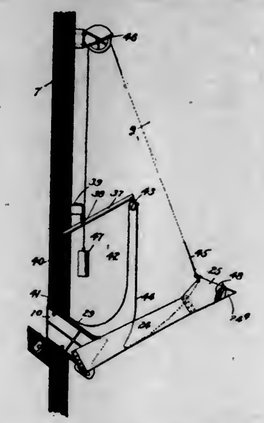
1. The combination with an elevator, bin, or the like, having a discharge-opening and a chute leading therefrom, of a shaft pivoted to the chute and an apron connected to the shaft, whereby the apron may be raised and lowered and moved laterally relative to the chute.

2. The combination with an elevator, bin, or the like, having a discharge-opening and a chute leading therefrom provided with guides, of a shaft pivoted at the bottom of the chute and engaging said guides, and an apron connected with the shaft at opposite ends thereof, whereby the apron may be raised and lowered and moved laterally relative to the chute.

3. The combination with an elevator, bin, or the like, having a discharge-opening and a chute leading therefrom, and containing elongated guide-openings, of a shaft pivoted at the bottom of the chute and extending through said guide-openings, and an apron connected with the shaft beyond said guides, whereby the apron may be raised and lowered and moved laterally relative to the chute.

4. The combination with an elevator, bin, or the like, having a discharge-opening and a chute leading there-

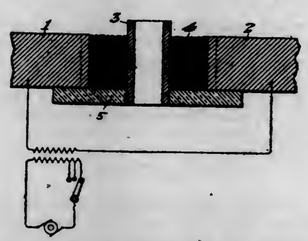
from, of a block pivoted to the bottom of the chute, a shaft extending through the block and an apron connected with the shaft near its opposite ends, for the purpose set forth.



5. The combination with an elevator, bin, or the like, having a discharge-opening and a chute leading therefrom containing guide-openings, of a shaft pivoted at the bottom of the chute and extending through the guide-openings, rollers on the shaft adjacent to the guide-openings, and an apron connected with the shaft beyond said guide-openings, for the purpose set forth.

[Claims 6 to 13 not printed in the Gazette.]

875,284. GRANULAR FURNACE. HENRY N. POTTER, New Rochelle, N. Y., assignor to Geo. Westinghouse, Pittsburg, Pa. Filed May 14, 1904. Serial No. 208,044.



1. An electric furnace consisting of a refractory heating resistance composed of free granules clamped between refractory electrodes, together with a refractory hollow body embedded within the said granular resistance.

2. An electric furnace consisting of a refractory heating resistance composed of free graphite granules clamped between refractory electrodes, together with a refractory hollow body embedded within the said granular resistance.

3. An electric furnace consisting of, a granular refractory hollow body embedded within a granular refractory heating resistance clamped between electrodes and means for causing one or more electrodes to be continuously pressed against said granular resistance.

4. An electric furnace consisting of a hollow refractory body embedded within a granular heating resistance, which is held in place by refractory walls having lower electric conductivity than the said granular heating resistance, and by refractory electrodes pressed against the said granular heating resistance.

5. An electric furnace consisting of a vertical hollow refractory body held in place by a refractory plate through which said body passes, and partially surrounded by a heating resistance composed of free granules retained between refractory walls and pressed between suitable electrodes.

[Claims 6 to 13 not printed in the Gazette.]

875,285. METHOD OF MAKING SILICON. HENRY N. POTTER, New Rochelle, N. Y., assignor to Geo. Westinghouse, Pittsburg, Pa. Filed June 10, 1905. Serial No. 264,548.

1. The method of producing silicon by reducing silicon monoxid.

2. The method of producing silicon by reducing silicon monoxid with carbon.

3. The method of producing silicon by heating together one equivalent of silicon monoxid and one equivalent of carbon.

875,286. ART OF PRODUCING SILICON MONOXID. HENRY N. POTTER, New Rochelle, N. Y., assignor to Geo. Westinghouse, Pittsburg, Pa. Filed June 14, 1905. Serial No. 265,204.

1. The process of producing silicon monoxid, which consists in causing an incomplete combustion of metallic silicon.

2. The process of producing silicon monoxid, which consists in heating silicon in the presence of oxygen under such conditions of oxygen supply as to prevent the oxidation to the dioxid.

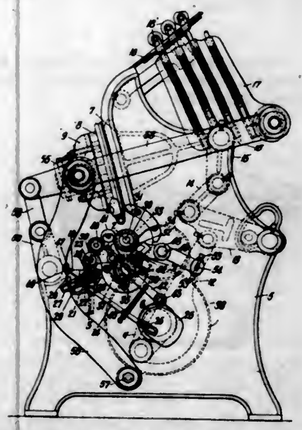
3. The method of producing silicon monoxid, which consists in highly heating metallic silicon in air under reduced pressure.

4. The method of producing silicon monoxid, which consists in highly heating silicon in an atmosphere poor in oxygen.

5. The method of making a pulverulent compound containing monoxid of silicon, which consists in burning the vapor of silicon with oxygen insufficient to produce the dioxid.

[Claims 6 and 7 not printed in the Gazette.]

875,287. PRINTING-PRESS. GEORGE W. PROUTY, Dorchester, Mass., assignor to The Imperial Art Press Co., a Corporation of Maine. Filed Apr. 2, 1907. Serial No. 365,949.



1. In a printing press, a main frame provided with ways extending transversely thereof, an ink fountain slidably mounted on said ways and constructed to be removed therefrom by sliding relatively thereto, a fountain roll, and a series of rolls journaled on said frame, said rolls being adapted to receive ink from said fountain roll.

2. In a printing press, a main frame provided with ways extending transversely thereof, an ink fountain slidably supported on said ways and constructed to be removed therefrom by sliding relatively thereto, a fountain roll, and a series of rolls journaled on said frame and constructed to be detached therefrom, said rolls being adapted to receive ink from said fountain.

3. In a printing press, a main frame provided with ways extending transversely thereof, an ink fountain slidably supported on said ways, a series of rolls adapted to receive ink from said ink fountain, a bearing bracket on which one of said rolls is journaled, and ways in which said bearing bracket is arranged to slide transversely of said frame.

4. In a printing press, a main frame provided with ways extending transversely thereof, an ink fountain slidably supported on said ways, a series of rolls adapted to receive ink from said ink fountain, a bearing bracket on which one of said rolls is journaled, and a secondary frame provided with ways in which said bearing bracket is arranged to slide transversely of said main frame.

5. In a printing press, a main frame provided with ways extending transversely thereof, an ink fountain slidably supported on said ways, a series of rolls adapted to receive ink from said ink fountain, a bearing bracket on which one of said rolls is journaled, and a secondary frame provided with ways in which said bearing bracket is arranged to slide transversely of said main frame, said secondary frame being pivoted to said main frame with its axis extending transversely thereof.

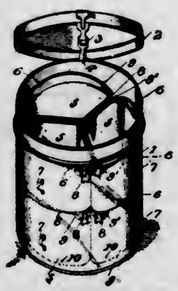
[Claims 6 to 10 not printed in the Gazette.]

875,288. MANUFACTURE OF BITUMINOUS CONCRETE. JAMES L. RAKE, Reading, Pa., and CLIFFORD RICHARDSON, New York, N. Y., assignors to The Barber Asphalt Paving Company, Philadelphia, Pa., a Corporation of West Virginia. Filed Dec. 19, 1906. Serial No. 348,643.

1. The process of manufacturing a bituminous concrete which consists in subdividing the mineral aggregate into a plurality of sizes, heating each of these sizes in a separate heater until they are each brought to the required temperature, and then combining the said sizes and adding bituminous cement to them while the mass still maintains its proper temperature throughout.

2. The process of manufacturing a bituminous concrete which consists in subdividing the mineral aggregate into a plurality of sizes, heating each of these sizes in a separate heater until they are each brought to the required temperature, further subdividing and proportioning the aggregate, and then combining the said sizes and adding the bituminous cement to them while the mass still maintains its proper temperature throughout.

875,289. BUCKET-AND-TANK FIRE-EXTINGUISHER SYSTEM. ARTHUR C. ROWE, New York, N. Y. Filed Feb. 13, 1907. Serial No. 357,228.



1. In a bucket-and-tank fire-extinguisher system, the combination of a cylindrical tank, a plurality of complementary buckets having two straight walls and assembled in said tank in a plurality of tiers, so as to produce a cylinder of less diameter than the tank, a plurality of spacing-devices on each bucket and abutting against the wall of the tank, a bail upon each bucket, and means for holding each bail elevated above the top thereof.

2. The combination of a tank, a plurality of buckets of complementary shape that when assembled side by side constitute a figure of less size than the corresponding part of the tank, a plurality of spacing-devices on each bucket adapted to abut against the wall of the tank, a pivoted bail carried by each bucket, and means for holding the same above the top of the bucket.

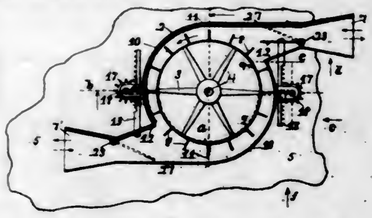
3. A bucket, designed for use in a bucket-and-tank fire-extinguisher system, having two flat sides and a third side in the form of a portion of a cylinder, a plurality of spacing-devices thereon, projecting beyond the surfaces of the sides, a pivoted bail, and stops for holding said bail elevated above the top of the bucket.

4. A bucket, designed for use in a bucket-and-tank fire-extinguisher system, having a plurality of flat vertical sides, a plurality of spacing-devices projecting beyond the surfaces of the sides, a pivoted bail, and stops for holding said bail elevated above the top of the bucket.

5. In a bucket-and-tank fire-extinguisher system, the combination of a tank and a plurality of buckets assembled close together therein to conform to the shape of the tank, a uniform space between the outside of the assembled buckets and the wall of the tank, spacing-devices on each bucket abutting against the tank, a pivoted bail on each bucket, and means for holding the same elevated.

[Claims 6 and 7 not printed in the Gazette.]

875,290. DEVICE FOR VENTILATING CARS. GEORGE W. RUGGLES, Charlotte, N. Y. Filed Aug. 10, 1907. Serial No. 388,042.



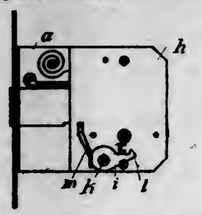
1. A device for ventilating cars, comprising a casing on the car having air passages at opposite ends and its opposing side-walls having curved portions concave toward each other, and a wheel between and eccentric with said curved portions, a shaft for the wheel extending into the interior of the car, a fan on the shaft, and means within the said air passages for controlling the amount of air acting against the wheel and independent means for actuating the means at each end independently of the other.

2. A device such as described, consisting of a casing without the car having air openings, a wheel in the casing, a shaft for the wheel extending from without to within the car, a fan on the shaft within the car, pivotal gates for controlling the flow of air within the casing, toothed racks connected movably with the gates, guides on the casing for the racks, toothed pinions in the guides to engage the racks, and means within the car for turning the pinions.

875,291. LOCK. AUGUST SCHMIDTKE, Königsberg, Germany. Filed May 24, 1907. Serial No. 375,421.

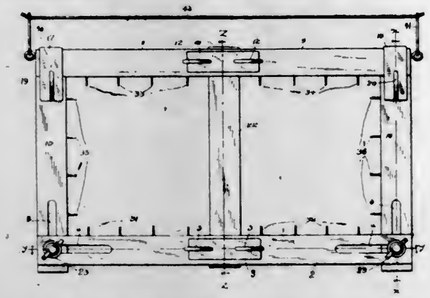
1. A door-lock comprising in combination with the lock proper (*a*), its bar (*b*) and the latch-key; a plate (*c*) movably arranged below said bar in the middle between the walls of the lock, guide-pins (*d*) designed to guide said plate, springs (*e*) designed to keep said plate in its mentioned normal position, the key-pintle (*f*) integral with said plate, and the movable key-tube (*g*) provided with a slot for the insertion of said latch-key, both the latter-key-pintle and key-tube-forming the key-hole and projecting to both sides of the lock so as to receive said

latch-key from either side of the lock and being capable, through the medium of said latch-key, to be pressed back together with said plate towards the opposite wall of said lock, for the purposes set forth.



2. A door-lock comprising in combination with the lock proper, its bar and the latch-key; a plate (c) movably arranged below said bar in the middle between the walls of the lock, guide-pins designed to guide said plate, springs designed to keep said plate in the mentioned normal position, the key-pintle integral with said plate, and the movable key-tube provided with a slot for the insertion of said latch-key, both the latter-key-pintle and the key-tube-forming the key-hole and projecting to both sides of the lock so as to receive said latch-key from either side of the lock, and a safety-contrivance designed to keep said key-tube in proper position and to cover the lower part of the key-hole and adapted to be turned away from the latter for the insertion of said latch-key, substantially as described and shown.

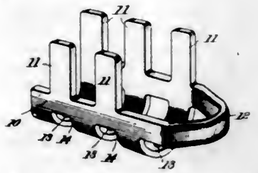
875,292. CURTAIN-STRETCHER. HELENA A. SCHWARZ, Waterbury, Conn. Filed Apr. 13, 1907. Serial No. 368,098.



1. In a curtain stretcher, the combination of the side bars 8, 9, having their inner ends abutting, the plate on the upper faces of said bars and bridging the abutting point, the bracket beneath said bars and having formed integral therewith a housing which extends close to the lower plane of said bars, the bolts passed through said plate, bars and bracket and engaging nuts on the under side of said bracket, the end cross bars abutted against the inner end faces of the bars 8, 9, the straps around the ends of the bars 8, 9, and embracing the ends of the cross bars, the bolts passed through the ends of said straps and cross bars and engaging nuts below the lowet members of said straps, the bars 1, 2, having their inner ends abutting while their outer extremities rest against the outer end faces of the cross bars, means for adjustably securing the outer ends of the bars 1, 2, to the outer ends of the cross bars, the plate resting upon the faces of the cross bars 1, 2, at the inner ends thereof and bridging the point of abutment, the bracket extending beneath the inner ends of the bars 1, 2, and against the lower faces thereof and having formed integral therewith a housing extending a distance from the bars 1, 2, in the same plane with the first mentioned housing, the bolts passed through said plate, bars and bracket, and engaging nuts on the under side of said bracket, and spurs carried by the inner edges of said bars.

2. The combination of the end cross bars, the side bars 8, 9, having their inner ends abutting, the straps passed freely around the outer ends of the bars 8, 9, and secured to said cross bars, the plate 10 and bracket 11 disposed on opposite sides of the bars 8, 9, and bridging the point of abutment, means for securing the bars 8, 9, the plate and the bracket rigidly together, the housing integral with said bracket and depending immediately below the bars 8, 9, the side bars 1, 2, having their outer extremities adjustably secured to the other ends of said cross bars the inner ends of said bars 1, 2, being in abutment and secured in this position by bolts passed through clamping members disposed above and below said bars 1, 2, and bridging the point of abutment, the housing integral with the lower clamping member and depending at a distance from the bars 1, 2, into the same plane with the first mentioned housing, the inner edges of the cross bars and the bars 8, 9, having T-grooves within which are assembled the headed portions of spurs, while the inner edges of the bars 1, 2, are likewise provided with T-grooves within which are arranged the headed portions of spurs the latter being bent downwardly so that the spur points will extend in the same plane with the points of the first named spurs.

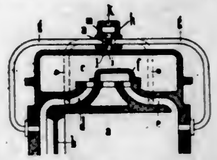
875,293. SHACKLE FOR TRANSMISSION-ROPE. JOHN G. SCOTT, Girardville, Pa. Filed May 4, 1907. Serial No. 371,878.



1. A shackle for rope belts comprising a body curved to fit the rope and having fingers projecting from its edges to grasp and bind the rope on the side opposite the curved body, said fingers alternating to pass each other in clamping the rope, and a loop diametrically across one end of the body and having both ends integral with the body.

2. A shackle for rope belts comprising a body curved to fit the rope and having transverse openings and having fingers projecting from its edges to grasp and bind the rope on the side opposite the curved body, said fingers alternating to pass each other in clamping the rope, the transverse openings in the body being in line with one side set of fingers, and a loop diametrically across one end of the body and having both ends integral with the body.

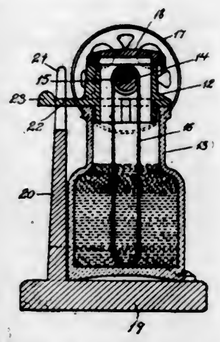
875,294. STEAM-ENGINE. ALEXIS SIABLOFF, Kolomna, Russia. Filed Mar. 9, 1907. Serial No. 361,487.



1. In a steam-engine a cylinder, a piston reciprocating therein, a conduit leading from one end of said cylinder to the other and having an enlargement forming a valve-chest, said valve-chest being in communication with the steam chest by a passage different from said conduit connecting the two ends of the cylinder with each other and at the same time with the open air, a piston valve within said valve-chest separating the open air from the steam-chamber and adapted to be actuated by pressure outside the valve-chest so as to automatically keep the passage from one end of the cylinder to the other by said conduit closed as long as live steam is fed to the cylinder and to open it when the steam-supply is shut off without admission of outside air.

2. In a steam-engine a cylinder, a piston reciprocating therein, a conduit leading from one end of said cylinder to the other and having an enlargement forming a valve-chest, a piston-valve within said valve-chest and slidingly mounted therein, said piston-valve adapted to interrupt the passage through said conduit in one position and to open it in a second position and openings in said valve-chest on opposite sides of the piston of said valve, one of said openings securing communication of said valve-chest with the steam chamber from which the engine-cylinder is fed with steam and the other with the open air the piston valve in all its positions preventing free communication between each of said openings of the valve chest with said conduit connecting the two opposite cylinder ends.

875,295. LIQUID-FEEDING DEVICE. JULIUS F. SMITH, Brockton, Mass., assignor of one-half to Eldon B. Keith, Brockton, Mass. Filed Sept. 17, 1907. Serial No. 393,395.



1. A liquid-feeding device comprising a base having a standard, a receptacle resting on the base, a casing loosely connected with the standard and resting on the receptacle, and an endless conveyer depending from the casing into the receptacle.

2. A liquid feeding device comprising a base having a bifurcated standard, a receptacle resting on the base, a casing resting on the receptacle and loosely engaging the bifurcated portion of the standard, and an endless conveyer depending from the casing into the receptacle.

3. A liquid feeding device comprising a base having a bifurcated standard, a receptacle resting on the base, a casing reating on the receptacle and carrying a shank adapted to loosely engage with the bifurcated portion of the standard, and an endless conveyer depending from the casing into the receptacle.

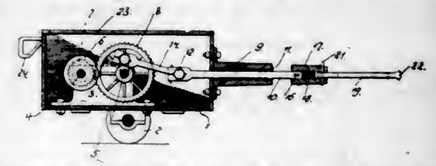
4. A liquid feeding device comprising a base having a standard the upper end of which is bifurcated, a receptacle resting on the base, a casing carried by said receptacle, a shank projecting from said casing the end portion of which terminates in an enlarged head, said shank being adapted to loosely engage the bifurcated portion of the standard, and an endless conveyer depending from the casing into the receptacle.

5. A liquid feeding device comprising a casing provided with vertical walls, a pulley journaled in said walls and arranged so that the tops of the walls and the surface of the pulley will be substantially flush with one another, and an endless conveyer depending from said pulley.

[Claims 6 to 9 not printed in the Gazette.]

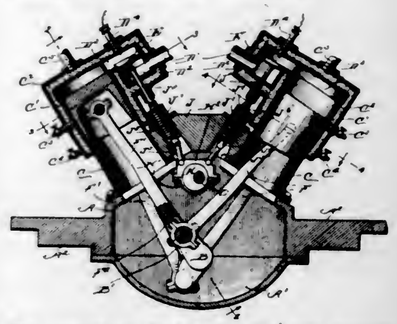
875,296. MINING-MACHINE. HARRY SPECHT, Frostburg, Pa. Filed June 11, 1907. Serial No. 378,382.

A mining machine comprising a portable box-like structure, wheels connected with said structure, said wheels arranged approximately centrally of the structure, bearings arranged within and supported by the bottom of the structure at each side thereof, a crank shaft journaled in said bearings approximately centrally of said structure and carrying a plurality of spur wheels, a motor arranged in said structure at the rear thereof and having its shaft journaled in said bearings, spur wheels carried by the motor shaft and engaging the said wheels upon the crank shaft, a forwardly extending bearing sleeve secured to the outer face



of the front wall of said structure approximately centrally thereof, a reciprocatory rod extending through the said front wall and said sleeve, a housing mounted upon the outer end of the rod, a drill connected to the housing, a spring arranged in the housing and interposed between the outer end of the rod and the inner end of the drill, and connections between the rod and the crank shaft for reciprocating the former when the latter is operated.

875,297. GASOLENE-ENGINE. GEORGE W. STANLEY, Logansport, Ind., assignor of one-eighth to George D. Miller, one-eighth to Ernest A. Tucker, one-eighth to Arthur E. Stanley, one-eighth to Frederick H. Klinsick, and one-eighth to William D. Craig, Logansport, Ind. Filed Aug. 20, 1906. Serial No. 331,352.



1. The combination with an engine having cylinders arranged in oppositely disposed sets, pistons in said cylinders, a power shaft, piston rods connected to said power shaft, a parallel shaft driven from the power shaft, valve chambers carried by the cylinders, valves in said chambers, eccentrics on the second mentioned shaft, blocks on the eccentrics, straps holding the blocks in place, and means for pivotally connecting two valves of oppositely disposed cylinders to the same block.

2. In a multi-cylinder engine, cylinders arranged in oppositely disposed sets, pistons, piston rods, a common crank shaft, a second shaft, driven from the crank shaft, eccentrics thereon, blocks on the eccentrics, valve casings carried by the cylinders, valves therein, valve stems, springs connected to the valve stems, and links pivotally connecting the springs to the blocks, valves of opposite sets being connected to the same.

3. A valve mechanism for multi-cylinder engines comprising an eccentric, a block fitting thereon, a strap connected to the corners of the block, valves, said valves being carried by the oppositely disposed cylinders, valve stems, closed coiled springs connected to the outer end of the stems and links each pivotally connected at one end to a spring and at the opposite end to one of the remaining corners of the block.

875,298. RUBBER COMPOUND AND MATERIAL FOR USE IN MAKING SAME. EBENEZER W. STRAIN, Philadelphia, Pa. Filed Oct. 30, 1905. Serial No. 285,040.

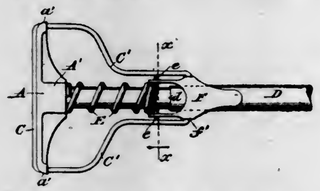
1. A composition of matter comprising the bitumen from asphaltic petroleum and rubber.

2. A composition of matter comprising oxidized bitumen from asphaltic petroleum and rubber.

3. A composition of matter comprising the bitumen from asphaltic petroleum and a resinous sap.

4. A composition of matter comprising the bitumen from asphaltic petroleum and virgin dip or gum thus.

875,299. MOP-HEAD. HAROLD M. STURGEON, Erie, Pa., assignor to Theo. J. Ely, Girard, Pa. Filed Mar. 14, 1906. Serial No. 306,062.



In a spiral mop-spring, a spirally wound spring, an integral ring on one end thereof formed of a plurality of closely wound coils of the spring material, and trunnions on opposite sides of said ring formed by closely compressed loops projecting from one of the coils of said ring, substantially as set forth.

875,300. VENTILATOR FOR WINDOWS. JAMES F. SYKES, Pittsburg, Pa. Filed Apr. 11, 1907. Serial No. 367,524.



1. The combination with a window frame having a plurality of openings extending therethrough, of independent spaced guides carried by the frame in opposed relation, each guide being angular in cross-section, said guides having one of the angle sides extending in parallelism, said angle-sides, being parallel with the axis of the openings and disposed relatively to said openings in such manner as to present the inner ends of the openings between and spaced from said angle-sides, the adjacent angle sides being in alinement and spaced from the face of the frame and from the inner ends of said openings to provide a slide-way, means for securing the parallel angle sides to the frame, and a slide mounted in said slide-way, said slide having a plurality of openings corresponding in number and position to the openings of the frame.

2. In a window frame, the combination with a rail having a plurality of openings extending therethrough, of independent spaced guides carried by said rail, said guides extending over the inner face of the rail on opposite sides of and spaced from the rail openings, each guide being L-shaped in cross-section, and having one of its sides extending in a plane at right angles to the face of the rail, said side extending in a plane parallel with the axis of the rail openings, the other side of the guide being spaced from and extending parallel with said rail face and the inner ends of the openings, means for securing the first-named side of the guide to the rail, and a slide mounted between the rail face and the opposing faces of the guides, said slide having openings corresponding in number and position to the openings in the rail.

3. The combination with a window frame having ventilating openings extending therethrough, of a slide movable over said openings, said slide having openings corresponding in number and position to the ventilating openings, and independent means located on opposite sides of and spaced from the inner ends of said openings for retaining the slide in position over the ventilating openings, said means being carried by the frame and having portions thereof extending within the plane of the frame, said portions being concealed by such frame.

4. The combination with a window frame having ventilating openings extending therethrough, of a slide movable over said openings, said slide having openings corresponding in number and position to the ventilating openings, and guides for retaining the slide in position over said ventilating openings, said guides being located on opposite sides of and spaced from said openings, each guide being independent of and similar in cross-section to its complemental opposing guide, and each guide having a portion extending within the plane of the window frame, said portions being concealed by such frame, and means for securing the guides to the frames, said means being located within the concealed portion of the guides.

875,301. BURNER FOR ACETYLENE AND LIKE GASES. KUNO THURNAUER, Nuremberg, Germany. Filed June 16, 1905. Serial No. 265,579.



A burner for acetylene and like gases, provided with a trough- or cup-shaped recess in the burner head, the diameter of which recess is larger than its depth, and with a supplementary recess provided below the main recess, into which supplementary recess the gas inlet passage opens directly.

875,302. SCREW-CLAMP. ALOIS N. VEADIN, Glendale, Ohio, assignor to Verdin, Kappes & Verdin, Cincinnati, Ohio, a Firm. Filed Oct. 11, 1906. Serial No. 338,339.



1. A device of the character described comprising a frame having a horizontaly-flanged upper portion and a vertical flange or lower portion, a work-rest having undercut guides adjustable along said upper portion of the frame, a clamping-jaw having a casing and also having undercut guides engaged for sliding-movement on said upper portion of the frame toward and from said work-rest, a removably-held key in said casing, a second casing having vertical and horizontal openings and hinged to the rear end of the flanged frame, a vertically-removable nut in the vertical opening of said second casing, and coinciding with its horizontal opening and a collared screw-shaft engaging said key and nut whereby endwise movement is imparted to said clamping-jaw.

2. In a device of the character described, the combination of a frame horizontally and oppositely flanged at its upper part and having at its lower part a longitudinally-extended series of serrations, a work-rest having undercut guides engaged for sliding-movement along the said oppositely-flanged upper part of the frame, a locking member or dog pivotally mounted on the work-rest and having a pendent yoke directed in advance of the pivot-point of said dog, lateral supporting-feet on said yoke and a hood on said dog carrying a spiral-spring, the latter stretched between the hood and the work-rest base and adapting said yoke for automatic normal engagement with one or another of the serrations of said longitudinal series.

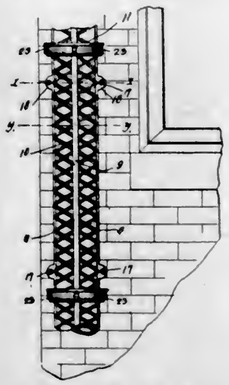
875,303. EXHAUST-SILENCER FOR GAS-MOTORS. AUGUST WEBER, Tilsit, Germany. Filed May 24, 1907. Serial No. 375,420.



1. An exhaust silencer for gas motors, comprising in combination with the exhaust box (*a*) and the exhaust pipe (*c*), a channel-pipe (*d*) of equal bore, and a channel pipe (*d*¹) provided with an outlet (*e*) and directly connected to said channel-pipe (*d*) and gradually enlarged towards its outlet so as to form the largest area at the latter and designed to receive the orifice of said exhaust pipe, for the purpose set forth.

2. A combined exhaust silencer and motor room ventilator for gas motors, comprising in combination with the exhaust box (*a*) and the exhaust pipe (*c*), a pit (*b*) arranged beneath the motor room and designed to receive said exhaust box, a perforated plate designed to cover said pit towards the motor room, a channel-pipe (*d*) of equal bore directly connected to said pit, and a channel-pipe (*d*¹) provided with an outlet (*e*) and directly connected to said channel-pipe (*d*) and gradually enlarged towards its outlet so as to form the largest area at the latter and designed to receive the orifice of said exhaust pipe, all for the purpose set forth.

875,304. PIPE, TUBE, AND TUBULAR STRUCTURE. WILLIAM H. WILKENING, Pittsburg, Pa. Filed June 5, 1907. Serial No. 377,422.



1. A pipe consisting of two semi-cylindrical sections, having interlocking longitudinally disposed edges, longitudinally disposed reinforcing ribs carried by said sections, intersecting reinforcing ribs arranged between the first mentioned ribs and the interlocking edges of said sections, screw bolts mounted in the interlocking edges of said sections, interlocking enlargements carried by the ends of said sections and providing a seat for an adjoining pipe, and clamps embracing said enlargements for supporting said pipes.

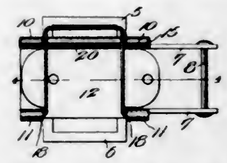
2. A pipe made of cast iron and consisting of two sections having interlocking edges bolted together, longitudinally disposed reinforcing ribs carried by said sections, intersecting reinforcing ribs carried by said sections, interlocking enlargements carried by said sections and providing a seat for an adjoining pipe, and means for supporting said pipe in a vertical position.

3. A pipe consisting of reinforced semi-cylindrical sections having interlocking and bolted longitudinal edges, interlocking annular peripheral enlargements carried by said sections for receiving the adjoining end of a pipe, and means for embracing and supporting the ends of said sections.

4. A pipe comprising a plurality of sections having the longitudinal edges interlocking and bolted together, peripherally disposed reinforcing ribs carried by each of the sections, and interlocking enlargements carried by said sections and provided with a seat for an adjoining pipe.

5. A pipe comprising a plurality of sections having the longitudinal edges interlocking and bolted together, peripherally disposed reinforcing ribs carried by each of the sections, interlocking enlargements carried by said sections and provided with a seat for an adjoining pipe, and means for supporting said pipe in abutting position.

875,305. TRACE-BUCKLE. GEORGE E. WILLIAMSON, Durango, Colo. Filed Jan. 30, 1907. Serial No. 354,894.



1. A trace buckle comprising a frame, studs projecting from said frame, a cover hinged to said frame and provided with apertures for said studs, a wire bail hinged to the opposite side of the frame from the cover hinge, and means for securing said wire bail across the cover to prevent its accidental disengagement with the studs, substantially as described.

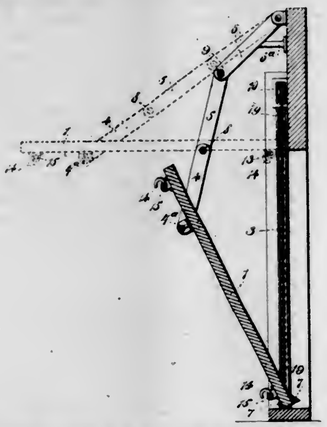
2. A trace buckle comprising a frame, studs extending upward from said frame, side bars extending at opposite sides of said studs, pintle bearings formed upon said side bars, a cover hinged between pintle bearings upon one side of said frame, said cover being provided with openings for the studs, a wire bail hinged to the pintle bearings upon the opposite side of the frame, and said pintle bearings provided with notches to engage the wire bail, and said wire bail having a curved portion to engage the hinge portion of the cover, substantially as described.

875,306. WAREHOUSE-DOOR. JAMES G. WILSON, New York, N. Y. Filed Feb. 10, 1906. Serial No. 300,389.

1. The combination of a door having sliding and pivotal connections with slide-ways at the sides of the same, and a plurality of links pivotally connected in series, one end of the series being pivotally jointed to the door and the other end being pivotally jointed to the door frame above the door, and means for holding the links away from the door frame substantially as and for the purpose described.

2. The combination of a door having sliding and pivotal connections with slide-ways at the sides of the same, and two or more supports, each composed of a plurality of links, pivotally connected, the pivots being formed of rods

connecting the various series, one end of each series being pivotally jointed to the door and the other end of each series to the door frame above the door, as and for the purpose described.



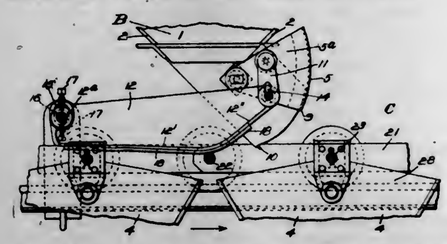
3. The combination of a door having sliding and pivotal connections with slide-ways at the sides of the same, and two or more supports, each composed of a plurality of links, pivotally connected, the pivots being formed by rods connecting the various series, one end of each series being pivotally joined to the door and the other end of each series to the door frame or wall above the door, and meahs for holding the support away from the door frame, substantially as and for the purpose described.

4. The combination of a door having sliding and pivotal connections with slide-ways at the sides of the same, and three links pivotally connected in series, one end of the series being pivotally jointed to a truss attached to the door and the other end to the door frame or wall above the door, substantially as and for the purpose described.

5. The combination of a door having sliding and pivotal connections with slide-ways at the sides of the same, and three links pivotally connected in series, one end of the series being pivotally jointed to the door and the other end being pivotally jointed to the door frame above the door, and means for holding the links away from the door frame substantially as and for the purpose described.

[Claims 6 to 8 not printed in the Gazette.]

875,307. CONVEYER-LOADING DEVICE. JOHN L. WILSON, Everett, Mass., assignor to Steel Cable Engineering Company, Boston, Mass., a Corporation of Maine. Filed Mar. 16, 1907. Serial No. 362,628.



1. In a device of the type described, conveying means comprising a plurality of material carriers, a loading device therefor, provided with a gate and adjustable lever means arranged in the path of and operated by said conveying means to open and close said gate and for regulating the time of opening and closing.

2. In a device of the type described, a loading device comprising a bin or hopper provided with a delivery chute, a gate for closing and opening the same and normally maintained closed by the material within said chute and provided with a closing member provided with means for reducing the friction of closing.

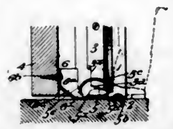
3. In a device of the type described, a loading device comprising a bin or hopper provided with a delivery chute, a gate for closing and opening the same normally maintained closed by the material within said chute and provided with a closing member adapted upon closing said gate to present a portion thereof in receding relation to the adjacent portion of said chute.

4. In a device of the type described, a loading device provided with a chute and a gate pivoted to said chute having a closing member tangentially eccentric relative to the bottom of said chute.

5. In a device of the type described, a hopper provided with a chute, an oscillatory gate for opening and closing the latter, a lever having a cam face an adjustable link connected with said gate and with said lever and a conveyer provided with coöperating members to engage the cam face of said lever for operating said gate.

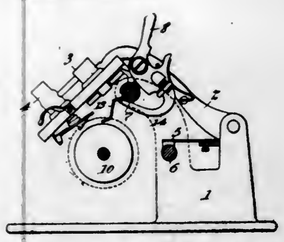
[Claims 6 to 20 not printed in the Gazette.]

875,308. WEATHER-STRIP. JAMES H. WOODBURY, Keokuk, Iowa. Filed Feb. 15, 1907. Serial No. 357,437.



The combination with a door frame and a door hingedly secured thereto, said door frame having side strips with under-cut portions, a weather strip hingedly secured to said sill and adapted to have its movement limited by such under-cut portions of the side strips, a door strip secured to the door to coöperate with the sill strip and pass under the same when the door is closed, said sill strip arranged to lie flat against the sill when a weight is applied thereon to be engaged by the edge of the door strip and form a door stop, and resilient means carried by the sill strip for engaging the door strip and raising the sill strip when the weight thereon is released, substantially as shown and described.

875,309. PHONOGRAPH. EDWARD L. AIKEN, Orange, N. J., assignor to New Jersey Patent Company, West Orange, N. J., a Corporation of New Jersey. Filed Oct. 11, 1907. Serial No. 396,875.



1. In a phonograph, the combination of means for holding a record tablet, a stylus, and an arm, each movable toward and from the tablet holding means, the arm serving to oppose movement of the tablet when moved toward said tablet holding means, and means for moving the stylus and arm simultaneously, substantially as set forth.

2. In a phonograph, the combination of a mandrel, a movable carriage, a lever for lifting said carriage, and means for preventing the placing of a record on the mandrel when the carriage is in its depressed position, the said means permitting the placing of a record upon the mandrel when the carriage is raised, substantially as set forth.

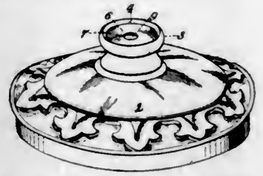
3. In a phonograph, the combination of a mandrel, a carriage, a lifting lever for said carriage and means under the control of the said lifting lever which prevents the placing of a record on the mandrel or removing it therefrom when the carriage is in its depressed position, substantially as set forth.

4. In a phonograph, the combination of a mandrel, a carriage movable up and down, means normally resting in position to prevent the placing of a cylinder upon the mandrel and means for lifting the carriage and moving the first named means away from the position in the path of the cylinder, substantially as set forth.

5. In a phonograph, the combination of a mandrel, a carriage movable up and down, a guide rod for supporting said carriage, means rotatable upon said guide rod and normally standing in position to prevent the movement of a cylinder upon the mandrel and means for raising said carriage and moving said cylinder obstructing means out of the obstructing position, substantially as set forth.

[Claim 6 not printed in the Gazette.]

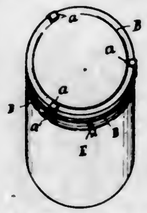
875,310. AUDIBLE ALARM FOR ELECTRIC COOKING VESSELS. JAMES I. AYER, Cambridgeport, Mass., assignor to Simplex Electric Heating Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 14, 1907. Serial No. 352,149.



1. A cover provided with a knob having at its outer side a whistle having a rounded top-side extending substantially flush with the top outer end of the knob and containing a central perforation affording communication between the whistle and the interior of the cover, the knob having a raised protecting rim recessed on its inner wall to hold the whistle.

2. A cover provided with a knob having at its top side a flat countersunk recess, a flat whistle mounted flatwise in said recess substantially flush with the top surface of the knob, and a tube secured at its upper end to said whistle and thence passing through the knob and secured at its lower end to the cover and serving as the means of connecting the whistle, knob and cover together.

875,311. CLIP FOR CAN-COVERS. GEORGE ACKERMANN, Cincinnati, Ohio, assignor to The Heekin Can Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Mar. 19, 1906. Serial No. 306,702.



The combination of a can having below its top an annular ridge, a cover fitting down over the top and contacting the ridge, angular clips with horizontal fingers to bear down upon the cover, with vertical arms to contact the sides of the can and with eyes projecting below the ridge, and a wire passing through the eyes and having its ends secured together.

875,312. FINISHING MEMBER FOR TILING. GUSTAV AYRES, Washington, D. C., assignor to Alfred du Montier, Alexandria, Va. Filed Apr. 17, 1907. Serial No. 368,691.



1. A finishing member for tiling comprising a polygonal body portion having certain of its edges formed for slidably engaging the faces of adjacent tiling to constitute supporting edges therefor, and securing means extending rearwardly from other edges of said body portion, substantially as described.

2. A finishing member for tiling comprising a quadrilateral body portion having two of its opposite edges formed for slidably engaging the faces of adjacent tiling to adjustably overlap the latter, and securing means extending rearwardly from the other two opposite edges of said body portion, substantially as described.

3. A finishing member for tiling comprising a body portion formed with supports for slidably engaging the faces of adjacent tiling to adjustably overlap the latter, and securing means extending rearwardly from said body portion with their outer edges parallel to the faces overlapped by said supports, and extending approximately at right angles to the line of engagement therewith, substantially as described.

4. A finishing member for tiling comprising a body portion formed with supports for slidably engaging the faces of adjacent tiling to adjustably overlap the latter, securing means extending rearwardly from said body portion with their outer edges parallel to the faces overlapped by said supports, and extending approximately at right angles to the line of engagement therewith, and finishing means carried by one edge of said body portion in position to extend across the outer edges of the tiling engaged by said supports, substantially as described.

5. A finishing member for tiling comprising a body portion formed with supports for slidably engaging the faces of adjacent tiling to adjustably overlap the latter, securing means extending rearwardly from said body portion in position with their outer edges parallel to the faces overlapped by said supports, and extending approximately at right angles to the line of engagement therewith, and finishing means carried by one edge of said body portion in position to extend across the outer edges of the tiling engaged by said supports, and securing means extending from the rear end of said finishing means, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

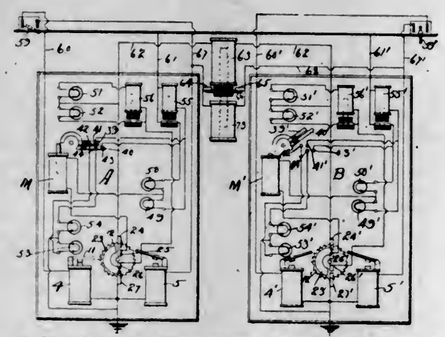
875,313. BLOCK-SIGNAL APPARATUS. ALEXANDER BEVAN, Providence, R. I. Filed Apr. 18, 1907. Serial No. 368,877.

1. In a block signaling system, the combination of a signal box, a register for indicating the number of cars in the block rotatably mounted in said box, a step by step magnetically actuated counting device also mounted in said box, and mechanical means connecting said counting device with said register, whereby the latter is rotated by the former as each car enters or leaves the block.

2. In a block signaling system, the combination of a signal box, a register for indicating the number of cars in the block rotatably mounted in said box, a step by step magnetically actuated counting device also mounted in said box, and a flexible driving connection between said counting device and said register, whereby the latter is rotated by the former as each car enters or leaves the block.

3. In a block signaling system, a signal box at each end of the block, a clear signal normally displayed in each box, a rotatable disk with numerals thereon in each box, means for displaying said safety signal in either box and said danger signal in the opposite box simultaneously by a car

entering the block, means for displaying the proper numeral on said disk to indicate the number of cars that have entered the block, means for removing the clear signals while the other signals are displayed, and means for restoring the normal conditions when the last car leaves the block.

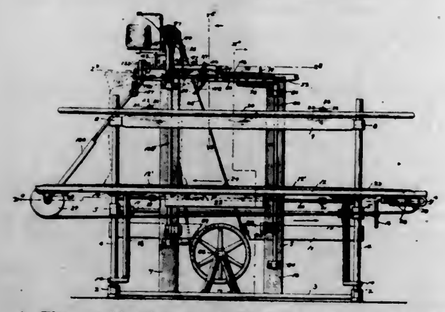


4. In a block signaling system, a signal box at each end of the block, a clear signal normally displayed in each box, a safety signal and a danger signal in each box, the safety signal in either box and the danger signal in the opposite box being adapted to be operated in series circuit, means for operating said safety signal in either box and said danger signal in the opposite box simultaneously by a passing car, and means for removing the clear signals while the other signals are displayed.

5. In a block signaling system, a signal box at each end of the block, a clear signal normally displayed in each box, a safety signal and a danger signal in each box, the safety signal in either box and the danger signal in the opposite box being adapted to be operated in series circuit, means for displaying said safety signal in either box and said danger signal in the opposite box simultaneously by a car entering the block, means for removing the clear signals while the other signals are displayed, and means for restoring the normal conditions when the car leaves the block.

[Claims 6 to 27 not printed in the Gazette.]

875,314. FILLED-BAG-SEWING MACHINE. JOHN BIGELOW, Minneapolis, Minn., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed May 22, 1900. Serial No. 17,552.



1. The combination, in a filled bag sewing machine, with a sewing head, of a table open at one side to receive the filled bags, means for simultaneously raising or lowering both ends of the table and thereby maintaining its horizontal position and a driven carrier belt arranged upon said table and adjustable therewith, and adapted to continuously move the filled bags along said table and past said sewing head.

2. In a filled bag sewing machine, the combination, with the bag feeding table, of the sewing head overhanging said table, a suitable frame or support for said table and head, and the adjustable side guide-bar by which the tops of the bags are kept in line with said sewing head, substantially as described.

3. In a filled bag sewing machine, the combination, with the bag feeding table or carrier, of the sewing head overhanging the same, a suitable frame, means for driving said head and feeding the bags upon said table, and the side guide-bar parallel with said table between the same and said head and adjustable back and forth in its parallel relation to said table and head, substantially as described.

4. In a filled bag sewing machine, the combination, with the bag feeding table or carrier, of the sewing head overhanging the same, a suitable frame, means for driving said head and feeding the bags upon said table, the side guide-bar parallel with said table between the same and said head and adjustable back and forth in its parallel relation to said table and head, and means for locking said bar, substantially as described.

5. In a filled bag sewing machine, the combination, with a suitable frame, of the sewing head overhanging the top of said frame, the bag table beneath said head, the endless belt upon said table, common driving means for said head and said belt, a starting shifter projecting from beneath said table for movement laterally by the leg of the operator, and other shifter or controlling devices provided upon said head for operation by the hands of the operator, substantially as described.

[Claims 6 to 75 not printed in Gazette.]

875,315. PROCESS OF MAKING PAPER-PULP FROM STRAW. LUDWIG K. BÖHM, Jersey City, N. J. Filed Mar. 13, 1907. Serial No. 362,160.

1. The improvement in the process of making paper pulp from straw consisting in producing half stuff from straw by means of fixed alkalies, treating the half stuff with an oxalic acid solution, agitating the half stuff in the oxalic acid solution so as to completely impregnate the fiber therewith, bleaching the half stuff by a solution of hypochlorite of magnesia, producing thereby oxalate of magnesia and producing the fine pulp by disintegrating the half stuff.

2. The improvement in the process of making paper pulp from straw consisting in producing half stuff from straw by means of fixed alkalies, treating the half stuff with an oxalic acid solution, agitating the half stuff in the oxalic acid solution so as to completely impregnate the fiber therewith, bleaching the half stuff by a solution of hypochlorite of magnesia, producing thereby oxalate of magnesia, disintegrating the half stuff to fine pulp, and working the fine pulp up into paper.

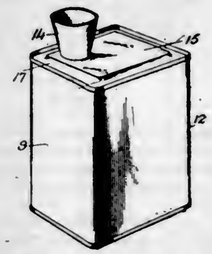
875,316. OIL-CAN. FRANKLIN D. BORLAND, McKeesport, Pa., assignor of one-fourth to Joseph F. Nacey, one-fourth to Andrew R. Bryce, and one-fourth to Lewis N. Morgan, McKeesport, Pa. Filed Mar. 12, 1907. Serial No. 361,993.



A can of the character described consisting of a containing receptacle having a tubular spout projecting through the top thereof and bent exterior of said receptacle to form a sealing convolution and extending downwardly on the interior within close proximity to the bottom of said receptacle, said tubular spout being formed in two sections, each of said sections carrying a partition,

slidably removed from the ends of said sections which are adapted to be jointed together forming an intervening chamber between said partition, each partition being provided with an aperture, and a freely movable ball within said chamber and normally resting upon one of said partitions to close the aperture therein.

875,317. SHEET-METAL CONTAINER. JULIUS BRENZINGER, Mount Vernon, N. Y., assignor to Max Ams Machine Company, Mount Vernon, N. Y., a Corporation of New York. Filed Dec. 24, 1906. Serial No. 349,231.



1. A sheet-metal container having an end portion secured to the body portion thereof by a joint consisting of both true and false double-seams.

2. A sheet-metal container of substantially polygonal cross-sectional configuration, with rounded corners, having an end portion joined to the body portion or sides by true double-seaming along right lines and false double-seaming on curves.

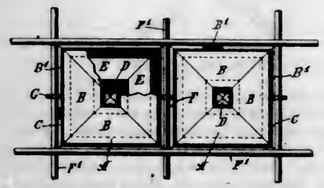
3. A sheet-metal container comprising a body portion formed from a suitable blank which provides at one end of said body portion a flange which is cut away at intervals, and an end portion secured to said body portion by a double-seaming operation, whereby the double-seam is false where said flange has been cut away.

4. A sheet-metal container comprising a blank bent into a body portion of substantially polygonal cross-sectional configuration, with rounded corners and flanges projecting from the straight side edges only of an open end of said body portion, and an end portion secured thereto by a double-seaming operation, whereby the resulting double-seam is false at the rounded corners.

5. A sheet-metal container comprising a blank bent into a body portion of substantially rectangular cross-sectional configuration with flanges at each end which do not include bent portions of said body, and end portions each secured to said body portion by a double-seaming operation.

[Claim 6 not printed in the Gazette.]

875,318. FLOORING. FERDINAND BURCHARTZ, New York, N. Y. Filed May 25, 1907. Serial No. 375,757.



1. A floor comprising blocks composed of open-end tubular sections, each having its end surfaces on the bias, adjacent sections being arranged with their longitudinal axes at an angle to each other and with their open ends in engagement, the tubular recesses of the several sections forming together an annular chamber.

2. A floor comprising blocks composed of substantially straight tubular sections set together at an angle to each other with their cavities or recesses registering to form a continuous annular chamber.

3. A floor comprising blocks composed of wedge-shaped sections, each section being a tube whose axis is parallel to the closed top and bottom surfaces of the block, said sections being fitted together end to end and forming, around the center of the block, a ring-shaped chamber or space having closed walls.

4. A floor comprising blocks composed of tubular sections set together with their open ends in engagement along surfaces directed toward the center of the block, the communicating recesses or cavities of said sections forming an annular chamber in the block.

5. A floor comprising blocks composed of tubular sections set together with their open ends in engagement along radial surfaces, the recesses or cavities of said sections forming together an annular chamber in the block, each section being provided upon the side nearest the center of the block, with a flange abutting against like flanges of the neighboring sections and forming therewith the bottom to a central space between the sections.

[Claims 6 to 15 not printed in the Gazette.]

875,319. AUXILIARY DRAW-BAR HOOK. BENJAMIN BURGESS, Danville, Ill. Filed Mar. 22, 1907. Serial No. 363,888.



1. A detachable hook for draw bars comprising a shank, having a re-curved end forming a hook, the other end of said shank having a head adapted to engage with a coupling head, and a tie-bar pivoted at one end to the said shank and at the other end engaging with the termination of the re-curved portion.

2. A detachable hook for draw bars comprising a shank having a re-curved end with a slotted termination, a head on the other end of said shank adapted to have engagement with the coupling, lugs projecting from the shank, and a tie-bar pivoted between the lugs and adapted to be received within the slotted termination of the said re-curved portion, and means for holding the said tie-bar in place.

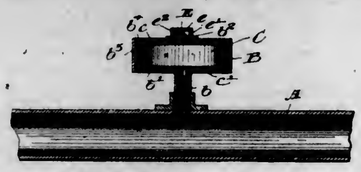
3. A detachable hook for draw bars comprising a shank having a re-curved end, the other end of said shank having a head adapted to be received within the slot of the laterally projecting knuckle-carrying jaw of a coupling head and pierced for the passage of the pivot pin of said knuckle, said shank being extended rearward to enter the opening of the coupler head and to engage with the coupling pin of said coupling head.

4. A detachable hook for draw bars comprising a shank having a re-curved end, the other end of said shank having a head adapted to be received within the slot of the laterally projecting knuckle-carrying jaw of a coupling head, and pierced for the passage of the pivot pin of said knuckle, said shank being extended rearward to enter the opening of the coupling head, and then bent laterally to engage the rear of the coupling pin of said coupler head.

875,320. VALVE. HUGH BURNET, Ottawa, Ontario, Canada. Filed Jan. 16, 1906. Serial No. 296,400.

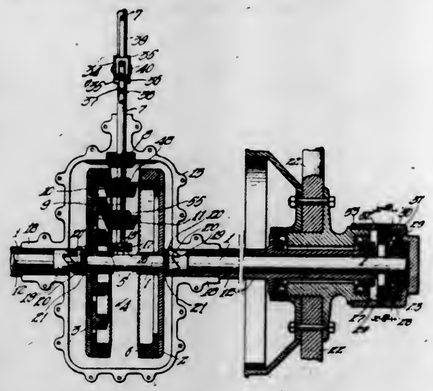
An air relief valve, consisting of a shallow casing of much greater width than depth having an inlet through its bottom and an outlet through its top, and a shallow sealed expansible-fluid-containing chamber, also of much greater width than depth, loose within said casing but so nearly fitting the interior of the same at top, bottom and sides as to cause fluid passing through the casing to form a thin sheet around the chamber, the top and bottom of

said chamber being adapted to be distended, when steam flows around the chamber, to press against the top and



bottom of the casing thereby closing both the inlet and the outlet.

875,321. TRANSMISSION MECHANISM. SAMUEL C. CARTER, Los Angeles, Cal., assignor of one-third to Carlisle H. Esler, Los Angeles, Cal. Filed Aug. 14, 1906. Serial No. 330,615.



1. The combination with a driving shaft of a plurality of gears shiftably mounted thereon, a housing for said gears, means for shifting said gears with respect to said driving shaft, a driven shaft, wheels on said driven shaft, gears mounted on said driven shaft, and means for shifting said gears and said driven shaft for causing a variable rotation of said wheels.

2. A driving shaft, a driven shaft, disks mounted on said driven shaft having gear faces of varying diameters, means for moving said disks and said driven shaft, wheels on said driven shaft, gears on said driving shaft and means for moving said gears into and out of engagement with said gear faces on said driven shaft.

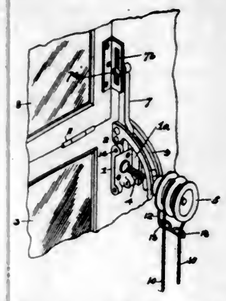
3. The combination with a driving and a driven shaft, of gears of varying sizes; means for shifting the gears on one of said shafts, means for moving said driving shaft independently of said gears, for causing a varying rotation of the driven shaft.

4. The combination with a driving shaft and a plurality of gear wheels mounted upon said shaft, of a driven shaft, wheels on said driven shaft, disks mounted thereon slidable with said shaft and provided with gear faces; means for throwing the gears on said driving shaft into engagement with the gear faces on said driven shaft, and means for controlling the rotation of the wheels mounted on said driven shaft.

5. A driving shaft a plurality of gears thereon, a driven shaft wheels on said driven shaft disks thereon provided with gear faces, a housing for the gears of both shafts, toothed collars mounted on opposite sides of said disks, means for throwing the toothed collars into and out of engagement with each other, and ball clutches carried by said driven shaft arranged to impart motion to the wheels.

[Claims 6 to 65 not printed in the Gazette.]

875,322. TRANSOM-LIFTER. FRANCIS J. CHELL, Seacombe, England. Filed Aug. 19, 1907. Serial No. 389,225.



1. In a regulator, in combination, a screw rigidly carried by the framework, a threaded pulley mounted on said screw, and one or more curved arms operatively connected to the ventilator and adapted to engage with and be actuated by said pulley.

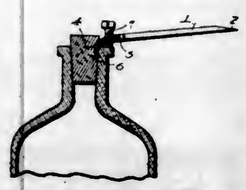
2. In a regulator, in combination, a screw rigidly carried by the framework, a base plate carrying said screw and provided with hinge lugs at each end and a side bracket, a threaded pulley mounted on said screw, and one or more curved arms pivoted in the hinge lugs and operatively connected to the ventilator and adapted to engage with and be actuated by the said pulley.

3. In a regulator, in combination, a screw rigidly carried by the framework, a base plate carrying said screw, a threaded pulley mounted in said screw, one or more curved arms carried from an arm pivoted to the base plate, and a slotted piece attached to the ventilator and engaging the end of the pivoted arm, the curved arms being adapted to engage with and be actuated by the said pulley.

4. In a regulator, in combination, a screw rigidly carried by the framework, a base plate carrying said screw, an arm pivoted to the base plate, one or more curved arms pivoted to the base plate arm, and means for adjusting the curved arms angularly about their pivot on the said base plate arm.

5. In a regulator, in combination, an internally threaded pulley having several cord grooves, and a looped cord guide rotatably mounted so as to swing about the pulley axis.

875,323. CORK-PULLER. HARRY CLARK, Menomonie, Wis. Filed Feb. 5, 1907. Serial No. 355,944.

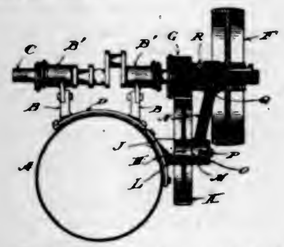


A cork puller having a shank, one end of which is formed and adapted to engage a cork, and is provided with a threaded opening near the engaging end, and a screw extending through and engaged in said opening and positioned to rest with one end on the bottle neck to form an adjustable fulcrum piece for the puller.

875,324. TRACTION-ENGINE CONSTRUCTION. WILLIAM H. COLEAN, Peoria, Ill. Filed July 2, 1906. Serial No. 324,347.

1. The combination in a traction engine of the usual engine shaft and its wheels, the usual bearings for the shaft, an auxiliary bearing for supporting that end of the

shaft which carries the wheels, a stud on the engine, and a wheel carried thereon to be driven by one of the wheels on the shaft, the auxiliary bearing being detachably secured to the stud and supported by said stud for the uses and purposes set forth.



2. The combination in a traction engine of the engine shaft, the usual bearings therefor, a wheel carrying stud on the engine the wheel adapted to be driven from the shaft, a member detachably secured to the stud and providing a bearing for supporting the shaft at its end for the purposes described.

3. The combination in a traction engine of the engine shaft and its usual bearings, of the auxiliary bearing for supporting and carrying the wheel-weighted end of the shaft, the same having two extensions, the stub-shaft on the engine to which one of such extensions is attached, and a stud also on the engine to which the remaining extension is attached for the uses and purposes described.

4. The combination in a traction engine of the engine shaft, bearings therefor, a stub-shaft on the engine, a stud also on the engine, auxiliary bearings for the outer end of the engine shaft, said bearing having depending extensions, the same being attached to the said stub-shaft and stud as described and means for retaining the extensions upon the last described members and for permitting their removal for the purposes described.

5. In a traction or other engine, the engine-shaft and bearing for carrying it, a wheel carried on said shaft outside the bearings, and an auxiliary bearing and support adjacent to such wheel the same being detachable for the purposes stated.

[Claims 6 and 7 not printed in the Gazette.]

875,325. METHOD OF EXTRACTING OR OBTAINING BUTTER-FAT. HENRY D. COOKE, Monmouth Beach, N. J., assignor to American Farm Products Company, Jersey City, N. J., a Corporation of New Jersey. Filed Sept. 14, 1906. Serial No. 334,609.

1. The process of obtaining butter fat from milk which consists in converting the milk into a thickened homogeneous liquid mass or emulsion and then extracting the butter fat therefrom.

2. The process of obtaining butter fat from milk which consists in converting the milk into a thickened homogeneous liquid mass or emulsion and then heating the mass to extract the butter fat therefrom.

3. The process of obtaining butter fat from milk which consists in violently disturbing the milk to produce a thickened homogeneous liquid mass or emulsion and then extracting the butter fat therefrom.

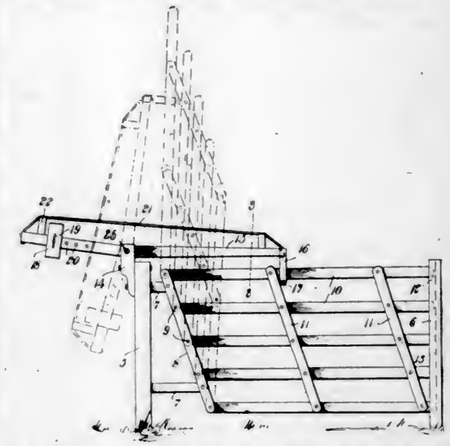
4. The process of obtaining butter fat from milk which consists in violently disturbing the milk to produce a thickened homogeneous liquid mass or emulsion and then heating the mass to extract the butter fat therefrom.

5. The process of obtaining butter fat from milk which consists in breaking the fat globules in the milk and then extracting the butter fat therefrom.

[Claims 6 to 18 not printed in the Gazette.]

875,326. FARM-GATE. WILLIAM A. CRAWFORD, Danville, Ill. Filed Feb. 13, 1907. Serial No. 357,203.

1. The combination with spaced gate posts, of a gate pivotally mounted for tilting movement between said posts and consisting of spaced longitudinal rails pivotally connected by inclined battens, a balancing lever pivotally mounted on one of the gate posts and having one end thereof deflected upwardly and provided with spaced perforations and its opposite end provided with depending hangers, an anti-friction roller journaled in the hangers and bearing against the adjacent longitudinal rail of the gate, stay-blocks extending vertically from the upper edge of the balancing lever near the opposite ends thereof, a truss rod bearing against the stay blocks and secured to the lever, a weight slidably mounted on the deflected end of the lever, a fastening device carried by the weight and adapted to engage the perforations in the operating lever for holding the weight in adjusted position, and means for tilting said lever thereby to raise and lower the gate.



2. The combination with spaced gate posts, of a gate pivotally mounted for vertical movement between said posts, auxiliary posts disposed one on each side of the gate, an operating shaft journaled in the auxiliary posts, a balancing lever rigidly secured to the operating shaft, and spaced operating levers secured to the opposite ends of the shaft and disposed at an angle to each other for moving the gate to open and closed position.

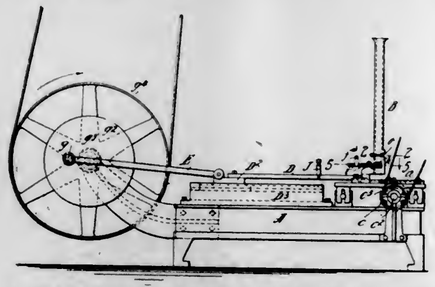
3. The combination with spaced gate posts, of a gate pivotally mounted for vertical movement between the gate posts, auxiliary posts disposed one on each side of the gate, an operating shaft journaled in the auxiliary posts, a balancing lever rigidly secured to the shaft and operatively connected with the gate, brackets carried by the auxiliary posts, crank arms secured to the shaft at said brackets, levers pivotally mounted on the brackets, links forming a pivotal connection between the levers and crank arms, and auxiliary levers secured to the opposite ends of the shaft for raising and lowering the gate.

4. The combination with spaced gate posts one of which constitutes a keeper, a gate pivotally mounted for vertical movement between the gate posts and adapted to engage the keeper, a balancing lever mounted on one of the gate posts, auxiliary gate posts disposed on each side of the gate, an operating shaft journaled in the auxiliary posts and piercing the balancing lever, said balancing lever being rigidly secured to the operating shaft and provided with a longitudinally adjustable counter-weight, a hanger depending from one end of the balancing lever and provided with an anti-friction roller adapted to bear against the gate, brackets secured to the auxiliary posts, operating levers pivotally mounted on the brackets, crank arms carried by the shaft, links forming a pivotal connection between the operating levers and crank arms, and auxiliary levers carried by the opposite ends of the shaft and disposed at an angle to the first mentioned levers.

5. The combination with spaced gate posts, of a gate pivotally mounted for vertical movement between said

posts, auxiliary posts disposed one on each side of the gate, a balancing lever operatively connected with the gate, an operating shaft journaled in the auxiliary posts and rigidly secured to the balancing lever, brackets secured to the auxiliary posts and extending transversely across the tops of said posts to form housings for the same, a crank arm secured to the operating shaft on one side of each auxiliary post, operating levers pivotally mounted on the brackets, links forming a pivotal connection between the operating levers and the crank arms, and auxiliary levers secured to the operating shaft on the opposite sides of the auxiliary posts.

875,327. BOBBIN-SLOTTING MACHINE. DANA S. COURTNEY, Chicopee, Mass. Filed June 14, 1907. Serial No. 378,927.



1. In a machine of the character described, the combination with a bed or table having an endwise-open, horizontal guideway thereon, and a saw operative at the base of the guideway, of a vertical cylindrical bobbin-feed-tube toward the rear of said horizontal guideway having a delivery opening at its lower portion, and a periodically acting pusher for forcing delivered bobbins through said guide-way.

2. In a machine of the character described, the combination with a bed or table having an endwise-open, horizontal, guideway thereon, and a saw operative at the base of the guideway, of a vertical cylindrical bobbin-feed-tube toward the rear of said horizontal guideway having a delivery opening at its lower portion, a periodically acting pusher for forcing delivered bobbins through said guideway, and means for preventing the bobbins from rising in the guide way.

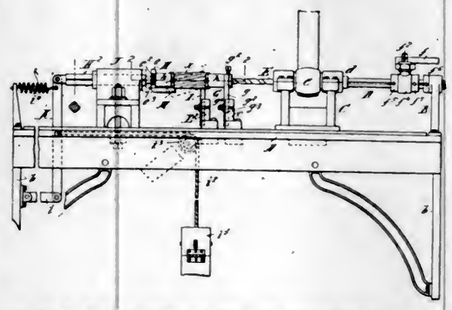
3. In a machine of the character described, the combination with a bed or table having a horizontal guideway thereon, and a saw operative at the base of the guideway, of a bobbin-pusher for advancing bobbins into said guideway, a vertical bobbin-feed-guide adapted to deliver bobbins vertically in succession to said pusher, and means distinct from the pusher and located adjacent the lower portion of said bobbin-feed-guide for temporarily arresting the descent of each lowermost bobbin after the preceding bobbin has been advanced by the pusher.

4. In a machine of the character described, the combination with a bed or table having a horizontal guideway thereon, and a saw operative at the base of the guideway, of a bobbin-pusher for advancing bobbins into said guideway, a vertical bobbin-feed-guide adapted to deliver bobbins vertically in succession to said pusher, and means distinct from but operated by the pusher and located adjacent the lower portion of said bobbin-feed-guide for temporarily arresting the descent of each lowermost bobbin after the preceding bobbin has been advanced by the pusher.

5. In a machine of the character described, the combination with a bed or table having a horizontal guideway thereon, and a saw operative at the base of the guideway, of a bobbin-pusher for advancing bobbins into said guideway, a vertical bobbin-feed-guide adapted to deliver bobbins vertically in succession to said pusher, and means distinct from said pusher and operating through the side of the lower portion of said bobbin-feed-guide for temporarily arresting the descent of each lowermost bobbin after the preceding bobbin has been advanced by the pusher.

[Claims 6 to 13 not printed in the Gazette.]

875,328. WOODWORKING-MACHINE. DANA S. COURTNEY, Chicopee, Mass. Filed June 14, 1907. Serial No. 378,928.



1. In a wood boring machine, the combination with a pair of chucks, each having two members, those of each chuck having faces which are divergent towards the relatively opposite chuck, one of said chucks having a bit hole centrally therethrough, and one of said chucks being movable towards and away from the other, of an endwise movable bit, means for rotating it, and means for moving it endwise, forward and back, means for moving one of the chucks towards and away from the other, and rests,—for supporting the pieces to be bored,—having their upper surfaces in a common plane suitably below, and adjacent, the chucks, one of said rests being supported by and movable in unison with the movable chuck.

2. In a wood boring machine, the combination with a pair of chucks, each having two members, those of each chuck having faces which are divergent towards the relatively opposite chuck, one of said chucks having a bit hole centrally therethrough, one of said chucks being movable towards and away from the other, and one of said chucks comprising a back and separately formed jaw members, both pivotally mounted on the chuck back and horizontally and transversely adjustable relatively to the length of the machine, of an endwise movable bit, means for rotating it, and means for moving it, endwise, forward and back, means for moving the one chuck towards and from the other, and rests,—for supporting the pieces to be bored,—having their upper surfaces in a common plane suitably below and adjacent the chucks.

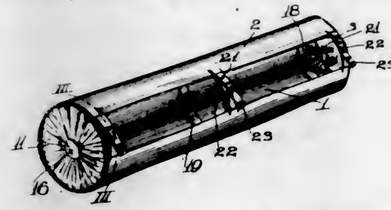
3. In a wood boring machine, the combination with a pair of chucks, each having two members, those of each chuck having faces which are divergent towards the relatively opposite chuck, the so formed jaws of each chuck being pivotally mounted for individual oscillation on studs which are provided therefor, and which studs are adjustable transversely and horizontally towards and from each other, one of said chucks having a horizontal bit hole centrally therethrough, and one of said chucks being bodily movable towards and away from the other, of an axially horizontally movable bit, means for rotating it, and means for moving it longitudinally forward and back, means for moving the one chuck towards and from the other, and rests,—for supporting the pieces to be bored,—having their upper surfaces in a common plane suitably below, and adjacent, the chucks.

4. In a wood boring machine, the combination with a pair of chucks, each having two members, those of each chuck having faces which are divergent towards the relatively opposite chuck, one of said chucks having a bit hole centrally therethrough, one of said chucks being movable towards and away from the other, said chucks comprising backs, and separately formed pairs of jaw members, pivotally mounted on the chuck backs and also horizontally adjustable thereon transversely relatively to the length of the machine, and means for limiting the oscillatory movements of the chuck jaws, of an endwise movable bit, means for rotating it, and means for moving it endwise, forward and back, means for moving the one chuck towards and from the other, and rests,—for supporting the pieces to be bored,—having their upper surfaces in a common plane suitably below and adjacent the chucks.

5. In a wood boring machine, the combination with a pair of chucks, each comprising a back, and two jaws,—the jaws of each chuck having faces which are divergent towards the relatively opposite chuck, one of said chucks having a bit hole centrally therethrough, one of said chucks being movable towards and away from the other, and one of said chucks having its jaws individually pivotally hung on the chuck back and each jaw provided with an upstanding headed stud, and washers loosely encircling said studs below their heads, and overlapping the upper surface of the chuck-back, of an endwise movable bit, means for rotating it, and means for reciprocating it, and means for moving one of the chucks towards and away from the other.

[Claims 6 to 8 not printed in the Gazette.]

875,329. SHAM ROLL-BOLSTER. JOSEPH DAVID, St. Louis, Mo. Filed Sept. 13, 1907. Serial No. 392,646.



1. A sham roll bolster comprising a body sheet, a covering incasing said body sheet and extending across one end of the bolster to provide a closure at said end, a draw string in said closure, a hoop within the bolster adjacent to said closure, an end section at the opposite end of the bolster comprising a hoop, and a covering inclosing said hoop, and means for adjustably connecting the edges of said body sheet and its covering, substantially as set forth.

2. A sham roll bolster comprising a body sheet, a covering incasing said body sheet, hoops located interiorly of said body sheet, strips inclosed within said covering, and means whereby said strips and covering are drawn tightly to said hoops, substantially as set forth.

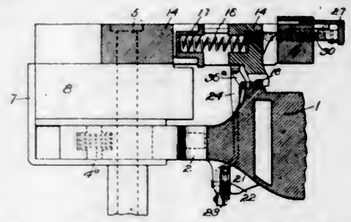
3. A sham roll bolster comprising a body sheet, a covering incasing said body sheet, hoops located interiorly of said body sheet, strips inclosed within said covering, and straps secured to said strips adapted to be connected to draw said body sheet to said hoops, substantially as set forth.

4. A sham roll bolster comprising a body sheet, a covering incasing said body sheet and extending across one end of the bolster to provide a closure at said end, a draw string in said closure, and a rosette comprising a pair of disks, a covering for said disks, and a binding string wrapped around said covering between said disks, substantially as set forth.

5. An end section for a sham roll bolster comprising a hoop, a covering inclosing said hoop and containing draw strings by which the covering is held around the hoop, and a rosette and a portion of said end section covering comprising a pair of disks, a covering incasing said disks, and a binding string wrapped around said disk covering between said disks, substantially as set forth.

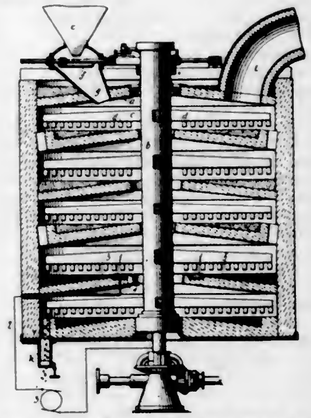
875,330. CAR-COUPLING. PATRICK J. DUGAN, Chestnut Hill, Mass., assignor to Elizabeth Dugan, Brookline, Mass. Filed Oct. 7, 1905. Serial No. 281,768.

1. In a draft appliance the combination of the pin 5, pivot block 4, spring 4a, drawbar 2 provided with the lug 21 carrying friction wheel 22, track 23 supported by the arm 24, said drawbar provided with a rib 18 adapted to receive the guide slot 19 in the buffer block 14, spring 16, socket member 17, spring 30, rod 31 connected to the extension member 27 pivotally connected to the arm 29 of the buffer 14.



2. In a device of the class described, a buffer provided with hangers, a track supported thereby and a pivoted draw bar provided with a wheel to run upon said track, and yielding means for normally maintaining the track engaging wheel in engaging position and for normally maintaining the track engaging wheel in central position relative to and upon said track.

875,331. FURNACE FOR DESULFURIZING AND AGGLOMERATING ORES. ANDREW J. DULL, Harrisburg, and JOSEPH WEATHERBY, Jr., New Cumberland, Pa.; said Weatherby assignor to said Dull. Filed Feb. 4, 1907. Serial No. 355,691.

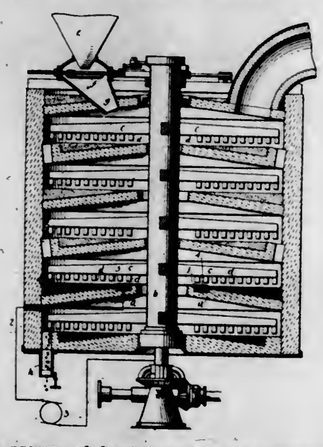


1. An ore roasting furnace having means for heating the ore to desulfurize the same, an electrode arranged in the furnace, a second movable electrode coöperating with the first-mentioned electrode to produce an electric arc to the action of which the heated ore is subjected, said movable electrode being adapted to move the agglomerated ore beyond the radius of action of the arc.

2. An ore roasting furnace having means for heating the ore to partially desulfurize the same, a pair of electrodes arranged in the furnace and movable one relative to the other, means coöperating with the electrodes to produce an electric arc to the action of which the heated ore is subjected, and further desulfurized, one of the electrodes being in the form of a separator for agitating the ore and for removing agglomerated ore out of the radius of action of the arc.

3. An ore roasting furnace having means for heating the ore a moving element to set up motion in the ore heated in the furnace, electrodes, and means coacting therewith to produce an electric arc, to the action of which the heated ore is exposed, one of said electrodes being movable with reference to the other, for the purpose set forth.

875,332. PROCESS OF DESULFURIZING AND AGGLOMERATING COMMINUTED ORES. ANDREW J. DULL, Harrisburg, and JOSEPH WEATHERBY, Jr., New Cumberland, Pa.; said Weatherby assignor to said Dull. Filed Feb. 4, 1907. Serial No. 355,692.



1. The process of desulfurizing and agglomerating ore, consisting in heating the same to a degree sufficient to burn out the major portion of the sulfur, but insufficient to fuse the ore, and subjecting such heated and partially desulfurized ore to the action of an electric arc, substantially as described.

2. The process of agglomerating ore by exposing the same to the action of an electric arc, and moving one of the electrodes with respect to the other to break off the agglomerated ore mass.

3. The process of agglomerating ore by first heating the same to reduce its electrical resistance, exposing the heated ore to the action of an electric arc, and moving one of the electrodes, between which the arc is produced, with respect to the other to break off the agglomerated ore mass or cinder between them, and removing such mass or cinder from the sphere of action of the arc.

875,333. MOVING-PICTURE FILM. FRANK L. DYER, Montclair, and DELOS HOLDEN, Upper Montclair, N. J., assignors to Edison Manufacturing Company, West Orange, N. J., a Corporation of New Jersey. Filed Oct. 21, 1905. Serial No. 283,838.

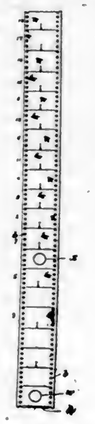
1. As a new article of manufacture, a moving picture film carrying two arithmetical series of photographs representing successive phases of movement the members of which series alternate, and the photographs of one series being preceded by photographs of the other series which are representative of later phases of movement, and an indicator for each series arranged in advance and in step with the pictures thereof, substantially as and for the purposes set forth.

2. As a new article of manufacture, a moving picture film carrying photographs representing successive phases of movement, the photographs constituting the even numbered series being relatively shifted longitudinally of the film with respect to the photographs representing the odd numbered series, and an indicator for each series arranged in advance and in step with the pictures thereof, substantially as and for the purposes set forth.

3. As a new article of manufacture, a moving picture film having pictures arranged in two distinct series and provided with two indicators corresponding to the two series, substantially as and for the purposes set forth.

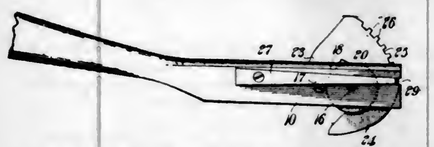
4. As a new article of manufacture, a moving picture film, having its pictures arranged in two distinct series, and an indicator for each series arranged in advance thereof, substantially as and for the purposes set forth.

5. As a new article of manufacture, a moving picture film, having its pictures arranged in two distinct series, an indicator for each series in advance thereof, and in



step with the pictures thereof, substantially as and for the purposes set forth.

875,334. CUTTING-TOOL. JAMES W. ECKLEY, Wallaceton, Pa., assignor of one-half to George F. Goss, Wallaceton, Pa. Filed Apr. 5, 1907. Serial No. 366,604.



1. In a device of the class specified, a revoluble cutter disk, a pivotally mounted cutting member, the edge of which intersects that of the disk, said pivotally mounted member being adjustable to present successively fresh portions of the cutting edge to operative position, and means for locking said pivotally mounted cutting member in adjusted position.

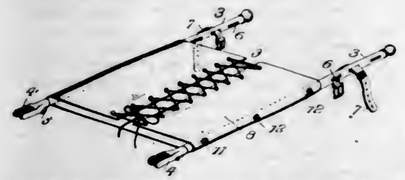
2. In a device of the class specified, a revoluble cutting disk, a pivotally mounted cutter having a notched periphery, said cutter being adjustable to present successively fresh portions of the edge to operative position, and a locking member arranged to enter said notches.

3. In a device of the class specified, a carrying head, a revoluble cutter, a pivotally mounted cutter, both of said cutters having beveled outer faces for engagement with the sides of the cut which they form, the pivoted cutter having a notched outer edge, and a spring locking arm arranged to enter the notches.

4. In a device of the class specified, a carrying handle having a terminal head, an arbor, and a pivot pin extending therethrough, a disk cutter on the arbor, a cutting blade mounted on the pivot pin and having a cutting edge on an arcuate line struck from such pivot, the outer edge of the cutting blade being notched, a spring locking arm arranged to enter the notches, the end of the head being provided with alining notches into which said arm may enter when in locking position, and a spring washer tending to force the revoluble cutter away from said cutting member.

5. In a cutting tool, a pair of cutters having beveled outer edges for engagement with the sides of the cut which they form, and a spring tending to force the cutters apart to prevent excess friction between them during the cutting operation.

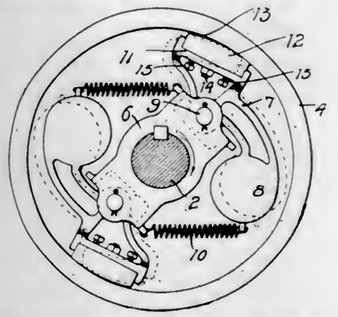
875,335. BED-REST. NANCY P. ELLICOTT, Baltimore, Md. Filed July 20, 1906. Serial No. 327,078.



1. In a bed rest the combination of two bars supported at their lower end on the side frame of the bed, fastening devices adapted to attach the bars to the head of the bed, and a series of seats on the bars adapted to coöperate with the fastening device.

2. In a bed rest the combination of two bars supported at their lower ends on the side frame of the bed, fastening devices adapted to attach the bars to the head of the bed, and a series of seats on the upper ends of the bars adapted to coöperate with the fastening devices for adjustable attachment to the head of the bed, a strip of flexible material extending from bar to bar, and means for adjusting the position of the material on the bars.

875,336. AUTOMATIC NON-REVERSING STOP. SCOTT F. EVANS, Minneapolis, Minn. Filed Sept. 21, 1906. Serial No. 335,600.



1. The combination, with a ring having an interior braking surface, of a shaft, arms pivotally supported thereby and having spring retracted ends adapted to be thrown outward by centrifugal force, and means carried by the opposite ends of said arms and arranged to engage the braking surface of said ring the strain arising from the pressure of said means on said surface being sustained by the pivots of said arms to lock said shaft against backward movement and said means swinging freely with said arms away from said braking surface against the tension of said springs to release said shaft when it is revolved in the other direction, substantially as described.

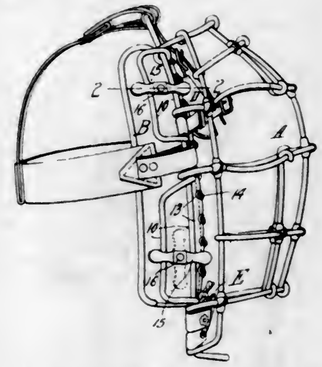
2. The combination, with a ring having an interior braking surface, of a shaft, arms pivotally supported thereby, shoes carried by said arms and having curved surfaces adapted to contact with said braking surface, said shoes being of greater depth at one end than at the other, the thicker ends of said shoes adapted to contact first with the braking surface of said ring, and said shoes when seated on said braking surface, having a wedging or cramping effect to lock said shaft against backward movement but permitting it to be freely revolved in the opposite direction, and means for tilting said shoes on said arm whereby the angle of their bearing surfaces may be changed with respect to said braking surface.

3. The combination, with a motor frame, of a ring secured thereon and having an interior braking surface, a motor shaft, a block keyed on said shaft, arms pivoted at points intermediate to their ends on said block, springs connecting said block with one end of each arm, shoes mounted on the opposite ends of said arms and swung into engagement with said braking surface by said springs when said shaft is stationary the strain arising from the pressure of said shoes on said surface being sustained by the pivots of said arms, whereby a wedging effect will be obtained between said pivots and said surface to lock said shaft against backward movement.

4. The combination, with a ring having an interior braking surface, of a shaft, arms pivotally supported at points intermediate to their ends thereon, springs connected to one end of said arms, shoes mounted in seats provided at the opposite ends of said arms and tapered from one end toward the other and having curved surfaces to engage the braking surface of said ring and adjusting bolts mounted in said seats and engaging said shoes whereby their angle with respect to said braking surface may be changed, substantially as described.

5. The combination, with a ring having an interior braking surface, of a shaft, arms pivotally supported thereon, shoes carried by said arms and having curved surfaces adapted to contact with said braking surface, said shoes tapering from one end toward the other, springs normally tending to hold said shoes in contact with said braking surface, the angle of engagement of said shoes with said braking surface causing the thicker ends of said shoes to first contact with said surface, and said shoes becoming fully seated on said braking surface when said arms have been moved to a predetermined position through the tension of said springs, and said shoes allowing said shaft to revolve freely in one direction but locking it against backward movement.

875,337. CATCHER'S MASK. ARTHUR C. FERRY, Chicopee Falls, Mass. Filed July 20, 1907. Serial No. 384,735.



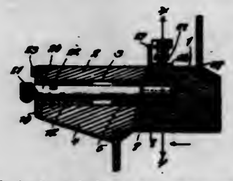
1. In a catcher's mask, the combination with the cage or frame, of a side face pad having a longitudinal slit-like opening and means for detachably closing the same, and means for removably securing the pad to the cage.

2. In a catcher's mask the combination of the cage or frame comprising at the side portion separated wire members—of a side face pad having a plurality of two armed metallic buttons, intermediately pivotally supported by and engaged with the pad, and adapted to detachably engage the said separated wire members.

875,338. SASH-LOCK. LORENZ FOERY, Rochester, N. Y. Filed Aug. 21, 1907. Serial No. 389,565.

1. In a sash lock, a spring-actuated bolt movable through the top rail of the lower sash, a bushing forming a keeper for said bolt, a lever for controlling the movements of the bolt, the bolt having a notch, and a weighted pawl for engagement with said notch and means movable through said bushing and engaging the bolt.

2. In a sash lock, a spring-actuated bolt, movable through the top rail of the lower sash, means for holding the bolt in its retracted position, and means for engaging the bolt in its projected position said means being both at right angles to the bolt and at right angles to each other.

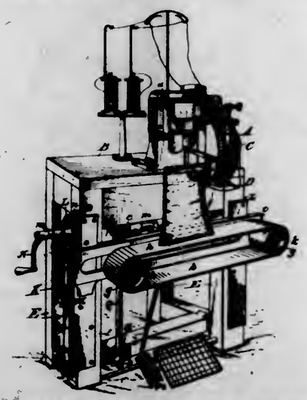


3. In a sash lock, a bolt, a spring actuated lever connected therewith, a weighted pawl for enaging the bolt to hold it in its retracted position, and means at right angles to the length of the bolt for drawing the sash together and holding the bolt in its projected position.

4. In a sash lock, a bolt, a lever connected therewith, a spring acting on the lever to normally keep the bolt projected, said bolt having an inclined portion, and means for engaging said inclined portion to draw the two sashes together.

5. In a sash lock, a bolt, a lever connected therewith, a spring acting on the lever, to keep the bolt projected, means for locking the bolt in its retracted position, said bolt having an inclined portion, and a thumb screw adapted to engage said inclined portion to draw the two sashes together.

875,339. APPARATUS FOR DELIVERING FILLED BAGS TO SEWING-MACHINES. CHARLES H. FOSTER, New York, N. Y., assignor to The Union Special Sewing Machine Co., Chicago, Ill., a Corporation of Illinois. Filed May 11, 1901, Serial No. 59,822. Renewed May 7, 1907. Serial No. 372,343.



1. In an organized sewing machine for feeding and sewing filled sacks, a suitable supporting framework, a sewing mechanism thereon, a driving shaft, a horizontal conveying mechanism, connections between the driving shaft and the sewing mechanism and between the driving shaft and the conveying mechanism, said means including a vertical shaft having a gear rotating therewith, but slidable thereon and a horizontal shaft having a gear meshing with said slidable gear, and means for raising and lowering the horizontal shaft and thereby the gear on the vertical shaft; substantially as described.

2. In an apparatus for feeding and sewing filled sacks, a suitable supporting framework, a sewing mechanism thereon, a driving shaft, connections between the driving shaft and the sewing mechanism, a conveying mechanism for the sacks, including a vertically moving bracket with means for adjusting it, shafts carried thereby, an endless band trained over said shafts, one of said shafts being provided with a worm wheel, a vertical shaft provided with a vertically movable worm engaging said worm wheel, whereby in the adjustment of the bracket, the worm is also adjusted; substantially as described.

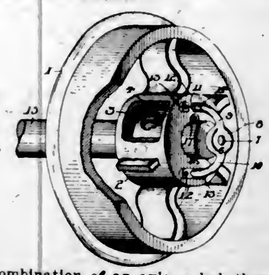
3. An apparatus for feeding and sewing filled bags, including a sewing mechanism, a horizontally disposed conveying mechanism in proper coöperative relation thereto, a driving mechanism, connections between the same and the sewing mechanism, and connections between said driving mechanism, and the conveying mechanism, said latter connections including an upright snaft, and gearing between the same and the conveying mechanism; and means for raising and lowering the conveying mechanism with the gearing, substantially as described.

4. An apparatus for feeding and sewing filled bags, including a sewing mechanism, a horizontally disposed conveying mechanism in proper coöperative relation thereto, a driving mechanism, connections between the same and the sewing mechanism, and connections between said driving mechanism, and the conveying mechanism, said latter connections including an upright shaft carrying a worm, a worm wheel meshing therewith, and connections between the worm wheel, and conveying mechanism; substantially as described.

5. An apparatus for feeding and sewing filled bags, including a sewing mechanism, a conveying mechanism in proper coöperative relation thereto, a driving mechanism, connections between the same and the sewing mechanism, and connections between the driving mechanism and the conveying mechanism, said latter connection including an upright shaft operatively connected to the driving mechanism, a worm movable on said upright shaft, a movable bracket having transverse shafts, belt pulleys on said shafts, a conveyer belt on said pulleys, and a worm wheel on one of said shafts, meshing with the worm gear on the upright shaft; substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

875,340. SELF-LUBRICATING WHEEL. WILLIAM C. FOWNES, Jr., and ROBERT J. GARDNER, Pittsburg, Pa., assignors to The S. Jarvis Adams Company, Pittsburg, Pa., a Corporation of Pennsylvania. Filed May 28, 1907. Serial No. 376,184.



1. The combination of an axle, a hub thereon having a lubricating chamber therein, a hub-fastening device carried by the axle, a plurality of hollow arms on said hub, the arms meeting opposite the end of the axle where a central inlet communicating with the passages in said arms is provided, and means for securing said arms to the hub, the outer face of the hub being sufficiently clear of obstructions and the said arms being sufficiently narrow to permit at substantially all times a view of the axle where it emerges from the hub.

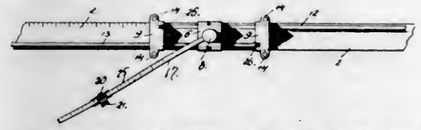
2. The combination of an axle, a hub thereon having a lubricating chamber therein, and a substantially plane outer face, a hub-fastening device carried by the axle, a plurality of hollow arms on the said hub, the said arms meeting opposite the end of the axle where a central inlet communicating with the passages in said arms is provided, and means for securing said arms to the hub, the said arms being sufficiently narrow to permit at substantially all times a view of the axle where it emerges from the hub.

3. The combination of an axle, a hub thereon having a lubricating chamber therein, a hub-fastening device carried by the axle, a plurality of hollow arms on said hub, the arms meeting opposite the end of the axle where a central inlet communicating with the passages in said arms is provided, and detachable means for securing said arms to the hub, the outer face of the hub being sufficiently clear of obstructions and the said arms being sufficiently narrow to permit at substantially all times a view of the axle where it emerges from the hub.

4. The combination of an axle, a hub thereon having a lubricating chamber therein, a hub-fastening device carried by the axle, a plurality of hollow arms on said hub, the arms meeting in a hollow enlargement opposite the end of the axle where a central inlet communicating with the passages in said arms is provided, and means for securing said arms to the hub, the outer face of the hub being sufficiently clear of obstructions and the said arms being sufficiently narrow to permit at substantially all times a view of the axle where it emerges from the hub.

5. The combination of an axle, a hub thereon having a lubricating chamber therein, a hub-fastening device carried by the axle, a plurality of hollow arms on said hub, the arms meeting in a hollow enlargement opposite the end of the axle where a central inlet communicating with the passages in said arms is provided, and means for securing said arms to the hub, the outer face of the hub being sufficiently clear of obstructions and the said arms being sufficiently narrow to permit at substantially all times a view of the axle where it emerges from the hub, the cross-section of the passages in the said enlargement each side of the inlet at least equaling that of the passage in one of the arms.

875,341. CENTERING AND MEASURING INSTRUMENT. ANTON FRANK, Braddock, Pa. Filed May 27, 1907. Serial No. 375,861.



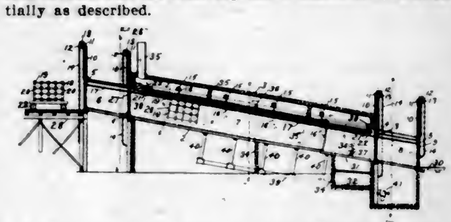
1. In a centering and measuring device, a base strip or rule, a pinion carried on the upper face thereof centrally of the length of the strip or rule, a housing inclosing the pinion, slides mounted on said rule and provided with apertured ears at each end, gage pins carried by said apertured ears, and a pair of racks arranged on the rule to engage said pinion, one end of one rack being connected to one of the slides and one end of the other rack being connected to the other slide.

2. In a centering and measuring device, a graduated rule having an opening centrally of its length, a sleeve mounted in said opening, a pinion mounted on said sleeve, a housing inclosing the sleeve and pinion and having openings in the upper and lower faces alining with said sleeve, slides mounted upon said rule, gage pins carried by said slides outside the rule, racks on the rule arranged one on each side of the pinion and connected one to each slide, a center pin mounted in said housing and sleeve, a graduated sweep carried by the center pin, and a marker adjustably mounted on said sweep.

875,342. APPARATUS FOR WOOD DISTILLATION. GEORGE B. FRANKFORTER, Minneapolis, Minn. Filed Mar. 20, 1905. Serial No. 250,915.

1. The combination, with an elongated retort having a bottom provided with a convex middle portion extending lengthwise thereof and longitudinal gutters upon each side of said convex portion, drain pipes 39 provided beneath said retort and provided with branch pipes 40 communicating with said gutters through the bottom of said retort, and a basket adapted to contain a supply of wood and arranged to travel slowly through said retort.

2. The combination, with an elongated retort arranged at an incline and having a bottom provided with a convex middle portion and longitudinal depressions on each side forming gutters, of a furnace located beneath and near the discharge end of said retort whereby the heat in the retort will gradually increase from its receiving to its discharge end, drain pipes 39 located beneath said retort and parallel therewith, and branch pipes extending vertically from said drain pipes through the bottom of said retort and communicating with said gutters at intervals between said furnace and the receiving end of said retort, substantially as described.



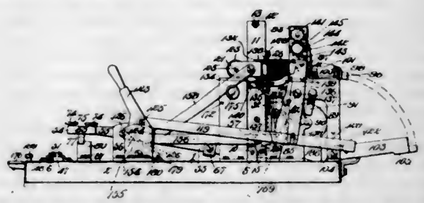
3. The combination, with an elongated retort having a bottom provided with a convex middle portion and longitudinal depressions on each side forming channels or gutters, and drain pipes connected with said channels at intervals, of a crate or basket adapted to contain a supply of wood and having a bottom provided with a convex central portion and depressions on each side and suspended within said retort, substantially as described.

4. The combination, with a retort having receiving and discharge openings and closing means therefor, of a heating means, a wood receptacle arranged to travel by gravity in said retort, a sprocket chain and lugs or teeth provided on said receptacle and adapted to engage the links of said chain, for the purpose specified.

5. The combination, with an elongated retort arranged at an incline and having a distillation chamber and receiving and cooling chambers, and gates separating said receiving and cooling chambers from said distillation chamber and also from the open air, a receptacle adapted to contain a supply of wood arranged to enter said distillation chamber through said receiving chamber and travel slowly toward said cooling chamber, means in the path of said receptacle to be automatically engaged by and disengaged from said receptacle for regulating the speed of travel of the same, and a furnace located beneath the discharge end of said distillation chamber and arranged to produce an intense heat at said discharge end gradually decreasing in intensity toward the receiving end of said chamber.

[Claims 6 and 7 not printed in the Gazette.]

875,343. PRINTING MECHANISM FOR ADDING-MACHINES. WILLIAM F. GATEWOOD, Pierce City, Mo., assignor of one-third to Ethelbert P. Lampkin, St. Louis, Mo., and one-third to William W. Locke, Pierce City, Mo. Original application filed June 18, 1906, Serial No. 322,138. Divided and this application filed Feb. 4, 1907. Serial No. 355,618.



1. In an adding machine printing mechanism, a type member, means for operating said type member, a roller platen arranged for movement toward said type member, and means causing a forward and upward movement for

operating said roller platen, so as to cause it to roll against the type of the type member, substantially as set forth.

2. In an adding machine printing mechanism, a type wheel, means for operating said wheel, a roller platen arranged for movement toward said type wheel, and means causing a forward and upward movement for operating said roller platen so as to cause it to roll against the type of the type wheel, substantially as set forth.

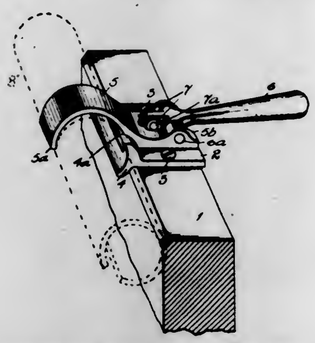
3. In an adding machine printing mechanism, a type wheel, means for operating said type wheel, a reciprocally supported roller platen arranged for movement toward said wheel, and means for imparting a forward and upward movement to said roller platen, so as to cause it to roll against the type of the type wheel, substantially as set forth.

4. In an adding machine printing mechanism, a type wheel, means for operating said wheel, a roller platen arranged for movement toward said wheel, means for imparting a forward and upward movement to said roller platen, and a support for said platen arranged so as to direct its movement at an angle to the axis of said type wheel and cause it to roll against the type of the type wheel, substantially as set forth.

5. In an adding machine printing mechanism, a type wheel, means for operating said type wheel, a slide bar, a roller platen carried by said slide bar, means for moving said slide bar forward and upward, so as to cause the roller platen to roll over the type of the type wheel and a spring bearing against one of the faces of said slide bar, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

875,344. CLAMPING DEVICE. EUGENE F. GLOCK, Detroit, Mich. Filed June 10, 1907. Serial No. 378,104.



1. In combination with a base, a movable clamping finger adapted to coöperate with an edge thereof in the holding in place of a tube, a locking lever pivotally attached to the base and to said finger whereby said finger may be so moved and locked in position relatively to the base, that, in coöperation therewith, it holds the tube in place, substantially as described.

2. In combination with a fixed base, a clamping finger engaging thereover, and a locking lever pivoted at different points along its length to said base and to said finger, adapted to throw the finger into locking engagement about a pipe interposed between its free end and an opposing portion of said base, substantially as described.

3. In combination with a base portion having one lateral edge shaped to receive a horizontally extending tube along its side portion, a clamping finger adapted to engage with its free end against the opposite side of the tube from that engaged by the base, and a locking lever hinged to said base and to said clamping finger, whereby the same is forced into locking engagement about said tube and positively held in such position, substantially as described.

875,345. THERMIC PROCESS. HANS GOLDSCHMIDT, Essen-on-the-Ruhr, Germany, assignor to The Firm of Th. Goldschmidt, Essen-on-the-Ruhr, Germany. Filed Jan. 6, 1906. Serial No. 294,972.

1. A thermic mixture, consisting of metallic substances, containing calcium, aluminum and a metallic compound capable of being reduced to a metal, the substances being thoroughly mixed with each other and the proportions of the two active reducing metals being such that calcium forms one quarter to three quarters in weight of the weight of the two active metals.

2. A thermic mixture consisting of metallic substances, containing calcium and aluminum in form of an alloy and a metal compound containing only metal and oxygen, the substances being thoroughly mixed with each other and the proportions of the two active reducing metals being such that calcium forms one quarter to three quarters in weight of the weight of the two active metals.

3. A thermic mixture consisting of metallic substances, containing calcium and aluminum and a metal compound containing only metal and oxygen, the substances being thoroughly mixed with each other and the proportions of the two active reducing metals being such that calcium forms one quarter to three quarters in weight of the weight of the two active metals.

4. A thermic mixture consisting of metallic substances containing calcium and aluminum in form of an alloy and a metal compound containing only metal and oxygen, the substances being thoroughly mixed with each other and the proportions of the two active reducing metals being such that calcium forms one quarter to three quarters in weight of the weight of the two active metals.

5. A thermic mixture consisting of metallic substances containing calcium and aluminum and an iron-oxid compound the substances being thoroughly mixed with each other.

[Claims 6 to 11 not printed in the Gazette.]

875,346. ARTIFICIAL CLAW. WILLIAM GRABOWSKI, Pittsburg, Pa. Filed Sept. 24, 1907. Serial No. 394,392.

1. An artificial claw for use in taxidermy comprising a body portion and a barbed projection.

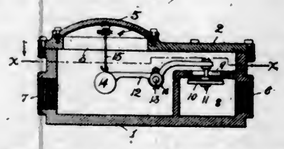


2. An artificial claw for use in taxidermy comprising a body-portion and a barbed projection, of arrow head shape.

3. An artificial claw for use in taxidermy comprising a body portion and a barbed projection of arrow-head shape, formed with a depending supplemental prong.

4. An artificial claw for use in taxidermy comprising a body-portion of molded material having an integral projection of arrow head shape, and a depending integral prong.

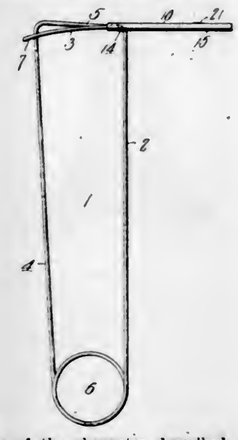
875,347. AUTOMATIC STOP-VALVE. JOSEPH G. HARRIS and TIMOTHY P. MATTIMORE, Toledo, Ohio. Filed July 13, 1907. Serial No. 383,700.



1. In combination, a casing having an internal valve-chamber provided in its top with a port opening into the chamber formed by the casing, said casing having an inlet opening leading into the valve-chamber and an outlet opening leading from the other chamber, a valve intended to close the outlet port in the valve-chamber and having its stem projected outwardly therethrough, a lever fulcrumed within the casing and having an end weighted and its other end attached to the valve stem, a diaphragm disposed above the weighted end of the lever and connected thereto whereby an outward pressure on the diaphragm effecta a raising of the weighted end of the lever and an opening of the valve, and a shaft carrying the lever and having its outer end projected through the casing to adapt a turning of the shaft to oscillate the lever.

2. In combination, a box-like member having an outlet port, a removable cover provided with an opening, a lid for said opening having its inner surface concaved, a diaphragm held across the opening by the lid and having its outward movement limited by the lid, a valve-chamber in one end of said member having inlet and outlet openings, the outlet opening being in its top, an internal valve for closing said outlet opening, a lever fulcrumed within the member and having one end weighted and connected to the diaphragm and its other end attached to the valve-stem, and means operative from without the member for manually turning the lever, substantially as described.

875,348. GAS-LIGHTER. CHARLES C. HARTLEY, Mattoon, Ill. Filed Nov. 12, 1906. Serial No. 343,027.



1. A device of the character described comprising an upright member, a match support secured to said member and arranged at an angle thereto, an arm resiliently connected to said member and having a plunger arranged to extend over said match support, and means on said match support for igniting a match and holding the same after ignition.

2. A device of the character described, comprising an upright member, a match support secured to said member and arranged at an angle thereto, an arm resiliently nected to said member and having a plunger arranged to extend over said match support, means carried by the match support for holding the plunger in a retracted position, and means on said match support for igniting a match and holding the same after ignition.

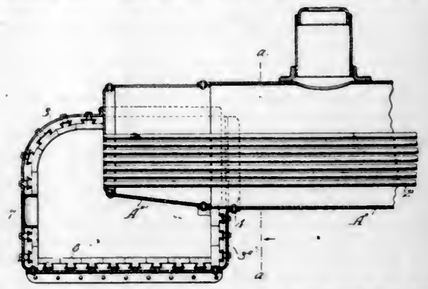
3. A device of the character described comprising an upright member, a match support secured to said member and arranged at an angle thereto, an arm resiliently connected to said member and having a plunger arranged to extend over said match support; said match support being provided at one end with a struck up portion to engage the forward end of said plunger to hold same retracted, and a device at the other end of said match holder for igniting a match and engaging the stem thereof after ignition.

4. In a device for the purpose described, the combination of a body comprising an upright portion and a resilient arm connected with the upright portion and provided with a plunger, means carried by the upright portion of the body for turning a gas key, means also carried by the upright portion of the body for supporting a match and normally holding the plunger in its retracted position, and means also carried by the upright portion of the body for igniting and holding a match.

5. In a device for the purpose described, the combination of a body comprising an upright portion having an integral loop for turning a gas key, and a resilient arm connected with the upright portion and provided with a plunger, means carried by the upright portion of the body for supporting a match and normally holding the plunger in its retracted position, and means also carried by the upright portion of the body for igniting and holding a match when the same is impelled by the plunger.

[Claims 6 to 12 not printed in the Gazette.]

875,349. STEAM-BOILER. FRANCIS J. HICKEY, Sacramento, Cal. Filed Apr. 1, 1907. Serial No. 365,803.



1. In a locomotive type of boiler having internal fire-tubes, a furnace inclosing the rear and lower part of the boiler, from which furnace the tubes extend, said furnace being made in detachable sections, and removably secured to the boiler about the water-line.

2. In a boiler of the character described, a substantially cylindrical shell, with longitudinal fire-tubes, said shell having the rear lower portion inclined upwardly toward its rear head, a sectional detachable furnace casing secured to the boiler and inclosing this portion of the boiler, a lining of refractory material, and means for removably securing the same within the furnace casing.

3. The combination with a cylindrical boiler shell having longitudinally disposed fire-tubes, of a furnace casing consisting of independent sections having their upper edges detachably secured to the opposite sides of the rear portion of the boiler shell, and their lower meeting edges united together, said casing extending forwardly and inclosing the bottom of the boiler shell, and a lining of refractory material with means for securing it within the furnace casing.

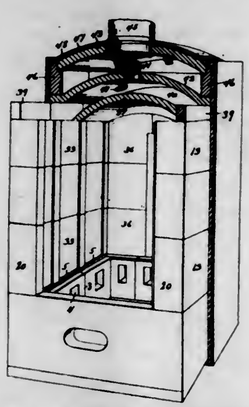
875,350. CHINA-KILN. JULIUS C. HINZ, Detroit, Mich. Filed Nov. 2, 1906. Serial No. 341,684.

1. In a china kiln, the combination with the base portion containing the combustion chamber and having flue passages communicating therewith, of the super-structure mounted upon the base portion consisting of interchangeable blocks having laterally extending members, and relatively thin tile pieces removably seated between the inner ends of said members to form one side of the flue passage ways leading from the combustion chamber, and collectively to form the walls of the oven, the body of the blocks forming the outer wall of the furnace.

2. In a china kiln, the combination of a base having a combustion chamber and flue openings leading therefrom, of a super-structure consisting of tile blocks supported upon said base having lateral projecting members, which together with the body of the blocks form three sides of the flue passages, thin, flat tiles removably interposed between the inner ends of said lateral members to form the fourth side of said flue passages, said removable tiles and said lateral members forming the walls of the oven.

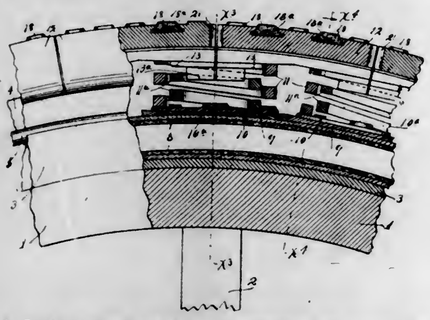
3. A china kiln having a wall with vertical flues, said wall consisting of blocks of tile provided with laterally projecting members and relatively thin removable tiles

supported between the inner ends only of said lateral members to form the inner side of the vertical flues of said wall.



4. A tile block for china kilns having laterally projecting members provided with vertical grooves in their inner ends and relatively thin tiles seated in said grooves to form one of the walls of a flue, the remaining walls of the flue being formed by said laterally projecting members and the body portion of the block.

875,351. RESILIENT TIRE. ISAAC W. HODGSON, Minneapolis, Minn., assignor of one-fourth to Philip W. Herzog, St. Paul, Minn. Filed Feb. 25, 1907. Serial No. 359,047.



1. In a resilient tire, the combination with a rim, of a tread made up of a multiplicity of yieldingly connected tread sections, and springs interposed between said rim and tread sections arranged to overlap the joints between the tread sections, and having interlocking engagement at their outer ends with the adjacent ends of said tread sections, substantially as described.

2. In a resilient tire, the combination with a rim, a tread made up of a multiplicity of metallic tread sections, a thrust hoop yieldingly connecting the said tread sections, and coiled springs interposed between said rim and tread, the outer ends of which springs overlap joints between the tread sections, and which tread sections are provided at their abutting ends with supplemental bosses that telescope into the said springs, substantially as described.

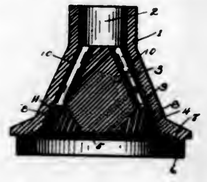
3. In a resilient tire, the combination with a rim, of a tread made up of a multiplicity of yieldingly connected metallic sections, and multi-coil springs interposed between said rim and the tread sections, the main coils of which springs are under initial compression, and the supplemental coils of which are arranged to be compressed only after said tread sections have been given forced inward movement, substantially as described.

4. In a resilient tire, the combination with a rim, of a tread made up of a multiplicity of yieldingly connected metallic tread sections having projecting supplemental bosses at their abutting ends, and multi-coil springs interposed between said rim and the said tread sections, and into the outer ends of the coils of which the supplemental bosses of said tread sections are telescoped, substantially as described.

5. In a resilient tire, the combination with a rim, of a tread made up of a multiplicity of metallic tread sections, laterally spaced thrust hoops engaging laterally open seats in the sides of the said tread sections, springs interposed between said rim and the tread sections, and holding said thrust hoops interlocked with the open seats of said tread sections, and annular guard plates locked to the side flanges of said rim and frictionally engaging the seat forming side portions of said tread sections, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

875,352. SOUND-RECORDER FOR TALKING-MACHINES. WILLIAM N. HUNTER, Blanchester, Ohio. Filed July 28, 1906. Serial No. 328,172.



1. In a sound recorder of the class described, a sound box, with diaphragm therefor, and a collecting chamber for the sound waves of substantial depth, in free communication with and back of the diaphragm, with a central raised portion approaching, but not touching, the diaphragm, and forming an annular collecting chamber, and a tubular passageway for the conveyance of the sound waves, with an opening therefrom into the annular collecting chamber.

2. In a sound recorder of the class described, a sound box with diaphragm therefor, and a collecting chamber for the sound waves of substantial depth, in free communication with and back of the diaphragm, with a central raised portion approaching, but not touching, the diaphragm, and forming an annular collecting chamber, and a tubular passageway for the conveyance of the sound waves, with a plurality of openings therefrom into the annular chamber.

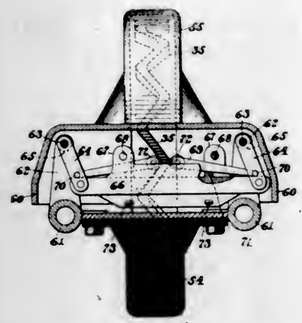
3. In a sound recorder of the class described, a sound box with diaphragm therefor, a collecting chamber of substantial depth for the sound waves at the rear of the diaphragm, said collecting chamber being provided with a converging outer wall, and having a central boss approaching but not touching the diaphragm, so as to form an annular collecting chamber, a tubular passageway for the conveyance of the sound waves, and an opening therefrom into the annular collecting chamber.

4. In a sound recorder of the class described, a sound box with diaphragm therefor, a collecting chamber for the sound waves at the rear of the diaphragm, with a central boss approaching but not touching the diaphragm, and forming an annular collecting chamber, said chamber being provided with converging inner and outer walls, a tubular passageway for the conveyance of the sound waves, and an opening therefrom into the annular collecting chamber.

5. In a sound recorder of the class described, a sound box having an annular collecting chamber of substantial depth formed therein, a vibratory diaphragm in connection therewith, said annular chamber being provided with a converging outer wall grooved substantially as described,

a tubular passageway for the conveyance of the sound waves, and a plurality of openings therefrom into the annular collecting chamber.

875,353. MOWING-MACHINE. MARTIN JEWELL, Clinton, Me. Filed Oct. 5, 1905. Serial No. 281,419.



1. In a mowing machine, the combination of a revoluble wheel provided with substantially parallel radiating zigzag walls; a device swinging in a vertical plane transverse to the direction of travel in front of said wheel; a strut connected thereto at a point removed from the pivots on which said device swings and engaging one of said walls to operate said swinging device; a knife blade; and a connector between said knife blade and said swinging device.

2. In a mowing machine, the combination of a revoluble wheel provided with substantially parallel radiating zigzag walls; a device adapted to swing in a vertical plane transverse to the direction of travel in front of said wheel; two struts connected thereto at points removed from the pivots on which said device swings, one on each side of said wheel and each engaging with one of said walls to operate said device; a knife blade; and a connector between said knife blade and said device.

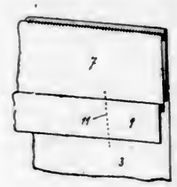
3. In a mowing machine, the combination of a revoluble wheel, provided with substantially parallel radiating zigzag walls; a device adapted to swing in a vertical plane transverse to the direction of travel in front of said wheel; two struts each connected thereto at points removed from the pivots on which said device swings, on opposite sides of said wheel and engaging with one of said walls to operate said device; means for limiting the movement of said struts about their fulcrums; a knife blade; and a connector between said knife blade and said device.

4. In a mowing machine, the combination of a revoluble wheel provided with substantially parallel radiating zigzag walls; two links pivoted to the frame of the machine; a member connecting the free ends of said links; two struts each pivotally connected to one of said links and engaging with one of said walls to operate said member; means for limiting the movement of said struts about their pivotal connections; cutting mechanism; and connections whereby it is operated by the movement of said member.

5. In a mowing machine, the combination of a revoluble wheel provided with substantially parallel radiating zigzag walls; two links pivoted to the frame of the machine; a member connecting the free ends of said links; two struts each pivotally connected to a link and engaging with one of said walls; means for limiting the movement of said struts about their pivotal conections; cutting mechanism; and connections whereby it is operated by the movement of said member.

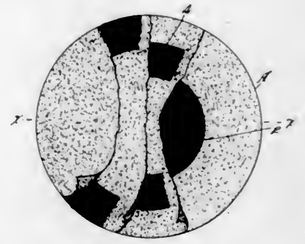
[Claims 6 to 27 not printed in the Gazette.]

875,354. WAISTBAND FOR GARMENTS. JACOB KAPLAN, Utica, N. Y., assignor of one-half to Albert Miller, Utica, N. Y. Filed May 31, 1907. Serial No. 376,629.



In a waist band construction for garments a strip of material constituting the band having its lower edge inturned and sewed to the body of a garment and its upper edge inturned, a strip of stiffening applied to the inner face of the band around the upper edge of which strip the inturned upper edge of the band is folded, and said inturned edge sewed to the stiffening and the stiffening sewed to the garment along the line of the seam between the band and the body, and a strip of lining applied to the inner face of stiffening having a folded upper edge formed by an outward turn of the lining material, said edge stitched by cross seam stitches to the upper edge of the band and tacked at its lower edge, substantially as set forth.

875,355. FILTER MEDIUM. EDWARD M. KNIGHT, San Francisco, Cal. Filed July 24, 1907. Serial No. 385,257.



1. The process of preparing a filtering medium, said process consisting in compressing alternate layers of carded asbestos and layers of carbon, so that said layers of carbon are interstratified with the asbestos.

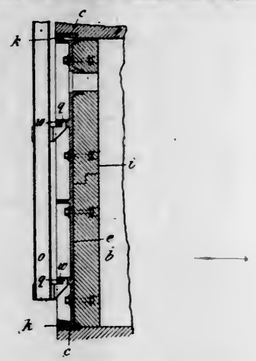
2. The process of preparing filter mediums, said process consisting in superposing alternate zones of asbestos and carbon concentrically, so that the carbon is interstratified and held in place by the interlocking of the asbestos fiber.

3. The process of making filtering pads or disks, said process consisting in forming a disk with loose uncompressed asbestos fiber, then compressing a portion of it and coating it with carbon, superposing another disk of asbestos fiber so that its fibers will cover the carbonated portion of the first disk, and also interlock with the fibers of the first disk, then compressing and coating a portion of said second disk of asbestos fiber, and in the same or like manner adding successive disks of asbestos fiber and carbon to form a pad of asbestos interstratified with carbon over the whole area.

4. As an article of manufacture, a filtering pad consisting of superposed and interlocked layers of asbestos, having interposed zones of carbon interstratified with the asbestos.

5. As an article of manufacture, a filtering pad consisting of superposed layers of asbestos having portions of their area interlocked and intermediate portions coated with carbon, interstratified with the asbestos.

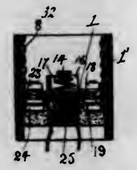
875,356. CLOSURE FOR COKE-OVENS AND SIMILAR DEVICES. HEINRICH KOPPERS, Essen-on-the-Ruhr, Germany. Filed May 25, 1907. Serial No. 375,585.



1. In a device of the character described, a coking chamber having a door-frame, combined with a door disconnected from said frame and adapted to be telescoped thereby, and with a packing that surrounds the door and engages the inner sides of the frame, said packing being adapted to sustain the door in position, substantially as specified.

2. In a device of the character described, a coking chamber having a door-frame, combined with a door disconnected from said frame and adapted to be telescoped thereby, one of said parts being beveled to form an intervening recess, and a packing within said recess, said packing being adapted to sustain the door in position, substantially as specified.

875,357. LAMP-SOCKET. WALTER R. LAMBERT, London, England. Filed Feb. 1, 1907. Serial No. 355,303.



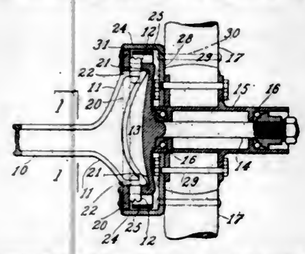
A lamp socket, a base of non-conducting material comprising a body having spaced wings at one side and a socket at the other side and with a semi-annular guard rib extending from the body within the socket and a longitudinal rib between said wings, a spring contact extending within the semi-annular guard rib and provided at its outer end with a binding bolt passing though the body, a threaded sleeve of conductive material within said socket and provided with inwardly extending lugs, a segmental bridge member connected at the ends to said lugs and provided with a bolt passing through the body, said bolts being disposed upon opposite sides of said longitudinal guard rib, and means for connecting the conducting wires respectively to said bolts, plastic insulating material disposed between said wings and around said longitudinal guard rib.

875,358. COMBINED BRAKE AND STEERING-KNUCKLE. JOSEPH E. LANDRY, New Bedford, Mass. Filed Oct. 18, 1907. Serial No. 398,101.

1. In combination, an axle-beam, an axle, and a knuckle joining them, the axle member of the knuckle being a disk journaled to the beam on a vertical axis.

2. In combination, an axle-beam, an axle, and a knuckle joining them, the axle member of the knuckle being a dished disk, and the beam end being journaled vertically in the dished portion.

3. In combination, an axle-beam, an axle, and a knuckle joining them, the axle member of the knuckle being a disk having a circular flange portion projecting outside the journals of the knuckle and set perpendicular to the axle.

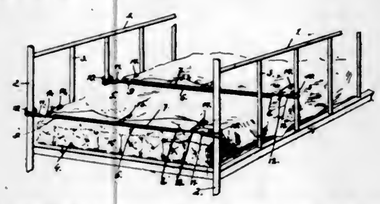


4. In combination, an axle-beam, an axle, and a knuckle joining them, two dished disks, and a brake band intervening anchored to one and adapted to bear against the other, one of said disks being fast on the wheel, and the other fast on the axle and constituting the axle member of the knuckle.

5. In combination, an axle-beam, an axle, and a knuckle joining them; the axle member of the knuckle being circular braced around the axis of the axle, and having its center dished from the plane of its outer parts.

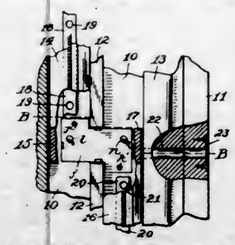
[Claim 6 not printed in the Gazette.]

875,359. CLOTHES-FASTENER FOR CRIBS. WILLIAM F. LAZARO, Turtle Creek, Pa. Filed Dec. 11, 1906. Serial No. 347,304.



A clothes holder comprising a pair of rods each formed at one terminus with an eye, the eye upon one of the rods extending in an opposite direction with respect to the eye upon the other of the rods, each of the rods extending through the eye of the other rod and provided at a point in proximity to its other terminus with a loop extending at right angles with respect to the eye at the terminus of its respective rod, each of the rods having one part of that portion of its end adjacent the loop bent over and secured to the other part, said bent portion of each of the rods folded back upon itself to form a hook, combined with fastening devices carried by one of said rods and said loops.

875,360. DUPLEX SASH-LOCK. WILLIAM LIPPS, Shelbyville, Ind. Filed Apr. 30, 1907. Serial No. 371,039.

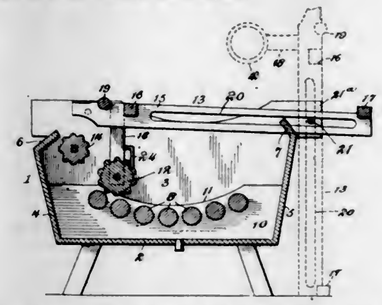


1. A duplex sash lock including a case, two spring-pressed lock-bolts mounted in the case and having each a guide to engage the case and having also a projection, a rock-shaft journaled in the case and having also two arms engaging the projections to retract the lock-bolts, one end of the rock-shaft having a slot therein and also a notch in the peripheral face thereof, a pawl pivoted in the case and normally extending into the notch, and a key to enter the slot and lift the pawl for turning the rock-shaft, the pawl engaging the key when turned and preventing the returning of the rock-shaft.

2. The combination with a window frame and two sashes mounted slidingly in the frame and having holes to receive lock-bolts, of a duplex sash-lock set into the frame and covered by the two sashes, the sash-lock having two spring-pressed retractable lock-bolts to enter the holes of the sashes, a rock-shaft journaled suitably and having a key-slot in an end thereof for retracting the two lock-bolts, a pawl for engaging a key when in the key-slot to hold the lock-bolts when retracted, a keyway extending from the slotted end of the rock-shaft through the frame, and a key to enter the key-slot for turning the rock-shaft and to be engaged by the pawl.

3. In a duplex sash-lock, the combination of a case comprising a back, and a top and a bottom, and also two ends, a front secured to the top and bottom and also to the ends, a pair of lock-bolts mounted movably in the back and the front and having each a guide flange that is rectangular in plan, each flange having a projection thereon, and a rock-shaft journaled in the ends of the case and having arms thereon extending between the front of the case and the projections of the lock-bolts and engaging the projections.

875,361. COMBINED WASHING AND WRINGING MACHINE. JOSEPH H. LOHR, Hustontown, Pa. Filed Apr. 4, 1906. Serial No. 309,905.



1. In a combined washing and wringing machine, the combination of a receptacle provided with a rubbing surface and having a horizontal pivot, a wringer roll mounted within the receptacle, an operating frame having guiding means extending longitudinally of the operating frame and receiving the horizontal pivot of the receptacle and slidably and pivotally connecting the said frame with the receptacle, and a roller mounted on the operating frame and adapted to be carried by the sliding movement of the same to the wringer roll to coöperate therewith to form a wringer, said operating frame being arranged to swing upwardly and downwardly and forming a lever to enable pressure to be applied during the wringing operation.

2. In a combined washing and wringing machine, the combination with a receptacle having a rubbing surface, of a wringer roller mounted in the receptacle and located above one end of the rubbing surface thereof, an operating frame provided at opposite sides with longitudinal slots, a transverse rod located at one end of the receptacle and passing through the slots of the operating frame and pivotally and slidably connecting the latter to the receptacle, and a roller mounted on the operating frame and adapted to be carried by the longitudinal sliding movement thereof to the wringer roller to coöperate with the same to form a wringer.

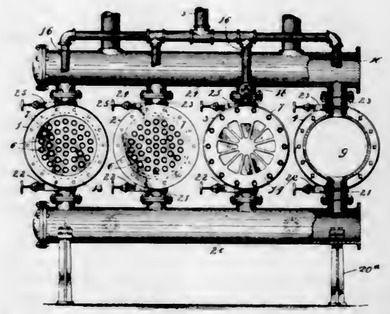
3. In a combined washing and wringing machine, the combination with a receptacle having a rubbing surface, of a wringer roller mounted in the receptacle and located above one end of the rubbing surface thereof, an operating frame provided at opposite sides with longitudinal slots and having rigid depending arms arranged at an angle to the sides of the frame, a transverse rod located at one end of the receptacle and passing through the slots of the frame and pivotally and slidably connecting the latter to the receptacle, and a roller mounted between the arms of the operating frame and adapted to be carried by the sliding movement thereof to the wringer roller and to coöperate with the same to form a wringer.

4. In a combined washing and wringing machine, the combination of a receptacle provided with a rubbing surface and having a horizontal pivot, a wringer roll mounted within the receptacle, an operating frame having guiding means extending longitudinally of the operating frame and receiving the horizontal pivot of the receptacle and slidably and pivotally connecting the said frame with the receptacle, and a roller mounted on the operating frame and adapted to be carried by the sliding movement of the same to the wringer roll to coöperate therewith to form a wringer, said operating frame being arranged to swing upwardly and downwardly and forming a lever, and springs located at opposite sides of the receptacle and connected with the same and with the operating frame to yieldably hold the rollers in engagement with each other.

5. In a combined washing and wringing machine, the combination with a washing machine body having a rubbing surface, of an operating frame provided with opposite arms, a rubbing roller mounted between the arms and coöperating with the rubbing surface, guides carried by the arms, a roller arranged to coöperate with the said rubbing roller to form a wringer, a rod passing through the said guides for limiting the movement of the operating frame, and yieldable means detachably connected with the operating frame for applying a constant pressure to the same.

[Claim 6 not printed in the Gazette.]

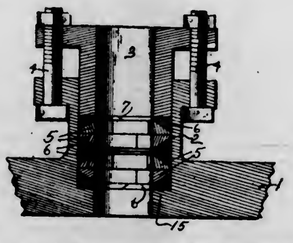
875,362. STEAM AND WATER HEATING APPARATUS. EUGENE S. MANNY, Montreal, Quebec, Canada. Filed June 18, 1904. Serial No. 213,064.



1. In a hot water heater, a pair of water mains, a series of water heating compartments connected in parallel between said mains, each compartment comprising a cylindrical casing having an annular flange at each end, and a steam chamber at each end thereof, each of said steam chambers comprising a collar having an annular flange at each end, a perforated end wall held between the flange of said casing and the flange on one end of said collar by a common securing means, and a head detachably secured to the flange on the other end of said collar, tubes supported in said end walls and establishing communication between said steam chambers, means for admitting steam to one of said steam chambers, means for discharging the steam from the other of said chambers, means for admitting water from one of said mains to the intertubular space, and means for discharging it into the other of said mains.

2. In a hot water heater, the combination of a cylindrical casing provided with opposite lateral openings and having an annular flange at one end, a steam chamber at each end of said casing, one of said steam chambers comprising a collar provided with a lateral opening and having an annular flange at each end, a perforated end wall held between the flange on said casing and the flange on one end of said collar by a common securing means, and a head detachably secured to the flange on the other end of said collar, tubes extending through the perforations in said end wall and establishing communication between said steam chambers, means for admitting steam through the opening in said collar into the corresponding steam chamber, means for discharging the steam from the other of said steam chambers, means for admitting water through the opening in one side of said casing, and means for discharging it through the opening on the opposite side.

875,363. PISTON-ROD PACKING. ROBERT E. L. MARTIN, Port Neches, Tex. Filed July 3, 1907. Serial No. 382,007.



1. A piston-rod packing comprising a cylinder head; a recess therein; a series of beveled wooden packing members located in said recess; a yieldable beveled packing ring located in said recess, the beveled surface thereof being in engagement with the beveled surfaces of said packing members; a gland in engagement with said yieldable ring; and means for forcing said gland against said ring: the arrangement of the packing members and yieldable ring being such that the beveled surfaces thereof coact to force said members inward as the gland is forced against the packing ring.

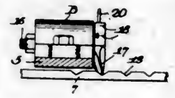
2. A piston-rod packing comprising a cylinder head; a recess therein; a plurality of series of beveled wooden packing members located in said recess; a plurality of yieldable beveled packing rings located in said recess, the beveled surfaces thereof being in engagement with the beveled surfaces of said packing members; a gland in engagement with one of said packing rings; and means for moving said gland to adjust said packing: the arrangement of the packing members and yieldable ring being such that the beveled surfaces thereof coact to force said members inward as the gland is moved to adjust the packing.

3. A piston-rod packing comprising a cylinder head; a recess therein; a series of beveled wooden packing members located in said recess, each member being cut in such a way that the grain of the wood extends longitudinally of said members; a yieldable beveled asbestos packing ring located in said recess, the beveled surface thereof being in engagement with the beveled surfaces of said packing members; a gland in engagement with said yieldable asbestos ring; and means for forcing said gland against said ring: the arrangement of the packing members and yielding ring being such that the beveled surfaces thereof coact to force said members inward as the gland is forced against the packing ring.

4. A piston-rod packing comprising a cylinder head; a recess therein; a plurality of series of beveled wooden packing members located in said recess, each member being cut in such a way that the grain of the wood extends longitudinally of the inner surface of said members with which surface the piston-rod contacts; a plurality of yieldable beveled asbestos packing rings located in said recess, the beveled surfaces thereof being in engagement with the beveled surfaces of said packing members; a gland in engagement with one of said packing rings; and means for moving said gland to adjust said packing; the arrangement of the packing members and yieldable ring being such that the beveled surfaces thereof coact to force said members inward as the gland is moved to adjust the packing.

5. In a piston-rod packing, a series of beveled segmental wooden packing members designed to surround a rod to be packed and to contact therewith; holes adjacent abutting ends of members of said series; a connecting staple the legs of which enter said holes; a yieldable beveled asbestos packing ring, the beveled surface thereof being in engagement with the beveled surfaces of said packing members; and means in engagement with one of said packing rings for forcing said series of packing rings and said yieldable ring toward each other, whereby the beveled surfaces aforesaid coact to force the packing members inward.

875,364. ADJUSTING-GAGE FOR LEVERS. EDWARD C. MERSHON, Saginaw, Mich. Filed Mar. 22, 1907. Serial No. 363,889.



1. The combination with a shifting lever and a notched quadrant, of a rotatable stud carried by the lever, a disk secured to the stud, the lower half of the periphery of which disk is provided with a spiral cam receivable in any one of the notches of the quadrant, the upper half of the disk having a series of graduations thereon, the lever having a mark with which any one of the graduations on the disk is adapted to be alined, and a handle carried by the disk.

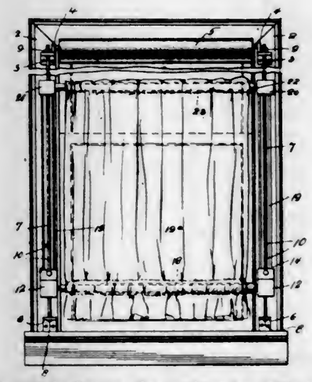
2. The combination with a shifting lever and a notched quadrant, of a round rotatable disk carried by the lever, the upper half of the periphery of the disk being smooth and having a graduated scale, the lower half of the periphery of the disk being provided with a spiral cam receivable in any one of the notches of the quadrant, the lever carrying a mark with which any one of the graduations of the scale is adapted to be alined.

3. The combination with a lever and a notched bar, of a disk rotatably mounted on one side of the lever with its inner face adjacent the lever, means for releasably retaining the disk in set position against accidental displacement, the upper half of the periphery of the disk being graduated, the lower half of the periphery of the disk provided with a spiral cam receivable in any of the notches of the bar, the lever carrying a mark with which any one of the graduations on the disk is adapted to be alined, and being movable upward away from the notched bar to disengage the cam from the notches in the bar.

4. A gage for shifting levers comprising a casting secured to the lever and provided with a bearing, a stud journaled in the bearing, a disk carried at one end of the stud, and having a spiral cam formed on one portion of its periphery the inner face of the disk adjacent the casting being provided with a series of depressions arranged in the arc of a circle, the casting provided with a recess, a spring and a pin seated in the recess, the outer end of the pin removably receivable in the depressions, a handle for rotating the disk, the casting having a mark located exteriorly of the casting and in line with the spring pressed pin, and there being a scale on the disk, the graduations of which correspond with the depressions and are adapted to be alined with the mark on the casting.

5. The combination with a shifting lever (5) and a notched quadrant (7), of a circular rotatable disk (15) carried by the lever, the upper half of the periphery of the disk being smooth, and having a graduated scale (18) thereon, the lower half of the periphery of the disk being provided with a spiral cam (17) receivable in any one of the notches (13) of the quadrant, the lever provided with a mark (19) with which any one of the graduations of the scale is adapted to be alined, and a spring-pressed detent (23) adapted to releasably retain the disk in any set position.

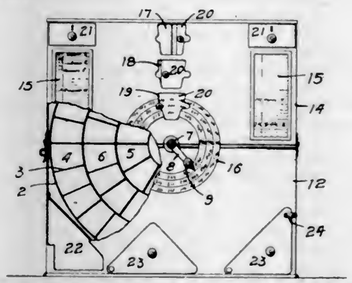
875,365. CURTAIN-FIXTURE. GEORGE A. MILLER, McKeesport, Pa. Filed July 26, 1907. Serial No. 385,615.



1. In a curtain fixture, the combination with a window-frame, of brackets carried thereby, a curtain shade roller carried by some of said brackets, vertically disposed rods connecting said brackets, said rods having notches formed therein, housings movably mounted upon said rods, guide rollers carried by said housings and engaging said rods, spring pressed latches carried by some of said housings and adapted to engage in the notches of said rods, telescopic rods connecting said housings and a curtain arranged between said telescopic rods, substantially as described.

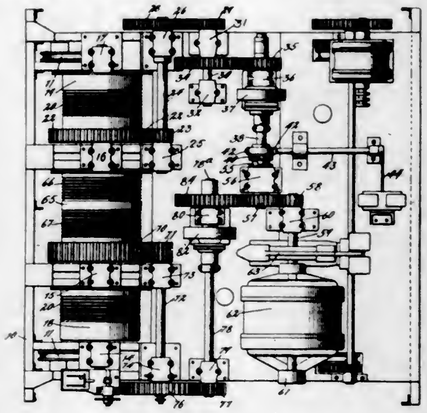
2. In a curtain fixture, the combination with a window-frame, of vertically disposed notched rods carried thereby, housings slidably mounted upon said rods, telescopic rods arranged between said housings and supported thereby, for carrying the upper and lower edges of a curtain, and spring pressed latches carried by some of said housings for locking the same in engagement with said rods.

875,366. MAIL-CABINET. CHRISTOPHER W. MOORE, Spring Valley, Wis. Filed July 8, 1907. Serial No. 382,682.



A mail cabinet comprising a vertical casing having openings at intervals in its wall between its center and periphery, and suitable doors for said openings, and a series of marks or characters arranged in concentric circles on said wall, a drum arranged to revolve in a substantially vertical plane within said casing and having its center concentric with said circles of marks or characters, the interior of said drum being provided with a series of concentric partitions at intervals between the center and circumference of the drum, and radial partitions dividing the spaces formed by said concentric partitions into a series of pockets or pigeon holes adapted to register successively with the respective openings in the wall of said casing as said drum is revolved, each pocket being marked when the mail is placed therein with numbers or characters corresponding to said marks on the casing but readable in the opposite direction, and the numbers on said casing corresponding to index numbers and designating certain families along the delivery route, an indicator hand carried by said drum and arranged to revolve past the numbers on said casing, whereby when the indicator hand is revolved with the drum in one direction and set opposite a certain number on the casing the pocket of the drum designated by that number when the mail is sorted, will be opposite the proper removal opening in the casing.

875,367. CLUTCH ARRANGEMENT FOR TRAVELING CRANES. ANDREW H. MCDOUGALL, Harvey, Ill., assignor to Whiting Foundry Equipment Company, Harvey, Ill., a Corporation of Illinois. Filed May 23, 1907. Serial No. 375,373.



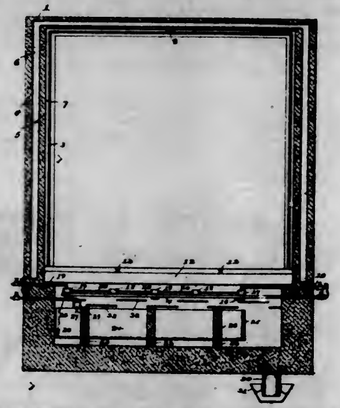
1. In mechanism of the class described in combination with a crane trolley frame, and a motor thereon; a lifting drum operated by said motor, another drum also capable of being operated by said motor, a clutch adapted to connect said drum to the motor and a bell crank lever mechanism having one arm connected to said clutch, and the other end connected to an alternating current magnet for the purposes set forth.

2. In mechanism of the class described in combination with a crane trolley frame, and a motor thereon; a lifting drum operated by said motor, another drum also capable of being operated by said motor, a jawed clutch adapted to connect said drum to the motor and a bell crank lever mechanism having one arm connected to said clutch, and the other arm connected to an alternating current magnet for the purposes set forth.

3. In combination with the frame of a traveling crane, a shaft carrying two releasing drums, a lifting drum mounted upon the same shaft between said releasing drums, a gear rigid with the releasing drums meshing with a pinion 71, rigidly connected to a gear 76 meshing with a pinion 77 connected to a mechanical brake 82, a connection between the opposite side of said mechanical brake and a gear 84 meshing with a gear 57, meshing with a pinion 58, on a shaft 59 connected through an electric brake 63 to a motor 62, a shaft connected to gear 57 carrying a clutch 55 another shaft 38 opposite said last shaft, carrying a clutch member 40 adapted to mesh with the clutch 55, an alternating current magnet, a bell crank having one arm connected to the armature of the alternating

current magnet and the other arm connected to said clutch 40, a mechanical brake 37 on the shaft 38, a pinion 35 on said shaft on the opposite side of said mechanical brake meshing with a gear 34 rigid with a pinion 29, another gear 28 meshing with pinion 29 rigid with the pinion 23, and a gear 22 meshing with the pinion 23 rigidly connected to the lifting drum, all of the parts being arranged and located substantially as shown and described for the purposes set forth.

875,368. DRYING APPARATUS. GEORGE W. MCMULLEN, Picton, Ontario, Canada. Filed May 26, 1905. Serial No. 262,381.



1. In a drying apparatus, the combination of a substantially closed drying chamber having insulating side and top walls, a series of liquid troughs constituting condensers arranged in the lowermost part of said chamber, a series of baffles arranged in horizontally distributed order above said condensers, a radiator coil disposed in horizontally extended position above said baffles, one or more open water receptacles arranged in juxtaposition to said radiator coil, and means for supporting commodities in the drying chamber above said radiator and water receptacle.

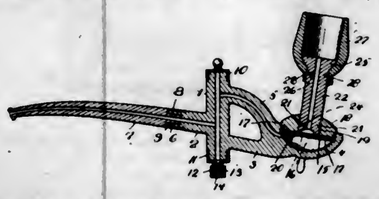
2. In a drying apparatus, the combination of a substantially closed drying chamber having insulating side and top walls, a series of liquid troughs constituting condensers arranged in the lowermost part of said chamber, a series of baffles arranged in horizontally distributed order above said condensers, a radiator coil disposed in horizontally extended position above said baffles, one or more open water receptacles arranged in juxtaposition to said radiator coil, means for delivering steam into said open water receptacle or receptacles, and means for supporting commodities in the drying chamber above said radiator and water receptacle.

3. In a drying apparatus, the combination of a substantially closed drying chamber having insulating side and top walls, a series of open water troughs arranged in horizontally distributed order in the lower part of said chamber, means affording a regulated supply of water to said troughs, a closed radiator pipe arranged in horizontally distributed order in a zone above said condenser troughs, a series of open vapor troughs supported in proximity to said radiator coil, means for circulating heating fluid through the radiator coil, means for discharging steam into the contents of one or more of said vapor troughs, and commodity supports arranged above the zone of the vapor troughs.

4. In a drying apparatus, the combination of a substantially closed drying chamber having insulating side and top walls, a series of open water troughs arranged in horizontally distributed order in the lower part of said chamber, means affording a regulated supply of water to said troughs, a closed radiator pipe arranged in horizontally distributed order in a zone above said condenser troughs, a series of open vapor troughs supported in proximity to said radiator coil, means for circulating heating fluid through the radiator coil, means for discharging steam into the contents of one or more of said vapor troughs, a series of baffles arranged in horizontally distributed order extending across the entire chamber and interposed between the condenser troughs and radiator pipe, and commodity supports arranged above the zone of the vapor troughs.

5. In a drying apparatus, the combination of a substantially closed chamber having insulating side and top walls, a series of condensers arranged in horizontally extended order in the bottom of said chamber, a series of vapor generators arranged above said condensers, a series of horizontally disposed closed heating coils arranged at a plurality of levels throughout the drying chamber above said vapor generators, a heating coil arranged in proximity to said vapor generators, means for supplying cooling fluid to the condensers, and means for circulating the heating fluid through the several heating coils.

875,369. SMOKING-PIPE. ROBERT J. MCMURRAY, California, Pa. Filed Sept. 10, 1907. Serial No. 392,102.



1. A pipe comprising a body portion having a passage therethrough, a stem connected to the body portion and communicating with the passage thereof, removable caps on the ends of said body portion, an arm projecting forwardly from the body portion and terminating at its forward end in a cup, a tube connecting the bowl of said cup with the passage in said body portion, an apertured diaphragm in said cup, a plug detachably connected to said diaphragm, and a pipe-bowl detachably connected to said plug.

2. In a pipe, the combination with a body portion provided with an integral cup, of a perforated diaphragm secured within said cup, a plug detachably secured to said diaphragm, and having a central opening, a tube detachably connected to said diaphragm, and a bowl detachably secured to said tube.

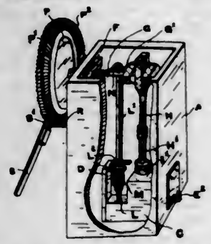
3. In a pipe the combination with a tubular body portion provided with an integral cup, of a perforated diaphragm secured within said cup, a plug detachably secured to said diaphragm, and having a central opening, a bowl, and means for detachably connecting said plug and bowl.

4. In a pipe, the combination with a tubular body portion provided with an integral cup, of a perforated diaphragm secured within said cup, a plug detachably secured to said diaphragm and having a central opening, a bowl, and means for detachably connecting said plug and bowl comprising a tube formed with longitudinal and horizontal grooves, and pins projecting from said plug and bowl.

5. In a pipe, the combination with a tubular body portion provided with an integral cup, of a perforated diaphragm secured within said cup, a plug detachably secured to said diaphragm and having a central opening, a bowl, and means for detachably connecting said plug and bowl, comprising a tube formed with a semi-circular head fitting within the bowl and with longitudinal and horizontal grooves, and pins projecting from said plug and bowl.

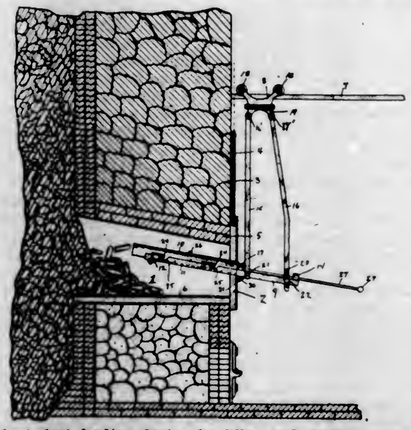
875,370. OIL-PUMP. WILLARD A. ODELL, Winnipeg, Manitoba, Canada, assignor of one-fourth to George Edward Norris and one-fourth to John Robert Norris, Winnipeg, Canada. Filed June 1, 1906. Serial No. 319,774.

1. In a device of the class described, the combination with an inclosed casing forming an oil receptacle, of a lower solid portion centrally disposed therein and having a passage-way extending longitudinally through the said portion and provided with an inlet opening into the passage-way from the receptacle, an outlet valve secured in the passage-way, a vertical working cylinder formed in the solid portion and extending into the passage-way, a plunger working in the cylinder, a packing ring at the top of the cylinder and adjoining the plunger, a crank shaft journaled in the casing, a connecting rod extending from the crank pin to the plunger, a cam protruding from the shaft, a spring pressed inlet cut off valve extending into and through the passage-way, a hooked shank or stem extending upwardly from the inlet valve and designed to engage the cam, and means for revolving said shaft, as and for the purpose specified.



2. In a device of the class described, the combination with an oil reservoir having an inner block portion, said portion having a passage-way connecting the interior and the exterior of the reservoir, a cylinder communicating with the passage-way through the side walls thereof, a plunger operating in said cylinder, an eccentric actuating said plunger, a drive shaft for the eccentric, a second cylinder communicating with the passage-way through the side wall thereof, a conical valve operating in said second cylinder, a hooked stem to the valve, a cam on the drive shaft for engaging with the stem, a helical spring embracing the stem and adapted to seat the valve when released by the cam and a valve in the passage-way, said valves being located on opposite sides of the plunger.

875,371. FUEL-FEEDING DEVICE. JOHN W. ORMSBY, Milwaukee, Wis. Filed Mar. 11, 1907. Serial No. 361,676.



1. A fuel feeding device for kilns and similar purposes comprising a carriage, a carriage supporting track, a frame pivotally supported from said carriage, a stationary fuel receptacle removably supported from said frame, a push bar and bar operating means slidably connected with said frame, said push bar being adapted to be forced longitudinally through said fuel receptacle, and thereby discharge its contents therefrom without moving said receptacle, substantially as and for the purpose specified.

2. The combination with a wall of a kiln, of a track supported on a plane above the door of the kiln, a carriage mounted on said track, a fuel supporting frame, a pair of suspension bars pivotally connected at their upper ends to the front end of said carriage and at their lower ends to the front end of said frame, a second pair of suspension bars pivotally connected at their upper ends to the rear end of said carriage and slidably connected at their lower ends to the rear end of said frame, a fuel receptacle located on said frame, a push bar slidably connected with said frame and adapted to move longitudinally through said fuel receptacle and operating handle, and means connected with said handle for operating said push bar.

3. The combination with a wall of a kiln, of a track supported on a plane above the door of the kiln, a carriage mounted on said track, a fuel supporting frame, a pair of suspension bars pivotally connected at their upper ends to the front end of said carriage and at their lower ends to the front end of said frame, a second pair of suspension bars pivotally connected at their upper ends to the rear end of said carriage and slidably connected at their lower ends to the rear end of said frame, a fuel receptacle located on said frame, a push bar slidably connected with said frame and adapted to move longitudinally through said fuel receptacle, an operating handle, means connected with said handle for operating said push bar, and means for holding said fuel receptacle in place on its supporting frame as its contents is being discharged therefrom.

4. The combination with a wall of a kiln, of a track supported on a plane above the door of the kiln, a carriage mounted on said track, a fuel supporting frame, a transversely arranged bar centrally pivoted to the lower side of said frame and adapted to contact at its ends with the respective sides of the doorway and limit the forward movement of said frame and fuel receptacle, a pair of suspension bars pivotally connected at their upper ends to the front end of said carriage and at their lower end to the front end of said frame, a second pair of suspension bars pivotally connected at their upper ends to the rear end of said carriage and slidably connected at their lower ends to the rear end of said frame, a fuel receptacle located on said frame, a push bar slidably connected with said frame and adapted to move longitudinally through said fuel receptacle, an operating handle, and means connected with said handle for operating said push bar.

875,372. OIL-WELL DEVICE. VICTOR H. PALM, Butler, Pa. Filed July 12, 1907. Serial No. 383,452.



1. The combination with the tubing of an oil well, the working barrel thereof, and the working barrel valve, of a casing connecting with said working barrel and fixed

within said tubing, a stuffing box carried by the upper end of said casing, a perforated pipe mounted in the upper end of said casing, a stand pipe surrounding said perforated pipe and held by said stuffing box, a block carried by said pipe, a rectangular plunger movably mounted in said block and connecting with said working barrel valve, a spring interposed between said perforated pipe and said working barrel valve, a cable connecting with the upper end of said plunger and blocks carried by said cable, substantially as described.

2. The combination with the tubing of an oil well, the working barrel thereof, and the working barrel valve, of a casing connecting with said working barrel and fixed within said tubing, a stuffing box carried by the upper end of said casing, a perforated pipe mounted in the upper end of said casing, a stand pipe surrounding said perforated pipe and held by said stuffing box, a block carried by said pipe, a rectangular plunger movably mounted in said block and connecting with said barrel valve, a spring interposed between said perforated pipe and said working barrel valve, and a cable connecting with the upper end of said plunger, substantially as described.

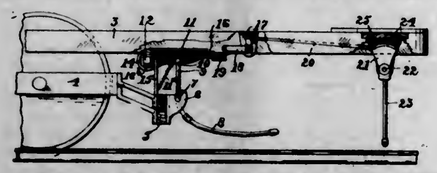
3. In an oil device, the combination with a working barrel and a valve thereof, of a casing carried by the upper end of said working barrel, a stand pipe extending upwardly from said casing, a stuffing box for holding said stand pipe upon said casing, a perforated pipe arranged in the upper end of said casing and surrounded by said stand pipe, a plunger operating in said perforated pipe and connecting with said valve, a spring interposed between said perforated pipe and said valve, a cable connecting with the upper end of said plunger, means for preventing said plunger from rotating, and means for preventing said stand pipe from becoming disengaged from said casing, due to rotation.

4. In an oil well device, the combination with a working barrel and a valve thereof, of a casing carried by said working barrel, a stand pipe connecting with said casing, a perforated pipe connecting with the upper end of said casing, a plunger slidably mounted in said pipe and connecting with said valve, a cable connecting with the upper end of said plunger, means for normally holding said valve in a lowered position, and means for preventing the rotation of said plunger.

5. In an oil well device, the combination with a working barrel and a valve thereof, of a casing connecting with said barrel, a stand pipe connecting with the upper end of said casing, a perforated pipe located within said stand pipe, a plunger slidably mounted in said perforated pipe and connecting with said valve, and a cable connected to the upper end of said plunger.

[Claim 6 not printed in the Gazette.]

875,373. CAR-FENDER. GEORGE A. PARMENTER, Cambridge, Mass. Filed July 20, 1907. Serial No. 384,801.



1. The combination with a car body and its swiveled truck frame, of a scoop pivotally carried by the truck frame, a locking device having a resilient connection with the truck frame and engaging the scoop, a trip frame pivotally carried by the car body, and means interposed between the trip frame and said locking device whereby the movement of the trip frame operates the locking device to release the scoop, substantially as described.

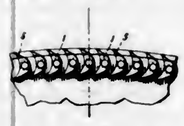
2. The combination with a car body and swiveled truck frame, of a scoop pivotally carried by the truck frame, a rock shaft yieldingly supported by the truck frame, a locking device carried by the rock shaft for holding the scoop normally elevated, a trip device carried by the car body and automatically adjusting operating connections interposed between the trip frame and rock shaft for operating the latter, substantially as described.

3. The combination with a car body and swiveled truck frame, of a scoop pivotally carried by the truck frame, and having an upwardly extending portion, uprights carried by the truck frame, a rock shaft journaled in said uprights having a locking device for engaging the upwardly extending part of the scoop, a curved bar connected to the rock shaft, a trip frame pivoted to the car body and means whereby the rocking of the trip frame releases the curved bar, substantially as described.

4. The combination with a car body and truck frame, of a scoop pivotally supported from the truck frame, and having an upwardly extending part, vertical yieldable standards carried by the truck frame, a rock shaft journaled in said standards, a trip device supported from the front of the car body and means whereby the movement of the trip frame operates said rock shaft, substantially as described.

5. In a car fender, a pivoted scoop, a locking device tending to hold the same normally elevated, a pivoted trip carried at the front of the car body, and operating means interposed between the trip and said locking device whereby the rearward movement of the trip releases the locking device, said connections including an arm extending upwardly above the pivoted point of the trip and having an elongated slot or guide, and a pull rod having a part or projection normally resting in the rear end of said slot, substantially as described.

875,374. TURBINE-VANE. JOHANN F. M. PATITZ, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Oct. 19, 1903. Serial No. 177,661.



1. In a turbine, the combination of a support comprising two walls, a series of vanes, and means for fastening the vanes between the walls, one of the walls having a continuous formation coacting with the vanes to prevent their twisting.

2. In a turbine, a wheel or casing, a set of vanes, and fastening means for the vanes, the wheel or casing having a common continuous locking formation separate from the fastening means, and the vanes being formed for coaction with the locking formation of the wheel or casing.

3. In a turbine, a wheel or casing, a set of vanes, and fastening means for the vanes, the wheel or casing having a common groove separate from the fastening means, and each vane having a projection thereon fitting the groove and locking the vanes against twisting.

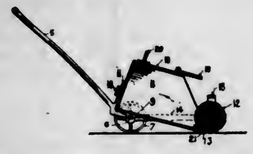
4. In a turbine, a wheel, a set of vanes, and fastening means for the vanes, the wheel having a common groove separate from the fastening means and each vane having a projection thereon fitting the groove so as to bring a surface of the set of vanes flush with a wheel surface.

5. As an article of manufacture, a vane, and a fastening means at the end of the vane, the vane being formed at an end for locking and the formation being separate from the fastening means.

[Claim 6 not printed in the Gazette.]

875,375. STREET-SWEEPER. FREDERICK E. PENFOLD, Sydney, New South Wales, Australia. Filed Jan. 24, 1907. Serial No. 353,837.

1. A street sweeper comprising a carriage, consisting of an axle and wheels mounted thereon, a dirt receptacle removably carried by the carriage, arms pivotally connected to the carriage at the sides of the dirt receptacle and projecting in front thereof, a brush journaled in the arms in front of the dirt receptacle, said arms being arranged to swing on the axle, and raise the brush above the dirt receptacle, and operable means for transmitting motion from the wheels to the brush.



2. A street sweeper comprising a carriage, consisting of an axle, a handle connected with the axle having a receptacle engaging projection, wheels for the axle, a dirt receptacle detachably mounted on the axle having an open side, lugs on the bottom of the dirt receptacle engaging the axle, a socket on the back of the dirt receptacle engaging the handle projection, arms pivoted on the axle, and projecting in front of the dirt receptacle, a rotary brush revolubly mounted between the arms and situated in front of the dirt receptacle, and means for causing the revolution of the brush as the wheels revolve.

3. A street sweeper comprising a carriage, consisting of an axle, a handle connected with the axle having a receptacle engaging projection, wheels mounted on the axle, a dirt receptacle detachably mounted on the axle having an open side, lugs on the bottom of the dirt receptacle engaging the axle, a socket on the back of the dirt receptacle engaging the handle projection, a shield hinged to the upper edge of the open side of the dirt receptacle, arms pivoted on the axle, and extending in front of the dirt receptacle, a brush revolubly mounted between the arms and situated in front of the dirt receptacle, means for causing the revolution of the brush as the wheels revolve, a flap hinged to the lower edge of the open side of the dirt receptacle, and means operated from the back of the sweeper for raising the flap in order to move the dirt backward in the dirt receptacle.

875,376. HANDLE FOR ROTARY SNAP-SWITCHES. JOHANN G. PETERSON, Bridgeport, Conn., assignor to The Perkins Electric Switch Manufacturing Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Nov. 21, 1905. Serial No. 288,403.

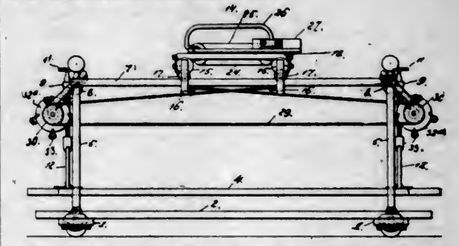


The insulating body of a rotary snap switch handle having a hole with radiating grooves, and a yoke whose legs are in the grooves, in combination with a plunger having wings guided in said grooves, a spring and a retaining ring held in position by the bent ends of the yoke.

875,377. TRAINING DEVICE. VITO PILIA and HARRIS BOOKER, California, Pa. Filed Aug. 22, 1907. Serial No. 389,670.

1. A training device consisting of a rectangular framework embodying trucks, standards and cross heads connected by rods, a platform or tread-way adjustably suspended from said cross heads, a plate movably mounted upon said rods, and having a central opening, an elastic holder carried by said plate, a frame revolubly mounted in said opening, a tray carried by said frame, side handles carried by said frame, bearings carried by said cross heads, disks revolubly supported by said bearings, pulleys mounted for rotation with said disks, and a cable passing over said pulleys and connecting indirectly with said plate, for revolving said disk when said plate is moved.

2. A training device consisting of a movable rectangular frame-work, a plate movably mounted upon said frame-work and having a central opening, and an elastic triangular holder carried by said plate, a frame revolubly mounted upon said plate and having a central opening, a tray carried by said frame, handles carried by said frame, bearings supported at the ends of said rectangular frame-work, revoluble amusement devices carried by said bearings, a cable moved by said plate for actuating said amusement devices, and an adjustable platform or tread-way suspended in said frame-work.



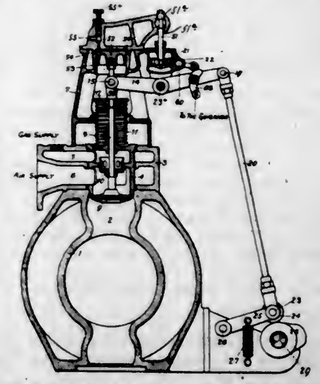
3. A training device consisting of a movable frame-work, a platform or tread-way adjustably mounted in said frame-work, a plate movably mounted upon said frame-work and having an opening formed therein, a frame revolubly mounted upon said plate, handles carried thereby, bearings carried by said frame-work at the ends thereof, revoluble amusement devices carried by said bearings, and means actuated by the movement of said plate for revolving said amusement devices.

4. A training device consisting of a movable frame-work, a platform or tread-way adjustably mounted in said frame-work, a plate movably mounted upon said frame-work and having an opening formed therein, a frame revolubly mounted upon said plate, bearings carried by said frame-work at the ends thereof, revoluble amusement devices carried by said bearings, and means actuated by the movement of said plate for revolving said amusement devices.

5. A training device consisting of a movable frame-work, an adjustable tread-way carried thereby, a revoluble frame supported by said frame-work and movable longitudinally thereon, an elastic holder arranged beneath said frame, amusement devices supported at the ends of said frame-work, and means actuated by the longitudinal movement of said frame for operating said amusement devices.

[Claim 6 not printed in the Gazette.]

875,378. REGULATING DEVICE FOR INTERNAL-COMBUSTION ENGINES. OTAKAR PODHAJSKÝ, Warren, Pa. Filed Nov. 6, 1906. Serial No. 342,199.



1. A regulating device for internal combustion engines, comprising in combination an admission-valve actuating mechanism, a cylinder closed at both ends one of said ends

being imperforate, said cylinder containing a substantially incompressible liquid and being provided with a piston dividing the interior thereof into compartments and with a device controlled by the governor for permitting the liquid to pass from one side of the piston to the other for the purpose of changing the lift and the cut-off of the admission-valve, said cylinder being connected to said admission-valve actuating mechanism and the piston thereof being connected to the engine frame, whereby the pressure due to the opening of the admission valve of the engine is exerted between said imperforate head and the piston substantially as described.

2. A regulating device for internal combustion engines, comprising in combination an admission-valve, a cylinder containing a substantially incompressible liquid, a piston in said cylinder connected to the engine frame and dividing the interior of the cylinder into two compartments, an automatic relief valve adapted to open communication between said compartments, a device controlled by the governor of the engine for permitting the liquid to pass from one compartment to the other for the purpose of changing the lift and the cut-off of said admission-valve, a member for operating the admission-valve pivotally connected to said cylinder and mechanism actuated by the engine for imparting movement to said member, substantially as described.

3. A regulating device for internal combustion engines comprising in combination an admission-valve, a device for securing a smooth seating of said valve, a cylinder closed at both ends containing a substantially incompressible liquid, a piston in said cylinder connected to the engine frame and dividing the interior of the cylinder into two compartments, a device controlled by the governor of the engine for permitting the liquid to pass from one compartment to the other, a lever for operating the admission-valve fulcrumed to said cylinder, mechanism actuated by the engine for imparting movement to said lever, and an automatic relief valve adapted to open communication between the said two compartments of the cylinder, substantially as described.

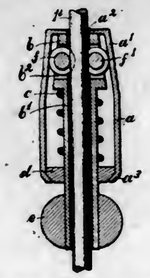
4. A regulating device for internal cumbustion engines comprising in combination an admission-valve, a cylinder closed at both ends containing a substantially incompressible liquid, a piston in said cylinder connected to the engine frame and dividing the interior of the cylinder into two compartments, a device controlled by the governor of the engine for permitting the liquid to pass from one compartment to the other, a device by means of which the amount of the incompressible liquid may be kept constant, a lever for operating the admission-valve fulcrumed to said cylinder, and mechanism actuated by the engine for imparting movement to the lever, the piston or the cylinder being equipped with an automatic relief valve adapted to open communication between the said two compartments of the cylinder, substantially as described.

5. A regulating device for internal combustion engines comprising in combination an admission-valve, a cylinder closed at both ends containing a substantially incompressible liquid, a piston in said cylinder connected to the engine frame and dividing the interior of the cylinder into two compartments, a device controlled by the governor of the engine for permitting the liquid to pass from one compartment to the other, an elastic cushion in one of the compartments, a lever for operating the admission-valve fulcrumed to said cylinder, and mechanism actuated by the engine for imparting movement to said lever, the piston or the cylinder being equipped with an automatic relief valve adapted to open communication between the said two compartments of the cylinder, substantially as described.

[Claim 6 not printed in the Gazette.]

875,379. DEVICE FOR SECURING SCARF-PINS. ABRAHAM RAINESS and BERNARD RAINESS, New York, N. Y. Filed June 11, 1907. Serial No. 378,442.

In a scarf pin securing and protecting device an outer shell, an inner part with a vertical channel adapted to receive the pin and having an enlarged conical top portion with a square opening which extends horizontally therethrough, two sheave shaped gripping members within



said square opening, and means for pressing the gripping members against the pin or releasing same therefrom.

875,380. COMPOSITION FOR DISINFECTING, ANTISEPTIC, AND OTHER PURPOSES. LUDWIG H. REUTER, Hoboken, N. J. Filed Oct. 31, 1906. Serial No. 341,433.

1. A disinfecting and antiseptic composition, comprising 50% of creosote, 5% of formaldehyde and not over twenty per cent. of soap in aqueous solution which is miscible with water to produce a clear and stable solution.

2. A disinfecting and antiseptic composition, consisting of a clear aqueous solution comprising about 20% of soap, about 50% of creosote, and a small amount of formaldehyde, in substantially the described proportions which is miscible in all proportions with water to produce a clear and stable solution.

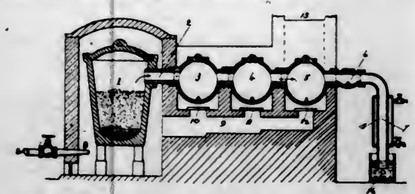
3. A disinfecting and antiseptic composition, comprising a clear aqueous solution of creosote, formaldehyde, and about two-fifths as much soft soap as creosote, which is miscible with water in all proportions to produce a clear and stable solution.

4. A disinfecting and antiseptic composition comprising an aqueous solution of soap, formaldehyde, and substantially 50% of creosote in aqueous solution, the quantity of creosote being materially in excess of that of soap, which is miscible with water to produce clear and stable solutions.

5. A composition of matter comprising a clear aqueous solution of potassium oleate, creosote and formaldehyde, the creosote constituting substantially one-half, and the potassium oleate substantially one-fifth of the solution in substantially the described proportions.

[Claims 6 and 7 not printed in the Gazette.]

875,381. PROCESS OF TREATING COMPLEX ORES CONTAINING ZINC AND OTHER VOLATILIZABLE METALS. GEORGE M. RICE, Worcester, Mass. Filed Feb. 25, 1907. Serial No. 359,089.



1. In the art of reducing complex zinc ores direct from the raw ore, the process step which consists in supplying to the ore a quantity of finely divided metallic iron in large excess of the amount required to combine with the sulfur from the volatilizable metals in forming monosulfid of iron (FeS.) and an additional amount sufficient to form slag, with the silica contained in the ore during the melting operation.

2. The process of treating sulfid ores containing volatile metals, which consists in intimately mixing with such ores a quantity of finely divided metallic iron particles in an amount of about fifty per cent. of the weight of the ore, thereby to chemically overbalance the sulfur that is combined with such volatilizable metals, then subjecting the mass to a degree of heat sufficient to volatilize said metals and set them free, forming mono-sulfid of iron with the sulfur previously combined with the metal, or metals, volatilized out of the ore.

3. The improvement in treating zinc ores, which consists in adding to crushed raw zinc ore a quantity of finely divided metallic-iron chips in excess of the amount that can combine with the sulfur in the volatilizable metals, subjecting the mixture to heat in a suitable retort or furnace at a degree sufficient to drive off volatilized metals and melt the residual material to matte and slag, then condensing the volatilized metals in successively arranged chambers or sections, the temperatures of which are adjusted according to the condensing requirements of the respective metals.

4. In the process of treating complex ores containing volatilizable metals, the improvement which consists in volatilizing such metals in a closed crucible or retort, leading the vaporized product from said retort into a series of condensing chambers or sections, regulating the temperature of the respective sections each for the condensation of a predetermined kind of metal, and gathering and collecting the several metals in their respective sections.

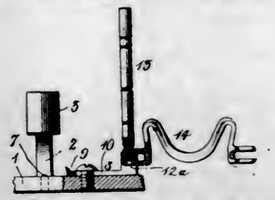
5. The improvement in the process of recovering metal from complex ores containing zinc and rare volatilizable metals, as indium, gallium, or the like, which consists in melting the ore, together with an excess of metallic iron, and volatilizing contained metals in a suitable crucible or retort, carrying the fumes away from the fused product, and then condensing the volatilized metals, such as indium, gallium and similar metals, at a location separate from the zinc condensation.

[Claim 6 not printed in the Gazette.]

875,382. PROCESS OF BATING HIDES AND SKINS. OTTO RÖHM, Stuttgart, Germany. Filed Aug. 18, 1906. Serial No. 331,215.

The process herein described of bating hides and skins which consists in subjecting the same to the action of an aqueous solution of sulfureted hydrogen, carbonic acid and ammonia.

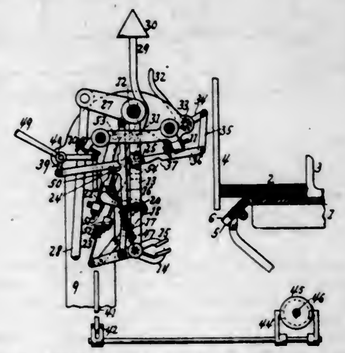
875,383. OPTICAL TOOL. GEORGE E. SCHOFIELD, Baltimore, Md. Filed May 18, 1907. Serial No. 374,449.



An optical tool of the character described comprising a bed plate, an adjustable gage plate provided with a longitudinal slot mounted upon the bed plate, and a screw extending through said slot into the bed plate to secure the gage plate in adjusted position, the outer end of the gage plate being upturned to constitute an anvil and being slotted for the purpose set forth, the latter slot being an extension of the former slot.

875,384. SIGNATURE-GATHERER. CHARLES L. SMITH, New York, N. Y., assignor to Gullberg & Smith, New York, N. Y., a Firm. Filed Dec. 31, 1906. Serial No. 350,224.

1. In a signature gatherer, an oscillating shaft, a gripper carried by the shaft, means for opening and closing the gripper, a clutch, a shaft for causing the clutch to open or release, links for moving the clutch actuating shaft, a transmission arm on the oscillating shaft, a signal, and an arm actuated by the signal for allowing one of the links to move to engagement with the transmission arm.



2. In a signature-gatherer, a plurality of gripper-devices, a shaft connected with and oscillating the several gripper-devices, an arm connected with said shaft, signal-devices one for each gripper-device, means for moving the signal devices a second shaft, lever arms on said shaft corresponding in number with and arranged to be moved by the signal-devices for operating said second shaft, and means for rendering the gatherer inoperative moved by the second shaft into engagement with the arm aforesaid.

3. In a signature gatherer, a plurality of gripper devices, a shaft connected with and oscillating the several gripper devices, an arm with a lug carried and oscillated by said shaft, signals actuated by the respective gripper devices, an arm actuated by the signals, a link forced down to engage the lug of the oscillating arm when the signal actuated arm is actuated by the signals, a lever actuated by the link, and a clutch with operating shaft actuated by the lever.

4. A signature-gatherer comprising a gripper-jaw, and an oscillating arm to which said jaw is fixed, a second jaw pivoted to the fixed jaw, means for swinging the jaw on its pivot, a plate independent of the jaw swinging means pivoted upon said arm and carrying a projection and a link connecting the movable gripper-jaw with said plate.

5. A signature gatherer comprising a pair of gripper jaws and an oscillating arm carrying said jaws, a plate pivoted upon said arm and carrying at one end a stop, a signal actuated by said stop, a link connecting the other end of the plate to one of the gripper jaws, and a pair of toggle members independent of the link for actuating one of the gripper jaws.

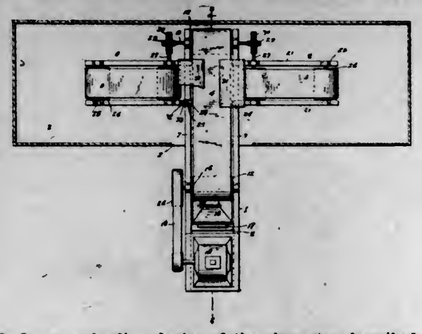
[Claims 6 to 10 not printed in the Gazette.]

875,385. CAR-UNLOADING DEVICE. CHRISTOPHER H. SMITH, Depue, Ill. Filed Mar. 28, 1907. Serial No. 365,051.

1. In an unloading device of the character described, a portable main frame mounted on supporting wheels and adapted to be projected through the door opening of a car or the like, a conveyer on said main frame, an end frame connected to the main frame and adapted to extend longitudinally of the car, and a conveyer arranged upon said end frame to discharge upon the conveyer on the main frame, substantially as described.

2. In an unloading device of the character described, a portable main frame mounted on supporting wheels and adapted to be projected through the door opening of a car or the like, an endless conveyer on the main frame, end frames connected to the opposite sides of the main frame and adapted to extend longitudinally of the car, endless conveyers on said end frames and adapted to discharge upon the conveyer on the main frame and means

for driving the conveyers on the end frames from the one upon the main frame, substantially as described.



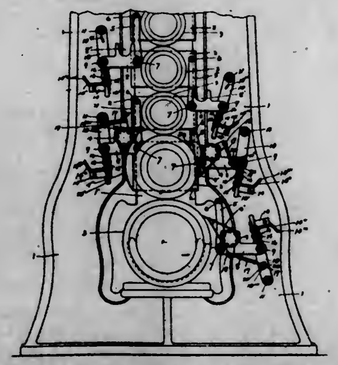
3. In an unloading device of the character described, a portable main frame mounted on supporting wheels and adapted to be projected through the door opening of a car or the like, an endless conveyer on the main frame, end frames connected to the opposite sides of the main frame and adapted to extend longitudinally of the car, endless conveyers on said end frames and adapted to discharge upon the conveyer on the main frame, means for driving the conveyers on the end frames from the one on the main frame and a motor upon the main frame for driving the conveyer thereon.

4. In an unloading device of the character described, a main frame to be projected through the door opening of a car or the like, an endless conveyer upon said frame, end frames detachably connected to the main frame and adapted to extend longitudinally of the car and endless conveyers upon said end frames to co-act with the one upon the main frame.

5. In an unloading device of the character described, a main frame to be projected through the door opening of a car or the like, an endless conveyer upon said frame, end frames to extend longitudinally of the car, endless conveyers upon said end frames, inclined plates or chutes between the conveyers on the end frames and the one on the main frame and means for driving said conveyers.

[Claims 6 to 10 not printed in the Gazette.]

875,386. CALENDER-FEED FOR ROLLS OF PAPER-MAKING MACHINES. RICHARD SMITH, Worcester, Mass., assignor to Smith Paper Machinery Company, Portland Me., a Corporation of Maine. Filed July 27, 1907. Serial No. 385,775.



1. In a calender feed, the combination with the box or bearing at the end of a calender roll, of mechanism for supporting the end of a doctor, said mechanism pivotally connected with said box or bearing, and having a vertical movement therewith.

2. In a calender feed, the combination with the box or bearing at the end of a calender roll, of mechanism for supporting the end of a doctor, said mechanism pivotally connected with said box or bearing, to move therewith, and means for moving said mechanism toward and away from said roll.

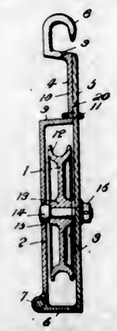
3. In a calender feed, the combination with the box or bearing at the end of a calender roll, of mechanism for supporting the end of a doctor, said mechanism pivotally connected with said box or bearing, to move therewith, and means for moving said mechanism toward and away from said roll, and means for locking said mechanism in its inward position.

4. In a calender feed, the combination with the box or bearing at the end of a calender roll, of mechanism for supporting the end of a doctor, said mechanism pivotally connected with said box or bearing, to move therewith, and means for moving said mechanism toward and away from said roll, and means for locking said mechanism in its inward position, and a stop for limiting the outward movement of said mechanism.

5. In a calender feed, the combination with the box or bearing at the end of a calender roll, of a lever or link pivotally attached, and connected with said box or bearing at one end, and pivotally connected at its other end to a bar or support for one end of a doctor, and said bar or support, pivotally connected at its other end with a lever, pivotally supported on the frame, and said lever, having a movable handle attached thereto, and adapted to engage a plate or locking device, to hold and lock said lever, and to be moved out of engagement with said plate or locking device, and into engagement with a stop, to limit the movement of said lever in one direction.

[Claims 6 to 13 not printed in the Gazette.]

875,387. TACKLE-BLOCK. WILLIAM H. STAM, Verdi, Nev. Filed Apr. 9, 1907. Serial No. 367,156.



1. In a device of the character described, the combination of a shell comprising a pair of side plates having corresponding edges thereof hinged, means for locking the plates in a closed position, a journal pin projecting from one of the plates, the opposite plate being provided with an opening normally receiving the extremity of the journal pin, and a sheave mounted upon the journal pin.

2. In a device of the character described, the combination of a shell comprising a pair of side plates having corresponding edges thereof hinged, extensions projecting from the opposite edges of the side plates, one of said extensions having a hooked extremity and being provided with offsets throwing a portion thereof against the opposite extensions, a slide locking the two extensions together, and a sheave mounted upon one of the side plates.

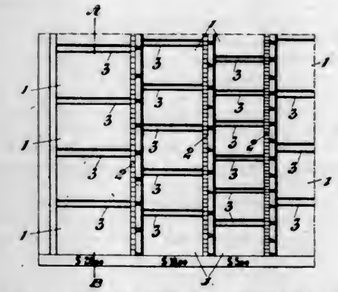
3. In a device of the character described, the combination of a shell comprising a pair of side plates having corresponding edges thereof hinged, means for locking the plates in a closed position, a headed journal pin projecting from one of the plates, the opposite plate being provided with an opening normally receiving the head of the journal pin, and a sheave mounted upon the journal pin and held against displacement by the head thereof.

4. In a device of the character described, the combination of a shell comprising a pair of hinged side plates, means for locking the side plates in a closed position, a headed pin carried by one of the side plates and extending through the same, a collar capping the extremity of the headed pin and rigidly connected to both the pin and side plate, and a sheave mounted upon the said headed pin.

5. In a device of the character described, the combination of a shell comprising a pair of side plates having corresponding edges thereof hinged, extensions projecting from the plates, a stud projecting from one of the extensions, the opposite extension being provided with an opening designed to receive the stud, means for locking the extensions together, and a sheave mounted upon one of the side plates.

[Claim 6 not printed in the Gazette.]

875,388. COIN-COUNTING BOX. FERDINAND STIEBEL, Eisenach, Germany. Filed June 5, 1907. Serial No. 377,398.



1. A box of the class described comprising a body, partitions arranged in said body forming a plurality of compartments therein, and a scale forming graduations arranged at the free edge of each of said partitions, said body having at the back thereof and in its inner face a plurality of recesses arranged transversely of the longitudinal extent of the compartment, the walls of each recess being flared to form an enlarged mouth for the latter to allow free access to the recess for receiving the edge of a coin within the same.

2. A coin box of the class described comprising a bottom, side and end walls, a plurality of partitions forming compartments engaging opposite walls of the box, and scales mounted on the free edge of each partition, said bottom having in its inner face a plurality of grooves arranged transversely of the longitudinal extent of the compartments, the walls of the grooves being flared to produce an increased mouth portion with respect to the groove to allow free entrance of a coin when inserted in each groove.

3. A coin box including a bottom, side and end walls, partitions arranged within the box for forming compartments therein, a plurality of transversely extending recesses in the bottom at the interior face thereof and with respect to the longitudinal extent of the compartments, and scales arranged on said partitions forming graduations, the walls of each recess diverging outwardly with respect to each other to form flared mouth portions thereby allowing free entrance of a coin into the recesses.

875,389. ADJUSTABLE BEARING. NICHOLAS J. THEEDE, Fairmount, N. D. Filed July 11, 1907. Serial No. 383,233.

1. The combination with side bars, a connecting cross bar, a roller supported stationarily between said side bars and rollers supported between said side bars and having adjustable movement, of a threaded shaft, a collar in said cross bar surrounding said shaft, a V-shaped member having diverging arms formed to surround the ends of said rollers, said shaft passing through the central portion of said V-shaped member and having a head bearing against the inner face of said central portion and means for rotating said shaft.



2. In a mechanism of the type set forth, side bars formed at corresponding ends with recesses extending from their upper and lower edges and with forwardly directed slots extending from the inner portions of said recesses, a pair of rollers having end trunnions adapted to be introduced into said slots through said recesses and means for adjustably moving said rollers in said slots.

3. In a mechanism of the type set forth, side bars formed at each end thereof with recesses extending from their upper and lower edges and with slots extending forwardly from the inner portion of said recesses, rollers mounted in pairs at the ends of said side bars and having end trunnions journaled in said slots and introduced thereinto through said recesses, an endless belt trained over said rollers and means for adjustably moving the rollers of one of said pairs along the extent of the adjacent slots.

875,390. ANTHRAQUINONE DERIVATIVE. PAUL THOMASCHEWSKI, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Sept. 25, 1907. Serial No. 394,555.

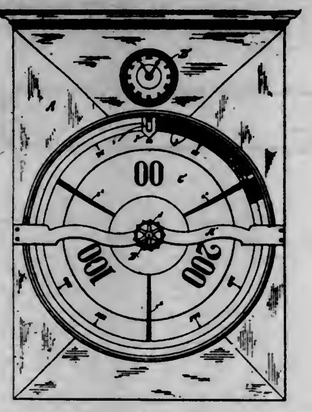
1. The herein-described new anthracene derivatives which can be obtained from anthrapyridons, which new derivatives are dark powders soluble in hot quinolin and in concentrated sulfuric acid, and which in the shape of their sulfonic acids dye wool from orange to red and blue shades, substantially as hereinbefore described.

2. The herein-described new anthracene derivative which can be obtained by condensing 2-amino-anthraquinon with 4-bromo-1-anthrapyridon, which new derivative is a brown powder soluble in hot quinolin with a crimson red color and in concentrated sulfuric acid with a violet color, forming a vat with hydrosulfite and caustic-soda lye which dyes unmordanted cotton red shades, and dyeing in the shape of its sulfonic acid wool from acid baths red shades, substantially as described.

875,391. DEVICE FOR CUTTING BARK FROM TREES. WILLIAM T. TINSLEY, Custer, S. D. Filed Apr. 18, 1906. Serial No. 312,465.

A bark peeling instrument comprising a flat blade 1, integral shanks 4 and 5 extended upwardly from opposite ends of the blade and then rearwardly and convergently, said shanks, adjacent their rear ends, having a quarter twist, whereby said rear ends are disposed in planes at right angles to the blade, the rear ends of said shanks being formed at their extremities with apertures, and inwardly of said apertures with vertical arcuate slots, a handle, a pivot bolt engaged through said handles and through said apertures, a bolt engaged through said handle and said slot and an adjusting thumb screw threaded upon the end of said last named bolt.

875,392. WORKMAN'S TIME-RECORDER. FRANK J. TRAN and FRANK CAIS, Cleveland, Ohio. Filed June 14, 1905. Serial No. 265,201.



1. In a workman's time-recorder, the combination with a platen, of a time-printing device embodying a carriage adapted to move intermittently across said platen, such carriage being composed of two members pivotally secured to each other.

2. In a workman's time-recorder, the combination with a platen, of a time-printing device embodying a carriage composed of two members pivotally secured to each other; and automatically operated means to position said carriage transversely relatively to said platen to correspond to intervals of time.

3. In a workman's time-recorder, the combination with a platen provided with a record-sheet having transverse divisions to correspond to individual workmen, and vertical divisions to correspond to intervals of time; a time-printing device embodying a carriage composed of two members pivotally secured to each other; means adapted to automatically position said carriage over said vertical divisions to correspond to the intervals of time there denoted; and manually operated means for bringing any one of said transverse divisions beneath said carriage.

4. In a workman's time-recorder, the combination with a platen, of a time-printing device comprising a carriage composed of two members, one of said members traveling on ways and the other being pivotally secured to said first member.

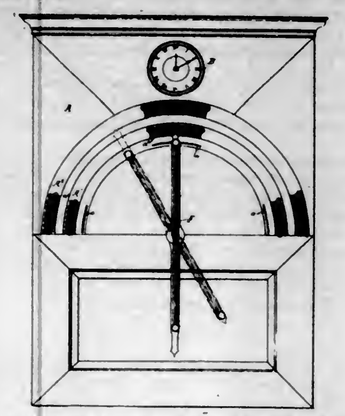
5. In a workman's time recorder, the combination with a platen, of a time-printing device comprising a carriage composed of two members, one of said members being movable transversely relatively to said platen, the other member being pivotally secured to said first member so as to be movable toward and away from said platen.

[Claims 6 to 27 not printed in the Gazette.]

875,393. WORKMAN'S TIME-RECORDER. FRANK J. TRAN and FRANK CAIS, Cleveland, Ohio. Filed Jan. 24, 1906. Serial No. 297,560.

1. In a workman's time-recorder, the combination of a rotary platen; a dial provided with two series of designating characters, such characters corresponding with transverse portions of said platen; and two pointers of unequal lengths mounted in front of said dial and connected to rotate with said platen, such series of characters being so arranged as to be respectively indicated by the longer and the shorter of said two pointers.

2. In a workman's time-recorder, the combination of a rotary platen adapted to support a record sheet or the like; a dial provided with separate series of designating characters corresponding with transverse divisions on said platen, said characters being arranged on arcs of concentric circles; and pointers of different lengths mounted in front of said dial and connected to rotate with said platen, the arcs on which said characters are arranged being disposed so as to be respectively indicated by different pointers.



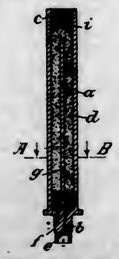
3. In a workman's time-recorder, the combination of a rotary platen provided with a record sheet having transverse divisions to correspond with individual workmen; a dial provided with separate series of designating characters arranged on arcs of concentric circles, each of said series corresponding with a series of successive divisions on said record sheet; and pointers of different length mounted in front of said dial and connected to rotate with said platen, the arcs on which said characters are arranged being disposed so as to be respectively indicated by different pointers.

4. In a workman's time-recorder, the combination of a rotary platen provided with a record sheet having transverse divisions to correspond to individual workmen; a dial provided with two series of designating characters arranged on concentric semicircles, one of said series corresponding with the divisions on one-half of said record sheet and the other series corresponding with the divisions on the other half thereof; and two oppositely-disposed pointers of unequal lengths mounted in front of said dial and connected to rotate with said platen, the semicircles on which said characters are arranged being disposed so as to be respectively indicated by the longer and the shorter of said two pointers.

5. In a workman's time-recorder, the combination of a hollow spindle; a cylindrical platen mounted thereon and adapted to support a record sheet; a time-printing device adapted to print on said record sheet; a reciprocatory shaft mounted in said hollow spindle and connected to actuate said time-printing device to thus print; and two oppositely disposed levers mounted upon the end of said spindle and independently adapted to reciprocate said shaft.

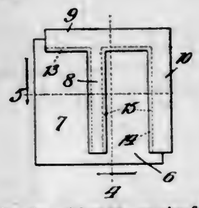
[Claims 6 to 9 not printed in the Gazette.]

875,394. ELECTRIC HEATER. AUGUST VOELKER, Berlin, Germany. Filed June 6, 1906. Serial No. 320,421.



In a heating cartridge the combination of a holder *a* of refractory material, a partition *g* in the inside of said holder so as to form two compartments *h*, a comminuted resistance material *d* contained in said two compartments, current connections or terminals *e*, *f* leading to each compartment *d* at the lower part of the cartridge, a socket *b* surrounding the outer end of said current connections or terminals, said socket *b* being in one piece with the holder *a*, a cover *c* closing the upper extremity of said holder *a*, and a conducting bridge *i* below said cover *c*, substantially as set forth.

875,395. CHIMNEY. CARL WEBER, Chicago, Ill., assignor to Weber Steel-Concrete Chimney Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 4, 1906. Serial No. 337,444.



1. A lining tile for chimney, smoke-flues and the like formed of refractory material and consisting of a body provided on one surface with a rib undercut along its sides and having offset flanges extending from two adjacent edges and undercut along their inner edges said rib extending from substantially the central portion of one of said flanges and substantially parallel to the other flange.

2. In combination with a reinforced concrete chimney, flue, or the like, a refractory lining formed of tiles comprising a body portion provided on one surface with a rib undercut along its sides and having offset flanges extending from two adjacent edges and undercut along their inner edges said rib extending from substantially the central portion of one of said flanges and substantially parallel to the other flange whereby said tiles may be lap-jointed in vertical series lengthwise of the structure and horizontal series about the same, with the ribs embedded in the concrete of the structure and the offset flanges forming expansion-joints between adjacent tiles throughout the lining and acid-proof fillings in said lap-joints whereby fumes passing up the chimney will be prevented from attacking the concrete of the structure.

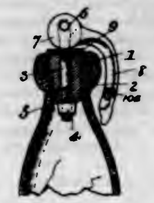
875,396. CLAMP FOR USE IN BUILDING CONSTRUCTION. HERBERT E. WHITE, Youngstown, Ohio, assignor to General Fireproofing Company, a Corporation of Ohio. Filed June 19, 1907. Serial No. 379,706.



1. A clamp for concrete constructions comprising the upper and lower members, one of said members having a socket, the other member having a projection fitting into the socket to form a closure therefor and prevent access of concrete to the socket, and a bolt passing centrally through said projection and socket, and screwing into the upper member, the lower member being constructed to prevent access of concrete to the bolt.

2. A clamp for concrete constructions comprising the upper and lower members, each provided with spaced grooves for engaging the bars or rods to be clamped, one of said members having a socket, the other member having a projection fitting into the socket to form a closure therefor and prevent access of concrete to the socket, and a bolt passing centrally through said projection and socket, and screwing into the upper member, the lower member being constructed to prevent access of concrete to the bolt.

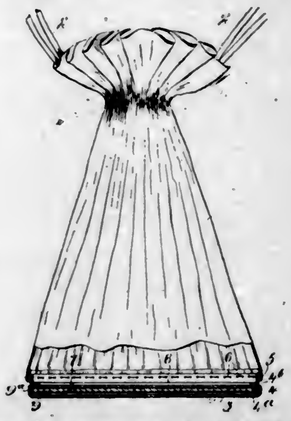
875,397. BOTTLE-STOPPER. EDWARD M. WILLIS, Kenton, Ohio. Filed Jan. 28, 1907. Serial No. 354,511.



1. A device as described, comprising a downward-tapering elastic plug, a stem extending through said plug, a plate arranged upon said stem and adjustably held to the lower end of said plug, said stem also extending above and overhanging the upper end of said plug, a lever having a cam-ended formation eccentrically pivoted upon the upper end overhanging portion of said stem, said lever being curved to bring it close, and cause it practically to conform to the upper portion of the bottle-neck.

2. A device as described, comprising a downward tapering elastic plug, a stem extending through said plug and having fitted upon its lower end an adjustably held plate fitting against the lower end of said plug, a plate applied to the upper end of said plug and having said stem passing through it, said stem extending beyond and overhanging the upper end of said plug, and a cam-ended lever eccentrically pivoted upon the overhanging portion of said stem and effective for engagement with the latter-referred to plate, said lever having a curved handled portion adapted to rest close and conform to the upper end portion of the bottle-neck.

875,398. HAND-BAG. GEORGINA T. WILLIS, New York, N. Y. Filed Apr. 16, 1907. Serial No. 368,579.



1. A hand bag comprising a tubular flexible body provided with a mirror secured thereto at and closing the lower end and having its reflecting surface exposed outwardly below the bag, a protector within said body at the back of the mirror, and a cover detachably secured over the mirror to protect its outer surface.

2. A hand bag comprising a tubular body of flexible material, means to close and support its upper open end, and a mirror provided along its edge with a flange secured to the lower end of the bag body and exposed outwardly below the bag, and a protector over the back of the mirror within said tubular body.

3. A hand bag comprising a tubular body of flexible material, means to close and support its upper open end, a mirror secured to the lower end of the bag body and constituting a closure for the lower end of the body, and

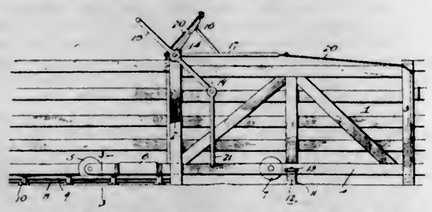
exposed outwardly below the body, and a protector within the bag lying over the reflecting medium of the mirror.

4. A hand bag comprising a flexible body, a mirror having its reflecting surface exposed outwardly, a frame attached to the mirror and having a flange extending upwardly, and means securing the bag body to said flange.

5. A hand bag comprising a flexible body, a mirror having its reflecting surface exposed outwardly, a frame attached to the mirror and having a flange extending upwardly, and means for securing the bag to said flange, said frame having a flange extending in front of the mirror at its edge.

[Claims 6 to 8 not printed in the Gazette.]

875,399. GATE. JAMES H. WILSON, Mount Ayr, Iowa. Filed July 3, 1907. Serial No. 381,955.



1. An endwise sliding gate embodying a horizontal rail, supporting wheels carried thereby, a supporting rail on which said wheels travel, and gate-operating mechanism embodying a rock-shaft, a plurality of arms extending upwardly from said shaft, and connections attached at one end to the upper extremities of said arms and at their other ends to opposite ends of the gate.

2. An endwise sliding gate embodying a supporting rail, rollers or wheels carried by the gate and traveling on said supporting rail, and gate-operating mechanism comprising a lever having a plurality of arms, and connections leading from the arms of said lever to opposite ends of the gate, said arms and connections being so proportioned that they act to hold the gate locked at the limit of its throw.

3. An endwise sliding gate embodying a supporting rail, wheels carried by the gate and traveling on said rail, and gate-operating mecnanism comprising a lever having a plurality of arms, and connections leading from the arms of said lever to opposite ends of the gate, said arms and connections being so proportioned and disposed that the connections substantially line up with the arms when the gate is at the limit of its movement, substantially as and for the purpose described.

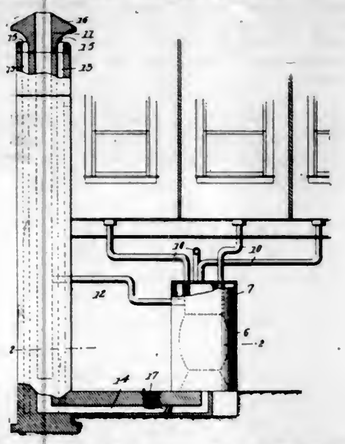
4. The combination with a sliding gate, and operating mechanism therefor, of a supporting track embodying a supporting rail and side rails or guards at opposite sides of the supporting rail, spaces being left for the escape of trash and the track as a whole being sustained in an elevated position, substantially as described.

875,400. HEATING AND VENTILATING SYSTEM. ERASTUS W. WOODS, Chicago, Ill. Filed Mar. 6, 1907. Serial No. 360,814.

1. In a heating system, the combination with a heating device having separate air chambers connected respectively to rooms on separate sides of the building, of separate air ducts leading to said chambers and having inlets presented in directions corresponding to said sides of the building.

2. In a heating system, the combination with means for heating air, of means for supplying the main part of the air to the heater from the windward direction, and means for delivering the major part of the heated air to the room or rooms on the windward side of the building.

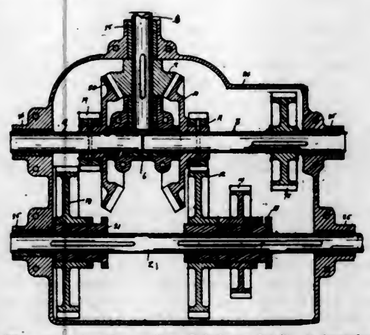
3. In a hot air heating system, the combination of a furnace having separate air chambers, a smoke stack, separate air supply ducts leading to said chambers and extending down beside the stack and having inlets near the top thereof presented on different sides, and separate service pipes leading from said air chambers to rooms on different sides of the house corresponding respectively to the sides on which said inlets are presented.



4. In a hot air heating system, the combination with a furnace having service pipes leading therefrom, a stack or chimney connected to the furnace and having a tapered top with the flue opening at the apex, and air ducts leading to the furnace and extending down beside the smoke flue and having inlets near the top of the stack, under the base of said tapered top, which base overhangs said inlets.

5. In a hot air heating system, the combination of a furnace having a jacket and vertical partitions in said jacket forming separate hot air chambers, service pipes leading from said chambers to rooms on different sides of the house respectively, and cold air supply ducts leading to said chambers respectively and having inlets presented in different directions, corresponding to the sides of the house supplied from said chambers, respectively.

875,401. VARIABLE-SPEED AND REVERSING GEAR. JAMES WORTHINGTON, Manitowoc, Wis. Filed May 6, 1907. Serial No. 372,169.



1. The combination of a driving shaft, a beveled gear wheel thereon, a set of transmission shafts, a beveled gear wheel on each, arranged to mesh with the beveled gear wheel on the driving shaft, transmission gears on said transmission shafts, operatively connected with the corresponding beveled gear wheel, a driven shaft, and shiftable gear wheels thereon adapted to be moved into and out of mesh with the transmission gears.

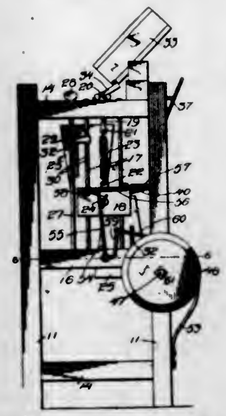
2. The combination with a driving shaft, and a set of transmission shafts, of a set of beveled gear wheels, each fast on one of said shafts and arranged with the one on the driving shaft meshing with those on the transmission shafts, transmission gears, each connected with one of the beveled gear wheels on one of the transmission shafts, a driven shaft, shiftable gear wheels thereon adapted to be moved into and out of mesh with the transmission gears, and a three way bearing member arranged to support the adjacent ends of the driving and transmission shafts.

3. The combination of a set of oppositely extending transmission shafts, beveled gear wheels thereon arranged in adjacent planes, a driving shaft a beveled gear wheel thereon meshing with the beveled gear wheels on the transmission shafts, a set of gear wheels of different size on one of the transmission shafts, a gear wheel on the other transmission shaft, a driven shaft and shiftable gear wheels thereon each adapted to be selectively adjusted to mesh with one of the gear wheels on one of the transmission shafts when the others are out of mesh.

4. The combination with a set of two adjacent gear wheels of a driving gear wheel in mesh with both and arranged to drive them in opposite directions, shafts connected with the respective gear wheels of said set, transmission gear wheels on said shafts a transmission shaft and slidable gear members thereon adapted to selectively engage the driven gear wheels.

5. The combination with suitable supports, of a set of gear wheels arranged in adjacent planes and adapted to revolve in opposite directions, a driving gear wheel in mesh with the gear wheels of said set, transmission gear wheels, each connected with one of the gear wheels of said set, a driven shaft, and shiftable gear wheels mounted thereon and adapted to be moved into and out of mesh with the transmission gear wheels.

875,402. AUTOMATIC GRAIN-SCALE. THOMAS J. YOUNG, Martin, Ga. Filed Mar. 28, 1906. Serial No. 308,604.

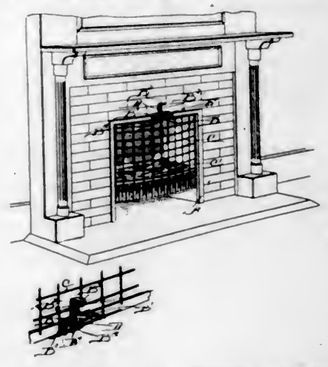


1. A mechanism of the class described comprising a rotatable hopper, a toothed disk, said disk being designed for the support of a record disk, means connected with said toothed disk for moving the said disk at each revolution of the hopper, and an indenting device for indenting the record disk, said indenting device being actuated by the movement of said hopper at each cycle of each revolution of the hopper.

2. A mechanism of the class described comprising a rotatable hopper, a toothed disk designed for the support of a record disk, an angle lever mounted for rocking movement adjacent said disk, a trip actuated by the rotation of the hopper to engage and rock said angle lever, a spring for holding the lever normally in engagement with the trip, a rod connected with the lever and resting in engagement at one of its ends with the toothed disk whereby when the angle lever is rocked, a step by step movement will be imparted to the disk, and a spring controlled indenting device designed to indent the record disk, said device being arranged for actuation at each revolution of the hopper.

3. A mechanism of the class described comprising a rotatable hopper, a toothed disk designed for the support of a record disk, an angle lever mounted for rocking movement adjacent said disk, a trip actuated by the rotation of the hopper to engage and rock said angle lever, a spring for holding the lever normally in engagement with the trip, a rod connected with the lever and resting in engagement at one of its ends with the toothed disk whereby when the angle lever is rocked, a step by step movement will be imparted to the disk, and a spring controlled indenting device arranged in the path of movement of the hoppers and arranged to be forced, by the passage of the hopper thereover, against the record disk carried by the toothed disk.

875,403. GRATE-FENDER. MORRIS J. ADAMS, Parksville, Ky. Filed May 25, 1906. Serial No. 318,703.



1. In a device of the kind described, the combination with the frame of a grate, of a supporting plate having an inwardly and upwardly projecting clamping member for embracing said frame, a tongue projecting upwardly from said plate and provided with an outwardly projecting notched end, and a wire screen pivotally connected to said plate, as set forth.

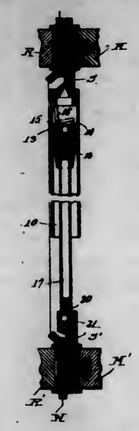
2. The combination with the frame of a grate, of a plate having apertured ears, a tongue extending downwardly from said plate, bent backwardly and upwardly, a second tongue projecting upwardly from said plate and provided with a hook and an opening, a thumb-screw working in the opening in said upwardly projecting tongue and adapted to engage said frame, a strand of wire mounted in the apertured ears of the plate, and a wire frame carried by said wire for the purpose described.

3. In a device of the kind described, the combination with the frame of a grate, of a plate having apertured ears at each end, of an apertured tongue projecting upwardly from said plate and provided with a hook at its end, a thumb-screw working in the opening formed in said tongue and adapted to lock said plate to said frame, a tongue extending downwardly from said plate bent backwardly and upwardly to form a clamping member, a wire mounted in said ears and a wire frame pivotally connected to said wire, for the purpose described.

875,404. COP AND COP-HOLDER FOR WIRE-NETTING MACHINES. ARTHUR E. BARLOW, Worcester, Mass. Filed July 6, 1905. Serial No. 268,463.

1. In a wire netting machine, the combination of a cop, a cop holder, and a locking device for the holder comprising a bell-crank mounted in the upper part of the holder and adapted to engage a bearing extending down from an upper twisting gear to lock the holder against a rising motion in the bearings.

2. In a wire netting machine, the combination of a cop, a cop-holder, and a locking device in the upper part of the cop-holder for preventing the holder from being accidentally raised from a bearing in the bottom twisting gear.



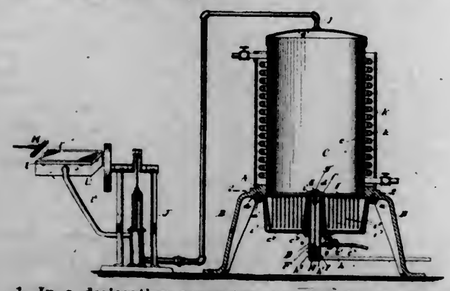
3. In a wire netting machine, the combination of a tubular cop-holder having its upper end embracing a bearing extending down from an upper twisting gear, a cop fitting into the cop-holder and having its lower end mounted in a step in the bottom twisting gear, and a locking device coöperating with the bearing extending down from an upper twisting gear for preventing said parts from being displaced from their bearings.

4. In a wire netting machine, the combination of a tubular cop-holder embracing a bearing extending down from a top twisting gear, means for supporting the cop-holder from a bearing in a bottom twisting gear, and a locking device holding said parts in place and consisting of a catch preventing the cop-holder from being raised except when said catch is unlocked.

5. In a wire netting machine, the combination of a tubular cop-holder having a piece therein dividing the cop-holder into two parts or chambers, the upper one containing a locking catch for preventing the cop-holder from being raised except by unlocking the catch, and the lower part being adapted to receive a bobbin or cop.

[Claims 6 to 9 not printed in the Gazette.]

875,405. DESICCATING APPARATUS. MILLS W. BARSE, Buffalo, N. Y., assignor, by mesne assignments, to Daniel Ridgeway Hendricks, Brooklyn, N. Y. Filed Feb. 12, 1906. Serial No. 300,616.



1. In a desiccating apparatus, an air-tight receptacle, a sprayer entering the bottom thereof, its end extending above the bottom of the receptacle, a pan for receiving the desiccated material supported on the bottom of the receptacle below said end, means for supplying the material to be desiccated to said sprayer, and a pump connected to the upper portion of the receptacle for exhausting air and vapor therefrom, substantially as set forth.

2. In a desiccating apparatus, an air-tight receptacle, a casing inclosing the same but separated therefrom, piping for carrying a heating medium located in the space between the receptacle and the casing, a removable bottom for the receptacle, a tube passing through the bottom and extending above the same, said tube having a plurality of fine openings in its upper end, a pan supported on the bottom of the receptacle, and a pump connected to the upper portion of the receptacle for exhausting air and vapor therefrom, substantially as set forth.

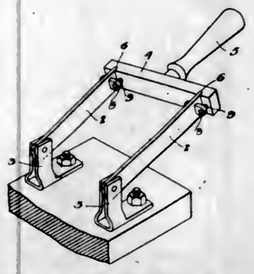
3. In a desiccating apparatus, an air-tight receptacle having a removable bottom, a rotatable tube extending through said bottom, means for carrying the material to be desiccated to said tube, a detachable coupling in said means, means for spraying the material to be desiccated into said receptacle through said tube, means carried by said tube within the receptacle for stirring the desiccated material collected upon the bottom of the receptacle, devices for rotating said tube, and a pump connected to the upper portion of the receptacle for exhausting air and vapor therefrom, substantially as set forth.

4. In a desiccating apparatus, an airtight receptacle, means for admitting thereto the material to be desiccated in the form of a spray, a receiver for the desiccated material at the bottom of the receptacle, means operated from outside the receptacle for stirring the material in said receiver, and a vacuum pump connected to the upper end of the receptacle, substantially as set forth.

5. In a desiccating apparatus, an airtight receptacle, a tube entering said receptacle, a nozzle at the inner end of said tube having small openings therethrough, a brush for cleaning said nozzle, means for rotating the brush from outside the receptacle, a pump connected to the upper end of said receptacle, and a receiver for the desiccated material, substantially as set forth.

[Claim 6 not printed in the Gazette.]

875,406. SWITCH. CHRISTIAN N. BERGMANN, Allegheny, Pa. Filed May 4, 1905. Serial No. 258,749.



1. In a joint for switch blades, the combination with a holding bar, of a blade provided with a transverse opening and abutting directly against the bar, and holding devices passing through the bar at each side of the blade and coacting with means engaging said opening to bind the blade against the bar, substantially as set forth.

2. Means for connecting a switch blade to a bar consisting of a transverse clip extending through the blade, and screws engaging the clip at each side of the blade and securing it thereto, substantially as set forth.

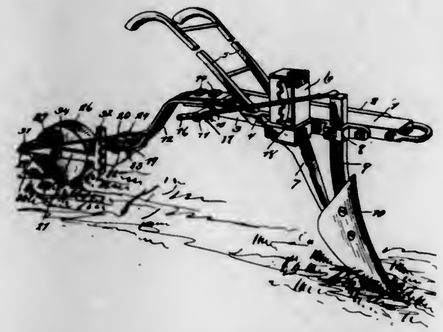
3. A connection for switch blades consisting of a transverse clip extending through and beyond the blade and provided with terminal openings, and means adapted to engage said openings and clamp said clip and the blade backwardly against a holding bar, substantially as set forth.

4. A connection for switch blades consisting of a transverse clip extending through and beyond the blade and provided with terminal openings, and means adapted to engage said openings and clamp said clip and the blade backwardly against a holding bar, said bar being recessed to receive the end of the blade, substantially as set forth.

5. In a joint for switch blades, the combination with an insulating bar provided with a recess, of a blade extending directly into said recess, a clip extending through and beyond the blade, and securing screws tapped into the terminals of the clip, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

875,407. PLOW ATTACHMENT. JOSEPHUS BINGAMAN, Garnett, Kans. Filed Aug. 27, 1907. Serial No. 390,284.



1. In combination with a plow beam, an angular spring bar having its central portion diagonally disposed with respect to the plow beam and having its upper end movably connected to the latter, means to enable adjustment of the position of the lower end of said bar, a frame pivotally connected to said bar, and a wheel carried by said frame.

2. In combination with a plow beam, a spring bar having a diagonal central portion and horizontally disposed ends, a pivot bar rigidly connected to the upper end of said spring bar, a rod rigidly connected to said pivot bar, a tooth rack carried by the plow beam to engage said rod and sustain the spring bar in adjusted position, a wheel carrying frame composed of longitudinal side members, a horizontal connecting part for said side members, a lip connected to said horizontal part and overlying the same, the lower end of said spring bar being received between said horizontal part and said lip and being pivoted to the same, and a wheel mounted between said side members.

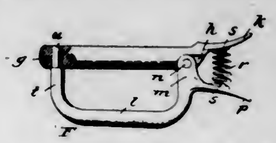
3. In combination with a plow beam, a spring bar diagonally disposed with relation to the beam thereof and pivotally connected to the latter, means to enable adjustment of the free end of said bar in an arc-like plane, a wheel carrying frame composed of spaced side members, a horizontal connecting member and a lip overlying said horizontal connecting member, the lower end of said spring bar being pivoted to said frame and being received in the space between said horizontal connecting member and said lip, and a wheel carried by said frame between the side members thereof.

4. In combination with a plow beam, a spring bar connected thereto, a wheel carrying frame pivoted to said bar, a wheel carried by said frame, a rack secured to the frame, a scraper journaled in the outer end of the frame, and a rod rigidly connected to said scraper and adapted to engage said rack.

5. In combination with a plow beam, a pivot bar rigidly connected to the upper end of said bar, a rod rigidly connected to said pivot bar, a rack carried by the plow beam to engage said rod, a wheel carrying frame pivoted to the lower end of said spring bar, and a wheel journaled in said frame.

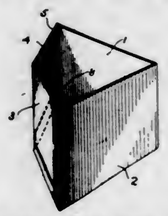
[Claim 6 not printed in the Gazette.]

875,408. PUMP-ROD CONNECTION. WILLIAM E. BOYD, Springview, Nebr. Filed June 3, 1907. Serial No. 377,077.



A device for the purpose described, comprising a pin terminating at one end in a finger-piece and having a diametrical aperture adjacent to its opposite end and also having a lug adjacent to the inner end of said finger-piece, a keeper having an angular arm at one end pivoted to the lug of the pin and an angular arm at its opposite end arranged to enter the diametrical aperture of the pin and also having a finger-piece extending outward from its first mentioned arm and arranged opposite the first mentioned finger-piece, and a coiled spring interposed between and connected with the said finger-pieces.

875,409. COLLAPSIBLE BOX. HENRY T. BROWN, Moorestown, N. J., assignor to Brown & Bailey Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 16, 1905. Serial No. 291,989.



1. A collapsible box having four unbroken sides, a creased bottom part secured to two sides and a bottom part secured to a third side only and supported by said first part, said parts being joined by flexible connections permitting them to fold together in parallel relation substantially within the compass of a single side.

2. A collapsible box formed from a single blank with four unbroken sides, but two essential laps fixed to form joints, an unbroken bottom fixed to a single side and an unfolding bottom section fixed to two sides to support said bottom, the parts of said box being joined in flexible relation permitting them to be folded together.

3. A collapsible box having a one piece folding bottom section fixed to two sides and an unbroken folding bottom fixed to an unbroken third side only, said bottom being supported by said bottom section when said box is expanded.

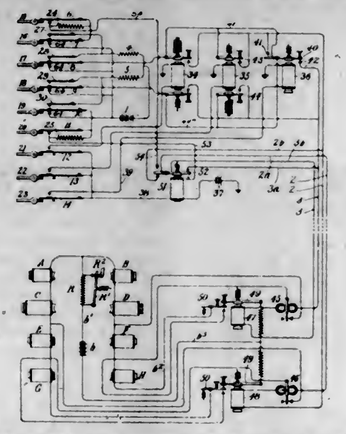
4. A collapsible four sided box having a broken folding bottom section fixed to two sides and an unbroken folding bottom fixed to a third side, said bottom having a part adapted for forming a lapping engagement with a fourth side of said box.

5. A collapsible box having four unbroken sides, a broken bottom section secured to two adjacent sides, and an unbroken bottom secured to a third side only and supported by said section.

875,410. PRINTING-TELEGRAPH RECEIVER. JOHN BURRY, Ridgefield Park, N. J. Filed Nov. 19, 1904. Serial No. 233,484. Renewed Sept. 16, 1907. Serial No. 392,976.

1. In a telegraph instrument for recording legible impressions corresponding to current impulses over a plurality of transmission circuits, the combination with a plurality of circuits, of mechanism for producing the impressions, and devices for controlling the impression mechanism, dependent for operation on variation in the polar-

ity, strength, and order of succession of the current impulses sent over the plurality of circuits, as set forth.



2. In a telegraph instrument for recording legible impressions corresponding to current impulses over a plurality of transmission circuits, the combination with a plurality of circuits, of a longitudinally movable type or die carrier, mechanism for producing impressions therefrom, and means for shifting the type or die carrier, dependent upon the order of succession of the current impulses over the plurality of transmission circuits, as set forth.

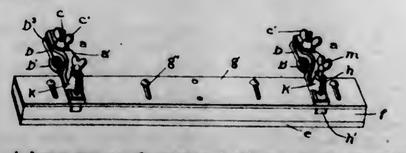
3. In a telegraph instrument for recording legible impressions corresponding to current impulses over a plurality of circuits, the combination with a plurality of circuits, of a rotatable and longitudinally movable type or die wheel, mechanism for producing impressions therefrom, means for controlling the rotation of the type wheel, dependent upon the direction and strength of the current impulses, and means for shifting the type wheel longitudinally, dependent upon the order of succession of the current impulses over the plurality of circuits, as set forth.

4. In a telegraph for recording legible impressions corresponding to current impulses over a plurality of transmission circuits, the combination with a plurality of circuits, of a rotatable and longitudinally movable type or die wheel, means for controlling the rotation of the type wheel, dependent upon the direction and strength of the current impulses, means for shifting the type wheel longitudinally, dependent upon the order of succession of the current impulses in the circuits and means for producing impressions from the type wheel, operated by the current impulses independently of their direction, strength or order of succession, as set forth.

5. The combination with a longitudinally adjustable type or die carrier, and means for adjusting the same, of a plurality of magnets arranged to act upon the said adjusting means, and means for energizing the magnets simultaneously or in different order, as set forth.

[Claims 6 to 23 not printed in the Gazette.]

875,411. LAWN-MOWER SHARPENER. JOHN CHESBRO, Oneonta, N. Y. Filed Apr. 18, 1907. Serial No. 368,930.



1. A lawn mower sharpener, having a sharpening stick, and frame bars having each a supporting connection with the mower frame and a direct, yieldable connection with the sharpening stick at each end portion thereof including outward projecting headed bolts, and coiled springs surrounding said bolts carried by the sharpening stick and having loose engagement with perforations of said frame bars and abutting at their ends against the heads thereof and said frame bars.

2. A lawn mower sharpener having a sharpening stick, frame bars having each a supporting connection with the mower frame and a direct yieldable connection with the sharpening stick at each end portion thereof, including outward projecting headed bolts and coiled springs surrounding said bolts carried by the sharpening stick and having loose engagement with perforations of said frame bars and abutting at their ends against the heads thereof and said frame bars, and tension adjusting means for said springs.

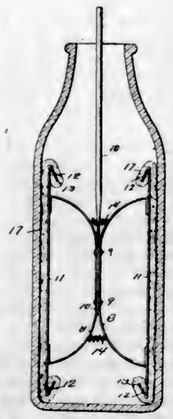
3. A lawn mower sharpener having a sharpening stick, a laterally adjustable back plate having a slot and bolt connection with said sharpening stick, and frame bars having each a supporting connection with the mower frame, and a direct yieldable spring-pressed connection with the sharpening stick at each end portion thereof.

4. A lawn mower sharpener having a sharpening stick provided with a back plate, and frame bars having each a supporting connection with the mower frame, and a direct, yieldable connection with the sharpening stick at each end portion thereof, including nuts between the sharpening stick and its back plate, outward projecting headed bolts engaging such nuts, and coiled springs surrounding such bolts and abutting at their ends against the heads thereof and said frame bars.

5. A lawn mower sharpener having a sharpening stick, a laterally adjustable back plate having a slot and bolt connection with the sharpening stick, and frame bars having each a supporting connection with the mower frame, and a direct yieldable connection with the sharpening stick at each end portion thereof, including nuts between such stick and its back plate, outward projecting headed bolts engaging such nuts, and coiled springs surrounding said bolts and abutting at their ends against the heads thereof and said frame bars.

[Claims 6 to 8 not printed in the Gazette.]

875,412. CLEANING IMPLEMENT. PHOEBE R. COTTRELL, Tigerton, Wis. Filed Mar. 4, 1907. Serial No. 360,425.



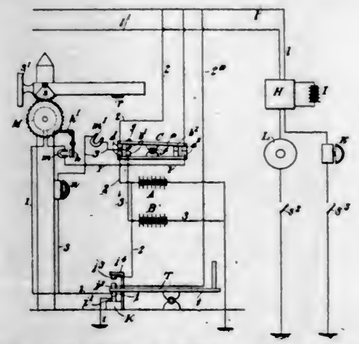
1. In an implement of the class described, a cloth holding body comprising a pair of oppositely disposed members connected centrally together, means disposed between the corresponding ends of said members for normally holding the same apart from each other, means provided upon opposite ends of said members for engaging a cloth, and a handle secured to said cloth-holding body.

2. In an implement of the class described, a cloth holding body comprising a pair of oppositely disposed members connected centrally together, springs disposed between the corresponding ends of said members for normally holding the same apart from each other, means provided upon opposite ends of said members for engaging a cloth, and a handle secured to said cloth-holding body.

3. In an implement of the class described, a cloth-holding member comprising a pair of oppositely bowed straps connected centrally together, a strap carried by each of said first-mentioned straps and provided at opposite ends with inwardly directed cloth-engaging portions, and a handle secured to said bowed members.

4. In an implement of the class described, a cloth-holding member comprising a pair of oppositely bowed straps connected centrally together, a strap carried by each of said first-mentioned straps and provided at opposite ends with inwardly directed cloth-engaging portions, resilient means disposed between the corresponding ends of said bowed members for holding the same yieldingly apart from each other, and a handle secured to said bowed members.

875,413. ELECTRIC SIGNALING. DORABJI M. DABOO, Bombay, India. Filed July 17, 1905. Serial No. 281,090.



1. In an apparatus for the electric working of signals and points on railways, an electric motor, a commutator which by the completing of the operation effected by the motor is actuated to break the motor circuit and establish a local battery circuit, an indicator in the local battery circuit located at the station, in combination with means for automatically locking the parts moved by the motor, and a train-operated switch which on the arrival of a train automatically breaks the station indicator circuit, and releases the locking means, the commutator and parts moved by the motor then returning to their original positions automatically as described.

2. In an apparatus for the electric working of signals and points on railways, an electric motor, a commutator which by the completing of the operation effected by the motor is actuated to break the motor circuit and establish a local battery circuit, an indicator in the local battery circuit located at the station, in combination with means for automatically locking the parts moved by the motor, and a train-operated switch which on the arrival of a train automatically breaks the station indicator circuit, and releases the locking means, a second local battery circuit controlled by the commutator and in which is arranged the means for automatically locking the motor-moved parts substantially as described.

3. In an apparatus for the electric working of signals and points on railways, an electric motor, a commutator which by the completing of the operation effected by the motor is actuated to break the motor circuit and establish a local battery circuit, an indicator in the local battery circuit located at the station, in combination with means for automatically locking the parts moved by the motor, and a train-operated switch which on the arrival of a train automatically breaks the station indicator circuit, and releases the locking means, whereby on the arrival of a train at the train-operated switch, a local battery circuit is also completed, which rings a bell at the station substantially as described.

4. The herein described apparatus for electrically operating the controlling devices on railways, comprising a motor and mechanical connections for operating the controlling mechanism, a main electrical circuit including said motor; two local battery circuits, a station indicator included in one local circuit, locking devices included in the other circuit; and means for making and breaking the main circuit and thereby opening or closing the local battery circuits.

5. In an electrically controlled signaling apparatus for railways, the combination of a signal, a motor for operating the same, a main electrical circuit including the motor, means at the station for closing said circuit, train controlled devices for automatically breaking this circuit, two local battery circuits, an indicator in one of the local battery circuits, and signal locking devices in the other local battery circuit, the local circuits being closed when the main circuit is broken, and being opened upon the arrival of the train at the train controlled devices; and means for restoring the circuits and their connections and adjuncts to normal condition when the train passes the said devices, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

875,414. RIFLE DREDGE-PIPE. GEORGE DICKSON and MILES MCKINNON, Sacramento, Cal. Filed Aug. 23, 1906. Serial No. 331,794.



A conducting pipe provided with a radial spiral vane or rib.

875,415. PROCESS OF GENERATING FORMALDEHYDE. ARTHUR EICHENGRÜM, Düsseldorf, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Mar. 6, 1907. Serial No. 360,906.

1. The process of generating gaseous formaldehyde, which consists in treating an aqueous formaldehyde solution with salts of those peracids which are derived from metallic peroxids, having an alkaline reaction, substantially as described.

2. The process of generating gaseous formaldehyde which consists in treating an aqueous formaldehyde solution with a mixture of salts of those peracids, which are derived from metallic peroxids, having an alkaline reaction, and fixed alkaline compounds, substantially as described.

3. The process of generating gaseous formaldehyde, which consists in treating an aqueous formaldehyde solution with sodium perborate, substantially as described.

4. The process of generating gasous formaldehyde, which consists in treating an aqueous formaldehyde solution with a mixture of sodium perborate and a fixed alkaline compound, substantially as described.

875,416. FINISH-REMOVER. CARLETON ELLIS, Larchmont, N. Y., assignor to Chadeloid Chemical Company, New York, N. Y., a Corporation of West Virginia. Filed Sept. 18, 1907. Serial No. 393,534.

1. A finish remover comprising an emulsion of cellulose and volatile organic solvents.

2. A finish remover comprising a solution of cellulose and organic finish solvents, said composition having an emulsified character and being fluent and flowable.

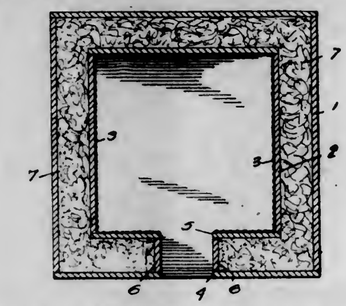
3. A finish remover comprising an aqueous solution of cellulose and organic finish solvents.

4. A finish remover comprising an aqueous solution of cellulose and an alcoholic body.

5. A finish remover comprising an emulsion of a viscid aqueous solution of cellulose and finish solvents.

[Claims 6 to 9 not printed in the Gazette.]

875,417. BROODER. LUCY C. ELLIS, Herrell, N. C. Filed May 6, 1907. Serial No. 372,199.



A brooder of the type set forth, comprising inner and outer walls spaced to afford a dead air chamber, said walls being formed with registering door openings, transverse walls secured to the edges of said walls adjacent said door openings, a filling of heat insulating material interposed in said dead air chamber, a lining of woolen cloth secured to the inner surface of said inner wall, spaced parallel slats supported upon the upper edges of said inner wall, and a covering of textile material imposed upon said slats.

875,418. GARTER-CLASP. WILLIAM C. FINNEY, Washington, D. C. Filed Dec. 14, 1904. Serial No. 236,905.

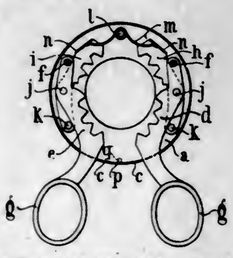


1. A clasp comprising two reailientiy connected members, the inner member being transversely upset and slotted longitudinally, the slot bisecting the upset portion, a tongue punched from the outer member, and extending inwardly, said tongue passing through the slot of the inner member, and a lever passing loosely through the outer member and having a head resting loosely between the tongue and the upset portion of the inner member, said head lying upon the inner face of the inner member, as and for the purpose set forth.

2. A clasp comprising a piece of spring metal bent upon itself providing two clamping members, the inner member being transversely upset and having a central longitudinal opening, the outer member being longitudinally slotted and having an inwardly depressed tongue a lever held between said tongue and the transverse upset portion of the inner member, and a bracing finger carried by the inner member and extending across the transverse upset portion.

3. A clasp comprising a piece of spring metal bent upon itself providing two clamping members, the inner member being upset transversely and having a longitudinal bracing portion punched therefrom and extending across the upset portion, the other member being slotted longitudinally and having a longitudinal depressed portion, and a lever having a transverse head, said head being held between the depressed portion of the outer member and the upset portion of the inner member, for the purpose described.

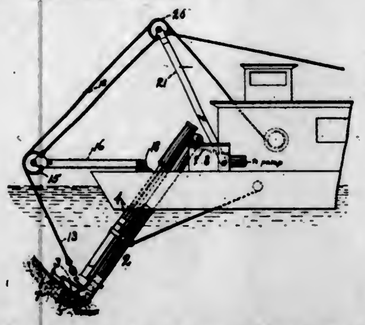
875,419. EGG-OPENER. FERDINAND FLEISCHMANN, Mölding, near Vienna, Austria-Hungary. Filed May 16, 1907. Serial No. 373,941.



1. A device of the class described, comprising a base portion having a central opening, two sets of toothed arc-shaped knives pivotally connected to the base on opposite sides of the opening, pivotal connections between the knives of each set whereby they may be moved simultaneously to be either extended beyond or retracted within the edge of the central opening, a spring member operatively connected with one knife of each set for moving said knives to and normally maintaining them in said retracted position, and hand-operable means for moving the knives to said extended position against the action of said spring.

2. A device of the class described, comprising a base portion having a central opening, two sets of toothed curved knives pivotally connected to the base on opposite sides of the opening, pivotal connections between the knives of each set whereby they may be moved simultaneously to be either extended beyond or retracted within the edge of the central opening, a spring member operatively connected with the end knife of each set at one end for moving said knives to and normally maintaining them in said retracted position, and two handles each connected to the knife at the opposite end of each set and extending beyond the base portion in position to be grasped by the hand to move the knives to said extended position against the action of said spring.

875,420. EXCAVATOR. CHARLES A. FRAYER, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Sept. 11, 1905. Serial No. 277,876.



1. In an excavator, a dipper comprising a bucket having a cutting edge and a handle, and simultaneous operating means for the dipper including a plurality of ropes spaced apart having spaced attachment to the dipper near its cutting edge.

2. In an excavator, a dipper comprising a bucket having a cutting edge and a handle, operating means for the dipper for the working stroke including a plurality of ropes spaced apart transversely of the operating plane and having attachment to the dipper spaced apart transversely of the operating plane and near the cutting edge of the dipper.

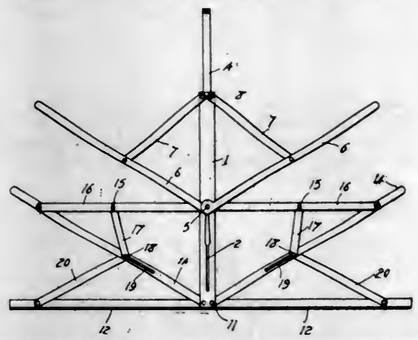
3. In an excavator, a dipper comprising a bucket having an entering edge and a handle, and elevating means for the dipper including a plurality of ropes spaced apart and having spaced attachment to the dipper near the entering edge of the bucket.

4. In an excavator, a dipper comprising a bucket having an entering edge and a handle and elevating means for the dipper including a plurality of ropes spaced apart and having horizontally spaced attachment to the dipper and directed towards the entering edge of the dipper.

5. In an excavator, a dipper comprising a bucket having an entering edge and a handle and means for elevating the dipper in a vertical plane including a plurality of ropes spaced apart transversely of the elevating plane and having attachment to the dipper transversely spaced as to the elevating plane and directed towards the entering edge of the dipper.

[Claims 6 and 7 not printed in the Gazette.]

875,421. SHEET-HOLDER FOR MUSIC-STANDS AND THE LIKE. CLINTON H. FRENCH, San Francisco, Cal. Filed Apr. 25, 1907. Serial No. 370,196.



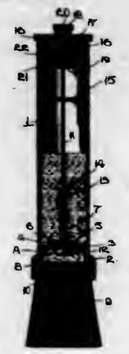
1. A sheet holder comprising base plates, a central stem, a pin movably engaging said stem, upper arms pivoted upon said pin, links pivoted to said arms and to the upper end of said stem, lower arms pivoted at the lower end of the stem, and links connected to said arms and to said pin, substantially as described.

2. A sheet holder comprising a central stem, a pin movably engaging said stem, upper arms pivoted upon said pin, links pivoted to said arms and to the upper end of said stem, lower arms pivoted at the lower end of the stem, links connected to said arms and to said pin, base plates pivoted upon the lower end of the stem, and means actuated by the spreading of a pair of said arms for simultaneously spreading said plates, substantially as described.

3. A sheet holder comprising a central stem, a rod slidable thereon, a pin attached at the lower end of the rod and guided by the stem, upper arms pivoted upon said pin, links pivoted to said arms and to the upper end of said stem, lower arms pivoted at the lower end of the stem, links connected to said arms and to said pin, and base plates pivoted upon the lower end of the stem substantially as described.

4. A sheet holder comprising a central stem, a pin movably engaging said stem, an upper pair of arms pivoted upon said pin, a pair of links pivoted to said arms and to the upper end of the stem, a lower pair of slotted arms pivoted to the lower end of the stem, a pair of links connecting the slotted arms with said pin, base plates pivoted at the lower end of stem, and toggle arms connected to the base plates and to the last mentioned links, the pivots of said toggle arms moving in the slots of said slotted arms, substantially as described.

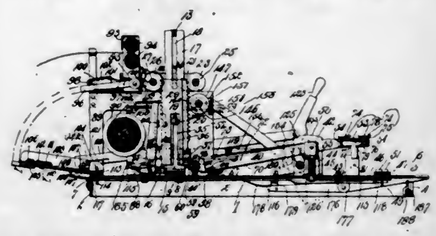
875,422. FOUNTAIN MARKING AND STENCIL BRUSH. EDWARD A. GARVEY and CHRISTOPHER A. GARVEY, St. Louis, Mo. Filed June 29, 1907. Serial No. 381,441.



1. In a fountain brush, the combination of a fountain shell, a stopper in the outer end of said fountain shell, a valve for controlling the flow of fluid from said fountain shell having a spring controlled rod, a valve controlling screw fitted in the stopper and provided with an air duct extending longitudinally of the valve controlling screw and then transversely of the valve controlling screw to the surface thereof and an annular rib having a washer and carried by said valve controlling screw, substantially as set forth.

2. A fountain brush comprising a shell providing a main chamber, a socket piece having a neck, a diaphragm having an orifice, and a bridge having a tubular guide stem, and secured at one end of the shell, a valve controlling the orifice, and having a valve rod extending through the tubular guide stem and provided with a collar, a retracting spring mounted on the valve rod between the guide stem and the collar, and a stopper secured to the other end of the shell, and a valve controlling screw having an air duct.

875,423. ADDING-MACHINE. WILLIAM F. GATEWOOD, Pierce City, Mo., assignor of one-third to Ethelbert P. Lampkin, St. Louis, Mo., and William W. Locke, Pierce City, Mo. Filed June 18, 1906. Serial No. 322,138.



1. In an adding machine, the combination of a series of accumulator wheels, a carriage movable relative to said accumulator wheels, gravitative means and item wheels carried by said carriage, and means for elevating said gravitative means; the item wheels being actuated by the upward movement of said gravitative means, and the accumulator wheels, and item wheels, being actuated by the dropping of the gravitative means when the carriage is advanced.

2. In an adding machine, the combination of a series of accumulator wheels, a carriage movable relative to said accumulator wheels, gravitative rack-bars and item wheels carried by said carriage; and means for elevating said gravitative rack-bars, the item wheels being actuated by the upward movement of said gravitative rack-bars, and

the accumulator wheels, and item wheels being actuated by the dropping of the gravitative rack-bars when the carriage is advanced.

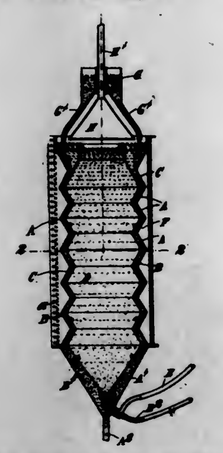
3. In an adding machine, the combination of a series of accumulator wheels, a carriage movable relative to said wheels, gravitative rack bars carried by said carriage, means for elevating said rack bars, means for sustaining the rack bars in elevated positions, and means for moving said carriage toward said wheels to bring said rack bars into engagement with said wheels before the rack bars descend and cause the rack bars to operate the wheels while the rack bars are descending by gravity, substantially as set forth.

4. In an adding machine, the combination of a series of accumulator wheels, means for guarding said wheels against movement, a carriage movable relative to said wheels, gravitative rack bars carried by said carriage, means for elevating said rack bars, means for sustaining the rack bars in elevated positions, and means for moving said carriage toward said wheels to bring said rack bars into engagement with said wheels previous to their descent by gravity, substantially as set forth.

5. In an adding machine, the combination of a series of accumulator wheels, a series of item wheels, a carriage by which said item wheels are supported, rack bars carried by said carriage and arranged to engage said item wheels, means for elevating said rack bars, means for sustaining the rack bars in elevated positions, and means for moving said carriage toward said accumulator wheels to bring said rack bars into engagement with said accumulator wheels, substantially as set forth.

[Claims 6 to 35 not printed in the Gazette.]

875,424. PROCESS FOR THE TREATMENT OF ZINCIFEROUS ORES AND METALLURGICAL PRODUCTS. JAMES H. GILLIES, Auburn, Victoria, Australia. Filed Aug. 20, 1906. Serial No. 331,375.



1. An improved process for the treatment of zinciferous ores and metallurgical products consisting essentially of first roasting the ore, second feeding such roasted ore through a current of dilute sulfuric acid moving continuously in an opposite direction, and finally, continuously separating the solution of zinc sulfate from the slimes and undissolved particles by settlement, substantially as described.

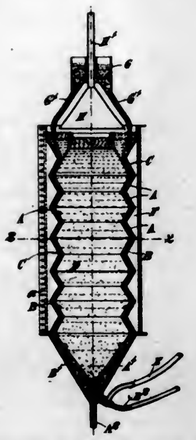
2. In a process for the treatment of zinciferous ores and metallurgical products, feeding the roasted ore downwardly through an upwardly moving current of dilute sulfuric acid, and drawing off the solution of zinc sulfate at the top, and the gangue and undissolved mineral particles at the bottom, substantially as described.

3. An improved process for the treatment of zinciferous ores and metallurgical products, consisting of first roasting the ore to form a maximum amount of sulfate of zinc, and a minimum amount of sulfates of iron and copper, then feeding such roasted ore downwardly into a vessel in which there is an upwardly moving current of dilute sulfuric acid, withdrawing the gangue and undissolved mineral particles from the said vessel at the bottom, and withdrawing the solution of zinc sulfate and other soluble salts together with the slimes and certain mineral particles at the top, and finally subjecting the said solutions and the slimes and certain mineral particles to alternate settling and washing of the solids, substantially as described.

4. In a process for the treatment of zinciferous ores and metallurgical products in which the roasted ore is treated with dilute sulfuric acid, separating the solutions of zinc sulfate and soluble salts from the slimes and undissolved particles by subjecting them to alternate settlement and washing of the solids, the clear solutions obtained in the lower settling operations being used for the higher washing operations to produce a concentrated solution of sulfate of zinc, substantially as described.

5. In a process for the treatment of zinciferous ores and metallurgical products in which the roasted ore is fed through an upwardly moving current of dilute sulfuric acid, passing the solutions and slimes and certain mineral particles carried therewith through series or groups of settling boxes or separators and returning the clear solutions obtained from the lower series or groups of settling boxes or separators to the upper series or groups for washing the solids in their passage between the series or groups of boxes or separators, substantially as described.

875,425. APPARATUS FOR LEACHING ORES AND THE SUBSEQUENT SEPARATION OF THE LIQUIDS FROM THE SOLIDS. JAMES H. GILLIES, Auburn, Victoria, Australia. Filed Aug. 20, 1906. Serial No. 331,376.



1. In an apparatus for the leaching of ores or metallurgical products and the separation of the liquids from the solids, a double walled vessel forming an annular space surrounding an internal space and having separate means of discharge from the bottom of the said annular space surrounding an internal space and having separate means for the inflow of solution into the bottom of the said annular space, substantially as described.

2. In an apparatus for the leaching of ores or metallurgical products and the separation of the liquids from the solids, a double walled vessel forming an annular space surrounding an internal space having means for feeding the ore or metallurgical products into the top of the said annular space and from the bottom of the said internal space, and an inlet for solution in the bottom of the said annular space.

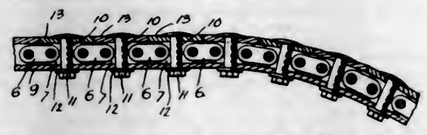
3. In an apparatus for the leaching of ores or metallurgical products and the separation of the liquids from the solids, the combination with a double walled vessel forming an annular space surrounding an internal space, the said walls being stepped or zigzag in vertical section and shaped as inverted cones at the bottom, of a discharge pipe from the bottom of the said annular space and a discharge pipe from the bottom of the said internal space, and an inlet pipe for solution leading into the bottom of the annular space, substantially as described.

4. In an apparatus for the leaching of ores or metallurgical products and the separation of the liquids from the solids, the combination with a double walled vessel forming an annular space surrounding an internal space, the said walls being of corrosive-fluid-resisting material, the outer wall being constructed in sections having flanges, of a casing surrounding the said outer wall having flanges between which the flanges of the said outer wall are bolted, substantially as described.

5. In an apparatus for the leaching of ores or metallurgical products, and the separation of the liquids from the solids, the combination with a double walled vessel forming an annular space surrounding an internal space, having means for the discharge from the bottom of the said annular space, and from the bottom of the said internal space, and an inlet pipe into the bottom of the annular space, of a steam jacket surrounding the outer wall of the said vessel, substantially as described.

[Claim 6 not printed in the Gazette.]

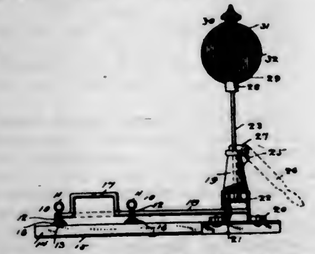
875,426. DRIVE-BELT. ALPHONS H. GITS, Chicago, Ill. Filed Sept. 19, 1907. Serial No. 393,667.



1. A drive belt of the class described comprising a metallic chain body consisting of blocks and links, a friction strip disposed against the under and side faces of the chain, rectangular pieces of hard leather disposed against the upper surface of the chain, and bolts passed through each of the last mentioned pieces and the strip and between each pair of links of the chain.

2. A drive belt of the class described comprising a metallic chain body consisting of blocks and links, the said links having their outer faces beveled, a friction strip disposed against the under and side faces of the chain, rectangular pieces of hard leather disposed against the upper surface of the chain, and bolts passed through each of the last mentioned pieces and the strip and between each pair of links of the chain.

875,427. TOY SIGNAL AND TRAIN-STOPPING DEVICE. WILLIAM R. HABERLIN, Bridgeport, Conn., assignor to The American Miniature Railway Company, Bridgeport, Conn., a Corporation of Connecticut. Filed June 1, 1907. Serial No. 376,767.



1. A device of the character described comprising a shaft provided with an integral bumper, an oscillatory shaft carrying a double signal comprising red and green plates, for the purpose set forth, and operating connections between said shafts

2. A device of the character described comprising a pair of rails, a shaft mounted to oscillate therein and provided with an integral U-shaped bend to form a bumper, an oscillatory signal shaft and connections whereby the bumper is operated by oscillation of the signal shaft.

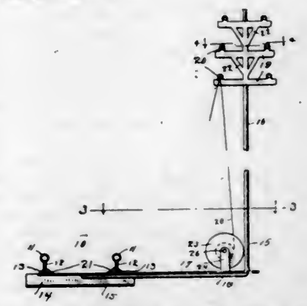
3. A device of the character described comprising a pair of rails, a shaft mounted to oscillate therein and provided with an integral U-shaped bend to form a bumper and a bevel pinion, a standard in which the end of the shaft is journaled and a signal shaft mounted to oscillate in the standard and provided with a bevel gear wheel meshing with the pinion on the bumper shaft.

4. A device of the character described comprising a pair of rails, a shaft mounted to oscillate therein and provided with an integral bumper, a shaft carrying a signal comprising plates set at right angles to each other, said plates being of different colors, for the purpose set forth, and operating connections between the signal shaft and the bumper shaft.

5. A device of the character described comprising an integral shaft provided with a bumper, a signal shaft, a standard in which the signal shaft is mounted to oscillate, operating connections between said shafts and an operating lever pivoted to the signal shaft.

[Claims 6 to 9 not printed in the Gazette.]

875,428. TOY TELEGRAPH-POLE, BASE, AND REEL. WILLIAM R. HABERLIN, Bridgeport, Conn., assignor to The American Miniature Railway Company, Bridgeport, Conn., a Corporation of Connecticut. Filed June 1, 1907. Serial No. 376,768.



1. A toy pole of the character described, comprising a base and a pole passing through one end of the base and extending longitudinally on the under side thereof and secured thereto and oppositely facing attaching lugs on the other end of the base which are adapted to engage the inner sides of the flanges of a pair of rails.

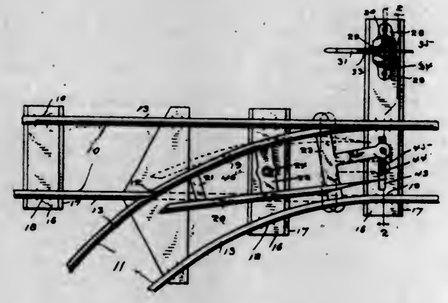
2. A toy pole of the character described, comprising a pole formed from wire and having cross pieces and eyes formed from sheet metal attached thereto, the lower end of said pole being bent at a right angle, a sheet metal base through which the pole is passed and to the under side of which the angle piece is secured and oppositely facing attaching lugs struck out from the metal of the base and left attached at the inner ends, said lugs being adapted to engage the flanges of rails to secure the pole and base in position.

3. A toy pole of the character described, comprising a base having at one end oppositely facing attaching lugs, for the purpose set forth, a pole and a yoke secured to the opposite end of the base and a reel journaled in the yoke.

4. A toy pole of the character described, comprising a pole formed from wire and having cross pieces and eyes formed from sheet metal attached thereto, a sheet metal base to which the pole is secured, a yoke attached to the base and a reel journaled in the yoke to carry cord for stringing through the eyes on the poles.

5. A toy pole of the character described, comprising a pole formed from wire, sheet metal cross pieces, braces and eyes formed integral from sheet metal and having lugs struck out therefrom to clamp the pole, a sheet metal base to which the pole is secured, a yoke attached to the base and a reel journaled in the yoke, substantially as described, for the purpose specified.

875,429. TOY-RAILWAY SIGNAL AND SWITCH. WILLIAM R. HABERLIN, Bridgeport, Conn., assignor to The American Miniature Railway Company, Bridgeport, Conn., a Corporation of Connecticut. Filed June 1, 1907. Serial No. 376,769.



1. In a toy railway system, the combination with main line rails and branch rails, of a pivoted switch piece comprising rails and cross pieces, one of said cross pieces being provided with an arm, a signal shaft carrying a double signal at its upper end corresponding with the position of said switch piece, a switch rod connected to the lower end of said shaft, and a yielding connection between said switch rod and said switch piece.

2. In a toy railway system, the combination with main line rails and branch rails, of a pivoted switch piece comprising rails and cross pieces, one of said cross pieces being provided with a laterally extending arm having a depending eye pivoted thereto, a signal shaft carrying a double signal at its upper end corresponding with the position of said switch piece, a switch rod connected to the lower end of said shaft, and a yielding connection between said switch rod and said depending eye.

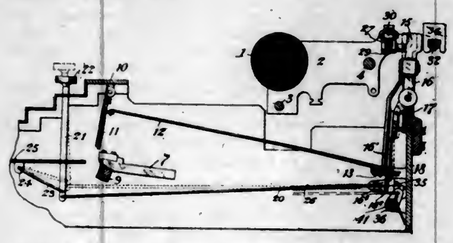
3. In a toy railway, the combination with main line rails and branch rails, of a pivoted switch piece comprising rails and cross pieces, one of said cross pieces being provided with a laterally extending arm having a depending eye pivoted thereto, a tie provided with a longitudinal slot through which said eye extends, a signal shaft mounted on said tie, a switch rod connected to said signal shaft, and a yielding connection between said switch rod and said depending eye.

4. In a toy railway system the combination with main line rails and branch rails, of a switch piece comprising rails and end cross pieces and a pivoted center piece, one of said end pieces being provided with a laterally extending arm, a signal shaft, a switch rod connected therewith, and a yielding connection between said switch rod and said laterally extending arm.

5. In a toy railway system, the combination with main line rails and branch rails, of a pivoted switch piece comprising switch rails and cross-pieces, one of said cross-pieces having an arm 25, an eye pivoted in said arm, a signal shaft having a crank arm, a switch rod pivoted to the crank arm, passing through the eye and provided with collars on opposite sides of the eye and springs intermediate the eye and the collars to form a yielding connection between the switch rod and the switch piece.

[Claim 6 not printed in the Gazette.]

875,430. WRITING-MACHINE. EDWARD B. HESS, New York, N. Y., assignor to Royal Typewriter Company, Hoboken, N. J., a Corporation of New Jersey. Filed Jan. 30, 1905. Serial No. 243,440. Renewed Oct. 17, 1907. Serial No. 397,917.

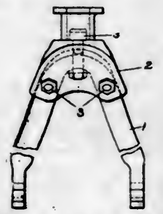


1. In a writing machine, a platen and type bars pivoted below the platen and normally extending toward the front of the machine in combination with a type-bar locking-frame segmental in form and pivoted in a plane above the type bar heads, normally swung forward at its ends out of the paths of the type bars but adjacent the type bar heads and adapted to be swung rearwardly into the paths of the type bar heads.

2. In a writing machine, a platen and type bars pivoted below the platen and normally extending toward the front of the machine, in combination with a type bar locking-frame pivoted in line vertically above the assemblage of type bar heads, normally swung forward into a plane adjacent to and in front of them and adapted to be swung rearwardly over them and into their paths.

3. In a writing machine a platen and type-bars pivoted in a segment below the platen and normally lying toward the front of the machine, in combination with a swinging type-bar locking segment curved to conform, substantially, to the curve in which the heads of the type-bars lie, pivoted at its ends above the type-bar heads and having its curved face adjacent the type-bar heads, said locking segment being normally swung forward out of the paths of and adjacent to the type-bars, and means for swinging it forward to lock the type-bar.

875,431. STEAM-SHOVEL A-FRAME AND CONNECTION. OLAF HETLESAETER, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Sept. 15, 1905. Serial No. 278,563.



1. A one-piece A-frame having a reduced portion at the bend.

2. A one-piece A-frame having a reduced portion at the bend, and a saddle having a continuous recess for the A-frame.

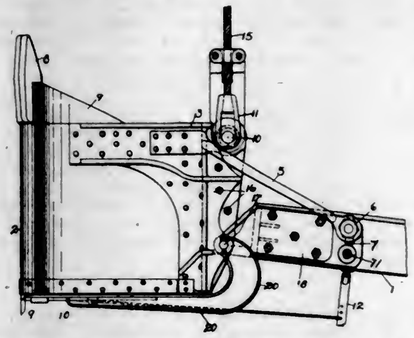
3. The combination of a support, an A-frame on the support, a saddle formed with a single recess for reception of the A-frame apex, and guys connecting to the saddle for staying the A-frame.

4. The combination of a support, a one-piece A-frame on the support, a saddle formed with a continuous recess into which the apex of the A-frame is housed, and guys connecting to the saddle for staying the A-frame.

5. The combination of a support, a one-piece A-frame on the support and having a reduced portion at the apex, a saddle on the A-frame at the reduced portion, a boom on the support, and guys for staying the boom and A-frame.

[Claims 6 and 7 not printed in the Gazette.]

875,432. SHOVEL-BUCKET. OLAF HETLESAETER, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Sept. 15, 1905. Serial No. 278,564.



1. The combination of a digging member having a pair of back reinforcing elements and a connecting bar.

2. The combination of a receptacle having a pair of back and side reinforcing elements and an interposed connecting bar.

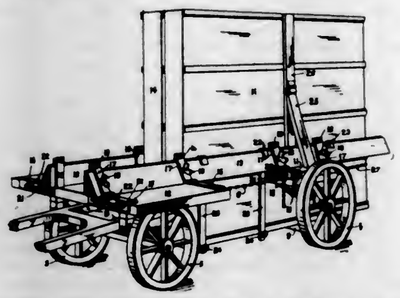
3. The combination of a digging member having a pair of reinforcing elements and a connecting bar interposed therebetween, said bar extending the full length of said member.

4. The combination of a digging member having a hinged side, a support for said member, and a pivot pin for the hinged side mounted in the support.

5. The combination of a digging member having a hinged side, a support for said member, and a pivot pin through the support, hinged side and member.

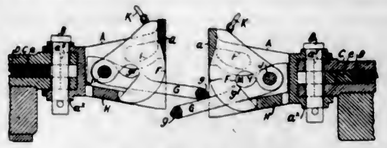
[Claims 6 to 12 not printed in the Gazette.]

875,433. WAGON. WILLIAM HUBBARD, Dulwich Hill, near Sydney, New South Wales, Australia. Filed Oct. 8, 1906. Serial No. 337,954.



An improved wagon to facilitate the handling of large cases consisting of a pair of lorry bodies and draft wheels connected together by a pair of longitudinal beams, said beams being adapted to move laterally to receive between them, cases of different dimensions and to be held in such desired position; a series of straps or brackets suspended from the said beams, each pair of which is connected at the bottom by a cross bolt, said bolts forming the rests for the case or cases to be carried substantially as described and illustrated in the drawings.

875,434. CENTRAL BUFFER AND COUPLING. GEORGE JOHNSTON, Liverpool, England. Filed Jan. 7, 1905. Serial No. 240,056.



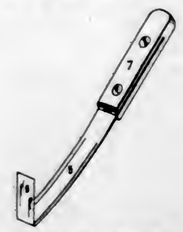
1. In an automatic buffer and coupling comprising a buffer head formed with the lower portion of its mouth cut away, a shackle pivotally mounted in said buffer head, and a hook mounted on said shackle pivot, said hook projecting beyond the buffer head in a sloping plane.

2. An automatic buffer and coupling, comprising a buffer-head, a pin mounted therein, a draw hook mounted in the center line of said buffer upon said pin and a coupling shackle mounted upon said pin, said shackle being chamfered at its projecting end and so arranged as to be held normally in a sloping position for the purposes set forth.

3. In an automatic buffer and coupling, the combination of a draw bar, a pin vertically mounted therein, a buffer-head pivoted on said pin, a yoke mounted in said draw bar at the rear of said buffer head and spring means for holding said yoke firmly against said buffer-head for the purposes set forth.

4. In an automatic buffer and coupling, a buffer head formed with an abutment on its upper interior surface, a shackle pivotally mounted within said buffer head and an abutment formed on the upper surface of said shackle and adapted to engage the abutment on the interior of said buffer head.

875,435. CULINARY SCRAPER. WILLIAM A. JOHNSTON, Sandy Bay, Hobart, Tasmania, Australia. Filed Jan. 24, 1907. Serial No. 353,801.

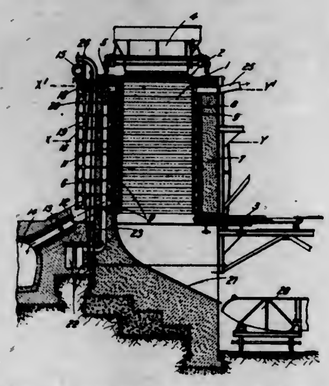


An implement for cleaning the insides of culinary utensils consisting of a curved flexible double edged blade part, a double edged end part arranged at an angle to the blade part, to enter the angle formed between the bottom and side of the culinary utensil, with the side faces of the blade and end part in angularly disposed planes and a handle for the blade part.

875,436. COKE-OVEN. ARTHUR O. JONES, New Brancepeth, England. Filed May 15, 1907. Serial No. 373,721.

1. In vertical coke ovens of that type in which the material treated is charged through the top and removed, when coked, through the base, the combination of a series of such ovens, each oblong in plan and of great length in proportion to its width, having a full open top, having a series of heating flues in the walls thereof, extending in horizontal planes around each oven, and having a vertical outlet passage in said walls for each oven with which outlet passage all said horizontal heating flues of said oven communicate, means for supplying heating gas and air separately to said heating flues and means for controlling said supply to each flue, a removable cover for closing the full open top of each oven, a removable sole for closing the base thereof, and rails mounted on the

side walls of said series of ovens beyond the fire-clay lining thereof to support a wagon having a hopper opening corresponding to the length of the open top of said ovens, substantially as set forth.

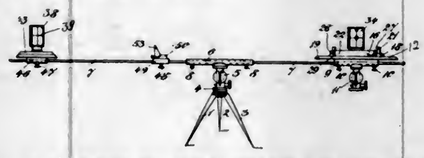


2. In vertical coke ovens of that type in which the material treated is charged through the top and removed, when coked, through the base, the combination of a series of such ovens, each oblong in plan and of great length in proportion to its width, having a full open top, having vertical outlet passages in the front wall of the series, one for each oven, and having a series of heating flues in said walls extending in horizontal planes around each oven, each of said flues being separate from the next flue above or below it, all the horizontal flues around one oven communicating with said vertical outlet passage for that oven in the front wall of the series, each of said horizontal heating flues extending from said vertical outlet passage around said oven and opening to the exterior of the front wall of the series of ovens, a gas and air admittance pipe entering the opening of each horizontal flue in the front wall and means for controlling each of said pipes, a removable cover for closing the full open top of each oven, a removable sole for closing the base thereof, and rails mounted on the front and rear walls of said series of ovens beyond the fireclay lining thereof to support a wagon having a hopper opening corresponding to the length of the open tops of said ovens, substantially as set forth.

3. In vertical coke ovens of that type in which the material treated is charged through the top and removed when coked, through the base, the combination with a series of such ovens, each oblong in plan and of great length in proportion to its width, having a full open top, having a series of separate heating flues in the walls thereof extending in horizontal planes around each oven, having a vertical outlet passage in said walls for each oven with which outlet passage all said horizontal flues of said oven communicate, said walls having vertical air admittance passages, communicating with circuitous air passages extending horizontally at the top of and continuously around several ovens, and having a delivery passage for said air, a heated air supply main and a pipe to conduct the heated air from said delivery passage to said main; of a removable cover for closing the full open top of each oven, a removable sole for closing the base thereof, rails mounted on the side walls of said series of ovens beyond the fireclay lining thereof to support a wagon having a hopper opening corresponding to the length of the open top of said ovens, means for supplying heating gas and air separately to said heating flues, and means for controlling said supply to each flue, substantially as set forth.

4. In vertical coke ovens of that type in which the material treated is charged through the top and removed when coked, through the base, the combination with a series of such ovens, each oblong in plan and of great length in proportion to its width, having a full open top, having vertical outlet passages in the front wall of the series one for each oven, and having a series of heating flues in said walls extending in horizontal planes around each oven, each of said flues being separated from the next flue above or below it, all the horizontal flues around one oven communicating with said vertical outlet passage for that oven in the front wall of the series, each of said horizontal heating flues extending from said vertical outlet passage around said oven and opening to the exterior of the front wall of the series of ovens, and a gas and air admittance pipe entering the opening of each horizontal flue in the front wall, and means for controlling each of said pipes, of a removable cover for closing the full open top of each oven, a removable sole for closing the base thereof, rails mounted on the front and rear walls of said series of ovens beyond the fireclay lining thereof to support a feed wagon, said walls of the series of ovens having vertical air admittance passages communicating with circuitous air passages extending horizontally at the top of and continuously around several ovens for cooling the tops of said ovens and for heating the air passed therethrough, and having a delivery passage for said air, a heated air supply main containing the heated air to be supplied for combustion, and a pipe to conduct the heated air from said delivery passage to said main, substantially as set forth.

875,437. DISTANCE AND ANGLE MEASURER. JEAN M. KAUFFMANN, Bettemburg, Luxemburg. Filed June 22, 1907. Serial No. 380,297.



1. In a distance and angle measurer, the combination of a base, two mirrors attached to said base, one of said mirrors being fixed and the other rotatable relative to said base, the rotatable mirror being provided with means to permit observation therethrough, the reflecting surfaces of both mirrors looking to the same side with respect to the connecting line of the centers of said mirrors, and means for reading the angle of rotation of said rotatable mirror.

2. In a distance and angle measurer, the combination of a stand, a horizontal tube attached to said stand, two mirrors attached to said tube, one of said mirrors being fixed and the other rotatable, the rotatable mirror having means to permit observation therethrough, the reflecting surfaces of both mirrors looking to the same end of the tube, and means for reading the angle of rotation of said rotatable mirror.

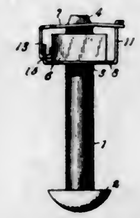
3. In a distance and angle measurer a base two mirrors attached to said base, one of said mirrors being rotatably arranged, the rotatable mirror having only a portion thereof silvered, the reflecting surfaces of both mirrors looking to the same side an index capable of being turned independently of the rotation of the rotatable mirror about the axis of said mirror a graduation for reading the angle of rotation of the rotatable mirror, said index being adjustable on said graduation and having a mark adapted to be seen in the rotatable mirror, as described.

4. In a distance and angle measurer a base, two mirrors attached to said base one of said mirrors being rotatably arranged, the rotatable mirror having only a portion thereof silvered, the reflecting surfaces of both mirrors looking to the same side an index capable of being turned independently of the rotation of said rotatable mirror about the axis of said mirror, a graduated arc concentric to the axis of the rotatable mirror, the diameter of said arc being greater than that of the circle of graduation for said rotatable mirror, said arc being provided with a divider slidable along said arc and adapted to be viewed through the uncovered part of said rotatable mirror, as described.

5. In a distance and angle measurer a base, two mirrors attached to said base one of said mirrors being rotatably arranged, the rotatable mirror having only a portion thereof silvered, the reflecting surfaces of both mirrors looking to the same side, both mirrors being provided with center crosses, a disk capable of being turned about the axis of the rotatable mirror independently of the rotation of said mirror, indices attached to said disk, upwardly projecting marks on said indices, a graduated disk concentric to said index disk, means for rigidly connecting said index disk with said rotatable mirror and said graduated disk, as described.

[Claim 6 not printed in the Gazette.]

875,438. BOLT AND NUT LOCK. GEORGE W. KETTERINGHAM, Natchez, Miss. Filed Mar. 29, 1907. Serial No. 365,311.



1. The combination of a bolt provided with a polygonal portion, a nut, an inner or base plate having a bolt opening and fitted against the inner face of the nut and provided at opposite sides thereof with a tongue and a flange having a slot, and an outer plate or catch provided at an intermediate point with an opening to receive the polygonal portion of the bolt and having a hook-shaped arm at one end engaging the slotted flange of the inner or base plate and the adjacent face of the nut, said outer plate or catch being provided at the other end with a slot through which the tongue passes, said tongue being adapted to be bent against the slotted end of the outer plate or catch to retain the same in engagement with the bolt and the nut.

2. The combination with a bolt provided with a polygonal portion, and a nut, of an inner or base plate having a bolt opening and fitted against the inner face of the nut and provided at one side thereof with an outwardly extending slotted flange, an outer plate or catch provided at an intermediate point with an opening to receive the polygonal portion of the bolt, and having a hook-shaped arm at one end extending through the slotted flange of the inner or base plate and engaging the adjacent face of the nut, said inner or base plate and outer plate or catch being detachably connected at the oppoites face of the nut.

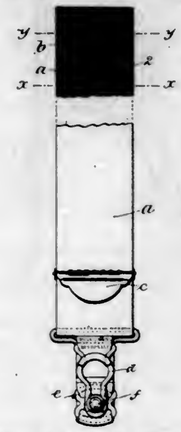
875,439. ELASTIC WEBBING. SAMUEL KOPS, New York, N. Y. Filed May 28, 1907. Serial No. 376,087.

1. An elastic webbing for hose supporters, consisting of a flat strip formed of a section woven under tension and a section at one end woven under normal conditions without tension.

2. A length of elastic webbing adapted to be cut up into hose supporters, comprising alternate sections of predetermined length woven under tension and alternate intermediate short sections woven continuously therewith under normal conditions without tension and the same to be severed at intermediate points in the respective sections to form hose supporters of the desired length.

3. A strip of elastic webbing for hose supporters, having a maximum section woven under tension and a minimum section at one end of the aforesaid section woven under normal conditions without tension, and in which the elastic strands are of normal area and the woven threads close together, said minimum section in contrast to the maximum section being of close woven and solid character.

4. A length of elastic webbing adapted to be cut up into hose supporters, comprising alternate sections of predetermined length loose woven or with spaced weft threads adapted to yield under tension and alternate intermediate short sections tight woven or with close weft threads so as to be comparatively non-elastic, the said length of webbing to be severed at intermediate points in the respective sections to form hose supporters of the desired length.



5. An elastic webbing for hose supporters, formed of a section woven under tension and a section at one end woven under normal conditions without tension, said sections being a continuation the one of the other and each section woven of solid character.

875,440. SAFETY-TREAD FOR STEPS. WILLIAM S. LAMSON, Lowell, Mass., assignor to American Mason Safety Tread Company, Saco, Me., a Corporation of Maine. Filed Feb. 11, 1905. Serial No. 245,318.



1. A non-slipping tread for steps having its tread-surface composed of artificial stone and having a base or frame of material softer than said stone.

2. A non-sliping tread for steps having its tread-surface composed of artificial stone containing carborundum, and having a suitable base or frame softer than carborundum to contain said stone.

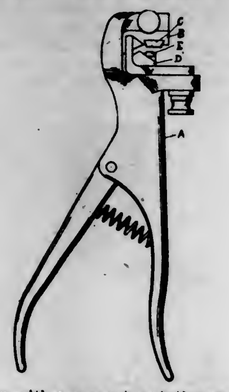
3. A non-slipping tread for steps having its tread-surface composed of carborundum or other hard artificial porous stone, and with a suitable body of metal softer than the carborundum, said metal forming the foundation or basis of the step.

4. A tread for steps consisting of a metal base, provided with suitable channels or pockets filled with grits, held therein by an artificial stone cement and forming a non-yielding grit tread-surface.

5. A tread for steps consisting of a metal base provided with suitable dovetail channels or pockets filled with grits, held therein by a suitable cement and forming a non-yielding grit tread-surface.

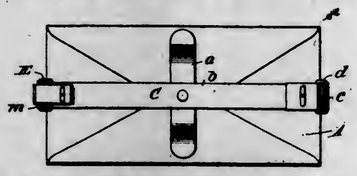
[Claims 6 to 10 not printed in the Gazette.]

875,441. SAW-SET. PHILIP J. LEAVENS, Vineland, N. J. Filed Apr. 15, 1907. Serial No. 368,173.



In combination with a saw set a stationary jaw member supporting an anvil a working face on the anvil against which the saw tooth is bent, a depression in the face of the anvil, an elastic block adapted to fit within said depression, a movable jaw member, a plunger adjacent to the elastic block and actuated by said movable jaw and so arranged as to clamp the jaw tooth between the anvil and the plunger.

875,442. PACKAGE-FASTENER. PAUL R. LE BOEUF, Amelia, La., assignor of one-fourth to Henry A. Terrio and Paul Braud, Ascension parish, La. Filed Aug. 5, 1907. Serial No. 387,107.



1. A package fastener comprising clamping members one of which is provided at one end with a ring, a strap connected to the corresponding end of the other member and passed through the said ring, a buckle slidable on the major portion of the strap and connected to one end thereof, a tab connected to the opposite end portion of one clamping member and having a hook, and a strap connected at one end to the corresponding end portion of the other clamping member, a ring through which the said strap is passed; said ring being arranged to be engaged with and disengaged from the said hook, and a buckle slidable on the major portion of the strap and connected to one end thereof.

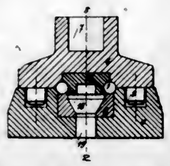
2. A package fastener comprising clamping members one of which is provided with a resilient strip having a downwardly bent end, a connection between the said members at one end of the fastener, a tab connected to the said strip of one clamping member and having a hook at its inner side arranged opposite the said downwardly bent end of the strip, and a connection connected to the corresponding end portion of the other clamping member and having a ring arranged to be engaged with and disengaged from the said hook.

3. A package fastener comprising clamping members each of which has a transverse strip of resilient material normally bowed outward and a longitudinal strip of resilient material, fixed to the transverse strip and normally bowed inward, and connections between the said clamping members at the ends of the fastener.

4. A package fastener comprising clamping members each of which has a transverse strip of resilient material normally bowed outward and a longitudinal strip of resilient material fixed to the transverse strip and normally bowed inward; one of said clamping members also having a hook adjacent to one end of its longitudinal strip, a connection between the ends of the clamping members remote from said hook, and a connection connected to the opposite end of one clamping member and having a device arranged to be engaged with and disengaged from the said hook.

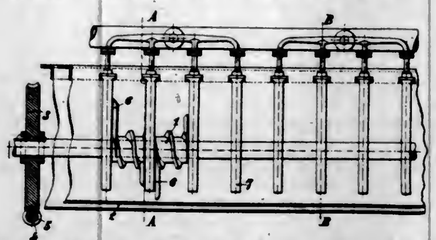
5. A package fastener comprising clamping members each of which has a transverse strip of resilient material normally bowed outward and a longitudinal strip of resilient material fixed to the transverse strip and normally bowed inward; one of said clamping members also having a tab adjacent to one end of its longitudinal strip and a hook at the inner side of said tab, and adjustable connection between the ends of the clamping members remote from the said tab and hook, and an adjustable connection connected to the opposite end of one clamping member and having a ring arranged to be engaged with and disengaged from the hook on the tab.

875,443. APPARATUS FOR FORGING IN DIES. EMILE LELONG, Conillet, Belgium. Filed July 17, 1905. Serial No. 269,884.



Means for forging rings in dies, comprising a die adapted to be located on the anvil of a forging device and having the shape required for forging the ring, in combination with a die adapted to be fixed on the hammer of the forging device and having the shape for forging the ring, and provided with a part entering recesses of corresponding shape in the anvil die, to remove the inner fins during the forging operation and a central passage to carry off the detached fins.

875,444. MIXING APPARATUS. CHARLES MASTAIN and ARTHUR DELFOSSE, Pont d'Ardres, France, assignors to The Firm of Societe des Refinerie et Sucrerie Say, Paris, France. Filed Aug. 5, 1907. Serial No. 387,128.

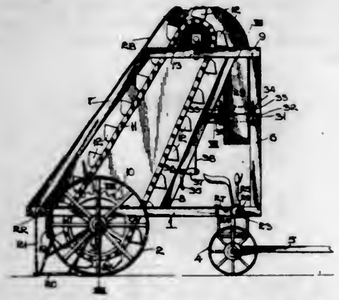


1. A mixing apparatus of the character described, comprising a trough, a set of hollow heating frames arranged transversely thereof, and a mixing screw mounted longitudinally of the trough and extending through and revoluble within the said transverse heating frames.

2. A mixing apparatus of the class described, comprising a trough, a set of hollow heating frames arranged within the walls thereof, and a mixing screw mounted longitudinally of the trough and having portions extending through the said heating frames, and radially projecting blades carried by the screw and arranged in coöperative relation with the respective heating frames.

3. In a mixing apparatus of the class described, the combination with a trough surrounded by a heating jacket, and a set of hollow frames spaced longitudinally of the trough and lying in parallel planes transverse to the trough, of a mixing screw journaled in the trough and having portions extending through the hollow frames in a direction longitudinally of the trough, and radial blades projecting beyond the screw and arranged to operate between the respective heating frames.

875,445. EARTH-LOADING MACHINE. ADOLF MEIERHOFF and HENRY C. BECKMANN, St. Louis, Mo., assignors to Charles Kunkel, Jr., St. Louis, Mo. Filed July 1, 1907. Serial No. 381,588.



1. In an earth loading machine, the combination of a running gear frame, an axle supporting said running gear frame, a bucket elevator operable around said axle and driven thereby, and a scraper pivotally connected to said axle and having a shoe movable in a path corresponding to the path of travel of said elevator while moving adjacent to the shoe, substantially as set forth.

2. In an earth loading machine, the combination of a running gear frame, an axle supporting said running gear frame, a bucket elevator operable around said axle and diven thereby, and a spring controlled scraper pivotally connected to said axle and having a shoe movable in a path corresponding to the path of travel of said elevator while moving adjacent to the shoe, substantially as set forth.

3. In an earth loading machine, the combination of a running gear frame, an axle supporting said running gear frame, a bucket elevator operable around said axle and driven thereby, a scraper pivotally connected to said axle and having a shoe movable in a path corresponding to the path of travel of said elevator while moving adjacent to the shoe, and means for elevating said scraper, substantially as set forth.

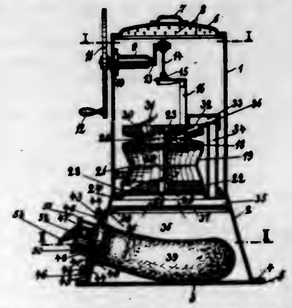
4. In an earth loading machine, the combination of a running gear frame, an axle supported by said running gear frame, a bucket elevator operable around said axle and driven thereby, a scraper pivotally connected to said axle, guide rods carried by said scraper, and a guide bar supported by said running gear frame and in which said guide rods operate, substantially as set forth.

5. In an earth loading machine, the combination of a running gear frame, an axle supported by said running gear frame, a bucket elevator operable around said axle and driven thereby, a scraper pivotally connected to said axle, guide rods carried by said scraper, a guide bar supported by said running gear frame and in which said guide rods operate, and springs surrounding said guide rods and located between said scraper and guide bar, substantially as set forth.

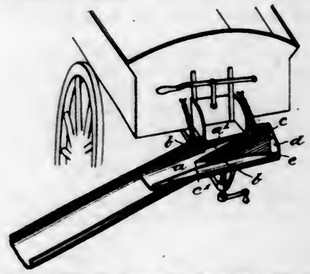
[Claims 6 to 10 not printed in the Gazette.]

875,446. PUMP FOR VACUUM-CLEANERS. ARTHUR MESTITZ, Raudnitz, Austria-Hungary. Filed Apr. 15, 1907. Serial No 368,309.

A pump for a vacuum cleaner, comprising in combination a casing, the lower part of which serves as a suction chamber, a movable board reciprocated between two fixed boards, leather bellows secured to a movable board forming only two folds and closed at both ends by the fixed boards, means for reciprocating the movable board, comprising a crank, a connecting rod and a fork-frame, connected by a link with the connecting rod and attached to the movable board, and a plate closing the suction chamber against the part of the casing containing the bellows, which plate has openings communicating with the air inlet-valves of the bellows, substantially as, and for the purpose set forth.



875,447. COAL-CHUTE FEEDER. ANNIE C. MILEY, Philadelphia, Pa. Filed Apr. 12, 1905, Serial No. 255,258. Renewed June 7, 1907. Serial No. 377,799.



1. A tapering trough, having a substantially triangular pyramidal rib, so arranged at the larger end of said trough as to divide the trough at its upper or larger end, into two converging troughs, adapted to deflect the coal into the common trough, to deliver the same from the coal-delivery wagon into the coal chute.

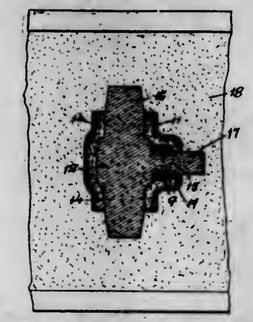
2. A tapering trough, having a substantially triangular pyramidal rib so arranged at the larger end of said trough, as to divide the trough at its upper or larger end, into two converging troughs adapted to deflect the coal into the common trough to deliver the same from the coal-delivery wagon into the coal chute, said tapering trough having rolling flanges on either side.

3. A tapering trough, having a substantially triangular pyramidal rib, so arranged at the larger end of said trough, as to divide the trough at its upper or larger end, into two converging troughs, adapted to deflect the coal into the common trough, to deliver the same from the coal-delivery wagon into the coal chute, said tapering trough having rolling flanges on either side, said flanges tapering from the central portion thereof to the upper and lower ends of said tapering trough.

4. A tapering trough, having a substantially triangular pyramidal rib, so arranged at the larger end of said trough, as to divide the trough at its upper or larger end, into two converging troughs, adapted to deflect the coal into the common trough, to deliver the same from the coal-delivery wagon, into the coal chute, said tapering trough having rolling flanges on either side, said flanges tapering from the central portion thereof to the upper and lower ends of said tapering trough, and having, a substantially triangular upright flange, closing the upper end of said double trough, and supporting the substantially triangular pyram-

idal rib in the center of the tapering trough at its upper or larger end, so as to form the double trough, this upright flange being so curved on either side as to meet the rolling flanges on either side of the trough.

875,448. CORE AND CASTING. ROBERT MILNE, Rockford, Ill., assignor to B. F. Barnes Company, a Corporation of Illinois. Filed June 14, 1907. Serial No. 378,989.



1. A core provided with a stud or post outwardly projecting from the body of the core, and a nut surrounding the stud or post and having the material thereof passed through the threaded interior of the nut, substantially as described.

2. A core provided with a stud or post outwardly extending from the body thereof, and a nut surrounding the stud or post at a suitable distance from the wall of the body, the stud or post extending beyond the outer face of the nut for embedding the inner and outer faces of the nut within the casting, substantially as described.

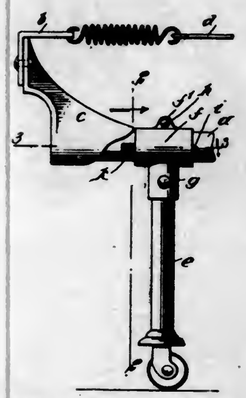
875,449. HEATING SYSTEM. ARTHUR MCGONAGLE, East Orange, N. J. Filed Mar. 21, 1907. Serial No. 363,538.



1. In a steam heating system, the combination with a plurality of radiators, a return pipe connected therewith in parallel, a steam trap between each of said radiators and said pipe, a water seal trap connected with said return pipe, a by-pass connected with discharge above said main trap, said by-pass having a restricted constantly open orifice for permitting the discharge of air therethrough, and a float controlled valve arranged in said by-pass for discharging water therethrough in excess of the water discharged by said main trap.

2. In a steam heating system, the combination with a plurality of radiators and a return pipe therefor, of a water seal trap connected with the return pipe, a by-pass arranged above the level of the trap and provided with a constantly open minute orifice for the discharge of air therethrough, a float-controlled valve arranged in said by-pass for discharging excess water, and individual float-controlled balanced valves for the individual radiators, said valves also provided with means for permitting discharge of air therethrough, but for opposing the passage of steam.

875,450. FOLDING COT OR DIVAN. BURTNETT MCINTOSH, New York, N. Y., assignor to Frank A. Hall, Montclair, N. J. Filed Aug. 17, 1907. Serial No. 388,960.



1. In a bedstead the combination with a frame and folding legs of means for mounting the legs to rotate on the frame, dogs extending loosely through the parts of the frame on which the legs are mounted and adapted to hold the legs in either of two positions and springs for yieldingly pressing the dogs into action.

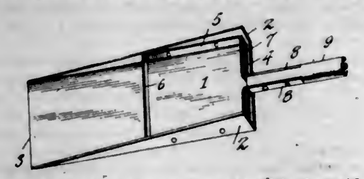
2. In a bedstead the combination with the frame having side rails with transverse openings therein and folding legs of means for mounting the legs to rotate on the side rails and dogs fitted loosely in the transverse openings in the side rails and springs contained within the side rails and engaging the dogs, said dogs serving releasably to hold the legs.

3. In a bedstead the combination with the frame having hollow side rails with transverse openings therein and folding legs of twin members fastened to the legs and having opposing portions loosely embracing the side rails, means for drawing said portions against the side rails, dogs extending loosely through the openings in the side rails and engaging said twin members and springs for yieldingly pressing the dogs into such engagement.

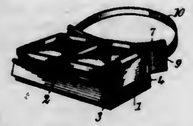
4. In a bedstead the combination of a frame having side rails, legs adapted to support the same, two separate, opposing clamp members for each leg and means for clamping such members firmly to the upper portion of each leg, the clamp members having parts facing each other and loosely engaging the opposite sides of the side rails, whereby to mount the legs to swing on the side rails.

875,451. BAKER'S PEEL. FRITZ NELSON and DAVID A. BYE, Louisville, Ky. Filed Apr. 20, 1907. Serial No. 369,369.

A baker's peel comprising a metallic plate formed with a knife edge and having side flanges, a handle frame secured to said side flanges, said handle frame comprising a forward cross bar, side bars and a rear cross bar, the said forward cross bar extending transversely and at midlength of the said metallic plate, the said side bars extending rearwardly from the said cross bar and bearing against the under surface of said metallic plate, the rearward cross bar being disposed adjacent the rear edge of the plate and formed with rearwardly extending sections, the said extending sections being formed integral with the said rearward cross bar and at right angles thereto, and a handle frame secured to said rearwardly extending sections.



875,452. BASKET-HOLDER. GEORGE S. PAINE, Winslow, Me. Filed May 6, 1907. Serial No. 372,254.



1. In a device of the character described, the combination of a trough-shaped basket holder open at both ends, and means for securing said holder about the waist.

2. In a device of the character described, the combination of a trough-shaped basket holder having means to bindingly engage a basket or the like when seated therein, and means for securing said holder about the waist.

3. In a device of the character described, the combination of a basket holder having one side thereof constructed with an offset and with the upper portion of said side bent inwardly, whereby baskets or the like of different sizes may be seated in said holder and bindingly retained in place, and means for securing said holder to the body.

4. In a device of the character described, the combination of a trough-shaped member having one side thereof constructed with an offset providing a shoulder and the upper portion of said side being bent inwardly, whereby a basket or the like will be bindingly engaged when seated within the member, a curved band attached at the opposite side of the holder, and a strap for securing said band about the waist.

5. In a device of the character described, a trough-shaped sheet metal member having one side thereof bent inwardly to bindingly engage a basket or the like seated within said member and means for securing said member about the waist.

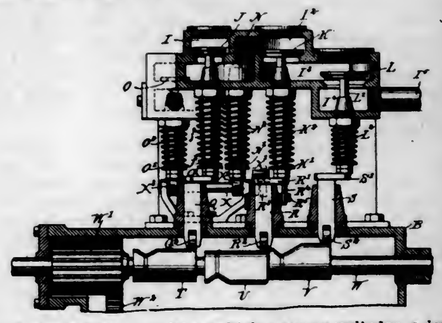
[Claims 6 and 7 not printed in the Gazette.]

875,453. COMPOUND ENGINE. DENT PARRETT, Wenona, Ill., assignor of one-half to James Parrett, Wenona, Ill. Filed Mar. 7, 1907. Serial No. 361,036.

1. An engine having high and low pressure cylinders, means for controlling the admission of steam to the high pressure cylinder, a connecting valve for conducting the exhaust steam from the high pressure cylinder to the low pressure cylinder, a high pressure admission valve for controlling the admission of live steam directly to the low pressure cylinder and means for operating either the said connecting valve or the said high pressure valve.

2. In a compound engine, a high pressure cylinder, a low pressure cylinder, a main steam chest, means for controlling the admission of steam from the main steam chest to the said high pressure cylinder, a connecting valve for conducting the exhaust steam from the high pressure cylinder to the low pressure cylinder, a high pressure admission valve for connecting the said main steam chest with the low pressure cylinder, and means for operating either the said connecting valve or the said high pressure admission valve.

3. An engine comprising a high pressure cylinder, a low pressure cylinder, a main steam chest, an auxiliary steam chest opening into the high pressure cylinder, a valve for controlling the admission of steam from the main steam chest to the auxiliary steam chest, a low pressure steam chest opening into the low pressure cylinder, a connecting valve connecting the auxiliary steam chest with the said low pressure steam chest to allow the exhaust steam from the high pressure cylinder to pass into the low pressure cylinder, an exhaust valve for the low pressure steam chest, a high pressure steam chest opening directly into the low pressure cylinder, a high pressure admission valve connecting the main steam chest with the said high pressure steam chest, and an exhaust valve for the auxiliary steam chest.



4. An engine comprising a high pressure cylinder, a low pressure cylinder, pistons reciprocating in opposite directions in the said cylinders, a crank shaft, pitmen connecting the crank shaft with the said pistons, a main steam chest connected with a steam supply, an admission valve for conducting the live steam from the said main steam chest to the said high pressure cylinder, a connecting valve for conducting the exhaust steam from the said high pressure cylinder to the said low pressure cylinder, an exhaust valve for the said low pressure cylinder, a high pressure admission valve for connecting the said main steam chest with the said low pressure cylinder, and means for operating either the said connecting valve or the said high pressure valve.

5. An engine comprising a high pressure cylinder, a low pressure cylinder, pistons reciprocating in opposite directions in the said cylinders, a crank shaft, pitmen connecting the crank shaft with the said pistons, a main steam chest connected with a steam supply, an admission valve for conducting the live steam from the said main steam chest to the said high pressure cylinder, a connecting valve for conducting the exhaust steam from the said high pressure cylinder to the said low pressure cylinder, an exhaust valve for the low pressure cylinder, a high pressure admission valve for connecting the main steam chest with the said low pressure cylinder, an exhaust valve for the said high pressure cylinder, and means for operating the said high pressure exhaust valve when operating the said high pressure admission valve for the low pressure cylinder.

[Claims 6 to 9 not printed in the Gazette.]

875,454. AIR-BRAKE. EDMUND B. POWERS, New York, N. Y. Filed Feb. 26, 1907. Serial No. 359,356.



1. In an apparatus of the character set forth, portable means separably attached to the rear terminal of the

train-pipe and actuated by changes of pressure in the latter, and an electric signal operated by said means.

2. In an apparatus of the character set forth, portable means separably attached to the rear terminal of the train-pipe and actuated by changes of pressure in said pipe, an electric signal located adjacent to the engineer's brake valve, and connections from said means to said signal for operating the latter.

3. In an apparatus of the character set forth, a train-pipe, an electric circuit, a signal in said circuit, and portable means separably attached to the rear terminal of said train-pipe and actuated by changes of pressure in said train-pipe for making and breaking said circuit and operating said signal.

4. In an apparatus of the character set forth, a train-pipe, a portable casing separably attached to the rear terminal of said train-pipe, a yielding plunger in said casing constructed to be moved by an increase of pressure in said train-pipe, a contact-piece in the path of said plunger, an electric circuit including said plunger and contact-piece, an engineer's brake valve controlling the pressure in said train-pipe, and a signal located adjacent to said valve and in said circuit.

5. In an apparatus of the character set forth, a train-pipe, a portable casing separably attached to the rear terminal of said train-pipe, a plunger in said casing constructed to be moved by changes of pressure in said train-pipe, a contact-piece in the path of said plunger, an electric circuit including said plunger and contact-piece, and a signal in said circuit.

[Claim 6 not printed in the Gazette.]

875,455. CAR-AXLE. GEORGE F. PRICE, St. Louis, Mo. Filed May 17, 1907. Serial No. 374,219.

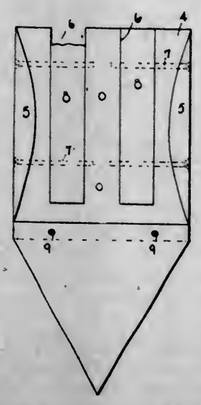


1. As a new article of manufacture, a hollow car axle cast in a single piece having the full dimensions of the axle, substantially as set forth.

2. As a new article of manufacture, a cast car axle hollow from end to end, cast in a single piece having the full dimensions of the axle, substantially as set forth.

3. As a new article of manufacture, a cast steel car exle hollow from end to end cast in a single piece having the full dimensions of the axle, substantially as set forth.

875,456. CULTIVATOR-SHOVEL. PETER PRIESS, Pleasant Valley, Okla. Filed July 11, 1907. Serial No. 383,330.



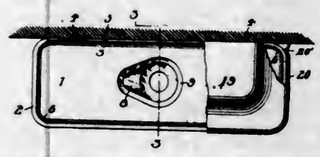
1. In a cultivator shovel, the combination of an elongated rectangular shovel plate having side flanges and a plurality of longitudinally disposed parallel slots or openings extending from one end to near its opposite end, plate members removably positioned in said opening and a cultivator point removably attached to the plate with means for removably attaching the shovel plate to a cultivator standard.

2. In a cultivator shovel, the combination with a hollow elongated shank adapted for removable attachment to a cultivator beam, of a plate having side flanges and two longitudinally disposed parallel openings, plates removably positioned in said openings and a cultivator shovel removably attached to one end of said plate.

3. A cultivator shovel, embracing an elongated shovel member formed with a plurality of longitudinally disposed parallel slots or openings, blade members removably fitted in said slots or openings and means for attaching the shovel member to a cultivator standard.

4. A cultivator shovel, embracing an elongated shovel member formed with a plurality of longitudinally disposed parallel slots or openings, plate members adapted to fit in said slots or openings, fastening screws screwing through the side edges of the shovel member and into the plate members for removably securing the latter in position with means for attaching the shovel member to a plow standard.

875,457. FLUSH-TANK. WILLIAM L. REED, Pittsburg, Pa. Filed Dec. 22, 1906. Serial No. 349,094.

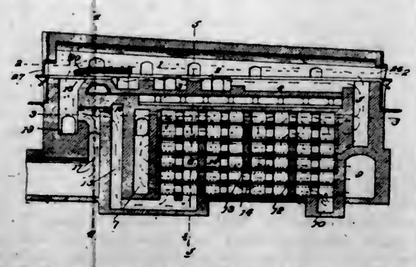


1. The combination of a rectangular tank having its end faces formed to receive projections on a cover, a cover having a flange depending from its front and ends, and inward projections on the end portions of the flange adapted to engage the tank ends and prevent the cover from moving frontward.

2. The combination of a rectangular tank having rounded rear corners, a cover having a flange depending from its front and ends, and inward projections on the end portions of the flange adapted to engage said rounded corners and prevent the cover from moving frontward.

3. The combination with a flush tank adapted to be secured to a wall or other support, the tank having rounded rear corners, of a raised cover fitting the tank and wholly open at its rear side, the cover having a flange depending from its front and ends, the end portions of the flange being bent inward to engage the rounded corners of the tank and prevent the cover from moving forward.

875,458. CONTINUOUS HEATING-FURNACE. JOSEF REULEAUX, Wilkinsburg, Pa., assignor to Alexander Laughlin, Pittsburg, Pa. Filed Oct. 5, 1906. Serial No. 337,592.



1. In a continuous heating furnace having its point of highest heat at or near one end, supports for the material

being heated extended from the receiving end of the furnace over such point of highest heat, and at or near such point formed with a step or shoulder and a prolongation on a lower plane, the underside of the material being held away from the supports in passing from the upper to the lower portions thereof.

2. In a continuous heating furnace having its point of highest heat at or near one end, supports for the material being heated extended from the receiving end of the furnace over such point of highest heat, each support having a prolongation on a lower plane, the upper and lower portions being substantially parallel and on such planes that the underside of the material is held away from the support in passing from the upper to the lower portions thereof.

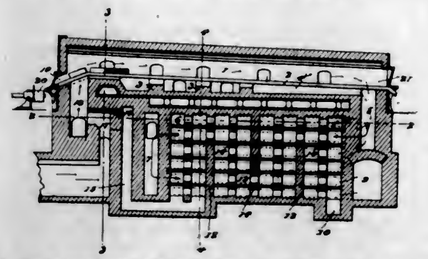
3. In a continuous heating furnace having its point of highest heat at or near one end, supports for the material being heated extended from the receiving end of the furnace over such point of highest heat, each support being hollow and at or near such point having a prolongation on a lower plane with passages for a cooling medium between the upper and lower portions of the support, a shoulder being formed by the end of the upper portion of the support for causing the material to occupy a position different from that which it occupies when wholly on either the upper or lower portions of the supports.

4. In a continuous heating furnace having transverse piers, supports for the material being heated composed of rails extending lengthwise of the furnace and having depending legs forming parts thereof constructed to contain a cooling medium and form a covering for the upper faces of the piers upon which they rest.

5. In a continuous heating furnace having transverse piers, supports for the material being heated composed of hollow rails extending lengthwise of the furnace and designed to convey a cooling medium, and depending hollow legs forming parts of said rails and communicating therewith, said legs being constructed to form a covering for the upper faces of the piers upon which they rest.

[Claim 6 not printed in the Gazette.]

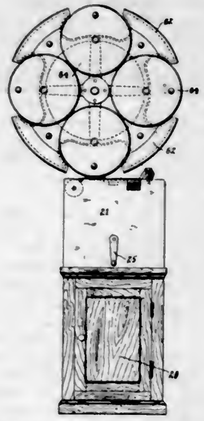
875,459. CONTINUOUS HEATING-FURNACE. JOSEF REULEAUX, Wilkinsburg, Pa., assignor to Alexander Laughlin, Pittsburg, Pa. Original application filed Oct. 5, 1906, Serial No. 337,592. Divided and this application filed Feb. 27, 1907. Serial No. 359,615.



1. In a continuous-heating furnace having its point of highest heat at or near one end of its combustion chamber, a fuel-port opening directly into said chamber at such end, a gas-supply chamber at one side of said fuel-port and into which it opens laterally, an air-heating chamber, and a chamber leading therefrom and opening laterally into said gas-supply chamber, the air and gas being thoroughly intermingled before entering the fuel-port.

2. In a continuous-heating furnace having a combustion chamber extending longitudinally thereof, and a fuel-port opening directly into said chamber at or near its discharge end, an air-heating chamber located beneath said combustion chamber, a waste-gas chamber at the receiving end of the furnace leading from the combustion chamber to the air-heating chamber, a stack-flue also at the receiving-end of the furnace, a series of conduits leading from the waste-gas chamber through said air-heating chamber, a chamber near the discharge end of the furnace into which said conduits open, a second series of conduits leading from said latter chamber to said stack-flue, said air-heating chamber having inlet ports at or near the receiving-end of the furnace, a hot-air chamber into which said air-heating chamber opens, and a gas-supply chamber into which the hot-air chamber opens laterally, said gas-supply chamber being at one side of said fuel-port and opening laterally thereinto.

875,460. TICKET-PRINTING MACHINE. WILLIAM C. REYNOLDS, Norwich, Conn. Filed Apr. 1, 1907. Serial No. 365,626.



1. In a device of the character described, the combination of a frame member, a table rotatable thereon, and having an opening therein, means for retaining a ticket at said opening by its margins, a dating device arranged in proximity to the table, means for operating the dating device from the movement of the table when swung to bring the ticket in such opening adjacent the dating device, a printing member adjacent the ticket on the table upon the latter being advanced to another position, and means for operating the printing member from the movement of the table when swung to bring the ticket adjacent the printing member.

2. In a device of the character described, the combination of a frame member, a table rotatable thereon, and having an opening therein, means for retaining a ticket at said opening by its margins, a dating device arranged in proximity to the table, means for operating the dating device from the movement of the table when swung to bring the ticket in such opening adjacent the dating device, a printing device adjacent the ticket on the table upon the latter being advanced to another position, means for operating the printing device from the movement of the table when swung to bring the ticket adjacent the printing member, a second printing device arranged in the path of movement of the ticket on the table beyond said first printing device, and means for operating a member of the second printing device when the table is swung to bring the ticket adjacent such second printing device.

3. In a device of the character described, the combination of a frame member, a table rotatable thereon, and having an opening therein, means for retaining a ticket at said opening by its margins, a dating device arranged in proximity to the table, means for operating the dating device from the movement of the table when swung to bring the ticket in such opening adjacent the dating device, a printing device adjacent the ticket on the table upon the latter being advanced to another position, means for operating the printing device from the movement of the table when swung to bring the ticket adjacent the printing member, a second printing device arranged in the path of movement of the ticket on the table beyond said first printing device, means for operating a member of the second printing device when the table is swung to bring

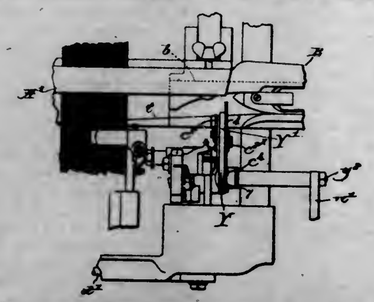
the ticket adjacent such second printing device, a record device carried by the machine, and means for causing a record of two said printing operations to be made on the record member.

4. In a device of the character described, the combination of a frame member, a table rotatable thereon, and having an opening therein, means for retaining a ticket at said opening by its margins, a dating device arranged in proximity to the table, means for operating the dating device from the movement of the table when swung to bring the ticket in such opening adjacent the dating device, a printing member adjacent the ticket on the table upon the latter being advanced to another position, means for operating the printing member from the movement of the table when swung to bring the ticket adjacent the printing member, a second printing device arranged in the path of movement of the ticket on the table beyond said first printing device, means for operating the second printing device when the table is swung to bring the ticket adjacent such second printing device, a record strip carried by the machine, means for shifting the record strip to follow the ticket on the table when the table is swung from the second printing position to the third whereby the record of impression is obtained at both said printing operations on the strip.

5. In a device of the character described, the combination of a frame member, a table rotatable thereon, and having an opening therein, means for retaining the ticket at said opening by its margins, a dating device arranged in proximity to the table, means for operating the dating device from the movement of the table when swung to bring the ticket in such opening adjacent the dating device, a printing device adjacent the ticket on the table upon the latter being advanced to another position, means for operating the printing device from the movement of the table when swung to bring the ticket adjacent the printing member, a second printing device arranged in the path of movement of the ticket on the table beyond said first printing device, means for operating a member of the second printing device when the table is swung to bring the ticket adjacent such second printing device, a record strip carried by the machine, means for shifting the record strip to follow the ticket on the table when the table is swung from the second printing position to the third whereby the record of impression is obtained at both said printing operations on the strip, and a printing band carried by the machine and arranged in the path of said two printing positions and located between the ticket and the record strip.

[Claims 6 to 17 not printed in the Gazette.]

875,461. THREAD-PARTING MECHANISM FOR LOOMS. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed July 24, 1907. Serial No. 385,317.



1. In a loom, a shuttle-feeler having a notch in its end, a device on the feeler to part the filling end, and spring-controlled means slidably mounted on the feeler and normally projecting beyond its notched end to insure the guidance of the filling end into the notch in position to be acted upon by the parting device.

2. In a loom, a shuttle-feeler having a notch in its end, a filling parting device on the feeler to part the filling when positioned in the notch, a plate slidably mounted on the feeler and having its rear end bifurcated to receive the filling and direct it into the notch in the feeler, a slot and pin connection between the latter and said plate, and a spring to yieldingly maintain the bifurcated end of the plate normally projected beyond the notched end of the feeler.

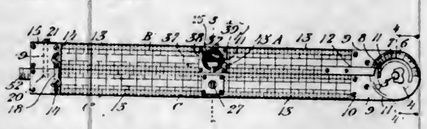
3. In thread-parting mechanism for filling-replenishing looms, the lay having a shuttle box thereon, a shuttle-feeler, an instrumentality bodily movable therewith into position to part the old filling end, and a bifurcated, spring-controlled guide mounted on the feeler to insure the positioning of the filling end to be parted, the rear end of the guide being engaged and slid forward on the feeler by the back of the shuttle-box as the lay beats up.

4. In thread-parting mechanism for filling-replenishing looms, a shuttle-feeler, a device mounted thereon to act upon and part the old filling end, a member longitudinally movable on the feeler and having a bevel-edged jaw adapted to extend under the filling end, to direct the latter into position to be acted upon by the parting device, and means to move said member forward on the feeler as the lay beats up.

5. In a loom, a shuttle-feeler having a notch in its end, a device on the feeler to part the filling end, when introduced into the notch, and a spring-projected, longitudinally movable member slidably mounted on the feeler and having its rear end bifurcated to present bevel-edged jaws at the side of and normally extended beyond the notched end of the feeler, to insure the guidance of the filling end into the notch in position to be acted upon by the parting device.

[Claim 6 not printed in the Gazette.]

875,462. COMBINED SPIRIT-LEVEL AND GAGE. THEODORE D. ROWAN, Columbia, S. C., assignor of one-half to Leonidas B. Dozier, Columbia, S. C. Filed Apr. 24, 1906, Serial No. 313,416. Renewed May 25, 1907. Serial No. 375,695.



1. A device of character described comprising a pair of staffs, each staff embodying a pair of graduated arms or blades, one carrying a horizontal and the other a plumb level, the blades of the two staffs being coaxially pivoted at one end, means upon each staff for interlocking the arms thereof, and interengaging means upon the staffs for locking the two staffs together.

2. A device of the character described comprising a pair of staffs, each embodying a pair of graduated arms, the arms of the staffs being coaxially pivoted at one end and having an angle degree scale concentric with their pivotal connection, the arms of one staff being provided with horizontal levels and the arms of the other staff with plumb levels, substantially as described.

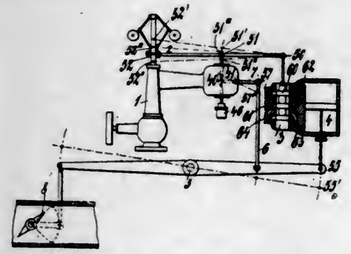
3. A device of the character described comprising a pair of staffs, each composed of a pair of graduated arms arranged to fold one behind the other, the arms of the two staffs being coaxially pivoted at one end, interlocking means for connecting the free ends of the arms of each staff, and interlocking means for securing the free ends of the two staffs together.

4. A device of the character described comprising a pair of staffs pivotally connected at one end, and having an angle degree scale concentric with their pivotal connection, each staff comprising a pair of graduated arms coaxially pivoted on said pivotal connection, the arms of one staff being provided with horizontal levels and the arms of the other staff with plumb levels, interlocking means for connecting the free ends of the arms of each staff, and interlocking means for connecting the staffs together to hold them in rigid relation.

5. A device of the character described comprising a pair of staffs pivotally connected at one end, and having an angle degree scale concentric with their pivotal connections, one of the arms of each staff being provided with a level tube and the other with a plumb tube, means for connecting the free ends of the arms of each staff, means for connecting the staffs together to hold them in rigid relation, and a degree blade adapted to be housed between the arms of one of the staffs and to be supported at right angles to coöperate with one of said arms for degree measurement.

[Claims 6 to 9 not printed in the Gazette.]

875,463. SPEED-REGULATOR. CARLOS SCHMITTHENNER, Heidenheim-on-the-Brenz, Germany. Filed May 7, 1907. Serial No. 372,314.



1. In a regulator of the kind described, a regulator motor, a valve therefor, a centrifugal regulator in operative connection with said motor valve, in combination with a valve return mechanism comprising return rods connected with the regulator motor and the valve controlling means, an interposed liquid brake in connection with said valve return rods, a stop positively operated by one of said return rods, the liquid brake having one of its parts positively connected to the same return rod, and means to return the other part of said brake to the same relative median position in relation to said stop after each regulation.

2. In a regulator of the kind described, a regulator motor, a valve therefor, a centrifugal regulator in operative connection with said motor valve, in combination with a valve return mechanism comprising return rods connected with the regulator motor and the valve controlling means, an interposed liquid brake in connection with said valve return rods, a stop operated by one of said return rods, means to control the movement of the stop with relation to the return rods.

3. In a regulator of the kind described, a regulator motor, a valve therefor, a centrifugal regulator in operative connection with said motor valve, in combination with a valve return mechanism comprising return rods connected with the regulator motor and the valve controlling means, an interposed liquid brake in connection with said valve return rods, a block operated by one of said return rods, means to control the movement of the block with relation to the return rods, and means operated by said block for opening the passage in the liquid brake.

875,464. BRUSH. ANNA SCHNURMACHER, St. Louis, Mo. Filed Mar. 3, 1906. Serial No. 303,940.



A brush comprising a back, a plurality of tufts of bristles having knots tied therein midway of their ends, and a cord on which said bristles are strung, substantially as set forth.

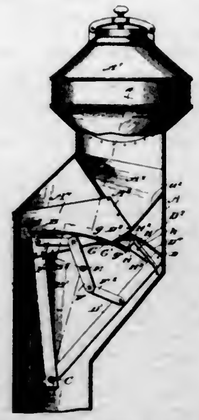
875,465. CAR-DOOR. JOHN L. SEVERNS and WILLIAM P. MCDERMOTT, East St. Louis, Ill. Filed Oct. 13, 1906. Serial No. 338,803.



1. A car door provided with an opening at the central lower portion thereof, guide strips secured to the door at opposite sides of said opening, a vertically sliding closure fitted to slide in the guide strips, a metal strap secured to said closure, a ring connected to said strap, a stay bar on which said ring slides, said stay bar being seated at its lower end in the car sill and its upper end being detachably fitted into a slotted keeper plate and provided with a winged nut, said guide strips provided with oppositely disposed slots, and a detachable spout provided with bars secured to the sides thereof, said bars having downwardly extending hooks upon their inner ends to engage said slots, substantially as described.

2. A sliding car door provided with an opening in the lower side and centrally of said door, guide strips secured at opposite sides of said opening, a vertically sliding closure for said opening, said closure being fitted into the guide strips, a metal strap extended upward from said closure, said strap carrying a ring, a stay bar upon which said ring slides, said stay bar being seated at its lower end in the car sill and its upper end being detachably fitted into a slotted keeper plate and provided with a winged nut, said guide strips being provided with slots, one at each side of each opening, and a removable spout provided with bars secured to the sides thereof, said bars having downwardly extending hooks at their inner ends to engage said slots, and means for holding the sliding door from movement, substantially as described.

875,466. CARBID-FEEDING DEVICE. NORMAN D. SHAFFER, Johnstown, Pa. Filed Mar. 12, 1907. Serial No. 361,932.



1. The combination of a casing having a hopper and side plates extending on opposite sides of and below the discharge of said hopper and a carbid feeding device oper-

ating between said side plates and comprising a table, a carbid displacer operating above said table and between the same and the discharge of the hopper, arms connected with said table and displacer and pivotally supported, a dumping gate pivoted between its edges to the front edge of the displacer and overlapping at its front edge the table, a latch pivoted to the displacer and having an arm to engage with the dumping gate and a second arm for engagement by the table, an oscillating shaft, a lever on said shaft and intermediate devices between the opposite arms of said lever and the table and displacer, substantially as set forth.

2. An apparatus for feeding carbid comprising a casing having a hopper and side plates extending below the discharge of said hopper, a table and a displacer operating between said side plates, the displacer being movable over the table and adapted to discharge carbid therefrom, an oscillating shaft, a lever on said shaft and intermediate devices between the said lever and the table and displacer whereby the said table and displacer may be moved reciprocally, substantially as set forth.

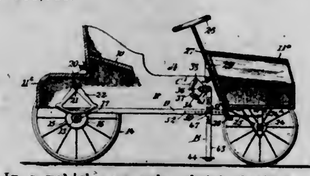
3. A carbid feeding device comprising a table and a displacer operating above the same and means for moving said table and displacer reciprocally.

4. A carbid feeding device comprising a receiving table and a displacer movable relatively to and over the table to discharge carbid therefrom, a rocking lever below the table and displacer and intermediate devices between the said lever and the table including links connected with the opposite ends of the rocking lever.

5. A carbid feeding device comprising a table and a displacer above the same, said table and displacer being movable reciprocally whereby the displacer may discharge carbid from the table.

[Claims 6 to 12 not printed in the Gazette.]

875,467. MOTIVE POWER FOR VEHICLES. MAYER SLOTKIN, New York, N. Y. Filed Apr. 17, 1907. Serial No. 368,760.



1. In a vehicle, an axle, clutch devices connected with the axle, a driving pinion for each clutch device, segmental racks pivotally mounted above the pinions and in mesh with the same, pivoted levers at angles to each other, and transmitting bars adjustably connected with said levers, the said bars being pivoted directly to the central portions of the tooth carrying sections of said segmental racks.

2. In a vehicle, an axle, clutch devices connected with the axle, adjustable bearings, locking devices for the bearings, a shaft carried by the bearings, levers independently mounted on said shaft, transmitting bars connected with said levers, and means for driving said clutch devices from the transmitting bars.

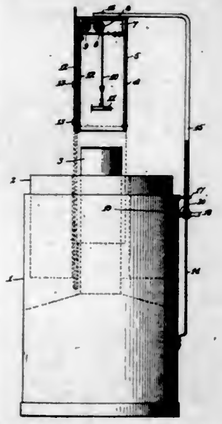
3. In a vehicle, an axle, clutch devices secured upon the axle, a driving pinion for each clutch device, segmental racks in engagement with the said pinions, supports for the said racks, levers located one opposite each rack, vertically adjustable supports for the said levers, the levers being independent in their movements, and transmitting bars adjustably connected with said levers and pivotally connected with the said racks.

4. In a vehicle, an axle, clutch devices secured to the axle, a driving pinion for each clutch device, segmental racks pivotally mounted one over each pinion, being in engagement with said pinions, vertically adjustable bearings, supports therefor, a shaft carried by the said bearings, levers independently mounted upon the said shaft, and transmitting bars adjustably connected with said levers and pivotally connected with said racks.

5. In a vehicle, the combination with the body thereof, axles for the body, clutches secured to the rear axle, a driving pinion for each clutch, and a segmental rack mounted for rocking movement above each pinion, being in engagement with said pinions, of adjustable bearing plates located upon the body, locking devices for the bearing plates, a shaft connecting the said bearings, pedals independently mounted upon the said shaft, and adjustable connections between the said pedals and the said racks.

[Claims 6 to 8 not printed in the Gazette.]

875,468. ACETYLENE-GAS GENERATOR. FRANK E. STOVER and CHARLES L. DARNALL, Chattanooga, Tenn. Filed Aug. 1, 1907. Serial No. 386,684.



1. In an acetylene gas generator, a generator body, a carbid chamber, a removable cover for said carbid chamber that is water sealed when in operative position over said carbid chamber, and means carried by said generator body for vertically lifting and supporting said cover free from said carbid chamber to permit access to said carbid chamber.

2. In an acetylene gas generator, a generator body, a carbid chamber, a removable cover for said carbid chamber, a carbid indicator mechanism carried entirely by said cover, and means carried by said generator body for vertically lifting and supporting said cover and carbid indicator mechanism free from said carbid chamber, whereby said carbid indicator mechanism will be undisturbed.

3. In an acetylene gas generator, a generator body, a carbid chamber, a removable cover for said carbid chamber, and a vertically movable rod on said generator body engaged with said cover to lift the latter vertically in the upward movement of said rod.

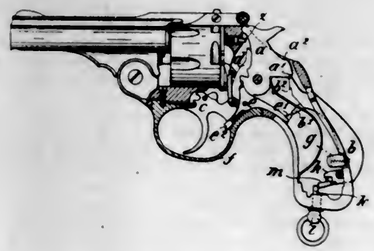
4. In an acetylene gas generator, a generator body, a carbid chamber, a removable cover for said carbid chamber, a vertically movable rod on said generator body engaged with said cover to lift the latter vertically in the upward movement of said rod, and means for supporting said rod in its lifted position.

5. In an acetylene gas generator, a generator body, a carbid chamber, a removable cover for said carbid chamber, and a vertically movable and rotatable rod having an upper horizontal end engaging said cover whereby the latter may be lifted vertically with said rod free from its carbid chamber and shifted laterally away from the upper open end of said carbid chamber.

[Claims 6 to 12 not printed in the Gazette.]

875,469. AUTOMATIC SAFETY APPLIANCE FOR LOCKING THE HAMMER AND THE SEAR OF SMALL-ARMS. JOSEPH TAMBOUR, Nanterre, near Paris, France. Filed Oct. 8, 1906. Serial No. 338,019.

1. In automatic safety appliances for firearms, the combination with a trigger, a sear, and a hammer disk, of a locking lever directly engaging said sear and hammer disk when the latter is in its cocked or uncocked position, and means for locking the said lever.



2. In automatic safety appliances for firearms, the combination with a trigger, a sear, and a hamme disk, of a locking lever directly engaging said sear and hammer disk when the latter is in its cocked or uncocked position.

3. In automatic safety appliances for firearms, the combination with a trigger, an elongated sear, and a hammer disk, of a locking lever directly engaging said sear and hammer disk when the latter is in its cocked or uncocked position.

4. In automatic safety appliances for firearms, the combination of a trigger, an elongated sear, and a hammer disk with a beveled projection and a safety bent, and a locking lever directly engaging said sear and hammer disk when the latter is in its cocked or uncocked position.

5. In automatic appliances for firearms, the combination with a trigger, an elongated sear having a terminal projection, a hammer disk with a beveled projection and a safety bent, of a locking lever directly engaging said sear and hammer disk when the latter is in its cocked or uncocked position.

[Claim 6 not printed in the Gazette.]

875,470. MEASURING DEVICE. ALBERT E. THOMSON, Sioux Falls, S. D. Filed Apr. 2, 1907. Serial No. 365,962.

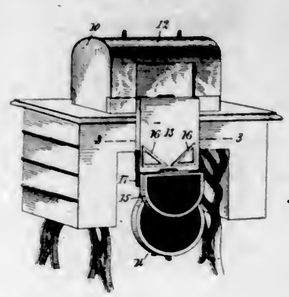


1. A measuring device for obtaining the length of a bolt of cloth or other fabric without unrolling the bolt, comprising a stick having a linear graduation thereon for measuring the width of one end of the bolt, the unit of graduation being an aliquot part of the diameter of a standard bolt whose yardage is equal to the number of folds.

2. A measuring device for obtaining the length of a bolt of cloth or other fabric without unrolling the bolt, comprising a stick having a linear graduation thereon, the linear graduation having fractions, each of which represents 1/100 of the yardage of a standard bolt measured at the bolt's diameter, the said graduation serving for measuring the width of one end of the bolt, the said graduation and the number of folds in the bolt forming the multiplicand and the multiplicator for obtaining the yardage of the bolt.

3. A measuring device for obtaining the length of a bolt of cloth or other fabric without unrolling the bolt, comprising a stick having a transverse gage pin, and linear scales on opposite faces of the stick, said gage pin being the zero point for the graduations, the unit of graduation being an aliquot part of the diameter of a standard bolt, one of the scales being for measuring bolts rolled flat on boards, and the other scale being for measuring bolts rolled round, either solid or hollow center.

875,471. COMBINED SEWING-MACHINE COVER AND CHAIR. JOSEPH TWINEM, New York, N. Y. Filed May 22, 1907. Serial No. 374,999.



1. In a device of the class described, the combination of a cover adapted for use in connection with sewing machines, said cover having a rectangular base, a chair back hinged to said base at the rear side thereof and adapted to be held in a substantially upright position with the cover as a support or to depend therefrom, a chair seat pivotally connected to said back intermediate its ends, and means for supporting said seat in a substantially horizontal position over the cover when the chair back is held upright, said seat being movable to a position in engagement with said back when the back is in its depending position.

2. In a device of the class described, the combination of a cover adapted for use in connection with sewing machines, said cover having solid ends and side rails connecting said ends, a chair back hinged to one of said side rails and adapted to be supported in a substantially upright position upon said side rail, means for connecting said back and said cover to hold them rigid in respect to each other, a chair seat pivotally connected to said back, and brackets on said back for supporting said seat in a substantially horizontal position over the body of the cover.

3. A device of the class described, comprising a cover adapted for use in connection with sewing machines, said cover having a rectangular base, a chair back hinged to said base at the rear side thereof and adapted to be held in a substantially upright position with the cover as a support or to depend therefrom, and a chair seat pivotally connected to said back intermediate its ends.

875,472. INDUCTION-COIL AND BOX FOR EXPLOSION-ENGINES. RICHARD VARLEY, Englewood, N. J., assignor to Varley Duplex Magnet Co., a Corporation of New Jersey. Filed July 24, 1907. Serial No. 385,378.

1. An induction coil unit for explosion engines comprising a U-shaped sheet of paramagnetic material, an L-shaped frame assembled therewith to form a casing, and an induction coil within such casing.

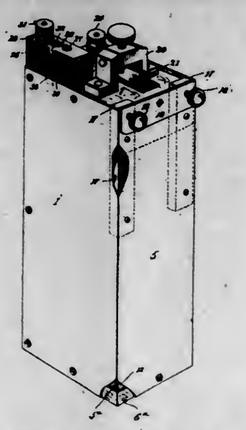
2. An induction coil unit for explosion engines, comprising a paramagnetic casing of sheet material having an open side, and an induction coil within the casing.

3. An induction coil unit for explosion-engines, comprising a casing including a U-shaped sheet iron part, and a non-magnetic frame assembled therewith to form a casing, and an induction coil within such casing.

4. An induction coil unit for explosion engines, comprising a casing having a U-shaped sheet of paramagnetic material embodied therein, and an induction coil within such casing.

5. An induction coil unit for explosion engines, comprising a casing having three of its sides formed of a

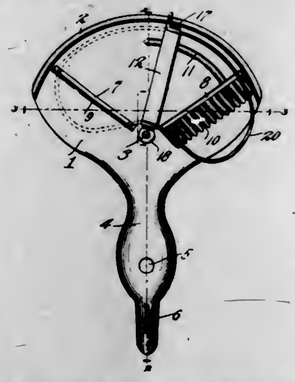
single piece of paramagnetic sheet material, and an induction coil within such casing and having its primary



and secondary windings grounded on said paramagnetic sheet material.

[Claims 6 to 12 not printed in the Gazette.]

875,473. FRUIT AND VEGETABLE SLICER. J. EVERETT WALSTON, Lansing, Mich. Filed June 29, 1907. Serial No. 381,463.



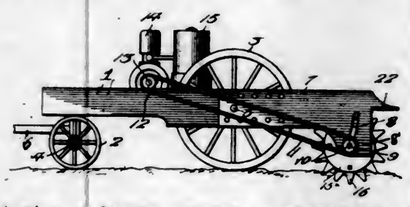
1. A fruit or vegetable slicer comprising a disk carrying a pivot member and having slots radiating therefrom, plain and corrugated cutting knives along the margins of the respective slots and extending from opposite sides of the disk, a swinging frame supported by said pivot member and carrying followers on opposite sides of the disk for cooperation with said knives, and handles applied to the frame for swinging the same from either side of the disk.

2. A fruit or vegetable slicer comprising a disk having an arcuate edge and carrying a pivot member constituting the center from which the arc or curvature of said edge is struck, said disk being further provided with slots on opposite sides of the center thereof radially arranged between the pivot member and curved edge, cutting knives along the margins of the slots and projecting from the opposite faces of the disk, a swinging frame pivotally supported by said pivot member and having portions on opposite sides of the disk connected by a yoke in guided engagement with the curved edge, followers carried by said portions for coaction with the respective knives, and handles applied to the frame portions, whereby the frame may be swung from either side of the disk.

3. A fruit or vegetable slicer comprising a disk provided with radial slots, plain and corrugated cutting knives along said slots and projecting from the opposite faces of the disk, a swinging frame carrying a pair of follower members arranged on opposite sides of the disk for respective coöperation with said knives, and means for operating the frame from either side of the disk.

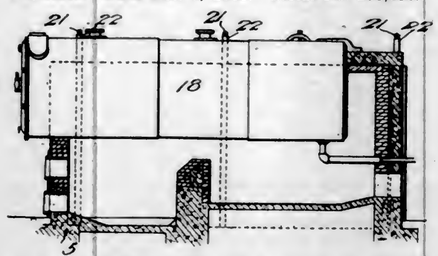
4. A fruit or vegetable slicer comprising a disk provided with radial slots, plain and corrugated cutting knives at the outer sides of the slots and extending from opposite sides of the disk, a swinging frame pivotally mounted upon the disk and in guided connection with the edge thereof, said frame including followers on opposite sides of the disk for coaction with the respective knives, and handles forming part of the frame on opposite sides of the disk.

875,474. HARROW. JAMES W. WANDELL, Philadelphia, Pa. Filed Sept. 17, 1906. Serial No. 334,839.



A plow or harrow comprising a wheeled supporting frame, plates projecting rearwardly and secured to the opposite sides of the frame, said plates being cut-away at their rear portions in right angular form to provide downward extensions and rearwardly projecting portions, said extensions and plates being provided with arcuate slots, an axle mounted in said slots and having angular disks thereon, means for rotating said shaft, and a transverse shield secured to said rearwardly projecting portions, substantially as described.

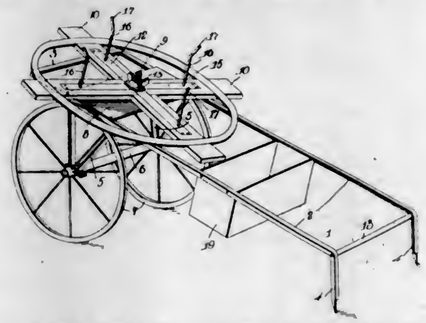
875,475. BOILER-SETTING. FRANK D. WARREN, Boston, Mass. Filed Dec. 5, 1905. Serial No. 290,453.



1. A boiler setting comprising a foundation, structure walls erected on said foundation, strengthening columns formed integral with said walls and disposed at the ends and at intermediate points between the ends of the walls, vertical I-beams embedded in said columns and projected above the upper ends thereof, perforated bearing heads secured to the upper ends of said I-beams, strengthening rods connected to said heads, intermediate walls provided with tongue and groove joints, and said joints being calked with asbestos, boilers seated in said setting and provided with fire clay jackets, there being an intermediate air space between said boilers and walls, substantially as described.

2. The herein described boiler setting comprising a foundation, walls erected on said foundation, and formed of a concrete material, strengthening columns formed integral with the walls, I-beams embedded within said columns, rods embedded within said columns, metal tie loops surrounding said rods and I-beams, intermediate walls provided with tongue and groove joints, said joints being packed with asbestos, said I-beams extending above said columns and provided with perforated bearing heads, rods extending through said heads, boilers secured in said setting and provided with fire clay jackets, there being an intermediate air space between said jackets and walls.

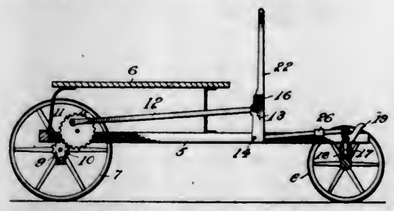
875,476. WIRE-REEL. BYRON F. WASSON, Clinton, Ill. Filed Aug. 16, 1907. Serial No. 388,911.



1. A wire reel carrier, comprising an approximately U-shaped member composed of a single piece of material and having the free ends of its legs bent at an angle thereto, a tie rod connecting said legs near their bent portion, a cross bar connecting said legs near their inner ends, an upwardly projecting reel-carrying pivot bolt rigidly mounted on said cross bar, V-shaped braces secured at their free ends to said legs at opposite sides of said cross bar, an axle pivotally connected with said V-shaped braces, and wheels mounted at opposite ends of said axle.

2. A wire reel carrier, comprising an axle having supporting wheels, V-shaped braces pivotally connected at their apices with said axle near its opposite ends, an approximately U-shaped member with the legs thereof secured to the free ends of said V shaped braces, a cross bar connecting said legs between the ends of said V-shaped braces and having reel-supporting means, the free ends of said legs being bent downwardly at an angle to form anchoring stakes, said stakes being shorter than the distance of the reel-supporting means from the ground to hold the reel in an inclined position to facilitate the paying out of the wire therefrom.

875,477. WAGON. FRANK WEBER, New York, N. Y. Filed Aug. 28, 1907. Serial No. 390,428.



1. In a vehicle, a propelling mechanism, a steering mechanism, and a handle adapted to be interchangeably used as a tongue for the steering mechanism and as an operating-lever for the propelling mechanism without disconnecting it from the vehicle.

2. In a vehicle having propelling means, a handle composed of two sections pivoted together, means for rigidly connecting one of said sections to the front axle of the vehicle whereby the handle may be used as a tongue, and means adapting the other of said sections to be used as a hand-lever for the propelling means while the first-named section remains inactive.

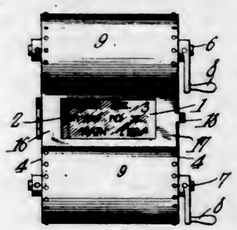
3. In a vehicle having propelling means, a king-pin rigidly attached to the front axle of the vehicle, a handle swiveled to the head of said pin composed of two sections pivoted together, means for detachably connecting the inner section of the handle to the head of said pin to provide a tongue, and means for detachably connecting the outer section of said handle to the propelling means to serve as a hand-lever.

4. In a vehicle having propelling means, a handle swivelly connected to the vehicle composed of two sections pivoted together, and means for detachably connecting the outer section with the propelling means to serve as an operating lever therefor without disconnecting the inner section of the handle from the vehicle.

5. In a vehicle, a propelling mechanism, a steering mechanism, a handle composed of two sections, the outer section being adapted to be interchangeably used as a tongue for the steering mechanism and as an operating-lever for the propelling mechanism, and means permanently connecting the inner section of the handle to the vehicle.

[Claims 6 to 9 not printed in the Gazette.]

875,478. TELEPHONE-DIRECTORY. ALBERT WEINRAUB, New Brunswick, N. J. Filed May 2, 1907. Serial No. 371,462.



A directory such as described comprising receptacles spaced apart and having opposite openings, shafts journaled for rotation in said receptacle, a plate bridging the space between the receptacles and the openings thereof and having at its sides flanges which pass through said openings and lie against the inner sides of the receptacle, said plate also having at its ends flanges which are bent back over the intermediate portion of said plate and a strip winding upon the shafts and passing through the openings in the receptacles and lying upon the bridge plate with its edges under the flanges at the ends thereof.

875,479. KNIFE-SETTING GAGE. CHARLES H. WEST, Estabutchie, Miss. Filed May 9, 1907. Serial No. 372,682.

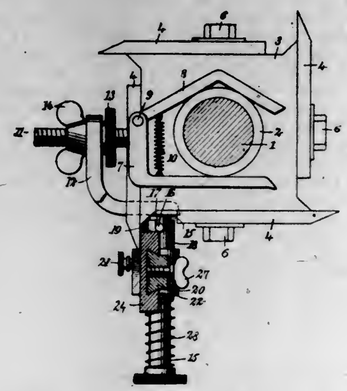
1. A knife setting gage comprising centering clamps, brackets adjustably connected with said clamps, hangers connected with said brackets, gage bars mounted in said hangers, and a gage adjustably mounted on said gage bars.

2. A knife centering gage comprising centering clamps, provided with threaded studs, brackets mounted upon and adjustable lengthwise of said studs, hangers connected with said brackets, gage bars mounted on said hangers, and a gage adjustably mounted on said gage bars.

3. A knife setting gage comprising clamps having bent arms adapted to center said clamps on a shaft, and provided with threaded studs, brackets mounted upon and adjustable longitudinally of said studs, lock nuts mounted upon said studs on opposite sides of said brackets, hangers connected with said brackets, gage bars mounted on said hangers, and a gage adjustably mounted on said gage bars.

4. A knife setting gage comprising centering clamps,

hangers connected with said centering clamps, sleeves movable lengthwise of said hangers, heads adjustably mounted on said sleeves, and a gage mounted on said heads.



5. A knife setting gage comprising supporting clamps having bent pivoted arms adapted to center said clamps on a shaft, springs secured to the arms of each of said clamps, studs connected with said clamps, brackets adjustable longitudinally of said studs, means for locking said brackets on the studs, hangers connected with said clamps, and a gage adjustably mounted upon gage bars connected with said hangers.

[Claims 6 to 8 not printed in the Gazette.]

875,480. MEANS FOR PROTECTING RIVER-BANKS. CLIFTON M. WESTENHAVER, Denver, Colo., assignor to The Westenhaver Contracting Company, a Corporation of Wyoming. Filed May 2, 1907. Serial No. 371,516.

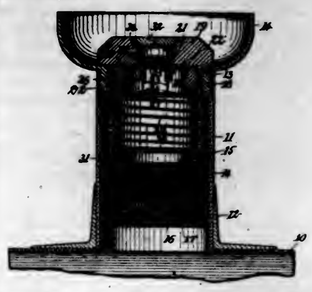


1. The herein described means for protecting the banks of running streams, consisting of walls extending from the solid bank of the stream outwardly into the channel thereof and having their planes directed upstream and forming suitable oblique angles with the direction of the current so that the edges of the walls are chiefly opposed to the flow of the current, substantially as described.

2. Means for protecting the banks of running streams comprising a series of walls arranged in different planes and having their planes directed up stream and suitably separated to form compartments for the reception of alluvial material automatically deposited by the stream whose channel is to be limited, substantially as described.

3. The means herein described for limiting the channels of running streams comprising walls extending outwardly from the bank into the stream so that their edges are chiefly opposed to the flow of the current, the said walls being suitably separated to form compartments for the purpose set forth.

875,481. SAFETY-CLOSURE FOR RECEPTACLES. LYMAN A. WILSON, New York, N. Y. Filed Feb. 20, 1907. Serial No. 358,364.



1. In combination with a tank having a filling opening therein, a safety closure for said opening, comprising a plug, a frangible diaphragm carried thereby, and an automatic igniter supported adjacent the outer side of said diaphragm.

2. In combination with a tank having a filling opening therein, a safety closure for said opening, comprising a plug having an axial passage therethrough, a diaphragm normally closing said passage, and an automatic igniter adjacent the outer end of said passage.

3. In combination with a tank having a filling opening therein, a safety closure for said opening, comprising a plug having a passage therethrough, a diaphragm normally closing said passage, an automatic igniter adjacent the outer end of said passage, and means adjacent the inner end of said passage for preventing back firing.

4. A safety closure for tanks and the like, comprising a plug having an axial passage therethrough, a frangible diaphragm normally closing said passage, a removable closure for the outer end of said passage, and an automatic igniter intermediate said closure and said diaphragm.

5. A safety closure for tanks and the like, comprising a plug having an axial passage therethrough, a frangible diaphragm normally closing said passage, and an automatic igniter adjacent the outer end of said passage, said igniter comprising a catalytic agent.

[Claims 6 to 13 not printed in the Gazette.]

875,482. ARTIFICIAL LIMB. WILLIAM G. WYATT, Boreing, Ky., assignor of one-half to James H. Wyatt, Boreing, Ky. Filed Mar. 29, 1907. Serial No. 365,383.



1. In an artificial limb, the combination of a crotched body, adjustable flexible members thereon for securing the limb to the leg of the user, and a pad vertically adjustable with one of the members.

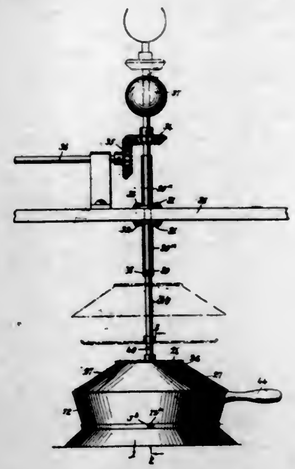
2. In an artificial limb, the combination of a body provided with an extension, adjustable slides on the body, a thigh strap attached to one of the slides, a second strap attached to the remaining slides, and a pad secured to the last-mentioned slides.

3. In an artificial limb, the combination of a crotched body comprising a pair of members one of which is prolonged to form a thigh extension, a pair of adjustable slides on the members, fastenings for securing the slides in adjusted position, a padding secured to the slides to move therewith, a fastening strap loosely attached to the slides, and means for attaching the said extension to the thigh of the user.

4. In an artificial limb, the combination of a crotched body, means for moving the members of the body toward or away from each other, the members being provided with longitudinal slots, slides on the members, bolts passing through the slides and slots for securing the former in adjusted positon, a padding attached to and movable with a pair of slides, a strap movable with the said pair of slides, and a second strap attached to another slide.

5. In an artificial limb, the combination of a crotched body having one of its members extended upwardly and the members having oppositely disposed longitudinal slots, the extension having a longitudinal slot, slides movable on the members at the slotted portions, keepers or guards secured to the slides, bolts passing through the slides and slots for holding the former in adjusted position, straps passing through the keepers, a padding secured to the slides at the oppositely disposed slots, and means for adjusting the relative position of the members.

875,483. CORN-POPPER. GEORGE B. YOUNG and JOSEPH H. YOUNG, El Paso, Tex. Filed July 20, 1907. Serial No. 384,693.



1. In a device of the class described, in combination, a pan, means for heating said pan, an agitator movable toward and away from said pan, and driving means for said agitator, said driving means being operatively connected with said agitator when the latter is in position within said pan, and being inoperative with respect to said agitator when the same is displaced from said pan.

2. In a device of the class described, in combination, a base, a base-plate on said base, a pan arranged upon said base-plate and having a rim located between said base and said base-plate, said pan having a bottom remote from said base-plate, insulators between said bottom and said base-plate and adjacent thereto respectively, means for rigidly connecting said base-plate and said bottom, a coil support between said base-plate and said bottom, a heating coil around said coil support and having the ends of the coil carried by said coil support, and means for electrically connecting the ends of said coil with a source of electrical supply.

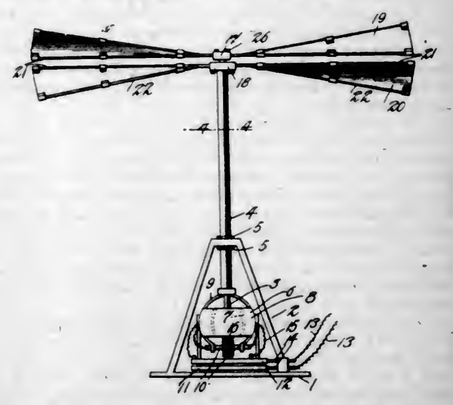
3. In a device of the class described, in combination, a base having a rim, a base plate on said base and presenting a flange, a pan mounted upon said base plate between said rim and said flange, said pan having a bottom remote from said base plate, insulators between said bottom and said base plate and adjacent thereto respectively, means for rigidly connecting said base plate and said bottom, a coil support between said base plate and said bottom, a heating coil around said coil support and having the ends of the coil carried by said coil support, binding posts carried by said base and adapted to be connected with a suitable source of electrical supply, and means for electrically connecting said binding posts and the ends of said coil.

4. In a device of the class described, in combination, a base, a pan mounted upon said base, means for heating said pan, a shaft having stirring arms, means for movably mounting said shaft whereby said stirring arms are arranged within said pan when said shaft is in a depressed position, means for operatively connecting said shaft with driving means when said shaft is in a depressed position, whereby said shaft is not operated when the same is elevated, means for holding said shaft in an elevated position, and a cover for said pan and controlled by said shaft.

5. In a device of the class described, in combination, a pan, means for heating said pan, a shaft having stirring arms, said shaft being movable toward and away from said pan, a driving shaft, said shaft in one position being operatively connected with said driving shaft, means for holding said shaft in an inoperative position, and a cover for said pan carried by said shaft.

[Claims 6 and 7 not printed in the Gazette.]

875,484. PROPELLER. ALBIN A. ANDERSON, Mead, Nebr. Filed July 26, 1907. Serial No. 385,702.



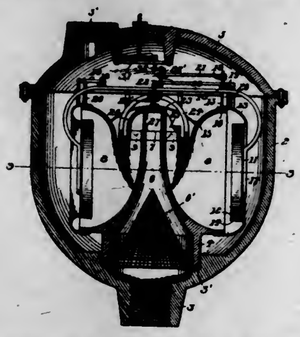
1. A propeller comprising a main shaft and enveloping sleeve therefor, an electro-motor having the field connected to the sleeve and the armature connected to the shaft, a head block secured to the shaft, a head block secured to the sleeve, and a blade projecting from each of said blocks, said blade comprising spaced rods and a strip secured between the rods, one of the rods being straight throughout its length and the other formed with a bend adjacent the connection with the block.

2. A propeller comprising a revolving element, a head block secured thereon, and a blade projecting from said block, said blade comprising spaced rods and a strip secured between the rods, one of the rods being straight throughout its length and the other formed with a bend adjacent the connection with the block, and means for permitting independent adjustment of the rods.

3. A propeller comprising a revolving element, a head

block secured thereon, and a blade projecting from said block, said blade comprising spaced rods and a strip secured between the rods, one of the rods being straight throughout its length and the other formed with a bend adjacent the connection with the block, means for mounting the rods in the block to permit their independent adjustment, and means for securing said rods against movement at will.

875,485. GAS-METER. JAMES R. ARMSTRONG, Pittsburg, Pa., assignor of one-third to William H. Irvin, Pittsburg, Pa. Filed Feb. 19, 1907. Serial No. 358,163.



1. In a meter, the combination of a series of pockets arranged radially, diaphragms forming the outer walls of the pockets and adapted to move outwardly when the pockets are filling, and valve mechanism operatively connected to the diaphragms.

2. In a meter, the combination of a series of radially arranged pockets, diaphragms for the pockets adapted to move outwardly when the pockets are filling, connections between opposite diaphragms whereby as one moves outwardly under pressure of inflowing gas the opposite diaphragm moves inwardly for expelling the gas contained in its pocket, and valve mechanism operatively connected to the diaphragms.

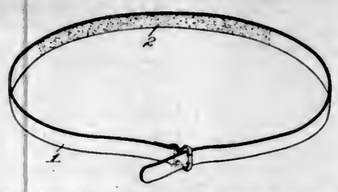
3. In a meter, the combination of a central gas inlet chamber, pocket side-walls extending from the outer face of the chamber, diaphragms forming outer walls of the pockets and adapted to move outwardly when the pockets are filling, connections between opposite diaphragms whereby they are caused to move simultaneously in the same direction, the central inlet chamber being provided with a valve seat which communicates with all the pockets, and a valve on the seat and operatively connected to the diaphragms for admitting and discharging gas from the pockets.

4. In a meter, the combination of a single structure consisting of a central upright gas inlet chamber open at its lower end for gas to enter and at its upper end provided with a valve seat, pocket side-walls extending from the outer face of the chamber, diaphragms forming the outer walls of the pockets, connections between opposite diaphragms, a valve on the seat for controlling the passage of gas to and from the pockets, and an operative connection between the valve and diaphragms.

5. The combination of an outer casing having a central gas-inlet at its lower end and a gas outlet, a single structure within and removable from the casing and consisting of a central gas inlet chamber adapted at its lower end to connect with the casing inlet and at its upper end provided with a valve seat, pocket side-walls extending from the outer face of the chamber, said valve seat communicating with all the pockets, diaphragms forming the outer walls of the pockets, connections between opposite diaphragms, a valve on the seat for controlling the passage of gas to and from the pockets, and an operative connection between the valve and diaphragms.

[Claims 6 to 9 not printed in the Gazette.]

875,486. BELT. JOSEPH ASKINS, Lima, Ohio. Filed Apr. 11, 1907. Serial No. 367,531.



1. A belt having a portion of the same at the back provided with a thin covering of gritty substance.

2. A belt having both sides of the back portion provided with a thin covering of gritty substance.

875,487. MEANS FOR CAUSING AN AUTOMATIC SCOURING ACTION FOR THE REMOVAL OF SILT FROM RIVER-BEDS AND WATERWAYS. EDOUARD M. AUDOUIN, Poitiers, France, administrator of Louis Joseph Audouin, deceased. Filed Mar. 25, 1904. Serial No. 200,071.



1. Means for creating a navigable channel in a stream having a shifting bottom, comprising a deviating dam arranged at an angle with respect to the banks of the stream and provided with vertical movable gates suspended above the bottom and spaced apart therefrom, to impart to the upper portion of the stream of water a movement in a direction parallel with the dam and to permit the lower portion of the stream of water to follow its original direction, whereby to permit the eroded material to settled beyond the dam in the angle formed by the dam and the bank of the stream.

2. A device for creating a navigable channel in a river with a shifting bed, comprising a dam provided with a plurality of series of gates located with their bottoms above the bed of the river and adjustable toward and from said bed in the plane of the dam.

3. In a device for creating a navigable channel in a river with a shifting bottom, the combination of a vertical dam having suspended sluice-gates, and a bottom dam of small height for securing a scouring action of the material at the bottom of the river and causing the material to be removed and deposited in another place.

4. A device for creating a navigable channel in a river with a shifting bottom, comprising a vertical dam in the river, the dam comprising movable sluice-gates independently mounted with respect to each other, guides in which said gates are adapted to move, and piles to which the guides are secured, whereby the height of the dam can be adjusted with reference to the bottom of the river.

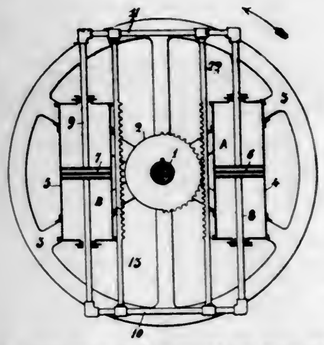
5. A device for creating a navigable channel in a river with shifting bottom, comprising a vertical dam in the river, in combination with floating-supports each comprising sluice gates, and each floating-support carrying a plurality of chains, and a pulley on one of said chains, the other chain being passed over said pulley and its end being anchored in a stationary position for providing adjustment.

[Claims 6 to 10 not printed in the Gazette.]

875,488. ROTATING MOTOR WITH RECTILINEAR CYLINDERS. ALBERTO BAGNULO, Naples, Italy. Filed Jan. 16, 1906. Serial No. 296,373.

1. In a rotary engine, the combination with the toothed rack and wheel, of two piston-rods, fixed on either side of the piston and rigidly connected to either end of the rack, substantially as shown and described.

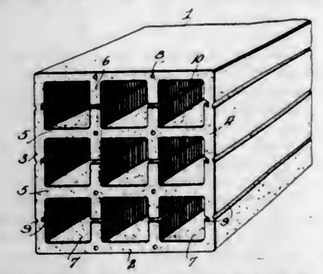
2. In a rotary engine, the combination with the toothed rack and wheel, and double piston-rods, of one or two revolving cylinders having the axis of symmetry displaced from the axis of revolution, and the center of symmetry placed on the perpendicular from the center of revolution, to the axis of symmetry, substantially as shown and described.



3. In a rotary engine, the combination with the toothed wheel and driving wheel, of two cylinders and racks placed symmetrically to the axis of revolution, and piston rods rigidly connected with cross bars all arranged and adapted to operate the engine as a double acting engine, as substantially shown and described.

4. A rotary engine comprising a fixed shaft, a fly-wheel loosely journaled thereon, a cylinder on the face of the wheel, a rod traversing the cylinder and provided with a piston in the cylinder, a rack bar parallel with the rod and connected thereto, and a mutilated gear-wheel secured to the shaft and meshing with the rack bar.

875,489. CONDUIT-TILE. JOHN BALCH, Newark, N. J. Filed Feb. 5, 1907. Serial No. 355,915.



1. A conduit having grooved opposing outer walls and slotted interior division walls.

2. A conduit having opposing outer walls provided with longitudinal grooves and interior division walls having slots arranged in alinement with the grooves.

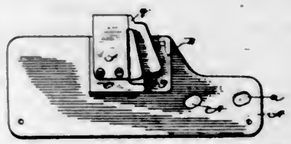
3. A conduit having outer opposing walls formed with inner and outer longitudinal grooves and inner division walls provided with slots in alinement with said grooves.

4. A conduit provided with a series of compartments formed by the interior division walls, said walls being provided with longitudinal slots, opposing outer walls of the conduit having weakening grooves in alinement with said slots, whereby the conduit may be divided at different points for access to the different compartments.

5. A conduit provided with rows of transverse compartments formed by division walls, the vertical division walls being provided with longitudinal transverse slots, the outer side walls of the conduit being formed with weakening grooves in alinement with the slots of the division walls of the different compartments.

[Claims 6 to 8 not printed in the Gazette.]

875,490. FOLDING-GUIDE FOR SEWING-MACHINES. WALTER E. BARNES, Bridgeport, Conn., assignor to Union Special Sewing Machine Co., Chicago, Ill., a Corporation of Illinois. Filed Mar. 5, 1901. Serial No. 49,706.



1. A folding guide for attachment to sewing machines, comprising a base piece, a standard rising therefrom, a portion projecting laterally from said standard, the base piece, projecting portion and standard forming a guiding recess, a vertical wall projecting above the said standard and having a horizontal extension above said laterally projecting portion and extending in the same direction, the vertical wall, horizontal extension and said projecting portion forming a recess parallel with and opening in the same direction as the first recess, a plate above the horizontal extension forming a recess between it and the horizontal extension, and means for folding the fabric around said plate and guiding it in said recess; substantially as described.

2. A folding guide for attachment to sewing machines, comprising a base piece, a standard rising therefrom, a portion projecting laterally from said standard, the base piece, projecting portion and standard forming a guiding recess, a vertical wall projecting above the said standard and having a horizontal extension above said laterally projecting portion and extending in the same direction, the vertical wall, horizontal extension and said projecting portion forming a recess parallel with and opening in the same direction as the first recess, said horizontal extension being provided with an upwardly and outwardly turned lip, with a rib having right and left projecting plates, one of which extends beneath the lip, thus forming a recess which opens in a direction opposite to the other two recesses; substantially as described.

3. A folding guide for attachment to sewing machines, comprising a base piece, a standard rising therefrom, a portion projecting laterally from said standard forming a recess between the projecting portion and the base piece, means for adjusting the height of said recess, and a folder attached to the standard having oppositely extending guiding recesses; substantially as described.

4. A folding guide for attachment to sewing machines, comprising a base piece, a standard rising therefrom, a portion projecting laterally from said standard forming a recess between the projecting portion and the base piece, an angle plate having a flange vertically adjustable on the laterally projecting portion, whereby the height of the recess may be adjusted, and a folder attached to the standard having oppositely extending guiding recesses; substantially as described.

875,491. ALARM-CIRCUIT. JOSEPH F. BASTEL, St. Louis, Mo. Filed June 28, 1906. Serial No. 323,786.

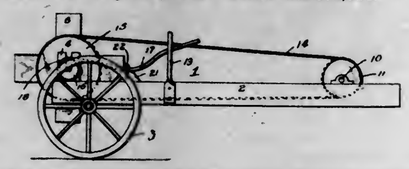


1. An alarm circuit for railway rails including conductors having spaced terminals and secured to the rails, an insulating block disposed between the contacts and secured to the rail supporting means, and a clamp for securing the conductor together beyond the block.

2. An alarm circuit for railway rails including conductors having spaced terminals and secured to the rails,

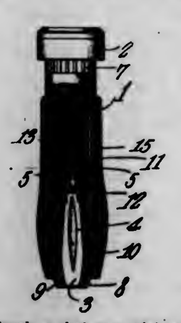
an insulating block disposed between the contacts and secured to the rail supporting means, and a clamp for securing the conductors together beyond the block, and spring arms carried by the clamp and bearing upon the contacts.

875,492. WIRE-ROLLER. JOHN H. BAUMAN, Concord, Nebr. Filed Apr. 29, 1907. Serial No. 370,934.



In a wire roller, a wheeled vehicle having open bearings at its rear end and a block upon one side adjacent to one of said bearings, a headed bolt in said block, a standard on said side piece adjacent to said block and having its inner face shouldered, a shaft journaled in the forward end of the vehicle and provided with a wheel, a shaft removably mounted in the open bearings having means for holding a wire spool and provided at one end with a wheel and a friction drum, a flexible connector upon said wheels, and a brake comprising a perforated flat strip of metal pivotally engaging with said bolt, the forward end of the brake being adapted to engage with the shoulders of the standard, and the rear end being curved and adapted to engage with said friction drum.

875,493. QUICK-ACTING BRACE-CHUCK. MICHAEL A. BEARD, Cabool, Ark. Filed May 6, 1907. Serial No. 372,171.

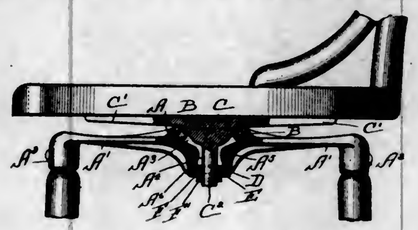


A quick acting chuck socket comprising a spindle having an interrupted thread and spaced portions, said spaced portions being in longitudinal alinement with the thread portions, cross pins lying between the spaced portions, chuck jaws having hooked shanks which pivotally and detachably engage the cross pins, said jaws having shoulders upon their outer sides and a chuck socket having upon its interior an interrupted thread for engagement with the thread of the spindle.

875,494. BALL-BEARING FOR CHAIRS. ISAAC E. BENDELL, York, Pa. Filed Feb. 20, 1907. Serial No. 358,481.

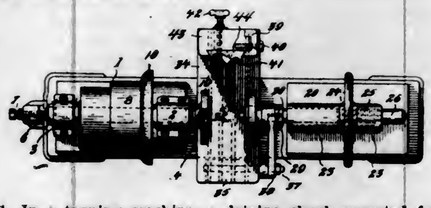
1. A ball bearing comprising a base having a recess formed in its top provided with inclined sides and bottom forming a raceway, a downwardly projecting portion formed on said base provided with a central bore communicating with the bottom of said recess having outwardly flanged sides, balls arranged in said raceway, a rounded head arranged on said balls provided with a depending spindle extending through said bore, balls arranged in said bore around said spindle, and a washer arranged on said spindle in said bore and bearing on the last mentioned balls, for the purpose described.

2. A ball bearing comprising a base having a recess formed in its top provided with inclined sides and bottom, the junction of the two being rounded forming a raceway, a downwardly projecting portion formed on said base provided with a bore communicating with said recess having outwardly flanged sides, a rounded head arranged in said recess provided with a depending spindle extending



through said bore, balls arranged in the raceway under said head, a mica washer arranged on said spindle in said bore, balls arranged around said spindle in said bore, a concaved convexed washer arranged on said spindle and balls in said bore, and a cotter pin passing through said spindle engaging said washer, for the purpose described.

875,495. TURNING-MACHINE. WILLIAM H. BERKHEISER, Memphis, Tenn., assignor to Memphis Column Company, Memphis, Tenn., a Corporation of Michigan. Filed Feb. 11, 1907, Serial No. 356,810. Renewed Nov. 14, 1907. Serial No. 402,211.



1. In a turning machine, a driving chuck mounted for longitudinal movement, a clutch member adapted to move with said chuck, a driving pulley provided with a cooperating clutch member, and an adjustable chuck opposite the driving chuck.

2. In a turning machine, a driving chuck mounted for longitudinal movement, a clutch member adapted to move with said chuck, a driving pulley provided with a cooperating clutch member, an adjustable chuck opposite the driving chuck, a track or way disposed laterally between said chucks, and a knife holding carriage mounted to reciprocate upon said track.

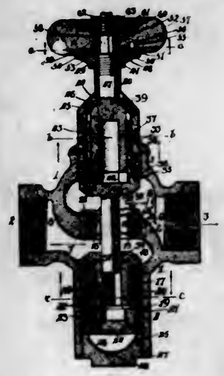
3. In a turning machine, a driving chuck mounted for longitudinal movement, a clutch member adapted to move with said chuck, a driving pulley provided with a cooperating clutch member, an adjustable chuck opposite the driving chuck, a track or way disposed laterally between said chucks, a knife holding carriage mounted to reciprocate upon said track, a driving rack carried by said carriage, a pinion mounted in said track, and an operating lever carried by the shaft of said pinion.

4. In a turning machine, a driving chuck mounted for longitudinal movement, a clutch member adapted to move with said chuck, a driving pulley provided with a cooperating clutch member, an adjustable chuck opposite the driving chuck, a track or way disposed laterally between said chucks, a knife holding carriage mounted to reciprocate upon said track, a driving rack carried by said carriage, a pinion mounted in said track, an operating lever carried by the shaft of said pinion, and an adjustable stop screw carried by said carriage to limit the travel thereof in one direction.

5. In a turning machine, a driving chuck mounted for longitudinal movement, a clutch member carried by said chuck to move therewith, a driving pulley provided with a coöperating clutch member, a spring disposed within said pulley to normally separate said clutch members, and an adjustable chuck opposite said driving chuck.

[Claims 6 to 8 not printed in the Gazette.]

875,496. HIGH-PRESSURE VALVE. JAMES A. BISHOP, Chicago, Ill. Filed Dec. 18, 1906. Serial No. 348,425.



1. In a high-pressure valve, the combination of a casing, a cross wall within the casing dividing the interior of the casing into an inlet passage and an outlet passage, a ring carried by the cross wall and having a seating face on each side, a first and second valve plug oppositely movable in relation to each other, and each valve plug having an acting face to coact with the seating face of the ring, a divided valve stem, one section adjustably entered into the first valve plug and the other section integral with and continuing from the first valve plug and adjustably entered into the second valve plug, and means for actuating the first section of the stem and simultaneously advancing and withdrawing both valve plugs, substantially as described.

2. In a high-pressure valve, the combination of a casing, a cross wall within the casing dividing the interior of the casing into an inlet passage and an outlet passage, a ring carried by the cross wall and having a seating face on each side, a front valve plug operative in the casing, a rear valve plug operative in the casing, the two valve plugs oppositely movable and each having an acting face to coact with the seating face of the ring, a divided valve stem, one section adjustably entered into the front valve plug and the other section integral with and continuing from the front valve plug and adjustably entered into the rear valve plug, and means for actuating the front valve plug section of the divided stem and simultaneously advancing and withdrawing both the front and rear valve plugs, substantially as described.

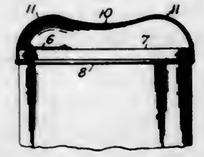
3. In a high-pressure valve, the combination of a casing, a cross wall within the casing dividing the interior of the casing into an inlet passage and an outlet passage, a ring carried by the cross wall and having a seating face on each side, a front valve plug operative in the casing, a rear valve plug operative in the casing, the two valve plugs oppositely movable and each having an acting face to coact with a seating face of the ring, an adjusting sleeve adjustably entered into the the rear valve plug, a stem integral with and extending from the front valve plug and adjustably engaging the sleeve of the rear valve plug and connecting the front and rear valve plugs, a stem adjustably entered into the front valve plug, and means for turning the stem of the front valve plug forward and backward and simultaneously advancing and withdrawing both valve plugs, substantially as described.

4. In a high pressure valve, the combination of a casing, a cross wall within the casing dividing the interior of the casing into an inlet passage and an outlet passage, a ring carried by the cross wall and having a seating face on each side, a front valve plug operative in the casing, a rear valve plug operative in the casing, the two valve plugs oppositely movable and each having an acting face to coact with a seating face of the ring, an adjusting sleeve adjustably entered into the rear valve plug, a stem integral with and extending from the front valve plug and adjustably engaging the sleeve of the rear valve plug and connecting the front and rear valve plugs, an operating stem adjustably entered into the front valve plug, and means for turning the operating stem of the front valve plug forward and backward and simultaneously advancing and withdrawing both valve plugs, substantially as described.

5. In a high pressure valve, the combination of a casing, a cross wall within the casing dividing the interior of the casing into an inlet passage and an outlet passage, a ring carried by the cross wall and having a seating face on each side, a front valve plug operative in the casing, a rear valve plug operative in the casing, the two valve plugs oppositely movable and each having an acting face to coact with a seating face of the ring, an adjusting sleeve adjustably entered into the the rear valve plug, a stem integral with and extending from the front valve plug and adjustably engaging the sleeve of the rear valve plug and connecting the front and rear valve plugs, a plug for closing the rear end of the rear valve plug, an operating stem adjustably entered into the front valve plug, and means for turning the operating stem of the front valve plug forward and backward and simultaneously advancing and withdrawing both valve plugs, substantially as described.

[Claims 6 to 26 not printed in the Gazette.]

875,497. BOX FOR POWDER. CHARLES BOKAY, New York, N. Y. Filed Dec. 8, 1906. Serial No. 346,958.



1. A box or receptacle for tooth powder and the like, having an auxiliary cup provided with an approximately central transverse depression, forming, when the cover is inverted, a ridge or elevation and cavities adjacent thereto.

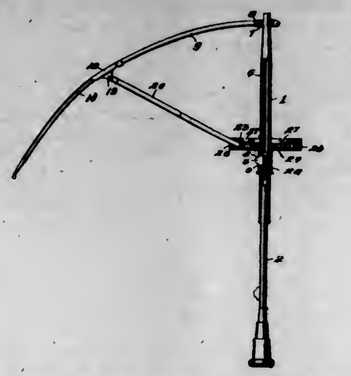
2. A receptacle for tooth powder and the like, having a bead near its upper edge and a lid permanently supported upon the said bead and provided with apertures near the edge thereof and a pivoted closure for said apertures, in combination with a readily detachable auxiliary cover, rounded to fit the hand and provided with an approximately central disposed transverse depression forming in the under side of the cover, two cavities and an elevated ridge portion separating said cavities.

875,498. UMBRELLA. MARGERY BOWDEN-HAMMOND, Eldorado Springs, Mo. Filed Jan. 9, 1907. Serial No. 351,536.

1. A folding umbrella embodying a stick, a runner mounted thereon, ribs pivotally connected to the stick and each embodying an inner and an outer section, the same being overlapped and pivotally connected at their adjoining ends to form a joint which will break inward, and a brace for each rib pivotally connected to the runner and having a slide pivotally connected to its outer end and movable lengthwise of the outer rib section, substantially as described.

2. A folding umbrella comprising a stick, a runner, ribs pivotally connected to the stick and each comprising an inner and an outer section, said sections having their adjoining ends overlapped and pivotally connected and provided with a stop which will adapt the joint to break inward, a slide coupled to the outer rib section and adapted to move lengthwise thereof and to embrace the overlapped

portions of the rib sections, and a brace interposed between said slide and the runner, substantially as described.



3. A folding umbrella compising a stick, ribs pivotally connected thereto and each comprising an inner section and an outer section, said sections being overlapped at their adjacent ends and pivotally connected where they overlap to form a joint which will break inward, flanges extending lengthwise of the outer rib section, a slide engaging said flanges and movable lengthwise thereof and also adapted to embace the overlapping portions of the inner and outer rib sections, a brace extending inward from the slide of each rib, and a runner to which the several braces are pivotally connected.

875,499. RAILROAD CONSTRUCTION. CARL R. BOWEN, Fordyce, Ark. Filed June 25, 1907. Serial No. 380,686.



1. A metallic rail support comprising a base plate of greater width than the flange of the rail, a reinforcing plate secured beneath the base plate, means for securing the rail to the base plate, and means for connecting the reinforcing plates of the respective rail supports.

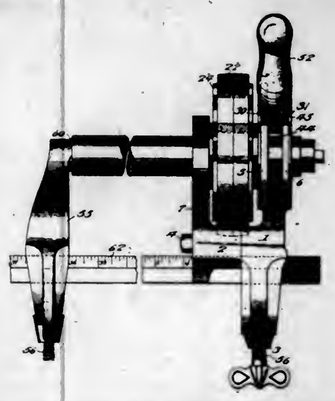
2. A metallic support for railroad rails comprising a base plate, a reinforcing plate secured beneath the base plate and formed with a dependent rib, and gage bars connecting the reinforcing plates of the respective rail supports, said gage bars being formed to receive the ribs of each reinforcing plate.

3. A metallic support for railroad rails comprising a base plate, a reinforcing plate secured beneath the base plate and formed with a dependent rib, gage bars connecting the reinforcing plates of the respective rail supports, said gage bars being formed to receive the ribs of each reinforcing plates, and rivets uniting the reinforcing plates and base plate, said rivets overlying the edge of the railroad rail flange.

4. A metallic support for railroad rails comprising a base plate, a reinforcing plate secured beneath the base plate and formed with a dependent rib, gage bars connecting the reinforcing plates of the respective rail supports, said gage bars being formed to receive the ribs of each reinforcing plate, rivets uniting the reinforcing plates and base plate, said rivets overlying the edge of the railroad rail flange, and clamping bars secured on said rivets to overlie and bear upon the rail flange.

5. A metallic support for railroad rails comprising a base plate, a reinforcing plate secured beneath the base plate and formed with a dependent rib, and gage bars connecting the reinforcing plates of the respective rail supports, said gage bars being formed to receive the reinforcing plates and rib thereof.

875,500. ROTARY TRIMMER. ALBERT C. BOWSER, Sandusky, Ohio, assignor of one-fifth to William F. Koegle, one-fifth to Arthur G. Rose, and one-fifth to Charles H. Zimmerman, Sandusky, Ohio. Filed Dec. 15, 1906. Serial No. 347,975.



1. A trimmer comprising a rotary member, roll-clamping means carried by the member, and cutting means disposed adjacent to the member and adapted to normally lock a portion of the rotary member against movement.

2. A trimmer comprising a rotary member including a roll-receiving element, clamping means carried by and operated in the movement of the member, and a trimming mechanism disposed adjacent the member, said trimming mechanism being adapted to normally lock the roll receiving element against rotation.

3. A rotary trimmer comprising a roll receiving barrel, clamping means carried by the barrel, means supported on the barrel for operating the clamping means, cutting mechanism, and means carried by said mechanism for normally locking the barrel against rotation.

4. A rotary trimmer comprising a barrel for receiving the roll to be trimmed, clamping means carried by the barrel, a casing mounted on the barrel and connected with the clamping means, and a cutting mechanism disposed adjacent the barrel, and barrel locking means carried by and operable with the cutting mechanism.

5. A rotary trimmer comprising a roll receiving barrel, a clamping means carried by the barrel, an independently movable casing mounted on the barrel and operatively connected with the clamping means, and a cutting mechanism disposed adjacent the barrel, and locking means carried by the cutting mechanism and designed to normally engage the barrel and maintain the same in fixed relation to the cutting mechanism during the operation of the clamping means.

[Claims 6 to 27 not printed in the Gazette.]

875,501. BLACKSMITH-TONGS. FRANK L. CASPER, Weiner, Ark. Filed July 19, 1906. Serial No. 326,953.

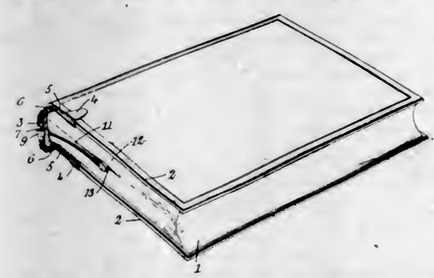
A pair of tongs comprising two handles provided adjacent their upper ends with enlarged rounded portions, a pivot pin projected centrally through said rounded portions, one of said handles having at its upper end a straight inclined inwardly pointing lip, the other handle having a curved inwardly pointing finger, a lip pivoted to the front end of said finger and comprising a working portion and spaced parallel outwardly extending wings overlying said

finger on each side thereof, said wings being formed with rearward and outward projections having their under sides concavely curved and formed to engage said rounded portions as stops, said projections being formed to project



beyond said finger at one extreme of their pivotal movement and to overlie said finger within the confines thereof at the other extreme of their pivotal movement.

875,502. BOOK-MARK. LEONARD B. CHADWICK, Chelsea, Mass. Filed July 24, 1907. Serial No. 385,233.



1. A book mark, comprising a pointer adapted to enter the leaves of a book, and means for connecting the pointer to a portion of the book and operating to insert and withdraw said pointer as the book is closed or opened.

2. A book mark, comprising a pointer movable in a direction intermediate of the covers of a book and adapted to enter between the leaves of the book, and means for connecting the pointer to a portion of the book, said connecting means being operable by the movement of opening or closing the book and controlling the pointer to insert or withdraw the same from between the leaves of a book as the book is shut or opened.

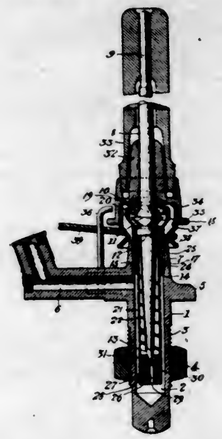
3. A book mark, comprising a member adapted to be mounted upon the binding of a book and operable by the movement of the covers thereof, and a pointer controlled by said member and movable therewith, said pointer being arranged to move in a direction intermediate of the book covers.

4. A book mark, comprising a pliable member adapted to be secured to a book cover and carried in a normal position when the cover is open, said member being twisted transversely of its length when the cover is closed, and a pointer controlled by said member.

5. A book mark, comprising a pliable member adapted to be secured to a book cover and carried in a normal position when the cover is open, said member being twisted transversely of its length when the cover is closed, and a pointer carried by said member and movable in a direction intermediate of the book covers, said member being swung to a position between the book covers when said member is twisted.

[Claims 6 to 13 not printed in the Gazette.]

875,503. SPINNING-SPINDLE AND BEARING THEREFOR. CHARLES H. CHAPMAN, Winchester, Mass. Filed Feb. 8, 1907. Serial No. 356,470.



1. A spindle, a bolster, a ball-bearing in the top of said bolster and a ball-bearing step in the bottom of said bolster to receive the spindle, and a bolster-case in which said bolster is supported and mounted to move laterally and vertically with the spindle.

2. A spindle, a bolster, ball-bearings in the top and bottom of said bolster to receive the spindle, the ball-bearing in the bottom being a step or supporting bearing, a bolster-case in which said bolster is supported and mounted to move laterally and vertically with the spindle, and means to fix the bolster in the bolster-case to prevent the bolster from rotating with the spindle.

3. A spindle, a ball-bearing bolster therefor, a contracted, cylindrical sleeve-whirl into which the upper portion of the bolster extends, the spindle, bolster and whirl arranged to move together laterally and vertically, and means to limit their vertical movement.

4. A spindle, a bearing therefor, and a whirl-base mounted upon the spindle and provided with a horizontally-extending flange, said whirl-base counterbored, a whirl inserted within the counterbore in the whirl-base, and a stop to engage the flange without contact with the whirl.

5. A spindle, a contracted cylindrical sleeve-whirl, a whirl-base recessed to receive and hold the sleeve-whirl and having a horizontally-extending flange, said whirl being of a smaller diameter than the cylindrical portion of the whirl-base, and a stop to engage the flange independently of the sleeve-whirl.

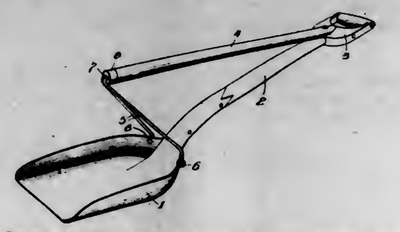
[Claims 6 to 15 not printed in the Gazette.]

875,504. SCOOP-HANDLE. HERVEY D. CLARK, Arcola, Ill. Filed May 13, 1907. Serial No. 373,365.

1. In combination with a blade and handle of a scoop, a supplemental handle secured at its rear end to the scoop handle and extending forwardly to a point forward of the rear end of the blade, and a brace connecting the said forward end of the supplemental handle to the sides of the blade.

2. In combination with a blade and handle of a scoop, a supplemental handle secured at its rear end to the rear end of the scoop handle and extending to a point above the blade, and a V-shaped brace connecting the forward

end of the supplemental handle to the rear end of the blade.



3. In combination with a scoop, a supplemental handle secured at its rear end to the handle of the scoop and extending forwardly to a point above the scoop blade, and a brace having joined arms fixed to the forward end of the supplemental handle and diverging therefrom to opposite sides of the blades and secured to the rear portions of the latter.

875,505. TAKE-UP ROLL FOR AUTOMATIC MUSICAL INSTRUMENTS. MELVILLE CLARK, Chicago, Ill. Filed Apr. 19, 1906. Serial No. 312,676.



1. A take-up roll for automatic musical instruments comprising a shaft; two roll sections mounted thereon having flanges at their outer ends, the shaft having notches at positions in opposite directions from the middle point of its length and disengageable catches mounted in the respective roll sections for engaging the notches.

2. A take-up roll for automatic musical instruments comprising a shaft having a short roll section at the middle of its length, and two supplemental roll sections adjustable on the shaft toward and from said middle roll section, the shaft and movable roll sections having coöperating means for guiding the latter in longitudinal movement along the former and preventing their relative rotation, the shaft having notches at a plurality of positions within the range of adjustment of the end sections, each end section having disengageable catches for engaging said notches.

3. A take-up roll for automatic musical instruments comprising a shaft having a middle roll section rigid therewith; two roll sections mounted on the shaft at opposite sides of the rigid section having flanges at their outer ends, the shaft having longitudinal ribs at opposite sides of the middle roll section and the movable roll sections having grooves for engaging the ribs, the ribs having notches at points in opposite directions from the middle roll section, and spring catches lodged in the grooves of the movable roll sections respectively, adapted to disengage and engage the notches.

875,506. GUIDING ATTACHMENT FOR PENHOLDERS. BERRY H. COLLINS, Shreveport, La. Filed Mar. 19, 1907. Serial No. 363,184.



1. A pen holder comprising a rest bar having one end fixed thereto and the other end free, said rest bar extending at an angle to said holder, and a member secured to said holder above said rest bar and extending rearwardly in a horizontal plane.

2. A pen holder comprising a rest bar having one end fixed thereto and the other end free, said rest bar extending at an angle to said holder, and a member secured to said holder above said rest bar and extending rearwardly in a horizontal plane, said member coöperating with the said rest bar for the purpose described.

3. A pen holder comprising a rest bar secured thereto at an angle and having one end fixed and the other end free, and a member secured to said holder above said rest bar and extending rearwardly in a horizontal plane, said member terminating in an enlarged head and coöperating with said rest bar for the purpose described.

4. In a device of the character described, the combination with an elongated holder of a pair of guiding bars adjustably secured thereto, for the purpose described.

5. In a device of the character described, the combination with an elongated holder of a pair of guiding bars adguide-bars adapted to be clamped thereto at separate points, for the purpose described.

[Claim 6 not printed in the Gazette.]

875,507. METHOD OF APPLYING MOLTEN SOLDER TO SHEET METAL. WILLIAM G. DAUGHERTY, Baltimore, Md. Filed Oct. 13, 1905. Serial No. 282,580.



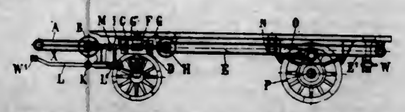
1. The herein described method of applying a bead or film of solder to can caps and similar articles, consisting in confining and holding the cap or other article to be soldered, leaving exposed to the solder only that portion of the cap or other article where the solder is to be applied, and then forcing molten solder under pressure to the said exposed portion and while the solder is confined thereon.

2. The herein described method of applying solder to can caps and similar articles, consisting in confining the entire cap or article within a mold or receptacle with the periphery exposed to the entrance of solder, and then forcing solder in a molten condition into the mold or receptacle, so as to cause the solder to flow around the exposed periphery of the can cap or similar article and while the solder is confined thereon.

3. The herein described method of applying solder to sheet metal, consisting in applying the solder in a fluid condition, confining the solder on the sheet metal, and subjecting the confined solder to pressure, so as to cause it to flow along the sheet metal.

4. The herein described method of applying solder to sheet metal, consisting in holding the sheet metal with a portion of the same exposed, applying the solder to the said exposed portion in a fluid condition, confining the solder on the exposed portion of the sheet metal, and subjecting the confined solder to pressure, so as to cause it to flow along the sheet metal, and form a bead or film of uniform shape.

875,508. AUTOMOBILE-TRAIN. ANGELO DE LUIGI and CARLO RAMAZZOTTI, Milan, Italy. Filed Mar. 22, 1906. Serial No. 307,763.



1. In a traction device, a train of vehicles, each having a pivoted axle, two telescopic members over said pivot having a Cardan joint at their outer ends. bevel gearing

connected with each joint, and chains for transmitting power to and from said gearing.

2. In a traction device, a train of vehicles, each having a pivoted axle, and an axle provided with a differential gearing, a flexible coupling over the pivot having bevel gearing at each end, chains for transmitting power to and from said bevel gearing, and a chain for transmitting power to the differential gearing.

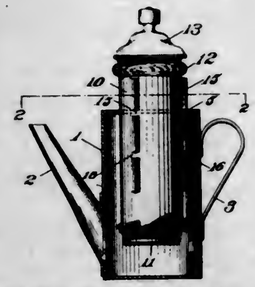
3. In a traction device, a train of vehicles, each having a pivoted axle at its forward end, a tongue connected with said axle, a fork support on the tongue, flexible coupling over said pivot, each end of which is provided with bevel gearing and the front end is carried by said support, and chains for transmitting power to and from said gearing, and chains for transmitting power to the traction wheels of the vehicles.

4. In a traction device, a train of vehicles, each of which is provided with a pivoted axle, poles for connecting the vehicles, the poles being of such a length that the relative width of the wheels and the length of the pole of each carriage represent a constant value for the whole train in order that the vehicles of the train may have the same angle of deviation.

5. In a traction device, a train of vehicles, each provided with a pivoted axle, pivoted poles for connecting the vehicles of the train, means for transmitting power to the train, and Oldham couplings in said means.

[Claim 6 not printed in the Gazette.]

875,509. COOKING OR CULINARY UTENSIL. LEROY J. ELLIS, Fanwood, N. J. Filed Jan. 5, 1906. Serial No. 294,765.



1. In a cooking utensil the combination of a containing vessel provided on its outside with substantially vertical and transversely notched ribs or flanges and an annular supporting plate notched to receive the ribs or flanges of the containing vessel and guide them in the vertical movement of said vessel and to enter the transverse notches in the ribs or flanges thereon so as to support said vessel at variable height.

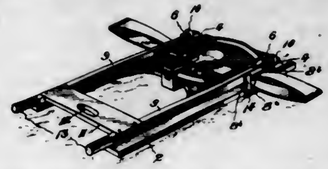
2. In a cooking utensil the combination of an outer receptacle having a notched annular plate, and a vessel contained in said outer receptacle, formed on its outside with transversely notched vertical ribs or flanges cooperating with the notched annular plate of the outer receptacle, to guide the inner vessel in its vertical movement and support it at variable height.

3. In a cooking utensil the combination of a vessel provided with vertically elongated and transversely notched ribs or flanges and a notched annular plate coöperating with the notched ribs or flanges on the vessel to guide the said vessel in vertical movement and support it in adjusted position.

4. In a cooking utensil, the combination of an outer receptacle formed with a notched or recessed mouth or opening and an inner vessel formed on its exterior with vertically elongated and transversely notched ribs or flanges cooperating with the notched or recessed mouth of the outer receptacle to support the inner vessel at different heights in said outer receptacle.

5. In a cooking utensil, the combination of an outer receptacle formed with a notched or recessed mouth or opening and an inner vessel adjustably supported in the mouth or opening of the receptacle by means of approximately vertical elongated and notched ribs or flanges, substantially as described.

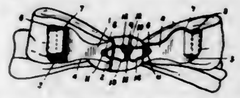
875,510. TRAP-SETTER. PETER ENGEN, Townsend, Mont. Filed July 9, 1907. Serial No. 382,897.



1. A trap setter comprising a base provided with end slots, a metal strip secured to said base and having loops extending upward through said slots, and a movable member comprising bars, a cross piece connecting said bars, and hooks on said movable member to engage the loops on the base member.

2. A trap setter comprising a base having recesses in the top side thereof for the pintles of the trap springs, a metal strip secured to said base and provided with loops, a movable member comprising bars, a cross piece connecting said bars, and wear plates secured to said bars, and hooks on the movable member adapted to engage said loops, substantially as described.

875,511. TIE-SHIELD. GEORGE E. FIGG, Montreal, Quebec, Canada. Filed Apr. 8, 1907. Serial No. 367,095.



1. A tie shield, comprising a piece of metal having a reduced central portion and slots extending inwardly from one edge at the ends and a lug extending outwardly and downwardly from the central portion, and a wire fastener secured thereto and projecting from the rear face thereof, substantially as described.

2. A tie shield, comprising a piece of metal having a central portion and a projecting lug from said central portion and enlarged ends joined to said central portion by suitable neck portions and vertical slots extending inwardly from the upper edge in the said enlarged ends, and fastening means secured to the rear face, substantially as described.

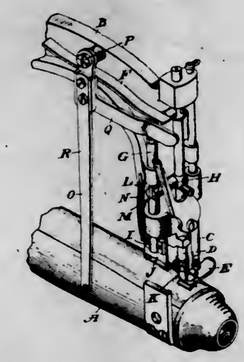
3. A tie shield, comprising a piece of suitable sheet material having a central portion and a lug projecting outwardly and downwardly from said central portion and holes to each side of said lug and vertical slots in proximity to the ends of said piece of material, and a wire fastener having projecting loops therefrom extending into said holes, substantially as described.

4. A tie shield, comprising a piece of sheet material having a lug projecting outwardly and downwardly from the central portion thereof and slots at the ends thereof and holes to each side of said lug and a wire fastener having loops formed at the ends thereof extending through said holes and upwardly projecting lengths from the lower bars looped over the upper bar and brought together towards the lower ends thereof, substantially as described.

875,512. THREAD-CUTTING DEVICE FOR SEWING-MACHINES. CHARLES H. FOSTER, New York, N. Y., assignor to The Union Special Sewing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 5, 1899. Serial No. 711,801.

1. In an apparatus for severing the threads between filled sacks, the combination with a sewing machine having an approximately vertical bed plate and an overhanging arm, a horizontally arranged presser bar mounted on

said arm, carrying a presser foot, coöperating feed mechanism, and a horizontal cutter bar parallel with the presser bar and also mounted on said arm, but having longitudinal movement independent thereof, and a coöperating stationary member, the cutting edges being arranged transverse to the line of feed, means for preventing the cutter bar from turning and means for moving the cutter bar longitudinally; substantially as described.



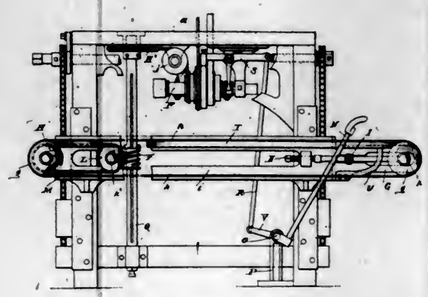
2. In a sewing machine, having an approximately vertical bed plate, a horizontally arranged presser bar carrying a presser foot with coöperating feed mechanism, mechanism for severing the chain of stitching after the sewing has been effected, including the horizontal cutter bar having longitudinal movement independent of the presser bar and a coöperating member, with their cutting edges transverse to the line of feed, with means for operating the cutter bar, said means including a swinging lever pivoted to the machine frame, one arm of which in its movement engages the horizontal cutter bar, and the other arm extending within reach of the operator, and a spring for keeping the cutter bar normally retracted; substantially as described.

3. A sewing machine having an approximately vertical bed plate, a horizontally arranged presser bar carrying a presser foot, with coöperating feed mechanism, a bar parallel with the presser bar and connected with the latter to prevent swinging thereof but having longitudinal movement independent of said presser bar, a cutting member carried by said bar, with its cutting edge operating across the line of feed, a coöperating stationary cutting member rigidly attached to a part of the machine frame, and means for operating the movable cutting member; substantially as described.

4. In a sewing machine having an approximately vertical cylindrical bed plate and stitch-forming mechanism, mechanism for severing the chain of stitching after the sewing has been effected, comprising a horizontally moving cutter bar with its cutting edge transverse to the line of feed of the machine, and a coöperating striking block or anvil secured to the outside of said cylindrical casing or bed plate, and in line with said cutting edge, means for preventing said cutting bar from turning and means for operating said cutting bar, substantially as described.

5. In a sewing machine having an approximately vertical bed plate, a horizontally arranged presser bar, a presser foot carried thereby, a cutter bar having a cross bar connection with the presser bar to permit swinging movement of the latter, but having an independent longitudinal movement, a cutting blade carried by the cutter bar, a spring attached at one end to a stationary part of the machine frame, and at the other end attached to the cutter bar, and a swinging lever pivoted to the machine frame, one arm of which in its movement engages the cutter bar, and the other arm extending within reach of the operator, and a striking block arranged on the bed plate of the machine in line with the cutting blade; substantially as described.

875,513. MACHINE FOR SEWING FILLED BAGS. CHARLES H. FOSTER, New York, N. Y., assignor to Union Special Sewing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed June 14, 1902. Serial No. 111,712.



1. In a filled bag sewing apparatus, the combination with a supporting frame, a sewing machine supported thereby and having its head overhanging said frame, stitch forming mechanism carried by said head, a vertically adjustable support beneath said stitch forming mechanism, a conveying belt carried by said support, means for tightening said belt, and means for driving said belt including a removable sprocket wheel whereby by the removal of said sprocket and the substitution of another the speed of the conveying belt may be changed, substantially as described.

2. In a filled bag sewing apparatus, the combination with a suitable frame, of the sewing mechanism the elements of which overhang the top of said frame, a vertically adjustable support beneath said sewing mechanism and of greater length than said frame, brackets upon said support, pulleys upon said brackets and a conveyer belt trained over said pulleys, one of said brackets being longitudinally adjustable; substantially as described.

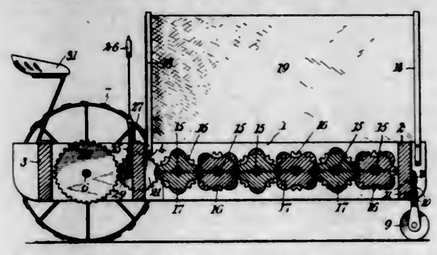
3. In a filled bag sewing apparatus, the combination with a suitable frame, of the sewing mechanism the elements of which overhang the top of said frame, a vertically adjustable support beneath said sewing mechanism and of greater length than said frame, brackets upon said supports, pulleys upon said brackets, and a conveyer belt trained over said pulleys, one of said brackets being guided in ways on the support, an end screw for adjusting the bracket longitudinally, and means for securing it in adjusted position; substantially as described.

4. In a filled bag sewing apparatus, the combination with a suitable frame, of the sewing mechanism, the elements of which overhang the top of said frame, a vertically adjustable support beneath said sewing mechanism, pulleys carried by said support, a conveyer belt trained over said pulleys, and means for driving the conveyer belt, comprising two parallel shafts having sprocket wheels thereon, one having a gear connection with the driving mechanism of the machine, and the other on the shaft carrying one of the conveyer belt pulleys, and a sprocket chain connecting the two wheels; substantially as described.

5. In a filled bag sewing apparatus the combination with a suitable frame of a sewing mechanism the elements of which overhang the top of said frame, a bag table beneath said sewing mechanism, an endless conveyer belt upon said table, common driving means for said sewing mechanism and the conveyer belt, a power transmitter, a clutch for causing the same to engage and disengage the parts to be driven, and a starting shifter projecting from said table for movement laterally by the leg of the operator, and connections between the shifting lever and the clutch; substantially as described.

[Claim 6 not printed in the Gazette.]

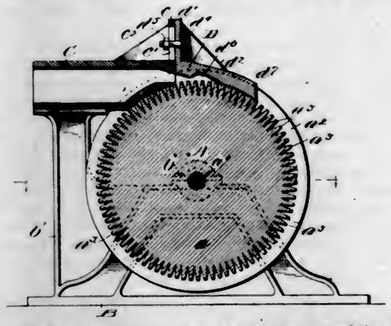
875,514. MACHINE FOR DESTROYING GRASSHOPPERS. BERNARDINO FRANCISCO, Penablanca, N. Mex. Filed Jan. 11, 1907. Serial No. 351,811.



1. An insect destroyer comprising a frame, a series of corrugated, intermeshing, crushing rolls journaled crosswise of the frame, intermeshing gears in fixed relation to said rolls, an axle journaled in the frame having a wheel fixed thereto for supporting the same, a gear fixed to the axle, a gear intermeshing with the gear fixed to the axle and one of said intermeshing gears, and a hand lever operable to shift said last-named gear, whereby said rolls are thrown out of action.

2. An insect destroyer comprising a frame, a series of closely adjacent rolls journaled crosswise of the frame, intermeshing gears in fixed relation to said rolls, an axle journaled in the frame, having a wheel fixed to one end thereof for supporting the frame, a gear fixed to the axle, an intermediate gear adapted to mesh with the gear fixed to the axle and one of said intermeshing gears, a seat fixed to the frame, and a hand lever carried by the frame adjacent to said seat, operable to shift said intermediate gear sidewise, whereby said rolls are thrown out of action.

875,515. ROTARY ENGINE. MORTIMER FRAUENTHAL, Conway, Ark. Filed May 24, 1907. Serial No. 375,424.



1. A rotary engine comprising a disk supported for a rotary movement and provided at each side of its periphery with annular radial flanges, and with radial vanes or wings arranged transversely and extending between the flanges, said vanes being of lesser height than the flanges, an inlet pipe for the motive fluid having one face curved to correspond with the path of travel of the free ends of the vanes and provided with grooves for receiving the flanges, said inlet pipe being provided with a flange at its free end, said flange having spaced slots, a tongue for deflecting the motive fluid against the vanes, said tongue having a flange abutting against the flange of the inlet pipe and provided with openings registering with the slots, bolts traversing the openings and the slots for securing the tongue to the pipe, said tongue having grooves for receiving the flanges of the disk and having a portion at the free end thereof curved concentrically with the disk and against which the ends of the vanes move.

2. A rotary engine comprising a disk supported for rotary movement and provided at each side of its periphery with annular radial flanges and with radial wings or vanes arranged transversely, the said vanes being of lesser height than the flanges and extending between the flanges, an inlet pipe for the motive fluid having one face curved to correspond with the path of travel of the free ends of the vanes and provided with grooves for receiving the flanges and a tongue for deflecting the motive fluid against the vanes and connected with the end of the inlet pipe and adjustable toward and from the disk, said tongue having grooves for receiving the flanges and having a portion at the free end thereof curved concentric with the disk and against which the free ends of the vanes or wings move.

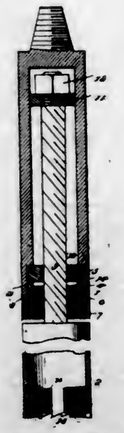
3. A rotary engine comprising a disk supported for rotary movement and provided at each side of its periphery with annular radial flanges, and with radial wings arranged transversely and extending between the flanges, said vanes being of lesser height than the flanges, an inlet pipe for the motive fluid having one face curved to correspond with the path of travel of the free ends of the vanes, and provided with grooves for receiving the flanges, and a tongue connected with the pipe for deflecting the motive fluid against the vanes, said tongue being adjustable toward and from the disk and being provided with grooves for receiving the flanges.

4. A rotary engine comprising a disk supported for rotary movement and provided with radial wings, or vanes, arranged transversely of the periphery thereof, an inlet pipe for the motive fluid having one face curved to correspond with the path of travel of the free ends of the vanes, a tongue connected with the inlet pipe for deflecting the motive fluid against the vanes, said tongue having a portion at the free end thereof curved concentric with the disk and against which the ends of the blades move, and means whereby to adjust said tongue toward and from the disk.

5. A rotary engine comprising a disk supported for rotary movement and provided with radial vanes or wings, an inlet pipe for the motive fluid having one of its faces arranged adjacent to the path of travel of the free ends of the vanes, a tongue connected with the pipe for deflecting the motive fluid against the vanes, said tongue being adjustable toward and from the disk and having a portion at the free end thereof against which the ends of the vanes move.

[Claims 6 and 7 not printed in the Gazette.]

875,516. WELL-DRILLING TOOL. FRONCO S. FREELAND, Broomfield, W. Va. Filed Oct. 29, 1906. Serial No. 341,098.



In a device of the character described, the combination of a tubular driver having the opening therethrough enlarged and interiorly threaded at one end thereof, an apertured cap fitting over the said end of the driver and pro-

vided with an exteriorly threaded rim received by the enlarged portion of the opening through the driver, an apertured operating member fitting in the enlarged portion of the opening of the driver and clamped in position by means of the cap, a cutter provided with a threaded stem extending through the perforations in the cap and before mentioned operating member and movable longitudinally within the driver, a second operating member having a threaded connection with the stem and fitting loosely between the cap and the first mentioned operating member, and means for securing a clutch connection between the two operating members when the driver is moved in one direction.

875,517. INSTEP-SUPPORTER FOR BOOTS AND SHOES. ANDERS G. GEFVERT, Philadelphia, Pa. Filed May 16, 1906. Serial No. 317,134.



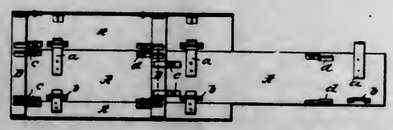
1. The combination, in an instep support for boots and shoes, of a base plate secured to the inner sole of the boot or shoe, a top plate extending across the base plate and detachably hinged to the same at one side, a block of resilient material forming a support and detachably mounted between said plates at the side opposite their point of engagement, and means carried by the base plate for positioning said support, said means not effecting its resiliency.

2. The combination, in an instep support for boots and shoes, of a base plate secured to the inner sole of the boot or shoe, a top plate extending across the sole and having a hooked portion at one side, said base plate being recessed for engagement by said hooked portion, and a block of rubber detachably mounted between said plates at the side opposite their point of engagement.

3. The combination, of a base plate secured to the instep portion of the insole of a boot or shoe and recessed at one side, a top plate extending across the sole and mounted above said base plate, a hinge member secured to the underside of the top plate having projecting hooks to engage the recesses of the bottom plate, and detachable means mounted between said plates and disposed at one side of the same for supporting said bottom plate.

4. The combination, of a base plate recessed at one side and secured to the instep portion of the inner sole of a boot or shoe, a pin on the opposite side of said plate, a rubber block mounted on said pin, a curved top plate overlying said base plate, a hinge member secured to the underside of the top plate, and hooks carried by said hinge member and arranged to enter the recesses in the base plate, so that while the top plate is normally connected to the base plate, it can be readily detached therefrom.

875,518. SECTIONAL SEWER-MOLD. GEORGE GEORGENSON, Wilmington, N. C. Filed Apr. 16, 1907. Serial No. 368,524.



1. A sewer mold, comprising a series of staves curved in cross section and of greater length than width, each bearing along one longitudinal edge one or more laterally projecting tongues, and on the other longitudinal edge one or more loops in the same transverse plane with the tongues and also having hook shaped clips at the ends on the inner sides and circular brace hoops with overlapping slotted ends arranged inside the panels and between the panels and the hook clips, said hoops being provided with bolts for adjustably connecting its ends.

2. A sewer mold, comprising separable brace hoops with overlapping and adjustable ends and a series of detachable panels forming together a complete tube, longitudinally adjustable hook clips on the inside of the panels for connecting them to the hoops, means for locking the panels to each other and diametrical braces arranged inside the hoops and made longitudinally extensible.

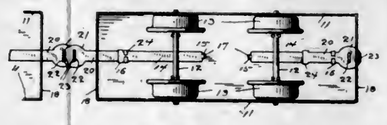
3. A sewer mold, comprising separable brace hoops having on their inner faces indented seats, sectional panels arranged outside the brace hoops and connected to them in series, to form a tube, and a diametrical brace having set screws at the opposite end adapted to enter the indented seats of the hoops.

4. A sewer mold, comprising separable brace hoops, sectional panels arranged outside the hoops and connected to them in series to form a tube, and a diametrical brace consisting of two bars having at their inner ends longitudinal slots and teeth along the side of the same, and a bolt passing through the slots, said bars having at their outer ends adjustable set screws.

5. A sewer mold, comprising separable brace hoops, sectional panels arranged outside the hoops and connected to them in series to form a tube, and two diametrical braces having longitudinal slots in the middle arranged at right angles to each other and having set screws at their ends and a central connecting bolt passing through the two crossed slots in the middle.

[Claim 6 not printed in the Gazette.]

875,519. TOY CAR COUPLING AND BUFFER. WILLIAM R. HABERLIN, Bridgeport, Conn., assignor to The American Miniature Railway Company, Bridgeport, Conn., a Corporation of Connecticut. Filed June 1, 1907. Serial No. 376,770.



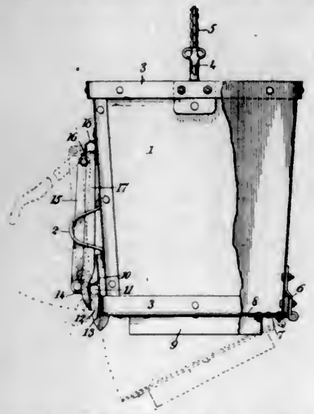
1. A coupler and buffer for toy railway cars comprising a pivoted draw bar, a coupler and buffer provided with a coupling lug and an engaging slot and lugs upon the coupler and buffer and the draw bar, respectively, which engage the contiguous parts, leaving the coupler and buffer free to slide longitudinally relatively to the draw bar, substantially as described, for the purpose specified.

2. A toy railway car having draw bars pivoted near its mid-length and extending outward and having lugs at their outer ends, and couplers and buffers provided with coupling lugs and engaging slots at their outer ends and at their inner ends with lugs, the lugs upon the outer ends of the draw bars and the inner ends of the couplers and buffers engaging the contiguous parts whereby said parts are secured together, leaving the couplers and buffers free to slide longitudinally.

3. A toy railway car having holes in the bottom near its mid-length, draw bars having lugs passing through said holes and turned downward to pivotally secure the draw bars in place and lugs on opposite sides at their outer ends, and couplers and buffers having at their outer ends coupling lugs and engaging slots and at their inner ends on opposite sides lugs, the lugs upon the outer ends of the draw bars and the inner ends of the couplers and buffers inclosing the contiguous members.

4. A toy railway car having draw bars pivoted near its mid-length and extending toward the ends and lugs on the sides of the draw bars at their outer ends, guard-plates at the ends of the cars having horizontal slots and couplers and buffers having coupling lugs and engaging slots, said couplers and buffers extending through the slots in the guard-plates and being provided at their inner ends on opposite sides with lugs and the lugs on the coupler and buffer and the draw bar, respectively, engaging the contiguous parts, substantially as described, for the purpose specified.

875,520. DUMPING-BUCKET. JAMES HAMILTON, New York, N. Y. Filed May 20, 1907. Serial No. 374,583.

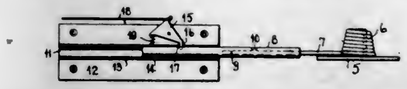


1. A dumping bucket provided with a hinged bottom, a rock shaft journaled on said bucket and provided with notched arms adapted to engage the free end of said bottom, and with a crank arm extending laterally from said bucket, an operating lever journaled on said bucket and provided with a crank arm extending in the same general direction as said lever, and a link connecting the crank arm of said lever and the laterally extending arm of said shaft.

2. A dumping bucket provided with a hinged bottom, a shaft journaled on said bucket and provided with notched arms adapted to engage the free end of the bottom of said bucket and with a crank arm extending laterally from said bucket, an operating lever journaled on said bucket and provided with a crank arm extending in the same general direction as said lever, and a link connecting the crank arm of said lever and the laterally projecting arm of said shaft, adapted to extend substantially parallel with said lever when the bottom of the bucket is closed.

3. A dumping bucket provided with a hinged bottom, a shaft journaled on said bucket and provided with notched arms adapted to receive the free end of said bottom, and with an arm extending out laterally from said bucket, an operating lever journaled on said bucket above said shaft, and provided with a crank arm, and a link connecting the crank arm of said lever and outwardly extending arm of said shaft so as to extend substantially parallel with said lever when the bottom of the bucket is closed.

875,521. SASH-FASTENER. ALBERT H. HANSEN, Oak Park, Ill. Filed Aug. 12, 1907. Serial No. 388,276.



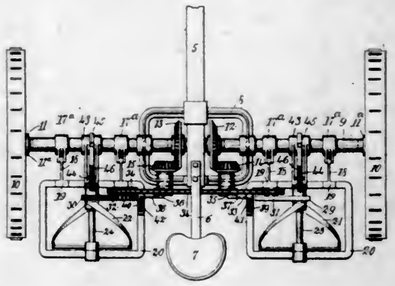
1. In a sash fastener, a perforated tube, a lock adjacent thereto provided with an extension adapted to pass through said perforation, a spring actuated shouldered member reciprocally mounted in said tube in position to permit said shoulder being engaged by said projection, and means for securing said spring in position.

2. In a sash fastener, two tubes reciprocally mounted one within the other, one of which is provided with an opening and the other with a plurality of recesses, a lock pivotally mounted adjacent to the outer tube and provided with an extension for passing through said perforation and engaging with the recessed portions of the inner tube, an arm secured to the inner tube at one end and having a coiled spring at the other, means for securing the outer tube in position, and means for securing the coiled spring in position.

3. In a sash fastener, two plates, one of which is adapted to be secured to a hinged sash, and the other to the ledge of a window casing, a perforated tube secured to one of the plates, and a coiled spring secured to the other plate, one end of said spring terminating in an arm, a recessed tube secured to said arm and reciprocally mounted in the other tube, a spring pressed lock provided with a projection in position for passing through said perforation and engaging with the recessed portion of the inner tube, and a cord connected with said lock for actuating the same.

4. In a sash fastener, two plates, one of which is adapted to be secured to a hinged sash and the other plate is adapted to be secured to the ledge of a window frame, a slotted and perforated tube secured to one of said plates, and a coiled spring to the other plate, the free end of said spring being in the form of a straight arm, a recessed tube secured to said arm and reciprocally mounted in the perforated tube, a projection on the inner tube for engaging with the slot of the outer tube, a substantially triangular lock pivotally mounted upon the first-mentioned plate and provided with a projection at one angle adapted to pass through said perforation and engage with the recessed portions of the inner tubes, a spring in engagement with another angle of the lock, and a cord connected with the remaining angle.

875,522. BEET-BLOCKER. LEWIS F. HAYNES, Brant, Mich. Filed June 1, 1907. Serial No. 376,822.

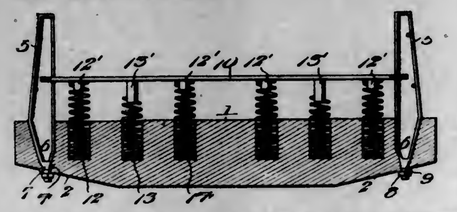


1. The combination of a frame provided with a tubular support, a shaft mounted within said frame, tread wheels connected with said shaft for turning the same, carriages disposed adjacent to said tubular support, each carriage being provided with a plurality of rollers whereby it is supported, pivotal connections from said carriage to said tubular support, so as to allow said carriage to move independently of said tubular support, a revoluble shaft mounted upon said carriage, cutters mounted upon said revoluble shaft, and mechanism controllable by rotation of said shaft for turning said revoluble cutters.

2. The combination of a tubular support, tread wheels connected therewith and adapted to turn as the machine is dragged along, gearing connected with said shaft, carriages secured to said tubular support and movable independently of each other, said carriages being provided with wheels whereby they are supported directly upon the ground, revoluble cutters mounted within said carriages, and gearing connected with said revoluble cutters for actuating the same, said gearing being connected with said shaft and receiving its motion therefrom.

3. The combination of tread wheels for engaging the ground, a frame connected with said tread wheels and carried thereby, a carriage pivotally connected with said frame, said carriage being provided with its own wheels, revoluble cutters mounted within said carriage, and gearing for turning said cutters, said gearing including a mutilated gear for rendering the motion of said cutters intermittent.

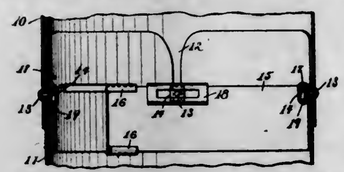
875,523. SPRING-BOLSTER. FRANK HELMICK and THOMAS B. PERKINS, Baker City, Oreg. Filed May 23, 1907. Serial No. 375,322.



1. A spring bolster comprising a body having receiving sockets therein, standards supported by the body, a follower in guided connection with the standards, a system of springs seated at their lower ends in the sockets, said springs comprising alternately arranged long and short springs, and alternately arranged short and long guide pins depending from the follower and receiving and engaging the ends of said springs.

2. A spring bolster comprising a body bar, standards supported thereby, a follower slidably connected with the standards, springs seated at their lower ends in the body bar, some of said springs being longer than the others, and long and short guide pins on the follower, the long pins engaging the upper ends of the short springs and the short pins the upper ends of the long springs.

875,524. STOVEPIPE-FASTENER. GILBERT O. HELVIG, Dawson, Minn. Filed July 16, 1907. Serial No. 383,963.



1. The combination with two pipe sections having telescoping ends, of an extensible ring within the pipe sections, and a plurality of bolts extending through the walls of both pipe sections and through said ring.

2. The combination with two pipe sections having telescoping ends, of an extensible ring within the pipe sections, a nut non-rotatably held by said ring and a bolt extending through the wall of both pipe sections and into said nut.

3. The combination with two pipe sections having telescoping ends, of bolts extending through the adjacent walls of both sections, nuts at the inner ends of said bolts, and a ring for preventing the rotation of said nuts.

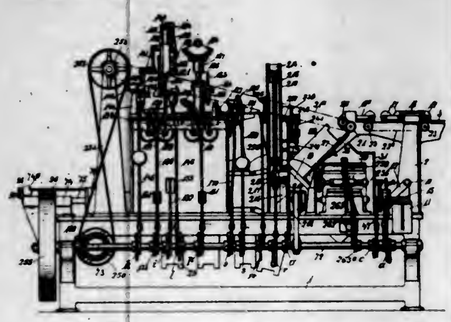
4. The combination with two pipe sections, one of which is provided with a plurality of longitudinally disposed slots adjacent the end thereof and said end telescoping with the end of the other section, of bolts extending through the outer section and through said slots in the inner section, and a ring in engagement with the inner ends of said bolts said ring and bolts serving to hold the pipe sections together.

5. A fastener for sheet metal pipes, comprising an extensible ring adapted to be disposed within the inner of two pipes adjacent their telescoping ends, nuts non-rotatably held by said ring, and bolts adapted for insertion through the walls of both pipes and into engagement with said nuts.

875,525. COMPOUND FOR SPRAYING FRUIT-TREES. CHARLES J. HERRING, Memphis, Tenn. Filed Aug. 8, 1907. Serial No. 387,666.

A composition for spraying fruit trees consisting of a mixture of sodium chlorid, 1 part; mercuric sulfid, 2.3 parts; corrosive sublimate, 8 parts; sulfur, 7 tenths part, and water 500 to 5000 parts.

875,526. APPARATUS FOR MAKING PAPER BAGS. OTTO HESSER, Cannstatt, Germany. Filed May 9, 1905. Serial No. 259,535.



1. In a paper bag machine, an endless conveyer, a series of equidistantly spaced folder plates carried by said conveyer, means for operating the conveyer, means for placing sheets of paper in the path of movement of the successive plates, means for acting on the paper at successive stages of movement of the plates to paste and fold the same into the form of a tube, to notch or cut the end of the tube, to withdraw the tube partly from the plate, to fold the part so withdrawn, and form the bottom of the bag and to finally remove the finished bag.

2. In a paper bag machine, a folding plate, a pressing plate for engaging and forcing one side of a partly folded sheet against the folding plate, a slidably mounted strip carried by the pressing plate, and arranged to engage and hold the edge of the sheet, and means for turning the opposite edge of the sheet over the folding plate and against the confined edge to form a tube.

3. In a paper bag machine, an endless conveyer, a series of folding plates carried thereby, and movable stops for engaging and holding the successive plates in proper position after each movement of the conveyer.

4. In a paper bag machine, a folding blade having a notch, and means for pressing a portion of the sheet to be folded into said notch, and thereby locking the sheet in position.

5. In a paper bag machine, a folding plate, cutting members for recessing the paper carried by the plate, and means operating simultaneously with the cutting members for engaging and partly withdrawing the paper from the plate.

[Claims 6 to 16 not printed in the Gazette.]

875,527. WAGON-BOLSTER. EDWIN G. HINES, Drums, Pa., assignor to Pressed Steel Wagon Bolster Co., Hazleton, Pa., a Corporation of Pennsylvania. Filed Feb. 27, 1907. Serial No. 359,561.



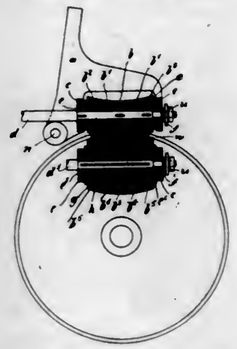
1. A bolster comprising upper and lower members normally held apart by spring pressure, stakes adjustable upon the end portions of the lower member, end extensions adjustably fitted to the end portions of the upper member and in engagement with the stakes and adapted to play thereon in the vertical movements of the said upper member and other springs interposed between the said end extensions and projecting portions of the stakes.

2. In a bolster comprising upper and lower members held separate by spring pressure, the combination of stakes having base extensions adjustably fitted to the end portions of the lower member, means for securing the stakes in an adjusted position, and extensions slidably fitted to the end portions of the upper member and embracing the stakes so as to move therewith when adjusting the stakes upon the lower member and adapted to play upon said stakes as said upper member moves vertically with the wagon body or bed.

3. In combination, a reach, a bolster having longitudinal slots in its bottom, plates fitted upon the bolster and extended over the slots thereof, interlocking means between said plates and bolster to hold the plates in an adjusted position, and vertical fastenings passed through the plates, the longitudinal slots of the bolster and openings in members of the said reach to secure all when properly assembled.

4. In a bolster comprising upper and lower members held apart by spring pressure, stakes adjustably connected to the end portions of the lower member, extensions fitted to the end portions of the upper member and comprising side flanges embracing edge portions of said upper member, said extensions having openings near their outer ends to receive the stakes, and rollers mounted upon the extensions to relieve frictional contact between them and the stakes.

875,528. FEED-ROLL FOR LEATHER-SKIVING MACHINES. ALBERT HIRTH, Cannstatt, Germany. Filed Oct. 22, 1906. Serial No. 339,969.



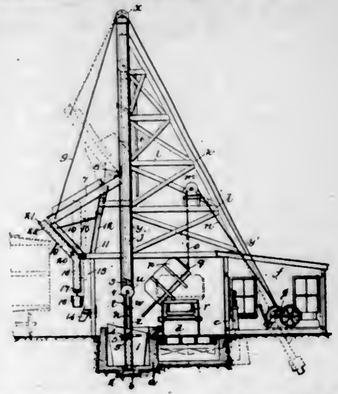
In a skiving machine, the combination, with a ring-knife, of an inner convex feed-roll divided into a number of individual rollers of different diameters, an outer concave feed-roll also subdivided into a number of individual rollers of different diameters, and shafts upon which said feed-rolls are supported.

875,529. APPARATUS FOR HANDLING BEETS. DETLEF L. JOEHNCK, Rocky Ford, Colo. Filed Apr. 22, 1907. Serial No. 369,619.

1. The combination of an upright support, a skip car vertically movable thereon, an inclining screen projecting therefrom, a hopper disposed beneath said screen, a sampling chute disposed at the outer end of said screen, means for hoisting said skip car, and means tilting said skip car adjacent said screen for discharging the contents thereon, substantially as described.

2. The combination of an upright support, an inclining screen projecting therefrom, a movable support carried by said upright and means for hoisting said support, a skip car pivotally suspended by said movable support, a latch pivotally mounted on said movable support adapted to engage locking means on said skip car, and means for tilting said skip car during its upward movement for discharging the contents thereof on said screen, comprising a tripping bar engaging the tail end of said latch, substantially as described.

3. The combination of an upright frame, an inclined screen carried thereby, a cross beam carried by said frame and mounted to slide therein, a skip car having a trunnion pin on each side thereof, a pair of hanger straps passing around said cross bar and said trunnion pins, a spacing block secured to one of said straps, a latch pivoted to said spacing block and coöperating with a lug on said skip car, means for elevating said cross bar, and means for tripping said latch comprising a trip bar projecting in the path of said latch below said inclining screen, substantially as described.

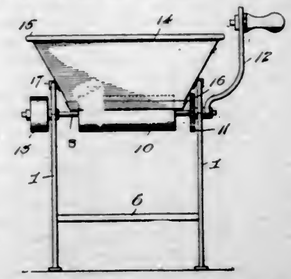


4. The combination of an upright support, a skip car movable vertically thereon and means for elevating same, a screen pivotally secured to said frame, a cable supporting the end of said screen, means for operating said cable, and means for tilting said skip car to dump the contents thereof on said screen, substantially as described.

5. The combination of an upright support, a pivoted screen carried thereby, a hopper disposed below said screen comprising a stationary rear wall and a pivoted front wall, the front wall of said hopper adapted to engage and support the outer end of said screen, a fixed pulley carried by said frame, a cable suspending the outer end of said screen and means for operating same, flexible means reeving around said fixed pulley and disposed between the upper end of said pivoted front wall and the rear end of said screen, a skip car vertically movable on said support, means for elevating said skip car, and means for tripping said skip car to tilt the contents thereof on said screen, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

875,530. POTATO-MASHER. DAVID E. JOHNSTON, Los Angeles, Cal. Filed Oct. 10, 1905. Serial No. 282,133.



In a machine of the class described, a pair of mashing rollers, an angular seat, a hopper removably supported by the seat and having the walls of its lower end inturned to contact with the rollers, the point of contact being above the shafts of the rollers, whereby to insure a close fit between the parts, thus to prevent the escape of material being operated upon.

875,531. SALT-SHAKER. OTTO KAMPFE, New York, N. Y. Filed Oct. 7, 1905. Serial No. 281,730.



1. The combination with the body and neck of a salt receptacle or shaker and a removable perforated cap therefor, of an open mesh structure adapted to fit snugly down into the neck of the shaker to a predetermined extent so as to produce therein a chamber substantially separate from the body of the receptacle holding the salt, pointed projections formed therewith, a center pin also formed therewith and rising to contact against the under side of said cap, a series of peripheral arms rising from said open-work structure and having overturned upper ends extending over the upper end of the neck and held in place by the cap.

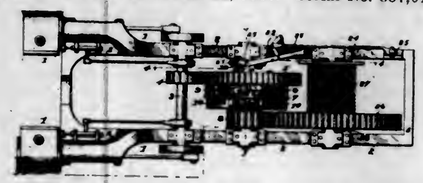
2. The combination with the body and neck of a salt receptacle or shaker and a removable perforated cap therefor, of a foraminous plate adapted to fit snugly within and down into the neck of the shaker to a predetermined extent so as to produce therein a chamber substantially separate from the body of the receptacle holding the salt, a series of peripheral arms rising from said foraminous plate and having overturned upper ends extending over the upper end of the neck and held in place by the cap when in position, and a central pin projecting from said foraminous plate and agreeing in length with the series of peripheral arms and contacting against the under side of the cap.

3. The combination with the body and neck of a salt receptacle or shaker and a removable perforated cap therefor, of a foraminous plate adapted to fit snugly within and down into the neck of the shaker to a predetermined extent so as to produce therein a chamber substantially separate from the body of the receptacle holding the salt, a series of peripheral arms rising from said foraminous plate and having overturned upper ends extending over the upper end of the neck and held in place by the cap when in position, and series of pointed projections formed with said foraminous plate and projecting upward into the chamber between the foraminous plate and the perforated cap.

4. The combination with the body and neck of a salt receptacle or shaker and a removable perforated cap therefor, of a foraminous plate adapted to fit snugly within and down into the neck of the shaker to a predetermined extent so as to produce therein a chamber substantially separate from the body of the receptacle holding the salt, a series of peripheral arms rising from said foraminous plate and having overturned upper ends extending over the upper end of the neck and held in place by the cap when in position, and a series of pointed projections formed with said foraminous plate and extending in opposite directions from opposite sides thereof, part of the said projections extending upward into the chamber formed between the foraminous plate and the perforated cap and others extending down into the receptacle holding the salt.

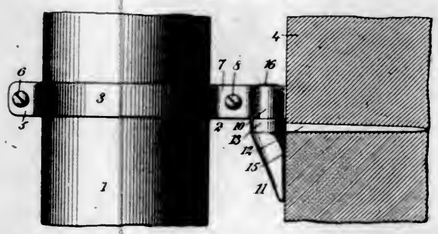
5. The combination with the body and neck of a salt receptacle or shaker and a removable perforated cap therefor, of a foraminous plate adapted to fit snugly within and down into the neck of the shaker to a predetermined extent so as to produce therein a chamber substantially separate from the body of the receptacle holding the salt, a series of peripheral arms rising from said foraminous plate and having overturned upper ends extending over the upper end of the neck and held in place by the cap when in position, a central pin projecting from said foraminous plate and agreeing in length with the series of peripheral arms and contacting against the under side of the cap, and a series of pointed projections formed with said foraminous plate and projecting upward into the chamber between the foraminous plate and the perforated cap.

875,532. COMPOUND-GEARED FRICTION HOISTING-ENGINE. JAMES P. KARR and JOHN D. RAUCH, Logansport, Ind. Filed Feb. 12, 1907. Serial No. 357,013.



The combination, with a hoisting drum 27, and a large gear 26 fast therewith, and a driving shaft 3 having a pinion 4 fast thereon, of an intermediate shaft 6, a driving gear 5 thereon which meshes with such driving pinion, and a double friction wheel 7 and pinion 8 which are fast together but mounted loose on the intermediate shaft, the pinion 8 meshing with the hoisting gear 26, and the friction wheel having two friction surfaces, a driving friction band 9 applied to one of such surfaces, means connected with the adjacent driving gear for tightening or releasing such band, and a brake band applied to the other surface of the friction wheel, and a device for tightening or releasing the same, substantially as described.

875,533. PIPE-HANGER. IRA G. LANE, New York, N. Y. Filed Oct. 9, 1907. Serial No. 396,599.



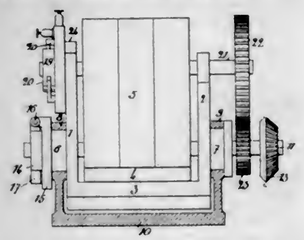
1. A wall bracket having means for securing the same upon a wall and having an upwardly-projecting lug, and a ring adapted to clamp a pipe and having a socket adapted to seat over said lug, said socket and lug having an elongated form adapted to prevent lateral movement of said ring.

2. In a device of the class described, in combination, a wall bracket adapted to be secured upon a wall and having an upwardly-projecting elongated lug, and a ring formed of sections adapted to clamp a pipe therebetween, said sections having oppositely-disposed hooks meeting together to form a socket receiving said lug, said lug and socket having a form adapted to prevent a lateral swinging movement of said ring.

3. In a device of the class described, in combination, a wall bracket having a spike adapted to be driven into the wall, a head integral with said spike and having an upwardly-projecting lug of oblong form and of reduced dimensions with respect to said head, whereby a supporting shoulder is formed at the base of said lug, a clamping ring formed in sections adapted to clamp a pipe and having U-shaped hooks disposed opposite to each other and meeting together to form a socket receiving said lug, and clamping bolts clamping said sections together.

875,534. MAGNETO IGNITING DEVICE FOR EXPLOSIVE-ENGINES. HENRI DE LA VALETTE, Paris, France. Filed Sept. 7, 1905. Serial No. 277,423.

1. A magneto-electric machine, comprising an armature, oscillating field magnets, an oscillating distributer of induced currents, and means for mounting the magnets and distributer, whereby they oscillate coöperatively one with the other about the axis of the armature.



2. A magneto-electric machine, comprising an armature, a frame mounted to swing about the axis of the armature, a magnet carried by the frame, and a distributer of induced currents also carried by the said frame.

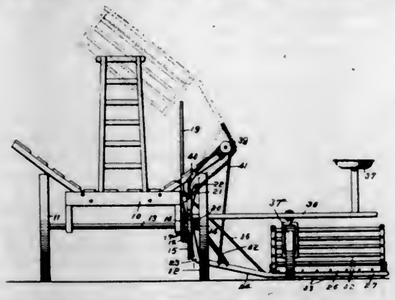
3. A magneto-electric machine, comprising a revoluble armature, a frame mounted to swing about the axis of the armature, a magnet carried by the frame, a revoluble distributer of induced currents also carried by said frame, and means for revolving the distributer from the armature shaft.

4. A magneto-electric machine with a distributer of induced currents for the ignition of motors, comprising the combination of a fixed main frame, a U-shaped frame journaled in the fixed frame, an armature journaled in the U-shaped frame, a field-magnet fixed on the base of the said U-shaped movable frame, and a distributer of induced currents mounted on the said movable frame.

5. In a magneto-igniting device, a main fame, a U-shaped frame journaled in the main frame, an armature journaled in the U-shaped frame, a field-magnet on the base of the U-shaped frame, a current distributer mounted in the U-shaped frame, and means for operating the distributer from the armature shaft.

[Claims 6 to 8 not printed in the Gazette.]

875,535. SHOCK-LOADER. JOHN W. LAVERENCE, Des Moines, Iowa. Filed Oct. 30, 1906. Serial No. 341,326.



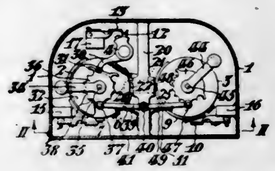
1. In a shock loader, the combination of a vehicle having a shaft and wheels mounted on the shaft; one of said wheels being provided at its inner side with a clutch member, a pulley carried by the shaft and movable in the direction of the length thereof and having a clutch member opposed to that of the wheel, a rock shaft carried by the vehicle and having an arm connected with the pulley and also having a shaft-operating arm and a handle, a gathering device arranged alongside the vehicle, a vertically swinging supporting arm for the gathering device, pivoted to the vehicle and arranged when swung upward to engage the shaft-operating arm of the rock-shaft, the shaft operating arm being located in the path of the vertical swinging arm, and a cable passed over guides on the vehicle and connected at one end to the pulley and at its opposite end to the supporting arm of the gathering device.

2. In a shock loader, the combination of a vehicle having a shaft and wheels mounted on the shaft; one of said wheels being provided at its inner side with a clutch member, a pulley carried by the shaft and movable in the direction of the length thereof and having a clutch member opposed to that of the wheel, a rock shaft carried by the vehicle and having an arm connected with the pulley and also having a shaft-operating arm and a handle, a gathering device arranged alongside the vehicle, a vertically swinging supporting arm for the gathering device, pivoted to the vehicle and arranged when swung upward to engage the shaft-operating arm of the rock-shaft, the shaft-operating arm being located in the path of the vertical swinging arm, a cable passed over guides on the vehicle and connected at one end to the pulley and at its opposite end to the supporting arm of the gathering device, and a tractile spring connected at one end to the supporting arm of the gathering device and at its opposite end to the vehicle at a point above the supporting arm when the latter is in its lower position.

3. In a shock loader, the combination of a vehicle, a supporting arm pivoted to the vehicle and arranged to swing in the direction of the width thereof and having parallel portions arranged parallel to the side of the vehicle and also having a portion connecting the rear ends of said parallel portions, a gathering device pivoted on the parallel portions of the supporting arm and arranged to swing vertically, and means for raising the supporting arm.

4. In a shock loader, the combination of a vehicle, a supporting arm pivoted to the vehicle and arranged to swing in the direction of the width thereof and having parallel portions arranged parallel to the side of the vehicle and also having a portion connecting the rear ends of said parallel portions, a gathering device carried by the supporting arm and arranged to swing vertically, and means for raising the supporting arm.

875,536. ELECTRIC CONTROLLER. JOSEPH LEDWINKA, Philadelphia, Pa., assignor to Russell Thayer, Philadelphia, Pa. Filed Aug. 3, 1907. Serial No. 386,861.



1. An electric controller comprising two relatively rotary contact drums and means arranged to interlock said drums so that one cannot be manipulated until the other is returned to its zero position; comprising a plunger mounted to reciprocate between said drums and alternately engage recesses in the respective drums; and, a drum arranged to coöperate with one of the other drums aforesaid to reverse the direction of the current through the motors as a consequence of the operation of the drum with which it is connected, substantially as set forth.

2. In a vehicle provided with electric motors and a storage battery, and arranged to be propelled by said motors in alternately operative connection with said battery and with an exterior railway supply system; a controller comprising three rotary contact drums, in operative relation with stationary contact fingers; means arranged to interlock two of said drums so that neither drum can be manipulated until the other is returned to its zero position; and, means arranged to operatively connect the third drum with one of said interlocked drums, substantially as set forth.

3. In a vehicle provided with electric motors and a storage battery, and arranged to be propelled by said motors in alternately operative connection with said battery, and with an exterior railway supply system; a controller comprising three rotary contact drums, in operative relation

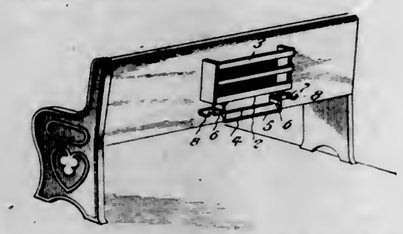
with stationary contact fingers; means arranged to interlock two of said drums, which are respectively connected to control the circuits between the motors and said supply system and battery, so that one drum cannot be manipulated until the other is returned to its zero position; and, means arranged to operatively connect the third drum with one of said interlocked drums, substantially as set forth.

4. In a vehicle provided with electric motors and a storage battery, and arranged to be propelled by said motors in alternately operative relation with said battery, and an external railway supply system; a controller comprising three rotatable drums carrying contact terminals in operative relation with stationary contact fingers, the first drum being connected to control the circuits in the vehicle while the motors are in operative relation with the railway supply system; the second drum being connected to control the circuits in the vehicle while the motors are in operative relation with the battery, and, the third drum being connected to coöperate with the second drum to reverse the direction of the current through the motors in accordance with the position of said second drum, substantially as set forth.

5. In a vehicle provided with electric motors, a variable resistance, and a storage battery, and arranged to be propelled by said motors in alternately operative relation with said battery, and an external railway supply system; a controller connected and arranged to include said resistance in connection with the motors except when it is desired to charge the battery, and, to substitute the battery for the resistance in the motor circuit when it is desired to charge the battery, substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

875,537. HAT AND COAT REST. ARTHUR J. LE MESURIER, St. Johns, Newfoundland. Filed Jan. 16, 1907. Serial No. 352,646.

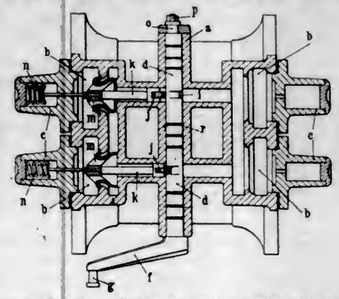


The combination with a supporting rack, of a hat and coat rack secured thereto and comprising independent U-shaped members depending from the supporting rack in spaced relation with their supporting bars in different horizontal planes, brace strips connected to one of the hangers and engaging the other, each of said strips being projected laterally beyond the hangers, and coat hooks carried by the lateral projections of the strips.

875,538. VALVE-GEAR. HUGO LENTZ, Halensee, near Berlin, Germany, and CHARLES BELLENS, Neuilly-sur-Seine, France. Filed Apr. 28, 1906. Serial No. 314,123.

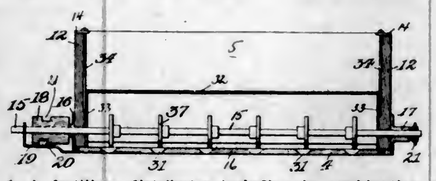
1. In a valve gear for steam engines, the combination of a rocking-shaft perpendicular to the axis of the engine cylinder, cam-shaped grooves formed in said shaft perpendicular to its axis, a hull or support for engaging the shaft tightly without any packing, said hull having a cylindrical bore for the shaft and other passages at right angles to the cylindrical bore, distributing valves lodged in the hull and having their stems in the said passages, and rollers at the end of the valve stems fitting into the cam-shaped grooves of the rocking-shaft.

2. In a valve gear for steam engines, a distributing rocking-shaft perpendicular to the axis of the engine cylinder, cam-shaped grooves in said shaft perpendicular to its axis, a casing having a cylindrical bore in which the shaft fits tightly without any packing, said casing being also provided with passages at right angles and leading to the cylindrical bore, chambered caps for the casing, springs lodged in said caps, distributing valves in the casings, each having oppositely projecting stems, one of which pro-



jects into a chamber of the cap and is resisted by a spring, and the other into a passage at right angles, and rollers on the ends of the last named stems working in the grooves of the distributing shaft.

875,539. FERTILIZER-DISTRIBUTER. ORA T. LITTLE, Ripley, N. Y. Filed Sept. 18, 1907. Serial No. 393,469.



1. A fertilizer distributer including in combination a hopper, a vibrating bottom having openings therein, and means located within and centrally of the hopper for controlling the amount of the fertilizer fed through said openings.

2. A fertilizer distributer including in combination a hopper, a vibrating bottom having openings therein, means located within and centrally of the hopper for controlling the amount of the fertilizer fed through said openings, and devices for controlling the position of said feed adjusting means.

3. A fertilizer distributer including in combination a hopper, a movable bottom carried thereby, and having openings therein, means for vibrating said bottom, auxiliary supporting means for the fertilizer located within and centrally of said hopper and spaced from said movable bottom for controlling the amount of fertilizer fed through said openings.

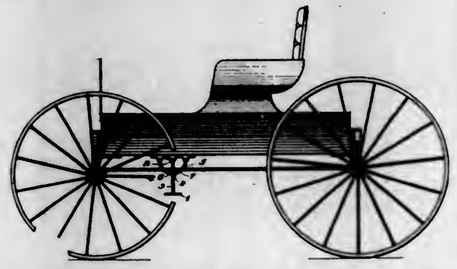
4. A fertilizer distributer including in combination a hopper, a movable bottom carried thereby and having openings therein, means for vibrating said bottom, auxiliary supporting means for the fertilizer located within and centrally of said hopper and spaced from said movable bottom for controlling the amount of fertilizer fed through said openings, and means for adjusting the position of the auxiliary supporting means toward and from said movable bottom.

5. A fertilizer distributer including in combination a hopper, a bottom having openings therein, means for suspending the bottom, means for vibrating the bottom and means located within and centrally of the hopper for controlling the amount of the fertilizer fed through said openings.

[Claims 6 to 10 not printed in the Gazette.]

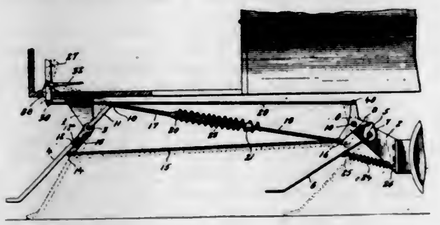
875,540. VEHICLE-STEP. JOHN G. LOHNER, Sparks, Okla. Filed Mar. 27, 1907. Serial No. 364,768.

1. A device of the class described, comprising a step pivoted to the body of a vehicle, said step having an inward projection with a perforation therein, a semi-circular guide and brace rigidly connected to said vehicle and passing through said perforation, said guide having means for holding said step against movement in one direction, and means for yieldably holding said step against movement in the opposite direction.



2. A vehicle having a pivoted step, with an aperture therein, a semi-circular guide and brace rigidly connected with the body of said vehicle, said brace having a reduced portion engaging said aperture for guiding and bracing said step in its movement, and a spring mounted on said reduced portion, substantially as described.

875,541. STREET-CAR FENDER. MATTHEW LUND, Grand Rapids, Mich., assignor of one-half to George K. McMullen, Grand Rapids, Mich. Filed Mar. 28, 1907. Serial No. 364,989.

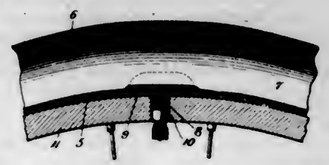


1. A device of the type set forth, comprising a pivoted main fender, a pivoted auxiliary fender, means for supporting said auxiliary fender in a raised position, and means controlled by said main fender in its movement in either direction for releasing said auxiliary fender.

2. A device of the type set forth comprising a rock shaft, a main fender carried thereby, a lever fixed to said main fender, an arm loosely carried by said shaft, a second rock shaft, a fender carried thereby, a stop carried thereby, a pivoted lever having an arm for engaging with said stop to hold said last named fender in a raised position, said last named lever having upper and lower portions on each side of its pivot, a rod interposed between said arm and the lower end of said lever, and being pivoted thereto, a second rod comprising relatively movable interfitting sections, one of said sections being pivoted to the end of said first named lever, and the other of said sections being pivoted to the lower end of said last named lever, a retractile coil spring interposed between said sections, and a coil spring for actuating said last-named fender to move the same downwardly.

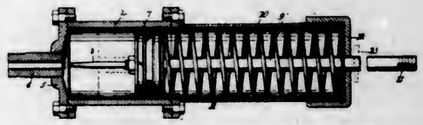
3. A device of the type set forth, comprising a pivoted main fender, a pivoted auxiliary fender, means for supporting said auxiliary fender in a raised position, means controlled by said main fender in its movement in either direction, for disengaging said last named means, and means controlled manually from the car for disengaging said last named means.

875,542. TIRE-VALVE-STEM PROTECTOR. CHARLES W. LURTEY, Little Rock, Ark. Filed May 15, 1906. Serial No. 316,900.



The combination with a tire having inner and outer sections, of a valve stem and valve mechanism projecting from the tire, and a stem protector comprising a base plate that is located between the tire sections, said plate being longitudinally and transversely curved, and an open ended sleeve projecting from the base plate and from the tire and surrounding the projecting portion of the valve stem.

875,543. AUTOMATIC BRAKE. JAMES LYNCH, Van Buren, Ark. Filed June 29, 1907. Serial No. 381,477.



1. In a brake mechanism, in combination, an air cylinder, a piston working therein, a spring tending to move said piston within said cylinder to apply the brakes, means for admitting air to said cylinder to oppose the force of said spring, and means for cushioning the said piston when the brakes are suddenly applied.

2. In a brake mechanism, in combination, an air cylinder, a piston moving therein, a spring pressing said piston toward the end of said cylinder and affording means for applying the brakes, and means for choking the efflux of air from said cylinder when said spring advances said piston.

3. In a brake mechanism, in combination, an air cylinder, a piston working therein, and carrying a longitudinally disposed stem on the forward side thereof, said cylinder having a head with an opening through which the air may escape in alinement with said stem, and a spring forcing said piston toward said head and affording means for applying the brakes, said stem affording means for choking the flow of air through said opening as said piston advances.

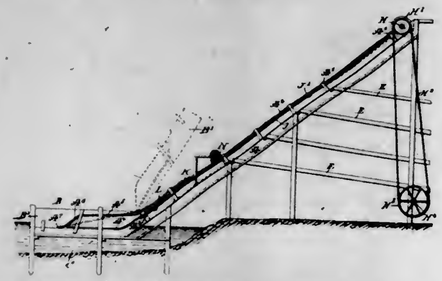
4. In a brake mechanism, in combination, an air cylinder, a piston working therein and carrying a longitudinally disposed stem, said cylinder having a head with a vent opening therein through which air may escape, said vent opening being in alinement with said stem whereby it will be choked by said stem when said piston is adjacent thereto, a spring forcing said piston toward said head and affording means for applying the brakes, and means independent of the air pressure for holding said piston against movement by said spring.

875,544. AUTOMATIC ICE-ELEVATOR. WILLIAM H. LYNCH, New Bedford, Mass. Filed July 13, 1907. Serial No. 383,591.

1. An automatic ice elevator comprising an incline, a driven shaft at the head of the incline, a drum mounted to turn loosely on said shaft, a clutch mechanism for connecting and disconnecting the said shaft and the said drum, an open frame ice carrier adapted to travel up and down on the said incline, cables connecting the drum, and means controlled by the movement of the carrier for releasing the clutch mechanism at a predetermined point in the travel of the carrier.

2. An automatic ice elevator comprising an incline, a

driven shaft at the head of the incline, a drum mounted to turn loosely on the said shaft, a clutch mechanism for connecting and disconnecting the said shaft and the said drum, an open frame ice carrier adapted to travel up and down on the said incline, a flexible connection between the said ice carrier and the said drum, and a tripping device for the said clutch mechanism and controlled by the said ice carrier, to release the drum at the time the ice carrier reaches a discharging position and to connect the said drum with the driven shaft at the time the ice carrier reaches the extreme lowermost position.



3. An automatic ice elevator comprising an incline, a driven shaft at the head of the incline, a drum mounted to turn loosely on the said shaft, a clutch mechanism for connecting and disconnecting the said shaft and the said drum, an open frame ice carrier adapted to travel up and down on the said incline, a flexible connection between the said ice carrier and the said drum, a trip rod arranged alongside the said incline and connected with the said clutch mechanism, a trip lug adjustably held on the upper portion of the said trip rod, and projecting into the path of the said ice carrier and a trip lever fulcrumed on the incline at or near the lower end thereof and adapted to engage notches on the lower end of the said trip rod, the said trip lever being controlled by the said ice carrier.

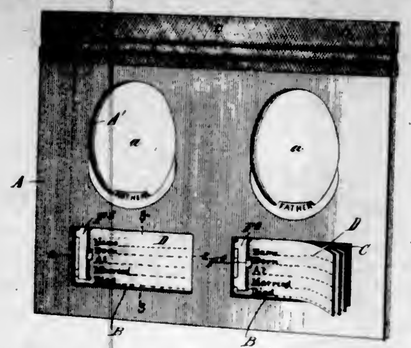
4. An ice elevator comprising an incline having main guideways at the sides, each guideway having a return guideway, a water box at the lower end of the said incline and having its sides provided with continuous guideways connected at their forward ends with the said main guideways and the said branch or return guideways, the said continuous guideways having outward extensions, and an ice carrier adapted to travel up and down on the said incline, and having its ends provided with transverse pins adapted to travel in the said guideways of the incline, the rear pins being also adapted to travel in the continuous guideways and the extensions thereof in the water box.

5. An automatic ice elevator comprising an incline, a carrier for carrying the cakes up the incline, and a planer attached to the incline a distance above the bottom thereof to plane the ice cakes carried up the incline by the said carrier.

[Claims 6 to 11 not printed in the Gazette.]

875,545. ALBUM. THOMAS A. MACDONALD, Midvale, N. J., assignor of forty-five one-hundredths to Richard Godfrey, Clifton, N. J. Filed Mar. 11, 1907. Serial No. 361,770.

1. A leaf substantially as herein described having the sections fitted flatwise together with the intervening space for a portrait and also having a portrait opening and a book opening intersected by said intervening space, a carrier card fitting in said intervening space opposite the book opening and projecting laterally beyond the walls of the same whereby it will be retained by the leaf, the book leaves on opposite sides of the card and perforated for the tongue of the clasps and the clasps each having a base plate held to the carrier card and provided with a projecting lug having an upturned tongue and a retaining plate hinged to the base plate and springing into and out of engagement with the tongue whereby to retain the book leaves when the latter are fitted on the tongue, substantially as set forth.



2. A leaf having a portrait opening, a book opening and the intervening space and slitted from its edge in communication with said space and a carrier plate inserted in the intervening space and having opposite the book opening a tongue projecting therein, substantially as set forth.

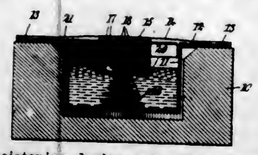
3. An album leaf having an opening for a portrait and also having a book opening, a book fitted in said opening and a carrier for said book held in the leaf, substantially as set forth.

4. An album leaf having a book opening, a carrier and a book to fit in said opening and a clasp for holding the book to the carrier and comprising a main plate having a tongue to pass through the leaves of the book and a retaining plate springing into and out of engagement with the tongue for holding the leaves therein, substantially as set forth.

5. An album leaf having an opening for a portrait and also having an opening for a book, a carrier card inserted in said album leaf and book leaves secured to the carrier card and fitting in the book opening, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

875,546. MOISTENER. MAXWELL A. METZNER, Perth Amboy, N. J. Filed July 5, 1907. Serial No. 382,369.



1. In a moistening device, a liquid container presenting a surface above the normal liquid level, a wire gauze adjacent said surface but spaced therefrom, and a capillary member for raising the water, whereby a film of water may be maintained in the space between said surface and said gauze.

2. In a moistening device, a liquid container presenting a horizontally-disposed surface above the normal liquid level, a wire gauze adjacent said surface but spaced therefrom, and means for raising the water, whereby a film of water may be maintained in the space between said surface and said gauze.

3. In a moistening device, a liquid container presenting a surface above the normal liquid level, a wire gauze adjacent said surface but spaced therefrom, and a capillary member in engagement with said gauze, whereby a film of water may be maintained in the space between said surface and said gauze.

4. In a moistening device, a liquid container presenting an annular substantially horizontally-disposed surface, a wire gauze adjacent said surface but spaced therefrom and covering said container, and a capillary member in said container for raising the water above the normal level, whereby a film of water may be maintained in the space between the surface and the gauze.

5. In a moistening device, a water container having an outwardly-directed flange, a wire gauze secured adjacent the outer edge of said flange and covering the water container, and a capillary member within said container and resiliently held in engagement with said gauze.

[Claims 6 to 11 not printed in the Gazette.]

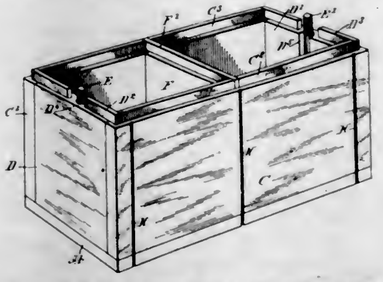
875,547. FOLDING UMBRELLA. GEORGE MEYER, St. Louis, Mich. Filed July 8, 1907. Serial No. 382,695.



1. In a folding umbrella, a rod formed in sections, means to hingedly connect the inner ends of said sections together, a rib crown secured to the outer end of said rod, said crown having formed therein an annular recess, a runner slidably mounted on said rod and adapted to be engaged with the recess in said crown when the umbrella is in a folded position, ribs pivotally secured at their outer ends to said crown, said ribs consisting of inner and outer sections having outwardly curved pivotally connected ends, a supporting sleeve on the outer end of said inner sections of the ribs, said sleeve having formed therein slots to receive the inner ends of the outer sections of the ribs when the latter are in an open position, braces connected to said sleeve and to said runner, a stop collar on said rod adapted to be engaged by said runner when the umbrella is in an open position, a spring catch adapted to hold said runner in place, and a flexible connection secured to said runner whereby the same may be drawn outwardly, substantially as described.

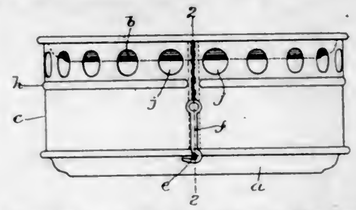
2. In a folding umbrella, a folding rod comprising an inner section, 2, and an outer section, laterally disposed connecting bars secured to each section and pivoted to each other at their outer ends, a sleeve slidable on one of said sections and a slot in said sleeve to receive said laterally disposed connecting bars.

875,548. KNOCKDOWN BOX. ALFRED N. MILLER, Evansville, Ind. Filed Sept. 13, 1906. Serial No. 334,422.



A knock down box, comprising a top, bottom, ends, and sides, said top and bottom being provided on their inner faces with a continuous marginal groove, the sides being provided on their ends with a transverse groove, and on their side edges with tenons for engaging the groove on the top and the bottom, said ends being provided on their edges with tenons engaging the edges of the top, bottom and sides, said top, bottom and sides being provided at approximately their center with transverse grooves, and a partition having tenons fitting within each of said grooves, and bolts extending through the box at each end, the bottom being recessed on its outer face for receiving the heads of the bolts, the top being recessed for receiving the nuts, and the ends being recessed on their inner faces for receiving the bolts.

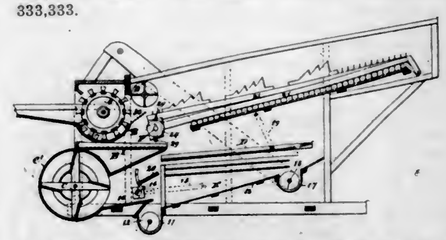
875,549. SERVING-TRAY. CLARA D. MITCHELL, Grant, Nebr., assignor of one-half to Clinton E. Achorn, Boston, Mass. Filed Mar. 6, 1907. Serial No. 360,952.



1. A serving appliance, comprising a base tray and an upper tray, the latter having a depending flange adapted to bear on the base tray, and form the sides of a heat-confining chamber, and a partition of slow heat conducting material forming the top of said chamber, said partition being attached to said flange and separated from the bottom of the upper tray by an air space.

2. A serving appliance, comprising a base tray and an upper tray, the latter having a depending flange adapted to bear on the base tray, and form the sides of a heat-confining chamber, and a partition of slow heat conducting material forming the top of said chamber, said partition being attached to said flange and separated from the bottom of the upper tray by an air space, the said flange and the base tray being provided with complemental coupling members whereby they may be detachably connected, orifices being formed in the flange above the partition to permit circulation of air through the space between the upper tray and the partition.

875,550. THRESHING-MACHINE. JAMES MCCORKELL, Nezperce, Idaho. Filed Sept. 5, 1906. Serial No. 333,333.

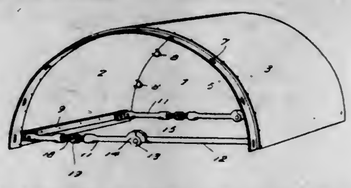


1. In a threshing machine, the combination with the cylinder and concave and beaters mounted to revolve at the rear upper portion of the cylinder, of a combined crank and beater shaft mounted to revolve below the upper beaters and at the rear of the concave and cylinder, the crank arms of the combined crank and beater shaft being located between the beater sections of the said shaft, and rakes mounted at their forward ends upon the crank sections of the said combined shaft, the upper beaters being rotated in a direction opposite to the direction of rotation of the combined crank and beater shaft.

2. In a threshing machine, the combination with a concave and cylinder and beaters mounted to revolve at the rear upper portion of the cylinder, of a shaft

mounted to revolve below the said beaters in a direction opposite to said beaters, which shaft consists of a series of crank sections and a series of interposed beater sections, rakes connected by one end to the crank sections the center of the beater sections being in alinement with the central portion of the terminals of the shaft, and pins carried by the said beater sections of said shaft, for the purpose set forth.

875,551. COLLAPSIBLE ARCH OR CENTER. CHARLES W. MCDONALD, New York, N. Y. Filed Mar. 21, 1907. Serial No. 363,683.

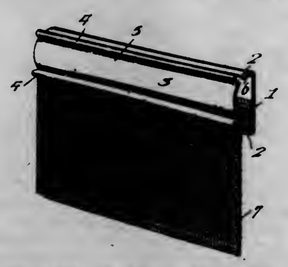


1. An arch-mold comprising sections hingedly united at their upper edges, brackets upon the lower edges of the sections, inextensible arms pivotally connected to the brackets of one section, extensible arms pivotally connected to the brackets of the other section, said sets of arms being pivotally connected with each other for an inward collapsing movement and for toggle-extension, each of said extensible arms comprising sections and an adjusting screw connecting said sections, and stops upon the pivotally-connected ends of the sets of arms to abut and limit their toggle-extension.

2. An arch-mold comprising partially circular sections hinged or pivoted at their meeting edges, each section being provided at one side with inwardly projecting staples and at the other side with slotted coupling flanges adapted for engagement with corresponding staples on another mold, and folding braces pivotally connecting the lower edges of the sections.

3. A mold comprising segmental sections pivotally connected at their meeting edges, inextensible arms pivotally connected with the free edge of one section, extensible arms pivotally connected with the free edge of the other section, said arms being pivotally connected with each other for an inward collapsing movement and for toggle-extension, each of said adjustable arms comprising spaced sections having threaded sockets, and a reversely threaded section engaging said sockets and adjustably connecting said sections.

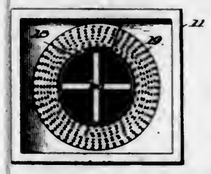
875,552. WINDOW-SCREEN. CHARLES H. MCGEE, Portland, Me. Filed Jan. 3, 1907. Serial No. 350,572.



1. A screen frame comprising two members formed of sheet metal, one of said members having inwardly extending side flanges and the other member having downwardly extending side edges, oppositely disposed beads, and a curved outer face between said beads, said curved face being rolled to spread said edges within the first named member to clamp the material forming the screen between said members.

2. A screen framing for securing reticulated material thereto, comprising two members, one of which is the base piece with its two opposite sides curved inwardly towards the same, the other member having its central portion curved outwardly, said member being also constructed oval shape at the terminals of the central curved portion to provide oppositely disposed beads said second member being further provided with oppositely disposed flanges formed at the terminals of the beads, said construction of said two members serving to clamp the reticulated material to either side of said two members, substantially as specified.

875,553. DYEING APPARATUS. FRANK N. PATTERSON, Lexington, N. C. Filed May 15, 1907. Serial No. 373,717.

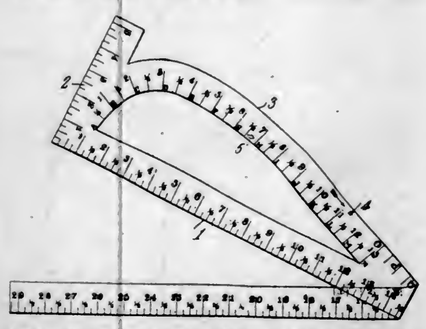


1. In a dyeing apparatus, the combination of a box, a perforated cone for receiving the material to be dyed, said cone having a pipe extending thereinto through the bottom of the box, a perforated expansible jacket surrounding the cone for confining the material thereon, a binder extending across the material at the top of the cone, and another pipe opening from the box.

2. In a dyeing apparatus, in combination, a dye box having an inlet pipe projecting through the bottom thereof, a hollow cone having perforated sides connected with the end of the pipe for supporting the yarn, an expansible jacket inclosing the yarn on the cone for confining said yarn in place and an outlet pipe for the box.

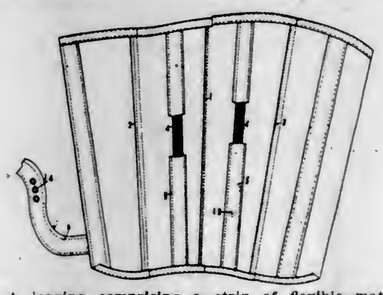
3. In a dyeing apparatus, a hollow cone having perforated sides for supporting the yarn, and an expansible jacket inclosing the yarn on the cone for confining said yarn in place, and means for supplying dyeing material to the hollow of the cone.

875,554. GARMENT MEASURING AND DRAFTING DEVICE. MARIE C. PELTON, Beatrice, Nebr. Filed May 16, 1907. Serial No. 373,889.



A garment measuring and drafting device embodying a graduated square and a graduated irregular curve connecting the tongue and the blade of the square and spaced throughout the length of its inner edge from the blade, and bearing on its inner and outer edges symbols to indicate points at which different curves are to start, and having on its opposite sides means to indicate which edge of the implement is to be used in making inward curves and which to be used in making outward curves.

875,555. LEGGING. MORRIS ROSENWASSER, New York, N. Y. Filed Apr. 1, 1907. Serial No. 365,878.



1. A legging comprising a strip of flexible material adapted to be wrapped about the leg and having a fastening member secured to one of its free meeting edges near one of the extremities thereof, said fastening member being adapted to be passed about the exterior of the legging detachably securing the other free edge of the legging near the opposite extremity thereof, one of said parts being provided with an aperture, a post carried by the other of said parts and projecting from the surface thereof adapted to enter said aperture, and guides located intermediate the extremities of the legging through which said fastening member extends.

2. A legging of the class described comprising a strip of flexible material having stiffening members extending longitudinally of the same, a post secured to one of said stiffening members and extending outwardly from the outer surface of the legging, a strap secured to one of the free edges of the legging near one of the extremities thereof having one or more apertures each of which is adapted to be engaged by said post, and a device upon the other free meeting edge of the legging near the opposite extremity thereof to which said strap is adjustably secured.

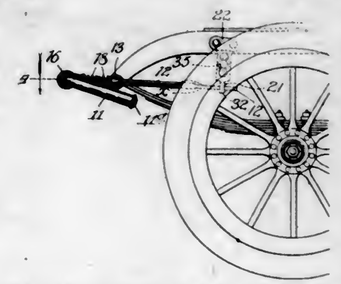
3. A legging comprising a strip of flexible material adapted to be wrapped about the leg, a plurality of stiffening members extending longitudinally of the same, a strap secured to the lower portion of one of the free edges thereof and having one or more apertures formed on the inner surface thereof, a post secured to one of said stiffening members and extending exteriorly of the legging adapted to engage one of the apertures of said strap when the same is passed about the leg, and a device upon the other free meeting edge of the legging near the opposite extremity thereof to which said strap may be adjustably secured.

4. A legging comprising a strip of flexible material adapted to be wrapped about the leg and having a strap provided with an opening in its inner surface secured thereto at one of its free meeting edges near one of the extremities thereof, said strap being adapted to be passed about the exterior of the legging and detachably secured to the other free edge near the opposite extremity thereof, guides located intermediate the extremities of the legging through which said strap extends, and a post carried by the legging and projecting outwardly therefrom at its rear portion, said post being adapted to enter the opening formed in said strap when the latter is wrapped about the leg and fastened thereby, the tension of said strap being adapted to hold said post and said opening in engagement.

875,556. VEHICLE-FENDER. JACOB L. SCHUREMAN, Chicago, Ill., assignor to Appliance Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 21, 1907. Serial No. 358,616.

1. A vehicle-fender comprising, in combination, an impact-bar, supporting-rods connected with said bar, guiding-supports adapted to be secured to the sides of a vehicle and in which said rods are guidedly supported between their ends, cushioning means for the bar interposed between it and said guiding-supports, and guide-brackets adapted to be secured on opposite sides of a vehicle and having elongated guide-slots in which the rear ends of said rods are removably confined.

2. A vehicle-fender comprising, in combination, an impact-bar, supporting-rods connected with said bar, guiding-supports adapted to be secured on opposite sides of a vehicle and in which said rods are guidedly supported between their ends, cushioning-means for the bar, and guide-brackets, each comprising a member adapted to be secured to a side of a vehicle and a second member adjustably secured on said first-named member and provided with an elongated guide-slot for the rear end-portion of the supporting-rod.



3. A vehicle-fender comprising, in combination, an impact-bar, supporting-rods connected with said bar, guiding-supports adapted to be secured on opposite sides of a vehicle and in which said rods are guidedly supported between their ends, cushioning-means for the bar, and guide-brackets, each comprising a plate adapted to be secured to a side of a vehicle and having a nut-receiving socket, a second plate adjustable on said first-named plate and provided with a nut-receiving opening, and a stem containing a laterally extending guide-slot for receiving the rear end-portion of a supporting-rod, and a clamping-nut and bolt adjustably confined in said socket and opening, for the purpose set forth.

4. A vehicle-fender comprising, in combination, an impact-bar, supporting-rods connected with said bar, guiding-supports adapted to be secured on opposite sides of a vehicle and in which said rods are guidedly supported between their ends, cushioning-means for the bar interposed between it and said guiding-supports, and guide-brackets, each comprising a plate adapted to be secured to a side of a vehicle and having a nut-receiving socket with a series of notches in its walls, a second plate adjustable on said first-named plate and provided with a nut-receiving opening having a series of notches in its walls registering with the notches in said socket and with guide-slot for receiving the rear end-portion of a supporting-rod, and clamping-means consisting of a flanged nut entering said socket and opening and provided on opposite sides with tongues fitting in said notches, and a clamping-bolt cooperating with said nut to clamp the plates together in adjusted position.

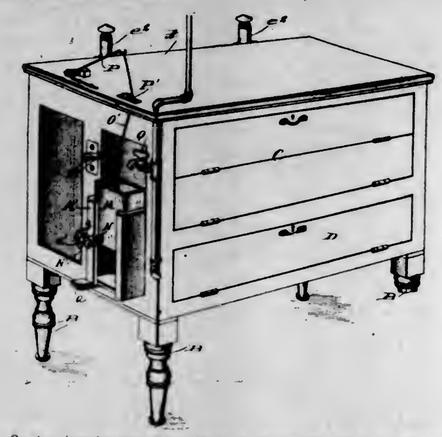
5. A vehicle-fender comprising, in combination, an impact-bar having its ends deflected downwardly and rearwardly, supporting-rods having flattened and perforated rear ends and on the forward ends of which said bar is supported and longitudinally adjustable, guiding heads through which said rods extend provided with bolt-extensions at which the heads are adapted to be secured to an automobile at its opposite sides, coiled springs confined on said rods between the bar and said heads, guide-brackets adapted to be secured to the sides of a vehicle and provided with laterally extending guide-slots through which the flattened rear ends of said rods extend to be guidedly supported therein, and stop-pins in said perforation, for the purpose set forth.

[Claim 6 not printed in the Gazette.]

875,557. INCUBATOR. GEORGE L. SCOTT, Poplar Bluff, Mo. Filed Jan. 2, 1907. Serial No. 350,373.

1. An incubator comprising a casing having upper and lower compartments and a partition sheet between the same, an egg holder in the upper compartment, means for automatically moving said egg holder, a ventilator pipe

disposed in the upper compartment and having discharge openings, inlet pipes communicating with said ventilator pipe, and a water pan in the lower compartment and provided in its under side with a heating space or recess and with flues leading therefrom, all substantially as and for the purpose set forth.



2. An incubator comprising a casing having an upper compartment a lower heating compartment, an egg holder in the upper compartment, means for moving said egg holder, and a ventilator pipe in the upper compartment below the said egg holder and disposed around the lower portion of said upper compartment, substantially as set forth.

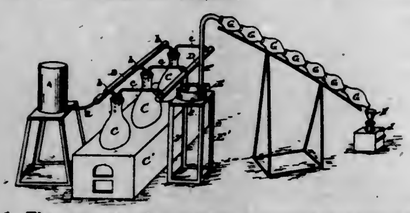
3. An incubator comprising a casing, a revolving egg holder, and water operated means for automatically moving said holder, substantially as set forth.

4. An incubator comprising a casing, a revolving egg holder, devices for moving said holder step by step, and water operated means for actuating said devices, substantially as set forth.

5. The combination in an incubator, of a casing, an egg holder, a bucket adapted to contain water and having an outlet valve, said bucket being movable vertically, means for opening the valve when the bucket is in its lowermost position for discharging the contents thereof, means for filling the bucket, means for readjusting the bucket to position for refilling, and connections between the bucket and the egg holder, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

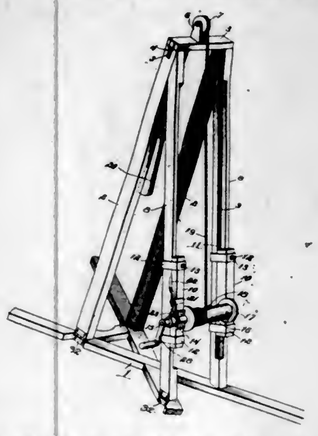
875,558. PROCESS OF PURIFYING HYDROCHLORIC ACID. LEWIS B. SKINNER, Denver, Colo. Filed Apr. 11, 1906. Serial No. 311,097.



1. The process of purifying commercial hydrochloric acid mixed with free chlorin which consists in distilling the mixture and then reacting on the distillate with hydrocarbon gas, as specified.

2. The process of purifying commercial hydrochloric acid mixed with free chlorin which consists in evaporating the mixture in a boiling flask, collecting the vapors in a closed pot, passing them on from the pot against gravity and condensing them, as specified.

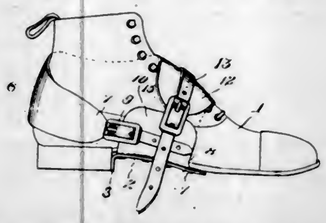
875,559. FENCING-MACHINE. WILLIAM B. SORRELLS, Rockmart, Ga. Filed Nov. 24, 1906. Serial No. 344,931.



1. In a machine of the class described, a frame composed of a base, side members each comprising a post or upright and an inclined brace or rail the post and rail constituting one of said side members being hingedly connected at their lower ends with the base, and a cap piece detachably connected with the upper extremity of the hingedly supported side member, bearing blocks supported slidably and adjustably upon the inclined rails or braces, a drum carrying shaft journaled upon the bearing blocks, means including a clutch for rotating the shaft and means for tripping the clutch.

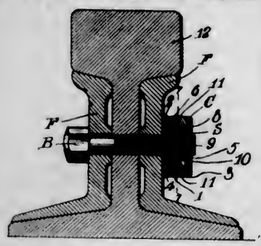
2. In a machine of the class described, a frame including a base, posts or uprights supported upon the base and inclined rails or braces connecting the upper ends of the posts with the base and provided with grooves or cut away portions at the upper inner corners, and a cap connecting the upper ends of the posts, a guide member supported upon the cap, bearing blocks supported slidably upon the inclined rails or braces and having tongues engaging the grooves or cut away portions of the latter, bands connecting the bearing blocks with the rails and having set screws engaging the bearing blocks, a drum carrying shaft journaled in the bearing blocks, means including a clutch for rotating the drum carrying shaft, means for tripping the clutch, a flexible element connected with the drum and guided over the guide member of the cap piece of the frame, and a tool carried by said flexible element.

875,560. SHOE-PROTECTOR. ELBERT VAUGHAN, Bates, Ark. Filed Aug. 14, 1907. Serial No. 388,550.



A protector plate for shoes having a downturned lug to bear against the breast of the heel, a leather foundation piece to which the metal plate is riveted, said foundation piece covering the inner side of the shoe and extending around the heel and over the instep, straps secured to the instep and heel portions, and a shank flap carrying buckles to engage said straps.

875,561. NUT-LOCK. DANIEL VERNA, Philadelphia, Pa. Filed Sept. 10, 1907. Serial No. 392,091.



1. A nut comprising an exterior casing, a sleeve longitudinally movable in said casing and having threaded engagement therewith intermediate the ends thereof, and means for securing the sleeve in the casing against endwise removal, said sleeve and casing having coinciding bearing or engaging faces at their inner ends.

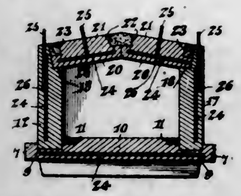
2. A nut comprising an exterior casing and a longitudinally apertured and threaded bolt engaging sleeve movable longitudinally of the casing and having threaded engagement therewith intermediate the ends thereof, said sleeve and casing having coinciding bearing or engaging faces at their inner ends.

3. A nut comprising a polygonal casing having a longitudinal bore enlarged to form terminal recesses, and a female thread intermediate said recesses in combination with a bolt engaging sleeve having a short male thread engaging the female thread of the casing and provided at the ends thereof with stop-members engaging the terminal recesses at the ends of the bore through the casing.

4. A nut comprising a bolt engaging sleeve, an exterior casing having a limited threaded engagement with the sleeve, and terminal stop-members upon the sleeve adapted for engagement with the casing to prevent separation of the sleeve and casing, said sleeve and casing having coinciding bearing or engaging faces at their inner ends.

5. A nut comprising a polygonal casing having a longitudinal bore enlarged to form terminal recesses, and a female thread intermediate said recesses, in combination with a bolt engaging sleeve having a short male thread engaging the female thread of the casing, one end of said sleeve being provided with an annular flange and the other end with a female thread, and a threaded ring engaging the female thread of the sleeve to secure the latter within the casing.

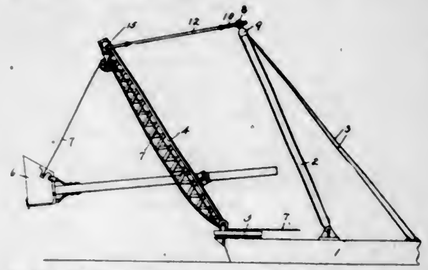
875,562. GRAVE-VAULT. LODRICK WILLIAMS and HERMAN C. BRENNECKE, Doe Run, Mo.; John G. Williams administrator of said Lodrick Williams, deceased. Filed Mar. 30, 1906. Serial No. 308,908.



1. In a vault, the combination with a bottom, of angularly disposed side walls having abutted end portions, and inwardly extending raised portions disposed longitudinally of the walls and terminating short of the abutted ends thereof, said portions having their end corners abutted and forming with the abutted ends inclosed cement-receiving channels.

2. In a grave vault, the combination with side walls having shoulder on their inner sides below their upper edges, of end walls having shoulders on their inner sides below their upper edges, said end wall shoulders having portions disposed in angular relation, and angularly disposed longitudinal cover sections resting upon the shoulders of the side and end walls, and having raised portions terminating short of the edges of the sections, and, with the upper margins of the side and end walls, forming cement-receiving grooves.

875,563. PIVOTAL HEAD FOR HOISTING APPARATUS. WILLIAM H. ARNOLD, Brooklyn, N. Y. Filed Aug. 8, 1907. Serial No. 387,591.



1. In an apparatus of the class described, the combination with the upright support or mast and the boom, of a pivotal head mounted upon said support and leads connecting the out-board end of said boom with said pivotal head, the lines of said leads intersecting in the center of said pivotal head.

2. In an apparatus of the class described, the combination with the upright support or mast and the boom, of a pivotal head carried by said support and a lead connecting the free end of said boom with said pivotal head, the line of said lead passing through the center of said pivot.

3. In an apparatus of the class described, the combination with the upright support or mast and the boom, of a pivot mounted upon the upright support or mast, a socket adapted to turn upon said pivot and tension rods secured to the free end of said boom and to said socket, said tension rods converging to the center of said pivot.

4. In an apparatus of the class described, the combination with the upright support or mast and the boom of a pivotal head mounted upon said support, and connecting links between the free end of said boom and said pivotal head, said links adapted to converge and the continued line thereof to intersect in the center of the pivotal head.

5. In an apparatus of the class described, the combination with the upright support or mast and the boom, of a pivot mounted upon the upright support, a socket adapted to clamp about said pivot and turn thereon and provided with extending arms, and tension rods secured at one end to the free end of said boom and at the other end of the arms of the socket, said tension rods converging to a point in the center of said pivot.

[Claims 6 to 8 not printed in the Gazette.]

875,564. FERTILIZER-DISTRIBUTER. JAMES R. AYERS, Petersburg, Va. Filed June 10, 1907. Serial No. 378,180.



1. A machine as described, in combination with the hopper having a discharge throat at the side of its bottom, of

a regulating gate held in said discharge throat, and an adjustable shelf held in said hopper over said discharge throat, substantially as shown and described.

2. In a machine as described, the combination with the hopper having a discharge throat at its side and a regulating gate held in said discharge throat, of an adjustable shelf held within the hopper and in operative relation with said discharge throat, and means on the outside of the hopper and coöperatively connected with said shelf for adjusting the same, substantially as shown and described.

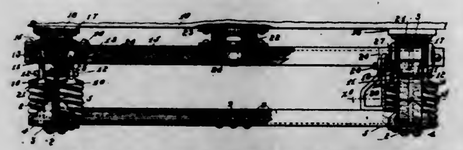
3. In a machine as described, the combination with the hopper having a discharge throat at its side and a regulating gate held in said discharge throat, of an adjustable shelf held within the hopper and in operative relation with said discharge throat, means on the outside of the hopper and coöperatively connected with said shelf for adjusting the same, said last named means comprising a lever, a pivotal connection between the lever and the shelf, and means for holding the lever in its adjusted positions substantially as shown and described.

4. In a machine of the class described, the combination with the hopper having a bottom provided with a discharge throat, a gate coöperatively held in said discharge throat, a shelf connected with said hopper and coöperatively held with respect to said discharge throat, combined with the stirring mechanisms comprising a rotatable shaft, a stirrer secured thereto adjacent said discharge throat, an agitator shaft mounted in bearings in said hopper, gear connections between said rotatable shaft and said agitator shaft and agitator arms mounted on said agitator shaft, substantially as shown and described.

5. In a machine of the class described, the combination with the wheeled drive shaft, the hopper and the means for mounting the drive shaft on the hopper, said hopper having a discharge throat, of a gate adjustably held in coöperative relation with said discharge throat, an agitator and stirring mechanism held within the hopper, means for driving said agitator and stirring mechanism from the drive shaft, a shelf held within the hopper, said shelf having a hub provided with a serrated face and held in the bearing apertures in the hopper, a lever having a serrated faced hub portion likewise held in said hopper bearing portion to engage with the hub portion of the gate, a bolt for holding said hub portions in contact to form a pivot bearing for said gate and lever, and means for holding said lever in its adjusted positions, substantially as shown and described.

[Claim 6 not printed in the Gazette.]

875,565. CAR-TRUCK. JOHN C. BARBER, Chicago, Ill. Filed Sept. 30, 1907. Serial No. 395,114.



1. In a car truck, the combination with truck and body bolsters connected for swiveling motion in respect to each other, of lateral motion and radial motion anti-friction bearings supporting the car body and its load directly from the side frames, with freedom for the lateral motion of said truck bolster on said lateral motion anti-friction bearings and freedom for the radial motion of said body bolster on said radial motion anti-friction bearings, substantially as described.

2. In a car truck, the combination with side frames, of truck and body bolsters connected for swiveling motion in respect to each other, bolster supporting springs on said side frames, lateral motion bearing rollers and bearing plates for said truck bolster, with the lower members of said plates resting on the caps of said springs and held by said frames with freedom for vertical motion only, and radial motion rollers and bearing plates for said body bolster, with the lower members of said plates fixed to the truck bolster directly over the top members of the lateral motion bearing plates, whereby the car body and its load is spring supported directly from the side frames, through the said anti-friction bearings, with freedom for the truck bolster and body bolster to move laterally together and to swivel or move angularly in respect to each other on said side bearing rollers, substantially as described.

3. In a car truck, the combination with side frames having bolster supporting springs thereon, of a truck bolster and lateral motion rollers and bearing plates for the same, the lower members of which plates have depending legs which straddle the side frames and rest on the bolster spring caps and are supported with freedom for vertical motion but held against any lateral motion or forward and backward motion, in respect to said frames, substantially as described.

4. In a car truck, the combination with the cast steel, girder-type side frames having the bolster spring supporting brackets cast integral therewith and projecting from the opposite sides thereof, the springs mounted thereon in two equal sets on opposite sides of the vertical webs of said frame castings, the truck bolster and the lateral motion rollers and bearing plates, the lower members of said bearing plates having depending legs which rest on the spring caps and straddle the top girders of said side frames, and which side frames are provided with retaining lugs embracing the legs of said plates and coöperating with the top girders of said frames to hold the said plates with freedom for vertical motion but against any lateral motion or forward and backward motion, substantially as described.

5. In a car truck, the combination with a side frame and a truck bolster, of lateral motion rollers and bearing plates for said bolster, the lower members of which plates are spring mounted on said side frames, with freedom for vertical motion but are held against any lateral motion or forward and backward motion, and loose connections uniting said bolster with said lower bearing plates with freedom for lateral motion of the bolster but preventing the separation of the upper and lower bearing plates far enough for the escape of the rollers, substantially as described.

[Claim 6 not printed in the Gazette.]

875,566. CAR-TRUCK. JOHN C. BARBER, Chicago, Ill. Filed Oct. 10, 1907. Serial No. 396,802.



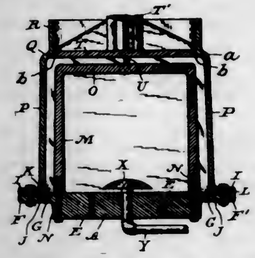
1. In a car truck having side frames of the arch bar type, the combination with bolster columns rising above the top arch bars, of top arch bars passing through the said columns, and a truck bolster working below the said top arch bars and provided with side bearings rising above the same and coöperating therewith to distribute the forward and backward thrusts to the said columns, partly above and partly below the said top arch bars, substantially as described.

2. The combination with arch bar side frames, of truck and body bolsters connected for swiveling motion in respect to each other, lateral motion rollers and radial motion rollers supporting the car body and its load through the side bearings, with the truck bolster laterally movable below the top arch bars on the lateral motion rollers and having fixed thereto the lower bearings for the radial motion rollers with the same constructed to straddle the top arch bars and afford the requisite clearance for the vertical and lateral motion of said bolsters, substantially as described.

3. The combination with arch bar side frames, of truck and body bolsters connected for swiveling motion in respect to each other, lateral motion rollers and radial motion rollers supporting the car body and its load through the side bearings, with the truck bolster laterally movable below the top arch bars on the lateral motion rollers and having fixed thereto the lower bearings for the radial motion rollers, with said bearings constructed to straddle said arch bars and afford the requisite clearance for the vertical and lateral motions of said bolster, and bolster columns rising above the top arch bars and receiving the forward and backward thrusts partly from the bolster proper and partly from said lower side bearings fixed thereto, substantially as described.

4. In a car truck having side frames of the arch bar type, the combination with the bolster columns 4 rising above the top arch bars, of the top arch bars 3 passing through the said columns, the bolster supporting springs 8, the plates 9 with lugs 9^a embracing said columns, the lateral motion rollers 10 on said plates 9, the truck bolster 12 having the plates 11 resting on said rollers 10, with said truck bolster located below the top arch bars and having the side bearings 13 straddling the top arch bars and working between the upper ends of said bolster columns 4, as described, the radial motion rollers 14 on said bearings 13, the body bolster 16 having the plates 15 resting on the rollers 14, and the swiveling plates 17 and 18 connecting said bolsters 12 and 16, all for coöperation substantially as described.

875,567. MOLD FOR GLASS CASKETS, BATH-TUBS, OR SIMILAR ARTICLES. JACOB BONSHIRE, Peru, Kans., and JAMES M. STAFFORD, Petersburg, Ind. Filed Feb. 15, 1907. Serial No. 357,433.



1. A mold including a perforate base, a separate hollow inner form comprising a side wall and a top on the wall to form a closed chamber accessible through the perforation in the base, a continuous outer form to inclose the side wall only of the inner form, and a plunger in the outer form to cover the top of the inner form.

2. A mold including a perforate base, a separate hollow inner form to be inverted on the base and form a closed chamber accessible only through the perforation in the base, means for holding the inner form on the base, a continuous outer form to inclose the side wall only of the inner form, means for gaging the outer form on the base and with respect to the inner form, and a plunger in the outer form to cover the inner form.

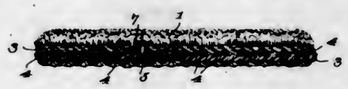
3. A mold for glass vessels including a base having an air-hole therein, a hollow inner form mounted on the base to shape the interior of a vessel inverted, an outer form on the base and extending about the inner form to shape the exterior of the side wall of the vessel, a plunger movable in the outer form to shape the exterior of the bottom of the vessel, and a burner in the hollow inner form upon the base.

4. A mold for glass vessels including a base having a hollow inner form secured thereto removably, a form plate on the base and extending about the lower portion of the inner form, there being also a groove extending about the lower portion of the inner form, an outer form supported by the base and extending about the groove and the inner form and having a plunger therein movable opposite to the inner form, a supply pipe extending through the base, and a burner connected to the supply pipe above the base.

5. A mold for glass vessels including a base, a hollow inner form secured removably on the top of the base, a form plate on the base and extending about the lower portion of the inner form, there being also a groove extending about the lower portion of the inner form, a filler inserted removably in the groove, an outer form mounted removably on the form plate and gaged thereby with respect to the inner form, and a plunger guided by the outer form opposite to the top of the inner form, said inner form having a heater therein.

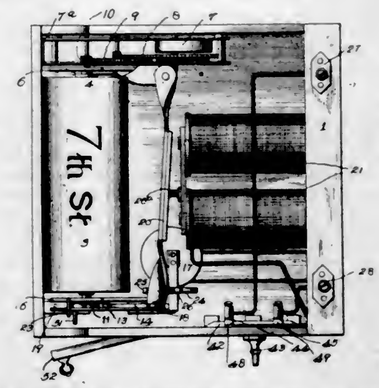
[Claims 6 to 12 not printed in the Gazette.]

875,568. DOOR-MAT. ERNEST W. CRUIKSHANK, Baltimore, Md. Filed Nov. 15, 1905. Serial No. 287,473.



The combination with a mat, of a binding braid having its ends overlapped, and a metal clip clenched transversely around the ends and sunk into the fibers thereof at points slightly removed from their extremities, the opposite edges of the clip constituting shoulders that are presented to the said ends and operate to prevent their longitudinal displacement in either direction.

875,569. STREET-INDICATOR FOR CARS. DANIEL W. DE SYLVIA, Richmond, Va. Filed Sept. 26, 1905. Serial 280,223.



1. In a device of the character described, the combination, with a ribbon mounted on independent rollers, of a magnet for operating said rollers in one direction, a spring for operating said rollers in the opposite direction, another magnet for controlling the operation of said spring, electric connections to said magnets, and a switch for directing the current to either of said magnets according to the direction it is desired to turn said ribbon.

2. In a device of the character described, the combination, with a ribbon mounted on independent rollers, a ratchet connected to one roller, a spring connected to the other roller, an armature carrying an arm provided with a tooth to engage said ratchet and turn the ribbon against the influence of the spring, a magnet for actuating said armature, a pivoted arm carrying a catch adapted to govern the escape of said ratchet, another magnet for actuating said pivoted arm, electric connections to each of said magnets, and a switch for directing the current to either of them according to the direction it is desired to turn said ribbon.

3. In a device of the character described, the combination, with a ribbon mounted on rollers, of a magnet for operating said rollers in one direction, a spring for operating said rollers in the opposite direction, another magnet for controlling the operation of said spring, a switch having two pairs of contact plates, each pair connected to one of said magnets, and a slide on said switch, said slide having electrical connections adapted to engage either of said pairs of contact plates for the purpose specified.

875,570. SHOE-LACE HOOK. OSCAR H. ELIEL, La Salle, Ill. Filed Apr. 4, 1907. Serial No. 366,261.



1. An improved shoe-lace hook comprising a hook-body having a base provided with attaching means, an upright part, and a top part connected and extended around three sides of the hook recess, in combination with a light spring attached to the top part and projected forward slightly beyond it and then downward and backward through the recess, the shape of the recess and spring and their relative arrangement being such that one portion of the spring is adapted to choke the front upper part of the recess at the entrance, another portion to extend further down and strike the base at about the middle of the depth of the recess, and still another portion to grip the lace lightly on the base at the rear adjacent to the upright.

2. An improved shoe-lace hook comprising a base with means for attaching it to a shoe, an upright on the base and a top part on the upright extended over the base to form an open-sided recess for the lace, in combination with a light flexible spring attached to the top part and projected forward slightly beyond it and then downward and backward into and through the recess, the spring being curved to enter the recess about midway between the base and the top part, to pass downward and backward so as to strike the base at about the middle of the depth of the recess and extend from there back the rest of the way in contact with the base to a point beyond the front line of the upright.

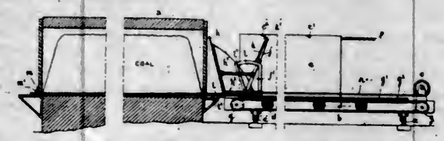
3. An improved shoe-lace hook comprising a base with attaching means, a slotted upright on the base, a top part on the upright and extended over the base forming an open-sided recess, in combination with a spring on the top part projected forward and downward and then backward into and through the recess and into the slot in the upright, the curvature of said spring being such as to leave the front lower part of the recess open for about half its height and depth and closed for the rest of the way back to the upright.

4. An improved shoe-lace hook comprising a base part with attaching means, an upright slotted part and a top part arranged to form a hook recess open at the front, in combination with a light spring attached to the front of the top part, projected slightly forward and then on a curve downward and backward through the hook recess and into the slot of the upright part, the curvature of the spring forming a free opening for the lace at the front lower part of the hook recess and a clasp for the lace at the rear lower part of the recess.

5. An improved article of manufacture of the class mentioned, comprising a shoe-lace hook having the base provided with fastening means, an upright part provided with a slot, and a top part provided with reverted side edges, in combination with a light spring adapted to be applied under the reverted side edges and having a rear part provided with a tongue adapted to play in the slot of the upright part.

[Claim 6 not printed in the Gazette.]

875,571. MACHINE FOR CHARGING COKE-OVENS. ALFRED EARNST, Pittsburg, Pa., assignor to The Coal and Coke By-Products Company, Pittsburg, Pa., a Corporation of West Virginia. Filed Apr. 25, 1907. Serial No. 370,315.



1. In a charging machine for coke ovens, the combination of a longitudinally adjustable charging box having a false bottom carrying a slidable head plate normally closing one end of the charging box, means for reciprocating said charging box into and without the oven, and means for discharging the coal therefrom.

2. A charging machine for coke ovens having in combination a longitudinally adjustable charging box provided with a false bottom having independent longitudinal movement, said false bottom carrying a head plate normally closing one end of the charging box, means for reciprocating the charging box into and without the oven, detachable means for securing the false bottom in position in the oven, and means for withdrawing the false bottom from the oven.

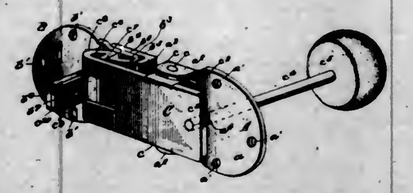
3. A charging machine for coke ovens having in combination a longitudinally adjustable charging box provided with a false bottom having independent longitudinal movement, said false bottom carrying an inclined head plate normally closing the rear end of the charging box, means for reciprocating the charging box, detachable means for securing the false bottom in position in the oven, and means for withdrawing the false bottom from the oven.

4. A charging machine for coke ovens having in combination a longitudinally adjustable charging box provided with a false bottom having independent longitudinal movement, said false bottom carrying an inclined slidable head plate normally closing the rear end of the charging box, means for reciprocating the charging box, detachable means for securing the false bottom in position in the oven, means for withdrawing the false bottom from the oven, and means for reciprocating said head plate.

5. A charging machine for coke ovens having in combination a longitudinally adjustable charging box provided with a false bottom having independent longitudinal movement, said false bottom carrying an inclined slidable head plate normally closing the rear end of the charging box, means for reciprocating the charging box, means for securing the false bottom in position in the oven, means operated by the charging box for withdrawing the head plate from the oven, means for withdrawing the false bottom from the oven, and means upon the charging box for restoring the means for withdrawing the head plate from the oven and the head plate to normal position.

[Claim 6 not printed in the Gazette.]

875,572. DOOR-FASTENER. MATTHEW J. FLANNERY, Bozeman, Mont. Filed Oct. 31, 1905. Serial No. 285,249.

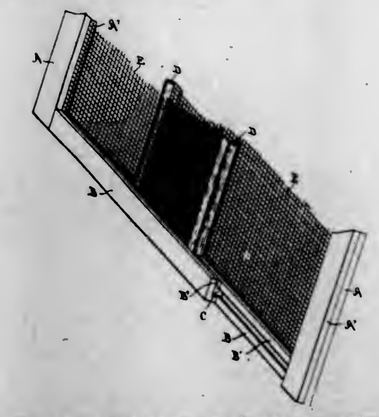


1. A fastener for sliding doors, comprising a plate having a segmental portion provided with perforations whereby to secure it to a door, a spring actuated catch pivoted to the plate, one end of the catch being bent downward to form an abutment having a square inner face and an inclined outer face, said catch having an upwardly extending lug adjacent to the abutment and formed from the catch and provided with an opening, a pin secured to the opposite end of the catch and traversing an opening in the plate and the door, said pin being provided with a knob for manipulating the catch, a second plate having a segmental portion provided with perforations whereby to attach it to the casing, and a portion offset from the segmental portion for entering between the first plate and the catch, the free end of the second plate being bent upwardly to form an abutment having a square inner face and an inclined outer face for coöperating with the first abutment, said second plate being provided with a lug having an opening registering with the opening in the first lug, and said first plate having stops for engaging the abutment on the second plate whereby to limit the inward movement of the plates with respect to each other.

2. A fastener for sliding doors comprising a plate having a spring actuated catch pivoted to the upper face thereof, a second plate having a portion for entering between the catch and the first plate, the first plate having stops for limiting the inward movement of the second plate, said catch and second plate being provided with lugs having registering openings, and with abutments having square inner faces and inclined outer faces, said abutments being on the engaging faces of said catch and second plate, means whereby to attach the plates to the door and the casing, and means for manipulating the catch.

3. A fastener comprising a plate having a spring actuated catch connected thereto, a second plate having a portion for entering between the first plate and the catch, said first plate having means beneath the catch for engaging the second plate to limit the inward movement thereof, said second plate and catch being provided with means whereby to allow the second plate to enter beneath the catch and to prevent the removal therefrom, and means for releasing said last named means.

875,573. EXTENSION WINDOW-SCREEN. HENRY G. FOSTER, Horseheads, N. Y., assignor, by mesne assignments, to Harry N. Low, trustee, Washington, D. C. Filed July 5, 1904, Serial No. 215,225. Renewed Oct. 17, 1907. Serial No. 397,916.



1. In an extensible screen, two frames arranged to overlap and having oppositely disposed channeled portions, the screen fabrics, and sliding connections between the frames including a plurality of coupling members, one carried by each frame and engaging the channeled portion of the opposite frame, in combination with retaining means in the channeled portions of the frames for the screen fabrics and coupling members.

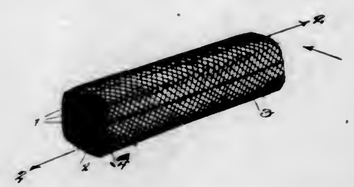
2. In an extensible screen, two frames arranged to overlap and having oppositely disposed channeled portions, the screen fabrics, and sliding connections between said frames including a plurality of coupling members, one secured against longitudinal movement in the channeled portion of one of the frames and slidably engaging the channeled portion of the opposite frame, in combination with retaining means in the channeled portion of the frames for the coupling members and screen fabrics.

3. In an extensible screen, two frames arranged to overlap and having oppositely disposed channeled portions including grooves in the frames, the screen fabrics, and sliding connections between said frames including a plurality of coupling members, one secured against longitudinal movement in the channeled portion of one of the frames and slidably engaging the groove in the channeled portion of the opposite frame, in combination with retaining means in the channeled portions of the frames for the coupling members and screen fabrics.

4. In an extensible screen, two frames arranged to overlap and having oppositely channeled portions, the screen fabrics, and sliding connections between the frames including a plurality of coupling members, one carried by each frame and engaging the channeled portion of the opposite frame, in combination with retaining strips fastened in the channeled portions over the screen fabrics and having their inner edges rabbeted to provide slide-ways for the coupling members.

5. An extensible screen comprising two frames arranged to overlap and having oppositely disposed grooved channeled portions, screen fabrics, retaining strips fastened in the channeled portions over the screen fabrics and having their inner edges rabbeted to form, together with the channel grooves, slide-ways of T-shaped cross-section, and sliding connections between the frames including a plurality of coupling members, one carried by each frame and presenting a T shaped projection to engage the slide-way in the opposite frame.

875,574. ROD-PACKING. OLIN J. GARLOCK, Palmyra, N. Y., assignor to The Garlock Packing Company, Palmyra, N. Y. Filed Aug. 21, 1907. Serial No. 389,566.



1. A rod packing an essential element of which is a body portion composed of a flattened tubular part folded upon itself to bring its adjacent sides into contact with each other.

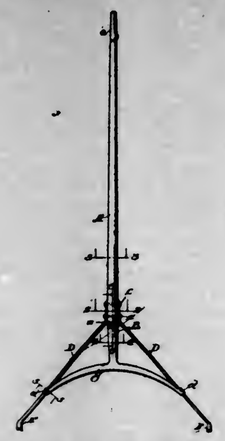
2. A rod packing having a body portion of a flattened and folded braided tube with its adjacent faces brought into contact with each other arranged with its edges to receive the pressure to bulge the tube.

3. A rod packing having a body of a flattened and folded tube with a plurality of folds one upon the other, a strip of rubber bearing against one face of the same, and a covering therefor.

4. A rod packing composed of a body portion of a flattened tubular member having a plurality of folds one upon the other, a comparatively rigid member, and a covering secured to the same.

5. A rod packing composed of a tubular member flattened and folded upon itself, a rubber strip bearing against one face of the same, and a covering, the rubber arranged to be outermost in use and the flattened tubular body to be innermost to receive the pressure and tend to be bulged thereby.

875,575. WAGON TONGUE OR POLE. SIMEON G. GAY, Ottawa, Ill. Filed Jan. 11, 1907. Serial No. 351,822.



1. A pole or tongue for vehicles comprising a tubular pressed metal portion in front of the double-tree pivot, braces secured to and extending diagonally from the sides of the rear end thereof, and a pressed metal rear extension for said tongue having a circle-bar through the ends of the branches of which said braces pass and are secured.

2. A pole or tongue for vehicles comprising a tubular pressed metal portion in front of the double-tree pivot, braces secured to and extending diagonally from the sides of the rear end thereof, and a pressed metal rear extension for said tongue having a circle-bar through the ends of the branches of which said braces pass and are secured and which are of an inverted channel-shape in cross-section.

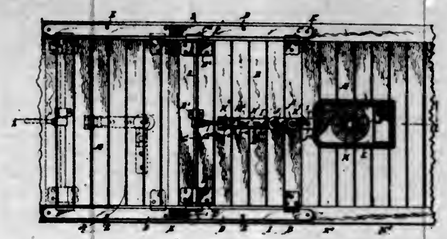
3. A pole or tongue for vehicles comprising a pressed metal portion in front of the double-tree pivot, a separate pressed metal extension to the forward end of which said tongue is secured and having a circle-bar, and metallic braces secured to and projecting diagonally from the sides of the rear end thereof, said extension and the branches thereof being of an inverted channel-shape in cross section and the latter terminating in knuckles through which said braces extend.

4. A pole or tongue for vehicles comprising a tubular pressed metal portion in front of the double-tree pivot, a malleable metal extension which is of an inverted channel-shape in cross section, has the rear end of said tubular portion fitted over and secured to its forward end, and is provided at its rear end with an integral circle-bar the extremities of which terminate in knuckles, and diagonal braces made of steel rods the forward ends of which are secured to the rear end of the tubular portion, and extend back through the said knuckles, and have their rear ends terminate in pole-couplings.

875,576. LOCKING DEVICE. JOHN P. GERAGHTY, Jersey City, N. J., assignor of thirty one-hundredths to himself, forty one-hundredths to Charles H. Good, twenty one-hundredths to John J. Goodlad, and ten one-hundredths to Eugene Sullivan, Jersey City, N. J. Filed Mar. 29, 1907. Serial No. 365,331.

1. In a locking device for doors and the like, a fixed plate adapted to be secured to a support, a movable member supported on the fixed plate for locking the operating device of a door, an actuating device for the movable member, a lock, and means connected with the actuating device and controlled by the lock for locking the actuating device.

2. In a locking device for doors and the like, a fixed plate adapted to be secured to a support, a slidable member supported on the fixed plate for locking the operating device of a door, an actuating device for the slidable member, a lock, and means connected with the actuating device and controlled by the lock for locking the actuating device.



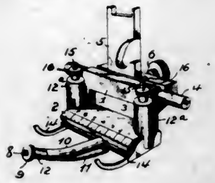
3. The combination with a lock, of a sliding plate for securing the handle of a door operating device, a pivoted arm engaging the plate to impart a sliding movement thereto, and a locking arm connected with the pivoted arm and adapted to be locked in place by said lock.

4. The combination with a lock, of a plate mounted to slide and having one end constructed to engage and secure the handle of a door operating device, and a pivoted arm engaging the said plate to impart a sliding motion to the same, the said arm having a hinged handle adapted to be engaged by the said lock.

5. The combination with a lock, of a plate for locking the handle of a door operating device, said plate being mounted to slide and provided with a slot, and a pivoted arm provided with a pin engaging the slot of the plate, said arm having a member adapted to be locked in place by the lock.

[Claims 6 to 8 not printed in the Gazette.]

875,577. GUIDE AND PRESSER-FOOT FOR SEWING-MACHINES. JOHN HUDSON, Spokane, Wash. Filed Aug. 2, 1906. Serial No. 328,961.



1. In a combined guide and presser foot, the combination with a block or casting, of a spring-pressed guide carried by said block or casting at one end thereof, and a spring presser foot projecting forwardly from said block or casting and adjustable laterally thereon toward and away from the guide.

2. In a combined guide and presser foot, the combination with a block or casting, of a spring-pressed guide at one end thereof, a forwardly projecting laterally adjustable rod secured to the block, a scale on the block, and a spring carried by said rod and adapted to press down on the goods adjacent to the needle.

3. In a combined guide and presser foot, the combination with a body or casting, of vertical barrels at the ends thereof, rods in said barrels, guides at the lower ends of the rods having upturned forward ends, adjusting nuts on the upper ends of the rods above the barrels, and a presser foot adjustably secured to the body between the guides.

4. In a combined guide and presser foot, the combination with a block a guide attached thereto and a presser foot laterally adjustable on the block, of a bar constructed for attachment to a sewing machine, a cross rod on said bar movable in the block, and a set screw to secure the block at any adjustment.

5. The combination with a rectangular block, of a spring presser foot adjustable laterally thereon and projecting forwardly from the front edge thereof, and means for effecting lateral adjustment of said block relatively to the presser bar of a sewing machine.

[Claims 6 to 8 not printed in the Gazette.]

875,578. PROCESS OF TREATING ZINC AND LEAD SULFID ORES. ANTOINE H. IMBERT, Grand-Montrouge, France. Filed Nov. 9, 1906. Serial No. 342,698.

1. The process of reducing metallic sulfid which consists in heating the sulfid in the presence of an oxid of such a character as to form a dissolvent for the said metallic sulfids with a metal having a greater affinity for sulfur than the metal of the sulfid.

2. The process of reducing sulfid ores which consists in heating the ore in the presence of an oxid of such a character as to form a dissolvent for the said sulfid ores with a metal having a greater affinity for sulfur than the metal of the ore.

3. The process of reducing metallic sulfids which consists in heating the sulfids with a mixture of an alkaline earth, and a metallic oxid of such a character as to form a dissolvent for the said metallic sulfids, and a metal having a greater affinity for sulfur than the metal of the sulfids.

4. The process of reducing zinc and lead sulfid ores, which consists in treating the ores with a mixture of a basic oxid and an acid oxid, of such a character as to form a dissolvent for the said sulfid ores, and metallic iron.

5. The process of reducing metallic sulfids which consists in treating the sulfid with a metal having a greater affinity for sulfur than the metal of the sulfid, in a bath composed of two or more oxids fusible at a temperature lower than the fusing point of any of the oxids composing the bath taken alone and capable of dissolving the sulfids which are to be treated.

[Claims 6 to 11 not printed in the Gazette.]

875,579. METALLURGICAL TREATMENT OF SULFUROUS ORES BY THE PRECIPITATION PROCESS. ANTOINE H. IMBERT, Grand-Montrouge, France, assignor to Imbert Process Company, New York, N. Y., a Corporation of New York. Filed June 6, 1907. Serial No. 377,591.

1. The process of reducing metallic sulfids which consists in heating the sulfid in the presence of an oxid and a sulfid of such a character that they will form a dissolvent for the said metallic sulfids with a metal having a greater affinity for sulfur than the metal of the sulfid being reduced.

2. The process of reducing sulfid ores which consists in heating the ore in the presence of an oxid and a sulfid of such a character that they will form a dissolvent for the said metallic sulfids with a metal having a greater affinity for sulfur than the metal of the ore.

3. The process of reducing sulfids which consists in heating the sulfid with a mixture of peroxid of iron, sulfid of iron, and a metal having a greater affinity for sulfur than the metal of the sulfid being reduced.

4. The process of reducing sulfid ores in which the metal has less affinity for sulfur than has iron which consists in heating the ore with a mixture of peroxid of iron, sulfid of iron and metallic iron.

5. The process of reducing sulfid ores which consists in heating the ore in the presence of a metal having a greater affinity for sulfur than the metal of the ore being reduced, and an oxid and a sulfid of said metal, and reemploying a portion of the residual sulfid for the reduction of further ore.

[Claims 6 to 15 not printed in the Gazette.]

875,580. METALLURGICAL METHOD OF TREATING OXIDIZED ZINC ORES (CALAMINS, OXIDS, SILICATES) BY THE PRECIPITATION PROCESS. ANTOINE H. IMBERT, Grand-Montrouge, France, assignor to Imbert Process Company, New York, N. Y., a Corporation of New York. Filed June 6, 1907. Serial No. 377,592.

1. The process of extracting zinc from oxid ores, which consists in heating the ore in the presence of a metallic oxid, a metallic sulfid of such a character as to form a dissolvent for said ores and a metallic reagent having a greater affinity for the element with which the zinc is combined than has zinc.

2. The process of extracting zinc from oxid ores, which consists in heating the ore in the presence of a metallic oxid and a metallic sulfid of such a character as to form a dissolvent for said ores with metallic iron.

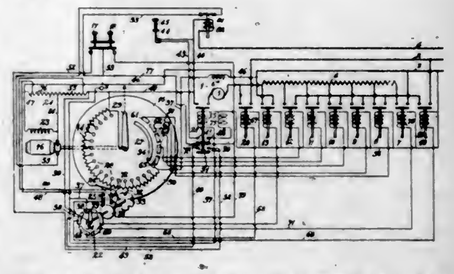
3. The process of extracting zinc from oxid ores which consists in heating the ore with a mixture of a peroxid of iron, sulfid of iron and metallic iron.

4. The process of extracting zinc from oxid ores which consists in first heating the ore in the presence of a metallic oxid, a metallic sulfid of such a character as to form a dissolvent for said ores and a metallic reagent having a greater affinity for the element with which the zinc is combined than has zinc and then collecting the extracted zinc.

5. The process of extracting zinc from oxid ores which consists in first heating the ore in the presence of a metallic oxid, a metallic sulfid of such a character as to form a dissolvent for said ores and a metallic reagent having a greater affinity for the element with which the zinc is combined than has zinc to release the zinc in the form of vapor and then condensing the vaporized zinc.

[Claim 6 not printed in the Gazette.]

875,581. SYSTEM OF ELECTRIC-MOTOR CONTROL. HENRY D. JAMES, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed May 6, 1907. Serial No. 372,136.



1. In a control system, the combination with supply circuits of unlike voltage, an electric motor having armature and field magnet windings, armature and field resistances therefor, and independently-operated switches for controlling the armature resistances, of means for governing the control switches and the field resistance, said means comprising a rotatable contact arm, and a series of stationary contact members disposed in the arc of a circle and a driving motor for the contact arm.

2. In a control system, the combination with an electric motor having a field magnet winding and an armature winding, a field resistance and an armature resistance, of a plurality of independently-operated control switches for the armature resistance, a switching device for varying the field resistance and controlling the action of the independent switches, an electric driving motor therefor, and automatic and manually-operated means for controlling the driving motor.

3. In a control system, the combination with an electric motor, a supply circuit, a field resistance, an armature resistance, a plurality of independently-operated control switches for the armature resistance, and a circuit interrupter, of a switching device for controlling the field resistance and the operation of the control switches, an operating motor for the switching device, means for permitting the closure of the circuit interrupter only when the switching device occupies its "off" position, and means dependent upon the opening of the circuit interrupter for automatically returning the switching device to its "off" position.

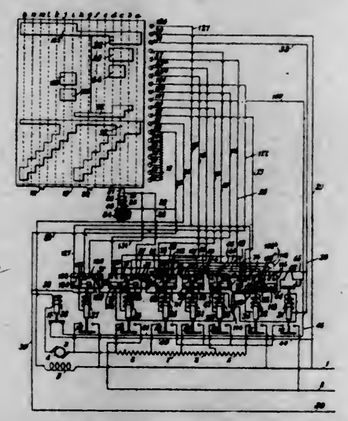
4. In a control system, the combination with an electric

motor, a supply circuit, a field resistance, an armature resistance, a plurality of independently-operated control switches for the armature resistance, and a circuit interrupter, of a switching device for controlling the field resistance and the operation of the control switches, means for permitting the closure of the circuit interrupter only when the switching device occupies its "off" position, and means, dependent upon the opening of the circuit interrupter for automatically returning the switching device to its "off" position.

5. In a control system, the combination with an electric motor, a supply circuit, a field resistance, an armature resistance, a plurality of independently-operated control switches for the armature resistance, and a circuit interrupter, of a switching device for controlling the field resistance and the operation of the control switches, and means, dependent upon the opening of the circuit interrupter, for automatically returning the switching device to a predetermined position.

[Claims 6 to 22 not printed in the Gazette.]

875,582. MULTIVOLTAGE SYSTEM OF ELECTRIC-MOTOR CONTROL. HENRY D. JAMES, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed May 6, 1907. Serial No. 372,137.



1. In a control system, the combination with switches adapted to alternately close and open, the closures being in predetermined sequences, of manually operated means for selectively governing the operation of the switches only when they are closing in certain of the sequences.

2. In a control system, the combination with switches adapted to close in sequences and to open and finally reclose in sequence, of manually-operated means for selectively governing the operation of the switches only when they are closing in one of the sequences.

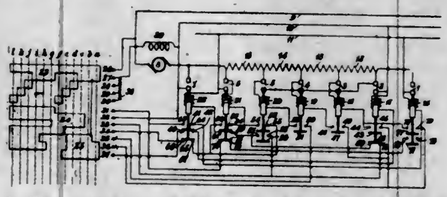
3. In a control system, the combination with a plurality of switches adapted to close in a predetermined sequence and to open and finally reclose in the same sequence, of a master controller for selectively governing the operation of the switches only when they are closing in the final sequence.

4. In a control system, the combination with supply circuits of unlike voltage, an electric motor having armature and field magnet windings and resistances therefor, and a plurality of independently operated resistance control switches adapted to close in sequence and to open and reclose in the same sequence for successively connecting the motor to the supply circuits, of manually operated means for selectively governing the operation of the switches only when they are closing in the final sequence.

5. In a control system, the combination with a multivoltage source of electrical energy, an electric motor having an armature winding, a resistance therefor and a series of independently-operated control switches for connecting the motor and the resistance to the lower-voltage source, for gradualy short-circuiting the resistance, for connecting the resistance between the lower and the higher-voltage supply circuit, for interrupting the low-voltage circuit and for gradually short-circuiting the resistance, of a master switch for selectively controlling the resistance-control switches only on the lower voltage.

[Claims 6 to 10 not printed in the Gazette.]

875,583. METHOD OF CONTROL OF ELECTRIC MOTORS. HENRY D. JAMES, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed May 6, 1907. Serial No. 372,138.



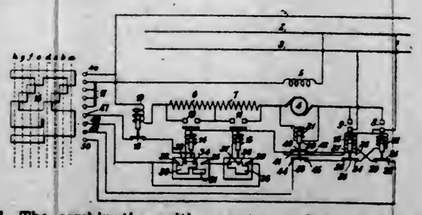
1. The method of operating an electrical translating device which consists in connecting the same successively to supply circuits of decreasing voltage while still maintaining the circuit of the device, and in introducing resistance in series with the device between the same and the low-voltage supply circuit when effecting a reduction in voltage.

2. The method of operating an electrical translating device which consists in connecting the same to a circuit of high voltage, connecting the device to a circuit of lower voltage and in series with a resistance while still maintaining the connection of the device with the high voltage circuit, and breaking the said connection with the high voltage circuit.

3. The method of changing the connection of a translating device from a high voltage circuit to a circuit of lower voltage which consists in connecting a resistance between one conductor of the low voltage circuit and one terminal of the device, and breaking the connection of the said terminal with the high voltage circuit.

4. The metnod of operating an electrical translating device which consists in connecting the same to a high voltage conductor, connecting a resistance between the high voltage conductor and a lower voltage conductor and breaking the connection of the device and the resistance with the high voltage conductor.

875,584. MULTIPLE-VOLTAGE SYSTEM OF CONTROL. HENRY D. JAMES, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed May 6, 1907. Serial No. 372,140.



1. The combination with a motor, and means for connecting the same successively to circuits of different voltage, of means for preventing connection of the motor to a circuit of low voltage after having been connected to a circuit of higher voltage until the electromotive force generated by the motor approximates that of the low voltage circuit.

2. The combination with a motor, and switches for connecting the same respectively to circuits of different voltage, of means for preventing closure of one of said switches for the purpose of connecting the motor to a circuit of low voltage after the same has been disconnected from the circuit of high voltage until the electromotive force generated by the motor approximates that of the low voltage circuit.

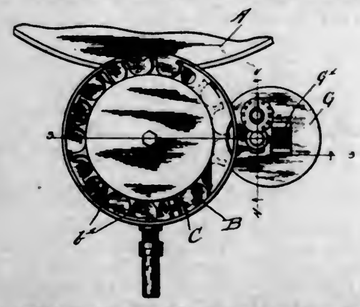
3. The combination with a motor, and switches for connecting the same respectively to circuits of different voltage, of means for preventing closure of one of said switches for the purpose of connecting the motor to a circuit of low voltage after the same has been disconnected from the circuit of high voltage until the electromotive force generated by the motor approximates that of the low voltage circuit, said means comprising a controlling magnet winding that is connected between the terminals of the motor armature.

4. The combination with a motor, and switches for connecting the motor respectively to circuits of different voltage, of controlling magnet windings for said switches and a relay switch having a controlling magnet winding connected between the terminals of the motor armature, the said relay switch being interposed in the circuit of the controlling magnet winding for the switch that connects the motor to a circuit of low voltage and being opened only when the electromotive force generated by the motor exceeds that of the low-voltage circuit.

5. The combination with a motor, and switches for connecting the same respectively to circuits of different voltage, of controlling magnet windings for the switches, and means for interrupting the circuit of the controlling magnet winding for the switch that is adapted to connect the motor to a circuit of low voltage when the electromotive force generated by the motor exceeds that of the low-voltage circuit.

[Claims 6 to 8 not printed in the Gazette.]

875,585. COUNTING-MACHINE. JAY M. JOHNSON, Chicago, Ill., assignor to Claude H. Birdsall, Washington, D. C. Filed Dec. 12, 1906. Serial No. 347,500.



1. A registering mechanism of the class described comprising a rotating carrying wheel adapted to selectively engage the articles to be counted, a toothed counting wheel positioned adjacent the periphery of the carrying wheel, a detent acting normally to engage one of the teeth on the counting wheel and to lock said counting wheel from movement and adapted to be automatically retracted by contact with the article to be counted, a shaft rigidly engaged on said wheel, a gear thereon, a registering mechanism driven by said gear and means for manually retracting said detent in setting the registering mechanism to zero.

2. A registering mechanism of the class described comprising a rotative carrying wheel adapted to selectively engage the articles to be counted, a toothed counting wheel positioned adjacent the periphery of the carrying wheel, a sliding detent acting normally to engage one of the teeth on the counting wheel and to lock the same from movement and adapted to be retracted by contact with the article to be counted, a shaft rigidly engaged on said wheel, a gear thereon, and a registering mechanism driven by said gear.

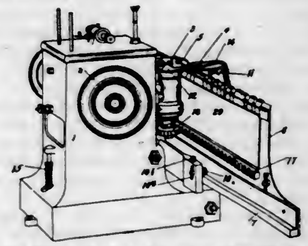
3. A device of the class described the combination with a carrying wheel for the articles to be counted of an escapement wheel having downwardly projecting teeth each adapted to be actuated by the passing articles successively means locking said escapement wheel from movement and actuated by the article passing to permit the article to actuate said escapement wheel, means automatically returning said locking means to normal after the passage of each article and a register actuated by the escapement wheel.

4. A device of the class described embracing an escapement wheel adapted to be actuated by the passage of the article to be counted, a detent adapted to lock said escapement after each count and actuated by the passage of the article to be counted, a shaft driven by the escapement wheel and a registering mechanism actuated thereby.

5. In a device of the class described the combination with the actuating means for the articles to be counted of an escapement wheel actuated successively by the passing articles, a register actuated by the escapement wheel and an escapement detent adapted to be retracted by the articles counted.

[Claims 6 to 36 not printed in the Gazette.]

875,586. GLOVE-TIP-SEWING MACHINE. CHARLES R. MORLEY, Amsterdam, N. Y. Filed Oct. 15, 1906. Serial No. 338,913.



1. In a machine of the character described, the combination of stitch forming mechanism and a movable work holding plate, a clamp on the plate mounted on a spring arm and provided with opening mechanism consisting of a lever 26 passing through an opening in the clamping plate, and having a transverse pin 27 and an angular head, both arranged between the plate and the spring arm, substantially as set forth.

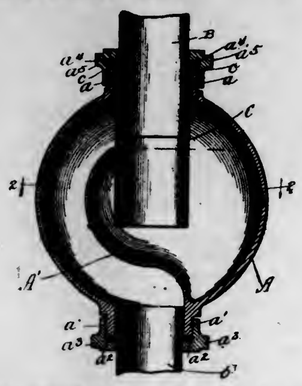
2. The combination in a machine of the character described of a sewing mechanism, a work supporting plate mounted on a track for longitudinal movement past the sewing mechanism, a roller mounted on the machine in substantially the same vertical plane with the needle, and against which the edge of the work supporting plate is adapted to travel, a toothed rack on the plate, a driving gear therefor on the machine, a clamping roller and a presser mounted on a movable arm, the roller adapted to oppose the roller on the machine and the presser adapted to hold the toothed rack in engagement with the driving gear, and means for operating said arm to open the rollers and release the plate laterally from the track and rack, substantially as set forth.

875,587. BASIN-TRAP. ANDREW M. MORRISON, Dubuque, Iowa. Filed June 9, 1905. Serial No. 264,404.

1. A trap comprising a casing having an inlet orifice in the top thereof and an outlet orifice in the bottom thereof, an inlet pipe engaged in said inlet orifice and projecting into the casing and a partition extending upwardly from one side of the outlet orifice beneath said inlet pipe and partly around the same.

2. A trap comprising a rounded casing having oppositely disposed outlet and inlet apertures therein, externally

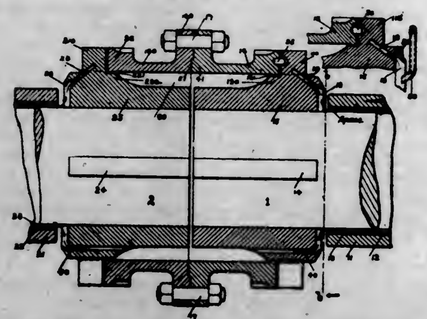
threaded bosses through which said apertures open into the casing, a sleeve extending from the inlet aperture downwardly and a partition extending from the bottom of the casing at one side of said aperture upwardly and laterally between the apertures and having its central portion curved about said sleeve.



3. A trap comprising a globular casing having an outer and an inner chamber a complementally curved partition integral with said casing and separating said chambers, oppositely disposed inlet and outlet apertures in said casing, a sleeve removably secured in inlet aperture and extending into the inner chamber and adapted to receive therein the pipe from the fixture an outlet pipe from the trap to the sewer and means affording slip joints connecting both said pipes with the trap.

4. A trap comprising a cast globular shell having an integral complementally curved partition therein extending obliquely across or upward in the same and affording an inner and an outer chamber, a discharge pipe connected in the outer chamber by means affording a slip joint, a sleeve extending through the inlet aperture into the inner chamber and flanged at its upper end to engage outside the trap, an inlet pipe adjustable therein, a gasket on said pipe and covering the flange of said sleeve, a following nut threaded on the trap and compressing the gasket affording a slip joint connection.

875,588. LUBRICATED COUPLING. ROBERT A. MCKEE, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Sept. 14, 1906. Serial No. 334,587.



1. The combination with a rotatable member provided with a tooth, of a second member rotatable on substantially the same axis and provided with a tooth adapted to engage the tooth of said first mentioned member to rotate the same, one of said members being recessed inwardly towards its axis to form a lubricant receptacle and also being provided with a duct leading outwardly from said receptacle to the bearing surface of its tooth.

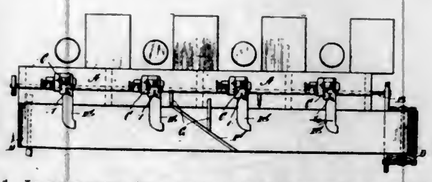
2. The combination with a rotatable member provided with a tooth, of a second rotatable member provided with a tooth adapted to engage the tooth of said first mentioned member to rotate the same, one of said members being recessed inwardly towards its axis to form a lubricant receptacle and also being provided with a duct leading outwardly from said receptacle to the bearing surface of its tooth, and a journal bearing for said last mentioned member, said journal bearing being nearer the axis than said lubricant receptacle.

3. The combination with two rotatable members each of which is provided with teeth of a coupling member provided with teeth engaged with the teeth of the two rotatable members, one of said rotatable members being recessed to form a lubricant receptacle and also being provided with ducts leading outwardly from said receptacle to the engaged faces of its teeth.

4. The combination with two rotatable members each of which is provided with teeth of a hollow coupling member provided with teeth engaged with the teeth of the two rotatable members, said coupling being provided on its interior with projections seated on said rotatable members, one of said rotatable members being recessed to form a lubricant receptacle and also being provided with ducts leading outwardly from said receptacle to the engaged faces of its teeth and also being provided with a duct to convey lubricant from said receptacle and discharge it within the hollow coupling.

5. The combination with two rotatable members each of which is provided with teeth, of a two-part coupling member, each of the parts of which is provided with teeth adapted to engage with the teeth of said two rotatable members, ducts being provided leading outwardly to the engaged faces of some of said teeth to feed lubricant outwardly by centrifugal force to said engaging teeth faces.

875,589. BAG SEAMING, CUTTING, AND CONVEYING APPARATUS. CHESTER MCNEIL and DUDLEY S. SEYMOUR, Chicago, Ill., assignors to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 21, 1905. Serial No. 288,464.



1. In apparatus for seaming bags, the combination with a sewing mechanism, of means for inverting the bags after the sewing operation; substantially as described.

2. In apparatus for seaming bags, and conveying them away, the combination with a sewing mechanism, of a conveyer, and means interposed between the conveyer and the sewing mechanism for inverting the bags; substantially as described.

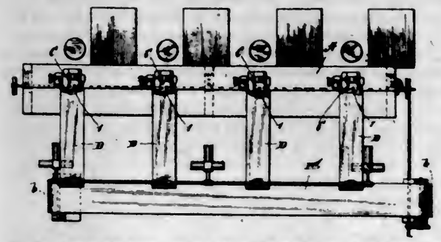
3. In apparatus for seaming bags, the combination with a sewing mechanism, a member to receive the seamed bag, and invert it, and mechanism for severing the chain of stitching between successive bags; substantially as described.

4. In apparatus for seaming bags and conveying them away, the combination with a sewing mechanism, of a conveyer, a stationary member to receive the seamed bag, and deliver it in inverted position to the conveyer; substantially as described.

5. In an apparatus of the character described, suitable sewing mechanism, an automatic cutting device for severing the chain of stitching between successive bags, a conveyer, and means between the conveyer and the cutting mechanism for inverting the bags; substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

875,590. BAG SEAMING, CUTTING, AND CONVEYING APPARATUS. CHESTER MCNEIL and DUDLEY S. SEYMOUR, Chicago, Ill., assignors to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 21, 1905. Serial No. 288,465.



1. In an apparatus for making bags, a suitable supporting framework, a sewing mechanism suported thereon and upon which the bags are sewed, a conveyer arranged substantially at right angles to the said supporting framework and adapted to receive the bags from the cloth plate of the sewing mechanism, and a second conveyer arranged to receive the bags from the first conveyer; substantially as described.

2. In a bag seaming and conveying mechanism, a suitable supporting framework, a sewing mechanism supported thereon, a conveyer for carrying the seamed bags away from the machine, said conveyer extending substantially at right angles to the supporting framework and to a position adjacent the rear edge thereof, whereby the seamed bags as they are fed from the sewing mechanism are delivered to said conveyer and a second conveyer arranged to receive the bags from the first conveyer; substantially as described.

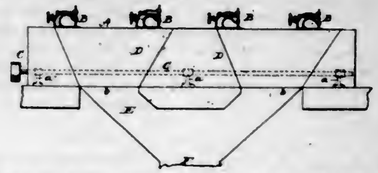
3. In a bag seaming and conveying mechanism, a suitable supporting framework, a sewing mechanism supported thereon, a conveyer for carrying the seamed bags away from the machine, said conveyer extending substantially at right angles to the supporting framework and to a position adjacent the rear edge thereof, whereby the seamed bags as they are fed from the sewing mechanism are delivered to said conveyer, and a second conveyer arranged to receive the bags from the first conveyer, and a device for severing the chain of stitching between successive bags arranged between the sewing mechanism and the first conveyer belt; substantially as described.

4. In a bag seaming and conveying mechanism, a suitable supporting framework, a series of sewing mechanism supported thereon, a bag conveyer for each machine, said conveyer extending substantially at right angles to the supporting framework and to a position adjacent the rear edge thereof, whereby the seamed bags as they are fed from the sewing mechanism are delivered to said conveyer, and a single conveyer in such relation to all such conveyers as to receive the bags therefrom; substantially as described.

5. In a bag seaming and conveying mechanism, a suitable supporting framework, a sewing mechanism supported thereon, a conveyer for carrying the seamed bags away from the machine, said conveyer extending substantially at right angles to the supporting framework and to a position adjacent the rear edge thereof, whereby the seamed bags as they are fed from the sewing mechanism are delivered to said conveyer, and an automatic cutter for severing the chain of stitching between the sewing mechanism and the first conveyer, and a second conveyer arranged to receive the sewed bags from the first conveyer; substantially as described.

875,591. BAG SEAMING, CUTTING, AND DELIVERING APPARATUS. CHESTER MCNEIL and DUDLEY S. SEYMOUR, Chicago, Ill., assignors to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 21, 1905. Serial No. 288,466.

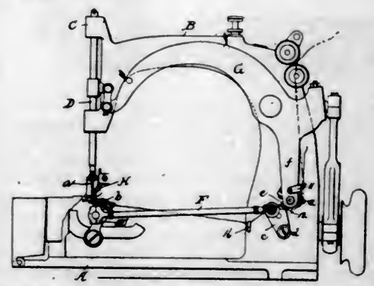
1. The herein described apparatus for making sewed articles including in combination a work table, a sewing machine mounted thereon, a cutting mechanism for severing the chain of stitches between the sewed articles carried by said machine and located at the rear edge of said table so that as the sewed articles are fed from the table, the weight of said article will draw the chain of stitches into said cutter; substantially as described.



2. The herein described apparatus for making sewed articles including in combination a work table, a sewing machine mounted thereon, a cutting mechanism for severing the chain of stitches between the articles carried by said machine and located at the rear edge of said table, so that as the sewed articles are fed from the table, the chain of stitches is positioned in said cutter, a guiding channel for receiving said sewed articles having one of its walls extending beneath the said work table so that said sewed articles will be fed from the said table to said guiding channel.

3. The herein described apparatus for making sewed articles including in combination a work table, a plurality of sewing machines mounted on said work table, a cutting mechanism for each machine for severing the chain of stitches between sewed articles, said cutting mechanism being located at the rear edge of said table so that as the sewed articles are fed from the table the chain of stitches will be positioned in said cutter, a guiding chute or channel for each set of two machines so located relative to said machines that said sewed articles are fed directly into the same and a common guiding chute or channel into which two of the first named guiding chutes or channels lead; substantially as described.

875,592. CHAIN-STITCH SEWING-MACHINE. LANSING ONDERDONK, New York, N. Y., assignor to Union Special Sewing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 5, 1904. Serial No. 196,745.



1. In a sewing machine, suitable stitch-forming mechanism including a needle and means for operating the same, a looper coöperating therewith to form stitches, and means for imparting variable movements to the looper, as set forth, said means including a swinging arm supported independently of the needle-operating means, means for guiding the thread thereto, means on said swinging arm for guiding the thread, and means for swinging said arm to cause it to gradually pay out the looper thread as the looper is moving forward, and to take up the slack as the looper is moving backward; substantially as described.

2. In a sewing machine, suitable stitch-forming mechanism including a needle, a needle lever, pull off thread guides thereon, a stationary guide coöperating therewith, a looper coöperating with said needle to form stitches, and means for imparting variable movement thereto, including a swinging arm supported independently of the

needle lever, but operatively connected therewith, means on said swinging arm for guiding the thread, said swinging arm in its movement gradually paying out the looper thread as the looper moves forward and taking up the slack as it moves backward; substantially as described.

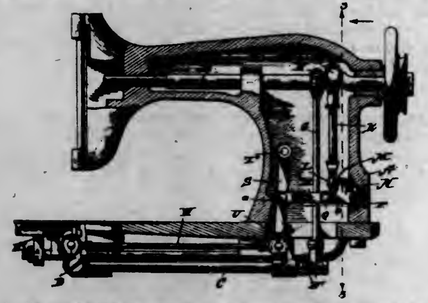
3. In a sewing machine, suitable stitch-forming mechanism including a needle and a looper coöperating therewith to form stitches, means for imparting variable movements to the looper as set forth, said means including a swinging arm provided with a grooved collar, over which the thread is guided, and which gradually pays out the looper thread as the looper is moving forward, and takes up the slack as it is moving backward; substantially as described.

4. In a sewing machine, suitable stitch-forming mechanism, including a needle and a looper coöperating therewith to form stitches, slack controlling devices, including a swinging arm, over which the thread is guided, connections between the needle lever and the swinging arm, and between said swinging arm and the looper; substantially as described.

5. A sewing machine having stitch-forming mechanism, including a needle and a looper coöperating therewith to form stitches, means for imparting a variable movement to the looper, including a needle lever extension, a link pivoted thereto, a crank pivoted on the machine frame, to which the link is pivoted, said crank having also pivotal connection with the looper rod; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

875,593. LOOPER-OPERATING MECHANISM FOR SEWING-MACHINES. LANSING ONDERDONK, New York, N. Y., assignor to Union Special Sewing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed June 3, 1904. Serial No. 211,058.



1. In a sewing machine, a driving shaft, a looper supporting shaft, a looper carried thereby and means for operating the shaft, to give the looper a needle-avoiding movement, a looper operating rod to give the looper a forward and backward movement in the direction of its length, and means for operating said looper operating rod, comprising a series of pivoted links, with connections to the driving shaft for operating them, and an intermediate connection between the links and the looper-operating rod and means independent of the looper rod, for supporting said connection; substantially as described.

2. In a sewing machine, a driving shaft, a looper supporting shaft, a looper carried thereby and means for operating the shaft, to give the looper a needle-avoiding movement, a looper-operating rod to give the looper a forward and backward movement in the direction of its length, and means for operating said looper-operating rod, comprising a series of pivoted links, with connections to the driving shaft for operating them, and an intermediate connection between the links and the looper-operating rod, and means for adjusting the vibrating position of said links; substantially as described.

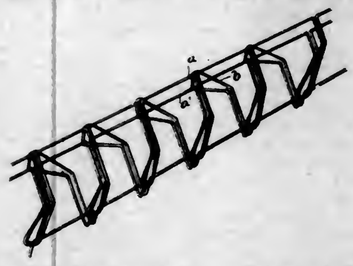
3. In a sewing machine, a driving shaft, a looper-supporting shaft, a looper carried thereby and means for operating the shaft, to give the looper a needle-avoiding movement, a looper-operating rod to give the looper a forward and backward movement in the direction of its length, and means for operating said looper-operating rod, comprising a link or bracket pivoted at one end to the machine frame, a second link pivoted thereto at one end, and a vertical swinging lever, to which the other end of the second link is pivoted, and connections between said vertical lever and the looper-operating rod; substantially as described.

4. In a sewing machine, a main shaft, a looper support and a looper carried thereby, means for imparting a needle-avoiding movement to the looper, and means for imparting a forward and backward movement to the looper; said latter means comprising toggle links, an adjustable connection between the toggle links and the main shaft, and a connection between the toggle links and the looper support, including a swinging connection having one end connected to the machine frame, the other end connected to the looper and connected to the toggle links intermediate its ends; substantially as described.

5. In a sewing machine, a driving shaft, a looper supporting shaft a looper carried thereby and means for operating the shaft, to give the looper a needle-avoiding movement, a looper-operating rod to give the looper a forward and backward movement in the direction of its length, and means for operating said looper-operating rod, comprising a series of pivoted links, with connections to the driving shaft for operating them, and an intermediate connection between the links and the looper-operating rod, and means independent of the looper rod for supporting said intermediate connection; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

875,594. SEAM FOR SEWED ARTICLES. LANSING ONDERDONK, New York, N. Y., assignor to Union Special Sewing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed June 3, 1904. Serial No. 211,060.



A seam for sewed articles, comprising a body fabric, a thread forming a row of loops passed therethrough in a line parallel to the edge of the fabric, a second thread forming a row of loops passed through the fabric in a line parallel to the first named row of loops, and intermediate the same and the edge of the fabric, the individual loops of said threads being nested and drawn to a point near the edge of the fabric and lying in a line oblique to the edge of the fabric, and a locking thread passing through the loops of said rows beneath the fabric, and extending over the edge onto the upper surface of the fabric, and surrounding the loops in the said threads and drawing said threads together on the upper face of the fabric, said locking thread loops lying at an angle to the lines of the individual loops.

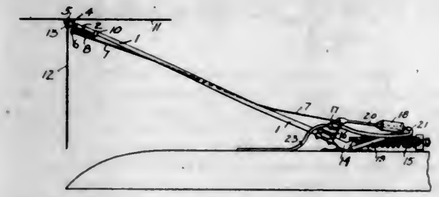
875,595. FLEXIBLE ROOFING. FREDERICK C. OVERBURY, New York, N. Y., assignor to Flintkote Manufacturing Company, Rutherford, N. J., a Corporation of New Jersey. Filed Apr. 23, 1907. Serial No. 369,831.



1. A web or sheet of flexible roofing material, partially cut longitudinally to form a plurality of strip-edges, having alternating projections and recesses, the cut being interrupted to leave connections between the portions on which said edges are formed, the general direction of the cut being parallel with the edges of the sheet.

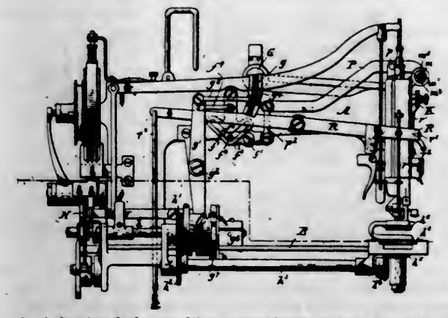
2. A roofing package comprising a sheet of flexible roofing material, wound to a roll, and partially subdivided in a direction which is substantially parallel with the edges of the sheet, to form edges of a plurality of incomplete roofing strips, which edges have alternating projections and recesses, and are connected by undivided portions of the sheet, the sheet being convertible into a plurality of operative roofing strips by the division of said connecting portions.

875,596. TROLLEY-POLE RETRIEVER. LUTHER M. PERKINS, Tacoma, Wash. Filed May 6, 1907. Serial No. 372,187.



In a trolley pole retriever, the combination with a base, of a spring actuated trolley pole pivoted thereto, a pneumatic cylinder linked to said base by tie bars and adapted to press against a part of said base, a piston and rod operating in said cylinder and engaging said trolley pole to lower it when actuated, a valve controlling the actuating pressure in said cylinder, a harp pivoted to said trolley pole and adapted to turn on its pivot when disengaged from the trolley wire, and means joining said pivoted harp and said valve whereby said valve is moved by the turning of said harp on its pivot independently of any movement of the trolley pole.

875,597. THREAD-CONTROLLING MECHANISM FOR SEWING-MACHINES. WILLIAM N. PARKES, New York, N. Y. Original application filed Sept. 12, 1898, Serial No. 690,777. Divided and this application filed Oct. 10, 1899. Serial No. 733,225.



1. A button-hole machine comprising means for making the end and side stitches of a button-hole, a work moving mechanism, and means actuated separately from the said work moving mechanism for producing a tension on the thread of one extent during the making of said end stitches, and of a different extent during the making of said side stitches.

2. A button-hole machine comprising means for making the end and side stitches of a button-hole, a device for producing a tension on the thread during the making of said stitches, a work moving mechanism, and means actuated separately from the said work moving mechanism for engaging said device and thereby changing the degree of tension produced on the thread by the same.

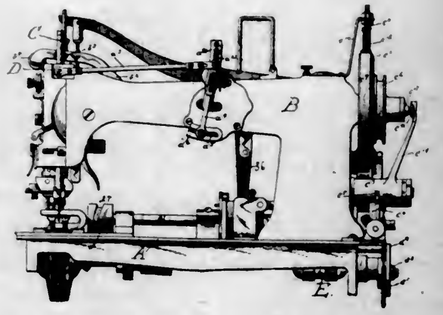
3. A button-hole machine comprising means for making the end and side stitches of a button-hole, a tension device for the thread, a tension change device for engaging said tension device, mechanism for actuating said tension change device, and means for suspending the action of said mechanism during the making of the side stitches of said button-hole.

4. A button-hole machine comprising a tension device for the thread, a revolving part, means intermediate said revolving part and said tension device whereby the degree of tension produced on the thread by the same is changed from the movement of said revolving part, and means for suspending the action of said revolving part during the stitching of a predetermined part of a button-hole.

5. In a button-hole machine, a tension device for the thread, a ratchet wheel, an actuating pawl adapted to operate the said ratchet wheel, said pawl being normally out of engagement with the teeth of the said ratchet wheel, means for turning at certain intervals, the teeth of the ratchet wheel into engagement with the said actuating pawl, and means operated through the movement of the ratchet wheel adapted to vary the degree of tension produced on the thread by the aforesaid tension device.

[Claims 6 to 21 not printed in the Gazette.]

875,598. BUTTONHOLE-SEWING MACHINE. WILLIAM N. PARKES, New York, N. Y. Filed Jan. 13, 1900. Serial No. 1,304. Renewed Mar. 5, 1903. Serial No. 146,416.



1. A button-hole machine comprising a stitch forming mechanism adapted to make the end and side stitches of a button-hole, a feeding mechanism for moving the work to dispose the side stitches, means for suspending the action of said feeding mechanism, a device actuated separately from said feeding mechanism for controlling said stitch forming mechanism for the end stitches, and means adapting said device to cause the feeding mechanism to again act after said suspension.

2. A button-hole machine comprising means for making the end and side stitches of a button-hole, a feeding mechanism for moving the work to dispose the said side stitches, means for suspending the action of said feeding mechanism during the making of the end stitches, a barring mechanism, and means adapting said barring mechanism to cause said feeding mechanism to again act after said suspension.

3. A button-hole sewing machine comprising a needle and means for operating it; a work carrier; means for producing a relatively progressive movement between the work-carrier and the needle longitudinally of the button-hole during the formation of the side rows of stitches; and independent means for producing a relatively progressive movement between the needle and the work-carrier longitudinally of the button-hole during the barring.

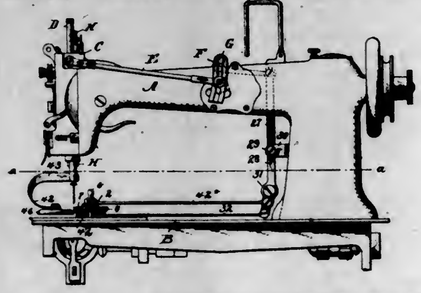
4. A button-hole machine comprising a stitch forming mechanism having a vertically reciprocating and laterally vibrating needle for making the end and side stitches of a button-hole, a feeding mechanism for moving the work to dispose the stitches, means for suspending the action of said feeding mechanism, a barring mechanism, and means

adapting said barring mechanism to cause said feeding mechanism to again act after said suspension.

5. A button-hole sewing machine comprising a work-carrier; means including a cam for giving the work-carrier a progressive movement longitudinally of the button-hole; and means including a second cam, for giving the work-carrier a second and separate progressive movement longitudinally of the button-hole.

[Claims 6 to 23 not printed in the Gazette.]

875,599. BLINDSTITCH SEWING-MACHINE. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Sept. 10, 1900, Serial No. 29,580. Renewed Nov. 18, 1907. Serial No. 402,737.



1. A sewing machine having stitch-forming mechanism comprising a reciprocating and vibrating needle; and a feeding mechanism comprising a feed-wheel having means for the reception of the needle and to shield the work therefrom.

2. In combination, a stitch-forming mechanism comprising a vertically reciprocating and laterally vibrating needle; and a feeding mechanism comprising a feed-wheel having means for the reception of the needle and to shield the work therefrom.

3. In combination, a stitch-forming mechanism comprising a reciprocating and vibrating needle; and a feeding mechanism comprising a disk pivoted to rotate in a horizontal plane, and a feed-wheel having means for the reception of the needle and to shield the work therefrom.

4. A sewing machine having stitch-forming mechanism comprising a reciprocating and vibrating needle; and feeding mechanism comprising a disk pivoted to rotate in a horizontal plane, and a wheel having means, for the reception of the needle and to shield the work also pivoted to rotate in a horizontal plane.

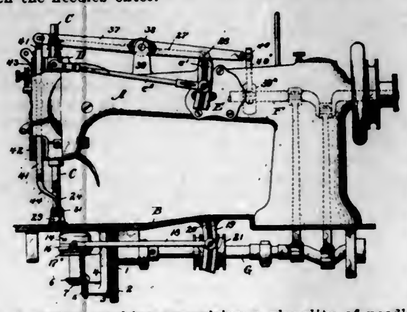
5. A sewing machine having stitch-forming mechanism comprising a vertically reciprocating and laterally vibrating needle; and a feeding mechanism comprising a rotary disk and a coöperating wheel yieldingly pressed against the disk having grooves in its periphery for the reception of the needle.

[Claims 6 to 38 not printed in the Gazette.]

875,600. HEMSTITCH SEWING-MACHINE. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Sept. 22, 1900. Serial No. 30,793.

1. The combination with a sewing machine having a feed mechanism and a stitch forming mechanism comprising a plurality of reciprocating thread carrying needles in line in the direction of the feed of the work; of means for producing a relative jogging or lateral movement between the said needles and the feed; a thread carrying looper suitably mounted to be operated; and means for operating the said looper so as to loop the looper thread around the needle threads on the side of the work into which the needles enter.

2. A sewing machine comprising a plurality of needles arranged substantially in line in the direction of the feed-movement; complemental stitch-forming mechanism; a consecutive feed; and means for producing a relative jogging movement between the needles and feed; a thread-carrying looper; and means for causing the looper to coöperate with the needles on the side of the work into which the needles enter.



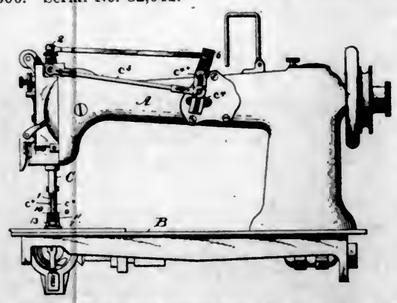
3. A sewing machine comprising a plurality of needles; complemental stitch-forming mechanism; a consecutive feed; a piercer; and means for producing a relative jogging movement between the needles and feed; a thread-carrying looper; and means for causing the looper to coöperate with the needles on the side of the work into which the needles enter.

4. A hemstitch sewing-machine comprising a plurality of needles arranged substantially in the line of the feed-movement; a piercer coöperating with the needles; and a looper coöperating with the needles disposed so that its hook when engaging the needle loops will move substantially in the line of the feed.

5. A hemstitch sewing machine comprising a consecutive feed; a plurality of needles arranged substantially in the line of the feed-movement; means for vibrating said needles simultaneously in the same direction; a looper mechanism adapted to coöperate with said needles; and a piercer coöperating with the needles to periodically penetrate the work at the same point therewith.

[Claims 6 to 49 not printed in the Gazette.]

875,601. ORNAMENTAL-STITCH SEWING-MACHINE. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Oct. 4, 1900. Serial No. 32,041.



1. A sewing machine comprising a plurality of vertically reciprocating and laterally vibrating thread carrying needles, a thread finger adapted to loop an auxiliary thread around the threads of said needles, and means for operating said thread finger.

2. A sewing machine comprising stitch-forming mechanism including a plurality of vertically reciprocating and laterally vibrating needles, in combination with an oscillating thread-finger, and means for actuating said needles and finger so as to impart to the former two complete reciprocations to one oscillation of the latter.

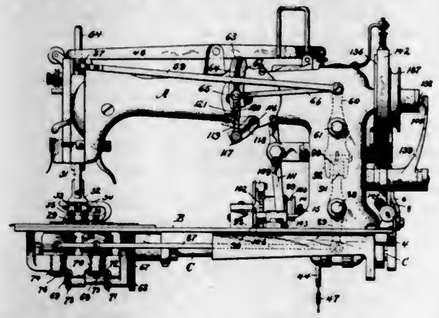
3. A sewing machine comprising two vertically reciprocating needles adapted to be moved laterally, mechanism for moving said needles laterally, a thread finger adapted to loop an auxiliary thread around the threads of said needles, and means for operating said thread finger from a part of the mechanism that moves the needles laterally.

4. A sewing machine comprising stitch-forming mechanism including a plurality of vertically reciprocating and laterally vibrating needles, in combination with an oscillating thread-finger, and means for actuating said needles and finger so as to impart to the former two complete reciprocations and a single vibration to one oscillation of the finger.

5. A sewing machine comprising stitch-forming mechanism, in combination with a thread-finger, and mechanism for actuating said finger including means whereby the latter may be put out of action without disturbing its operative position or affecting the operation of the stitch-forming mechanism.

[Claims 6 to 14 not printed in the Gazette.]

875,602. BUTTONHOLE-SEWING MACHINE. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Dec. 17, 1900. Serial No. 40,144.



1. In combination in a button-hole sewing machine, a stitch forming mechanism for simultaneously stitching both sides of a button-hole, a feeding mechanism, a barring mechanism, an actuator separate from the movement of the feeding mechanism for operating said barring mechanism, and means adapting a part of the feeding mechanism to cause said actuator to operate said barring mechanism once to each complete button-hole stitching operation of said machine.

2. A button-hole machine comprising a stitch forming mechanism adapted to simultaneously stitch both sides of a button-hole, a feeding mechanism, a barring mechanism having a part that is adapted to move circularly, said part normally out of action, an actuator that operates separately from the feeding mechanism, and means adapting said feeding mechanism to turn said part into engagement with said actuator.

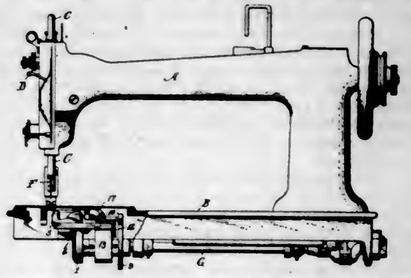
3. A button-hole machine comprising a stitch forming mechanism adapted to simultaneously stitch both sides of a button-hole, a feeding mechanism comprising a feed wheel, a barring mechanism including a part adapted to move circularly, an actuating device for intermittently moving said part, and means adapting the feeding mechanism to turn said part into engagement with said actuating device.

4. A button-hole machine comprising a stitch forming mechanism, a feeding mechanism, a barring mechanism which is normally out of action, a vibrating part for actuating said barring mechanism, means adapting a part of the feeding mechanism to cause said vibrating part to actuate said barring mechanism separately from the feeding mechanism, a stop motion device, and means whereby said stop motion device is tripped into action from a moving part of said barring mechanism.

5. The combination in a button-hole machine having a stop motion mechanism; of a stitch forming mechanism for making the side stitches of a button-hole, a ratchet operated mechanism for moving the work to dispose said stitches, a second ratchet mechanism that is operated separately from said first ratchet operated mechanism, means adapting said second ratchet mechanism to change the stitch forming mechanism to make the end stitches of a button-hole, and means whereby the aforesaid stop motion mechanism is tripped into action from the movement of said second ratchet mechanism.

[Claims 6 to 37 not printed in the Gazette.]

875,603. AUTOMATIC BOBBIN-CONTROLLER FOR SEWING-MACHINES. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Dec. 11, 1901. Serial No. 85,471.



1. In a sewing-machine, a stitch-forming mechanism comprising a looper or hook, a bobbin-holder or case supported by said looper, said bobbin-holder provided with a bobbin, and means for automatically controlling said bobbin.

2. In a sewing-machine, a stitch-forming mechanism comprising a looper disposed to revolve in a horizontal plane, means for revolving said looper, a bobbin-holder supported by said looper, a bobbin supported by said bobbin-holder, and means for automatically controlling said bobbin.

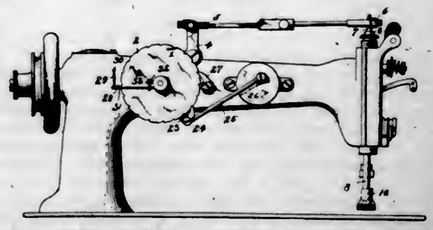
3. In a sewing machine, a stitch-forming mechanism comprising a reciprocating needle, a looper, means for revolving said looper a plurality of times to each reciprocation of said needle, a bobbin-holder supported by said looper, a bobbin supported by said bobbin-holder, and means for automatically controlling said bobbin.

4. In a sewing machine, a stitch-forming mechanism comprising a looper, a bobbin-holder supported by said looper, a bobbin supported by said bobbin holder, a friction-device disposed between the bobbin and the holder, and means for automatically controlling said bobbin.

5. In a sewing machine, a stitch-forming mechanism, comprising a looper, a bobbin-holder, a bobbin supported by said bobbin holder, a bobbin controller for said bobbin, and means for actuating said controller including a device for holding the controller from contact with the bobbin during the time thread is being drawn from the same.

[Claims 6 to 13 not printed in the Gazette.]

875,604. ORNAMENTAL-STITCH SEWING-MACHINE. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Jan. 23, 1902. Serial No. 90,915.



1. A sewing machine comprising a plurality of thread carrying needles, an auxiliary thread carrying device for coöperating with said needles, means for operating said device so that its threads is passed back and forth under said needles consecutively a plurality of times, and means for alternately suspending the movement of said

device in the opposite extremes of its movements during a plurality of stitch forming operations.

2. A sewing machine comprising two thread carrying needles, an auxiliary thread carrying device, means for operating said device so its thread is passed back and forth under said needles consecutively a plurality of times, means for guiding a strip of fabric or ribbon under the links of the auxiliary thread, and means for suspending the movement of said device alternately on opposite sides of said ribbon during a plurality of stitch forming operations.

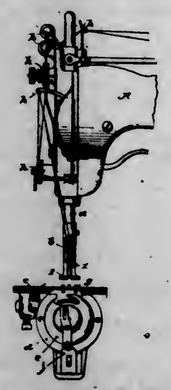
3. A sewing machine comprising a plurality of vertically reciprocating and laterally vibrating needles, an auxiliary thread carrying device for coöperating with said needles, means for operating said device so that its thread is passed back and forth under said needles consecutively a plurality of times, and means for alternately suspending the movement of said device in the opposite extremes of its movements during a plurality of stitch forming operations.

4. A sewing machine comprising a reciprocating needle-bar, an auxiliary thread or cord carrying part, a ratchet wheel, means intermediate said ratchet wheel and the auxiliary thread carrying part whereby when the ratchet wheel is operated the said part is operated, and means actuated separately from the needle-bar for operating said ratchet wheel.

5. In a sewing machine, mechanism for stitching and ornamenting fabrics comprising a tubular presser-bar having a recessed presser-foot, a rod or shaft mounted in the said presser-bar, a cord-carrier attached to the lower end of the said rod within the recess of said foot, a cam and connections between the same and the said rod, and means for actuating the said cam.

[Claims 6 to 18 not printed in the Gazette.]

875,605. TUCKING MECHANISM FOR SEWING-MACHINES. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Sept. 18, 1902, Serial No. 123,884. Renewed Nov. 18, 1907. Serial No. 402,739.



1. In combination, a stitch-forming mechanism; a presser-foot having a needle aperture, and formed in its bottom with a groove flared from said needle aperture to its front end; and a stationary tongue coöperating with said groove and tapered toward its front end to a narrow edge, whereby the work may ride upon and pass the tongue without drag and be manipulated in the flared portion of the groove to form curved tucks.

2. In combination, a stitch-forming mechanism, a presser-foot formed in its bottom with a groove, and a throat-plate provided with an upwardly projecting tongue for coöperating with said groove in forming tucks or gathers, said tongue being tapered toward its front to a narrow edge, for the purpose described.

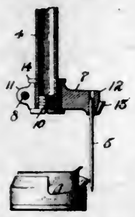
3. In combination, a stitch-forming mechanism, a presser-foot formed on its bottom with a groove, and a throat-plate provided with an upwardly projecting tongue for coöperating with said groove in forming tucks or gathers, said tongue having its rear end narrowed and curved.

4. In combination, a stitch-forming mechanism; a presser-foot formed with a groove in its bottom; and a tongue provided with a broad, top portion, for coöperating with said groove to form tucks, and with a narrowed neck-portion below said top-portion against the opposite sides of which the bottoms of the tucks may be drawn as the stitch is set, substantially as described.

5. In combination, a stitch-forming mechanism, a presser-foot having in its bottom a groove, and a throat-plate provided with an upwardly projecting tongue for coöperating with said groove in forming tucks or gathers, said tongue being provided with a tapered front end and a rear narrowed and curved end.

[Claims 6 to 11 not printed in the Gazette.]

875,606. NEEDLE-ADJUSTING DEVICE FOR SEWING-MACHINES. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Jan. 14, 1903, Serial No. 139,017. Renewed Nov. 18, 1907. Serial No. 402,740.



1. In combination, a needle-bar, a needle-holder, means for clamping the holder to the bar and means encircling the bar within the holder for adjusting the bar and holder relatively.

2. In combination, a needle-bar, a needle-holder, means between the bar and holder for adjusting the same relatively, and means carried by the end of the bar and coöperating with the holder and said adjusting means for halding the parts properly grouped.

3. In combination, a needle-bar, a needle-holder, means for clamping the holder to the bar and an eccentric between the bar and holder for adjusting the one relatively to the other.

4. In combination, a needle-bar, provided with an eccentric a needle-holder surrounding the eccentric, and means for clamping the holder upon the eccentric.

5. In combination, a needle-bar provided with an eccentric; a needle-holder, having a split portion, surrounding the eccentric; and means acting upon the split portion to clamp the holder upon the eccentric.

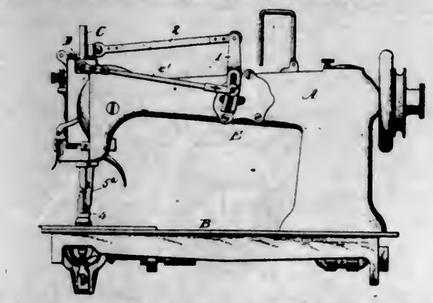
[Claims 6 to 14 not printed in the Gazette.]

875,607. ORNAMENTAL-STITCH SEWING-MACHINE. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Mar. 5, 1903. Serial No. 146,417.

1. In a sewing machine, a stitch-forming mechanism including a needle-bar that reciprocates longitudinally only, an auxiliary thread or cord carrier that is adapted to loop its thread completely around alternate stitches only made by said stitch-forming mechanism, and means separate from the movement of the needle bar for operating said carrier.

2. In a sewing machine, a stitch-forming mechanism, including a needle bar that reciprocates longitudinally only, an auxiliary thread or cord carrier adapted to oscillate in a horizontal plane and thereby loop its thread completely around alternate stitches only made by said stitch-forming mechanism, and means separate from the movement of the needle-bar for operating said carrier.

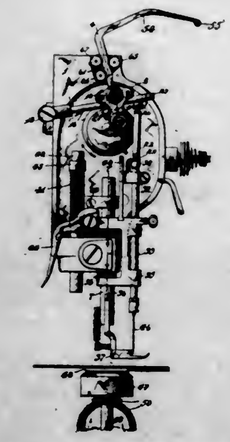
3. A sewing machine having a vertically reciprocating and laterally vibrating needle, an auxiliary thread carrying looper, means for operating said looper so that it loops its own thread around alternate stitches only made by said stitch forming mechanism, and means for so locating the working position of said looper relative to said stitch forming mechanism that the loops formed by the looper are drawn in line with one row of lateral stitches made by said stitch forming mechanism.



4. A sewing machine having a stitch forming mechanism comprising a vertically reciprocating and laterally vibrating needle, an auxiliary thread carrying looper, the thread carrying portion of said looper extending in an arc of a circle in a plane at right angles to the plane in which said needle reciprocates, and means for operating said looper so that its thread is looped around alternate stitches only made by said stitch forming mechanism and drawn taut in line with one row of lateral stitches.

5. A sewing machine comprising a reciprocating and vibrating needle and complemental stitch forming mechanism; a presser foot having a depression therein; a looper housed by and operated entirely in said depression and means for oscillating the looper in alternation with the reciprocations of the needle.

875,608. TAKE-UP AND NEEDLE-BAR MECHANISM FOR SEWING-MACHINES. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Mar. 6, 1903. Serial No. 146,468.



1. In combination, an actuating crank-pin, an actuator pivoted on the said crank-pin, a pivoted lever, said lever being in engagement with the said actuator, a take-up pivoted on the said actuator, and a fulcrum for the said take-up.

2. In combination a rotating part, an actuator operated by the said rotating part, a take-up pivoted on the said actuator, and a fulcrum for the said take-up on which it is adapted to slide.

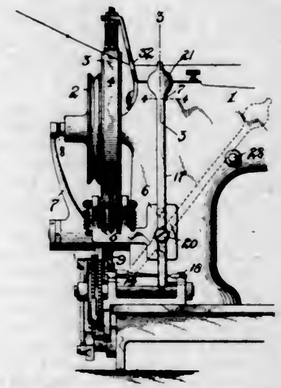
3. In combination a rotating shaft, a crank-pin operated by the shaft, a pivoted lever, an actuator pivoted on the crank-pin and adapted slidingly to engage and operate the said lever, a needle-bar, and a connection between the lever and the needle-bar.

4. A needle-bar operating mechanism comprising a rotating shaft, a lever adapted to operate in a plane at substantially right angles to the longitudinal axis of the said shaft, an actuator pivoted to the shaft, by which the said lever is operated, a needle-bar operating in the plane of operation of the said lever, and a connection between the needle-bar and the said lever whereby the needle-bar is operated by a direct thrust from the movement of the lever.

5. A needle-bar operating mechanism comprising a needle-bar, a rotating shaft, a lever pivoted to oscillate in a vertical plane at a right angle to said shaft, and the needle-bar operating in the vertical plane of operation of said lever, a pivoted actuator connecting the said lever and the rotating shaft, and a connection between the said lever and the end of the needle-bar.

[Claims 6 to 38 not printed in the Gazette.]

875,609. STOP MECHANISM FOR SEWING-MACHINES. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Mar. 26, 1903. Serial No. 149,660.



1. A stop motion for sewing machines, a device adapted to trip said stop motion into action, means separate from the thread for holding said device out of action, means whereby a knot or thick place in the thread causes said device to commence to act after which it continues to act independent of said thread until it has tripped said stop motion into action.

2. A stop motion for sewing machines, a device adapted to trip said stop motion into action, means separate from the thread for holding said device out of action, means for guiding a thread through a part of said device whereby a knot in the thread causes said device to commence to act after which it continues to act independent of the thread until it has tripped said stop motion into action.

3. A stop motion for a sewing machine having a latch disposed in a horizontal plane, a catch disposed in a horizontal plane at right angles to said latch, a lever adapted to turn in a vertical plane and thereby engage said latch, and means whereby a knot or thick place in the thread causes said lever to commence to act after which it continues to act independent of the thread until it has tripped said stop motion into action.

4. A stop motion for sewing machines having a latch and catch, a lever the lower end of which is adapted to engage said latch, the upper end of said lever weighted, a stop for said lever against which it normally rests so that gravity prevents it from turning on its pivot, and means whereby a knot or thick place in the thread causes said lever to turn on its pivot and thereby engage said latch.

5. A stop motion for sewing machines having a latch

and catch, a pivoted lever the lower end of which is adapted to engage said latch, and the upper end of said lever provided with a needle through which the thread passes in its way to the aforesaid thread carrying needle.

[Claims 6 to 9 not printed in the Gazette.]

875,610. THREAD-CONTROLLING MECHANISM FOR SEWING-MACHINES. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Mar. 26, 1903. Serial No. 149,661.



1. A thread controlling mechanism for sewing machines comprising a supporting stem, a housing surrounding said stem and held adjustably fixed thereby, a part carried in said housing, means for circularly adjusting said part relative to the housing, a controller spring the coiled body of which is located in said part, and an extending end of the same in engagement with said part, said controller spring provided with a thread engaging part, and a support provided for said thread engaging part.

2. A thread controlling mechanism for sewing machines comprising a supporting stem, a controller spring, means for supporting said controller spring and for regulating the stress of the same on the thread comprising two parts one of which is supported by the other, and a worm connection between said parts by means of which the stress of the controller spring is regulated.

3. A thread controller mechanism for sewing machines comprising a supporting stem, a housing surrounding said stem and adjustably held fixed thereto, a bushing located in said housing, a worm connection between the housing and the bushing by means of which the bushing may be circularly adjusted relative to the housing, a controller spring having a coiled body portion located in said bushing, said controller spring provided with a thread engaging part, and a connection between the spring and the bushing.

4. A slack-thread controller, comprising a spring or coiled wire having a thread engaging extension, a stem supporting the same, means for adjusting the tension of the controller to regulate its stress upon the thread including a bushing, by which the coiled portion is housed and to which the controller is connected, supported by said stem, and means for adjusting the bushing circumferentially of the stem.

5. A thread-controlling mechanism for sewing machines, comprising a supporting stem, a collar surrounding said stem and held fixed thereby, a bushing inclosed by the collar and surrounding said stem, means for adjusting the bushing relatively to the collar, a slack-thread controller connected to the bushing at one end and supported by the stem at the other end, a tension device supported by said stem, and means for regulating the stress of the tension device on the thread.

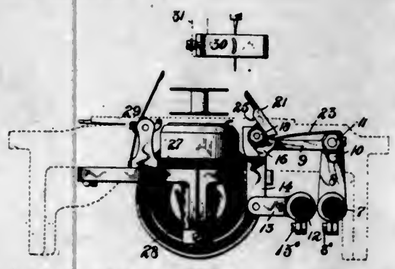
[Claims 6 and 7 not printed in the Gazette.]

875,611. FEEDING MECHANISM FOR SEWING-MACHINES. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Mar. 30, 1903. Serial No. 150,182.

1. A sewing machine comprising a looper mechanism; and a feeding mechanism, operating below the bed-plate of the machine, and a portion of which normally extends over the looper mechanism; and means whereby the said portion may be moved from its normal position to permit free removal of parts of the looper mechanism.

2. A sewing machine having a looper mechanism and a feeding mechanism, a portion of the feeding mechanism being arranged to normally overlap the looper mechanism; and means whereby said portion of the feeding mechanism may be moved back from the looper mechanism so as not to overlap the latter, whereby the parts of the looper-mechanism may be conveniently removed from the machine.

3. In combination, a feeding mechanism comprising a feed-dog carrying bar; a looper mechanism arranged substantially in rear of the feeding mechanism, and a portion of the feed-dog extending over the looper mechanism; and means whereby said feed-dog may be moved relatively to its bar so as not to obstruct the removal of the bobbin or cop from the looper.

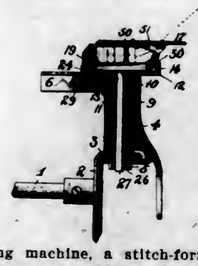


4. A sewing machine having in combination a looper mechanism and a feeding mechanism, both located and operating below the cloth-plate, the feeding mechanism comprising a bar having a dog movable relatively thereto, said dog overlapping the looper mechanism; and means whereby said dog may be moved back from the looper mechanism.

5. A sewing machine having a feeding mechanism comprising a horizontally disposed feed-dog carrying bar arranged below the cloth-plate, the feed-dog being pivotally supported on said bar; and means for holding said dog in operative position, said means permitting the dog to be turned vertically relatively to said bar into, and maintained in, an inoperative position said means, at the same time, maintaining its normal coöperative relation with said dog.

[Claims 6 to 17 not printed in the Gazette.]

875,612. LOOPER MECHANISM FOR SEWING-MACHINES. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Apr. 27, 1903. Serial No. 154,456.



1. In a sewing machine, a stitch-forming mechanism comprising a looper, a second looper provided with a beak that is located within the circumference of said first looper, said loopers mounted independently of each other, and means for moving circularly one of said loopers relative to the other.

2. In a sewing machine, a looper, a second looper, said loopers mounted independently of each other, mechanism for revolving the first looper about an axis, a groove formed in said first looper concentric with said axis, and the second looper having its beak extending into said groove.

3. A looper mechanism comprising a looper adapted to move about an axis, a second looper having a spindle that extends through the center of said primary looper, a part attached to the end of said spindle by means of which the spindle and secondary hook are supported, and means intermediate said part and the primary hook by means of which said primary hook may be operated.

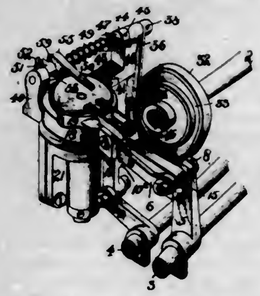
4. A looper mechanism comprising a circular looper provided with a channel in its wall extending to the point

thereof and the width or depth of which channel extends parallel with the axis of the looper, a bobbin supported directly by the looper, and a stationary hook which operates in said channel and engages the inner strand of a loop and aids in passing the latter about said bobbin.

5. A looper mechanism comprising a looper having a concentric groove in the wall thereof, a bobbin supported directly by the looper, a stationary secondary-hook coöperating with the looper and operating within the groove and means for causing said parts to coöperate in passing a loop about the bobbin.

[Claims 6 to 21 not printed in the Gazette.]

875,613. BOBBIN-CONTROLLING MECHANISM FOR SEWING-MACHINES. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Apr. 27, 1903. Serial No. 154,457.



1. In a sewing machine, a stitch forming mechanism comprising a looper, a bobbin support provided with a bobbin means for controlling said bobbin comprising a positively actuating part, and a yielding contact part carried by said positively actuating part for engaging said bobbin.

2. In a sewing machine, a stitch forming mechanism comprising a looper, a bobbin case provided with a bobbin, means for controlling said bobbin comprising a positively actuating part, a yielding contact part carried by said positively actuating part for engaging the bobbin, and means for regulating the pressure of said contact part on the bobbin.

3. A bobbin controller mechanism for sewing machines comprising a part in which a cam groove is formed, a second shaft having a bobbin contact piece mounted thereon, a connection between the second shaft and the grooved cam, and means whereby the contact piece may yieldingly engage the bobbin.

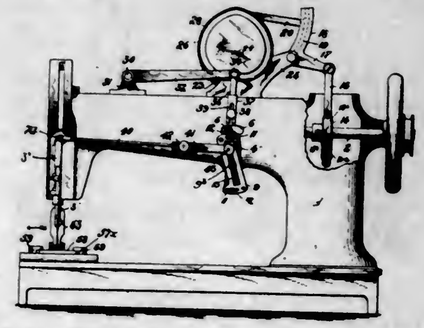
4. A bobbin controller mechanism for sewing machines comprising a part in which a cam groove is formed, a shaft and a connection between the same and said cam groove, a bobbin contact part carried by said shaft, and means also carried by said shaft for regulating the yielding pressure of said contact part on a bobbin.

5. A sewing machine comprising a looper, a bobbin carried by said looper, a bobbin controller mechanism having a pivoted bobbin contact part that extends over said bobbin, means adapting said bobbin contact part to be turned on its pivot and thereby removed from above said bobbin, a feed mechanism comprising a pivoted feed dog which extends over said bobbin, and means adapting said feed dog to be turned on its pivot and thereby removed from above said bobbin.

[Claims 6 to 15 not printed in the Gazette.]

875,614. EYELET OR EMBROIDERY STITCHING MACHINE. WILLIAM N. PARKES, Brooklyn, N. Y. Filed May 26, 1903. Serial No. 158,812.

1. In a sewing machine, a stitch-forming mechanism comprising a needle that reciprocates in the direction of its length, a non-rotative work holder, a vibrating part acting upon one of these elements to produce relative movements between them in one direction, a second vibrating part acting upon one of these elements to produce relative movements between these parts in a direction at part, means for operating the vibrating parts to change the movements of the same to produce relative movements between the needle and work holder radially completely around a given center thereby stitching an eyelet without turning the work.



2. A sewing machine comprising a reciprocating and laterally vibrating needle, a work holder vibrating at right angles to the direction in which said needle vibrates, means for vibrating said needle and work holder, and means for automatically changing the movements of the same to produce relative movements between the needle and work holder radially completely around a given center.

3. A sewing machine comprising a reciprocating and laterally vibrating needle, a reciprocating work holder confined to move in a right line at right angles to the direction in which said needle vibrates, means for vibrating said needle and work holder, and means for automatically changing the movements of the same to produce relative movements between the needle and work holder radially completely around a given center.

4. A sewing machine comprising a reciprocating and laterally vibrating needle, a non-rotatable work holder, means for vibrating said work holder in a direction at right angles to the lateral movements of said needle, and means for automatically changing the movements of the needle and work holder to produce relative movements of a uniform extent between the same radially completely around a given center.

5. A sewing machine comprising a reciprocating and laterally moving needle, a work holder that reciprocates at right angles to the direction in which said needle moves laterally, and a ratchet operated mechanism for changing relatively the lateral movements of said needle and the reciprocating movements of said work holder to produce relative movements between the same radially completely around a given center.

[Claims 6 to 10 not printed in the Gazette.]

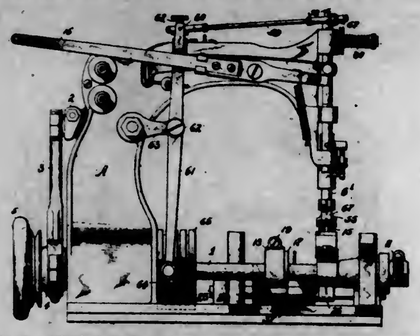
875,615. SEWING-MACHINE. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Oct. 3, 1903. Serial No. 175,595.

1. A sewing machine comprising a part which carries a looper, a revolving shaft which carries an eccentric or cam, a pitman connection between said eccentric and said part, and means engaged by said pitman whereby longitudinal movement of the pitman causes bodily lateral movement of the same.

2. A sewing machine comprising a revolving shaft, an eccentric carried by said shaft, a rocking shaft the axis of which is parallel with said revolving shaft, a connection between said eccentric and said rocking shaft, means engaged by said connection whereby the longitudinal movement of the same causes rocking and longitudinal movement of said rocking shaft, and a looper carried by said rocking shaft.

3. In a sewing machine, a revolving shaft, an eccentric carried by said shaft, a rocking shaft, a looper carried by

said rocking shaft, an arm carried by said rocking shaft, a pitman directly connecting said arm and said eccentric whereby said rocking shaft is oscillated, and means engaged by said pitman whereby the movement of the same causes said rocking shaft to move longitudinally.

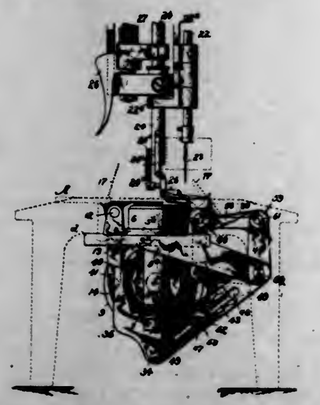


4. A stitch-forming mechanism for sewing machines comprising a needle and coöperating looper, a carrier for said looper, an actuating cam, a single driving connection between the cam and looper carrier, and means whereby said connection is given longitudinal reciprocations and sidewise bodily movements.

5. A sewing machine comprising a revolving shaft disposed in a horizontal plane, an eccentric carried by said shaft, a second shaft parallel with said revolving shaft, a single connection between said eccentric and said second shaft whereby the second shaft is oscillated, a stationary part with which said connection engages so constructed that said second shaft is reciprocated longitudinally thereby, and a looper carried by said second shaft.

[Claims 6 to 14 not printed in the Gaette.]

875,616. FEEDING MECHANISM FOR SEWING-MACHINES. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Oct. 26, 1903. Serial No. 178,628.



1. A feeding mechanism for sewing machines comprising a shaft, an eccentric secured to said shaft, a block mounted on said eccentric, a pivoted lever having jaws that embrace said block, a feed dog, means adapting said lever to move said feed dog horizontally, and means adapting said block to move said feed dog vertically.

2. A feeding mechanism for sewing machines comprising a revolving shaft, an eccentric secured to said shaft, a feed dog, means operated by said eccentric for giving the feed dog a vertical and a horizontal movement said means comprising a lever having jaws between which said eccentric is located, a second lever adapted to reciprocate said feed dog horizontally, an adjustable connection between said levers whereby the extent of the horizontal movement of the feed dog is controlled, and means adapting said eccentric to reciprocate said feed dog vertically.

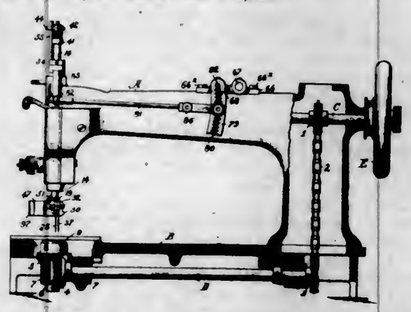
3. A feeding mechanism for sewing machines comprising a revolving shaft, an eccentric mounted on said shaft, a block mounted on said eccentric, a part in engagement with said block whereby the block is restrained from revolving with the eccentric, a feed dog, and a connection between said part and said feed dog whereby the dog is reciprocated horizontally, a lever one end of which is positively oscillated from the movement of said block, and means whereby the feed dog is operated vertically from the movement of said lever.

4. A feeding mechanism comprising a feed dog, a revolving shaft, a single eccentric secured to said shaft, a single part mounted on said eccentric, a lever having jaws between which said part is located, and means intermediate said part and the feed dog whereby the dog is reciprocated horizontally and vertically from the movement of said part.

5. A feeding mechanism for sewing machines comprising a feed dog, a revolving shaft, an eccentric secured to said shaft, a block mounted on said eccentric, a lever having jaws that embrace said block, adjustable means for reducing or increasing the space between said jaws, and means whereby the feed dog is reciprocated horizontally and vertically from the movement of said block.

[Claims 6 to 17 not printed in the Gazette.]

875,617. ZIGZAG AND ORNAMENTAL STITCH MACHINE. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Oct. 26, 1903. Serial No. 178,629.



1. In a sewing machine, a stitch-forming mechanism comprising a looper that revolves about an axis, two needles adapted to move laterally about an axis that is coincident with the axis of said looper, and means for moving one of said needles laterally a greater extent than the other.

2. In a sewing machine, a stitch-forming mechanism comprising a looper or hook that moves circularly about an axis, a plurality of reciprocating needles, in combination with means which produce between said needles relative lateral movements of different extent about a single axis that is coincident with the axis of said looper.

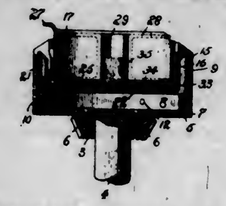
3. In a sewing machine, a stitch-forming mechanism comprising a looper that revolves about an axis, two needles adapted to vibrate laterally about an axis that is coincident with the axis of said looper, means for vibrating one of said needles laterally a greater extent than the other, and means for changing laterally the vibrating positions of said needles relative to each other.

4. In a sewing machine, a stitch-forming mechanism comprising a looper that moves circularly about an axis, two reciprocating needles, means for producing between said needles relative lateral movements of different extent about an axis that is coincident with the axis of said looper, and means for changing the amplitude of said lateral movements.

5. A sewing machine comprising a feeding mechanism, a stitch-forming mechanism, including a plurality of reciprocating needles, in combination with means for simultaneously producing between said needles and said feeding mechanism relative vibratory movements of different extent so as to produce lines of zig-zag stitches of different width, and means for guiding a ribbon under such stitches.

[Claims 6 to 49 not printed in the Gazette.]

875,618. LUBRICATOR FOR SEWING-MACHINE LOOPER MECHANISMS. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Oct. 26, 1903, Serial No. 178,630. Renewed Nov. 18, 1907. Serial No. 402,741.



1. A looper mechanism comprising a looper having an internal flange, a bobbin-case formed of a plurality of parts between which a race is produced in which runs the said flange, a lubricating device carried by the bobbin-case including a conduit for conveying the lubricant to the race, said conduit being formed by and between the said parts of the bobbin-case.

2. A looper mechanism comprising a circularly moving looper, a bobbin-case held from circular movement, means forming a race between the looper and the bobbin-case, an oil well located centrally of the bobbin-case and means for conveying the oil from the well to the race.

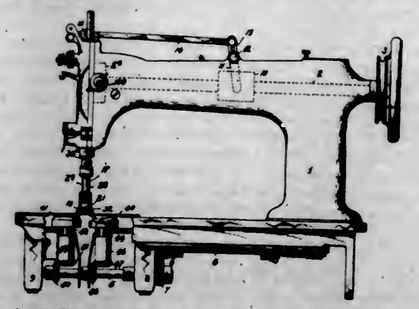
3. A looper mechanism comprising a looper and a bobbin-case, means between the two for producing a race, a lubricating device carried by one of the parts, and means for regulating the amount of flow of the lubricant to the race including a portion of the race forming means.

4. A looper mechanism for sewing machines comprising a looper and a bobbin-case; means between the two producing a race; a stationary device for lubricating the race, including a well for holding the lubricant; and means for closing the well to prevent foreign substances from reaching said race through said device.

5. A looper mechanism comprising a looper, a bobbin-case, means forming a race between the looper and the bobbin-case, and a lubricating device, coöperating with said race, having means for constantly and automatically leading a lubricant to the race while the looper is in and out of motion.

[Claims 6 to 12 not printed in the Gazette.]

875,619. ORNAMENTAL-STITCH MACHINE. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Nov. 2, 1903. Serial No. 179,469.

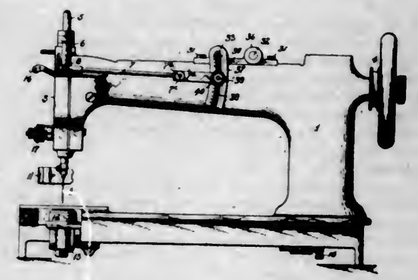


1. A sewing machine comprising stitch-forming mechanism for producing independent lines of stitching, a throat-plate having an elongated needle-slot, a separator-guide located and terminating in advance of said slot, and an additional guide depending in said needle-slot.

2. A sewing machine comprising stitch-forming mechanism for producing independent lines of stitching, a presser-foot having a needle-slot, and a throat-plate having a needle-slot, and one of said latter parts being provided with a tongue which extends into the slot of the other part; and a fixed guide arranged in advance of said tongue and coöperating therewith to guide the work.

3. A sewing machine comprising a stitch-forming mechanism, a throat-plate and a presser-foot, one of said parts having a projecting tongue the under-side of which is inclined; and a fixed guide the forward end of which is inclined to coincide with the under-side of the tongue, said tongue and guide coöperating to guide the work.

875,620. NEEDLE-ACTUATING MECHANISM FOR SEWING-MACHINES. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Nov. 2, 1903. Serial No. 179,470.



1. A sewing machine comprising a reciprocating needle adapted to be moved laterally, means for moving said needle laterally comprising a part that is mounted on a plurality of pivots carried by a plurality of pivoted members that are mounted on independent axes, and a cam adapted to oscillate said part.

2. A sewing machine comprising a reciprocating needle adapted to be moved laterally, means for moving said needle laterally comprising a part that is mounted on two pivots and intermediate the same, said pivots carried by two pivoted members that are mounted on independent axes, a connection between said part and the aforesaid needle, and means for oscillating said part.

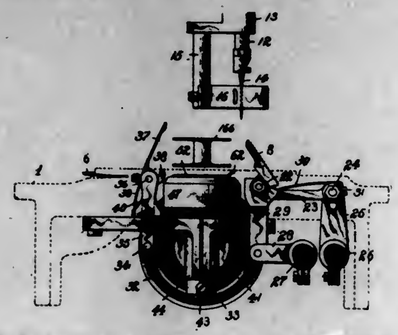
3. In a sewing machine having a stitch forming mechanism comprising a needle adapted to be moved laterally, two arms separately pivoted to oscillate in a vertical plane about separate axes which run in a horizontal plane, a part comprising two bearings or jaws running parallel to each other, said part pivoted to the extending ends of the said arms and intermediate the same, an operating cam in engagement with the said jaws and between the same, and means intermediate one of the said elements and the aforesaid needle whereby the needle is moved laterally.

4. In combination, a reciprocating needle-bar, a rotating driving-device, and means for converting the rotary movement of said device into reciprocating movement for said bar, including a yoke for embracing the driving-device, two pivotally supported arms pivotally connected to the yoke, and means for compensating for wear between the rotary device and the yoke.

5. In combination, a rotary driving-shaft; a circularly moving actuating device; means between the latter and said shaft for imparting the circular movement; a vibrating needle-bar; and means between the actuating device and said bar for transmitting movement from one to the other, including a plurality of pivotally supported arms, means for maintaining the arms in parallelism, means for connecting the latter means with the actuating device, and means connecting the arms with the vibrating bar.

[Claims 6 and 7 not printed in the Gazette.]

875,621. BOBBIN-CASE-THREADING MECHANISM FOR SEWING-MACHINES. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Nov. 2, 1903, Serial No. 179,468. Renewed Nov. 18, 1907. Serial No. 402,742.



1. In combination, a horizontally disposed looper, bobbin-case and bobbin, the bobbin-case being provided with means whereby the same may be threaded from the top thereof while in place in the looper.

2. In combination, a looper horizontally disposed, a bobbin-case supported thereby, the latter having means for threading the same while in the looper and also having means for preventing the thread from becoming loose and thus engaged by the hook of the looper.

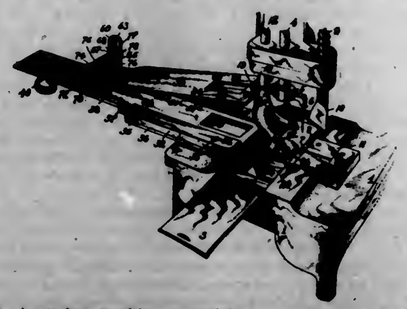
3. In combination, a horizontally disposed looper, carrying a horizontally disposed bobbin-case provided with a diagonal open-end slot terminating in a horizontally extending thread-eye, and having a guard attached thereto for preventing the thread, extending from the said eye to the work, from bowing or becoming loose.

4. In combination a looper, a bobbin case carried by the same, a bobbin carried by said case, a bobbin controller adapted to engage the bobbin, means for removing the controller from its operating position to permit of the insertion of the bobbin in the case, and means whereby the case may be threaded from the top thereof while in place in the looper.

5. In combination a looper horizontally disposed, and a bobbin case carried by the same, a bobbin carried by the case, a feed dog extending over a portion of the bobbin and case, means adapting the case to be threaded without removing it from the looper, and means for removing the feed dog to permit of the threading of the case.

[Claims 6 and 7 not printed in the Gazette.]

875,622. WORK-CLAMP MECHANISM FOR SEWING-MACHINES. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Dec. 26, 1903. Serial No. 186,589.



1. A sewing machine comprising a work-carrier having a clamping device, said clamping device adapted to engage the work so that no movement takes place between the clamp and the work, means for normally holding said clamping device open, and means mounted in a stationary part of the machine for holding said clamping device closed during the stitching operation.

2. A sewing machine the work-plate of which is provided with an opening for access to the looper mechanism; a carrier supported on the work-plate to move adjacent the opening; a work-clamp supported on the carrier and operating over said opening; means for actuating said carrier; and means whereby the clamp may be moved away from said opening and the carrier be undisturbed.

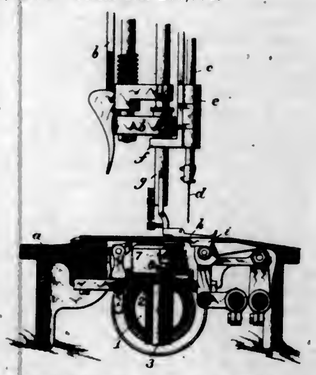
3. A sewing machine comprising stitch-forming mechanism; a work-clamp; means for actuating the clamp; means for regulating the extent of travel of the clamp; and means whereby the initial position of the clamp may be established irrespective of adjustments of the extent of its travel.

4. A sewing machine comprising stitch-forming mechanism; a work-clamp; means for actuating the parts relatively for stitching a buttonhole; and means whereby the working position of the clamp may be adjusted.

5. A sewing machine comprising stitch-forming mechanism; a work-clamp; a carrier for said clamp; means for actuating the parts relatively for stitching a buttonhole; and means whereby the clamp and carrier may be adjusted relatively for determining the working position of the clamp.

[Claims 6 to 22 not printed in the Gazette.]

875,623. LOOPER MECHANISM FOR SEWING-MACHINES. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Sept. 9, 1905. Serial No. 277,774.



1. In a sewing machine, a looper mechanism comprising a hook having a ledge, a bobbin case having a circumferential flange that is located on said ledge and means for retaining the same on the ledge, a gap in said flange for the reception of a limb of the needle thread loop, a thread passage in the wall of said bobbin case below said gap, and a thread guard disposed on said bobbin case above said gap by means of which the bobbin thread is retained in said gap.

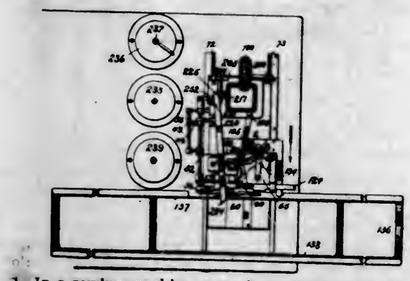
2. In a sewing machine, a looper mechanism comprising a hook having a ledge and a beak, a bobbin case having a circumferential flange that is located on said ledge and means for retaining the same on the ledge, a gap in said flange for the reception of a limb of the needle thread loop, a thread passage in the wall of the bobbin case below said flange for the passage of the bobbin thread into said gap and thence to the needle plate and the work, and a thread guard disposed on said bobbin case above said gap by means of which the bobbin thread is guarded from being caught by the point of the beak of the hook.

3. In a sewing machine, a looper mechanism comprising a hook having a ledge, a bobbin case having a circumferential flange that is located on said ledge and means for retaining the same on the ledge, a gap in said flange for the reception of a limb of the needle thread loop, a thread passage in the wall of said bobbin case below said gap, a thread guard disposed on said bobbin case above said gap, and a slot in said bobbin case by means of which the bobbin thread may be drawn into said thread passage so as to run from thence upwardly back of said thread guard.

4. In a sewing machine, a stitch-forming mechanism comprising a looper having a groove formed therein and provided with a ledge near its top, a bobbin case having a circumferential flange near its top that is located on said ledge, and an auxiliary hook having a beak extending into said groove.

5. In a sewing machine, a stitch-forming mechanism comprising a looper having a ledge near its top, a bobbin-case having a circumferential flange located on said ledge and means for retaining the same on said ledge, a gap in said flange for the reception of a limb of the needle thread loop, a thread passage in the wall of the bobbin-case below said gap, and a thread guard disposed on said bobbin case above said gap by means of which the strand of bobbin thread is retained in the gap.

875,624. AUTOMATIC EMBROIDERY OR ORNAMENTAL STITCH SEWING-MACHINE. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Nov. 27, 1905. Serial No. 289,324.



1. In a sewing machine, a work moving mechanism comprising means for moving the work progressively forward, a stitch forming mechanism comprising a reciprocating and laterally moving needle, and means for automatically moving the complete stitch forming mechanism laterally relative to the work.

2. In a sewing machine, a stitch forming mechanism comprising a reciprocating and laterally moving needle, a work moving mechanism comprising a work carrier, means adapted to change laterally the working position of the complete stitch forming mechanism relative to the work carrier.

3. In a sewing machine, a stitch forming mechanism comprising a reciprocating and laterally moving needle, a work moving mechanism adapted to move the work at substantially right angles to the direction in which the needle moves laterally, and means for reciprocating all of said stitch forming mechanism.

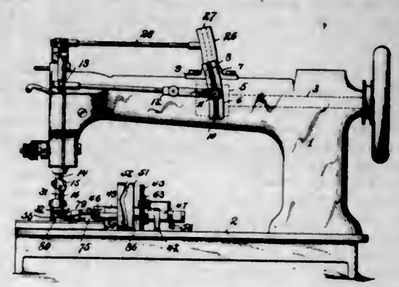
4. A sewing machine comprising a vertically reciprocating and laterally vibrating needle, a work moving mechanism, and means adapting said work moving mechanism to change laterally the working position of said laterally vibrating needle.

5. In a sewing machine, a stitch forming mechanism comprising a reciprocating needle adapted to be moved laterally, means for moving said needle a plurality of steps laterally, means for moving the work in a direction substantially at right angles to the lateral movement of said needle, and means for moving the stitch forming mechanism laterally in substantially the same direction in which the needle moves laterally.

[Claims 6 to 35 not printed in the Gazette.]

875,625. EMBROIDERY OR ORNAMENTAL STITCH SEWING-MACHINE. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Nov. 29, 1905. Serial No. 289,646.

1. In combination in a sewing machine, a vertically reciprocating and laterally vibrating needle, a feeding device that engages the work and moves it progressively forward relative to said feeding device, means for moving the work progressively laterally to dispose the stitches to make an embroidered design, and means for looping an auxiliary thread around links of the needle thread.



2. In combination in a sewing machine, a vertically reciprocating and laterally vibrating needle, a device for moving the work progressively forward, means for moving the work progressively laterally to dispose the stitches to make an embroidered design, and means for looping an auxiliary thread consecutively around the links of the needle thread along the edge of said design.

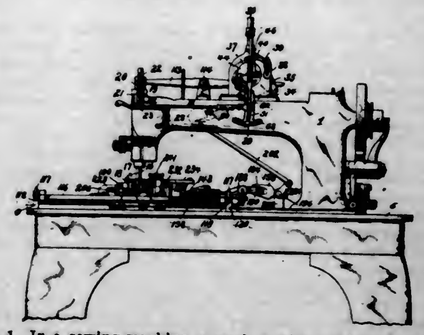
3. In combination in a sewing machine, a vertically reciprocating and laterally vibrating needle, a device for moving the work progressively forward, means for moving the work progressively laterally to dispose the stitches to make an embroidered design, and means for looping an auxiliary thread around links of the needle thread including a thread carrying device that moves laterally in unison with the lateral movements of the needle.

4. In a sewing machine, a stitch forming mechanism comprising a reciprocating and laterally moving needle, a feed mechanism comprising a revolving feed wheel adapted to engage the work, means for reciprocating said feed wheel in a direction at right angles to the direction in which it revolves, an auxiliary thread carrying device and means for operating said auxiliary thread carrying device so that its thread is looped consecutively around the links of the needle thread.

5. In a sewing machine, a stitch forming mechanism comprising a reciprocating and laterally moving needle, a needle plate adapted to reciprocate, a revolving feed wheel adapted to engage the work, and means operated separately from the stitch forming mechanism for reciprocating said needle plate and said feed wheel.

[Claims 6 to 8 not printed in the Gazette.]

875,626. EMBROIDERY OR ORNAMENTAL STITCH SEWING-MACHINE. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Dec. 8, 1905. Serial No. 290,945.



1. In a sewing machine, a work moving mechanism comprising means for revolving the work, means for automatically varying the speed of said movement of the work,

and a stitch forming mechanism adapted to coöperate with said work moving mechanism.

2. In a sewing machine, a work moving mechanism comprising a revolving work carrier, means for automatically increasing and decreasing the speed of rotation of said work carrier a predetermined number of times during a rotation of the work carrier, and a stitch forming mechanism adapted to coöperate with said work moving mechanism.

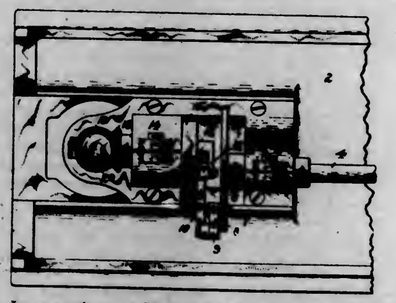
3. In a sewing machine, a work moving mechanism comprising a revolving work carrier, means for automatically increasing and decreasing the speed of rotation of the work carrier, means for moving the work carrier laterally, and a stitch forming mechanism adapted to coöperate with said work moving mechanism.

4. In a sewing machine, a work moving mechanism comprising a revolving work carrier, means for moving said work carrier laterally a plurality of times during a rotation of the same, means for automatically increasing the speed of rotation of said work carrier, and a stitch forming mechanism adapted to coöperate with said work moving mechanism.

5. In a sewing machine, a work moving mechanism comprising a revolving and reciprocating work carrier, means for automatically varying the revolving and reciprocating movements of said work carrier, and a stitch forming mechanism adapted to coöperate with said work moving mechanism.

[Claims 6 to 22 not printed in the Gazette.]

875,627. LOOPER MOVEMENT FOR SEWING-MACHINES. WILLIAM N. PARKES, Brooklyn, N. Y. Filed June 15, 1906. Serial No. 321,815.



1. In a sewing machine, a revolving looper, means for operating the same comprising a revolving shaft, a second shaft, a member having a groove extending around the axis of said second shaft, a lever having a fulcrum sliding in said groove, a connection between one end of said lever and said first shaft, a connection between the other end of said lever and said second shaft, and means whereby the aforesaid looper is operated from the movement of said second shaft.

2. In a sewing machine, a looper adapted to be revolved, means for revolving the same comprising a revolving shaft, a second revolving shaft, a lever connection between said shafts, means for guiding the fulcrum of said lever in a path around one of the shafts and eccentric thereto, and means whereby the aforesaid looper is operated from the movement of one of said shafts.

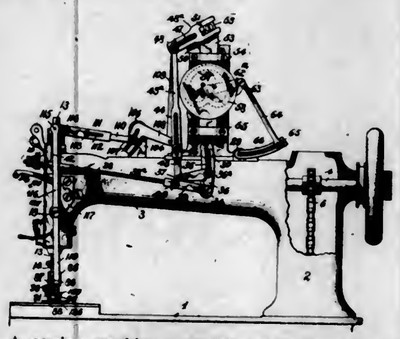
3. A sewing machine comprising two shafts located eccentrically relative to each other, a lever connection between said shafts, and means for guiding the fulcrum of said lever around one of the shafts and eccentric thereto, a looper mechanism comprising a looper, and means whereby said looper is revolved from the movement of one of said shafts.

4. A sewing machine comprising two shafts located eccentrically relative to each other, a lever, a connection between one end of said lever and one of said shafts, a connection between the other end of said lever and the other of said shafts, means for guiding the fulcrum of said lever around one of said shafts, a looper suitably mounted, and means whereby said looper is operated from the movement of one of said shafts.

5. A sewing machine comprising two shafts located eccentrically to each other and the axes of which are parallel, a part that is guided around the axis of one of said shafts and eccentric thereto, a connection between said part and one of said shafts, a connection between said part and the other of said shafts, a looper suitably mounted, and means whereby said looper is operated from the movement of one of said shafts.

[Claims 6 to 9 not printed in the Gazette.]

875,628. SCALLOPING-EMBROIDERY MACHINE. WILLIAM N. PARKES, Brooklyn, N. Y. Filed Mar. 6, 1907. Serial No. 360,900.



1. A sewing machine comprising a reciprocating and laterally moving needle, means for changing laterally the working position of said laterally moving needle so as to embroider scallops, and means for concatenating an auxiliary thread with the thread of which said scallops are composed so as to form a purl or button-hole finish along the edge of said scallops.

2. A sewing machine comprising a plurality of reciprocating needles, means for moving said needles laterally step by step, means for passing back and forth under said needles an auxiliary thread and thereby securing the same to the work, and means for guiding a filling material under said auxiliary thread.

3. A sewing machine comprising a reciprocating needle, means for producing a relative lateral movement between said needle and the work so as to embroider designs, means for concatenating an auxiliary thread with the thread of said design so as to form a purl or button-hole finish along the edge of the designs, and means for guiding a filling material under the thread of which said designs are composed.

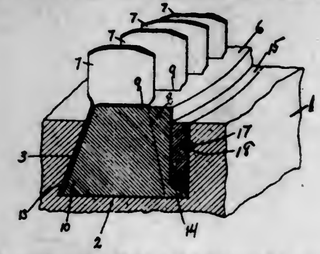
4. A sewing machine comprising a feeding device that engages directly with the work, a reciprocating needle, means for producing a relative step by step lateral movement between said needle and the work, and means for guiding an auxiliary material or cord under the reciprocating path of said needle.

5. A sewing machine comprising a reciprocating and laterally moving needle, means for changing laterally the working position of said laterally moving needle, means for looping an auxiliary thread around single links of the needle thread, and means for drawing the auxiliary thread taut so as to form a purl or button-hole edge in line with one of the outer rows or edges of stitching.

[Claims 6 to 33 not printed in the Gazette.]

875,629. BLADE-FASTENING. MAX ROTTER, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Oct. 29, 1906, Serial No. 341,081. Renewed May 27, 1907. Serial No. 375,960.

1. The combination with a blade-carrying member provided with a recess having one side undercut of a blade-holding member, blades interlocked with said blade-holding member, said blade-holding member being provided with a projecting portion adapted to be engaged directly with said side within the undercut portion thereof.

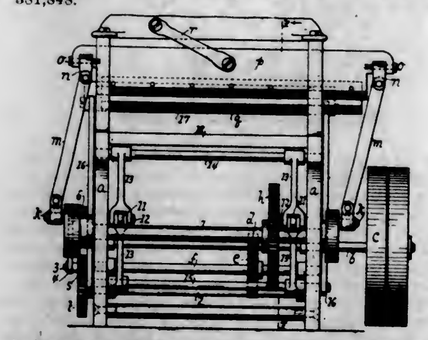


2. The combination with a blade-carrying member provided with a recess having one side undercut of a blade-holding member, blades interlocked with said blade-holding member, said blade-holding member being provided with a projecting portion adapted to be engaged directly with said side within the undercut portion thereof, and means for securing said blade-holding member in said recess.

3. The combination with a blade-carrying member provided with a recess having one side undercut of a blade-holding member, blades interlocked with said blade-holding member, said blade-holding member being provided with two projecting portions one of which is adapted to be engaged directly with said side within the undercut portion thereof and a calking member adapted to rest upon the other of said projections and retain the blade-holding member within the recess of the blade-carrying member.

4. The combination with a blade-carrying member provided with a recess having one side undercut of a blade-holding member, blades interlocked with said blade-holding member, said blade-holding member projecting within the undercut portion of said side and being provided with a projecting portion upon which is adapted to bear a calking member, and said calking member.

875,630. PAPER-CUTTER. CHARLES L. SMITH, New York, N. Y., assignor to Gullberg and Smith, New York, N. Y., a Partnership. Filed July 2, 1907. Serial No. 381,848.

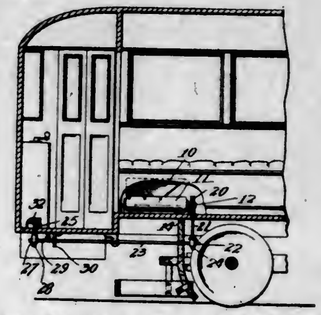


1. In a paper cutting apparatus a blade with a rotary shaft and crank connections for actuating the blade, gears actuated by the rotary shaft, reciprocating arms actuated by the gears, a toggle actuated by the arms, and a clamp actuated by the toggle.

2. In a paper cutting apparatus a blade with actuating means, a clamp, a toggle for actuating the clamp, a rock shaft for actuating the toggle, a friction device on the shaft, and a rotary shaft linked to the friction device.

3. In a paper cutting apparatus a blade, a shaft with an eccentric and links for actuating the blade, a second shaft having gear connections with the shaft of the eccentric, a friction device and a rock shaft oscillated by the second shaft, a toggle joint actuated by the rock shaft and a clamp actuated by the toggle joint, the friction device forming a slip connection on the rock shaft to allow motion to the cutter when the clamp is arrested.

875,631. TRACK-SANDER. JOSEPH M. SMITH, Worcester, Mass., assignor of one-half to William J. Saunders, Worcester, Mass. Filed Mar. 23, 1907. Serial No. 364,131.



1. A track sanding device, comprising a casing having a substantially horizontal bottom, and a tapering worm conveyer inclined at such an angle that the bottom of the conveyer is substantially parallel with the bottom of the casing, said casing being tapered so that its sides are substantially parallel with the sides of the worm.

2. A track sanding device, comprising a casing, and a tapering worm conveyer mounted on an inclined axis, the lower part of said casing having a cross-section corresponding with that of the conveyer throughout its length.

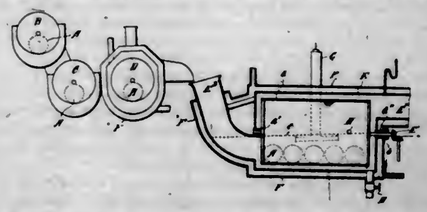
3. A track sanding device, comprising a casing, and a tapering worm conveyer mounted on an inclined axis, the lower part of said casing having a cross-section corresponding with that of the conveyer throughout its length, said casing having a discharge opening at the large end of the worm, and a wall between the end of the worm and the discharge opening.

4. A track sanding device, comprising a casing, and a tapering worm conveyer having its larger end at the discharge end of the casing, said casing having a wall extending upwardly from the bottom thereof at the end of said worm.

5. A track sanding device, comprising a casing, and a tapering worm conveyer having its larger end at the discharge end of the casing, said casing having a wall extending upwardly from the bottom thereof at the end of said worm, said worm having longitudinal flukes extending toward the large end of the casing from its end flights.

[Claims 6 to 11 not printed in the Gazette.]

875,632. METHOD FOR DETINNING AND PRODUCING TIN COMPOUNDS AND OTHER PRODUCTS. ELMER A. SPERRY, Brooklyn, N. Y. Original application filed Nov. 29, 1905, Serial No. 289,581. Divided and this application filed Aug. 24, 1907. Serial No. 389,953.



1. The process of recovering tin from tin scrap which consists in reacting upon the mass to be detinned with

chlorin in the presence of anhydrous stannic chlorid, producing thereby stannic chlorid and throwing out the tin from the chlorid.

2. The process of detinning which consists in treating the mass to be detinned with diluted chlorin in the presence of an anhydrous liquid, heating the gaseous products arising from the treatment and bringing them into contact with water.

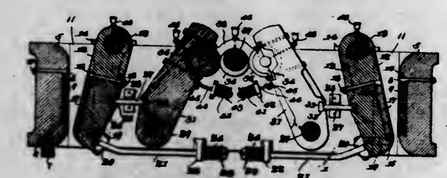
3. The process of detinning which consists in treating the mass to be detinned with diluted chlorin in the presence of an anhydrous liquid, cooling the gases rising from such treatment for purpose of condensing the products from same, and then bringing the residual gases into contact with water.

4. The method of detinning which consists in re-acting upon the masses to be detinned with a body of a suitable anhydrous liquid, agitating and supplying chlorin in excess to the agitated liquid.

5. The process of recovering tin from tin scrap which consists in reacting upon the mass to be detinned with chlorin in the presence of anhydrous stannic chlorid and throwing out metallic tin and chlorin from such chlorid.

[Claims 6 to 20 not printed in the Gazette.]

875,633. STONE-CRUSHER. GREEN R. STARNES, Charlotte, N. C., assignor of one-half to Henry C. Little, Charlotte, N. C. Filed Mar. 7, 1906. Serial No. 304,749.



A portable crusher comprising a wheel supported casing having oppositely disposed fixed jaws, oppositely movable jaws coöperating therewith, each of said movable jaws being pivotally mounted adjacent its upper end, a power shaft extending transversely within the upper portion of the center of the casing, a cam upon the shaft and within the casing, tumblers pivotally mounted at their lower ends within the casing and converging upwardly, an anti-friction roller journaled within the upper portion of each tumbler and bearing upon the cam, means for transmitting motion from each tumbler to the adjoining movable jaw, and separate spring actuated means for holding each tumbler normally pressed against the cam.

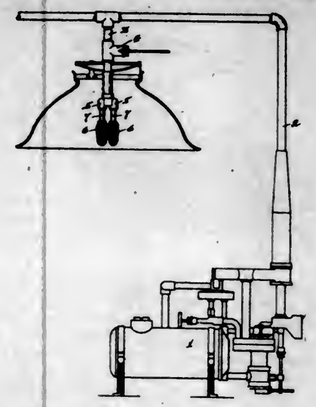
875,634. INCANDESCENT-LAMP FIXTURE. JOSEPH STUBBERS, Covington, Ky., assignor to The Incandescent Light & Stove Company, Cincinnati, Ohio, a Corporation. Filed May 14, 1906. Serial No. 316,860.

1. In combination with an illuminating system, an inverted burner tip, a mantle carrying fabric impregnated with rare earths, and means for loosely suspending the said mantle directly from the burner tip, substantially as described.

2. In combination, with an illuminating system, an inverted burner tip, a web work of rare earths shaped to the outline of the flame and loosely suspended directly from the mouth of the burner tip, substantially as described.

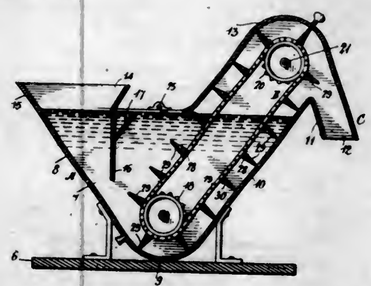
3. In combination with an illuminating system, an inverted burner tip, a conical flange formed on the tip, a mantle carrying fabric impregnated with rare earths and having its upper end drawn in above and around the flange, whereby the said mantle is loosely suspended from the burner tip, substantially as described.

4. In combination with an illuminating system, an inverted burner tip, a conical flange formed on said tip, a web work of rare earths shaped to the outline of the flame, having its upper end constricted around said flange, whereby the mantle remains adjustably suspended from the mouth of the burner tip, substantially as described.



5. In combination with an illuminating system, an inverted burner tip, a flange around the burner tip, a mantle carrying fabric impregnated with rare earths having its upper end constricted around and loosely fitting the flange, whereby the mantle is directly suspended from the mouth of the burner tip, substantially as described.

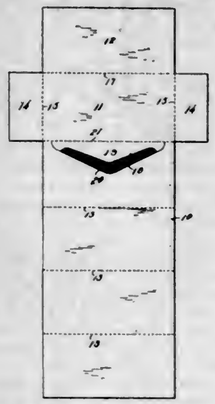
875,635. GRAIN-TREATING APPARATUS. CARL P. THOMPSON, Salem, Oreg., assignor of one-fourth to W. E. Keyes, one-fourth to F. L. Buckio, and one-fourth to J. C. Smith, Salem, Oreg. Filed Oct. 16, 1907. Serial No. 397,746.



A grain treating apparatus comprising a tank body, a housing formed as an extension of the body, a spout formed as an extension of the housing, a conveyer mounted for travel within the tank and within the housing, a hopper located at one of the upper ends of the tank body and formed in part by a partition which extends across the said body and depends within the same, and a foraminous plate secured at its side edges to the sides of the tank body and at its lower edge to the partition, said plate being disposed at an angle to the partition and forming, in conjunction with the partition and the sides of the tank, a vitriol container.

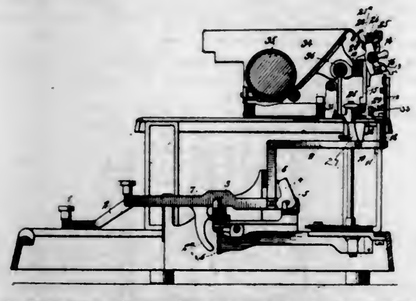
875,636. LETTER-SHEET. CHARLES M. TUBBS, Oquawka, Ill. Filed Apr. 13, 1907. Serial No. 368,010.

A letter sheet of the class described, comprising a blank including a communicatory portion and an envelop portion which latter is composed of a front a back, and end flaps, and a foldable closure, the latter being cut from the communicatory portion of the edge adjacent the point of junction of the said portion of the sheet with the front of the envelop portion, the end flaps being gummed only adjacent their junction with the front of the envelop portion of the sheet, and the closure flap being gummed only along its outer edge, the communicatory portion of the sheet being adapted to be folded to such a degree as to be bounded by the edges of the front of the envelop portion, the end flaps of the envelop portion being adapted to be



folded over upon the folded communicatory portion of the sheet, the back of the envelop portion being adapted to be folded over upon the said end flaps, and the closure flap being adapted to be folded over upon the said back flap, substantially as described.

875,637. CARRIAGE STOP MECHANISM FOR TYPE-WRITING MACHINES. FRANZ X. WAGNER, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Original application filed Nov. 12, 1904, Serial No. 232,413. Divided and this application filed May 18, 1905. Serial No. 260,985.



1. In a typewriter or like machine, a carriage having a swinging section, a feed member and a column stop carried by said swinging section and tabulating mechanism comprising a tabulating stop adapted to coöperate with said column stop, an arm connected with said tabulating stop and provided with a roller journaled about a substantially vertical axis and adapted to engage the feed member to release the carriage.

2. In a typewriter or like machine, a carriage provided with a rod and a scale parallel therewith, a stop adjustable lengthwise of said rod and capable of a swinging movement thereon, said stop being provided with two pointers facing toward each other, either of which is adapted to indicate on said scale according to the position of the stop.

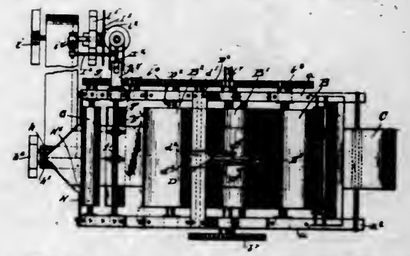
3. In a typewriter or like machine, a carriage having a swinging section, a column stop carried by said swinging section, a feed member and a brake on the frame of the machine, a second feed member carried by the swinging section of the carriage and adapted to normally engage said first named escapement member, said second named escapement member being located between the brake and the first named escapement member and means for swinging said carriage section to disengage the escapement members and to swing said second named escapement member against the brake.

4. In a typewriter or like machine, a carriage comprising two sections, each movable relatively to the other, a feed member and a stop located on one of said carriage sections and movable therewith, a second stop on the frame of the machine adapted to be moved into operative position and mechanism separate from second named stop yet connected therewith for moving the section of the carriage on which the stop is located, thereby moving said stop and releasing the carriage from the feed mechanism.

5. In a typewriter or like machine a carriage provided with a rod and a rack parallel with the direction of its motion, and a bar having a rib, and a stop adjustable lengthwise of said rod and arranged to engage said rack, said stop having a spring pressed member adapted to engage said rib on one side or the other.

[Claims 6 to 8 not printed in the Gazette.]

875,638. MACHINE FOR PRINTING LEAVES FOR BOOKS. GUSTAV A. WALSTEAD and SIVERT MOE, Chicago, Ill. Filed Jan. 3, 1905. Serial No. 239,363.



1. In a device of the class described the combination with printing and numbering mechanisms of means for making a plurality of lines of perforations longitudinally of the paper, mechanism for folding the paper longitudinally thereof, a mandrel adapted to receive said strip, a shaft rigidly engaged to the frame and projecting outwardly therefrom, means journaled on its outer end whereby said mandrel is rotated, an arm rigidly engaged to said shaft, a roller on the end of said shaft resting on said mandrel and adapted to regulate the velocity of the mandrel.

2. In a device of the class described the combination with a plurality of rolls adapted to feed a strip of paper therethrough, of means for perforating said strip longitudinally thereof, means for folding the strip longitudinally, a mandrel adapted to receive the folded strip thereon in a roll a friction wheel on the mandrel, a friction wheel pivoted on the side of the machine and adapted to contact therewith and means for automatically adjusting said wheels.

3. In a machine of the class described the combination with a plurality of rolls adapted to convey a strip therethrough, of printing means adjustably supported above the rolls, means adapted to perforate the strip longitudinally thereof, a downwardly tapering guide, a pair of coacting rolls beneath the same adapted to fold the strip longitudinally, a mandrel adapted to receive the folded strip and automatically operating means acting to vary the speed of the mandrel to give a uniform peripheral speed.

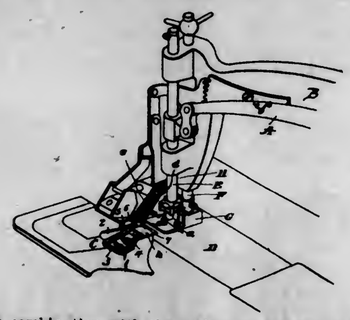
4. In a device of the class described the combination with a frame, of a plurality of rolls journaled thereon, means for driving said rolls, printing means supported adjacent said rolls, a downwardly tapering guide on the end of said frame, coacting rolls beneath said guide, a man-

drel, a friction disk thereon, a friction disk pivotally supported on the frame and adapted to drive the friction disk on the mandrel and means for automatically moving the last named friction disk radially of the first named friction disk.

5. In a device of the class described the combination with means for printing and folding a strip longitudinally thereof, of a mandrel adapted to have said strip rolled thereon, a friction drive for said mandrel, means pivotally supporting said drive and means operated by the growth of the roll to adjust the speed of said mandrel.

[Claims 6 to 11 not printed in the Gazette.]

875,639. STRIPPER-BLADE SUPPORT AND GUIDE FOR RUFFLING-MACHINES. RUSSEL G. WOODWARD, Waukegan, Ill., assignor to Union Special Sewing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 17, 1902. Serial No. 103,324.



1. In combination with the ruffling mechanism of a sewing machine, a stripper blade pivotally attached to the framework of the machine, independent of the cloth plate and ruffling mechanism, and means for adjusting the operative position of the stripper blade for varying thicknesses of goods, substantially as described.

2. In combination with the ruffling mechanism of a sewing machine, a stripper blade pivotally attached to the framework of the machine independent of the cloth plate and ruffling mechanism, means for raising it above said cloth plate, and means for adjusting the operative position of the stripper blade; substantially as described.

3. A sewing machine including in combination a frame, a ruffling mechanism, a presser foot, a stripper blade, means for supporting said stripper blade from the frame and independent of the presser foot, and means for adjusting vertically the position of said stripper blade, whereby said stripper blade may be properly positioned for varying thicknesses of fabric.

4. In combination with the ruffling mechanism of a sewing machine, a stripper blade supported from the framework thereof, and means for adjusting vertically its operative position in accordance with varying thicknesses of fabric, a presser foot and connections between the presser foot and stripper blade support, to permit the latter and the parts carried thereby to be raised as the presser foot is raised; substantially as described.

5. In a sewing machine having a ruffling mechanism an arm pivotally secured to the frame of the machine, a stripper blade supported thereby, and an adjustable stop for varying the operative position of the pivoted arm; substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

875,640. PRESSER-FOOT FOR OVERSEAMING-MACHINES. RUSSEL G. WOODWARD, Waukegan, Ill., assignor to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Feb. 5, 1906. Serial No. 299,505.

1. In a sewing machine having stitch forming mechanism including a device for laying a thread upon the upper surface of the fabric, a presser foot having a recess located in the path of travel of said thread laying device, and upon the top side of the bearing surface of said foot, said recess being so arranged as that the thread will be deflected out of it; substantially as described.



2. In a sewing machine having stitch forming mechanism including a device for laying a thread upon the upper surface of the fabric, a presser foot having a tongue over which the stitches pass and provided with a recess on the top side of its bearing surface, said recess being located in the path of travel of said thread laying device; substantially as described.

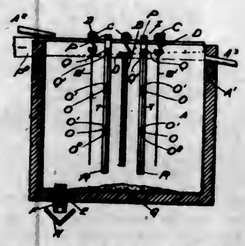
3. In a sewing machine having stitch forming mechanism, including a device for laying a thread upon the upper surface of the fabric, a presser foot having a tongue over which the stitches pass and having a shank portion raised above the presser foot and provided with a recess on the top side of its bearing surface, and being located in the path of travel of said thread-laying device; substantially as described.

4. In a sewing machine having stitch forming mechanism, including a device for laying a thread on the upper surface of the fabric, a presser foot, a plate secured thereto having a tongue provided with a recess on the top of its bearing surface, said recess being located in the path of said thread-laying device; substantially as described.

5. In a sewing machine having stitch-forming mechanism, including a device for carrying the thread over the edge of the presser foot, a needle, presser foot having a tongue, a notch or recess in said presser foot located in the path of said thread-carrying device, and in advance of said needle, whereby the thread carried by the thread-carrying device is drawn at an angle to the line of feed and deflected upon said tongue; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

875,641. APPARATUS FOR REFINING COPPER. FRANK L. ANTISELL, New York, N. Y. Filed July 5, 1906. Serial No. 324,771.



1. In a device for electrolytically refining copper, a tank adapted to contain an electrolyte, an anode and a cathode suspended in said electrolyte, a frame suspended in said electrolyte between the anode and the cathode, and a removable porous non-conducting diaphragm carried by said frame.

2. In a device of the class described, a diaphragm adapted to be suspended in an electrolyte, consisting of a frame and a removable wooden panel carried by said frame.

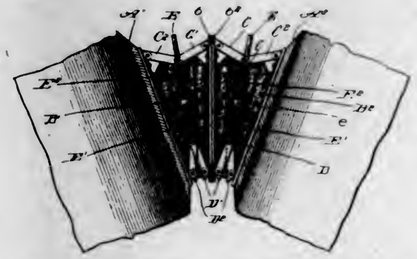
3. In a device of the class described, a diaphragm adapted to be suspended in an electrolyte, vertical side pieces, cross pieces extending from one side piece to another, and removable panels secured between the side pieces and the cross pieces, said pieces and panels being made of non-conducting material.

4. In a device of the class described, a diaphragm adapted to be suspended in an electrolyte, consisting of a frame of non-conducting material and removable wooden panels carried by said frame.

5. In a diaphragm adapted to be inserted in an electrolyte, vertical side pieces, cross pieces extending from one side to the other, said pieces being made of non-conducting material, and panels of rotary cut wood veneer secured between said side pieces and cross pieces and adapted to be removable therefrom.

[Claims 6 and 7 not printed in the Gazette.]

875,642. CAR-VESTIBULE DIAPHRAGM. FRED C. ABEY, Chicago, Ill. Filed Sept. 15, 1904. Serial No. 224,551.



1. The combination with a car vestibule, of an extensible diaphragm the inner end of which is secured to the vestibule around the passage therethrough, a face plate to which the outer edge of the diaphragm is secured, horizontal toggle links operatively connecting the face plate and vestibule at each side of the diaphragm, and means interposed between the toggle links for extending one side of the diaphragm when the other side is compressed.

2. The combination with a car vestibule, of an extensible diaphragm the inner end of which is secured to the vestibule around the passage therethrough, a face plate to which the outer edge of the diaphragm is secured, horizontal toggle links operatively connecting the face plate and vestibule at each side of the diaphragm, and a transverse spring extending between the toggle links for extending one side of the diaphragm when the other side is compressed.

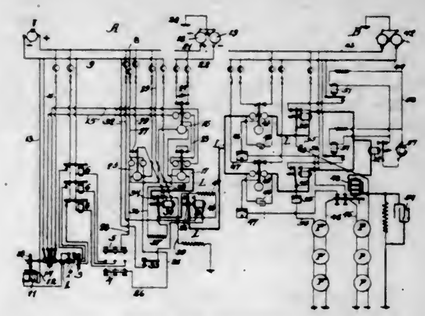
3. The combination with a car vestibule, of an extensible diaphragm the inner end of which is secured to the vestibule around the passage therethrough, a face plate to which the outer edge of the diaphragm is secured, horizontal toggle links operatively connecting the face plate and vestibule at each side of the diaphragm, a floating rod extending transversely across the diaphragm and movable relatively to said toggle links, and a spring surrounding said rod engaging the inwardly projecting joints of the toggle links.

4. The combination with a car vestibule, of an extensible diaphragm the inner end of which is secured to the vestibule around the passage therethrough, a face plate to which the outer end of the diaphragm is secured, toggle links interposed between the face plate and the vestibule at each side of the diaphragm, a rod extending transversely across the diaphragm and movable relatively to the toggle links, a collar fixed to said rod, and springs surrounding said rod at each side of said collar and bearing against the inwardly projecting joints of the respective toggle links.

5. The combination with a car vestibule, of an extensible diaphragm the inner end of which is secured to the vestibule around the passage therethrough, a face plate to which the outer end of the diaphragm is secured, horizontal toggle links above and below the diaphragm at each side thereof, means interposed between the toggle links above the diaphragm and means interposed between the toggle links below the diaphragm whereby the compression of one side of the diaphragm extends the other side.

[Claims 6 and 7 not printed in the Gazette.]

875,643. PRINTING-TELEGRAPH. JOHN C. BARCLAY, New York, N. Y., assignor to Western Union Telegraph Company, New York, N. Y., a Corporation of New York. Filed Apr. 22, 1905. Serial No. 256,867.



1. A printing telegraph system comprising in combination, a line circuit, one or more multi-circuit printers comprising printing and shift mechanisms each having independent controlling means, printing and shift circuits for said printers, a transmitter for said printers comprising means for producing a pulsating current in such line circuit and for prolonging the pulses therein at will, and comprising also means for producing another class of signals in said line circuit, and a translating apparatus separate and distant from said transmitter and printers, but connected with said transmitter through said line circuit, and comprising means operated by said pulsatory current and the prolongation of pulses therein, controlling the printing circuit of said printers and comprising also means operated by the other class of signals in said line circuit for controlling the shift circuit of said printers.

2. In a printing telegraph system, the combination of a transmitter, translating apparatus and a connecting line circuit, said translating apparatus comprising means operated by one class of signals in said line circuit for operating printing mechanism in a printer, and further comprising means controlled by another class of signals in the line circuit for operating shift mechanism of a printer, and further comprising means operated by a third class of signals in said line circuit for causing repetition of the character last printed.

3. In a printing telegraph system, the combination of a transmitter, translating apparatus, a connecting line circuit, and printing and shift circuits for a printer controlled by said printing apparatus, said translating apparatus comprising means operated by one class of signals in said line circuit for producing an alternating current in such printing circuit and for prolonging one pulse of such current at will, said translating apparatus further comprising means controlled by another class of signals in the line circuit for controlling said shift circuit, and further comprising means controlled by a third class of signals in the line circuit for transmitting through such printing circuit an additional pulse of the same direction as the preceding pulse.

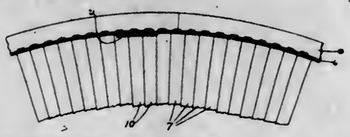
4. In a transmitter for printing telegraph systems, the combination of means for transmitting an alternating current through a line circuit, a sunflower and contact arm therefor passing over the contacts of said sunflower in synchronism with the alternations in said circuit, a keyboard and means operated by the several keys thereof for arresting said sunflower contact arm in corresponding positions and simultaneously prolonging the corresponding current pulse in said circuit, and shift and repeat relays, arranged when operated to vary the current strength, one

to a greater extent than the other, and means for operating said relays.

5. In a transmitter for printing telegraph systems, the combination of means for transmitting an alternating current through a line circuit, a sunflower and a contact arm therefor passing over the contacts of said sunflower in synchronism with the alternations in said circuit, a keyboard and means operated by the several keys thereof for arresting said sunflower contact arm in corresponding positions and simultaneously prolonging the corresponding current pulse in said circuit, and a shift relay arranged when operated to connect a leak to said line circuit.

[Claims 6 to 18 not printed in the Gazette.]

875,644. STEAM-TURBINE. CHARLES F. BARTH, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Apr. 9, 1906. Serial No. 310,638.



1. The combination of a plurality of blades, and adjacent baffle sections secured thereto, one end of one of said sections being off-set and lapped by the end of the adjacent section.

2. The combination of a plurality of blades, and adjacent baffle sections secured thereto each having a web portion and flanges at an angle to the web portion, one end of one of said sections having its web portion extending beyond its flanges and lapped by the web portion of the adjacent section.

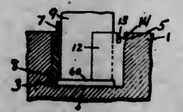
3. The combination of adjacent baffle sections extending with their body portions end to end and in the same continuous surface, one of said sections having an extension lapping the adjacent section, said sections and extension having apertures, the apertures in the extension registering with apertures in the adjacent section, and blades having portions extending through said registering apertures, said portions having heads beyond the sections.

4. The combination of adjacent baffle sections extending with their body portions end to end and in the same continuous surface, the end of one section being disposed at an oblique angle to its side edges and an end of the adjacent section being correspondingly formed for close abutting thereto, one of said sections having an extension lapping the adjacent section, said sections and extension having apertures, the apertures in the extension registering with apertures in the adjacent section, and blades having portions extending through said registering apertures, said portions having heads beyond the sections.

5. The combination of a plurality of blades, and adjacent baffle sections secured thereto each comprising a web portion and flanges thereon, one end of one of said baffle sections having the web portion extending beyond the flanges and being off-set and lapped by the end of the adjacent section.

[Claims 6 to 8 not printed in the Gazette.]

875,645. BLADE-FASTENING. NORMAN C. BASSETT, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Oct. 29, 1906, Serial No. 341,075. Renewed May 27, 1907. Serial No. 375,954.



1. The combination with a blade-carrying member, provided with a recess, of a blade-holding member, provided with notches, seated in said recess, blades seated in said notches, and filling blocks to secure said blade-holding member and blades in the recess of said blade-carrying member.

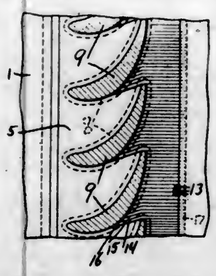
2. The combination with a blade-carrying member, provided with a recess, of a blade-holding member, provided with notches, seated in said recess, blades seated in said notches, and filling blocks to secure said blade-holding member and blades in the recess of said blade-carrying member, said filling blocks being locked to said blade-carrying member.

3. The combination with a blade-carrying member, provided with a recess a side of which is undercut, of a blade-holding member, provided with notches and a projection, said projection being adapted to engage with said side in the undercut portion thereof, blades seated in said notches, and filling blocks to secure said blade-holding member and blades in the recess of said blade-carrying member.

4. The combination with a blade-carrying member, provided with a recess, of a blade-holding member provided with notches and recessed adjacent said notches, seated in said recess, said blade-holding member being provided with a projection adapted to engage with said side in the undercut portion thereof, blades seated in said notches and provided with projections adapted to engage with said blade-holding member in the recessed portions thereof, and filling blocks to secure said blade-holding member and blades in the recess of said blade-holding member.

5. The combination with a blade-carrying member, provided with a recess, of a blade-holding member provided with notches and recessed adjacent said notches, seated in said recess, said blade-holding member being provided with a projection adapted to engage with said side in the undercut portion thereof, blades seated in said notches and provided with projections adapted to engage with said blade-holding member in the recessed portions thereof, and filling blocks to secure said blade-holding member and blades in the recess of said blade-holding member, the recess of said blade-carrying member being provided with a depression and portions of the filling blocks being forced into said depression to lock the several parts against displacement.

875,646. BLADE-FASTENING. NORMAN C. BASSETT, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Oct. 29, 1906, Serial No. 341,076. Renewed May 27, 1907. Serial No. 375,955.



1. The combination with a blade-carrying member, provided with a recess, of a blade-holding member, provided with notches, seated in said recess, blades seated in the notches of said blade-holding member, and a laminated filling block to secure a blade and said blade-holding member within the recess of said blade-carrying member.

2. The combination with a blade-carrying member, provided with a recess, of a blade-holding member, provided with notches, seated in said recess, blades seated in the notches of said blade-holding member, and a plurality of laminated filling blocks to secure the blades and said blade-holding member within the recess of said blade-carrying member.

3. The combination with a blade-carrying member, pro-

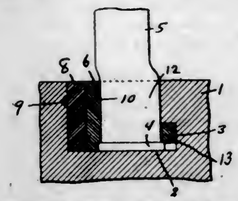
vided with a recess a side of which is undercut, of a blade-holding member provided with notches seated in said recess, said blade-holding member being also provided with a projection adapted to engage with said side of the recess within the undercut portion thereof, blades seated in the notches of said blade-holding member, and laminated filling blocks to secure said blades and blade-holding member within the recess of said blade-carrying member.

4. The combination with a blade-carrying member, provided with a recess a side of which is undercut, of a blade-holding member, provided with notches, seated in said recess, said blade-holding member being also provided with a projection adapted to engage with said side of the recess within the undercut portion thereof, said blade-holding member being recessed adjacent to said notches, blades, provided with projections, seated in said notches with their projections engaged with the blade-holding member in the recessed portions thereof, and laminated filling blocks to secure said blades and blade-holding member within the recess of said blade-carrying member.

5. The combination with a blade-carrying member, provided with a recess the sides of which are undercut, of a blade-holding member provided with notches, seated in said recess, said blade-holding member being also provided with a projection adapted to engage with a side of the recess within the undercut portion thereof, said blade-holding member being recessed adjacent to said notches, blades, provided with projections, seated in said notches with their projections engaged with the blade-holding member in the recessed portions thereof, and filling blocks, each of which is composed of a plurality of plates, engaged both with the blades and projections thereon and with a side of the recess in said blade-carrying member within the undercut portion thereof to secure said blades and blade-holding member within the recess of said blade-carrying member.

[Claims 6 to 8 not printed in the Gazette.]

875,647. BLADE-FASTENING. NORMAN C. BASSETT, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Oct. 29, 1906, Serial No. 341,077. Renewed May 27, 1907. Serial No. 375,956.

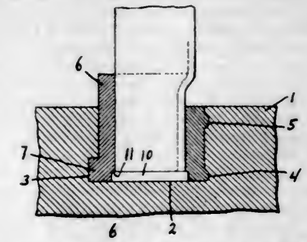


1. The combination with a blade-carrying member, provided with a recess a side of which is undercut, blades provided with projections adapted to be received within the undercut portion of said side, a blade-holding member provided with notches seated in the recess of said blade-carrying member, and means to secure said blades and blade-holding member within the recess of said blade-carrying member.

2. The combination with a blade-carrying member, provided with a recess a side of which is undercut, blades provided with projections adapted to be received within the undercut portion of said side, a blade-holding member provided with notches seated in the recess of said blade-carrying member, said blade-holding member being recessed adjacent said notches to receive projections on the blades, and means to secure said blades and blade-holding member in the recess of said blade-carrying member.

3. The combination with a blade-carrying member, provided with a recess a side of which is undercut, blades provided with projections adapted to be received within the undercut portion of said side, a blade-holding member provided with notches seated in the recess of said blade-carrying member, said blade-holding member being recessed adjacent said notches to receive projections on the blades and being provided with a projection adapted to engage with said side within the undercut portion thereof, and means to secure said blades and blade-holding member in the recess of said blade-carrying member.

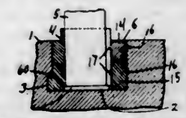
875,648. BLADE-FASTENING. NORMAN C. BASSETT, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Oct. 29, 1906, Serial No. 341,078. Renewed May 27, 1907. Serial No. 375,957.



1. The combination with a blade-carrying member, provided with a recess the sides of which are undercut, of a blade-holding member, provided with notches and a projection seated in said recess with its projection engaged with a side of the recess within the undercut portion thereof, blades, provided with projections, seated in the notches of said blade-holding member and calking pieces to secure said blades and blade-holding member within the recess of said blade carrying member, each calking piece being engaged with the projections on two adjacent blades and also with the adjacent side of the recess of the blade-carrying member within the undercut portion thereof.

2. The combination with a blade-carrying member, provided with a recess the sides of which are undercut, of a blade-holding member, provided with notches and a projection seated in said recess with its projection engaged with a side of said recess within the undercut portion thereof, said blade-holding member being recessed adjacent to said notches, blades, provided with projections, seated in said notches with their projections engaged with the blade-holding member within the recessed portions thereof and calking pieces to secure said blades and blade-holding member within the recess of said blade-carrying member, each calking piece being engaged with the projections on two adjacent blades and also with the adjacent side of the recess of the blade-carrying member within the undercut portion thereof.

875,649. BLADE-FASTENING. NORMAN C. BASSETT, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Oct. 29, 1906, Serial No. 341,074. Renewed June 14, 1907. Serial No. 378,925.



1. The combination with a blade-carrying member, provided with a recess, of a blade-holding member provided with notches, seated in said recess, blades and filling blocks seated in said notches and means for securing said blade-holding member, blades and filling blocks in the recess of said blade-carrying member.

2. The combination with a blade-carrying member, provided with a recess, of a blade-holding member, provided with notches, seated in said recess, said blade-holding member being recessed adjacent said notches, blades provided with projections, said blades being seated in said notches with the projections thereon engaged with said

blade-holding member in the recessed portions thereof, filling blocks, and means for securing said blade-holding member, blades and filling blocks in the recess of said blade-carrying member.

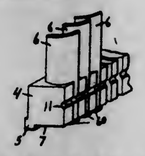
3. The combination with a blade-carrying member, provided with a recess a side of which is undercut, of a blade-holding member provided with a projection adapted to engage said side within the undercut portion thereof, said blade-holding member being provided with notches and seated within said recess and also being recessed adjacent said notches, blades provided with projections, said blades being seated in said notches with the projections thereon engaged with said blade-holding member in the recessed portion thereof, filling blocks, and means for securing said blade-holding member, blades and filling blocks in the recess of said blade-carrying member.

4. The combination with a blade-carrying member, provided with a recess a side of which is undercut, of a blade-holding member provided with a projection adapted to engage said side within the undercut portion thereof, said blade-holding member being provided with notches and seated within said recess and also being recessed adjacent said notches, blades provided with projections, said blades being seated in said notches with the projections thereon engaged with said blade-holding member in the recessed portions thereof, filling blocks, and means for securing said blade-holding member, blades and filling blocks in the recess of said blade-carrying member, the blades being recessed to receive the filling blocks whereby the several parts are locked together.

5. The combination with a blade-carrying member, provided with a recess, of a blade-holding member and blades seated in said recess and a multiple-deck calking member also seated in said recess to secure the blade holding member and blades therein.

[Claim 6 not printed in the Gazette.]

875,650. BLADE-FASTENING. NORMAN C. BASSETT, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Oct. 29, 1906, Serial No. 341,073. Renewed Aug. 23, 1907. Serial No. 389,873.

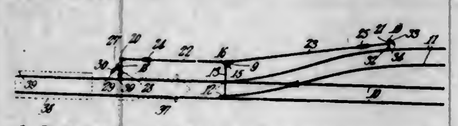


1. The combination with a blade-carrying member, provided with an elongated groove or recess, of an elongated blade-holding member, provided with a continuous recess extending substantially the length thereof, secured within said elongated recess and blades with projections thereon, said projections being engaged in the recess of said blade-holding member.

2. The combination with a blade-carrying member, provided with an elongated groove or recess, of an elongated blade-holding member, provided with a continuous recess extending substantially the length thereof, seated within said elongated recess, blades with projections thereon, said projections being engaged in the recess of said blade-holding member and means for securing the blades and blade-holding member in the recess of said blade-carrying member.

3. The combination with a blade-carrying member, provided with an elongated recess, a side of which is undercut, of an elongated blade-holding member, provided with a continuous recess extending substantially the length thereof, seated in said recess, blades with projections thereon, said projections being engaged in the recess of said blade-holding member, said blade-holding member being provided with a projection engaged with the undercut portion of said side and a calking member to secure the blades and blade-holding member in the recess of said blade-carrying member.

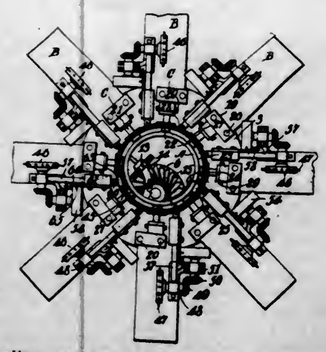
875,651. SWITCH-OPERATING APPARATUS. GEORGE J. BEARD, Waterloo, Ind. Filed May 15, 1907. Serial No. 373,793.



1. In a switch operating device, a main track and siding having movable switch rails between them, a switch stand having a crank arm operatively connected to said switch rails, a standard spaced from said switch stand and disposed contiguous to the main line track and having a crank arm provided with diverging fingers extending therefrom for alternate projection into the path of trip members movably disposed upon the locomotive and one or more of the cars of the trains passing on the main track, a standard spaced from said switch stand and disposed contiguous to the siding and having a crank arm provided with diverging fingers extending therefrom for alternate projection into the path of said trip bars as the train passes to or from the siding, a connecting rod between said switch stand crank arm and the crank arm of said main line standard, and a connecting rod between said switch stand crank arm and the crank arm of said siding standard.

2. In a switch operating device, a main track and siding having movable switch rails between them, a switch stand having a crank arm operatively connected to said switch rails, a standard spaced from said switch stand and disposed contiguous to the main line track and having a crank arm provided with diverging fingers extending therefrom for alternate projection into the path of trip members movably disposed upon the locomotive and one or more of the cars of the trains passing on the main track, the outer one of said fingers being jointed to swing in one direction, a standard spaced from said switch stand and disposed contiguous to the siding and having a crank arm provided with diverging arms extending therefrom for alternate projection into the path of said trip bars as the train passes to or from the siding, one of the fingers of the siding crank arm being jointed to swing in one direction, a connecting rod between said switch stand crank arm and the crank arm of said main line standard, and a connecting rod between said switch stand crank arm and the crank arm of said siding standard.

875,652. BALING-MACHINE. WILLIAM S. BRYAN, Decatur, Tex., assignor of one-sixth to W. S. Barlow, Gainesville, Tex. Filed Sept. 15, 1906. Serial No. 334,711.



1. A baling machine having a centrally disposed feed hopper, and a plurality of baling chambers radiating therefrom, said feed hopper and baling chambers having a relative rotary movement with respect to each other.

2. A baling machine having a centrally disposed feed hopper, a plurality of radial baling chambers, and means for producing relative rotary movement between said hopper and baling chambers.

3. A baling machine having a feed hopper, a radial baling chamber, means for producing relative rotary movement between said hopper and baling chamber, twisting and cutting mechanism connected with said baling chamber, a supporting track carried by said feed hopper and having a connection with said twisting and cutting mechanism, upward and downward switches connected with said supporting track, upward and downward tracks connected with said feed hopper, and means for automatically opening said downward switch for throwing said twisting and cutting mechanism into contact with said downward track when a bale inside the baling chamber has reached the proper size.

4. A baling machine having a feed hopper, a radial baling chamber, means for producing relative rotary movement between said feed hopper and said baling chamber, twisting and cutting mechanism connected with said baling chamber, and cam tracks carried by said feed hopper for throwing said twisting and cutting mechanism into and out of operation.

5. A baling machine having a feed hopper, a plurality of baling chambers, means for producing relative rotary movement between said baling chambers and feed hopper, twisting and cutting mechanism connected with each of said baling chambers, and cam tracks connected with said feed hopper for moving said twisting and cutting mechanism into and out of said baling chambers.

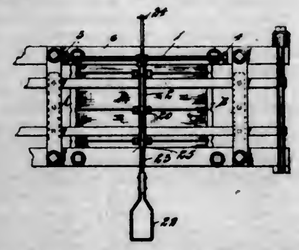
[Claims 6 to 16 not printed in the Gazette.]

875,653. LIQUID LEATHER-DRESSING. GEORGE W. CHILDS, New York, N. Y. Original application filed May 16, 1906, Serial No. 317,141. Divided and this application filed Aug. 30, 1907. Serial No. 390,753.

1. A leather dressing adapted for impregnating leather, derived from sapped or exhausted organic tanning liquor and having a specific gravity of from 1.05 to 1.3, substantially as described.

2. A leather dressing adapted for impregnating leather, containing inert solid matter derived from sapped or exhausted organic tanning liquors and having a specific gravity of from 1.05 to 1.3, substantially as described.

875,654. BALE-TYING ATTACHMENT. JOHN CHRISTENSEN, Ann Arbor, Mich., assignor to Ypsilanti Hay Press Co., Ypsilanti, Mich. Filed Sept. 10, 1906. Serial No. 333,973.



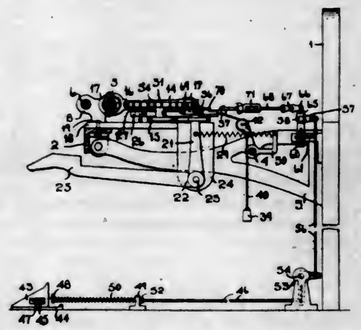
1. A bale fastening attachment for hay presses, having in combination a supporting bracket, a hanger adapted to slide therealong, notched wire-receiving brackets at intervals along said hanger, rotatable wheels journaled opposite each of said brackets, each having a notched portion extending from its periphery to the center adapted to register with the complementary part of its bracket, and means for simultaneously actuating said wheels, substantially as described.

2. A bale band fastening attachment for hay presses, having in combination a track, a hanger adapted to travel on said track, wire holding brackets secured to said hanger, a wire twisting wheel journaled between said brackets, the said wire twisting wheel being provided with a notch extending through a side thereof into said wheel to the center thereof, and means for rotating said wheel, substantially as described.

3. A wire twisting attachment for hay presses, having in combination with a supporting trackway fixed members adapted to travel therealong and to hold the lapping ends of a bale wire, a rotating member journaled between said fixed members adapted to engage the parallel lapping ends of a bale wire intermediate the fixed holding members, and means for actuating the rotating member, substantially as described.

4. In combination with a supporting track, a frame adapted to travel therealong, said frame having notched wire-engaging portions at intervals along its length, gear wheels each having an indentation of greater depth than the toothed peripheral portion journaled in said frame, in position for the registry of the indented portion with one of the notched portions of the frame, and a rack slidably supported by said frame with its teeth in engagement with said gear wheels, whereby the same may be actuated, substantially as described.

875,655. ATTACHMENT FOR SPINNING-MULES. ROBERT J. HARRINGTON, Dalton, Mass. Filed July 2, 1906. Serial No. 324,474.



1. In a spinning mule, the combination of a roving delivery controlling gear having a stop pin, means operated by the mule carriage for drawing said gear into mesh with its operating worm, a lock bar for holding said gear in mesh with its worm, a slide carried by said lock bar and having one side tapered towards its free end and adapted to engage said stop pin, a rock shaft connected with said slide, a push rod connected with said rock shaft, a coiled spring on said rod for actuating it in one direction, and a building shoe having a detent for engagement with said push rod for actuating it in the other direction.

2. In a spinning mule, the combination with a building shoe roving delivery mechanism and a roving gear having a stop pin, of a stop slide having a tapered edge to coact with said stop pin, a rock shaft for operating said stop slide, an arm upon said shaft, a bell crank, a link connecting said arm and said bell crank, a guide, a push rod slidable in said guide and connected to the other arm of said bell crank, a head upon said rod, an adjustable stop upon said rod, a coil spring upon said rod between said head and said guide, and a trip adjustably mounted upon said building shoe.

3. In a spinning mule the combination with a building shoe, roving delivery mechanism and a roving delivery controlling gear having a stop pin, of a stop slide having a tapered edge to coact with said stop pin, a rock shaft, an arm upon said rock shaft, a stud on said arm, a universal joint on said stud, an adjustable connecting rod between said joint and said stop slide, a bell crank, a link connecting said arm and said bell crank, a guide, a push rod slidable in said guide and connected to the other arm of said bell crank, a head upon said rod, an adjustable stop upon

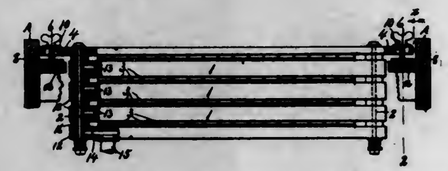
said rod, a coiled spring mounted on said rod between said head and said guide, and a trip adjustably mounted upon said building shoe.

4. In a spinning mule, the combination with a building shoe roving delivery mechanism and a roving delivery controlling gear having a stop pin, of a stop slide having a tapered edge to coact with said stop pin, a rock shaft, a bell crank, a connection between the said bell crank and said rock shaft, a push rod connected to said bell crank, a coiled spring on said push rod for actuating it in one direction a trip upon said building shoe for actuating said push rod for actuating it in the other direction, an arm upon said rock shaft, and an adjustable connection between said arm and said stop slide, substantially as described.

5. In a spinning mule, the combination with a lever, a stud-provided roving-wheel mounted for oscillatory movement on said lever, a carriage-operated lever for actuating the wheel carrying lever, a swinging locking-plate for engaging the carriage-operated lever, and a building-shoe, of a stop member bodily carried by, and slidable relatively to, said locking-plate and operative by changed positions thereof on the locking plate to vary the point of its interception of the roving-wheel-stud, and means connected with said stop member and subject to affect by the building shoe for variably positioning the stop slide on the locking plate.

[Claims 6 to 9 not printed in the Gazette.]

875,656. SELF-PLAYING MUSICAL INSTRUMENT. LEWIS B. DOMAN, Elbridge, N. Y. Filed Mar. 13, 1906. Serial No. 305,763.



1. In a self-playing musical instrument, a pneumatic action comprising a series of pneumatics and a support therefor, and means for adjusting said pneumatics longitudinally and tilting them transversely.

2. In a self-playing musical instrument, the combination with a case, of a pneumatic action mounted in the case, means for tilting the action transversely, and additional means for holding it in its adjusted position.

3. In a self-playing musical instrument, a pneumatic action comprising a valve shelf and a series of pneumatics rigidly secured thereto, longitudinally projecting arms rigidly secured to the shelf, supporting ledges for said arms, adjusting screws engaging said ledges and arms, and means for clamping the arms to the ledges.

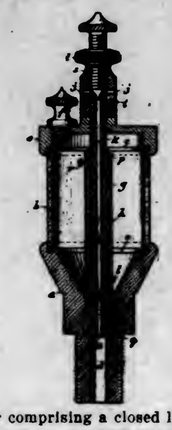
4. In a self-playing musical instrument, in combination with opposite end ledges of a piano case, arms overhanging said ledges, and means for adjusting said arms vertically, a series of separable valve shelves arranged one above the other below said arms and provided with registering wind ports, and clamping bolts passed through the arms and through the opposite ends of the shelves for securing said shelves together and to said arms.

5. In a self-playing musical instrument, a pneumatic action comprising a wind chest or valve-shelf, and a series of pneumatics rigidly secured thereto, supporting ledges at the ends of the action, a pair of adjusting screws on each end of the action resting upon said ledges, and means for clamping the action to said ledges.

[Claims 6 to 8 not printed in the Gazette.]

875,657. LUBRICATOR. WALTER N. DURANT, Los Angeles, Cal. Filed Sept. 20, 1905. Serial No. 279,227.

1. A lubricator comprising a closed lubricant receptacle provided with an air inlet passage leading through the top and having an inlet opening at its upper end outside and an outlet opening at its lower end inside of the receptacle, and an outlet passage leading through the bottom and having an inlet opening at its upper end inside and an outlet opening at its lower end outside of said receptacle, substantially as described.



2. A lubricator comprising a closed lubricant receptacle, a transparent part through which its contents are visible, said receptacle being provided with an air inlet passage leading through the top and having an inlet opening at its upper end outside and an outlet opening at its lower end inside of the receptacle, a regulating valve controlling the supply of air admitted to said receptacle through said passage, and an outlet passage leading through the bottom and having an inlet opening at its upper end inside and an outlet opening at its lower end outside of said receptacle, substantially as described.

3. A lubricator comprising a closed lubricant receptacle having an outlet passage in the base, a tube extending through the top of the receptacle and having a longitudinal bore extending from an air inlet opening at its upper end to a lateral outlet opening into the lower part of said receptacle, a longitudinal groove in its outer face and a longitudinal bore communicating at its upper end with the lower end of said groove and at its lower end with said outlet passage, and a sleeve surrounding said tube and having lateral openings registering inside of said receptacle with the upper end of said groove and with the lateral outlet opening in said tube, substantially as described.

4. A lubricator comprising a closed lubricant receptacle, a transparent part through which its contents are visible, a tube extending through the top of the receptacle and having a longitudinal bore extending from an air inlet opening at its upper end to a lateral outlet opening into the lower part of said receptacle, a longitudinal groove in its outer face and a longitudinal bore communicating at its upper end with the lower end of said groove and at its lower end with said outlet passage, a regulating valve controlling the admission of air into said tube, and a sleeve surrounding said tube and having lateral openings registering inside of said receptacle with the upper end of said groove and with the lateral outlet opening in said tube, substantially as described.

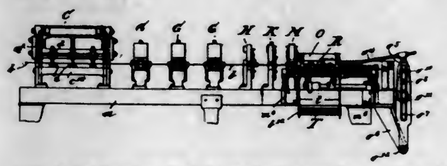
5. A lubricator comprising a lubricant receptacle composed of a base having an outlet passage, a transparent body and a cover, a tube passing through said cover into the outlet passage in the base and having a longitudinal bore leading from an air inlet opening at its upper end to a lateral outlet opening into the lower part of said receptacle, a longitudinal groove in its outer face and a longitudinal bore communicating with the lower end of said groove and leading therefrom into said outlet passage, a sleeve surrounding said tube and secured thereto and to the base and having lateral openings registering with the upper end of said groove and with the lateral outlet opening in said tube, a nut threaded on the upper end of said tube and having a lateral opening communicating therewith, and a regulating valve threaded in said nut and controlling the admission of air into said tube, substantially as described.

875,658. NAIL-DRIVING TOOL. SAMUEL F. DUTTON, Detroit, Mich., assignor of one-half to Fenton B. Nebel and Edward J. Nebel, Detroit, Mich. Filed Dec. 15, 1906. Serial No. 348,067.



In a nailing tool, in combination with a tubular guide having its lower end contracted to form a delivery passage, a driving plunger adapted to be reciprocated therein, its lower end being complementary in size and contour to the delivery end of the guide piece, a fixed collar engaging about the guide member immediately above a downwardly inclined aperture in the walls thereof, and a magazine member rotatably mounted upon the tubular guide and adapted to coöperate with said collar and the adjacent aperture in the delivery of nails into the interior chamber thereof, one at a time, substantially as described.

875,659. MACHINE FOR MANUFACTURING HEDDLES. WILLIAM FEHR, Philadelphia, Pa., assignor to Steel Heddle Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 22, 1905. Serial No. 292,946.



1. In a machine of the character described, an oscillating gripping and delivering mechanism having holders, two fingers, respectively, slidably and pivotally connected with each of said holders, means for supporting a metal strip in a position opposite said fingers, when occupying a certain position, a shaft having means for rotating the same and carrying the holders, pivotally arranged arms carrying said shaft, means for oscillating said arms, means engaging the rotary means of said shaft to rock the same during the oscillatory movement thereof, and said shaft when rocked adapted to oscillate said holders and by the same said fingers to alternately bring the fingers opposite said carrying means to permit said fingers to remove the metal strip therefrom.

2. In a machine of the character described, an oscillatory gripping and delivering mechanism, having a holder, a finger pivotally connected with the holder, a second finger slidably arranged in the holder and having bolts respectively extending horizontally and vertically therefrom, a lever pivotally connected with the holder and engaging said pivotal finger and having a cam portion engaging the horizontally arranged bolt of said slidable finger, means adapted when engaged by the vertical bolt of the slidable finger in a certain end position of said holder to shift the same, said slidable finger when shifted adapted to actuate said lever and by the same to lift the pivotal finger in said holder, and a second lever carried by said holder and adapted when said pivotal finger is lifted to hold the same in the lifted position.

3. In a machine of the character described, an oscillatory gripping and delivering mechanism having holders, each of said holders having fingers respectively, pivoted and slidably connected with each of said holders and adapted to hold a slotted metal strip between the same, a bell crank-lever resting with one end upon said pivotal finger, carried by each of said holders, bolts connected with the slidable finger of each holder and extending horizontally and vertically therefrom, a lever pivotally connected with each of the holders and engaging said pivotal finger and having a cam portion engaging the horizontally arranged bolt of the slidable finger, stops supporting bars arranged at one side of said holders, said holders adapted to thread by said fingers the metal strip through the slots upon the bars adapted to shift the slidable fingers by bringing the vertically arranged bolts into engagement with said bar-stops, said slidable fingers when shifted adapted to permit the metal strips to descend on said bars and to actuate said cam levers, said cam levers adapted to raise said pivotal fingers, and said bell crank-lever adapted when actuated by said pivotal fingers to hold the same in a raised or open position.

4. In a machine of the character described, an oscillatory gripping and delivering mechanism having holders, each having a finger pivotally connected with a holder and provided with a projection, and a finger slidably arranged in the holder having bolts extending horizontally and vertically therefrom, said fingers adapted to hold a slotted metal strip between the same, a lever having a hook shaped end connected with each of said holders and resting upon the pivotal finger, a second lever pivotally connected with each of said holders engaging said pivotal finger and having a cam portion engaging the horizontally arranged bolt of said slidable finger, stops arranged at each side of said holder, whereof one is provided with bars, means for supporting said holders and for bringing the same alternately into a position to thread the strips upon said bars and to bring successively the vertically arranged bolt of said slidable fingers and the hook shaped lever into engagement with the respective stops, the vertically arranged bolt of the slidable fingers, when actuated by its stop in one of the end positions of said holders adapted to release the metal strip to permit the same to descend on said bars and to actuate said cam levers, said cam levers adapted to raise said pivotal fingers and to bring its hook portion into engagement with the hook shaped end of said lever to hold the same in an open position and permit of the sliding and entrance of a metal strip between said fingers in the second of the end positions of said holders, and said hook shaped lever when contacting with its respective stop in the second of the end positions of said holders adapted to release the pivotal finger to permit of engagement of a metal strip by both fingers.

5. In a machine of the character described, an oscillating gripping and delivering mechanism having gripping fingers, a holder to which said fingers are connected, a shaft carrying the holder and by the same the fingers, arms carrying said shaft, a second shaft carrying said arms, means adapted to impart to said second shaft a rocking movement, a gear-wheel mounted on the first shaft, a sector meshing with the gear-wheel, said gear-wheel and sector adapted when the arms are actuated to impart to the shaft, the holders and the fingers a rocking movement.

[Claims 6 to 11 not printed in the Gazette.]

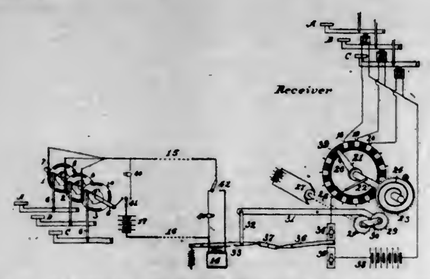
875,660. PRINTING-TELEGRAPH. FREDERICK J. HAIG, Hyattsville, Md. Filed Aug. 30, 1906. Serial No. 332,578.

1. In a telegraph receiver, the combination of a contact-maker for closing circuit to character-actuating magnets, means for actuating said contact-maker, a motor, a clutch for coupling the motor to said actuating means, a switch for making and breaking the main circuit of said magnets and means for simultaneously operating the said clutch and said switch.

2. In a telegraph receiver, the combination of a spring-returned contact-maker, a series of contacts connected to character-actuating magnets, means for giving to the contact-maker its advance movement, a switch in the main circuit of said magnets, and means for closing said switch only during the period that said contact-maker is on the last contact reached in its advance movement.

3. In a telegraph receiver, the combination of a circuit

selector, character actuating magnets connected thereto, a main circuit branching to said magnets, a switch in said main circuit, and means for permitting the selector to return to zero and also by the same actuation closing said switch and closing it only during the period that said selector closes the last circuit reached by it in its advance movement.

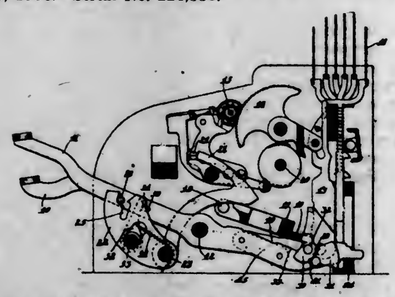


4. In a telegraph receiver, the combination of a contact-maker returnable to zero after each actuation, a series of contacts over which it passes connected respectively to character-actuating magnets, a main circuit branching to said magnets, means for actuating the contact-maker, a motor, means for completing said main circuit only during the period that said contact is returning over the farthest contact reached by it, and a magnet controlled from a transmitter for simultaneously coupling the motor to the contact-actuating means and operating the means for completing said main circuit.

5. In a telegraph receiver, the combination of a series of character-actuating magnets, a selector for said magnets, a circuit controller in the main line of the printing circuit containing said magnets, a power clutch, a motor driving said clutch, and means for simultaneously engaging the clutch with the selector shaft and for operating the circuit controller.

[Claims 6 and 7 not printed in the Gazette.]

875,661. CASH-REGISTER. EDWARD J. HALL, Kansas City, Mo., assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Sept. 13, 1904. Serial No. 224,334.



1. In a cash register, the combination with a key, and a member movable with said key; of a movable device pivoted upon said key for locking the key to said member after a partial movement of the key.

2. In a cash register, the combination with a series of keys certain of which have provisions permitting an initial movement of the same, and a member common to said keys; of movable devices pivoted upon said initially movable keys for locking the same to said common member.

3. In a cash register, the combination with a series of keys certain of which have provisions permitting an initial movement of the same, and a member common to said keys; of movable devices carried by said initially movable keys for locking the same to said common member; and means for latching said initially movable keys in such initial position.

4. In a cash register, the combination with a series of keys, certain of which have provisions permitting an initial movement of the same, and a member common to said keys; of movable devices carried by said initially movable keys for locking the same to said common member; and means coöperating with said movable devices for unlocking said initially movable keys from said common member at the end of the operation of said member.

5. In a cash register, the combination with a key formed with provisions permitting an initial movement, and a coupling member to which said key becomes coupled; of means coöperating with said key and said coupling member to positively return said key with said coupling member to normal position beyond its initially movable position.

[Claims 6 to 18 not printed in the Gazette.]

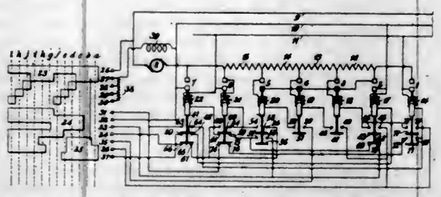
875,662. COMPOSITION FOR BRICK, &c., AND PROCESS OF MAKING SAME. LUKE HOUZE, Monterey, Cal., assignor of fourteen-sixtieths to R. H. Willey, fourteen-sixtieths to Arthur Branquart, and fourteen-sixtieths to Charles F. Niklaus, Monterey, Cal. Filed Nov. 6, 1906. Serial No. 342,298.

1. A composition for brick, etc. consisting of divided rock of substantially the composition above stated and having a specific gravity of about 1.85 with a binder of fire-clay.

2. A composition for brick, etc. consisting of rock of substantially the composition stated, and having a specific gravity of about 1.85 in a divided condition, and a binder of fire-clay in the proportion of 75 to 80 per cent. of rock and 25 to 20 per cent. of the fire-clay.

3. The process of forming a composition brick which consists in pulverizing and calcining rock of substantially the composition stated, and having a specific gravity of about 1.85 mixing the same with fire-clay in the proportion of substantially 75 to 80 per cent. of the rock and 25 to 20 per cent. of the clay, molding and burning.

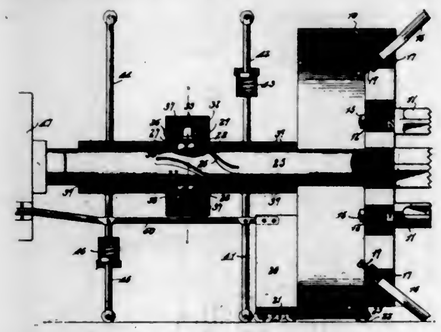
875,663. SYSTEM OF CONTROL. HENRY D. JAMES, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed May 6, 1907. Serial No. 372,139.



1. The combination with a multiple-voltage circuit, a motor and a resistance in the armature circuit thereof, of means for connecting the motor armature to different pairs of conductors of the multiple voltage circuit, means for removing the resistance from the armature circuit comprising a magnet winding one terminal of which is connected to the said resistance, and means for connecting the other terminal of said winding to different conductors of said multiple voltage circuit so as to apply approximately the same voltage to the circuit of the magnet winding for all voltages that are applied to the armature circuit of the motor.

2. The combination with a multiple-voltage circuit, a motor and a resistance in the circuit thereof, of means for connecting the motor armature to different pairs of conductors of the multiple-voltage circuit, a plurality of switches for removing the resistance from the armature circuit, and controlling magnet windings for the switches each having a terminal connected to the resistance in the armature circuit, and means for connecting the remaining terminals of the said magnet windings to different conductors of the multiple-voltage circuit so that the magnet windings may become sufficiently energized to effect operation of the corresponding switches when the drops of potential over the portions of the said resistance attain predetermined values regardless of the voltage of the circuit to which the motor armature is connected.

875,664. TUNNELING-MACHINE. JOHN P. KARNS, Boulder, Colo., assignor to The J. P. Karns Tunneling Machine Co., Boulder, Colo., a Corporation. Filed Apr. 30, 1906. Serial No. 314,541.



1. In a machine of the class described, a reciprocatory member having helical grooves, a ratchet ring through which said member extends, provided with approximately straight grooves, anti-friction balls extending into both grooves, pawls coacting with the ratchet ring, and means for supporting the pawls.

2. In apparatus of the class described, a reciprocatory member having helical grooves, a ratchet ring having grooves in its inner face, anti-friction balls fitting in both grooves and connecting the reciprocating member to the ring, a cage having openings for the passage of the balls, an inclosing casing for the ratchet ring, and pawls carried by the casing and engaging the teeth of the ratchet ring.

3. In apparatus of the class described, a reciprocatory member having helical grooves, a ratchet ring, the inner wall of which is provided with grooves, a plurality of anti-friction balls arranged in both grooves and connecting the reciprocatory member to the ring, a casing inclosing the ratchet ring, and pawls carried by the casing and engaging the ratchet teeth.

4. In a tunneling machine, a drill carrying head, a shaft carrying said head and provided with helical grooves at a point adjacent the head, a shaft support including a casing inclosing a portion of the shaft near the head, a ratchet ring arranged within the casing and provided with grooves in its inner face, anti-friction balls fitting within the grooves and connecting the shaft to the ring, and pawls carried by the casing and engaging the ratchet teeth.

5. In a tunneling machine, a drill head, a shaft carrying the same and provided with helical grooves, a casing encircling the shaft at a point adjacent to the drill carrying head, means for supporting said casing, a ratchet ring arranged within the casing and provided with grooves, anti-friction balls fitted within the grooves and connecting the shaft to the ratchet ring, and pawls carried by the casing and engaging the ratchet teeth.

[Claims 6 to 9 not printed in the Gazette.]

875,665. EMULSION OF OIL AND THE LIKE. OSCAR A. H. H. KÖSTERS, Hemelingen, near Bremen, Germany. Original application filed May 2, 1906, Serial No. 314,889. Divided and this application filed Aug. 30, 1907. Serial No. 390,810.

1. The process of producing stable emulsions of oils, fats and the like, which consists in heating an acidyl derivative of an aromatic base and a salt of a higher fatty acid with water and the oil to be emulsified.

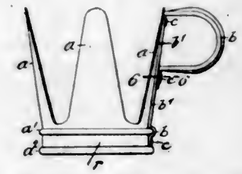
2. The process of producing stable emulsions of oils, fats and the like, which consists in heating an acidyl derivative of an aromatic base and an alkali salt of a fatty acid with water and the oil to be emulsified.

3. The process of producing stable emulsions of oils, fats and the like, which consists in heating an acidyl derivative of an aromatic base and a sodium salt of a fatty acid with water and the oil to be emulsified, and adding glycerin thereto.

4. A water-emulsion of oil, fat or the like containing an acidyl derivative of an aromatic base and an alkali salt of a fatty acid.

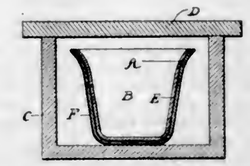
5. A water-emulsion of oil, fat or the like containing the anilid of stearic acid and the sodium salt of a fatty acid.

875,666. HOLDER FOR SODA-WATER GLASSES. WILLIAM LIVINGSTONE, New York, N. Y., assignor to himself and Brass Specialties Company, New York, N. Y. Filed Feb. 5, 1907. Serial No. 355,904.



A glass holder consisting of a body-portion formed of a strip of material bent about until its ends meet, each of the said meeting edges being provided with prongs or tabs, and a handle consisting of a shank-portion lying over said meeting edges and being bent over to form a hand-loop, said prongs or tabs being passed through said shank and the lower end of said hand-loop and bent over in opposite directions to unite the said parts.

875,667. METHOD OF PRODUCING ENAMEL-LINED ARTICLES OF HOLLOW WARE. EDWARD B. MANNING and CHARLOTTE R. MANNING, Meriden, Conn.; said Edward B. Manning assignor to said Charlotte R. Manning. Filed Mar. 8, 1907. Serial No. 361,386.



The herein described method of producing enamel lined articles of sheet-metal hollow-ware consisting in first polishing the exterior surfaces of the article, then applying raw enamel to those surfaces of the article which are to be enameled, then placing the article in a relatively small portable receptacle, then closing said receptacle and introducing it into a previously heated kiln in which it is allowed to remain for the brief period required for fluxing the enamel, then removing the said receptacle and its contained fired article from the kiln and allowing the article to gradually cool in the receptacle without uncovering the same, then removing the article from the receptacle, and finally finishing the polished unenameled exterior surfaces of the article, whereby by protecting the polished exterior surfaces of the article from the action of the air, while the article is being heated, and while it is cooling, the oxidation of its polished exterior surfaces is avoided.

875,668. PROCESS OF PRODUCING AN ALLOY FOR USE IN STEEL-CASTING. MAURICE MESLANS, Paris, France. Original application filed July 7, 1902, Serial No. 114,651. Divided and this application filed May 3, 1904. Serial No. 206,161.

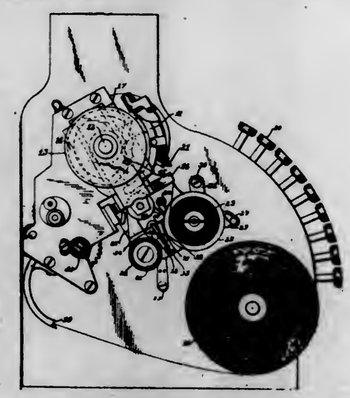
1. The herein described process of preparing an alloy of aluminium and a metal which has the property of combining with hydrogen and nitrogen to form products which are stable at the temperature of fused steel, said process consisting in electrolytically treating a salt of said metal in the presence of a cathode of fused aluminium and subsequently removing the alloy formed.

2. The herein described process of preparing an alloy of aluminium and calcium, consisting in electrolytically treating fused chlorid of calcium in contact with a cathode of fused aluminium, and continuing the operation until the alloy formed rises to and floats upon the surface of the bath, from which it is then removed.

3. The herein described process of preparing an alloy of aluminium and calcium consisting in electrolytically treating a calcium salt in the presence of a cathode of fused aluminium and subsequently removing alloy formed

4. As a new product, an alloy of aluminium and calcium containing more than 8.6 per cent. calcium.

875,669. CASH-REGISTER. WILLIAM MURPHY, Buffalo, N. Y., assignor, by mesne assignments, to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Aug. 8, 1904. Serial No. 219,928.



1. In a printing attachment, the combination with type carriers, a paper support, a platen, and means for bringing the platen and type together to produce an impression upon the paper; of means for absolutely preventing the advancement of said paper while the platen is within the entire range of printing effectiveness.

2. In a printing attachment, the combination with type carriers, a paper support, a platen, and means for bringing the platen and type together to produce an impression upon the paper; of means for absolutely preventing the advancement of said paper while the platen is within the entire range of printing effectiveness; and means for automatically feeding the paper when the platen is beyond the range of printing effectiveness.

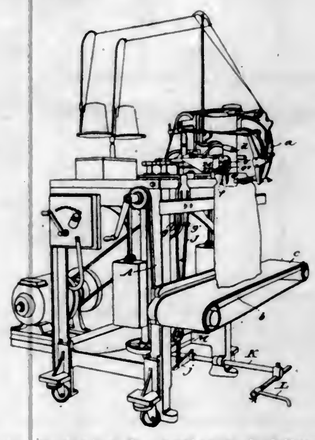
3. In a printing attachment, the combination with type carriers, a paper support, a platen, and means for bringing the platen and type together to produce an impression upon the paper; of means automatically rendered operative at each operation of the machine for preventing the advancement of the paper after the printing impression has once been taken.

4. In a printing attachment, the combination with type carriers, a paper support, a platen, and means for bringing the platen and type together to produce an impression upon the paper; of means for automatically feeding the paper; and means for locking said feed from operation after the printing impression has once been taken and until the normal feed movement takes place.

5. In a printing attachment, the combination with type carriers, a paper support, a platen, and means for taking a plurality of successive impressions from said type carriers at each operation of the machine; of means for preventing the advancement of the paper between said successive impressions.

[Claims 6 to 16 not printed in the Gazette.]

875,670. CUTTING APPARATUS FOR FILLED-BAG MACHINES. CHESTER MCNEIL and DUDLEY S. SEYMOUR, Chicago, Ill., assignors to Union Special Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 21, 1905. Serial No. 288,467.



1. In an apparatus for sewing and delivering filled bags, a certain apparatus controlled by the means for starting and stopping the sewing mechanism, means controlled by the movement of the bag for preventing the action of the cutting device while a bag is in engagement with the sewing head; substantially as described.

2. In an apparatus for sewing and delivering filled bags, having manual means for controlling the starting and stopping of the sewing mechanism, a cutting device controlled by said manual means, and means controlled by the movement of said bag for keeping the connections between the manual means and the cutter broken, while a bag is in engagement with the sewing head; substantially as described.

3. In an apparatus for sewing and delivering filled bags, having manual means for controlling the starting and stopping of the sewing mechanism, a cutting device controlled by said manual means, and a lever in the path of movement of said bag with connections between it and the cutting device, to keep the latter out of operative engagement with the manual means, while the bag is in engagement with the sewing head; substantially as described.

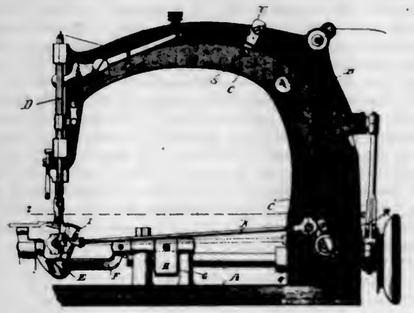
4. In an apparatus for sewing and delivering filled bags, means under control of the operator for stopping and starting the machine, a cutting device normally brought into action when the machine is stopped, a lever in the path of movement of the bag, and operatively connected with the cutting apparatus for preventing the normal operation of the cutting apparatus while a bag is in engagement with the sewing head; substantially as described.

5. In an apparatus for sewing and delivering filled bags, manual means under the control of the operator for permitting stopping and starting of the machine, a cutting device and means for normally operating said device when the machine is stopped, a pivoted lever in the path

of the bag, connections between said lever and the cutter operating means whereby said cutter may be rendered inoperative; substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

875,671. LOOPER-OPERATING MECHANISM FOR SEWING-MACHINES. LANSING ONDERDONK, New York, N. Y., assignor to Union Special Sewing Machine Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 9, 1901. Serial No. 81,760.



1. In a chain stitch sewing machine, stitch-forming mechanism including a needle lever having an extension, a needle and a coöperating thread-carrying looper, and means for imparting forward and backward movements to said looper, to take and leave the needle loop, said means including devices for imparting to said looper a relatively slow forward movement in the direction of its length until it is about to enter the needle loop, as the needle is ascending, a relatively quick movement into the needle loop, a relatively slow further forward movement, and an initial slow backward movement, and a relatively quick backward movement as it is about to leave the needle loop, and the needle in its descent passes into the looper loop, and a relatively slow final backward movement, said looper operating means including a pitman, and variable speed mechanism interposed between one end of the pitman and the needle lever extension; substantially as described.

2. In a chain stitch sewing machine, stitch-forming mechanism including a needle and a coöperating thread-carrying looper, and means for imparting forward and backward movements to said looper, to take and leave the needle loop, said means including devices for imparting to said looper a relatively slow forward movement in the direction of its length until it is about to enter the needle loop, as the needle is ascending, a relatively quick movement into the needle loop, a relatively slow further forward movement, and an initial slow backward movement, and a relatively quick backward movement as it is about to leave the needle loop, and the needle in its descent passes into the looper loop, and a relatively slow final backward movement, said devices including a pitman and variable speed mechanism interposed between one end of the pitman and the needle lever extension, said variable speed mechanism comprising rocking cranks, one of which has a pivotal link connection with the needle lever extension, and the other of which is movable uniformly with the first crank and is operatively connected with the pitman, substantially as described.

3. In a chain stitch sewing machine, stitch-forming mechanism including a needle and a coöperating thread-carrying looper, and means for imparting forward and backward movements to said looper, to take and leave the needle loop, said means including devices for imparting to said looper a relatively slow forward movement in the direction of its length until it is about to enter the needle loop, as the needle is ascending, a relatively quick movement into the needle loop, a relatively slow further forward movement, and an initial slow backward movement, and a relatively quick backward movement as it is about to leave the needle loop, and the needle in its descent passes into the looper loop, and a relatively slow final backward movement, said devices including a pitman, and variable speed mechanism interposed between one end of the pitman and the needle lever extension, said variable speed mechanism including a link pivoted to the needle lever extension, a crank arm pivoted to the link at one end, and at its opposite end to the machine frame, a second crank arm secured to the first crank arm and pivoted at its opposite end to the looper-operating pitman; substantially as described.

4. In a chain stitch sewing machine, stitch-forming mechanism including a needle and a coöperating thread-carrying looper, and means for imparting forward and backward movements to said looper, to take and leave the needle loop, said means including devices for imparting to said looper a relatively slow forward movement in the direction of its length until it is about to enter the needle loop, as the needle is ascending, a relatively quick movement into the needle loop, a relatively slow further forward movement, and an initial slow backward movement, and a relatively quick backward movement as it is about to leave the needle loop, and the needle in its descent passes into the looper loop, and a relatively slow final backward movement, said devices including a swinging lever, a link pivoted thereto, a crank arm pivoted to the link at one end, and at its opposite end to the machine frame, a second crank arm secured to the first crank arm, and pivoted at its opposite end to the looper-operating rod; substantially as described.

5. In a sewing machine, stitch-forming mechanism including a needle, a looper and a looper support, and means for operating said looper support including a compound toggle lever mechanism; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

875,672. METHOD OF MAKING SILICON. HENRY N. POTTER, New Rochelle, N. Y., assignor to Geo. Westinghouse, Pittsburg, Pa. Filed June 10, 1905. Serial No. 264,549.

1. The method of producing silicon, which consists in heating one equivalent of silicon carbid with one equivalent of silicon monoxid.

2. The method of producing silicon, which consists in reducing silicon monoxid by heating it with silicon carbid.

875,673. METHOD OF MAKING SILICON CARBID. HENRY N. POTTER, New Rochelle, N. Y., assignor to Geo. Westinghouse, Pittsburg, Pa. Filed June 10, 1905. Serial No. 264,550.

1. The method of producing silicon carbid by heating together one equivalent of silicon monoxid and two equivalents of carbon.

2. The method of producing silicon carbid, which consists in heating a mixture of silicon monoxid and carbon in approximately the proportions of one equivalent of silicon monoxid to two equivalents of carbon.

875,674. METHOD OF MAKING SILICON DIOXID. HENRY N. POTTER, New Rochelle, N. Y., assignor to Geo. Westinghouse, Pittsburg, Pa. Filed June 10, 1905. Serial No. 264,552.

1. The method of producing comminuted silicon dioxid which consists in oxidizing silicon monoxid substantially as described.

2. The method of producing comminuted silicon dioxid which consists in blowing an oxidizing gas through a furnace during the progress of a reaction which, *per se*, would liberate silicon monoxid.

3. The method of producing silicon dioxid which consists in oxidizing silicon monoxid substantially as described.

875,675. METHOD OF PRODUCING SILICON MONOXID. HENRY N. POTTER, New Rochelle, N. Y., assignor to Geo. Westinghouse, Pittsburg, Pa. Filed June 10, 1905. Serial No. 264,553.

1. The method of producing silicon monoxid which consists in reducing silica by means of silicon.

2. The method of producing silicon monoxid by causing a reaction between silica and silicon.

3. The method of producing silicon monoxid by heating a mixture of granular silicon and granular silica.

4. The method of producing silicon monoxid by heating a mixture of silicon and silicon dioxid under reduced pressure.

5. The method of producing silicon monoxid by promoting the reaction, silicon dioxid plus silicon—2 silicon monoxid, in an indifferent atmosphere, preferably under reduced pressure.

[Claim 6 not printed in the Gazette.]

875,676. METHOD OF PREPARING SILICON-MONOXID POWDER. HENRY N. POTTER, New Rochelle, N. Y., assignor to Geo. Westinghouse, Pittsburg, Pa. Filed June 10, 1905. Serial No. 264,555.

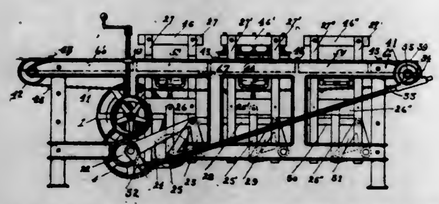
1. The method of producing silicon monoxid powder which consists in distilling vitreous silicon monoxid.

2. The method of producing silicon monoxid powder, which consists in highly heating vitreous silicon monoxid in an electric furnace in the absence of oxidizing gases.

3. The method of producing silicon monoxid powder, which consists in highly heating vitreous silicon monoxid in an electric furnace in the absence of oxidizing gases, under reduced pressure.

4. The method of producing silicon monoxid powder, which consists in heating a combination of vitreous SiO with a reactive mixture yielding silicon monoxid.

875,677. APPARATUS FOR SOLDERING CANS. CHARLES W. SLEEPER, Lancaster, N. H., assignor to The Independent Canning Company, Eastport, Me. Filed Sept. 22, 1906. Serial No. 335,740.



1. In an apparatus for soldering cans, a stationary heated plate; a tray or carrier having an opening adapted to receive a can body and bottom to be soldered together; means for supporting the can in said opening; means for supporting said carrier in a position such that the can bottom is in the plane of the surface of said plate; and means for moving said carrier from said support and across said plate, whereby as the carrier traverses the heated plate the can bottom moves in direct contact therewith.

2. In an apparatus for soldering cans, a stationary heated plate; a tray or carrier having an opening adapted to receive a can bottom with a can body resting thereupon; means for supporting the can bottom within said opening; means for supporting said carrier in a position such that the can bottom is in the plane of the surface of said plate; and means for moving said carrier from said support and across said plate, whereby as the carrier traverses the heated plate the can bottom moves in direct contact therewith.

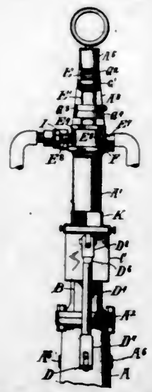
3. In an apparatus for soldering cans, a stationary heated plate having longitudinally extending grooves; a tray or carrier having an opening adapted to receive a can bottom with a can body resting thereupon, and having means extending beneath and forming a support for the bottom; means for supporting said carrier in a position such that the can bottom is in the plane of the surface of said plate; and means for moving said carrier from said support and across said plate, the arrangement of the parts being such that the supports for the can bottom pass through said grooves as the carrier traverses the heated plate and the can bottom moves in direct contact therewith.

4. In an apparatus for soldering cans the combination with a heated plate and a cool plate of means for moving can bottoms and can bodies onto the heated plate and from the heated plate onto the cool plate, so arranged that the can bottom will be supported in direct contact with said plates throughout substantially its entire area, means for pressing the parts to be soldered together and against the heated plate, and a second means for pressing said parts together and against the cool plate.

5. In an apparatus for soldering cans, the combination with a stationary heated plate, of intermittently moving means for receiving and supporting cans to be soldered and for moving said cans onto the heated plate, permitting them to rest upon the plate to cause the solder to be melted, and then moving them off the plate, said moving means being arranged to so support the cans that the can bottoms will be in direct contact with the heated plate.

[Claims 6 to 19 not printed in the Gazette.]

875,678. MACHINE FOR FILLING AND CAPPING VESSELS WITH FLUID UNDER PRESSURE. JAMES M. HICKS, Summit, N. J., assignor to Auto Stopper Company, New York, N. Y. Filed July 12, 1906. Serial No. 325,772.

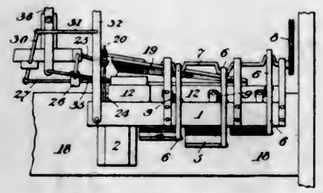


1. A machine for filling vessels and sealing them with sealing caps while under full pressure, consisting of a supporting frame; a vessel support, guided, and vertically reciprocative on said frame; means for reciprocating said support; a resistance post secured on the said frame directly over and above said vessel support; means at the base of said post to grip a sealing cap and hold it; a sleeve surrounding said post constructed to be reciprocated vertically thereon, and in close contact therewith; a chamber in the base of said sleeve and beneath the said post having a supply port through its circumference; a valve containing a port constructed to operate on the outer circumference of said chamber and arranged to control the supply of fluid to said chamber when desired; means at the base of said chamber to permit the passage of a sealing cap to the gripping device at the base of said post and to admit the nose and bead on a vessel neck to pass through it and to cause a second bead on the vessel neck below the upper bead to engage with the bottom of said sleeve; packing material located and secured below the said sleeve to pack the joints between the said lower bead and the bottom of said sleeve and seal the said chamber from below, all constructed, arranged and combined to operate to close the filling chamber and raise the said sliding sleeve by means of the vessel resting on said vessel support while raising the said vessel support; to fill the vessel by the operation of the valve mechanism, and to seal the vessel within the filling chamber by entering a bead upon the vessel neck into the flange of a sealing cap when held beneath the said resistance post and while the filling chamber is charged with full pressure, substantially as specified.

2. A vessel filling and capping machine consisting of a frame; a vertically reciprocated table carried on said frame; a filling and capping chamber carried on said frame above said table; consisting of a vertical resistance post; a sleeve on and around said post, constructed to be moved vertically on said post by a vessel located on said table and bearing against the lower end of said sleeve; means in the base of said sleeve to receive the bead on the nose of the vessel within the said chamber; a flange at the base of said sleeve provided with a packing washer on its under side against which a bead upon the vessel neck engages to close said chamber from below and to raise said sleeve; a valve mechanism located on the exterior of said chamber, to control the supply of liquid under pressure to the interior of said chamber and fill the vessel; means within said chamber around the base of said post to hold a sealing cap against the base of said post; means for reciprocating said table and vessel upward against the said flange and its packing at the base of said sleeve, to fill the vessel, and to force the sleeve upward around said post after filling, and the nose of the vessel into the flange of the sealing cap against said post in the act of sealing, all arranged to operate to first fill a vessel with liquid under pressure, and then apply a sealing cap thereto while the nose of the vessel is within the closed filling chamber, substantially as specified.

REISSUES.

12,736. PNEUMATIC MOTOR AND SPEED-GOVERNOR. THOMAS DANQUARD, New York, N. Y., assignor to The Autopiano Company, New York, N. Y., a Corporation of New York. Filed July 11, 1907. Serial No. 383,350. Original application filed Oct. 8, 1904, Serial No. 227,625. Divided and application filed Feb. 8, 1905, Serial No. 244,819. Original No. 797,181, dated Aug. 15, 1905.



1. A pneumatic motor and speed-governor, comprising a motor including a driving shaft with pneumatic devices actuating said shaft and means directly controlling operation of said pneumatic devices, a casing inclosing said means controlling the pneumatic devices, means regulating inlet of air to said casing, a governor pneumatic communicating with the casing, and means in the motor windway controlled by said governor pneumatic and automatically regulating the air current to maintain any desired speed of the motor.

2. A pneumatic motor and speed governor, comprising a motor including a driving shaft with pneumatics actuating said shaft and valves directly controlling operation of said pneumatics, a casing inclosing said pneumatic controlling valves, means regulating inlet of air to said valve inclosing casing, a governor pneumatic communicating with the casing, and a valve in the motor windway controlled by said governor pneumatic and automatically regulating the air current to maintain any desired speed of the motor.

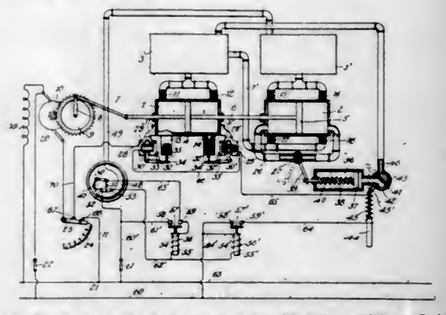
3. A pneumatic motor and speed governor, comprising a motor including a driving shaft with pneumatic devices actuating it and means directly controlling operation of said pneumatic devices, a casting inclosing said motor, means regulating inlet of air to said motor inclosing casing, a governor pneumatic communicating with said casing, and means in the motor windway controlled by said governor pneumatic and automatically regulating the air current to maintain any desired speed of the incased motor.

4. A pneumatic motor and speed governor, comprising a motor including a driving shaft with pneumatics actuating said shaft and valves directly controlling operation of said pneumatics, a casing inclosing said motor, means regulating inlet of air to said motor inclosing casing, a governor pneumatic communicating with said casing, and a valve in the motor windway controlled by said governor pneumatic and automatically regulating the air current to maintain any desired speed of the incased motor.

5. A pneumatic motor comprising a driving shaft, pneumatics and connections therefrom to said shaft for rotating it, valves controlling the motor shaft driving pneumatics, and a casing inclosing said valves, combined with a governor comprising a pneumatic opening to said casing and a valve in the motor windway automatically controlled by the governor pneumatic, and a tempo-valve controlling admission of air to the valve inclosing casing.

[Claims 6 to 26 not printed in the Gazette.]

12,737. FLUID-PRESSURE SYSTEM. WALTER J. RICHARDS, Milwaukee, Wis. Filed Oct. 2, 1907. Serial No. 395,659. Original No. 858,470, dated July 2, 1907, Serial No. 223,397.



1. In a pressure system, the combination with a fluid pump, of an electric motor driving said pump, means for rendering valves of said pump ineffective upon a maximum pressure in said system, and electromagnetic means for automatically rendering said valves effective upon a certain minimum pressure in said system independently of said motor.

2. In a pressure system, the combination with a fluid pump, of a motor for continuously driving said pump, a circuit for said motor, means for rendering said pump ineffective upon maximum pressure in said system, and electrical means independent of said motor circuit for rendering said pump effective upon a minimum pressure in said system.

3. In a pressure system, the combination with a fluid pump, of a motor for continuously driving said pump, mechanical means for rendering the valves of said pump inoperative upon maximum pressure in said system, and electrical means independent of the motor circuit for rendering the valves effective upon a certain minimum pressure in said system.

4. In a pressure system, the combination with a fluid pump, of a motor for continuously driving said pump,

electromagnetic mechanism normally mechanically associated with the valves of said pump, to prevent actuation thereof, whereby said pump is ineffective, and electrical means controlled by the pressure in the system for actuating said electromagnetic mechanism to allow actuation of said valves upon a certain minimum pressure in said system.

5. In a pressure system, the combination with a fluid pump, of an electric motor for continuously driving said pump, electromagnetic mechanism associated with the suction valves of said pump, said electromagnetic mechanism upon maximum pressure in said system being adapted to mechanically prevent actuation of said suction valves to render said pump ineffective, and means controlled upon a certain minimum pressure in said system for causing actuation of said electromagnetic means to release said suction valves to allow said pump to become effective.

[Claims 6 to 37 not printed in the Gazette.]

DESIGNS.

38,964. BADGE OR EMBLEM. ERLE R. SHEPPARD, Baltimore, Md. Filed Nov. 25, 1907. Serial No. 403,831. Term of patent 7 years.



The ornamental design for a badge or emblem as shown.

38,965. PIN OR BUTTON HEAD. DAVID P. BARRY, New York, N. Y. Filed Sept. 6, 1907. Serial No. 391,731. Term of patent 7 years.



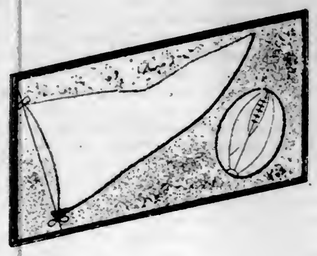
An ornamental design for a pin or button head as shown.

38,966. FINGER-RING OR SIMILAR ARTICLE. JOSEPH L. HERZOG, New York, N. Y. Filed Aug. 14, 1907. Serial No. 388,561. Term of patent 7 years.



The ornamental design for a finger ring or similar article, as shown.

38,967. POST-CARD. JOSEPH KRAMER, Chicago, Ill. Filed Oct. 25, 1907. Serial No. 399,228. Term of patent 3½ years.



The ornamental design for a post card, as shown.

38,968. DOILY. ROBERT GAIR, New York, N. Y. Filed July 26, 1907. Serial No. 385,757. Term of patent 3½ years.



The ornamental design for a doily, as shown.

38,969. GLASS VESSEL. ALBERT BUSKEY, Wheeling, W. Va. Filed Nov. 4, 1907. Serial No. 400,702. Term of patent 7 years.



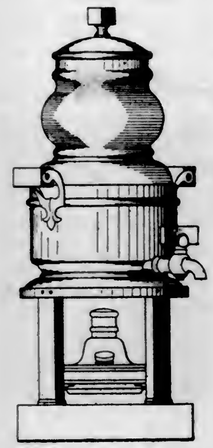
The ornamental design for a glass vessel, as shown.

38,970. FLASK. THOMAS R. HARPER, Philadelphia, Pa. Filed June 17, 1907. Serial No. 379,521. Term of patent 3½ years.



The ornamental design for a flask, as shown.

38,971. PERCOLATOR, STAND, AND LAMP. EDWARD A. GUTERMANN, Meriden, Conn., assignor to Manning, Bowman & Company, Meriden, Conn., a Corporation of Connecticut. Filed Oct. 18, 1907. Serial No. 398,134. Term of patent 3½ years.



The ornamental design for a percolator, stand and lamp as shown.

38,972. CEILING-FIXTURE FOR ELECTRIC LAMPS. JOHN H. GOEHST, Chicago, Ill. Filed Oct. 5, 1907. Serial No. 396,120. Term of patent 14 years.



The ornamental design for a ceiling fixture for electric lamps as shown.

38,973. GAS-HEATER. AUGUST T. WEHRLE, Newark, Ohio. Filed Oct. 31, 1907. Serial No. 400,130. Term of patent 7 years.

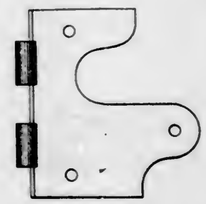


The ornamental design for a gas heater, substantially as shown.

38,974. RANGE. JOSEPH BECVAR, Cleveland, Ohio, assignor to The Wehrle Company, Newark, Ohio, a Corporation of Ohio. Filed Nov. 21, 1907. Serial No. 403,225. Term of patent 7 years.

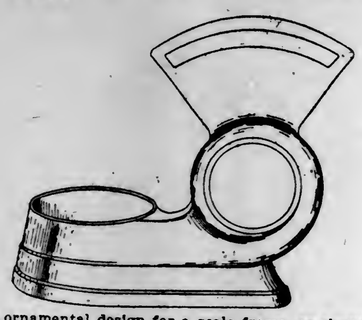
The ornamental design for a range, as shown.

38,975. HINGE-LEAF. WILLIAM J. NEIDL, New Britain, Conn. Filed Oct. 26, 1907. Serial No. 399,385. Term of patent 14 years.



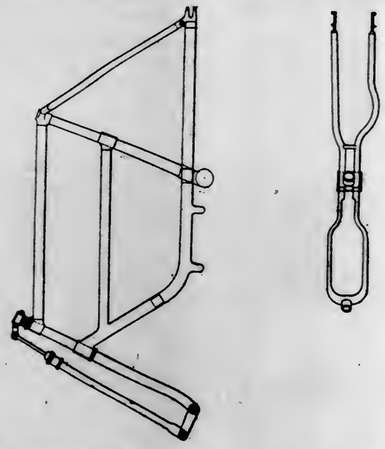
The ornamental design for a hinge leaf, as shown.

38,976. SCALE-FRAME. GEORGE W. COPE, Detroit, Mich., assignor to Walter F. Stimpson, Detroit, Mich. Filed Dec. 26, 1906. Serial No. 349,586. Term of patent 14 years.



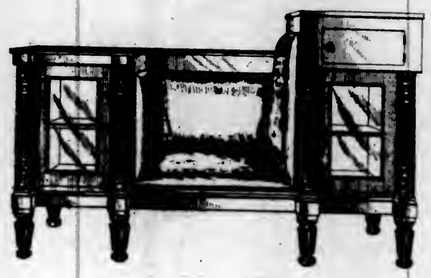
The ornamental design for a scale frame, as shown.

38,977. MOTOR-CYCLE FRAME. PAUL KELECOM, Liege, Belgium, assignor to Fabrique Nationale d'Armes de Guerre Société Anonyme, Herstal, Belgium. Filed Apr. 26, 1907. Serial No. 370,535. Term of patent 7 years.



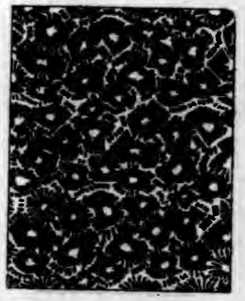
The ornamental design for a motor cycle frame, as shown.

38,978. COMBINED SEAT AND CABINET. VIRGINIA D. BURNAM, Huntsville, Ala. Filed Oct. 14, 1907. Serial No. 397,459. Term of patent 14 years.



The ornamental design for a combined seat and cabinet, as shown.

38,979. SHEET-GLASS. FRED WOLTJEN, Utica, Ohio, assignor to The Advance Glass Company, Utica, Ohio, a Corporation of Ohio. Filed Sept. 25, 1907. Serial No. 394,590. Term of patent 14 years.



The ornamental design for sheet glass, as shown.

TRADE-MARKS

PUBLISHED DECEMBER 31, 1907.

The following trade-marks have been adjudged entitled to registration under the act of February 20, 1905, and are published in compliance with section 6 of said act. Said section provides:

"Any person who believes he would be damaged by the registration of a mark may oppose the same by filing notice of opposition, stating the grounds therefor, in the Patent Office within thirty days after the publication of the mark sought to be registered, which said notice of opposition shall be verified by the person filing the same before one of the officers mentioned in section two of this act. If no notice of opposition is filed within said time the Commissioner shall issue a certificate of registration therefor, as hereinafter provided for."

Marks which are stated to have been "Used ten years" are registrable under the last proviso of section 5 of said act, which is as follows:

"And provided further, That nothing herein shall prevent the registration of any mark used by the applicant or his predecessors, or by those from whom title to the mark is derived, in commerce with foreign nations or among the several States, or with Indian tribes, which was in actual and exclusive use as a trade-mark of the applicant or his predecessors from whom he derived title for ten years next preceding the passage of this act."

Section 14 of said act provides for the following fee:

"On filing notice of opposition to the registration of a trade-mark, ten dollars."

Ser. No. 2,072. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) WATERBURY CHEMICAL COMPANY, Des Moines, Iowa. Filed Apr. 17, 1905.

Cutizine

Particular description of goods.—Face-Lotions Possessing Antiseptic and Germ-Destroying Qualities.

Ser. No. 3,023. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) HARRY LAY, Kansas City, Mo. Filed Apr. 20, 1905.

THE DIAMOND DANDRUFF COMPOUND

Particular description of goods.—Hair-Tonic.

Ser. No. 7,811. (CLASS 55. WINES.) CHANDON ET CO., Epernay, France. Filed June 10, 1905.

WHITE SEAL 1743 MOËT & CHANDON EPERNAY-FRANCE

Particular description of goods.—Champagne-Wine.

Ser. No. 13,354. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) W. T. HANSON CO., Schnectady, N. Y. Filed Oct. 4, 1905. Used ten years.

DR WILLIAMS' PINK PILLS FOR PALE PEOPLE

Particular description of goods.—Pills for Diseases of the Blood and Nerves.

Ser. No. 14,601. (CLASS 70. STATIONERY NOT OTHERWISE CLASSIFIED) JOHANN FROESCHEIS LYRA-BLEISTIFTFABRIK, Nuremberg, Germany. Filed Nov. 14, 1905.



Particular description of goods.—Lead-Pencils and Oil-Chalk Crayons.

Ser. No. 14,612. (CLASS 20. CUTLERY NOT INCLUDED IN CLASS 61, AND EDGE-TOOLS.) NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Nov. 14, 1905.

DIAMOND EDGE.

Particular description of goods.—Augers, Auger-Bits, Reamers, Gimlets, Boring-Countersinks, Cutting-Pliers, Cutting-Pincers, Axes, Hatchets, Files, Bush-Hooks, Corn-Knives, Cane-Knives, Beet-Topping Knives, Broom-Corn Knives, Skinning-Knives, Chisels, Drawing-Knives, Cold-Chisels, Knife-Edge Can-Openers, Meat-Cutters, Food-Choppers, Scythes, Cleavers, Mincing-Knives, Belt-Punches, Ticket-Punches, Grass-Shears, Sheep-Shears, Tinners' Snips, Toilet-Clippers, Horse-Clippers, Mattocks, and Weed-Cutters.

Ser. No. 14,614. (CLASS 23. HAND-TOOLS NOT OTHERWISE CLASSIFIED.) NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Nov. 14, 1905.

DIAMOND EDGE.

Particular description of goods.—Hammers.

Ser. No. 14,615. (CLASS 23. HAND-TOOLS NOT OTHERWISE CLASSIFIED.) NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Nov. 14, 1905.

DIAMOND EDGE.

Particular description of goods.—Non-Cutting Pliers, Non-Cutting Pincers, Wrenches, and Putty-Knives.

Ser. No. 14,616. (CLASS 58. GAMES AND TOYS, AND SPORTING GOODS NOT OTHERWISE CLASSIFIED.) NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Nov. 14, 1905.

DIAMOND EDGE.

Particular description of goods.—Ice-Skates.

Ser. No. 14,617. (CLASS 23. HAND-TOOLS NOT OTHERWISE CLASSIFIED.) NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Nov. 14, 1905.

DIAMOND EDGE.

Particular description of goods.—Picks, Grub-Hoes, Trowels, Shovels, and Spades.

Ser. No. 14,618. (CLASS 18. AGRICULTURAL AND DAIRY MACHINERY AND PARTS OF SUCH MACHINERY.) NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Nov. 14, 1905.

DIAMOND EDGE.

Particular description of goods.—Lawn-Mowers.

Ser. No. 14,628. (CLASS 23. HAND-TOOLS NOT OTHERWISE CLASSIFIED.) NORVELL-SHAPLEIGH HARDWARE COMPANY, St. Louis, Mo. Filed Nov. 14, 1905.

BLUE DIAMOND

Particular description of goods.—Boring-Bit Braces, Screw-Drivers, Screw-Driver Bits, Nail-Sets, and Saw-Sets.

Ser. No. 19,386. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) NORMAN K. PEACE, Sheffield, England. Filed May 9, 1906.

HURRICANE

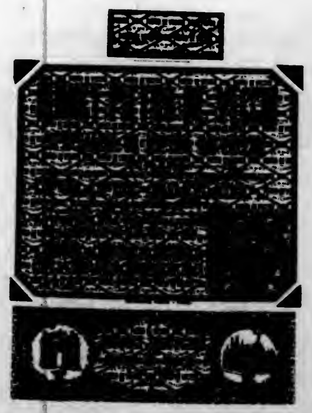
Particular description of goods.—Machine Lathe-Tools, Machine Planing-Tools, Machine Slotting-Tools, Machine Twist-Drills, Machine Milling-Cutters, Machine Cold-Saws, Machine-Taps, and Machine-Dies.

Ser. No. 19,859. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE NORWICH PHARMACAL COMPANY, Norwich and New York, N. Y. Filed May 25, 1906. Used ten years.

The Norwich Pharmacal Company.

Particular description of goods.—Pills, Granules, Tablet Triturates, Compressed Tablets, Hypodermic Tablets, Horse-Balls, Condition-Powders, Cough and Heave Powders, Worm-Powders, Liniments, and Tonics; also, Medicinal Lozenges, Elixirs, Syrups, Wines, Tinctures, Fluid Extracts, Powders, Ointments, Suppositories, Glycerites, Solutions, Emulsions, Mixtures, and Spirits.

Ser. No. 20,268. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) PIETRO DE VECCHI, Milan, Italy. Filed June 14, 1906.



Particular description of goods.—Stomach Tonics or Bitters.

Ser. No. 20,480. (CLASS 70. STATIONERY NOT OTHERWISE CLASSIFIED.) A. W. FABER, Stein, near Nürnberg and Berlin, Germany. Filed June 22, 1906.

Castell

Particular description of goods.—Lead-Pencils and Colored Pencils.

Ser. No. 22,277. (CLASS 2. MINERAL.) FELICIA V. MORSE, Canton, Mass. Filed Sept. 24, 1906.

SUN

Particular description of goods.—Black Lead, Plumbago, Graphite, and Foundry-Facings.

Ser. No. 23,753. (CLASS 23. HAND-TOOLS NOT OTHERWISE CLASSIFIED.) THE CHILLINGTON TOOL CO. LD., Wolverhampton, England. Filed Dec. 4, 1906.



Particular description of goods.—Hoes, Spades, Shovels, Picks, Wood-Splitting Wedges, Crowbars, Mining-Bars, Coffee-Diggers, Hammers, Trowels, and Pitchforks.

Ser. No. 23,914. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THEODOR ENGELHARD, Cassel, Germany. Filed Dec. 10, 1906.

FORTUNAMENTOM

After Using — Before Using

BEST CHEAPEST CRAMP REMEDY FOR PIGS

Particular description of goods.—A Cramp Remedy for Pigs.

Ser. No. 23,919. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) WALDBERG & CO., G. m b H., Berlin, Germany. Filed Dec. 10, 1906.

PERSELS

Particular description of goods—Chemical Nickel Salt.

Ser. No. 23,946. (CLASS 51. MALT PREPARATIONS NOT OTHERWISE CLASSIFIED.) C. KERN BREWING CO., Port Huron, Mich. Filed Dec. 11, 1906. Used ten years.

Old Dominion

Particular description of goods.—Porter.

Ser. No. 24,181. (CLASS 9. EXPLOSIVES.) NITEDALS TAENDSTIKFABRIK, Grönvold in Östre Aker, near Christiania, Norway. Filed Dec. 21, 1906.



Particular description of goods.—Matches.

Ser. No. 24,607. (CLASS 55. WINES.) CHANDON ET CO., Epernay, France. Filed Jan. 14, 1907. Used ten years.

MOËT & CHANDON WHITE SEAL

Particular description of goods.—Champagne-Wine.

Ser. No. 24,608. (CLASS 55. WINES.) CHANDON ET CO., Epernay, France. Filed Jan. 14, 1907. Used ten years.

WHITE SEAL

Particular description of goods.—Champagne-Wine.

Ser. No. 24,609. (CLASS 55. WINES.) CHANDON ET CO., Epernay, France. Filed Jan. 14, 1907. Used ten years.

Brut Impérial
MOËT & CHANDON
ÉPERNAY-FRANCE.

Particular description of goods.—Champagne-Wine.

Ser. No. 24,610. (CLASS 55. WINES.) CHANDON ET CO., Epernay, France. Filed Jan. 14, 1907. Used ten years.

BRUT IMPÉRIAL

The crown and words "Moet et Chandon Epernay-France" and the ornamentation being printed in gold on a black background, while the words "Brut Impérial" are printed in black on a gold background.

Particular description of goods.—Champagne-Wine.

Ser. No. 25,335. (CLASS 23. HAND-TOOLS NOT OTHERWISE CLASSIFIED.) SUPPLEE HARDWARE COMPANY, Philadelphia, Pa. Filed Feb. 16, 1907.



Particular description of goods.—Shovels, Spades, Scoops, and Hammers.

Ser. No. 25,336. (CLASS 20. CUTLERY NOT INCLUDED IN CLASS 61, AND EDGE-TOOLS.) SUPPLEE HARDWARE COMPANY, Philadelphia, Pa. Filed Feb. 16, 1907.



Particular description of goods.—Hatchets and Axes.

Ser. No. 25,718. (CLASS 65. MUSICAL INSTRUMENTS AND TALKING-MACHINES AND SUPPLIES THEREFOR.) VICTOR TALKING MACHINE COMPANY, Camden, N. J. Filed Mar. 2, 1907.

Exhibition

Particular description of goods.—Recording and Reproducing Sound-Boxes for Talking-Machines.

Ser. No. 26,947. (CLASS 14. METALS, UNWROUGHT AND PARTLY WROUGHT.) FRANK A. HOWELL, New York, N. Y. Filed Apr. 26, 1907.

SEMPERMERUS

Particular description of goods.—Sheet Metal.

Ser. No. 27,573. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) GEO. W. TORREY COMPANY, Boston, Mass. Filed May 22, 1907.



Particular description of goods.—Whisky.

Ser. No. 28,213. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) PIERSON & HOUGH CO., Detroit, Mich. Filed June 17, 1907.

"PEER-HQ"

Particular description of goods.—Harness, Horse-Collars, and Saddles.

Ser. No. 29,000. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) FLOURNOY AND JOHNSON, Odessa, Mo. Filed July 23, 1907.

Particular description of goods.—Remedy for Hog-Cholera, Chicken-Cholera, Worms, Gapes, Rheumatism, Thumps, and Bots.

Ser. No. 29,058. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) BADISCHE ANILIN & SODA FABRIK, Ludwigshafen-on-the-Rhine, Germany. Filed July 27, 1907.

Agalma

Particular description of goods.—Indigo and Indigo Preparations, Coal-Tar Dyes, Mineral Acids, Alkalies and Alkali Salts, Chlorin, Chromic Acid, Chromates and Chrome Salts, Mordants and Chemicals for Dyeing, Discharging, and Printing, Chemical Preparations for Photographic Purposes.

Ser. No. 29,116. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ACTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION, Berlin, Germany. Filed July 30, 1907.

Borovertin

Particular description of goods.—An Internal Remedy for Urinary Diseases.

Ser. No. 29,394. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) CONRAD D. WITTE, Cincinnati, Ohio. Filed Aug. 14, 1907.



Particular description of goods.—Chemical Sweeping Compound.

Ser. No. 29,411. (CLASS 37. PAPER AND PAPER MANUFACTURES NOT OTHERWISE CLASSIFIED.) THE UNION BAG & PAPER COMPANY, New York, N. Y. Filed Aug. 15, 1907.



Particular description of goods.—Paper Bags.

Ser. No. 29,417. (CLASS 63. MEASURING AND SCIENTIFIC APPARATUS, APPLIANCES, AND INSTRUMENTS.) JOSEPH F. MCCOY CO., New York, N. Y. Filed Aug. 16, 1907.

AXIOM

Particular description of goods.—Wood Rules.

Ser. No. 29,434. (CLASS 8. DETERGENTS.) CHEMISCHE WERKE HANSA GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Hemelingen, Germany. Filed Aug. 17, 1907.

Duron

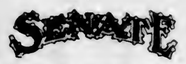
Particular description of goods.—Soap.

Ser. No. 29,435. (CLASS 15. OILS AND GREASES NOT INCLUDED IN CLASSES 6, 16, AND 50.) CHEMISCHE WERKE HANSA GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Hemelingen, Germany. Filed Aug. 17, 1907.

Duron

Particular description of goods.—Lubricating-Oils and Lubricants.

Ser. No. 29,529. (CLASS 54. SEA FOODS.) JED FRYE & Co., New York, N. Y. Filed Aug. 22, 1907.



Particular description of goods.—Canned Fish.

Ser. No. 29,546. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) L. FRANK SADDLERY CO., San Antonio, Tex. Filed Aug. 23, 1907.



Particular description of goods.—Saddles, Harness, Horse-Collars, Whips, Horse-Blankets, Lap-Robes, and Collar-Pads.

Ser. No. 29,574. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) AMALGAMATED GUM COMPANY, Troy, N. Y. Filed Aug. 26, 1907.



Particular description of goods.—Chemical Starch Preparations Used for Sizing Textiles, Papers, and for Laundry Purposes.

Ser. No. 29,579. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) WHEELER MANUFACTURING CO., Dallas, Tex. Filed Aug. 26, 1907.



Particular description of goods.—Massage and Face Cream.

Ser. No. 29,604. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) WILLIAM COOPER & NEPHEWS, Berkhamsted, England. Filed Aug. 26, 1907.

LAVENE

Particular description of goods.—A Dressing for Mange in Cattle, Horses, and Dogs.

Ser. No. 29,768. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) LUIN F. MANGIS, Portland, Oreg. Filed Sept. 5, 1907.

MANGIS'
EASY-DAY

Particular description of goods.—Chemical Washing-Powder for Laundry Purposes.

Ser. No. 29,797. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) VEREINIGTE ULTRAMARINFABRIKEN AKTIEN-GESELLSCHAFT VORMALS LEVERKUS, ZELTNER & CONSORTEN, IN KÖLN AM RHEIN, Cologne-on-Rhine, Germany. Filed Sept. 7, 1907.



Particular description of goods.—Ultramarine Blue.

Ser. No. 29,935. CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) THE J. EY COMPANY, San Jose, Cal. Filed Sept. 13, 1907.



Particular description of goods.—A Liquid Hair-Tonic.

Ser. No. 29,951. (CLASS 2. MINERAL.) PEABODY COAL COMPANY, Chicago, Ill. Filed Sept. 13, 1907.

SHELLBARK

Particular description of goods.—Coal.

Ser. No. 30,030. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) PERLMUTTERS, Jersey City, N. J. Filed Sept. 17, 1907. Used ten years.

PERLMUTTERS
IF WE SHOW IT, IT'S RIGHT.

Particular description of goods.—Kid Gloves and Ladies' and Girls' Cloaks.

Ser. No. 30,130. (CLASS 33. GLASSWARE NOT OTHERWISE CLASSIFIED.) MONARCH TILE CO., Weston, W. Va. Filed Sept. 21, 1907.

Monarch

Particular description of goods.—Glass Tiles.

Ser. No. 30,131. (CLASS 33. GLASSWARE NOT OTHERWISE CLASSIFIED.) MONARCH TILE CO., Weston, W. Va. Filed Sept. 21, 1907.



Particular description of goods.—Glass Tiles.

Ser. No. 30,152. (CLASS 71. TOBACCO PRODUCTS.) BECKER BROS., Cincinnati, Ohio. Filed Sept. 23, 1907.

GROUND-HOG



Particular description of goods.—Cigars, Cigarettes, Cheroots, Stogies, Smoking-Tobacco, Chewing-Tobacco, and Scrap-Tobacco.

Ser. No. 30,158. (CLASS 65. MUSICAL INSTRUMENTS AND TALKING-MACHINES AND SUPPLIES THEREFOR.) THE KAY GRAHAM CO., Portsmouth, Ohio. Filed Sept. 23, 1907.



Particular description of goods.—Strings for Musical Instruments.

Ser. No. 30,272. (CLASS 47. CONFECTIONERY.) ALTA VISTA CREAMERY COMPANY, Fort Worth, Tex. Filed Sept. 28, 1907.

Alta Vista

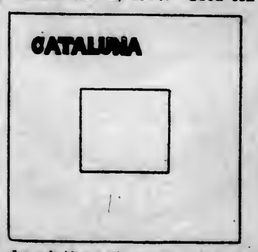
Particular description of goods.—Ice-Cream, Ices, Sherbets, and Frozen Custards.

Ser. No. 30,313. (CLASS 41. KNITTED, NETTED, AND LACE GOODS.) LORD & TAYLOR, New York, N. Y. Filed Sept. 30, 1907.

"Crestwood Mills"

Particular description of goods.—Knitted Underwear for Men, Women, and Children, of Wool, Silk, Cotton, or Admixtures of These Materials.

Ser. No. 30,331. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) STROHMEYER & ARPE COMPANY, New York, N. Y. Filed Oct. 2, 1907. Used ten years.



Particular description of goods.—Salad-Oil, Olive-Oil, Cotton-Oil, Peanut-Oil, Nut-Oil, and Sesame-Oil.

Ser. No. 30,362. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) A. B. BELLMAN & CO., Chicago, Ill. Filed Oct. 2, 1907.



Particular description of goods.—Preparations for Improving and Fluffing the Hair.

Ser. No. 30,435. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) S. ARMITAGE, London, England. Filed Oct. 5, 1907.

Icilma

Particular description of goods.—Skin-Cream, Cold-Cream, and Hair-Lotions.

Ser. No. 30,443. (CLASS 47. CONFECTIONERY.) COMMON SENSE GUM CO., Boston, Mass. Filed Oct. 5, 1907.



The body of the triangle being in red, the outlines thereof gilt.

Particular description of goods.—Chewing-Gum.

Ser. No. 30,466. (CLASS 60. INKS AND INKING MATERIALS.) THE AULT & WIBORG CO., Cincinnati, Ohio. Filed Oct. 7, 1907.

DUPLEXRAY

Particular description of goods.—Printing-Ink.

Ser. No. 30,501. (CLASS 41. KNITTED, NETTED, AND LACE GOODS.) M. & C. MAYER, New York, N. Y. Filed Oct. 9, 1907.

O.Y.E.

Particular description of goods.—Knit Hosiery and Underwear.

Ser. No. 30,554. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE ATLANTIC PAINT COMPANY, New York, N. Y. Filed Oct. 12, 1907.

ATLANTIKOTE

Particular description of goods.—Mixed Paints.

Ser. No. 30,602. (CLASS 63. MEASURING AND SCIENTIFIC APPARATUS, APPLIANCES, AND INSTRUMENTS.) THE FULTON COMPANY, Knoxville, Tenn. Filed Oct. 14, 1907.

Regitherm

Particular description of goods.—Heat or Temperature Regulators.

Ser. No. 30,618. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) PATTON PAINT COMPANY, Milwaukee, Wis. Filed Oct. 15, 1907.

LEPTYNE

Particular description of goods.—A Substitute for Turpentine.

Ser. No. 30,638. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) JAMES BOWERS, Essex Fells, N. J. Filed Oct. 17, 1907.

HY—SAN

Particular description of goods.—Dispensing Apparatus for Liquids.

Ser. No. 30,714. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) FREDERICK STEARNS & CO., Detroit, Mich. Filed Oct. 21, 1907.

PANASE

Particular description of goods.—Remedies for Indigestion and Dyspepsia.

Ser. No. 30,736. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) JULIUS GRÜNTHAL, Berlin, Germany. Filed Oct. 23, 1907.

„Laxigen"

Particular description of goods.—Remedies for Constipation.

Ser. No. 30,757. (CLASS 8. DETERGENTS.) THE J. B. WILLIAMS COMPANY, Glastonbury, Conn. Filed Oct. 24, 1907.



Particular description of goods.—Shaving and other Toilet Soaps.

Ser. No. 30,770. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) H. M. LINDENTHAL AND SONS, Chicago, Ill. Filed Oct. 24, 1907.

THE L SYSTEM

The letter "L" and the oblong surrounding it being printed in red.

Particular description of goods.—Coats, Pants, Vests, and Overcoats.

Ser. No. 30,801. (CLASS 6. CHEMICALS NOT OTHERWISE CLASSIFIED.) BADISCHE ANILIN & SODA FABRIK, Ludwigshafen-on-the-Rhine, Germany. Filed Oct. 26, 1907.

Primazine

Particular description of goods.—Dyestuffs, including Indigo and Indigo Preparations, Coal-Tar Dyes.

Ser. No. 30,810. (CLASS 12. MASONRY MATERIALS.) PENN-ALLEN PORTLAND CEMENT CO., Allentown, Pa. Filed Oct. 26, 1907.

PORTLAND PENN-ALLEN CEMENT CO

Particular description of goods.—Portland Cement.

Ser. No. 30,818. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) AMERICAN DEHYDRATING COMPANY, Waukesha, Wis. Filed Oct. 28, 1907.

DEHYDRO

Particular description of goods.—Dehydrated Vegetables and Fruit.

Ser. No. 30,848. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) J. H. SNYDER MED. CO., Jonesboro, Ark. Filed Oct. 29, 1907.



Particular description of goods.—Fever and Headache Powders, Bitters, Liniment, and Liver-Regulator.

Ser. No. 30,860. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) CLARENCE WHITMAN & CO., New York, N. Y. Filed Oct. 29, 1907.

Flaxon

Particular description of goods.—Cotton Piece Goods with a Linen Finish) for Dresses and Waists.

Ser. No. 30,882. (CLASS 42. TEXTILES NOT OTHERWISE CLASSIFIED.) PRUDENTIAL WORSTED COMPANY, Philadelphia, Pa. Filed Oct. 30, 1907.

"PANAJAH"

Particular description of goods.—Textile Worsteds.

Ser. No. 30,909. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ABRAHAM MISLIG, New York, N. Y. Filed Nov. 1, 1907.



Particular description of goods.—Cosmetic Preparations for the Treatment of Freckles, Blackheads, and Blemishes of the Skin.

Ser. No. 30,913. (CLASS 15. OILS AND GREASES NOT INCLUDED IN CLASSES 6, 16, AND 50.) L. SONNEBORN SONS, INC., New York, N. Y. Filed Nov. 1, 1907.



Particular description of goods.—Lubricating-Oils and Lubricating-Greases and Lubricating-Pastes.

Ser. No. 30,948. (CLASS 51. MALT PREPARATIONS NOT OTHERWISE CLASSIFIED.) AMERICAN BREWING CO., Indianapolis, Ind. Filed Nov. 1, 1907.

A- SEE

Particular description of goods.—Beer.

Ser. No. 30,975. (CLASS 65. MUSICAL INSTRUMENTS AND TALKING-MACHINES AND SUPPLIES THEREFOR.) GENERAL PHONOGRAPH SUPPLY CO., New York, N. Y. Filed Nov. 4, 1907.

EUREKA RECORD CABINETS EUREKA PHONOGRAPH HORNS EUREKA TALKING MACHINE ACCESSORIES

Particular description of goods.—Talking-Machines, Talking-Machine Horns, Disk and Cylinder Record Cabinets, Needle-Boxes, Needle-Sharpeners, and Needle-Transferrers.

Ser. No. 30,996. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE OHIO SUSPENDER COMPANY, Mansfield, Ohio. Filed Nov. 4, 1907.

THE KADY

Particular description of goods.—Suspenders.

Ser. No. 31,020. (CLASS 51. MALT PREPARATIONS NOT OTHERWISE CLASSIFIED.) THE STARK-TUSCARAWAS BREWERIES CO., Canton, Ohio. Filed Nov. 5, 1907.

ZEST

Particular description of goods.—Beer.

Ser. No. 31,022. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) MILLER BROTHERS, New York, N. Y. Filed Nov. 5, 1907.

Rubigloss

Particular description of goods.—Nail-Polishing Paste.

Ser. No. 31,033. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) FRANKENTHAL BROTHERS COMPANY, New York, N. Y. Filed Nov. 6, 1907.



Particular description of goods.—Women's and Misses' Shirt and Dress Waists Made of Cotton, Silk, and Wool.

Ser. No. 31,034. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) FOOTE AND JENKS, Jackson, Mich. Filed Nov. 6, 1907.

Swas-ti-ka

Particular description of goods.—Perfumes.

Ser. No. 31,035. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) THE EAGLE TOOL CO., Cincinnati, Ohio. Filed Nov. 6, 1907.

MARVEL

Particular description of goods.—Clothes-Washing Machines.

Ser. No. 31,038. (CLASS 38. RUBBER AND MINOR PLASTICS NOT OTHERWISE CLASSIFIED.) WILLIAM HEYMANN, New York, N. Y. Filed Nov. 6, 1907.

Fregoli

Particular description of goods.—Collars and Cuffs Made from Celluloid and other Similar Compositions.

Ser. No. 31,057. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) MARTIN GERING, Gering, Nebr. Filed Nov. 7, 1907.



Particular description of goods.—Medical Compounds Containing Iron.

Ser. No. 31,074. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) TANQUERAY GORDON & CO., LITD., London, England. Filed Nov. 8, 1907.



Particular description of goods.—Orange Bitters.

Ser. No. 31,094. (CLASS 39. CLOTHING NOT OTHERWISE CLASSIFIED.) GREENHUT & COMPANY, New York, N. Y. Filed Nov. 8, 1907.

Peronna

Particular description of goods.—Kid Gloves.

Ser. No. 31,112. (CLASS 53. SACCHARINE FOODS NOT INCLUDED IN CLASS 47.) HULMAN & Co., Terre Haute, Ind. Filed Nov. 11, 1907.



Particular description of goods.—Sorghum and Syrup.

Ser. No. 31,113. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) FREDERICK HAMILTON GREEN, Muscatine, Iowa. Filed Nov. 11, 1907.

Seola

Particular description of goods.—Tonic Laxatives Used in the Treatment of Constipation, Liver and Stomach Disorders, Dyspepsia, Backache, Headache, and Neuralgia, &c.

Ser. No. 31,124. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS NOT INCLUDED IN CLASS 21.) BRIDGE & BEACH MANUFACTURING COMPANY, St. Louis, Mo. Filed Nov. 11, 1907. Used ten years.

SUPERIOR

Particular description of goods.—Stoves and Ranges.

Ser. No. 31,147. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) GEORGE GREAMBA, Denver, Colo. Filed Nov. 13, 1907.

NECO

Particular description of goods.—A Hair-Restorative.

Ser. No. 31,179. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) AMERICAN-LA FRANCE FIRE ENGINE CO., Elmira, N. Y. Filed Nov. 15, 1907. Used ten years.

HOLLOWAY

Particular description of goods.—Chemical-Engines, Chemical Fire-Extinguishing Apparatus, and Hand-Grenades.

Ser. No. 31,181. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) SHAPLEIGH COFFEE COMPANY, Boston, Mass. Filed Nov. 15, 1907. Used ten years.

CLUB

Particular description of goods.—Coffee and Tea.

Ser. No. 31,193. (CLASS 67. PHARMACEUTICAL PREPARATIONS, PLASTERS, AND PROPRIETARY AND VETERINARY MEDICINES.) ROBINSON BROS. & COMPANY, INCORPORATED, Portland, Me., and Malden, Mass. Filed Nov. 15, 1907.

PINEOL

Particular description of goods.—Medicinal and Toilet Cologne.

Ser. No. 31,195. (CLASS 8. DETERGENTS.) ROBINSON BROS. & COMPANY, INCORPORATED, Portland, Me., and Malden, Mass. Filed Nov. 15, 1907.



Particular description of goods.—Medicinal and Toilet Soap.

Ser. No. 31,197. (CLASS 8. DETERGENTS.) ROYAL SOLVENT CO., New York, N. Y. Filed Nov. 15, 1907.

RSS

Particular description of goods.—Soaps.

Ser. No. 31,209. (CLASS 72. MERCHANDISE NOT OTHERWISE CLASSIFIED.) STANDARD FUEL COMPANY, Birmingham, Ala. Filed Nov. 16, 1907.



Particular description of goods.—Artificial Fuel in the Form of Briquets.

Ser. No. 31,210. (CLASS 41. KNITTED, NETTED, AND LACE GOODS.) J. L. BRANDEIS AND SONS, Omaha, Nebr. Filed Nov. 16, 1907.



Particular description of goods.—Hosiery.

Ser. No. 31,229. (CLASS 13. METAL MANUFACTURES NOT OTHERWISE CLASSIFIED.) JANESVILLE BARB WIRE COMPANY, Janesville, Wis. Filed Nov. 18, 1907.

APEX

Particular description of goods.—Wire Fence.

Ser. No. 31,230. (CLASS 61. JEWELRY AND SOLID AND PLATED PRECIOUS-METAL WARE.) THE D. F. BRIGGS CO., Attleboro, Mass. Filed Nov. 18, 1907. Used ten years.



The tag being red.

Particular description of goods.—Chains for Personal Adornment.

Ser. No. 31,231. (CLASS 50. FOODS NOT OTHERWISE CLASSIFIED.) FARMERS FEED COMPANY, New York, N. Y. Filed Nov. 18, 1907.

FARMERS FEED CO.



BULL-BRAND

Particular description of goods.—Brewers' Wet and Dried Grains.

Ser. N. 31,234. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) HEYWOOD BOOT & SHOE COMPANY, Worcester, Mass. Filed Nov. 18, 1907. Used ten years.

Bunion.

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 31,235. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) W. A. JENKINSON & Co., Jacksonville, Ill. Filed Nov. 18, 1907.

Brazola

The word being printed in red.

Particular description of goods.—Coffee.

Ser. No. 31,255. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) THE ARMSTRONG MFG. CO., Bridgeport, Conn. Filed Nov. 19, 1907. Used ten years.

ARMSTRONG

Particular description of goods.—Threading and Cutting-Off Machines.

Ser. No. 31,263. (CLASS 65. MUSICAL INSTRUMENTS AND TALKING-MACHINES AND SUPPLIES THEREFOR.) BUEGELEISEN & JACOBSON, New York, N. Y. Filed Nov. 20, 1907.

VICTORIA

Particular description of goods.—Mandolins, Guitars, Banjos, and Parts of the Same.

Ser. No. 31,278. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) THE HUNTER BROTHERS MILLING COMPANY, St. Louis, Mo., and Edwardsville, Ill. Filed Nov. 21, 1907.



Particular description of goods.—Wheat-Flour.

Ser. No. 31,282. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) THE PHILADELPHIA DRYING MACHINERY COMPANY, Philadelphia, Pa. Filed Nov. 21, 1907.

HURRICANE

Particular description of goods.—Machinery for Drying Cotton Stock, Wool, Hair, Rags, Cloth, Yarn, Stockings and Underwear.

Ser. No. 31,291. (CLASS 4. ABRASIVE AND POLISHING MATERIALS NOT INCLUDED IN CLASSES 8 AND 16.) THE CUDAHY PACKING CO., Chicago, Ill., and Omaha, Nebr. Filed Nov. 21, 1907.



Particular description of goods.—An Abrasive Scouring-Soap.

Ser. No. 31,308. (CLASS 44. BAKERY PRODUCTS, CEREAL FOODS, AND YEAST.) EMILIA BISI, Carnegie, Pa., executrix of the last will and testament of Ernesto Bisi, deceased. Filed Nov. 22, 1907.

YANDO

Particular description of goods.—Macaroni and Vermicelli.

Ser. No. 31,322. (CLASS 23. HAND-TOOLS NOT OTHERWISE CLASSIFIED.) THE KEYSTONE MFG. CO., Buffalo, N. Y. Filed Nov. 23, 1907.

GIANT

Particular description of goods.—Hand-Ratchets for Operating Drills, Taps, and Wrenches.

Ser. No. 31,326. (CLASS 36. LEATHER AND LEATHER MANUFACTURES NOT OTHERWISE CLASSIFIED.) H. E. SMITH & SON, Worcester, Mass. Filed Nov. 23, 1907.

Nox'Em All

Particular description of goods.—Leather Boots and Shoes.

Ser. No. 31,335. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) SHAPLEIGH COFFEE COMPANY, Boston, Mass. Filed Nov. 25, 1907. Used ten years.



Particular description of goods.—Coffee and Tea.

Ser. No. 31,336. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) SHAPLEIGH COFFEE COMPANY, Boston, Mass. Filed Nov. 25, 1907.

VICTOR

Particular description of goods.—Coffee and Tea.

Ser. No. 31,337. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) SHAPLEIGH COFFEE COMPANY, Boston, Mass. Filed Nov. 25, 1907. Used ten years.

STERLING

Particular description of goods.—Coffee and Tea.

Ser. No. 31,345. (CLASS 12. MASONRY MATERIALS.) F. W. BIRD & SON, East Walpole, Mass. Filed Nov. 25, 1907.



Particular description of goods.—Roofing-Paper.

Ser. No. 31,355. (CLASS 26. MACHINERY AND PARTS OF MACHINERY NOT OTHERWISE CLASSIFIED.) AMERICAN-LA FRANCE FIRE ENGINE CO., Elmira, N. Y. Filed Nov. 25, 1907.

ALERT

Particular description of goods.—Chemical Fire-Extinguishing Apparatus.

Ser. No. 31,390. (CLASS 46. COFFEE, TEA, AND SUBSTITUTES.) SHAPLEIGH COFFEE COMPANY, Boston, Mass. Filed Nov. 27, 1907.



Particular description of goods.—Coffee and Tea.

TRADE-MARKS

REGISTERED DECEMBER 31, 1907.

66,780. ANTISEPTIC PREPARATION. AMERICAN CHEMICAL & TEXTILE COLORING CO., Wilmington, N. C.
Filed September 10, 1907. Serial No. 29,848. PUBLISHED OCTOBER 29, 1907.

66,781. COMPOSITION FOR PURIFYING WATER. THE AUTO RADIUM CO., East Cleveland, Ohio.
Filed September 10, 1907. Serial No. 29,847. PUBLISHED OCTOBER 29, 1907.

66,782. LIQUID DISINFECTANT AND ANTISEPTIC PREPARATION. JULES BLAN, New York, N. Y.
Filed August 13, 1907. Serial No. 29,376. PUBLISHED OCTOBER 29, 1907.

66,783. CERTAIN CHEMICAL PREPARATIONS. FAXON WILLIAMS & FAXON, Buffalo, N. Y.
Filed June 2, 1905. Serial No. 7,264. PUBLISHED OCTOBER 29, 1907.

66,784. LINEN THREAD FOR MACHINE-SEWING AND FOR LACE-MAKING. ARTHUR J. KAHN, New York, N. Y.
Filed May 29, 1907. Serial No. 27,765. PUBLISHED OCTOBER 29, 1907.

66,785. NAIL-SETS AND PUNCHES. MASSACHUSETTS SAW WORKS, Chicopee, Mass.
Filed August 5, 1907. Serial No. 29,221. PUBLISHED OCTOBER 29, 1907.

66,786. BAKING-POWDER. SEA FOAM BAKING POWDER CO., New York, N. Y.
Filed April 11, 1905. Serial No. 1,149. PUBLISHED OCTOBER 29, 1907.

66,787. CERTAIN CHEMICAL. GEORGE W. GILBERT, Boston, Mass.
Filed September 7, 1907. Serial No. 29,789. PUBLISHED OCTOBER 22, 1907.

66,788. WHEAT-FLOUR. REGINA FLOUR MILL CO., St. Louis, Mo.
Filed November 6, 1906. Serial No. 23,143. PUBLISHED APRIL 2, 1907.

66,789. WHEAT-FLOUR. REGINA FLOUR MILL CO., St. Louis, Mo.
Filed November 6, 1906. Serial No. 23,144. PUBLISHED APRIL 2, 1907.

66,790. AUTOMOBILES. STEVENS-DURYEA COMPANY, Chicopee Falls, Mass.
Filed July 15, 1907. Serial No. 28,805. PUBLISHED SEPTEMBER 3, 1907.

66,791. WHISKY AND GIN. BLUTHENTHAL & BICKART, Atlanta, Ga.
Filed August 26, 1907. Serial No. 29,603. PUBLISHED OCTOBER 29, 1907.

66,792. CANDIES, GLACÉ FRUITS, CHOCOLATES, BONBONS, AND CANDY KISSES. CHARLES & CO., New York, N. Y.
Filed August 22, 1907. Serial No. 29,516. PUBLISHED OCTOBER 29, 1907.

66,793. WHISKY, GIN, AND BRANDY. EDW. B. BRUCE CO., Baltimore, Md.
Filed August 13, 1906. Serial No. 21,501. PUBLISHED OCTOBER 29, 1907.

66,794. CHOCOLATE. JACOB R. ELFRETH, Philadelphia, Pa.
Filed January 18, 1906. Serial No. 16,296. PUBLISHED OCTOBER 29, 1907.

66,795. GIN. ANDREW FORBES, Philadelphia, Pa.
Filed August 29, 1907. Serial No. 29,665. PUBLISHED OCTOBER 29, 1907.

66,796. WHISKY. GOODERHAM & WORTS LTD., Toronto, Ontario, Canada.
Filed June 9, 1905. Serial No. 7,745. PUBLISHED OCTOBER 29, 1907.

66,797. FIGS. WILLIAM HILLS, Jr., New York, N. Y.
Filed September 5, 1907. Serial No. 29,759. PUBLISHED OCTOBER 29, 1907.

66,798. WHISKY. A. HIRSCHMAN & Co., St. Paul, Minn.
Filed September 10, 1907. Serial No. 29,820. PUBLISHED OCTOBER 29, 1907.

66,799. BUTTER-SCOTCH. KERR BROTHERS, Toronto, Ontario, Canada.
Filed May 31, 1907. Serial No. 27,798. PUBLISHED OCTOBER 29, 1907.

66,800. CORNED BEEF AND ROAST BEEF. LIBBY, McNEILL & LIBBY, Chicago, Ill.
Filed August 26, 1907. Serial No. 29,601. PUBLISHED OCTOBER 29, 1907.

66,801. SYRUP. MANSFIELD, WITHAM & Co., Lowell, Mass.
Filed July 29, 1907. Serial No. 29,082. PUBLISHED OCTOBER 29, 1907.

66,802. WHISKY. O'BRYAN BROS., Louisville, Ky.
Filed August 28, 1907. Serial No. 29,631. PUBLISHED OCTOBER 29, 1907.

66,803. WHISKY. O'BRYAN BROS., Louisville, Ky.
Filed August 28, 1907. Serial No. 29,632. PUBLISHED OCTOBER 29, 1907.

66,804. STOCK AND POULTRY FOOD. PENNSYLVANIA PRIMO FEED COMPANY, Harrisburg, Pa.
Filed August 5, 1907. Serial No. 29,235. PUBLISHED OCTOBER 29, 1907.

66,805. WHISKY. RECORDS & GOLDSBOROUGH, Baltimore, Md.
Filed April 11, 1907. Serial No. 26,638. PUBLISHED MAY 14, 1907.

66,806. WHISKY. WILLIAM E. SEEL, Harrisburg, Pa.
Filed May 16, 1905. Serial No. 5,796. PUBLISHED OCTOBER 29, 1907.

66,807. WHISKY. STEIN BROTHERS, Chicago, Ill.
Filed September 10, 1907. Serial No. 29,852. PUBLISHED OCTOBER 29, 1907.

66,808. WHISKY. VOGT-APPLEGATE COMPANY, Louisville, Ky.
Filed September 3, 1907. Serial No. 29,731. PUBLISHED OCTOBER 29, 1907.

66,809. WHISKY. THE WIGLESWORTH BROS. CO., Poindexter, Ky.
Filed August 19, 1907. Serial No. 29,462. PUBLISHED OCTOBER 29, 1907.

66,810. ABRASIVE MATERIAL. ABRASIVE MATERIAL CO., Philadelphia, Pa.
Filed September 19, 1907. Serial No. 30,074. PUBLISHED OCTOBER 29, 1907.

66,811. WINE. CALIFORNIA WINE ASSOCIATION, San Francisco, Cal.
Filed September 10, 1907 Serial No. 29,850. PUBLISHED OCTOBER 29, 1907.

66,812. WHISKY. HENRY CAMPE & Co., San Francisco, Cal. Filed January 5, 1906. Serial No. 15,939. PUBLISHED APRIL 23, 1907.

66,813. WHEAT-FLOUR. ELMORE MILL CO., Elmore, Minn. Filed January 9, 1906. Serial No. 16,074. PUBLISHED NOVEMBER 20, 1906.

66,814. TOOTH-BRUSHES. FLORENCE MANUFACTURING COMPANY, Northampton, Mass.
Filed September 21, 1907. Serial No. 30,136. PUBLISHED OCTOBER 29, 1907.

66,815. PORT-WINE. OFFLEY, FORRESTER & Co., London, England.
Filed December 21, 1905. Serial No. 15,557. PUBLISHED OCTOBER 29, 1907.

66,816. LOCKS AND KEYS. THE SMITH & EGGE MFG. CO., Bridgeport, Conn.
Filed September 18, 1907. Serial No. 30,053. PUBLISHED OCTOBER 29, 1907.

66,817. PAPER AND FELT ROOFING AND SHEATHING. AMERICAN SASH & DOOR CO., Kansas City, Mo.
Filed September 3, 1907. Serial No. 29,741. PUBLISHED OCTOBER 29, 1907.

66,818. CARPET-SWEEPERS. BISSELL CARPET SWEEPER COMPANY, Grand Rapids, Mich.
Filed September 3, 1907. Serial No. 29,720. PUBLISHED OCTOBER 29, 1907.

66,819. CERTAIN TEXTILES. CHINA & JAPAN TRADING COMPANY, LIMITED, New York, N. Y.
Filed August 28, 1907. Serial No. 29,641. PUBLISHED OCTOBER 29, 1907.

66,820. CERTAIN TEXTILES. CHINA & JAPAN TRADING COMPANY, LIMITED, New York, N. Y.
Filed August 28, 1907. Serial No. 29,642. PUBLISHED OCTOBER 29, 1907.

66,821. CERTAIN TEXTILES. CHINA & JAPAN TRADING COMPANY, LIMITED, New York, N. Y.
Filed August 28, 1907. Serial No. 29,643. PUBLISHED OCTOBER 29, 1907.

66,822. CERTAIN TEXTILES. CHINA & JAPAN TRADING COMPANY, LIMITED, New York, N. Y.
Filed August 28, 1907. Serial No. 29,644. PUBLISHED OCTOBER 29, 1907.

66,823. CERTAIN TEXTILES. CHINA & JAPAN TRADING COMPANY, LIMITED, New York, N. Y.
Filed August 28, 1907. Serial No. 29,645. PUBLISHED OCTOBER 29, 1907.

66,824. VALVES. HOMESTEAD VALVE MANUFACTURING COMPANY, Homestead, Pa.
Filed September 6, 1907. Serial No. 29,769. PUBLISHED OCTOBER 29, 1907.

66,825. SAND-BOXES FOR RAILWAY-CARS. J. G. BRILL COMPANY, Philadelphia, Pa., assignor to The J. G. Brill Company, a Corporation of Pennsylvania.
Filed June 7, 1907. Serial No. 27,972. PUBLISHED OCTOBER 29, 1907.

66,826. WIRE SCREENS AND WIRE-SCREEN DOORS. NEUHAUS MFG. CO., Glen Rock, Pa.
Filed August 12, 1907. Serial No. 29,362. PUBLISHED OCTOBER 29, 1907.

66,827. PLANES. STANLEY RULE & LEVEL COMPANY, New Britain, Conn.
Filed August 30, 1907. Serial No. 29,686. PUBLISHED OCTOBER 29, 1907.

66,828. CERTAIN TAPESTRY GOODS. A. THEODORE ABBOTT & COMPANY, Philadelphia, Pa.
Filed August 3, 1907. Serial No. 29,192. PUBLISHED OCTOBER 29, 1907.

66,829. COLLAPSIBLE TUBES. P. BEIERSDORF & Co., Hamburg, Germany.
Filed July 29, 1907. Serial No. 29,085. PUBLISHED OCTOBER 29, 1907.

66,830. REMEDIES FOR AGUE AND MALARIAL FEVERS. WILLIAM R. BURGOYNE, Steubenville, Ohio.
Filed August 31, 1907. Serial No. 29,707. PUBLISHED OCTOBER 29, 1907.

66,831. CHARCOAL. CLIFFORD BROS., Cleveland, Ohio.
Filed December 19, 1906. Serial No. 24,151. PUBLISHED OCTOBER 29, 1907.

66,832. REMEDY FOR SYPHILIS. WILLIAM I. DEARISO, Albany, Ga.
Filed September 24, 1907. Serial No. 30,186. PUBLISHED OCTOBER 29, 1907.

66,833. CERTAIN METAL ARTICLES. ALFRED DEWSBURY, Walsall, England.
Filed July 30, 1907. Serial No. 29,103. PUBLISHED OCTOBER 29, 1907.

66,834. TOOTH-POWDER. EVERETT S. ESTLINGEN, Los Angeles, Cal.
Filed September 24, 1907. Serial No. 30,189. PUBLISHED OCTOBER 29, 1907.

66,835. STOMACH-BITTERS. ANTHONY FISCHER, Flushing, N. Y.
Filed August 11, 1906. Serial No. 21,479. PUBLISHED OCTOBER 29, 1907.

66,836. CERTAIN MEDICINE. FISCHER CHEMICAL IMPORTING CO., New York, N. Y.
Filed October 16, 1905. Serial No. 13,650. PUBLISHED OCTOBER 15, 1907.

66,837. SKIN REMEDY. OSCAR P. GOERG, East Chicago, Ind.
Filed August 14, 1907. Serial No. 29,387. PUBLISHED OCTOBER 29, 1907.

66,838. TOILET CREAM. BRUNO H. GOLL CHEMICAL WORKS, Chicago, Ill.
Filed December 12, 1906. Serial No. 23,961. PUBLISHED MAY 7, 1907.

66,839. CERTAIN MEDICINE. H. E. BUCKLEN & COMPANY, Chicago, Ill.
Filed July 10, 1907. Serial No. 28,696. PUBLISHED OCTOBER 29, 1907.

66,840. WASHING-MACHINES FOR LAUNDRY PURPOSES. H. F. BRAMMER MANUFACTURING COMPANY, Davenport, Iowa.
Filed February 28, 1907. Serial No. 25,651. PUBLISHED APRIL 2, 1907.

66,841. REMEDY FOR RHEUMATISM, NEURALGIA, AND CHILLS. HENRY H. HARRIS, Jacksboro, Tex.
Filed September 10, 1907. Serial No. 29,844. PUBLISHED OCTOBER 29, 1907.

66,842. TONICS FOR RHEUMATISM. LICHTERMAN & JUDT, Brooklyn, N. Y.
Filed September 9, 1907. Serial No. 29,825. PUBLISHED OCTOBER 29, 1907.

66,843. OBESITY REMEDIES. MARMOLA COMPANY, Detroit, Mich.
Filed September 21, 1907. Serial No. 30,138. PUBLISHED OCTOBER 29, 1907.

66,844. CERTAIN MEDICINE. PETER P. MINIOTTI, New York, N. Y.
Filed August 27, 1907. Serial No. 29,616. PUBLISHED OCTOBER 29, 1907.

66,845. CERTAIN MEDICINE. THE MIOL MANUFACTURING CO. LIMITED, London, England.
Filed June 8, 1907. Serial No. 27,987. PUBLISHED OCTOBER 29, 1907.

66,846. COKE. NEW ENGLAND GAS & COKE COMPANY, Boston and Everett, Mass.
Filed September 27, 1905. Serial No. 13,081. PUBLISHED OCTOBER 29, 1907.

66,847. TOOTH-SOAP. JAMES S. RAMAGE, Chicago, Ill.
Filed July 3, 1907. Serial No. 28,590. PUBLISHED OCTOBER 22, 1907.

66,848. ANTISPASMODIC EXPECTORANT SEDATIVE. HARRIS REIFE, New York, N. Y.
Filed September 24, 1907. Serial No. 30,190. PUBLISHED OCTOBER 29, 1907.

66,849. CERTAIN TOILET PREPARATION. THE SAMURAI COMPANY, New York, N. Y.
Filed April 15, 1907. Serial No. 26,725. PUBLISHED OCTOBER 29, 1907.

66,850. FURNITURE-POLISH. REINHARD SCHULZE, Baltimore, Md.
Filed September 23, 1907. Serial No. 30,155. PUBLISHED OCTOBER 29, 1907.

66,851. MUSCULAR AND NERVE TONIC. SHARP & DOHME, Baltimore, Md.
Filed September 21, 1907. Serial No. 30,133. PUBLISHED OCTOBER 29, 1907.

66,852. PILLS FOR FEMALE COMPLAINTS. HORACE B. TAYLOR, Philadelphia, Pa.
Filed September 18, 1907. Serial No. 30,048. PUBLISHED OCTOBER 29, 1907.

66,853. CERTAIN TEXTILES. EUGENE L. WALDO, New York, N. Y.
Filed August 23, 1907. Serial No. 29,547. PUBLISHED OCTOBER 29, 1907.

66,854. CERTAIN CUTLERY. WESTER BROS., New York, N. Y.
Filed May 6, 1907. Serial No. 27,171. PUBLISHED OCTOBER 29, 1907.

66,855. BEER. BLACK HILLS BREWING CO., Central City, S. D.
Filed April 23, 1907. Serial No. 26,867. PUBLISHED OCTOBER 29, 1907.

66,856. ACCORDIONS. BUEGELEISEN & JACOBSON, New York, N. Y.
Filed September 12, 1907. Serial No. 29,897. PUBLISHED OCTOBER 29, 1907.

66,857. FUR HATS. THE CROFUT & KNAPP CO., South Norwalk, Conn.
Filed May 19, 1906. Serial No. 19,678. PUBLISHED OCTOBER 29, 1907.

66,858. FIRE-BRICK. DUPARQUET, HUOT & MONEUSE CO., New York, N. Y.
Filed September 19, 1907. Serial No. 30,085. PUBLISHED OCTOBER 29, 1907.

66,859. CAMPHORATED LIQUID SOAP. FISKE BROTHERS REFINING CO., New York, N. Y.
Filed September 23, 1907. Serial No. 30,157. PUBLISHED OCTOBER 29, 1907.

66,860. SOAPS. THE H. B. CLAFLIN COMPANY, New York, N. Y.
Filed September 12, 1907. Serial No. 29,891. PUBLISHED OCTOBER 29, 1907.

66,861. PERIODICAL. THE HALE PUBLISHING CO., St. Louis, Mo.
Filed August 21, 1907. Serial No. 29,500. PUBLISHED OCTOBER 29, 1907.

66,862. FRICTIONAL SUSPENSION DEVICES. HARTFORD SUSPENSION COMPANY, New York, N. Y.
Filed September 6, 1905. Serial No. 12,259. PUBLISHED OCTOBER 29, 1907.

66,863. MAGAZINE. INDUSTRY PUBLISHING COMPANY, Pittsburg, Pa.
Filed July 6, 1907. Serial No. 28,620. PUBLISHED OCTOBER 29, 1907.

66,864. LAGER-BEER. THE LOUIS BERGDOLL BREWING COMPANY, Philadelphia, Pa.
Filed November 6, 1906. Serial No. 23,131. PUBLISHED OCTOBER 29, 1907.

66,865. RUBBER HOOF-PADS. MORGAN & WRIGHT, Detroit, Mich.
Filed June 12, 1907. Serial No. 28,064. PUBLISHED OCTOBER 29, 1907.

66,866. CERTAIN RUBBER GOODS. PACIFIC COAST RUBBER CO., Seattle, Wash.
Filed August 3, 1907. Serial No. 29,183. PUBLISHED OCTOBER 29, 1907.

66,867. CERTAIN RUBBER GOODS. PACIFIC COAST RUBBER CO., Seattle, Wash.
Filed August 3, 1907. Serial No. 29,184. PUBLISHED OCTOBER 29, 1907.

66,868. BEER. THE STARK-TUSCARAWAS BREWERIES CO., Canton, Ohio.
Filed May 24, 1906. Serial No. 19,826. PUBLISHED OCTOBER 29, 1907.

66,869. CERTAIN NEEDLES. THOS. HARPER & SONS LTD., London, England.
Filed May 8, 1905. Serial No. 4,726. PUBLISHED OCTOBER 29, 1907.

66,870. GRAPE-JUICE. BOERICKE & TAFEL, Philadelphia, Pa.
Filed September 10, 1907. Serial No. 29,846. PUBLISHED OCTOBER 29, 1907.

66,871. NATURAL MINERAL WATER. CLYSMIC SPRING CO., New York, N. Y.
Filed April 2, 1907. Serial No. 26,401. PUBLISHED OCTOBER 29, 1907.

66,872. RUBBER FRUIT-JAR RINGS. CONSOLIDATED RUBBER COMPANY, Trenton, N. J.
Filed January 3, 1907. Serial No. 24,419. PUBLISHED OCTOBER 29, 1907.

66,873. CERTAIN JEWELRY. CHAS. S. CROSSMAN & Co., New York, N. Y.
Filed July 13, 1907. Serial No. 28,788. PUBLISHED OCTOBER 29, 1907.

66,874. RUBBER HOSE AND FABRIC HOSE. FABRIC FIRE HOSE COMPANY, Sandy Hook, Conn., and New York, N. Y.
Filed August 15, 1907. Serial No. 29,407. PUBLISHED OCTOBER 29, 1907.

66,875. CERTAIN EXERCISING APPARATUS. JOHN EDWIN GARRATT, London, England.
Filed August 9, 1907. Serial No. 29,318. PUBLISHED OCTOBER 29, 1907.

66,876. WEEKLY PUBLICATION. JOSEPH A. GAVIN, Buffalo, N. Y.
Filed August 26, 1907. Serial No. 29,590. PUBLISHED OCTOBER 29, 1907.

66,877. LEATHER BOOTS AND SHOES. HAYNES, SPARRELL & Co., Boston, Mass.
Filed September 24, 1907. Serial No. 30,191. PUBLISHED OCTOBER 29, 1907.

66,878. CERTAIN PRECIOUS-METAL GOODS. JOS. MAYER & BROS., Seattle, Wash.
Filed June 14, 1907. Serial No. 28,128. PUBLISHED OCTOBER 29, 1907.

66,879. COATS, OVERCOATS, VESTS, AND TROUSERS. L. ADLER BROS. & Co., Rochester, N. Y.
Filed August 14, 1905. Serial No. 11,637. PUBLISHED NOVEMBER 13 1906.

66,880. LADIES' CLOAKS, OUTER SUITS, AND OUTER SKIRTS. THE LANDESMAN HIRSCHEIMER COMPANY, Cleveland, Ohio.
Filed July 18, 1907. Serial No. 28,866. PUBLISHED OCTOBER 29, 1907.

66,881. CERTAIN SURGICAL GOODS. THE M. LINDSAY RUBBER MANUFACTURING COMPANY, New York, N. Y., and Washington, D. C.
Filed July 30, 1907. Serial No. 29,112. PUBLISHED OCTOBER 29, 1907.

66,882. SOAP. MASTER SOAP CO., Boston, Mass.
Filed August 26, 1907. Serial No. 29,589. PUBLISHED OCTOBER 29, 1907.

66,883. COATS. MCKIBBIN, DRISCOLL & DORSEY, St. Paul, Minn.
Filed November 12, 1906. Serial No. 23,286. PUBLISHED OCTOBER 29, 1907.

66,884. CARBONATED BEVERAGE CARLO T. PIRANIO, Dallas, Tex.
Filed August 22, 1907. Serial No. 29,511. PUBLISHED OCTOBER 29, 1907.

66,885. UNFERMENTED GRAPE-JUICE. THE ROYAL GRAPE JUICE CO., Harrisburg, Pa.
Filed September 9, 1907. Serial No. 29,832. PUBLISHED OCTOBER 29, 1907.

66,886. ACCORDIONS. WILHELM SPARTHE, Gera, Germany. Filed August 27, 1907. Serial No. 29,634. PUBLISHED OCTOBER 29, 1907.

66,887. CIGARS. STARLIGHT BROTHERS, New York, N. Y. Filed August 31, 1907. Serial No. 29,692. PUBLISHED OCTOBER 29, 1907.

66,888. LADIES' DRAWERS MANUFACTURED FROM TEXTILE MATERIAL. HARRIET POWELL WHEELER, New York, N. Y. Filed March 27, 1907. Serial No. 26,287. PUBLISHED OCTOBER 29, 1907.

66,889. HOSE AND PACKING. MORGAN & WRIGHT, Detroit, Mich. Filed August 15, 1907. Serial No. 29,399. PUBLISHED OCTOBER 29, 1907.

66,890. WORCESTERSHIRE SAUCE. ALART & MCGUIRE, New York, N. Y. Filed March 19, 1907. Serial No. 26,061. PUBLISHED MAY 21, 1907.

66,891. LADIES' KNITTED, NETTED, AND LACE DRAWERS. HARRIET POWELL WHEELER, New York, N. Y. Filed June 27, 1907. Serial No. 28,438. PUBLISHED OCTOBER 29, 1907.

LABELS

REGISTERED DECEMBER 31, 1907.

13,954.—*Title:* "SINN FEIN." (For Cigars.) ELMER E. KIRKLAND & Co., Binghamton, N. Y. Filed November 25, 1907.

13,955.—*Title:* "PUNCH-I-NELLO." (For Soft Drinks.) W. E. BORDEN, Goldsboro, N. C. Filed November 26, 1907.

13,956.—*Title:* "BUNTE BROTHERS." (For Chocolate.) BUNTE BROTHERS, Chicago, Ill. Filed September 19, 1906.

13,957.—*Title:* "ROYAL CAKE ICING." (For Cake-Icing.) ROYAL PURE FOOD CO., Passaic, N. J., and New York, N. Y. Filed November 30, 1907.

13,958.—*Title:* "TANALINE CREAM LOTION." (For a Lotion for the Complexion.) DAMASCUS CHEMICAL CO., Butler, Pa. Filed November 19, 1907.

13,959.—*Title:* "MUNSON'S YE-TI-VA REMEDY." (For Medicine.) JAMES G. MUNSON, San Jose, Cal. Filed November 29, 1907.

13,960.—*Title:* "DELIGHTFUL." (For Scouring-Soap.) JOSEPH GUTRADT, New York, N. Y. Filed November 25, 1907.

13,961.—*Title:* "WHITMAN'S KILRAT EXTERMINATOR." (For a Rat-Exterminator.) JAMES T. WHITMAN, Detroit, Mich. Filed November 8, 1907.

13,962.—*Title:* "THE GROTE BILLIARD BALLS." (For Billiard-Balls.) NEWARK BILLIARD BALL & MFG. CO., Newark, N. J. Filed November 19, 1907.

13,963.—*Title:* "THE NEW GROTE POOL BALLS." (For Pool-Balls.) NEWARK BILLIARD BALL & MFG. CO., Newark, N. J. Filed November 19, 1907.

PRINTS

REGISTERED DECEMBER 31, 1907.

2,188.—*Title:* "MEN'S AND BOYS' APPAREL." (For Men's and Boys' Apparel.) H. C. LYTTON, Chicago, Ill. Filed November 25, 1907.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

HALLWOOD *v.* CARROLL.

PATENT INTERFERENCE.

Decided August 1, 1907.

1. INTERFERENCE—PRIORITY—SECOND INTERFERENCE—RES ADJUDICATA.

Where in the first interference between the same parties C. formally abandoned the invention specifically stated in the issue, *Held* that in a second interference the issue of which is based upon the same disclosure as that upon which the issue of the first interference was based judgment must be rendered against C. upon the ground that the matter is *res adjudicata*.

2. SAME—SAME—SAME—SAME.

The fact that no testimony was taken in the first interference does not avoid the application of the doctrine of *res adjudicata* to the second interference, even though the issue of the latter includes details not expressly recited in the first interference, (citing *Blackford* v. *Wilder*, 127 O. G., 1255, and *Wende* v. *Horine*, 129 O. G., 2858.)

APPEAL from Examiners-in-Chief.

CASH-REGISTER.

Mr. Chester C. Shepherd and *Mr. S. E. Fouts* for Hallwood.

Mr. Wm. H. Muzzy and *Mr. F. P. Davis* for Carroll.

MOORE, *Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief reversing the decision of the Examiner of Interferences and awarding priority of invention to Hallwood.

The issue is stated in seven counts, of which the following count will serve as an illustration:

1. In a cash-register, the combination with a register, comprising a plurality of wheels having ratchet-teeth formed on their peripheries, of operating-pawls engaging said ratchet-teeth, locking devices for said pawls normally locking the same to the wheels, and operating mechanism for effecting retraction of the pawls over the ratchet-teeth and subsequent advance of the pawls to turn the wheels, and means connected to said operating mechanism and arranged to engage the locking devices for withdrawing them from the pawls upon the initial movement of said operating mechanism with provisions for reengaging the locking devices with the pawls for the advance movement of the same.

The invention involved in this interference relates to means for preventing "overthrow" of the adding-wheels of a cash-register, due ordinarily to the slamming of the drawer. This is accomplished by providing locking devices for the pawls which actuate the registering-wheels so constructed as to remain in locked position during the closing of the drawer and until the initial movement in the next opening of the drawer.

This is the second interference between the same applications, the issue of the prior interference, No. 21,803, being as follows:

In a cash-register, the combination with registering devices, of a series of operating-pawls, means or locking said pawls in engagement with said registering devices, a movable frame arranged to govern said means, a spring for holding said frame in one position, and mechanism for moving said frame against the tension of the spring.

The record of the earlier interference shows that after the preliminary statements were approved motions for dissolution were brought by both parties, Hallwood's motion relating to irregularity in the declaration of the interference and Carroll's alleging all the grounds provided for by Rule 122. The motions to dissolve were denied, and times were set for taking testimony.

Shortly before the date set for Hallwood, the junior party, to begin taking his testimony-in-chief Carroll filed a written declaration of abandonment of the invention, as provided for by Rule 125. Judgment was thereupon rendered in favor of Hallwood.

Subsequently Carroll presented an amendment containing the claims forming the issue of this interference. The Examiner finally rejected these claims upon the ground that they "read directly on the apparatus of Hallwood, with which this case has been in interference." Upon appeal by Carroll the Examiners-in-Chief reversed the decision of the Primary Examiner. The present interference was then declared.

After the preliminary statements in this interference were approved Hallwood filed a motion for dissolution, alleging all the grounds provided for by Rule 122. In his decision upon this motion the Primary Examiner held that Carroll had no right to make the claims in issue in view of the decision in the prior interference, stating, in part:

It is true that the present issues are in some respects narrower than the issue of the first interference and in other respects broader, but they all read on the disclosures of both parties, are directed to the same subject-matter, and when construed in view of the disclosures, there is no structural line of division between the thing covered by the issue of the first interference and the thing covered by the issues of the present interference.

The Examiners-in-Chief upon appeal from this decision again reversed the Primary Examiner, holding that there was a clear and definite structural line of division between the thing covered by the issue of the first interference and the thing covered by the issue of the present interference. In view of this favorable decision upon Carroll's right to make the claims proceedings in the interference were resumed and testimony was taken by both parties. The Examiner of Interferences held in his decision upon the question of priority that Carroll had a right to make the claims in issue and that the testimony showed that Carroll was first to conceive and reduce to practice the invention stated in counts 1, 4, 5, 6, and 7, and that as to counts 2 and 3 Hallwood, though first to conceive, was last to reduce to practice and was lacking in diligence at the

time Carroll entered the field and subsequently thereto. He therefore awarded priority of invention to Carroll upon all the counts of the issue.

Hallwood then appealed to the Examiners-in-Chief, again urging that the question of priority was *res adjudicata* in view of the decision upon the prior interference.

The Examiners-in-Chief in their decision upon this appeal reversed the decision of the Examiner of Interferences and awarded priority of invention to Hallwood, in view of the principle announced in the then recent decision of the Court of Appeals of the District of Columbia in *Blackford* v. *Wilder*, (127 O. G., 1255,) in which the court said:

To sum up—The parties are the same. The applications are the same and disclose the invention of each issue. The constructions relied on, respectively, as evidencing conception and reduction to practice of the invention of both issues are the same. The fundamental facts of both cases are the same. Applying the well-settled principle of estoppel by judgment, before stated, it follows inevitably that the final decision in the first interference is conclusive, unless it can be made to appear that the question upon which the determination of the second case rests is one that neither was nor could have been presented and determined in the first case.

The Examiners-in-Chief held that notwithstanding their former conclusion that there was a "structural line of division between the thing covered by the issue of the first interference and the thing covered by the issue of the present interference" the claims now involved between the same parties "are claims for the same general structure that was covered by the issue of the prior interference and might have been presented in the first instance if Carroll or Hallwood had so desired."

It is contended on behalf of Carroll that the issue of the original interference was suggested from his case to Hallwood and that inasmuch as Hallwood had no claims corresponding to the counts of the present issue he could not amend within the provisions of Rule 109. It is further urged that at the time the first interference was declared the practice stated in the decision of Commissioner Allen in *Churchward* v. *Douglass* v. *Cutler*, (106 O. G., 2016,) permitting the addition of new claims made by both parties, had not been instituted and that the parties could not therefore amend their cases to include claims covering all the subject-matter common to the two applications. This contention is not well founded. The first interference was declared May 13, 1902. Prior to this date, on April 15, 1902, a decision by Commissioner Allen was published in the case of *Reece* v. *Fenwick*, (99 O. G., 669,) in which a motion presented by both parties was granted permitting the entry by the Primary Examiner of certain claims in each party's application and directing the Primary Examiner to re-form the issue to include such claims in case he found the proposed claims allowable to the parties. In his decision upon that motion the Commissioner said:

It is the general policy of the Office to have all questions which may be brought in issue between the parties settled in one interference, and it would seem to be to the interest of the parties and of the Office to have the question whether the proposed claims may constitute an issue in this case settled at this time rather than at the conclusion of the interference.

It is therefore clear that under the practice of this Office existing at that time claims might have been introduced to cover all the interfering subject-matter.

Aside from this consideration, however, the court of appeals in the case of *Blackford* v. *Wilder*, *supra*, and in the more recent case of *Horine* v. *Wende*, decided February 5, 1907, (129 O. G., 2858,) did not excuse the failure to contest all the subject-matter common to the interfering applications, upon the ground that the rules of this Office did not provide a means for introducing claims to common subject-matter not included in the interference as at first declared.

It is further contended that the claims of the present issue do not differ merely in scope from the issue of the prior interference, but that they comprehend a separable invention. This contention is clearly untenable. The claims forming the issue of this interference, as well as those which formed the issue of the prior interference, are predicated upon the same mechanical constructions. The following principle, stated in the decision of the Commissioner in the case of *Corry and Barker* v. *Trout* v. *McDermott*, (110 O. G., 306,) which was quoted with approval by the Court of Appeals of the District of Columbia in *Horine* v. *Wende*, *supra*, is clearly applicable to this case:

The Office is justified in taking the decision as to priority of invention as *prima facie* evidence that the successful party was the first inventor not merely of the particular issue in controversy, but of the invention common to the two cases, whether more broadly or more specifically stated. The burden is upon the defeated party to show special circumstances of the particular case which make it improper to apply the decision to the other claims presented. It is not sufficient that the claims differ and that it is theoretically possible for one party to be prior inventor as to the first and the other party prior inventor as to the second, for this would apply in all cases where the claims are not identical.

The special circumstances relied upon by Carroll to avoid the effect of the decision of the earlier interference as an estoppel to his right to the claims in issue in this interference are clearly insufficient for that purpose.

It is contended that the abandonment of the invention filed by Carroll in the earlier interference was restricted to the one definite invention set forth in the issue of that interference and that it was not a general concession of priority of invention. By the terms of that instrument Carroll formally abandoned "the invention which is the subject-matter of said interference and is defined in the issue thereof, which is as follows:" reciting the issue in that interference.

The claim which formed the issue of the prior interference is based upon the same disclosure as that upon which the claims of the present issue are based, and since Carroll abandoned the invention covered by the issue of the first interference he is clearly estopped from prosecuting other claims based upon the identical structure.

It is also urged that in view of the fact that no testimony was taken in the earlier interference the doctrine of *res adjudicata* should not be applied to the claims which are now presented and which it is claimed were capable of embodiment in a different machine from that which constituted a reduction to practice of the issue of the first interference. This contention is untenable. As stated in *Horne* v. *Wende*, *supra*:

The judgment or decree in the former case is not conclusive in the later one as to matters which might have been decided, but only to those which were in fact decided. (*Cromwell* v. *Sac. Co.*, 94 U. S., 351, 353; *Last Chance Mining Co.* v. *Tyler Mining Co.*, 157 U. S., 683, 687.) The issue of the estoppel is that there has been a judicial determination of the fact and this includes every fact put in issue and necessary to the judgment or decree, whether expressly recited therein or not.

To determine, then, what has been adjudicated in the former litigation on which the claim of estoppel is founded, resort is had to the material facts alleged with certainty in the declaration or bill on which the plaintiff's right to recover is founded, and a general judgment thereon is conclusive of such facts. Hence a final judgment by default or upon demurrer is as efficacious as one rendered after a contest between the parties.

The fact judicially determined in the earlier interference between the present contestants comprised the same invention based upon the same disclosure as that upon which the present issue is predicated, and the judgment by the Examiner of Interferences in that case was conclusive of the question of priority of that invention whether the details thereof were expressly recited or not.

I find no error in the decision of the Examiners-in-Chief, and it is accordingly affirmed.

JOHNSTON v. EREKSON AND CARLSON v. BARNARD.

PATENT INTERFERENCE.

Decided November 22, 1907.

PRELIMINARY STATEMENT—MOTION TO AMEND.

A motion to amend a preliminary statement cannot be granted where it has not been shown that proper care was exercised in the preparation of the original statement and no explanation is given of how the original mistake occurred or why it was not sooner discovered.

APPEAL on motion.

FISH-SCREEN.

Mr. John A. Saul for Johnston.

Mr. W. N. Moore for Erekson and Carlson.

Messrs. C. A. Snow & Co. for Barnard.

MOORE, *Commissioner:*

This is an appeal by Johnston from the decision of the Examiner of Interferences denying his motion for permission to amend his preliminary statement.

In his original statement Johnston alleged conception in January, 1905, and disclosure in June, 1906. By his proposed amendment he desires to allege disclosure in January, 1905, and thereby carry his date back of the dates of disclosure alleged by his opponents. The affidavits of Johnston and his attorney, filed in support of the motion to amend, are very brief and general in their statements. Johnston merely states that a mistake was made in not alleging the earlier date and that it was caused by his misinterpreting the word "disclosure" to mean the time when he first showed to others the completed model. His attorney states that his communication with Johnston was through a local attorney who is a regular practitioner and not skilled in patent practice and that "it appears that Johnston is totally ignorant of the meaning of the word disclosure." It is not shown that proper care was exercised in drafting the original statement. There is no explanation of how this alleged mistake was discovered and why it was not discovered sooner.

The preliminary statements were approved and times for taking testimony were set on May 31, 1907; but the motion to amend was not filed until October 16, 1907, and after the testimony of one of Johnston's opponents had been taken and filed.

The showing is deemed insufficient to warrant the amendment for reasons indicated above and more fully set forth in *Bliss* v. *Creveling*, (112 O. G., 449); *Fowler* v. *Boyce* v. *Temple and Goodrum*, (108 O. G., 561;) *Neth and Tamplin* v. *Ohmer*, (116 O. G., 874.)

The decision of the Examiner of Interferences is affirmed.

EX PARTE UNDERWOOD TYPEWRITER COMPANY.

APPLICATION FOR REGISTRATION OF TRADE-MARK.

Decided November 27, 1907.

TRADE-MARKS—PART OF A MACHINE NOT REGISTRABLE ON A TRADE-MARK.

It being well settled that the form of part of a machine is not proper subject-matter for a trade-mark, the form of the face-plate of a type-writing machine is not registrable, since it is necessary to give a finished appearance to the machine.

ON APPEAL.

TRADE-MARK FOR TYPE-WRITERS.

Mr. Fred B. Fetherstonhaugh for the applicant.

MOORE, *Commissioner:*

This is an appeal from a decision of the Examiner of Trade-Marks refusing to register the form of a face-plate used on what is known as the "Underwood" type-writing machine as a trade-mark for type-writers.

The drawing filed as a part of the application consists of the outline of a rectangular figure having a length about twice its height, the greater portion of the upper side of which is cut out in the form of a curve. It is not a representation similar to this which appellant claims as a trade-mark; but he claims the thing itself—*i. e.*, the front face-plate, which is used on the "Underwood" type-writing machine.

The Examiner refused registration on the ground that under well-established law, as set forth in numerous decisions of the courts, the form of an article or a part of an article or machine is not proper subject-matter for a trade-mark. Appellant does not deny that this is the the law; but he contends that this case does not fall within this doctrine, for the reason that the plate which he seeks to register is not really a part of the machine, as it can be removed without changing the shape of the machine or interfering with its operation or with the supporting structure. While it is true that this plate performs none of the mechanical functions of the machine, it is, nevertheless, a part of the machine as actually made and is regarded almost as essential as the frame itself, so far as the production of a commercial article is concerned. This plate is necessary to give a finished appearance to the machine, and it would not be salable without it. This being so, if the trade-mark here claimed were valid appellant would be enabled to prevent the manufacture of the Underwood machine as it is constructed to-day after all the patents covering its structure had expired, since no salable machine could be produced without infringing the trade-mark. This is obviously contrary to the spirit of the law, which contemplates the freedom of the public to make a patented structure after the patent thereon shall have expired.

The decision of the Examiner is affirmed.

EX PARTE C. H. ALDEN COMPANY.

APPLICATION FOR REGISTRATION OF TRADE-MARK.

Decided November 11, 1907.

1. TRADE-MARK—REGISTRATION—"THE ALDEN SHOE"—NAME OF INDIVIDUAL.

A trade-mark consisting of the words "The Alden Shoe," of which the word "Alden" is printed in letters of such relative sizes as to form an ellipse, inclosed within a circle around which is printed the words "Mannish Shoes" at the top and "For Boys" at the bottom, these phrases being separated on either

side by two stars, *Held* not entitled to registration, on the ground that "Alden" is the name of an individual and that the other features are descriptive.

2. SAME—SAME—NAME OF INDIVIDUAL—DISTINCTIVE PRINTING.

The use of the letters forming the name of an individual of different sizes increasing from each end toward the center, forming in outline an ellipse, *Held* not such a distinctive manner of printing as to warrant registration, since the name is still the predominating feature.

ON APPEAL.

TRADE-MARK FOR LEATHER BOOTS AND SHOES.

Mr. T. Hart Anderson for the applicant.

BILLINGS, *Assistant Commissioner:*

This is an appeal from the decision of the Examiner of Trade-Marks refusing registration of a trade-mark for shoes comprising the words "The Alden Shoe" inclosed within a circle, the words "Mannish Shoes" being printed around the top and "For Boys" printed around the bottom of the circle, these phrases being separated on either side by two stars.

Registration of this mark is refused on the ground that the controlling feature of the mark is the word "Alden," and that being the mere name of an individual, not written or printed in a distinctive manner, is prohibited registration under section 5 of the Trade-Mark Act of 1905, which provides in part that—

* * * no mark which consists merely in the name of an individual, firm, corporation, or association, not written, printed, impressed, or woven in some particular or distinctive manner or in association with a portrait of the individual, or merely in words or devices which are descriptive of the goods with which they are used, or of the character or quality of such goods, or merely a geographical name or term, shall be registered under the terms of this act.

It is contended by the applicant that the trade-mark is registrable under the provisions of this section, for the reason, first, that said trade-mark is not "merely the name of an individual or of the applicant," and, second, that it is not "merely words or devices which are descriptive of the goods on which the said trade-mark is used."

The words "Mannish Shoes for Boys" are clearly descriptive of the character of the goods. The circle inclosing the words "The Alden Shoe" and the stars appearing on either side of the circle are merely ornamental devices, which do not confer any arbitrary signification on the trade-mark. The salient feature of the mark by which the merchandise of the applicant would undoubtedly become known is the phrase "The Alden Shoe." Of these words "The Shoe" is descriptive and "Alden" is the name of an individual. In the present case it is the surname of the president of the applicant company. The letters of the word "Alden," as appears from the specimens and the drawing forming part of the application, are of a different size, so that the word "Alden" has the general form of an ellipse. The real question to be determined in this case is whether the word "Alden" is printed in such a distinctive manner as to warrant registration under the provisions of section 5 of the act of 1905, above noted. It is believed that the controlling principle underlying the requirement of the statute that a mere name unless written or printed in a distinctive manner may not be registered is that the distinctive manner in which the name is displayed must be of a character as to give such a distinct impression to the eye of the ordinary observer as to outweigh the significance of the mere name.

As stated in the decision in *ex parte Mark Cross*, (102 O. G., 622,) in which the word "Cross" written in the same manner was considered—

The peculiarities must dominate the mere name and reduce it to a position of relative obscurity. This result has not been accomplished in the case under consideration. In this case only a slight peculiarity of form of expression of the mere name has been obtained by the use of a common expedient of the type-setter, and it must be held that for determination of the identity of this mark it remains practically the mere name "Cross."

In the present case the manner in which the word "Alden" is written is not so dissimilar from that in which another person by the name of "Alden" might employ his name in ordinary block type as to avoid confusion in the mind of the public. It is therefore held that the predominating feature of this mark by which the goods would be known is not displayed in such a distinctive manner as to warrant the registration of the mark under section 5 of the act of 1905. The mere inclusion of descriptive words written in a certain manner does not confer registrability upon the mark, and the ornamental devices are not of sufficient prominence to create an arbitrary symbol or to warrant the registration of the mark as a whole.

The decision of the Examiner of Trade-Marks is affirmed.

SMITH v. INGRAM.

PATENT INTERFERENCE.

Decided December 4, 1907.

1. INTERFERENCE—MOTION TO AMEND PRELIMINARY STATEMENT.

Where it appears that at the time of making his preliminary statement a party did not read the counts of the issue, that the alleged mistake therein was not discovered till testimony was taken, and the motion to amend was not brought for more than two months thereafter, *Held* that neither proper care in preparing the statement nor diligence in investigating the matter and discovering the mistake was shown.

2. SAME—SAME—POSTPONING DECISION AND FINAL HEARING.

Whether a decision on a motion to amend a preliminary statement should be rendered before or at final hearing is a matter within the discretion of the Examiner of Interferences.

APPEAL on motion.

ADDING-MACHINE.

Mr. E. G. Siggers for Smith.

Mr. Jacob Felbel for Ingram.

BILLINGS, *Assistant Commissioner:*

This case comes up on two appeals by Smith, first, from the decision of the Examiner of Interferences denying his motion to amend his preliminary statement, and, second, from the decision of the Examiner of Interferences denying his motion for postponement of the consideration of the motion to amend until final hearing.

Smith's original preliminary statement, filed May 29, 1906, alleged disclosure and reduction to practice in September, 1904. The dates alleged by his opponent are March, 1903, for conception, and July, 1903, for reduction to practice. Smith by his amendment desires to allege, as to counts 1, 3, 4, 6, 7, and 8, disclosure in December, 1902, and reduction to practice in January, 1903, and to thereby carry his dates, except for the invention of counts 2 and 5, back of those of his opponent.

It appears that the original interference was dissolved in part and redeclared with added counts and that Smith filed a second preliminary statement containing the same allegations as the first. Smith took his testimony in June and July, 1907, but did not file his motion to amend his preliminary statement until September 25, 1907, though he did give notice of his intention to file such motion to amend during the taking of testimony. In support of his motion Smith relies upon the testimony taken in the interference and on the affidavit of his attorney. According to the showing made therein the Examiner of Interferences found that Smith was careless and negligent in the preparation of his preliminary statement and denied his motion to amend upon this ground.

As an excuse for the alleged error in the original statement, it is asserted that Smith was sick at the time it was prepared and upon being advised that the interference related to the "comb-plate or actuator master-wheel guide-plate," assumed that it related merely to a certain machine; that he did not read the counts of the interference and did not know that the issue was broad enough to include earlier machines. It does not appear, however, that Smith's sickness was responsible for the alleged error in the statement, for he did not after his recovery read over the counts of the issue, and certainly it does not excuse the mistake in the second preliminary statement. The second preliminary statement related to the counts added to the interference, and Smith was under obligation to prepare this statement concerning the invention of these counts with the same care he should have exercised with respect to the counts of the original interference. It is claimed that the error in the statement was discovered by Smith in May, 1907, at about the time his attorney visited the factory for the purpose of preparing the evidence to be offered in his behalf. This was not until a year after the execution of his original preliminary statement and some months after the execution of the second statement. No excuse is offered for the failure to sooner discover the error. It appears that both Smith and Laganke, the superintendent of the factory, were conversant all this time with the earlier machines claimed to embody the invention of the issue, but failed to recognize that they might embody the issue. This fact Smith claims to have perceived at once when he on this occasion read over for the first time the counts of the interference. Apparently it would have been equally clear at any previous time since the declaration of the interference if he had taken the trouble to examine the issue.

Appellant is held not to have exercised proper care in preparing his statement, nor diligence in investigating the matter and discovering the alleged mistake. No error is found in the decision of the Examiner of Interferences denying the motion on this ground.

The second motion, requesting that consideration of the subject-matter of the first motion be postponed until final hearing, raises a matter that is properly within the discretion of the Examiner of Interferences. Where testimony taken must be considered in determining a motion to amend a preliminary statement, it is within his discretion to consider such testimony for the purpose of deciding the motion prior to final hearing. When in his opinion the conditions of the case justify an early adjudication of the questions raised, his decision should not be delayed.

For the reasons stated the decision of the Examiner of Interferences upon both motions is affirmed.

DANQUARD v. COURVILLE.

PATENT INTERFERENCE.

Decided December 7, 1907.

1. INTERFERENCE—MOTION TO DISSOLVE—INFORMALITY IN DECLARATION.

A motion to dissolve on the ground of informality in declaring the interference was properly refused transmission where it appears that the alleged informality relates to the right of the parties to make the claim.

2. SAME—SAME—MOVING PARTY'S RIGHT TO MAKE THE CLAIM.

Where both parties are applicants and under the head of informality in declaring the interference it is alleged in a motion to dissolve that the claims do not apply to the structures of either party, *Held* that this is not such an admission as to justify a decision on priority adverse to the moving party. (The case of *Lipe* v. *Miller* (109 O. G., 1608) distinguished.)

APPEAL on motion.

REGULATOR FOR PNEUMATICALLY-OPERATED MUSICAL INSTRUMENTS.

Messrs. Southgate & Southgate for Danquard.

Messrs. Whittemore, Hulbert & Whittemore and *Messrs. Bacon & Milans* for Courville.

BILLINGS, *Assistant Commissioner:*

This is an appeal by Courville from the decision of the Examiner of Interferences transmitting Danquard's motion to dissolve as to the grounds that the issue is not patentable and that the applicant Courville had no right to make the claims.

The record shows that the Examiner of Interferences refused to transmit the first ground of Danquard's motion, which alleges that there has been an informality in the declaring of the interference, for the reason that the grounds of the issue are incorrectly drawn and that they do not apply to the structure of either party. This ground was refused transmission by the Examiner of Interferences, for the reason that the facts stated in support thereof relate to the right of the parties to make the claim and are not properly transmissible under the head of informality in the declaration of an interference.

It is not denied by the appellant that the grounds of the motion which were transmitted are sufficiently explicit; but it is contended that the reasons set forth in the first grounds of Danquard's motion which was not transmitted constitute an admission by him that the issue is not patentable to him; that in view of this admission the motion to transmit should have been denied and priority of invention awarded to Courville. This contention is not well founded. As stated in the case of *Goodwin* v. *Smith*, (123 O. G., 998)—

there is no reason, as was pointed out in *Miller* v. *Perham*, (121 O. G., 2667,) why the Office, having once decided that a party is entitled to make certain claims, should reconsider the question on that party's own motion.

The alleged ground of irregularity in the declaration stated in Danquard's motion is therefore not one which could be properly transmitted. Furthermore, this ground of the motion does not merely deny the right of Danquard to claim the invention in issue and is not

therefore an admission upon which a decision of priority could be rendered in favor of his opponent.

The appellant has cited the decision of *Lipe* v. *Miller*, (109 O. G., 1608,) in which it was held that where an applicant alleges that the issue is not patentable to him when in interference with a patent the motion should not be transmitted, but the interference summarily dissolved. The conditions of that case were radically different from those in the present case. In the case of *Lipe* v. *Miller* the sole question to be determined was the right of the applicant to make the claim in issue. This claim had already been granted to the patentee. In the present case neither party has been granted a patent; but the Office has already held that each of the applicants is entitled to make claims in the terms of the issue. No reason, therefore, appears which would warrant the summary dissolution of the interference or a decision of priority in favor of Courville.

The decision of the Examiner of Interferences is affirmed.

EX PARTE SHAVER.

APPLICATION FOR PATENT.

Decided December 9, 1907.

APPLICATION—SWORN TO IN BLANK—STRIKING FROM FILES—RULE 31.

Where an inventor assigns an invention and subsequently alleges that the application papers were executed in blank and petitions that the application be stricken from the files, *Held* that because of the assignment he is estopped from denying the validity of the executed papers, especially when the application has been on file nearly a year.

ON PETITION.

SOAP-DISPENSING MACHINE.

Messrs. Sturtevant & Mason for the petitioner.

BILLINGS, *Assistant Commissioner:*

This is a petition by the applicant that the above-entitled application be stricken from the files in accordance with the provisions of Rule 31, since it was signed and sworn to in blank and without actual inspection of the petition and specification.

The specification is dated October 29, 1906, and the jurat to the oath and the assignment are dated October 29, 1906, and November 5, 1906, respectively. In affidavits accompanying the petition applicant states that he signed these papers in blank prior to severing his connection with the Hygienic Soap Granulator Company, the assignee of this application, in September, 1906, and that since that time he has signed no papers for this company. There are also filed affidavits corroborating applicant's statement that he severed his connection with the assignee company in September, 1906.

The showing made is not deemed sufficient to justify striking the case from the files. A petition of this kind would be looked upon with disfavor even if it had been filed promptly; but it appears from the records of this Office that the applicant took no steps to find out if the application had been filed in his name for nearly a year after the time when he alleges that he severed his connection with the assignee company. If a patent had been granted on this application, applicant would have been estopped from denying its validity. (*Force* v. *Sawyer-Boss Mfg. Co. et al.*, 111 F. R., 902; *Siemens-Halske Electric Co.* v. *Duncan Electric Mfg. Co. et al.*, 142 F. R., 157; *Mathews Gravity Carrier Co.* v. *Lister et al.*, 154 F. R., 490.) It is believed that in this case, by a parity of reasoning, he should be estopped from denying that the application which he has assigned was properly executed. It is not shown that the assignment was made without consideration or, if consideration was given, as stated in the assignment, that it has been returned. The fact that no affidavits have been filed on behalf of the assignee controverting the allegations in the applicant's affidavits does not affect the operation of the estoppel.

The petition is denied.

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., December 26, 1907.

Irwin & Company, their assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Walter S. Bare, of 227 North Duke street, Lancaster, Pa., for registration of a trade-mark registered to Irwin & Company, of 185 Milk street, Boston, Mass., and no response to the said declaration mailed by the Patent Office in the usual manner to Irwin & Company having been received, and there being no evidence of its having been received by the said Irwin & Company, it is presumed that the company has not received the same. Therefore notice is hereby given to the said Irwin & Company, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents in order that due notice of the declaration of this interference may be forwarded to them.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall be entered at the expiration of the period of publication, the interference will be proceeded with as in case of default.

EDWARD B MOORE, *Commissioner.*

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UNITED STATES COURTS

IN THE MATTER OF

PATENTS, TRADE-MARKS, ETC.

OFFICIAL GAZETTE—NOVEMBER–DECEMBER, 1907.

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DIGEST OF DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

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DIGEST OF DECISIONS.

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ABANDONMENT OF APPLICATIONS.

1. FINAL ACTION ON FORM AND MERITS—APPEAL ON MERITS TOO LATE.

Where the Examiner finally rejected the claims of an application and also made final certain objections to such claims on July 3, 1906, and a petition upon the formal matters was taken on August 2, 1906, which was decided by the Commissioner on August 27, 1906, an appeal to the Examiners-in-Chief filed August 24, 1907, is filed without the period of one year allowed for prosecution, which dates from the final rejection and not from the decision of the Commissioner on the petition.

[*Ex parte* Wentzel, 941.

2. DELAY SLIGHT—UNAVOIDABLE.

Where delay beyond the year allowed for action is slight and the application prior to such delay had been prosecuted vigorously and in good faith and the applicant had reason to suppose that his action was filed in time, the delay may be regarded as unavoidable. [Id.

3. SUFFICIENCY OF ACTION.

Where on December 29, 1905, an Examiner rejected certain claims and made a formal objection to another claim, to which the applicant made a sufficient response on January 27, 1906, with the exception that he failed to mention the informal claim, and the Examiner in his next action, on February 16, 1906, reiterated the formal objection, but did not state that the applicant's action by reason of failure to mention the informal claim was unresponsive and did not make such objection final, *Held* that an amendment curing the informality filed January 18, 1907, is filed in proper time, the renewal of the objection by the Examiner without objection to the insufficiency of the applicant's action of January 27, 1906, constituting a waiver of the question of incompleteness of such action.

[*Ex parte* Westinghouse, 1420.

ABANDONMENT OF INVENTION.

(See Priority of Invention.)

ABANDONMENT OF TRADE-MARKS.

(See Trade-Marks, 5, 16.)

ACQUIESCENCE.

(See Interference, 17.)

AFFIDAVITS.

(See Motion to Dissolve Interference, 4.)

AGENT.

(See Infringement, 2.)

ALLEGATIONS.

(See Motion to Dissolve Interference, 1, 6, 7, 9; Preliminary Statement; Trade-Marks, 15.)

AMENDMENT.

(See Applications, 1.)

NEW MATTER—RIGHT TO MAKE CLAIMS.

Where the original specification of an application relating to combined type-writing and adding machines did not describe the adding-machine, but stated that the invention was illustrated "in connection with an adding-machine of the class known as 'registering-accountants'" and only the case and a few minor elements thereof were shown in the drawings, *Held* that an amendment of the application reciting a patent disclosing the construction referred to by the words "registering-accountants" did not constitute a departure from the original disclosure in view of evidence showing that such term referred to a construction well known in the market embodying the construction of the patent and that such construction was the only one on the market which had the distinctive appearance illustrated in the original drawing. *Held*, further, that such party had a right to make claims to a combination including specific elements of such adding-machine.

[Hopkins v. Newman, 1161.

AMENDMENT TO PRELIMINARY STATEMENT.

(See Interference, 6, 14; Motion to Amend Preliminary Statement.)

ANTICIPATION.

(See Trade-Marks, 7.)

APPEAL.

(See Motion to Dissolve Interference, 4; Patentability; Trade-Marks, 9, 25, 27.)

APPEAL FROM THE EXAMINER OF INTERFERENCES.

(See Trade-Marks, 26.)

APPEAL TO THE EXAMINERS-IN-CHIEF.

(See Decisions of the Examiners-in-Chief.)

APPLICATION EXECUTED IN BLANK.

(See Applications, 3.)

APPLICATIONS.

(See Abandonment of Applications; Amendment; Claims; Drawings; Examination of Applications; Labels; Trade-Marks.)

1. AMENDMENT FROM DESIGN TO MECHANICAL CASE.

Where an applicant in presenting his own case requested in his petition the grant of a design patent upon a letter-scale, but his specification, claim, and oath were of the form prescribed for mechanical application, and it appears from the actions by the applicant in the case that it was his intention to obtain protection for an article of manufacture, *Held* that he should be permitted to amend the case to accord with the form prescribed for mechanical applications. [*Ex parte* Saunders, Jr. 1164.

2. COMPLETION—DRAWINGS SIGNED BY ATTORNEY WITHOUT FULL POWER.

Where all papers necessary for a complete application are filed on October 30, 1902, but the drawings were signed by substitute attorneys who had not full power, and on November 28, 1902, full power is given to such attorneys, upon whose request the date of the application is changed to November 28, 1902, *Held* that the application is entitled to the date of October 30, 1902, as a constructive reduction to practice, the informality being one which could be cured, and was in fact cured, by subsequent ratification by the persons delegating the power.

[Marconi v. Shoemaker, 1939.

3. SWORN TO IN BLANK—STRIKING FROM FILES—RULE 31.

Where an inventor assigns an invention and subsequently alleges that the application papers were executed in blank and petitions that the application be stricken from the files, *Held* that because of the assignment he is estopped from denying the validity of the executed papers, especially when the application has been on file nearly a year. [*Ex parte* Shaver, 2422.

ASSIGNMENT.

(See Applications, 3.)

ASSIGNMENT OF TRADE-MARKS.

(See Trade-Marks, 16, 18, 19.)

BAR TO PATENT.

(See Interference, 12.)

CANCELATION OF FIGURES OF THE DRAWINGS.

(See Drawings.)

CLAIMS.

(See Interference, 1, 2, 3; Rejection of Claims.)

FUNCTIONAL—OPEN TO OBJECTION.

Claims which fail to include sufficient mechanical elements to effect the function expressed in the claims are open to objection, and from objection on such ground petition may be taken to the Commissioner. [*Ex parte* Plumb, 1165.

COMMISSIONER OF PATENTS.

(See Abandonment of Applications, 1; Claims: Public Use; Trade-Marks, 26.)

CONCEALMENT OF INVENTION.

1. SUPPRESSION AFTER REDUCTION TO PRACTICE.

The failure to file an application for more than two years after reduction to practice where the machine was put into actual use in a factory the policy of the management of which was not to patent machines used for their own work is not such a concealment or suppression of the invention as will subordinate the inventor's rights to one who, claiming conception in July, 1900, reduced it to practice in April, 1901, but did not file an application until May, 1902, and did not arrange to manufacture the same until June, 1903.

[*Burson v. Vogel, 942.

2. SAME.

Where a party constructed a device in October, 1900, but allowed it to remain entirely within the knowledge of the inventor and his co-employees until knowledge was obtained of the invention of the opposing party, when the application in interference was filed showing a different form, apparently suggested by such knowledge, *Held* that such party's rights were forfeited by concealment. [Marconi v. Shoemaker, 1939.

CONCEPTION OF INVENTION.

(See Interference, 13.)

IDEA OF MEANS NECESSARY.

The mere idea that there ought to be an arrangement to strip a stocking from a board or form on which it was mounted and return the board to the one who placed the stockings thereon and the illustration of this idea by the originator thereof by stripping a stocking from a form by the passage thereof between his hand and the edge of a table does not amount to a conception of an invention. No mechanism was described by which the desired result could be obtained. Invention consists of the conception of the idea and of means for putting it in practice and producing the desired result. Until the latter conception is complete and ready to be put in some practical form there is no available conception of the invention within the meaning of the patent law. (*Mergenthaler* v. *Scudder*, 81 O. G., 1417; 11 App. D. C., 264, 276.) [*Burson v. Vogel, 942.

CONSTRUCTION OF CLAIMS.

(See Interference, 2.)

CONSTRUCTION OF RULES.

(See Interference, 4; Motion to Dissolve Interference, 2, 3, 5.)

CORPORATIONS.

(See Trade-Marks, 23.)

DATE OF FILING APPLICATIONS.

(See Applications, 2; Concealment of Invention; Preliminary Statement.)

DECEPTION.

(See Trade-Marks, 17, 20.)

DECISIONS OF THE EXAMINERS-IN-CHIEF.

1. DECISION BY TWO MEMBERS.

A decision by two of the Examiners-in-Chief is a decision of the Examiners-in-Chief. [*Ex parte* Helbig, 1687.

2. SAME—REHEARING.

A rehearing of an appeal to the Examiners-in-Chief is not necessary merely because one of the Examiners-in-Chief was not present. If the two members are present, the decision is valid. If they disagree, the case may be set for rehearing, as provided in Order No. 1664, (121 O. G., 1963.) [Id.

DECLARATION.

(See Trade-Marks, 15.)

DELAY IN FILING MOTION.

(See Motion to Dissolve Interference, 1.)

DELAY IN MAKING APPEAL.

(See Abandonment of Applications, 2.)

DEMURRER.

(See Trade-Marks, 1, 2.)

DESCRIPTION OF GOODS.

(See Trade-Marks, 3, 4, 9.)

DESCRIPTIVE TERMS.

(See Trade-Marks, 7, 29, 30.)

DESIGNS.

(See Applications, 1.)

DILIGENCE.

(See Motion to Amend Preliminary Statement, 2.)

DISCRETION OF THE EXAMINER OF INTERFERENCES.

(See Motion to Amend Preliminary Statement, 3.)

DRAWINGS.

(See Applications, 2.)

ELIMINATION OF UNNECESSARY ILLUSTRATIONS.

Held that the requirement by the Examiner that unnecessary figures be canceled and that the remaining figures be reduced to a reasonable scale and placed on a single sheet was right. [*Ex parte* Kell, 2144.

EARLIER APPLICATIONS.

(See Interference, 14.)

EMPLOYER AND EMPLOYEE.

(See Interference, 17.)

EQUIVALENT.

(See Interference, 1; Trade-Marks, 10, 11.)

ESTOPPEL.

(See Applications, 3.)

EVIDENCE.

(See Interference, 7; Trade-Marks, 23.)

EXAMINATION OF APPLICATIONS.

(See Rejection of Claims.)

SUFFICIENCY OF DISCLOSURE—PRACTICE.

Where no reason is given for the use of certain ingredients of the article of manufacture which are set forth in the specification and the Examiner is of the opinion that such ingredients have a deleterious effect or no effect at all, he should not refuse to act upon the merits of the case, but should reject the claim for this reason. [*Ex parte* Danford, 942.

EXAMINER OF TRADE-MARKS.

(See Trade-Marks, 8.)

EXHIBITS.

(See Trade-Marks, 25.)

EXPERIMENTAL DEVICES.

(See Preliminary Statement.)

FINAL HEARING.

(See Motion to Amend Preliminary Statement, 3; Reopening of Interference, 2; Trade-Marks, 4.)

FINAL REJECTION OF CLAIMS.

(See Rejection of Claims.)

FIRST AND ORIGINAL INVENTOR.

(See Interference, 16, 17.)

FOREIGN INVENTOR.

(See Interference, 13.)

FOREIGN PATENTS.

(See Interference, 12.)

FORMER DECISIONS CITED.

(See Conception of Invention; Interference, 1; Priority of Invention, 2; Reduction to Practice, 2.)

FORMER DECISIONS DISTINGUISHED.

(See Motion to Dissolve Interference, 9; Preliminary Statement; Trade-Marks, 13.)

FUNCTIONAL CLAIMS.

(See Claims.)

GEOGRAPHICAL TERMS.

(See Trade-Marks, 14.)

INDEFINITENESS.

(See Interference, 11; Motion to Dissolve Interference, 1, 7.)

INFRINGEMENT.

(See Trade-Marks, 22.)

1. CONTRIBUTORY—SALE OF UNPATENTED SUPPLIES FOR USE WITH PATENTED MACHINE.

Where a machine is sold under the restriction that it was to be used only with supplies made by the vendor, a defendant who sells supplies which are used with such machine cannot be held liable as a contributory infringer of the patent for the machine where it does not appear that the defendant ever solicited an order for such supplies, or was ever notified by the plaintiffs of the rights which they claimed, or that the executive officers of defendant had knowledge of the special character of such machines or the restrictions on the purchase of supplies.

[*Cortelyou and Cortelyou, administrators, *et al*, v. Charles Eneu Johnson Company, 2147.

2. NOTICE TO SALESMAN NOT NOTICE TO COMPANY.

Notice to a salesman of a company who was not an officer or general agent of the company is not such notice as will bind the principal with respect to all future transactions. [*Id.

INTERFERENCE.

(See Concealment of Invention; Conception of Invention; Motion to Amend Preliminary Statement; Motion to Dissolve Interference; Patentability; Preliminary Statement; Priority of Invention; Public Use; Reduction to Practice; Reopening of Interference; Trade-Marks, 3, 4, 12, 13, 18, 19.)

1. CONSTRUCTION OF ISSUE—EQUIVALENTS.

Where the claim in issue calls for a "plurality of blast-nozzles," a device which has an "oscillating blast-nozzle" cannot be considered as a reduction to practice on the ground that it is an equivalent. In the consideration of an interference the Patent Office is no more competent than the courts to say that an element which an applicant has placed in his claims is an immaterial one. (*Streat* v. *Freckleton*, 87 O. G., 695.)

[Collom v. Thurman, 359.

2. SAME.

While applications are pending in this Office the claims thereof will be construed as broadly as the ordinary meaning of the language employed will permit. [Junge v. Harrington, 691.

3. SAME.

The party who first presents claims should not later be heard to urge limitations upon the terms thereof which might readily have been expressed therein had it been intended that they should be so restricted. [Id.

4. RULE 130.

Rule 130 does not confer upon a party the absolute right to contest his opponent's right to a claim, but allows him to do so only when the objections urged against his opponent's right to make the claim do not apply with equal force to his own case.

[Pym v. Hadaway, 692.

5. LIMIT OF APPEAL FROM DECISION ON PRIORITY.

The bringing of motions or the taking of petitions to the Commissioner will not stay the running of the limit of appeal from a decision on priority. [Id.

6. PRELIMINARY STATEMENT—AMENDMENT—CARRYING BACK DATE OF REDUCTION TO PRACTICE.

The junior party to an interference permitted to amend his preliminary statement by carrying the date of the production of two full-sized devices from a date subsequent to the opponent's filing date, on which the opponent alone relies for reduction to practice, to a date prior thereto, where the motion to amend was brought only thirteen days after the filing of the original statement and before any testimony was taken and where it appears from affidavits filed that prior to the execution of his first preliminary statement he examined such records and consulted with such persons as would in his opinion enable him to secure all the necessary facts. [Davis v. Kennard, 695.

7. EVIDENCE—PRIVATE DIARY IN SHORTHAND.

An inventor after having testified in regard to his conception and the work done thereon produced a shorthand diary and read a number of entries from the diary showing dates and memoranda of work done. Of this evidence the court said: "Burson is a man over seventy years of age and appears to have kept a diary for fifty years in which he made a daily record of events. There is nothing in the appearance of this diary to excite suspicion. The dates follow consecutively. It is true that the record is in shorthand after the Pittman system; but it appears that interpretation thereof could be made with sufficient certainty by one skilled in that method. * * * We see no substantial difference between this and the ordinary use of memoranda by a witness to refresh his memory."

[*Burson v. Vogel, 942.

8. RIGHT TO MAKE CLAIMS—RES ADJUDICATA.

Where the Examiner, on a motion to dissolve, holds that a party has a right to make the claims in issue and upon petition to the Commissioner by the opposing party asking him, under his supervisory authority, to review the favorable decision of the Examiner the Commissioner refuses to pass upon the question, it cannot be successfully urged that the question of the right of such party to make the claims is *res adjudicata*.

[Hopkins v. Newman, 1161.

9. PRIORITY—SECOND INTERFERENCE—RES ADJUDICATA.
As to claims involved in a second interference between the same parties which could have been made in the first interference, *Held* that a final decision in the first interference on the question of priority renders that question *res adjudicata*. [Id.

10. PRINTING TESTIMONY.
The fact that the senior party took no testimony is not a sufficient reason for waiving the requirements of Rule 152.
[Albers Bros. Milling Company *v.* Forrest, 1419.

11. INDEFINITE MOTION—AMENDED MOTION—TRANSMISSION.
It is well settled that piecemeal action cannot be permitted; but where a party acting in good faith files a motion which is held to be indefinite and an amended motion curing the informalities is promptly filed within the limit of appeal set from the previous decision the amended motion should be transmitted. [Gold *v.* Gold, 1422.

12. PRIORITY—FOREIGN PATENT AS BAR NOT CONSIDERED.
Where the proofs of the junior party to an interference are insufficient to overcome the date of a foreign patent granted to the senior party, the question whether a foreign patent granted to such senior party stands as a bar to the allowance of his United States application will be left for *ex parte* consideration after the termination of the interference.
[Gueniffet, Benoit and Nicault *v.* Wictorsohn, 1685.

13. SAME—CONCEPTION—KNOWLEDGE IN THIS COUNTRY BY FOREIGN INVENTOR.
Mere knowledge of an invention in this country by a foreign inventor or his agent *Held* not equivalent to a conception of the invention in this country. [Id.

14. PRELIMINARY STATEMENT—AMENDMENT—MISTAKE OF LAW.
An amendment to a preliminary statement will not be permitted upon the allegation of the moving party that at the time of the declaration of the interference he supposed that the issue was restricted to the machine shown in the application, but that he later learned that the Examiner construed it so broadly as to read on a prior application, where it did not appear that the Examiner had construed the issue except by declaring the interference, and that the Examiner had held, on a motion to shift the burden of proof, that the issue was not readable upon the earlier application. In any event the mistake was one of law and affords no ground for amendment.
[Miller *v.* Wallace, 1689.

15. PRIORITY—CONSTRUCTIVE REDUCTION TO PRACTICE OVERCOME BY PUBLICATION.
A published description of an invention by the inventor describing the invention in such full and intelligible manner as to enable persons skilled in the art to understand the operation of the invention and to carry it into practical use is sufficient to overcome the filing date of the application of the opposing party. [Marconi *v.* Shoemaker, 1939.

16. ORIGINALITY—FAILURE TO ASSERT CLAIM TO INVENTION.
Where W. stated in the presence of K. and a witness that he proposed to file an application for patent for an invention which each now claims to have made and K. at that time made no protest, but a few days later went to W. and asked to have his name in the patent, *Held* that as it appeared that W. was at the head of the business and was a man of violent temper and that K. made it a practice not to dispute W. in the presence of others, and in view of the fact that K. was an intelligent man at the head of a large department his request to have his name in the patent indicated that he regarded himself at that time to be the inventor of the process in issue. [Weidmann *v.* Knup, 2143.

17. SAME—SILENCE AFTER FILING APPLICATION.
A failure to assert the origination of an invention by a subordinate officer against the claims of his superior cannot be regarded as acquiescence in the superior officer's claims to the invention where prior to that time the subordinate officer had filed an application for such invention. [Id.

INVENTION.

(See Concealment of Invention; Conception of Invention.)

IRREGULARITY IN DECLARATION.

(See Motion to Dissolve Interference, 7, 8, 9.)

JUDGMENT ON THE RECORD.

(See Motion to Dissolve Interference, 3, 5.)

LABELS.

(See Trade-Marks, 17.)

REGISTRABILITY.
The use of a paraph under certain words of a label which is otherwise devoid of artistic merit is not sufficient to render the label registrable.
[*Ex parte* The Samuel Winslow Skate Mfg. Co., 692.

LIMITATION OF CLAIMS.

(See Interference, 2, 3.)

LIMIT OF APPEAL.

(See Abandonment of Applications, 1; Interference, 5, 11; Trade-Marks, 26.)

MACHINE.

(See Infringement, 1; Reduction to Practice, 1, 2; Trade-Marks, 28.)

MISTAKE.

(See Interference, 14; Motion to Amend Preliminary Statement, 1, 2.)

MOTION TO AMEND PRELIMINARY STATEMENT.

1. INTERFERENCE—PRELIMINARY STATEMENT.
A motion to amend a preliminary statement cannot be granted where it has not been shown that proper care was exercised in the preparation of the original statement and no explanation is given of how the original mistake occurred or why it was not sooner discovered.
[Johnston *v.* Erekson and Carlson *v.* Barnard, 2419.

2. SAME—SAME.
Where it appears that at the time of making his preliminary statement a party did not read the counts of the issue, that the alleged mistake therein was not discovered till testimony was taken, and the motion to amend was not brought for more than two months thereafter, *Held* that neither proper care in preparing the statement nor diligence in investigating the matter and discovering the mistake was shown.
[Smith *v.* Ingram, 2420.

3. SAME—SAME—POSTPONING DECISION AND FINAL HEARING.
Whether a decision on a motion to amend a preliminary statement should be rendered before or at final hearing is a matter within the discretion of the Examiner of Interferences. [Id.

MOTION TO DISSOLVE INTERFERENCE.

1. DELAY IN BRINGING EXCUSED.
A delay of seven days in filing an amended motion to dissolve, curing objections relating to indefiniteness of the allegations of a prior motion, may be excused where it appears that the first motion attempted in good faith to comply with the practice of the Office. [Auxer *v.* Peirce, Jr., 359.

2. GROUND OF NON-PATENTABILITY BASED ON ART TO BE SUBSEQUENTLY CITED—TRANSMISSION.
Held that a motion to dissolve an interference on the ground that the claims in issue are not patentable in view of certain patents and others which "will be cited more than five days before the hearing" should not be transmitted. Rule 122 requires that the motion for dissolution must "contain a full statement of grounds relied upon." [Papendell *v.* Bunnell *et al*, 362.

3. BROUGHT IN ANSWER TO ORDER TO SHOW CAUSE UNDER RULE 114 MAY BE TRANSMITTED.
The fact that a record judgment may be rendered against a junior party under the provisions of Rule 114 does not preclude him from presenting motions for dissolution. [Id.

4. AFFIDAVITS.
When a party may not appeal from a decision on a motion to dissolve, he may not appeal from a determination upon the admissibility of affidavits filed with that motion.
[Brown *v.* Inwood and Lavenberg, 1423.

5. PROPER ANSWER TO ORDER TO SHOW CAUSE UNDER RULE 114.
A motion to dissolve on the ground of non-patentability of the issue is a proper answer to an order under Rule 114 to show cause why judgment of priority should not be rendered on the record.
[Field *v.* Colman, 1656.

6. MOTION TO SHIFT BURDEN OF PROOF—ORDER OF CONSIDERATION.
The consideration of a motion to dissolve alleging non-patentability of the issue should not be postponed until after the determination of a motion to shift the burden of proof, as such practice would result in piecemeal prosecution of the motion to dissolve. [Id.

7. INDEFINITENESS OF ISSUE—HOW RAISED.
Vagueness and indefiniteness of the issue are proper questions to raise under allegations of informality or irregularity in the declaration of the interference. [Id.

8. INFORMALITY IN DECLARATION.
A motion to dissolve on the ground of informality in declaring the interference was properly refused transmission where it appears that the alleged informality relates to the right of the parties to make the claim. [Danquard *v.* Courville, 2421.

9. MOVING PARTY'S RIGHT TO MAKE THE CLAIM.
Where both parties are applicants and under the head of informality in declaring the interference it is alleged in a motion to dissolve that the claims do not apply to the structures of either party, *Held* that this is not such an admission as to justify a decision on priority adverse to the moving party. (The case of *Lipe* v. *Miller*, 109 O. G., 1608, distinguished.) [Id.

MOTION TO REOPEN INTERFERENCE.

(See Reopening of Interference, 2.)

MOTION TO SHIFT BURDEN OF PROOF.

(See Motion to Dissolve Interference, 6.)

MOTION TO STRIKE OUT TESTIMONY.

(See Trade-Marks, 24, 27.)

NEW MATTER.

(See Amendment.)

NOTICE.

(See Infringement, 2.)

OPERATIVENESS.

(See Reduction to Practice, 3, 4, 5, 6.)

OPPOSITION.

(See Trade-Marks, 1, 2.)

PATENTABILITY.

(See Motion to Dissolve Interference, 2, 3, 5, 6.)

APPEAL ON PRIORITY.
The question of the patentability of the issue will not be considered on an appeal on priority except under such special circumstances as would warrant the exercise of the supervisory authority of the Commissioner.
[Hess *v.* Joerissen *v.* Felbel, 1419.

PETITION TO THE COMMISSIONER OF PATENTS.

(See Abandonment of Applications, 1; Claims; Interference, 5, 8.)

POWER OF ATTORNEY.

(See Applications, 2.)

PRELIMINARY STATEMENT.

(See Interference, 6, 14; Motion to Amend Preliminary Statement.)

INTERFERENCE—ALLEGATIONS—RESTRICTION OF PROOF.
Where the preliminary statement of a party alleges that an "experimental" device was constructed in January, 1901, and no date of reduction to practice is given, such party will not be restricted to the date of his application for his reduction to practice where no objection was made to the statement on the ground that it was indefinite. (*Hammond* v. *Basch*, 115 O. G., 804; 24 App. D. C., 469, distinguished.)
[*Burson *v.* Vogel, 942.

PRIORITY OF INVENTION.

(See Interference, 5, 9, 12, 13, 15; Motion to Dissolve Interference, 9.)

1. INTERFERENCE—SECOND INTERFERENCE—RES ADJUDICATA.
Where in the first interference between the same parties C. formally abandoned the invention specifically stated in the issue, *Held* that in a second interference the issue of which is based upon the same disclosure as that upon which the issue of the first interference was based judgment must be rendered against C. upon the ground that the matter is *res adjudicata*.
[Hallwood *v.* Carroll, 2417.

2. SAME—SAME—SAME.
The fact that no testimony was taken in the first interference does not avoid the application of the doctrine of *res adjudicata* to the second interference, even though the issue of the latter includes details not expressly recited in the first interference, (citing *Blackford* v. *Wilder*, 127 O. G., 1255, and *Wende* v. *Horine*, 129 O. G., 2858.) [Id.

PUBLICATION.

(See Interference, 15.)

PUBLIC POLICY.

(See Trade-Marks, 20, 21.)

PUBLIC USE.

QUESTION NOT CONSIDERED IN AN INTERFERENCE.
The question whether the invention in issue was placed in public use by one of the parties to an interference is not one which can be raised in an interference proceeding, but is one for the consideration of the Commissioner of Patents on the final allowance of the patent. [*Burson *v.* Vogel, 942.

REDUCTION TO PRACTICE.

(See Concealment of Invention; Interference, 1, 15; Preliminary Statement.)

1. REPRODUCTION OF ORIGINAL MACHINE.
A device which was experimented with and afterward laid aside and partly dismantled and which when produced in evidence did not have all of the original parts, some of the important parts being replacements, *Held* not to constitute a reduction to practice, the evidence tending to show the identity of the parts replaced and the original parts not being satisfactory.
[*Burson *v.* Vogel, 942.

2. CRUDE MACHINE—SUBSEQUENT IMPROVEMENTS.
A machine may be crude in construction, but if it contains all the essential elements of the invention of the issue and in its operation successfully demonstrates its practical efficacy and utility reduction to practice is accomplished. (*Coffee* v. *Guerant*, 68 O. G., 279; 3 App. D. C., 497, 499; *Norden* v. *Spalding*, 114 O. G., 1828; 24 App. D. C., 286, 290; *Gallagher* v. *Hien*, 115 O. G., 1330; 25 App. D. C., 77, 82; *Lourie* v. *Taylor*, 118 O. G., 1681; 27 App. D. C., 322, 326.) The mere fact that mechanical improvements may be suggested and made in the course of operation that tend to perfect the operation of the machine and increase its practical efficiency, while retaining the essential elements of the invention which it puts in practice, does not impair the effect of the original demonstration of utility if established satisfactorily. [*Id.

3. EVIDENCE OF SUCCESS OF TESTS.
In view of the failure of the inventor to testify as to the character or results of tests of a magneto receiver for wireless telegraphy and the testimony of a witness who assisted in the tests that the signals were faint, the unsupported statement of an electrical engineer who tested the device that his operator received intelligible messages is not sufficient to establish the operativeness of the device, especially where it does not appear with what certainty or rapidity the signals or messages were received. [Marconi *v.* Shoemaker, 1939.

4. SAME—CONSTRUCTION OF ANOTHER DEVICE.
The construction of another device to obviate defects in a prior device tends to show that the first device was unsatisfactory. [Id.

5. SAME—SAME.
Where it is claimed that the form of device described and illustrated in the application produced the most satisfactory results, and it appears that a device of this construction was built and tested and afterward several modifications of such device were made and tried without success, and that a prior construction was finally reverted to, and that a number of devices of the latter construction were built for use in preference to the former, the presumption is warranted, in the absence of testimony establishing a satisfactory test, that such device was not successful. [Id.

6. SAME—EX PARTE TEST DURING REBUTTAL TESTIMONY.
A test by a party during the taking of rebuttal testimony out of the presence of the opposing party or his agent is entitled to no consideration as proof of the operativeness of the device several years previous under different conditions. [Id.

REFERENCES.

(See Motion to Dissolve Interference, 2; Rejection of Claims.)

REGISTRABILITY.

(See Labels; Trade-Marks, 28, 29, 30.)

REGISTRATION.

(See Trade-Marks, 8, 9, 11, 15, 17.)

REHEARING.

(See Decisions of the Examiners-in-Chief, 2.)

REJECTION OF CLAIMS.

(See Examination of Applications.)

1. EXPLANATION OF GROUNDS OF BY EXAMINERS.
Where in answer to a rejection by the Examiner giving a fair statement of his reasons for rejection the applicant responds by fully stating what he considered to be disclosed in the references, what he considered to be covered by the rejected claims, and why such claims were not anticipated and requests a further statement from the Examiner as to the bearing of the references upon the broadest claim presented, the Examiner should not finally reject merely upon the reasons formerly stated, but he should make a further statement of the reasons of rejection in the light of applicant's argument.
[*Ex parte* Herbst, 361.

2. FINAL—WHEN WARRANTED.
Where substitute claims were rejected upon the same references as the prior claims and it was stated that the "claims are substantially like those previously rejected on the same references, being, if anything, a little broader," *Held* that a final rejection was proper. [*Ex parte* Lasance, 1421.

REOPENING OF INTERFERENCE.

1. TO TAKE TESTIMONY TO STRENGTHEN CASE.
A practice which would allow a contestant to experimentally conduct his case to a probable failure and then permit him after consultation and with competent assistance to make further endeavors to show what he could and should have earlier shown with such assistance would be contrary to all well-established rules and legal principles.
[Standard Import Co., Ltd., *v.* New Orleans Import Co., Ltd., 1164.

2. SAME—MOTION BROUGHT BEFORE FINAL HEARING.
The fact that a motion to reopen an interference to take additional evidence was brought before final hearing is no reason why it should be granted. [Id.

RES ADJUDICATA.

(See Interference, 8, 9; Priority of Invention.)

RESPONSIVE ACTION BY APPLICANT.

(See Abandonment of Applications, 3; Rejection of Claims.)

RIGHT TO MAKE CLAIMS.

(See Amendment; Interference, 4, 8; Motion to Dissolve Interference, 8.)

SECOND INTERFERENCE.

(See Priority of Invention.)

SIMILARITY OF MARKS.

(See Trade-Marks, 1, 2, 5, 6, 10, 11, 12, 13.)

SPECIFICATIONS.

(See Amendment; Examination of Applications.)

SUPERVISORY AUTHORITY OF THE COMMISSIONER OF PATENTS.

(See Interference, 8; Patentability.)

SUPPRESSION OF TESTIMONY.

(See Trade-Marks, 24.)

TESTIMONY.

(See Interference, 10; Reopening of Interference; Trade-Marks, 25.)

TESTS.

(See Reduction to Practice, 3, 4, 5, 6.)

TRADE-MARKS.

1. OPPOSITION—DISSIMILARITY OF MARKS—DEMURRER.
Held that trade-marks for electric-wiring purpose consisting of the words "Wirelets" and "Conduiets" are not so similar in appearance as to deceive a purchaser using reasonable care and diligence in the selection of the goods and that a demurrer to the notice of opposition was properly sustained.
[Crouse-Hinds Company *v.* Appleton Electric Company, 360.

2. SAME—SAME—UNFAIR COMPETITION IN TRADE NOT CONSIDERED.
The question of unfair competition in trade cannot be considered in an opposition proceeding. [Id.

3. INTERFERENCE—RE-FORMATION OF ISSUE.
Where the issue of a trade-mark interference is declared to be for "mixed paints," it should not be re-formed so as to read "ready-mixed paints" when one of the parties does not use the words "ready-mixed paints" to define the goods upon which the mark is used.
[Lewis and Bros. Company *v.* Phoenix Paint and Varnish Company, 361.

4. SAME—SAME CLASS OF GOODS—CONSIDERED AT FINAL HEARING.
The question whether the goods to which a mark forming the issue of an interference has been applied by the respective parties are of the same descriptive properties is a question which may be decided by the Examiner of Interferences at final hearing. [Id.

5. ABANDONMENT—SUBSEQUENT RIGHTS OF OTHERS.
If the word "Star" or the representation of a star as a trade-mark for beer has become public property, an applicant is not entitled to the registration of a mark for the same class of goods consisting of two superimposed equilateral triangles forming a six-pointed star, with a monogram of the letters "G. E." in the center thereof, unless his mark differs from a mere star to such an extent that the simultaneous use of the same would not be likely to cause confusion in the mind of the public.
[Ehret *v.* Star Brewery Company, 603.

6. IDENTITY.
A mark consisting of a six-pointed star having in the center thereof a monogram of the letters "G. E." *Held* to so nearly resemble a mark in prior use by another, consisting of a six-pointed star surrounded by two concentric circles, between which are the words "The Celebrated Star Lager Beer," as to be likely to cause confusion in the mind of the public. [Id.

7. ANTICIPATION.
Held that the trade-mark "Royal Blend" for coffee is anticipated by a registered mark comprising a Maltese cross surmounted by a crown and bearing the word "Royal." *Held* also that the word "Blend" for coffee is merely descriptive of the merchandise, and its presence as part of the mark does not confer any arbitrary or distinguishing significance upon the mark sought to be registered.
[*Ex parte* Granger & Company, 604.

8. ACTION OF THE EXAMINER—POINTING OUT DISTINCTIONS BETWEEN APPLICANT'S MARK AND PREVIOUSLY-REGISTERED MARKS.
While it is proper for an applicant to cite previous registration for the purpose of showing that his mark should be registered, it is not necessary for the Examiner of Trade-Marks to explain why these marks were registered.
[*Ex parte* Vance Shoe Company, 942.

9. REQUIREMENT THAT CLASS OF MERCHANDISE BE LIMITED IS IN EFFECT A REJECTION.
Where the Examiner required that the particular description of his merchandise stated by the applicant as falling in Class 23 be limited to "Pliers without a cutting edge" or that the class stated be changed to Class 20 and the particular description of goods made to read "Nippers and pliers provided with a cutting edge" *Held*, that this action is in effect a refusal to register the mark, and the applicant's remedy is by appeal and not by petition.
[*Ex parte* Utica Drop Forge and Tool Co., 1164.

10. THE WORDS "SPOT CORD" AND A CORD HAVING SPOTS THEREON NOT ALTERNATIVES.
The words "Spot Cord" as a trade-mark for braided sash-cord *Held* not in conflict with the use of spots on a cord, the latter being a mere symbol which may be translated into words other than the words "spot cord." Spots on a cord and the words "Spot Cord" are not true alternatives.
[Silver Lake Company *v.* Samson Cordage Works, 1420.

11. THE WORDS "SPOT CORD" NOT INDEFINITE.
The words "Spot Cord" not being the mere equivalent or alternative, in a trade-mark sense, of a cord having spots thereon, such words will not be refused registration on the ground that a mark consisting of spots on a cord is too indefinite to form trade-mark subject-matter. [Id.

12. INTERFERENCE IN FACT—ARROW PIERCING LETTER "B" AND LETTERS "X L C R" PIERCED BY ARROW INCLOSED IN DIAMOND-SHAPED BORDER.
Held that a trade-mark comprising the letters "X L C R" pierced by an arrow, the whole being inclosed in a diamond-shaped figure, does not so nearly resemble a trade-mark for the same merchandise which comprises the letter "B" pierced by an arrow as to cause confusion in the mind of the public.
[The W. Bingham Company *v.* G. W. Bradley's Sons, 1421.

13. SAME—EX PARTE SMITH & HEMENWAY (129 O. G., 2500) DISTINGUISHED.
Where the words are alike in appearance or where the common features of a mark are of sufficient prominence as to cause the merchandise of both parties to become known by a common name, the interference should be continued in order that the Office may have the benefit of testimony showing whether confusion in trade has actually occurred; but where there is so marked a difference in appearance and significance of the marks when considered as a whole that no likelihood of confusion in trade is apparent the interference should be dissolved. [Id.

14. "BROOKWOOD"—NOT GEOGRAPHICAL.
The mark "Brookwood" for whisky *Held* not geographical.
[L. W. Levy & Co. *v.* Uri, 1687.

15. APPLICATION—ALLEGATION UNDER TEN-YEAR PROVISO—TECHNICAL MARK.
Where the declaration of an application for the registration of a trade-mark contains the allegations requisite to obtain registration of the mark as a technical mark, it may be registered as such, notwithstanding the fact that other allegations are made sufficient to obtain registration under the ten-year proviso of the Trade-Mark Act, such additional allegations being in the nature of mere surplusage. [Id.

16. ASSIGNMENT OF BUSINESS AND TRADE-MARK AFTER FILING OF APPLICATION.
The assignment of the business with which a trade-mark is used, together with the trade-mark and good-will of the business after the filing of an application for the registration of such mark, does not work an abandonment of the application, but necessitates suitable action under section 10 of the Trade-Mark Act in order that registration may be issued to the assignee. [Id.

17. MISREPRESENTATION ON LABELS—REGISTRATION NOT REFUSED.
The use of the words "Pure Old Rye Whisky" on labels containing the trade-mark "Brookwood" adopted and used for whisky composed of rye and other whiskies *Held* not such deception as would warrant the refusal of registration, there apparently being no actual intent to deceive. [Id.

18. INTERFERENCE—SUBSTITUTION OF ASSIGNEE.
Where an application for registration of a trade-mark which is involved in an interference has been assigned and the assignment recorded in the Patent Office contains a request that the certificate of registration be issued to the assignee, *Held* that the assignee may be substituted for the nominal applicant in the interference proceedings. [L. W. Levy & Company *v.* Uri, 1689.

19. SAME—SAME.
Held that the technical relation of plaintiff and defendant does not exist in trade-mark interference proceedings and that the substitution for the applicant of the party to whom the certificate of registration may be issued if the final decision in the interference should be adverse to the opposing party should not be refused even if the courts do not allow the substitution by a defendant of a party defendant. [Id.

20. DECEPTIVE.
A mark containing the legend "Guaranteed under the Food and Drugs Act of June 30, 1906," *Held* deceptive, since the registration of such a mark would lead the public to believe that the Government had guaranteed the purity of the article upon which the mark was used. [*Ex parte* Alart and McGuire, 2145.

21. PUBLIC POLICY.
It is believed to be against public policy to register a mark which indicates or suggests that the Government has given its official approval of the character or quality of the merchandise to which such mark is affixed. [Id.

22. MARK MUST BE AFFIXED TO THE GOODS.
In order that a party may acquire a trade-mark right, it must be shown that he affixed the mark to the goods.
[Bay State Belting Company *v.* Kelton-Bruce Manufacturing Company, 2146.

23. EVIDENCE—COMPETENCY OF WITNESS.
The fact that the witnesses testifying in behalf of a corporation were officers of the corporation furnishes no sufficient reason for disregarding their depositions. [Id.

24. CANCELATION—MOTION TO SUPPRESS TESTIMONY—OBJECTION INDEFINITE.
An objection that "the proceedings about to be taken are contrary to the statutes and the rules in these cases made and provided" *Held* too indefinite to warrant suppressing testimony where no other notice of the real ground of objection was given prior to the hearing on the motion.
[Deitsch Brothers *v.* Loonen, 2146.

25. SAME—TESTIMONY—PRINTING EXHIBITS.
The printing or reproduction of paper exhibits will not be required, since if the case should be appealed to the Court of Appeals of the District of Columbia these exhibits can be sent to the court as physical exhibits. [Id.

26. SAME—MOTIONS—APPEAL.
An appeal from a decision of the Examiner of Interferences to which no limit of appeal was set will not be dismissed because the appellant did not first ask leave of the Commissioner to file such appeal. [Id.

27. MOTION TO SUPPRESS EVIDENCE OR TO PRINT EXHIBITS—APPEAL.
Appeals will not hereafter be allowed from a decision of the Examiner of Interferences denying a motion to strike out testimony or a motion to require the printing of exhibits prior to the appeal from the decision on the merits rendered after final hearing. [Id.

28. PART OF A MACHINE NOT REGISTRABLE ON A TRADE-MARK.
It being well settled that the form of part of a machine is not proper subject-matter for a trade-mark, the form of the face-plate of a type-writing machine is not registrable, since it is necessary to give a finished appearance to the machine.
[*Ex parte* Underwood Typewriter Company, 2419.

29. REGISTRATION—"THE ALDEN SHOE"—NAME OF INDIVIDUAL.
A trade-mark consisting of the words "The Alden Shoe," of which the word "Alden" is printed in letters of such relative sizes as to form an ellipse, inclosed within a circle around which is printed the words "Mannish Shoes" at the top and "For Boys" at the bottom, these phrases being separated on either side by two stars, *Held* not entitled to registration, on the ground that "Alden" is the name of an individual and that the other features are descriptive.
[*Ex parte* C. H. Alden Company, 2419.

30. SAME—NAME OF INDIVIDUAL—DISTINCTIVE PRINTING.
The use of the letters forming the name of an individual of different sizes increasing from each end toward the center, forming in outline an ellipse, *Held* not such a distinctive manner of printing as to warrant registration, since the name is still the predominating feature. [Id.

TRADE-MARK STATUTES.

(See Trade-Marks, 15, 16.)

TRANSMISSION OF MOTIONS.

(See Interference, 11; Motion to Dissolve Interference, 2, 3, 8.)

UNFAIR COMPETITION IN TRADE.

(See Trade-Marks, 2.)

USE OF PATENTED MACHINES.

(See Infringement, 1.)

WITNESSES.

(See Interference 7; Trade-Marks, 23.)

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF NOVEMBER, 1907.

Name, residence, and invention.	No.	Date.	Monthly volume. Specification.	Monthly volume. Drawing.	Official Gazette. Volume.	Official Gazette. Page.
A. Leschen & Sons Rope Company. (See Brazelle, Benjamin, assignor.)						
A. M. Todd Company. (See Shirley, John H., assignor.)						
A. Y. McDonald & Morrison Mfg. Company. (See Lauth, John C., assignor.)						
Aasen, Niels W., Drøbak, Norway, assignor to Rheinische Metallwaren-und Maschinenfabrik, Düsseldorf-Derendorf, Germany. Explosive hand-shell	871,156	Nov. 19	2099	564	131	717
Abbott, John E., Port Huron, Mich. Grain-door for cars	871,659	Nov. 19	3158	783	131	883
Abel, William, Jr., North Amherst, Ohio. Combination fruit-jar opener, tightener, and presser	871,197	Nov. 19	2181	580	131	731
Abell, Rollin, assignor of two-thirds to S. A. Campbell and E. T. Kimball, Boston, Mass. Tool	870,151	Nov. 5	431	118	131	142
Acers, Arthur D., Norman, Okla. Ter. Gate	871,905	Nov. 26	3678	897	131	995
Ackermann, Hugo, Berlin, Germany. Valve for pumps, compressors, and the like	870,659	Nov. 12	1249	339	131	441
Acme Flexible Clasp Company. (See Norton, Elliott S., assignor.)						
Adams, Daniel B., Summitville, N. Y. Automatic alarm and stopping device for engines.	872,039	Nov. 26	4013	963	131	1040
Adams, James H., assignor of one-half to P. H. Tamplet, Kensington, Md. Game apparatus	870,606	Nov. 12	1151	313	131	407
Adams-Randall, Charles, New York, N. Y. Wheel	870,708	Nov. 12	1321	361	131	465
Adler, Henry, assignor to H. Adler Company, Pittsburg, Pa. Metallic step-ladder	870,334	Nov. 5	731	197	131	240
Adler, Henry, Pittsburg, assignor to H. Adler Company, Inc., Pittsburg and Carnegie, Pa. Ladder	872,165	Nov. 26	4252	1014–15	131	1061
Adt, Leo F., Albany, N. Y. Eyeglass-mounting	872,211	Nov. 26	4353	1038	131	1096
Aeolian Company. (See Paln, Robert W., assignor.)						
Agrillo, Joseph A., Rockaway Beach, N. Y. Refrigerator	870,532	Nov. 12	1039	284	131	367
Ahlberg, Joseph. (See Ahlberg, Karl E. and J.)						
Ahlberg, Karl E. and J., Chicago, Ill. Lock-controlled nut and set-screw guard	870,533	Nov. 12	1040	284	131	367
Aiken, Charles W. (See Mitchell, Albion L. F., assignor.)						
Aiken, Emilie S., Boston, Mass. Veiling-display stand	871,198	Nov. 19	2182	580	131	731
Aitken, Hugh W., and W. Mackie, Glasgow, Scotland. Roll for sugar-cane mills	871,018	Nov. 12	1829	499–500	131	621
Aktiebolaget Separator. (See Forsberg, Erik A., assignor.)						
Aktiebolaget Separator. (See Ljungström, Birger, assignor.)						
Aktiebolaget Svenska Automat Fabriken. (See Lindgren, Erick W., assignor.)						
Alberger, Alvan H., Buffalo, N. Y. Stuffing-box	870,152	Nov. 5	433	118–19	131	142
Albrecht, Martin, Friedberg, assignor to Felten & Guilleaume-Lahmeyerwerke Actien-Gesellschaft, Frankfort-on-the-Main, Germany. Means for driving motor road-vehicles	871,098	Nov. 19	1967	539	131	699
Albright, James E., Greensboro, N. C. Water-closet lid and device for preventing seats from splitting and warping	870,406	Nov. 5	854	227	131	281
Alcorn, Thomas H., Philadelphia, Pa. Keel-block for ships	871,467	Nov. 19	2788	702	131	823
Aldred, Alfred E., Glencoe, Ontario, Canada. Apparatus for elevating and handing up dough	870,212	Nov. 5	532	144	131	174
Alexander, John F., assignor of one-half to E. W. Stribling, Columbus, Ohio. Combined feed and water bucket	870,660	Nov. 12	1250	339	131	441
Alford, Frank R., assignor to Wm. L. Gilbert Clock Company, Winsted, Conn. Clock	871,019	Nov. 12	1830	500	131	622
Allen, Anson W., Philadelphia, Pa. Manufacture of open-hearth steel	870,921	Nov. 12	1674	.....	131	575
Allen, Charles M. (See Baggaley, Allen, and Lindquist.)						
Allen, Herbert W., *et al.* (See Phinney, William B., assignor.)						
Allen, Jacob B., Jr., Philadelphia, Pa. Derrick	870,922	Nov. 12	1675	461	131	575
Allen, John L., Chicago, Ill. Can-heading machine	871,383	Nov. 19	2597	665–7	131	786
Allen, Leicester, assignor to Pearson Typo-Bar Company, New York, N. Y. Composing-machine	871,020	Nov. 12	1831	500–1	131	622
Allen, Lewis A., Passaic, N. J. Trolley-pole guide	870,755	Nov. 12	1415	383	131	490
Allen, Wallace P., Milwaukee, Wis. Plate-printing press	870,811	Nov. 12	1499	409–10	131	519
Allen, William G., and F. G. Feeley, Akron, Ohio. Fire-extinguisher system	871,021	Nov. 12	1834	501–2	131	623
Allis-Chalmers Company *et al.* (See Cheney, Herbert W., assignor.)						
Allis-Chalmers Company *et al.* (See Gilmore, Thomas, Jr., assignor.)						
Allis-Chalmers Company *et al.* (See Stull, Emmett W., assignor.)						
Allis-Chalmers Company *et al.* (See Tatum, Lewis L., assignor.)						
Allis-Chalmers Company *et al.* (See Wright, Edwin C., assignor.)						
Alma Manufacturing Company of Baltimore City. (See Blum, Isaac, assignor.)						
Alsop, William T., Owensboro, Ky. Reshaping and restoring cartridge-shells	871,747	Nov. 19	3319	820	131	911
Alsop, William T., Owensboro, Ky. Apparatus for reshaping and restoring shells	871,748	Nov. 19	3321	820	131	911
Althoff, Walter. (See Henry and Althoff.)						
Alvan Clark and Sons Corporation. (See Garrish, Willard P., assignor.)						
Alves, Antonio. (See Uhlmann, Bernhard, assignor.)						
Alvey, Benjamin H., assignor to Alvey-Ferguson Company, Louisville, Ky. System of transferring baggage or freight	872,212	Nov. 26	4355	1036	131	1097

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 5TH DAY OF NOVEMBER, 1907.

Name, residence, and invention.	No.	Date.	Monthly volume. Specification.	Monthly volume. Drawing.	Official Gazette. Volume.	Official Gazette. Page.
Abell, Rollin, assignor of two-thirds to S. A. Campbell and E. T. Kimball, Boston, Mass. Tool	870,151	Nov. 5	431	118	131	142
Acme Flexible Clasp Company. (See Norton, Elliott S., assignor.)						
Adler, Henry, assignor to H. Adler Company, Pittsburg, Pa. Metallic step-ladder	870,334	Nov. 5	731	197	131	240
Aeolian Company. (See Pain, Robert W., assignor.)						
Aktiebolaget Svenska Automat Fabriken. (See Lindgren, Erick W., assignor.)						
Alberger, Alvan H., Buffalo, N. Y. Stuffing-box	870,152	Nov. 5	433	118–19	131	142
Albright, James E., Greensboro, N. C. Water-closet lid and device for preventing seats from splitting and warping	870,406	Nov. 5	854	227	131	281
Aldred, Alfred E., Glencoe, Ontario, Canada. Apparatus for elevating and handing up dough	870,212	Nov. 5	532	144	131	174
Alvan Clark and Sons Corporation. (See Gerrish, Willard P., assignor.)						
Alves, Antonio. (See Uhlmann, Bernhard, assignor.)						
American Attachment Company. (See Stevens, George J., assignor.)						
American Sheet & Tin Plate Company. (See Bryson, James W., assignor.)						
American Steel & Wire Company. (See Harter, Noah S., assignor.)						
American Sugar Refining Company. (See Pool, John F., assignor.)						
Ams, Charles M. (See Ams, Max, assignor.)						
Ams, Max, assignor to C. M. Ams, New York, N. Y. Composition of matter	869,870	Nov. 5	1	1	131	3
Amundson, Amund J., Baldwin, Wis. Plow	870,007	Nov. 5	214	57	131	76
Andrew, William, Norwood, Ohio. Stove	870,153	Nov. 5	435	119	131	143
Anthony, Kohath, Wilmerding, assignor of one-half to A. L. Trevaskis, Turtle Creek, Pa. Fresh-air conveyer	870,407	Nov. 5	855	227	131	281
Apple, Philip H., Lavalle, Wis. Scrubbing-machine	870,335	Nov. 5	734	197	131	241
Ard, William. (See Pruett and Ard.)						
Armstrong, John H. (See Parsons and Armstrong.)						
Arnold, Edwin E., Wilkinsburg, Pa., assignor to Westinghouse Machine Company. Rail-traversing truck	870,213	Nov. 5	533	145	131	174
Astrom, Carl P., Orange, N. J., assignor to M. H. Treadwell & Co. Motor-operated dumping-car. (Reissue)	12,714	Nov. 5	1033	282	131	333
Astrom, John, Milwaukee, Wis. Apparatus for the production of vibrations	870,074	Nov. 5	310	86	131	105
Attleboro Manufacturing Company. (See Wilde, Eben F., assignor.)						
Auchmutz, Benjamin F., *et al.* (See Bostley, Augustus H., assignor.)						
Auto Strop Company. (See Galsman, Henry J., assignor.)						
Bailey, William F., Minneapolis, Minn. Metallic wheel	869,956	Nov. 5	115	32	131	38
Bain John M., Peterboro, Ontario, Canada. Automatic chain-drive-regulating device for spinning-machines	870,075	Nov. 5	312	86	131	105
Barker, England J., Morgan Park, Ill. Type-writer	870,336	Nov. 5	735	197–8	131	241
Barker, John F., Springfield, Mass. Measuring apparatus for gasolene or other oils	870,154	Nov. 5	436	119	131	143
Barnes, James W., New York, N. Y. Spool for music-rolls	869,871	Nov. 5	3	1	131	3
Barnes, John S., assignor of one-third to L. E. Barnes, Detroit, Mich. Laundry-button	869,872	Nov. 5	4	1	131	4
Barnes, Lewis E. (See Barnes, John S., assignor.)						
Barnhart, Harry J. (See Stump, Kling, and Barnhart.)						
Barry, John F. (See Ronan and Barry.)						
Bass, Duncan M., Fackler, Ala. Insulator	869,873	Nov. 5	5	1	131	4
Bassell, John Y., and F. C. Blenkner, Columbus, Ohio. Gun-sight	870,337	Nov. 5	737	198	131	242
Batdorf, Charles S., Brooklyn, N. Y., assignor, by mesne assignments, to Universal Coin Wrapping Machine Company. Coin counting, registering, and bagging machine	870,214	Nov. 5	534	145–6	131	175
Batdorff, Watson, Canton, Ohio. Eaves-trough hanger	869,957	Nov. 5	116	32	131	38
Bateman, Frank, Grenloch, and H. C. Jones, Allentown, assignors to Bateman Manufacturing Company, Grenloch, N. J. Plant-spraying machine	869,958	Nov. 5	117	32	131	39
Bateman Manufacturing Company. (See Bateman and Jones, assignors.)						
Bates, Adelmer M., assignor to Bates Valve Bag Company, Cleveland, Ohio. Filling bags	870,215	Nov. 5	543	146	131	178
Bates Valve Bag Company. (See Bates, Adelmer M., assignor.)						
Bauer, Carl H. Vom, New York, N. Y. Automatic starting device for alternating-current vapor-lamps	870,141	Nov. 5	411	114	131	137
Baur, Theodore H., Middletown, Ohio Back-curtain-raising device	870,408	Nov. 5	855	228	131	281
Baus, Burton A., St. Johnsville, N. Y. Self-dumping bucket	870,409	Nov. 5	857	228	131	281
Bean, William H., Gadsden, Ala. Electric popcorn-machine	870,155	Nov. 5	437	119	131	143
Beaumont, Edward A., Jr., and G. W. Garmon, Philadelphia, Pa. Check-operated mechanism	870,338	Nov. 5	739	198–9	131	243
Beck, Charles W., Rockville Center, N. Y. Joint-ring for acetylene-gas lamps	870,339	Nov. 5	740	199	131	243
Becroft, William H., and A. Isaacs, West Hoboken, N. J. Pulley	870,340	Nov. 5	743	199	131	244
Bedell, Frank L., Carbondale, Pa. Amplifying-horn support	870,008	Nov. 5	214	57	131	77
Bedford, Ebenezer S., assignor of one-half to R. M. Ferguson, Grand Rapids, Mich. Show-case	870,268	Nov. 5	617	166	131	201
Bell, George F., Sistersville, W. Va. Oil-well pump	870,410	Nov. 5	858	228	131	281
Bennett, Thomas S., Attleboro, Mass. Band for bracelets	870,076	Nov. 5	315	87	131	106
Bennett, Thomas S., Attleboro, Mass. Band for bracelets	870,077	Nov. 5	316	87	131	106
Bennett, William, and W. A. Ralston, assignors to Caldwell Manufacturing Company, Rochester, N. Y. Door-check	870,216	Nov. 5	345	146	131	179
Bernard, William A., assignor to William Schollhorn Company, New Haven, Conn. Revolving eyeleting-tool	869,874	Nov. 5	6	2	131	4

Name, residence, and invention.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Berry, William H., Chester, Pa. Feed-water heater and purifier	869,875	Nov. 5	6	2	131	4
Bertram, Lawrence A., Allegheny, Pa. Blow-off valve	870,487	Nov. 5	966	265	131	313
Blackham, William H. (See Teese, William J., assignor.)						
Blackmore, Alfred, Kensington, London, England. Electric switching apparatus and controlling apparatus therefor	870,078	Nov. 5	318	88–90	131	106
Blakeslee, Frank E. (See Tower, Oscar, assignor.)						
Blenkner, Fred C. (See Bassell and Blenkner.)						
Boehm, Herman, Youngstown, Ohio. Incandescent lamp	870,341	Nov. 5	744	200	131	245
Boehm, Walter M., Iowa City, Iowa. Calculating-machine	870,009	Nov. 5	215	57–8	131	77
Boltan, Isaac, Hot Springs, Ark. Eyeglass-mounting	870,079	Nov. 5	321	90	131	107
Bolus, William G., Peoria, Ill. Seeding device	870,488	Nov. 5	967	265	131	314
Bonnert, Charles C., assignor of one-half to J. I. Vogeler, Baltimore, Md. Advertising device	870,525	Nov. 5	1024	279	131	330
Boos, Louis F. (See Dearing, David M., assignor.)						
Borden, William E., Hillsboro, Ohio. Churn	869,876	Nov. 5	9	2	131	5
Boren, James L., Carterville, Ill. Safety appliance for elevators	870,411	Nov. 5	860	229	131	283
Borgström, Arthur H., Hangö, Russia. Manufacture of butter	870,217	Nov. 5	546	.....	131	179
Bossert, Albert T., assignor of one-half to W. B. Doddridge, Kansas City, Mo. Regulating-valve for lighting-tanks	870,526	Nov. 5	1024	279	131	330
Bostian, Charles P. and H. C., assignors of one-third to H. R. Frick, Milton, Pa. Trolley-wheel	870,080	Nov. 5	321	90	131	107
Bostian, Homer C. (See Bostian, Charles P. and H. C.)						
Bostley, Augustus H., South Williamsport, assignor of two-thirds to G. H. Young, Williamsport, and B. F. Auchmutz, South Williamsport, Pa. Valve	870,342	Nov. 5	744	200	131	245
Boswell, George G. F., Lawrence, Ind. Form for sewers and the like	870,269	Nov. 5	618	166	131	202
Boucher, Arthur L., assignor to New York Cigarette Machine Company, New York, N. Y. Die for printing cigarettes	869,877	Nov. 5	9	3	131	5
Bourke, John W., New York, N. Y. Amusement device	870,489	Nov. 5	969	265	131	314
Bowen, Frank, Purdy, Mo. Baling-press	870,010	Nov. 5	219	58–9	131	78
Bowne, John D., assignor of one-half to J. Wallace, New York, N. Y. Key-filing device	870,218	Nov. 5	547	147	131	179
Boye, James H., assignor to Boye Needle Company, Chicago, Ill. Sewing-machine attachment	870,219	Nov. 5	548	147	131	180
Boye Needle Company. (See Boye, James H., assignor.)						
Brenizer, Loama A., Miami, Mo. Riding attachment for harrows	870,081	Nov. 5	323	91	131	108
Brittain, Marshall L. (See Germiner, William, assignor.)						
Brock, Frederick C., and E. M. Du Bois, assignors to Vehicle Apron & Hood Company, Columbus, Ohio. Storm-front for vehicles	870,011	Nov. 5	221	59	131	78
Brooks, John, Brockton, Mass. Disk-knife holder	870,220	Nov. 5	550	147	131	180
Brown, Eugene H., Troy, N. Y. Folding-machine	870,343	Nov. 5	747	200	131	246
Brown, Harry E. (See Leonard and Brown.)						
Brown, Olive K., Asherville, Kans. Mop-holder	870,412	Nov. 5	862	229	131	283
Brown, Silas B., Cincinnati, Ohio. Time-controlled damper	870,221	Nov. 5	551	148	131	181
Brown, Wallace R., Tidioute, Pa. Combined knife and fork	870,413	Nov. 5	862	229	131	284
Brown, William C., Melrose, Mass. Mixer for spraying purposes and the like	870,270	Nov. 5	619	166	131	202
Bruckmann, Ludwig, Pforzheim, Germany. Machine for automatically making soldered cable and globular or pea-shaped chains	870,414	Nov. 5	864	230	131	284
Bruckner, Rudolph E., Mount Vernon, assignor to Commercial Acetylene Company, New York, N. Y. Safety cut-off for storage lighting systems	869,878	Nov. 5	11	3	131	6
Bryant, Frederic J., New York, N. Y. Fire-escape	869,959	Nov. 5	118	33	131	39
Bryant, Joseph D. (See Hanna and Bryant.)						
Brydges, Samuel M., Nelson, British Columbia, Canada. Collar-button	870,222	Nov. 5	553	148	131	181
Bryson, James W., New Castle, assignor to American Sheet & Tin Plate Company, Pittsburg, Pa. Branning-machine	870,156	Nov. 5	437	120	131	143
Buck, Taylor S., New York, N. Y. Stamp	870,223	Nov. 5	553	148	131	181
Buckley, John P., New York, N. Y. Electromagnetic press	870,012	Nov. 5	223	60	131	79
Bulley, George W., New York, N. Y. Gas-producer	870,271	Nov. 5	620	167	131	202
Bunzl, Ernest, *et al.* (See Kuhn, Edmond, assignor.)						
Bunzl, Gustav, *et al.* (See Kuhn, Edmond, assignor.)						
Burbank, Henry L., and J. W. Manson, Akron, Ohio. Drawing-board	870,224	Nov. 5	555	149	131	182
Burbank, Stephen F., Wilmington, N. C. Combined electric connector and switch	870,490	Nov. 5	970	266	131	314
Burdett-Rowntree Manufacturing Company. (See Rowntree, Harold, assignor.)						
Burton, Frank F., assignor to Winchester Repeating Arms Company, New Haven, Conn. Telescope-sight for firearms	870,272	Nov. 5	624	167	131	203
Burton, Frank F., assignor to Winchester Repeating Arms Co., New Haven, Conn. Telescope-sight for firearms	870,273	Nov. 5	625	167	131	204
Burton, George D., Boston, Mass. Treating and degumming porous and fibrous substances	870,157	Nov. 5	438	.....	131	144
Butler, Alton W., Brockton, Mass. Vehicle-tire	870,013	Nov. 5	224	60	131	79
Byrd, Britton E., assignor to Byrd Manufacturing Company, Durham, N. C. Knotter	870,527	Nov. 5	1025	279	131	330
Byrd Manufacturing Company. (See Byrd, Britton E., assignor.)						
C. G. Sargent's Sons. (See Sargent, Allan C., assignor.)						
C. G. Sargent's Sons. (See Sargent, Frederick G., assignor.)						
Cahall, William H. (See MacGregor and Cahall.)						
Caldwell Manufacturing Company. (See Bennett and Ralston, assignors.)						
Callaghan, Jeremiah J., St. Louis, Mo. Cue-clutch	870,491	Nov. 5	971	266	131	315
Cameron, William R., New York, N. Y. Ice-cream server	869,879	Nov. 5	12	4	131	6
Campbell Easy Doubletree Company. (See Campbell, William C., assignor.)						
Campbell, Ezra T., and B. H. Noelting, Nebraska City, Nebr. Water-motor	870,225	Nov. 5	557	149	131	183
Campbell Printing Press & Manufacturing Company. (See Wood, Henry A.W., assignor.)						
Campbell, Solomon A., *et al.* (See Abell, Rollin, assignor.)						
Campbell, Solomon A., assignor of one-half to E. T. Kimball, Boston, Mass. Tool	870,014	Nov. 5	226	61	131	80
Campbell, William C., assignor to Campbell Easy Doubletree Company, St. Louis, Mo. Draft-equalizer	870,344	Nov. 5	749	200–1	131	247
Caperton, William E., McGregor, Tex. Bee-gum	870,274	Nov. 5	626	168	131	204
Carr, Jackson, *et al.* (See Wilson, Samuel T., assignor.)						
Carroll, Albert E. (See Whitney, Randall M., assignor.)						
Chadwick, Jesse A., Moberly, Mo. Machine for grinding locomotive valve-seats	870,082	Nov. 5	324	91	131	108
Chambers, Okey J. (See Goff, Lewis S., assignor.)						
Chance, Herbert D., Loveland, Colo. Apparatus for canning and washing	870,415	Nov. 5	866	231	131	284
Chubb, George W., Binghamton, N. Y. Coat and hat rack	870,158	Nov. 5	440	121	131	144
Clark, Sealy E. S., Gage, Okla. Ter. Punching and stitching tool	870,492	Nov. 5	972	266	131	315
Clarkmobile Company. (See Way, Charles H., assignor.)						
Clarkson, Thomas, and W. J. Morison, Chelmsford, England. Regulator for liquid-fuel burners	870,083	Nov. 5	325	91	131	108
Clegg, William H., Burnley, England. Cloth-take-up motion for looms	870,345	Nov. 5	750	201	131	247
Clegg, William H., Burnley, England. Measuring and marking motion for use in connection with yarn-sizing and similar machines	870,416	Nov. 5	867	231	131	285
Cleland, J. B. (See Webb, Powhatan A., assignor.)						
Cleveland Car Specialty Company. (See Maltby, George B., assignor.)						
Coleman, Jesse, Shelburn, Ind. Safety appliance for elevators	870,084	Nov. 5	327	91–2	131	109

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Collett, James D. (See Hosmer, Arthur, assignor.)						
Collins, Lucius J., Saries, N. D. Sled	870,493	Nov. 5	973	266	131	316
Collins, Robert E. (See Lupton, William A., assignor.)						
Commercial Acetylene Company. (See Bruckner, Rudolph E., assignor.)						
Conklin, Edward D., assignor to Whitehead & Hoag Company, Newark, N. J. Cap for keys of type-writing and analogous machines	870,275	Nov. 5	627	168	131	204
Connett, John W., Missouri Valley, Iowa. Churn	870,494	Nov. 5	974	267	131	316
Conrad, Elijah J., Coalport, Pa. Clothes-pin	869,880	Nov. 5	12	4	131	6
Cook, Frank B., Chicago, Ill. Automatic resoldering device for electrical protective apparatus	870,495	Nov. 5	976	267	131	316
Cook, Frank B., Chicago, Ill. Individual protector unit	870,530	Nov. 5	1031	281	131	332
Cook, Joseph C., and E. Sokal, Buffalo, N. Y.; said Sokal assignor to said Cook. Storage battery	870,015	Nov. 5	227	61	131	80
Copeland, W. B. (See Ellis, Stephen A., assignor.)						
Corbin Cabinet Lock Company. (See Johnson, Charles E., assignor.) (Reissue.)						
Corcoran, Michael J., York, Pa. Whiffletree-hook	870,016	Nov. 5	228	61	131	80
Cornell, Olive D., New York, N. Y. Bust reducer and supporter	870,226	Nov. 5	558	150	131	183
Corson, Theodore A., Portland, Ark. Car-door	870,417	Nov. 5	868	231–2	131	285
Cosgrove, Joseph J., Scranton, assignor to Standard Sanitary Manufacturing Company, Pittsburg, Pa. Water-closet connection	870,017	Nov. 5	229	62	131	80
Cosgrove, Joseph J., Scranton, assignor to Standard Sanitary Manufacturing Company, Pittsburg, Pa. Water-closet connection	870,018	Nov. 5	230	62	131	81
Cosgrove, Joseph J., Scranton, assignor to Standard Sanitary Manufacturing Company, Pittsburg, Pa. Water-closet connection	870,085	Nov. 5	327	92	131	109
Cosmos Construction Company. (See Lamson, Franklin S., assignor.)						
Couch, Samuel H. (See Henry, William W., assignor.)						
Cox Multi-Mailer Company. (See Cox, Sandford C., assignor.)						
Cox, Sandford C., Rock Rapids, Iowa, assignor, by mesne assignments, to Cox Multi-Mailer Company, Augusta, Me. Addressing-machine	870,418	Nov. 5	869	232–4	131	286
Cromwell, John C., assignor to Garrett-Cromwell Engineering Company, Cleveland, Ohio. Metallurgical furnace	869,960	Nov. 5	119	33–4	131	39
Cronk, William, Montour Falls, N. Y. Rake	870,227	Nov. 5	559	150	131	183
Crosby, William W., Tacoma, Wash. Grease-cup	870,346	Nov. 5	752	201	131	247
Cummings, Henry H., Malden, assignor to Union Lock Stitch Company, Boston, Mass. Lock-stitch sewing-machine	869,961	Nov. 5	121	34	131	39
Curtin, David F., St. Louis, Mo. Butter measure and cutter	870,496	Nov. 5	979	267	131	317
Cyr, Denis J., Hugo, Minn. Clamp	870,419	Nov. 5	875	234–5	131	288
Dackiewicz, Charles, assignor of one-half to L. Odziemczewski, Donora, Pa. Double-cone ball-bearing axle	870,276	Nov. 5	628	168	131	205
Dawkins, John R., Dallas, Tex. Electrical attachment for movable objects. (Reissue)	12,715	Nov. 5	1036	282	131	335
Dawson, Arthur T., and J. Ramsay, Westminster, assignors to Vickers Sons & Maxim, Limited, London, England. Muzzle attachment for automatic guns	870,497	Nov. 5	980	267–8	131	317
De Camps, Wylie C., Parkersburg, W. Va. Attachment for bath-tubs	870,086	Nov. 5	328	92	131	109
Dearing, David M., Jackson, Mich. Motor-vehicle running-gear	869,881	Nov. 5	13	4–5	131	7
Dearing, David M., assignor of one-half to L. F. Boos, Jackson, Mich. Variable-speed power-transmission device	869,882	Nov. 5	16	5	131	7
Demuth, Albert, Laurenburg-on-the-Lahn, Germany. Round buddle for dressing ores	869,883	Nov. 5	17	5	131	8
Densmore Typewriter Company. (See Rees, Perley E., assignor.)						
Dent, Charles H., Tamworth, England. Belt-shifter for motor-vehicles	870,159	Nov. 5	441	121–2	131	145
Detroit Steam Engine Company. (See MacLachlan, John D., assignor.)						
Dexter, Thomas F., Providence, R. I. Automatic relief device for steam-radiators	869,884	Nov. 5	18	5	131	8
Dickins, Arthur W. M., Bromley, England. Combined measuring-glass and pestle and mortar	870,087	Nov. 5	330	92	131	110
Dietz, Herman F., Liverpool, assignor of one-half to A. Will, Syracuse, N. Y. Emergency-brake for automobiles	870,228	Nov. 5	560	150	131	183
Distler, Andrew, Peoria, Ill. Calk	869,962	Nov. 5	123	35	131	40
Dixon, Ezra, Bristol, R. I. Top-roll saddle	870,347	Nov. 5	753	202	131	248
Doddridge, William B. (See Bossert, Albert T., assignor.)						
Dodge, Philip T., Brooklyn, N. Y., assignor to Mergenthaler Linotype Company. Linotype-machine	870,019	Nov. 5	231	62	131	81
Doersch, Philip, Nyack, N. Y. Bottle-closure	869,963	Nov. 5	125	35	131	41
Doub, John H., Walnut, Kans. Washing-machine	870,020	Nov. 5	233	62	131	81
Drake, Michael, Cora, Idaho. Railway-joint	870,088	Nov. 5	331	93	131	110
Drew, George F., Brunswick, Me. Signal-bell	869,885	Nov. 5	20	6	131	9
Du Bois, Edward M. (See Brock and Du Bois.)						
Duckworth, Frank M., Bridgewater, Mass. Applauding device and the like	869,886	Nov. 5	21	6	131	9
Duffee, Thomas E., Winchendon, Mass. Nasal snare	870,021	Nov. 5	235	63	131	82
Duncan, Dora, New York, N. Y. Automobile-veil	870,160	Nov. 5	442	122	131	145
Dunkerley, Enoch, Jr., Vilas, Pa., assignor of one-half to F. Dunkerley, Oneida, N. Y. Combined shade and curtain bracket	870,348	Nov. 5	754	202	131	248
Dunkerley, Fredrick. (See Dunkerley, Enoch, Jr., assignor.)						
Duryea, James F., Springfield, Mass. Internal-combustion engine	869,887	Nov. 5	22	6	131	9
Dyer, Arthur, Deephaven, Minn. Line-fastener	870,022	Nov. 5	236	63	131	82
Earthom, Oscar N., and T. Gallaher, Adena, assignors of one-third to G. W. Tidrich, Dillonvale, Ohio. Mine-door	870,420	Nov. 5	876	235	131	288
Easterling, Robert W., Yoakum, assignor of two-thirds to T. J. King and S. V. Wood, Brady, McCulloch county, Tex. Hay-press	870,023	Nov. 5	237	63	131	82
Edison Storage Battery Company. (See Edison, Thomas A., assignor.)						
Edison, Thomas A., Llewellyn Park, Orange, assignor to Edison Storage Battery Company, West Orange, N. J. Apparatus for producing perforated strips	870,024	Nov. 5	238	63–6	131	83
Edwards, John, and W. V. Sheppard, Allegheny, Pa. Burner for hot-air furnaces	869,964	Nov. 5	126	35	131	41
Edwards, Jonathan H., Gilbertsville, Ky. Plow	870,421	Nov. 5	878	236	131	289
Egle, William, assignor to Eureka Manufacturing Company, Detroit, Mich. Manhole-cover	870,498	Nov. 5	982	268	131	319
Ekert, Frederick M., Akron, assignor to U. S. Ekert Fibre Company, Cleveland, Ohio. Producing compounds containing rubber and fiber	870,349	Nov. 5	755	.....	131	248
Electric Controller and Supply Company. (See Hall, Jay H., assignor.)						
Electric Railway Improvement Company. (See Herrick, Albert B., assignor.)						
Electric Safety Appliances Company. (See Manley, John W., assignor.)						
Electric Signagraph and Semaphore Co. (See Webb, Jean F., Jr., assignor.)						
Electro Dynamic Company. (See Pfatischer, Mathias, assignor.)						
Eliel, Albert L., New York, N. Y. Hat-ventilator	870,350	Nov. 5	758	202	131	249
Eliot, Alice R., Brookline, Mass. Educational material	870,277	Nov. 5	629	168	131	205
Ellis, Mark S., U. S. Navy. Railway	870,089	Nov. 5	331	93	131	110
Ellis, Stephen A., Woodlawn, assignor of one-tenth to W. B. Copeland, Birmingham, Ala. Cotton-harvesting apparatus	869,888	Nov. 5	23	7	131	10
Ellis, William J., assignor of one-half to C. W. Savage, Andrews, N. C. Steam-boiler furnace	870,090	Nov. 5	332	93–4	131	110
Ellsworth, John M. (See Fay and Ellsworth.)						
Elsas, Edward J., Blue Mound, Mo. Musical instrument	870,025	Nov. 5	242	67	131	84

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Emery, Albert H., Stamford, Conn. Means for cleaning out the chambers and bores of guns	870,528	Nov. 5	1027	280	131	331
Emley, Jay N., New York, N. Y. Cooling system for automobile-engines	870,278	Nov. 5	630	169	131	205
English, James, assignor to Reynolds & Co. New Haven, Conn. Screw-machine	870,499	Nov. 5	983	268–9	131	319
Ernst, Jacob C., *et al.* (See Funk, Henry M., assignor.)						
Ethridge, Edward, Stattler, Ark. Harrow	870,351	Nov. 5	758	202	131	249
Eubank, Samuel F., assignor of one-third to C. S. Harris and J. Garnett, Columbia, Ky. Implement for extracting spikes and bolts	870,422	Nov. 5	879	236	131	290
Eureka Manufacturing Company. (See Egle, William, assignor.)						
Fahrenheim, Emil C., Hamburg, Germany. Apparatus for straining liquids	870,500	Nov. 5	985	269	131	319
Fairbank, George W., Wayland, Mass. Skiving-machine	869,889	Nov. 5	25	7	131	10
Fairmont Box Car Loader Company. (See Hunn, John H., assignor.)						
Fairmont Box Car Loader Company. (See Huhn and Ice, assignors.)						
Fairmont Box Car Loader Company. (See Mayers, Wilbur S., assignor.)						
Farm Motor Company. (See Glascock, Alfred E., assignor.)						
Farm Motor Company. (See Schroeder, George G., assignor.)						
Farnham, Frank E., Providence, R. I. Ear-ring	869,965	Nov. 5	127	36	131	41
Farnham, Schuyler E., assignor, by mesne assignments, to National Mfg. & Mailing Co., Racine, Wis. Wrapping-machine	870,501	Nov. 5	986	270	131	319
Faupel, Charles F., Chicago, Ill. Portable rotary bathing and massaging machine	869,890	Nov. 5	27	8	131	11
Fay, Henry R., Boston, Mass. Water-gage	870,026	Nov. 5	244	67–8	131	84
Fay, Thomas J., New York, N. Y., and J. M. Ellsworth, Bernardsville, N. J. Crank-shaft	870,502	Nov. 5	987	270	131	320
Federal Ice Company. (See Holden, Daniel L., assignor.)						
Feinenburg, Johann, Auf der Höhe, near Solingen, Germany. Scissors	870,161	Nov. 5	443	122	131	145
Felt, Willard O., New Yo[illegible] Y. Compressing and purifying air	869,966	Nov. 5	128	36	131	42
Fenton, John, Auckland, New Zealand. Fastener for hats, bonnets, and the like	869,891	Nov. 5	29	8	131	11
Ferguson, Raymond M. (See Bedford, Ebenezer S., assignor.)						
Finch, Joda, Lyndhurst, N. J. Electrical thermostatic alarm	870,423	Nov. 5	881	236	131	290
Finch, Paul R., Des Moines, Iowa. Gas-mantle	870,229	Nov. 5	562	151	131	184
Finfrock, William H. (See Scheck and Finfrock.)						
Fitzgibbon, James H., Milwaukee, Wis. Fence-post	870,352	Nov. 5	760	203	131	250
Flinker, Leon A., and J. Schade, Jr., New York, N. Y.; said Schade assignor to said Flinker. Cutlery-sharpening machine	870,279	Nov. 5	631	169	131	206
Floyd, Green R., Irma, Ala. Toy	870,424	Nov. 5	882	237	131	291
Foote, Theodore M., Allston, Mass. Circuit-closer	870,353	Nov. 5	761	203	131	250
Frank, David, *et al.* (See Thorner, Bernard D., assignor.)						
Frank, Henry, Lickingville, Pa. Bread-slicer	870,503	Nov. 5	990	270	131	321
Frazier, Schuyler, Bristol, Va. Razor-blade holder	870,425	Nov. 5	883	237	131	291
Frick, Harry R. (See Bostian, Charles P. and H. C., assignors.)						
Frost, Paul, Berlin, Germany. Mutoscope	870,504	Nov. 5	991	271	131	321
Funk, Henry M., assignor of two-thirds to J. W. Funk and J. C. Ernst, Hanover, Pa. Centering device for table-leg blanks	870,354	Nov. 5	762	203	131	250
Funk, John W., *et al.* (See Funk, Henry M., assignor.)						
Fyrberg, Andrew, Hopkinton, Mass. Breech-loading gun	869,967	Nov. 5	129	36–7	131	42
G. A. Gray Company. (See Richter, Ernst, assignor.)						
Gaisman, Henry J., New York, N. Y., assignor to Auto Strop Company. Stropping mechanism for razors	870,091	Nov. 5	333	94	131	111
Gallagher, James A., Lancaster, Pa. Shuttle	870,355	Nov. 5	764	203	131	251
Gallagher, Richard D., Sr., Lamar, Colo. Broom-corn-fiber sorting and sizing machine	870,280	Nov. 5	636	169–71	131	207
Gallaher, Tolbert. (See Earthom and Gallaher.)						
Gamber, John, and O. F. Heer, Washington, Pa. Infant's bed	870,426	Nov 5	884	237–8	131	291
Gammeter, Harry C., Cleveland, Ohio. Tubular structural member	870,356	Nov. 5	765	204	131	251
Gardiner, George W., San Francisco, Cal. Fuel-feeding device	870,230	Nov. 5	563	151	131	184
Gardiner, Roland, Cleveland, Ohio. Abrasive wheel	870,231	Nov. 5	565	151	131	185
Garmon, George W. (See Beaumont and Garmon.)						
Garnett, James, *et al.* (See Eubank, Samuel F., assignor.)						
Garrett-Cromwell Engineering Company. (See Cromwell, John C., assignor.)						
Gay, George E., Malden, Mass., assignor to Linen Thread Company, New York, N. Y. Loom	869,892	Nov. 5	30	9	131	12
Gay, William A., Newark, N. J. Musical instrument	870,092	Nov. 5	336	94	131	112
Geo. E. Keith Company. (See Wilkins, George H., assignor.)						
Germiner, William, assignor of two-fifths to M. L. Brittain, Pueblo, Colo. Train-controlling apparatus	870,427	Nov. 5	885	238–9	131	292
Gerrish, Willard P., assignor of one-half to Alvan Clark and Sons Corporation, Cambridge, Mass. Apparatus for synchronizing motors	870,505	Nov. 5	992	271	131	321
Getchell, George S., Los Angeles, Cal. Signaling device for railways	870,232	Nov. 5	565	152	131	185
Gibbs, William M., Anderson, Ind. Cement fence-post and line-wire fastener therefor	870,162	Nov. 5	443	122	131	145
Gillet, Joseph, Schöneberg, near Berlin, assignor to Siemens & Halske, A. G., Berlin, Germany. Instrument for determining the position of an organ or the like within human bodies	870,506	Nov. 5	996	271	131	322
Gilmore, Benjamin V., Red House Shoals, W. Va. Coal-drill	870,281	Nov. 5	641	171	131	209
Gilmore, Howard, Brookline, Mass. Manufacturing reflector incandescent lamps	870,233	Nov. 5	566	152	131	185
Gjuke, Georg E., Trelleborg, Sweden. Hydraulic rock-drill	869,893	Nov. 5	33	10	131	13
Glascock, Alfred E., Washington, D. C., assignor, by mesne assignments, to Farm Motor Company. Traction-wheel	870,163	Nov. 5	445	123	131	146
Glazier, Harold P., assignor to Glazier Stove Company, Chelsea, Mich. Alcohol-burner	870,164	Nov. 5	446	123	131	146
Glazier Stove Company. (See Glazier, Harold P., assignor.)						
Godwin, Ellis, Concord, N. C. Apparatus for raising and lowering poles	869,894	Nov. 5	35	10	131	13
Goff, Lewis S., assignor of one-third to O. J. Chambers, Spencer, W. Va. Pruning implement	870,282	Nov. 5	641	172	131	209
Goldman, Gustav, Baltimore, Md. Steam-table	869,895	Nov. 5	37	10	131	14
Goldsborough, Richard H., Washington, D. C. Turbine	869,896	Nov. 5	39	11–12	131	14
Goulding, John W., Trenton, N. J. Washing-machine for brick-molds	870,357	Nov. 5	766	204	131	251
Govers, Francis X., Owego, N. Y. Vapor generation and power system	869,897	Nov. 5	41	12	131	15
Govers, Francis X., Owego, N. Y. Heat-engine	870,507	Nov. 5	997	272	131	322
Graham, Andrew W., Bradford, Pa. Pipe-coupling packing	870,428	Nov. 5	887	239	131	292
Granger, Roger D. (See Washburn and Granger.)						
Grasso, Nicholas, New York, N. Y. Gate for railway-cars	870,093	Nov. 5	337	94	131	112
Gray, Charles W., Chattanooga, Tenn. Moistening device	870,234	Nov. 5	569	153	131	186
Gray, William H., Eddyville, Iowa. Pruning-shears	869,898	Nov. 5	42	12	131	15
Green Bay Cot Company. (See Rasopeles, Francis D., assignor.)						
Green, Joseph R., Wakefield, assignor to Phonoharp Company, East Boston, Mass. Hitch-pin for stringed instruments	870,283	Nov. 5	642	172	131	209
Griffiths, David R., Richville, N. Y. Mowing-machine	870,358	Nov. 5	766	204	131	252
Grimler, Frank G., Buffalo, N. Y. Sectional stand	870,429	Nov. 5	888	239	131	292
Grooms, Robert O., Ottumwa, Iowa. Fuse-holder	870,531	Nov. 5	1033	281	131	333
Gross, Herman, Webster, S. D. Belt-guide	869,899	Nov. 5	43	12–13	131	16
Gross, Joseph F., New York, N. Y. Drain system and apparatus	870,027	Nov. 5	245	68	131	85
Guffey, John W., Arkansas City, Kans. Safety device for air-brakes	870,284	Nov. 5	643	172	131	210
Guthrie, Wardell, Chicago, Ill. Deep-water gold-dredge	870,235	Nov. 5	571	153	131	187

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H. Adler Company. (See Adler, Henry, assignor.)						
H. S. Eckles & Company. (See Sparmaker, Frank P., assignor.)						
Haas, George, Tremont, Ill. Gate-operating mechanism	870,094	Nov. 5	338	95	131	112
Hackerson, Martin R., Denver, Colo. Music-stand	870,529	Nov. 5	1029	280–1	131	332
Haddock, Edwin J., Columbus, Ohio, assignor to J. A. Jeffrey. Supporting-pulley for belt conveyers	869,900	Nov. 5	44	13	131	16
Hager, William L., Lincoln, Nebr. Furnace-regulator	870,028	Nov. 5	247	68	131	85
Hagler, Jefferson D., and M. Pickens, Vernon, Tex. Screen for eaves-troughs	870,165	Nov. 5	446	123	131	147
Hahn, Henry, Stockton, Cal. Tappet	869,901	Nov. 5	45	13	131	16
Haines, Robert T., and F. Whit-Gould, London, England. Washing apparatus	870,095	Nov. 5	339	95	131	113
Haley, James M., assignor of one-half to F. F. Young, Springdale, Ark. Grafting-tool	870,096	Nov. 5	340	95	131	113
Hall, Charles E., *et al.* (See Neal, Harry W., assignor.)						
Hall, Jay H., assignor to Electric Controller and Supply Company, Cleveland, Ohio. System of motor control	870,029	Nov. 5	248	68–9	131	86
Hall, Louis J., Chicago, Ill., assignor, by mesne assignments, to Morris-Hall Mail Closer Company. Machine for stamping and sealing mail-matter	870,359	Nov. 5	767	204–11	131	252
Hamilton, Alexander K., New Brighton, N. Y., and A. T. Keller; said Keller assignor of one-half to Mesta Machine Company, Pittsburg, Pa. Hydraulic counterbalance for rolling-mills	870,285	Nov. 5	645	172–3	131	210
Hanna, Walter S., and J. D. Bryant, Columbus, Ohio. Paint and varnish remover	870,508	Nov. 5	999	.....	131	323
Hanson, Bengt M. W., assignor to Pratt & Whitney Company, Hartford, Conn. Thread-gage	870,286	Nov. 5	646	173–4	131	211
Harbeck, Jervis R., assignor to Kemlweld Can Company, Detroit, Mich. Tube-mandrel	869,902	Nov. 5	46	13	131	17
Harbuck, William H., Anderson, Tex. Fly-trap shed	870,360	Nov. 5	791	211	131	258
Hare, John D., McCook, Nebr. Sled-brake	870,361	Nov. 5	793	212	131	259
Harloe, Morton, Hawley, Pa. Cooking utensil	869,903	Nov. 5	47	14	131	17
Harmon, Willard, *et al.* (See Neal, Harry W., assignor.)						
Harrell, William D., and J. E. McNown, Lagro, Ind. Bundler and binder	870,362	Nov. 5	795	212	131	260
Harriman, Henry I., Hyde Park, Mass. Weft-replenishing loom	870,509	Nov. 5	1000	272–3	131	323
Harris, Charles J., Bridgeport, Conn. Vehicle construction	870,287	Nov. 5	647	174	131	211
Harris, Charles S., *et al.* (See Eubank, Samuel F., assignor.)						
Harryman, Alfred P. (See Harryman, Thomas G. and A. P.)						
Harryman, Thomas G. and A. P., Box, Okla. Ter. Wrench	870,097	Nov. 5	341	96	131	113
Harter, Noah S., Waukegan, Ill., assignor to American Steel & Wire Company, Worcester, Mass. Electric clutch	870,166	Nov. 5	448	123–4	131	147
Hartmann Trunk Company. (See Wheary, George H., assignor.)						
Hartness, James, Springfield, Vt. Clutch mechanism	870,288	Nov. 5	650	174–5	131	212
Hartridge, Frank, T. G. Thorne, and E. Rookes, Sittingbourne, England. Shifting spanner or wrench	870,510	Nov. 5	1004	273	131	324
Hartshorn, Edmund F., Newark, assignor to Stewart Hartshorn Company, East Newark, N. J. Shade-hanger level	870,098	Nov. 5	342	96	131	114
Hartshorn, Edmund F., Newark, assignor to Stewart Hartshorn Company, East Newark, N. J. Shade-roller	870,099	Nov. 5	343	96	131	114
Hartshorn, Edmund F., Newark, assignor to Stewart Hartshorn Company, East Newark, N. J. Cord attachment for window-shades	870,100	Nov. 5	345	96	131	114
Hawkins, Joe S., Highlandville, Mo. Bottle-closure	870,030	Nov. 5	250	69	131	86
Hawley, Charles T. (See Stowell and Hawley.)						
Hayes, Elmer F., Kirwin, Kans. Axle-nut wrench for vehicles	870,031	Nov. 5	251	69	131	87
Hayes, George B., Buffalo, N. Y., and J. A. Hayes, Burlington, N. J.; said George B. Hayes assignor to G. D. Hayes, Buffalo, N. Y. Foundry apparatus	870,511	Nov. 5	1005	273–4	131	324
Hayes, George D. (See Hayes, George B. and J. A., assignors.)						
Hayes, John A. (See Hayes, George B. and J. A.)						
Heer, Otto F. (See Gamber and Heer.)						
Heimlich, John, Port Clinton, Ohio. Air-inspirator	870,167	Nov. 5	449	124	131	147
Helwig, Anna. (See Thomas, Owen W., assignor.)						
Hempel, Hans, Chicago, Ill. Attachment for washboilers	869,904	Nov. 5	48	14	131	17
Hendryx, Wilbur A., Denver, Colo. Recovering solutions	870,289	Nov. 5	652	175	131	213
Henkel, Adolf W., assignor of one-half to R. E. Wilkinson, Kenosha, Wis. Rotary engine	870,290	Nov. 5	653	175	131	213
Henning, Peter A., Kenyon, Minn. Elevated carrier	870,363	Nov. 5	796	212	131	260
Henry, George J., Jr., assignor of one-half to Pelton Water Wheel Company, San Francisco, Cal. Regulating means for water-wheel nozzles	870,291	Nov. 5	654	176	131	214
Henry, George J., Jr., assignor of one-half to Pelton Water Wheel Company, San Francisco, Cal. Regulating means for impact-streams	870,292	Nov. 5	658	176	131	215
Henry, William W., Wollaston, assignor to S. H. Couch, Boston, Mass. Intercommunicating telephone	870,168	Nov. 5	451	124–5	131	148
Hensley, Charles G., New York, N. Y., assignor, by mesne assignments, to J. G. Brill Company, Philadelphia, Pa. Sand-box	870,101	Nov. 5	345	97	131	115
Herman, Antoine G., Aix-la-Chapelle, Germany. Apparatus for hardening and tempering card-teeth	870,364	Nov. 5	797	213	131	260
Hernlen, Emile J. (See Wirtz and Hernlen.)						
Herrick, Albert B., Ridgewood, N. J., assignor to Electric Railway Improvement Company, Cleveland, Ohio. Apparatus for making rail-bonds	870,169	Nov. 5	454	125	131	149
Hershiser, Orel L., Buffalo, N. Y. Wax-extractor	870,512	Nov. 5	1007	274	131	325
Hervé, Henri A., Paris, France. Captive balloon	870,430	Nov. 5	889	239–40	131	293
Herzog, Felix B., New York, N. Y. Electric signaling apparatus	870,102	Nov. 5	347	97	131	115
Herzog, Moses, Washington, D. C. Strap-fastener	870,032	Nov. 5	252	69	131	87
Hess, John D., Baltimore, Md. Sash operating, locking, and balancing mechanism	870,431	Nov. 5	893	240–1	131	293
Hewey, Henry A., Claremont, N. H. Rotary engine	870,293	Nov. 5	660	177	131	216
Hewson, S. J. (See Peck, Frank S., assignor.)						
Higginson, George, London, England. Aerating and bottling apparatus	870,103	Nov. 5	348	97–8	131	116
Hight, Robert L., Decatur, Ill. Graver-sharpener	870,365	Nov. 5	799	213	131	261
Higley Machine Company. (See Juengst, Charles A., assignor.)						
Higley, Pratt H., Chillicothe, Ohio. Seed-planter	870,432	Nov. 5	894	241	131	294
Hildreth, Eugene W., Melrose, Mass. Fish-hook guard	870,033	Nov. 5	253	70	131	87
Hill, Henry, Nottingham, England. Warp-knitting machine	870,170	Nov. 5	455	126	131	149
Hill, Walter A., assignor of one-half to V. Scheidell and G. Meyers, Callicoon, N. Y. Spring-cushioned automobile-wheel	870,171	Nov. 5	456	126	131	150
Hirsh, Leon F., York, Pa. Cover-lifter for sheet-metal boxes	870,513	Nov. 5	1009	275	131	326
Hodges, Emery C., Bloomington, Ill. Drainage for building foundations	870,433	Nov. 5	895	241	131	294
Hodges, Jackson. (See Lipscond, Julius, assignor.)						
Holden, Daniel L., assignor to Federal Ice Company, New York, N. Y. Hydraulic valve	870,104	Nov. 5	350	98	131	116
Holden, Lenhard A., Ottosen, Iowa. Gate-hinge	869,905	Nov. 5	48	14	131	17
Holmes, Daniel S., *et al.* (See Lane, George M., assignor.)						
Hookway, Charles T., Syracuse, N. Y. Wheel-shovel	870,172	Nov. 5	458	126	131	150
Hopkins, Lafayette B., North Lawrence, Kans. Screw-driver	870,034	Nov. 5	254	70	131	88
Hornung, John, Dresden, Ohio. Sad-iron cleaner and waxer	870,236	Nov. 5	572	154	131	187
Horsley, Robert L., Fort Worth, Tex., assignor to Worth Wire Works. Wire-coiling machine	870,237	Nov. 5	573	154	131	188
Horsley, Robert L., Fort Worth, Tex., assignor to Worth Wire Works. Wire-coiling machine	870,514	Nov. 5	1010	275	131	326

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Hosmer, Arthur, assignor of one-half to J. D. Collett, Fort Worth, Tex. Railway-crossing	870,173	Nov. 5	459	127	131	151
Howard, John B., St. John, Kans. Pruning-knife	870,366	Nov. 5	799	213	131	261
Hudson, John, Hamlin, Tex. Cotton-chopper	870,434	Nov. 5	896	241–2	131	294
Huhn, John H., assignor to Fairmont Box Car Loader Company, Fairmont, W. Va. Car-loader	870,175	Nov. 5	463	127–8	131	152
Huhn, John H., and C. F. Ice, assignors to Fairmont Box Car Loader Company, Fairmont, W. Va. Rotary shovel for loading cars	870,174	Nov. 5	461	127	131	151
Huhn, John H., and C. F. Ice, assignors to Fairmont Box Car Loader Company, Fairmont, W. Va. Car-loader	870,294	Nov. 5	661	177	131	216
Hull, David C., assignor to United States Whip Company, Westfield, Mass. Ratan-splitting machine	870,435	Nov. 5	897	242–3	131	294
Hultz, Smith M., and C. I. Smith, Elyria, Ohio. Display-rack	870,176	Nov. 5	465	128	131	153
Hunnicutt, Charles, Wilmington, Ohio. Corn-grader	870,515	Nov. 5	1011	275	131	326
Hurd, Elijah L., Howell, S. D. Draft-releasing device	870,177	Nov. 5	467	128	131	153
Hurley, Andrew J., *et al.* (See Warthen, Harry J., assignor.)						
Hurry, Rutgers I. (See Prevost, Dwight F., assignor.)						
Ice, Charles F. (See Huhn and Ice.)						
Iler Rock Drill Manufacturing Company. (See Johnson, Alfred E., assignor.)						
Impecoven, John W., Kidder, S. D. Vehicle-coupling	870,105	Nov. 5	351	98	131	117
International Switch & Signal Company. (See Shaw, Francis G., assignor.)						
Irwin, Frank L., assignor to Ralston Steel Car Company, Columbus, Ohio. Steel underframing for railway-cars	870,436	Nov. 5	900	243	131	295
Isaacs, Abraham. (See Becroft and Isaacs.)						
J. B. Timberlake & Sons. (See Timberlake, John B., assignor.)						
J. G. Brill Company. (See Hensley, Charles G., assignor.)						
J. G. Brill Company. (See Levy, Joseph L., assignor.)						
J. I. Case Plow Works. (See Michael, Clement W., assignor.)						
J. I. Case Threshing Machine Company. (See MacGregor and Cahall, assignors.)						
Jackson, Dugald C., Madison, Wis. Dynamo-electric machine	870,035	Nov. 5	254	70	131	88
Jacobs, Arthur I., assignor to Jacobs Manufacturing Company, Hartford, Conn. Universal joint	869,906	Nov. 5	49	15	131	17
Jacobs Manufacturing Company. (See Jacobs, Arthur I., assignor.)						
Jacobson, Samuel, *et al.* (See Mahoney, Joseph N., assignor.)						
James, Frederick, Lanesboro, Pa. Torpedo-placer	870,437	Nov. 5	901	243–4	131	295
Jarvis, Samuel E., Lansing, Mich. High and low water alarm	869,907	Nov. 5	50	15	131	17
Jeffrey, Joseph A. (See Haddock, Edwin J., assignor.)						
Jeffrey, Joseph A. (See Merrill, Edwin R., assignor.)						
Jeffrey, Joseph A. (See Willson, Freeman R., Jr., assignor.)						
Jenness, Edwin J., Chicago, Ill. Spring suspension for automobiles	869,968	Nov. 5	132	37	131	43
Johnson, Alfred E., assignor to Iler Rock Drill Manufacturing Company, Denver, Colo. Hammer-drill	870,178	Nov. 5	467	128	131	154
Johnson, Arthur, Hyde Park, Mass. Combined hot and cold water faucet	870,438	Nov. 5	903	244	131	296
Johnson, Charles. (See Mereen and Johnson.)						
Johnson, Charles E., assignor to Corbin Cabinet Lock Company, New Britain, Conn. Padlock. (Reissue)	12,716	Nov. 5	1037	283	131	335
Johnson, Edwin S. (See Knight and Johnson.)						
Johnson, Frederick S., assignor to Merriam Manufacturing Company, Durham, Conn. Box-fastener	869,908	Nov. 5	51	15	131	18
Johnson, Iver, Bellingham, Wash. Lock mechanism for doors	870,238	Nov. 5	574	154–5	131	188
Johnson, Nels J., Wallingford, Iowa. Head-rest	870,179	Nov. 5	470	129	131	154
Johnson, Thomas C., assignor to Winchester Repeating Arms Co., New Haven, Conn. Telescope-sight for firearms	870,295	Nov. 5	664	178	131	218
Jones, Hilles C. (See Bateman and Jones.)						
Jones, Joshua J., Avalon, Pa. Gear-wheel	870,106	Nov. 5	352	98–9	131	117
Juengst, Charles A., assignor to Higley Machine Company, Croton Falls, N. Y. Machine for sawing metals	870,180	Nov. 5	470	129	131	154
Kade, Charles F., Sheboygan, Wis. Adjustable bracket	870,439	Nov. 5	904	244	131	296
Kahn, Adolph E., New York, N. Y. Anerold barometer	869,909	Nov. 5	51	15	131	18
Kallberg, Albin, and L. Netz, Milford, Mass. Buckle	869,910	Nov. 5	52	16	131	18
Kamp, Frank F., Jr. (See Moore and Kamp.)						
Karr, Burton A., Omaha, Nebr., assignor, by mesne assignments, to Universal Amusement Company. Horizontal roller-coaster	870,440	Nov. 5	905	245	131	296
Keeter, John H., Spencer, N. C. Saw-set	870,036	Nov. 5	257	71	131	88
Keiser, Henry B. A., Akron, Ohio. Railway-track construction	870,181	Nov. 5	472	129–30	131	155
Keller, Albert T. (See Hamilton and Keller.)						
Kelly, Charles W., Jasper, Ala. Labeling-machine	870,182	Nov. 5	473	130–1	131	155
Kelly, George, Hinsdale, Ill. Glue	870,367	Nov. 5	900	.....	131	262
Kelly, George, Hinsdale, Ill. Insulating board or slab	870,368	Nov. 5	901	.....	131	262
Kemlweld Can Company. (See Harbeck, Jervis R., assignor.)						
Kemlweld Can Company. (See Scott, Burton W., assignor.)						
Kent, Elihu B., Lansing, Mich. Transmission-gearing	870,183	Nov. 5	478	131–2	131	157
Kerr, Jesse J., Dunbar, Pa. Nut-cutting tool	870,441	Nov. 5	907	245	131	297
Kimball, Edward T., *et al.* (See Abell, Rollin, assignor.)						
Kimball, Edward T. (See Campbell, Solomon A., assignor.)						
Kimble, Ransom E., Vicksburg, Mich. Weighing device	869,969	Nov. 5	132	37	131	43
King, Charles B. (See Stump, King, and Barnhart.)						
King, T. J., *et al.* (See Easterling, Robert W., assignor.)						
Kintner, Charles J., New York, N. Y. Railway signal and safety appliance	869,970	Nov. 5	133	38	131	43
Kintz, Herbert, Sharpsburg, Pa. Bed	869,911	Nov. 5	53	16	131	18
Kirkpatrick, Charles P., *et al.* (See Wilcox, Charles M., assignor.)						
Kirkpatrick, James E., *et al.* (See Wilcox, Charles M., assignor.)						
Kiser, Isaac L., and O. M. Prince, St. Charles, Mo. Car construction	870,296	Nov. 5	666	178	131	218
Kline, John P., Brooklyn, Mich. Felt boot	870,037	Nov. 5	258	71	131	89
Knapp, John C., Philadelphia, Pa. Portable folding washstand	870,038	Nov. 5	259	71	131	89
Kneeland, Oscar A., Lisbon, N. D. Car-step	870,442	Nov. 5	907	246	131	297
Knight, William J., and E. S. Johnson, Oakland, Cal. Cutter head for dredges	869,912	Nov. 5	54	16	131	18
Knowlton, Dallas, Washington, D. C. Jar-closure	870,239	Nov. 5	577	155	131	189
Knuppen, Peter, Milwaukee, Wis. Sofa-pillow	870,297	Nov. 5	667	178	131	218
Koeb, Emil. (See Thompson and Koeb.)						
Koeb, Emil, Leipsic, assignor of one-half to R. P. Thompson, Springfield, Ohio. Transmission-gear	870,107	Nov. 5	354	99–100	131	117
Korhonen, Kaarlo H., Detroit, Mich. Rotary engine	869,971	Nov. 5	139	38	131	45
Kowastch, Ambrose, New York, N. Y., and L. Reinicke, Hoboken, N. J. Ball-distributer	870,108	Nov. 5	356	100	131	119
Krahn, Alvin W., Milwaukee, Wis. Computing-machine	870,184	Nov. 5	480	132–3	131	157
Krauss, George M., Omaha, Nebr. Calf-weaner	869,913	Nov. 5	55	16	131	19
Kuhn, Edmond, East Orange, N. J., assignor to G. and E. Bunzl, New York, N. Y. Stem winding and setting watch	870,109	Nov. 5	358	101	131	119
La Zacualpa Rubber Plantation Company. (See Lesher, Charles A., assignor.)						
Lake, Fred W. (See Rideout, Eugene P., assignor.)						
Lamkin, Arthur E., Croydon, England. Sparking plug for internal-combustion engines	870,369	Nov. 5	802	213	131	262

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Lamson, Franklin S., assignor to Cosmos Construction Company, Washington, D. C. Making artificial stone and concrete	870,370	Nov. 5	802	.....	131	262
Lane, George M., Lanoka, assignor of two-thirds to O. F. Lane and D. S. Holmes, Forked River, N. J. Electric-arc lamp	869,914	Nov. 5	56	17	131	19
Lane, John D., Etherly, Ill. Cab-window	869,972	Nov. 5	140	38	131	46
Lane, Orlan F., *et al.* (See Lane, George M., assignor.)						
Lange, Leopold, Chicago, Ill. Barrel-cleaner	869,915	Nov. 5	57	17	131	19
Lash, Levi, Garretson, S. D., assignor of one-half to J. P. Petersen, Russell, Minn. Hulling-machine	870,298	Nov. 5	668	179	131	219
Lavoie, Joseph P., Kibbey, Mont. Steel fence-post	870,443	Nov. 5	908	246	131	297
Lawrence, Henry J., Longbeach, Cal. Cream-separator	870,110	Nov. 5	359	101	131	120
Lease, George M., Lamar, Mo. Tire-bench	870,039	Nov. 5	260	71	131	89
Lee, Alfred M., trustee. (See Pease, Roger S., assignor.)						
Legg, Marion W., Trenton, Mo. Gate	870,371	Nov. 5	806	214	131	264
Lehmkuhl, William B., Cambridge, Mass. Telephone-supporting apparatus	869,973	Nov. 5	141	39	131	47
Leigh, Richard A. (See Schnaufer and Smock, assignors.)						
Leonard, Gaspar A., Boston, Mass. Attachment for T-squares	870,372	Nov. 5	807	214	131	265
Leonard, John W., and H. E. Brown, Washington, Pa. Gearing	870,444	Nov. 5	909	246	131	298
Lesher, Charles A., Soconusco, Mexico, assignor to La Zacualpa Rubber Plantation Company, San Francisco, Cal. Tapping-knife for rubber-trees and the like	870,299	Nov. 5	669	179	131	219
Levin, David R., Chicago, Ill. Sheet-metal-stamping die	869,916	Nov. 5	59	18	131	20
Levin, Samuel, Highland Park, Ill. Stylus for sound-reproducing machines	870,300	Nov. 5	670	179	131	219
Levy, Joseph L., New York, N. Y., assignor, by mesne assignments, to J. G. Brill Company, Philadelphia, Pa. Sand-box	870,111	Nov. 5	360	101	131	120
Lewis, Joseph W., assignor of one-half to J. E. Phillips, Daingerfield, Tex. Clothes-pin	870,040	Nov. 5	262	72	131	90
Lewis, Lewis C., assignor to Monarch Manufacturing Company, Columbus, Ohio. Water-motor	870,112	Nov. 5	361	102	131	120
Lewis, Lewis C., assignor to Monarch Manufacturing Company, Columbus, Ohio. Stop and waste valve	870,113	Nov. 5	363	102	131	121
Lewis, Walter J., St. Louis, Mo. Comb-honey section	869,917	Nov. 5	61	18	131	21
Leys, James D., *et al.* (See Mahoney, Joseph N., assignor.)						
Libby, Dorville, Jr., assignor to Sunset Automobile Company, San Francisco, Cal. Gas-engine	870,240	Nov. 5	577	155	131	189
Liebig, William G., Detroit, Mich. Staple-forming machine	870,114	Nov. 5	364	102–3	131	121
Lindgren, Erick W., Hagalund, near Stockholm, Sweden, assignor to Aktiebolaget Svenska Automat Fabriken. Apparatus for automatic sale of liquids	870,185	Nov. 5	485	133	131	159
Lindström, Charles A., Allegheny, assignor to Pressed Steel Car Company, Pittsburg, Pa. Brake-beam	870,186	Nov. 5	487	133	131	159
Linen Thread Company. (See Gay, George E., assignor.)						
Lingenfelter, Carl E., assignor to Scully Steel & Iron Company, Chicago, Ill. Beveling-machine	870,301	Nov. 5	671	180	131	219
Lipscond, Julius, assignor of one-third to J. Hodges, Indianola, Miss. Portable desk	869,918	Nov. 5	61	18	131	21
Little & Company, A. E. (See Weeks, Horace A., assignor.)						
Livermore, Charles B., Seattle, Wash. Ticket-holder	870,445	Nov. 5	911	247	131	298
Livingston, Colin, Muskegon, Mich. Sprocket-chain	870,373	Nov. 5	808	214	131	265
Locke, Fred M., Victor, N. Y. Wall-insulator	870,187	Nov. 5	488	133	131	160
Long, Albert C., assignor to Long Furniture Co., Hanover, Pa. Extension-table	870,374	Nov. 5	809	214–15	131	265
Long Furniture Co. (See Long, Albert C., assignor.)						
Lugar, John M., Otterbein, Ind. Car-door closure	869,919	Nov. 5	62	18	131	21
Lundberg, Carl E. I., Spokane, Wash. Game apparatus	870,041	Nov. 5	263	72	131	90
Lupton, William A., assignor of one-half to R. E. Collins, Eros, La. Ice-shaver	870,446	Nov. 5	913	247	131	299
Lyons, Charles H., Kansas City, Mo. Combination dust-pan and broom-holder	870,447	Nov. 5	914	247	131	299
Lyons, Charles H., Gila River Valley, N. Mex. Ter. Road-scraper	870,516	Nov. 5	1013	276	131	326
M. H. Treadwell & Co. (See Astrom, Carl P., assignor.) (Reissue.)						
MacGregor, Wallace F., Racine, Wis. Sleve for threshing-machines	870,302	Nov. 5	672	180–1	131	220
MacGregor, Wallace F., and W. H. Cahall, assignors to J. I. Case Threshing Machine Company, Racine, Wis. Draft apparatus for wagons and the like	870,241	Nov. 5	579	155–6	131	189
MacLachlan, John D., assignor to Detroit Steam Engine Company, Detroit, Mich. Steam-engine	870,375	Nov. 5	813	215–16	131	267
MacLagan, Hector P., assignor to National Rheostat Company, Chicago, Ill. Resistance-adjusting device	870,042	Nov. 5	264	72	131	90
Mahoney, Joseph N., Brooklyn, assignor to himself, J. D. Leys, and S. Jacobson, New York, N. Y. Brake for vehicles	870,188	Nov. 5	489	134	131	160
Mahoney, Joseph N., Brooklyn, assignor to himself, J. D. Leys, and S. Jacobson, New York, N. Y. Brake for power-driven vehicles	870,189	Nov. 5	492	134–5	131	161
Main Belting Company. (See Plummer, George C., assignor.)						
Maine, Andrew J., Appleton, Wis. Car-mover	870,043	Nov. 5	266	73	131	91
Maltby, George B., assignor to Cleveland Car Specialty Company, Cleveland, Ohio. Roof-carline	869,974	Nov. 5	143	39	131	47
Maltby, George B., assignor to Cleveland Car Specialty Company, Cleveland, Ohio. Roof-carline	869,975	Nov. 5	144	39	131	47
Manley, John W., New Barnet, assignor of one-half to Electric Safety Appliances Company, Limited, London, England. Contact-galvanometer	870,376	Nov. 5	814	216	131	268
Manson, James W. (See Burbank and Manson.)						
Manton, James S. (See McIntosh and Manton.)						
Marett, Philip W., Philadelphia, Pa. Valve	870,377	Nov. 5	816	216	131	268
Marsland, Frank, Brooklyn, N. Y. Exercising apparatus	869,920	Nov. 5	63	19	131	22
Mason, Herbert C., Providence, R. I. Rubber overshoe	869,976	Nov. 5	145	39	131	47
Mason, John A., Newton, Mass. Automobile-rack	870,517	Nov. 5	1015	276	131	327
Mathews, Albert, New York, N. Y. Attachment for air-ships	870,448	Nov. 5	915	247	131	299
May, Alva C., Massillon, Ohio. Pipe and nut wrench	870,449	Nov. 5	915	248	131	300
Mayer, Fredric H., Manhattan, Kans. Lifter	870,450	Nov. 5	916	248	131	300
Mayers, Wilbur S., assignor to Fairmont Box Car Loader Company, Fairmont, W. Va. Car-loader	870,115	Nov. 5	367	103–4	131	122
Maynes, Hyla F., Gaines, Pa. Amusement apparatus	870,378	Nov. 5	817	217	131	268
Maywald, Frederick J., New York, N. Y. Producing carbon tetrachlorid	870,518	Nov. 5	1015	276	131	327
McBride, Orris H., Plankinton, S. D. Cross-line buckle	869,927	Nov. 5	72	22	131	25
McCabe, Thomas, Homestead, and J. J. Rauch, Munhall, Pa. Scrubbing-machine	870,454	Nov. 5	919	249–55	131	301
McCarty, Ralph, Lebanon, Pa. Screw-cutting machine	869,928	Nov. 5	73	22	131	25
McCaskey, Perry A., assignor to McCaskey Register Company, Alliance, Ohio. Manifolding off-pad holder	870,193	Nov. 5	504	137	131	164
McCaskey Register Company. (See McCaskey, Perry A., assignor.)						
McClellon, James M., Everett, Mass. Coal-handling apparatus	869,929	Nov. 5	75	22–4	131	25
McClellon, James M., Everett, Mass. Fire-box for locomotive-boilers	870,306	Nov. 5	680	182–3	131	222
McClellon, James M., Everett, Mass. Fire-box for locomotive-boilers	870,380	Nov. 5	820	217	131	269
McClellon, James M., Everett, Mass. Locomotive-boiler	870,455	Nov. 5	921	250–2	131	301
McCool, William A., Beaver Falls, Pa., assignor to Union Specialty Manufacturing Company. Ribbon-feed mechanism for type-writers	870,307	Nov. 5	684	183–4	131	224
McGonigle, Charles W., assignor of one-half to O. L. Young, North Yakima, Wash. Engine	870,308	Nov. 5	685	184	131	224

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McIntosh, Jacob M., Warren, Ohio. Wall-paper cleaner	869,931	Nov. 5	82	24	131	28
McIntosh, John T., and J. S. Manton, Chicago, Ill. Automatic air-brake apparatus and method	869,930	Nov. 5	78	24	131	26
McKay, Ferdinand C. D., Willseyville, assignor to W. L. McKay, Geneva, N. Y. Truss	870,519	Nov. 5	1016	276–7	131	328
McKay, William L. (See McKay, Ferdinand C. D., assignor)						
McKee, Charles S., Glencoe, Ill. Piston	869,932	Nov. 5	83	25	131	28
McLean, Donald W., Mount Hutt, Methven, New Zealand. Apparatus for surveying and range-finding	869,933	Nov. 5	83	25	131	28
McNown, Joseph E. (See Harrell and McNown)						
McSheehy, Bartholomew E., Jersey City, N. J. Manifolding device	870,456	Nov. 5	926	252–3	131	302
McVitty, Melville C., North Baltimore, Ohio. Gas-stove	869,979	Nov. 5	150	41	131	50
Meech, Alfred H., Chatham, N. Y. Cable-clamp	870,242	Nov. 5	581	156	131	190
Mercer, Samuel E., Shelbyville, Ill. Wheel	869,921	Nov. 5	64	19	131	22
Mercer, Samuel E., Shelbyville, Ill. Truck	869,922	Nov. 5	65	19–20	131	22
Mereen, Arno, and C. Johnson, Minneapolis, Minn. Machine for uniting matched boards	869,923	Nov. 5	66	20–1	131	23
Mergenthaler Linotype Company. (See Dodge, Philip T., assignor.)						
Merriam Manufacturing Company. (See Johnson, Frederick S., assignor.)						
Merrill, Edwin R., assignor to J. A. Jeffrey, Columbus, Ohio. Mining-machine	870,116	Nov. 5	372	104–5	131	124
Mesta Machine Company. (See Hamilton and Keller, assignors.)						
Mettmann, Philipp, Philadelphia, Pa. Box and closure thereof	869,924	Nov. 5	68	21	131	24
Meyers, Guernsey, *et al.* (See Hill, Walter A., assignor.)						
Meyrowitz Manufacturing Company. (See Schwinzer, John R., assignor.)						
Michael, Clement W., assignor to J. I. Case Plow Works, Racine, Wis. Fertilizer attachment for planters	869,977	Nov. 5	145	40	131	48
Miller, Edward J., Canton, Ohio. Pasteurizing apparatus	869,978	Nov. 5	148	40	131	49
Miller, George J., Kansas City, Mo Broiling apparatus	870,117	Nov. 5	377	105–6	131	126
Miller, George J., Kansas City, Mo. Broiler	870,118	Nov. 5	380	106	131	127
Miller, Louis H., Campbell, Cal. Acetylene-gas machine	870,190	Nov. 5	495	135–6	131	162
Miller, William J. D., Hillsboro, Mo. Speed-governor	870,303	Nov. 5	675	181	131	221
Mills, Rudolph C., Eldorado, Okla. Ter. Lister attachment	870,451	Nov. 5	917	248	131	300
Milner, George, assignor to Milner Power Multiplying Machine Company, Inc., Brooklyn, N. Y. Power-transmission gearing	870,304	Nov. 5	676	181–2	131	221
Milner Power Multipyling Machine Company. (See Milner, George, assignor.)						
Monarch Manufacturing Company. (See Lewis, Lewis C., assignor.)						
Montigny, Emile J., New York, N. Y. Shirt-waist-retaining belt	870,452	Nov. 5	917	248	131	300
Moore, Daniel M., Newark, N. J., assignor to Moore Electrical Company, New York, N. Y. Pressure-gage	869,925	Nov. 5	69	21	131	24
Moore, Edward Y., Cleveland, Ohio. Locking mechanism for trolleys	870,305	Nov. 5	678	182	131	222
Moore Electrical Company. (See Moore, Daniel M., assignor.)						
Moore, Evan L. (See Perry, Manville E., assignor.)						
Moore, John M., Bridgeville, and F. F. Kamp, Jr., Lawrence, Pa. Railway-signal	870,453	Nov. 5	918	249	131	301
Morden, Lucena M., Waterbury, Conn. Key-ring	870,191	Nov. 5	499	136	131	163
Morehouse, Aaron, assignor to F. A. Morehouse, Atlantic Highlands, N. J. Bottle-closure	870,243	Nov. 5	582	156	131	190
Morehouse, Aaron, assignor to F. A. Morehouse, Atlantic Highlands, N. J. Bill-file	870,244	Nov. 5	583	156	131	190
Morehouse, Frank A. (See Morehouse, Aaron, assignor.)						
Morison, William J. (See Clarkson and Morison.)						
Morris-Hall Mail Closer Company. (See Hall, Louis J., assignor.)						
Morris, Leonard D., Chicago, Ill. Pedal bass-organ	870,192	Nov. 5	500	136–7	131	164
Mottier, Walter F., Gibson City, Ill. Hydraulic motor	870,379	Nov. 5	818	217	131	269
Murchison, Roderick, Kewanee, Ill. Clothes-line reel	870,245	Nov. 5	583	157	131	191
Myers and Brother, F. E. (See Myers, Philip A., assignor.)						
Myers, Philip A., assignor to F. E. Myers and Brother, Ashland, Ohio. Pump	869,926	Nov. 5	70	21	131	24
Myers, William, New Brighton, England. Means for securing envelops from fraudulent or unauthorized opening	870,119	Nov. 5	384	107	131	128
N. Stafford Company. (See Stafford, Nelson, assignor.)						
Naranjo, Hector, Alajuela, Costa Rica. Heating or refrigerating apparatus	870,457	Nov. 5	927	253	131	303
National Mfg. & Mailing Co. (See Farnham, Schuyler E., assignor.)						
National Rheostat Company. (See MacLagan, Hector P., assignor.)						
National Tube Company. (See Nicholson, John H., assignor.)						
Neal, Harry W., assignor to himself, W. Harmon, and C. E. Hall, Indianapolis, Ind. Damper	870,309	Nov. 5	686	185	131	225
Nelson, Charles E., Harvey, Ill. Ball-bearing track-drill	870,194	Nov. 5	505	138	131	165
Nettenstrom, David, assignor to U. S. Chemical Rubber Company, Chicago, Ill. Belt and belting	870,044	Nov. 5	267	73	131	92
Netz, Ludvig. (See Kallberg and Netz.)						
New Idea Pulverizing Mill Company. (See Turman, Byron I., assignor.)						
New York Cigarette Machine Company. (See Boucher, Arthur L., assignor.)						
Nicholson, John H., assignor to National Tube Company, Pittsburg, Pa. Making seamless tubing	870,246	Nov. 5	584	157	131	191
Nixon, Jacob, Stockport, Iowa. Corn-harvester	870,247	Nov. 5	585	157–8	131	191
Noelting, Bernhard H. (See Campbell and Noelting.)						
Norton, Elliott S., assignor to Acme Flexible Clasp Company, Chicago, Ill. Apparatus for making box-strapping	870,195	Nov. 5	506	138–9	131	165
O'Brien, Thomas, assignor to Revolving Cylinder Motor Co., New York, N. Y. Revolving-cylinder motor	870,120	Nov. 5	385	107	131	129
O'Donnell, James J., Paducah, Ky. Rotary pump	870,310	Nov. 5	687	185	131	225
Odziemczewski, Ladislaus. (See Dackiewicz, Charles, assignor.)						
Okamoto, Goro, New York, N. Y. Rotary pump	870,311	Nov. 5	689	185	131	225
Open Coil Heater & Purifier Company. (See Stickle, Cole, assignor.)						
Otis Elevator Company. (See Sundh, August, assignor.)						
P. & F. Corbin. (See Trask, William S., assignor.)						
Pain, Robert W., New York, N. Y., assignor to Aeolian Company. Folding pedal	869,980	Nov. 5	151	41	131	50
Painter, Carl T., assignor to Patten Manufacturing Company, Chattanooga, Tenn. Clutch mechanism	870,381	Nov. 5	822	218	131	270
Painter, Carl T., assignor to Patten Manufacturing Company, Chattanooga, Tenn. Hoisting apparatus	870,458	Nov. 5	930	253–4	131	303
Palm, Emil, assignor of one-half to O. E. Strahn, Kiron, Iowa. Elbow-chart	870,520	Nov. 5	1017	277	131	328
Palmer, Harry A., Akron, Ohio. Pneumatic tire	870,248	Nov. 5	589	158	131	192
Parker, Clarence A., Craigsville, N. Y. Non-refillable bottle	870,312	Nov. 5	689	186	131	225
Parks, George P., assignor to Postal Auto and Engine Company, Bedford, Ind. Motor-vehicle	870,459	Nov. 5	932	254	131	304
Parsons, Charles A., and J. H. Armstrong, Newcastle-upon-Tyne, England; said Armstrong assignor to said Parsons. Dynamo-electric machinery	869,934	Nov. 5	86	25	131	29
Patten, James S., Baltimore, Md. Journal-box	870,121	Nov. 5	386	107	131	129
Patten Manufacturing Company. (See Painter, Carl T., assignor.)						
Patterson, Thomas C., New York, N. Y. Cruller-cutting machine	870,249	Nov. 5	590	158–9	131	193
Pease, Roger S., Allegheny, assignor to A. M. Lee, trustee, Pittsburg, Pa. Apparatus for delivering molten glass	870,250	Nov. 5	594	159	131	195
Peck, Frank S., Menomonie, Wis., assignor of one-half to S. J. Hewson, Minneapolis, Minn. Dump-table	870,521	Nov. 5	1018	277	131	328

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Peeples, William E., Pomeroy, Ohio. Lock	870,460	Nov. 5	933	254	131	304
Pelton Water Wheel Company. (See Henry, George J., Jr., assignor.)						
Pendleton, George W., Mineola, Tex. Steam-condenser	870,461	Nov. 5	934	254	131	304
Pennington, Benjamin C., Oscar, Ind. Ter. Guard for cotton-pickers' bags	870,462	Nov. 5	935	255	131	305
Perkins, William A., Charlottesville, Va. Knockdown crate	870,122	Nov. 5	387	108	131	129
Perritt, William J., Rogers, Ark. Grocery-cabinet	870,196	Nov. 5	509	139–40	131	166
Perry, Jere D., Lincoln, Me. Car-stake	870,123	Nov. 5	389	108	131	130
Perry, Manville E., assignor of one-half to E. L. Moore, Philadelphia, Pa. Metal-ceiling construction	870,382	Nov. 5	825	218	131	271
Persen, Ole, Fortuna, Cal. Fruit-juice extractor	870,124	Nov. 5	390	109	131	130
Petersen, Jay P. (See Lash, Levi, assignor.)						
Peterson, August W., Highwood, Ill. Stropping-machine	869,981	Nov. 5	152	42	131	50
Petsche, Gustav B., assignor to Southwark Foundry & Machine Company, Philadelphia, Pa. Admission-valve for gas-engines	870,125	Nov. 5	391	109	131	130
Pettibone, Edward F., Los Angeles, Cal. Mop and cloth wringer	870,463	Nov. 5	936	255	131	305
Pfatischer, Mathias, Philadelphia, Pa., assignor to Electro Dynamic Company, New York, N. Y. Dynamo-electric machine	870,313	Nov. 5	691	186–7	131	226
Pfeifer, John, Springfield, Ohio. Cash-indicator	869,982	Nov. 5	153	42–3	131	51
Phillips, Joseph E. (See Lewis, Joseph W., assignor.)						
Phillipson, Jacob, Chicago, Ill. Settee-bed and couch	870,197	Nov. 5	511	140	131	167
Phonoharp Company. (See Green, Joseph R., assignor.)						
Pickens, Mell. (See Hagler and Pickens.)						
Pierce, Orlando E., San Francisco, Cal. Show-case	870,314	Nov. 5	694	187	131	228
Pinner, Louis, New York, N. Y. Vending-machine	870,126	Nov. 5	392	109	131	131
Plummer, George C., assignor to Main Belting Company, Philadelphia, Pa. Conveyer-belt	869,935	Nov. 5	87	26	131	29
Pool, John F., Philadelphia, Pa., assignor to American Sugar Refining Company, Jersey City, N. J. Separator for powdered material	870,383	Nov. 5	826	218	131	272
Pope, John W., Vernal, Utah. Whip-socket lock	870,464	Nov. 5	936	255	131	305
Posey, Edward V., Gage, Okla. Ter. Plow	870,127	Nov. 5	393	110	131	131
Postal Auto and Engine Company. (See Parks, George P., assignor.)						
Pratt & Whitney Company. (See Hanson, Bengt M. W., assignor.)						
Premier Last Company. (See Trufant, Walter E., assignor.)						
Prentiss, Lewis S., Oklahoma, Okla. Ter. Adjustable hinging-strip for doors	870,128	Nov. 5	394	110	131	131
Pressed Steel Car Company. (See Lindström, Charles A., assignor.)						
Prevost, Dwight F., assignor of one-half to R. I. Hurry, New York, N. Y. Spraying apparatus	869,936	Nov. 5	88	26	131	30
Priddle, Arthur, San Francisco, Cal. Reinforcing-bar for concrete structures	870,129	Nov. 5	395	110	131	132
Priebe, Herman C., Blue Island, Ill. Car-underframe	870,130	Nov. 5	396	111	131	132
Prince, Oscar M. (See Kiser and Prince.)						
Pruett, John M., and W. Ard, Rockville, Ind. Burial-vault mold	870,045	Nov. 5	268	73	131	92
Rahn, John B., Racine, Wis. Driving-gear	870,315	Nov. 5	695	188	131	228
Rakestraw, Thomas G., assignor to U. S. Boiler Supply Company, Detroit, Mich. Water-feed regulator	870,046	Nov. 5	270	74	131	92
Ralston Steel Car Company. (See Irwin, Frank L., assignor.)						
Ralston, William A. (See Bennett and Ralston.)						
Ramage, Alexander S., Detroit, Mich. Making lead pigments	870,316	Nov. 5	697	.....	131	228
Ramsay, James. (See Dawson and Ramsay.)						
Rappelee, Francis D., assignor to Green Bay Cot Company, Green Bay, Wis. Mosquito-net support	870,465	Nov. 5	937	256	131	306
Rappleye, Samuel B., Philadelphia, Pa. Oil-burner	870,317	Nov. 5	698	188	131	229
Rarig, Welden C., Ogden, Utah. Sickle-support for grindstones	869,983	Nov. 5	159	43	131	53
Rasmussen, Frode, Inglewood, Victoria, Australia. Trap for rabbits and other animals	870,251	Nov. 5	595	159	131	195
Rauch, John J. (See McCabe and Rauch.)						
Raus, Anton, Cleveland, Ohio. Single-trigger mechanism	870,318	Nov. 5	699	188–9	131	229
Reddell, William, Denver, Colo. Sofa-bed	870,131	Nov. 5	397	111	131	132
Rees, Perley E., Kansas City, Mo., assignor to Densmore Typewriter Company, Syracuse, N. Y. Type-writing machine	869,984	Nov. 5	161	44	131	54
Reinicke, Ludwig. (See Kowastch and Reinicke.)						
Reiss, Walter A., *et al.* (See Warthen, Harry J., assignor.)						
Remaly, Wilson J., Nazareth, Pa. Toy air-ship	870,047	Nov. 5	271	74	131	93
Revolving Cylinder Motor Co. (See O'Brien, Thomas, assignor.)						
Reynolds & Co. (See English, James, assignor.)						
Rich, Solomon M., St. Louis, Mo. Combined warehouse invoice and freight book	870,048	Nov. 5	272	74	131	93
Richardson, Charles H., Jr., Allegheny, Pa. Beer-pipe cleaner	870,384	Nov. 5	828	219	131	272
Richissin, Howard, Akron, Ohio. Envelop-sealer	870,252	Nov. 5	597	160	131	196
Richter, Ernst, assignor to G. A. Gray Company, Cincinnati, Ohio. Selective speed device	869,985	Nov. 5	166	44	131	56
Ridd, Ambrose, Newport, Ky. Manufacturing sheet metal	870,049	Nov. 5	273	75	131	93
Rideout, Eugene P., East Oakland, assignor of one-half to F. W. Lake, Oakland, Cal. Reversible car-seat	870,385	Nov. 5	829	219	131	272
Rider, Harry L., Oil City, Pa. Electrical signaling system for railways	870,466	Nov. 5	938	256	131	306
Ripple, Josiah M., Martinsburg, W. Va. Dumping-wagon	870,132	Nov. 5	399	111–12	131	132
Robbins, George, Columbus, Ohio. Handle for cars	870,386	Nov. 5	830	219	131	273
Robbins, Percy A., Englewood, N. J. Conveying-machine	870,050	Nov. 5	275	75	131	93
Roche, William J., New Bethlehem, Pa. Shaving-brush	870,467	Nov. 5	941	257	131	306
Ronan, James J., and J. F. Barry, Jersey City, N. J. Vending-machine	870,468	Nov. 5	942	257	131	307
Rookes, Edwin. (See Hartridge, Thorne, and Rookes.)						
Rorick, William B. (See Triggs, James M., assignor.)						
Ross, Frank H. (See White and Ross.)						
Rowntree, Harold, assignor to Burdett-Rowntree Manufacturing Company, Chicago, Ill. Car door and step operating mechanism	870,051	Nov. 5	277	75	131	94
Russell, William E., Danbury, Conn. Electrical horn	870,198	Nov. 5	512	140	131	167
Sack, Frank, and F. A. Tyler, Smartville, Nebr. Railway cattle-guard	870,469	Nov. 5	944	258	131	307
Sargent, Allan C., assignor to C. G. Sargent's Sons, Westford, Mass. Drier	870,133	Nov. 5	400	112	131	133
Sargent, Frederick G., Westford, Mass., assignor to C. G. Sargent's Sons Corporation. Apron-guide	870,134	Nov. 5	402	112	131	134
Savage, Columbus W. (See Ellis, William J., assignor.)						
Schade, John, Jr. (See Flinker and Schade.)						
Schayer, John J. (See Schweitzer, Edmund O., assignor.)						
Schebler, George M., Indianapolis, Ind. Carbureter	870,052	Nov. 5	279	76	131	95
Scheck, Andrew, and W. H. Finfrock, Chicago, Ill. Gas-governor	870,470	Nov. 5	945	258	131	308
Scheidell, Valentine, *et al.* (See Hill, Walter A., assignor.)						
Schiermeyer, Henry W., Beatrice, Nebr. Door-check	869,937	Nov. 5	90	26	131	31
Schimanoski, Joseph, St. Louis, Mo. Combined plow and cultivator	870,319	Nov. 5	702	189	131	230
Schimanoski, Joseph, St. Louis, Mo. Potato-digger	870,320	Nov. 5	703	189	131	230
Schnaufer, George A., and H. G. Smock, assignors of one-third to R. A. Leigh, Denver, Colo. Connecting device	870,471	Nov. 5	946	258	131	308
Schneider, Berthold, Berlin, Germany. Fare-indicator	870,387	Nov. 5	830	219–21	131	273
Schneider, William E., Washington D. C. Mechanical movement	870,135	Nov. 5	403	112	131	134

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Scholes, Daniel R., Chicago, Ill. Base for skeleton towers	870,053	Nov. 5	281	76	131	96
Schroeder, George G., Washington, D. C., assignor to Farm Motor Company. Traction attachment for moving objects	870,472	Nov. 5	947	259	131	308
Schroyer, Harry H., Chicago, Ill. Railway vestibule-diaphragm	870,054	Nov. 5	282	76–7	131	96
Schultze, Gustav F. W., Oakland, Cal., assignor to Schultze Novelty Co. Racing-game apparatus	870,473	Nov. 5	949	260	131	309
Schultze Novelty Co. (See Schultze, Gustav F. W., assignor.)						
Schweitzer, Edmund O., assignor of one-half to J. J. Schayer, Chicago, Ill. Electric compensator	870,253	Nov. 5	597	160	131	196
Schwinzer, John R., New York, N. Y., assignor to Meyrowitz Manufacturing Company. Making bifocal lenses	869,938	Nov. 5	91	27	131	31
Scott, Barton W., San Jose, Cal. Drag-saw	870,474	Nov. 5	952	260–1	131	309
Scott, Burton W., assignor to Kemiweld Can Company, Detroit, Mich. Feeding and tension mechanism	870,199	Nov. 5	514	140–1	131	168
Scott, Robert W., Leeds Point, N. J., assignor of one-half to L. N. D. Williams, Ogontz, Pa. Rib-knitted fabric	869,986	Nov. 5	168	44–6	131	57
Scully Steel & Iron Company. (See Lingenfelter, Carl E., assignor.)						
Selden, George M. (See Smith, George E., assignor.)						
Sentz, H. W., *et al.* (See Wilson, Samuel T., assignor.)						
Seymour, Ernest G., assignor to J. E. Seymour, Toledo, Ohio. Vise	870,522	Nov. 5	1019	278	131	329
Seymour, John E. (See Seymour, Ernest G., assignor.)						
Shaffer, Fred, Vandergrift, Pa. Clothes-line reel	870,475	Nov. 5	955	261	131	310
Shaw, Francis O., assignor to International Switch & Signal Company, Boston, Mass. Means for keeping switch and signal apparatus free from snow and ice	869,987	Nov. 5	170	46	131	57
Shaw, Robert L., Paterson, N. J. Pen-guide	870,388	Nov. 5	833	221	131	274
Shaw, Robert W., Stamford, Conn. Propeller-wheel	870,136	Nov. 5	404	113	131	135
Sheckler, Wilder R., Greenville, Pa. Angle-pipe coupling	870,200	Nov. 5	515	141	131	168
Sheppard, William V. (See Edwards and Sheppard.)						
Shoemaker, George H., Benton township, Berrien county, Mich. Well-tube strainer	870,389	Nov. 5	833	221	131	274
Shumway, Marshall G., Farmington, Minn. Litter-carrier	869,939	Nov. 5	93	27	131	31
Siemens & Halske, A. G. (See Gillet, Joseph, assignor.)						
Siewert, George, Brooklyn, Iowa. Washing-machine	869,940	Nov. 5	94	27	131	32
Simcoe, Harry W., Louisville, Ky. Torpedo-placing machine	870,390	Nov. 5	834	221–2	131	274
Simplex Time Recorder Company. (See Stowell and Hawley, assignors.)						
Slater, William E., San Francisco, Cal. Shock-absorber	870,254	Nov. 5	600	160	131	196
Smith, Arthur W., New York, assignor to Yost Writing Machine Company, Ilion, N. Y. Type-writing machine	869,988	Nov. 5	172	47–8	131	58
Smith, Charles F., Miami, Fla. Lock for the closures of window-frame pockets	870,476	Nov. 5	956	261	131	310
Smith, Charles I. (See Hnitz and Smith.)						
Smith, David W. (See Weber and Smith.)						
Smith, George E., assignor of one-half to G. M. Selden, Winnfield, La. Churn-operating mechanism	870,055	Nov. 5	283	77	131	96
Smith, Godfrey, Canal Dover, Ohio. Polishing-machine	870,056	Nov. 5	284	77–8	131	97
Smith, Herbert G., Wayside, Kans. Automatic pull-rod adjuster	870,201	Nov. 5	516	141	131	168
Smith, John, El Paso, Tex. Composite railway-tie	870,255	Nov. 5	601	161	131	196
Smith, Samuel C., Daisy, La. Flood-gate	870,256	Nov. 5	602	161	131	197
Smith, William, Springdale, Ark. Apple-trimming machine	870,137	Nov. 5	405	113	131	135
Smock, Harry G. (See Schnaufer and Smock.)						
Snyder, Grant E., Cooperstown, N. D. Feed-hopper	870,477	Nov. 5	957	261–2	131	311
Sokal, Edward. (See Cook and Sokal.)						
Sommer, Joseph W. (See Sommer, Peter W. and J. W.)						
Sommer, Peter W. and J. W., Peoria, Ill. Wire-barbing machine	870,057	Nov. 5	288	79–80	131	98
Southwark Foundry & Machine Company. (See Petsche, Gustav B., assignor.)						
Sparmaker, Frank P., Woodbury, N. J., assignor to H. S. Eckels & Company, Philadelphia, Pa. Casket-truck	870,058	Nov. 5	290	80	131	98
Spencer, Christopher M., Windsor, assignor to Universal Machine Screw Company, Hartford, Conn. Threading mechanism for screw-machines	869,989	Nov. 5	184	48	131	65
Sponsel, Charles W., Hartford, Conn. Reversing-gear	870,202	Nov. 5	517	142	131	169
Sponsel, Charles W., Hartford, Conn. Speed-indicator	870,203	Nov. 5	519	142	131	169
Staaf, Werner I., Pittsburg, Pa. Spool attachment	870,478	Nov. 5	958	262	131	311
Stafford, Nelson, assignor to N. Stafford Company, New York, N. Y. Pencil-sharpener	870,204	Nov. 5	520	142	131	170
Stamper, Charles and J. D., Cincinnati, Ohio. Polishing-machine for marble and analogous materials	870,321	Nov. 5	704	190	131	231
Stamper, James D. (See Stamper, Charles and J. D.)						
Standard Sanitary Manufacturing Company. (See Cosgrove, Joseph J., assignor.)						
Stanley, George P. (See Tainter and Stanley.)						
Stanley, Shirley Q., Casper, Wyo. Fire-extinguisher	870,479	Nov. 5	958	262	131	311
Stanton, Charles W., *et al.* (See Wood, John W., assignor.)						
Starrett, Danvill W., Oakland, Cal. Steam-actuated valve	870,391	Nov. 5	836	222	131	275
Stearling, Martin M., Missoula, Mont. Trousers-guard	870,392	Nov. 5	837	222	131	276
Steinman, Balthasar, Scranton, Pa. Rolling window-screen	870,393	Nov. 5	838	222	131	276
Stephenson, Robert E., Indianapolis, Ind. Engine-valve-setting device	870,205	Nov. 5	522	142	131	170
Sternaman, John, Jr., Springfield, Ill. Screw	870,059	Nov. 5	291	80	131	99
Stevens, George J., London, England, assignor, by mesne assignments, to American Attachment Company, Portland, Me. Attachment for sewing-machines for producing feiling, blindstitching, &c	869,990	Nov. 5	186	49	131	65
Stevens, Irving D., Chicago, Ill. Fountain shaving-brush	870,257	Nov. 5	603	161	131	197
Stewart Hartshorn Company. (See Hartshorn, Edmund F., assignor.)						
Stewart, John K., Chicago, Ill. Automobile-alarm	869,941	Nov. 5	95	27	131	32
Stickle, Cole, assignor to Open Coil Heater & Purifier Company, Indianapolis, Ind. Feed-water heater	870,060	Nov. 5	292	81	131	99
Stoddard, Elliott J., Detroit, Mich. Gas-engine	869,991	Nov. 5	190	49	131	67
Stout, Franklin B., Baltic, S. D. Draft-equalizer	870,480	Nov. 5	959	262	131	311
Stowe, Larkin, Pleasant View, Ky. Wall-section for dispensing-boxes	869,942	Nov. 5	96	28	131	32
Stowell, Desrie A., and C. T. Hawley, assignors to Simplex Time Recorder Company, Gardner, Mass. Time-recorder	870,061	Nov. 5	294	81–2	131	99
Strahn, O. E. (See Palm, Emil, assignor.)						
Strand Heater Company. (See Strand, Henry, assignor.)						
Strand, Henry, assignor to Strand Heater Company, Cleveland, Ohio. Furnace	870,322	Nov. 5	707	190	131	231
Strang, John, Quebec, Quebec, Canada. Dial for watches and clocks	870,481	Nov. 5	960	263	131	312
Strauss, Emil A., Chicago, Ill. Boltwork mechanism for safe and vault doors	869,992	Nov. 5	191	50	131	67
Stump, Orman L., C. B. King, and H. J. Barnhart, Marion, Ohio. Feed-water filter	870,138	Nov. 5	407	113	131	135
Subra, Gustave E. N. I. E., Paris, France. Elastic tire for vehicle-wheels	870,323	Nov. 5	708	190–1	131	232
Sundh, August, Yonkers, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Alternating-current motor-controller	869,943	Nov. 5	96	28	131	32
Sunset Automobile Company. (See Libby, Dorville, Jr., assignor.)						
Sutton, Edward O., Springfield, Mass. Driving mechanism for automobiles	870,258	Nov. 5	603	161–2	131	197
Tainter, Simon S. and W. W., and G. P. Stanley, Dixfield, Me. Machine for boxing toothpicks	869,993	Nov. 5	191	50	131	67

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Tainter, Willis W. (See Tainter and Stanley.)						
Tangenberg, Christian, Chicago, Ill. Artificial veneer	870,394	Nov. 5	838	223	131	276
Taylor, John D., assignor to Union Switch & Signal Company, Swissvale, Pa. Track-relay	870,139	Nov. 5	409	114	131	136
Teese, William J., Balaclava, Victoria, assignor to W. H. Blackham, Melbourne, Australia. Apparatus used for milking cows	870,395	Nov. 5	840	223	131	276
Tenney, George H., West Townsend, Mass. Bag-rack	870,259	Nov. 5	605	162	131	198
Thistlethwaite, Charles A., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y. Type-writing machine	869,944	Nov. 5	99	28	131	33
Thomas, Franklin S. and L., New York, N. Y. Window-cleaner	870,482	Nov. 5	961	263	131	312
Thomas, George A. (See Thomas, William H., assignor.)						
Thomas, Leopold. (See Thomas, Franklin S. and L.)						
Thomas, Owen W., assignor to A. Helwig, St. Paul, Minn. Pneumatic tool	870,523	Nov. 5	1021	278	131	329
Thomas, William H., assignor of one-half to G. A. Thomas, Syracuse, N. Y. Folding chair	870,260	Nov. 5	607	163	131	198
Thomas, William W., West Pawlet, Vt. Penholder	870,396	Nov. 5	843	223	131	277
Thompson, Albert W., Manchester, N. H. Humidifying apparatus	869,945	Nov. 5	100	28	131	34
Thompson, Frank E., Tiskilwa, Ill. Railway-car	870,397	Nov. 5	844	244	131	278
Thompson, Ralph P. (See Koeb, Emil, assignor.)						
Thompson, Ralph P., and E. Koeb, Springfield, Ohio. Steering mechanism for automobiles	869,994	Nov. 5	194	50–1	131	68
Thorne, Thomas G. (See Hartridge, Thorne, and Rookes.)						
Thorner, Bernard D., New York, assignor to D. Frank, Brooklyn, and J. Trounstine, New York, N. Y. Operating-table	870,324	Nov. 5	709	191–2	131	232
Throm, Anthony J., Buffalo, N. Y. Furniture-drawer	870,140	Nov. 5	411	114	131	137
Thurman, John S., St. Louis, Mo. Pneumatic renovator	870,325	Nov. 5	712	192	131	233
Tidrich, George W. (See Earthom and Gallaher, assignors.)						
Tiefel, Charles G. (See Todd and Tiefel.)						
Timberlake, John B., Jackson, Mich., assignor to J. B. Timberlake & Sons. Display-easel	869,995	Nov. 5	195	51	131	69
Timberlake, John B., Jackson, Mich., assignor to J. B. Timberlake & Sons. Display-rack	869,996	Nov. 5	196	51	131	69
Todd and Company, G. W. (See Todd and Tiefel, assignors.)						
Todd, Libanus M., and C. G. Tiefel, assignors to G. W. Todd and Company, Rochester, N. Y. Printing apparatus	869,997	Nov. 5	197	51–2	131	69
Tolman, Abraham L., Orange, Mass. Manicure implement	869,946	Nov. 5	104	29	131	35
Tone, Frank J., Niagara Falls, N. Y. Electric furnace	870,326	Nov. 5	714	193	131	233
Tower, Oscar, Kenmore, assignor of one-half to F. E. Blakeslee, Buffalo, N. Y. Railway-car door	870,062	Nov. 5	298	82	131	101
Townsend, William, Milan, Mo. Center-bearing	870,483	Nov. 5	962	263	131	312
Trask, William S., assignor to P. & F. Corbin, New Britain, Conn. Machine for making butts and hinges	869,998	Nov. 5	198	52–4	131	70
Trevaskis, A. L. (See Anthony, Kohath, assignor.)						
Triggs, James M., assignor of one-half to W. B. Rorick, Morenci, Mich. Chute-frame	870,524	Nov. 5	1023	279	131	330
Trounstine, John, *et al.* (See Thorner, Bernard D., assignor.)						
Trufant, Walter E., Whitman, Mass., assignor, by mesne assignments, to Premier Last Company, Great River, Long Island, N. Y. Turning lasts	870,484	Nov. 5	963	263–4	131	312
Tupper, Fay, Kingsburg, Cal. Saw attachment	869,947	Nov. 5	105	29	131	35
Turman, Byron I., Oakland, assignor to New Idea Pulverizing Mill Company, San Francisco, Cal. Pulverizer	870,261	Nov. 5	608	163	131	199
Turner, Albert R., London, England. Brake for cycles, motor-cars, and the like	869,948	Nov. 5	106	29	131	35
Tyler, Frank A. (See Sack and Tyler.)						
U. S. Boiler Supply Company. (See Rakestraw, Thomas G., assignor.)						
U. S. Chemical Rubber Company. (See Nettenstrom, David, assignor.)						
U. S. Ekert Fibre Company. (See Ekert, Frederick M., assignor.)						
Uhlmann, Bernhard, Passaic, assignor of one-half to A. Alves, Englewood, N. J. Burglar-alarm	870,063	Nov. 5	300	82	131	101
Ulrich, Charles, New York, N. Y. Fishing-reel	870,327	Nov. 5	715	193	131	234
Union Lock Stitch Company. (See Cummings, Henry H., assignor.)						
Union Specialty Manufacturing Company. (See McCool, William A., assignor.)						
Union Switch & Signal Company. (See Taylor, John D., assignor.)						
United States Whip Company. (See Hull, David C., assignor.)						
Universal Amusement Company. (See Karr, Burton A., assignor.)						
Universal Coinwrapping Machine Company. (See Batdorf, Charles S., assignor.)						
Universal Machine Screw Company. (See Spencer, Christopher M., assignor.)						
Vehicle Apron & Hood Company. (See Brock and Du Bois, assignors.)						
Vickers Sons & Maxim. (See Dawson and Ramsay, assignors.)						
Victor Electric Company. (See Wantz, Julius B., assignor.)						
Vogeler, Jerome I. (See Bonnert, Charles C., assignor.)						
Wahlstrom, Verner J., New York, N. Y. Chuck	870,142	Nov. 5	413	115	131	137
Wahlstrom, Verner J., New York, N. Y. Chuck	870,143	Nov. 5	415	115	131	138
Wahlstrom, Verner J., New York, N. Y. Clutch	870,206	Nov. 5	524	143	131	171
Wahlstrom, Verner J., New York, N. Y. Clutch	870,144	Nov. 5	416	115	131	138
Walker, Joseph A., Detroit, Mich. Collapsible core						
Wallace, John. (See Bowne, John D., assignor.)						
Wantz, Julius B., assignor to Victor Electric Company, Chicago, Ill. Therapeutic lamp	870,262	Nov. 5	610	163–4	131	199
Ward, Bruce R., Fort Kent, Me. Wrench	870,485	Nov. 5	964	264	131	313
Ward, Francis E., New York, N. Y. Box	870,398	Nov. 5	844	224	131	278
Warren, William R., New York, N. Y. Clutch	870,263	Nov. 5	612	164	131	200
Warthen, Harry J., assignor of two-thirds to A. J. Hurley and W. A. Reiss, Washington, D. C. Electric signaling system for railways	870,145	Nov. 5	417	116	131	138
Washburn, Montross, Ossining, and R. D. Granger, Brooklyn, N. Y. Meter for weighing coal, grain, and like material	869,999	Nov. 5	202	54	131	72
Watrous, Earl G., Chicago, Ill. Water-closet	870,000	Nov. 5	203	54–5	131	72
Way, Charles H., assignor to Clarkmobile Company, Lansing, Mich. Engine	870,001	Nov. 5	206	55	131	74
Webb, Jean F., Jr., assignor to Electric Signagraph and Semaphore Co., Chicago, Ill. Electric signaling mechanism	870,328	Nov. 5	717	193	131	235
Webb, Powhatan A., Atlanta, Ga., assignor of one-half to J. B. Cleland, New York, N. Y. Toy	870,146	Nov. 5	422	117	131	139
Weber, Rudolph H., and D. W. Smith, Kansas City, Kans. Smoke-separator	870,329	Nov. 5	719	194	131	235
Weeks, Horace A., assignor to A. E. Little & Company, Lynn, Mass. Shoe-form	870,064	Nov. 5	300	83	131	102
Weiss, Christian, Trossingen, Germany. Musical instrument	870,207	Nov. 5	526	143	131	172
Welch, Allie R. and F. S., Pontiac, Mich. Gas-engine	870,065	Nov. 5	301	83	131	102
Welch, Fred S. (See Welch, Allie R. and F. S.)						
Welles, Nelson A., Wyalusing, Pa. Holder for use in sharpening blades of safety-razors	870,399	Nov. 5	846	225	131	278
Wessel, Frederick, San Antonio, Tex. Signaling device for headlights	870,066	Nov. 5	302	83	131	102
Westerdahl, Anton, Carney, Mich. Scissors	869,949	Nov. 5	107	29	131	36
Westinghouse Machine Company. (See Arnold, Edwin E., assignor.)						
Wheary, George H., assignor to Hartmann Trunk Company, Racine, Wis. Trunk attachment	870,067	Nov. 5	303	84	131	102
Whipple, Robert M., Mayfield, Idaho. Fire-alarm	870,068	Nov. 5	304	84	131	103
Whit-Gould, Frederick. (See Haines and Whit-Gould.)						
White, Cullen D., Union City, Tenn. Vehicle-shaft support	869,950	Nov. 5	108	30	131	36

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White, Joseph M., and F. H. Ross, Cleveland, Ohio. Water-heater	870,208	Nov. 5	527	143	131	172
Whitehead & Hoag Company. (See Conklin, Edward D., assignor.)						
Whitney, Randall M., Worcester, assignor to A. E. Carroll, Boston, Mass. Under-screen for carding-machines	870,264	Nov. 5	613	164	131	200
Wick, Alvin D., Topeka, Kans., assignor of one-third to W.W. Wick, Jr., Portland, Oreg. Crutch	870,400	Nov. 5	847	225	131	279
Wick, William W., Jr. (See Wick, Alvin D., assignor.)						
Wicke, August, New York, N. Y. Non-refillable bottle	870,401	Nov. 5	848	225	131	279
Wikander, Ragnar, Westerås, Sweden. Multiple-unit-controlling system for electric locomotives or motor-cars	870,147	Nov. 5	423	117	131	139
Wilcox, Charles M., New Paris, Ohio, assignor of two-thirds to J. E. Kirkpatrick, Anderson, Ind., and C. P. Kirkpatrick, New Paris, Ohio. Fish-decoy	870,069	Nov. 5	305	84	131	103
Wilde, Eben F., assignor to Attleboro Manufacturing Company, Attleboro, Mass. Earring	870,330	Nov. 5	720	194	131	236
Wilkins, George H., Brockton, assignor to Geo. E. Keith Company, Campello, Mass. Shoe-creaser	870,265	Nov. 5	613	165	131	200
Wilkinson, Robert E. (See Henkel, Adolf W., assignor.)						
Will, Anthony. (See Dietz, Herman F., assignor.)						
William Schollhorn Company. (See Bernard, William A., assignor.)						
Williams, Edward M., Dallas, Tex. Cotton-harvester	869,951	Nov. 5	109	30	131	37
Williams, John C., Wheeling, W. Va. Awning	870,070	Nov. 5	307	85	131	103
Williams, Louis N. D. (See Scott, Robert W., assignor.)						
Williams, Malcolm C., Kansas City, Mo. Cable-suspension device	870,002	Nov. 5	208	55	131	74
Willig, John, Harris, Minn. Plow	869,952	Nov. 5	111	31	131	37
Willms, Charles, Baltimore, Md. Water-tank	869,953	Nov. 5	111	31	131	37
Willson, Freeman R., Jr., Worthington, assignor to J. A. Jeffrey, Columbus, Ohio. Cable attachment	870,003	Nov. 5	209	55–6	131	75
Wilson, Samuel T., assignor of two-thirds to J. Carr and H. W. Sentz, Charleston, W. Va. Rotary grain-scourer	870,071	Nov. 5	308	85	131	104
Wilson, Thomas J., Quitman, Ga. Wheel-fender	870,072	Nov. 5	309	85	131	104
Winchester Repeating Arms Company. (See Burton, Frank F., assignor.)						
Winchester Repeating Arms Co. (See Johnson, Thomas C., assignor.)						
Winks, Charles E., Winnipeg, Manitoba, Canada. Throat-protector	870,004	Nov. 5	210	56	131	75
Wirtz, John W., and E. J. Hernlen, Augusta, Ga. Hay-press	870,005	Nov. 5	211	56	131	76
Wise, Alexander E., New York, N. Y. Garment-marking device	870,209	Nov. 5	528	144	131	173
Wistner, Harvey W., Ogden, Utah. Conducting-wire support and insulator	870,486	Nov. 5	965	264	131	313
Witt, George E., San Francisco, Cal. Locomotive oil-burner	870,402	Nov. 5	848	225	131	279
Woerner, Louis C., Berlin, Germany. Micrometer-gage	870,403	Nov. 5	849	226	131	280
Wolf, Alvin Q., assignor to Wolf Machine Company, Dayton, Ohio. Operating mechanism for ventilators	870,331	Nov. 5	721	194–5	131	236
Wolf Machine Company. (See Wolf, Alvin Q., assignor.)						
Wolfenden, Charles, Minneapolis, Minn. Concrete-block machine	870,006	Nov. 5	212	56–7	131	76
Wolffenstein, Richard, Berlin, Germany. Producing hydrogen peroxid	870,148	Nov. 5	425	.....	131	140
Wood, Allen L., Grayville, Ill. Train-signal-operating device	870,266	Nov. 5	614	165	131	201
Wood, Henry A. W., assignor to Campbell Printing Press & Manufacturing Company, New York, N. Y. Rotary web-perfecting printing-machine	870,210	Nov. 5	529	144	131	175
Wood, John W., assignor of two-thirds to C. W. Stanton and J. H. Zelnicker, Mobile, Ala. Time-controlled electric switch	870,404	Nov. 5	850	226	131	280
Wood, S. V., *et al.* (See Easterling, Robert W., assignor.)						
Wood, William C., Saco, Ala. Tube cutter and expander	870,332	Nov. 5	724	195	131	237
Woodbridge, Joseph L., Philadelphia, Pa. System of electrical distribution	870,149	Nov. 5	426	118	131	140
Woodbridge, Joseph L., Philadelphia, Pa. System of electrical distribution	870,150	Nov. 5	427	118	131	140
Woodring, James H., Corry, Pa. Balanced valve	870,073	Nov. 5	310	85	131	104
Woodward, William R., New York, N. Y. Means for simultaneously writing a plurality of signatures or inscriptions	870,333	Nov. 5	726	196	131	237
Worth Wire Works. (See Horsley, Robert L., assignor.)						
Wyckoff, Seamans & Benedict. (See Thistlethwaite, Charles A., assignor.)						
Yansky, Louis R., Chicago, Ill. Gas-burner	869,954	Nov. 5	114	31	131	38
Yost Writing Machine Company. (See Smith, Arthur W., assignor.)						
Young, Alfred K., Pittsburg, Pa. Steam-boiler furnace	870,267	Nov. 5	616	165–6	131	201
Young, Frank F. (See Haley, James M., assignor.)						
Young, George H., *et al.* (See Bostley, Augustus H., assignor.)						
Young, O. L. (See McGonigle, Charles W., assignor.)						
Zaremba, Edward, Chicago, Ill. Evaporator	870,211	Nov. 5	531	144	131	174
Zelnicker, James H., *et al.* (See Wood, John W., assignor.)						
Zimmerman, Frank M., Aurora, Ill. Switch for trolley-wires	869,955	Nov. 5	114	31–2	131	38
Zuckriegel, Peter, Cleveland, Ohio. Music-chart	870,405	Nov. 5	851	226–7	131	280

DESIGNS.

Name, residence, and design	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Cheney Brothers. (See Rapp, Ada M., assignor.)				
Cheney Brothers. (See Rose, Arthur M., assignor.)				
Grossman, Henry, New York, N. Y. Chair	38,875	Nov. 5	131	337
Gutermann, Edward A., assignor to Manning, Bowman & Company, Meriden, Conn. Leg for chafing-dish stands	38,869	Nov. 5	131	336
Manning, Bowman & Company. (See Gutermann, Edward A., assignor.)				
Meakin, Alfred J., Turnstall, England. Covered dish or similar article	38,873	Nov. 5	131	337
Onondaga Pottery Company. (See Walter, Elmer E., assignor.)				
Podmore, Henry, Trenton, N. J. Lavatory	38,874	Nov. 5	131	337
Rapp, Ada M., Irvington, N. J., assignor to Cheney Brothers, South Manchester, Conn. Textile fabric	38,876	Nov. 5	131	337
Rose, Arthur M., New York, N. Y., assignor to Cheney Brothers, South Manchester, Conn. Textile fabric	38,877	Nov. 5	131	337
Thomas, George J., New York, N. Y. Domino	38,868	Nov. 5	131	336
Walter, Elmer E., assignor to Onondaga Pottery Company, Syracuse, N. Y. Plate	38,870	Nov. 5	131	336
Walter, Elmer E., assignor to Onondaga Pottery Company, Syracuse, N. Y. Plate	38,871	Nov. 5	131	336
Walter, Elmer E., assignor to Onondaga Pottery Company, Syracuse, N. Y. Plate	38,872	Nov. 5	131	336

TRADE-MARKS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Allberger Condenser Company, New York, N. Y. Water-heaters and heat-extractors	65,970	Nov. 5	131	353
Allberger Condenser Company, New York, N. Y. Water-heaters and heat-extractors	65,971	Nov. 5	131	353
Algeo, Thomas W., Chicago, Ill. Antiseptic antifebrile unguent external medicine	65,956	Nov. 5	131	353
Allen-Day Company, New York, N. Y. Chocolates and candies	66,035	Nov. 5	131	355
American Thread Company, Jersey City, N. J. Spool-cotton and sewing-cotton and thread	66,036	Nov. 5	131	355
American Trading Company. (Pacific Coast,) San Francisco, Cal. Canned salmon	66,016	Nov. 5	131	354
American Trading Company, (Pacific Coast,) San Francisco, Cal. Canned salmon	66,017	Nov. 5	131	354
American Writing Paper Company, Holyoke, Mass. Cover-paper	65,972	Nov. 5	131	353
American Writing Paper Company, Holyoke, Mass. Writing and printing paper	65,973	Nov. 5	131	353
American Writing Paper Company, Holyoke, Mass. Writing and printing paper	65,974	Nov. 5	131	353
American Writing Paper Company, Holyoke, Mass. Writing and Printing paper	65,975	Nov. 5	131	353
American Writing Paper Company, Holyoke, Mass. Writing and printing paper	65,976	Nov. 5	131	353
American Writing Paper Company, Holyoke, Mass. Writing and printing paper	65,977	Nov. 5	131	353
American Writing Paper Company, Holyoke, Mass. Writing and printing paper	65,978	Nov. 5	131	353
Aschenbach & Miller Incorporated, Philadelphia, Pa. Bitters	65,957	Nov. 5	131	353
Associated Shoe Company, Boston, Mass. Oil blackings, paste blackings, shoe-dressings, and leather-dressings	66,018	Nov. 5	131	354
Auerbach, Meyer, New York, N. Y. Financial and commercial newspaper	66,064	Nov. 5	131	356
Baldwins Limited, Wilden Iron Works, near Stourport, England. Tin, terne, leaded, and black sheets	66,065	Nov. 5	131	356
Baldwins Limited, Wilden Iron Works, near Stourport, England. Tin plates	66,066	Nov. 5	131	356
Becker Bros. & Co., New York, N. Y. Furs and skins	66,037	Nov. 5	131	355
Bentley & Olmsted Company, Des Moines, Iowa. Leather boots and shoes	65,986	Nov. 5	131	353
Blodgett & Orswell Co., Pawtucket, R. I. Spool-cotton or sewing-thread	66,019	Nov. 5	131	354
Boynton Furnace Company, New York, N. Y. Stoves, ranges, boilers, and furnaces	65,979	Nov. 5	131	353
C. S. Morey Mercantile Company, Denver, Colo. Dried fruits, olives, canned fruits, and vegetables	66,038	Nov. 5	131	355
Carter, Qvarnstrom & Remington, Attleboro, Mass. Jewelry	65,987	Nov. 5	131	354
Central Brewing Co., East St. Louis, Ill. Beer	66,067	Nov. 5	131	356
Chemische Fabrik auf Actien (vorm. E. Schering). Berlin, Germany. Disinfecting and deodorizing apparatus	66,068	Nov. 5	131	356
Childs, Thomas M., Providence, R. I. Liquid tooth-cleansing compound	65,958	Nov. 5	131	353
Clewell & Son, Thos. B., Allentown, Pa. Potato-chips	66,039	Nov. 5	131	355
Coleman Mining Co, Louisville, Ky. Coal	66,040	Nov. 5	131	355
Compton, W. E., Redditch, England. Fish-hooks	65,988	Nov. 5	131	354
Covert Manufacturing Co., Watervliet, N. Y. Snap-hooks	66,041	Nov. 5	131	355
Daimler-Motoren-Gesellschaft, Untertürkheim, near Stuttgart, Germany. Certain rubber goods	65,989	Nov. 5	131	354
Davidson, Samuel C., Belfast, Ireland. Certain heating and ventilating apparatus	65,980	Nov. 5	131	353
Davidson, Samuel C., Belfast, Ireland. Certain heating and ventilating apparatus	65,981	Nov. 5	131	353
Davidson, Samuel C., Belfast, Ireland. Certain machinery	66,042	Nov. 5	131	355
Dexter Brothers Company, Boston, Mass. Damp-proof paint	66,020	Nov. 5	131	354
Doyle, Frank M., Boston, Mass. Compound of malt and hops	66,070	Nov. 5	131	356
Dr. Pierre Chemical Company, Chicago, Ill. Suppositories, tablets, and pills	65,959	Nov. 5	131	353
Duffy, Robert L., Newbern, N. C. Tonic beverages	65,982	Nov. 5	131	353
E. A. Pflueger Company, Akron, Ohio. Certain fishing-tackle	65,990	Nov. 5	131	354
E. A. Pflueger Company, Akron, Ohio. Certain harness-trimmings	65,991	Nov. 5	131	354
E. I. Horsman Co., New York, N. Y. Automatic instruments for making conventional figures	65,992	Nov. 5	131	354
F. A. Patrick & Co., Duluth Minn. Certain clothing	66,071	Nov. 5	131	356
Fabrik Stolzenberg Deutsche Bureau-Einrichtungs-Gesellschaft mit beschränkter Haftung, Oos, Germany. Type-writing machines	66,072	Nov. 5	131	356
Fisher, Rolland R., Freeport, Ill. Magazines	66,073	Nov. 5	131	356
Galena-Signal Oil Company, Franklin, Pa. Lubricating-oil	65,993	Nov. 5	131	354
Galena-Signal Oil Company, Franklin, Pa. Lubricating-oil	65,994	Nov. 5	131	354
Galena-Signal Oil Company, Franklin, Pa. Lubricating-oil	65,995	Nov. 5	131	354
Gane Brothers & Co., New York, N. Y. Imitation metal leaf	66,043	Nov. 5	131	355
Goldschmidt, Th., Essen-on-the-Ruhr, Germany. Certain metals and alloys	66,044	Nov. 5	131	355
Goodyear's Metallic Rubber Shoe Co., Naugatuck, Conn. Rubber boots and shoes	65,996	Nov. 5	131	354
Goodyear's Metallic Rubber Shoe Co., Naugatuck, Conn. Rubber boots and shoes	65,997	Nov. 5	131	354
Grafton Press, New York, N. Y. Magazine	66,082	Nov. 5	131	356
Gregory, James F., St. Louis, Mo. Artificial bait for fish	65,998	Nov. 5	131	354
Grunauer, Bernard P., Cleveland, Ohio. Statements of credit ratings periodically issued	66,045	Nov. 5	131	355
Hammel, Riglander & Co., New York, N. Y. Watch-glasses	66,021	Nov. 5	131	354
Hanlon-Sharps Co., Wheeling, W. Va. Wrapping-paper	65,983	Nov. 5	131	353
Hanlon-Sharps Co., Wheeling, W. Va. Wrapping-paper	65,984	Nov. 5	131	353
Harkness, Fannie, New York, N. Y. Salve for burns, frost-bites, and sores	65,900	Nov. 5	131	353
Hearst, William R., New York, N. Y. Newspaper	66,074	Nov. 5	131	356
Hearst, William R., New York, N. Y. Newspaper	66,075	Nov. 5	131	356
Hearst, William R., New York, N. Y. Newspaper	66,076	Nov. 5	131	356
Hearst, William R., New York, N. Y. Newspaper	66,077	Nov. 5	131	356
Hearst, William R., New York, N. Y. Newspaper	66,078	Nov. 5	131	356
Hearst, William R., New York, N. Y. Newspaper	66,079	Nov. 5	131	356
Hearst, William R., New York, N. Y. Newspaper	66,080	Nov. 5	131	356
Hearst, William R., New York, N. Y. Newspaper	66,081	Nov. 5	131	356
Hearst, William R., New York, N. Y. Newspaper	66,090	Nov. 5	131	356
Hess, Elmer E., Brook, Ind. Witch-hazel cream	65,961	Nov. 5	131	353
Hoosier Mfg. Co., Newcastle, Ind. Kitchen-cabinets	66,022	Nov. 5	131	354
J. G. Hutchison & Co., Ottumwa, Iowa. Certain cereal foods	66,023	Nov. 5	131	354
Jesse Moore Hunt Co., San Francisco, Cal. Whisky	66,083	Nov. 5	131	356
Jönköpings och Vulcans Tändsticksfabriksaktiebolag, Jönköping, Sweden. Matches	66,024	Nov. 5	131	354
Kautzmann & Sussfeld, Newark, N. J. Certain jewelry	65,999	Nov. 5	131	354
Keiffer Bros., New Orleans, La. Leather and canvas shoes	66,000	Nov. 5	131	354
Keiffer Bros., New Orleans, La. Leather and canvas shoes	66,001	Nov. 5	131	354
Keiffer Bros., New Orleans, La. Leather and canvas shoes	66,002	Nov. 5	131	354
Keiffer Bros., New Orleans, La. Leather and canvas shoes	66,003	Nov. 5	131	354
Kieferle, Joseph A., Allegheny, Pa. Polishing-cloths	66,025	Nov. 5	131	355
Klinger, Richard, Gumpoldskirchen, near Vienna, Austria-Hungary. Glass tubes for water-gages	66,004	Nov. 5	131	354
Lafayette Suspender Company, Easton, Pa. Suspenders	65,962	Nov. 5	131	353
M. Lindsay Rubber Manufacturing Co., Washington, D. C. Certain rubber goods	66,046	Nov. 5	131	355
Martin, Wm. L., assignor to Deitsch Brothers, New York, N. Y. Tooth and nail brushes	66,047	Nov. 5	131	355
Matthael, Henry, Kansas City, Mo. Bread	66,048	Nov. 5	131	355
Miller Hapgood Shoe Co., Lynn, Mass. Leather boots, shoes, slippers, and leggings	66,005	Nov. 5	131	354
Monarch Typewriter Company, Syracuse, N. Y. Type-writer ribbons and type-writer carbon-paper	66,084	Nov. 5	131	356
Mount Vernon-Woodberry Cotton Duck Company, Baltimore, Md. Cotton duck	66,026	Nov. 5	131	355

TRADE-MARKS—Continued.

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Mount Vernon-Woodberry Cotton Duck Company, Baltimore, Md. Cotton duck	66,027	Nov. 5	131	355
Mount Vernon-Woodberry Cotton Duck Company, Baltimore, Md. Cotton duck	66,049	Nov. 5	131	355
Mount Vernon-Woodberry Cotton Duck Company, Baltimore, Md. Cotton duck	66,050	Nov. 5	131	355
Mount Vernon-Woodberry Cotton Duck Company, Baltimore, Md. Cotton duck	66,051	Nov. 5	131	355
Mount Vernon-Woodberry Cotton Duck Company, Baltimore, Md. Cotton duck	66,052	Nov. 5	131	355
Mount Vernon-Woodberry Cotton Duck Company, Baltimore, Md. Cotton duck	66,053	Nov. 5	131	355
Mount Vernon-Woodberry Cotton Duck Company, Baltimore, Md. Cotton duck	66,054	Nov. 5	131	355
Northern Brewery Company, Portland, Oreg. Beer	66,056	Nov. 5	131	355
Osborn, Guy, Mount Vernon and New York, N. Y. Hydrogen peroxid	66,006	Nov. 5	131	354
Pacific Coast Rubber Co., Seattle, Wash. Rubber tires and inner tubes	65,963	Nov. 5	131	353
Pacific Novelty Company, New York, N. Y. Ladies' hair-combs	66,085	Nov. 5	131	356
Paragon Malt Extract Co., New York, N. Y. Malt extract	66,007	Nov. 5	131	354
Rectors, New York, N. Y. Cigarettes	66,030	Nov. 5	131	355
Roewekamp Bros., Oshkosh, Wis. Whisky	66,005	Nov. 5	131	353
Rohde, C., Hamburg, Germany. Certain paper	66,008	Nov. 5	131	354
S. & B. Lederer Company, Providence, R. I. Jewelry	66,087	Nov. 5	131	356
Sanderson & Son, Wm., Leith, Scotland. Whisky	66,057	Nov. 5	131	355
Sauerston & Brown, Cincinnati, Ohio. Candy	66,028	Nov. 5	131	355
Schacht, F., Brunswick, Germany. Certain preparations of tar	66,088	Nov. 5	131	356
Schoeneman, J., Baltimore, Md. Pantaloons	66,029	Nov. 5	131	355
Schrader, Hugo E., Chicago, Ill. Feed composed of crushed grain	66,009	Nov. 5	131	354
Selz, Schwab & Company, Chicago, Ill. Leather boots and shoes	66,010	Nov. 5	131	354
Selz, Schwab & Company, Chicago, Ill. Leather boots and shoes	65,964	Nov. 5	131	353
Shuler, John D., Vernal, Utah. Liniment	66,031	Nov. 5	131	355
Smith Lichty & Hillman Company, Waterloo, Iowa. Mince-meat, dried fruits, and flavoring extracts	66,030	Nov. 5	131	355
Sonnenthal & Co., Selig, London, England. Corundum and emery grinding-wheels	65,965	Nov. 5	131	353
Sormani, Egbert J., Brooklyn, N. Y. Cough remedies	66,032	Nov. 5	131	355
Standard Wafer Co., New York, N. Y. Biscuits	66,011	Nov. 5	131	354
Strasburger, Byron L., New York, N. Y. Watches and watch-movements	66,033	Nov. 5	131	355
Susquehanna Silk Mills, New York, N. Y. Silk piece goods and silk-mixed piece goods	66,059	Nov. 5	131	355
Taylor, H. P., Jr., Richmond, Va. Canned fruits and vegetables	66,012	Nov. 5	131	354
Tedcastle & Co., Boston, Mass. Leather boots and shoes	66,013	Nov. 5	131	354
Tide Water Oil Co., New York, N. Y. Illuminating oil	66,058	Nov. 5	131	355
Trowbridge Chocolate Chip Co., Meadville, Pa. Candies	66,061	Nov. 5	131	355
Trowbridge Chocolate Chip Co., Meadville, Pa. Candies	66,089	Nov. 5	131	356
Union Brewing & Malting Co., San Francisco, Cal. Beer	66,014	Nov. 5	131	354
United States Whip Company, Westfield, Mass. Whips	66,062	Nov. 5	131	356
Upham Bro's. New York, N. Y. Teas and coffees	66,034	Nov. 5	131	355
Voigt & Co., Chattanooga, Tenn. Tasteless castor-oil	65,966	Nov. 5	131	353
Wall-Rogalsky Milling Co., McPherson, Kans. Wheat-flour	66,063	Nov. 5	131	356
Washburn Crosby Company, Minneapolis, Minn. Wheat-flour	65,967	Nov. 5	131	353
Welch & Co., C. S., New York, N. Y. Certain pharmaceutical preparations	65,968	Nov. 5	131	353
Whittaker, George E., Somerville, Mass. Cough medicine or medicinal cordial	65,969	Nov. 5	131	353
William Carter Co., Highlandville, Mass. Certain underclothing	66,055	Nov. 5	131	355
Wm. Pfeifer Berlin Weiss Beer Co., Chicago, Ill. Beer	66,015	Nov. 5	131	354
Young, Charles M., San Francisco, Cal. Calculators				

LABELS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Page.
Arbuckle Bros., New York, N. Y.; Pittsburg, Pa., and Chicago, Ill. "Arbuckle's Certified Coffees." (For Coffee)	13,850	Nov. 5	131	357
Coca Cola Company, Atlanta, Ga. "Coca Cola." (For a Non-Alcoholic Beverage)	13,853	Nov. 5	131	357
Dixon, James Q., Buffalo, N. Y. "Dixon's Mica Oil." (For Mica-Oil)	13,866	Nov. 5	131	357
Horlacher, Fred. H., Allentown, Pa. "Horlacher 9 Months Old." (For Beer)	13,852	Nov. 5	131	357
James Heekin Co., Cincinnati, Ohio. "Fortune Teller Coffee." (For Coffee)	13,849	Nov. 5	131	357
Kent, May W., Chicago, Ill. "Purity Bath." (For a Toilet Deodorant)	13,863	Nov. 5	131	357
Presto Mfg. Co., Council Bluffs, Iowa. "Presto." (For a Silver-Cleaner)	13,867	Nov. 5	131	357
Ruegg, John J., Clifton, N. J. "Lava Tea." (For a Preparation for the Nerves and Brain)	13,862	Nov. 5	131	357
Schmidt & Co., New York, N. Y. "Preferito." (For Cigars)	13,855	Nov. 5	131	357
Schmidt & Co., New York, N. Y. "Compliments of the Season." (For Cigars)	13,856	Nov. 5	131	357
Schmidt & Co., New York, N. Y. "Purello." (For Cigars)	13,857	Nov. 5	131	357
Schmidt & Co., New York, N. Y. "Volumo." (For Cigars)	13,858	Nov. 5	131	357
Schmidt & Co., New York, N. Y. "El-Ko." (For Cigars)	13,859	Nov. 5	131	357
Schmidt & Co., New York, N. Y. "Palace Bouquet." (For Cigars)	13,860	Nov. 5	131	357
Schmidt & Co., New York, N. Y. "Elato." (For Cigars)	13,861	Nov. 5	131	357
Sethness Company, Chicago, Ill. "Hyball Ginger Ale." (For Ginger-Ale)	13,851	Nov. 5	131	357
Tomlinson, Thos., Tate Springs, Tenn. "Tate Spring Mineral Water." (For Mineral Water)	13,854	Nov. 5	131	357
Wallerstein Produce Co., Richmond, Va. "Dime." (For Evaporated Apples)	13,864	Nov. 5	131	357
Whittemore, Horace A., Boston, Mass. "T-Wharf Ringed Fish Hooks." (For Fish-Hooks)	13,868	Nov. 5	131	357
Woolson Spice Company, Toledo, Ohio "Atlas Brand." (For Spice)	13,865	Nov. 5	131	357

PRINTS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Page.
Boyd, Charles L., Chicago, Ill. "Boyd's Chart of By-Products of Ec-Zine." (For Ec-Zine Products)	2,147	Nov. 5	131	357
John Church Company, Cincinnati, Ohio. "The Harvard Piano." (For Pianos)	2,149	Nov. 5	131	357
John Church Company, Cincinnati, Ohio. "The Everett Piano." (For Pianos)	2,150	Nov. 5	131	357
Lytton, H. C., Chicago, Ill. "Men's and Boys' Apparel." (For Men's and Boys' Apparel)	2,148	Nov. 5	131	357
Seattle Brewing & Malting Co., Seattle, Wash. "Rainier Beer." (For Beer)	2,146	Nov. 5	131	357
Washburn Crosby Company, Minneapolis, Minn. "Kitchen Profits." (For Flour)	2,145	Nov. 5	131	357

TRADE-MARKS.

(REGISTRATION APPLIED FOR.)

Name, residence, and title.	Serial No.	Date.	Official Gazette. Vol.	Page.
A. Spiegel Co., Milwaukee, Wis. Abrasive polish	20,154	Nov. 5	131	340
Alberger Condenser Company, New York, N. Y. Steam-condensers	30,026–7	Nov. 5	131	349
Allen Brothers Company, Omaha, Nebr. Rolled oats and wheat-flour	26,203	Nov. 5	131	341
Allen Brothers Company, Omaha, Nebr. Pancake-flour	26,204	Nov. 5	131	341
Allen Brothers Company, Omaha, Nebr. Canned fruits and vegetables, spices, flavoring extracts, &c.	26,212	Nov. 5	131	341
American Lead Pencil Co., New York, N. Y. Eraser-holders	27,786	Nov. 5	131	342
Atchison Oatmeal and Cereal Co., Atchison, Kans. Rolled oats	29,118	Nov. 5	131	343
Atwell, Eli, Mountaindale, N. Y. Powdered detergent hand-cleaning preparation	25,160	Nov. 5	131	341
Aurora Mantle Manuf'g Co., Aurora, Ill. Mantles, mountings, and fixtures for same	29,721	Nov. 5	131	345
Baltimore Chewing Gum Co., Baltimore, Md. Chewing-gum	29,733	Nov. 5	131	346
Baum, Edward, Baltimore, Md. Suppositories for the nasal passages	30,307	Nov. 5	131	352
Boericke & Tafel, Philadelphia, Pa. Boracic-acid tooth and mouth wash, &c.	29,845	Nov. 5	131	346
Bradfield Regulator Co., Atlanta, Ga. Remedies for female use	29,901–6	Nov. 5	131	347–8
Bradfield Regulator Co., Atlanta, Ga. Remedies for female use	29,908–10	Nov. 5	131	347–8
Charles Zunz, Limited, Brussels, Belgium. Portland or hydraulic cement	10,715	Nov. 5	131	339
Chemische Fabrik von Heyden Aktien-Gesellschaft, Radebeul, near Dresden, Germany. Antiseptic silver salts	19,989	Nov. 5	131	341
Cleveland-Akron Bag Co., Cleveland, Ohio. Paper bags	29,672	Nov. 5	131	345
Cohen, Solomon, New York, N. Y. Overalls	29,705	Nov. 5	131	345
Cole, Harlan P., New York, N. Y. Leather boots, shoes, slippers, and sandals	26,352	Nov. 5	131	342
Columbia Phonograph Company, General, New York, N. Y. Graphophones	30,037	Nov. 5	131	349
Cotten, Joseph A., Kansas City, Mo. Veterinary medicine	29,471	Nov. 5	131	344
Davis, Elwood S., Philadelphia, Pa. Butter	21,923	Nov. 5	131	340
Delaney & Co., J. M., New York, N. Y. Sole-leather taps, outsoles, insoles, counters, &c.	24,432	Nov. 5	131	341
Dermatone Company, Chicago, Ill. Ointment for catarrh, headache, coughs, colds, &c.	30,305	Nov. 5	131	352
Dewsbury & Son, John, Walsall, England. Metal bridle-bits, stirrups, spurs, &c.	29,115	Nov. 5	131	343
Dr. Hunter Chemical Company, New York, N. Y. Tablets for diseases of the blood and the nervous system	29,196	Nov. 5	131	344
Dressel, Carl, Sonoma, Cal. Wines	8,991	Nov. 5	131	339
Dreyfus Bros., Montgomery, Ala. Peanut-candy	29,906	Nov. 5	131	348
Etna Chemical Company, New York, N. Y. Antipyretic and analgesic medical preparation	11,225	Nov. 5	131	339
F. Brigham & Gregory Company, Boston, Mass. Leather boots and shoes and leather for their manufacture	29,723	Nov. 5	131	345
F. Mayer Boot & Shoe Co., Milwaukee, Wis. Leather boots and shoes	29,967	Nov. 5	131	348
Falk Tobacco Company, New York, N. Y., and Richmond, Va. Smoking-tobacco	29,648	Nov. 5	131	345
Falk Tobacco Company, New York, N. Y., and Richmond, Va. Cigars and cigarettes	29,782	Nov. 5	131	346
Freeman Delamater & Co., Detroit, Mich. Axes, table-cutlery, scythes, knives, adzes, &c.	27,790	Nov. 5	131	342
Fresno Home Packing Company, Fresno, Cal. Canned, dried, and preserved fruits and canned vegetables	29,157–60	Nov. 5	131	343–4
G. C. Hanford Manufacturing Co., Syracuse, N. Y. Condition-powder for horses, cattle, sheep, and swine	30,271	Nov. 5	131	351
Good Roads Imp. Co., Cincinnati, Ohio. Asphalt-oils	28,465	Nov. 5	131	343
Goodyear's Metallic Rubber Shoe Co., Naugatuck, Conn. Rubber boots and shoes	30,023–5	Nov. 5	131	349
Habicht, Braun & Co., Chicago, Ill. Shelled almonds	30,066–71	Nov. 5	131	350–1
Harrington and Richardson Arms Company, Worcester, Mass. Shotguns, rifles, and revolvers	28,858	Nov. 5	131	343
Hartford Rubber Works Company, Hartford, Conn. Rubber wheel-tires	26,463	Nov. 5	131	342
Hoffman, Daniel H., New Orleans, La. Roasted coffee	26,579	Nov. 5	131	342
Hoffman, Daniel H., New Orleans, La. Roasted and ground coffee	26,582	Nov. 5	131	342
Holton & Adams, New York, N. Y. Brushes	30,310	Nov. 5	131	352
Hood Rubber Co., Boston, Mass. Rubber vehicle-tires and rubber boots and shoes	30,167	Nov. 5	131	351
Huyett, S. R., Abilene, Kans. Musical strings	29,760	Nov. 5	131	346
International Dental Company, Rocky Mount, Va. Mouth-wash	29,915	Nov. 5	131	348
John B. Bright & Son, Inc., Indianapolis, Ind. Coffee	29,465	Nov. 5	131	344
John Ellwanger Co., Dubuque, Iowa. Whisky	29,730	Nov. 5	131	346
Kora Company, New York, N. Y. Dress-shields and hose-supporters	30,221	Nov. 5	131	351
L. Candee & Co., New Haven, Conn. Rubber boots and shoes	30,007–9	Nov. 5	131	348
Lewis, Newbern H., Silver Springs, N. Y. Game-cards	29,984	Nov. 5	131	348
Lipschutz, Isaac L., Philadelphia, Pa. Whisky	29,455	Nov. 5	131	344
Miller, Bernard, Chicago, Ill. Tonic medicine	29,279	Nov. 5	131	344
Minot Flour Mill Co., Minot, N. D. Wheat-flour	30,283	Nov. 5	131	352
Morris Chemical Co., Dallas, Tex. Rheumatic remedy	29,871	Nov. 5	131	346
Morse & Rogers, New York, N. Y. Leather boots, shoes, and slippers	27,071	Nov. 5	131	342
Mosse, Gebrüder, Berlin, Germany. Bed and table linen	12,484	Nov. 5	131	340
National Candy Company, Jersey City, N. J., and St. Louis, Mo. Chewing-gums	30,135	Nov. 5	131	351
National India Rubber Co., Bristol, R. I. Rubber boots and shoes	30,019	Nov. 5	131	349
Nelsen, Christian T., Chicago, Ill. Vegetable compound for constipation, &c.	29,719	Nov. 5	131	345
Obernauer, Herman, Pittsburg, Pa. Stomach-bitters	30,315	Nov. 5	131	352
Procter & Gamble Company, Ivorydale, Ohio, and Kansas City, Kans Soap	14,322	Nov. 5	131	340

TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

Name, residence, and title.	Serial No.	Date.	Official Gazette. Vol.	Page.
Rasin-Monumental Company of Anne Arundel County, Baltimore, Md. Fertilizers	17,923	Nov. 5	131	340
Richmond Cedar Works, Richmond, Va. Domestic washing-machines	30,185	Nov. 5	131	351
Richmond Hosiery Mills, Chattanooga, Tenn., and Rossville, Ga. Hosiery	29,780	Nov. 5	131	346
Rockland-Rockport Lime Co., Rockland, Me. Lime and mortar	27,806	Nov. 5	131	342
Savarese & Bros., V., Brooklyn, N. Y. Macaroni and vermicelli	25,325	Nov. 5	131	341
Scandinavian Fur & Leather Co., New York, N. Y. Rubber automobile-coats, rubber wraps, robes, &c	29,534	Nov. 5	131	345
Schaar, Charles L., Chicago, Ill. Loose-leaf ledgers	28,077	Nov. 5	131	343
Selser, Wm. A., Jenkintown, Pa. Honey	29,726	Nov. 5	131	345
Shivell, Edwin, Boston, Mass. Sardines, salmon, herrings, and mackerel	30,260	Nov. 5	131	351
Simmons Hardware Company, St. Louis, Mo. Razors	30,046	Nov. 5	131	349
Smith & Egge Mfg. Co., Bridgeport, Conn. Sheet-metal chains	30,054	Nov. 5	131	349
Stern & Co. (Incorporated), Richmond, Va. Leather shoes	10,262	Nov. 5	131	339
Stitzel Distilling Company, Louisville, Ky Whisky	29,729	Nov. 5	131	346
Strasburger & Co., Byron D., New York, N. Y Watches and watch-movements	30,057-9	Nov. 5	131	349-50
Strasburger & Co., Byron D., New York, N. Y. Watches and watch-movements	30,061-2	Nov. 5	131	350
Sturges & Burn Mfg. Co., Chicago, Ill. Ice-cream freezers	19,354	Nov. 5	131	340
Thermos-Gesellschaft m. b. H., Berlin, Germany. Double-walled glass vessels with vacuum between the walls	26,112	Nov. 5	131	341
Thomlinson, William R., Partick, Scotland. Leather	19,669	Nov. 5	131	340
Troy Knitting Company, Troy, N. Y. Knitted underwear	29,893	Nov. 5	131	347
United Drug Company, Jersey City, N. J. Candy	24,979-80	Nov. 5	131	341
United States Graphite Company, Saginaw, Mich. Plumbago foundry-facings and pulverized graphite	30,294	Nov. 5	131	352
Vi-Dermis Co., Dayton, Ohio. Preparation for the skin	29,790	Nov. 5	131	346
Virginia-Carolina Chemical Company, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Fertilizers	30,278-80	Nov. 5	131	351
W. B. Cosgrave Shoe Co., Zanesville, Ohio. Leather boots and shoes	29,859	Nov. 5	131	346
Weil Chemical Mfg. Co., Pine Bluff, Ark. Salves	29,734	Nov. 5	131	346
Whitridge, White & Company, Baltimore, Md. Burlaps	27,138	Nov. 5	131	342
Wiebusch & Hilger, Ltd., New York, N. Y. Hammers	29,544	Nov. 5	131	345
Wm. Warne & Co., Limited, London, England. Tobacco-pouches	28,159	Nov. 5	131	343
Woodward & Cochey, Lynn, Mass. Shoe tongues, stays, linings, and tips	28,804	Nov. 5	131	343
Woonsocket Rubber Company, Woonsocket, R. I. Rubber boots and shoes	30,012-14	Nov. 5	131	349

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED ON THE 5TH DAY OF NOVEMBER, 1907.

Invention.	Name.	No.	Date.	Monthly volume. Specification.	Monthly volume. Drawing.	Official Gazette. Volume.	Official Gazette. Page.
Abrasive wheel	R. Gardner	870,231	Nov. 5	565	151	131	185
Addressing-machine	S. C. Cox	870,418	Nov. 5	869	232–4	131	286
Adjustable bracket	C. F. Kade	870,439	Nov. 5	904	244	131	296
Advertising device	C. C. Bonnert	870,525	Nov. 5	1024	279	131	330
Aerating and bottling apparatus	G. Higginson	870,103	Nov. 5	348	97–8	131	116
Air-brake apparatus and method. Automatic	J. T. McIntosh and J. S. Manton	869,930	Nov. 5	78	24	131	26
Air-brake safety device	J. W. Guffey	870,284	Nov. 5	643	172	131	209
Air. Compressing and purifying	W. O. Felt	869,966	Nov. 5	128	36	131	42
Air conveyer. Fresh-	K. Anthony	870,407	Nov. 5	855	227	131	281
Air-inspirator	J. Heimlich	870,167	Nov. 5	449	124	131	147
Air-ship attachment	A. Mathews	870,448	Nov. 5	915	247	131	299
Alarm: *See* Automobile-alarm. Burglar-alarm. Electrical thermostatic alarm. Fire-alarm. High and low water alarm.							
Alcohol-burner	H. P. Glazier	870,164	Nov. 5	446	123	131	146
Amusement apparatus	H. F. Maynes	870,378	Nov. 5	817	217	131	268
Amusement device	J. W. Bourke	870,489	Nov. 5	969	265	131	314
Animal-trap	F. Rasmussen	870,251	Nov. 5	595	159	131	195
Applauding device and the like	F. M. Duckworth	869,886	Nov. 5	21	6	131	9
Apple-trimming machine	W. Smith	870,137	Nov. 5	405	113	131	135
Apron-guide	F. G. Sargent	870,134	Nov. 5	402	112	131	134
Automobile-alarm	J. K. Stewart	869,941	Nov. 5	95	27	131	32
Automobile driving mechanism	E. O. Sutton	870,258	Nov. 5	603	161–2	131	197
Automobile emergency-brake	H. F. Dietz	870,228	Nov. 5	560	150	131	183
Automobile-engine cooling system	J. N. Emley	870,278	Nov. 5	630	169	131	206
Automobile-rack	J. A. Mason	870,517	Nov. 5	1015	276	131	327
Automobile spring-suspension	E. J. Jenness	869,968	Nov. 5	132	37	131	43
Automobile steering mechanism	R. P. Thompson and E. Koeb	869,994	Nov. 5	194	50–1	131	68
Automobile-wheel. Spring-cushioned	W. A. Hill	870,171	Nov. 5	456	126	131	150
Awning	J. C. Williams	870,070	Nov. 5	307	85	131	103
Axle. Double-cone ball-bearing	C. Dackiewicz	870,276	Nov. 5	628	168	131	205
Bag-rack	G. H. Tenney	870,259	Nov. 5	605	162	131	198
Bags. Filling	A. M. Bates	870,215	Nov. 5	543	146	131	178
Baling-press	F. Bowen	870,010	Nov. 5	219	58–9	131	78
Ball-distributer	A. Kowastch and L. Reinicke	870,108	Nov. 5	356	100	131	119
Balloon. Captive	H. A. Hervé	870,430	Nov. 5	889	239–40	131	293
Barometer. Aneroid	A. E. Kahn	869,909	Nov. 5	51	15	131	18
Barrel-cleaner	L. Lange	869,915	Nov. 5	57	17	131	19
Bath-tub attachment	W. C. De Camps	870,086	Nov. 5	328	92	131	109
Bathing and massaging machine. Portable rotary	C. F. Faupel	869,890	Nov. 5	27	8	131	11
Battery: *See* Storage battery.							
Bearing. Center-	W. Townsend	870,483	Nov. 5	962	263	131	312
Bed	H. Kintz	869,911	Nov. 5	53	16	131	18
Bed. Infant's	J. Gamber and O. F. Heer	870,426	Nov. 5	884	237–8	131	291
Bed. Sofa-	W. Reddell	870,131	Nov. 5	397	111	131	132
Bee-gum	W. E. Caperton	870,274	Nov. 5	626	168	131	204
Beer-pipe cleaner	C. H. Richardson, Jr.	870,384	Nov. 5	828	219	131	272
Bell. Signal-	G. F. Drew	869,885	Nov. 5	20	6	131	9
Belt and belting	D. Nettenstrom	870,044	Nov. 5	267	73	131	92
Belt. Conveyer-	G. C. Plummer	869,935	Nov. 5	87	26	131	29
Belt-guide	H. Gross	869,899	Nov. 5	43	12–13	131	16
Bench: *See* Tire-bench.							
Beveling-machine	C. E. Lingenfelter	870,301	Nov. 5	671	180	131	219
Board: *See* Drawing-board. Insulating-board.							
Boards. Machine for uniting matched	A. Mereen and C. Johnson	869,923	Nov. 5	66	20–1	131	23
Boiler: *See* Locomotive-boiler.							
Boiler fire-box. Locomotive-	J. M. McClellon	870,306	Nov. 5	680	182–3	131	222
Boiler fire-box. Locomotive	J. M. McClellon	870,380	Nov. 5	820	217	131	269
Boiler furnace. Steam-	W. J. Ellis	870,090	Nov. 5	332	93–4	131	110
Boiler furnace. Steam-	A. K. Young	870,267	Nov. 5	616	165–6	131	201
Book. Combined warehouse invoice and freight	S. M. Rich	870,048	Nov. 5	272	74	131	93
Boot. Felt	J. P. Kline	870,037	Nov. 5	258	71	131	89
Bottle-closure	P. Doersch	869,963	Nov. 5	125	35	131	41
Bottle-closure	J. S. Hawkins	870,030	Nov. 5	250	69	131	86
Bottle-closure	A. Morehouse	870,243	Nov. 5	582	156	131	190
Bottle. Non-refillable	C. A. Parker	870,312	Nov. 5	689	186	131	225
Bottle. Non-refillable	A. Wicke	870,401	Nov. 5	848	225	131	279

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Box:							
See Dispensing-box. Sand-box.							
Journal-box. Stuffing-box.							
Box	F. E. Ward	870,398	Nov. 5	844	224	131	278
Box and closure thereof	P. Mettmann	869,924	Nov. 5	68	21	131	24
Box-cover lifter. Sheet-metal-	L. F. Hirsh	870,513	Nov. 5	1009	275	131	326
Box-fastener	F. S. Johnson	869,908	Nov. 5	51	15	131	18
Box-strapping. Apparatus for making	E. S. Norton	870,195	Nov. 5	506	138–9	131	165
Bracket:							
See Adjustable bracket.							
Shade and curtain bracket.							
Bracelet-band	T. S. Bennett	870,076	Nov. 5	315	87	131	106
Bracelet-band	T. S. Bennett	870,077	Nov. 5	316	87	131	106
Brake: *See* Automobile emergency Sled brake.							
brake. Vehicle-brake.							
Brake-beam	C. A. Lindström	870,186	Nov. 5	487	133	131	159
Branning-machine	J. W. Bryson	870,156	Nov. 5	437	120	131	143
Bread-slicer	H. Frank	870,503	Nov. 5	990	270	131	321
Brick-mold-washing machine	J. W. Goulding	870,357	Nov. 5	766	204	131	257
Broiler	G. J. Miller	870,118	Nov. 5	380	106	131	127
Broiling apparatus	G. J. Miller	870,117	Nov. 5	377	105–6	131	126
Broom-corn-fiber sorting and sizing machine	R. D. Gallagher, Sr	870,280	Nov. 5	636	169–71	131	206
Brush. Fountain shaving-	I. D. Stevens	870,257	Nov. 5	603	161	131	197
Brush. Shaving-	W. J. Roche	870,467	Nov. 5	941	257	131	306
Bucket. Self-dumping	B. A. Baus	870,409	Nov. 5	857	228	131	281
Buckle	A. Kallberg and L. Netz	869,910	Nov. 5	52	16	131	18
Buckle. Cross-line	O. H. McBride	869,927	Nov. 5	72	22	131	25
Building-foundations. Drainage for	E. C. Hodges	870,433	Nov. 5	895	241	131	294
Bundler and binder	W. D. Harrell and J. E. McNown	870,362	Nov. 5	795	212	131	260
Burglar-alarm	B. Uhlmann	870,063	Nov. 5	300	82	131	101
Burner:							
See Alcohol-burner. Gas-burner.							
Furnace-burner. Oil-burner.							
Bust reducer and supporter	O. D. Cornell	870,226	Nov. 5	558	150	131	183
Butter. Manufacture of	A. H. Borgström	870,217	Nov. 5	546	.....	131	179
Butter measure and cutter	D. F. Curtin	870,496	Nov. 5	979	267	131	317
Button. Collar-	S. M. Brydges	870,222	Nov. 5	553	148	131	181
Button. Laundry-	J. S. Barnes	869,872	Nov. 5	4	1	131	4
Butts and hinges. Machine for making	W. S. Trask	869,998	Nov. 5	198	52–4	131	70
Cab-window	J. D. Lane	869,972	Nov. 5	140	38	131	46
Cabinet. Grocery-	W. J. Perritt	870,196	Nov. 5	509	139–40	131	166
Cable attachment	F. R. Willson, Jr	870,003	Nov. 5	209	55–6	131	75
Cable-clamp	A. H. Mecch	870,242	Nov. 5	581	156	131	190
Cable-suspension device	M. C. Williams	870,002	Nov. 5	208	55	131	74
Calculating-machine	W. M. Boehm	870,009	Nov. 5	215	57–8	131	77
Calk	A. Distler	869,962	Nov. 5	123	35	131	40
Canning and washing apparatus	H. D. Chance	870,415	Nov. 5	866	231	131	284
Car construction	I. L. Kiser and O. M. Prince	870,296	Nov. 5	666	178	131	218
Car-door	T. A. Corson	870,417	Nov. 5	868	231–2	131	285
Car door and step operating mechanism	H. Rowntree	870,051	Nov. 5	277	75	131	94
Car-door closure	J. M. Lugar	869,919	Nov. 5	62	18	131	21
Car door. Railway-	O. Tower	870,062	Nov. 5	298	82	131	101
Car gate. Railway-	N. Grasso	870,093	Nov. 5	337	94	131	112
Car-handle	G. Robbins	870,386	Nov. 5	830	219	131	273
Car-loader	W. S. Mayers	870,115	Nov. 5	367	103–4	131	122
Car-loader	J. H. Huhn	870,175	Nov. 5	463	127–8	131	152
Car-loader	J. H. Huhn and C. F. Ice	870,294	Nov. 5	661	177	131	216
Car. Motor-operated dumping-	C. P. Astrom. (Reissue)	12,714	Nov. 5	1033	282	131	333
Car-mover	A. J. Maine	870,043	Nov. 5	266	73	131	91
Car. Railway-	F. E. Thompson	870,397	Nov. 5	844	224	131	278
Car-seat. Reversible	E. P. Rideout	870,385	Nov. 5	829	219	131	272
Car-stake	J. D. Perry	870,123	Nov. 5	389	108	131	130
Car steel underframing. Railway-	F. L. Irwin	870,436	Nov. 5	900	243	131	295
Car-step	O. A. Kneeland	870,442	Nov. 5	907	246	131	297
Car-underframe	H. C. Priebe	870,130	Nov. 5	396	111	131	132
Carbon tetrachlorid. Producing	F. J. Maywald	870,518	Nov. 5	1015	276	131	327
Carbureter	G. M. Schebler	870,052	Nov. 5	279	76	131	95
Card teeth. Apparatus for hardening and tempering	A. G. Herman	870,364	Nov. 5	797	213	131	260
Carding-machine under-screen	R. M. Whitney	870,264	Nov. 5	613	164	131	200
Carrier:							
See Elevator-carrier. Letter-carrier.							
Case:							
See Show-case.							
Cash-indicator	J. Pfeifer	869,982	Nov. 5	153	42–3	131	51
Chain. Sprocket-	C. Livingston	870,373	Nov. 5	808	214	131	265
Chains. Machine for automatically making soldered cable and globular or pea-shaped	L. Bruckmann	870,414	Nov. 5	864	230	131	284
Chair:							
See Folding chair.							
Chart. Elbow-	E. Palm	870,520	Nov. 5	1017	277	131	328
Check-operated mechanism	E. A. Beaumont, Jr., and G. W. Garmon	870,338	Nov. 5	739	198–9	131	243
Chopper:							
See Cotton-chopper.							
Chuck	V. J. Wahlstrom	870,142	Nov. 5	413	115	131	137
Chuck	V. J. Wahlstrom	870,143	Nov. 5	415	115	131	138
Churn	W. E. Borden	869,876	Nov. 5	9	2	131	5
Churn-operating mechanism	J. W. Connett	870,494	Nov. 5	974	267	131	316
Chute-frame	G. E. Smith	870,055	Nov. 5	283	77	131	96
Circuit-closer	J. M. Triggs	870,524	Nov. 5	1023	279	131	330
Clamp:	T. M. Foote	870,353	Nov. 5	761	203	131	250
See Cable-clamp							
Clamp							
Cleaner:	D J. Cyr	870,419	Nov. 5	875	234–5	131	288
See Barrel-cleaner. Paper-cleaner.							
Beer-pipe cleaner. Window-cleaner.							
Clothes-line reel	R. Murchison	870,245	Nov. 5	583	157	131	191
Clothes-line reel	F. Shaffer	870,475	Nov. 5	955	261	131	310

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Clothes-pin	E. J. Conrad	869,880	Nov. 5	12	4	131	6
Clothes-pin	J. W. Lewis	870,040	Nov. 5	262	72	131	90
Clutch	V. J. Wahlstrom	870,206	Nov. 5	524	143	131	171
Clutch	W. R. Warren	870,263	Nov. 5	612	164	131	200
Clutch. Electric	N. S. Harter	870,166	Nov. 5	448	123–4	131	147
Clutch mechanism	J. Hartness	870,288	Nov. 5	650	174–5	131	212
Clutch mechanism	C. T. Painter	870,381	Nov. 5	822	218	131	270
Coal-drill	B. V. Gilmore	870,281	Nov. 5	641	171	131	207
Coal-handling apparatus	J. M. McClellon	869,929	Nov. 5	75	22–4	131	25
Coat and hat rack	G. W. Chubb	870,158	Nov. 5	440	121	131	144
Coin counting, registering, and bagging machine	C. S. Batdorf	870,214	Nov. 5	534	145–6	131	175
Composition of matter	M. Ams	869,870	Nov. 5	1	1	131	3
Computing-machine	A. W. Krahn	870,184	Nov. 5	480	132–3	131	157
Concrete-block machine	C. Wolfenden	870,006	Nov. 5	212	56–7	131	76
Concrete-structure reinforcing-bar	A. Priddle	870,129	Nov. 5	395	110	131	132
Condenser. Steam-	G. W. Pendleton	870,461	Nov. 5	934	254	131	304
Connecting device	G. A. Schnaufer and H. G. Smock	870,471	Nov. 5	946	258	131	308
Conveying-machine	P. A. Robbins	870,050	Nov. 5	275	75	131	94
Cooking utensil	M. Harloe	869,903	Nov. 5	47	14	131	17
Core. Collapsible	J. A. Walker	870,144	Nov. 5	416	115	131	138
Corn-grader	C. Hunnicutt	870,515	Nov. 5	1011	275	131	326
Cotton-chopper	J. Hudson	870,434	Nov. 5	896	241–2	131	294
Cotton-pickers' bags. Guard for	B. C. Pennington	870,462	Nov. 5	935	255	131	305
Coupling:							
See Pipe-coupling. Vehicle-coupling.							
Crank-shaft	T. J. Fay and J. M. Ellsworth	870,502	Nov. 5	987	270	131	320
Crate. Knockdown	W. A. Perkins	870,122	Nov. 5	387	108	131	129
Cream-separator	H. J. Lawrence	870,110	Nov. 5	359	101	131	120
Cruller-cutting machine	T. C. Patterson	870,249	Nov. 5	590	158–9	131	193
Crutch	A. D. Wick	870,400	Nov. 5	847	225	131	279
Cue-clutch	J. J. Callaghan	870,491	Nov. 5	971	266	131	314
Curtain-raising device. Back-	T. H. Bauer	870,408	Nov. 5	855	228	131	281
Cup:							
See Grease-cup.							
Cutlery-sharpening machine	L. A. Flinker and J. Schade, Jr	870,279	Nov. 5	631	169	131	205
Cutter:							
See Tube-cutter.							
Cycle, motor-car, &c., brake	A. R. Turner	869,948	Nov. 5	106	29	131	35
Cylinder motor. Revolving-	T. O'Brien	870,120	Nov. 5	385	107	131	129
Damper	H. W. Neal	870,309	Nov. 5	686	185	131	225
Damper. Time-controlled	S. B. Brown	870,221	Nov. 5	551	148	131	181
Desk. Portable	J. Lipscond	869,918	Nov. 5	61	18	131	21
Die:							
See Printing-die.							
Sheet-metal-stamping die.							
Digger:							
See Potato-digger.							
Disk-knife holder	J. Brooks	870,220	Nov. 5	550	147	131	180
Dispensing-box wall-section	L. Stowe	869,942	Nov. 5	96	28	131	32
Display-easel	J. B. Timberlake	869,995	Nov. 5	195	51	131	69
Display-rack	J. B. Timberlake	869,996	Nov. 5	196	51	131	69
Display-rack	S. M. Hultz and C. I. Smith	870,176	Nov. 5	465	128	131	153
Door-check	H. W. Schiermeyer	869,937	Nov. 5	90	26	131	31
Door-check	W. Bennett and W. A. Ralston	870,216	Nov. 5	545	146	131	179
Door lock mechanism	I. Johnson	870,238	Nov. 5	574	154–5	131	188
Doors. Adjustable hinging-strip for	L. S. Prentiss	870,128	Nov. 5	394	110	131	131
Dough elevating and handing-up apparatus	A. E. Aldred	870,212	Nov. 5	532	144	131	174
Draft-equalizer	W. C. Campbell	870,344	Nov. 5	749	200–1	131	247
Draft-equalizer	F. B. Stout	870,480	Nov. 5	959	262	131	311
Draft-releasing device	E. L. Hurd	870,177	Nov. 5	467	128	131	153
Drain system and apparatus	J. F. Gross	870,027	Nov. 5	245	68	131	85
Drawer. Furniture-	A. J. Throm	870,140	Nov. 5	411	114	131	137
Drawing-board	H. L. Burbank and J. W. Manson	870,224	Nov. 5	555	149	131	182
Dredge cutter-head	W. J. Knight and E. S. Johnson	869,912	Nov. 5	54	16	131	18
Drier	A. C. Sargent	870,133	Nov. 5	400	112	131	133
Drill:							
See Coal-drill. Rock-drill.							
Hammer-drill. Track-drill.							
Dump-table	F. S. Peck	870,521	Nov. 5	1018	277	131	328
Dust-pan and broom-holder. Combination	C. H. Lyons	870,447	Nov. 5	914	247	131	299
Ear-ring	F. E. Farnham	869,965	Nov. 5	127	36	131	41
Ear-ring	E. F. Wilde	870,330	Nov. 5	720	194	131	226
Eaves-trough hanger	W. Batdorff	869,957	Nov. 5	116	32	131	38
Eaves-trough screen	J. D. Hagler and M. Pickens	870,165	Nov. 5	446	123	131	147
Educational material	A. R. Elliot	870,277	Nov. 5	629	168	131	205
Electric compensator	E. O. Schweitzer	870,253	Nov. 5	597	160	131	196
Electric connector and switch. Combined	S. F. Burbank	870,490	Nov. 5	970	266	131	314
Electric furnace	F. J. Tone	870,326	Nov. 5	714	193	131	233
Electric machine. Dynamo-	D. C. Jackson	870,035	Nov. 5	254	70	131	88
Electric machine. Dynamo-	M. Pfatischer	870,313	Nov. 5	691	186–7	131	226
Electric machinery. Dynamo-	C. A. Parsons and J. H. Armstrong.	869,934	Nov. 5	86	25	131	29
Electric switch. Time-controlled	J. W. Wood	870,404	Nov. 5	850	226	131	280
Electric switching apparatus and controlling apparatus therefor.	A. Blackmore	870,078	Nov. 5	318	88–90	131	106
Electrical attachment for movable objects	J. R. Dawkins. (Reissue.)	12,715	Nov. 5	1036	282	131	335
Electrical distribution system	J. L. Woodbridge	870,149	Nov. 5	426	118	131	140
Electrical distribution system	J. L. Woodbridge	870,150	Nov. 5	427	118	131	140
Electrical protective apparatus. Automatic resoldering device for	F. B. Cook	870,495	Nov. 5	976	267	131	316
Electrical thermostatic alarm	J. Finch	870,423	Nov. 5	881	236	131	290
Electromagnetic press	J. P. Buckley	870,012	Nov. 5	223	60	131	79
Elevated carrier	P. A. Henning	870,363	Nov. 5	796	212	131	260
Elevator safety appliance	J. Coleman	870,084	Nov. 5	327	91–2	131	109
Elevator safety appliance	J. L. Boren	870,411	Nov. 5	860	229	131	283
Engine:							
See Gas-engine. Rotary engine.							
Heat-engine. Steam-engine							
Internal-combustion engine.							
Engine	C. H. Way	870,001	Nov. 5	206	55	131	74

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Engine	C. W. McGonigle	870,308	Nov. 5	685	184	131	224
Engines. Sparking plug for internal-combustion	A. E. Lamkin	870,369	Nov. 5	902	213	131	262
Envelop-sealer	H. Richissin	870,252	Nov. 5	597	160	131	196
Envelops from fraudulent or unauthorized opening. Means for securing	W. Myers	870,119	Nov. 5	384	107	131	128
Evaporator	E. Zaremba	870,211	Nov. 5	531	144	131	174
Exercising apparatus	F. Marsland	869,920	Nov. 5	63	19	131	22
Extension-table	A. C. Long	870,374	Nov. 5	909	214–15	131	265
Eyeglass-mounting	I. Boltan	870,079	Nov. 5	321	90	131	107
Eyeleting-tool. Revolving	W. A. Bernard	869,874	Nov. 5	6	2	131	4
Fare-indicator	B. Schneider	870,387	Nov. 5	830	219–21	131	273
Faucet. Combined hot and cold water	A. Johnson	870,438	Nov. 5	903	244	131	296
Feed-water heater	C. Stickle	870,060	Nov. 5	292	81	131	99
Feed-water heater and purifier	W. H. Berry	869,875	Nov. 5	6	2	131	4
Feeding and tension mechanism	B. W. Scott	870,199	Nov. 5	514	140–1	131	168
Fence-post	J. H. Fitzgibbon	870,352	Nov. 5	760	203	131	250
Fence-post and line-wire fastener therefor. Cement	W. M. Gibbs	870,162	Nov. 5	443	122	131	145
Fence-post. Steel	J. P. Lavoie	870,443	Nov. 5	908	246	131	297
Fender: *See* Wheel-fender.							
File. Bill-	A. Morehouse	870,244	Nov. 5	583	156	131	190
Filter. Feed-water	O. L. Stump, C. B. King, and H. J. Barnhart.	870,138	Nov. 5	407	113	131	135
Fire-alarm	R. M. Whipple	870,068	Nov. 5	304	84	131	103
Fire-escape	F. J. Bryant	869,959	Nov. 5	118	33	131	39
Fire-extinguisher	S. Q. Stanley	870,479	Nov. 5	958	262	131	311
Firearm-sight. Telescope	F. F. Burton	870,272	Nov. 5	624	167	131	203
Firearm-sight. Telescope	F. F. Burton	870,273	Nov. 5	625	167	131	204
Firearm-sight. Telescope	T. C. Johnson	870,295	Nov. 5	664	178	131	218
Fish-decoy	C. M. Wilcox	870,069	Nov. 5	305	84	131	103
Fish-hook guard	E. W. Hildreth	870,033	Nov. 5	253	70	131	87
Fishing-reel	C. Ubrich	870,327	Nov. 5	715	193	131	234
Flood-gate	S. C. Smith	870,256	Nov. 5	602	161	131	197
Fly-trap shed	W. H. Harbuck	870,360	Nov. 5	791	211	131	258
Folding chair	W. H. Thomas	870,260	Nov. 5	607	163	131	198
Folding-machine	E. H. Brown	870,343	Nov. 5	747	200	131	246
Foundry apparatus	G. B. and J. A. Hayes	870,511	Nov. 5	1005	273–4	131	324
Frame: *See* Chute-frame.							
Fruit-juice extractor	O. Persen	870,124	Nov. 5	390	109	131	130
Fuel-feeding device	G. W. Gardner	870,230	Nov. 5	563	151	131	184
Furnace: *See* Boiler-furnace. Metallurgical furnace. Electric furnace.							
Furnace	H. Strand	870,322	Nov. 5	707	190	131	231
Furnace burner. Hot-air	J. Edwards and W. V. Sheppard	869,964	Nov. 5	126	35	131	41
Furnace-regulator	W. L. Hager	870,028	Nov. 5	247	68	131	85
Fuse-holder	R. O. Grooms	870,531	Nov. 5	1033	281	131	333
Gage: *See* Micrometer-gage. Thread-gage. Pressure-gage. Water-gage.							
Galvanometer. Contact-	J. W. Manley	870,376	Nov. 5	814	216	131	268
Game apparatus	C. E. I. Lundberg	870,041	Nov. 5	263	72	131	90
Game apparatus. Racing-	G. F. W. Schultze	870,473	Nov. 5	949	260	131	309
Garment-marking device	A. E. Wise	870,209	Nov. 5	528	144	131	173
Gas-burner	L. R. Yansky	869,954	Nov. 5	114	31	131	38
Gas-engine	E. J. Stoddard	869,991	Nov. 5	190	49	131	67
Gas-engine	A. R. and F. S. Welch	870,065	Nov. 5	301	83	131	102
Gas-engine	D. Libby, Jr	870,240	Nov. 5	577	155	131	189
Gas-governor	A. Scheck and W. H. Finfrock	870,478	Nov. 5	945	258	131	308
Gas machine. Acetylene-	L. H. Miller	870,190	Nov. 5	495	135–6	131	162
Gas-mantle	P. R. Finch	870,229	Nov. 5	562	153	131	184
Gas-producer	G. W. Bulley	870,271	Nov 5	620	167	131	202
Gasolene or other oils. Measuring apparatus for	J. F. Barker	870,154	Nov. 5	436	119	131	143
Gate: *See* Car-gate. Flood-gate.							
Gate	M. W. Legg	870,371	Nov. 5	806	214	131	264
Gate-operating mechanism	G. Haas	870,094	Nov. 5	338	95	131	112
Gear. Driving-	J. B. Rahn	870,315	Nov. 5	695	188	131	228
Gear. Reversing-	C. W. Sponsel	870,202	Nov. 5	517	142	131	169
Gear. Transmission-	E. Koeb	870,107	Nov. 5	354	99–100	131	117
Gear-wheel	J. J. Jones	870,106	Nov. 5	352	98–99	131	117
Gearing	J. W. Leonard and H. E. Brown	870,444	Nov. 5	909	246	131	298
Gearing. Power-transmission	G. Milner	870,304	Nov. 5	676	181–2	131	221
Gearing. Transmission-	E. B. Kent	870,183	Nov. 5	478	131–2	131	157
Glass. Apparatus for delivering molten	R. S. Pease	870,250	Nov. 5	594	159	131	195
Glue	G. Kelly	870,367	Nov. 5	800	.....	131	262
Gold-dredge. Deep-water	W. Guthrie	870,235	Nov. 5	571	153	131	187
Grafting-tool	J. M. Haley	870,096	Nov. 5	340	95	131	113
Grain-scourer. Rotary	S. T. Wilson	870,071	Nov. 5	308	85	131	104
Graver-sharpener	R. L. Hight	870,365	Nov. 5	799	213	131	261
Grease-cup	W. W. Crosby	870,346	Nov. 5	752	201	131	247
Grindstone sickle-support	W. C. Rarig	869,983	Nov. 5	159	43	131	53
Gun. Breech-loading	A. Fyrberg	869,967	Nov. 5	129	36–7	131	47
Gun muzzle attachment. Automatic-	A. T. Dawson and J. Ramsay	870,497	Nov. 5	980	267–8	131	312
Gun-sight	J. Y. Bassell and F. C. Blenkner	870,337	Nov. 5	737	198	131	241
Guns. Means for cleaning out the chambers and bores of	A. H. Emery	870,528	Nov. 5	1027	280	131	332
Hammer-drill	A. E. Johnson	870,178	Nov. 5	467	128	131	154
Handle: *See* Car-handle.							
Hanger: *See* Eaves-trough hanger.							
Harrow	E. Etheridge	870,351	Nov. 5	758	202	131	249
Harrow riding attachment	L. A. Brenizer	870,081	Nov. 5	322	91	131	108
Harvester. Corn-	J. Nixon	870,247	Nov. 5	585	157–8	131	191
Harvester. Cotton-	E. M. Williams	869,951	Nov. 5	109	30	131	37
Harvesting apparatus. Cotton-	S. A. Ellis	869,888	Nov. 5	23	7	131	10
Hat, bonnet, &c., fastener	J. Fenton	869,891	Nov. 5	29	8	131	11

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Hat-ventilator	A. L. Eliel	870,350	Nov. 5	758	202	131	249
Hay-press	J. W. Wirtz and E. J. Hernlen	870,005	Nov. 5	211	56	131	76
Hay-press	R. W. Easterling	870,023	Nov. 5	237	63	131	82
Head-rest	N. J. Johnson	870,179	Nov. 5	470	129	131	154
Heat-engine	F. X. Govers	870,507	Nov. 5	997	272	131	323
Heater: *See* Feed-water heater. Water-heater.							
Heating or refrigerating apparatus	H. Naranjo	870,457	Nov. 5	927	253	131	303
High and low water alarm	S. E. Jarvis	869,907	Nov. 5	50	15	131	17
Hinge. Gate-	L. A. Holden	869,905	Nov. 5	48	14	131	17
Hoisting apparatus	C. T. Painter	870,458	Nov. 5	930	253–4	131	303
Honey section. Comb-	W. J. Lewis	869,917	Nov. 5	61	18	131	21
Hook: *See* Whiffletree-hook.							
Hopper. Feed-	G. E. Snyder	870,477	Nov. 5	957	261–2	131	311
Horn. Electrical	W. E. Russell	870,198	Nov. 5	512	140	131	167
Horn support. Amplifying-	F. L. Bedell	870,008	Nov. 5	214	57	131	77
Hulling-machine	L. Lash	870,298	Nov. 5	668	179	131	219
Humidifying apparatus	A. W. Thompson	869,945	Nov. 5	100	28	131	34
Hydraulic motor	W. F. Mottier	870,379	Nov. 5	818	217	131	269
Hydrogen peroxid. Producing	R. Wolffenstein	870,148	Nov. 5	425	.....	131	140
Ice-cream server	W. R. Cameron	869,879	Nov. 5	12	4	131	6
Ice-shaver	W. A. Lupton	870,446	Nov. 5	913	247	131	299
Indicator: *See* Cash-indicator. Speed-indicator. Fare-indicator.							
Insulating board or slab	G. Kelly	870,366	Nov. 5	801	.....	131	262
Insulator	D. M. Bass	869,873	Nov. 5	5	1	131	4
Insulator. Wall-	F. N. Locke	870,187	Nov. 5	488	133	131	160
Internal-combustion engine	J. F. Duryea	869,887	Nov. 5	22	6	131	9
Iron: *See* Sad-iron.							
Jar-closure	D. Knowlton	870,239	Nov. 5	577	155	131	189
Joint: *See* Railway-joint. Universal joint.							
Journal-box	J. S. Patten	870,121	Nov. 5	386	107	131	129
Key-filing device	J. D. Bowne	870,218	Nov. 5	547	147	131	179
Key-ring	L. M. Morden	870,191	Nov. 5	499	136	131	163
Knife: *See* Pruning-knife.							
Knife and fork. Combined	W. R. Brown	870,413	Nov. 5	802	229	131	284
Knife for rubber-trees and the like. Tapping-	C. A. Lesher	870,299	Nov. 5	669	179	131	219
Knitted fabric. Rib-	R. W. Scott	869,986	Nov. 5	168	44–6	131	57
Knitting machine. Warp-	H. Hill	870,170	Nov. 5	455	126	131	149
Knotter	B. E. Byrd	870,527	Nov. 5	1025	279	131	330
Labeling-machine	C. W. Kelly	870,182	Nov. 5	473	130–1	131	155
Ladder. Metallic step-	H. Adler	870,334	Nov. 5	731	197	131	240
Lamp. Electric-arc	G. M. Lane	869,914	Nov. 5	56	17	131	19
Lamp. Incandescent	H. Boehm	870,341	Nov. 5	744	200	131	245
Lamp. Therapeutic	J. B. Wantz	870,262	Nov. 5	610	163–4	131	199
Lamps. Automatic starting device for alternating current vapor-	C. H. Vom Baur	870,141	Nov. 5	411	114	131	137
Lamps. Joint-ring for acetylene-gas	C. W Beck	870,339	Nov. 5	740	199	131	243
Lamps. Manufacturing reflector incandescent	H. Gilmore	870,233	Nov. 5	566	152	131	185
Lasts. Turning	W. E. Trufant	870,484	Nov. 5	963	263–4	131	312
Lead pigments. Making	A. S. Ramage	870,316	Nov. 5	697	.....	131	228
Lenses. Making bifocal	J. R. Schwinzer	869,938	Nov. 5	91	27	131	31
Lifter: *See* Box-cover lifter.							
Lifter	F. H. Mayer	870,450	Nov. 5	916	248	131	300
Lighting-system safety cut-off. Storage-	R. E. Bruckner	870,878	Nov. 5	11	3	131	6
Lighting-tank regulating-valve	A. T. Bossert	870,526	Nov. 5	1024	279	131	330
Line-fastener	A. Dyer	870,022	Nov. 5	236	63	131	82
Linotype-machine	P. T. Dodge	870,019	Nov. 5	231	62	131	81
Liquid-fuel-burner regulator	T. Clarkson and W. J. Morison	870,083	Nov. 5	325	91	131	108
Liquid-straining apparatus	E. C. Fahrenheim	870,500	Nov. 5	985	269	131	319
Liquids. Apparatus for automatic sale of	E. W. Lindgren	870,185	Nov. 5	485	133	131	159
Lister attachment	R. C. Mills	870,451	Nov. 5	917	248	131	300
Litter-carrier	M. G. Shumway	869,939	Nov. 5	93	27	131	31
Lock: *See* Whip-socket lock.							
Lock	W. E. Peeples	870,460	Nov. 5	933	254	131	304
Locomotive-boiler	J. M. McClellon	870,455	Nov. 5	921	250–2	131	301
Locomotives or motor-cars. Multiple-unit-controlling system for electric.	R. Wikander	870,147	Nov. 5	423	117	131	139
Loom	G. E. Gay	869,892	Nov. 5	30	9	131	12
Loom. Weft-replenishing	H. I. Harriman	870,509	Nov. 5	1000	272–3	131	323
Looms. Cloth-take-up motion for	W. H. Clegg	870,345	Nov. 5	750	201	131	247
Mail-matter. Machine for stamping and sealing	L. J. Hall	870,350	Nov. 5	767	204–11	131	252
Mandrel. Tube-	J. R. Harbeck	869,902	Nov. 5	46	13	131	17
Manhole-cover	W. Egle	870,406	Nov. 5	982	268	131	319
Manicure implement	A. L. Tolman	869,946	Nov. 5	104	29	131	35
Manifolding-bill-pad holder	P. A. McCaskey	870,193	Nov. 5	504	137	131	164
Manifolding device	B. E. McSheehy	870,456	Nov. 5	926	252–3	131	302
Measuring-glass and pestle and mortar. Combined	A. W. M. Dickins	870,097	Nov. 5	330	92	131	110
Mechanical movement	W. E. Schneider	870,135	Nov. 5	403	112	131	134
Metal-ceiling construction	M. E. Perry	870,382	Nov. 5	825	218	131	271
Metal-sawing machine	C. A. Juengst	870,180	Nov. 5	470	129	131	154
Metallic wheel	W. F. Bailey	869,956	Nov. 5	115	32	131	38
Metallurgical furnace	J. C. Cromwell	869,960	Nov. 5	119	33–4	131	39
Micrometer-gage	L. C. Woerner	870,403	Nov. 5	849	226	131	280
Milking apparatus. Cow-	W. J. Teese	870,395	Nov. 5	840	223	131	276
Mill: *See* Rolling-mill.							
Mine-door	O. N. Earthom and T. Gallaher	870,420	Nov. 5	876	235	131	288
Mining-machine	E. R. Merrill	870,116	Nov. 5	372	104–5	131	124
Moistening device	C. W. Gray	870,234	Nov. 5	569	153	131	186
Mop and cloth wringer	E. F. Pettibone	870,463	Nov. 5	936	255	131	305
Mop-holder	O. K. Brown	870,412	Nov. 5	862	229	131	283

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Mosquito-net support	F. D. Rappelee	870,465	Nov. 5	937	256	131	306
Motor:							
See Cylinder-motor. Water-motor. Hydraulic-motor.							
Motor-control system	J. H. Hall	870,029	Nov. 5	248	68–9	131	86
Motor-controller. Alternating-current	A. Sundh	869,943	Nov. 5	96	28	131	32
Motor-synchronizing apparatus	W. P. Gerrish	870,505	Nov. 5	992	271	131	321
Mowing-machine	D. R. Griffiths	870,358	Nov. 5	766	204	131	252
Music-chart	P. Zuckriegel	870,405	Nov. 5	851	226–7	131	280
Music-roll spool	J. W. Barnes	869,871	Nov. 5	3	1	131	3
Music-stand	M. R. Hackerson	870,529	Nov. 5	1029	280–1	131	332
Musical instrument	E. J. Elsas	870,025	Nov. 5	242	67	131	84
Musical instrument	W. A. Gay	870,092	Nov. 5	336	94	131	112
Musical instrument	C. Weiss	870,207	Nov. 5	526	143	131	172
Musical instrument	P. Frost	870,504	Nov. 5	991	271	131	321
Mutoscope	T. E. Duffee	870,021	Nov. 5	235	63	131	82
Nasal snare	J. J. Kerr	870,441	Nov. 5	907	245	131	297
Nut-cutting tool	S. B. Rappleye	870,317	Nov. 5	698	188	131	229
Oil-burner	G. E. Witt	870,402	Nov. 5	848	225	131	279
Oil-burner. Locomotive	B. D. Thorner	870,324	Nov. 5	709	191–2	131	232
Operating-table	A. Demuth	869,883	Nov. 5	17	5	131	8
Ores. Round buddle for dressing	J. Gillet	870,506	Nov. 5	996	271	131	322
Organ or the like within human bodies. Instrument for determining the position of an	L. D. Morris	870,192	Nov. 5	500	136–7	131	164
Organ. Pedal bass	C. E. Johnson. (Reissue)	12,716	Nov. 5	1037	283	131	335
Padlock	W. S. Hanna and J. D. Bryant	870,508	Nov. 5	999	.....	131	323
Paint and varnish remover							
Pan:							
See Dust-pan.							
Paper cleaner. Wall	J. M. McIntosh	869,931	Nov. 5	82	24	131	28
Pasteurizing apparatus	E. J. Miller	869,978	Nov. 5	148	40	131	49
Pedal. Folding	R. W. Pain	869,980	Nov. 5	151	41	131	50
Pen-guide	R. L. Shaw	870,388	Nov. 5	833	221	131	274
Pencil-sharpener	N. Stafford	870,204	Nov. 5	520	142	131	170
Penholder	W. W. Thomas	870,396	Nov. 5	843	223	131	277
Perforated strips. Apparatus for producing	T. A. Edison	870,024	Nov. 5	238	63–6	131	83
Pillow. Sofa	P. Knuppen	870,297	Nov. 5	667	178	131	218
Pin:							
See Clothes-pin.							
Pipe and nut wrench	A. C. May	870,449	Nov. 5	915	248	131	300
Pipe coupling. Angle	W. R. Sheckler	870,200	Nov. 5	515	141	131	168
Pipe-coupling packing	A. W. Graham	870,428	Nov. 5	887	239	131	292
Piston	C. S. McKee	869,932	Nov. 5	83	25	131	28
Planter fertilizer attachment	C. W. Michael	869,977	Nov. 5	145	40	131	48
Planter. Seed	P. H. Higley	870,432	Nov. 5	804	241	131	294
Plow	J. Willig	869,952	Nov. 5	111	31	131	37
Plow	A. J. Amundson	870,007	Nov. 5	214	57	131	76
Plow	E. V. Posey	870,127	Nov. 5	393	110	131	131
Plow	J. H. Edwards	870,421	Nov. 5	878	236	131	289
Plow and cultivator. Combined	J. Schimanoski	870,319	Nov. 5	702	189	131	230
Pole raising and lowering apparatus	E Godwin	869,894	Nov. 5	35	10	131	13
Polishing-machine	G. Smith	870,056	Nov. 5	284	778	131	97
Polishing-machine for marble and analogous materials	C. and J. D. Stamper	870,321	Nov. 5	704	190	131	231
Popcorn machine Electric	W. H. Bean	870,155	Nov. 5	437	119	131	143
Porous and fibrous substances. Treating and degumming	G. D. Burton	870,157	Nov. 5	438	.....	131	144
Post:							
See Fence-post.							
Potato-digger	J. Schimanoski	870,320	Nov. 5	703	189	131	230
Power-transmission device. Variable-speed	D. M. Dearing	869,882	Nov. 5	16	5	131	7
Press:							
See Baling-press. Hay-press. Electromagnetic press.							
Pressure-gage	D. M. Moore	869,925	Nov. 5	69	21	131	24
Printing apparatus	L. M. Todd and C. G. Tiefel	869,997	Nov. 5	197	51–2	131	69
Printing die. Cigarette	A. L. Boucher	869,877	Nov. 5	9	3	131	5
Printing-machine. Rotary web-perfecting	H. A. W. Wood	870,210	Nov. 5	529	144	131	173
Propeller-wheel	R. W. Shaw	870,136	Nov. 5	404	113	131	135
Protector unit. Individual	F. B. Cook	870,530	Nov. 5	1031	281	131	332
Pruning implement	L. S. Goff	870,282	Nov. 5	641	172	131	209
Pruning-knife	J. B. Howard	870,366	Nov. 5	799	213	131	261
Pruning-shears	W. H. Gray	869,898	Nov. 5	42	12	131	15
Pull-rod adjuster. Automatic	H. G. Smith	870,201	Nov. 5	516	141	131	168
Pulley	W. H. Becroft and A. Isaacs	870,340	Nov. 5	743	199	131	244
Pulleys for belt conveyers. Supporting	E. J. Haddock	869,900	Nov. 5	44	13	131	16
Pulverizer	B. I. Turman	870,261	Nov. 5	606	163	131	199
Pump	P. A. Myers	869,926	Nov. 5	70	21	131	24
Pump. Oil-well	G. F. Bell	870,410	Nov. 5	838	228	131	281
Pump. Rotary	J. J. O'Donnell	870,310	Nov. 5	687	185	131	225
Pump. Rotary	G. Okamoto	870,311	Nov. 5	689	185	131	225
Punching and stitching tool	S. E. S. Clark	870,492	Nov. 5	972	266	131	315
Rack:							
See Automobile-rack. Display-rack. Bag-rack. Hat and coat rack.							
Radiators. Automatic relief device for steam	T. F. Dexter	870,884	Nov. 5	18	5	131	8
Rail-bond-making apparatus	A. B. Herrick	870,169	Nov. 5	454	125	131	149
Railway	M. S. Ellis	870,089	Nov. 5	331	93	131	110
Railway cattle-guard	F. Sack and F. A. Tyler	870,469	Nov. 5	944	258	131	307
Railway-crossing	A. Hosmer	870,173	Nov. 5	459	127	131	151
Railway electric signaling system	H. J. Warthen	870,145	Nov. 5	417	116	131	138
Railway electrical signaling system	H. L. Rider	870,466	Nov. 5	908	256	131	306
Railway-joint	M. Drake	870,088	Nov. 5	331	93	131	110
Railway-signal	J. M. Moore and F. F. Kamp, Jr.	870,453	Nov. 5	918	249	131	301
Railway signal and safety appliance	C. J. Kintner	869,970	Nov. 5	133	38	131	43
Railway signaling device	G. S. Getchell	870,232	Nov. 5	565	152	131	185
Railway-tie. Composite	J. Smith	870,255	Nov. 5	601	161	131	196
Railway-track construction	H. B. A. Keiser	870,181	Nov. 5	472	129–30	131	155
Railway vestibule-diaphragm	H. H. Sehroyer	870,064	Nov. 5	282	76–7	131	96
Rake	W. Cronk	870,227	Nov. 5	559	150	131	183
Ratan-splitting machine	D. C. Hull	870,435	Nov. 5	897	242–3	131	294
Razor-blade holder	S. Frazier	870,425	Nov. 5	883	237	131	291

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Razor-stropping mechanism	H. J. Gaisman	870,091	Nov. 5	333	94	131	111
Razors. Holder for use in sharpening blades of safety-	N. A. Welles	870,399	Nov. 5	846	225	131	278
Recorder:							
See Time-recorder.							
Reel:							
See Clothes-line reel. Fishing-reel.							
Regulator:							
See Furnace-regulator. Water-feed regulator.							
Relay. Track	J. D. Taylor	870,139	Nov. 5	409	114	131	136
Renovator. Pneumatic	J. S. Thurman	870,325	Nov. 5	712	192	131	233
Resistance-adjusting device	H. P. MacLagan	870,042	Nov. 5	264	72	131	90
Ring:							
See Ear-ring. Key-ring.							
Rock-drill. Hydraulic	G. E. Gjuke	869,893	Nov. 5	33	10	131	13
Rod:							
See Pull-rod.							
Roller:							
See Shade-roller.							
Roller-coaster. Horizontal	B. A. Karr	870,440	Nov. 5	905	245	131	296
Rolling-mill hydraulic counterbalance	A. K. Hamilton and A. T. Keller	870,285	Nov. 5	645	172–3	131	210
Roof-carline	G. B. Maltby	869,974	Nov. 5	143	39	131	47
Roof-carline	G. B. Maltby	869,975	Nov. 5	144	39	131	47
Rotary engine	K. H. Korhonen	869,971	Nov. 5	139	38	131	45
Rotary engine	A. W. Henkel	870,290	Nov. 5	653	175	131	213
Rotary engine	H. A. Hewey	870,293	Nov. 5	660	177	131	216
Rotary shovel for loading cars	J. H. Huhn and C. F. Ice	870,174	Nov. 5	461	127	131	151
Rubber and fiber. Producing compounds containing	F. M. Ekert	870,349	Nov. 5	755	.....	131	248
Rubber overshoe	H. C. Mason	869,976	Nov. 5	145	39	131	47
Sad-iron cleaner and waxer	J. Hornung	870,236	Nov. 5	572	154	131	187
Saddle. Top-roll	E. Dixon	870,347	Nov. 5	753	202	131	248
Safe and vault door boltwork mechanism	E. A. Strauss	869,902	Nov. 5	191	50	131	67
Sand-box	C. G. Hensley	870,101	Nov. 5	345	97	131	115
Sand-box	J. L. Levy	870,111	Nov. 5	360	101	131	120
Sash operating, locking, and balancing mechanism	J. D. Hess	870,431	Nov. 5	893	240–1	131	293
Saw attachment	F. Tupper	869,947	Nov. 5	105	29	131	35
Saw. Drag	B. W. Scott	870,474	Nov. 5	952	260–1	131	309
Saw-set	J. H. Keeter	870,036	Nov. 5	257	71	131	88
Scissors	A. Westerdahl	869,949	Nov. 5	107	29	131	36
Scissors	J. Feinenburg	870,161	Nov. 5	443	122	131	145
Scraper. Road	C. H. Lyons	870,516	Nov. 5	1013	276	131	326
Screen:							
See Eaves-trough screen. Window-screen.							
Screw	J. Sternaman, Jr	870,069	Nov. 5	291	80	131	99
Screw-cutting machine	R. McCarty	869,928	Nov. 5	73	22	131	25
Screw-driver	L. B. Hopkins	870,034	Nov. 5	254	70	131	88
Screw-machine	J. English	870,499	Nov. 5	983	268–9	131	319
Screw-machine threading mechanism	C. M. Spencer	869,989	Nov. 5	184	48	131	65
Scrubbing-machine	P. H. Apple	870,335	Nov. 5	734	197	131	240
Scrubbing-machine	T. McCabe and J. J. Rauch	870,454	Nov. 5	919	249–50	131	301
Seat:							
See Car-seat.							
Sectional stand	F. G. Grimler	870,429	Nov. 5	888	239	131	292
Seeding device	W. G. Bolus	870,488	Nov. 5	967	265	131	314
Separator:							
See Cream-separator. Smoke-separator.							
Separator for powdered material	J. F. Pool	870,383	Nov. 5	826	218	131	272
Settee-bed and couch	J. Phillipson	870,197	Nov. 5	511	140	131	167
Sewers and the like. Form for	G. G. F. Boswell	870,269	Nov. 5	618	166	131	202
Sewing-machine attachment	J. H. Boye	870,219	Nov. 5	548	147	131	180
Sewing-machine attachment for felling, blindstitching, &c.	G. J. Stevens	869,990	Nov. 5	186	49	131	65
Sewing-machine. Lock-stitch	H. H. Cummings	869,961	Nov. 5	121	34	131	39
Shade and curtain bracket. Combined	E. Dunkerley, Jr	870,348	Nov. 5	754	202	131	248
Shade cord attachment. Window	E. F. Hartshorn	870,100	Nov. 5	345	96	131	114
Shade-hanger level	E. F. Hartshorn	870,098	Nov. 5	342	96	131	114
Shade-roller	E. F. Hartshorn	870,099	Nov. 5	343	96	131	114
Shaft support. Vehicle	C. D. White	869,950	Nov. 5	108	30	131	36
Sheet metal. Manufacturing	A. Ridd	870,049	Nov. 5	273	75	131	93
Sheet-metal-stamping die	D. R. Levin	869,916	Nov. 5	59	18	131	20
Shifting spanner or wrench	F. Hartridge, T. G. Thorne, and E. Rookes.	870,510	Nov. 5	1004	273	131	324
Shirt-waist-retaining belt	E. J. Montigny	870,452	Nov. 5	917	248	131	300
Shock-absorber	W. E. Slater	870,254	Nov. 5	600	160	131	196
Shoe-creaser	G. H. Wilkins	870,265	Nov. 5	613	165	131	200
Shoe-form	H. A. Weeks	870,064	Nov. 5	300	83	131	102
Shovel:							
See Wheel-shovel.							
Show-case	E. S. Bedford	870,268	Nov. 5	617	166	131	201
Show-case	O. E. Pierce	870,314	Nov. 5	694	187	131	228
Shuttle	J. A. Gallagher	870,355	Nov. 5	764	203	131	251
Signal:							
See Railway-signal.							
Signal-operating device. Train	A. L. Wood	870,266	Nov. 5	614	165	131	201
Signaling apparatus. Electric	F. B. Herzog	870,102	Nov. 5	347	97	131	115
Signaling device. Headlight	F. Wessel	870,066	Nov. 5	302	83	131	102
Signaling mechanism. Electric	J. F. Webb, Jr	870,328	Nov. 5	717	193	131	235
Skiving-machine	G. W. Fairbank	869,899	Nov. 5	25	7	131	10
Sled	L. J. Collins	870,498	Nov. 5	973	266	131	315
Sled-brake	J. D. Hare	870,361	Nov. 5	793	212	131	259
Smoke-separator	R. H. Weber and D. W. Smith	870,329	Nov. 5	719	194	131	235
Solutions. Recovering	W. A. Hendryx	870,289	Nov. 5	652	175	131	213
Sound-reproducing-machine styles	S. Levin	870,300	Nov. 5	670	179	131	219
Speed device. Selective	E. Richter	869,985	Nov. 5	166	44	131	56
Speed-governor	W. J. D. Miller	870,303	Nov. 5	675	181	131	221
Speed-indicator	C. W. Sponsel	870,203	Nov. 5	519	142	131	169
Spike and bolt extracting implement	S. F. Eubank	870,422	Nov. 5	879	236	131	290
Spinning-machine automatic chain-drive-regulating device	J. M. Bain	870,075	Nov. 5	312	86	131	105
Spool attachment	W. I. Staaf	870,478	Nov. 5	956	262	131	311
Spraying apparatus	D. F. Prevost	869,936	Nov. 5	88	26	131	30

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Spraying machine. Plant-	F. Bateman and H. C. Jones	869,958	Nov. 5	117	32	131	39
Spraying purposes and the like. Mixer for	W. C. Brown	870,270	Nov. 5	619	166	131	202
Squares. Attachment for T	G. A. Leonard	870,372	Nov. 5	807	214	131	265
Stamp	T. S. Buck	870,223	Nov. 5	553	148	131	181
Stand:							
See Music-stand. Sectional stand.							
Staple-forming machine	W. G. Liebig	870,114	Nov. 5	364	102–3	131	121
Steam-engine	J. D. MacLachlan	870,375	Nov. 5	813	215–16	131	267
Steam-table	G. Goldman	869,895	Nov. 5	37	10	131	14
Stone and concrete. Making artificial	F. S. Lamson	870,370	Nov. 5	802	.....	131	262
Storage battery	J. C. Cook and E. Sokal	870,015	Nov. 5	227	61	131	80
Stove	W. Andrew	870,153	Nov. 5	435	119	131	143
Stove. Gas-	M. C. McVitty	869,979	Nov. 5	150	41	131	50
Strap-fastener	M. Herzog	870,032	Nov. 5	252	69	131	87
Streams. Regulating means for impact-	G. J. Henry, Jr.	870,292	Nov. 5	658	176	131	215
Stringed instruments. Hitch-pin for	J. R. Green	870,283	Nov. 5	642	172	131	209
Stropping-machine	A. W. Peterson	869,981	Nov. 5	152	42	131	50
Stuffing-box	A. H. Alberger	870,152	Nov. 5	433	118–19	131	142
Surveying and range-finding apparatus	D. W. McLean	869,933	Nov. 5	83	25	131	28
Switch:							
See Electric switch. Trolley-wire switch.							
Switch and signal apparatus free from snow and ice. Means for keeping.	F. G. Shaw	869,987	Nov. 5	170	46	131	57
Table:							
See Dump-table. Operating-table. Extension-table. Steam-table.							
Table-leg blanks. Centering device for	H. M. Funk	870,354	Nov. 5	762	203	131	250
Tank:							
See Water-tank.							
Tappet	H. Hahn	869,901	Nov. 5	45	13	131	16
Telephone. Intercommunicating	W. W. Henry	870,168	Nov. 5	451	124–5	131	148
Telephone-supporting apparatus	W. B. Lehmkuhl	869,973	Nov. 5	141	39	131	47
Thread-gage	B. M. W. Hanson	870,286	Nov. 5	646	173–4	131	211
Threshing-machine sieve	W. F. MacGregor	870,302	Nov. 5	672	180–1	131	220
Throat-protector	C. E. Winks	870,004	Nov. 5	210	56	131	75
Ticket-holder	C. B. Livermore	870,445	Nov. 5	911	247	131	298
Tie:							
See Railway-tie.							
Time-recorder	D. A. Stowell and C. T. Hawley	870,061	Nov. 5	294	81–2	131	99
Tire-bench	G. M. Lease	870,039	Nov. 5	260	71	131	89
Tire for vehicle-wheels. Elastic	G. E. N. I. E. Subra	870,323	Nov. 5	708	190–1	131	232
Tire. Pneumatic	H. A. Palmer	870,248	Nov. 5	589	158	131	192
Tire. Vehicle-	A. W. Butler	870,013	Nov. 5	224	60	131	79
Tool	S. A. Campbell	870,014	Nov. 5	226	61	131	80
Tool	R. Abell	870,151	Nov. 5	431	118	131	142
Tool. Pneumatic	O. W. Thomas	870,523	Nov. 5	1021	278	131	329
Toothpick-boxing machine	S. S. and W. W. Tainter and G. P. Stanley.	869,993	Nov. 5	191	50	131	67
Torpedo-placer	F. James	870,437	Nov. 5	901	243–4	131	295
Torpedo-placing machine	H. W. Simcoe	870,390	Nov. 5	834	221–2	131	274
Towers. Base for skeleton	D. R. Scholes	870,053	Nov. 5	281	76	131	16
Toy	P. A. Webb	870,146	Nov. 5	422	117	131	139
Toy	G. R. Floyd	870,424	Nov. 5	882	237	131	299
Toy air-ship	W. J. Remaly	870,047	Nov. 5	271	74	131	93
Track-drill. Ball-bearing	C. E. Nelson	870,194	Nov. 5	505	138	131	165
Traction attachment for moving objects	G. G. Schroeder	870,472	Nov. 5	947	259	131	308
Traction-wheel	A. E. Glascock	870,163	Nov. 5	445	123	131	146
Train-controlling apparatus	W. Germiner	870,427	Nov. 5	885	238–9	131	292
Trap:							
See Animal-trap.							
Trigger mechanism. Single-	A. Raus	870,318	Nov. 5	699	188–9	131	239
Trolley-locking mechanism	E. Y. Moore	870,305	Nov. 5	678	182	131	222
Trolley-wheel	C. P. and H. C. Bostian	870,080	Nov. 5	321	90	131	107
Trolley-wire switch	F. M. Zimmerman	869,955	Nov. 5	114	31–2	131	138
Trousers-guard	M. M. Stearling	870,392	Nov. 5	837	222	131	276
Truck	S. E. Mercer	869,922	Nov. 5	68	19–20	131	122
Truck. Casket-	F. P. Sparmaker	870,058	Nov. 5	290	80	131	98
Truck. Rail-traversing	E. E. Arnold	870,213	Nov. 5	533	145	131	174
Trunk attachment	G. H. Wheary	870,067	Nov. 5	303	84	131	102
Truss	F. C. D. McKay	870,519	Nov. 5	1016	276–7	131	328
Tube cutter and expander	W. C. Wood	870,332	Nov. 5	724	195	131	237
Tubing. Making seamless	J. H. Nicholson	870,246	Nov. 5	584	157	131	191
Tubular structural member	H. C. Gammeter	870,356	Nov. 5	765	204	131	251
Turbine	R. H. Goldsborough	869,896	Nov. 5	39	11–12	131	14
Type-writer	E. J. Barker	870,336	Nov. 5	735	197–8	131	240
Type-writer ribbon-feed mechanism	W. A. McCool	870,307	Nov. 5	384	183–4	131	224
Type-writing and analogous machines. Cap for keys of	E. D. Conklin	870,275	Nov. 5	627	168	131	204
Type-writing machine	C. A. Thistlethwaite	869,944	Nov. 5	99	28	131	33
Type-writing machine	P. E. Rees	869,984	Nov. 5	161	44	131	54
Type-writing machine	A. W. Smith	869,988	Nov. 5	174	47–8	131	58
Universal joint	A. I. Jacobs	869,906	Nov. 5	49	15	131	17
Valve	A. H. Bostley	870,342	Nov. 5	744	200	131	245
Valve. Balanced	P. W. Marett	870,377	Nov. 5	816	216	131	268
Valve. Blow-off	J. H. Woodring	870,073	Nov. 5	310	85	131	104
Valve. Gas-engine admission-	L. A. Bertram	870,487	Nov. 5	966	265	131	313
Valve. Hydraulic	G. B. Petsche	870,125	Nov. 5	391	109	131	130
Valve-seats. Machine for grinding locomotive	D. L. Holden	870,104	Nov. 5	350	98	131	116
Valve-setting device. Engine-	J. A. Chadwick	870,082	Nov. 5	324	91	131	108
Valve. Steam-actuated	R. E. Stephenson	870,205	Nov. 5	522	142	131	170
Valve. Stop and waste	D. W. Starrett	870,391	Nov. 5	836	222	131	275
Vapor generation and power system	L. C. Lewis	870,113	Nov. 5	363	102	131	121
Vault mold. Burial-	F. X. Govers	869,897	Nov. 5	41	12	131	15
Vehicle belt-shifter. Motor-	J. M. Pruett and W. Ard	870,045	Nov. 5	268	73	131	92
Vehicle-brake	C. H. Dent	870,159	Nov. 5	441	121–2	131	145
Vehicle-brake. Power-driven	J. N. Mahoney	870,188	Nov. 5	499	134	131	160
Vehicle construction	J. N. Mahoney	870,189	Nov. 5	492	134–5	131	161
Vehicle-coupling	C. J. Harris	870,287	Nov. 5	647	174	131	211
Vehicle. Motor	J. W. Impecoven	870,105	Nov. 5	351	98	131	117
Vehicle running-gear. Motor-	G. P. Parks	870,459	Nov. 5	932	254	131	304
	D. M. Dearing	869,881	Nov. 5	13	4–5	131	7

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Vehicle storm-front	F. C. Brock and E. M. du Bois	870,011	Nov. 5	221	59	131	78
Vehicle-wrench. Axle-nut	E. F. Hayes	870,031	Nov. 5	251	69	131	87
Veil. Automobile-	D. Duncan	870,160	Nov. 5	442	122	131	145
Vending-machine	L. Pinner	870,126	Nov. 5	392	100	131	131
Vending-machine	J. J. Roman and J. F. Barry	870,468	Nov. 5	942	257	131	307
Veneer. Artificial	C. Tangenberg	870,394	Nov. 5	838	223	131	276
Ventilator:							
See Hat-ventilator.							
Ventilator-operating mechanism	A. Q. Wolf	870,331	Nov. 5	721	194–5	131	236
Vibrations. Apparatus for the production of	J. Astrom	870,074	Nov. 5	310	86	131	105
Vise	E. G. Seymour	870,522	Nov. 5	1019	278	131	329
Wagon. Dumping-	J. M. Ripple	870,132	Nov. 5	399	111–12	131	132
Wagons and the like. Draft apparatus for	W. F MacGregor and W. H. Cahall.	870,241	Nov. 5	579	155–6	131	189
Washboiler attachment	H. Hempel	869,904	Nov. 5	48	14	131	17
Washing apparatus	R. T. Haines and F. Whit-Gould.	870,095	Nov. 5	339	95	131	113
Washing-machine	G. Siewert	869,940	Nov. 5	94	27	131	32
Washing-machine	J. H. Doub	870,020	Nov. 5	233	62	131	81
Washstand. Portable folding	J. C. Knapp	870,038	Nov. 5	259	71	131	89
Watch and clock dial	J. Strang	870,481	Nov. 5	960	263	131	312
Watch. Stem winding and setting	E. Kuhn	870,109	Nov. 5	358	101	131	119
Water-closet	E. G. Watrous	870,000	Nov. 5	203	54–5	131	72
Water-closet connection	J. J. Cosgrove	870,017	Nov. 5	229	62	131	80
Water-closet connection	J. J. Cosgrove	870,018	Nov. 5	230	62	131	81
Water-closet connection	J. J. Cosgrove	870,085	Nov. 5	327	92	131	109
Water-closet lid and device for preventing seats from splitting and warping.	J. E. Albright	870,406	Nov. 5	854	227	131	281
Water-feed regulator	T. G. Rakestraw	870,046	Nov. 5	270	74	131	92
Water-gage	H. R. Fay	870,026	Nov. 5	244	67–8	131	84
Water-heater	J. M. White and F. H. Ross	870,208	Nov. 5	527	143	131	172
Water-motor	L. C. Lewis	870,112	Nov. 5	361	102	131	120
Water-motor	E. T. Campbell and B. H Noeltling.	870,225	Nov. 5	557	149	131	183
Water-tank	C. Willms	869,953	Nov. 5	111	31	131	37
Water-wheel nozzles. Regulating means for	G. J. Henry, Jr.	870,291	Nov. 5	654	176	131	214
Wax-extractor	O. L. Hershiser	870,512	Nov. 5	1007	274	131	325
Weaner. Calf-	G. M. Krauss	869,913	Nov. 5	55	16	131	19
Weighing coal, grain, &c. Meter for	M. Washburn and R. D. Granger	870,999	Nov. 5	202	54	131	72
Weighing device	R. E. Kimble	869,969	Nov. 5	132	37	131	43
Well-tube strainer	G. H. Shoemaker	870,389	Nov. 5	833	221	131	274
Wheel:							
See Abrasive wheel. Propeller-wheel. Gear-wheel. Traction-wheel. Metallic wheel. Trolley-wheel.							
Wheel	S. E. Mercer	869,921	Nov. 5	64	19	131	22
Wheel-fender	T. J. Wilson	870,072	Nov. 5	309	85	131	104
Wheel-shovel	C. T. Hookway	870,172	Nov. 5	458	126	131	150
Whiffletree-hook	M. J. Corcoran	870,016	Nov. 5	228	61	131	80
Whip-socket lock	J. W. Pope	870,464	Nov. 5	936	255	131	305
Window-cleaner	F. S. and L. Thomas	870,482	Nov. 5	961	263	131	312
Window-frame pockets. Lock for the closures of	C. F. Smith	870,476	Nov. 5	956	261	131	310
Window-screen. Rolling	B. Steinman	870,393	Nov. 5	838	222	131	276
Wire-barbing machine	P. W. and J. W. Sommer	870,057	Nov. 5	288	79–80	131	98
Wire-coiling machine	R. L. Horsley	870,237	Nov. 5	573	154	131	188
Wire-coiling machine	R. L. Horsley	870,514	Nov. 5	1010	275	131	326
Wire support and insulator. Conducting-	H. W. Wistner	870,486	Nov. 5	965	264	131	313
Wrapping-machine	S. E. Farnham	870,501	Nov. 5	986	270	131	319
Wrench:							
See Nut-wrench. Pipe and nut wrench.							
Wrench	T. G. and A. P. Harryman	870,097	Nov. 5	341	96	131	113
Wrench	B. R. Ward	870,485	Nov. 5	964	264	131	313
Wringer:							
See Mop-wringer.							
Writing a plurality of signatures or inscriptions simultaneously. Means for.	W. R. Woodward	870,333	Nov. 5	726	196	131	2 37
Yarn-sizing and similar machines. Measuring and marking motion for use in connection with	W. H. Clegg	870,416	Nov. 5	867	231	131	285

DESIGNS.

Design.	Name.	No.	Date.	Official Gazette. Vol.	Page.
Chafing-dish stands. Leg for	E. A. Gutermann	38,869	Nov. 5	131	336
Chair	H. Grossman	38,875	Nov. 5	131	337
Dish or similar article. Covered	A. J. Meakin	38,873	Nov. 5	131	337
Domino	G. J. Thomas	38,868	Nov. 5	131	336
Fabric. Textile	A. M. Rapp	38,876	Nov. 5	131	337
Fabric. Textile	A. M. Rose	38,877	Nov. 5	131	337
Lavatory	H. Podmore	38,874	Nov. 5	131	337
Plate	E. E. Walter	38,870	Nov. 5	131	336
Plate	E. E. Walter	38,871	Nov. 5	131	336
Plate	E. E. Walter	38,872	Nov. 5	131	336

TRADE-MARKS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
Beer	Northern Brewery Company	66,054	Nov. 5	131	355
Beer	Wm. Pfeifer Berlin Weiss Beer Co.	66,055	Nov. 5	131	355
Beer	Central Brewing Co	66,067	Nov. 5	131	356
Beer	Union Brewing & Malting Co	66,080	Nov. 5	131	356
Biscuits	Standard Wafer Co	66,032	Nov. 5	131	355
Bitters	Aschenbach & Miller	65,957	Nov. 5	131	353
Boots and shoes. Leather	Bentley & Olmsted Company	65,998	Nov. 5	131	353
Boots and shoes. Leather	Selz, Schwab & Company	66,009	Nov. 5	131	354
Boots and shoes. Leather	Selz, Schwab & Company	66,010	Nov. 5	131	354
Boots and shoes. Leather	A. W. Tedcastle & Co	66,012	Nov. 5	131	354
Boots, shoes, slippers, and leggings. Leather	Miller Hapgood Shoe Co	66,005	Nov. 5	131	354
Bread	H. Matthaei	66,048	Nov. 5	131	355
Brushes. Tooth and nail	W. L. Martin	66,047	Nov. 5	131	355
Cabinets. Kitchen-	Hoosier Mfg. Co	66,022	Nov. 5	131	354
Calculators	C. M. Young	66,015	Nov. 5	131	354
Candies	Trowbridge Chocolate Chip Co	66,058	Nov. 5	131	355
Candies	Trowbridge Chocolate Chip Co	66,061	Nov. 5	131	355
Candy	Sauerston & Brown	66,057	Nov. 5	131	355
Canned fruits and vegetables	H. P. Taylor, Jr	66,059	Nov. 5	131	356
Canned salmon	American Trading Company (Pacific Coast).	66,016	Nov. 5	131	354
Canned salmon	American Trading Company (Pacific Coast).	66,017	Nov. 5	131	354
Chocolates and candies	Allen-Day Company	66,035	Nov. 5	131	355
Cigarettes	Rectors	66,007	Nov. 5	131	354
Clothing. Certain	F. A. Patrick & Co	66,071	Nov. 5	131	356
Coal	Coleman Mining Co	66,040	Nov. 5	131	355
Corundum and emery grinding-wheels	S. Sonnenthal & Co	66,030	Nov. 5	131	355
Cotton duck	Mount Vernon-Woodberry Cotton Duck Company.	66,026	Nov. 5	131	355
Cotton duck	Mount Vernon-Woodberry Cotton Duck Company.	66,027	Nov. 5	131	355
Cotton duck	Mount Vernon-Woodberry Cotton Duck Company.	66,049	Nov. 5	131	355
Cotton duck	Mount Vernon-Woodberry Cotton Duck Company.	66,050	Nov. 5	131	355
Cotton duck	Mount Vernon-Woodberry Cotton Duck Company.	66,051	Nov. 5	131	355
Cotton duck	Mount Vernon-Woodberry Cotton Duck Company.	66,052	Nov. 5	131	355
Cotton duck	Mount Vernon-Woodberry Cotton Duck Company.	66,053	Nov. 5	131	355
Cough remedies	E. J. Sormani	65,965	Nov. 5	131	353
Cream. Witch-hazel	E. E. Hess	65,961	Nov. 5	131	353
Credit ratings. Periodical statements of	B. P. Grunauer	66,045	Nov. 5	131	355
Disinfecting and deodorizing apparatus	Chemische Fabrik auf Actien (vorm. E. Schering).	66,068	Nov. 5	131	356
Dried fruits, olives, canned fruits and vegetables	C. S. Morey Mercantile Company	66,038	Nov. 5	131	355
Feed composed of crushed grain	H. E. Schrader	66,029	Nov. 5	131	355
Fish-bait. Artificial	J. F. Gregory	65,998	Nov. 5	131	354
Fish-hooks	W. E. Compton	65,988	Nov. 5	131	354
Fishing-tackle. Certain	E. A. Pflueger Company	65,990	Nov. 5	131	354
Flour. Wheat-	Wall-Rogalsky Milling Co	66,034	Nov. 5	131	355
Flour. Wheat-	Washburn Crosby Company	66,063	Nov. 5	131	356
Foods. Certain cereal	J. G. Hutchison & Co	66,023	Nov. 5	131	354
Furs and skins	Becker Bros. & Co	66,037	Nov. 5	131	355
Hair-combs. Ladies'	Pacific Novelty Company	65,983	Nov. 5	131	353
Harness-trimmings. Certain	E. A. Pflueger Company	65,991	Nov. 5	131	354
Heaters and heat-extractors. Water-	Alberger Condenser Company	65,970	Nov. 5	131	353
Heaters and heat-extractors. Water-	Alberger Condenser Company	65,971	Nov. 5	131	353
Heating and ventilating apparatus. Certain	S. C. Davidson	65,980	Nov. 5	131	353
Hooks. Snap-	Covert Manufacturing Company	66,041	Nov. 5	131	355
Hydrogen peroxid	G. Osborn	66,056	Nov. 5	131	355
Instrument for making conventional figures. Automatic	E. I. Horsman Co	65,992	Nov. 5	131	354
Liniment	J. D. Shuler	65,964	Nov. 5	131	353
Liquid tooth-cleansing compound	T. M. Childs	65,958	Nov. 5	131	353
Jewelry	Carter, Qvarnstrom & Remington	65,987	Nov. 5	131	354
Jewelry. Certain	S. & B. Lederer Company	66,008	Nov. 5	131	354
Machinery. Certain	Kautzmann & Susefeld	65,999	Nov. 5	131	354
Magazine	S. C. Davidson	66,042	Nov. 5	131	355
Magazines	Grafton Press	66,062	Nov. 5	131	356
Malt and hops. Compound of	R. R. Fisher	66,073	Nov. 5	131	356
Malt extract	F. M. Doyle	66,070	Nov. 5	131	356
Matches	Paragon Malt Extract Co	66,065	Nov. 5	131	356
Medicine. Antiseptic antifebrile unguent external	Jönköpings och Vulcans Tändsticksfabriksaktiebolag.	66,024	Nov. 5	131	354
Medicine or medicinal cordial. Cough	T. W. Algeo	65,956	Nov. 5	131	353
Metal leaf. Imitation	G. E. Whittaker	65,968	Nov. 5	131	353
Metals and alloys. Certain	Gane Brothers & Co	66,043	Nov. 5	131	355
Mince-meat, dried fruits, and flavoring extracts	T. Goldschmidt	66,044	Nov. 5	131	355
Must or grape-juice	Smith Lichty & Hillman Company.	66,031	Nov. 5	131	355
	Deutsche Weinmostkelterei alkoholfreier Obst und Traubensafte H. Lampe & Co. Worms a/ Rh. G. M. B. H.	65,981	Nov. 5	131	353
Newspaper	W. R. Hearst	66,074	Nov. 5	131	356
Newspaper	W. R. Hearst	66,075	Nov. 5	131	356
Newspaper	W. R. Hearst	66,076	Nov. 5	131	356
Newspaper	W. R. Hearst	66,077	Nov. 5	131	356
Newspaper	W. R. Hearst	66,078	Nov. 5	131	356
	W. R. Hearst	66,079	Nov. 5	131	356

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Newspaper	W. R. Hearst	66,080	Nov. 5	131	356
Newspaper	W. R. Hearst	66,081	Nov. 5	131	356
Newspaper	W. R. Hearst	66,090	Nov. 5	131	356
Newspaper. Financial and commercial	M. Auerbach	66,064	Nov. 5	131	356
Oil blackings, paste blackings, shoe-dressings, and leather-dressings.	Associated Shoe Company	66,018	Nov. 5	131	354
Oil. Illuminating-	Tide Water Oil Co	66,013	Nov. 5	131	354
Oil. Lubricating-	Galena-Signal Oil Company	65,993	Nov. 5	131	354
Oil. Lubricating-	Galena-Signal Oil Company	65,994	Nov. 5	131	354
Oil. Lubricating-	Galena-Signal Oil Company	65,995	Nov. 5	131	354
Oil. Tasteless castor-	Voigt & Co	65,966	Nov. 5	131	353
Paint. Damp-proof	Dexter Brothers Company	66,020	Nov. 5	131	354
Pantaloons	J. Schoeneman	66,088	Nov. 5	131	356
Paper. Certain	C. Rohde	65,985	Nov. 5	131	353
Paper. Cover-	American Writing Paper Company.	65,972	Nov. 5	131	353
Paper. Wrapping-	Hanlon-Sharps Co	65,983	Nov. 5	131	353
Paper. Wrapping-	Hanlon-Sharps Co	65,984	Nov. 5	131	353
Paper. Writing and printing	American Writing Paper Company.	65,973	Nov. 5	131	353
Paper. Writing and printing	American Writing Paper Company.	65,974	Nov. 5	131	353
Paper. Writing and printing	American Writing Paper Company.	65,975	Nov. 5	131	353
Paper. Writing and printing	American Writing Paper Company.	65,976	Nov. 5	131	353
Paper. Writing and printing	American Writing Paper Company.	65,977	Nov. 5	131	353
Paper. Writing and printing	American Writing Paper Company.	65,978	Nov. 5	131	353
Pharmaceutical preparations. Certain	C. S. Welch & Co	65,967	Nov. 5	131	353
Polishing-cloths	J. A. Kieferle	66,025	Nov. 5	131	355
Potato-chips	T. B. Clewell & Son	66,039	Nov. 5	131	355
Rubber boots and shoes	Goodyear's Metallic Rubber Shoe Co.	65,996	Nov. 5	131	354
Rubber boots and shoes	Goodyear's Metallic Rubber Shoe Co.	65,997	Nov. 5	131	354
Rubber goods. Certain	Daimler-Motoren-Gesellschaft	65,989	Nov. 5	131	354
Rubber goods. Certain	M. Lindsay Rubber Manufacturing Co.	66,046	Nov. 5	131	355
Salve for burns, frost-bites, and sores	F. Harkness	65,960	Nov. 5	131	353
Shoes. Leather and canvas	Keiffer Bros	66,000	Nov. 5	131	354
Shoes. Leather and canvas	Keiffer Bros	66,001	Nov. 5	131	354
Shoes. Leather and canvas	Keiffer Bros	66,002	Nov. 5	131	354
Shoes. Leather and canvas	Keiffer Bros	66,003	Nov. 5	131	354
Silk piece goods and silk-mixed piece goods	Susquehanna Silk Mills	66,033	Nov. 5	131	355
Spool-cotton, sewing-cotton, and thread	American Thread Company	66,036	Nov. 5	131	355
Stoves, ranges, boilers, and furnaces	Boynton Furnace Company	65,979	Nov. 5	131	353
Suppositories, tablets, and pills	Dr. Pierre Chemical Company	65,959	Nov. 5	131	353
Suspenders	Lafayette Suspender Company	65,962	Nov. 5	131	353
Tar. Certain preparations of	F. Schacht	66,028	Nov. 5	131	355
Teas and coffees	Upham Bro's	66,002	Nov. 5	131	356
Thread or spool-cotton. Sewing-	Blodgett & Orswell Co	66,019	Nov. 5	131	354
Tin plates	Baldwins Limited	66,066	Nov. 5	131	356
Tin, terne, leaded and black sheets	Baldwins Limited	66,065	Nov. 5	131	356
Tires and inner tubes. Rubber	Pacific Coast Rubber Co	66,006	Nov. 5	131	354
Tonic beverages	R. L. Duffy	65,982	Nov. 5	131	353
Type-writer ribbons and type-writer carbon-paper	Monarch Typewriter Company	66,084	Nov. 5	131	356
Type-writing machines	Fabrik Stolzenberg Deutsche Bureau-Einrichtungs-Gesellschaft mit beschränkter Haftung.	66,072	Nov. 5	131	356
Underclothing. Certain	William Carter Co	65,969	Nov. 5	131	353
Watch-glasses	Hammel, Riglander & Co	66,021	Nov. 5	131	354
Watches and watch-movements	B. L. Strasburger	66,011	Nov. 5	131	354
Water-gage tubes	R. Klinger	66,004	Nov. 5	131	354
Whips	United States Whip Company	66,014	Nov. 5	131	354
Whisky	Roewekamp Bros	66,060	Nov. 5	131	355
Whisky	Jesse Moore Hunt Co	66,083	Nov. 5	131	356
Whisky	W. Sanderson & Son	66,087	Nov. 5	131	356

LABELS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
"Arbuckle's Certified Coffee." (For Coffee)	Arbuckle Bros	13,850	Nov. 5	131	357
"Atlas Brand." (For Spices)	Woolson Spice Company	13,865	Nov. 5	131	357
"Coco Cola." (For a Non-Alcoholic Beverage)	Coco Cola Company	13,853	Nov. 5	131	357
"Compliments of the Season." (For Cigars)	Schmidt & Co	13,856	Nov. 5	131	357
"Dime." (For Evaporated Apples)	Wallerstein Produce Co	13,864	Nov. 5	131	357
"Dixon's Mica Oil." (For Mica-Oil)	J. Q. Dixon	13,866	Nov. 5	131	357
"El-Ko." (For Cigars)	Schmidt & Co	13,859	Nov. 5	131	357

LABELS—Continued.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
"Elato." (For Cigars)	Schmidt & Co	13,861	Nov. 5	131	357
"Fortune Teller Coffee." (For Coffee)	James Heekin Co	13,849	Nov. 5	131	357
"Horlacher 9 Months Old." (For Beer)	F. H. Horlacher	13,852	Nov. 5	131	357
"Hyball Ginger Ale." (For Ginger-Ale)	Sethness Company	13,851	Nov. 5	131	357
"Lava Tea." (For a Preparation for the Nerves and Brain)	J. J. Ruegg	13,862	Nov. 5	131	357
"Palace Bouquet." (For Cigars)	Schmidt & Co	13,860	Nov. 5	131	357
"Preferito." (For Cigars)	Schmidt & Co	13,855	Nov. 5	131	357
"Presto." (For a Silver-Cleaner)	Presto Mfg. Co	13,867	Nov. 5	131	357
"Purello." (For Cigars)	Schmidt & Co	13,857	Nov. 5	131	357
"Purity Bath." (For a Toilet Deodorant)	M. W. Kent	13,863	Nov. 5	131	357
"T-Wharf Ringed Fish Hooks." (For Fish-Hooks)	H. A. Whittemore	13,868	Nov. 5	131	357
"Tate Spring Mineral Water." (For Mineral Water)	T. Tomlinson	13,854	Nov. 5	131	357
"Volumo." (For Cigars)	Schmidt & Co	13,858	Nov. 5	131	357

PRINTS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
"Boyd's Chart of By-Products of Ec-Zine." (For Ec-Zine products.)	C. L. Boyd	2,147	Nov. 5	131	357
"Kitchen Profits." (For Flour)	Washburn Crosby Company	2,145	Nov. 5	131	357
"Men's and Boys' Apparel." (For Men's and Boys' Apparel)	H. C. Lytton	2,148	Nov. 5	131	357
"Rainier Beer." (For Beer)	Seattle Brewing & Malting Co	2,146	Nov. 5	131	357
"The Everett Piano." (For Pianos)	John Church Company	2,150	Nov. 5	131	357
"The Harvard Piano." (For Pianos)	John Church Company	2,149	Nov. 5	131	357

TRADE-MARKS.

(REGISTRATION APPLIED FOR.)

Title.	Name.	Serial No.	Date.	Official Gazette. Vol.	Page.
Imounds. Shelled	Habicht, Braun & Co	30,066–71	Nov. 5	131	350–1
Antipyretic and analgesic preparation	Etna Chemical Company	11,225	Nov. 5	131	339
Antiseptic silver salts for certain diseases	Chemische Fabrik von Heyden Aktien-Geselischaft.	19,989	Nov. 5	131	340
Asphalt oils for use on roadways	Good Roads Imp. Co	28,465	Nov. 5	131	343
Axes, table-cutlery, butcher-knives, hatchets, razors, &c	Freeman Delamater & Co	27,790	Nov. 5	131	342
Bags. Paper	Cleveland-Akron Bag Co	29,672	Nov. 5	131	345
Bitters. Stomach	H. Obernauer	30,355	Nov. 5	131	352
Boots and shoes and leather for same. Leather	F. Brigham & Gregory Company	29,723	Nov. 5	131	345
Boots and shoes. Leather	W. B. Cosgrave Shoe Co	29,859	Nov. 5	131	346
Boots and shoes. Leather	F. Mayer Boot & Shoe Co	29,967	Nov. 5	131	348
Boots, shoes, and slippers. Leather	H. P. Cole	26,352	Nov. 5	131	342
Boots, shoes, and slippers. Leather	Morse & Rogers	27,071	Nov. 5	131	342
Bridle bits, stirrups, spurs, &c. Metal	J. Dewsbury & Son	29,115	Nov. 5	131	343
Brushes	Holton & Adams	30,310	Nov. 5	131	352
Burlaps	Whitridge, White & Company	27,138	Nov. 5	131	342
Butter	E. S. Davis	21,923	Nov. 5	131	340
Candy	United Drug Company	24,979–80	Nov. 5	131	341
Candy. Peanut	Dreyfus Bros	29,996	Nov. 5	131	348
Canned, dried, and preserved fruits and canned vegetables	Fresno Home Packing Company	29,157–60	Nov. 5	131	343–4
Canned fruits and vegetables, dried fruits, spices, jams, &c	Allen Brothers Company	26,212	Nov. 5	131	341
Cement. Portland or hydraulic	Charles Zunz, Limited	10,715	Nov. 5	131	339
Chains. Sheet-metal	Smith & Egge Mfg. Co	30,054	Nov. 5	131	349
Cigars and cigarettes	Falk Tobacco Company	29,782	Nov. 5	131	346
Cleaning preparation. Powdered detergent hand	E. Atwell	25,160	Nov. 5	131	341
Coffee	John B. Bright & Son	29,465	Nov. 5	131	344
Coffee. Roasted	D. H. Hoffman	26,579	Nov. 5	131	342
Coffee. Roasted and ground	D. H. Hoffman	26,582	Nov. 5	131	342
Compound to be used for constipation, liver and kidney complaints, &c.	C. T. Nelsen	29,719	Nov. 5	131	345
Condensers. Steam	Alberger Condenser Company	30,026–7	Nov. 5	131	349
Condition-powder for horses, cattle, sheep, and swine	G. C. Hanford Manufacturing Co.	30,271	Nov. 5	131	351
Dress-shields and hose-supporters	Kora Company	30,221	Nov. 5	131	351
Fertilizers	Rasin-Monumental Company of Anne Arundel County.	17,923	Nov. 5	131	340
Fertilizers	Virginia-Carolina Chemical Company.	30,278–80	Nov. 5	131	351
Flour. Pancake	Allen Brothers Company	26,204	Nov. 5	131	341
Flour. Wheat	Minot Flour Mill Co	30,283	Nov. 5	131	352

TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

Title.	Name.	Serial No.	Date.	Official Gazette. Vol.	Page.
Game-cards	N. H. Lewis	29,984	Nov. 5	131	348
Gas and vapor burner mantles. Mountings and fixtures for	Aurora Mantle Manuf'g Co	29,721	Nov. 5	131	345
Glass vessels with vacuum between the walls. Double-walled	Thermos-Gesellschaft m. b. H	26,112	Nov. 5	131	341
Graphophones	Columbia Phonograph Company, General.	30,037	Nov. 5	131	349
Gum. Chewing	Baltimore Chewing Gum Co	29,733	Nov. 5	131	346
Gums. Chewing	National Candy Company	30,135	Nov. 5	131	351
Guns, rifles, and revolvers. Shot	Harrington and Richardson Arms Company.	28,858	Nov. 5	131	343
Hammers	Wiebusch & Hilger	29,544	Nov. 5	131	345
Honey	W. A. Selser	29,726	Nov. 5	131	345
Hosiery	Richmond Hosiery Mills	29,780	Nov. 5	131	346
Ice-cream freezers	Sturges & Burn Mfg. Co	19,354	Nov. 5	131	340
Knitted underwear	Troy Knitting Company	29,893	Nov. 5	131	347
Leather	W. R. Thomlinson	19,669	Nov. 5	131	340
Leather taps, top pieces, outsoles, insoles, counters, &c. Sole	J. M. Delaney & Co	24,432	Nov. 5	131	341
Ledgers. Loose-leaf	C. L. Schaar	28,077	Nov. 5	131	343
Lime and ready-mixed mortar	Rockland-Rockport Lime Co	27,806	Nov. 5	131	342
Linen. Bed and table	Mosse Gebrüder	12,484	Nov. 5	131	340
Macaroni and vermicelli	V. Savarese & Bros	25,325	Nov. 5	131	341
Medicine. Tonic	B. Miller	29,279	Nov. 5	131	344
Medicine. Veterinary	J. A. Cotten	29,471	Nov. 5	131	344
Mouth-wash	International Dental Company	29,915	Nov. 5	131	348
Musical strings	S. R. Huyett	29,760	Nov. 5	131	346
Oats and wheat-flour. Rolled	Allen Brothers Company	26,203	Nov. 5	131	341
Oats. Rolled	Atchison Oat Meal and Cereal Co	29,118	Nov. 5	131	343
Ointment for catarrh, headache, influenza, &c	Dermatone Company	30,305	Nov. 5	131	352
Overalls	S. Cohen	29,705	Nov. 5	131	345
Pencil eraser-holders. Lead	American Lead Pencil Co	27,786	Nov. 5	131	342
Preparation for the skin	Vi-Dermis Co	29,790	Nov. 5	131	346
Razors	Simmons Hardware Company	30,046	Nov. 5	131	349
Remedies for diseases peculiar to women	Bradfield Regulator Co	29,901–6	Nov. 5	131	347
Remedies for diseases peculiar to women	Bradfield Regulator Co	29,908–10	Nov. 5	131	348
Remedy for rheumatism	Morris Chemical Co	29,871	Nov. 5	131	346
Rubber automobile-coats, wraps, robes, boots, &c	Scandinavian Fur & Leather Co	29,534	Nov. 5	131	345
Rubber boots and shoes	L. Candee & Co	30,007–9	Nov. 5	131	348
Rubber boots and shoes	Woonsocket Rubber Company	30,012–14	Nov. 5	131	349
Rubber boots and shoes	National India Rubber Co	30,019	Nov. 5	131	349
Rubber boots and shoes	Goodyear's Metallic Rubber Shoe Co.	30,023–5	Nov. 5	131	349
Salves	Weil Chemical Mfg. Co	29,734	Nov. 5	131	346
Sardines, salmon, herrings, and mackerel	E. Shivell	30,260	Nov. 5	131	351
Shoe tongues, eyelet stays, bottom linings, toe tips, &c	Woodward & Cochey	28,804	Nov. 5	131	343
Shoes. Leather	Stern & Co. (Incorporated)	10,262	Nov. 5	131	339
Silver-lead or plumbago foundry-facings and pulverized graphite.	United States Graphite Company.	30,294	Nov. 5	131	352
Soap	Procter & Gamble Company	14,322	Nov. 5	131	340
Suppositories	E. Baum	30,307	Nov. 5	131	352
Tablets for diseases of the blood and the nervous system	Dr. Hunter Chemical Company	29,196	Nov. 5	131	344
Tin, zinc, &c. Abrasive polish for	A. Spiegel Co	20,154	Nov. 5	131	340
Tires, boots, and shoes. Rubber	Hood Rubber Co	30,167	Nov. 5	131	351
Tires. Rubber	Hartford Rubber Works Company.	26,463	Nov. 5	131	342
Tobacco-pouches	Wm. Warne & Co	28,159	Nov. 5	131	343
Tobacco. Smoking	Falk Tobacco Company	29,048	Nov. 5	131	345
Tooth and mouth wash, antiseptic dressings, and disinfectants.	Boericke & Tafel	29,845	Nov. 5	131	346
Washing-machines	Richmond Cedar Works	30,185	Nov. 5	131	351
Watches and watch-movements	B. L. Strasburger & Co	30,057	Nov. 5	131	349
Watches and watch-movements	B. L. Strasburger & Co	30,059	Nov. 5	131	350
Watches and watch-movements	B. L. Strasburger & Co	30,061–2	Nov. 5	131	350
Whisky	I. L. Lipschutz	29,455	Nov. 5	131	344
Whisky	Stitzel Distilling Company	29,729	Nov. 5	131	346
Whisky	John Ellwanger Co	29,730	Nov. 5	131	346
Wines	C. Dresel	8,991	Nov. 5	131	339

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ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 12TH DAY OF NOVEMBER, 1907.

Name, residence, and invention.	No.	Date.	Monthly volume.		Official Gazette.	
			Specification.	Drawing.	Volume.	Page.
A Leschen & Sons Rope Company. (See Brazelle, Benjamin, assignor.)						
A. M. Todd Company. (See Shirley, John H., assignor.)						
A. Y. McDonald & Morrison Mfg. Company. (See Lauth, John C., assignor.)						
Ackermann, Hugo, Berlin, Germany. Valve for pumps, compressors, and the like	870,659	Nov. 12	1249	339	131	441
Adams, James H., assignor of one-half to P. H. Tamplet, Kensington, Md. Game apparatus	870,606	Nov. 12	1151	313	131	407
Adams-Randall, Charles, New York, N. Y. Wheel	870,708	Nov. 12	1321	361	131	465
Agrillo, Joseph A., Rockaway Beach, N. Y. Refrigerator	870,532	Nov. 12	1039	284	131	367
Ahlberg, Joseph. (See Ahlberg, Karl E. and J.)						
Ahlberg, Karl E. and J., Chicago, Ill. Lock-controlled nut and set-screw guard	870,533	Nov. 12	1040	284	131	367
Aiken, Charles W. (See Mitchell, Albion L. F., assignor.)						
Aitken, Hugh W., and W. Mackie, Glasgow, Scotland. Roll for sugar-cane mills	871,018	Nov. 12	1829	499–500	131	621
Alexander, John F., assignor of one-half to E. W. Stribling, Columbus, Ohio. Combined feed and water bucket	870,660	Nov. 12	1250	339	131	441
Alford, Frank R., assignor to Wm. L. Gilbert Clock Company, Winsted, Conn. Clock	871,019	Nov. 12	1830	500	131	622
Allen, Anson W., Philadelphia, Pa. Manufacture of open-hearth steel	870,921	Nov. 12	1674	.....	131	575
Allen, Charles M. (See Baggaley, Allen, and Lindquist.)	870,922	Nov. 12	1675	461	131	575
Allen, Jacob S., Jr., Philadelphia, Pa. Derrick	871,020	Nov. 12	1831	500–1	131	622
Allen, Leicester, assignor to Pearson Typo-Bar Company, New York, N. Y. Composing-machine	870,755	Nov. 12	1415	383	131	490
Allen, Lewis A., Passaic, N. J. Trolley-pole guide	870,811	Nov. 12	1499	409–10	131	519
Allen, Wallace P., Milwaukee, Wis. Plate-printing press	871,021	Nov. 12	1834	501–2	131	623
Allen, William G., and F. G. Feeley, Akron, Ohio. Fire-extinguisher system						
Allis-Chalmers Company *et al.* (See Tatum, Lewis L., assignor.)						
Althoff, Walter. (See Henry and Althoff.)	870,607	Nov. 12	1151	314	131	407
Amberg, Walter E., Chicago, Ill. Car-truck						
American Auto Wheel Company. (See Warner and Kitchel, assignors.)						
American Graphophone Company. (See Macdonald and Cappa, assignors.)						
American Steel Package Company. (See Kruse, Alfred T., assignor.)						
Amsden, George A., Springfield, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J. Cable cash-carrier	870,756	Nov. 12	1416	384	131	491
Amsden, George A., Springfield, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J. Cable cash-carrier	870,757	Nov. 12	1416	384	131	491
Amundson, Carl, Slayton, Minn. Cleaning attachment for harvesters	870,534	Nov. 12	1041	284	131	367
Andresen, Herman P., assignor of one-half to D. J. Evans, Chicago, Ill. Grab-bucket and operating mechanism	870,812	Nov. 12	1501	410–11	131	520
Ansell, James, assignor of one-half to W. A. Hurley, McKeesport, Pa. Device for contracting and reloading gun-shells	870,608	Nov. 12	1154	314–15	131	408
Anthoine, Alfred W., Lewiston, Me. Guard for eyeglasses	871,077	Nov. 12	1912	524	131	648
Anthony, Mark. Streator, Ill. Reclining-chair	871,022	Nov. 12	1836	502	131	623
Arnold, Whiting, Mandarin, Fla. Boat-propelling device	870,758	Nov. 12	1417	384	131	491
Ashman, Lewis C., *et al.* (See Shutz and Kirkman, assignors.)	871,078	Nov. 12	1912	524	131	648
Astfalck, Wiland, Tegel, near Berlin, Germany. Hydraulic press	870,923	Nov. 12	1677	461	131	576
Atkins, Carl, San Francisco, Cal. Drive-shaft connection	870,924	Nov. 12	1678	462	131	576
Attlesey, William, Cincinnati, Ohio. Head for shower-baths, &c.	871,023	Nov. 12	1837	502	131	624
Atwood, Frank G., New Haven, Conn. Veterinary operating-table	870,661	Nov. 12	1251	339	131	442
Austin, Charles L., Jr., Mahopac Falls, N. Y. Arch-supporter	870,662	Nov. 12	1252	340	131	442
Babcock, Elisha W., Lorain, Ohio. Heating-stove						
Bachmann, Eduard, Seebach, assignor to Neu-Graphic A. G., Oerlikon, near Zurich, Switzerland. Apparatus for the production of pictures, patterns, and the like by photographic method	870,863	Nov. 12	1575	433	131	542
Baerbaick, Hans, assignor to Hamilton Machine Tool Company, Hamilton, Ohio. Relieving mechanism for engine-lathes	870,759	Nov. 12	1418	385	131	492
Baggaley, Ralph, Pittsburg, Pa. Converter	870,925	Nov. 12	1679	462	131	576
Baggaley, Ralph, Pittsburg, Pa., C. M. Allen, Lo Lo, Mont., and E. W. Lindquist, Chicago, Ill., assignors to Pittsburgh and Montana Copper Company, Pittsburg, Pa. Means for increasing the air-blast of converters and furnaces	871,079	Nov. 12	1913	524–6	131	649
Bailey, Charles L., deceased, F. C. Hodgman, Hopedale, Mass., and E. H. Bailey, administratrix, Waterbury, Conn., assignors to Draper Company, Hopedale, Mass. Apparatus for applying expansible rings to bobbins	870,960	Nov. 12	1746	477–8	131	596
Bailey, Ella H., administratrix. (See Hodgman and Bailey.)						
Baird, John R. (See Clough, George W., assignor.)	871,054	Nov. 12	1883	515	131	639
Baker, Russell M., Seattle, Wash. Sweeping device	870,709	Nov. 12	1323	362	131	465
Baker, Wilfred, Aberdeen, S. D. Metal steam-packing ring						
Baker, Winthrop D., assignor to Protector Last Reinforcing Company, Brockton, Mass. Reinforced last for boots and shoes	870,760	Nov. 12	1420	385	131	492
Bancroft, John S., assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Keyboard mechanism for perforating-machines	871,080	Nov. 12	1920	526–7	131	649
Bancroft, John S., assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Keyboard mechanism for perforating and other machines	871,081	Nov. 12	1923	527	131	651
Barker, Clarence I. J., David City, Nebr. Trellis	870,864	Nov. 12	1578	434	131	543
Barrett, Edward E., La Grange, Ill. Coal-handling device	870,609	Nov. 12	1155	315	131	408
Bassell, John Y., and F. C. Blenkner, Columbus, Ohio. Gun-sight	870,610	Nov. 12	1157	315	131	409

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Bausch, Edward, Rochester, N. Y., assignor to Bausch & Lomb Optical Company. Projection apparatus	870,535	Nov. 12	1042	285	131	367
Bausch & Lomb Optical Company. (See Bausch, Edward, assignor.)						
Beals, Erl V., Boston, Mass. Composing mechanism for printing-bar, matrix-making, and type-setting machines	870,926	Nov. 12	1680	462–5	131	577
Beates, James W., Denver, Colo. Wind-motor	871,024	Nov. 12	1838	503	131	624
Bechtolsheim, Clemens von, Munich, Germany. Automatic unloading and depositing device	870,710	Nov. 12	1325	362–3	131	466
Beckley, Henry C., Norwood, Ohio, assignor to Bullock Electric Manufacturing Company. Series shunt for dynamo-electric machines	870,611	Nov. 12	1159	316	131	410
Beckman, Ross C., Independence, Kans. Laundry-machine	870,536	Nov. 12	1043	285	131	368
Benson, Andrew C., Camden, Ark. Gluing-clamp	870,761	Nov. 12	1420	386	131	492
Bent, George W., Boston, Mass. Bed	870,663	Nov. 12	1253	340	131	442
Bern, Edward A., Chicago, Ill. Cap for sheet-piling. (Reissue)	12,718	Nov. 12	1963	538	131	663
Bessier, Vetal, New York, N. Y. Phonograph attachment	870,612	Nov. 12	1161	316	131	410
Bibb, Charles E., *et al.* (See Paullins, George E., assignor.)						
Bidelman, Robert M., Adrian, Mich. Gas-generator	870,537	Nov. 12	1044	285	131	368
Black Diamond Coal Drill and Tool Co. (See Weiss, George F., assignor.)						
Blair, Walter O., and M. J. Scanlan, Keystone, S. D. Brake-block	870,711	Nov. 12	1326	363	131	467
Blenkner, Fred C. (See Bassell and Blenkner.)						
Blue, Elijah A., Burket, Ind. Milk-pail support	870,613	Nov. 12	1161	316	131	411
Blume, William. (See Fitzgerald, Jeremiah C., assignor.)						
Bock, William E., assignor to Toledo Glass Company, Toledo, Ohio. Machine for gathering and shaping glass	870,664	Nov. 12	1253	340–3	131	442
Bolles, William, Toledo, Ohio. Fountain-pen	870,538	Nov. 12	1046	286	131	369
Booth, Thomas, Boise, Idaho. Spike	870,813	Nov. 12	1507	411	131	523
Boston Machine Works Company. (See Dunn, George F., assignor.)						
Bouché, Will F., Norwood, Ohio, assignor to Bullock Electric Manufacturing Company. Shaft-oscillator	870,539	Nov. 12	1047	286	131	369
Boulding, George R., Wells, Nev. Buck-rake hay-fork	871,055	Nov. 12	1884	516	131	639
Boyd, Benjamin Y., Chicago, Ill. Electrotherapeutic instrument	870,927	Nov. 12	1693	465	131	580
Boylan, Mary, New York, N. Y. Garment-fastener	871,025	Nov. 12	1840	503	131	625
Bradford, Chester, Indianapolis, Ind. Conveyer	870,614	Nov. 12	1162	316	131	411
Branin, Mark H., Newark, N. J., assignor to General Electric Company. Sealing-in machine	870,097	Nov. 12	1959	537	131	662
Brazelle, Benjamin, Kirkwood, assignor to A. Leschen & Sons Rope Company, St. Louis, Mo. Wire-rope packing and producing same	870,615	Nov. 12	1163	317	131	411
Brazelle, Benjamin, Kirkwood, assignor to A. Leschen & Sons Rope Company, St. Louis, Mo. Oil-well appliance	870,616	Nov. 12	1164	317	131	412
Bredel, Frederick, Milwaukee, Wis. Cover-closure	870,540	Nov. 12	1048	286	131	369
Brewer, Edward D., Atlanta, Ga. Type-writer	871,026	Nov. 12	1841	503–4	131	625
Brigham, Isaac N., Melrose Park, Ill., assignor to Electro Automatic Safety Razor Company, Orange, Cal. Safety-razor	871,082	Nov. 12	1925	528	131	652
Brisson, Gilbert, Lewiston, Me. Heddle-frame for looms	871,027	Nov. 12	1843	504	131	626
Brown, Charles F., trustee. (See Reeve, Sidney A., assignor.)						
Brown, John I., assignor of one-half to J. Rubek, Marion, Iowa. Jack	871,063	Nov. 12	1927	528	131	652
Brown, Robert A., Chicago, Ill. Life-boat	870,928	Nov. 12	1695	465–6	131	581
Brownlee, James H., Philadelphia, Pa. Washboiler	870,865	Nov. 12	1579	434	131	543
Brumley, Charles D., Norfolk, Va. Bed-canopy	870,541	Nov. 12	1049	286	131	370
Bryan, Augustus M., Corsicana, Tex. Base-board	871,028	Nov. 12	1844	505	131	626
Bucino, Guadalupe, and A. R. Poett, Santa Barbara, Cal. Sprinkler	871,029	Nov. 12	1844	505	131	267
Bullock Electric Manufacturing Company. (See Beckley, Henry C., assignor.)						
Bullock Electric Manufacturing Company. (See Bouché, Will F., assignor.)						
Bullock Electric Manufacturing Company. (See Garrett, Frank W., assignor.)						
Bullock Electric Manufacturing Company *et al.* (See Tatum, Lewis L., assignor.)						
Burge, Fred, New Haven, Conn. Pile-driver	870,762	Nov. 12	1421	386	131	493
Burger, Franz, assignor of three-fourths to H. M. Williams, Fort Wayne, Ind. Rotary combustion-engine	871,030	Nov. 12	1845	505–6	131	627
Burns, Silver & Co. (See Mosman, Charles F., assignor.)						
Bushnell, Elmer. (See Watson, Bushnell, and Sanderson.)						
Butler, Haywood L., *et al.* (See Paullins, George E., assignor.)						
Callahan, Eugene C. and F. L., Terre Haute, Ind. Mine-car	870,542	Nov. 12	1051	287	131	370
Callahan, Frank L. (See Callahan, Eugene C. and F. L.)						
Cameron, Arthur, Jackson, Mich. Dumping-wagon	870,929	Nov. 12	1697	466–7	131	581
Campbell, Daniel F., Eureka, Cal. Drag-saw	870,712	Nov. 12	1327	363	131	467
Capps, Frank L. (See Macdonald and Capps.)						
Carroll, William H., Jersey City, N. J. Disappearing-table cabinet	871,084	Nov 12	1928	529	131	652
Central Iron Works. (See Lechtenberg, Henry, assignor.)						
Chaffee, Frank W., Albany, N. Y. Hose-band	870,763	Nov. 12	1422	386	131	493
Chase, William, Jr., Indianapolis, Ind. Boring-bar	871,031	Nov. 12	1847	506	131	627
Cheesebro, William A., assignor of two-thirds to D. E. Lyons and W. H. Sheasby, Los Angeles, Cal. Means to record the speed of automobiles	871,032	Nov. 12	1848	506–7	131	628
Chicago Pneumatic Tool Company. (See Duntley and Hayes, assignors.)						
Chilton, Franklin H., Union City, assignor to National Machine Company, Mamaroneck, N. Y. Sewing-machine	870,543	Nov. 12	1052	287–8	131	371
Christianson, Andrew, Butler, Pa. Gripping-tongs	870,713	Nov. 12	1328	364	131	467
Christianson, Andrew, Butler, Pa. Gripping-tongs	870,764	Nov. 12	1423	386–7	131	493
Chrysler, Walter P. (See Schaefer, August C., assignor.)						
Church, William L., Newton, Mass. Building dams	870,866	Nov. 12	1580	435	131	543
Church, William L., Newton, Mass. Dam	870,930	Nov. 12	1700	467	131	582
Churchill, Levi M., Minneapolis, Minn. Hose-supporter	870,544	Nov. 12	1057	288	131	372
Claflin, Charles A., Medford, Mass. Gate-valve	871,085	Nov. 12	1931	529	131	653
Claiborne, Alexander, assignor, by mesne assignments, to Tallerday Manufacturing Company, Dolgeville, Cal. Device for pulling pipe-sections together	870,931	Nov. 12	1702	467	131	582
Clayton, Edwin J., Philadelphia, Pa. Non-refilling attachment for bottles	870,932	Nov. 12	1703	467	131	583
Cleveland, Charles C., San Francisco, Cal. Oil-burner	870,933	Nov. 12	1704	468	131	583
Clough, George W., assignor of one-half to J. R. Baird, Cleveland, Ohio. Plating device	870,545	Nov. 12	1057	288	131	372
Coburn, Howard L., Boston, Mass. Dam	870,934	Nov. 12	1706	468	131	583
Coffield, Peter T., assignor to P. T. Coffield & Son, Dayton, Ohio. Water-motor. (Reissue)	12,719	Nov. 12	1964	538	131	664
Coffield & Son, P. T. (See Coffield, Peter T., assignor.) (Reissue.)						
Cokel Company. (See Cooke, Ernest W., assignor.)						
Colgren, Andrew F., Chicago, Ill. Transmission-gear	870,665	Nov. 12	1261	343–4	131	444
Colson, Leonard, and C. Gebauer, New York, N. Y.; said Colson assignor to said Gebauer. Automatic switch-governor	870,935	Nov. 12	1707	468	131	584
Colvin, George A., Arago, Oreg. Gate	870,815	Nov. 12	1509	412	131	524
Computing Scale Company. (See Ludlow, George M., assignor.)						
Computing Scale Company. (See Ozias, Orange O., assignor.)						
Comstock, Chester, Brooklyn, N. Y. Impact and reaction motor	870,867	Nov. 12	1582	435	131	544

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Connolly, Bartholomew, Tonopah, Nev. Aerial machine	870,936	Nov. 12	1710	469	131	584
Conrad, Beryl A. (See Reese and Miner, assignors.)						
Consolidated Dental Manufacturing Company. (See Hardy, James F., assignor.)						
Cook, Frank B., Chicago, Ill. Electrothermal protector	870,714	Nov. 12	1331	364	131	467
Cooke, Ernest W., New York, N. Y., assignor, by mesne assignments, to Cokel Company. Air-drier for desiccating apparatus	870,546	Nov. 12	1058	289	131	372
Cookingham, De Witt, assignor of one-half to J. H. Hertner, Cleveland, Ohio. Vehicle-brake	870,666	Nov. 12	1262	344	131	445
Cooper, William, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Vehicle-motor-control system	870,816	Nov. 12	1511	412	131	524
Coslett, Thomas W., Birmingham, England. Treatment of iron or steel for preventing oxidation or rusting	870,937	Nov. 12	1713	.....	131	585
Cove, George H., Roxbury, assignor of one-half to F. R. Kimball, Boston, Mass. Alternating-current generator	870,938	Nov. 12	1714	469	131	586
Cowles, Edward P., Warren, Ohio. Variable-speed gearing	870,715	Nov. 12	1333	364–5	131	469
Cox, William M., Belleville, Ill. Lifting-jack	870,939	Nov. 12	1716	469	131	586
Crary, Benjamin F., Kansas City, Mo. Weighing-scale	871,056	Nov. 12	1886	516–17	131	640
Creel, Milton P., *et al.* (See Tyldesley, Harry, assignor.)						
Crispin, George B., and R. F. Wright, Charleston, Ill. Wrench	870,862	Nov. 12	1574	433	131	542
Crompton & Knowles Loom Works. (See Whitmore, Fred A., assignor.)						
Cullman, Otto, Chicago, Ill. Bolt-lock	870,547	Nov. 12	1059	289	131	373
Cunningham, Roy S. (See Hassell and Cunningham.)						
Custer, Edgar A., Philadelphia, Pa. Casting pipes	870,817	Nov. 12	1514	413	131	525
Custer, Edgar A., Philadelphia, Pa. Mold for casting pipes	870,868	Nov. 12	1587	436	131	547
Custer, Edgar A., Philadelphia, Pa. Apparatus for holding and pouring metal into molds for casting-machines	870,869	Nov. 12	1588	436	131	547
Custer, Edgar A., Philadelphia, Pa. Apparatus for casting metal pipes	870,870	Nov. 12	1590	436–7	131	548
Dahl, Albert, New York, N. Y. Folding step-ladder	870,940	Nov. 12	1717	470	131	586
Daniel, Paul, New York, N. Y. Clutch	871,033	Nov. 12	1849	507	131	628
Darlington, Philip J., Hinsdale, Ill. Recorder	870,667	Nov. 12	1264	344	131	445
Darrow, Jay M., Asherville, Kans. Feed-bag	870,818	Nov. 12	1516	413–14	131	525
Davis, William E., Morristown, N. J. Artificial bait	871,057	Nov. 12	1887	517	131	640
Day, Alfred B., Knoxville, Tenn. Axle-lubricator	870,941	Nov. 12	1718	470	131	587
De Coligny, Frank, Chicago, Ill. Power-transmitter	870,814	Nov. 12	1508	411	131	523
Dedolph, Eduard, Marysville, British Columbia, Canada. Desulfurizing and reducing sulfid ores	870,668	Nov. 12	1265	.....	131	446
Del Valle, Armando, New York, N. Y. Shutter operator or worker	870,819	Nov. 12	1517	414	131	526
Dentzeau, George, West New York, N. J. Tire-shoe	870,548	Nov. 12	1060	289	131	373
Diamond Shading Film Company. (See Guest, Samuel W., assignor.)						
Dickinson, Henry, Flushing, N. Y. Garment-fastener	870,549	Nov. 12	1061	289	131	373
Dielmann, Wilhelm. (See Möllenbruck and Dielmann.)						
Dod, William, Newbury, England. Hat-box	870,550	Nov. 12	1062	290	131	373
Donaldson, Elmer E. (See Donaldson, William and E. E.)						
Donaldson, William and E. E., Moingona, Iowa. Miner's pick	871,058	Nov. 12	1889	517	131	641
Doss, George W., Erick, Okla. Ter. Well-drilling machine	870,765	Nov. 12	1426	387	131	494
Douse, Frederick A., Seattle, Wash. Propeller	871,059	Nov. 12	1889	518	131	641
Draper Company. (See Hodgman and Bailey, assignors.)						
Drucker, George A. (See Murphy, William M., assignor.)						
Dunbar, Francis W., assignor to Kellogg Switchboard and Supply Company, Chicago, Ill. Central-energy telephone system	870,551	Nov. 12	1063	290	131	374
Dunn, George F., Brockton, assignor, by mesne assignments, to Boston Machine Works Company, Boston, Mass. Vamp-folding machine	870,942	Nov. 12	1719	470–1	131	587
Dunn, James L., Montpelier, Cal. Pencil-holder	870,716	Nov. 12	1339	365	131	471
Duntley, William O., Chicago, Ill., and G. H. Hayes, Philadelphia, Pa., assignors, by mesne assignments, to Chicago Pneumatic Tool Company. Engine	871,086	Nov. 12	1933	529–31	131	654
Eaton, James B., Fargo, N. D. Apparatus for treating cattle	870,766	Nov. 12	1427	387–8	131	495
Eggleton, William G., assignor to Mattatuck Mfg. Co., Waterbury, Conn. Shackle	870,871	Nov. 12	1593	437	131	549
Eisenhut, Laurense C., New York, assignor of one-half to G. Elliott, Brooklyn, N. Y. Weir and tide gage	871,093	Nov. 12	1497	533–4	131	658
Electro Automatic Safety Razor Company. (See Brigham, Isaac N., assignor.)						
Elliott, Gilbert. (See Eisenhut, Laurense C., assignor.)						
Ellis, Alvirus L., Chicago, Ill. Toggle-bolt	870,820	Nov. 12	1519	414	131	526
Emory & Company, Robert J. (See Emory, Robert J., assignor.)						
Emory & Company, Robert J. (See Ruth, Thomas D., assignor.)						
Emory, Robert J., assignor to R. J. Emory & Company, Newark, N. J. Spooling-machine	870,767	Nov. 12	1429	388	131	495
Erlandsen, Julius, New York, N. Y. Wire-mattress stretcher	870,552	Nov. 12	1068	290–1	131	377
Eulenstein, Eduard, Leipzig, Germany. Copying-press	870,553	Nov. 12	1072	290–2	131	379
Evans, David J. (See Andresen, Herman P., assignor.)						
Evans, Evan W., Greenwood, British Columbia, Canada. Sight for firearms	871,034	Nov. 12	1852	507	131	629
Evans, Lewis J., Kirkwood, N. Y. Mail-bag catching and delivering device	870,872	Nov. 12	1594	437–8	131	549
Faber, John P. (See Veazie, Arthur H., assignor.)	870,873	Nov. 12	1597	438	131	550
Fagersten, Lorenzo G., Chicago, Ill. Cooking utensil						
Fairall, Harry K. (See Fairall and Kunzmann.)						
Fairall, Howard L. and H. K., and J. Kunzmann, Highland, Cal. Automatic water register	871,060	Nov. 12	1890	518	131	641
Fairbanks, John F., Springfield, Mass. Combined chair and garment support	870,874	Nov. 12	1598	438	131	550
Falter, Richard, New York, N. Y. Clasp	870,617	Nov. 12	1165	317	131	412
Fanckboner, William, Schoolcraft, Mich. Broom	870,717	Nov. 12	1340	365–6	131	471
Farrar, Jacob H., Chicago, Ill. Underground railway system	870,618	Nov. 12	1166	317	131	413
Farrell, John, Newton, N. J. Drop-tine grappling-fork	870,768	Nov. 12	1432	388–	131	496
Farrelly, James P., Winnipeg, Manitoba, Canada. Excavator	870,943	Nov. 12	1723	470–2	131	589
Faul, Edwin L., assignor to William J. Faul Co., New York, N. Y. Candlestick-lubricator	870,875	Nov. 12	1600	439	131	551
Feeley, Frank G. (See Allen and Feeley.)	870,619	Nov. 12	1168	318	131	413
Fidell, Edwin, Jersey City, N. J. Label and stamp applying machine	870,944	Nov. 12	1725	472	131	589
Field, Joe G. (See Lyst, Charles E., assignor.)						
Fish, Cyrus R., Denver, Colo. Clothes-line stretcher	870,718	Nov. 12	1341	366	131	472
Fitzgerald, Jeremiah C., Kilbourn, assignor of one-half to W. Blume, Portage, Wis. Manure-carrier	870,876	Nov. 12	1601	439	131	551
Fleming, Allison H., Fairmont, W. Va. Shade-roller	870,877	Nov. 12	1603	439	131	552
Fleming, Allison H., Fairmont, W. Va. Razor-blade holder	870,669	Nov. 12	1266	345	131	446
Fleming, Josiah C., assignor to Filling Air Engine Company, Detroit, Mich. Turn-table	870,945	Nov. 12	1725	472–3	131	589
Floyd, Henry C., Beulahville, Va. Shaft-hanger	870,946	Nov. 12	1727	473	131	590
Fogel, Taylor T., assignor of two-thirds to A. J. Mason, Reading, Pa. Controlling mechanism for electric circuits	871,061	Nov. 12	1892	518	131	642
Ford, James J., F. and M. Hollister, Jr., Fort Dodge, Iowa. Draft-equalizer						
Fort, Henry K. (See Praul, Charles M., assignor.)						
Frasch, Herman, New York, N. Y., assignor to Frasch Sulphur Process Company, Kittery Me. Mining sulfur	870,620	Nov. 12	1170	318–19	131	414

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Frasch Sulphur Process Company. (See Frasch, Herman, assignor.)						
Fraser, George H. (See Hall, Milan W., assignor.)						
Fraser, Norman P., and W. Gribben, Carsonville, Mich. Electric railway signaling system	870,621	Nov. 12	1174	319	131	416
Freed, Isaac, Harrisburg, Pa. Carpet-stretcher	870,670	Nov. 12	1267	345	131	446
Freed, Isaac, Harrisburg, Pa. Carpet-stretcher	870,671	Nov. 12	1268	345–6	131	446
Freedmann, William, New York, N. Y. Combined bookcase and folding bed	870,947	Nov. 12	1728	473	131	590
Freeman, Charles, Los Angeles, Cal. Automatic firearm	870,719	Nov. 12	1342	366–7	131	472
Friermood, John E., Everett, Wash. Locomotive	870,769	Nov. 12	1433	389	131	497
Frink, Orton O., and F. W. Scanling, Chrisman, Ill. Combination-tool	870,672	Nov. 12	1270	346	131	447
Frith, Arthur J., New York, N. Y. Internal-combustion engine	870,720	Nov. 12	1345	367	131	473
Fritts, Benjamine T., Des Moines, Iowa. Belt-clamping tool	871,062	Nov. 12	1803	518	131	642
Fuchs, Emiel R., New York, N. Y. Door-securer	870,948	Nov. 12	1729	473–4	131	590
Fuller, Harris, Stockbridge, Ga. Rubber tip and means for securing it	870,770	Nov. 12	1439	390	131	500
Gabler, Johannes, Mülhausen, Germany. Shuttle-positioning means for filling-replenishing looms	870,673	Nov. 12	1270	346	131	447
Gambler, Edward V., trustee. (See Terrell, Elah, assignor.)						
Gargett, George I., Alma, Mich. Fence-post	870,554	Nov. 12	1073	292	131	379
Garman, Raymond H., Chicago, Ill. Painting-book	870,771	Nov. 12	1440	390	131	500
Garrett, Frank W., Norwood, Ohio, assignor to Bullock Electric Manufacturing Company. Controller	870,555	Nov. 12	1073	292	131	379
Garrett, William N., Amherst, Nova Scotia, Canada, assignor of one-half to H. H. Robertson, Canton, Mass. Car-roof	870,721	Nov. 12	1348	368	131	473
Gebauer, Charles. (See Colson and Gebauer.)						
General Electric Company. (See Branin, Mark H., assignor.)						
Gilman, Willard H., Medford, Mass., assignor, by mesne assignments, to International Telemeter Company. Electric signaling system	870,622	Nov. 12	1176	319–21	131	416
Gilson, Walter S., Benton Harbor, Mich. Trunk-tray form	870,949	Nov. 12	1731	474	131	591
Glaske, Walter P., Los Angeles, Cal. Trolley	870,950	Nov. 12	1732	474	131	592
Godfrey, Alfred, London, England. Apparatus for wrapping cigarettes with tin-foil or the like	870,623	Nov. 12	1182	321–2	131	418
Goodholm, George H., and J. A. Train, Lindsborg, Kans. Tool	870,951	Nov. 12	1733	474	131	592
Goreau, Nelson G. (See Tschopik and Goreau.)						
Goss Printing Press Company. (See Husby, Hans P., assignor.)						
Goughnour, Charles L., Canton, Ohio. Workman's clock	871,087	Nov. 12	1938	531	131	656
Gouty, Clarence A., Springfield, Ill. Trolley	870,772	Nov. 12	1442	390	131	501
Graff, Henry W., Chicago, Ill. Mail-pouch-delivery device	870,878	Nov. 12	1604	439	131	552
Graff, Henry W., Chicago, Ill. Mail-pouch-catching device	870,879	Nov. 12	1605	440	131	552
Gray, Isaac C., assignor of one-half to P. Voorhees, Logansport, Ind. Boiler-cleaner	870,773	Nov. 12	1443	391	131	501
Gray, Isaac C., assignor of one-half to P. Voorhees, Logansport, Ind. Boiler-cleaner for steam-engines	870,774	Nov. 12	1444	391	131	502
Gregg, Arthur. (See Taverner and Gregg.)						
Gribben, William. (See Fraser and Gribben.)						
Guertin, Frank D. (See Ungar, Elgin O., assignor.)						
Guess, George A., Silverton, Colo., and H. E. T. Haultain, Nelson, British Columbia, Canada. Apparatus for electrochemical analysis	870,674	Nov. 12	1271	347	131	447
Guess, George A., Silverton, Colo., and H. E. T. Haultain, Nelson, British Columbia, Canada. Electrode	870,675	Nov. 12	1272	347	131	447
Guest, Samuel W., assignor to Diamond Shading Film Company, Buffalo, N. Y. Printing-film holder	870,722	Nov. 12	1349	368–9	131	474
Guttzeit, Charles W., assignor to Taylor Iron and Steel Company, High Bridge, N. J. Crusher-head for gyratory ore-crushers	870,952	Nov. 12	1734	475	131	592
Hackney, Leslie S., St. Paul, Minn. Roadway for automobiles	870,775	Nov. 12	1445	391	131	502
Hall, Frederick D., Chicago, Ill. Talking-machine needle	870,723	Nov. 12	1351	369	131	474
Hall, Harry F., Philadelphia, Pa. Culinary utensil	870,880	Nov. 12	1606	440	131	553
Hall, Henry D., *et al.* (See Spikes, Richard B., assignor.)						
Hall, Milan W., New York, assignor of two-thirds to G. H. Fraser, Brooklyn, N. Y. Heater	870,821	Nov. 12	1521	414	131	527
Hall, William M. (See Shepard, James L. B., assignor.)						
Hallwood, Henry S., assignor to International Register Company, Columbus, Ohio. Cash-register	870,624	Nov. 12	1185	322–3	131	419
Hallwood, Henry S., assignor to International Register Company, Columbus, Ohio. Multiple-drawer cash-register	871,094	Nov. 12	1949	534–6	131	650
Halvorson, Albert, Rice Lake, Wis. Hay-blower	870,822	Nov. 12	1522	415	131	527
Ham, William D., Knoxville Tenn. Method of and apparatus for making walls	870,881	Nov. 12	1607	440	131	553
Hamilton, James M., Meriden, Conn. Combined chair and couch	870,776	Nov. 12	1446	392	131	502
Hamilton Machine Tool Company. (See Baerbalck, Hans, assignor.)						
Hamm, William S., Lakeside, Ill. Signal-lantern	871,088	Nov. 12	1940	531	131	656
Hannah, William, Paterson, N. J. Weaving	870,823	Nov. 12	1523	415–16	131	527
Harbour, Orange V. L., Fairmount, Ind. Communion-cup	870,556	Nov. 12	1075	293	131	380
Hardy, James F., assignor to Consolidated Dental Manufacturing Company, New York, N. Y. Handpiece for dental engines	870,824	Nov. 12	1524	416	131	527
Hardy, James F., assignor to Consolidated Dental Manufacturing Company, New York, N. Y. Angle attachment for dental handpieces	870,825	Nov. 12	1525	416	131	528
Harkins, Francis W., Chicago, Ill. Fire-escape	870,777	Nov. 12	1447	392	131	502
Harrison, Frank A., Sackville, New Brunswick, Canada. Type-carrying belt for addressing-machines	870,778	Nov. 12	1449	392	131	503
Harrison, Frank B., Toledo, Ohio. Cellar for axle-boxes	870,953	Nov. 12	1735	475	131	593
Harrison, John L., Montreal, Quebec, Canada. Attachment for window-shade rollers	870,625	Nov. 12	1196	323	131	425
Hartwig, William G., Chicago, Ill. Electric soldering-iron	870,779	Nov. 12	1450	392	131	503
Hassell, Frank J., Dallas, Tex., and R. S. Cunningham, St. Louis, Mo. Bread-cutter	870,626	Nov. 12	1197	323	131	425
Haultain, Herbert E. T. (See Guess and Haultain.)						
Haus, Frank, Metropolitan, N. Y. Pipe-coupling	870,557	Nov. 12	1076	293	131	380
Hawley Down Draft Furnace Company. (See Schwartz, Edward H., assignor.)						
Hayden, Edward E., Washington, D. C. Crutch	870,676	Nov. 12	1273	347	131	448
Hayden, William B., New York, N. Y. Electrical sparking device for explosive-engines	870,954	Nov. 12	1736	475–6	131	593
Hayes, George H. (See Duntley and Hayes.)						
Hays, William C., Berkeley, Cal. Chimney construction	870,780	Nov. 12	1451	393	131	504
Hazzard, Robert T., Jamestown, N. Y. Combination fork and rake	870,955	Nov. 12	1740	476	131	595
Head, George M., Marianna, Ark., assignor to himself, and W. McCaleb, Bluffs, Ill. Cotton-chopper	871,035	Nov. 12	1853	508	131	629
Hebting, Martin, Kaw, Okla. Ter. Potato digger and shaker	870,677	Nov. 12	1274	347–8	131	448
Heckling, George, Cleveland, Ohio. Pipe-wrench	870,781	Nov. 12	1451	393	131	504
Hefta, Gunda H., Leeds, N. D. Wagon-loading device	870,782	Nov. 12	1453	393	131	504
Henry, Horace L., and W. Althoff, Geneva, N. Y. Safety-razor	870,826	Nov. 12	1526	417	131	528
Henry, John B., Aspinwall borough, assignor to Union Steel Casting Company, Pittsburg, Pa. Annealing-box	870,558	Nov. 12	1077	293	131	380
Henson, John H., Cooley, Okla. Ter. Knife	870,678	Nov. 12	1276	348	131	448
Hertner, John H. (See Cookingham, De Witt, assignor.)						
Heuser, Leonard, New York, N. Y. Safety-razor	871,036	Nov. 12	1855	508	131	630

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Heuser, Leonard, New York, N. Y. Razor	871,037	Nov. 12	1855	508	131	630
Higginbotham, Don J., Rialto, Fla. Bottle	870,956	Nov. 12	1741	476	131	595
Hill, James B., Quitman, La. Saw-holder	870,827	Nov. 12	1527	417	131	528
Hilton, Hugh R., Port Allegany, Pa. Cultivating-tool	870,957	Nov. 12	1742	476	131	595
Hinckley, Robert, Washington, D. C. Book-handle	870,958	Nov. 12	1743	477	131	595
Hitchings, Arthur S. H., Rio de Janeiro, Brazil. Instrument for use in determining the functions of circles	870,959	Nov. 12	1744	477	131	596
Hobbs, Joseph D., Mediapolis, Iowa. Means for pumping water under hydraulic power	870,882	Nov. 12	1611	441	131	553
Hobson, Charles F., St. Helena, Cal. Saw-filing device	870,883	Nov. 12	1612	441–2	131	554
Hodges, Emery C., Bloomington, Ill. Stone-crusher	871,063	Nov. 12	1894	519	131	642
Hodgman, Fred C. (See Hodgman and Bailey.)						
Hoffman, August, New York, N. Y. Multogram record	870,961	Nov. 12	1754	478	131	599
Hoffmann, Otto, Charlottenburg, Germany. Manufacture of a new material suitable for use in dentistry	870,962	Nov. 12	1755	.....	131	599
Hogan, Daniel. (See Meinecke and Hogan.)						
Hogan, John J., West Haven, Conn. Gas-engine	870,559	Nov. 12	1077	293–5	131	380
Holden, Lee G., Portland, Oreg. Alarm-box attachment	870,963	Nov. 12	1755	478	131	599
Holinger, Emil F., McKeesport, Pa. Computing tape-measure	870,884	Nov. 12	1613	442	131	554
Hollister, Fred. (See Ford and Hollister.)						
Hollister, Mark, Jr. (See Ford and Hollister.)						
Holst, Oscar K., Tompkinsville, N. Y. Hoisting apparatus	870,724	Nov. 12	1353	369	131	475
Homan, Frank W., Swampscott, Mass. Boot or shoe	870,783	Nov. 12	1453	394	131	505
Hotaling, Isaac, and W. A. Jacobs, Albany, N. Y.; said Jacobs assignor to said Hotaling. Druggist prescription-file	871,089	Nov. 12	1941	531–2	131	657
Houghton, Andrew C., Winnepeg, Manitoba, Canada. Boot-cleaner	870,679	Nov. 12	1277	348	131	449
Hovey, William S., assignor to Sheffield Car Company, Three Rivers, Mich. Locomotive	870,560	Nov. 12	1081	295–6	131	382
Huff, George, Tropico, Cal. Dog-collar	870,784	Nov. 12	1455	394	131	505
Huntington, Archer M., New York, N. Y. Exhibiting device for coins	870,885	Nov. 12	1614	442	131	554
Hurley, George M., Los Angeles, Cal. Three-point contact-trolley timer for internal-combustion motor-cars	871,064	Nov. 12	1895	519	131	643
Hurley, William A. (See Ansell, James, assignor.)						
Husby, Hans P., assignor to Goss Printing Press Company, Chicago, Ill. Rotary folding mechanism for printing-presses	870,964	Nov. 12	1757	479	131	600
Husby, Hans P., assignor to Goss Printing Press Company, Chicago, Ill. Folding apparatus for printing-presses	871,038	Nov. 12	1856	509	131	630
Hutchings, John, London, England. Tide or wave motor	870,965	Nov. 12	1759	479–80	131	600
Iddings, Nate. (See Mullenix, John S., assignor.)						
International Electric Meter Company. (See Lea, John M., assignor.)						
International Electrical Manufacturing Company. (See Schneider, Carl, assignor.)						
International Register Company. (See Hallwood, Henry S., assignor.)						
International Telemeter Company. (See Gilman, Willard H., assignor.)						
J. B. Timberlake & Sons. (See Twitchell, James E., assignor.)						
J. I. Case Plow Works. (See Sobey, William, assignor.)						
Jackson, Lucian C., Warren, Pa. Governor for explosive-engines	870,627	Nov. 12	1197	324	131	425
Jackson, Martin, Mabton, Wash. Irrigating or ditching plow	871,039	Nov. 12	1860	509	131	631
Jacobs, Walter A. (See Hotaling and Jacobs.)	870,785	Nov. 12	1456	394–5	131	506
Jacques, Mia E., Buffalo, N. Y. Milking apparatus	870,966	Nov. 12	1761	480–1	131	601
James, Thomas S., Chiswick, and T. H. Wilson, London, England. Internal-combustion engine	870,628	Nov. 12	1199	324	131	426
Janes, William D., Saginaw, Mich. Bearing for shade-rollers	870,967	Nov. 12	1763	481	131	601
Jenne, Elmer E., Ilion, N. Y. Garment	870,629	Nov. 12	1200	324–5	131	426
Johnson, Eugie P., and C. I. Lee, Hartsells, Ala. Gas-engine governor	870,886	Nov. 12	1615	442	131	555
Johnson, Everell A., Mohave City, Ariz. Wrench	870,887	Nov. 12	1616	443	131	555
Johnston, Torbett H., Kansas City, Mo. Garbage-receptacle	870,828	Nov. 12	1528	418	131	529
Jones Cold Store Door Co. (See Lowman, Samuel K., assignor.)	870,551	Nov. 12	1083	296	131	383
Jorgensen, Severin, Arcata, Cal. Die-stock	870,786	Nov. 12	1461	.....	131	507
Jose, Edward, Harrisville, W. Va. Wagon-box and hay-rack remover	870,968	Nov. 12	1764	481–2	131	602
Jumau, Lucien, Paris, France. Obtaining pure copper	870,725	Nov. 12	1354	369	131	475
Junge, George L., Pittsburg, Pa. Fuel-retarding member for furnaces	870,888	Nov. 12	1617	443	131	555
Kalllwoda, Irene, Sopron, Austria-Hungary. Button	870,680	Nov. 12	1278	348–9	131	449
Kanable, Grover G., Rose Farm, Ohio. Weighing device	870,681	Nov. 12	1280	349–50	131	450
Karges, Julius J., Kansas City, Mo. Display-rack						
Karges, Julius J., Kansas City, Mo. Display-rack						
Kees, Frederick. (See Kelly, Frank E., assignor.)						
Kellogg Switchboard and Supply Company. (See Dunbar, Francis W., assignor.)	870,889	Nov. 12	1618	443	131	556
Kelley, Alexander, Wilmington, Del. Paving-block	871,090	Nov. 12	1942	532	131	657
Kelley, Frank E., assignor of one-half to F. Kees, Minneapolis, Minn. Smoke-consuming furnace	870,562	Nov. 12	1085	297	131	384
Kennedy, Michael R., Dansville, assignor to National Straw Pulp Company, New York, N. Y. Rotary digester or cooker	870,969	Nov. 12	1767	482	131	602
Keowen, Katherine M., New York, N. Y. Piano-protecting pad						
Key, John P. (See Watkins, William D., assignor.)						
Kimball, Frank R. (See Cove, George H., assignor.)						
Kindig, Samuel C., assignor of one-half to W. Wittler, Baltimore, Md. Stamp-affixing machine	870,726	Nov. 12	1354	370	131	475
Kindt, William, Belleville, Kans. Portable stack-cover	870,563	Nov. 12	1087	298	131	384
King, Rice and Ganey. (See Rice, Joseph T., assignor.)	870,630	Nov. 12	1201	325	131	427
Kinsman, Frank E., Plainfield, N. J. Means for controlling fluid-pressure						
Kirkman, Madison L. (See Shutz and Kirkman.)						
Kitchel, Horace. (See Warner and Kitchel.)						
Klemm, Hermann A., New York, assignor of one-half to J. D. Leys, Yonkers, N. Y. Needle-bed for straight-frame and circular-knitting machines	871,095	Nov. 12	1957	536	131	661
Kneuper, George, *et al.* (See Kneuper, George M., assignor.)						
Kneuper, George M., New York, N. Y., assignor of two-thirds to G. and K. Kneuper. Filter	870,631	Nov. 12	1203	325–6	131	427
Kneuper, George M., New York, N. Y., assignor of two-thirds to G. and K. Kneuper. Cleaning filters	870,727	Nov. 12	1356	370–1	131	476
Kneuper, Kate, *et al.* (See Kneuper, George M., assignor.)	870,829	Nov. 12	1529	.....	131	529
Koch, Fritz, London, England. Manufacture of camphene	870,787	Nov. 12	1462	395	131	507
Koontz, John, assignor of one-half to J. Weille, Paducah, Ky. Self-soaping washboard	870,564	Nov. 12	1089	298	131	385
Kozesnik, Charles, New York, N. Y. Third-rail electric-railway system	870,728	Nov. 12	1357	371	131	476
Kruse, Alfred T., assignor, by mesne assignments, to American Steel Package Company, Defiance, Ohio. Sheet-metal packing case	870,890	Nov. 12	1618	443–4	131	556
Kruse, John, St. Louis, Mo. Keyless padlock	870,729	Nov. 12	1359	371	131	477
Kuheim, Charles, Kansas City, Mo. Barrel-follower	870,730	Nov. 12	1360	372	131	477
Kunzmann, Jacob. (See Fairall and Kunzmann.)						
Laible, Philip D., Newark, N. J. Bottle-washing machine	870,891	Nov. 12	1620	444	131	556
Lamson Consolidated Store Service Company. (See Amsden, George A., assignor.)	870,731	Nov. 12	1363	372	131	477
Landes, Joseph C., Collegeville, Pa. Automatic gas controller						
Landis, Frank F., Waynesboro, Pa. Separating grate for threshing-machines						

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Lanphier, Robert C., Springfield, Ill. Alternating-current meter	870,907	Nov. 12	1768	482	131	603
Lanston Monotype Machine Company. (See Bancroft, John S., assignor.)						
Lassen, Hermann R., Hamburg, Germany. Burglar-alarm	870,732	Nov. 12	1364	373	131	479
Latty, Samuel D., Cleveland, Ohio. Double-lock hub	870,565	Nov. 12	1090	298	131	385
Lauth, John C., Rochester, N. Y., assignor to A. Y. McDonald & Morrison Mfg. Company, Dubuque, Iowa. Antisiphon-trap	870,733	Nov. 12	1365	373	131	479
Lea, John M., assignor to International Electric Meter Company, Chicago, Ill. Electrical measuring instrument	870,632	Nov. 12	1205	326	131	428
Lechtenberg, Henry, assignor to Central Iron Works, Quincy, Ill. Dust-arrester	870,830	Nov. 12	1529	418	131	529
Lee, Chester I. (See Johnson and Lee.)						
Leps, Raymond M. A., Bordeaux, France. Elastic wheel	870,831	Nov. 12	1531	419–20	131	530
Lewis, Florence A., Shadypoint, Ind. Ter. Floor-cleaning machine	870,633	Nov. 12	1208	327	131	428
Leys, James D. (See Klemm, Hermann A., assignor.)						
Lindenberg, Frank H., Columbus, Ohio. Closet-tank	870,832	Nov. 12	1534	421	131	530
Lindenberg, Frank H., Columbus, Ohio. Closet-seat	870,833	Nov. 12	1535	421	131	530
Lindley, Forrest P., New York, N. Y. Motor-bicycle	870,834	Nov. 12	1535	421–5	131	530
Lindquist, Edward W. (See Baggaley, Allen, and Lindquist.)						
Lindstrom, Conrad, El Campo, Tex. Device for cutting key-seats or the like	870,971	Nov. 12	1771	483	131	603
Little, Allan F., Kansas City, Mo. Sausage-linking machine	870,972	Nov. 12	1773	483	131	604
Little, Homer E. R., New York, N. Y. Storage battery	870,973	Nov. 12	1776	483	131	605
Loew, Charles H., Lakewood, Ohio. Truck	870,835	Nov. 12	1537	422	131	531
Loftus, Edward M., St. Paul, Minn. Gas-burner	870,566	Nov. 12	1091	299	131	386
Löh, Wilhelm, Höchst-on-the-Main, Germany. Turbine	870,567	Nov. 12	1091	299	131	386
Lomax, Frank B., assignor to G. Lomax, Chicago, Ill. Siphon-head	870,788	Nov. 12	1463	395	131	507
Lomax, George. (See Lomax, Frank B., assignor.)						
Lord, John, Fall River, Mass. Envelop	870,974	Nov. 12	1777	484	131	605
Loudenslager, Edward. (See Meyers and Loudenslager.)						
Loudon, William, Seattle, Wash. Low-water alarm	871,040	Nov. 12	1861	510	131	632
Lowman, Samuel K., assignor to Jones Cold Store Door Co., Hagerstown, Md. Registering apparatus	870,975	Nov. 12	1778	484	131	606
Lowry, Reginald N., Allegheny, Pa., assignor of one-half to C. A. Paxson, Kansas City, Mo. Dumping-wagon	871,091	Nov. 12	1943	532	131	657
Ludlow, George M., Chicago, Ill., assignor to Computing Scale Company, Dayton, Ohio. Chart for computing-scales	870,568	Nov. 12	1092	299–300	131	386
Ludwig, Martin, Albany, Oreg. Chimney-cowl	870,976	Nov. 12	1779	484	131	606
Lundell, Robert, New York, N. Y. Alternating-current motor	870,892	Nov. 12	1621	444	131	557
Lundell, Robert, New York, N. Y. Alternating-current motor	870,893	Nov. 12	1623	444–5	131	557
Lundquist, Frank A., Chicago, Ill. Calling device for telephone-exchanges	870,634	Nov. 12	1210	327–8	131	429
Lundquist, Frank A., Chicago, Ill. Selecting device for telephone-exchanges	871,092	Nov. 12	1945	533	131	658
Lyon, Platt W., Minneapolis, Minn. Order-blank holder	870,789	Nov. 12	1464	395	131	508
Lyons, David E., *et al.* (See Cheesebro, William A., assignor.)						
Lyst, Charles E., assignor of one-half to J. G. Field, Elwood, Ind. Baking-oven	870,977	Nov. 12	1780	484–5	131	606
MacDougall, Harry O., Watertown, N. Y. Toaster or broiler	870,894	Nov. 12	1626	445	131	558
Macartney, Edmund C., assignor of one-half to W. D. Wegefarth, Philadelphia, Pa. Puzzle	870,978	Nov. 12	1781	485	131	606
Macdonald, Thomas H., and F. L. Capps, assignors to American Graphophone Company, Bridgeport, Conn. Apparatus for coating disks and similar articles	870,569	Nov. 12	1094	300	131	387
Mackie, William. (See Aitken and Mackie.)						
Makeeff, Philémon, Le Locle, Switzerland. Photographic vignetter	870,790	Nov. 12	1464	396	131	508
Mallett, George H., Copake, N. Y. Weighing-machine	870,979	Nov. 12	1782	485	131	607
Mangan, Joseph, Galesburg, Ill. Riding attachment for harrows	870,570	Nov. 12	1095	300	131	387
Manke, Henry C., *et al.* (See Mathews, George S., assignor.)						
Mann, Edward B., Mankato, Minn. Litter-carrier	870,635	Nov. 12	1212	328	131	429
Marcotte, Arthur D., Church Point, La. Crude-oil burner	870,980	Nov. 12	1784	485	131	608
Mason, Alfred J. (See Fogel, Taylor T., assignor.)						
Matchette, Frank J., and R. Raddatz, Milwaukee, Wis.; said Raddatz assignor to said Matchette. Vacuum cleaning system	870,981	Nov. 12	1785	486	131	608
Mathews, George S., assignor of one-half to H. C. Manke and J. F. Pelletier, Kansas City, Mo. Floor-surfacing machine	870,982	Nov. 12	1788	486	131	609
Mattatuck Mfg. Co. (See Eggleton, William G., assignor.)						
McAlear, James, St. Paul, Minn. Attachment for sprinkler systems	870,792	Nov. 12	1466	396	131	509
McCaleb, William. (See Head, George M., assignor.)						
McCaskey, Perry A., assignor to McCaskey Register Company, Alliance, Ohio. Manifolding-pad holder	870,793	Nov. 12	1469	397	131	510
McCaskey Register Company. (See McCaskey, Perry A., assignor.)						
McCaughan, James, Canon City, Colo. Apple-box press	870,683	Nov. 12	1284	351	131	452
McCauley, Frank L. (See McIntyre, James J., assignor.)						
McDaniel, Charles W., Kansas City, Mo. Fire-alarm system	870,574	Nov. 12	1100	301	131	389
McDanill, John R., Aubrey, Tex. Horse-detacher	870,898	Nov. 12	1636	447	131	562
McGill, James H. (See Molitor, Charles, assignor.)						
McIntyre, James J., assignor of one-half to F. L. McCauley, Ironton, Ohio. Adjustable and reversible handle for baby-carriages	870,739	Nov. 12	1371	375	131	481
McIver, Evander, deceased, and J. Widua, Chicago, Ill.; M. McIver, administratrix. Hair-drying apparatus	870,740	Nov. 12	1372	376	131	481
McIver, Margaret, administratrix. (See McIver and Widua.)						
McLachlan, John C., Toronto, Ontario, Canada. Water-cooling apparatus for gas or gasoline engines	870,575	Nov. 12	1102	302	131	390
McQuaid, Orlando C., Franklin, Pa. Plumb-bob	870,576	Nov. 12	1103	302	131	390
Meinecke, Christian W., Jersey City, and D. Hogan, Hoboken, N. J., assignors to Whitall Tatum Company, New York, N. Y. Bed-pan	870,984	Nov. 12	1790	487	131	609
Merrill, Arthur H., Hartford, Conn. Key-ring	870,636	Nov. 12	1213	328	131	430
Meyers, Charles H., and E. Loudenslager, Columbus, Ohio. Boiler-tube-scaring machine	870,734	Nov. 12	1365	373	131	479
Miles, Casper W., Anderson township, Hamilton county, Ohio. Floor-surfacer	870,836	Nov. 12	1538	422	131	531
Miller Pasteurizing Machine Company. (See Pfouts, Leroy S., assignor.)						
Mills, George R., Hudson, Mich. Wire-fence tie	870,571	Nov. 12	1098	301	131	388
Miner, Court L. (See Reese and Miner.)						
Miner-Stevens, Leon W., Biglake, Wash. Match-striking device	870,735	Nov. 12	1366	374	131	479
Minneapolis Steel & Machinery Company. (See Swensson, Eric, assignor.)						
Mitchell, Albion L. F., Hyde Park, Mass., assignor of one-half to C. W. Aiken, Hackensack, N. J. Box-filling machine	870,895	Nov. 12	1628	445–7	131	558
Mitchell, Harry R., North Yakima, Wash. Electric fixture	870,736	Nov. 12	1366	374	131	479
Mohr, Jakob, New York, N. Y. Washboiler	870,572	Nov. 12	1098	301	131	388
Molitor, Charles, Chicago, Ill., assignor to J. H. McGill, Valparaiso, Ind. Incandescent-lamp guard	870,637	Nov. 12	1213	328–9	131	430
Möllenbruck, Wilhelm, and W. Dielmann, assignors to H. Peltzer, Düsseldorf, Germany. Carbon electrode for galvanic elements	870,985	Nov. 12	1791	487	131	610
Moller, Carl, Jacksonville, Fla. Lifting-machine	870,986	Nov. 12	1791	487–8	131	610
Moller, Jacob A., Jr., New York, N. Y. Bottle-stopper	871,041	Nov. 12	1862	510	131	632
Moohan, Patrick H., Trenton, N. J., assignor of one-half to L. Roden, Philadelphia, Pa. Water-closet	870,896	Nov. 12	1634	447	131	561

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Moon, Thomas E., Sabina, Ohio. Pump	870,682	Nov. 12	1283	350	131	451
Moorhead, Albert L., Telluride, Colo. Metallic railway-tie	871,065	Nov. 12	1896	519	131	643
Morden, Lucena M., Waterbury, Conn. Temporary binder	870,837	Nov. 12	1540	422	131	532
Morrow, Mark. (See Orr, Francis L., assignor.)						
Mosman, Charles F., assignor to Burns, Silver & Co., Bridgeport, Conn. Furniture-caster	870,791	Nov. 12	1465	396	131	508
Mullenix, John S., assignor of one-half to N. Iddings, Bradford, Ohio. Car-mover	870,987	Nov. 12	1793	488	131	610
Murphy, William M., assignor to G. A. Drucker, New York, N. Y. Flash-light apparatus	870,897	Nov. 12	1635	447	131	562
Myers, Charles A., Niagara Falls, N. Y. Street and station indicator	870,737	Nov. 12	1368	374–5	131	480
Myers, Charles G., Cleveland, Ohio. Instrument for introducing liquid medicament into teeth	870,573	Nov. 12	1099	301	131	388
Myers, Charles H., Buffalo, N. Y. Boat	870,738	Nov. 12	1370	375	131	480
National Machine Company. (See Chilton, Franklin H., assignor.)						
National Straw Pulp Company. (See Kennedy, Michael R., assignor.)						
National Tube Company. (See Scholz, Richard, assignor.)						
Naumer, Emil, New York, N. Y. Electrical water-heater	870,577	Nov. 12	1104	302	131	390
Neill, Guy D., Denver, Colo. Miner's candlestick	870,638	Nov. 12	1217	329	131	432
Nelson, George, Chicago, Ill. Gage for paper-cutting machines	870,578	Nov. 12	1105	302	131	391
Neu-Graphic A. G. (See Bachmann, Eduard, assignor.)						
Newcomb, Louise S., New York, N. Y. Buttonhole-strip	870,988	Nov. 12	1794	489	131	611
Nielsen, James, Lake Forest, Ill. Propeller	870,639	Nov. 12	1218	329–30	131	432
Nordlander, Carl, Norway, Mich. Skee-stirrup	870,741	Nov. 12	1373	376	131	482
Norris, Harry E., Arnold, Ohio. Steering mechanism	870,794	Nov. 12	1470	397	131	510
Norstrom, Samuel A., assignor to C. L. Redfield, Chicago, Ill. Telephone-exchange	871,042	Nov. 12	1864	510	131	632
Norstrom, Samuel A., assignor to C. L. Redfield, Chicago, Ill. Telephone-exchange	871,043	Nov. 12	1865	510–11	131	633
Nutting, William W. (See Raines, William E., assignor.)						
O'Neill, John C., Hamburg, N. Y. Sash-fastener	870,641	Nov. 12	1221	330	131	433
Ocumpaugh, Charles H., Rochester, N. Y. Door-controlling device	870,640	Nov. 12	1219	330	131	432
Oliver, Edd C., assignor to H. E. Pence, Minneapolis, Minn. Speed-indicator	870,795	Nov. 12	1471	397	131	511
Orengo, Cesare, Genoa, Italy. Oil suction and collecting apparatus for steam-engines	870,579	Nov. 12	1106	303	131	391
Orr, Francis L., Thurman, assignor of one-half to M. Morrow, Percival, Iowa. Engine-starter	870,580	Nov. 12	1107	303	131	391
Oskamp, Alfred, Wyoming, Ohio. Friction-clutch	870,642	Nov. 12	1222	331	131	433
Osmer, John E., Chicago, Ill. Combination wheel and tire gage	870,581	Nov. 12	1109	303	131	392
Overholt, Edward H., Galesburg, Ill. Wagon-elevator	870,899	Nov. 12	1637	448	131	562
Owens, John, Maraisburg, Transvaal. Safety-brake mechanism for mine cages and skips	870,989	Nov. 12	1795	489	131	611
Ozias, Orange O., assignor to Computing Scale Company, Dayton, Ohio. Computing-scale	870,582	Nov. 12	1110	303–4	131	392
Palmer, Harry B., assignor to G. E. Sly, New York, N. Y. Recording apparatus	870,742	Nov. 12	1374	376–9	131	482
Palmgren, Carl A., and A. H. Young, Chicago, Ill. Time-controlled circuit-closing device	870,900	Nov. 12	1639	448–9	131	563
Parker, Russell, New York, N. Y. Tire-protector	870,796	Nov. 12	1472	397	131	511
Parks, Samuel R., Pawtucket, R. I. Oil-can	870,684	Nov. 12	1285	351	131	452
Pasko, Osmond E., Fond du Lac, Wis. Wagon-seat	870,583	Nov. 12	1112	304	131	393
Paullins, George E., assignor of fifteen twenty-fourths to C. E. Bibb, C. H. Theobald, and H. L. Butler, Colorado Springs, Colo. Amalgamator	870,643	Nov. 12	1223	332	131	433
Paxson, Charles A. (See Lowry, Reginald N., assignor.)						
Payson, Bernard A., Tyreonnell, Ontario, Canada. Pencil-eraser	870,990	Nov. 12	1797	489	131	611
Pearson, Gardner W., Lowell, Mass. Awning-blind	871,044	Nov. 12	1868	511	131	634
Pearson, James, Central Falls, R. I. Bobbin-holder	870,743	Nov. 12	1402	379	131	486
Pearson Typo-Bar Company. (See Allen, Leicester, assignor.)						
Peck, Benjamin C., assignor to Roth & Engelhardt, New York, N. Y. Stop mechanism for self-playing musical instruments	870,744	Nov. 12	1403	380	131	486
Peck, Benjamin C., assignor to Roth & Engelhardt, New York, N. Y. Pneumatic valve for self-playing musical instruments	870,745	Nov. 12	1405	380	131	487
Peignon, Joseph, Nantes, France. Machine for the manufacture of wire-netting or latticed fences with bars of all description	870,901	Nov. 12	1641	449–51	131	563
Pelletier, John F., *et al.* (See Mathews, George S., assignor.)						
Peltzer, Hermann. (See Möllenbruck and Dielmann, assignors.)						
Pence, Harry E. (See Oliver, Edd C., assignor.)						
Penney, Harry E., Columbus, Ohio. Copy-holder	870,991	Nov. 12	1797	489–90	131	612
Pennington, Edward J., New York, N. Y. Ignition-plug for hydrocarbon-motors or explosion-engines	870,902	Nov. 12	1644	451	131	564
Pennock, John D., Syracuse, N. Y., assignor to Solvay Process Company. Making sodium sulfate	870,746	Nov. 12	1406	380	131	488
Perini, Victorio A. de, Rio de Janeiro, Brazil. Fiber-separating machine	870,838	Nov. 12	1541	423	131	532
Peterson, Lars A., Stockholm, Sweden. Loose handle for vessels	870,839	Nov. 12	1543	423–4	131	532
Petty, Milton E., Chicago, Ill. Locomotive-tender	870,840	Nov. 12	1544	424	131	532
Pfouts, Leroy S., assignor to Miller Pasteurizing Machine Company, Canton, Ohio. Pasteurizing apparatus	870,841	Nov. 12	1545	424–5	131	533
Pierce, Zachariah L., Hanna City, Ill. Anti-rail-spreading device and gage	870,842	Nov. 12	1547	425	131	533
Pilling Air Engine Company. (See Fleming, Josiah C., assignor.)						
Pittsburg Pneumatic Company. (See Vaughan, Henry H., assignor.)						
Pittsburgh and Montana Copper Company. (See Baggaley, Allen, and Lindquist, assignors.)						
Planckh, Rudolf, Graz-Eggenberg, Austria-Hungary. Boiling and distilling apparatus	870,747	Nov. 12	1407	381	131	488
Poett, Alfred R. (See Buelna and Poett.)						
Poore, John B., Scranton, Pa. Portable bank	870,843	Nov. 12	1548	425	131	534
Post, Marvin C., Brookfield, Mo. Carpenter's square	870,584	Nov. 12	1112	304	131	393
Potter, Charles W. (See Staples and Potter.)						
Powell, George, Newark, N. J. Armor for tires	870,844	Nov. 12	1550	426	131	534
Praul, Charles M., Atlantic City, assignor to H. K. Fort, Haddonfield, N. J. Square	870,845	Nov. 12	1551	426	131	535
Prieto, Eudoro C., Cipaquira, Colombia. Rethresher and polisher for coffee	871,045	Nov. 12	1871	512	131	635
Protector Last Reinforcing Company. (See Baker, Winthrop D., assignor.)						
Prött, Carl, Hagen, Germany. Means for maintaining flow in water-columns	870,685	Nov. 12	1285	351	131	453
Raddatz, Richard. (See Matchette and Raddatz.)						
Raines, William E., assignor of one-half to W. W. Nutting, Salt Lake City, Utah. Door-securer	870,846	Nov. 12	1552	426	131	535
Ramage, Alexander S., Detroit, Mich. Preparing sodium sulfate and compounds of lead	871,066	Nov. 12	1898		131	644
Ransome, Arthur W., New York, N. Y. Concrete-mixer	870,797	Nov. 12	1473	398	131	512
Redfield, Casper L. (See Norstrom, Samuel A., assignor.)						
Redway, Albert J. (See Witte, Albert, assignor.)						
Reese, Joseph F., and C. L. Miner, Lucerne, assignors of one-third to B. A. Conrad, Royal Center, Ind. Railway-switch	870,992	Nov. 12	1799	490	131	612
Reeve, Sidney A., Worcester, assignor to C. F. Brown, trustee, Reading, Mass. Utilizing working fluid in jacketed engines	870,585	Nov. 12	1113	304	131	393
Reid, John L., Chicago, Ill. Stove	870,686	Nov. 12	1287	352	131	453
Renick, Frederick E., Mammoth Spring, Ark. Water-wheel	870,586	Nov. 12	1114	305	131	394
Renne, William M., Belvidere, Ill. Bag-holder	870,687	Nov. 12	1290	352	131	453
Reynolds, Samuel and S. J., Plymouth, Pa. Journal-box	870,587	Nov. 12	1115	305	131	394

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Reynolds, Samuel J. (See Reynolds, Samuel and S. J.)						
Rice, Charles L., Chippewa county, Minn. Paper-folding machine	870,903	Nov. 12	1645	451–3	131	565
Rice, Joseph T., West Hoboken, assignor to King, Rice and Ganey, Weehawken, N. J. Apparatus for alining conduit-sections	871,067	Nov. 12	1899	519–20	131	644
Richardson, Fred L., Rockland, Mass. Shoe-protector for shoe-racks	870,993	Nov. 12	1800	490	131	612
Richmond, Henry T., Malvern, Iowa. Net-making machine	870,644	Nov. 12	1225	332–3	131	434
Rietzel, Adolph F., assignor to Thomson Electric Welding Company, Lynn, Mass. Making a joint in thin flat material	870,847	Nov. 12	1552	426–7	131	535
Ringer, John W., Castleton, Ind. Automatic electric storing device	870,688	Nov. 12	1291	352–3	131	454
Riskey, Andrew J., Troy, N. Y. Oil-gas generator	870,798	Nov. 12	1477	398	131	513
Robertson, Harold H. (See Garrett, William N., assignor.)						
Robertson, Pompie L., Maybeury, W. Va. Train-operated mechanism for opening and closing doors	870,689	Nov. 12	1293	353–4	131	454
Rockstroh, Charles F., New York, N. Y., assignor to Rockstroh Manufacturing Company, Orange, N. J. Printing-plate holder	870,994	Nov. 12	1801	491	131	613
Rockstroh Manufacturing Company. (See Rockstroh, Charles F., assignor.)						
Roden, L. (See Moohan, Patrick H., assignor.)						
Rodgers, Jacob, Wolf Creek, assignor of one-half to C. M. Smith, Andyville, Ky. Power attachment for spray-pumps	870,995	Nov. 12	1802	491	131	613
Rogers, Alson, Warren, Pa. Reinforced concrete structure	870,588	Nov. 12	1116	305	131	394
Rosen, Meyer, Bloomington, Ill. Velocipede seat-post	870,645	Nov. 12	1227	333	131	434
Ross, Thomas L., China Grove, N. C. Shutter latch-guard	870,848	Nov. 12	1554	427	131	536
Ross, William, Troy, N. Y. Ice-cream scraper	870,996	Nov. 12	1804	491	131	614
Rossignol, Abel, Voiron, France. Picker-staff for weaving-looms	870,904	Nov. 12	1648	453	131	566
Roth & Engelhardt. (See Peck, Benjamin C., assignor.)						
Rubek, Joseph. (See Brown, John L., assignor.)						
Ruggles, Frederick W., Hudson, Mass. Feeding device for poultry	870,849	Nov. 12	1555	427–8	131	536
Ruppman, Frank W., Philadelphia, Pa. Elevator-lock	870,589	Nov. 12	1117	305–6	131	394
Ruth, Thomas D., assignor to R. J. Emory & Company, Newark, N. J. Spooling-machine.	870,850	Nov. 12	1556	428	131	356
Sanderson, James F. (See Watson, Bushnell, and Sanderson.)						
Sauer, Adelbert, Pittsburg, Pa. Change-speed apparatus	870,997	Nov. 12	1806	492	131	615
Savage, George B., Oak Grove, Cal. Beeswax separator and purifier	871,046	Nov. 12	1872	512	131	635
Savelsberg, Adolf, Aachen, Germany. Roasting sulfurous ores	870,690	Nov. 12	1295	.....	131	455
Sawyer, Orren A., assignor to E. A. Thissell, Lowell, Mass. Harness-loosener of looms	871,096	Nov. 12	1958	536–7	131	661
Scanlan, Marcellus J. (See Blair and Scanlan.)						
Scanling, Frank W. (See Frink and Scanling.)						
Schachner, Edward E. Denver, Colo. Stair construction	870,905	Nov. 12	1649	453–4	131	566
Schaefer, August C., assignor of one-half to W. P. Chrysler, Oelwein, Iowa. Packing for piston-rods	871,068	Nov. 12	1899	520	131	644
Schapler, Richard, Frankfort-on-the-Main, and C. Wasser, Nüremberg, Germany. Fire-escape	870,998	Nov. 12	1807	492	131	615
Schirmer, Baldwin F., Indianapolis, Ind. Dust-preventer	870,590	Nov. 12	1119	306	131	395
Schmitz, Franz, San Francisco, Cal. Door-manipulator	870,906	Nov. 12	1650	454	131	567
Schneider, Carl, Jersey City, N. J., assignor to International Electrical Manufacturing Company, New York, N. Y. Combination instrument	870,851	Nov. 12	1558	428	131	537
Schoenberger, Frank W., Columbus, Ohio. Bearing	870,799	Nov. 12	1477	399	131	513
Scholz, Richard, Lorain, Ohio, assignor to National Tube Company, Pittsburg, Pa. Vertical tapping-machine	871,069	Nov. 12	1901	520–1	131	645
Schulze, Hermann, Bernburg, Germany. Producing porous barium oxid	870,691	Nov. 12	1296	354	131	455
Schwartz, Edward H., assignor to Hawley Down Draft Furnace Company, Chicago, Ill. Furnace	871,070	Nov. 12	1903	521	131	645
Schwartz, Edward H., assignor to Hawley Down Draft Furnace Company, Chicago, Ill. Melting	871,071	Nov. 12	1905	522	131	646
Seidenspinner, Charles W., Woodhaven, N. Y. Scarf-holder	871,072	Nov. 12	1906	522	131	646
Selg Brewery Apparatus Co. (See Selg, Otto, assignor.)						
Selg, Otto, New York, N. Y., assignor to Selg Brewery Apparatus Co. Stirrer for mash-tubs	870,748	Nov. 12	1407	381	131	488
Shafer, William H., Cincinnati, Ohio. Water-tower	870,646	Nov. 12	1227	333	131	435
Shallenberger, Charles S., St. Louis, Mo. Car-truck	870,647	Nov. 12	1229	333–4	131	435
Shantz, Edgar, Rochester, N. Y. Button	870,907	Nov. 12	1652	454	131	567
Sheasby, William H., *et al.* (See Cheesebro, William A., assignor.)						
Sheffield Car Company. (See Hovey, William S., assignor.)						
Shepard, James L. B., assignor of one-fifth to W. M. Hall, Grayville, Ill. Spring-gear for vehicles	870,692	Nov. 12	1297	354–5	131	455
Shipman, Ralph, Simbury, Pa. Speed-indicator and distance-recorder	870,852	Nov. 12	1559	428–9	131	537
Shirley, John H., Mentha, assignor to A. M. Todd Company, Limited, Kalamazoo, Mich. Root-planting machine	870,693	Nov. 12	1298	355–6	131	456
Sholes, Zalmon G., New York, N. Y. Attachment for automobiles	870,908	Nov. 12	1652	455	131	567
Sholes, Zalmon G., New York, N. Y. Fastening for vehicle-top bows	871,047	Nov. 12	1874	512–13	131	635
Shutz, John A., and M. L. Kirkman, assignors to Standard Pattern & Mfg. Co., Richmond, Ind., and H. A. Wehrly and L. C. Ashman, New Paris, Ohio. Vehicle-heater	870,648	Nov. 12	1230	334	131	436
Simmons, Samuel T., Columbus, Ohio. Trolley-harp	870,999	Nov. 12	1808	492	131	615
Siy, George E. (See Palmer, Harry B., assignor.)						
Small, David P., Mount Oliver borough, Pa. Street-railway curve sweeper and lubricator	870,591	Nov. 12	1120	306	131	395
Smith, Charles M. (See Rodgers, Jacob, assignor.)						
Smith, Curtis, A., Elgin, Ill. Sound-reproducing head	871,000	Nov. 12	1809	493	131	615
Smith, Ernest W., Grand Marais, Mich. Bench-plane	871,001	Nov. 12	1810	493	131	616
Smith, James S., Spokane, Wash. Feed-rack	870,694	Nov. 12	1300	356	131	457
Smitmans, John A., Sharon, Pa. Cooling-bed and conveyer	870,592	Nov. 12	1121	306–7	131	396
Snow, George B., Buffalo, N. Y. Dental articulator	870,909	Nov. 12	1654	455	131	568
Snugge, John H., Jackson, Mich. Axle-wheel coupling	870,853	Nov. 12	1564	430	131	539
Sober, Morris S., McLoud, Okla. Ter. Attachment for carpenters' squares	870,854	Nov. 12	1564	430	131	539
Sobey, William, assignor to J. I. Case Plow Works, Racine, Wis. Plow	870,695	Nov. 12	1302	356–7	131	457
Solvay Process Company. (See Pennock, John D., assignor.)						
Sorenson, Gilbert, Casselton, N. D. Flue-cutter	870,800	Nov. 12	1478	399	131	513
Spikes, Richard B., assignor of two-thirds to M. C. Spires and H. D. Hall, Bisbee, Ariz. Ter. Beer-tapper	871,073	Nov. 12	1907	522	131	647
Spires, Marine C., *et al.* (See Spikes, Richard B., assignor.)						
Spittgerber, William, Wayne, Nebr. Handle	870,910	Nov. 12	1656	456	131	568
Sprogis, August, Gleason, Wis. Logging-hook	870,593	Nov. 12	1123	307	131	396
Stainee, Frank, Melbourne, Victoria, Australia. Process to facilitate the shelling of peas and the like	870,855	Nov. 12	1565	.....	131	539
Standard Pattern & Mfg. Co. *et al.* (See Shutz and Kirkman, assignors.)						
Staples, Albert F., Boston, and C. W. Potter, Waltham, Mass. Account-register	870,594	Nov. 12	1123	307–8	131	396
Steimer, Theodore C., Buchanan, W. Va. Glass gathering and pressing machine	870,649	Nov. 12	1232	334–5	131	436
Stein, David J., Butzbach, Germany. Fan attachment for rocking-chairs	870,911	Nov. 12	1657	456	131	569
Steinberger, Louis, New York, N. Y. Insulating-fixture	871,002	Nov. 12	1811	494	131	616
Stetler, Daniel E., Medford, Okla. Ter. Gate-post	870,696	Nov. 12	1305	357	131	459

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Stevenson, S. Price, Chester, Pa. Door and frame therefor for opening and closing air-tight chambers. (Reissue)	12,717	Nov. 12	1961	538	131	663
Stevenson, William M., Indian Orchard, Mass. Woven fabric	870,697	Nov. 12	1306	357	131	459
Stilwell, Charles B., Wayne, assignor to Union Paper Bag Machine Company, Philadelphia, Pa. Paper-bag machine	870,801	Nov. 12	1480	399–406	131	514
Stocker, Julius C., Pittsburg, and D. A. Welsh, Mount Oliver, Pa. Foldable phonograph-horn	870,698	Nov. 12	1308	358	131	461
Stockton, Joseph B., John Day, assignor of two-fifths to T. P. Stockton, Mount Vernon, Oreg. Bath apparatus	871,074	Nov. 12	1908	523	131	647
Stockton, Thomas P. (See Stockton, Joseph B., assignor.)						
Storer, Norman W., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Vehicle control system	870,802	Nov. 12	1487	456	131	516
Stribling, E. W. (See Alexander, John F., assignor.)						
Swensson, Eric, assignor to Minneapolis Steel & Machinery Company, Minneapolis, Minn. Reinforced steel beam	871,075	Nov. 12	1910	523	131	647
Swensson, Eric, assignor to Minneapolis Steel & Machinery Company, Minneapolis, Minn. Reinforced steel column	871,076	Nov. 12	1911	523	131	648
Tallerday Manufacturing Company. (See Claiborne, Alexander, assignor.)						
Tamplet, Paul H. (See Adams, James H., assignor.)						
Taplin, Homer E., Lowell, Mass. Picker-stick attachment	870,749	Nov. 12	1408	381	131	488
Tatum, Lewis L., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Controller	870,595	Nov. 12	1125	308	131	397
Tatum, Lewis L., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Motor-controller	870,596	Nov. 12	1129	308–9	131	398
Taverner, William W., Upper Ballinderry, and A. Gregg, Belfast, Ireland. Potato-planter	870,856	Nov. 12	1566	430–1	131	539
Taylor Iron and Steel Company. (See Guttzeit, Charles W., assignor.)						
Taylor, John D., Edgewood Park, assignor to Union Switch and Signal Company, Swissvale, Pa. Mechanical clutch	870,912	Nov. 12	1657	456	131	569
Teall, William A., Eau Claire, Wis. Hose-nozzle	871,003	Nov. 12	1812	494	131	616
Terrell, Elah, Columbus, Ohio, assignor to E. V. Gambier, trustee. Type-setting machine.	870,699	Nov. 12	1309	358	131	461
Textile Machine Works. (See Thun, Ferdinand, assignor.)						
Thebus, George H., Belleville, Ill. Street-flusher	870,700	Nov. 12	1311	359	131	462
Theobald, Charles H., *et al.* (See Paullins, George E., assignor.)						
Theobald, George J., Boston, Mass. Saddletree	870,857	Nov. 12	1567	431	131	540
Thissell, Earl A. (See Sawyer, Orren A., assignor.)						
Thissell, Earl A., Lowell, Mass. Warp stop-motion	871,048	Nov. 12	1876	513	131	637
Thompson, James C., Salem, Va. Metallic railway-tie	871,049	Nov. 12	1877	514	131	637
Thomson Electric Welding Company. (See Rietzel, Adolph F., assignor.)						
Thun, Ferdinand, assignor to Textile Machine Works, Wyomissing, Pa. Braiding-machine	871,004	Nov. 12	1814	494–5	131	617
Thwing, Charles B., Philadelphia, Pa. Electrical measuring instrument	870,803	Nov. 12	1489	406	131	516
Tidnam, Frederick H., Oklahoma, Okla. Ter. Telegreph-pole	870,858	Nov. 12	1568	431	131	540
Tieck, Max A., Denver, Colo. Life-saving suit	870,604	Nov. 12	1490	406–7	131	517
Tindel, Adam, Philadelphia, assignor to Tindel-Morris Company, Eddystone, Pa. Chuck mechanism	871,005	Nov. 12	1815	495	131	617
Tindel-Morris Company. (See Tindel, Adam, assignor.)						
Toan, Robert O., Jackson, Mich. Cork-extractor	871,006	Nov. 12	1816	495	131	617
Todd, William C., Chance, Md. Means for operating oyster-dredges	871,007	Nov. 12	1816	496	131	618
Toledo Glass Company. (See Bock, William E., assignor.)						
Trabue, Albert L., Mays, Ind. Storm-shield and buggy-top	870,859	Nov. 12	1569	431–2	131	541
Trager, Louis R., Springfield, Ill. Ironer's cabinet	870,805	Nov. 12	1491	407	131	517
Train, Jacob A. (See Goodhoim and Train.)						
Trowbridge, Charles C., New York, N. Y. Refrigerating cars	870,913	Nov. 12	1659	456	131	569
Tschopik, Julius D., and N. G. Goreau, New Orleans, La. Flushing device	870,597	Nov. 12	1132	309	131	400
Tucker, Benjamin W., Newark, N. J., assignor to C. H. Unverzagt, New York, N. Y. Malt-stirring apparatus	870,598	Nov. 12	1133	309–10	131	401
Turner, Walter V., Edgewood, assignor to Westinghouse Air Brake Company, Pittsburg, Pa. Fluid-pressure brake	870,806	Nov. 12	1493	408	131	518
Twigg, Henry A., Denver, Colo. Seam-dampener	870,807	Nov. 12	1495	408	131	518
Twitchell, James E., Detroit, assignor, by mesne assignments, to J. B. Timberlake & Sons, Jackson, Mich. Display-easel	870,914	Nov. 12	1660	457	131	570
Tyldesley, Harry, assignor of two-thirds to T. Tyldesley and M. P. Creel, Central City, Ky. Drilling appliance	870,701	Nov. 12	1313	359	131	462
Tyldesley, Thomas, *et al.* (See Tyldesley, Harry, assignor.)						
Ungar, Elgin O. assignor of one-half to F. D. Guertin, Minneapolis, Minn. Floor-gate-actuating device for elevators	870,860	Nov. 12	1571	432	131	541
Union Paper Bag Machine Company. (See Stilwell, Charles B., assignor.)						
Union Steel Casting Company. (See Henry, John B., assignor.)						
Union Switch and Signal Company. (See Taylor, John D., assignor.)						
Unverzagt, Charles H. (See Tucker, Benjamin W., assignor.)						
Vallance, Emil, New York, N. Y. Tobacco-pipe	871,008	Nov. 12	1817	496	131	618
Vanderwitt, William A., Ashton, Iowa. Wire-stretcher	870,808	Nov. 12	1496	408	131	519
Vandevort, David A., Scottsburg, Ind. Gate	870,650	Nov. 12	1237	336	131	437
Varet, Jules, Camden Road, London, England. Collar stud, button, or the like	871,009	Nov. 12	1818	496	131	618
Vaughan, Ernest M., New York, N. Y. Indicator for railway and other purposes	870,599	Nov. 12	1137	311	131	403
Vaughan, Henry H., Chicago, Ill., assignor, by mesne assignments, to Pittsburg Pneumatic Company, Canton, Ohio. Fluid-pressure-operated tool	870,651	Nov. 12	1238	336	131	438
Veazie, Arthur H., assignor of one-half to J. P. Faber, Rochester, N. Y. Separator for carriage-top bows	871,010	Nov. 12	1819	496	131	618
Vest, Eugene W., Tacoma, Wash. Latch-keeper	870,652	Nov. 12	1242	336	131	439
Vogt, Jacob. New Rochelle, N. Y. Christmas-tree support	871,050	Nov. 12	1878	514	131	637
Voorhees, Philip. (See Gray, Isaac C., assignor.)						
Vreeland, Cornelius D., Montclair, N. J. Manufacturing arsenic compounds of lead	870,915	Nov. 12	1662	457	131	571
Waggner, Benjamin G., Philadelphia, Pa. Prepayment gas-meter	870,600	Nov. 12	1141	311–12	131	404
Wagner, John F., *et al.* (See Weston, James H., assignor.)						
Walker, Arthur W., Malden, Mass. Cooking-stove	871,051	Nov. 12	1879	514	131	638
Walker, Clinton L., Piedmont, Cal. Surveying instrument	870,809	Nov. 12	1497	409	131	519
Walker, Frank J., New Rochelle, N. Y. Compositor's bracket-cabinet	870,601	Nov. 12	1143	312	131	404
Wallace, E. O. (See Wallace, Fred A., assignor.)						
Wallace, Fred A., assignor to E. O. Wallace, Des Moines, Iowa. Pipe-bending tool	871,052	Nov. 12	1881	515	131	638
Warne, George, Omaha, Nebr. Ditching-machine	871,011	Nov. 12	1820	497	131	619
Warner, Daniel, Bronson, and H. Kitchel, assignors to American Auto Wheel Company, Coldwater, Mich. Spring-wheel	870,602	Nov. 12	1145	312	131	405
Warner, James L., Girard, Kans. Violin-piano	870,702	Nov. 12	1314	359–60	131	462
Warsop, Thomas, Coniston, England. Rock-drill and other percussion tool	870,653	Nov. 12	1243	337	131	440
Wasser, Carl. (See Schapler and Wasser.)						
Watkins, William D., assignor of one-half to J. P. Key, San Jose, Cal. Clothes-pin	870,703	Nov. 12	1316	360	131	463
Watrous, Earl G., Chicago, Ill. Automatic flushing-valve	870,916	Nov. 12	1663	458	131	571

Name, residence, and invention.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Watson, Charles G., Mount Morris, Mich. Shipping-package	870,603	Nov. 12	1147	313	131	406
Watson, David S., E. Bushnell, and J. F. Sanderson, assignors to Watson Wagon Company, Canastota, N. Y. Dump-wagon	871,012	Nov. 12	1822	497	131	619
Watson Wagon Company. (See Watson, Bushnell, and Sanderson, assignors.)						
Wegefarth, William D. (See Macartney, Edmund C., assignor.)						
Wehrly, Henry A., *et al.* (See Shutz and Kirkman, assignors.)						
Weille, James. (See Koontz, John, assignor.)						
Weiss, George F., assignor to Black Diamond Coal Drill and Tool Co., Springfield, Ill. Miner's drill	871,013	Nov. 12	1823	497–8	131	620
Welles, Frederick R., New York, N. Y. Pencil-holder	870,750	Nov. 12	1409	382	131	489
Wells, Nelson G., Tulsa, Ind. Ter. Well-drilling machine	871,014	Nov. 12	1824	498	131	620
Welsh, Darrell A. (See Stocker and Welsh.)						
Welsh, Theodore A., Philadelphia, Pa. Printing and developing dark cabinet	870,751	Nov. 12	1410	382	131	490
Westinghouse Air Brake Company. (See Turner, Walter V., assignor.)						
Westinghouse Electric & Manufacturing Company. (See Cooper, William, assignor.)						
Westinghouse Electric & Manufacturing Company. (See Storer, Norman W., assignor.)						
Weston, Edward, Newark, N. J. Means for supporting shafting	870,861	Nov. 12	1573	433	131	541
Weston, Edward, Newark, N. J. Factory building	870,917	Nov. 12	1666	458	131	573
Weston, George. (See Weston, William E. and G.)						
Weston, James H., assignor of two-thirds to J. F. Wagner and G. A. Wilford, Tamaqua, Pa. Chain	870,704	Nov. 12	1317	360	131	464
Weston, William E. and G., Kansas City, Mo. Mail-box	870,654	Nov. 12	1244	337	131	440
Whitall Tatum Company. (See Meinecke and Hogan, assignors.)						
White, Francis M., Newkirk, Okla. Ter. Clothes-line prop	870,752	Nov. 12	1412	383	131	490
Whitmore, Fred A., Philadelphia, Pa., assignor to Crompton & Knowles Loom Works. Printing-drum	870,918	Nov. 12	1669	458–60	131	574
Wickstrum, Peter M., Lincoln, Nebr. Drinking-fount for poultry	871,015	Nov. 12	1826	499	131	620
Wickstrum, Peter M., Lincoln, Nebr. Incubator or brooder lamp	871,016	Nov. 12	1827	499	131	621
Widua, John. (See McIver and Widua.)						
Wiederhold, Oscar, Jersey City, N. J. Incandescent gas-lamp	870,753	Nov. 12	1413	383	131	490
Wightman, Richard, Mount Vernon, N. Y. Advertising device	870,705	Nov. 12	1318	360	131	464
Wilford, George A., *et al.* (See Weston, James H., assignor.)						
Wilkinson, Joseph A., Hiawatha, Kans. Machine for shelling corn	870,919	Nov. 12	1672	460	131	574
William J. Faul Co. (See Faul, Edwin L., assignor.)						
Williams, Alvin M., West Orange, N. J. Pyrographic burner	870,754	Nov. 12	1414	383	131	490
Williams, Henry M. (See Burger and Williams.)						
Willis, Henry M., Hempstead, N. Y. Combined pocket-knife and manicuring-tool	870,604	Nov. 12	1148	313	131	406
Willsea, Louis P., Rochester, N. Y. Centrifugal machine	870,655	Nov. 12	1245	338	131	440
Wilson, Garland D., Surveyor, W. Va. Gearing	870,605	Nov. 12	1149	313	131	406
Wilson, Thomas H. (See James and Wilson.)						
Winningham, John W., Seattle, Wash. Cutter-head setter	871,053	Nov. 12	1481	515	131	638
Witte, Albert, assignor of one-half to A. J. Redway, Cincinnati, Ohio. Means for supporting reinforcing-rods for cement structures	871,017	Nov. 12	1828	499	131	621
Wittier, William. (See Kindig, Samuel C., assignor.)						
Wm. L. Gilbert Clock Company. (See Alford, Frank R., assignor.)						
Wood, John E., Nottingham, England. Water heater and purifier	870,920	Nov. 12	1673	461	131	575
Woodard, Hiram P., Douglas, Ariz. Ter. Tide or wave motor	870,706	Nov. 12	1319	361	131	464
Woodworth, Charles B., Newton, Mass. Detachable tread for pneumatic tires	870,656	Nov. 12	1246	338	131	440
Woodworth, Charles B., Newton, Mass. Traction attachment for vehicle-tires	870,657	Nov. 12	1247	338	131	441
Wortman, George C., Wortman, Colo. Brake-operating mechanism	870,707	Nov. 12	1320	361	131	464
Wright, Rola F. (See Crispin and Wright.)						
Young, Arthur H. (See Palmgren and Young.)						
Zimmerman, Frank T., Auburn, Ind. Shaft-bearing	870,810	Nov. 12	1498	409	131	519
Zimmerman, Walter H., De Kalb, Ill. System of drip-water return	870,658	Nov. 12	1248	339	131	441

DESIGNS.

Name, residence, and design.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Cretors, Charles, Chicago, Ill. Vehicle-body	38,882	Nov. 12	131	665
Cretors, Charles, Chicago, Ill. Vehicle-body	38,883	Nov. 12	131	665
Cretors, Charles, Chicago, Ill. Vehicle-body	38,884	Nov. 12	131	665
Grossman, Henry, New York, N. Y. Hand-bag	38,881	Nov. 12	131	665
Habensack, Frederick, Sag Harbor, N. Y. Spoon, fork, or similar article	38,878	Nov. 12	131	664
Hillbom, Henrik, Wallingford, Conn. Back for mirrors, brushes, or similar articles	38,880	Nov. 12	131	665
Osborne, Charles, New York, N. Y. Handle for spoons, forks, or similar articles	38,879	Nov. 12	131	664

TRADE-MARKS.

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Althea Remedy Company, Fort Wayne, Ind. Liver remedies	66,091	Nov. 12	131	685
American Beverage Co., Atlanta, Ga. Ginger-ale	66,115	Nov. 12	131	685
American Beverage Co., Atlanta, Ga. Root-beer	66,116	Nov. 12	131	685
American Thread Company, Jersey City, N. J. Spool-cotton, sewing-cotton, and thread	66,117	Nov. 12	131	685
American Thread Company, Jersey City, N. J. Spool-cotton, sewing-cotton, and thread	66,118	Nov. 12	131	685
American Thread Company, Jersey City, N. J. Spool-cotton, sewing-cotton, and thread	66,119	Nov. 12	131	685

TRADE-MARKS—Continued.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
American Thread Company, Jersey City, N. J. Spool-cotton, sewing-cotton and thread	66,196	Nov. 12	131	687
American Wringer Company, New York, N. Y. Mangles	66,120	Nov. 12	131	685
American Wringer Company, New York, N. Y. Clothes-wringers and mangles	66,121	Nov. 12	131	685
American Wringer Company, New York, N. Y. Bench-wringers	66,122	Nov. 12	131	686
American Wringer Company, New York, N. Y. Clothes-wringers	66,123	Nov. 12	131	686
American Wringer Company, New York, N. Y. Clothes-wringers	66,124	Nov. 12	131	686
American Wringer Company, New York, N. Y. Clothes-wringers	66,125	Nov. 12	131	686
American Wringer Company, New York, N. Y. Clothes-wringers	66,126	Nov. 12	131	686
American Wringer Company, New York, N. Y. Clothes-wringers	66,127	Nov. 12	131	686
American Wringer Company, New York, N. Y. Clothes-wringers	66,128	Nov. 12	131	686
American Wringer Company, New York, N. Y. Clothes-wringers	66,129	Nov. 12	131	686
American Wringer Company, New York, N. Y. Clothes-wringers	66,130	Nov. 12	131	686
American Wringer Company, New York, N. Y. Clothes-wringers	66,131	Nov. 12	131	686
American Writing Paper Company, Holyoke, Mass. Writing and printing paper	66,092	Nov. 12	131	685
Batchelder, Mark D., Peoria, Ill. Ginger-ale and root-beer	66,132	Nov. 12	131	686
Big Four. (See Moore, Harrie G., assignor.)				
Billings, Frederick C., Milwaukee, Wis. Flanges for piano-actions	66,133	Nov. 12	131	686
Boston Artificial Leather Company, New York, N. Y. Artificial leather	66,093	Nov. 12	131	685
Bowen, Saml. B., Philadelphia, Pa. Portland cements	66,163	Nov. 12	131	687
Burroughs Adding Machine Co., Detroit, Mich. Adding and listing machines	66,134	Nov. 12	131	686
C. E. Conover Co., New York, N. Y. Dress-shields	66,164	Nov. 12	131	687
C. S. Morey Mercantile Company, Denver, Colo. Coffee	66,165	Nov. 12	131	687
Carleton Dry Goods Company, St. Louis, Mo. Knitted underwear	66,206	Nov. 12	131	688
Carter, George H., Plymouth, Pa. Paste for softening horses' hoofs	66,094	Nov. 12	131	685
Cavanagh & Sons, H. L., Chicago, Ill. Ironing-boards	66,135	Nov. 12	131	686
Charles Hewitt & Sons Co., Des Moines, Iowa. Canned salmon and canned oysters	66,166	Nov. 12	131	587
Charles Hewitt & Sons Co., Des Moines, Iowa. Certain cereal foods	66,167	Nov. 12	131	687
Courtney Shoe Co., St. Louis, Mo. Leather boots and shoes	66,095	Nov. 12	131	685
Covert Mfg. Co., Watervliet, N. Y. Certain metal articles	66,096	Nov. 12	131	685
Davis-Bridaham Drug Company, Denver, Colo. Certain surgical goods	66,197	Nov. 12	131	687
Davis Chemical Company, Denver, Colo. Laxative candy	66,097	Nov. 12	131	685
Del Gaizo, Vincenzo, Naples, Italy. Tomato-sauce	66,168	Nov. 12	131	687
Die Actiengesellschaft Apollinaris Brunnen, Neuenahr, Germany. Mineral water	66,136	Nov. 12	131	686
Eagle Roller Mill Company, New Ulm, Minn. Bread	66,169	Nov. 12	131	687
Eckardt, Christian, Hamburg, Germany. Dried, fresh, and preserved fruits and vegetable oils	66,170	Nov. 12	131	687
Eckardt, Christian, Hamburg, Germany. Dried, fresh, and preserved fruits and vegetable oils	66,171	Nov. 12	131	687
Erb, Ludwig G. B., New York, N. Y. Remedy for headache and neuralgia	66,098	Nov. 12	131	685
Falck, James S., Washington, D. C. Suppositories	66,099	Nov. 12	131	685
Forcat, Tomás S., New York, N. Y. Remedy for the treatment of leprosy	66,100	Nov. 12	131	685
Forcat, Tomás S., New York, N. Y. Remedy for the treatment of syphilis	66,101	Nov. 12	131	685
Franklinville Canning Co., Franklinville, N. Y. Canned fruits and vegetables	66,172	Nov. 12	131	687
Galena-Signal Oil Company, Franklin, Pa. Lubricating-oils	66,154	Nov. 12	131	686
Greif & Bro., L., Baltimore, Md. Certain clothing	66,155	Nov. 12	131	686
Gustav A. Moebs & Co., Detroit, Mich. Cigars	66,137	Nov. 12	131	686
Gustav A. Moebs & Co., Detroit, Mich. Cigars	66,138	Nov. 12	131	686
H. K. Muiford Company, Philadelphia, Pa. Preparation of bismuth	66,102	Nov. 12	131	685
Hearst, William R., New York, N. Y. Newspaper	66,156	Nov. 12	131	686
Hearst, William R., New York, N. Y. Newspaper	66,157	Nov. 12	131	686
Hohlfeld, Herman L., Philadelphia, Pa. Hammocks	66,139	Nov. 12	131	686
Hollenbach, Dietrich & Co., Reading, Pa. Whisky	66,103	Nov. 12	131	685
Hollingsworth & Co., Augusta, Ga. Canned tomatoes	66,173	Nov. 12	131	687
Holmes Keeler & Selleck Co., Norwalk, Conn. Canned vegetables and fruit	66,174	Nov. 12	131	687
Holmes Keeler & Selleck Co., Norwalk, Conn. Canned vegetables and fruit	66,175	Nov. 12	131	687
John V. Farwell Company, Chicago, Ill. Textile collars and shirts	66,158	Nov. 12	131	686
Johnson Educator Food Company, Boston, Mass. Certain cereal foods	66,176	Nov. 12	131	687
Korkemas & Co., R., New York, N. Y. Razors and razor-blades	66,198	Nov. 12	131	688
Littlejohn & Co., L., New York, N. Y. Gambier	66,104	Nov. 12	131	685
Mason, Albert G., Cleveland, Ohio. Sewing-machine heads and attachments	66,140	Nov. 12	131	686
Mayer, Joshua W., New York, N. Y. Precious stones and jewelry for personal wear	66,141	Nov. 12	131	686
Maywood Packing Co., Corning, Cal. Canned, dried, and fresh fruits and olive-oil	66,177	Nov. 12	131	687
Mein, William G., London, England. Metal casters	66,199	Nov. 12	131	688
Meisel, C., New York, N. Y. Certain musical instruments	66,159	Nov. 12	131	686
Meisel, Chas., New York, N. Y. Certain musical instruments	66,105	Nov. 12	131	685
Meisel, Chas., New York, N. Y. Certain musical instruments	66,142	Nov. 12	131	686
Mendel, Weinstock & Company, Louisville, Ky. Certain clothing	66,160	Nov. 12	131	686
Modoc Company, Chester, Pa. Certain oils and lubricants	66,161	Nov. 12	131	687
Moore, Harrie G., assignor to Big Four, Kansas City, Mo. Wagons and carriages	66,200	Nov. 12	131	688
Morton, Robert M., Detroit, Mich. Bread and cakes	66,178	Nov. 12	131	687
Mráz, Franz, Prague, Austria-Hungary. Food-preservatives	66,179	Nov. 12	131	687
Murphey, Robert O., New York, N. Y. Powdered yeast	66,180	Nov. 12	131	687
Mutual Drug Company, Cleveland, Ohio. Consumption remedies	66,106	Nov. 12	131	685
New Kensington Distilling Co., New Kensington, Pa. Whisky	66,107	Nov. 12	131	685
Northwestern Fisheries Company, Seattle, Wash. Canned fish	66,181	Nov. 12	131	687
Novelty Candy Co., New York, N. Y. Candy	66,182	Nov. 12	131	687
Paragon Suspender Company, Atlanta, Ga. Suspenders	66,201	Nov. 12	131	688
Parker & Thomes Co., Portland, Me. Shirt-waists, shirt-waist suits, and wrappers	66,162	Nov. 12	131	687
Pellow, Norman, Grand Rapids, Mich. Sizing plastic material	66,202	Nov. 12	131	688
Penn Tobacco Co., Wilkes-Barre, Pa. Smoking and chewing tobacco	66,143	Nov. 12	131	686
Peter Henderson & Co., New York, N. Y. Agricultural and horticultural seeds	66,183	Nov. 12	131	687
Peter Henderson & Co., New York, N. Y. Lawn-mowers	66,207	Nov. 12	131	688
Planten, John R., New York, N. Y. Certain medicine	66,108	Nov. 12	131	685
Pompeian Mfg. Co., Cleveland, Ohio. Certain pharmaceutical preparations	66,109	Nov. 12	131	685
Pratt, George K., New Orleans, La. Antiseptic powder	66,110	Nov. 12	131	685
Procter & Gamble Company, Ivorydale and Cincinnati, Ohio, and Kansas City, Kans. Soap	66,144	Nov. 12	131	687
Ruby & Co., S., Chicago, Ill. Cigarette-paper	66,145	Nov. 12	131	687
Safety Emery Wheel Company, Springfield, Ohio. Emery-wheels	66,184	Nov. 12	131	688
Safford, Harry E., Allegheny, Pa. Hand chemical fire-extinguishers	66,203	Nov. 12	131	688
Sanford, Vincent, Toledo, Ohio. Teas	66,185	Nov. 12	131	687
Sawyer Belting Company, Cleveland, Ohio. Dressings for canvas, leather, and rubber belts	66,186	Nov. 12	131	687
Schilling & Co., A., San Francisco, Cal. Flavoring extracts	66,208	Nov. 12	131	688
Seidel, George E., Richmond, Ind. Folding storm-fronts for vehicles	66,209	Nov. 12	131	688

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Sherman, Horace E., Boston, Mass. Wheat-flour	66,187	Nov. 12	131	687
St. Louis Coffee and Spice Mills, St. Louis, Mo. Baking-powder	66,112	Nov. 12	131	685
St. Louis Coffee and Spice Mills, St. Louis, Mo. Coffee and tea	66,188	Nov. 12	131	687
St. Louis Coffee and Spice Mills, St. Louis, Mo. Spices and flavoring extracts	66,189	Nov. 12	131	687
Stewart & Co., Baltimore, Md. Ladies' leather boots and shoes	66,111	Nov. 12	131	685
Stromberg-Carlson Telephone Mfg. Company, Rochester, N. Y. Certain electrical instruments	66,210	Nov. 12	131	688
Summit Foundry Co., Geneva, N. Y. Stoves, ranges, and furnaces and parts thereof	66,204	Nov. 12	131	688
Thompson Milling Company, Lockport, N. Y. Wheat-flour	66,190	Nov. 12	131	687
Tonnancour, C. G. de Montreal, Quebec, Canada. Blacking and dressing for boots, shoes, and leather	66,191	Nov. 12	131	687
Wabash Baking Powder Company, Wabash, Ind. Baking-powder and bicarbonate of soda	66,113	Nov. 12	131	685
Wabash Baking Powder Company, Wabash, Ind. Corn-starch	66,193	Nov. 12	131	687
Wabash Baking Powder Company, Wabash, Ind. Catsup and flavoring extracts	66,194	Nov. 12	131	687
Warren-Ehret Company, Philadelphia, Pa. Coal-tar cement	66,146	Nov. 12	131	686
Warren-Ehret Company, Philadelphia, Pa. Coal-tar cement	66,195	Nov. 12	131	687
Watkins Packing Co., Odessa, Del. Canned corn	66,205	Nov. 12	131	688
Werle & Co., Rheims, France. Champagne	66,147	Nov. 12	131	686
Werle & Co., Rheims, France. Champagne	66,148	Nov. 12	131	686
Werle & Co., Rheims, France. Champagne	66,149	Nov. 12	131	686
Werle & Co., Rheims, France. Champagne	66,150	Nov. 12	131	686
Werle & Co., Rheims, France. Champagne	66,151	Nov. 12	131	686
Werle & Co., Rheims, France. Champagne	66,152	Nov. 12	131	686
Weston, John A., Newark, N. J. Wooden ladders, step-ladders, and flagpoles	66,153	Nov. 12	131	686
Whelan, Mary C., Washington, D. C. Certain toilet preparations	66,211	Nov. 12	131	688
Yerba Yutu Remedy Company, Los Angeles, Cal. Medicinal preparation for purifying the blood	66,114	Nov. 12	131	685

LABELS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Page.
Abrams, R. & A., New York, N. Y. "Robalo." (For Cigars.)	13,870	Nov. 12	131	689
Derma Viva Co., Chicago, Ill. "Derma Viva." (For Toilet Preparations)	13,875	Nov. 12	131	689
Doolittle, Elizabeth, Salina, Kans. "Quickheal." (For Ointments for External Use for Subduing Inflammation)	13,876	Nov. 12	131	689
Gillies & Co., Edwin J., New York, N. Y. "Good Health." (For Coffee)	13,869	Nov. 12	131	689
Martinez, Pedro P., Dallas, Tex. "Mexican Commerce." (For Cigars)	13,871	Nov. 12	131	689
Ruegg, John J., Clifton, N. J. "Lava Soup." (For a Remedy in Stomach Troubles)	13,874	Nov. 12	131	689
Schmidt & Co., New York, N. Y. "Extenso." (For Cigars)	13,872	Nov. 12	131	689
Schmidt & Co., New York, N. Y. "Estemento." (For Cigars)	13,873	Nov. 12	131	689

PRINTS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Page.
Beal, Samuel R., Adrian, Mich. "Swastika." (For Game-Cards)	2,155	Nov. 12	131	689
Cream of Wheat Co., Minneapolis, Minn. "Our Platform." (For a Breakfast Food)	2,154	Nov. 12	131	689
Russell and Co., Cambridge, Mass. "Anona Chocolates." (For Chocolates)	2,151	Nov. 12	131	689
United States Playing Card Company, Norwood, Ohio. "Swastika and Bid Backs, Five Hundred Playing Cards." (For Playing-Cards)	2,152	Nov. 12	131	689
United States Playing Card Company, Norwood, Ohio. "54 Initial Playing Cards." (For Playing-Cards)	2,153	Nov. 12	131	689

TRADE-MARKS.

(REGISTRATION APPLIED FOR.)

Name, residence, and title.	Serial No.	Date.	Official Gazette. Vol.	Page.
A. C. Staley Mfg. Co., South Bend, Ind. Knitted underwear	25,190	Nov. 12	131	671
A. F. Beckmann & Co., New York, N. Y. Canned fruits and vegetables, vinegar, and pickles	30,303	Nov. 12	131	680
A. F. Beckmann & Co., New York, N. Y. Canned fruits and vegetables, pork and beans, jams, &c.	30,304	Nov. 12	131	680
A. J. Reach Company, Philadelphia, Pa. Base-balls	30,573	Nov. 12	131	683
Allmens Distilling Company, Kansas City, Mo. Cigars	28,447	Nov. 12	131	672
Alvarado, Aristoteles, New York, N. Y. Remedies for coughs and colds	30,192	Nov. 12	131	678
American Axe & Tool Co. inc., Glassport, Pa. Grass-hooks, axes, hatchets, &c.	29,564	Nov. 12	131	674
Anger Baking Company, New York, N. Y. Egg-noodles and macaroni	29,781	Nov. 12	131	674
Arnold, Hugh, Kansas City, Mo. Bank-checks	28,989	Nov. 12	131	672
Ashcroft, Ralph W., New York, N. Y. Whisky	29,314	Nov. 12	131	672
Ashcroft, Ralph W., New York, N. Y. Smoking-tobacco	29,315	Nov. 12	131	672
Ashcroft, Ralph W., Brooklyn, N. Y. Smoking-tobacco	29,532	Nov. 12	131	673
Ashcroft, Ralph W., Brooklyn, N. Y. Whisky	29,533	Nov. 12	131	674
Atmore & Son, Philadelphia, Pa. Mince-meat	14,810–11	Nov. 12	131	668–9
B. F. Goodrich Company, Akron, Ohio. Rubber or partly-rubber belting	30,431	Nov. 12	131	682
B. S. Flersheim Mercantile Co., Kansas City, Mo. Bitters and medicinal cordials	29,449	Nov. 12	131	673
Baines, Frederick E. V., Blackheath, England. Pencil-sharpening machines	29,128	Nov. 12	131	672
Bennett Company, Omaha, Nebr. Baking-powder	30,179	Nov. 12	131	678
Bernard, Glen A., Seattle, Wash. Printed books, pamphlets, and magazines	20,419	Nov. 12	131	669
Beston, Rafala S., New York, N. Y. Canned pears	8,094	Nov. 12	131	668
Bleistiftfabrik vormals Johann Faber, Actien-Gesellschaft, Nuremberg, Germany. Pencils, erasing-rubber, and penholders	9,818	Nov. 12	131	668
Bleistiftfabrik vormals Johann Faber, Actien-Gesellschaft, Nuremberg, Germany. Pencils and erasing-rubber	9,819	Nov. 12	131	668
Bleistiftfabrik vormals Johann Faber, Actien-Gesellschaft, Nuremberg, Germany. Pencils	9,820	Nov. 12	131	668
Boas, Rodrigues et Cie., Paris, France Acetylene and oil lighting apparatus	26,448	Nov. 12	131	671
Boott Mills, Lowell, Mass. Cotton piece goods	21,958	Nov. 12	131	669
Boott Mills, Lowell, Mass. Cotton piece goods	21,966	Nov. 12	131	670
Boott Mills, Lowell, Mass. Cotton piece goods	21,980	Nov. 12	131	670
Boott Mills, Lowell, Mass. Cotton piece goods	22,470	Nov. 12	131	670
Brackett & Co., W. D., Boston, Mass. Leather boots and shoes	30,413	Nov. 12	131	682
Brunor, Emile, New York, N. Y. Peroxid of hydrogen, sulfur, ammonia, &c.	20,494	Nov. 12	131	669
Brunor, Emile, New York, N. Y. Cod-liver oil, pills, perfumes, &c.	23,813	Nov. 12	131	670
Cable Company, Chicago, Ill. Organs, pianos, and piano-players	30,499–500	Nov. 12	131	682
Capewell Horse Nail Company, Hartford, Conn. Horseshoe-nails	30,315	Nov. 12	131	681
Cartun, Jacob, Philadelphia, Pa. Whisky	9,337	Nov. 12	131	668
Cartun, Jacob, Philadelphia, Pa. Brandy	9,338	Nov. 12	131	668
Commercial Shirt Co., New York, N. Y. Outer shirts	30,004	Nov. 12	131	676
Cortwright Company, New York, N. Y. Whisky	30,542	Nov. 12	131	683
Cortwright Company, New York, N. Y. Whisky	30,544	Nov. 12	131	683
Crossman Company, New York, N. Y. Brooches, lorgnette and neck chains, &c.	30,043	Nov. 12	131	676
Daigleish, William D., Glenbrook, Conn. Gold paste for decorating crockery, &c.	29,856	Nov. 12	131	675
Dawson & Co., R. T., Baltimore, Md. Whisky	30,493	Nov. 12	131	682
De Stearine Kaarsenfabriek Gouda, Gouda, Holland. Pitch	30,171	Nov. 12	131	678
Del Gaizo, Vincenzo, Naples, Italy. Tomato-sauce	22,551	Nov. 12	131	670
Deperdussin, Hippolyte, Paris, France, assignor to Pasteur Vaccine Company Limited, London, England. Germicides and disinfectants	29,345	Nov. 12	131	672
Dewsbury, Alfred, Walsall, England. Bridle-bits, stirrups, spurs, &c.	29,714	Nov. 12	131	674
Domestic Science Mfg. Co., Boston, Mass. Flavoring extracts	29,553	Nov. 12	131	674
Eastman Kodak Co., Rochester, N. Y. Photographic supplies	30,508	Nov. 12	131	682
Edwin C. Burt Company, Brooklyn, N. Y. Leather boots, shoes, and slippers	30,267	Nov. 12	131	680
Ellet-Kendall Shoe Company, Kansas City, Mo. Leather boots, shoes, and leggings	29,472	Nov. 12	131	673
Esmond Mills, Enfield, R. I. Blankets	30,396	Nov. 12	131	681
F. Reddaway & Co., Limited, Pendleton, England. Certain belting	29,445	Nov. 12	131	673
Farbenfabriken of Elberfeld Co., New York, N. Y. Medical magazine	29,833	Nov. 12	131	675
Fargo Bottling Works Co., Fargo, N. D. Beer	5,208	Nov. 12	131	667
Fashion Publicity Company, New York, N. Y. Boots, shoes, slippers, and sandals	30,533	Nov. 12	131	683
Fiebeger, Frank, Akron, Ohio. Heating-furnaces	27,378	Nov. 12	131	671
G. W. Simpson & Co., Boston, Mass. Butter and cream	30,384	Nov. 12	131	681
Garrett-Williams Co., Baltimore, Md. Whisky	28,940	Nov. 12	131	672
Geo. Borgfeldt & Co., New York, N. Y. Tennis-balls	30,398	Nov. 12	131	681
Globe Tobacco Company, Detroit, Mich. Tobacco, cigars, and cigarettes	22,673	Nov. 12	131	670
Halpen, Green & Co., Philadelphia, Pa. Table-syrup	30,291	Nov. 12	131	680
Hannah & Hogg, Chicago, Ill. Olive-oil	30,354	Nov. 12	131	681
Harrell, Earle G., Camilla, Ga. Remedy for catarrh, hay-fever, &c.	26,406	Nov. 12	131	671
Hazen-Brown Co., Brockton, Mass. Rubber and leather cements and adhesive pastes	29,959–60	Nov. 12	131	675
Hibbard, Spencer, Bartlett & Company, Chicago, Ill. Washing-machines and parts thereof	29,900	Nov. 12	131	675
Hyde Manufacturing Co., Southbridge, Mass. Certain cutlery and edge-tools	29,554	Nov. 12	131	674
Illinois Canning Co., Camden, N. J., and Hoopeston, Ill. Canned vegetables	30,231–6	Nov. 12	131	679
Illinois Canning Co., Camden, N. J., and Hoopeston, Ill. Canned vegetables	30,239–40	Nov. 12	131	680
Illinois Canning Co., Camden, N. J., and Hoopeston, Ill. Canned vegetables	30,244	Nov. 12	131	680
Illinois Canning Co., Camden, N. J., and Hoopeston, Ill. Canned vegetables	30,246–50	Nov. 12	131	680
James R. Crompton & Brothers, Limited, Elton Paper Mills, near Bury, England. Wall, velvet crape, and toilet paper	30,515	Nov. 12	131	683
Jeffery-Dewitt Company, Newark, N. J. Spark-plugs	30,028	Nov. 12	131	676
Johnson, John B., Kansas City, Mo. Hair-tonic	29,920	Nov. 12	131	676
Jonas & Colver, Limited, Sheffield, England. Steel and iron	29,475	Nov. 12	131	673
Jonas & Colver, Limited, Sheffield, England. Machine-knives, tools, drills, &c.	29,476	Nov. 12	131	673
Kelly Milling Company, Wm., Hutchinson, Kans. Wheat-flour	25,705	Nov. 12	131	671
Kraut & Finver Bros., New York, N. Y. Umbrellas and parasols	30,358	Nov. 12	131	681
Levinson, Solomon, Seattle, Wash. Stomach-bitters	30,147	Nov. 12	131	678
Libby, McNeill & Libby, Chicago, Ill. Marmalades, jellies, jams, fruit-sauces, &c.	25,206	Nov. 12	131	671
Lipman, Morris H., New York, N. Y. Cigars	30,217–18	Nov. 12	131	679
Loring Q. White Company, Brockton, Mass. Leather boots and shoes	29,917	Nov. 12	131	675
Lowden, Geo. W., Savannah, Ga. Canned oysters	30,491	Nov. 12	131	682
M. Lindsay Rubber Manufacturing Company, New York, N. Y., and Washington, D. C. Rubber toys	30,137	Nov. 12	131	678
MacDonald Co., S. A., Los Angeles, Cal. Washing-tablets	28,566	Nov. 12	131	672
Mason City Brick & Tile Company, Mason City, Iowa. Drain-tile, sewer-pipe, bricks, &c.	29,752	Nov. 12	131	674
McKenna, Charles E., Providence, R. I. Soap	30,530	Nov. 12	131	683
Meigs & Company Inc., Springfield, Mass. Leather boots and shoes	30,042	Nov. 12	131	676
Mendez, Lucy J., Brooklyn, N. Y. Cigars	30,513	Nov. 12	131	682

TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

Name, residence, and title.	Serial No.	Date.	Official Gazette. Vol.	Page
Mercer Drug Company, Trenton, N. J. Medicine	29,369	Nov. 12	131	672
Moos & Co., New York, N. Y. Olive-oil, peas, mushrooms, carrots, &c	7,220	Nov. 12	131	672
Morgan & Wright, Detroit, Mich. Rubber tires	29,397	Nov. 12	131	673
Morgan & Wright, Detroit, Mich. Rubber packing	29,400	Nov. 12	131	673
Morse, Felicia V., Canton, Mass. Lubricants and lubricating material	22,272	Nov. 12	131	670
Nestlé & Anglo-Swiss Condensed Milk Co., Cham, Switzerland. Cocoa and chocolate with milk	30,494	Nov. 12	131	682
North Coast Dry Kiln Co., Seattle, Wash. Hoisting machinery	25,379	Nov. 12	131	671
Norton & Curd Coffee Co., Louisville, Ky. Coffees	30,168	Nov. 12	131	678
Old Bleach Linen Company, Limited, Randalstown, Ireland. Linen piece goods	20,587	Nov. 12	131	669
Paddock & Fowler Company, New York, N. Y. Raisins	16,344	Nov. 12	131	669
Pastene & Co., P., Boston, Mass. Macaroni	29,985	Nov. 12	131	676
Pastene & Co., P., Boston, Mass. Pepper, artichokes, and dry mushrooms	29,987	Nov. 12	131	676
Pasteur Vaccine Company. (See Deperdussin, Hippolyte, assignor.)				
Patrick, Francis A., Palestine, Tex. Remedy for bowel diseases	27,838	Nov. 12	131	672
Perry Mason Company, Boston, Mass. Story-papers and periodical magazines	3,462	Nov. 12	131	667
Printz Biederman Co., Cleveland, Ohio. Coats, capes, jackets, dresses, &c	29,410	Nov. 12	131	673
Rhein, Lizzie E. V., New York, N. Y. Tooth powders and pastes	28,946	Nov. 12	131	672
Scandinavian Fur & Leather Co., New York, N. Y. Leather lap-robes and boots	29,535	Nov. 12	131	674
Schopf, Abraham B., Philadelphia, Pa. Candy	28,754	Nov. 12	131	672
Schwarcz & Co., Max M., New York, N. Y. Women's cloaks, skirts, and suits	29,796	Nov. 12	131	675
Siegel Cooper & Co., Chicago, Ill. Flours	5,414	Nov. 12	131	667
Slimmer & Company, M. D., Chicago, Ill. Acid compounds for laundry sours	28,640	Nov. 12	131	672
Smith Hogg & Co., New York, N. Y. Cotton piece goods	30,088–93	Nov. 12	131	677
Southern Cotton Oil Company, Jersey City, N. J.; New York, N. Y.; Savannah, Ga., and Gretna, La. Mixture of vegetable oil and animal fat	10,899	Nov. 12	131	668
Southern Cotton Oil Company, Jersey City, N. J.; New York, N. Y.; Savannah, Ga., and Gretna, La. Mixture of vegetable oil and animal fat	30,216	Nov. 12	131	679
Stanley Rule & Level Company, New Britain, Conn. Planes, shapers, scrapers, &c	29,748	Nov. 12	131	674
Ste. de la Distillerie du Supreme Fecamp, Fécamp, France. Liqueurs or cordials	12,932	Nov. 12	131	668
Strauss, Pritz & Co., Cincinnati, Ohio. Whisky	20,195	Nov. 12	131	669
Strohmeyer & Arpe Company, New York, N. Y. Olive-oil	30,332	Nov. 12	131	681
Strohmeyer & Arpe Company, New York, N. Y. Salad-oil	30,333	Nov. 12	131	681
Susquehanna Silk Mills, New York, N. Y. Silk piece goods	21,904	Nov. 12	131	669
Susquehanna Silk Mills, New York, N. Y. Silk and silk-mixed piece goods	30,201–2	Nov. 12	131	679
T. W. Armstrong Co., New York, N. Y. Abrasive metal-polishes	30,040	Nov. 12	131	676
Teddy Bear Card Co., Erie, Pa. Card games	30,488	Nov. 12	131	682
Texas Star Flour Mills, Galveston, Tex. Wheat-flour	29,652	Nov. 12	131	674
Thornton & Chester Milling Company, Buffalo, N. Y. Wheat-flour	29,715	Nov. 12	131	674
Tilton & Keeler, New York, N. Y. Cotton piece goods	30,156	Nov. 12	131	678
Ulrici, Charles J., New York, N. Y. Medicinal wine	29,522	Nov. 12	131	673
United States Graphite Company, Saginaw, Mich. Silver-lead or plumbago foundry-facings, &c	30,406	Nov. 12	131	681
Vanduzen, George W., Cincinnati, Ohio. Brass castings	30,016	Nov. 12	131	676
W. W. Harper Co., Zanesville, Ohio. Coffee	30,410	Nov. 12	131	681
Wayne Shoe Manufacturing Company, Fort Wayne, Ind. Leather shoes	30,110–13	Nov. 12	131	677–8
Wertheimer & Co., Ben., New York, N. Y. Bonnet and hat frames	29,448	Nov. 12	131	673
West End Wine & Spirits Co., Boston, Mass. Gin	30,356	Nov. 12	131	681
Western Leather Mfg. Co., Chicago, Ill. Leather machine-cases, saddle-bags, &c	24,881	Nov. 12	131	671
White, Albert R., Philadelphia, Pa. Medicines for coughs and colds	20,169	Nov. 12	131	669
Wright's Indian Vegetable Pill Company, New York, N. Y. Remedy for indigestion	29,971	Nov. 12	131	675
Wright's Indian Vegetable Pill Company, New York, N. Y. Remedy for gonorrhea, gleets, &c	29,973	Nov. 12	131	675
Wright's Indian Vegetable Pill Company, New York, N. Y. Remedy to produce sleep, relieve pain, &c	29,974	Nov. 12	131	676
Wright's Indian Vegetable Pill Company, New York, N. Y. Remedy for worms	29,975	Nov. 12	131	676
Yankee Shirt Co., New York, N. Y. Outer shirts	29,870	Nov. 12	131	675

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED ON THE 12TH DAY OF NOVEMBER, 1907.

Invention.	Name.	No.	Date.	Monthly volume. Specification.	Drawing.	Official Gazette. Volume.	Page.
Account-register	A. F. Staples and C. W. Potter	870,594	Nov. 12	1123	307–8	131	396
Addressing-machines. Type-carrying belt for	F. A. Harrison	870,778	Nov. 12	1449	392	131	503
Advertising device	R. Wightman	870,705	Nov. 12	1318	360	131	464
Aerial machine	B. Connolly	870,936	Nov. 12	1710	469	131	584
Alarm: *See* Burglar-alarm. Low-water alarm.							
Alarm-box attachment	L. G. Holden	870,963	Nov. 12	1755	478	131	599
Amalgamator	G. E. Paullins	870,643	Nov. 12	1223	332	131	493
Annealing-box	J. B. Henry	870,558	Nov. 12	1077	293	131	380
Anti-rail-spreading device and gage	Z. L. Pierce	870,842	Nov. 12	1547	425	131	533
Antisiphon-trap	J. C. Lauth	870,733	Nov. 12	1365	373	131	479
Apple-box press	J. McCaughan	870,683	Nov. 12	1284	351	131	452
Arch-supporter	C. L. Austin, Jr.	870,661	Nov. 12	1251	339	131	442
Automobile attachment	Z. G. Sholes	870,908	Nov. 12	1652	455	131	567
Automobile-roadway	L. S. Hackney	870,775	Nov. 12	1445	391	131	502
Automobiles. Means to record the speed of	W. A. Cheesebro	871,032	Nov. 12	1848	506–7	131	628
Axle-box cellar	F. B. Harrison	870,953	Nov. 12	1735	475	131	593
Axle-lubricator	A. B. Day	870,941	Nov. 12	1718	470	131	587
Axle-wheel coupling	J. H. Snuggs	870,853	Nov. 12	1564	430	131	539
Bag: *See* Feed-bag.							
Bag-holder	W. M. Renne	870,687	Nov. 12	1290	352	131	453
Bait. Artificial	W. E. Davis	871,057	Nov. 12	1887	517	131	640
Bank. Portable	J. B. Poore	870,843	Nov. 12	1548	425	131	534
Bar: *See* Boring-bar.							
Barium oxid. Producing porous	H. Schulze	870,691	Nov. 12	1296	354	131	455
Barrel-follower	C. Kuheim	870,729	Nov. 12	1359	371	131	477
Base-board	A. M. Bryan	871,028	Nov. 12	1844	505	131	626
Bath apparatus	J. B. Stockton	871,074	Nov. 12	1908	523	131	647
Baths, &c. Head for shower	W. Attlesey	870,924	Nov. 12	1678	462	131	576
Battery: *See* Storage battery.							
Beam. Reinforced steel	E. Swensson	871,075	Nov. 12	1910	523	131	647
Bearing	F. W. Schoenberger	870,799	Nov. 12	1477	399	131	513
Bearing. Shaft	F. T. Zimmerman	870,810	Nov. 12	1498	409	131	519
Bed	G. W. Bent	870,663	Nov. 12	1253	340	131	442
Bed-canopy	C. D. Brumley	870,541	Nov. 12	1049	286	131	370
Bed-pan	C. W. Meinecke and D. Hogan	870,984	Nov. 12	1700	467	131	609
Beer-tapper	R. B. Spikes	871,073	Nov. 12	1907	522	131	647
Beeswax separator and purifier	G. B. Savage	871,046	Nov. 12	1872	512	131	635
Belt-clamping tool	B. T. Fritts	871,062	Nov. 12	1893	518	131	642
Bicycle. Motor	F. P. Lindley	870,834	Nov. 12	1535	421–2	131	530
Binder. Temporary	L. M. Morden	870,837	Nov. 12	1540	422	131	532
Blind. Awning	G. W. Pearson	871,044	Nov. 12	1868	511	131	634
Block: *See* Brake-block. Paving-block.							
Board: *See* Base-board. Washboard.							
Boat	C. H. Myers	870,738	Nov. 12	1370	375	131	480
Boat. Life	R. A. Brown	870,928	Nov. 12	1695	465–6	131	581
Bobbin-holder	J. Pearson	870,743	Nov. 12	1402	379	131	486
Bobbins. Apparatus for applying expansible rings to	F. C. Hodgman and C. L. Bailey	870,960	Nov. 12	1746	477–8	131	596
Boiler: *See* Washboiler.							
Boiler-cleaner	I. C. Gray	870,773	Nov. 12	1443	391	131	501
Boiler cleaner. Steam-engine	I. C. Gray	870,774	Nov. 12	1444	391	131	502
Boiler-tube-scarfing machine	C. H. Meyers and E. Loudenslager	870,734	Nov. 12	1365	373	131	479
Boiling and distilling apparatus	R. Planckh	870,747	Nov. 12	1407	381	131	488
Bolt: *See* Toggle-bolt.							
Bolt-lock	O. Cullman	870,547	Nov. 12	1059	289	131	373
Book-handle	R. Hinckley	870,958	Nov. 12	1743	477	131	595
Book. Painting	R. H. Garman	870,771	Nov. 12	1440	390	131	500
Bookcase and folding bed. Combined	W. Freedmann	870,947	Nov. 12	1728	473	131	590
Boot-cleaner	A. C. Houghton	870,679	Nov. 12	1277	348	131	449
Boot or shoe	F. W. Homan	870,783	Nov. 12	1453	394	131	505
Boring-bar	W. Chase, Jr.	871,031	Nov. 12	1847	506	131	627
Bottle	D. J. Higginbotham	870,956	Nov. 12	1741	476	131	595
Bottle attachment. Non-refilling	E. J. Clayton	870,932	Nov. 12	1703	467	131	583
Bottle-stopper	J. A. Moller, Jr.	871,041	Nov. 12	1862	570	131	632
Bottle-washing machine	P. D. Laible	870,730	Nov. 12	1360	372	131	477

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Box:							
See Annealing-box. Journal-box. Hat-box. Mail-box.							
Box-filling machine	A. L. F. Mitchell	870,895	Nov. 12	1628	445–7	131	558
Braiding-machine	F. Thun	871,004	Nov. 12	1814	494–5	13c	617
Brake:							
See Fluid-pressure brake. Vehicle-brake.							
Brake-block	W. O. Blair and M. J. Scanlan	870,711	Nov. 12	1326	363	131	467
Brake-operating mechanism	G. C. Wartman	870,707	Nov. 12	1320	361	131	464
Bread-cutter	F. J. Hassell and R. S. Cunningham.	870,626	Nov. 12	1197	323	131	425
Broom	W. Fanckboner	870,717	Nov. 12	1340	365–6	131	471
Bucket and operating mechanism. Grab-	H. P. Andresen	870,812	Nov. 12	1501	410–11	131	520
Bucket. Combined feed and water	J. F. Alexander	870,660	Nov. 12	1250	339	131	441
Burglar-alarm	H. R. Lassen	870,732	Nov. 12	1364	373	131	479
Burner:							
See Gas-burner. Pyrographic burner. Oil-burner.							
Button	I. Kallwoda	870,725	Nov. 12	1354	369	131	475
Button	E. Shantz	870,907	Nov. 12	1652	454	131	567
Buttonhole-strip	L. S. Newcomb	870,988	Nov. 12	1794	489	131	611
Cabinet. Compositor's bracket-	F. J. Walker	870,601	Nov. 12	1143	312	131	404
Cabinet. Disappearing-table	W. H. Carroll	871,064	Nov. 12	1928	529	131	652
Cabinet. Ironer's	L. R. Trager	870,805	Nov. 12	1491	407	131	517
Camphene. Manufacture of	F. Koch	870,829	Nov. 12	1529	.....	131	529
Can:							
See Oil-can.							
Candlestick-lubricator	E. L. Faul	870,875	Nov. 12	1600	439	131	551
Candlestick. Miner's	G. D. Neill	870,638	Nov. 12	1217	329	131	432
Cane-mill roll. Sugar-	H. W. Aitken and W. Mackie	871,018	Nov. 12	1829	499–500	131	621
Car. Mine-	E. C. and F. L. Callahan	870,542	Nov. 12	1051	287	131	370
Car-mover	J. S. Mullenix	870,987	Nov. 12	1793	488	131	610
Car-roof	W. N. Garrett	870,721	Nov. 12	1348	368	131	473
Cars. Three-point contact-trolley timer for internal-combustion motor-	G. M. Hurley	871,064	Nov. 12	1895	519	131	643
Carpet-stretcher	I. Freed	870,670	Nov. 12	1267	345	131	446
Carpet-stretcher	I. Freed	870,671	Nov. 12	1268	345–6	131	446
Carriage handle. Adjustable and reversible baby-	J. J. McIntyre	870,739	Nov. 12	1371	375	131	481
Carriage-top-bow separator	A. H. Veazie	871,010	Nov. 12	1819	496	131	618
Carrier:							
See Cash-carrier. Manure-carrier. Litter-carrier.							
Case:							
See Packing-case.							
Cash-carrier. Cable	G. A. Amsden	870,756	Nov. 12	1416	384	131	491
Cash-carrier. Cable	G. A. Amsden	870,757	Nov. 12	1416	384	131	491
Cash-register	H. S. Hallwood	870,624	Nov. 12	1185	322–3	131	419
Cash-register. Multiple-drawer	H. S. Hallwood	871,094	Nov. 12	1940	534–6	131	650
Caster. Furniture-	C. F. Mosman	870,791	Nov. 12	1465	396	131	508
Casting-machines. Apparatus for holding and pouring metal into molds for	E. A. Custer	870,869	Nov. 12	1568	436	131	547
Cattle-treating apparatus	J. B. Eaton	870,766	Nov. 12	1427	387–8	131	495
Cement structures. Means for supporting reinforcing-rods for	A. Witte	871,017	Nov. 12	1828	499	131	621
Centrifugal machine	L. P. Willsea	870,655	Nov. 12	1245	338	131	440
Chain	J. H. Weston	870,704	Nov. 12	1317	360	131	464
Chair:							
See Reclining-chair.							
Chair and couch. Combined	J. M. Hamilton	870,776	Nov. 12	1446	392	131	502
Chair and garment-support. Combined	J. F. Fairbanks	870,874	Nov. 12	1598	438	131	550
Chair fan attachment. Rocking	D. J. Stein	870,911	Nov. 12	1657	456	131	569
Chimney construction	W. C. Hays	870,780	Nov. 12	1451	393	131	504
Chimney-cowl	M. Ludwig	870,976	Nov. 12	1779	484	131	606
Chopper:							
See Cotton-chopper.							
Christmas-tree support	J. Vogt	871,050	Nov. 12	1878	514	131	637
Chuck mechanism	A. Tindel	871,005	Nov. 12	1815	495	131	617
Cigarettes with tin-foil or the like. Apparatus for wrapping	A. Godfrey	870,623	Nov. 12	1182	321–2	131	418
Circles. Instrument for use in determining the functions of	A. S. H. Hitchings	870,959	Nov. 12	1744	477	131	596
Circuit-closing device. Time-controlled	C. A. Palmgren and A. H. Young	870,900	Nov. 12	1639	448–9	131	563
Clamp:							
See Gluing-clamp.							
Clasp	R. Falter	870,617	Nov. 12	1165	317	131	412
Cleaner:							
See Boiler-cleaner. Engine-boiler cleaner. Boot-cleaner,							
Cleaning system. Vacuum	F. J. Matchette and R. Raddatz	870,981	Nov. 12	1785	486	131	608
Clock	F. R. Alford	871,019	Nov. 12	1830	500	131	622
Clock. Workman's	C. L. Goughnour	871,087	Nov. 12	1938	531	131	656
Closet:							
See Water-closet.							
Closet-seat	F. H. Lindenberg	870,833	Nov. 12	1535	421	131	530
Closet-tank	F. H. Lindenberg	870,832	Nov. 12	1534	421	131	530
Clothes-line prop	F. M. White	870,752	Nov. 12	1412	383	131	490
Clothes-line stretcher	C. R. Fish	870,944	Nov. 12	1725	472	131	589
Clothes-pin	W. D. Watkins	870,703	Nov. 12	1316	360	131	463
Clutch	P. Daniel	871,033	Nov. 12	1849	507	131	628
Clutch. Friction-	A. Oskamp	870,642	Nov. 12	1222	331	131	433
Clutch. Mechanical	J. D. Taylor	870,912	Nov. 12	1657	456	131	569
Coal-handling device	E. E. Barrett	870,809	Nov. 12	1155	315	131	408
Coating disks and similar articles. Apparatus for	T. H. Macdonald and F. L. Capps	870,569	Nov. 12	1094	300	131	387
Coffee rethresher and polisher	E. C. Prieto	871,045	Nov. 12	1871	512	131	505
Collar. Dog-	G. Huff	870,784	Nov. 12	1455	394	131	648
Column. Reinforced steel	E. Swensson	871,076	Nov. 12	1911	523	131	577
Combination instrument	C. Schneider	870,851	Nov. 12	1558	428	131	380
Communion-cup	O. V. L. Harbour	870,556	Nov. 12	1075	293	131	622
Composing-machine	L. Allen	871,020	Nov. 12	1831	500–1	131	

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Concrete-mixer	A. W. Ransome	870,797	Nov. 12	1473	398	131	512
Concrete structure. Reinforced	A. Rogers	870,588	Nov. 12	1116	305	131	394
Conduit-sections. Apparatus for alining	J. T. Rice	871,067	Nov. 12	1899	519–20	131	644
Controller	F. W. Garrett	870,555	Nov. 12	1073	292	131	379
Controller	L. L. Tatum	870,595	Nov. 12	1125	308	131	397
Converter	R. Baggaley	870,925	Nov. 12	1679	462	131	576
Converters and furnaces. Means for increasing the air-blast of	R. Baggaley, C. M. Allen, and E. W. Lindquist.	871,079	Nov. 12	1913	524–6	131	649
Conveyer	C. Bradford	870,614	Nov. 12	1162	316	131	411
Cooking utensil	L. G. Fagersten	870,873	Nov. 12	1597	438	131	550
Cooling-bed and conveyer	J. A. Smitmans	870,592	Nov. 12	1121	306–7	131	396
Copper. Obtaining pure	L. Juman	870,786	Nov. 12	1461	.....	131	507
Copy-holder	H. E. Penney	870,991	Nov. 12	1797	489–90	131	612
Copying-press	E. Eulenstein	870,553	Nov. 12	1072	291–2	131	379
Cork-extractor	R. O. Toan	871,006	Nov. 12	1816	495	131	617
Corn-shelling machine	J. A. Wilkinson	870,919	Nov. 12	1672	400	131	574
Cotton-chopper	G. M. Head	871,035	Nov. 12	1853	508	131	629
Coupling:							
See Axle-wheel coupling. Pipe-coupling.							
Cover-closure	F. Bredel	870,540	Nov. 12	1048	286	131	369
Crusher:							
See Stone-crusher.							
Crutch	E. E. Hayden	870,676	Nov. 12	1273	347	131	448
Culinary utensil	H. F. Hall	870,880	Nov. 12	1606	440	131	553
Cultivating-tool	H. R. Hilton	870,957	Nov. 12	1742	476	131	595
Cup:							
See Communion-cup.							
Current generator. Alternating-	G. H. Cove	870,938	Nov. 12	1714	469	131	586
Current meter. Alternating-	R. C. Lanphier	870,970	Nov. 12	1768	482	131	603
Current motor. Alternating-	R. Lundell	870,892	Nov. 12	1621	444	131	557
Current motor. Alternating-	R. Lundell	870,893	Nov. 12	1623	444–5	131	557
Cutter:							
See Bread-cutter. Flue-cutter.							
Cutter-head setter	J. W. Winningham	871,053	Nov. 12	1881	515	131	638
Dam	W. L. Church	870,930	Nov. 12	1700	467	131	582
Dam	H. L. Coburn	870,934	Nov. 12	1706	468	131	583
Dams. Building	W. L. Church	870,806	Nov. 12	1580	435	131	543
Dental articulator	G. B. Snow	870,909	Nov. 12	1654	455	131	568
Dental-engine handpiece	J. F. Hardy	870,824	Nov. 12	1524	416	131	527
Dental-handpiece angle attachment	J. F. Hardy	870,825	Nov. 12	1525	416	131	528
Dentistry. Manufacture of a new material suitable for use in	O. Hoffmann	870,962	Nov. 12	1755	.....	131	599
Derrick	J. S. Allen, Jr.	870,922	Nov 12	1675	461	131	575
Desiccating apparatus. Air-drier for	E. W. Cooke	870,546	Nov. 12	1058	289	131	372
Die-stock	S. Jorgensen	870,828	Nov. 12	1528	418	131	529
Digester and cooker. Rotary	M. R. Kennedy	870,562	Nov. 12	1085	297	131	384
Digger:							
See Potato-digger.							
Display-easel	J. E. Twitchell	870,914	Nov. 12	1660	457	131	570
Display-rack	J. J. Karges	870,680	Nov. 12	1278	348–9	131	449
Display-rack	J. J. Karges	870,681	Nov. 12	1280	349–50	131	450
Display-rack	G. Warne	871,011	Nov. 12	1820	497	131	619
Ditching-machine	S. P. Stevenson. (Reissue)	12,717	Nov. 12	1961	538	131	663
Door and frame therefor for opening and closing air-tight chambers	C. H. Ocumpaugh	870,640	Nov. 12	1219	330	131	432
Door-controlling device	F. Schmitz	870,906	Nov. 12	1650	454	131	567
Door-manipulator	W. E. Raines	870,846	Nov. 12	1552	426	131	535
Door-securer	E. R. Fuchs	870,948	Nov. 12	1729	473–4	131	590
Door-securer	J. J. Ford, and F. and M. Hollister, Jr.	871,061	Nov. 12	1892	518	131	642
Drill:							
See Miner's drill. Rock-drill.							
Drilling appliance	H. Tyldesley	870,701	Nov. 12	1313	359	131	462
Drinking-fount. Poultry	P. M. Wickstrum	871,015	Nov. 12	1826	499	131	620
Dust-arrester	H. Lechtenberg	870,830	Nov. 12	1529	418	131	529
Dust-preventer	B. F. Schirmer	870,590	Nov. 12	1119	306	131	395
Elastic wheel	R. M. A. Leps	870,831	Nov. 12	1531	419–20	131	530
Electric-circuit-controlling mechanism	T. T. Fogel	870,946	Nov. 12	1727	473	131	590
Electric fixture	H. R. Mitchell	870,736	Nov. 12	1366	374	131	479
Electric machines. Series shunt for dynamo-	H. C. Beekley	870,611	Nov. 12	1159	316	131	410
Electric-storing device. Automatic	J. W. Ringer	870,688	Nov. 12	1291	352–3	131	454
Electrochemical analysis. Apparatus for	G. A. Guess and H. E. T. Haultain.	870,674	Nov. 12	1271	347	131	447
Electrode	G. A. Guess and H. E. T. Haultain.	870,675	Nov. 12	1272	347	131	447
Electrode for galvanic elements. Carbon	W. Möllenbruck and W. Dielmann	870,985	Nov. 12	1791	487	131	610
Electrotherapeutic instrument	B. Y. Boyd	870,927	Nov. 12	1693	465	131	580
Electrothermal protector	F. B. Cook	870,714	Nov. 12	1331	364	131	467
Elevator:							
See Wagon-elevator.							
Elevator-lock	F. W. Ruppman	870,589	Nov. 12	1117	305–6	131	394
Elevators. Floor-gate-actuating device for	E. O. Ungar	870,860	Nov. 12	1571	432	131	541
Engine:							
See Gas-engine. Internal-combustion engine. Rotary combustion-engine.							
Engine	W. O. Duntley and G. H. Hayes	871,086	Nov. 12	1933	529–31	131	654
Engine-lathe relieving mechanism	H. Baerbalck	870,759	Nov. 12	1418	385	131	492
Engine oil suction and collecting apparatus. Steam-	C. Orengo	870,579	Nov. 12	1106	303	131	391
Engine-starter	F. L. Orr	870,580	Nov. 12	1107	303	131	391
Engines. Electrical sparking device for explosive-	W. B. Hayden	870,954	Nov. 12	1736	475–6	131	593
Engines. Utilizing working fluid in jacketed	S. A. Reeve	870,585	Nov. 12	1113	304	131	390
Engines. Water-cooling apparatus for gas or gasolene	J. C. McLachlan	870,575	Nov. 12	1102	302	131	390
Envelop	J. Lord	870,974	Nov. 12	1777	484	131	605
Eraser. Pencil-	B. A. Payson	870,990	Nov. 12	1797	489	131	611
Excavator	J. P. Farrelly	870,943	Nov. 12	1723	471–2	131	589
Exhibiting device. Coin-	A. M. Huntington	870,885	Nov. 12	1614	442	131	554
Eyeglass-guard	A. W. Antholne	871,077	Nov. 12	1912	524	131	648
Fabric:							
See Woven fabric.							
Factory building	E. Weston	870,917	Nov. 12	1666	458	131	573

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Feed-bag	J. M. Darrow	870,818	Nov. 12	1516	413–14	131	525
Feed-rack	J. S. Smith	870,694	Nov. 12	1300	356	131	457
Feeding device. Poultry-	F. W. Ruggles	870,849	Nov. 12	1555	427–8	131	536
Fence-post	G. I. Gargett	870,554	Nov. 12	1073	292	131	379
Fence tie. Wire-	G. R. Mills	870,571	Nov. 12	1098	301	131	388
Fences with bars of all description. Machine for the manufacture of wire-netting or latticed	J. Peignon	870,901	Nov. 12	1641	449–51	131	563
Fender:							
See Locomotive-fender.							
Fiber-separating machine	V. A. de Perini	870,838	Nov. 12	1541	423	131	532
File. Druggist prescription-	I. Hotaling and W. A. Jacobs	871,089	Nov. 12	1941	531–2	131	657
Filter	G. M. Kneuper	870,631	Nov. 12	1203	325–6	131	427
Filters. Cleaning	G. M. Kneuper	870,727	Nov. 12	1356	370–1	131	476
Fire-alarm system	C. W. McDaniel	870,574	Nov. 12	1100	301	131	389
Fire-escape	F. W. Harkins	870,777	Nov. 12	1447	392	131	502
Fire-escape	R. Schapler and C. Wasser	870,998	Nov. 12	1807	492	131	615
Fire-extinguisher system	W. G. Allen and F. G. Feeley	871,021	Nov. 12	1834	501–2	131	623
Firearm. Automatic	C. Freeman	870,719	Nov. 12	1342	366–7	131	472
Firearm-sight	E. W. Evans	871,034	Nov. 12	1852	507	131	629
Flash-light apparatus	W. M. Murphy	870,897	Nov. 12	1635	447	131	562
Floor-cleaning machine	F. A. Lewis	870,633	Nov. 12	1208	327	131	428
Floor-surfacer	C. W. Miles	870,836	Nov. 12	1538	422	131	531
Floor-surfacing machine	G. S. Mathews	870,962	Nov. 12	1788	486	131	609
Flue-cutter	G. Sorenson	870,800	Nov. 12	1478	399	131	513
Fluid-pressure brake	W. V. Turner	870,806	Nov. 12	1493	408	131	518
Fluid-pressure-controlling means	F. E. Kinsman	870,630	Nov. 12	1201	325	131	427
Flushing device	J. D. Tschopik and N. G. Goreau	870,597	Nov. 12	1132	309	131	400
Fork:							
See Grappling-fork. Hay-fork.							
Fork and rake. Combination	R. T. Hazzard	870,955	Nov. 12	1740	476	131	595
Frame:							
See Loom heddle-frame.							
Furnace:							
See Smoke-consuming furnace.							
Furnace	E. H. Schwartz	871,070	Nov. 12	1903	521	131	645
Furnaces. Fuel-retarding member for	G. L. Junge	870,968	Nov. 12	1764	481–2	131	602
Gage:							
See Weir-gage.							
Game apparatus	J. H. Adams	870,606	Nov. 12	1151	313	131	407
Garbage-receptacle	T. H. Johnston	870,887	Nov. 12	1617	443	131	555
Garment	E. E. Jenne	870,967	Nov. 12	1763	481	131	601
Garment-fastener	H. Dickinson	870,549	Nov. 12	1061	289	131	373
Garment-fastener	M. Boylan	871,025	Nov. 12	1840	503	131	625
Gas-burner	E. M. Loftus	870,566	Nov. 12	1091	299	131	386
Gas-controller. Automatic	J. C. Landes	870,891	Nov. 12	1620	444	131	556
Gas-engine	J. J. Hogan	870,559	Nov. 12	1077	293–5	131	380
Gas-generator	R. M. Bidelman	870,537	Nov. 12	1044	285	131	368
Gas generator. Oil-	A. J. Riskey	870,798	Nov. 12	1477	398	131	513
Gas-meter. Prepayment	B. G. Waggner	870,600	Nov. 12	1141	311–12	131	404
Gate	D. A. Vandevort	870,650	Nov. 12	1237	336	131	437
Gate	G. A. Colvin	870,815	Nov. 12	1509	412	131	524
Gate-post	D. E. Stetler	870,698	Nov. 12	1305	357	131	459
Gear. Transmission-	A. F. Colgren	870,665	Nov. 12	1261	343–4	131	444
Gearing	G. D. Wilson	870,605	Nov. 12	1149	313	131	406
Gearing. Variable-speed	E. P. Cowles	870,715	Nov. 12	1333	364–5	131	469
Generator:							
See Current-generator. Gas-generator.							
Glass gathering and pressing machine	T. C. Steimer	870,649	Nov. 12	1232	304–5	131	436
Glass gathering and shaping machine	W. E. Bock	870,664	Nov. 12	1253	340–3	131	442
Gluing-clamp	A. C. Benson	870,761	Nov. 12	1420	386	131	492
Governor. Explosive-engine	L. C. Jackson	870,627	Nov. 12	1197	324	131	425
Governor. Gas-engine	E. P. Johnson and C. I. Lee	870,629	Nov. 12	1200	324–5	131	426
Grappling-fork. Drop-tine	J. Farrell	870,768	Nov. 12	1432	388–9	131	496
Gun-shells. Device for contracting and reloading	J. Ansell	870,608	Nov. 12	1154	314–15	131	408
Gun-sight	J. Y. Bassell and F. C. Blenkner	870,610	Nov. 12	1157	315	131	409
Hair-drying apparatus	E. McIver and J. Widua	870,740	Nov. 12	1372	376	131	481
Handle:							
See Book-handle. Vessel-handle.							
Handle	W. Splittgerber	870,910	Nov. 12	1656	456	131	568
Hanger:							
See Shaft-hanger.							
Harrow riding attachment	J. Mangan	870,570	Nov. 12	1095	300	131	387
Harvester cleaning attachment	C. Amundson	870,534	Nov. 12	1041	284	131	367
Hat-box	W. Dod	870,550	Nov. 12	1062	290	131	373
Hay-blower	A. Halvorson	870,822	Nov. 12	1522	415	131	527
Hay-fork. Buck-rake	G. R. Boulding	871,055	Nov. 12	1884	516	131	639
Heater:							
See Vehicle-heater. Water-heater.							
Heater	M. W. Hall	870,821	Nov. 12	1521	414	131	527
Hoisting apparatus	O. K. Holst	870,724	Nov. 12	1353	369	131	475
Hook:							
See Logging-hook.							
Hose-detacher	J. R. McDanill	870,898	Nov. 12	1636	447	131	562
Hose-band	F. W. Chaffee	870,763	Nov. 12	1422	386	131	493
Hose-nozzle	W. A. Teall	871,003	Nov. 12	1812	494	131	616
Hose-supporter	L. M. Churchill	870,544	Nov. 12	1057	288	131	372
Hub. Double-lock	S. D. Latty	870,565	Nov. 12	1090	298	131	385
Hydraulic press	W. Astfalck	871,078	Nov. 12	1912	524	131	648
Ice-cream scraper	W. Ross	870,996	Nov. 12	1804	491	131	614
Impact and reaction motor	C. Comstock	870,867	Nov. 12	1582	435	131	544
Indicator:							
See Speed-indicator. Street and station indicator.							
Indicator for railway and other purposes	E. M. Vaughan	870,599	Nov. 12	1137	311	131	403
Insulating-fixture	L. Steinberger	871,002	Nov. 12	1811	494	131	616
Internal-combustion engine	A. J. Frith	870,720	Nov. 12	1345	367	131	473
Iron:	T. S. James and T. H. Wilson	870,966	Nov. 12	1761	480–1	131	601
See Soldering-iron.							
Iron or steel for preventing oxidation or rusting. Treatment of	T. W. Coslett	870,937	Nov. 12	1713		131	585
Jack:							
See Lifting-jack.							
Jack	J. I. Brown	871,083	Nov. 12	1927	528	131	652
Joint in thin flat material. Making a	A. F. Rietzel	870,847	Nov. 12	1552	426–7	131	535
Journal-box	S. and S. J. Reynolds	870,587	Nov. 12	1115	305	131	394
Key-ring	A. H. Merrill	870,636	Nov. 12	1213	328	131	430
Key-seats or the like. Device for cutting	C. Lindstrom	870,971	Nov. 12	1771	483	131	603
Knife	J. H. Henson	870,678	Nov. 12	1276	348	131	448
Knitting machines. Needle-bed for straight-frame and circular-	H. A. Klemm	871,095	Nov. 12	1957	536	131	661
Label and stamp applying machine	E. Fidell	870,619	Nov. 12	1168	318	131	413
Ladder. Folding step-	A. Dahl	870,940	Nov. 12	1717	470	131	586
Lamp guard. Incandescent-	C. Molitor	870,637	Nov. 12	1213	328–9	131	430
Lamp. Incandescent gas-	O. Wiederhold	870,753	Nov. 12	1413	383	131	490
Lamp. Incubator or brooder	P. M. Wickstrum	871,016	Nov. 12	1827	499	131	621
Lantern. Signal-	W. S. Hamm	871,088	Nov. 12	1940	531	131	656
Last for boots and shoes. Reinforced	W. D. Baker	870,760	Nov. 12	1420	385	131	492
Latch-guard. Shutter	T. L. Ross	870,848	Nov. 12	1554	427	131	536
Latch-keeper	E. W. Vest	870,652	Nov. 12	1242	336	131	439
Laundry-machine	R. C. Beekman	870,536	Nov. 12	1043	285	131	368
Lead. Manufacturing arsenic compounds of	C. D. Vreeland	870,915	Nov. 12	1662	457	131	571
Life-saving suit	M. A. Tieck	870,804	Nov. 12	1490	406–7	131	517
Lifting-jack	W. M. Cox	870,939	Nov. 12	1716	469	131	586
Lifting-machine	C. Moller	870,986	Nov. 12	1791	487–8	131	610
Litter-carrier	E. B. Mann	870,635	Nov. 12	1212	328	131	429
Lock:							
See Bolt-lock. Elevator-lock.							
Loading device. Wagon-	G. H. Hefta	870,782	Nov. 12	1453	393	131	504
Locomotive	W. S. Hovey	870,560	Nov. 12	1081	295–6	131	382
Locomotive	J. E. Friermood	870,769	Nov. 12	1433	389	131	497
Locomotive-tender	M. E. Petty	870,840	Nov. 12	1544	424	131	532
Logging-hook	A. Sprogis	870,593	Nov. 12	1123	307	131	396
Loom harness-loosener	O. A. Sawyer	871,096	Nov. 12	1958	536–7	131	661
Loom heddle-frame	G. Brisson	871,027	Nov. 12	1843	504	131	626
Looms. Picker-staff for weaving-	A. Rossignol	870,904	Nov. 12	1648	453	131	566
Looms. Shuttle-positioning means for filling-replenishing	J. Gabler	870,673	Nov. 12	1270	346	131	447
Low-water alarm	W. Loudon	871,040	Nov. 12	1861	510	131	632
Lubricator:							
See Axle-lubricator. Candlestick-lubricator.							
Mail-bag catching and delivering device	L. J. Evans	870,872	Nov. 12	1594	437–8	131	549
Mail-box	W. E. and G. Weston	870,654	Nov. 12	1244	337	131	440
Mail-pouch-catching device	H. W. Graff	870,879	Nov. 12	1605	440	131	552
Mail-pouch-delivery device	H. W. Graff	870,878	Nov. 12	1604	439	131	552
Malt-stirring apparatus	B. W. Tucker	870,598	Nov. 12	1133	309–10	131	40
Manifolding-pad holder	P. A. McCaskey	870,793	Nov. 12	1469	397	131	510
Manure-carrier	J. C. Fitzgerald	870,718	Nov. 12	1341	366	131	472
Mash-tub stirrer	O. Selg	870,748	Nov. 12	1407	381	131	488
Match-striking device	L. W. Miner-Stevens	870,735	Nov. 12	1366	374	131	479
Mattress stretcher. Wire-	J. Eriandsen	870,552	Nov. 12	1068	290–1	131	377
Measure. Computing tape-	E. F. Holinger	870,884	Nov. 12	1613	442	131	554
Measuring instrument. Electrical	J. M. Lea	870,632	Nov. 12	1205	326	131	428
Measuring instrument. Electrical	C. B. Thwing	870,803	Nov. 12	1489	406	131	516
Melting. Method of	E. H. Schwartz	871,071	Nov. 12	1905	522	131	646
Meter:							
See Current-meter. Gas-meter.							
Milking apparatus	M. E. Jacques	870,785	Nov. 12	1456	394–5	131	506
Mine cage and skip safety brake mechanism	J. Owens	870,989	Nov. 12	1795	489	131	611
Miner's drill	G. F. Weiss	871,013	Nov. 12	1823	497–8	131	620
Mining sulfur	H. Frasch	870,620	Nov. 12	1170	318–19	131	414
Mold:							
See Pipe-casting mold.							
Motor:							
See Current-motor. Tide or wave motor. Impact and reaction motor. Wind-motor.							
Motor-control system. Vehicle-	W. Cooper	870,816	Nov. 12	1511	412	131	524
Motor-controller	L. L. Tatum	870,596	Nov. 12	1129	308–9	131	398
Motors or explosion-engines. Ignition-plug for hydrocarbon-	E. J. Pennington	870,902	Nov. 12	1644	451	131	564
Multogram record	A. Hoffman	870,961	Nov. 12	1754	478	131	599
Musical instruments. Pneumatic valve for self-playing	B. C. Peck	870,745	Nov. 12	1405	380	131	487
Musical instruments. Stop mechanism for self-playing	B. C. Peck	870,744	Nov. 12	1403	380	131	486
Net-making machine	H. T. Richmond	870,644	Nov. 12	1225	332–3	131	434
Nut and set-screw guard. Lock-controlled	K. E. and J. Ahlberg	870,533	Nov. 12	1040	284	131	367
Oil-burner	C. C. Cleveland	870,933	Nov. 12	1704	468	131	583
Oil burner. Crude-	A. D. Marcotte	870,980	Nov. 12	1784	485	131	608
Oil-can	S. R. Parks	870,684	Nov. 12	1285	351	131	453
Order-blank holder	P. W. Lyon	870,789	Nov. 12	1464	395	131	508
Ore-crushers. Crusher-head for gyratory	C. W. Guttzeit	870,952	Nov. 12	1734	475	131	592
Ores. Desulfurizing and reducing sulfid	E. Dodolph	870,668	Nov. 12	1265		131	446
Ores. Roasting sulfurous	A. Savelsberg	870,690	Nov. 12	1295		131	455
Oven. Baking-	C. E. Lyst	870,977	Nov. 12	1780	484–5	131	606
Oyster-dredges. Means for operating	W. C. Todd	871,007	Nov. 12	1816	496	131	618
Package. Shipping-	C. G. Watson	870,603	Nov. 12	1147	313	131	406
Packing and producing same. Wire-rope	B. Brazelle	870,615	Nov. 12	1163	317	131	411
Packing-case. Sheet-metal	A. T. Kruse	870,728	Nov. 12	1357	371	131	476
Packing. Piston-rod	A. C. Schaefer	871,068	Nov. 12	1899	520	131	644
Packing ring. Metal steam-	W. Baker	870,709	Nov. 12	1323	362	131	465
Pad:							
See Piano-protecting pad.							
Padlock. Keyless	J. Kruse	870,890	Nov. 12	1618	443–4	131	556
Pail support. Milk-	E. A. Blue	870,613	Nov. 12	1161	316	131	411
Pan:							
See Bed-pan.							
Paper-bag machine	C. B. Stilwell	870,801	Nov. 12	1480	399–406	131	514
Paper-cutting-machine gage	G. Nelson	870,578	Nov. 12	1105	302	131	391
Paper-folding machine	C. L. Rice	870,903	Nov. 12	1645	451–3	131	565

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Pasteurizing apparatus	L. S. Pfouts	870,841	Nov. 12	1545	424–5	131	533
Paving-block	A. Kelley	870,889	Nov. 12	1618	443	131	556
Peas and the like. Process to facilitate the shelling of	F. Staines	870,855	Nov. 12	1565	.....	131	530
Pen. Fountain-	W. Bolles	870,538	Nov. 12	1046	286	131	369
Pencil-holder	J. L. Dunn	870,716	Nov. 12	1330	365	131	471
Pencil-holder	F. R. Welles	870,750	Nov. 12	1409	382	131	489
Perforating and other machines. Keyboard mechanism for	J. S. Bancroft	871,081	Nov. 12	1923	527	131	651
Perforating-machine keyboard mechanism	J. S. Bancroft	871,080	Nov. 12	1920	526–7	131	649
Phonograph attachment	V. Bessier	870,612	Nov. 12	1161	316	131	410
Phonograph-horn. Foldable	J. C. Stocker and D. A. Welsh	870,698	Nov. 12	1308	358	131	461
Photographic method and apparatus for the production of pictures, patterns, and the like.	E. Bachmann	870,863	Nov. 12	1575	433	131	542
Photographic vignetter	P. Makeeff	870,790	Nov. 12	1464	396	131	508
Piano-protecting pad	K. M. Keowen	870,969	Nov. 12	1767	482	131	602
Pick. Miner's	W. and E. E. Donaldson	871,058	Nov. 12	1889	517	131	641
Picker-stick attachment	H. E. Taplin	870,749	Nov. 12	1408	381	131	488
Pile-driver	F. Burge	870,762	Nov. 12	1421	386	131	493
Piling. Cap for sheet-	E. A. Bern. (Reissue)	12,718	Nov. 12	1963	538	131	663
Pin: *See* Clothes-pin.							
Pipe: *See* Tobacco-pipe.							
Pipe-bending tool	F. A. Wallace	871,052	Nov. 12	1881	515	131	638
Pipe-casting mold	E. A. Custer	870,868	Nov. 12	1587	436	131	547
Pipe-coupling	F. Haus	870,557	Nov. 12	1076	293	131	380
Pipe-sections together. Device for pulling	A. Claiborne	870,931	Nov. 12	1702	467	131	582
Pipe-wrench	G. Heckling	870,781	Nov. 12	1451	393	131	504
Pipes. Apparatus for casting metal	E. A. Custer	870,870	Nov. 12	1590	436–7	131	548
Pipes. Casting	E. A. Custer	870,817	Nov. 12	1514	413	131	525
Plane. Bench-	E. W. Smith	871,001	Nov. 12	1810	493	131	616
Planter. Potato-	W. W. Taverner and A. Gregg	870,856	Nov. 12	1566	430–1	131	539
Planting machine. Root-	J. H. Shirley	870,693	Nov. 12	1298	355–6	131	456
Plating device	G. W. Clough	870,545	Nov. 12	1057	288	131	372
Plow	W. Sobey	870,695	Nov. 12	1302	356–7	131	457
Plow. Irrigating or ditching	M. Jackson	871,039	Nov. 12	1880	509	131	631
Plumb bob	O. C. McQuaid	870,576	Nov. 12	1103	302	131	390
Pocket-knife and manicuring-tool. Combined	H. M. Willis	870,604	Nov. 12	1148	313	131	406
Post: *See* Fence post. Gate-post. Velocipede-seat post.							
Potato digger and shaker	M. Hebting	870,677	Nov. 12	1274	347–8	131	448
Power-transmitter	F. de Coligny	870,814	Nov. 12	1508	411	131	523
Press: *See* Box-press. Copy press. Hydraulic press. Printing-press.							
Printing and developing dark cabinet	T. A. Welsh	870,751	Nov. 12	1410	382	131	489
Printing-bar, matrix-making, and type-setting machines. Composing mechanism for	E. V. Beals	870,926	Nov. 12	1680	402–5	131	577
Printing-drum	F. A. Whitmore	870,918	Nov. 12	1669	458–60	131	574
Printing film holder	S. W. Guest	870,722	Nov. 12	1349	368–9	131	474
Printing plate holder	C. F. Rockstroh	870,994	Nov. 12	1801	491	131	613
Printing press folding apparatus	H. P. Husby	871,038	Nov. 12	1856	509	131	630
Printing press. Plate-	W. P. Allen	870,811	Nov. 12	1499	409–10	131	519
Printing press rotary folding mechanism	H. P. Husby	870,964	Nov. 12	1757	479	131	600
Projection apparatus	E. Bausch	870,535	Nov. 12	1042	285	131	367
Propeller	J. Nielsen	870,639	Nov. 12	1218	329–30	131	432
Propeller	F. A. Douse	870,758	Nov. 12	1889	518	131	641
Propelling device. Boat-	W. Arnold	871,059	Nov. 12	1417	384	131	491
Pump	T. E. Moon	870,682	Nov. 12	1283	350	131	451
Pump power attachment. Spray-	J. Rodgers	870,659	Nov. 12	1802	491	131	613
Pumps compressors and the like. Valve for	H. Ackermann	870,995	Nov. 12	1249	339	131	441
Pumping water under hydraulic power. Means for	J. D. Hobbs	870,882	Nov. 12	1611	441	131	553
Puzzle	E. C. Macartney	870,978	Nov. 12	1781	485	131	606
Pyrographic burner	A. M. Williams	870,754	Nov. 12	1414	383	131	490
Rack: *See* Display-rack. Feed-rack.							
Railway curve sweeper and lubricator. Street-	D. P. Small	870,591	Nov. 12	1120	306	131	395
Railway signaling system. Electric	N. P. Fraser and W. Gribben	870,621	Nov. 12	1174	319	131	416
Railway-switch	J. F. Reese and C. L. Miner	870,992	Nov. 12	1799	490	131	612
Railway system. Third-rail electric-	C. Kozesnik	870,564	Nov. 12	1089	298	131	385
Railway system. Underground	J. H. Farrar	870,618	Nov. 12	1166	317	131	413
Railway-tie. Metallic	J. C. Thompson	871,049	Nov. 12	1877	514	131	637
Railway-tie. Metallic	A. L. Moorhead	871,065	Nov. 12	1896	519	131	643
Razor	L. Heuser	871,037	Nov. 12	1855	508	131	630
Razor-blade holder	A. H. Fleming	870,877	Nov. 12	1603	439	131	552
Razor. Safety-	H. L. Henry and W. Althoff	870,826	Nov. 12	1526	417	131	528
Razor. Safety-	L. Heuser	871,036	Nov. 12	1855	508	131	630
Razor. Safety-	I. N. Brigham	871,082	Nov. 12	1925	528	131	652
Reclining-chair	M. Anthony	871,022	Nov. 12	1836	502	131	623
Recorder	P. J. Darlington	870,667	Nov. 12	1264	344	131	445
Recording apparatus	H. B. Palmer	870,742	Nov. 12	1374	376–9	131	482
Refrigerating cars	C. C. Trowbridge	870,913	Nov. 12	1659	456	131	569
Refrigerator	J. A. Agrillo	870,532	Nov. 12	1039	284	131	367
Register: *See* Account-register. Cash-register. Water-register.							
Registering apparatus	S. K. Lowman	870,975	Nov. 12	1778	484	131	606
Ring: *See* Key-ring. Metal steam-packing ring.							
Rock-drill and other percussion tool	T. Warsop	870,653	Nov. 12	1243	337	131	440
Roller: *See* Shade-roller.							
Rotary combustion-engine	F. Burger	871,030	Nov. 12	1845	505–6	131	627
Rubber tip and means for securing it	H. Fuller	870,770	Nov. 12	1439	390	131	500
Saddle-tree	G. J. Theobald	870,857	Nov. 12	1567	431	131	540
Sash-fastener	J. C. O'Neill	870,641	Nov. 12	1221	330	131	433
Sausage-linking machine	A. F. Little	870,972	Nov. 12	1773	483	131	604
Saw. Drag-	D. F. Campbell	870,712	Nov. 12	1227	363	131	467

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Saw-filing device	C. F. Hobson	870,883	Nov. 12	1612	441–2	131	554
Saw-holder	J. B. Hill	870,827	Nov. 12	1527	417	131	528
Scale chart. Computing-	G. M. Ludlow	870,568	Nov. 12	1092	299–300	131	386
Scale. Computing-	O. O. Ozias	870,582	Nov. 12	1110	303–4	131	392
Scale. Weighing-	B. F. Crary	871,056	Nov. 12	1886	516–17	131	640
Scarf-holder	C. W. Seidenspinner	871,072	Nov. 12	1906	522	131	646
Sealing-in machine	M. H. Branin	871,097	Nov. 12	1959	537	131	662
Seam-dampener	H. A. Twigg	870,807	Nov. 12	1495	408	131	518
Seat: *See* Closet-seat. Wagon-seat.							
Separator: *See* Beeswax-separator. Carriage-top-bow separator.							
Sewing-machine	F. H. Chilton	870,543	Nov. 12	1052	287–8	131	371
Shackle	W. G. Eggleton	870,871	Nov. 12	1593	437	131	549
Shade-roller	A. H. Fleming	870,876	Nov. 12	1601	439	131	551
Shade-roller attachment. Window-	J. L. Harrison	870,625	Nov. 12	1196	323	131	425
Shade-roller bearing	W. D. Janes	870,628	Nov. 12	1199	324	131	426
Shaft connection. Drive-	C. Atkins	870,923	Nov. 12	1677	461	131	576
Shaft-hanger	H. C. Floyd	870,945	Nov. 12	1725	472–3	131	589
Shaft-oscillator	W. F. Bouché	870,539	Nov. 12	1047	286	131	369
Shafting-supporting means	E. Weston	870,861	Nov. 12	1573	433	131	541
Shoe-rack shoe-protector	F. L. Richardson	870,993	Nov. 12	1800	490	131	612
Shutter operator or worker	A. Del Valle	870,819	Nov. 12	1517	414	131	526
Signaling system. Electric	W. H. Gilman	870,622	Nov. 12	1176	319–21	131	416
Siphon-head	F. B. Lomax	870,788	Nov. 12	1463	395	131	507
Skee-stirrup	C. Nordlander	870,741	Nov. 12	1373	376	131	482
Smoke-consuming furnace	F. E. Kelly	871,090	Nov. 12	1942	532	131	657
Sodium sulfate and compounds of lead. Preparing	A. S. Ramage	871,066	Nov. 12	1898	.....	131	644
Sodium sulfate. Making	J. D. Pennock	870,746	Nov. 12	1406	380	131	488
Soldering-iron. Electric	W. G. Hartwig	870,779	Nov. 12	1450	392	131	503
Sound-reproducing head	C. A. Smith	871,000	Nov. 12	1809	493	131	615
Speed apparatus. Change-	A. Sauer	870,997	Nov. 12	1806	492	131	615
Speed-indicator	E. C. Oliver	870,796	Nov. 12	1471	397	131	511
Speed-indicator and distance-recorder	R. Shipman	870,852	Nov. 12	1559	428–9	131	537
Spike	T. Booth	870,813	Nov. 12	1507	411	131	523
Spooling-machine	R. J. Emory	870,707	Nov. 12	1429	388	131	495
Spooling-machine	T. D. Ruth	870,850	Nov. 12	1556	428	131	536
Spring-wheel	D. Warner and H. Kitchel	870,602	Nov. 12	1145	312	131	405
Sprinkler	G. Bueina and A. R. Poett	871,029	Nov. 12	1844	505	131	627
Sprinkler-system attachment	J. McAlear	870,792	Nov. 12	1466	396	131	509
Square	C. M. Praul	870,845	Nov. 12	1551	426	131	535
Square. Carpenter's	M. C. Post	870,584	Nov. 12	1112	304	131	393
Squares. Attachment for carpenters'	M. S. Sober	870,854	Nov. 12	1564	450	131	539
Stack-cover. Portable	W. Kindt	870,563	Nov. 12	1087	298	131	384
Stair construction	E. E. Schachner	870,905	Nov. 12	1649	453–4	131	566
Stamp-affixing machine	S. C. Kindig	870,726	Nov. 12	1354	370	131	475
Steel. Manufacture of open-hearth	A. W. Allen	870,921	Nov. 12	1674	.....	131	575
Steering mechanism	H. E. Norris	870,794	Nov. 12	1470	397	131	510
Stone-crusher	E. C. Hodges	871,063	Nov. 12	1894	519	131	642
Stopper: *See* Bottle-stopper.							
Storage battery	H. E. R. Little	870,973	Nov. 12	1776	483	131	605
Storm-shield and buggy-top	A. L. Trabue	870,859	Nov. 12	1569	431–2	131	541
Stove	J. L. Reid	870,686	Nov. 12	1287	352	131	453
Stove. Cooking-	A. W. Walker	871,051	Nov. 12	1879	514	131	638
Stove. Heating-	E. W. Babcock	870,662	Nov. 12	1252	340	131	442
Street and station indicator	C. A. Myers	870,737	Nov. 12	1368	374–5	131	480
Street-flusher	G. H. Thebus	870,700	Nov. 12	1311	359	131	462
Stud, button, &c. Collar	J. Varet	871,009	Nov. 12	1818	496	131	618
Surveying instrument	C. L. Walker	870,809	Nov. 12	1497	409	131	579
Sweeping device	R. M. Baker	871,054	Nov. 12	1883	515	131	639
Switch: *See* Railway-switch.							
Switch-governor. Automatic	L. Colson and C. Gebauer	870,935	Nov. 12	1707	468	131	584
Table: *See* Turn-table. Veterinary operating-table.							
Talking-machine needle	F. D. Hall	870,723	Nov. 12	1351	369	131	474
Tank: *See* Closet-tank.							
Tapping-machine. Vertical	R. Scholz	871,069	Nov. 12	1901	520–1	131	645
Teeth. Instrument for introducing liquid medicament into	C. G. Myers	870,573	Nov. 12	1099	301	131	388
Telegraph-pole	F. H. Tidnam	870,858	Nov. 12	1568	431	131	540
Telephone-exchange	S. A. Norstrom	871,042	Nov. 12	1864	510	131	632
Telephone-exchange	S. A. Norstrom	871,043	Nov. 12	1865	510–11	131	633
Telephone-exchange calling device	F. A. Lundquist	870,634	Nov. 12	1210	327–8	131	429
Telephone-exchange selecting device	F. A. Lundquist	871,092	Nov. 12	1945	533	131	658
Telephone system. Central-energy	F. W. Dunbar	870,551	Nov. 12	1063	290	131	374
Threshing-machine separating-grate	F. F. Landis	870,731	Nov. 12	1363	372	131	478
Tide or wave motor	H. P. Woodard	870,706	Nov. 12	1319	361	131	464
Tide or wave motor	J. Hutchings	870,965	Nov. 12	1759	479–80	131	600
Tie: *See* Fence-tie. Railway-tie.							
Tire-armor	G. Powell	870,844	Nov. 12	1550	426	131	534
Tire-protector	R. Parker	870,796	Nov. 12	1472	397	131	511
Tire-shoe	G. Dentzeau	870,548	Nov. 12	1060	289	131	373
Tire traction attachment. Vehicle-	C. B. Woodworth	870,657	Nov. 12	1247	338	131	441
Tires. Detachable tread for pneumatic	C. B. Woodworth	870,656	Nov. 12	1246	338	131	440
Toaster or broiler	H. O. MacDougall	870,894	Nov. 12	1626	445	131	558
Tobacco-pipe	E. Vallance	871,008	Nov. 12	1817	496	131	618
Toggle-bolt	A. L. Ellis	870,820	Nov. 12	1519	414	131	526
Tongs. Gripping-	A. Christianson	870,713	Nov. 12	1328	364	131	467
Tongs. Gripping-	A. Christianson	870,764	Nov. 12	1423	386–7	131	493
Tool	G. H. Goodholm and J. A. Train	870,951	Nov. 12	1733	474	131	592
Tool. Combination-	O. O. Frink and F. W. Scanling	870,672	Nov. 12	1270	346	131	447
Tool. Fluid-pressure-operated	H. H. Vaughan	870,651	Nov. 12	1238	336	131	438
Train-operated mechanism for opening and closing doors.	P. L. Robertson	870,689	Nov. 12	1293	353–4	131	454

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Trap:							
See Antisiphon-trap.							
Trellis	C. I. J. Barker	870,864	Nov. 12	1578	434	131	543
Trolley	C. A. Gouty	870,772	Nov. 12	1442	390	131	501
Trolley	W. P. Gisske	870,950	Nov. 12	1732	474	131	592
Trolley-harp	S. T. Simmons	870,999	Nov. 12	1808	492	131	615
Trolley-pole guide	L. A. Allen	870,755	Nov. 12	1415	383	131	490
Truck	C. H. Loew	870,835	Nov. 12	1537	422	131	531
Truck. Car-	W. E. Amberg	870,607	Nov. 12	1151	314	131	407
Truck. Car-	C. S. Shallenberger	870,647	Nov. 12	1229	333–4	131	435
Trunk-tray form	W. S. Gilson	870,949	Nov. 12	1731	474	131	591
Turbine	W. Löh	870,567	Nov. 12	1091	299	131	386
Turn-table	J. C. Fleming	870,869	Nov. 12	1266	345	131	446
Type-setting machine	E. Terrell	870,909	Nov. 12	1309	358	131	461
Type-writer	E. D. Brewer	871,026	Nov. 12	1841	503–4	131	625
Unloading and depositing device. Automatic	C. von Bechtolsheim	870,710	Nov. 12	1325	362–3	131	466
Valve. Automatic flushing-	E. G. Watrous	870,916	Nov. 12	1663	458	131	571
Valve. Gate-	C. A. Claflin	871,085	Nov. 12	1931	529	131	653
Vamp-folding machine	G. F. Dunn	870,942	Nov. 12	1719	470–1	131	587
Vehicle-brake	D. Cookingham	870,666	Nov. 12	1262	344	131	445
Vehicle control system	N. W. Storer	870,802	Nov. 12	1487	406	131	516
Vehicle-heater	J. A. Shutz and M. L. Kirkman	870,648	Nov. 12	1230	334	131	436
Vehicle spring-gear	J. L. B. Shepard	870,692	Nov. 12	1297	554–5	131	455
Vehicle-top-bow fastening	Z. G. Sholes	871,047	Nov. 12	1874	512–13	131	635
Velocipede seat-post	M. Rosen	870,645	Nov. 12	1227	333	131	434
Vessel-handle. Loose	L. A. Peterson	870,839	Nov. 12	1543	423–4	131	532
Veterinary operating-table	F. G. Atwood	871,023	Nov. 12	1837	502	131	624
Violin-piano	J. L. Warner	870,702	Nov. 12	1314	359–60	131	462
Wagon-box and hay-rack remover	E. Jose	870,561	Nov. 12	1083	296	131	383
Wagon. Dump-	D. S. Watson, E. Bushnell, and J. F. Sanderson.	871,012	Nov. 12	1822	497	131	619
Wagon. Dumping-	A. Cameron	870,929	Nov. 12	1697	466–7	131	581
Wagon. Dumping-	R. N. Lowry	871,091	Nov. 12	1943	532	131	657
Wagon-elevator	E. H. Overholt	870,899	Nov. 12	1637	448	131	562
Wagon-seat	O. E. Pasko	870,583	Nov. 12	1112	304	131	393
Walls. Method and apparatus for making	W. D. Ham	870,881	Nov. 12	1607	440	131	553
Warp stop-motion	E. A. Thissell	871,048	Nov. 12	1876	513	131	637
Washboard. Self-soaping	J. Koontz	870,787	Nov. 12	1462	395	131	507
Washboiler	J. Mohr	870,572	Nov. 12	1098	301	131	388
Washboiler	J. H. Brownlee	870,865	Nov. 12	1579	434	131	543
Water-closet	P. H. Moohan	870,896	Nov. 12	1634	447	131	561
Water-columns. Means for maintaining flow in	C. Prött	870,685	Nov. 12	1285	351	131	453
Water heater and purifier	J. E. Wood	870,920	Nov. 12	1673	461	131	575
Water-heater. Electrical	E. Naumer	870,577	Nov. 12	1104	302	131	390
Water-motor	P. T. Coffield. (Reissue)	12,719	Nov. 12	1964	538	131	664
Water-register. Automatic	H. L. and H. K. Fairall and J. Kunzmann.	871,060	Nov. 12	1890	518	131	641
Water-return system. Drip-	W. H. Zimmerman	870,658	Nov. 12	1248	339	131	441
Water-tower	W. H. Shafer	870,646	Nov. 12	1227	333	131	435
Water-wheel	F. E. Renick	870,586	Nov. 12	1114	305	131	394
Weaving	W. Hannah	870,823	Nov. 12	1523	415–16	131	527
Weighing device	G. G. Kanable	870,888	Nov. 12	1617	443	131	555
Weighing-machine	G. H. Mallett	870,979	Nov. 12	1782	485	131	607
Weir and tide gage	L. C. Eisenhut	871,093	Nov. 12	1947	533–4	131	658
Well appliance. Oil-	B. Brazelle	870,616	Nov. 12	1164	317	131	412
Well-drilling machine	G. W. Doss	870,765	Nov. 12	1426	387	131	494
Well-drilling machine	N. D. Wells	871,014	Nov. 12	1824	498	131	620
Wheel:							
See Elastic wheel. Water-wheel. Spring-wheel.							
Wheel	C. Adams-Randall	870,708	Nov. 12	1321	361	131	465
Wheel and tire gage. Combination	J. E. Osmer	870,581	Nov. 12	1109	303	131	392
Wind-motor	J. W. Beates	871,024	Nov. 12	1838	503	131	624
Wire-stretcher	W. A. Vanderwilt	870,808	Nov. 12	1496	408	131	519
Woven fabric	W. M. Stevenson	870,697	Nov. 12	1306	357	131	459
Wrench:							
See Pipe-wrench.							
Wrench	G. B. Crispin and R. F. Wright	870,862	Nov. 12	1574	433	131	542
Wrench	E. A. Johnson	870,886	Nov. 12	1615	442	131	555

DESIGNS.

Design.	Name.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Bag. Hand-	H. Grossman	38,881	Nov. 12	131	665
Mirrors, brushes, or similar articles. Back for	H. Hillborn	38,880	Nov. 12	131	665
Spoon, fork, or similar article	F Habensack	38,878	Nov. 12	131	664
Spoons, forks, or similar articles. Handle for	C. Osborne	38,879	Nov. 12	131	664
Vehicle-body	C. Cretors	38,882	Nov. 12	131	665
Vehicle-body	C. Cretors	38,883	Nov. 12	131	665
Vehicle-body	C. Cretors	38,884	Nov. 12	131	665

TRADE-MARKS.

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Adding and listing machines	Burroughs Adding Machine Co	66,134	Nov. 12	131	686
Ale and root-beer. Ginger-	M. D. Batchelder	66,132	Nov. 12	131	686
Ale. Ginger-	American Beverage Co	66,115	Nov. 12	131	685
Antiseptic powder	G. K. Pratt	66,110	Nov. 12	131	685
Baking-powder	St. Louis Coffee and Spice Mills	66,112	Nov. 12	131	685
Baking-powder and bicarbonate of soda	Wabash Baking Powder Company.	66,113	Nov. 12	131	685
Beer. Root-	American Beverage Co	66,116	Nov. 12	131	685
Belt-dressings	Sawyer Belting Company	66,186	Nov. 12	131	687
Bench-wringers	American Wringer Company	66,122	Nov. 12	131	686
Bismuth. Preparation of	H. K. Mulford Company	66,102	Nov. 12	131	685
Blacking and dressing for boots, shoes, and leather	C. G. de Tonnancour	66,191	Nov. 12	131	687
Boots and shoes. Ladies' leather	Stewart & Co	66,111	Nov. 12	131	685
Boots and shoes. Leather	Courtney Shoe Co	66,095	Nov. 12	131	685
Bread	Eagle Roller Mill Company	66,169	Nov. 12	131	687
Bread and cakes	R. M. Morton	66,178	Nov. 12	131	687
Candy	Novelty Candy Co	66,182	Nov. 12	131	687
Candy. Laxative	Davis Chemical Company	66,097	Nov. 12	131	685
Canned corn	Watkins Packing Co	66,205	Nov. 12	131	688
Canned, dried, and fresh fruits and olive-oil	Maywood Packing Co	66,177	Nov. 12	131	687
Canned fish	Northwestern Fisheries Company	66,181	Nov. 12	131	687
Canned fruits and vegetables	Franklinville Canning Co	66,172	Nov. 12	131	687
Canned salmon and oysters	C. Hewitt & Sons Co	66,166	Nov. 12	131	687
Canned tomatoes	Hollingsworth & Co	66,173	Nov. 12	131	687
Canned vegetables and fruit	Holmes Keeler & Selleck Co	66,174	Nov. 12	131	687
Canned vegetables and fruit	Holmes Keeler & Selleck Co	66,175	Nov. 12	131	687
Carpets and rugs. Fiber	W. & J. Sloane	66,192	Nov. 12	131	687
Casters. Metal	W. G. Mein	66,199	Nov. 12	131	688
Catsup and flavoring extracts	Wabash Baking Powder Company.	66,194	Nov. 12	131	687
Cement. Coal-tar	Warren-Ehret Company	66,146	Nov. 12	131	686
Cement. Coal-tar	Warren-Ehret Company	66,195	Nov. 12	131	687
Cements. Portland	S. B. Bowen	66,163	Nov. 12	131	687
Champagne	Merle & Co	66,147	Nov. 12	131	686
Champagne	Merle & Co	66,148	Nov. 12	131	686
Champagne	Merle & Co	66,149	Nov. 12	131	686
Champagne	Merle & Co	66,150	Nov. 12	131	686
Champagne	Merle & Co	66,151	Nov. 12	131	686
Champagne	Merle & Co	66,152	Nov. 12	131	686
Champagne	S. Ruby & Co	66,145	Nov. 12	131	686
Cigarette-paper	G. A. Moebs & Co	66,137	Nov. 12	131	686
Cigars	G. A. Moebs & Co	66,138	Nov. 12	131	686
Cigars	American Wringer Company	66,123	Nov. 12	131	686
Clothes-wringers	American Wringer Company	66,124	Nov. 12	131	686
Clothes-wringers	American Wringer Company	66,125	Nov. 12	131	686
Clothes-wringers	American Wringer Company	66,126	Nov. 12	131	686
Clothes-wringers	American Wringer Company	66,127	Nov. 12	131	686
Clothes-wringers	American Wringer Company	66,128	Nov. 12	131	686
Clothes-wringers	American Wringer Company	66,129	Nov. 12	131	686
Clothes-wringers	American Wringer Company	66,130	Nov. 12	131	686
Clothes-wringers	American Wringer Company	66,131	Nov. 12	131	686
Clothes-wringers	American Wringer Company	66,121	Nov. 12	131	685
Clothes-wringers and mangles	L. Greif & Bro	66,155	Nov. 12	131	686
Clothing. Certain	Mendel, Weinstock & Company	66,160	Nov. 12	131	686
Clothing. Certain	C. S. Morey Mercantile Company	66,165	Nov. 12	131	687
Coffee	St. Louis Coffee and Spice Mills	66,188	Nov. 12	131	687
Coffee and tea	John V. Farwell Company	66,158	Nov. 12	131	686
Collars and shirts. Textile	Wabash Baking Powder Company.	66,193	Nov. 12	131	687
Corn-starch	C. E. Conover Co	66,164	Nov. 12	131	687
Dress-shields	Stromberg-Carlson Telephone Mfg. Company.	66,210	Nov. 12	131	688
Electrical instruments. Certain	Safety Emery Wheel Company	66,184	Nov. 12	131	687
Emery-wheels	H. E. Safford	66,203	Nov. 12	131	688
Fire-extinguishers. Hand chemical	A. Schilling & Co	66,208	Nov. 12	131	688
Flavoring extracts	H. E. Sherman	66,187	Nov. 12	131	687
Flour. Wheat-	Thompson Milling Company	66,190	Nov. 12	131	687
Flour. Wheat-	F. Mraz	66,179	Nov. 12	131	687
Food-preservatives	C. Hewitt & Sons Co	66,167	Nov. 12	131	687
Foods. Certain cereal	Johnson Educator Food Company.	66,176	Nov. 12	131	687
Foods. Certain cereal	C. Eckardt	66,170	Nov. 12	131	687
Fruits and vegetable oils. Dried, fresh, and preserved	C. Eckardt	66,171	Nov. 12	131	687
Fruits and vegetable oils. Dried, fresh, and preserved	L. Littlejohn & Co	66,104	Nov. 12	131	685
Gambler	H. L. Hohlfeld	66,139	Nov. 12	131	686
Hammocks	G. H. Carter	66,094	Nov. 12	131	685
Horses' hoofs. Paste for softening	H. L. Cavanagh & Sons	66,135	Nov. 12	131	686
Ironing-boards	Carleton Dry Goods Company	66,206	Nov. 12	131	688
Knitted underwear	J. A. Weston	66,153	Nov. 12	131	686
Ladders, step-ladders, and flagpoles. Wooden	Boston Artificial Leather Company.	66,093	Nov. 12	131	685
Leather. Artificial	American Wringer Company	66,120	Nov. 12	131	685
Mangles	Yerba Yutu Remedy Company	66,114	Nov. 12	131	685
Medicinal preparation for purifying the blood	J. R. Planten	66,108	Nov. 12	131	685
Medicine. Certain	Covert Mfg. Co	66,096	Nov. 12	131	685
Metal articles. Certain	Peter Henderson & Co	66,207	Nov. 12	131	688
Mowers. Lawn-	C. Meisel	66,105	Nov. 12	131	685
Musical instruments. Certain	C. Meisel	66,142	Nov. 12	131	686
Musical instruments. Certain	C. Meisel	66,159	Nov. 12	131	686
Musical instruments. Certain	W. R. Hearst	66,156	Nov. 12	131	686
Newspaper	W. R. Hearst	66,157	Nov. 12	131	686
Newspaper					

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Oil and lubricants. Certain	Modoc Company	66,161	Nov. 12	131	687
Oils. Lubricating-	Galena-Signal Oil Company	66,154	Nov. 12	131	686
Paper. Writing and printing	American Writing Paper Company.	66,092	Nov. 12	131	685
Pharmaceutical preparations. Certain	Pompeian Mfg. Co	66,109	Nov. 12	131	685
Piano-action flanges	F. C. Billings	66,133	Nov. 12	131	686
Precious stones and jewelry	J. W. Mayer	66,141	Nov. 12	131	686
Razors and razor-blades	R. Korkemas & Co	66,198	Nov. 12	131	688
Remedies. Consumption	Mutual Drug Company	66,106	Nov. 12	131	685
Remedies. Liver	Althea Remedy Company	66,091	Nov. 12	131	685
Remedy for headache and neuralgia	L. G. B. Erb	66,098	Nov. 12	131	685
Remedy for the treatment of leprosy	T. S. Forcat	66,100	Nov. 12	131	685
Remedy for the treatment of syphilis	T. S. Forcat	66,101	Nov. 12	131	685
Sauce. Tomato-	V. D. Galzo	66,168	Nov. 12	131	687
Seeds. Agricultural and horticultural	Peter Henderson & Co	66,183	Nov. 12	131	687
Sewing-machine heads and attachments	A. G. Mason	66,140	Nov. 12	131	686
Shirt-waists, shirt-waist suits, and wrappers	Parker & Thomes Co	66,162	Nov. 12	131	687
Sizing plastic material	N. Pellow	66,202	Nov. 12	131	688
Soap	Procter & Gamble Company	66,144	Nov. 12	131	686
Spices and flavoring extracts	St. Louis Coffee and Spice Mills	66,189	Nov. 12	131	687
Spool-cotton, sewing-cotton, and thread	American Thread Company	66,117	Nov. 12	131	685
Spool-cotton, sewing-cotton, and thread	American Thread Company	66,118	Nov. 12	131	685
Spool-cotton, sewing-cotton, and thread	American Thread Company	66,119	Nov. 12	131	685
Spool-cotton, sewing-cotton, and thread	American Thread Company	66,196	Nov. 12	131	687
Stoves, ranges, and furnaces and parts thereof	Summit Foundry Co	66,204	Nov. 12	131	688
Suppositories	J. S. Falck	66,099	Nov. 12	131	685
Surgical goods. Certain	Davis-Bridaham Drug Company	66,197	Nov. 12	131	687
Suspenders	Paragon Suspender Company	66,201	Nov. 12	131	688
Teas	V. Sanford	66,185	Nov. 12	131	687
Tobacco. Smoking and chewing	Penn Tobacco Co	66,143	Nov. 12	131	686
Toilet preparations. Certain	M. C. Whelan	66,211	Nov. 12	131	688
Vehicles. Folding storm-front for	G. E. Seidel	66,209	Nov. 12	131	688
Wagons and carriages	H. G. Moore	66,200	Nov. 12	131	688
Water. Mineral	Die Actiengesellschaft Apollinaris Brunnen.	66,136	Nov. 12	131	686
Whisky	Hollenbach, Dietrich & Co	66,103	Nov. 12	131	685
Whisky	New Kensington Distilling Co	66,107	Nov. 12	131	685
Yeast. Powdered	R. O. Murphey	66,180	Nov. 12	131	687

LABELS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
"Derma Viva." (For Toilet Preparations)	Derma Viva Co	13,875	Nov. 12	131	689
"Estemento." (For Cigars)	Schmidt & Co	13,873	Nov. 12	131	689
"Extenso." (For Cigars)	Schmidt & Co	13,872	Nov. 12	131	689
"Good-Health." (For Coffee)	E. J. Gillies & Co	13,869	Nov. 12	131	689
"Lava Soap." (For a Remedy in Stomach Troubles)	J. J Ruegg	13,874	Nov. 12	131	689
"Mexican Commerce." (For Cigars)	P. P. Martinez	13,871	Nov. 12	131	689
"Quickheal." (For Ointments for External Use for Subduing Inflammation.)	E. Doolittle	13,876	Nov. 12	131	689
"Robalo." (For Cigars)	R. & A. Abrams	13,870	Nov. 12	131	689

PRINTS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
"Anona Chocolates." (For Chocolates)	Russell and Co	2,151	Nov. 12	131	689
"54 Initial Playing Cards." (For Playing-Cards)	United States Playing Card Company.	2,153	Nov. 12	131	689
"Our Platform." (For a Breakfast Food)	Cream of Wheat Co	2,154	Nov. 12	131	689
"Swastika." (For Game-Cards)	S. R. Beal	2,155	Nov. 12	131	689
"Swastika and Bid Backs, Five Hundred Playing Cards." (For Playing-Cards.)	United States Playing Card Company.	2,152	Nov. 12	131	689

TRADE-MARKS.

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Title.	Name.	Serial No.	Date.	Official Gazette. Vol.	Page.
Acid compounds for laundry sours	M. D. Slimmer & Company	28,640	Nov. 12	131	672
Baking-powder	Bennett Company	30,179	Nov. 12	131	678
Balls. Base-	A. J. Reach Company	30,573	Nov. 12	131	683
Balls. Tennis-	Geo. Borgfeldt & Co	30,398	Nov. 12	131	681
Beer	Fargo Bottling Works Co	5,208	Nov. 12	131	667
Belting. Certain	F. Reddaway & Co	29,445	Nov. 12	131	673
Bitters and medicinal cordials	B. S. Flersheim Mercantile Co	29,449	Nov. 12	131	673
Bitters. Stomach-	S. Levinson	30,147	Nov. 12	131	678
Blankets	Esmond Mills	30,396	Nov. 12	131	681
Bonnet and hat frames	B. Werthelmer & Co	29,448	Nov. 12	131	673
Books, pamphlets, and magazines. Printed	G. A. Bernard	20,419	Nov. 12	131	669
Boots and lap-robes. Leather	Scandinavian Fur & Leather Co	29,535	Nov. 12	131	674
Boots and shoes. Leather	Loring Q. White Company	29,917	Nov. 12	131	675
Boots and shoes. Leather	Meigs & Company	30,042	Nov. 12	131	676
Boots and shoes. Leather	W. D. Brackett & Co	30,413	Nov. 12	131	682
Boots, shoes, and leggings. Leather	Eliet-Kendall Shoe Company	29,472	Nov. 12	131	673
Boots, shoes, and slippers. Leather	Edwin C. Burt Company	30,267	Nov. 12	131	680
Boots, shoes, slippers, and sandals. Leather	Fashion Publicity Company	30,533	Nov. 12	131	683
Brandy	J. Cartun	9,338	Nov. 12	131	668
Bridle-bits, stirrups, spurs, &c	A. Dewsbury	29,714	Nov. 12	131	674
Brooches, lorgnette and neck chains, necklaces, &c	Crossman Company	30,043	Nov. 12	131	676
Butter and cream	G. W. Simpson & Co	30,384	Nov. 12	131	681
Candy	A. B. Schopf	28,754	Nov. 12	131	672
Canned fruits and vegetables, pork and beans, jams, &c	A. F. Beckmann & Co	30,304	Nov. 12	131	680
Canned fruits and vegetables, vinegar, and pickles	A. F. Beckmann & Co	30,303	Nov. 12	131	680
Canned oysters	G. W. Lowden	30,491	Nov. 12	131	682
Canned pears	R. S. Beston	8,094	Nov. 12	131	668
Canned vegetables	Illinois Canning Co	30,231–6	Nov. 12	131	679
Canned vegetables	Illinois Canning Co	30,239–40	Nov. 12	131	680
Canned vegetables	Illinois Canning Co	30,244	Nov. 12	131	680
Canned vegetables	Illinois Canning Co	30,246–50	Nov. 12	131	680
Canned vegetables	G. W. Vanduzen	30,016	Nov. 12	131	676
Castings. Brass	Hazen-Brown Co	29,959–60	Nov. 12	131	675
Cements and adhesive pastes. Rubber and leather	H. Arnold	28,989	Nov. 12	131	672
Checks. Bank-	Allmens Distilling Company	28,447	Nov. 12	131	672
Cigars	M. H. Lipman	30,217–18	Nov. 12	131	679
Cigars	L. J. Mendez	30,513	Nov. 12	131	682
Cigars	M. M. Schwarcz & Co	29,796	Nov. 12	131	675
Cloaks, skirts, and suits	Printz Biederman Co	29,410	Nov. 12	131	673
Coats, capes, jackets, dresses, &c	Nestlé & Anglo-Swiss Condensed Milk Co.	30,494	Nov. 12	131	682
Cocoa and chocolate with milk	W. W. Harper Co	30,410	Nov. 12	131	681
Coffee	Norton & Curd Coffee Co	30,168	Nov. 12	131	678
Coffees	Boott Mills	21,958	Nov. 12	131	669
Cotton piece goods	Boott Mills	21,966	Nov. 12	131	670
Cotton piece goods	Boott Mills	21,980	Nov. 12	131	670
Cotton piece goods	Boott Mills	22,470	Nov. 12	131	670
Cotton piece goods	Smith Hogg & Co	30,088–93	Nov. 12	131	677
Cotton piece goods	Tilton & Keeler	30,156	Nov. 12	131	678
Cotton piece goods	Hyde Manufacturing Co	29,554	Nov. 12	131	674
Cutlery and edge-tools. Certain	Domestic Science Mfg. Co	29,553	Nov. 12	131	674
Flavoring extracts	W. Kelly Milling Company	25,785	Nov. 12	131	671
Flour. Wheat-	Texas Star Flour Mills	29,652	Nov. 12	131	674
Flour. Wheat-	Thornton & Chester Milling Company.	29,715	Nov. 12	131	674
Flour. Wheat-	Siegel Cooper & Co	5,414	Nov. 12	131	667
Flours	F. Fiebeger	27,378	Nov. 12	131	671
Furnaces. Heating-	Teddy Bear Card Co	30,488	Nov. 12	131	682
Games. Card	H. Deperdussin	29,345	Nov. 12	131	672
Germicides and disinfectants	West End Wine & Spirits Co	30,356	Nov. 12	131	681
Gin	W. D. Dalgleish	29,856	Nov. 12	131	675
Gold paste for decorating crockery, &c	American Axe & Tool Co	29,564	Nov. 12	131	674
Grass-hooks, axes, hatchets, &c	J. B. Johnson	29,920	Nov. 12	131	675
Hair-tonic	North Coast Dry Kiln Co	25,379	Nov. 12	131	671
Hoisting machinery	Capewell Horse Nail Company	30,315	Nov. 12	131	681
Horseshoe-nails	A. C. Staley Mfg. Co	25,190	Nov. 12	131	671
Knitted underwear	Western Leather Mfg. Co	24,881	Nov. 12	131	671
Leather machine-cases, vial-cases, saddle-bags, &c	Boas, Rodriques et Cie	26,448	Nov. 12	131	671
Lighting apparatus. Acetylene and oil	Old Bleach Linen Company	20,587	Nov. 12	131	669
Linen piece goods	Ste. de la Distillerie du Supreme Fecamp.	12,932	Nov. 12	131	668
Liqueurs or cordials	F. V. Morse	22,272	Nov. 12	131	670
Lubricants and lubricating material	P. Pastene & Co	29,985	Nov. 12	131	676
Macaroni	Jonas & Colver	29,476	Nov. 12	131	673
Machine-knives, tools, drills, &c	Farbenfabriken of Elberfeld Co	29,833	Nov. 12	131	675
Magazine, Medical	Libby, McNeill & Libby	25,206	Nov. 12	131	671
Marmalades, jellies, jams, fruit-sauces, &c	C. J. Ulrici	29,522	Nov. 12	131	673
Medicinal wine	Mercer Drug Company	29,369	Nov. 12	131	672
Medicine	A. R. White	30,169	Nov. 12	131	669
Medicines for coughs and colds	T. W. Armstrong Co	30,040	Nov. 12	131	676
Metal-polishes. Abrasive	Atmore & Son	14,810–11	Nov. 12	131	668–9
Mince-meat	Southern Cotton Oil Company	10,899	Nov. 12	131	668
Mixture of vegetable oil and animal fat	Southern Cotton Oil Company	30,216	Nov. 12	131	679
Mixture of vegetable oil and animal fat	Anger Baking Company	29,781	Nov. 12	131	674
Noodles and macaroni	Strohmeyer & Arpe Company	30,332	Nov. 12	131	681
Oil. Olive-	Hannah & Hogg	30,354	Nov. 12	131	681
Oil. Olive-	Moos & Co	7,220	Nov. 12	131	667
Oil, peas, mushrooms, carrots, &c. Olive-	E. Brunor	23,813	Nov. 12	131	670
Oil, pills, perfumes, &c. Cod-liver	Strohmeyer & Arpe Company	30,333	Nov. 12	131	681
Oil. Salad-	Cable Company	30,499–500	Nov. 12	131	682
Organs, pianos, and piano-players	James R. Crompton & Brothers	30,515	Nov. 12	131	683
Paper. Wall, velvet crape, and toilet	Perry Mason Company	3,462	Nov. 12	131	667
Papers and magazines. Story-					

TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

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Pencil-sharpening machines	F. E. V. Baines	29,128	Nov. 12	131	672
Pencils	Bleistiftfabrik vormals Johann Faber, Actien-Gesellschaft.	9,820	Nov. 12	131	668
Pencils and erasing-rubber	Bleistiftfabrik vormals Johann Faber, Actien-Gesellschaft.	9,819	Nov. 12	131	668
Pencils, erasing-rubber, and penholders	Bleistiftfabrik vormals Johann Faber, Actien-Gesellschaft.	9,818	Nov. 12	131	668
Peppers, artichokes, and dry mushrooms	P. Pastene & Co	29,987	Nov. 12	131	676
Peroxid of hydrogen, sulfur, ammonia, &c	E. Brunor	20,494	Nov. 12	131	669
Photographic supplies	Eastman Kodak Co	30,508	Nov. 12	131	682
Pitch	De Stearine Kaarsenfabriek Gouda.	30,171	Nov. 12	131	675
Planes, shapers, scrapers, &c	Stanley Rule & Level Company	29,748	Nov. 12	131	674
Powders and pastes. Tooth	L. E. V. Rhein	28,946	Nov. 12	131	672
Raisins	Paddock & Fowler Company	16,344	Nov. 12	131	669
Remedies for coughs and colds	A. Alvarado	30,192	Nov. 12	131	678
Remedy for bowel diseases	F. A. Patrick	27,838	Nov. 12	131	672
Remedy for catarrh, hay fever, pneumonia, &c	E. G. Harrell	26,406	Nov. 12	131	671
Remedy for gonorrhea, gleets, &c	Wright's Indian Vegetable Pill Company.	29,973	Nov. 12	131	675
Remedy for indigestion	Wright's Indian Vegetable Pill Company.	29,971	Nov. 12	131	675
Remedy for worms	Wright's Indian Vegetable Pill Company.	29,975	Nov. 12	131	676
Remedy to produce sleep, relieve pain, &c	Wright's Indian Vegetable Pill Company.	29,974	Nov. 12	131	676
Rubber or partly-rubber belting	B. F. Goodrich Company	30,431	Nov. 12	131	682
Rubber packing	Morgan & Wright	29,400	Nov. 12	131	673
Rubber toys	M. Lindsay Rubber Manufacturing Company.	30,137	Nov. 12	131	678
Sauce. Tomato-	V. Del Gaizo	22,551	Nov. 12	131	670
Shirts. Outer	Yankee Shirt Co	29,870	Nov. 12	131	675
Shirts. Outer	Commercial Shirt Co	30,004	Nov. 12	131	676
Shoes. Leather	Wayne Shoe Manufacturing Company.	30,110–13	Nov. 12	131	677–8
Silk and silk-mixed piece goods	Susquehanna Silk Mills	30,201–2	Nov. 12	131	679
Silk piece goods	Susquehanna Silk Mills	21,904	Nov. 12	131	669
Silver-lead or plumbago foundry-facings, &c	United States Graphite Company.	30,406	Nov. 12	131	681
Soap	C. E. McKenna	30,530	Nov. 12	131	683
Spark-plugs	Jeffery-Dewitt Company	30,028	Nov. 12	131	676
Steel and iron	Jonas & Colver	29,475	Nov. 12	131	673
Syrup. Table-	Halpen, Green & Co	30,291	Nov. 12	131	680
Tile, sewer-pipe, bricks, &c. Drain-	Mason City Brick & Tile Company.	29,752	Nov. 12	131	674
Tires. Rubber	Morgan & Wright	29,397	Nov. 12	131	673
Tobacco, cigars, and cigarettes	Globe Tobacco Company	22,673	Nov. 12	131	670
Tobacco. Smoking-	R. W. Ashcroft	29,315	Nov. 12	131	672
Tobacco. Smoking-	R. W. Ashcroft	29,532	Nov. 12	131	673
Umbrellas and parasols	Kraut & Finver Bros	30,358	Nov. 12	131	681
Washing-machines and parts thereof	Hibbard, Spencer, Bartlett & Company.	29,900	Nov. 12	131	675
Washing-tablets	S. A. MacDonald Co	28,566	Nov. 12	131	672
Whisky	J. Cartun	9,337	Nov. 12	131	668
Whisky	Strauss, Pritz & Co	20,195	Nov. 12	131	669
Whisky	Garrett-Williams Co	28,940	Nov. 12	131	672
Whisky	R. W. Ashcroft	29,314	Nov. 12	131	672
Whisky	R. W. Ashcroft	29,533	Nov. 12	131	674
Whisky	R. T. Dawson & Co	30,493	Nov. 12	131	682
Whisky	Cortwright Company	30,542	Nov. 12	131	683
Whisky	Cortwright Company	30,544	Nov. 12	131	683

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ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 19TH DAY OF NOVEMBER, 1907.

Name, residence, and invention.	No.	Date.	Monthly volume. Specification.	Monthly volume. Drawing.	Official Gazette. Volume.	Official Gazette. Page.
Aasen, Niels W., Drøbak, Norway, assignor to Rheinische Metallwaren-und Maschinenfabrik, Düsseldorf-Derendorf, Germany. Explosive hand-shell	871,156	Nov. 19	2099	564	131	717
Abbott, John E., Port Huron, Mich. Grain-door for cars	871,659	Nov. 19	3158	783	131	883
Abel, William, Jr, North Amherst, Ohio. Combination fruit-jar opener, tightener, and presser	871,197	Nov. 19	2181	580	131	731
Aiken, Emilie S., Boston, Mass. Veiling-display stand	871,198	Nov. 19	2182	580	131	731
Aktiebolaget Separator. (See Ljungström, Birger, assignor.)						
Albrecht, Martin, Friedberg, assignor to Felten & Guilleaume-Lahmeyerwerke Actien-Gesellschaft, Frankfort-on-the-Main, Germany. Means for driving motor road-vehicles	871,098	Nov. 19	1967	539	131	699
Alcorn, Thomas H., Philadelphia, Pa. Keel-block for ships	871,467	Nov. 19	2788	702	131	823
Allen, Herbert W. *et al.* (See Phinney, William B., assignor.)						
Allen, John L., Chicago, Ill. Can-heading machine	871,383	Nov. 19	2597	665–7	131	795
Allis-Chalmers Company *et al.* (See Cheney, Herbert W., assignor.)						
Allis-Chalmers Company *et al.* (See Gilmore, Thomas, Jr., assignor.)						
Allis-Chalmers Company *et al.* (See Stull, Emmett W., assignor.)						
Alsop, William T., Owensboro, Ky. Reshaping and restoring cartridge-shells	871,747	Nov. 19	3319	820	131	911
Alsop, William T., Owensboro, Ky. Apparatus for reshaping and restoring shells	871,748	Nov. 19	3321	820	131	911
Alvord, Franklin G., Estelle, Okla. Three or four horse hitch	871,316	Nov. 19	2453	634	131	772
American Attachment Company. (See Stevens, George J., assignor.)						
American Bank Protection Co. (See Arndt, Frederich J., assignor.)						
American Optical Company. (See Reinhard, Frank A., assignor.)						
American Typographic Corporation. (See Richards, Francis H., assignor.)						
American Warp-Drawing Machine Company. (See Field and Hathaway, assignors.)						
American Warp-Drawing Machine Company. (See Field, Hathaway, and Lanning, assignors.)	871,252	Nov. 19	2301	602	131	749
Ames, George E., Chicago, Ill. Joke-box						
Anderson, David F. (See Gilmore, Edward L., assignor.)						
Anderson, John. (See Spray, George H., assignor.)						
Anderson, Robert D. H., Cincinnati, Ohio. Vending-machine	871,384	Nov. 19	2608	667–8	131	795
Andrews, Charles M., assignor of one-half to C. M. Moore, Caryville, Tenn. Rotary valve	871,660	Nov. 19	3160	783	131	884
Andrews, Jacob R., Bath, Me. Valve mechanism for steam-steering	871,157	Nov. 19	2102	564	131	717
Arctander, Axel B., St. Paul, Minn. Window-screen	871,661	Nov. 19	3162	784	131	884
Armington, George A., Wickliffe, Ohio. Safety-brake for hoisting devices	871,552	Nov. 19	2972	742	131	851
Armstrong, Hamilton, *et al.* (See Canfield, Frank, assignor.)						
Arndt, Frederich J., assignor to American Bank Protection Co., Minneapolis, Minn. Electric time-alarm	871,553	Nov. 19	2975	742	131	851
Arndt, William. (See Lauber, William, assignor.)						
Auchu, Henry, Emporium, Pa. Gas-condenser	871,749	Nov. 19	3322	820	131	911
Austen, Peter T., F. J. Maywald, New York, and F. X. Govers, Owego, N. Y. Stripping paint and varnish remover and making same	871,750	Nov. 19	3323	.....	131	912
Automatic Gas Lighting Company. (See Meyer, August, assignor.)						
Automatic Train Control Company. (See Stiegelmeyer, John E., assignor.)						
Aylesworth, Julius P., Endeavor, Pa. Lathe-tool	871,662	Nov. 19	3163	784	131	884
Aylsworth, Jonas W., East Orange, assignor to New Jersey Patent Company, West Orange, N. J. Duplicating sound-records	871,554	Nov. 19	2978	742	131	852
Babbitt, Elvin J., Petoskey, Mich. Banjo attachment	871,158	Nov. 19	2103	564	131	718
Back, John R., assignor to F. E. Reed Co., Worcester, Mass. Controller for electrically-operated machine-tools	871,199	Nov. 19	2183	580–1	131	731
Backus, Alexander. (See Webber, John B., Jr., assignor.)						
Badische Anilin & Soda Fabrik. (See Labhardt, Hans, assignor.)						
Badische Anilin & Soda Fabrik. (See Reinking, Karl, assignor.)						
Badische Anilin & Soda Fabrik. (See Schönherr and Gaus, assignors.)						
Baker, Hugh J., Ambridge, Pa. Stand for ink-bottles	871,099	Nov. 19	1967	539	131	699
Baker, Winthrop D., Brockton, Mass. Tire	871,159	Nov. 19	2104	565	131	718
Ball, Francis E., Chicago, Ill. Bath-tub shower attachment	871,663	Nov. 19	3164	784	131	885
Ballard, Charley E., Guthrie Center, Iowa. Animal-muzzle	871,555	Nov. 19	2980	743	131	852
Bangs, William, Fort Fred Steele, Wyo. Shoal-indicator	871,556	Nov. 19	2981	743	131	852
Barber, John C., Chicago, Ill. Antifriction lateral-motion center-bearing	871,200	Nov. 19	2185	581	131	732
Barber, William E., Hope Valley, R. I. Combined strap and protector for harness-buckles, &c	871,557	Nov. 19	2982	743	131	853
Barthelmess, Emil, Neuss, Germany. Ring-and-roller mill	871,558	Nov. 19	2983	744	131	853
Bauman, Charles W., Columbus, Ohio. Measuring-faucet	871,253	Nov. 19	2303	602	131	750
Bayley, Arthur J. (See Russell and Bayley.)						
Baynes, Frederick A., Buffalo, N. Y. Oil-burner for lamps and stoves	871,100	Nov. 19	1968	539	131	699
Beam, Thomas L., Lake City, Colo. Bag and fastening	871,664	Nov. 19	3165	785	131	885
Bebout, Anna, St. Louis, Mo. Telephone-mouthpiece	871,468	Nov. 19	2790	702	131	823
Beck, Conrad and H. C., London, England. Photographic lens	871,559	Nov. 19	2985	744	131	853
Beck, Horace C. (See Beck, Conrad and H. C.)						
Belknap, Charles A., assignor to Standard Addressing Machine Company, New York, N. Y. Addressing-machine	871,560	Nov. 19	2986	7445	131	853
Bell, George A., Aurora, Ill. Grader	871,101	Nov. 19	1973	540	131	700
Benefiel, Harriet C., Vandalia, Ill. Kettle	871,665	Nov. 19	3166	785	131	885
Benjamin, George, assignor of one-half to F. A. Tygert, Philadelphia, Pa. Collapsible table	871,254	Nov. 19	2306	602	131	750

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Bentley, Alfred D., Toronto, Ontario, Canada. Device for holding the lids of boxes, cases, and similar receptacles in place	871,561	Nov. 19	2991	746	131	854
Bernel, Lucien H., otherwise known as Bernel Bourette, Paris, France. Apparatus for ascertaining the probability of frost	871,562	Nov. 19	2993	746	131	854
Berthier, André V. P. M., Constantinople, Turkey. Rail with triple head	871,563	Nov. 19	2994	746	131	855
Best, Ezra, *et al.* (See Best, William N., assignor.)						
Best, John H., *et al.* (See Best, William N., assignor.)						
Best, William N., Los Angeles, Cal., assignor to J. H. and E. Best, Quincy, Ill. Air-carbureting oil-burner	871,751	Nov. 19	3327	820	131	912
Betts, Charles L., assignor to R. E. Dietz Company, New York, N. Y. Lantern-tube	871,317	Nov. 19	2454	635	131	773
Bingham, Samuel, Rochester, N. Y. Valve for sterilizers	871,666	Nov 19	3167	785	131	885
Bischoff, Gustavus A., Chicago, Ill. Fastener for metallic sash-bars	871,318	Nov. 19	2455	635	131	773
Bissell, Percy R., New York, N. Y. Gas-engine	871,319	Nov. 19	2458	635–6	131	773
Blaine, John E., Jr., assignor to Globe-Wernicke Company, Cincinnati, Ohio. Index-filing system	871,102	Nov. 19	1976	540–1	131	700
Blair, Wesley W. (See Greenlaw, Arthur L., assignor.)						
Blake & Knowles Steam Pump Works. (See De Laval, George, assignor.)						
Blaw Collapsible Steel Centering Company. (See Blaw, Jacob B., assignor.)						
Blaw, Jacob B., assignor to Blaw Collapsible Steel Centering Company, Pittsburg, Pa. Mold	871,385	Nov. 19	2612	668	131	795
Bliedung, August, Hamburg, Germany. Automatic coaling apparatus for bunkers, &c.	871,469	Nov. 19	2791	702	131	823
Blood, William H., Jr., Wellesley, Mass. Pipe-cap	871,667	Nov. 19	3168	785	131	886
Bollée, Léon, Le Mans, France. Carbureter	871,320	Nov. 19	2462	636–7	131	774
Bontempi, Augusto, New York, N. Y. Sculpturing-machine	871,668	Nov. 19	3171	786–7	131	886
Bonus, George Y., Chicago, Ill. Superheating-boiler	871,201	Nov. 19	2187	581	131	732
Boos, Louis F. (See Dearing, David M., assignor.)						
Booth, Hiram E., Salt Lake City, Utah. Telephone-receiver	871,470	Nov. 19	2792	702	131	823
Borchert, Charles, *et al.* (See Lauber, William, assignor.)						
Bosau, Charles J., *et al.* (See Owings, George R., assignor.)						
Bragg, George W., Marietta, Ohio. Crane	871,255	Nov. 19	2307	603	131	751
Braman, Rollo W. (See Braman, Warren L., assignor.)						
Braman, Warren L., Ellington, assignor of one-half to R. W. Braman, Torrington, Conn. Lead-controlling mechanism for steam-engines	871,471	Nov. 19	2794	703	131	824
Branin, Mark H., Newark, N. J., assignor to General Electric Company. Stem-making machine	871,160	Nov. 19	2106	565–6	131	719
Bridge, Ephraim C., Chariton, Iowa. Optical instrument	871,103	Nov. 19	1978	541	131	700
Briggs, George E. (See Mayo and Houlehan, assignors.)						
Brining, Frank P., assignor of one-half to R. F. Whitmer, Philadelphia, Pa. Metallic railway cross-tie	871,472	Nov. 19	2796	703	131	824
Brink, Moris H., assignor of one-half to J. B. Carson, Blairsville, Pa. Rail-joint	871,104	Nov. 19	1979	541	131	701
Brockette, Ollie D., Aubrey, Tex. Horse-releaser	871,669	Nov. 19	3175	787–8	131	886
Brosius, Aaron, Evansville, Ind., assignor of one-half to L. F. Nonnast, Chicago, Ill. Veneer-cutting machine	871,473	Nov. 19	2797	703–5	131	824
Brown, Clark T., New York, N. Y. Type-writer. (Reissue)	12,720	Nov. 19	3372	827	131	918
Brown, Gilman E., Sandown, N. H. Tether-pin	871,564	Nov. 19	2996	747	131	855
Brown, Horace P. (See Johnston, Clarence L., assignor.)						
Buchanan, Robert, *et al.* (See Rothchild, Joseph, assignor.)						
Buckley, John P., Dayton, Ohio. Hose-nozzle	871,256	Nov. 19	2309	603	131	751
Buckner, William T., Shelbyville, Ky. Syringe	871,474	Nov. 19	2804	705	131	825
Buell, Charles E., North Plainfield, N. J., assignor to General Fire Extinguisher Company, New York, N. Y. Automatic sprinkler	871,105	Nov. 19	1980	541	131	701
Bulley, George W., New York, N. Y. Generating gas	871,202	Nov. 19	2189	581	131	733
Bullock Electric Manufacturing Company *et al.* (See Cheney, Herbert W., assignor.)						
Bullock Electric Manufacturing Company *et al.* (See Gilmore, Thomas, Jr., assignor.)						
Bullock Electric Manufacturing Company. (See Schneider, William F., assignor.)						
Bullock Electric Manufacturing Company *et al.* (See Stull, Emmett W., assignor.)						
Burhop, John H., Pyatt, Ark. Mowing-machine	871,203	Nov. 19	2192	582	131	733
Burke, Henry B., Windber, Pa. Mail-transfer device	871,475	Nov. 19	2806	706	131	825
Burkhardt, Edward G., assignor to Main-Winchester-Stone Company, Oakland, Cal. Harness	871,106	Nov. 19	1983	542	131	701
Burkholder, John H., assignor to F. E. Myers & Bro., Ashland, Ohio. Door-hanger	871,386	Nov. 19	2614	669	131	796
Burnham, Williams & Company. (See Ehle, Archibald H., assignor.)						
Burns, Robert H., *et al.* (See Rothchild, Joseph, assignor.)						
Burt Machine Company. (See Wild, Frederick W., Jr., assignor.)						
Burtin, Joseph, Charquemont, France. Watch	871,387	Nov. 19	2616	669	131	796
Cahoon, Everett B., Akron, Ohio. Trenching-hoe	871,565	Nov. 19	2997	747	131	855
Calbeck, Rinaldo, Pratt, Kans. Table-rack	871,670	Nov. 19	3176	788	131	886
Cameron, Arthur, Jackson, Mich. Draft device	871,204	Nov. 19	2194	582	131	733
Campbell, Charles E., Lynn, Mass. Time controlling device	871,671	Nov. 19	3177	788	131	887
Campbell, Charles E., Lynn, Mass. Rotary fan	871,672	Nov. 19	3179	788–9	131	887
Canfield, Frank, assignor to A. W. Well, N. Q. Tanquary, and H. Armstrong, Denver, Colo. Lid-supporter and price-tag holder	871,752	Nov. 19	3330	821	131	912
Capewell, George J., assignor to Capewell Horse Nail Company, Hartford, Conn. Scaling-machine	871,257	Nov. 19	2311	603–4	131	751
Capewell Horse Nail Company. (See Capewell, George J., assignor.)						
Carnegie, Alfred Q. (See Parsons and Carnegie.)						
Carson, John B. (See Brink, Moris H., assignor.)						
Cassel, Elmer F., Seattle, Wash. Relief mechanism for hydraulic nozzles	871,321	Nov. 19	2464	637	131	774
Cavana, Alvin J., Eldora, Iowa. Clothes-supporter	871,673	Nov. 19	3181	789	131	888
Champion Machinery Company. (See Smith, Edgar W., assignor.)						
Champion Machinery Company. (See Streich, Frank, assignor.)						
Chaney, James H., Stanton, Tenn., assignor of two-thirds to W. F. De Witt, Philadelphia, Pa. Combined tool	871,476	Nov. 19	2808	706	131	825
Chaplin, Edwin D., Boston, Mass., assignor to International Lead Companies. Producing pigments by electrolysis	871,161	Nov. 19	2109	566	131	719
Chaplin, Edwin D., Boston, Mass., assignor to International Lead Companies. Producing pigments by electrolysis	871,162	Nov. 19	2112	566	131	719
Charles, Henry L., Salt Lake City, Utah, assignor of one-half to F. A. Heinze, Butte, Mont. Feeding reverberatory furnaces	871,477	Nov. 19	2809	706–7	131	825
Cheney, Herbert W., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Controlling mechanism	871,205	Nov. 19	2195	583	131	734
Childress, Henderson P., New York, N. Y. Cotton-picker	871,478	Nov. 19	2812	708	131	826
Chipera, Frank and T., Breckenridge, Minn. Shaking mechanism for separators	871,566	Nov. 19	2998	747	131	856
Chipera, Thomas. (See Chipera, Frank and T.)						
Christensen, Hans P., San Francisco, Cal. Reversing mechanism for turbines	871,107	Nov. 19	1984	542	131	701
Christenson, Nils, assignor to C. B. Tuttle, deceased, Lynn, Mass., (A. M. Tuttle and H. M. Marsh, administratrices.) Variable-speed driving mechanism	871,753	Nov. 19	3332	821	131	913
Churchill, Thomas J., Boardman, Conn. Plowing-under attachment for plows	871,388	Nov. 19	2617	670	131	797
Clayland, James L., Fort Smith, Ark. Rotary engine	871,322	Nov. 19	2467	637–8	131	774

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Clément, Adolphe, Levallois-Perret, France. Transmission-gear for motor-lorries and other vehicles	871,108	Nov. 19	1985	542	131	702
Clemons, De Laski T., Hornell, N. Y. Sanding and polishing machine	871,323	Nov. 19	2471	638	131	775
Closter, Jep, Apenrade, Germany. Loading-hatchway for ships	871,567	Nov. 19	3000	748	131	856
Coates, George H., Worcester, Mass. Steering mechanism for motor-cars	871,109	Nov. 19	1986	542–3	131	702
Cochran, Edwin J., Sterling, Ill. Drain-pipe	871,389	Nov. 19	2618	670	131	797
Cochran, Henry R., Camden, Ark. Wedge-making machine	871,324	Nov. 19	2473	639	131	775
Coleman, Clyde J., New York, N. Y. Refrigerating apparatus	871,325	Nov. 19	2475	639	131	776
Comlinge, William R., London, England. Mechanical movement	871,110	Nov. 19	1988	543	131	702
Conklin, Charles M. (See Lunken and Conklin.)						
Conklin, Charles M., and E. H. Lunken, Cincinnati, Ohio, assignors to Lunken Steel Window Co. Locking mechanism for swinging windows	871,206	Nov. 19	2201	583	131	734
Connaty, James W., and W. E. Reno, Indianapolis, Ind. Table-top	871,207	Nov. 19	2203	583	131	734
Conner, William M., Cincinnati, Ohio. Bone-cutting machine	871,674	Nov. 19	3183	789	131	888
Cooney, Peter A. (See Oakes and Cooney.)						
Cooper, Albert R., Findlay, Ohio. Electrogenic body device	871,479	Nov. 19	2816	708	131	826
Cornish, Harry B., Minneapolis, assignor to one-half to P. Peterson, Glenwood, Minn. Carbureter	871,480	Nov. 19	2817	708–9	131	826
Corwin, Richard F., Grand Rapids, Mich. Vehicle-wheel	871,481	Nov. 19	2819	709	131	827
Cotton, Alfred, Newark, N. J. Jet-blower	871,208	Nov. 19	2204	584	131	734
Cotton, Alfred, Newark, N. J. Jet blowing apparatus	871,209	Nov. 19	2207	584–5	131	735
Coulter, Charles J., Longmont, Colo. Combined machine-wrench and clamp	871,482	Nov. 19	2820	709	131	827
Cramer, Stuart W., Charlotte, N. C. Hygrometer for humidifying and air-moistening apparatus	871,163	Nov. 19	2114	567	131	720
Criswell, James M., Pullman, W. Va. Well-tubing	871,258	Nov. 19	2314	604	131	752
Crocker-Wheeler Company. (See Heltmann and Young, assignors.)						
Crompton & Knowles Loom Works. (See Gordon, Albert A., Jr., assignor.)						
Crown Cork and Seal Company. (See Hofheimer, Maurice, assignor.)						
Cuba Manufacturing Company. (See Willink, William A. T., assignor.)						
Cummings, Robert A., Beaver, Pa. Connecting and spacing clip	871,210	Nov. 19	2211	585	131	736
D'Humy, Fernand E., Englewood, N. J. Massage implement	871,121	Nov. 19	2015	548	131	706
D-S-B. Company. (See Lee, George B., assignor.)						
D. T. Owen Company. (See Owen, David T., assignor.)						
Damzin, Martin, Detroit, Mich. Boat-propelling mechanism	871,326	Nov. 19	2478	640	131	776
Dander, Otto, Königsberg, Germany. Wood-polishing machine	871,111	Nov. 19	1994	543	131	703
Daniels, Fred H., Worcester, Mass. Concrete-floor structure	871,568	Nov. 19	3001	748	131	856
Dann, George E. (See Dann, Isaac N. and G. E.)						
Dann, Isaac N. and G. E., assignors to Rattan Mfg. Co., New Haven, Conn. Folding baby-carriage	871,483	Nov. 19	2822	710	131	827
Davidson, Marshall T. (See Drewett, William A., assignor.)						
Davidson, William K., Boston, Mass. Individual electric gas-lighter	871,112	Nov. 19	1995	544	131	703
Davies, Charles W. T., New York, N. Y. Necktie	871,569	Nov. 19	3002	748	131	856
Davies, William G., Seattle, Wash. Automatic portable weighing-scoop	871,676	Nov. 19	3187	790	131	889
Davis Acetylene Company. (See Davis, Augustine, assignor.)						
Davis, Augustine, Chicago, Ill., assignor to Davis Acetylene Company, Elkhart, Ind. Carbid-feeding device	871,570	Nov. 19	3003	748	131	857
Davis, George H., West Orange, N. J Electromechanical power-governor	871,484	Nov. 19	2824	710	131	828
Davis, Henry P., Hot Springs, Ark. Office-indicator	871,675	Nov. 19	3185	790	131	888
Dawes, Frederick C., and J. W. Forrest, Los Angeles, Cal. Sprocket	871,677	Nov. 19	3188	790	131	889
De Kleist, Eugene, North Tonawanda, N. Y. Cut-off for pneumatic musical instruments	871,123	Nov. 19	2017	549	131	706
De Laval, George, East Orange, N. J., assignor to Blake & Knowles Steam Pump Works, New York, N. Y. Air-pump	871,349	Nov. 19	2526	649	131	783
De Long, Albert, Sr., Shamokin, Pa. Music-rack	871,113	Nov. 19	1996	544	131	703
De Witt, William E. (See Chaney, James H., assignor.)						
Dean, William W., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Telephone wall set	871,485	Nov. 19	2826	711	131	828
Dearing, David M., assignor of one-half to L. F. Boos, Jackson, Mich. Steering-gear	871,678	Nov. 19	3189	791	131	889
Debroisse, Louis, South Bellingham, Mass. Fish-bait	871,486	Nov. 19	2830	.....	131	829
Delany, John F., Colona, Ill. Shaking-sieve	871,571	Nov. 19	3004	749	131	857
Denmead, John W., Akron, assignor to K. D. Box and Label Company, Cleveland, Ohio. Machine for making paper-box blanks	871,487	Nov. 19	2831	712–13	131	829
Dental Protective Supply Company of the United States. (See Morris, Joseph, assignor.)						
Dexter, Talbot C., Pearl River, N. Y. Paper-cutting machine	871,572	Nov. 19	3006	749	131	857
Dexter, Talbot C., Pearl River, N. Y. Paper-cutting machine	871,573	Nov. 19	3008	749–50	131	858
Diamond Match Company. (See Wright, Jacob P., assignor.)						
Dieter, Albert E., and G. H. Sander, Dayton, Ohio. Tobacco-pipe	871,488	Nov. 19	2834	713	131	829
Dietrichs, Charles, Little Ferry, N. J. Apparatus for constructing walls of concrete	871,327	Nov. 19	2479	640	131	776
Dietrichs, Charles, Little Ferry, N. J. Device for molding concrete and other plastic materials	871,390	Nov. 19	2620	670	131	797
Dixon, Robert M. (See Erb, Edmund M., assignor.)						
Dorgan, Michael H., Mayfield, Cal. Vehicle-washer	871,574	Nov. 19	3011	750	131	858
Dorgan, William T., Peoria, Ill., assignor to W. J. Wickes and A. D. Eddy, Saginaw, Mich. Tire-protector	871,575	Nov. 19	3012	750	131	858
Dorman, John J., Red Springs, N. C. Plow-point fastener	871,259	Nov. 19	2315	605	131	752
Dow, Charles E., Plymouth, Mass. Comb-frame lifter	871,489	Nov. 19	2835	713	131	830
Downs, William J., Fragrant, Ky. Corn-planter and fertilizer-dropper	871,328	Nov. 19	2481	640–1	131	777
Draper Company. (See Morey, Myron, assignor.)						
Draper Company. (See Roper, Charles F., assignor.)						
Drayer, Charles, St. Louis, Mo. Column-joint	871,576	Nov. 19	3013	750	131	859
Drewett, William A., New York, assignor to M. T. Davidson, Brooklyn, N. Y. Twin air-pump	871,114	Nov. 19	1997	544–5	131	703
Duncan, John D. E., New York, N. Y. Insulator-pin mounting	871,490	Nov. 19	2836	714	131	830
Dunkel, Julius, Langfuhr, near Danzig, Germany. Jointed metal pipe	871,577	Nov. 19	3015	751	131	859
Dunlap, John S., Chicago, Ill. Coffee-pot	871,491	Nov. 19	2838	714	131	830
Dunlap, John S., Chicago, Ill. Coffee-pot	871,492	Nov. 19	2839	714	131	830
Dunn, George W., Newport, Ky. Wall and ceiling decoration	871,211	Nov. 19	2213	585	131	736
Dupre, Wilfred, assignor of forty-eight fiftieths to H. H. O'Rourke, Worcester, Mass. Street-sweeper	871,212	Nov. 19	2214	585–6	131	736
Dushane, James. (See Knoblock and Dushane.)						
Dutrieux, Arthur, Le Quesnoy, France. Shock-absorber for motor-cars	871,329	Nov. 19	2482	641	131	777
Dyer Company. (See Dyer, Harold P., assignor.)						
Dyer, Harold P., assignor to Dyer Company, Cleveland, Ohio. Pressure regulator and reducer	871,260	Nov. 19	2316	605	131	752
Eastman Kodak Company. (See Gaffney, Augustine, assignor.)	871,213	Nov. 19	2216	586	131	736
Eckmann, Max, Blue Island, Ill. Suspensory						
Eddy, Arthur D., *et al.* (See Dorgan, William T., assignor.)						
Edison Storage Battery Company. (See Edison, Thomas A., assignor.)						
Edison, Thomas A., Llewellyn Park, assignor to Edison Storage Battery Company, Orange, N. J. Reversible galvanic battery	871,214	Nov. 19	2217	586	131	737

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Edward E. Rieck Company. (See Glauser, John J., assignor.)						
Edwards, Montieville M., Abbott, Tex. Cotton-seed separator	871,115	Nov. 19	1999	545	131	704
Eells, Ira E. (See McKelvey and Eells.)						
Ehle, Archibald H., assignor to Burnham, Williams & Company, Philadelphia, Pa. Controlling mechanism for clutches	871,578	Nov. 19	3016	751–2	131	859
Eichenhofer, Friedrich, *et al.* (See Kroschel, August H., assignor.)						
Einstein, Robert E., St. Louis, Mo. Railway-track structure	871,493	Nov. 19	2842	715	131	831
Electric Boat Company. (See Spear, Lawrence Y., assignor.)						
Elliott, William P., Jr. (See Elliott, William P. and W. P., Jr.)						
Elliott, William P. and W. P., Jr., La Grange, Ill. Pneumatic gate	871,391	Nov. 19	2622	670	131	797
Ellis, Carleton, Larchmont, N. Y. Preserved wood and making same	871,392	Nov. 19	2623	.....	131	798
Ellsworth, Amos C., Newport, Vt. Air-ship	871,164	Nov. 19	2117	567–8	131	720
Endemann, Hubert, Vienna, Austria-Hungary. Press for molding suppositories, &c.	871,261	Nov. 19	2317	605	131	753
Englefield, Arthur, Longford, near Gloucester, England. Book-rest and the like. (Reissue)	12,721	Nov. 19	3373	827	131	918
English, William J., Cohoes, N. Y. Atomizer	871,579	Nov. 19	3017	752	131	859
Erb, Edmund M., Jersey City, assignor to R. M. Dixon, East Orange, N. J. Sash construction	871,215	Nov. 19	2220	587	131	737
Erb, Edmund M., Jersey City, assignor to R. M. Dixon, East Orange, N. J. Window construction	871,216	Nov. 19	2222	587	131	737
Erb, Edmund M., Jersey City, assignor to R. M. Dixon, East Orange, N. J. Sash construction	871,217	Nov. 19	2223	587	131	737
Erb, Edmund M., Jersey City, assignor to R. M. Dixon, East Orange, N. J. Sash construction	871,218	Nov. 19	2224	588	131	738
Erber, Josef. (See Homolka and Erber.)						
Estey Organ Company. (See Haskell, William E., assignor.)						
Ethridge, Martin V. B., New York, N. Y. Canceling and postmarking machine	871,330	Nov. 19	2484	641–2	131	777
F. E. Reed Co. (See Back, John R., assignor.)						
Faber, Homo, Chicago, Ill. Folding reed-organ	871,262	Nov. 19	2319	605–6	131	753
Fallows, Edward H., trustee. (See Gallagher, Joseph D., assignor.)						
Farbwerke, vorm. Meister, Lucius & Brüning. (See Homolka and Erber, assignors.)						
Feighery, Eugene, Newport, Ky. Window-screen	871,679	Nov. 19	3191	791	131	890
Feighery, Eugene, Newport, Ky. Window-screen	871,754	Nov. 19	3336	821	131	913
Felbel, Jacob, New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine	871,116	Nov. 19	2000	545–6	131	704
Felten & Guilleaume-Lahmeyerwerke Actien-Gesellschaft. (See Albrecht, Martin, assignor.)						
Field, Millard F., Winthrop, and E. F. Hathaway, assignors to American Warp-Drawing Machine Company, Boston, Mass. Shifter-rod for power-driven machines	871,681	Nov. 19	3196	792	131	890
Field, Millard F., Winthrop, E. F. Hathaway and C. D. Lanning, assignors to American Warp-Drawing Machine Company, Boston, Mass. Warp-drawing machine	871,680	Nov. 19	3192	791–2	131	890
Fielding, William, Lewiston, Me. Spindle-lubricator	871,165	Nov. 19	2119	568	131	721
Finney, Samuel C., Breadysville, Pa. Square	871,117	Nov. 19	2003	546	131	704
Fishburn, John P., Los Angeles, Cal. Lawn-sprinkling device	871,682	Nov. 19	3200	792	131	891
Flanders, Louis H., Wilkinsburg, Pa., assignor to Westinghouse Machine Company. Appliance for assembling storage batteries	871,393	Nov. 19	2625	671	131	798
Flindall, John, Chicago, Ill. Reclining-lounge	871,263	Nov. 19	2325	607	131	753
Flindall, John, Chicago, Ill. Chair	871,683	Nov. 19	3202	792	131	891
Forbush, Walter R., Newton, Mass. Damper-regulator	871,755	Nov. 19	3337	821–2	131	914
Ford, R. M. (See Thomas, Frank S., assignor.)	871,118	Nov. 19	2005	546	131	704
Forrest, James W. (See Dawes and Forrest.)						
Forrester, Peter C., Tacoma, Wash. Liquid-measuring apparatus	871,580	Nov. 19	3018	752	131	860
Forter Miller Engineering Company. (See Miller, William R., assignor.)						
Foss, Walter D., Wooster, Ohio. Brush	871,494	Nov. 19	2843	715	131	831
Foster, Charles H., St. Louis, Mo. Toy and other device	871,264	Nov. 19	2327	607	131	754
Foster, William, and T. L. Schenck, Butler, Pa. Spirit plumb and level device	871,684	Nov. 19	3203	792	131	891
Foulke, John T., Richmond, Ind. Expansion-plow	871,219	Nov. 19	2225	588	131	738
Fraasch, Ewald W., Bellingham, Minn. Device for picking up lodged or battered-down grain	871,331	Nov. 19	2488	642	131	777
Francke, William J., Bridgeport, Conn. Journal-bearing	871,265	Nov. 19	2328	607	131	754
Fraser, George H. (See Hall, Milan W., assignor.)						
Freier, Anton, Boston, Mass., assignor to Holtzer Cabot Electric Company. Applying a coating of one metal to the surface of another metal	871,685	Nov. 19	3204	793	131	892
Freier, Anton, Boston, Mass., assignor to Holtzer Cabot Electric Company. Platinum contact	871,686	Nov. 19	3205	793	131	892
Frey, Ernest H., Cleveland, Ohio. Printing-card	871,581	Nov. 19	3019	753	131	860
Fried. Krupp Aktiengesellschaft. (See Krone, Johannes, assignor.)						
Friestedt, Luther P., Chicago, Ill. Sheet-piling	871,582	Nov. 19	3021	753	131	860
Frink, Robert L., Belle Vernon, assignor to Window Glass Machine Company, Pittsburg, Pa. Hoisting-gear for glass-drawing apparatus	871,687	Nov. 19	3206	793–4	131	892
Fuhrmann, Franz, assignor to Kirchhoff & Neirath Berlin American Commercial Company, Berlin, Germany. Making mercury salves and ointments	871,495	Nov. 19	2845	.....	131	831
Fuller, Galus C., Cleveland, Ohio. Caster	871,583	Nov. 19	3023	753	131	861
Gaffney, Augustine, assignor, by mesne assignments, to Eastman Kodak Company, Rochester, N. Y. Apparatus for developing photographic plates	871,332	Nov. 19	2489	642–3	131	778
Gallagher, Joseph D., Glenridge, N. J., assignor to E. H. Fallows, trustee, New York, N. Y. Brake-shoe	871,394	Nov. 19	2628	672	131	794
Galt, Amos A., Edgar, Nebr. Hame and trace connection	871,688	Nov. 19	3208	794	131	892
Ganzhorn, Philip, Chicago, Ill. Surgical appliance	871,689	Nov. 19	3210	795	131	893
Gaus, Wilhelm. (See Schönherr and Gaus.)						
Gehner, Fred, Garrison, N. D. Wrench	871,690	Nov. 19	3211	795	131	893
General Electric Company. (See Branin, Mark H., assignor.)						
General Electric Company. (See Kruh, Osias O., assignor.)						
General Fire Extinguisher Company. (See Buell, Charles E., assignor.)						
Gentieu, George W., Peoria, Ill. Explosive	871,395	Nov. 19	2630	.....	131	799
Gentieu, George W., Peoria, Ill. Projectile	871,396	Nov. 19	2630	672	131	799
Gérard, Abel R. A., Pontgivart, near Reims, France. Protection of railway trains	871,496	Nov. 19	2846	715–17	131	832
Gerlach, George W., Cumberland, Iowa. Railway signal and safety appliance	871,166	Nov. 19	2120	568–9	131	721
Gertenbach, Louise, Dubuque, Iowa. Auxiliary grate for stoves and ranges	871,266	Nov. 19	2329	608	131	754
Giambra, Gandolfo, Paterson, N. J. Spacing instrument	871,333	Nov. 19	2492	643	131	778
Girardino, Joachim, Guttenberg, N. J. Window-pane fastener	871,267	Nov. 19	2330	608	131	755
Gibbon, Frank, Pocatello, Idaho. Weather-strip	871,334	Nov. 19	2494	644	131	778
Gillespie, John S., *et al.* (See Owings, George R., assignor.)						
Gilmore, Edward L., assignor of one-half to D. F. Anderson, Youngstown, Ohio. Fishing-reel	871,167	Nov. 19	2122	569	131	721
Gilmore, Thomas, Jr., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Controller	871,220	Nov. 19	2228	589	131	738
Glauser, John J., assignor to Edward E. Rieck Company, Pittsburg, Pa., Refrigerating apparatus	871,397	Nov. 19	2631	672–3	131	799

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Globe-Wernicke Company. (See Blaine, John E., Jr., assignor.)						
Gordon, Albert A., Jr., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Loom shedding mechanism	871,398	Nov. 19	2633	673	131	799
Gorsuch, Samuel C., Braddock, Pa. Gas-generator	871,497	Nov. 19	2850	717	131	832
Goss, Milford T., Chicago, Ill. Boiler	871,691	Nov. 19	3212	795–6	131	893
Govers, Francis X. (See Austen, Maywald, and Govers.)						
Graham, Alvaro B., Chicago, Ill. Paper-feeding machine	871,498	Nov. 19	2852	717–19	131	832
Graham, Charles M., Dunedin, New Zealand. Fire-grate	871,584	Nov. 19	3025	753	131	861
Graham, Frederick S., Philadelphia, Pa., assignor of two-thirds to R. M. Seaman and C. A. Struntz. Valveless pneumatic tool	871,756	Nov. 19	3340	822	131	914
Gray, Daniel H. and G. S., Dunbar, Pa. Coal-washer	871,499	Nov. 19	2865	719	131	833
Gray, George S. (See Gray, Daniel H. and G. S.)						
Gray, James A., San Francisco, Cal. Can-body-forming machine	871,268	Nov. 19	2332	608–9	131	755
Gray, William, Springfield, Mo. Hammock	871,692	Nov. 19	3214	794	131	893
Green, David S., St. Louis, Mo. Toy	871,399	Nov. 19	2635	673	131	800
Greenlaw, Arthur L., Malden, assignor of one-half to W. W. Blair, Newtonville, Mass. Flexible pipe-joint	871,757	Nov. 19	3342	822	131	914
Gregg, John A., Burlington, Iowa. Turn-button	871,269	Nov. 19	2334	609	131	755
Griffin, Martin, assignor of two-thirds to A. M. Lane, St. Marys, and J. H. Weaver, Philadelphia, Pa. Pressure-retaining and quick-release valve for air-brakes	871,270	Nov. 19	2335	609	131	755
Gurney, Gilbert, Berkeley, Cal. Extracting gold and silver from ores	871,766	Nov. 19	3369	826	131	917
Hadley, Artemus N., Indianapolis, Ind. Portable field-derrick	871,500	Nov. 19	2867	719–20	131	833
Haeberli, Christopher J., Buffalo, N. Y. Combination-tool	871,585	Nov. 19	3026	754	131	861
Haile, Charles Y., and G. M. Hugus, Uniontown, Pa. Bond for rails	871,501	Nov. 19	2869	720	131	834
Hall, George, Lima, Ohio. Combination dental bracket	871,400	Nov. 19	2636	674	131	800
Hall, John, Fresno, Cal. Carrier	871,586	Nov. 19	3027	754	131	862
Hall Milan W., New York, assignor of one-tenth to G. H. Fraser, Brooklyn, N. Y. Apparatus for generating and utilizing power in engines and self-propelled vehicles	871,335	Nov. 19	2495	644	131	779
Hall, Silas, Morecambe, England. Cover for jugs, teapots, and like vessels	871,271	Nov. 19	2341	610	131	756
Halse, Sophus J., Milwaukee, Wis. Registration-stamp	871,502	Nov. 19	2870	720	131	834
Hamm, William S., Lakeside, Ill. Lantern	871,401	Nov. 19	2637	674	131	800
Hammond, Henry. (See Moneuse, Elie J., assignor.)						
Handlan, Alexander H., Jr., St. Louis, Mo. Machine for boring railway-ties	871,402	Nov. 19	2638	674–5	131	800
Hanhart, Louis J., assignor to J. A. Fay & Egan Company, Cincinnati, Ohio. Band sawing-machine	871,119	Nov. 19	2007	547–8	131	705
Harder, Paulli, Maspeth, N. Y. Non-refillable bottle	871,693	Nov. 19	3215	796	131	894
Harris, Eli P. (See Kinney and Harris.)						
Harrison, James R., Peoria, Ill. Vehicle-weigher	871,403	Nov. 19	2641	675–6	131	801
Hartmann, Firm of Rud. A. (See Vassel, Walter, assignor.)						
Hascy, Harvey W., Hempstead, N. Y. Brush	871,336	Nov. 19	2497	644	131	779
Haskell, Charles C., Bournedale, Mass. Pipe	871,503	Nov. 19	2871	720	131	834
Haskell, William E., assignor to Estey Organ Company, Brattleboro, Vt. Organ-pipe	871,272	Nov. 19	2342	610	131	756
Hathaway, Edgar F. (See Field and Hathaway.)						
Hathaway, Edgar F. (See Field, Hathaway, and Lanning.)						
Haupt, Max, Allegheny, Pa. Reinforcing-bar	871,504	Nov. 19	2872	721	131	834
Hawley, Charles D. (See Hawley, Jesse G. and C. D.)						
Hawley, Jesse G. and C. D., Stratford, Conn. Changeable-speed gearing	871,337	Nov. 19	2497	644–5	131	779
Hayden, Joel, Jr., Boston, Mass. Ring spinning and twisting machine	871,694	Nov. 19	3216	796	131	894
Haywood, Daniel H., New York, N. Y. Music-sheet	871,221	Nov. 19	2230	589	131	739
Heeney, Henry J., Boston, Mass., assignor to Holtzer Cabot Electric Company. Electric bell	871,168	Nov. 19	2125	569	131	721
Heinze, Fritz A. (See Charles, Henry L., assignor.)						
Heitmann, Edward, Montclair, and F. W. Young, East Orange, assignors to Crocker-Wheeler Company, Ampere, N. J. Bridging-blocks for dynamo-electric machines	871,768	Nov. 19	3345	823	131	915
Heller, William A., Akron, Ohio. Tire	871,404	Nov. 19	2647	676	131	801
Henjum, John A. (See Mullen, William G., assignor.)						
Henninger, George S., Linton, Ind. Street-car signal	871,587	Nov. 19	3028	754	131	862
Henry, Edward, Belcherville, Tex. Railway-tie	871,695	Nov. 19	3217	797	131	894
Herman, Emil. (See Herman, Raymond L., assignor.)						
Herman, Raymond L., assignor, by mesne assignments, to E. Herman, New York, N. Y. Folding bed	871,505	Nov. 19	2873	721	131	835
Héroult, Paul L. T., La Praz, assignor to Societe Electro-Metallurgique Francaise, Froges, Isère, France. Electric furnace and method	871,273	Nov. 19	2344	610	131	756
Héroult, Paul L. T., La Praz, assignor to Societe Electro-Metallurgique Francaise, Froges, France. Electric furnace	871,338	Nov. 19	2501	645	131	780
Herr, Arthur T., assignor to "Rapid Fire" Fuse Igniter Company, Denver, Colo. Igniting-tape and producing same	871,696	Nov. 19	3218	797	131	894
Hertzberg, Harry, and M. J. Wohl, New York, assignors to A. A. Low, Horseshoe, N. Y. Electrically-heated soldering-iron	871,405	Nov. 19	2648	677	131	802
Herzog, Philip W., *et al.* (See Hodgson, Isaac W., assignor.)						
Hetherington, Alexander F. (See Nelson, Alfred, assignor.)						
Hickey, Daniel K. (See Saunders, William L., assignor.)						
Higgin, Henry, assignor to Higgin Manufacturing Company, Newport, Ky. Reach for vehicles	871,222	Nov. 19	2231	589	131	739
Higgin Manufacturing Company. (See Higgin, Henry, assignor.)						
Hinsberger, Louis, New York, N. Y. Salt-shaker	871,588	Nov. 19	3030	755	131	862
Hitchcock, Wilbur K., Chicago, Ill. Spring structure	871,589	Nov. 19	3031	755	131	862
Hodgson, Edgar J., *et al.* (See Hodgson, Isaac W., assignor.)						
Hodgson, Isaac W., assignor of three-fourths to E. J. Hodgson, Minneapolis, and P. W. Herzog, St. Paul, Minn. Resilient tire	871,506	Nov. 19	2874	721	131	835
Hofheimer, Maurice, assignor to Crown Cork and Seal Company, Baltimore, Md. Closure for bottles, jars, &c.	871,697	Nov. 19	3221	797	131	895
Hohulin, John, S., and T., Goodfield, Ill. Fence construction	871,698	Nov. 19	3223	798	131	895
Hohulin, Samuel. (See Hohulin, John S., and T.)						
Hohulin, Timotheus. (See Hohulin, John, S., and T.)						
Hollinshead, Burton, Fulton, Ill. Animal-fetter	871,406	Nov. 19	2651	677	131	802
Holly, John A., Port au Prince, Haiti. Placket-closure	871,590	Nov. 19	3032	755	131	863
Holmes, George A., Newton, Mass. Attachment for setting-presses	871,591	Nov. 19	3033	755–6	131	863
Holmes, Grant, assignor to Robert Holmes & Brothers, Danville, Ill. Automatic lifting mechanism	871,120	Nov. 19	2013	548	131	705
Holtzer Cabot Electric Company. (See Freier, Anton, assignor.)						
Holtzer Cabot Electric Company. (See Heeney, Henry J., assignor.)						
Homolka, Benno, Frankfort-on-the-Main, and J. Erber, assignors to Farbwerke, vorm. Meister, Lucius & Brüning, Höchst-on-the-Main, Germany. Anthrachrysone derivatives	871,507	Nov. 19	2876	.....	131	835
Hood Frederic C., Boston, Mass. Pneumatic tire	871,169	Nov. 19	2127	570	131	722
Hope-Jones, Frank, London, England. Electric clock	871,407	Nov. 19	2652	677–8	131	802
Hopkinson, Austin, Manchester, England. Coal-cutting machine	871,592	Nov. 19	3034	756	131	863
Horix, Carl, East Cleveland, Ohio. Concrete reinforcement	871,699	Nov. 19	3225	798	131	895
Horn, Frederick F., Colorado Springs, Colo. Hand-rake attachment	871,339	Nov. 19	2502	645	131	780

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Houlehan, John. (See Mayo and Houlehan.)						
Hu lehan John, and W. C. Mayo, El Paso, Tex. Gas-engine	871,508	Nov. 19	2878	722	131	835
Hrdina, Frank C, North St. Paul, Minn. Conveyer system	871,340	Nov. 19	2504	645–6	131	780
Hrdlicka, John, *et al.* (See Lauber, William, assignor.)						
Hugus, George M. (See Haile and Hugus.)						
Hüneke, Hermann. (See Martini and Hüneke.)						
Hupfel, Adolph G., New York, N. Y. Keg-handling mechanism	871,274	Nov. 19	2345	610–11	131	757
Hutchins Car Roofing Company. (See Otis, Spencer, assignor.)						
Hutchison, Robert B., Pittsburg, Pa., assignor of one-half to A. H. Thurston, New York, N. Y. Carpet-cleaning machine	871,700	Nov. 19	3226	798	131	896
Imperial Art Press Co. (See Prouty, George W., assignor.)						
Ingersoll, Richmond H., Biddeford, Me. Picker mechanism for looms	871,275	Nov. 19	2349	611–12	131	757
International Lead Companies. (See Chaplin, Edwin D., assignor.)						
International Steam Pump Company. (See Jaeger, Carl H., assignor.)						
International Steam Pump Company. (See Newcomb, Charles L., assignor.)						
J. A. Fay & Egan Company. (See Hanhart, Louis J., assignor.)						
J. B. Williams Company. (See Reed, James V., assignor.)						
Jackson Cushion Spring Company. (See Smith and Phelps, assignors.)						
Jacob, John, assignor of one-half to E. S. Woods, Chicago, Ill. Side bearing for railway-cars	871,408	Nov. 19	2655	678	131	803
Jacob, John, assignor of one-half to E. S. Woods, Chicago, Ill. Roller-bearing	871,409	Nov. 19	2659	678–9	131	803
Jacob, John, assignor of one-half to E. S. Woods, Chicago, Ill. Roller-bearing	871,410	Nov. 19	2663	679	131	804
Jacobi, Georg A., Darmstadt, Germany. Soap-frame	871,411	Nov. 19	2666	679	131	804
Jaeger, Carl H., Leipzig, Germany, assignor to International Steam Pump Company, New York, N. Y. Centrifugal and turbine pump and the like	871,341	Nov. 19	2505	646	131	780
Jameson, Alexander, assignor to L. Noble, trustee, Indianapolis, Ind. Non-refillable bottle	871,276	Nov. 19	2352	612	131	758
Jansen, Bernard H. (See McNamara, William V., assignor.)						
Jeavons, William R., Cleveland, Ohio. Oil-burner	871,593	Nov. 19	3036	756	131	863
Jeckert, Joseph F., Garfield, N. J. Toy	871,701	Nov. 19	3228	799	131	896
John Brown & Company. (See Wallace, William C., assignor.)						
Johnson, Andrew T., Tonopah, Nev. Pressure-reducing valve	871,277	Nov. 19	2354	612	131	758
Johnson, Charles P., Eureka, Kans. Headlight for locomotives	871,223	Nov. 19	2233	589	131	739
Johnson, Edwin. (See Sadtler, Samuel P., assignor.)						
Johnson, Frank, New York, N. Y. Loom	871,224	Nov. 19	2234	590	131	740
Johnson, Frank, New York, N. Y. Brake mechanism for loom warp-beams	871,278	Nov. 19	2359	613	131	759
Johnson, Harry C., and O. Steidel, Washington, D. C. Non-refillable bottle	871,702	Nov. 19	3228	799	131	896
Johnston, Clarence L., San Francisco, assignor of one-half to H. P. Brown, Alameda, Cal. Sheet-delivery apparatus	871,412	Nov. 19	2667	679–80	131	804
Jones, Charles W., and W. L. Meredith, Oskaloosa, Iowa. Combination blacking-brush	871,170	Nov. 19	2128	570	131	722
Jones, Edward N., Victor, Colo. Rock-drill	871,594	Nov. 19	3040	757	131	864
Jones, Llewellyn W., Sewickley, assignor to Pittsburgh Filter Manufacturing Company, Pittsburg, Pa. Water-softener	871,225	Nov. 19	2236	590	131	740
Jones, Llewellyn W., Sewickley, assignor to Pittsburgh Filter Manufacturing Company, Pittsburg, Pa. Water-softener apparatus	871,226	Nov. 19	2237	591	131	740
Jordan, Franz, Köthen, Germany. Compressed-air brake	871,509	Nov. 19	2881	722	131	836
K. D. Box and Label Company. (See Denmead, John W., assignor.)						
Kabureck, George, Jersey City, N. J. Ventilator	871,342	Nov. 19	2506	646	131	781
Keane, Mary J., New York, N. Y. Hook and eye or the like	871,413	Nov. 19	2676	680	131	805
Keckeley, Ernest C., and A. Kossmann, Columbus, Ohio. Cleaning-machine	871,414	Nov. 19	2677	680	131	805
Keith, Marion, St. Louis, Mo. Combined curtain-protector and sham-holder	871,703	Nov. 19	3229	799	131	896
Kelley, Charles E., Waterbury, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine	871,595	Nov. 19	3042	757	131	864
Kellogg Switchboard & Supply Company. (See Dean, William W., assignor.)						
Kelly, John, Chicago, Ill. Wrench	871,415	Nov. 19	2678	681	131	805
Kelly, Luke. (See Williams, Elmer V., assignor.)						
Kelly, Thomas F. (See Rankin and Kelly.)						
Kemp Hydro-Carbon Furnace Company. (See Worthen, Burt L., assignor.)						
Kendrick, Solomon, assignor to Vogt Manufacturing and Coach Lace Company, Rochester, N. Y. Emergency stop-motion for narrow-fabric looms	871,704	Nov. 19	3230	800	131	887
Kent, Robert S., Brooklyn, N. Y. Apparatus for drying charcoal	871,705	Nov. 19	3232	800–1	131	897
Kenyon, Otis A., New York, N. Y. Cut-estimator	871,417	Nov. 19	2680	681	131	805
Kerr, William M., Stamford, Conn. Sign	871,510	Nov. 19	2883	722	131	836
Ketcham, Isaac A., New York, N. Y. Apparatus for controlling fishing-nets	871,343	Nov. 19	2507	646	131	781
Keyes, William H., Chicago, Ill. Foot-rest for vehicles	871,279	Nov. 19	2360	613	131	759
Kidder, Wellington P., Boston, Mass., assignor to Parker Machine Company, Buffalo, N. Y. Carriage escapement mechanism	871,280	Nov. 19	2362	613	131	759
Kidder, Wellington P., Boston, Mass., assignor to Parker Machine Company, Buffalo, N. Y. Type-writing machine	871,344	Nov. 19	2508	647	131	781
Kidder, Wellington P., Boston, Mass., and C. W. Sponsel, Hartford, Conn., assignors to Parker Machine Company, Buffalo, N. Y. Type-writing machine	871,281	Nov. 19	2364	614	131	760
Kingsley, Nathan S., West Gouldsboro, Me. Timber-jack	871,122	Nov. 19	2016	549	131	706
Kinney, Charles, Elmira Heights, and E. P. Harris, Horseheads, N. Y. Antifriction rein-guide	871,596	Nov. 19	3046	758	131	865
Kirchhoff & Neirath Berlin American Commercial Company. (See Fuhrmann, Franz, assignor.)						
Kitchen, Joseph M. W., East Orange, N. J. Combustion apparatus	871,597	Nov. 19	3046	758–9	131	865
Kitsee, Isidor, Philadelphia, Pa. Production of sound-records	871,511	Nov. 19	2885	723	131	837
Kleemann, Felix, London, England. Shoemaker's knife	871,416	Nov. 19	2680	681	131	805
Kleinschmidt, Edward E., New York, N. Y. Fishing-reel	871,345	Nov. 19	2513	647	131	782
Kleinschmidt, Edward E., New York, N. Y. Fishing-reel	871,346	Nov. 19	2516	648	131	782
Klessig, Otto H., Houghton, Mich. Washtub-fitting	871,347	Nov. 19	2520	648	131	783
Kline, David L. and M. D., Newark, N. J. Water-heater	871,706	Nov. 19	3235	801	131	897
Kline, Martha D. (See Kline, David L. and M. D.)						
Klumph, Almon P., assignor of one-half to E. Leber, Elyria, Ohio. Multiple force-feed sight-lubricator	871,418	Nov. 19	2682	681	131	806
Kneppler, Charles M., assignor to L. E. Kneppler, New York, N. Y. Graining metallic lithographic plates	871,598	Nov. 19	3057	759	131	866
Kneppler, Louis E. (See Kneppler, Charles M., assignor.)						
Knoblock, Otto M., and J. Dushane, South Bend, Ind. Sounding apparatus	871,124	Nov. 19	2020	550	131	707
Knoll, George J., Cleveland, Ohio. Convertible street-car	871,419	Nov. 19	2683	682–3	131	806
Knutson, Alfred W., Brookfield, Ill., assignor to Trolley Supply Company, Canton, Ohio. Trolley-retriever. (Reissue)	12,722	Nov. 19	3374	827–8	131	919
Koch, Eugène, Lyon, France. Hydrocarbon-motor	871,707	Nov. 19	3236	801	131	898
Kohout, Alois and F., assignors to H. F. Vogel, St. Louis, Mo. Flexible parquetry	871,420	Nov. 19	2903	683	131	806
Kohout, Frederick. (See Kohout, Alois and F.)						
Koppers, Heinrich, Essen-on-the-Ruhr, Germany. Coke-oven door	871,421	Nov. 19	2904	683	131	807
Kossmann, Andrew. (See Keckeley and Kossmann.)						
Krantz, Hubert, Brooklyn, N. Y. Panel-board	871,348	Nov. 19	2522	648	131	783

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Krone, Johannes, assignor to Fried. Krupp Aktiengesellschaft, Essen-on-the-Ruhr, Germany. Disappearing gun-carriage	871,708	Nov. 19	3238	802	131	898
Kroschel, August H., assignor to F. Eichenhofer and N. A. Ross, Los Angeles, Cal. Combined grading and bordering machine	871,709	Nov. 19	3239	802	131	898
Krueger, Richard C., Cresco, Iowa. Spring draft attachment	871,282	Nov. 19	2374	614	131	760
Kruh, Osias O., Schenectady, N. Y., assignor to General Electric Company. Vapor-rectifier system	871,171	Nov. 19	2129	570	131	722
Kuzel, Hans, Baden, near Vienna, Austria-Hungary. Converting elements into the colloidal state	871,599	Nov. 19	3058	.....	131	866
Labhardt, Hans, Mannheim, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Making zinc formaldehyde hydrosulfite	871,600	Nov. 19	3061	.....	131	866
Lamson Consolidated Store Service Company. (See Litchfield, Isaac W., assignor.)						
Lane, A. M., *et al.* (See Griffin, Martin, assignor.)						
Lane, George W., St. Louis, Mo. Air-ship	871,710	Nov. 19	3242	803	131	899
Langhorne, John T., *et al.* (See Lotterhand, Jason C., assignor.)						
Lanning, Charles D. (See Field, Hathaway, and Lanning.)						
Lauber, William, assignor of six-sevenths to L. Reimer, J. Hrdlicka, W. Arndt, H. Patzke, E. Wangerin, and C. Borchert, Milwaukee, Wis. Rotary engine	871,125	Nov. 19	2023	550	131	707
Lauppe, Edward, Antelope, Cal. Loading attachment for wagons	871,601	Nov. 19	3062	759–60	131	866
Leathers, Lewis P., *et al.* (See Willson, Mendal W., assignor.)						
Leavitt, George W., Pittsburg, Kans. Car-door	871,711	Nov. 19	3243	803	131	899
Leber, Ed. (See Klumph, Almon P., assignor.)						
Ledwinka, Joseph, assignor to R. Thayer, Philadelphia, Pa. Sweeping-machine	871,512	Nov. 19	2886	723	131	837
Lee, George B., assignor to D-S-B. Company, Providence, R. I. Storm-window fastener	871,759	Nov. 19	3346	823	131	915
Leibenguth, Walter F. (See Pollock and Leibenguth.)						
Leonard, Joseph T., Sidney, Ohio. Hair-pin	871,422	Nov. 19	2905	684	131	807
Linfoot, Ernest F., Philadelphia, Pa. Manifold paper and producing the same	871,172	Nov. 19	2131	570	131	723
Litchfield, Isaac W., Boston, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J. Carrier for pneumatic-despatch-tube apparatus	871,423	Nov. 19	2906	684	131	807
Ljungström, Birger, assignor to Aktiebolaget Separator, Stockholm, Sweden. Gearing	871,227	Nov. 19	2239	591	131	741
Locke, Bradford H., New York, N. Y. Percussion-drill, &c	871,350	Nov. 19	2527	649–50	131	783
Lockett, Oswald, Chicago, Ill. Indicator-lock	871,126	Nov. 19	2024	551	131	707
Loeffler, Gustav W., Tampa, Fla. Reach-coupling for running-gears	871,712	Nov. 19	3245	804	131	899
Löffler, Samuel, Witkowitz, Austria-Hungary. Mechanism for changing a four-stroke cycle-motor into a two-stroke cycle-motor	871,602	Nov. 19	3064	760	131	866
Lohr, Carl A., Schenectady, N. Y. Alternating-current motor	871,513	Nov. 19	2889	723	131	837
Long, William, assignor of one-half to J. C. Newby, Sheridan, Ind. Pneumatic knee-pad	871,760	Nov. 19	3348	823	131	915
Lorenz, William A., Hartford, Conn., assignor to Parker Machine Company, Buffalo, N. Y. Type-writer	871,283	Nov. 19	2375	615	131	761
Lott, Albert A., and R. C. Stein, Birmingham, Ala. Hat and coat hanger	871,713	Nov. 19	3246	804	131	900
Lotterhand, Jason C., New York, N. Y., assignor to J. T. Langhorne, St. Louis, Mo., and W. B. Manny, New York, N. Y. Adding attachment for type-writers	871,761	Nov. 19	3349	824–5	131	916
Lovell, Edward C., Bristol, England. Packing-machine	871,284	Nov. 19	2379	615–18	131	761
Low, Abbot A. (See Hertzberg and Wohl, assignors.)	871,714	Nov. 19	3248	804	131	900
Luff, Henry J., Cleveland, Ohio. Joint for waste-pipes	871,603	Nov. 19	3065	760	131	867
Lumbard, Frank H., Chicago, Ill. Brush						
Lunken, Edmund H. (See Conklin and Lunken.)						
Lunken, Edmund H., and C. M. Conklin, Cincinnati, Ohio, assignors to Lunken Steel Window Co Metallic window construction	871,127	Nov. 19	2027	551–3	131	708
Lunken, Edmund H., and C. M. Conklin, Cincinnati, Ohio, assignors to Lunken Steel Window Co. Sash-lock	871,128	Nov. 19	2035	553	131	708
Lunken, Edmund H., and C. M. Conklin, Cincinnati, Ohio, assignors to Lunken Steel Window Co. Fireproof window construction	871,129	Nov. 19	2036	553	131	708
Lunken, Edmund H., and C. M. Conklin, Cincinnati, Ohio, assignors to Lunken Steel Window Co. Fireproof window construction (laterally-inserted glass)	871,130	Nov. 19	2039	553	131	709
Lunken, Edmund H., and C. M. Conklin, Cincinnati, Ohio, assignors to Lunken Steel Window Co. Fireproof window construction	871,131	Nov. 19	2040	554	131	709
Lunken, Edmund H., and C. M. Conklin, Cincinnati, Ohio, assignors to Lunken Steel Window Co. Metallic window construction	871,228	Nov. 19	2240	592	131	741
Lunken, Edmund H., and C. M. Conklin, Cincinnati, Ohio, assignors to Lunken Steel Window Co. Fireproof window construction	871,229	Nov. 19	2243	592	131	741
Lunken, Edmund H., and C. M. Conklin, Cincinnati, Ohio, assignors to Lunken Steel Window Co. Metallic window construction	871,715	Nov. 19	3250	805	131	901
Lunken Steel Window Co. (See Conklin and Lunken, assignors.)						
Lunken Steel Window Co. (See Lunken and Conklin, assignors.)						
Lutz, Benjamin F., Lititz, Pa. Damper-regulator	871,716	Nov. 19	3253	805	131	901
Lyter, Charles E., Harrisburg, Pa. Safety attachment for air-brake systems	871,717	Nov. 19	3254	806	131	902
Macklin, Athol B., Ottawa, Ontario, Canada. Nut-lock	871,718	Nov. 19	3255	806	131	902
Madigan, Frank S., Cleveland, Ohio. Means for trimming and controlling curtains and scenic drops	871,173	Nov. 19	2132	571	131	723
Mahoney, Timothy, San Francisco, Cal. Surface electric railway	871,424	Nov. 19	2907	684	131	808
Main-Winchester-Stone Company. (See Burkhardt, Edward G., assignor.)						
Malings, Charles J., Elyria, Ohio. Resilient vehicle-wheel	871,351	Nov. 19	2529	650	131	784
Malmborg, Carl E., assignor of one-half to O. E. Prytz and J. A. Rundqvist, Galesburg, Ill. Acetylene-gas generator	871,719	Nov. 19	3256	805	131	902
Manning, Ebenezer H., Elkhart, Ind. Changeable-speed gearing	871,132	Nov. 19	2042	554	131	709
Manny, Walter B., *et al.* (See Lotterhand, Jason C., assignor.)						
Marah, Helen M., *et al.*, administratrices. (See Tuttle, Calvin B.)						
Martin, Horace G., Rutherford, N. J. Spring binding-post	871,352	Nov. 19	2532	651	131	784
Martin, Thomas C., Cleveland, Ohio. Filter	871,285	Nov. 19	2386	619	131	761
Martin, William E., Stamford, England. Side-delivery rake, swath-turner, and other like implement or machine	871,604	Nov. 19	3066	761	131	867
Martini, Carl, and H. Hüneke, Hanover, Germany. Storage and transference of inflammable liquids	871,353	Nov. 19	2533	651	131	784
Matousek, Joseph W., Dresden, Kans. Grain-saving device for pneumatic stackers	871,286	Nov. 19	2388	619	131	762
Mattausch, Frank and W. T., Lincoln, and J. F. Schlossstein, Cochrane, Wis. Water-turbine	871,720	Nov. 19	3258	807	131	902
Mattausch, William T. (See Mattausch and Schlossstein.)						
Mayo, William C. (See Houlehan and Mayo.)						
Mayo, William C., and J. Houlehan, assignors of one-third to G. E. Briggs, El Paso, Tex. Railway-tie	871,425	Nov. 19	2909	684	131	808
Maywald, Frederick J. (See Austen, Maywald, and Govers.)						
McBrier, Harry, and J. McGarvey, Roll, Ind. Adjustable grip for surface pump-rods for oil-wells	871,765	Nov. 19	3367	826	131	917
McCargar, Elmer E., Lincoln, Nebr., assignor of one-half to E. H. Merriam, Council Bluffs, Iowa, and R. F. Smith, Omaha, Nebr. Feed-grinder	871,176	Nov. 19	2137	572	131	724
McCaskey, Perry A., assignor to McCaskey Register Company, Alliance, Ohio. Manifolding bill pad or book	871,516	Nov. 19	2894	724	131	838
McCaskey Register Company. (See McCaskey, Perry A., assignor.)						
McChord, William C., Jr., Springfield, Ky. Electric fan	871,729	Nov. 19	3274	810	131	905

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McDaniel, James, Minneapolis, Minn. Wheat-washing machine	871,517	Nov. 19	2896	725	131	839
McGarvey, John. (See McBrier and McGarvey.)						
McHardy, James A., assignor to Standard Carbureter Company, Providence, R. I. Carbureter	871,730	Nov. 19	3274	811	131	905
McIntosh, Charles H., Montreal, Quebec, Canada. Producing half-tone plates	871,234	Nov. 19	2260	595	131	743
McIntyre, David, Detroit, Mich. Bracket	871,137	Nov. 19	2061	557	131	711
McIntyre, Elmer E., Pittsburg, Pa. Shaft-hanger	871,136	Nov. 19	2059	556–7	131	711
McKelvey, Etta N., and I. E. Eells, East Liverpool, Ohio. Combination skirt trimmer and marker	871,731	Nov. 19	3277	811	131	905
McKoy, Albert M., Stonewall, Ind. Ter. Churn	871,732	Nov. 19	3278	811–12	131	906
McLaughlin, Susie, Philadelphia, Pa. Sleeve-iron	871,733	Nov. 19	3280	812	131	906
McLeod, Minnie M., Como, Miss. Garment-supporter	871,356	Nov. 19	2538	652	131	785
McNamara, William V., assignor to B. H. Jansen, Cleveland, Ohio. Stop and waste cock	871,432	Nov. 19	2717	686	131	811
McNaught, William, Rochdale, England. Wool-washing machine	871,433	Nov. 19	2718	687	131	811
Melanson, Ranchford B., and G. R. Peare, assignors of one-third to M. A. Piper, Lynn, Mass. Apparel	871,426	Nov. 19	2703	685	131	808
Melms, Pfenninger and Sankey, Limited. (See Sankey, Matthew H. P. R., assignor.)						
Mendal, Henry L., Cincinnati, Ohio. Frying-pan	871,287	Nov. 19	2389	619	131	762
Meredith, Wilber L. (See Jones and Meredith.)						
Merriam, Edgar H., *et al.* (See McCargar, Elmer E., assignor.)						
Merritt, Louis G., Lockport, N. Y. Veneer-cutting machine	871,230	Nov. 19	2245	593	131	742
Merritt, Louis G., Lockport, N. Y. Veneer-cutting machine	871,231	Nov. 19	2250	593	131	742
Merwin, John B., St. Louis, Mo. Gas-saturating device	871,288	Nov. 19	2389	620	131	762
Meyer, August, assignor to Automatic Gas Lighting Company, Baltimore, Md. Gas lighting and extinguishing device	871,605	Nov. 19	3068	761–2	131	867
Meyrowitz, Emil B., New York, N. Y., assignor to Meyrowitz Manufacturing Company. Goggles	871,762	Nov. 19	3363	825	131	916
Meyrowitz Manufacturing Company. (See Meyrowitz, Emil B., assignor.)						
Michel, William P., New York, N. Y. Street-car	871,514	Nov. 19	2892	724	131	838
Miller, Archag P., Winthrop, assignor to C. F. Sharkey, Somerville, Mass. Making a printing-plate by photo-engraving	871,721	Nov. 19	3260	.....	131	903
Miller Bung Bush Company. (See Ricke, George H., assignor.)						
Miller, Sidney W., Chicago, Ill. Controlling device for deep-seal siphons	871,427	Nov. 19	2705	685	131	809
Miller, William R., assignor to Forter Miller Engineering Company, Pittsburg, Pa. Feeding apparatus for gas-producers	871,428	Nov. 19	2708	685	131	809
Millican, William J., New York, N. Y. Amusement device	871,722	Nov. 19	3261	807	131	903
Mills, Madeleine M., New York, N. Y. Tire	871,763	Nov. 19	3364	825	131	916
Minton, Calvin J., Gage, Okla Ter. Doubletree-fastener	871,723	Nov. 19	3262	808	131	903
Moeslein, Valentine, Weehawken, N. J. Ceiling construction	871,606	Nov. 19	3072	762	131	868
Molyneux Auto-Mailing Machine Company. (See Molyneux, Barton S., assignor.)						
Molyneux, Barton S., assignor to Molyneux Auto-Mailing Machine Company, Buffalo, N. Y., and Pierre, S. D. Automatic mailing-machine	871,133	Nov. 19	2043	554–5	131	710
Moneuse, Elie J., New York, N. Y., assignor one-fourth to H. Hammond, Washington, D. C. Cooking stove or range	871,764	Nov. 19	3365	826	131	917
Monnier, Joseph G. P. M., and A. M. Morin, Boulogne-sur-Seine, France. Carbureter	871,134	Nov. 19	2055	556	131	710
Montgomery, John E., Yost, Utah. Packing-nut for water and oil gages	871,607	Nov. 19	3073	763	131	868
Moore, Charles M. (See Andrews, Charles M., assignor.)						
Moran, John W., Adams, Mass. Electric warp stop-motion for looms	871,724	Nov. 19	3263	808	131	903
Moreland, Frank B., Indianapolis, Ind. Folding go-cart	871,608	Nov. 19	3073	763	131	868
Morey Myron, Milford, assignor to Draper Company, Hopedale, Mass. Shuttle-checking means for looms	871,429	Nov. 19	2710	686	131	809
Morgan, Jack C., Frankfort, Ky. Hasp	871,725	Nov. 19	3265	808	131	904
Morgan, John C., Polk county, N. C. Planter	871,354	Nov. 19	2534	651–2	131	785
Morin, Antoine M. (See Monnier and Morin.)						
Morin, George, Habana, Cuba. Telegraphone system	871 726	Nov. 19	3266	808–10	131	904
Morlan, Ernest E., Garden City, Mo. Rifle-loader	871,355	Nov. 19	2536	652	131	785
Morris, Joseph, North Wales, Pa., assignor to Dental Protective Supply Company of the United States, Chicago, Ill. Artificial tooth	871,430	Nov. 19	2713	686	131	810
Morrison Murdock, Chicago, Ill. Window-fastener	871,727	Nov. 19	3272	810	131	904
Morse, Edwin K., Pittsburg, Pa. Railway-track construction	871,232	Nov. 19	2255	594	131	743
Moses, Joseph, Toronto, Ontario, Canada. Display-sign	871,289	Nov. 19	2391	620	131	762
Moskau, Rudolph, Jersey City, N. J. Shutter-operator	871,609	Nov. 19	3075	764	131	869
Mouneyrat, Antoine, Paris, France. Burner for heating and lighting	871,728	Nov. 19	3273	810	131	904
Mozingo, Harley J. (See Mozingo, William H., assignor.)						
Mozingo, William H., Hurdland, Mo., assignor of one-half to H. J. Mozingo, Pulaski, Iowa. Means for collecting and delivering mail	871,431	Nov. 19	2714	686	131	810
Mullen, William G., Los Angeles, assignor of one-half to J. A. Henjum, Pomona, Cal. Vehicle-wheel	871,515	Nov. 19	2893	724	131	838
Muren, Albert L., Belleville, Ill. Changeable-speed gearing	871,233	Nov. 19	2256	594	131	743
Murphy, Edward E., Chelsea, Mass., assignor to Puffer Manufacturing Company. Carbonator	871,174	Nov. 19	2134	571	131	723
Myers & Bro., F. E. (See Burkholder, John H., assignor.)						
Myers and Brother, F. E. (See Myers, Philip A., assignor.)						
Myers, Edward K., Preston, Iowa. Garment-hanger	871,175	Nov. 19	2135	571	131	723
Myers, Philip A., assignor to F. E. Myers and Brother, Ashland, Ohio. Pump	871,135	Nov. 19	2057	556	131	710
Nash, Walter C., Miami, Ohio. Book-clip and leaf-support	871,610	Nov. 19	3077	764	131	869
National Interlocking Steel Sheeting Company. (See Nye, George E., assignor.)						
Nelson, Alfred, assignor to A. F. Hetherington, Philadelphia, Pa. Umbrella	871,611	Nov. 19	3078	764	131	869
Nesfield, Vincent B., Ealing, London, England. Sterilizing tablet	871,290	Nov. 19	2393	620–1	131	763
Neste, James P., Lake Mills, Iowa. Adjustable tongue	871,612	Nov. 19	3079	765	131	870
New Jersey Patent Company. (See Aylsworth, Jonas W., assignor.)	871,613	Nov. 19	3080	765	131	870
Newby, Harmon T., Marion, Ind. Collapsible box	871,614	Nov. 19	3081	765	131	870
Newby, John C. (See Long, William, assignor.)						
Newcomb, Charles L., Holyoke, Mass., assignor to International Steam Pump Company, New York, N. Y. Pump	871,357	Nov. 19	2539	652	131	785
Nice, William, Jr., Ogontz, Pa., assignor to Pressed Steel Manufacturing Company, Atco, N. J. Wheel	871,518	Nov. 19	2900	726	131	839
Noble, Laz, trustee. (See Jameson, Alexander, assignor.)						
Nolan, Lawrence, New York, N. Y. Bracket	871,615	Nov. 19	3082	766	131	870
Nonnast, Louis F. (See Brosius, Aaron, assignor.)						
Norland, Clarence, Los Angeles, Cal. Trolley-pole controller	871,616	Nov. 19	3083	766	131	871
Norris, David L., Westminster, S. C. Shuttle	871,291	Nov. 19	2400	621	131	763
Norstrom, Nils E., assignor to C. L. Redfield, Chicago, Ill. Telephone-exchange	871,520	Nov. 19	2903	726	131	840
Norstrom, Samuel A., assignor to C. L. Redfield, Chicago, Ill. Party-line telephone-exchange	871,519	Nov. 19	2900	726	131	839
Nugent, Francis J., Rochester, N. Y. Collapsible last	871,138	Nov. 19	2062	557	131	711
Nye, George E., assignor to National Interlocking Steel Sheeting Company, Chicago, Ill. Interlocking means for sheet-piling	871,177	Nov. 19	2140	572	131	724
O'Rourke, Hugh H. (See Dupre, Wilfred, assignor.)						
Oakes, Ernest A., and P. A. Cooney, Chicago, Ill. Recorder	871,434	Nov. 19	2721	687–8	131	811

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Oestergard, Jens C., Burbank, Cal. Implement to arrest the flow of water on sidehills	871,617	Nov. 19	3085	766	131	871
Okey, Miles. (See Ullman and Okey.)						
Orr, Gaylord A., Cripple Creek, Colo. Drill-chuck	871,618	Nov. 19	3087	767	131	871
Orzel, Franz, assignor to Firm of Voigt & Haeffner, Aktiengesellschaft, Frankfort-on-the-Main, Bockenheim, Germany. Electrical switch	871,139	Nov. 19	2063	558	131	712
Ostrander, James, Indianapolis, Ind. Sheet-packing	871,178	Nov. 19	2142	572	131	725
Otis, Spencer, Chicago, Ill., assignor to Hutchins Car Roofing Company, Detroit, Mich. Car-roof	871,179	Nov. 19	2143	572	131	725
Owen, David T., assignor to D. T. Owen Company, Cleveland, Ohio. Combined bed and couch	871,180	Nov. 19	2144	573	131	725
Owen, David T., assignor to D. T. Owen Company, Cleveland, Ohio. Combined bed and couch	871,181	Nov. 19	2146	573–4	131	725
Owen, William M., Bessemer, Ala. Wire-fencing-stretching device	871,619	Nov. 19	3088	767	131	872
Owings, George R., assignor of five-eighths to L. H. Wentz, C. J. Bosau, and J. S. Gillespie, Pittsburg, Pa. Car-fender	871,521	Nov. 19	2906	726–9	131	840
Paasche, Jens A., Chicago, Ill. Hair-drying implement	871,182	Nov. 19	2150	574	131	726
Palmer, Alphonso T., Clyde, Ill. Rail-joint	871,140	Nov. 19	2065	558	131	712
Palmer, Dennis W., Hermon, Me. Fastener	871,620	Nov. 19	3089	767	131	872
Palmer, George W., Gardena, Cal. Curtain-rod support	871,435	Nov. 19	2723	688	131	812
Pank, Karl, Königs Wusterhausen, Germany. Apparatus for automatically lighting gas-lamps	871,141	Nov. 19	2067	558	131	712
Parker Machine Company. (See Kidder, Wellington P., assignor.)						
Parker Machine Company. (See Kidder and Sponsel, assignors.)						
Parker Machine Company. (See Lorenz, William A., assignor.)						
Parker Machine Company. (See Sponsel, Charles W., assignor.)						
Parks, John N., Rochester, assignor to D. L. Whittier, Elmira, N. Y. Back-pedaling coaster-brake	871,621	Nov. 19	3090	768	131	872
Parmelee, Roy, assignor to Parmelee Wrench Company, Chicago, Ill. Pipe-wrench	871,436	Nov. 19	2723	688	131	812
Parmelee Wrench Company. (See Parmelee, Roy, assignor.)						
Parsons, Charles A., and A. Q. Carnegie, Newcastle-upon-Tyne, England; said Carnegie assignor to said Parsons. Turbine compressor, pump, and the like	871,292	Nov. 19	2402	621–2	131	764
Patzke, Henry, *et al.* (See Lauber, William, assignor.)						
Peare, George R. (See Melanson and Peare.)						
Peck, Burton H., near Lexington, Oreg. Land roller and packer	871,358	Nov. 19	2540	653	131	786
Peck, James E., Syracuse, N. Y. Heater	871,235	Nov. 19	2261	595	131	744
Peirce, John R., assignor to Royden Marble Machinery Company, New York, N. Y. Lathe for marble or the like	871,522	Nov. 19	2908	727–8	131	841
Peterson, P. (See Cornish, Harry B., assignor.)						
Pettee, Jane E., New York, N. Y. Holder for nursing-bottles	871,622	Nov. 19	3092	768	131	872
Phelps, Macy A. (See Smith and Phelps.)						
Phillips, Charlie F., Bremerton, Wash. Vehicle running and propelling gear	871,623	Nov. 19	3093	768–9	131	872
Phinney, William B., Westfield, assignor of one-half to R. A. Quale, Silver Creek, and H. W. Allen, Buffalo, N. Y. Machine for trimming string-beans and other articles	871,734	Nov. 19	3281	812–13	131	906
Phonographic Music Co. (See Sherwood, William L., assignor.)						
Pierce, Clarence A., Manchester, N. H. Top-roll saddle and stirrup	871,293	Nov. 19	2403	622	131	764
Pino, Giuseppe, Genoa, Italy. Vessel-propelling means	871,236	Nov. 19	2266	596	131	744
Piper, Mark A. (See Melanson and Peare, assignors.)						
Pitcher, James B., Saginaw, Mich. Vehicle-seat	871,624	Nov. 19	3097	769	131	873
Pittsburgh Filter Manufacturing Company. (See Jones, Llewellyn W., assignor.)						
Plant Company. (See Richards, Charles W., assignor.)						
Poché, Pierre A., Ponchatoula, La. Mail-bag catching and delivery mechanism	871,625	Nov. 19	3099	770	131	873
Poindexter, William S., Louisa, Va. Automatic gate	871,437	Nov. 19	2726	688	131	812
Pollard, Enos C., Seattle, Wash. Turbine air-compressor	871,626	Nov. 19	3101	770–1	131	874
Pollock, James, Wilkes-Barre, and W. F. Leibenguth, Dorranceton, Pa. Rotary gas-engine	871,523	Nov. 19	2913	728–9	131	841
Potts, Thomas W., Fulham, London, England. Vehicle for recreation or amusement	871,294	Nov. 19	2405	622	131	764
Power, George S., Passaic, N. J., assignor to Wickes Brothers, Saginaw, Mich. Adjustable slideway	871,142	Nov. 19	2067	558	131	713
Prahar, Louis B., New York, N. Y. Box-fastener	871,627	Nov. 19	3105	771	131	874
Prarie, Gilbert, Adrian, Mich., assignor of one-fourth to E. G. Siggers, Washington, D. C. Fence-tie	871,438	Nov. 19	2727	689	131	813
Pressed Steel Manufacturing Company. (See Nice, William, Jr., assignor.)						
Prouty, George W., Boston, Mass., assignor to Imperial Art Press Co. Platen-throw-off mechanism for printing-presses	871,439	Nov. 19	2729	689	131	813
Prugh, John H., Toledo, Ohio. Surfacing and polishing machine	871,143	Nov. 19	2068	559	131	713
Prytz, Otto E., *et al.* (See Malmborg, Carl E., assignor.)						
Puckett, Claiborne W., Kern, Cal. Rotary engine	871,359	Nov. 19	2542	653–4	131	786
Puffer Manufacturing Company. (See Murphy, Edward E., assignor.)						
Pullis, Pierre P., *et al.* (See Rothchild, Joseph, assignor.)						
Pulvermann, Leo, Hamburg, Germany. Process of and apparatus for manufacturing artificial stone	871,524	Nov. 19	2918	729	131	842
Quale, Ralph A., *et al.* (See Phinney, William B., assignor.)						
R. E. Dietz Company. (See Betts, Charles L., assignor.)						
Rankin, William K., and T. F. Kelly, assignors to J. E. Reyburn, Philadelphia, Pa. Electric and pneumatic governor	871,360	Nov. 19	2543	654	131	786
"Rapid Fire" Fuse Igniter Company. (See Herr, Arthur T., assignor.)						
Rashkin, Joseph, New York, N. Y. Door for elevator-shafts	871,735	Nov. 19	3287	813	131	907
Rateau, Auguste C. E., Paris, France, assignor to Rateau Turbine Company, Chicago, Ill. Pumping apparatus. (Reissue)	12,723	Nov. 19	3380	828–9	131	919
Rateau Turbine Company. (See Rateau, Auguste C. E., assignor.) (Reissue.)						
Rattan Mfg. Co. (See Dann, Isaac N. and G. E., assignors.)	871,736	Nov. 19	3289	814	131	907
Raymond, John F., Scottsbluff, Nebr. Feed-chopper	871,767	Nov. 19	3371	827	131	918
Raynaud, Charles F., San Francisco, Cal. Folding paper box						
Redfield, Casper L. (See Norstrom, Nils E., assignor.)						
Redfield, Casper L. (See Norstrom, Samuel A., assignor.)						
Reed, James V., Yonkers, N. Y., assignor to J. B. Williams Company, Glastonbury, Conn. Hinged receptacle	871,440	Nov. 19	2732	689	131	814
Reeves, John C., Huntsville, Ark. Bottle	871,183	Nov. 19	2151	574	131	726
Reid, William, Geneva, N. Y. Range	871,441	Nov. 19	2732	690	131	814
Reimer, Louis, *et al.* (See Lauber, William, assignor.)						
Reineking, Frederick C., Jersey City, N. J. Air-intake regulator for carbureters	871,361	Nov. 19	2545	654	131	787
Reinhard, Frank A., East Weymouth, Mass., assignor to American Optical Company. Eyeglass or spectacle case	871,144	Nov. 19	2072	559	131	713
Reinke, Oscar P., De Kalb, Mo. Advertising toy	871,628	Nov. 19	3107	771	131	874
Reinking, Karl, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Discharging paste	871,629	Nov. 19	3108	.....	131	874
Reno, William E. (See Connaty and Reno.)						
Rever, Everett I., *et al.* (See Rever, Robert P., assignor.)						
Rever, Robert P., assignor of three-fifths to E. I. Rever, Newark, N. J., and F. Van Winkle, Brooklyn, N. Y. Trolley-pole attachment	871,442	Nov. 19	2735	690–1	131	814

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Reyburn, John E. (See Rankin and Kelly, assignors.)						
Rheinische Metallwaren-und Maschinenfabrik. (See Aasen, Niels W., assignor.)						
Richards, Charles W., Needham, assignor to Plant Company, Boston, Mass. Treeing-iron	871,184	Nov. 19	2152	575	131	726
Richards, Francis H., Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation. Mechanism for producing character impressions	871,145	Nov. 19	2073	559–60	131	713
Richards, George C., Berkeley, Cal., assignor to Western Mill & Machine Co. Deep-well pump	871,185	Nov. 19	2153	575	131	727
Richardson, Henry, New York, N. Y. Discharge-controlling mechanism for weighing-machines	871,630	Nov. 19	3108	771	131	874
Richardson, Jonathan B., Santa Margarita, Cal. Target-trap	871,443	Nov. 19	2738	691–2	131	815
Ricke, George H., assignor to Miller Bung Bush Company, Cincinnati, Ohio. Bung-bushing	871,444	Nov. 19	2743	692	131	815
Ries, Elias E., New York, N. Y. Telephone-transmitter	871,737	Nov. 19	3290	814	131	907
Robe, Arthur, Corona, Cal. Heating device for bakers' ovens	871,445	Nov. 19	2744	692	131	815
Robert Holmes & Brothers. (See Holmes, Grant, assignor.)						
Robertson, William H., Rector, Ark. Index for books	871,446	Nov. 19	2745	693	131	815
Robinson, Duncan, Brookline, Mass. Shock-absorber for vehicles	871,237	Nov. 19	2268	596	131	745
Robinson, Duncan, Brookline, Mass. Shock-absorber for vehicles	871,631	Nov. 19	3111	772	131	875
Rogers, Frank P., Worcester, Mass. Weft-replenishing mechanism for looms	871,447	Nov. 19	2746	693	131	816
Rollason, Arthur, Long Eaton, England. Internal-combustion engine	871,632	Nov. 19	3114	772	131	875
Roper, Charles F., assignor to Draper Company, Hopedale, Mass. Harness-motion for looms	871,448	Nov. 19	2749	693–4	131	816
Rose, Walter L., Wadesboro, N. C. Cotton-chopper	871,295	Nov. 19	2406	622–3	131	765
Rosenzweig, Chaim, New York, N. Y. Pneumatic equalizer for vehicles	871,186	Nov. 19	2155	575–6	131	727
Ross, N. A., *et al.* (See Kroschel, August H., assignor.)						
Rossi, Giorgio, Genoa, Italy. Automatic alarm	871,633	Nov. 19	3116	772–3	131	875
Roth, Joseph C., West Seneca, and J. J. Welshofer, Buffalo, N. Y. Ventilator	871,146	Nov. 19	2079	560	131	714
Rothchild, Joseph, assignor to R. Buchanan, Brooklyn, R. H. Burns, Queens, and P. P. Pullis, Brooklyn, N. Y. Engine	871,634	Nov. 19	3117	773	131	876
Rothrock, James H., Lock Haven, Pa. Attachment for barrels	871,635	Nov. 19	3118	773	131	876
Royden Marble Machinery Company. (See Peirce, John R., assignor.)						
Rundqvist, John A., *et al.* (See Malmborg, Carl E., assignor.)						
Russell, James J., and A. J. Bayley, Milwaukee, Wis. Bark-peeling machine	871,296	Nov. 19	2409	623–4	131	765
Ryan-Hopkins Machine Company. (See Shortt, Edward G., assignor.)						
Sadtler, Samuel P., Philadelphia, assignor to E. Johnson, Pittsburg, Pa. Composition for removing paint or varnish	871,525	Nov. 19	2922	.....	131	842
Sager, Franklin P., Maplewood, Ohio. Clothes-drainer	871,449	Nov. 19	2751	694	131	816
Sager, James H., Rochester, N. Y. Means for cooling heated surfaces	871,636	Nov. 19	3119	774	131	876
Sander, Gustav H. (See Dieter and Sander.)						
Sankey, Matthew H. P. R., assignor to Melms, Pfenninger and Sankey Limited, London, England. Reversible turbine	871,526	Nov. 19	2923	729–30	131	842
Sarkisian, Dickran M., Malden, Mass. Pulley-holder for curtain-poles	871,362	Nov. 19	2546	654	131	787
Saunders, Oscar S., Brockton, Mass. Slipper	871,187	Nov. 19	2158	576	131	727
Saunders, William L., assignor of two-thirds to D. K. Hickey, Denver, Colo. Device to disclose shunting of the circuits around electric meters	871,238	Nov. 19	2270	596	131	745
Schäffer, Christoph, Melville, N. D. Gate	871,637	Nov. 19	3120	774	131	876
Schenck, Theodore L. (See Foster and Schenck.)						
Schenk, Nicholas, St. Louis, Mo. Vehicle-wheel	871,297	Nov. 19	2412	624	131	765
Schlossstein, John F. (See Mattausch and Schlossstein.)						
Schmidt, Charles R., Baltimore, Md. Concrete mixing and molding apparatus	871,363	Nov. 19	2547	655	131	787
Schmidt, Charles R., Baltimore, Md. Bottle-closure	871,364	Nov. 19	2548	655	131	788
Schmidt, Harry, Council Bluffs, Iowa. Photographic toning and mounting	871,188	Nov. 19	2160	.....	131	728
Schmidt, John D., New York, N. Y. Clothes-line bracket	871,638	Nov. 19	3122	775	131	877
Schneider, William F., Norwood, Ohio, assignor to Bullock Electric Manufacturing Company. System of motor control	871,239	Nov. 19	2272	597	131	745
Schoedelin, Fernand. (See Schoedelin, Gaston and F.)						
Schoedelin, Gaston and F., Paris, France. Reducing-gear	871,240	Nov. 19	2279	597	131	746
Scholl, Edward P., Mount Sterling, Ill. Road-scraper	871,639	Nov. 19	3123	775	131	877
Schönherr, Otto, and W. Gaus, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Making nitrites	871,640	Nov. 19	3124	775	131	877
Schreck, Charles, Lancaster, Pa. Nut-lock	871,641	Nov. 19	3125	775	131	878
Schüler, Leo, assignor to Wagner Electric Manufacturing Company, St. Louis, Mo. Alternating-current motor	871,189	Nov. 19	2161	576	131	728
Schwarz, Alfred, New York, N. Y. Magnetic separator	871,298	Nov. 19	2414	625	131	766
Schwarz, Alfred, New York, N. Y. Magnetic separator	871,301	Nov. 19	2419	626	131	767
Schwarz, Alfred, New York, N. Y. Magnetic separator	871,365	Nov. 19	2549	655	131	788
Schwarz, Alfred, New York, N. Y. Magnetic separator	871,367	Nov. 19	2553	656	131	788
Schwarz, Alfred, New York, N. Y. Concentrating ores	871,368	Nov. 19	2555	656–7	131	789
Schwarz, Alfred, New York, N. Y. Ore-concentrating table	871,369	Nov. 19	2559	657	131	789
Schwarz, Alfred, assignor to Schwarz Engineering Company, New York, N. Y. Tailings-discharge valve	871,299	Nov. 19	2416	625	131	766
Schwarz, Alfred, assignor to Schwarz Engineering Company, New York, N. Y. Leaching ores	871,300	Nov. 19	2418	626	131	766
Schwarz, Alfred, assignor to Schwarz Engineering Company, New York, N. Y. Tailings-settler	871,366	Nov. 19	2552	656	131	788
Schwarz Engineering Company. (See Schwarz, Alfred, assignor.)						
Seognamillo, Salvatore, New York, N. Y. Machine for forming flexible tubing	871,241	Nov. 19	2281	597	131	746
Scott, Edward, Pittsburg, Pa. Rotary engine	871,527	Nov. 19	2924	730	131	843
Scrafford, Daniel E., Peoria, Ill. Meter	871,738	Nov. 19	3293	814	131	908
Seaman, Ralph M., *et al.* (See Graham, Frederick S., assignor.)						
Sebald, Albert, Weiden, Germany. Toilet-case	871,242	Nov. 19	2283	598	131	747
Seckler, Winfield C., Marianna, Ark. Multiplying-back for cameras	871,302	Nov. 19	2422	627	131	767
Sellstone, Ivar, Brockton, Mass. Sled	871,642	Nov. 19	3126	776	131	878
Senn, Johann, Berne, Switzerland. Fastener	871,528	Nov. 19	2925	730	131	843
Shafer, William H., Cincinnati, Ohio. Chemical fire-extinguisher	871,147	Nov. 19	2081	560	131	714
Shantz, Dilman B., Berlin, Ontario, Canada. Button-tuft	871,303	Nov. 19	2426	627	131	768
Sharkey, Charles F. (See Miller, Archag P., assignor.)						
Sharp, Benson, Middlesex county, England. Contrivance for turning the leaves of a pamphlet or book	871,148	Nov. 19	2063	561	131	715
Shaw, Lorenzo D., Glen Echo Park, Md. Pleasure-railway	871,643	Nov. 19	3127	776	131	878
Shears, William, Sault Ste. Marie, Mich. Floor-finishing device	871,450	Nov. 19	2753	694	131	817
Sherwood, William L., New York, assignor to Phonographic Music Co., Brooklyn, N. Y. Sound-reproducing record-disk	871,370	Nov. 19	2562	657	131	789
Shortill, William J., Markdale, Ontario, Canada. Display device	871,190	Nov. 19	2163	577	131	728
Shortt, Edward G., Carthage, N. Y., assignor to Ryan-Hopkins Machine Company. Fluid-pressure clutch	871,243	Nov. 19	2285	598	131	746
Siggers, E. G. (See Prarie, Gilbert, assignor.)						
Skibsted, Ove de F., Copenhagen, Denmark. Apparatus for sucking dust from upholstered furniture, &c	871,304	Nov. 19	2427	627–8	131	768

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Smart, Albert J., Greenfield, Mass. Screw-cutting die and holder therefor	871,451	Nov. 19	2755	695	131	817
Smith, Archie, Chester, W. Va. Switch	871,529	Nov. 19	2926	730	131	843
Smith, Arthur W., New York, assignor to Yost Writing Machine Company, Ilion, N. Y. Type-writing machine	871,371	Nov. 19	2563	658	131	789
Smith, Edgar W., assignor to Champion Machinery Company, Joliet, Ill. Loaf-forming machine	871,644	Nov. 19	3128	776	131	878
Smith, James E., Baltimore, Md. Box	871,452	Nov. 19	2758	695	131	817
Smith, John E., Elizabeth, Pa. Axle for pit-cars	871,149	Nov. 19	2086	561	131	715
Smith, Joseph J., New York, N. Y. Contracting last	871,150	Nov. 19	2086	562	131	715
Smith, Robert F., *et al.* (See McCargar, Elmer E., assignor.)						
Smith, Watson R., and M. A. Phelps, assignors to Jackson Cushion Spring Company, Jackson, Mich. Spring-cushion work	871,244	Nov. 19	2289	599	131	747
Societe Electro-Metallurgique Francaise. (See Hérouit, Paul L. T., assignor.)						
Solie, Oscar L., Sioux Falls, S. D. Filing-cabinet	871,372	Nov. 19	2569	658–9	131	790
Southam, Arthur D., Hartford, Conn. Electrically-operated fountain	871,191	Nov. 19	2166	577–8	131	729
Southworth, Edward, Portland, Me. Punching-machine	871,739	Nov. 19	3296	815	131	908
Spear, Frank R., Chicago, Ill. Brake-shoe	871,740	Nov. 19	3297	815	131	908
Spear, Lawrence Y., Milton, Mass., assignor to Electric Boat Company, New York, N. Y. Tandem torpedo-tube	871,453	Nov. 19	2760	695–6	131	818
Speer, Louis M., Cowanshannoc, Pa. Cabinet and display-rack for neckties	871,530	Nov. 19	2927	731	131	843
Sperling, Peter, Neunkirchen, Germany. Machine for printing measurements on pieces of material	871,645	Nov. 19	3130	777	131	879
Sponsel, Charles W. (See Kidder and Sponsel.)						
Sponsel, Charles W., Hartford, Conn., assignor to Parker Machine Company, Buffalo, N. Y. Ribbon-feeding mechanism for type-writers	871,373	Nov. 19	2573	659	131	790
Spray, George H., New York, assignor of one-half to J. Anderson, Brooklyn, N. Y. Hair-pin	871,646	Nov. 19	3131	777	131	879
Spurrier, John W., Hattiesburg, Miss. Insect-trap	871,305	Nov. 19	2428	628	131	768
Staley, Amos C., Chicago, Ill. Multicopying-machine	871,531	Nov. 19	2928	731	131	843
Standard Addressing Machine Company. (See Belknap, Charles A., assignor.)						
Standard Carbureter Company. (See McHardy, James A., assignor.)						
Stanton, William H., Chicago, Ill Flying shears for rod or bar mills	871,532	Nov. 19	2931	731	131	844
Steidel, Oscar. (See Johnson and Steidel.)						
Stein, Robert C. (See Lott and Stein.)						
Stenz, George W., Ashland, Wis. Sieve	871,647	Nov. 19	3133	778	131	879
Stevens, George J., London, England, assignor, by mesne assignments, to American Attachment Company, Portland, Me. Combined presser-foot and guide for sewing-machines	871,454	Nov. 19	2764	696	131	818
Stewart, Annie. (See Stewart, James S., assignor.)						
Stewart, James S., assignor to A. Stewart, New York, N. Y. Outdoor receptacle	871,192	Nov. 19	2170	578	131	729
Stickney, Burnham C., Elizabeth, N. J. Type-writing machine	871,151	Nov. 19	2089	562	131	716
Stickney, Burnham C.; Elizabeth, assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine	871,374	Nov. 19	2575	659–60	131	790
Stiegelmeyer, John E., assignor to Automatic Train Control Company, Indianapolis, Ind. Automatic locomotive-controller	871,375	Nov. 19	2578	660	131	791
Streich, Frank, assignor to Champion Machinery Company, Joliet, Ill. Spindle-shaper guard	871,533	Nov. 19	2933	732	131	844
Streich, Frank, assignor, by mesne assignments, to Champion Machinery Company, Joliet, Ill. Dough-divider	871,648	Nov. 19	3134	778	131	879
Streich, Frank, assignor, by mesne assignments, to Champion Machinery Company, Joliet, Ill. Long-loaf-molding machine	871,649	Nov. 19	3137	778–9	131	880
Streich, Frank, assignor to Champion Machinery Company, Joliet, Ill. Dough-divider	871,650	Nov. 19	3139	779	131	880
Stroh, Heinrich, Hellbronn, Germany. Means for impregnating liquids with gas	871,245	Nov. 19	2291	599	131	747
Struntz, Charles A., *et al.* (See Graham, Frederick S., assignor.)						
Stuart, George R., Owensboro, Ky. Automatic switch-throwing device	871,455	Nov. 19	2765	697	131	818
Stubblebine, William, Coraopolis, Pa. Furnace	871,651	Nov. 19	3142	779–80	131	881
Stull, Emmett W., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Arrangement for motor-drives	871,193	Nov. 19	2173	578–9	131	730
Sturtevant Mill Company. (See Sturtevant, Thomas L. and T. J., assignors.)						
Sturtevant, Thomas J. (See Sturtevant, Thomas L. and T. J.)						
Sturtevant, Thomas L., Quincy, and T. J. Sturtevant, Wellesley, Mass., assignors to Sturtevant Mill Company, Portland, Me. Double carbureter for explosive-engines	871,741	Nov. 19	3299	816	131	909
Submerged Electric Motor Company. (See Thorsen, Thomas, assignor.)						
Sulzbach, Jacob, College Point, N. Y. Dyeing machinery	871,376	Nov. 19	2581	661	131	791
Swagler, William, and W. L. Volz, Brooklyn, N. Y. Poultry-fountain	871,377	Nov. 19	2584	662	131	792
Tanner, Roe, Attica, Ohio. Shock-loading apparatus	871,456	Nov. 19	2767	697	131	819
Tanquary, Nathan Q., *et al.* (See Canfield, Frank, assignor.)						
Taylor, Warren H., assignor to Yale & Towne Manufacturing Company, Stamford, Conn. Time-lock	781,534	Nov. 19	2934	732	131	845
Thatcher, Frederick B., Providence, R. I. Electric-wire connection	871,535	Nov. 19	2936	733	131	845
Thayer, Russell. (See Ledwinka, Joseph, assignor.)						
Thayer, Russell, Philadelphia, Pa. Electrically-propelled vehicle	871,457	Nov. 19	2770	698	131	819
Thomas, Frank S., assignor to R. M. Ford, New York, N. Y. Combined scrubber and mop	871,246	Nov. 19	2292	599	131	748
Thomas, Richard H., Chicago, Ill. Humidity-reducing apparatus	871,194	Nov. 19	2175	579	131	730
Thompson, Charles C. (See Thornhill and Thompson.)						
Thompson, Edward, Minneapolis, Minn. Seed-separator	871,536	Nov. 19	2938	733	131	845
Thornhill, Ray G., and C. C. Thompson, Los Angeles, Cal. Automatic mail-bag ejector	871,458	Nov. 19	2772	698	131	820
Thorsen, Thomas, assignor to Submerged Electric Motor Company, Menomonie, Wis. Boat-propelling mechanism	871,459	Nov. 19	2775	698–9	131	820
Thullen, Louis H., Edgewood, assignor to Union Switch & Signal Company, Swissvale, Pa. Railway-signal	871,378	Nov. 19	2586	662	131	792
Thurlow, Winfield S., Boston, Mass. Merry-go-round	871,306	Nov. 19	2429	628–9	131	768
Thurston, Alfred H. (See Hutchison, Robert B., assignor.)						
Tice, Allen K. (See Tice, George W., assignor.)						
Tice, George W., Riley Center, Mich., assignor of one-half to A. K. Tice, Larimore, N. D. Band-cutter and feeder	871,742	Nov. 19	3302	816	131	909
Tice, George W., Riley Center, Mich., assignor of one-half to A. K. Tice, Larimore, N. D. Grain-separator	871,743	Nov. 19	3304	817	131	910
Tilney, Max J. E., South Kensington, England. Voltage-regulator	871,537	Nov. 19	2939	733–4	131	846
Tisdale, James R. M., Beaverton, Ontario, Canada. Lantern	871,307	Nov. 19	2431	629	131	769
Tittmann, Gerhard, Foche, near Solingen, Germany. Razor-guard	871,152	Nov. 19	2094	563	131	716
Toch, Maximilian, New York, N. Y. Paint-remover	871,195	Nov. 19	2179	.....	131	730
Tomlinson, Walter H., Chicago, Ill. Egg-beater	871,247	Nov. 19	2294	600	131	748
Trolley Supply Company. (See Knutson, Alfred W., assignor.) (Reissue.)	871,379	Nov. 19	2588	662–3	131	793
Troyer, Nelson, Portland, Oreg. Can-heading machine	871,380	Nov. 19	2592	663–4	131	793
Tuckermann, Ernst, Rath, near Dusseldorf, Germany. Two-time combustion-engine						
Tuttle, Anna M., *et al.*, administratrices. (See Tuttle, Calvin B.)						
Tuttle, Calvin B. (See Christenson, Nils, assignor.)						
Tver, Edward, Dalston, London, England. Apparatus for insuring safety of traffic on single lines of railway	871,538	Nov. 19	2942	734–5	131	846

Name, residence, and invention.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Tygert, Frances A. (See Benjamin, George, assignor.)						
Ullman, William H., Stafford, and M. Okey, Zanesville, Ohio. Well-drilling apparatus	871,248	Nov. 19	2295	600	131	748
Underwood Typewriter Company. (See Kelley, Charles E., assignor.)						
Union Switch & Signal Company. (See Thullen, Louis H., assignor.)						
Union Typewriter Company. (See Felbel, Jacob, assignor.)						
Union Typewriter Company. (See Stickney, Burnham C., assignor.)						
Valentine, Ernest D., Akron, Ohio. Rim for vehicle-wheels	871,460	Nov. 19	2778	699	131	821
Van Auken, Clarence E., Yonkers, N. Y., assignor, by mesne assignments, to Van Auken Motor and Machine Works. Multiple-piston internal-combustion engine	871,539	Nov. 19	2946	735	131	846
Van Auken Motor and Machine Works. (See Van Auken, Clarence E., assignor.)						
Van Gundy, Charles P., Catonsville, Md. Water-purifying apparatus	871,461	Nov. 19	2779	699–700	131	821
Van Kannel, Theophilus, New York, N. Y. Amusement apparatus	871,744	Nov. 19	3307	817–18	131	910
Van Marter, William H., Petaluma, Cal. Oil-burner	871,462	Nov. 19	2781	700	131	821
Van Winkle, Francis, *et al.* (See Rever, Robert P., assignor.)						
Vassel, Walter, Charlottenburg, assignor to Firm of R. A. Hartmann, Berlin, Germany. Surface cooler	871,308	Nov. 19	2432	629–30	131	769
Vaughan, Sarah F., Worcester, Mass. Wall-cleaner	871,196	Nov. 19	2180	579	131	730
Vinton, John H., Boston, Mass. Metallic protector for the heels or soles of boots and shoes	871,309	Nov. 19	2434	631	131	769
Vogel, Henry F. (See Kohout, Alois and F., assignors.)						
Vogt Manufacturing and Coach Lace Company. (See Kendrick, Solomon, assignor.)						
Voigt & Haeffner, Aktiengesellschaft, Firm of. (See Orzel, Franz, assignor.)						
Volz, William L. (See Swagler and Volz.)						
Wade, Martin J., Iowa City, Iowa. Memorandum-book	871,310	Nov. 19	2435	631	131	770
Wagg, Solomon R., Appleton, Wis. Washing or beating engine	871,540	Nov. 19	2948	736	131	847
Wagner Electric Manufacturing Company. (See Schüler, Leo, assignor.)						
Wagner, Ferdinand, New York, N. Y. Musical instrument	871,463	Nov. 19	2783	700	131	821
Walker, James R., *et al.* (See Willson, Mendal W., assignor.)						
Wallace, William C., Tenafly, N. J., assignor of one-half to John Brown & Company, Limited, Sheffield, England. Air-draft system for steam-boilers	871,541	Nov. 19	2950	736	131	847
Walter, Carl C., Philadelphia, Pa. Carbureter	871,464	Nov. 19	2784	700–1	131	822
Wangerin, Elmer, *et al.* (See Lauber, William, assignor.)						
Ward, Frank A., Los Angeles, Cal. Air-purifier	871,652	Nov. 19	3143	780	131	881
Warren, Samuel E., Eureka, Cal. Fruit-press	871,653	Nov. 19	3145	780–1	131	881
Watkins, Alfred, and C. G. Woodhead, Hereford, England. Appliance for adjusting and working iris diaphragms of photographic cameras	871,654	Nov. 19	3146	781	131	881
Watkins, Robert L., New York, N. Y. Hemoglobinometer	871,542	Nov. 19	2951	737	131	847
Watson, Jennie, Allegheny, Pa. Curtain pole and bracket	871,543	Nov. 19	2955	737	131	848
Weaver, J. H., *et al.* (See Griffin, Martin, assignor.)						
Webber, John B., Jr., assignor to A. Backus, Toledo, Ohio. Dredge	871,544	Nov. 19	2956	737–8	131	848
Weil, Alfred W., *et al.* (See Canfield, Frank, assignor.)						
Welshofer, John J. (See Roth and Welshofer.)						
Wentz, Louis H., *et al.* (See Owings, George R., assignor.)						
Wenzelmann, Gustave, Galesburg, Ill. Sheet-metal conveyer	871,381	Nov. 19	2563	664	131	793
Wera, Eugene L. J., Liege, Belgium. Steam-boiler	871,249	Nov. 19	2298	601	131	749
Western Mill & Machine Co. (See Richards, George C., assignor.)						
Westinghouse Machine Company. (See Flanders, Louis H., assignor.)						
Whippernan, Harry J., Dixon, Ill. Adjustable scaffold-trestle	871,465	Nov. 19	2785	701	131	822
White, Charles B., Manchester, England. Loom for weaving pile fabrics	871,382	Nov. 19	2595	664–5	131	794
White, Harry R. L. (See White, Ray A. and H. R. L.)						
White, Ray A. and H. R. L., Chicago, Ill. Vehicle-tire	871,545	Nov. 19	2957	738	131	848
Whitmer, Robert F. (See Brining, Frank P., assignor.)						
Whittier, David L. (See Parks, John N., assignor.)						
Wicker, Hugh M., Brooklyn, N. Y. Electric heater	871,153	Nov. 19	2095	563	131	716
Wickes Brothers. (See Power, George S., assignor.)						
Wickes, William J., *et al.* (See Dorgan, William T., assignor.)						
Wild, Frederick W., Jr., Baltimore, Md., assignor to Burt Machine Company. Labeling-machine	871,745	Nov. 19	3315	818	131	910
Wilkie, Calvin H., Douglas, Ariz. Concentrator	871,546	Nov. 19	2959	738	131	848
Williams, Elmer V., assignor of one-half to L. Kelly, San Pedro, Cal. Calculator for type-writing machines	871,311	Nov. 19	2436	631–3	131	770
Williams, Robert P., Santa Barbara, Cal. Connecting device for disabled railway-cars	871,547	Nov. 19	2960	739	131	849
Williams, Walter J., New York N. Y. Coffee-urn	871,312	Nov. 19	2444	633	131	770
Williamson Bros. Company. (See Williamson, John D., Jr., assignor.)						
Williamson, John D., Jr., assignor to Williamson Bros. Company, Philadelphia, Pa. Attachment for steering-gear	871,548	Nov. 19	2962	739	131	849
Willink, William A. T., Brooklyn, N. Y., assignor, by mesne assignments, of four-fifths to Cuba Manufacturing Company. Charcoal-retort	871,313	Nov. 19	2447	633	131	771
Willson, Mendal W., assignor of two-thirds to J. R. Walker and L. P. Leathers, St. Louis, Mo. Automatic car-wheel-flange greaser	871,549	Nov. 19	2964	739–40	131	849
Window Glass Machine Company. (See Frink, Robert L., assignor.)						
Winslow, Edward J., Chicago, Ill. Reinforced vault	871,655	Nov. 19	3148	781	131	882
Winter, Oscar, Philadelphia, Pa. Sectional table-pad	871,314	Nov. 19	2449	634	131	772
Wirth, Louis, Hanover, Germany. Apparatus for preparing and storing boiled hams	871,250	Nov. 19	2299	601	131	749
Wittwer, Albert, Nemaha township, Richardson county, Nebr. Quilting-frame	871,315	Nov. 19	2451	634	131	772
Wohl, Maurice J. (See Hertzberg and Wohl.)						
Wolff, Herbert W., St. Louis, Mo., assignor to Wolff Truck Frame Company, Augusta, Me. Car-truck	871,466	Nov. 19	2786	701	131	822
Wolff Truck Frame Company. (See Wolff, Herbert W., assignor.)						
Wood, George E., Plantsville, Conn. Screw-driver	871,154	Nov. 19	2097	563	131	716
Wood, George E., Plantsville, Conn. Insulating device	871,155	Nov. 19	2098	563	131	717
Woodhead, Charles G. (See Watkins and Woodhead.)						
Woods, Edwin S. (See Jacob John, assignor.)						
Worrest, Alfred H., Lancaster, Pa. Die	871,251	Nov. 19	2300	601	131	749
Worrest, Alfred H., Lancaster, Pa. Firearm	871,550	Nov. 19	2965	740	131	850
Worthen, Burt L., Tucson, Ariz. Ter., assignor to Kemp Hydro-Carbon Furnace Company. Hydrocarbon-burner for furnaces	871,656	Nov. 19	3153	781–2	131	882
Wright, Emily H., Port Washington, N. Y. Bustle	871,657	Nov. 19	3156	782	131	883
Wright, Jacob P., Akron, Ohio, assignor to Diamond Match Company, New York, N. Y. Machine for feeding cards or paper	871,746	Nov. 19	3316	819	131	911
Wright, Lewis M., Fountain, Colo. Metallic railway-tie	871,658	Nov. 19	3157	782	131	883
Yale & Towne Manufacturing Company. (See Taylor, Warren H., assignor.)						
Yost Writing Machine Company. (See Smith, Arthur W., assignor.)						
Young, Frederick W. (See Heitmann and Young.)						
Younghusband, Samuel S., Darlington, England. Smoke-box of locomotive-engine and similar boilers	871,551	Nov. 19	2969	741	131	850

DESIGNS.

Name, residence, and design.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Becvar, Joseph, Collinwood, Ohio. Gas heating-stove	38,895	Nov. 19	131	921
Cole, Thomas W., Chicago, Ill. Cigar-band	38,885	Nov. 19	131	919
Cope, George W. (See Thompson and Cope.)				
Cornish, Harry S., New York, N. Y. Liquid-dispensing keg	38,891	Nov. 19	131	920
Evans, William L., Bridgeton, N. J. Dish	38,888	Nov. 19	131	920
Hosford, James C., Malden, assignor to Magee Furnace Co., Boston, Mass. Stove	38,893	Nov. 19	131	921
Hosford, James C., Malden, assignor to Magee Furnace Co., Boston, Mass. Stove	38,894	Nov. 19	131	921
Kalamazoo Stove Co. (See Thompson and Cope, assignors.)				
Lawler, James J., Mount Vernon, N. Y. Water-heater	38,892	Nov. 19	131	920
Magee Furnace Co. (See Hosford, James C., assignor.)				
Nelson, Charles. (See Strassburger and Nelson.)				
Sternau & Company, S. (See Strassburger and Nelson, assignors.)				
Strassburger, Lionel, and C. Nelson, Brooklyn, assignors to S. Sternau & Company, New York, N. Y. Chafing-dish	38,889	Nov. 19	131	920
Strassburger, Lionel, and C. Nelson, Brooklyn, assignors to S. Sternau & Company, New York, N. Y. Chafing-dish stand and lamp	38,890	Nov. 19	131	920
Switzer, Maurice, New York, N. Y. Paper-cutter	38,886	Nov. 19	131	919
Thayer, Emily W., Saxtons River, Vt. Stocking-darner	38,887	Nov. 19	131	920
Thompson, William, Kalamazoo, and G. W. Cope, Detroit, assignors to Kalamazoo Stove Co., Kalamazoo, Mich. Heating and cooking stove	38,896	Nov. 19	131	921

TRADE-MARKS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Acme Shear Company, Bridgeport, Conn. Shears and scissors	66,318	Nov. 19	131	938
Alberger Condenser Company, New York, N. Y. Expansion-joints	66,319	Nov. 19	131	938
Alden & Co., Geo. A., Boston, Mass. India-rubber, gutta-percha, and other vulcanizable gums	66,259	Nov. 19	131	936
American Thread Company, Jersey City, N. J. Spool-cotton, sewing-cotton, and thread	66,260	Nov. 19	131	936
American Wringer Company, New York, N. Y. Clothes-wringers	66,243	Nov. 19	131	936
American Wringer Company, New York, N. Y. Wringers and parts thereof	66,244	Nov. 19	131	936
American Wringer Company, New York, N. Y. Clothes-wringers	66,245	Nov. 19	131	936
Arnhold, Karberg & Co., New York, N. Y. Cotton piece goods	66,320	Nov. 19	131	938
Big Four. (See Moore, Harrie G., assignor.)				
Block-Horn Preserving Co., Kansas City, Mo. Certain foods	66,281	Nov. 19	131	937
Body Builders Medicine Company, Binghamton, N. Y. Kidney, liver, and blood remedies	66,261	Nov. 19	131	936
Boehm & Levine, New York, N. Y. Ladies' jabots made of netted and lace fabrics	66,321	Nov. 19	131	938
Bonetti Frères, Paris, France. Alterative iodin compound	66,262	Nov. 19	131	936
Boott Mills, Lowell, Mass. Cotton piece goods	66,322	Nov. 19	131	938
Boott Mills, Lowell, Mass. Cotton piece goods	66,323	Nov. 19	131	938
Brownell & Field Company, Providence, R. I. Cocoa	66,282	Nov. 19	131	937
Burt Olney Canning Co., Oneida and Albion, N. Y. Canned fruits and vegetables except canned corn	66,283	Nov. 19	131	937
Butler, James T., Abington, Pa. Medicinal tablets	66,263	Nov. 19	131	936
Chance & Hunt, Ld., Oldbury, England. Caustic soda	66,212	Nov. 19	131	935
Charles Hewitt & Sons Co., Des Moines, Iowa. Certain food preparations	66,284	Nov. 19	131	937
Connecticut Tool Company, Bridgeport, Conn. Thread-cutting dies	66,324	Nov. 19	131	938
Cosby Shoe Co. Incorporated, Lynchburg, Va. Leather boots and shoes	66,227	Nov. 19	131	935
Cosby Shoe Co. Incorporated, Lynchburg, Va. Leather boots and shoes	66,228	Nov. 19	131	935
Cosby Shoe Co. Incorporated, Lynchburg, Va. Leather boots and shoes	66,229	Nov. 19	131	935
Cosby Shoe Co. Incorporated, Lynchburg, Va. Leather boots and shoes	66,230	Nov. 19	131	935
Crego, Oscar M., New York, N. Y. Cheese	66,285	Nov. 19	131	937
Dacotah Manufacturing Co., St. Paul, Minn. Certain clothing	66,325	Nov. 19	131	938
Davis-Bridaham Drug Company, Denver, Colo. Brushes	66,246	Nov. 19	131	936
Detrick & Harvey Machine Co. of Baltimore City, Baltimore, Md. Open-side planers	66,264	Nov. 19	131	936
Dohrn, Franz J., White Plains, N. Y. Certain non-alcoholic beverages	66,286	Nov. 19	131	937
Dolmetsch, Heinrich, Stuttgart, Germany. Cork coverings for walls and ceilings	66,247	Nov. 19	131	936
Drake & Company, Easton, Pa. Teas and coffees	66,287	Nov. 19	131	937
Duluth-Superior Milling Co., Duluth, Minn. Wheat-flour	66,288	Nov. 19	131	937
Duncan, William D., Ottawa, Ill. Certain medicine	66,265	Nov. 19	131	936
Durand & Co., Newark, N. J. Certain jewelry and precious-metal ware	66,213	Nov. 19	131	935
Egli, Hans W., Zurich, Switzerland. Calculating-machines	66,214	Nov. 19	131	935
Elseman & Company, New York, N. Y. Whisky, brandy, and gin	66,289	Nov. 19	131	937
Ellis, Richard, New York, N. Y. Powdered granular soap	66,215	Nov. 19	131	935
Enterprise Rubber Co., Boston, Mass. Certain rubber goods	66,248	Nov. 19	131	936
Erb, Ludwig G. B., New York, N. Y. Certain chemicals and antiseptics	66,216	Nov. 19	131	935
Eureka Machine Co., Lansing, Mich. Concrete-mixing machinery	66,326	Nov. 19	131	938
Faber, Eberhard, New York, N. Y. Rubber erasers	66,249	Nov. 19	131	936
Farwell & Rhines, Watertown, N. Y. Wheat-flour	66,290	Nov. 19	131	937
Ferruginold Co., New York, N. Y. Certain medicine	66,266	Nov. 19	131	936
Garrett-Williams Company, Baltimore, Md. Whisky	66,291	Nov. 19	131	937
Geo. H. Cross Co., St. Johnsbury, Vt. Bread and crackers	66,292	Nov. 19	131	937
Golden Hill Distilling Co., Columbus, Ohio Cordials	66,293	Nov. 19	131	937
Golden Hill Distilling Co., Columbus, Ohio. Whisky	66,294	Nov. 19	131	937
Greco, Gaspare G., New Orleans, La. Macaroni	66,295	Nov. 19	131	937
Haarmann de Laire Schaefer Co., Maywood, N. J. Aromatic synthetic liquid base for use in violet perfumes	66,217	Nov. 19	131	935
Harpham Bros. Co., Lincoln, Nebr. Harness, horse-collars, saddles, and whips	66,231	Nov. 19	131	935
Hetherington, Thomas, Philadelphia, Pa. Toilet preparation for the mustache or hair	66,267	Nov. 19	131	936
Hetherington, Thomas, Philadelphia, Pa. Perfumes	66,268	Nov. 19	131	936
House & Son, Jacob, Buffalo, N. Y. Ginger-ale	66,296	Nov. 19	131	937
Howard, Henry J. M., Washington, D. C. Canvas hose	66,232	Nov. 19	131	935
Ingham, Harvey B., Waverly, N. Y. Furniture and piano polishes	66,233	Nov. 19	131	935
J. G. Brill Company, Philadelphia, Pa., assignor to J. G. Brill Company. Gongs and parts thereof, except electric gongs	66,327	Nov. 19	131	938

TRADE-MARKS—Continued.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Page.
J. G. Brill Company, Philadelphia, Pa., assignor to The J. G. Brill Company. Railway street-sprinklers	66,328	Nov. 19	131	938
Jacob & Brown, New York, N. Y. Buckles	66,329	Nov. 19	131	938
James M. Houston Grocer Company, St. Louis, Mo. Canned fruits and vegetables	66,218	Nov. 19	131	935
Japhet & Co., Houston, Tex. Gin	66,297	Nov. 19	131	937
John Barth Company, Milwaukee, Wis. Vodka	66,298	Nov. 19	131	937
Kearney & Co., J., Liverpool, England. Stylographic fountain-pens	66,269	Nov. 19	131	936
Kellogg & Hitchcock Co., Syracuse, N. Y. Menthol ice	66,270	Nov. 19	131	936
Kerens Shoe Co., St. Louis, Mo. Leather boots and shoes	66,234	Nov. 19	131	935
Körting & Mathiesen Aktiengesellschaft, Leutzsch, Germany. Electric lamps of all kinds	66,219	Nov. 19	131	935
Kuehnrich, Paul R., Sheffield, England. Steel ingots and bars, draw-plates, and worties	66,330	Nov. 19	131	938
Kumberger & Vreeland, New York, N. Y. Marine gasolene-engines	66,331	Nov. 19	131	938
Labaume & Co., Royé, Beaune, France. Wines	66,250	Nov. 19	131	936
Lazarus-Nassauer Co., Cairo, Ill. Whisky	66,299	Nov. 19	131	937
Loonen, Charles, Paris, France. Nail-brushes	66,300	Nov. 19	131	937
Los Angeles Olive Growers Association, Los Angeles, Cal. Soap	66,220	Nov. 19	131	935
Low, Abbot A., Brooklyn, N. Y. Electrically-heated soldering-irons, sad-irons, and branding-irons	66,332	Nov. 19	131	938
Lutz Co., George A., New York, N. Y. Dry batteries	66,333	Nov. 19	131	938
Magnus Metal Company, New York, N. Y. Alloy castings	66,334	Nov. 19	131	938
Maulbetsch & Whittemore Company, Newark, N. J. Cases and satchels for musical instruments	66,235	Nov. 19	131	935
McElroy, Ross O., New York, N. Y. Remedy for venereal diseases	66,272	Nov. 19	131	936
McKoy, Robert H., Wilmington, N. C. Certain medicine	66,271	Nov. 19	131	936
Menzel & Co., New York, N. Y. Certain sea foods	66,301	Nov. 19	131	937
Mills Equipment Co. Ltd., Westminster, England. Knapsacks of woven material	66,250	Nov. 19	131	936
Mohr, Peter, Belleville, Ill. Cigars	66,221	Nov. 19	131	935
Moon Vibrator Company, Chicago, Ill. Electric vibratory massage-machines	66,251	Nov. 19	131	936
Moore, Harrie G., assignor to Big Four, Kansas City, Mo. Plows	66,335	Nov. 19	131	938
Mountain Copper Company Limited, London, England, and San Francisco, Cal. Fertilizers	66,273	Nov. 19	131	936
National Candy Company, Jersey City, N. J., and St. Louis, Mo. Candies composed of or containing chocolate	66,336	Nov. 19	131	938
National Sewing Machine Company, Belvidere, Ill. Sewing-machine needles	60,252	Nov. 19	131	936
Neuralgyline Company, Wheeling, W. Va. Headache remedies in liquid and tablet form	66,274	Nov. 19	131	936
Northern Manufacturing Company, Bangor, Me. Paints	66,236	Nov. 19	131	935
Oakland Vinegar and Pickle Co., Saginaw, Mich. Vinegars and pickles	66,302	Nov. 19	131	937
Oesterreichische Daimler-Motoren-Gesellschaft Gesellschaft mit beschränkter Haftung, Vienna, Austria-Hungary. Automobiles	66,337	Nov. 19	131	938
Ohio Mining & Manufacturing Co., New York, N. Y., and Shawnee, Ohio. Building bricks or blocks	66,253	Nov. 19	131	936
Oneida Community Limited, Oneida and Niagara Falls, N. Y. Metal animal-ties	66,338	Nov. 19	131	938
Openhym & Sons, Wm., New York, N. Y. Ribbons	66,339	Nov. 19	131	938
Optical Specialties Company, Boston, Mass. Bifocal lenses	66,222	Nov. 19	131	935
Owens, T. Lloyd, Savannah, Ga. Coffee	66,303	Nov. 19	131	937
Paramount Knitting Company, Chicago, Ill. Hosiery	66,340	Nov. 19	131	938
Paramount Knitting Company, Chicago, Ill. Hosiery	66,341	Nov. 19	131	938
Patterson, Joseph E., Wilkes-Barre, Pa. Spring-water	66,223	Nov. 19	131	935
Pennsylvania Tanning Company, Great Bend, Pa. Chamois-skins	66,304	Nov. 19	131	937
Powell Bros. & Co., London, England. Preserved fish	66,305	Nov. 19	131	937
Quality Saw & Tool Works Incorporated, Springfield, Mass. Saws	66,342	Nov. 19	131	938
R. C. Proudfit Baking Company, Chicago, Ill. Bread	66,306	Nov. 19	131	937
Ramey Medicator Company, Asbury Park, N. J. Medicator or inhaler	66,254	Nov. 19	131	936
Revere Rubber Company, Boston, Mass. Belting, hose, and machinery packing	66,237	Nov. 19	131	935
Rich, Charles S., New York, N. Y. Preparations for the removal of hair and blemishes from the skin	66,275	Nov. 19	131	936
Richmond Cedar Works, Richmond, Va. Ice-cream freezers	66,255	Nov. 19	131	936
Robinson Bros. & Company Incorporated, Portland, Me., and Malden, Mass. Ointment	66,224	Nov. 19	131	935
Rosenfield, Joseph L., Pueblo, Colo. Bitters	66,276	Nov. 19	131	936
Rosenfield Bros. & Co., Chicago, Ill. Whisky	66,308	Nov. 19	131	937
Sächsische Pulverfabriken G. Krantz & Co., Bautzen, Germany. Cartridges, powder, and smokeless powder	66,256	Nov. 19	131	936
Saqui, David S., New York, N. Y. Cigars, cigarettes, cheroots, smoking-tobacco, and chewing-tobacco	66,225	Nov. 19	131	935
Saunders, Clarence C., Celina, Tex. Stock-powders	66,277	Nov. 19	131	936
Scharff, L. & A., St. Louis, Mo. Whisky	66,226	Nov. 19	131	935
Schoellkopf, Hartford & Hanna Co., Buffalo, N. Y. Paints	66,238	Nov. 19	131	935
Schorsch & Co., New York, N. Y. Paper bags	66,239	Nov. 19	131	935
Schraders, New York, N. Y. Candy	66,309	Nov. 19	131	937
Schultes Agost, Szinye-Lipoczi Salvatorforrás vállalat, Eperjes, Austria-Hungary. Natural mineral water	66,310	Nov. 19	131	937
Shapiro & Aronson, New York, N. Y. Gas and electric light fixtures	66,240	Nov. 19	131	935
Shivell, Edwin, Melrose and Boston, Mass. Sardines	66,343	Nov. 19	131	938
Spears & Riddle Co., Wheeling, W. Va. Washing-machines	66,257	Nov. 19	131	936
Stollwerck Bros., New York, N. Y. Cocoa, chocolate, and candy	66,311	Nov. 19	131	937
Strassburger, Gustave, New York, N. Y. Tooth-brushes	66,258	Nov. 19	131	936
T. M. Sinclair & Co., Ltd., Cedar Rapids, Iowa. Lard compound	66,312	Nov. 19	131	937
Trunk Bros. Drug Company, Denver, Colo. Certain medicines	66,313	Nov. 19	131	937
Ulriel, Charles J., New York, N. Y. Remedies for stomach troubles	66,278	Nov. 19	131	937
Venesta Limited, London, England. Certain wood manufactures	66,279	Nov. 19	131	937
Waldo, Howard L., Troy, N. Y. Nerve-tonic	66,314	Nov. 19	131	937
Ward, Joseph P., Fort Worth, Tex. Hair tonic and invigorator	66,315	Nov. 19	131	937
Warren Featherbone Co., Three Oaks, Mich. Whip stock or materials, whips, and whip-lashes	66,241	Nov. 19	131	935
Wayne County Canning Co., Ltd., Marion, N. Y. Canned fruits and vegetables	66,316	Nov. 19	131	937
Webster, Towner K., Jr., New York, N. Y. Suspenders, belts, garters, hose-supporters, and sleeve-bands	66,344	Nov. 19	131	938
Webster, Towner K., Jr., New York, N. Y. Suspenders, belts, garters, hose-supporters, and sleeve-bands	66,345	Nov. 19	131	938
Webster, Towner K., Jr., New York, N. Y. Suspenders, belts, garters, hose-supporters, and sleeve-bands	66,346	Nov. 19	131	938
Whaley Mill & Elevator Co., Gainesville, Tex. Wheat-flour	66,347	Nov. 19	131	938
White Sewing Machine Co., Cleveland, Ohio. Sewing-machines and parts	66,317	Nov. 19	131	937
Whitman & Co., Clarence, New York, N. Y. Mercerized cotton piece fabrics	66,280	Nov. 19	131	937
Wilpaco Packing Company, New York, N. Y. Plaited fibrous packing	66,348	Nov. 19	131	938
Wyeth Hardware & Manufacturing Co., St. Joseph, Mo. Certain cutlery	66,242	Nov. 19	131	936
	66,349	Nov. 19	131	938

LABELS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Page.
Aronson, Louis V., Newark, N. J. "In-Sen-Zum, Makes Home Sweet Home Sweeter." (For an Incense Preparation)	13,892	Nov. 19	131	939
Burton Brothers & Co., New York, N. Y. "Samson." (For Dress Goods Known in the Trade as Galatea)	13,893	Nov. 19	131	939
Clark & Company, F. B., Harrisburg, Pa. "Pain King." (For a Cough Cure)	13,884	Nov. 19	131	939
Clark & Company, F. B., Harrisburg, Pa. "Cuti-Vita Salve." (For a Salve)	13,887	Nov. 19	131	939
Crichton, Alexander, Castleton, Ontario, Canada. "Grippura, (Germ-Destroyer.)" (For a Proprietary Medicine)	13,886	Nov. 19	131	939
Douglas Candy Company, St. Joseph, Mo. "Miladi." (For Candy)	13,882	Nov. 19	131	939
Goldberg, Philip, New York, N. Y. "Candidate Club." (For Whisky)	13,878	Nov. 18	131	939
Lewkowicz, I. H., Sharon, Pa. "Dr. I. H. Lewko's Antiseptic Tooth Powder." (For Tooth-Powder)	13,889	Nov. 19	131	939
Lewkowicz, I. H., Sharon, Pa. "Dr. I. H. Lewko's Antiseptic Tooth Paste." (For Tooth-Paste)	13,890	Nov. 19	131	939
Lewkowicz, I. H., Sharon, Pa. "Dr. I. H. Lewko's Antiseptic Tooth Wash." (For a Tooth-Wash-Preparation)	13,891	Nov. 19	131	939
Ortega, Emile C., Los Angeles, Cal. "Ortega's Selected Peeled Green Chiles." (For Peeled Green Chiles)	13,881	Nov. 19	131	939
Paul, William J., Pittsburg, Pa. "Original Jolly Fellows Pepsin Gum." (For Chewing-Gum)	13,883	Nov. 19	131	939
Purita Co., A. C. H., Buffalo, N. Y. "Purita Never-Grey Hair Tonic." (For Hair-Tonic)	13,888	Nov. 19	131	939
Runkel Brothers, Incorporated, New York, N. Y. "Choco-Sodo." (For Hot Chocolate)	13,879	Nov. 19	131	939
Seven Day Coffee Company, New York, N. Y. "Seven Day Coffee, the National Beverage." (For Coffee)	13,880	Nov. 19	131	939
Symons-Kraussman Co., New York, N. Y. "Dennis Kearney." (For Cigars)	13,877	Nov. 19	131	939
Williams, Samuel W., Harriman, Tenn. "Old Log Cabin." (For a Liquid Medical Compound for Coughs and Colds)	13,885	Nov. 19	131	939

PRINTS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Page.
Cream of Wheat Co., Minneapolis, Minn. "Broncho Busting Design." (For Breakfast Food)	2,156	Nov. 19	131	939
Dunham, Curtis, New York, N. Y. "U. S. S. Peacemaker, The Great Game of Nations." (For a Game)	2,160	Nov. 19	131	939
H. B. Claflin Company, New York, N. Y. "Napoleon." (For Medicinal and Toilet Preparations)	2,158	Nov. 19	131	939
Lytton, H. C., Chicago, Ill. "Men's and Boys' Apparel." (For Men's and Boys' Apparel)	2,159	Nov. 19	131	939
Washburn Crosby Company, Minneapolis, Minn. "Let me tell you Something—." (For Flour)	2,157	Nov. 19	131	939

TRADE-MARKS.

(REGISTRATION APPLIED FOR.)

Name, residence, and title.	Serial No.	Date.	Official Gazette. Vol.	Page.
A. B. Farquhar Company, Limited, York, Pa. Potato-diggers	30,273	Nov. 19	131	930
A. J. Bates Co., Webster, Mass. Leather boots and shoes	29,980	Nov. 19	131	928
Atmore & Son, Philadelphia, Pa. Plum-pudding	14,812	Nov. 19	131	924
B. F. Goodrich Company, Akron, Ohio. Rubber or partly-rubber aprons, air mattresses and pillows, &c	628	Nov. 19	131	923
Beagle Hame Works, Freeland, Pa. Wooden hames	30,252	Nov. 19	131	930
Belknap Hardware & Mfg. Co., Louisville, Ky. Stoves and ranges	30,479	Nov. 19	131	932
Bell-Wart Manufacturing Company, New York, N. Y. Antiseptic foot-powder	30,253	Nov. 19	131	930
Bennett Company, Omaha, Nebr. Butter	30,177	Nov. 19	131	929
Bennett Company, Omaha, Nebr. Maple-syrup	30,178	Nov. 19	131	929
Bielefeld & Spahn, New York, N. Y. Leather shoes	30,227	Nov. 19	131	930
Black, Alice S., Montclair, N. J. Toilet balm	30,351	Nov. 19	131	931
Blanke-Baer Chemical Co., St. Louis, Mo. Ginger-ale	29,742	Nov. 19	131	927
Boott Mills, Lowell, Mass. Cotton piece goods	21,956	Nov. 19	131	924
Boott Mills, Lowell, Mass. Cotton piece goods	21,959	Nov. 19	131	924
Boott Mills, Lowell, Mass. Cotton piece goods	21,967	Nov. 19	131	924
Braunstein & Cie., Paris, France. Cigarette-paper	30,143-6	Nov. 19	131	929
Chicago Herald Company, Chicago, Ill. Newspaper	30,522	Nov. 19	131	932
Cook & Bernheimer Co., New York, N. Y. Whisky	9,264-5	Nov. 19	131	923-4
Cook & Bernheimer Co., New York, N. Y. Whisky	9,305	Nov. 19	131	924
Cox Blodgett Dry Goods Company, Wichita, Kans. Ginghams, cambrics, damasks, linings, &c	29,041	Nov. 19	131	927
Darling, Harry B., Washington, D. C. Printed books, pamphlets, catalogues, &c	30,415	Nov. 19	131	931
Dermatone Company, Chicago, Ill. Medicines for eczema and skin diseases	30,105	Nov. 19	131	929
Detrick & Harvey Machine Co. of Baltimore City, Baltimore, Md. Open-side planers	24,275	Nov. 19	131	925
Detroit Oak Belting Co., Detroit, Mich. Leather belting	30,434	Nov. 19	131	931
Donaldson-Shultz Co., Baltimore, Md. Pickles, catsup, and vinegar	29,931	Nov. 19	131	928
E. Martin & Co., San Francisco, Cal. Whisky	27,125	Nov. 19	131	925
E. T. Smith Company, Worcester, Mass. Canned fruits, berries, and vegetables	30,460	Nov. 19	131	932
Eastman Kodak Co., Rochester, N. Y. Photographic supplies	27,850	Nov. 19	131	926

TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

Name, residence, and title.	Serial No.	Date.	Official Gazette. Vol.	Page.
Eaton, Cole & Burnham Co., Bridgeport, Conn. Hose-nozzles	30,041	Nov. 19	131	928
Eldridge, Willis J., Aurora, Ohio. Cheese	28,779	Nov. 19	131	926
Eldridge, Willis J., Aurora, Ohio. Cheese	28,782	Nov. 19	131	926
F. Korbel & Bros., San Francisco, Cal. Whisky	30,353	Nov. 19	131	931
Fayette R. Plumb, Incorporated, Philadelphia, Pa. Hammers, picks, boat and log hooks, &c	27,165	Nov. 19	131	925
Fischer Bros., Seattle, Wash. Lye, sodium chlorid, and starch	28,033	Nov. 19	131	926
Fischer Bros., Seattle, Wash. Honey, syrup, molasses, &c	28,034	Nov. 19	131	926
Fischer Bros., Seattle, Wash. Clams, clam nectar, chowder, minced clams, &c	28,036	Nov. 19	131	926
Follansbee Brothers Company, Pittsburg, Pa. Tin and terne plates	25,204	Nov. 19	131	925
Franklin Manufacturing Co., Franklin, Tenn. Canned fruits and vegetables	30,540	Nov. 19	131	933
Friend & Marks, Milwaukee, Wis. Coats, vests, trousers, and overcoats	30,270	Nov. 19	131	930
German-American Coffee Co., New York, N. Y. Coffee	29,858	Nov. 19	131	928
Gieraltowski, Charles P., Chicago, Ill. Tonics	29,913	Nov. 19	131	928
Hart, Charles M., Brooklyn, N. Y. Compounds for the extermination of vermin	30,566	Nov. 19	131	933
High Grade Lard Company, Baltimore, Md. Lard substitute	24,214	Nov. 19	131	924
Hitch, David M., Philadelphia, Pa. Tooth-brush sterilizer	30,256	Nov. 19	131	930
Hood Rubber Co., Boston, Mass. Rubber footwear and tires	29,536	Nov. 19	131	927
Houston, John, Wellston, Ohio. Medicinal remedy for purifying the blood, for catarrh, &c	29,792	Nov. 19	131	928
Imperial Dry Plate Company, Limited, London, England. Photographic plates, paper, and films	25,877	Nov. 19	131	925
Interstate Packing Co., East End, Minn. Lard	30,527	Nov. 19	131	932
J. H. Allen & Company, St. Paul, Minn. Coffee and tea	28,422	Nov. 19	131	926
Jacob Dold Packing Company, Buffalo, N. Y. Fresh meats	30,473	Nov. 19	131	932
John Hoffmann & Sons Co., Milwaukee, Wis. Canned fruits and vegetables	29,810	Nov. 19	131	928
Johnston & Sons, Nathaniel, Bordeaux, France. Olive-oil	30,438	Nov. 19	131	932
Keen & Reville, New York, N. Y. Mohairs and sicilians	29,761	Nov. 19	131	928
L. Candee & Co., New Haven, Conn. Rubber boots and shoes	30,363	Nov. 19	131	931
"Le Ripolin," (Société anonyme française de peintures laquées et d'enduits sous-marins, procédés Lefranc & Briegleb réunis,) Paris, France. Composition paint	12,079	Nov. 19	131	924
Lee Broom & Duster Company, Lincoln, Nebr. Brooms, whisks, brushes, and dusters	30,426	Nov. 19	131	931
Lee Broom & Duster Company, Lincoln, Nebr. Brooms	30,428–9	Nov. 19	131	931
Manischewitz, B., Cincinnati, Ohio. Unleavened bread	27,069	Nov. 19	131	925
Nahass, Adolph, Boston, Mass. Belts, girdles, and sashes	30,120	Nov. 19	131	929
Nestlé & Anglo-Swiss Condensed Milk Co., Cham, Switzerland. Coffee with milk	24,840	Nov. 19	131	925
New South Brewery & Ice Co., Middlesboro, Ky. Beer	30,050	Nov. 19	131	928
New South Brewery & Ice Co., Middlesboro, Ky. Medicinal malt extracts	30,051	Nov. 19	131	928
New York Belting and Packing Company, Ltd., New York, N. Y. Machinery packing	28,172	Nov. 19	131	926
Newman & Sons, I., New Haven, Conn. Corsets	30,298–9	Nov. 19	131	930
Old Kentucky Mfg. Co., Paducah, Ky. Remedy for hog-cholera, swine plague, &c	30,038	Nov. 19	131	928
Peoples Chemical Co., Inc., Providence, R. I. Medicinal tonic	30,546	Nov. 19	131	933
R. T. French Company, Rochester, N. Y. Mustard	24,382	Nov. 19	131	925
Ridenour Baker Grocery Co., Kansas City, Mo. Canned fruits and vegetables	30,454	Nov. 19	131	932
Riggs, James E., Lincoln, Nebr. Remedy for skin diseases	17,225	Nov. 19	131	924
Rosenstein Brothers Inc., New York, N. Y. Fish	22,950	Nov. 19	131	924
S. S. McClure Company, New York, N. Y. Monthly publication	30,159	Nov. 19	131	929
Scandinavian Fur & Leather Co., New York, N. Y. Automobile coats, wraps, robes, &c	28,727	Nov. 19	131	926
Sheffield Farms-Slawson-Decker Co., New York, N. Y. Milk and cream	30,608	Nov. 19	131	933
Sherwin-Williams Co., Cleveland, Ohio. Paints, pigments, stains, &c	30,517	Nov. 19	131	932
Shivell, Edwin, Boston, Mass. Sardines, salmon, herrings, and mackerel	30,531	Nov. 19	131	932
Simon Levi Company, Los Angeles, Cal. Chili and dried fruits	29,724	Nov. 19	131	927
Staderman, Julius P., Buffalo, N. Y. Amusement devices	30,387	Nov. 19	131	931
Stanley Rule & Level Company, New Britain, Conn. Iron tool-handles	29,746	Nov. 19	131	927
Stoll, Samuel F., Kansas City, Mo. Medicinal tablets	30,197	Nov. 19	131	930
Strohmeyer & Arpe Company, New York, N. Y. Canned sardines, sprats, anchovies, &c	30,338–40	Nov. 19	131	930-1
Sulzbach, Jacob, New York, N. Y. Ribbons	30,031	Nov. 19	131	928
Tileston, Henry M., Chicago, Ill. Ointments	29,530	Nov. 19	131	927
United States Graphite Co., Saginaw, Mich. Silver-lead or plumbago foundry-facings, &c	30,295	Nov. 19	131	930
Va. Brewing Co., Roanoke, Va. Malt extract	30,456	Nov. 19	131	932
Weed Chain Tire Grip Company, New York, N.Y. Chain tire-grips	27,209	Nov. 19	131	926
Wellcome, Henry S., London, England. Medicated wines	30,518	Nov. 19	131	932
Wells, Ephraim S., Jersey City, N. J. Poisons or exterminators of rats, mice, squirrels, &c	29,550	Nov. 19	131	927
Wiseman, Robert J., Lewiston, Me. Castor-oil	29,510	Nov. 19	131	927
Woolson Spice Company, Toledo, Ohio. Spices	30,536	Nov. 19	131	933
Wright & Taylor, Louisville, Ky. Whisky	5,542	Nov. 19	131	923
Wylde, William F., Ponca, Okla. Ter. Flavoring-syrup for beverages	30,326	Nov. 19	131	930
Wyman & Son, Jasper, Millbridge, Me. Canned clams	29,583	Nov. 19	131	927

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED ON THE 19TH DAY OF NOVEMBER, 1907.

Invention.	Name.	No.	Date.	Monthly volume. Specification.	Drawing.	Official Gazette. Volume.	Page.
Addressing-machine	C. A. Belknap	871,500	Nov. 19	2986	744–5	131	853
Air brake. Compressed-	F. Jordan	871,509	Nov. 19	2881	722	131	836
Air-brake-system safety attachment	C. E. Lyter	871,717	Nov. 19	3264	806	131	902
Air-compressor. Turbine	E. C. Pollard	871,626	Nov. 19	3101	770–1	131	874
Air-purifier	F. A. Ward	871,652	Nov. 19	3143	780	131	881
Air-ship	A. C. Ellsworth	871,164	Nov. 19	2117	567–8	131	720
Air-ship	G. W. Lane	871,710	Nov. 19	3242	803	131	899
Alarm: *See* Automatic alarm. Time-alarm.	T. Van Kannel	871,744	Nov. 19	3307	817–18	131	910
Amusement apparatus	W. J. Millican	871,722	Nov. 19	3261	807	131	903
Amusement device	B. Homolka and J. Erber	871,507	Nov. 19	2876	.....	131	835
Anthrachrysone derivatives	R. B. Melanson and G. R. Peare	871,426	Nov. 19	2703	685	131	808
Apparel	W. J. English	871,579	Nov. 19	3017	752	131	859
Atomizer	G. Rossi	871,633	Nov. 19	3116	772–3	131	875
Automatic alarm	W. S. Poindexter	871,437	Nov. 19	2726	688	131	812
Automatic gate	C. E. Buell	871,105	Nov. 19	1980	541	131	701
Automatic sprinkler	J. E. Smith	871,149	Nov. 19	2086	561	131	715
Axle. Pit-car	T. L. Beam	871,664	Nov. 19	3165	785	131	885
Bag and fastening	G. W. Tice	871,742	Nov. 19	3302	816	131	909
Band-cutter and feeder	E. J. Babbitt	871,158	Nov. 19	2103	564	131	718
Banjo attachment							
Bar: *See* Reinforcing-bar.	J. J. Russell and A. J. Bayley	871,296	Nov. 19	2409	623–4	131	765
Bark-peeling machine	J. H. Rothrock	871,635	Nov. 19	3118	773	131	876
Barrel attachment	F. E. Ball	871,663	Nov. 19	3164	784	131	885
Bath-tub shower attachment							
Battery: *See* Galvanic battery.	L. H. Flanders	871,393	Nov. 19	2625	671	131	798
Battery-assembling apparatus. Storage-	W. B. Phinney	871,734	Nov. 19	3281	812–13	131	906
Beans, &c. Machine for trimming string-	J. C. Barber	871,200	Nov. 19	2185	581	131	732
Bearing. Antifriction lateral-motion center	J. Jacob	871,409	Nov. 19	2659	678–9	131	803
Bearing. Roller-	J. Jacob	871,410	Nov. 19	2663	679	131	804
Bearing. Roller-	D. T. Owen	871,180	Nov. 19	2144	573	131	725
Bed and couch. Combined	D. T. Owen	871,181	Nov. 19	2146	573–4	131	725
Bed and couch. Combined	R. L. Herman	871,505	Nov. 19	2873	721	131	835
Bed. Folding	H. J. Heeney	871,168	Nov. 19	2125	560	131	721
Bell. Electric	A. Cotton	871,208	Nov. 19	2204	584	131	734
Blower. Jet-	A. Cotton	871,209	Nov. 19	2207	584–5	131	735
Blowing apparatus. Jet							
Board: *See* Panel-board.							
Boiler: *See* Steam-boiler. Superheating-boiler.	M. T. Goss	871,691	Nov. 19	3212	795–6	131	893
Boiler	W. C. Wallace	871,541	Nov. 19	2950	736	131	847
Boiler air-draft system. Steam-	W. M. Conner	871,674	Nov. 19	3183	789	131	888
Bone-cutting machine	W. C. Nash	871,610	Nov. 19	3077	764	131	869
Book-clip and leaf-support	M. J. Wade	871,310	Nov. 19	2435	631	131	770
Book. Memorandum-	A. Englefield. (Reissue)	12,721	Nov. 19	3373	827	131	918
Book-rest and the like	J. C. Reeves	871,183	Nov. 19	2151	574	131	726
Bottle	C. R. Schmidt	871,364	Nov. 19	2548	655	131	788
Bottle-closure	J. E. Pettee	871,622	Nov. 19	3092	768	131	872
Bottle holder. Nursing-	A. Jameson	871,276	Nov. 19	2352	612	131	758
Bottle. Non-refillable	P. Harder	871,693	Nov. 19	3215	796	131	894
Bottle. Non-refillable	H. C. Johnson and O. Steidel	871,702	Nov. 19	3228	799	131	890
Bottle. Non-refillable	H. J. Baker	871,099	Nov. 19	1967	539	131	699
Bottle stand. Ink-	M. Hofheimer	871,697	Nov. 19	3221	797	131	895
Bottles, jars, &c. Closure for							
Box: *See* Collapsible box. Paper box. Joke-box. Smoke-box.	J. E. Smith	871,452	Nov. 19	2758	695	131	817
Box	L. B. Prahar	871,627	Nov. 19	3105	771	131	874
Box-fastener	A. D. Bentley	871,561	Nov. 19	2991	746	131	854
Boxes, cases, and similar receptacles in place. Device for holding the lids of							
Bracket: *See* Clothes-line bracket. Dental bracket.	D. McIntyre	871,137	Nov. 19	2061	557	131	711
Bracket	L. Nolan	871,615	Nov. 19	3082	766	131	870
Bracket							
Brake: *See* Air-brake. Coaster-brake.	J. D. Gallagher	871,394	Nov. 19	2628	672	131	798
Brake-shoe	F. R. Spear	871,740	Nov. 19	3297	815	131	908
Brake-shoe	H. W. Hacy	871,336	Nov. 19	2497	644	131	779
Brush	W. D. Foss	871,494	Nov. 19	2843	715	131	831
Brush	F. H. Lumbard	871,603	Nov. 19	3065	760	131	867
Brush	C. W. Jones and W. L. Meredith	871,170	Nov. 19	2128	570	131	722
Brush. Combination blacking-							

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Dr'g.	Official Gazette. Vol.	Official Gazette. Page.
Buckles, &c. Combined strap and protector for harness-	W. E. Barber	871,557	Nov. 19	2982	743	131	853
Burner:							
See Furnace hydrocarbon-burner.							
Heating and lighting burner.							
Lamp and stove oil-burner.							
Oil-burner.							
Bushing. Bung-	G. H. Ricke	871,444	Nov. 19	2743	692	131	815
Bustle	E. H. Wright	871,657	Nov. 19	3156	782	131	883
Button-tuft	D. B. Shantz	871,303	Nov. 19	2426	627	131	768
Cabinet and display-rack for neckties	L. M. Speer	871,530	Nov. 19	2927	731	131	843
Camera multiplying-back	W. C. Seckler	871,302	Nov. 19	2422	627	131	767
Cameras. Appliance for adjusting and working iris diaphragms of photographic	A. Watkins and C. G. Woodhead	871,654	Nov. 19	3146	781	131	881
Can-body-forming machine	J. A. Gray	871,268	Nov. 19	2332	606–9	131	755
Can-heading machine	N. Troyer	871,379	Nov. 19	2588	662–3	131	793
Can-heading machine	J. L. Allen	871,383	Nov. 19	2597	665–7	131	795
Canceling and postmarking machine	M. V. B. Ethridge	871,330	Nov. 19	2484	641–2	131	777
Car. Convertible street-	G. J. Knoll	871,419	Nov. 19	2683	682–3	131	806
Car-door	G. W. Leavitt	871,711	Nov. 19	3243	803	131	899
Car-fender	G. R. Owings	871,521	Nov. 19	2906	726–7	131	840
Car grain-door	J. E. Abbott	871,659	Nov. 19	3158	783	131	883
Car-roof	S. Otis	871,179	Nov. 19	2143	572	131	725
Car shock-absorber. Motor-	A. Dutrieux	871,329	Nov. 19	2482	641	131	777
Car side bearing. Railway-	J. Jacob	871,408	Nov. 19	2655	678	131	803
Car signal. Street-	G. S. Henninger	871,587	Nov. 19	3028	754	131	862
Car-steering mechanism. Motor-	G. H. Coates	871,109	Nov. 19	1986	542–3	131	702
Car. Street-	W. P. Michel	871,514	Nov. 19	2892	724	131	838
Car-wheel-flange greaser. Automatic	M. W. Willson	871,549	Nov. 19	2964	739–40	131	849
Cars. Connecting device for disabled railway-	R. P. Williams	871,547	Nov. 19	2960	739	131	849
Carbid-feeding device	A. Davis	871,570	Nov. 19	3003	748	131	857
Carbonator	E. E. Murphy	871,174	Nov. 19	2134	571	131	723
Carbureter	J. G. P. M. Monnier and A. M. Morin	871,134	Nov. 19	2055	556	131	710
Carbureter	L. Bollée	871,320	Nov. 19	2462	636–7	131	774
Carbureter	C. C. Walter	871,464	Nov. 19	2784	700–1	131	822
Carbureter	H. B. Cornish	871,480	Nov. 19	2817	708–9	131	826
Carbureter	J. A. McHardy	871,730	Nov. 19	3274	811	131	905
Carbureter air-intake regulator	F. C. Reineking	871,361	Nov. 19	2545	654	131	787
Carbureter for explosive-engines. Double	T. L. and T. J. Sturtevant	871,741	Nov. 19	3299	816	131	909
Cards or paper. Machine for feeding	J. P. Wright	871,746	Nov. 19	3316	819	131	911
Carpet-cleaning machine	R. B. Hutchison	871,700	Nov. 19	3226	798	131	896
Carriage escapement mechanism	W. P. Kidder	871,280	Nov. 19	2362	613	131	759
Carriage. Folding baby-	I. N. and G. E. Dann	871,483	Nov. 19	2822	710	131	827
Carrier	J. Hall	871,596	Nov. 19	3027	754	131	862
Cartridge-shells. Reshaping and restoring	W. T. Alsop	871,747	Nov. 19	3319	820	131	911
Case:							
See Eyeglass-case. Toilet-case.							
Caster	G. C. Fuller	871,583	Nov. 19	3023	753	131	861
Ceiling construction	V. Moeslein	871,606	Nov. 19	3072	762	131	868
Chair	J. Flindall	871,683	Nov. 19	3202	792	131	891
Chair	J. Flindall	871,755	Nov. 19	3337	821–2	131	914
Character impressions. Mechanism for producing	F. H. Richards	871,145	Nov. 19	2073	559–60	131	713
Charcoal-drying apparatus	R. S. Kent	871,705	Nov. 19	3232	800–1	131	897
Chopper:							
See Cotton-chopper. Feed-chopper.							
Chuck. Drill-	G. A. Orr	871,618	Nov. 19	3087	767	131	871
Churn	A. M. McKoy	871,732	Nov. 19	3278	811–12	131	906
Cleaner:							
See Wall-cleaner.							
Cleaning-machine	E. C. Keckeley and A. Kossmann	871,414	Nov. 19	2677	680	131	805
Clip:							
See Book-clip.							
Connecting and spacing clip.							
Clock. Electric	F. Hope-Jones	871,407	Nov. 19	2652	677–8	131	802
Clothes-drainer	F. P. Sager	871,449	Nov. 19	2751	694	131	816
Clothes-line bracket	J. D. Schmidt	871,638	Nov. 19	3122	775	131	877
Clothes-supporter	A. J. Cavana	871,673	Nov. 19	3181	789	131	888
Clutch controlling mechanism	A. H. Ehle	871,578	Nov. 19	3016	751–2	131	859
Clutch. Fluid-pressure	E. G. Shortt	871,243	Nov. 19	2295	568	131	746
Coal-cutting machine	A. Hopkinson	871,592	Nov. 19	3034	756	131	863
Coal-washer	D. H. and G. S. Gray	871,499	Nov. 19	2965	719	131	833
Coaling apparatus for bunkers, &c. Automatic	A. Blledung	871,469	Nov. 19	2791	702	131	823
Coaster-brake. Back-pedaling	J. N. Parks	871,621	Nov. 19	3090	768	131	872
Coating of one metal to the surface of another. Applying a	A. Freier	871,685	Nov. 19	3204	793	131	892
Cock. Stop and waste	W. V. McNamara	871,432	Nov. 19	2717	686	131	811
Coffee-pot	J. S. Dunlap	871,491	Nov. 19	2838	714	131	830
Coffee-pot	J. S. Dunlap	871,492	Nov. 19	2839	714	131	830
Coffee-urn	W. J. Williams	871,312	Nov. 19	2444	633	131	770
Coke-oven door	H. Koppers	871,421	Nov. 19	2694	683	131	807
Collapsible box	H. T. Newby	871,614	Nov. 19	3081	765	131	870
Collapsible table	G. Benjamin	871,254	Nov. 19	2306	602	131	750
Colloidal state. Converting elements into the	H. Kuzel	871,599	Nov. 19	3058		131	866
Column-joint	C. Drayer	871,576	Nov. 19	3013	750	131	859
Comb-frame lifter	C. E. Dow	871,489	Nov. 19	2835	713	131	830
Combustion apparatus	J. M. W. Kitchen	871,597	Nov. 19	3046	758–9	131	865
Combustion-engine. Two-time	E. Tuckermann	871,380	Nov. 19	2592	663–4	131	793
Concentrator	C. H. Wilkie	871,546	Nov. 19	2959	738	131	848
Concrete and other plastic materials. Device for molding	C. Dietrichs	871,390	Nov. 19	2620	670	131	797
Concrete-floor structure	F. H. Daniels	871,568	Nov. 19	3001	748	131	856
Concrete mixing and molding apparatus	C. R. Schmidt	871,363	Nov. 19	2547	655	131	787
Concrete reinforcement	C. Horix	871,699	Nov. 19	3225	798	131	895
Concrete-wall-constructing apparatus	C. Dietrichs	871 327	Nov. 19	2479	640	131	776
Connecting and spacing clip	R. A. Cummings	871,210	Nov. 19	2211	585	131	736
Controller	T. Gilmore, Jr.	871,220	Nov. 19	2228	589	131	738
Controlling mechanism	H. W. Cheney	871,205	Nov. 19	2195	583	131	734
Conveyer. Sheet-metal	G. Wenzelmann	871,381	Nov. 19	2593	664	131	793
Conveyer system	F. C. Hrdlina	871,340	Nov. 19	2504	645–6	131	780

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Cooling heated surfaces. Means for	J. H. Sager	871,636	Nov. 19	3119	774	131	876
Cotton-chopper	W. L. Rose	871,295	Nov. 19	2406	622–3	131	765
Cotton-picker	H. P. Childress	871,478	Nov. 19	2812	708	131	826
Coupling:							
See Gear reach-coupling.							
Cover for jugs, teapots, and like vessels	S. Hall	871,271	Nov. 19	2341	610	131	756
Crane	G. W. Bragg	871,255	Nov. 19	2307	603	131	751
Current motor. Alternating-	L. Schüler	871,189	Nov. 19	2161	576	131	728
Current motor. Alternating-	C. A. Lohr	871,513	Nov. 19	2889	723	131	837
Curtain pole and bracket	J. Watson	871,543	Nov. 19	2955	737	131	848
Curtain-pole pulley-holder	D. M. Sarkisian	871,362	Nov. 19	2546	654	131	787
Curtain-protector and sham-holder. Combined	M. Keith	871,703	Nov. 19	3229	799	131	896
Curtain-rod support	G. W. Palmer	871,435	Nov. 19	2723	688	131	812
Curtains and scenic drops. Means for trimming and controlling	F. S. Madigan	871,173	Nov. 19	2132	571	131	723
Cushion work. Spring-	W. R. Smith and M. A. Phelps	871,244	Nov. 19	2289	599	131	747
Cut-estimator	O. A. Kenyon	871,417	Nov. 19	2680	681	131	805
Cutter:							
See Band-cutter.							
Cycle-motor into a two-stroke cycle-motor. Mechanism for changing a four-stroke	S. Löffler	871,602	Nov. 19	3064	760	131	866
Damper-regulator	W. R. Forbush	871,118	Nov. 19	2005	546	131	704
Damper-regulator	B. F. Lutz	871,716	Nov. 19	3253	805	131	901
Dental bracket. Combination	G. Hall	871,400	Nov. 19	2636	674	131	800
Derrick. Portable field-	A. N. Hadley	871,500	Nov. 19	2807	719–20	131	833
Die:							
See Screw-cutting die.							
Die	A. H. Worrest	871,251	Nov. 19	2300	601	131	749
Display device	W. J. Shortill	871,190	Nov. 19	2163	577	131	728
Display stand. Veiling-	E. S. Aiken	871,198	Nov. 19	2182	580	131	731
Door-hanger	J. H. Burkholder	871,386	Nov. 19	2614	669	131	976
Doubletree-fastener	C. J. Minton	871,723	Nov. 19	3262	808	131	903
Dough-divider	F. Streich	871,648	Nov. 19	3134	778	131	879
Dough-divider	F. Streich	871,650	Nov. 19	3139	779	131	880
Dough-divider	R. G. Krueger	871,282	Nov. 19	2374	614	131	760
Draft attachment. Spring	A. Cameron	871,204	Nov. 19	2194	582	131	733
Draft device	E. J. Cochran	871,389	Nov. 19	2618	670	131	797
Drain-pipe	J. B. Webber, Jr	871,544	Nov. 19	2956	737–8	131	848
Dredge							
Drill:							
See Percussion-drill. Rock-drill.							
Driving mechanism. Variable-speed	N. Christenson	871,753	Nov. 19	3332	821	131	913
Dust from upholstered furniture, &c. Apparatus for sucking	O. D. Skibsted	871,304	Nov. 19	2427	627–8	131	768
Dyeing machinery	J. Sulzbach	871,376	Nov. 19	2581	661	131	791
Egg-beater	W. H. Tomlinson	871,247	Nov. 19	2294	600	131	748
Electric furnace	P. L. T. Héroult	871,338	Nov. 19	2501	645	131	780
Electric furnace and method	P. L. T. Héroult	871,273	Nov. 19	2344	610	131	756
Electric heater	H. M. Wicker	871,153	Nov. 19	2095	563	131	716
Electric-machine bridging-blocks. Dynamo	E. Heltmann and F. W. Young	871,758	Nov. 19	3345	823	131	915
Electric meters. Device to disclose shunting of the circuits around	W. L. Saunders	871,238	Nov. 19	2270	596	131	745
Electric-wire connection	F. B. Thatcher	871,535	Nov. 19	2936	733	131	845
Electrical switch	F. Orzel	871,139	Nov. 19	2063	558	131	712
Electrically-operated fountain	A. D. Southam	871,191	Nov. 19	2166	577–8	131	729
Electrogenic body device	A. R. Cooper	871,479	Nov. 19	2816	708	131	826
Elevator-shaft door	J. Rashkin	871,735	Nov. 19	3287	813	131	907
Engine:							
See Combustion-engine. Rotary engine.							
Gas-engine. Washing-engine.							
Internal-combustion engine.							
Engine	J. Rothchild	871,634	Nov. 19	3117	773	131	876
Engines. Lead-controlling mechanism for steam-	W. L. Braman	871,471	Nov. 19	2794	703	131	824
Explosive	G. W. Gentieu	871,395	Nov. 19	2630		131	799
Eyeglass or spectacle case	F. A. Reinhard	871,144	Nov. 19	2072	559	131	713
Fan. Electric	W. C. McChord, Jr.	871,729	Nov. 19	3274	810	131	905
Fan. Rotary	C. E. Campbell	871,672	Nov. 19	3179	788–9	131	887
Fastener	J. Senn	871,528	Nov. 19	2925	730	131	843
Fastener	D. W. Palmer	871,620	Nov. 19	3089	767	131	872
Fastener	C. W. Bauman	871,253	Nov. 19	2303	602	131	750
Faucet. Measuring-	J. F. Raymond	871,736	Nov. 19	3289	814	131	907
Feed-chopper	J., S., and T. Hohulin	871,608	Nov. 19	3223	798	131	895
Fence construction	G. Prarie	871,438	Nov. 19	2727	689	131	813
Fence-tie	W. M. Owen	871,619	Nov. 19	3088	767	131	872
Fencing-stretching device. Wire-							
Fender:							
See Car-fender.							
Fetter. Animal-	B. Hollinshead	871,406	Nov. 19	2651	677	131	802
Filing-cabinet	O. L. Solie	871,372	Nov. 19	2589	658–9	131	790
Filter	T. C. Martin	871,265	Nov. 19	2386	619	131	761
Fire-extinguisher. Chemical	W. H. Shafer	871,147	Nov. 19	2081	560	131	714
Firearm	A. H. Worrest	871,550	Nov. 19	2965	740	131	850
Fireproof window construction	E. H. Lunken and C. M. Conklin	871,129	Nov. 19	2036	553	131	708
Fireproof window construction	E. H. Lunken and C. M. Conklin	871,131	Nov. 19	2040	554	131	709
Fireproof window construction	E. H. Lunken and C. M. Conklin	871,229	Nov. 19	2243	592	131	741
Fireproof window construction, (laterally-inserted glass.)	E. H. Lunken and C. M. Conklin	871,130	Nov. 19	2039	553	131	709
Fish-bait	L. Debroisse	871,486	Nov. 19	2830		131	829
Fishing-nets. Apparatus for controlling	I. A. Ketcham	871,343	Nov. 19	2507	646	131	782
Fishing-reel	E. L. Gilmore	871,167	Nov. 19	2122	569	131	721
Fishing-reel	E. F. Kleinschmidt	871,345	Nov. 19	2513	647	131	782
Fishing-reel	E. F. Kleinschmidt	871,346	Nov. 19	2516	648	131	782
Floor-finishing device	W. Shears	871,450	Nov. 19	2753	694	131	817
Flying shears for rod or bar mills	W. H. Stanton	871,532	Nov. 19	2931	731	131	844
Force-feed sight-lubricator. Multiple	A. P. Klumph	871,418	Nov. 19	2682	681	131	806
Fountain:							
See Poultry-fountain.							
Frame:							
See Quilting-frame. Soap-frame.							
Frost. Apparatus for ascertaining the probability of.	L. H. Bernel	871,562	Nov. 19	2993	746	131	854
Fruit-press	S. E. Warren	871,653	Nov. 19	3145	780–1	131	881
Frying-pan	H. L. Mendal	871,287	Nov. 19	2389	619	131	762

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Furnace:							
See Electric furnace.							
Furnace	W. Stubblebine	871,651	Nov. 19	3142	779–80	131	881
Furnaces. Feeding reverberatory	H. L. Charles	871,477	Nov. 19	2809	706–7	131	825
Gage packing-nut. Water and oil	J. E. Montgomery	871,607	Nov. 19	3073	763	131	868
Galvanic battery. Reversible	T. A. Edison	871,214	Nov. 19	2217	586	131	737
Garment-hanger	E. K. Myers	871,175	Nov. 19	2135	571	131	723
Garment-supporter	M. M. McLeod	871,356	Nov. 19	2538	652	131	785
Gas-condenser	H. Auchu	871,749	Nov. 19	3322	820	131	911
Gas-engine	P. R. Bissell	871,319	Nov. 19	2458	635–6	131	773
Gas-engine	J. Houlehan and W. C. Mayo	871,508	Nov. 19	2878	722	131	835
Gas-engine. Rotary	J. Pollock and W. F. Leibenguth	871,523	Nov. 19	2913	728–9	131	841
Gas. Generating	G. W. Bulley	871,202	Nov. 19	2189	581	131	733
Gas-generator	S. C. Gorsuch	871,497	Nov. 19	2850	717	131	832
Gas generator. Acetylene-	C. E. Malmborg	871,719	Nov. 19	3256	806	131	902
Gas-lighter. Individual electric	W. K. Davidson	871,112	Nov. 19	1995	544	131	703
Gas lighting and extinguishing device	A. Meyer	871,605	Nov. 19	3068	761–2	131	867
Gas-meter. Prepayment	N. D. Nelson	871,290	Nov. 19	2393	620–1	131	763
Gas-producer-feeding apparatus	W. R. Miller	871,428	Nov. 19	2708	685	131	809
Gas-saturating device	J. B. Merwin	871,288	Nov. 19	2389	620	131	762
Gate:							
See Automatic gate. Pneumatic gate.							
Gate	C. Schäffer	871,637	Nov. 19	3120	774	131	876
Gear for motor-lorries and other vehicles. Transmission-	A. Clément	871,108	Nov. 19	1985	542	131	702
Gear. Reducing-	G. and F. Schoedelin	871,240	Nov. 19	2279	597	131	746
Gearing	B. Ljungström	871,227	Nov. 19	2239	591	131	741
Gearing. Changeable-speed	E. H. Manning	871,132	Nov. 19	2042	554	131	709
Gearing. Changeable-speed	A. L. Muren	871,233	Nov. 19	2256	594	131	743
Gearing. Changeable-speed	J. G. and C. D. Hawley	871,337	Nov. 19	2497	644–5	131	779
Generator:							
See Gas-generator.							
Glass-drawing apparatus. Hoisting-gear for	R. L. Frink	871,687	Nov. 19	3206	793–4	131	892
Go-cart. Folding	F. B. Moreland	871,608	Nov. 19	3073	763	131	868
Goggles	E. B. Meyrowitz	871,762	Nov. 19	3363	825	131	916
Gold and silver from ores. Extracting	G. Gurney	871,766	Nov. 19	3369	826	131	917
Governor. Electric and pneumatic	W. K. Rankin and T. F. Kelly	871,360	Nov. 19	2543	654	131	786
Governor. Electromechanical power-	G. H. Davis	871,484	Nov. 19	2824	710	131	828
Grader	G. A. Bell	871,101	Nov. 19	1973	540	131	700
Grading and bordering machine. Combined	A. H. Kroschel	871,709	Nov. 19	3239	802	131	896
Grain. Device for picking up lodged or battered-down	E. W. Fraasch	871,331	Nov. 19	2488	642	131	777
Grain-separator	G. W. Tice	871,743	Nov. 19	3304	817	131	910
Grate. Fire-	C. M. Graham	871,584	Nov. 19	3025	753	131	861
Grinder. Feed-	E. E. McCargar	871,176	Nov. 19	2137	572	131	724
Gun-carriage. Disappearing	J. Krone	871,708	Nov. 19	3238	802	131	898
Hair-drying implement	J. A. Paasche	871,182	Nov. 19	2150	574	131	726
Hair-pin	J. T. Leonard	871,422	Nov. 19	2695	684	131	807
Hair-pin	G. H. Spray	871,646	Nov. 19	3131	777	131	879
Hame and trace connection	A. A. Galt	871,688	Nov. 19	3208	794	131	892
Hammock	W. Gray	871,692	Nov. 19	3214	796	131	893
Hams. Apparatus for preparing and storing boiled	L. Wirth	871,250	Nov. 19	2299	601	131	749
Hanger:							
See Door-hanger. Hat-hanger Garment-hanger. Shaft-hanger.							
Harness	E. G. Burkhardt	871,106	Nov. 19	1983	542	131	701
Hasp	J. C. Morgan	871,725	Nov. 19	3265	808	131	904
Hat and coat hanger	A. A. Lott and R. C. Stein	871,713	Nov. 19	3246	804	131	900
Headlight. Locomotive-	C. P. Johnson	871,223	Nov. 19	2233	589	131	739
Heater:							
See Electric heater. Water-heater.							
Heater	J. E. Peck	871,235	Nov. 19	2261	595	131	744
Heating and lighting burner	A. Mouneyrat	871,728	Nov. 19	3273	810	131	904
Heels or soles of boots and shoes. Metallic protector for	J. H. Vinton	871,309	Nov. 19	2434	631	131	769
Hemoglobinometer	R. L. Watkins	871,542	Nov. 19	2951	737	131	847
Hoe. Trenching-	E. B. Cahoon	871,565	Nov. 19	2997	747	131	855
Hoisting-device safety-brake	G. A. Armington	871,552	Nov. 19	2972	742	131	851
Hook and eye or the like	M. J. Keane	871,413	Nov. 19	2676	680	131	805
Horse hitch. Three or four	F. G. Alvord	871,316	Nov. 19	2453	634	131	772
Horse-releaser	O. D. Brockette	871,669	Nov. 19	3175	787–8	131	886
Hose-nozzle	J. P. Buckley	871,256	Nov. 19	2309	603	131	751
Humidity-reducing apparatus	R. H. Thomas	871,194	Nov. 19	2175	579	131	730
Hydrocarbon-burner for furnaces	B. L. Worthen	871,656	Nov. 19	3152	781–2	131	882
Hydrocarbon-motor	E. Koch	871,707	Nov. 19	3236	801	131	898
Hygrometer for humidifying and air-moistening apparatus	S. W. Cramer	871,163	Nov. 19	2114	567	131	720
Igniting-tape and producing same	A. T. Herr	871,696	Nov. 19	3218	797	131	894
Index. Book-	W. H. Robertson	871,446	Nov. 19	2745	693	131	815
Index-filing system	J. E. Blaine, Jr	871,102	Nov. 19	1976	540–1	131	700
Indicator:							
See Office-indicator. Shoal-indicator.							
Indicator-lock	O. Lockett	871,126	Nov. 19	2024	551	131	707
Insect-trap	J. W. Spurrier	871,305	Nov. 19	2428	628	131	768
Insulating device	G. E. Wood	871,155	Nov. 19	2098	563	131	717
Insulator-pin mounting	J. D. E. Duncan	871,490	Nov. 19	2836	714	131	830
Internal-combustion engine	A. Rollason	871,632	Nov. 19	3114	772	131	875
Internal-combustion engine. Multiple-piston	C. E. Van Auken	871,539	Nov. 19	2946	735	131	846
Iron:							
See Sleeve-iron. Treeing-iron. Soldering-iron.							
Jack:							
See Timber-jack.							
Jar opener, tightener, and presser. Combination fruit-	W. Abel, Jr	871,197	Nov. 19	2181	580	131	731
Joint:							
See Column-joint. Rail-joint. Pipe-joint.							
Joke-box	G. E. Ames	871,252	Nov. 19	2301	602	131	749
Journal-bearing	W. J. Francke	871,265	Nov. 19	2328	607	131	754
Keg-handling mechanism	A. G. Hupfel	871,274	Nov. 19	2345	610–11	131	757
Kettle	H. C. Benefiel	871,665	Nov. 19	3166	785	131	885

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Knee-pad. Pneumatic	W. Long	871,760	Nov. 19	3348	823	131	915
Knife:							
See Shoemaker's knife.							
Labeling-machine	F. W. Wild, Jr	871,745	Nov. 19	3315	818	131	910
Lamps. Apparatus for automatically lighting gas-	K. Pank	871,141	Nov. 19	2067	558	131	712
Land roller and packer	B. H. Peck	871,358	Nov. 19	2540	653	131	786
Lantern	J. R. M. Tisdale	871,307	Nov. 19	2431	629	131	769
Lantern	W. S. Hamm	871,401	Nov. 19	2637	674	131	800
Lantern	C. L. Betts	871,317	Nov. 19	2454	635	131	773
Lantern tube	F. J. Nugent	871,138	Nov. 19	2062	557	131	711
Last. Collapsible	J. J. Smith	871,150	Nov. 19	2086	562	131	715
Last. Contracting	J. R. Peirce	871,522	Nov. 19	2908	727–8	131	841
Lathe for marble or the like	J. P. Aylesworth	871,662	Nov. 19	3163	784	131	884
Lathe-tool	B. Sharp	871,148	Nov. 19	2083	561	131	715
Leaves. Contrivance for turning pamphlet or book	F. Canfield	871,752	Nov. 19	3330	821	131	912
Lid-supporter and price-tag holder	G. Holmes	871,120	Nov. 19	2013	548	131	705
Lifter:							
See Comb-frame lifter.							
Lifting mechanism. Automatic	C. Martini and H. Hüneke	871,353	Nov. 19	2533	651	131	784
Liquids. Storage and transference of inflammable	H. Stroh	871,245	Nov. 19	2291	599	131	747
Liquids with gas. Means for impregnating	C. M. Kneppler	871,598	Nov. 19	3057	759	131	866
Lithographic plates. Graining metallic	E. Lauppe	871,601	Nov. 19	3062	759–60	131	866
Loading attachment. Wagon	E. W. Smith	871,644	Nov. 19	3128	776	131	878
Loaf-forming machine	F. Streich	871,649	Nov. 19	3137	778–9	131	880
Loaf-molding machine. Long-							
Lock:							
See Indicator-lock. Sash-lock. Nut-lock. Time-lock.							
Locomotive-controller. Automatic	J. E. Stiegelmeyer	871,375	Nov. 19	2578	660	131	791
Loom	F. Johnson	871,224	Nov. 19	2234	590	131	740
Loom electric warp stop-motion	J. W. Moran	871,724	Nov. 19	3263	808	131	903
Loom for weaving pile fabrics	C. B. White	871,382	Nov. 19	2595	664–5	131	794
Loom harness-motion	C. F. Roper	871,448	Nov. 19	2749	693–4	131	816
Loom picker mechanism	R. H. Ingersoll	871,275	Nov. 19	2349	611–12	131	757
Loom shedding mechanism	A. A. Gordon, Jr	871,396	Nov. 19	2633	673	131	799
Loom shuttle-checking means	M. Morey	871,429	Nov. 19	2710	686	131	809
Loom warp-beam brake mechanism	F. Johnson	871,278	Nov. 19	2359	613	131	759
Loom weft-replenishing mechanism	F. P. Rogers	871,447	Nov. 19	2746	693	131	816
Looms. Emergency stop-motion for narrow-fabric	S. Kendrick	871,704	Nov. 19	3230	800	131	897
Lounge. Reclining-	J. Flindall	871,263	Nov. 19	2325	607	131	753
Lubricator:							
See Force-feed sight-lubricator. Spindle-lubricator.							
Machine-wrench and clamp. Combined	C. J. Coulter	871,482	Nov. 19	2820	709	131	827
Magnetic separator	A. Schwarz	871,298	Nov. 19	2414	625	131	766
Magnetic separator	A. Schwarz	871,301	Nov. 19	2419	626	131	767
Magnetic separator	A. Schwarz	871,365	Nov. 19	2549	655	131	788
Magnetic separator	A. Schwarz	871,367	Nov. 19	2553	656	131	788
Magnetic separator	P. A. Poché	871,625	Nov. 19	3099	770	131	873
Mail-bag catching and delivery mechanism	R. G. Thornhill and C. C. Thompson.	871,458	Nov. 19	2772	698	131	820
Mail-bag ejector. Automatic	W. H. Mozingo	871,431	Nov. 19	2714	686	131	810
Mail collecting and delivering means	H. B. Burke	871,475	Nov. 19	2806	706	131	825
Mail-transfer device	B. S. Molyneux	871,133	Nov. 19	2043	554–5	131	710
Mailing-machine. Automatic	P. A. McCaskey	871,516	Nov. 19	2894	724	131	838
Manifolding bill pad or book	F. E. d'Humy	871,121	Nov. 19	2015	548	131	706
Massage implement	P. C. Forrester	871,580	Nov. 19	3018	752	131	860
Measuring apparatus. Liquid-	W. R. Comings	871,110	Nov. 19	1988	543	131	702
Mechanical movement	W. S. Thurlow	871,306	Nov. 19	2429	628–9	131	768
Merry-go-round	J. Dunkel	871,577	Nov. 19	3015	751	131	859
Metal pipe. Jointed							
Meter:							
See Gas-meter.							
Meter	D. E. Scrafford	871,738	Nov. 19	3293	814	131	908
Mill:							
See Ring-and-roller mill.							
Mold	J. B. Blaw	871,385	Nov. 19	2612	668	131	795
Motor:							
See Current-motor. Hydrocarbon-motor.							
Motor-control system	W. F. Schneider	871,239	Nov. 19	2272	597	131	745
Motor-drive arrangement	E. W. Stull	871,193	Nov. 19	2173	578–9	131	730
Mowing-machine	J. H. Burhop	871,203	Nov. 19	2192	582	131	733
Multicopying-machine	A. C. Staley	871,531	Nov. 19	2928	731	131	843
Music-rack	A. De Long, Sr	871,113	Nov. 19	1996	544	131	703
Music-sheet	D. H. Haywood	871,221	Nov. 19	2230	589	131	739
Musical instrument	F. Wagner	871,463	Nov. 19	2783	700	131	821
Musical instruments. Cut-off for pneumatic	E. de Kleist	871,123	Nov. 19	2017	549	131	706
Muzzle. Animal-	C. F. Ballard	871,555	Nov. 19	2980	743	131	852
Necktie	C. W. T. Davies	871,569	Nov. 19	3002	748	131	856
Nitrites. Making	O. Schönherr and W. Gaus	871,640	Nov. 19	3124	775	131	877
Nozzle relief mechanism. Hydraulic-	E. F. Cassel	871,321	Nov. 19	2464	637	131	774
Nut-lock	C. Schreck	871,641	Nov. 19	3125	775	131	878
Nut-lock	A. B. Macklin	871,718	Nov. 19	3255	806	131	902
Office-indicator	H. P. Davis	871,675	Nov. 19	3185	790	131	888
Oil-burner	W. H. Van Marter	871,462	Nov. 19	2781	700	131	821
Oil-burner	W. R. Jeavons	871,593	Nov. 19	3036	756	131	863
Oil-burner	W. N. Best	871,751	Nov. 19	3327	820	131	912
Oil-burner. Air-carbureting	F. A. Baynes	871,100	Nov. 19	1968	539	131	699
Oil-burner for lamps and stoves	E. C. Bridge	871,103	Nov. 19	1978	541	131	700
Optical instrument	A. Schwarz	871,369	Nov. 19	2559	657	131	789
Ore-concentrating table	A. Schwarz	871,368	Nov. 19	2555	656–7	131	789
Ores. Concentrating	A. Schwarz	871,300	Nov. 19	2418	626	131	766
Ores. Leaching	H. Faber	871,262	Nov. 19	2319	605–6	131	753
Organ. Folding reed-	W. E. Haskell	871,272	Nov. 19	2342	610	131	756
Organ-pipe	A. Robe	871,445	Nov. 19	2744	692	131	815
Oven-heating device. Baker's-	E. C. Lovell	871,284	Nov. 19	2379	616–18	131	761
Packing-machine	J. Ostrander	871,178	Nov. 19	2142	572	131	725
Packing. Sheet-							
Pad:							
See Bell-pad. Table-pad. Knee-pad.							
Paint and varnish remover and making same. Stripping	P. T. Austen, F. J. Maywald, and F. X. Govers.	871,750	Nov. 19	3323	.....	131	912

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Paint or varnish. Composition for removing	S. P. Sadtler	871,525	Nov. 19	2922	.....	131	842
Paint-remover	M. Toch	871,195	Nov. 19	2179	.....	131	730
Pan:							
See Frying-pan.							
Panel-board	H. Krantz	871,348	Nov. 19	2522	648	131	783
Paper and producing the same. Manifold	E. E. Linfoot	871,172	Nov. 19	2131	570	131	723
Paper-box-blank-making machine	J. W. Denmead	871,487	Nov. 19	2831	712–13	131	829
Paper box. Folding	C. F. Raynaud	871,767	Nov. 19	3371	827	131	918
Paper-cutting machine	T. C. Dexter	871,572	Nov. 19	3006	749	131	857
Paper-cutting machine	T. C. Dexter	871,573	Nov. 19	3008	749–50	131	858
Paper-feeding machine	A. B. Graham	871,498	Nov. 19	2852	717–19	131	832
Parquetry. Flexible	A. and F. Kohout	871,420	Nov. 19	2693	683	131	806
Paste. Discharging	K. Reinking	871,629	Nov. 19	3108	.....	131	874
Percussion-drill, &c	B. H. Locke	871,350	Nov. 19	2527	649–50	131	783
Photographic lens	C. and H. C. Beck	871,539	Nov. 19	2985	744	131	853
Photographic-plate-developing apparatus	A. Gaffney	871,332	Nov. 19	2489	642–3	131	778
Photographic toning and mounting process	H. Schmidt	871,188	Nov. 19	2160	.....	131	728
Picker:							
See Cotton-picker.							
Pigments by electrolysis. Producing	E. D. Chaplin	871,161	Nov. 19	2109	566	131	719
Pigments by electrolysis. Producing	E. D. Chaplin	871,162	Nov. 19	2112	566	131	719
Piling. Interlocking means for sheet-	G. E. Nye	871,177	Nov. 19	2140	572	131	724
Piling. Sheet-	L. P. Friestedt	871,582	Nov. 19	3021	753	131	860
Pin:							
See Hair-pin. Tether-pin.							
Pipe:							
See Drain-pipe. Organ-pipe. Metal pipe. Tobacco-pipe.							
Pipe	C. C. Haskell	871,503	Nov. 19	2871	720	131	834
Pipe-cap	W. H. Blood, Jr	871,667	Nov. 19	3168	785	131	886
Pipe-joint. Flexible	A. L. Greenlaw	871,757	Nov. 19	3342	822	131	914
Pipe joint. Waste-	H. J. Luff	871,714	Nov. 19	3248	804	131	900
Pipe-wrench	R. Parmelee	871,436	Nov. 19	2723	688	131	812
Placket-closure	J. A. Holly	871,590	Nov. 19	3032	755	131	863
Planter and fertilizer-dropper. Corn-	J. C. Morgan	871,354	Nov. 19	2534	651–2	131	785
Plates. Producing half-tone	W. J. Downs	871,328	Nov. 19	2481	640–1	131	777
Platinum contact	C. H. McIntosh	871,234	Nov. 19	2260	595	131	743
Plow. Expansion-	A. Freier	871,686	Nov. 19	3206	793	131	892
Plow-point fastener	J. T. Foulke	871,219	Nov. 19	2225	588	131	738
Plows. Plowing-under attachment for	J. J. Dorman	871,259	Nov. 19	2315	605	131	752
Plumb and level device. Spirit	T. J. Churchill	871,388	Nov. 19	2617	670	131	797
Pneumatic-despatch-tube apparatus. Carrier for	W. Foster and T. L. Schenck	871,684	Nov. 19	3203	793	131	891
Pneumatic gate	I. W. Litchfield	871,423	Nov. 19	2696	684	131	807
Post:	W. P. and W. P. Elliott, Jr	871,391	Nov. 19	2622	670	131	797
See Spring binding-post.							
Pot:							
See Coffee-pot.							
Poultry-fountain	W. Swagler and W. L. Volz	871,377	Nov. 19	2584	662	131	792
Power-driven machines. Shifter-rod for	M. F. Field and E. F. Hathaway	871,681	Nov. 19	3196	792	131	890
Power in engines and self-propelled vehicles. Apparatus for generating and utilizing	M. W. Hall	871,335	Nov. 19	2495	644	131	779
Press:							
See Fruit-press.							
Press for molding suppositories, &c	H. Endemann	871,261	Nov. 19	2317	605	131	753
Press-setting attachment	G. A. Holmes	871,591	Nov. 19	3033	755–6	131	863
Pressure regulator and reducer	H. P. Dyer	871,260	Nov. 19	2316	605	131	752
Printing-card	E. H. Frey	871,581	Nov. 19	3019	753	131	860
Printing measurements on pieces of material. Machine for	P. Sperling	871,645	Nov. 19	3130	777	131	879
Printing-plate by photo-engraving. Making a	A. P. Miller	871,721	Nov. 19	3260	.....	131	903
Printing-presses. Platen-throw-off mechanism for	G. W. Prouty	871,439	Nov. 19	2729	689	131	813
Projectile	G. W. Gentieu	871,396	Nov. 19	2630	672	131	799
Propelling means. Vessel-	G. Pino	871,236	Nov. 19	2266	596	131	744
Propelling mechanism. Boat-	M. Damzin	871,326	Nov. 19	2478	640	131	776
Propelling mechanism. Boat-	T. Thorsen	871,459	Nov. 19	2775	698–9	131	820
Pump	P. A. Myers	871,135	Nov. 19	2057	556	131	710
Pump	C. L. Newcomb	871,357	Nov. 19	2539	652	131	785
Pump. Air-	G. De Laval	871,349	Nov. 19	2526	649	131	783
Pump and the like. Centrifugal and turbine	C. H. Jaeger	871,341	Nov. 19	2505	646	131	780
Pump. Deep-well	G. C. Richards	871,185	Nov. 19	2153	575	131	727
Pump-rods for oil-wells. Adjustable grip for surface	H. McBrier and J. McGarvey	871,765	Nov. 19	3367	826	131	917
Pump. Twin air-	W. A. Drewett	871,114	Nov. 19	1997	544–5	131	703
Pumping apparatus	A. C. E. Rateau. (Reissue)	12,723	Nov. 19	3380	828–9	131	919
Punching-machine	E. Southworth	871,739	Nov. 19	3296	815	131	908
Quilting-frame	A. Wittwer	871,315	Nov. 19	2451	634	131	772
Rack:							
See Music-rack. Table-rack.							
Rail-bond	C. Y. Haile and G. M. Hugus	871,501	Nov. 19	2869	720	131	834
Rail-joint	M. H. Brink	871,104	Nov. 19	1979	541	131	701
Rail-joint	A. T. Palmer	871,140	Nov. 19	2065	558	131	712
Rail with triple head	A. V. P. M. Berthier	871,563	Nov. 19	2994	746	131	855
Railway cross-tie. Metallic	F. P. Brining	871,472	Nov. 19	2796	703	131	824
Railway. Pleasure-	L. D. Shaw	871,643	Nov. 19	3127	776	131	878
Railway-signal	L. H. Thullen	871,378	Nov. 19	2586	662	131	792
Railway signal and safety appliance	G. W. Gerlach	871,166	Nov. 19	2120	568–9	131	721
Railway. Surface electric	T. Mahoney	871,424	Nov. 19	2697	684	131	808
Railway-tie	W. C. Mayo and J. Houlehan	871,425	Nov. 19	2699	684	131	808
Railway-tie	E. Henry	871,695	Nov. 19	3217	797	131	894
Railway-tie-boring machine	A. H. Handlan, Jr	871,402	Nov. 19	2638	674–5	131	800
Railway-tie. Metallic	L. M. Wright	871,658	Nov. 19	3157	782	131	883
Railway-track construction	E. K. Morse	871,232	Nov. 19	2255	594	131	743
Railway-track structure	R. E. Einstein	871,493	Nov. 19	2842	715	131	831
Railway traffic on single lines. Apparatus for insuring safety of	E. Tyer	871,538	Nov. 19	2942	734–5	131	846
Railway trains. Protection of	A. R. A. Gérard	871,496	Nov. 19	2846	715–17	131	832
Rake attachment. Hand-	F. F. Horn	871,339	Nov. 19	2502	645	131	780
Rake, sweep-turner, and other like implement or machine. Side-delivery	W. E. Martin	871,604	Nov. 19	3056	761	131	867
Range	W. Reid	871,441	Nov. 19	2732	690	131	814

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Razor-guard	G. Tittmann	871,152	Nov. 19	2094	563	131	716
Receptacle. Hinged	J. V. Reed	871,440	Nov. 19	2732	689	131	814
Receptacle. Outdoor	J. S. Stewart	871,192	Nov. 19	2170	518	131	729
Recorder	E. A. Oakes and P. A. Cooney	871 434	Nov. 19	2721	687–8	131	811
Reel:							
See Fishing-reel.							
Refrigerating apparatus	C. J. Coleman	871,325	Nov. 19	2475	639	131	776
Refrigerating apparatus	J. J. Glauser	871,397	Nov. 19	2631	672–3	131	799
Regulator:							
See Carbureter air-intake regulator. Damper-regulator. Pressure-regulator. Voltage-regulator.							
Rein-guide. Antifriction	C. Kinney and E. P. Harris	871,596	Nov. 19	3046	758	131	865
Reinforcing-bar	M. Haupt	871,504	Nov. 19	2872	721	131	834
Retort. Charcoal-	W. A. T. Willink	871,313	Nov. 19	2447	633	131	771
Rifle-loader	E. E. Morlan	871,355	Nov. 19	2536	652	131	785
Ring-and-roller mill	E. Barthelmess	871,558	Nov. 19	2983	744	131	853
Rock-drill	E. N. Jones	871,594	Nov. 19	3040	757	131	864
Roller:							
See Land-roller.							
Rotary engine	W. Lauber	871,125	Nov. 19	2023	550	131	707
Rotary engine	J. L. Clayland	871,322	Nov. 19	2467	637–8	131	774
Rotary engine	C. W. Puckett	871,359	Nov. 19	2542	653–4	131	786
Rotary engine	E. Scott	871,527	Nov. 19	2924	730	131	843
Rotary engine	G. W. Loeffler	871,712	Nov. 19	3245	804	131	899
Running-gear reach-coupling	L. Hinsberger	871,588	Nov. 19	3030	755	131	862
Salt-shaker	F. Fuhrmann	871,495	Nov. 19	2845	.....	131	831
Salves and ointments. Making mercury	D. T. Clemons	871,323	Nov. 19	2471	638	131	775
Sanding and polishing machine	G. A. Bischoff	871,318	Nov. 19	2455	635	131	773
Sash-bar fastener. Metallic-	F. M. Erb	871,215	Nov. 19	2220	587	131	737
Sash construction	E. M. Erb	871,217	Nov. 19	2223	587	131	737
Sash construction	E. M. Erb	871,218	Nov. 19	2224	588	131	738
Sash construction	E. H. Lunken and C. M. Conklin	871,128	Nov. 19	2035	553	131	708
Sash-lock	L. J. Hanhart	871,119	Nov. 19	2007	547–8	131	705
Sawing-machine. Band	H. J. Whipperman	871,465	Nov. 19	2785	701	131	822
Scaffold-trestle. Adjustable	G. J. Capewell	871,257	Nov. 19	2311	603–4	131	751
Scaling-machine	E. P. Scholl	871,639	Nov. 19	3123	775	131	877
Scraper. Road-							
Screen:							
See Window-screen.							
Screw-cutting die and holder therefor	A. J. Smart	871,451	Nov. 19	2755	695	131	817
Screw-driver	G. E. Wood	871,154	Nov. 19	2097	563	131	716
Scrubber and mop. Combined	F. S. Thomas	871,246	Nov. 19	2292	599	131	748
Sculpturing-machine	A. Bontempi	871,668	Nov. 19	3171	786–7	131	886
Seed-separator	E. Thompson	871,536	Nov. 19	2938	733	131	845
Seed separator. Cotton-	M. M. Edwards	871,115	Nov. 19	1999	545	131	704
Separator:							
See Grain-separator. Seed-separator. Magnetic-separator.							
Separator shaking mechanism	F. and T. Chipera	871,566	Nov. 19	2998	747	131	856
Sewing-machine presser-foot and guide combined	G. J. Stevens	871,454	Nov. 19	2764	696	131	818
Shaft-hanger	E. E. McIntyre	871,135	Nov. 19	2059	556–7	131	711
Shears:							
See Flying shears.							
Sheet-delivery apparatus	C. L. Johnston	871,412	Nov. 19	2667	679–80	131	804
Shell. Explosive hand-	N. W. Aasen	871,156	Nov. 19	2099	564	131	717
Shells. Apparatus for reshaping and restoring	W. T. Alsop	871,748	Nov. 19	3321	820	131	911
Ship loading-hatchway	J. Closter	871,507	Nov. 19	3000	748	131	856
Ships. Keel-block for	T. H. Alcorn	871,467	Nov. 19	2788	702	131	823
Shoal-indicator	W. Bangs	871,556	Nov. 19	2981	743	131	852
Shock loading-apparatus	R. Tanner	871,456	Nov. 19	2767	697	131	819
Shoemaker's knife	F. Kloemann	871,416	Nov. 19	2680	681	131	805
Shutter-operator	R. Moskau	871,609	Nov. 19	3075	764	131	869
Shuttle	D. L. Norris	871,291	Nov. 19	2400	621	131	763
Sieve	G. W. Stenz	871,647	Nov. 19	3133	778	131	879
Sieve. Shaking-	J. F. Delany	871,571	Nov. 19	3004	749	131	857
Sign	W. M. Kerr	871,510	Nov. 19	2883	722	131	836
Sign. Display-	J. Moses	871,289	Nov. 19	2391	620	131	762
Signal:							
See Car-signal. Railway-signal.							
Siphons. Controlling device for deep-seal	S. W. Miller	871,427	Nov. 19	2705	685	131	809
Skirt trimmer and marker. Combination	E. N. McKelvey and I. E. Eells	871,731	Nov. 19	3277	811	131	905
Sled	I. Sellstone	871,642	Nov. 19	3126	776	131	878
Sleeve-iron	S. McLaughlin	871,733	Nov. 19	3280	812	131	906
Slideway. Adjustable	G. S. Power	871,142	Nov. 19	2067	558	131	713
Slipper	O. S. Saunders	871,187	Nov. 19	2158	576	131	727
Smoke-box of locomotive-engine and similar boilers	S. S. Younghusband	871,551	Nov. 19	2969	741	131	850
Soap-frame	G. A. Jacobi	871,411	Nov. 19	2666	679	131	804
Soldering-iron. Electrically-heated	H. Hertzberg and M. J. Wohl	871,405	Nov. 19	2648	677	131	802
Sound-records. Duplicating	J. W. Aylsworth	871,554	Nov. 19	2978	742	131	852
Sound-records. Production of	I. Kitsee	871,511	Nov. 19	2885	723	131	837
Sound-reproducing record-disk	W. I. Sherwood	871,370	Nov. 19	2562	657	131	789
Sounding apparatus	O. M. Knoblock and J. Dushane	871,124	Nov. 19	2020	550	131	707
Spacing instrument	G. Giambra	871,333	Nov. 19	2492	643	131	778
Spindle-lubricator	W. Fielding	871,165	Nov. 19	2119	568	131	721
Spindle-shaper guard	F. Streich	871,533	Nov. 19	2933	732	131	844
Spinning and twisting apparatus. Ring	J. Hayden, Jr	871,694	Nov. 19	3216	796	131	894
Spring binding-post	H. G. Martin	871,352	Nov. 19	2532	651	131	784
Spring structure	W. K. Hitchcock	871,589	Nov. 19	3031	755	131	862
Sprinkling device. Lawn-	J. P. Fishburn	871,682	Nov. 19	3200	792	131	891
Sprocket	F. C. Dawes and J. W. Forrest	871,677	Nov. 19	3188	790	131	889
Square	S. C. Finney	871,117	Nov. 19	2003	546	131	704
Stackers. Grain-saving device for pneumatic	J. W. Matousek	871,286	Nov. 19	2388	619	131	762
Stamp. Registration-	S. J. Halse	871,502	Nov. 19	2870	720	131	834
Stand:							
See Display-stand. Ink-bottle stand.							
Steam-boiler	E. L. J. Wera	871,249	Nov. 19	2298	601	131	749
Steering-gear	D. M. Dearing	871,678	Nov. 19	3189	791	131	889
Steering-gear attachment	J. D. Williamson, Jr	871,548	Nov. 19	2962	739	131	849
Steering valve mechanism. Steam-	J. R. Andrews	871,157	Nov. 19	2102	564	131	717

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Stem-making machine	M. H. Branin	871,160	Nov. 19	2106	565–6	131	719
Sterilizing-tablet	V. B. Nesfield	871,612	Nov. 19	3079	765	131	870
Stone. Process of and apparatus for manufacturing artificial	L. Pulvermann	871,524	Nov. 19	2918	729	131	842
Stove and range auxiliary grate	L. Gertenbach	871,266	Nov. 19	2329	608	131	754
Stove or range. Cooking	E. J. Moneuse	871,764	Nov. 19	3165	826	131	917
Street-sweeper	W. Dupre	871,212	Nov. 19	2214	585–6	131	736
Superheating-boiler	G. Y. Bonus	871,201	Nov. 19	2187	581	131	732
Surface-cooler	W. Vassel	871,308	Nov. 19	2432	629–30	131	769
Surfacing and polishing machine	J. H. Prugh	871,143	Nov. 19	2068	559	131	713
Surgical appliance	P. Ganzhorn	871,689	Nov. 19	3210	795	131	893
Suspensory	M. Eckmann	871,213	Nov. 19	2216	586	131	736
Sweeping-machine	J. Ledwinka	871,512	Nov. 19	2886	723	131	837
Switch:							
See Electrical switch.							
Switch	A. Smith	871,529	Nov. 19	2926	730	131	843
Switch-throwing device. Automatic	G. R. Stuart	871,455	Nov. 19	2765	697	131	818
Syringe	W. T. Buckner	871,474	Nov. 19	2804	705	131	825
Table:							
See Collapsible table.							
Ore-concentrating table.							
Table-pad. Sectional	O. Winter	871,314	Nov. 19	2449	634	131	772
Table-rack	R. Calbeck	871,670	Nov. 19	3176	788	131	886
Table-top	J. W. Connaty and W. E. Reno	871,207	Nov. 19	2203	563	131	734
Tailings-settler	A. Schwarz	871,366	Nov. 19	2552	656	131	788
Target-trap	J. B. Richardson	871,443	Nov. 19	2738	691–2	131	815
Telegraphone system	G. Morin	871,726	Nov. 19	3266	808–10	131	904
Telephone-exchange	N. E. Norstrom	871,520	Nov. 19	2903	726	131	840
Telephone-exchange. Party-line	S. A. Norstrom	871,519	Nov. 19	2900	726	131	839
Telephone-mouthpiece	A. Bebout	871,468	Nov. 19	2790	702	131	823
Telephone-receiver	H. E. Booth	871,470	Nov. 19	2792	702	131	823
Telephone-transmitter	E. E. Ries	871,737	Nov. 19	3290	814	131	907
Telephone wall set	W. W. Dean	871 485	Nov. 19	2826	711	131	828
Tether-pin	G. E. Brown	871,564	Nov. 19	2996	747	131	855
Tie:							
See Fence-tie. Railway cross-tie.							
Railway-tie.							
Timber-jack	N. S. Kingsley	871,122	Nov. 19	2016	549	131	706
Time-a arm. Electric	F. J. Arndt	871,553	Nov. 19	2975	742	131	851
Time controlling device	C. E. Campbell	871,671	Nov. 19	3177	788	131	887
Time-lock	W. H. Taylor	871,534	Nov. 19	2934	732	131	845
Tire	W. D. Baker	871,159	Nov. 19	2104	565	131	718
Tire	W. A. Heller	871,404	Nov. 19	2647	676	131	801
Tire	M. M. Mills	871,763	Nov. 19	3364	825	131	916
Tire. Pneumatic	F. C. Hood	871,169	Nov. 19	2127	570	131	722
Tire-protector	W. T. Dorgan	871 575	Nov. 19	3012	750	131	858
Tire. Resilient	I. W. Hodgson	871,506	Nov. 19	2874	721	131	835
Tire. Vehicle-	R. A. and H. R. L. White	871,545	Nov. 19	2957	738	131	848
Tobacco-pipe	A. E. Dieter and G. H. Sander	871,488	Nov. 19	2834	713	131	829
Toilet-case	A. Sebald	871,242	Nov. 19	2283	598	131	746
Tongue. Adjustable	J. P. Neste	871,613	Nov. 19	3080	765	131	870
Tool. Combination-	C. J. Haeberli	871,585	Nov. 19	3026	754	131	861
Tool. Combined	J. H. Chaney	871,476	Nov. 19	2808	706	131	825
Tool. Valveless pneumatic	F. S. Graham	871,756	Nov. 19	3340	822	131	914
Tools. Controller for electrically-operated machine-	J. R. Back	871,199	Nov. 19	2183	580–1	131	731
Tooth. Artificial	J. Morris	871,430	Nov. 19	2713	686	131	810
Top-roll saddle and stirrup	C. A. Pierce	871,293	Nov. 19	2403	622	131	764
Torpedo-tube. Tandem	L. Y. Spear	871,453	Nov. 19	2760	695–6	131	818
Toy	D. S. Green	871,399	Nov. 19	2635	673	131	800
Toy. Advertising	J. F. Jeckert	871,701	Nov. 19	3228	799	131	896
Toy and other device	O. P. Reinke	871,628	Nov. 19	3107	771	131	874
Trap:	C. H. Foster	871,264	Nov. 19	2327	607	131	754
See Insect-trap. Target-trap.							
Treeing-iron	C. W. Richards	871,184	Nov. 19	2152	575	131	726
Trolley-pole attachment	R. P. Rever	871,442	Nov. 19	2735	690–1	131	814
Trolley-pole controller	C. Norland	871,616	Nov. 19	3083	766	131	871
Trolley-retriever	A. W. Knutson. (Reissue)	12,722	Nov. 19	3374	827–8	131	919
Truck. Car-	H. W. Wolff	871,466	Nov. 19	2786	701	131	822
Tube:							
See Lantern-tube. Torpedo-tube.							
Tubing. Machine for forming flexible	S. Scognamillo	871,241	Nov. 19	2281	597	131	746
Turbine compresser, pump, and the like	C. A. Parsons and A. Q. Carnegie	871,292	Nov. 19	2402	621–2	131	764
Turbine. Reversible	M. H. P. R. Sankey	871,526	Nov. 19	2923	729–30	131	842
Turbine reversing mechanism	H. P. Christensen	871,107	Nov. 19	1984	542	131	701
Turbine. Water-	F. and W. T. Mattausch and J. F. Schlossstein	871,720	Nov. 19	3258	807	131	902
Turn-button	J. A. Gregg	871,269	Nov. 19	2334	609	131	755
Type-writer	W. A. Lorenz	871,283	Nov. 19	2375	615	131	761
Type-writer	C. T. Brown. (Reissue)	12,720	Nov. 19	3372	827	131	918
Type-writer adding attachment	J. C. Lotterhand	871,761	Nov. 19	3349	824–5	131	916
Type-writer ribbon-feeding mechanism	C. W. Sponsel	871,373	Nov. 19	2573	659	131	790
Type-writing machine	J. Feibel	871,116	Nov. 19	2000	545–6	131	704
Type-writing machine	B. C. Stickney	871,151	Nov. 19	2089	562	131	716
Type-writing machine	W. P. Kidder and C. W. Sponsel	871,281	Nov. 19	2364	614	131	760
Type-writing machine	W. P. Kidder	871,344	Nov. 19	2508	647	131	782
Type-writing machine	A. W. Smith	871,371	Nov. 19	2563	658	131	789
Type-writing machine	B. C. Stickney	871,374	Nov. 19	2575	659–60	131	790
Type-writing-machine calculator	C. E. Kelley	871,595	Nov. 19	3042	757	131	864
Umbrella	E. V. Williams	871,311	Nov. 19	2436	631–3	131	770
Valve for air-brakes. Pressure-retaining and quick-release	A. Nelson	871,611	Nov. 19	3078	764	131	869
Valve for sterilizers	M. Griffin	871,270	Nov. 19	2335	609	131	755
Valve. Pressure-reducing	S. Bingham	871,666	Nov. 19	3167	785	131	885
Valve. Rotary	A. T. Johnson	871,277	Nov. 19	2354	612	131	758
Valve. Tandem-discharge	C. M. Andrews	871,660	Nov. 19	3160	783	131	884
Vapor-rest for system	A. Schwarz	871,299	Nov. 19	2416	625	131	766
Vault. Reinforced	O. O. Kruh	871,171	Nov. 19	2129	570	131	722
Vehicle. Electrically-propelled	E. J. Winslow	871,654	Nov. 19	3148	781	131	882
	R. Thayer	871,450	Nov. 19	2770	698	131	819

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Vehicle foot-rest	W. H. Keyes	871,279	Nov. 19	2360	613	131	759
Vehicle for recreation or amusement	T. W. Potts	871,294	Nov. 19	2405	622	131	764
Vehicle pneumatic equalizer	C. Rosenzweig	871,186	Nov. 19	2155	575–6	131	727
Vehicle-reach	H. Higgin	871,222	Nov. 19	2231	589	131	739
Vehicle running and propelling gear	C. E. Phillips	871,623	Nov. 19	3093	768–9	131	872
Vehicle-seat	J. B. Pitcher	871,624	Nov. 19	3097	769	131	873
Vehicle shock-absorber	D. Robinson	871,237	Nov. 19	2268	596	131	745
Vehicle shock-absorber	D. Robinson	871,631	Nov. 19	3111	772	131	875
Vehicle-washer	M. H. Dorgan	871,574	Nov. 19	3011	750	131	858
Vehicle-wheel	N. Schenk	871,297	Nov. 19	2412	624	131	765
Vehicle-wheel	R. F. Corwin	871,481	Nov. 19	2819	709	131	827
Vehicle-wheel	W. G. Mullen	871,5.5	Nov. 19	2893	724	131	838
Vehicle-wheel	C. J. Malings	871,351	Nov. 19	2529	650	131	784
Vehicle-wheel. Resilient	M. Albrecht	871,098	Nov. 19	1967	539	131	699
Vehicles. Means for drawing motor road-	R. D. H. Anderson	871,384	Nov. 19	2608	667–8	131	795
Vending-machine	L. G. Merritt	871,230	Nov. 19	2245	593	131	742
Veneer-cutting machine	L. G. Merritt	871,231	Nov. 19	2250	593	131	742
Veneer-cutting machine	A. Broslus	871,473	Nov. 19	2797	703–5	131	824
Veneer-cutting machine	J. C. Roth and J. J. Welshofer	871,146	Nov. 19	2079	560	131	714
Ventilator	G. Kabureck	871,342	Nov. 19	2506	646	131	782
Ventilator	M. J. E. Tilney	871,537	Nov. 19	2939	733–4	131	846
Voltage-regulator	G. W. Dunn	871,211	Nov. 19	2213	585	131	736
Wall and ceiling decoration	S. F. Vaughan	871,196	Nov. 19	2180	579	131	730
Wall-cleaner	M. F. Field, E. F. Hathaway, and C. D. Lanning	871,680	Nov. 19	3192	791–2	131	890
Warp-drawing machine							
Washer:							
See Coal-washer. Vehicle-washer.							
Washing or beating engine	S. R. Wagg	871,340	Nov. 19	2948	736	131	847
Washtub-fitting	O. H. Klessig	871,347	Nov. 19	2520	648	131	783
Watch	J. Burtin	871,387	Nov. 19	2616	669	131	796
Water-heater	D. L. and M. D. Kline	871,706	Nov. 19	3235	801	131	897
Water on sidehills. Implement to arrest the flow of	J. C. Oestergard	871,617	Nov. 19	3085	766	131	871
Water-purifying apparatus	C. P. Van Gundy	871,461	Nov. 19	2779	699–700	131	821
Water-softener	L. W. Jones	871,225	Nov. 19	2236	590	131	740
Water-softener apparatus	L. W. Jones	871,220	Nov. 19	2237	591	131	740
Weather-strip	F. Gibbon	871,334	Nov. 19	2494	644	131	778
Wedge-making machine	H. R. Cochran	871,324	Nov. 19	2473	639	131	775
Weigher. Vehicle-	J. R. Harrison	871,403	Nov. 19	2641	675–6	131	801
Weighing-machine discharge-controlling mechanism	H. Richardson	871,630	Nov. 19	3108	771	131	874
Weighing-scoop. Automatic portable	W. G. Davies	871,676	Nov. 19	3187	790	131	889
Well-drilling apparatus	W. H. Ullman and M. Okey	871,248	Nov. 19	2295	600	131	748
Well-tubing	J. M. Criswell	871,258	Nov. 19	2314	604	131	752
Wheat-washing machine	J. McDaniel	871,517	Nov. 19	2896	725	131	839
Wheel:							
See Vehicle-wheel.							
Wheel	W. Nice, Jr	871,518	Nov. 19	2900	726	131	839
Wheel rim. Vehicle-	E. D. Valentine	871,460	Nov. 19	2778	699	131	821
Window construction	F. M. Erb	871,216	Nov. 19	2222	587	131	737
Window construction. Metallic	E. H. Lunken and C. M. Conklin	871,127	Nov. 19	2027	551–3	131	708
Window construction. Metallic	E. H. Lunken and C. M. Conklin	871,228	Nov. 19	2240	592	131	741
Window construction. Metallic	E. H. Lunken and C. M. Conklin	871,715	Nov. 19	3250	805	131	903
Window-fastener	M. Morrison	871,727	Nov. 19	3272	810	131	904
Window fastener. Storm-	G. B. Lee	871,759	Nov. 19	3346	823	131	915
Window-locking mechanism. Swinging-	C. M. Conklin and E. H. Lunken	871,206	Nov. 19	2201	583	131	734
Window-pane fastener	J. Giardino	871,267	Nov. 19	2330	608	131	755
Window-screen	A. B. Arctander	871,661	Nov. 19	3162	784	131	884
Window-screen	E. Feighery	871,679	Nov. 19	3191	791	131	890
Window-screen	E. Feighery	871,754	Nov. 19	3336	821	131	913
Wood and making same. Preserved	C. Fillis	871,392	Nov. 19	2623	.....	131	798
Wood-polishing machine	O. Dander	871,111	Nov. 19	1994	543	131	703
Wool-washing machine	W. McNaught	871,433	Nov. 19	2718	687	131	811
Wrench:							
See Machine-wrench. Pipe-wrench.							
Wrench	J. Kelly	871,415	Nov. 19	2678	681	131	893
Wrench	F. Gehner	871,690	Nov. 19	3211	795	131	805
Wrench	H. Labhardt	871,600	Nov. 19	3061	.....	131	806
Zinc formaldehdye hydrosulfite. Making							

DESIGNS.

Design.	Name.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Chafing-dish	L. Strassburger and C. Nelson	38,889	Nov. 19	131	920
Chafing-dish, stand and lamp	L. Strassburger and C. Nelson	38,890	Nov. 19	131	920
Cigar-band	T. W. Cole	38,885	Nov. 19	131	919
Dish	W. L. Evans	38,888	Nov. 19	131	920
Liquid-dispensing keg	H. S. Cornish	38,891	Nov. 19	131	920
Paper-cutter	M. Switzer	38,886	Nov. 19	131	919
Stocking-darner	E. W. Thayer	38,887	Nov. 19	131	920
Stove	J. C. Hosford	38,893	Nov. 19	131	921
Stove	J. C. Hosford	38,894	Nov. 19	131	921
Stove. Gas heating-	J. Becvar	38,895	Nov. 19	131	921
Stove. Heating and cooking	W. Thompson and G. W. Cope	38,896	Nov. 19	131	921
Water-heater	J. J. Lawler	38,892	Nov. 19	131	920

TRADE-MARKS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
Ale. Ginger	J. House & Son	66,296	Nov. 19	131	937
Alterative iodin compound	Bonetti Frères	66,262	Nov. 19	131	936
Automobiles	Oesterrechische Daimler-Motoren-Gesellschaft Gesellschaft mit beschränkter Haftung.	66,337	Nov. 19	131	938
Batteries. Dry	G. A. Lutz Co	66,333	Nov. 19	131	938
Belting, hose, and machinery packing	Revere Rubber Company	66,237	Nov. 19	131	935
Beverages. Non-alcoholic	F. J. Dohrn	66,286	Nov. 19	131	937
Bitters	J. L. Rosenfield	66,276	Nov. 19	131	936
Boots and shoes. Leather	Cosby Shoe Co	66,227	Nov. 19	131	935
Boots and shoes. Leather	Cosby Shoe Co	66,228	Nov. 19	131	935
Boots and shoes. Leather	Cosby Shoe Co	66,229	Nov. 19	131	935
Boots and shoes. Leather	Cosby Shoe Co	66,230	Nov. 19	131	935
Boots and shoes. Leather	Kerens Shoe Co	66,234	Nov. 19	131	935
Bread	R. C. Proudfit Baking Company	66,306	Nov. 19	131	937
Bread and crackers	Geo. H. Cross Co	66,292	Nov. 19	131	937
Bricks or blocks. Building	Ohio Mining & Manufacturing Co.	66,253	Nov. 19	131	936
Brushes	Davis-Bridaham Drug Company	66,246	Nov. 19	171	936
Brushes. Nail	C. Loonen	66,300	Nov. 19	131	937
Brushes. Tooth	G. Strassburger	66,258	Nov. 19	131	936
Buckles	Jacob & Brown	66,329	Nov. 19	131	938
Calculating-machines	H. W. Egli	66,214	Nov. 19	131	935
Candies	National Candy Company	66,336	Nov. 19	131	938
Candy	Schraders	66,309	Nov. 19	131	937
Canned fruits and vegetables	James M. Houston Grocer Company.	66,218	Nov. 19	131	935
Canned fruits and vegetables	Burt Olney Canning Co	66,283	Nov. 19	131	937
Canned fruits and vegetables	Wayne County Canning Co	66,316	Nov. 19	131	937
Cartridges and powder	Sächsische Pulverfabriken G. Krantz & Co.	66,256	Nov. 19	131	936
Castings. Alloy	Magnus Metal Company	66,334	Nov. 19	131	938
Chamois-skins	Pennsylvania Tanning Company	66,304	Nov. 19	131	937
Cheese	O. M. Crego	66,285	Nov. 19	131	937
Chemicals and antiseptics. Certain	L. G. B. Erb	66,216	Nov. 19	131	935
Cigars	P. Mohr	66,221	Nov. 19	131	935
Cigars, cigarettes, cheroots, and tobacco	D. S. Saqui	66,225	Nov. 19	131	935
Clothes-wringers	American Wringer Company	66,243	Nov. 19	131	936
Clothes-wringers	American Wringer Company	66,245	Nov. 19	131	936
Clothing. Certain	Dacotah Manufacturing Co	66,325	Nov. 19	131	938
Cocoa	Brownell & Field Company	66,282	Nov. 19	131	937
Cocoa, chocolate, and candy	Stollwerck Bros	66,311	Nov. 19	131	937
Coffee	T. L. Owens	66,303	Nov. 19	131	937
Concrete-mixing machinery	Eureka Machine Co	66,326	Nov. 19	131	938
Cordials	Golden Hill Distilling Co	66,293	Nov. 19	131	937
Cotton piece fabrics. Mercerized	C. Whitman & Co	66,348	Nov. 19	131	938
Cotton piece goods	Arnold Karberg & Co	66,320	Nov. 19	131	938
Cotton piece goods	Boott Mills	66,322	Nov. 19	131	938
Cotton piece goods	Boott Mills	66,323	Nov. 19	131	938
Cutlery. Certain	Wyeth Hardware & Manufacturing Co.	66,349	Nov. 19	131	938
Engines. Marine gasolene	Kumberger & Vreeland	66,331	Nov. 19	131	938
Fertilizers	Mountain Copper Company	66,273	Nov. 19	131	936
Fish. Preserved	Powell Bros. & Co	66,305	Nov. 19	131	937
Flour. Wheat	Duluth-Superior Milling Co	66,288	Nov. 19	131	937
Flour. Wheat	Farwell & Rhines	66,290	Nov. 19	131	937
Flour. Wheat	Whaley Mill & Elevator Co	66,317	Nov. 19	131	937
Food preparations. Certain	Charles Hewitt & Sons Co	66,284	Nov. 19	131	937
Foods. Certain	Block-Horn Preserving Co	66,281	Nov. 19	131	937
Foods. Certain sea	Menzel & Co	66,301	Nov. 19	131	937
Furniture and piano polishes	H. B. Ingham	66,233	Nov. 19	131	935
Gas and electric light fixtures	Shapiro & Aronson	66,240	Nov. 19	131	935
Gin	Japhet & Co	66,297	Nov. 19	131	937
Gongs and parts thereof	J. G. Brill Company	66,327	Nov. 19	131	938
Hair and mustache. Preparation for the	T. Hetherington	66,267	Nov. 19	131	936
Hair tonic and invigorator	J. P. Ward	66,315	Nov. 19	131	937
Harness, horse-collars, saddles, and whips	Harpham Bros. Co	66,231	Nov. 19	131	935
Hose. Canvas	H. J. M. Howard	66,232	Nov. 19	131	935
Hosiery	Paramount Knitting Company	66,340	Nov. 19	131	938
Hosiery	Paramount Knitting Company	66,341	Nov. 19	131	938
Ice-cream freezers	Richmond Cedar Works	66,255	Nov. 19	131	936
Jabots made of netted and lace fabrics	Boehm & Levine	66,321	Nov. 19	131	938
Jewelry and precious-metal ware. Certain	Durand & Co	66,213	Nov. 19	131	935
Joints. Expansion	Allberger Condenser Company	66,319	Nov. 19	131	938
Knapsacks	Mills Equipment Co	66,250	Nov. 19	131	936
Lamps of all kinds. Electric	Körting & Mathiesen Aktiengesellschaft.	66,219	Nov. 19	131	935
Lard compound	T. M. Sinclair & Co	66,312	Nov. 19	131	937
Lenses. Bifocal	Optical Specialties Company	66,222	Nov. 19	131	935
Macaroni	G. G. Greco	66,295	Nov. 19	131	937
Massage-machines	Moon Vibrator Company	66,251	Nov. 19	131	936
Medicator or inhaler	Ramey Medicator Company	66,254	Nov. 19	131	936
Medicinal tablets	J. T. Butler	66,263	Nov. 19	131	936
Medicine. Certain	W. D. Duncan	66,265	Nov. 19	131	936
Medicine. Certain	Ferruginoid Co	66,266	Nov. 19	131	936
Medicines. Certain	R. H. McKoy	66,271	Nov. 19	131	936
Menthol ice	Trunk Bros. Drug Company	66,313	Nov. 19	131	937
Musical-instrument cases and satchels	Kellogg & Hitchcock Co	66,270	Nov. 19	131	936
Ointment	Maulbetsch & Whittemore Company.	66,235	Nov. 19	131	935
Packing. Plaited fibrous	Robinson Bros. & Company	66,224	Nov. 19	131	935
	Wilpaco Packing Company	66,242	Nov. 19	131	936

TRADE-MARKS—Continued.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
Paints	Northern Manufacturing Company.	66,236	Nov. 19	131	935
Paints	Schoellkopf, Hartford & Hanna Company.	66,238	Nov. 19	131	935
Paper bags	Schorsch & Co	66,239	Nov. 19	131	935
Pens. Stylographic fountain	J. Kearney & Co	66,269	Nov. 19	131	936
Perfume base. Violet	Haarmann de Laire Schaefer Co	66,217	Nov. 19	131	935
Perfumes	T. Hetherington	66,268	Nov. 19	131	936
Planers. Open-side	Detrick & Harvey Machine Co. of Baltimore City.	66,264	Nov. 19	131	936
Plows	H. G. Moore	66,335	Nov. 19	131	938
Powders. Stock	C. C. Saunders	66,277	Nov. 19	131	936
Preparations for the removal of hair and blemishes from the skin	C. S. Rich	66,275	Nov. 19	131	936
Railway street-sprinklers	J. G. Brill Company	66,328	Nov. 19	131	938
Remedies for stomach troubles	C. J. Ulrici	66,278	Nov. 19	131	937
Remedies. Headache	Neuralgyline Company	66,274	Nov. 19	131	936
Remedies. Kidney, liver, and blood	Body Builders Medicine Company	66,261	Nov. 19	131	936
Remedy for venereal diseases	R. O. McElroy	66,272	Nov. 19	131	936
Ribbons	W. Openhym & Sons	66,339	Nov. 19	131	938
Rubber erasers	E. Faber	66,249	Nov. 19	131	936
Rubber goods. Certain	Enterprise Rubber Co	66,248	Nov. 19	131	936
Rubber, gutta-percha, &c	G. A. Alden & Co	66,259	Nov. 19	131	936
Sardines	E. Shivell	66,343	Nov. 19	131	938
Saws	Quality Saw & Tool Works	66,342	Nov. 19	131	938
Sewing-machine needles	National Sewing Machine Company.	66,252	Nov. 19	131	936
Sewing-machines and parts	White Sewing Machine Co	66,280	Nov. 19	131	937
Shears and scissors	Acme Shear Company	66,318	Nov. 19	131	938
Soap	Los Angeles Olive Growers Association.	66,220	Nov. 19	131	935
Soap. Powdered granular	R. Ellis	66,215	Nov. 19	131	935
Soda. Caustic	Chance & Hunt	66,212	Nov. 19	131	935
Soldering, sad, and branding irons. Electrically-heated	A. A. Low	66,332	Nov. 19	131	938
Steel ingots, bars, &c	P. R. Kuehnrich	66,330	Nov. 19	131	938
Suspenders, belts, garters, &c	T. K. Webster, Jr	66,344	Nov. 19	131	938
Suspenders, belts, garters, &c	T. K. Webster, Jr	66,345	Nov. 19	131	938
Suspenders, belts, garters, &c	T. K. Webster, Jr	66,346	Nov. 19	131	938
Suspenders, belts, garters, &c	T. K. Webster, Jr	66,347	Nov. 19	131	938
Teas and coffees	Drake & Company	66,287	Nov. 19	131	937
Thread-cutting dies	Connecticut Tool Company	66,324	Nov. 19	131	938
Thread, spool, and sewing cotton	American Thread Company	66,260	Nov. 19	131	936
Ties. Metal animal	Oneida Community	66,338	Nov. 19	131	938
Tonic. Nerve	H. L. Waldo	66,314	Nov. 19	131	937
Vinegars and pickles	Oakland Vinegar and Pickle Co	66,302	Nov. 19	131	937
Vodka	John Barth Company	66,296	Nov. 19	131	937
Wall and ceiling coverings	H. Dolmetsch	66,247	Nov. 19	131	936
Washing-machines	Spears & Riddle Co	66,257	Nov. 19	131	936
Water. Mineral	Schultes Agost, Szinye-Lipoczi Salvatorforrás vállalat.	66,310	Nov. 19	131	937
Water. Spring	J. E. Patterson	66,223	Nov. 19	131	935
Whips, whip-lashes, &c	Warren Featherbone Co	66,241	Nov. 19	131	935
Whisky	I. & A. Scharff	66,226	Nov. 19	131	935
Whisky	Garrett-Williams Company	66,291	Nov. 19	131	937
Whisky	Golden Hill Distilling Co	66,214	Nov. 19	131	937
Whisky	Lazarus-Nassauer Co	66,299	Nov. 19	131	937
Whisky	Rosenfield Bros. & Co	66,308	Nov. 19	131	937
Whisky, brandy, and gin	Eiseman & Company	66,289	Nov. 19	131	937
Wines	R. Labaume & Co	66,250	Nov. 19	131	936
Wood manufactures. Certain	Venesta Limited	66,279	Nov. 19	131	937
Wringers and parts thereof	American Wringer Company	66,244	Nov. 19	131	936

LABELS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
"Candidate Club." (For Whisky)	P. Goldberg	13,878	Nov. 19	131	939
"Choco-Sodo." (For Hot Chocolate)	Runkel Brothers	13,879	Nov. 19	131	939
"Cuti-Vita Salve." (For a Salve)	F. B. Clark & Company	13,887	Nov. 19	131	939
"Dennis Kearney." (For Cigars)	Symons-Kraussman Co	13,877	Nov. 19	131	939
"Dr. I. H. Lewko's Antiseptic Tooth Powder." (For Tooth-Powder.)	I. H. Lewkowicz	13,889	Nov. 19	131	939
"Dr. I. H. Lewko's Antiseptic Tooth Paste." (For Tooth-Paste.)	I. H. Lewkowicz	13,890	Nov. 19	131	939
"Dr. I. H. Lewko's Antiseptic Tooth Wash." (For a Tooth-Wash Preparation.)	I. H. Lewkowicz	13,891	Nov. 19	131	939
"Grippura. (Germ-Destroyer.)" (For a Proprietary Medicine)	A. Crichton	13,886	Nov. 19	131	939
"In-Sen-Zum. Makes Home Sweet Home Sweeter." (For an Incense Preparation.)	L. V. Aronson	13,892	Nov. 19	131	939
"Miladi." (For Candy)	Douglas Candy Company	13,882	Nov. 19	131	939

LABELS—Continued.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
"Old Log Cabin." (For a Liquid Medical Compound for Coughs and Colds.)	S. W. Williams	13,885	Nov. 19	131	939
"Original Jolly Fellows Pepsin Gum." (For Chewing-Gum)	W. J. Paul	13,883	Nov. 19	131	939
"Ortega's Selected Peeled Green Chiles." (For Peeled Green Chilies.)	E. C. Ortega	13,881	Nov. 19	131	939
"Pain King." (For a Cough Cure)	F. B. Clark & Company	13,884	Nov. 19	131	939
"Purita Never-Grey Hair Tonic." (For Hair-Tonic)	A. C. H. Purita Co	13,888	Nov. 19	131	939
"Samson." (For Dress Goods Known in the Trade as Galatea)	Burton Brothers & Co	13,893	Nov. 19	131	939
"Seven Day Coffee, the National Beverage." (For Coffee)	Seven Day Coffee Company	13,880	Nov. 19	131	939

PRINTS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
"Broncho Busting Design." (For Breakfast Food)	Cream of Wheat Co	2,156	Nov. 19	131	939
"Let me tell you Something—" (For Flour)	Washburn Crosby Company	2,157	Nov. 19	131	939
"Men's and Boys' Apparel." (For Men's and Boys' Apparel)	H. C. Lytton	2,159	Nov. 19	131	939
"Napoleon." (For Medicinal and Toilet Preparations)	H. B. Claflin Company	2,158	Nov. 19	131	939
"U. S. S. Peacemaker, The Great Game of Nations." (For a Game.)	C. Dunham	2,160	Nov. 19	131	939

TRADE-MARKS.

(REGISTRATION APPLIED FOR.)

Title.	Name.	Serial No.	Date.	Official Gazette. Vol.	Page.
Ale. Ginger	Blanke-Baer Chemical Co	29,742	Nov. 19	131	927
Amusement devices	J. P. Staderman	30,387	Nov. 19	131	931
Antiseptic foot-powder	Bell-Wart Manufacturing Company.	30,253	Nov. 19	131	930
Balm. Toilet	A. S. Black	30,351	Nov. 19	131	931
Beer	New South Brewery & Ice Co	30,050	Nov. 19	131	928
Belting. Leather	Detroit Oak Belting Co	30,434	Nov. 19	131	931
Belts, girdles, and sashes	A. Nahass	30,120	Nov. 19	131	929
Books, pamphlets, catalogues, &c. Printed	H. B. Darling	30,415	Nov. 19	131	931
Boots and shoes. Leather	A. J. Bates Co	29,989	Nov. 19	131	928
Bread. Unleavened	B. Manischewitz	27,009	Nov. 19	131	925
Brooms	Lee Broom & Duster Company	30,428–9	Nov. 19	131	931
Brooms, whisks, brushes, and dusters	Lee Broom & Duster Company	30,426	Nov. 19	131	931
Brush sterilizer. Tooth	D. M. Hitch	30,256	Nov. 19	131	930
Butter	Bennett Company	30,177	Nov. 19	131	929
Canned clams	J. Wyman & Son	29,583	Nov. 19	131	927
Canned fruits and vegetables	John Hoffmann & Sons Co	29,810	Nov. 19	131	928
Canned fruits and vegetables	Ridenour Baker Grocery Co	30,454	Nov. 19	131	932
Canned fruits and vegetables	Franklin Manufacturing Co	30,540	Nov. 19	131	933
Canned fruits, berries, and vegetables	E. T. Smith Company	30,460	Nov. 19	131	932
Canned sardines, sprats, anchovies, &c	Strohmeyer & Arpe Company	30,338–40	Nov. 19	131	930–1
Cheese	W. J. Eldridge	28,779	Nov. 19	131	926
Cheese	W. J. Eldridge	28,782	Nov. 19	131	926
Chili and dried fruits	Simon Levi Company	29,724	Nov. 19	131	927
Cigarette-paper	Braunstein & Cie	30,143–6	Nov. 19	131	929
Clams, clam nectar and chowder, canned crabs, &c	Fischer Bros	28,036	Nov. 19	131	926
Coats, vests, trousers, and overcoats	Friend & Marks	30,270	Nov. 19	131	930
Coats, wraps, robes, &c. Automobile	Scandinavian Fur & Leather Co	28,727	Nov. 19	131	926
Coffee	German-American Coffee Co	29,858	Nov. 19	131	928
Coffee and tea	J. H. Allen & Company	28,422	Nov. 19	131	926
Coffee with milk	Nestlé & Anglo-Swiss Condensed Milk Co.	24,840	Nov. 19	131	925
Corsets	I. Newman & Sons	30,298–9	Nov. 19	131	930
Cotton piece goods	Boott Mills	21,956	Nov. 19	131	924
Cotton piece goods	Boott Mills	21,959	Nov. 19	131	924
Cotton piece goods	Boott Mills	21,967	Nov. 19	131	924
Fish	Rosenstein Brothers	22,950	Nov. 19	131	924
Flavoring syrups for beverages	W. F. Wylde	30,326	Nov. 19	131	930
Ginghams, cambrics, damasks, &c	Cox Blodgett Dry Goods Company.	29,041	Nov. 19	131	927
Hames. Wooden	Beagle Hame Works	30,252	Nov. 19	131	930

TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

Title.	Name.	Serial No.	Date.	Official Gazette. Vol.	Page.
Hammers, picks, boat and log hooks, &c	Fayette R. Plumb, Incorporated.	27,165	Nov. 19	131	925
Honey, syrup, molasses, &c	Fischer Bros	28,034	Nov. 19	131	926
Hose-nozzles	Eaton, Cole & Burnham Co	30,041	Nov. 19	131	928
Lard	Interstate Packing Co	30,527	Nov. 19	131	932
Lard substitute	High Grade Lard Company	24,214	Nov. 19	131	924
Lye, sodium chlorid, and starch	Fischer Bros	28,033	Nov. 19	131	926
Malt extract	Va. Brewing Co	30,456	Nov. 19	131	932
Meats. Fresh	Jacob Dold Packing Company	30,473	Nov. 19	131	932
Medicated wines	H. S. Wellcome	30,518	Nov. 19	131	932
Medicinal malt extracts	New South Brewery & Ice Co	30,051	Nov. 19	131	928
Medicinal tablets	S. F. Stoll	30,197	Nov. 19	131	930
Medicinal tonic	Peoples Chemical Co	30,546	Nov. 19	131	933
Medicines for treatment of eczema, &c	Dermatone Company	30,105	Nov. 19	131	929
Milk and cream	Sheffield Farms-Slawson-Decker Co.	30,608	Nov. 19	131	933
Mohairs and sicilians	Keen & Reville	29,761	Nov. 19	131	928
Mustard	R. T. French Company	24,382	Nov. 19	131	925
Newspaper	Chicago Herald Company	30,522	Nov. 19	131	932
Oil. Castor	R. J. Wiseman	29,510	Nov. 19	131	927
Oil. Olive	N. Johnston & Sons	30,488	Nov. 19	131	932
Ointments	H. M. Tileston	29,530	Nov. 19	131	927
Packing. Machinery	New York Belting and Packing Company.	28,172	Nov. 19	131	926
Paint. Composition	"Le Ripolin," (Société anonyme française de peintures laquées et d'enduits sous-marins, procédés Lefranc & Briegleb réunis.)	12,079	Nov. 19	131	924
Paints, pigments, stains, &c	Sherwin-Williams Co	30,517	Nov. 19	131	932
Photographic plates, paper, and films	Imperial Dry Plate Company	25,877	Nov. 19	131	925
Photographic supplies	Eastman Kodak Co	27,850	Nov. 19	131	926
Pickles, catsup, and vinegar	Donaldson-Shultz Co	29,931	Nov. 19	131	928
Planers. Open-side	Detrick & Harvey Machine Co. of Baltimore City.	24,275	Nov. 19	131	925
Plum-pudding	Atmore & Son	14,812	Nov. 19	131	924
Poisons or exterminators of rats, mice, squirrels, &c	E. S. Wells	29,550	Nov. 19	131	927
Potato-diggers	A. B. Farquhar Company	30,273	Nov. 19	131	930
Publication. Monthly	S. S. McClure Company	30,159	Nov. 19	131	929
Remedy for hog-cholera, swine plague, &c	Old Kentucky Mfg. Co	30,038	Nov. 19	131	928
Remedy for purifying the blood, for catarrh, &c	J. Houston	29,792	Nov. 19	131	928
Remedy for skin diseases	J. E. Riggs	17,225	Nov. 19	131	924
Ribbons	J. Sulzbach	30,031	Nov. 19	131	928
Rubber boots and shoes	L. Candee & Co	30,363	Nov. 19	131	931
Rubber footwear and tires	Hood Rubber Co	29,536	Nov. 19	131	927
Rubber or partly-rubber aprons, air mattresses and pillows, &c	B. F. Goodrich Company	628	Nov. 19	131	923
Sardines, salmon, herrings, and mackerel	E. Shivell	30,511	Nov. 19	131	932
Shoes. Leather	Bielefeld & Spahn	30,227	Nov. 19	131	930
Silver-lead or plumbago foundry-facings, &c	United States Graphite Co	30,295	Nov. 19	131	930
Spices	Woolson Spice Company	30,536	Nov. 19	131	933
Stoves and ranges	Belknap Hardware & Mfg. Co	30,479	Nov. 19	131	932
Syrup. Maple	Bennett Company	30,178	Nov. 19	131	929
Tin and terne plates	Follansbee Brothers Company	25,204	Nov. 19	131	925
Tire-grips. Chain	Weed Chain Tire Grip Company	27,209	Nov. 19	131	926
Tonics	C. P. Gieraltowski	29,9?3	Nov. 19	131	928
Tool-handles. Iron	Stanley Rule & Level Company	29,746	Nov. 19	131	927
Vermin-exterminator	C. M. Hart	30,566	Nov. 19	131	933
Whisky	Wright & Taylor	'5,542	Nov. 19	131	923
Whisky	Cook & Bernheimer Co	9,264–5	Nov. 19	131	923–4
Whisky	Cook & Bernheimer Co	9,305	Nov. 19	131	924
Whisky	E. Martin & Co	27,125	Nov. 19	131	925
Whisky	F. Korbel & Bros	30,353	Nov. 19	131	931
Whisky					

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ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 26TH DAY OF NOVEMBER, 1907.

Name, residence, and invention.	No.	Date.	Monthly volume. Specification.	Monthly volume. Drawing.	Official Gazette. Volume.	Official Gazette. Page.
Acers, Arthur D., Norman, Okla. Ter. Gate	871,905	Nov. 26	3678	897	131	995
Adams, Daniel B., Summitville, N. Y. Automatic alarm and stopping device for engines.	872,039	Nov. 26	4013	963	131	1040
Adler, Henry, Pittsburg, assignor to H. Adler Company, Inc., Pittsburg and Carnegie, Pa. Ladder	872,165	Nov. 26	4252	1014–15	131	1061
Adt, Leo F., Albany, N. Y. Eyeglass-mounting	872,211	Nov. 26	4353	1038	131	1096
Aktiebolaget Separator. (See Forsberg, Erik A., assignor.)						
Allis-Chalmers Company *et al.* (See Stull, Emmett W., assignor.)						
Allis-Chalmers Company *et al.* (See Wright, Edwin C., assignor.)						
Alma Manufacturing Company of Baltimore City. (See Blum, Isaac, assignor.)						
Alvey, Benjamin H., assignor to Alvey-Ferguson Company, Louisville Ky. System of transferring baggage or freight	872,212	Nov. 26	4355	1038	131	1097
Alvey-Ferguson Company. (See Alvey, Benjamin H., assignor.)						
American Car & Foundry Company. (See Ostrander, Allen E., assignor.)						
American Dehydrating Company. (See Cooke, Ernest W., assignor.)						
American Dehydrating Company. (See Stare, Frank T., assignor.)						
Amsden, George A., Lowell, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J. Cable carrier apparatus	871,768	Nov. 26	3383	830–1	131	949
	871,769	Nov. 26	3385	831–2	131	949
Anderson, Alfred A., Jamestown, N. Y. Veneer-clamp	872,040	Nov. 26	4017	963	131	1040
Anderson, Gunnar, and R. Lundin, New York, N. Y. Rotary pump	871,770	Nov. 26	3387	832–3	131	950
Armitage, Albert, Fairport, and W. P. Thistlethwaite, Macedon, assignor to Ontario Drill Company, Despatch, N. Y. Grain-drill	872,041	Nov. 26	4019	964	131	1041
Armstrong, William D., W. C. Hooker, and K. R. Marks, Abingdon, Ill. Gopher-trap	872,316	Nov. 26	4554	1078	131	1129
Aspinwall, Lewis A., assignor to Aspinwall Manufacturing Co., Jackson, Mich. Agricultural implement	871,771	Nov. 26	3390	833	131	950
Aspinwall Manufacturing Co. (See Aspinwall, Lewis A., assignor.)	872,103	Nov. 26	4136	989	131	1061
Atkins, William, Auburn, N. Y. Dump-wagon	871,906	Nov. 26	3681	897–8	131	995
Aufrichtig, Alois, St. Louis, Mo. Drain-controlling apparatus for mash-tubs	872,104	Nov. 26	4138	990	131	1061
Autoplano Company. (See Danquard, Thomas, assignor.)						
Avery, Hiram P., and S. J. Bartlett, Beardstown, Ill. Machine for churning or washing	871,853	Nov. 26	3562	871	131	977
Bacon, Abbott L., Franklin, Mass. Sand-box for cars	872,213	Nov. 26	4358	1039	131	1097
Bacon, Levi S., Washington, D. C., assignor, by mesne assignments, to Chamberlin Metal Weather Strip Company, Detroit, Mich. Metal weather-strip	871,772	Nov. 26	3392	833	131	950
Badische Anilin & Soda Fabrik. (See Immerheiser, Carl, assignor.)	872,042	Nov. 26	4021	964	131	1041
Bailey, Samuel R., Amesbury, Mass. Battery-support for automobiles	871,773	Nov. 26	3393	834	131	951
Baker, James R., Arlington, N. J., assignor to Cooper Hewitt Electric Company, New York, N. Y. Sealing for electric apparatus						
Barrow, Joseph J., Louisburg, N. C., and T. J. King, Richmond, Va.; said King assignor to said Barrow. Drawer-contents-indexing device						
Bartlett, Sylvester J. (See Avery and Bartlett.)						
Baum, Albert E., Waterloo, Iowa. Shovel						
Bausch & Lomb Optical Company. (See Patterson, William L., assignor.)						
Baxter, John B., assignor to Covert Manufacturing Company, Watervliet, N. Y. Spring-tongue snap-hook	871,979	Nov. 26	3866	935	131	1020
Baxter, Robert S., Broughty Ferry, assignor to J. Urquhart, Dundee, Scotland. Machine for harvesting potatoes	872,166	Nov. 26	4254	1015	131	1061
	872,043	Nov. 26	4022	964	131	1041
Beck, John C., and J. A. Bowyer, Chicago, Ill. Air-pump	872,044	Nov. 26	4024	965	131	1042
Becker, Anton, assignor to Ralston Steel Car Company, Columbus, Ohio. Underframe for cars	872,045	Nov. 26	4025	965	131	1042
Becker, Anton, assignor to Ralston Steel Car Company, Columbus, Ohio. Dumping-car	871,854	Nov. 26	3564	871–2	131	978
Beguelin, Oscar, Battle Creek, Mich. Furnace						
Belfield, A. Miller. (See Hansen, Rasmus, assignor.)	871,774	Nov. 26	3394	834	131	951
Belitz, Paul H., Stettin, Germany. Ship propulsion	871,270	Nov. 26	4463	1060	131	1114
Bellinger, John N., Casa, Ark. Snap-hook	871,271	Nov. 26	4464	1060–1	131	1114
Benet, Peter A., Boston, Mass. Combination-tool	871,980	Nov. 26	3867	935	131	1020
Benton, George E., East Hampton, N. Y. Shears						
Berliner, Stickmaschinenfabrik Schirmer, Blau & Co., Firm of. (See Schroeder, Johann, assignor.						
Berry-Wood Piano Player Co. (See Wood, Frederich W., assignor.)	871,907	Nov. 26	3682	898	131	996
Bertram, William A., Brimley, Mich. Sleigh attachment	872,105	Nov. 26	4140	990	131	1061
Besenbruch, Ernst, Hirschfelde, Germany. Self-extinguishing burner	872,214	Nov. 26	4360	1039	131	1098
Bethune, Frank M., Homestead, Pa. Horseshoe						
Beyer, Otto S., East Rutherford, N. J., assignor to E. W. Bliss Company. Seaming-machine	871,855	Nov. 26	3565	872–4	131	978
Beyer, Otto S., East Rutherford, N. J., assignor to E. W. Bliss Company. Seaming-machine	871,856	Nov. 26	3571	875–6	131	978
Beyer, Otto S., East Rutherford, N. J., assignor to E. W. Bliss Company. Seaming-machine	871,857	Nov. 26	3580	876–8	131	979
Biberfeld & Co., Firm of. (See Hambruch, Heinrich F., assignor.)	871,908	Nov. 26	3684	898–9	131	996
Bihn, Sylvan F., Petaluma, Cal. Incubator						
Blackman, Isaac. (See Friedman, Bernhard Z., assignor.)	872,046	Nov. 26	4026	965–6	131	1042
Blair, Thomas S., Jr., Elmhurst, Ill. Steel plant						
Blanchard, Frederick C., and E. B. Crocker, Bridgeport, Conn., assignors to Consolidated Safety Valve Company. Muffler	871,775	Nov. 26	3394	834–5	131	951

Name, residence, and invention.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Bilss, William L., Brooklyn, N. Y. Automatic electric switch	872,215	Nov. 26	4361	1039	131	1008
Blodgett, George B., Fredonia, N. Y. Mold for forming cement blocks	872,106	Nov. 26	4141	990	131	1062
Blum, Isaac, assignor to Alma Manufacturing Company of Baltimore City, Baltimore, Md. Buckle	871,981	Nov. 26	3868	936	131	1020
Bodley, Homer D., Stanley, N. Y Insulator	872,216	Nov. 26	4364	1039	131	1008
Bonesteel, Arthur E., Denver, Colo. Syringe	872,217	Nov. 26	4365	1040	131	1009
Bossert, William F., Utica, N. Y Combined tie-plate and guard-rail clamp	871,909	Nov. 26	3688	899-900	131	998
Botting, Clark T., Watertown, N. Y. Safety-stop for shade-rollers	871,858	Nov. 26	3585	878	131	980
Bottlers Machinery Manufacturing Company. (See Strasburger, Frank C. H., assignor.)						
Bowen, John L. (See Jewett and Bowen.)						
Bowen, Leander P., Auburn, N. Y. Shoe-rack	872,047	Nov. 26	4028	966	131	1043
Bowers, Byron, Canon, Ga. Cotton-seed culler	872,218	Nov. 26	4366	1040	131	1009
Bowyer, John A. (See Beck and Bowyer.)						
Boyer, Allen P., Goshen, Ind. Variable-speed and reversing transmission-gear	872,219	Nov. 26	4367	1040	131	1009
Boyer, Allen P., Goshen, Ind. Transmission-gear	872,220	Nov. 26	4370	1041	131	1100
Boyer, Edith E. L., Dayton, Ohio Labeling-machine	871,776	Nov. 26	3397	835	131	951
Boyle, James C., Calgary, Alberta, Canada. Skinning-tool	872,272	Nov. 26	4465	1061	131	1115
Boynton Earl, Syracuse, assignor of one-half to F. E. Van Duyne, Auburn, N. Y. Hat, coat, and umbrella rack	872,107	Nov. 26	4143	991	131	1062
Brady, Harry V., Amherst, Nova Scotia, Canada. Steam-boiler	872,291	Nov. 26	4503	1069	131	1121
Brasson, Adelard D., San Francisco, Cal. Gas-pressure regulator	872,273	Nov. 26	4467	1061-2	131	1115
Breeze, Frank A., Philadelphia, Pa. Pneumatic threading device for spinning-machines	871,910	Nov. 26	3689	900	131	997
Brett, Henry E., Los Angeles, Cal., assignor to Mills Automatic Press Company. Automatic printing-press	872,108	Nov. 26	4145	991-2	131	1063
Brewery Equipment & Supply Co. (See Griesser, Wilhelm, assignor.)						
Bright, Allen U., Anadarko, Okla. Ter. Fastener	872,221	Nov. 26	4375	1041	131	1100
Broad, William, Beaver Falls, assignor of two-thirds to E. E. Pierce and C. A. White, New Brighton, Pa. Hand-operated tool	872,048	Nov. 26	4030	966	131	1043
Broadbent, Arthur (See Broadbent, Benjamin and A.)						
Broadbent, Benjamin and A., Longwood, near Huddersfield, England. Apparatus for treating trade effluents	872,049	Nov. 26	4032	966	131	1043
Brooks, Reuben, assignor to Russia Cement Company, Gloucester, Mass. Display-stand	872,274	Nov. 26	4469	1062	131	1116
Brooks, Robert A., Chicago, Ill. Flushing-valve	871,859	Nov. 26	3588	878-9	131	980
Brown, Charles. T. (See Krause, Hugo C., assignor.)						
Browne, William J., Pittsburg, Pa. Amusement device	871,777	Nov. 26	3401	836	131	952
Bryant Electric Company. (See Goodridge, Gilbert W., assignor.)						
Buckingham, Charles L., assignor of one-half to R. B. McConney, Denver, Colo. Filter for separating solutions from ore-pulp	871,860	Nov. 26	3595	879	131	980
Buckler, Arthur, Philadelphia, Pa. Loom-shuttle	871,911	Nov. 26	3690	901	131	997
Bullock Electric Manufacturing Company. (See Mattman, Emil, assignor.)						
Bullock Electric Manufacturing Company *et al.* (See Stull, Emmett W., assignor.)						
Bullock Electric Manufacturing Company *et al.* (See Wright, Edwin C., assignor.)						
Burgess, Charles P., *et al.* (See Mongrain, Edward, assignor.)						
Burhans, Paul C., Phœnix, N. D. Fire-escape	872,050	Nov. 26	4033	967	131	1043
Burwell, Fred W., Geneva, Ohio. Car-door	872,167	Nov. 26	4255	1016	131	1061
Buser, Ellis W., Dawson, Nebr. Cement-pipe mold	871,778	Nov. 26	3404	836	131	952
C. G. Sargent's Sons Corporation. (See Sargent, Frederick G., assignor.)						
Cannan, John J., Rochester, N. Y. Trunk-tray hinge	871,779	Nov. 26	3405	837	131	953
Cantwell, Thomas, St. Louis, Mo. Sewer-pipe cleaner	872,109	Nov. 26	4149	992-3	131	1063
Card, Edward M., Middlefield, Conn. Non-refillable bottle	871,780	Nov. 26	3407	837	131	953
Carlipp, Ernst, Erlangen, Germany. Apparatus for demonstrating the strains in building constructions	871,861	Nov. 26	3598	880	131	981
Carpenter, Arthur H., *et al.* (See Carpenter, Franklin R., assignor.)						
Carpenter, Cranston H., *et al.* (See Carpenter, Franklin R., assignor.)						
Carpenter, Franklin R., assignor of one-half to A. H., C. H., and M. H. Carpenter, Denver, Colo. Apparatus for obtaining sulfur from furnace-gases	871,912	Nov. 26	3692	901	131	997
Carpenter, Malcolm H., *et al.* (See Carpenter, Franklin R., assignor.)						
Carroll, Philip F., assignor to Champion Machinery Company, Joliet, Ill. Feeding device for dough-machines	872,051	Nov. 26	4035	967	131	1044
Carter, Charles C. (See Morgan, George, assignor.)						
Cast Steel Platform Company. (See Howard and Westlake, assignors.)						
Caswell, William A., Chicago, Ill., assignor to National Dump Car Company. Dump-car	871,781	Nov. 26	3403	837	131	953
Caswell, William M., Warren, Pa. Trolley-wheel bearing	871,913	Nov. 26	3695	902	131	998
Chamberlin Metal Weather Strip Company. (See Bacon, Levi S., assignor.)						
Champion Machinery Company. (See Carroll, Philip F., assignor.)						
Chenault, Daniel M., *et al.* (See Pullins, David C., assignor.)						
Chenault, John C., *et al.* (See Pullins, David C., assignor.)						
Chicago Pneumatic Tool Company. (See Kimman, Henry J., assignor.)						
Chicago Pneumatic Tool Company. (See Thompson, Mackie, and Doyle, assignors.)						
Chittenden, Ward B., assignor of one-half to H. Kiffe, Mankato, Minn. Lantern-holder	872,052	Nov. 26	4036	967	131	1044
Christy, James, Chicago, Ill. Keeper for lock-bolts	872,053	Nov. 26	4037	967-8	131	104
Clark, Horace J., Chicago, Ill. Boiler washout system	872,222	Nov. 26	4376	1042	131	1101
Clark, James, assignor to S. R. Dresser Manufacturing Company, Bradford, Pa. Apparatus for upsetting metal rings	872,168	Nov. 26	4259	1016-17	131	1062
Clark, Melville, Chicago, Ill. Piano	871,782	Nov. 26	3409	837-8	131	953
Clayton, Herbert, Brooklyn, N. Y. Pipe connection	872,169	Nov. 26	4262	1017	131	1062
Cleveland, Irvin L., Fremont, Ohio. Gas-pipe safety device	871,783	Nov. 26	3410	838	131	953
Cobb, James R., Walhalla, S. C. Bottling-machine	872,275	Nov. 26	4471	1062	131	1116
Coes, Zorester B., and R. F. Scott, assignors to Edwin Harrington, Son & Co., Inc., Philadelphia, Pa. Chain-making machine	871,784	Nov. 26	3412	838-9	131	954
Cohen, Isaac Z., Baltimore, Md. Pocket tobacco box and cutter	871,983	Nov. 26	3672	936	131	1021
Cohn, Samuel, New York, N. Y. Machine for sewing tubular structures. (Reissue)	12,724	Nov. 26	4563	1079-80	131	1130
Compagnie Internationale La Norgine. (See Herrmann, Ernest, assignor.)						
Conover, Charles F., New York, N. Y. Water-cooler	871,914	Nov. 26	3696	902	131	998
Consolidated Safety Valve Company. (See Blanchard and Crocker, assignors.)						
Converse, Francis B., Jr., Louisville, Ky., assignor, by mesne assignments, to Mergenthaler Linotype Company. Justifying mechanism	872,223	Nov. 26	4379	1042-3	131	1101
Cook, Eugene, Kalamazoo, Mich. Grinding-machine	871,785	Nov. 26	3414	839	131	954
Cook, Frank B., Chicago, Ill. Cable-terminal and junction-box	871,984	Nov. 26	3673	936-7	131	1021
Cook, William, Broadhead, Colo. Car-arrester	872,276	Nov. 26	4474	1063	131	1116
Cook, William M., Warren, Ohio. Sliding-door lock	872,110	Nov. 26	4150	993	131	1063
Cooke, Ernest W., Waukesha, Wis., assignor, by mesne assignments, to American Dehydrating Company. Dehydrating animal and vegetable substances	871,982	Nov. 26	3670	936	131	1021
Cooke, Ernest W., Waukesha, Wis., assignor to American Dehydrating Company. Air-drier	872,054	Nov. 26	4040	968	131	1045
Cooper Hewitt Electric Company. (See Baker, James R., assignor.)						
Cooperman, Harry, Philadelphia, Pa. Bottle-brush	871,786	Nov. 26	3417	840	131	955
Coster, Henry P., Shabbona, Ill. Automatic cut-off	872,170	Nov. 26	4264	1017-18	131	1063

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Coughlin, Joseph D., assignor to F. McGrath, Boston, Mass. Device for wrapping packages	871,985	Nov. 26	3876	937	131	1022
Covert Manufacturing Company. (See Baxter, John B., assignor.)						
Crocker, Ernest B. (See Blanchard and Crocker.)						
Crompton & Knowles Loom Works. (See Gordon, Albert A., Jr., assignor.)						
Crompton & Knowles Loom Works. (See Ryon, Epps H., assignor.)						
Crompton & Knowles Loom Works. (See Wattie, William, assignor.)						
Crosby Steam Gage and Valve Company. (See Wolfe, Frank L., assignor.)						
Cunningham, Thomas, *et al.* (See Mongrain, Edward, assignor.)						
Curtis, Augustus D., Chicago, Ill. Reflector	871,915	Nov. 26	3698	902	131	998
Cutler-Hammer Manufacturing Company. (See Wiegand, Henry J., assignor.)						
D'La Monte, Cascions H., assignor, by mesne assignments, to International Speed Register Co., Philadelphia, Pa. Speed-recording instrument	872,186	Nov. 26	4291	1025-6	131	1068
Dalén, Gustaf, Stockholm, Sweden. Elastic-fluid turbine	872,055	Nov. 26	4042	968-9	131	1045
Danquard, Thomas, assignor to Autopiano Company, New York, N. Y. Narrow-music-sheet attachment for musical instruments	871,787	Nov. 26	3418	840	131	955
Danquard, Thomas, assignor to Autopiano Company, New York, N. Y. Modulating attachment for automatic musical instruments	871,788	Nov. 26	3420	840-1	131	955
Darley, John W., Jr., assignor to Wm. Knabe & Co. Manufacturing Company of Baltimore City, Baltimore, Md. Combined manually and mechanically operated piano	871,916	Nov. 26	3699	902-3	131	998
Darley, John W., Jr., assignor to Wm. Knabe & Co. Manufacturing Company of Baltimore City, Baltimore, Md. Combined manually and mechanically operated piano	871,917	Nov. 26	3706	904	131	999
Darley, John W., Jr., assignor to Wm. Knabe & Co. Manufacturing Company of Baltimore City, Baltimore, Md. Combined manually and mechanically operated piano	871,918	Nov. 26	3711	904-5	131	999
Darley, John W., Jr., assignor to Wm. Knabe & Co. Manufacturing Company of Baltimore City, Baltimore, Md. Combined manually and mechanically operated piano	871,919	Nov. 26	3717	905-6	131	1000
Darley, John W., Jr., assignor to Wm. Knabe & Co. Manufacturing Company of Baltimore City, Baltimore, Md. Piano-action frame	872,292	Nov. 26	4505	1069-70	131	1121
Davis, Joseph H., Winfield, Ala. Locomotive-tender	872,277	Nov. 26	4476	1063	131	1117
De Laval Separator Company. (See McLeod, Kenneth K., assignor.)						
Dean Electric Company. (See Dean, William W., assignor.)						
Dean, Harry J., Meadville, Pa. Locomotive-pilot	871,789	Nov. 26	3423	841	131	956
Dean, William W., assignor to Dean Electric Company, Elyria, Ohio. Means for protecting operators' ringing leads	872,171	Nov. 26	4265	1018	131	1063
Dean, William W., assignor to Dean Electric Company, Elyria, Ohio. Ringing device for telephone-exchanges	872,293	Nov. 26	4508	1070	131	1122
Derby, Albert J., Honolulu, Hawaii. Loading apparatus	872,278	Nov. 26	4477	1064	131	1117
Dick, Ralph C., St. Louis, Mo. Electric guest-calling clock	872,224	Nov. 26	4390	1043-4	131	1101
Dickson, John F., Binghamton, N. Y. Paint and varnish remover	871,790	Nov. 26	3425	.....	131	956
Diescher, August P., Pittsburg, Pa. Rerolling rails	872,056	Nov. 26	4043	969	131	1045
Dill, Harry E., administrator. (See Grimes, Charles D.)						
Dittman, William C. (See Dunning, Samuel W., assignor.)						
Dixie Match Company. (See Parker, William H., assignor.)						
Doty, Charles H., assignor to Kilbourne and Jacobs Manufacturing Company, Columbus, Ohio. Dump-car	872,057	Nov. 26	4045	969	131	1046
Dow, Wallace L., Sioux Falls, S. D. Building-block	872,111	Nov. 26	4152	993	131	1064
Downey, Barton S., Kokomo, Ind. Yoke for wire-carrying hooks	872,112	Nov. 26	4153	994	131	1064
Doyle, Percival F. (See Thompson, Mackie, and Doyle.)						
Duffy, Thomas I., assignor to Voigtman and Company, Chicago, Ill. Metal-sheathed paneled partition	872,058	Nov. 26	4048	970	131	1046
Dumas, George, Walhalla, N. D. Whip-socket	872,059	Nov. 26	4050	970-1	131	1046
Dunning, Samuel W., assignor of one-half to W. C. Dittman, Milwaukee, Wis. Sifter for ashes, &c.	871,862	Nov. 26	3600	880	131	981
Durham, Richard T., Richmond, Va. Grocer's cabinet	872,225	Nov. 26	4392	1044	131	1102
Dusenbury, William H., New York, N. Y. Dog-muzzle	872,279	Nov. 26	4484	1065	131	1118
E. W. Bliss Company. (See Beyer, Otto S., assignor.)						
Edgerton, Chauncey T., Richmond Hill, and W. J. Golden, Oswego, N. Y. Spring	872,226	Nov. 26	4393	1044-5	131	1102
Edwards, Richard J., Galena, Ill. Scraper attachment for shovels	871,986	Nov. 26	3877	937	131	1022
Edwin Harrington, Son & Co. (See Coes and Scott, assignors.)						
Ellis, George H., St. Paul, Minn., assignor to International Flax Twine Company. Feeding mechanism for flax-breakers	871,863	Nov. 26	3602	880-1	131	982
Elterich, Isabel I., Freeport, N. Y. Shield for ladies' drawers	872,172	Nov. 26	4267	1018	131	1063
Enders, William F., Oakland, Cal. Type-writer ribbon attachment	872,113	Nov. 26	4154	994	131	1064
Engi, Gadient, assignor to Firm of Society of Chemical Industry in Basle, Basel, Switzerland. Stable hydrosulfite preparation and making same	872,114	Nov. 26	4155	.....	131	1064
Engi, Gadient, assignor to Firm of Society of Chemical Industry in Basle, Basel, Switzerland. Mixed chlorobromo derivatives of indigo and making same	872,115	Nov. 26	4157	.....	131	1065
Engi, Gadient, assignor to Firm of Society of Chemical Industry in Basle, Basel, Switzerland. Green vat-dye and making same	872,227	Nov. 26	4395	.....	131	1102
Engi, Gadient, assignor to Firm of Society of Chemical Industry in Basle, Basel, Switzerland. Monochloromonobromo derivative of indigo and making same	872,280	Nov. 26	4485	.....	131	1118
English, Analdo M., Boston, Mass., assignor to Manufacturers Machine Company, Montclair, N. J. Sole rounding and channeling machine	871,987	Nov. 26	3878	937-9	131	1022
Faber, Richard. (See Westphal, Heinrich, assignor.)	871,920	Nov. 26	3723	906	131	1000
Falkenhainer, Arthur, St. Louis, Mo. Vehicle-spring	871,988	Nov. 26	3892	939	131	1022
Farbwerke, vorm. Meister, Lucius & Brüning. (See Schmidt, Albrecht, assignor.)	871,864	Nov. 26	3606	881	131	982
Fay, Alpheus, assignor of one-half to S. E. Rawlings, Louisville, Ky. Bread-mixer	871,865	Nov. 26	3607	881	131	982
Feazell, Frank and H. Thompson, Winnfield, La. Sprinting-spring	872,116	Nov. 26	4158	994	131	1065
Felter, Augustus J., assignor of one-half to W. F. Shedd, Grand Rapids, Mich. Measuring apparatus	871,791	Nov. 26	3426	841	131	956
Ferguson, Charles H., Jersey City, N. J. Fluid-pressure-brake apparatus	871,921	Nov. 26	3724	907	131	1001
Fidler, Homer D., Muncie, Ind. Sand-line reel for deep-well-drilling machinery	871,922	Nov. 26	3725	907	131	1001
Fish, Joseph F., assignor of one-half to E. B. Reith, Chicago, Ill. Nut-lock	872,060	Nov. 26	4052	971	131	1047
Fisher, Hurley A. and J. P., Charleston, assignors to O. J. Morrison, Ripley, W. Va. Nut-lock	872,173	Nov. 26	4268	1019	131	1064
Fisher, James P. (See Fisher, Hurley A. and J. P.)	871,792	Nov. 26	3427	842	131	956
Fitzgibbon, John J., St. Louis, Mo. Boot for draft-animals	871,793	Nov. 26	3429	842	131	957
Flax, George. (See Morrey, Edward, assignor.)	872,281	Nov. 26	4486	1065	131	1118
Forsberg, Erik A., assignor to Aktiebolaget Separator, Stockholm, Sweden. Centrifugal liquid-separator	871,866	Nov. 26	3608	881	131	982
Francke, William J., Bridgeport, Conn. Turbine-engine	872,174	Nov. 26	4269	1019-20	131	1064
Frank, Charles. (See Johnson, Charles, assignor.)	871,867	Nov. 26	3611	882	131	983
French, James B., Chicago, Ill. Illuminating-tile						
French, Joseph, Woonsocket, R. I., assignor of one-half to Sewing Machines Supplies Company, Boston, Mass. Inking device for stamping and numbering machines						
Friedman, Bernhard Z., assignor to I. Blackman, Fort Worth, Tex. Hair-spring locator						
Frink, Miles T. (See McGregor, Allan L. and D., assignors.)						
Fyock, Ralph M., and S. Stone, Butler, Pa. Automatic train-pipe coupling						
Galloway, William, assignor to William Galloway Company, Waterloo, Iowa. Manure-spreader						

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Galloway, William, assignor to William Galloway Company, Waterloo, Iowa. Tire-cleat for traction-wheels	871,868	Nov. 26	3612	882	131	983
Galwey, John D., Dublin, Ireland, assignor to E. Schreier, London, England. Arrangement for giving movement to automatic numbering mechanisms for printing-machines	871,923	Nov. 26	3726	907	131	1001
Gardner, Sidney H., Bellingham, Wash. Level	871,924	Nov. 26	3729	908	131	1001
Garst, Dudley. (See Litchfield and Garst.)						
Gates, Horatio, Worcester, Mass. Bottle-guide for labeling-machines	871,794	Nov. 26	3431	842	131	957
Gates, John W., Los Angeles, Cal. Animal-trap	871,989	Nov. 26	3893	939	131	1023
Gates, Silas E., Bigtimber, Mont. Halter	871,925	Nov. 26	3730	908	131	1002
Gathmann, Emil. (See Gathmann, Louis, assignor.)						
Gathmann, Louis, Washington, D. C., assignor of one-fourth to E. Gathmann, Bethlehem, Pa. Air-propeller for flying-machines	871,926	Nov. 26	3731	909	131	1002
Geb, George F., Franklin, Mass. Expansion-pulley	872,282	Nov. 26	4489	1065	131	1118
Gedeon, John, Jr., Cleveland, Ohio. Hot-water heater	871,927	Nov. 26	3733	909–10	131	1002
Geizenlichter, John, Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J. Buffing-machine	871,990	Nov. 26	3895	939–40	131	1023
Gentry, Oliver H., Langley, S. C. Wrench	872,117	Nov. 26	4162	995	131	1065
Ghegan, John J., Newark, N. J. Quadruplex-telegraph system	872,228	Nov. 26	4306	1045	131	1102
Gifford, Arthur L., assignor of one-half to L. L. Lewis, Oil City, Pa. Soldering-iron	872,229	Nov. 26	4307	1045	131	1103
Gilbert, Henry J., Saginaw, Mich. Bushing	871,928	Nov. 26	3734	910	131	1002
Gilbough, Benjamin G. (See Miller and Gilbough.)						
Giles, John S., Chicago, Ill. Hermetic closure for receptacles	872,118	Nov. 26	4163	995	131	1065
Glass, Perley R., Boston, Mass., assignor to Manufacturers Machine Company, Montclair, N. J. Staple-tacker	871,991	Nov. 26	3899	940–2	131	1023
Glazier, Harold P., assignor to Glazier Stove Company, Chelsea, Mich. Hydrocarbon-burner	871,992	Nov. 26	3905	942	131	1024
Glazier Stove Company. (See Glazier, Harold P., assignor.)						
Glossinger, John. (See Johnson, Oscar L., assignor.)						
Goetze, Otto. (See Van Buggenhoudt, René, assignor.)						
Golden, Welford J. (See Edgerton and Golden.)						
Goldsborough, Richard H., Washington, D. C. Power system	871,993	Nov. 26	3906	942–3	131	1024
Goodridge, Gilbert W., assignor to Bryant Electric Company, Bridgeport, Conn. Incandescent-lamp socket	872,283	Nov. 26	4490	1066	131	1118
Gordon, Albert A., Jr., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Take-up mechanism for looms	872,061	Nov. 26	4053	971	131	1047
Gordon, Orin L., Robinson, Ill. Scale	872,119	Nov. 26	4166	995	131	1066
Gordon, William W., Washington, D. C. Means for operating cocks or valves	871,869	Nov. 26	3613	882	131	983
Grant, George, and W. T. Newton, New Orleans, La. Sawmill log-dog	871,795	Nov. 26	3434	843	131	957
Gray, Henry M., Duffield, England. Chain	871,796	Nov. 26	3435	843	131	958
Gray, John G., Philadelphia, Pa. Optical instrument	872,120	Nov. 26	4168	996	131	1066
Green, Gustavus, assignor of one-half to F. P. C. Hope and J. Miller, Bexhill, county of Sussex, England. Cooling system for internal-combustion engines	871,797	Nov. 26	3436	843–4	131	958
Greenlaw Manufacturing Co. (See Greenlaw, Warren A., assignor.)						
Greenlaw, Warren A., Melrose, assignor to Greenlaw Manufacturing Co., Boston, Mass. Flexible pipe-joint	872,121	Nov. 26	4171	996	131	1066
Griesser, Wilhelm, Joplin, Mo., assignor to Brewery Equipment & Supply Co., New York, N. Y. Cooling apparatus	872,175	Nov. 26	4272	1020–1	131	1085
Grimes, Charles D., deceased, Dayton, Ohio.; H. E. Dill, administrator. Machine for forming and applying wire balls to paper boxes	872,176	Nov. 26	4274	1021–2	131	1085
Guerin, James, Philadelphia, Pa. Ash-sifter	871,929	Nov. 26	3736	910	131	1003
Guild, David S., Sr., *et al.* (See Guild, George R., assignor.)						
Guild, George R., U. S. Army, assignor of one-third to D. S. Guild, Sr., and E. J. Reuther, Nahant, S. D. Bedding-roll	872,122	Nov. 26	4172	997	131	1067
Gustafson, Axel R., Chicago, Ill. Ironing-machine	872,123	Nov. 26	4174	997–8	131	1067
H. Adler Company. (See Adler, Henry, assignor.)						
Hagstrom Bros. Manufacturing Company. (See Hagstrom, Gustaf and E., assignors.)						
Hagstrom, Emanuel. (See Hagstrom, Gustaf and E.)						
Hagstrom, Gustaf and E., assignors to Hagstrom Bros. Manufacturing Company, Lindsborg, Kans. Patch for pneumatic tires	871,930	Nov. 26	3737	910	131	1003
Haley, Thomas S., West Haven, Conn. Button-loop	872,230	Nov. 26	4309	1045	131	1103
Hambruch, Heinrich F., assignor of three-fourths to Firm of Biberfeld & Co., Hamburg, Germany. Sausage-stuffer	872,231	Nov. 26	4309	1046	131	1103
Hambruch, Heinrich F., assignor of three-fourths to Firm of Biberfeld & Co., Hamburg, Germany. Sausage-stuffer	872,294	Nov. 26	4511	1070	131	1122
Hamilton, William T. (See Reisner, Swartz, and Hamilton.)						
Hammarén, Thure F., Koetzschenbroda, near Dresden, Germany. Bicycle and motor-bicycle saddle	872,124	Nov. 26	4178	998	131	1068
Hammerstein, Oscar, New York, N. Y. Cigar-bunch-rolling machine	872,125	Nov. 26	4179	998–9	131	1068
Hammerstein, Oscar, New York, N. Y. Cigar-bunch-forming apparatus	872,177	Nov. 26	4280	1023	131	1086
Hansen, John M., Pittsburg, Pa. Apparatus for tempering and annealing car-wheels	871,931	Nov. 26	3738	911	131	1003
Hansen, Rasmus, assignor of one-half to A. M. Belfield, Chicago, Ill. Transmitter	871,932	Nov. 26	3740	911	131	1003
Harbert, Curtis, Smethport, Pa. Siphon-skimmer	872,284	Nov. 26	4491	1066	131	1119
Harker, John E., Milford, Iowa. Sight for firearms	872,232	Nov. 26	4402	1046	131	1103
Harpold, Otto, Rosedale, Ind. Railway-switch	871,933	Nov. 26	3742	911	131	1004
Harris, Carl C., Orange, Mass. Tool-post	872,178	Nov. 26	4281	1023	131	1086
Harrison, Charles, New York, N. Y., assignor to S. F. Hayward & Company. Life-net	871,798	Nov. 26	3437	844	131	958
Hart, Henry G., Mount Vernon, N. Y. Massage implement	871,870	Nov. 26	3615	883	131	984
Hartness, James, Springfield, Vt. Engine-lathe	872,126	Nov. 26	4181	999	131	1069
Haugland, John. (See Jacobson and Haugland.)	872,233	Nov. 26	4403	1046	131	1104
Havemeyer, John F., Ardsley-on-Hudson, N. Y. Reinforcing means for composite structures	872,127	Nov. 26	4182	999	131	1069
Hawekotte, Harry G. (See Potter, Joseph L., assignor.)						
Hawthorne, Jean, New York, N. Y. Cleansing metal	871,994	Nov. 26	3909	.....	131	1025
Haynes-Langenberg Manufacturing Company. (See Kitching, William, assignor.)						
Hedstrom, Carl O., Springfield, Mass. Motor-cycle	871,995	Nov. 26	3910	943	131	1025
Heeter, Charles M., Butler, Pa. Well-drilling apparatus	872,128	Nov. 26	4184	1000	131	1069
Heffley, Robert A., Denver, Colo. Water-heater	872,129	Nov. 26	4186	1000	131	1070
Hegeman, Benjamin A., Jr. (See Hillman, Edward D., assignor.)						
Helgeson, Halvor T., Regina, Saskatchewan, Canada. Grain cleaning and pickling machine	872,130	Nov. 26	4189	1000–1	131	1070
Henderson, Carl. (See McCain and Henderson.)						
Henderson, George A., Stephenville, Tex. Combined educational chart, drawing-board, and writing-desk	871,934	Nov. 26	3743	911–12	131	1004
Henry, Thomas C., Montgomery, La. Rotary engine	872,234	Nov. 26	4405	1047	131	1104
Hensel, John G., Chicago, Ill. Artificial bait	871,935	Nov. 26	3744	912	131	1004
Herrmann, Ernest, assignor to Compagnie Internationale La Norgine, Paris, France. Obtaining a soluble glutinous substance from tang-acid	872,179	Nov. 26	4283	1023	131	1086

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Hilliard Clutch & Machinery Company. (See Hilliard, William J., assignor.)						
Hilliard, William J., assignor to Hilliard Clutch & Machinery Company, Elmira, N. Y. Friction-clutch	872,062	Nov. 26	4056	972	131	1047
Hillman, Edward D., Larchmont Manor, N. Y., assignor to B. A. Hegeman, Jr., North Plainfield, N. J. Warning-post for railway equipment	871,936	Nov. 26	3744	912	131	1004
Himmel, Joseph, Jamaica Plain, Mass. Collapsible clothes-horse	872,235	Nov. 26	4406	1047	131	1104
Hirschman, Frank H., Indianapolis, Ind. Mattress	871,871	Nov. 26	3617	883	131	984
Hite, Frank E., Owensboro, Ky. Cotter-pin	872,180	Nov. 26	4284	1024	131	1087
Hixson, John L., and C. W. Powell, Ypsilanti, Mich. Tire-setting machine for rubber tires	872,295	Nov. 26	4512	1070	131	1122
Hollenbeck, Elijah A., Funk, Nebr. Corn harvesting and husking machine	872,285	Nov. 26	4492	1066–7	131	1119
Holliday, Joseph C. (See Rooney, Frank E., assignor.)						
Hollis, Henry L., Chicago, Ill. Supporting and conveying apparatus	872,063	Nov. 26	4057	972	131	1048
Holman, Leslie A., Rochester, assignor to W. P. Randall, Leroy, N. Y. Feeding apparatus for cables, strands, and the like	872,064	Nov. 26	4061	973	131	1048
Hooker, William C. (See Armstrong, Hooker, and Marks.)						
Hope, Francis P. C., *et al.* (See Green, Gustavus, assignor.)						
Hoskins, Nathaniel W., Almond, assignor of one-half to W. H. Rice, Plainfield, Wis. Spool-stand	872,296	Nov. 26	4514	1071	131	1122
Howard, Clarence H. and C. T., Westlake, assignors to Cast Steel Platform Company, St. Louis, Mo. Car-underframe	871,799	Nov. 26	3439	844	131	958
Hubbell, Harvey, Bridgeport, Conn. Incandescent-lamp cluster	872,065	Nov. 26	4063	973	131	1048
Huff, Elbridge, Jr., Brooklyn, N. Y. Building	872,236	Nov. 26	4408	1048	131	1105
Hugh Lyons and Company. (See Lyons, Arthur E., assignor.)						
Hughes Eyelet Company. (See Hughes, William, assignor.)						
Hughes, William, assignor to Hughes Eyelet Company, Taunton, Mass. Eyelet	872,237	Nov. 26	4409	1048	131	110
Hulsing, Garrett H., assignor to Porter Safety Seal Co., Chicago, Ill. Seal	871,872	Nov. 26	3616	883	131	984
Hutchison, Robert B., Pittsburg, Pa. Surface-cleaning machine	871,937	Nov. 26	3746	912–13	131	1004
Immerheiser, Carl, assignor to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Making red lakes	872,181	Nov. 26	4285	.....	131	1087
International Flax Twine Company. (See Ellis, George H., assignor.)						
International Harvester Company. (See Pearson, Charles, assignor.)						
International Speed Register Co. (See D'La Monte, Cascious M., assignor.)						
Inwood, Richard G., and P. C. Lavenberg, assignors to National Wire Bound Box Company, South Bend, Ind. Box. (Reissue)	12,725	Nov. 26	4566	1080	131	1131
Jackson, Fred W., Heartwell, Nebr. Combination-tool	872,066	Nov. 26	4065	973–4	131	1049
Jackson, Grove C., Kingwood, W. Va. Earth-drill	871,800	Nov. 26	3441	845	131	959
Jackson, Ralph H., Rochester, N. Y. Meat-tag	872,238	Nov. 26	4410	1048	131	1105
Jacobs, Fred D., Paw Paw, Mich. Car-ventilating system	871,938	Nov. 26	3748	913	131	1005
Jacobson, Jacob, and J. Haugland, Brooklyn, N. Y. Measuring instrument	871,996	Nov. 26	3912	943	131	1025
Jahns, Robert H., Naco, Ariz. Ter. Cord-knotter	872,182	Nov. 26	4286	1024	131	1087
Jantzen, James W., Lowell, Mass. Feed-water heater	871,801	Nov. 26	3443	845–6	131	959
Jehin, Victor J. (See Treffière and Jehin.)						
Jenning, Gustav A., East St. Louis, Ill. Leveling instrument	872,183	Nov. 26	4287	1024	131	1087
Jennings, Fred F., Kansas, Ill. Tug-loop	872,067	Nov. 26	4066	974	131	1049
Jewett, John C., and J. L. Bowen, San Francisco, Cal. Milk-cooling apparatus	872,286	Nov. 26	4495	1067	131	1119
Johnson, Alexander F. J., London, England. Marine torch	871,997	Nov. 26	3914	944	131	1026
Johnson, Charles, Auburn, assignor of one-half to C. Frank, Newark Valley, N. Y. Change-speed gearing	872,131	Nov. 26	4192	1001	131	1071
Johnson, Henry J., and T. J. Larkin, Lowell, Mass. Market-box display-case	871,802	Nov. 26	3446	846	131	960
Johnson, Martin. (See Smith and Johnson.)						
Johnson, Oscar L., assignor of one-half to J. Glossinger, Chicago, Ill. Cigar-moistener	872,068	Nov. 26	4067	975	131	1049
Johnston, Thomas A., Chadron, Nebr. Rod-packing	872,132	Nov. 26	4194	1002	131	1071
Keil, Henry F., Bronxville, N. Y. Door check or bumper	872,184	Nov. 26	4290	1025	131	1088
Keil, Henry F., Bronxville, N. Y. Door check or bumper	872,185	Nov. 26	4290	1025	131	1088
Kelly, Henry P., Shelton, Conn. Refrigerator-alarm	871,873	Nov. 26	3619	883	131	985
Kendall, Frank, Grant Park, Ill. Salt-shaker	871,803	Nov. 26	3447	846	131	960
Kesner, Jacob L., Chicago, Ill. Savings-bank	871,874	Nov. 26	3621	884	131	985
Kiffe, Henry. (See Chittenden, Ward B., assignor.)						
Kilbourne and Jacobs Manufacturing Company. (See Doty, Charles H., assignor.)						
Kimman, Henry J., Cleveland, Ohio, assignor to Chicago Pneumatic Tool Company. Portable pneumatic drill	871,939	Nov. 26	3750	913–15	131	1005
King, Thomas J. (See Barrow and King.)						
Kingsbury, Harry T., Keene, N. H. Toy swing	872,069	Nov. 26	4069	975	131	1050
Kinnell, George N., Pittsfield, Mass. Overshoe for horses	872,287	Nov. 26	4496	1067	131	1120
Kinney, Justus R., Dorchester, Mass. Rotary motor	872,133	Nov. 26	4195	1002	131	1071
Kirk, Robert H., assignor to "Long Arm" System Company, Cleveland, Ohio. Apparatus for electrically operating water-tight bulkhead-doors	871,804	Nov. 26	3448	846–9	131	960
Kirkegaard, Georg, New York, N. Y. Bottle-capping machine	871,998	Nov. 26	3917	944	131	1026
Kitching, William, Joplin, assignor to Haynes-Langenberg Manufacturing Company, St. Louis, Mo. Gas-burner	872,134	Nov. 26	4196	1002–3	131	1071
Kline, John M., Chicago, Ill. Popcorn-buttering device	872,239	Nov. 26	4412	1048	131	1105
Knabe, Ernest J., Jr. (See Sandlas, Henry J., assignor.)						
Knapp, William W., *et al.* (See Phillips, Charles E., assignor.)						
Koch, Adolph, Pasadena, Cal. Liquid-cooling device	871,940	Nov. 26	3761	915	131	1005
Kohn, Louis, Chicago, Ill. Mainspring-winder	872,135	Nov. 26	4198	1003	131	1071
Koons, John H., Anderson, Ind. Liquid-fuel burner	872,288	Nov. 26	4498	1068	131	1120
Kraft, Edmund G., Somerville, N. J. Carrier and elevator	872,136	Nov. 26	4201	1003	131	1072
Krause, Hugo C., assignor of one-third to C. T. Brown, Chicago, Ill. Garment-holder	872,297	Nov. 26	4515	1071	131	1123
Krell, Albert. (See Welin, Peter, assignor.)						
Krentler-Arnold Hinge Last Company. (See Pym, Charles F., assignor.)						
Kvam, Sigvart, Minneapolis, Minn. Husking-glove	871,805	Nov. 26	3465	849	131	961
Lamson Consolidated Store Service Company. (See Amsden, George A., assignor.)						
Lancaster, John D., Lorena, Tex. Planter	871,941	Nov. 26	3763	916	131	1006
Lange, August, Scribner, Nebr. Draft-equalizer	872,240	Nov. 26	4413	1049	131	1106
Lanning, Charles D., Dorchester, Mass. Stop-motion for looms	871,875	Nov. 26	3622	884–5	131	985
Larkin, Thomas J. (See Johnson and Larkin.)						
Lauferty, David E., Fort Wayne, Ind. Glove	872,137	Nov. 26	4202	1004	131	1072
Lavenberg, Perry C. (See Inwood and Lavenberg.) (Reissue.)	871,876	Nov. 26	3630	885	131	986
Law, Prentis E., Wilmette, Ill. Lavatory	871,942	Nov. 26	3764	916	131	1006
Leavitt, John E., Boston, Mass., assignor to Manufacturers Machine Company, Montclair, N. J. Buffing-machine	872,070	Nov. 26	4071	975–6	131	1050
Lederer, Joseph, New York, N. Y. Inverted gas-burner	871,806	Nov. 26	3466	850	131	961
Leep, Jeremiah G., Vevay, Ind. Implement for cutting grass	871,807	Nov. 26	3467	850	131	961
Lehman, Jay E., Canton, Ohio. Rotary engine	872,288	Nov. 26	4517	1071–2	131	1123
Leonard, Harry W., Bronxville, N. Y. Means for automatically controlling electric motors	872,289	Nov. 26	4499	1068	131	1120
Lewis, Edward D., Elmira, N. Y., assignor to Lewis Motor & Crane Company. Controlling mechanism for electric motors						

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Lewis, Lester L. (See Gifford, Arthur L., assignor.)						
Lewis Motor & Crane Company. (See Lewis, Edward D., assignor.)						
Lipps, Emory J., and F. Ott, South Bethlehem, Pa. Thread-finishing machine	871,999	Nov. 26	3919	945	131	1027
Litchfield, Edgar C., and D. Garst, assignors to Litchfield Manufacturing Company, Waterloo, Iowa. Manure-spreader	872,000	Nov. 26	3922	945	131	1027
Litchfield Manufacturing Company. (See Litchfield and Garst, assignors.)						
Little, James W., Deertrail, Wash. Quick-drop mechanism	872,071	Nov. 26	4073	976	131	1051
Livingston, Walter, Hastings, Nebr. Grave construction	872,241	Nov. 26	4414	1049	131	1106
"Long Arm" System Company. (See Kirk, Robert H., assignor.)						
Lorant, Alois, Budapest, Austria-Hungary. Design-drafting machine	871,808	Nov. 26	3471	850	131	962
Lorentzen, Wilhelm F., Habana, Cuba. Steam cooking apparatus	872,242	Nov. 26	4417	1049	131	1106
Luke, David F., Blakeslee, assignor of one-half to O. H. Nihart, Edon, Ohio. Scaffold-support	872,187	Nov. 26	4298	1026	131	1068
Luna, Manuel F., Saltillo, Mexico. Match-box	872,243	Nov. 26	4418	1050	131	1106
Lundin, Richard. (See Anderson and Lundin.)						
Lusk, James G., Newcastle, New South Wales, Australia. Tube-cutter	872,290	Nov. 26	4502	1068	131	1121
Lyman, Frank J., Minot, N. D. Spark-destroyer for smoke-stacks	872,072	Nov. 26	4075	977	131	1051
Lyman, Otis W., *et al.* (See Mentzer, Claude E., assignor.)						
Lynch, John M., assignor of one-half to G. A. Morgan, Erie, Pa. Feed-water distributing-pan mechanism	872,299	Nov. 26	4525	1072	131	1123
Lyons, Arthur E., assignor to Hugh Lyons and Company, Lansing, Mich. Display-case	871,877	Nov. 26	3631	885	131	986
MacGahan, Paul, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Electrical measuring instrument	872,300	Nov. 26	4527	1072	131	1124
MacGregor, John G., Goderich, Ontario, Canada. Gravity filtration plant	872,073	Nov. 26	4076	977	131	1051
Mackie, Edwin M. (See Thompson, Mackie, and Doyle.)						
Manning, Bowman & Co. (See Savage and Marchesseault, assignors.)						
Manufacturers Machine Company. (See English, Analdo M., assignor.)						
Manufacturers Machine Company. (See Gelzenlichter, John, assignor.)						
Manufacturers Machine Company. (See Glass, Perley R., assignor.)						
Manufacturers Machine Company. (See Leavitt, John E., assignor.)						
Manufacturers Machine Company. (See Stewart, George F., assignor.)						
Manufacturers Machine Company. (See Stewart, William C., assignor.)						
Marchesseault, Joseph R. (See Savage and Marchesseault.)						
Marks, Knox R. (See Armstrong, Hooker, and Marks.)						
Marks, Knox R., Abingdon, Ill. Animal-trap	871,809	Nov. 26	3473	851	131	962
Marsh, Wilbur W. (See Morgan, Thomas W., assignor.)						
Marsh, Wilbur W., Waterloo, Iowa. Liner for centrifugal cream-separators	871,878	Nov. 26	3632	885	131	986
Mascart, Charles, Paris, France. Cab-fare indicator	872,188	Nov. 26	4298	1026	131	1069
Massie, John D., Belleville, Ill. Hose-coupling	872,001	Nov. 26	3923	946	131	1027
Matlak, Anton, K. Wisniewski, and M. Skiklewicz, Chicago, Ill. Mail receiver and deliverer for railway-trains	872,301	Nov. 26	4529	1073	131	1124
Mattman, Emil, Norwood, Ohio, assignor to Bullock Electric Manufacturing Company. Belt-tightener	871,943	Nov. 26	3767	916–17	131	1007
Mayer, Heinrich, assignor to Firm of A. Saurer, Arbon, Switzerland. Valve-gear	872,138	Nov. 26	4203	1004	131	1072
McCain, Cyrus A., and C. Henderson, Chicago, Ill. Printing-press	872,004	Nov. 26	3927	947	131	1028
McConney, Robert B. (See Buckingham, Charles L., assignor.)						
McCormick, Charles H., Jersey City, N. J. Cutting attachment for paper-making machines	872,248	Nov. 26	4424	1051	131	1108
McCullough, Henry L., Cropsey, Ill. Pump-lubricator	872,249	Nov. 26	4426	1052	131	1108
McCullough, Paul J., St. Louis, Mo. Ball-bearing	871,949	Nov. 26	3778	918	131	1009
McCullough, Peter A., Pittsburg, Pa. Automatically-opening valve	872,005	Nov. 26	3930	947	131	1028
McCullough, William C., Bucyrus, Ohio. Pneumatic cushion	871,811	Nov. 26	3477	852	131	963
McCusker, Peter, Galesburg, Ill. Burner for explosion-engines	871,883	Nov. 26	3642	888	131	988
McGrath, Frederick. (See Coughlin, Joseph D., assignor.)						
McGregor, Allan L. and D., assignors to M. T. Frink, Duluth, Minn. Evener for vehicles	872,006	Nov. 26	3932	947	131	1029
McGregor, Duncan. (See McGregor, Allan L. and D.)						
McIntyre, James J., Ironton, Ohio. Gas-lamp	871,950	Nov. 26	3780	919	131	1009
McLauthlin, Martin B., Malden, Mass. Controlling mechanism for electric motors	872,143	Nov. 26	4214	1006	131	1074
McLeod, Kenneth K., White Bear Lake, Minn., assignor, by mesne assignments, to De Laval Separator Company, New York, N. Y. Journal-support for centrifugal machines	872,078	Nov. 26	4092	980	131	1053
McMahon, Michael, Toledo, Ohio. Printing apparatus	872,302	Nov. 26	4531	1073	131	1125
McNeill, Daniel, Glenorkney, Meadow Lea, Manitoba, Canada. Foundry drying-stove	871,812	Nov. 26	3478	852	131	963
McNutt, William H., assignor to Non-Explosive Safety Naphtha Container Company, New York, N. Y. Tank	871,813	Nov. 26	3478	852	131	963
Melchert, Carl, Lynch, Nebr. Yoke-fastener	872,244	Nov. 26	4419	1050	131	1107
Mentzer, Claude E., assignor to O. W. Lyman and I. Rude, Denver, Colo. Display-stand for hats	872,139	Nov. 26	4207	1004	131	1073
Mercer, Henry H., assignor to Sullivan Machinery Company, Claremont, N. H. Tool-holder for stone-working machines	871,944	Nov. 26	3770	917	131	1007
Mergenthaler Linotype Company. (See Converse, Francis B., Jr., assignor.)						
Merrick, Frank W., Boston, Mass. Lock-stitch sewing-machine	872,074	Nov. 26	4079	977–8	131	1052
Merriman, Robert M., Youngstown, Ohio. Tire	871,945	Nov. 26	3772	917	131	1008
Middleton, William E., Kansas City, Mo. Concrete wall or column construction	871,879	Nov. 26	3634	886	131	987
Mikulasek, John, Grove City, Pa. Water-vehicle	872,140	Nov. 26	4209	1005	131	1073
Miller, Burns S., Everett, Wash. Railway signaling device	872,002	Nov. 26	3924	946	131	1027
Miller, Joseph, *et al.* (See Green, Gustavus, assignor.)	872,075	Nov. 26	4062	978	131	1052
Miller, Sidney W., Chicago, Ill. Alternating siphon	872,076	Nov. 26	4086	978–9	131	1052
Milliken, Walter L. (See Shiek, Daniel W., assignor.)						
Millis, Jacob E. (See Stroh, Freeman W., assignor.)						
Mills Automatic Press Company. (See Brett, Henry E., assignor.)						
Mirfield, George E., Joliet, Ill. Combined speed indicator and recorder	871,946	Nov. 26	3773	917	131	1008
Mitchell, John H., New York, N. Y. Fire apparatus	871,880	Nov. 26	3635	886–7	131	987
Mongrain, Edward, assignor of one-half to T. Cunningham, East St. Louis, Ill., and C. P. Burgess, St. Louis, Mo. Machine for burring nuts	872,189	Nov. 26	4299	1026–7	131	1069
Montan, Adolf, and J. Scholm, Newark, N. J. Rotary explosive-engine	871,881	Nov. 26	3638	887	131	988
Moore, Harry G. (See Thomas and Moore.)						
Morgan, George, assignor to C. C. Carter, Los Angeles, Cal. Imitation brick facing	872,003	Nov. 26	3926	946	131	1028
Morgan, George A. (See Lynch, John M., assignor.)						
Morgan, Thomas W., assignor to W. W. Marsh, Waterloo, Iowa. Centrifugal cream-separator	871,882	Nov. 26	3641	887	131	988
Morrey, Edward, assignor of one-half to G. Flax, Paterson, N. J. Harness	872,245	Nov. 26	4420	1050	131	1107
Morris, Frank W., Victoria, British Columbia, Canada. Manufacture of white lead	871,947	Nov. 26	3775	918	131	1008
Morris, Frank W., Victoria, British Columbia, Canada. Manufacture of cyanid of potassium or sodium	871,948	Nov. 26	3777	918	131	1009
Morris, Roy H., and E. E. Townsend, Oakland, Cal. Fastening device for pneumatic-tire protectors	872,246	Nov. 26	4422	1051	131	1107
Morrison, O. J. (See Fisher, Hurley A. and J. P., assignors.)						
Morrison, Vaughn, Wessington Springs, S. D. Automatic stop for railway-trains	872,141	Nov. 26	4211	1005	131	1074

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Morton, George L., Sutton Coldfield, England. Producer-gas plant	871,810	Nov. 26	3475	851–2	131	962
Mosher, Asa H., Westfield, N. J. Rail-bond	872,142	Nov. 26	4212	1005	131	1074
Mosher, Charles D., New York, N. Y. Steam-boiler	872,077	Nov. 26	4090	979	131	1053
Moss, Augustus L., Sandusky, Ohio. Automobile-chair	872,247	Nov. 26	4423	1051	131	1108
Mueller, Edward V. (See Rohde and Mueller.)						
Müller, Heinrich J., Schaffhausen, Switzerland. Contrivance for inserting loose packets of tickets into ticket-compartments	872,190	Nov. 26	4302	1027	131	1090
Nagley, Andrew, Elmhurst, Pa. Hoof-spreading horseshoe	872,191	Nov. 26	4303	1027	131	1090
National Dump Car Company. (See Caswell, William A., assignor.)						
National Wire Bound Box Company. (See Inwood and Lavenberg, assignors.) (Reissue.)						
New System Bullet Company. (See Piatkowski, John, assignor.)						
Newton, Charles W., Kansas City, Mo. Measure	871,814	Nov. 26	3480	853	131	963
Newton, William T. (See Grant and Newton.)						
Nihart, Orrin H. (See Luke, David F., assignor.)						
Noetzel, Paul C., New York, assignor to Sweet, Orr & Company, Newburgh, N. Y. Trousers and belt fastener	871,884	Nov. 26	3643	888	131	988
Non-Explosive Safety Naphtha Container Company. (See McNutt, William H., assignor.)						
Nusser, Michael, New York, N. Y. Oven	872,144	Nov. 26	4217	1006	131	1075
Nye, Robert G., Oswego, N. Y. Lathe-dog	872,007	Nov. 26	3935	948	131	1029
Oakes, Francis J., New York, N. Y. Dyestuff and making same	872,250	Nov. 26	4430	.....	131	1109
Oettinger, Joseph, Missoula, Mont. Type-writer attachment	871,815	Nov. 26	3481	853	131	964
Olson, Martin A., Brainerd, Minn. Window-pane fastening	872,192	Nov. 26	4303	1027	131	1090
Olsson, Henry A., Brooklyn, N. Y. Filling-machine for bottle-caps	872,079	Nov. 26	4094	980	131	1054
Ontario Drill Company. (See Armitage and Thistlethwaite, assignors.)						
Orling, Axel, Upper Tooting, England. Electrocapillary apparatus	872,193	Nov. 26	4304	1028	131	1090
Oscar Barnett Foundry Company. (See Rosentreter, Albert J., assignor.)						
Osmer, John E., Chicago, Ill. Vise	871,816	Nov. 26	3482	853	131	964
Ostrander, Allen E., Paterson, N. J., assignor to American Car & Foundry Company, St. Louis, Mo. Seat and seat-back for railway rolling-stock	871,951	Nov. 26	3781	919	131	1010
Ott, Frederick. (See Lipps and Ott.)						
Oven, Frederick W. von, Aurora, Ill. Filter-press	872,008	Nov. 26	3936	948	131	1029
Page, Albert S., El Paso, Tex. Dump-car-operating mechanism	871,885	Nov. 26	3644	888–9	131	988
Palm, John V. O., Milwaukee, Wis. Suction-pump for cleaning systems	871,952	Nov. 26	3783	919	131	1010
Parker, Charles A. (See Parker, John C. and C. A.)						
Parker, John C., Brockport, and C. A. Parker, Poughkeepsie, N. Y. Hoopless barrel	871,817	Nov. 26	3484	854	131	964
Parker, William H., Passaic, N. J., assignor to Dixie Match Company, Memphis, Tenn. Match-dipping apparatus	871,818	Nov. 26	3485	854	131	964
Parry, David M. and T. H., assignors to Parry Manufacturing Company, Indianapolis, Ind. Reinforced corner for vehicle-bodies	871,886	Nov. 26	3646	889	131	898
Parry Manufacturing Company. (See Parry, David M. and T. H., assignors.)						
Parry, Thomas H. (See Parry, David M. and T. H.)						
Patterson, Alice C. (See Patterson, George L., assignor.)						
Patterson, Alice C. (See Raymond and Vetter, assignors.)						
Patterson, George L., assignor to A. C. Patterson, New York, N. Y. Protective shield for skeleton-frame belts	872,145	Nov. 26	4219	1006	131	1075
Patterson, George L., assignor to A. C. Patterson, New York, N. Y. Adjustment for contacts	872,146	Nov. 26	4220	1007	131	1075
Patterson, William L., assignor to Bausch & Lomb Optical Company, Rochester, N. Y. Projection apparatus	872,308	Nov. 26	4532	1074	131	1125
Paxton, Richard M., Washington, Pa. Glass-working apparatus	872,194	Nov. 26	4307	1028–9	131	1091
Payne, Henry S., Wheeling, W. Va. Locking coat, hat, and umbrella rack	872,147	Nov. 26	4220	1007	131	1076
Payne, James P., Delta, Colo. Box-making machine	872,195	Nov. 26	4312	1029–30	131	1091
Payson, Walter G. (See Saunders, Edward M., assignor.)						
Pearson, Charles, Chicago, Ill., assignor to International Harvester Company. Hay-rake	872,009	Nov. 26	3939	949	131	1030
Pederson, Rasmus, Parkersburg, Iowa. Wagon-loading device	871,887	Nov. 26	3647	889–90	131	989
Penny, James A. (See Sowash, William H., assignor.)						
Perry, Willard J., Weyauwega, Wis. Portable oven	871,819	Nov. 26	3487	854	131	965
Perry, William H., Concord, N. H. Chimney-flue cleaner	872,080	Nov. 26	4096	981	131	1054
Petersen, William. (See Schofield, Silas C., assignor.)						
Phillips, Charles E., assignor to W. W. Knapp and I. A. Phillips, Indianapolis, Ind. Stamp-canceling machine	872,010	Nov. 26	3941	949	131	1030
Phillips, George A., Marion, Ind. Meal-check system	872,011	Nov. 26	3945	950	131	1031
Phillips, Iva A., *et al.* (See Phillips, Charles E., assignor.)	872,012	Nov. 26	3946	950	131	1031
Phillips, William P., Boston, Mass. Oil-cup lubricator	872,304	Nov. 26	4534	1074	131	1125
Phillipson, Emil, New York, N. Y., assignor to Phillipson Valve Co. Valve	872,081	Nov. 26	4097	981	131	1054
Phillipson Valve Co. (See Phillipson, Emil, assignor.)						
Piatkowski, John, assignor to New System Bullet Company, Cleveland, Ohio. Bullet	872,196	Nov. 26	4317	1030–1	131	1092
Pierce, Erastus E., *et al.* (See Broad, William, assignor.)						
Pittman, Francis M., Logansport, Ind. Street-sweeper	871,888	Nov. 26	3651	890	131	990
Poluba, John. (See Szekeres, John, assignor.)						
Porter, Louis H., Rockdale, Tex. Clip	872,197	Nov. 26	4319	1031	131	1092
Porter Safety Seal Co. (See Huising, Garrett H., assignor.)						
Posey Automatic Switching Company. (See Posey, James A., assignor.)						
Posey, James A., Midlothian, assignor to Posey Automatic Switching Company, Dallas, Tex. Electric switching device	872,251	Nov. 26	4430	1052–3	131	1109
Potter, Joseph L., assignor to H. G. Hawekotte, Indianapolis, Ind. Electromagnetic power-generator	871,820	Nov. 26	3489	854–5	131	965
Potts, Clyde, Newark, N. J. Intermittent discharge tank or reservoir	872,013	Nov. 26	3949	950	131	1031
Powell, Charles W. (See Hixson and Powell.)	872,014	Nov. 26	3951	950	131	1032
Powis, Arthur H., Slindon, near Arundel, assignor of one-half to T. H. Roberts, Preston, England. Boot and shoe tree or expander	872,015	Nov. 26	3953	951	131	1032
Price, William G., New Castle, Pa. Bolster swing-damper	872,016	Nov. 26	3955	951	131	1032
Price, William G., New Castle, Pa. Bolster swing-damper	872,017	Nov. 26	3957	951	131	1032
Price, William G., New Castle, Pa. Truck-frame	872,198	Nov. 26	4321	1032	131	1092
Price, William G., New Castle, Pa. Truck	871,953	Nov. 26	3784	920	131	1010
Pullins, David C., Conway, assignor of one-half to J. C. and D. M. Chenault, Richmond, Ky. Wire-stretcher	872,082	Nov. 26	4098	981–2	131	1055
Pulster, Henry, assignor of one-half to W. Wilson, Philadelphia, Pa. Stop mechanism	872,305	Nov. 26	4536	1074–5	131	1126
Pulster, Henry, assignor of one-half to W. Wilson, Philadelphia, Pa. Stop mechanism	872,317	Nov. 26	4556	1078–9	131	1130
Pumberger, Georg, Eberschwang, Austria-Hungary. Working ship-locks	872,318	Nov. 26	4561	1079	131	1130
Purpura, Bartolomeo, Wheeling, W. Va. Illusory apparatus						
Pym, Charles F., Essex, Ontario, Canada, assignor to Krentler-Arnold Hinge Last Company, Detroit, Mich. Relasting-machine						
Pym, Charles F., Essex, Ontario, Canada, assignor to Krentler-Arnold Hinge Last Company, Detroit, Mich. Apparatus for relasting shoes						
Ralston Steel Car Company. (See Becker, Anton, assignor.)						
Randall, William P. (See Holman, Leslie A., assignor.)						
Rawlings, Samuel E. (See Fay, Alpheus, assignor.)						
Raymond, Nelson H., Brooklyn, and J. C. Vetter, Coney Island, assignors to A. C. Patterson, New York, N. Y. Electrotherapeutic apparatus	872,148	Nov. 26	4222	1007	131	1076

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Reare, Morley A., Los Angeles, Cal. Clamp	872,252	Nov. 26	4434	1053	131	1109
Rebman, Clarence M. (See Sanders, Rebman, and Sanders.)						
Rector, Alcorn, assignor to Rector Gas Lamp Company, New York, N. Y. Incandescent gas-lamp	871,954	Nov. 26	3787	920	131	1011
Rector Gas Lamp Company. (See Rector, Alcorn, assignor.)						
Reed, Adam, Los Angeles, Cal. Garbage-receptacle	871,955	Nov. 26	3789	920	131	1011
Reese, Henry O., Baltimore, Md. Self-attaching button	872,149	Nov. 26	4223	1008	131	1076
Reidy, Matthew J., Mechanicsville, Iowa. Harmonica	872,083	Nov. 26	4100	982	131	1055
Reisner, William H., S. C. Swartz, and W. T. Hamilton, Hagerstown, Md. Machine for applying binding-strips to books	871,821	Nov. 26	3492	855–6	131	966
Reith, E. B. (See Fish, Joseph F., assignor.)						
Remington and Sherman Company. (See Williams, James H., assignor.)						
Repp, Ephraim B., New Windsor, Md. Metal structure	872,018	Nov. 26	3958	952	131	1033
Reuther, Emil J., *et al.* (See Guild, George R., assignor.)						
Rhodes, Edgar, Scholes, near Leeds, England. Appliance for fixing and cutting off the upper or wearing portions of compound tramway-rails	871,822	Nov. 26	3496	856	131	966
Rice, Robert, assignor of one-half to G. Stroh, Detroit, Mich. Stop-cock	871,956	Nov. 26	3791	921	131	1011
Rice, William H. (See Hoskins, Nathaniel W., assignor.)						
Richter, Hans, assignor to Firm of Vereinigte Maschinenfabrik Augsburg und Maschinenbaugesellschaft Nürnberg, A. G., Nuremberg, Germany. Cylinder for gas-engines	872,306	Nov. 26	4539	1075	131	1126
Ridings, James E., Salina, Kans. Automatic magazine-hammer	872,150	Nov. 26	4224	1008	131	1076
Riehl, Henry E., New York, N. Y. Amusement apparatus	872,253	Nov. 26	4435	1053–4	131	1110
Rigg, Lauren D., Leon, Kans. Box or crate machine	871,957	Nov. 26	3792	921	131	1012
Roberts, Tom H. (See Powis, Arthur H., assignor.)						
Robinson, Henry M., Washington, D. C. Toy	871,823	Nov. 26	3498	856–7	131	966
Rodzonowski, Frank M., Chicago, Ill. Automatic sharpening and polishing machine	871,889	Nov. 26	3652	891	131	990
Roemer, Joseph, assignor to Roemer Reversible Lever Tong Company, Santa Maria, Cal. Pipe-wrench	871,958	Nov. 26	3794	921	131	1012
Roemer Reversible Lever Tong Company. (See Roemer, Joseph, assignor.)						
Rohde, William, and E. V. Mueller, Cincinnati, Ohio; said Mueller assignor to said Rohde. Vending-machine	871,890	Nov. 26	3654	891	131	990
Rooney, Frank E., assignor of one-half to J. C. Holliday, Altoona, Pa. Mixing apparatus	872,084	Nov. 26	4103	982	131	1055
Roosa, Herbert H., Lincoln, Nebr. Insole	871,891	Nov. 26	3656	891	131	991
Rosentreter, Albert J., Boonton, N. J., assignor, by mesne assignments, to Oscar Barnett Foundry Company. Door-holder	871,959	Nov. 26	3797	952	131	1013
Ross, Henry I. M., Dunedin, New Zealand. System of double ventilation	872,199	Nov. 26	4322	1032	131	1092
Rowe, Edward, Indiana, Pa. Tower-clock	872,200	Nov. 26	4324	1032–3	131	1093
Rude, Isadore, *et al.* (See Mentzer, Claude E., assignor.)						
Rudnick, George E., Iola, Kans. Pulverizing-mill	872,201	Nov. 26	4325	1033	131	1093
Rule, John A., Cincinnati, Ohio. Coin-operated vending-machine	871,824	Nov. 26	3503	857–8	131	967
Russell, William T., Chicago, Ill. Tool-holder for lathes	871,892	Nov. 26	3657	891	131	991
Russia Cement Company. (See Brooks, Reuben, assignor.)						
Ryon, Eppa H., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Shuttle-changing mechanism for looms	872,254	Nov. 26	4437	1054–5	131	1110
S. F. Hayward & Company. (See Harrison, Charles, assignor.)						
S. R. Dresser Manufacturing Company. (See Clark, James, assignor.)						
Sack, August A., Providence, R. I. Whorl for cap spinning-frames	872,019	Nov. 26	3960	952	131	1033
Salmon, Wilmer W., Buffalo, N. Y. Signaling system	871,960	Nov. 26	3799	922	131	1013
Sanders, Alexander, C. M. Rebman, and B. H. Sanders, Okemah, Ind. Ter. Cotton-picker's truck	871,893	Nov. 26	3658	892	131	991
Sanders, Benjamin H. (See Sanders, Rebman, and Sanders.)						
Sandlas, Henry J., assignor to E. J. Knabe, Jr., Baltimore, Md. Piano-action frame	871,894	Nov. 26	3660	892	131	991
Sargent, Frederick G., assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass. Wool-washing machine	872,020	Nov. 26	3961	952	131	1033
Sargent, Frederick G., assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass. Propeller or fan	872,307	Nov. 26	4540	1075	131	1126
Saunders, Edward M., Malden, assignor of one-fourth to W. G. Payson, Boston, Mass. Washboard	872,308	Nov. 26	4541	1076	131	1127
Saunders, George B. (See Saunders, William M., W. G., G. B., and S. Q.)						
Saunders, Samuel Q. (See Saunders, William M., W. G., G. B., and S. Q.)						
Saunders, Wesley G. (See Saunders, William M., W. G., G. B., and S. Q.)						
Saunders, William M., W. G., G. B., and S. Q., Richland, Oreg. Water-wheel	872,202	Nov. 26	4328	1033–4	131	1093
Saunderson, Herbert P., Bedford, England. Motor-vehicle for agricultural purposes	872,255	Nov. 26	4441	1055–6	131	1110
Savage, George E., and J. R. Marchesseault, assignors to Manning, Bowman & Co., Meriden, Conn. Beater or mixer	871,895	Nov. 26	3661	892	131	992
Schackner, John A., assignor of one-fourth to E. Veisor, New York, N. Y. Dining-table	872,256	Nov. 26	4442	1056	131	1110
Schaffer, Frank M., Hudson, Colo. Covering for water-closet seats	871,896	Nov. 26	3663	892	131	992
Schicht, Georg, Vienna, Austria-Hungary. Crystallizing apparatus	872,257	Nov. 26	4443	1056	131	1111
Schmidt, Albrecht, assignor to Farbwerke vorm. Meister Lucius & Bruning, Höchst-on-the-Main, Germany. Brown vat-dye	872,085	Nov. 26	4104	.....	131	1056
Schmidt, Albrecht, assignor to Farbwerke vorm. Meister Lucius & Bruning, Höchst-on-the-Main, Germany. Green-black vat-dye	872,086	Nov. 26	4105	.....	131	1056
Schmidt, Franz, Oberschöneweide, Germany. Thread-stretching device for the warps of drum printing-machines	872,258	Nov. 26	4444	1056	131	1111
Schofield, Silas C., Freeport, Ill., assignor to W. Petersen, Lyons, Iowa. Door and cup-board catch	872,309	Nov. 26	4543	1076	131	1127
Schreier, Emil. (See Galwey, John D., assignor.)						
Schroeder, Adam, Sugar Creek township, Shelby county, Ind. Dumping-bucket	872,151	Nov. 26	4226	1008	131	1077
Schroeder, Johann, assignor to Firm of Berliner Stickmaschinenfabrik Schirmer, Blau & Co., Berlin, Germany. Embroidering-machine	872,152	Nov. 26	4227	1009	131	1077
Schuppmann, Ludwig, Aix-la-Chapelle, Germany. Projectile for rifled firearms	871,825	Nov. 26	3506	858	131	967
Schwensow, Fred, Milwaukee, Wis. Carpet stretcher and sizer	872,087	Nov. 26	4107	983	131	1056
Scott, John R., Oakland, Cal. Device for rescaling bottles	872,153	Nov. 26	4229	1009	131	1077
Scott, Robert F. (See Coes and Scott.)						
Scott, Robert W. (See Williams, Louis N. D., assignor.)						
Scott, William M., Philadelphia, Pa. Combined controller and circuit-breaker	872,154	Nov. 26	4230	1010	131	1077
Scribner, Walter, Columbus, Ohio. Electric train-lighting system	871,826	Nov. 26	3510	858	131	968
Sebring, Ira, Greenville, Ohio. Tobacco-lath holder	872,259	Nov. 26	4446	1057	131	1111
Seeley, George O., Grand Rapids, Mich. Liquid-measuring device	871,827	Nov. 26	3514	859	131	968
Seholm, Joseph. (See Montan and Seholm.)						
Sewing Machines Supplies Company. (See French, Joseph, assignor.)						
Sexton, Arthur E., Los Angeles, Cal. Rotary roll-cutting attachment	871,828	Nov. 26	3516	860	131	969
Shank, Charles S., assignor of one-third to R. A. Stewart, Scott Depot, W. Va. Corn-thinner	872,260	Nov. 26	4447	1057	131	1111
Shank, Victor C., St. Louis, Mo. Hydraulic transmission device	872,203	Nov. 26	4330	1034–5	131	1094
Shedd, William F. (See Felter, Augustus J., assignor.)						
Sherman, William B., Dorchester, Mass. Canoe-awning	872,088	Nov. 26	4109	983	131	1056
Sherrer, Philip, Cleveland, Ohio. Barrel-pitching equipment	871,829	Nov. 26	3518	860–1	131	969

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Shiek, Daniel W., Chicago, Ill., assignor of one-half to W. L. Milliken, Indianapolis, Ind. Computing-machine	872,021	Nov. 26	3964	953–4	131	1034
Shipman, Madison D., De Kalb, Ill., assignor to United States Fastener Company of Portland, Maine, Boston, Mass. Separable button	871,897	Nov. 26	3663	893	131	992
Short, William A., assignor of one-half to G. T. Ward, Beeville, Tex. Means for taking up wear on vehicle-axles	872,155	Nov. 26	4234	1010	131	1078
Shrader, Louis I., New Albany, Ind. Apparatus for fumigating telephone instruments	872,204	Nov. 26	4333	1035	131	1094
Shuster, Andy C. (See Steele and Shuster.)						
Siebert, Fritz, Oakdale, Pa. Lock	872,156	Nov. 26	4235	1010	131	1078
Skfkiewicz, Marjan. (See Matlak, Wisniewski, and Skikiewicz.)						
Slotterbeck, Harry, Los Angeles, Cal. Free-casting reel	872,261	Nov. 26	4448	1057	131	1112
Smith, Charles, Boston, Mass. Door fastener and opener	872,022	Nov. 26	3974	955	131	1034
Smith, Ira E., Stockton, Cal. Oil-burning system	872,023	Nov. 26	3978	955	131	1035
Smith, Samuel, Surrey Centre, British Columbia, Canada. Tube-stopper	872,024	Nov. 26	3980	956	131	1035
Smith, William C., Minneapolis, Minn. Floor-gate-actuating device for elevators	871,898	Nov. 26	3665	893–4	131	992
Smith, William F., and M. Johnson, Coshocton, Ohio. Machine for bending match-safe blanks	872,025	Nov. 26	3981	956–7	131	1035
Smith, William H., Reed City, Mich. Perambulator	871,961	Nov. 26	3801	922	131	1013
Society of Chemical Industry in Basle, Firm of. (See Engi, Gadient, assignor.)						
Sommers, Jacob A., Columbus, Ohio. Overalls	872,089	Nov. 26	4111	983	131	1056
Souder, Jacob J., Washington, D. C. Metal joint	871,830	Nov. 26	3520	861	131	969
Sowash, William H., assignor of nine-twentieths to J. A. Penny, McKeesport, Pa. Attachment for registers	872,090	Nov. 26	4112	984	131	1057
Spangler, Fred J., Lebanon, Pa. Tooth-brush holder	872,091	Nov. 26	4113	984	131	1057
Sperry, Elmer A., Brooklyn, N. Y. Detinning and recovering merchantable iron from tin-plate scrap	872,092	Nov. 26	4114	984–5	131	1057
Sperry, Elmer A., Brooklyn, N. Y. Producing stannic chlorid	872,205	Nov. 26	4335	1035–6	131	1094
Stare, Frank T., Waukesha, Wis., assignor to American Dehydrating Company. Dehydrating apparatus	872,026	Nov. 26	3984	957–8	131	1036
Stare, Frank T., Waukesha, Wis., assignor to American Dehydrating Company. Air-drier	872,027	Nov. 26	3988	958	131	1036
Steele, Edgar W., and A. C. Shuster, Edna, Cal. Wall construction	872,262	Nov. 26	4449	1057	131	1112
Stein, Frank J., Davenport, Iowa. Railway-gate	872,028	Nov. 26	3989	958	131	1037
Stewart, Annie. (See Stewart, James S., assignor.)						
Stewart, George F., Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J. Buffing-machine	871,962	Nov. 26	3803	923–4	131	1014
Stewart, George F., Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J. Machine for making pad-covers	871,963	Nov. 26	3807	924–5	131	1014
Stewart, George F., Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J. Buffing-machine and disk-holder therefor	871,964	Nov. 26	3815	926	131	1014
Stewart, George F., Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J. Pad-cover	871,965	Nov. 26	3821	926	131	1015
Stewart, George F., Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J. Making pad-covers	871,966	Nov. 26	3823	927	131	1015
Stewart, James S., assignor to A. Stewart, New York, N. Y. Molding-receptacle	872,029	Nov. 26	3991	959	131	1037
Stewart, Robert A. (See Shank, Charles S., assignor.)						
Stewart, William C., Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J. Insole-slashing machine	871,967	Nov. 26	3827	927–8	131	1015
Stewart, William C., Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J. Boot and shoe sole	871,968	Nov. 26	3835	928	131	1016
Stewart, William C., Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J. Sole-slashing machine	871,969	Nov. 26	3836	929	131	1016
Stewart, William J., Belfast, Ireland. Excavating for concrete piles, &c	872,093	Nov. 26	4121	985	131	1058
Stickney, James, Bad Axe, Mich. Axle-spindle	872,030	Nov. 26	3994	959	131	1037
Stone, Edward L., Roanoke, Va. Printing-press	871,831	Nov. 26	3522	861	131	970
Stone, Stewart. (See Fyock and Stewart.)						
Strasburger, Frank C. H., assignor to Bottlers Machinery Manufacturing Company, Chicago, Ill. Beer-reclaiming machine	871,832	Nov. 26	3524	862	131	970
Stroh, Freeman W., assignor of one-half to J. E. Millis, Barberton, Ohio. Vise	872,310	Nov. 26	4543	1076	131	1127
Stroh, George. (See Rice, Robert, assignor.)						
Stull, Emmett W., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. System of motor control	871,970	Nov. 26	3840	929–30	131	1016
Sullivan Machinery Company. (See Mercer, Henry H., assignor.)						
Sutherland, Emil, Hollywood, Cal. Vehicle-wheel	872,311	Nov. 26	4546	1076	131	1128
Swartz, Sewell C. (See Reisner, Swartz, and Hamilton.)						
Sweet, Orr & Company. (See Noetzel, Paul C., assignor.)						
Szekeres, John, Pittsburg, assignor of one-half to J. Poluba, Allegheny, Pa. Trolley-securing device	872,004	Nov. 26	4123	985	131	1058
Taylor, Charles G., Hartford, Conn. Easel and hanger	871,833	Nov. 26	3526	862	131	971
Taylor, Edward R., Penn Yan, N. Y. Electric furnace	871,971	Nov. 26	3845	930–1	131	1017
Thistlethwaite, William P. (See Armitage and Thistlethwaite.)						
Thomas, Willie O., Riverside, and H. G. Moore, Chicago, Ill. Automobile-body	872,031	Nov. 26	3996	959–60	131	1037
Thompson, Henry. (See Feazell and Thompson.)						
Thompson, James A., E. M. Mackie, and P. F. Doyle, Chicago, Ill., assignors to Chicago Pneumatic Tool Company. Self-tightening rock-drill chuck	871,972	Nov. 26	3849	931	131	1017
Tihon, Jean P., Paris, France. Distributer of double-magazine linotype-machines	871,899	Nov. 26	3667	894–5	131	993
Titus, Wellington S., Glenmoore, N. J. Bootjack	872,095	Nov. 26	4124	986	131	1058
Tolle, William J., Reesville, Ohio. Combined feed-rack, feed-trough, and animal-pen	872,032	Nov. 26	4000	960	131	1038
Torode, William H., Chicago, Ill. Hinge	872,263	Nov. 26	4450	1058	131	1112
Townsend, Elvin E. (See Morris and Townsend.)						
Trautman, Charles G., Chicago, Ill. Alarm-clock	871,900	Nov. 26	3671	895	131	993
Treflère, Louis E., and V. J. Jehin, Paris, France. Means for preventing side slip in pneumatic tires	872,096	Nov. 26	4125	986	131	1058
Twaddell, Janie S., El Paso, Tex. Combined pen and pencil rack	872,157	Nov. 26	4236	1011	131	1078
Tweit, Jacob, Ericson, Mont. Stirrup	872,264	Nov. 26	4451	1058	131	1112
United Shoe Machinery Company. (See White, Melbourne W., assignor.)						
United States Fastener Company of Portland, Maine. (See Shipman, Madison D., assignor.)						
Urquhart, James. (See Baxter, Robert S., assignor.)						
Van Buggenhoudt, René, assignor of one-half to O. Goetze, New York, N. Y. Bleaching cotton fibers	872,097	Nov. 26	4126	486	131	1059
Van Buggenhoudt, René, New York, assignor of one-half to O. Goetze, Brooklyn, N. Y. Apparatus for bleaching	872,265	Nov. 26	4452	1058–9	131	1113
Van Buren, Charles J., Findlay, Ohio. Combined scalper, excavator, road-roller, and locomotive	872,159	Nov. 26	4238	1011–12	131	1079
Van Duyne, Frank E. (See Boynton, Earl, assignor.)	872,266	Nov. 26	4455	1059	131	1113
Vance, Edward H., Colton, Tex. Bale-tie	871,973	Nov. 26	3853	932	131	1018
Veith, Friedrich, Veithwerk, near Höchst, Germany. Multipart mold for pneumatic tires						

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Velsor, Emma. (See Schackner, John A., assignor.)						
Verbeck, William. Manlius, N. Y. Folding stereoscope	871,974	Nov. 26	3853	932	131	1018
Vereinigte Maschinenfabrik Augsburg und Maschinenbaugesellschaft Nürnberg, A. G., Firm of. (See Richter, Hans, assignor.)						
Vetter, Joseph C. (See Raymond and Vetter.)						
Vient, André G., Hoquiam, Wash. Fruit-basket	872,206	Nov. 26	4341	1036	131	1095
Vogt, Theodore, Hoboken, N. J. Sheet-metal-working machine	871,834	Nov. 26	3527	862–3	131	1071
Voightman and Company. (See Duffy, Thomas I., assignor.)						
Wacek, George P., Olivia, Minn. Harvester	871,835	Nov. 26	3529	863–4	131	971
Wache, Alphons, Königschütte, Germany. Safety-valve	871,975	Nov. 26	3858	932	131	1018
Wade, James J., Chicago, Ill. Trap or water seal	871,836	Nov. 26	3531	864	131	972
Waite, Charles N., Wilmington, Del. Device for separating materials held in suspension by liquids	872,033	Nov. 26	4001	961	131	1038
Walker, James J., London, England. Recording music	872,267	Nov. 26	4456	1059	131	1113
Walker, Joseph H., Grand Rapids, Mich. Casket-handle	872,034	Nov. 26	4002	961	131	1038
Waller, Charles, Seattle, Wash. Apparatus for cutting cable, &c	872,312	Nov. 26	4547	1077	131	1128
Walterskirchen, Richard, Lainsdorf, near Krumpendorf-on-the-Wörthersee, Austria-Hungary. Oar for boats	872,158	Nov. 26	4237	1011	131	1079
Walther, Herman Davenport, Iowa. Rotary blower	871,837	Nov. 26	3533	865	131	972
Walton, John G., Coleman, Mich. Stand for propping plants	871,901	Nov. 26	3672	896	131	994
Walton, Ralph, Warsaw, Ind. Mucilage-bottle	872,268	Nov. 26	4461	1060	131	1114
Ward, G. T. (See Short, William A., assignor.)						
Warwick, John F., Chicago, Ill. Tile construction	871,838	Nov. 26	3535	865	131	973
Watson, William, Portland, Oreg. Excavator	871,839	Nov. 26	3537	865–6	131	973
Wattie, William, Worcester, Mass., assignor to Crompton & Knowles Loom Works. Loom	872,035	Nov. 26	4003	961	131	1039
Wattie, William, Worcester, Mass., assignor to Crompton & Knowles Loom Works. Machine for cutting spiral oil-channels in boxes, bearings, &c	872,036	Nov. 26	4004	961–2	131	1039
Wegner, William C., Laporte, Ind. Tire-channel-cleaning device	872,207	Nov. 26	4342	1036	131	1095
Weissenthanner, Alfred L., New York, N. Y. Receptacle-closure	872,160	Nov. 26	4243	1013	131	1079
Weissenthanner, Alfred L., New York, N. Y. Receptacle-closure	872,162	Nov. 26	4248	1013	131	1080
Welin, Peter, assignor to A. Krell, Newcastle, Ind. Automatic playing attachment for musical instruments	872,313	Nov. 26	4548	1077	131	1128
Wenzelmann, Gustave, Galesburg, Ill. Horse-power	871,840	Nov. 26	3541	866	131	973
Wertman, William, Danville, Pa. Extension window shade and curtain hanger	871,841	Nov. 26	3544	866	131	974
West, James, Jackson township, Wells county, Ind. Device for picking cherries and like small fruits	871,842	Nov. 26	3545	867	131	974
Westinghouse Electric & Manufacturing Company. (See MacGahan, Paul, assignor.)						
Westlake, Charles T. (See Howard and Westlake.)						
Westphal, Heinrich, Posen, assignor to R. Faber, Fermersleben, near Magdeburg, Germany. Ceiling and floor composed of tiles	872,098	Nov. 26	4127	987	131	1059
White, Charles A., *et al.* (See Broad, William, assignor.)						
White, Melbourne W., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lacing device for boots and shoes	872,037	Nov. 26	4006	962	131	1039
Whitehorn, Thomas, Coburg, Victoria, Australia. Apparatus for packing predetermined quantities in bags	872,161	Nov. 26	4245	1013	131	1079
Whitney, Guy S., Lindsay, Cal. Grading-machine	871,976	Nov. 26	3858	933	131	1019
Wiegand, Henry J., assignor to Cutler-Hammer Manufacturing Company, Milwaukee, Wis. Inclosed resistance	872,208	Nov. 26	4346	1037	131	1096
Weigand, Henry J., assignor to Cutler-Hammer Manufacturing Company, Milwaukee, Wis. Inclosed resistance	872,209	Nov. 26	4349	1037	131	1096
Wiesen, John G., Milwaukee, Wis. Screen for windows and doors	871,843	Nov. 26	3546	867	131	974
Wilkin, Theodore S., Milwaukee, Wis. Sawmill	872,038	Nov. 26	4007	962	131	1039
William Galloway Company. (See Galloway, William, assignor.)						
William Galloway Company. (See Wilson, Dalton K., assignor.)						
Williams, James H., assignor to Remington and Sherman Company, Philadelphia, Pa. Adjustable bolt-bearing for vault and safe door jambs	871,844	Nov. 26	3547	867	131	974
Williams, Louis N. D., Ogontz, Pa., assignor of one-half to R. W. Scott, Leeds Point, N. J. Knitted fabric	872,163	Nov. 26	4249	1014	131	1080
Williams, Oscar, Charleston, Wash. Gearing	872,269	Nov. 26	4462	1060	131	1114
Wilson, Dalton K., assignor to William Galloway Company, Waterloo, Iowa. Manure-spreader	871,845	Nov. 26	3548	868	131	975
Wilson, Dalton K., assignor to William Galloway Company, Waterloo, Iowa. Riding attachment for harrows	871,846	Nov. 26	3549	868	131	975
Wilson, Dalton K., assignor to William Galloway Company, Waterloo, Iowa. Velocipede	871,847	Nov. 26	3551	868	131	975
Wilson, James T., Cynthiana, Ky. Gage for type-setting machines	871,902	Nov. 26	3673	896	131	994
Wilson, John M., Montclair, N. J. Removing paint and varnish	872,314	Nov. 26	4550	1077	131	1129
Wilson, Wallace. (See Pulster, Henry, assignor.)						
Windle, John E., Worcester, Mass. Unwinding-machine	871,848	Nov. 26	3552	868–9	131	976
Winslow Edward J., Chicago, Ill. Sectional vault	871,977	Nov. 26	3860	933–4	131	1019
Wisniewski, Kasimir. (See Matiak, Wisniewski, and Skiklewicz.)						
Wm. Knabe & Co. Manufacturing Company of Baltimore City. (See Darley, John W., Jr., assignor.)						
Wolfe, Frank L., Medford, assignor to Crosby Steam Gage and Valve Company, Boston, Mass. Recording-counter	871,849	Nov. 26	3556	870	131	976
Wolff, Herman O., Syracuse, N. Y. Sash lock and tightener	872,099	Nov. 26	4128	987	131	1059
Wood, Frederich W., assignor to Berry-Wood Piano Player Co., Kansas City, Mo. Tracker-bar for piano-players	872,315	Nov. 26	4553	1078	131	1129
Wood, Martin A., Marshall, N. C. Garment-hanger	872,100	Nov. 26	4129	988	131	1060
Woodley, Whitford W., Elizabeth City, N. C. Belt-punching implement	872,210	Nov. 26	4352	1037	131	1096
Work, Charles L., Granville, Ohio. Book-holder	871,903	Nov. 26	3675	896	131	994
Worthington, Charles C., Dunnfield, N. J., and H. R. Worthington, Irvington-on-Hudson, N. Y. Controlling mechanism for self-propelled vehicles	872,101	Nov. 26	4130	988	131	1060
Worthington, Henry R. (See Worthington, Charles C. and H. R.)						
Wright, Earl E., Mansfield, Ohio. Gas and gasolene engine	872,164	Nov. 26	4250	1014	131	1080
Wright, Edwin C., Newport, Ky., assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Shaft-oscillator	871,904	Nov. 26	3677	897	131	995
Wright, James K., New York, N. Y. Electric stop for engines	872,102	Nov. 26	4134	988–9	131	1060
Wright, William H., Philadelphia, Pa. Turn-table casting for locomotive-engines	871,850	Nov. 26	3557	870	131	976
Wulff, Herman, Toledo, Ohio. Ice-cutting machine	871,978	Nov. 26	3863	934–5	131	1020
Young, Frederick W., East Orange, N. J. Fuse	871,851	Nov. 26	3558	870	131	977
Ziehler, Bernard, Dayton, Ohio. Water-motor	871,852	Nov. 26	3560	871	131	977

DESIGNS.

Name, residence, and design.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Cheney Brothers. (See Fowler, Harriet W., assignor.)				
Cheney Brothers. (See Mosenthal, Elizabeth L., assignor.)				
Cheney Brothers. (See Olsson, Anna, assignor.)				
Cheney Brothers. (See Russell, Louisa, assignor.)				
Corbett, Edgar M., Paterson, N. J. Ribbon	38,912	Nov. 26	131	1134
Corbett, Edgar M., Paterson, N. J. Ribbon	38,913	Nov. 26	131	1134
Court, Charles S. (See Crees and Court.)				
Crees, Eustace, and C. S. Court, Providence, R. I., assignors to J. S. Townsend, Chicago, Ill. Spoon or similar article	38,897	Nov. 26	131	1131
Fowler, Harriet W., New York, N. Y., assignor to Cheney Brothers, South Manchester, Conn. Textile fabric	38,906	Nov. 26	131	1133
Fowler, Harriet W., New York, N. Y., assignor to Cheney Brothers, South Manchester, Conn. Textile fabric	38,907	Nov. 26	131	1133
Hawkins, George, assignor to Ivins Dietz & Metzger Company, Philadelphia, Pa. Carpet fabric	38,904	Nov. 26	131	1132
Hawkins, George, assignor to Ivins Dietz & Metzger Company, Philadelphia, Pa. Carpet fabric	38,905	Nov. 26	131	1132
Ivins Dietz & Metzger. (See Hawkins, George, assignor.)				
Kronman, Edward, New York, N. Y. Sterilizing-receptacle	38,898	Nov. 26	131	1131
Mosenthal, Elizabeth L., New York, N. Y., assignor to Cheney Brothers, South Manchester, Conn. Textile fabric	38,908	Nov. 26	131	1133
Newcomb, Annie, Ridgefield, Conn. Milk-bottle opener	38,899	Nov. 26	131	1131
Olsson, Anna, assignor to Cheney Brothers, South Manchester, Conn. Textile fabric	38,909	Nov. 26	131	1133
Olsson, Anna, assignor to Cheney Brothers, South Manchester, Conn. Textile fabric	38,910	Nov. 26	131	1133
Paul, William J., Pittsburg, Pa. Vending-machine casing	38,902	Nov. 26	131	1132
Rice, Louis W., New York, N. Y. Cigar-lighter	38,901	Nov. 26	131	1132
Russell, Louisa, Glenridge, N. J., assignor to Cheney Brothers, South Manchester, Conn. Textile fabric	38,911	Nov. 26	131	1133
Sanborn, George O., Seattle, Wash. Necktie	38,914	Nov. 26	131	1134
Sanborn, George O., Seattle, Wash. Necktie	38,915	Nov. 26	131	1134
Schade, Edmund A. (See Wood and Schade.)				
Stanley Rule & Level Company. (See Wood and Schade, assignors.)				
Susman, Harris, New York, N. Y. Wire fabric	38,903	Nov. 26	131	1132
Townsend, J. S. (See Crees and Court, assignors.)				
Wood, George E., Plantsville, and E. A. Schade, assignors to Stanley Rule & Level Company, New Britain, Conn. Ice-pick	38,900	Nov. 26	131	1132

TRADE-MARKS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
A. Boake Roberts & Co. Ltd., Stratford, London, England. Preparation for preserving wine and beer	66,447	Nov. 26	131	1157
A. G. Spalding & Bros., Jersey City, N. J., and New York, N. Y. Golf-club irons	66,434	Nov. 26	131	1157
American Thread Company, Jersey City, N. J. Spool-cotton, sewing-cotton, and thread	66,401	Nov. 26	131	1156
American Wringer Company, New York, N. Y., and Providence, R. I. Clothes-wringers	66,417	Nov. 26	131	1156
American Writing Paper Company, Holyoke, Mass. Writing and printing paper	66,435	Nov. 26	131	1157
Argentina Company, New York, N. Y. Polishing and plating compounds	66,402	Nov. 26	131	1156
August Kress Company, New York, N. Y. Canned meat	66,379	Nov. 26	131	1155
B. F. Goodrich Company, Akron, Ohio. Machinery packing	66,351	Nov. 26	131	1155
B. T. Babbitt Inc., New York, N. Y. Toilet soaps	66,380	Nov. 26	131	1155
Baker Extract Company, Portland, Me., and Springfield, Mass. Flavoring extracts	66,403	Nov. 26	131	1155
Benton, Hall & Co., Cleveland, Ohio. Flavorings for soda-water and like beverages	66,381	Nov. 26	131	1156
Blodgett & Orswell Co., Pawtucket, R. I. Spool-cotton or sewing-thread	66,382	Nov. 26	131	1156
Blodgett & Orswell Co., Pawtucket, R. I. Spool-cotton or sewing-thread	66,383	Nov. 26	131	1156
Blodgett & Orswell Co., Pawtucket, R. I. Spool-cotton or sewing-thread	66,404	Nov. 26	131	1156
Bosman & Lohman Co., Norfolk, Va. Peanut-candy	66,384	Nov. 26	131	1156
Bowen, Saml. B., Philadelphia, Pa. Paints, enamels, fillers, stains, and varnishes	66,418	Nov. 26	131	1155
Campbell, Maude L., Washington, D. C. Hair-tonic and scalp remedy	66,352	Nov. 26	131	1155
Charles & Co., New York, N. Y. Basketed fresh fruits	66,385	Nov. 26	131	1156
Chemische Werke Hansa Gesellschaft mit beschränkter Haftung, Hemelingen, near Bremen, Germany. Certain chemicals	66,353	Nov. 26	131	1155
Childs, Frederick L., Kalamazoo, Mich. Tonic, laxative, and digestive preparations	66,354	Nov. 26	131	1155
Childs, Frederick L., Kalamazoo, Mich. Tonic, laxative, and digestive preparations	66,355	Nov. 26	131	1155
Coalite Limited, London, England. Coal, coke, breeze, and partially-coked coal	66,405	Nov. 26	131	1156
Columbia Mill & Elevator Company, Columbia, Tenn. Wheat-flour	66,386	Nov. 26	131	1156
Cooper, Joseph P., Jersey City, N. J. Food product made from egg-albumen and milk	66,406	Nov. 26	131	1156
Corn Products Refining Company, New York, N. Y. Corn-oil	66,448	Nov. 26	131	1157
Corn Products Refining Company, New York, N. Y. Corn-oil	66,449	Nov. 26	131	1157
Corno Mills Company, East St. Louis, Ill. Certain cereal foods	66,407	Nov. 26	131	1156
Cosby Shoe Co. Incorporated, Lynchburg, Va. Leather boots and shoes	66,356	Nov. 26	131	1155
Diaz & Co., B., New York, N. Y. Fertilizers and fertilizing materials	66,419	Nov. 26	131	1157
E. E. Taylor Co., Boston, Mass. Men's and boys' leather shoes	66,357	Nov. 26	131	1155
Electric Railway Improvement Co., Cleveland, Ohio. Certain electrical conductors	66,420	Nov. 26	131	1157
F. F. Rick & Company, Buffalo, N. Y. Pyrographic outfits	66,387	Nov. 26	131	1156
Faber, Eberhard, New York, N. Y. Lead-pencils	66,358	Nov. 26	131	1155
Faber, Eberhard, New York, N. Y. Lead-pencils	66,359	Nov. 26	131	1155
Faber, Eberhard, New York, N. Y. Lead-pencils	66,360	Nov. 26	131	1155
Faber, Eberhard, New York, N. Y. Lead-pencils	66,361	Nov. 26	131	1155
Faber, Eberhard, New York, N. Y. Lead-pencils	66,362	Nov. 26	131	1155
Faber, Eberhard, New York, N. Y. Lead-pencils and rubber erasers	66,363	Nov. 26	131	1155
Faber, Eberhard, New York, N. Y. Rubber erasers	66,364	Nov. 26	131	1155
Faultless Rubber Company, Akron, Ohio. Nursing-bottle nipples	66,436	Nov. 26	131	1157
Fiorentini, Henry, Boston, Mass. Pressed ham, mortadelle, capicolli, presiutti, and cotteghini	66,408	Nov. 26	131	1156

TRADE-MARKS—Continued.

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Frederick Laboratory, Toledo, Ohio. Medicinal unguent or salve	66,365	Nov. 26	131	1155
George La Monte & Son, Nutley, N. J., and New York, N. Y. Safety-paper	66,452	Nov. 26	131	1157
George La Monte & Son, Nutley, N. J., and New York, N. Y. Safety-paper	66,453	Nov. 26	131	1157
Gilbert, George W., Boston, Mass. Alizarin	66,366	Nov. 26	131	1155
Glasner & Barzen Distilling & Importing Co., Kansas City, Mo. Whisky	66,421	Nov. 26	131	1157
Glidden Varnish Company, Cleveland, Ohio. Varnish	66,437	Nov. 26	131	1157
Greek American Confectionery Co., New York, N. Y. Candy	66,388	Nov. 26	131	1156
Grumbach, Theodore, Los Angeles, Cal. California wines	66,438	Nov. 26	131	1157
Haggard & Marcusson Co., Chicago, Ill. Bed-springs	66,409	Nov. 26	131	1156
Hall, Emmett B., Salt Lake City, Utah. Flavoring for tonic mixtures	66,389	Nov. 26	131	1156
Harnish, Fritz, Berlin, Germany. Preparation for the treatment of finger-nails	66,454	Nov. 26	131	1157
Hatfield Motor Vehicle Company, Cortland, N. Y. Automobiles	66,439	Nov. 26	131	1157
Heffernan, Edward, Lynn, Mass. Cocktails	66,422	Nov. 26	131	1157
Henry Thode Co., Davenport, Iowa. Whisky	66,423	Nov. 26	131	1157
Holmes and Barnes, Limited, Baton Rouge, La. Wheat-flour	66,410	Nov. 26	131	1156
J. G. Brill Company, Philadelphia, Pa., assignor to The J. G. Brill Company. Certain bells and parts thereof	66,424	Nov. 26	131	1157
Johnson, Anthony T., Mineola, N. Y. Certain oil	66,390	Nov. 26	131	1156
Knickerbocker Audit Company, New York, N. Y. Pamphlets relating to finance	66,440	Nov. 26	131	1157
Laubach, Thomas F., New York, N. Y. Certain medicines	66,367	Nov. 26	131	1155
Leggett & Brother, New York, N. Y. Insecticide-distributers	66,425	Nov. 26	131	1157
Leggett & Brother, New York, N. Y. Insecticide-distributers	66,441	Nov. 26	131	1157
Lever Brothers Company, Portland, Me., and Cambridge, Mass. Soap	66,442	Nov. 26	131	1157
Liebscher, F. & E., New York, N. Y. Stove-polish and metal-polish	66,411	Nov. 26	131	1156
Lord & Taylor, New York, N. Y. Hosiery	66,368	Nov. 26	131	1155
Lord & Taylor, New York, N. Y. Hosiery	66,369	Nov. 26	131	1155
Lord & Taylor, New York, N. Y. Hosiery	66,370	Nov. 26	131	1155
Lord & Taylor, New York, N. Y. Hosiery	66,371	Nov. 26	131	1155
Lyle, James E., Bowling Green, Ky. Mosquito-repellent	66,372	Nov. 26	131	1155
M. Haiff & Bro., San Antonio, Tex. Hosiery	66,373	Nov. 26	131	1155
M. Haiff & Bro., San Antonio, Tex. Certain clothing	66,426	Nov. 26	131	1157
Marks, Jacob A., Boise, Idaho. Overcoats, coats, pants, and vests	66,427	Nov. 26	131	1157
Maschinenfabrik Oddesse, Gesellschaft mit beschränkter Haftung, Oschersleben, near Magdeburg, Germany. Pumps, steam engines and turbines, and parts thereof	66,443	Nov. 26	131	1157
Mattingly & Moore Dist'y Co., Bardstown, Ky. Whisky	66,428	Nov. 26	131	1157
Montgomery, James M., New York, N. Y. Teas	66,412	Nov. 26	131	1156
Mowry, Thomas J., Renovo, Pa. Hair-tonics	66,455	Nov. 26	131	1157
Murray, Edward M., Chicago, Ill. Wooden step-ladders	66,392	Nov. 26	131	1156
National Packing Company, Chicago, Ill. Sausage and ham	66,413	Nov. 26	131	1156
Pacific Coast Borax Co., Oakland, Cal.; Chicago, Ill., and New York, N. Y. Washing compound	66,393	Nov. 26	131	1156
Palmer, Solon, New York, N. Y. Perfumes and perfumed toilet powders	66,456	Nov. 26	131	1158
Pape, Walter, St. Louis, Mo. Knives, razors, and shears	66,444	Nov. 26	131	1157
Peters Cartridge Company, Cincinnati, Ohio. Cartridges, loaded shells, caps, primers, and powder	66,374	Nov. 26	131	1155
Physicians Supply Co., Louisville, Ky. Medicinal salts	66,375	Nov. 26	131	1155
Protegit Company, New York, N. Y. Chemical preserving compounds	66,376	Nov. 26	131	1155
Ranson & Co., G. O., Fortuna, Cal. Hair tonics and restorers	66,457	Nov. 26	131	1158
Reichard, Firm of F. A., New York, N. Y. Ochers	66,458	Nov. 26	131	1158
Reichard, Firm of F. A., New York, N. Y. Ochers	66,459	Nov. 26	131	1158
Rubens & Marble, Chicago, Ill. Knit undershirts	66,377	Nov. 26	131	1155
Rubens & Meyer, New York, N. Y. Hosiery	66,394	Nov. 26	131	1156
Rueckheim Bros. & Eckstein, Chicago, Ill. Chocolates and other candies	66,395	Nov. 26	131	1156
Rueckheim Bros. and Eckstein, Chicago, Ill. Candied popcorn	66,414	Nov. 26	131	1156
Schmitz & Co., C., New York, N. Y. Certain skins and rugs	66,415	Nov. 26	131	1156
Scholz, Otto, Bridgeport, Conn. Non-alcoholic beverage	66,396	Nov. 26	131	1156
Schraders, New York, N. Y. All kinds of candy	66,397	Nov. 26	131	1156
Shinners, Luke F., Cleveland, Ohio. Soaps	66,398	Nov. 26	131	1156
Siegel Cooper Company, New York, N. Y. Leather trunks	66,378	Nov. 26	131	1155
Silver Suds Manufacturing Company, Philadelphia, Pa. Certain medicinal preparations	66,429	Nov. 26	131	1157
Simpson, Sons & Co., Wm., Philadelphia, Pa.; New York, N. Y.; Baltimore, Md.; Chicago, Ill., and St. Louis, Mo. Dyed cotton piece goods	66,430	Nov. 26	131	1157
Sondheim & Magnus, New York, N. Y. Pillow-tops, pillow-slips, and laundry-bags	66,431	Nov. 26	131	1157
Sporting Goods Publishing Company, St. Louis, Mo. Monthly magazine	66,460	Nov. 26	131	1158
Sporting News Publishing Company, St. Louis, Mo. Weekly paper	66,461	Nov. 26	131	1158
Springer, Oscar M., Boston, Mass. Dental cement	66,399	Nov. 26	131	1156
Standard Oil Co. of New York, New York, N. Y. Naphtha	66,462	Nov. 26	131	1158
The J. G. Brill Company. (See J. G. Brill Company, assignor.)	66,416	Nov. 26	131	1156
Trummer & Otto Vogler, P. H., Hamburg, Germany. Hydraulic cement and asphalt	66,432	Nov. 26	131	1157
Ullman Einstein Co., Cleveland, Ohio. Whisky	66,445	Nov. 26	131	1157
Van Vleet-Mansfield Drug Co., Memphis, Tenn. Whisky	66,400	Nov. 26	131	1156
Vereinigte Chemische Werke Aktiengesellschaft, Charlottenburg, near Berlin, Germany. Soap made of wool-fat	66,463	Nov. 26	131	1158
Wagner & Sons, John, Philadelphia, Pa. Bitters	66,446	Nov. 26	131	1157
Weeks, Edward C., New York, N. Y. Corset-stiffeners and corset-stays	66,433	Nov. 26	131	1157
Weyermann, Johann B., Firm of, Potsdam, Germany. Certain malt preparations				

LABELS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Page.
Crotzer, Frank P., Wilkes-Barre, Pa. "Bromo-Mint." (For Medicine)	13,902	Nov. 26	131	1156
Frankfort Distillery, (Incorporated,) Frankfort, Ky. "Baker Bourbon." (For Whisky)	13,897	Nov. 26	131	1159
Frankfort Distillery, (Incorporated,) Frankfort, Ky. "Baker Rye." (For Whisky)	13,898	Nov. 26	131	1159
Furthmann, Jacob, Jersey City, N. J. "The Only 5¢ Bull Heads." (For Cigars)	13,894	Nov. 26	131	1159

LABELS—Continued.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Page.
Greenberg, Joseph, New York, N. Y. "White Star Water." (For Drinking-Water)	13,900	Nov. 26	131	1159
Gross & Co., Kurwin S., Philadelphia, Pa. "The Ideal Liniment." (For a Liniment for Man and Beast)	13,905	Nov. 26	131	1159
Heineman Brothers, Baltimore, Md. "Protection." (For Cigars)	13,895	Nov. 26	131	1159
Home Brewing & Ice Co., Joplin, Mo. "Hombrew." (For Beer)	13,896	Nov. 26	131	1159
Home Brewing & Ice Co., Joplin, Mo. "Ido." (For a Beverage)	13,899	Nov. 26	131	1159
Mahon, John M., Pittsburg, Pa. "Mack Mahon's Diamond Back Oil." (For Medicinal Oil)	13,904	Nov. 26	131	1159
Mentholatum Company, Wichita, Kans., and Buffalo, N. Y. "Mentholatum." (For a Salve)	13,903	Nov. 26	131	1159
Smith, Annie H., Berwin, Pa. "A. H. S." (For Prepared Potted Beef)	13,901	Nov. 26	131	1159

PRINTS.

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Anheuser-Busch Brewing Ass'n., St. Louis, Mo. "Budweiser Girl." (For Beer)	2,161	Nov. 26	131	1159
Boone, E. L., Chicago, Ill. "Apparel for Man and Boy." (For Clothing)	2,166	Nov. 26	131	1159
Hayes Lithographing Co., Buffalo, N. Y. "Champion Harvesting Machines." (For Harvesting Machinery)	2,168	Nov. 26	131	1159
Lytton, H. C., Chicago, Ill. "Men's and Boys' Apparel." (For Men's and Boys' Apparel)	2,167	Nov. 26	131	1159
Pinchin, Johnson & Co., Ltd., London, England. "Immaculate." (For Enamels)	2,164	Nov. 26	131	1159
Rieder, Michael, Los Angeles, Cal. "California Souvenir Playing Cards." (For Playing-Cards)	2,162	Nov. 26	131	1159
Standard Oil Cloth Co., New York, N. Y. "Meritas, Table Oil Cloth." (For Table Oil-Cloth)	2,163	Nov. 26	131	1159
Standard Oil Cloth Co., New York, N. Y. "Sanitas, Cloth Wall Covering." (For Cloth Wall-Covering)	2,165	Nov. 26	131	1159

TRADE-MARKS.

(REGISTRATION APPLIED FOR.)

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A. C. Lawrence Leather Co., Boston, Mass. Leather	30,599	Nov. 26	131	1150
A. J. Reach Company, Philadelphia, Pa. Base-ball gloves	30,392	Nov. 26	131	1147
Abraham, David J., Berkeley, Cal. Knit gloves and ladies' hosiery	21,458	Nov. 26	131	1136
American Board & Box Company, Dayton, Ohio. Paper pails	30,464	Nov. 26	131	1148
American Candy Co., Milwaukee, Wis. Chocolates	30,692	Nov. 26	131	1152
American Cyanamid Company, New York, N. Y. Calcium cyanamid	30,666	Nov. 26	131	1151
Anderson & Co., Wm., New York, N. Y. Ginghams	12,750	Nov. 26	131	1135
Arntz, Lew, Des Moines, Iowa. Eye remedies	18,375	Nov. 26	131	1136
Arrow Electric Company, Hartford, Conn. Electrical switches	30,630	Nov. 26	131	1151
Bardell & Schick, Joliet, Ill. Liniments and unguents	29,754	Nov. 26	131	1142
Beadleston & Woerz, New York, N. Y. Ale, porter, lager-beer, and stout	2,267	Nov. 26	131	1135
Bible & Fitch, New York, N. Y. Trade magazines and journals	30,100	Nov. 26	131	1144
Blackwell, Clyde B., Statesville, N. C. Yeast	30,148	Nov. 26	131	1144
Block Brothers Clothing Company, St. Joseph, Mo. Overcoats, coats, vests, and trousers	30,101	Nov. 26	131	1144
Boott Mills, Lowell, Mass. Cotton piece goods	21,983	Nov. 26	131	1136
Boott Mills, Lowell, Mass. Cotton piece goods	21,985	Nov. 26	131	1136
Borello Bros., San Rafael, Cal. Natural mineral waters and carbonated beverages	30,390	Nov. 26	131	1147
Braunstein & Cie., Paris, France. Cigarette-paper	30,142	Nov. 26	131	1144
Bullard & Gormley Co., Chicago, Ill. Fishing lines, reels, hooks, and flies	22,378	Nov. 26	131	1136
Cabot, Godfrey L., Boston, Mass. Carbon, lamp, and gas black	20,851	Nov. 26	131	1136
Cargill, J. Marcus, Baltimore, Md. Remedies for coughs, catarrh, dyspepsia, &c	30,545	Nov. 26	131	1149
Cauvigny Brush Co., New York, N. Y. Toilet-brushes	30,663	Nov. 26	131	1151
Charles Munson Belting Co., New York, N. Y. Leather belting	26,684	Nov. 26	131	1138
Chas. A. Malsh Co., Cincinnati, Ohio. Comforts	30,079	Nov. 26	131	1144
Chemische Fabrik auf Actien (vorm. E. Schering), Berlin, Germany. Photographic developing substance	25,220	Nov. 26	131	1138
Chemische Fabrik auf Actien (vorm. E. Schering), Berlin, Germany. Photographic developing substance	28,529	Nov. 26	131	1139
Cornelly, Margaret C., New York, N. Y. Remedy for headaches, neuralgias, &c	29,568	Nov. 26	131	1141
Cross, Charles V., San Francisco, Cal. Antiseptic powders	30,419	Nov. 26	131	1148
Crystal Carbonate Lime Company, Louisiana, Mo. Poultry food	30,219	Nov. 26	131	1145
David E. Foutz Co., Baltimore, Md. Remedy for diseases of horses, cattle, swine, &c	3,872	Nov. 26	131	1135
Deitsch Brothers, New York, N. Y. Brushes	22,813-14	Nov. 26	131	1137
Delaney & Co., J. M., New York, N. Y. Sole-leather, taps, top pieces, squares, &c	24,433	Nov. 26	131	1137
Delaney & Co., J. M., New York, N. Y. Sole-leather, taps, top pieces, squares, &c	24,435	Nov. 26	131	1137
Detroit Oak Belting Co., Detroit, Mich. Leather belting	30,696	Nov. 26	131	1152
Dielectric Manufacturing Company, St. Louis, Mo. Electric-coil-insulating compound	30,418	Nov. 26	131	1147
Drake & Company, Easton, Pa. Table-salt, blue, and ammonia	28,899	Nov. 26	131	1140
Duck, Charles E., Baltimore, Md. Tooth-powder	30,483	Nov. 26	131	1149

TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

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Duparquet, Huot & Moneuse Co., New York, N. Y. Stoves, ranges, furnaces, &c., their parts and attachments	30,084	Nov. 26	131	1144
E. I. Horsman Co., New York, N. Y. Game	30,257	Nov. 26	131	1146
E. T. Smith Company, Worcester, Mass. Canned fish, clams, lobsters, &c	30,459	Nov. 26	131	1148
Eastern Dynamite Company, Kenvil, N. J. Electric exploders and leading and connecting wire	24,983	Nov. 26	131	1138
Elliott-Fisher Co., New York, N. Y. Type-writing machines	30,605	Nov. 26	131	1151
Emery Candle Co., Cincinnati, Ohio. Candles	30,457–8	Nov. 26	131	1148
Empire Gypsum Company, Garbutt, N. Y. Wall-plaster	30,241	Nov. 26	131	1145
Empire Gypsum Company, Garbutt, N. Y. Wall-plaster	30,242	Nov. 26	131	1146
Empire Gypsum Company, Garbutt, N. Y. Wall-plaster	30,243	Nov. 26	131	1146
Federal Waterproofing Co., St. Joseph, Mo. Waterproofed cotton fabric	29,970	Nov. 26	131	1143
Fischer Bros., Seattle, Wash. Corn-starch, rice, yeast, flour, hominy, &c	28,035	Nov. 26	131	1139
Fortuna Machine Co., New York, N. Y. Skiving and drilling machines	29,612	Nov. 26	131	1141
Frear Novelty Co., Albany, N. Y. Skirt and trousers hanger	30,225	Nov. 26	131	1145
Fuller, Frank, New York, N. Y. Remedy for dyspepsia, headaches, and nausea	30,469	Nov. 26	131	1148
Garner & Co., New York, N. Y. Cotton piece goods	30,328–9	Nov. 26	131	1146–7
Geo. Borgfeldt & Co., New York, N. Y. Penholders, rubber erasers, pencils, and paper-weights	30,402	Nov. 26	131	1147
Geo. F. Dittmann Boot & Shoe Company, St. Louis, Mo. Leather boots and shoes	30,255	Nov. 26	131	1146
Glahn & Son, Henry von, Brooklyn, N. Y. Canned vegetables	22,419	Nov. 26	131	1137
Globe Tobacco Company, Detroit, Mich. Tobacco, cigars, and cigarettes	22,674	Nov. 26	131	1137
Golden Hill Distilling Co., Columbus, Ohio. Whisky	30,606	Nov. 26	131	1151
Graef, A., New York, N. Y. Razors	30,534	Nov. 26	131	1149
Graham Paper Co., St. Louis, Mo. Printing and writing paper	27,451	Nov. 26	131	1139
Graham Paper Co., St. Louis, Mo. Printing and writing paper	27,455	Nov. 26	131	1139
Great Western Cereal Company, Chicago, Ill. Food for live stock	29,282	Nov. 26	131	1140
H. B. Claffin Company, New York, N. Y. Antiseptics and germicides	28,262	Nov. 26	131	1139
H. W. Johns-Manville Company, New York, N. Y. Asbestos packing	30,082	Nov. 26	131	1144
Hall, Henry J. S., *et al*, executors. (See Hall, William H.)				
Hall, Martha M., *et al*, executors. (See Hall, William H.)				
Hall, William H., deceased; H. J. S., W. H., and M. M. Hall and I. Hawley, New York, N. Y., executors. Dentifrices	29,308	Nov. 26	131	1140
Hannah, William S., East St. Louis, Ill. Candied popcorn, candy, and chewing-gum	30,388	Nov. 26	131	1147
Hawley, Irad, *et al*., executors. (See Hall, William H.)				
Hazard Powder Company, Hazardville, Conn. Explosive powder	21,661	Nov. 26	131	1136
Hein, George N., San Francisco, Cal. Dental obtundents	29,685	Nov. 26	131	1141
Hicks, Albert S., Grand Rapids, Mich. Furniture-polish	30,161	Nov. 26	131	1145
Hill, Adam, London, England, assignor to John Robertson & Sons Limited. Whisky	24,987	Nov. 26	131	1138
Illinois Canning Co., Camden, N. J., and Hoopeston, Ill. Canned corn	30,238	Nov. 26	131	1145
Illinois Canning Co., Camden, N. J., and Hoopeston, Ill. Canned vegetables	30,241	Nov. 26	131	1145
Illinois Canning Co., Camden, N. J., and Hoopeston, Ill. Canned corn	30,242	Nov. 26	131	1145
Illinois Canning Co., Camden, N. J., and Hoopeston, Ill. Canned corn	30,245	Nov. 26	131	1146
Illinois Canning Co., Camden, N. J., and Hoopeston, Ill. Canned vegetables	30,700–2	Nov. 26	131	1152
International Corset Company, Aurora, Ill. Corset-stays	30,139	Nov. 26	131	1144
Iron-ox Remedy Company, Detroit, Mich. Remedy for laxative and blood-purifying purposes	30,568	Nov. 26	131	1150
Isaacs Brothers, New York, N. Y. Overcoats, coats, vests, and trousers	29,602	Nov. 26	131	1141
J. K. Armsby Company, Chicago, Ill., and San Francisco, Cal. Dried fruits	29,785–7	Nov. 26	131	1142
J. K. Armsby Company, Chicago, Ill., and San Francisco, Cal. Canned and dried fruits	30,558–9	Nov. 26	131	1150
J. K. Armsby Company, San Francisco, Cal., and Chicago, Ill. Dried fruits	30,555–7	Nov. 26	131	1149–50
John Hoffmann & Sons Co., Milwaukee, Wis. Canned fruits and vegetables	29,809	Nov. 26	131	1142
John Hoffmann & Sons Co., Milwaukee, Wis. Canned fruits and vegetables	29,812	Nov. 26	131	1143
John Robertson & Sons Limited. (See Hill, Adam, assignor.)				
Jones, Alfred P., Minneapolis, Minn. Remedy for indigestion, &c	29,879	Nov. 26	131	1143
Jönköpings och Vulcans Tändsticksfabriksaktiebolag, Jönköpings, Sweden. Matches	29,499	Nov. 26	131	1141
Joseph F. McCoy Co., New York, N. Y. Grass-shears, hand-clippers, farrier-knives, &c	29,418	Nov. 26	131	1140
Kilmarnock Textile Manufacturing Co., Chicago, Ill. Woven rugs	29,982	Nov. 26	131	1143
Koppel, Albert, New Orleans, La. Tea	29,677	Nov. 26	131	1141
L. E. Waterman Company, New York, N. Y. Fountain-pens and pencils	30,613	Nov. 26	131	1151
La Bell, Alexander, Detroit, Mich. Medicines for diseases of the stomach and liver	30,503	Nov. 26	131	1149
Laflin & Rand Powder Company, New York, N. Y. Insulated electrical wires and electric exploders	24,990	Nov. 26	131	1138
Lamkin and Foster, Inc., Boston, Mass. Children's leather and canvas shoes	26,998	Nov. 26	131	1138
Lane & Son, J. E., Golconda, Ill. Wheat-flour	30,287	Nov. 26	131	1146
Lauer, Jacob, Baltimore, Md. Dress and negligée shirts	30,308	Nov. 26	131	1146
"Le Ripolin," (Société anonyme francaise de peintures laquées et d'enduits sous-marins, procédés Lefranc & Briegleb réunis,) Paris, France. Paints and varnishes	12,080	Nov. 26	131	1135
Lee Broom & Duster Company, Lincoln, Nebr. Brooms	30,427	Nov. 26	131	1148
Lee Broom & Duster Company, Lincoln, Nebr. Brooms	30,674–6	Nov. 26	131	1152
Lehmann, Julius, New York, N. Y. Rubber erasers	30,726	Nov. 26	131	1153
Leonori, Frank R., New York, N. Y. Aromatic bitters	30,524–5	Nov. 26	131	1149
Live Oak Distilling Company, Cincinnati, Ohio. Whisky	30,600	Nov. 26	131	1150
Long Island Pharmaceutical Co., New York, N. Y. Remedies for dyspepsia and diseases of the blood	29,762	Nov. 26	131	1142
M. Philipsborn Co., New York, N. Y. Ladies' suits, dresses, gowns, &c	29,018	Nov. 26	131	1140
Maillard, Henry, New York, N. Y. Cocoa	29,947	Nov. 26	131	1143
Manomet Cranberry Company, Plymouth, Mass. Cranberries	30,342	Nov. 26	131	1147
Marjenhoff Co., Charleston, S. C. Candy	29,638	Nov. 26	131	1141
Maspero Frères, Limited, London, England. Cigarettes, cigars, and tobacco	9,916	Nov. 26	131	1135
Maspero Frères, Limited, London, England. Cigarettes, cigars, and tobacco	12,965	Nov. 26	131	1135
Matchless Metal Polish Co., New York, N. Y., and Chicago, Ill. Abrasive material for cleaning and polishing metal, glass, and marble	18,390	Nov. 26	131	1136
McCarver, Sidney S., Fordyce, Ark. Remedy for cramps and bots in horses	27,629	Nov. 26	131	1139
Metzger, Theodor, Stamford, Conn. Soap	30,571	Nov. 26	131	1150
Monmouthshire Steel and Tinplate Company Limited, Pontymister, Wales. Galvanized iron and steel sheeting	27,422	Nov. 26	131	1139
Moroney, James, deceased; J. E. Moroney, Philadelphia, Pa., executor. Gin	29,640	Nov. 26	131	1141
Moroney, James, deceased; J. E. Moroney, Philadelphia, Pa., executor. Cigars	30,391	Nov. 26	131	1147
Moroney, James E., executor. (See Moroney, James.)				
Mulroney Manufacturing Company, Fort Dodge, Iowa. Overalls, shirts, coats, jackets, and pants	29,689	Nov. 26	131	1141
Mutual Drug Company, Cleveland, Ohio. Cigars	30,706	Nov. 26	131	1153
New South Brewery & Ice Co., Middlesboro, Ky. Beer	30,049	Nov. 26	131	1143
New York Belting and Packing Company, Ltd., New York, N. Y. Rubber machinery packing	28,173	Nov. 26	131	1139

TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

Name, residence, and title.	Serial No.	Date.	Official Gazette. Vol.	Page.
Odorless Refrigerator Company, Chattanooga, Tenn. Refrigerators	30,631	Nov. 26	131	1151
Olax Remedy Company, Desplaines, Ill. Liniment	30,512	Nov. 26	131	1149
Pastene & Co., P., Boston, Mass. Anchovies, tunny, sardines, &c	29,986	Nov. 26	131	1143
Peek, Walter K., New York, N. Y. Tooth powder, paste, and wash	30,788	Nov. 26	131	1153
Philip Morris & Co., Ltd., New York, N. Y. Cigarettes	30,643	Nov. 26	131	1151
Philip Morris & Co., Ltd., New York, N. Y. Cigarettes	30,647	Nov. 26	131	1151
Philip Morris & Co., Ltd., New York, N. Y. Cigarettes	30,650	Nov. 26	131	1151
Physicians Publishing Company, Boston, Mass. Treatises on medicines and supplements thereto	27,773	Nov. 26	131	1139
R. P. Smith & Sons Co., Chicago, Ill. Leather shoes	30,682–5	Nov. 26	131	1152
Red Rock Co., Jacksonville, Fla. Beverages and syrups for the same	27,123	Nov. 26	131	1138
Reed & Co., Charles H., Brockton, Mass. Lubricating oils and greases	30,327	Nov. 26	131	1146
Ricketts Bros., Detroit, Mich. Cough medicines	30,474	Nov. 26	131	1148
Rüegg, Walter, Basel, Switzerland. Pudding preparations	25,380	Nov. 26	131	1139
Sharp & Dohme, Baltimore, Md. Antiseptic solution	30,132	Nov. 26	131	1144
Shockley, Thomas, Topar, Mo. Remedy for diseases of eyes	30,160	Nov. 26	131	1145
Shoemart Company, St. Louis, Mo. Leather for boots and shoes	30,532	Nov. 26	131	1149
Siegel Cooper & Co., Chicago, Ill. Canned vegetables	5,434	Nov. 26	131	1135
Smith & Egge Mfg. Co., Bridgeport, Conn. Sheet-metal chains	30,055	Nov. 26	131	1144
Southdown Knitting Co., Allentown, Pa. Ribbed underwear	30,765–6	Nov. 26	131	1153
Standard Oil Co. of New York, New York, N. Y. Oil-lamps	29,716–17	Nov 26	131	1142
Stern & Saalberg Company, New York, N. Y. Candy	30,629	Nov. 26	131	1151
Stewart & Co., Baltimore, Md. Coffee	29,481	Nov. 26	131	1140
Stock Food Company of America, Minneapolis, Minn. Stock-tonics	22,699	Nov. 26	131	1137
Sultan, Frederick W., St. Louis, Mo. Laxative tablets	29,083	Nov. 26	131	1140
Talcum Puff Company, Inc., Asheville, N. C. Talcum powder	27,133	Nov. 26	131	1138
Theo. Hamm Brewing Co., St. Paul, Minn. Malt extract	29,591	Nov. 26	131	1141
Thompson Milling Company, Lockport, N. Y. Wheat-flour	29,147	Nov. 26	131	1140
Tilly, G de Koning, Harlem, Netherlands. Medicinal oil	25,600	Nov. 26	131	1138
Tolle, Charles R., Los Angeles, Cal. Rock-cider	30,172	Nov. 26	131	1145
Turner, Henry, Grand Rapids, Mich. Liniments and lotions	29 207	Nov. 26	131	1140
Tyndale, William C., Geneva, Ill. Medicine for pulmonary diseases	26,316	Nov. 26	131	1138
United States Graphite Company, Saginaw, Mich. Graphite lubricant, grease, and lubricating-graphite	30,407	Nov. 26	131	1147
United States Graphite Company, Saginaw, Mich. Graphite paint and pipe-cement	30,408	Nov. 26	131	1147
Utica Drop Forge and Tool Co., Utica, N. Y. Nippers and pliers	30,430	Nov. 26	131	1148
Va. Brewing Co., Roanoke, Va. Malt extract	30,455	Nov. 26	131	1148
Vail Brothers, Philadelphia, Pa. Odorless deodorant	30,581	Nov. 26	131	1150
Vance Shoe Company, Wheeling, W. Va. Leather boots and shoes	22,433	Nov. 26	131	1137
Viertel, Edmund, Detroit, Mich. Pills	29,896	Nov. 26	131	1143
Vincente Portuondo Company, Philadelphia, Pa. Cigars	30,263	Nov. 26	131	1146
Walsh, James H., Boston, Mass. Whisky	30,612	Nov. 26	131	1151
Wanser, George N., Cranford township, Union county, N. J. Lozenges or troches for coughs, &c	26,731	Nov. 26	131	1138
Washington Shirt Co., Chicago, Ill. Men's overshirts	29,998	Nov. 26	131	1143
Wellcome, Henry S., London, England. Dentifrice and perfumery	30,519	Nov. 26	131	1149
Whann Lithia Springs Co., Franklin, Pa. Ginger-ale and sarsaparilla	30,063	Nov. 26	131	1144
Wyman & Son, Jasper, Millbridge, Me. Canned sardines	29,582	Nov. 26	131	1141
Yale & Towne Manufacturing Company, Stamford, Conn. Padlocks	30,768	Nov. 26	131	1153

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED ON THE 26TH DAY OF NOVEMBER, 1907.

Invention.	Name.	No.	Date.	Monthly volume.		Official Gazette.	
				Specification.	Drawing.	Volume.	Page.
Acid. Obtaining a soluble glutinous substance from tang-	E. Herrmann	872,179	Nov. 26	4283	1023	131	1086
Agricultural implement	L. A. Aspinwall	872,316	Nov. 26	4554	1078	131	1129
Air-drier	F. T. Stare	872,027	Nov. 26	3988	958	131	1036
Air-drier	E. W. Cooke	872,054	Nov. 26	4040	968	131	1045
Alarm: *See* Refrigerator-alarm.							
Amusement apparatus	H. E. Riehl	872,253	Nov. 26	4435	1053–4	131	1110
Amusement device	W. J. Browne	871,777	Nov. 26	3401	836	131	952
Animal boot. Draft-	J. J. Fitzgibbon	872,060	Nov. 26	4052	971	131	1047
Animal-trap	K. R. Marks	871,809	Nov. 26	3473	851	131	962
Animal-trap	J. W. Gates	871,989	Nov. 26	3893	939	131	1023
Automobile battery-support	S. R. Bailey	872,213	Nov. 26	4358	1039	131	1097
Automobile-body	W. O. Thomas and H. G. Moore	872,031	Nov. 26	3996	959–60	131	1037
Automobile-chair	A. L. Moss	872,247	Nov. 26	4423	1051	131	1108
Awning. Canoe-	W. B. Sherman	872,088	Nov. 26	4109	983	131	1056
Axle-spindle	J. Stickney	872,030	Nov. 26	3994	959	131	1037
Axles. Means for taking up wear on vehicle-	W. A. Short	872,155	Nov. 26	4234	1010	131	1078
Baggage or freight transferring system	B. H. Alvey	872,212	Nov. 26	4355	1038	131	1097
Bags. Apparatus for packing predetermined quantities in	T. Whitehorn	872,161	Nov. 26	4245	1013	131	1079
Bait. Artificial	J. G. Henzel	871,935	Nov. 26	3744	912	131	1004
Bale-tie	E. H. Vance	872,266	Nov. 26	4455	1059	131	1113
Bank. Savings-	J. L. Kesner	871,874	Nov. 26	3621	884	131	985
Barrel. Hoopless	J. C. and C. A. Parker	871,817	Nov. 26	3484	854	131	964
Barrel-pitching equipment	P. Sherrer	871,829	Nov. 26	3518	860–1	131	969
Basket. Fruit-	A. G. Vient	872,206	Nov. 26	4341	1036	131	1095
Bearing. Ball-	P. J. McCullough	871,949	Nov. 26	3778	918	131	1009
Bearing for vault and safe door jambs. Adjustable bolt-	J. H. Williams	871,844	Nov. 26	3547	867	131	974
Bearing. Trolley-wheel	W. M. Caswell	871,913	Nov. 26	3695	902	131	998
Beater or mixer	G. E. Savage and J. R. Marcheseault.	871,895	Nov. 26	3661	892	131	992
Bedding-roll	G. R. Gulld	871,122	Nov. 26	4172	997	131	1067
Beer-reclaiming machine	F. C. H. Strasburger	871,832	Nov. 26	3524	862	131	970
Bells. Protective shield for skeleton-frame	G. L. Patterson	872,145	Nov. 26	4219	1006	131	1075
Belt-tightener	E. Mattman	871,943	Nov. 26	3767	916–17	131	1007
Bicycle and motor-bicycle saddle	T. F. Hammarén	872,124	Nov. 26	4178	998	131	1068
Bleaching apparatus	R. Van Buggenhoudt	872,265	Nov. 26	4452	1058–9	131	1113
Bleaching cotton fibers	R. Van Buggenhoudt	872,097	Nov. 26	4126	986	131	1059
Block: *See* Building-block.							
Blower. Rotary	H. Walther	871,837	Nov. 26	3533	865	131	972
Board: *See* Washboard.							
Boiler: *See* Steam-boiler.							
Boiler washout system	H. J. Clark	872,222	Nov. 26	4376	1042	131	1101
Bolster swing-damper	W. G. Price	872,014	Nov. 26	3951	950	131	1032
Bolster swing-damper	W. G. Price	872,015	Nov. 26	3953	951	131	1032
Book-holder	C. L. Work	871,903	Nov. 26	3675	896	131	994
Books. Machine for applying binding-strips to	W. H. Reisner, S. C. Swartz, and W. T. Hamilton	871,821	Nov. 26	3492	855–6	131	966
Boot and shoe tree or expander	A. H. Powis	872,013	Nov. 26	3949	950	131	1031
Bootjack	W. S. Titus	872,095	Nov. 26	4124	986	131	1058
Bottle-cap filling-machine	H. A. Olsson	872,079	Nov. 26	4094	980	131	1054
Bottle-capping machine	G. Kirkegaard	871,998	Nov. 26	3917	944	131	1026
Bottle. Mucilage-	R. Walton	872,268	Nov. 26	4461	1060	131	1114
Bottle. Non-refillable	E. M. Card	871,780	Nov. 26	3407	837	131	953
Bottle-resealing device	J. R. Scott	872,153	Nov. 26	4229	1009	131	1077
Bottling-machine	J. R. Cobb	872,275	Nov. 26	4471	1062	131	1116
Box: *See* Car sand-box. Tobacco-box. Match-box.							
Box	R. G. Inwood and P. C. Lavenberg. (Reissue.)	12,725	Nov. 26	4566	1080	131	1131
	J. P. Payne	872,195	Nov. 26	4312	1029–30	131	1091
Box-making machine	L. D. Rigg	871,957	Nov. 26	3792	921	131	1012
Box or crate machine	C. H. Ferguson	872,116	Nov. 26	4158	994	131	1065
Brake apparatus. Fluid-pressure	A. Fay	871,998	Nov. 26	3892	939	131	1022
Bread-mixer	G. Morgan	872,003	Nov. 26	3926	946	131	1028
Brick facing. Imitation	H. Cooperman	871,796	Nov. 26	3417	840	131	955
Brush. Bottle-	F. J. Spangler	872,091	Nov. 26	4113	984	131	1057
Brush holder. Tooth-	A. Schroeder	872,151	Nov. 26	4226	1008	131	1077
Bucket. Dumping-	I. Blum	871,981	Nov. 26	3868	936	131	1020
Buckle							

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Buffing-machine	J. E. Leavitt	871,942	Nov. 26	3764	916	131	1006
Buffing-machine	G. F. Stewart	871,962	Nov. 26	3803	923–4	131	1014
Buffing-machine	J. Gelzenlichter	871,990	Nov. 26	3895	939–40	131	1023
Buffing-machine and disk-holder therefor	G. F. Stewart	871,964	Nov. 26	3815	926	131	1014
Building	E. Huff, Jr	872,236	Nov. 26	4408	1048	131	1105
Building-block	W. L. Dow	872,111	Nov. 26	4152	993	131	1064
Building constructions. Apparatus for demonstrating the strains in	E. Carlipp	871,861	Nov. 26	3598	880	131	961
Bulkhead-doors. Apparatus for electrically operating water-tight	R. H. Kirk	871,804	Nov. 26	3448	846–9	131	960
Bullet	J. Piatkowski	872,081	Nov. 26	4097	981	131	1054
Burner: *See* Engine-burner. Gas-burner. Hydrocarbon-burner. Liquid-fuel burner. Self-extinguishing burner.							
Bushing	H. J. Gilbert	871,928	Nov. 26	3734	910	131	1002
Button-loop	T. S. Haley	872,230	Nov. 26	4399	1045	131	1103
Button. Self-attaching	H. O. Reese	872,149	Nov. 26	4223	1003	132	1076
Button. Separable	M. D. Shipman	871,897	Nov. 26	3663	893	131	992
Cabinet. Grocer's	R. T. Durham	872,225	Nov. 26	4392	1044	131	1102
Cable carrier apparatus	G. A. Amsden	871,768	Nov. 26	3383	830–1	131	949
Cable-terminal and junction-box	F. B. Cook	871,984	Nov. 26	3873	936–7	131	1021
Cables, &c. Apparatus for cutting	C. Waller	872,312	Nov. 26	4547	1077	131	1128
Cables, strands, and the like. Feeding apparatus for	L. A. Holman	872,064	Nov. 26	4061	973	131	1048
Canceling machine. Stamp-	C. E. Phillips	872,010	Nov. 26	3941	949	131	1030
Car-arrester	W. Cook	872,276	Nov. 26	4474	1063	131	1116
Car-door	F. W. Burwell	872,167	Nov. 26	4255	1016	131	1081
Car. Dump-	W. A. Caswell	871,781	Nov. 26	3408	837	131	953
Car. Dump-	C. H. Doty	872,057	Nov. 26	4045	989	131	1046
Car. Dumping-	A. Becker	872,045	Nov. 26	4025	985	131	1042
Car-operating mechanism. Dump-	A. S. Page	871,885	Nov. 26	3644	888–9	131	988
Car sand-box	A. L. Bacon	872,104	Nov. 26	4138	990	131	1061
Car-underframe	C. H. Howard and C. T. Westlake.	871,799	Nov. 26	3439	844	131	958
Car-underframe	A. Becker	872,044	Nov. 26	4024	985	131	1042
Car-ventilating system	F. D. Jacobs	871,938	Nov. 26	3748	913	131	1006
Car-wheel tempering and annealing apparatus	J. M. Hansen	871,931	Nov. 26	3738	911	131	1003
Car-wheels. Tempering and annealing	J. M. Hansen	871,932	Nov. 26	3740	911	131	1003
Carpet stretcher and sizer	F. Schwensow	872,087	Nov. 26	4107	983	131	1056
Carrier and elevator	E. G. Kraft	872,136	Nov. 26	4201	1003	131	1072
Case: *See* Display-case.							
Casket-handle	J. H. Walker	872,034	Nov. 26	4002	961	131	1038
Casting reel. Free-	H. Slotterbeck	872,261	Nov. 26	4448	1057	131	1112
Cement-block mold	G. B. Blodgett	872,106	Nov. 26	4141	990	131	1062
Centrifugal machines. Journal-support for	K. K. McLeod	872,078	Nov. 26	4092	980	131	1053
Chain	H. M. Gray	871,796	Nov. 26	3435	843	131	958
Chain-making machine	Z. B. Coes and R. F. Scott	871,784	Nov. 26	3412	838–9	131	954
Chair: *See* Automobile-chair.							
Check system. Meal-	G. A. Phillips	872,011	Nov. 26	3945	950	131	1031
Cherries, &c. Device for picking	J. West	871,842	Nov. 26	3545	867	131	974
Chuck. Self-tightening rock-drill	J. A. Thompson, E. M. Mackie, and P. F. Doyle.	871,972	Nov. 26	3849	931	131	1017
Churning or washing machine	H. P. Avery and S. J. Bartlett	871,906	Nov. 26	3681	897–8	131	995
Cigar-bunch-forming apparatus	O. Hammerstein	872,177	Nov. 26	4280	1023	131	1086
Cigar-bunch-rolling machine	O. Hammerstein	872,125	Nov. 26	4179	998–9	131	1058
Cigar-moistener	O. L. Johnson	872,068	Nov. 26	4067	975	131	1049
Clamp: *See* Veneer-clamp.							
Clamp	M. A. Reare	872,252	Nov. 26	4434	1053	131	1109
Cleaner: *See* Flue-cleaner. Sewer-pipe cleaner.							
Clip	L. H. Porter	871,888	Nov. 26	3651	890	131	990
Clock. Alarm-	C. G. Trautman	871,900	Nov. 26	3671	895	131	993
Clock. Electric guest-calling	R. C. Dick	872,224	Nov. 26	4390	1043–4	131	1101
Clock. Tower-	E. Rowe	872,200	Nov. 26	4324	1032–3	131	1093
Clothes-horse. Collapsible	J. Himmel	872,235	Nov. 26	4406	1047	131	1104
Clutch. Friction-	W. J. Hilliard	872,062	Nov. 26	4056	972	131	1047
Coat, hat, and umbrella rack. Locking	H. S. Payne	872,147	Nov. 26	4220	1007	131	1076
Cock or valve operating means	W. W. Gordon	871,869	Nov. 26	3613	882	131	983
Cock. Stop-	R. Rice	871,956	Nov. 26	3791	921	131	1011
Composite structures. Reinforcing means for	J. F. Havemeyer	872,127	Nov. 26	4182	999	131	1059
Computing-machine	D. W. Shiek	872,021	Nov. 26	3964	953–4	131	1034
Concrete wall or column construction	W. E. Middleton	871,879	Nov. 26	3634	886	131	987
Contact adjustment	G. L. Patterson	872,146	Nov. 26	4220	1007	131	1075
Controller and circuit-breaker. Combined	W. M. Scott	872,154	Nov. 26	4230	1010	131	1077
Cooking apparatus. Steam	W. F. Lorentzen	872,242	Nov. 26	4417	1049	131	1106
Cooler: *See* Water-cooler.							
Cooling apparatus	W. Griesser	872,175	Nov. 26	4272	1020–1	131	1085
Cord-knotter	R. H. Jahns	872,182	Nov. 26	4286	1024	131	1087
Cotter-pin	C. S. Shank	872,260	Nov. 26	4447	1057	131	1111
Counter. Recording-	F. E. Hite	872,180	Nov. 26	4284	1024	131	1087
Coupling: *See* Hose-coupling. Pipe-coupling.	F. L. Wolfe	871,849	Nov. 26	3556	870	131	976
Cream-separator. Centrifugal	T. W. Morgan	871,882	Nov. 26	3641	887	131	988
Cream-separators. Liner for centrifugal	W. W. Marsh	871,878	Nov. 26	3632	885	131	986
Crystallizing apparatus	G. Schlicht	872,257	Nov. 26	4443	1056	131	1111
Cut-off. Automatic	H. P. Coster	872,170	Nov. 26	4264	1017–18	131	1083
Cutter: *See* Tube-cutter.							
Cyanid of potassium or sodium. Manufacture of	F. W. Morris	871,948	Nov. 26	3777	918	131	1009
Cycle. Motor-	C. O. Hedstrom	871,995	Nov. 26	3910	943	131	1025
Dehydrating animal and vegetable substances	E. W. Cooke	871,982	Nov. 26	3870	936	131	1021
Dehydrating apparatus	F. T. Stare	872,026	Nov. 26	3984	957–8	131	1036
Dining-table	J. A. Schackner	872,256	Nov. 26	4442	1056	131	1110
Discharge tank or reservoir. Intermittent	C. Potts	871,820	Nov. 26	3489	854–5	131	965

Invention.	Name.	No.	Date.	Monthly volume. Spec	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Display-case	A. E. Lyons	871,877	Nov. 26	3631	885	131	986
Display-case. Market-box	H. J. Johnson and T. J. Larkin	871,802	Nov. 26	3446	846	131	960
Display-stand	R. Brooks	872,274	Nov. 26	4409	1062	131	1116
Display-stand for hats	C. E. Mentzer	872,139	Nov. 26	4207	1004	131	1073
Door and cupboard catch	S. C. Schofield	872,309	Nov. 26	4543	1076	131	1127
Door check or bumper	H. F. Keil	872,184	Nov. 26	4290	1025	131	1088
Door check or bumper	H. F. Keil	872,185	Nov. 26	4290	1025	131	1088
Door fastener and opener	C. Smith	872,022	Nov. 26	3974	955	131	1034
Door-holder	A. J. Rosentreter	871,959	Nov. 26	3797	922	131	1013
Door lock. Sliding-	W. M. Cook	872,110	Nov. 26	4150	993	131	1063
Dough-machine feeding device	P. F. Carroll	872,051	Nov. 26	4035	967	131	1044
Draft-equalizer	A. Lange	872,240	Nov. 26	4413	1049	131	1106
Drafting machine. Design-	A. Lorant	871,806	Nov. 26	3471	850	131	962
Drawers. Shield for ladies'	I. I. Elterich	872,172	Nov. 26	4267	1018	131	1083
Drier: *See* Air-drier.							
Drill: *See* Earth-drill. Grain-drill. Pneumatic drill.							
Drop mechanism. Quick-	J. W. Little	872,071	Nov. 26	4073	976	131	1071
Dye and making same. Green vat-	G. Engi	872,227	Nov. 26	4395	.....	131	1102
Dye. Brown vat-	A. Schmidt	872,085	Nov. 26	4104	.....	131	1056
Dye. Green-black vat-	A. Schmidt	872,086	Nov. 26	4105	.....	131	1056
Dyestuff and making same	F. J. Oakes	872,250	Nov. 26	4430	.....	131	1109
Earth-drill	G. C. Jackson	871,900	Nov. 26	3441	845	131	959
Easel and hanger	C. G. Taylor	871,833	Nov. 26	3526	862	131	971
Educational chart, drawing-board, and writing-desk. Combined	G. A. Henderson	871,934	Nov. 26	3743	911–12	131	1004
Effluents. Apparatus for treating trade	B. and A. Broadbent	872,049	Nov. 26	4032	966	131	1043
Electric apparatus. Sealing for	J. R. Baker	871,772	Nov. 26	3392	833	131	950
Electric furnace	E. R. Taylor	871,971	Nov. 26	3845	930–1	131	1017
Electric switch. Automatic	W. L. Bliss	872,215	Nov. 26	4361	1039	131	1098
Electrocapillary apparatus	A. Orling	872,193	Nov. 26	4304	1028	131	1090
Electrotherapeutic apparatus	N. H. Raymond and J. C. Vetter	872,148	Nov. 26	4222	1007	131	1076
Elevator-floor-gate-actuating device	W. C. Smith	871,898	Nov. 26	3665	893–4	131	992
Embroidering-machine	J. Schroeder	872,152	Nov. 26	4227	1009	131	1077
Engine: *See* Explosive-engine. Gas and gasolene engine. Rotary engine. Turbine-engine.							
Engine burner. Explosion-	P. McCusker	871,883	Nov. 26	3642	888	131	988
Engine cylinder. Gas-	H. Richter	872,306	Nov. 26	4539	1075	131	1126
Engine turn-table casting. Locomotive-	W. H. Wright	871,850	Nov. 26	3557	870	131	976
Engines. Automatic alarm and stopping device for	D. B. Adams	872,039	Nov. 26	4013	963	131	1040
Engines. Cooling system for internal-combustion	G. Green	871,797	Nov. 26	3436	843–4	131	958
Engines. Electric stop for	J. K. Wright	872,102	Nov. 26	4134	988–9	131	1060
Excavating for concrete piles, &c	W. J. Stewart	872,093	Nov. 26	4121	985	131	1058
Excavator	W. Watson	871,839	Nov. 26	3537	865–6	131	973
Eyeglass-mounting	L. F. Adt	872,211	Nov. 26	4353	1038	131	1096
Eyelet	W. Hughes	872,237	Nov. 26	4409	1048	131	1105
Fabric: *See* Knitted fabric.							
Fare indicator. Cab-	C. Mascart	872,188	Nov. 26	4298	1026	131	1089
Fastener	A. U. Bright	872,221	Nov. 26	4375	1041	131	1100
Feed-rack, feed-trough, and animal-pen. Combined	W. J. Tolle	872,032	Nov. 26	4000	960	131	1038
Feed-water distributing-pan mechanism	J. M. Lynch	872,299	Nov. 26	4525	1072	131	1123
Feed-water heater	J. W. Jantzen	871,801	Nov. 26	3443	845–6	131	959
Filter-press	F. W. von Oven	872,008	Nov. 26	3936	948	131	1029
Filtration plant. Gravity	J. G. MacGregor	872,073	Nov. 26	4076	977	131	1051
Fire apparatus	J. H. Mitchell	871,880	Nov. 26	3635	886–7	131	987
Fire-escape	P. C. Burhans	872,050	Nov. 26	4033	967	131	1043
Firearm-sight	J. E. Harker	871,933	Nov. 26	3742	911	131	1004
Flax-breaker feeding mechanism	G. H. Ellis	871,863	Nov. 26	3602	880–1	131	982
Flue cleaner. Chimney-	W. H. Perry	872,080	Nov. 26	4096	981	131	1054
Flying-machine air-propeller	L. Gathmann	871,926	Nov. 26	3731	909	131	1002
Frame: *See* Piano-action frame. Truck-frame.							
Furnace: *See* Electric furnace.							
Furnace	O. Beguelin	871,854	Nov. 26	3564	871–2	131	978
Fuse	F. W. Young	871,851	Nov. 26	3558	870	131	977
Gage: *See* Type-setting-machine gage.							
Garbage-receptacle	A. Reed	871,955	Nov. 26	3789	920	131	1011
Garment-hanger	M. A. Wood	872,100	Nov. 26	4129	988	131	1060
Garment-holder	H. C. Krause	872,297	Nov. 26	4515	1071	131	1123
Gas and gasolene engine	E. E. Wright	872,164	Nov. 26	4250	1014	131	1080
Gas-burner	W. Kitching	872,134	Nov. 26	4198	1002–3	131	1071
Gas-burner. Inverted	J. Lederer	872,070	Nov. 26	4071	975–6	131	1050
Gas-pipe safety device	I. L. Cleveland	871,783	Nov. 26	3410	838	131	953
Gas plant. Producer-	G. L. Morton	871,810	Nov. 26	3475	851–2	131	962
Gas-pressure regulator	A. D. Brasson	872,273	Nov. 26	4467	1061–2	131	1115
Gate: *See* Railway-gate.							
Gate	A. D. Acers	871,905	Nov. 26	3678	897	131	995
Gear. Transmission-	A. P. Boyer	872,220	Nov. 26	4370	1041	131	1100
Gear. Variable-speed and reversing transmission-	A. P. Boyer	872,219	Nov. 26	4367	1040	131	1099
Gearing	O. Williams	872,269	Nov. 26	4462	1060	131	1114
Gearing. Change-speed	C. Johnson	872,131	Nov. 26	4192	1001	131	1071
Generator: *See* Power-generator.							
Glass-working apparatus	R. M. Paxton	872,194	Nov. 26	4307	1028–9	131	1091
Glove	D. E. Lauferty	872,137	Nov. 26	4202	1004	131	1072
Glove. Husking-	S. Kvam	871,805	Nov. 26	3465	849	131	961
Gopher-trap	W. D. Armstrong, W. C. Hooker, and K. R. Marks.	872,041	Nov. 26	4019	964	131	1041
Grading-machine	G. S. Whitney	871,976	Nov. 26	3858	933	131	1019
Grain cleaning and pickling machine	H. T. Helgeson	872,130	Nov. 26	4189	1000–1	131	1070
Grain-drill	A. Armitage and W. P. Thistlethwaite.	871,770	Nov. 26	3387	832–3	131	950
Grass-cutting implement	J. G. Leep	871,806	Nov. 26	3466	850	131	961

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Grave construction	W. Livingston	872,241	Nov. 26	4414	1049	131	1106
Grinding-machine	E. Cook	871,785	Nov. 26	3414	839	131	964
Hair-spring locator	B. Z. Friedman	871,806	Nov. 26	3698	861	131	982
Halter	S. E. Gates	871,925	Nov. 26	3730	908	131	1002
Hammer. Automatic magazine-	J. E. Ridings	872,150	Nov. 26	4224	1008	131	1076
Handle: *See* Casket-handle.							
Hanger: *See* Garment-hanger.							
Harmonica	M. J. Reidy	872,262	Nov. 26	4100	982	131	1055
Harness	E. Morrey	872,265	Nov. 26	4420	1050	131	1107
Harrow riding attachment	D. K. Wilson	871,846	Nov. 26	3549	868	131	975
Harvester	G. P. Wacek	871,835	Nov. 26	3529	863–4	131	971
Harvesting and husking machine. Corn	E. A. Hollenbeck	872,285	Nov. 26	4402	1066–7	131	1119
Harvesting machine. Potato-	R. S. Baxter	872,146	Nov. 26	4264	1015	131	1081
Hat, coat, and umbrella rack	E. Boynton	872,107	Nov. 26	4143	991	131	1062
Hay-rake	C. Pearson	872,009	Nov. 26	3989	949	131	1030
Heater: *See* Feed-water heater. Water-heater. Hot-water heater.							
Hinge	W. H. Torode	872,263	Nov. 26	4450	1058	131	1112
Hook: *See* Snap-hook.							
Horse-overshoe	G. N. Kinnell	872,287	Nov. 26	4406	1067	131	1120
Horse-power	G. Wenzelmann	871,840	Nov. 26	3541	866	131	973
Horseshoe. Hoof-spreading	F. M. Bethune	872,214	Nov. 26	4360	1039	131	1098
Hose-coupling	A. Nagley	872,191	Nov. 26	4303	1027	131	1090
Hot-water heater	J. G. Massie	872,001	Nov. 26	3923	946	121	1027
Hydraulic transmission device	J. Gedeon, Jr	871,927	Nov. 26	3733	909–10	121	1002
Hydrocarbon-burner	V. C. Shank	872,203	Nov. 26	4330	1054–5	121	1094
Hydrosulfite preparation and making same. Stable	H. P. Glazier	871,992	Nov. 26	3905	942	121	1024
Ice-cutting machine	G. Engi	872,114	Nov. 26	4155	.....	131	1064
Illusory apparatus	H. Wulff	871,978	Nov. 26	3863	934–5	131	1020
Incubator	B. Purpura	872,305	Nov. 26	4536	1074–5	131	1126
Indexing device. Drawer-contents-	S. F. Bihn	871,908	Nov. 26	3684	898–9	131	996
Indicator: *See* Fare-indicator. Speed-indicator.	J. J. Barrow and T. J. King	872,042	Nov. 26	4021	964	131	1041
Indigo and making same. Mixed chlorobromo derivatives of	G. Engi	872,115	Nov. 26	4157	.....	131	1065
Indigo and making same. Monochloromonobromo derivatives of	G. Engi	872,280	Nov. 26	4485	.....	131	1118
Insole	H. H. Roosa	871,891	Nov. 26	3656	891	131	991
Insole-slashing machine	W. C. Stewart	871,967	Nov. 26	3827	927–8	131	1015
Insulator	H. D. Bodley	872,216	Nov. 26	4364	1039	131	1098
Iron: *See* Soldering-iron.							
Iron from tin-plate scrap. Detinning and recovering merchantable	E. A. Sperry	872,092	Nov. 26	4114	984–5	131	1057
Ironing-machine	A. R. Gustafson	872,123	Nov. 26	4174	997–8	131	1057
Jack: *See* Bootjack.							
Joint: *See* Pipe-joint.							
Justifying mechanism	F. B. Converse, Jr	872,223	Nov. 26	4379	1042–3	131	1101
Knitted fabric	L. N. D. Williams	872,163	Nov. 26	4249	1019	131	1080
Labeling-machine	E. E. L. Boyer	871,776	Nov. 26	3397	835	131	961
Labeling-machine bottle-guide	H. Gates	871,794	Nov. 26	3431	842	131	967
Lacing device. Boot and shoe	M. W. White	872,037	Nov. 26	4006	962	131	1039
Ladder	H. Adler	872,165	Nov. 26	4252	1014–15	131	1081
Lamp cluster. Incandescent-	H. Hubbell	872,065	Nov. 26	4053	973	131	1043
Lamp. Gas-	J. J. McIntyre	871,950	Nov. 26	3780	919	131	1000
Lamp. Incandescent gas-	A. Rector	871,954	Nov. 26	3787	920	131	1011
Lamp socket. Incandescent-	G. W. Goodridge	872,283	Nov. 26	4400	1066	131	1118
Lantern-holder	W. B. Chittenden	872,052	Nov. 26	4026	967	131	1044
Lathe-dog	R. G. Nye	872,007	Nov. 26	3985	948	131	1029
Lathe. Engine-	J. Hartness	872,233	Nov. 26	4402	1040	131	1104
Lathe tool-holder	W. T. Russell	871,892	Nov. 26	3657	891	131	991
Lavatory	P. E. Law	871,876	Nov. 26	3630	885	131	985
Lead. Manufacture of white	F. W. Morris	871,947	Nov. 26	3775	918	131	1008
Level	S. H. Gardner	871,924	Nov. 26	3729	908	131	1001
Leveling instrument	G. A. Jenning	872,183	Nov. 26	4287	1024	131	1087
Life-net	C. Harrison	871,870	Nov. 26	3615	883	131	984
Linotype-machines. Distributer of double-magazine	J. P. Tihon	871,899	Nov. 26	3667	894–5	131	993
Liquid-cooling device	A. Koch	871,940	Nov. 26	3761	915	131	1006
Liquid-fuel burner	J. H. Koons	872,288	Nov. 26	4408	1068	131	1120
Liquid-separator. Centrifugal	E. A. Forsberg	872,173	Nov. 26	4268	1019	131	1084
Liquids. Device for separating materials held in suspension by	C. N. Waite	872,033	Nov. 26	4001	961	131	1038
Loading apparatus	A. J. Derby	872,278	Nov. 26	4477	1064	131	1117
Loading device. Wagon-	R. Pederson	871,887	Nov. 26	3647	889–90	131	989
Lock: *See* Door-lock. Sash-lock. Nut-lock.							
Lock	F. Siebert	872,156	Nov. 26	4235	1010	131	1078
Lock-bolt keeper	J. Christy	872,053	Nov. 26	4037	987–8	131	1044
Locomotive-pilot	H. J. Dean	871,789	Nov. 26	3423	841	131	965
Locomotive-tender	J. H. Davis	872,277	Nov. 26	4476	1063	131	1117
Loom	W. Wattie	872,035	Nov. 26	4003	961	131	1039
Loom-shuttle	A. Buckler	871,911	Nov. 26	3690	901	131	997
Loom-shuttle-changing mechanism	E. H. Ryon	872,254	Nov. 26	4437	1054–5	131	1110
Loom stop-motion	C. D. Lanning	871,875	Nov. 26	3622	884–5	131	985
Loom take-up mechanism	A. A. Gordon, Jr	872,061	Nov. 26	4053	971	131	1047
Lubricator: *See* Oil-cup lubricator. Pump-lubricator.							
Mail receiver and deliverer for railway-trains	A. Matlak, K. Wisniewski, and M. Sikiewicz.	872,301	Nov. 26	4529	1073	131	1126
Mainspring-winder	L. Kohn	872,135	Nov. 26	4198	1003	131	1071
Manure-spreader	D. K. Wilson	871,846	Nov. 26	3548	868	131	975

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Manure-spreader	W. Galloway	871,867	Nov. 26	3611	882	131	983
Manure-spreader	E. C. Litchfield and D. Garst	872,000	Nov. 26	3922	945	131	1027
Mash-tubs. Drain-controlling apparatus for	A. Aufrichtig	872,103	Nov. 26	4136	989	131	1061
Massage implement	H. G. Hart	872,126	Nov. 26	4181	999	131	1069
Match-box	M. F. Luna	872,243	Nov. 26	4418	1050	131	1106
Match-dipping apparatus	W. H. Parker	871,818	Nov. 26	3485	854	131	964
Match-safe blank-bending machine	W. F. Smith and M. Johnson	872,025	Nov. 26	3981	956–7	131	1035
Mattress	F. H. Hirschman	871,871	Nov. 26	3617	883	151	984
Measure	C. W. Newton	871,814	Nov. 26	3480	853	131	963
Measuring apparatus	A. J. Felter	871,865	Nov. 26	3607	881	131	982
Measuring device. Liquid-	G. O. Seeley	871,827	Nov. 26	3514	859	131	968
Measuring instrument	J. Jacobson and J. Haugland	871,996	Nov. 26	3912	943	131	1025
Measuring instrument. Electric	P. MacGahan	872,300	Nov. 26	4527	1072	131	1124
Metal. Cleansing	J. Hawthorne	871,994	Nov. 26	3909	.....	131	1025
Metal joint	J. J. Souder	871,830	Nov. 26	3520	861	131	969
Metal rings. Apparatus for upsetting	J. Clark	872,168	Nov. 26	4259	1016–17	131	1082
Metal structure	E. B. Repp	872,018	Nov. 26	3958	952	131	1033
Milk-cooling apparatus	J. C. Jewett and J. L. Bowen	872,286	Nov. 26	4495	1067	131	1119
Mill: *See* Pulverizing-mill. Sawmill.							
Mixer: *See* Bread-mixer.							
Mixing apparatus	F. E. Rooney	872,084	Nov. 26	4103	982	131	1055
Mold: *See* Cement-block mold. Pipe-mold.							
Molding-receptacle	J. S. Stewart	872,029	Nov. 26	3991	959	131	1037
Motor: *See* Rotary motor. Water-motor.							
Motor-control system	E. W. Stull	871,970	Nov. 26	3840	929–30	131	1016
Motor-controlling mechanism. Electric-	M. B. McLauthlin	872,143	Nov. 26	4214	1006	131	1074
Motor-controlling mechanism. Electric-	E. D. Lewis	872,289	Nov. 26	4409	1068	131	1120
Motors. Means for automatically controlling electric	H. W. Leonard	872,298	Nov. 26	4517	1071–2	131	1123
Muffler	F. C. Blanchard and E. B. Crocker	871,775	Nov. 26	3394	834–5	131	951
Music. Recording	J. J. Walker	872,267	Nov. 26	4456	1059	131	1113
Musical instruments. Automatic playing attachment for	P. Welin	872,313	Nov. 26	4548	1077	131	1128
Musical instruments. Modulating attachment for automatic	T. Danquard	871,788	Nov. 26	3420	840–1	131	955
Musical instruments. Narrow music-sheet attachment for	T. Danquard	871,787	Nov. 26	3418	840	131	955
Muzzle. Dog-	W. H. Dusenbury	872,279	Nov. 26	4484	1065	131	1118
Nut-burring machine	E. Mongrain	872,189	Nov. 26	4299	1026–7	131	1089
Nut-lock	J. F. Fish	871,921	Nov. 26	3724	907	131	1001
Nut-lock	H. A. and J. P. Fisher	871,922	Nov. 26	3725	907	131	1010
Oar for boats	R. Walterskirchen	872,158	Nov. 26	4237	1011	131	1079
Oil-burning system	I. E. Smith	872,023	Nov. 26	3978	955	131	1035
Oil-channels in boxes, bearings, &c. Machine for cutting spiral	W. Wattie	872,036	Nov. 26	4004	961–2	131	1039
Oil-cup lubricator	W. P. Phillips	872,012	Nov. 26	3946	950	131	1031
Optical instrument	J. G. Gray	872,120	Nov. 26	4168	996	131	1066
Ore-pulp. Filter for separating solutions from	C. L. Buckingham	871,860	Nov. 26	3595	879	131	980
Oven	M. Nusser	872,144	Nov. 26	4217	1006	131	1075
Oven. Portable	W. J. Perry	871,819	Nov. 26	3487	854	131	965
Overalls	J. A. Sommers	872,089	Nov. 26	4111	983	131	1056
Packing. Rod-	T. A. Johnston	872,132	Nov. 26	4194	1002	131	1071
Pad-cover	G. F. Stewart	871,965	Nov. 26	3821	926	131	1015
Pad-covers. Machine for making	G. F. Stewart	871,963	Nov. 26	3807	924–5	131	1014
Pad-covers. Making	G. F. Stewart	871,966	Nov. 26	3823	927	131	1015
Paint and varnish remover	J. F. Dickson	871,790	Nov. 26	3425	.....	131	956
Paint and varnish. Removing	J. M. Wilson	872,314	Nov. 26	4550	1077	131	1129
Paper boxes. Machine for forming and applying wire bales to	C. D. Grimes	872,176	Nov. 26	4274	1021–2	131	1085
Paper-making-machine cutting attachment	C. H. McCormick	872,248	Nov. 26	4424	1051	131	1108
Partition. Metal-sheathed panaled	T. I. Duffy	872,058	Nov. 26	4048	970	131	1046
Pen and pencil rack. Combined	J. S. Twaddell	872,157	Nov. 26	4236	1011	131	1078
Perambulator	W. H. Smith	871,961	Nov. 26	3801	922	131	1013
Piano	M. Clark	871,782	Nov. 26	3409	837–8	131	953
Piano-action frame	H. J. Sandlas	871,894	Nov. 26	3660	892	131	991
Piano-action frame	J. W. Darley, Jr	872,292	Nov. 26	4505	1069–70	131	1121
Piano. Combined manually and mechanically operated	J. W. Darley, Jr	871,916	Nov. 26	3699	902–3	131	998
Piano. Combined manually and mechanically operated	J. W. Darley, Jr	871,917	Nov. 26	3706	904	131	999
Piano. Combined manually and mechanically operated	J. W. Darley, Jr	871,918	Nov. 26	3711	904–5	131	999
Piano. Combined manually and mechanically operated	J. W. Darley, Jr	871,919	Nov. 26	3717	905–6	131	1000
Piano-players. Tracker-bar for	F. W. Wood	872,315	Nov. 26	4553	1078	131	1129
Pin: *See* Cotter-pin.							
Pipe connection	H. Clayton	872,169	Nov. 26	4262	1017	131	1082
Pipe coupling. Automatic train-	R. M. Fyock and S. Stone	872,174	Nov. 26	4269	1019–20	131	1084
Pipe-joint. Flexible	W. A. Greenlaw	872,121	Nov. 26	4171	996	131	1066
Pipe mold. Cement-	E. W. Buser	871,778	Nov. 26	3404	836	131	952
Pipe-wrench	J. Roemer	871,958	Nov. 26	3794	921	131	1012
Planter	J. D. Lancaster	871,941	Nov. 26	3763	915	131	1006
Plants. Stand for propping	J. G. Walton	871,901	Nov. 26	3672	896	131	994
Pneumatic cushion	W. C. McCullough	871,811	Nov. 26	3477	852	131	963
Pneumatic drill. Portable	H. J. Kimman	871,939	Nov. 26	3750	913–15	131	1005
Popcorn-buttering device	J. M. Kline	872,239	Nov. 26	4412	1048	131	1105
Post: *See* Tool-post.							
Power-generator. Electromagnetic	J. L. Potter	872,251	Nov. 26	4430	1052–3	131	1109
Power system	R. H. Goldsborough	871,993	Nov. 26	3906	942–3	131	1024
Press: *See* Filter-press. Printing-press.							
Printing apparatus	M. McMahon	872,302	Nov. 26	4531	1073	131	1126
Printing-machines. Arrangement for giving movement to automatic numbering mechanisms for	J. D. Galwey	871,923	Nov. 26	3726	907	131	1001

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg's.	Official Gazette. Vol.	Official Gazette. Page.
Printing-machines. Thread-stretching device for the warps of drum	F. Schmidt	872,258	Nov. 26	4444	1056	131	1111
Printing-press	E. L. Stone	871,831	Nov. 26	3522	861	131	970
Printing-press	C. A. McCain and C. Henderson	872,004	Nov. 26	3027	947	131	1028
Printing-press. Automatic	H. E. Brett	872,108	Nov. 26	4145	991–2	131	1063
Projectile for rifled firearms	L. Schupmann	871,825	Nov. 26	3506	858	131	967
Projection apparatus	W. L. Patterson	872,303	Nov. 26	4532	1074	131	1125
Propeller or fan	F. G. Sargent	872,307	Nov. 26	4540	1075	131	1126
Propulsion. Ship	P. H. Bellitz	871,774	Nov. 26	3394	834	131	951
Pulley. Expansion	G. F. Geb	872,282	Nov. 26	4489	1065	131	1118
Pulverizing-mill	G. E. Rudnick	872,201	Nov. 26	4325	1033	131	1093
Pump. Air	J. C. Beck and J. A. Bowyer	872,043	Nov. 26	4022	964	131	1041
Pump for cleaning systems. Suction	J. V. O. Palm	871,952	Nov. 26	3783	919	131	1010
Pump-lubricator	H. L. McCullough	872,249	Nov. 26	4426	1052	131	1108
Pump. Rotary	G. Anderson and R. Lundin	872,040	Nov. 26	4017	963	131	1040
Punching implement. Belt	W. W. Woodley	872,210	Nov. 26	4352	1037	131	1096
Rack: *See* Coat, hat, and umbrella rack. Pen and pencil rack. Shoe-rack. Feed-rack. Hat, coat, and umbrella rack.							
Rail-bond	A. H. Mosher	872,142	Nov. 26	4212	1005	131	1074
Rails. Appliance for fixing and cutting off the upper or wearing portions of compound tramway	E. Rhodes	871,822	Nov. 26	3496	856	131	966
Rails. Rerolling	A. P. Diescher	872,056	Nov. 26	4043	969	131	1045
Railway equipment. Warning-post for	E. D. Hillman	871,936	Nov. 26	3744	912	131	1004
Railway-gate	F. J. Stein	872,028	Nov. 26	3989	958	131	1037
Railway rolling-stock. Seat and seat-back for	A. E. Ostrander	871,951	Nov. 26	3781	919	131	1010
Railway signaling device	B. S. Miller	872,002	Nov. 26	3924	946	131	1027
Railway-switch	O. Harpold	872,178	Nov. 26	4281	1023	131	1086
Railway-trains. Automatic stop for	V. Morrison	872,141	Nov. 26	4211	1005	131	1074
Rake: *See* Hay-rake.							
Receptacle-closure	A. L. Weissenthanner	872,160	Nov. 26	4243	1013	131	1079
Receptacle-closure. Hermetic	A. L. Weissenthanner	872,162	Nov. 26	4248	1013	131	1080
Red lakes. Making	J. S. Giles	872,118	Nov. 26	4163	995	131	1066
Reel: *See* Casting-reel.	C. Immerheiser	872,181	Nov. 26	4285	.....	131	1087
Reflector	A. D. Curtis	871,915	Nov. 26	3698	902	131	998
Register attachment	H. P. Kelly	871,873	Nov. 26	3619	883	131	985
Regulator: *See* Gas-pressure regulator.	W. H. Sowash	872,090	Nov. 26	4112	984	131	1057
Relasting apparatus. Shoe	C. F. Pym	872,318	Nov. 26	4561	1079	131	1130
Relasting-machine	C. F. Pym	872,317	Nov. 26	4556	1078–9	131	1130
Resistance. Inclosed	H. J. Wiegand	872,208	Nov. 26	4346	1037	131	1096
Resistance. Inclosed	H. J. Wiegand	872,209	Nov. 26	4349	1037	131	1096
Ringing leads. Means for protecting operators	W. W. Dean	872,171	Nov. 26	4265	1018	131	1083
Rod: *See* Packing-rod.							
Roll-cutting attachment. Rotary	A. E. Sexton	871,828	Nov. 26	3516	860	131	969
Rotary engine	J. E. Lehman	871,807	Nov. 26	3467	850	131	961
Rotary engine	T. C. Henry	872,234	Nov. 26	4405	1047	131	1104
Rotary explosive-engine	A. Montan and J. Seholm	871,881	Nov. 26	3638	887	131	988
Rotary motor	J. R. Kinney	872,133	Nov. 26	4195	1002	131	1071
Salt-shaker	F. Kendall	871,803	Nov. 26	3447	846	131	960
Sash lock and tightener	H. O. Wolff	872,090	Nov. 26	4128	987	131	1059
Sausage-stuffer	H. F. Hambruch	872,231	Nov. 26	4399	1046	131	1103
Sausage-stuffer	H. F. Hambruch	872,294	Nov. 26	4511	1070	131	1122
Sawmill	T. S. Wilkin	872,038	Nov. 26	4007	962	131	1039
Sawmill log-dog	G. Grant and W. T. Newton	871,795	Nov. 26	3434	843	131	957
Scaffold-support	D. F. Luke	872,187	Nov. 26	4298	1026	131	1088
Scale	O. L. Gordon	872,119	Nov. 26	4166	995	131	1066
Scalper, excavator, road-roller, and locomotive. Combined	C. J. Van Buren	872,159	Nov. 26	4238	1011–12	131	1079
Screen: *See* Window and door screen.							
Seal	G. H. Hulsing	871,872	Nov. 26	3618	883	131	984
Seaming-machine	O. S. Beyer	871,855	Nov. 26	3565	872–4	131	978
Seaming-machine	O. S. Beyer	871,856	Nov. 26	3571	875–6	131	978
Seed culler. Cotton	O. S. Beyer	871,857	Nov. 26	3580	876–8	131	979
Self-extinguishing burner	B. Bowers	872,218	Nov. 26	4366	1040	131	1099
Separator: *See* Cream-separator. Liquid-separator.	E. Besenbruch	872,105	Nov. 26	4140	990	131	1061
Sewer-pipe cleaner	T. Cantwell	872,109	Nov. 26	4149	992–3	131	1063
Sewing-machine. Lock-stitch	F. W. Merrick	872,074	Nov. 26	4079	977–8	131	1052
Sewing tubular structures. Machine for	S. Cohn. (Reissue.)	12,724	Nov. 26	4563	1079–80	131	1130
Shade and curtain hanger. Extension window	W. Wertman	871,841	Nov. 26	3544	866	131	974
Shade-roller safety-stop	C. T. Botting	871,858	Nov. 26	3585	878	131	980
Shaft-oscillator	E. C. Wright	871,904	Nov. 26	3677	897	131	995
Sharpening and polishing machine. Automatic	F. M. Rodzonowski	871,889	Nov. 26	3652	891	131	990
Shears	G. F. Benton	871,980	Nov. 26	3967	935	131	1020
Sheet-metal-working machine	T. Vogt	871,834	Nov. 26	3527	862–3	131	971
Ship-locks. Working	G. Pumberger	872,082	Nov. 26	4098	981–2	131	1055
Shoe-rack	L. P. Bowen	872,047	Nov. 26	4028	966	131	1043
Shovel	A. E. Baum	871,773	Nov. 26	3393	834	131	951
Shovels. Scraper attachment for	R. J. Edwards	871,986	Nov. 26	3977	937	131	1022
Sifter. Ash	J. Guerin	871,929	Nov. 26	3736	910	131	1003
Sifter for ashes, &c	S. W. Dunning	871,862	Nov. 26	3600	880	131	981
Signaling system	W. W. Salmon	871,960	Nov. 26	3799	922	131	1013
Siphon. Alternating	S. W. Miller	872,076	Nov. 26	4085	978–9	131	1052
Skimmer. Siphon	C. Harbert	872,232	Nov. 26	4402	1046	131	1103
Skinning-tool	J. C. Boyle	872,272	Nov. 26	4465	1061	131	1115
Sleigh attachment	W. A. Bertram	871,907	Nov. 26	3682	898	131	996
Snap-hook	J. N. Bellingar	872,270	Nov. 26	4463	1060	131	1114
Snap-hook. Spring-tongue	J. B. Baxter	871,979	Nov. 26	3956	935	131	1020
Soldering-iron	A. L. Gifford	872,220	Nov. 26	4207	1045	131	1103
Sole. Boot and shoe	W. C. Stewart	871,968	Nov. 26	3835	928	131	1016
Sole rounding and channeling machine	A. M. English	871,987	Nov. 26	3878	937–9	131	1022
Sole-slashing machine	W. C. Stewart	871,969	Nov. 26	3836	929	131	1016
Spark-destroyer for smoke-stacks	F. J. Lyman	872,072	Nov. 26	4075	977	131	1052
Sparking device	H. A. Miller and B. G. Gilbough	872,075	Nov. 26	4082	978	131	1051
Speed indicator and recorder. Combined	G. E. Mirfield	871,946	Nov. 26	3773	917	131	1008
Speed-recording instrument	C. H. d'La Monte	872,186	Nov. 26	4291	1025–6	131	1088
Spindle: *See* Axle-spindle.							
Spinning-frames. Whirl for cap	A. A. Sack	872,019	Nov. 26	3960	952	131	1033
Spinning-machines. Pneumatic threading device for	F. A. Breeze	871,910	Nov. 26	3689	900	131	997
Spool-stand	N. W. Hoskins	872,296	Nov. 26	4514	1071	131	1122
Spring: *See* Sprinting spring. Vehicle-spring.							
Spring	C. T. Edgerton and W. J. Golden	872,226	Nov. 26	4393	1044–5	131	1102
Sprinting-spring	F. Feazell and H. Thompson	871,864	Nov. 26	3606	881	131	982
Stamping and numbering machines. Inking device for	J. French	872,281	Nov. 26	4486	1065	131	1118
Stand: *See* Display-stand. Spool-stand.							
Stannic chlorid. Producing	E. A. Sperry	872,205	Nov. 26	4335	1035–6	131	1094
Staple-tacker	P. R. Glass	871,991	Nov. 26	3899	940–2	131	1023
Steam-boiler	C. D. Mosher	872,077	Nov. 26	4090	979	131	1053
Steam-boiler	H. V. Brady	872,291	Nov. 26	4503	1069	131	1121
Steel plant	T. S. Blair, Jr	872,046	Nov. 26	4026	965–6	131	1042
Stereoscope. Folding	W. Verbeck	871,974	Nov. 26	3853	932	131	1018
Stirrup	J. Tweit	872,264	Nov. 26	4451	1058	131	1112
Stone-working-machine tool-holder	H. H. Mercer	871,944	Nov. 26	3770	917	131	1007
Stop mechanism	H. Pulster	871,953	Nov. 26	3784	920	131	1010
Stopper: *See* Tube-stopper.							
Stove. Foundry drying	D. McNeill	871,812	Nov. 26	3478	852	131	963
Street-sweeper	F. M. Pittman	872,196	Nov. 26	4317	1030–1	131	1092
Sulfur from furnace-gases. Apparatus for obtaining	F. R. Carpenter	871,912	Nov. 26	3692	901	131	997
Supporting and conveying apparatus	H. L. Hollis	872,063	Nov. 26	4057	972	131	1048
Surface-cleaning machine	R. B. Hutchison	871,937	Nov. 26	3746	912–13	131	1004
Switch: *See* Electric switch. Railway-switch.							
Switching device. Electric	J. A. Posey	872,197	Nov. 26	4319	1031	131	1092
Syringe	A. E. Bonesteel	872,217	Nov. 26	4365	1040	131	1099
Table: *See* Dining-table.							
Tag. Meat	R. H. Jackson	872,238	Nov. 26	4410	1048	131	1105
Tank	W. H. McNutt	871,813	Nov. 26	3478	852	131	963
Telegraph system. Quadruplex	J. J. Ghegan	872,228	Nov. 26	4396	1045	131	1102
Telephone-exchanges. Ringing device for	W. W. Dean	872,293	Nov. 26	4508	1070	131	1122
Telephone instruments. Apparatus for fumigating	L. I. Shrader	872,204	Nov. 26	4333	1035	131	1094
Thread-finishing machine	E. J. Lipps and F. Ott	871,999	Nov. 26	3919	945	131	1027
Tickets into ticket-compartments. Contrivance for inserting loose packets of	H. J. Muller	872,190	Nov. 26	4302	1027	131	1090
Tie: *See* Bale-tie.							
Tie-plate and guard-rail clamp. Combined	W. F. Bossert	871,909	Nov. 26	3688	899–900	131	996
Tile construction	J. F. Warwick	871,838	Nov. 26	3535	865	131	973
Tile. Illuminating	J. B. French	871,793	Nov. 26	3429	842	131	957
Tiles. Ceiling and floor composed of	H. Westphal	872,098	Nov. 26	4127	987	131	1059
Tire	R. M. Merriman	871,945	Nov. 26	3772	917	131	1008
Tire-channel-cleaning device	W. C. Wegner	872,207	Nov. 26	4342	1036	131	1095
Tire-cleat. Traction-wheel	W. Galloway	871,868	Nov. 26	3612	882	131	983
Tire patch. Pneumatic	G. and E. Hagstrom	871,930	Nov. 26	3737	910	131	1003
Tire-protector fastening device. Pneumatic	R. H. Morris and E. E. Townsend	872,246	Nov. 26	4422	1051	131	1107
Tire-setting machine for rubber tires	J. L. Hixson and C. W. Powell	872,295	Nov. 26	4512	1070	131	1122
Tires. Means for preventing side slip in pneumatic	L. E. Treffière and V. J. Jehin	872,096	Nov. 26	4125	986	131	1056
Tires. Multipart mold for pneumatic	F. Veith	871,973	Nov. 26	3853	932	131	1018
Tobacco box and cutter. Pocket	I. Z. Cohen	871,983	Nov. 26	3872	936	131	1021
Tobacco-lath holder	I. Sebring	872,259	Nov. 26	4446	1057	131	1111
Tool. Combination	F. W. Jackson	872,066	Nov. 26	4065	973–4	131	1049
Tool. Combination	P. A. Benet	872,271	Nov. 26	4464	1060–1	131	1114
Tool. Hand-operated	W. Broad	872,048	Nov. 26	4030	966	131	1043
Tool-post	C. C. Harris	871,798	Nov. 26	3437	844	131	958
Torch. Marine	A. F. J. Johnson	871,997	Nov. 26	3914	944	131	1026
Toy	H. M. Robinson	871,823	Nov. 26	3498	856–7	131	966
Toy swing	H. T. Kingsbury	872,069	Nov. 26	4069	975	131	1050
Train-lighting system. Electric	W. Scribner	871,826	Nov. 26	3510	858	131	968
Transmitter	R. Hansen	872,284	Nov. 26	4491	1066	131	1119
Trap: *See* Animal-trap. Gopher-trap.							
Trap or water Seal	J. J. Wade	871,836	Nov. 26	3531	864	131	972
Trolley-securing device	J. Szekeres	872,094	Nov. 26	4123	985	131	1058
Trousers and belt fastener	P. C. Noetzel	871,884	Nov. 26	3643	888	131	988
Truck	W. G. Price	872,017	Nov. 26	3957	951	131	1032
Truck. Cotton-picker's	A. Sanders, C. M. Rebman, and B. H. Sanders.	871,893	Nov. 26	3658	892	131	991
Truck-frame	W. G. Price	872,016	Nov. 26	3955	951	131	1032
Trunk-tray hinge	J. J. Cannan	871,779	Nov. 26	3405	837	131	953
Tube-cutter	J. G. Lusk	872,200	Nov. 26	4502	1068	131	1121
Tube-stopper	S. Smith	872,024	Nov. 26	3980	956	131	1038
Tug-loop	F. F. Jennings	872,067	Nov. 26	4066	974	131	1049
Turbine. Elastic-fluid	G. Dalén	872,055	Nov. 26	4042	968–9	131	1046
Turbine-engine	W. J. Francke	871,792	Nov. 26	3427	842	131	956
Type-setting-machine gage	J. T. Wilson	871,902	Nov. 26	3673	896	131	994
Type-writer attachment	J. Oettinger	871,815	Nov. 26	3481	853	131	964
Type-writer ribbon attachment	W. F. Enders	872,113	Nov. 26	4154	994	131	1064
Unwinding-machine	J. E. Windle	871,848	Nov. 26	3552	868–9	131	976
Valve	E. Phillipson	872,304	Nov. 26	4534	1074	131	1125
Valve. Automatically-opening	P. A. McCullough	872,005	Nov. 26	3930	947	131	1028
Valve. Flushing	R. A. Brooks	871,859	Nov. 26	3588	878–9	131	980
Valve-gear	H. Mayer	872,138	Nov. 26	4203	1004	131	1038
Valve. Safety	A. Wache	871,975	Nov. 26	3858	932	131	1012
Vault. Sectional	E. J. Winslow	871,977	Nov. 26	3860	933–4	131	1019

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Drg.	Official Gazette. Vol.	Page.
Vehicle-bodies. Reinforced corner for	D. M. and T. H. Parry	871,886	Nov. 26	3646	899	131	989
Vehicle controlling mechanism. Self-propelled	C. C. and H. R. Worthington	872,101	Nov. 26	4130	988	131	1060
Vehicle for agricultural purposes. Motor	H. P. Saunderson	872,255	Nov. 26	4441	1055–6	131	1110
Vehicle-spring	A. Falkenhainer	871,920	Nov. 26	3723	906	131	1000
Vehicle. Water	J. Mikulasek	872,140	Nov. 26	4209	1005	131	1073
Vehicle-wheel	E. Sutherland	872,311	Nov. 26	4546	1076	131	1128
Vehicles. Evener for	A. L. and D. McGregor	872,006	Nov. 26	3932	947	131	1029
Velocipede	D. K. Wilson	871,847	Nov. 26	3551	868	131	975
Vending-machine	W. Rohde and E. V. Mueller	871,890	Nov. 26	3654	891	131	990
Vending-machine. Coin-operated	J. A. Rule	871,824	Nov. 26	3503	857–8	131	967
Veneer-clamp	A. A. Anderson	871,769	Nov. 26	3385	831–2	131	949
Ventilation system. Double	H. I. M. Ross	872,199	Nov. 26	4322	1032	131	1092
Vise	J. E. Osmer	871,816	Nov. 26	3482	853	131	964
Vise	F. W. Stroh	872,310	Nov. 26	4543	1076	131	1127
Wagon. Dump	W. Atkins	871,771	Nov. 26	3390	833	131	950
Wall construction	E. W. Steele and A. C. Shuster	872,262	Nov. 26	4449	1057	131	1112
Washboard	E. M. Saunders	872,308	Nov. 26	4541	1076	131	1127
Water-closet-seat covering	F. M. Schaffer	871,896	Nov. 26	3663	892	131	992
Water-cooler	C. F. Conover	871,914	Nov. 26	3696	902	131	998
Water-heater	R. A. Heffley	872,129	Nov. 26	4186	1000	131	1070
Water-motor	B. Ziehler	871,852	Nov. 26	3560	871	131	977
Water-wheel	W. M., W. G., G. B., and S. Q. Saunders.	872,202	Nov. 26	4328	1033–4	131	1093
Weather-strip. Metal	L. S. Bacon	871,853	Nov. 26	3562	871	131	977
Well-drilling apparatus	C. M. Heeter	872,128	Nov. 26	4184	1000	131	1069
Well-drilling machinery. Sand-line reel for deep	H. D. Fidler	871,791	Nov. 26	3426	841	131	956
Wheel: *See* Vehicle-wheel. Water-wheel.							
Whip-socket	G. Dumas	872,059	Nov. 26	4050	970–71	131	1046
Window and door screen	J. G. Wiesen	871,843	Nov. 26	3546	867	131	974
Window-pane fastening	M. A. Olson	872,192	Nov. 26	4303	1027	131	1090
Wire-stretcher	D. C. Pullins	872,198	Nov. 26	4321	1032	131	1092
Wool-washing machine	F. G. Sargent	872,020	Nov. 26	3961	952	131	1033
Wrapping device. Package	J. D. Coughlin	871,985	Nov. 26	3876	937	131	1022
Wrench: *See* Pipe-wrench.							
Wrench	O. H. Gentry	872,117	Nov. 26	4162	995	131	1065
Yoke-fastener	C. Melchert	872,244	Nov. 26	4419	1050	131	1107
Yoke for wire-carrying hooks	B. S. Downey	872,112	Nov. 26	4153	994	131	1064

DESIGNS.

Design.	Name.	No.	Date.	Official Gazette. Vol.	Page.
Bottle opener. Milk	A. Newcomb	38,899	Nov. 26	131	1131
Carpet fabric	G. Hawkins	38,904	Nov. 26	131	1132
Carpet fabric	G. Hawkins	38,905	Nov. 26	131	1132
Cigar-lighter	L. W. Rice	38,901	Nov. 26	131	1132
Fabric. Textile	H. W. Fowler	38,906	Nov. 26	131	1133
Fabric. Textile	H. W. Fowler	38,907	Nov. 26	131	1133
Fabric. Textile	E. L. Mosenthal	38,908	Nov. 26	131	1133
Fabric. Textile	A. Olsson	38,909	Nov. 26	131	1133
Fabric. Textile	A. Olsson	38,910	Nov. 26	131	1133
Ice-pick	L. Russell	38,911	Nov. 26	131	1133
Necktie	G. E. Wood and C. A. Schade	38,900	Nov. 26	131	1132
Necktie	G. O. Sanborn	38,914	Nov. 26	131	1134
Ribbon	G. O. Sanborn	38,915	Nov. 26	131	1134
Ribbon	E. M. Corbett	38,912	Nov. 26	131	1134
Spoon or similar article	E. M. Corbett	38,913	Nov. 26	131	1134
Sterilizing-receptacle	E. Crees and C. S. Court	38,897	Nov. 26	131	1131
Vending-machine casing	E. Kronman	38,898	Nov. 26	131	1131
Wire fabric	W. J. Paul	38,902	Nov. 26	131	1132
	H. Sussman	38,903	Nov. 26	131	1132

TRADE-MARKS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
Alizarin	G. W. Gilbert	66,366	Nov. 26	131	1155
Automobiles	Hatfield Motor Vehicle Company	66,439	Nov. 26	131	1157
Bed-springs	Haggard & Marcusson Co	66,409	Nov. 26	131	1156
Bells and parts thereof. Certain	J. G. Brill Company	66,424	Nov. 26	131	1157
Beverage. Non-alcoholic	O. Scholz	66,396	Nov. 26	131	1156
Bitters	J. Wagner & Sons	66,463	Nov. 26	131	1158
Boots and shoes. Leather	Cosby Shoe Co	66,356	Nov. 26	131	1155
Bottle-nipples	Faultless Rubber Company	66,436	Nov. 26	131	1157
Candied popcorn	Rueckheim Bros. and Eckstein	66,414	Nov. 26	131	1156
Candies. Chocolates and other	Rueckheim Bros. & Eckstein	66,395	Nov. 26	131	1156

TRADE-MARKS—Continued.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
Candy	Greek American Confectionery Co.	66,388	Nov. 26	131	1156
Candy	Schraders	66,397	Nov. 26	131	1156
Candy. Peanut	Bosman & Lohman Co	66,384	Nov. 26	131	1156
Canned meat	August Kress Company	66,379	Nov. 26	131	1155
Cartridges, loaded shells, caps, &c	Peters Cartridge Company	66,374	Nov. 26	131	1155
Cement and asphalt. Hydraulic	P. H Trummer & O. Vogler	66,416	Nov. 26	131	1156
Chemicals. Certain	Chemische Werke Hansa Gesellschaft mit beschränkter Haftung.	66,353	Nov. 26	131	1155
Clothes-wringers	American Wringer Company	66,417	Nov. 26	131	1156
Clothing. Certain	M. Haiff & Bro	66,426	Nov. 26	131	1157
Coal, coke, breeze, &c	Coalite Limited	66,405	Nov. 26	131	1156
Cocktails	E. Heffernan	66,422	Nov. 26	131	1157
Corset stiffeners and stays	E. C. Weeks	66,446	Nov. 26	131	1157
Cotton piece goods. Dyed	Wm. Simpson, Sons & Co	66,430	Nov. 26	131	1157
Dental cement	O. M. Springer	66,399	Nov. 26	131	1156
Electrical conductors. Certain	Electric Railway Improvement Co.	66,420	Nov. 26	131	1157
Fertilizers and fertilizing materials	B. Diaz & Co	66,419	Nov. 26	131	1157
Flavoring extracts	Baker Extract Company	66,403	Nov. 26	131	1156
Flavoring for soda-water, &c	Benton, Hall & Co	66,381	Nov. 26	131	1155
Flavoring for tonic mixtures	E. B. Hall	66,389	Nov. 26	131	1156
Flour. Wheat	Columbia Mill & Elevator Company.	66,386	Nov. 26	131	1156
Flour. Wheat	Holmes and Barnes	66,410	Nov. 26	131	1156
Food products	J. P. Cooper	66,406	Nov. 26	131	1156
Foods. Certain cereal	Corno Mills Company	66,407	Nov. 26	131	1156
Fruits. Basketed fresh	Charles & Co	66,385	Nov. 26	131	1156
Golf-club irons	A. G. Spalding & Bros	66,434	Nov. 26	131	1157
Hair-tonic and scalp remedy	M. L. Campbell	66,332	Nov. 26	131	1155
Hair-tonics	T. J. Mowry	66,455	Nov. 26	131	1157
Hair tonics and restorers	G. O. Ranson & Co	66,457	Nov. 26	131	1158
Ham, mortadelle, capicolli, &c. Pressed	H. Fiorentini	66,408	Nov. 26	131	1156
Hosiery	Lord & Taylor	66,368	Nov. 26	131	1155
Hosiery	Lord & Taylor	66,369	Nov. 26	131	1155
Hosiery	Lord & Taylor	66,370	Nov. 26	131	1155
Hosiery	Lord & Taylor	66,371	Nov. 26	131	1155
Hosiery	M. Haiff & Bro	66,373	Nov. 26	131	1155
Hosiery	Rubens & Meyer	66,394	Nov. 26	131	1156
Hosiery	Leggett & Brother	66,425	Nov. 26	131	1157
Insecticide-distributers	Leggett & Brother	66,441	Nov. 26	131	1157
Insecticide-distributers	Rubens & Marble	66,377	Nov. 26	131	1155
Knit undershirts	W. Pope	66,444	Nov. 26	131	1157
Knives, razors, and shears	E. M. Murray	66,392	Nov. 26	131	1156
Ladders. Wooden step	Sporting Goods Publishing Company.	66,460	Nov. 26	131	1158
Magazine. Monthly	J. B. Weyermann	66,433	Nov. 26	131	1157
Malt preparations. Certain	Silver Suds Manufacturing Company.	66,429	Nov. 26	131	1157
Medicinal preparations. Certain	Physicians Supply Co	66,375	Nov. 26	131	1155
Medicinal salts	T. F. Laubach	66,367	Nov. 26	131	1155
Medicines. Certain	J. E. Lyle	66,372	Nov. 26	131	1155
Mosquito-repellent	Standard Oil Co. of New York	66,462	Nov. 26	131	1158
Naphtha	Firm of F. A. Reichard	66,458	Nov. 26	131	1158
Ochers	Firm of F. A. Reichard	66,459	Nov. 26	131	1158
Ochers	A. T. Johnson	66,390	Nov. 26	131	1156
Oil. Certain	Corn Products Company	66,448	Nov. 26	131	1157
Oil. Corn	Corn Products Company	66,449	Nov. 26	131	1157
Oil. Corn	J. A. Marks	66,427	Nov. 26	131	1157
Overcoats, coats, pants, and vests	B. F. Goodrich Company	66,351	Nov. 26	131	1155
Packing. Machinery	S. B. Bowen	66,418	Nov. 26	131	1156
Paints, enamels, fillers, &c	Knickerbocker Audit Company	66,440	Nov. 26	131	1157
Pamphlets relating to finance	George La Monte & Son	66,452	Nov. 26	131	1157
Paper. Safety	George La Monte & Son	66,453	Nov. 26	131	1157
Paper. Safety	Sporting News Publishing Company.	66,461	Nov. 26	131	1158
Paper. Weekly	American Writing Paper Company.	66,435	Nov. 26	131	1157
Paper. Writing and printing	E. Faber	66,363	Nov. 26	131	1155
Pencils and rubber erasers. Lead	E. Faber	66,358	Nov. 26	131	1155
Pencils. Lead	E. Faber	66,359	Nov. 26	131	1155
Pencils. Lead	E. Faber	66,360	Nov. 26	131	1155
Pencils. Lead	E. Faber	66,361	Nov. 26	131	1155
Pencils. Lead	E. Faber	66,362	Nov. 26	131	1155
Pencils. Lead	E. Faber	66,456	Nov. 26	131	1158
Perfumes and perfumed toilet powders	S. Palmer	66,431	Nov. 26	131	1157
Pillow tops and slips and laundry-bags	Sondheim & Magnus	66,402	Nov. 26	131	1156
Polishing and plating compounds	Argentina Company	66,454	Nov. 26	131	1157
Preparation for the treatment of finger-nails	F. Harnisch	66,376	Nov. 26	131	1155
Preserving compounds. Chemical	Protegit Company	66,443	Nov. 26	131	1157
Pumps, steam-engines, turbines, and parts thereof	Maschinenfabrik Oddesse Gesellschaft mit beschränkter Haftung.	66,387	Nov. 26	131	1156
Pyrographic outfits	F. F. Rick & Company	66,364	Nov. 26	131	1155
Rubber erasers	E. Faber	66,413	Nov. 26	131	1156
Sausage and ham	National Packing Company	66,357	Nov. 26	131	1155
Shoes. Leather	E. E. Taylor Co	66,415	Nov. 26	131	1156
Skins and rugs. Certain	C. Schmitz & Co	66,442	Nov. 26	131	1157
Soap	Lever Brothers	66,400	Nov. 26	131	1156
Soap made of wool-fat	Vereinigte Chemische Werke Aktiengesellschaft.	66,398	Nov. 26	131	1156
Soaps	L. F. Shinners				

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Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
Soaps. Toilet	B. T. Babbitt Ino	66,390	Nov. 26	131	1155
Stove and metal polish	F. & E. Liebscher	66,411	Nov. 26	131	1156
Teas	J. M. Montgomery	66,412	Nov. 26	131	1156
Thread or spool-cotton. Sewing-	Blodgett & Orswell Co	66,382	Nov. 26	131	1155
Thread or spool-cotton. Sewing-	Blodgett & Orswell Co	66,383	Nov. 26	131	1155
Thread or spool-cotton. Sewing-	Blodgett & Orswell Co	66,404	Nov. 26	131	1156
Thread, spool and sewing cotton	American Thread Company	66,401	Nov. 26	131	1156
Tonic, laxative, and digestive preparations	F. L. Childs	66,354	Nov. 26	131	1155
Tonic, laxative, and digestive preparations	F. L. Childs	66,355	Nov. 26	131	1155
Trunks. Leather	Siegel Cooper Company	66,378	Nov. 26	131	1155
Unguent or salve	Frederick Laboratory	66,365	Nov. 26	131	1155
Varnish	Glidden Varnish Company	66,437	Nov. 26	131	1157
Washing compound	Pacific Coast Borax Co	66,393	Nov. 26	131	1156
Whisky	Glasner & Barzen Distilling & Importing Co.	66,421	Nov. 26	131	1157
Whisky	Henry Thode Co	66,423	Nov. 26	131	1157
Whisky	Mattingly & Moore Dist'y. Co	66,428	Nov. 26	131	1157
Whisky	Ullman Einstein Co	66,432	Nov. 26	131	1157
Whisky	Van Vleet-Mansfield Drug Co	66,445	Nov. 26	131	1157
Wine and beer. Preparation for preserving	A. Boake Roberts & Co	66,447	Nov. 26	131	1157
Wines. California	T. Grumbach	66,438	Nov. 26	131	1157

LABELS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
"A. H. S." (For Prepared Potted Beef)	A. H. Smith	13,901	Nov. 26	131	1159
"Baker Bourbon." (For Whisky)	Frankfort Distillery	13,897	Nov. 26	131	1159
"Baker Rye." (For Whisky)	Frankfort Distillery	13,898	Nov. 26	131	1159
"Bromo-Mint." (For Medicine)	F. P. Crotzer	13,902	Nov. 26	131	1159
"Hombrew." (For Beer)	Home Brewing & Ice Co	13,896	Nov. 26	131	1159
"Ido." (For a Beverage)	Home Brewing & Ice Co	13,899	Nov. 26	131	1159
"Mack Mahon's Diamond Back Oil." (For a Medicinal Oil)	J. M. Mahon	13,904	Nov. 26	131	1159
"Mentholatum." (For a Salve)	Mentholatum Company	13,903	Nov. 26	131	1159
"Protection." (For Cigars)	Heineman Brothers	13,895	Nov. 26	131	1159
"The Ideal Liniment." (For a Liniment for Man and Beast)	K. S. Gross & Co	13,905	Nov. 26	131	1159
"The Only & Bull Heads." (For Cigars)	J. Furthmann	13,894	Nov. 26	131	1159
"White Star Water." (For Drinking-Water)	J. Greenberg	13,900	Nov. 26.	131	1159

PRINTS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
"Apparel for Man and Boy." (For Clothing)	E. L. Boone	2,166	Nov. 26	131	1159
"Budweiser Girl." (For Beer)	Anheuser-Busch Brewing Ass'n	2,161	Nov. 26	131	1159
"California Souvenir Playing Cards." (For Playing-Cards)	M. Rieder	2,162	Nov. 26	131	1159
"Champion Harvesting Machines." (For Harvesting Machinery.)	Hayes Lithographing Co	2,168	Nov. 26	131	1159
"Immaculate." (For Enamels)	Pinchin, Johnson & Co	2,164	Nov. 26	131	1159
"Men's and Boys' Apparel." (For Men's and Boys' Apparel)	H. C. Lytton	2,167	Nov. 26	131	1159
"Meritas, Table Oil Cloth." (For Table Oil-Cloth)	Standard Oil Cloth Co	2,163	Nov. 26	131	1159
"Sanitas, Cloth Wall Covering." (For Cloth Wall-Covering)	Standard Oil Cloth Co	2,165	Nov. 26	131	1159

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Ale and sarsaparilla. Ginger-	Whann Lithia Springs Co	30,063	Nov. 26	131	1144
Ale, porter, lager-beer, and stout	Beadleston & Woerz	2,267	Nov. 26	131	1135
Anchovies, tunny, sardines, &c	P. Pastene & Co	29,986	Nov. 26	131	1143

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Title.	Name.	Serial No.	Date.	Official Gazette. Vol.	Page.
Antiseptic powders	C. V. Cross	30 419	Nov. 26	131	1178
Antiseptic solution	Sharp & Dohme	30,132	Nov. 26	131	1144
Antiseptics and germicides	H. B. Claflin Company	28,262	Nov. 26	131	1139
Beer	New South Brewery & Ice Co	30,049	Nov. 26	131	1143
Belting. Leather	Charles Munson Belting Co	26,684	Nov. 26	131	1138
Belting. Leather	Detroit Oak Belting Co	30,696	Nov. 26	131	1152
Beverages and syrups for the same	Red Rock Co	27,123	Nov. 26	131	1138
Bitters. Aromatic	F. R. Leonori	30,524–5	Nov. 26	131	1149
Boots and shoes. Leather	Vance Shoe Company	23,433	Nov. 26	131	1137
Boots and shoes. Leather	Geo. F. Dittmann Boot & Shoe Company.	30,255	Nov. 26	131	1146
Boots and shoes. Leather	Shoemart Company	30,532	Nov. 26	131	1149
Brooms	Lee Broom & Duster Company	30,427	Nov. 26	131	1178
Brooms	Lee Broom & Duster Company	30,674–6	Nov. 26	131	1152
Brushes	Deitsch Brothers	22,813–14	Nov. 26	131	1137
Brushes. Toilet-	Cauvigny Brush Co	30,663	Nov. 26	131	1151
Calcium cyanamid	American Cyanamid Company	30,666	Nov. 26	131	1151
Candied popcorn, candy, and chewing-gum	W. S. Hannah	30,388	Nov. 26	131	1147
Candy	Marjenhoff Co	29,638	Nov. 26	131	1141
Candy	Stern & Saalberg Company	30,629	Nov. 26	131	1151
Candles	Emery Candle Co	30,457–8	Nov. 26	131	1178
Canned and dried fruits	J. K. Armsby Company	30,558–9	Nov. 26	131	1150
Canned corn	Illinois Canning Co	30,238	Nov. 26	131	1145
Canned corn	Illinois Canning Co	30,242	Nov. 26	131	1145
Canned corn	Illinois Canning Co	30,245	Nov. 26	131	1146
Canned fish, clams, lobsters, &c	E. T. Smith Company	30,459	Nov. 26	131	1178
Canned fruits and vegetables	John Hoffmann & Sons Co	29,809	Nov. 26	131	1142
Canned fruits and vegetables	John Hoffmann & Sons Co	29,812	Nov. 26	131	1142
Canned sardines	J. Wyman & Son	29,582	Nov. 26	131	1141
Canned vegetables	Siegel Cooper & Co	5,434	Nov. 26	131	1135
Canned vegetables	H. von Glahn & Son	22,419	Nov. 26	131	1137
Canned vegetables	Illinois Canning Co	30,241	Nov. 26	131	1145
Canned vegetables	Illinois Canning Co	30,700–2	Nov. 26	131	1152
Carbon, lamp, and gas black	G. L. Cabot	20,851	Nov. 26	131	1136
Chains. Sheet-metal	Smith & Egge Mfg. Co	30,055	Nov. 26	131	1144
Chocolates	American Candy Co	30,692	Nov. 26	131	1152
Cider. Rock-	C. R. Tolle	30,172	Nov. 26	131	1145
Cigarette-paper	Braunstein & Cie	30,142	Nov. 26	131	1144
Cigarettes	Philip Morris & Co	30,643	Nov. 26	131	1151
Cigarettes	Philip Morris & Co	30,647	Nov. 26	131	1151
Cigarettes	Philip Morris & Co	30,650	Nov. 26	131	1151
Cigars	Vincente Portuondo Company	30,263	Nov. 26	131	1146
Cigars	J. Moroney	30,391	Nov. 26	131	1147
Cigars	Mutual Drug Company	30,706	Nov. 26	131	1153
Cigars, cigarettes, and tobacco	Maspero Frères	9,916	Nov. 26	131	1135
Cigars, cigarettes, and tobacco	Maspero Frères	12,965	Nov. 26	131	1135
Cocoa	H. Maillard	29,947	Nov. 26	131	1143
Coffee	Stewart & Co	29,481	Nov. 26	131	1140
Comforts	Chas. A. Maish Co	30,079	Nov. 26	131	1144
Corn-starch, rice, flour, hominy, &c	Fischer Bros	28,035	Nov. 26	131	1139
Corset-stays	International Corset Company	30,139	Nov. 26	131	1144
Cotton fabric. Waterproofed	Federal Waterproofing Co	29,970	Nov. 26	131	1143
Cotton piece goods	Boott Mills	21,983	Nov. 26	131	1136
Cotton piece goods	Boott Mills	21,985	Nov. 26	131	1136
Cotton piece goods	Garner & Co	30,328–9	Nov. 26	131	1146
Cranberries	Manomet Cranberry Company	30,342	Nov. 26	131	1147
Dental obtundents	G. N. Hein	29,685	Nov. 26	131	1141
Dentifrice and perfumery	H. S. Wellcome	30,519	Nov. 26	131	1149
Dentifrices	W. H. Hall	29,308	Nov. 26	131	1140
Deodorant. Odorless	Vail Brothers	30,581	Nov. 26	131	1150
Electric exploders, &c	Eastern Dynamite Company	24,983	Nov. 26	131	1137
Electrical switches	Arrow Electric Company	30,630	Nov. 26	131	1151
Fishing lines, reels, hooks, and flies	Bullard & Gormley Co	22,378	Nov. 26	131	1136
Flour. Wheat-	Thompson Milling Company	29,147	Nov. 26	131	1140
Flour. Wheat-	J. E. Lane & Son	30,287	Nov. 26	131	1146
Food for live stock	Great Western Cereal Company	29,282	Nov. 26	131	1140
Food. Poultry-	Crystal Carbonate Lime Company.	30,219	Nov. 26	131	1145
Fruits. Dried	J. K. Armsby Company	29,785–7	Nov. 26	131	1142
Fruits. Dried	J. K. Armsby Company	30,555–7	Nov. 26	131	1149–50
Furniture-polish	A. S. Hicks	30,161	Nov. 26	131	1145
Game	E. I. Horsman Co	30,257	Nov. 26	131	1146
Gin	J. Moroney	29,640	Nov. 26	131	1141
Ginghams	W. Anderson & Co	12,750	Nov. 26	131	1135
Gloves. Base-ball	A. J. Reach Company	30,392	Nov. 26	131	1147
Grass-shears, hand-clippers, farrier-knives, &c	Joseph F. McCoy Co	29,418	Nov. 26	131	1140
Insulated electrical wires and electric exploders	Laflin & Rand Powder Company	24,990	Nov. 26	131	1138
Insulating compound. Electric-coil-	Dielectric Manufacturing Company.	30,418	Nov. 26	131	1147
Iron and steel sheeting. Galvanized	Monmouthshire Steel and Tinplate Company.	27,422	Nov. 26	131	1139
Knit gloves and ladies' hosiery	D. J. Abraham	21,458	Nov. 26	131	1136
Lamps. Oil-	Standard Oil Co. of New York	29,716–17	Nov. 26	131	1142
Leather	A. C. Lawrence Leather Co	30,599	Nov. 26	131	1150
Leather, taps, top pieces, squares, &c. Sole-	J. M. Delaney & Co	24,432–5	Nov. 26	131	1137
Liniments	Olax Remedy Company	30,512	Nov. 26	131	1149
Liniments and lotions	H. Turner	29,207	Nov. 26	131	1140
Liniments and unguents	Bardell & Schick	29,754	Nov. 26	131	1142
Lozenges or troches for coughs, colds, &c	G. N. Wanser	26,731	Nov. 26	131	1138
Lubricant, grease, and lubricating-graphite. Graphite	United States Graphite Company.	30,407	Nov. 26	131	1147
Magazines and journals. Trade	Bible & Fitch	30,100	Nov. 26	131	1144
Malt extract	Theo. Hamm Brewing Co	29,591	Nov. 26	131	1141

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Malt extract	Va. Brewing Co	30,455	Nov. 26	131	1170
Matches	Jönköpings och Vulcans Tändsticksfabriksaktiebolag.	29,299	Nov. 26	131	1140
Medicinal oil	G. D. Tilly	25,990	Nov. 26	131	1160
Medicine for pulmonary diseases	W. C. Tyndale	26,216	Nov. 26	131	1160
Medicines. Cough	Ricketts Bros	30,474	Nov. 26	131	1170
Medicines for stomach and liver diseases	A. La Bell	30,583	Nov. 26	131	1140
Metal, glass, and marble. Abrasive material for cleaning and polishing	Matchless Metal Polish Co	18,390	Nov. 26	131	1120
Nippers and pliers	Utica Drop Forge and Tool Co	30,430	Nov. 26	131	1170
Oils and greases. Lubricating	C. H. Reed & Co	30,327	Nov. 26	131	1140
Overalls, shirts, coats, jackets, and pants	Mulroney Manufacturing Company.	29,689	Nov. 26	131	1140
Overcoats, coats, vests, and trousers	Isaacs Brothers	29,602	Nov. 26	131	1140
Overcoats, coats, vests, and trousers	Block Brothers Clothing Company.	30,101	Nov. 26	131	1140
Overshirts. Men's	Washington Shirt Co	29,998	Nov. 26	131	1140
Packing. Asbestos	H. W. Johns-Manville Company	30,082	Nov. 26	131	1140
Padlocks	Yale & Towne Manufacturing Company.	30,768	Nov. 26	131	1180
Paint and pipe-cement. Graphite	United States Graphite Company.	30,408	Nov. 26	131	1160
Paints and varnishes	"Le Ripolin," (Société anonyme française de peintures laquées et d'enduits sous-marins, procédés Lefranc & Briegleb réunis.)	12,080	Nov. 26	131	1120
Paper pails	American Board & Box Company	30,464	Nov. 26	131	1170
Paper. Printing and writing	Graham Paper Co	27,451	Nov. 26	131	1130
Paper. Printing and writing	Graham Paper Co	27,455	Nov. 26	131	1130
Penholders, erasers, pencils, and paper-weights	Geo. Borgfeldt & Co	30,402	Nov. 26	131	1140
Pens and pencils. Fountain-	L. E. Waterman Company	30,613	Nov. 26	131	1160
Photographic developing substance	Chemische Fabrik auf Actien (vorm. E. Schering).	25,220	Nov. 26	131	1200
Photographic developing substance	Chemische Fabrik auf Actien (vorm. E. Schering).	28,529	Nov. 26	131	1200
Pills	E. Viertel	29,896	Nov. 26	131	1160
Plaster. Wall-	Empire Gypsum Company	30,241	Nov. 26	131	1200
Plaster. Wall-	Empire Gypsum Company	30,242	Nov. 26	131	1200
Plaster. Wall-	Empire Gypsum Company	30,243	Nov. 26	131	1200
Powder. Explosive	Hazard Powder Company	21,661	Nov. 26	131	1200
Powder, paste, and wash. Tooth	W. K. Peek	30,788	Nov. 26	131	1200
Powder. Talcum	Talcum Puff Company	27,133	Nov. 26	131	1200
Powder. Tooth-	C. E. Duck	30,483	Nov. 26	131	1200
Pudding preparations	W. Rüegg	26,380	Nov. 26	131	1200
Razors	A. Graef	30,534	Nov. 26	131	1160
Refrigerators	Odorless Refrigerator Company	30,631	Nov. 26	131	1200
Remedies. Eye	L. Arntz	18,375	Nov. 26	131	1200
Remedies for coughs, catarrh, dyspepsia, &c	J. M. Cargill	30,545	Nov. 26	131	1160
Remedies for diseases of horses, cattle, swine, &c	David E. Foutz Co	3,872	Nov. 26	131	1180
Remedies for dyspepsia and diseases of the blood	Long Island Pharmaceutical Co	29,762	Nov. 26	131	1160
Remedy for cramps and bots in horses	S. S. McCarver	27,629	Nov. 26	131	1200
Remedy for diseases of eyes	T. Shockley	30,760	Nov. 26	131	1220
Remedy for dyspepsia, headaches, and nausea	F. Fuller	30,469	Nov. 26	131	1170
Remedy for headaches, neuralgias, cramps, &c	M. C. Cornelly	29,568	Nov. 26	131	1160
Remedy for indigestion, &c	A. P. Jones	29,879	Nov. 26	131	1160
Remedy for laxative and blood-purifying purposes	Iron-ox Remedy Company	30,568	Nov. 26	131	1180
Rubber erasers	J. Lehmann	30,726	Nov. 26	131	1180
Rubber packing	New York Belting and Packing Company.	28,173	Nov. 26	131	1220
Rugs. Woven	Kilmarnock Textile Manufacturing Co.	29,962	Nov. 26	131	1160
Salt, blue, and ammonia. Table-	Drake & Company	28,869	Nov. 26	131	1160
Shirts. Dress and negligé	J. Lauer	30,308	Nov. 26	131	1180
Shoes. Children's leather and canvas	Lamkin and Foster	26,998	Nov. 26	131	1220
Shoes. Leather	R. P. Smith & Sons Co	30,682-5	Nov. 26	131	1180
Skirt and trousers hanger	Frear Novelty Co	30,225	Nov. 26	131	1160
Skiving and drilling machines	Fortuna Machine Co	29,612	Nov. 26	131	1160
Soap	T. Metzger	30,571	Nov. 26	131	1180
Stoves, ranges, furnaces, &c., their parts and attachments	Duparquet, Huot & Moneuse Co	30,084	Nov. 26	131	1160
Suits, dresses, gowns, &c	M. Philipsborn Co	29,018	Nov. 26	131	1160
Tablets. Laxative	F. W. Sultan	29,083	Nov. 26	131	1160
Tea	A. Koppel	29,677	Nov. 26	131	1160
Tobacco, cigars, and cigarettes	Globe Tobacco Company	22,674	Nov. 26	131	1220
Tonics. Stock-	Stock Food Company of America	22,699	Nov. 26	131	1220
Treatises on medicines and supplements thereto	Physicians Publishing Company	27,773	Nov. 26	131	1220
Type-writing machines	Elliott-Fisher Co	30,605	Nov. 26	131	1200
Underwear. Ribbed	Southdown Knitting Co	30,765-6	Nov. 26	131	1180
Waters and carbonated beverages. Mineral	Borello Bros	30,300	Nov. 26	131	1160
Whisky	A. Hill	24,987	Nov. 26	131	1220
Whisky	Live Oak Distilling Company	30,600	Nov. 26	131	1180
Whisky	Golden Hill Distilling Co	30,606	Nov. 26	131	1180
Yeast	J. H. Walsh	30,612	Nov. 26	131	1180
	C. B. Blackwell	30,148	Nov. 26	131	1140

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ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 3D DAY OF DECEMBER, 1907.

Name, residence, and invention.	No.	Date.	Monthly volume. Specification.	Monthly volume. Drawing.	Official Gazette. Volume.	Official Gazette. Page.
Aaron, Charles F., New York, N. Y. Belting	872,882	Dec. 3	1189	253	131	1353
Actien Gesellschaft für Anilin Fabrikation. (See Heimann, Heinrich, assignor.)						
Adams, Edwin G., near Plain City, Ohio. Locking means	872,883	Dec. 3	1193	253	131	1353
Adams, John H. B., *et al.* (See Woodall, Robert B., assignor.)						
Adams, Mae D., and A. J. Collier, Washington, D. C. Window-bracket	872,884	Dec. 3	1194	254	131	1354
Adams, Nicholas M. (See Bell, John C., assignor.)						
Adt, Leo F., Troy, N. Y. Bridge-spring for eyeglasses	872,319	Dec. 3	1	1	131	1169
Adt, Leo F., Troy, N. Y. Spring for eyeglasses	872,320	Dec. 3	3	1	131	1169
Aeolian Company. (See Pain, Robert W., assignor.)						
Aermotor Company. (See Scholes, Daniel R., assignor.)						
Aiken, Henry, Pittsburg, Pa. Blowing-engine	872,492	Dec. 3	366	75–6	131	1225
Aiken, Henry, Pittsburg, Pa. Blowing-engine	872,603	Dec. 3	597	125–6	131	1260
Albert and J. M. Anderson Manufacturing Company. (See Andersen, Johan M., assignor.)						
Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. Induction-motor	872,550	Dec. 3	495	104–5	131	1244
Allen, William B., and W. Blalack, Parsons, Kans. Grinding-mill	872,321	Dec. 3	5	1	131	1169
Allis-Chalmers Company *et al.* (See Behrend, Bernard A., assignor.)						
Allis-Chalmers Company *et al.* (See Bouché, Will F., assignor.)						
Allis-Chalmers Company *et al.* (See Fleming, Carl, assignor.)						
Allis-Chalmers Company. (See Richards, Walter J., assignor.)						
Althoff, William H. (See Oesterle, Frank, and Althoff.)						
Altman, Dewitt, and A. Silverman, assignors of one-third to M. Janofsky, Washington, D. C. Line-holder	872,604	Dec. 3	599	126	131	1261
American Car & Foundry Company. (See Ostrander, Allen E., assignor.)						
American Concrete Machinery Company. (See Cunningham and McPherson, assignors.)						
American Sheet and Tin Plate Company. (See Porter and Jones, assignors.)						
American Steel Package Company. (See Kruse, Alfred T., assignor.)						
American Steel & Wire Company. (See Harter, Noah S., assignor.)						
American Thermos Bottle Company. (See Burger, Reinhold, assignor.)						
Andersen, Johan M., assignor to Albert and J. M. Anderson Manufacturing Company, Boston, Mass. Electromagnetically-operated mechanism	872,400	Dec. 3	165	31–2	131	1194
Anderson, Charles D., and A. G. Stout, assignors to Union Railway Signal Company, Louisville, Ky. Audible warning-signal for railway-crossings	872,631	Dec. 3	657	137	131	1271
Anderson, Ellis B., Memphis, Tenn. Cake-forming machine	872,885	Dec. 3	1196	254	131	1354
Anderson, John, Boston, Mass. Piano-action	872,551	Dec. 3	500	105	131	1244
Annable, Warren W., Grand Rapids, Mich., assignor to C. V. Kasson, Chicago, Ill. Track-grinder	872,493	Dec. 3	370	77	131	1226
Ansley, George W., Medical Lake, Wash. Cigar-cutter and match-receptacle	872,632	Dec. 3	660	137	131	1271
Anspach, Francis G., Ida, Mich., assignor of one-half to C. A. Johnson, Chicago, Ill. Wrench	872,633	Dec. 3	661	138	131	1271
Appell, Franklin J. (See Bates, John C., assignor.)						
Archer, Daniel W., Chicago, Ill. Apparatus for handling green corn, &c.	872,983	Dec. 3	1385	291–2	131	1385
Armstrong, Ernest, Woodbury, assignor to Twin Lubricator Company, Camden, N. J. Axle-lubricating device	872,984	Dec. 3	1388	292	131	1386
Armstrong, Walter, *et al.* (See Wissler, Jacob, assignor.)						
Ashley, Freeland B., Kansas City, Mo. Aerial vessel	872,778	Dec. 3	959	200	131	1319
Atchison, Thomas N., *et al.* (See Woodall, Robert B., assignor.)						
Atherton, Edmond F., Cleveland, Ohio. Automatic bucket	872,634	Dec. 3	664	138	131	1272
Atherton, Walter C., Milwaukee, Wis. Window-shade fixture	872,322	Dec. 3	7	1	131	1170
Atkinson, Robert E. (See Pulsford, Frederick C., assignor.)						
Automatic Packing & Labeling Company. (See Lee, George A., assignor.)						
Automatic Trolley Guard Company. (See Nolan, Frank J., assignor.)						
Autopiano Company. (See Danquard, Thomas, assignor.)						
Auw, Alwin Von, New York, N. Y. Machine for gumming or moistening labels	872,392	Dec. 3	151	29	131	1192
Averbeck, Henry J., Covington, Ky. Feed-regulator	872,635	Dec. 3	666	138–9	131	1272
Ayer, William H., Claremont, N. H. Shuttle-check for looms	872,779	Dec. 3	962	200	131	1319
Ayer, William H., Claremont, N. H. Picker-check for looms	872,780	Dec. 3	964	201	131	1320
Ayer, William H., Claremont, N. H. Picking-motion for looms	872,781	Dec. 3	965	201	131	1320
Ayer, William H., Claremont, N. H. Shuttle-check for looms	872,782	Dec. 3	967	201	131	1320
Babbitt, Ira T., Abingdon, Ill. Ice-cream freezer and churn	872,636	Dec. 3	669	139	131	1273
Babson, Henry B., and A. Haug, New York, N. Y., assignors to Univeral Talking Machine Manufacturing Company. Talking-machine	872,783	Dec. 3	969	201–2	131	1321
Bacon, Charles G., assignor of one-half to E. Hadler, Antigo, Wis. Combined shade and curtain-pole support	872,637	Dec. 3	671	139	131	1273
Ballor, Silas E., Tarkio, Mo. Draft-equalizer for cultivators	872,784	Dec. 3	971	202	131	1321
Baker, Isaac F. (See Libby and Baker.)						
Ball, Jacob. (See Bechtel and Ball.)						
Ball, Norman Z. (See Ledoux and Ball.)						
Ball, Webster C. (See Faller, Lewis A., assignor.)						
Barney, Edwin E., assignor to Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine	872,552	Dec. 3	501	105	131	1245
Barnhardt, Albert, Moyie, British Columbia, Canada. Invisible trousers-support	872,323	Dec. 3	8	2	131	1170
Baron, Santo, *et al.* (See Rosa, Marco D., assignor.)						
Barton, Thomas F., Chicago, Ill. Grain-door for cars	872,785	Dec. 3	972	202	131	1321
Bates John C., assignor of one-half to F. J. Appell, Lake City, Fla. Hammer	872,886	Dec. 3	1198	254	131	1354

Name, residence, and invention.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Batts, John T., Grand Rapids, Mich. Garment support for wardrobes	872,401	Dec. 3	169	33	131	1195
Bauer & Black. (See Schulz, Otto C., assignor.)						
Baxter, Lancing B., Hickory, Va. Pea-harvesting machine	872,887	Dec. 3	1199	264–5	131	1355
Bayles, Lewis C. (See Hellman and Bayles.)						
Beahm, Peter, Altoona, Pa. Automatic connector for train-pipes	872,707	Dec. 3	819	170–1	131	1296
Bear, Isaac. (See Deem, Arthur S., assignor.)						
Beazell, Edwin H., Canonsburg, Pa. Piston	872,786	Dec. 3	975	202	131	1322
Becchi, Angelo, and G. B. Tarantini, Genoa, Italy. Apparatus for submarine recovering operation	872,888	Dec. 3	1200	255–6	131	1355
Bechtel, Byron E., and J. Ball, Waterloo, Ontario, Canada. Guard for rotary knives	872,889	Dec. 3	1203	256–7	131	1355
Beckman, Frank W., *et al.* (See Nystrom, Charles A. M., assignor.)						
Beckman, J. Henry, *et al.* (See Nystrom, Charles A. M. assignor.)						
Behrend, Bernard A., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Induction-motor	872,708	Dec. 3	823	171	131	1296
Bell, John C., assignor of one-half to N. M. Adams, Cartersville, Ga. Cotton-chopper	872,787	Dec. 3	976	203	131	1322
Bell, William, Montreal, Quebec, Canada. Banana-case	872,788	Dec. 3	980	203	131	1323
Bellinger, David E., Chanute, Kans. Packer for baling-presses	872,639	Dec. 3	673	140–1	131	1274
Bellmer, Herman, Brooklyn, N. Y. Attachment for desk-drawers	872,789	Dec. 3	982	203	131	1323
Bender, Franz J. W. (See Lowman, John, assignor.)						
Benners, Edwin H., Elizabeth, N. J. Side frame for car-trucks	872,790	Dec. 3	983	204	131	1323
Bergin, Patrick H. (See Painter, William A., assignor.)						
Bergman, Sven R., Lynn, Mass., assignor to General Electric Company. Magnetic wedge	872,324	Dec. 3	9	2	131	1170
Berner, William C., El Reno, Okla. Device for propelling vehicles	872,638	Dec. 3	672	140	131	1273
Bignell, George, *et al.* (See Clarke, Paul C., assignor.)						
Bishop, John M., Huntsville, Ala. Fertilizer-distributer	872,553	Dec. 3	509	106	131	1245
Blackburn, Harvey, Evansville, Ind. Beer-coil cleaner	872,494	Dec. 3	373	77	131	1226
Blackmore, Henry S., Mount Vernon, N. Y. Producing aluminium and other metals	872,985	Dec. 3	1390	292	131	1386
Blakely, Thomas A., Flesherton, Ontario, assignor of one-half to F. W. Harrison, Owen Sound, Canada. Antifriction-bearing	872,709	Dec. 3	825	171–2	131	1297
Blalack, William. (See Allen and Blalack.)						
Blauvelt, Albert, Chicago, Ill. Fire-extinguisher valve	872,791	Dec. 3	984	204	131	1323
Blood, Charles W. H., Winthrop, assignor to S. A. Woods Machine Company, Boston, Mass. Solid-back cutter-head	872,890	Dec. 3	1206	257	131	1356
Boehl, Ferdinand J., Spokane, Wash. Window-screen	872,891	Dec. 3	1209	257	131	1356
Boehringer, Charles E., Carterville, Ill. Railway safety device	872,005	Dec. 3	600	126	131	1261
Bolger, Thomas P., assignor to Success Manufacturing Company, Gloucester, Mass. Ash-sifter	872,640	Dec. 3	675	141	131	1274
Bosley, Elijah M., St. Louis, Mo. Sectional boiler	872,495	Dec. 3	374	78	131	1226
Bouché, Will F., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Shaft-oscillator	872,641	Dec. 3	676	141	131	1274
Bowers, Fredson E., New Haven, Conn. Spare-tire holder	872,892	Dec. 3	1210	257	131	1356
Bowne, John D., assignor of one-half to J. W. Slawson, New York, N. Y. Electric damper-regulator	872,893	Dec. 3	1211	258	131	1356
Boyce, Josephine, Bigbattle, W. Va. Bottle	872,606	Dec. 3	601	127	131	1261
Boyd, James E., Columbus, Ohio. Mechanism for measuring and indicating velocity	872,325	Dec. 3	10	2	131	1170
Boyden, George A. (See Brown, Hanrahan, and Boyden.) (Reissue.)						
Boyle, Walter V., Rockford, Ill. Crate	872,792	Dec. 3	987	204	131	1324
Brady, Joseph H., Kansas City, Mo. Thermostat	872,402	Dec. 3	172	34	131	1195
Bredsvold, Paul A., assignor of one-half to H. A. Vrooman, St. Louis, Mo. Oscillating-piston engine	872,496	Dec. 3	377	78–9	131	1227
Brewington, Henry S., Baltimore, Md. Bottle-closure	872,403	Dec. 3	175	34	131	1195
Brewster, William, Mount Carmel, Conn. Vehicle-seat	872,554	Dec. 3	512	106	131	1246
Bridenbaugh, Elmer H. (See Ohmer and Bridenbaugh.)						
Briscoe, Hylton A., and C. J. Erickson, San Francisco, Cal. Deep-well pump	872 326	Dec. 3	13	2	131	1171
Brodeen, Aaron W., Big Lake, Minn. Loading mechanism for manure, hay, and the like	872,793	Dec. 3	988	205	131	1324
Brown, Charles F., trustee. (See Reeve, Sidney A., assignor.)						
Brown, Frank H., J. E. Hanrahan, Baltimore, and G. A. Boyden, Mount Washington, assignors to National Compositype Company, Baltimore, Md. Sorts-machine for making type. (Reissue)	12,726	Dec. 3	1423	298–300	131	1392
Brown, John W., London, England. Plunger-elevator	872,327	Dec. 3	15	3	131	1171
Brown, John W., East Sheen, England. Elevator	872,966	Dec. 3	1392	292	131	1386
Brown, Michael E., Brooklyn, N. Y., assignor to Union Special Machine Company, Chicago, Ill. Take-up device for sewing-machines	872,328	Dec. 3	16	3	131	1172
Bruen, Edwin C., Brooklyn, assignor of one-fourth to N. W. Henley, New York, N. Y. Forming plate-high linotype printing-plates	872,794	Dec. 3	989	205	131	1324
Bryan, John H. B., Buffalo, N. Y., assignor to Niles-Bement-Pond Company, Jersey City, N. J. Cooling device for friction-clutches	872,607	Dec 3	602	127	131	1261
Bujewski, Albert, St. Louis, Mo. Weather-strip	872,642	Dec. 3	678	141–2	131	1274
Bullock Electric Manufacturing Company *et al.* (See Behrend, Bernard A., assignor.)						
Bullock Electric Manufacturing Company *et al.* (See Bouché, Will F., assignor.)						
Bullock Electric Manufacturing Company *et al.* (See Fleming, Carl, assignor.)						
Bullock Electric Manufacturing Company. (See Gerry, Edward M., assignor.)						
Burch, Frederick W., Pueblo, Colo. Stockman's combination bed-sheet, tent, and sleeping-bag	872,404	Dec. 3	176	34–5	131	1196
Burger, Reinhold, Berlin, Germany, assignor, by mesne assignments, to American Thermos Bottle Company, New York, N. Y. Double-walled vessel with a space for a vacuum between the walls	872,795	Dec. 3	991	206	131	1325
Burk, Albro, *et al.* (See Comer, George G., assignor.)						
Burkhart, Henry A. Y., Monocacy, Pa. Fodder-tie	872,643	Dec. 3	680	142	131	1275
Burn, John S., Liverpool, assignor of one-half to M. Tönnies, Hull, England. Lavatory appurtenance	872,894	Dec. 3	1213	258	131	1357
Burwell, Cyrus, Bunker Hill, Ill. Treshing-machine	872,405	Dec. 3	178	35	131	1196
Business Systems, Limited. (See Tait, Arthur A., assignor.)						
C. B. Cottrell & Sons Company. (See McKee, Milton A., assignor.)						
C. B. Cottrell & Sons Company. (See Seymour, Ralph C., assignor.)						
Campbell, Alexander, Halifax, England. Internal-combustion engine	872,497	Dec. 3	380	79	131	1227
Campbell, Charles A., New York, N. Y. Incandescent gas-lamp	872,895	Dec. 3	1214	259	131	1357
Campbell, Lewis C., Kalamazoo, Mich., assignor of one-half to O. A. Geeseka and A. O. Pitcher, Mount Pleasant, Iowa. Door latch and lock	872,896	Dec. 3	1217	259	131	1358
Campbell, William E., and H. T. Ingham, Fairfield, Iowa. Non-refillable bottle	872,644	Dec. 3	680	142	131	1275
Capehart, Poindexter W., Norfolk, Va. Tobacco paper for cigarettes	872,897	Dec. 3	1303	1	131	1387
Cappa, John R., Middletown, Cal. Ore-concentrator	872,555	Dec. 3	513	107	131	1246
Carhart, Edwin M., Providence, R. I. Resilient-tired wheel for self-propelled vehicles	872,645	Dec. 3	682	142	131	1275
Carnine, Arba I., and R. L. Goble, Anaheim, Cal.: said Carnine assignor to said Goble. Hydrocarbon-burner	872,988	Dec. 3	1393	293	131	1387
Carr, Benjamin M., Houston, Tex. Car-wheel chill	872,606	Dec. 3	604	127–8	131	1262
Carr, Fred S., Malden, Mass. Stud member of stud-and-socket fastening devices	872,796	Dec. 3	992	206	131	1325
Carswell, Alexander, assignor to J. Williamson, Chicago, Ill. Tilting fire-grate	872,710	Dec. 3	826	172	131	1297
Carter, James, Huntington, W. Va. Metal roof and eaves-trough	872,646	Dec. 3	684	143	131	1276
Carwile, Eugene B., Atlanta, Tex. Fish-trap	872,556	Dec. 3	514	107	131	1246

Name, residence, and invention.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Case, Edwin M., St. Louis, Mo. Attachment for ink-bottles	872,711	Dec. 3	828	172	131	1297
Cederquist, Adolf F. (See Eek and Cederquist.)						
Chamberlin Metal Weather Strip Company. (See Hiltz and Smith, assignors.)						
Chamberlin Metal Weather Strip Company. (See Lawder, Will J., assignor.)						
Chambers, John S., Wilmington, N. C. Throttle-valve	872,797	Dec. 3	904	206–7	131	1325
Chapman, John W., and C. C. Foss, Barwick, Ga. Nut-lock	872,897	Dec. 3	1219	259	131	1358
Chase, James L., Ayer, assignor of one-half to R. J. Joslin, Webster, Mass. Trolley-harp	872,898	Dec. 3	1220	260	131	1358
Christensen, Mogens C. (See Olson and Christensen.)						
Christianson, Andrew, Butler, assignor to Standard Steel Car Company, Pittsburg, Pa. Passenger and like car	872,557	Dec. 3	515	107–8	131	1246
Church, Duane H., deceased, Newton, Mass.; H. L. Church, executrix, assignor, by mesne assignments, to Waltham Watch Company. Watch	872,712	Dec. 3	829	173	131	1298
Church, Harriet L., executrix. (See Church, Duane H.)						
Clark, James, assignor to S. R. Dresser Manufacturing Company, Bradford, Pa. Clamping-ring	872,899	Dec. 3	1222	260	131	1359
Clarke, Paul C., assignor of two-thirds to G. Bignell and E. O. Cochran, Denver, Colo. Liquid-measuring tank	872,989	Dec. 3	1395	293	131	1387
Cleal, Joseph P., assignor to National Cash Register Company, Dayton, Ohio. Cash-register	872,900	Dec. 3	1222	260–2	131	1359
Cleveland, Alva W., Waukesha, Wis. Piano-bench	872,498	Dec. 3	381	80	131	1227
Cochran, Ezra O., *et al.* (See Clarke, Paul C., assignor.)						
Coleman, Clarence W., Westfield, N. J., assignor to Hall Signal Company. Signaling system	872,713	Dec. 3	831	173	131	1298
Coleman, Clarence W., Westfield, N. J., assignor to Hall Signal Company. Signaling system	872,796	Dec. 3	990	207–8	131	1326
Colgate & Co. (See Ittner, Martin H., assignor.)						
Collier, Andrew J. (See Adams and Collier.)						
Collins, John, Dayton, Ohio. Loading apparatus	872,901	Dec. 3	1231	262	131	1359
Collins, William. (See Norton, James W., assignor.)						
Comer, George G., A. Burk, and D. Modrow, Kalama, Wash. Car-step	872,902	Dec. 3	1233	263	131	1360
Comstock, Wilbur A., Bethel, Conn. Heat-regulating apparatus	872,714	Dec. 3	834	174	131	1298
Conde, Frederic. (See Shufelt, James A., assignor.)						
Connally, William J., Atlanta, Ga. Wheel-hub	872,715	Dec. 3	836	174	131	1299
Connelly, Patrick F., Sioux Falls, S. D. Adjustable tool-holder	872,903	Dec. 3	1235	263	131	1360
Conner, John F., Teckville, Miss. Back-band buckle	872,799	Dec. 3	1000	208	131	1326
Connolly, William, Fort Benton, Mont. Irrigating-pipe	872,904	Dec. 3	1236	263	131	1360
Connors, Joseph, Louisville, Ky. Attachable table	872,905	Dec. 3	1238	263–4	131	1361
Consolidated Street Lighting Company. (See Momand, Ragland, assignor.)						
Cook, Miller, Jr., Whitman, Mass. Sole-channeling tool	872,716	Dec. 3	839	174	131	1299
Cooper, Edwin R. (See Lotave, Carl G., assignor.)						
Cooper, John A. (See Smith, John W., assignor.)						
Cooper, John M., Paskenta, Cal. Hame and trace connector	872,499	Dec. 3	382	80	131	1228
Cooper, William H., *et al.* (See Woodall, Robert B., assignor.)						
Corsensky, Rubin, Philadelphia, Pa. Dress-form	872,496	Dec. 3	179	35–6	131	1196
Covert, Henry W., Waterford, N. Y. Sash-holder	872,906	Dec. 3	1240	264	131	1361
Cramer, Stuart W., Charlotte, N. C. Hygrometer for regulating humidifying and heating systems. (Reissue)	12,727	Dec. 3	1443	300–1	131	1392
Crane, William E., and C. D. Pratt, Binghamton, N. Y. Gasolene soldering-tool	872,500	Dec. 3	383	80	131	1228
Crawford, William H. (See Eastman, Ernest A., assignor.)						
Crivyea, Daniel C., Aberdeen, Wash. Band-saw-wheel grinder	872,907	Dec. 3	1242	264–5	131	1361
Crockard, Frank H., Birmingham, Ala., assignor of one-half to A. Laughlin, Sewickley, Pa. Open-hearth steel plant	872,800	Dec. 3	1002	208–10	131	1326
Crocker, Arthur T., Schenectady, N. Y., assignor to General Electric Company. Controller	872,329	Dec. 3	17	3–4	131	1172
Crocker, Arthur T., Schenectady, N. Y., assignor to General Electric Company. Control apparatus	872,990	Dec. 3	1398	293–4	131	1388
Crocker, Arthur T., Schenectady, N. Y., assignor to General Electric Company. Control apparatus	872,991	Dec. 3	1401	294	131	1388
Crockett, James B., Glendive, Mont. Wire-stretcher	872,558	Dec. 3	518	108	131	1247
Crotto, Gilbert A., assignor of one-half to L. E. Hepler, Reading, Pa. Gas-burner	872,609	Dec. 3	606	128	131	1262
Cunningham, Roy N., and J. W. McPherson, assignors to American Concrete Machinery Company, Columbus, Ohio. Mixing-machine	872,610	Dec. 3	609	128–9	131	1262
Cunningham, William A., Winona, Minn. Air-moistener for furnaces	872,330	Dec. 3	21	4	131	1172
Curtain Supply Company. (See Houghtaling, Paul A., assignor.)						
Cutter, John D., New York, N. Y. Dental floss	872,908	Dec. 3	1244	265	131	1362
Danquard, Thomas, assignor to Autopiano Company, New York, N. Y. Automatic musical instrument	872,611	Dec. 3	611	129	131	1263
Danz, Jacob, 2d, St. Paul, Minn. Sheet-metal pail for lard, &c.	872,992	Dec. 3	1405	295	131	1389
Davis, Alfred M., Freetown, Mass. Puzzle	872,717	Dec. 3	841	175	131	1300
Davis & Furber Machine Company. (See Rundlett, William D., assignor.)						
Davis, John B., Dayton, Ohio. Self-measuring oil-pump	872,501	Dec. 3	384	80–1	131	1228
Davis, Stephen G., Cooper, Iowa. Tire	872,647	Dec. 3	683	143	131	1276
De Bona, John, *et al.* (See Rosa, Marco D., assignor.)						
De Bona, Umberto, *et al.* (See Rosa, Marco D., assignor.)						
De Bona, Vittorio, *et al.* (See Rosa, Marco D., assignor.)						
De Harpporte, Wilbert R., Minneapolis, Minn. Hot-water heater	872,612	Dec. 3	613	129	131	1263
De Vos, Arie, Minneapolis, Minn., assignor of one-half to S. S. Still, Des Moines, Iowa. Electrically-wound clock	872,909	Dec. 3	1244	265	131	1362
Deem, Arthur S., assignor of one-half to I. Bear, Reading, Pa. Insulator	872,993	Dec. 3	1408	295	131	1389
Di Lorenzo, John. (See Fadda and Di Lorenzo.)						
Diboll, William A. (See Fairchild, Oscar H., assignor.)						
Diefenbach, Louis, Union Hill, N. J. Jacquard card-wire	872,910	Dec. 3	1246	265	131	1362
Dilworth, Elizabeth, Baltimore, Md. Waist supporter and former	872,911	Dec. 3	1247	266	131	1363
Dodge, Herbert E. (See Dodge, James O. and H. E.) (Reissue.)						
Dodge, James O. and H. E., Los Angeles, Cal. Pen holding and releasing device. (Reissue)	12,730	Dec. 3	1457	303	131	1393
Dodgson, Frank L., and W. K. Howe, assignors to General Railway Signal Company, Buffalo, N. Y. Railway signaling apparatus	872,613	Dec. 3	614	130	131	1263
Donahoe, Hedley J., Chicago, Ill. Canteen	872,407	Dec. 3	186	37	131	1197
Donahoe, Hedley J., West Chicago, Ill. Canteen	872,408	Dec. 3	188	37	131	1197
Donaldson, Raymond B. (See Simmonds, Fernandize M., assignor.)						
Doody, Patrick. (See McDaniel, Albert B., assignor.)						
Doolittle, Elford F., Torrington, Conn. Poultry-roost	872,502	Dec. 3	386	81	131	1228
Downey, Allen J., St. Louis, Mo. Sash-lock	872,912	Dec. 3	1248	266	131	1363
Draper Company. (See Stimpson, Edward S., assignor.)						
Dreier, Charles A., Chicago, Ill. Water-closet fitting	872,331	Dec. 3	22	4	131	1172
Dreier, Charles A., Chicago, Ill. Water-closet bend	872,332	Dec. 3	23	4	131	1173
Duggins, Samuel E., Richmond, Va. Garment shaping and pressing form	872,718	Dec. 3	841	175	131	1300
Duryea, Charles E., Reading, Pa. Magnetic igniter	872,503	Dec. 3	387	81	131	1229

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Duvanel, John A. (See Mohr and Duvanel.)						
Dwyer, Philip, and J. Ottmann, New York, N. Y. Non-refillable bottle	872,913	Dec. 3	1249	266	131	1363
E. Goldman & Company. (See Warshilsky, Harry, assignor.)						
E. Ingraham Co. (See Porter, Arthur H., assignor.)						
East, John F., Norfolk, Va. Barrel-cover	872,614	Dec. 3	616	130	131	1264
Eastman, Ernest A., Chicago, Ill., assignor of one-half to W. H. Crawford. Dayton, Ohio. Self stretching or shaping shoe	872,615	Dec. 3	618	130	131	1264
Eaton, Warren V., Kansas City, Mo. Garment-collar	872,914	Dec. 3	1250	266	131	1364
Edwards, Josiah H., Los Angeles, Cal. Sash-pulley casing	872,915	Dec. 3	1251	267	131	1364
Eek, Albin C., and A. F. Cederquist, St. Louis, Mo. Rotary engine	872,801	Dec. 3	1004	210–11	131	1327
Ehmann, Gustav, Canton, Ohio. Trolley	872,802	Dec. 3	1008	211	131	1327
Eichberg, Friedrich, Berlin, Germany, assignor to General Electric Company. Alternating-current motor	872,559	Dec. 3	520	108	131	1247
Eimerbrink, Charles H., York, Pa. Registering mechanism	872,916	Dec. 3	1252	267	131	1364
Eisemann, Emil, New York, N. Y. Feather-drying machine	872,917	Dec. 3	1253	267–8	131	1364
Eldred, Thomas T., Buffalo, N. Y. Lawn-sweeper	872,409	Dec. 3	189	37–8	131	1198
Elkins, Roland H., Sioux City, Iowa. Distributer for force-feed lubricators	872,803	Dec. 3	1010	212	131	1327
Elliott, Edward, assignor of one-half to R. D. Jones, Calumet, Mich. Dustless ash-sifter	872,560	Dec. 3	521	109	131	1247
Emerson, Frank L., Mountain View, Cal. Traction-motor	872,648	Dec. 3	686	143–4	131	1276
Eno, G. C., *et al.* (See Houghton, Charles L., assignor.)						
Erickson, Charles J. (See Brisco and Erickson.)						
Eureka Manufacturing Co. (See Rink, Joseph C., assignor.)						
Eustace, Edward C. (See Lacomme, Gaston, assignor.)						
Everett, Ernest P., New York, N. Y. Paper barrel	872,918	Dec. 3	1254	268	131	1364
Everton, William Y. (See Smith, Adam T., assignor.)						
Ewing, Lewis D., Akron, Ohio. Concrete-molding machine	872,333	Dec. 3	24	5–6	131	1173
Ezekiel, Richard C., Carbon Hill, Ala. Vegetable-slicer	872,919	Dec. 3	1255	268	131	1365
F. L. Schafuss Company. (See Uffner, Hyman, assignor.)						
Fadda, Aurelio S., and J. Di Lorenzo, Pittsburg, Pa. Air-ship	872,334	Dec. 3	31	6	131	1173
Fairchild, Oscar H., assignor of two-thirds to W. A. Diboll, Denver, Colo. Revolving filter	872,616	Dec. 3	620	131	131	1264
Faller, Lewis A., Nashville, Tenn., assignor to W. C. Ball. Watch-barrel	872,994	Dec. 3	1409	295	131	1389
Farbwerke vorm. Meister Lucius & Brüning. (See Schmidt and Pretzell, assignors.)						
Farley, George A., Lawrence, Mass. Drawing mechanism for spinning-machines	872,804	Dec. 3	1011	212	131	1328
Farley, Michael H., assignor of one-half to C. Harrison, Seattle, Wash. Vapor-burner	872,920	Dec. 3	1256	268	131	1365
Fashbaugh, Henry C. (See Scherer and Fashbaugh.)						
Fenner, George P., New London, Conn. Inking arrangement for printing-presses	872,805	Dec. 3	1014	212–13	131	1328
Fenstemaker, George W., Amboy, Ill. Horseshoe-calk	872,921	Dec. 3	1257	269	131	1365
Ferranti, Sebastian Z. de, Hampstead, London, England. Elastic-fluid turbine-engine	872,806	Dec. 3	1014	213–14	131	1328
Fess, Charles J., Newark, N. J., assignor to Palmer-Price Company. Removing paint and varnish	872,561	Dec. 3	522	109	131	1248
Fisher, Daniel C., Boston, Mass. Feed mechanism for carding-engines	872,719	Dec. 3	844	175–6	131	1300
Fleming, Carl, Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Controller-operating mechanism	872,720	Dec. 3	851	177	131	1301
Fleming, Forney W., Archer, Fla., assignor of one-half to S. K. Fleming, Montgomery, Ala. Eccentric	872,922	Dec. 3	1258	269	131	1365
Fleming, Samuel K. (See Fleming, Forney W., assignor.)						
Fletcher, Ira E., Montello, Mass. Rotary heel-seat maker and counter-pounder	872,617	Dec. 3	624	131	131	1265
Fletcher, William H., Paterson, N. J. Dyeing-machine	872,807	Dec. 3	1019	214–15	131	1329
Forbes, Edward P. (See Taylor, Florence E., assignor.)						
Ford, James S., Oak Park, Ill. Checker-board	872,923	Dec. 3	1259	269	131	1365
Foss, Christian C. (See Chapman and Foss.)						
Foster, Charles A., Oaktown, Ind. Scaffolding-support	872,335	Dec. 3	33	7	131	1174
Foster, Claud H., Cleveland, Ohio. Shock-absorbing device for vehicles	872,808	Dec. 3	1020	215	131	1329
Foster, Eugene C. (See Foster, Whilldin and E. C.).						
Foster, Whilldin and E. C., Philadelphia, Pa., assignors to Leede Process Company. Oil-atomizer	872,649	Dec. 3	690	144–5	131	1277
Fox, Frank J., St. Louis, Mo. Toilet-soap hanger	872,721	Dec. 3	855	177	131	1301
Fox, William R., Grand Rapids, Mich. Spacer-bar mechanism for type-writing machines	872,809	Dec. 3	1022	215	131	1329
Fraley, Charles B., assignor to Haggard & Marcusson Company, Chicago, Ill. Bed-bottom fabric	872,995	Dec. 3	1412	295	131	1390
Frank, William V. (See Oesterle, Frank, and Althoff.)						
Fravel, Jesse, near Dayton, Ohio. Knockdown trestle	872,722	Dec. 3	856	177	131	1301
Frazier, George W. (See Schoneberger and Frazier.)						
Friedmann, Max, Vienna, Austria-Hungary, and R. Knoller, Pantin, France. Multiple heating-burner for vaporized liquid combustibles	872,810	Dec. 3	1026	215	131	1330
Gage, La Vaughn P., Denver, Colo. Appliance for maintaining garments in a folded condition	872,924	Dec. 3	1260	269	131	1366
Gallagher, Thomas M., Old Orchard, assignor to Scullin-Gallagher Iron and Steel Company, St. Louis, Mo. Car-truck	872,723	Dec. 3	858	177	131	1302
Gamwell, Charles. (See Gamwell, Harry and C.)						
Gamwell, Harry and C., Liverpool, England. Prepayment meter	872,504	Dec. 3	391	82	131	1229
Garland, Thomas H., Chicago, Ill. Car-ventilator. (Reissue)	12,729	Dec. 3	1455	302–3	131	1393
Garrett, Charles A., assignor to Stokes & Smith Company, Philadelphia, Pa. Cover-applying element for box-covering machines	872,925	Dec. 3	1262	270	131	1366
Gates, Virgil A., Charleston, W. Va. Wheelbarrow	872,926	Dec. 3	1265	270	131	1366
Gebhard, Lawrence G., Buffalo, N. Y. Means for ventilating tunnels	872,618	Dec. 3	625	132–3	131	1265
Geeseka, Otto A., *et al.* (See Campbell, Lewis C., assignor.)						
Gehr, Harvey J., Waynesboro, Pa. Separating garlic or the like from grain	872,927	Dec. 3	1268	271	131	1367
General Electric Company. (See Alexanderson, Ernst F. W., assignor.)						
General Electric Company. (See Bergman, Sven R., assignor.)						
General Electric Company. (See Crocker, Arthur T., assignor.)						
General Electric Company. (See Eichberg, Friedrich, assignor.)						
General Electric Company. (See Hall, Walter A., assignor.)						
General Electric Company. (See Hewlett, Edward M., assignor.)						
General Electric Company. (See Hill, George H., assignor.)						
General Electric Company. (See Lemp, Hermann, assignor.)						
General Electric Company. (See Macloskie, George, assignor.)						
General Electric Company. (See Noeggerath, Jakob E., assignor.)						
General Electric Company. (See Samuelson, Frederick, assignor.)						
General Electric Company. (See Steinmetz, Charles P., assignor.)						
General Electric Company. (See Ver Planck, William E., assignor.)						
General Electric Company. (See Wilson, Leonard, assignor.)						
General Railway Signal Company. (See Dodgson and Howe, assignors.)						
General Railway Signal Company. (See Macomber, William, assignor.)						
Gere, George H., Utica, N. Y. Carbureter	872,505	Dec. 3	393	82	131	1229
Gerry, Edward M., Norwood, Ohio, assignor to Bullock Electric Manufacturing Company. System of distribution	872,724	Dec. 3	859	178	131	1302
Geyer, Franklin P., Philadelphia, Pa. Safety-lock for pocket-books and hand-bags	872,619	Dec. 3	661	133	131	1266
Gibbs, Lucius T., Hempstead, N. Y. Internal-combustion engine	872,336	Dec. 3	34	7	131	1174

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Gibson, William L., and J. V. Royal, Philadelphia, Pa., assignors to Royal Gas Heating Company, Camden, N. J. Gas-heater	872,811	Dec. 3	1027	216	131	1330
Gifford, Cyrus P., Erie, Pa. Lamp-extinguishing mechanism	872,725	Dec. 3	862	178	131	1302
Gifford, Cyrus P., Erie, Pa. Lantern-burner	872,926	Dec. 3	1270	271	131	1367
Gilbough, Benjamin G. (See Miller and Gilbough.)						
Gilroy, Frank J., Buffalo, N. Y. Locking-hinge	872,650	Dec. 3	692	145	131	1277
Giron, Pierre, Paris, France. Apparatus for charging siphons or seltzogenes	872,812	Dec. 3	1029	216–17	131	1330
Glascock, Alfred E., *et al.* (See Wissler Jacob, assignor.)						
Gloversville Silk Mills. (See Möller, Johan P., assignor.)						
Goble, Roland L. (See Carmine and Goble.)						
Goerlinger, Franz, Barmen, Germany. Folding hat-stand	872,929	Dec. 3	1272	271	131	1367
Gogel, Franz, Kahl, Germany. Roller-stamp	872,337	Dec. 3	35	7	131	1175
Gold, Egbert H., Chicago, Ill. Fitting for fluid-supply systems	872,338	Dec. 3	36	7	131	1175
Gonce, John W., Chattanooga, Tenn. Snap hook or link	872,339	Dec. 3	39	8	131	1175
Goodacre, Henry, Pine Village, Ind. Fabric-pressing device	872,930	Dec. 3	1272	272	131	1367
Gordon, Ira, Davisville, Cal. Hay and grain loader	872,651	Dec. 3	694	145	131	1277
Gottfried, Anton, Erie, Pa. Organ-pipe	872,931	Dec. 3	1274	272	131	1368
Grady, Charles B., West Orange, N. J. Floor-slab	872,726	Dec. 3	863	178	131	1302
Granger, Roger D. (See Washburn and Granger.)						
Grannis, William P., Kendallville, Ind. Buggy-seat attachment	872,410	Dec. 3	193	38	131	1198
Grau, George W., Jr., and E. L. Nelson, Columbus, Ohio. Minnow-net	872,652	Dec. 3	696	145	131	1278
Graupner, Louis C., San Francisco, Cal. Hydraulic sizing-machine	872,820	Dec. 3	633	133	131	1266
Gray, Peter D., assignor to T. R. Gray, San Francisco, Cal. Porous filtering-plate and making same	872,621	Dec. 3	636	.....	131	1267
Gray Telephone Pay Station Company. (See Long, George A., assignor.)						
Gray, Tone R. (See Gray, Peter D., assignor.)						
Greenawalt, David F., York, Pa. Merchandise-holder	872,411	Dec. 3	194	39	131	1199
Greene, Gilbert F., Washington, D. C. Cotton-picker	872,340	Dec. 3	41	8	131	1175
Greene, Gilbert F., Washington, D. C. Means for harvesting cotton	872,341	Dec. 3	45	9–10	131	1176
Greenwood, Thomas, Wolverley, near Kidderminster, England. Loom for the manufacture of tufted or pile fabrics	872,506	Dec. 3	394	82	131	1230
Greenwood, Thomas, Wolverley, near Kidderminster, England. Loom for the manufacture of tufted or pile fabrics	872,507	Dec. 3	395	83	131	1230
Greenwood, Thomas, Wolverley, near Kidderminster, England. Loom for the manufacture of tufted or pile fabrics	872,508	Dec. 3	396	83	131	1230
Greth, John C. W., assignor to Wm. B. Scaife & Sons Company, Pittsburg, Pa. Water-purifying apparatus	872,412	Dec. 3	196	39	131	1199
Griswold, Arthur G., assignor of one-half to J. B. Griswold, Kankakee, Ill. Explosive-engine	872,342	Dec. 3	51	10	131	1176
Griswold, Frank E., Geneva, Ohio. Speculum	872,343	Dec. 3	54	10–11	131	1177
Griswold, Frank E., Geneva, Ohio. Speculum	872,344	Dec. 3	55	11	131	1177
Griswold, J. B. (See Griswold, Arthur G., assignor.)						
Grossman, Frank. (See Grossman, Julius and F.)						
Grossman, Julius and F., New York, N. Y. Extension for the heels of shoes	872,413	Dec. 3	197	39	131	1199
Grüninger, Joseph, New York, N. Y. Tobacco-pipe	872,509	Dec. 3	397	83	131	1230
Guenther, Albert. (See Hemann and Guenther.)						
Hadler, Edward. (See Bacon, Charles G., assignor.)						
Hagadorn, Emmett G., Buffalo, assignor of one-half to H. D. Hagadorn, Olean, N. Y. Piston-rod lubricator	872,622	Dec. 3	636	134	131	1267
Hagadorn, Harry D. (See Hagadorn, Emmett G., assignor.)						
Haggard & Marcusson Company. (See Fraley, Charles B., assignor.)						
Haines, Jones & Cadbury Company. (See Harman, Azy H., assignor.)						
Hall, Gordon W., Lockport, N. Y. Rag-cutting machine	872,414	Dec. 3	197	39	131	1199
Hall, Lincoln E., Philadelphia, Pa. Polishing-wheel and mandrel therefor	872,932	Dec. 3	1276	272	131	1368
Hall Signal Company. (See Coleman, Clarence W., assignor.)						
Hall, Walter A., Lynn, Mass., assignor to General Electric Company. Indicating device	872,623	Dec. 3	639	134	131	1267
Hall, Willard A. (See Oyer, Oren B., assignor.)						
Hames, Joseph C., Goldfield, Nev. Knockdown tank	872,813	Dec. 3	1032	217	131	1331
Hamilton, Edward, Winchester, Ill. Drag	872,933	Dec. 3	1277	272–3	131	1368
Hamilton, Henry P., assignor to Hamilton Manufacturing Company, Two Rivers, Wis. Sectional cabinet	872,415	Dec. 3	198	40	131	1200
Hamilton Manufacturing Company. (See Hamilton, Henry P., assignor.)						
Hamilton, Thomas W., Berlin, Wis. Legging	872,727	Dec. 3	864	179	131	1303
Hammer, Oskar, Mahlitzsch, Germany. Pattern-roll for paper-machines	872,345	Dec. 3	56	11	131	1177
Hanks, Theo., *et al.* (See Malburg, Gottfried, assignor.)						
Hanrahan, John E. (See Brown, Hanrahan, and Boyden.) (Reissue.)						
Harig, Joseph B., Baltimore, Md. Fish-hook spreader and suspender	872,934	Dec. 3	1278	273	131	1369
Harman, Azy H., assignor to Haines, Jones & Cadbury Company, Philadelphia, Pa. Flush-tank	872,935	Dec. 3	1280	273	131	1369
Harris, William W., Spartanburg, S. C. Combined planter and fertilizer-distributer	872,814	Dec. 3	1034	217–18	131	1331
Harrison, Charles. (See Farley, Michael H., assignor.)						
Harrison, Frederick W. (See Blakely, Thomas A., assignor.)						
Hart, Frederick, Poughkeepsie, N. Y. Vending-machine	872,653	Dec. 3	697	146–7	131	1278
Harter, Noah S., Waukegan, assignor to American Steel & Wire Company, Chicago, Ill. Wire-straightener	872,346	Dec. 3	57	11	131	1177
Hartmann Trunk Company. (See Wheary, George H., assignor.)						
Hartness, James, Springfield, Vt. Machine for cutting screw-threads	872,728	Dec. 3	866	179–80	131	1303
Haskins, R. W., *et al.* (See Herbst, Frederick, assignor.)						
Hatmaker, James R., Paris, France. Chocolate and cocoa compound and making same	872,416	Dec. 3	200	40	131	1200
Haug, Andrew. (See Babson and Haug.)						
Haugh, Harry, Anderson, Ind. Tile	872,510	Dec. 3	398	84	131	1230
Hawekotte, Harry G., and H. W. Klausmann, Indianapolis, Ind. Toy aerial swing	872,511	Dec. 3	399	84	131	1231
Hawthorne & Sheble Manufacturing Company. (See Sheble, Horace, assignor.)						
Hays, Joseph W., Chicago, Ill. Power-transmission device	872,512	Dec. 3	402	84–5	131	1231
Heany, John A., York, Pa. Tungsten electric incandescent lamp	872,936	Dec. 3	1281	273	131	1369
Heard, William H., London, Ontario, Canada. Spraying apparatus	872,654	Dec. 3	706	147–8	131	1278
Heckert, Charles W. (See Kaufmann, Frank J., assignor.)						
Heimann, Heinrich, assignor to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Safranin dye and making same	872,815	Dec. 3	1038	.....	131	1332
Hellman, Henry, and L. C. Bayles, Johannesburg, Transvaal. Rock-drilling machine or engine	872,417	Dec. 3	201	40–1	131	1200
Hellman, Henry, and L. C. Bayles, Johannesburg, Transvaal. Rock-drilling machine or engine	872,418	Dec. 3	209	41	131	1201
Hellman, Henry, and L. C. Bayles, Johannesburg, Transvaal. Water-supplying attachment for rock-drilling machines	872,996	Dec. 3	1413	296	131	1390
Hemann, Bennard, and A. Guenther, Belleville, Ill. Nut lock or fastening device	872,816	Dec. 3	1040	218	131	1332
Henley, Norman W. (See Bruen, Edwin C., assignor.)						
Hepler, Irvin E. (See Crotto, Gilbert A., assignor.)						
Herbst, Frederick, assignor of one-half to I. A. Martin and R. W. Haskins, Ouray, Colo. Charge-forming device for internal-combustion engines	872,419	Dec. 3	214	41–2	131	1201

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Hewlett, Edward M., Schenectady, N. Y., assignor to General Electric Company. Oil-switch	872,513	Dec. 3	405	85	131	1231
Heyser, Frederick J., assignor of one-half to W. T. Hulscher, Battle Creek, Mich. Direct-acting steam-engine	872,937	Dec. 3	1287	274	131	1370
Hibler, James T., Del Norte, Colo. Revolving harrow	872,562	Dec. 3	524	109	131	1248
Hien, Phillip, Chicago, Ill. Automatic train-pipe coupling	872,514	Dec. 3	408	514	131	1232
Hill, George H., Schenectady, N. Y., assignor to General Electric Company. Automatic motor-control apparatus	872,515	Dec. 3	412	86	131	1232
Hill, George H., Schenectady, N. Y., assignor to General Electric Company. Control system	872,563	Dec. 3	525	109	131	1248
Hill, George H., Schenectady, N. Y., assignor to General Electric Company. System of control	872,938	Dec. 3	1291	274–5	131	1371
Hill, George H., Schenectady, N. Y., assignor to General Electric Company. System of motor control	872,939	Dec. 3	1298	275	131	1371
Hiller, Georg, Teplitz, Austria-Hungary. Mixing-machine	872,729	Dec. 3	871	180	131	1304
Hiltz, John H., and J. B. Smith, assignors to Chamberlin Metal Weather Strip Company, Detroit, Mich. Swinging sash	872,420	Dec. 3	216	42	131	1202
Himmel, Gottlob, Tübingen, Germany. Device for lighting gas-lamps from a distance	872,421	Dec. 3	219	42–3	131	1201
Hinton, John W. (See Ruel, Charles H., assignor.)						
Hipp, Frank J., New Brighton, Minn. Fish-hook	872,817	Dec. 3	1041	218	131	1332
Hodell, Frederic G., Cleveland, Ohio. Butter-cutting machine	872,422	Dec. 3	223	43–4	131	1203
Hodell, Frederic G., Cleveland, Ohio. Chain-pump bucket	872,423	Dec. 3	226	44	131	1203
Holbrook, Harry R., Attleboro, Mass. Automatic vending-machine	872,624	Dec. 3	640	134	131	1267
Holmberg, John A., Lindsborg, Kans. Tube-extractor for wells	872,940	Dec. 3	1304	276	131	1372
Holtmann, Henry F., Indianapolis, Ind., assignor to Seng Company, Chicago, Ill. Extension table	872,424	Dec. 3	227	44	131	1203
Hooper, Charles N., Dubuque, Iowa. Serving-fork	872,425	Dec. 3	229	45	131	1204
Hopcroft, Ernest D., assignor to Hopcroft Gas Producer Co., Bridgeport, Conn. Gas-producer	872,625	Dec. 3	644	135	131	1268
Hopcroft Gas Producer Co. (See Hopcroft, Ernest D., assignor.)						
Hopkins, Thomas and W. B., Lexington, Ky. Hemp-breaking machine	872,426	Dec. 3	232	45–6	131	1204
Hopkins, William B. (See Hopkins, Thomas and W. B.)						
Hott, James L., Lahmansville, W. Va. Hay stack or rick protector	872,564	Dec. 3	528	110	131	1248
Houghtaling, Paul A., Riverton, assignor to Curtain Supply Company, Newark, N. J. Curtain-fixture	872,516	Dec. 3	416	86	131	1233
Houghton, Charles L., Westfield, Mass., assignor of two-thirds to G. C. Eno, Simsbury, Conn., and M. A. Whitcomb, Holyoke, Mass. Railway-switch	872,997	Dec. 3	1417	296–7	131	1391
Howe, Winthrop K. (See Dodgson and Howe.)						
Howell, John, New York, N. Y. Controlling device	872,347	Dec. 3	58	12	131	1178
Hughes, Albert J., St. Anthony Park, Minn. Envelop	872,730	Dec. 3	872	180	131	1304
Hüllinghorst, Friedrich A. D., London, England. Cooler	872,427	Dec. 3	234	46–7	131	1204
Hulscher, William T. (See Heyser, Frederick J., assignor.)						
Humphrey, James, Boston, Mass. Plate for artificial teeth	872,626	Dec. 3	647	135	131	1269
Hündhausen, Rüdolf, Halensee, near Berlin, Germany. Typing-machine	872,348	Dec. 3	60	12	131	1178
Hunt, Fred W., Key West, Fla. Swing-shelf	872,941	Dec. 3	1305	276	131	1372
Hutcheson, Caswell L., Chattanooga, Tenn. Salt-brick holder for live stock	872,818	Dec. 3	1042	218	131	1332
Hutcheson, Thomas C., and A. M. Wilkins, Comer, Ga. Display-cabinet	872,942	Dec. 3	1306	276	131	1372
Ihlder, John D., New York, N. Y., assignor to Otis Elevator Company, Jersey City, N. J. Motor-controlling system	872,349	Dec. 3	62	13	131	1178
Indiana Manufacturing Company. (See Walsh, James A., assignor.)						
Inghram, Howard T. (See Campbell and Inghram.)						
International Harvester Company. (See Sturrock and Johnson, assignors.)						
Irwin, Louisa E., London, Ontario, Canada. Baby's stocking	872,517	Dec. 3	417	87	131	1233
Isabel, John B., Columbus, Ohio. Detachable tool-handle	872,731	Dec. 3	874	181	131	1304
Ittner, Martin H., Jersey City, N. J., assignor to Colgate & Co., New York, N. Y. Cake of shaving-soap	872,819	Dec. 3	1043	219	131	1333
J. J. Ryan & Company. (See McCormick, Joseph A., assignor.)						
Jamieson, William, Grays, England. Machine for clamping together pieces of wood	872,428	Dec. 3	236	47	131	1205
Janofsky, Max. (See Altman and Silverman, assignors.)						
Jobban, Josef. (See Marsóvszky and Jobban.)						
John C. Moore Corporation. (See Patric, Milan W., assignor.)						
Johnson, Abner, Strandquist, Minn. Animal-trap	872,429	Dec. 3	237	47	131	1205
Johnson, Albert, Ladysmith, Wis. Folding umbrella	872,518	Dec. 3	418	87	131	1233
Johnson, Andrew L. (See Sturrock and Johnson.)						
Johnson, C. A. (See Anspach, Francis G., assignor.)						
Johnson, Frederick I., Barrington, R. I. Electric alarm	872,430	Dec. 3	238	47–8	131	1205
Johnson, Henry, Detroit, Mich. Refrigerator	872,655	Dec. 3	710	148	131	1279
Johnson, James T., Memphis, Tenn. Automobile air-brake	872,732	Dec. 3	875	181	131	1304
Johnson, James T., Memphis, Tenn. Air-guide or steering device for automobiles	872,820	Dec. 3	1044	219	131	1333
Johnson, Jesse H., New Paris, Ohio. Corn-harvesting machine	872,821	Dec. 3	1046	219–21	131	1333
Johnson, Montgomery H., Utica, N. Y. Electrically-heated can-capping machine	872,656	Dec. 3	712	148	131	1279
Johnson, Robert C., and M. H. Myers, Leicester, England. Curtain-rod	872,565	Dec. 3	528	110	131	1249
Johnston Harvester Company. (See Maul, Christian, assignor.)						
Johnston, Robert P., Asheville, N. C. Document-file	872,657	Dec. 3	714	148	131	1280
Jones, Charles S., Marion, Ind. Self-measuring pump	872,943	Dec. 3	1307	277	131	1373
Jones, John G., Carthage, N. Y. Making sulfur dioxid	872 822	Dec. 3	1055	221	131	1334
Jones, John I. (See Porter and Jones.)						
Jones, Richard D. (See Elliott, Edward, assignor.)						
Jones, Thomas A., Stamford, Tex. Baling-press	872,431	Dec. 3	240	48	131	1206
Jones, William L., Newark, N. J. Rolling-machine	872,733	Dec. 3	877	181–2	131	1305
Joslin, Ralph J. (See Chase, James L., assignor.)						
Kalma, Theodore, South Pasadena, Cal. Combined pocket rule, square, and bevel	872,944	Dec. 3	1309	277	131	1373
Kane, Joseph P., assignor to himself, M. J. and R. P. Kane, Worcester, Mass. Tamping device	872,519	Dec. 3	419	87	131	1233
Kane, Michael J., *et al.* (See Kane, Joseph P., assignor.)						
Kane, Richard P., *et al.* (See Kane, Joseph P., assignor.)						
Kasson, C. Vallette. (See Annable, Warren W., assignor.)						
Kaufmann, Frank J., assignor of one-half to C. W. Heckert, Fultonville, N. Y. Sewing-machine	872,945	Dec. 3	1310	277–8	131	1373
Keach, George A. (See Tilford, George H., assignor.)						
Keen, Charles C., San Francisco, Cal. Amusement device	872,627	Dec. 3	648	135–6	131	1269
Kelley, William V. D., Newark, N. J. Gas-burner	872,350	Dec. 3	67	13	131	1179
Kerr, Robert M. (See Lerch and Kerr.)						
Ketzler, Ernst, Chicago, Ill. Scouring-machine	872,823	Dec. 3	1058	222	131	1334
Keyworth, William C., Paterson, N. J. Machine for winding, lustering, and finishing silk, &c	872,734	Dec. 3	879	182	131	1305
King, Jesse C., assignor to Willson Carbide Works Company of St. Catharines, Limited, St. Catharines, Ontario, Canada. Manufacture of calcium carbid, &c	872,351	Dec. 3	68	13	131	1179
King, Jesse C., assignor to Willson Carbide Works Company of St. Catharines, Limited, St. Catharines, Ontario, Canada. Electric furnace	872,352	Dec. 3	72	13–14	131	1179
Kitsee, Isidor, assignor of one-half to W. Latta, Philadelphia, Pa. Electric telegraphy	872,824	Dec. 3	1060	222	131	1335

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Klausmann, Henry W. (See Hawekotte and Klausmann.)						
Klein, Charles J., assignor to R. A. Schoenberg, New York, N. Y. Electrical apparatus	872,432	Dec. 3	242	48–9	131	1206
Klipfel, Thomas. (See Powers and Klipfel.)						
Kneeland, Josephine M. (See Van Ferls and Kneeland.)						
Knoller, Richard. (See Friedmann and Knoller.)						
Knutson, Albert, Red Cloud, Nebr. Gravel-loading machine	872,735	Dec. 3	881	183	131	1365
Konst, Albert, Burlington, Wis. Cooking-stove	872,353	Dec. 3	76	14	131	1180
Kopatousky, Samuel I. (See Norman, Frank B., assignor.)						
Krebs, Arthur, assignor to Société Anonyme des Anciens Etablissements Panhard et Levassor, Paris, France. Apparatus for checking or deadening the vibrations imparted to suspended vehicles	872,825	Dec. 3	1063	222–3	131	1335
Krentler-Arnold Hinge Last Company. (See Pym, Charles F., assignor.)						
Kruse, Alfred T., assignor to American Steel Package Company, Defiance, Ohio. Sheet-metal packing-case	872,998	Dec. 3	1420	297	131	1391
Laas & Sponenburg Co. (See Sponenburg, Hiram H., assignor.)						
Lacomme, Gaston, assignor of one-half to E. C. Eustace, New York, N. Y. Roundabout	872,566	Dec. 3	529	110	131	1249
Laird, John H., Lexington, Va. Interlocking transmission mechanism	872,520	Dec 3	422	88	131	1234
Lake Torpedo Boat Company. (See Peacock, Edward L., assignor.)						
Lambert, Arthur J., and C. H. Land, Bradford, England. Photographic stand	872,433	Dec. 3	245	49–50	131	1206
Lambert, Robert L., *et al.* (See Wissler, Jacob, assignor.)						
Land, Charles H. (See Lambert and Land.)						
Landis Machine Company. (See Pedersen, Christian, assignor.)						
Landon, Jed N., Hartland, Vt. Reel	872,826	Dec. 3	1064	223	131	1335
Landon, John E., Syracuse, N. Y. Glove	872,354	Dec. 3	77	14	131	1180
Langstaff, Lewis G., New York, N. Y. Curette	872,567	Dec. 3	530	110	131	1249
Lansberry, Alferd C., Jr., Patton, Pa. Swing	872,736	Dec. 3	882	183	131	1306
Lantz, Harold H., *et al.* (See Wissler, Jacob, assignor.)						
Latta, William J. (See Kitsee, Isidor, assignor.)						
Laughlin, Alexander. (See Crockard, Frank H., assignor.)						
Lavender, George A., Oakland, Cal. Shade-hanger	872,946	Dec. 3	1313	278	131	1374
Lawder, Will J., Washington, D. C., assignor to Chamberlin Metal Weather Strip Company, Detroit, Mich. Weather-strip	872,434	Dec. 3	247	50	131	1207
Le Maire, John B., Jersey City, N. J. Securing device for ropes	872,355	Dec. 3	78	15	131	1180
Ledoux, John W., Swarthmore, Pa., assignor to Simplex Valve and Meter Company. Liquid-meter	872,435	Dec. 3	248	50	131	1207
Ledoux, John W., Swarthmore, and N. Z. Ball, Philadelphia, Pa., assignors to Simplex Valve & Meter Company, Camden, N. J. Liquid-meter	872,436	Dec. 3	250	51	131	1207
Lee, George A., Yonkers, N. Y., assignor to Automatic Packing & Labeling Company, Durham, N. C. Machine for packaging materials	872,521	Dec. 3	427	88–91	131	1234
Lee, William V., Urbana, Ohio. Building construction	872,658	Dec. 3	716	149	131	1280
Leede Process Company. (See Foster, Whilldin and E. C., assignors.)						
Leggo, Arthur V., Pendeen, Ballarat Victoria, Australia. Rabble shaft and arm for furnaces	872,827	Dec. 3	1065	224	131	1336
Leighton, William E., Pembroke, Me. Reproducing-horn for talking-machines	872,828	Dec. 3	1068	224	131	1336
Lemp, Hermann, Lynn, Mass., assignor to General Electric Company. Motor-driven boat	872,356	Dec. 3	79	15–16	131	1180
Leonardi, Caleb E., Los Angeles, Cal. Filter	872,437	Dec. 3	253	51	131	1208
Leonard, Harry W., Bronxville, N. Y. Electric-circuit controller	872,829	Dec. 3	1069	225	131	1336
Lerch, Frederick J., and R. M. Kerr, assignors to Mapother, Kerr and Lerch, Louisville, Ky. Combined package seal and fastener	872,357	Dec. 3	81	16	131	1180
Leslie, Alexander. (See Leslie, James W., assignor.)						
Leslie, James W., Wakefield, assignor to A. Leslie, Boston, Mass. Curtain-ring and traverse-roll therefor	872,947	Dec. 3	1316	279	131	1374
Letsch, Frederick W., assignor to Ott. Mergenthaler Company, Baltimore, Md. Reamer	872,522	Dec. 3	441	91	131	1233
Libby, Sam H., East Orange, N. J., assignor to Sprague Electric Company. Grab-bucket hoist apparatus	872,523	Dec. 3	442	92	131	1233
Libby, Sam H., and I. F. Baker, East Orange, N. J., assignors to Sprague Electric Company. Hoist-controller	872,524	Dec. 3	445	92	131	1236
Liddell, John G., East Walpole, Mass. Pipe-joint	872,358	Dec. 3	82	16–17	131	1181
Lilienberg, Nils H. O., Philadelphia, Pa. Apparatus for compressing steel ingots	872,830	Dec. 3	1078	225–7	131	1337
Linderoth, Martin, Newark, N. J. Sandpaper-holder	872,568	Dec. 3	531	111	131	1249
Lindner, John, Waconia, Minn. Boiler	872,438	Dec. 3	254	51–2	131	1208
Livengood, Winfield S., assignor to Smith & Sons Mfg. Co., Kansas City, Mo. Scraper-pan bit	872,439	Dec. 3	256	52	131	1208
Locke, Fred M., Victor, N. Y. System of insulation for high-voltage electric conductors	872,569	Dec. 3	532	111	131	1249
Loewer, Henry F., Rochester, N. Y. Last	872,525	Dec. 3	448	93	131	1236
London Free Press Printing Company. (See Parkinson, Benjamin L., assignor.)						
Long, George A., assignor to Gray Telephone Pay Station Company, Hartford, Conn. Telephone pay-station	872,628	Dec. 3	649	136	131	1269
Longacre, Matthias R., Millerstown, Pa. Railway	872,831	Dec. 3	1085	227	131	1337
Loofbourrow, C. E. (See Pettygrove, George L., assignor.)						
Lord, Raymond S., Pittsburg, Pa. Pipe-coupling	872,659	Dec. 3	718	149	131	1280
Losso, Agostino, *et al.* (See Rosa, Marco D., assignor.)						
Lotave, Carl G., assignor of one-half to E. R. Cooper, Denver, Colo. Protected pneumatic tire	872,526	Dec. 3	450	93	131	1236
Lowman, John, London, England, assignor of one-half to F. J. W. Bender, Frankenthal, Pfalz, Germany. Stopper for bottles, jars, or other receptacles and manufacturing same	872,660	Dec. 3	719	149–50	131	1281
Lowry, Frederick N., Midland, Mich. Automatic measuring-tank	872,359	Dec. 3	84	17	131	1181
Lyman Gun Sight Corporation. (See Windridge and Wilcox, assignors.)						
MacGregor, Peter, Ottawa, Ontario, Canada. Fastening device for binding-bars and similar purposes	872,948	Dec. 3	1317	279	131	1374
MacKenzie, R. J., *et al.* (See Malburg, Gottfried, assignor.)						
Machtolf, Josef, Böblingen, Germany. Production of amorphous carbon	872,949	Dec. 3	1318	279	131	1375
Mactholf, Josef, Böblingen, Germany. Apparatus for producing carbon	872,950	Dec. 3	1323	280	131	1375
Mackie-Lovejoy Manufacturing Company. (See Spruce, Clifford J., assignor.)						
Macloskie, George, Schenectady, N. Y., assignor to General Electric Company. Brake-leverage system	872,661	Dec. 3	723	150	131	1281
Macomber, William, assignor to General Railway Signal Company, Buffalo, N. Y. Railway switching and signaling apparatus	872,570	Dec. 3	534	111–12	131	1250
Malaby, John G., and C. E. Oxford, Foreman, Ark.; said Malaby assignor to said Oxford. Telephone-box hanger	872,832	Dec. 3	1086	227	131	1337
Malburg, Gottfried, assignor of three-fourths to A. A. Maresh, R. J. MacKenzie, T. Hanks, F. McHale, and F. Mathews, Cleveland, Ohio. Power-transmitting mechanism	872,999	Dec. 3	1422	297	131	1392
Malone, David H., Kelso, Wash. Pivoted bin	872,662	Dec. 3	724	150	131	1281
Mannesmann, Otto, Remscheid, Germany. Inverted gas-burner	872,833	Dec. 3	1087	227	131	1338
Manny, Emilien A., Beauharnois, Quebec, Canada. Cattle-guard for railways	872,951	Dec. 3	1327	280	131	1375
Manz, Adolph W., assignor to P. H. Manz, Chicago, Ill. Motor-starter	872,527	Dec. 3	453	93	131	1237
Manz, Paul H. (See Manz, Adolph W., assignor.)						
Mapother, Kerr and Lerch. (See Lerch and Kerr, assignors.)						
Marble, Webster L., Gladstone, Mich. Front sight	872,360	Dec. 3	90	17	131	1181

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Marburg, Franz, Jr., New York, N. Y. Screw-propeller pump	872,361	Dec. 3	91	17-18	131	1181
Maresh, A. A., *et al.* (See Malburg, Gottfried, assignor.)						
Markgraf, Franz, New York, N. Y. Variable-speed and reversing gear	872,952	Dec. 3	1328	281	131	1376
Markham Air Rifle Company. (See Polley, David F., assignor.)						
Marquette, James D. M., *et al.* (See Marquette, John N., assignor.)						
Marquette, John N., assignor of two-thirds to J. D. M. Marquette and P. J. Nelson, Baltimore, Md. Car-door	872,953	Dec. 3	1334	282	131	1376
Marsóvszky, Emerich von, and J. Jobban, Budapest, Austria-Hungary. Roughing-calk for horseshoes	872,440	Dec. 3	257	52	131	1209
Martin, Edgar D., assignor of one-half to F. P. Smith, Chicago, Ill. Building construction	872,954	Dec. 3	1336	282	131	1376
Martin, I. A., *et al.* (See Herbst, Frederick, assignor.)						
Mascord, George W., London, England. Gearing	872,528	Dec. 3	455	94-5	131	1237
Mathews, Fred, *et al.* (See Malburg, Gottfried, assignor.)						
Matthews, Isaac R., Barnesville, Ga. Door-check	872,529	Dec. 3	459	95	131	1237
Mattingly, Charles I., Uniontown, Ky. Plow attachment	872,834	Dec. 3	1068	228	131	1338
Mattison, Anna, Kewanee, Ill. Bathing and massaging device	872,441	Dec. 3	257	52	131	1209
Maul, Christian, assignor to Johnston Harvester Company, Batavia, N. Y. Grain-binder	872,663	Dec. 3	725	151	131	1281
Maxwell, George W., San Francisco, Cal. Receptacle-forming machine	872,835	Dec. 3	1069	228-9	131	1338
McConnaughey, Thomas L., Hagerstown, Md. Vehicle-wheel	872,668	Dec. 3	735	153	131	1283
McCormick, Joseph A., assignor to J. J. Ryan & Company, Chicago, Ill. Soda-fountain	872,669	Dec. 3	736	153-4	131	1284
McCray, David S., *et al.* (See Woodall, Robert B., assignor.)						
McDaniel, Albert B., Allegheny, Pa. Adjustable and portable carrying-stool	872,739	Dec. 3	887	184	131	1307
McDaniel, Albert B., Allegheny, assignor of one-half to P. Doody, Pittsburg, Pa. Combination stool and folding foot-rest	872,738	Dec. 3	886	184	131	1306
McDonald, Alexander H., Wyandotte, Mich. Evaporating apparatus	872,533	Dec. 3	468	97	131	1239
McDonald, Thomas L., Luella, Tex. Cultivator	872,443	Dec. 3	260	53	131	1209
McGehe, William J., Bushnell, Ill. Hand-cultivator	872,959	Dec. 3	1345	284	131	1378
McGuire, Daniel H., Wharton, Tex. Seed-planter	872,363	Dec. 3	105	19	131	1182
McHale, Frank, *et al.* (See Malburg, Gottfried, assignor.)						
McKee, Milton A., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Treating printing-plates	872,630	Dec. 3	654	137	131	1270
McKenzie, Angus, assignor of one-half to W. W. Stephens, Canton, Ohio. Metallic case or casket	872,740	Dec. 3	889	184	131	1307
McLennan, Charles J., Detroit, Mich. Paint compound	872,960	Dec. 3	1346		131	1378
McMahon, Stephen D., Genoa township, Delaware county, Ohio. Lifting-jack	872,839	Dec. 3	1100	230	131	1339
McPherson, John W. (See Cunningham and McPherson.)						
McWilliams, Arthur C., Chicago, Ill. Metering panel-board	872,670	Dec. 3	739	154	131	1284
Meeker, George H., Media, Pa. Sealing metal in glass	872,530	Dec. 3	460	95	131	1237
Melcher, Fredrick, Wheeling, W. Va. Mail-bag catcher	872,664	Dec. 3	729	151	131	1282
Mell, Tod J., assignor to Republic Rubber Company, Youngstown, Ohio. Vehicle-wheel	872,836	Dec. 3	1095	229	131	1338
Meyer, Gustav H., George Town, Cape Colony. Leaf-turning apparatus	872,665	Dec. 3	731	152	131	1282
Miller, Franklin C., Kittanning, Pa. Wrench	872,955	Dec. 3	1339	283	131	1377
Miller, Fredrick W., Muskegon, Mich. Wagon	872,531	Dec. 3	462	96-7	131	1238
Miller, Harry A., Pasadena, Cal., and B. G. Gilbough, Chicago, Ill. Sparking device	872,929	Dec. 3	652	136	131	1270
Mio, Jenmatsu, Salt Lake City, Utah. Adjustable bake-pan	872,837	Dec. 3	1097	230	131	1339
Modrow, David. (See Comer and Modrow.)						
Moeller, William, Philadelphia, Pa. Clothes-line reel	872,838	Dec. 3	1098	230	131	1339
Mohler, Charles K., Chicago, Ill. Railway tie, beam, or post	872,956	Dec. 3	1340	283	131	1377
Mohr, Diederich P., and J. A. Duvanel, Mackinaw, Ill. Harrow	872,957	Dec. 3	1342	283	131	1377
Möller, Johan P., assignor to Gloversville Silk Mills, Gloversville, N. Y. Glove-cutting die	872,666	Dec. 3	733	152	131	1283
Momand, Ragland, New York, N. Y., assignor to Consolidated Street Lighting Company. Street-lamp	872,958	Dec. 3	1344	284	131	1378
Monarch Typewriter Company. (See Barney, Edwin E., assignor.)						
Moore, William C. (See Williamson and Moore.)						
Morewood, William B. (See Nevins and Morewood.)						
Morgan, Doctor F., Chicago, Ill. Air-valve	872,737	Dec. 3	883	184	131	1306
Morris, Hugh, Middletown, Ohio. Pipe-joint	872,442	Dec. 3	259	53	131	1209
Morrison, Andrew, Pittsburg, Pa. Rail-joint	872,532	Dec. 3	466	97	131	1238
Morrison, Edward G. (See Watts and Morrison.)						
Moser, Fritz, St. Aubin, Switzerland. Internal-combustion engine	872,571	Dec. 3	547	112-13	131	1250
Motorluftschiff-Studiengesellschaft M. B. H. (See Parseval, August von, assignor.)						
Muckey, Harrison, and E. Robertson, Triplett, Mo. Road-scraper	872,667	Dec. 3	734	152-3	131	1283
Muren, Albert L., Belleville, Ill. Pneumatic spring and shock-absorber for motor-vehicles	872,362	Dec. 3	103	18	131	1182
Murray, Thomas E., New York, N. Y. Electric-meter case and support	872,572	Dec. 3	548	113	131	1251
Myers, Matthew H. (See Johnson and Myers.)						
N. Stafford Co. (See Stevenson, Robert A., assignor.)						
Nash, John S., Chicago, Ill. Cap for syrup-bottles and the like	872,671	Dec. 3	741	154	131	1285
National Cash Register Company. (See Cleal, Joseph P., assignor.)						
National Compositype Company. (See Brown, Hanrahan, and Boyden, assignors.) (Reissue.)						
Neddo, Philip, Barre, Vt. Scoop	872,961	Dec. 3	1346	284	131	1378
Neeland, Marvin A., Youngstown, Ohio. Valve mechanism for blowing-engines and compressors	872,573	Dec. 3	550	114	131	1251
Nelson, Edward L. (See Grau and Nelson.)						
Nelson, Herbert R., New York, N. Y. Curtain-display rack	872,840	Dec. 3	1100	230-1	131	1339
Nelson, Peter J., *et al.* (See Marquette, John N., assignor.)						
Nevins, Frederick, Brooklyn, N. Y., and W. B. Morewood, Elizabeth, N. J.; said Nevins assignor to said Morewood. Supporting terminal clip	872,741	Dec. 3	890	185	131	1307
New Jersey Patent Company. (See Wangemann, Adelbert T. E., assignor.)						
Newman, Floyd W., Bradford, Pa. Fireproof door, shutter, and the like	872,534	Dec. 3	469	98	131	1239
Nickel, James, McCracken, Kans. Buttonhole-shield	872,574	Dec. 3	554	114	131	1251
Niemeyer, William H., Baltimore, Md. Bottle cap or closure	872,672	Dec. 3	743	155	131	1285
Niggel, Fred J., Jeannette, Pa. Tick-tack	872,962	Dec. 3	1348	285	131	1379
Niles-Bement-Pond Company. (See Bryan, John H. B., assignor.)						
Nilsson, John W., Balfour, N. D. Cultivator	872,575	Dec. 3	554	114-15	131	1252
Nisbet, David F., Wilkinsburg, Pa. Gas-purifier	872,576	Dec. 3	556	115-16	131	1252
Nock, Rupert A., Newark, N. J., assignor to William B. Kerr Company. Frame and back-retaining device therefor	872,673	Dec. 3	744	155	131	1285
Noeggerath, Jakob E., Schenectady, N. Y., assignor to General Electric Company. Frequency-changer	872,535	Dec. 3	472	98	131	1240
Nolan, Frank J., assignor to Automatic Trolley Guard Company, Buffalo, N. Y. Safety-guard for trolley-wheels	872,674	Dec. 3	750	155	131	1286
Noiet, Maurice, Manchester, N. H. Stop-motion for roving-frames	872,963	Dec. 3	1349	285	131	1379
Norman, Frank B., West Orange, assignor of one-half to S. I. Kopatousky, Newark, N. J. Phonograph-horn	872,577	Dec. 3	558	116	131	1252
North, Albert A., assignor to Skinner Chuck Company, New Britain, Conn. Drill-chuck	872,841	Dec. 3	1102	231	131	1340
Norton, James W., assignor of one-half to W. Collins, Lovelady, Tex. Railway-tie lifter	872,444	Dec. 3	261	54	131	1210
Nowotny, Wilhelm, assignor to Phoenix Boot Machinery Company, Limited, Street, England. Machine for producing sewing-ribs on the soles of boots and shoes	872,578	Dec. 3	560	116	131	1253

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Nystrom, Charles A. M., Tacoma, assignor of two-thirds to J. H. Beckman, Seattle, Wash., and F. W. Beckman, Portland, Oreg. Device for filling bottles, ink-wells, &c	872,536	Dec. 3	475	98	131	1240
O'Neil, John, Wilmerding, Pa. Rail fastener and lock	872,743	Dec. 3	896	185	131	1308
Oesterle, Charles, W. V. Frank, Springfield, and W. H. Althoff, Dayton, Ohio. Support or carriage for cash-registers	872,742	Dec. 3	892	185	131	1308
Ohio Cultivator Company. (See Plank, George A., assignor.)						
Ohmer, John F., and E. H. Bridenbaugh, Dayton, Ohio. Fare-register	872,537	Dec. 3	476	99	131	1240
Olson, John P., and M. C. Christensen, Tacoma, Wash. Saw-setting tool	872,445	Dec. 3	262	54	131	1210
Onderdonk, Lansing, New York, N. Y., assignor to Union Special Sewing Machine Company, Chicago, Ill. Zigzag needle-operating mechanism for sewing-machines	872,675	Dec. 3	752	156-7	131	1286
Onderdonk, Lansing, New York, N. Y., assignor to Union Special Sewing Machine Company, Chicago, Ill. Device for controlling the bight of the needle into the goods in blindstitch sewing-machines	872,676	Dec. 3	755	157	131	1286
Ostlund, John, and W. Sandberg, Braddock, Pa. Scale-connector	872,964	Dec. 3	1351	285	131	1379
Ostrander, Allen E., Paterson, N. J., assignor to American Car & Foundry Company, St. Louis, Mo. Car bolster and underframe	872,965	Dec. 3	1352	285-6	131	1380
Otis Elevator Company. (See Ihlder, John D., assignor.)						
Ott. Mergenthaler Company. (See Letsch, Frederick W., assignor.)						
Ottmann, Jacob. (See Dwyer and Ottmann.)						
Owens, James P., Weatherford, Tex. Stamp-rack	872,446	Dec. 3	263	54	131	1210
Oxford, Charles E (See Malaby and Oxford.)						
Oyer, Oren B., assignor of one-half to W. A. Hall, Chillicothe, Ohio. Hose-supporter	872,677	Dec. 3	757	158	131	1287
P. R. Warren Company. (See Warren, Peter R., assignor.)						
Page, Albert A., East Haven, and J. H. Shaw, assignors to Sargent & Company, New Haven, Conn. Door plate and handle	872,579	Dec. 3	561	117	131	1253
Page, Arthur A., Brooklyn, N. Y. Window-curtain-suspending device. (Reissue)	12,731	Dec. 3	1458	303	131	1394
Pain, Robert W., New York, N. Y., assignor to Aeolian Company. Actuating mechanism for pneumatically-operated musical instruments	872,678	Dec. 3	758	158	131	1287
Painter, William A., assignor of one-half to P. H. Bergin, Allegheny, Pa. Buffing or polishing wheel	872,966	Dec. 3	1355	286	131	1380
Palmer, Edward H., Detroit, Mich. Combining and mixing tube	872,580	Dec. 3	562	117	131	1253
Palmer-Price Company. (See Fess, Charles J., assignor.)						
Paquette, Joseph A., Hull, Quebec, Canada. Contractible shaft	872,538	Dec. 3	478	100	131	1241
Parkinson, Benjamin L., assignor to London Free Press Printing Company Limited, London, Ontario, Canada. Assembling-elevator for linotype-machines	872,967	Dec. 3	1356	286-7	131	1380
Parseval, August von, Augsburg, assignor to Motorluftschiff-Studiengesellschaft M. B. H., Berlin, Germany. Car suspension for motor-balloons	872,539	Dec. 3	479	100	131	1241
Patric, Milan W., Rochester, N. Y., assignor to John C. Moore Corporation. Loose-leaf binder	872,968	Dec. 3	1359	287	131	1381
Patterson, James S., and D. E. Smith, Abilene, Tex. Bale-band buckle	872,969	Dec. 3	1362	287	131	1381
Paulson, Charles J., Brooklyn, N. Y. Ribbon-shift for type-writers	872,447	Dec. 3	265	55	131	1210
Payne, John S., Mulvane, Kans. Railway signal mechanism	872,679	Dec. 3	750	158-9	131	1287
Peacock, Edward L., Montreal, Quebec, Canada, assignor to Lake Torpedo Boat Company, Bridgeport, Conn. Submergible vessel	872,842	Dec. 3	1103	231-2	131	1340
Pedersen, Christian, assignor to Landis Machine Company, St. Louis, Mo. Thread-laying mechanism for sewing-machines	872,744	Dec. 3	897	186	131	1308
Pedersen, Christian, assignor to Landis Machine Company, St. Louis, Mo. Awl-feeding mechanism for sewing-machines	872,745	Dec. 3	899	186	131	1309
Penhallow, Dunlap P., Boston, Mass. Stethoscope	872,448	Dec. 3	268	55	131	1211
Pennington, Lawrence W., Worcester, Mass. Alarm apparatus	872,581	Dec. 3	564	117	131	1254
Pepe, Phillip. (See Rulli and Pepe.)						
Peters, Walter H., Elmhurst, Ill. Fender	872,449	Dec. 3	270	55-6	131	1211
Peterson, Frederick A., Jamestown, N. Y. Water-closet bowl and cleaner	872,746	Dec. 3	900	187	131	1309
Pettygrove, George L., Berkeley, assignor of one-half to C. E. Loofbourrow, Oakland, Cal. Semaphore safety-alarm	872,843	Dec. 3	1108	232	131	1340
Phoenix Boot Machinery Company. (See Nowotny, Wilhelm, assignor.)						
Piening, Ferdinand, Rendsburg, Germany. Door-lock	872,582	Dec. 3	565	118	131	1254
Piepergerdes, John, Stewartsville, Mo. Gate	872,844	Dec. 3	1110	233	131	1340
Pierce, James S., Tacoma, Wash. Cement block	872,364	Dec. 3	106	19	131	1182
Pierre, Lazar, Folsom, La. Wheel	872,583	Dec. 3	566	118	131	1254
Pink, John J., Chicago, Ill. Magazine for moving-picture machines	872,970	Dec. 3	1363	287-8	131	1381
Pisciceli, Roberto T., Naples, Italy. Cash-register	872,845	Dec. 3	1112	233-6	131	1341
Pitcher, Alfred O., *et al.* (See Campbell, Lewis C., assignor.)						
Pitner, Marion W., Chicago, Ill. Burner	872,846	Dec. 3	1120	237	131	1341
Pittsburgh Electrolytic Manufacturing Company. (See Schoneberger and Frazier, assignors.)						
Plank, George A., Independence, Mo., assignor to Ohio Cultivator Company, Bellevue, Ohio. Cultivator	872,450	Dec. 3	274	56-7	131	1211
Pledath. Max, Berlin, Germany. Inverted incandescent gas-burner	872,367	Dec. 3	109	20	131	1183
Podlešák, Henry J., Chicago, Ill. Automatic releaser for fire-doors, fire-shutters, &c	872,680	Dec. 3	762	159	131	1288
Polley, David F., assignor to Markham Air Rifle Company, Plymouth, Mich. Magazine air-gun	872,747	Dec. 3	902	187	131	1309
Porter, Arthur H., assignor to E. Ingraham Co., Bristol, Conn. Clock-key	872,971	Dec. 3	1365	288	131	1382
Porter, Edgar G., and J. I. Jones, Elwood, Ind., assignors to American Sheet and Tin Plate Company, Pittsburg, Pa. Coating apparatus	872,368	Dec. 3	110	20	131	1184
Powers, Frank A., and T. Klipfel, assignors to Union Wire Mattress Company, Chicago, Ill. Bed-bottom	872,681	Dec. 3	765	160	131	1288
Pratt, Charles D. (See Crane and Pratt.)						
Prescott, Edwin, Arlington, Mass. Shutter-worker	872,682	Dec. 3	766	160	131	1289
Pretzell, Carl. (See Schmidt and Pretzell.)						
Price, William G., New Castle, Pa. Slack-adjuster for car-brakes	872,540	Dec. 3	480	100	131	1241
Price, William G., New Castle, Pa. Brake-shoe hanger	872,541	Dec. 3	483	101	131	1241
Pulsford, Frederick C., Leicester, assignor to R. E. Atkinson, Knighton, England. Steam-heating apparatus	872,847	Dec. 3	1122	237	131	1342
Puritan Corset Company. (See Williams, Charles H., assignor.)						
Putney, Leonard D., St. Louis, Mo. Plumber's tool	872,748	Dec. 3	904	187	131	1310
Pym, Charles F., Essex, Ontario, Canada, assignor to Krentler-Arnold Hinge Last Company, Detroit, Mich. Link-last	872,972	Dec. 3	1366	288	131	1382
Ramapo Iron Works. (See Strong, James B., assignor.)						
Rankin, William K., assignor to J. E. Reyburn, Philadelphia, Pa. Brake-cylinder	872,369	Dec. 3	111	21	131	1184
Ray, Charles T. (See Schofield and Ray.)						
Ray, Joseph, Decatur, Ill. Pie-pan lifter	872,683	Dec. 3	768	160	131	1289
Reed, Ralph, Middletown, Ohio. Letter-sheet	872,370	Dec. 3	112	21	131	1184
Reeve, Sidney A., Worcester, assignor to C. F. Brown, trustee, Reading, Mass. Clearance-controlling mechanism for compressors and motors	872,451	Dec. 3	277	57	131	1212
Reeve, Sidney A., Worcester, assignor to C. F. Brown, trustee, Reading, Mass. Internal-combustion power apparatus	872,452	Dec. 3	279	57	131	1212
Reid, David, Ithaca, N. Y. Muffler	872,453	Dec. 3	282	58	131	1212
Reno, Joseph I., Rochester, Pa. Support for corpses in caskets	872,584	Dec. 3	567	118-19	131	1254
Repp, Clinton B., New York, assignor to C. M. M. Vahjen, Brooklyn, N. Y. Combined sewing-machine and stand	872,848	Dec. 3	1124	237	131	1342

Name, residence, and invention.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Republic Rubber Company. (See Mell, Tod J., assignor.)						
Resderk, Frank, Roscoe, Pa. Ink-well	872,973	Dec. 3	1368	288	131	1332
Reyburn, John E. (See Rankin, William K., assignor.)						
Rice, William P., Chicago, Ill. Malt-house and apparatus. (Reissue)	12,728	Dec. 3	1446	301–2	131	1393
Richards, George L., Malden, assignor to Standard Commercial Company, Boston, Mass. Barrel-head fastener	872,749	Dec. 3	906	188	131	1310
Richards, Walter J., Norwood, Ohio, assignor to Allis-Chalmers Company. Motor-control system	872,684	Dec. 3	769	161	131	1289
Richardson, John L., Bloomsburg, Pa. Mold for concrete walls	872,750	Dec. 3	908	188	131	1310
Riddell, John S. (See Ross and Riddell.)						
Rink, Joseph C., assignor to Eureka Manufacturing Co., Erie, Pa. Mop-wringer	872,974	Dec. 3	1369	289	131	1332
Ritter, Gilbert P., Chicago, Ill. Car-coupling	872,454	Dec. 3	286	58	131	1213
Roberts, Harry O. and J. O., Gloucester, England. Mechanical figure for projecting balls or the like	872,371	Dec. 3	114	21	131	1154
Roberts, John O. (See Roberts, Harry O. and J. O.)						
Robertson, Eugene. (See Muckey and Robertson.)						
Rockford Automobile & Engine Co. (See Ziska, Adam, Jr., assignor.)						
Roesler, Ernst C. G., Philadelphia, Pa. Picture-exhibitor	872,455	Dec. 3	289	58	131	1213
Rosa, Marco D., assignor to J., U., and V. De Bona, S. Baron, and A. Losso, New Rochelle, N. Y. Safety device for vehicles	872,849	Dec. 3	1126	237–8	131	1342
Ross, John M., and J. S. Riddell, Frotisher, Saskatchewan, Canada. Disk-grinder	872,372	Dec. 3	115	21	131	1185
Rothe, William F., East St. Louis, Ill. Pneumatic motor	872,751	Dec. 3	910	188–90	131	1311
Rothenbucher, George E. R., New York, N. Y. Smoke-consuming furnace	872,373	Dec. 3	117	22	131	1185
Rothenbucher, George E. R., New York, N. Y. Smoke-consuming furnace	872,374	Dec. 3	119	374	131	1186
Rouse, Harry B., Chicago, Ill. Registering device	872,685	Dec. 3	773	161	131	1290
Rowan, Lloyd, Shawneetown, Ill. Boiler	872,456	Dec. 3	293	59	131	1214
Rowekamp, Frank A., Witaka, Minn. Hay-baler	872,850	Dec. 3	1128	238	131	1343
Royal Gas Heating Company. (See Gibson and Royal, assignors.)						
Royal, James V. (See Gibson and Royal.)						
Rue, Albert C. S. and O. S., Northwood, Iowa. Stack-compressor	872,686	Dec. 3	774	161	131	1290
Rue, Ole S. (See Rue, Albert C. S. and O. S.)						
Rueff, Emil, New York, N. Y. Magnesium cement and making the same	872,375	Dec. 3	122		131	1186
Ruel, Charles H., Castle Shannon, assignor to J. W. Hinton, Ingram, Pa. Combined door-knob and key fastener	872,376	Dec. 3	123	23	131	1186
Rulli, Peter M., and P. Pepe, New Haven, Pa. Nut-lock	872,752	Dec. 3	914	190	131	1311
Rundlett, William D., assignor to Davis & Furber Machine Company, North Andover, Mass. Spindle-driving mechanism for mules	872,687	Dec. 3	775	161	131	1290
Runyon, Joseph, Rome, Ind. Indicating and registering device	872,753	Dec. 3	915	190	131	1312
Russel, Howland, Milwaukee, Wis. Movable stairway	872,457	Dec. 3	295	59–60	131	1214
Ruth, Samuel D., Beatrice, Nebr. Inking-pad	872,754	Dec. 3	917	191	131	1312
Ruthenburg, Marcus, Lockport, N. Y. Cementation process	872,755	Dec. 3	918	191	131	1312
S. A. Woods Machine Company. (See Blood, Charles W. H., assignor.)						
S. R. Dresser Manufacturing Company. (See Clark, James, assignor.)						
Salghman, Edward S., Chicago, Ill. Electrical and thermal cupping device	872,688	Dec. 3	778	162	131	1290
Samuelson, Frederick, Rugby, England, assignor to General Electric Company. Governing mechanism for turbines	872,377	Dec. 3	124	23	131	1186
Sanborn, Floyd T., and C. H. Young, Youngstown, Ohio. Curb-box	872,458	Dec. 3	301	60	131	1214
Sandberg, William. (See Ostlund and Sandberg.)						
Sargent, Charles E., Chicago, Ill., assignor to Sargent Engineering Company, Bronxville, N. Y. Apparatus for washing gas	872,475	Dec. 3	1370	289	131	1383
Sargent & Company. (See Page and Shaw, assignors.)						
Sargent Engineering Company. (See Sargent, Charles E., assignor.)						
Sarkisian, Dickran M., Malden, Mass. Curtain-pole and support therefor	872,689	Dec. 3	780	162	131	1291
Satre, Knute S., Frost, Minn. Shock-loader	872,459	Dec. 3	303	60–2	131	1215
Schaaf, Adolph J., Pittsburg, Pa. High-pressure steam-generator	872,378	Dec. 3	127	23	131	1187
Schenck, Jacob, Clinton, Wis. Draft-equalizer	872,460	Dec. 3	310	62	131	1215
Scherer, Frederick C., and H. C. Fashbaugh, Columbiana, Ohio. Insulator	872,756	Dec. 3	920	191	131	1312
Schlutius, Johannes, Karow, Germany. Making nitrated superphosphate	872,757	Dec. 3	921		131	1313
Schmidt, Albrecht, and C. Pretzell, assignors to Farbwerke vorm. Meister, Lucius & Brüning, Höchst-on-the-Main, Germany. Orange vat-dye and making same	872,585	Dec. 3	569		131	1255
Schnoor, Christian F., Chicago, Ill. Fan	872,690	Dec. 3	782	162	131	1291
Schoenberg, Ralph A. (See Klein, Charles J., assignor.)						
Schofield, James D., and C. T. Ray, Dallas, Tex., assignors to Texas Implement and Machine Company. Planter	872,461	Dec. 3	310	62	131	1215
Scholes, Daniel R., assignor to Aermotor Company, Chicago, Ill. Transmission-tower	872,758	Dec. 3	922	192	131	1313
Schoneberger, John H., and G. W. Frazier, Allegheny, Pa., assignors to Pittsburgh Electrolytic Manufacturing Company. Electrolytic ship-bottom protector	872,759	Dec. 3	924	192	131	1313
Schroeder, Ernst H., Minier, Ill. Grain-conveyer	872,462	Dec. 3	312	63	131	1216
Schulz, Fritz, Chicago, Ill. Lathe and shaper tool	872,760	Dec. 3	926	193	131	1314
Schulz, Otto C., assignor to Bauer & Black, Chicago, Ill. Receptacle for antiseptic bandages	872,379	Dec. 3	128	24	131	1187
Schwabe, Bernhard A., Abrams, Wis. Hose-coupling	872,463	Dec. 3	316	63	131	1216
Scullin-Gallagher Iron and Steel Company. (See Gallagher, Thomas M., assignor.)						
Seaman, George Q., New York, N. Y. Truss	872,851	Dec. 3	1130	239	131	1343
Seidl, Frank W., Manitowoc, Wis. Swivel	872,691	Dec. 3	783	163	131	1291
Sellers, David, Winfield, Kans. Napkin-holder	872,852	Dec. 3	1131	239	131	1343
Seng Company. (See Holtmann, Henry F., assignor.)						
Seymour, Ralph C., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Cutting and feeding mechanism for printing-presses	872,464	Dec. 3	317	63–4	131	1216
Sharp, Thomas, Carlisle, Pa Heating device	872,853	Dec. 3	1132	239	131	1344
Shaw, John H. (See Page and Shaw.)						
Sheble, Horace, assignor to Hawthorne & Sheble Manufacturing Company, Philadelphia, Pa. Talking-machine	872,586	Dec. 3	569	119	131	1255
Shepard, Josephine G., Brooklyn, N. Y. Ironing-board	872,854	Dec. 3	1133	239	131	1344
Sheppard, Auley B., Salem, N. J. Packing-box for photographic plates	872,761	Dec. 3	928	193	131	1314
Sherman, Alva, Howard, Kans. Attachment for planters	872,542	Dec. 3	484	101	131	1242
Shillaber, Daniel H., Lynn, Mass. Shoe-sole	872,762	Dec. 3	931	193	131	1314
Shook, Jacob W., Turbutville, Pa. Elevator	872,855	Dec. 3	1135	240	131	1344
Shufelt, James A., assignor to F. Conde, Oswego, N. Y. Garment	872,380	Dec. 3	130	24	131	1187
Shufelt, James A., assignor to F. Conde, Oswego, N. Y. Machine for folding and stitching fabrics	872,381	Dec. 3	131	24	131	1188
Sikora, Pawel, Pustkow, Austria-Hungary. Header and thresher	872,465	Dec. 3	321	65	131	1217
Silverman, Abe. (See Altman and Silverman.)						
Simmonds, Fernandize M., assignor of one-half to R. B. Donaldson, Chicago, Ill. Spring	872,692	Dec. 3	785	163	131	1292
Simplex Valve and Meter Company. (See Ledoux, John W., assignor.)						
Simplex Valve and Meter Company. (See Ledoux and Ball, assignors.)						
Skinner Chuck Company. (See North, Albert A., assignor.)						
Slawson, John W. (See Bowne, John D., assignor.)						
Slick, Edwin E., Pittsburg, Pa. Furnace-stoker	872,382	Dec. 3	133	25	131	1188
Slick, Edwin E., Pittsburg, Pa. Bar-handling apparatus	872,383	Dec. 3	135	26	131	1188
Smead, Isaac D., Cincinnati, Ohio. Garbage-crematory	872,466	Dec. 3	322	65–6	131	1217
Smedberg, Henry A., New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine	872,543	Dec. 3	485	101–2	131	1242
Smith, Adam T., Greensboro, assignor of one-half to W. Y. Everton, Grifton, N. C. Earth-anger	872,763	Dec. 3	932	193–4	131	1314
Smith, Amos, Vienna Cross Roads, Ohio. Side-delivery buncher	872,467	Dec. 3	324	66	131	1217
Smith, Dallas E. (See Patterson and Smith.)						
Smith, Ernest U., Honeoye Falls, N. Y. Apparatus for gathering fruit	872,764	Dec. 3	935	194	131	1315
Smith, Franklin P. (See Martin, Edgar D., assignor.)						
Smith, Hubert L., Edri, Pa. Coal-cutting machine	872,765	Dec. 3	936	194–5	131	1315
Smith, John A., San Francisco, Cal. Pool-ball carrier	872,766	Dec. 3	939	195	131	1316
Smith, John B. (See Hiltz and Smith.)						
Smith, John B., Royal Oak, Mich. Weather-strip for doors and windows	872,976	Dec. 3	1373	289	131	1383
Smith, John E., Kansas City, Kans. Mail-bag-catching device	872,767	Dec. 3	940	195	131	1316
Smith, John W., assignor of one-half to J. A. Cooper, Louisville, Ky. Steam hoisting-engine	872,977	Dec. 3	1375	289–90	131	1383
Smith, Joseph J., New York, N. Y. Humidifier	872,384	Dec. 3	137	26	131	1189
Smith, Michael H., London, England. Cash-tray	872,768	Dec. 3	941	196	131	1316
Smith & Sons Mfg. Co. (See Livengood, Winfield S., assignor.)						
Smith, William D., Fullerton, Cal. Machine for brushing and revolving oranges and other fruit	872,468	Dec. 3	327	67	131	1218
Snell, David, Gasport, N. Y. Supporter for spraying-towers	872,469	Dec. 3	329	67	131	1218
Snow, Charles W. and H. H., Truro, Mass. Cutter	872,385	Dec. 3	139	26–7	131	1189
Snow Horace H. (See Snow, Charles W. and H. H.)						
Société Anonyme des Anciéns Etablissements Panhard et Levassor. (See Krebs, Arthur, assignor.)						
Sohmer & Co. (See Weber, Peter, assignor.)						
Spence, Charles H., St. Paul, Minn. Gravity-conveyer	872,856	Dec. 3	1137	240	131	1345
Sponenburg, Hiram H., Wadsworth, Ill., assignor to Laas & Sponenburg Co. Railway-rail stay	872,603	Dec. 3	787	163–4	131	1292
Sprague Electric Company. (See Libby, Sam H., assignor.)						
Sprague Electric Company. (See Libby and Baker, assignors.)						
Spruce, Clifford J., assignor to Mackie-Lovejoy Manufacturing Company, Chicago, Ill. Trousers-hanger	872,587	Dec. 3	571	119	131	1255
St. Clair, William F., Owatonna, Minn. Display-stand	872,771	Dec. 3	950	198	131	1317
St. John, William B., New Edinburg, Ark. Attachment for harrow-teeth	872,386	Dec. 3	141	27	131	1197
Staats, William H., Colonie, N. Y. Recoil-check for vehicles	872,544	Dec. 3	487	102	131	1242
Standard Commercial Company. (See Richards, George L., assignor.)						
Standard Novelty Works. (See Walter, Charles A., assignor.)						
Standard Steel Car Company. (See Christianson, Andrew, assignor.)						
Stead, John C., London, England. Apparatus for the manufacture of carbon dioxid	872,588	Dec. 3	572	119	131	1256
Steinmetz, Charles P., Schenectady, N. Y., assignor to General Electric Company. Turbine	872,545	Dec. 3	488	102	131	1242
Stephens, W. W. (See McKenzie, Angus, assignor.)						
Stevenson, Robert A., assignor of one-half to N. Stafford Co., New York, N. Y. Interchangeable-number frame	872,769	Dec. 3	942	196	131	1316
Stevenson, Samuel P., Chester, Pa. Door-fastener	872,470	Dec. 3	331	68	131	1218
Stickley, Joseph, Lake Andes, S. D. Harrow attachment	872,546	Dec. 3	490	102–3	131	1243
Still, S. S. (See De Vos, Arie, assignor.)						
Stimpson, Edward S., Hopedale, Mass., assignor to Draper Company, Portland, Me., and Hopedale, Mass. Thread-cutter for weft-replenishing looms	872,471	Dec. 3	332	68	131	1219
Stokes & Smith Company. (See Garrett, Charles A., assignor.)						
Stolz, Otto G., Chicago, Ill. Fastening for resilient tires	872,472	Dec. 3	335	68	131	1219
Stout, Ashby G. (See Anderson and Stout.)						
Strauss, Ferdinand, New York, N. Y. Harmonica	872,589	Dec. 3	575	120	131	1256
Streich, Frank, assignor to Universal Automatic Carving Machine Co., Chicago, Ill. Automatic carving-machine	872,857	Dec. 3	1139	241	131	1345
Strong, James B., assignor to Ramapo Iron Works, Hillburn, N. Y. Railway-frog	872,473	Dec. 3	336	69	131	1220
Stuart, Benjamin F., Rushville, Mo. Wire-fencing stretcher	872,387	Dec. 3	142	27	131	1190
Sturrock, John, and A. L. Johnson, Hamilton, Ontario, Canada, assignors to International Harvester Company. Grain-drill	872,590	Dec. 3	576	120	131	1256
Success Manufacturing Company. (See Bolger, Thomas P., assignor.)						
Sumpner, William E., Birmingham, England. Electrical measuring instrument	872,474	Dec. 3	338	69–70	131	1220
Swanberg, Arthur W., Minneapolis, Minn. Non-refillable bottle	872,475	Dec. 3	341	70	131	1221
Swift, Francis E., Dayton, Ohio. Heating-furnace	872,858	Dec. 3	1143	242	131	1345
Symons, Arthur H. and J. H., Kansas City, Mo. Bale-tie machine	872,770	Dec. 3	944	196–7	131	1317
Symons, Jabez H. (See Symons, Arthur H. and J. H.)						
Taggart, William H., Chicago, Ill. Making molds for dental inlays and the like	872,976	Dec. 3	1377	290	131	1384
Talt, Arthur A., Winnipeg, Manitoba, assignor to Business Systems Limited, Toronto, Canada. Loose-leaf binder	872,388	Dec. 3	143	27	131	1190
Tarantini, Giovanni B. (See Becchi and Tarantini.)						
Taylor, Clarence G. (See Taylor, William C., assignor.)						
Taylor, Edward S. (See Tolman, Charles P., assignor.)						
Taylor, Florence E., assignor of one-third to E. P. Forbes, Boston, Mass. Label-affixing machine	872,859	Dec. 3	1144	242–3	131	1346
Taylor, William C., Paris, France, assignor of one-half to C. G. Taylor, Washington, D. C. Vehicle-tire	872,860	Dec. 3	1148	243	131	1346
Terrell, Elah, Columbus, Ohio. Boat	872,389	Dec. 3	145	28	131	1190
Texas Implement and Machine Company. (See Schofield and Ray, assignors.)						
Theberath, Frederick W., Lakewood, Ohio. Lawn-edge trimmer	872,861	Dec. 3	1149	243	131	1346
Theophel, Henry, Detroit, Mich. Drum-snare	872,476	Dec. 3	342	70	131	1221
Thiem, James E., Raleigh, N. C. Stove-door	872,694	Dec. 3	789	164	131	1292
Thomas, Abe, Cynthiana, Ky. Journal-box	872,695	Dec. 3	790	164–5	131	1293
Thomas, Edward M., Norway, Me. Broom-moistener	872,696	Dec. 3	791	165	131	1291
Thompson. Ernie A. (See Truesdale and Thompson.)						
Thomson, William P., Philadelphia, Pa. Rail-joint	872,477	Dec. 3	343	70–1	131	1221
Thum, Otto, Grand Rapids, Mich. Throttle-controller	872,478	Dec. 3	345	71	131	1221
Tichenor, Robert R., Feeley, Minn. Grain-door	872,479	Dec. 3	348	71	131	1222
Tilden, Marshall, Willimantic, Conn. Spool	872,480	Dec. 3	349	72	131	1222
Tilford, George H., assignor of one-half to G. A. Keach, Providence, R. I. Charm, hat-pin, &c	872,697	Dec. 3	792	165	131	1293
Tillotson, Charles C., Olathe, Kans. Power-transmission clutch	872,481	Dec. 3	350	72	131	1222
Toledo Computing Scale Company. (See Wear, Frank F., assignor.)						
Tolman, Charles P., assignor of one-half to E. S. Taylor, New York, N. Y. Graduated measuring-can	872,482	Dec. 3	352	72	131	1223
Tönnies, Max. (See Burn, John S., assignor.)						
Totten, Robert C., Pittsburg, Pa. Composition of metal	872,483	Dec. 3	355		131	1223
Townsend, Miles, Riverside, Cal. Window-ventilator	872,979	Dec. 3	1379	290	131	1384
Truesdale, Avery M., and E. A. Thompson, Jefferson, Ohio. Curtain and shade bracket	872,862	Dec. 3	1150	244	131	1346
Tuley, William M., Marion, Ind. Dipping-machine	872,863	Dec. 3	1151	244–5	131	1347

Name, residence, and invention.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Twin Lubricator Company. (See Armstrong, Ernest, assignor.)						
Tyler, Benjamin F., Coshocton, Ohio. Curtain-fixture	872,698	Dec. 3	794	165–6	131	1293
Uffner, Hyman, New York, assignor to F. L. Schafuss Company, Brooklyn, N. Y. Album	872,547	Dec. 3	491	103	131	1243
Umnitz, Caroline, Philadelphia, Pa. Hook and eye	872,772	Dec. 3	952	198	131	1317
Umnitz, Caroline, Philadelphia, Pa. Hook and eye	872,773	Dec. 3	953	198	131	1318
Unckrich, Ferdinand, Galion, Ohio. Vault-closure	872,864	Dec. 3	1156	245–6	131	1347
Union Railway Signal Company. (See Anderson and Stout, assignors.)						
Union Special Machine Company. (See Brown, Michael E., assignor.)						
Union Special Machine Company. (See Woodward, Russel G., assignor.)						
Union Special Sewing Machine Company. (See Onderdonk, Lansing, assignor.)						
Union Typewriter Company. (See Smedberg, Henry A., assignor.)						
Union Wire Mattress Company. (See Powers and Klipfel, assignors.)						
Universal Automatic Carving Machine Company. (See Streich, Frank, assignor.)						
Universal Talking Machine Manufacturing Company. (See Babson and Haug, assignors.)						
Vahjen, C. M. M. (See Repp, Clinton B., assignor.)						
Van Ferls, Cornelis P. A., and J. M. Kneeland, New York, N. Y. Motor-car	872,774	Dec. 3	955	196	131	1318
Van Glahn, John H., Toledo, Ohio. Lime-hydrating machine	872,390	Dec. 3	146	28	131	1191
Van Halder, Peter F., Sharon, Pa. Advertising device	872,700	Dec. 3	797	166	131	1294
Vance, Enoch H., Jr., *et al.* (See Woodall, Robert B., assignor.)						
Vandevort, David A., Scottsburg, Ind. Wire-stretcher	872,699	Dec. 3	796	166	131	1294
Vawter, Charles E., Jr., Blacksburg, Va. Index for recording instruments	872,391	Dec. 3	149	28	131	1191
Ver Planck, William E., Swampscott, Mass., assignor to General Electric Company. Shaft-bearing	872,365	Dec. 3	107	19	131	1183
Ver Planck, William E., Swampscott, Mass., assignor to General Electric Company. Packing for shafts of rotary steam-engines	872,366	Dec. 3	108	20	131	1183
Verch, Robert, Albany, N. Y. Strap-lock	872,865	Dec. 3	1158	246	131	1348
Vial, Blanche, *et al.* (See Vial, Emile.)						
Vial, Emile, deceased, Brussels, Belgium; L. B., B., and G. Vial heiresses-at-law. Mud retainer or collector for water-clarifying tanks	872,866	Dec. 3	1160	246	131	1348
Vial, Gabrielle, *et al.* (See Vial, Emile.)						
Vial, Louise B., *et al.* (See Vial, Emile.)						
Vincent, Louis H., Jr., Gila Bend, Ariz. Ter. Sash-holder	872,701	Dec. 3	798	166	131	1294
Vodoz, Alfred, Geneva, Switzerland. Apparatus for washing glasses	872,702	Dec. 3	799	167	131	1295
Vogel, William W., Chicago, Ohio. Spanner-wrench	872,484	Dec. 3	356	73	131	1223
Votaw, Howard E., College Corner, Ind. Form for cement cisterns or the like	872,393	Dec. 3	153	29	131	1192
Vrooman, Herbert A. (See Bredsvold, Paul A., assignor.)						
Wahl, Nikolaus, Kahl-on-the-Main, Germany. Manufacture of seamless felt tubes for covering rollers and the like	872,867	Dec. 3	1162	246	131	1348
Walsh, James A., assignor to Indiana Manufacturing Company, Indianapolis, Ind. Pneumatic straw-stacker	872,868	Dec. 3	1163	247	131	1349
Walter, Charles A., assignor to Standard Novelty Works, Duncannon, Pa. Fifth-wheel	872,591	Dec. 3	577	120	131	1256
Waltham Watch Company. (See Church, Duane H., assignor.)						
Wangemann, Adelbert T. E., assignor to New Jersey Patent Company, West Orange, N. J. Tone-purifier	872,592	Dec. 3	579	120–1	131	1257
Warner, Clarence M., Cambridge, Ill. Voting-machine	872,703	Dec. 3	800	167–8	131	1295
Warner, Clarence M., Cambridge, Ill. Voting-machine	872,704	Dec. 3	806	168–9	131	1296
Warnken, Congdon, Coffer Company. (See Warnken, George L., assignor.)						
Warnken, George L., assignor to Warnken, Congdon, Coffer Company, Jamestown, Cal. Hygrometer	872,593	Dec. 3	581	121	131	1257
Warren, Peter R., Brookline, assignor to P. R. Warren Company, Boston, Mass. Box for candy and other articles	872,594	Dec. 3	583	121	131	1257
Warshilsky, Harry, assignor to E. Goldman & Company, Chicago, Ill. Bottle-washer brush	872,595	Dec. 3	584	122	131	1258
Warshilsky, Harry, assignor to E. Goldman & Company, Chicago, Ill. Bottle-washer brush	872,596	Dec. 3	585	122	131	1258
Washburn, Montross, Ossining, and R. D. Granger, New York, N. Y. Furnace-grate	872,869	Dec. 3	1165	247–8	131	1349
Waters, Benjamin F., Dover, N. C. Boat	872,870	Dec. 3	1167	248	131	1349
Waters, Daniel F., Philadelphia, Pa. Dyeing-machine	872,597	Dec. 3	586	122–3	131	1258
Watt, Andrew F., Baltimore, Md. Extractor for bottle-corks	872,485	Dec. 3	357	73	131	1223
Watts, Elmer A., and E. G. Morrison, Springfield, Ohio. Gas-engine	872,598	Dec. 3	588	123	131	1259
Wayland, Columbus A., South Knoxville, Tenn. Multiplying attachment	872,871	Dec. 3	1168	249	131	1349
Weakley, Raymond D., St. Louis, Mo. Hose-toe protector	872,394	Dec. 3	155	29	131	1192
Wear, Frank F., San Francisco, Cal., assignor to Toledo Computing Scale Company, Toledo, Ohio. Scale	872,486	Dec. 3	358	73	131	1223
Weber, Benjamin, Baltimore, Md. Trunk-lock	872,775	Dec. 3	956	199	131	1318
Weber, Peter, assignor to Sohmer & Co., New York, N. Y. Capo-tasto bar for pianos	872,487	Dec. 3	360	73	131	1224
Webster, Henry R., New Lyme, Ohio. Roofing	872,599	Dec. 3	592	123	131	1259
Weiskopf, Harry, Chicago, Ill. Sample-mounting machine	872,872	Dec. 3	1172	249	131	1350
Weiln, Axel, London, England. Davit	872,776	Dec. 3	957	199	131	1318
Wells Parmer D., Alx, Ind. Fender-adjuster	872,395	Dec. 3	156	30	131	1192
West, Frank L., Cleveland, Ohio. Mounting for hooks and eyes	872,873	Dec. 3	1173	250	131	1350
Wharton, Lewis, Cambridge, Ohio. Shipping-crate	872,600	Dec. 3	593	124	131	1259
Wheary, George H., assignor to Hartmann Trunk Company, Racine, Wis. Garment-holder	872,488	Dec. 3	361	74	131	1224
Wheary, George H., assignor to Hartmann Trunk Co., Racine, Wis. Trunk	872,874	Dec. 3	1174	250	131	1350
Wheat, Elmer. (See Wheat, William D., assignor.)						
Wheat, William D., assignor of one-half to E. Wheat, Jamestown, Ky. Harvester-cutter	872,980	Dec. 3	1381	290	131	1385
Whitcomb, Marcienne A., *et al.* (See Houghton, Charles L., assignor.)						
White, Frank D., Alpena, Mich. Envelop	872,548	Dec. 3	492	103–4	131	1243
Whitney, Arthur E., assignor of one-half to R. F. Whitney, Winchester, Mass. Hide-working machine	872,489	Dec. 3	362	74	131	1224
Whitney, Robert F. (See Whitney, Arthur E., assignor.)						
Wickel, Fritz C., Nuremberg, Germany. Apparatus for coloring roll-paper and the like	872,777	Dec. 3	957	200	131	1319
Wiegant, Aleid O., Wathena, Kans. Mechanical movement	872,875	Dec. 3	1177	250	131	1351
Wightman, Simon G., Washington, D. C. Composition of matter	872,705	Dec. 3	816		131	1296
Wilcox, George S. (See Windridge and Wilcox.)						
Wilkins, Abner M. (See Hutcheson and Wilkins.)						
Wilkinson, James, Providence, R. I., assignor to Wilkinson Turbine Company, Birmingham, Ala. Shaft-packing for turbines	872,396	Dec. 3	156	30	131	1192
Wilkinson Turbine Company. (See Wilkinson, James, assignor.)						
William B. Kerr Company. (See Nock, Rupert A., assignor.)						
Williams, Charles H., assignor to Puritan Corset Company, Kalamazoo, Mich. Corset	872,876	Dec. 3	1178	251	131	1351
Williamson, John. (See Carswell, Alexander, assignor.)						
Williamson, John H., and W. C. Moore, St. Joseph, Mo. Reversible slide and hose-protector	872,490	Dec. 3	363	74	131	1224
Williamson, Zephaniah E., Sheffield, Ill. Vehicle	872,877	Dec. 3	1180	251	131	1352
Willson Carbide Works Company of St. Catharines. (See King, Jesse C., assignor.)						
Wilson, Leonard, Schenectady, N. Y., assignor to General Electric Company. Current-converter	872,549	Dec. 3	493	104	131	1244

Name, residence, and invention.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Windridge, James, and G. S. Wilcox, assignors to Lyman Gun Sight Corporation, Middlefield, Conn. Sight for firearms	872,706	Dec. 3	818	170	131	1296
Wisnom, Robert J., Virginia City, Nev. Electrode	872,878	Dec. 3	1181	251	131	1352
Wissler, Jacob, Lyndhurst, Va., assignor of one-half to R. L. Lambert, W. Armstrong, H. H. Lantz, and A. E. Glascock, Washington, D. C. Disk-sharpener	872,981	Dec. 3	1382	291	131	1385
Wm. B. Scaife & Sons Company. (See Greth, John C. W., assignor.)						
Wogoman, Levi D., Versailles, Ohio. Brick-machine	872,491	Dec. 3	364	74–5	131	1225
Wood, Minard F., Worcester, Mass. Bluing device	872,879	Dec. 3	1182	252	131	1352
Woodall, Robert B., Traskwood, assignor of five-sixths to D. S. McCray, W. H. Cooper, E. H. Vance, Jr., J. H. B. Adams, and T. N. Atchison, Malvern, Ark. Railway-switch	872,982	Dec. 3	1383	291	131	1385
Woodward, Russel G., Waukegan, assignor to Union Special Machine Company, Chicago, Ill. Cover-plate for sewing-machines	872,601	Dec. 3	594	124	131	1260
Wuchner, George G., Louisville, Ky. Bottle	872,880	Dec. 3	1183	252	131	1352
Wulff, John P., Minneapolis, Minn. Antifriction wheel-bearing	872,397	Dec. 3	159	30	131	1193
Young, Clinton H. (See Sanborn and Young.)						
Zelser, Adlow. (See Zelser, John R. and A.)						
Zelser, John R. and A., Berwick, Pa. Form for concrete sidewalks	872,602	Dec. 3	595	124	131	1260
Ziegler, John C., Wichita Falls, Tex. Oil-burner	872,398	Dec. 3	161	31	131	1193
Ziska, Adam, Jr., Chicago, assignor to Rockford Automobile & Engine Co., Rockford, Ill. Drive mechanism for motor-vehicles	872,881	Dec. 3	1184	252–3	131	1353
Zoebl, Theodor, Chicago, Ill. Pitch-indicating device for graphophones and the like	872,399	Dec. 3	164	31	131	1194

DESIGNS.

Name, residence, and design.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Alexander, Jesse, Brooklyn, N. Y. Type-writer frame	38,927	Dec. 3	131	1396
Bernstein, Henry, Philadelphia, Pa. Neckwear fabric	38,932	Dec. 3	131	1397
Cross, Harry, and G. J. Griffiths, Woodstock, assignors to Oliver Typewriter Company, Chicago, Ill. Type-writer base-frame	38,928	Dec. 3	131	1396
De Wyngaert, Joseph E., Newark, N. J. Head of brooches, scarf-pins, or similar articles	38,918	Dec. 3	131	1394
Dickelman, Joseph L., Forest, Ohio. Shingle	38,931	Dec. 3	131	1397
Dumont, Amos, Champlain, N. Y. Handle for combs, knives, or similar articles	38,920	Dec. 3	131	1395
Emergency Rubber Company. (See Vogt, Albert E., assignor.)				
Griffiths, George J. (See Cross and Griffiths.)				
Henriksen, Louis C., Los Angeles, Cal. Belt-buckle	38,917	Dec. 3	131	1394
Homan, Joseph T., Cincinnati, Ohio. Metal dish	38,925	Dec. 3	131	1396
Jameson, William A., Niagara Falls, N. Y. Mirror or similar article	38,929	Dec. 3	131	1397
Miller, August C., Taunton, Mass., assignor to Reed and Barton Corporation. Spoon or fork	38,921	Dec. 3	131	1395
Nelson, Clarence A., and C. A. Payne, assignors to Utica Aluminum & Novelty Works, Utica, N. Y. Salt-shaker	38,922	Dec. 3	131	1395
Oliver Typewriter Company. (See Cross and Griffiths, assignors.)				
Payne, Charles A. (See Nelson and Payne.)				
Reed and Barton Corporation. (See Miller, August C., assignor.)				
Reed and Barton Corporation. (See Wilkes, Samuel G., assignor.)				
Ryon, Earl, Washington, D. C. Molding	38,930	Dec. 3	131	1397
Scheck, Max E., Chicago, Ill. Cut-glass bowl	38,923	Dec. 3	131	1395
Smith, William T., Philadelphia, Pa. Woven fabric	38,933	Dec. 3	131	1397
Utica Aluminum & Novelty Works. (See Nelson and Payne, assignors.)				
Vogt, Albert E., assignor to Emergency Rubber Company, Rochester, N. Y. Purse or bag	38,919	Dec. 3	131	1395
Walker, Arthur W., Malden, Mass. Stove	38,934	Dec. 3	131	1397
Wells, Richard H., Kenosha, Wis. Headlight	38,926	Dec. 3	131	1396
Wilkes, Samuel G., Taunton, Mass., assignor to Reed and Barton Corporation. Chafing-dish lamp and stand	38,924	Dec. 3	131	1395
Willis, Henry M., Hempstead, N. Y. Book-mark	38,916	Dec. 3	131	1394

TRADE-MARKS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Anheuser-Busch Brewing Association, St. Louis, Mo. Beer	66,464	Dec. 3	131	1417
Blodgett & Orswell Co., Pawtucket, R. I. Spool-cotton or sewing-thread	66,465	Dec. 3	131	1417
Ciaburri & Fil., Enrico, Naples, Italy. Liqueurs	66,466	Dec. 3	131	1417
Consolidated Cotton Duck Company, Baltimore, Md. Cotton duck	66,467	Dec. 3	131	1417
Duplex Phonograph Co., Kalamazoo, Mich. Phonographs	66,468	Dec. 3	131	1417
Faultless Rubber Company, Akron, Ohio. Certain rubber articles	66,484	Dec. 3	131	1417
Faultless Rubber Company, Akron, Ohio. Certain rubber goods	66,485	Dec. 3	131	1417
Faultless Rubber Company, Akron, Ohio. Certain surgical goods	66,487	Dec. 3	131	1417
Fleming & Christian Co., Richmond, Va. Cider	66,488	Dec. 3	131	1417
Freiberg, Sig. & Sol. H., Cincinnati, Ohio. Whisky	66,469	Dec. 3	131	1417
Hewlett Bros. Co., Salt Lake City, Utah. Coffees	66,489	Dec. 3	131	1417
Jackes-Evans Manufacturing Company, St. Louis, Mo. Stovepipes	66,490	Dec. 3	131	1417
John Dewar & Sons, Ltd., Perth, Scotland. Whisky	66,470	Dec. 3	131	1417
L. Hess & Co., Inc., New York, N. Y. White and colored cotton cloth	66,471	Dec. 3	131	1417
Mount Vernon-Woodberry Cotton Duck Company, Baltimore, Md. Cotton duck	66,472	Dec. 3	131	1417
Rees-Scott Company, Limited, New Orleans, La. Certain wood manufactures	66,473	Dec. 3	131	1417
Rippen, Hyman, Perth Amboy, N. J. Smoking-tobacco	66,474	Dec. 3	131	1417
Rosenberg, Ruben, Pittsburg, Pa. Stogies	66,475	Dec. 3	131	1417
Rowntree and Company, Limited, York, England. Gum-drops				

TRADE-MARKS—Continued.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Page.
Royal Skirt Co., New York, N. Y. Ladies' and misses' dress-skirts and walking-overskirts	66,491	Dec. 3	131	1417
Rupp & Oeschger, Berlin, N. H. Cigars	66,476	Dec. 3	131	1417
Sanitary Steel Couch Co., Elkhart, Ind. Beds, couches, and bed springs	66,477	Dec. 3	131	1417
Schmitz & Co., C., New York, N. Y. Cotton piece goods	66,473	Dec. 3	131	1417
Siegel Cooper Company, New York, N. Y. Umbrellas	66,479	Dec. 3	131	1417
Sjoberg, Israel, Roseau, Minn. Snuff	66,480	Dec. 3	131	1417
Strawbridge & Clothier, Philadelphia, Pa. Dress fabrics composed of worsted or cotton, and worsted and cotton	66,481	Dec. 3	131	1417
White, William L., Brooklyn, N. Y. Certain medicine and corn-plaster	66,482	Dec. 3	131	1417
Winchester Repeating Arms Co., New Haven, Conn. Loaded paper shot-shells	66,493	Dec. 3	131	1417
Wolff & Glaserfeld, Berlin, Germany. Certain wearing-apparel	66,492	Dec. 3	131	1417
Worumbo Manufacturing Company, Bath, Me. Woolen piece goods	66,483	Dec. 3	131	1417

LABELS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Page.
Acme Shear Company, Bridgeport, Conn. "Oval." (For Shears)	13,913	Dec. 3	131	1418
Home Brewing & Ice Co., Joplin, Mo. "Home Malt Tonic." (For a Malt Bevorage)	13,909	Dec. 3	131	1418
Means, William B., Lebanon, Pa. "Dr. Means Pills." (For Pills)	13,910	Dec. 3	131	1418
Nichols, Francis E., Leominster, Mass. "The Comb Makers." (For Cigars)	13,907	Dec. 3	131	1418
Roth, Martin, Washington, D. C. "Birdwood Rye." (For Whisky)	13,908	Dec. 3	131	1418
Saums, Geo. W., Plainfield, N. J. "None Such Furniture & Floor Polish." (For a Polish for Furniture and Floors)	13,912	Dec. 3	131	1418
Schmidt & Co., New York, N. Y. "Guarantee." (For Cigars)	13,906	Dec. 3	131	1418
St. Denis, Oliva, Fall River, Mass. "King Philip Bleaching Water." (For Bleaching-Water)	13,911	Dec. 3	131	1418

PRINTS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Page.
Berger, Raphael & Wile, New York, N. Y. "Built Right & Wearwell." (For Men's Clothing)	2,171	Dec. 3	131	1418
Lytton, H. C., Chicago, Ill. "Men's and Boys' Apparel." (For Men's and Boys' Apparel)	2,170	Dec. 3	131	1418
Washburn Crosby Company, Minneapolis, Minn. "Don't Be Odd." (For Flour)	2,169	Dec. 3	131	1418

TRADE-MARKS.

(REGISTRATION APPLIED FOR.)

Name, residence, and title.	Serial No.	Date.	Official Gazette. Vol.	Page.
A. E. Little & Company, Lynn, Mass. Boots and shoes	30,704	Dec. 3	131	1411
A/S. Stavanger Sardine Co., Stavanger, Norway. Canned sardines	27,827	Dec. 3	131	1402
Acme Belting Company, Phillipsburg, N. J. Machinery-belts	27,104	Dec. 3	131	1402
Altschuler, Levi, Allegheny, Pa. Liniments	30,636	Dec. 3	131	1411
American Electric Lamp Co. of N. Y., Philadelphia, Pa. Electric lamps	30,603	Dec. 3	131	1411
American Rubber Company, Boston, Mass. Rubber boots and shoes	29,929–30	Dec. 3	131	1405–6
Arizona Wonderine Co., Phœnix, Ariz. Ter., and Los Angeles, Cal. Remedy for pneumonia, pleurisy, appendicitis, &c	25,173	Dec. 3	131	1401
Ashcroft Manufacturing Company, Bridgeport, Conn. Pressure-gages, indicators, revolution-counters, &c	29,563	Dec. 3	131	1404
Aurness, Peter A., Minneapolis, Minn. Stethoscopes	29,355	Dec. 3	131	1404
Bamberger & Co., Justin W., München, Germany. Type-writing machines	29,855	Dec. 3	131	1405
Bates, Robert N., Ottawa, Canada. Pills	28,318	Dec. 3	131	1403
Baumgarten, Abbie G., New York, N. Y. Skin and face food, powder, lotion, &c	30,761–4	Dec. 3	131	1413–14
Bayless Fruit Co., Lexington, Ky. Fresh fruits	29,518	Dec. 3	131	1404
Bogart, Charles C., Middletown, N. Y. Tobacco, cigars, cigarettes, and cheroots	30,723	Dec. 3	131	1412
Boston Rubber Shoe Company, Boston, Mass. Rubber boots and shoes	29,944–5	Dec. 3	131	1406
C. F. Brown Chemical Co., New York, N. Y. Liniment	30,510	Dec. 3	131	1409
C. T. Ham Manufacturing Company, Rochester, N. Y. Oil-burning lamps	27,019	Dec. 3	131	1402
Cargill Cleveland & Co., Westfield, Mass. Whips	30,725	Dec. 3	131	1412
Chatfield Mfg. Co., Cincinnati, Ohio. Roofing-paper	28,463	Dec. 3	131	1403

TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

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Chemische Fabrik auf Actien (vorm. E. Schering), Berlin, Germany. Antiseptic remedies	18,711	Dec. 3	131	1400
Cheney Chemical Company, South Manchester, Conn. Cleaning and polishing powder	25,925	Dec. 3	131	1401
Chesterman & Streeter, Philadelphia, Pa. Truss-pads	30,785	Dec. 3	131	1414
China & Japan Trading Company, Limited, New York, N. Y. Sheetings, shirtings, drills, &c	30,798–800	Dec. 3	131	1414–15
Columbia Flouring Mills Company Ltd., Enderby, British Columbia. Wheat-flour	29,166	Dec. 3	131	1403
Crescent Tool Co., Jamestown, N. Y. Wrenches and pliers	30,321	Dec. 3	131	1408
Davis Chemical Company, Denver, Colo. Salve or ointment and unguent	30,759	Dec. 3	131	1413
Donaldson-Shultz Co., Baltimore, Md. Tomato soup and Worcestershire sauce	30,750	Dec. 3	131	1413
E. E. Post Co., Utica, N. Y. Saccharine butter	30,549	Dec. 3	131	1409
E. H. Jacobs Manufacturing Company, Killingly, Conn. Loom-pickers and lug straps	26,976	Dec. 3	131	1402
Elastro Manufacturing Company, Hartford, Conn. Resilient composition of matter to be injected into tires	29,405	Dec. 3	131	1404
Elder-Harrison Company, Baltimore, Md. Whisky	29,702	Dec. 3	131	1404
Elgin Butter Company, Elgin, Ill. Butter	29,805	Dec. 3	131	1405
Elgin Butter Company, Elgin, Ill. Butter	29,808	Dec. 3	131	1405
F. M. Bower Co., New York, N. Y. Bread and cake pans	22,754	Dec. 3	131	1400
Feist & Co., A., Solingen, Germany. Knives, forks, scissors, &c	29,864	Dec. 3	131	1405
Fischer Bros., Seattle, Wash. Canned and dried fruits and vegetables, jams, jellies, &c	28,037	Dec. 3	131	1402
Florida Fruit Oil & Extract Co., Atlanta, Ga. Carbonated hop drinks	30,597	Dec. 3	131	1410
Frederick Stearns & Co., Detroit, Mich. Perfumes	30,616	Dec. 3	131	1410
Geneva Preserving Company, Geneva, N. Y. Canned fruits and vegetables	30,526–9	Dec. 3	131	1415–16
Geo. Borgfeldt & Co., New York, N. Y. Rubber balls, toy animals, rattles, &c	30,399	Dec. 3	131	1408
Geo. Borgfeldt & Co., New York, N. Y. Brushes	30,400	Dec. 3	131	1408
Geo. Borgfeldt & Co., New York, N. Y. Rubber syringes, water-bottles, atomizers, &c	30,401	Dec. 3	131	1408
Glenn Springs Company, Spartanburg, S. C. Mineral, carbonated, and aerated waters	30,678	Dec. 3	131	1411
Glo-Zo Gloss Co., Philadelphia, Pa. Material for improving the finish of starched fabrics and preventing the iron from sticking	30,769	Dec. 3	131	1414
Globe Packing Company, Lubec and Eastport, Me. Sardines	30,624–5	Dec. 3	131	1410
Globe Wire Company, Limited, Sharpsburg, Pa. Polished drill-rods and drawn wire	30,814	Dec. 3	131	1415
Gloretta Ranch Company, Clovis, Cal. Green, dried, and preserved fruits and vegetables	30,786	Dec. 3	131	1414
Golden State Wine Co., Los Angeles, Cal. Bourbon and rye whisky	30,564	Dec. 3	131	1409
Goodyear's India Rubber Glove M'f'g. Co., Naugatuck, Conn. Rubber boots and shoes	29,938	Dec. 3	131	1406
H. J. McGrath Company, Baltimore, Md. Canned fruits and vegetables	30,668	Dec. 3	131	1411
Hardtmuth, L. & C., Vienna and Budweis, Austria-Hungary, and London, England. Tracing-cloth	27,648	Dec. 3	131	1402
Heywood Candy Manufacturing Company, Des Moines, Iowa. Candies	30,792	Dec. 3	131	1414
Hubbard, Elbert, East Aurora, N. Y. Monthly publications	30,664	Dec. 3	131	1411
Indianapolis Composite Brick Company, Indianapolis, Ind. Bricks	28,707	Dec. 3	131	1403
Isaac Prouty & Co. (Incorporated), Boston, Mass. Leather boots and shoes	25,543	Dec. 3	131	1401
J. K. Armsby Company, Chicago, Ill., and San Francisco, Cal. Canned and dried fruits	30,560	Dec. 3	131	1409
J. W. James Company, Wheeling, W. Va. Remedy for coughs, colds, bronchitis, &c	30,776	Dec. 3	131	1414
J. W. James Company, Wheeling, W. Va. Remedy for colic, cramps, diarrhea, &c	30,778	Dec. 3	131	1414
Jacob & Sons, H., New York, N. Y. Textile leggings and overgalters	30,617	Dec. 3	131	1410
Jewelers Circular Pub. Co., New York, N. Y. Periodical	29,086	Dec. 3	131	1403
Joseph Banigan Rubber Co., Providence, R. I. Rubber boots and shoes	29,924	Dec. 3	131	1405
Joseph Banigan Rubber Co., Providence, R. I. Rubber boots and shoes	29,926	Dec. 3	131	1405
Joseph N. Eisendrath Company, Chicago, Ill. Leather gloves, mittens, and gauntlets	30,134	Dec. 3	131	1407
Kaufherr & Co.'s Shoe Leather Tanneries, Newark, N. J. Calf leathers	29,722	Dec. 3	131	1406
Kellogg-Mackay-Cameron Co., Chicago, Ill. Boilers, tank and laundry heaters	29,204	Dec. 3	131	1404
Knowlton Danderine Co., Chicago, Ill. Scalp-tonic	30,807	Dec. 3	131	1415
Krausse & Auerbach, London, England. Detergent metal-polish	30,485	Dec. 3	131	1409
Kulhawik, John J., Grand Rapids, Mich. Hat-hangers	30,011	Dec. 3	131	1407
Lawson, Oliver P., McGregor, Tex. Seed-oats	30,601	Dec. 3	131	1410
Leddan, Mabel M., Baltimore, Md. Cough medicines	21,942	Dec. 3	131	1400
Levy's Sons, M., Shreveport, La. Leather boots and shoes	30,394	Dec. 3	131	1408
Light, Howard W., Newtown, Conn. Gherkins, pickles, chili-sauce, &c	25,269	Dec. 3	131	1401
Lycoming Rubber Co., Williamsport, Pa. Rubber boots and shoes	30,727–29	Dec. 3	131	1412
Lynchburg Shoe Co., Lynchburg, Va. Leather boots and shoes	26,380	Dec. 3	131	1401
Maas & Waldstein Extract Company, New York, N. Y. Soda-water syrup	30,226	Dec. 3	131	1408
Macdonald, Robert B., Attleboro, Mass. Lockets, cuff-pins, and fobs	30,166	Dec. 3	131	1407
Marion Flint Glass Company, Marion, Ind. Glass bottles	30,626	Dec. 3	131	1411
Marjenhoff Company, Charleston, S. C. Biscuits, crackers, and cakes	30,709	Dec. 3	131	1412
Martin, Louis B., Boston, Mass. Liniment	30,705	Dec. 3	131	1412
Meyer Rubber Company, New Brunswick, N. J. Rubber boots and shoes	29,927	Dec. 3	131	1405
Miller, John C., Akron, Ohio. Medicine for rheumatism	26,042	Dec. 3	131	1401
Moncrief & Francis, Troy, N. Y. Dyspepsia remedy	30,258	Dec. 3	131	1408
Montbarbon, Philippe C. M., Paris, France. Eye-protectors	30,672	Dec. 3	131	1411
Moos & Co., New York, N. Y. Canned fish	7,219	Dec. 3	131	1399
N. K. Fairbank Company, Chicago, Ill. Soap	10,223	Dec. 3	131	1399
National Sportsman, (Inc.,) Boston, Mass. Monthly magazines	30,607	Dec. 3	131	1410
Nellis, Milton C., New York, N. Y. Canned, bottled, and preserved fruits and vegetables	30,756	Dec. 3	131	1413
New Brunswick Rubber Company, New Brunswick, N. J. Rubber boots and shoes	29,946	Dec. 3	131	1406
New England Confectionery Co., Portland, Me., and Boston, Mass. Chocolates and chocolate bonbons	30,416	Dec. 3	131	1408
New Orleans Import Co. Ltd., New Orleans, La. Tea	29,566	Dec. 3	131	1404
New York & London Drug Co., New York, N. Y. Remedies for venereal diseases	30,710	Dec. 3	131	1412
Newman, Loeb, New York, N. Y. Knitted sweaters and bathing-suits	30,448	Dec. 3	131	1409
Niemann, A. H., Berkley, Va. Remedy for paralysis, neuralgia, &c	30,572	Dec. 3	131	1410
Norcross Co., Cleveland, Ohio. Stone sinks	18,744	Dec. 3	131	1400
Odenweller Edward L., Ottoville, Ohio. Wheat-flour	30,579	Dec. 3	131	1410
Pearl City Fruit Company Limited, Pearl City and Honolulu, Hawaii. Canned pineapples	27,755–6	Dec. 3	131	1402
Penick & Ford Ltd., Shreveport and New Orleans, La. Molasses	30,738–43	Dec. 3	131	1412–13
Pfeifer, Jacob A., Detroit, Mich. Spectacles and eyeglasses	30,417	Dec. 3	131	1408
Phoenix-American Pipe Works, Washington, Mo. Corncob pipes	30,150	Dec. 3	131	1407
Physicians Chemical and Drug Company, Denver, Colo. Medicated plasters	29,571	Dec. 3	131	1404
Portland Cementfabrik Hemmoor, Hamburg and Hemmoor-on-the-Oste, Germany. Portland cement	20,923	Dec. 3	131	1400
Quaker Oats Company, Jersey City, N. J.; Chicago, Ill.; Cedar Rapids, Iowa, and Akron, Ohio. Stock foods	29,939–40	Dec. 3	131	1406
Quaker Oats Company, Jersey City, N. J.; Chicago, Ill.; Cedar Rapids, Iowa, and Akron, Ohio. Stock foods	29,942	Dec. 3	131	1406

TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

Name, residence, and title.	Serial No.	Date.	Official Gazette. Vol.	Pages.
Quaker Oats Company, Jersey City, N. J., and Chicago, Ill. Flours, meals, hominy-grits, &c.	30,209–11	Dec. 3	131	1407
Quirl, Edward A., Amsterdam, N. Y. Leather shoes	29,711	Dec. 3	131	1405
Raynor & Perkins Envelope Company, New York, N. Y. Paper and envelops	14,124	Dec. 3	131	1399
Richard Co., Stephen, Southbridge, Mass. Hand knives and blades for cutting cigars and tobacco.	30,222	Dec. 3	131	1408
Ridenour Baker Grocery Co., Kansas City, Mo. Vinegar, canned fruits, and vegetables	30,453	Dec. 3	131	1409
Ries, Jacob, Shakopee, Minn. Table-waters	30,467	Dec. 3	131	1409
Robinson, Gertrude I., New York, N. Y. Printed and illustrated books	30,324	Dec. 3	131	1408
Rowe Patent Calk Company, Hartford, Conn. Horseshoe-calks	29,517	Dec. 3	131	1404
S. & B. Lederer Company, Providence, R. I. Jewelry	29,164	Dec. 3	131	1403
Scheuer & Brother, New York, N. Y. Leather pocket-books and purses	29,142	Dec. 3	131	1403
Siccardi, Enrico P., New York, N. Y. Vegetable compounds for rheumatism, neuralgia, &c.	30,715	Dec. 3	131	1412
Sidney Blumenthal & Co. Inc., New York, N. Y. Worsted, silk, cotton, and mohair fabrics	30,497	Dec. 3	131	1409
Smith, John W., Chester, Pa. Imitation laces	30,772	Dec. 3	131	1414
Snyder, Bertha F., New Kensington, Pa. Remedy for rheumatism	28,010	Dec. 3	131	1402
St. Luke Remedies Co., New York, N. Y. Hair-tonic	28,401	Dec. 3	131	1403
Standard Import Co., Ltd., New Orleans, La. Nutmeg, chilli-pepper, sage, cayenne, &c	30,468	Dec. 3	131	1409
Steiner, Rosenstein & Traub, New York, N. Y. Netted veilings	29,791	Dec. 3	131	1405
Texas Overall Company, Fort Worth, Tex. Overalls, jumpers, and trousers	30,316	Dec. 3	131	1408
Tishenbanner, Frank J., Gilmore City, Iowa. Remedy for bowel complaint in poultry	30,632	Dec. 3	131	1411
Toes-O-K Medical Company, Welland, Canada. Remedies for corns, calluses, and bunions	27,236	Dec. 3	131	1402
"Tot" Company, Milan, Italy. Remedies for indigestion	28,941	Dec. 3	131	1403
Union Cement and Lime Company, Louisville, Ky. Cement, lime, and plaster-of-paris	20,964	Dec. 3	131	1400
United States Rubber Company, New Brunswick, N. J. Rubber boots and shoes	29,958	Dec. 3	131	1407
Universal Drug and Chemical Co., Augusta, Me. Perfumeries, powders, cold-cream, cough remedies, &c.	29,040	Dec. 3	131	1403
Valentine & Bentley Silk Co., New York, N. Y. Silk piece goods	30,808	Dec. 3	131	1415
Virginia-Carolina Chemical Company, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Fertilizers	17,540–1	Dec. 3	131	1399
Virginia-Carolina Chemical Company, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Fertilizers	17,831	Dec. 3	131	1400
Virginia-Carolina Chemical Company, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Fertilizers	17,840–1	Dec. 3	131	1400
W. A. Ross & Brother, Inc., New York, N. Y. Ale	30,574	Dec. 3	131	1410
William Lea & Sons Company, Wilmington, Del. Wheat-flour	6,398	Dec. 3	131	1399
Wülfing, Firm of Johann A., Berlin, Germany. Albumen and albuminous food compounds	28,365	Dec. 3	131	1403
Yale Hat Co., Detroit, Mich. Felt, straw and stiff hats and cloth caps	18,032	Dec. 3	131	1400

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED ON THE 3D DAY OF DECEMBER, 1907.

Invention.	Name.	No.	Date.	Monthly volume. Specification.	Monthly volume. Drawing.	Official Gazette. Volume.	Official Gazette. Page.
Advertising device	P. F. Van Halder	872,700	Dec. 3	797	166	131	1294
Aerial vessel	F. B. Ashley	872,778	Dec. 3	959	200	131	1319
Air-brake. Automobile	J. T. Johnson	872,732	Dec. 3	875	181	131	1304
Air-ship	A. S. Fadda and J. Di Lorenzo	872,334	Dec. 3	31	6	131	1173
Alarm: *See* Electric alarm. Semaphore safety-alarm.							
Alarm apparatus	L. W. Pennington	872,581	Dec. 3	564	117	131	1254
Album	H. Uffner	872,547	Dec. 3	491	103	131	1243
Aluminium and other metals. Producing	H. S. Blackmore	872,985	Dec. 3	1390	292	131	1386
Amusement device	C. C. Keen	872,627	Dec. 3	648	135–6	131	1269
Animal-trap	A. Johnson	872,429	Dec. 3	237	47	131	1205
Atomizer. Oil-	W. and E. C. Foster	872,649	Dec. 3	690	144–5	131	1277
Attachable table	J. Connors	872,905	Dec. 3	1238	263–4	131	1361
Auger. Earth-	A. T. Smith	872,763	Dec. 3	932	198–4	131	1314
Automobiles. Air guide or steering device for	J. T. Johnson	872,820	Dec. 3	1044	219	131	1333
Axle-lubricating device	E. Armstrong	872,984	Dec. 3	1388	292	131	1386
Bake-pan. Adjustable	J. Mio	872,837	Dec. 3	1097	230	131	1339
Bale-tie machine	A. H. and J. H. Symons	872,770	Dec. 3	944	196–7	131	1317
Baler. Hay-	F A. Rowekamp	872,850	Dec. 3	1128	238	131	1343
Baling-press	T. A. Jones	872,431	Dec. 3	240	48	131	1206
Baling-press packer	D. E. Bellinger	872,639	Dec. 3	673	140–1	131	1274
Balloons. Car suspension for motor-	A. von Parseval	872,539	Dec. 3	479	100	131	1241
Banana-case	W. Bell	872,788	Dec. 3	980	203	131	1323
Bandages. Receptacle for antiseptic	O. C. Schulz	872,379	Dec. 3	128	24	131	1187
Bar: *See* Piano-capo-tasto bar.							
Bar-handling apparatus	E. E. Slick	872,383	Dec. 3	135	26	131	1188
Barrel-cover	J. F. East	872,614	Dec. 3	616	130	131	1264
Barrel-head fastener	G. L. Richards	872,749	Dec. 3	906	188	131	1310
Bathing and massaging device	A. Mattison	872,441	Dec. 3	257	52	131	1209
Bearing. Antifriction-	T. A. Blakely	872,709	Dec. 3	825	171–2	131	1297
Bearing. Antifriction wheel-	J. P. Wulff	872,397	Dec. 3	159	30	131	1193
Bearing. Shaft-	W. E. Ver Planck	872,365	Dec. 3	107	19	131	1183
Bed-bottom	F. A. Powers and T. Klipfel	872,681	Dec. 3	765	160	131	1288
Bed-bottom fabric	C. B. Fraley	872,995	Dec. 3	1412	295	131	1390
Bed-sheet, tent, and sleeping-bag. Stockman's combination	F. W. Burch	872,404	Dec. 3	176	34–5	131	1196
Beer-coil cleaner	H. Blackburn	872,494	Dec. 3	373	77	131	1226
Belting	C. F. Aaron	872,882	Dec. 3	1189	253	131	1353
Bench: *See* Piano-bench.							
Bin: *See* Pivoted bin.							
Binder. Loose-leaf	A. A. Tait	872,388	Dec. 3	143	27	131	1190
Binder. Loose-leaf	M. W. Patric	872,968	Dec. 3	1359	287	131	1381
Binding-bars and similar purposes. Fastening device for	P. MacGregor	872,948	Dec. 3	1317	279	131	1374
Bit: *See* Scraper-pan bit.							
Block: *See* Cement block.							
Blowing-engine	H. Aiken	872,492	Dec. 3	366	75–6	131	1225
Blowing-engine	H. Aiken	872,603	Dec. 3	597	125–6	131	1260
Bluing device	M. F. Wood	872,879	Dec. 3	1182	252	131	1352
Board: *See* Checker-board. Panel-board. Ironing-board.							
Boat	E. Terrell	872,389	Dec. 3	145	28	131	1190
Boat	B. F. Waters	872,870	Dec. 3	1167	248	131	1349
Boat. Motor-driven	H. Lamp	872,356	Dec. 3	79	15–16	131	1180
Boiler: *See* Sectional boiler.							
Boiler	J. Lindner	872,438	Dec. 3	254	51–2	131	1208
Boiler	L. Rowan	872,456	Dec. 3	293	59	131	1214
Bottle	J. Boyce	872,606	Dec. 3	601	127	131	1261
Bottle	G. G. Wuchner	872,880	Dec. 3	1183	252	131	1352
Bottle attachment. Ink-	E. M. Case	872,711	Dec. 3	828	172	131	1297
Bottle cap or closure	W. H. Niemeyer	872,672	Dec. 3	743	155	131	1285
Bottle-closure	H. S. Brewington	872,403	Dec. 3	175	34	131	1195
Bottle. Non-refillable	A. W. Swanberg	872,475	Dec. 3	341	70	131	1221
Bottle. Non-refillable	W. E. Campbell and H. T. Ingham.	872,644	Dec. 3	680	142	131	1275
Bottle. Non-refillable	P. Dwyer and J. Ottmann	872,913	Dec. 3	1249	266	131	1363

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Bottles and the like. Cap for syrup-	J. S. Nash	872,671	Dec. 3	741	154	131	1235
Bottles, ink-wells, &c. Device for filling	C. A. M. Nystrom	872,636	Dec. 3	475	98	131	1240
Box: *See* Curb-box.							
Box-covering machines. Cover-applying element for	C. A. Garrett	872,925	Dec. 3	1262	270	131	1366
Box for candy and other articles	P. R. Warren	872,594	Dec. 3	583	121	131	1267
Bracket: *See* Curtain and shade bracket. Window-bracket.							
Brake: *See* Air-brake.							
Brake-cylinder	W. K. Rankin	872,369	Dec. 3	111	21	131	1184
Brake-leverage system	G. Macloskie	872,661	Dec. 3	723	150	131	1261
Brake-shoe hanger	W. G. Price	872,541	Dec. 3	483	101	131	1241
Brick-machine	L. D. Wogoman	872,491	Dec. 3	364	74–5	131	1225
Brush. Bottle-washer	H. Warshilsky	872,595	Dec. 3	584	122	131	1258
Brush. Bottle-washer	H. Warshilsky	872,596	Dec. 3	585	122	131	1258
Bucket. Automatic	E. F. Atherton	872,634	Dec. 3	664	138	131	1272
Buckle. Back-band	J. F. Conner	872,799	Dec. 3	1000	208	131	1329
Buckle. Bale-band	J. S. Patterson and D. E. Smith	872,969	Dec. 3	1362	287	131	1381
Buffing or polishing wheel	W. A. Painter	872,966	Dec. 3	1355	286	131	1380
Buggy-seat attachment	W. P. Grannis	872,410	Dec. 3	193	38	131	1198
Building construction	W. V. Lee	872,658	Dec. 3	716	149	131	1280
Building construction	E. D. Martin	872,954	Dec. 3	1336	282	131	1376
Buncher. Side-delivery	A. Smith	872,467	Dec. 3	324	66	131	1217
Burner: *See* Gas-burner. Lantern-burner. Heating-burner. Oil-burner. Hydrocarbon-burner. Vapor-burner.							
Burner	M. W. Pitner	872,846	Dec. 3	1120	237	131	1341
Butter-cutting machine	F. G. Hodell	872,422	Dec. 3	223	43–4	131	1208
Buttonhole-shield	J. Nickel	872,574	Dec. 3	554	114	131	1251
Cabinet. Sectional	H. P. Hamilton	872,415	Dec. 3	198	40	131	1200
Cake-forming machine	E. B. Anderson	872,885	Dec. 3	1196	254	131	1354
Calcium carbid, &c. Manufacture of	J. C. King	872,351	Dec. 3	68	13	131	1179
Can: *See* Measuring-can.							
Can-capping machine. Electrically-heated	M. H. Johnson	872,656	Dec. 3	712	148	131	1279
Canteen	H. J. Donahoe	872,407	Dec. 3	186	37	131	1197
Canteen	H. J. Donahoe	872,408	Dec. 3	188	37	131	1197
Car bolster and underframe	A. E. Ostrander	872,965	Dec. 3	1352	285–6	131	1380
Car-brake slack-adjuster	W. G. Price	872,540	Dec. 3	480	100	131	1241
Car-coupling	G. P. Ritter	872,454	Dec. 3	296	58	131	1213
Car-door	J. N. Marquette	872,953	Dec. 5	1334	282	131	1076
Car grain-door	T. F. Barton	872,785	Dec. 3	972	202	131	1321
Car. Motor-	C. P. A. Van Ferls and J. M. Knee-land.	872,774	Dec. 3	955	198	131	1318
Car. Passenger and like	A. Christianson	872,557	Dec. 5	515	107–8	131	1246
Car-step	G. G. Comer, A. Burk, and D. Modrow.	872,902	Dec. 3	1233	263	131	1360
Car-ventilator	T. H. Garland. (Reissue)	12,729	Dec. 3	1455	302–3	131	1393
Car-wheel chill	B. M. Carr	872,608	Dec. 3	604	127–8	131	1262
Carbon dioxid. Apparatus for the manufacture of	J. C. Stead	872,588	Dec. 3	572	119	131	1255
Carbon-producing apparatus	J. Machtolf	872,950	Dec. 3	1323	280	131	1375
Carbon. Production of amorphous	J. Machtolf	872,949	Dec. 3	1318	279	131	1375
Carbureter	G. H. Gere	872,505	Dec. 3	393	82	131	1229
Carding-engine feed mechanism	D. C. Fisher	872,719	Dec. 3	844	175–6	131	1300
Carrier: *See* Pool-ball carrier.							
Carving-machine. Automatic	F. Streich	872,857	Dec. 3	1139	241	131	1345
Case: *See* Banana-case. Metallic case. Electric-meter case. Packing-case.							
Cash-register	R. T. Pisciceli	872,845	Dec. 3	1112	233–6	131	1341
Cash-register	J. P. Cleal	872,900	Dec. 3	1222	260–2	131	1339
Cash-register support or carriage	C. Oesterle, W. V. Frank, and W. H. Althoff.	872,742	Dec. 3	892	185	131	1308
Cash-tray	M. H. Smith	872,768	Dec. 3	941	196	131	1316
Caskets. Support for corpses in	J. I. Reno	872,584	Dec. 3	567	118–19	131	1254
Cement and making the same. Magnesium	E. Rueff	872,375	Dec. 3	122		131	1186
Cement block	J. S. Pierce	872,364	Dec. 3	106	19	131	1182
Cement cisterns or the like. Form for	H. E. Votaw	872,393	Dec. 3	153	29	131	1192
Cementation process	M. Ruthenburg	872,755	Dec. 3	918	191	131	1312
Charm, hat-pin, &c	G. H. Tilford	872,607	Dec. 3	792	165	131	1263
Checker-board	J. S. Ford	872,923	Dec. 3	1259	269	131	1365
Chocolate and cocoa compound and making same	J. R. Hatmaker	872,416	Dec. 3	200	40	131	1200
Chopper: *See* Cotton-chopper.							
Chuck. Drill-	A. A. North	872,841	Dec. 3	1102	231	131	1340
Cigar-cutter and match-receptacle	G. W. Ansley	872,632	Dec. 3	660	137	131	1271
Cigarettes. Tobacco paper for	P. W. Capehart	872,987	Dec. 3	1393		131	1337
Clamping-ring	J. Clark	872,899	Dec. 3	1222	260	131	1359
Clamping together pieces of wood. Machine for	W. Jamieson	872,428	Dec. 3	236	47	131	1205
Cleaner: *See* Beer-coil cleaner.							
Clip: *See* Terminal clip.							
Clock. Electrically-wound	A. De Vos	872,909	Dec. 3	1244	265	131	1362
Clock-key	A. H. Porter	872,971	Dec. 3	1365	288	131	1382
Clothes-line reel	W. Moeller	872,838	Dec. 3	1098	230	131	1339
Clutch. Power-transmission	C. C. Tillotson	872,481	Dec. 3	350	72	131	1222
Clutches. Cooling device for friction-	J. H. B. Bryan	872,607	Dec. 3	602	127	131	1261
Coal-cutting machine	H. L. Smith	872,765	Dec. 3	936	194–5	131	1315
Coating apparatus	E. G. Porter and J. I. Jones	872,368	Dec. 3	110	20	131	1184
Collar. Garment-	W. V. Eaton	872,914	Dec. 3	1250	266	131	1364
Combining and mixing tube	E. H. Palmer	872,580	Dec. 3	562	117	131	1253
Composition of matter	S. G. Wightman	872,705	Dec. 3	816		131	1296
Compressors and motors. Clearance-controlling mechanism for	S. A. Reeve	872,451	Dec. 3	277	57	131	1212
Concrete-molding machine	L. D. Ewing	872,333	Dec. 3	24	5–6	131	1173

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Concrete sidewalks. Form for	J. R. and A. Zeiser	872,602	Dec. 3	595	124	131	1260
Concrete-wall mold	J. L. Richardson	872,750	Dec. 3	908	188	131	1310
Control apparatus	A. T. Crocker	872,990	Dec. 3	1398	293–4	131	1388
Control apparatus	A. T. Crocker	872,991	Dec. 3	1401	294	131	1388
Control system	G. H. Hill	872,563	Dec. 3	525	109	131	1248
Control system	G. H. Hill	872,938	Dec. 3	1291	274–5	131	1371
Controller	A. T. Crocker	872,320	Dec. 3	17	3–4	131	1172
Controller-operating mechanism	C. Fleming	872,720	Dec. 3	851	177	131	1301
Controlling device	J. Howell	872,347	Dec. 3	58	12	131	1178
Conveyer. Gravity-	C. H. Spence	872,856	Dec. 3	1137	240	131	1345
Cooler	F. J. D. Hillinghorst	872,427	Dec. 3	234	46–7	131	1204
Cork extractor. Bottle-	A. P. Watt	872,485	Dec. 3	357	73	131	1223
Corn, &c. Apparatus for handling green	D. W. Archer	872,983	Dec. 3	1385	291–2	131	1385
Corset	C. H. Williams	872,876	Dec. 3	1178	251	131	1351
Cotton-chopper	J. C. Bell	872,787	Dec. 3	976	203	131	1322
Cotton-picker	G. F. Greene	872,340	Dec. 3	41	8	131	1175
Coupling: *See* Car-coupling. Pipe-coupling. Hose-coupling.							
Crate	W. V. Boyle	872,792	Dec. 3	987	204	131	1324
Crate. Shipping-	L. Wharton	872,600	Dec. 3	593	124	131	1259
Cultivator	T. L. McDonald	872,443	Dec. 3	260	53	131	1209
Cultivator	G. A. Plank	872,450	Dec. 3	274	56–7	131	1211
Cultivator	J. W. Nilsson	872,575	Dec. 3	554	114–15	131	1252
Cultivator draft-equalizer	S. E. Bailor	872,784	Dec. 3	971	202	131	1321
Cultivator Hand-	W. J. McGehe	872,959	Dec. 3	1345	284	131	1378
Cupping device. Electrical and thermal	E. S. Salghman	872,688	Dec. 3	778	162	131	1290
Curb-box	F. T. Sanborn and C. H. Young	872,458	Dec. 3	301	60	131	1214
Curette	L. G. Langstaff	872,567	Dec. 3	530	110	131	1249
Current-converter	L. Wilson	872,549	Dec. 3	493	104	131	1244
Current motor. Alternating-	F. Eichberg	872,559	Dec. 3	520	108	131	1247
Curtain and shade bracket	A. M. Truesdale and E. A. Thompson.	872,862	Dec. 3	1150	244	131	1346
Curtain-fixture	P. A. Houghtaling	872,516	Dec. 3	416	86	131	1233
Curtain-fixture	B. F. Tyler	872,698	Dec. 3	794	165–6	131	1293
Curtain-pole and support therefor	D. M. Sarkisian	872,680	Dec. 3	780	162	131	1291
Curtain-ring and traverse-roll therefor	J. W. Leslie	872,947	Dec. 3	1316	279	131	1374
Curtain-rod	R. C. Johnson and M. H. Myers	872,565	Dec. 3	528	110	131	1249
Curtain-suspending device. Window-	A. A. Page. (Reissue)	12,731	Dec. 3	1458	303	131	1394
Cutter: *See* Cigar-cutter. Harvester-cutter.							
Cutter	C. W. and H. H. Snow	872,385	Dec. 3	139	26–7	131	1189
Cutter-head. Solid-back	C. W. H. Blood	872,880	Dec. 3	1206	257	131	1356
Damper-regulator. Electric	J. D. Bowne	872,893	Dec. 3	1211	258	131	1356
Davit	A. Wellin	872,776	Dec. 3	957	199	131	1318
Dental floss	J. D. Cutter	872,908	Dec. 3	1244	265	131	1362
Dental inlays and the like. Making molds for	W. H. Taggart	872,978	Dec. 3	1377	290	131	1384
Die: *See* Glove-cutting die.							
Dipping-machine	W. M. Tulley	872,863	Dec. 3	1151	244–5	131	1347
Display-cabinet	T. C. Hutcheson and A. M. Wilkins.	872,942	Dec. 3	1306	276	131	1372
Display rack. Curtain-	H. R. Nelson	872,840	Dec. 3	1100	230–1	131	1339
Display-stand	W. F. St. Clair	872,771	Dec. 3	951	198	131	1317
Distribution system	E. M. Gerry	872,724	Dec. 3	859	178	131	1302
Door-check	I. R. Matthews	872,529	Dec. 3	459	95	131	1237
Door-fastener	S. P. Stevenson	872,470	Dec. 3	331	68	131	1216
Door. Grain-	R. R. Tichenor	872,479	Dec. 3	348	71	131	1222
Door-lock	F. Piening	872,582	Dec. 3	565	118	131	1254
Door plate and handle	A. A. Page and J. H. Shaw	872,579	Dec. 3	561	117	131	1253
Draft-equalizer	J. Schenck	872,460	Dec. 3	310	62	131	1215
Drag	E. Hamilton	872,933	Dec. 3	1277	272–3	131	1368
Drawer attachment. Desk-	H. Bellmer	872,789	Dec. 3	982	203	131	1323
Drill: *See* Grain-drill.							
Drum-snare	H. Theophel	872,476	Dec. 3	342	70	131	1221
Dye and making same. Orange vat-	A. Schmidt and C. Fretzell	872,585	Dec. 3	569		131	1255
Dye and making same. Safranin	H. Heimann	872,515	Dec. 3	1038		131	1332
Dyeing-machine	D. F. Waters	872,597	Dec. 3	586	122–3	131	1258
Dyeing-machine	W. H. Fletcher	872,807	Dec. 3	1019	214–15	131	1329
Eccentric	F. W. Fleming	872,922	Dec. 3	1255	269	131	1365
Electric alarm	F. I. Johnson	872,430	Dec. 3	238	47–8	131	1205
Electric-circuit controller	H. W. Leonard	872,829	Dec. 3	1069	225	131	1336
Electric furnace	J. C. King	872,352	Dec. 3	72	13–14	131	1179
Electric-meter case and support	T. E. Murray	872,572	Dec. 3	548	113	131	1251
Electrical apparatus	C. J. Klein	872,432	Dec. 3	242	48–9	131	1206
Electrode	R. J. Wismon	872,878	Dec. 3	1181	251	131	1352
Electromagnetically-operated mechanism	J. M. Andersen	872,400	Dec. 3	165	31–2	131	1194
Elevator: *See* Plunger-elevator.							
Elevator	J. W. Shook	872,855	Dec. 3	1135	240	131	1344
Elevator	J. W. Brown	872,986	Dec. 3	1392	292	131	1386
Engine: *See* Blowing-engine. Oscillating-piston engine. Explosive-engine. Gas-engine. Rotary engine. Hoisting-engine. Steam-engine. Internal-combustion engine. Turbine-engine.							
Engines. Charge-forming device for internal-combustion	F. Herbst	872,419	Dec. 3	214	41–2	131	1201
Engines. Packing for shafts for rotary steam-	W. E. Ver Planck	872,366	Dec. 3	108	20	131	1183
Envelop	F. D. White	872,548	Dec. 3	492	103–4	131	1243
Envelop	A. J. Hughes	872,730	Dec. 3	872	180	131	1304
Evaporating apparatus	A. H. McDonald	872,533	Dec. 3	468	97	131	1239
Explosive-engine	A. G. Griswold	872,342	Dec. 3	51	10	131	1176
Extension-table	H. F. Holtmann	872,424	Dec. 3	227	44	131	1203
Extractor: *See* Cork-extractor. Well-tube extractor.							
Eyeglass bridge-spring	L. F. Adt	872,319	Dec. 3	1	1	131	1169

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Eyeglass-spring	L. F. Adt	872,320	Dec. 3	3	1	131	1169
Fabric: *See* Bed-bottom fabric.							
Fabric folding and stitching machine	J. A. Shufelt	872,381	Dec. 3	131	24	131	1188
Fabric-pressing device	H. Goodacre	872,930	Dec. 3	1272	272	131	1367
Fan	C. F. Schnoor	872,690	Dec. 3	782	162	131	1291
Fare-register	J. F. Ohmer and E. H. Bridenbaugh.	872,537	Dec. 3	476	99	131	1240
Fastening devices. Stud member of stud-and-socket	F. S. Carr	872,796	Dec. 3	992	206	131	1325
Feather-drying machine	E. Eisemann	872,917	Dec. 3	1253	268	131	1364
Feed-regulator	H. J. Averbeck	872,635	Dec 3	666	138-9	131	1272
Fencing stretcher. Wire	B. F. Stuart	872,387	Dec. 3	142	27	131	1190
Fender	W. H. Peters	872,449	Dec. 3	270	55-6	131	1211
Fender-adjuster	P. D. Wells	872,395	Dec. 3	156	30	131	1192
Fertilizer-distributer	J. M. Bishop	872,553	Dec. 3	509	106	131	1245
Fifth-wheel	C. A. Walter	872,591	Dec. 3	577	120	131	1256
Figure for projecting balls or the like. Mechanical	H. O. and J. O. Roberts	872,371	Dec. 3	114	21	131	1184
File. Document	R. P. Johnston	872,657	Dec. 3	714	148	131	1280
Filter. Revolving	C. E. Leonard	872,437	Dec. 3	253	51	131	1208
Filtering-plate and making same. Porous	O. H. Fairchild	872,616	Dec. 3	620	131	131	1264
Fire-doors, fire-shutters, &c. Automatic releaser for	P. D. Gray	872,621	Dec. 3	636		131	1267
Fire-extinguishing valve	H. J. Podlesák	872,680	Dec. 3	762	159	131	1288
Firearm-sight	A. Blauvelt	872,791	Dec. 3	984	204	131	1323
Fireproof door, shutter, and the like	J. Windridge and G. S. Wilcox	872,706	Dec. 3	818	170	131	1296
Fish-hook	F. W. Newman	872,534	Dec. 3	469	98	131	1239
Fish-hook spreader and suspender	F. J. Hipp	872,817	Dec. 3	1041	218	131	1332
Fish-trap	J. B. Harig	872,934	Dec. 3	1278	273	131	1369
Floor-slab	E. B. Carwile	872,556	Dec. 3	514	107	131	1246
Fluid-supply systems. Fitting for	C. B. Grady	872,726	Dec. 3	863	178	131	1302
Flush-tank	E. H. Gold	872,338	Dec. 3	36	7	131	1175
Fodder-tie	A. H. Harman	872,935	Dec. 3	1280	273	131	1369
Fork: *See* Serving-fork.	H. A. Y. Burkhart	872,643	Dec. 3	680	142	131	1275
Form. Dress	R. Corsensky	872,406	Dec. 3	179	35-6	131	1196
Form. Garment shaping and pressing	S. E. Duggins	872,718	Dec. 3	841	175	131	1300
Fountain: *See* Soda-fountain.							
Frame: *See* Number-frame. Truck side-frame.							
Frame and back-retaining device therefor	R. A. Nock	872,673	Dec. 3	744	155	131	1285
Frequency-changer	J. E. Noeggerath	872,535	Dec. 3	472	98	131	1240
Front sight	W. L. Marble	872,360	Dec. 3	90	17	131	1181
Fruit-gathering apparatus	E. U. Smith	872,764	Dec. 3	935	194	131	1315
Furnace: *See* Electric furnace. Heating-furnace. Smoke-consuming furnace.							
Furnace-grate	M. Washburn and R. D. Granger	872,869	Dec. 3	1165	247-8	131	1349
Furnaces. Air-moistener for	W. A. Cunningham	872,330	Dec. 3	21	4	131	1172
Furnaces. Rabble shaft and arm for	A. V. Leggo	872,827	Dec. 3	1065	224	131	1336
Garbage-crematory	I. D. Smead	872,466	Dec. 3	322	65-6	131	1217
Garment	J. A. Shufelt	872,380	Dec. 3	130	24	131	1187
Garment-holder	G. H. Wheary	872,488	Dec. 3	361	74	131	1224
Garment-support for wardrobes	J. T. Batts	872,401	Dec. 3	169	33	131	1195
Garments in a folded condition. Appliance for maintaining	L. P. Gage	872,924	Dec. 3	1260	269	131	1366
Gas-burner	W. V. D. Kelley	872,350	Dec. 3	67	13	131	1179
Gas-burner	G. A. Crotto	872,609	Dec. 3	606	128	131	1262
Gas-burner. Inverted	O. Mannesmann	872,833	Dec. 3	1087	227	131	1338
Gas-burner. Inverted incandescent	M. Pledath	872,367	Dec. 3	109	20	131	1183
Gas-engine	E. A. Watts and E. G. Morrison	872,598	Dec. 3	588	123	131	1259
Gas-heater	W. L. Gibson and J. V. Royal	872,811	Dec. 3	1027	216	131	1330
Gas-producer	E. D. Hopcroft	872,625	Dec. 3	644	135	131	1266
Gas-purifier	D. F. Nisbet	872,576	Dec. 3	556	115-16	131	1252
Gas-washing apparatus	C. E. Sargent	872,975	Dec. 3	1370	289	131	1333
Gate	J. Piepergerdes	872,844	Dec. 3	1110	233	131	1340
Gear. Variable-speed and reversing	F. Markgraf	872,952	Dec. 3	1328	281	131	1376
Gearing	G. W. Mascord	872,528	Dec. 3	455	94-5	131	1237
Generator: *See* Steam-generator.							
Glasses. Apparatus for washing	A. Vodoz	872,702	Dec. 3	799	167	131	1295
Glove	J. E. Landon	872,354	Dec. 3	77	14	131	1180
Glove-cutting die	J. P. Möller	872,666	Dec. 3	733	152	131	1283
Grain-binder	C. Maul	872,663	Dec. 3	725	151	131	1281
Grain-conveyer	E. H. Schroeder	872,462	Dec. 3	312	63	131	1216
Grain-drill	J. Sturrock and A. L. Johnson	872,590	Dec. 3	576	120	131	1256
Grain. Separating garlic or the like from	H. J. Gehr	872,927	Dec. 3	1268	271	131	1367
Graphophones and the like. Pitch-indicating device for	T. Zoebl	872,399	Dec. 3	164	31	131	1194
Grate. Tilting fire	A. Carswell	872,710	Dec. 3	826	172	131	1297
Grinder. Band-saw-wheel	D. C. Crivyea	872,907	Dec. 3	1242	264-5	131	1361
Grinder. Disk	J. M. Ross and J. S. Riddell	872,372	Dec. 3	115	21	131	1185
Grinding-mill	W. B. Allen and W. Blalack	872,321	Dec. 3	5	1	131	1169
Gun. Magazine air	D. F. Polley	872,747	Dec. 3	902	187	131	1309
Hame and trace connector	J. M. Cooper	872,499	Dec. 3	382	80	131	1228
Hammer	J. C. Bates	872,886	Dec. 3	1198	254	131	1354
Handle: *See* Tool-handle.							
Hanger: *See* Brake-shoe hanger. Shade-hanger. Soap-hanger. Telephone-box hanger. Trousers-hanger.							
Harmonica	F. Strauss	872 589	Dec. 3	575	120	131	1256
Harrow	D. P. Mohr and J. A. Duvanel	872,957	Dec. 3	1342	283	131	1377
Harrow attachment	J. Stickley	872,546	Dec. 3	490	102-3	131	1243
Harrow. Revolving	J. T. Hibler	872,562	Dec. 3	524	109	131	1248
Harrow-tooth attachment	W. B. St. John	872,386	Dec. 3	141	27	131	1190
Harvester-cutter	W. D. Wheat	872,980	Dec. 3	1381	290	131	1385
Harvesting cotton. Means for	G. F. Greene	872,341	Dec. 3	45	9-10	131	1176

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Harvesting machine. Corn	J. H. Johnson	872,821	Dec. 3	1046	219-21	131	1333
Harvesting machine. Pea	L. B. Baxter	872,887	Dec. 3	1199	254-5	131	1355
Hat-stand. Folding	F. Goerlinger	872,929	Dec. 3	1272	271	131	1367
Header and thrasher	R. Sikora	872,465	Dec. 3	321	65	131	1217
Heat-regulating apparatus	W. A. Comstock	872,714	Dec. 3	834	174	131	1298
Heater: *See* Gas-heater. Hot-water heater.							
Heating apparatus. Steam	F. C. Pulsford	872,847	Dec. 3	1122	237	131	1342
Heating-burner for vaporized liquid combustibles. Multiple	M. Friedmann and R. Knoller	872,810	Dec. 3	1026	215	131	1330
Heating device	T. Sharp	872,853	Dec. 3	1132	239	131	1344
Heating-furnace	F. E. Swift	872,858	Dec. 3	1143	242	131	1345
Heel extension. Shoe	J. and F. Grossman	872,413	Dec. 3	197	39	131	1199
Heel-seat maker and counter-pounder. Rotary	I. E. Fletcher	872,617	Dec. 3	624	131	131	1265
Hemp-breaking machine	T. and W. B. Hopkins	872,426	Dec. 3	232	45-6	131	1204
Hide-working machine	A. E. Whitney	872,489	Dec. 3	362	74	131	1224
Hinge. Locking	F. J. Gilroy	872,650	Dec. 3	692	145	131	1277
Hoist apparatus. Grab-bucket	S. H. Libby	872,523	Dec. 3	442	92	131	1233
Hoist-controller	S. H. Libby and I. F. Baker	872,524	Dec. 3	445	92	131	1236
Hoisting-engine. Steam	J. W. Smith	872,977	Dec. 3	1375	289-90	131	1383
Hook: *See* Fish-hook. Snap-hook.							
Hook and eye	C. Umnitz	872,772	Dec. 3	952	198	131	1317
Hook and eye	C. Umnitz	872,773	Dec. 3	953	198	131	1318
Hook-and-eye mounting	F. L. West	872,873	Dec. 3	1173	250	131	1350
Horseshoe-calk	G. W. Fenstemaker	872,921	Dec. 3	1257	269	131	1365
Horseshoe roughing-calk	E. von Marsóvszky and J. Jobban	872,440	Dec. 3	257	52	131	1209
Hose-coupling	B. A. Schwabe	872,463	Dec. 3	316	63	131	1216
Hose-supporter	O. B. Oyer	872,677	Dec. 3	757	158	131	1287
Hose-toe protector	R. D. Weakley	872,394	Dec. 3	155	29	131	1192
Hot-water heater	W. R. De Harpporte	872,612	Dec. 3	613	129	131	1263
House: *See* Malt-house.							
Hub. Wheel	W. J. Connally	872,715	Dec. 3	836	174	131	1299
Humidifier	J. J. Smith	872,384	Dec. 3	137	26	131	1189
Hydrocarbon-burner	A. I. Carnine and R. L. Goble	872,988	Dec. 3	1393	293	131	1387
Hygrometer	G. L. Warnken	872,598	Dec. 3	581	121	131	1257
Hygrometer for regulating humidifying and heating systems.	S. W. Cramer. (Reissue)	12,727	Dec. 3	1443	300-1	131	1392
Ice-cream freezer and churn	I. T. Babbitt	872,636	Dec. 3	669	139	131	1273
Igniter. Magnetic	C. E. Duryea	872,503	Dec. 3	387	81	131	1229
Index for recording instruments	C. E. Vawter, Jr.	872,391	Dec. 3	149	28	131	1191
Indicating and registering device	J. Runyon	872,753	Dec. 3	915	190	131	1312
Indicating device	W. A. Hall	872,623	Dec. 3	639	134	131	1267
Induction-motor	E. F. W. Alexanderson	872,550	Dec. 3	495	104-5	131	1244
Induction-motor	B. A. Behrend	872,708	Dec. 3	823	171	131	1296
Ink-well	F. Reederk	872,973	Dec. 3	1368	288	131	1382
Inking-pad	S. D. Ruth	872,754	Dec. 3	917	191	131	1312
Insulation for high-voltage electric conductors. System of	F. M. Locke	872,569	Dec. 3	532	111	131	1249
Insulator	F. C. Scherer and H. C. Fashbaugh.	872,756	Dec. 3	920	191	131	1312
Insulator	A. S. Deam	872,993	Dec. 3	1408	295	131	1389
Internal-combustion engine	L. T. Gibbs	872,336	Dec. 3	34	7	131	1174
Internal-combustion engine	A. Campbell	872,497	Dec. 3	380	79	131	1227
Internal-combustion engine	F. Moser	872,571	Dec. 3	547	112-13	131	1250
Ironing-board	J. G. Shepard	872,854	Dec. 3	1133	239	131	1344
Irrigating-pipe	W. Connolly	872,904	Dec. 3	1236	263	131	1360
Jack: *See* Lifting-jack.							
Jacquard card-wire	L. Diefenbach	872,910	Dec. 3	1246	265	131	1362
Joint: *See* Pipe-joint. Rail-joint.							
Journal-box	A. Thomas	872,695	Dec. 3	790	164-5	131	1293
Key: *See* Clock-key.							
Knife guard. Rotary	B. E. Bechtel and J. Ball	872,889	Dec. 3	1203	256-7	131	1355
Knob and key fastener. Combined door	C. H. Ruel	872,376	Dec. 3	123	23	131	1186
Knockdown tank	J. C. Hames	872,813	Dec. 3	1032	217	131	1331
Label-affixing machine	F. E. Taylor	872,859	Dec. 3	1144	242-3	131	1346
Label gumming or moistening machine	A. Von Anw	872,392	Dec. 3	151	29	131	1192
Lamp-extinguishing mechanism	C. P. Gifford	872,725	Dec. 3	862	178	131	1302
Lamp. Incandescent gas	C. A. Campbell	872,895	Dec. 3	1214	259	131	1357
Lamp. Street	R. Momand	872,958	Dec. 3	1344	284	131	1378
Lamp. Tungsten electric incandescent	J. A. Heany	872,936	Dec. 3	1281	273	131	1369
Lamps from a distance. Device for lighting gas	G. Himmel	872,421	Dec. 3	219	42-3	131	1202
Lantern-burner	C. P. Gifford	872,928	Dec. 3	1270	271	131	1367
Last	H. F. Loewer	872,525	Dec. 3	448	93	131	1236
Last. Link	C. F. Pym	872,972	Dec. 3	1366	288	131	1382
Latch and lock. Door	L. C. Campbell	872,896	Dec. 3	1217	259	131	1358
Lathe and shaper tool	F. Schulz	872,760	Dec. 3	926	193	131	1314
Lavatory appurtenance	J. S. Burn	872,894	Dec. 3	1213	258	131	1357
Lawn-edge trimmer	F. W. Theberath	872,861	Dec. 3	1149	243	131	1346
Lawn-sweeper	T. T. Eldred	872,409	Dec. 3	189	37-8	131	1198
Leaf-turning apparatus	G. H. Meyer	872,665	Dec. 3	731	152	131	1282
Legging	T. W. Hamilton	872,727	Dec. 3	864	179	131	1303
Letter-sheet	R. Reed	872,370	Dec. 3	112	21	131	1184
Lifter: *See* Pan-lifter. Railway-tie lifter.							
Lifting-jack	S. D. McMahon	872,839	Dec. 3	1100	230	131	1339
Lime-hydrating machine	J. H. Van Glahn	872,390	Dec. 3	146	28	131	1191
Line-holder	D. Altman and A. Silverman	872,604	Dec. 3	599	126	131	1261
Linotype-machines. Assembling-elevator for	B. L. Parkinson	872,967	Dec. 3	1356	286-7	131	1380
Linotype printing-plates. Forming plate-high	E. C. Bruen	872,794	Dec. 3	989	205	131	1324
Liquid-meter	J. W. Ledoux	872,435	Dec. 3	248	50	131	1207
Liquid-meter	J. W. Ledoux and N. Z. Ball	872,436	Dec. 3	250	51	131	1207
Loader. Hay and grain	I. Gordon	872,651	Dec. 3	694	145	131	1277
Loader. Shock	K. S. Satre	872,459	Dec. 3	303	60-2	131	1215
Loading apparatus	J. Collins	872,901	Dec. 3	1231	262	131	1359

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Loading machine. Gravel-	A. Knutson	872,735	Dec. 3	881	183	131	1305
Loading mechanism for manure, hay, and the like	A. W. Brodeen	872,793	Dec. 3	968	205	131	1324
Lock:							
See Door-lock. Strap-lock. Nut-lock. Trunk-lock. Sash-lock.							
Locking means	E. G. Adams	872,883	Dec. 3	1193	253	131	1353
Loom for the manufacture of tufted or pile fabrics	T. Greenwood	872,506	Dec. 3	394	82	131	1220
Loom for the manufacture of tufted or pile fabrics	T. Greenwood	872,507	Dec. 3	395	83	131	1220
Loom for the manufacture of tufted or pile fabrics	T. Greenwood	872,508	Dec. 3	396	83	131	1220
Loom picker-check	W. H. Ayer	872,780	Dec. 3	964	201	131	1320
Loom picking-motion	W. H. Ayer	872,781	Dec. 3	965	201	131	1320
Loom shuttle-check	W. H. Ayer	872,779	Dec. 3	962	200	131	1319
Loom shuttle-check	W. H. Ayer	872,782	Dec. 3	967	201	131	1320
Looms. Thread-cutter for weft-replenishing	E. S. Stimpson	872,471	Dec. 3	332	68	131	1219
Lubricator:							
See Piston-rod lubricator.							
Lubricators. Distributer for force-feed	R. H. Elkins	872,803	Dec. 3	1010	212	131	1227
Mail-bag catcher	F. Melcher	872,664	Dec. 3	729	151	131	1282
Mail-bag-catching device	J. E. Smith	872,767	Dec. 3	940	195	131	1316
Malt-house and apparatus	W. P. Rice. (Reissue)	12,728	Dec. 3	1446	301-2	131	1293
Measuring and indicating velocity. Mechanism for	J. E. Boyd	872,325	Dec. 3	10	2	131	1170
Measuring-can. Graduated	C. P. Tolman	872,482	Dec. 3	352	72	131	1223
Measuring instrument. Electrical	W. E. Sumpner	872,474	Dec. 3	338	69-70	131	1220
Measuring-tank. Automatic	F. N. Lowry	872,359	Dec. 3	84	17	131	1181
Measuring tank. Liquid-	P. C. Clarke	872,989	Dec. 3	1395	293	131	1287
Mechanical movement	A. O. Wiegant	872,875	Dec. 3	1177	250	131	1251
Merchandise-holder	D. F. Greenawalt	872,411	Dec. 3	194	39	131	1199
Metal. Composition of	R. C. Totten	872,483	Dec. 3	355		131	1223
Metallic case or casket	A. McKenzie	872,740	Dec. 3	889	184	131	1307
Meter:							
See Liquid-meter. Prepayment-meter.							
Mill:							
See Grinding-mill.							
Mixing-machine	R. N. Cunningham and J. W. McPherson.	872,610	Dec. 3	609	128-9	131	1262
Mixing-machine	G. Hiller	872,729	Dec. 3	871	180	131	1304
Moistener. Broom-	E. M. Thomas	872,696	Dec. 3	791	165	131	1293
Mold:							
See Concrete-wall mold.							
Mop-wringer	J. C. Rink	872,974	Dec. 3	1369	289	131	1362
Motor:							
See Current-motor. Pneumatic motor. Induction-motor. Traction-motor.							
Motor-control apparatus. Automatic	G. H. Hill	872,515	Dec. 3	412	86	131	1232
Motor-control system	W. J. Richards	872,684	Dec. 3	769	161	131	1289
Motor-control system	G. H. Hill	872,939	Dec. 3	1298	275	131	1371
Motor-controlling system	J. D. Ihlder	872,349	Dec. 3	62	13	131	1178
Motor-starter	A. W. Manz	872,527	Dec. 3	453	93	131	1237
Muffler	D. Reid	872,453	Dec. 3	282	58	131	1212
Multiplying attachment	C. A. Wayland	872,871	Dec. 3	1168	249	131	1349
Musical instrument. Automatic	T. Danquard	872,611	Dec. 3	611	129	131	1263
Musical instruments. Actuating mechanism for pneumatically-operated	R. W. Pain	872,678	Dec. 3	758	158	131	1287
Napkin-holder	D. Sellers	872,852	Dec. 3	1131	239	131	1343
Net. Minnow-	G. W. Grau, Jr., and E. L. Nelson	872,652	Dec. 3	696	145	131	1278
Number frame. Interchangeable-	R. A. Stevenson	872,769	Dec. 3	942	196	131	1316
Nut-lock	P. M. Rulli and P. Pepe	872,752	Dec. 3	914	190	131	1311
Nut-lock	J. W. Chapman and C. C. Foss	872,897	Dec. 3	1219	259	131	1358
Nut lock or fastening device	B. Hemann and A. Guenther	872,816	Dec. 3	1040	218	131	1332
Oil-burner	J. C. Ziegler	872,398	Dec. 3	161	31	131	1193
Oil-switch	E. M. Hewlett	872,513	Dec. 3	405	85	131	1231
Oranges and other fruits. Machine for brushing and revolving	W. D. Smith	872,408	Dec. 3	327	67	131	1218
Ore-concentrator	J. R. Capps	872,555	Dec. 3	513	107	131	1246
Organ-pipe	A. Gottfried	872,931	Dec. 3	1274	272	131	1368
Oscillating-piston engine	C. A. Bredsvold	872,496	Dec. 3	377	78-9	131	1227
Packaging materials. Machine for	G. A. Lee	872,521	Dec. 3	427	88-91	131	1234
Packing-case. Sheet-metal	A. T. Kruse	872,998	Dec. 3	1420	297	131	1391
Packing for turbines. Shaft-	J. Wilkinson	872,396	Dec. 3	156	30	131	1192
Pad:							
See Inking-pad.							
Pail for lard, &c. Sheet-metal	J. Danz, 2nd	872,992	Dec. 3	1405	295	131	1389
Paint and varnish. Removing	C. J. Fess	872,561	Dec. 3	522	109	131	1248
Paint compound	C. J. McLennan	872,960	Dec. 3	1346		131	1378
Pan:							
See Bake-pan.							
Pan lifter. Pie-	J. Ray						
Panel-board. Metering	A. C. McWilliams	872,683	Dec. 3	768	160	131	1289
Paper and the like. Apparatus for coloring roll-	F. C. Wickel	872,670	Dec. 3	739	154	131	1284
Paper barrel	E. P. Everett	872,777	Dec. 3	957	200	131	1319
Paper-machines. Pattern-roll for	O. Hammer	872,918	Dec. 3	1254	268	131	1364
Pen holding and releasing device	J. O. and H. E. Dodge. (Reissue)	872,345	Dec. 3	56	11	131	1177
Phonograph-horn	F. B. Norman	12,730	Dec. 3	1457	303	131	1393
Photographic plates. Packing-box for	A. B. Sheppard	872,577	Dec. 3	558	116	131	1252
Photographic stand	A. J. Lambert and C. H. Land	872,761	Dec. 3	928	193	131	1314
Piano-action	J. Anderson	872,433	Dec. 3	245	49-50	131	1206
Piano-bench	A. W. Cleveland	872,551	Dec. 3	500	105	131	1244
Piano capo-tasto bar	P. Weber	872,498	Dec. 3	381	80	131	1227
Picker:		872,487	Dec. 3	360	73	131	1224
See Cotton-picker.							
Picture-exhibitor	E. C. G. Roesler	872,455	Dec. 3	289	58	131	1213
Picture machines. Magazine for moving-	J. J. Pink	872,970	Dec. 3	1363	287-8	131	1381
Pipe:							
See Irrigating-pipe. Tobacco-pipe. Organ-pipe.							
Pipe-coupling	R. S. Lord	872,659	Dec. 3	718	149	131	1280
Pipe coupling. Automatic train-	P. Hien	872,514	Dec. 3	408	86	131	1232
Pipe-joint	J. G. Liddell	872,358	Dec. 3	82	16-17	131	1181

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Pipe-joint	H. Morris	872,442	Dec. 3	259	53	131	1209
Pipes. Automatic connector for train-	P. Beahm	872,707	Dec. 3	819	170-1	131	1296
Piston	E. H. Bearell	872,786	Dec. 3	975	202	131	1322
Piston-rod lubricator	E. G. Hagadorn	872,622	Dec. 3	636	134	131	1267
Pivoted bin	D. H. Malone	872,662	Dec. 3	724	150	131	1281
Planter	J. D. Schofield and C. T. Ray	872,461	Dec. 3	310	62	131	1215
Planter and fertilizer-distributer. Combined	W. W. Harris	872,814	Dec. 3	1034	217-18	131	1331
Planter attachment	A. Sherman	872,542	Dec. 3	484	101	131	1242
Planter. Seed-	D. H. McGuire	872,363	Dec. 3	105	19	131	1182
Plow attachment	C. I. Mattingly	872,834	Dec. 3	1088	228	131	1338
Plumber's tool	L. D. Putney	872,748	Dec. 3	904	187	131	1310
Plunger-elevator	J. W. Brown	872,327	Dec. 3	15	3	131	1171
Pneumatic motor	W. F. Rothe	872,751	Dec. 3	910	188-90	131	1311
Pocket-books and hand-bags. Safety-lock for	F. P. Geyer	872,619	Dec. 3	631	133	131	1266
Polishing-wheel and mandrel therefor	L. E. Hall	872,932	Dec. 3	1276	272	131	1368
Pool-ball carrier	J. A. Smith	872,766	Dec. 3	939	195	131	1316
Power apparatus. Internal-combustion	S. A. Reeve	872,452	Dec. 3	279	57	131	1212
Power-transmission device	J. W. Hays	872,512	Dec. 3	402	84-5	131	1231
Power-transmitting mechanism	G. Malburg	872,999	Dec. 3	1422	297	131	1392
Prepayment-meter	H. and C. Gamwell	872,504	Dec. 3	391	82	131	1229
Press:							
See Baling-press.							
Printing-plates. Treating	M. A. McKee	872,630	Dec. 3	654	137	131	1270
Printing-press cutting and feeding mechanism	R. C. Seymour	872,464	Dec. 3	317	63-4	131	1216
Printing-press inking arrangement	G. P. Fenner	872,805	Dec. 3	1014	212-13	131	1328
Pulley casing. Sash-	J. H. Edwards	872,915	Dec. 3	1251	267	131	1364
Pump-bucket. Chain	F. G. Hodell	872,423	Dec. 3	226	44	131	1203
Pump. Deep-well	H. A. Brisco and C. J. Erickson	872,326	Dec. 3	13	2	131	1171
Pump. Screw-propeller	F. Marburg, Jr	872,361	Dec. 3	91	17-18	131	1181
Pump. Self-measuring	C. S. Jones	872,943	Dec. 3	1307	277	131	1373
Pump. Self-measuring oil-	J. B. Davis	872,501	Dec. 3	384	80-1	131	1228
Puzzle	A. M. Davis	872,717	Dec. 3	841	175	131	1300
Rack:							
See Display-rack. Stamp-rack.							
Rag-cutting machine	G. W. Hall	872,414	Dec. 3	197	39	131	1199
Rail fastener and lock	J. O'Neil	872,743	Dec. 3	896	185	131	1308
Rail-joint	W. P. Thomson	872,477	Dec. 3	343	70-1	131	1221
Rail-joint	A. Morrison	872,532	Dec. 3	466	97	131	1241
Railway	M. R. Longacre	872,831	Dec. 3	1085	227	131	1337
Railway cattle-guard	E. A. Manny	872,951	Dec. 3	1327	280	131	1375
Railway-crossings. Audible warning-signal for	C. D. Anderson and A. G. Stout	872,631	Dec. 3	657	137	131	1271
Railway-frog	J. B. Strong	872,473	Dec. 3	336	69	131	1220
Railway-rail stay	H. H. Sponenburg	872,693	Dec. 3	787	163-4	131	1292
Railway safety device	C. E. Boehringer	872,605	Dec. 3	600	126	131	1261
Railway signal mechanism	J. S. Payne	872,679	Dec. 3	759	158-9	131	1287
Railway signaling apparatus	F. L. Dodgson and W. K. Howe	872,613	Dec. 3	614	130	131	1263
Railway-switch	R. B. Woodall	872,982	Dec. 3	1383	291	131	1385
Railway-switch	C. L. Houghton	872,997	Dec. 3	1417	296-7	131	1391
Railway switching and signaling apparatus	W. Macomber	872,570	Dec. 3	534	111-12	131	1250
Railway tie, beam, or post	C. K. Mohler	872,956	Dec. 3	1340	283	131	1377
Railway-tie lifter	J. W. Norton	872,444	Dec. 3	261	54	131	1210
Reamer	F. W. Letsch	872,522	Dec. 3	441	91	131	1233
Receptacle-forming machine	G. W. Maxwell	872,835	Dec. 3	1089	228-9	131	1338
Reel:							
See Clothes-line reel.							
Reel	J. N. Landon	872,826	Dec. 3	1064	223	131	1335
Refrigerator	H. Johnson	872,655	Dec. 3	710	148	131	1279
Register:							
See Cash-register. Fare-register.							
Registering device	H. B. Rouse	872,685	Dec. 3	773	161	131	1290
Registering mechanism	C. H. Elmerbrink	872,916	Dec. 3	1252	268	131	1364
Regulator:							
See Damper-regulator. Feed-regulator.							
Resilient-tired wheel for self-propelled vehicles	E. M. Carhart	872,645	Dec. 3	682	142	131	1275
Ring:							
See Clamping-ring. Curtain-ring.							
Rock-drilling machine or engine	H. Hellman and L. C. Bayles	872,417	Dec. 3	201	40-1	131	1200
Rock-drilling machine or engine	H. Hellman and L. C. Bayles	872,418	Dec. 3	209	41	131	1201
Rock-drilling machines. Water-supplying attachment for	H. Hellman and L. C. Bayles	872,996	Dec. 3	1413	296	131	1300
Rod:							
See Curtain-rod.							
Rolling-machine	W. L. Jones	872,733	Dec. 3	877	181-2	131	1305
Roof and eaves-trough. Metal	J. Carter	872,646	Dec. 3	684	143	131	1276
Roofing	H. R. Webster	872,599	Dec. 3	592	123	131	1259
Roost. Poultry-	E. F. Doolittle	872,502	Dec. 3	386	81	131	1228
Rope-securing device	J. B. Le Maire	872,355	Dec. 3	78	15	131	1180
Rotary engine	A. C. Eek and A. Cederquist	872,801	Dec. 3	1004	210-11	131	1327
Roundabout	G. Lacomme	872,566	Dec. 3	529	110	131	1249
Rule, square, and bevel. Combined pocket	T. Kalma	872,944	Dec. 3	1309	277	131	1373
Salt-brick holder for live stock	C. L. Hutcheson	872,818	Dec. 3	1042	218	131	1332
Sample-mounting machine	H. Weiskopf	872,872	Dec. 3	1172	249	131	1350
Sandpaper-holder	M. Linderoth	872,568	Dec. 3	531	111	131	1249
Sash-holder	L. H. Vincent, Jr	872,701	Dec. 3	798	166	131	1294
Sash-holder	H. W. Covert	872,906	Dec. 3	1240	264	131	1361
Sash-lock	A. J. Downey	872,912	Dec. 3	1245	266	131	1363
Sash, Swinging	J. H. Hiltz and J. B. Smith	872,420	Dec. 3	216	42	131	1202
Saw-setting tool	J. P. Olson and M. C. Christensen	872,445	Dec. 3	262	54	131	1210
Scaffolding-support	C. A. Foster	872,335	Dec. 3	33	7	131	1174
Scale	F. F. Wear	872,496	Dec. 3	358	73	131	1223
Scale-connector	J. Ostlund and W. Sandberg	872,964	Dec. 3	1351	285	131	1379
Scoop	P. Neddo	872,961	Dec. 3	1346	284	131	1378
Scouring-machine	E. Ketzler	872,823	Dec. 3	1058	222	131	1334
Scraper-pan bit	W. S. Livengood	872,439	Dec. 3	256	52	131	1208
Scraper. Road-	H. Muckey and E. Robertson	872,667	Dec. 3	734	152-3	131	1283
Screen:							
See Window-screen.							
Screw-thread-cutting machine	J. Hartness	872,728	Dec. 3	866	179-80	131	1303
Seal and fastener. Combined package	F. J. Lerch and R. M. Kerr	872,357	Dec. 3	81	16	131	1180

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Sealing metal in glass	G. H. Meeker	872,530	Dec. 3	460	95	131	1237
Seat:							
See Vehicle-seat.							
Sectional boiler	E. M. Bosley	872,495	Dec. 3	374	78	131	1226
Semaphore safety-alarm	G. L. Pettygrove	872,843	Dec. 3	1108	232	131	1340
Serving-fork	C. N. Hooper	872,425	Dec. 3	229	45	131	1204
Sewing-machine	F. J. Kaufmann	872,945	Dec. 3	1310	277–8	131	1373
Sewing-machine and stand. Combined	C. B. Repp	872,848	Dec. 3	1124	237	131	1342
Sewing-machine awl-feeding mechanism	C. Pedersen	872,745	Dec. 3	899	186	131	1309
Sewing-machine cover-plate	R. G. Woodward	872,601	Dec. 3	594	124	131	1260
Sewing-machine take-up device	M. E. Brown	872,328	Dec. 3	16	3	131	1172
Sewing-machine thread-laying mechanism	C. Pedersen	872,744	Dec. 3	897	186	131	1308
Sewing-machines. Device for controlling the bight of the needle into the goods in blindstitch	L. Onderdonk	872,676	Dec. 3	755	157	131	1286
Sewing-machines. Zigzag needle-operating mechanism for	L. Onderdonk	872,675	Dec. 3	752	156–7	131	1286
Shade and curtain-pole support. Combined	C. G. Bacon	872,637	Dec. 3	671	139	131	1273
Shade fixture. Window-	W. C. Atherton	872,322	Dec. 3	7	1	131	1170
Shade-hanger	G. A. Lavender	872,946	Dec. 3	1313	278	131	1374
Shaft. Contractible	J. A. Paquette	872,538	Dec. 3	478	100	131	1241
Shaft-oscillator	W. F. Bouché	872,641	Dec. 3	676	141	131	1274
Sharpener. Disk-	J. Wissler	872,981	Dec. 3	1382	291	131	1355
Shelf. Swing-	F. W. Hunt	872,941	Dec. 3	1305	276	131	1372
Ship-bottom protector. Electrolytic	J. H. Schoneberger and G. W. Frazier.	872,759	Dec. 3	924	192	131	1313
Shoe. Self stretching or shaping	E. A. Eastman	872,615	Dec. 3	618	130	131	1264
Shutter-worker	E. Prescott	872,682	Dec. 3	766	160	131	1289
Sifter. Ash-	T. P. Bolger	872,640	Dec. 3	675	141	131	1274
Sifter. Dustless ash-	E. Elliott	872,560	Dec. 3	521	109	131	1247
Signaling system	C. W. Coleman	872,713	Dec. 3	831	173	131	1298
Signaling system	C. W. Coleman	872,798	Dec. 3	996	207–8	131	1326
Siphons or seltzogenes. Apparatus for charging	P. Giron	872,812	Dec. 3	1029	216–17	131	1330
Sizing-machine. Hydraulic	L. C. Graupner	872,620	Dec. 3	633	133	131	1266
Slicer. Vegetable	R. C. Ezekiel	872,919	Dec. 3	1255	263	131	1305
Slide and hose-protector. Reversible	J. H. Williamson and W. C. Moore.	872,490	Dec. 3	363	74	131	1224
Smoke-consuming furnace	G. E. R. Rothenbucher	872,373	Dec. 3	117	22	131	1185
Smoke-consuming furnace	G. E. R. Rothenbucher	872,374	Dec. 3	119	22	131	1186
Snap hook or link	J. W. Gonce	872,339	Dec. 3	39	8	131	1175
Soap. Cake of shaving-	M. H. Ittner	872,819	Dec. 3	1043	219	131	1333
Soap hanger. Toilet-	F. J. Fox	872,721	Dec. 3	835	177	133	1301
Soda-fountain	J. A. McCormick	872,669	Dec. 3	736	153–4	131	1284
Soldering-tool. Gasolene	W. E. Crane and C. D. Pratt	872,500	Dec. 3	383	80	131	1228
Sole-channeling tool	M. Cook, Jr.	872,716	Dec. 3	839	174	131	1299
Sole. Shoe-	D. H. Shillaber	872,762	Dec. 3	931	193	131	1314
Soles of boots and shoes. Machine for producing sewing ribs on the	W. Nowotny	872,578	Dec. 3	560	116	131	1253
Spanner-wrench	W. W. Vogel	872,484	Dec. 3	356	73	131	1223
Sparking device	H. A. Miller and B. G. Gilbough	872,629	Dec. 3	652	136	131	1270
Speculum	F. E. Griswold	872,343	Dec. 3	54	10–11	131	1177
Speculum	F. E. Griswold	872,344	Dec. 3	55	11	131	1177
Spindle-driving mechanism for mules	W. D. Rundlett	872,657	Dec. 3	775	161	131	1290
Spinning-machine drawing mechanism	G. A. Farley	872,804	Dec. 3	1011	212	131	1328
Spool	M. Tilden	872,480	Dec. 3	349	72	131	1222
Spraying apparatus	W. H. Heard	872,654	Dec. 3	708	147–8	131	1278
Spraying-tower supporter	D. Snell	872,409	Dec. 3	329	67	131	1218
Spring:							
See Eyeglass-spring. Eyeglass-bridge spring.							
Spring	F. M. Simmonds	872,692	Dec. 3	785	163	131	1292
Stack-compressor	A. C. S. and O. S. Rue	872,686	Dec. 3	774	161	131	1290
Stack or rick protector. Hay	J. L. Hott	872,564	Dec. 3	528	110	131	1248
Stacker. Pneumatic straw-	J. A. Walsh	872,868	Dec. 3	1163	247	131	1349
Stairway. Movable	H. Russel	872,457	Dec. 3	295	59–60	131	1214
Stamp-rack	J. P. Owens	872,446	Dec. 3	263	54	131	1210
Stamp. Roller-	F. Gogel	872,337	Dec. 3	35	7	131	1175
Stand:							
See Display-stand. Photographic stand.							
Hat-stand.							
Steam-engine. Direct-acting	F. J. Heyser	872,937	Dec. 3	1287	274	131	1370
Steam-generator. High-pressure	A. J. Schaaf	872,378	Dec. 3	127	23	131	1187
Steel-ingot-compressing apparatus	N. H. O. Lilienberg	872,830	Dec. 3	1078	225–7	131	1337
Steel plant. Open-hearth	F. H. Crockard	872,900	Dec. 3	1002	208–10	131	1326
Stethoscope	D. P. Penhallow	872,448	Dec. 3	268	55	131	1211
Stocking. Baby's	L. E. Irwin	872,517	Dec. 3	417	87	131	1233
Stoker. Furnace-	E. E. Slick	872,382	Dec. 3	133	25	131	1188
Stool. Adjustable and portable carrying-	A. B. McDaniel	872,739	Dec. 3	887	184	131	1307
Stool and folding foot-rest. Combination	A. B. McDaniel	872,738	Dec. 3	886	184	131	1306
Stop-motion for roving-frames	M. Nolet	872,963	Dec. 3	1349	265	131	1379
Stopper for bottles, jars, &c., and manufacturing same.	J. Lowman	872,660	Dec. 3	719	149–50	131	1281
Stove. Cooking-	A. Konst	872,353	Dec. 3	76	14	131	1180
Stove-door	J. E. Thiem	872,694	Dec. 3	789	164	131	1292
Strap-lock	R. Verch	872,865	Dec. 3	1158	246	131	1348
Submarine recovering operations. Apparatus for	A. Becchi and G. B. Tarantini	872,888	Dec. 3	1200	255–6	131	1355
Sulfur dioxid. Making	J. G. Jones	872,822	Dec. 3	1055	221	131	1334
Superphosphate. Making nitrated	J. Schlutius	872,757	Dec. 3	921	.....	131	1313
Swing	A. C. Lansberry, Jr	872,736	Dec. 3	882	183	131	1306
Switch:							
See Oil-switch. Railway-switch.							
Swivel	F. W. Seidl	872,691	Dec. 3	783	163	131	1291
Table:							
See Attachable table. Extension-table.							
Talking-machine	H. Sheble	872,586	Dec. 3	569	119	131	1255
Talking-machine	H. B. Babson and A. Haug	872,783	Dec. 3	969	201–2	131	1321
Talking-machines. Reproducing-horn for	W. E. Leighton	872,828	Dec. 3	1068	224	131	1336
Tamping device	J. P. Kane	872,519	Dec. 3	419	87	131	1233
Tank:							
See Flush-tank. Measuring-tank.							
Knockdown tank.							
Teeth. Plate for artificial	J. Humphrey	872,626	Dec. 3	647	135	131	1269

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Telegraphy. Electric	I. Kitsee	872,824	Dec. 3	1060	222	131	1305
Telephone-box hanger	J. G. Malaby and C. E. Oxford	872,832	Dec. 3	1086	227	131	1337
Telephone pay-station	G. A. Long	872,628	Dec. 3	649	136	131	1269
Terminal clip. Supporting	F. Nevins and W. B. Morewood	872,741	Dec. 3	890	185	131	1307
Thermostat	J. H. Brady	872,402	Dec. 3	172	34	131	1195
Threshing-machine	C. Burwell	872,405	Dec. 3	178	35	131	1196
Throttle-controller	O. Thum	872,478	Dec. 3	345	71	131	1221
Tick-tack	F. J. Niggel	872,902	Dec. 3	1348	285	131	1379
Tie:							
See Fodder-tie. Railway-tie.							
Tile	H. Haugh	872,510	Dec. 3	398	84	131	1230
Tire	S. G. Davis	872,647	Dec. 3	686	143	131	1276
Tire fastening. Resilient-	O. G. Stolz	872,472	Dec. 3	335	68	131	1219
Tire holder. Spare-	F. E. Bowers	872,892	Dec. 3	1210	257	131	1356
Tire. Protected pneumatic	C. G. Lotave	872,526	Dec. 3	450	93	131	1236
Tire. Vehicle-	W. C. Taylor	872,860	Dec. 3	1148	243	131	1346
Tobacco-pipe	J. Grüninger	872,509	Dec. 3	397	83	131	1230
Tone-purifier	A. T. E. Wangemann	872,592	Dec. 3	579	120–1	131	1257
Tool-handle. Detachable	J. B. Isabel	872,731	Dec. 3	874	181	131	1304
Tool-holder. Adjustable	P. F. Connelly	872,908	Dec. 3	1235	263	131	1360
Tower. Transmission-	D. R. Scholes	872,758	Dec. 3	922	192	131	1313
Toy aerial swing	H. G. Hawckotte and H. W. Klausmann.	872,511	Dec. 3	399	84	131	1231
Track-grinder	W. W. Annable	872,493	Dec. 3	370	77	131	1226
Traction-motor	F. L. Emerson	872,648	Dec. 3	686	143–4	131	1276
Transmission mechanism. Interlocking	J. H. Laird	872,520	Dec. 3	422	88	131	1234
Trap:							
See Animal-trap. Fish-trap.							
Trestle. Knockdown	J. Fravel	872,722	Dec. 3	856	177	131	1301
Trimmer:							
See Lawn-edge trimmer.							
Trolley	G. Ehmann	872,802	Dec. 3	1006	211	131	1327
Trolley-harp	J. L. Chase	872,898	Dec. 3	1220	260	131	1358
Trolley-wheel safety-guard	F. J. Nolan	872,674	Dec. 3	750	155	131	1286
Trousers-hanger	C. J. Spruce	872,587	Dec. 3	571	119	131	1255
Trousers-support. Invisible	A. Barnhardt	872,323	Dec. 3	8	2	131	1170
Truck. Car-	T. M. Gallagher	872,723	Dec. 3	858	177	131	1302
Truck side frame. Car-	E. H. Benners	872,790	Dec. 3	983	204	131	1323
Trunk	G. H. Wheary	872,874	Dec. 3	1174	250	131	1350
Trunk-lock	B. Weber	872,775	Dec. 3	956	199	131	1318
Truss	G. Q. Seaman	872,851	Dec. 3	1130	239	131	1343
Tube:							
See Combing and mixing tube.							
Tubes for covering rollers and the like. Manufacture of seamless felt	N. Wahl	872,867	Dec. 3	1162	246	131	1348
Tunnels. Means for ventilating	L. G. Gebhard	872,618	Dec. 3	625	132–3	131	1265
Turbine	C. P. Steinmetz	872,545	Dec. 3	488	102	131	1242
Turbine-engine. Elastic-fluid	S. Z. de Ferranti	872,806	Dec. 3	1014	213–14	131	1328
Turbine-governing mechanism	F. Samuelson	872,377	Dec. 3	124	23	131	1186
Type. Sorts-machine for making	F. H. Brown, J. E. Hanrahan, and G. A. Boyden. (Reissue.)	12,726	Dec. 3	1423	298–300	131	1392
Type-writer ribbon-shift	C. J. Paulson	872,447	Dec. 3	265	55	131	1210
Type-writing machine	H. A. Smedberg	872,543	Dec. 3	485	101–2	131	1242
Type-writing machine	E. E. Barney	872,552	Dec. 3	501	105	131	1245
Type-writing machines. Spacer-bar mechanism for	W. R. Fox	872,809	Dec. 3	1022	215	131	1329
Typing-machine	R. Hündhausen	872,348	Dec. 3	60	12	131	1178
Umbrella. Folding	A. Johnson	872,518	Dec. 3	418	87	131	1233
Valve. Air-	D. F. Morgan	872,737	Dec. 3	883	184	131	1306
Valve mechanism for blowing-engines and compressors.	M. A. Neeland	872,573	Dec. 3	550	114	131	1251
Valve. Throttle-	J. S. Chambers	872,797	Dec. 3	994	206–7	131	1325
Vapor-burner	M. H. Farley	872,920	Dec. 3	1256	268	131	1365
Vault-closure	F. Unckrich	872,864	Dec. 3	1156	245–6	131	1347
Vehicle	Z. E. Williamson	872,877	Dec. 3	1180	251	131	1352
Vehicle drive mechanism. Motor-	A. Ziska, Jr.	872,881	Dec. 3	1184	252–3	131	1353
Vehicle-propelling device	W. C. Berner	872,638	Dec. 3	672	140	131	1273
Vehicle recoil-check	W. H. Staats	872,544	Dec. 3	487	102	131	1242
Vehicle safety device	M. D. Rosa	872,849	Dec. 3	1126	237–8	131	1342
Vehicle-seat	W. Brewster	872,554	Dec. 3	512	106	131	1246
Vehicle shock-absorbing device	C. H. Foster	872,808	Dec. 3	1020	215	131	1329
Vehicle-wheel	T. L. McConnaughey	872,668	Dec. 3	735	153	131	1283
Vehicle-wheel	T. J. Mell	872,536	Dec. 3	1095	229	131	1338
Vehicles. Apparatus for checking or deadening the vibrations imparted to suspended	A. Krebs	872,825	Dec. 3	1063	222–3	131	1335
Vehicles. Pneumatic spring and shock-absorber for motor-	A. L. Muren	872,362	Dec. 3	103	18	131	1182
Vending-machine	F. Hart	872,653	Dec. 3	697	146–7	131	1278
Vending-machine. Automatic	H. R. Holbrook	872,024	Dec. 3	640	134	131	1267
Ventilator:							
See Car-ventilator. Window-ventilator.							
Vessel. Submergible	E. L. Peacock	872,842	Dec. 3	1103	231–2	131	1340
Vessel with a space for a vacuum between the walls. Double-walled	R. Burger	872,795	Dec. 3	991	206	131	1325
Voting-machine	C. M. Warner	872,703	Dec. 3	800	167–8	131	1295
Voting-machine	C. M. Warner	872,704	Dec. 3	808	168–9	131	1295
Wagon	F. W. Miller	872,531	Dec. 3	462	96–7	131	1238
Waist supporter and former	E. Dilworth	872,911	Dec. 3	1247	266	131	1363
Watch	D. H. Church	872,712	Dec. 3	829	173	131	1298
Watch-barrel	L. A. Faller	872,994	Dec. 3	1409	295	131	1389
Water-clarifying tanks. Mud retainer or collector for	E. Vial	872,866	Dec. 3	1160	246	131	1348
Water-closet bend	C. A. Dreier	872,332	Dec. 3	23	4	131	1173
Water-closet bowl and cleaner	F. A. Peterson	872,746	Dec. 3	900	187	131	1309
Water-closet fitting	C. A. Dreier	872,331	Dec. 3	22	4	131	1172
Water-purifying apparatus	J. C. W. Greth	872,412	Dec. 3	196	39	131	1199
Weather-strip	W. J. Lawder	872,434	Dec. 3	247	50	131	1207
Weather-strip	A. Bujewski	872,642	Dec. 3	678	141–2	131	1274
Weather-strip for doors and windows	J. B. Smith	872 976	Dec. 3	1373	289	131	1383
Wedge. Magnetic	S. R. Bergman	872,324	Dec. 3	9	2	131	1170
Well-tube extractor	J. A. Holmberg	872,940	Dec. 3	1304	276	131	1372

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Wheel: *See* Buffing or polishing wheel. Polishing-wheel. Fifth-wheel. Vehicle-wheel.							
Wheel	L. Pierre	872,583	Dec. 3	566	118	131	1254
Wheelbarrow	V. A. Gates	872,926	Dec. 3	1265	270	131	1366
Winding, lustering, and finishing silk, &c. Machine for	W. C. Keyworth	872,734	Dec. 3	879	182	131	1305
Window-bracket	M. D. Adams and A. J. Collier	872,884	Dec. 3	1194	254	131	1354
Window-screen	F. J. Boehl	872,891	Dec. 3	1209	257	131	1356
Window-ventilator	M. Townsend	872,979	Dec. 3	1379	290	131	1384
Wire-straightener	N. S. Harter	872,346	Dec. 3	57	11	131	1177
Wire-stretcher	J. B. Crockett	872,558	Dec. 3	518	108	131	1247
Wire-stretcher	D. A. Vandevort	872,699	Dec. 3	796	166	131	1294
Wrench: *See* Spanner-wrench.							
Wrench	F. G. Anspach	872,633	Dec. 3	661	138	131	1271
Wringer: *See* Mop-wringer.	F. C. Miller	872,955	Dec. 3	1339	283	131	1377

DESIGNS.

Design.	Name.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Book-mark	H. M. Willis	38,916	Dec. 3	131	1394
Brooches, scarf-pins, or similar articles. Head for	J. E. De Wyngaert	38,918	Dec. 3	131	1394
Buckle. Belt-	L. C. Henriksen	38,917	Dec. 3	131	1394
Chafing-dish lamp and stand	S. G. Wilkes	38,924	Dec. 3	131	1395
Combs, knives, or similar articles. Handle for	A. Dumont	38,920	Dec. 3	131	1395
Dish. Metal	J. T. Homan	38,925	Dec. 3	131	1396
Fabric. Woven	W. T. Smith	38,933	Dec. 3	131	1397
Glass bowl. Cut-	M. E. Scheck	38,923	Dec. 3	131	1395
Headlight	R. H. Welles	38,926	Dec. 3	131	1396
Mirror or similar article	W. A. Jameson	38,929	Dec. 3	131	1397
Molding	E. Ryon	38,930	Dec. 3	131	1397
Neckwear fabric	H. Bernstein	38,932	Dec. 3	131	1397
Purse or bag	A. E. Vogt	38,919	Dec. 3	131	1395
Salt-shaker	C. A. Nelson and J. L. Dickelman	38,922	Dec. 3	131	1395
Shingle	A. C. Miller	38,931	Dec. 3	131	1397
Spoon or fork	A. W. Walker	38,921	Dec. 3	131	1395
Stove	J. Alexander	38,934	Dec. 3	131	1397
Type-writer frame	H. Cross and G. J. Griffiths	38,927	Dec. 3	131	1396
Type-writer base-frame		38,928	Dec. 3	131	1396

TRADE-MARKS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Apparel. Certain wearing-	Wolff & Glaserfeld	66,492	Dec. 3	131	1417
Beds and couches and bed-springs	Sanitary Steel Couch Co	66,477	Dec. 3	131	1417
Beer	Anheuser-Busch Brewing Association.	66,464	Dec. 3	131	1417
Cider	Fleming & Christian Co	66,487	Dec. 3	131	1417
Cigars	Rupp & Oeschger	66,476	Dec. 3	131	1417
Coffees	Hewlett Bros. Co	66,469	Dec. 3	131	1417
Cotton cloth	L. Hess & Co	66,470	Dec. 3	131	1417
Cotton duck	Consolidated Cotton Duck Company.	66,466	Dec. 3	131	1417
Cotton duck	Mount Vernon-Woodberry Cotton Duck Company.	66,471	Dec. 3	131	1417
Cotton piece goods	C. Schmitz & Co	66,478	Dec. 3	131	1417
Gum-drops	Rowntree and Company	66,475	Dec. 3	131	1417
Liqueurs	E. Claburri & Fil	66,486	Dec. 3	131	1417
Medicines and corn-plaster. Certain	W. L. White	66,482	Dec. 3	131	1417
Phonographs	Duplex Phonograph Co	66,467	Dec. 3	131	1417
Rubber articles. Certain	Faultless Rubber Company	66,468	Dec. 3	131	1417
Rubber goods. Certain	Faultless Rubber Company	66,484	Dec. 3	131	1417
Shells. Loaded paper shot-	Winchester Repeating Arms Co	66,493	Dec. 3	131	1417
Skirts and walking-overskirts. Ladies' and misses' dress-	Royal Skirt Co	66,491	Dec. 3	131	1417
Snuff	I. Sjoberg	66,480	Dec. 3	131	1417
Stogies	R. Rosenberg	66,474	Dec. 3	131	1417
Stovepipes	Jackes - Evans Manufacturing Company.	66,489	Dec. 3	131	1417
Surgical goods. Certain	Faultless Rubber Company	66,485	Dec. 3	131	1417
Thread or spool-cotton. Sewing-	Blodgett & Orswell Co	66,465	Dec. 3	131	1417
Tobacco. Smoking-	H. Rippen	66,473	Dec. 3	131	1417
Umbrellas	Siegel Cooper Company	66,479	Dec. 3	131	1417
Whisky	S. & S. H. Freiberg	66,488	Dec. 3	131	1417

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Title.	Name.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Whisky	John Dewar & Sons	66,490	Dec. 3	131	1417
Wood manufactures. Certain	Rees-Scott Company	66,472	Dec. 3	131	1417
Woolen piece goods	Worumbo Manufacturing Company.	66,483	Dec. 3	131	1417
Worsted or cotton and worsted and cotton dress fabrics	Strawbridge & Clothier	66,481	Dec. 3	131	1417

LABELS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
"Birdwood Rye." (For Whisky)	M. Roth	13,908	Dec. 3	131	1418
"Dr. Means' Pills." (For Pills)	W. B. Means	13,910	Dec. 3	131	1418
"Guarantee." (For Cigars)	Schmidt & Co	13,906	Dec. 3	131	1418
"Home Malt Tonic." (For a Malt Beverage)	Home Brewing & Ice Co	13,909	Dec. 3	131	1418
"King Philip Bleaching Water." (For Bleaching-Water)	O. St. Denis	13,911	Dec. 3	131	1418
"None Such Furniture & Floor Polish." (For a Polish for Furniture and Floors.)	G. W. Saums	13,912	Dec. 3	131	1418
"Oval." (For Shears)	Acme Shear Company	13,913	Dec. 3	131	1418
"The Comb Makers." (For Cigars)	F. E. Nichols	13,907	Dec. 3	131	1418

PRINTS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
"Built Right & Wearwell." (For Men's Clothing)	Berger, Raphael & Wife	2,171	Dec. 3	131	1418
"Don't Be Odd." (For Flour)	Washburn Crosby Company	2,169	Dec. 3	131	1418
"Men's and Boys' Apparel." (For Men's and Boys' Apparel)	H. C. Lytton	2,170	Dec. 3	131	1418

TRADE-MARKS.

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Title.	Name.	Serial No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Albumen and albuminous food compounds	J. A. Wilfing	28,365	Dec. 3	131	1403
Ale	W. A. Ross & Brother	30,574	Dec. 3	131	1410
Belts. Machinery-	Acme Belting Company	27,104	Dec. 3	131	1402
Biscuits, crackers, and cakes	Marjenhoff Company	30,709	Dec. 3	131	1412
Boilers, tank and laundry heaters	Kellogg-Mackay-Cameron Co	29,904	Dec. 3	131	1404
Books. Printed and illustrated	G. I. Robinson	30,324	Dec. 3	131	1408
Boots and shoes	A. E. Little & Company	30,704	Dec. 3	131	1411
Boots and shoes. Leather	Isaac Prouty & Co	25,543	Dec. 3	131	1401
Boots and shoes. Leather	Lynchburg Shoe Co	26,380	Dec. 3	131	1401
Boots and shoes. Leather	M. Levy's Sons	30,394	Dec. 3	131	1408
Bottles. Glass	Marion Flint Glass Company	30,626	Dec. 3	131	1411
Bricks	Indianapolis Composite Brick Company.	28,707	Dec. 3	131	1403
Brushes	Geo. Borgfeldt & Co	30,400	Dec. 3	131	1408
Butter	Elgin Butter Company	29,805	Dec. 3	131	1405
Butter	Elgin Butter Company	29,808	Dec. 3	131	1405
Butter. Saccharine	E. E. Post Co	30,549	Dec. 3	131	1409
Candies	Heywood Candy Manufacturing Company.	30,792	Dec. 3	131	1414
Canned and dried fruits	J. K. Armsby Company	30,560	Dec. 3	131	1409
Canned and dried fruits and vegetables, jams, jellies, &c	Fischer Bros	28,037	Dec. 3	131	1402
Canned, bottled, and preserved fruits and vegetables	M. C. Nellis	30,756	Dec. 3	131	1413
Canned fish	Moos & Co	7,219	Dec. 3	131	1399
Canned fruits and vegetables	H. J. McGrath Company	30,668	Dec. 3	131	1411
Canned fruits and vegetables	Geneva Preserving Company	30,826-9	Dec. 3	131	1415-16
Canned pineapples	Pearl City Fruit Company	27,755-6	Dec. 3	131	1402

TRADE-MARKS—Continued.

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Title.	Name.	Serial No.	Date.	Official Gazette. Vol.	Page.
Canned sardines	A/S Stavanger Sardine Co	27,827	Dec. 3	131	1402
Cement, lime, and plaster-of-paris	Union Cement and Lime Company.	20,984	Dec. 3	131	1400
Cement. Portland	Portland Cementfabrik Hemmoor.	20,923	Dec. 3	131	1400
Chocolates and chocolate bonbons	New England Confectionery Co	30,416	Dec. 3	131	1406
Cleaning and polishing powder	Cheney Chemical Company	25,925	Dec. 3	131	1401
Compounds for application in rheumatism, neuralgia, &c	E. P. Siccardi	30,715	Dec. 3	131	1412
Drill-rods and drawn wire	Globe Wire Company	30,814	Dec. 3	131	1415
Drinks. Carbonated hop	Florida Fruit Oil & Extract Co	30,597	Dec. 3	131	1410
Eye-protectors	P. C. M. Montbarbon	30,672	Dec. 3	131	1411
Fabrics. Worsted, silk, cotton, and mohair	Sidney Blumenthal & Co	30,497	Dec. 3	131	1409
Fertilizers	Virginia-Carolina Chemical Company.	17,540–1	Dec. 3	131	1399
Fertilizers	Virginia-Carolina Chemical Company.	17,831	Dec. 3	131	1400
Flour. Wheat	Virginia-Carolina Chemical Company.	17,840–1	Dec. 3	131	1400
Flour. Wheat	William Lea & Sons Company	6,398	Dec. 3	131	1399
Flour. Wheat	Columbia Flouring Mills Company.	20,166	Dec. 3	131	1403
Flours, meals, hominy-grits, rice, &c	E. L. Odenweller	30,579	Dec. 3	131	1410
Foods. Stock	Quaker Oats Company	30,209–11	Dec. 3	131	1407
Foods. Stock	Quaker Oats Company	29,939–40	Dec. 3	131	1406
Fruits and vegetables. Green, dried, and preserved	Quaker Oats Company	29,942	Dec. 3	131	1406
Fruits. Fresh	Glorietta Ranch Company	30,786	Dec. 3	131	1414
Gherkins, pickles, chilli-sauce, &c	Bayless Fruit Co	29,518	Dec. 3	131	1404
Gloves, mittens, and gauntlets. Leather	H. W. Light	25,269	Dec. 3	131	1401
Hair-tonic	Joseph N. Elsendrath Company	30,134	Dec. 3	131	1407
Hat-hangers	St. Luke Remedies Co	28,401	Dec. 3	131	1403
Hats and cloth caps. Felt, straw, and stiff	J. J. Kulhawik	30,011	Dec. 3	131	1407
Horseshoe-calks	Yale Hat Co	18,032	Dec. 3	131	1400
Jewelry	Rowe Patent Calk Company	29,517	Dec. 3	131	1404
Knitted sweaters and bathing-suits	S. & B. Lederer Company	29,164	Dec. 3	131	1403
Knives and blades for cutting cigars and tobacco	L. Newman	30,448	Dec. 3	131	1409
Knives, forks, scissors, razors, &c	S. Richard Co	30,222	Dec. 3	131	1408
Laces. Imitation	A. Feist & Co	29,854	Dec. 3	131	1405
Lamps. Electric	J. W. Smith	30,772	Dec. 3	131	1414
Lamps. Oil-burning	American Electric Lamp Co. of N. Y.	30,693	Dec. 3	131	1411
Leathers. Calf	C. T. Ham Manufacturing Company.	27,019	Dec. 3	131	1402
Leggings and overgaiters	Kaufherr & Co.'s Shoe Leather Tanneries.	29,722	Dec. 3	131	1405
Liniment	H. Jacob & Sons	30,617	Dec. 3	131	1410
Liniment	C. F. Brown Chemical Co	30,510	Dec. 3	131	1409
Liniments	L. B. Martin	30,705	Dec. 3	131	1412
Lockets, cuff-pins, and fobs	L. Altschuler	30,636	Dec. 3	131	1411
Loom-pickers and lug-straps	R. B. Macdonald	30,166	Dec. 3	131	1407
Magazines. Monthly	E. H. Jacobs Manufacturing Company.	26,976	Dec. 3	131	1402
Medicated plasters	National Sportsman	30,607	Dec. 3	131	1410
Medicine. Cough	Physicians Chemical and Drug Company.	29,571	Dec. 3	131	1404
Medicine for rheumatism	M. M. Leddan	21,942	Dec. 3	131	1400
Metal-polish. Detergent	J. C. Miller	26,042	Dec. 3	131	1401
Molasses	Krausse & Auerbach	30,485	Dec. 3	131	1409
Nutmeg, chilli-pepper, sage, Cayenne, &c	Penick & Ford	30,738–43	Dec. 3	131	1412–13
Oats. Seed	Standard Import Co	30,468	Dec. 3	131	1409
Overalls, jumpers, and trousers	O. P. Lawson	30,601	Dec. 3	131	1410
Pans. Bread and cake	Texas Overall Company	30,316	Dec. 3	131	1408
Paper and envelops	F. M. Bower Co	22,754	Dec. 3	131	1400
Paper. Roofing	Raynor & Perkins Envelope Company.	14,124	Dec. 3	131	1399
Perfumeries, powders, shampoo, remedies, &c	Chatfield Mfg. Co	28,463	Dec. 3	131	1403
Perfumes	Universal Drug and Chemical Co	29,040	Dec. 3	131	1403
Periodical	Frederick Stearns & Co	30,616	Dec. 3	131	1410
Pills	Jewelers Circular Pub. Co	29,086	Dec. 3	131	1403
Pipes. Corncob	R. N. Bates	28,318	Dec. 3	131	1403
Pocket-books and purses. Leather	Phoenix-American Pipe Works	30,150	Dec. 3	131	1407
Pressure-gages, indicators, revolution-counters, &c	Scheuer & Brother	29,142	Dec. 3	131	1403
Publications. Monthly	Ashcroft Manufacturing Company.	29,563	Dec. 3	131	1404
Remedies. Antiseptic	E. Hubbard	30,664	Dec. 3	131	1411
Remedies for corns, calluses, and bunions	Chemische Fabrik auf Actien (vorm. E. Schering).	18,711	Dec. 3	131	1400
Remedies for indigestion	Toes-O-K Medical Company	27,336	Dec. 3	131	1402
Remedies for venereal diseases	"Tot" Company	28,941	Dec. 3	131	1403
Remedy. Dyspepsia	New York & London Drug Co	30,710	Dec. 3	131	1412
Remedy for bowel complaint in poultry	Moncrief & Francis	30,258	Dec. 3	131	1408
Remedy for colic, cramps, diarrhea, &c	F. J. Tishenbanner	30,632	Dec. 3	131	1411
Remedy for coughs, colds, bronchitis, &c	J. W. James Company	30,778	Dec. 3	131	1414
Remedy for paralysis, neuralgia, &c	J. W. James Company	30,776	Dec. 3	131	1414
Remedy for pneumonia, pleurisy, appendicitis, &c	A. H. Niemann	30,572	Dec. 3	131	1410
Remedy for rheumatism	Arizona Wonderine Company	25,173	Dec. 3	131	1401
Rubber balls toy animals, rattles, &c	B. F. Snyder	28,010	Dec. 3	131	1402
Rubber boots and shoes	Geo. Borgfeldt & Co	30,399	Dec. 3	131	1408
Rubber boots and shoes	Joseph Banigan Rubber Co	29,924	Dec. 3	131	1405
Rubber boots and shoes	Joseph Banigan Rubber Co	29,926	Dec. 3	131	1405
Rubber boots and shoes	Meyer Rubber Company	29,927	Dec. 3	131	1405
	American Rubber Company	29 929–30	Dec. 3	131	1405–6

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Rubber boots and shoes	Goodyear's India Rubber Glove M'f'g. Co.	29,938	Dec. 3	131	1406
Rubber boots and shoes	Boston Rubber Shoe Company	29 944–5	Dec. 3	131	1406
Rubber boots and shoes	New Brunswick Rubber Company.	29,946	Dec. 3	131	1406
Rubber boots and shoes	United States Rubber Company	29,958	Dec. 3	131	1407
Rubber boots and shoes	Lycoming Rubber Co	30,727–9	Dec. 3	131	1412
Rubber syringes, water-bottles, atomizers, &c	Geo. Borgfeldt & Co	30,401	Dec. 3	131	1408
Salve or ointment and unguent	Davis Chemical Company	30,759	Dec. 3	131	1413
Sardines	Globe Packing Company	30,624–5	Dec. 3	131	1410
Sheetings, shirtings, drills, &c	China & Japan Trading Company	30,798–800	Dec. 3	131	1414–15
Shoes. Leather	E. A. Quirl	29,711	Dec. 3	131	1405
Silk piece goods	Valentine & Bentley Silk Co	30,808	Dec. 3	131	1415
Sinks. Stone	Norcross Co	18,744	Dec. 3	131	1400
Skin and face food, powder, lotion, &c	A. G. Baumgarten	30,761–4	Dec. 3	131	1413–14
Soap	N. K. Fairbank Company	10,223	Dec. 3	131	1399
Soda-water syrup	Mass & Waldstein Extract Company.	30,226	Dec. 3	131	1408
Soup and Worcestershire sauce. Tomato	Donaldson-Shultz Co	30,750	Dec. 3	131	1413
Spectacles and eyeglasses	J. A. Pfeifer	30,417	Dec. 3	131	1406
Starched fabrics and preventing the iron from sticking. Material for improving the finish of	Glo-Zo Gloss Co	30,769	Dec. 3	131	1414
Stethoscopes	P. A. Aurness	29,355	Dec. 3	131	1404
Tea	New Orleans Import Co	29,566	Dec. 3	131	1404
Tires. Resilient composition of matter to be injected into	Elastro Manufacturing Company.	29,405	Dec. 3	131	1404
Tobacco, cigars, cigarettes, and cheroots	C. C. Bogart	30,723	Dec. 3	131	1412
Tonic. Scalp	Knowlton Danderine Co	30,807	Dec. 3	131	1415
Tracing-cloth	L. & C. Hardtmuth	27,648	Dec. 3	131	1402
Truss-pads	Chesterman & Streeter	30,785	Dec. 3	131	1414
Type-writing machines	J. W. Bamberger & Co	29,855	Dec. 3	131	1405
Vellings. Netted	Steiner, Rosenstein & Traub	29,791	Dec. 3	131	1405
Vinegar, canned fruits, and vegetables	Ridenour Baker Grocery Co	30,453	Dec. 3	131	1409
Waters. Mineral, carbonated, and aerated	Glenn Springs Company	30,678	Dec. 3	131	1411
Waters. Table	J. Ries	30,467	Dec. 3	131	1409
Whips	Cargill Cleveland & Co	30,725	Dec. 3	131	1412
Whisky	Elder-Harrison Company	29,702	Dec. 3	131	1404
Whisky. Bourbon and rye	Golden State Wine Co	30,564	Dec. 3	131	1409
Wrenches and pliers	Crescent Tool Co	30,321	Dec. 3	131	1408

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 10TH DAY OF DECEMBER, 1907

Name, residence, and invention.	No.	Date.	Monthly volume.		Official Gazette.	
			Specification.	Drawing.	Volume.	Page.
Abbott, Ambrose E., Twin Falls, Idaho. Weighing and measuring device	873,694	Dec. 10	2818	601	131	1657
Abbott, Charles C., assignor to Triumph Voting Machine Company, Pittsfield, Mass. Grouping mechanism for voting-machines	873,400	Dec. 10	2264	472	131	1559
Abbott, Charles C., assignor to Triumph Voting Machine Company, Pittsfield, Mass. Counter-carrier for voting-machines	873,401	Dec. 10	2266	472	131	1559
Abraham, Enoch H., Uniontown, Pa., assignor to Covington Door Jamb Company. Door-jamb for coke-ovens	873,479	Dec. 10	2395	504	131	1585
Adell, John A. (See Starrett and Adell.)						
Adelman, Oscar F. (See Lowy and Adelman.)						
Adkins, V. V. (See Burks, William E., assignor.)						
Adriance, Arthur E., Buffalo, N. Y. Keyboard for musical instruments	873,146	Dec. 10	1751	368	131	1475
Adt, Leo F., *et al.* (See Bader, Gustav A., assignor.)						
Adt, Leo F., *et al.* (See Becker, Louis B., assignor.)						
Adt, Leo F., *et al.* (See Bemis, Wallace L., assignor.)						
Ahern, Cornelius, Allegheny, Pa. Wrench	873,480	Dec. 10	2396	505	131	1585
Aiken, Robert H., Winthrop Harbor, Ill. Making iron from metallic sulfids	873,648	Dec. 10	2732	.....	131	1642
Aliano, Frank S., New York, N. Y. Lock	873,481	Dec. 10	2397	505	131	1586
Allen William W., and J. Metzger, assignors to Weir Frog Company, Cincinnati, Ohio. Switch-stand	873,649	Dec. 10	2733	579	131	1642
Alley, Jesse L., Indianapolis, Ind. Wire-crimping machine	873,200	Dec. 10	1859	390	131	1492
Allis-Chalmers Company. (See Allison and De Wein, assignors.)						
Allis-Chalmers Company. (See Hinkley, George M., assignor.)						
Allis-Chalmers Company. (See Richards, Walter J., assignor.)						
Allis-Chalmers Company *et al.* (See Schneider, William F., assignor.)						
Allis-Chalmers Company. (See Shipley, Grant B., assignor.)						
Allis-Chalmers Company. (See Tomlinson, Royal D., assignor.)						
Allison, Daniel K., and G. F. De Wein, assignors to Allis-Chalmers Company, Milwaukee, Wis. Hook-rod-disconnecting device	873,695	Dec. 10	2819	601	131	1657
Allison, Edward I., Saginaw, Mich. Harness-buckle	873,000	Dec. 10	1461	304	131	1427
American Can Company. (See Rudolphi, Frank, assignor.)						
American Pulley Company. (See Brinley and Bowen, assignors.)						
American Road Machine Company. (See Philips, Edwin S., assignor.)						
American Silk Thread Finishing Co. (See Bossart, Xaver, assignor.)						
American Steel & Wire Company. (See Harter, Noah S., assignor.)						
American Telegraphone Company. (See Hagemann, Emil S., assignor.)						
American Telegraphone Company. (See Pedersen and Poulsen, assignors.)						
American Telegraphone Company. (See Poulsen, Valdemar, assignor.)						
American Telegraphone Company. (See Poulsen and Pedersen, assignors.)						
American Well & Prospecting Co. (See Johnston and Norris, assignors.)						
Anderson, Anders, Bloomfield, Colo. Calendar	873,696	Dec. 10	2821	601–2	131	1657
Anderson, Frank B., Cleveland, Ohio. Filter-press	873,482	Dec. 10	2402	505–6	131	1586
Anderson, Hjalmar S., Pittsburg, Pa. Internal-combustion engine	873,650	Dec. 10	2734	579	131	1642
Anderson, Matthew C. (See Bogie and Anderson.)						
Angell, John E., St. Louis, Mo. Gas or steam separator	873,336	Dec. 10	2138	446–7	131	1537
Angle, Persy S. (See Paquette, Herman A., assignor.)						
Apstein, David, Bridgeport, Conn. Puncture-closer	873,337	Dec. 10	2143	447	131	1538
Armstrong Cork Company. (See Busch, Herman F., assignor.)						
Aronson, Harris, *et al.* (See Wolfenden, Knutson, and Larsen, assignors.)						
Arrowsmith, James W., Morristown, N. J. Shoe-sole support	873,001	Dec. 10	1462	304	131	1427
Ascue, William H., Klowa, Kans. Grain-door	873,115	Dec. 10	1699	354–5	131	1466
Ashenberg, Herman H., Peoria, Ill. Bung-starter	873,116	Dec. 10	1700	355	131	1466
Ashton, Orrell, Lawrence, Mass. Feeding mechanism	873,338	Dec. 10	2145	447–8	131	1538
Asmus, William G., Cleveland, Ohio. Automatic fire-extinguisher	873,651	Dec. 10	2737	580	131	1642
Aspinwall, Louis M., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Control system for electric motors	873,284	Dec. 10	2012	421–2	131	1519
Asquith, Stead A., Waterloo, Iowa. Spectacle-clamp	873,002	Dec. 10	1464	304	131	1427
Atherton, Charles T., assignor to Atherton Spinning Ring Company, Providence, R. I. Ring for spinning machinery	873,483	Dec. 10	2405	506	131	1586
Atherton Spinning Ring Company. (See Atherton, Charles T., assignor.)						
Augustine, Benjamin F., Buffalo, N. Y. Rotary engine	873,201	Dec. 10	1862	390–1	131	1492
Austin, Leonidas J., Allapaha, Ga. Whiffletree-hook	873,003	Dec. 10	1465	304	131	1428
Avery, Charles G., Chicago, Ill. Flat-iron	873,202	Dec. 10	1865	391	131	1493
Aymond, Frank L. (See De Witt, Clinton C., assignor.)						
Babcock, George G. (See Libby and Babcock.)						
Babcock, George G., assignor to C. T. Libby, Portland, Me. Linotype-machine	873,203	Dec. 10	1867	391–2	131	1493
Backscheider, Jacob, Minneapolis, Minn. Combination bolt and nut cutter	873,004	Dec. 10	1466	305	131	1428
Bader, Gustav A., assignor to E. Kirstein Sons Company, Rochester, and L. F. Adt, Albany, N. Y. Nose-guard for eyeglasses	873,339	Dec. 10	2148	448	131	1539
Bagnall, Edward, Pittsburg, Pa. Machine for grinding, smoothing, and polishing plate-glass	873,340	Dec. 10	2150	448–50	131	1539
Bailey, James T., Phœnixville, Pa. Christmas-tree holder	873,402	Dec. 10	2268	473	131	1559

Name, residence, and invention.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Bair, Samuel H., *et al.* (See Ottinger, Edwin C., assignor.)						
Baker, William, Youngstown, Ohio. Separator	873,484	Dec. 10	2407	506–7	131	1587
Baldwin, David M., Jonesboro, Ark. Show-case	873,403	Dec. 10	2269	473	131	1560
Baldwin, Henry S., Lynn, Mass., assignor to General Electric Company. Steering-wheel pivot for automobiles						
Ball, Henry P., New York, N. Y., assignor to General Electric Company. Knife-switch	873,147	Dec. 10	1752	368	131	1475
Ball, Henry P., New York, N. Y., assignor to General Electric Company. Rheostat	873,005	Dec. 10	1467	305	131	1428
Ball, James, Louisa, Ky. Gas-burner	873,006	Dec. 10	1468	305	131	1429
Ballard, George L., assignor to Wildman Manufacturing Company, Norristown, Pa. Cloth-cutting machine	873,485	Dec. 10	2412	507	131	1587
Ballard, Harrie A., Ashland, assignor to Boylston Manufacturing Company, Boston, Mass. Chain-stitch shoe-sewing machine	873,285	Dec. 10	2015	422	131	1519
Ballou, Ernest S., Des Moines, Iowa. Focusing attachment	873,486	Dec. 10	2413	507–8	131	1587
Banks, Charles H., Atlanta, Ga. Hammock-support	873,204	Dec. 10	1899	392	131	1493
Barber, Howard M., Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Variable-size-sheet cutting and feeding mechanism	873,652	Dec. 10	2738	580	131	1643
Barber, John C., Chicago, Ill. Side bearing for cars	873,341	Dec. 10	2155	450–1	131	1539
Barrett, William J., Chicago, Ill. Wedge for locomotive driving-boxes	873,404	Dec. 10	2270	473	131	1560
Barron, Walter J., New York, N. Y., and H. W. Merritt, Springfield, Mass., assignors to Densmore Typewriter Company, Syracuse, N. Y. Type-writing machine	873,148	Dec. 10	1754	369	131	1476
Barrows, Frank W., Cambridge, Mass. Music-sheet holder	873,487	Dec. 10	2417	508	131	1588
Barth, John W., Pittsburg, Pa. Combined car and train-pipe coupling	873,286	Dec. 10	2017	423	131	1519
Barth, John W., Pittsburg, Pa. Combination car and train-pipe coupling	873,287	Dec. 10	2018	423	131	1520
Bartholomew, John A., New York, N. Y. Musical instrument	873,288	Dec. 10	2020	423	131	1520
Bartl, Franz, New York, N. Y. Automobile	873,289	Dec. 10	2022	424	131	1520
Bartlett, Hayward & Co. (See Wagner, Frederick H., assignor.)	873,405	Dec. 10	2272	473–4	131	1560
Barton, John, *et al.* (See Topham, William, assignor.)						
Barton, Joseph, *et al.* (See Topham, William, assignor.)						
Barton-Wright, Edward W. (See Marino and Barton-Wright.)						
Baskerville, Charles, New York, N. Y., assignor to Welsbach Light Company, Gloucester, N. J. Making a solution of rare-earth metals	873,205	Dec. 10	1870	.....	131	1493
Bassett, Norman C. (See Henderson and Bassett.)						
Bausch, Edward, assignor to Bausch & Lomb Optical Company, Rochester, N. Y. Microscope	873,007	Dec. 10	1471	305–6	131	1429
Bausch, Edward, assignor to Bausch & Lomb Optical Company, Rochester, N. Y. Engraving-machine	873,008	Dec. 10	1473	306	131	1429
Bausch & Lomb Optical Company. (See Bausch, Edward, assignor.)						
Baxter, Frederic, Manchester, England. Belt-fastener	873,009	Dec. 10	1475	306	131	1430
Beach, Howard L., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Electric apparatus	873,290	Dec. 10	2024	424	131	1520
Beal, Charles, Jr. (See Mitchell and Beal.)						
Beaudette, Telesphore J., Los Angeles, Cal. Acetylene-gas generator	873,406	Dec. 10	2274	474	131	1561
Beck, Niels D. S. K., Chicago, Ill. Ellipsograph	873,291	Dec. 10	2028	424	131	1521
Becker, Louis B., New York, assignor to E. Kirstein Sons Co., Rochester, and L. F. Adt, Albany, N. Y. Eyeglasses	873,342	Dec. 10	2159	451	131	1540
Behl, William, Scotland, S. D. Eaves-strip	873,407	Dec. 10	2276	475	131	1561
Belcher, Winner C., Colfax, Cal. Tea-kettle	873,653	Dec. 10	2739	580	131	1643
Bell, George H., assignor to H. L. Bell, Brooklyn, N. Y. Vaporizer	873,654	Dec. 10	2740	580	131	1643
Bell, Hattie L. (See Bell, George H, assignor.)						
Bemis, Wallace L., Brockton, Mass., assignor to E. Kirstein Sons Co., Rochester, and L. F. Adt, Albany, N. Y. Eyeglasses	873,343	Dec. 10	2161	451	131	1540
Benjamin, Alfred H., East Orange, assignor to Benjamin & Johnes, Newark, N. J. Apparel-corset	873,489	Dec. 10	2421	509	131	1588
Benjamin & Johnes. (See Benjamin, Alfred H., assignor.)						
Berkner, Adolph W., Cayuga, N. D. Elevator-bucket	873,655	Dec. 10	2741	581	131	1644
Berlin Machine Works. (See Ross, Harry B., assignor.)						
Berns, Hugo, Ohligs, Germany. Pocket-knife	873,206	Dec. 10	1872	392	131	1494
Billings, George P., Bar Harbor, Me. Machine for finishing and smoothing floors	873,207	Dec. 10	1872	392	131	1494
Bird & Son, F. W. (See Wyman, George R., assignor.)						
Blaisdell, Hiram W., Los Angeles, Cal. Machine for cleaning filter-beds	873,010	Dec. 10	1476	307	131	1430
Blake, John H., Knoxville, Tenn. Dumping-car	873,149	Dec. 10	1755	369	131	1476
Blakeslee, George S., Chicago, Ill. Knife-polishing machine	873,011	Dec. 10	1478	307–8	131	1430
Blakkan, I. J. (See Hestness, Bernt, assignor.)						
Blessing, Louis, Jackson, Mich. Railway-tie	873,292	Dec. 10	2030	424	131	1521
Bliss, Gottle. (See Rothfuchs and Bliss.)						
Bloch, Albert, Chicago, Ill. Cloth-shrinking machine	873,656	Dec. 10	2742	581–2	131	1644
Blood, Charles W. H., and C. G. Osteman, assignors to S. A. Woods Machine Company, Boston, Mass. Work-support for bottom cutter-heads of wood-planers	873,657	Dec. 10	2745	582	131	1644
Blood, Henry S., Bottineau, N. D. Stovepipe-joint	873,658	Dec. 10	2747	582	131	1645
Blood, Henry S., Bottineau, N. D. Stovepipe-joint	873,659	Dec. 10	2749	583	131	1645
Blow, George P., La Salle, Ill. Battery connection	873,660	Dec. 10	2749	583	131	1645
Bock, Richard W., Chicago, Ill. Hat-holder	873,490	Dec. 10	2424	509–10	131	1589
Bogie, Patrick J., and M. C. Anderson, Washburn, Wis. Sawmill set-works	873,012	Dec. 10	1481	328	131	1430
Bornand, Joseph, Pelham, and B. Thoens, New York, N. Y. Phonograph	873,013	Dec. 10	1483	308–9	131	1431
Bornhorn, Paul. (See Courtney and Bornhorn.)						
Bossart, Xaver, assignor to American Silk Thread Finishing Co., Paterson, N. J. Silk-thread-finishing machine	873,491	Dec. 10	2425	510	131	1589
Boucher, Arthur L., assignor to New York Cigarette Machine Company, New York, N. Y. Cigarette-tipping machine	873,014	Dec. 10	1484	309–10	131	1431
Bowen, Russell H. (See Brinley and Bowen.)						
Boyce, William D., and H. Guels, St. Louis, Mo.; said Guels assignor to said Boyce. Turbine-wheel	873,344	Dec. 10	2162	451	131	1540
Boylston Manufacturing Company. (See Ballard, Harrie A., assignor.)						
Bramwell, Balfour. (See Reeves and Bramwell.)						
Brendt, Jacob B., and C. O. Sherman, Pollock, S. D. Animal-trap	873,117	Dec. 10	1702	355–6	131	1466
Brewster, Charles N. (See Mangels and Brewster.)						
Brinley, Charles E., Philadelphia, Pa., and R. H. Bowen, Palmyra, N. J., assignors to American Pulley Company, Philadelphia, Pa. Wheel	873,408	Dec. 10	2277	475	131	1562
Brooks, Karmell, New York, N. Y. Water-swivel	873,601	Dec. 10	2750	583	131	1645
Brothers, James H., Newark, N. J., assignor to Rail Joint Company. Insulated rail-joint	873,492	Dec. 10	2427	510–11	131	1589
Brower, James F., assignor of one-half to E. F. Ketchum, Rodney, Mich. Carving-fork	873,150	Dec. 10	1756	369	131	1476
Brown, Arthur M., Ye Kowhai, Ngaruawahai, New Zealand, assignor to Providence Engineering Works, Providence, R. I. Internal-combustion engine	873,493	Dec. 10	2430	511	131	1590
Brown, James L., Brookville, Pa. Pipe-wrench	873,494	Dec. 10	2433	511	131	1590
Browne, Arthur W., Prince Bay, N. Y., assignor to S. S. White Dental Manufacturing Company, Philadelphia, Pa. Dental chair	873,015	Dec. 10	1489	310–11	131	1431
Bruce, Samuel, Helvetia, Pa. Elevator safety appliance	873,495	Dec. 10	2435	512	131	1590
Bryan, Clarence H., Chicago, Ill Chain rope or belt	873,208	Dec. 10	1874	393	131	1494

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Bryant, Edward W., New York, N. Y., assignor of one-half to J. J. Corell, Norfolk, Va. System of shelf-supports	873,496	Dec. 10	2437	512	131	1591
Buckbee, Charles E., Flushing, Mich. Rotating bracket for the suspension of electric wires	873,700	Dec. 10	2833	603	131	1659
Buell, Young K., New York, N. Y. Receptacle for powdered substances	873,497	Dec. 10	2440	513	131	1591
Buick Motor Company. (See O'Brien, Frank, assignor.)						
Bullock Electric Manufacturing Company. (See Mug, Edward T., assignor.)						
Bullock Electric Manufacturing Company. (See Nichols, Louis C., assignor.)						
Bullock Electric Manufacturing Company *et al.* (See Schneider, William F., assignor.)						
Burger, Roy C. (See Russell, Milo M., assignor.)						
Burks, William E., assignor of one-half to V. V. Adkins, Ashland, Ky. Combined holder for paper sacks and roll-paper	873,499	Dec. 10	2279	475–6	131	1562
Burnham, James, London, England. Pneumatic and solid tire for vehicle-wheels	873,016	Dec. 10	1492	311–12	131	1432
Burnham, Williams & Company. (See Rushton, Kenneth, assignor.)						
Busch, Herman F., Millvale, assignor to Armstrong Cork Company, Pittsburg, Pa. Machine for grinding or finishing corks	873,498	Dec. 10	2441	513–14	131	1591
Busch, Karl, Grossalmerode, Germany. Tool for cutting clay	873,209	Dec. 10	1875	393	131	1494
Bynum, Samuel B., assignor of one-half to W. F. Lamb, J. P. Mallory, and C. E. Pigford, Jackson, Tenn. Spring-motor	873,499	Dec. 10	2443	514	131	1592
C. B. Cottrell & Sons Company. (See Barber, Howard M., assignor.)						
C. G. Sargent's Sons. (See Sargent, Allan C., assignor.)						
Calder Grain Shocker Company. (See Calder, John, assignor.)						
Calder, James, assignor to Calder Grain Shocker Company, Limited, Hamilton, Ontario, Canada. Apparatus for shocking grain	873,500	Dec. 10	2444	514–15	131	1592
Canniff, William L., New York, N. Y. Pneumatic grout mixing and discharging apparatus	873,345	Dec. 10	2163	452	131	1541
Carbone, Tito L., Charlottenburg, Germany. Elastic tire for wheels	873,501	Dec. 10	2450	515–16	131	1593
Carbonelle, Henri, Ucels, Belgium. Machine for punching jacquard-cards for lace-machines	873,293	Dec. 10	2033	425–6	131	1522
Cardwell, James R., Chicago, Ill. Friction draft-gear	873,210	Dec. 10	1875	393	131	1494
Carey, William G., Schenectady, N. Y., assignor to General Electric Company. Trolley-wire ear	873,017	Dec. 10	1493	312	131	1432
Carlson, John O., and C. O. Hedstrom, Funk, Nebr. Animal-trap	873,502	Dec. 10	2451	516	131	1593
Carnegie Steel Company. (See Davis, Cleland, assignor.)						
Casaccia, Julius, San Francisco, Cal. Indicating device for bottles	873,410	Dec. 10	2282	476	131	1563
Casale, Andrew, New Haven, Conn. Receptacle for the drain-water of refrigerators and alarm therefor	873,503	Dec. 10	2452	516	131	1593
Cason, Charles W., Sr. (See Shepard and Cason.)						
Cassels, William and W. J., London, England. Folding table, form, and the like	873,118	Dec. 10	1704	356	131	1467
Cassels, William J. (See Cassels, William and W. J.)						
Castle, William H., Geneva, Ohio. Railway-tie	873,294	Dec. 10	2039	426	131	1523
Cavanagh, James, Jr., Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lasting-machine	873,018	Dec. 10	1494	313–14	131	1432
Central Trust Company of New York, trustee. (See Price, Edgar F., assignor.)						
Cerutti, Benjamin, Habana, Cuba. Composite building structure	873,504	Dec. 10	2453	517	131	1593
Cerutti, Benjamin, Habana, Cuba. Hollow building-block	873,505	Dec. 10	2455	517	131	1594
Chamberlin, Henry C., Olyphant, Pa. Furnace-grate	873,411	Dec. 10	2284	476	131	1563
Chamberlin Metal Weather Strip Company. (See Hiltz and Smith, assignors.)						
Chambers, John E., Shelbyville, Ind. Incubator	873,295	Dec. 10	2040	426–7	131	1523
Chapman, Harvey, Dorchester, Mass. Cleaning device	873,412	Dec. 10	2285	476	131	1563
Chappelle, Charles H., Woodburn, Oreg. Screw-driver	873,296	Dec. 10	2044	427	131	1523
Chicago Grain Door Company. (See Hill, Edward A., assignor.)						
Chillingworth, Rudolf, Nuremberg, Germany. Producing hollow sheet-metal articles	873,297	Dec. 10	2048	428	131	1524
Christie, Lewis D., assignor to Union Metallic Cartridge Company, Bridgeport, Conn. Loading short-range shot-shells	873,346	Dec. 10	2166	452	131	1541
Christie, Lewis D., assignor to Union Metallic Cartridge Company, Bridgeport, Conn. Scatter-load for shot-shells	873,347	Dec. 10	2167	452	131	1541
Claflin, Adams D. (See Cummings, Henry H., assignor.)						
Clark, Hervey D., Arcola, Ill. Spool-holder	873,506	Dec. 10	2457	517	131	1594
Clarkson, William H., Edwards Station, Ill. Frame for supporting coal-drills	873,019	Dec. 10	1503	314	131	1433
Claussen, Peter J. (See Rypkema, Gerrit, assignor.)						
Cleves, Anna, Omaha, Nebr. Adjustable skirt-supporter	873,348	Dec. 10	2168	453	131	1541
Cole, William J. (See Janin, Albert S., assignor.)						
Coleman, John E. (See Hill and Coleman.)						
Collins, Paul E., assignor to Electric Novelty Machine Company, Boston, Mass. Transparency	873,020	Dec. 10	1505	314	131	1433
Conkling, Ira L., Philadelphia, Pa. Cigarette-making device	873,350	Dec. 10	2169	453	131	1541
Cook, Edward M., Oberlin, Ohio. Metallic packing	873,507	Dec. 10	2458	518	131	1594
Cook, Lyman J., assignor of one-half to J. B. Webster, Silver Creek, N. Y. Window-sash	873,211	Dec. 10	1877	393	131	1495
Cook, William C. (See Gilmore and Cook.)						
Cool, Harlow R., Bradford, Pa. Electrotherapeutic syringe	873,021	Dec. 10	1507	315	131	1434
Cooper, William, Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Electric-motor control	873,298	Dec. 10	2049	428	131	1524
Copp, Gardner P., assignor of one-half to A. L. Rhodes, Los Angeles, Cal. Trolley-head	873,662	Dec. 10	2761	584	131	1646
Cordeau, Adolphe, Ste. Madeleine, Quebec, Canada. Lock	873,212	Dec. 10	1878	394	131	1495
Cordes, August W., New York, N. Y. Bottle-capping machine	873,022	Dec. 10	1508	315–16	131	1434
Corell, John J. (See Bryant, Edward W., assignor.)						
Cornell, Robert F., Philipsburg, Mont. Thill-coupling	873,299	Dec. 10	2053	428–9	131	1524
Cornell, Evan W., Adrian, Mich., assignor of one-half to F. H. Knapp, Chicago, Ill. Gas-lamp	873,663	Dec. 10	2753	584	131	1646
Corporation Trust Company, trustee. (See Schofield, Albert B., assignor.)						
Couch & Seeley Company. (See Galbraith, George J., assignor.)						
Courtney, Edmund, and P. Bornhorn, Covington, Ky. Horseshoe-calk	873,119	Dec. 10	1706	356	131	1467
Courtney Sarah C., Fairmont, W. Va., assignor of one-half to A. Hurford, Canton, Ohio. Dust-pan	873,213	Dec. 10	1880	394	131	1495
Covington Door Jamb Company. (See Abraham, Enoch H., assignor.)						
Cowper-Coles, Sherard O., London, England. Electrodeposition of copper and other metals	873,508	Dec. 10	2459	518	131	1595
Cox, James F., Jersey City, N. J. Pipe-bending machine	873,023	Dec. 10	1512	316	131	1434
Crab, Henry. (See Sharp, Abel B., assignor.)						
Cranston, Alfred P., New York, N. Y. Vacuum-cleaner handle	873,300	Dec. 10	2054	429	131	1525
Crawford John E. L., Lisbon, Ohio. Saddletree-plate	873,509	Dec. 10	2460	518	131	1595
Crippen, Walter R., Cambridge, assignor to Emerson Piano Company, Boston, Mass. Autopneumatic music-playing instrument	873,214	Dec. 10	1880	394	131	1495
Crowley, Thomas, Lambertville, N. J. Rubber boot and shoe	873,510	Dec. 10	2462	519	131	1595
Culin, George M Von, Philadelphia, Pa. Shuttle-motion	873,470	Dec. 10	2382	501	131	1582
Cummings, Frederick W., and G. H. Hanna, Cleveland, Ohio assignors to Sanitary Street Flushing Machine Company, St. Louis, Mo. Nozzle	873,301	Dec. 10	2056	429	131	1525
Cummings Henry H., assignor to A. D. Claflin, Newton, Mass. Ticket apparatus	873,302	Dec. 10	2056	429–30	131	1525

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Cunningham, Abelard V., Sr., Zelienople, Pa. Tug and trace fastener	873,413	Dec. 10	2285	477	131	1564
Custer, Dwight W., Brooklyn, N. Y. Postal mailing-card	873,024	Dec. 10	1515	317	131	1435
Cutler-Hammer Mfg. Co. (See Henderson and Bassett, assignors.)						
Cyphers, Charles A., assignor, by mesne assignments, to Model Incubator Company, Buffalo, N. Y. Thermostat	873,511	Dec. 10	2463	519	131	1596
Daniels, Walter E., Chicago, Ill. Aro-lamp	873,414	Dec. 10	2287	477	131	1564
Daniels, Walter E., Chicago, Ill. Aro-lamp	873,415	Dec. 10	2289	477	131	1564
Darlington, Frederick, and O. S. Schairer, Pittsburg, Pa., assignors to Westinghouse Electric & Manufacturing Company. System of control	873,351	Dec. 10	2171	453	131	1542
Davidyan, Nathaniel K., Philadelphia, Pa. Rug-fastener	873,025	Dec. 10	1516	317	131	1435
Davis Acetylene Company. (See Davis, Augustine, assignor.)						
Davis, Augustine, Chicago, Ill., assignor to Davis Acetylene Company, Elkhart, Ind. Time-controlled gas-cock	873,026	Dec. 10	1516	317	131	1435
Davis, Benjamin, Nesquehoning, Pa. Envelop	873,416	Dec. 10	2291	478	131	1565
Davis, Charles W., Edgeworth, assignor to Standard Underground Cable Company, Pittsburg, Pa. Joint for metal-sheathed cables	873,215	Dec. 10	1882	394	131	1496
Davis, Charles W., Edgeworth, assignor to Standard Underground Cable Company Pittsburg, Pa. Electric cable	873,216	Dec. 10	1884	395	131	1496
Davis, Cleland, U. S. Navy, assignor, by mesne assignments, to Carnegie Steel Company, Pittsburg, Pa. Face-hardened steel plate	873,512	Dec. 10	2465	520	131	1596
Davis, Edwin K., assignor to G. A. Reach, Philadelphia, Pa. Punching-bag hanger	873,027	Dec. 10	1518	318	131	1436
Davis, John P., assignor of two-fifths to L. Morton, Chicago, Ill. Smoke-preventing apparatus	873,513	Dec. 10	2467	520	131	1596
Davis, Joshua, New Ross, Ind. Hog catcher and holder	873,514	Dec. 10	2470	520	131	1597
Davis, Verner F., Orange, N. J. Temperature-regulator	873,028	Dec. 10	1519	318	131	1436
Dawson, James C., St. Louis, Mo., assignor to Sieber & Trussell Manufacturing Company. Loose-leaf binder	873,417	Dec. 10	2291	478	131	1565
Day, Benjamin, West Hoboken, N. J. Film-frame rest for printing-film frames	873,029	Dec. 10	1521	318–19	131	1436
De Beaumont, Amos J. J. (See De Beaumont, Augustus H. and A. J. J.)						
De Beaumont, Augustus H. and A. J. J., Philadelphia, Pa. Clothes-line hook	873,488	Dec. 10	2420	508	131	1588
De Wein, George F. (See Allison and De Wein.)						
De Witt, Clinton C., assignor of one-half to F. L. Aymond, St. Louis, Mo. Compressed-air-cushion block for piling	873,517	Dec. 10	2474	521	131	1598
De Witt, Frank W. (See Wheeler, James F., assignor.)						
Decker, W. W. K. (See Driver, Charles H., assignor.)						
Dedels, Henry W., Winnipeg, Manitoba, Canada. Shoe-polishing device	873,515	Dec. 10	2471	521	131	1597
Dehler, Edward E., Wonewoc, Wis. Calf-weaner	873,516	Dec. 10	2472	521	131	1597
Dennis, Samuel K., and F. W. Rice, Chicago, Ill., assignors to International Harvester Company. Manure-spreader	873,030	Dec. 10	1523	319–20	131	1437
Densmore Typewriter Company. (See Barron and Merritt, assignors.)						
Derge, Frank E., Eau Claire, Wis. Cigar-package	873,217	Dec. 10	1885	395	131	1496
Deutsche Waffen-und Munitionsfabriken. (See Raabe, Paul, assignor.)						
Diehl, Charles, New York, N. Y. Apparatus for laying out and marking round-top awnings	873,352	Dec. 10	2172	454	131	1542
Dixon, Napoleon B., Dixie, Ala. Fence structure	873,353	Dec. 10	2174	454	131	1543
Doan & Company, George B. (See Doan and Hanson, assignors.)						
Doan, George B., and H. Hanson, assignors to G. B. Doan & Company, Chicago, Ill. Game-board	873,031	Dec. 10	1530	320	131	1437
Dohrmann, Frank C., Brooklyn, N. Y. Printer's registering device	873,303	Dec. 10	2061	430–1	131	1526
Donat, Joseph L., Chicago, Ill. Trap-valve	873,518	Dec. 10	2476	521–2	131	1598
Doran, James A. (See Doran, James C. and J. A.)						
Doran, James C. and J. A., Providence, R. I. Button	873,354	Dec. 10	2176	455	131	1543
Doran, James C. and J. A., Providence, R. I. Button	873,355	Dec. 10	2177	455	131	1543
Douglass, Harry J., Bellingham, Wash. Can-vent-shielding machine	873,519	Dec. 10	2477	522–3	131	1598
Dowling, Francis J., Montreal, Quebec, Canada. Prepayment attachment for electricity-meters	873,356	Dec. 10	2177	455	131	1544
Doyle, Frank L. (See Stockham and Doyle.)						
Doyle, James S., New York, N. Y. Metallic window-frame for steel cars	873,218	Dec. 10	1887	395	131	1496
Doyle, John W. (See Mahoney, Michael F., assignor.)						
Draper Company. (See Rhoades, Alonzo E., assignor.)						
Draper Company. (See Stone, Melvin L., assignor.)						
Driver, Charles H., assignor of one-half to W. W. K. Decker, Tarpon Springs, Fla. Turpentine-hack	873,032	Dec. 10	1531	320	131	1438
Du Belle, Charles S., Williamsport, Pa. Type-writer	873,304	Dec. 10	2063	431–2	131	1526
Dunn, John J., New York, N. Y. Bed	873,357	Dec. 10	2181	455	131	1544
Dünnebier, Max R., Dresden, assignor to C. Herzberg, Cologne, Germany. Machine for manufacturing envelops	873,520	Dec. 10	2485	524–5	131	1599
Dunning, Thomas J., Chatfield, Minn. Lawn-mower	873,033	Dec. 10	1532	320–1	131	1438
Dunstan, George E., Lorain, Ohio. Double-flange trap and sink	873,120	Dec. 10	1707	356	131	1467
Dupuis, J. B. (See Renaud, Ernest, assignor.)						
Dye, Joseph O. (See Goodfellow, Moore, assignor.)						
E. Kirstein Sons Company *et al.* (See Bader, Gustav A., assignor.)						
E. Kirstein Sons Co. *et al.* (See Becker, Louis B., assignor.)						
E. Kirstein Sons Co. *et al.* (See Bemis, Wallace L., assignor.)						
Earley, Christie P., Auburn, Mass. Foot-rest	873,521	Dec. 10	2492	525	131	1599
Eaton, Thomas. (See Taylor, Eaton, and Schwarz.)						
Eckart, Edmund, New Rochelle, N. Y. Card-index	873,305	Dec. 10	2067	432	131	1526
Eckenroth, Philip, Jr., Philadelphia, Pa. Wood-splitting machine	873,418	Dec. 10	2293	478–9	131	1565
Eddowes, Ralph K., Philadelphia, Pa. Third rail	873,522	Dec. 10	2493	526	131	1600
Edison Storage Battery Company. (See Edison, Thomas A., assignor.)						
Edison, Thomas A., Llewellyn Park, Orange, N. J. Feed-regulator for grinding-machines	873,219	Dec. 10	1889	395	131	1497
Edison, Thomas A., Llewellyn Park, assignor to Edison Storage Battery Company, Orange, N. J. Reversible galvanic battery	873,220	Dec. 10	1891	396	131	1497
Edwards, Richard J., Galena, assignor of one-fourth to F. Hengesch, Chicago, Ill. Spring-bearing for vehicles	873,221	Dec. 10	1892	396	131	1497
Electric Novelty Machine Company. (See Collins, Paul E., assignor.)						
Ellsworth, John M. (See Fay and Ellsworth.)						
Ellwood, Ivan, Red Oak, Iowa. Lawn-mower	873,523	Dec. 10	2494	526	131	1600
Ely, James, Summit, N. J. Steam or vacuum gage	873,034	Dec. 10	1534	321	131	1438
Emerson Piano Company. (See Crippen, Walter R., assignor.)						
Emrich, Philip, Cincinnati, Ohio. Adjustable roofing-tongs	873,358	Dec. 10	2182	455	131	1544
Engholm, Ernest, New York, N. Y. Tobacco-pipe	873,222	Dec. 10	1893	396	131	1498
English, Thomas, Hawley, near Dartford, England. Drawing instrument for parallel ruling	873,524	Dec. 10	2497	527	131	1600
Erickson, Mathew. (See Quinn, David H., assignor.)						
Erwood, John, Chicago, Ill. Rolling door	873,359	Dec. 10	2184	456	131	1545
Estell, Samuel F., Los Angeles, Cal., and F. W. G. Phillips, Wilmette, Ill. Trolley and harp therefor	873,419	Dec. 10	2296	479	131	1565
Estler, Paul T. J London, England. Store-bin	873,664	Dec. 10	2755	584	131	1647

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Faber, Eberhard. (See Fleming, Clarence C., assignor.)						
Fain, William A., and R. A. Henry, Dandridge, Tenn. Lamp-burner	873,360	Dec. 10	2186	456	131	1545
Fanslow, Benjamin O., Los Angeles, Cal., assignor to Universal Polygraph Company incorporated. Duplicating printing-machine	873,361	Dec. 10	2186	456–7	131	1545
Farbenfabriken vorm. Friedr. Bayer & Co. (See Rudolph, Georg, assignor.)						
Farbenfabriken vorm. Friedr. Bayer & Co. (See Toepfer, Hans, assignor.)						
Farbenfabriken vorm. Friedr. Bayer & Co. (See Waldinger and Iserloth, assignors.)						
Farmer, Theodore P., Southwest Harbor, Me., assignor to Protective Tread Company, Boston, Mass. Rubber mat	873,420	Dec. 10	2296	480	131	1566
Farnoff, Jay W., Buffalo, assignor, by mesne assignments, to S. M. Stowell, Alden, N. Y. Gas-burner	873 525	Dec. 10	2499	527	131	1601
Farrow, Isaac H., Pueblo, Colo. Saw-filing machine	873,223	Dec. 10	1894	397	131	1498
Fauth, Charles E., and G. E. Skamper, Chicago, Ill. Automatic sheet-music cornet	873,035	Dec. 10	1535	321–2	131	1439
Fay, Thomas J., New York, N. Y., and J. M. Ellsworth, Bernardsville, N. J. Steering-gear	873,526	Dec. 10	2501	527–8	131	1601
Fell, Albert J., and J. A. McIver, Roodhouse, Ill. Propelling mechanism for boats	873,647	Dec. 10	2826	602	131	1658
Fenner, Charles W., assignor to Spotless Steam Sponger Company, Cleveland, Ohio. Machine for shrinking cloth	873,224	Dec. 10	1897	397–8	131	1498
Fisher, Oliver, Sloan, Iowa. Mail deliverer and receiver	873,527	Dec. 10	2505	528–9	131	1601
Fitzgerald, James. (See Patnod, Felix J., assignor.)						
Fitzpatrick, James, Peekskill, N. Y. Liquid-dispenser	873,306	Dec. 10	2069	432	131	1527
Fleming, Clarence C., Amityville, assignor to E. Faber, New York, N. Y. Display device	873,421	Dec. 10	2298	480	131	1566
Fleuss, Henry A., assignor to Pulsometer Engineering Company, Limited, Reading, England. Vapor-pump	873,528	Dec. 10	2508	529	131	1602
Flory, Charles I., Palmyra, Mo. Tripod and attaching device	873,121	Dec. 10	1708	357	131	1467
Fogel, R. R., *et al.* (See Ochoa, Victor L., assignor.)						
Ford, Albert J., assignor to Fuchs & Lang Manufacturing Co., New York, N. Y. Machine for removing bronze-dust	873,529	Dec. 10	2510	530	131	1602
Fordyce, Edmond A., Boston, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J. Carrier for pneumatic-tube apparatus	873,530	Dec. 10	2512	530	131	1602
Fordyce, Edmond A., Boston, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J. Pneumatic-despatch apparatus	873,531	Dec. 10	2513	531	131	1603
Forman, Elie, Boston, Mass. Cap	873,122	Dec. 10	1712	357	131	1468
Forsberg, Oscar F., assignor to Western Electric Company, Chicago, Ill. Lock-out switch for party telephone-lines	873,362	Dec. 10	2190	457	131	1546
Forsyth Brothers Company. (See Forsyth, George H., assignor.)						
Forsyth, George H., assignor to Forsyth Brothers Company, Chicago, Ill. Dust-collector	873,532	Dec. 10	2516	531	131	1603
Foss, Benjamin F., Fairfield, Me. Ratchet screw-driver	873,363	Dec. 10	2194	458	131	1547
Fowler, Benjamin F., assignor of one-half to L. W. Northfield, Minneapolis, Minn. Traveling rocking-horse	873,533	Dec. 10	2517	532	131	1603
Fox, William J. (See Hart, Archibald, assignor.)						
Frank, John J., Schenectady, N. Y., assignor to General Electric Company. Transformer	873,036	Dec. 10	1539	322	131	1439
Freeman, Fred. (See Tobey and Freeman.)						
Freeman, Samuel A. (See Throop and Freeman.)						
Freytag, Victor, Des Moines, Iowa. Folding lamp-shade	873,665	Dec. 10	2756	585	131	1647
Fricke, Harry C., and G. E. Turner, assignors to Turner-Fricke Manufacturing Company, Pittsburg, Pa. Admission-valve for explosive-engines	873,534	Dec. 10	2519	532	131	1604
Fuchs & Lang Manufacturing Co. (See Ford, Albert J., assignor.)						
Funkhouser, Jacob O., Hagerstown, Md. Combination stop-action	873,364	Dec. 10	2195	458	131	1547
Galbraith, George J., assignor to Couch & Seeley Company, Boston, Mass. Electrical drop	873,307	Dec. 10	2071	432	131	1527
Gamer, Charles, Fort Worth, Tex. Gas-producer	873,037	Dec. 10	1540	322–3	131	1439
Gardy, Henry D., Philadelphia, Pa. Massage implement	873,123	Dec. 10	1713	357	131	1468
Garret, Jean, Pittsburg, Pa. Curtain support and hanger	873,038	Dec. 10	1542	323	131	1440
Garrison, George H., Olympia, Wash., and W. A. Hillis, Portland, Oreg. Gun-sight	873,535	Dec. 10	2521	532	131	1604
Gast, Albert C., St. Joseph, Mich. Cigar-cutter	873,365	Dec. 10	2200	458	131	1547
Gehne, Carl A., Chicago, Ill. Drawer-support	873,225	Dec. 10	1898	398	131	1499
General Electric Company. (See Baldwin, Henry S., assignor.)						
General Electric Company. (See Ball, Henry P., assignor.)						
General Electric Company. (See Carey, William G., assignor.)						
General Electric Company. (See Frank, John J., assignor.)						
General Electric Company. (See Gray, Alexander T., assignor.)						
General Electric Company. (See Junggren, Oscar, assignor.)						
General Electric Company. (See Merrill, Wilbur L., assignor.)						
General Electric Company. (See Noeggerath, Jakob E., assignor.)						
General Electric Company. (See Rice, Walter F., assignor.)						
General Electric Company. (See Riddell, John, assignor.)						
General Electric Company. (See Schattner, Ernest, assignor.)						
General Electric Company. (See Slichter, Walter I., assignor.)						
General Electric Company. (See Taylor, John B., assignor.)						
General Railway Signal Company. (See Townsend, Fitzhugh, assignor.)						
Geometric Tool Company. (See Leonard, Wilbur A., assignor.)						
Gerhardt, George J., assignor of one-half to C. Hoffman, Steubenville, Ohio. Mechanism for marking sheets	873,226	Dec. 10	1899	398–9	131	1499
Gevaert-Naert, Louis, Bevere-Audenarde, assignor to Société Anonyme des Cuirs et Courroies d'Audenarde, Audenarde, Belgium. Manufacturing artificial leather	873,582	Dec. 10	2614		131	1620
Gifford, Albert J., assignor to C. H. Morgan, Worcester, Mass. Gas-producer	873,039	Dec. 10	1544	323–4	131	1440
Giles, John S., Chicago, Ill. Closure-gasket and making the same	873,366	Dec. 10	2202	459	131	1548
Gillespie, Robert T., Bloomfield, N. J. Adjustable cleaning-brush	873,308	Dec. 10	2072	323–4	131	1527
Gilmore, Robert F., and W. C. Cook, Montpelier, Ind. Railway-switch	873,536	Dec. 10	2523	533	131	1604
Glover, Samuel. (See Young and Glover.)						
Golland, Henry S., Manchester, England. Spinning-mule	873,422	Dec. 10	2300	480–2	131	1566
Goodfellow, Moore, assignor of one-half to J. O. Dye, Columbus, Ohio. Beet-harvester	873,040	Dec. 10	1547	324–5	131	1441
Goodman Manufacturing Company. (See Levin, Nils D., assignor.)						
Goodwine, John. (See Hall, Francis M., assignor.)						
Goodwine, Ulysses S. (See Hall, Francis M., assignor.)						
Gottwals, William O., Philadelphia, Pa. Arch-file	873,537	Dec. 10	2525	533	131	1605
Gould, Ovid M., Montreal, Quebec, Canada. Brake	873,367	Dec. 10	2204	459	131	1548
Govan, James, Abington, Pa. Golf-club	873,423	Dec. 10	2304	482	131	1567
Grantland, John W., Philadelphia, Pa. Faucet	873,538	Dec. 10	2527	533	131	1605
Gray, Alexander T., Schenectady, N. Y., assignor to General Electric Company. Condenser for elastic-fluid turbines	873,041	Dec. 10	1552	325	131	1441
Gray, Simon J., and J. Horning, Oakland, Cal. Saw	873,666	Dec. 10	2756	585	131	1647
Greenawalt, John E., Denver, Colo. Chloridizing ores	873,309	Dec. 10	2075	433	131	1528
Greene, Frederick, Canonsburg, Pa. Nut-lock	873,424	Dec. 10	2305	482	131	1567
Greis, Frank E., Syracuse, N. Y. Sash-lock	873,425	Dec. 10	2306	482	131	1567
Griffith, Lawrence, Yonkers, N. Y., assignor to Hall Signal Company. Mechanical movement	873,426	Dec. 10	2307	483	131	1567
Grover, Joel A., Woodland, Wash. Hop-w re-detaching device	873,227	Dec. 10	1902	399	131	1499

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Gudmundson, Gudmunder S., Ardal, Manitoba, Canada. Sled-brake	873,124	Dec. 10	1715	358	131	1498
Guels, Herman. (See Boyce and Guels.)						
Guenther, Edward P., West Hoboken, N. J. Machine for exerting pressure	873,539	Dec. 10	2528	533	131	1606
Gustafson, Adolph F., Pueblo, Colo. Railway-tie	873,310	Dec. 10	2076	434	131	1525
Guynn, Lincoln, Wabash, Ind. Tray for trunks	873 540	Dec. 10	2529	534	131	1606
Hagemann, Emil S., Copenhagen, Denmark, assignor, by mesne assignments, to American Telegraphone Company. Apparatus for receiving and strengthening the reproduction of messages, signals, &c.	873,042	Dec. 10	1556	326	131	1441
Hagemann, Emil S., Copenhagen, Denmark. Receiving and strengthening the reproduction of speech, signals, &c.	873,541	Dec. 10	2530	534	131	1606
Hahn, Arwed, Cassel, Germany. Telescope	873,228	Dec. 10	1904	399–400	131	1500
Haines, James M. (See Peterson and Haines.)						
Hakenholz, Herman, South Omaha, Nebr. Entrail-cleaning mechanism	873,311	Dec. 10	2078	434	131	1528
Hall, Francis M., assignor of two-thirds to J. and U. S. Goodwine, Potomac, Ill. Automatic switch	873,368	Dec. 10	2206	459	131	1549
Hall Signal Company. (See Griffith, Lawrence, assignor.)						
Halliday, George, assignor of forty-five one-hundredths to E. J. St. Onge, Superior, Wis. Aerial vessel	873,542	Dec. 10	2532	534–5	131	1606
Hamilton, Morgan S. (See Higgs and Hamilton.)						
Hamilton, William L., Chicago, Ill. Register-hook	873,043	Dec. 10	1559	326	131	1442
Hammann, William, Milwaukee, Wis. Ventilator	873,125	Dec. 10	1715	358	131	1469
Hampton, Calvin G., Ryde Station, Cal. Auto steam-plow	873,229	Dec. 10	1906	400	131	1500
Handlan, Alexander H., Jr., St. Louis, Mo. Lamp	873,427	Dec. 10	2309	483	131	1568
Hanna, Gustave H. (See Cummings and Hanna.)						
Hanson, Hart. (See Doan and Hanson.)						
Hanson, Henry H., Tyler, Tex. Piano-sling	873,044	Dec. 10	1562	327	131	1442
Harazim, Franjo, *et al.* (See Regal, August, assignor.)						
Hardman, Peck & Company. (See Hattemer, Justus, assignor.)						
Harris, James W., Ashland, Ohio. Door-hanger	873,230	Dec. 10	1907	400	131	1501
Harris, William A., Greenville, S. C. Hoeing-machine	873,543	Dec. 10	2537	535–6	131	1607
Harroun, Ray W., Chicago, Ill. Automobile-bumper	873,544	Dec. 10	2541	536	131	1607
Hart, Archibald, assignor of one-half to W. J. Fox, Glen Head, N. Y. Vehicle-hub	873,428	Dec. 10	2310	483	131	1568
Harter, Noah S., Waukegan, assignor to American Steel & Wire Company, Chicago, Ill. Making coil-springs	873,429	Dec. 10	2311	483	131	1569
Harter, Noah S., Waukegan, assignor to American Steel & Wire Company, Chicago, Ill. Means for cutting coil-springs	873,430	Dec. 10	2312	484	131	1569
Hartshorn, Joseph, Des Moines, Iowa. Trap fish-hook	873,231	Dec. 10	1909	401	131	1501
Hasselbarth, Carl O. (See Sprague, Franklin S., assignor.)						
Hattemer, Justus, West New York, N. J., assignor to Hardman, Peck & Company, New York, N. Y. Tracker-bar	873,545	Dec. 10	2543	537	131	1607
Hayes, Elmer F., Kirwin, Kans. Dinner-pail and heater	873,232	Dec. 10	1910	401	131	1501
Hedrick, James, Favonia, Va. Hoof-parer	873,546	Dec. 10	2544	537	131	1608
Hedstrom, Carl O. (See Carlson and Hedstrom.)						
Heine, Richard, New York, N. Y. Combined fob and purse	873,431	Dec. 10	2314	484	131	1569
Hemsley, Joseph A., Trenton, N. J. Vehicle-top	873,233	Dec. 10	1912	401–2	131	1502
Henderson, Clark T., Pittsburg, Pa., and N. C. Bassett, assignors to Cutler-Hammer Mfg. Co., Milwaukee, Wis. Electrically-operated coal-hoist	873,312	Dec. 10	2080	434–5	131	1529
Hengesch, Ferdinand. (See Edwards, Richard J., assignor.)						
Henkle, Edward A. (See Pendleton, John H., assignor.)						
Henry, John J., Watson, Ill. Magazine-firearm	873,547	Dec. 10	2546	538–9	131	1608
Henry, Robert A. (See Fain and Henry.)						
Henry, William K., assignor to P. & F. Corbin, New Britain, Conn. Door-hinge	873,432	Dec. 10	2315	484	131	1569
Henry, William K., assignor to P. & F. Corbin, New Britain, Conn. Door closer and check	873,433	Dec. 10	2316	485	131	1570
Hepburn, James T., Lochwinnoch, Scotland. Motor-car	873,434	Dec. 10	2317	485–6	131	1570
Heppe, George. Philadelphia, Pa. Article of confectionery	873,399	Dec. 10	2208	460	131	1549
Herschel, Clemens, Glen Ridge, N. J. Means for driving hydraulic turbines	873,435	Dec. 10	2318	486–7	131	1570
Herzberg, Carl. (See Dünnebier, Max R., assignor.)						
Hestness, Bernt, assignor of one-half to I. J. Blakkan, Rockford, Wash. Fruit-picker	873,234	Dec. 10	1914	402	131	1502
Heywood, Charles H., and D. E. Travis, Waukegan, Ill., assignors to United States Envelope Company, Springfield, Mass. Mechanism for gumming envelop-blanks	873,370	Dec. 10	2209	460–1	131	1549
Higgs, William A., and M. S. Hamilton, Davis, Tex. Cotton chopper and cultivator	873,548	Dec. 10	2554	539	131	1608
Hilbert, Henry P., Cincinnati, Ohio. Paper coating or treating machine	873,126	Dec. 10	1718	358–9	131	1469
Hill, Edward A., assignor to Chicago Grain Door Company, Chicago, Ill. Latch-hook	873,235	Dec. 10	1916	402	131	1503
Hill, Patrick F., and J. E. Coleman, Cabot, Ark. Fertilizer-distributer	873,236	Dec. 10	1918	402	131	1503
Hillis, William A. (See Garrison and Hillis.)						
Hiltz, John H., and J. B. Smith, assignors to Chamberlin Metal Weather Strip Company, Detroit, Mich. Casement-window	873,045	Dec. 10	1562	327	131	1442
Hinkle, James F. (See Young and Hinkle.)						
Hinkley, Elizabeth J., *et al.*, executors. (See Hinkley, George M.)						
Hinkley, George M., deceased, (E. J. Hinkley and E. L. Wood, executors,) assignor of one-half to Allis-Chalmers Company, Milwaukee, Wis. Edger	873,667	Dec. 10	2757	585	131	1647
Hippe, Ernst E., Copenhagen, Denmark. Making artificial marble	873,371	Dec. 10	2214		131	1550
Hof, Frank, New York, N. Y. Harness-hanger	873,549	Dec. 10	2556	539	131	1609
Hoffman, Charles. (See Gerhardt, George J., assignor.)						
Hoffmann, Jacob A., Denver, Colo. Receptacle	873,237	Dec. 10	1919	403	131	1503
Holdren, Herbert H., Dayton, Ohio. Device for beheading fowls	873,436	Dec. 10	2321	487	131	1571
Hollister, Clarence P., assignor to Stilson Motor Car Co., Pittsfield, Mass. Intake device for explosive mixtures in vapor-engines	873,372	Dec. 10	2216	461	131	1550
Holmes, George A., Newton, Mass. Snap-fastening buckle	873,128	Dec. 10	1723	360	131	1470
Holmes, George A., Newton Center, assignor to United States Fastener Company, Boston, Mass. Snap-fastener	873,127	Dec. 10	1721	360	131	1470
Horning, John. (See Gray and Horning.)						
Howard, Frank S., Lombard, Ill. Device for tying rolls of roofing materials	873,046	Dec. 10	1564	327–8	131	1443
Howe, Fred F., Salem, assignor, by mesne assignments, to Turner Tanning Machinery Company, Boston, Mass. Seasoning-machine	873,238	Dec. 10	1920	403	131	1504
Hübner, Robert, New York, N. Y. Horseshoe	873,373	Dec. 10	2217	461	131	1550
Hudson, Erving C., Wilmington, N. C. Blacking-brush	873,550	Dec. 10	2558	539–40	131	1609
Humphries, George E., Wellington, New Zealand. Scaffolding-bracket	873,129	Dec. 10	1724	360	131	1470
Hunt, Charles, Chicago, Ill. Puzzle	873,313	Dec. 10	2086	435	131	1529
Hunter, Stephen D., Philadelphia, Pa. Automobile wind-shield	873,047	Dec. 10	1565	328	131	1443
Huntington, Arthur S. (See Huntington, Charles S. and A. S.)						
Huntington, Charles S. and A. S., Omaha, Nebr. Snap-hook	873,239	Dec. 10	1921	403	131	1504
Hurford, Alvin. (See Courtney, Sarah C., assignor.)						
Hurlburt, George B., Middletown, Conn. Wheel	873,048	Dec. 10	1567	328	131	1444
Hurley, Timothy E., Beverly, Mass. Rubber boot and shoe	873,551	Dec. 10	2559	540	131	1609
Hyde, Eugene A., New Britain, Conn. Gaiting device for horses	873,240	Dec. 10	1922	404	131	1504
Ideal Register and Metallic Furniture Company. (See Petroskey, John H., assignor.)						
Imie, Emil, Weisser Hirsch, near Dresden, Germany. Turbine-wheel	873,241	Dec. 10	1924	404	131	1540

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Imperial Art Press Co. (See Prouty, George W., assignor.)						
Ingalls, Edward E. (See Lyon, Fred, assignor.)						
Inglis, James, deceased, Toronto, Ontario, Canada; F. D. Todd, administrator, assignor, by mesne assignments, to G. R. Lawrence, Chicago, Ill. Photographic flash-lamp	873,242	Dec. 10	1925	404	131	1505
Ingold, Carl F. (See Webster and Ingold.)						
Ingram, Jesse A., Avery, Tex. Seeder and fertilizer-distributer	873,130	Dec. 10	1724	360–1	131	1470
International Harvester Company. (See Dennis and Rice, assignors.)						
Irving, John, Jr., New Brighton, N. Y. Ash-sifter	873,049	Dec. 10	1568	328–9	131	1444
Iserloth, Carl F. (See Waldinger and Iserloth.)						
Itter, Herbert C., Bay City, Mich. Photograph-easel	873,050	Dec. 10	1570	329	131	1444
Jackson, Benjamin A., *et al.* (See Ochoa, Victor L., assignor.)						
Janin, Albert S., assignor of one-third to W. J. Cole, New York, N. Y. Electric trolley	873,668	Dec. 10	2760	586	131	1648
Janssen, Henry, assignor to Textile Machine Works, Incorporated, Wyomissing, Pa. Change-gearing for braiding-machines	873,698	Dec. 10	2827	602–3	131	1658
Jeffrey, Harry, Louisville, Ky. Wrench	873,437	Dec. 10	2322	487	131	1571
Jenkins, Edwin E., Villisca, Iowa. Derrick	873,374	Dec. 10	2218	461–2	131	1550
Jewell, Martin, Clinton, Me. Vehicle-brake	873,552	Dec. 10	2560	540	131	1610
John, Albert, Jr., Chicago, Ill. Spring shade-roller	873,438	Dec. 10	2323	488	131	1571
Johnson, Abner, Strandquist, Minn. Snap-hook	873,553	Dec. 10	2562	540	131	1610
Johnson, Frank V., *et al.* (See Mentzer, Claude E., assignor.)						
Johnson, Ole J. (See Olsen and Johnson.)						
Johnston, Horace G., and J. B. Norris, assignors to American Well & Prospecting Co., Corsicana, Tex. Hydraulic swivel	873,669	Dec. 10	2762	586	131	1648
Jones, Budd J., Cincinnati, Ohio. Ground-plate	873,375	Dec. 10	2221	462	131	1551
Jones, John W. (See Magoon, Augustus, assignor.)						
Junggren, Oscar, Schenectady, N. Y., assignor to General Electric Company. Elastic-fluid turbine	873,051	Dec. 10	1572	329–30	131	1445
Junggren, Oscar, Schenectady, N. Y., assignor to General Electric Company. Governing mechanism for turbines	873,243	Dec. 10	1927	404–5	131	1505
Kadow, Otto F., and J. H. Lyons, assignors to said Kadow and C. P. Salen, Cleveland, Ohio. Automatic flushing device	873,554	Dec. 10	2563	541	131	1610
Kaiser, Fredrick C. (See Meeks and Kaiser.)						
Kalbe, Charles J. (See Lang and Kalbe.)						
Karazej, Eugen, *et al.* (See Regal, August, assignor.)						
Karsam Soap Company. (See Samuel, Marcus R. A., assignor.)						
Kavle, Oscar C., Syracuse, assignor to J. T. Underwood, New York, N. Y. Computing attachment for type-writing machines	873,314	Dec. 10	2087	436–7	131	1529
Keables, Raymond, *et al.* (See Wirt, Reuben D., assignor.)						
Kearns Furniture Company. (See Kearns, Oscar E., assignor.)						
Kearns, Oscar E., assignor to Kearns Furniture Company, High Point, N. C. Provision-safe	873,555	Dec. 10	2567	541	131	1641
Keehn, Harry W. (See Keehn, Henry A. and H. W.)						
Keehn, Henry A. and H. W., Newark, Ohio. Attachment for molds	873,670	Dec. 10	2766	586–7	131	1648
Keller, Albert T., Pittsburg, Pa. Rolling-mill	873,439	Dec. 10	2326	488	131	1572
Kellogg Switchboard & Supply Company. (See Koch, Frank S., assignor.)						
Kelsall, Charles H., Horwich, England. Manufacture of high-per-cent.-manganese steel	873,556	Dec. 10	2569		131	1611
Kelton, John M. (See Wright, James E., assignor.)						
Kendig, Jacob S., assignor to Keystone Farm Machine Company, York, Pa. Wheeled cultivator	873,376	Dec. 10	2223	462	131	1551
Kennedy, James W., Chicago, Ill., assignor, by mesne assignments, to Kennedy Typewriter Company of Manhattan, New York, N. Y. Ribbon mechanism for type-writing machines	873,244	Dec. 10	1931	405–6	131	1506
Kennedy Typewriter Company of Manhattan. (See Kennedy, James W., assignor.)						
Kenyon, William J. C., and W. S. King, Omaha, Nebr. Blocking and derailing device	873,377	Dec. 10	2224	463	131	1551
Kerr, Adelaide C., Trafford City, Pa. Kitchen-cabinet	873,440	Dec. 10	2327	489	131	1572
Ketchum, Edward F. (See Brower, James F., assignor.)						
Keystone Farm Machine Company. (See Kendig, Jacob S., assignor.)						
King, Thomas B., Ephrata, Wash. Life-boat	873,557	Dec. 10	2570	541	131	1611
King, Winfield S. (See Kenyon and King.)						
Kingsland, Allan B., Burlington, Vt. Portable oven	873,558	Dec. 10	2571	541	131	1611
Kirkegaard, Georg, New York, N. Y. Head for bottle-capping machines	873,245	Dec. 10	1937	406	131	1506
Knapp, Frederick H. (See Cornell, Evan W., assignor.)						
Knöchel, George H., Lansdowne, Md. Grave-protector	873,052	Dec. 10	1578	330	131	1445
Knox, George W., Philadelphia, Pa. Float fabric	873,378	Dec. 10	2225	463	131	1551
Knutson, John. (See Wolfenden, Knutson, and Larsen.)						
Koch, Frank S., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Electric condenser	873,053	Dec. 10	1580	331	131	1445
Koch, John N., Cincinnati, Ohio. Photograph cabinet or rack	873,379	Dec. 10	2226	463	131	1552
Koob Dumping Wagon Company. (See Warner, Arthur L., assignor.)						
Koontz, John H., Stewardson, Ill. Molding-machine	873,559	Dec. 10	2573	542	131	1612
Kosatka, Joseph, Chicago, Ill. Edge-guide for sewing-machines	873,246	Dec. 10	1939	406–7	131	1506
Koster, William C. (See Vincent, Joseph A., assignor.)						
Krill, August, Acton, England. Bayonet and side arm	873,054	Dec. 10	1582	331	131	1446
Kuhl, Albert F., Van Wert, Ohio. Mail-receiver	873,247	Dec. 10	1942	407	131	1507
L. S. Starrett Co. (See Starrett, Laroy S., assignor.)						
L. S. Starrett Co. (See Starrett and Adell, assignors.)						
Lafayette, The Great, New York, N. Y. Theatrical device	873,315	Dec. 10	2093	437–8	131	1530
Lagasse, Isidore J., and N. Normand, New Bedford, Mass. Jack or lifting device	873,248	Dec. 10	1946	407	131	1507
Lake, Golladay, Memphis, Tenn. Vehicle-top support	873 055	Dec. 10	1583	331	131	1446
Lake, Simon, Berlin, Germany. Drill	873,056	Dec. 10	1585	332	131	1446
Lamb, William F., *et al.* (See Bynum, Samuel B., assignor.)						
Lamboley, John L., Fort Wayne, Ind. Printing attachment for paper-roll holders	873,560	Dec. 10	2574	542	131	1612
Lame, Frank C., New York, N. Y. Number-lantern for automobiles	873,316	Dec. 10	2097	438	131	1530
Lamson Consolidated Store Service Company. (See Fordyce, Edmond A., assignor.)						
Lamson Consolidated Store Service Company. (See Litchfield, Isaac W., assignor.)						
Lamson Consolidated Store Service Company. (See Pearsall, Albert W., assignor.)						
Lamson Consolidated Store Service Company. (See Thomas, Edward G., assignor.)						
Landers, Frary and Clark. (See Smith, William H., assignor.)						
Landry, Moïse, Merced, Cal. Electric heater	873,317	Dec. 10	2099	438	131	1531
Lang, Edward P., and C. J. Kalbe, Chicago, Ill. Stool	873,249	Dec. 10	1947	407–8	131	1507
Langer, Gotthold L., Stockton, assignor to Pacific Steel & Wire Co., Oakland, Cal. Wire fence	873,318	Dec. 10	2100	439	131	1531
Langer, Paul, Milwaukee, Wis. Cross-head	873,561	Dec. 10	2577	542	131	1613
Larsen, Lewis. (See Wolfenden, Knutson, and Larsen.)						
Larzelere, Robert G., Wathena, Kans. Wire-stretcher	873,562	Dec. 10	2578	543	131	1613
Laubach, Margaret F., Philadelphia, Pa. Hat-fastener	873,057	Dec. 10	1588	332	131	1447
Lawrence, George R. (See Inglis, James, assignor.)						
Lawrence, John D., Princeton, N. J. Casket-handle	873,563	Dec. 10	2579	543	131	1613
Le Brocq, Richard F., assignor of one-half to E. J. Selley, New York, N. Y. Door-operating mechanism	873,058	Dec. 10	1589	333	131	1447

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Lea, Henry I., Pittsburg, Pa. Gas manufacture	873,250	Dec. 10	1948	408	131	1508
Leader Specialty Manufacturing Company. (See Martindale, John H., assignor.)						
Leapley, Edward E. (See Sloderbeck, Martin C., assignor.)						
Lebrun, Hector, Brussels, Belgium. Microtome	873,059	Dec. 10	1590	333	131	1447
Leidal, Knute, and M. Ulring, Webster, Minn. Carrier	873,380	Dec. 10	2227	463	131	1562
Leiser, Heinrich, Thorn, Germany. Device for mixing fluids and molten metals of different densities	873,131	Dec. 10	1727	361	131	1471
Leonard, Wilbur A., assignor to Geometric Tool Company, New Haven, Conn. Reversing tap-holder	873,441	Dec. 10	2329	489	131	1572
Levin, Nils D., assignor to Goodman Manufacturing Company, Chicago, Ill. Locomotive	873,442	Dec. 10	2330	490	131	1573
Lewis, George, and D. A. Smith, Alto Pass, Ill. Pressure-tank	873,671	Dec. 10	2768	587	131	1649
Leyland, John W. (See Leyland, William and J. W.)						
Leyland, William and J. W., New York, N. Y. Lubricator	873,319	Dec. 10	2101	439	131	1531
Libby, Charles T. (See Babcock, George G., assignor.)						
Libby, Charles T., and G. G. Babcock, Portland, Me.; said Babcock assignor to said Libby. Linotype-machine	873,251	Dec. 10	1953	408–9	131	1508
Lindauer, Jules, Paris, France. Corset	873,443	Dec. 10	2331	490	131	1573
Lindgren, Daniel A., Waltham, Mass. Pendent winding and setting watch	873,564	Dec. 10	2580	543	131	1613
Litchfield, Isaac W., Boston, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J. Terminal for pneumatic-despatch tube apparatus	873,565	Dec. 10	2582	543–4	131	1613
Little, Adelbert P. (See Nixon, Morris B., assignor.)						
Loewer, Henry F., Rochester, N. Y. Last	873,060	Dec. 10	1592	333	131	1448
Lomax, Ralph, and J. Tomlinson, Darwen, England. Electrical control apparatus for steam-generators	873,061	Dec. 10	1594	333–4	131	1448
Lotz, James D. (See Viger, John A., assignor.)						
Louden Machinery Company. (See Neller, Albert H., assignor.)						
Loudenslager, William J., and J. E. Morris, deceased, (L. L. Morris, executor,) Jacksonburg, W. Va. Cooking utensil	873,672	Dec. 10	2770	587	131	1649
Lovejoy, Arthur H., Red Bank, N. J. Air-heater	873,566	Dec. 10	2584	544–5	131	1614
Lowy, Ignatz, and O. F. Adelman, Chicago, Ill. Beer-racker	873,567	Dec. 10	2589	546	131	1615
Luburg, Ellsworth N., assignor of two-thirds to W. W. Varney and A. H. Smith, Baltimore, Md. Trolley-wheel	873,444	Dec. 10	2333	490	131	1573
Luchinger, Albert, New York, N. Y. Motor-sleigh	873,062	Dec. 10	1597	334	131	1449
Lufsky, Charles, Chicago, Ill. Bowling-alley	873,252	Dec. 10	1959	409	131	1508
Lyman Gun Sight Corporation. (See Windridge and Wilcox, assignors.)						
Lynde, Frank G., assignor to J. A. Weser, New York, N. Y. Mechanical musical instrument	873,320	Dec. 10	2102	439	131	1531
Lyon, Fred, assignor of one-half to E. E. Ingalls, Ithaca, N. Y. Speed recorder and indicator	873,321	Dec. 10	2104	440	131	1532
Lyons, Joseph H. (See Kadow and Lyons.)						
MacGahan, Paul, Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Coil for electrical apparatus	873,253	Dec. 10	1960	409	131	1509
MacNelly, Mathias F., assignor of one-half to O. R. Vasbinder, Buffalo, N. Y. Fastening device	873,063	Dec. 10	1597	334	131	1449
Maclachlan, John E., Boston, Mass. Loose-leaf binder	873,151	Dec. 10	1757	370	131	1476
Magoon, Augustus, Logan, assignor of one-half to J. W. Jones, Haydenville, Ohio. Treating brick	873,568	Dec. 10	2592		131	1615
Mahoney, Michael F., New Haven, assignor of one-half to J. W. Doyle, East Haven, Conn. Sheet-feeding mechanism	873,322	Dec. 10	2106	440–1	131	1532
Mallory, John P., *et al.* (See Bynum, Samuel B., assignor.)	873,569	Dec. 10	2593	546	131	1616
Malmquist, Charles, Sioux City, Iowa. Street-sweeping machine	873,445	Dec. 10	2334	490	131	1574
Maltby, Julius, assignor to Waterbury Buckle Co., Waterbury, Conn. Garter-slide	873,381	Dec. 10	2229	464	131	1552
Manahan, Ira C., Goshen, Ind. Gliding settee	873,570	Dec. 10	2595	547	131	1616
Mangels, William F., and C. N. Brewster, New York, N. Y. Amusement apparatus	873,446	Dec. 10	2335	491	131	1574
Manheim, Henry M., New York, N. Y. Rack	873,571	Dec. 10	2598	547	131	1616
Mansfield, Benjamin A., Salem, Mass. Combination-tool	873,572	Dec. 10	2599	547–8	131	1617
Mansfield, Frank R., *et al.* (See Mentzer, Claude E., assignor.)	873,132	Dec. 10	1727	362	131	1471
Mantsion, Frank X., Philadelphia, Pa. Automatic switch	873,573	Dec. 10	2601	548	131	1617
Marino, Quintin, and E. W. Barton-Wright, London, England. Electric accumulator	873,574	Dec. 10	2603	548	131	1618
Markmann, Emil R. and J., Chicago, Ill. Automatically-closing furnace-door and device for opening the same	873,152	Dec. 10	1758	370	131	1477
Markmann, John. (See Markmann, Emil R. and J.)	873,382	Dec. 10	2231	464	131	1553
Marsteller, Aaron R., assignor of one-third to D. Marsteller, St. Louis, Mo. Molding process	873,447	Dec. 10	2335	491	131	1574
Marsteller, Delia. (See Marsteller, Aaron R., assignor.)	873,323	Dec. 10	2113	441	131	1532
Martindale, John H., Bradford, assignor to Leader Specialty Manufacturing Company, Smethport, Pa. Valve	873,134	Dec. 10	1730	362–3	131	1471
Marx, Joseph, Buffalo, N. Y. Storage-battery grid	873,675	Dec. 10	2776	589	131	1650
Massaad, Ascander K., New York, N. Y. Illusion device	873,383	Dec. 10	2231	465	131	1553
Matthews, Francis I., assignor to Oakland Stamp Mill Co., Oakland, Cal. Stamp-mill	873,258	Dec. 10	1967	412	131	1510
McCarty, Ralph. (See Westrip and McCarty.)	873,580	Dec. 10	2611	550	131	1619
McConnell, Milton B., Tampa, Fla. Switch	873,325	Dec. 10	2120	442	131	1534
McCoy, Nathan, Marshalltown, Iowa. Sight-feed lubricator	873,162	Dec. 10	1779	374–5	131	1480
McCune, Samuel A., New Waterford, Ohio. Weeder attachment for cultivators	873,676	Dec. 10	2778	589	131	1651
McDonnell, Michael E., Leominster, Mass. Ornamental article for personal wear	873,677	Dec. 10	2779	589	131	1651
McElroy, Covelle S., Steppville, Kans. Attachment for screen-doors	873,069	Dec. 10	1609	336	131	1451
McGinn, Patrick J., Salisbury, Rhodesia. Spring for vehicles	873,135	Dec. 10	1734	363	131	1472
McGladdery, David, Newport, Ky., and J. Pawolowski, Cincinnati, Ohio. Race-course barrier and starting device	873,163	Dec. 10	1790	375	131	1480
McGuinness, Leonard J., *et al.* (See McGuire, Patrick J., assignor.)	873,581	Dec. 10	2613	550–1	131	1620
McGuire, Patrick J., assignor of one-fifth to L. J. McGuinness and E. A. Schminke, New York, N. Y. Tile	873,575	Dec. 10	2604	549	131	1618
McIver, John A. (See Fell and McIver.)	873,573	Dec. 10	2771	588	131	1649
McKinnon, Fred N., Boston, Mass. Instep-support	873,153	Dec. 10	1760	370–1	131	1477
McLeod, Alexander Z., New York, N. Y. Caisson construction	873,254	Dec. 10	1961	409	131	1509
McMichael, Eduard L., Arlington, Ky. Gate	873,064	Dec. 10	1599	335	131	1449
McNeil, Daniel W., Cincinnati, Ohio. Hair-pin	873,576	Dec. 10	2607	549	131	1618
McQueen, Finlay R., assignor of one-half to C. H. Scott, Minneapolis, Minn. Subaqueous concrete construction	873,324	Dec. 10	2115	441–2	131	1533
Meeks, Jacob A., and F. C. Kaiser, Muncie, Ind. Self-feeding sawing-machine						
Mentzer, Claude E. assignor to F. V. Johnson and F. R. Mansfield, Denver, Colo. Corn-planter						
Mercer, Nelson S., Omaha, Nebr. System for ventilating passenger-cars						
Merrill, Arthur H., Hartford, Conn. Attachment for stoves						
Merrill, Wilbur L., Schenectady, N. Y., assignor to General Electric Company. System of motor control						
Merritt, Henry W. (See Barron and Merritt.)						
Mertes, Michael E., Chicago, Ill. Puzzle						
Metzger, John. (See Allen and Metzger.)						
Michaels, August, Milwaukee, Wis. Automatic valve						

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Mick, Frederick, Billings, Mont. Wagon-brake	873,577	Dec. 10	2608	549	131	1618
Miller, George A., assignor to St. Louis Lightning Rod Co., St. Louis, Mo Two-male T	873,154	Dec. 10	1764	371	131	1478
Miller, Howard E., St. Louis, Mo. Electrical testing system	873,674	Dec. 10	2774	588–9	131	1650
Milwaukee Optical Manufacturing Company. (See Webster and Ingold, assignors.)						
Minard, Ernest E., Chicago, Ill. Article-holder	873,133	Dec. 10	1729	362	131	1471
Mindermann, Henry, Brooklyn, N. Y. Non-refillable bottle	873,155	Dec. 10	1766	372	131	1478
Mitchell, Frank, and C. Beal, Jr., Philadelphia, Pa. Wire head and fastening means for looms	873,448	Dec. 10	2338	491	131	1574
Mizell, Hardy P., Waxahachie, Tex. Cotton-chopper	873,255	Dec. 10	1963	410	131	1509
Model Incubator Company. (See Cyphers, Charles A., assignor.)						
Moe, Charles, Chicago, Ill. Gem-displaying ring	873,156	Dec. 10	1767	372	131	1478
Mohler, George H., Fremont, Nebr. Air-pump	873,065	Dec. 10	1602	335	131	1450
Molyneux, Charles H., Rochester, N. Y. Eaves-trough support	873,578	Dec. 10	2608	550	131	1619
Monarch Acetylene Gas Company. (See Schlieder, Augustus E., assignor.)						
Monks, Archibald G., Brookline, Mass. Hoisting apparatus	873,157	Dec. 10	1768	372–3	131	1478
Moore, Richard H., Wakita, Okla. Ter. Knotter for harvesters	873,158	Dec. 10	1774	373	131	1479
Moores, James, Manchester, England. Magneto-electric dumb-bell	873,066	Dec. 10	1605	335	131	1450
Morgan, Charles H. (See Gifford, Albert J., assignor.)						
Morrell, Thomas W., Bloomfield, N. J. Came	873,067	Dec. 10	1606	336	131	1450
Morris, James E., deceased. (See Loudenslager and Morris.)						
Morris, L. L., executor. (See Loudenslager and Morris.)						
Morton, Frank M., Columbus, Ga. Truck	873,159	Dec. 10	1775	373	131	1479
Morton, Llewellyn. (See Davis, John P., assignor.)						
Mott, Abram C., Philadelphia, Pa. Hot-air furnace	873,449	Dec. 10	2339	491–2	131	1574
Motter, Elmer E., Tippecanoe City, Ohio. Fat-cutting machine	873,256	Dec. 10	1963	410–11	131	1510
Mueller, Martin, Elyria, Ohio. Porch-cleaner	873,451	Dec. 10	2343	492	131	1575
Mug, Edward T., Norwood, Ohio, assignor to Bullock Electric Manufacturing Company. Field-coil support	873,160	Dec. 10	1776	373–4	131	1479
Mulkerins, Thomas M., Chicago, Ill. Fan	873,257	Dec. 10	1966	411	131	1510
Müller, Gottfried, Philadelphia, Pa. Drying and ventilating system for houses, factories, or buildings	873,450	Dec. 10	2340	492	131	1575
Munday, Robert, Fulton, Ark. Paper-bag punch	873,161	Dec. 10	1778	374	131	1480
Munn, James M., Evanston, assignor of one-half to A. A. Norton, Chicago, Ill. Log finder and lifter for submerged logs, &c.	873,579	Dec. 10	2610	550	131	1619
Myers and Brother, F. E. (See Myers, Philip A., assignor.)						
Myers, Philip A., assignor to F. E. Myers and Brother, Ashland, Ohio. Track for door-hangers	873,068	Dec. 10	1607	336	131	1451
Napp, Charles E., Trenton, N. J. Telephone-directory	873,259	Dec. 10	1968	412	131	1511
Naudin, Louis. (See Sizaire and Naudin.)						
Neeland, Marvin A., Youngstown, Ohio. Pumping-cylinder valve	873,452	Dec. 10	2345	492–3	131	1575
Neff, Whitman C., Lawrenceville, Ill. Attachment for buggy-tops	873,164	Dec. 10	1791	376	131	1480
Neller, Albert H., assignor to Louden Machinery Company, Fairfield, Iowa. Elevated carrier	873,165	Dec. 10	1792	376	131	1481
New York Cigarette Machine Company. (See Boucher, Arthur L., assignor.)						
Nibelius, Axel W., Hackettstown, N. J. Recovering sodium sulfate and sulfuric acid	873,070	Dec. 10	1615	337	131	1451
Nichols, Charlie M., Beaumont, Tex. Polishing-machine	873,583	Dec. 10	2615	551	131	1620
Nichols, Louis C., Norwood, Ohio, assignor to Bullock Electric Manufacturing Company. Transformer	873,166	Dec. 10	1794	376–7	131	1481
Nixon, Morris B., New York, assignor to A. P. Little, Rochester, N. Y. Ribbon-holder for type-writers	873,071	Dec. 10	1617	337	131	1452
Noeggerath, Jakob E., Schenectady, N. Y., assignor to General Electric Company. Dynamo-electric machine	873,072	Dec. 10	1618	337	131	1452
Nolan, James M., assignor of two-thirds to W. H. Wilson and C. Rasmussen, New Haven, Conn. Folding seat-frame for automobiles	873,453	Dec. 10	2347	493	131	1576
Noll, George, Winchester, Kans. Compost digger and elevator	873,260	Dec. 10	1909	412	131	1511
Norcross Moulding Machine Company. (See Norcross, William C., assignor.)						
Norcross, William C., assignor to Norcross Moulding Machine Company, Terre Haute, Ind. Sand-molding machine	873,584	Dec. 10	2617	551	131	1621
Nordfors, Conrad, Jersey City, N. J. Machine for molding candles	873,073	Dec. 10	1620	338	131	1452
Nordquist, Louis R., Tampa, Fla. Rail-tie	873,585	Dec. 10	2619	552	131	1621
Normand, Norcisse. (See Lagasse and Normand.)						
Normandin, Levi P., Jackson, Mich. Cloth-measuring machine	873,454	Dec. 10	2345	493	131	1576
Norris, Dudley H., New York, N. Y. Apparatus for separating the metallic particles of ores from the rocky constituents thereof	873,586	Dec. 10	2620	552	131	1621
Norris, Joseph B. (See Johnston and Norris.)						
North & Judd Manufacturing Company. (See Smith, Clarence E., assignor.)						
Northfield, Luke W. (See Fowler, Benjamin F., assignor.)						
Norton, Alexander A. (See Munn, James M., assignor.)						
Nowak Manufacturing Company. (See Nowak, Ottokar H., assignor.)						
Nowak, Ottokar H., Chicago, Ill., assignor to Nowak Manufacturing Company. Substance for treating hides and making same	873,074	Dec. 10	1623	338	131	1452
Nutry & Cook Manufacturing Company. (See Nutry, John, assignor.)						
Nutry, John, assignor to Nutry & Cook Manufacturing Company, Brooklyn, N. Y. Safety device for coin-receptacles	873,678	Dec. 10	2780	590	131	1651
O'Brien, Frank, Jackson, assignor to Buick Motor Company, Flint, Mich. Band-brake	873,679	Dec. 10	2781	590	131	1652
Oakland Stamp Mill Co. (See Matthews, Francis I., assignor.)						
Ochoa, Victor L., assignor of three-fourths to R. R. Fogel and B. A. Jackson, New York, N. Y. Rail magnetic brake	873,587	Dec. 10	2622	552	131	1622
Oelman, Curt E., Detroit, Mich. Mortar-mixer	873,455	Dec. 10	2351	494	131	1577
Ogle, Elmer L., assignor to N. L. Otis, New York, N. Y. Radiator	873,384	Dec. 10	2233	465	131	1553
Ogle, Elmer L., assignor to N. L. Otis, New York, N. Y. Radiator	873,385	Dec. 10	2234	465	131	1553
Olin Gas Engine Company. (See Throop and Freeman, assignors.)						
Oliver, Alfred, Alpena, Mich. Turbine	873,075	Dec. 10	1627	339	131	1453
Olsen, George E., and O. J. Johnson, Muskegon, Mich. Invalid-lifter	873,076	Dec. 10	1628	339	131	1453
Osteman, Carl G. (See Blood and Osteman.)						
Otis, N. Leroy. (See Ogle, Elmer L., assignor.)						
Ottinger, Edwin C., deceased, Newport, (W. S. Ottinger, Sr., administrator,) assignor to J. E. and W. S. Ottinger, Sr., Philadelphia, and S. H. Bair, Newport, Pa. Wire-carrying cross-arm and insulator therefor	873,456	Dec. 10	2253	494	131	1577
Ottinger, Jennie E., *et al.* (See Ottinger, Edwin C., assignor.)						
Ottinger, Walter S., Sr., administrator. (See Ottinger, Edwin C.)						
Ottinger, Walter S., Sr., *et al.* (See Ottinger, Edwin C., assignor.)						
P. & F. Corbin. (See Henry, William K., assignor.)						
Pacific Steel & Wire Co. (See Langer, Gotthold L., assignor.)						
Packard Motor Car Company. (See Schmidt, Charles, assignor.)						
Page, Norman S., New York, N. Y. Party-line telephone system	873,588	Dec. 10	2623	552	131	1622
Painter, Simon K., Liberty, W. Va. Tub-rack	873,261	Dec. 10	1970	412	131	1511
Papst, Rudolph. (See White, Amos L., assignor.)						
Paquette, Herman A., assignor, by mesne assignments, to P. S. Angie, Washington, D. C. Wrench	873,262	Dec. 10	1971	413	131	1511

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Paris, William A., Edgewood Park, Pa., assignor to Westinghouse Electric & Manufacturing Company. Electric-circuit controller	873,263	Dec. 10	1973	413	131	1511
Paris, William A., Edgewood Park, Pa., assignor to Westinghouse Electric & Manufacturing Company. Controller for electric motors	873,264	Dec. 10	1975	413–14	131	1512
Parry, Anna C., Wyncote, Pa. Gridiron	873,589	Dec. 10	2627	553	131	1623
Patnod, Felix J., assignor of one-half to J. Fitzgerald, Worcester, Mass. Comb-cementing clamp	873,077	Dec. 10	1629	339	131	1483
Pawolowski, Jacob. (See McGladdery and Pawolowski.)						
Pearsall, Albert W., Lowell, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J. Pneumatic-despatch-tube apparatus	873,590	Dec. 10	2628	553	131	1623
Pearse, John V., assignor to Railway Chemical Sprayer Company, Owensboro, Ky. Spraying apparatus	873,680	Dec. 10	2782	590–1	131	1632
Pearse, William E., New York, N. Y. Separating process and apparatus	873,326	Dec. 10	2121	442	131	1534
Pedersen, Peder O. (See Poulsen and Pedersen.)						
Pedersen, Peder O., and V. Poulsen, Copenhagen, Denmark, assignors to American Telegraphone Company. Electromagnet for telegraphone purposes	873,078	Dec. 10	1632	340	131	1454
Pendleton, John H., West Philadelphia, assignor of one-half to E. A. Henkle, Philadelphia, Pa. Power-transmission mechanism	873,681	Dec. 10	2785	591	131	1652
Pendrith, George T., Toronto, Ontario, Canada. Dough-dividing machine for bread-making	873,682	Dec. 10	2788	591–2	131	1653
Penfield, Charles R., Chicago, Ill. Light-projecting attachment for firearms	873,591	Dec. 10	2629	554	131	1623
Perkins, Martin W., Battle Creek, Mich. Blackboard-eraser	873,327	Dec. 10	2124	443	131	1534
Peters, Robert H., Buffalo, N. Y. Maternity-skirt	873,167	Dec. 10	1797	377	131	1481
Peterson, Arne T., Racine, Wis. Pencil-sharpener	873,079	Dec. 10	1632	340	131	1454
Peterson, Peter A., and J. M. Haines, Cedar Rapids, Iowa. Horse-detacher	873,592	Dec. 10	2631	554	131	1623
Petroskey, John H., assignor to Ideal Register and Metallic Furniture Company, Detroit, Mich. Metallic chair	873,265	Dec. 10	1977	414	131	1512
Philips, Edwin S., assignor to American Road Machine Company, Kennett Square, Pa. Multiple rock-crusher	873,080	Dec. 10	1635	340	131	1454
Philips, Edwin S., assignor to American Road Machine Company, Kennett Square, Pa. Rock-crusher	873,081	Dec. 10	1637	341	131	1455
Phillips, Frederick W. G. (See Estell and Phillips.)						
Phillips, John W., Silver City, Nev. Centrifugal separator	873,593	Dec. 10	2632	554–5	131	1623
Phoebus, Virginia A., New York, N. Y. Machine or device to be used in measuring and cutting skirts	873,266	Dec. 10	1979	414	131	1513
Pichard, Charles and E., Paris, France. Carroting hides and skins	873,594	Dec. 10	2635	.....	131	1624
Pichard, Emile. (See Pichard, Charles and E.)						
Pietzsch, Richard H., Washington, D. C. Microtome	873,595	Dec. 10	2636	555–6	131	1624
Pigford, Clarence E., *et al.* (See Bynum, Samuel B., assignor.)						
Pingret Turbo Piston Engine Co. (See Pingret, Victor, assignor.)						
Pingret, Victor, Rio Grande do Sul, Brazil, assignor, by mesne assignments, to Pingret Turbo Piston Engine Co., Escanaba, Mich. Rotary engine	873,596	Dec. 10	2641	556–7	131	1625
Pingret, Victor, Rio Grande do Sul, Brazil, assignor, by mesne assignments, to Pingret Turbo Piston Engine Co., Escanaba, Mich. Rotary engine	873,597	Dec. 10	2645	557–8	131	1625
Plew, James E. (See Schmidt, Louis A., assignor.)						
Pocock, Henry, London, Ontario, Canada. Molding-machine	873,598	Dec. 10	2648	558	131	1626
Pohlmann, Henry, New York, N. Y. Joining device	873,599	Dec. 10	2653	558	131	1626
Poole, Edward C., Southampton, England. Reinforced building block or slab	873,600	Dec. 10	2654	559	131	1627
Porter, Asahel A., Naugatuck, Conn. Current water-wheel	873,082	Dec. 10	1638	341	131	1455
Poulsen, Valdemar. (See Pedersen and Poulsen.)						
Poulsen, Valdemar, Copenhagen, Denmark, assignor to American Telegraphone Company. Telegraphone	873,084	Dec. 10	1641	342	131	1456
Poulsen, Valdemar, and P. O. Pedersen, Copenhagen, Denmark, assignors to American Telegraphone Company. Telegraphone	873,083	Dec. 10	1640	341	131	1455
Powell, H. G. (See Price, John D., assignor.)						
Prettyman, Finice D., Watsonville, Cal. Slicing-machine	873,601	Dec. 10	2655	559	131	1627
Price, Edgar F., Niagara Falls, N. Y., assignor, by mesne assignments, to Central Trust Company of New York, trustee. Producing silicids	873,328	Dec. 10	2125	443	131	1535
Price, John D., assignor of one-half to H. G. Powell, Cleveland, Ohio. Overshoe	873,602	Dec. 10	2657	560	131	1627
Protective Tread Company. (See Farmer, Theodore P., assignor.)						
Prouty, George W., Boston, Mass., assignor to Imperial Art Press Co. Ink-distributing mechanism for printing-presses	873,267	Dec. 10	1980	415	131	1513
Providence Engineering Works. (See Brown, Arthur M., assignor.)						
Pulsometer Engineering Company. (See Fleuss, Henry A., assignor.)						
Quinn, David H., assignor of one-half to M. Erickson, Williams, Minn. Water-tank heater	873,136	Dec. 10	1736	363–4	131	1472
Raabe, Paul, Karlsruhe, Baden, assignor to Deutsche Waffen-und Munitionsfabriken, Berlin, Germany. Device for automatically delivering articles of manufacture from a collecting-receptacle	873,268	Dec. 10	1982	415	131	1513
Rail Joint Company. (See Brothers, James H., assignor.)						
Railway Chemical Sprayer Company. (See Pearse, John V., assignor.)						
Raney Canner Co. (See Raney, Thomas H., assignor.)						
Raney, Lee M. (See Waddington, Benjamin, assignor.)						
Raney, Thomas H., assignor to Raney Canner Co., Chapel Hill, N. C. Fruit-canning device	873,603	Dec. 10	2658	560	131	1628
Rasmussen, Charles, *et al.* (See Nolan, James M., assignor.)						
Reach, George A. (See Davis, Edwin K., assignor.)						
Reade, Arthur H., New York, N. Y. Nut-lock	873,457	Dec. 10	2355	494	131	1577
Reed, Matthew H., Pittsburg, Pa. Platform-scale	873,168	Dec. 10	1799	377–8	131	1482
Reeves, Wilfred, and B. Bramwell, Wellington Place, Belfast county, Ireland. Apparatus for filtering liquids	873,458	Dec. 10	2356	494	131	1578
Regal, August, assignor of two-thirds to F. Harazim and E. Karazej, Banjaluka, Austria-Hungary. Apparatus for weaving in natural colors without pattern-cards	873,683	Dec. 10	2791	592–6	131	1653
Reichert, John, Racine, Wis. Bridle-bit	873,604	Dec. 10	2660	560	131	1628
Renaud, Ernest, assignor to J. B. Dupuis, Montreal, Quebec, Canada. Train-controlling means	873,605	Dec. 10	2663	560–2	131	1628
Repetto, John, Philadelphia, Pa. Metallic crate or case for bottles, jars, and the like	873,085	Dec. 10	1643	342–3	131	1456
Repetto, John, Philadelphia, Pa. Metallic crate	873,086	Dec. 10	1646	343	131	1456
Repetto, John, Philadelphia, Pa. Bottle-stopper	873,087	Dec. 10	1650	343	131	1457
Rhoades, Alonzo E., assignor to Draper Company, Hopedale, Mass. Lay-motion for looms	873,606	Dec 10	2668	562	131	1629
Rhodes, Ailin L. (See Copp, Gardner B., assignor.)						
Rhodes, Elbert C., Detroit, Mich. Rotary engine	873,607	Dec. 10	2671	562–3	131	1629
Rice, Frank W. (See Dennis and Rice.)						
Rice, Walter F., Quincy, Mass., assignor to General Electric Company. Core-box	873,170	Dec. 10	1807	379	131	1483
Rice, Walter F., Quincy, Mass., assignor, by mesne assignments, to General Electric Company. Core-box	873,684	Dec. 10	2801	596–7	131	1654
Richards, Walter J., Norwood, Ohio, assignor to Allis-Chalmers Company. Motor-control system	873,171	Dec. 10	1810	380	131	1483

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Richter, Wolfgang D., Philadelphia, Pa. Frame for long machines	873,088	Dec. 10	1651	344	131	1457
Ricker, Benjamin J., Grinnell, Iowa. Apparel-glove	873,608	Dec. 10	2672	563	131	1629
Riddell, John, Schenectady, N. Y., assignor to General Electric Company. Tool for cutting turbine-buckets	873,089	Dec. 10	1653	344	131	1457
Rigby, Clark F., New Martinsville, W. Va. Clamp for well-drilling cables	873,090	Dec. 10	1656	344–5	131	1458
Ritter, Lillian A., Allegheny, Pa. Washboiler	873,172	Dec. 10	1813	380	131	1483
Robertson, Henry M., St. Paul, Minn. Automatic uncoupling-handle for vestibule-curtains	873,091	Dec. 10	1657	345	131	1458
Robinson, George M., Chicago, Ill. Metallic bedstead side-rail joint	873,173	Dec. 10	1814	380	131	1483
Rockstroh, Max, Klein-Sedlitz, near Pirna, Germany. Platen printing-machine	873,609	Dec. 10	2674	563–4	131	1629
Roe, Noble H., Marceline, Mo. Axle-nut	873,386	Dec. 10	2235	465	131	1553
Roller, Alvah C., Lawrence, Kans. Folding umbrella or parasol	873,174	Dec. 10	1816	380	131	1484
Rommel, Théodore, Neuilly-sur-Seine, France. Coupling-rod for the axles of automobiles	873,092	Dec. 10	1659	345	131	1458
Rosenstein, Meyers, *et al.* (See Wolfenden, Knutson, and Larsen, assignors.)						
Rosenthal, August, West Allis, assignor to Rosenthal Manufacturing Company, Milwaukee, Wis. Corn-husking rolls	873,610	Dec. 10	2675	564	131	1630
Rosenthal Manufacturing Company. (See Rosenthal, August, assignor.)						
Ross, Harry B., assignor to Berlin Machine Works, Beloit, Wis. Cutter-head for grooving and jointing machines	873,093	Dec. 10	1660	346	131	1458
Ross, Henry J., St. Catherines, Ontario, Canada. Horseshoe	873,611	Dec. 10	2677	564	131	1630
Ross, William G., assignor of one-half to F. Sutherland, Chicago, Ill. Boiler	873,094	Dec. 10	1661	346–7	131	1459
Rothfuchs, August, and G. Bliss, Hammond, Ind. Chair support or prop	873,612	Dec. 10	2679	564–5	131	1631
Rudolph, Georg, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Production of effects on mixed goods composed of cotton and wool	873,613	Dec. 10	2680	.....	131	1631
Rudolphi, Frank, Chicago, Ill., assignor to American Can Company, New York, N. Y. Sheet-metal display-can	873,137	Dec. 10	1737	364	131	1472
Rükonen, John. (See Salo and Rükonen.)						
Rushton, Kenneth, assignor to Burnham, Williams & Company, Philadelphia, Pa. Brake mechanism	873,459	Dec. 10	2357	495	131	1578
Russell, Milo M., Eau Claire, assignor of one-half to R. C. Burger, Winter, Wis. Log or lumber car	873,685	Dec. 10	2804	597	131	1654
Ryan, John G., Montreal, Quebec, Canada. Head-rest for beds	873,095	Dec. 10	1663	347	131	1459
Rypkema, Gerrit, Wichert, assignor of one-half to P. J. Claussen, Chicago, Ill. Lumber-loading jack	873,096	Dec. 10	1665	347	131	1459
S. A. Woods Machine Company. (See Blood and Osteman, assignors.)						
S. S. White Dental Manufacturing Company. (See Browne, Arthur W., assignor.)						
Sakovitch, Alexis, New York, N. Y., assignor to M. White, Winnipeg, Canada. Fan	873,460	Dec. 10	2359	495	131	1578
Salen, Charles P. (See Kadow and Lyons, assignors.)						
Salo, Victor M., and J. Rükonen, Chicago, Ill. Motor-boat	873,614	Dec. 10	2681	565	131	1631
Samuel, Marcus R. A., assignor to Karsam Soap Company, Limited, London, England. Process of saponification	873,615	Dec. 10	2682	565	131	1631
Sanitary Street-Flushing Machine Company. (See Cummings and Hanna, assignors.)						
Sargent, Allan C., assignor to C. G. Sargent's Sons, Westford, Mass. Water-heating device	873,269	Dec. 10	1984	415	131	1514
Sargh, John, New York, N. Y. Trousers-expander	873,616	Dec. 10	2683	566	131	1631
Sauer, Adelbert, Pittsburg, Pa. Shaft-bearing	873,097	Dec. 10	1666	347	131	1460
Sayre, George W., Stevens, W. Va. Car-door	873,175	Dec. 10	1817	381	131	1484
Schairer, Otto S. (See Darlington and Schairer.)						
Schattner, Ernest, Schenectady, N. Y., assignor to General Electric Company. Meter	873,098	Dec. 10	1667	348	131	1460
Scherf, Theodore, Cleveland, Ohio. Apparatus for softening paper	873,169	Dec. 10	1803	378–9	131	1482
Schlieder, Augustus E., Buffalo, N. Y., assignor to Monarch Acetylene-Gas Company, Omaha, Nebr. Carbid-feed mechanism for acetylene-gas generators	873,176	Dec. 10	1819	381	131	1484
Schmidt, Carl C., St. John, New Brunswick, Canada. Detachable heel	873,388	Dec. 10	2238	466	131	1554
Schmidt, Charles, Cleveland, Ohio, assignor to Packard Motor Car Company, Detroit, Mich. Throttle-valve for hydrocarbon-engines	873,387	Dec. 10	2237	466	131	1554
Schmidt, Louis A., assignor of one-half to J. E. Plew, Chicago, Ill. Register	873,270	Dec. 10	1986	416	131	1514
Schminke, Edward A., *et al.* (See McGuire, Patrick J., assignor.)						
Schmitt, Gustav, Milwaukee, Wis. Vehicle-spring	873,329	Dec. 10	2126	443	131	1535
Schmitt, Joseph J., Kinsley, Kans. Shaft-coupling	873,617	Dec. 10	2685	566	131	1632
Schneider, William F., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. System of motor control	873,177	Dec. 10	1822	381	131	1485
Schofield, Albert B., New York, N. Y., assignor, by mesne assignments, to Corporation Trust Company, trustee, Jersey City, N. J. Seal	873,618	Dec. 10	2686	567	131	1632
Schroeder, John, Davenport, Iowa. Motor	873,619	Dec. 10	2687	567	131	1632
Schwarz, Herman. (See Taylor, Eaton, and Schwarz.)						
Schwarz, William C., Edwardsville, Ill. Motor-vehicle	873,620	Dec. 10	2689	568	131	1633
Schwarz, William C., Edwardsville, Ill. Controlling-valve for hydraulic transmission devices	873,621	Dec. 10	2691	568–9	131	1633
Scott, Charles H. (See McQueen, Finlay R., assignor.)						
Selg Brewery Apparatus Co. (See Selg, Otto, assignor.)						
Selg, Otto, New York, N. Y., assignor to Selg Brewery Apparatus Co. Hop-jack	873,330	Dec. 10	2127	443	131	1535
Selley, Edwin J. (See Le Brocq, Richard F., assignor.)						
Senn, Johann, Berne, Switzerland. Fastening device	873,271	Dec. 10	1989	416	131	1515
Sharp, Abel B., assignor of one-half to H. Crab, Atlanta, Idaho. Chalk-line holder	873,686	Dec. 10	2806	597	131	1654
Sheley, Clifford, Norton, Kans. Skid	873,272	Dec. 10	1990	417	131	1515
Shepard, William O., and C. W. Cason, Sr., Camden, N. J. Umbrella attachment	873,099	Dec. 10	1669	348	131	1460
Sherman, Charles O. (See Brendt and Sherman.)						
Shinn, William C., Lincoln, Nebr. Static electric machine	873,178	Dec. 10	1824	382	131	1485
Shipley, Grant B., assignor to Allis-Chalmers Company, Milwaukee, Wis. Roasting-furnace shaft	873,687	Dec. 10	2808	598	131	1655
Sieber & Trussell Manufacturing Company. (See Dawson, James C., assignor.)						
Sizaire, Maurice, and L. Naudin, Puteaux, assignors to Société des Automobiles Sizaire et Naudin, Paris, France. Change-speed gear	873,461	Dec. 10	2360	496	131	1579
Skalstad, Carl A., Chicago, Ill. Dental broach	873,100	Dec. 10	1670	348	131	1461
Skamper, George D. (See Fauth and Skamper.)						
Skinner, Emily G., Buffalo, N. Y. Device for dampening and folding collars	873,179	Dec. 10	1829	383	131	1486
Sletto, Fred M., Moscow, Idaho. Animal trap	873,331	Dec. 10	2128	444	131	1535
Slichter, Walter I., Schenectady, N. Y., assignor to General Electric Company. Regenerative system for braking	873,101	Dec. 10	1671	349	131	1461
Slick, Edwin E., Pittsburg, Pa. Apparatus for rolling	873,462	Dec. 10	2362	496	131	1579
Slick, Edwin E., Pittsburg, Pa. Mill for rolling irregular shapes	873,463	Dec. 10	2364	497	131	1580
Sloderbeck, Martin C., assignor one-half to E. E. Leapley, Marion, Ind. Derailer	873,622	Dec. 10	2694	569	131	1633
Sly, William W., Cleveland, Ohio. Clutch	873,102	Dec. 10	1674	349	131	1461
Smith, Albert H., *et al.* (See Luburg, Ellsworth N., assignor.)						
Smith, Charles, Cleveland, Ohio. Sash-lock	873,180	Dec. 10	1831	383	131	1486
Smith, Charles W., Berlin, assignor to Waterloo Spreader Manufacturing Company, Waterloo, Iowa. Manure-spreader	873,465	Dec. 10	2367	498	131	1580
Smith, Chester J., Jamestown, N. Y. Calculating-machine	873,181	Dec. 10	1832	383–4	131	1486

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Smith, Clarence E., assignor to North & Judd Manufacturing Company, New Britain, Conn. Buckle	873,464	Dec. 10	2366	497	131	1580
Smith, David A. (See Lewis and Smith.)						
Smith, George C., Clapham, London, England. Sash-cord holder	873,623	Dec. 10	2695	569	131	1634
Smith, John B. (See Hiltz and Smith.)						
Smith, William H., assignor to Landers, Frary and Clark, New Britain, Conn. Table-cutlery	873,274	Dec. 10	1994	417	131	1515
Société Anonyme des Cuirs et Courroies d'Audenarde. (See Gevaert-Naert, Louis, assignor.)						
Société des Automobiles Sizaire et Naudin. (See Sizaire and Naudin, assignors.)						
Spalding, James F., Kansas City, Mo. Catheter-user's portable mechanical assistant	873,275	Dec. 10	1995	418	131	1515
Sperry, Elmer A., Brooklyn, N. Y. Detinning	873,699	Dec. 10	2829	.....	131	1659
Spotless Steam Sponger Company. (See Fenner, Charles W., assignor.)						
Sprague, Franklin S., Somerville, Mass., assignor one-half to C. O. Hasselbarth, Albany, N. Y. Couch-bed	873,103	Dec. 10	1675	349–50	131	1462
Springer, Edward S., and J. L. Maloney, Leavenworth, Kans. Gas-burner	873,182	Dec. 10	1834	384	131	1487
Springer, Edward S., and J. L. Maloney, Leavenworth, Kans. Gas-burner	873,624	Dec. 10	2696	569	131	1634
St. Louis Lightning Rod Co. (See Miller, George A., assignor.)						
St. Onge, Edmond J. (See Halliday, George, assignor.)						
Standard Underground Cable Company. (See Davis, Charles W., assignor.)						
Stanford, John C., Atlanta, Ga. Waistband	873,389	Dec. 10	2240	466	131	1554
Stanley, Buell, Herndon, Va. Device for receiving and delivering mail-pouches	873,276	Dec. 10	1997	418–19	131	1516
Stapp, Orrill V., Seattle, Wash. Platen-gage	873,183	Dec. 10	1835	384	131	1487
Starrett, Laroy S., assignor to L. S. Starrett Co., Athol, Mass. Magazine screw-driver	873,625	Dec. 10	2697	570	131	1634
Starrett, Laroy S., and J. A. Adell, assignors to L. S. Starrett Co., Athol, Mass. Spindle-lock for micrometer-gages, &c.	873,626	Dec. 10	2699	570	131	1635
Staunton, Gray, Chicago, Ill. Valve for hermetically-closable jars	873,627	Dec. 10	2700	570	131	1635
Stevenson, William A., Northampton, Mass., and A. H. White, Brooklyn, N. Y. Apparatus for screening pulp	873,390	Dec. 10	2241	466–7	131	1554
Stewart, Annie. (See Stewart, James S., assignor.)						
Stewart, James S., assignor to A. Stewart, New York, N. Y. Lamp-receptacle	873,104	Dec. 10	1677	350	131	1462
Stilson Motor Car Co. (See Hollister, Clarence P., assignor.)						
Stivers, Charles E., Denver, Colo. Dart for blow-guns	873,628	Dec. 10	2702	570	131	1635
Stockham Homogeneous Mixer Manufacturing Company. (See Stockham and Doyle, assignors.)						
Stockham, William G., and F. L. Doyle, assignors to Stockham Homogeneous Mixer Manufacturing Company, Piqua, Ohio. Mixing-machine	873,391	Dec. 10	2245	467–8	131	1555
Stoker, Albert E., Dallas, Tex. Carbureter	873,392	Dec. 10	2247	468	131	1555
Stone, Fred L., Denver, Colo. Display card-rack	873,184	Dec. 10	1838	384	131	1487
Stone, Melvin L., Lowell, assignor to Draper Company, Hopedale, Mass. Rotary magazine for weft-replenishing looms	873,467	Dec. 10	2372	498–500	131	1581
Storm, Francis, New York, N. Y. Hydrometer testing-jar	873,629	Dec. 10	2703	571	131	1635
Stott, James, Oldham, England. Water-heater	873,630	Dec. 10	2704	571–2	131	1636
Stowell, Shirley M. (See Farnoff, Jay W., assignor.)						
Stratton, John H., Holyoke, Mass. Door-latch	873,185	Dec. 10	1839	385	131	1488
Straubel, Rudolf, assignor to Firm of C. Zeiss, Jena, Germany. Double telescope with support	873,105	Dec. 10	1679	350	131	1462
Stuhlman, Isaac, Chicago, Ill. Sewing-machine guide	873,332	Dec. 10	2129	444	131	1536
Stults, Frederick M., Chicago, Ill. Mold for concrete work	873,138	Dec. 10	1739	364	131	1473
Sturgis, Herbert M., Kansas City, Mo. Loose-leaf book	873,106	Dec. 10	1681	351	131	1462
Sullivan, Alonzo T., Malcolm, Nebr. Animal-trap	873,631	Dec. 10	2705	572	131	1636
Surfacing Machine Company. (See Wattles, Cyra B., assignor.)						
Sutherland, Frank. (See Rose, William G., assignor.)						
Sweet, John M., Batavia, N. Y. Shears and other tool	873,333	Dec. 10	2131	445	131	1536
Sweetland, William W., Edwardsburg, Mich. Sash-supporter	873,186	Dec. 10	1840	385	131	1488
Taylor, Abraham, Rishton, T. Eaton, and H. Schwarz, Manchester, England Apparatus for use in starting and controlling electric motors	873,139	Dec. 10	1741	365	131	1473
Taylor, Charles C., G. W. Wood, and M. A. Vincent, San Diego, Cal. Automatic dump-bed	873,187	Dec. 10	1841	385–6	131	1488
Taylor, John B., Schenectady, N. Y., assignor to General Electric Company. System of distribution	873,107	Dec. 10	1683	351	131	1463
Taylor, John L., Dalton, Pa Thill-coupling	873,632	Dec. 10	2707	572	131	1637
Textile Machine Works, Incorporated. (See Janssen, Henry, assignor.)						
Thoens, Burchard. (See Barnard and Thoens.)						
Thomas, Edward G., Boston, Mass., assignor to Lamson Consolidated Store Service Company, Newark, N. J. Conveyer for newspapers and the like	873,633	Dec. 10	2708	572–3	131	1637
Thomas, William S., Eaton, Colo. Concrete-tile mold	873,634	Dec. 10	2709	573	131	1637
Throop, Charles E., and S. A. Freeman, assignors to Olin Gas Engine Company, Buffalo, N. Y. Electric-lamp holder	873 108	Dec. 10	1685	351–2	131	1463
Thumann, Henry, Chicago, Ill. Roll-holder	873,188	Dec. 10	1844	386	131	1488
Thurell, John P., North Adams, Mass. Last	873,635	Dec. 10	2711	573	131	1637
Tim & Company. (See Zillhardt, Jakob, assignor.)						
Tobey, William W., and F. Freeman, Iola, Kans. Ice-machine	873,189	Dec. 10	1845	386	131	1489
Todd, F. Dundas, administrator. (See Inglis, James.)						
Toepfer, Hans, assignor to Farbenfabriken vorm. Friedr. Bayer & Co. Elberfeld, Germany. Process of Dyeing	873,636	Dec. 10	2712	.....	131	1638
Tomlinson, John. (See Lomax and Tomlinson.)						
Tomlinson, Royal D., assignor to Allis-Chalmers Company, Milwaukee, Wis. Combined wet and dry air pump	873,688	Dec. 10	2810	599	131	1655
Topham, William, assignor of three-fourths to J. and J. Barton and W. Topham, Jr., Westville, Ill. Boring or drilling machine	873,637	Dec. 10	2713	574	131	1638
Topham, William, Jr., *et al.* (See Topham, William, assignor.)						
Townsend, Fitzhugh, deceased, New York, N. Y.; J. J. Townsend, administrator, assignor to General Railway Signal Company. Automatic block-signaling system for electric railways	873,468	Dec. 10	2376	500	131	1581
Townsend, John J., administrator. (See Townsend, Fitzhugh.)						
Travis, Denison E. (See Heywood and Travis.)						
Triumph Voting Machine Company. (See Abbott, Charles C., assignor.)						
Turner-Fricke Manufacturing Company. (See Fricke and Turner, assignors.)						
Turner, George E. (See Fricke and Turner.)						
Turner Tanning Machinery Company. (See Howe, Fred F., assignor.)						
Turner, William D., Mars, Pa. Metallic tie	873,469	Dec. 10	2381	501	131	1581
Ulring, Martin. (See Leidal and Ulring.)						
Underwood, John T. (See Kavle, Oscar C., assignor.)						
Underwood Typewriter Company. (See Wagner, Franz X., assignor.)						
Union Metallic Cartridge Company. (See Christie, Lewis D., assignor.)						
United Shoe Machinery Company. (See Cavanagh, James, Jr., assignor.)						
United States Envelope Company. (See Heywood and Travis, assignors.)						
United States Fastener Company. (See Holmes, George A., assignor.)						
Universal Polygraph Company. (See Fanslow, Benjamin O., assignor.)						
Upton, Edmund F., Mineral City, Ohio. Steering-wheel	873,190	Dec. 10	1847	387	131	1489

Name, residence, and invention.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Van Bergh, Carlos, Winnipeg, Manitoba, Canada, assignor to Van Bergh Electric Protection System Co., New York, N. Y. Burglar-alarm	873,638	Dec. 10	2714	574	131	1638
Van Bergh Electric Protection System Co. (See Van Bergh, Carlos, assignor.)						
Van Horn, Charles, Bethlehem, Pa., and G. C. Van Horn, Jersey City, N. J. Monkey-wrench	873,101	Dec. 10	1848	387	131	1489
Van Horn, George C. (See Van Horn, Charles and G. C.)						
Van Winkle, Walter H., Newark, N. J. Apparatus for tapping mains	873,689	Dec. 10	2812	599	131	1656
Varney, William W., *et al.* (See Luburg, Ellsworth N., assignor.)						
Vasbinder, Oliver R. (See MacNelly, Mathias F., assignor.)						
Veliquette, Nelson T., Kewadin, Mich. Combined gun-case and ammunition-belt	873,140	Dec. 10	1744	366	131	1473
Viger, John A., St. Paul, assignor to J. D. Lotz, Stillwater, Minn. Automatic display-sign	873,471	Dec. 10	2383	501–2	131	1582
Vincent, Joseph A., assignor of one-half to W. C. Koster, Hastings-upon-Hudson, N. Y. Mouse-trap	873,639	Dec. 10	2716	574	131	1638
Vincent, Mayhew A. (See Taylor, Wood, and Vincent.)						
Vissas, George P., St. Louis, Mo. Non-refillable bottle	873,472	Dec. 10	2384	502	131	1582
Waddington, Benjamin, assignor to L. M. Raney, New Castle, Pa. Riveting apparatus	873,640	Dec. 10	2717	575	131	1639
Wagner, Franz X., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine	873,641	Dec. 10	2718	575–6	131	1639
Wagner, Frederick H., assignor to Bartlett, Hayward & Co., Baltimore, Md. Hydraulic reversing-valve for gas apparatus	873,393	Dec. 10	2248	468–9	131	1556
Wahler, Henry, Estherville, Iowa. Pump	873,394	Dec. 10	2252	469	131	1556
Wais, Charles C., Oakley, Ohio. Machine for cutting out circular or elliptical forms	873,395	Dec. 10	2254	470	131	1557
Waldinger, Gustav A., and C. F. Iserloth, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Dyeing	873,277	Dec. 10	1999	.....	131	1516
Walker, Arthur W., Malden, Mass. Damper	873,141	Dec. 10	1745	366	131	1473
Wallin Addressing Machine Manufacturing Company. (See Wallin, Gustaf E., assignor.)						
Wallin, Gustaf E., Pocatello, Idaho, assignor to Wallin Addressing Machine Manufacturing Company, Kansas City, Mo. Linotype-slug receiver	873,642	Dec. 10	2721	576	131	1639
Walsh, Thomas A., Yonkers, N. Y. File-box	873,473	Dec. 10	2386	503	131	1583
Walters, Joseph J., Binghamton, N. Y. Bicycle attachment	873,278	Dec. 10	2000	419	131	1516
Walters, Russell S., Oklahoma, Okla. Round-stick-candy-making machine	873,396	Dec. 10	2256	470	131	1557
Warner, Arthur L., Moline, Ill., assignor to Koob Dumping Wagon Company. Dumping-wagon	873,397	Dec. 10	2257	471	131	1557
Warner, Charles R., Portland, Oreg. Welsbach-mantle holder	873,690	Dec. 10	2813	600	131	1656
Waterbury Buckle Co. (See Maltby, Julius, assignor.)						
Waterloo Spreader Manufacturing Company. (See Smith, Charles W., assignor.)						
Watties, Cyra B., assignor to Surfacing Machine Company, Providence, R. I. Grinding or polishing wheel	873,398	Dec. 10	2259	471	131	1558
Weber-Illig, Carl, Delawanna, N. J. Cover for decorating mounds, graves, and other similar purposes	873,279	Dec. 10	2001	419–20	131	1517
Webster, Jesse M., and C. F. Ingold, assignors to Milwaukee Optical Manufacturing Company, Milwaukee, Wis. Eyeglasses	873,109	Dec. 10	1688	352	131	1464
Webster, John B. (See Cook, Lyman J., assignor.)						
Weir Frog Company. (See Allen and Metzger, assignors.)						
Welsbach Light Company. (See Baskerville, Charles, assignor.)						
Weser, John A. (See Lynde, Frank G., assignor.)						
Western Electric Company. (See Forsberg, Oscar F., assignor.)						
Westholm, Carl A. W., Chicago, Ill. Combined envelop and letter-sheet	873,691	Dec. 10	2815	600	131	165 6
Westinghouse Electric & Manufacturing Company. (See Aspinwall, Louis M., assignor.)						
Westinghouse Electric & Manufacturing Company. (See Beach, Howard L., assignor.)						
Westinghouse Electric & Manufacturing Company. (See Cooper, William, assignor.)						
Westinghouse Electric & Manufacturing Company. (See Darlington and Schairer, assignors.)						
Westinghouse Electric & Manufacturing Company. (See MacGahan, Paul, assignor.)						
Westinghouse Electric & Manufacturing Company. (See Paris, William A., assignor.)						
Westrip, Edward D., Myerstown, and R. McCarty, Lebanon, Pa. Pipe-threading machinery	873,334	Dec. 10	2133	445	131	1536
Wheeler, James F., assignor of one-half to F. W. De Witt, Grand Valley, Colo. Sound-amplifying horn	873,643	Dec. 10	2724	576	131	1640
White, Ambrose H. (See Stevenson and White.)						
White, Amos L., assignor of one-half to R. Papst, Lexington, Mich. Fastening means	873,692	Dec. 10	2816	600	131	1656
White, Michael. (See Sakovitch, Alexis, assignor.)						
White, Ormond S., Wilkes-Barre, Pa. Package-tie	873,192	Dec. 10	1849	387	131	1490
White, Ormond S., Wilkes-Barre, Pa. Package-tie	873,193	Dec. 10	1850	387	131	1490
Whiteford, Alexander W., Omaha, Nebr. Combined lifting and moving jack	873,194	Dec. 10	1850	388	131	1490
Wickblom, Peter J., Bishop Hill, Ill. Centrifugal pump	873,644	Dec. 10	2725	577	131	1640
Wicks, Louis C., Pittsburg, Pa. Safety-pin	873,474	Dec. 10	2387	503	131	1583
Wilcox, George S. (See Windridge and Wilcox.)						
Wildman Manufacturing Company. (See Ballard, George L., assignor.)						
Wilenski, Morris, Chicago, Ill. Fender for street-cars	873,197	Dec. 10	1855	389	131	1491
Wilhelm, Walter E., Palmyra, Nebr. Disk-scraper	873,142	Dec. 10	1746	366	131	1474
Willets, William C., Minneapolis, Minn. Wire-fabric blank	873,195	Dec. 10	1852	388	131	1490
Willets, William C., Minneapolis, Minn. Running-gear support for baby-carriages	873,196	Dec. 10	1853	388–9	131	1490
Williams, Charles J., Prosser, Wash. Chain-pump	873,280	Dec. 10	2003	420	131	1517
Williams, George A., Newcastle, Ind. Bottle-cap fastener	873,646	Dec. 10	2729	578	131	1641
Williams, Nathan W., Evanston, Ill. Combined heating and ventilating system for automobiles	873,399	Dec. 10	2261	472	131	1558
Williamson, William, Saginaw, Mich. Extension-ladder	873,110	Dec. 10	1689	352	131	1464
Williman, Anton, Washington, Mass. Knockdown crate	873,645	Dec. 10	2727	577	131	1641
Wilson, Edgar C., *et al.* (See Wirt, Reuben D., assignor.)						
Wilson, Harvey, Brooklyn, Ohio. Hot-water boiler	873,111	Dec. 10	1682	352–3	131	1464
Wilson, William A., Arlington, Nebr. Stovepipe-hanger	873,198	Dec. 10	1857	389	131	1491
Wilson, William H., *et al.* (See Nolan, James M., assignor.)						
Windridge, James, and G. S. Wilcox, assignors to Lyman Gun Sight Corporation, Middlefield, Conn. Sight for firearms	873,112	Dec. 10	1693	353	131	1465
Windridge, James, and G. S. Wilcox, assignors to Lyman Gun Sight Corporation, Middlefield, Conn. Sight for firearms	873,281	Dec. 10	2005	420	131	1518
Wirt, Reuben D., assignor of one-half to E. C. Wilson and R. Keables, Philadelphia, Pa. Garden-reel	873,143	Dec. 10	1747	367	131	1474
Witherell, Charles M. (See Witherell, Harry L., assignor.)						
Witherell, Harry L., Milan, assignor of one-half to C. M. Witherell, Rock Island, Ill. Brake-operating attachment	873,113	Dec. 10	1695	353–4	131	1465
Wolf, Ernst A. P., New York, N. Y. Binder and letter-file	873,282	Dec. 10	2007	421	131	1518
Wolfenden, John, Minneapolis, Minn., J. Knutson and L. Larsen, Menominee, Mich., assignors to H. Aronson and M. Rosenstein, St. Paul, Minn. Collapsible go-cart	873,283	Dec. 10	2008	421	131	1518
Wood, Edgar L., *et al.*, executors. (See Hinkley, George M.)						
Wood, George W. (See Taylor, Wood, and Vincent.)						
Woods, Harry, Steubenville, Ohio. Fluid-pressure valve	873,475	Dec. 10	2388	503	131	1583
Woods, Harry, Steubenville, Ohio. Valve for fluids under pressure	873,476	Dec. 10	2389	503–4	131	1584

Name, residence, and invention.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Woodworth, John H., Cleveland, Ohio. Car-wheel	873,477	Dec. 10	2391	504	131	1584
Wright, James E., West Bay City, assignor of one-half to J. M. Kelton, Bay City, Mich. Metal hoop	873,114	Dec. 10	1697	354	131	1465
Wright, Wilfred L., Philadelphia, Pa. Sheet-metal pole	873,144	Dec. 10	1748	367	131	1474
Wyman, George R., assignor to F. W. Bird & Son, East Walpole, Mass. Paper box	873,335	Dec. 10	2130	446	131	1537
Young, Andrew E., and J. F. Hinkle, Roswell, N. Mex. Buckle	873,199	Dec. 10	1858	390	131	1492
Young, Joseph S., Pittsburg, Pa. Door-check	873,693	Dec. 10	2817	600	131	1657
Young, William, Peebles, Scotland, and S. Glover, St. Helens, England. Apparatus for carbonizing coal for the production of gas	873,647	Dec. 10	2730	578	131	1641
Zeiss, Carl, Firm of. (See Straubel, Rudolf, assignor.)						
Ziegler, Frederick J., New York, N. Y. Lubricating device for automobiles	873,478	Dec. 10	2368	504	131	1585
Zillhardt, Jakob, assignor to Tim & Company, Troy, N. Y. Automatic cut-off for gas-stoves	873,145	Dec. 10	1750	367	131	1475

DESIGNS.

Name, residence, and design.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Afken, Edward L., Orange, assignor to New Jersey Patent Company, West Orange, N. J. Phonograph-horn	38,942	Dec. 10	131	1660
Afken, Edward L., Orange, assignor to New Jersey Patent Company, West Orange, N. J. Phonograph-horn	38,943	Dec. 10	131	1660
Auerbach, Louis, New York, N. Y. Neckwear fabric	38,947	Dec. 10	131	1661
Bachert, Augustus E., Robertsdale, Pa. Book-plate	38,937	Dec. 10	131	1659
Berbecker & Rowland Manufacturing Company. (See Bond, Lester W., assignor.)				
Bond, Lester W., New York, N. Y., assignor to Berbecker & Rowland Manufacturing Company, Waterville, N. H. Furniture-handle	38,939	Dec. 10	131	1660
Davis, Frank S. Detroit Mich. Automobile-body	38,946	Dec. 10	131	1661
Hansen-Bennett Company. (See Hansen, Charles E., assignor.)				
Hansen, Charles E., Providence, R. I., assignor to Hansen-Bennett Company. Signet	38,935	Dec. 10	131	1659
Hansen, Charles E., Providence, R. I., assignor to Hansen-Bennett Company. Signet	38,936	Dec. 10	131	1659
Knight, Jonathan L., Kansas City, Mo. Calendar-blank	38,938	Dec. 10	131	1659
Landenberger, Charles H., Philadelphia, Pa. Woven fabric	38,948	Dec. 10	131	1661
Landenberger, Charles H., Philadelphia, Pa. Woven fabric	38,949	Dec. 10	131	1661
Lektro Manufacturing Company. (See Smith, Edward F., assignor.)				
Marsh, Wilbur W. (See Morgan, Thomas W., assignor.)				
Morgan, Thomas W., assignor to W. W. Marsh, Waterloo, Iowa. Centrifugal cream-separator	38,944	Dec. 10	131	1661
New Jersey Patent Company. (See Aiken, Edward L., assignor.)				
Sargent & Company. (See Schoonmaker, Edward T., assignor.)				
Schoonmaker, Edward T., South Orange, N. J., assignor to Sargent & Company, New Haven, Conn. Lock-trimming	38,940	Dec. 10	131	1660
Schoonmaker, Edward T., South Orange, N. J., assignor to Sargent & Company, New Haven, Conn. Door-knob	38,941	Dec. 10	131	1660
Smith, Edward F., assignor to Lektro Manufacturing Company, Cincinnati, Ohio. Housing for electric drills	38,945	Dec. 10	131	1661

TRADE-MARKS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
A. G. Hyde & Sons, New York, N. Y. Bleached, unbleached, dyed, and printed textile fabrics	66,543	Dec. 10	131	1682
American Sanitary Works, New York, N. Y. Earthenware closet-bowls	66,544	Dec. 10	131	1682
Associated Shoe Company, Hartford, Conn., and Boston, Mass. Certain footwear	66,494	Dec. 10	131	1681
B. S. Flersheim Mercantile Co., Kansas City, Mo. Whisky, brandy, and gin	66,574	Dec. 10	131	1683
Bentley & Olmsted Company, Des Moines, Iowa. Leather shoes	66,495	Dec. 10	131	1681
Berkele, Henry, New York, N. Y. Razors	66,496	Dec. 10	131	1681
Bianchi, Jos., Toronto, Ontario, Canada. Animated and moving picture apparatus	66,545	Dec. 10	131	1682
Bianchi, Jos., Toronto, Ontario, Canada. Animated and moving picture apparatus	66,546	Dec. 10	131	1682
Boericke & Tafel, Philadelphia, Pa. Certain medicines	66,497	Dec. 10	131	1681
Burlingame Chemical Co., Los Angeles, Cal. Certain remedy	66,498	Dec. 10	131	1681
Charles Jacquin et Cie., Inc., New York, N. Y. Stomach-bitters	66,499	Dec. 10	131	1681
Charles Jacquin et Cie., Inc., New York, N. Y. Orange bitters	66,500	Dec. 10	131	1681
Chemische Fabrik von Heyden Aktien-Gesellschaft, Radebeul, near Dresden, Germany. Certain chemical	66,547	Dec. 10	131	1682
Class Journal Co., New York, N. Y. Magazine issued weekly	66,501	Dec. 10	131	1681
Clifton Manufacturing Company, Clifton, S. C. Sheetings, shirtings, and drillings	66,548	Dec. 10	131	1682
Coalite Limited, London, England. Certain fuel	66,502	Dec. 10	131	1681
Cosby Shoe Co. Incorporated, Lynchburg, Va. Leather boots and shoes	66,503	Dec. 10	131	1681
Davis Chemical Company, Denver, Colo. Certain medicines	66,504	Dec. 10	131	1681
De Nederlandsche Gist & Spiritusfabriek, Delft, Netherlands. Genova	66,575	Dec. 10	131	1683
Detmer Woolen Company, New York, N. Y. Cotton and woolen piece goods	66,569	Dec. 10	131	1683
Dewsbury, Alfred, Walsall, England. Certain metal articles	66,505	Dec. 10	131	1681
Dr. Rainey Medicine Co., Chicago, Ill. Certain medicines	66,506	Dec. 10	131	1681
Dunham Bros., Brattleboro, Vt. Rubber heels	66,507	Dec. 10	131	1681
Evening Star Newspaper Co., Washington, D. C. Newspaper	66,508	Dec. 10	131	1681
Evening Star Newspaper Co., Washington, D. C. Newspaper	66,509	Dec. 10	131	1681
Faber, Eberhard, New York, N. Y. Rubber erasers	66,576	Dec. 10	131	1683
General Storage Battery Co., Boonton, N. J., and New York, N. Y. Storage batteries and storage-battery plates	66,510	Dec. 10	131	1681

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Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Gloversville Silk Mills, Gloversville, N. Y. Silk gloves	66,511	Dec. 10	131	1681
Goldberg, Samuel, Cleveland, Ohio. Remedy for sleeplessness	66,512	Dec. 10	131	1681
Graham Paper Co., St. Louis, Mo. Certain paper	66,549	Dec. 10	131	1681
Graham Paper Co., St. Louis, Mo. Certain paper	66,550	Dec. 10	131	1682
Graham Paper Co., St. Louis, Mo. Certain paper	66,551	Dec. 10	131	1682
Grhaam Paper Co., St. Louis, Mo. Certain paper	66,552	Dec. 10	131	1582
Graham Paper Co., St. Louis, Mo. Certain paper	66,553	Dec. 10	131	1682
Graham Paper Co., St. Louis, Mo. Certain paper	66,554	Dec. 10	131	1682
Graham Paper Co., St. Louis, Mo. Certain paper	66,555	Dec. 10	131	1682
Great Western Wine Co., Chicago, Ill. Wine	66,570	Dec. 10	131	1683
Great Western Wine Co., Chicago, Ill. Wine	66,571	Dec. 10	131	1683
H. Mueller Manufacturing Company, Decatur, Ill. Brass and iron pipe fittings	66,513	Dec. 10	131	1681
Hall & Cummings, St. Louis, Mo. Remedy for disorders of the stomach, liver, and blood	66,514	Dec. 10	131	1681
Hannah & Hogg, Chicago, Ill. Blackberry and apricot cordials	66,577	Dec. 10	131	1683
Happ Brothers Company, Macon, Ga. Overalls, pants, and denim jackets	66,515	Dec. 10	131	1681
Harris, Hattie E., Newark, N. J. Fruit-butter	66,516	Dec. 10	131	1681
Herrmann & Co., Morris, New York, N. Y. Paris-green	66,556	Dec. 10	131	1682
Herrmann & Co., Morris, New York, N. Y. Paris-green	66,557	Dec. 10	131	1682
Hockaday Paint Company, Wichita, Kans. Certain paint, varnish, and enamel	66,558	Dec. 10	131	1682
Ideal Concrete Machinery Company, South Bend, Ind. Waterproofing-powder for cement and concrete	66,517	Dec. 10	131	1681
J. H. Winchell & Co., Inc. Haverhill, Mass. Leather boots and shoes	66,518	Dec. 10	131	1681
Kraeger, Oscar H., New York, N. Y. Leather boots and shoes	66,578	Dec. 10	131	1683
Krug & Co., Rheims, France. Champagne-wine	66,572	Dec. 10	131	1683
Krug & Co., Rheims, France. Champagne-wine	66,573	Dec. 10	131	1683
Littlefield & Steere Co., Knoxville, Tenn. Candies of all kinds	66,519	Dec. 10	131	1681
Loopuyt & Co., P., Schiedam, Netherlands. Gin	66,579	Dec. 10	131	1683
Lund, George, London, England. Knitted shirts, skirts, and hosiery	66,520	Dec. 10	131	1681
Mathey Bros., Mathez & Co., New York, N. Y. Watches	66,559	Dec. 10	131	1682
Michael, Julius H., Detroit, Mich. Whisky	66,580	Dec. 10	131	1683
Miller & Co., Clifford L., New York, N. Y. Preservative paints in liquid or paste form	66,560	Dec. 10	131	1682
Miller Drug Co., Polk, Richmond, Va. Certain dog remedies	66,521	Dec. 10	131	1681
Mount Vernon-Woodberry Cotton Duck Company, Baltimore, Md. Cotton duck	66,561	Dec. 10	131	1682
Newman, Julius C., Cleveland, Ohio. Cigars	66,562	Dec. 10	131	1682
Ogden and Shimer, Middletown, N. Y. Toilet cream	66,522	Dec. 10	131	1681
Pacific Coast Borax Company, Oakland, Cal.; Chicago, Ill., and New York, N. Y. Soap	66,563	Dec. 10	131	1682
Pain, Henry J., New York, N. Y. Fireworks	66,523	Dec. 10	131	1681
Pain, Henry J., New York, N. Y. Fireworks	66,524	Dec. 10	131	1681
Paramount Knitting Company, Chicago, Ill. Hosiery	66,525	Dec. 10	131	1681
Sander, Johannes A., Hamburg, Germany. Disinfectant materials	66,564	Dec. 10	131	1683
Schmitz & Co., C., New York, N. Y. Bristles	66,526	Dec. 10	131	1682
Schneider, Alexander M., North Manchester, Ind. Silk and muslin underskirts	66,527	Dec. 10	131	1682
Société Anonyme de la Grande Distillerie E. Cusenier fils Aîné & Cie., Paris, France. Absinthe and vermuth	66,581	Dec. 10	131	1683
Standard Sewing Machine Company, Cleveland, Ohio. Sewing-machines and attachments	66,528	Dec. 10	131	1682
Standard Sewing Machine Company, Cleveland, Ohio. Sewing-machines and attachments	66,529	Dec. 10	131	1682
Standard Sewing Machine Company, Cleveland, Ohio. Sewing-machines and attachments	66,530	Dec. 10	131	1682
Standard Sewing Machine Company, Cleveland, Ohio. Sewing-machines and attachments	66,531	Dec. 10	131	1682
Strasburger, Byron L., New York, N. Y. Watches and watch-movements	66,565	Dec. 10	131	1683
Turpin, Henry E., Haywards, Cal. Remedy for coughs and colds of horses and mules	66,532	Dec. 10	131	1682
Union Metallic Cartridge Company, Bridgeport, Conn. Shotgun, rifle, and pistol cartridges, caps, and primers	66,534	Dec. 10	131	1682
Union Portland Cement Company, Ogden, Utah. Portland cement	66,533	Dec. 10	131	1682
Wagner, Edward H., New York, N. Y. Stick-fireworks	66,535	Dec. 10	131	1682
Wagner, Edward H., New York, N. Y. Stick-fireworks	66,536	Dec. 10	131	1682
Wagner, Edward H., New York, N. Y. Stick-fireworks	66,537	Dec. 10	131	1682
Washington Post Company, Washington, D. C. Newspapers	66,538	Dec. 10	131	1682
Washington Times Co., Washington, D. C. Newspaper	66,539	Dec. 10	131	1682
Watkins Packing Co., Odessa, Del. Canned corn and tomatoes	66,540	Dec. 10	131	1682
Watson, William J., Oakland, Cal. Preservative and waterproof paint	66,566	Dec. 10	131	1683
Wicke, Otto, Brooklyn, N. Y. Certain remedy	66,541	Dec. 10	131	1682
Wilkinson, Lancelot, London, England. Preparation for promoting combustion	66,567	Dec. 10	131	1683
Witt, John A., Chicago, Ill. Preparation of corn and honey	66,542	Dec. 10	131	1682
Wyles, Tom R., Chicago, Ill. Paint and varnish solvents and removers	66,568	Dec. 10	131	1683

LABELS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Cooper, Charles. (See Zaitchick and Cooper.)				
Economy Corset Company, Syracuse, N. Y. "The National Hygienic Button." (For Hose-Supporter Buttons)	13,913	Dec. 10	131	1684
Henschel Mfg. Co., C. B., Milwaukee, Wis. "Red Band." (For Cigars)	13,914	Dec. 10	131	1684
Kaiser, Chas. F., New York, N. Y. "St. Elmo." (For Cigars)	13,915	Dec. 10	131	1684
Leavenworth Milling Company, Leavenworth, Kans. "Eminence High Patent." (For Wheat-Flour)	13,920	Dec. 10	131	1684
O. L. Schwenke Lithographic Co., New York, N. Y. "Prize Elk." (For Cigars)	13,916	Dec. 10	131	1684
O. L. Schwenke Lithographic Co., New York, N. Y. "Great American." (For Cigars)	13,917	Dec. 10	131	1684
O. L. Schwenke Lithographic Co., New York, N. Y. "Princessa." (For Cigars)	13,918	Dec. 10	131	1684
Woolson Spice Company, Toledo, Ohio. "Ardmore Brand." (For Coffee)	13,919	Dec. 10	131	1684
Zaitchick, Elias, and C. Cooper, New York, N. Y. "The Petriscent Rat and Mouse Killer." (For a Rat or Mouse Poison)	13,922	Dec. 10	131	1684

PRINTS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Page.
L. L. Brown Paper Company, Adams, Mass. "Water Mark of Quality." (For Paper)	2,173	Dec. 10	131	1684
Toasted Corn Flake Co., Battle Creek, Mich. "The sweet heart of the Corn." (For Toasted Corn-Flakes)	2,172	Dec. 10	131	1684

TRADE-MARKS.

(REGISTRATION APPLIED FOR.)

Name, residence, and title.	Serial No.	Date.	Official Gazette. Vol.	Page.
Agricultural Remedy Co., Topeka, Kans. Stock medicine	29,831	Dec. 10	131	1668
Allen, William E., Monroe, La. Remedies for headaches and fevers	21,249	Dec. 10	131	1668
American Fork & Hoe Company, Cleveland, Ohio. Forks, rakes, and hoes	30,819	Dec. 10	131	1674
Arnold Schiff & Company, New York, N. Y. Umbrellas and parasols	31,054	Dec. 10	131	1678
Aughinbaugh Canning Co., Baltimore, Md. Canned fruits and vegetables	31,037	Dec. 10	131	1678
Aughinbaugh Caramel Company, Indianapolis, Ind. Candy	29,838	Dec. 10	131	1669
Beadleston & Woerz, New York, N. Y. Beer, ale, porter, and stout	30,959–60	Dec. 10	131	1676–7
Beatty, Robert P., assignor to Beatty Stamping Company, Cleveland, Ohio. Garment-hangers.	30,309	Dec. 10	131	1670
Beatty Stamping Company. (See Beatty, Robert P., assignor.)				
Black Drug and Chemical Company, Akron, Ohio. Extract of vanilla, lemon, orange, &c	30,780	Dec. 10	131	1673
Black Hawk Coffee & Spice Company, Waterloo, Iowa. Coffee	30,823–4	Dec. 10	131	1674–5
Bloch, Bert K., New York, N. Y. Whisky	29,611	Dec. 10	131	1668
Block & Sons, Elias, Cincinnati, Ohio. Whisky	27,109	Dec. 10	131	1666
Borden's Condensed Milk Company, Jersey City, N. J., and New York, N. Y. Caramels and chocolates	30,550	Dec. 10	131	1671
Bowen, Saml. B., Philadelphia, Pa. Adhesive cements	30,972	Dec. 10	131	1677
Boyd, John R., Corpus Christi, Tex. Razors and pocket-knives	29,076	Dec. 10	131	1667
Brennahan, Timothy A., Lynn, Mass. Leather and canvas boots and shoes	30,906	Dec. 10	131	1676
Cartun, Jacob, Philadelphia, Pa. Whisky, brandy, gin, and cordials	9,337	Dec. 10	131	1663
Chellis-Hillman Company, Portland, Me. Metal closures for containing vessels	30,509	Dec. 10	131	1671
Chicago Herald Company, Chicago, Ill. Sunday newspaper	30,523	Dec. 10	131	1671
Choozit Mfg. Co., Chicago, Ill. Chewing-gum	23,474	Dec. 10	131	1666
Ciaburri & Fil., Enrico, Naples, Italy. Liqueurs	28,386	Dec. 10	131	1667
Climax Coffee & Baking Powder Company, Indianapolis, Ind. Coffee	29,952	Dec. 10	131	1669
Corn Products Manufacturing Company, Chicago, Ill. Stock food	30,855–6	Dec. 10	131	1675
Crawford, McGregor & Canby Co., Dayton, Ohio. Leather boots and shoes	28,823	Dec. 10	131	1667
Cu-Cura Company, Tulsa, Okla. Hair-tonic, &c	28,310	Dec. 10	131	1667
Dannemiller Coffee Co., Brooklyn, N. Y. Coffees and teas	30,673	Dec. 10	131	1672
Davis Chemical Company, Denver, Colo. Uterine tonic	30,669	Dec. 10	131	1672
Davis Chemical Company, Denver, Colo. Remedy for constipation, &c	30,760	Dec. 10	131	1673
Dawson, John W., Ward, W. Va. Bituminous coal	29,060	Dec. 10	131	1667
Delmar Drug Co., Baltimore, Md. Headache-tablets	38,833	Dec. 10	131	1675
Dix Manufacturing Company, Lewistown, Pa. Medicines	30,627	Dec. 10	131	1672
Dodson, Mary J., Houston, Tex. Scalp food	30,784	Dec. 10	131	1674
Dowsley, Arthur M., Cando, N. D. Medicine for purifying the blood	30,802	Dec. 10	131	1674
Eby Shoe Co., Inc., Lititz, Pa. Leather shoes	30,962	Dec. 10	131	1677
Ellet-Kendall Shoe Company, Kansas City, Mo. Leather boots, shoes, and leggings	30,953	Dec. 10	131	1676
Elliott, J. S., Newville, Pa. Coffee	30,562	Dec. 10	131	1672
Ewart, William I., Seattle, Wash. Feed-bags	30,164	Dec. 10	131	1670
Exposition Cotton Mills, Atlanta, Ga. Sheetings and drillings	17,257	Dec. 10	131	1664
Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Coal-tar dyes, disinfectants, food-preservatives, &c	29,680	Dec. 10	131	1668
Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Substitute for shellac	29,681	Dec. 10	131	1668
Fralley, Wm. O., Lancaster, Pa. Medicinal preparations for coughs and colds	28,048	Dec. 10	131	1667
Frost, Frederick E., Worcester, Mass. Toilet soap paste	21,432	Dec. 10	131	1665
Geo. Borgfeldt & Co., New York, N. Y. Rubber combs	30,403	Dec. 10	131	1671
Geo D Witt Shoe Co., Lynchburg, Va. Leather boots and shoes	23,798	Dec. 10	131	1666
Geo Q Moon & Co., Inc., Binghamton, N. Y. Wheat-flour	30,804	Dec. 10	131	1674
George Liss & Co., New York, N. Y. Coffee and tea	30,988	Dec. 10	131	1677
German American Coffee Co., New York, N. Y. Coffee and tea	27,851	Dec. 10	131	1666
Glover, Rebecca S., Dorchester, Mass. Liniment or ointment	30,330	Dec. 10	131	1670
Good Housekeeping Co., New York, N. Y. Periodical magazines	15,728	Dec. 10	131	1664
Goodyear's India Rubber Glove M'f'g. Co., Naugatuck, Conn. Rubber boots and shoes	29,937	Dec. 10	131	1669
Guggenheim Company, Cleveland, Ohio. Dress and shirt waists	29,834	Dec. 10	131	1668
Haas, Baruch & Co., Los Angeles, Cal. Canned fish	30,908	Dec. 10	131	1676
Haase, Paul, Boone, Iowa. Liniment	30,841	Dec. 10	131	1675
Habicht, Braun & Co., Chicago, Ill. Flavoring compounds	30,805	Dec. 10	131	1674
Hall, Frank A., New York, N. Y. Feathers	30,003	Dec. 10	131	1669
Harris, John S., New York, N. Y. Soap	30,976	Dec. 10	131	1677
Hawthorne & Sheble Manufacturing Company, Philadelphia, Pa. Talking-machine records	30,734	Dec. 10	131	1673
Hawthorne & Sheble Manufacturing Company, Philadelphia, Pa. Talking-machines	30,735	Dec. 10	131	1673
Henry, Thomas W., Des Moines, Iowa. Detergent composition	31,032	Dec. 10	131	1678
Herring, Herbert L., Atlanta, Ga. Hair-tonics	30,969	Dec. 10	131	1677
Hoch Hames Co. Inc., Freeland and Hazleton, Pa. Hames	30,535	Dec. 10	131	1671
Hollins Sons & Co., Nashville, Tenn. Leather boots and shoes	30,838	Dec. 10	131	1675
Hoyt, Frank M., Amesbury, Mass. Peanut-butter	23,686	Dec. 10	131	1666
Hunt & Co., M. A., Cincinnati, Ohio; Chattanooga, Tenn.; Louisville, Ky., and Evansville, Ind. Spring-beds	30,990	Dec. 10	131	1677
Igmandi Import Company, New York, N. Y. Laxative mineral waters	30,837	Dec. 10	130	1675
Indianapolis Warehouse Company, Indianapolis, Ind. Chewing-gum	30,773	Dec. 10	131	1673
International Fisheries Co., Tacoma, Wash. Salt, dried, smoked, and fresh fish	30,836	Dec. 10	131	1675
International Fisheries Co., Tacoma, Wash. Smoked halibut	30,899	Dec. 10	131	1676

TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

Name, residence, and title.	Serial No.	Date.	Official Gazette. Vol.	Page.
International Fisheries Co., Tacoma, Wash. Smoked halibut	30,902	Dec. 10	131	1676
J. W. James Company, Wheeling, W. Va. Powders for the relief of headache, neuralgia, &c	30,777	Dec. 10	131	1673
John Barth Company, Milwaukee, Wis. Bitters	30,910	Dec. 10	131	1676
Joseph F. McCoy Co., New York, N. Y. Pulley-blocks, rail-benders, winches, and ratchets	29,679	Dec. 10	131	1668
Kahn Manufacturing Company, Mobile, Ala. Overalls	30,703	Dec. 10	131	1673
Kirk, Albert E., Hoopeston, Ill. Composition roofing and siding	29,865	Dec. 10	131	1669
Kuner Pickle Company, Denver, Colo. Canned fruits and vegetables and pickles	29,749	Dec. 10	131	1668
Langworthy, Louis O., Bradford, Pa. Choke-coils	30,970	Dec. 10	131	1677
Leach, William A., Cincinnati, Ohio. Remedies for diseases of the respiratory organs, &c	18,426	Dec. 10	131	1664
Lee Broom & Duster Company, Lincoln, Nebr. Brooms	3',014–15	Dec. 10	131	1678
Lord Brothers Company, Portland, Me. Boneless codfish	30,364	Dec. 10	131	1671
Lurie, John, New York, N. Y. Automobile-lamps	25,773	Dec. 10	131	1666
Lynchburg Shoe Co., Lynchburg, Va. Leather boots and shoes	26,381	Dec. 10	131	1666
Markham and Roberts, Limited, Stafford, England. Boot and shoe heels	30,680	Dec. 10	131	1673
Marshall Field & Company, Chicago, Ill. Gloves	30,708	Dec. 10	131	1673
Maryville Hosiery Mills, Maryville, Tenn. Knitted hosiery	30,782	Dec. 10	131	1674
McElroy Bros. Co., Bridgeport, Conn. Butter	30,656	Dec. 10	131	1672
Merchant & Evans Company, Philadelphia, Pa. Tin-plate, brass, copper, sheet-iron, &c	23,084	Dec. 10	131	1666
Merck, E., Darmstadt, Germany. Solution of hydrogen peroxid in water	29,955	Dec. 10	131	1669
Minard's Liniment Manufacturing Company, Framingham and Boston, Mass. Liniment	20,512	Dec. 10	131	1665
Model Heating Company, Philadelphia, Pa. Hot-water heaters, &c	22,947	Dec. 10	131	1665
Moloff, Elias, St. Louis, Mo. Remedy for eruptions of the face and body	30,884	Dec. 10	131	1675
Moore, William B., St. Louis, Mo. Remedy for indigestion, &c	28,406	Dec. 10	131	1667
Morse & Rogers, New York, N. Y. Leather boots, shoes, and slippers	30,478	Dec. 10	131	1671
Mount Vernon Belting Company, Baltimore, Md. Machine-belting	29,953	Dec. 10	131	1669
Mutual Drug Company, Cleveland, Ohio. Laxative and cathartic medicine	30,961	Dec. 10	131	1677
National Candy Company, St. Louis, Mo. Candies	30,999	Dec. 10	131	1678
National India Rubber Company, Bristol, R. I. Rubber boots and shoes	30,809	Dec. 10	131	1674
New Miraculum Corporation Ld., Melbourne, Australia. Preparation for stopping punctures in tires	29,617	Dec. 10	131	1668
Northwestern Elevator & Mill Company, Mount Vernon, Ohio. Wheat-flour	26,685	Dec. 10	131	1666
Norton Company, Worcester, Mass. Abrasive and polishing materials, tools implements, &c	26,393	Dec. 10	131	1666
Noxal Medicine Co., St. Louis, Mo. Female tonic, cough-syrup, liniment, &c	30,174	Dec. 10	131	1670
Nye & Wait, Auburn, N. Y. Rugs, portières, and cushion-covers	10,455	Dec. 10	131	1663
Old Kentucky Mfg. Co., Paducah, Ky. Remedies for diseases of live stock, hogs, and poultry	30,654	Dec. 10	131	1672
Olive Hill Fire Brick Company, Olive Hill, Ky. Fire-brick	29,433	Dec. 10	131	1668
Orbon Stove and Range Co., Belleville, Ill. Stoves and ranges	30,892	Dec. 10	131	1676
Osborn Mfg. Co., Cleveland, Ohio. Wire brushes	30,895	Dec. 10	131	1676
Pacific Novelty Company, New York, N. Y. Pyroxylin and metal combs	30,584	Dec. 10	131	1672
Peck Johnson Company, Grand Rapids, Mich. Medicines	29,801	Dec. 10	131	1668
Pernod, Jules, Avignon, France. Absinthe	30,486	Dec. 10	131	1671
Post Publishing Company, Boston, Mass. Daily newspaper	30,978	Dec. 10	131	1677
Post Publishing Company, Boston, Mass. Sunday newspaper	30,979	Dec. 10	131	1677
Pressed Steel Car Company, Pittsburg, Pa. Car-truck bolsters	31,023	Dec. 10	131	1678
R. E. Dietz Company, New York, N. Y. Lamp and lantern globes	30,657	Dec. 10	131	1672
R-N Leather Dressing Co., Saylesville, R. I. Leather-dressing	31,105	Dec. 10	131	1679
Rice-Stix Dry Goods Company, St. Louis, Mo. Muslin undergarments	30,850	Dec. 10	131	1675
Robertson, Alexander, Roseneath, Scotland. Medicated lotion	30,816	Dec. 10	131	1674
Sample, George W., York, Pa. Composition for cleaning and polishing metals, stone, &c	29,878	Dec. 10	131	1669
Samson Iron Works, Stockton, Cal. Gas, gasolene, and oil engines	29,343	Dec. 10	131	1667
Schwabacher Bros. & Co., Inc., Seattle, Wash. Canned fish	31,052	Dec. 10	131	1679
Sichert, George, New York, N. Y. Trousers	30,991	Dec. 10	131	1677
Smith & Egge Mfg. Co., Bridgeport, Conn. Alloy of metal	30,052	Dec. 10	131	1670
Smith, John W., Chester, Pa. Imitation laces	30,907	Dec. 10	131	1676
Société Generale Suisse de Chocolats, Vevey, Switzerland. Chocolate	30,815	Dec. 10	131	1674
Solomon & Company, K., Pittsburg, Pa. Suits, skirts and dress-waists	30,383	Dec. 10	131	1671
Standard Brewery, Chicago, Ill. Beer	30,128	Dec. 10	131	1670
Starner-Copeland Company, Columbus, Ohio. Leather shoes	29,224	Dec. 10	131	1667
Taylor & Williams, Louisville, Ky. Whisky	3,845	Dec. 10	131	1663
Thos. Moore Distilling Company, McKeesport, Pa. Whisky	30,360	Dec. 10	131	1671
Thumb, Eugene W., Chicago, Ill. Polishes and dressings for varnished, lacquered, &c., surfaces	29,892	Dec. 10	131	1669
Touraine Confectionery Co., Boston, Mass. Chocolates	31,026	Dec. 10	131	1678
Turnbull Wagon Company, Defiance, Ohio. Farm and truck wagons	30,667	Dec. 10	131	1672
Udolpho Wolfe Company, New York, N. Y. Aromatic schiedam schnapps	30,047	Dec. 10	131	1670
Underwood Typewriter Company, New York, N. Y. Stencilling-machines and stencil-sheets	30,476	Dec. 10	131	1671
Union Card & Paper Co., New York, N. Y. Paper, envelops, and bristol-boards	30,228	Dec. 10	131	1670
Union Card & Paper Co., New York, N. Y. Paper and bristol-boards	30,229	Dec. 10	131	1670
United Publishing Co., Washington, D. C. Tridally newspaper	31,010	Dec. 10	131	1678
United States Rubber Company, New Brunswick, N. J. Rubber boots and shoes	31,006	Dec. 10	131	1678
Viqueot Company, Long Island City, N. Y. Automobiles	12,875	Dec. 10	131	1664
Walker & Co., J. L., Lynn, Mass. Leather shoes, slippers, and sandals	30,821	Dec. 10	131	1674
Wanous, Josie A., Minneapolis, Minn. Hair-tonic compound	27,989	Dec. 10	131	1667
Watson & MacDonald, Dayton, Ohio. Pies and cakes	27,535	Dec. 10	131	1666
Weir & Company, Ross W., New York, N. Y. Coffee and tea	30,891	Dec. 10	131	1675
Weisberg, Benjamin, Philadelphia, Pa. Neckties	29,366	Dec. 10	131	1668
Wellcome, Henry S., London, England. Medicinal suppositories, &c	30,039	Dec. 10	131	1670
Wendell Pharmacal Co., Syracuse, N. Y. Remedy for dyspepsia, headaches, indigestion, &c	23,164	Dec. 10	131	1666
Weston, Edward, Newark, N. J. Magazine or trade journal	20,228	Dec. 10	131	1664
Wheaton & Sons, Hiram, New Bedford, Mass. Beverages and syrups for the same	16,016	Dec. 10	131	1664
Wheaton & Sons, Hiram, New Bedford, Mass. Syrup for carbonated beverages	16,017	Dec. 10	131	1664
White Cross Tonsorial Co., New York, N. Y. Advertising-signs	15,391	Dec. 10	131	1664
White, William B., Quincy, Mass. Eye-shades	30,658	Dec. 10	131	1672
Willis & Co., Grinnell, New York, N. Y. Shirtings, cambrics, and long-cloth	14,703	Dec. 10	131	1664
Williston, A. Lyman, Northampton, Mass. Indelible ink	24,236	Dec. 10	131	1666
Wookey, Alonzo, Peoria, Ill. Pianos, guitars, and mandolins	28,607	Dec. 10	131	1667
Woonsocket Rubber Company, Woonsocket, R. I. Rubber boots and shoes	30,015	Dec. 10	131	1669
Wyman & Son, Jasper, Millbridge, Me. Canned clams and sardines	5,837	Dec. 10	131	1663
X-Ray Incubator Co., Wayne, Nebr. Incubators and brooders	31,021	Dec. 10	131	1678
Zeiss, Carl, Jena, Germany. Optical instruments	22,110	Dec. 10	131	1665

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED ON THE 10TH DAY OF DECEMBER, 1907.

Invention.	Name.	No.	Date.	Monthly volume.		Official Gazette.	
				Specification.	Drawing.	Volume.	Page.
Aerial vessel	G. Halliday	873,542	Dec. 10	2532	534–5	131	1606
Air-heater	A. H. Lovejoy	873,566	Dec. 10	2584	544–5	131	1614
Alarm:							
See Burglar-alarm.							
Amusement apparatus	W. F. Mangels and C. N. Brewster	873,570	Dec. 10	2595	547	131	1616
Animal-trap	J. B. Brendt and C. O. Sherman	873,117	Dec. 10	1702	355–6	131	1466
Animal-trap	F. M. Sletto	873,331	Dec. 10	2128	444	131	1535
Animal-trap	J. O. Carlson and C. O. Hedstrom	873,502	Dec. 10	2451	516	131	1593
Animal-trap	A. T. Sullivan	873,631	Dec. 10	2705	572	131	1631
Article-holder	E. E. Minard	873,133	Dec. 10	1729	362	131	1471
Automatic switch	F. M. Hall	873,368	Dec. 10	2206	459	131	1549
Automatic switch	F. X. Mantsion	873,572	Dec. 10	2599	547–8	131	1617
Automobile	F. Bartl	873,405	Dec. 10	2272	473–4	131	1560
Automobile-bumper	R. W. Harroun	873,544	Dec. 10	2541	536	131	1607
Automobile folding-seat frame	J. M. Nolan	873,453	Dec. 10	2347	493	131	1576
Automobile lubricating device	F. J. Ziegler	873,478	Dec. 10	2393	504	131	1585
Automobile steering-wheel pivot	H. S. Baldwin	873,147	Dec. 10	1752	368	131	1475
Automobile wind-shield	S. D. Hunter	873,047	Dec. 10	1565	328	131	1443
Automobiles. Combined heating and ventilating system for	N. W. Williams	873,399	Dec. 10	2261	472	131	1558
Automobiles. Coupling-rod for the axles of	T. Rommel	873,092	Dec. 10	1659	345	131	1458
Automobiles. Number-lantern for	F. C. Lame	873,316	Dec. 10	2097	438	131	1530
Awnings. Apparatus for laying out and marking round-top	C. Diehl	873,352	Dec. 10	2172	454	131	1542
Band-brake	F. O'Brien	873,679	Dec. 10	2781	590	131	1652
Bar:							
See Tracker-bar.							
Battery:							
See Galvanic battery.							
Battery connection	G. P. Blow	873,560	Dec. 10	2749	583	131	1645
Battery grid. Storage	J. Marx	873,382	Dec. 10	2231	464	131	1553
Bayonet and side arm	A. Krill	873,054	Dec. 10	1582	331	131	1446
Bearing for vehicles. Spring	R. J. Edwards	873,221	Dec. 10	1892	396	131	1497
Bearing. Shaft	A. Sauer	873,097	Dec. 10	1666	347	131	1460
Bed	J. J. Dunn	873,357	Dec. 10	2181	455	131	1544
Bed. Couch	F. S. Sprague	873,103	Dec. 10	1675	349–50	131	1462
Beds. Head-rest for	J. G. Ryan	873,095	Dec. 10	1663	347	131	1459
Bedstead side-rail joint. Metallic	G. M. Robinson	873,173	Dec. 10	1814	380	131	1483
Beer-racker	I. Lowy and O. F. Adelman	873,567	Dec. 10	2589	546	131	1615
Belt-fastener	F. Baxter	873,009	Dec. 10	1475	306	131	1430
Bicycle attachment	J. J. Walters	873,278	Dec. 10	2000	419	131	1516
Bin:							
See Store-bin.							
Binder and letter-file	E. A. P. Wolf	873,282	Dec. 10	2007	421	131	1518
Binder. Loose-leaf	J. E. Maclachlan	873,151	Dec. 10	1757	370	131	1476
Binder. Loose-leaf	J. C. Dawson	873,417	Dec. 10	2291	478	131	1565
Bit:							
See Bridle-bit.							
Block:							
See Building-block.							
Blocking and derailing device	W. J. C. Kenyon and W. S. King	873,377	Dec. 10	2224	463	131	1551
Blow-guns. Dart for	C. E. Stivers	873,628	Dec. 10	2702	570	131	1635
Board:							
See Game-board.							
Boat. Life	T. B. King	873,557	Dec. 10	2570	541	131	1611
Boat. Motor	V. M. Salo and J. Rükonen	873,614	Dec. 10	2681	565	131	1631
Boiler:							
See Hot-water boiler. Washboiler.							
Boiler	W. G. Ross	873,094	Dec. 10	1661	346–7	131	1459
Bolt and nut cutter. Combination	J. Backscheider	873,004	Dec. 10	1466	305	131	1428
Book. Loose-leaf	H. M. Sturgis	873,106	Dec. 10	1681	351	131	1462
Boring or drilling machine	W. Topham	873,637	Dec. 10	2713	574	131	1638
Bottle-cap fastener	G. A. Williams	873,646	Dec. 10	2729	578	131	1641
Bottle-capping machine	A. W. Cordes	873,022	Dec. 10	1508	315–16	131	1434
Bottle-capping-machine head	G. Kirkegaard	873,245	Dec. 10	1937	406	131	1506
Bottle-indicating device	J. Casaccia	873,410	Dec. 10	2282	476	131	1563
Bottle. Non-refillable	H. Mindermann	873,155	Dec. 10	1766	372	131	1478
Bottle. Non-refillable	G. P. Vissas	873,472	Dec. 10	2384	502	131	1582
Bottle-stopper	J. Repetto	873,087	Dec 10	1650	343	131	1457

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Bowling-alley	C. Lufsky	873,252	Dec. 10	1959	409	131	1508
Box:							
See Core-box. Paper box. File-box.							
Bracket:							
See Scaffolding-bracket.							
Braiding-machines. Change-gearing for	H. Janssen	873,698	Dec. 10	2827	602–3	131	1658
Brake:							
See Band-brake. Vehicle-brake. Rail magnetic brake. Wagon-brake. Sled-brake.							
Brake	O. M. Gould	873,367	Dec. 10	2204	459	131	1548
Brake mechanism	K. Rushton	873,459	Dec. 10	2357	495	131	1578
Brake-operating attachment	H. L. Witherell	873,113	Dec. 10	1695	353–4	131	1468
Braking. Regenerative system for	W. I. Slichter	873,101	Dec. 10	1671	349	131	1461
Brick. Treating	A. Magoon	873,568	Dec. 10	2592	.....	131	1615
Bridle-bit	J. Reichert	873,604	Dec. 10	2660	560	131	1628
Bronze-dust. Machine for removing	A. J. Ford	873,529	Dec. 10	2510	530	131	1602
Brush. Adjustable cleaning-	R. T. Gillespie	873,308	Dec. 10	2072	433	131	1527
Brush. Blacking-	E. C. Hudson	873,550	Dec. 10	2558	539–40	131	1609
Buckle	A. E. Young and J. F. Hinkle	873,199	Dec. 10	1858	390	131	1492
Buckle. Harness-	C. E. Smith	873,464	Dec. 10	2366	497	131	1580
Buckle. Snap-fastening	E. I. Allison	873,000	Dec. 10	1461	304	131	1427
Buggy-top attachment	G. A. Holmes	873,128	Dec. 10	1723	360	131	1470
Building-block. Hollow	W. C. Neff	873,164	Dec. 10	1791	376	131	1480
Building block or slab. Reinforced	B. Cerutti	873,505	Dec. 10	2455	517	131	1594
Building structure. Composite	E. C. Poole	873,600	Dec. 10	2654	559	131	1627
Bung-starter	B. Cerutti	873,504	Dec. 10	2453	517	131	1593
Burglar-alarm	H. H. Ashenberg	873,116	Dec. 10	1700	355	131	1466
Burner:	C. Van Bergh	873,638	Dec. 10	2714	574	131	1638
See Gas-burner. Lamp-burner.							
Button	J. C. and J. A. Doran	873,354	Dec. 10	2176	455	131	1543
Button	J. C. and J. A. Doran	873,355	Dec. 10	2177	455	131	1543
Cabinet. Kitchen-	A. C. Kerr	873,440	Dec. 10	2327	489	131	1572
Cable clamp. Well-drilling-	C. F. Rigby	873,090	Dec. 10	1656	344–5	131	1458
Cable-joint. Metal-sheathed	C. W. Davis	873,215	Dec. 10	1882	394	131	1496
Caisson construction	A. Z. McLeod	873,069	Dec. 10	1609	336	131	1451
Calculating-machine	C. J. Smith	873,181	Dec. 10	1832	383–4	131	1486
Calendar	A. Anderson	873,696	Dec. 10	2821	601–2	131	1657
Came	T. W. Morrell	873,067	Dec. 10	1606	336	131	1450
Can:							
See Display-can.							
Can-vent-shielding machine	H. J. Douglass	873,519	Dec. 10	2477	522–3	131	1598
Canning device. Fruit-	T. H. Raney	873,603	Dec. 10	2658	560	131	1628
Candle-molding machine	C. Nordfors	873,073	Dec. 10	1620	338	131	1452
Candy-making machine. Round-stick-	R. S. Walters	873,396	Dec. 10	2256	470	131	1557
Cap	E. Forman	873,122	Dec. 10	1712	357	131	1468
Car and train-pipe coupling. Combination	J. W. Barth	873,288	Dec. 10	2020	423	131	1520
Car and train-pipe coupling. Combined	J. W. Barth	873,287	Dec. 10	2018	423	131	1520
Car-door	G. W. Sayre	873,175	Dec. 10	1817	381	131	1484
Car. Dumping-	J. H. Blake	873,149	Dec. 10	1755	369	131	1476
Car fender. Street-	M. Wilenski	873,197	Dec. 10	1855	389	131	1491
Car. Log or lumber	M. M. Russell	873,685	Dec. 10	2804	597	131	1654
Car. Motor-	J. T. Hepburn	873,434	Dec. 10	2317	485–6	131	1570
Car side bearing	J. C. Barber	873,404	Dec. 10	2270	473	131	1560
Car-ventilating system. Passenger-	N. S. Mercer	873,153	Dec. 10	1760	370–1	131	1477
Car-wheel	J. H. Woodworth	873,477	Dec. 10	2391	504	131	1584
Cars. Metallic window-frame for steel	J. S. Doyle	873,218	Dec. 10	1887	395	131	1496
Carbureter	A. E. Stoker	873,392	Dec. 10	2247	466	131	1555
Cards for lace-machines. Machine for punching jacquard-	H. Carbonnelle	873,293	Dec. 10	2033	425–6	131	1522
Carriage running-gear support. Baby-	W. C. Willets	873,196	Dec. 10	1853	388–9	131	1490
Carrier:							
See Elevated carrier. Pneumatic-tube-apparatus carrier.							
Carrier	K. Leidal and M. Ulring	873,380	Dec. 10	2227	463	131	1552
Carving-fork	J. F. Brower	873,150	Dec. 10	1756	369	131	1476
Case:							
See Gun-case. Show-case.							
Casket-handle	J. D. Lawrence	873,563	Dec. 10	2579	543	131	1613
Catheter-user's portable mechanical assistant	J. F. Spalding	873,275	Dec. 10	1995	418	131	1515
Centrifugal separator	J. W. Phillips	873,593	Dec. 10	2632	554–5	131	1623
Chain rope or belt	C. H. Bryan	873,208	Dec. 10	1874	393	131	1494
Chair:							
See Dental chair Metallic chair.							
Chair support or prop	A. Rothfuchs and G. Bliss	873,612	Dec. 10	2679	564–5	131	1631
Chalk-line holder	A. B. Sharp	873,686	Dec. 10	2806	597	131	1654
Chopper:							
See Cotton-chopper.							
Christmas-tree holder	J. T. Bailey	873,402	Dec. 10	2268	473	131	1559
Cigar-cutter	A. C. Gast	873,365	Dec. 10	2200	458	131	1547
Cigar-package	F. E. Derge	873,217	Dec. 10	1885	395	131	1496
Cigarette-making device	I. L. Conkling	873,350	Dec. 10	2189	453	131	1541
Cigarette-tipping machine	A. L. Boucher	873,014	Dec. 10	1484	309–10	131	1431
Clamp:							
See Cable-clamp. Spectacle-clamp. Comb-cementing clamp.							
Clay-cutting tool	K. Busch	873,209	Dec. 10	1875	393	131	1494
Cleaner:							
See Porch-cleaner.							
Cleaner handle. Vacuum-	A. P. Cranston	873,300	Dec. 10	2054	429	131	1525
Cleaning device	H. Chapman	873,412	Dec. 10	2285	476	131	1563
Cloth-cutting machine	G. L. Ballard	873,285	Dec. 10	2015	422	131	1519
Cloth-shrinking machine	C. W. Fenner	873,224	Dec. 10	1897	397–8	131	1498
Cloth-shrinking machine	A. Bloch	873,656	Dec. 10	2742	581–2	131	1644
Clothes-line hook	A. H. and A. J. J. de Beaumont	873,488	Dec. 10	2420	506	131	1588
Clutch	W. W. Sly	873,102	Dec. 10	1674	349	131	1461
Coal-drill-supporting frame	W. H. Clarkson	873,019	Dec. 10	1503	314	131	1433

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Coal-hoist. Electrically-operated	C. T. Henderson and N. C. Bassett.	873,312	Dec. 10	2080	434–5	131	1529
Cock. Time-controlled gas-	A. Davis	873,026	Dec. 10	1516	317	131	1435
Coil support. Field-	E. T. Mug	873,160	Dec. 10	1776	373–4	131	1479
Coin-receptacle safety device	J. Nutry	873,678	Dec. 10	2780	590	131	1651
Coke-oven door-jamb	E. H. Abraham	873,479	Dec. 10	2395	504	131	1585
Collar dampening and folding device	E. G. Skinner	873,179	Dec. 10	1829	383	131	1486
Comb-cementing clamp	F. J. Patnod	873,077	Dec. 10	1629	339	131	1453
Compost digger and elevator	G. Noll	873,260	Dec. 10	1969	412	131	1511
Concrete construction. Subaqueous	F. R. McQueen	873,581	Dec. 10	2613	550–1	131	1620
Concrete-tile mold	W. S. Thomas	873,634	Dec. 10	2709	573	131	1637
Concrete-work mold	F. M. Stults	873,138	Dec. 10	1739	364	131	1473
Condenser. Electric	F. S. Koch	873,053	Dec. 10	1580	331	131	1445
Confectionery. Article of	G. Heppe	873,369	Dec. 10	2208	460	131	1549
Control system	F. Darlington and O. S. Schairer	873,351	Dec. 10	2171	453	131	1542
Cooking utensil	W. J. Loudenslager and J. E. Morris.	873,672	Dec. 10	2770	587	131	1649
Copper and other metals. Electrodeposition of	S. O. Cowper-Coles	873,508	Dec. 10	2459	518	131	1595
Core-box	W. F. Rice	873,170	Dec. 10	1807	379	131	1483
Core-box	W. F. Rice	873,684	Dec. 10	2801	595–7	131	1654
Cork grinding or finishing machine	H. F. Busch	873,498	Dec. 10	2441	513–14	131	1591
Corn-husking rolls	A. Rosenthal	873,610	Dec. 10	2675	564	131	1630
Corset	J. Lindauer	873,443	Dec. 10	2331	490	131	1573
Corset. Apparel-	A. H. Benjamin	873,489	Dec. 10	2421	509	131	1588
Cotton-chopper	H. P. Mizell	873,255	Dec. 10	1963	410	131	1509
Cotton chopper and cultivator	W. A. Higgs and M. S. Hamilton	873,548	Dec. 10	2554	539	131	1606
Coupling:							
See Car and train-pipe coupling. Shaft-coupling. Thill-coupling.							
Crate. Knockdown	A. Williman	873 645	Dec. 10	2727	577	131	1641
Crate. Metallic	J. Repetto	873,086	Dec. 10	1646	343	131	1456
Crate or case for bottles, jars, and the like. Metallic	J. Repetto	873,085	Dec. 10	1643	342–3	131	1456
Cross-arm and insulator therefor. Wire-carrying	E. C. Ottinger	873,456	Dec. 10	2353	494	131	1577
Cross-head	P. Langer	873,561	Dec. 10	2577	542	131	1613
Crusher:							
See Rock-crusher.							
Cultivator weeder attachment	S. A. McCune	873,383	Dec. 10	2231	465	131	1553
Cultivator. Wheeled	J. S. Kendig	873,376	Dec. 10	2223	462	131	1551
Curtain support and hanger	J. Garret	873,038	Dec. 10	1542	323	131	1440
Curtains. Automatic uncoupling-handle for vestibule-	H. M. Robertson	873,091	Dec. 10	1657	345	131	1458
Cutlery. Table-	W. H. Smith	873,274	Dec. 10	1994	417	131	1515
Cutter:							
See Bolt and nut cutter. Cigar-cutter.							
Cutting out circular or elliptical forms. Machine for	C. C. Wals	873,395	Dec. 10	2254	470	131	1557
Damper	A. W. Walker	873,141	Dec. 10	1745	366	131	1473
Delivering articles of manufacture from a collecting-receptacle. Device for automatically	P. Raabe	873,268	Dec. 10	1982	415	131	1513
Dental broach	C. A. Skalstad	873,100	Dec. 10	1670	348	131	1461
Dental chair	A. W. Browne	873,015	Dec. 10	1489	310–11	131	1431
Derailer	M. C. Sloderbeck	873,622	Dec. 10	2694	569	131	1633
Derrick	E. E. Jenkins	873,374	Dec. 10	2218	461–2	131	1550
Detinning	E. A. Sperry	873,699	Dec. 10	2829	.....	131	1659
Digger:							
See Compost-digger.							
Directory. Telephone-	C. E. Napp	873,259	Dec. 10	1968	412	131	1511
Display-can. Sheet-metal	F. Rudolphi	873,137	Dec. 10	1737	364	131	1472
Display card-rack	F. L. Stone	873,184	Dec. 10	1838	385	131	1487
Display device	C. C. Fleming	873,421	Dec. 10	2298	480	131	1566
Distribution system	J. B. Taylor	873,107	Dec. 10	1683	351	131	1463
Door attachment. Screen-	C. S. McElroy	873,580	Dec. 10	2611	550	131	1619
Door-check	J. S. Young	873,693	Dec. 10	2817	600	131	1657
Door closer and check	W. K. Henry	873,433	Dec. 10	2316	485	131	1570
Door. Grain-	W. H. Ascue	873,115	Dec. 10	1699	354–5	131	1466
Door-hanger	J. W. Harris	873,230	Dec. 10	1907	400	131	1501
Door-hanger track	P. A. Myers	873,065	Dec. 10	1607	336	131	1451
Door-operating mechanism	R. F. Le Brocq	873,058	Dec. 10	1589	333	131	1447
Door. Rolling	J. Erwood	873,359	Dec. 10	2184	456	131	1545
Double-flange trap and sink	G. E. Dunstan	873,120	Dec. 10	1707	356	131	1467
Dough-dividing machine for bread-making	G. T. Pendrith	873,682	Dec. 10	2788	591–2	131	1653
Drawer-support	C. A. Gehne	873,225	Dec. 10	1898	398	131	1499
Drawing instrument for parallel ruling	T. English	873,524	Dec. 10	2497	527	131	1600
Drill	S. Lake	873,056	Dec. 10	1585	332	131	1446
Drying and ventilating system for houses, factories, or buildings	G. Müller	873,450	Dec. 10	2340	492	131	1575
Dumb-bell. Magneto-electric	J. Moores	873,066	Dec. 10	1605	335	131	1450
Dump-bed. Automatic	C. C. Taylor, G. W. Wood, and M. A. Vincent.	873,187	Dec. 10	1841	385–6	131	1488
Dust-collector	G. H. Forsyth	873,532	Dec. 10	2516	531	131	1603
Dust-pan	S. C. Courtney	873,213	Dec. 10	1880	394	131	1495
Dyeing	G. A. Waldinger and C. F. Isenloth.	873,277	Dec. 10	1999	.....	131	1516
Dyeing	H. Toepfer	873,636	Dec. 10	2712	.....	131	1638
Easel. Photograph-	H. C. Itter	873,050	Dec. 10	1570	329	131	1444
Eaves-strip	W. Behl	873,407	Dec. 10	2276	475	131	1561
Eaves-trough support	C. H. Molyneux	873,578	Dec. 10	2608	550	131	1619
Edger	G. M. Hinkley	873,667	Dec. 10	2757	585	131	1647
Electric accumulator	Q. Marino and E. W. Barton-Wright.	873,132	Dec. 10	1727	362	131	1471
Electric apparatus	H. L. Beach	873,290	Dec. 10	2024	424	131	1520
Electric cable	C. W. Davis	873,216	Dec. 10	1884	395	131	1496
Electric-circuit controller	W. A. Paris	873,263	Dec. 10	1973	413	131	1511
Electric heater	M. Landry	873,317	Dec. 10	2099	438	131	1531
Electric machine. Dynamo-	J. E. Noeggerath	873,072	Dec. 10	1618	337	131	1452
Electric machine. Static	W. C. Shinn	873,178	Dec. 10	1824	382	131	1485
Electric wires. Rotating bracket for the suspension of	C. E. Buckbee	873,700	Dec. 10	2833	703	131	1659
Electrical apparatus coil	P. MacGahan	873,253	Dec. 10	1960	409	131	1509
Electrical drop	G. J. Galbraith	873,307	Dec. 10	2071	432	131	1527
Electrical testing system	H. E. Miller	873,674	Dec. 10	2774	588–9	131	1650

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Elevated carrier	A. H. Neller	873,165	Dec. 10	1792	376	131	1481
Elevator-bucket	A. W. Berkner	873,655	Dec. 10	2741	581	131	1644
Elevator safety appliance	S. Bruce	873,495	Dec. 10	2435	512	131	1590
Ellipsograph	N. D. S. K. Beck	873,291	Dec. 10	2028	424	131	1521
Engine:							
See Internal-combustion engine.							
Rotary engine.							
Engines. Intake device for explosive mixtures in vapor-	C. P. Hollister	873,372	Dec. 10	2216	461	131	1550
Engraving-machine	E. Bausch	873,008	Dec. 10	1473	306	131	1429
Entrail-cleaning mechanism	H. Hakenholz	873,311	Dec. 10	2078	434	131	1528
Envelop	B. Davis	873,416	Dec. 10	2291	478	131	1565
Envelop and letter-sheet. Combined	C. A. W. Westholm	873,691	Dec. 10	2815	600	131	1656
Envelop-blank-gumming mechanism	C. H. Heywood and D. E. Travis	873,370	Dec. 10	2209	460-1	131	1547
Envelop-manufacturing machine	M. R. Dünnebier	873,520	Dec. 10	2485	524-5	131	1599
Eraser. Blackboard-	M. W. Perkins	873,327	Dec. 10	2124	443	131	1534
Eyeglasses	J. M. Webster and C. F. Ingold	873,109	Dec. 10	1688	352	131	1464
Eyeglasses	L. B. Becker	873,342	Dec. 10	2159	451	131	1540
Eyeglasses. Nose-guard for	W. L. Bemis	873,343	Dec. 10	2161	451	131	1540
Fabric:	G. A. Bader	873,339	Dec. 10	2148	448	131	1539
See Float fabric.							
Fan	T. M. Mulkerins	873,257	Dec. 10	1966	411	131	1510
Fan	A. Sakovitch	873,460	Dec. 10	2350	495	131	1578
Fastening device	M. F. MacNelly	873,063	Dec. 10	1597	334	131	1449
Fastening device	J. Senn	873,271	Dec. 10	1989	416	131	1515
Fastening means	A. L. White	873,692	Dec. 10	2816	600	131	1656
Fat-cutting machine	E. E. Motter	873,256	Dec. 10	1963	410-11	131	1510
Faucet	J. W. Grantland	873,538	Dec. 10	2527	553	131	1605
Feeding mechanism	O. Ashton	873,338	Dec. 10	2145	447-8	131	1538
Fence structure	N. B. Dixon	873,353	Dec. 10	2174	454	131	1543
Fence. Wire	G. L. Langer	873,318	Dec. 10	2100	439	131	1531
Fender:							
See Car-fender.							
Fertilizer-distributer	P. F. Hill and J. E. Coleman	873,236	Dec. 10	1918	402	131	1503
File. Arch-	W. O. Gottwals	873,537	Dec. 10	2525	553	131	1605
File-box	T. A. Walsh	873,473	Dec. 10	2386	503	131	1588
Filter-bed-cleaning machine	H. W. Blaisdell	873,010	Dec. 10	1476	307	131	1430
Filter-press	F. B. Anderson	873,482	Dec. 10	2402	505-16	131	1586
Filtering apparatus. Liquid-	W. Reeves and B. Bramwell	873,458	Dec. 10	2356	494	131	1578
Fire-extinguisher. Automatic	W. G. Asmus	873,651	Dec. 10	2737	580	131	1642
Firearm. Magazine-	J. J. Henry	873,547	Dec. 10	2546	538-9	131	1608
Firearm-sight	J. Windridge and G. S. Wilcox	873,112	Dec. 10	1693	353	131	1465
Firearm-sight	J. Windridge and G. S. Wilcox	873,281	Dec. 10	2005	420	131	1518
Firearms. Light-projecting attachment for	C. R. Penfield	873,591	Dec. 10	2629	554	131	1623
Fish-hook. Trap	J. Hartshorn	873,231	Dec. 10	1909	401	131	1501
Flat-iron	C. G. Avery	873,202	Dec. 10	1865	391	131	1493
Float fabric	G. W. Knox	873,378	Dec. 10	2225	463	131	1551
Floor finishing and smoothing machine	G. P. Billings	873,207	Dec. 10	1872	392	131	1494
Flushing device. Automatic	O. F. Kadow and J. H. Lyons	873,554	Dec. 10	2563	541	131	1610
Fob and purse. Combined	R. Heine	873,431	Dec. 10	2314	484	131	1509
Focusing attachment	E. S. Ballon	873,204	Dec. 10	1869	392	131	1493
Folding table, form, and the like	W. and W. J. Cassels	873,118	Dec. 10	1704	356	131	1467
Foot-rest	C. P. Earley	873,521	Dec. 10	2492	525	131	1599
Fork:							
See Carving-fork.							
Fowl-beheading device	H. H. Holdren	873,436	Dec. 10	2321	487	131	1571
Frame:							
See Automobile folding-seat frame.							
Coal-drill-supporting frame.							
Machine-frame.							
Fruit-picker	B. Hestness	873,234	Dec. 10	1914	402	131	1502
Furnace:							
See Hot-air furnace.							
Furnace-door and device for opening the same. Automatically-closing	E. R. and J. Markmann	873,573	Dec. 10	2601	548	131	1617
Furnace-grate	H. C. Chamberlin	873,411	Dec. 10	2284	476	131	1503
Furnace shaft. Roasting-	G. B. Shipley	873,687	Dec. 10	2808	598	131	1655
Gage:							
See Platen-gage. Steam or vacuum gage.							
Galvanic battery. Reversible	T. A. Edison	873,220	Dec. 10	1891	396	131	1497
Game-board	G. B. Doan and H. Hanson	873,031	Dec. 10	1530	320	131	1437
Garden-reel	R. D. Wirt	873,143	Dec. 10	1747	367	131	1474
Garter-slide	J. Maltby	873,445	Dec. 10	2334	490	131	1574
Gas. Apparatus for carbonizing coal for the production of	W. Young and S. Glover	873,647	Dec. 10	2730	578	131	1641
Gas-burner	E. S. Springer and J. L. Maloney	873,182	Dec. 10	1834	384	131	1487
Gas-burner	J. Ball	873,485	Dec. 10	2412	507	131	1587
Gas-burner	J. W. Farnoff	873,525	Dec. 10	2499	527	131	1601
Gas generator. Acetylene-	E. S. Springer and J. L. Maloney	873,624	Dec. 10	2696	569	131	1634
Gas generators. Carbid-feed mechanism for acetylene-	T. J. Beaudette	873,406	Dec. 10	2274	474	131	1561
Gas manufacture	A. E. Schlieder	873,176	Dec. 10	1819	381	131	1484
Gas or steam separator	H. I. Lea	873,250	Dec. 10	1948	408	131	1508
Gas-producer	J. E. Angell	873,336	Dec. 10	2138	446-7	131	1537
Gas-producer	C. Gamer	873,037	Dec 10	1540	322-3	131	1439
Gasket and making the same. Closure-	A J. Gifford	873,039	Dec. 10	1544	323-4	131	1440
Gate	J. S. Giles	873,366	Dec. 10	2202	459	131	1548
Gear. Change-speed	E. L. McMichael	873,135	Dec. 10	1734	363	131	1472
Gear. Friction draft-	M. Sizaire and L. Naudin	873,461	Dec. 10	2360	496	131	1579
Gem-displaying ring	J. R. Cardwell	873,210	Dec. 10	1875	393	131	1494
Generator:	C. Moe	873,156	Dec. 10	1767	372	131	1478
See Gas-generator.							
Glass grinding, smoothing, and polishing machine. Plate-	E. Bagnall	873,340	Dec. 10	2150	448-50	131	1539
Glove. Apparel-	B. J. Ricker	873,608	Dec. 10	2672	563	131	1629
Go-cart. Collapsible	J. Wolfenden, J. Knutson, and L. Larsen.	873,283	Dec. 10	2008	421	131	1518
Golf-club	J Govan	873,423	Dec. 10	2304	482	131	1567

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Goods composed of cotton and wool. Production of effects on mixed	G. Rudolph	873,613	Dec. 10	2680		131	1631
Grain-shocking apparatus	J. Calder	873,500	Dec. 10	2444	514-15	131	1592
Grave-protector	G. H. Knöchel	873,052	Dec. 10	1578	330	131	1445
Gridiron	A. C. Parry	873,589	Dec. 10	2627	553	131	1623
Grinding-machine feed-regulator	T. A. Edison	873,219	Dec. 10	1889	395	131	1497
Grinding or polishing wheel	C. B. Wattles	873,398	Dec. 10	2259	471	131	1558
Grooving and jointing machine cutter-head	H. B. Ross	873,093	Dec. 10	1660	346	131	1458
Ground-plate	B. J. Jones	873,375	Dec. 10	2221	462	131	1551
Grout mixing and discharging apparatus. Pneumatic	W. L. Canniff	873,345	Dec. 10	2163	452	131	1541
Gun-case and ammunition-belt. Combined	N. T. Vellquette	873,140	Dec. 10	1744	366	131	1473
Gun-sight	G. H. Garrison and W. A. Hillis	873,535	Dec. 10	2521	532	131	1604
Hair-pin	D. W. McNeil	873,163	Dec. 10	1790	375	131	1480
Hammock-support	C. H. Banks	873,652	Dec. 10	2738	580	131	1643
Handle:							
See Casket-handle. Cleaner-handle.							
Hanger:							
See Door-hanger. Punching-bag hanger.							
Harness-hanger. Stovepipe-hanger.							
Harness-hanger	F. Hof	873,549	Dec. 10	2556	539	131	1609
Harvester. Beet-	M. Goodfellow	873,040	Dec. 10	1547	324-5	131	1441
Harvester-knotter	R. H. Moore	873,158	Dec. 10	1774	373	131	1479
Hat-fastener	M. F. Laubach	873,057	Dec. 10	1588	332	131	1447
Hat-holder	R. W. Bock	873,490	Dec. 10	2424	509-10	131	1589
Heater:							
See Air-heater. Water-heater.							
Electric heater. Water-tank heater.							
Heel. Detachable	C. C. Schmidt	873,388	Dec. 10	2238	466	131	1554
Hides and making same. Substance for treating	O. H. Nowak	873,074	Dec. 10	1623	338	131	1452
Hides and skins. Carroting	C. and E. Pichard	873 594	Dec. 10	2635		131	1624
Hinge. Door-	W. K. Henry	873,432	Dec. 10	2315	484	131	1509
Hoeing-machine	W. A. Harris	873,543	Dec. 10	2537	535-6	131	1607
Hog catcher and holder	J. Davis	873,514	Dec. 10	2470	520	131	1597
Hoisting apparatus	A. G. Monks	873,157	Dec. 10	1768	372-3	131	1478
Hoof-parer	J. Hedrick	873,546	Dec. 10	2544	537	131	1608
Hook:							
See Clothes-line hook. Register-hook.							
Fish-hook. Snap-hook.							
Latch-hook. Whiffletree-hook.							
Hook-rod-disconnecting device	D. K. Allison and G. F. De Wein	873,695	Dec. 10	2819	601	131	1657
Hoop:							
See Metal hoop.							
Hop-jack	O. Selg	873,330	Dec. 10	2127	443	131	1535
Hop-wire-detaching device	J. A. Grover	873,227	Dec. 10	1902	399	131	1499
Horse-detacher	P. A. Peterson and J. M. Haines	873,592	Dec. 10	2631	554	131	1623
Horse-gaiting device	E. A. Hyde	873,240	Dec. 10	1922	404	131	1504
Horseshoe	R. Hübner	873,373	Dec. 10	2217	461	131	1550
Horseshoe	H. J. Ross	873,611	Dec. 10	2677	564	131	1630
Horseshoe-calk	E. Courtney and P. Bornhorn	873,119	Dec. 10	1706	356	131	1467
Hot-air furnace	A. C. Mott	873,449	Dec. 10	2339	491-2	131	1574
Hot-water boiler	H. Wilson	873,111	Dec. 10	1692	352-3	131	1464
Hub. Vehicle-	A. Hart	873,428	Dec. 10	2310	483	131	1508
Hydrometer testing-jar	F. Storm	873,629	Dec. 10	2703	571	131	1635
Ice-machine	W. W. Tobey and F. Freeman	873,189	Dec. 10	1845	386	131	1489
Illusion device	A. K. Massad	873,447	Dec. 10	2335	491	131	1574
Incubator	J. E. Chambers	873,295	Dec. 10	2040	426-7	131	1523
Index. Card-	E. Eckart	873,305	Dec. 10	2067	432	131	1526
Instep-support	F. N. McKinnon	873,677	Dec. 10	2779	589	131	1651
Insulated rail-joint	J. H. Brothers	873,402	Dec. 10	2427	510-11	131	1589
Internal-combustion engine	A. M. Brown	873,493	Dec. 10	2430	511	131	1590
Internal-combustion engine	H. S. Anderson	873,650	Dec. 10	2734	579	131	1642
Invalid-lifter	G. E. Olsen and O. J. Johnson	873,076	Dec. 10	1628	339	131	1453
Iron:							
See Flat-iron.							
Iron from metallic sulfids. Making	R. H. Aiken	873,648	Dec. 10	2732		131	1642
Jack:							
See Hop-jack. Loading-jack.							
Lifting and moving jack.							
Jack or lifting device	I. J. Lagasse and N. Normand	873,248	Dec. 10	1946	407	131	1507
Jar:							
See Hydrometer testing-jar.							
Joining device	H. Pohlmann	873,599	Dec. 10	2653	558	131	1626
Joint:							
See Bedstead side-rail joint. Insulated rail-joint.							
Cable-joint. Stovepipe-joint.							
Knife:							
See Pocket-knife.							
Knife-polishing machine	G. S. Blakeslee	873,011	Dec. 10	1478	307-8	131	1430
Knife-switch	H. P. Ball	873,005	Dec. 10	1467	305	131	1428
Ladder. Extension-	W. Williamson	873,110	Dec. 10	1689	352	131	1464
Lamp	A. H. Handlan, Jr.	873,427	Dec. 10	2309	483	131	1508
Lamp. Arc-	W. E. Daniels	873,414	Dec. 10	2287	477	131	1564
Lamp. Arc-	W. E. Daniels	873,415	Dec. 10	2289	477	131	1564
Lamp-burner	W. A. Fain and R. A. Henry	873,360	Dec. 10	2186	456	131	1545
Lamp. Gas-	E. W. Cornell	873,663	Dec. 10	2753	584	131	1646
Lamp holder. Electric-	C. E. Throop and S. A. Freeman	873,108	Dec. 10	1685	351-2	131	1463
Lamp-receptacle	J. S. Stewart	873,104	Dec. 10	1677	350	131	1462
Lamp-shade. Folding	V. Freytag	873,665	Dec. 10	2756	585	131	1647
Last	H. F. Loewer	873,060	Dec. 10	1592	333	131	1448
Last	J. P. Thurell	873,635	Dec. 10	2711	573	131	1637
Lasting-machine	J. Cavanagh, Jr.	873,018	Dec. 10	1494	313-14	131	1432
Latch. Door-	J. H. Stratton	873,185	Dec. 10	1839	385	131	1488
Latch-hook	E. A. Hill	873,235	Dec. 10	1916	402	131	1503
Leather. Manufacturing artificial	L. Gevaert-Naert	873,582	Dec. 10	2614		131	1620
Lifter:							
See Invalid-lifter.							
Lifting and moving jack. Combined	A. W. Whiteford	873,194	Dec. 10	1850	388	131	1490
Linotype-machine	G. G. Babcock	873,203	Dec. 10	1867	391-2	131	1493

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Linotype-machine	C. T. Libby and G. G. Babcock	873,251	Dec. 10	1953	408–9	131	1508
Linotype-slug receiver	G. E. Wallin	873,642	Dec. 10	2721	576	131	1639
Liquid-dispenser	J. Fitzpatrick	873,306	Dec. 10	2009	432	131	1527
Loading jack. Lumber-	G. Rypkema	873,096	Dec. 10	1665	347	131	1459
Lock:							
See Nut-lock. Sash-lock.							
Lock	A. Cordeau	873,212	Dec. 10	1878	394	131	1495
Lock	F. S. Allano	873,481	Dec. 10	2397	505	131	1586
Locomotive	N. D. Levin	873,442	Dec. 10	2330	490	131	1573
Locomotive driving-boxes. Wedge for	W. J. Barrett	873,148	Dec. 10	1754	369	131	1476
Log finder and lifter for submerged logs, &c.	J. M. Munn	873,579	Dec. 10	2610	550	131	1619
Looms. Lay-motion for	A. E. Rhoades	873,606	Dec. 10	2668	562	131	1629
Looms. Rotary magazine for weft-replenishing	M. L. Stone	873,467	Dec. 10	2372	498–500	131	1581
Looms. Wire head and fastening means for	F. Mitchell and C. Beal, Jr.	873,448	Dec. 10	2338	491	131	1574
Lubricator:							
See Sight-feed lubricator.							
Lubricator	W. and J. W. Leyland	873,319	Dec. 10	2101	439	131	1531
Machine frame. Long-	W. D. Richter	873,068	Dec. 10	1651	344	131	1457
Mail deliverer and receiver	O. Fisher	873,527	Dec. 10	2505	528–9	131	1601
Mail-pouch receiving and delivering device	B. Stanley	873,276	Dec. 10	1997	418–19	131	1516
Mail-receiver	A. F. Kuhl	873,247	Dec. 10	1942	407	131	1507
Mantle holder. Welsbach-	C. R. Warner	873,690	Dec. 10	2813	600	131	1656
Manure-spreader	S. K. Dennis and F. W. Rice	873,030	Dec. 10	1523	319–20	131	1437
Manure-spreader	C. W. Smith	873,465	Dec. 10	2367	498	131	1581
Marble. Making artificial	E. E. Hippe	873,371	Dec 10	2214	.....	131	1550
Massage implement	H. D. Gardy	873,123	Dec. 10	1713	357	131	1468
Mat:							
See Rubber mat.							
Measuring and cutting skirts. Machine or device to be used in	V. A. Phoebus	873,266	Dec. 10	1979	414	131	1513
Measuring machine. Cloth-	L. P. Normandin	873,454	Dec. 10	2348	493	131	1576
Mechanical movement	L. Griffith	873,426	Dec. 10	2307	483	131	1567
Messages, signals, &c. Apparatus for receiving and strengthening the reproduction of	E. S. Hagemann	873,042	Dec. 10	1556	326	131	1441
Metal hoop	J. E. Wright	873,114	Dec. 10	1697	354	131	1465
Metals. Making a solution of rare-earth	C. Baskerville	873,205	Dec. 10	1870	.....	131	1493
Metallic chair	J. H. Petroskey	873,265	Dec. 10	1977	414	131	1512
Metallic tie	W. D. Turner	873,469	Dec. 10	2381	501	131	1581
Meter	E. Schattner	873,098	Dec. 10	1667	348	131	1460
Meters. Prepayment attachment for electricity-	F. J. Dowling	873,356	Dec. 10	2177	455	131	1544
Micrometer-gages, &c. Spindle-lock for	L. S. Starrett and J. A. Adell	873,626	Dec. 10	2699	570	131	1635
Microscope	C. Bausch	873,007	Dec. 10	1471	305–6	131	1429
Microtome	H. Lebrun	873,059	Dec. 10	1590	333	131	1447
Microtome	R. H. Pietzsch	873,595	Dec. 10	2636	555–6	131	1624
Mill:							
See Rolling-mill. Stamp-mill.							
Mixer:							
See Mortar-mixer.							
Mixing fluids and molten metals of different densities. Device for	H. Leiser	873,131	Dec. 10	1727	361	131	1471
Mixing-machine	W. G. Stockham and F. L. Doyle	873,391	Dec. 10	2245	467–8	131	1555
Mold:							
See Concrete-tile mold. Concrete-work mold.							
Mold attachment	H. A. and H. W. Keehn	873,670	Dec. 10	2766	586–7	131	1648
Molding-machine	J. H. Koontz	873,559	Dec. 10	2573	542	131	1612
Molding-machine	H. Pocock	873,598	Dec. 10	2648	558	131	1626
Molding process	A. B. Marsteller	873,574	Dec. 10	2603	548	131	1618
Monkey-wrench	C. and G. C. Van Horn	873,191	Dec. 10	1848	387	131	1489
Mortar-mixer	C. E. Oelman	873,455	Dec. 10	2351	494	131	1577
Motor:							
See Spring-motor.							
Motor	J. Schroeder	873,619	Dec. 10	2687	567	131	1632
Motor control. Electric-	W. Cooper	873,298	Dec. 10	2049	428	131	1524
Motor-control system	W. L. Merrill	873,064	Dec. 10	1599	335	131	1449
Motor-control system	W. J. Richards	873,171	Dec. 10	1810	380	131	1483
Motor-control system	W. F. Schneider	873,177	Dec. 10	1822	381	131	1485
Motor control system. Electric-	L. M. Aspinwall	873,284	Dec. 10	2012	421–2	131	1519
Motor controller. Electric-	W. A. Paris	873,264	Dec. 10	1975	413–14	131	1512
Motor starting and controlling apparatus. Electric-	A. Taylor, T. Eaton, and H. Schwarz	873,139	Dec. 10	1741	365	131	1473
Mounds, graves, and other similar purposes. Cover for decorating	C. Weber-Illig	873,279	Dec. 10	2001	419–20	131	1517
Mouse-trap	J. A. Vincent	873,639	Dec. 10	2716	574	131	1638
Mower. Lawn-	T. J. Dunning	873,033	Dec. 10	1532	320–1	131	1438
Mower. Lawn-	I. Ellwood	873,523	Dec. 10	2494	526	131	1600
Music cornet. Automatic sheet-	C. E. Fauth and G. D. Skamper	873,035	Dec. 10	1535	321–2	131	1439
Music-playing instrument. Autopneumatic	W. R. Crippen	873,214	Dec. 10	1880	394	131	1495
Music-sheet holder	F. W. Barrows	873,286	Dec. 10	2017	423	131	1519
Musical instrument	J. A. Bartholomew	873,289	Dec. 10	2022	424	131	1520
Musical-instrument keyboard	A. E. Adriance	873,146	Dec. 10	1751	368	131	1475
Musical instrument. Mechanical	F. G. Lynde	873,320	Dec. 10	2102	439	131	1531
Newspapers and the like. Conveyer for	E. G. Thomas	873,633	Dec. 10	2708	672–3	131	1637
Nozzle	F.W. Cummings and G. H. Hanna	873,301	Dec. 10	2056	429	131	1525
Nut. Axle-	N. H. Roe	873,396	Dec. 10	2235	465	131	1553
Nut-lock	F. Greene	873,424	Dec. 10	2305	482	131	1567
Nut-lock	A. H. Reade	873,457	Dec. 10	2355	494	131	1577
Ores. Chloridizing	J. E. Greenawalt	873,309	Dec. 10	2075	433	131	1528
Ores from the rocky constituents thereof. Apparatus for separating the metallic particles of	D. H. Norris	873,586	Dec. 10	2620	552	131	1621
Ornamental article for personal wear	M. E. McDonnell	873,258	Dec 10	1967	412	131	1510
Oven. Portable	A. B. Kingsland	873,558	Dec. 10	2571	541	131	1611
Overshoe	J. D. Price	873,602	Dec. 10	2657	560	131	1627
Package-tie	O. S. White	873,192	Dec. 10	1849	387	131	1490
Package-tie	O. S. White	873,193	Dec. 10	1850	387	131	1490
Packing. Metallic	E. M. Cook	873,507	Dec. 10	2458	518	131	1504
Pail and heater. Dinner-	E. F. Hayes	873,232	Dec. 10	1910	401	131	1501
Pan:							
See Dust-pan.							
Paper box	G. R. Wyman	873,335	Dec. 10	2136	446	131	1537
Paper coating or treating machine	H. P. Hilbert	873,126	Dec. 10	1718	358–9	131	1469

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Paper sacks and roll-paper. Combined holder for	W. E. Burks	873,409	Dec. 10	2279	475–6	131	1562
Paper-softening apparatus	T. Scherf	873,169	Dec. 10	1803	378–9	131	1482
Pencil-sharpener	A. T. Peterson	873,079	Dec. 10	1632	340	131	1454
Phonograph	J. Bornand and B. Thoens	873,013	Dec. 10	1483	308–9	131	1431
Photograph cabinet or rack	J. N. Koch	873,379	Dec. 10	2226	463	131	1552
Photographic flash-lamp	J. Inglis	873,242	Dec. 10	1925	404	131	1505
Piano-sling	H. H. Hanson	873,044	Dec. 10	1562	327	131	1442
Picker:							
See Fruit-picker.							
Piling. Compressed-air-cushion block for	C. C. De Witt	873,517	Dec. 10	2474	521	131	1598
Pin:							
See Hair-pin. Safety-pin.							
Pipe:							
See Tobacco-pipe.							
Pipe-bending machine	J. F. Cox	873,023	Dec. 10	1512	316	131	1434
Pipe-threading machinery	E. D. Westrip and R. McCarty	873,334	Dec. 10	2133	445	131	1536
Pipe-wrench	J. L. Brown	873,494	Dec. 10	2433	511	131	1590
Planers. Work-support for bottom cutter-heads of wood-	C. W. H. Blood and C. G. Ostemman	873,657	Dec. 10	2745	582	131	1644
Planter. Corn-	C. E. Mentzer	873,673	Dec. 10	2771	588	131	1649
Platen-gage	O. V. Stapp	873,183	Dec. 10	1835	384	131	1487
Plow. Auto steam-	C. G. Hampton	873,229	Dec. 10	1906	400	131	1500
Pneumatic-despatch apparatus	E. A. Fordyce	873,531	Dec. 10	2313	531	131	1603
Pneumatic-despatch-tube apparatus	A. W. Pearsall	873,590	Dec. 10	2628	553	131	1623
Pneumatic-despatch-tube apparatus. Terminal for	I. W. Litchfield	873,565	Dec. 10	2582	543–4	131	1613
Pneumatic-tube-apparatus carrier	E. A. Fordyce	873,530	Dec. 10	2512	530	131	1602
Pocket-knife	H. Berns	873,206	Dec. 10	1872	392	131	1494
Pole. Sheet-metal	W. L. Wright	873,144	Dec. 10	1748	367	131	1474
Polishing-machine	C. M. Nichols	873,583	Dec. 10	2615	551	131	1620
Porch cleaner	M. Mueller	873,451	Dec. 10	2343	492	131	1575
Postal mailing-card	D. W. Custer	873,024	Dec. 10	1515	317	131	1435
Powdered substances. Receptacle for	Y. K. Buell	873,497	Dec. 10	2440	513	131	1591
Power-transmission mechanism	J. H. Pendleton	873,081	Dec. 10	2785	591	131	1652
Press:							
See Filter-press.							
Pressure. Machine for exerting	E. P. Guenther	873,539	Dec. 10	2528	533	131	1605
Pressure-tank	G. Lewis and D. A. Smith	873,671	Dec. 10	2768	587	131	1649
Printer's registering device	F. C. Dohrmann	873,303	Dec. 10	2061	430–1	131	1526
Printing attachment for paper-roll holders	J. L. Lamboley	873,500	Dec. 10	2574	542	131	1612
Printing-film frames. Film-frame rest for	B. Day	873,029	Dec. 10	1521	318–19	131	1436
Printing-machine. Duplicating	B. O. Fanslow	873,361	Dec. 10	2186	456–7	131	1545
Printing-machine. Platen	M. Rockstroh	873,609	Dec. 10	2674	563–4	131	1629
Printing-press ink-distributing mechanism	G. W. Prouty	873,267	Dec. 10	1980	415	131	1513
Propelling mechanism. Boat-	A. J. Fell and J. A. McIver	873,697	Dec. 10	2826	602	131	1658
Pulp-screening apparatus	W. A. Stevenson and A. H. White	873,390	Dec. 10	2241	466–7	131	1554
Pump	H. Wahler	873,394	Dec. 10	2252	469	131	1556
Pump. Air-	G. H. Mohler	873,065	Dec. 10	1602	335	131	1450
Pump. Centrifugal	P. J. Wickblom	873,644	Dec. 10	2725	577	131	1640
Pump. Chain-	C. J. Williams	873,280	Dec. 10	2003	420	131	1517
Pump. Combined wet and dry air	R. D. Tomlinson	873,688	Dec. 10	2810	599	131	1655
Pump. Vapor-	H. A. Fleuss	873,528	Dec. 10	2508	529	131	1602
Pumping-cylinder valve	M. A. Neeland	873,452	Dec. 10	2345	492–3	131	1575
Punch. Paper-bag	R. Munday	873,161	Dec. 10	1778	374	131	1480
Punching-bag hanger	E. K. Davis	873,027	Dec. 10	1518	318	131	1436
Puncture-closer	D. Apstein	873,337	Dec. 10	2143	447	131	1538
Puzzle	C. Hunt	873,313	Dec. 10	2086	435	131	1529
Puzzle	M. O. Mertes	873,576	Dec. 10	2607	549	131	1618
Race-course barrier and starting device	D. McGladdery and J. Pawolowski.	873,162	Dec. 10	1779	374–5	131	1480
Rack:							
See Display card-rack. Tub-rack.							
Rack	H. M. Manheim	873,446	Dec. 10	2335	491	131	1574
Radiator	E. L. Ogle	873,384	Dec. 10	2233	465	131	1553
Radiator	E. L. Ogle	873,385	Dec. 10	2234	465	131	1553
Rail magnetic brake	V. L. Ochoa	873,587	Dec. 10	2622	553	131	1622
Rail. Third	R. K. Eddowes	873,522	Dec. 10	2493	526	131	1600
Rail-tie	L. R. Nordquist	873,585	Dec. 10	2619	552	131	1621
Railway-switch	R. F. Gilmore and W. C. Cook	873,536	Dec. 10	2523	532–3	131	1604
Railway-tie	L. Blessing	873,292	Dec. 10	2030	424	131	1521
Railway-tie	W. H. Castle	873,294	Dec. 10	2039	426	131	1523
Railway-tie	A. F. Gustafson	873,310	Dec. 10	2076	434	131	1528
Railways. Automatic block-signaling system for electric	F. Townsend	873,468	Dec. 10	2376	500	131	1581
Receptacle	J. A. Hoffmann	873,237	Dec. 10	1919	403	131	1503
Recorder:							
See Speed-recorder.							
Reel:							
See Garden-reel.							
Refrigerators and alarm therefor. Receptacle for the drain-water of	A. Casale	873,503	Dec. 10	2452	516	131	1593
Register	L. A. Schmidt	873,270	Dec. 10	1986	416	131	1514
Register-hook	W. L. Hamilton	873,043	Dec. 10	1559	326	131	1442
Regulator:							
See Grinding-machine feed-regulator. Temperature-regulator.							
Rheostat	H. P. Ball	873,006	Dec. 10	1468	305	131	1429
Ring:							
See Gem-displaying ring. Spinning-machinery ring.							
Riveting apparatus	B. Waddington	873,640	Dec. 10	2717	575	131	1639
Rock-crusher	E. S. Philips	873,081	Dec. 10	1637	341	131	1455
Rock-crusher. Multiple	E. S. Philips	873,080	Dec. 10	1635	340	131	1454
Rocking-horse. Traveling	B. F. Fowler	873,533	Dec. 10	2517	532	131	1603
Roll-holder	H. Thumann	873,188	Dec. 10	1844	386	131	1488
Roller:							
See Shade-roller.							
Rolling apparatus	E. E. Slick	873,462	Dec. 10	2362	496	131	1579
Rolling irregular shapes. Mill for	E. E. Slick	873,463	Dec. 10	2364	497	131	1580
Rolling-mill	A. T. Keller	873,439	Dec. 10	2226	488	131	1572
Roofing materials. Device for tying rolls of	F. S. Howard	873,046	Dec. 10	1564	327–8	131	1443

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Rotary engine	B. F. Augustine	873,201	Dec. 10	1862	360–1	131	1492
Rotary engine	V. Pingret	873,596	Dec. 10	2641	556–7	131	1625
Rotary engine	V. Pingret	873,597	Dec. 10	2645	557–8	131	1625
Rotary engine	E. C. Rhodes	873,607	Dec. 10	2671	562–3	131	1629
Rubber boot and shoe	T. Crowley	873,510	Dec. 10	2462	519	131	1595
Rubber boot and shoe	T. E. Hurley	873,551	Dec. 10	2559	540	131	1609
Rubber mat	T. P. Farmer	873,420	Dec. 10	2298	480	131	1566
Rug-fastener	N. K. Davidyan	873,025	Dec. 10	1516	317	131	1435
Saddletree-plate	J. E. L. Crawford	873,509	Dec. 10	2460	518	131	1595
Safe. Provision-	O. E. Kearns	873,555	Dec. 10	2567	541	131	1611
Safety-pin	L. C. Wicks	873,474	Dec. 10	2387	503	131	1583
Sand-molding machine	W. C. Norcross	873,584	Dec. 10	2617	551	131	1621
Saponification process	M. R. A. Samuel	873,615	Dec. 10	2682	565	131	1631
Sash-cord holder	G. C. Smith	873,623	Dec. 10	2695	569	131	1634
Sash-lock	C. Smith	873,180	Dec. 10	1831	383	131	1486
Sash-lock	F. E. Greis	873,425	Dec. 10	2306	482	131	1567
Sash-supporter	W. W. Sweetland	873,186	Dec. 10	1840	385	131	1488
Sash. Window-	L. J. Cook	873,211	Dec. 10	1877	393	131	1495
Saw	S. J. Gray and J. Horning	873,666	Dec. 10	2756	585	131	1647
Saw-filing machine	I. H. Farrow	873,223	Dec. 10	1804	397	131	1498
Sawing-machine. Self-feeding	J. A. Meeks and F. C. Kaiser	873,575	Dec. 10	2604	549	131	1618
Sawmill set-works	P. J. Bogie and M. C. Anderson	873,012	Dec. 10	1481	308	131	1430
Scaffolding-bracket	G. E. Humphries	873,129	Dec. 10	1724	360	131	1470
Scale. Platform-	M. H. Reed	873,168	Dec. 10	1799	377–8	131	1482
Scraper. Disk-	W. E. Wilhelm	873,142	Dec. 10	1746	366	131	1474
Screw-driver	C. H. Chappelle	873,296	Dec. 10	2044	427	131	1523
Screw-driver. Magazine	L. S. Starrett	873,625	Dec. 10	2697	570	131	1634
Screw-driver. Ratchet	B. F. Foss	873,463	Dec. 10	2194	458	131	1547
Seal	A. B. Schofield	873,618	Dec. 10	2686	567	131	1632
Seasoning-machine	F. F. Howe	873,238	Dec. 10	1920	403	131	1504
Seeder and fertilizer-distributer	J. A. Ingram	873,130	Dec. 10	1724	360–1	131	1470
Separating process and apparatus	W. E. Pearse	873,326	Dec. 10	2121	442	131	1534
Separator: *See* Centrifugal separator. Gas or steam separator.							
Separator	W. Baker	873,484	Dec. 10	2407	506–7	131	1587
Settee. Gliding	I. C. Manahan	873,381	Dec. 10	2229	464	131	1552
Sewing machine. Chain-stitch shoe-	H. A. Ballard	873,486	Dec. 10	2413	507–8	131	1587
Sewing-machine edge-guide	J. Kosatka	873,246	Dec. 10	1939	406–7	131	1506
Sewing-machine guide	I. Stubiman	873,332	Dec. 10	2129	444	131	1536
Shade-roller. Spring	A. John, jr.	873,438	Dec. 10	2323	488	131	1571
Shaft-coupling	J. J. Schmitt	873,617	Dec. 10	2685	566	131	1632
Shears and other tool	J. M. Sweet	873,333	Dec. 10	2131	445	131	1536
Sheet cutting and feeding mechanism. Variable-size-	H. M. Barber	873,341	Dec. 10	2155	450–1	131	1539
Sheet-feeding mechanism	M. F. Mahoney	873,322	Dec. 10	2106	440–1	131	1532
Sheet-marking mechanism	G. J. Gerhardt	873,226	Dec. 10	1809	398–9	131	1499
Sheet-metal articles. Producing hollow	R. Chillingworth	873,297	Dec. 10	2048	428	131	1524
Shelf-support system	E. W. Bryant	873,406	Dec. 10	2437	512	131	1591
Shells. Loading short-range shot-	L. D. Christie	873,346	Dec. 10	2166	452	131	1541
Shells. Scatter-load for shot-	L. D. Christie	873,347	Dec. 10	2167	452	131	1541
Shoe-polishing device	H. W. Dedels	873,515	Dec. 10	2471	521	131	1597
Show-case	D. M. Baldwin	873,403	Dec. 10	2269	473	131	1560
Shuttle-motion	G. M. Von Cullin	873,470	Dec. 10	2382	501	131	1582
Sifter. Ash-	J. Irving, Jr.	873,049	Dec. 10	1568	328–9	131	1444
Sight-feed lubricator	N. McCoy	873,675	Dec. 10	2776	589	131	1650
Silicids. Producing	J. A. Viger	873,471	Dec. 10	2383	501–2	131	1582
Sign. Automatic display-	E. F. Price	873,328	Dec. 10	2125	443	131	1535
Skid	C. Sheley	873,272	Dec. 10	1900	417	131	1515
Skirt. Maternity-	R. H. Peters	873,167	Dec. 10	1797	377	131	1481
Skirt-supporter. Adjustable	A. Cleves	873,348	Dec. 10	2168	453	131	1547
Sled-brake	G. S. Gudmundson	873,124	Dec. 10	1715	358	131	1468
Sleigh. Motor-	A. Luchinger	873,062	Dec. 10	1597	334	131	1449
Slicing-machine	F. D. Prettyman	873,601	Dec. 10	2655	559	131	1627
Smoke-preventing apparatus	J. P. Davis	873,513	Dec. 10	2467	520	131	1596
Snap-fastener	G. A. Holmes	873,127	Dec. 10	1721	360	131	1470
Snap-hook	C. S. and A. S. Huntington	873,239	Dec. 10	1921	403	131	1504
Snap-hook	A. Johnson	873,553	Dec. 10	2562	540	131	1610
Sodium sulfate and sulfuric acid. Recovering	A. W. Nibelius	873,070	Dec. 10	1615	337	131	1451
Sole support. Shoe-	J. W. Arrowsmith	873,001	Dec. 10	1462	304	131	1427
Sound-amplifying horn	J. F. Wheeler	873,643	Dec. 10	2724	576	131	1640
Spectacle-clamp	S. A. Asquith	873,002	Dec. 10	1464	304	131	1427
Speech, signals, &c. Receiving and strengthening the reproduction of	E. S. Hagemann	873,541	Dec. 10	2530	534	131	1606
Speed recorder and indicator	F. Lyon	873,321	Dec. 10	2104	440	131	1531
Spinning-machinery ring	C. T. Atherton	873,483	Dec. 10	2405	506	131	1586
Spinning-mule	H. S. Golland	873,422	Dec. 10	2300	480–2	131	1566
Spool-holder	H. D. Clark	873,506	Dec. 10	2457	517	131	1594
Spraying apparatus	J. V. Pearse	873,680	Dec. 10	2782	590–1	131	1652
Spring: *See* Vehicle-spring.							
Spring-motor	S. B. Bynum	873,499	Dec. 10	2443	514	131	1592
Springs. Making coil-	N. S. Harter	873,429	Dec. 10	2311	483	131	1569
Springs. Means for cutting coil-	N. S. Harter	873,430	Dec. 10	2312	484	131	1569
Stamp-mill	F. I. Matthews	873,323	Dec. 10	2113	441	131	1532
Stand: *See* Switch-stand.							
Steam-generators. Electrical control apparatus for	R. Lomax and J. Tomlinson	873,061	Dec. 10	1594	333–4	131	1448
Steam or vacuum gage	J. Ely	873,034	Dec. 10	1534	321	131	1438
Steel. Manufacture of high-per-cent.-manganese	C. H. Kelsall	873,556	Dec. 10	2569	.....	131	1611
Steel plate. Face-hardened	C. Davis	873,512	Dec. 10	2465	520	131	1596
Steering-gear	T. J. Fay and J. M. Ellsworth	873,526	Dec. 10	2501	527–8	131	1601
Steering-wheel	E. F. Upton	873,190	Dec. 10	1847	387	131	1489
Stool	E. P. Lang and C. J. Kalbe	873,249	Dec. 10	1947	407–8	131	1507
Stop-action. Combination	J. O. Funkhouser	873,364	Dec. 10	2195	458	131	1547
Stopper: *See* Bottle-stopper.							
Store-bin	P. T. J. Estler	873,664	Dec. 10	2755	584	131	1647
Stove attachment	A. H. Merrill	873,254	Dec. 10	1941	409	131	1509
Stoves. Automatic cut-off for gas-	J. Zillhardt	873,145	Dec. 10	1750	367	131	3475
Stovepipe-hanger	W. A. Wilson	873,198	Dec. 10	1857	389	131	1491

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Stovepipe-joint	H. S. Blood	873,658	Dec. 10	2747	582	131	1645
Stovepipe-joint	H. S. Blood	873,659	Dec. 10	2749	583	131	1645
Street-sweeping machine	C. Malmquist	873,569	Dec. 10	2593	546	131	1616
Switch: *See* Automatic switch. Railway-switch. Knife-switch.							
Switch	M. B. McConnell	873,134	Dec. 10	1730	362–3	131	1471
Switch-stand	W. W. Allen and J. Metzger	873,649	Dec. 10	2733	579	131	1642
Swivel. Hydraulic	H. G. Johnston and J. B. Norris	873,660	Dec. 10	2762	586	131	1648
Swivel. Water-	K. Brooks	873,661	Dec. 10	2760	583	131	1645
Syringe. Electrotherapeutic	H. R. Cool	873,021	Dec. 10	1507	315	131	1434
T. Two-male	G. A. Miller	873,154	Dec. 10	1764	371	131	1478
Table: *See* Folding table.							
Tank: *See* Pressure-tank.							
Tap-holder. Reversing	W. A. Leonard	873,441	Dec. 10	2329	489	131	1572
Tapping apparatus. Main-	W. H. Van Winkle	873,689	Dec. 10	2812	599	131	1656
Tea-kettle	W. C. Belcher	873,653	Dec. 10	2739	580	131	1643
Telegraphone	V. Poulsen and P. O. Pedersen	873,083	Dec. 10	1640	341	131	1455
Telegraphone	V. Poulsen	873,084	Dec. 10	1641	342	131	1456
Telepgrahone purposes. Electromagnet for	P. O. Pedersen and V. Poulsen	873,078	Dec. 10	1632	340	131	1454
Telephone-lines. Lock-out switch for party	O. F. Forsberg	873,302	Dec. 10	2190	457	131	1546
Telephone system. Party-line	N. S. Page	873,588	Dec. 10	2623	552	131	1622
Telescope	A. Hahn	873,228	Dec. 10	1904	399–400	131	1500
Telescope with support. Double-	R. Straubel	873,105	Dec. 10	1679	350	131	1462
Temperature-regulator	V. F. Davis	873,028	Dec. 10	1519	318	131	1436
Theatrical device	T. G. Lafayette	873,315	Dec. 10	2093	437–8	131	1530
Thermostat	C. A. Cyphers	873,511	Dec. 10	2463	519	131	1596
Thill-coupling	R. F. Cornell	873,299	Dec. 10	2053	428–9	131	1524
Thill-coupling	J. L. Taylor	873,632	Dec. 10	2707	572	131	1637
Thread-finishing machine. Silk-	X. Bossart	873,491	Dec. 10	2425	510	131	1589
Ticket apparatus	H. H. Cummings	873,302	Dec. 10	2056	429–30	131	1525
Tie: *See* Metallic tie. Rail-tie. Package-tie. Railway-tie.							
Tile	P. J. McGuire	873,676	Dec. 10	2778	589	131	1651
Tire for vehicle-wheels. Pneumatic and solid	J. Burnham	873,016	Dec. 10	1492	311–12	131	1432
Tire for wheels. Elastic	T. L. Carbone	873,501	Dec. 10	2450	515–16	131	1593
Tobacco-pipe	E. Engholm	873,222	Dec. 10	1893	396	131	1498
Tongs. Adjustable roofing	P. Emrich	873,358	Dec. 10	2182	456	131	1544
Tool. Combination-	B. A. Mansfield	873,571	Dec. 10	2598	547	131	1616
Tracker-bar	J. Hattemer	873,545	Dec. 10	2543	537	131	1607
Train-controlling means	E. Renaud	873,605	Dec. 10	2663	560–2	131	1628
Transformer	J. J. Frank	873,036	Dec. 10	1539	322	131	1439
Transformer	L. C. Nichols	873,166	Dec. 10	1794	376–7	131	1481
Transparency	P. E. Collins	873,020	Dec. 10	1505	314	131	1433
Trap: *See* Animal-trap. Mouse-trap. Double-flange trap.							
Tripod and attaching device	C. I. Flory	873,121	Dec. 10	1708	357	131	1467
Trolley and harp therefor	S. F. Estell and F. W. G. Phillips	873,419	Dec. 10	2296	479	131	1565
Trolley. Electric	A. S. Janin	873,668	Dec. 10	2760	586	131	1648
Trolley-head	G. P. Copp	873,662	Dec. 10	2751	584	131	1646
Trolley-wheel	E. N. Luburg	873,444	Dec. 10	2333	490	131	1573
Trolley-wire ear	W. G. Carey	873,017	Dec. 10	1493	312	131	1432
Trousers-expander	J. Sargh	873,616	Dec. 10	2683	566	131	1631
Truck	F. M. Morton	873,159	Dec. 10	1775	373	131	1479
Trunk-tray	L. Guynn	873,540	Dec. 10	2529	534	131	1606
Tub-rack	S. K. Painter	873,261	Dec. 10	1970	412	131	1511
Tug and trace fastener	A. V. Cunningham, Sr	873,413	Dec. 10	2285	477	131	1564
Turbine	A. Oliver	873,075	Dec. 10	1627	339	131	1453
Turbine-buckets. Tool for cutting	J. Riddell	873,089	Dec. 10	1653	344	131	1457
Turbine-driving means. Hydraulic-	C. Herschel	873,435	Dec. 10	2318	486–7	131	1570
Turbine. Elastic-fluid	O. Junggren	873,051	Dec. 10	1572	329–30	131	1445
Turbine-governing mechanism	O. Junggren	873,243	Dec. 10	1927	404–5	131	1505
Turbine-wheel	E. Imle	873,241	Dec. 10	1924	404	131	1504
Turbine-wheel	W. D. Boyce and H. Guels	873,344	Dec. 10	2162	451	131	1540
Turbines. Condenser for elastic-fluid	A. T. Gray	873,041	Dec. 10	1552	325	131	1441
Turpentine-hack	C. H. Driver	873,032	Dec. 10	1531	320	131	1438
Type-writer	C. S. Du Belle	873,304	Dec. 10	2063	431–2	131	1526
Type-writer ribbon-holder	M. B. Nixon	873,071	Dec. 10	1617	337	131	1452
Type-writing machine	W. J. Barron and H. W. Merritt	873,487	Dec. 10	2417	508	131	1588
Type-writing machine	F. X. Wagner	873,641	Dec. 10	2718	575–6	131	1639
Type-writing-machine computing attachment	O. C. Kavle	873,314	Dec. 10	2087	436–7	131	1529
Type-writing-machine ribbon mechanism	J. W. Kennedy	873,244	Dec. 10	1931	405–6	131	1506
Umbrella attachment	W. O. Shepard and C. W. Cason, Sr.	873,099	Dec. 10	1660	348	131	1460
Umbrella or parasol. Folding	A. C. Roller	873,174	Dec. 10	1816	380	131	1484
Valve	J. H. Martindale	873,152	Dec. 10	1758	370	131	1477
Valve. Automatic	A. Michaels	873,324	Dec. 10	2115	441–2	131	1533
Valve. Fluid-pressure	H. Woods	873,475	Dec. 10	2388	503	131	1583
Valve for explosive-engines. Admission-	H. C. Fricke and G. E. Turner	873,534	Dec. 10	2519	532	131	1604
Valve for fluids under pressure	H. Woods	873,476	Dec. 10	2389	503–4	131	1584
Valve for gas apparatus. Hydraulic reversing-	F. H. Wagner	873,393	Dec. 10	2248	468–9	131	1556
Valve for hermetically-closable jars	G. Staunton	873,627	Dec. 10	2700	570	131	1635
Valve for hydraulic transmission devices. Controlling-	W. C. Schwarz	873,621	Dec. 10	2691	568–9	131	1633
Valve for hydrocarbon-engines. Throttle-	C. Schmidt	873,387	Dec. 10	2237	466	131	1554
Valve. Trap-	J. L. Donat	873,518	Dec. 10	2476	521–2	131	1598
Vaporizer	G. H. Bell	873,654	Dec. 10	2740	580	131	1643
Vehicle-brake	M. Jewell	873,552	Dec. 10	2560	540	131	1610
Vehicle. Motor-	W. C. Schwarz	873,620	Dec. 10	2689	568	131	1633
Vehicle-spring	P. J. McGinn	873,325	Dec. 10	2120	442	131	1534
Vehicle-spring	G. Schmitt	873,329	Dec. 10	2126	443	131	1535
Vehicle-top	J. A. Hemsley	873,233	Dec. 10	1912	401–2	131	1502
Vehicle-top support	G. Lake	873,055	Dec. 10	1583	331	131	1446
Ventilator	W. Hammann	873,125	Dec. 10	1715	358	131	1469
Voting-machines. Counter-carrier for	C. C. Abbott	873,401	Dec. 10	2266	472	131	1559

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Voting-machines. Grouping mechanism for	C. C. Abbott	873,400	Dec. 10	2264	472	131	1559
Wagon-brake	F. Mick	873,577	Dec. 10	2608	549	131	1618
Wagon. Dumping-	A. L. Warner	873,397	Dec. 10	2257	471	131	1557
Waistband	J. C. Stanford	873,389	Dec. 10	2240	466	131	1554
Washboiler	L. A. Ritter	873,172	Dec. 10	1813	380	131	1483
Watch. Pendent winding and setting	D. A. Lindgren	873,564	Dec. 10	2580	543	131	1613
Water-heater	J. Stott	873,630	Dec. 10	2704	571-2	131	1636
Water-heating device	A. C. Sargent	873,269	Dec. 10	1984	415	131	1514
Water-tank heater	D. H. Quinn	873,136	Dec. 10	1736	363-4	131	1472
Water-wheel. Current	A. A. Porter	873,082	Dec. 10	1638	341	131	1465
Weaner. Calf-	E. E. Dehler	873,516	Dec. 10	2472	521	131	1597
Weaving in natural colors without pattern-cards. Apparatus for	A. Regal	873,683	Dec. 10	2791	592-6	131	1653
Weighing and measuring device	A. E. Abbott	873,694	Dec. 10	2818	601	131	1657
Wheel: *See* Car-wheel. Trolley-wheel. Grinding or polishing wheel. Turbine-wheel Steering-wheel. Water-wheel.							
Wheel	G. B. Hurlburt	873,048	Dec. 10	1567	328	131	1444
Wheel	C. E. Brinley and R. H. Bowen	873,408	Dec. 10	2277	475	131	1562
Whiffletree-hook	L. J. Austin	873,003	Dec. 10	1465	304	131	1428
Window. Casement-	J. H. Hiltz and J. B. Smith	873,045	Dec. 10	1562	327	131	1442
Wire-crimping machine	J. L. Alley	873,200	Dec. 10	1859	390	131	1492
Wire-fabric blank	W. C. Willets	873,195	Dec. 10	1852	388	131	1490
Wire-stretcher	R. G. Larzelere	873,562	Dec. 10	2578	543	131	1613
Wood-splitting machine	P. Eckenroth, Jr	873,418	Dec. 10	2293	478-9	131	1565
Wrench: *See* Monkey-wrench. Pipe-wrench.							
Wrench	H. A. Paquette	873,262	Dec. 10	1971	413	131	1511
Wrench	H. Jeffrey	873,437	Dec. 10	2322	487	131	1571
Wrench	C. Ahern	873,480	Dec. 10	2396	505	131	1586

DESIGNS.

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Automobile-body	F. S. Davis	38,946	Dec. 10	131	1661
Book-plate	A. E. Bachert	38,937	Dec. 10	131	1659
Calendar-blank	J. L. Knight	38,938	Dec. 10	131	1659
Cream-separator. Centrifugal	T. W. Morgan	38,944	Dec. 10	131	1661
Drill housing. Electric-	E. F. Smith	38,945	Dec. 10	131	1661
Fabric. Woven	C. H. Landenberger	38,948	Dec. 10	131	1661
Fabric. Woven	C. H. Landenberger	38,949	Dec. 10	131	1661
Furniture-handle	L. W. Bond	38,939	Dec. 10	131	1660
Knob. Door-	E. T. Schoonmaker	38,941	Dec. 10	131	1660
Lock-trimming	E. T. Schoonmaker	38,940	Dec. 10	131	1660
Neckwear fabric	L. Auerbach	38,947	Dec. 10	131	1661
Phonograph-horn	E. L. Aiken	38,942	Dec. 10	131	1660
Phonograph-horn	E. L. Aiken	38,943	Dec. 10	131	1660
Signet	C. E. Hansen	38,935	Dec. 10	131	1659
Signet	C. E. Hansen	38,936	Dec. 10	131	1659

TRADE-MARKS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Absinthe and vermuth	Société Anonyme de la Grande Distillerie E. Cusenier Fils Aîné & Cie.	66,581	Dec. 10	131	1683
Batteries and plates for same. Storage	General Storage Battery Co	66,510	Dec. 10	131	1681
Bitters	Charles Jacquin et Cie	66,499	Dec. 10	131	1681
Bitters	Charles Jacquin et Cie	66,500	Dec. 10	131	1681
Boots and shoes. Leather	Cosby Shoe Co	66,503	Dec. 10	131	1681
Boots and shoes. Leather	J. N. Winchell & Co	66,518	Dec. 10	131	1681
Bristles	O. H. Kraeger	66,578	Dec. 10	131	1683
Candles	C. Schmitz & Co	66,526	Dec. 10	131	1682
Canned corn and tomatoes	Littlefield & Steere Co	66,519	Dec. 10	131	1681
Cartridges, caps, and primers	Watkins Packing Co	66,540	Dec. 10	131	1682
Cement and concrete waterproofing-powder	Union Metallic Cartridge Company.	66,534	Dec. 10	131	1682
Cement. Portland	Ideal Concrete Machinery Company.	66,517	Dec. 10	131	1681
Chemical. Certain	Union Portland Cement Company.	66,533	Dec. 10	131	1682
Cigars	Chemische Fabrik von Heyden Aktien-Gesellschaft.	66,547	Dec. 10	131	1682
	J. C. Newman	66,562	Dec. 10	131	1682

TRADE-MARKS—Continued.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Combustion. Preparation for promoting	L. Wilkinson	66,567	Dec. 10	131	1683
Cordials	Hannah & Hogg	66,577	Dec. 10	131	1683
Corn and honey. Preparation of	J. A. Witt	66,542	Dec. 10	131	1682
Cotton and woolen piece goods	Detmer Woolen Company	66,569	Dec. 10	131	1683
Cotton duck	Mount Vernon-Woodberry Cotton Duck Company.	66,561	Dec. 10	131	1682
Cream. Toilet	Ogden and Shimer	66,522	Dec. 10	131	1681
Disinfectant materials	J. A. Sander	66,564	Dec. 10	131	1683
Earthenware closet-bowls	American Sanitary Works	66,544	Dec. 10	131	1682
Fabrics. Textile	A. G. Hyde & Sons	66,543	Dec. 10	131	1682
Fireworks	H. J. Paln	66,523	Dec. 10	131	1681
Fireworks	H. J. Paln	66,524	Dec. 10	131	1681
Fireworks. Stick-	E. H. Wagner	66,535	Dec. 10	131	1682
Fireworks. Stick-	E. H. Wagner	66,536	Dec. 10	131	1682
Fireworks. Stick-	E. H. Wagner	66,537	Dec. 10	131	1682
Footwear. Certain	Associated Shoe Company	66,494	Dec. 10	131	1681
Fruit-butter	H. E. Harris	66,516	Dec. 10	131	1681
Fuel. Certain	Coalite Limited	66,502	Dec. 10	131	1681
Geneva	De Nederlandsche Gist- & Spiritusfabriek.	66,575	Dec. 10	131	1683
Gin	P. Loopuyt & Co	66,579	Dec. 10	131	1683
Gloves. Silk	Gloversville Silk Mills	66,511	Dec. 10	131	1681
Hosiery	Paramount Knitting Company	66,525	Dec. 10	131	1681
Knitted shirts, skirts, and hosiery	G. Lund	66,520	Dec. 10	131	1681
Magazine. Weekly	Class Journal Co	66,501	Dec. 10	131	1681
Medicines. Certain	Boericke & Tafel	66,497	Dec. 10	131	1681
Medicines. Certain	Davis Chemical Company	66,504	Dec. 10	131	1681
Medicines. Certain	Dr. Rainey Medicine Co	66,506	Dec. 10	131	1681
Metal articles. Certain	A. Dewsbury	66,505	Dec. 10	131	1681
Newspaper	Evening Star Newspaper Co	66,508	Dec. 10	131	1681
Newspaper	Evening Star Newspaper Co	66,509	Dec. 10	131	1681
Newspaper	Washington Times Co	66,539	Dec. 10	131	1682
Newspapers	Washington Post Company	66,538	Dec. 10	131	1682
Overalls, pants, and denim jackets	Happ Brothers Company	66,515	Dec. 10	131	1681
Paint and varnish solvents and removers	T. R. Wyles	66,568	Dec. 10	131	1683
Paint. Preservative and waterproof	W. J. Watson	66,566	Dec. 10	131	1683
Paint, varnish, and enamel. Certain	Hockaday Paint Company	66,558	Dec. 10	131	1682
Paints. Preservative	C. L. Miller & Co	66,560	Dec. 10	131	1682
Paper. Certain	Graham Paper Co	66,549	Dec. 10	131	1682
Paper. Certain	Graham Paper Co	66,550	Dec. 10	131	1682
Paper. Certain	Graham Paper Co	66,551	Dec. 10	131	1682
Paper. Certain	Graham Paper Co	66,552	Dec. 10	131	1682
Paper. Certain	Graham Paper Co	66,553	Dec. 10	131	1682
Paper. Certain	Graham Paper Co	66,554	Dec 10	131	1682
Paper. Certain	Graham Paper Co	66,555	Dec. 10	131	1682
Paris-green	M. Herrmann & Co	66,556	Dec. 10	131	1682
Paris-green	M. Herrmann & Co	66,557	Dec. 10	131	1682
Picture apparatus. Animated and moving	J. Bianchi	66,545	Dec. 10	131	1682
Picture apparatus. Animated and moving	J. Bianchi	66,546	Dec. 10	131	1682
Pipe-fittings. Brass and iron	H. Mueller Manufacturing Company.	66,513	Dec. 10	131	1681
Razors	H. Berkele	66,496	Dec. 10	131	1681
Remedies. Dog	P. Miller Drug Co	66,521	Dec. 10	131	1681
Remedy. Certain	Burlingame Chemical Co	66,498	Dec. 10	131	1681
Remedy. Certain	O. Wicke	66,541	Dec. 10	131	1682
Remedy for coughs and colds of horses and mules	H. E. Turpin	66,532	Dec. 10	131	1682
Remedy for disorders of the stomach, liver, and blood	Hall & Cummings	66,514	Dec. 10	131	1681
Remedy for sleeplessness	S. Goldberg	66,512	Dec. 10	131	1681
Rubber erasers	E. Faber	66,576	Dec. 10	131	1683
Rubber heels	Dunham Bros	66,507	Dec. 10	131	1681
Sewing-machines and attachments	Standard Sewing Machine Company.	66,528	Dec. 10	131	1682
Sewing-machines and attachments	Standard Sewing Machine Company.	66,529	Dec. 10	131	1682
Sewing-machines and attachments	Standard Sewing Machine Company.	66,530	Dec. 10	131	1682
Sewing-machines and attachments	Standard Sewing Machine Company.	66,531	Dec. 10	131	1682
Sheetings, shirtings, and drillings	Clifton Manufacturing Company	66,548	Dec. 10	131	1682
Shoes. Leather	Bentley & Olmsted Company	66,495	Dec. 10	131	1681
Soap	Pacific Coast Borax Company	66,563	Dec. 10	131	1682
Underskirts. Silk and muslin	A. M. Schneider	66,527	Dec. 10	131	1682
Watches	Mathey Bros., Mathez & Co	66,559	Dec. 10	131	1682
Watches and watch-movements	B. L. Strasburger	66,565	Dec. 10	131	1683
Whisky	J. H. Michael	66,580	Dec. 10	131	1683
Whisky, brandy, and gin	B. S. Fiersheim Mercantile Co	66,574	Dec. 10	131	1683
Wine	Great Western Wine Co	66,570	Dec. 10	131	1683
Wine	Great Western Wine Co	66,571	Dec. 10	131	1683
Wine. Champagne-	Krug & Co	66,572	Dec. 10	131	1683
Wine. Champagne-	Krug & Co	66,573	Dec. 10	131	1683

LABELS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
"Ardmore Brand." (For Coffee)	Woolson Spice Company	13,919	Dec. 10	131	1684
"Eminence High Patent." (For Wheat-Flour)	Leavenworth Milling Company	13,920	Dec. 10	131	1684
"Great American." (For Cigars)	O. L. Schwenke Lithographic Co.	13,917	Dec. 10	131	1684
"Princesa." (For Cigars)	O. L. Schwenke Lithographic Co.	13,918	Dec. 10	131	1684
"Prize Elk." (For Cigars)	O. L. Schwenke Lithographic Co.	13,916	Dec. 10	131	1684
"Red Band." (For Cigars)	C. B. Herschel Mfg. Co	13,914	Dec. 10	131	1684
"St. Elmo." (For Cigars)	C. F. Kaiser	13,915	Dec. 10	131	1684
"The National Hygienic Button." (For Hose-Supporter Buttons.)	Economy Corset Company	13,923	Dec. 10	131	1684
"The Petriscent Rat and Mouse Killer." (For a Rat or Mouse Poison.)	E. Zaitchick and C. Cooper	13,922	Dec. 10	131	1684

PRINTS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
"The sweet heart of the Corn." (For Toasted Corn-Flakes)	Toasted Corn Flake Co	2,172	Dec. 10	131	1684
"Water Mark of Quality." (For Paper)	L. L. Brown Paper Company	2,173	Dec. 10	131	1684

TRADE-MARKS.

(REGISTRATION APPLIED FOR.)

Title.	Name.	Serial No.	Date.	Official Gazette. Vol.	Page.
Abrasive and polishing materials, tools, implements, &c.	Norton Company	26,393	Dec. 10	131	1666
Absinthe	J. Pernod	30,486	Dec. 10	131	1671
Alloy. Metal	Smith & Egge Mfg. Co	30,052	Dec. 10	131	1670
Automobiles	Vigueot Company	12,875	Dec. 10	131	1664
Beds. Spring	M. A. Hunt & Co	30,990	Dec. 10	131	1677
Beer	Standard Brewery	30,128	Dec. 10	131	1670
Beer, ale, porter, and stout	Beadleston & Woerz	30,959–60	Dec. 10	131	1676–7
Belting. Machine	Mount Vernon Belting Company	29,953	Dec. 10	131	1669
Beverages and syrup for the same	H. Wheaton & Sons	16,016	Dec. 10	131	1664
Bitters	John Barth Company	30,910	Dec. 10	131	1676
Boot and shoe heels	Markham and Roberts	30,680	Dec. 10	131	1673
Boots and shoes. Leather	Geo D Witt Shoe Co	23,798	Dec. 10	131	1665
Boots and shoes. Leather	Lynchburg Shoe Co	26,351	Dec. 10	131	1666
Boots and shoes. Leather	Crawford, McGregor & Canby Co	28,823	Dec. 10	131	1667
Boots and shoes. Leather and canvas	Hollins Sons & Co	30,838	Dec. 10	131	1675
Boots, shoes, and leggings. Leather	T. A. Bresnahan	30,900	Dec. 10	131	1676
Boots, shoes, and slippers. Leather	Ellet-Kendall Shoe Company	30,953	Dec. 10	131	1676
Brick. Fire	Morse & Rogers	30,478	Dec. 10	131	1671
Brooms	Olive Hill Fire Brick Company	29,433	Dec. 10	131	1668
Brushes. Wire	Lee Broom & Duster Company	31,014–15	Dec. 10	131	1678
Butter	Osborn Mfg. Co	30,895	Dec. 10	131	1676
Butter. Peanut	McElroy Bros. Co	30,656	Dec. 10	131	1672
Candles	F. M. Hoyt	23,686	Dec. 10	131	1665
Candy	National Candy Company	30,999	Dec. 10	131	1678
Canned clams and sardines	Aughinbaugh Caramel Company	29,838	Dec. 10	131	1669
Canned fish	J. Wyman & Son	5,837	Dec. 10	131	1663
Canned fish	Haas, Baruch & Co	30,908	Dec. 10	131	1676
Canned fruits and vegetables	Schwabacher Bros. & Co	31,062	Dec. 10	131	1679
Canned fruits and vegetables and pickles	Aughinbaugh Canning Co	31,037	Dec. 10	131	1678
Caramels and chocolates	Kumer Pickle Company	29,749	Dec. 10	131	1668
Cements. Adhesive	Borden's Condensed Milk Company	30,550	Dec. 10	131	1671
Chocolate	S. B. Bowen	30,972	Dec. 10	131	1677
Chocolates	Société Generale Suisse de Chocolats	30,815	Dec. 10	131	1674
Coal. Bituminous	Touraine Confectionery Co	31,026	Dec. 10	131	1678
Codfish. Boneless	J. W. Dawson	29,060	Dec. 10	131	1667
Coffee	Lord Brothers Company	30,364	Dec. 10	131	1671
Coffee	Climax Coffee & Baking Powder Company	29,952	Dec. 10	131	1669
Coffee	J. S. Elliott	30,562	Dec. 10	131	1672
Coffee and tea	Black Hawk Coffee & Spice Company	30,823–4	Dec. 10	131	1674–5
Coffee and tea	German American Coffee Co	27,851	Dec. 10	131	1666
	R. W. Weir & Company	30,891	Dec. 10	131	1675

TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

Title.	Name.	Serial No.	Date.	Official Gazette. Vol.	Page.
Coffee and tea	George Liss & Co	30,988	Dec. 10	131	1677
Coffees and teas	Dannemiller Coffee Co	30,673	Dec. 10	131	1672
Coils. Choke	L. O. Langworthy	30,970	Dec. 10	131	1677
Combs. Hair	Pacific Novelty Company	30,584	Dec. 10	131	1672
Detergent composition	T. W. Henry	31,032	Dec. 10	131	1678
Dress and shirt waists	Guggenheim Company	29,834	Dec. 10	131	1668
Dyes, disinfectants, food-preservatives, &c. Coal-tar	Farbenfabriken vorm. Friedr. Bayer & Co.	29,680	Dec. 10	131	1668
Engines. Gas, gasolene, and oil	Samson Iron Works	29,343	Dec. 10	131	1667
Extract of vanilla lemon, orange, raspberry, &c	Black Drug and Chemical Company.	30,780	Dec. 10	131	1673
Eye-shades	W. B. White	30,658	Dec. 10	131	1672
Feathers	F. A. Hall	30,003	Dec. 10	131	1669
Feed-bags	W. I. Ewart	30,164	Dec. 10	131	1670
Fish. Salt, dried, smoked, and fresh	International Fisheries Co	30,836	Dec. 10	131	1675
Flavoring compounds	Habicht, Braun & Co	30,805	Dec. 10	131	1674
Flour. Wheat	Northwestern Elevator & Mill Company.	26,685	Dec. 10	131	1666
Flour. Wheat	Geo Q Moon & Co	30,804	Dec. 10	131	1674
Food. Stock	Corn Products Manufacturing Company.	30,855–6	Dec. 10	131	1675
Forks, rakes, and hoes	American Fork & Hoe Company	30,819	Dec. 10	131	1674
Garment-hangers. Metallic	R. P. Beatty	30,309	Dec. 10	131	1670
Gloves	Marshall Field & Company	30,708	Dec. 10	131	1673
Gum. Chewing	Choozit Mfg. Co	23,474	Dec. 10	131	1665
Gum. Chewing	Indianapolis Warehouse Company.	30,773	Dec. 10	131	1673
Hair-tonic, &c	Cu-Cura Company	28,310	Dec. 10	131	1667
Hair-tonic compound	J. A. Wanous	27,989	Dec. 10	131	1667
Hair-tonics	H. L. Herring	30,969	Dec. 10	131	1677
Halibut. Smoked	International Fisheries Co	30,899	Dec. 10	131	1676
Halibut. Smoked	International Fisheries Co	30,902	Dec. 10	131	1676
Hames	Hoch Hames Co	30,535	Dec. 10	131	1671
Heaters, &c. Hot-water	Model Heating Company	22,947	Dec. 10	131	1665
Hydrogen peroxid in water. Solution of	E. Merck	29,955	Dec. 10	131	1669
Incubators and brooders	X-Ray Incubator Co	31,021	Dec. 10	131	1678
Ink. Indelible	A. L. Williston	24,236	Dec. 10	131	1665
Knitted hosiery	Maryville Hosiery Mills	30,782	Dec. 10	131	1674
Laces. Imitation	J. W. Smith	30,907	Dec. 10	131	1676
Lamp and lantern globes and chimneys	R. E. Dietz Company	30,657	Dec. 10	131	1672
Lamps. Automobile	J. Lurie	25,773	Dec. 10	131	1666
Leather-dressing	R-N Leather Dressing Co	31,105	Dec. 10	131	1679
Liniment	Minard's Liniment Manufacturing Company.	20,512	Dec. 10	131	1665
Liniment	P. Haase	30,841	Dec. 10	131	1675
Liniment or ointment	R. S. Glover	30,330	Dec. 10	131	1670
Liqueurs	E. Ciaburri & Fli	28,386	Dec. 10	131	1667
Magazine or trade journal	E. Weston	20,228	Dec. 10	131	1664
Magazines. Periodical	Good Housekeeping Co	15,728	Dec. 10	131	1664
Medicated lotion	A. Robertson	30,816	Dec. 10	131	1674
Medicinal preparations for coughs and colds	W. O. Frailey	28,048	Dec. 10	131	1667
Medicinal suppositories	H. S. Wellcome	30,039	Dec. 10	131	1670
Medicine for purifying the blood	A. M. Dowsley	30,802	Dec. 10	131	1674
Medicine. Stock	Agricultural Remedy Co	29,831	Dec. 10	131	1668
Medicines. Certain	Peck Johnson Company	29,801	Dec. 10	131	1668
Medicines. Certain	Dix Manufacturing Company	30,627	Dec. 10	131	1672
Medicines. Laxative and cathartic	Mutual Drug Company	30,961	Dec. 10	131	1677
Metals, stone, pottery-ware, &c. Composition for cleaning and polishing.	G. W. Sample	29,878	Dec. 10	131	1669
Neckties	B. Weisberg	29,386	Dec. 10	131	1668
Newspaper. Daily	Post Publishing Company	30,978	Dec. 10	131	1677
Newspaper. Sunday	Chicago Herald Company	30,523	Dec. 10	131	1671
Newspaper. Sunday	Post Publishing Company	30,979	Dec. 10	131	1677
Newspaper. Tridaily	United Publishing Co	31,010	Dec. 10	131	1678
Optical instruments	C. Zeiss	22,110	Dec. 10	131	1665
Overalls	Kahn Manufacturing Company	30,703	Dec. 10	131	1673
Paper and bristol-boards. Bond	Union Card & Paper Co	30,229	Dec. 10	131	1670
Paper, envelops, and bristol-boards	Union Card & Paper Co	30,228	Dec. 10	131	1670
Pianos, guitars, and mandolins	A. Wookey	28,607	Dec. 10	131	1667
Pies and cakes	Watson & MacDonald	27,538	Dec. 10	131	1666
Polishes and dressings for varnished, lacquered, &c., surfaces	E. W. Thumb	29,892	Dec. 10	131	1669
Powders for the relief of headache, neuralgia, &c	J. W. James Company	30,777	Dec. 10	131	1673
Pulley-blocks, rail-benders, winches, and ratchets	Joseph F. McCoy Co	29,679	Dec. 10	131	1668
Razors and pocket-knives	J. R. Boyd	29,076	Dec. 10	131	1667
Remedies for diseases of live stock, hogs, and poultry	Old Kentucky Mfg. Co	30,654	Dec. 10	131	1672
Remedies for diseases of the respiratory organs, &c	W. A. Leach	18,426	Dec. 10	131	1664
Remedies for headaches and fevers	W. E. Allen	21,249	Dec. 10	131	1665
Remedy for constipation, &c	Davis Chemical Company	30,760	Dec. 10	131	1673
Remedy for dyspepsia, headaches, indigestion, &c	Wendell Pharmacal Co	23,164	Dec. 10	131	1665
Remedy for eruptions on the face and body	E. Molloff	30,884	Dec. 10	131	1675
Remedy for indigestion, &c	W. B. Moore	28,406	Dec. 10	131	1667
Roofing and siding Composition	A. E. Kirk	29,865	Dec. 10	131	1669
Rubber boots and shoes	Goodyear's India Rubber Glove M'f'g Co.	29,937	Dec. 10	131	1669
Rubber boots and shoes	Woonsocket Rubber Company	30,015	Dec. 10	131	1669
Rubber boots and shoes	National India Rubber Company	30,809	Dec. 10	131	1674
Rubber boots and shoes	United States Rubber Company	31,006	Dec. 10	131	1678
Rubber combs	Geo. Borgfeldt & Co	30,403	Dec. 10	131	1671
Rugs, portières, and cushion-covers	Nye & Wait	10,455	Dec. 10	131	1663
Scalp food	M J. Dodson	30,784	Dec. 10	131	1674
Schiedam schnapps. Aromatic	Udolpho Wolfe Company	30,047	Dec. 10	131	1670
Sheetings and drillings	Exposition Cotton Mills	17,257	Dec. 10	131	1664

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(REGISTRATION APPLIED FOR.)

Title.	Name.	Serial No.	Date.	Official Gazette. Vol.	Page.
Shellac substitute	Farbenfabriken vorm. Friedr. Bayer & Co.	29,681	Dec. 10	131	1668
Shirtings, cambrics, and long-cloth	G. Willis & Co	14,703	Dec. 10	131	1664
Shoes. Leather	Starner-Copeland Company	29,224	Dec. 10	131	1667
Shoes. Leather	Eby Shoe Co	30,962	Dec. 10	131	1677
Shoes, slippers, and sandals. Leather	J. L. Walker & Co	30,821	Dec. 10	131	1674
Signs. Advertising	White Cross Tonsorial Co	15,391	Dec. 10	131	1664
Soap	J. S. Harris	30,976	Dec. 10	131	1677
Soap paste. Toilet	F. E. Frost	21,432	Dec. 10	131	1665
Stencilling-machines and stencil-sheets	Underwood Typewriter Company	30,476	Dec. 10	131	1671
Stoves and ranges	Orbon Stove and Range Co	30,892	Dec. 10	131	1676
Suits, skirts, and dress-waists	K. Solomon & Company	30,383	Dec. 10	131	1671
Syrup for carbonated beverages	H. Wheaton & Sons	16,017	Dec. 10	131	1664
Tablets. Headache	Delmar Drug Co	30,833	Dec. 10	131	1675
Talking-machine records	Hawthorne & Sheble Manufacturing Company	30,734	Dec. 10	131	1673
Talking-machines	Hawthorne & Sheble Manufacturing Company	30,735	Dec. 10	131	1673
Tin-plate, brass, copper, sheet-iron, &c	Merchant & Evans Company	23,084	Dec. 10	131	1665
Tire-punctures. Preparation for stopping	New Miraculum Corporation	29,617	Dec. 10	131	1668
Tonic, cough-syrup, liniment, &c	Noxal Medicine Co	30,174	Dec. 10	131	1670
Tonic. Uterine	Davis Chemical Company	30,669	Dec. 10	131	1672
Trousers	G. Sichert	30,991	Dec. 10	131	1677
Truck bolsters. Car	Pressed Steel Car Company	30,023	Dec. 10	131	1678
Umbrellas and parasols	Arnold Schiff & Company	31,054	Dec. 10	131	1678
Undergarments. Muslin	Rice-Stix Dry Goods Company	30,850	Dec. 10	131	1675
Vessel-closures	Chellis-Hillman Company	30,509	Dec. 10	131	1671
Wagons. Farm and truck	Turnbull Wagon Company	30,667	Dec. 10	131	1672
Waters. Laxative mineral	Igmandi Import Company	30,837	Dec. 10	131	1675
Whisky	Taylor & Williams	3,845	Dec. 10	131	1663
Whisky	E. Block & Sons	27,107	Dec. 10	131	1666
Whisky	B. K. Bloch	29,611	Dec. 10	131	1668
Whisky, brandy, gin, and cordials	Thos. Moore Distilling Company	30,360	Dec. 10	131	1671
	J. Cartun	9,337	Dec. 10	131	1663

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 17TH DAY OF DECEMBER, 1907.

Name, residence, and invention.	No.	Date.	Monthly volume. Specification.	Monthly volume. Drawing.	Official Gazette. Volume.	Official Gazette. Page.
A. B. Dick Company. (See Dick, Albert B., assignor.)						
Abbott, Charles C., assignor to Triumph Voting Machine Company, Pittsfield, Mass. Ballot-strip-locking device	873,824	Dec. 17	3104	662	131	1734
Abbott, Charles C., assignor to Triumph Voting Machine Company, Pittsfield, Mass. Mechanism for attaching counters in voting-machines	873,825	Dec. 17	3106	662	131	1734
Abbott, Charles C., assignor to Triumph Voting Machine Company, Pittsfield, Mass. Question-voting mechanism	873,826	Dec. 17	3107	662	131	1734
Abbott, Charles C., assignor to Triumph Voting Machine Company, Pittsfield, Mass. Voting-machine frame	873,827	Dec. 17	3114	663	131	1735
Abbott, Charles C., assignor to Triumph Voting Machine Company, Pittsfield, Mass. Independent-shutter-locking mechanism for voting-machines	873,828	Dec. 17	3115	663	131	1735
Acme Tobacco Company. (See Bright and Davis, assignors.)						
Actiengesellschaft fur Schriftgiesserei und Machinenbau. (See Müller and Murray, assignors.)						
Adams, Harry L., and L. O. Wells, Bonneterre, Mo. Lard-scoop	874,277	Dec. 17	4053	856	131	1882
Adams, Jasper L., St. George Island, Md. Egg-steamer	874,278	Dec. 17	4055	857	131	1882
Adams, John Q., assignor to T. J. Skelly, Philadelphia, Pa. Eyeglass-hook	873,701	Dec. 17	2835	604	131	1693
Adder Machine Company. (See McFarland, Charles N., assignor.)						
Addis, John W. (See Wahlert, Henry A., assignor.)						
Aeolian Company. (See Binney, Harold, assignor.)						
Aktiebolaget Celtic. (See Johnson, Johan H. S., assignor.)						
Albrecht, Jacob J., Syracuse, N. Y. Ratchet-wrench	873,977	Dec. 17	3394	723	131	1784
Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. Alternating-current motor	873,702	Dec. 17	2836	604-5	131	1693
Allis-Chalmers Company *et al.* (See Stull, Emmett W., assignor.)						
American Clay Machinery Company. (See Cunningham, William R., assignor.)						
American Graphophone Company. (See Macdonald, Thomas H., assignor.)						
American Horse Shoe Company. (See Smith, Arthur, assignor.)						
Anderson, Alexander P., New York, N. Y. Baking	874,279	Dec. 17	4056	857	131	1883
Anderson, Edward H., Schenectady, N. Y., assignor to General Electric Company. Electrically-propelled car or locomotive	873,703	Dec. 17	2842	605	131	1693
Anderson, Erick E., St. Louis, Mo. Splice-bar	873,918	Dec. 17	3282	701	131	1764
Anderton, Charles, Jr. (See Kramer and Anderton.)						
Andrus, Frank P., Almont, Mich. Calendar match-safe	874,280	Dec. 17	4062	857	131	1883
Antes, Robert H., Geneseo, Ill. Dental plugger	874,281	Dec. 17	4064	858	131	1883
Arnold, Samuel S., Toronto, Ontario, Canada. Hinge	873,704	Dec. 17	2847	606	131	1694
Arnold, William S., San Francisco, Cal. Protecting shield or guard for pneumatic tires	873,919	Dec. 17	3283	701	131	1764
Automatic Gas Lighting Company. (See Meyer, August, assignor.)						
Automatic Time Stamp Company. (See Wilson, John C., assignor.)						
Aveson, Thomas S., Passaic, N. J. Projectile	874,282	Dec. 17	4065	858	131	1884
Axx, Harry C., Napoleon, Ohio. Brace for screen-doors or the like	874,283	Dec. 17	4067	858	131	1884
Babcock, Ira J., Chicago, Ill., assignor, by mesne assignments, to National Brake and Electric Company, Milwaukee, Wis. Governor	874,284	Dec. 17	4068	858	131	1884
Baier, Xaver, Munich, Germany. Swinging-lever crank mechanism	874,285	Dec. 17	4072	859	131	1885
Bailey, Frank, and F. H. Jackson, London, England. Clutching device adapted for use in communicating rotary motion and in controlling the transmission thereof	873,978	Dec. 17	3395	723	131	1784
Bain, John A., *et al.* (See Ries, Frank, assignor.)						
Baker, Bryon G., Minneapolis, Minn., assignor to J. I. Case Threshing Machine Company, Racine, Wis. Pneumatic stacker	873,829	Dec. 17	3121	664	131	1736
Baker, William H., assignor of three-fifths to J. Peterson, Lockport, N. Y. Insulating covering or sheathing for contact-rail conductors	873,705	Dec. 17	2849	606	131	1694
Barber, Allan J., Woonsocket, R. I. Educational appliance	874,152	Dec. 17	3797	800	131	1841
Barber, Howard M., Stonington, Conn., assignor to C. B. Cottrell & Sons Company, New York, N. Y. Rotary printing-press	873,979	Dec. 17	3398	723-5	131	1784
Barber, James T., Brooklyn, N. Y. Engine-starting mechanism	874,153	Dec. 17	3799	800	131	1841
Barnhart, Harry J. (See King, Barnhart, and King.)						
Barth, Eli, Nevada, Ohio. Fence	874,154	Dec. 17	3800	801	131	1841
Bartlett, Albert H., Buffalo, N. Y. Machine for sizing, cutting, and marking candy material or other commodities	873,832	Dec. 17	3125	665	131	1737
Barwise, Charles A., Brooklyn, N. Y. Coffee and tea urn	873,980	Dec. 17	3402	725	131	1785
Bassett, Lemuel F., Redding, Cal. Machine for working the soil	874,286	Dec. 17	4073	859	131	1885
Batchelder, Asa F., Schenectady, N. Y., assignor to General Electric Company. Motor-truck	873,706	Dec. 17	2850	606	131	1694
Bayne, Eugene D. C., and L. A. Subers, Cleveland, Ohio. Machine for coating the strands of a thread and also the twisted thread	874,287	Dec. 17	4076	859	131	1886
Bealrd, Lena R., *et al.* (See Sodekson, Nathan S., assignor.)						
Beaman, Timothy L., Knoxville, Tenn. Seed-planter	874,155	Dec. 17	3801	801	131	1842
Bechtold, Joseph A., New York, N. Y. Hedge-trimmer	873,830	Dec. 17	3124	665	131	1736
Beech, John M., *et al.* (See Olsen, John, assignor.)						
Belden, Frank M., Sheridan, Ill. Combined shaft and cross-bar brace	874,288	Dec. 17	4078	860	131	1886
Bell, Edwin H., assignor to Railroad Supply Company, Chicago, Ill. Tie-plate	873,707	Dec. 17	2852	607	131	1695
Bemus, Thomas A., assignor to T. Alton Bemus Company, Incorporated, Boston, Mass. Circuit-closer for explosive-engines	874,289	Dec. 17	4079	860	131	1886
Bering, Wilson M., and R. L. Ford, assignors to Chambers Bering Quinlan Company, Decatur, Ill. Corn-planter	873,708	Dec. 17	2854	607-8	131	1695

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Berlin Machine Works. (See Ross, Harry B., assignor.)						
Bernstein, Max. (See Fawcett, William N., assignor.)						
Beskow, Bernhard, New York, N. Y. Traction-varying device	873,709	Dec. 17	2859	608	131	1695
Beverage, Edward C., Monterey, Va. Nut-lock	873,831	Dec. 17	3124	665	131	1736
Biehl, Bernard, assignor to J. L. Sommer, Newark, N. J. Can-opener	874,290	Dec. 17	4081	860	131	1887
Binney, Harold, assignor to Aeolian Company, New York, N. Y. Tracker-board for legato and other effects in pneumatic musical apparatus	873,981	Dec. 17	3406	726	131	1785
Bischoff, Carl. (See Linzel and Bischoff.)						
Bittle, George, Sharonville, Ohio. Sign	874,156	Dec. 17	3804	802	131	1842
Black, William C., Plymouth, Ohio. Separator-sieve	874,291	Dec. 17	4082	860	131	1887
Blackford, Ernest, Potomac, Ill. Revolving-paddle churn	874,292	Dec. 17	4084	861	131	1888
Blair, Frank W., New York, N. Y. Circuit-breaker	874,293	Dec. 17	4085	861	131	1888
Blake, George E., Greencastle, Ind. Power-transmitting device	874,157	Dec. 17	3805	802	131	1842
Blood, Charles W. H., and C. G. Osteman, assignors to S. A. Woods Machine Company, Boston, Mass. Knife-jointer for the bottom cutter-heads of wood-planers	874,355	Dec. 17	4200	884–5	131	1908
Bloomberg, Casper, New York, N. Y. Belt end	873,982	Dec. 17	3406	726	131	1785
Bluntach, Alexander J., assignor of three-fourths to M. A. Huffman, C. D. Bonner, and A. H. Reed, Winona, Minn. Ink-well	873,983	Dec. 17	3407	726	131	1786
Blye, Harry C. (See Hull, Joseph V., assignor.)						
Bobrick, Gabriel A., Los Angeles, Cal. Compressed-fluid charging and discharging device	873,984	Dec. 17	3410	727	131	1786
Boisvert, William R., St. David de Levis, Quebec, Canada. Bed-spring	874,048	Dec. 17	3548	755	131	1806
Bonner, Cornelia D., *et al.* (See Bluntach, Alexander J., assignor.)						
Borsch, John L., Philadelphia, Pa. Combined paper-weight, knife-rest, and optical device	874,049	Dec. 17	3549	756	131	1807
Bottenfield, William T., Nelson, Nebr. Washing-machine	873,833	Dec. 17	3129	666	131	1737
Bourque, Wilfrid, Sherbrooke, Quebec, Canada. Storm-window fastener	873,834	Dec. 17	3130	666	131	1737
Bovard, Mary J., Oil City, Pa. Skirt-measuring device	874,158	Dec. 17	3806	802	131	1842
Bower, Clarence E., Newton, Iowa, and H. W. Bower, Olney, Ill. Bale-tying mechanism for baling-presses	873,835	Dec. 17	3131	666–8	131	1738
Bower, Harry A., Boston, Mass. Tuning device for timpani	874,050	Dec. 17	3550	756	131	1807
Bower, Howard W. (See Bower, Clarence E. and H. W.)						
Bowers, Wilder P., Chicago, Ill. Display device for cigar-boxes	874,294	Dec. 17	4087	861	131	1888
Boyers, Albert J., Mount Morris, Pa. Curtain-pole	874,375	Dec. 17	4246	894	131	1915
Bradley, Edson, Tuxedo Park, N. Y., assignor by mesne assignments, to Standard Distilling and Distributing Company. Package for distilled spirits	873,710	Dec. 17	2860	608	131	1696
Brand, Achill W., Boise, Idaho. Top for ranges	874,295	Dec. 17	4088	861	131	1889
Brantingham, Allen C., Toledo, Ohio. Grain-cleaner	873,985	Dec. 17	3412	727	131	1786
Bright, Richard A., and A. W. Davis, Cranston, R. I., assignors to Acme Tobacco Company. Roll for cigar-machines	873,836	Dec. 17	3140	668	131	1738
Brown, Benjamin F., Bridgeton, Ind. Hand-cart	873,986	Dec. 17	3413	727	131	1787
Brown, Claude E., and W. J. Gibbs, Denver, Colo. Wood-trimming machine	873,837	Dec. 17	3141	669	131	1738
Brown, Edward H., New York, N. Y. Oil-heater protector	874,296	Dec. 17	4090	862	131	1889
Brown, James. (See Dickens, John, assignor.)						
Brown, Nimrod W. L., Thomasville, Ala. Shaking-screen	874,051	Dec. 17	3553	756	131	1807
Bruen, Edwin C., Brooklyn, N. Y. Vehicle	873,711	Dec. 17	2862	609–10	131	1696
Brusis, Heinrich, Soest, Germany. Stretcher-supporting frame	874,159	Dec. 17	3807	802–3	131	1843
Bucherer, Frederick, Bayonne, N. J. Power-transmitting mechanism	873,838	Dec. 17	3143	669–70	131	1739
Buck, Fred, assignor to Lufkin Rule Company, Saginaw, Mich. Tape-measure	873,712	Dec. 17	2865	610	131	1697
Buckborough, Purian, Brantford, Ontario, Canada. Fabric-roll protector	874,160	Dec. 17	3811	803	131	1843
Buckingham, Lee, *et al.* (See Ries, Frank, assignor.)						
Bullis, Jannette, New York, N. Y. Bathing-suit	873,713	Dec. 17	2868	610	131	1697
Bullock Electric Manufacturing Company *et al.* (See Stull, Emmett W., assignor.)						
Burke, Thomas F., Lowellville, Ohio. Fastener-button for lacing terminals	874,161	Dec. 17	3812	804	131	1843
Burnham, Joseph L., Schenectady, N. Y., assignor to General Electric Company. Dynamo-electric machine	873,714	Dec. 17	2869	610	131	1697
Burnham, Williams & Co. (See McCarroll, William J., assignor.)						
Burriss, John T. and O. G., Anderson, S. C. Metallic sheet-roofing	873,920	Dec. 17	3285	702	131	1765
Burriss, Oliver G. (See Burris, John T. and O. G.)						
Busch, Charles, New York, N. Y. Electrical accumulator	873,715	Dec. 17	2871	611	131	1698
Bush, George W., Turtle Creek, Pa. Combined window-shade and curtain-pole support	874,297	Dec. 17	4092	862	131	1889
Busse, Oscar, Meiderich-Duisberg, Germany. Drying device	873,987	Dec. 17	3414	727	131	1787
Butts, John H. B., Pickard, Ga. Back-band buckle	874,162	Dec. 17	3813	804	131	1844
Buxton, Benjamin C., Buxton, Iowa. Portable sectional track	873,716	Dec. 17	2873	611	131	1698
Byl, George N., and J. Koehler, Jersey City, N. J. Label-paster	874,298	Dec. 17	4093	862	131	1890
C. B. Cottrell & Sons Company. (See Barber, Howard M., assignor.)						
C. G. Sargent's Sons Corporation. (See Sargent, Frederick G., assignor.)						
Caddick, George, Allegheny, Pa. Pianoforte	874,299	Dec. 17	4095	863	131	1890
Caille, Auguste A., G. Hamilton, and O. C. Currie, assignors to Caille Company, Detroit, Mich. Coin-controlled weighing-machine	874,300	Dec. 17	4098	863–4	131	1890
Caille Company. (See Caille, Hamilton, and Currie, assignors.)						
Callan, John G., Lynn, Mass., assignor to General Electric Company. Reciprocating mechanism for spooling-machines	873,717	Dec. 17	2874	611–12	131	1698
Cantwell, Thomas J., Great Neck, N. Y. Table or easel	874,052	Dec. 17	3554	757	131	1807
Caputo, Louis, East Boston, Mass. Automatic signaling device	873,839	Dec. 17	3145	670	131	1739
Carnt, Edwin C., and A. Forster, assignors of one-third to J. S. White and Company Limited, East Cowes, Isle of Wight, England. Marine turbine	874,356	Dec. 17	4203	885	131	1908
Casey, Owen E., Nashua, Minn. Ditching and grading machine	873,718	Dec. 17	2884	612	131	1698
Cedarburg, Arthur C., Chicago, Ill. Display-case for post-cards, &c	874,301	Dec. 17	4105	864	131	1891
Chambers Bering Quinlan Company. (See Bering and Ford, assignors.)						
Chapman, Penrose E., St. Louis, Mo. Armature-winding machine	874,163	Dec. 17	3815	804	131	1844
Charles Longenecker & Company. (See Wright and Longenecker, assignors.)						
Charlottenburger Farbwerke Aktien Gesellschaft. (See Wagner, Hubert, assignor.)						
Chassé Manufacturing Company. (See Chassé, Raphael, assignor.)						
Chassé, Raphael, assignor to Chassé Manufacturing Company, Middletown, N. Y. Animal-trap	873,988	Dec. 17	3415	728	131	1787
Chavey, George H., Winooski, Vt. Drawing-pen	874,302	Dec. 17	4107	864	131	1891
Chester, James, New York, N. Y. Illuminated sign	873,921	Dec. 17	3287	702	131	1765
Christy Fire Clay Company. (See Miller, Robert H., assignor.)						
Cibulas, Stephen F., Bridgeport, Conn. Operating mechanism for ventilating windows	874,164	Dec. 17	3818	805	131	1844
Clark, Edgar M. (See Hoover and Clark.)						
Clift, Eric H., West Kensington, England. Internal-combustion engine	873,840	Dec. 17	3147	671	131	1739
Closz, Charles, Webster City, Iowa. Adjustable sieve	873,719	Dec. 17	2886	613	131	1699
Cloud, Arthur D., assignor of two-thirds to F. M. Patterson and F. W. Rizer, Chicago, Ill. Switch-stand	873,720	Dec. 17	2888	613–15	131	1699
Coates, Jesse, Lynn, Mass., assignor to General Electric Company. Transformer	873,721	Dec. 17	2900	615	131	1700
Coats, Henry L., Moscow, Idaho. Gate and operating means therefor	874,165	Dec. 17	3820	805	131	1845
Cochran, Ezra O. and L. H., Denver, Colo. Motor	874,303	Dec. 17	4108	865–6	131	1891
Cochran, Louis H. (See Cochran, Ezra O. and L. H.)						
Cohen, Hyman, New York, N. Y. Innersole	873,722	Dec. 17	2903	616	131	1700
Cohen, Stanley A., New York, N. Y. Drying-machine	873,723	Dec. 17	2905	616	131	1700

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Cole, Charles E., Cleveland, Ohio. Vehicle-wheel	873,841	Dec. 17	3150	671	131	1740
Cole, Dwight S., Detroit, Mich. Hot-water supply	873,842	Dec. 17	3151	671–2	131	1740
Cone, John W., and F. R. Miller, Barnesboro, Pa. Boring device	873,724	Dec. 17	2906	616–17	131	1700
Consolidated Car Heating Company. (See McElroy, James F., assignor.)						
Converse, Maschil D., Newark, N. J., assignor, by mesne assignments, to Howland Metallic Cap Company, New York, N. Y. Closure for jars, bottles, and like receptacles	873,989	Dec. 17	3416	728	131	1787
Converse, Newton B., assignor to himself and J. E. Dickinson, trustees, Fresno, Cal. Apparatus for preparing and packing seeded raisins	873,922	Dec. 17	3289	702–3	131	1766
Cook, Mansfield J. (See Eno and Cook.)						
Copeland, David W., Syracuse, N. Y. Thill-coupling	874,304	Dec. 17	4111	866	131	1892
Corey, Fred B., Schenectady, N. Y., assignor to General Electric Company. Pneumatically-operated gong	873,725	Dec. 17	2908	617	131	1701
Coulter, Frank E., Omaha, Nebr. Garment-supporter	873,726	Dec. 17	2910	617	131	1701
Courson, John F., Pitcairn, Pa. Draft-gearing for railway-cars	873,843	Dec. 17	3154	672	131	1741
Cousans, Louis B., Lincoln, England. Centrifugal fan	873,923	Dec. 17	3290	703–4	131	1766
Covert, Edward, La Prairie, Ill. Poultry-picking device	873,844	Dec. 17	3156	672	131	1714
Cramer, Stuart W., Charlotte, N. C. Humidifying and air-moistening apparatus	873,924	Dec. 17	3292	704	131	1766
Crehan, Hubert, Sheridan, assignor to Oliver Iron and Steel Company, Pittsburg, Pa. Bolt-machine	873,727	Dec. 17	2911	617–18	131	1702
Creque, Frank J., Cuyahoga Falls, assignor of one-half to F. W. Dodge, Ashland, Ohio. Balloon-inflator	874,166	Dec. 17	3822	806	131	1845
Crisenberry, Benjamin F., Elwood, Ind. Syringe	873,728	Dec. 17	2913	618	131	1702
Crisp, Albert V. (See Layfield and Crisp.)						
Crocker, Alvin E., New York, N. Y. Coffee mixture	874,305	Dec. 17	4112	.....	131	1892
Crosby Steam Gage and Valve Company. (See Johnson, Philip L., assignor.)						
Crosby Steam Gage and Valve Company. (See Wolfe, Frank L., assignor.)						
Crow, William D., East Orange, N. J. Machine for molding units of clay or other refractory material to be used in the manufacture of concrete	874,167	Dec. 17	3824	806	131	1845
Crow, William H., Pueblo, Colo. Portable power-dam	873,845	Dec. 17	3158	673	131	1741
Crum, Clarence M., Hansboro, N. D. Rein-holder	873,990	Dec. 17	3418	728	131	1788
Cubitt, Archibald S., Schenectady, N. Y., assignor to General Electric Company. Throttle-relay	873,729	Dec. 17	2914	618	131	1702
Cultra, Robert A., Cambridge, Mass. Cartridge-fuse attachment-plug	873,846	Dec. 17	3159	673	131	1742
Cumner, Matthew S., New York, N. Y. Type-writer shift-key mechanism	873,730	Dec. 17	2917	619	131	1703
Cumpston, Frederick B., Blooming Grove, Tex. Baling-press	874,306	Dec. 17	4113	866–7	131	1892
Cunningham, James H., Brockton, Mass. Boot and shoe	873,731	Dec. 17	2919	619	131	1703
Cunningham, William R., assignor to American Clay Machinery Company, Bucyrus, Ohio. Unloading mechanism	873,991	Dec. 17	3419	728–9	131	1788
Cunningham, William R., assignor to American Clay Machinery Company, Bucyrus, Ohio. Unloading mechanism	873,992	Dec. 17	3423	729	131	1788
Currie, Otis C. (See Caille, Hamilton, and Currie.)						
Curtain Supply Company. (See Hopkins, Charles L., assignor.)						
Cutler, Joseph W., assignor to Cutler Manufacturing Company, Rochester, N. Y. Mail-chute	874,053	Dec. 17	3556	757–8	131	1808
Cutler Manufacturing Company. (See Cutler, Joseph W., assignor.)						
Cyphers, Charles A., assignor, by mesne assignments, to Model Incubator Company, Buffalo, N. Y. Brooder	873,993	Dec. 17	3426	729	131	1789
Dale, John H., New York, N. Y. Canopy for electric fixtures	873,994	Dec. 17	3428	730	131	1789
Dallugge, Rudolph A., Venice, Cal. Machine for issuing cash	874,307	Dec. 17	4117	867–8	131	1893
Danker, Hugo M., Austin, Ill. Cord or twine holder	874,168	Dec. 17	3825	806	131	1846
Dann, George E., assignor to Rattan Mfg. Co., New Haven, Conn. Folding baby-carriage	874,308	Dec. 17	4123	868	131	1893
Dannert, Fritz, assignor to J. A. Hutmacher, Berlin, Germany. Generator for water-gas	874,309	Dec. 17	4125	868–9	131	1893
Darcy, Frederick, and S. Lubin, Philadelphia, Pa. Illusion apparatus for amusement	874,169	Dec. 17	3826	806	131	1846
Dashiell, Milton, Baltimore, Md. Elevator-lock	873,925	Dec. 17	3295	704	131	1767
Daugherty, Warren B., San Luis Obispo, Cal. Oil-well packing	873,995	Dec. 17	3429	730	131	1789
Davidson, Harry J., Washington, D. C. Cigar-vending machine	874,170	Dec. 17	3827	807	131	1846
Davis, Arthur W. (See Bright and Davis.)						
De Forest, Lee, New York, N. Y., assignor to G. K. Woodworth, Brookline, Mass. Cautery	874,178	Dec. 17	3842	810	131	1849
De Moulin, Edmond and U. S., Greenville, Ill. Lifting-machine	873,733	Dec. 17	2922	620	131	1704
De Moulin, Ulysses S. (See De Moulin, Edmond and U. S.)						
De Voe, Albert H., Elizabeth, N. J. Conduit-threading device	873,996	Dec. 17	3431	730–1	131	1790
Decker Electrical Manufacturing Company. (See Decker, Frank A., assignor.)						
Decker, Frank A., Philadelphia, Pa., assignor, by mesne assignments, to Decker Electrical Manufacturing Company, Wilmington, Del. Battery train-lighting system	873,732	Dec. 17	2920	620	131	1703
Déay, Louis A., assignor to J. W. Harris, Montreal, Quebec, Canada. Excavator-scraper	873,734	Dec. 17	2924	620	131	1704
Dey, Valentine J. (See Sulzer, Garanger, and Dey.)						
Dick, Albert B., Lake Forest, assignor to A. B. Dick Company, Chicago, Ill. Stencil-printing machine	873,847	Dec. 17	3162	673–4	131	1742
Dick, Albert B., Lake Forest, assignor to A. B. Dick Company, Chicago, Ill. Sheet-feeding apparatus	873,848	Dec. 17	3164	674	131	1743
Dickens, John, Passaic, N. J., assignor of one-half to J. Brown, Philadelphia, Pa. Electric gas-lighter	874,357	Dec. 17	4204	885	131	1909
Dickinson, J. E., trustees. (See Converse, Newton B., assignor.)						
Dickson, William W. (See Parker and Dickson.)						
Diesel, Rudolf, Munich, Germany. Longitudinally-displaceable car-body for motor-vehicles	873,926	Dec. 17	3296	705	131	1767
Dieterich, Karl G., New York, N. Y. Locking safety-pin	873,927	Dec. 17	3297	705	131	1767
Dillen, Michael C., Sandwich, Ill. Mail-pouch deposit and collection apparatus	873,735	Dec. 17	2925	621	131	1704
Dittman, Samuel E., New York, N. Y. Clamp for printing-plates	873,736	Dec. 17	2927	621	131	1705
Dodge, F. W. (See Creque, Frank J., assignor.)						
Donahue, James A., Everett, Wash. Metallic sole for boots and shoes	874,171	Dec. 17	3829	807	131	1847
Donard, Eugéne, and H. Labbé, Paris, France. Pharmaceutical coating	874,310	Dec. 17	4126	.....	131	1894
Dopkins, George W., Morris, Minn. Overshoe-holder	873,928	Dec. 17	3299	705	131	1767
Doran, Julia, Omaha, Nebr. Adjustable curtain-bracket	874,311	Dec. 17	4127	869	131	1894
Duchesne, Ernest. (See Duchesne, Ulric and E.)						
Duchesne, Ulric and E., Montreal, Quebec, Canada. Rotary engine	874,312	Dec. 17	4128	869	131	1894
Ducker, Orlando, Washington, D. C. Eyeglass-case	874,172	Dec. 17	3830	807	131	1847
Duerr, Harry O., Wilmington, Del. Making artificial stone and the stone	873,849	Dec. 17	3167	.....	131	1743
Duff Manufacturing Company. (See Freed, George F., assignor.)						
Dukesmith Air Brake Company. (See Dukesmith, Frank H., assignor.)						
Dukesmith, Frank H., Meadville, assignor to Dukesmith Air Brake Company, Pittsburg, Pa. Air-brake system	874,054	Dec. 17	3559	758	131	1808
Dykes, Hugh J., Berkeley, Cal. Railway-spike	874,055	Dec. 17	3564	759	131	1809
E. C. Cook & Bro. (See Reutar, Herman C., assignor.)						
Eastwood, Arthur C., Cleveland, Ohio. Automatic cut-out for electric controllers	873,737	Dec. 17	2930	621	131	1705
Ebersole, Cyrus P., Keokuk, Iowa, assignor to Electric Service Supplies Company, Camden, N. J. Controller-regulator	874,173	Dec. 17	3831	808	131	1847
Eberson, Alexander A. (See Lemcke, Louis, assignor.)						
Ebinghaus, Emil, and A. Schumacher, Gevelsberg, Germany. Rolling-mill	873,997	Dec. 17	3437	731	131	1790

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Eckhard, John, Buffalo, N. Y. Vehicle-tire						
Eckman, William H., Warren, Ind. Horse-detacher	873,738	Dec. 17	2933	622	131	1705
Edmondson, Robert, South Bend, Ind. Reinforced interlocking concrete wall	873,929	Dec. 17	3300	705	131	1767
Ekman, Carl. (See Sinclair and Ekman.)	873,739	Dec. 17	2935	622	131	1766
Electric Service Supplies Company. (See Ebersole, Cyrus P., assignor.)						
Ellefson, Elert R., and L. Ihlan, Hardwick, Minn. Corn-planter	874,313	Dec. 17	4134	870	131	1895
Elliott, William S., and F. M. Faber, Pittsburg, Pa.; said Faber assignor to said Elliott. Turbine						
Ellis, Edward S., Upper Montclair, N. J. Shoe-button	874,174	Dec. 17	3834	808–9	131	1847
Ellis, Theola T., St. Louis, Mo. Combination scoop and scale	874,314	Dec. 17	4136	870	131	1895
Emerson Manufacturing Company. (See Waterman, Lewis E., assignor.)	873,850	Dec. 17	3169	674	131	1743
Eno, Frank D., Auburn, and M. J. Cook, Syracuse, N. Y.; said Cook assignor to said Eno. Display-rack						
Ernsberger, Harvey K., Norwalk, Ohio. Water-heater	874,315	Dec. 17	4137	871	131	1895
Eschenbrenner, Carl, Oberlahnstein, Germany. Sewer-pipe	874,316	Dec. 17	4138	871	131	1896
Faber, Frank M. (See Elliott and Faber.)	873,851	Dec. 17	3171	675	131	1744
Falk, Frank A., Stacyville, Iowa. Lever mechanism	874,175	Dec. 17	3837	809	131	1848
Fanslow, Benjamin O., Los Angeles, Cal., assignor to Universal Polygraph Company, (Incorporated.) Reproducing and imitating machine	873,930	Dec. 17	3303	706	131	1768
Faris, John W. B., Skidmore, Tex. Register-operating device for massage treatments	873,931	Dec. 17	3305	706	131	1768
Faris, John W. B., Skidmore, Tex. Shave-register-operating device	873,932	Dec. 17	3308	706	131	1769
Faris, John W. B., Skidmore, Tex. Barber's bottle-holder	873,933	Dec. 17	3310	707	131	1769
Farnham, Frank E., Providence, R. I. Buckle-bar	873,998	Dec. 17	3438	731	131	1790
Fawcett, William N., Brooklyn, assignor of one-half to M. Bernstein, New York, N. Y. Electrical alarm system	873,934	Dec. 17	3311	707	131	1770
Federal Railway Signal Company. (See Herringer, Casper, assignor.)	873,935	Dec. 17	3313	707	131	1770
Felten und Guilleaume-Lahmeyerwerke Aktien-Gesellschaft. (See Salomon, Bernhard, assignor.)						
Fetters, Charles A., assignor to Sanitary Sectional Brush Company, New York, N. Y. Sectional hair-brush						
Fischer, Christian A., Grand Forks, N. D. Adjustable feed-carriage for lathes	873,832	Dec. 17	3172	675	131	1744
Fisher, Harvey L., Woodstock, assignor to Fisher Manufacturing Company, Chicago, Ill. Type-writer	874,176	Dec. 17	3838	809	131	1848
Fisher, Harvey L., Woodstock, assignor to Fisher Manufacturing Company, Chicago, Ill. Type-writer	874,056	Dec. 17	3565	759–60	131	1809
Fisher, Harvey L., assignor to Fisher Manufacturing Company, Chicago, Ill. Tabulator for type-writing machines	874,057	Dec. 17	3577	760	131	1809
Fisher, Harvey L., assignor to Fisher Manufacturing Company, Chicago, Ill. Tabulator for type-writing machines	874,058	Dec. 17	3582	761	131	1810
Fisher, Harvey L., assignor to Fisher Manufacturing Company, Chicago, Ill. Adding attachment for type-writing machines	874,059	Dec. 17	3596	762	131	1810
Fisher Manufacturing Company. (See Fisher, Harvey L., assignor.)	874,060	Dec. 17	3611	762–3	131	1811
Flinchbaugh, Frederick T., York, Pa. Reverse-gear for four-cycle combustion-engines	874,177	Dec. 17	3840	809–10	131	1848
Flint, Henry, St. Louis, Mo. Bow-facing oar	874,317	Dec. 17	4140	871	131	1896
Flugum, Mons N., Thompson, Ohio. Corn-ear rack	874,318	Dec. 17	4141	871–2	131	1896
Ford, Charles B., and J. N. Wood, Richmond, Va. Vending-machine	873,936	Dec. 17	3314	707–8	131	1770
Ford, Ralph L. (See Bering and Ford.)						
Fordyce, Edgar W., Anniston, Ala. Track-gage	874,373	Dec. 17	4242	893	131	1914
Fordyce, Edmond A., Boston, Mass. Pneumatic-despatch-tube apparatus	873,740	Dec. 17	2936	622–3	131	1706
Forster, Andrew. (See Carnt and Forster.)						
Forter Miller Engineering Co. (See Waldburger, John A., assignor.)						
Forth, John F., and E. J. Langley, Syracuse, N. Y.; said Langley assignor to said Forth. Optical testing apparatus						
Frank, Adolph, Charlottenburg, Germany. Producing hydrogen from water-gas	874,179	Dec. 17	3845	810	131	1849
Frankenberg, John R. (See Lewis and Frankenberg.)	873,853	Dec. 17	3174		131	1745
Frederick, Edwin E., Bellevue, assignor to Frederick-Elder Co., Inc., Pittsburg, Pa. Switch-operating mechanism						
Frederick-Elder Co. (See Frederick, Edwin E., assignor.)	873,741	Dec. 17	2938	623	131	1707
Freed, George F., assignor to Duff Manufacturing Company, Allegheny, Pa. Lifting-jack	874,061	Dec. 17	3638	764	131	1811
Freedman, Alice, Hazlewood, Pa. Curtain-pole	873,854	Dec. 17	3175	675	131	1745
French, Joseph, Woonsocket, R. I., assignor of one-half to Sewing Machines Supplies Company, Boston, Mass. Stamping and numbering machine						
Freund, Joseph, Crystal City, Mo. Tile gutter	874,358	Dec. 17	4207	886	131	1909
G. R. Lynch Manufacturing Company. (See Stover, Frank E., assignor.)	874,180	Dec. 17	3847	811	131	1849
Gade, Harald F. (See Hallowell and Gade.)						
Gade, Harald F., assignor to Standard Pressed Steel Company, Philadelphia, Pa. Shaft-hanger	874,062	Dec. 17	3640	764	131	1811
Gade, Harald F., assignor to Standard Pressed Steel Company, Philadelphia, Pa. Shaft-hanger	874,319	Dec. 17	4142	872	131	1897
Garanger, Maurice. (See Sulzer, Garanger, and Dey.)						
Garbin, Ernesto, Genoa, Italy. Apparatus for utilizing the waste of celluloid and similar substances						
Garland, Thomas H., Chicago, Ill. Car-ventilator	874,181	Dec. 17	3849	811–12	131	1850
Gascard, Jules, and R. Shimmen, Ballan, Victoria, Australia. Machine for grading and cleaning potatoes, onions, and other products	874,320	Dec. 17	4145	872	131	1897
Geer, Erastus L., Johnstown, Pa. Metallic tie and rail-fastener	874,321	Dec. 17	4147	873	131	1897
Gefäll, Rudolf, Vienna, Austria-Hungary, assignor, by mesne assignments, to H. J. Reed, Chicago, Ill. Gas-burner	874,322	Dec. 17	4150	873	131	1898
Geiger, Francis C., Parkersburg, W. Va. Ironing-board	874,063	Dec. 17	3641	765	131	1812
Geiger, Frederick J., *et al.* (See Halle, Luther T., assignor.)	874,323	Dec. 17	4151	873	131	1898
General Acoustic Company. (See Haff, Howell W., assignor.)						
General Electric Company. (See Alexanderson, Ernst F. W., assignor.)						
General Electric Company. (See Anderson, Edward H., assignor.)						
General Electric Company. (See Batchelder, Asa F., assignor.)						
General Electric Company. (See Burnham, Joseph L., assignor.)						
General Electric Company. (See Callan, John G., assignor.)						
General Electric Company. (See Coates, Jesse, assignor.)						
General Electric Company. (See Corey, Fred B., assignor.)						
General Electric Company. (See Cubitt, Archibald S., assignor.)						
General Electric Company. (See Hopkins, Nelson S., assignor.)						
General Electric Company. (See McIver, Alexander, assignor.)						
General Electric Company. (See Pauly, Karl A., assignor.)						
General Electric Company. (See Peterson, Charles F., assignor.)						
General Electric Company. (See Riddell, John, assignor.)						
General Electric Company. (See Van Brunt, Charles, assignor.)						
General Electric Company. (See Wiard, John B., assignor.)						
Gerbert, Emil, Waltershausen, Germany. Means for attaching tires to vehicle-wheels	874,324	Dec. 17	4152	873	131	1898
Gerbrand, Abraham B., Buhler, Kans. Means for stretching covering around pulleys	874,182	Dec. 17	3852	812	131	1850
Gibbs, Arthur E., Wyandotte, Mich. Electrolytic cell	874,064	Dec. 17	3642	765	131	1812

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Gibbs, William J. (See Brown and Gibbs.)						
Gibson, John E. (See Harden, William H., assignor.)						
Giles, Jesse H., Salt Lake City, Utah. Perpendicular swath-divider attachment	874,325	Dec. 17	4153	874	131	1898
Glass, Perley R., Quincy, assignor to L. Muther, Boston, Mass. Liquid-applying device	874,359	Dec. 17	4208	886	131	1909
Goeckeler, Frederick A., Worcester, Mass. Treating manure	874,326	Dec. 17	4153		131	1899
Goldin, Horace, London, England. Valise, dressing-case, and the like	873,855	Dec. 17	3176	675–6	131	1745
Goldman, Gustav, Baltimore, Md. Making garment-pads	873,999	Dec. 17	3439	731–2	131	1791
Goldsmith, Nathaniel O., Norwood, assignor to Weir Frog Company, Cincinnati, Ohio. Guard-rail clamp	874,000	Dec. 17	3443	732	131	1791
Goodman, Max, New York, N. Y. Safety-curtain for preventing runaway accidents on bridges	874,327	Dec. 17	4155	874	131	1899
Gordon, Adolph O., Chicago, Ill. Headwear	873,856	Dec. 17	3177	676	131	1745
Gordon, Charles, and H. Hart, assignors to Milwaukee Harness Machinery Company, Milwaukee, Wis. Power-punch	874,183	Dec. 17	3854	812–13	131	1851
Gordon, Robert G., Calgary, Alberta, Canada. Cycloramic apparatus	874,328	Dec. 17	4156	874–5	131	1899
Gough, Albert C., Chester, Mont. Scoop	874,001	Dec. 17	3444	732–3	131	1791
Gounley, James F., *et al.* (See Welsh, William H., assignor.)						
Grade, Hans, Magdeburg, Germany. Explosive-engine	873,857	Dec. 17	3179	677	131	1746
Gragg, Abner H., Knoxville, Tenn. Churn	874,002	Dec. 17	3445	733	131	1792
Grand Rapids Show Case Company. (See Rémond, Louis, assignor.)						
Grape, Richard, New York, N. Y. Hair-drying apparatus	874,005	Dec. 17	3645	765	131	1812
Grasberger, Boniface A., Richmond, Va. Clamp-setting machine	874,184	Dec. 17	3861	813–14	131	1851
Grauel, Hermann, Berlin, Germany. Metal folding furniture	874,003	Dec. 17	3446	733	131	1792
Gray, William, Lincoln, Nebr. Cut-off and blast-regulator for grain, ore, and mineral separators	874,329	Dec. 17	4158	876	131	1899
Green, Henry C., Port, Okla. Harrow attachment	874,185	Dec. 17	3864	814	131	1851
Greenleaf, William I., *et al.* (See Olsen, John, assignor.)						
Gregg, Arthur. (See Jones and Gregg.)						
Grettenberger, Christoph F. (See Winger, Josiah G., assignor.)						
Griffin, Samuel, Bath, England. Gas-producer	873,858	Dec. 17	3180	677	131	1746
Griffith, Samuel D., Curwensville, Pa. Atmospheric clothes-pounder	874,006	Dec. 17	3640	766	131	1818
Groom, Marshall W., San Jose, Cal. Conveying means for can cookers and exhausters	874,330	Dec. 17	4159	875	131	1900
Guldemann, Arnold, assignor to I. A. Hall, Paterson, N. J. Loom-shuttle	874,331	Dec. 17	4161	876	131	1900
Haas, Joseph W. (See Ratliff, George W., assignor.)						
Haas, Louis, New York, N. Y. Piano-pedal	873,742	Dec. 17	2940	623	131	1707
Hachmann, Frederick, assignor to A. T. Rosen, St. Paul, Minn. Wrench	873,859	Dec. 17	3182	678	131	1746
Haff, Howell W., Richmond Hill, N. Y., assignor to General Acoustic Company. Telephone-transmitter	874,004	Dec. 17	3447	733	131	1792
Halle, Luther T., assignor of nine one-hundredths to J. W. Shannon, one-tenth to F. J. Geiger, and one-tenth to L. W. Mulford, Philadelphia, Pa. Sound-reproducing machine	873,937	Dec 17	3317	708	131	1771
Haldy, Frederick G., assignor to Yale & Towne Manufacturing Company, Stamford, Conn. Magnetic brake	874,186	Dec. 17	3865	814–15	131	1852
Hall, Isaac A. (See Guldemann, Arnold, assignor.)						
Hallett, Henry M., Ludington, Mich. Smoking-pipe	874,332	Dec. 17	4163	876	131	1900
Hallowell, Howard T., and H. F. Gade, assignors to Standard Pressed Steel Company, Philadelphia, Pa. Shaft-hanger	874,067	Dec. 17	3648	766	131	1813
Hallowell, Howard T., and H. F. Gade, assignors to Standard Pressed Steel Company, Philadelphia, Pa. Shaft-hanger	874,187	Dec. 17	3866	815	131	1852
Hamel, Charles W. and E. C., St. Louis county, Mo. Self-regulating ash-pan	874,188	Dec. 17	3868	815	131	1852
Hamel, Ernest C. (See Hamel, Charles W. and E. C.)						
Hamilton, Alexander T., Etna, Ga., and W. B. Lowe, New York, N. Y. Bag or sack fastener or closure	874,333	Dec. 17	4164	876	131	1901
Hamilton, Guy. (See Caille, Hamilton, and Currie.)						
Hans, Alfred, Friedenau, near Berlin, Germany. Producing photographs on metal, glass, porcelain, &c.	874,005	Dec. 17	3448		131	1792
Harazim, Franjo, *et al.* (See Regal, August, assignor.)						
Harbolsheimer, John, Philadelphia, Pa. Discharge-chute for wagons	874,334	Dec. 17	4165	876	131	1901
Harden, William H., assignor of one-half to J. E. Gibson, Quitman, Ga. Trap	874,335	Dec. 17	4166	877–8	131	1901
Hardie, John C., Helena, Mont. Smelting ores	874,336	Dec. 17	4170	878	131	1902
Hardscog, Martin, Ottumwa, Iowa. Pneumatic hammer	873,938	Dec. 17	3321	708	131	1772
Hardwick, Harry, assignor to Ivins, Dietz & Metzger Company, Philadelphia, Pa. Stretching device for carpets and rugs	873,743	Dec. 17	2941	623	131	1707
Hardwick, Harry, assignor to Ivins, Dietz & Metzger Company, Philadelphia, Pa. Pile fabric	873,744	Dec. 17	2942	624	131	1708
Hare, William, Galesburg, Ill. Dental articulator	874,189	Dec. 17	3871	816	131	1853
Harrington, Alfred, assignor to W. Spiers, Leicester, England. Edge setting or burnishing machine	874,360	Dec. 17	4209	886–7	131	1909
Harris, Joseph W. (See Désy, Louis A., assignor.)						
Hart, Gerald W., West Hartford, assignor to Hart Manufacturing Company, Hartford, Conn. Automatic circuit-breaker	874,190	Dec. 17	3872	816–17	131	1853
Hart, Harry. (See Gordon and Hart.)						
Hart Manufacturing Company. (See Hart, Gerald W., assignor.)						
Hart Manufacturing Company. (See Leppert, Henry E., assignor.)						
Hartoch, Julius, Wiesbaden, Germany. Piston for internal-combustion or explosion engines	874,006	Dec. 17	3449	734	131	1793
Haskins, William J., New York, N. Y. Hoisting-tower	874,192	Dec. 17	3876	817–18	131	1854
Hasley, Nicoll Y. (See Jones, Jonathan S., assignor.)						
Hatfield, Henry A., Clarkson, Ky. Motor	874,191	Dec. 17	3875	817	131	1853
Hawk, Ulysaus. (See Henson, Marshal, assignor.)						
Haynes, Elwood, Kokomo, Ind. Metal alloy	873,745	Dec. 17	2943		131	1708
Haynes, Elwood, Kokomo, Ind. Metal alloy	873,746	Dec. 17	2945		131	1708
Hedstrom, Carl O., Springfield, Mass. Means for operating exhaust-valves	873,747	Dec. 17	2946	624	131	1708
Heintz, Jacob C., Buffalo, N. Y. Railway-tie	874,193	Dec. 17	3878	818	131	1854
Helm, Samuel W., New York, N. Y. Box	874,337	Dec. 17	4171	878	131	1902
Henderson, Charles H., Chicago, Ill. Structural-iron-punching device	874,194	Dec. 17	3879	818–19	131	1854
Henry, John W., New York, N. Y. Chair-seat	873,939	Dec. 17	3326	709	131	1772
Henson, Marshal, assignor of one-third to U. Hawk, Doe Run, Mo. Ore-feeding mechanism	873,748	Dec. 17	2948	625	131	1708
Herbert, George, Jr., Glasgow, Scotland. Mechanism for detaching biscuits from their pans	874,195	Dec. 17	3881	819	131	1855
Herrick, Frederick C., Cleveland, Ohio. Latrine for use in the field	873,749	Dec. 17	2951	625	131	1709
Herringer, Casper, New York, N. Y., assignor to Federal Railway Signal Company. Detector-bar	874,196	Dec. 17	3884	819–20	131	1855
Hess, Edward B., New York, N. Y., assignor to Royal Typewriter Company, Hoboken, N. J. Type-writing machine	874,068	Dec. 17	3650	766–7	131	1813
Hess, Edward B., New York, N. Y., assignor to Royal Typewriter Company, Hoboken, N. J. Type-writing machine	874,338	Dec. 17	4173	878	131	1902
Hester, George C., Portland, Oreg. Sash-bar	874,069	Dec. 17	3652	768	131	1814
Heym, Ernest, Philadelphia, Pa. Micrometer-calipers	874,197	Dec. 17	3895	820	131	1856
Higgins, Elmer F., Mount Vernon, Ohio. Grader	874,198	Dec. 17	3899	820–1	131	1856

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Hilbert, Henry P., Cincinnati, Ohio. Slitting and winding machine	874,070	Dec. 17	3654	768–9	131	1814
Hildreth, Warnie W. (See Webb and Hildreth.)						
Hinkel, Peter, St. Louis, Mo. Elevator	874,339	Dec. 17	4176	879	131	1902
Hirst, John C. (See Newcome, Thomas J., assignor.)						
Hobby, William H., Gardner, Mass. Tenoning-machine	874,007	Dec. 17	3450	734	131	1793
Hoe, Robert. (See Spalckhaver, William, assignor.)						
Hoffman, Fredrick, Cincinnati, Ohio. Electrical connection for hose-couplings	873,940	Dec. 17	3327	709	131	1772
Hoffman, Oscar, and E. A. Newman, Bingham Canyon, Utah. Ventilating apparatus for passenger cars	873,862	Dec. 17	3185	679	131	1747
Holden, Charles L., Indianapolis, Ind. Range-boiler stand	874,071	Dec. 17	3659	769	131	1815
Holl, Gustave J., Knoxville, Tenn. Dispensing apparatus	874,072	Dec. 17	3661	769	131	1815
Holmes, Horace F., Concord, N. H. Phonograph	873,860	Dec. 17	3183	678	131	1747
Holmgren, Gustaf, Westerås, Sweden. Electric furnace	873,861	Dec. 17	3184	678–9	131	1747
Holt, Benjamin, Stockton, Cal. Traction-engine	874,008	Dec. 17	3452	735–6	131	1798
Hood, Frederic C., Boston, Mass. Rubber overshoe	874,340	Dec. 17	4177	879	131	1903
Hoover, Albert H., and E. M. Clark, Morribell, W. Va. Railway-rail and joint therefor	874,073	Dec. 17	3664	770	131	1815
Hopkins, Charles H., Butler, Pa., assignor of fifty-one one-hundredths to National Machinery Co., Tiffin, Ohio. Bolt-header	873,750	Dec. 17	2953	626	131	1709
Hopkins, Charles L., Chicago, Ill., assignor to Curtain Supply Company, Newark, N. J. Curtain-fixture	873,863	Dec. 17	3189	679	131	1747
Hopkins, Nelson S., Fort Wayne, Ind., assignor to General Electric Company. Condenser	873,751	Dec. 17	2955	626	131	1709
Horner, Jacob W., Columbus, Ind. Dental soldering apparatus	874,199	Dec. 17	3901	821	131	1856
Horton, Emmet, Elmira, N. Y. Nailing mechanism for basket-making machines	874,361	Dec. 17	4213	887	131	1910
Hotchkiss, Charles A., assignor to Ives Manufacturing Corporation, Bridgeport, Conn. Toy-railway-train stop and signal	874,009	Dec. 17	3457	736–7	131	1798
Houseman, Harry A., assignor to Standard Machine Company, Philadelphia, Pa. Pattern mechanism for knitting-machines	874,074	Dec. 17	3665	770	131	1816
Hovey, William S., assignor to Sheffield Car Company, Three Rivers, Mich. Variable-speed transmission and reversing gear	874,075	Dec. 17	3666	771	131	1816
Howard, William H., New Canton, Ill. Animal-trap	873,864	Dec. 17	3192	680	131	1748
Howland Metallic Cap Company. (See Converse, Maschil D., assignor.)						
Hoyt, Gabriel F. B., New York, N. Y. Motor	874,200,	Dec. 17	3903	821–2	131	1857
Hubbard, Frank H. (See Whitaker and Hubbard.)						
Huffman, May A., *et al.* (See Bluntach, Alexander J., assignor.)						
Huggins, E. F. (See Sevcik, Joseph, assignor.)						
Hull, Joseph V., Brooklyn, assignor to H. C. Blye, New York, N. Y. Machine for sealing bottles, jars, and other receptacles	874,201	Dec. 17	3905	822–3	131	1857
Humason, Granville A., Natchez, Miss., assignor of one-fourth to E. O. Riordan, Washington, D. C. Burglar-alarm	874,202	Dec. 17	3909	823	131	1858
Hunt, Edward D., and A. C. James, assignors to C. M. Osbun, Mount Victory, Ohio. Scaffold-jack	874,362	Dec. 17	4215	887	131	1910
Huntington, Arthur S. (See Huntington, Charles S. and A. S.)						
Huntington, Charles S. and A. S., Omaha, Nebr. Buckle	874,076	Dec. 17	3668	771	131	1816
Huntley, De Witt C., Jr., Kansas City, Kans. Pencil	874,077	Dec. 17	3669	772	131	1816
Hurd, Arthur J., assignor to Wilson & Hurd Manufacturing Co., Wausau, Wis. Milk-pail holder	874,078	Dec. 17	3670	772	131	1817
Hutmacher, Julius A. (See Dannert Fritz, assignor.)						
Hyams, Aaron. (See McAtlin, William D., assignor.)						
Hyatt, William F., Brooklyn, N. Y. Closure for cans and other receptacles	873,752	Dec. 17	2956	626	131	1710
Hydraulic Power Controller Company. (See Wing, Leander J., assignor.)						
Ihlan, Loyd. (See Ellefson and Ihlan.)						
Incandescent Heat Company. (See Smallwood, Alfred, assignor.)						
Ingersoll-Sergeant Drill Company. (See Prellwitz, William, assignor.)						
International Harvester Company. (See Zachow, William, assignor.)						
International Royal Phone Company. (See Runge, Walter C., assignor.)						
Irving, William, Calgary, Alberta, Canada. Oil-can	873,941	Dec. 17	3329	709	131	1772
Irwin, Frank L., assignor to Ralston Steel Car Company, Columbus, Ohio. Tank-car	874,363	Dec. 17	4217	889	131	1910
Iserman, Henry, Moran, Kans. Washing-machine	874,079	Dec. 17	3671	772	131	1817
Ives Manufacturing Corporation. (See Hotchkiss, Charles A., assignor.)						
Ives Manufacturing Corporation. (See Slattery, Edward F., assignor.)						
Ivins, Dietz & Metzger Company. (See Hardwick, Harry, assignor.)						
J. I. Case Threshing Machine Company. (See Baker, Bryon G., assignor.)						
J. S. McDonald Company. (See Wiedeman, Herman, assignor.)						
Jackson, Frederick H. (See Bailey and Jackson.)						
Jackson, Ralph M., Fullerton, Cal. Combined generator and burner	874,341	Dec. 17	4178	879–80	131	1903
Jackson, William B., Newfield, Pa. Chair	874,203	Dec. 17	3910	823	131	1858
Jacobs, Frank C., Bozeman, Mont. Sash-holder	873,865	Dec. 17	3193	680	131	1748
Jacobson, Samuel, *et al.* (See Mahoney, Joseph N., assignor.)						
Jacoby, John C., Ashland, Ohio. Nose-ring	873,753	Dec. 17	2957	626	131	1710
James, Alva C. (See Hunt and James.)						
James Ore Concentrator Co. (See James, Ulysses S., assignor.)						
James, Ulysses S., assignor to James Ore Concentrator Co., Newark, N. J. Ore-concentrator	874,364	Dec. 17	4220	889	131	1911
Janson, Carl A., Chicago, Ill. Roller-tooth gear	874,342	Dec. 17	4179	880	131	1903
Jeffrey Manufacturing Company. (See Joor, Samuel F., assignor.)						
Jeffries, William J., Oregon City, Oreg. Boiler-feeder	874,080	Dec. 17	3673	772–3	131	1817
Jensen, Aage, Eureka, Cal. Liquid ripener, pasteurizer, and cooler	874,343	Dec. 17	4181	880	131	1904
Jerald, Daniel A., Osage, Iowa. Self-heating iron	873,942	Dec. 17	3330	710	131	1773
Jess, Peter, Sabula, Iowa. Vehicle-brace	874,204	Dec. 17	3912	827	131	1859
Jessop, George W., Pittsburg, Pa. Wrench	874,081	Dec. 17	3675	773	131	1818
Joergensen, Niels, West Hoboken, N. J. Auxiliary car-seat	874,082	Dec. 17	3676	773	131	1818
Johnson, Eliza A., Washington, D. C. Type-cleaner	874,010	Dec. 17	3460	737	131	1794
Johnson, Frederick M., San Francisco, Cal. Treating ores	873,943	Dec. 17	3331		131	1773
Johnson, Johan H. S., assignor to Aktiebolaget Celtic, Malmo, Sweden. Packing-case	873,866	Dec. 17	3194	680	131	1748
Johnson, Nelson, Chicago, Ill. Thread-guide	873,944	Dec. 17	3332	710	131	1773
Johnson, Nelson B., Webster, Mass. Siphon-valve for closet-cisterns	873,945	Dec. 17	3333	710	131	1773
Johnson, Philip L., Somerville, assignor to Crosby Steam Gage and Valve Company, Boston, Mass. Registering-counter	873,754	Dec. 17	2958	627	131	1710
Johnston, Horace G., assignor of one-half to W. P. and J. W. Sturm, Corsicana, Tex. Hydraulic swivel. (Reissue)	12,732	Dec. 17	4247	895	131	1915
Jonah & George. (See Jonah, William S., assignor.)						
Jonah, William S., assignor to Jonah & George, Merrimac, Mass. Carriage-curtain fastener	874,083	Dec. 17	3677	773	131	1818
Jones, Arthur, and A. Gregg, Rock Falls, Ill. Paper-stock-refining machine	874,344	Dec. 17	4183	881	131	1904
Jones, John J., Monticello, Ga. Fertilizer-distributer	874,205	Dec. 17	3913	824	131	1859
Jones, Jonathan S., West Bend, Iowa, assignor of one-half to N. Y. Hasley, Peoria, Ill. Railway-switch	874,011	Dec. 17	3461	737	131	1794
Joor, Samuel F., Morgan Park, Ill., assignor, by meane assignments, to Jeffrey Manufacturing Company. Conveyer	874,365	Dec. 17	4225	890	131	1911

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Jottrand, Felix, deceased, Uccle, near Brussels, and F. Schmidt, Namur, Belgium; J. R. and A. Jottrand, guardians, assignors to Société Anonyme l'Oxhydrique Internationale. Welding metals	874,084	Dec. 17	3678	774	131	1819
Jottrand, Julia R., *et al.*, guardians. (See Jottrand and Schmidt.)						
Kain, John H., Milford, assignor to D. A. Reidy, Cincinnati, Ohio. Can-labeling machine	874,012	Dec. 17	3462	737–8	131	1794
Kammer, John von der, Prairie View, Ill. Cotton-seed food	873,946	Dec. 17	3335	710	131	1774
Kanaly, Morris E., Arlington, Mass. Door-hanger	874,013	Dec. 17	3466	738	131	1795
Karazej, Eugen, *et al.* (See Regal, August, assignor.)						
Karns, William E., Parkers Landing, Pa. Rail-bond for rail-joint circuits	874,085	Dec. 17	3679	774	131	1819
Karns, William E., Parkers Landing, Pa. Insulating end post of rail-joint circuits	874,206	Dec. 17	3914	824	131	1859
Karr, James P., and J. D. Rauch, Logansport, Ind. Dipper and dipper-handle for excavators	874,207	Dec. 17	3916	824–5	131	1860
Kellogg Switchboard & Supply Company. (See Winston, Charles S., assignor.)						
Kelly-Arnold Manufacturing Company. (See Kelly and Royer, assignors.)						
Kelly, George E., and G. F. Royer, assignors to Kelly-Arnold Manufacturing Company, Wilkes-Barre, Pa. Train-pipe coupling	873,947	Dec. 17	3336	711	131	1774
Kelly, George E., and G. F. Royer, assignors to Kelly-Arnold Manufacturing Company, Wilkes-Barre, Pa. Train-pipe coupling	873,948	Dec. 17	3838	711	131	1774
Kennedy, Jesse B. (See Rosenberry, George, assignor.)						
Kenyon, Bertrand P., Grand Rapids, assignor to Shaw Walker Company, Muskegon, Mich. Card-index drawer	873,755	Dec. 17	2960	627	131	1710
Keresztes, George, Pittsburg, Pa. Trolley	874,345	Dec. 17	4185	881	131	1905
Kiblinger, Lee, Jackson, La. Pole-changer	874,208	Dec. 17	3918	825	131	1860
Kimbro, John A., assignor of one-half to M. Pate, Georgetown, Tex. Well-pipe lifter	874,086	Dec. 17	3618	774	131	1819
King, Charles B. (See King, Barnhart, and King.)						
King, George W., H. J. Barnhart, and C. B. King, assignors to Marion Steam Shovel Company, Marion, Ohio. Steam-shovel	873,756	Dec. 17	2962	627–9	131	1711
Kinsey, Ernest U., Rutherford, N. J. Cabinet	874,087	Dec. 17	3682	774–5	131	1819
Kirkegaard, Georg, New York, N. Y. Bottle-stopper	873,867	Dec. 17	3195	681	131	1748
Kitsee, Isidor, Philadelphia, Pa. Electric transmission of intelligence	874,209	Dec. 17	3919	826	131	1860
Kitsee, Isidor, assignor of one-half to W. J. Latta, Philadelphia, Pa. Transmitting device for electric telegraphy	873,757	Dec. 17	2964	629	131	1711
Klemm, Emil R., Chicago, Ill. Wrench	873,868	Dec. 17	3196	681	131	1749
Kline, Harris W., Sells Station, Pa. Mail-pouch crane	874,210	Dec. 17	3920	826	131	1860
Kline, John W., White Haven, Pa. Wrench	873,758	Dec. 17	2967	630	131	1712
Knight, William H., Boston, Mass. Piano sounding-board	873,949	Dec. 17	3340	712	131	1775
Koch, Henry, assignor to Regina Company, Rahway, N. J. Music-roll	873,950	Dec. 17	3341	712	131	1775
Koch, Reinhart, New York, N. Y. Bottle-closure	873,869	Dec. 17	3198	681	131	1749
Koehler, Joseph. (See Byl and Koehler.)						
König, Albert, assignor to Firm of C. Zeiss, Jena, Germany. Ramsden ocular	873,870	Dec. 17	3199	681	131	1749
König, Albert, assignor to Firm of C. Zeiss, Jena, Germany. Ramsden ocular	873,871	Dec. 17	3200	682	131	1750
Kramer, William F., and C. Anderton, Jr., Dayton, Ohio. Running-gear for portable houses	873,759	Dec. 17	2968	630	131	1712
Krantz, Hubert, Brooklyn, N. Y. Housing	873,872	Dec. 17	3201	682	131	1750
Kremer, Irving I., New York, N. Y. Non-refillable bottle	874,211	Dec. 17	3922	826	131	1861
Krummel, Louis C., Clinton, Conn. Forming sheet-metal receptacles	874,346	Dec. 17	4186	881	131	1905
Kuderer, Charles, Allegheny, Pa. Pneumatic fan	874,212	Dec. 17	3923	827	131	1861
Kurtzon, Morris, Chicago, Ill. Adjustable bracket	874,014	Dec. 17	3467	739	131	1795
L. E. Knott Apparatus Company. (See Packard, John C., assignor.)						
La More, James, Grand Rapids, Mich. Dress-skirt gage	873,882	Dec. 17	3220	686	131	1753
Labbé, Henri. (See Donard and Labbé.)						
Lamping, Thomas J., Moline, Ill. Bookcase	874,015	Dec. 17	3468	739–40	131	1795
Landon, Asa A., Millidgeville, Ill. Nose-ring	874,088	Dec. 17	3684	775	131	1820
Lange, Diego, La Crosse, Wis. Match scratch and receptacle	874,347	Dec. 17	4188	882	131	1905
Langerfeld, Arthur, Scranton, Pa. Separator for lump material	873,951	Dec. 17	3342	712–13	131	1775
Langley, Edward J. (See Forth and Langley.)						
Larkam, John C., Kansas City, Mo. Valve-operating apparatus	874,089	Dec. 17	3685	775	131	1820
Latham, Charles H., Bradford, Pa. Molding apparatus	873,760	Dec. 17	2970	630	131	1712
Latta, William J. (See Kitsee, Isidor, assignor.)						
Layfield, James, and A. V. Crisp, Vancouver, British Columbia, Canada, assignors to Victor Cement Block & Machine Co., Ltd. Cement-block-molding machine	874,366	Dec. 17	4228	890–1	131	1912
Lederer, Irving R., Providence, R. I. Bracelet	873,873	Dec. 17	3202	682	131	1750
Leeland, Thorval, Newark, N. J. Boring-machine	874,090	Dec. 17	3688	776	131	1820
Leitch, Thomas S., Seattle, Wash. Roller-skate wheel	873,874	Dec. 17	3203	682	131	1750
Lemcke, Louis, assignor of one-half to A. A. Eberson, St. Louis, Mo. Apparatus for constructing dress-forms	874,091	Dec. 17	3690	776–7	131	1820
Lemere, Christopher, Marshfield, Wis. Fence-post	874,213	Dec. 17	3924	827	131	1861
Lentz, Hugo, Halensee, near Berlin, and W. Volt, Berlin, Germany. Inertia-governor	874,214	Dec. 17	3926	827–8	131	1862
Leppert, Henry E., New Britain, assignor to Hart Manufacturing Company, Hartford, Conn. Turn-button for electric switches	874,016	Dec. 17	3474	740	131	1796
Lewis, George L., Edgewood, and J. R. Frankenberg, Pittsburg, Pa. Gas-regulator	874,017	Dec. 17	3476	740	131	1796
Lewis, Stephen M., Pittsburg, Kans. Pencil-holder	874,215	Dec. 17	3928	828	131	1862
Leys, James D., *et al.* (See Mahoney, Joseph N., assignor.)						
Lingaas, Jens, San Francisco, Cal. Orchard-cultivator	873,875	Dec. 17	3205	683	131	1750
Linzel, Hermann, and C. Bischoff, Berlin, Germany. Making non-alcoholic beverages from fermented liquids	874,216	Dec. 17	3929	828	131	1862
Liverpool, Coyal H., Boston, Mass. Ear-tip for stethoscopes and other aural instruments	874,092	Dec. 17	3692	777	131	1821
Lobnitz, Fred, Renfrew, Scotland. Apparatus for breaking rocks, &c	874,217	Dec. 17	3930	829–31	131	1863
Logan, Gertrude M., St. Louis, Mo. Sash-lock	874,093	Dec. 17	3693	777	131	1821
Long, Louis, Buchanan, N. Y. Wheel	873,876	Dec. 17	3206	683	131	1751
Longenecker, Charles. (See Wright and Longenecker.)						
Louden, Henry W., Sr., Lebanon, Pa. Sausage linking and twisting machine	873,877	Dec. 17	3208	683–4	131	1751
Low, John M., Chicago, Ill. Butter-cutter	874,094	Dec. 17	3694	777	131	1821
Lowe, William B. (See Hamilton and Lowe.)						
Lowrie, Harvey C., New York, N. Y. Wall safe or receptacle	873,878	Dec. 17	3210	684	131	1752
Lubin, Siegmund. (See Darcy and Lubin.)						
Lufkin Rule Company. (See Buck, Fred, assignor.)						
Luther, Henry R. (See Stockwell and Luther.)						
Luther, Henry R., Newton, and F. F. Stockwell, Jr., Somerville, Mass. Railway-switch structure	873,761	Dec. 17	2971	631	131	1713
Lutz, William P., Elizabeth township, Miami county, Ohio. Plant and vegetable brooder and grower	874,218	Dec. 17	3935	831	131	1863
Lyons, Noble L., Akron, Iowa. Broom and dust-pan hanger	873,762	Dec. 17	2973	631	131	1713
Lyst, Francis, London, England. Internal-combustion engine	873,952	Dec. 17	3349	713	131	1775
Macdonald, Thomas H., assignor to American Graphophone Company, Bridgeport, Conn. Recorder and reproducer	873,763	Dec. 17	2974	631	131	1713
Mahoney, Joseph N., Brooklyn, assignor to himself, J. D. Leys, and S. Jacobson, New York, N. Y. Brake for power-driven vehicles	874,219	Dec. 17	3936	831	131	1863
Maiben, Charles H., Jogansport, Ind. Laundry-marking machine	874,220	Dec. 17	3939	832	131	1864
Mammen, Lawrence W., Chicago, Ill. Gearing for washing-machines	874,095	Dec. 17	3696	778	131	1821

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Manz, Adolph W., assignor to P. H. Manz, Chicago, Ill. Motor-starter	873,764	Dec. 17	2975	632	131	1714
Manz, Paul H. (See Manz, Adolph W., assignor.)						
Marcante, Antonio, Manville, R. I. Reed for looms	874,096	Dec. 17	3697	778	131	1821
Marden, Aldis H., Watertown, Mass. Sash-holder	874,097	Dec. 17	3698	778	131	1822
Marion Steam Shovel Company. (See King, Barnhart, and King, assignors.)						
Markham, Charles F., Providence, R. I. Pin	873,765	Dec. 17	2977	632	131	1714
Marshall Electric Manufacturing Company. (See Sanford, Frank W., assignor.)						
Matheny, Charles A., Montgomery, Ala. Music-leaf turner	874,221	Dec. 17	3941	832–3	131	1864
Matson, Charles I., Chicago, Ill. Flush-valve	873,766	Dec. 17	2978	632	131	1714
Maurer, Martin, Pueblo, Colo. Rolling-mill scale	873,879	Dec. 17	3213	684–5	131	1752
McAtlin, William D., Tullvania, Mo., assignor of one-half to A. Hyams, Sioux Falls, S. D. Broom	874,368	Dec. 17	4232	891	131	1913
McCamish, Sara R., *et al.* (See Sodekson, Nathan S., assignor.)						
McCarroll, William J., assignor to Burnham, Williams & Co., Philadelphia, Pa. Means for operating valves or cocks	874,106	Dec. 17	3712	781	131	1824
McClay, David W., Schenectady, N. Y. Axle-cutter	873,886	Dec. 17	3226	688	131	1754
McClintock, Charles C., Englewood, Colo. Trolley-head	873,955	Dec. 17	3353	714	131	1776
McClurg, Harry O., Baltimore, Md. Non-refillable bottle	874,021	Dec. 17	3481	741	131	1797
McComb, Jennings S., Dobbs Ferry, N. Y. Desk attachment	873,770	Dec. 17	2986	633	131	1715
McCoy, John, Vienna Cross Roads, Ohio. Screw-driver	873,771	Dec. 17	2988	633	131	1716
McElroy, James F., assignor to Consolidated Car Heating Company, Albany, N. Y. Expansible cell for thermostats	874,022	Dec. 17	3483	741	131	1798
McElroy, James F., assignor to Consolidated Car-Heating Company, Albany, N. Y. Non-inductive resistance	874,023	Dec. 17	3484	742	131	1798
McElroy, James F., assignor to Consolidated Car Heating Company, Albany, N. Y. Electric bell	874,024	Dec. 17	3486	742	131	1798
McFarland, Charles N., assignor to Adder Machine Company, Kingston, Pa. Digit-repeating mechanism for adding-machines	874,107	Dec. 17	3714	781–2	131	1824
McIver, Alexander, Schenectady, N. Y., assignor to General Electric Company. System of motor control	874,025	Dec. 17	3487	742	131	1798
McKinney, George B., Barry, Ill. Valve attachment for engines	874,108	Dec. 17	3717	782	131	1825
McKnight, Thomas R., assignor to Western Wheeled Scraper Company, Aurora, Ill. Dump-car	873,772	Dec. 17	2990	634	131	1716
McLoney, William J., and E. B. Preston, Mexico, Mo. Household-sifter	874,109	Dec. 17	3718	782–3	131	1825
McQueen, Finlay R., Minneapolis, Minn. Apparatus for unloading grain-cars	873,773	Dec. 17	2992	634–5	131	1717
McQueen, Finlay R., Minneapolis, Minn. Grain-storage elevator	873,774	Dec. 17	2995	635	131	1717
McWhorter, William L., Sterling, Ill. Signaling apparatus	874,228	Dec. 17	3957	835	131	1867
Mees, Robert P., St. Louis, Mo. Sewing-machine attachment	874,098	Dec. 17	3699	778	131	1822
Mehl, Walter B., assignor of one-half to W. H. Sawtelle, Waltham, Mass. Tool-holder	873,953	Dec. 17	3349	713	131	1775
Mendenhall, Hiram. (See Stocking and Mendenhall.)						
Merckens, August, New York, N. Y. Box	874,099	Dec. 17	3700	779	131	1822
Merckens, August, New York, N. Y. Box	874,100	Dec. 17	3701	779	131	1823
Mérou, Emile, Paris, France. Waterproof fabric	874,101	Dec. 17	3703		131	1823
Merrick, Frank W., Boston, Mass. Machine for cutting leather, &c., into continuous strips	874,102	Dec. 17	3704	779–80	131	1823
Mertens, Eduard, Gross-Lichterfelde, near Berlin, Germany. Combination of line and screen photography	874,222	Dec. 17	3946	833	131	1865
Messer, Chester A., East Madison, Me. Power-gage and lug-strap for looms	873,767	Dec. 17	2981	632	131	1715
Mesta, Charles J., West Homestead, assignor to Mesta Machine Company, Pittsburg, Pa. Chilled casting	874,018	Dec. 17	3478		131	1796
Mesta Machine Company. (See Mesta, Charles J., assignor.)						
Meyer, August, assignor to Automatic Gas Lighting Company, Baltimore, Md. Gas-burner	873,880	Dec. 17	3216	683–6	131	1752
Michel, Auguste, Paris, France. Sparking coil with multiple winding for ignition and like purposes	873,954	Dec. 17	3351	714	131	1775
Miller, Carl H., Jr., Cleveland, Ohio. Kitchen-range	874,103	Dec. 17	3708	780	131	1823
Miller, Forrest R. (See Cone and Miller.)						
Miller, Harry C. (See Scott, John L., assignor.)						
Miller, Michael, Brillion, Wis. Folding or collapsible egg-case	874,104	Dec. 17	3710	780	131	1824
Miller, Moses. (See Salter, Fayette, assignor.)						
Miller, Robert, H., assignor to Christy Fire Clay Company, St. Louis, Mo. Cleaning gas-producer connections	873,768	Dec. 17	2984	633	131	1715
Miller, Thomas S., South Orange, N. J. Conveying apparatus	874,223	Dec. 17	3948	833	131	1865
Mills, James N., Pittsburg, Pa. Collar-button	874,224	Dec. 17	3951	834	131	1865
Millsap, James, De Soto, Mo. Mail-bag deliverer	874,225	Dec. 17	3952	834	131	1865
Milwaukee Harness Machinery Company. (See Gordon and Hart, assignors.)						
Model Incubator Company. (See Cyphers, Charles A., assignor.)						
Molony, William D., Oneida, Kans. Display-stand	873,881	Dec. 17	3219	686	131	1753
Moore, Edward Y., Cleveland, Ohio. Trolley-hoist	874,105	Dec. 17	3711	780–1	131	1824
Moore, Edward Y., Cleveland, Ohio. Trolley	874,367	Dec. 17	4230	891	131	1912
Moore, Harry P., Newburyport, Mass. End cap for electric conduits	874,019	Dec. 17	3479	741	131	1797
Morgan, Doctor F., Chicago, Ill. Combined vent and check valve	873,883	Dec. 17	3221	686	131	1753
Morgan, James I., Dwight, Kans. Wagon-rack fastener	873,884	Dec. 17	3223	687	131	1753
Morris, James F., Philadelphia, Pa. Fountain-pen	873,769	Dec. 17	2985	633	131	1715
Morse, Orson A., assignor to N. H. Peppler, Arlington, N. J. Velocipede	873,885	Dec. 17	3224	687	131	1754
Mortensen, Hans J., assignor of one-half to H. P. Stewart, Baltimore, Md. Guard for non-refillable bottles	874,020	Dec. 17	3480	741	131	1797
Muldoon, John W., New York, N. Y. Reinforced concrete construction	874,226	Dec. 17	3953	834	131	1866
Mulford, Logan W., *et al.* (See Haile, Luther T., assignor.)						
Müller, Wilhelm, Offenbach-on-the-Main, Germany, and C. R. Murray, Chicago, Ill., assignors to Actiengesellschaft fur Schriftgiesserei und Maschinenbau, Offenbach, Germany. Apparatus for electrodepositing metals	874,374	Dec. 17	4244	894	131	1914
Mulry, Joseph L., assignor of one-third to C. P. Rollings, Pawtucket, R. I. Portable burglar-alarm	874,227	Dec. 17	3955	834	131	1866
Murray, Charles R. (See Müller and Murray.)						
Muther, Lorenz. (See Glass, Perley R., assignor.)						
Nathan, Benjamin, New York, N. Y. Innersole	873,775	Dec. 17	2996	636	131	1717
National Brake and Electric Company. (See Babcock, Ira J., assignor.)						
National Brake and Electric Company. (See Nef, John J., assignor.)						
National Machinery Co. (See Hopkins, Charles H., assignor.)						
Necker, Adolf, Philadelphia, Pa. Life-preserver	874,026	Dec. 17	3491	743	131	1799
Nef, John J., Chicago, Ill., assignor to National Brake and Electric Company, Milwaukee, Wis. Controlling mechanism	874,229	Dec. 17	3959	835	131	1867
Nelson, Andrew, Rock Island, Ill. Machine for molding building-blocks	874,230	Dec. 17	3962	835–6	131	1868
Nelson, George, Chicago, Ill. Tool-holder	874,027	Dec. 17	3493	743	131	1799
Nelson, Sven T., assignor to Sullivan Machinery Company, Chicago, Ill. Reversing mechanism	873,776	Dec. 17	2998	636–7	131	1718
Neumeyer, Horace F., Macungie, Pa. Waste-valve for hydrants	873,956	Dec. 17	3354	715	131	1776
Newcome, Thomas J., Jamisonville, assignor of one-half to J. C. Hirst, Reynoldsville, Pa. Coal-mining machine	874,028	Dec. 17	3495	743	131	1799

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Newman, Erik A. (See Hoffman and Newman.)						
Nott, Howard C., and A. W. Rau, New York, N. Y. Refrigerator	873,887	Dec. 17	3227	688	131	1754
O'Brien, Joseph L., South Norwalk, Conn. Electric hat-curling iron	874,029	Dec. 17	3496	744	131	1800
Oechelhaeuser, Wilhelm von, Dessau, and C. Steinbecker, Langfuhr, Germany. Vertical gas-engine	874,369	Dec. 17	4233	891–2	131	1913
Oliver Iron and Steel Company. (See Crehan, Hubert, assignor.)						
Oliver Typewriter Company. (See Poole, Charles C., assignor.)						
Olsen, John, assignor to W. I. Greenleaf and J. M. Beech, Milwaukee, Wis. Sieve-cleaner	874,030	Dec. 17	3498	744	131	1800
Olson, Thomas, Northwood, N. D., Automatic watering-trough	874,231	Dec. 17	3966	836–7	131	1868
Olsson, Henry A., Brooklyn, assignor of two-thirds to A. and E. Williamson, New York, N. Y. Stapling-machine	873,888	Dec. 17	3229	689	131	1755
Osbun, Claude M. (See Hunt and James, assignors.)						
Osteman, Carl G. (See Blood and Osteman.)						
Packard, John C., Brookline, assignor to L. E. Knott Apparatus Company, Boston, Mass. Apparatus for determining the law of falling bodies	874,110	Dec. 17	3720	783	131	1826
Palmenberg, Emil T. (See Palmenberg, William F. and E. T.)						
Palmenberg, William F. and E. T., New York, N. Y. Garment-form	874,232	Dec. 17	3967	837	131	1868
Palmer, Charles M., Chicago, Ill. Roller-skate	873,889	Dec. 17	3231	689	131	1755
Palmer, Isaac E., Middletown, Conn. Hull of vessels	874,031	Dec. 17	3500	744	131	1800
Parker, George E., and W. W. Dickson, Amsterdam, N. Y. Mattress and bedclothes holder	873,777	Dec. 17	3002	637	131	1718
Parks, Samuel S. (See Parks, William R., assignor.)						
Parks, William R., assignor to S. S. Parks, Chicago, Ill. Electric smelting-furnace	873,890	Dec. 17	3234	690	131	1756
Parsons, Clarence C., Oberlin, Ohio. Milking-machine	874,111	Dec. 17	3722	783	131	1826
Parsons, Richmond. (See Stanley, Frank J., assignor.)						
Parsons, Wallace W., Mount Rainier, Md. Mechanism for locking split bolts	874,233	Dec. 17	3968	837–8	131	1869
Pate, Marvin. (See Kimbro, John A., assignor.)						
Patterson, Frank M., *et al.* (See Cloud, Arthur D., assignor.)						
Pauling, Harry, assignor to Saltpetersäure-Industrie-Gesellschaft, G. M. B. H., Gelsenkirchen, Germany. Production of nitric acid or nitric oxid from atmospheric air	873,891	Dec. 17	3236	690	131	1756
Pauly, Karl A., Schenectady, N. Y., assignor to General Electric Company. Dynamo-electric machine	873,778	Dec. 17	3003	637	131	1718
Pearse, George A., Jr., New York, N. Y. Vehicle-tire	873,957	Dec. 17	3356	715	131	1777
Pearson, James. (See Webb and Pearson.)						
Pease, Horace S., Cincinnati, Ohio. Sad-iron stand	873,779	Dec. 17	3005	638	131	1719
Peck, Cassius C., Rochester, N. Y. Vacuum heating apparatus	874,112	Dec. 17	3724	784	131	1826
Peck, Cassius C., Rochester, N. Y. Vacuum heating system	874,113	Dec. 17	3726	784	131	1827
Pedersēn, Johannes T., Woodside, assignor to Pedersēn Manufacturing Company, New York, N. Y. Lubricator	874,114	Dec. 17	3729	784	131	1827
Pedersēn Manufacturing Company. (See Pedersēn, Johannes T., assignor.)						
Pennell, Sylvenus, Girard, Ohio. Pump-mounting	874,115	Dec. 17	3733	785	131	1828
Pepple, John W., Hillsboro, Tex. Mail-pouch catcher	874,234	Dec. 17	3972	838	131	1869
Peppler, Nelson H. (See Morse, Orson A., assignor.)						
Peregrine, Oren M., McCoysburg, Ind. Mail catcher and crane	874,116	Dec. 17	3735	785–6	131	1828
Perkins, Franklin J. (See Rood and Perkins.)						
Peterson, Charles F., Schenectady, N. Y., assignor to General Electric Company. Insulated coil	873,780	Dec. 17	3006	638	131	1719
Peterson, Jesse. (See Baker, William H., assignor.)						
Petterson, Gustaf E., Pine Bluff, Ark. Hose-coupling	873,892	Dec. 17	3236	690	131	1756
Pfeufer, Anton, Landshut-Neustadt, Germany. Sewing-machine	874,032	Dec. 17	3501	744–6	131	1801
Pillings, John H., Columbus, Ohio. Printing-machine	874,033	Dec. 17	3504	746–7	131	1801
Pirani, Marcello von, Wilmersdorf, near Berlin, assignor to Siemens & Halske Aktiengesellschaft, Berlin, Germany. Producing homogeneous bodies from tantalum or other highly-refractory metals	873,958	Dec. 17	3357	715	131	1777
Pirtle, Claiborne, Cleveland, Ohio. Cable-drum mechanism	873,781	Dec. 17	3007	638	131	1719
Pohl, Edward, Paterson, N. J. Silk-thread-finishing machine	874,235	Dec. 17	3974	838	131	1869
Pond, Harry S., Chicago, Ill. Vending-machine	874,236	Dec. 17	3976	838–9	131	1870
Pond, Harry S., Chicago, Ill. Vending-machine cabinet	874,237	Dec. 17	3979	839	131	1870
Poole, Charles C., Evanston, assignor to Oliver Typewriter Company, Chicago, Ill. Line-space-indicating device	873,782	Dec. 17	3009	638–9	131	1720
Portable Wagon Dump and Elevator Company. (See White, John F., assignor.)						
Porter & Co., C. B. (See Wittebolle, Emile J., assignor.)						
Portmann, William W., St. Louis, Mo. Lamp heating-stove	874,117	Dec. 17	3738	786	131	1828
Prellwitz, William, Easton, Pa., assignor to Ingersoll-Sergeant Drill Company, New York, N. Y. Discharge-valve for fluid-compressors	874,034	Dec. 17	3507	748	131	1801
Prentice, George G., New Haven, Conn. Multiple-spindle automatic turret-machine	874,035	Dec. 17	3508	748–9	131	1801
Preston, Edith B. (See McLoney and Preston.)						
Printz, Carl J., Milwaukee, Wis. Telephone-transmitter	874,118	Dec. 17	3739	786	131	1829
Pust, Otto A., Holloway, Minn. Bag-holder	873,893	Dec. 17	3237	691	131	1756
Putnam, Edmond, Roseville, Ill. Hoisting apparatus	874,238	Dec. 17	3981	840	131	1870
Racine-Sattley Company. (See Weaver, Ira A., assignor.)						
Rail Joint Company. (See Wolhaupter, Benjamin, assignor.)						
Railroad Supply Company. (See Bell, Edwin H., assignor.)						
Ralston Steel Car Company. (See Irwin, Frank L., assignor.)						
Randall, Roy C., Kirkwood, Ill. Animal-trap	873,783	Dec. 17	3014	639	131	1720
Ratliff, George W., Kyana, assignor of one-half to J. W. Haas, Schnellville, Ind. Drenching-bit	874,239	Dec. 17	3983	840	131	1871
Rattan Mfg. Co. (See Dann, George E., assignor.)						
Rau, Alexander W. (See Nott and Rau.)						
Rauch, John D. (See Karr and Rauch.)						
Rawlinson, William, East Ham, England. Apparatus for sharpening, removing, and replacing cutter-sections	873,894	Dec. 17	3239	691	131	1757
Reed, Agnes H., *et al.* (See Bluntach, Alexander J., assignor.)						
Reed, Charles M., Nashville, Ohio. Towel-wringer	874,240	Dec. 17	3984	840	131	1871
Reed, Harry J. (See Gefäll, Rudolf, assignor.)						
Regal, August, assignor of two-thirds to F. Harazim and E. Karazej, Banjaluka, Austria-Hungary. Weaving in natural colors without pattern-cards	874,370	Dec. 17	4234		131	1913
Regina Company. (See Koch, Henry, assignor.)	873,784	Dec. 17	3015	639	131	1720
Reichardt, Henry C., Pottsville, Pa. Fishing-reel	873,785	Dec. 17	3016	640	131	1721
Reichel, Alfred, Dresden-Loschwitz, Germany. Apparatus for deodorizing the exhaust-gases of motors	874,241	Dec. 17	3985	841	131	1871
Reidy, Denis A. (See Kain, John H., assignor.)						
Reischer, Muriel E. M., London, England. Candlestick and candle-holder	874,348	Dec. 17	4189	882	131	1905
Rémond, Louis, assignor to Grand Rapids Show Case Company, Grand Rapids, Mich. Article-support for wardrobes	873,786	Dec. 17	3017	640	131	1721
Reutar, Herman C., assignor to E. C. Cook & Bro., Chicago, Ill. Gun-case	874,242	Dec. 17	3986	841	131	1871
Rhodes, Charles M., Steubenville, Ohio. Trolley	874,349	Dec. 17	4191	882	131	1906
Richards, George H., Terre Haute, Ind. Automatic car-stop						

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Richards Manufacturing Company. (See Wideman, Gustavus, assignor.)						
Riddell, John, Schenectady, N. Y., assignor to General Electric Company. Boring and turning mill	873,787	Dec. 17	3018	640–1	131	1721
Ries, Frank, assignor of one-half to L. Buckingham and J. A. Bain, Tiffin, Ohio. Duplicating apparatus	873,788	Dec. 17	3021	642	131	1721
Righter, James B., River Falls, Wis. Artificial-tooth crown and bridgework	873,789	Dec. 17	3023	642	131	1722
Riordan, Ellen O. (See Humason, Granville A., assignor.)						
Ritts, Michael R., McClure, S. D. Horse-detacher	874,243	Dec. 17	3987	841	131	1872
Rizer, Fred W., *et al.* (See Cloud, Arthur D., assignor.)						
Roberts, Joseph W., Smithville, Mo. Grain-elevator	873,959	Dec. 17	3359	715–16	131	1778
Robinson, Harry C., Muncy, Pa. Grinding-mill	874,244	Dec. 17	3988	842	131	1872
Robinson, William C., Baltimore, Md. Apparatus for testing oils	873,895	Dec. 17	3241	692	131	1757
Rogers, Francis J. (See White and Rogers.)						
Rohr, Morits von, assignor to Firm of C. Zeiss, Jena, Germany. Double objective	873,896	Dec. 17	3243	692	131	1758
Rollings, Charles P. (See Muiry, Joseph L., assignor.)						
Rood, John, Danvers, and F. J. Perkins, Woburn, assignors, by mesne assignments, to Turner Tanning Machinery Company, Boston, Mass. Leather-working machine	873,790	Dec. 17	3025	642–3	131	1722
Rooney, John J., Scarsdale, N. Y. Lamp-socket	874,245	Dec. 17	3990	842	131	1872
Rose, Wesley M., Sacramento, Cal. Oil-column	874,246	Dec. 17	3991	842	131	1873
Rosen, Adolph T. (See Hachmann, Frederick, assignor.)						
Rosenberry, George, Harrisburg, assignor of one-half to J. B. Kennedy, Stewartstown, Pa. Machine for welding copper	873,897	Dec. 17	3243	692	131	1758
Ross, Harry B., assignor to Berlin Machine Works, Beloit, Wis. Feed mechanism for planing-machines	874,036	Dec. 17	3518	750	131	1802
Ross, Joseph, Vincennes, Ind. Corn harvesting and husking machine	874,247	Dec. 17	3993	842–3	131	1873
Ross, Justin E., Springfield, Mo. Lamp-burner	874,248	Dec. 17	3995	843	131	1873
Roteng Engineering Corporation. (See Tolman, Charles P., assignor.)						
Rothbarth, John C., Buffalo, N. Y. Chimney cap or ventilator	874,249	Dec. 17	3996	843	131	1873
Royal, Charlton H., *et al.* (See Welsh, William H., assignor.)						
Royal Typewriter Company. (See Hess, Edward B., assignor.)						
Royer, George F. (See Kelly and Royer.)						
Rubin, Max, New York, N. Y. Buckle	873,791	Dec. 17	3028	643	131	1723
Rudolph, Alfred J., Philadelphia, Pa. Plumber's trap	873,792	Dec. 17	3029	643	131	1727
Rudolph, Paul, and E. Wandersleb, assignors to Firm of C. Zeiss, Jena, Germany. Telephotographic objective	873,898	Dec. 17	3244	693	131	1758
Runge, Walter C., Camden, N. J., assignor to International Royal Phone Company, Boston, Mass. Reproducing-trumpet support	874,350	Dec. 17	4193	883	131	1906
S. A. Woods Machine Company. (See Blood and Osteman, assignors.)						
Sachs, Caroline N., Hartford, Conn. Safety-fuse indicator	873,793	Dec. 17	3031	644	131	1723
Sackett, James E., Sparrow Bush, N. Y. Roller-bearing	874,119	Dec. 17	3741	786–7	131	1829
Sackwitz, Louis, St. Louis, Mo. Fire-alarm and signaling device	874,250	Dec. 17	3998	844	131	1874
Salomon, Bernhard, assignor to Feiten und Guilleaume-Lahmeyerwerke Aktien-Gesellschaft, Frankfort-on-the-Main, Germany. Current-supplying arrangement	873,899	Dec. 17	3245	693	131	1758
Salter, Fayette, assignor of one-half to M. Miller, Atlanta, Ga. Sash-lock	873,794	Dec. 17	3033	644	131	1723
Saltpetersäure-Industrie-Gesellschaft, G. M. B. H. (See Panling, Harry, assignor.)						
Sanford, Frank W., assignor, by mesne assignments, to Marshall Electric Manufacturing Company, Boston, Mass. Screw-driving machine	873,900	Dec. 17	3247	693	131	1758
Sanford, William, Vineland, N. J. Railway-truck guard	873,795	Dec. 17	3036	644	131	1724
Sanitary Sectional Brush Company. (See Fetters, Charles A., assignor.)						
Sargent, Frederick G., assignor to C. G. Sargent's Sons Corporation, Westford, Mass. Drier	873,796	Dec. 17	3036	645	131	1724
Sauer, Anthony, Jr., Newark, N. J. Fabric frame for caskets	873,901	Dec. 17	3249	693	131	1759
Sawtelle, William H. (See Mehl, Walter B., assignor.)						
Schelling, Hermann F., Weehawken, N. J. Implement for massage, shampooing, and other purposes	874,251	Dec. 17	3999	844	131	1874
Schlingloff, Nicholas J., Marion, Kans. Copy-holder	873,902	Dec. 17	3250	694	131	1759
Schmidt, Charles J., Evanston, Ill. Receptacle	873,797	Dec. 17	3040	646	131	1724
Schmidt, Eugene, Stillwater, Minn. Transmission and speed-changing mechanism	873,903	Dec. 17	3253	694	131	1760
Schmidt, Frederick. (See Jottrand and Schmidt.)						
Schneider, Eugene, Le Creusot, France. Apparatus for measuring the angles of sight	873,904	Dec. 17	3255	694	131	1760
Schreiber, Ernst G., Hammond, Ind. Potato-planter	874,037	Dec. 17	3520	751	131	1802
Schudt, Hermann, Charlottenburg, Germany. Producing plastic composition	873,960	Dec. 17	3360	.....	131	1778
Schüle, Rudolf, Frankfort-on-the-Main, Germany. Red azo dye and making same	873,798	Dec. 17	3042	.....	131	1725
Schumacher, Albert. (See Ebinghaus and Schumacher.)						
Schwiete, Peter, St. Louis, Mo. Mortar-making machine	874,252	Dec. 17	4000	844	131	1874
Scott, John L., assignor of one-half to H. C. Miller, Pittsfield, Ill. Wire-stretching tool	874,253	Dec. 17	4002	845	131	1875
Sedziak, Francis, St. Louis, Mo. Brake mechanism	873,905	Dec. 17	3256	695	131	1760
Self, Charles E., Richwood, Ohio. Trap	874,120	Dec. 17	3743	787	131	1830
Sevcik, Joseph, New Era, assignor of one-half to E. F. Huggins, Portland, Oreg. Rail-joint	874,121	Dec. 17	3744	787	131	1830
Sewing Machines Supplies Company. (See French, Joseph, assignor.)						
Shafer, Benjamin F., Chester, Pa. Hoisting mechanism	873,799	Dec. 17	3043	646	131	1725
Shallenberger, Charles S., St. Louis, Mo. Underframe for cars	873,800	Dec. 17	3045	647	131	1725
Shannon, Joseph W., *et al.* (See Halle, Luther T., assignor.)						
Sharp, William, McKeesport, Pa. Knobbling-furnace	874,038	Dec. 17	3523	751	131	1803
Shaw Walker Company. (See Kenyon, Bertrand P., assignor.)						
Sheffield Car Company. (See Hovey, William S., assignor.)						
Shields, William S., Chicago, Ill. Siphon	873,961	Dec. 17	3361	716	131	1778
Shimmen, Robert. (See Gascard and Shimmen.)						
Shroyer, Oliver H., St. Louis, Mo. Internal-combustion engine	874,122	Dec. 17	3745	788	131	1830
Shumaker, Marshall M., Terre Haute, Ind. Registering device	874,254	Dec. 17	4002	845	131	1875
Siemens & Halske Aktiengesellschaft. (See Pirani, Marcello von, assignor.)						
Sillett, Harry C., Salt Lake City, Utah. Automatic water-supply system	873,906	Dec. 17	3257	695	131	1761
Silverstein, Joseph. (See Sturm and Silverstein.)						
Sinclair, Harry R., Worcester, Mass. Pipe-vise	874,123	Dec. 17	3747	788	131	1831
Sinclair, Harry R., and C. Ekman, Worcester, Mass.; said Ekman assignor to said Sinclair. Pipe-vise	874,124	Dec. 17	3750	789	131	1831
Sizemore, Samuel A., Leadwood, Mo. Swivel for rock-drills	873,801	Dec. 17	3047	647	131	1726
Skelly, Thomas J. (See Adams, John Q., assignor.)						
Skutsch, Rudolf, Brunswick, Germany. Device for diminishing the rolling motion of ships	874,255	Dec. 17	4004	845–6	131	1875
Slattery, Edward F., New York, N. Y., assignor to Ives Manufacturing Corporation, Bridgeport, Conn. Toy-railway turn-table	873,962	Dec. 17	3363	716–17	131	1778
Sleight, Sarah B., Chicago, Ill. Can-closure	874,256	Dec. 17	4005	846	131	1875
Sloan, Francis E., Baltimore, Md. Sheet-metal pulley-casing	874,125	Dec. 17	3751	789	131	1831
Slocum, Benjamin A., Lynn, assignor to J. R. Vaux, Swampscott, Mass. Internal-combustion engine	873,963	Dec. 17	3365	717	131	1779
Smallwood, Alfred, assignor to Incandescent Heat Company, Limited, London, England. Muffle or furnace for annealing	874,039	Dec. 17	3524	751	131	1803

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Smiley, Franklin M., Goshen, Ind. Draft-equalizer	874,126	Dec. 17	3752	789	131	1832
Smith, Arthur, Easton, Pa., assignor to American Horse Shoe Company, Phillipsburg, N. J. Horseshoe-machine	873,802	Dec. 17	3050	648	131	1726
Smith, Charles E., New York, N. Y., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine	873,964	Dec. 17	3368	717–18	131	1779
Smith, Hollis B., Cambridge, Mass. Power-transmitting mechanism	873,965	Dec. 17	3376	718	131	1780
Smith, Luther D., Detroit, Mich. Register	874,127	Dec. 17	3753	789–90	131	1832
Smith, Oscar, Milton, Kans. Attachment for self-propelled vehicles	874,128	Dec. 17	3755	700	131	1832
Snediker, William E., New York, N. Y. Vehicle-wheel	873,907	Dec. 17	3259	695	131	1761
Société Anonyme l'Oxhydrique Internationale. (See Jottrand and Schmidt.)						
Sodekson, Eva M., *et al.* (See Sodekson, Nathan S., assignor.)						
Sodekson, Nathan S., assignor to S. R. McCamish, L. R. Beaird, and E. M. Sodekson, Minneola, Tex. Cotton-chopper	874,129	Dec. 17	3756	790	131	1833
Soistmann, Adolph G., Philadelphia, Pa. Horn for talking-machines	873,908	Dec. 17	3261	696	131	1761
Sommer, John L. (See Biehl, Bernard, assignor.)						
Spalckhaver, William, assignor to R. Hoe, New York, N. Y. Printing-machine	873,909	Dec. 17	3262	696–7	131	1761
Spaulding, George W., Bozeman, Mont. Head-block for baling-presses	873,803	Dec. 17	3052	649	131	1726
Sperry, Elmer A., Brooklyn, N. Y. Electric lighting	873,804	Dec. 17	3053	649	131	1727
Sperry, Elmer A., New York, N. Y. Detinning and producing tin compounds and other products	874,040	Dec. 17	3527	752	131	1804
Spiers, William. (See Harrington, Alfred, assignor.)						
Spotswood, George W., Mobile, Ala. Suspenders	874,257	Dec. 17	4006	846	131	1876
Sprung, Edmund, Detroit, Mich. Friction-clutch	873,910	Dec. 17	3264	697	131	1762
Standard Distilling and Distributing Company. (See Bradley, Edson, assignor.)						
Standard Machine Company. (See Houseman, Harry A., assignor.)						
Standard Pressed Steel Company. (See Gade, Harald F., assignor.)						
Standard Pressed Steel Company. (See Hallowell and Gade, assignors.)						
Stanley, Frank J., assignor of one-half to R. Parsons, Philadelphia, Pa. Chalk-line holder	874,130	Dec. 17	3758	791	131	1833
Stanley, George P., and W. W. Tainter, Dixfield, Me. Making toothpicks	874,131	Dec. 17	3760	791	131	1833
Starley, Harold M., Coventry, England. Vehicle-wheel	873,911	Dec. 17	3267	697–8	131	1762
Steinbecker, Carl. (See Occhelhaeuser and Steinbecker.)						
Sternberg, Marc, Philadelphia, Pa. Hose-supporter	874,132	Dec. 17	3761	791	131	1834
Stevens, Chauncey N., South Gilboa, N. Y. Horseshoe	873,966	Dec. 17	3378	769	131	1780
Stevens, Robert W., Butte, Mont. Machine for cutting butter	874,133	Dec. 17	3762	791–3	131	1834
Stewart, Hyland P. (See Mortensen, Hans J., assignor.)						
Stocking, Bert A., and H. Mendenhall, Audubon, Iowa. Washing-machine. (Reissue)	12,733	Dec. 17	4249	895	131	1915
Stockwell, Frederic F., Jr. (See Luther and Stockwell.						
Stockwell, Frederic F., Jr., Somerville, and H. R. Luther, Newton Center, Mass. Railway-track structure	873,912	Dec. 17	3269	698–9	131	1762
Stormer, Harry S., Johnstown, Pa. Tube and flue cleaner	874,258	Dec. 17	4007	846–7	131	1876
Stover, Frank E., assignor to G. R. Lynch Manufacturing Company, Chattanooga, Tenn. Carbid-feed valve	874,351	Dec. 17	4194	883	131	1907
Stubert, Henry, assignor of one-half to D. Thomas, New Kensington, Pa. Trundling toy	874,134	Dec. 17	3765	793	131	1834
Stull, Emmett W., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Controller	873,805	Dec. 17	3055	649–50	131	1727
Sturm, Jacob W., *et al.* (See Johnston, Horace G., assignor.) (Reissue.)						
Sturm, Moses M., and J. Silverstein, New York, N. Y. Clasp	873,967	Dec. 17	3379	719	131	1780
Sturm, William P., *et al.* (See Johnston, Horace G., assignor.) (Reissue.)						
Subers, Lawrence A. (See Bayne and Subers.)						
Sullivan Machinery Company. (See Nelson, Sven T., assignor.)						
Sullivan, Michael H., Poughkeepsie, N. Y. Piston and piston-packing	873,806	Dec. 17	3058	650	131	1727
Sullivan, Michael H., Poughkeepsie, N. Y. Piston and piston-packing	873,807	Dec. 17	3060	651	131	1728
Sulzer, Ernest T., M. Garanger, and V. J. Dey, New York, N. Y. Amusement apparatus	874,135	Dec. 17	3766	793–4	131	1835
Süsskind, Ludwig. von, St. Georgen, near St. Gallen, Switzerland. Apparatus for drying macaroni and other substances	874,136	Dec. 17	3768	794	131	1835
Suzuki, Tozaburo, Sunamura, Japan. Apparatus for brewing soy	874,041	Dec. 17	3533	752	131	1804
T. Alton Bemus Company. (See Bemus, Thomas A., assignor.)						
Tainter, Willis W. (See Stanley and Tainter.)						
Taylor, John D., Edgewood Park, assignor to Union Switch & Signal Company, Swissvale, Pa. Block-signaling apparatus	874,042	Dec. 17	3536	753	131	1804
Thatcher, Frederick B., Providence, R. I. Electric spark-plug	873,968	Dec. 17	3380	719	131	1781
Theodor Umrath Commanditgesellschaft, Firm of. (See Umrath, Theodor, assignor.)						
Thoma, Charles, Jr., and W., Carlstadt, N. J. Phonograph	873,969	Dec. 17	3381	719–20	131	1781
Thoma, Walter. (See Thoma, Charles, Jr., and W.)						
Thomas, David. (See Stubert, Henry, assignor.)						
Thompson, Lloyd E., De Kalb, Ill. Explosive-engine	873,808	Dec. 17	3062	651	131	1728
Tolman, Charles P., assignor to Roteng Engineering Corporation, New York, N. Y. Automatic pressure-regulator	874,137	Dec. 17	3769	794–5	131	1835
Tornfelt, Oscar, New York, N. Y. Clutch	874,259	Dec. 17	4010	847	131	1876
Trett, Minnie J., Arkansas City, Ark. Kettle-lid	874,138	Dec. 17	3772	795	131	1836
Triumph Voting Machine Company. (See Abbott, Charles C., assignor.)						
Tudor, Robert L., Buffalo, N. Y. Box-cover lifter	874,043	Dec. 17	3538	753	131	1805
Turner Tanning Machinery Company. (See Rood and Perkins, assignors.)						
Turner, Walter V., Wilkinsburg, assignor to Westinghouse Air Brake Company, Pittsburg, Pa. Fluid-pressure brake	874,260	Dec. 17	4013	847–8	131	1877
Turner, Walter V., Wilkinsburg, assignor to Westinghouse Air Brake Company, Pittsburg, Pa. Graduated-release-valve mechanism for fluid-pressure brakes	874,261	Dec. 17	4016	848	131	1877
Uhlworm, Oskar, Berlin, Germany. Type casting and setting machine	874,262	Dec. 17	4019	848–50	131	1877
Ullom, Andrew W., Philadelphia, Pa. Clip	874,139	Dec. 17	3772	795	131	1836
Umrath, Theodor, assignor to Firm of Theodor Umrath Commanditgesellschaft, Wysotschan, near Prague, Austria-Hungary. Grain-drill	873,970	Dec. 17	3385	720	131	1782
Union Switch & Signal Company. (See Taylor, John D., assignor.)						
Union Typewriter Company. (See Smith, Charles E., assignor.)						
United States Marine Signal Company. (See Willson, Thomas L., assignor.)						
Universal Polygraph Company. (See Fanslow, Benjamin O., assignor.)						
Unzner, Gustav, New York, N. Y. Propelling apparatus	874,263	Dec. 17	4026	850–2	131	1878
Valiquet, Benjamin, Chicago, Ill. Apparatus for converting, storing, and utilizing wind-power	874,140	Dec. 17	3774	795–6	131	1836
Van Brunt, Charles, Schenectady, N. Y., assignor to General Electric Company. Purification of metallic compounds	873,809	Dec. 17	3064	.....	131	1729
Vance, Herman E., Columbus, Ohio. Flexible curtain	873,810	Dec. 17	3066	652	131	1729
Vaux, John R. (See Slocum, Benjamin A., assignor.)						
Vernon, Charles M. and G. V., Zanesville, Ohio. Composition to be used in sweeping	873,913	Dec. 17	3270	.....	131	1763
Vernon, George V. (See Vernon, Charles M. and G. V.)						
Victor Cement Block & Machine Co. (See Layfield and Crisp, assignors.)						
Vikören, Ole, Wilcox, Nebr. Furniture	873,914	Dec. 17	3271	699	131	1763
Voit, Wilhelm. (See Lentz and Voit.)						
Volney, Carl W., Keyport, N. J. Manufacture of gunpowder	874,264	Dec. 17	4031	852	131	1878

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Volney, Carl W., Keyport, N. J. Treating materials	874,265	Dec. 17	4033	853	131	1878
Voss, William H., Davenport, Iowa. Combined wringer-tray and drip-board	874,266	Dec. 17	4037	853	131	1879
Wagner, Hubert, Munich, assignor to Charlottenburger Farbewerke Atkien Gesellschaft, Charlottenburg, Germany. Means for mounting stone lithographic rollers	874,267	Dec. 17	4038	853	131	1879
Wahlert, Henry A., St. Louis, Mo., assignor of one-half to J. W. Addis, Marshall, Tex. Body-bolster	874,044	Dec. 17	3539	784	131	1805
Waldburger, John A., McKeesport, assignor to Forter Miller Engineering Co., Pittsburg, Pa. Feeding mechanism for gas-producers, furnaces, &c.	874,352	Dec. 17	4195	884	131	1907
Wales, Nathaniel B., Braintree, Mass. Mechanical movement	874,045	Dec. 17	3541	784	131	1805
Walsh, William E., Morris, Ill. Window-tent	873,971	Dec. 17	3386	721	131	1782
Walstrom, Axel M., Minneapolis, Minn. Bath-cabinet	873,811	Dec. 17	3067	652	131	1729
Walter, Arthur, Naples, Italy. Apparatus for producing sublimed sulfur	873,812	Dec. 17	3070	653	131	1730
Wandersleb, Ernst. (See Rudolph and Wandersleb.)						
Warsop, Thomas, Coniston, England. Rock-drill and other percussion-tool	873,813	Dec. 17	3072	653–4	131	1730
Waterman, Lewis E., assignor to Emerson Manufacturing Company, Rockford, Ill. Harrow-disk	874,268	Dec. 17	4039	853	131	1879
Watrous, Earl G., Chicago, Ill. Lavatory	873,915	Dec. 17	3272	699	131	1763
Weaver, Ira A., assignor to Racine-Sattley Company, Springfield, Ill. Harrow-transporter	874,141	Dec. 17	3776	790	131	1837
Webb, Samuel, Glassport, and J. Pearson, Duquesne, Pa. Fan	874,142	Dec. 17	3778	796	131	1837
Webb, William, and W. W. Hildreth, Gloversville, N. Y. Wrench	874,269	Dec. 17	4040	854	131	1880
Weber, George J., Kansas City, Mo. Rotary explosive-engine	873,916	Dec. 17	3274	699–700	131	1763
Wehrle, Otto, Emmendingen, Germany. Chopping and extracting apparatus	874,270	Dec. 17	4041	854	131	1880
Weir Frog Company. (See Goldsmith, Nathaniel O., assignor.)						
Wells, Francis F., Elkton, Oreg. Grain-separator	873,972	Dec. 17	3389	721	131	1782
Wells, Lawrence O. (See Adams and Wells.)						
Welsh, William H., Collingswood, N. J., assignor of two-thirds to C. H. Royal and J. F. Gounley, Philadelphia, Pa. Producing matrices	874,353	Dec. 17	4197	884	131	1907
Welsh, William H., Collingswood, N. J., assignor of two-thirds to C. H. Royal and J. F. Gounley, Philadelphia, Pa. Producing matrices	874,354	Dec. 17	4198	884	131	1908
Werther, Francis O., Sydney, Nova Scotia, Canada. Fireproof lining	874,271	Dec. 17	4042	.....	131	1880
Western Wheeled Scraper Company. (See McKnight, Thomas R., assignor.)						
Westinghouse Air Brake Company. (See Turner, Walter V., assignor.)						
Whitaker, Jesse H., and F. H. Hubbard, Washington, D. C. Tabulator for type-writers	874,272	Dec. 17	4043	854–5	131	1880
White and Company, J. Samuel. (See Carnt and Forster, assignors.)						
White, Frank D., Alpena, Mich. Paper-bag holder	874,143	Dec. 17	3780	796–7	131	1837
White, Harry L., and F. J. Rogers, Wheeling, W. Va. Envelop	874,144	Dec. 17	3782	797	131	1838
White, John F., Bloomington, Ill., assignor to Portable Wagon Dump and Elevator Company. Wagon-dump	873,814	Dec. 17	3073	654–5	131	1730
Whiteford, Grover C., Wilmington, Del. Receptacle for mail-bags	874,273	Dec. 17	4047	855	131	1881
Whiting, Thomas H., Rockford, Ill. Screen for motor-vehicles	874,046	Dec. 17	3544	755	131	1806
Wiard, John B., Lynn, Mass., assignor to General Electric Company. Switching device for electric motors	873,815	Dec. 17	3078	656	131	1731
Wickberg, John, Fosston, Minn. Brake for sleds	874,145	Dec. 17	3783	797	131	1838
Wideman, Gustavus, assignor to Richards Manufacturing Company, Aurora, Ill. Stay-roller	873,816	Dec. 17	3080	656	131	173.
Wiedeman, Herman, assignor to J. S. McDonald Company, Chicago, Ill. Temporary binder for loose leaves	874,371	Dec. 17	4237	892	131	1913
Wiedemeier, Anton A. (See Wiedemeier, Joseph, Jr., and A. A.)						
Wiedemeier, Joseph, Jr., and A. A., Carroll, Iowa. Display apparatus	873,817	Dec. 17	3081	656	131	1731
Wilke, Hermann W., Long Island City, N. Y. Steering vessels	873,818	Dec. 17	3083	657	131	1732
Williams, James P., Latonia, Ky. Electrical signaling device	874,372	Dec. 17	4238	892–3	131	1914
Williamson, Albert, *et al.* (See Olsson, Henry A., assignor.)						
Williamson, Edward, *et al.* (See Olsson, Henry A., assignor.)						
Willits, Horace G., Davenport, Iowa. Railway-tie	874,146	Dec. 17	3784	797–8	131	1838
Willson, Thomas L., Ottawa, Ontario, Canada, assignor, by mesne assignments, to United States Marine Signal Company, Jersey City, N. J. Signal-buoy	873,917	Dec. 17	3280	700–1	131	1764
Wilson, Eugene, Fort Smith, Ark. Stamp-affixing device	874,274	Dec. 17	4049	855	131	1881
Wilson & Hurd Manufacturing Co. (See Hurd, Arthur J., assignor.)						
Wilson, John C., Boston, Mass., assignor to Automatic Time Stamp Company, Portland, Me. Printing-machine or time-stamp	874,047	Dec. 17	3544	755	131	1806
Wing, Leander J., Lexington, Mass., assignor to Hydraulic Power Controller Company, Portland, Me. Liquid-power-transmission apparatus	873,819	Dec. 17	3084	657–8	131	1732
Winger, Josiah G., Grand Valley, assignor to C. F. Grettenberger, Tidioute, Pa. Hydraulic winch	874,275	Dec. 17	4049	855–6	131	1881
Winkler, Max O., Hamilton, Ontario, Canada. Clothes-pin clip	873,820	Dec. 17	3086	658	131	1732
Winston, Charles S., assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Three-wire multiple system	874,147	Dec. 17	3785	798	131	1839
Winters, George W., De Queen, Ark. Butter-separator	874,148	Dec. 17	3789	798	131	1839
Wittebolle, Emile J., Camden, N. J., assignor to C. B. Porter & Co., Philadelphia, Pa. Machine for making sheet-metal vessels	874,149	Dec. 17	3791	799	131	1840
Wolcott, Ira S., Tremont, Pa. Book-cover	873,973	Dec. 17	3390	721	131	1783
Wolfe, Frank L., Medford, assignor to Crosby Steam Gage and Valve Company, Boston, Mass. Whistle-valve	873,822	Dec. 17	3088	658	131	1733
Wolff, Ferdinand, Mannheim, Germany. Tramway	873,974	Dec. 17	3391	722	131	1783
Wolhaupter, Benjamin, assignor to Rail Joint Company, New York, N. Y. Insulated rail-joint	873,821	Dec. 17	3086	658	131	1732
Wood, James N. (See Ford and Wood.)						
Woodworth, George K. (See De Forest, Lee, assignor.)						
Wright, Edward T., and C. Longenecker, assignors to Charles Longenecker & Company, New York, N. Y. Road-roller	873,975	Dec. 17	3391	722	131	1783
Yale & Towne Manufacturing Company. (See Haldy, Frederick G., assignor.)						
Young, Edgar J., Buenos Ayres, Argentina. Shock-absorbing mechanism	874,150	Dec. 17	3793	799–800	131	1840
Zachow, William, Milwaukee, Wis., assignor to International Harvester Company. Fertilizer-distributer	873,823	Dec. 17	3090	659–61	131	1733
Zelser, Adlow. (See Zelser, John R. and A.)						
Zelser, John R. and A., Berwick, Pa. Combined clamp and spreader	874,151	Dec. 17	3795	800	131	1840
Zeiss, Carl, Firm of. (See König, Albert, assignor.)						
Zeiss, Carl, Firm of. (See Rohr, Moritz von, assignor.)						
Zeiss, Carl, Firm of. (See Rudolph and Wandersleb, assignors.)						
Zimmermann, Otto, Ludwigshafen-on-the-Rhine, Germany. Manufacturing tube apparatus	873,976	Dec. 17	3392	722	131	1783
Zwingenberger, Otto K., New York, N. Y. Gas-producer	874,276	Dec. 17	4052	856	131	1882

DESIGNS.

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American Cut Glass Company. (See Anderson, William C., assignor.)				
Anderson, William C., assignor to American Cut Glass Company, Lansing, Mich. Dish	38,950	Dec. 17	131	1916
Beal, Samuel R., Adrian, Mich. Playing-cards	38,954	Dec. 17	131	1916
Crystal, David, and M. Tischler, New York, N. Y. Skirt	38,953	Dec. 17	131	1916
Hohman & Maurer Manufacturing Company. (See Maurer, Henry W., assignor.)				
Jarvis, Marshall N., Portland, Conn. Handle for nut-crackers, nut-picks, and similar dessert cutlery	38,951	Dec. 17	131	1916
Kreag, John A., Rochester, N. Y. Shoe-polishing brush	38,952	Dec. 17	131	1916
Litle, Thomas J., Jr., assignor to Welsbach Light Company, Gloucester City, N. J. Gas-burner	38,955	Dec. 17	131	1916
Maurer, Henry W., assignor to Hohman & Maurer Manufacturing Company, Rochester, N. Y. Casing for temperature and pressure gages	38,957	Dec. 17	131	1917
Stites, Townsend, assignor to Welsbach Light Company, Gloucester City, N. J. Gas-burner	38,956	Dec. 17	131	1917
Tischler, Max. (See Crystal and Tischler.)				
Welsbach Light Company. (See Litle, Thomas J., Jr., assignor.)				
Welsbach Light Company. (See Stites, Townsend, assignor.)				

TRADE-MARKS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Adams Argood Chocolate Co., Philadelphia, Pa. Candies	66,582	Dec. 17	131	1935
Adams Argood Chocolate Co., Philadelphia, Pa. Candies	66,583	Dec. 17	131	1935
Albers Bros. Milling Co., Portland, Oreg. Rolled oats	66,616	Dec. 17	131	1936
B. F. Goodrich Company, Akron, Ohio. Certain medical and surgical appliances and instruments	66,653	Dec. 17	131	1937
Barton Vineyard Company, Limited, Fresno, Cal. Brandy	66,617	Dec. 17	131	1936
Barton Vineyard Company, Limited, Fresno, Cal. Certain wines	66,618	Dec. 17	131	1936
Bates & Bacon, Attleboro, Mass. Chains	66,654	Dec. 17	131	1937
Bell Company. (See Wedgefuth, Louis C., assignor.)				
Bengué, Jules, Paris, France. Balsams, purgatives pastils, and anesthetics	66,633	Dec. 17	131	1936
Bidtel Chemical Works, Jersey City, N. J. Certain chemical preparation	66,602	Dec. 17	131	1935
Blumenthal & Company, F., New York, N. Y. Leather	66,655	Dec. 17	131	1937
Boucher, Charles, Paris, France. Toilet powder	66,634	Dec. 17	131	1936
Bourn Rubber Co., Providence, R. I. Rubber boots and shoes	66,635	Dec. 17	131	1936
Bradley's Sons, G. W., Weston, Conn. Certain edge-tools	66,584	Dec. 17	131	1935
Cementium (Parent) Co. Ltd., London, England. Cements, glues, and adhesives	66,636	Dec. 17	131	1936
Carson Pirie Scott & Co., Chicago, Ill. Embroidery-cotton	66,603	Dec. 17	131	1935
Charles Wolff Packing Company, Topeka, Kans. Lard	66,656	Dec. 17	131	1937
Chas. A. Zahn Co., Chicago, Ill. Red wine, Burgundy type	66,637	Dec. 17	131	1936
Chas. A. Zahn Co., Chicago, Ill. White wine, Rhine-wine type	66,638	Dec. 17	131	1936
Chemische Fabrik Flörsheim, Dr. H. Noerdlinger, Flörsheim-on-the-Main, Germany. Impregnating agents for preserving and coating wood	66,585	Dec. 17	131	1935
Chicago Folding Box Co., Chicago, Ill. Paper oyster-pails	66,604	Dec. 17	131	1935
Cleveland-Akron Bag Co., Cleveland, Ohio. Paper bags	66,605	Dec. 17	131	1935
Columbia Carriage Co., Hamilton, Ohio. Certain road-vehicles	66,586	Dec. 17	131	1935
Compagnie Ray mit beschränkter Haftung, Berlin, Germany. Soap	66,657	Dec. 17	131	1937
Crescent Milling Company, Minneapolis, Minn. Wheat-flour	66,587	Dec. 17	131	1935
De Luxe Motor Car Company, Detroit, Mich. Automobiles	66,606	Dec. 17	131	1935
Decker & Cohn, Alfred, Chicago, Ill. Coats, vests, trousers, and overcoats	66,619	Dec. 17	131	1936
Donovan & Co., James, Everett, Mass. Certain boots, shoes, and slippers	66,658	Dec. 17	131	1937
Dr. W. Towns Medical Company, Fond du Lac, Wis. Remedy for epilepsy	66,639	Dec. 17	131	1936
E. Martin & Co., San Francisco, Cal. Whisky	66,659	Dec. 17	131	1937
Fall, Arthur J., Anamosa, Iowa. Card games	66,660	Dec. 17	131	1937
Genuine Bangor Slate Co., Easton, Pa. Roofing-slate	66,588	Dec. 17	131	1935
George Wiedemann Brewing Co., Newport, Ky. Beer	66,661	Dec. 17	131	1937
Globe Milling Co., Lockport, N. Y. Wheat-flours	66,589	Dec. 17	131	1935
Graham Paper Co., St. Louis, Mo. Printing and writing papers	66,590	Dec. 17	131	1935
Graham Paper Co., St. Louis, Mo. Printing and writing papers	66,591	Dec. 17	131	1935
Graham Paper Co., St. Louis, Mo. Printing and writing papers	66,592	Dec. 17	131	1935
Graves & Meade Co., Dayton, Ohio. Trousers, vests, coats, and overcoats	66,620	Dec. 17	131	1936
H. O. Canfield Company, Bridgeport, Conn. Certain rubber goods	66,621	Dec. 17	131	1936
Haldenwang, Richard, Jr., Brooklyn, N. Y. Puzzle	66,662	Dec. 17	131	1937
Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y. Rubber wheel-tires	66,622	Dec. 17	131	1936
Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y. Rubber wheel-tires	66,623	Dec. 17	131	1936
Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y. Rubber wheel-tires	66,624	Dec. 17	131	1936
Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y. Rubber wheel-tires	66,625	Dec. 17	131	1936
Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y. Rubber wheel-tires	66,626	Dec. 17	131	1936
Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y. Rubber wheel-tires	66,640	Dec. 17	131	1936
Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y. Rubber wheel-tires	66,641	Dec. 17	131	1936
Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y. Rubber wheel-tires	66,642	Dec. 17	131	1936
Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y. Rubber wheel-tires	66,643	Dec. 17	131	1936
Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y. Rubber wheel-tires	66,644	Dec. 17	131	1936
Hartford Rubber Works Company, Hartford, Conn., and New York, N. Y. Rubber wheel-tires	66,663	Dec. 17	131	1937
Helena Stove and Range Co., Louisville, Ky. Stoves and ranges	66,664	Dec. 17	131	1937
House & Sons, Chas. W., New York, N. Y. Felts in the piece	66,665	Dec. 17	131	1937
Houston Ice & Brewing Co., Houston, Tex. Non-intoxicating tonic malt liquor	66,645	Dec. 17	131	1936
Howarth, John H., New Haven, Conn. Remedy for rheumatism and gout	66,666	Dec. 17	131	1937
International Sunshine Society, New York, N. Y. Magazine	66,627	Dec. 17	131	1936
J. H. Rice & Friedmann Co., Milwaukee, Wis. Dress and negligée shirts made of woven cloth	66,593	Dec. 17	131	1935
Konomax Rock Drill Syndicate Limited, Johannesburg, Transvaal. Rock-drilling machines	66,607	Dec. 17	131	1935
Kron, Rudolf, Golzern, near Grimma, Germany. Certain machinery	66,628	Dec. 17	131	1936
Lathem, Tom B., Brownwood, Tex. Hair tonics and renewers	66,667	Dec. 17	131	1937
M. D. Wells Co., Chicago, Ill. Leather boots, shoes, and slippers				

TRADE-MARKS—Continued.

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Manchester Furniture Co., Manchester, Va. Washboards	66,646	Dec. 17	131	1936
Melzer, Hermann, Meiningen, Germany. Surgical lubricant	66,594	Dec. 17	131	1935
Michigan Knitting Co., Lansing, Mich. Certain knitted goods	66,668	Dec. 17	131	1937
Moch, Berman & Co., Cincinnati, Ohio. Overcoats, dress-coats, outer coats, vests, and trousers	66,620	Dec. 17	131	1936
Mona Manufacturing Company, Boston, Mass. Dress-shields	66 669	Dec. 17	131	1937
Monarch Suspender Co., New York, N. Y. Suspenders and belts	66,670	Dec. 17	131	1937
Nahass, Adolph, Boston, Mass. Belts	66,671	Dec. 17	131	1937
Ogden and Shimer, Middletown, N. Y. Cough mixture	66,647	Dec. 17	131	1936
Pennsylvania Chocolate Company, Pittsburg, Pa. Chocolate and cocoa	66,608	Dec. 17	131	1935
Pereyra, Aurelio M., San Francisco, Cal. Cereal breakfast foods	66,595	Dec. 17	131	1935
Portland Flouring Mills Co., Portland, Oreg. Wheat breakfast foods	66,596	Dec. 17	131	1935
R. Hudnut's Pharmacy, New York, N. Y. Tooth-brushes	66,609	Dec. 17	131	1935
Ramage, James S., Chicago, Ill. Certain medicines	66,630	Dec. 17	131	1936
Royal Worcester Corset Co., Worcester, Mass. Corsets	66,631	Dec. 17	131	1936
Rubens & Marble, Chicago, Ill. Knit undershirts	66,672	Dec. 17	131	1937
S. W. Miller Piano Co., Sheboygan, Wis. Pianos and interior mechanically-operated pianos	66,673	Dec. 17	131	1937
Selz, Schwab & Company, Chicago, Ill. Leather boots and shoes	66,674	Dec. 17	131	1937
Shannon & Mott Company, Des Moines, Iowa. Certain cereal foods	66,610	Dec. 17	131	1935
Snow Flake Manufacturing Company, New York, N. Y. Ice-cream freezers	66,597	Dec. 17	131	1935
Société Anonyme Ariès, Villeneuve la Garenne, France. Automobiles	66,611	Dec. 17	131	1935
Société Anonyme Ariès, Villeneuve la Garenne, France. Automobiles	66,612	Dec. 17	131	1936
Société Anonyme des Caves et des Producteurs réunis de Roquefort (Aveyron), Roquefort, Aveyron, France. Roquefort cheese	66,598	Dec. 17	131	1935
Spirine Extracting Co., Chicago, Ill. Laxative and digestive medicines	66,648	Dec. 17	131	1936
Stanley Rule & Level Company, New Britain, Conn. Certain measuring instruments	66,675	Dec. 17	131	1937
Taylor Chair Company, Bedford, Ohio. Chairs, rockers, settees, and sofas	66,613	Dec. 17	131	1936
Tracy Shoe Co., Portsmouth, Ohio. Boots and shoes made of leather	66,676	Dec. 17	131	1937
Tropon Gesellschaft mit beschränkter Haftung, Mülheim-on-the-Rhine, Germany. Certain food	66,599	Dec. 17	131	1935
Tropon Gesellschaft mit beschränkter Haftung, Mülheim-on-the-Rhine, Germany. Certain food	66,600	Dec. 17	131	1935
Tunnell & Co., F. W., Philadelphia, Pa. Fertilizers	66,601	Dec. 17	131	1935
Utica Drop Forge and Tool Co., Utica, N. Y. Nippers and pliers provided with a cutting edge	66,649	Dec. 17	131	1937
W. T. Owbridge Ltd., Hull, England. Lung-tonic	66,650	Dec. 17	131	1937
Washburn Crosby Company, Minneapolis, Minn. Wheat-flour	66,614	Dec. 17	131	1936
Wedgefuth, Louis C., assignor to Bell Company, New York, N. Y. Dyspepsia medicine	66,651	Dec. 17	131	1937
Wellcome, Henry S., London, England. Aromatic liquid preparation of cascara sagrada	66,632	Dec. 17	131	1936
Wessel Bros. Candy Co., St. Paul, Minn. Cough-drops	66,652	Dec. 17	131	1937
Zane & Gill, Swedesboro, N. J. Certain foods	66,615	Dec. 17	131	1936

LABELS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Page.
Adams, Herbert L., Worcester, Mass. "Wilhelmina Corsets." (For Corsets)	13,941	Dec. 17	131	1938
Follmer Clogg & Co., Inc., New York, N. Y. "F. C. & Co. Fluffy Ruffles Parasols" (For Parasols)	13,939	Dec. 17	131	1938
Follmer Clogg & Co., Inc., New York, N. Y. "F. C. & Co. Fluffy Ruffles Umbrella." (For Umbrellas)	13,940	Dec. 17	131	1938
Garden City Brewery, Chicago, Ill. "Daisy." (For Beer)	13,928	Dec. 17	131	1938
Grandfathers Cure Company, Mount Vernon, N. Y. "Voicelets." (For a Medicinal Compound)	13,933	Dec. 17	131	1938
Grandfathers Cure Company, Mount Vernon, N. Y. "Liquid Voicelets." (For a Medicinal Compound)	13,934	Dec. 17	131	1938
Henschel & Co., A. C., Chicago, Ill. "La Buna." (For Cigars)	13,924	Dec. 17	131	1938
Henschel & Co., A. C., Chicago, Ill. "La Posa." (For Cigars)	13,925	Dec. 17	131	1938
Henschel & Co., A. C., Chicago, Ill. "La Fregata." (For Cigars)	13,926	Dec. 17	131	1938
Henschel & Co., A. C., Chicago, Ill. "La Morenda." (For Cigars)	13,927	Dec. 17	131	1938
Johnston, James C., Chicago, Ill. "Fort Dear-Born." (For Whisky)	13,930	Dec. 17	131	1938
Lydia E. Pinkham Medicine Co., Saco, Me., and Lynn, Mass. "Lydia E. Pinkham's Sanative Wash." (For Medical Preparations for Women's Use)	13,935	Dec. 17	131	1938
Minneapolis Brewing Company, Minneapolis, Minn. "Zumalweiss." (For Beer)	13,929	Dec. 17	131	1938
Nichols, Elbert H., Liberty, N. Y. "Clean-All." (Preparation for the Removal of Dirt and Grease from Cloth)	13,938	Dec. 17	131	1938
O'Brien, J. F., New York, N. Y. "Dick's Diamond Dust." (For Polishing-Powders)	13,937	Dec. 17	131	1938
Schmuelling, Harry G., Cincinnati, Ohio. "Epsom Salt Tablets." (For a Medicine)	13,932	Dec. 17	131	1938
W. E. Tillotson Manufacturing Company, Pittsfield, Mass. "Collins Health Underwear." (For Underwear)	13,942	Dec. 17	131	1938
Weeks, Edward C., New York, N. Y. "Flying Diable." (For a Game Apparatus)	13,943	Dec. 17	131	1938
Yosemite Mineral Springs Company, Los Angeles, Cal. "Sparkling Yosemite Mineral Water." (For Mineral Water)	13.931	Dec. 17	131	1938

PRINTS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Page.
Dr. Richards Dyspepsia Tablet Association, New York, N. Y. "The Dyspeptic's Dream." (For Dyspepsia-Tablets)	2,175	Dec. 17	131	1938
F. W. Cook Brewing Co., Evansville, Ind. "Goldblume." (For Beer)	2,174	Dec. 17	131	1938
Gelston, William H., Camden, N. J. "Has the Power of Niagara." (For Automobiles)	2,180	Dec. 17	131	1938
Hoyt & Co., C. H., Toledo, Ohio. "Hoyt's Improved Pile Remedy." (For a Pile Remedy)	2,176	Dec. 17	131	1938
Lytton, H. C., Chicago, Ill. "Men's and Boys' Apparel." (For Men's and Boys' Apparel)	2,177	Dec. 17	131	1938
Swift and Company, Chicago, Ill. "Lexard." (For Soap)	2,179	Dec. 17	131	1938
United States Playing Card Co., Norwood, Ohio. "606. College Series Congress Playing Cards." (For Playing-Cards)	2,178	Dec. 17	131	1938

TRADE-MARKS.

(REGISTRATION APPLIED FOR.)

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A. J. Reach Company, Philadelphia, Pa. Base-balls, bats, masks, mitts, tennis-rackets, &c.	30,754	Dec. 17	131	1928
Adamick, G. H. (See Lewis and Company, George, assignor.)				
Alcohol Light, Heat and Power Company, Meriden, Conn. Alcohol gas-burners, lamps, heaters, stoves, &c.	30,885	Dec. 17	131	1929
Allen, William R., Manchester, England. Cigars, cigarettes, smoking and chewing tobacco	31,153	Dec. 17	131	1934
Amalgamated Gum Company, Troy, N. Y. Chemical starch preparation	29,573	Dec. 17	131	1924
Amalgamated Gum Company, Troy, N. Y. Chemical starch preparation	29,575	Dec. 17	131	1924
American Improved Anti-Friction Metal Company, Mobile, Ala. Antifriction metal	31,084	Dec. 17	131	1933
American Tobacco Company, New York, N. Y. Chewing and smoking tobacco	30,875	Dec. 17	131	1929
Baird, William C., New York, N. Y. Fire-escapes	30,893	Dec. 17	131	1929
Bay State Milling Co., Boston, Mass. Wheat-flour	31,009	Dec. 17	131	1932
Birkin & Co., Nottingham, England. Imitation laces	29,089	Dec. 17	131	1923
Bo-Bo Manufacturing Co., New York, N. Y. Laxative candy	30,596	Dec. 17	131	1927
Boondas, Photios, New York, N. Y. Candy	28,664	Dec. 17	131	1923
Boston Rubber Company, Boston, Mass. Rubber boots, shoes, coats, hats, &c.	30,730	Dec. 17	131	1928
Boston Wine & Spirits Co., Boston, Mass. Whisky, rum, gin, brandy, cocktails, and punches	30,916–30	Dec. 17	131	1930–1
Boston Wine & Spirits Co., Boston, Mass. Whisky, rum, gin, brandy, cocktails, and punches	30,932–4	Dec. 17	131	1931
Boston Wine & Spirits Co., Boston, Mass. Whisky, rum, gin, brandy, cocktails, and punches	30,937	Dec. 17	131	1931
Boston Wine & Spirits Co., Boston, Mass. Port and sherry wines	30,938–47	Dec. 17	131	1931–2
Bray, Jaber G., Laurium, Mich. Remedy for rheumatism	30,603	Dec. 17	131	1927
Brown, Herbert H., Philadelphia, Pa. Butter	30,572	Dec. 17	131	1929
Cannon, Henry P., Bridgeville, Del. Canned fruits and vegetables	18,630	Dec. 17	131	1920
Carmel Wine Company, New York, N. Y. Cognacs and cordials	31,042	Dec. 17	131	1932
Carmel Wine Company, New York, N. Y. Cognacs and cordials	31,044	Dec. 17	131	1932
Carmel Wine Company, New York, N. Y. Wines	31,045–8	Dec. 17	131	1932–3
Carmel Wine Company, New York, N. Y. Wines	31,051	Dec. 17	131	1933
Carter-Corey Company, Bangor, Me. Potatoes	29,965	Dec. 17	131	1925
Cedar Rapids Candy Company, Cedar Rapids, Iowa. Chocolate candy	31,207	Dec. 17	131	1934
Chicago Belting Company, Chicago, Ill. Leather belting	30,694	Dec. 17	131	1927
Class Journal Co., New York, N. Y. Annual periodical	29,628	Dec. 17	131	1924
Clymer, Reuben S., Allentown, Pa. Remedies for heart diseases, indigestion, nervous debility, &c.	30,604	Dec. 17	131	1927
Cohen & Rosenberg, Boston, Mass. Wheat-flour	30,514	Dec. 17	131	1927
Commercial Electrical Supply Company, St. Louis, Mo. Electrical supplies	29,909	Dec. 17	131	1925
Comstock Castle Stove Co., Quincy, Ill. Stoves, ranges, heaters, and parts thereof	30,318	Dec. 17	131	1926
Concrete-Steel Engineering Company, New York, N. Y. Metal bars for reinforcing concrete	30,104	Dec. 17	131	1925
Cortwright Company, New York, N. Y. Whisky	30,543	Dec. 17	131	1927
Covert Manufacturing Co., Watervliet, N. Y. Harness	29,194	Dec. 17	131	1923
Cravanette Company Limited, Bradford, England. Hats, caps, overcoats, coats, vests, trousers, &c.	28,844	Dec. 17	131	1923
Cundy-Bettoney Company, Boston, Mass. Flutes clarinets, drums, cornets, and their cases	30,289	Dec. 17	131	1925
Davidsen, Joseph M., Paris, France. Parts of machinery for transmission purposes	18,475	Dec. 17	131	1920
Destrempes, Philippe, Lowell, Mass. Ointments	28,520	Dec. 17	131	1923
Domestic Science Mfg. Co., Boston, Mass. Flavoring extracts	29,553	Dec. 17	131	1924
Dowd & Co., J. C., New York, N. Y. Hair, nail, and tooth brushes	30,896	Dec. 17	131	1930
Eckardt, Christian, Johannishof, Germany. Dried and preserved fruits and oils used as foods	29,966	Dec. 17	131	1925
Ednur Pharmacal Co., St. Louis, Mo., and Kampsville, Ill. Remedy for coughs and colds	13,386	Dec. 17	131	1920
Edward Korry Co., New Orleans, La. Coats, pants, vests, jackets, overalls, &c.	30,570	Dec. 17	131	1927
Eldridge, Willis J., Aurora, Ohio. Cheese	30,697	Dec. 17	131	1927
Fischer, August A., Paterson, N. J. Waterproofed textile fabrics	30,698	Dec. 17	131	1928
Fox, Will H., Graysville, Tenn. Fresh fruits and vegetables	31,119	Dec. 17	131	1934
G. W. Nicholson Company, Grand Junction, Iowa. Fresh and storage eggs	25,917	Dec. 17	131	1921
Garner & Co., New York, N. Y. Cotton piece goods	31,060	Dec. 17	131	1933
Hagan, John C., Richmond, Va. Flavoring extracts	23,347	Dec. 17	131	1921
Halpen, Green & Co., Philadelphia, Pa. Table-syrup	30,292	Dec. 17	131	1925
Hansen-Bennett Company, Providence, R. I. Jewelry	30,592	Dec. 17	131	1927
Harris, John S., New York, N. Y. Textile collars	30,977	Dec. 17	131	1932
Harris John S., New York, N. Y. Laundry starch	31,096	Dec. 17	131	1933
Hayden-Corbett Chain Co., Columbus, Ohio. Chains, chain links and hooks	30,669	Dec. 17	131	1927
Heidland Baking Co., St. Louis, Mo. Wheat-bread	30,903	Dec. 17	131	1930
Heineman Brothers, Baltimore, Md. Cigars, cheroots, and little cigars	31,169	Dec. 17	131	1934
Hendee, Geo. M., Springfield, Mass. Bicycles and motor-cycles	15,220	Dec. 17	131	1920
Heritage, J. Ward, Philadelphia, Pa. Photographic prints of plans, specifications, and surveys	30,444	Dec. 17	131	1926
Hodge & Bailey, Little Rock, Ark. Remedy for malaria and diseases of the blood and kidneys	27,964	Dec. 17	131	1922
Hyde Manufacturing Co., Southbridge, Mass. Cutlery and edge-tools	29,554	Dec. 17	131	1924

TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

Name, residence, and title.	Serial No.	Date.	Official Gazette. Vol.	Page.
Indiana Cotton Mills, Cannelton, Ind. Cotton sheetings	30,790–1	Dec. 17	131	1928
Joseph & Feiss Co., Cleveland, Ohio. Suits, coats, vests, trousers, and overcoats	30,102	Dec. 17	131	1925
Ketcheson, Guy T., Portland, Oreg. Drug journal	30,859	Dec. 17	131	1929
Kingan and Company, Limited, Belfast, Ireland, and Indianapolis, Ind. Cured meats and sausage	28,420	Dec. 17	131	1923
L. Wolff Mfg. Co., Chicago, Ill. Metal kitchen-boilers, sinks, bath-tubs, &c	5,062	Dec. 17	131	1919
Lash's Bitters Company, San Francisco, Cal. Specific for cramps, colic, diarrhea, &c	30,463	Dec. 17	131	1926
Lehmann & Co., Dr. Max, Berlin, Germany. Talcum for smoothing the edges of collars, &c	29,873	Dec. 17	131	1925
Leonard, John H., New York, N. Y. Antiseptic wash	30,807	Dec. 17	131	1930
Lewis and Company, George, assignor to G. H. Adamick, Chicago, Ill. Tea	28,410	Dec. 17	131	1923
Lyle & Kinahan Ltd., Belfast, Ireland. Whisky	31,133	Dec. 17	131	1934
M. A. Winter Co., Washington, D. C. Laxative tablets	30,748	Dec. 17	131	1928
Margarete Steiff, G. m b. H., Giengen a/Brenz, Germany. Dolls and stuffed toy figures	28,316	Dec. 17	131	1923
Marshall Field & Company, Chicago, Ill. Leather gloves	30,707	Dec. 17	131	1928
McClave-Brooks Co., Scranton, Pa. Steam-blowers	29,618	Dec. 17	131	1924
McClave-Brooks Co., Scranton, Pa. Grates	29,619	Dec. 17	131	1924
Migel & Co., M. C., New York, N. Y. Broad silks	29,596	Dec. 17	131	1924
Migel & Co., M. C., New York, N. Y. Broad silks	29,598–600	Dec. 17	131	1924
Modoc Company, Chester, Pa. Car-cleaners	25,625	Dec. 17	131	1921
Mona Manufacturing Co., Boston, Mass. Corsets, corset waists and covers, dress-waists, &c	27,170	Dec. 17	131	1922
Mond Nickel Company, Limited, Westminster, England. Copper sulfate	31,001	Dec. 17	131	1932
Morse-Broughton Company, New York, N. Y. Monthly magazine	31,061	Dec. 17	131	1933
Mother Seigel's Syrup Company, New York, N. Y. Laxative compounds	18,871	Dec. 17	131	1921
New York Taxi-Cab Company, New York, N. Y. Motor-cabs	30,547	Dec. 17	131	1927
Newell, Frank F., Burlington, Wis. Pills, tablets, powders, salves, &c	29,670	Dec. 17	131	1924
Northrop Coburn and Dodge Co., New York, N. Y. Metal ceilings and walls	24,256	Dec. 17	131	1921
Norvell-Shapleigh Hardware Company St. Louis, Mo. Auger-bits	14,621	Dec. 17	131	1920
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Hammers	14,622	Dec. 17	131	1920
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Axes, hatchets, cane-knives, and razors	14,623	Dec. 17	131	1920
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Measuring-tapes	14,624	Dec. 17	131	1920
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Wrapping-paper	14,625	Dec. 17	131	1920
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Dividers and squares	14,626	Dec. 17	131	1920
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Axes, hatchets, chisels, scythes, &c	14,629	Dec. 17	131	1920
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Scoops	14,630	Dec. 17	131	1920
Outdoor News Company, New York, N. Y. Monthly magazine	29,866	Dec. 17	131	1925
Prophytol Dentifrice Co. (See Tyler, Frank R., assignor.)				
Reeder, David H., Laporte, Ind. Chewing-gum and candy	31,155	Dec. 17	131	1934
Riffle, Edward J., Allegheny, Pa. Whisky	18,800	Dec. 17	131	1920
Saginaw Medicine Co., Saginaw, Mich. Remedies for scrofula, salt-rheum, old sores, &c	27,656	Dec. 17	131	1922
Saranac Glove Company, Littleton, N. H. Leather gloves	26,903	Dec. 17	131	1921
Schenck, Ludwig B., New York, N. Y. Lotions, hair-tonics, nasal washes and gargles, &c	30,912	Dec. 17	131	1930
Schotz, John F., Chicago, Ill. Dental alloy	29,240	Dec. 17	131	1923
Simmons Hardware Company, St. Louis, Mo. Adzes, cutting-tools, augers, boring-bits, files, &c	28,014	Dec. 17	131	1922
Snyder Med. Co., J. H., Jonesboro, Ark. Liniment	30,847	Dec. 17	131	1929
Sovereign Polish Co., Boston, Mass. Shoe blackings and dressings	31,004	Dec. 17	131	1932
Speed & Company, J. B., Louisville, Ky. Salt	31,085	Dec. 17	131	1933
Stirn, L. & E., New York, N. Y. Silk piece goods	29,622	Dec. 17	131	1924
Strohmeyer & Arpe Company, New York, N. Y. Olive-oil	30,332	Dec. 17	131	1926
Strohmeyer & Arpe Company, New York, N. Y. Salad-oil	30,333	Dec. 17	131	1926
Strohmeyer & Arpe Company, New York, N. Y. Sardines, sprats, anchovies, herrings, &c	30,334	Dec. 17	131	1926
System Company, Chicago, Ill. Magazines	29,799	Dec. 17	131	1925
The 6-5-4 Co., Detroit, Mich. Stove-polish	30,475	Dec. 17	131	1926
Thomson Wood Finishing Co., Philadelphia, Pa. Varnishes, enamels, and paints	7,586	Dec. 17	131	1919
Thos. Harper & Sons, Ltd., London, England. Crewel-needles	4,724	Dec. 17	131	1919
Truesdell, George A., Winthrop Harbor, Ill. Antiseptic medicinal preparation	27,076	Dec. 17	131	1921
Tucker Pharmacal Co., Brooklyn, N. Y. Remedy for epilepsy	30,845	Dec. 17	131	1929
Tyler, Frank R., Richmond, Va., assignor to Prophytol Dentifrice Co., Inc. Tooth powder and paste	28,269	Dec. 17	131	1922
Ullmann & Co., Bernhard, New York, N. Y. Yarns	31,083	Dec. 17	131	1933
W. Bingham Company, Cleveland, Ohio. Hatchets, scythes, adzes, auger-bits, &c	3,709	Dec. 17	131	1919
Walton and Logan Company, Lynn, Mass. Leather boots and shoes	30,472	Dec. 17	131	1926
Walter M. Lowney Company, Boston, Mass. Chocolates and bonbons	31,146	Dec. 17	131	1934
Walter M. Lowney Company, Boston, Mass. Milk-chocolate	31,182	Dec. 17	131	1934
Warner & Co., William R., Philadelphia, Pa. Medicines in tablet form	30,844	Dec. 17	131	1929
Western Leather Mfg. Co., Chicago, Ill. Leather medicine-cases, emergency-bags, vial-cases, &c	24,881	Dec. 17	131	1921
White-Haines Optical Company, Columbus, Ohio. Eyeglasses	29,669	Dec. 17	131	1924
Whittemore, Horace A., Boston, Mass. Fishing-tackle	30,405	Dec. 17	131	1926
Wilson & Co., James L., New York, N. Y. Cotton diaper-cloth	30,718	Dec. 17	131	1928
Wilson, John, Sacramento, Cal. Disinfectant, deodorizer, and insect and germ killer	31,110	Dec. 17	131	1933
Winterbottom Book Cloth Company, Ltd., Manchester, England. Bookbinders' cloth	30,881	Dec. 17	131	1929
Wolf, Alfred M., New York, N. Y. Cigarettes	30,817	Dec. 17	131	1929

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED ON THE 17TH DAY OF DECEMBER, 1907.

Invention.	Name.	No.	Date.	Monthly volume. Specification.	Monthly volume. Drawing.	Official Gazette. Volume.	Official Gazette. Page.
Acid or nitric oxid from atmospheric air. Production of nitric	H. Pauling	873,891	Dec. 17	3236	690	131	1756
Adding-machines. Digit-repeating mechanism for	C. N. McFarland	874,107	Dec. 17	3714	781–2	131	1824
Adjustable bracket	M. Kurtzon	874,014	Dec. 17	3467	730	131	1795
Air-brake system	F. H. Dukesmith	874,054	Dec. 17	3559	758	131	1808
Alarm: *See* Burglar-alarm. Fire-alarm.							
Alarm system. Electrical	W. N. Fawcett	873,935	Dec. 17	3313	707	131	1770
Alloy. Metal	E. Haynes	873,745	Dec. 17	2943	.....	131	1708
Alloy. Metal	E. Haynes	873,746	Dec. 17	2945	.....	131	1708
Amusement apparatus	E. T. Sulzer, M. Garanger, and V. J. Dey.	874,135	Dec. 17	3766	793–4	131	1835
Amusement. Illusion apparatus for	F. Darcy and S. Lubin	874,169	Dec. 17	3826	806	131	1846
Animal-trap	R. C. Randall	873,783	Dec. 17	3014	639	131	1720
Animal-trap	W. H. Howard	873,864	Dec. 17	3192	680	131	1748
Animal-trap	R. Chassé	873,988	Dec. 17	3415	726	131	1787
Armature-winding machine	P. E. Chapman	874,163	Dec. 17	3815	804	131	1844
Ash-pan. Self-regulating	C. W. and E. C. Hamel	874,188	Dec. 17	3868	815–16	131	1852
Axle-cutter	D. W. McClay	873,886	Dec. 17	3226	688	131	1754
Bag-holder	O. A. Pust	873,893	Dec. 17	3237	691	131	1756
Bag or sack fastener or closure	A. T. Hamilton and W. B. Lowe	874,333	Dec. 17	4164	876	131	1901
Baking	A. P. Anderson	874,279	Dec. 17	4056	857	131	1833
Baling-press	F. B. Cumpston	874,306	Dec. 17	4113	866–7	131	1892
Baling-press head-block	G. W. Spaulding	873,803	Dec. 17	3052	649	131	1726
Baling-presses. Bale-tying mechanism for	C. E. and H. W. Bower	873,835	Dec. 17	3131	666–8	131	1738
Balloon-inflator	F. J. Creque	874,166	Dec. 17	3822	806	131	1843
Ballot-strip-locking device	C. C. Abbott	873,824	Dec. 17	3104	662	131	1734
Bar: *See* Buckle-bar. Sash-bar. Detector-bar. Splice-bar.							
Basket-making machines. Nailing mechanism for	E. Horton	874,361	Dec. 17	4213	887	131	1910
Bath-cabinet	A. M. Walstrom	873,811	Dec. 17	3067	652	131	1729
Bathing-suit	J. Bullis	873,713	Dec. 17	2868	610	131	1697
Bearing. Roller-	J. E. Sackett	874,119	Dec. 17	3741	786–7	131	1829
Bed-spring	W. R. Boisvert	874,048	Dec. 17	3548	755	131	1806
Bell. Electric	J. F. McElroy	874,024	Dec. 17	3486	742	131	1798
Belt end	C. Bloomberg	873,982	Dec. 17	3406	726	131	1785
Beverages from fermented liquids. Making non-alcoholic	H. Linzel and C. Bischoff	874,216	Dec. 17	3929	828	131	1862
Binder for loose leaves. Temporary	H. Wiedeman	874,371	Dec. 17	4237	892	131	1913
Biscuits from their pans. Mechanism for detaching	G. Herbert, Jr	874,195	Dec. 17	3881	819	131	1855
Bit: *See* Drenching-bit.							
Board: *See* Ironing-board. Piano sounding-board.							
Boiler stand. Range-	C. L. Holden	874,071	Dec. 17	3659	769	131	1815
Bolster. Body-	H. A. Wahlert	874,044	Dec. 17	3539	754	131	1805
Bolt-header	C. H. Hopkins	873,750	Dec. 17	2953	626	131	1709
Bolt locking mechanism. Split-	W. W. Parsons	874,233	Dec. 17	3968	837	131	1869
Bolt-machine	H. Crehan	873,727	Dec. 17	2911	617–18	131	1702
Book-cover	I. S. Wolcott	873,973	Dec. 17	3390	721	131	1783
Bookcase	T. J. Lamping	874,015	Dec. 17	3468	739–40	131	1795
Boot and shoe	J. H. Cunningham	873,731	Dec. 17	2919	619	131	1703
Boring and turning mill	J. Riddell	873,787	Dec. 17	3018	640–1	131	1721
Boring device	J. W. Cone and F. R. Miller	873,724	Dec. 17	2906	616–17	131	1700
Boring-machine	T. Leeland	874,090	Dec. 17	3688	776	131	1820
Bottle-closure	R. Koch	873,869	Dec. 17	3198	681	131	1749
Bottle-holder. Barber's	J. W. B. Faris	873,933	Dec. 17	3310	707	131	1769
Bottle. Non-refillable	H. O. McClurg	874,021	Dec. 17	3481	741	131	1797
Bottle. Non-refillable	I. I. Kremer	874,211	Dec. 17	3922	826	131	1861
Bottle-stopper	G. Kirkegaard	873,867	Dec. 17	3195	681	131	1748
Bottles. Guard for non-refillable	H. J. Mortensen	874,020	Dec. 17	3480	741	131	1797
Box	A. Merckens	874,099	Dec. 17	3700	779	131	1822
Box	A. Merckens	874,100	Dec. 17	3701	779	131	1823
Box	S. W. Helm	874,337	Dec. 17	4171	878	131	1902
Box-cover lifter	R. L. Tudor	874,043	Dec. 17	3538	753	131	1805
Brace: *See* Vehicle-brace.							
Bracelet	I. R. Lederer	873,873	Dec. 17	3202	682	131	1750
Bracket: *See* Curtain-bracket.							
Brake: *See* Fluid-pressure brake. Sled-brake. Magnetic brake. Vehicle-brake.							
Brake mechanism	F. Sedziak	873,905	Dec. 17	3256	695	131	1760

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Brewing soy. Apparatus for	T. Suzuki	874,041	Dec. 17	3533	752	131	1804
Bridges. Safety-curtain for preventing runaway accidents on	M. Goodman	874,327	Dec. 17	4155	874	131	1899
Brooder	C. A. Cyphers	873,993	Dec. 17	3426	729	131	1789
Brooder and grower. Plant and vegetable	W. P. Lutz	874,218	Dec. 17	3935	831	131	1863
Broom	W. D. McAtlin	874,368	Dec. 17	4232	891	131	1913
Broom and dust-pan hanger	N. L. Lyons	873,762	Dec. 17	2973	631	131	1713
Brush. Sectional hair	C. A. Fetters	873,852	Dec. 17	3172	675	131	1744
Buckle	M. Rubin	873,791	Dec. 17	3028	643	131	1723
Buckle. Back-band	C. S. and A. S. Huntington	874,076	Dec. 17	3668	771	131	1816
Buckle-bar	J. H. B. Butts	874,162	Dec. 17	3813	804	131	1844
Building-block-molding machine	F. E. Farnham	873,834	Dec. 17	3311	707	131	1770
Buoy. Signal	A. Nelson	874,230	Dec. 17	3962	835–6	131	1860
Burglar-alarm	T. L. Willson	873,917	Dec. 17	3280	700–1	131	1764
Burglar-alarm. Portable	G. A. Humason	874,202	Dec. 17	3909	823	131	1858
Burner:	J. L. Mulry	874,227	Dec. 17	3955	834	131	1866
See Gas-burner. Lamp-burner.							
Butter-cutter	J. M. Low	874,094	Dec. 17	3694	777	131	1821
Butter-cutting machine	R. W. Stevens	874,133	Dec. 17	3762	791–3	131	1834
Butter-separator	G. W. Winters	874,148	Dec. 17	3789	798	131	1839
Button. Collar	J. N. Mills	874,224	Dec. 17	3951	834	131	1865
Button for lacing terminals. Fastener	T. F. Burke	874,161	Dec. 17	3812	804	131	1843
Button. Shoe	E. S. Ellis	874,314	Dec. 17	4136	870	131	1895
Cabinet	E. U. Kinsey	874,087	Dec. 17	3682	774–5	131	1819
Cable-drum mechanism	C. Pirtle	873,781	Dec. 17	3007	638	131	1719
Calipers. Micrometer	E. Heym	874,197	Dec. 17	3895	820	131	1856
Can:							
See Oil-can.							
Can closure	S. B. Sleight	874,256	Dec. 17	4005	846	131	1875
Can-opener	B. Biehl	874,200	Dec. 17	4081	860	131	1887
Cans and other receptacles. Closure for	W. F. Hyatt	873,752	Dec. 17	2956	626	131	1710
Candlestick and candle-holder	M. E. M. Reischer	874,241	Dec. 17	3985	841	131	1871
Candy material or other commodities. Machine for sizing, cutting, and marking	A. H. Bartlett	873,832	Dec. 17	3125	665	131	1737
Car draft-gearing. Railway	J. F. Courson	873,843	Dec. 17	3154	672	131	1741
Car. Dump	T. R. McKnight	873,772	Dec. 17	2990	634	131	1716
Car or locomotive. Electrically-propelled	E. H. Anderson	873,703	Dec. 17	2842	605	131	1693
Car-seat. Auxiliary	N. Joergensen	874,082	Dec. 17	3676	773	131	1818
Car-stop. Automatic	G. H. Richards	874,349	Dec. 17	4191	882	131	1906
Car. Tank	F. L. Irwin	874,363	Dec. 17	4217	888–9	131	1910
Car-underframe	C. S. Shallenberger	873,800	Dec. 17	3045	647	131	1725
Car-unloading apparatus. Grain	F. R. McQueen	873,773	Dec. 17	2992	634–5	131	1717
Car-ventilating apparatus. Passenger	O. Hoffman and E. A. Newman	873,862	Dec. 17	3185	679	131	1747
Car-ventilator	T. H. Garland	874,320	Dec. 17	4145	872	131	1897
Carpet and rug stretching device	H. Hardwick	873,743	Dec. 17	2941	623	131	1707
Carriage-curtain fastener	W. S. Jonah	874,083	Dec. 17	3677	773	131	1818
Carriage. Folding baby	G. E. Dann	874,308	Dec. 17	4123	868	131	1893
Cart. Hand	B. F. Brown	873,986	Dec. 17	3413	727	131	1787
Case:							
See Display-case. Gun-case. Egg-case. Packing-case. Eyeglass-case.							
Cash-issuing machine	R. A. Dallugge	874,307	Dec. 17	4117	867–8	131	1898
Caskets. Fabric frame for	A. Sauer, Jr.	873,901	Dec. 17	3249	693	131	1759
Casting. Chilled	C. J. Mesta	874,018	Dec. 17	3478	.....	131	1796
Cautery	L. De Forest	874,178	Dec. 17	3842	810	131	1849
Celluloid and similar substances. Apparatus for utilizing the waste of	E. Garbin	874,181	Dec. 17	3849	811–12	131	1850
Cement-block-molding machine	J. Layfield and A. V. Crisp	874,366	Dec. 17	4228	890–1	131	1912
Chair	W. B. Jackson	874,203	Dec. 17	3910	823	131	1858
Chair-seat	J. W. Henry	873,939	Dec. 17	3326	709	131	1772
Chalk-line holder	F. J. Stanley	874,130	Dec. 17	3758	791	131	1833
Chimney cap or ventilator	J. C. Rothbarth	874,249	Dec. 17	3996	843	131	1873
Chopper:							
See Cotton-chopper.							
Chopping and extracting apparatus	O. Wehrle	874,270	Dec. 17	4041	854	131	1880
Churn	A. H. Gragg	874,002	Dec. 17	3445	733	131	1792
Churn. Revolving-paddle	E. Blackford	874,292	Dec. 17	4084	861	131	1888
Chute for wagons. Discharge	J. Harbolsheimer	874,334	Dec. 17	4165	876	131	1901
Cigar-machine roll	R. A. Bright and A. W. Davis	873,836	Dec. 17	3140	668	131	1738
Circuit-breaker	F. W. Blair	874,293	Dec. 17	4085	861	131	1888
Circuit-breaker. Automatic	G. W. Hart	874,190	Dec. 17	3872	816–17	131	1853
Clamp:							
See Printing-plate clamp. Rail-clamp.							
Clamp and spreader. Combined	J. R. and A. Zeiser	874,151	Dec. 17	3795	800	131	1840
Clamp-setting machine	B. A. Grasberger	874,184	Dec. 17	3861	813–14	131	1851
Clasp	M. M. Sturm and J. Silverstein	873,967	Dec. 17	3379	719	131	1780
Cleaner:							
See Grain-cleaner. Type-cleaner. Tube and flue cleaner.							
Clip:							
See Clothes-pin clip.							
Clip	A. W. Ullom	874,139	Dec. 17	3772	795	131	1836
Closet-cisterns. Siphon-valve for	N. B. Johnson	873,945	Dec. 17	3333	710	131	1773
Clothes-pin clip	M. O. Winkler	873,820	Dec. 17	3096	658	131	1732
Clothes-pounder. Atmospheric	S. D. Griffith	874,066	Dec. 17	3646	766	131	1813
Clutch	O. Tornfelt	874,259	Dec. 17	4010	847	131	1876
Clutch. Friction	E. Sprung	873,910	Dec. 17	3264	697	131	1752
Coffee and tea urn	C. A. Barwise	873,980	Dec. 17	3402	725	131	1755
Coffee mixture	A. E. Crocker	874,305	Dec. 17	4112	.....	131	1892
Concrete construction. Reinforced	J. W. Muldoon	874,226	Dec. 17	3953	834	131	1866
Concrete. Machine for molding units of clay or other refractory material to be used in the manufacture of	W. D. Crow	874,167	Dec. 17	3824	806	131	1845
Concrete wall. Reinforced interlocking	R. Edmondson	873,739	Dec. 17	2935	622	131	1706
Condenser	N. S. Hopkins	873,751	Dec. 17	2955	626	131	1709
Conduit-threading device	A. H. De Voe	873,996	Dec. 17	3431	730–1	131	1790
Controller	E. W. Stull	873,805	Dec. 17	3055	649–50	131	1727
Controller-regulator	C. P. Ebersole	874,173	Dec. 17	3831	808	131	1847
Controlling mechanism	J. J. Nef	874,229	Dec. 17	3959	835	131	1867

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Conveyer	S. F. Joor	874,365	Dec. 17	4225	890	131	1911
Conveying apparatus	T. S. Miller	874,223	Dec. 17	3948	833	131	1865
Cookers and exhausters. Conveying means for can	M. W. Groom	874,330	Dec. 17	4159	875	131	1900
Copy-holder	N. J. Schlingloff	873,902	Dec. 17	3250	694	131	1759
Cord or twine holder	H. M. Danker	874,168	Dec. 17	3825	806	131	1846
Corn-ear rack	M. N. Flugum	874,318	Dec. 17	4141	871–2	131	1896
Cotton-chopper	N. S. Sodekson	874,129	Dec. 17	3756	790	131	1833
Counter. Registering	P. L. Johnson	873,754	Dec. 17	2958	627	131	1710
Coupling:							
See Hose-coupling. Thill-coupling. Pipe-coupling.							
Crank mechanism. Swinging-lever	X. Baier	874,285	Dec. 17	4072	859	131	1885
Cultivator. Orchard	J. Lingaas	873,875	Dec. 17	3205	683	131	1750
Current motor. Alternating	E. F. W. Alexanderson	873,702	Dec. 17	2836	604–5	131	1693
Current-supplying arrangement	B. Salomon	873,899	Dec. 17	3245	693	131	1758
Curtain-bracket. Adjustable	J. Doran	874,311	Dec. 17	4127	869	131	1894
Curtain-fixture	C. L. Hopkins	873,863	Dec. 17	3189	679	131	1747
Curtain. Flexible	H. E. Vance	873,810	Dec. 17	3066	652	131	1729
Curtain-pole	A. Freedman	873,854	Dec. 17	3175	675	131	1745
Curtain-pole	A. J. Boyers	874,375	Dec. 17	4240	894	131	1915
Cutter:							
See Axle-cutter. Butter-cutter.							
Cycloramic apparatus	R. G. Gordon	874,328	Dec. 17	4156	874–5	131	1899
Dental articulator	W. Hare	874,189	Dec. 17	3871	816	131	1853
Dental plugger	R. H. Antes	874,281	Dec. 17	4064	858	131	1883
Dental soldering apparatus	J. W. Horner	874,199	Dec. 17	3901	821	131	1856
Desk attachment	J. S. McComb	873,770	Dec. 17	2986	633	131	1718
Detector-bar	C. Herringer	874,196	Dec. 17	3884	819–20	131	1855
Dispensing apparatus	G J Holl	874,072	Dec. 17	3661	769	131	1815
Display apparatus	J., Jr , and A. A. Wiedemeier	874,817	Dec. 17	3081	656	131	1731
Display-case for post-cards, &c	A. C. Cedarburg	874,301	Dec. 17	4105	864	131	1891
Display device for cigar-boxes	W. P. Bowers	874,294	Dec. 17	4087	861	131	1888
Display-rack	F. D. Eno and M. J. Cook	874 315	Dec. 17	4137	871	131	1895
Display-stand	W. D. Molony	873,881	Dec. 17	3219	686	131	1753
Distilled spirits. Package for	E. Bradley	873,710	Dec. 17	2960	608	131	1696
Ditching and grading machine	O. E. Casey	873,718	Dec. 17	2884	612	131	1698
Door-hanger	M. E. Kanaly	874,013	Dec. 17	3466	738	131	1795
Doors or the like. Brace for screen	H. C. Axx	874,283	Dec. 17	4067	858	131	1884
Double objective	M. von Rohr	873,806	Dec. 17	3243	692	131	1758
Draft-equalizer	F. M. Smiley	874,126	Dec. 17	3752	780	131	1832
Drawer. Card-index	B. P. Kenyon	873,755	Dec. 17	2960	627	131	1710
Drenching-bit	O. W. Ratliff	874,239	Dec. 17	3983	840	131	1871
Drier	F. G. Sargent	873,796	Dec. 17	3036	645	131	1724
Drying device	O. Busse	873,987	Dec. 17	3414	727	131	1787
Drying-machine	S. A. Cohen	873,723	Dec. 17	2905	616	131	1700
Drill:							
See Grain-drill. Rock-drill.							
Duplicating apparatus	F. Ries	873,788	Dec. 17	3021	642	131	1721
Dye and making same. Red azo	R. Schile	873,798	Dec. 17	3042	.....	131	1725
Edge setting or burnishing machine	A. Harrington	874,360	Dec. 17	4209	886–7	131	1909
Educational appliance	A. J. Barber	874,152	Dec. 17	3797	800	131	1841
Egg-case. Folding or collapsible	M. Miller	874,104	Dec. 17	3710	780	131	1824
Electric conduits. End cap for	H. P. Moore	874,019	Dec. 17	3479	741	131	1797
Electric controllers. Automatic cut-out for	A. C. Eastwood	873,737	Dec. 17	2930	621	131	1705
Electric fixtures. Canopy for	J. H. Dale	873,994	Dec. 17	3428	730	131	1789
Electric furnace	G. Holmgren	873,861	Dec. 17	3184	678–9	131	1747
Electric lighting	E. A. Sperry	873,804	Dec. 17	3053	649	131	1727
Electric machine. Dynamo	J. L. Burnham	873,714	Dec. 17	2869	610	131	1697
Electric machine. Dynamo	K. A. Pauly	873,778	Dec. 17	3003	637	131	1718
Electric switches. Turn-button for	H. E. Leppert	874,016	Dec. 17	3474	740	131	1796
Electric transmission of intelligence	I. Kitsee	874,209	Dec. 17	3919	826	131	1860
Electrical accumulator	C. Busch	873,715	Dec. 17	2871	611	131	1698
Electrolytic cell	A. E. Gibbs	874,064	Dec. 17	3842	765	131	1812
Elevator:							
See Grain-elevator. Grain-storage elevator.							
Elevator	P. Hinkel	874,339	Dec. 17	4176	879	131	1902
Elevator-lock	M. Dashiell	873,925	Dec. 17	3295	704	131	1767
Engine:							
See Explosive-engine. Rotary engine. Gas-engine. Rotary explosive-engine. Internal-combustion engine. Traction-engine.							
Engine circuit-closer. Explosive	T. A. Bemus	874,289	Dec. 17	4079	860	131	1886
Engine-starting mechanism	J. T. Barber	874,153	Dec. 17	3799	800	131	1841
Engines. Piston for internal combustion or explosion	J. Hartoch	874,006	Dec. 17	3449	734	131	1793
Engines. Reverse-gear for four-cycle combustion	F. T. Flinchbaugh	874,177	Dec. 17	3840	809–10	131	1848
Envelop	H. L. White and F. J. Rogers	874,144	Dec. 17	3782	797	131	1838
Excavator-scraper	L. A. Déay	873,734	Dec. 17	2924	620	131	1704
Excavators. Dipper and dipper-handle for	J. P. Karr and J. D. Rauch	874,207	Dec. 17	3916	824–5	131	1860
Explosive-engine	L. E. Thompson	873,808	Dec. 17	3062	651	131	1728
Explosive-engine	H. Grade	873,857	Dec. 17	3179	677	131	1746
Eyeglass-case	O. Ducker	874,172	Dec. 17	3830	807	131	1847
Eyeglass-hook	J. Q. Adams	873,701	Dec. 17	2835	604	131	1693
Fabric:							
See Pile fabric. Waterproof fabric.							
Fabric-roll protector	P. Buckborough	874,160	Dec. 17	3811	803	131	1843
Falling bodies. Apparatus for determining the law of	J. C. Packard	874,110	Dec. 17	3720	783	131	1826
Fan	S. Webb and J. Pearson	874,142	Dec. 17	3778	796	131	1837
Fan. Centrifugal	L. B. Cousans	873,923	Dec. 17	3290	703–4	131	1766
Fan. Pneumatic	C. Kuderer	874,212	Dec. 17	3923	827	131	1861
Feeder. Boiler	W. J. Jeffries	874,080	Dec. 17	3673	772–3	131	1817
Fence	E. Barth	874,154	Dec. 17	3800	801	131	1841
Fence-post	C. Lemere	874,213	Dec. 17	3924	827	131	1861
Fertilizer-distributer	W. Zachow	873,823	Dec. 17	3060	650–61	131	1723
Fertilizer-distributer	J. J. Jones	874,205	Dec. 17	3913	824	131	1859
Fire-alarm and signaling device	L. Sackwitz	874,250	Dec. 17	3998	844	131	1874
Fireproof lining	F. O. Werther	874,271	Dec. 17	4042	.....	131	1880
Fishing-reel	H. C. Reichardt	873,784	Dec. 17	3015	639	131	1720
Fluid charging and discharging device. Compressed	G. A. Bobrick	873,984	Dec. 17	3410	727	131	1786
Fluid-pressure brake	W. V. Turner	874,260	Dec. 17	4013	847–8	131	1877

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Food. Cotton-seed	J. von der Kammer	873,946	Dec. 17	3335	710	131	1774
Form. Garment-	W. F. and E. T. Palmenberg	874,232	Dec. 17	3967	837	131	1868
Forms. Apparatus for constructing dress-	L. Lemcke	874,091	Dec. 17	3690	776–7	131	1820
Frame:							
See Stretcher-supporting frame.							
Voting-machine frame.							
Furnace:							
See Electric furnace. Smelting-furnace.							
Knobbling-furnace.							
Furniture	O. Vikören	873,914	Dec. 17	3271	699	131	1763
Furniture. Metal folding	H. Grauel	874,003	Dec. 17	3446	733	131	1792
Fuse attachment-plug. Cartridge-	R. A. Cultra	873,846	Dec. 17	3159	673	131	1742
Fuse indicator. Safety-	C. N. Sachs	873,793	Dec. 17	3031	644	131	1723
Gage:							
See Loom power-gage. Track-gage.							
Skirt-gage.							
Garment-pads. Making	G. Goldman	873,909	Dec. 17	3439	731–2	131	1791
Garment-supporter	F. E. Coulter	873,726	Dec. 17	2910	617	131	1701
Gas-burner	A. Meyer	873,880	Dec. 17	3216	685–6	131	1752
Gas-burner	R. Gefäll	874,063	Dec. 17	3641	765	131	1812
Gas-engine. Vertical	W. von Oechelhaeuser and C. Steinbecker.	874,309	Dec. 17	4233	891–2	131	1913
Gas generator. Water-	F. Dannert	874,309	Dec. 17	4125	868–9	131	1893
Gas-lighter. Electric	J. Dickens	874,357	Dec. 17	4204	885	131	1909
Gas-producer	S. Griffin	873,858	Dec. 17	3180	677	131	1746
Gas-producer	O. K. Zwingenberger	874,276	Dec. 17	4052	856	131	1882
Gas-producer connections. Cleaning	R. H. Miller	873,768	Dec. 17	2984	633	131	1715
Gas-producers, furnaces, &c. Feeding mechanism for	J. A. Waldburger	874,352	Dec. 17	4195	884	131	1907
Gas-regulator	G. L. Lewis and J. R. Frankenberg.	874,017	Dec. 17	3476	740	131	1796
Gases of motors. Apparatus for deodorizing the exhaust-	A. Reichel	873,785	Dec. 17	3016	640	131	1721
Gate and operating means therefor	H. L. Coats	874,165	Dec. 17	3820	805	131	1845
Gear. Roller-tooth	C. A. Janson	874,342	Dec. 17	4179	880	131	1903
Gear. Variable-speed transmission and reversing	W. S. Hovey	874,075	Dec. 17	3666	771	131	1816
Generator:							
See Gas-generator.							
Generator and burner. Combined	R. M. Jackson	874,341	Dec. 17	4178	879–80	131	1903
Gong. Pneumatically-operated	F. B. Corey	873,725	Dec. 17	2908	617	131	1701
Governor	I. J. Babcock	874,284	Dec. 17	4068	858	131	1884
Grader	E. F. Higgins	874,198	Dec. 17	3899	820–1	131	1856
Grain-cleaner	A. C. Brantingham	873,985	Dec. 17	3412	727	131	1786
Grain-drill	T. Umrath	873,970	Dec. 17	3385	720	131	1782
Grain-elevator	J. W. Roberts	873,959	Dec. 17	3359	715–16	131	1778
Grain, ore, and mineral separators. Cut-off and blast-regulator for	W. Gray	874,329	Dec. 17	4158	875	131	1899
Grain-separator	F. F. Wells	873,972	Dec. 17	3389	721	131	1782
Grain-storage elevator	F. R. McQueen	873,774	Dec. 17	2995	635	131	1717
Grinding-mill	H. C. Robinson	874,244	Dec. 17	3988	842	131	1872
Gun-case	H. C. Reutar	873,786	Dec. 17	3017	640	131	1721
Gunpowder. Manufacture of	C. W. Volney	874,264	Dec. 17	4031	852	131	1878
Hair-cut register	J. W. B. Faris	873,998	Dec. 17	3438	731	131	1790
Hair-drying apparatus	R. Grape	874,065	Dec. 17	3645	765	131	1812
Hammer. Pneumatic	M. Hardsocg	873,938	Dec. 17	3321	708	131	1772
Hanger:							
See Broom and dust-pan hanger.							
Shaft-hanger.							
Harrow attachment	H. C. Green	874,185	Dec. 17	3864	814	131	1857
Harrow-disk	L. E. Waterman	874,268	Dec. 17	4039	853	131	1879
Harrow-transporter	I. A. Weaver	874,141	Dec. 17	3776	796	131	1837
Harvesting and husking machine. Corn	J. Ross	874,247	Dec. 17	3993	842–3	131	1873
Hat-curling iron. Electric	J. L. O'Brien	874,029	Dec. 17	3496	744	131	1800
Headwear	A. O. Gordon	873,856	Dec. 17	3177	676	131	1745
Heater:							
See Water-heater.							
Heater protector. Oil-	E. H. Brown	874,206	Dec. 17	4090	862	131	1889
Heating apparatus. Vacuum	C. C. Peck	874,112	Dec. 17	3724	784	131	1826
Heating system. Vacuum	C. C. Peck	874,113	Dec. 17	3726	784	131	1827
Hedge-trimmer	J. A. Bechtold	873,830	Dec. 17	3124	665	131	1736
Hinge	S. S. Arnold	873,704	Dec. 17	2847	606	131	1694
Hoisting apparatus	E. Putnam	874,238	Dec. 17	3981	840	131	1870
Hoisting mechanism	B. F. Shafer	873,799	Dec. 17	3043	646	131	1725
Hoisting-tower	W. J. Haskins	874,192	Dec. 17	3876	817–18	131	1854
Hook:							
See Eyeglass-hook.							
Horse-detacher	W. H. Eckman	873,929	Dec. 17	3300	705	131	1767
Horse-detacher	M. R. Ritts	874,243	Dec. 17	3987	841	131	1872
Horseshoe	C. N. Stevens	873,966	Dec. 17	3378	719	131	1780
Horseshoe-machine	A. Smith	873,802	Dec. 17	3050	648	131	1726
Hose-coupling	G. E. Petterson	873,892	Dec. 17	3236	690	131	1756
Hose-couplings. Electrical connection for	F. Hoffman	873,940	Dec. 17	3327	709	131	1772
Hose-supporter	M. Sternberg	874,132	Dec. 17	3761	791	131	1834
Hot-water supply	D. S. Cole	873,842	Dec. 17	3151	671–2	131	1740
Houses. Running-gear for portable	W. F. Kramer and C. Anderton, Jr.	873,759	Dec. 17	2968	630	131	1712
Housing	H. Krantz	873,872	Dec. 17	3201	682	131	1756
Humidifying and air-moistening apparatus	S. W. Cramer	873,924	Dec. 17	3292	704	131	1766
Hydrogen from water-gas. Producing	A. Frank	873,853	Dec. 17	3174	.....	131	1745
Indicator:							
See Fuse-indicator.							
Inertia-governor	H. Lentz and W. Voit	874,214	Dec. 17	3926	827–8	131	1862
Ink-well	A. J. Bluntach	873,983	Dec. 17	3407	726	131	1786
Innersole	H. Cohen	873,722	Dec. 17	2903	616	131	1700
Innersole	B. Nathan	873,775	Dec. 17	2996	636	131	1717
Insulated coil	C. F. Peterson	873,780	Dec. 17	3000	638	131	1719
Insulated rail-joint	B. Wolhaupter	873,821	Dec. 17	3086	658	131	1732
Insulating covering or sheathing for contact-rail conductors.	W. H. Baker	873,705	Dec. 17	2849	606	131	1694
Insulating end post for rail-joint circuits	W. E. Karns	874,206	Dec. 17	3914	824	131	1859
Internal-combustion engine	E. H. Clift	873,840	Dec. 17	3147	671	131	1739

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Internal-combustion engine	F. Lyst	873,952	Dec. 17	3340	713	131	1775
Inetrnal-combustion engine	B. A. Slocum	873,963	Dec. 17	3365	717	131	1779
Internal-combustion engine	O. H. Shroyer	874,122	Dec. 17	3745	788	131	1830
Iron:							
See Self-heating iron.							
Ironing-board	F. C. Geiger	874,323	Dec. 17	4151	873	131	1898
Jack:							
See Lifting-jack. Scaffold-jack							
Jars, bottles, and like receptacles. Closure for	M. D. Converse	873,989	Dec. 17	3416	728	131	1787
Joint:							
See Insulated rail-joint. Rail-joint.							
Kettle-lid	M. J. Trett	874,138	Dec. 17	3772	795	131	1836
Knitting-machine pattern mechanism	H. A. Houseman	874,074	Dec. 17	3665	770	131	1816
Knobbling-furnace	W. Sharp	874,038	Dec. 17	3523	751	131	1803
Label-paster	G. N. Byl and J. Koehler	874,298	Dec. 17	4093	862	131	1890
Labeling machine. Can-	J. H. Kain	874,012	Dec. 17	3462	737–8	131	1794
Lamp-burner	J. E. Ross	874,248	Dec. 17	3995	843	131	1873
Lamp-socket	J. J. Rooney	874,245	Dec. 17	3990	842	131	1872
Lathes. Adjustable feed-carriage for	C. A. Fischer	874,176	Dec. 17	3838	809	131	1848
Latrine for use in the field	F. C. Herrick	873,749	Dec. 17	2951	625	131	1709
Laundry-marking machine	C. H. Malben	874,220	Dec. 17	3939	832	131	1864
Lavatory	E. G. Watrous	873,915	Dec. 17	3272	699	131	1763
Leather, &c., into continuous strips. Machine for cutting	F. W. Merrick	874,102	Dec. 17	3704	779–80	131	1823
Leather-working machine	J. Rood and F. J. Perkins	873,790	Dec. 17	3025	642–3	131	1722
Lever mechanism	F. A. Falk	874,175	Dec. 17	3837	809	131	1848
Life-preserver	A. Necker	874,026	Dec. 17	3491	743	131	1799
Lifter:							
See Box-cover lifter. Well-pipe lifter.							
Lifting-jack	G. F. Freed	874,061	Dec. 17	3638	764	131	1811
Lifting-machine	E. and U. S. De Moulin	873,733	Dec. 17	2922	620	131	1704
Line-space-indicating device	C. C. Poole	873,782	Dec. 17	3009	638–9	131	1720
Liquid-applying device	P. R. Glass	874,359	Dec. 17	4208	886	131	1909
Liquid ripener, pasteurizer, and cooler	A. Jensen	874,343	Dec. 17	4181	880	131	1904
Lithographic rollers. Means for mounting stone	H. Wagner	874,267	Dec. 17	4038	853	131	1879
Lock:							
See Elevator-lock. Sash-lock.							
Nut-lock.							
Loom power-gage and lug-strap	C. A. Messer	873,767	Dec. 17	2981	632	131	1715
Loom-reed	A. Marcante	874,096	Dec. 17	3697	778	131	1821
Loom-shuttle	A. Guldemann	874,331	Dec. 17	4161	876	131	1900
Lubricator	J. T. Pedersän	874,114	Dec. 17	3729	784	131	1827
Macaroni and other substances. Apparatus for drying	L. von Süsskind	874,136	Dec. 17	3768	794	131	1835
Magnetic brake	F. G. Haldy	874,186	Dec. 17	3865	814–15	131	1852
Mail-bag deliverer	J. Millsap	874,225	Dec. 17	3952	834	131	1865
Mail-bag receptacle	G. C. Whiteford	874,273	Dec. 17	4047	855	131	1881
Mail catcher and crane	O. M. Peregrine	874,116	Dec. 17	3735	785–6	131	1828
Mail-chute	J. W. Cutler	874,053	Dec. 17	3556	757–8	131	1808
Mail-pouch catcher	J. W. Pepple	874,234	Dec. 17	3972	838	131	1869
Mail-pouch crane	H. W. Kline	874,210	Dec. 17	3920	826	131	1860
Mail-pouch deposit and collection apparatus	M. C. Dillen	873,735	Dec. 17	2925	621	131	1704
Manure. Treating	F. A. Goeckeler	874,326	Dec. 17	4153	.....	131	1899
Massage, shampooing, and other purposes. Implement for	H. P. Schelling	874,251	Dec. 17	3999	844	131	1874
Massage treatments. Register-operating device for	J. W. B. Faris	873,931	Dec. 17	3395	706	131	1768
Match-safe. Calendar	F. P. Andrus	874,280	Dec. 17	4062	857	131	1883
Match scratch and receptacle	D. Lange	874,347	Dec. 17	4188	882	131	1905
Matrices. Producing	W. H. Welsh	874,353	Dec. 17	4197	884	131	1907
Matrices. Producing	W. H. Welsh	874,354	Dec. 17	4198	884	131	1906
Mattress and bedclothes holder	G. E. Parker and W. W. Dickson	873,777	Dec. 17	3002	637	131	1718
Measure. Tape-	F. Buck	873,712	Dec. 17	2865	610	131	1697
Measuring device. Skirt-	M. J. Bovard	874,158	Dec. 17	3806	802	131	1842
Measuring the angles of sight. Apparatus for	E. Schneider	873,904	Dec. 17	3255	694	131	1760
Mechanical movement	N. B. Wales	874,045	Dec. 17	3541	754	131	1805
Metallic compounds. Purification of	C. Van Brunt	873,809	Dec. 17	3064	.....	131	1729
Metallic tie and rail-fastener	E. L. Geer	874,322	Dec. 17	4150	873	131	1896
Metals. Apparatus for electrodepositing	W. Müller and C. R. Murray	874,374	Dec. 17	4244	894	131	1914
Metals. Producing homogeneous bodies from tantalum or other highly-refractory	M. von Pirani	873,958	Dec. 17	3357	715	131	1777
Milking-machine	C. C. Parsons	874,111	Dec. 17	3722	783	131	1828
Mill:							
See Boring and turning mill. Rolling-mill.							
Grinding-mill.							
Mining machine. Coal-	T. J. Newcome	874,028	Dec. 17	3495	743	131	1799
Molding apparatus	C. H. Latham	873,760	Dec. 17	2970	630	131	1712
Mortar-making machine	P. Schwiete	874,252	Dec. 17	4000	844	131	1874
Motion and controlling the transmission thereof. Clutching device for communicating rotary	F. Bailey and F. H. Jackson	873,978	Dec. 17	3395	723	131	1784
Motor:							
See Current-motor.							
Motor	H. A. Hatfield	874,191	Dec. 17	3875	817	131	1853
Motor	G. P. B. Hoyt	874,200	Dec. 17	3903	821–2	131	1857
Motor	E. O. and L. H. Cochran	874,303	Dec. 17	4108	865–6	131	1891
Motor-control system	A. McIver	874,025	Dec. 17	3487	742	131	1798
Motor-starter	A. W. Manz	873,764	Dec. 17	2975	632	131	1714
Motor switching device. Electric-	J. B. Wiard	873,815	Dec. 17	3078	656	131	1731
Muffle or annealing furnace	A. Smallwood	874,039	Dec. 17	3524	751	131	1803
Music-leaf turner	C. A. Matheny	874,221	Dec. 17	3941	832–3	131	1864
Music-roll	H. Koch	873,950	Dec. 17	3341	712	131	1775
Musical apparatus. Tracker-board for legato and other effects in pneumatic	H. Binney	873,981	Dec. 17	3406	726	131	1785
Nose-ring	J. C. Jacoby	873,753	Dec. 17	2957	626	131	1710
Nose-ring	A. A. Landon	874,088	Dec. 17	3684	775	131	1820
Nut-lock	E. C. Beverage	873,831	Dec. 17	3124	665	131	1736
Oar. Bow-facing	H. Flint	874,317	Dec. 17	4140	871	131	1896
Ocular. Ramsden	A. König	873,870	Dec. 17	3199	681	131	1749
Ocular. Ramsden	A. König	873,871	Dec. 17	3200	682	131	1750
Oil-can	W. Irving	873,941	Dec. 17	3329	709	131	1772

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Oil-column	W. M. Rose	374,246	Dec. 17	3991	842	131	1873
Oil-testing apparatus	W. C. Robinson	373,895	Dec. 17	3241	692	131	1757
Optical testing apparatus	J. F. Forth and E. J. Langley	374,179	Dec. 17	3845	810	131	1849
Ore-concentrator	U. S. James	374,364	Dec. 17	4220	889	131	1911
Ore-feeding mechanism	M. Henson	373,748	Dec. 17	2948	625	131	1708
Ores. Treating	F. M. Johnson	373,943	Dec. 17	3331	.....	131	1773
Overshoe-holder	C. W. Dopkins	373,928	Dec. 17	3299	705	131	1767
Packing-case	J. H. S. Johnson	373,866	Dec. 17	3194	680	131	1746
Pail holder. Milk-	A. J. Hurd	374,078	Dec. 17	3670	772	131	1817
Pan: *See* Ash-pan.							
Paper-bag holder	F. D. White	374,143	Dec. 17	3780	796–7	131	1837
Paper-stock-refining machine	A. Jones and A. Gregg	374,344	Dec. 17	4183	881	131	1904
Paper-weight, knife-rest, and optical device. Combined	J. L. Borsch	374,049	Dec. 17	3549	756	131	1807
Pen. Drawing-	G. H. Chavey	374,202	Dec. 17	4107	864	131	1891
Pen. Fountain-	J. P. Morris	373,769	Dec. 17	2985	633	131	1715
Pencil	D. C. Huntley, Jr	374,077	Dec. 17	3669	772	131	1816
Pencil-holder	S. M. Lewis	374,215	Dec. 17	3928	828	131	1862
Pharmaceutical coating	E. Donard and H. Labbé	374,310	Dec. 17	4126	.....	131	1894
Phonograph	H. F. Holmes	373,860	Dec. 17	3183	678	131	1747
Phonograph	C., Jr., and W. Thoma	373,969	Dec. 17	3381	719–20	131	1781
Photographs on metal, glass, porcelain, &c. Producing	A. Hans	374,005	Dec. 17	3448	.....	131	1792
Photography. Combination of line and screen	E. Mertens	374,222	Dec. 17	3946	833	131	1865
Piano-pedal	L. Haas	373,742	Dec. 17	2940	623	131	1707
Piano sounding-board	W. H. Knight	373,949	Dec. 17	3340	712	131	1775
Pianoforte	G. Caddick	374,299	Dec. 17	4095	863	131	1890
Pile fabric	H. Hardwick	373,744	Dec. 17	2942	624	131	1708
Pin: *See* Safety-pin.							
Pin	C. F. Markham	373,765	Dec. 17	2977	652	131	1714
Pipe: *See* Sewer-pipe. Smoking-pipe.							
Pipe coupling. Train-	G. E. Kelly and G. F. Royer	373,947	Dec. 17	3336	711	131	1774
Pipe coupling. Train-	G. E. Kelly and G. F. Royer	373,948	Dec. 17	3338	711	131	1774
Piston and piston-packing	M. H. Sullivan	373,806	Dec. 17	3058	650	131	1727
Piston and piston-packing	M. H. Sullivan	373,807	Dec. 17	3060	651	131	1728
Planers. Knife-jointer for the bottom cutter-heads of wood-	C. W. H. Blood and C. G. Ostemman	374,355	Dec. 17	4200	884–5	131	1908
Planing-machine feed mechanism	H. B. Ross	374,036	Dec. 17	3518	750	131	1802
Planter. Corn-	W. M. Bering and R. L. Ford	373,708	Dec. 17	2854	607–8	131	1695
Planter. Corn-	E. R. Ellefson and L. Ihlan	374,313	Dec. 17	4134	870	131	1895
Planter. Potato-	E. G. Schreiber	374,037	Dec. 17	3520	750	131	1802
Planter. Seed-	T. L. Beaman	374,155	Dec. 17	3801	801	131	1842
Plastic composition. Producing	H. Schudt	373,960	Dec. 17	3360	.....	131	1778
Plumber's trap	A. J. Rudolph	373,792	Dec. 17	3029	643	131	1723
Pneumatic-despatch-tube apparatus	E. A. Fordyce	373,740	Dec. 17	2936	622–3	131	1706
Pole-changer	L. Kiblinger	374,208	Dec. 17	3918	825	131	1860
Post: *See* Fence-post.							
Potatoes, onions, and other products. Machine for grading and cleaning	J. Gascard and R. Shimmen	374,321	Dec. 17	4147	873	131	1897
Poultry-picking device	E. Covert	373,844	Dec. 17	3156	672	131	1741
Power. Apparatus for converting, storing, and utilizing wind-	B. Valiquet	374,140	Dec. 17	3774	795–6	131	1836
Power-dam. Portable	W. H. Crow	373,845	Dec. 17	3158	673	131	1741
Power-transmission apparatus. Liquid-	L. J. Wing	373,819	Dec. 17	3094	657–8	131	1732
Power-transmitting device	G. E. Blake	374,157	Dec. 17	3805	802	131	1842
Power-transmitting mechanism	F. Bucherer	373,838	Dec. 17	3143	669–70	131	1739
Power-transmitting mechanism	H. B. Smith	373,965	Dec. 17	3376	718	131	1780
Press: *See* Baling-press. Printing-press.							
Pressure-regulator. Automatic	C. P. Tolman	374,137	Dec. 17	3769	794–5	131	1835
Printing-machine	W. Spaickhaver	373,909	Dec. 17	3262	696–7	131	1761
Printing-machine	J. H. Pillings	374,033	Dec. 17	3504	746–7	131	1801
Printing-machine or time-stamp	J. C. Wilson	374,047	Dec. 17	3544	755	131	1806
Printing machine. Stencil-	A. B. Dick	373,847	Dec. 17	3162	673–4	131	1742
Printing-plate clamp	S. E. Dittman	373,736	Dec. 17	2927	621	131	1705
Printing-press. Rotary	H. M. Barber	373,979	Dec. 17	3398	723–5	131	1784
Projectile	T. S. Aveson	374,282	Dec. 17	4065	858	131	1884
Propelling apparatus	G. Unzner	374,263	Dec. 17	4026	850–2	131	1878
Pulley-casing. Sheet-metal	F. E. Sloan	374,125	Dec. 17	3751	789	131	1831
Pulleys. Means for stretching covering around	A. B. Gerbrand	374,182	Dec 17	3852	812	131	1850
Pump-mounting	S. Pennell	374,115	Dec. 17	3733	785	131	1828
Punch. Power-	C. Gordon and H. Hart	374,183	Dec. 17	3854	812–13	131	1851
Punching device. Structural-iron-	C. H. Henderson	374,194	Dec. 17	3879	818–19	131	1854
Rack: *See* Corn-ear rack. Display-rack.							
Rail-bond for rail-joint circuits	W. E. Karns	374,085	Dec. 17	3679	774	131	1819
Rail clamp. Guard-	N. O. Goldsmith	374,000	Dec. 17	3443	732	131	1791
Rail-joint	J. Sevcik	374,121	Dec. 17	3744	787	131	1830
Railway-rail and joint therefor	A. H. Hoover and E. M. Clark	374,073	Dec. 17	3664	770	131	1815
Railway-spike	H. J. Dykes	374,055	Dec. 17	3564	750	131	1809
Railway-switch	J. S. Jones	374,011	Dec. 17	3461	737	131	1794
Railway-switch structure	H. R. Luther and F. F. Stockwell, Jr.	373,761	Dec. 17	2971	631	131	1713
Railway-tie	H. G. Willits	374,146	Dec. 17	3784	797–8	131	1838
Railway-tie	J. C. Heintz	374,193	Dec. 17	3878	818	131	1854
Railway-track structure	F. F. Stockwell, Jr., and H. R. Luther	373,912	Dec. 17	3269	698–9	131	1762
Raisins. Apparatus for preparing and packing seeded	N. B. Converse	373,922	Dec. 17	3289	702–3	131	1765
Range. Kitchen-	C. H. Miller, Jr	374,103	Dec. 17	3708	780	131	1823
Range-top	A. W. Brand	374,295	Dec. 17	4088	861–2	131	1889
Ratchet-wrench	J. J. Albrecht	373,977	Dec. 17	3394	723	131	1784
Receptacle	C. J. Schmidt	373,797	Dec. 17	3040	646	131	1724
Recorder and reproducer	T. H. Macdonald	373,763	Dec. 17	2974	631	131	1713
Reel: *See* Fishing-reel.							
Refrigerator	H. C. Nott and A. W. Ran	373,887	Dec. 17	3227	688	131	1754
Register: *See* Hair-cut register.							
Register	L. D. Smith	374,127	Dec. 17	3753	789–90	131	1832
Registering device	M. M. Shumaker	374,254	Dec. 17	4002	845	131	1875
Regulator: *See* Controller-regulator. Pressure-regulator.							
Rein-holder	C. M. Crum	373,990	Dec. 17	3418	726	131	1788
Relay. Throttle-	A. S. Cubitt	373,729	Dec. 17	2914	618	131	1702
Reproducing and imitating machine	B. O. Fanslow	373,930	Dec. 17	3303	706	131	1768
Resistance. Non-inductive	J. F. McElroy	374,023	Dec. 17	3484	742	131	1798
Reversing mechanism	S. T. Nelson	373,776	Dec. 17	2999	636–7	131	1718
Ring: *See* Nose-ring.							
Road-roller	E. T. Wright and C. Longenecker	373,975	Dec. 17	3391	722	131	1783
Rock-drill and other percussion-tool	T. Warsop	373,813	Dec. 17	3072	653–4	131	1730
Rock-drill swivel	S. A. Sizemore	373,801	Dec. 17	3047	647	131	1726
Rocks, &c. Apparatus for breaking	F. Lobnitz	374,217	Dec. 17	3930	829–31	131	1863
Roller: *See* Stay-roller.							
Rolling-mill	E. Ebinghaus and A. Schumacher	373,997	Dec. 17	3437	731	131	1790
Roofing. Metallic sheet-	J. T. and O. G. Burriss	373,920	Dec. 17	3285	702	131	1765
Rotary engine	U. and E. Duchesne	374,312	Dec. 17	4128	869	131	1894
Rotary explosive-engine	G. J. Weber	373,916	Dec. 17	3274	699–700	131	1763
Rubber overshoe	F. C. Hood	374,340	Dec. 17	4177	879	131	1903
Sad-iron stand	H. S. Pease	373,779	Dec. 17	3005	638	131	1719
Safe or receptacle. Wall	H. C. Lowrie	373,878	Dec. 17	3210	684	131	1752
Safety-pin. Locking	K. G. Dieterich	373,927	Dec. 17	3297	705	131	1767
Sash-bar	G. C. Hester	374,069	Dec. 17	3652	768	131	1814
Sash-holder	F. C. Jacobs	373,865	Dec. 17	3193	680	131	1748
Sash-holder	A. H. Marden	374,097	Dec. 17	3698	778	131	1822
Sash-lock	F. Salter	373,794	Dec. 17	3033	644	131	1723
Sash-lock	G. M. Logan	374,093	Dec. 17	3693	777	131	1821
Sausage linking and twisting machine	H. W. Louden, Sr	373,877	Dec. 17	3206	683–4	131	1751
Scaffold-jack	E. D. Hunt and A. C. James	374,362	Dec. 17	4215	887	131	1910
Scale. Rolling-mill	M. Maurer	373,879	Dec. 17	3213	684–5	131	1752
Scoop	A. C. Gough	374,001	Dec. 17	3444	732–3	131	1791
Scoop and scale. Combination	T. T. Ellis	373,850	Dec. 17	3169	674	131	1743
Scoop. Lard-	H. L. Adams and L. O. Wells	374,277	Dec. 17	4053	856	131	1882
Screen: *See* Shaking-screen. Vehicle-screen.							
Screw-driver	J. McCoy	373,771	Dec. 17	2988	633	131	1716
Screw-driving machine	F. W. Sanford	373,900	Dec. 17	3247	693	131	1758
Sealing bottles, jars, and other receptacles. Machine for	J. V. Hull	374,201	Dec. 17	3905	822–3	131	1857
Seat: *See* Car-seat. Chair-seat.							
Self-heating iron	D. A. Jerald	373,942	Dec. 17	3330	710	131	1773
Separator: *See* Butter-separator. Grain-separator.							
Separator for lump material	A. Langerfeld	373,951	Dec. 17	3342	712–13	131	1775
Sewer-pipe	C. Eschenbrenner	373,851	Dec. 17	3171	675	131	1744
Sewing-machine	A. Pfeufer	374,032	Dec. 17	3501	744–6	131	1801
Sewing-machine attachment	R. P. Mees	374,098	Dec. 17	3699	778	131	1822
Shade and curtain-pole support. Combined window-	G. W. Bush	374,297	Dec. 17	4092	862	131	1889
Shaft and cross-bar brace. Combined	F. M. Belden	374,288	Dec. 17	4078	860	131	1886
Shaft-hanger	H. F. Gade	374,062	Dec. 17	3640	764	131	1811
Shaft-hanger	H. T. Hallowell and H. F. Gade	374,067	Dec. 17	3648	766	131	1813
Shaft-hanger	H. T. Hallowell and H. F. Gade	374,187	Dec. 17	3866	815	131	1852
Shaft-hanger	H. F. Gade	374,319	Dec. 17	4142	872	131	1897
Shaking-screen	N. W. L. Brown	374,051	Dec. 17	3553	756	131	1807
Sharpening, removing, and replacing cutter-sections. Apparatus for	W. Rawlinson	373,894	Dec. 17	3239	691	131	1757
Shave-register-operating device	J. W. B. Faris	373,932	Dec. 17	3308	706	131	1769
Sheet-feeding apparatus	A. B. Dick	373,848	Dec. 17	3164	674	131	1743
Sheet-metal receptacles. Forming	L. C. Krummel	374,346	Dec. 17	4186	881	131	1905
Sheet-metal vessels. Machine for making	E. J. Wittebolle	374,149	Dec. 17	3791	799	131	1840
Ships. Device for diminishing the rolling motion of	R. Skutsch	374,255	Dec. 17	4004	845–6	131	1875
Shock-absorbing mechanism	E. J. Young	374,150	Dec. 17	3793	799–800	131	1840
Shovel: *See* Steam-shovel.							
Sieve. Adjustable	C. Closz	373,719	Dec. 17	2886	613	131	1699
Sieve-cleaner	J. Olsen	374,030	Dec. 17	3498	744	131	1800
Sieve. Separator-	W. C. Black	374,291	Dec. 17	4082	860	131	1887
Sifter. Household-	W. J. McLoney and E. B. Preston.	374,109	Dec. 17	3718	782–3	131	1825
Sign	G. Bittle	374,156	Dec. 17	3804	802	131	1842
Sign. Illuminated	J. Chester	373,921	Dec. 17	3287	702	131	1765
Signaling apparatus	W. L. McWhorter	374,228	Dec. 17	3957	835	131	1867
Signaling apparatus. Block-	J. D. Taylor	374,042	Dec. 17	3536	753	131	1804
Signaling device. Automatic	L. Caputo	373,839	Dec. 17	3145	670	131	1739
Signaling device. Electrical	J. P. Williams	374,372	Dec. 17	4238	892–3	131	1914
Siphon	W. S. Shields	373,961	Dec. 17	3361	716	131	1778
Skate. Roller-	C. M. Palmer	373,889	Dec. 17	3231	689	131	1755
Skate wheel. Roller-	T. S. Leitch	373,874	Dec. 17	3203	682	131	1750
Skirt gage. Dress-	J. La More	373,882	Dec. 17	3220	686	131	1753
Sled-brake	J. Wickberg	374,145	Dec. 17	3783	797	131	1838
Slitting and winding machine	H. P. Hilbert	374,070	Dec. 17	3654	768–9	131	1814
Smelting-furnace. Electric	W. R. Parks	373,890	Dec. 17	3234	690	131	1755
Smelting ores	J. C. Hardie	374,336	Dec. 17	4170	878	131	1902
Smoking-pipe	H. M. Hallett	374,332	Dec. 17	4163	876	131	1900
Soil-working machine	L. F. Bassett	374,285	Dec. 17	4073	859	131	1885
Sole for boots and shoes. Metallic	J. A. Donahue	374,171	Dec. 17	3829	807	131	1847
Sound-reproducing machine	L. T. Haile	373,937	Dec. 17	3317	708	131	1771
Spark-plug. Electric	F. B. Thatcher	373,968	Dec. 17	3380	719	131	1781
Sparking coil with multiple winding for ignition and like purposes.	A. Michel	373,954	Dec. 17	3351	714	131	1776
Splice-bar	E. E. Anderson	373,918	Dec. 17	3282	701	131	1764
Spooling-machine reciprocating mechanism	J. C. Callan	373,717	Dec. 17	2874	611–12	131	1698
Spring: *See* Bed-spring.							
Stacker. Pneumatic	B. G. Baker	373,829	Dec. 17	3121	664	131	1736

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Stamp-affixing device	E. Wilson	874,274	Dec. 17	4049	855	131	1831
Stamping and numbering machine	J. French	874,358	Dec. 17	4207	886	131	1909
Stand:							
See Boiler-stand. Display-stand. Sad-iron stand. Switch-stand.							
Stapling-machine	H. A. Olsson	873,888	Dec. 17	3229	689	131	1755
Stay-roller	G. Wideman	873,816	Dec. 17	3080	656	131	1731
Steam-shovel	G. W. King, H. J. Barnhart, and C. B. King.	873,756	Dec. 17	2962	627–9	131	1711
Steamer. Egg-	J. L. Adams	874,278	Dec. 17	4055	857	131	1882
Steering vessels	H. W. Wilke	873,818	Dec. 17	3083	657	131	1732
Stethoscopes and other aural instruments. Ear-tip for.	C. H. Liverpool	874,092	Dec. 17	3692	777	131	1821
Stone and making same. Artificial	H. O. Duerr	873,849	Dec. 17	3167	.....	131	1743
Stopper:							
See Bottle-stopper.							
Stove. Lamp heating-	W. W. Portmann	874,117	Dec. 17	3738	786	131	1828
Stretcher-supporting frame	H. Brusis	874,159	Dec. 17	3807	802–3	131	1843
Sulfur. Apparatus for producing sublimed	A. Walter	873,812	Dec. 17	3070	653	131	1730
Suspenders	G. W. Spotswood	874,257	Dec. 17	4006	846	131	1876
Swath-divider attachment. Perpendicular	J. H. Giles	874,325	Dec. 17	4152	874	131	1898
Sweeping. Composition to be used in	C. M. Vernon and G. von Vernon	873,913	Dec. 17	3270	.....	131	1763
Switch-operating mechanism	E. E. Frederick	873,741	Dec. 17	2938	623	131	1707
Switch-stand	A. D. Cloud	873,720	Dec. 17	2888	613–15	131	1699
Swivel. Hydraulic	H. G. Johnston. (Reissue)	12,732	Dec. 17	4247	895	131	1915
Syringe	B. F. Criesenberry	873,728	Dec. 17	2913	618	131	1702
Table or easel	T. J. Cantwell	874,052	Dec. 17	3554	757	131	1807
Talking-machine horn	A. G. Solstmann	873,908	Dec. 17	3261	696	131	1761
Telegraphy. Transmitting device for electric	I. Kitsee	873,757	Dec. 17	2964	629	131	1711
Telephone-transmitter	H. W. Haff	874,004	Dec. 17	3447	733	131	1792
Telephone-transmitter	C. J. Printz	874,118	Dec. 17	3739	786	131	1829
Telephotographic objective	P. Rudolph and E. Wandersleb	873,898	Dec. 17	3244	693	131	1758
Tenoning-machine	W. H. Hobby	874,007	Dec. 17	3450	734	131	1793
Thermostats. Expansible cell for	J. F. McElroy	874,022	Dec. 17	3483	741	131	1798
Thill-coupling	D. W. Copeland	874,304	Dec. 17	4111	866	131	1892
Thread and also the twisted thread. Machine for coating the strands of a	E. D. C. Bayne and L. A. Subers.	874,287	Dec. 17	4076	859	131	1886
Thread-finishing machine Silk-	E. Pohl	874,235	Dec. 17	3974	838	131	1869
Thread-guide	N. Johnson	873,944	Dec. 17	3332	710	131	1773
Tie:							
See Metallic tie. Railway-tie.							
Tie-plate	E. H. Bell	873,707	Dec. 17	2852	607	131	1695
Tile gutter	J. Freund	874,180	Dec. 17	3847	811	131	1849
Tin compounds and other products. Detinning and producing	E. A. Sperry	874,040	Dec. 17	3527	752	131	1804
Tire. Vehicle-	J. Eckhard	873,738	Dec. 17	2933	622	131	1705
Tire. Vehicle-	G. A. Pearse, Jr	873,957	Dec. 17	3356	715	131	1777
Tires. Protecting shield or guard for pneumatic	W. S. Arnold	873,919	Dec. 17	3283	701	131	1764
Tires to vehicle-wheels. Means for attaching	E. Gerbert	874,324	Dec. 17	4152	873	131	1898
Tool-holder	W. B. Mehl	873,953	Dec. 17	3349	713	131	1775
Tooth crown and bridgework. Artificial-	G. Nelson	874,027	Dec. 17	3493	743	131	1799
Toothpicks. Making	J. B. Righter	873,789	Dec. 17	3023	642	131	1722
Towel-wringer	G. P. Stanley and W. W. Tainter.	874,131	Dec. 17	3760	791	131	1833
Toy-railway-train stop and signal	C. M. Reed	874,240	Dec. 17	3984	840	131	1871
Toy-railway turn-table	C. A. Hotchkiss	874,009	Dec. 17	3457	736–7	131	1793
Toy. Trundling	E. F. Slattery	873,962	Dec. 17	3363	716–17	131	1778
Track-gage	H. Stubert	874,134	Dec. 17	3765	793	131	1834
Track. Portable sectional	E. W. Fordyce	874,373	Dec. 17	4242	893	131	1914
Traction-engine	B. C. Buxton	873,716	Dec. 17	2873	611	131	1698
Traction-varying device	B. Holt	874,008	Dec. 17	3452	735–6	131	1793
Train-lighting system. Battery	B. Beskow	873,709	Dec. 17	2859	608	131	1695
Tramway	F. A. Decker	873,732	Dec. 17	2920	620	131	1703
Transformer	F. Wolff	873,974	Dec. 17	3391	722	131	1783
Transmission and speed-changing mechanism	J. Coates	873,721	Dec. 17	2900	615	131	1700
Trap:	E. Schmidt	873,903	Dec. 17	3253	694	131	1760
See Animal-trap. Plumber's trap.							
Trap	C. E. Self	874,120	Dec. 17	3743	787	131	1830
Trap	W. H. Harden	874,335	Dec. 17	4166	877–8	131	1901
Treating materials	C. W. Volney	874,265	Dec. 17	4033	853	131	1878
Trimmer:							
See Hedge-trimmer.							
Trolley	C. M. Rhodes	874,242	Dec. 17	3986	841	131	1871
Trolley	G. Keresztes	874,345	Dec. 17	4185	881	131	1905
Trolley	E. Y. Moore	874,367	Dec. 17	4230	891	131	1912
Trolley-head	C. C. McClintock	873,955	Dec. 17	3353	714	131	1776
Trolley-hoist	E. Y. Moore	874,105	Dec. 17	3711	780–1	131	1824
Trough:							
See Watering-trough.							
Truck guard. Railway-	W. Sanford	873,795	Dec. 17	3036	644	131	1724
Truck. Motor-	A. F. Batchelder	873,706	Dec. 17	2850	606	131	1694
Trumpet support. Reproducing-	W. C. Runge	874,350	Dec. 17	4193	883	131	1906
Tube and flue cleaner	H. S. Stormer	874,258	Dec. 17	4007	846–7	131	1876
Tube apparatus. Manufacturing	O. Zimmermann	873,976	Dec. 17	3392	722	131	1783
Tuning device for timpani	H. A. Bower	874,050	Dec. 17	3550	756	131	1807
Turbine	W. S. Elliott and F. M. Faber	874,174	Dec. 17	3834	808–9	131	1847
Turbine. Marine	E. C. Carnt and A. Forster	874,356	Dec. 17	4203	885	131	1908
Turret-machine. Multiple-spindle automatic	G. G. Prentice	874,035	Dec. 17	3508	748–9	131	1801
Type casting and setting machine	O. Uhlworm	874,262	Dec. 17	4019	848–50	131	1877
Type-cleaner	E. A. Johnson	874,010	Dec. 17	3460	737	131	1794
Type-writer	H. L. Fisher	874,056	Dec. 17	3565	750–60	131	1809
Type-writer	H. L. Fisher	874,057	Dec. 17	3577	760	131	1809
Type-writer shift-key mechanism	M. S. Cumner	873,730	Dec. 17	2917	619	131	1703
Type-writer tabulator	J. H. Whitaker and F. H. Hubbard.	874,272	Dec. 17	4043	854–5	131	1880
Type-writing machine	C. E. Smith	873,964	Dec. 17	3368	717–18	131	1779
Type-writing machine	E. B. Hess	874,068	Dec. 17	3650	756–7	131	1813
Type-writing machine	E. B. Hess	874,338	Dec. 17	4173	878	131	1902
Type-writing-machine adding attachment	H. L. Fisher	874,060	Dec. 17	3611	762–3	131	1811
Type-writing-machine tabulator	H. L. Fisher	874,058	Dec. 17	3582	761	131	1810

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Type-writing-machine tabulator	H. L. Fisher	874,059	Dec. 17	3596	762	131	1810
Unloading mechanism	W. R. Cunningham	873,991	Dec. 17	3419	728–9	131	1788
Unloading mechanism	W. R. Cunningham	873,992	Dec. 17	3423	729	131	1788
Valise, dressing-case, and the like	H. Goldin	873,855	Dec. 17	3176	675–6	131	1745
Valve attachment. Engine-	G. B. McKinney	874,108	Dec. 17	3717	782	131	1825
Valve. Carbid-feed	F. E. Stover	874,351	Dec. 17	4194	883	131	1907
Valve. Combined vent and check	D. F. Morgan	873,853	Dec. 17	3221	686	131	1753
Valve. Flush-	C. I. Matson	873,766	Dec. 17	2978	632	131	1714
Valve for fluid-compressors. Discharge-	W. Prellwitz	874,034	Dec. 17	3507	748	131	1801
Valve for hydrants. Waste-	H. F. Neumeyer	873,956	Dec. 17	3354	715	131	1776
Valve mechanism for fluid-pressure brakes. Graduated-release-	W. V. Turner	874,261	Dec. 17	4016	848	131	1877
Valve-operating apparatus	J. C. Larkam	874,089	Dec. 17	3685	775	131	1820
Valve-operating means. Exhaust-	C. O. Hedstrom	873,747	Dec. 17	2946	624	131	1708
Valve. Whistle-	F. L. Wolfe	873,822	Dec. 17	3088	658	131	1733
Valves or cocks. Means for operating	W. J. McCarroll	874,106	Dec. 17	3712	781	131	1824
Vehicle	E. C. Bruen	873,711	Dec. 17	2882	609–10	131	1696
Vehicle attachment. Self-propelled-	O. Smith	874,128	Dec. 17	3755	790	131	1832
Vehicle-brace	P. Jess	874,204	Dec. 17	3912	823	131	1859
Vehicle brake. Power-driven-	J. N. Mahoney	874,219	Dec. 17	3936	831	131	1863
Vehicle screen. Motor-	T. H. Whiting	874,046	Dec. 17	3544	755	131	1806
Vehicle-wheel	C. E. Cole	873,841	Dec. 17	3150	671	131	1740
Vehicle-wheel	W. E. Snediker	873,907	Dec. 17	3259	695	131	1761
Vehicle-wheel	H. M. Starley	873,911	Dec. 17	3267	697–8	131	1762
Vehicles. Longitudinally-displaceable car-body for motor-	R. Diesel	873,926	Dec 17	3296	705	131	1767
Velocipede	O. A. Morse	873,885	Dec. 17	3224	687	131	1754
Vending-machine	C. B. Ford and J. N. Wood	873,936	Dec. 17	3314	707–8	131	1770
Vending-machine	H. S. Pond	874,236	Dec. 17	3976	838–9	131	1870
Vending-machine cabinet	H. S. Pond	874,237	Dec. 17	3979	839	131	1870
Vending machine. Cigar-	H. J. Davidson	874,170	Dec. 17	3827	807	131	1846
Ventilator:							
See Car-ventilator.							
Vessel-hull	I. E. Palmer	874,031	Dec. 17	3500	744	131	1800
Vise. Pipe-	H. R. Sinclair	874,123	Dec. 17	3747	788	131	1831
Vise. Pipe-	H. R. Sinclair and C. Ekman	874,124	Dec. 17	3750	789	131	1831
Voting-machine frame	C. C. Abbott	873,827	Dec. 17	3114	663	131	1735
Voting-machines. Independent-shutter-locking mechanism for	C. C. Abbott	873,828	Dec. 17	3115	663	131	1734
Voting-machines. Mechanism for attaching counters in	C. C. Abbott	873,825	Dec. 17	3106	662	131	1735
Voting mechanism. Question-	C. C. Abbott	873,826	Dec. 17	3107	662	131	1734
Wagon-dump	J. F. White	873,814	Dec. 17	3073	654–5	131	1730
Wagon-rack fastener	J. I. Morgan	873,884	Dec. 17	3223	687	131	1753
Wardrobes. Article-support for	L. Rémond	874,348	Dec. 17	4189	882	131	1905
Washing-machine	W. T. Bottenfield	873,833	Dec. 17	3129	666	131	1737
Washing-machine	H. Iserman	874,079	Dec. 17	3671	772	131	1817
Washing-machine	B. A. Stocking and H. Mendenhall. (Reissue.)	12,733	Dec. 17	4249	895	131	1915
Washing-machine gearing	L. W. Mammen	874,095	Dec. 17	3696	776	131	1821
Water-heater	H. K. Ernsberger	874,316	Dec. 17	4138	871	131	1896
Water-supply system. Automatic	H. C. Sillett	873,906	Dec. 17	3257	695	131	1761
Watering-trough. Automatic	T. Olson	874,231	Dec. 17	3966	836–7	131	1868
Waterproof fabric	E. Mérou	874,101	Dec. 17	3703	.....	131	1823
Weaving in natural colors without pattern-cards	A. Regal	874,370	Dec. 17	4234	.....	131	1913
Weighing machine. Coin-controlled	A. A. Calle, G. Hamilton and O. C. Currie.	874,300	Dec. 17	4098	863–4	131	1890
Welding machine. Copper-	G. Rosenberry	873,897	Dec. 17	3243	692	131	1758
Welding metals	F. Jottrand and F. Schmidt	874,084	Dec. 17	3678	774	131	1819
Well packing. Oil-	W. B. Daugherty	873,995	Dec. 17	3429	730	131	1789
Well-pipe lifter	J. A. Kimbro	874,086	Dec. 17	3681	774	131	1819
Wheel:							
See Skate-wheel. Vehicle-wheel.							
Wheel	L. Long	873,876	Dec. 17	3206	683	131	1751
Winch. Hydraulic	J. G. Winger	874,275	Dec. 17	4049	855–6	131	1881
Window fastener. Storm-	W. Bourque	873,834	Dec. 17	3130	666	131	1737
Window-operating mechanism. Ventilating-	S. E. Cibulas	874,164	Dec. 17	3818	805	131	1844
Window-tent	W. E. Walsh	873,971	Dec. 17	3386	721	131	1782
Wire multiple system. Three-	C. S. Winston	874,147	Dec. 17	3785	798	131	1839
Wire-stretching tool	J. L. Scott	874,253	Dec. 17	4002	845	131	1875
Wood-trimming machine	C. E. Brown and W. J. Gibbs	873,837	Dec. 17	3141	669	131	1738
Wrench:							
See Ratchet-wrench.							
Wrench	J. W. Kline	873,758	Dec. 17	2967	630	131	1712
Wrench	F. Hachmann	873,859	Dec. 17	3182	678	131	1746
Wrench	E. R. Klemm	873,868	Dec. 17	3196	681	131	1749
Wrench	G. W. Jessop	874,081	Dec. 17	3675	773	131	1818
Wrench	W. Webb and W. W. Hildreth	874,269	Dec. 17	4040	854	131	1880
Wringer:							
See Towel-wringer.							
Wringer-tray and drip-board. Combined	W. H. Voss	874,266	Dec. 17	4037	853	131	1879

DESIGNS.

Design.	Name.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Brush. Shoe-polishing	J. A. Kreag	38,952	Dec. 17	131	1916
Card. Playing-	S. R. Beal	38,954	Dec. 17	131	1916
Dish	W. C. Anderson	38,950	Dec. 17	131	1916

DESIGNS—Continued.

Design.	Name.	No.	Date.	Official Gazette. Vol.	Page.
Gage casing. Temperature and pressure	H. W. Maurer	38,957	Dec. 17	131	1917
Gas-burner	T. J. Litte, Jr.	38,955	Dec. 17	131	1916
Gas-burner	T. Stites	38,956	Dec. 17	131	1917
Nut-crackers, nut-picks, and similar dessert-cutlery. Handle for	M. N. Jarvis	38,951	Dec. 17	131	1916
Skirt	D. Crystal and M. Tischler	38,953	Dec. 17	131	1916

TRADE-MARKS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
Automobiles	De Luxe Motor Car Company	66,606	Dec. 17	131	1935
Automobiles	Société Anonyme Ariès	66,611	Dec. 17	131	1935
Automobiles	Société Anonyme Ariès	66,612	Dec. 17	131	1936
Balsams, purgatives, pastils, and anesthetics	J. Bengué	66,633	Dec. 17	131	1936
Beer	George Wiedemann Brewing Co.	66,661	Dec. 17	131	1937
Belts	A. Nahass	66,671	Dec. 17	131	1937
Boots and shoes. Leather	Selz, Schwab & Company	66,674	Dec. 17	131	1937
Boots and shoes. Leather	Tracy Shoe Co	66,676	Dec. 17	131	1937
Boots, shoes, and slippers. Certain	J. Donovan & Co	66,658	Dec. 17	131	1937
Boots, shoes, and slippers. Leather	M. D. Wells Co	66,667	Dec. 17	131	1937
Brandy	Barton Vineyard Company	66,617	Dec. 17	131	1936
Brushes. Tooth-	R. Hudnut's Pharmacy	66,609	Dec. 17	131	1935
Candles	Adams Argood Chocolate Co	66,582	Dec. 17	131	1935
Candles	Adams Argood Chocolate Co	66,583	Dec. 17	131	1935
Cascara sagrada. Preparation of	H. S. Wellcome	66,632	Dec. 17	131	1936
Cements, glues, and adhesives	Cæmentium (Parent) Co	66,636	Dec. 17	131	1936
Chains	Bates & Bacon	66,654	Dec. 17	131	1937
Chairs, rockers, settees, and sofas	Taylor Chair Company	66,613	Dec. 17	131	1936
Cheese. Roquefort	Société Anonyme des Caves et des Producteurs réunis de Roquefort (Aveyron).	66,598	Dec. 17	131	1935
Chemical preparation. Certain	Bidtel Chemical Works	66,602	Dec. 17	131	1935
Chocolate and cocoa	Pennsylvania Chocolate Company.	66,608	Dec. 17	131	1935
Coats, vests, and trousers	Moch, Berman & Co	66,629	Dec. 17	131	1936
Coats, vests, trousers, and overcoats	A. Decker & Cohn	66,619	Dec. 17	131	1936
Corsets	Royal Worcester Corset Co	66,631	Dec. 17	131	1936
Cough-drops	Wessel Bros. Candy Co	66,652	Dec. 17	131	1937
Cough mixture	Ogden and Shimer	66,647	Dec. 17	131	1936
Dress-shields	Mona Manufacturing Company	66,669	Dec. 17	131	1937
Edge-tools. Certain	G. W. Bradley's Sons	66,584	Dec. 17	131	1935
Embroidery-cotton	Carson Pirie Scott & Co	66,603	Dec. 17	131	1935
Felts in the piece	C. W. House & Sons	66,664	Dec. 17	131	1937
Fertilizers	F. W. Tunnell & Co	66,601	Dec. 17	131	1935
Flour. Wheat-	Crescent Milling Company	66,587	Dec. 17	131	1935
Flour. Wheat-	Washburn Crosby Company	66,614	Dec. 17	131	1936
Flours. Wheat-	Globe Milling Co	66,589	Dec. 17	131	1935
Food. Certain	Tropon Gesellschaft mit beschränkter Haftung.	66,599	Dec. 17	131	1935
Food. Certain	Tropon Gesellschaft mit beschränkter Haftung.	66,600	Dec. 17	131	1935
Foods. Cereal breakfast	A. M. Pereyra	66,595	Dec. 17	131	1935
Foods. Certain	Zane & Gill	66,615	Dec. 17	131	1936
Foods. Certain cereal	Shannon & Mott Company	66,610	Dec. 17	131	1935
Foods. Wheat breakfast	Portland Flouring Mills Co	66,596	Dec. 17	131	1935
Games, Card	A. J. Fall	66,660	Dec. 17	131	1937
Hair tonics and renewers	T. B. Lathem	66,628	Dec. 17	131	1936
Ice-cream freezers	Snow Flake Manufacturing Company.	66,597	Dec. 17	131	1935
Knit undershirts	Rubens & Marble	66,672	Dec. 17	131	1937
Knitted goods. Certain	Michigan Knitting Co	66,668	Dec. 17	131	1937
Lard	Charles Wolff Packing Company	66,656	Dec. 17	131	1937
Leather	F. Blumenthal & Co	66,655	Dec. 17	131	1937
Machinery. Certain	R. Kron	66,607	Dec. 17	131	1935
Magazine	International Sunshine Society	66,666	Dec. 17	131	1937
Measuring instruments. Certain	Stanley Rule & Level Company	66,675	Dec. 17	131	1937
Medical and surgical appliances and instruments	B. F. Goodrich Company	66,653	Dec. 17	131	1937
Medicine. Dyspepsia	L. C. Wedgefuth	66,651	Dec. 17	131	1937
Medicines. Certain	J. S. Ramage	66,630	Dec. 17	131	1936
Medicines. Laxative and digestive	Spirine Extracting Co	66,648	Dec. 17	131	1936
Nippers and pliers	Utica Drop Forge and Tool Co	66,649	Dec. 17	131	1937
Oats, &c. Rolled	Albers Bros. Milling Co	66,616	Dec. 17	131	1936
Paper bags	Cleveland-Akron Bag Co	66,605	Dec. 17	131	1935
Paper oyster-pails	Chicago Folding Box Co	66,604	Dec. 17	131	1935
Paper. Printing and writing	Graham Paper Co	66,590	Dec. 17	131	1935
Paper. Printing and writing	Graham Paper Co	66,591	Dec. 17	131	1935
Paper. Printing and writing	Graham Paper Co	66,592	Dec. 17	131	1935
Pianos	S. W. Miller Piano Co	66,673	Dec. 17	131	1937
Powder. Toilet	C. Boucher	66,634	Dec. 17	131	1936

TRADE-MARKS—Continued.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
Puzzle	R. Haldenwang, Jr.	66,662	Dec. 17	131	1937
Remedy for epilepsy	Dr. W. Towns Medical Company	66,639	Dec. 17	131	1936
Remedy for rheumatism and gout	J. H. Howarth	66,645	Dec. 17	131	1936
Rock-drilling machines	Konomax Rock Drill Syndicate	66,593	Dec. 17	131	1935
Rubber boots and shoes	Bourn Rubber Co	66,635	Dec. 17	131	1936
Rubber goods. Certain	H. O. Canfield Company	66,621	Dec. 17	131	1936
Shirts. Dress and negligée	J. H. Rice & Friedmann Co	66,627	Dec. 17	131	1936
Slate. Roofing-	Genuine Bangor Slate Co	66,588	Dec. 17	131	1935
Soap	Compagnie Ray mit beschränkter Haftung.	66,657	Dec. 17	131	1937
Stoves and ranges	Helena Stove and Range Co	66,663	Dec. 17	131	1937
Surgical lubricant	H. Melzer	66,594	Dec. 17	131	1935
Suspenders and belts	Monarch Suspender Co	66,670	Dec. 17	131	1937
Tires. Rubber	Hartford Rubber Works Company.	66,622	Dec. 17	131	1936
Tires. Rubber	Hartford Rubber Works Company.	66,623	Dec. 17	131	1936
Tires. Rubber	Hartford Rubber Works Company.	66,624	Dec. 17	131	1936
Tires. Rubber	Hartford Rubber Works Company.	66,625	Dec. 17	131	1936
Tires. Rubber	Hartford Rubber Works Company.	66,626	Dec. 17	131	1936
Tires. Rubber	Hartford Rubber Works Company.	66,640	Dec. 17	131	1936
Tires. Rubber	Hartford Rubber Works Company.	66,641	Dec. 17	131	1936
Tires. Rubber	Hartford Rubber Works Company.	66,642	Dec. 17	131	1936
Tires. Rubber	Hartford Rubber Works Company.	66,643	Dec. 17	131	1936
Tires. Rubber	Hartford Rubber Works Company.	66,644	Dec. 17	131	1936
Tonic. Lung-	W. T. Owbridge Ltd	66,650	Dec. 17	131	1937
Tonic malt liquor	Houston Ice & Brewing Co	66,665	Dec. 17	131	1937
Trousers, vests, coats, and overcoats	Graves & Meade Co	66,620	Dec. 17	131	1936
Vehicles. Certain road-	Columbia Carriage Co	66,586	Dec. 17	131	1935
Washboards	Manchester Furniture Co	66,646	Dec. 17	131	1936
Whisky	E. Martin & Co	66,659	Dec. 17	131	1937
Wine. Certain	Chas. A. Zahn Co	66,637	Dec. 17	131	1936
Wine. Certain	Chas. A. Zahn Co	66,638	Dec. 17	131	1936
Wines. Certain	Barton Vineyard Company	66,618	Dec. 17	131	1935
Wood. Impregnating agents for preserving and coating	Chemische Fabrik Flörsheim, Dr. H. Noerdlinger.	66,585	Dec. 17	131	1935

LABELS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
"Clean All." (For a Preparation for the Removal of Dirt and Grease from Cloth.)	E. H. Nichols	13,938	Dec. 17	131	1938
"Collins Health Underwear." (For Underwear)	W. E. Tillotson Manufacturing Company.	13,942	Dec. 17	131	1938
"Daisy." (For Beer)	Garden City Brewery	13,928	Dec. 17	131	1938
"Dick's Diamond Dust." (For Polishing-Powders)	J. F. O'Brien	13,937	Dec. 17	131	1938
"Epsom Salt Tablets." (For a Medicine)	H. G. Schmuelling	13,932	Dec. 17	131	1938
"F. C. & Co. Fluffy Ruffles Parasols." (For Parasols)	Follmer Clogg & Co., Inc	13,939	Dec. 17	131	1938
"F. C. & Co. Fluffy Ruffles Umbrella." (For Umbrellas)	Follmer Clogg & Co., Inc	13,940	Dec. 17	131	1938
"Flying Diable." (For a Game Apparatus)	E. C. Weeks	13,943	Dec. 17	131	1938
"Fort Dear-Born." (For Whisky)	J. C. Johnston	13,930	Dec. 17	131	1938
"La Buna." (For Cigars)	A. C. Henschel & Co	13,924	Dec. 17	131	1938
"La Fregata." (For Cigars)	A. C. Henschel & Co	13,926	Dec. 17	131	1938
"La Morenda." (For Cigars)	A. C. Henschel & Co	13,927	Dec. 17	131	1938
"La Posa." (For Cigars)	A. C. Henschel & Co	13,925	Dec. 17	131	1938
"Liquid Voicelets." (For a Medicinal Compound)	Grandfathers Cure Co	13,934	Dec. 17	131	1938
"Lydia E. Pinkham's Sanative Wash." (For Medical Preparations for Women's Use.)	Lydia E. Pinkham Medicine Co	13,935	Dec. 17	131	1938
"Sparkling Yosemite Mineral Water." (For Mineral Water)	Yosemite Mineral Springs Company.	13,931	Dec. 17	131	1938
"Voicelets." (For a Medicinal Compound)	Grandfathers Cure Co	13,933	Dec. 17	131	1938
"Wilhelmina Corsets." (For Corsets)	H. L. Adams	13,941	Dec. 17	131	1938
"Zumalweiss." (For Beer)	Minneapolis Brewing Company	13,929	Dec. 17	131	1938

PRINTS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
"Goldblume." (For Beer)	F. W. Cook Brewing Co	2,174	Dec. 17	131	1936
"Has the Power of Niagara." (For Automobiles)	W. H. Gelston	2,180	Dec. 17	131	1938
"Hoyt's Improved Pile Remedy." (For a Pile Remedy)	C. H. Hoyt & Co	2,176	Dec. 17	131	1938
"Lexard." (For Soap)	Swift and Company	2,179	Dec. 17	131	1938
"Men's and Boys' Apparel." (For Men's and Boys' Apparel)	H. C. Lytton	2,177	Dec. 17	131	1938
"606. College Series Congress Playing Cards." (For Playing-Cards.	United States Playing Card Co	278	Dec. 17	131	1938
"The Dyspeptic's Dream." (For Dyspepsia-Tablets)	Dr. Richards Dyspepsia Tablet Association.	2,175	Dec. 17	131	1938

TRADE-MARKS.

(REGISTRATION APPLIED FOR.)

Title.	Name.	Serial No.	Date.	Official Gazette. Vol.	Page.
Adzes, axes, augers, drills, files, &c.	Simmons Hardware Company	28,014	Dec. 17	131	1922
Antiseptic wash	J. H. Leonard	30,897	Dec. 17	131	1930
Auger-bits	Norvell - Shapleigh Hardware Company.	14,621	Dec. 17	131	1920
Axes, hatchets, cane-knives, and razors	Norvell - Shapleigh Hardware Company.	14,623	Dec. 17	131	1920
Axes, hatchets, chisels, scythes, &c	Norvell - Shapleigh Hardware Company.	14,629	Dec. 17	131	1920
Balls, bats, masks, mitts, tennis-rackets, &c. Base-	A. J. Reach Company	30,754	Dec. 17	131	1928
Belting. Leather	Chicago Belting Company	30,694	Dec. 17	131	1927
Bicycles and motor-cycles	G. M. Hendee	15,220	Dec. 17	131	1920
Blackings and dressings. Shoe	Sovereign Polish Co	31,004	Dec. 17	131	1932
Blowers. Steam-	McClave-Brooks Co	20,618	Dec. 17	131	1924
Boilers, sinks, bath-tubs, &c. Kitchen-	L. Wolff Mfg. Co	5,002	Dec. 17	131	1919
Bookbinders' cloth	Winterbottom Book Cloth Company.	30,881	Dec. 17	131	1929
Boots and shoes. Leather	Walton and Logan Company	30,472	Dec. 17	131	1926
Bread. Wheat-	Heidland Baking Co	30,903	Dec. 17	131	1930
Brushes. Hair, nail, and tooth	J. C. Dowd & Co	30,896	Dec. 17	131	1930
Butter	H. H. Brown	30,872	Dec. 17	131	1929
Cabs. Motor-	New York Taxi-Cab Company	30,547	Dec. 17	131	1927
Candy	P. Boondas	28,664	Dec. 17	131	1923
Candy. Chocolate	Cedar Rapids Candy Company	31,207	Dec. 17	131	1934
Canned fruits and vegetables	H. P. Cannon	18,630	Dec. 17	131	1920
Car-cleaners	Modoc Company	25,625	Dec. 17	131	1921
Ceilings and walls. Metal	Northrop Coburn and Dodge Co	24,256	Dec. 17	131	1921
Chains, chain links and hooks	Hayden-Corbett Chain Co	30,660	Dec. 17	131	1927
Cheese	W. J. Eldridge	30,697	Dec. 17	131	1927
Chocolate. Milk-	Walter M. Lowney Company	31,182	Dec. 17	131	1934
Chocolates and bonbons	Walter M. Lowney Company	31,146	Dec. 17	131	1934
Cigarettes	A. M. Wolf	30,817	Dec. 17	131	1929
Cigarettes, cigars, smoking and chewing tobacco	W. R. Allen	31,153	Dec. 17	131	1934
Cigars, cheroots, and little cigars	Heineman Brothers	31,169	Dec. 17	131	1934
Coats, pants, vests, jackets, overalls, &c	Edward Kory Co	30,570	Dec. 17	131	1927
Cognacs and cordials	Carmel Wine Company	31,042	Dec. 17	131	1932
Cognacs and cordials	Carmel Wine Company	31,044	Dec. 17	131	1932
Collars. Textile	J. S. Harris	30,977	Dec. 17	131	1932
Copper sulfate	Mond Nickel Company	31,001	Dec. 17	131	1932
Corsets, corset waists and covers, dress and under waists	Mona Manufacturing Co	27,170	Dec. 17	131	1922
Cotton diaper-cloth	J. L. Wilson & Co	30,718	Dec. 17	131	1928
Cotton piece goods	Garner & Co	31,060	Dec. 17	131	1933
Cutlery and edge-tools	Hyde Manufacturing Co	29,554	Dec. 17	131	1924
Dental alloy	J. F. Schotz	29,240	Dec. 17	131	1923
Disinfectant, deodorizer, and insect and germ killer	J. Wilson	31,110	Dec. 17	131	1933
Dividers and squares	Norvell - Shapleigh Hardware Company.	14,626	Dec. 17	131	1920
Dolls and stuffed toy figures	Margarete Steiff G. m. b. H.	28,316	Dec. 17	131	1923
Eggs. Fresh and storage	G. W. Nicholson Company	25,917	Dec. 17	131	1921
Electrical supplies	Commercial Electrical Supply Company.	29,969	Dec. 17	131	1925
Eyeglasses	White-Haines Optical Company	29,699	Dec. 17	131	1924
Fabrics. Waterproofed textile	A. A. Fischer	30,698	Dec. 17	131	1928
Fire-escapes	W. C. Baird	30,893	Dec. 17	131	1929
Fishing-tackle	H. A. Whittemore	30,405	Dec. 17	131	1926
Flavoring extracts	J. C. Hagan	23,347	Dec. 17	131	1921
Flavoring extracts	Domestic Science Mfg. Co	29,553	Dec. 17	131	1923
Flour. Wheat-	Cohen & Rosenberg	30,514	Dec. 17	131	1927
Flour. Wheat-	Bay State Milling Co	31,009	Dec. 17	131	1932
Flutes, clarinets, drums, cornets, and their cases	Cundy-Bettoney Company	30,289	Dec. 17	131	1925
Fruits and vegetable oils used as foods. Dried and preserved.	C. Ecardt	29,966	Dec. 17	131	1925
Fruits and vegetables. Fresh	W. H. Fox	31,119	Dec. 17	131	1934
Gas burners, lamps, heaters, stoves, &c. Alcohol	Alcohol Light, Heat and Power Company.	30,885	Dec. 17	131	1929
Gloves. Leather	Saranac Glove Company	26,903	Dec. 17	131	1921
Gloves. Leather	Marshall Field & Company	30,707	Dec. 17	131	1928

TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

Title.	Name.	Serial No.	Date.	Official Gazette. Vol.	Page.
Grates	McClave-Brooks Co	29,619	Dec. 17	131	1924
Gum and candy. Chewing-	D. H. Reeder	31,155	Dec. 17	131	1934
Hammers	Norvell - Shapleigh Hardware Company.	14,622	Dec. 17	131	1920
Harness	Covert Manufacturing Co	29,194	Dec. 17	131	1923
Hatchets, scythes, adzes, auger-bits, &c	W. Bingham Company	3,709	Dec. 17	131	1919
Hats, caps, overcoats, coats, vests, trousers, &c	Cravenette Company	28,844	Dec. 17	131	1923
Jewelry	Hansen-Bennett Company	30,592	Dec. 17	131	1927
Journal. Drug	G. T. Ketcheson	30,859	Dec. 17	131	1929
Laces. Imitation	Birkin & Co	29,089	Dec. 17	131	1923
Laxative candy	Bo-Bo Manufacturing Co	30,596	Dec. 17	131	1927
Laxative compounds	Mother Seigel's Syrup Company	18,871	Dec. 17	131	1921
Laxative tablets	M. A. Winter Co	30,748	Dec. 17	131	1928
Liniment	J. H. Snyder Med. Co	30,847	Dec. 17	131	1929
Lotions, hair-tonics, nasal washes and gargles, &c	L. B. Schenck	30,912	Dec. 17	131	1930
Machinery. Parts of transmission	J. M. Davidsen	18,475	Dec. 17	131	1920
Magazine. Monthly	Outdoor News Company	29,866	Dec. 17	131	1925
Magazine. Monthly	Morse-Broughton Company	31,061	Dec. 17	131	1933
Magazines	System Company	29,799	Dec. 17	131	1925
Measuring-tapes	Norvell - Shapleigh Hardware Company.	14,624	Dec. 17	131	1920
Meats and sausage. Cured	Kingan and Company	28,420	Dec. 17	131	1923
Medicinal preparation. Antiseptic	G. A. Truesdell	27,026	Dec. 17	131	1921
Medicine and pocket vial cases, emergency and saddle bags, &c. Leather	Western Leather Mfg. Co	24,881	Dec. 17	131	1921
Medicines in tablet form	W. R. Warner & Co	30,844	Dec. 17	131	1929
Metal. Antifriction	American Improved Anti-Friction Metal Company.	31,004	Dec. 17	131	1933
Metal bars for reinforcing concrete	Concrete-Steel Engineering Company.	30,104	Dec. 17	131	1925
Needles. Crewel-	Thos. Harper & Sons	4,724	Dec. 17	131	1919
Oil. Olive-	Strohmeyer & Arpe Company	30,332	Dec. 17	131	1926
Oil. Salad-	Strohmeyer & Arpe Company	30,333	Dec. 17	131	1926
Ointments	P. Destrempes	28,520	Dec. 17	131	1923
Paper. Wrapping-	Norvell - Shapleigh Hardware Company.	14,625	Dec. 17	131	1920
Periodical. Annual	Class Journal Co	29,628	Dec. 17	131	1924
Photographic prints of plans, specifications, and surveys	J. W. Heritage	30,444	Dec. 17	131	1926
Pills, tablets, powders, salves, &c	F. F. Newell	29,670	Dec. 17	131	1924
Potatoes	Carter-Corey Company	29,965	Dec. 17	131	1925
Powder and paste. Tooth	F. R. Tyler	28,269	Dec. 17	131	1922
Remedies for heart diseases, indigestion, nervous debility, &c	R. S. Clymer	30,604	Dec. 17	131	1927
Remedies for scrofula, salt-rheum, eczema, old sores, &c	Saginaw Medicine Co	27,656	Dec. 17	131	1922
Remedy for coughs and colds	Ednur Pharmacal Co	13,386	Dec. 17	131	1920
Remedy for epilepsy	Tucker Pharmacal Co	30,845	Dec. 17	131	1929
Remedy for malaria and diseases of the blood and kidneys	Hodge & Bailey	27,984	Dec. 17	131	1922
Remedy for rheumatism	J. G. Bray	30,603	Dec 17	131	1927
Rubber boots, shoes, coats, hats, &c	Boston Rubber Company	30,730	Dec. 17	131	1928
Salt	J. B. Speed & Company	31,085	Dec. 17	131	1933
Sardines, sprats, anchovies, herrings, &c	Strohmeyer & Arpe Company	30,334	Dec. 17	131	1926
Scoops	Norvell - Shapleigh Hardware Company.	14,630	Dec. 17	131	1920
Sheetings. Cotton	Indiana Cotton Mills	30,790–1	Dec. 17	131	1928–9
Silk piece goods	L. & E. Stirn	29,622	Dec. 17	131	1924
Silks. Broad	M. C. Migel & Co	29,596	Dec. 17	131	1924
Silks. Broad	M. C. Migel & Co	29,598–600	Dec. 17	131	1924
Specific for cramps, colic, diarrhea, &c	Lash's Bitters Company	30,463	Dec. 17	131	1926
Starch. Laundry	J. S. Harris	31,096	Dec. 17	131	1933
Starch preparation. Chemical	Amalgamated Gum Company	29,573	Dec. 17	131	1924
Starch preparation. Chemical	Amalagmated Gum Company	29,575	Dec. 17	131	1924
Stove-polish	The 6-5-4 Co	30,475	Dec. 17	131	1926
Stoves, ranges, heaters, and parts thereof	Comstock Castle Stove Co	30,318	Dec. 17	131	1926
Suits, coats, vests, trousers, and overcoats	Joseph & Feiss Co	30,102	Dec. 17	131	1925
Syrup. Table-	Halpen, Green & Co	30,292	Dec. 17	131	1925
Talcum for smoothing collar edges, &c	Dr. M. Lehmann & Co	29,573	Dec. 17	131	1925
Tea	G. Lewis and Company	28,410	Dec. 17	131	1923
Tobacco. Chewing and smoking	American Tobacco Company	30,875	Dec. 17	131	1929
Varnishes, enamels, and paints	Thomson Wood Finishing Co	7,586	Dec. 17	131	1919
Whisky	E. J. Riffle	18,800	Dec. 17	131	1920
Whisky	Cortwright Company	30,543	Dec. 17	131	1927
Whisky	Lyle & Kinahan	31,133	Dec. 17	131	1934
Whisky, rum, gin, brandy, cocktails, and punches	Boston Wine & Spirits Co	30,916–30	Dec. 17	131	1930–1
Whisky, rum, gin, brandy, cocktails, and punches	Boston Wine & Spirits Co	30,932–4	Dec. 17	131	1931
Whisky, rum, gin, brandy, cocktails, and punches	Boston Wine & Spirits Co	30,937	Dec. 17	131	1931
Wines	Carmel Wine Company	31,045–8	Dec. 17	131	1932–3
Wines	Carmel Wine Company	31,051	Dec. 17	131	1933
Wines. Port and sherry	Boston Wine & Spirits Co	30,938–47	Dec. 17	131	1931–2
Yarns	B. Ulmann & Co	31,083	Dec. 17	131	1933

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 24TH DAY OF DECEMBER, 1907.

Name, residence, and invention.	No.	Date.	Monthly volume.		Official Gazette.	
			Specification.	Drawing.	Volume.	Page.
A. Kimball Company. (See Kimball, Alonzo, assignor.)						
A. Kimball Company. (See Wallin, Gustav A., assignor.)						
Abernethy, Harry M., assignor to American Railway Signal Company, Cleveland, Ohio. Railway-signal	874,477	Dec. 24	4435	935-7	131	1963
Abrams, Albert, Paris, France. Garment-creasing device	874,818	Dec. 24	5122	1079	131	2092
Adams, Guy. (See Burr and Adams.)						
Adams, Robert, London, England. Door closer and check	874,721	Dec. 24	4960	1041-2	131	2061
Adams, Thomas E., Darlington, La. Cattle-poke	874,478	Dec. 24	4441	937	131	1960
Aeschlimann, Adolf E., Taylor, Tex. Gate	874,376	Dec. 24	4253	896	131	1947
Ahlberg, Jacob. (See Boehner, William, assignor.)						
Akimoff, Nicholas W., Philadelphia, Pa. Pump	874,377	Dec. 24	4256	896-7	131	1947
Akin, John H., and C. C. Anderson, Creston, Iowa. Metal railway-tie	874,556	Dec. 24	4620	971	131	2005
Albrecht, Karl, assignor to Firm of Kalle and Company, Aktiengesellschaft, Biebrich, Germany. Thio-indoxyl derivatives and making same	874,649	Dec. 24	4810	.....	131	2038
Alderson, Erastus, North Yakima, Wash. Anvil-vise	874,722	Dec. 24	4962	1042	131	2061
Allen, William H., Newark, N. J. Connection for gas-tubes	874,378	Dec. 24	4259	897	131	1948
Allis-Chalmers Company *et al.* (See Stull, Emmett W., assignor.)						
Allison, Harvey H., New York, N. Y. Record-needle	874,819	Dec. 24	5123	1079	131	2092
Alting, Robert. (See Grunewald and Alting.)						
American Grain Meter Company. (See Sonander, Andrew, assignor.)						
American Laundry Machinery Company. (See Mann, Albret B., assignor.)						
American Railway Signal Company. (See Abernethy, Harry M., assignor.)						
American Sheet & Tin Plate Company. (See Bray, Charles W., assignor.)						
American Sheet & Tin Plate Company. (See Evans, George D., assignor.)						
American Sheet & Tin Plate Company. (See Marks, Herbert E., assignor.)						
American Telephone and Telegraph Company. (See Blakeney and Chetwood, assignors.)						
Anderson, Alfred C., Atwater, Minn. Adjustable vehicle-seat	874,723	Dec. 24	4963	1042-3	131	2062
Anderson, Charles C. (See Akin and Anderson.)						
Anderson, George A., Coal Harbor, N. D. Harness	874,557	Dec. 24	4622	972	131	2006
Anderson, Robert J., New York, N. Y. Tea and coffee pot	874,479	Dec. 24	4442	937	131	1961
Anderson, Swan, Ottumwa, Iowa. Lubricator	874,650	Dec. 24	4811	1010	131	2038
Asmann, Oscar J. (See Clegg and Asmann.)						
Atlantis Fountain Pen Company. (See Moore, Morris W., assignor.)						
Atwood, James F., Claremont, N. H. Garment-supporting clasp	874,820	Dec. 24	5124	1080	131	2092
Aurora Specialty Co. (See Wolfe, John, assignor.)						
Automatic Molding Machine Company. (See Rogerson, Albert C., assignor.)						
Averill, Clarence R., Webster, N. Y. Dental-crown driver	874,379	Dec. 24	4260	898	131	1948
Ayer, Albert E., Chelsea, assignor to R. L. Vose, Brookline, Mass. Edge-trimming machine	874,821	Dec. 24	5126	1080	131	2093
Bagnall, Frederick A., Attleboro, Mass. Clasp	874,651	Dec. 24	4813	1010	131	2038
Bailey, George P., Philadelphia, Pa. Machine for kneading and molding dough	874,480	Dec. 24	4443	937-8	131	1961
Bailey, George W., Washington, D. C. Valve	874,652	Dec. 24	4814	1010	131	2039
Baird, Harry D., assignor to Saint Clair Motor Co., Detroit, Mich. Carbureter	874,822	Dec. 24	5128	1080	131	2093
Baker, Charles E., Chicago, Ill. Filter or separator for pneumatic cleaners	874,481	Dec. 24	4445	938	131	1961
Baker, Frank J., San Francisco, Cal. Wall	874,881	Dec. 24	5243	1104	131	2111
Baldwin, Arthur J., East Orange, N. J. Making wire-glass	874,380	Dec. 24	4261	898	131	1948
Barclay, Brown and Bird. (See Wallace, George V., assignor.)						
Barker, Eugene, Batavia, N. Y. Clamp-bar	874,724	Dec. 24	4965	1043	131	2062
Barker, Eugene, Batavia, N. Y. Clamp-bar	874,725	Dec. 24	4966	1043	131	2062
Barnes, John J., Herington, Kans. Railway game apparatus	874,726	Dec. 24	4968	1044	131	2062
Barricklow, Irvin E., Antioch, Cal. Fluid-pressure engine	874,823	Dec. 24	5130	1081	131	2094
Bartholomew, John B., Peoria, Ill., assignor, by mesne assignments, to Sattley Stacker Company, Indianapolis, Ind. Straw-stacker	874,918	Dec. 24	5355	1120	131	2124
Basso, Philip G. (See Portteus, Albert M., assignor.)						
Bathrow, Ezra E., Prince Albert, Saskatchewan, Canada. Square	874,653	Dec. 24	4815	1010	131	2039
Baur, Armin J., Mill Creek township, Erie county, Pa. Tool for applying fastening devices to split carnations, &c	874,381	Dec. 24	4262	898	131	1948
Beach, Howard L., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Alternating-direct-current system of control	874,558	Dec. 24	4623	972	131	2006
Beach, Howard L., Wilkinsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. System of control	874,559	Dec. 24	4626	972	131	2007
Beall, John W. (See McGranor and Beall.)						
Bearhope, George, assignor of two-thirds to W. A. and T. Mooney, Columbus, Ind. Process of stuffing leather and apparatus therefor	874,882	Dec. 24	5244	1105	131	2112
Beaudry, Frederick, Springfield, Mass. Mouse-trap	874,654	Dec. 24	4816	1011	131	2039
Bell, John A., and S. W. Reynolds, Lathrop, Cal. Windmill	874,382	Dec. 24	4263	899	131	1948
Bennett, Charles E., Topeka, Kans. Window-shade bracket	874,655	Dec. 24	4817	1011	131	2039
Benning, Henry, Chicago, Ill. Attachment for baby-carriages	874,656	Dec. 24	4819	1011	131	2040
Berendes, Rudolph, and J. Callsen, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Methylene citryl oxytoluic acid	874,824	Dec. 24	5133	.....	131	2094
Berendes, Rudolph, and F. Herwig, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Oxyalkyl derivative of the xanthin bases	874,825	Dec 24	5134	.....	131	2094

Name, residence, and invention.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Berg, Ludwig A., Hamburg, Germany. Machine for depositing liquid confectionery material	874,560	Dec. 24	4631	972–3	131	2007
Berkowitz, Samuel, *et al.* (See Rautbord, Zebulon, assignor.)						
Best, Ezra, *et al.* (See Best, William N., assignor.)						
Best, John H., *et al.* (See Best, William N., assignor.)						
Best, William N., Los Angeles, Cal., assignor to J. H. and E. Best, Quincy, Ill. Furnace for heating and welding	874,561	Dec. 24	4632	973	131	2007
Bibby, Arthur, Rochester, assignor of one-half to C. Renner, Monaca, Pa. Umbrella	874,727	Dec. 24	4970	1044	131	2063
Birmingham Small Arms Company. (See Norman, George, assignor.)						
Bishop, Louis N., Dayton, Ky. Work-guide for sewing-machines	874,728	Dec. 24	4972	1044–5	131	2063
Bishop, Wade H., Birmingham, Ala. Square	874,383	Dec. 24	4264	899	131	1949
Blair, Joseph H., Bowling Green, Mo. Drafting instrument	874,384	Dec. 24	4265	899	131	1949
Blakeney, Edward, Ossining, N. Y., and R. E. Chetwood, Jr., Elizabeth, N. J., assignors to American Telephone and Telegraph Company. Nullifying disturbances in telegraphic or other signaling circuits	874,826	Dec. 24	5135	1081	131	2095
Blakey, George G. (See Weitershausen, Franklin B., assignor.)						
Bliss, Fred, assignor of one-half to G. Bliss, Hammond, Ind. Double pan	874,562	Dec. 24	4634	973	131	2008
Bliss, Gottle. (See Bliss, Fred, assignor.)						
Blomquist, Gust E., Rockford, Ill. Coupling for iron bedsteads	874,385	Dec. 24	4271	900	131	1950
Boehner, William, assignor of one-half to J. Ahlberg, Chicago, Ill. Loose-leaf ledger	874,919	Dec. 24	5360	1120–1	131	2124
Bölderl, Dominik, Oakland, Cal. Miner's prospecting-tool	874,730	Dec. 24	4975	1045	131	2064
Bond, Ida M., Forest Hill, N. J. Corset and corset-waist	874,386	Dec. 24	4272	900	131	1951
Bond, Joseph E., Maywood, Ill. Brickmaking-machine	874,482	Dec. 24	4448	939–40	131	1982
Botts, Winfield J., Havre de Grace, Md. Check-row and hill marker	874,827	Dec. 24	5138	1082–3	131	2095
Boulanger, Andrew, Los Angeles, Cal. Power-transmission device	874,563	Dec. 24	4635	973	131	2008
Boyer, Isaac H., Muncie, Ind. Steam-producer	874,731	Dec. 24	4976	1046–7	131	2064
Bray, Charles W., assignor to American Sheet & Tin Plate Company, Pittsburg, Pa. Treating packs	874,732	Dec. 24	4980	1047	131	2065
Briailles, Gaston C. de, Paris, France. Electrolytic apparatus for the manufacture of nitrocellulose	874,564	Dec. 24	4637	974	131	2008
Briggs, Melancthon J., Philadelphia, Pa. Electric fire and burglar alarm	874,483	Dec. 24	4455	940	131	1982
Brill, John A. (See Bucknam, Ezra S., assignor.)						
Brillhart, Elmer L., Pentwater, Mich. Vehicle and spring thereof	874,484	Dec. 24	4459	940	131	1983
Bristow, Ralph E., assignor of one-half to W. Burkart and H. A. Williams, Denver, Colo. Flush-tank	874,565	Dec. 24	4638	974	131	2008
Brough, Thomas J., Baltimore, Md. Bag-closing machine	874,734	Dec. 24	4982	1048–9	131	2065
Brown, Arthur F., assignor to P. P. Mast and Company, Springfield, Ohio. Disk-bearing	874,485	Dec. 24	4462	941	131	1983
Brown, Arthur F., assignor to P. P. Mast and Company, Springfield, Ohio. Wheel-cultivator	874,566	Dec. 24	4640	974–5	131	2009
Brown, Millard F. (See Knight, Jonathan L., assignor.)						
Brown, Oscar H., Eastport, Me. Vest-holder	874,733	Dec. 24	4981	1047	131	2065
Brown, Roy W., Amsterdam, N. Y. Electric controller	874,567	Dec. 24	4644	975	131	2009
Browne, Ralph S., Alameda, Cal. Zinc-lathe	874,486	Dec. 24	4464	941	131	1983
Bruneau, John, Clichy, Paris, France. Vapor-burner	874,735	Dec. 24	4984	1049	131	2065
Buck, William L., New York, N. Y. Power-transmission mechanism	874,828	Dec. 24	5143	1083	131	2096
Buckley, Thomas J., Chicago, Ill. Automatic relief-valve	874,736	Dec. 24	4985	1049	131	2066
Bucklin, Harry, Rochester, N. Y. Fluid-mixer	874,737	Dec. 24	4986	1050	131	2066
Bucknam, Ezra S., assignor to J. A. Brill, Philadelphia, Pa. Car	874,568	Dec. 24	4647	975–6	131	2010
Bullock Electric Manufacturing Company *et al.* (See Stull, Emmett W., assignor.)						
Bunning, John W. P., Philadelphia, Pa. Combination-garment	874,487	Dec. 24	4466	941–2	131	1984
Bunse, Carl. (See Gellert and Bunse.)						
Burger, Franz, assignor of three-fourths to H. M. Williams, Fort Wayne, Ind. Variable gearing	874,657	Dec. 24	4820	1012	131	2040
Burkart, William, *et al.* (See Bristow, Ralph E., assignor.)						
Burkholder, John H., assignor to Elite Manufacturing Company, Ashland, Ohio. Lifting-jack	874,904	Dec. 24	5284	1113	131	2119
Burr, Franklin H., Atlantic, Iowa, and G. Adams, Chicago, Ill. Ventilator	874,387	Dec. 24	4273	900	131	1951
Bush, Charles, Hammond, Ind. Furnace grate and ash-pit	874,569	Dec. 24	4649	976	131	2010
Butler, Thomas J., Harrison, N. J. Clutch	874,388	Dec. 24	4274	901	131	1951
Butman, Thomas R., Lake Bluff, Ill. Steam-generator	874,389	Dec. 24	4283	902	131	1952
C. G. Sargent's Sons Corporation. (See Sargent, Frederick G., assignor.)						
Cable Company. (See Klugh, Paul B., assignor.)						
Cairncross, Andrew S., St. Paul, Minn. Salting apparatus	874,570	Dec. 24	4650	976–7	131	2010
Callsen, Jürgen. (See Berendes and Callsen.)						
Cameron, James H., Paris, Tex. Carrier-frame for baskets	874,658	Dec. 24	4823	1012	131	2040
Camp, Samuel G. (See Dodge and Camp.)						
Cantrall, Sarah E., Athens, Ill. Combined cutter and baster	874,829	Dec. 24	5144	1083	131	2096
Carel, John O., Duluth, Minn. Pipe-coupling	874,390	Dec. 24	4285	902	131	1952
Carnegie Steel Company. (See Lewis and Unger, assignors.)						
Carroll, Fred A., Penn Yan, N. Y. Sash-lock	874,830	Dec. 24	5146	1084	131	2096
Catoire, Henri M. P., and J. A. M. Marret, Paris, France. Apparatus for the manufacture of pasteboard boxes by punching	874,831	Dec. 24	5147	1084	131	2096
Causey, Joseph L., assignor to North American Biscuit Company, Kansas City, Mo. Oil-burner	874,488	Dec. 24	4470	942	131	1984
Chalas, Léon, E. Réquillart, and C. Contal, Levallois-Perret, France. Electric horn	874,792	Dec. 24	5078	1070	131	2083
Chandler, Edward F., assignor of two-thirds to E. R. Van Tassel and A. E. Leighton, Brooklyn, N. Y. Machine for holding, stamping, and displaying checks	874,905	Dec. 24	5285	1114	131	2119
Charles, Emile, Paris, France. Announcing or advertising apparatus	874,832	Dec. 24	5148	1084–5	131	2096
Chetwood, Robert E., Jr. (See Blakeney and Chetwood.)						
Chewning, C. D. (See Taylor, Burt E., assignor.)						
Chute, Harry O., Cleveland, Ohio. Making steel	874,391	Dec. 24	4286	903	131	1952
Clark, Gilbert J., Mayville, Wis. Dental pliers	874,489	Dec. 24	4472	942	131	1984
Clarke, Arthur F., Butler, Pa. Lubricating device	874,883	Dec. 24	5245	1105	131	2112
Clegg, William O., and O. J. Asmann, Palestine, Tex. Derailing device	874,490	Dec. 24	4473	943	131	1984
Cloud, Arthur D., *et al.* (See Latimer, James B., assignor.)						
Cobbe, Hervic N. G. (See Middleton and Cobbe.)						
Colborne, Oliver, Chicago, Ill. Pie-crust-trimming machine	874,392	Dec. 24	4289	903	131	1953
Collins, Joseph, New York, N. Y. Indicator for bottles	874,393	Dec. 24	4291	903	131	1953
Commercial Storage Battery Co. (See Gardiner, William, assignor.)						
Conklin, Edward, Channahon, Ill. Door check and tightener	874,659	Dec. 24	4825	1013	131	2041
Contal, Camille. (See Chalas, Réquillart, and Contal.)						
Cooke, Jasper N., and J. C. Moeller, Davilla, Tex. Clothes-pin	874,660	Dec. 24	4826	1013	131	2041
Coombs, William H., Rockford, Ill. Switch for street-cars	874,491	Dec. 24	4475	943	131	1985
Coon, Louis G., Pueblo, Colo. Fastener for refrigerator-doors	874,833	Dec. 24	5150	1085	131	2097
Copping, Thomas C., Houston, Tex. Insulator and protector for electric conductors	874,834	Dec. 24	5151	1085	131	2097
Cord, Octave, Montélimar, France. Type-writer	874,661	Dec. 24	4826	1013	131	2041
Cork, Pearl, and D. Naglee, Weston, W. Va. Combination wrench and pliers	874,394	Dec. 24	4294	903	131	1954
Cosgrove, Robert H., Spokane, Wash. Entry-tag	874,835	Dec. 24	5152	1085	131	2097
Crampton, Henry B., Syracuse, N. Y. Device for cutting flaps of sweat-bands	874,571	Dec. 24	4652	977	131	2011
Crawford, Lafayette F., Denver, Colo. Fountain-pen	874,738	Dec. 24	4989	1050	131	2067

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Cunningham, Roy N., and J. W. McPherson, Columbus, Ohio. Non-refillable receptacle	874,739	Dec. 24	4990	1050	131	2067
Cunningham, Thomas E., *et al.* (See Lynch, James H., assignor.)						
Curtis, Walter L., Worcester, Mass. Wire paper-clip	874,572	Dec. 24	4653	977	131	2011
Daimler Motorengesellschaft. (See Lorenz, Wilhelm, assignor.)						
Dalby, William E., Hester, N. C. Lubricating-axle	874,740	Dec. 24	4991	1051	131	2067
Dale, John H. (See Lewis, Herman J. S., assignor.)						
Danielson, Daniel B., Milwaukee, Wis. Column construction	874,395	Dec. 24	4295	904	131	1954
Davis, Calvin R., assignor to Oliver Chilled Plow Works, South Bend, Ind. Corn-planter	874,741	Dec. 24	4992	1051	131	2068
Davis, John B., assignor to National Oil Pump & Tank Co., Dayton, Ohio. Power-pump for measuring oil	874,573	Dec. 24	4654	977–8	131	2011
Davis, John B., assignor to National Oil Pump & Tank Co., Dayton, Ohio. Self-measuring oil-pump	874,574	Dec. 24	4657	978–9	131	2012
Davis, John H., assignor to Sanitary Manufacturing Company, Hamilton, Ohio. Ball-cock	874,575	Dec. 24	4659	979	131	2012
Davis-Martin Company. (See Martin, Thomas A., assignor.)						
De Bobula, Titus, Pittsburg, Pa. Reinforced concrete door structure	874,729	Dec. 24	4974	1045	131	2064
De Vito, John A., Boston, Mass. Spinning-machine	874,662	Dec. 24	4830	1014	131	2041
De Vito, John A., Boston, Mass. Variable-speed-transmitting gearing	874,747	Dec. 24	5000	1053	131	2069
De Voe, William E., Chicago Heights, Ill., assignor to E. H. Fallows, trustee, New York, N. Y. Brake-shoe	874,663	Dec. 24	4832	1014	131	2042
Deckert, Henry P., Marion Junction, S. D. Wrench	874,742	Dec. 24	4994	1052	131	2068
Deinet, Joseph, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Anthracene dye	874,743	Dec. 24	4995	.....	131	2068
Deinet, Joseph, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Anthracene dye	874,744	Dec. 24	4996	.....	131	2068
Delany, Patrick B., South Orange N. J. Telegraphy	874,745	Dec. 24	4996	1052	131	2068
Delbon, Frank G., Brooklyn, assignor to Hygienic Shoe Shank Company, New York, N. Y. Manufacture of shoes	874,396	Dec. 24	4296	904	131	1955
Delbon, Frank G., Brooklyn, assignor to Hygienic Shoe Shank Company, New York, N. Y. Shoe-shank stiffener	874,884	Dec. 24	5246	1105	131	2112
Delcampe, Cyrille, Quincy, Mass. Blowpipe	874,492	Dec. 24	4479	943	131	1985
Denham, George A. (See Pearson, Henry, assignor.)						
Dennis, Lydia H., Gratz, Ky. Hinge	874,746	Dec. 24	4999	1052	131	2069
Dewitz, Heinrich. (See Siems and Dewitz.)						
Dix, William, Lakewood, N. J. Trap-nest	874,748	Dec. 24	5002	1053	131	2070
Dodds, Ethan I., Pullman, assignor to Pullman Company, Chicago, Ill. Metal ore-car	874,576	Dec. 24	4661	979–80	131	2012
Dodds, Ethan I., Pullman, assignor to Pullman Company, Chicago, Ill. Metallic ore-car	874,577	Dec. 24	4662	980	131	1213
Dodds, Ethan I., assignor to Pullman Company, Chicago, Ill. Door-operating mechanism for dumping-cars	874,578	Dec. 24	4664	980–1	131	2013
Dodge, Owen, and S. G. Camp, Colorado Springs, Colo. Adjustable chandelier	874,836	Dec. 24	5153	1086	131	2098
Dodge, Orlas, Norwich, Conn. Film	874,885	Dec 24	5248	.....	131	2112
Donaldson, William R. (See Marble, George W., assignor.)						
Dove, John O., Cooledge, and C. Wirsing, Fort Worth, Tex. Water-conveyer	874,397	Dec. 24	4299	905	131	1955
Dow, Herbert H. (See Gates and Dow.)						
Drew, George F., Brunswick, Me. Supplemental metallic picture-holding strip	874,749	Dec. 24	5003	1053	131	2070
Dusenbery, Albert W., Ionia, Kans. Draft-evener	874,664	Dec. 24	4834	1015	131	2042
Eberhardt, Frederick L., Newark, N. J. Gear-cutter	874,886	Dec. 24	5249	1105	131	2112
Eby, Henry C. (See Hoeregott and Eby.)						
Eckman, Peter J., Long Lake, Minn. Beehive	874,579	Dec. 24	4666	981	131	2013
Edwards, Ellsworth J., Los Angeles, Cal. Roller-bearing	874,837	Dec. 24	5155	1086	131	2098
Edwards, Henry. (See Libhart, Hugh P., assignor.)						
Edwards, Welford G., Plainview, Minn. Sleigh	874,750	Dec. 24	5004	1054	131	2070
Elite Manufacturing Company. (See Burkholder, John H., assignor.)						
Ellington, Edmund W., Owensburg, Ky. Measuring implement	874,751	Dec. 24	5006	1054–5	131	2070
Engelberg Huller Co. (See Halstead, Willard, assignor.)						
Ethridge, William E., Schlater, Miss. Valve-discharge	874,752	Dec. 24	5008	1055	131	2071
Evans, George D., Sharon, assignor to American Sheet & Tin Plate Company, Pittsburg, Pa. Opening packs	874,753	Dec. 24	5009	1055–6	131	2071
Everit, Edward H., *et al.* (See Morris, Thomas M., assignor.)						
Fallows, Edward H., trustee. (See De Voe, William E., assignor.)						
Falsey, Martin B. (See Miller, Frank F., assignor.)						
Farbenfabriken vorm. Friedr. Bayer & Co. (See Berendes and Callsen, assignors.)						
Farbenfabriken vorm. Friedr. Bayer & Co. (See Berendes and Herwig, assignors.)						
Farbenfabriken vorm. Friedr. Bayer & Co. (See Deinet, Joseph, assignor.)						
Farkas, Armand, and J. Kieffer, Billancourt, France. Gearing	874,580	Dec. 24	4667	981	131	2014
Faughnan, Patrick J., Locust Gap, Pa. Currycomb	874,493	Dec. 24	4479	944	131	1985
Feldt, Ferdinand J., Peoria, Ill. Broadcast seeding-machine	874,887	Dec. 24	5250	1106	131	2113
Feldt, Ferdinand J., Peoria, Ill. Seeding-machine	874,888	Dec. 24	5252	1106	131	2113
Ferguson, Bassett, Moores, Pa. Wind and dust shield for railway-coaches	874,838	Dec. 24	5156	1086	131	2099
Ferranti, Sebastian Z. de, Grindleford Bridge, Sheffield, England. Bladed turbine element	874,398	Dec. 24	4301	905–6	131	1955
Finzi, Giorgio, and E. Tallero, Milan, Italy. Brush-holder for electric machines	874,665	Dec. 24	4835	1015	131	2042
Fischer, Edward J., *et al.* (See Fischer, Peter J., assignor.)						
Fischer, Nicholas, *et al.* (See Fischer, Peter J., assignor.)						
Fischer, Peter J., assignor of two-thirds to N. and E. J. Fischer, Cincinnati, Ohio. Tile construction	874,909	Dec. 24	5339	1116	131	2121
Flather, Ernest J., Nashua, N. H. Indexing mechanism	874,754	Dec. 24	5010	1056–7	131	2071
Fleischman, Edwin C., and J. F. Jennings, assignors to Monarch Brass Company, Cleveland, Ohio. Faucet	874,755	Dec. 24	5017	1057	131	2072
Flood, William H., Ilion, N. Y. Attachment for drawers	874,581	Dec. 24	4671	982	131	2014
Foster, Charles H., West Duluth, Minn. Pipe-wrench	874,839	Dec. 24	5158	1087	131	2099
Fox, John H., New York, N. Y. Syrup-measure for charging beverage-bottles	874,757	Dec. 24	5019	1057	131	2072
Francis, Charles. (See Francis, William H., assignor.)						
Francis, William H., Cherryvale, assignor for one-half to C. Francis, Independence, Kans. Transporting bricks, &c.	874,582	Dec. 24	4672	982	131	2014
Frasch, Herman, assignor to United Salt Company, Cleveland, Ohio. Mining salt	874,906	Dec. 24	5290	1115	131	2120
Frasch, Herman, assignor to United Salt Company, Cleveland, Ohio. Mining salt	874,907	Dec. 24	5297	1115	131	2120
Freese, John D., Chicago, Ill. Packing-pad	874,494	Dec. 24	4480	944	131	1986
French, Mary E., Clyde, Ohio. Potato-masher	874,756	Dec. 24	5018	1057	131	2072
Fretz, J. R., *et al.* (See Hendrick, Thomas A., assignor.)						
Fritts, Charles E., deceased, New York, N. Y.; J. H. Fritts, administratrix, assignor of one-third to S. B. Prentiss, Washington, D. C. Apparatus or means for the production, transmission, and distribution of electric currents	874,908	Dec. 24	5306	1116	131	2121
Fritts, Josephine H., administratrix. (See Fritts, Charles E.)						
Fry, Charles A. (See White and Fry.)						
Fuchs, Charles G., Jersey City, N. J. Toy	874,840	Dec. 24	5160	1087	131	2099
Gardiner, William, assignor, by mesne assignments, to Commercial Storage Battery Co., Chicago, Ill. Storage-battery plate	874,841	Dec. 24	5160	1087	131	2099
Garny, George, Rochester, N. Y. Paper-file	874,758	Dec. 24	5021	1058	131	2073
Garret, Jean, Pittsburg, Pa. Tracing implement	874,583	Dec. 24	4673	982	131	2015

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Gaterman, William, Manitowoc, Wis. Bunching device for windrowing attachments	874,399	Dec. 24	4803	906	131	1955
Gaterman, William, Manitowoc, Wis. Surgical instrument	874,495	Dec. 24	4481	944	131	1986
Gates, Walter S., and H. H. Dow, Midland, Mich., assignors, by mesne assignments, to Ontario Nickel Company, Limited, Worthington, Canada. Rendering soluble in water the nickel and copper contained in sulfid ores and mattes	874,496	Dec. 24	4482	.....	131	1986
Gauthier, Emile, and C. Rodrigues-Ely, Paris, France. Apparatus for perforating and cutting metals	874,606	Dec. 24	4835	1015	131	2043
Gehre, Max, Dusseldorf-Rath, Germany. Apparatus for measuring the supply of steam from a boiler	874,667	Dec. 24	4837	1015	131	2043
Gellert, Christain L., Dusseldorf, and C. Bunse, Bocholt, Germany. Treating waste oakum and similar materials	874,668	Dec. 24	4838	1016–17	131	2043
Gettle, Thomas S., *et al.* (See Winkelmeyer, John, assignor.)						
Gilleland, Edgar B., assignor of seven-sixteenths to J. Rinehart, Nevada, Mo. Grain-door	874,759	Dec. 24	5022	1058	131	2073
Gillies, Alexander, Heidelberg, Victoria, Australia. Pneumatic milking apparatus. (Reissue)	12,734	Dec. 24	5362	1121	131	2125
Gladding, Samuel E., Jersey City, N. J. Device to prevent sea-dumped garbage from being thrown onto the beach	874,497	Dec. 24	4487	944	131	1986
Glosap, John H., Nottawa, Mich. Nut-lock	874,760	Dec. 24	5026	1059	131	2073
Goddard, George F., St. Louis, Mo. Carpet-cleaner	874,584	Dec. 24	4675	982	131	2015
Goddu, George, Winchester, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Eyeleting-machine	874,669	Dec. 24	4840	1017	131	2044
Godlewski, William A., St. Louis, Mo. Sash-fastener	874,842	Dec. 24	5163	1087	131	2100
Goltstein, Elise, Cologne, Germany. Bottle cap or closure for bottles, jars, or other receptacles	874,670	Dec. 24	4844	1017	131	2044
Gould, Edwin J., assignor of one-half to T. E. Sawdey, Boulder, Colo. Clipper-sharpening machine	874,671	Dec. 24	4845	1018	131	2044
Gowin, Arnest E., Morrisonville, Ill. Flue-stop	874,672	Dec. 24	4847	1018	131	2044
Graham, Charles W., assignor to Utica Industrial Company, Rome, N. Y. Can-crimping machine	874,498	Dec. 24	4488	945	131	1987
Graham, George, and J. C. Martin, Rounthwaite, Manitoba, Canada. Snow-plow	874,761	Dec. 24	5026	1059	131	2074
Graves, John W., Covington, Tenn., assignor to International Cotton Company, Boston, Mass. Cotton-gin roller	874,910	Dec. 24	5340	1117	131	2121
Green, Francis W., Wakefield, England. Air-heater	874,673	Dec. 24	4849	1018	131	2045
Greene, George G., Moorhead, Minn. Machine for cleaning erasers	874,400	Dec. 24	4305	906	131	1956
Greiner, Friedrich, Berlin, assignor to Maschinenbau-Anstalt Altenessen, A. G., Altenessen, Germany. Ball-bearing	874,401	Dec. 24	4306	906	131	1956
Grunewald, Otto, Jr., Trenton, N. J., and R. Alting, New York, N. Y. Stall-floor	874,674	Dec. 24	4849	1018–19	131	2045
Gulbransen, Axel G., Chicago, Ill. Automatic-playing piano	874,675	Dec. 24	4851	1019	131	2045
Gulbransen, Axel G., Sycamore, Ill. Mechanical piano-player	874,763	Dec. 24	5031	1060	131	2075
Gulick, Edward J., Mishawaka, Ind. Exhaust-muffler	874,762	Dec. 24	5028	1059–60	131	2074
Gunn, Charles H., Oroville, Cal. Hand rock-drill	874,676	Dec. 24	4855	1020	131	2046
H. B. Smith Machine Company. (See Perry, James L., assignor.)	874,499	Dec 24	4492	945	131	1987
Hager, Alexander, Jamestown, N. Y. Heat-radiating mantel	874,843	Dec. 24	5163	1088	131	2100
Hahn, Edmund, Everett, Mass. Sausage-stuffing machine	874,889	Dec. 24	5253	1106–7	131	2113
Hale, John B., Omaha, Nebr. Straw-rack for grain-separators	874,585	Dec. 24	4677	983	131	2015
Hall, Frank J., Philadelphia, Pa. Woven pile fabric	874,677	Dec. 24	4857	1020	131	2046
Hall, Robert C. (See Solomon, William T., assignor.)						
Halstead, Willard, assignor to Engelberg Huller Co., Syracuse, N. Y. Grinding-mill (Reissue)	12,735	Dec. 24	5364	1121–2	131	2125
Hamilton, William L., Chicago, Ill. Register-hook	874,764	Dec. 24	5033	1060	131	2075
Hamm, William S., Lakeside, Ill. Signal lamp or lantern glass holder	874,500	Dec. 24	4494	945	131	1987
Hammond, Harry L., Indianapolis, Ind. Window-fastener	874,402	Dec. 24	4307	907	131	1957
Hampe, Adolph, New York, N. Y. Attaching device	874,586	Dec. 24	4678	983	131	2016
Hamsley, Millard F., Brooklyn, N. Y. Fireproof window	874,765	Dec. 24	5034	1060	131	2075
Hare, John E., Chicago, Ill. Flash-light apparatus	874,501	Dec. 24	4495	946	131	1988
Harriman, Edward H. (See McKeen, William R., Jr., assignor.)	874,403	Dec. 24	4309	907	131	1957
Harris, Lewis W., and W. M. Parker, Richmond, Ind. Body-catch for caskets or the like	874,502	Dec. 24	4499	946	131	1988
Harris, Winfred W., Winthrop, assignor to E. M. Wilson, Chelsea, Mass. Machine for weaving tubing	874,678	Dec. 24	4859	1020–2	131	2046
Hartmann, Louis A., Brooklyn, N. Y. Means for propelling boats	874,890	Dec. 24	5255	1107	131	2114
Haworth, William E., Ridge Farm, Ill. Railway-crossing	874,679	Dec. 24	4862	1023	131	2047
Hay, Robert, Mount Pleasant, Pa. Car-dumping apparatus	874,503	Dec. 24	4500	946–7	131	1988
Haynes, Ethel M., Normal, Ill. Hose-supporter	874,766	Dec. 24	5036	1061	131	2076
Hays, Joseph W., Chicago, Ill. Ruling device	874,588	Dec. 24	4681	984	131	2016
Hays, Joseph W., assignor of one-half to G. L. Simonds, Chicago, Ill. Paper-ruling machine	874,587	Dec. 24	4679	983	131	2016
Healy, Raymond, Brooklyn, N. Y. Detachable wheel-rim	874,844	Dec. 24	5164	1088	131	2100
Henderson, John R., Los Angeles, Cal. Wave-motor	874,589	Dec. 24	4682	984	131	2016
Hendrick, Thomas A., assignor to J. R. Fretz, Sauquoit, N. Y., and F. L. Rogers, Warrington, Pa. Whiffletree trace-fastener	874,590	Dec. 24	4684	984	131	2017
Henrich, Peter, assignor, by mesne assignments, of one-half to J. Milhofer, Hoquiam, Wash. Fruit-box	874,891	Dec. 24	5256	1107	131	2114
Henry, Earl, Allegheny, Pa. Wrench	874,845	Dec. 24	5166	1088	131	2100
Henry S. Spackman Engineering Company. (See Spackman and Lazell, assignors.)						
Herwig, Felix. (See Berendes and Herwig.)						
Hess, Edward B., New York, N. Y., assignor to Royal Typewriter Company, Hoboken, N. J. Writing-machine	874,892	Dec. 24	5257	1107–8	131	2114
Hesselius, Peter, and J. Jaderlund, Chicago, Ill. Variable-speed power-transmitting gear	874,404	Dec. 24	4311	907	131	1957
Heybach, Frederick J., assignor of one-half to Morehouse Manufacturing Company, Savannah, Ga. Weighing and can-filling apparatus	874,911	Dec. 24	5341	1117	131	2121
Heys, John J., Lynn, Mass., assignor to Manufacturers Machine Company, Montclair, N. J. Automatic boot and shoe leveling machine	874,504	Dec. 24	4504	947–8	131	1989
Heys, John J., Lynn, Mass., assignor to Manufacturers' Machine Company, Montclair, N. J. Sole-rounding machine	874,505	Dec. 24	4515	949–51	131	1989
Higgin, Henry, assignor to Higgin Manufacturing Company, Newport, Ky. Making brace-irons or strengthening-irons for perches and analogous articles	874,506	Dec. 24	4525	951	131	1990
Higgin Manufacturing Company. (See Higgin, Henry, assignor.)						
Higgins, Edmund, Soldiers Home, Cal. Combined table and desk	874,846	Dec. 24	5167	1089	131	2101
High Speed Ring Company. (See Pierce, George L., assignor.)						
Highsmith, Zebulon F., Sumter, S. C. Lens-drilling machine	874,507	Dec. 24	4527	951–2	131	1990
Hill George S., Bradford, Mass. Shock-absorbing device	874,767	Dec. 24	5037	1061	131	2076
Hines, Joseph H., Philadelphia, Pa. Spark-arrester	874,768	Dec. 24	5040	1061	131	2076
Hoeregott, Carl M., and H. C. Eby, Jolley, Iowa. Lock whip-socket	874,591	Dec. 24	4685	985	131	2017
Hogmire, George M., Joliet, Ill. Culinary scraper	874,592	Dec. 24	4686	985	131	2017
Hubbard, Moses G., Jr., Austin, Ill. Brake for electric cars	874,508	Dec. 24	4529	952–3	131	1991
Hull, William S., Jackson, Miss. Mosquito-trap	874,680	Dec. 24	4864	1023	131	2047
Hulse, Jerome E., Albany, N. Y. Automatically-sharpening shears	874,847	Dec. 24	5170	1089	131	2101
Humphrey Charles S., Bellefontaine, Ohio. Core-bar	874 769	Dec. 24	5041	1061	131	2076

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Hungate, Charles D., Camp Creek, Va. Ball attachment	874,681	Dec. 24	4866	1023	131	2047
Hurst, Henry G., and W. H. Roth, Ozora, Mo. Twine-holder for binding corn, grain, &c.	874,770	Dec. 24	5042	1062	131	2077
Hurt, William B. (See Johnson and Hurt.)						
Huston, Edward D., Chaplin, Ky. Traction-engine	874,593	Dec. 24	4686	985	131	2018
Hygienic Shoe Shank Company. (See Delbon, Frank G., assignor.)						
Ide, Harry L., Springfield, Ill. Automobile	874,405	Dec. 24	4313	908	131	1958
Ingram, Fred F., San Francisco, assignor of one-half to A. S. Wilson, San Diego, Cal. Speed-indicator	874,594	Dec. 24	4689	986	131	2018
International Cotton Company. (See Graves, John W., assignor.)						
International Harvester Company. (See Pitkin, Julian H., assignor.)						
Ironside, Harold A., Upper Norwood, England. Advertising-machine	874,595	Dec. 24	4692	986–7	131	2019
Isbell, Sterling P., Ukiah, Cal. Salt-cellar	874,509	Dec. 24	4539	953	131	1991
J. P. Karns Tunnelling Machine Co. (See Karns, John P., assignor.)						
Jackson, Robert. (See Storm, Underwood, and Jackson.)						
Jaderlund, John. (See Hesselius and Jaderlund.)						
Janet, Armand, Paris, France. Producing oxygen	874,596	Dec. 24	4695	987	131	2019
Jarrell, Edwin, Riverdale, Kans. Plow	874 597	Dec. 24	4696	987	131	2020
Jeffrey, Joseph A. (See Lynch, George E., assignor.)						
Jennings, John F. (See Fleischman and Jennings.)						
Jensen, Aage, Eureka, Cal. Pasteurizer	874,598	Dec. 24	4697	987–8	131	2020
John R. Keim Mills. (See Smith, William H., assignor.)						
Johnson, Arthur L., Chicago, Ill. Clamping-machine	874,406	Dec. 24	4316	908–9	131	1958
Johnson, Frank A., New Bedford, Mass. Indexed ballot and ballot-book	874,599	Dec. 24	4699	988	131	2020
Johnson, Wallace C., Ivy, and W. B. Hurt, Stockton, Mo. Match-lighting device	874,682	Dec. 24	4867	1024	131	2048
Johnston, Theophilus, East Orange, N. J. Cornice-protector	874,510	Dec. 24	4540	954	131	1991
Johnston, Walter R., assignor to Walter R. Johnston Manufacturing Company, New York, N. Y. Fire-extinguishing apparatus	874,600	Dec. 24	4702	988	131	2021
Jones, Thomas L., Hamburg, Germany. Compressed-air motor	874,771	Dec. 24	5042	1062	131	2077
Josling, Harold W. E., London, England. Non-refillable bottle	874,683	Dec. 24	4869	1024	131	2048
Kaisling, William, assignor to M. G. Kellogg, Chicago, Ill. Interrupter	874,511	Dec. 24	4541	954	131	1991
Kalle and Company, Aktiengesellschaft, Firm of. (See Albrecht, Karl, assignor.)						
Kane, Michael, Cincinnati, Ohio. Horseshoe	874,912	Dec. 24	5343	1117	131	2122
Karns, John P., assignor to J. P. Karns Tunneling Machine Co., Boulder, Colo. Sinkshaft drill	874,848	Dec. 24	5171	1089	131	2101
Karr, James P., and J. D. Rauch, Logansport, Ind. Barge	874,849	Dec. 24	5172	1090	131	2102
Keiper, Henry B., Lancaster, Pa. Twyer	874,893	Dec. 24	5262	1108	131	2115
Kellogg, Milo G. (See Kaisling, William, assignor.)						
Kelman, Joseph N., Los Angeles, Cal. Switch for high-potential circuits	874,601	Dec. 24	4705	988–9	131	2021
Kennedy, James W., Chicago, Ill., assignor, by mesne assignments, to Kennedy Typewriter Company of Manhattan, New York, N. Y. Type-writing machine	874,407	Dec. 24	4318	909–10	131	1958
Kennedy Typewriter Company of Manhattan. (See Kennedy, James W., assignor.)						
Key, Brewer W. (See Percival, Herbert E., assignor.)						
Kieffer, Joseph. (See Farkas and Kieffer.)						
Kimball, Alonzo, New York, N. Y., assignor to A. Kimball Company. Pin-ticket for fabrics and the like	874,772	Dec. 24	5044	1062	131	2077
King, Homer A., Colton, Cal. Rotary engine	874,684	Dec. 24	4871	1024–5	131	2048
Kinney, John P., Pocatello, Idaho. Telegraph-key	874,602	Dec. 24	4707	989	131	2022
Kirkegaard, Georg, New York, N. Y. Bottle-stopper	874,685	Dec. 24	4874	1025	131	2049
Kitchen, Joseph M. W., East Orange, N. J. Generator	874,850	Dec. 24	5174	1090–1	131	2102
Klugh, Paul B., assignor to Cable Company, Chicago, Ill. Pedal mechanism	874,408	Dec. 24	4321	910	131	1959
Knight, Jonathan L., assignor to M. F. Brown, Kansas City, Mo. Combination-tool	874,409	Dec. 24	4324	911	131	1959
Knudsen, George C. (See Prest, Lynge, and Knudsen.)						
Koch, Theodore, Milwaukee, Wis. Waste-pipe tool	874,512	Dec. 24	4546	954	131	1991
Kohler, Charles W., Arlington, and T. E. O'Brien, Watertown, Mass.; said Koehler assignor to said O'Brien. Ratchet drill	874,410	Dec. 24	4326	911	131	1960
Kugelgen, Franz von. (See Seward and Kugelgen.)						
Kummer, Heinrich, *et al.* (See Wheeler, Seth, assignor.)						
Lacomme, Gaston. (See Lee, Arthur L., assignor.)						
Lagonda Manufacturing Company. (See Weinland, Henry F., assignor.)						
Lake, Herman B., Rapid River, Mich. Nut-lock	874,773	Dec. 24	5046	1062	131	2078
Langjahr, William A., Plymouth, Wis. Buggy-iron	874,774	Dec. 24	5047	1063	131	2078
Lathrop, Frederick H., assignor of one-half to J. J. McCarthy, Chicago, Ill. Rotary engine	874,775	Dec. 24	5048	1063	131	2078
Latimer, James B., assignor to A. D. Cloud, F. M. Patterson, and F. W. Rizer, Chicago, Ill. Switch-point lock	874,686	Dec. 24	4875	1025	131	2049
Lawrence, Henry J., Longbeach, Cal. Wave or tide motor	874,687	Dec. 24	4879	1026	131	2079
Lawrence, Henry J., assignor of one-half to O. E. Seastrom, Elmore, Minn. Manure-loader	874,776	Dec. 24	5051	1064	131	2049
Lazell, Ellis W. (See Spackman and Lazell.)						
Leblanc, Maurice, Paris, France, assignor to Westinghouse Electric & Manufacturing Company. System of electrical transmission and propulsion	874,411	Dec. 24	4328	911–12	131	1960
Lee, Alva D., Brookline, and F. J. E. Nelson, Jr., East Boston, Mass. Rock-drilling machine	874,603	Dec. 24	4708	989–90	131	2022
Lee, Arthur L., New York, assignor of one-half to G. Lacomme, Brooklyn, N.Y. Door-fastener	874,688	Dec. 24	4880	1026	131	2050
Leighton, Alexander E., *et al.* (See Chandler, Edward F., assignor.)						
Lennox, Talbot, assignor to McGuire-Cummings Manufacturing Company, Chicago, Ill. Car-door hook	874,689	Dec. 24	4881	1026	131	2050
Lewis, Edwin W., and J. S. Unger, Munhall, assignors to Carnegie Steel Company, Pittsburg, Pa. Finishing armor-plate	874,604	Dec. 24	4713	990	131	2022
Lewis, Frederick P., *et al.* (See Morris, Thomas M., assignor.)						
Lewis, Herman J. S., assignor of one-half to J. H. Dale, New York, N. Y. Starter for explosion-motors	874,913	Dec. 24	5344	1117–18	131	2122
Lewis, William H., Rome, N. Y. Folding pocket coat and hat hook	874,412	Dec. 24	4335	912	131	1961
Libhart, Hugh P., assignor of one-half to H. Edwards, Troup, Tex. Plastic fence-post	874,513	Dec. 24	4546	954	131	1992
Linborg, Christina, Galeton, Pa. Guiding and marking device for sewing-machines	874,777	Dec. 24	5052	1064	131	2079
Lincoln, Edwin S., Brookline, Mass. Line-tester	874,690	Dec. 24	4882	1027	131	2050
Lindow, Wesley F., Detroit, Mich. Joist-hanger	874,514	Dec. 24	4548	955	131	1992
Lindquist, Charles L., Brooklyn, N. Y. Fire-escape	874,691	Dec. 24	4884	1027	131	2050
Lindstrand, Carl G., Bisbee, Ariz. Machine for slag-breaking	874,692	Dec. 24	4887	1027–8	131	2051
Little, Elwin, Granville, Ohio. Base-ball glove or mitten	874,851	Dec. 24	5182	1091	131	2103
Lorenz, Peter A., Chicago, Ill. Making bucket-blanks	874,515	Dec. 24	4549	955	131	1992
Lorenz, Wilhelm, Karlsruhe, assignor to Firm of Daimler Motorengesellschaft, Unterturkheim-Stuttgart, Germany. Differential gearing	874,852	Dec. 24	5183	1091–2	131	2103
Losch, John S., Reading, Pa. Friction-clutch	874,605	Dec. 24	4714	990–1	131	2022
Losey, James, Grand Rapids, Mich. Wrench	874,853	Dec. 24	5184	1092	131	2103
Low, Abbot A., Horseshoe, N. Y. Cutting implement	874,516	Dec. 24	4550	955	131	1993
Lowry, Cuthbert B., Lexington, Ky. Diaphragm	874,517	Dec. 24	4552	955	131	1993
Lowry, George A., Chicago, Ill., assignor, by mesne assignments, to Planters Compress Company. Combined condenser and feeder mechanism for presses	874,606	Dec. 24	4716	991	131	2023
Loynd John B., West Philadelphia, Pa. Kettle-filler	874,607	Dec. 24	4721	992	131	2023

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Lübcke, Emil, Merseburg, Germany. Combined elevator and builder's crane for moving heavy building materials	874,778	Dec. 24	5053	1065	131	2079
Luedke, Frederick W., Trenton, N. J. Explosive-turbine	874,693	Dec. 24	4838	1028	131	2061
Luther, Clevia J., assignor of two-fifths to J. T. Mayberry, Desloge, Mo. Danger-signal	874,608	Dec. 24	4722	992	131	2031
Lynch, George E., assignor to J. A. Jeffrey, Columbus, Ohio. Drill	874,894	Dec. 24	5263	1108–9	131	2113
Lynch, James C., Chicago, Ill. Locking means for bureau-trunks	874,518	Dec. 24	4563	956	131	1993
Lynch, James H., Belle Vernon, assignor of one-half to F. G. Myers and T. E. Cunningham, Pittsburg, Pa. Railway-tie and fastener	874,609	Dec. 24	4725	992–3	131	2024
Lynge, William C. (See Prest, Lynge, and Knudsen.)						
Lyon, Wallace C., Hyattsville, Md. Means for reinforcing composition construction of ceilings, walls, &c	874,413	Dec. 24	4335	912	131	1961
Maclin, Edward S., Knoxville, Tenn. Dump-car	874,519	Dec. 24	4555	956	131	1994
Maddren, Harold H., Hollywood, Cal. Pipe-tongs	874,854	Dec. 24	5186	1092	131	2103
Main, Lawrence. (See Oster and Main.)						
Manufacturers Machine Company. (See Heys, John J., assignor.)						
Mann, Albret B., Cincinnati, assignor to American Laundry Machinery Company, Norwood, Ohio. Motor-controlling treadle	874,895	Dec. 24	5266	1109	131	2115
Marble, George W., assignor of one-half to W. R. Donaldson, Chicago, Ill. Change-speed and reversing mechanism	874,520	Dec. 24	4557	956	131	1994
March, Thomas J., Pottstown, Pa. Cold-air-inlet regulator for furnaces	874,521	Dec. 24	4563	956	131	1995
Marks, Herbert E., Poughkeepsie, N. Y., assignor to American Sheet & Tin Plate Company, Pittsburg, Pa. Wrapper for metal sheets	874,779	Dec. 24	5054	1065	131	2080
Marret, Joseph A. M. (See Catoire and Marret.)						
Marsh, Albert L., Lake Bluff, assignor to W. A. Spinks & Co., Chicago, Ill. Thermo-electric element	874,780	Dec. 24	5056	1065	131	2080
Marshall, William B., Paris, Iowa. Wire-fence stretcher	874,855	Dec. 24	5187	1093	131	2104
Martin, John C. (See Graham and Martin.)						
Martin, Thomas A., assignor to Davis-Martin Company, Chicago, Ill. Animal-shears	874,522	Dec. 24	4564	957	131	1996
Maschinenbau-Anstalt Altenessen, A. G. (See Greiner, Friedrich, assignor.)						
Mason, William, assignor to Winchester Repeating Arms Co., New Haven, Conn. Tubular-magazine automatic gun	874,856	Dec. 24	5188	1093–6	131	2104
Mather, Allan G., and E. C. Shaw, Milwaukee, Wis. Temperature-controlling device for furnaces	874,781	Dec. 24	5057	1066	131	2080
Mathison, Edward L., Panora, Iowa. Rural-mail-carrier's cabinet	874,896	Dec. 24	5269	1110	131	2116
Mathy, Joseph, Hot Springs, Ark. Metallic crate	874,782	Dec. 24	5059	1066	131	2081
Mathy, Joseph, Hot Springs, Ark. Grate for metallic crates	874,783	Dec. 24	5061	1066	131	2081
Mayberry, James T. (See Luther, Clevia J., assignor.)						
McCafferty, Walter, Butte, Mont. Railway-rail	874,788	Dec. 24	5072	1068	131	2083
McCandless, Charles W., Allegheny, Pa. Furnace-door opener	874,612	Dec. 24	4728	993	131	2025
McCarthy, John J. (See Lathrop, Frederick H., assignor.)						
McCarty, William F. M., Pleasantville, N. Y. Automatic incubator	874,696	Dec. 24	4900	1030	131	2053
McColm, John A., New Plymouth, Idaho. Nail holder and set	874,613	Dec. 24	4730	994	131	2025
McDonnell, Michael E., Leominster, Mass. Ornament	874,789	Dec. 24	5073	1069	131	2083
McEvoy, Joseph H., Houston, Tex. Straining-plug	874,418	Dec. 24	4344	914	131	1962
McGowan, Henry E., New York, N. Y. System of cooling for condensing steam plants	874,858	Dec. 24	5200	1096	131	2105
McGranor, Lauriston G., and J. W. Beall, Irwin, Pa. Elevating-wagon	874,525	Dec. 24	4568	958	131	1996
McGuire-Cummings Manufacturing Company. (See Lennox, Talbot, assignor.)						
McKeel & Company, George A. (See McKeel, George A., assignor.)						
McKeel, George A., assignor to G. A. McKeel & Company, Limited, Jackson, Mich. Vehicle-hub	874,637	Dec. 24	4901	10-0	131	2053
McKeen, William R., Jr., Omaha, Nebr., assignor to E. H. Harriman, Arden, N. Y. Clutch mechanism	874,419	Dec. 24	4345	914	131	1963
McKenzie, Daniel B., Elkhorn, W. Va. Fence-picket	874,420	Dec. 24	4349	915	131	1963
McLaughlin, Luther E., and R. J. Parsons, Priceburg, Pa. Toy	874,526	Dec. 24	4569	958	131	1996
McLoughlin, James, Rye, N. Y. Ore-reducing furnace	874,527	Dec. 24	4570	959	131	1997
McMullen, John, Kent, Ohio. Door and hinge	874,528	Dec. 24	4572	959	131	1997
McPherson, John W. (See Cunningham and McPherson.)						
Meagher, James E., Burlington, Vt. Ball-cock	874,523	Dec. 24	4566	957	131	1995
Meredith, John H., Altoona, Pa. Brake	874,857	Dec. 24	5197	1096	131	2104
Merritt, Henry W., assignor to Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine	874,784	Dec. 24	5063	1067	131	2081
Middleton, William, and H. N. G. Cobbe, Kalgoorlie, Western Australia, Australia. Grinding shoe and die	874,414	Dec. 24	4337	912–13	131	1961
Milhofer, John. (See Henrich, Peter, assignor.)						
Miller, Frank F., assignor to M. B. Falsey, New York, N. Y. Lock	874,694	Dec. 24	4892	1029	131	2052
Miller, Sam, Marshfield, Wis. Artificial fruit	874,415	Dec. 24	4338	913	131	1961
Mingus, Bert, Novinger, Mo. Washing-machine	874,610	Dec. 24	4727	993	131	2024
Mirus, Ehrenfried, Cologne, Germany. Type-writer	874,695	Dec. 24	4894	1029	131	2052
Mitchell, Hillard S. (See Pipkin and Mitchell.)						
Moeller, John C. (See Cooke and Moeller.)						
Monarch Brass Company. (See Fleischman and Jennings, assignors.)						
Monarch Typewriter Company. (See Merritt, Henry W., assignor.)						
Monitor Manufacturing Company. (See O'Brien, William C., assignor.)						
Mont, Robert R., New York, N. Y. Match-safe	874,416	Dec. 24	4339	913	131	1962
Mooney, Thomas, *et al.* (See Bearhope, George, assignor.)						
Mooney, William A., *et al.* (See Bearhope, George, assignor.)						
Moore, Morris W., assignor to Atlantis Fountain Pen Company, Everett, Mass. Fountain-pen	874,897	Dec. 24	5270	1110	131	2116
Moos, Reinhold, Placerville, Cal. Food-mixer	874,524	Dec. 24	4567	958	131	1995
Morehouse Manufacturing Company. (See Heybach, Frederick J., assignor.)						
Moriz, Maximilian, *et al.* (See Wheeler, Seth, assignor.)						
Morris, Thomas M., assignor of one-half to F. P. Lewis and E. H. Everit, New Haven, Conn. Automatic starting-box	874,898	Dec. 24	5271	1110–11	131	2116
Mortimore, Walter E. G., Gosport, England. Bolt for fixing railway chairs, rails, and the like	874,611	Dec. 24	4727	993	131	2024
Moser, Aurelius B., Los Angeles, Cal. Switch-stand	874,785	Dec. 24	5069	1067–8	131	2082
Moss, James, Manchester, England. Means for gripping and coupling wire ropes, rods, &c	874,417	Dec. 24	4343	913	131	1962
Mueller, Charles R., Jr., Detroit, Mich. Suspending device	874,786	Dec. 24	5071	1068	131	2082
Multi-Colour Printing Company (1904). (See Taylor, Elmer Z., assignor.)						
Murphy, John G., New York, N. Y. Auxiliary power device	874,787	Dec. 24	5071	1068	131	2082
Myers, Frank G., *et al.* (See Lynch, James H., assignor.)						
Naglee, Dwight. (See Cork and Naglee.)						
Nail, Joseph A., Chicago, Ill. Baby-crib	874,421	Dec. 24	4350	915	131	1963
National Oil Pump & Tank Co. (See Davis, John B., assignor.)						
National Wrapping Machine Co. (See Patterson, James M., assignor.)						
Neighbour, William W., Denison, Tex. Antifriction device for cranks and pitmen	874,859	Dec. 24	5202	1097	131	2105
Nelson, Francis J. E., Jr. (See Lee and Nelson.)						
Nelson, James W., New York, N. Y. Hydraulic jack	874,698	Dec. 24	4902	1030	131	2053
Nelson, James W., New York, N. Y. Hydraulic jack	874,699	Dec. 24	4907	1031	131	2054
Nelson, James W., New York, N. Y. Hydraulic jack	874,700	Dec. 24	4910	1031	131	2054

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Niebuhr, Henri, Hanover, assignor to Siemens & Halske Aktiengesellschaft, Berlin, Germany. Device for transforming variable motions into uniform motions	874,529	Dec. 24	4573	959	131	1997
Noah, William T., Elon College, N. C. Spindle-driving mechanism	874,614	Dec. 24	4732	994	131	2025
Norman, George, assignor of one-half to Birmingham Small Arms Company Limited, Small Heath, near Birmingham, England. Back sight for small-arms	874,914	Dec. 24	5347	1118	131	2123
North American Biscuit Company. (See Causey, Joseph L., assignor.)						
Norton, Edwin, New York, N. Y. Continuous heating-furnace	874,422	Dec. 24	4351	915–16	131	1964
Norton, Edwin, New York, N. Y., and H. C. Shaw, Glenshaw, Pa. Continuous furnace	874,530	Dec. 24	4575	959–60	131	1998
Nunamacher, William H., Newark, N. J. Freight-car	874,615	Dec. 24	4734	994	131	2026
O'Brien, Thomas E. (See Kohler and O'Brien.)						
O'Brien, William C., assignor to Monitor Manufacturing Company, Baltimore, Md. Automatic motor-starter	874,531	Dec. 24	4577	960–1	131	1998
O'Neill, Frank P., Dell, Oreg. Frying-pan and folding handle therefor	874,701	Dec. 24	4912	1032	131	2054
Oakman, Thomas C., Philadelphia, Pa. Rotary engine	874,616	Dec. 24	4736	994–5	131	2026
Ogan Mechanical Appliance Co. (See Ogan, William J., assignor.)						
Ogan, William J., assignor to Ogan Mechanical Appliance Co., Dayton, Ohio. Boiler	874,423	Dec. 24	4353	916	131	1964
Ogden, William L., Burlingame, Kans. Galting attachment for sulkies or other vehicles	874,617	Dec. 24	4739	995	131	2027
Ohm, William J., Minneapolis, Minn. Loading-machine	874,532	Dec. 24	4583	961	131	1998
Ohmer, John F., Dayton, Ohio. Fare-register	874,424	Dec. 24	4354	916–17	131	1964
Oliver Chilled Plow Works. (See Davis, Calvin R., assignor.)						
Ontario Nickel Company. (See Gates and Dow, assignors.)						
Oster, Arlie D., and L. Main, Centralia, Wash. Making swivel-joints	874,618	Dec. 24	4740	996	131	2027
P. & F. Corbin. (See Pickop, George B., assignor.)						
P. P. Mast and Company. (See Brown, Arthur F., assignor.)						
Pabst, Friedrich G., Hamburg, Germany. Tree for boots and shoes	874,619	Dec. 24	4741	996	131	2027
Palmer, Henry S. W., London, England. Tea mixture	874,425	Dec. 24	4359	.....	131	1965
Palmiter, Milton J., South Bend, Ind. Block-molding machine	874,533	Dec. 24	4585	962	131	1999
Parker, William M. (See Harris and Parker.)						
Parlin, William H., assignor to Parlin & Orendorff Company, Canton, Ill. Wheel-plow	874,534	Dec. 24	4587	962	131	1999
Parlin & Orendorff Company. (See Parlin, William H., assignor.)						
Parsons, Robert J. (See McLaughlin and Parsons.)						
Patterson, Arthur L., Albemarle, N. C. Printing device	874,790	Dec. 24	5074	1069	131	2083
Patterson, Frank M., *et al.* (See Latimer, James B., assignor.)						
Patterson, James M., assignor to National Wrapping Machine Co., Los Angeles, Cal. Wrapping-machine	874,620	Dec. 24	4742	997–8	131	2028
Patton, Elias J., Hastings, Nebr. Gasket or washer cutter	874,702	Dec. 24	4913	1032	131	2055
Pearson, Henry, Springfield, assignor to G. A. Denham, Boston, Mass. Combined trap-door abutment and locking member	874,426	Dec. 24	4360	917	131	1965
Pearson, Henry, Springfield, assignor to G. A. Denham, Boston, Mass. Hinge	874,427	Dec. 24	4360	917	131	1965
Pearson, John, Chicago, Ill. Dust-guard	874,428	Dec. 24	4361	418	131	1965
Penn, Ross R., Flora, Ind. Lathe-dog	874,791	Dec. 24	5076	1069	131	2083
Percival, Herbert E., Galveston, Tex., assignor of one-half to B. W. Key, Woodward, Okla. Rail-fastening	874,535	Dec. 24	4588	962	131	1999
Perry, James L., assignor to H. B. Smith Machine Company, Smithville, N. J. Carrier for sandpapering-machines	874,915	Dec. 24	5349	1118	131	2123
Phillips, Oliver P., Ames, Ind. Incubator	874,860	Dec. 24	5203	1097	131	2105
Pickop, George B., assignor to P. & F. Corbin, New Britain, Conn. Knob	874,621	Dec. 24	4746	998	131	2028
Pierce, George L., Manchester, N. H., assignor, by mesne assignments, to High Speed Ring Company, Boston, Mass. Spinning and twisting ring	874,429	Dec. 24	4363	918	131	1965
Pipkin, James W., and H. S. Mitchell, Wilton, Ark. Pneumatic signal for railway-crossings	874,622	Dec. 24	4747	998–9	131	2028
Pither, Thomas H., assignor to Western Electric Company, Chicago, Ill. Ceiling-fan motor	874,430	Dec. 24	4364	918–19	131	1966
Pitkin, Julian H., Chicago, Ill., assignor to International Harvester Company. Fan	874,431	Dec. 24	4367	919	131	1966
Planters Compress Company. (See Lowry, George A., assignor.)						
Pockman, Raymond, Yolo, Cal. Soldering-iron	874,861	Dec. 24	5204	1097	131	2106
Polk, Ralph B., Greenwood, Ind. Apparatus for grading fruits and vegetables	874,623	Dec. 24	4751	999	131	2029
Pörscke, Heinrich P. R. L., Hamburg, Germany. Turbine	874,432	Dec. 24	4368	919	131	1966
Porter, Edward C., Telluride, Colo. Slime-concentrator	874,433	Dec. 24	4368	919–20	131	1966
Portteus, Albert M., assignor of one-half to P. G. Basso, Indianapolis, Ind. Attachment for band-saws	874,434	Dec. 24	4370	920	131	1967
Posner, Abraham, New York, N. Y. Ankle-stay for shoes	874,862	Dec. 24	5206	1097	131	2106
Potter, Frank W. (See Wescott and Potter.)						
Potter, John A., Los Angeles, Cal. Manufacturing wrought iron or steel	874,536	Dec. 24	4589	963	131	2000
Potter, John A., Los Angeles, Cal. Apparatus for producing wrought iron or steel direct from ore	874,537	Dec. 24	4591	963–4	131	2000
Powell, James W., Arleta, Oreg. Combined sage-brush digger and land-roller	874,538	Dec. 24	4593	964	131	2000
Pratt, Eugene L., Swarthmore, Pa. Bottom board for beehives	874,863	Dec. 24	5207	1098	131	2106
Prentiss, Spencer B. (See Fritts, Charles E., assignor.)						
Prescott, Jesse, Webster, Mass. Adjustable chair	874,435	Dec. 24	4371	920	131	1967
Prest, Wilford D., W. C. Lynge, and G. C. Knudsen, Chicago, Ill. Marking-pen	874,539	Dec. 24	4595	965	131	2001
Price, Burt. (See Swanton and Price.)						
Price, James W., Covington, Ind. Farm-gate	874,436	Dec. 24	4373	920	131	1968
Pring, John N., New York, assignor to E. A. Sperry, Brooklyn, N. Y. Electrolytic process for refining nickel	874,864	Dec. 24	5210	.....	131	2107
Proal, Arthur B., Jr., New York, N. Y. Apparatus for excavating and removing material	874,865	Dec. 24	5212	1098–9	131	2107
Puckett, Louisa E., Vermilion, S. D. Kettle-cover	874,437	Dec. 24	4375	131	131	1968
Pullman Company. (See Dodds, Ethan I., assignor.)						
Ramsdell, James H., Newton Falls, Ohio. Nut-lock	874,540	Dec. 24	4596	965	131	2001
Rauch, John D. (See Karr and Rauch.)						
Rautbord, Zebulon, assignor of one-half to S. Berlowitz and D. Rothman, Milwaukee, Wis. Lock	874,438	Dec. 24	4376	921	131	1968
Rector, Alcorn, assignor to Rector Lamp Company, New York, N. Y. Incandescent gas-lamp	874,703	Dec. 24	4915	1032	131	2055
Rector Gas Lamp Company. (See Rector, Alcorn, assignor.)						
Reece, Rankin B., Knightstown, Ind. Gate	874,541	Dec. 24	4597	965	131	2001
Reed, Alfred L., *et al.* (See Winkelmeyer, John, assignor.)						
Reed, Charles J., Philadelphia, Pa. Metallic composition	874,866	Dec. 24	5214	.....	131	2107
Reis, Adolpho D., Oporto, Portugal. Making a food product from lupine beans	874,624	Dec. 24	4753	.....	131	2029
Remich, William, Sinking Spring, Pa. Shaft and thill iron	874,625	Dec. 24	4754	999	131	2029
Renner, Charles. (See Bibby, Arthur, assignor.)						
Republic Metalware Company. (See Stine, Edward L., assignor.)						
Réquillart, Edouard. (See Chalas, Réquillart, and Contal.)						
Reynolds, Frank D. (See Sachs and Reynolds.)						
Reynolds, Oliver B., Elgin, Ill. Wagon-box	874,704	Dec. 24	4917	1033	131	2055
Reynolds, Sydney W. (See Bell and Reynolds.)						
Richelderfer, Henry, Wasco, Oreg. Weeder and stalk-cutter	874,867	Dec. 24	5214	1099	131	2107
Rinehart, Jay. (See Gilleland, Edgar B., assignor.)						
Rizer, Fred W., *et al.* (See Latimer, James B., assignor.)						
Roberts, Daniel A., Elmira, N. Y. Manifolding copy book or pad	874,439	Dec. 24	4377	921	131	1968

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Robinson, Joseph, Centralia, Wash. Sawmill set-works	874,899	Dec. 24	5275	1111	131	2117
Robinson, Wellington S., Chicago, Ill., assignor to Yale & Towne Manufacturing Company, Stamford, Conn. Lock	874,793	Dec. 24	5079	1070	131	2084
Rockstroh, Max, Klein-Sedlitz, Germany. Bed-plate for printing machinery	874,626	Dec. 24	4755	1000	131	2029
Rodrigues-Ely, Camille. (See Gauthier and Rodrigues-Ely.)						
Rogers, Florence L., *et al.* (See Hendrick, Thomas A., assignor.)						
Rogerson, Albert C., assignor to Automatic Molding Machine Company, Chicago, Ill., Molding Apparatus	874,440	Dec. 24	4379	921-2	131	1969
Roote, William R., Guelph, Ontario, Canada. Top-rest for carriages	874,794	Dec. 24	5080	1070	131	2084
Roth, William H. (See Hurst and Roth.)						
Rothman, David, *et al.* (See Rautbord, Zebulon, assignor.)						
Rothschild, Sidney, New York, N. Y. Telautophote	874,868,	Dec. 24	5216	1099-1100	131	2107
Royal Typewriter Company. (See Hess, Edward B., assignor.)						
Russell, Cornelius W., Burlington, Iowa. Apparatus for liquefaction and purification of sewage	874,542	Dec. 24	4598	966	131	2001
Russell, Elmer C. (See Spicer, Andrew J., assignor.)						
Ruth, John F., St. Louis, Mo. Automatic window-closing device	874,900	Dec. 24	5277	1111	131	2117
Sachs Company. (See Sachs, Joseph, assignor.)						
Sachs Company. (See Sachs and Reynolds, assignors.)						
Sachs, Joseph, assignor to Sachs Company, Hartford, Conn. Safety-fuse	874,798	Dec. 24	5089	1071	131	2085
Sachs, Joseph, and F. D. Reynolds, assignors to Sachs Company, Hartford, Conn. Safety-fuse	874,795	Dec. 24	5082	1071	131	2084
Sachs, Joseph, and F. D. Reynolds, assignors to Sachs Company, Hartford, Conn. Safety-fuse	874,796	Dec. 24	5084	1071	131	2085
Sachs, Joseph, and F. D. Reynolds, assignors to Sachs Company, Hartford, Conn. Safety-fuse	874,797	Dec. 24	5087	1071	131	2085
Saint Clair Motor Co. (See Baird, Harry D., assignor.)						
Samuel J. Shimer and Sons. (See Shimer, Elmer S., assignor.)						
Samuel, Mary B., Bryn Mawr, Pa. Bottle	874,441	Dec. 24	4382	922	131	1969
Sandborgh, Olof A., Swissvale, Pa., assignor to Westinghouse Electric & Manufacturing Company. Control system for electric vehicles	874,869	Dec. 24	5222	1100	131	2108
Sandel, Caleb, Powhatan, La. Shelving-tray for bottles	874,442	Dec. 24	4383	922	131	1969
Sanitary Manufacturing Company. (See Davis, John H., assignor.)						
Sankey, Matthew H. P. R., Bilton, near Rugby, England. Steam-turbine	874,443	Dec. 24	4384	922	131	1970
Sargent, Frederick G., assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass. Drying-machine	874,901	Dec. 24	5279	1112	131	2118
Sattley Stacker Company. (See Bartholomew, John B., assignor.)						
Sawdey, Thomas E. (See Gould, Edwin J., assignor.)						
Scheuer, John P., Mishicot, Wis. Wrench for operating bushings	874,543	Dec. 24	4599	966	131	2001
Scheuer, Ralph, New York, N. Y. Belt, band, and the like	874,870	Dec. 24	5224	1101	131	2108
Schmidt, Paul C., Hartford, Conn. Nut-lock	874,544	Dec. 24	4601	966	131	2002
Schreiber, William, Leavenworth, Kans. Husking-tool	874,444	Dec. 24	4386	923	131	1970
Schroeder, Frederick W., Strand, London, England. Rib and rib-joint for umbrella and parasol frames	874,799	Dec. 24	5091	1072	131	2086
Scoda, F. J. Oscar. (See Struller, Otto, assignor.)						
Scribner, Elbridge L., Amesbury, Mass. Pipe-wrench	874,545	Dec. 24	4601	966	131	2002
Seastrom, Oscar E. (See Lawrence, Henry J., assignor.)						
Seward, George O., East Orange, N. J., and F. von Kugelgen, Holcombs Rock, Va., assignors to Virginia Laboratory Company, New York, N. Y. Producing steel	874,628	Dec. 24	4758	.....	131	2030
Shafer, William H., Cincinnati, Ohio. Aerial ladder	874,546	Dec. 24	4602	967	131	2002
Shaw, Edwin E., Edgewood, Mich. Beet-harvester	874,800	Dec. 24	5092	1072	131	2086
Shaw, Ernest C. (See Mather and Shaw.)						
Shaw, George A., Dayton, Ohio. Clothes-lifter	874,547	Dec. 24	4605	967	131	2002
Shaw, Henry C. (See Norton and Shaw.)						
Shaw Walker Company. (See Walker, Lawrence H., assignor.)						
Shears, Albert L., Seattle, Wash. Insulator	874,445	Dec. 24	4386	923	131	1970
Sherwin, Edgarton H. (See Sherwin, Edwin C., assignor.)						
Sherwin, Edwin C., assignor of one-half to E. H. Sherwin, Brandon, Wis. Road-grader	874,916	Dec. 24	5350	1119	131	2123
Shimer, Elmer S., assignor to Samuel J. Shimer and Sons, Incorporated, Milton, Pa. Rotary cutter-head	874,871	Dec. 24	5225	1101	131	2108
Siemens & Halske Aktiengesellschaft. (See Niebuhr, Henri, assignor.)						
Siems, Henry C., and H. Dewitz, Wheatley, Ark. Extension-ladder	874,801	Dec. 24	5093	1073	131	2086
Simmons, Andrew J., Farmington, Mo. Horse-collar	874,629	Dec. 24	4759	1001	131	2030
Simmons, John P., San Francisco, Cal. Vehicle steering-gear	874,802	Dec. 24	5095	1073	131	2087
Simonds, George L. (See Hays, Joseph W., assignor.)						
Skelly, Thomas V., Chicago, Ill. Record holding and shifting attachment for phonographs	874,548	Dec. 24	4600	967	131	2002
Slater, Stanley C., Bolton, England. Surgical splint	874,446	Dec. 24	4387	923-4	131	1970
Smart, Charles W., Memphis, Tenn. Transmission-gear for automobiles	874,627	Dec. 24	4756	1000-1	131	2030
Smith, Albert B., Sutter, Cal. Wedge-cutting machine	874,447	Dec. 24	4388	924	131	1971
Smith, Christian H., Tranger, Pa. Latch for mine-car doors	874,872	Dec. 24	5229	1102	131	2109
Smith, Gustavus W. (See Wise, William L., assignor.)						
Smith, Harold O. (See Weidely, George A., assignor.)						
Smith, Thomas E. (See Wilburn and Smith.)						
Smith, William H., assignor of one-half to John R. Keim Mills, Inc., Buffalo, N. Y. Making gear-wheels	874,448	Dec. 24	4389	924	131	1971
Sohn, George H., Lincoln, Cal. Third-rail attachment for electric cars	874,630	Dec. 24	4760	1001	131	2030
Solomon, William T., assignor to R. C. Hall, Pittsburg, Pa. Gas and vapor burner	874,449	Dec. 24	4391	925	131	1971
Solomon, William T., assignor to R. C. Hall, Pittsburg, Pa. Incandescent gas-burner	874,705	Dec. 24	4918	1033	131	2056
Sonander, Andrew, assignor to American Grain Meter Company, Springfield, Ohio. Grain-meter	874,706	Dec. 24	4920	1033-4	131	2056
Spackman, Henry S., Ardmore, and E. W. Lazell, assignors to Henry S. Spackman Engineering Company, Philadelphia, Pa. Stack-kiln	874,631	Dec. 24	4762	1001	131	2031
Sperry, Elmer A. (See Pring, John N., assignor.)						
Sperry, Elmer A., Brooklyn, N. Y. Electrolytic refining of tin	874,707	Dec. 24	4923	.....	131	2056
Spicer, Andrew J., Franklin, assignor, by mesne assignments, of one-half to E. C. Russell, Indianapolis, Ind. Gas-engine	874,450	Dec. 24	4392	925	131	1971
Spinks & Co., Wm. A. (See Marsh, Albert L., assignor.)						
Spinney, Alfred K., Toledo, Ohio. Nut-lock	874,803	Dec. 24	5097	1073	131	2087
St. Germain, William A., Greenville, Me. Two-cycle engine	874,634	Dec. 24	4769	1002	131	2032
Stambaugh, William B., Woodsboro, Md. Portable wire-fence post	874,804	Dec. 24	5098	1074	131	2087
Stanislaus-Jungwirth. (See Weiss, Matthias, assignor.)						
Stapleton, Charles W., New York, N. Y. Vehicle-wheel	874,708	Dec. 24	4926	1034	131	2057
Steinhauer, Peter, St. Louis, Mo. Steering-gear	874,709	Dec. 24	4928	1035	131	2057
Stengel, Henry A., Dayton, Ohio. Machine for gathering the edges of mattresses for stitching	874,451	Dec. 24	4394	926	131	1972
Sternberg, Marc, Philadelphia, Pa. Spring-clasp	874,632	Dec. 24	4764	1002	131	2031
Stevens, Theodore B., Cleveland, Ohio. Spring-latch	874,633	Dec. 24	4765	1002	131	2031
Stine, Edward L., assignor to Republic Metalware Company, Buffalo, N. Y. Muffle-furnace	874 452	Dec. 24	4396	926-7	131	1972

Name, residence, and invention.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Stine, Joseph C., Osceola Mills, Pa. Power-fan	874,805	Dec. 24	5098	1074	131	2067
Stoll, John F., Cuyahoga Falls, Ohio. Surfacing-machine	874,549	Dec. 24	4609	968	131	2003
Storm, Ralph, J. F. Underwood, and R. Jackson, Waterloo, Iowa. Registering device	874,635	Dec. 24	4771	1003	131	2033
Stout, William W., Somerset, Ind. Cement fence-post	874,453	Dec. 24	4397	927	131	1973
Straight, Lee S., Fonda, Iowa. Conveyer	874,636	Dec. 24	4778	1003	131	2033
Strother, Robert H., Montclair, assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine	874,806	Dec. 24	5099	1074-5	131	2088
Struller, Otto, assignor of one-half to F. J. O. Scoda, New York, N. Y. Self-igniting gas-stove	874,637	Dec. 24	4780	1004	131	2034
Stull, Emmett W., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Controller	874,638	Dec. 24	4782	1004	131	2034
Sumerlin, Van, Pinetops, N. C. Toy	874,873	Dec. 24	5230	1102	131	2109
Swanson, Alfred, Albuquerque, N. Mex. Necktie	874,710	Dec. 24	4930	1035	131	2057
Swanson, Ernest, Bay City, Mich. Railway-spike	874,454	Dec. 24	4398	927	131	1973
Swanton, Frederick V. W., and B. Price, Braamfontain, Johannesburg, Transvaal. Rock-drill	874,455	Dec. 24	4400	927-8	131	1973
Tallero, Emilio. (See Finzi and Tallero.)						
Taylor, Burt E., Wauseon, Ohio, assignor to C. D. Chewning, Randolph, N. Y. Filling-machine	874,639	Dec. 24	4786	1004-5	131	2034
Taylor, Burt E., Wauseon, Ohio, assignor to C. D. Chewning, Randolph, N. Y. Filling-nozzle for canning-machines	874,874	Dec. 24	5231	1102	131	2109
Taylor, Charles C., G. W. Wood, and M. A. Vincent, San Diego, Cal. Dump-bed	874,875	Dec. 24	5234	1103	131	2110
Taylor Elmer Z., assignor to Multi-Colour Printing Company (1904) Limited, London, England. Printing-machine	874,640	Dec. 24	4788	1005-6	131	2035
Taylor, Robert W., Chicago, Ill. Faucet for beer and other carbonated beverages	874,876	Dec. 24	5236	1103	131	2110
Taylor, Warren H., assignor to Yale & Towne Manufacturing Company, Stamford, Conn. Combination-lock	874,807	Dec. 24	5104	1075	131	2088
Taylor, Warren H., assignor to Yale & Towne Manufacturing Company, Stamford, Conn. Cylinder-lock	874,808	Dec. 24	5106	1076	131	2088
Taylor, William, Leicester, England. Apparatus for use in the hardening of steel	874,641	Dec. 24	4791	1006	131	2035
Templin, William, Chicago, Ill. Tie-slide	874,456	Dec. 24	4401	928	131	1974
Therriault, Louis P., Bonfield, Ontario, Canada. Can-opener	874,457	Dec. 24	4402	928	131	1974
Thompson, Henry A., Loogootee, Ind. Nut-lock	874,642	Dec. 24	4792	1006	131	2035
Thueson, Agnes, Anaconda, Mont. Clothes stick and catcher	874,711	Dec. 24	4931	1036	131	2057
Timberlake, John B., Jackson, Mich. Display-rack	874,917	Dec. 24	5353	1119-20	131	2124
Tokheim, John J., Cedar Rapids, Iowa. Fluid gage or indicator	874,643	Dec. 24	4793	1006	131	2036
Torrani, Pietro, Milan, Italy. Sensitive-plate package	874,644	Dec. 24	4795	1007	131	2036
Towns, William, Liverpool, England. Gas-producer	874,458	Dec. 24	4403	928	131	1974
Triska, Joseph, Omaha, Nebr. Paper-folding machine	874,645	Dec. 24	4796	1007-8	131	2036
Tyden, Emil, Hastings, Mich. Seal-lock	874,712	Dec. 24	4933	1036	131	2058
Underwood, Herbert G., Stamford, Conn. Method of casting	874,877	Dec. 24	5237	1103	131	2110
Underwood, Joseph F. (See Storm, Underwood, and Jackson.)						
Underwood, Loring, Belmont, Mass. Pipe	874,459	Dec. 24	4404	929	131	1974
Unger, John S. (See Lewis and Unger.)						
Union Typewriter Company. (See Strother, Robert H., assignor.)						
United Salt Company. (See Frasch, Herman, assignor.)						
United Shoe Machinery Company. (See Goddu, George, assignor.)						
United States Marine Signal Company. (See Willson, Thomas L., assignor.)						
Utica Industrial Company. (See Graham, Charles W., assignor.)						
Van Tassel, Edward R., *et al.* (See Chandler, Edward F., assignor.)						
Vessot, Charles H., Ottawa, Ontario, Canada. Flax-pulling machine	874,460	Dec. 24	4405	929	131	1975
Vincent, Mayhew A. (See Taylor, Wood, and Vincent.)						
Virginia Laboratory Company. (See Seward and Kugelgen, assignors.)						
Voss, Ruth L. (See Ayer, Albert E., assignor.)						
Vraalstad, Edward J., Buffalo, N. Y. Vehicle steering device	874,878	Dec. 24	5239	1103-4	131	2111
Waite, Charles N., Wilmington, Del. Dress-shield	874,879	Dec. 24	5241	1104	131	2111
Walker, Albert E., A., and G., Norwood Green, near Halifax, England. Controlling device for automatic weft-replenishing looms	874,550	Dec. 24	4612	969-70	131	2003
Walker, Arthur. (See Walker, Albert E., A., and G.)						
Walker, Arthur F., Atlanta, Ga. Concrete structure and hanger-support	874,461	Dec. 24	4406	929	131	1975
Walker, Arthur F., Atlanta, Ga. Concrete structure	874,462	Dec. 24	4410	930	131	1975
Walker, George. (See Walker, Albert E., A., and G.)						
Walker, Lawrence H., assignor to Shaw Walker Company, Muskegon, Mich. Drawer-guide	874,463	Dec. 24	4412	930	131	1976
Wallace, George V., Wakefield, assignor to Barclay, Brown and Bird, Incorporated, Boston, Mass. Stocking-protector	874,880	Dec. 24	5242	1104	131	2111
Wallin, Gustav A., New York, N. Y., assignor to A. Kimball Company. Pin-ticket	874,809	Dec. 24	5107	1076	131	2089
Wallis, Henry E., assignor to Wallis Stoker and Manufacturing Co., Terre Haute, Ind. Arch-hanger for furnaces	874,464	Dec. 24	4414	930	131	1976
Wallis, Samuel L., Pasadena, Cal. Dress-skirt	874,551	Dec. 24	4614	970	131	2004
Wallis Stoker and Manufacturing Co. (See Wallis, Henry E., assignor.)						
Walter R. Johnston Manufacturing Company, (See Johnston, Walter R., assignor.)						
Wappler, Reinhold H., New York, N. Y. Cystoscope	874,810	Dec. 24	5108	1076	131	2089
Way, John H., St. Davids, Pa. Knit muffler	874,465	Dec. 24	4415	930-1	131	1976
Weber, Adolfo, Milan, Italy. Mill	874,713	Dec. 24	4935	1036-7	131	2058
Weidely, George A., assignor of one-half to H. O. Smith, Indianapolis, Ind. Motor-vehicle driving-gear	874,811	Dec. 24	5110	1076	131	2089
Weinland, Henry F., assignor to Lagonda Manufacturing Company, Springfield, Ohio. Valve	874,466	Dec. 24	4416	931-2	131	1977
Weiss, Matthias, Mariafeld, near Laibach, assignor of one-half to Stanislaus-Jungwirth, St. Stefan, Styria, Austria-Hungary. Apparatus for the control of valves	874,812	Dec. 24	5112	1077	131	2090
Weiss, William C., Milwaukee, Wis. Automobile sleigh	874,467	Dec. 24	4419	932	131	1977
Weitershausen, Franklin B., assignor of one-half to G. G. Blakey, Pittsburg, Pa. Clothes-drier	874,902	Dec. 24	5281	1113	131	2118
Westcott, Valorus S., Pawtucket, and F. W. Potter, Central Falls, R. I. Making worsted yarns	874,714	Dec. 24	4938	1037	131	2058
Westcott, Valorus S., Pawtucket, and F. W. Potter, Central Falls, R. I. Wool evening and drawing machine	874,715	Dec. 24	4942	1038-9	131	2059
Western Electric Company. (See Pither, Thomas H., assignor.)						
Westinghouse Electric & Manufacturing Company. (See Beach, Howard L., assignor.)						
Westinghouse Electric & Manufacturing Company. (See Leblanc, Maurice, assignor.)						
Westinghouse Electric & Manufacturing Company. (See Sandborgh, Olof A., assignor.)						
Weston, Thomas A., Arden, N. C. Shutter stay and adjuster	874,468	Dec. 24	4419	932	131	1977
Wheatley, James B., Kansas City, Mo. Self-heating soldering-iron	874,469	Dec. 24	4421	933	131	1978
Wheeler, Edwin J., Brooklyn, N. Y. Circulator for steam-boilers	874,470	Dec. 24	4424	933	131	1978
Wheeler, Seth, Albany, N. Y., assignor to M. Moriz and H. Kummer, Berlin, Germany. Apparatus for cutting, folding, and interfolding sheets or units	874,903	Dec. 24	5281	1113	131	2118
Whitcher, Frank W., Boston, Mass. Rubber heel	874,471	Dec. 24	4426	933	131	1978
White, Robert S., Jr., Osceola, and C. A. Fry, Grand, Okla. Feeder and cutter for threshing-machines	874,813	Dec. 24	5114	1077-8	131	2090

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Robinson, Joseph, Centralia, Wash. Sawmill set-works	874,899	Dec. 24	5275	1111	131	2117
Robinson, Wellington S., Chicago, Ill., assignor to Yale & Towne Manufacturing Company, Stamford, Conn. Lock	874,793	Dec. 24	5079	1070	131	2084
Rockstroh, Max, Klein-Sedlitz, Germany. Bed-plate for printing machinery	874,626	Dec. 24	4755	1000	131	2029
Rodrigues-Ely, Camille. (See Gauthier and Rodrigues-Ely.)						
Rogers, Florence L., *et al.* (See Hendrick, Thomas A., assignor.)						
Rogerson, Albert C., assignor to Automatic Molding Machine Company, Chicago, Ill., Molding Apparatus	874,440	Dec. 24	4379	921–2	131	1969
Roote, William R., Guelph, Ontario, Canada. Top-rest for carriages	874,794	Dec. 24	5080	1070	131	2084
Roth, William H. (See Hurst and Roth.)						
Rothman, David, *et al.* (See Rautbord, Zebulon, assignor.)						
Rothschild, Sidney, New York, N. Y. Telautophote	874,868,	Dec. 24	5216	1099-1100	131	2107
Royal Typewriter Company. (See Hess, Edward B., assignor.)						
Russell, Cornelius W., Burlington, Iowa. Apparatus for liquefaction and purification of sewage	874,542	Dec. 24	4568	966	131	2001
Russell, Elmer C. (See Spicer, Andrew J., assignor.)						
Ruth, John F., St. Louis, Mo. Automatic window-closing device	874,900	Dec. 24	5277	1111	131	2117
Sachs Company. (See Sachs, Joseph, assignor.)						
Sachs Company. (See Sachs and Reynolds, assignors.)						
Sachs, Joseph, assignor to Sachs Company, Hartford, Conn. Safety-fuse	874,798	Dec. 24	5089	1071	131	2085
Sachs, Joseph, and F. D. Reynolds, assignors to Sachs Company, Hartford, Conn. Safety-fuse	874,795	Dec. 24	5082	1071	131	2084
Sachs, Joseph, and F. D. Reynolds, assignors to Sachs Company, Hartford, Conn. Safety-fuse	874,796	Dec. 24	5084	1071	131	2085
Sachs, Joseph, and F. D. Reynolds, assignors to Sachs Company, Hartford, Conn. Safety-fuse	874,797	Dec. 24	5087	1071	131	2085
Saint Clair Motor Co. (See Baird, Harry D., assignor.)						
Samuel J. Shimer and Sons. (See Shimer, Elmer S., assignor.)						
Samuel, Mary B., Bryn Mawr, Pa. Bottle	874,441	Dec. 24	4382	922	131	1969
Sandborgh, Olof A., Swissvale, Pa., assignor to Westinghouse Electric & Manufacturing Company. Control system for electric vehicles	874,869	Dec. 24	5222	1100	131	2106
Sandel, Caleb, Powhatan, La. Shelving-tray for bottles	874,442	Dec. 24	4383	922	131	1969
Sanitary Manufacturing Company. (See Davis, John H., assignor.)						
Sankey, Matthew H. P. R., Bilton, near Rugby, England. Steam-turbine	874,443	Dec. 24	4384	922	131	1970
Sargent, Frederick G., assignor to C. G. Sargent's Sons Corporation, Graniteville, Mass. Drying-machine	874,901	Dec. 24	5279	1112	131	2118
Sattley Stacker Company. (See Bartholomew, John B., assignor.)						
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Scheuer, Ralph, New York, N. Y. Belt, band, and the like	874,870	Dec. 24	5224	1101	131	2108
Schmidt, Paul C., Hartford, Conn. Nut-lock	874,644	Dec. 24	4601	966	131	2002
Schreiber, William, Leavenworth, Kans. Husking-tool	874,444	Dec. 24	4386	923	131	1970
Schroeder, Frederick W., Strand, London, England. Rib and rib-joint for umbrella and parasol frames	874,799	Dec. 24	5091	1072	131	2086
Scoda, F. J. Oscar. (See Struller, Otto, assignor.)						
Scribner, Elbridge L., Amesbury, Mass. Pipe-wrench	874,545	Dec. 24	4601	966	131	2002
Seastrom, Oscar E. (See Lawrence, Henry J., assignor.)						
Seward, George O., East Orange, N. J., and F. von Kugelgen, Holcombs Rock, Va., assignors to Virginia Laboratory Company, New York, N. Y. Producing steel	874,628	Dec. 24	4758	.....	131	2030
Shafer, William H., Cincinnati, Ohio. Aerial ladder	874,546	Dec. 24	4602	967	131	2002
Shaw, Edwin E., Edgewood, Mich. Beet-harvester	874,800	Dec. 24	5092	1072	131	2086
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Sherwin, Edgarton H. (See Sherwin, Edwin C., assignor.)						
Sherwin, Edwin C., assignor of one-half to E. H. Sherwin, Brandon, Wis. Road-grader	874,916	Dec. 24	5350	1119	131	2123
Shimer, Elmer S., assignor to Samuel J. Shimer and Sons, Incorporated, Milton, Pa. Rotary cutter-head	874,871	Dec. 24	5225	1101	131	2108
Siemens & Halske Aktiengesellschaft. (See Niebuhr, Henri, assignor.)						
Siems, Henry C., and H. Dewitz, Wheatley, Ark. Extension-ladder	874,801	Dec. 24	5093	1073	131	2086
Simmons, Andrew J., Farmington, Mo. Horse-collar	874,629	Dec. 24	4759	1001	131	2030
Simmons, John P., San Francisco, Cal. Vehicle steering-gear	874,802	Dec. 24	5095	1073	131	2087
Simonds, George L. (See Hays, Joseph W., assignor.)						
Skelly, Thomas V., Chicago, Ill. Record holding and shifting attachment for phonographs	874,548	Dec. 24	4606	967	131	2003
Slater, Stanley C., Bolton, England. Surgical splint	874,446	Dec. 24	4387	923–4	131	1970
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Smith, Christian H., Tranger, Pa. Latch for mine-car doors	874,872	Dec. 24	5229	1102	131	2109
Smith, Gustavus W. (See Wise, William L., assignor.)						
Smith, Harold O. (See Weidely, George A., assignor.)						
Smith, Thomas E. (See Wilburn and Smith.)						
Smith, William H., assignor of one-half to John R. Keim Mills, Inc., Buffalo, N. Y. Making gear-wheels	874,448	Dec. 24	4389	924	131	1971
Sohn, George H., Lincoln, Cal. Third-rail attachment for electric cars	874,630	Dec. 24	4760	1001	131	2030
Solomon, William T., assignor to R. C. Hall, Pittsburg, Pa. Gas and vapor burner	874,449	Dec. 24	4391	925	131	1971
Solomon, William T., assignor to R. C. Hall, Pittsburg, Pa. Incandescent gas-burner	874,705	Dec. 24	4918	1033	131	2056
Sonander, Andrew, assignor to American Grain Meter Company, Springfield, Ohio. Grain-meter	874,706	Dec. 24	4920	1033–4	131	2056
Spackman, Henry S., Ardmore, and E. W. Lazell, assignors to Henry S. Spackman Engineering Company, Philadelphia, Pa. Stack-kiln	874,631	Dec. 24	4762	1001	131	2031
Sperry, Elmer A. (See Pring, John N., assignor.)						
Sperry, Elmer A., Brooklyn, N. Y. Electrolytic refining of tin	874,707	Dec. 24	4923	.....	131	2056
Spicer, Andrew J., Franklin, assignor, by mesne assignments, of one-half to E. C. Russell, Indianapolis, Ind. Gas-engine	874,450	Dec. 24	4392	925	131	1971
Spinks & Co., Wm. A. (See Marsh, Albert L., assignor.)						
Spinney, Alfred K., Toledo, Ohio. Nut-lock	874,803	Dec. 24	5097	1073	131	2087
St. Germain, William A., Greenville, Me. Two-cycle engine	874,634	Dec. 24	4769	1002	131	2032
Stambaugh, William B., Woodsboro, Md. Portable wire-fence post	874,804	Dec. 24	5098	1074	131	2087
Stanislaus-Jungwirth. (See Weiss, Matthias, assignor.)						
Stapleton, Charles W., New York, N. Y. Vehicle-wheel	874,708	Dec. 24	4926	1034	131	2057
Steinhauer, Peter, St. Louis, Mo. Steering-gear	874,709	Dec. 24	4928	1035	131	2057
Stengel, Henry A., Dayton, Ohio. Machine for gathering the edges of mattresses for stitching	874,451	Dec. 24	4394	926	131	1972
Sternberg, Marc, Philadelphia, Pa. Spring-clasp	874,632	Dec. 24	4764	1002	131	2031
Stevens, Theodore B., Cleveland, Ohio. Spring-latch	874,633	Dec. 24	4765	1002	131	2031
Stine, Edward L., assignor to Republic Metalware Company, Buffalo, N. Y. Muffle-furnace	874 452	Dec. 24	4396	926–7	131	1972

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Stine, Joseph C., Osceola Mills, Pa. Power-fan	874,805	Dec. 24	5098	1074	131	2087
Stoll, John F., Cuyahoga Falls, Ohio. Surfacing-machine	874,549	Dec. 24	4609	968	131	2003
Storm, Ralph, J. F. Underwood, and R. Jackson, Waterloo, Iowa. Registering device	874,635	Dec. 24	4771	1003	131	2033
Stout, William W., Somerset, Ind. Cement fence-post	874,453	Dec. 24	4907	927	131	1973
Straight, Lee S., Fonda, Iowa. Conveyer	874,636	Dec. 24	4778	1003	131	2033
Strother, Robert H., assignor to Union Typewriter Company, Jersey City, N. J. Type-writing machine	874,806	Dec. 24	5099	1074–5	131	2088
Struller, Otto, assignor of one-half to F. J. O. Scoda, New York, N. Y. Self-igniting gas-stove	874,637	Dec. 24	4780	1004	131	2034
Stull, Emmett W., Norwood, Ohio, assignor to Allis-Chalmers Company and Bullock Electric Manufacturing Company. Controller	874,638	Dec. 24	4782	1004	131	2034
Sumerlin, Van, Pinetops, N. C. Toy	874,873	Dec. 24	5230	1102	131	2109
Swanson, Alfred, Albuquerque, N. Mex. Necktie	874,710	Dec. 24	4930	1035	131	2057
Swanson, Ernest, Bay City, Mich. Railway-spike	874,454	Dec. 24	4398	927	131	1973
Swanton, Frederick V. W., and B. Price, Braamfontain, Johannesburg, Transvaal. Rock-drill	874,455	Dec. 24	4400	927–8	131	1973
Tallero, Emilio. (See Finzi and Tallero.)						
Taylor, Burt E., Wauseon, Ohio, assignor to C. D. Chewning, Randolph, N. Y. Filling-machine	874,639	Dec. 24	4786	1004–5	131	2034
Taylor, Burt E., Wauseon, Ohio, assignor to C. D. Chewning, Randolph, N. Y. Filling-nozzle for canning-machines	874,874	Dec. 24	5231	1102	131	2109
Taylor, Charles C., G. W. Wood, and M. A. Vincent, San Diego, Cal. Dump-bed	874,875	Dec. 24	5234	1103	131	2110
Taylor Elmer Z., assignor to Multi-Colour Printing Company (1904) Limited, London, England. Printing-machine	874,640	Dec. 24	4788	1005–6	131	2035
Taylor, Robert W., Chicago, Ill. Faucet for beer and other carbonated beverages	874,876	Dec. 24	5236	1103	131	2110
Taylor, Warren H., assignor to Yale & Towne Manufacturing Company, Stamford, Conn. Combination-lock	874,807	Dec. 24	5104	1075	131	2088
Taylor, Warren H., assignor to Yale & Towne Manufacturing Company, Stamford, Conn. Cylinder-lock	874,808	Dec. 24	5106	1076	131	2088
Taylor, William, Leicester, England. Apparatus for use in the hardening of steel	874,641	Dec. 24	4791	1006	131	2035
Templin, William, Chicago, Ill. Tie-slide	874,456	Dec. 24	4401	928	131	1974
Therriault, Louis P., Bonfield, Ontario, Canada. Can-opener	874,457	Dec. 24	4402	928	131	1974
Thompson, Henry A., Loogootee, Ind. Nut-lock	874,642	Dec. 24	4792	1006	131	2035
Thueson, Agnes, Anaconda, Mont. Clothes stick and catcher	874,711	Dec. 24	4931	1036	131	2057
Timberlake, John B., Jackson, Mich. Display-rack	874,917	Dec. 24	5353	1119–20	131	2124
Tokheim, John J., Cedar Rapids, Iowa. Fluid gage or indicator	874,643	Dec. 24	4793	1006	131	2036
Torrani, Pietro, Milan, Italy. Sensitive-plate package	874,644	Dec. 24	4795	1007	131	2036
Towns, William, Liverpool, England. Gas-producer	874,458	Dec. 24	4403	928	131	1974
Triska, Joseph, Omaha, Nebr. Paper-folding machine	874,645	Dec. 24	4796	1007–8	131	2036
Tyden, Emil, Hastings, Mich. Seal-lock	874,712	Dec. 24	4933	1036	131	2058
Underwood, Herbert G., Stamford, Conn. Method of casting	874,877	Dec. 24	5237	1103	131	2110
Underwood, Joseph F. (See Storm, Underwood, and Jackson.)						
Underwood, Loring, Belmont, Mass. Pipe	874,459	Dec. 24	4404	929	131	1974
Unger, John S. (See Lewis and Unger.)						
Union Typewriter Company. (See Strother, Robert H., assignor.)						
United Salt Company. (See Frasch, Herman, assignor.)						
United Shoe Machinery Company. (See Goddu, George, assignor.)						
United States Marine Signal Company. (See Willson, Thomas L., assignor.)						
Utica Industrial Company. (See Graham, Charles W., assignor.)						
Van Tassel, Edward R., *et al.* (See Chandler, Edward F., assignor.)						
Vessot, Charles H., Ottawa, Ontario, Canada. Flax-pulling machine	874,460	Dec. 24	4405	929	131	1975
Vincent, Mayhew A. (See Taylor, Wood, and Vincent.)						
Virginia Laboratory Company. (See Seward and Kugelgen, assignors.)						
Vose, Ruth L. (See Ayer, Albert E., assignor.)						
Vraalstad, Edward J., Buffalo, N. Y. Vehicle steering device	874,878	Dec. 24	5239	1103–4	131	2111
Waite, Charles N., Wilmington, Del. Dress-shield	874,879	Dec. 24	5241	1104	131	2111
Walker, Albert E., A., and G., Norwood Green, near Halifax, England. Controlling device for automatic weft-replenishing looms	874,550	Dec. 24	4612	969–70	131	2003
Walker, Arthur. (See Walker, Albert E., A., and G.)						
Walker, Arthur F., Atlanta, Ga. Concrete structure and hanger-support	874,461	Dec. 24	4408	929	131	1975
Walker, Arthur F., Atlanta, Ga. Concrete structure	874,462	Dec. 24	4410	930	131	1975
Walker, George. (See Walker, Albert E., A., and G.)						
Walker, Lawrence H., assignor to Shaw Walker Company, Muskegon, Mich. Drawer-guide	874,463	Dec. 24	4412	930	131	1976
Wallace, George V., Wakefield, assignor to Barclay, Brown and Bird, Incorporated, Boston, Mass. Stocking-protector	874,880	Dec. 24	5242	1104	131	2111
Wallin, Gustav A., New York, N. Y., assignor to A. Kimball Company. Pin-ticket	874,809	Dec. 24	5107	1076	131	2089
Wallis, Henry E., assignor to Wallis Stoker and Manufacturing Co., Terre Haute, Ind. Arch-hanger for furnaces	874,464	Dec. 24	4414	930	131	1976
Wallis, Samuel L., Pasadena, Cal. Dress-skirt	874,551	Dec. 24	4614	970	131	2004
Wallis Stoker and Manufacturing Co. (See Wallis, Henry E., assignor.)						
Walter R. Johnston Manufacturing Company, (See Johnston, Walter R., assignor.)						
Wappler, Reinhold H., New York, N. Y. Cystoscope	874,810	Dec. 24	5108	1076	131	2089
Way, John H., St. Davids, Pa. Knit muffler	874,465	Dec. 24	4415	930–1	131	1976
Weber, Adolfo, Milan, Italy. Mill	874,713	Dec. 24	4935	1036–7	131	2058
Weidely, George A., assignor of one-half to H. O. Smith, Indianapolis, Ind. Motor-vehicle driving-gear	874,811	Dec. 24	5110	1076	131	2089
Weinland, Henry F., assignor to Lagonda Manufacturing Company, Springfield, Ohio. Valve	874,466	Dec. 24	4416	931–2	131	1977
Weiss, Matthias, Mariafeld, near Laibach, assignor of one-half to Stanislaus-Jungwirth, St. Stefan, Styria, Austria-Hungary. Apparatus for the control of valves	874,812	Dec. 24	5112	1077	131	2090
Weiss, William C., Milwaukee, Wis. Automobile sleigh	874,467	Dec. 24	4419	932	131	1977
Weitershausen, Franklin B., assignor of one-half to G. G. Blakey, Pittsburg, Pa. Clothes-drier	874,902	Dec. 24	5281	1113	131	2118
Westcott, Valorus S., Pawtucket, and F. W. Potter, Central Falls, R. I. Making worsted yarns	874,714	Dec. 24	4938	1037	131	2058
Westcott, Valorus S., Pawtucket, and F. W. Potter, Central Falls, R. I. Wool evening and drawing machine	874,715	Dec. 24	4942	1038–9	131	2059
Western Electric Company. (See Pither, Thomas H., assignor.)						
Westinghouse Electric & Manufacturing Company. (See Beach, Howard L., assignor.)						
Westinghouse Electric & Manufacturing Company. (See Leblanc, Maurice, assignor.)						
Westinghouse Electric & Manufacturing Company. (See Sandborgh, Olof A., assignor.)						
Weston, Thomas A., Arden, N. C. Shutter stay and adjuster	874,468	Dec. 24	4419	932	131	1977
Wheatley, James B., Kansas City, Mo. Self-heating soldering-iron	874,469	Dec. 24	4421	933	131	1978
Wheeler, Edwin J., Brooklyn, N. Y. Circulator for steam-boilers	874,470	Dec. 24	4424	933	131	1978
Wheeler, Seth, Albany, N. Y., assignor to M. Moritz and H. Kummer, Berlin, Germany. Apparatus for cutting, folding, and interfolding sheets or units	874,903	Dec. 24	5281	1113	131	2118
Whitcher, Frank W., Boston, Mass. Rubber heel	874,471	Dec. 24	4426	933	131	1978
White, Robert S., Jr., Osceola, and C. A. Fry, Grand, Okla. Feeder and cutter for threshing-machines	874,813	Dec. 24	5114	1077–8	131	2090

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Whitman, Henry L., St. Louis, Mo. Baling-press	874,814	Dec. 24	5117	1078	131	2091
Wilburn, Sylvester, and T. E. Smith, Tunis, Tex. Wire-fastener	874,552	Dec. 24	4615	970	131	2004
Willcox and Gibbs Sewing Machine Company. (See Wright, James B., assignor.)						
Williams, Harvey A., *et al.* (See Bristow, Ralph E., assignor.)						
Williams, Henry M. (See Burger, Franz, assignor.)						
Williams, James R., New York, N. Y. Safety-pocket	874,815	Dec. 24	5118	1078	131	2091
Williams, Lewis H., Zanesville, Ohio. Saggar-crane	874,553	Dec. 24	4616	970	131	2004
Wilson, Thomas L., Ottawa, Ontario, Canada, assignor, by mesne assignments, to United States Marine Signal Company, Jersey City, N. J. Buoy	874,646	Dec. 24	4804	1009	131	2037
Wilner, Elias R., New York, N. Y. Incandescent gas-lamp	874,716	Dec. 24	4947	1039	131	2059
Wilsey, Clyde F., Ashley, Ind. Farm-gate	874,472	Dec. 24	4427	934	131	1978
Wilson, Albert S. (See Ingram, Fred F., assignor.)						
Wilson, Emma M. (See Harris, Winfred W., assignor.)						
Winchester Repeating Arms Co. (See Mason, William, assignor.)						
Winkelmeyer, John, assignor to T. S. Gettle and A. L. Reed, Anderson, Ind. Computing cheese-cutter for vending cheese	874,717	Dec. 24	4948	1039–40	131	2059
Winlund, Nicholas J., Rockford, Ill. Dulcimer-action	874,473	Dec. 24	4429	934	131	1979
Wirsing, Charley. (See Dove and Wirsing.)						
Wirt, George A., Greensburg, Ind. Mail-box	874,718	Dec. 24	4954	1040	131	2060
Wise, William L., assignor of one-half to G. W. Smith, Kansas City, Mo. Weather-strip for doors	874,474	Dec. 24	4430	934	131	1979
Wlatnigg, Ernst, Klagenfurt, Austria-Hungary. Safety-hook	874,647	Dec. 24	4806	1009	131	2037
Wolfe, John, assignor to Aurora Specialty Co., Cleveland, Ohio. Umbrella structure	874,648	Dec. 24	4808	1009	131	2037
Wood, George, Newark, N. J. Force-feed oiler	874,719	Dec. 24	4955	1040	131	2060
Wood, George W. (See Taylor, Wood, and Vincent.)						
Woods, Norman E., Richmond, Va. Drill-socket	874,554	Dec 24	4617	971	131	2005
Woollen, Olive K., Franklin, Ind. Invalid's bed	874,555	Dec. 24	4618	971	131	2005
Wright, James B., assignor to Willcox and Gibbs Sewing Machine Company, New York, N. Y. Guide for overedge sewing-machines	874,816	Dec. 24	5119	1079	131	2091
Yale & Towne Manufacturing Company. (See Robinson, Wellington S., assignor.)						
Yale & Towne Manufacturing Company. (See Taylor, Warren H., assignor.)						
Yauck, Edwin C., Columbus, Ohio. Stamp-affixer	874,720	Dec. 24	4957	1041	131	2060
York, Don H., New York, N. Y. Music-book roll	874,817	Dec. 24	5120	1079	131	2091
Yost, Henry P., Tekonsha, Mich. Grain-auger mechanism	874,475	Dec. 24	4432	935	131	1979
Zippler, Michael, Allegheny, Pa. Cupola-furnace	874,476	Dec. 24	4433	935	131	1979

DESIGNS.

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Arthur, Paul, Detroit, Mich. Automatic radiator	38,962	Dec. 24	131	2126
Corbin Cabinet Lock Company. (See Johnson, Charles E., assignor.)				
Gonyer, Edward L., Mendon, Mich. Vehicle-body	38,963	Dec. 24	131	2126
Johnson, Charles E., assignor to Corbin Cabinet Lock Company, New Britain, Conn. Padlock	38,960	Dec. 24	131	2126
Miller, Arthur K., Peekskill, N. Y. Gas-burner pillar	38,961	Dec. 24	131	2126
Polsky, Louise, Stockton, Ill. Heater and food-receptacle	38,959	Dec. 24	131	2126
Thieme, George R., Monmouth, Ill. Pottery jar	38,958	Dec. 24	131	2126

TRADE-MARKS.

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A. R. Justice Company, Philadelphia, Pa. Certain cutlery	66,697	Dec. 24	131	2139
Acme White Lead & Color Works, Detroit, Mich. Certain painters' materials	66,757	Dec. 24	131	2141
American Stove Company, Jersey City, N. J., and St. Louis, Mo. Certain stoves, heaters, and ovens	66,758	Dec. 24	131	2141
American Stove Company, Jersey City, N. J., and St. Louis, Mo. Gas-stoves, gas-ranges, gas-heaters, and coal-ranges	66,759	Dec. 24	131	2141
American Stove Company, Jersey City, N. J., and St. Louis, Mo. Gas-stoves, gas-ranges, gas-heaters, and coal-ranges	66,760	Dec. 24	131	2141
American Trading Company (Pacific Coast) San Francisco, Cal. Wheat-flour	66,677	Dec. 24	131	2139
Arabol M'f'g Co., New York, N. Y. Glues made from seaweeds	66,713	Dec. 24	131	2140
Armiger Chemical Co., Chicago, Ill. Abrasive metal-polishes	66,714	Dec. 24	131	2140
Ashepoo Fertilizer Company, Charleston, S. C. Fertilizers	66,715	Dec. 24	131	2140
Aydelott, Anna C., McKenzie, Tenn. Hair-tonics, face-powder, perspiration-powder, talcum powder, and bath-powder	66,736	Dec. 24	131	2140
Azle Manufacturing Company, North Adams, Mich. Non-abrasive scouring-powder	66,704	Dec. 24	131	2139
Bartel, Louis W., St. Louis, Mo. Cold-cream, massage-cream, and toilet cream	66,737	Dec. 24	131	2140
Berg Medicine Company, Des Moines, Iowa. Certain remedies and tonics	66,738	Dec. 24	131	2140
Daprato Statuary Company, Chicago, Ill. Statuary	66,705	Dec. 24	131	2139
Deitsch Brothers, New York, N. Y. Tooth-brushes	66,698	Dec. 24	131	2139
Delong, Seaman & Company. (See Shivel, Edwin, assignor.)				
Dresner, I., San Francisco, Cal. Coats, vests, trousers, and overcoats	66,678	Dec. 24	131	2139
E. B. Colby & Co., Jersey City, N. J. Furnaces, stoves, and ranges	66,761	Dec. 24	131	2141
Elmira Knitting Mills, Elmira Heights, N. Y. Knitted and netted underclothing	66,706	Dec. 24	131	2139
Fabrique d'horlogerie Beau-Site Vve Ferdinand Bourquin, St. Imier, Switzerland. Watches	66,707	Dec. 24	131	2140
Fischer Chemical Importing Co., New York, N. Y. Calcium-silver and quinin salts	66,716	Dec. 24	131	2140
Fischer Chemical Importing Co., New York, N. Y. Filled gelatin capsules	66,739	Dec. 24	131	2140
Friedmann & Distillator, New York, N. Y. Chiffons, malines, ribbons, and velvets	66,740	Dec. 24	131	2140

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Frye & Co., Jed, New York, N. Y. Canned fish	66,679	Dec. 24	131	2139
Frye & Co., Jed, New York, N. Y. Canned fish	66,680	Dec. 24	131	2139
Frye & Co., Jed, New York, N. Y. Canned sardines	66,681	Dec. 24	131	2139
Garratt, Edward C., Seattle, Wash. Packing	66,762	Dec. 24	131	2141
Geo. Benz & Sons, St. Paul, Minn. Whisky	66,741	Dec. 24	131	2140
Glidden, Hyde & Co., Boston, Mass. Knit stockings	66,742	Dec. 24	131	2140
Graft, John C., Newark, N. J. Antiseptic and germicide preparation for dental use	66,717	Dec. 24	131	2140
Hall-Heffernan Brush Co., North Adams, Mass. Vulcanized fiber for the manufacture of combs	66,708	Dec. 24	131	2140
Hampden Mfg. Co., Baltimore, Md. Remedy for certain diseases	66,743	Dec. 24	131	2141
Harmsworth, St. John, London, England. Mineral waters	66,718	Dec. 24	131	2140
Hawes Chemical Company, Louisville, Ky. Aromatic medicinal elixir	66,744	Dec. 24	131	2141
Hermann, John J., Zanesville, Ohio. Whisky	66,745	Dec. 24	131	2141
Herrmann & Co., Morris, New York, N. Y. Paris-green	66,719	Dec. 24	131	2140
Hess Bros., Inc., New York, N. Y. Candy and chocolates	66,682	Dec. 24	131	2139
Holbrook Grocery Co., Keene, Woodsville, and Nashua, N. H. Certain canned goods	66,683	Dec. 24	131	2139
Holbrook Grocery Co., Keene, Woodsville, and Nashua, N. H. Certain sea foods	66,684	Dec. 24	131	2139
Hons, Alfred, Berwick, Pa. Toilet and laundry soap	66,709	Dec. 24	131	2140
I. L. Lamm Co., Superior, Wis. Whisky	66,746	Dec. 24	131	2141
International Patent Corporation, Pierre, S. D., and Jersey City, N. J. Power-transmitting apparatus, clutches, and speed-gears	66,720	Dec. 24	131	2140
Isaacs, Isaac, Kansas City, Mo. Coats, vests, and trousers	66,685	Dec. 24	131	2139
Jacobus & Carlisle Co., New York, N. Y. Bleached absorbent gauze in the piece	66,763	Dec. 24	131	2141
John Murphy Company, Baltimore, Md. Printed books	66,764	Dec. 24	131	2141
Joyce, Thomas J., New York, N. Y. Hair-grower and dandruff-eradicator	66,747	Dec. 24	131	2141
Kane Chemical Company, Cleveland, Ohio. Liniment and medicines for catarrh, hay-fever, and deafness	66,748	Dec. 24	131	2141
Kingan and Company, Limited, Belfast, Ireland; Indianapolis, Ind.; Baltimore, Md., and Richmond, Va. Cured meats and sausage	66,686	Dec. 24	131	2139
Kingan and Company, Limited, Belfast, Ireland; Indianapolis, Ind.; Baltimore, Md., and Richmond, Va. Cured, cooked, canned, and salted meats, lard, and sausage	66,687	Dec. 24	131	2139
Kingan and Company, Limited, Belfast, Ireland; Indianapolis, Ind.; Baltimore, Md., and Richmond, Va. Cured and salted meats	66,699	Dec. 24	131	2139
Kingan and Company, Limited, Belfast, Ireland; Indianapolis, Ind.; Baltimore, Md., and Richmond, Va. Cured and salted meats	66,700	Dec. 24	131	2139
Kingan and Company, Limited, Belfast, Ireland; Indianapolis, Ind.; Baltimore, Md., and Richmond, Va. Cured meats	66,701	Dec. 24	131	2139
Lang, Henry J., deceased; Sue E. Lang, executrix, assignor to H. J. Lang Shoe Company, Pittsburg, Pa. Leather boots and shoes	66,765	Dec. 24	131	2141
Lang, Henry J., deceased; Sue E. Lang, executrix, assignor to H. J. Lang Shoe Company, Pittsburg, Pa. Leather boots and shoes	66,766	Dec. 24	131	2141
Lang Shoe Company, H. J. (See Lang, Henry J., assignor.)				
Lang, Sue E., executrix. (See Lang, Henry J.)				
Law, Hartland, Herbert E. Law, San Francisco, Cal. Tonic	66,749	Dec. 24	131	2141
Lawton, Jenkins M., New York, N. Y. Hair, flesh, and tooth brushes	66,721	Dec. 24	131	2140
Leggett & Brother, New York, N. Y. Insecticides	66,722	Dec. 24	131	2140
Lepper, H. Hatten, Chicago, Ill. Certain pharmaceutical preparations	66,750	Dec. 24	131	2141
Lerch & Co., P. W., South Canaan, Pa. Salve	66,751	Dec. 24	131	2141
Lockland Lumber Co., Lockland, Ohio. Refrigerators	66,723	Dec. 24	131	2140
Louis Kindling Co., Milwaukee, Wis. Cigars	66,710	Dec. 24	131	2140
Luddy & Currier, Lynn, Mass. Leather boots and shoes	66,767	Dec. 24	131	2141
M. Haiff & Bro., San Antonio, Tex. Certain knitted garments	66,724	Dec. 24	131	2140
Mazawattee Tea Company Limited, London, England. Cocoa and chocolate	66,688	Dec. 24	131	2131
Mona Manufacturing Company, Boston, Mass. Stockings, knitted, netted, and lace underwear and waists	66,725	Dec. 24	131	2140
Montana Gesellschaft mit beschränkter Haftung, Strehla, Germany. Preserving and disinfecting agents	66,726	Dec. 24	131	2140
Moore Paint Co., Cleveland, Ohio. Varnishes, fillers, and colors ground in oil	66,768	Dec. 24	131	2141
Mount Vernon Belting Co., Baltimore, Md. Stitched canvas machine-belting	66,769	Dec. 24	131	2141
Offene Handelsgesellschaft Schröder, Smidt & Co., Bremen, Germany. Hides, skins, and furs	66,727	Dec. 24	131	2140
Paramount Knitting Co., Chicago, Ill. Hosiery	66,702	Dec. 24	131	2139
Patterson Sargent Co., Cleveland, Ohio. Certain painters' materials	66,770	Dec. 24	131	2141
Pond, Frank N., New York, N. Y. Cold-cream and remedy for dyspepsia	66,752	Dec. 24	131	2141
Radigan, Rich & Co., New York, N. Y. Celluloid, animal and vegetable matter hair-combs	66,689	Dec. 24	131	2139
Rahn, Charles C., Thompsonville, Conn. Pasteboard cases, boxes, and cartons	66,771	Dec. 24	131	2141
Ruehl Bros. Brewing Co., Chicago, Ill. Beer	66,690	Dec. 24	131	2139
Samuel Winslow Skate Mfg. Co., Worcester, Mass. Ice and roller skates	66,711	Dec. 24	131	2140
Sapa Chemical Co., St. Louis, Mo. Certain medicinal preparation	66,753	Dec. 24	131	2141
Shivell, Edwin, assignor to Delong, Seaman & Company, Boston, Mass. Sardines	66,691	Dec. 24	131	2139
Smith, Albert D., Springfield, Mass. Children's textile bands, undershirts, and caps	66,692	Dec. 24	131	2139
Smith & Anthony Company, Boston, Mass. Stoves, ranges, and parts thereof	66,772	Dec. 24	131	2141
Société "Le Ferment," Paris, France. Certain medicines	66,754	Dec. 24	131	2141
Southern Substitute Turpentine Company, Wilmington, Del., and Highlandtown, Md. Substitute for turpentine	66,773	Dec. 24	131	2141
Standard Sewing Machine Company, Cleveland, Ohio. Sewing-machines and attachments	66,728	Dec. 24	131	2140
Standard Sewing Machine Company, Cleveland, Ohio. Sewing-machine needles	66,729	Dec. 24	131	2140
Steele, Frederick A., New Rochelle, N. Y. Medicated and antiseptic pads for external treatment of the anus	66,774	Dec. 24	131	2141
Strader, Wilson P., Lexington, Ky. Whisky, gin, brandy, cordials, and cocktails	66,755	Dec. 24	131	2141
Sunset Hone Co., Los Angeles, Cal. Razor-hones	66,730	Dec. 24	131	2140
System Company, Chicago, Ill. Monthly magazine	66,775	Dec. 24	131	2141
Teraqua Mineral Company, Memphis, Tenn. Certain medicines	66,776	Dec. 24	131	2141
Toronto Type Foundry Co., (Limited,) Toronto, Canada. Certain adhesive composition	66,731	Dec. 24	131	2140
U. S. E. M. Co., New York, N. Y. Electrical bells and electrical push-buttons	66,732	Dec. 24	131	2140
Virginia-Carolina Chemical Company, Jersey City, N. J.; Richmond and Norfolk, Va.; Charleston, S. C.; Savannah and Atlanta, Ga.; Montgomery, Ala.; Durham, N. C., and Memphis, Tenn. Fertilizers	66,703	Dec. 24	131	2139
W. A. Ross & Brother, Incorporated, New York, N. Y. Whisky	66,756	Dec. 24	131	2141
W. B. Cosgrave Shoe Co., Zanesville, Ohio. Leather boots and shoes	66,777	Dec. 24	131	2141
W. B. Cosgrave Shoe Co., Zanesville, Ohio. Leather boots and shoes	66,778	Dec. 24	131	2141
W. H. Coe Manufacturing Co., Providence, R. I. Hand-operated gilding-wheel	66,733	Dec. 24	131	2140
W. H. Coe Manufacturing Co., Providence, R. I. Hand-operated gilding-wheel	66,734	Dec. 24	131	2140

TRADE-MARKS—Continued.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Page.
W. H. Coe Manufacturing Co., Providence, R. I. Hand-operated gilding-wheel	66,735	Dec. 24	131	2140
Wachter Manufacturing Company, Hartford, Conn. Watch-bows and watch-pendants	66,712	Dec. 24	131	2140
Ward, George S., Pittsburg, Pa. Bread	66,693	Dec. 24	131	2139
Welsh and Jones, Philadelphia, Pa. Gold paint	66,779	Dec. 24	131	2141
Wichita Vinegar Works, Wichita, Kans. Catsup, mince-meat, apple-butter, pickles, and vinegar	66,694	Dec. 24	131	2139
Zwonechek & Aksamit, Wilber, Nebr. Wheat-flour	66,695	Dec. 24	131	2139
Zwonechek & Aksamit, Wilber, Nebr. Wheat-flour and cornmeal	66,696	Dec. 24	131	2139

LABELS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Page.
Bunte Brothers, Chicago, Ill. "Bunte." (For Chocolate and Cocoa)	13,948	Dec. 24	131	2142
Farrell & Company, Omaha, Nebr. "Farrell's Wedding Breakfast Cane and Maple Sugar Syrup." (For Cane and Maple-Sugar Syrup.)	13,949	Dec. 24	131	2142
Farrell & Company, Omaha, Nebr. "Farrell's Pride of Colorado Fancy Table Syrup." (For Table Syrup)	13,950	Dec. 24	131	2142
Gnesin, Vladimir F., New York, N. Y. "Kremlin Russian Cigarettes M'f'g by Vladimir F. Gnesin 'The Russian Store.'" (For Cigarettes)	13,945	Dec. 24	131	2142
McLean Cigar Mfg. Co., Minneapolis, Minn. "La Imperiale Bouquet." (For Sigars)	13,944	Dec. 24	131	2142
Montague, Joseph, Buffalo, N. Y. "Monty Krysto." (For a Preparation for the Hair)	13,952	Dec. 24	131	2142
Piekenbrock & Sons, E. B., Dubuque, Iowa. "Collegian." (For Shoes for Men)	13,953	Dec. 24	131	2142
Schuster Brewing Company. (See Wilmanns Bros. Co., assignor.)				
Standard Oil Company, San Francisco and Oakland, Cal. "Zerolene." (For Oils)	13,951	Dec. 24	131	2142
Upham Bro's., New York, N. Y. "Gossip Chop." (For Tea)	13,947	Dec. 24	131	2142
Wilmanns Bros. Co., Milwaukee, Wis., assignor to Schuster Brewing Company, Rochester, Minn. "Old German Lager." (For Beer)	13,946	Dec. 24	131	2142

PRINTS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Page.
Cream of Wheat Co., Minneapolis, Minn. "Bear Design." (For a Breakfast Food)	2,181	Dec. 24	131	2142
Cream of Wheat Co., Minneapolis, Minn. "The Newsboy." (For a Breakfast Food)	2,182	Dec. 24	131	2142
Cream of Wheat Co., Minneapolis, Minn. "There is More Cream of Wheat." (For a Breakfast Food)	2,183	Dec. 24	131	2142
Cream of Wheat Co., Minneapolis, Minn. "Raised on Cream of Wheat." (For a Breakfast Food)	2,184	Dec. 24	131	2142
Cream of Wheat Co., Minneapolis, Minn. "Cute Kids." (For a Breakfast Food)	2,185	Dec. 24	131	2142
Cream of Wheat Co., Minneapolis, Minn. "Boy Whispering to Sister." (For a Breakfast Food)	2,186	Dec. 24	131	2142
The Eye-Fix Remedy Co., Detroit, Mich. "The Japillusion." (For a Remedy for Diseases of the Eyes)	2,187	Dec. 24	131	2142

TRADE-MARKS.

(REGISTRATION APPLIED FOR.)

Name, residence, and title.	Serial No.	Date.	Official Gazette. Vol.	Page.
A. Baldwin & Co., Ltd., New Orleans, La. Saws, scissors, shears, chisels, &c	30,968	Dec. 24	131	2134
A. B. Farquhar Company Limited, York, Pa. Potato-diggers	31,204	Dec. 24	131	2138
Acme Chemical Co., Detroit, Mich. Massage-cream	31,040	Dec. 24	131	2135
American Thread Company, Jersey City, N. J. Spool and sewing cotton and thread	31,190–2	Dec. 24	131	2137
American Washboard Company, Cleveland, Ohio, assignor to National Washboard Company. Washboards				
Barella, Firm of P. F. W., Berlin, Germany. Stomachic powder	21,564	Dec. 24	131	2129
Barth & Myer, Oklahoma, Okla. Hats, gloves, overshirts, &c	12,876	Dec. 24	131	2128
Beadleston & Woerz, New York, N. Y. Beer, ale, porter, and stout	28,347	Dec. 24	131	2130
Bosch, Robert, Stuttgart, Germany. Electric devices	31,025	Dec. 24	131	2135
Bridge & Beach Manufacturing Company, St. Louis, Mo Stoves and ranges	29,857	Dec. 24	131	2131
Bridge & Beach Manufacturing Company, St. Louis, Mo. Stoves	31,126–7	Dec. 24	131	2136
Bry-Block Mercantile Co., Memphis, Tenn. Corsets	31,129	Dec. 24	131	2136
	31,262	Dec. 24	131	2138

TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

Name, residence, and title.	Serial No.	Date.	Official Gazette. Vol.	Page.
Builders Iron Foundry, Providence, R. I. Water-meters	31,180	Dec. 24	131	2137
C. S. Morey Mercantile Company. Denver, Colo. Tea	31,202	Dec. 24	131	2138
Cadbury Brothers, Limited, Birmingham, England. Cocoa and chocolate	31,086	Dec. 24	131	2135
Callender, Benjamin F., Rochester, N. Y. Crayons	30,620	Dec. 24	131	2133
Campho Croup Co., Wheeling, W. Va. Remedy for croup, coughs, and colds	31,008	Dec. 24	131	2134
Case Brothers, Highland Park, Conn. Press-boards	31,157	Dec 24	131	2137
Cederroth, Christian, Gefle, Sweden. Remedy for rheumatism, nervousness, &c	28,883	Dec. 24	131	2130
Chevreux, Paul, Gouhenans, (Haute-Saone,) France. Medicines for gravel, gout, rheumatism, &c	31,116	Dec. 24	131	2136
Chillington Tool Company Limited, Wolverhampton, England. Hoes, spades, shovels, picks, &c	23,705	Dec. 24	131	2129
Cleveland Varnish Company, Cleveland, Ohio Varnishes, japans, varnish-oils, &c	30,587	Dec. 24	131	2133
Cleveland Varnish Company, Cleveland, Ohio. Varnishes, japans, varnish-oils, &c	30,589–90	Dec. 24	131	2133
Cohen Son & Co., Jacob, New York, N. Y. Coats, vests, trousers, and overcoats	27,124	Dec. 24	131	2130
Columbian Hardware Company, Cleveland, Ohio. Spring-hinges and hinge-blanks	18,080	Dec. 24	131	2128
Commercial Electrical Supply Company, St. Louis, Mo. Soldering paste, salts, and sticks	31,173	Dec. 24	131	2137
Conqueror Fire Extinguisher Company, Portland, Me. Fire-extinguishers	31,068	Dec. 24	131	2135
Cook & Bernheimer Co., New York, N. Y. Whisky	9,266	Dec. 24	131	2127
Cook & Bernheimer Co., New York, N. Y. Cocktails	9,267	Dec. 24	131	2127
Cook & Bernheimer Co., New York, N. Y. Gin	9,269	Dec. 24	131	2127
Corry Chemical Co., Corry, Pa. Shoe-polish	31,144	Dec. 24	131	2136
Covert Manufacturing Co., Watervliet, N. Y. Harness	29,195	Dec. 24	131	2131
Dailey, H. and T., Fall River, Mass. Tonic beverage	31,106	Dec. 24	131	2135
De Miracle Chemical Co., New York, N. Y. Toilet cream and freckle-eradicator	31,069	Dec. 24	131	2135
Eliot & Matthews, Los Angeles, Cal. Worsted and cheviots	17,228	Dec. 24	131	2128
Emil Seelig, A. G., Heilbronn, Germany, and Jersey City, N. J. Chicory and coffee substitute	22,447	Dec. 24	131	2129
Erstein & Bro., L., New York, N. Y. Chiffons	30,747	Dec. 24	131	2133
Fairchild Bros. & Foster, New York, N. Y. Food for infants and invalids	31,232	Dec. 24	131	2138
Farbenfabriken of Elberfeld Co., New York, N. Y. Coal-tar dyes, disinfectants, food-preservatives, &c	31,117	Dec. 24	131	2136
Fermo Company, Cincinnati, Ohio. Remedies for stomach, liver, and bowel disorders	30,306	Dec. 24	131	2132
Fountain Ink Pad Company, Chicago, Ill. Inks and ink-pads	31,007	Dec. 24	131	2134
Friedlander, Joseph, New York, N. Y. Remedy for eczema, pimples, blotches, &c	31,101	Dec. 24	131	2135
General Gas Light Co., Kalamazoo, Mich. Gas-lamp mantles	31,237	Dec. 24	131	2138
Gillette-Vibber Co., New London, Conn. Cable and pipe caps, molding-boxes, &c	31,260	Dec. 24	131	2138
Glenn Springs Company, Spartanburg, S. C. Mineral water	30,679	Dec. 24	131	2133
H. J. Heinz Company, Allegheny, Pa. Pickles, chow-chow, sauer-kraut, &c	30,699	Dec. 24	131	2133
Harris Suspender Company, New York, N. Y. Garters	30,974	Dec. 24	131	2134
Hoon, Nettie M., Mercer, Pa. Ointment	31,108	Dec. 24	131	2136
Hoyt & Co., C. H., Toledo, Ohio. Pile remedy	31,176	Dec. 24	131	2137
Hulman & Co., Terre Haute, Ind. Apple-butter, jam, vinegar, crushed fruits, &c	31,111	Dec. 24	131	2136
Hunter, Campbell M., London, England. Match-ignition strips	30,465	Dec. 24	131	2133
International Patent Corporation, Pierre, S. D., and Jersey City, N. J. Lubricators and oilers	23,494	Dec. 24	131	2129
Keeler, Charles E., Atlantic City, N. J. Cold-cream	30,865	Dec. 24	131	2134
Kirk, Albert E., Hoopeston, Ill. Paint	29,864	Dec. 24	131	2132
Kraemer, William A., Los Angeles, Cal. Shirt-waists, kimonas, corset-covers, &c	16,561	Dec. 24	131	2128
Kuschnitzky & Grünhut, Vienna, Austria. Steam or machinery packing	30,861	Dec. 24	131	2134
Lacto-Bacilline Company of New York, New York, N. Y. Milk	29,918–19	Dec. 24	131	2132
Lee Broom & Duster Company, Lincoln, Nebr. Brooms	31,189	Dec. 24	131	2137
Litwiller, Thomas, Tremont, Ill. Wire fence	31,027	Dec. 24	131	2135
Mariani & Co., New York, N. Y. Medicinal preparation	31,168	Dec. 24	131	2137
Mechanische Weberei zu Linden, Hannover-Linden, Germany. Velveteens	9,810	Dec. 24	131	2127
Minton Company, Inc., Rochester, N. Y. Hose-supporters and garters	31,103	Dec. 24	131	2135
Mole, Harry, Pottstown, Pa. Remedy for whooping-cough and colds	31,066	Dec. 24	131	2135
N-M-C-R Company, New York, N. Y. Ink-dividing bands for inking-rollers	30,498	Dec. 24	131	2133
National Washboard Company. (See American Washboard Company, assignor.)				
Nitedals Tændstikfabrik, Grönvold, in Ostre Aker, near Christiania, Norway. Matches	24,180	Dec. 24	131	2129
Neunsinger, Charles, Baltimore, Md. Carbonated beer	30,894	Dec. 24	131	2134
Osborn & Co., Saml., Sheffield, England. Cutlery, &c	12,580	Dec. 24	131	2127
Osborn & Co., Saml., Sheffield, England. Steel and iron in bars, sheets, rods, &c	12,581	Dec. 24	131	2127
Pacific Milling Company, Incorporated, San Francisco, Cal. Wheat-flakes	26,722	Dec. 24	131	2130
Paine Furniture Company, Boston, Mass. Mattresses, upholstered springs, &c	25,777	Dec. 24	131	2129
Pelosi, Louis, Washingtonville, N. Y. Cordial	26,617	Dec. 24	131	2129
Philadelphia Drying Machinery Company, Philadelphia, Pa. Compresses for cotton, wool, hair, rags, &c	31,283	Dec. 24	131	2138
Philadelphia Drying Machinery Company, Philadelphia, Pa. Machinery for drying, cooling, ordering, or treating tobacco	31,284	Dec. 24	131	2138
Philadelphia Drying Machinery Company, Philadelphia, Pa. Machinery for washing, scouring, bleaching, &c	31,285	Dec. 24	131	2138
Quack, John, *et al.*, executors. (See Sandheger, C.)				
Rippe Grain & Milling Co., Fairmont, Minn. Wheat-flour	27,805	Dec. 24	131	2130
Roberts & Mathews, Ansonia, Ohio. Vehicle-lamps	31,152	Dec. 24	131	2136
Robinson Bros. & Company, Incorporated, Portland, Me., and Malden, Mass. Ointment	31,194	Dec. 24	131	2138
Robinson Bros. & Company, Incorporated, Portland, Me., and Malden, Mass. Medicinal and toilet cologne	31,196	Dec. 24	131	2138
Rockland-Rockport Lime Co., Rockland, Me. Lime and ready-mixed mortar	31,067	Dec. 24	131	2135
Roseman, Aaron W., Philadelphia, Pa. Paste for destroying rats, mice, and roaches	29,045	Dec. 24	131	2131
Rosenberg, Adolph, Newark, N. J. Rings, chains, bracelets, and jewelry	26,991	Dec. 24	131	2130
Sandheger, C., deceased; J. Quack and G. H. Sandheger, Cincinnati, Ohio, executors. Whisky	28,924	Dec. 24	131	2131
Sandheger, C., deceased; J. Quack and G. H. Sandheger, Cincinnati, Ohio, executors Whisky	30,196	Dec. 24	131	2132
Sandheger, Gerhard H., *et al.*, executors. (See Sandheger, C.)				
Schwarzkopf, Hans, Charlottenburg, near Berlin, Germany. Cosmetics for the hair	31,029	Dec. 24	131	2135
Secrest, Harry O., Cleveland, Ohio. Lawn trimmers and edgers	30,076	Dec. 24	131	2132
Sheppard, Charles E., New York, N. Y. Loose-leaf binders	19,736	Dec. 24	131	2128
Simmons, Daniel W., Seattle, Wash. Cigarettes and cigars	30,297	Dec. 24	131	2132
Simmons Hardware Company, St. Louis, Mo. Hammers, screw-drivers, bit-braces, ice-picks, &c	28,016	Dec. 24	131	2130
Smith, Lycurgus, Mineral Wells, Tex. Mineral waters	30,955	Dec. 24	131	2134
Société anonyme des Produits Chimiques Spéciaux, Lyon-Monplaisir, France. Medicines for tuberculosis, neurasthenia, overwork, &c	20,331	Dec. 24	131	2128
Société anonyme des Produits Chimiques Spéciaux, Lyon-Monplaisir, France. Certain medicines and plasters	20,332	Dec. 24	131	2128
Société anonyme des Produits Chimiques Spéciaux, Lyon-Monplaisir, France. Certain medicines	20,333–4	Dec. 24	131	2128–9

TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

Name, residence, and title.	Serial No.	Date.	Official Gazette. Vol.	Page.
South Bend Watch Company, South Bend, Ind. Watches	30,857	Dec. 24	131	2134
Standard Mfg. Co., Shelby, Ohio. Spring-hinges	31,059	Dec. 24	131	2135
Sterling, William H., New York, N. Y. Tire-filler	30,319	Dec. 24	131	2132
Stevenson & Howell, Limited, London, England. Flavoring essences and extracts	28,996	Dec. 24	131	2131
Stevenson & Howell, Limited, London, England. Oils, extracts, &c	29,840	Dec. 24	131	2131
Strawsons, London, England. Insecticides	29,035	Dec. 24	131	2131
Tandy, John L., Kansas City, Mo. Beds, couches, cots, mattresses, &c	29,735	Dec. 24	131	2131
Theoline Chemical Company, New York, N. Y., and Bridgeport, Conn. Liniments	31,208	Dec. 24	131	2133
U. S. Hame Company, Buffalo, N. Y. Hames and trimmings therefor	31,016	Dec. 24	131	2134
Vereinigte Chemische Werke Aktiengesellschaft, Charlottenburg, Germany. Cold-cream and pomades	15,061	Dec. 24	131	2128
Viascope Mfg. Co., Chicago, Ill. Moving-picture machines, films, and attachments	30,665	Dec. 24	131	2133
W. B. Cosgrave Shoe Co., Zanesville, Ohio. Leather boots and shoes	29,861-2	Dec. 24	131	2132
W. W. Harper Co., Zanesville, Ohio. Spices	30 409	Dec. 24	131	2132
W. W. Harper Co., Zanesville, Ohio. Coffee	30,411	Dec. 24	131	2133
Wake Chemical Company, Raleigh, N. C. Tonic beverage	29,913	Dec. 24	131	2131
Wanamaker, John, Philadelphia, Pa. Ladies' corsets	31,145	Dec. 24	131	2136
Warfield Pratt Howell Co., Des Moines, Iowa. Canned fish	31,203	Dec. 24	131	2136
Wilkinson Sword Company, Limited, London and Sheffield, England. Flat, table, and hollow ware	18,965	Dec. 24	131	2128
Wilmarth & Morman Co., Grand Rapids, Mich. Drill-grinding machines	28,364	Dec. 24	131	2130
Withington & Cooley Manufacturing Company, Jackson, Mich. Hoes	31,161-2	Dec. 24	131	2137

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED ON THE 24TH DAY OF DECEMBER, 1907.

Invention.	Name.	No.	Date.	Monthly volume. Specification.	Drawing.	Official Gazette. Volume.	Page.
Acid. Methylene citryl oxytoluic	R. Berendes and J. Callsen	874,824	Dec. 24	5133	.....	131	2094
Adjustable chair	J. Prescott	874,435	Dec. 24	4371	920	131	1967
Advertising-machine	H. A. Ironside	874,595	Dec. 24	4692	986-7	131	2019
Air-heater	F. W. Green	874,673	Dec. 24	4849	1018	131	2045
Air motor. Compressed-	T. L. Jones	874,771	Dec. 24	5042	1062	131	2077
Alarm: *See* Fire and burglar alarm.							
Animal-shears	T. A. Martin	874,522	Dec. 24	4564	957	131	1995
Announcing or advertising apparatus	E. Charles	874,532	Dec. 24	5148	1084-5	131	2096
Armor-plate. Finishing	E. W. Lewis and J. S. Unger	874,604	Dec. 24	4713	990	131	2022
Attaching device	A. Hampe	874,765	Dec. 24	5034	1060	131	2075
Automobile	H. L. Ide	874,405	Dec. 24	4313	908	131	1958
Automobile sleigh	W. C. Weiss	874,467	Dec. 24	4419	932	131	1977
Automobiles. Transmission-gear for	C. W. Smart	874,627	Dec. 24	4756	1000-1	131	2030
Axle. Lubricating-	W. E. Dalby	874,740	Dec. 24	4991	1051	131	2067
Bag-closing machine	T. J. Brough	874,734	Dec. 24	4982	1048-9	131	2065
Ball attachment	C. D. Hungate	874,681	Dec. 24	4866	1023	131	2047
Baling-press	H. L. Whitman	874,814	Dec. 24	5117	1078	131	2091
Ballot and ballot-book. Indexed	F. A. Johnson	874,509	Dec. 24	4699	988	131	2020
Bar: *See* Clamp-bar. Core-bar.							
Barge	J. P. Karr and J. D. Rauch	874,849	Dec. 24	5172	1090	131	2102
Basket carrier-frame	J. H. Cameron	874,658	Dec. 24	4823	1012	131	2040
Battery plate. Storage-	W. Gardiner	874,841	Dec. 24	5160	1087	131	2099
Bearing. Ball-	F. Greiner	874,401	Dec. 24	4306	906	131	1956
Bearing. Disk-	A. F. Brown	874,485	Dec. 24	4462	941	131	1983
Bearing. Roller-	E. J. Edwards	874,837	Dec. 24	5155	1086	131	2098
Bed. Invalid's	O. K. Woollen	874,555	Dec. 24	4618	971	131	2005
Bedstead coupling. Iron-	G. E. Blomquist	874,385	Dec. 24	4271	900	131	1950
Beehive	P. J. Eckman	874,579	Dec. 24	4666	981	131	2013
Beehives. Bottom board for	E. L. Pratt	874,863	Dec. 24	5207	1098	131	2106
Belt, band, and the like	R. Scheuer	874,870	Dec. 24	5224	1101	131	2108
Block-molding machine	M. J. Palmiter	874,533	Dec. 24	4585	962	131	1999
Blowpipe	C Delcampe	874,492	Dec. 24	4476	943	131	1985
Boiler	W. J. Ogan	874,423	Dec. 24	4353	916	131	1964
Boiler circulator. Steam-	E. J. Wheeler	874,470	Dec. 24	4424	933	131	1978
Book or pad. Manifolding copy	D. A. Roberts	874,439	Dec. 24	4377	921	131	1968
Boot and shoe leveling machine. Automatic	J. J. Heys	874,504	Dec. 24	4504	947-8	131	1989
Boot and shoe tree	F. G. Pabst	874,619	Dec. 24	4741	996	131	2027
Bottle	M. B. Samuel	874,441	Dec. 24	4382	922	131	1969
Bottle cap or closure for bottles, jars, or other receptacles	E. Goltstein	874,670	Dec. 24	4844	1017	131	2044
Bottle-indicator	J. Collins	874,393	Dec. 24	4291	903	131	1953
Bottle. Non-refillable	H. W. E. Josling	874,683	Dec. 24	4869	1024	131	2048
Bottle-stopper	G. Kirkegaard	874,685	Dec. 24	4874	1025	131	2049
Bottles. Shelving-tray for	C. Sandel	874,442	Dec. 24	4383	922	131	1969
Box: *See* Display-box. Starting-box. Fruit-box. Wagon-box. Mail-box.							
Boxes by punching. Apparatus for the manufacture of pasteboard	H. M. P. Catoire and J. A. M. Marret.	874,831	Dec. 24	5147	1084	131	2096
Bracket: *See* Shade-bracket.							
Brake: *See* Car-brake. Railway-brake.							
Brake	J. H. Meredith	874,857	Dec. 24	5197	1096	131	2104
Brake-shoe	W. E. De Voe	874,663	Dec. 24	4832	1014	131	2042
Brickmaking-machine	J. E. Bond	874,482	Dec. 24	4448	939-40	131	1982
Bricks, &c. Transporting	W. H. Francis	874,582	Dec. 24	4672	982	131	2014
Bucket-blanks. Making	P. A. Lorenz	874,515	Dec. 24	4549	955	131	1992
Buggy-iron	W. A. Langjahr	874,774	Dec. 24	5047	1063	131	2078
Buoy	T. L. Willson	874,646	Dec. 24	4804	1009	131	2037
Burner: *See* Gas-burner. Oil-burner. Gas and vapor burner. Vapor-burner.							
Can-crimping machine	C. W. Graham	874,498	Dec. 24	4488	945	131	1987
Can-opener	L. P. Therriault	874,457	Dec. 24	4402	928	131	1974
Canning-machines. Filling-nozzle for	B. E. Taylor	874,874	Dec. 24	5221	1102	131	2109
Car	E. S. Bucknam	874,568	Dec. 24	4647	975-6	131	2010
Car brake. Electric-	M. G. Hubbard, Jr.	874,508	Dec. 24	4529	952-3	131	1990
Car-door hook	T. Lennox	874,689	Dec. 24	4881	1026	131	2050
Car-door latch. Mine-	C. H. Smith	874,872	Dec. 24	5229	1102	131	2109

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Car door-operating mechanism. Dumping-	E. I. Dodds	874,578	Dec. 24	4654	980–1	131	2031
Car. Dump-	E. S. Maclin	874,519	Dec. 24	4555	956	131	1994
Car-dumping apparatus	R. Hay	874,503	Dec. 24	4500	946–7	131	1988
Car. Freight-	W. H. Nunamacher	874,615	Dec. 24	4734	994	131	2026
Car. Metal ore-	E. I. Dodds	874,576	Dec. 24	4661	979–80	131	2012
Car. Metallic ore-	E. I. Dodds	874,577	Dec. 24	4662	980	131	2013
Car switch. Street-	W. H. Coombs	874,491	Dec. 24	4475	943	131	1985
Cars. Third-rail attachment for electric	G. H. Sohn	874,630	Dec. 24	4760	1001	131	2030
Carbureter	H. D. Baird	874,822	Dec. 24	5128	1080	131	2093
Carnations, &c. Tool for applying fastening devices to split	A. J. Baur	874,381	Dec. 24	4262	898	131	1948
Carpet-cleaner	G. F. Goddard	874,584	Dec. 24	4675	982	131	2015
Carriage attachment. Baby-	H. Benning	874,656	Dec. 24	4819	1011	131	2040
Carriage-top rest	W. R. Roote	874,794	Dec. 24	5080	1070	131	2084
Carrier: *See* Sandpapering-machine carrier.							
Caskets or the like. Body-catch for	L. W. Harris and W. M. Parker	874,502	Dec. 24	4499	946	131	1988
Casting	H. G. Underwood	874,577	Dec. 24	5237	1103	131	2110
Ceilings, walls, &c. Means for reinforcing composition construction of	W. C. Lyon	874,413	Dec. 24	4335	912	131	1961
Chair: *See* Adjustable chair.							
Chandelier. Adjustable	O. Dodge and S. G. Camp	874,836	Dec. 24	5153	1086	131	2098
Check-row and hill marker	W. J. Botts	874,827	Dec. 24	5138	1082–3	131	2095
Checks. Machine for holding, stamping, and displaying	E. F. Chandler	874,905	Dec. 24	5285	1114	131	2119
Cheese-cutter for vending cheese. Computing	J. Winkelmeyer	874,717	Dec. 24	4948	1039–40	131	2059
Circuit switch. High-potential-	J. N. Kelman	874,601	Dec. 24	4705	988–9	131	2021
Clamp-bar	E. Barker	874,724	Dec. 24	4965	1043	131	2062
Clamp-bar	E. Barker	874,725	Dec. 24	4966	1043	131	2062
Clamping-machine	A. L. Johnson	874,406	Dec. 24	4316	908–9	131	1958
Clasp: *See* Garment-supporting clasp. Spring-clasp.							
Clasp	F. A. Bagnall	874,651	Dec. 24	4813	1010	131	2038
Cleaner: *See* Carpet-cleaner.							
Clip: *See* Paper-clip.							
Clothes-drier	F. B. Weltershausen	874,902	Dec. 24	5281	1113	131	2118
Clothes-lifter	G. A. Shaw	874,547	Dec. 24	4605	967	131	2002
Clothes-pin	J. N. Cooke and J. C. Moeller	874,660	Dec. 24	4826	1013	131	2041
Clothes stick and catcher	A. Thueson	874,711	Dec. 24	4931	1036	131	2057
Clutch	T. J. Butler	874,388	Dec. 24	4274	901	131	1951
Clutch. Friction-	W. R. McKeen, Jr.	874,605	Dec. 24	4714	990–1	131	2022
Clutch mechanism	W. H. Lewis	874,419	Dec. 24	4345	914	131	1963
Coat and hat hook. Folding pocket	J. E. Meagher	874,412	Dec. 24	4335	912	131	1961
Cock. Ball-	J. H. Davis	874,523	Dec. 24	4566	457	131	1995
Cock. Ball-	A. G. Simmons	874,575	Dec. 24	4659	979	131	2012
Collar. Horse-	D. B. Danielson	874,629	Dec. 24	4759	1001	131	2030
Column construction		874,395	Dec. 24	4295	904	131	1954
Comb: *See* Currycomb							
Combination-lock	W. H. Taylor	874,807	Dec. 24	5104	1075	131	2088
Concrete door structure. Reinforced	T. de Bobula	874,729	Dec. 24	4974	1045	131	2064
Concrete structure	A. F. Walker	874,462	Dec. 24	4410	930	131	1975
Concrete structure and hanger-support	A. F. Walker	874,461	Dec. 24	4408	929	131	1975
Confectionery material. Machine for depositing liquid.	L. A. Berg	874,560	Dec. 24	4631	972–3	131	2007
Continuous furnace	E. Norton and H. C. Shaw	874,530	Dec. 24	4575	959–60	131	1998
Control system	H. L. Beach	874,559	Dec. 24	4626	972	131	2007
Control system. Alternating-direct-current	H. L. Beach	874,558	Dec. 24	4623	972	131	2006
Controller	E. W. Stull	874,638	Dec. 24	4782	1004	131	2034
Conveyer	L. S. Straight	874,636	Dec. 24	4778	1003	131	2033
Core-bar	C. S. Humphrey	874,769	Dec. 24	5041	1061	131	2076
Cornice-protector	T. Johnston	874,510	Dec. 24	4540	954	131	1991
Corset and corset-waist	I. M. Bond	874,386	Dec. 24	4272	900	131	1951
Cotton-gin roller	J. W. Graves	874,910	Dec. 24	5340	1117	131	2121
Coupling: *See* Bedstead-coupling. Pipe-coupling.							
Crane. Saggar-	L. H. Williams	874,553	Dec. 24	4616	970	131	2004
Cranks and pitmen. Antifriction device for	W. W. Neighbour	874,859	Dec. 24	5202	1097	131	2105
Crate. Metallic	J. Mathy	874,782	Dec. 24	5059	1066	131	2081
Crates. Grate for metallic	J. Mathy	874,783	Dec. 24	5061	1066	131	2081
Crib. Baby-	J. A. Nall	874,421	Dec. 24	4350	915	131	1963
Cultivator. Wheel-	A. F. Brown	874,566	Dec. 24	4640	974–5	131	2009
Cupola-furnace	M. Zippler	874,476	Dec. 24	4433	935	131	1979
Currycomb	P. J. Faughnan	874,493	Dec. 24	4479	944	131	1985
Cutter: *See* Cheese-cutter. Gear-cutter. Gasket or washer cutter.							
Cutter and baster. Combined	S. E. Cantrall	874,829	Dec. 24	5144	1083	131	2096
Cutter-head. Rotary	E. S. Shimer	874,871	Dec. 24	5225	1101	131	2108
Cutting implement	A. A. Low	874,516	Dec. 24	4550	955	131	1993
Cylinder-lock	W. H. Taylor	874,808	Dec. 24	5106	1076	131	2088
Cystoscope	R. H. Wappler	874,810	Dec. 24	5108	1076	131	2089
Danger-signal	C. J. Luther	874,608	Dec. 24	4722	992	131	2023
Dental crown-driver	C. R. Averill	874,379	Dec. 24	4260	898	131	1948
Dental pliers	G. J. Clark	874,489	Dec. 24	4472	942	131	1984
Derailing device	W. O. Clegg and O. J. Asmann	874,490	Dec. 24	4473	942	131	1984
Diaphragm	C. B. Lowry	874,517	Dec. 24	4552	955	131	1993
Digger: *See* Sage-brush digger.							
Display-rack	J. B. Timberlake	874,917	Dec. 24	5353	1119–20	131	2124
Door and hinge	J. McMullen	874,528	Dec. 24	4572	959	131	1997
Door check and tightener	E. Conklin	874,659	Dec. 24	4825	1013	131	2041
Door closer and check	R. Adams	874,721	Dec. 24	4960	1041–2	131	2061
Door-fastener	A. L. Lee	874,688	Dec. 24	4880	1026	131	2050
Door. Grain-	E. B. Gilleland	874,759	Dec. 24	5022	1058	131	2073

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Double pan	F. Bliss	874,562	Dec. 24	4634	973	131	2008
Draft-evener	A. W. Dusenbery	874,664	Dec. 24	4834	1015	131	2042
Drafting instrument	J. H. Blair	874,384	Dec. 24	4265	899	131	1949
Drawer attachment	W. H. Flood	874,581	Dec. 24	4671	982	131	2014
Drawer-guide	L. H. Walker	874,463	Dec. 24	4412	930	131	1976
Dress-shield	C. N. Waite	874,879	Dec. 24	5241	1104	131	2111
Drier: *See* Clothes-drier.							
Drill: *See* Ratchet-drill. Shaft-drill. Rock-drill.							
Drill	G. E. Lynch	874,894	Dec. 24	5263	1108–9	131	2115
Drill-socket	N. E. Woods	874,554	Dec. 24	4617	971	131	2005
Drying-machine	F. G. Sargent	874,901	Dec. 24	5279	1112	131	2118
Dulcimer-action	N. J. Winlund	874,473	Dec. 24	4429	934	131	1979
Dump-bed	C. C. Taylor, G. W. Wood, and M. A. Vincent.	874,875	Dec. 24	5234	1103	131	2110
Dust-guard	J. Pearson	874,428	Dec. 24	4361	918	131	1965
Dye. Anthracene	J. Deinet	874,743	Dec. 24	4995	.....	131	2068
Dye. Anthracene	J. Deinet	874,744	Dec. 24	4996	.....	131	2068
Edge-trimming machine	A. E. Ayer	874,821	Dec. 24	5126	1080	131	2093
Electric controller	R. W. Brown	874,567	Dec. 24	4644	975	131	2009
Electric currents. Apparatus or means for the production, transmission, and distribution of	C. E. Fritts	874,908	Dec. 24	5306	1116	131	2121
Electric-machine brush-holder	G. Finzi and E. Tallero	874,665	Dec. 24	4835	1015	131	2042
Electrical transmission and propulsion. System of	M. Leblanc	874,411	Dec. 24	4328	911–12	131	1960
Elevator and builder's crane for moving heavy building materials. Combined	E. Ldbcke	874,778	Dec. 24	5053	1065	131	2079
Engine: *See* Fluid-pressure engine. Rotary engine. Gas-engine. Traction-engine.							
Eraser-cleaning machine	G. G. Greene	874,400	Dec. 24	4305	906	131	1956
Excavating and removing material. Apparatus for	A. B. Proal, Jr.	874,865	Dec. 24	5212	1098–9	131	2107
Eyeleting-machine	G. Goddu	874,669	Dec. 24	4840	1017	131	2044
Fabric: *See* Pile fabric.							
Fan	J. H. Pitkin	874,431	Dec. 24	4367	919	131	1966
Fan motor. Ceiling-	T. H. Pither	874,430	Dec. 24	4364	918–19	131	1966
Fan. Power-	J. C. Stine	874,805	Dec. 24	5098	1074	131	2087
Fare-register	J. F. Ohmer	874,424	Dec. 24	4354	916–17	131	1964
Farm-gate	J. W. Price	874,436	Dec. 24	4373	920	131	1968
Farm-gate	C. F. Wilsey	874,472	Dec. 24	4427	934	131	1978
Faucet	E. C. Fleischman and J. F. Jennings.	874,755	Dec. 24	5017	1057	131	2072
Faucet for beer and other carbonated beverages	R. W. Taylor	874,876	Dec. 24	5236	1103	131	2110
Fence-picket	D. B. McKenzie	874,420	Dec. 24	4349	915	131	1963
Fence-post. Cement	W. W. Stout	874,453	Dec. 24	4397	927	131	1973
Fence-post. Plastic	H. P. Libhart	874,513	Dec. 24	4546	954	131	1992
Fence post. Portable wire-	W. B. Stambaugh	874,804	Dec. 24	5098	1074	131	2087
Fence stretcher. Wire-	W. B. Marshall	874,855	Dec. 24	5187	1093	131	2104
File. Paper-	G. Garny	874,758	Dec. 24	5021	1058	131	2073
Filling-machine	B. E. Taylor	874,639	Dec. 24	4786	1004–5	131	2034
Film	O. Dodge	874,885	Dec. 24	5248	.....	131	2112
Filter or separator for pneumatic cleaners	C. E. Baker	874,481	Dec. 24	4445	938	131	1981
Fire and burglar alarm. Electric	M. J. Briggs	874,483	Dec. 24	4455	940	131	1982
Fire-escape	C. L. Lindquist	874,691	Dec. 24	4884	1027	131	2050
Fire-extinguishing apparatus	W. R. Johnston	874,600	Dec. 24	4702	988	131	2021
Fireproof window	M. F. Hamsley	874,501	Dec. 24	4495	946	131	1988
Flash-light apparatus	J. E. Hare	874,403	Dec. 24	4309	907	131	1957
Flax-pulling machine	C. H. Vessot	874,460	Dec. 24	4405	929	131	1975
Flue-stop	A. E. Gowin	874,672	Dec. 24	4847	1018	131	2044
Fluid gage or indicator	J. J. Tokheim	874,643	Dec. 24	4793	1006	131	2036
Fluid-mixer	H. Bucklin	874,737	Dec. 24	4986	1050	131	2066
Fluid-pressure engine	I. E. Barricklow	874,823	Dec. 24	5130	1081	131	2094
Flush-tank	R. E. Bristow	874,565	Dec. 24	4638	974	131	2008
Food-mixer	R. Moos	874,524	Dec. 24	4567	958	131	1995
Food product from lupine beans. Making a	A. D. Reis	874,624	Dec. 24	4753	.....	131	2029
Frame: *See* Basket carrier-frame.							
Fruit and vegetable grading apparatus	R. B. Polk	874,623	Dec. 24	4751	999	131	2029
Fruit. Artificial	S. Miller	874,415	Dec. 24	4338	913	131	1961
Fruit-box	P. Henrich	874,891	Dec. 24	5256	1107	131	2114
Frying-pan and folding handle therefor	F. P. O'Neill	874,701	Dec. 24	4912	1032	131	2054
Furnace: *See* Continuous furnace. Cupola-furnace. Muffle-furnace. Heating-furnace. Ore-reducing furnace. Heating and welding furnace.							
Furnace arch-hanger	H. E. Wallis	874,464	Dec. 24	4414	930	131	1976
Furnace-door opener	C. W. McCandless	874,612	Dec. 24	4728	993	131	2025
Furnace grate and ash-pit	C. Bush	874,509	Dec. 24	4649	976	131	2010
Furnaces. Cold-air-inlet regulator for	T. J. March	874,521	Dec. 24	4563	956	131	1995
Furnaces. Temperature-controlling device for	A. G. Mather and E. C. Shaw	874,781	Dec. 24	5057	1066	131	2080
Fuse. Safety-	J. Sachs and F. D. Reynolds	874,795	Dec. 24	5082	1071	131	2084
Fuse. Safety-	J. Sachs and F. D. Reynolds	874,796	Dec. 24	5084	1071	131	2085
Fuse. Safety-	J. Sachs and F. D. Reynolds	874,797	Dec. 24	5087	1071	131	2085
Fuse. Safety-	J. Sachs	874,798	Dec. 24	5089	1071	131	2085
Gage: *See* Fluid-gage.							
Game apparatus. Railway	J. J. Barnes	874,726	Dec. 24	4968	1044	131	2062
Garbage from being thrown onto the beach. Device to prevent sea-dumped	S. E. Gladding	874,497	Dec. 24	4487	944	131	1986
Garment. Combination-	J. W. P. Bunning	874,487	Dec. 24	4466	941–2	131	1984
Garment-creasing device	A. Abrams	874,818	Dec. 24	5122	1079	131	2092
Garment-supporting clasp	J. F. Atwood	874,820	Dec. 24	5124	1080	131	2092
Gas and vapor burner	W. T. Solomon	874,449	Dec. 24	4391	925	131	1971
Gas-burner. Incandescent	W. T. Solomon	874,705	Dec. 24	4918	1033	131	2056
Gas-engine	A. J. Spicer	874,450	Dec. 24	4392	925	131	1971
Gas-producer	W. Towns	874,458	Dec. 24	4403	926	131	1974
Gas-tube connection	W. H. Allen	874,378	Dec. 24	4259	897	131	1948

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Gasket or washer cutter	E. J. Patton	874,702	Dec. 24	4913	1032	131	2055
Gate: *See* Farm-gate.							
Gate	A. E. Aeschlimann	874,376	Dec. 24	4253	896	131	1947
Gate	R. B. Reece	874,541	Dec. 24	4597	965	131	2001
Gear-cutter	F. L. Eberhardt	874,886	Dec. 24	5240	1105	131	2112
Gear. Variable-speed power-transmitting	P. Hesselius and J. Jaderlund	874,404	Dec. 24	4311	907	131	1957
Gear-wheels. Making	W. H. Smith	874,448	Dec. 24	4389	924	131	1971
Gearing	A. Farkas and J. Kieffer	874,580	Dec. 24	4667	981	131	2014
Gearing. Differential	W. Lorenz	874,852	Dec. 24	5183	1091–2	131	2103
Gearing. Variable	F. Burger	874,657	Dec. 24	4820	1012	131	2040
Gearing. Variable-speed transmitting	J. A. De Vito	874,747	Dec. 24	5000	1053	131	2069
Generator: *See* Steam-generator.							
Generator	J. M. W. Kitchen	874,850	Dec. 24	5174	1090–1	131	2102
Glass. Making wire	A. J. Baldwin	874,380	Dec. 24	4261	898	131	1948
Glove or mitten. Base-ball	E. Little	874,851	Dec. 24	5182	1091	131	2103
Grader. Road	H. P. Yost	874,916	Dec. 24	5350	1119	131	2125
Grain-auger mechanism	A. Sonander	874,475	Dec. 24	4432	935	131	1979
Grain-meter	J. B. Hale	874,706	Dec. 24	4920	1033–4	131	2056
Grain-separators. Straw-rack for	W. Halstead	874,585	Dec. 24	4677	983	131	2015
Grinding-mill	W. Middleton and H. N. G. Cobbe	874,764	Dec. 24	5033	1060	131	2075
Grinding shoe and die	W. Mason	874,414	Dec. 24	4337	912–13	131	1961
Gun. Tubular-magazine automatic		874,856	Dec. 24	5188	1093–6	131	2104
Hanger: *See* Furnace arch-hanger. Joist-hanger.							
Harness	G. A. Anderson	874,557	Dec. 24	4622	972	131	2006
Harvester. Beet	E. E. Shaw	874,800	Dec. 24	5092	1072	131	2085
Heater: *See* Air-heater.							
Heating and welding furnace	W. N. Best	874,561	Dec. 24	4632	973	131	2007
Heating-furnace. Continuous	E. Norton	874,422	Dec. 24	4351	915–16	131	1964
Hinge	H. Pearson	874,427	Dec. 24	4360	917	131	1965
Hinge	L. H. Dennis	874,746	Dec. 24	4999	1052	131	2069
Hook: *See* Car-door hook. Register-hook. Coat and hat hook. Safety-hook.							
Horn. Electric	L. Chalas, E. Réquillart, and C Contal.	874,792	Dec. 24	5078	1070	131	2084
Horseshoe	M. Kane	874,912	Dec. 24	5343	1117	131	2122
Hose-supporter	E. M. Haynes	874,766	Dec. 24	5036	1061	131	2076
Hub. Vehicle	G. A. McKeel	874,697	Dec. 24	4901	1030	131	2053
Husking-tool	W. Schreiber	874,444	Dec. 24	4386	923	131	1970
Hydraulic jack	J. W. Nelson	874,698	Dec. 24	4902	1030	131	2053
Hydraulic jack	J. W. Nelson	874,699	Dec. 24	4907	1031	131	2054
Hydraulic jack	J. W. Nelson	874,700	Dec. 24	4910	1031	131	2054
Incubator	O. P. Phillips	874,860	Dec. 24	5203	1097	131	2105
Incubator. Automatic	W. F. M. McCarty	874,696	Dec. 24	4900	1030	131	2053
Indexing mechanism	E. J. Flather	874,754	Dec. 24	5010	1056–7	131	2071
Indicator: *See* Bottle-indicator. Speed-indicator.							
Insulator	A. L. Shears	874,445	Dec. 24	4386	923	131	1970
Insulator and protector for electric conductors	T. C. Copping	874,834	Dec. 24	5151	1085	131	2097
Interrupter	W. Kaisling	874,511	Dec. 24	4541	954	131	1991
Iron: *See* Buggy-iron. Soldering-iron. Shaft and thill iron.							
Iron or steel direct from ore. Apparatus for producing wrought	J. A. Potter	874,537	Dec. 24	4501	963–4	131	2000
Iron or steel. Manufacturing wrought	J. A. Potter	874,536	Dec. 24	4589	963	131	2000
Jack: *See* Hydraulic jack. Lifting-jack.							
Joist-hanger	W. F. Lindow	874,514	Dec. 24	4548	955	131	1992
Kettle-cover	L. E. Puckett	874,437	Dec. 24	4375	921	131	1968
Kettle-filler	J. B. Loynd	874,607	Dec. 24	4721	992	131	2023
Key: *See* Telegraph-key.							
Kiln: *See* Stack-kiln.							
Kneading and molding machine. Dough	G. P. Bailey	874,480	Dec. 24	4443	937–8	131	1981
Knit muffler	J. H. Way	874,405	Dec. 24	4415	930–1	131	1976
Knob	G. B. Pickop	874,621	Dec. 24	4746	998	131	2028
Ladder. Aerial	W. H. Shafer	874,546	Dec. 24	4602	967	131	2002
Ladder. Extension	H. C. Siems and H. Dewitz	874,801	Dec. 24	5093	1073	131	2086
Lamp. Incandescent gas	A. Rector	874,703	Dec. 24	4915	1032	131	2055
Lamp. Incandescent gas	E. R. Wilner	874,716	Dec. 24	4947	1039	131	2059
Lamp or lantern glass holder. Signal	W. S. Hamm	874,402	Dec. 24	4307	907	131	1957
Latch. Spring	T. B. Stevens	874,633	Dec. 24	4765	1002	131	2031
Lathe-dog	R. R. Penn	874,791	Dec. 24	5076	1069	131	2083
Leather and apparatus therefor. Process of stuffing	G. Bearhope	874,882	Dec. 24	5244	1105	131	2112
Ledger. Loose-leaf	W. Boehner	874,919	Dec. 24	5360	1120–1	131	2124
Lens-drilling machine	Z. F. Highsmith	874,507	Dec. 24	4527	951–2	131	1990
Lifter: *See* Clothes-lifter.							
Lifting-jack	J. H. Burkholder	874,904	Dec. 24	5284	1113	131	2119
Line-tester	E. S. Lincoln	874,690	Dec. 24	4882	1027	131	2050
Loader. Manure	H. J. Lawrence	874,776	Dec. 24	5051	1064	131	2079
Loading-machine	W. J. Ohm	874,532	Dec. 24	4583	961	131	1998
Lock: *See* Combination-lock. Sash-lock. Cylinder-lock. Seal-lock. Nut-lock. Switch-point lock.							
Lock	Z. Rautbord	874,438	Dec. 24	4376	921	131	1968
Lock	F. F. Miller	874,694	Dec. 24	4892	1029	131	2052
Lock	W. S. Robinson	874,793	Dec. 24	5079	1070	131	2084
Loom controlling device. Automatic-weft-replenishing	A. E., A., and G. Walker	874,550	Dec. 24	4612	969–70	131	2003
Lubricating device	A. F. Clarke	874,883	Dec. 24	5245	1105	131	2112
Lubricator	S. Anderson	874,650	Dec. 24	4811	1010	131	2038
Mail-box	G. A. Wirt	874,718	Dec. 24	4954	1040	131	2060

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Mail-carrier's cabinet. Rural	E. L. Mathison	874,896	Dec. 24	5269	1110	131	2116
Mantel. Heat-radiating	A. Hager	874,843	Dec. 24	5163	1088	131	2100
Match-lighting device	W. C. Johnson and W. B. Hurt	874,682	Dec. 24	4867	1024	131	2043
Match-safe	R. R. Mont	874,416	Dec. 24	4339	913	131	1962
Mattresses for stitching. Machine for gathering the edges of	H. A. Stengel	874,451	Dec. 24	4394	926	131	1972
Measuring implement	E. W. Ellington	874,751	Dec. 24	5006	1054–5	131	2070
Metal perforating and cutting apparatus	E. Ganthler and C. Rodrigues-Ely	874,666	Dec. 24	4835	1015	131	2043
Metallic composition	C. J. Reed	874,866	Dec. 24	5214	.....	131	2107
Meter: *See* Grain-meter.							
Milking apparatus. Pneumatic	A. Gillies. (Reissue)	12,734	Dec. 24	5362	1121	131	2125
Mill: *See* Grinding-mill. Windmill.							
Mill	A. Weber	874,713	Dec. 24	4935	1036–7	131	2058
Miner's prospecting-tool	D. Bölderl	874,730	Dec. 24	4975	1045	131	2064
Mining salt	H. Frasch	874,906	Dec. 24	5290	1115	131	2120
Mining salt	H. Frasch	874,907	Dec. 24	5297	1115	131	2120
Mixer: *See* Fluid-mixer. Food-mixer.							
Molding apparatus	A. C. Rogerson	874,440	Dec. 24	4379	921–2	131	1969
Mosquito-trap	W. S. Hull	874,680	Dec. 24	4864	1023	131	2047
Motions. Device for transforming variable motions into uniform	H. Niebuhr	874,529	Dec. 24	4573	959	131	1997
Motor: *See* Air-motor. Wave-motor. Fan-motor. Wave or tide motor.							
Motor-controlling treadle	A. B. Mann	874,895	Dec. 24	5266	1109	131	2115
Motor-starter. Automatic	W. C. O'Brien	874,531	Dec. 24	4577	960–1	131	1998
Motor starter. Explosion	H. J. S. Lewis	874,913	Dec. 24	5344	1117–18	131	2122
Mouse-trap	F. Beaudry	874,654	Dec. 24	4816	1011	131	2039
Muffle-furnace	E. L. Stine	874,452	Dec. 24	4396	926–7	131	1972
Muffler. Exhaust	E. J. Gulick	874,676	Dec. 24	4855	1020	131	2046
Music-book roll	D. H. York	874,817	Dec. 24	5120	1079	131	2091
Nail holder and set	J. A. McColm	874,613	Dec. 24	4730	994	131	2025
Necktie	A. Swanson	874,710	Dec. 24	4930	1035	131	2057
Nest. Trap	W. Dix	874,748	Dec. 24	5002	1053	131	2070
Nickel and copper contained in sulfid ores and mattes. Rendering soluble in water the	W. S. Gates and H. H. Dow	874,496	Dec. 24	4482	.....	131	1986
Nickel. Electrolytic process for refining	J. N. Pring	874,864	Dec. 24	5210	.....	131	2107
Nitrocellulose. Electrolytic apparatus for the manufacture of	G. C. de Briailles	874,564	Dec. 24	4637	974	131	2008
Nut-lock	J. H. Ramsdell	874,540	Dec. 24	4596	965	131	2001
Nut-lock	P. C. Schmidt	874,544	Dec. 24	4601	966	131	2002
Nut-lock	H. A. Thompson	874,642	Dec. 24	4792	1006	131	2035
Nut-lock	J. H. Glosap	874,760	Dec. 24	5025	1059	131	2073
Nut-lock	H. B. Lake	874,773	Dec. 24	5046	1062	131	2078
Nut-lock	A. K. Spinney	874,803	Dec. 24	5097	1073	131	2087
Oakum and similar materials. Treating waste	C. L. Gellert and C. Bunse	874,668	Dec. 24	4838	1016–17	131	2043
Oil-burner	J. L. Causey	874,486	Dec. 24	4470	942	131	1984
Oiler. Force-feed	G. Wood	874,719	Dec. 24	4955	1040	131	2060
Ore-reducing furnace	J. McLoughlin	874,527	Dec. 24	4570	959	131	1996
Ornament	M. E. McDonnell	874,780	Dec. 24	5073	1069	131	2083
Oxyalkyl derivative of the xanthin bases	R. Berendes and F. Herwig	874,825	Dec. 24	5134	.....	131	2094
Oxygen. Producing	A. Janet	874,896	Dec. 24	4995	987	131	2019
Package. Sensitive-plate	P. Torrani	874,644	Dec. 24	4795	1007	131	2036
Packing-pad	J. D. Freese	874,494	Dec. 24	4480	944	131	1986
Packs. Opening	G. D. Evans	874,753	Dec. 24	5009	1055–6	131	2071
Packs. Treating	C. W. Bray	874,732	Dec. 24	4980	1047	131	2065
Pad: *See* Packing-pad.							
Pan: *See* Frying-pan.							
Paper-clip. Wire	W. L. Curtis	874,572	Dec. 24	4653	977	131	2011
Paper-folding machine	J. Triska	874,645	Dec. 24	4796	1007–8	131	2036
Pasteurizer	A. Jensen	874,598	Dec. 24	4697	987–8	131	2020
Pedal mechanism	P. B. Klugh	874,408	Dec. 24	4321	910	131	1959
Pen. Fountain	L. F. Crawford	874,738	Dec. 24	4989	1050	131	2067
Pen. Fountain	M. W. Moore	874,897	Dec. 24	5270	1110	131	2116
Pen. Marking	W. D. Prest, W. C. Lynge, and G. C. Knudsen	874,539	Dec. 24	4595	965	131	2001
Perches and for analogous articles. Making brace-irons or strengthening-irons for	H. Higgin	874,506	Dec. 24	4525	951	131	1990
Phonograph record holding and shifting attachment	T. V. Skelly	874,548	Dec. 24	4606	967	131	2003
Piano. Automatic-playing	A. G. Gulbransen	874,675	Dec. 24	4851	1019	131	2045
Piano-player. Mechanical	A. G. Gulbransen	874,762	Dec. 24	5028	1059–60	131	2074
Picture-holding strip. Supplemental metallic	G. F. Drew	874,749	Dec. 24	5003	1053	131	2070
Pie-crust-trimming machine	O. Colborne	874,392	Dec. 24	4280	903	131	1953
Pile fabric. Woven	F. J. Hall	874,677	Dec. 24	4857	1020	131	2046
Pin: *See* Clothes-pin.							
Pipe: *See* Blowpipe.							
Pipe	L. Underwood	874,459	Dec. 24	4404	929	131	1974
Pipe-coupling	J. O. Carel	874,390	Dec. 24	4285	902	131	1952
Pipe tool. Waste	T. Koch	874,512	Dec. 24	4546	954	131	1991
Pipe-wrench	E. L. Scribner	874,545	Dec. 24	4601	966	131	2002
Pipe-wrench	C. H. Foster	874,839	Dec. 24	5158	1057	131	2069
Planter. Corn	C. R. Davis	874,741	Dec. 24	4992	1051	131	2068
Plow	E. Jarrell	874,597	Dec. 24	4696	987	131	2020
Plow. Wheel	W. H. Parlin	874,534	Dec. 24	4587	962	131	1999
Plug. Straining	J. H. McEvoy	874,418	Dec. 24	4344	914	131	1962
Pneumatic-action mechanism	A. G. Gulbransen	874,763	Dec. 24	5031	1060	131	2075
Pocket. Safety	J. R. Williams	874,815	Dec. 24	5118	1078	131	2091
Poke. Cattle	T. E. Adams	874,478	Dec 24	4441	937	131	1980
Post: *See* Fence-post.							
Pot: *See* Tea and coffee pot.							
Potato-masher	M. E. French	874,756	Dec. 24	5018	1057	131	2072

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Power device. Auxiliary	J. G. Murphy	874,787	Dec. 24	5071	1068	131	2062
Power-transmission device	A. Boulanger	874,563	Dec. 24	4635	973	131	2008
Power-transmission mechanism	W. L. Buck	874,828	Dec. 24	5143	1083	131	2096
Press: *See* Baling-press.							
Presses. Combined condenser and feeder mechanism for	G. A. Lowry	874,606	Dec. 24	4716	991	131	2023
Printing device	A. L. Patterson	874,790	Dec. 24	5074	1069	131	2063
Printing-machine	E. Z. Taylor	874,640	Dec. 24	4788	1005–6	131	2035
Printing machinery. Bed-plate for	M. Rockstroh	874,626	Dec. 24	4755	1000	131	2029
Propelling boats. Means for	L. A. Hartmann	874,890	Dec. 24	5255	1107	131	2114
Pump	N. W. Akimoff	874,377	Dec. 24	4256	896–7	131	1947
Pump for measuring oil. Power-	J. B. Davis	874,573	Dec. 24	4654	977–8	131	2011
Pump. Self-measuring oil-	J. B. Davis	874,574	Dec. 24	4657	978–9	131	2012
Rail-fastening	H. E. Percival	874,535	Dec. 24	4588	962	131	1999
Railway-brake	P. Hallot. (Reissue)	12,735	Dec. 24	5364	1121–2	131	2125
Railway chairs, rails, and the like. Bolt for fixing	W. E. G. Mortimore	874,611	Dec. 24	4727	993	131	2024
Railway-coaches. Wind and dust shield for	B. Ferguson	874,838	Dec. 24	5156	1086	131	2099
Railway-crossing	W. E. Haworth	874,679	Dec. 24	4862	1023	131	2047
Railway-crossings. Pneumatic signal for	J. W. Pipkin and H. S. Mitchell	874,622	Dec. 24	4747	998–9	131	2028
Railway-signal	W. McCafferty	874,788	Dec. 24	5072	1068	131	2063
Railway-spike	H. M. Abernethy	874,477	Dec. 24	4435	935–7	131	1980
Railway-tie and fastener	E. Swanson	874,454	Dec. 24	4398	927	131	1973
Railway-tie. Metal	J. H. Lynch	874,609	Dec. 24	4725	992–3	131	2024
Ratchet-drill	J. H. Akin and C. C. Anderson	874,556	Dec. 24	4620	971	131	2005
Receptacle. Non-refillable	C. W. Kohler and T. E. O'Brien	874,410	Dec. 24	4326	911	131	1960
Record-needle	R. N. Cunningham and J. W. McPherson.	874,739	Dec. 24	4990	1050	131	2067
Refrigerator-door fastener	H. H. Allison	874,819	Dec. 24	5123	1079	131	2092
Register: *See* Fare-register.	L. G. Coon	874,833	Dec. 24	5150	1085	131	2097
Register-hook	W. L. Hamilton	874,500	Dec. 24	4494	945	131	1987
Registering device	R. Storm, J. F. Underwood, and R. Jackson.	874,635	Dec. 24	4771	1003	131	2033
Ring: *See* Spinning and twisting ring.							
Rock-drill	F. V. W. Swanton and B. Price	874,455	Dec. 24	4400	927–8	131	1973
Rock-drill Hand	C. H. Gunn	874,409	Dec. 24	4492	945	131	1987
Rock-drilling machine	A. D. Lee and F. J. E. Nelson, Jr.	874,603	Dec. 24	4708	989–90	131	2022
Roller: *See* Cotton-gin roller.							
Rotary engine	T. C. Oakman	874,616	Dec. 24	4736	994–5	131	2026
Rotary engine	H. A. King	874,684	Dec. 24	4871	1024–5	131	2048
Rubber heel	F. H. Lathrop	874,775	Dec. 24	5048	1063–4	131	2078
Ruling device	F. W. Whitcher	874,471	Dec. 24	4426	933	131	1978
Ruling machine. Paper-	J. W. Hays	874,588	Dec. 24	4681	984	131	2016
Safety-hook	J. W. Hays	874,587	Dec. 24	4679	983	131	2016
Sage-brush digger and land-roller. Combined	E. Wlatnigg	874,647	Dec. 24	4806	1009	131	2037
Salt-cellar	J. W. Powell	874,538	Dec. 24	4593	964	131	2000
Salting apparatus	S. P. Isbell	874,509	Dec. 24	4539	953	131	1991
Sandpapering-machine carrier	A. S. Cairncross	874,570	Dec. 24	4650	976–7	131	2010
Sash-fastener	J. L. Perry	874,915	Dec. 24	5349	1118	131	2122
Sash-lock	W. A. Godlewski	874,842	Dec. 24	5162	1087	131	2100
Sausage-stuffing machine	F. A. Carroll	874,830	Dec. 24	5146	1084	131	2096
Saw attachment. Band-	E. Hahn	874,889	Dec. 24	5253	1105–7	131	2113
Sawmill set-works	A. M. Portteus	874,434	Dec. 24	4370	920	131	1967
Scraper. Culinary	J. Robinson	874,899	Dec. 24	5275	1111	131	2117
Seal-lock	G. M. Hogmire	874,592	Dec. 24	4686	985	131	2017
Seat: *See* Vehicle-seat.	E. Tyden	874,712	Dec. 24	4932	1036	131	2058
Seeding-machine	F. J. Feldt	874,888	Dec. 24	5252	1106	131	2113
Seeding-machine. Broadcast	F. J. Feldt	874,887	Dec. 24	5250	1106	131	2113
Sewage. Apparatus for liquefaction and purification of	C. W. Russell	874,542	Dec. 24	4598	966	131	2001
Sewing-machine guide. Overedge-	J. B. Wright	874,816	Dec. 24	5119	1079	131	2091
Sewing-machine guiding and marking device	C. Linborg	874,777	Dec. 24	5062	1064	131	2079
Sewing-machine work-guide	L. N. Bishop	874,728	Dec. 24	4972	1044–5	131	2063
Shade bracket. Window-	C. E. Bennett	874,655	Dec. 24	4817	1011	131	2039
Shaft and thill iron	W. Remich	874,625	Dec. 24	4754	999	131	2029
Shaft drill. Sink-	J. P. Karns	874,848	Dec. 24	5171	1089	131	2101
Sharpening machine. Clipper-	E. J. Gould	874,671	Dec. 24	4845	1018	131	2044
Sharpening shears. Automatically-	J. E. Hulse	874,847	Dec. 24	5170	1089	131	2101
Shears: *See* Animal-shears.							
Sheets or units. Apparatus for cutting, folding, and interfolding	S. Wheeler	874,903	Dec. 24	5281	1113	131	2118
Shock-absorbing device	G. S. Hill	874,767	Dec. 24	5037	1061	131	2076
Shoe-shank stiffener	F. G. Delbon	874,884	Dec. 24	5246	1105	131	2112
Shoes. Ankle-stay for	A. Posner	874,862	Dec. 24	5206	1097	131	2106
Shoes. Manufacture of	F. G. Delbon	874,396	Dec. 24	4296	904	131	1955
Shutter stay and adjuster	T. A. Weston	874,468	Dec. 24	4419	932	131	1977
Signal: *See* Danger-signal. Railway-signal.							
Skirt. Dress-	S. L. Wallis	874,551	Dec. 24	4614	970	131	2004
Slag-breaking machine	C. G. Lindstrand	874,692	Dec. 24	4887	1027–8	131	2057
Sleigh	W. G. Edwards	874,750	Dec. 24	5004	1054	131	2070
Slime-concentrator	E. C. Porter	874,433	Dec. 24	4368	919–20	131	1966
Small-arms. Back sight for	G. Norman	874,914	Dec. 24	5347	1118	131	2123
Snow-plow	G. Graham and J. C. Martin	874,761	Dec. 24	5026	1059	131	2074
Soldering-iron	R. Pockman	874,861	Dec. 24	5204	1097	131	2106
Soldering-iron. Self-heating	J. B. Wheatley	874,469	Dec. 24	4421	933	131	1978
Sole-rounding machine	J. J. Heys	874,505	Dec. 24	4515	949–51	131	1989
Spark-arrester	J. H. Hines	874,768	Dec. 24	5040	1061	131	2076
Speed and reversing mechanism. Change-	G. W. Marble	874,520	Dec. 24	4557	956	131	1995
Speed-indicator	F. F. Ingram	874,594	Dec. 24	4689	986	131	2018
Spindle-driving mechanism	W. T. Noah	874,614	Dec. 24	4732	994	131	2025
Spinning and twisting ring	G. L. Pierce	874,429	Dec. 24	4363	918	131	1965
Spinning-machine	J. A. De Vito	874,662	Dec. 24	4830	1014	131	2041

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Spring-clasp	M. Sternberg	874,632	Dec. 24	4764	1002	131	2031
Square	W. H. Bishop	874,383	Dec. 24	4264	899	131	1949
Square	E. E. Bathrow	874,653	Dec. 24	4815	1010	131	2039
Stack-kiln	H. S. Speckman and E. W. Lazell.	874,631	Dec. 24	4762	1001	131	2031
Stacker. Straw-	J. B. Bartholomew	874,918	Dec. 24	5355	1120	131	2124
Stall-floor	O. Grunewald, Jr., and R. Alting	874,674	Dec. 24	4849	1018–19	131	2045
Stamp-affixer	E. C. Yauck	874,720	Dec. 24	4957	1041	131	2060
Stand: *See* Switch-stand.							
Starting-box. Automatic	T. M. Morris	874,898	Dec. 24	5271	1110–11	131	1216
Steam from a boiler. Apparatus for measuring the supply of	M. Gehre	874,667	Dec. 24	4837	1015	131	2043
Steam-generator	T. R. Butman	874,389	Dec. 24	4283	902	131	1952
Steam plants. System of cooling for condensing	H. E. McGowan	874,858	Dec. 24	5200	1096	131	2105
Steam-producer	I. H. Boyer	874,731	Dec. 24	4976	1046–7	131	2064
Steel-hardening apparatus	W. Taylor	874,641	Dec. 24	4791	1006	131	2035
Steel. Making	H. O. Chute	874,391	Dec. 24	4286	903	131	1952
Steel. Producing	G. O. Seward and F. von Kugelgen.	874,628	Dec. 24	4758		131	2030
Steering-gear	P. Steinhauer	874,709	Dec. 24	4928	1035	131	2057
Stocking-protector	G. V. Wallace	874,880	Dec. 24	5242	1104	131	2111
Stopper: *See* Bottle-stopper.							
Stove. Self-igniting gas-	O. Struller	874,637	Dec. 24	4780	1004	131	2034
Sulkies or other vehicles. Gaiting attachment for	W. L. Ogden	874,617	Dec. 24	4739	995	131	2027
Surfacing-machine	J. F. Stoll	874,549	Dec. 24	4609	968	131	2003
Surgical instrument	W. Gaterman	874,495	Dec. 24	4481	944	131	1986
Surgical splint	S. C. Slater	874,446	Dec. 24	4387	923–4	131	1970
Suspending device	C. R. Mueller, Jr.	874,786	Dec. 24	5071	1068	131	2062
Sweat-bands. Device for cutting flaps of	H. B. Crampton	874,571	Dec. 24	4632	977	131	2011
Switch: *See* Car-switch. Circuit-switch.							
Switch-point lock	J. B. Latimer	874,686	Dec. 24	4875	1025	131	2049
Switch-stand	A. B. Moser	874,785	Dec. 24	5069	1067–8	131	2062
Swivel-joints. Making	A. D. Oster and L. Main	874,618	Dec. 24	4740	996	131	2027
Syrup-measure for charging beverage-bottles	J. H. Fox	874,757	Dec. 24	5019	1057	131	2072
Table and desk. Combined	E. Higgins	874,846	Dec. 24	5167	1089	131	2101
Tag. Entry-	R. H. Cosgrove	874,835	Dec. 24	5152	1085	131	2097
Tank: *See* Flush-tank.							
Tea and coffee pot	R. J. Anderson	874,479	Dec. 24	4442	937	131	1981
Tea mixture	H. S. W. Palmer	874,425	Dec. 24	4359		131	1965
Telautophote	S. Rothschild	874,868	Dec. 24	5216	1099–1100	131	2107
Telegraph-key	J. P. Kinney	874,602	Dec. 24	4707	989	131	2022
Telegraphic or other signaling circuits. Nullifying disturbances in	E. Blakeney and R. E. Chetwood, Jr.	874,826	Dec. 24	5135	1081	131	2095
Telegraphy	P. B. Delany	874,745	Dec. 24	4996	1052	131	2068
Thermo-electric element	A. L. Marsh	874,780	Dec. 24	5056	1065	131	2080
Thio-indoxyl derivatives and making same	K. Albrecht	874,649	Dec. 24	4810		131	2038
Threshing-machine feeder and cutter	R. S. White, Jr., and C. A. Fry	874,813	Dec. 24	5114	1077–8	131	2090
Ticket for fabrics and the like. Pin-	A. Kimball	874,772	Dec. 24	5044	1062	131	2077
Ticket. Pin-	G. A. Wallin	874,809	Dec. 24	5107	1076	131	2048
Tie: *See* Railway-tie.							
Tie-slide	W. Templin	874,456	Dec. 24	4401	928	131	1974
Tile construction	P. J. Fischer	874,909	Dec. 24	5339	1116	131	2121
Tin. Electrolytic refining of	E. A. Sperry	874,707	Dec. 24	4923		131	2056
Tongs. Pipe-	H. H. Maddren	874,854	Dec. 24	5186	1092	131	2103
Tool. Combination-	J. L. Knight	874,409	Dec. 24	4324	911	131	1959
Toy	L. E. McLaughlin and R. J. Parsons.	874,526	Dec. 24	4569	958	131	1996
Toy	C. G. Fuchs	874,840	Dec. 24	5160	1087	131	2099
Toy	V. Sumerlin	874,873	Dec. 24	5230	1102	131	2109
Trace-fastener. Whiffletree	T. A. Hendrick	874,590	Dec. 24	4684	984	131	2017
Tracing implement	J. Garret	874,583	Dec. 24	4673	982	131	2015
Traction-engine	E. D. Huston	874,593	Dec. 24	4686	985	131	2018
Trap: *See* Mosquito-trap. Mouse-trap.							
Trap door abutment and locking member. Combined	H. Pearson	874,426	Dec. 24	4360	917	131	1965
Tree: *See* Boot and shoe tree.							
Trunks. Locking means for bureau-	J. C. Lynch	874,518	Dec. 24	4553	956	131	1993
Tubing. Machine for weaving	W. W. Harris	874,678	Dec. 24	4859	1020–2	131	2046
Turbine	H. P. R. L. Pörscke	874,432	Dec. 24	4308	919	131	1966
Turbine element. Bladed	S. Z. de Ferranti	874,398	Dec. 24	4301	905–6	131	1955
Turbine. Explosive-	F. W. Lnedke	874,693	Dec. 24	4888	1028	131	2051
Turbine. Steam-	M. H. P. R. Sankey	874,443	Dec. 24	4384	922	131	1970
Twine-holder for binding corn, grain, &c	H. G. Hurst and W. H. Roth	874,770	Dec. 24	5042	1062	131	2077
Two-cycle engine	W. A. St. Germain	874,634	Dec. 24	4769	1002	131	2032
Twyer	H. B. Kelper	874,893	Dec. 24	5262	1108	131	2115
Type-writer	O. Cord	874,661	Dec. 24	4826	1013	131	2043
Type-writer	E. Mirus	874,695	Dec. 24	4894	1029	131	2052
Type-writing machine	J. W. Kennedy	874,407	Dec. 24	4318	909–10	131	1958
Type-writing machine	H. W. Merritt	874,784	Dec. 24	5063	1067	131	2081
Type-writing machine	R. H. Strother	874,806	Dec. 24	5099	1074–5	131	2088
Umbrella	A. Bibby	874,727	Dec. 24	4970	1044	131	2063
Umbrella and parasol frames. Rib and rib-joint for	F. W. Schroeder	874,709	Dec. 24	5091	1072	131	2086
Umbrella structure	J. Wolfe	874,648	Dec. 24	4808	1009	131	2037
Valve	H. F. Weinland	874,466	Dec. 24	4416	931–2	131	1977
Valve	G. W. Bailey	874,652	Dec. 24	4814	1010	131	2039
Valve. Automatic relief-	T. J. Buckley	874,736	Dec. 24	4985	1049	131	2066
Valve-discharge	W. E. Ethridge	874,752	Dec. 24	5008	1055	131	2071
Valves. Apparatus for the control of	M. Weiss	874,812	Dec. 24	5112	1077	131	2090
Vapor-burner	J. Bruneau	874,535	Dec. 24	4984	1049	131	2065
Vehicle and spring thereof	E. L. Brillhart	874,484	Dec. 24	4439	940	131	1963
Vehicle control system. Electric-	O. A. Sandborgh	874,869	Dec. 24	5222	1100	131	2108
Vehicle driving-gear. Motor-	G. A. Weidely	874,811	Dec. 24	5110	1076	131	2089
Vehicle-seat. Adjustable	A. C. Anderson	874,723	Dec. 24	4963	1042–3	131	2062

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Vehicle steering device	E. J. Vraalstad	874,878	Dec. 24	5239	1103-4	131	2111
Vehicle steering-gear	J. P. Simmons	874,802	Dec. 24	5095	1073	131	2087
Vehicle-wheel	C. W. Stapleton	874,708	Dec. 24	4926	1034	131	2057
Ventilator	F. H. Burr and G. Adams	874,387	Dec. 24	4273	900	131	1951
Vest-holder	O. H. Brown	874,733	Dec. 24	4981	1047	131	2065
Vise. Anvil-	E. Alderson	874,722	Dec. 24	4962	1042	131	2061
Wagon-box	O. B. Reynolds	874,704	Dec. 24	4917	1033	131	2055
Wagon. Elevating-	L. G. McGranor and J. W. Beall	874,525	Dec. 24	4568	958	131	1996
Wall	F. J. Baker	874,881	Dec. 24	5243	1104	131	2111
Washing-machine	B. Mingus	874,610	Dec. 24	4727	993	131	2024
Water-conveyer	J. O. Dove and C. Wirsing	874,397	Dec. 24	4299	905	131	1955
Wave-motor	J. R. Henderson	874,589	Dec. 24	4682	984	131	2016
Wave or tide motor	H. J. Lawrence	874,687	Dec. 24	4879	1026	131	2049
Weather-strip for doors	W. L. Wise	874,474	Dec. 24	4430	934	131	1979
Wedge-cutting machine	A. B. Smith	874,447	Dec. 24	4388	924	131	1971
Weeder and stalk-cutter	H. Richelderfer	874,867	Dec. 24	5214	1099	131	2107
Weighing and can-filling apparatus	F. J. Heybach	874,911	Dec. 24	5341	1117	131	2121
Wheel:							
See Vehicle-wheel.							
Wheel-rim. Detachable	R. Healy	874,844	Dec. 24	5164	1088	131	2100
Whip-socket. Lock	C. M. Hoeregott and H. C. Eby	874,591	Dec. 24	4685	985	131	2017
Windmill	J. A. Bell and S. W. Reynolds	874,382	Dec. 24	4263	899	131	1948
Window-closing device. Automatic	J. F. Ruth	874,900	Dec. 24	5277	1111	131	2117
Window-fastener	H. L. Hammond	874,586	Dec. 24	4678	983	131	2016
Windrowing attachments. Bunching device for	W. Gaterman	874,399	Dec. 24	4303	906	131	1955
Wire-fastener	S. Wilburn and T. E. Smith	874,552	Dec. 24	4615	970	131	2004
Wire ropes, rods, &c. Means for gripping and coupling	J. Moss	874,417	Dec. 24	4343	913	131	1962
Wool evening and drawing machine	V. S. Westcott and F. W. Potter	874,715	Dec. 24	4942	1038-9	131	2059
Wrapper for metal sheets	H. E. Marks	874,779	Dec. 24	5054	1065	131	2080
Wrapping machine	J. M. Patterson	874,620	Dec. 24	4742	997-8	131	2028
Wrench:							
See Pipe wrench.							
Wrench	H. P. Deckert	874,742	Dec. 24	4994	1052	131	2068
Wrench	E. Henry	874,845	Dec. 24	5166	1088	131	2100
Wrench and pliers. Combination	J. Losey	874,853	Dec. 24	5184	1092	131	2103
Wrench for operating bushings	P. Cork and D. Naglee	874,394	Dec. 24	4294	903	131	1954
Writing-machine	J. P. Scheuer	874,543	Dec. 24	4599	966	131	2001
Yarns. Making worsted	E. B. Hess	874,892	Dec. 24	5257	1107-8	131	2114
Zinc-lathe	V. S. Westcott and F. W. Potter	874,714	Dec. 24	4938	1057	131	2068
	R. S. Browne	874,486	Dec. 24	4464	941	131	1983

DESIGNS.

Design.	Name.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Automobile-radiator	P. Arthur	38,962	Dec. 24	131	2126
Gas-burner pillar	A. K. Miller	38,961	Dec. 24	131	2126
Heater and food-receptacle	L. Polsky	38,959	Dec. 24	131	2126
Padlock	C. E. Johnson	38,960	Dec. 24	131	2126
Pottery jar	G. R. Thieme	38,958	Dec. 24	131	2126
Vehicle-body	E. L. Gonyer	38,963	Dec. 24	131	2126

TRADE-MARKS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Adhesive composition. Certain	Toronto Type Foundry Co	66,731	Dec. 24	131	2140
Bands, undershirts, and caps. Children's textile	A. D. Smith	66,692	Dec. 24	131	2139
Beer	Riehl Bros. Brewing Co	66,690	Dec. 24	131	2139
Bells and push-buttons. Electrical	U. S. E. M. Co	66,732	Dec. 24	131	2140
Belting. Machine-	Mount Vernon Belting Co	66,709	Dec. 24	131	2141
Books. Printed	John Murphy Company	66,764	Dec. 24	131	2141
Boots and shoes. Leather	H. J. Lang	66,765	Dec. 24	131	2141
Boots and shoes. Leather	H. J. Lang	66,766	Dec. 24	131	2141
Boots and shoes. Leather	Luddy & Currier	66,767	Dec. 24	131	2141
Bread	W. B. Cosgrave Shoe Co	66,777	Dec. 24	131	2141
Brushes. Hair, flesh, and tooth	W. B. Cosgrave Shoe Co	66,778	Dec. 24	131	2141
Brushes. Tooth-	G. S. Ward	66,693	Dec. 24	131	2139
Calcium-silver and quinin salts	J. M. Lawton	66,721	Dec. 24	131	2140
Candy and chocolates	Deitsch Brothers	66,698	Dec. 24	131	2139
Canned fish	Fischer Chemical Importing Co	66,716	Dec. 24	131	2140
Canned fish	Hess Bros	66,682	Dec. 24	131	2139
Canned goods. Certain	J. Frye & Co	66,679	Dec. 24	131	2139
Canned sardines	J. Frye & Co	66,680	Dec. 24	131	2139
Capsules. Filled gelatin	Holbrook Grocery Co	66,683	Dec. 24	131	2139
Catsup, mince-meat, apple-butter, pickles, and vinegar	J. Frye & Co	66,681	Dec. 24	131	2139
Chiffons, malines, ribbons, and velvets	Fischer Chemical Importing Co	66,739	Dec. 24	131	2140
Cigars	Wichita Vinegar Works	66,694	Dec. 24	131	2139
	Friedmann & Distillator	66,740	Dec. 24	131	2140
	Louis Kindling Co	66,710	Dec. 24	131	2140

TRADE-MARKS—Continued.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Coats, vests, and trousers	I. Isaacs	66,685	Dec. 24	131	2139
Coats, vests, trousers, and overcoats	I. Dresner	66,678	Dec. 24	131	2139
Cocoa and chocolate	Mazawattee Tea Company	66,688	Dec. 24	131	2139
Combs. Celluloid, animal and vegetable matter hair-	Radigan, Rich & Co	66,689	Dec. 24	131	2139
Combs. Vulcanized fiber for the manufacture of	Hall-Iiefferman Brush Co	66,708	Dec. 24	131	2140
Cream and remedy for dyspepsia. Cold-	F. N. Pond	66,752	Dec. 24	131	2141
Cream. Cold, massage, and toilet	L. W. Bartel	66,737	Dec. 24	131	2140
Cutlery. Certain	A. R. Justice Company	66,697	Dec. 24	131	2139
Dental use. Antiseptic and germicide preparation for	J. C. Graft	66,717	Dec. 24	131	2140
Fertilizers	Virginia-Carolina Chemical Company.	66,703	Dec. 24	131	2139
Fertilizers	Ashepoo Fertilizer Company	66,715	Dec. 24	131	2140
Flour and cornmeal. Wheat-	Zwonechek & Aksamit	66,696	Dec. 24	121	2139
Flour. Wheat-	American Trading Company (Pacific Coast).	66,677	Dec. 24	131	2139
Flour. Wheat-	Zwonechek & Aksamit	66,695	Dec. 24	131	2139
Foods. Certain sea	Holbrook Grocery Co	66,684	Dec. 24	131	2139
Furnaces, stoves, and ranges	E. B. Colby & Co	66,761	Dec. 24	131	2141
Gauze in the piece	Jacobus & Carlisle Co	66,763	Dec. 24	131	2141
Gilding-wheel. Hand-operated	W. H. Coe Manufacturing Company.	66,733	Dec. 24	131	2140
Gilding-wheel. Hand-operated	W. H. Coe Manufacturing Company.	66,734	Dec. 24	131	2140
Gilding-wheel. Hand-operated	W. H. Coe Manufacturing Company.	66,735	Dec. 24	131	2140
Glues made from seaweeds	Arabol M'f'g Co	66,713	Dec. 24	131	2140
Hair-grower and dandruff-eradicator	T. J. Joyce	66,747	Dec. 24	131	2141
Hair-tonics, face, perspiration, talcum. and bath powder	A. C. Aydelott	66,736	Dec. 24	131	2140
Hides, skins, and furs	Offene Handelsgesellschaft Schröder Smidt & Co.	66,727	Dec. 24	131	2140
Hosiery	Paramount Knitting Co	66,702	Dec. 24	131	2139
Insecticides	Leggett & Brother	66,722	Dec. 24	131	2140
Knit stockings	Glidden, Hyde & Co	66,742	Dec. 24	131	2140
Knitted and netted underclothing	Elmira Knitting Mills	66,706	Dec. 24	131	2139
Knitted garments. Certain	M. Haiff & Bro	66,724	Dec. 24	131	2140
Liniment and medicines for catarrh, hay-fever, and deafness	Kane Chemical Company	66,748	Dec. 24	131	2141
Magazine. Monthly	System Company	66,775	Dec. 24	131	2141
Meats and sausages. Cured	Kingan and Company	66,686	Dec. 24	131	2139
Meats. Cured	Kingan and Company	66,701	Dec. 24	131	2139
Meats. Cured and salted	Kingan and Company	66,699	Dec. 24	131	2139
Meats. Cured and salted	Kingan and Company	66,700	Dec. 24	131	2139
Meats, lard, and sausages. Cured, cooked, canned, and salted	Kingan and Company	66,687	Dec. 24	131	2139
Medicated and antiseptic pads	F. A. Steele	66,774	Dec. 24	131	2141
Medicinal elixir. Aromatic	Hawes Chemical Company	66,744	Dec. 24	131	2141
Medicinal preparation. Certain	Sapa Chemical Co	66,753	Dec. 24	131	2141
Medicines. Certain	Société "Le Ferment"	66,754	Dec. 24	131	2141
Medicines. Certain	Teraqua Mineral Company	66,776	Dec. 24	131	2141
Metal-polishes. Abrasive	Armiger Chemical Co	66,714	Dec. 24	131	2140
Packing	E. C. Garratt	66,762	Dec. 24	131	2141
Paint. Gold	Welsh and Jones	66,779	Dec. 24	131	2141
Painters' materials	Patterson Sargent Co	66,770	Dec. 24	131	2141
Painters' materials. Certain	Acme White Lead & Color Works	66,757	Dec. 24	131	2141
Paris-green	M. Herrman & Co	66,719	Dec. 24	131	2140
Pasteboard cases, boxes, and cartons	C. C. Rahn	66,771	Dec. 24	131	2141
Pharmaceutical preparations. Certain	H. H. Lepper	66,750	Dec. 24	131	2141
Power-transmitting apparatus, clutches, &c.	International Patent Corporation	66,720	Dec. 24	131	2140
Preserving and disinfecting agents	Montana Gesellschaft mit beschränkter Haftung.	66,726	Dec. 24	131	2140
Razor-hones	Sunset Hone Co	66,730	Dec. 24	131	2140
Refrigerators	Lockland Lumber Co	66,723	Dec. 24	131	2140
Remedies and tonics. Certain	Berg Medicine Company	66,738	Dec. 24	131	2140
Remedy for certain diseases	Hampden Mfg. Co	66,743	Dec. 24	131	2141
Salve	P. W. Leach & Co	66,751	Dec. 24	131	2141
Sardines	E. Shivell	66,691	Dec. 24	131	2139
Scouring-powder. Non-abrasive	Azie Manufacturing Company	66,704	Dec. 24	131	2139
Sewing-machine needles	Standard Sewing Machine Company.	66,729	Dec. 24	131	2140
Sewing-machines and attachments	Standard Sewing Machine Company.	66,728	Dec. 24	131	2140
Skates. Ice and roller	Samuel Winslow Skate Mfg. Co	66,711	Dec. 24	131	2140
Soap. Toilet and laundry	A. Hons	66,709	Dec. 24	131	2140
Statuary	Daprato Statuary Company	66,705	Dec. 24	131	2139
Stockings, knitted, netted and lace underwear and waists	Mona Manufacturing Company	66,725	Dec. 24	131	2140
Stoves, heaters, and ovens. Certain	American Stove Company	66,758	Dec. 24	131	2141
Stoves, ranges, and heaters and coal-ranges. Gas	American Stove Company	66,759	Dec. 24	131	2141
Stoves, ranges, and heaters and coal-ranges. Gas	American Stove Company	66,760	Dec. 24	131	2141
Stoves, ranges, and parts thereof	Smith and Anthony Company	66,772	Dec. 24	131	2141
Tonic	H. Law, H. E. Law	66,749	Dec. 24	131	2141
Turpentine substitute	Southern Substitute Turpentine Company.	66,773	Dec. 24	131	2141
Varnishes, fillers, and colors	Moore Paint Co	66,768	Dec. 24	131	2141
Watch-bows and watch-pendants	Wachter Manufacturing Company.	66,712	Dec. 24	131	2140
Watches	Fabrique d'horlogerie Beau-Site Vve Ferdinand Bourquin.	66,707	Dec. 24	131	2140
Waters. Mineral	S. Harmsworth	66,718	Dec. 24	131	2140
Whisky	Geo. Benz & Sons	66,741	Dec. 24	131	2141
Whisky	J. J. Hermann	66,745	Dec. 24	131	2141
Whisky	I. L. Lamm Co	66,746	Dec. 24	131	2141
Whisky	W. A. Ross & Brother	66,756	Dec. 24	131	2141
Whisky, gin, brandy, cordials, and cocktails	W. P. Strader	66,755	Dec. 24	131	2141

LABELS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
"Bunte." (For Chocolate and Cocoa)	Bunte Brothers	13,948	Dec. 24	131	2142
"Collegian." (For Shoes for Men)	E. B. Pickenbrock & Sons	13,953	Dec. 24	131	2142
"Farrell's Pride of Colorado Fancy Table Syrup." (For Table Syrup.)	Farrell & Company	13,950	Dec. 24	131	2142
"Farrell's Wedding Breakfast Cane and Maple Sugar Syrup." (For Cane and Maple-Sugar Syrup.)	Farrell & Company	13,949	Dec. 24	131	2142
"Gossip Chop." (For Tea)	Upham Bro's	13,947	Dec. 24	131	2142
"Kremlin Russian Cigarettes M'f'g by Vladimir F. Gnesin 'The Russian Store.'" (For Cigarettes.)	V. F. Gnesin	13,945	Dec. 24	131	2142
"La Imperiale Bouquet." (For Cigars)	McLean Cigar Mfg. Co	13,944	Dec. 24	131	2142
"Monty Krysto." (For a Preparation for the Hair)	J. Montague	13,952	Dec. 24	131	2142
"Old German Lager." (For Beer)	Wilmanns Bros. Co	13,946	Dec. 24	131	2142
"Zerolene." (For Oils)	Standard Oil Company	13,951	Dec. 24	131	2142

PRINTS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
"Bear Design." (For a Breakfast Food)	Cream of Wheat Co	2,181	Dec. 24	131	2142
"Boy Whispering to Sister." (For a Breakfast Food)	Cream of Wheat Co	2,186	Dec. 24	131	2142
"Cute Kids." For a Breakfast Food)	Cream of Wheat Co	2,185	Dec. 24	131	2142
"Raised on Cream of Wheat." (For a Breakfast Food)	Cream of Wheat Co	2,184	Dec. 24	131	2142
"The Japillusion." (For a Remedy for Diseases of the Eyes)	The Eye-Fix Remedy Co	2,187	Dec. 24	131	2142
"The Newsboy." (For a Breakfast Food)	Cream of Wheat Co	2,182	Dec. 24	131	2142
"There is More Cream of Wheat." (For a Breakfast Food)	Cream of Wheat Co	2,183	Dec. 24	131	2142

TRADE-MARKS.

(REGISTRATION APPLIED FOR.)

Title.	Name.	Serial No.	Date.	Official Gazette. Vol.	Page.
Beds, couches, cots, mattresses, &c	J. L. Tandy	29,735	Dec. 24	131	2131
Beer, ale, porter, and stout	Beadleston & Woerz	31,025	Dec. 24	131	2135
Beer. Carbonated	C. Neumsinger	30,894	Dec. 24	131	2134
Binders. Loose-leaf	C. E. Sheppard	19,736	Dec. 24	131	2128
Boots and shoes. Leather	W. B. Cosgrave Shoe Co	29,861-2	Dec. 24	131	2132
Brooms	Lee Broom & Duster Company	31,189	Dec. 24	131	2137
Cable and pipecaps, molding-boxes, ground-clamps, &c	Gillette-Vibber Co	31,200	Dec. 24	131	2138
Canned fish	Warfield Pratt Howell Co	31,203	Dec. 24	131	2138
Chiffons	I. Erstein & Bro	30,747	Dec. 24	131	2133
Cigarettes and cigars	D. W. Simmons	30,297	Dec. 24	131	2132
Coats, vests, trousers, and overcoats	J. Cohen Son & Co	27,194	Dec. 24	131	2130
Cocktails	Cook & Bernheimer Co	9,267	Dec. 24	131	2127
Cocoa and chocolate	Cadbury Brothers	31,081	Dec. 24	131	2135
Coffee	W. W. Harper Co	30,411	Dec. 24	131	2133
Coffee substitute and chicory	Emil Seelig, A. G	22,447	Dec. 24	131	2129
Compresses for cotton, wool, hair, leather, &c	Philadelphia Drying Machinery Company.	31,283	Dec. 24	131	2138
Cordial	L. Pelosi	26,617	Dec. 24	131	2129
Corsets	Bry-Block Mercantile Co	31,202	Dec. 24	131	2138
Corsets. Ladies'	J. Wanamaker	31,145	Dec. 24	131	2136
Crayons	B. F. Callender	30,620	Dec. 24	131	2133
Cream and freckle-eradicator. Toilet	De Miracle Chemical Co	31,069	Dec. 24	131	2135
Cream and pomades. Cold-	Vereinigte Chemische Werke Aktiengesellschaft.	15,061	Dec. 24	131	2128
Cream. Cold-	C. E. Keeler	30,865	Dec. 24	131	2134
Cream. Massage-	Acme Chemical Co	31,040	Dec. 24	131	2135
Cutlery, &c	S. Osborn & Co	12,580	Dec. 24	131	2127
Electric igniting devices, &c	R. Bosch	29,857	Dec. 24	131	2131
Drill-grinding machine	Wilmarth & Morman Co	28,304	Dec. 24	131	2130
Dyes, disinfectants, food-preservatives, &c. Coal-tar	Farbenfabriken of Elberfeld Co	31,117	Dec. 24	131	2136
Fence. Wire	T. Litwiller	31,027	Dec. 24	131	2135
Fire-extinguishers	Conqueror Fire Extinguisher Co	31,068	Dec. 24	131	2135
Flat, table, and hollow ware	Wilkinson Sword Company	18,965	Dec. 24	131	2128
Flavoring essences and extracts	Stevenson & Howell	28,996	Dec. 24	131	2131
Flour. Wheat-	Rippe Grain & Milling Co	27,805	Dec. 24	131	2130
Food for infants and invalids	Fairchild Bros. & Foster	31,232	Dec. 24	131	2138
Garters	Harris Suspender Company	30,974	Dec. 24	131	2134
Gin	Cook & Bernheimer Co	9,269	Dec. 24	131	2127
Hair-cosmetics	H. Schwarzkopf	31,029	Dec. 24	131	2135

TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

Title.	Name.	Serial No.	Date.	Official Gazette. Vol.	Page.
Hames and trimmings therefor	U. S. Hame Company	31,016	Dec. 24	131	2134
Hammers, screw-drivers, bit-braces, ice-picks, &c	Simmons Hardware Company	28,016	Dec. 24	131	2130
Harness	Covert Manufacturing Co	29,195	Dec. 24	131	2131
Hats, gloves, overshirts, collars, &c	Barth & Myer	28,347	Dec. 24	131	2130
Hinges and hinge-blanks	Columbian Hardware Company	18,080	Dec. 24	131	2128
Hinges. Spring-	Standard Mfg. Co	31,059	Dec. 24	131	2135
Hoes	Withington & Cooley Manufacturing Company.	31,161-2	Dec. 24	131	2137
Hoes, spades, shovels, picks, &c	Chillington Tool Company	23,705	Dec. 24	131	2126
Hose-supporters and garters	Minton Company	31,103	Dec. 24	131	2135
Ink-dividing bands for inking-rollers	N-M-C-R Company	30,498	Dec. 24	131	2133
Inks and ink-pads	Fountain Ink Pad Company	31,007	Dec. 24	131	2134
Insecticides	Strawsons	29,035	Dec. 24	131	2131
Lamp mantles. Gas-	General Gas Light Co	31,237	Dec. 24	131	2138
Lamps. Vehicle-	Roberts & Mathews	31,152	Dec. 24	131	2136
Lawn trimmers and edgers	H. O. Secrest	30,076	Dec. 24	131	2132
Lime and ready-mixed mortar	Rockland-Rockport Lime Co	31,067	Dec. 24	131	2135
Liniments	Theoline Chemical Company	31,208	Dec. 24	131	2138
Lubricators and oilers	International Patent Corporation	23,494	Dec. 24	131	2129
Match-ignition strips	C. M. Hunter	30,465	Dec. 24	131	2133
Matches	Nitedals Tændstikfabrik	24,180	Dec. 24	131	2129
Mattresses, upholstered springs, pillows, and bolsters	Paine Furniture Company	25,777	Dec. 24	131	2129
Medicinal and toilet cologne	Robinson Bros. & Company	31,196	Dec. 24	131	2138
Medicinal preparation	Mariani & Co	31,168	Dec. 24	131	2137
Medicines and plasters. Certain	Société anonyme des Produits Chimiques Spéciaux.	20,332	Dec. 24	131	2128
Medicines. Certain	Société anonyme des Produits Chimiques Spéciaux.	20,331	Dec. 24	131	2128
Medicines for gravel, gout, rheumatism, &c	Société anonyme des Produits Chimiques Spéciaux.	20,333-4	Dec. 24	131	2129
Milk	P. Chevreux	31,116	Dec. 24	131	2136
Oils, extracts, &c	Lacto-Bacilline Company of New York.	29,918-19	Dec. 24	131	2132
Ointment	Stevenson & Howell	29,840	Dec. 24	131	2131
Ointment	N. M. Hoon	31,108	Dec. 24	131	2136
Packing. Steam or machinery	Robinson Bros. & Company	31,194	Dec. 24	131	2138
Paint	Kuschnitzky & Grünhut	30,861	Dec. 24	131	2134
Paste for destroying rats, mice, and roaches	A. E. Kirk	29,864	Dec. 24	131	2132
Pickles, chow-chow, sauer-kraut, vinegar, &c	A. W. Roseman	29,045	Dec. 24	131	2131
Picture machines, films, and attachments. Moving-	H. J. Heinz Company	30,699	Dec. 24	131	2133
Potato-diggers	Viascope Mfg. Co	30,665	Dec. 24	131	2133
Powder. Stomachic	A. B. Farquhar Company	31,204	Dec. 24	131	2138
Preserves, jam, apple-butter, vinegar, &c	Firm of P. F. W. Barella	12,876	Dec. 24	131	2128
Press-boards	Hulman & Co	31,111	Dec. 24	131	2136
Remedies for stomach, liver, and bowel disorders	Case Brothers	31,157	Dec. 24	131	2137
Remedy for croup, coughs, and colds	Fermo Company	30,306	Dec. 24	131	2132
Remedy for eczema, pimples, blotches, &c	Campho Croup Co	31,008	Dec. 24	131	2134
Remedy for rheumatism, nervousness, &c	J. Friedlander	31,101	Dec. 24	131	2135
Remedy for whooping-cough and colds	C. Cederroth	28,883	Dec. 24	131	2130
Remedy. Pile	H. Mole	31,006	Dec. 24	131	2135
Rings, chains, bracelets, and jewelry	C. H. Hoyt & Co	31,176	Dec. 24	131	2137
Saws, scissors, shears, chisels, &c	A. Rosenberg	26,991	Dec. 24	131	2130
Shirt-waists, kimonas, corset-covers, collars, and cuffs	A. Baldwin & Co	30,968	Dec. 24	131	2134
Shoe-polish	W. A. Kraemer	16,561	Dec. 24	131	2128
Soldering paste, salts, and sticks	Corry Chemical Co	31,144	Dec. 24	131	2136
Spices	Commercial Electrical Supply Company.	31,173	Dec. 24	131	2137
Steel and iron in bars, sheets, rods, &c	W. W. Harper Co	30,409	Dec. 24	131	2132
Stoves	S. Osborn & Co	12,581	Dec. 24	131	2127
Stoves and ranges	Bridge & Beach Manufacturing Company.	31,129	Dec. 24	131	2136
Tea	Bridge & Beach Manufacturing Company.	31,126-7	Dec. 24	131	2136
Thread, and spool and sewing cotton	C. S. Morey Mercantile Company	31,202	Dec. 24	131	2138
Tire-filler	American Thread Company	31,190-92	Dec. 24	131	2137
Tobacco drying, cooling, ordering, or treating machinery	W. H. Sterling	30,319	Dec. 24	131	2132
Tonic beverage	Philadelphia Drying Machinery Company.	31,284	Dec. 24	131	2138
Tonic beverage	Wake Chemical Company	28,913	Dec. 24	131	2131
Varnishes, japans, lacquers, &c	H. and T. Dalley	31,106	Dec. 24	131	2135
Varnishes, japans, lacquers, &c	Cleveland Varnish Company	30,587	Dec. 24	131	2133
Velveteens	Cleveland Varnish Company	30,589-90	Dec. 24	131	2133
Washboards	Mechanische Weberei zu Linden	9,810	Dec. 24	131	2127
Washing, scouring, bleaching, &c., machinery	American Washboard Company	21,564	Dec. 24	131	2129
Watches	Philadelphia Drying Machinery Company.	31,285	Dec. 24	131	2138
Water-meters	South Bend Watch Company	30,857	Dec. 24	131	2134
Water. Mineral	Builders Iron Foundry	31,180	Dec. 24	131	2137
Waters. Mineral	Glenn Springs Company	30,679	Dec. 24	131	2133
Wheat-flakes	L. Smith	30,995	Dec. 24	131	2134
Whisky	Pacific Milling Company	26,722	Dec. 24	131	2130
Whisky	Cook & Bernheimer Co	9,266	Dec. 24	131	2127
Whisky	C. Sandheger	28,924	Dec. 24	131	2131
Worsteds and cheviots	C. Sandheger	30,196	Dec. 24	131	2132
	Elliot & Matthews	17,228	Dec. 24	131	2128

ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 31ST DAY OF DECEMBER, 1907.

Name, residence, and invention.	No.	Date.	Monthly volume. Specification.	Monthly volume. Drawing.	Official Gazette. Volume.	Official Gazette. Page.
Ach, Narciss, Marburg, Germany. Gyroscope	875,036	Dec. 31	5604	1170	131	2188
Achorn, Clinton E. (See Mitchell, Clara D., assignor.)						
Acker, Charles E., Niagara Falls, assignor, by mesne assignments, to M. Stine, New York, N. Y. Making chlorids of sulfur	875,231	Dec. 31	5980	1246	131	2251
Acker, Charles E., Niagara Falls, assignor, by mesne assignments, to M. Stine, New York, N. Y. Refining carbon tetrachlorid	875,232	Dec. 31	5981	.....	131	2251
Ackermann, George, assignor to Heekin Can Company, Cincinnati, Ohio. Clip for can-covers	875,311	Dec. 31	6127	1278	131	2275
Adams, Morris J., Parksville, Ky. Grate-fender	875,403	Dec. 31	6320	1818	131	2305
Adt, Leo F., Albany, N. Y. Eyeglass nose-guard	875.233	Dec. 31	5982	1246	131	2252
Aero and Marine Motor Company. (See Altham, George J., assignor.)						
Aiken, Edward L., Orange, assignor to New Jersey Patent Company, West Orange, N. J. Phonograph	875,309	Dec. 31	6125	1278	131	2274
Allis-Chalmers Company. (See Barth, Charles H., assignor.)						
Allis-Chalmers Company. (See Bassett, Norman C., assignor.)						
Allis-Chalmers Company. (See Frayer, Charles A., assignor.)						
Allis-Chalmers Company. (See Hetlesaeter, Olaf, assignor.)						
Allis-Chalmers Company. (See McKee, Robert A., assignor.)						
Allis-Chalmers Company. (See Rotter, Max, assignor.)						
Allis-Chalmers Company. (See Patitz, Johann F. M., assignor.)						
Altham, George J., Fall River, assignor to Aero and Marine Motor Company, Boston, Mass. Internal-combustion engine	874,920	Dec. 31	5369	1123	131	2151
American Automatic Light Company. (See Kent, Don H., assignor.)						
American Car & Foundry Company. (See Frame, Robert E., assignor.)						
American Clock Company. (See Jackson and Pidgeon, assignors.)						
American Cutlery Company. (See Blessing, John G., assignor.)						
American Electric Telephone Company. (See Clausen, Henry P., assignor.)						
American Farm Products Company. (See Cooke, Henry D., assignor.)						
American Flange Frog and Railway Improvement Company. (See Graham, John E., assignor.)						
American Graphophone Company. (See Macdonald, Thomas H., assignor.)						
American Mason Safety Tread Company. (See Lamson, William S., assignor.)						
American Miniature Railway Company. (See Haberlin, William R., assignor.)						
American Paper Goods Company. (See Cooley, Henry B., assignor.)						
American Steel Foundries. (See Floyd, George G., assignor.)						
American Typographic Corporation. (See Richards, Francis H., assignor.)						
Anderson, Albin A., Mead, Nebr. Propeller	875,484	Dec. 31	6474	1352	131	2331
Antisell, Frank L., New York, N. Y. Apparatus for refining copper	875,641	Dec. 31	6880	1436	131	2382
Appliance Manufacturing Company. (See Schureman, Jacob L., assignor.)						
Aretino Company. (See O'Neill, Arthur J., assignor.)						
Arey, Fred C., Chicago, Ill. Car-vestibule diaphragm	875,642	Dec. 31	6881	1436	131	2383
Armstrong, James R., assignor of one-third to W. H. Irvin, Pittsburg, Pa. Gas-meter	875,485	Dec. 31	6476	1353	131	2332
Arnold, William H., Brooklyn, N. Y. Pivotal head for hoisting apparatus	875,563	Dec. 31	6614	1383	131	2355
Aron, Hermann, Charlottenburg, Germany. Counting mechanism	875,037	Dec. 31	5610	1171	131	2189
Askins, Joseph, Lima, Ohio. Belt	875,486	Dec. 31	6478	1353	131	2332
Audouin, Edouard M., administrator. (See Audouin, Louis J.)						
Audouin, Louis J., deceased; E. M. Audouin, administrator, Poitiers, France. Means for causing an automatic scouring action for the removal of silt from river-beds and waterways	875,487	Dec. 31	6479	1353	131	2332
Auto Stopper Company. (See Hicks, James M., assignor.)						
Autopiano Company. (See Danquard, Thomas, assignor.) (Reissue.)						
Avram-Leet Engineering Company. (See Avram, Mois H., assignor.)						
Avram, Mois H., assignor to Avram-Leet Engineering Company, New York, N. Y. Mixing-machine	875,234	Dec. 31	5983	1246–7	131	2252
Ayer, James I., Cambridgeport, assignor to Simplex Electric Heating Company, Boston, Mass. Audible alarm for electric cooking vessels	875,310	Dec. 31	6126	1278	131	2275
	875,564	Dec. 31	6617	1384	131	2355
Ayers, James R., Petersburg, Va. Fertilizer-distributer						
Ayres, Gustav, Washington, D. C., assignor to A. Du Montier, Alexandria, Va. Finishing member for tiling	875,038	Dec. 31	5612	1171	131	2189
Ayres, Gustav, Washington, D. C., assignor to A. Du Montier, Alexandria, Va. Finishing member for tiling	875,312	Dec. 31	6128	1279	131	2275
B. F. Barnes Company. (See Milne, Robert, assignor.)						
Baddock, John W., Lynn, Mass. Top-lift or heel holder for heel-attaching machines	874,921	Dec. 31	5370	1123	131	2151
Bagnulo, Alberto, Naples, Italy. Rotating motor with rectilinear cylinders	875,483	Dec. 31	6481	1353	131	2332
Baker, Julius, Allegheny, Pa. Vault-light construction	874,922	Dec. 31	5372	1123	131	2151
Balch, John, Newark, N. J. Conduit-tile	875,489	Dec. 31	6482	1354	131	2333
Baldwin, Henry S., Lynn, Mass., assignor to General Electric Company. Nozzle for elastic-fluid turbines	874,923	Dec. 31	5373	1124	131	2151
Barber Asphalt Paving Company. (See Rake and Richardson, assignors.)						
Barber, John C., Chicago, Ill. Car-truck	875,565	Dec. 31	6619	1385	131	2356
Barber, John C., Chicago, Ill. Car-truck	875,566	Dec. 31	6622	1385–6	131	2356
Barclay, John C., assignor to Western Union Telegraph Company, New York, N. Y. Printing-telegraph	875,643	Dec. 31	6884	1437	131	2383

Name, residence, and invention.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Barlow, Arthur E., Worcester, Mass. Cop and cop-holder for wire-netting machines	875,404	Dec. 31	6321	1318	131	2305
Barlow, W. S. (See Bryan, William S., assignor.)						
Barnes, Walter E., Bridgeport, Conn., assignor to Union Special Sewing Machine Co., Chicago, Ill. Folding guide for sewing-machines	875,490	Dec. 31	6484	1354	131	2333
Barse, Mills W., Buffalo, assignor, by mesne assignments, to D. R. Hendricks, Brooklyn, N. Y. Desiccating apparatus	875,405	Dec. 31	6323	1318	131	2306
Barth, Charles F., assignor to Allis-Chalmers Company, Milwaukee, Wis. Steam-turbine	875,644	Dec. 31	6891	1437	131	2384
Bartz, Frank, and F. A. Wygant, assignors to Bartz, Wygant & Brown, Hornell, N. Y. Receptacle for coffee-mills	874,924	Dec. 31	5375	1124	131	2152
Bartz, Frank, and F. A. Wygant, assignors to Bartz, Wygant & Brown, Hornell, N. Y. Coffee-mill	874,925	Dec. 31	5377	1124	131	2152
Bartz, Wygant & Brown. (See Bartz and Wygant, assignors.)						
Bassett, Norman C., assignor to Allis-Chalmers Company, Milwaukee, Wis. Blade-fastening	875,645	Dec. 31	6892	1437	131	2384
Bassett, Norman C., assignor to Allis-Chalmers Company, Milwaukee, Wis. Blade-fastening	875,646	Dec. 31	6894	1438	131	2384
Bassett, Norman C., assignor to Allis-Chalmers Company, Milwaukee, Wis. Blade-fastening	875,647	Dec. 31	6897	1438	131	2385
Bassett, Norman C., assignor to Allis-Chalmers Company, Milwaukee, Wis. Blade-fastening	875,648	Dec. 31	6898	1438	131	2385
Bassett, Norman C., assignor to Allis-Chalmers Company, Milwaukee, Wis. Blade-fastening	875,649	Dec. 31	6899	1438	131	2385
Bastel, Joseph F., St. Louis, Mo. Portable stand for flowers, &c.	875,650	Dec. 31	6901	1439	131	2386
Bastel, Joseph F., St. Louis, Mo. Alarm-circuit	875,235	Dec. 31	5985	1247	131	2232
Bauman, John H., Concord, Nebr. Wire-roller	875,491	Dec. 31	6485	1354	131	2333
Baur, Armin J., Millcreek township, Erie county, Pa. Fastening device for split carnations	875,492	Dec. 31	6487	1354	131	2334
Beard, George J., Waterloo, Ind. Switch-operating apparatus	875,236	Dec. 31	5987	1247	131	2233
Beard, Michael A., Cabool, Ark. Quick-acting brace-chuck	875,651	Dec. 31	6903	1439	131	2386
Beckmann, Henry C. (See Meierhoff and Beckmann.)	875,493	Dec. 31	6488	1355	131	2334
Bedell, Isaac E., York, Pa. Ball-bearing for chairs	875,494	Dec. 31	6489	1355	131	2334
Beebe, Charles S., Peru, Ind. Fence-post	875,039	Dec. 31	5614	1172	131	2189
Behr, Hermann, Magdeburg-Sudenburg, Germany. Resilient connection for pendulum-mills	874,926	Dec. 31	5379	1124	131	2153
Belanger, Joseph T., et al. (See Boileau, James W., assignor.)						
Bellens, Charles. (See Lentz and Bellens.)						
Bennett, Frank, Mineral Wells, Tex. Sand-band for vehicles	874 927	Dec. 31	5380	1125	131	2153
Berendes, Rudolph, and J. Callsen, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Succinyl-dioxytoluic acid	874,928	Dec. 31	5381	.....	131	2153
Berendes, Rudolph, and J. Callsen, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Succinyl-disalicylic acid	874,929	Dec. 31	5382	.....	131	2153
Bergmann, Christian N., Allegheny, Pa. Switch	875,406	Dec. 31	6326	1319	131	2306
Bergström, Charles, Tammerfors, Russia. Automatic leak-indicator for ships	875,040	Dec. 31	5617	1172	131	2190
Berkheiser, William H., assignor to Memphis Column Company, Memphis, Tenn. Turning-machine	875,495	Dec. 31	6490	1355	131	2334
Berkley, Henry J., assignor of one-half to C. F. Corning, Baltimore, Md. Nut-lock	875,141	Dec. 31	5807	1212	131	2222
Bevan, Alexander, Providence, R. I. Block-signal apparatus	875,313	Dec. 31	6130	1279–80	131	2275
Bigelow, John, Minneapolis, Minn., assignor to Union Special Machine Company, Chicago, Ill. Filled-bag-sewing machine	875,314	Dec. 31	6135	1280–3	131	2276
Bingaman, Josephus, Garnett, Kans. Plow attachment	875,407	Dec. 31	6327	1319	131	2307
Binney, Harold, New York, N. Y., assignor to Nealon Company. Hose-supporter clasp	875,142	Dec. 31	5808	1212	131	2223
Birdsall, Claude H. (See Johnson, Jay M., assignor.)						
Bishop, James A., Chicago, Ill. High-pressure valve	875,496	Dec. 31	6492	1356	131	2335
Bishoprie, George F., Toronto, Ontario, Canada. Composite roofing	875,041	Dec. 31	5619	1172	131	2190
Bissell, Edward J., Bay City, Mich. Wave-motor	875,042	Dec. 31	5620	1173	131	2190
Blessing, John G., Chicago, Ill., assignor to American Cutlery Company. Cutlery-glazing machine	875,237	Dec. 31	5988	1248–9	131	2233
Böhm, Ludwig K., Jersey City, N. J. Making paper-pulp from straw	875,315	Dec. 31	6147	.....	131	2276
Boice, Augustin. (See Wheeler, James F., assignor.)						
Boileau, James W., assignor of one-half to J. T. Belanger and J. L. Cochrane, Detroit, and E. O. Spaulding, Caro, Mich. Grinding-mill and pulverizer	875,143	Dec. 31	5810	1213	131	2223
Boltay, Charles, New York, N. Y. Box for powder	875,497	Dec. 31	6501	1356	131	2335
Bonshire, Jacob, Peru, Kans., and J. M. Stafford, Petersburg, Ind. Mold for glass caskets, bath-tubs, or similar articles	875,567	Dec. 31	6624	1386	131	2357
Booker, Harris. (See Pilla and Booker.)						
Borden, Bradford, assignor to Borden Company, Warren, Ohio. Taper-thread-cutting tool	875,043	Dec. 31	5621	1173	131	2191
Borden Company. (See Borden, Bradford, assignor.)						
Borland, Franklin D., McKeesport, Pa., assignor of three-fourths to J. F. Nacey, A. R. Bryce, and L. N. Morgan. Oil-can	875,316	Dec. 31	6148	1287	131	2276
Bourn, Augustus O., Bristol, R. I. Rubber sandal	875,144	Dec. 31	5811	1213	131	2223
Bowden-Hammond, Margery, Eldorado Springs, Mo. Umbrella	875,498	Dec. 31	6502	1356	131	2335
Bowen, Carl R., Fordyce, Ark. Railway construction	875 499	Dec. 31	6503	1357	131	2336
Bower, Adolphus L., Lima, Ohio. Antisiphon-trap	874,930	Dec. 31	5383	1125	131	2153
Bowles, Charles J. (See Broome and Bowles.)						
Bowser, Albert C., assignor of one-fifth to W. F. Koegle and two-thirds to A. G. Rose and C. H. Zimmerman, Sandusky, Ohio. Rotary trimmer	875,500	Dec. 31	6504	1357–8	131	2336
Boyce, Warren E., assignor of seven-twelfths to W. F. Gatewood, Pierce City, and E. P. Lampkin, St. Louis, Mo. Computing-meter	875,238	Dec. 31	5993	1249	131	2233
Boyd, William E., Springview, Nebr. Pump-rod connection	875,408	Dec. 31	6329	1319	131	2307
Bradford, Chester, Indianapolis, Ind. Elevator-boot	875,145	Dec. 31	5812	1213	131	2223
Braud, Paul, *et al.* (See Le Boeuf, Paul R., assignor.)						
Branquart, Arthur, *et al.* (See Houze, Luke, assignor.)						
Brass Specialties Company. (See Livingstone, William, assignor.)						
Breckheimer, Peter E., Elkhart Lake, Wis. Shock-absorber for neck-yokes	875,146	Dec. 31	5815	1214	131	2224
Brennecke, Herman C. (See Williams and Brennecke.)						
Brenner, Godfrey, Poughkeepsie, N. Y. Mechanical movement	874,931	Dec. 31	5384	1125	131	2154
Brenzinger, Julius, assignor to Max Ams Machine Company, Mount Vernon, N. Y. Sheet-metal container	875,317	Dec. 31	6149	1283–4	131	2277
Bride, Cotter T., Washington, D. C. Heater	875,044	Dec. 31	5623	1173	131	2191
Briggs, Herbert A., New York, N. Y. Type-writing machine	875,239	Dec. 31	5994	1249–51	131	2234
Brigham, Isaac N., Melrose Park, Ill., assignor to Electro Automatic Safety Razor Company, Orange, Cal. Hair-clipping device	874,932	Dec. 31	5386	1125	131	2154
Bristow, Joseph, Jr., Oak Park, Ill. Medicine-case	874,933	Dec. 31	5387	1126	131	2154
Brooks, L. C. (See Hulbert, Edwin F., assignor.)						
Broome, Henry, and C. J. Bowles, Springfield, Ohio. Fence-wire tightener	874,934	Dec. 31	5388	1126	131	2155
Brown & Bailey Company. (See Brown, Henry T., assignor.)						
Brown, Frank C., Asherville, Kans. Lawn-shears	875,240	Dec. 31	6000	1251	131	2234

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Brown, Henry T., Moorestown, N. J., assignor to Brown & Bailey Company, Philadelphia, Pa. Collapsible box	875,409	Dec. 31	6330	1319–20	131	2307
Brown, John, Auckland, New Zealand. Knife-cleaner	874,935	Dec. 31	5390	1127	131	2155
Brown, Middleton D., Grand Chain, Ill. Gage	875,045	Dec. 31	5625	1173–4	131	2191
Bryan, William S., Decatur, assignor of one-sixth to W. S. Barlow, Gainesville, Tex. Baling-machine	875,652	Dec. 31	6905	1439–40	131	2386
Bryce, Andrew R., *et al.* (See Borland, Franklin D., assignor.)						
Buchanan, John J. (See Maltby and Buchanan.)						
Buckio, F. L., *et al.* (See Thompson, Carl P., assignor.)						
Buffalo Pitts Company. (See Vraalstad, Edward J., assignor.)						
Bullock Electric Company. (See Pomeroy, William D., assignor.)						
Bullock Electric Manufacturing Company. (See Powell, William H., assignor.)						
Burchartz, Ferdinand, New York, N. Y. Flooring	875,318	Dec. 31	6152	1284	131	2277
Burgess, Benjamin, Danville, Ill. Auxiliary draw-bar hook	875,319	Dec. 31	6154	1284	131	2277
Burnet, Hugh, Ottawa, Ontario, Canada. Valve	875,320	Dec. 31	6156	1284	131	2277
Burrus, Madison C., New Franklin, Mo. Gynecological sling	875,046	Dec. 31	5625	1174	131	2192
Burry, John, Ridgefield Park, N. J. Printing-telegraph receiver	875,410	Dec. 31	6331	1320–1	131	2307
Bursik, Frank, Chicago, Ill. Hanger or separable hinge for storm-sash	875,047	Dec. 31	5626	1174	131	2192
Bye, David A. (See Nelson and Bye.)						
Cais, Frank. (See Tran and Cais.)						
Callan, John G., Lynn, Mass., assignor to General Electric Company. Governing mechanism for turbines	874,936	Dec. 31	5391	1127	131	2155
Callsen, Jürgen. (See Berendes and Callsen.)						
Cameron, James H., Paris, Tex. Tire-tightener	875,147	Dec. 31	5816	1214	131	2224
Campbell, Clarence W. (See Elchhorn and Campbell.)						
Campbell, Harry G., assignor of one-half to Union School Furnishing Company, Chicago, Ill. Ink-well	875,148	Dec. 31	5817	1214	131	2224
Campbell Printing Press & Manufacturing Company. (See Johnston, Robert T., assignor.)						
Cantine, Martin, Saugerties, N. Y. Machine for coating paper	875,241	Dec. 31	6002	1251–2	131	2234
Caron, Josephine A., Montreal, Quebec, Canada. Pegging-machine	875,149	Dec. 31	5819	1215	131	2224
Carr, Walter E. (See Knowles and Carr.)						
Carter, Samuel C., assignor of one-third to C. H. Esler, Los Angeles, Cal. Transmission mechanism	875,321	Dec. 31	6157	1285	131	2278
Carter, Thomas N., Norton, Va. Loading-machine	875,150	Dec. 31	5822	1215	131	2225
Case, David A., Jamaica, and W. H. Smith, Richmond Hill, N. Y. Telephone attachment	875,151	Dec. 31	5823	1216	131	2225
Case, Stephen M., Newark, N. J. Apparatus for cleaning blackboard-erasers	874,937	Dec. 31	5394	1127	131	2155
Casper, Frank L., Weiner, Ark. Blacksmith-tongs	875,501	Dec. 31	6510	1358	131	2336
Cazin, Francis M. F., Hoboken, N. J. Machine and apparatus for manufacturing filaments for electric incandescent lamps	874,938	Dec. 31	5395	1128	131	2156
Central Trust Company of New York, trustee. (See Price, Edgar F., assignor.)						
Chadeloid Chemical Company. (See Ellis, Carleton, assignor.)						
Chadwick, Leonard B., Chelsea, Mass. Book-mark	875,502	Dec. 31	6511	1358	131	2337
Chamberlain Cartridge & Target Company. (See North, Paul, assignor.)						
Champion Chemical Company. (See Colthar, William U., assignor.)						
Chapman, Charles H., Winchester, Mass. Spinning-spindle and bearing therefor	875,503	Dec. 31	6513	1359	131	2337
Chartres, Ponsonby M., Bathbeach, N. Y. Shoe-lace and fastener	875,152	Dec. 31	5824	1216	131	2225
Chell, Francis J., Seacombe, England. Transom-lifter	875,322	Dec. 31	6165	1285	131	2278
Chesbro, John, Oneonta, N. Y. Lawn-mower sharpener	875,411	Dec. 31	6339	1321	131	2308
Childs, George W., New York, N. Y. Liquid leather-dressing	875,653	Dec. 31	6911	.....	131	2387
Christensen, John, Ann Arbor, assignor to Ypsilanti Hay Press Co., Ypsilanti, Mich. Bale-tying attachment	875,654	Dec. 31	6911	1440	131	2387
Churchill, Lucius R. (See Sharood, Samuel Y., assignor.)						
Clark, Harry, Menomonie, Wis. Cork-puller	875,323	Dec. 31	6166	1286	131	2278
Clark, Hervey D., Arcola, Ill. Scoop-handle	875,504	Dec. 31	6516	1359	131	2337
Clark, Melville, Chicago, Ill. Take-up roll for automatic musical instruments	875,505	Dec. 31	6517	1359	131	2338
Clark, Norris E., Plainville, Conn. Metal-working machine	875,153	Dec. 31	5826	1216–17	131	2225
Clark, Norris E., Plainville, Conn. Expanded metal	875,154	Dec. 31	5829	1217	131	2226
Clark, Norris E., Plainville, Conn. Expanded metal	875,155	Dec. 31	5830	1217	131	2226
Clausen, Henry P., assignor to American Electric Telephone Company, Chicago, Ill. Telephone-transmitter	875,156	Dec. 31	5831	1217–18	131	2226
Clayton, Frank B., and G. D. Spielberger, Philadelphia, Pa. Refrigerator-building	874,939	Dec. 31	5401	1128–9	131	2156
Clevenstine, Milton, Kimberton, Pa. Wrench	875,048	Dec. 31	5628	1175	131	2192
Clyde Iron Works. (See McGiffert, John R., assignor.)						
Coal and Coke By-Products Company. (See Ernst, Alfred, assignor.)						
Cochrane, John L., *et al.* (See Boileau, James W., assignor.)						
Cole, Roudy B., Fredericktown, Mo. Picture-exhibiting machine	874,940	Dec. 31	5405	1130	131	2156
Colean, William H., Peoria, Ill. Traction-engine construction	875,324	Dec. 31	6167	1286	131	2278
Collins, Berry H., Shreveport, La. Guiding attachment for penholders	875,506	Dec. 31	6518	1359	131	2338
Collins Electric Clock Company. (See Collins, Ulysses L., assignor.)						
Collins, Ulysses L., assignor to Collins Electric Clock Company, St. Louis, Mo. Electric clock	874,941	Dec. 31	5407	1130	131	2157
Colthar, William U., assignor to Champion Chemical Company, Springfield, Ohio. Truck for undertakers' use	875,049	Dec. 31	5629	1175	131	2193
Conlon, Daniel E., Worcester, Mass. Measuring device	875,050	Dec. 31	5631	1175	131	2193
Conradson, Conrad M., assignor to V. E. Prentice, New York, N. Y. Non-refillable bottle	875,157	Dec. 31	5836	1218	131	2227
Continental Signal Company. (See Short, William A. D., assignor.)						
Cook, Theodore H., Minneapolis, Minn. Nursing-bottle	874,942	Dec. 31	5410	1130	131	2157
Cooke, Henry D., Monmouth Beach, assignor to American Farm Products Company, Jersey City, N. J. Extracting or obtaining butter-fat	875,325	Dec. 31	6169	.....	131	2279
Cooley, Henry B., New Britain, assignor to American Paper Goods Company, Kensington, Conn. Mechanism for feeding paper	874,943	Dec. 31	5411	1131–2	131	2157
Cooper, Martin L., Modesto, Cal. Reinforcing-frame for concrete building construction	875,158	Dec. 31	5837	1218	131	2227
Corbin Cabinet Lock Company. (See Corbin, Wilbur R., assignor.)						
Corbin, Wilbur R., assignor to Corbin Cabinet Lock Company, New Britain, Conn. Hinge	875,242	Dec. 31	6003	1252	131	2235
Corning, Charles F. (See Berkley, Henry J., assignor.)						
Cottrell, Phoebe R., Tigerton, Wis. Cleaning implement	875,412	Dec. 31	6341	3121–2	131	2308
Coulter, John R. (See O'Brian and Coulter.)						
Courtney, Dana S., Chicopee, Mass. Bobbin-slotting machine	875,327	Dec. 31	6173	1287	131	2280
Courtney, Dana S., Chicopee, Mass. Woodworking-machine	875,328	Dec. 31	6177	1287	131	2280
Craig, William D., *et al.* (See Stanley, George W., assignor.)						
Cramer, Charles J., Sedro Woolley, Wash. Level and square	875,243	Dec. 31	6004	1252	131	2235
Crawford, William A., Danville, Ill. Farm-gate	875,326	Dec. 31	6171	1286	131	2279
Creelman, Frank, New York, N. Y., assignor to Willson Carbide Works Company of St. Catherines, Limited, St. Catherines, Canada. Electric smelting	874,944	Dec. 31	5415	1132	131	2158
Crow, Herbert M., Oakdale, Cal. Tool-handle	875,159	Dec. 31	5838	1219	131	2227
Cruikshank, Ernest W., Baltimore, Md. Door-mat	875,568	Dec. 31	6627	1386	131	2357
Cummings, Robert T., assignor of one-half to C. W. Zweigart, Maysville, Ky. Harness	875,051	Dec. 31	5632	1176	131	2193

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Curtis, Charles G., New York, N. Y., assignor, by mesne assignments, to General Electric Company. Elastic-fluid turbine	875,244	Dec. 31	6006	1282	131	2255
Daboo, Dorabji M., Bombay, India. Electric signaling	875,413	Dec. 31	6342	1322	131	2309
Danquard, Thomas, assignor to Autopiano Company, New York, N. Y. Pneumatic motor and speed-governor. (Reissue)	12,736	Dec. 31	6973	1452	131	2395
Darnall, Charles L. (See Stover and Darnall.)						
Darrow, Alice, Simpson, Kans. Base of cook-stoves	875,245	Dec. 31	6007	1253	131	2256
Daugherty, William G., Baltimore, Md. Applying molten solder to sheet-metal	875,507	Dec. 31	6520	1360	131	2338
Davey, Arthur J., Westminster, London, England. Military equipment	874,945	Dec. 31	5420	1133	131	2158
David, Joseph, St. Louis, Mo. Sham roll-bolster	875,329	Dec. 31	6131	1288	131	2281
Davidson Rubber Company. (See Turner, Charles L., assignor.)						
Davies, Charles W. T., assignor to Good Form Manufacturing Company, New York, N. Y. Necktie	875,246	Dec. 31	6008	1253	131	2256
Davis, Edwin J., Los Angeles, Cal. Trunk-fastener	875,160	Dec. 31	5830	1219	131	2227
De Luigi, Angelo, and C. Ramazzotti, Milan, Italy. Automobile-train	875,508	Dec. 31	6521	1360	131	2338
De Sylvia, Daniel W., Richmond, Va. Street-indicator for cars	875,569	Dec. 31	6629	1387	131	2357
Decker, William J., Detroit, Mich. Bow-rest	875,052	Dec. 31	5633	1176	131	2193
Deere & Company. (See Poole and Kiel, assignors.)						
Delfosse, Arthur. (See Mastain and Delfosse.)						
Dickson, George, and M. McKinnon, Sacramento, Cal. Rifle dredge-pipe	875,414	Dec. 31	6345	1322	131	2309
Dierdorff, Joseph, and W. W. Willson, Columbus, Ohio, assignors, by mesne assignments, to Jeffrey Manufacturing Company. Conveyer-chain	875,247	Dec. 31	6009	1254	131	2256
Dierdorff, Joseph, and W. W. Willson, Columbus, Ohio, assignors, by mesne assignments, to Jeffrey Manufacuring Company. Conveyer-chain	875,248	Dec. 31	6011	1254	131	2257
Doble, William A., San Francisco, Cal. Bucket for impact-wheels	875,161	Dec. 31	5841	1219	131	2228
Doman, Lewis B., Elbridge, N. Y. Self-playing musical instrument	875,656	Dec. 31	6917	1441	131	2388
Double Pointed Safety Pin Mfg. Co. (See Kasparl and Krejci, assignors.)						
Dozier, Leonidas B. (See Rowan, Theodore D., assignor.)						
Draper Company. (See Rhoades, Alonzo E., assignor.)						
Du Montier, Alfred. (See Ayres, Gustav, assignor.)						
Dugan, Elizabeth. (See Dugan, Patrick J., assignor.)						
Dugan, Patrick J., Chestnut Hill, assignor to E. Dugan, Brookline, Mass. Car-coupling	875,330	Dec. 31	6182	1288–9	131	2281
Dull, Andrew J., Harrisburg, and J. Weatherby, Jr., New Cumberland, Pa.; said Weatherby assignor to said Dull. Furnace for desulfurizing and agglomerating ores	875,331	Dec. 31	6184	1289	131	2281
Dull, Andrew J., Harrisburg, and J. Weatherby, Jr., New Cumberland, Pa.; said Weatherby assignor to said Dull. Desulfurizing and agglomerating comminuted ores	875,332	Dec. 31	6186	1289–90	131	2282
Dunst, Frank J. (See Peterson, Alfred, assignor.)						
Durant, Walter N., Los Angeles, Cal. Lubricator	875,657	Dec. 31	6919	1441	131	2388
Duryea, Charles E., Reading, Pa. Pneumatic tire	875,053	Dec. 31	5634	1176	131	2194
Dutton, Samuel F., assignor of one-half to F. B. and E. J. Nebel, Detroit, Mich. Nail-driving tool	875,658	Dec. 31	6921	1441	131	2389
Dyer, Frank L., Montclair, and D. Holden, Upper Montclair, assignors to Edison Manufacturing Company, West Orange, N. J. Moving-picture film	875,333	Dec. 31	6187	1290	131	2282
E. H. Stafford Manufacturing Company. (See Field, John F., assignor.)						
E. M. Hulse Company. (See Finckel, George M., assignor.)						
Eacrett, William, assignor of one-half to C. W. Smith, Toronto, Ontario, Canada. Credit-account-filing device	875,054	Dec. 31	5636	1176	131	2194
Earhart, Isaac S., near Caldwell, Kans. Water-trough	875,162	Dec. 31	5841	1219	131	2228
Eckley, James W., assignor of one-half to G. F. Gass, Wallaceton, Pa. Cutting-tool	875,334	Dec. 31	6189	1290	131	2282
Edison Manufacturing Company. (See Dyer and Holden, assignors.)						
Egler, Charles J., New York, N. Y. Brake-shoe	875,249	Dec. 31	6012	1254	131	2257
Eichengrün, Arthur, Düsseldorf, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Generating formaldehyde	875,415	Dec. 31	6346	.....	131	2309
Eichhorn-Campbell Company. (See Eichhorn and Campbell, assignors.)						
Eichhorn, Carl, and C. W. Campbell, assignors to Eichhorn-Campbell Company, Dexter, N. Y. Paper-making machine	874,946	Dec. 31	5422	1133–4	131	2159
Eldredge, Harry H. (See Howe and Eldredge.)						
Electric Storage Battery Company. (See Rodman and Howard, assignors.)						
Electro Automatic Safety Razor Company. (See Brigham, Isaac N., assignor.)						
Eliel, Oscar H., La Salle, Ill. Shoe-lace hook	875,570	Dec. 31	6630	1387	131	2358
Ellicott, Nancy P., Baltimore, Md. Bed-rest	875,335	Dec. 31	6191	1290	131	2283
Ellis, Carleton, Larchmont, assignor to Chadeloid Chemical Company, New York, N. Y., Applying paint-removers	875,163	Dec. 31	5843	1220	131	2228
Ellis, Carleton, Larchmont, assignor to Chadeloid Chemical Company, New York, N. Y. Finish-remover	875,416	Dec. 31	6347	.....	131	2309
Ellis, Carleton, White Plains, N. Y., and K. P. McElroy, Washington, D. C. Making formates	875,055	Dec. 31	5640	1177	131	2194
Ellis, Leroy J., Fanwood, N. J. Cooking or culinary utensil	875,509	Dec. 31	6523	1360	131	2339
Ellis, Lucy C., Herrell, N. C. Brooder	875,417	Dec 31	6348	1323	131	2310
Ely, Theo. J. (See Sturgeon, Harold M., assignor.)						
Emmet, William L. R., and O. Junggren, Schenectady, N. Y., assignors to General Electric Company. Bearing for elastic-fluid turbines	874,947	Dec. 31	5425	1134	131	2159
Engen, Peter, Townsend, Mont. Trap-setter	875,510	Dec. 31	6525	1361	131	2339
Erickson, John E., St. Paul, Minn. Box-setting-up machine	875,164	Dec. 31	5845	1220–1	131	2229
Ernst, Alfred, assignor to Coal and Coke By-Products Company, Pittsburg, Pa. Machine for charging coke-ovens	875,571	Dec. 31	6632	1387–8	131	2358
Esler, Carlisle H. (See Carter, Samuel C., assignor.)						
Etter, William H., Marietta, Ohio. Weather-strip	875,250	Dec. 31	6013	1254	131	2257
Evans, Scott F., Minneapolis, Minn. Automatic non-reversing stop	875,336	Dec. 31	6192	1291	131	2283
Excelsior Needle Company. (See Lamb, Amherst G., assignor.)						
Farbenfabriken vorm. Friedr. Bayer & Co. (See Berendes and Callsen, assignors.)						
Farbenfabriken vorm. Friedr. Bayer & Co. (See Eichengrün, Arthur, assignor.)						
Farbenfabriken vorm. Friedr. Bayer & Co. (See König, Walter, assignor.)						
Farbenfabriken vorm. Friedr. Bayer & Co. (See Thomaschewski, Paul, assignor.)						
Faust, Claude M., and M. B. Grout, Chicago, Ill. Roller-skate	875,165	Dec. 31	5849	1221	131	2229
Fehr, William, assignor to Steel Heddle Manufacturing Company, Philadelphia, Pa. Machine for manufacturing heddles	875,659	Dec. 31	6921	1442–6	131	2389
Fell, Julius P., Berclair, Tex. Adjustable scraper attachment for disk plows	875,166	Dec. 31	5851	1222	131	2229
Fenn, James L., Jr., Bracebridge, Ontario, Canada. Rail-joint	874,948	Dec. 31	5431	1134	131	2159
Fergesen, Daniel, Aurora, Ill. Grass-catcher for lawn-mowers	875,056	Dec. 31	5643	1177	131	2195
Ferry, Arthur C., Chicopee Falls, Mass. Catcher's mask	875,337	Dec. 31	6194	1291	131	2283
Field, John F., assignor to E. H. Stafford Manufacturing Company, Ionia, Mich. Folding joint for school-desks	875,251	Dec. 31	6015	1255	131	2257
Figg, George E., Montreal, Quebec, Canada. Tie-shield	875,511	Dec. 31	6526	1361	131	2339
Finckel, George M., assignor to E. M. Hulse Company, Columbus, Ohio. Apparatus for manufacturing upholstery	875,252	Dec. 31	6017	1255	131	2258
Finney, William C., Washington, D. C. Garter-clasp	875,418	Dec. 31	6348	1323	131	2310
Firth Sterling Steel Company. (See Wheeler and McKenna, assignors.)						
Flannery, Matthew J., Bozeman, Mont. Door-fastener	875,572	Dec. 31	6634	1388	131	2358

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Fleischmann, Ferdinand, Mödling, near Vienna, Austria-Hungary. Egg-opener	875,419	Dec. 31	6350	1323	131	2310
Flintkote Manufacturing Company. (See Overbury, Frederick C., assignor.)						
Floyd, George G., Granite, Ill., assignor to American Steel Foundries, New York, N. Y. Truck side frame and journal-box	874,949	Dec. 31	5432	1135–6	131	2160
Foery, Lorenz, Rochester, N. Y. Sash-lock	875,338	Dec. 31	6195	1291	131	2283
Forman, Frank, Wahpeton, N. D. Shock and hay loader	874,950	Dec. 31	5436	1136	131	2160
Forrester, Eli T., Washington, D. C. Railway-tie	875,057	Dec. 31	5646	1177	131	2195
Foster, Charles H., New York, N. Y., assignor to Union Special Sewing Machine Co., Chicago, Ill. Apparatus for delivering filled bags to sewing-machines	875,339	Dec. 31	6197	1292	131	2284
Foster, Charles H., New York, N. Y., assignor to Union Special Sewing Machine Company, Chicago, Ill. Thread-cutting device for sewing-machines	875,512	Dec. 31	6528	1361	131	2339
Foster, Charles H., New York, N. Y., assignor to Union Special Sewing Machine Company, Chicago, Ill. Machine for sewing filled bags	875,513	Dec. 31	6529	1362	131	2340
Foster, Henry G., Horseheads, N. Y., assignor, by mesne assignments, to H. N. Low, trustee, Washington, D. C. Extension window-screen	875,573	Dec. 31	6636	1388	131	2359
Fownes, William C., Jr., and R. J. Gardner, assignors to S. Jarvis Adams Company, Pittsburg, Pa. Self-lubricating wheel	875,340	Dec. 31	6199	1292	131	2284
Fraizer, Robert F., Cloverdale township, Putnam county, Ind. Overshoe-retainer	874,951	Dec. 31	5438	1137	131	2161
Frame, Robert E., assignor of one-half to H. W. Wolff, St. Louis, Mo. Spring-plank	875,058	Dec 31	5647	1177	131	2195
Frame, Robert E., assignor to American Car & Foundry Company, St. Louis, Mo. Car-underframe	875,167	Dec. 31	5853	1222	132	1230
Francisco, Bernardino, Penabianca, N. Mex. Ter. Machine for destroying grasshoppers	875,514	Dec. 31	6532	1362	131	2341
Frank, Anton, Braddock, Pa. Centering and measuring instrument	875,341	Dec. 31	6201	1292	131	2285
Franke, Rudolf. (See Günther and Franke.)						
Frankforter, George B., Minneapolis, Minn. Apparatus for wood distillation	875,342	Dec. 31	6203	1293	131	2285
Franklin, William S., Bethlehem, Pa. Gas-gun	874,952	Dec. 31	5439	1137	131	2161
Frauenthal, Mortimer, Conway, Ark. Rotary engine	875,515	Dec. 31	6533	1362	131	2341
Frayer, Charles A., assignor to Allis-Chalmers Company, Milwaukee, Wis. Excavator	875,420	Dec. 31	6351	1324	131	2310
Freebey, Mordecai P., and G. Moore, Los Angeles, Cal. Hot-water attachment for stoves	875,253	Dec. 31	6019	1255	131	2258
Freeland, Fronco S., Broomfield, W. Va. Well-drilling tool	875,516	Dec. 31	6535	1363	131	2341
French, Clinton H., San Francisco, Cal. Sheet-holder for music-stands and the like	875,421	Dec. 31	6352	1324	131	2311
Frohlich, George W., Chicago, Ill. Metal-drawing machine	874,953	Dec. 31	5441	1137–8	131	2161
Fry, Henry E., Dorchester, England. Hydro-electric machine	875,059	Dec. 31	5649	1178	131	2196
Gardner, Robert J. (See Fownes and Gardner.)						
Garlock, Olin J., assignor to Garlock Packing Company, Palmyra, N. Y. Rod-packing	875,574	Dec. 31	6637	1389	131	2359
Garlock Packing Company. (See Garlock, Olin J., assignor.)						
Gartshore, Matthew W., assignor to Parish Manufacturing Company, Reading, Pa. Automobile frame member	875,254	Dec. 31	6021	1255	131	2259
Garvey, Christopher A. (See Garvey, Edward A. and C. A.)						
Garvey, Edward A. and C. A., St. Louis, Mo. Fountain marking and stencil brush	875,422	Dec. 31	6353	1324	131	2311
Gaskins, Claude H., and W. H. Keiser, Shamokin, Pa. Hook and eye	875,255	Dec. 31	6022	1256	131	2259
Gassett, Oscar, Boston, Mass. Oil-engine	875,256	Dec. 31	6023	1256	131	2259
Gaston, Alanson D., Washington, D. C. Nut and screw-bolt lock	875,168	Dec. 31	5854	1222	131	2230
Gates, Michael, Decatur, Mich. Horseshoe	875,257	Dec. 31	6025	1257	131	2259
Gatewood, William F., *et al.* (See Boyce, Warren E., assignor.)						
Gatewood, William F., Pierce City, assignor of two-thirds to E. P. Lampkin, St. Louis, and W. W. Locke, Pierce City, Mo. Printing mechanism for adding-machines	875,343	Dec. 31	6206	1294–5	131	2285
Gatewood, William F., Pierce City, assignor of one-third to E. P. Lampkin, St. Louis, and W. W. Locke, Pierce City, Mo. Adding-machine	875,423	Dec. 31	6355	1324–6	131	2311
Gay, John T., Binghamton, N. Y. Gage attachment for printing-presses	875,060	Dec. 31	5650	1178	131	2196
Gay, Simeon G., Ottawa, Ill. Wagon tongue or pole	875,575	Dec. 31	6638	1389	131	2360
Gelvert, Anders G., Philadelphia, Pa. Instep-supporter for boots and shoes	875,517	Dec. 31	6536	1363	131	2342
Geisendorff, Lee H., Indianapolis, Ind. Friction-clutch pulley	874,954	Dec. 31	5443	1138	131	2161
General Acoustic Company. (See Kelly, John W., Jr., assignor.)						
General Electric Company. (See Baldwin, Henry S., assignor.)						
General Electric Company. (See Callan, John G., assignor.)						
General Electric Company. (See Curtis, Charles G., assignor.)						
General Electric Company. (See Emmet and Junggren, assignors.)						
General Electric Company. (See Junggren, Oscar, assignor.)						
General Electric Company. (See Rice, Walter F., assignor.)						
General Electric Company. (See Samuelson, Frederick, assignor.)						
General Electric Company. (See Worsey, Charles H., assignor.)						
General Fireproofing Company. (See White, Herbert E., assignor.)						
Georgenson, George, Wilmington, N. C. Sectional sewer-mold	875,518	Dec. 31	6538	1363	131	2342
Georghegan, Anthony F. S. (See McGee, John J., assignor.)						
Geraghty, John P., assignor to himself, C. H. Good, J. J. Goodlad, and E. Sullivan, Jersey City, N. J. Locking device	875,576	Dec. 31	6639	1389	131	2360
Gianoli, Louis A., Paris, France. Sparking mechanism for explosion-engines	874,955	Dec. 31	5445	1138	131	2162
Gibbs, George, New York, N. Y. Ventilation of electric railway-motors	875,061	Dec. 31	5651	1179	131	2196
Gilchrist, George K. (See Reeves and Gilchrist.)						
Gillette Safety Razor Company. (See King, Frederick B., assignor.)						
Gillies, James H., Auburn, Victoria, Australia. Treatment of zinciferous ores and metallurgical products	875,424	Dec. 31	6367	1327	131	2312
Gillies, James H., Auburn, Victoria, Australia. Apparatus for leaching ores and the subsequent separation of the liquids from the solids	875,425	Dec. 31	6370	1328	131	2312
Gits, Alphons H., Chicago, Ill. Drive-belt	875,426	Dec. 31	6374	1328	131	2313
Glaser, Charles, Baltimore, Md. Producing camphor from camphene, isoborneol, or other camphor-producing substances	875,062	Dec. 31	5653	.....	131	2197
Glass, George G., Hoopeston, Ill. Can-capping machine	874,956	Dec. 31	5446	1139–40	131	2162
Glock, Eugene F., Detroit, Mich. Clamping device	875,344	Dec. 31	6209	1295	131	2286
Goddard, George W., Philadelphia, Pa. Safety car-signaling device	875,063	Dec. 31	5654	1179–80	131	2197
Godfrey, Richard. (See Macdonald, Thomas A., assignor.)						
Godley, George, Sarnia, Ontario, Canada. Jewelry-clasp	874,957	Dec. 31	5453	1140	131	2162
Goehns, George W., Philadelphia, Pa. Bottle-washing machine	874,958	Dec. 31	5453	1140	131	2163
Goldschmidt, Hans, assignor to Firm of Th. Goldschmidt, Essen-on-the-Ruhr, Germany. Thermic process	875,345	Dec. 31	6210	.....	131	2286
Good, Charles H., *et al.* (See Geraghty, John P., assignor.)						
Good Form Manufacturing Company. (See Davies, Charles W. T., assignor.)						
Goodlad, John J., *et al.* (See Geraghty, John P., assignor.)						
Goss, George F. (See Eckley, James W., assignor.)	874,959	Dec. 31	5454	1140	131	2163
Gove, Frank W., Essex Junction, Vt. Automatic regulator for steam-pipes	875,346	Dec. 31	6213	1295	131	2286
Grabowsky, William, Pittsburg, Pa. Artificial claw						
Graham, John E., Salem, Va., assignor to American Flange Frog and Railway Improvement Company, Gainesville, Fla. Railway-switch frog	875,169	Dec. 31	5858	1223	131	2231
Gramelspacher, John, Jasper, Ind. Copy-holder	875,170	Dec. 31	5860	1223	131	2231
Graves, George B., Albany, N. Y. Pen and pencil holder	875,064	Dec. 31	5657	1180	131	2197
Green, John H., Salford, England. Pole and like erecting machine	875,065	Dec. 31	5658	1181	131	2197
Green, Willard R., Muscatine, Iowa. Absorbent material	875,066	Dec. 31	5660	1181	131	2198
Green, Willard R., Muscatine, Iowa. Machine for making fiber strands	875,067	Dec. 31	5662	1181–2	131	2198
Green, Willard R., Muscatine, Iowa. Paper manufacture	875,068	Dec. 31	5665	1182	131	2198

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Green, Willard R., Muscatine, Iowa. Paper manufacture	875,069	Dec. 31	5667	1182	131	2199
Greuter, Charles R., assignor to Matheson Motor Car Company, Wilkes-Barre, Pa. Combined jump-spark and contact-spark device	875,258	Dec. 31	6026	1257	131	2260
Grout, Martin B. (See Faust and Grout.)						
Gullberg & Smith. (See Smith, Charles L., assignor.)						
Günther, Emil, and R. Franke, Eisleben, Germany. Extracting metallic ores and matte	875,259	Dec. 31	6028	.....	131	2260
Gustafson, Bernhard, assignor to United Printing Machinery Company, Boston, Mass. Automatic stop mechanism for paper-sheet-handling machines	875,260	Dec. 31	6029	1257–9	131	2260
Haas, Carl, Mannheim, and H. Studt, Heidelberg, Germany. Apparatus for correspondence in cipher	875,070	Dec. 31	5670	1183	131	2199
Haberlin, William R., assignor to American Miniature Railway Company, Bridgeport, Conn. Toy signal and train-stopping device	875,427	Dec. 31	6375	1328	131	2313
Haberlin, William R., assignor to American Miniature Railway Company, Bridgeport, Conn. Toy telegraph-pole base and reel	875,428	Dec. 31	6376	1329	131	2313
Haberlin, William R., assignor to American Miniature Railway Company, Bridgeport, Conn. Toy-railway signal and switch	875,429	Dec. 31	6378	1329	131	2314
Haberlin, William R., assignor to American Miniature Railway Company, Bridgeport, Conn. Toy-car coupling and buffer	875,519	Dec. 31	6540	1364	131	2342
Hadaway, John B., Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for operating on welts	875,171	Dec. 31	5862	1223–4	131	2231
Hadaway, John B., Brockton, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Knife for welt-slitting machines	875,172	Dec. 31	5868	1224	131	2232
Hadlock, Aaron, V. (See Mohme and Hadlock.)						
Haig, Frederick J., Hyattsville, Md. Printing-telegraph	875,660	Dec. 31	6935	1446	131	2389
Hall, Edward J., Kansas City, Mo., assignor, by mesne assignments, to National Cash Register Company, Dayton, Ohio. Cash-register	875,661	Dec. 31	6937	1446	131	2390
Hall, Frank A. (See McIntosh, Burtnett, assignor.)						
Hamann, Benjamin, Detroit, Minn. Air-pump	874,960	Dec. 31	5456	1141	131	2163
Hamilton, James, New York, N. Y. Dumping-bucket	875,520	Dec. 31	6541	1364	131	2343
Hammerstein, Oscar, New York, N. Y. Producing cigar-bunch structures	875,071	Dec. 31	5672	1183	131	2199
Hansen, Albert H., Oak Park, Ill. Sash-fastener	875,521	Dec. 31	6542	1364	131	2343
Hanson, Hans C., Albert Lea, Minn. Means for automatically regulating the supply of oil to gas-generators	875,173	Dec. 31	5870	1224	131	2232
Harbach, Florin, Reading, Pa. Sash-balance	875,072	Dec. 31	5673	1183	131	2199
Harrington, Robert J., Dalton, Mass. Attachment for spinning-mules	875,655	Dec. 31	6913	1440–1	131	2387
Harris, Joseph G., and T. P. Mattimore, Toledo, Ohio. Automatic stop-valve	875,347	Dec. 31	6213	1295	131	2226
Hartley, Charles C., Mattoon, Ill. Gas-lighter	875,348	Dec. 31	6215	1296	131	2227
Hartwell, Charles M., Marion, Ohio. Mail-box	875,073	Dec. 31	5674	1184	131	2200
Hauser, Julius, Los Angeles, Cal. Branding or marking composition	875,174	Dec. 31	5871	.....	131	2232
Haynes, Lewis F., Brant, Mich. Beet-blocker	875,522	Dec. 31	6543	1364–5	131	2343
Hearn, Moses W., Cobleskill, N. Y. Curtain-stretcher	875,261	Dec. 31	6035	1259	131	2260
Heath, William E., Baltimore, Md. Receptacle-sealing cap	875,074	Dec. 31	5675	1184	131	2200
Heekin Can Company. (See Ackermann, George, assignor.)						
Heinitz, Woldemar R., assignor to Firm of Schubert & Salzer Maschinenfabrik Aktiengesellschaft, Chemnitz, Germany. Cash-register	875,075	Dec. 31	5679	1184	131	2200
Helmick, Frank, and T. B. Perkins, Baker City, Oreg. Spring-bolster	875,523	Dec. 31	6545	1365	131	2344
Helmond, William F., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine	875,262	Dec. 31	6037	1259	131	2261
Helvig, Gilbert O., Dawson, Minn. Stovepipe-fastener	875,524	Dec. 31	6546	1365	131	2344
Hendricks, Daniel R. (See Barse, Mills W., assignor.)						
Henshaw, James T. (See Turton and Henshaw.)						
Herdrich, William F., Chicago, Ill. Pencil-sharpener	874,961	Dec. 31	5457	1141	131	2163
Herring, Charles J., Memphis, Tenn. Compound for spraying fruit-trees	875,525	Dec. 31	6548	.....	131	2344
Hertwig, August, Aix-la-Chapelle, Germany. Riveted joint	875,263	Dec. 31	6038	1260	131	2261
Herzog, Philip W. (See Hodgson, Isaac W., assignor.)						
Hess, Edward B., New York, N. Y., assignor to Royal Typewriter Company, Hoboken, N. J. Writing-machine	875,430	Dec. 31	6379	1329–30	131	2314
Hess, W. H. (See Lewis, Gersham E., assignor.)						
Hess, William H., Dewey, Okla., assignor of one-half to H. F. Tyler, Junction City, Kans. Air and gas mixer	875,175	Dec. 31	5872	1224–5	131	2232
Hesser, Otto, Cannstatt, Germany. Apparatus for making paper bags	875,526	Dec. 31	6548	1366–9	131	2344
Hetlesaeter, Olaf, assignor to Allis-Chalmers Company, Milwaukee, Wis. Steam-shovel A-frame and connection	875,431	Dec. 31	6382	1330	131	2314
Hetlesaeter, Olaf, assignor to Allis-Chalmers Company, Milwaukee, Wis. Shovel-bucket	875,432	Dec. 31	6383	1330	131	2315
Hickey, Francis J., Sacramento, Cal. Steam-boiler	875,349	Dec. 31	6217	1296	131	2227
Hicks, James M., Summit, N. J., assignor to Auto Stopper Company, New York, N. Y. Machine for filling and capping vessels with fluid under pressure	875,678	Dec. 31	6970	1451–2	131	2394
Hines, Edwin G., Drums, assignor to Pressed Steel Wagon Bolster Co., Hazleton, Pa. Wagon-bolster	875,527	Dec. 31	6556	1369	131	2344
Hinman, Howard M., Cleveland, Ohio. Table-mat	875,076	Dec. 31	5681	1185	131	2201
Hinz, Julius C., Detroit, Mich. China-kiln	875,350	Dec. 31	6218	1296–7	131	2227
Hirth, Albert, Cannstatt, Germany. Feed-roll for leather-skiving machines	875,528	Dec. 31	6558	1369	131	2345
Hodgson, Isaac W., Minneapolis, assignor of one-fourth to P. W. Herzog, St. Paul, Minn. Resilient tire	875,351	Dec. 31	6220	1297	131	2228
Hoelder, Ferdinand, and C. J. Welzin, New York, N. Y. Automatic cut-off	875,264	Dec. 31	6040	1260	131	2262
Holden, Delos. (See Dyer and Holden.)						
Hoops, Charles A. (See Maddox, Ernest C., assignor.)						
Hoover, Jacob B., Columbus, Ohio. Gas-engine	875,077	Dec. 31	5682	1185	131	2201
Hoover, John C., Cincinnati, Ohio. Goods-handler	875,078	Dec. 31	5683	1186	131	2201
Houtsinger, Henry J., Sterling, Ill. Animal-trap	875,265	Dec. 31	6041	1260	131	2262
Houze, Luke, assignor of seven-tenths to R. H. Willey, A. Branquart, and C. F. Niklaus, Monterey, Cal. Composition for brick, &c., and making same	875,662	Dec. 31	6942	.....	131	2390
Howard, George M. (See Rodman and Howard.)						
Howe, Charles, and H. H. Eldredge, Guthrie, Okla. Banana-crate	875,266	Dec. 31	6043	1260	131	2262
Hubbard, William, near Sydney, New South Wales, Australia. Wagon	875,433	Dec. 31	6384	1331	131	2315
Hudson, John, Spokane, Wash. Guide and presser-foot for sewing-machines	875,577	Dec. 31	6642	1300	131	2300
Huebsch, Joseph, Milwaukee, Wis. Automatic shut-off-valve mechanism	875,176	Dec. 31	5874	1225	131	2233
Hughes, Samuel, Lindsay, Ontario, Canada. Dust-protector for traction-engines	874,962	Dec. 31	5459	1141	131	2164
Hulbert, Edwin F., assignor of one-half to L. C. Brooks, Kenosha, Wis. Crate structure	875,267	Dec. 31	6044	1261	131	2262
Hunter, Stephen D., Philadelphia, Pa. Holder for automobile-top bows	874,963	Dec. 31	5461	1142	131	2164
Hunter, William N., Blanchester, Ohio. Sound-recorder for talking-machines	875,352	Dec. 31	6223	1297	131	2228
Hurd, Norman B., assignor to Russell & Erwin Manufacturing Company, New Britain, Conn. Lock and latch	875,177	Dec. 31	5876	1225	131	2233
Hyatt, Lewis D., St. Louis, Mo. Sled	875,268	Dec. 31	6046	1261	131	2263
Imbert, Antoine H., Grand-Montrouge, France. Treating zinc and lead sulfid ores	875,578	Dec. 31	6644	.....	131	2361
Imbert, Antoine H., Grand-Montrouge, France, assignor to Imbert Process Company, New York, N. Y. Metallurgical treatment of sulfurous ores by the precipitation process	875,579	Dec. 31	6648	.....	131	2361
Imbert, Antoine H., Grand-Montrouge, France, assignor to Imbert Process Company, New York, N. Y. Metallurgical method of treating oxidized zinc ores (calamines, oxids, silicates) by the precipitation process	875,580	Dec. 31	6650	.....	131	2361

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Imbert Process Company. (See Imbert, Antoine H., assignor.)						
Imperial Art Press Co. (See Prouty, George W., assignor.)						
Incandescent Light & Stove Company. (See Stubbers, Joseph, assignor.)						
Independent Canning Company. (See Sleeper, Charles W., assignor.)						
Inman, David W., Versailles, Ohio. Table	875,269	Dec. 31	6047	1262	131	2263
Irish, Elmer E., Winthrop, Mass. Refuse-receptacle	875,270	Dec. 31	6049	1262	131	2263
Irvin, William H. (See Armstrong, James R., assignor.)						
J. B. Timberlake & Sons. (See Timberlake, Paul J., assignor.)						
J. P. Karns Tunneling Machine Co. (See Karns, John P., assignor.)						
Jackson, Dugald C., Madison, Wis. Electric motor	875,178	Dec. 31	5878	1226	131	2234
Jackson, Dugald C., Madison, Wis. Alternating-current motor	875,179	Dec. 31	5882	1226	131	2234
Jackson, George E., Newark, Ill. Baling-press	875,271	Dec. 31	6050	1262–4	131	2264
Jackson, Henry O., Norfolk, Va., and H. W. Pidgeon, Chicago, Ill., assignors to American Clock Company. Time-ajaratus	875,272	Dec. 31	6057	1264	131	2264
James, Henry D., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. System of electric-motor control	875,581	Dec. 31	6651	1390	131	2361
James, Henry D., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Multivoltage system of electric-motor control	875,582	Dec. 31	6656	1390	131	2362
James, Henry D., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Control of electric motors	875,583	Dec. 31	6660	1391	131	2362
James, Henry D., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. Multiple-voltage system of control	875,584	Dec. 31	6664	1391	131	2362
James, Henry D., Pittsburg, Pa., assignor to Westinghouse Electric & Manufacturing Company. System of control	875,663	Dec. 31	6943	1447	131	2390
Jamieson, William M., Te Papa, near Onehunga, New Zealand. Pneumatic-tire protector	874,964	Dec. 31	5463	1142	131	2165
Jeffrey Manufacturing Company. (See Dierdoff and Willson, assignors.)						
Jewell, Martin, Clinton, Me. Mowing-machine	875,353	Dec. 31	6225	1298–9	131	2289
Joehnck, Detlef L., Rocky Ford, Colo. Apparatus for handling beets	875,529	Dec. 31	6550	1370	131	2345
John, Mathias, Milwaukee, Wis. Mechanical movement	875,180	Dec. 31	5883	1227	131	2234
Johnson, Henry V., Denver, Colo. Liquid-measuring device	875,181	Dec. 31	5886	1227	131	2235
Johnson, Jay M., Chicago, Ill., assignor to C. H. Birdsall, Washington, D. C. Counting-machine	875,585	Dec. 31	6666	1391–2	131	2363
Johnston, David E., Los Angeles, Cal. Potato-masher	875,530	Dec. 31	6562	1370	131	2345
Johnston, George, Liverpool, England. Central Buffer and coupling	875,434	Dec. 31	6385	1331	131	2315
Johnston, Robert T., Plainfield, N. J., assignor to Campbell Printing Press & Manufacturing Company, New York, N. Y. Inking apparatus	875,079	Dec. 31	5685	1186	131	2202
Johnston, William A., Sandy Bay, Hobart, Tasmania, Australia. Culinary scraper	875,435	Dec. 31	6386	1331	131	2315
Jones, Arthur O., New Brancepeth, England. Coke-oven	875,436	Dec. 31	6387	1331–2	131	2315
Junggren, Oscar. (See Emmet and Junggren.)						
Junggren, Oscar, Schenectady, N. Y., assignor to General Electric Company. Multiple-stage impact-turbine	874,965	Dec. 31	5464	1142	131	2165
Kampfe, Otto, New York, N. Y. Salt-shaker	875,531	Dec. 31	6563	1371	131	2346
Kaplan, Jacob, assignor of one-half to A. Miller, Utica, N. Y. Waistband for garments	875,354	Dec. 31	6231	1300	131	2289
Karns, John P., assignor to J. P. Karns Tunneling Machine Co., Boulder, Colo. Tunneling-machine	875,664	Dec. 31	6946	1447	131	2391
Karr, James P., and J. D. Rauch, Logansport, Ind. Compound-geared friction hoisting-engine	875,532	Dec. 31	6565	1371	131	2346
Karron, Louis. (See Meltzer and Karron.)						
Kaspar, Henry, and J. Krejci, assignors to Double Pointed Safety Pin Mfg. Co., Tyndall, S. D. Safety-pin	875,080	Dec. 31	5687	1187	131	2202
Kauffmann, Jean M., Battemburg, Luxemburg. Distance and angle measure	875,437	Dec. 31	6389	1332–3	131	2316
Keighley, Frederick C., Uniontown, Pa. Mine-roof support	875,182	Dec. 31	5889	1227	131	2235
Keiser, William H. (See Gaskins and Keiser.)						
Keith, Eldon B. (See Smith, Julius F., assignor.)						
Kelly, John W., Jr., Camden, N. J., assignor to General Acoustic Company. Telephone dictating system or apparatus	875,081	Dec. 31	5689	1187	131	2202
Kennedy, Frank B. (See Murphy, William J., assignor.)						
Kent, Don H., assignor to American Automatic Light Company, Urbana, Ohio. Automatic gas-regulator	875,183	Dec. 31	5892	1228	131	2236
Ketteringham, George W., Natchez, Miss. Bolt and nut-lock	875,438	Dec. 31	6392	1333	131	2317
Keyes, W. E., *et al.* (See Thompson, Carl P., assignor.)						
Kiel, John. (See Poole and Kiel.)						
Kilbourne, Charles E., Troy, N. Y. Bed	875,184	Dec. 31	5893	1228–9	131	2236
Kimberling, John W. (See Kirkwood and Kimberling.)						
Kimble, Charles E., Columbus, Ohio. Exercise-bat	875,273	Dec. 31	6060	1265	131	2265
King, Frederick B., Bridgeport, Conn., assignor, by mesne assignments, to Gillette Safety Razor Company, Boston, Mass. Protector for safety-razor blades	875,274	Dec. 31	6061	1265	131	2265
Kirkwood, Robert, and J. W. Kimberling, Moran, assignor of one-half to L. A. Sheets, Michigantown, and W. J. Nees, Moran, Ind. Fence-machine	875,185	Dec. 31	5894	1229	131	2237
Kirkwood, William, Chicago, Ill. Gas-generator	875,186	Dec. 31	5896	1229	131	2237
Kitsee, Isidor, Philadelphia, Pa. Making sound-records	874,966	Dec. 31	5468	1143	131	2166
Klinsick, Frederick H., *et al.* (See Stanley, George W., assignor.)						
Knight, Edward M., San Francisco, Cal. Filter medium	875,355	Dec. 31	6232	1300	131	2289
Knowles, Silas A., and W. E. Parr, Idaho Springs, Colo. Tunneling-machine	875,082	Dec. 31	5692	1187–8	131	2203
Koch, Henry, assignor to Regina Company, Rahway, N. J. Bell	875,187	Dec. 31	5898	1229	131	2237
Koegle, William F., *et al.* (See Bowser, Albert C., assignor.)						
Kohler, Conrad, Zurich, Switzerland. Rotary blade-compressor	875,188	Dec. 31	5899	1230	131	2238
König, Walter, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Greenish-black azo dye	874,967	Dec. 31	5469	.....	131	2166
König, Walter, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Violet-black azo dye	874,968	Dec. 31	5470	.....	131	2166
Koppers, Heinrich, Essen-on-the-Ruhr. Germany. Closure for coke-ovens and similar devices	875,356	Dec. 31	6233	1300	131	2290
Kops, Samuel, New York, N. Y. Elastic webbing	875,439	Dec. 31	6393	1333	131	2317
Kösters, Oscar A. H. H., Hemelingen, near Bremen, Germany. Emulsion of oil and the like	875,665	Dec. 31	6948	.....	131	2391
Krejci, Joseph. (See Kaspar and Krejci.)						
Krentler-Arnold Hinge Last Company. (See Trufant, Walter E., assignor.)						
Kunitz, Adolph, Norfolk, Nebr. Candy-dipping machine	875,189	Dec. 31	5900	1230	131	2238
Kunkel, Charles, Jr. (See Meierhoff and Beckmann, assignors.)						
La Fleur, William J., Northampton, Mass. Attachment for sled-runners	874,909	Dec. 31	5471	1143	131	2166
La Valette, Henri de, Paris, France. Magneto igniting device for explosive-engines	875,534	Dec. 31	6568	1372	131	2346
Lamb, Amberst G., assignor to Excelsior Needle Company, Torrington, Conn. Ruffler attachment for sewing-machines	875,083	Dec. 31	5698	1188	131	2203
Lambert, Walter R., London, England. Lamp-socket	875,357	Dec. 31	6234	1300	131	2290
Lampkin, Ethelbert P., *et al.* (See Boyce, Warren E., assignor.)						
Lampkin, Ethelbert P., *et al.* (See Gatewood, William F., assignor.)						
Lamson, William S., Lowell, Mass., assignor to American Mason Safety Tread Company, Saco, Me. Safety-tread for steps	875,440	Dec. 31	6395	1333	131	2317
Landry, Joseph E., New Bedford, Mass. Combined brake and steering-knuckle	875,358	Dec. 31	6235	1301	131	2290

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Lane, Ira G., New York, N. Y. Pipe-hanger	875,533	Dec. 31	6567	1372	131	2346
Laughlin, Alexander. (See Reuleaux, Josef, assignor.)						
Laverance, John W., Des Moines, Iowa. Shock-loader	875,535	Dec. 31	6569	1372	131	2347
Lazaro, William F., Turtle Creek, Pa. Clothes-fastener for cribs	875,359	Dec. 31	6237	1301	131	2290
Le Blanc, Alexis, Brooklyn, N. Y. Braiding-machine	875,190	Dec. 31	5902	12,0-1	131	2228
Le Boeuf, Paul R., Amelia, assignor of one-fourth to H. A. Terrio and P. Braud, Ascension parish, La. Package-fastener	875,442	Dec. 31	6397	1334	131	2318
Le Messurier, Arthur J., St. Johns, Newfoundland. Hat and coat rest	875,537	Dec. 31	6577	1373	131	2348
Leavens, Philip J., Vineland, N. J. Saw-set	875,441	Dec. 31	6396	1334	131	2318
Ledwinka, Joseph, assignor to R. Thayer, Philadelphia, Pa. Electric controller	875,536	Dec. 31	6571	1373	131	2347
Lee, Thomas, Home City, Ohio. Automatic window-closure	875,084	Dec. 31	5700	1189	131	2204
Lelong, Emile, Conillet, Belgium. Apparatus for forging in dies	875,443	Dec. 31	6399	1334	131	2318
Lentz, Hugo, Halensee, near Berlin, Germany, and C. Bellens, Neuilly-sur-Seine, France. Valve-gear	875,538	Dec. 31	6578	1374	131	2348
Les Produits Chimique de Croissy (J. Basler & Co.). (See Tixier and Tortel, assignors.)						
Levy, Max, Philadelphia, Pa. Screen or grating	875,191	Dec. 31	5906	1231	131	2230
Lewis, Gersham E., assignor of one-half to W. H. Hess, Dewey, Okla. Attachment for bean-harvesters	875,275	Dec. 31	6063	1265	131	2265
Leyner, John G., Denver, Colo. Fluid-controlled clutch	875,192	Dec. 31	5907	1231	131	2230
Lipps, William, Shelbyville, Ind. Duplex sash-lock	875,360	Dec. 31	6238	1301	131	2290
Little, Henry C. (See Starnes, Green R., assignor.)						
Little, Ora T., Ripley, N. Y. Fertilizer-distributer	875,539	Dec. 31	6579	1374	131	2348
Little, Thomas F., Chicago, Ill. Acetylene-gas generator	874,970	Dec. 31	5475	1143	131	2166
Livingstone, William, assignor to himself and Brass Specialties Company, New York, N. Y. Holder for soda-water glasses	875,666	Dec. 31	6950	1447	131	2391
Lochmann, Paul, Zeulenroda, Germany. Mechanical stringed instrument with spring-hammers	875,193	Dec. 31	5910	1232	131	2240
Locke, Hugh E., and W. A. Scott, Chicago, Ill. Feed-bag	875,194	Dec. 31	5912	1232	131	2240
Locke, William W., *et al.* (See Gatewood, William F., assignor.)						
Loftin, John E., Rockford, Wash. Combined folding table and receptacle	875,195	Dec. 31	5912	1232	131	2240
Lohner, John G., Sparks, Okla. Vehicle-step	875,540	Dec. 31	6582	1374-5	131	2348
Lohr, Joseph H., Hustontown, Pa. Combined washing and wringing machine	875,361	Dec. 31	6240	1301-2	131	2291
Long, James, Minot, N. D. Water-eliminator for steam-boilers	874,971	Dec. 31	5477	1144	131	2167
Loqvist, August H., Söderköping, Sweden. Milking-machine	874,972	Dec. 31	5478	1144-5	131	2167
Loudon, Howard C., New York, N. Y. Game apparatus	876,085	Dec. 31	5702	1189	131	2204
Lovejoy, John F., assignor of one-half to A. Stein, New York, N. Y. Producing coal-tar pitch	875,196	Dec. 31	5914	.....	131	2240
Low, Harry N., trustee. (See Foster, Henry G., assignor.)						
Luft, Christian G., Forest, Ohio. Honey-extractor	875,086	Dec. 31	5703	1189	131	2204
Lund, Matthew, assignor of one-half to G. K. McMullen, Grand Rapids, Mich. Street-car fender	875,541	Dec. 31	6582	1375	131	2349
Lurtey, Charles W., Little Rock, Ark. Tire-valve-stem protector	875,542	Dec. 31	6584	1375	131	2349
Lynch, James, Van Buren, Ark. Automatic brake	875,543	Dec. 31	6585	1375-6	131	2349
Lynch, William H., New Bedford, Mass. Automatic ice-elevator	875,544	Dec. 31	6586	1376	131	2349
Macdonald, Thomas A., Midvale, assignor of forty-five one-hundredths to R. Godfrey, Clifton, N. J. Album	875,545	Dec. 31	6589	1377	131	2350
Macdonald, Thomas H., assignor to American Graphophone Company, Bridgeport, Conn. Combined recorder and reproducer for talking-machines	874,973	Dec. 31	5481	1145	131	2168
Mackintosh, Henry B., Rossland, British Columbia, Canada. Seal-lock	875,087	Dec. 31	5705	1189	131	2205
Maddox, Ernest C., assignor of one-half to C. A. Hoops, Woodward, Okla. Exhaust-control mechanism for gas-engines	874,974	Dec. 31	5483	1145	131	2168
Magni, Umberto, San Francisco, Cal. Burglar-alarm	875,197	Dec. 31	5915	1232	131	2241
Mahlen, Anton, Superior, Wis. Band-cutter and feeder	874,975	Dec. 31	5484	1146	131	2168
Maignen, Jean A., Philadelphia, Pa. Clarifying aqueous solutions	875,088	Dec. 31	5708	.....	131	2205
Maltby, Julius, and J. J. Buchanan, assignors to Waterbury Buckle Company, Waterbury, Conn. Garment-supporter clasp	875,089	Dec. 31	5709	1190	131	2205
Mann, Marcus F. (See Thorn and Mann.)						
Manning, Charlotte R. (See Manning, Edward B. and C. R.)						
Manning, Edward B. and C. R., Meriden, Conn.; said Edward B. Manning assignor to said C. R. Manning. Producing enamel-lined articles of hollow ware	875,667	Dec. 31	6951	1448	131	2391
Manny, Eugene S., Montreal, Quebec, Canada. Steam and water heating apparatus	875,362	Dec. 31	6242	1302	131	2291
Marcy, Frank M., Worcester, Mass. Electric bond for rails	875,198	Dec. 31	5917	1233	131	2241
Martin, Robert E. L., Port Neches, Tex. Piston-rod packing	875,363	Dec. 31	6244	1302	131	2292
Mastain, Charles, and A. Delfosse, Pont d'Ardres, assignors to Firm of Societe des Refinerie et Sucrerie Say, Paris, France. Mixing apparatus	875,444	Dec. 31	6400	1335	131	2318
Matheson Motor Car Company. (See Greuter, Charles R., assignor.)						
Mattimore, Timothy P. (See Harris and Mattimore.)						
Max Ams Machine Company. (See Brenzinger, Julius, assignor.)						
McCorkell, James, Nezperce, Idaho. Threshing-machine	875,550	Dec. 31	6596	1378	131	2351
McCoy, John A., Somerville, Mass. Junction or connecting box	875,279	Dec. 31	6071	1267	131	2266
McDermott, William P. (See Severns and McDermott.)						
McDonald, Charles W., New York, N. Y. Collapsible arch or center	875,551	Dec. 31	6597	1379	131	2352
McDougall, Andrew H., assignor to Whiting Foundry Equipment Company, Harvey, Ill. Clutch arrangement for traveling cranes	875,367	Dec. 31	6250	1304	131	2293
McElroy, Karl P. (See Ellis and McElroy.)						
McGavin, James, Springfield, Ill. Adjustable hanger for electric lights	875,280	Dec. 31	6073	1267	131	2267
McGee, Charles H., Portland, Me. Window-screen	875,552	Dec. 31	6599	1379	131	2352
McGee, John J., assignor of one-half to A. F. S. Georghegan, New York, N. Y. Pump piston-packing	875,095	Dec. 31	5718	1192	131	2207
McGiffert, John R., assignor to Clyde Iron Works, Duluth, Minn. Log-skidding machine	875,096	Dec. 31	5720	1192	131	2208
McGlinchay, Edward, Galloway, Ohio. Stock-feeding apparatus	874,980	Dec. 31	5493	1147	131	2170
McGonagle, Arthur, East Orange, N. J. Heating system	875,449	Dec. 31	6408	1337	131	2320
McGregor, Homer T., Wheeling, W. Va. Making enameled vessels	875,281	Dec. 31	6074	1268	131	2267
McIntosh, Burtnett, New York, N. Y., assignor to F. A. Hall, Montclair, N. J. Folding cot or divan	875,450	Dec. 31	6410	1337	131	2320
McKee, George F., and W. F. Schilling, Aspinwall, Pa. Collapsible core	875,097	Dec. 31	5723	1192	131	2208
McKee, Robert A., assignor to Allis-Chalmers Company, Milwaukee, Wis. Lubricated coupling	875,588	Dec. 31	6676	1394	131	2364
McKenna, Alexander G. (See Wheeler and McKenna.)						
McKinnon, Miles. (See Dickson and McKinnon.)						
McMullen, George K. (See Lund, Matthew, assignor.)						
McMullen, George W., Picton, Ontario, Canada. Drying apparatus	875,368	Dec. 31	6252	1304-5	131	2294
McMurray, Robert J., California, Pa. Smoking-pipe	875,369	Dec. 31	6255	1305	131	2294
McNeil, Chester, and D. S. Seymour, assignors to Union Special Machine Company, Chicago, Ill. Bag seaming, cutting, and conveying apparatus	875,589	Dec. 31	6678	1394-5	131	2364
McNeil, Chester, and D. S. Seymour, assignors to Union Special Machine Company, Chicago, Ill. Bag seaming, cutting, and conveying apparatus	875,590	Dec. 31	6680	1395-6	131	2365
McNeil, Chester, and D. S. Seymour, assignors to Union Special Machine Company, Chicago, Ill. Bag seaming, cutting, and delivering apparatus	875,591	Dec. 31	6681	1396	131	2365

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McNeil, Chester, and D. S. Seymour, assignors to Union Special Machine Company, Chicago, Ill. Cutting apparatus for filled-bag machines	875,670	Dec. 31	6957	1448-9	131	2392
Meese, Boicer H., Brownsville, Pa. Clamp	874,976	Dec. 31	5485	1146	131	2169
Meierhoff, Adolf, and H. C. Beckmann, assignors to C. Kunkel, Jr., St. Louis, Mo. Earth-loading machine	875,445	Dec. 31	6401	1335-6	131	2319
Meltzer, Hyman, and L. Karron, New York, N. Y. Picture-holder	875,090	Dec. 31	5710	1190	131	2206
Memphis Column Company. (See Berkheiser, William H., assignor.)						
Mengel, Charles C., Louisville, Ky. Box	875,276	Dec. 31	6064	1266	131	2265
Menges, Charles L. R. E., The Hague, Netherlands. Incandescent electric lamp	874,977	Dec. 31	5486	.....	131	2169
Menkin, Burnett, New Haven, Conn. Electrical alarm device	875,091	Dec. 31	5712	1190-1	131	2206
Merrell, Irving S., assignor to Merrell-Soule Company, Syracuse, N. Y. Can-marking machine	875,092	Dec. 31	5714	1191	131	2206
Merrell-Soule Company. (See Merrell, Irving S., assignor.)						
Mershon, Edward C., Saginaw, Mich. Adjusting-gage for levers	875,364	Dec. 31	6246	1303	131	2292
Meslans, Maurice, Paris, France. Producing an alloy for use in steel-casting	875,668	Dec. 31	6953	.....	131	2392
Mestitz, Arthur, Raudnitz, Austria-Hungary. Pump for vacuum-cleaners	875,446	Dec. 31	6404	1336	131	2319
Metzner, Maxwell A., Perth Amboy, N. J. Moistener	875,546	Dec. 31	6591	1377	131	2350
Meyer, George, St. Louis, Mich. Folding umbrella	875,547	Dec. 31	6592	1377	131	2351
Meyer, George W., Sparrows Point, Md. Rotary valve for air-compressors	875,277	Dec. 31	6065	1266	131	2265
Meyrowitz, Emil B., New York, N. Y., assignor to Meyrowitz Manufacturing Company. Ophthalmometer	875,278	Dec. 31	6068	1266-7	131	2266
Meyrowitz Manufacturing Company. (See Meyrowitz, Emil B., assignor.)						
Miley, Annie C., Philadelphia, Pa. Coal-chute feeder	875,447	Dec. 31	6405	1337	131	2319
Miller, Albert. (See Kaplan, Jacob, assignor.)						
Miller, Alfred N., Evansville, Ind. Knockdown box	875,548	Dec. 31	6594	1378	131	2351
Miller, George A., McKeesport, Pa. Curtain-fixture	875,365	Dec. 31	6248	1303	131	2293
Miller, George D., *et al.* (See Stanley, George W., assignor.)						
Miller, Thomas S., South Orange, N. J. Conveying apparatus	875,199	Dec. 31	5918	1233-4	131	2241
Milne, Robert, Rockford, Ill., assignor to B. F. Barnes Company. Core and casting	875,448	Dec. 31	6407	1337	131	2320
Mitchell, Clara D., Grant, Nebr., assignor of one-half to C. E. Achorn, Boston, Mass. Serving-tray	875,549	Dec. 31	6595	1378	131	2351
Moe, Sivert. (See Walstead and Moe.)						
Mohme, Gustave, and A. V. Hadlock, Chicago, Ill. Tire-tool	875,093	Dec. 31	5716	1191	131	2207
Monahan, Louis J., Oshkosh, Wis. Puzzle novelty	875,200	Dec. 31	5921	1234	131	2241
Monarch Typewriter Company. (See Woodhouse, William B., assignor.)						
Moon, Richard, Homestead, Pa. Roll-housing	875,201	Dec. 31	5922	1234-5	131	2242
Moore, Christopher W., Spring Valley, Wis. Mail-cabinet	875,366	Dec. 31	6249	1303	131	2293
Moore, Grant. (See Freebey and Moore.)						
Morgan, Lewis N., *et al.* (See Borland, Franklin D., assignor.)						
Morley, Charles R., Amsterdam, N. Y. Glove-tip-sewing machine	875,586	Dec. 31	6672	1392-3	131	2363
Morrell, William W., assignor of one-half to F. Rees, Meriden, Conn. Marking-pin	875,094	Dec. 31	5717	1191	131	2207
Morrison, Andrew, Pittsburg, Pa. Rolling tie-plates	875,202	Dec. 31	5923	1235	131	2242
Morrison, Andrew, Pittsburg, Pa. Guard-rail	875,203	Dec. 31	5925	1235	131	2242
Morrison, Andrew, Pittsburg, Pa. Insulated rail-joint	875,204	Dec. 31	5926	1236	131	2243
Morrison, Andrew M., Dubuque, Iowa. Basin-trap	875,587	Dec. 31	6674	1393	131	2363
Moskowitz, Morris, assignor to United States Light & Heating Company, New York, N. Y. Electric regulation	875,205	Dec. 31	5928	1236	131	2243
Munger, Vernon D., Beach City, Ohio. Power-transmission gearing	874,978	Dec. 31	5488	1146	131	2169
Murphy, Thomas J. (See Whiting, Charles D., assignor.)						
Murphy, William, Buffalo, N. Y., assignor, by mesne assignments, to National Cash Register Company, Dayton, Ohio. Cash-register	875,669	Dec. 31	6954	1448	131	2392
Murphy, William J., Bridgeport, assignor to F. B. Kennedy, New Haven, Conn. Trolley-harp	874,979	Dec. 31	5491	1147	131	2170
Nacey, Joseph F., *et al.* (See Borland, Franklin D., assignor.)						
National Cash Register Company. (See Hall, Edward J., assignor.)						
National Cash Register Company. (See Murphy, William, assignor.)						
Nealon Company. (See Binney, Harold, assignor.)						
Nebel, Edward J., *et al.* (See Dutton, Samuel F., assignor.)						
Nebel, Fenton B., *et al.* (See Dutton, Samuel F., assignor.)						
Nees, William J., *et al.* (See Kirkwood and Kimberling, assignors.)						
Nelson, Fritz, and D. A. Bye, Louisville, Ky. Baker's peel	875,451	Dec. 31	6411	1338	131	2320
New Jersey Patent Company. (See Aiken, Edward L., assignor.)						
New Jersey Wire Cloth Company. (See Scammell, Charles H., assignor.)						
Newark Safety Razor Company. (See Steinharter, Joseph J., assignor.)						
Niklaus, Charles F., *et al.* (See Houre, Luke, assignor.)						
Noon, Herbert E., Brooklyn, N. Y., assignor to Singer Manufacturing Company. Needle-threading machine	875,282	Dec. 31	6075	1268-9	131	2267
Norris, George E., *et al.* (See Odell, Willard A., assignor.)						
Norris, John R., *et al.* (See Odell, Willard A., assignor.)						
North, Paul, Lakewood, assignor to Chamberlain Cartridge and Target Company, Cleveland, Ohio. Gun hand-protector	874,981	Dec. 31	5494	1147	131	2170
Norton, Henry C., San Francisco, Cal. Conveyer-belt	874,982	Dec. 31	5495	1148	131	2170
O'Brian, Harry R., and J. R. Coulter, Oxford, Ohio. Foot and leg bath for horses	874,983	Dec. 31	5496	1148	131	2171
O'Neill, Arthur J., assignor to Aretino Company, Chicago, Ill. Talking-machine	874,985	Dec. 31	5500	1148	131	2171
Odell, Willard A., assignor of one-half to G. E. and J. R. Norris, Winnipeg, Manitoba, Canada. Oil-pump	875,370	Dec. 31	6257	1305	131	2294
Ogle, Robert A., Chicago, Ill. Chute and controlling mechanism therefor for elevators, bins, and the like	875,283	Dec. 31	6063	1269	131	2267
Oliva, Sabbath A., Danbury, Conn. Implement for applying rubber tires	874,984	Dec. 31	5498	1148	131	2171
Olson, Peter A., Cloquet, Minn. Rail and tie coupling	875,096	Dec. 31	5724	1193	131	2208
Onderdonk, Lansing, New York, N. Y., assignor to Union Special Sewing Machine Company, Chicago, Ill. Chain-stitch sewing-machine	875,592	Dec. 31	6683	1396-7	131	2365
Onderdonk, Lansing, New York, N. Y., assignor to Union Special Sewing Machine Company, Chicago, Ill. Looper-operating mechanism for sewing-machines	875,593	Dec. 31	6684	1397	131	2366
Onderdonk, Lansing, New York, N. Y., assignor to Union Special Sewing Machine Company, Chicago, Ill. Seam for sewed articles	875,594	Dec. 31	6686	1398	131	2366
Onderdonk, Lansing, New York, N. Y., assignor to Union Special Sewing Machine Company, Chicago, Ill. Looper-operating mechanism for sewing-machines	875,671	Dec. 31	6961	1450	131	2393
Ormsby, John W., Milwaukee, Wis. Fuel-feeding device	875,371	Dec. 31	6258	1306	131	2295
Osborne, Lewis E., Brooklyn, N. Y. Canopy for beds	875,206	Dec. 31	5930	1236-7	131	2243
Overbury, Frederick C., New York, N. Y., assignor to Flintkote Manufacturing Company, Rutherford, N. J. Roofing-strip	875,099	Dec. 31	5725	1198	131	2209
Overbury, Frederick C., New York, N. Y., assignor to Flintkote Manufacturing Company, Rutherford, N. J. Flexible roofing	875,595	Dec. 31	6687	1398	131	2366
Paine, George S., Winslow, Me. Basket-holder	875,452	Dec. 31	6412	1338	131	2321
Palm, Victor H., Butler, Pa. Oil-well device	875,372	Dec. 31	6260	1306	131	2295
Parish Manufacturing Company. (See Gartshore, Matthew W., assignor.)						
Parkes, William N., New York, N. Y. Thread-controlling mechanism for sewing-machines	875,597	Dec. 31	6689	1398-1400	131	2367
Parkes, William N., New York, N. Y. Buttonhole-sewing machine	875,598	Dec. 31	6697	1400-1	131	2367

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Parkes, William N., Brooklyn, N. Y. Blindstitch sewing-machine	875,599	Dec. 31	6704	1401	131	2368
Parkes, William N., Brooklyn, N. Y. Hemstitch sewing-machine	875,600	Dec. 31	6710	1402	131	2368
Parkes, William N., Brooklyn, N. Y. Ornamental-stitch sewing-machine	875,601	Dec. 31	6717	1403	131	2368
Parkes, William N., Brooklyn, N. Y. Buttonhole-sewing machine	875,602	Dec. 31	6720	1403–5	131	2368
Parkes, William N., Brooklyn, N. Y. Automatic bobbin-controller for sewing-machines	875,603	Dec. 31	6731	1405	131	2369
Parkes, William N., Brooklyn, N. Y. Ornamental-stitch sewing-machine	875,604	Dec. 31	6735	1405–6	131	2369
Parkes, William N., Brooklyn, N. Y. Tucking mechanism for sewing-machines	875,605	Dec. 31	6739	1406	131	2369
Parkes, William N., Brooklyn, N. Y. Needle-adjusting device for sewing-machines	875,606	Dec. 31	6742	1406	131	2370
Parkes, William N., Brooklyn, N. Y. Ornamental-stitch sewing-machine	875,607	Dec. 31	6744	1407	131	2370
Parkes, William N., Brooklyn, N. Y. Take-up and needle-bar mechanism for sewing-machines	875,608	Dec. 31	6748	1408	131	2371
Parkes, William N., Brooklyn, N. Y. Stop mechanism for sewing-machines	875,609	Dec. 31	6752	1408–9	131	2371
Parkes, William N., Brooklyn, N. Y. Thread-controlling mechanism for sewing-machines	875,610	Dec. 31	6755	1409	131	2372
Parkes, William N., Brooklyn, N. Y. Feeding mechanism for sewing-machines	875,611	Dec. 31	6758	1409–10	131	2372
Parkes, William N., Brooklyn, N. Y. Looper mechanism for sewing-machines	875,612	Dec. 31	6763	1410	131	2372
Parkes, William N., Brooklyn, N. Y. Bobbin-controlling mechanism for sewing-machines	875,613	Dec. 31	6767	1410	131	2372
Parkes, William N., Brooklyn, N. Y. Eyelet or embroidery stitching machine	875,614	Dec. 31	6772	1411	131	2373
Parkes, William N., Brooklyn, N. Y. Sewing-machine	875,615	Dec. 31	6777	1412	131	2373
Parkes, William N., Brooklyn, N. Y. Feeding mechanism for sewing-machines	875,616	Dec. 31	6782	1413–14	131	2374
Parkes, William N., Brooklyn, N. Y. Zigzag and ornamental stitch machine	875,617	Dec. 31	6787	1414–15	131	2374
Parkes, William N., Brooklyn, N. Y. Lubricator for sewing-machine looper mechanisms	875,618	Dec. 31	6795	1415	131	2375
Parkes, William N., Brooklyn, N. Y. Ornamental-stitch machine	875,619	Dec. 31	6798	1416	131	2375
Parkes, William N., Brooklyn, N. Y. Needle-actuating mechanism for sewing-machines	875,620	Dec. 31	6802	1416–17	131	2375
Parkes, William N., Brooklyn, N. Y. Bobbin-case-threading mechanism for sewing-machines	875,621	Dec. 31	6806	1417–18	131	2376
Parkes, William N., Brooklyn, N. Y. Work-clamp mechanism for sewing-machines	875,622	Dec. 31	6810	1418–19	131	2376
Parkes, William N., Brooklyn, N. Y. Looper mechanism for sewing-machines	875,623	Dec. 31	6816	1419	131	2376
Parkes, William N., Brooklyn, N. Y. Automatic embroidery or ornamental stitch sewing-machine	875,624	Dec. 31	6820	1419–22	131	2377
Parkes, William N., Brooklyn, N. Y. Embroidery or ornamental stitch sewing-machine	875,625	Dec. 31	6830	1422–3	131	2377
Parkes, William N., Brooklyn, N. Y. Embroidery or ornamental stitch sewing-machine	875,626	Dec. 31	6834	1423–7	131	2377
Parkes, William N., Brooklyn, N. Y. Looper movement for sewing-machines	875,627	Dec. 31	6844	1428	131	2378
Parkes, William N., Brooklyn, N. Y. Scalloping-embroidery machine	875,628	Dec. 31	6847	1428–30	131	2378
Parmenter, George A., Cambridge, Mass. Car-fender	875,373	Dec. 31	6262	1306	131	2299
Parrett, Dent, assignor of one-half to J. Parrett, Wenona, Ill. Compound engine	875,453	Dec. 31	6413	1338–9	131	2321
Parrett, James. (See Parrett, Dent, assignor.)						
Parsons, Charles A., Newcastle-upon-Tyne, England. Vacuum-producing apparatus	874,986	Dec. 31	5501	1149	131	2172
Pattitz, Johann F. M., assignor to Allis-Chalmers Company, Milwaukee, Wis. Turbine-vane	875,374	Dec. 31	6264	1307	131	2296
Patterson, Frank N., Lexington, N. C. Dyeing apparatus	875,553	Dec. 31	6600	1379	131	2352
Pelton, Marie C., Beatrice, Nebr. Garment measuring and drafting device	875,554	Dec. 31	6601	1380	131	2352
Penfold, Frederick E., Sydney, New South Wales, Australia. Street-sweeper	875,375	Dec. 31	6265	1307	131	2296
Peregrine, Seymour W., Portland, Me. Automatic valve	875,101	Dec. 31	5728	1194	131	2209
Perkins Electric Switch Manufacturing Company. (See Peterson, Johann G., assignor.)						
Perkins, Luther M., Tacoma, Wash. Trolley-pole retriever	875,596	Dec. 31	6688	1308	131	2307
Perkins, Thomas B. (See Helmick and Perkins.)						
Peterson, Alfred, assignor of one-fourth to F. J. Dunst, Denver, Colo. Crimping attachment for ruling-machines	874,987	Dec. 31	5505	1149–50	131	2172
Peterson, Carl E., Newark, N. J. Clasp	875,102	Dec. 31	5729	1194	131	2209
Peterson, Johann G., assignor to Perkins Electric Switch Manufacturing Company, Bridgeport, Conn. Handle for rotary snap-switches	875,376	Dec. 31	6266	1307	131	2297
Petterson, Simon G., Pine Bluff, Ark. Rail-fastener	875,100	Dec. 31	5727	1193–4	131	2209
Phair, Arthur W. A. (See Uren and Phair.)						
Philp, Casimir von, New York, N. Y. Cutting-machine	875,103	Dec. 31	5729	1194–5	131	2209
Pick, Friedrich, Vienna, Austria-Hungary. Stop-motion for looms	875,104	Dec. 31	5732	1195	131	2210
Pickett, Fred C., Kansas City, Mo. Electrolytic receiver	875,105	Dec. 31	5733	1195	131	2210
Pidgeon, Harry W. (See Jackson and Pidgeon.)						
Pilla, Vito, and H. Booker, California, Pa. Training device	875,377	Dec. 31	6267	1307–8	131	2297
Pirkis, Albert G., London, England. Apparatus for stenciling designs on post-cards, &c.	875,106	Dec. 31	5735	1195	131	2210
Podhajský, Otakar, Warren, Pa. Regulating device for internal-combustion engines	875,378	Dec. 31	6268	1308	131	2297
Pomeroy, William D., Norwood, Ohio, assignor, by mesne assignments, to Bullock Electric Company. Field-magnet	875,207	Dec. 31	5932	1237	131	2244
Poole, Staley D., and J. Kiel, assignors to Deere & Company, Moline, Ill. Wheeled cultivator	874,988	Dec. 31	5507	1150	131	2172
Porter-Cable Machine Co. (See Porter, George G., assignor.)	874,989	Dec. 31	5510	1151	131	2173
Porter, George G., assignor to Porter-Cable Machine Co., Syracuse, N. Y. Steering-gear	875,284	Dec. 31	6085	1270–1	131	2296
Potter, Henry N., New Rochelle, N. Y., assignor to G. Westinghouse, Pittsburg, Pa. Granular furnace	875,285	Dec. 31	6088	.....	131	2296
Potter, Henry N., New Rochelle, N. Y., assignor to G. Westinghouse, Pittsburg, Pa. Making silicon	875,286	Dec. 31	6089	.....	131	2296
Potter, Henry N., New Rochelle, N. Y., assignor to G. Westinghouse, Pittsburg, Pa. Producing silicon monoxid	875,672	Dec. 31	6963	.....	131	2393
Potter, Henry N., New Rochelle, N. Y., assignor to G. Westinghouse, Pittsburg, Pa. Making silicon	875,673	Dec. 31	6964	.....	131	2393
Potter, Henry N., New Rochelle, N. Y., assignor to G. Westinghouse, Pittsburg, Pa. Making silicon carbid	875,674	Dec. 31	6964	.....	131	2393
Potter, Henry N., New Rochelle, N. Y., assignor to G. Westinghouse, Pittsburg, Pa. Making silicon dioxid	875,675	Dec. 31	6964	.....	131	2394
Potter, Henry N., New Rochelle, N. Y., assignor to G. Westinghouse, Pittsburg, Pa. Producing silicon monoxid	875,676	Dec. 31	6965	.....	131	2394
Potter, Henry N., New Rochelle, N. Y., assignor to G. Westinghouse, Pittsburg, Pa. Preparing silicon-monoxid powder	874,990	Dec. 31	5512	1151	131	2173
Powell, William H., Norwood, Ohio, assignor to Bullock Electric Manufacturing Company. Multiple-voltage system of motor control	875,454	Dec. 31	6416	1339	131	2321
Powers, Edmund B., New York, N. Y. Air-brake						
Prentice, Vernette E. (See Conradson, Conrad M., assignor.)						
Pressed Steel Wagon Bolster Co. (See Hines, Edwin G., assignor.)						
Price, Edgar F., assignor, by mesne assignments, to Central Trust Company of New York, trustee. Producing ferrovanadium	875,208	Dec. 31	5933	.....	131	2244
Price, George F., St. Louis, Mo. Car-axle	875,455	Dec. 31	6418	1339	131	2322
Prien, Rudolph B., Rockford, Ill. Water-heater	874,991	Dec. 31	5517	1151	131	2174
Priess, Peter, Pleasant Valley, Okla. Cultivator-shovel	875,456	Dec. 31	6419	1340	131	2322
Prinke, Carl L. H., Baltimore, Md. Automatic firearm	875,209	Dec. 31	5934	1237	131	2244
Prouty, George W., Dorchester, Mass., assignor to Imperial Art Press Co. Printing-press	875,287	Dec. 31	6090	1271	131	2296
Prouty, Theodore C., assignor to Wilcox Manufacturing Company, Aurora, Ill. Quick-acting vise	874,992	Dec. 31	5517	1152	131	2174
Rainess, Abraham, and B., New York, N. Y. Device for securing scarf-pins	875,379	Dec. 31	6271	1308	131	2298
Rainess, Bernard. (See Rainess, Abraham, and B.)						
Rake, James L., Reading, Pa., and C. Richardson, New York, N. Y., assignors to Barber Asphalt Paving Company, Philadelphia, Pa. Manufacture of bituminous concrete	875,288	Dec. 31	6092	.....	131	2269

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Ramazzotti, Carlo. (See De Luigi and Ramazzotti.)						
Rauch, John D. (See Karr and Rauch.)						
Ravaillier, Jules J., Paris, France. Canoe-carriage	875,210	Dec. 31	5938	1238	131	2245
Reck, Anders B., Copenhagen, Denmark. Hot-water heating apparatus	875,107	Dec. 31	5735	1196	131	2211
Reed, William L., Pittsburg, Pa. Flush-tank	875,457	Dec. 31	6420	1340	131	2322
Rees, Fred. (See Morrell, William W., assignor.)						
Reeves, Lewis, and G. K. Gilchrist, Vinton, Iowa. Spring-trip for cultivators	875,211	Dec. 31	5940	1238	131	2245
Regina Company. (See Koch, Henry, assignor.)						
Reid, Aubrey J., North Sydney, New South Wales, Australia. Brake for railway and other vehicles	875,108	Dec. 31	5738	1196–7	131	2211
Reid, Aubrey J., North Sydney, New South Wales, Australia. Coupling for controlling-rods of brakes between railway and other vehicles	875,109	Dec. 31	5740	1197	131	2212
Reilly, Frances J., Jerico, Iowa. Railway-switch	875,110	Dec. 31	5741	1197–8	131	2212
Reuleaux, Josef, Wilkinsburg, assignor to A. Laughlin, Pittsburg, Pa. Continuous heating-furnace	875,458	Dec. 31	6421	1340–1	131	2322
Reuleaux, Josef, Wilkinsburg, assignor to A. Laughlin, Pittsburg, Pa. Continuous heating-furnace	875,459	Dec. 31	6423	1341–2	131	2323
Reuter, Ludwig H., Hoboken, N. J. Composition for disinfecting, antiseptic, and other purposes	875,380	Dec. 31	6272	.....	131	2296
Reynolds, William C., Norwich, Conn. Ticket-printing machine	875,460	Dec. 31	6424	1342–3	131	2323
Rhoades, Alonzo E., assignor to Draper Company, Hopedale, Mass. Thread-parting mechanism for looms	875,461	Dec. 31	6430	1343	131	2324
Rice, George M., Worcester, Mass. Treating complex ores containing zinc and other volatilizable metals	875,381	Dec. 31	6274	1309	131	2298
Rice, Walter F., Quincy, Mass., assignor, by mesne assignments, to General Electric Company. Bucket for turbines	874,993	Dec. 31	5521	1152	131	2174
Richards, Francis H., Hartford, Conn., assignor, by mesne assignments, to American Typographic Corporation. Typographic machine	875,212	Dec. 31	5941	1238–9	131	2245
Richards, Walter J., Milwaukee, Wis. Fluid-pressure system. (Reissue)	12,737	Dec. 31	6078	1453	131	2395
Richardson, Clifford. (See Rake and Richardson.)						
Richardson, Myron H., Chicago, Ill. Rotary measuring device	874,994	Dec. 31	5522	1152	131	2175
Rodman, Hugh, and G. M. Howard, Philadelphia, Pa., assignors to Electric Storage Battery Company. Secondary or storage battery	875,213	Dec. 31	5950	.....	131	2246
Röhm, Otto, Stuttgart, Germany. Bating hides and skins	875,382	Dec. 31	6277	.....	131	2299
Rolley, Thomas, East Brisbane, Queensland, Australia. Transom-lifter	875,214	Dec. 31	5951	1239	131	2246
Rose, Arthur G., *et al.* (See Bowser, Albert C., assignor.)						
Rosenwasser, Morris, New York, N. Y. Legging	875,555	Dec. 31	6602	1380	131	2353
Ross, Frederick M., Newport, Ky. Trolley-pole	875,215	Dec. 31	5952	1240	131	2246
Rotter, Max, assignor to Allis-Chalmers Company, Milwaukee, Wis. Blade-fastening	875,629	Dec. 31	6855	1430	131	2378
Rowan, Theodore D., assignor of one-half to L. B. Dozier, Columbia, S. C. Combined spirit-level and gage	875,462	Dec. 31	6432	1344	131	2324
Rowe, Arthur C., New York, N. Y. Bucket-and-tank fire-extinguisher system	875,289	Dec. 31	6093	1271	131	2269
Royal Typewriter Company. (See Hess, Edward B., assignor.)						
Ruggles, George W., Charlotte, N. Y. Device for ventilating cars	875,290	Dec. 31	6095	1272	131	2269
Ruhmann, Gustave E., Schulenburg, Tex. Portable furnace	875,216	Dec. 31	5954	1240	131	2247
Russell & Erwin Manufacturing Company. (See Hurd, Norman B., assignor.)						
Ruud, Edwin, Pittsburg, Pa. Thermostatic-valve-operating mechanism	875,217	Dec. 31	5955	1240–1	131	2247
Ruud, Edwin, Pittsburg, Pa. Gas-burner	875,218	Dec. 31	5958	1241	131	2247
S. Jarvis Adams Company. (See Fownes and Gardner, assignors.)						
Samuelson, Frederick, Rugby, England, assignor to General Electric Company. Shaft-packing	874,995	Dec. 31	5524	1153	131	2175
Samuelson, Frederick, Rugby, England, assignor to General Electric Company. Elastic-fluid turbine	875,111	Dec. 31	5743	1198	131	2212
Sanders, Adolph, New York, N. Y. Time-limit annunciator	875,112	Dec. 31	5746	1198	131	2213
Saunders, William J. (See Smith, Joseph M., assignor.)						
Scammell, Charles H., New York, N. Y., assignor to New Jersey Wire Cloth Company, Trenton, N. J. Clamping device for building constructions	875,219	Dec. 31	5959	1241	131	2248
Schachner, Edward E., Denver, Colo. Fireproof stair structure	875,113	Dec. 31	5747	1198	131	2213
Scheld, Theodor C., Hamburg, Germany. Door-holder	875,114	Dec. 31	5749	1199	131	2213
Schilling, William F. (See McKee and Schilling.)						
Schmidtke, August, Königsberg, Germany. Lock	875,291	Dec. 31	6097	1272	131	2269
Schmitthenner, Carlos, Heidenheim-on-the-Brenz, Germany. Speed-regulator	875,463	Dec. 31	6436	1345	131	2325
Schnurmacher, Anna, St. Louis, Mo. Brush	875,464	Dec. 31	6439	1345	131	2325
Schoeppl, Joseph F., Baltimore, Md. Knockdown crate	874,996	Dec. 31	5525	1153	131	2175
Schoeppl, Joseph F., Baltimore, Md. Tailor's templet for making patterns	874,997	Dec. 31	5528	1153–4	131	2176
Schofield, George E., Baltimore, Md. Optical tool	875,383	Dec. 31	6278	1309	131	2299
Schubert & Salzer, Maschinenfabrik Aktiengesellschaft. Firm of. (See Heinitz, Woldemar R., assignor.)						
Schumacher, William, Camden, N. J. Reversible sign for automobiles and like purposes	874,998	Dec. 31	5529	1154	131	2176
Schuppe, Max, assignor to B. F. Seadler, New York, N. Y. Boot and shoe polishing machine	875,115	Dec. 31	5749	1199–1200	131	2214
Schureman, Jacob L., assignor to Appliance Manufacturing Company, Chicago, Ill. Vehicle-fender	875,556	Dec. 31	6604	1380	131	2353
Schussler, John H., Chicago, Ill. Vibrating distributing-roller for platen-presses	875,116	Dec. 31	5757	1200	131	2214
Schwarz, Helena A., Waterbury, Conn. Curtain-stretcher	875,292	Dec. 31	6098	1272–3	131	2270
Scott, George L., Poplar Bluff, Mo. Incubator	875,557	Dec. 31	6606	1381	131	2353
Scott, John G., Girardville, Pa. Shackle for transmission-ropes	875,293	Dec. 31	6100	1273	131	2270
Scott, Percy, Montreal, Quebec, Canada. Roasting-pan	875,117	Dec. 31	5761	1200	131	2215
Scott, Walter A. (See Locke and Scott.)						
Seadler, Bernard F. (See Schuppe, Max, assignor.)	875,118	Dec. 31	5762	1201	131	2215
Seckel, Gerrit J., Enschede, Netherlands. Incandescent mantle						
Secor, Jerome B., assignor to Williams Typewriter Company, Derby, Conn. Carriage-feed mechanism for type-writing machines	874,999	Dec. 31	5530	1154–5	131	2176
Seidel, William, Wheeling, Ill. Can for handling milk	875,000	Dec. 31	5535	1155	131	2176
Seidel, William, Wheeling, Ill. Bottle-scrubbing mechanism	875,001	Dec. 31	5537	1156	131	2177
Sellew, William H., Detroit, Mich. Valve for stand-pipes	875,002	Dec. 31	5540	1156–7	131	2177
Severns, John L., and W. P. McDermott, East St. Louis, Ill. Car-door	875,465	Dec. 31	6440	1345–6	131	2325
Seymour, Dudley S. (See McNeil and Seymour.)						
Shaffer, Norman D., Johnstown, Pa. Carbid-feeding device	875,466	Dec. 31	6441	1346	131	2325
Shank, Thomas M., Hurricane, W. Va. Bulletin-board	875,003	Dec. 31	5542	1157	131	2178
Sharood, Samuel V., assignor of one-half to L. R. Churchill, Brockton, Mass. Heating system	875,119	Dec. 31	5762	1201	131	2215
Shears, Albert L., Seattle, Wash. Detachable pipe-coupling	875,004	Dec. 31	5543	1157	131	2178
Sheets, Lewis A., *et al.* (See Kirkwood and Kimberling, assignors.)						
Short, Robert L., Fostoria, Ohio. Fountain-brush	875,005	Dec. 31	5544	1157	131	2178
Short, William A. D., Lexington, Ky., assignor to Continental Signal Company. Automatic electric block-signal	875,120	Dec. 31	5764	1201–2	131	2215
Shryock, Leonard D., Marietta, Ohio. Rope-clamp	875,121	Dec. 31	5767	1202	131	2215
Slabloff, Alexis, Kolomna, Russia. Steam-engine	875,294	Dec. 31	6101	1273	131	2270
Sills, Benson S., Belleville, Ontario, Canada. Truss	875,122	Dec. 31	5768	1203	131	2216

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Simplex Electric Heating Company. (See Ayer, James I., assignor.)						
Singer Manufacturing Company. (See Noon, Herbert E., assignor.)						
Skinner, Lewis B., Denver, Colo. Purifying hydrochloric acid	875,558	Dec. 31	5668	1382	131	2354
Slater, W. T. S. (See Slaughter, Perry H., assignor.)						
Slaughter, Perry H., Manassas, assignor of one-third to W. T. S. Slater, Broxton, Ga. Railway-signal	875,123	Dec. 31	5770	1203–4	131	2216
Sleeper, Charles W., Lancaster, N. H., assignor to Independent Canning Company, Eastport, Me. Apparatus for soldering cans	875,677	Dec. 31	6030	1450–1	131	2361
Sloan, Winifred E., Sioux City, Iowa. Collapsible warming-oven	875,124	Dec. 31	5771	1204	131	2216
Slotkin, Mayer, New York, N. Y. Motive power for vehicles	875,467	Dec. 31	6441	1346–7	131	2326
Smallwood, Clarence S., Granite City, Ill. Railway-tie	875,125	Dec. 31	5772	1204–5	131	2216
Smith, Charles L., assignor to Gullberg & Smith, New York, N. Y. Signature-gatherer	875,384	Dec. 31	6279	1309	131	2299
Smith, Charles L., assignor to Gullberg & Smith, New York, N. Y. Paper-cutter	875,630	Dec. 31	6857	1430–1	131	2370
Smith, Charles W. (See Eacrett, William, assignor.)						
Smith, Christopher H., Depue, Ill. Car-unloading device	875,385	Dec. 31	6282	1310	131	2299
Smith, Edward A., Loveland, Colo. Beet-puller	875,126	Dec. 31	5773	1205	131	2217
Smith, J. C., *et al.* (See Thompson, Carl P., assignor.)						
Smith, Joseph M., assignor of one-half to W. J. Saunders, Worcester, Mass. Track-sander	875,631	Dec. 31	6858	1431	131	2370
Smith, Julius F., assignor of one-half to E. B. Keith, Brockton, Mass. Liquid-feeding device	875,295	Dec. 31	6102	1273	131	2271
Smith, Julius G., Liberty, N. Y. Metallic railway-tie and fastener	875,127	Dec. 31	5774	1206	131	2217
Smith Paper Machinery Company. (See Smith, Richard, assignor.)						
Smith, Richard, Worcester, Mass., assignor to Smith Paper Machinery Company, Portland, Me. Calender-feed for rolls of paper-making machines	875,386	Dec. 31	6285	1310	131	2300
Smith, Stephen G., Hannibal, Mo. Clasp for cuff-holders	875,006	Dec. 31	5545	1158	131	2178
Smith, Walton D., assignor of one-half to J. H. Tascher, Prophetstown, Ill. Easel	875,220	Dec. 31	5961	1242	131	2248
Smith, William H. (See Case and Smith.)						
Snyder, Samuel F., Canton, Ohio. Cremator for insects	875,221	Dec. 31	5962	1242	131	2248
Societe des Reffinerie et Sucrerie Say. Firm of. (See Mastain and Delfosse, assignors.)						
Sörensen, Stanley S., and G. C. Westby, Murray, Utah. Treating smelter smoke and extracting values from ores or metallurgical waste products	875,222	Dec. 31	5964	1242–3	131	2249
Sorrells, William B., Rockmart, Ga. Fencing-machine	875,559	Dec. 31	6009	1382	131	2354
Spaulding, Elijah F., New York, N. Y. Coin-controlled vending-machine	875,128	Dec. 31	5776	1206–7	131	2217
Spaulding, Eugene O., *et al.* (See Bolleau, James W., assignor.)						
Specht, Harry, Frostburg, Pa. Mining-machine	875,296	Dec. 31	6103	1274	131	2271
Speier, Joe, New York, N. Y. Cinder-collecting attachment for locomotives	875,223	Dec. 31	5969	1243	131	2249
Sperry, Elmer A., Brooklyn, N. Y. Detinning and producing tin compounds and other products	875,632	Dec. 31	6860	1431–2	131	2370
Spielberger, George D. (See Clayton and Spielberger.)						
Spielberger, George D., Philadelphia, Pa. Ventilator	875,007	Dec. 31	5546	1158–9	131	2179
Stafford, James M. (See Bonshire and Stafford.)						
Stam, William H., Verdi, Nev. Tackle-block	875,387	Dec. 31	6288	1311	131	2300
Stanley, Arthur E., *et al.* (See Stanley, George W., assignor.)						
Stanley, George W., assignor of five-eighths to G. D. Miller, E. A. Tucker, A. E. Stanley, F. H. Klinsick, and W. D. Craig, Logansport, Ind. Gasolene-engine	875,297	Dec. 31	6104	1274	131	2271
Starnes, Green R., assignor of one-half to H. C. Little, Charlotte, N. C. Stone-crusher	875,633	Dec. 31	6864	1432	131	2380
Steel Cable Engineering Company. (See Wilson, John L., assignor.)						
Steel Heddle Manufacturing Company. (See Fehr, William, assignor.)						
Stein, Abraham. (See Lovejoy, John, F., assignor.)						
Steinharter, Joseph J., assignor to Newark Safety Razor Company, Newark, N. J. Safety-razor	875,008	Dec. 31	5549	1159	131	2179
Stephenson, Errett B., Wawaka, Tex. Window-shade	875,129	Dec. 31	5784	1207	131	2218
Stern, Philip K., New York, N. Y. Safety-razor	875,130	Dec. 31	5786	1208	131	2218
Stevens, Byron, Oakland, Cal. Turbine	875,131	Dec. 31	5788	1208	131	2219
Stevenson, Charles E. (See Watson and Stevenson.)						
Stiebel, Ferdinand, Eisenach, Germany. Coin-counting box	875,388	Dec. 31	6289	1311	131	2301
Stiebel, Harry J., St. Louis, Mo. Carrying and setting-up machine for bottles and the like	875,009	Dec. 31	5550	1159–60	131	2179
Stine, Marcus. (See Acker, Charles E., assignor.)						
Stover, Frank E., and C. L. Darnall, Chattanooga, Tenn. Acetylene-gas generator	875,468	Dec. 31	6448	1347	131	2326
Strain, Ebenezer W., Philadelphia, Pa. Rubber compound and material for use in making same	875,298	Dec. 31	6106	.....	131	2272
Stubbers, Joseph, Covington, Ky., assignor to Incandescent Light & Stove Company, Cincinnati, Ohio. Incandescent-lamp fixture	875,634	Dec. 31	6866	1432	131	2380
Studt, Heinrich. (See Haas and Studt.)						
Sturgeon, Harold M., Erie, assignor to T. J. Ely, Girard, Pa. Mop-head	875,299	Dec. 31	6107	1275	131	2272
Sullivan, Eugene, *et al.* (See Geraghty, John F., assignor.)						
Suter, Frank W., London, England. Lamp for burning carbureted air	875,010	Dec. 31	5553	1160–1	131	2180
Swift, George W., Jr., Bordentown, N. J. Paper box	875,011	Dec. 31	5557	1161	131	2180
Swindell, John W., Greenville, Tex. Vibrator	875,132	Dec. 31	5789	1208	131	2219
Sykes, James F., Pittsburg, Pa. Ventilator for windows	875,300	Dec. 31	6108	1275	131	2272
Tambour, Joseph, Nanterre, near Paris, France. Automatic safety appliance for locking the hammer and the sear of small-arms	875,469	Dec. 31	6450	1347	131	2326
Tascher, Julius H. (See Smith, Walton D., assignor.)						
Taylor, William, Carman, Manitoba, Canada. Plow	875,133	Dec. 31	5790	1209	131	2220
Terrio, Henry A., *et al.* (See Le Boeuf, Paul R., assignor.)						
Th. Goldschmidt, Firm of. (See Goldschmidt, Hans, assignor.)						
Thayer, Russell. (See Ledwinka, Joseph, assignor.)						
Theede, Nicholas J., Fairmount, N. D. Adjustable bearing	875,389	Dec. 31	6290	1311	131	2301
Thomaschewski, Paul, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Anthraquinone derivative	875,390	Dec. 31	6291	.....	131	2301
Thompson, Carl P., assignor of three-fourths to W. E. Keyes, F. L. Buckio, and J. C. Smith, Salem, Oreg. Grain-treating apparatus	875,635	Dec. 31	6868	1433	131	2380
Thomson, Albert E., Sioux Falls, S. D. Measuring device	875,470	Dec. 31	6451	1347	131	2327
Thorn, William, and M. F. Mann, Exeter, England. Automatic coupling for railway-vehicles	875,134	Dec. 31	5794	1209–10	131	2220
Thurnauer, Kuno, Nuremberg, Germany. Burner for acetylene and like gases	875,301	Dec. 31	6110	1275	131	2272
Timberlake, Paul J., Jackson, Mich., assignor to J. B. Timberlake & Sons. Stocking-drier	875,135	Dec. 31	5797	1210	131	2220
Tinsley, William T., Custer, S. D. Device for cutting bark from trees	875,391	Dec. 31	6293	1312	131	2301
Tixier, Auguste, and C. Tortel, assignors to Les Produits Chimique de Croissy, (J. Basler & Co.,) Paris, France. Extraction of copper and other metals from roasted pyrites	875,012	Dec. 31	5560	.....	131	2181
Tortel, Casimir. (See Tixier and Tortel.)						
Tran, Frank J., and F. Cals, Cleveland, Ohio. Workman's time-recorder	875,392	Dec. 31	6294	1312–13	131	2302
Tran, Frank J., and F. Cals, Cleveland, Ohio. Workman's time-recorder	875,393	Dec. 31	6302	1313–14	131	2302
Trufant, Walter E., Whitman, Mass., assignor to Krentler-Arnold Hinge Last Company, Detroit, Mich. Last	875,136	Dec. 31	5798	1210	131	2221
Tubbs, Charles M., Oquawka, Ill. Letter-sheet	875,636	Dec. 31	6869	1433	131	2380
Tucker, Ernest A., *et al.* (See Stanley, George W., assignor.)						
Turner, Charles L., Reading, assignor to Davidson Rubber Company, Boston, Mass. Butt-seaming machine	875,137	Dec. 31	5801	1210–11	131	2221

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Turner, William A., Glasgow, Scotland. Carriage for conveying drums of electric cables	875,013	Dec. 31	5561	1161–2	131	2181
Turton, James E., Jr., and J. T. Henshaw, Washington, D. C. Foldable box	875,014	Dec. 31	5563	1162	131	2181
Twinem, Joseph, New York, N. Y. Combined sewing-machine cover and chair	875,471	Dec. 31	6453	1348	131	2327
Tyler, Herbert F. (See Hess, William H., assignor.)						
Umbach, Christian, New York, N. Y., assignor to Western Electric Company, Chicago, Ill. Telephone-transmitter	875,138	Dec. 31	5803	1211	131	2221
Underwood, Caroline, Riddle, Oreg. Paper bag	875,224	Dec. 31	5971	1243–4	131	2249
Underwood Typewriter Company. (See Helmond, William F., assignor.)						
Underwood Typewriter Company. (See Wagner, Franz X., assignor.)						
Union School Furnishing Company. (See Campbell, Harry G., assignor.)						
Union Special Machine Company. (See Bigelow, John, assignor.)						
Union Special Machine Company. (See McNeil and Seymour, assignors.)						
Union Special Sewing Machine Co. (See Barnes, Walter E., assignor.)						
Union Special Sewing Machine Company. (See Foster, Charles H., assignor.)						
Union Special Sewing Machine Company. (See Onderdonk, Lansing, assignor.)						
Union Special Sewing Machine Company. (See Woodward, Russel G., assignor.)						
United Printing Machinery Company. (See Gustafson, Bernhard, assignor.)						
United Shoe Machinery Company. (See Hadaway, John B., assignor.)						
United States Light & Heating Company. (See Moskowitz, Morris, assignor.)						
United States Marine Signal Company. (See Willson, Thomas L., assignor.)						
Upton, Thomas A., Toledo, Ohio. Pool bowling-table	875,015	Dec. 31	5566	1163	131	2181
Uren, James B., and A. W. A. Phair, Lillooet, British Columbia, Canada. Removable gun-sight	875,016	Dec. 31	5568	1163	131	2182
Van Slyke, John C., Fort Collins, Colo. Electric time-switch	875,017	Dec. 31	5569	1163	131	2182
Varley Duplex Magnet Co. (See Varley, Richard, assignor.)						
Varley, Richard, Englewood, N. J., assignor to Varley Duplex Magnet Co. Induction-coil and box for explosion-engines	875,472	Dec. 31	6454	1348	131	2327
Vaughan, Elbert, Bates, Ark. Shoe-protector	875,560	Dec. 31	6611	1382	131	2354
Verdin, Alois N., Glendale, assignor to Verdin, Kappes & Verdin, Cincinnati, Ohio. Screw-clamp	875,302	Dec. 31	6111	1275	131	2272
Verdin, Kappes & Verdin. (See Verdin, Alois N., assignor.)						
Verna, Daniel, Philadelphia, Pa. Nut-lock	875,561	Dec. 31	6611	1382	131	2355
Verschave, Edouard C. F., Paris, France. Shaped iron or steel for automobile-frames	875,018	Dec. 31	5571	1164	131	2183
Voelker, August, Berlin, Germany. Electric heater	875,394	Dec. 31	6307	1314	131	2302
Vraalstad, Edward J., assignor to Buffalo Pitts Company, Buffalo, N. Y. Grain-conveyer	875,225	Dec. 31	5972	1244	131	2250
Wagner, Franz X., assignor to Underwood Typewriter Company, New York, N. Y. Carriage-stop mechanism for type-writing machines	875,637	Dec. 31	6870	1434	131	2381
Wahlert, Henry A., St. Louis, Mo. Hose-clamp	875,019	Dec. 31	5573	1164	131	2183
Wallace, James S., Rockport, Mass. Window-sash clamp	875,226	Dec. 31	5974	1244	131	2250
Wallis, Henry E., assignor to Wallis Stoker and Manufacturing Co., Terre Haute, Ind. Automatic stoker	875,020	Dec. 31	5574	1164	131	2183
Wallis Stoker and Manufacturing Co. (See Wallis, Henry E., assignor.)						
Walstead, Gustav A., and S. Moe, Chicago, Ill. Machine for printing leaves for books	875,638	Dec. 31	6872	1434–5	131	2381
Walston, J Everett, Lansing, Mich. Fruit and vegetable slicer	875,473	Dec. 31	6457	1349	131	2328
Walton, James A., Hull, England. Ticket-printing apparatus	875,139	Dec. 31	5804	1211	131	2222
Wandell, James W., Philadelphia, Pa. Harrow	875,474	Dec. 31	6458	1349	131	2328
Warren, Frank D., Boston, Mass. Boiler-setting	875,475	Dec. 31	6460	1349–50	131	2328
Wasson, Byron F., Clinton, Ill. Wire-reel	875,476	Dec. 31	6461	1350	131	2329
Waterbury Buckle Company. (See Maltby and Buchanan, assignors.)						
Watson, Robert, Vancouver, British Columbia, and C. E. Stevenson, Toronto, Ontario, Canada. Fire-escape	875,227	Dec. 31	5974	1245	131	2250
Weatherby, Joseph, Jr. (See Dull and Weatherby.)						
Weber, August, Tilsit, Germany. Exhaust-silencer for gas-motors	875,303	Dec. 31	6114	1276	131	2273
Weber, Carl, assignor to Weber Steel-Concrete Chimney Company, Chicago, Ill. Chimney	875,395	Dec. 31	6308	1315	131	2303
Weber, Frank, New York, N. Y. Wagon	875,477	Dec. 31	6462	1350	131	2329
Weber Steel-Concrete Chimney Company. (See Weber, Carl, assignor.)						
Weinraub, Albert, New Brunswick, N. J. Telephone-directory	875,478	Dec. 31	6464	1351	131	2329
Welzin, Charles J. (See Hoelder and Welzin.)						
West, Charles H., Estabutchie, Miss. Knife-setting gage	875,479	Dec. 31	6465	1351	131	2329
Westbrook, William D., Glenwood, Minn. Fire-box door	875,021	Dec. 31	5576	1165	131	2184
Westby, George C. (See Sörensen and Westby.)						
Westcott Chuck Company. (See Westcott, James H., assignor.)						
Westcott, James H., assignor of one-half to Westcott Chuck Company, Oneida, N. Y. Chuck	875,022	Dec. 31	5577	1165	131	2184
Westenhaver, Clifton M., Denver, Colo., assignor to Westenhaver Contracting Company. Means for protecting river-banks	875,480	Dec. 31	6466	1351	131	2330
Westenhaver Contracting Company. (See Westenhaver, Clifton M., assignor.)						
Western Electric Company. (See Umbach, Christian, assignor.)						
Western Union Telegraph Company. (See Barclay, John C., assignor.)						
Westinghouse Electric & Manufacturing Company. (See James, Henry D., assignor.)						
Westinghouse, Geo. (See Potter, Henry N., assignor.)						
Wheeler, Charles V., Pittsburg, and A. G. McKenna, Braddock, Pa., assignors to Firth Sterling Steel Company. Projectile	875,023	Dec. 31	5579	1165	131	2184
Wheeler, James F., Southport, assignor of one-half to A. Boice, Indianapolis, Ind. Pea-harvester	875,024	Dec. 31	5581	1165	131	2185
Whinery, Samuel, East Orange, N. J. Curb-protector	875,025	Dec. 31	5583	1166	131	2185
White, Herbert E., Youngstown, Ohio, assignor to General Fireproofing Company. Clamp for use in building construction	875,396	Dec. 31	6309	1315	131	2303
Whiting, Charles D., Minneapolis, assignor of one-half to T. J. Murphy, St. Paul, Minn. Journal-box lid	875,026	Dec. 31	5584	1166	131	2185
Whiting Foundry Equipment Company. (See McDougall, Andrew H., assignor.)						
Wilcox Manufacturing Company. (See Prouty, Theodore C., assignor.)						
Wilkening, William H., Pittsburg, Pa. Pipe, tube, and tubular structure	875,304	Dec. 31	6115	1276	131	2273
Willey, R. H., *et al.* (See Houze, Luke, assignor.)						
Williams, John G., administrator. (See Williams and Brennecke.)						
Williams, Lodrick, deceased, and H. C. Brennecke, Doe Run, Mo.: J. G. Williams administrator of, Grave-vault	875,562	Dec. 31	6613	1383	131	2355
Williams, Sidney T., Paducah, Ky. Window-shade fixture	875,027	Dec. 31	5586	1167	131	2185
Williams Typewriter Company. (See Secor, Jerome B., assignor.)						
Williamson, George E., Durango, Colo. Trace-buckle	875,305	Dec. 31	6116	1276	131	2273
Willis, Edward M., Kenton, Ohio. Bottle-stopper	875,397	Dec. 31	6311	1315	131	2303
Willis, Georgina T., New York, N. Y. Hand-bag	875,398	Dec. 31	6312	1316	131	2303
Willson Carbide Works Company of St. Catherines. (See Creelman, Frank, assignor.)						
Willson, Thomas L., Ottawa, Ontario, Canada, assignor, by mesne assignments, to United States Marine Signal Company, Jersey City, N. J. Buoy	875,140	Dec 31	5805	1211	131	2222
Willson, William W. (See Dierdorff and Willson.)						
Wilson, James G., New York, N. Y. Warehouse-door	875,306	Dec. 31	6117	1276–7	131	2273
Wilson, James H., Mount Ayr, Iowa. Gate	875,399	Dec. 31	6313	1316	131	2304

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Wilson, John L., Everett, assignor to Steel Cable Engineering Company, Boston, Mass. Conveyer-loading device	875,307	Dec. 31	6119	1277	131	2274
Wilson, Lyman A., New York, N. Y. Safety-closure for receptacles	875,481	Dec. 31	6468	1352	131	2330
Witham, Ervin E., Newark, N. J. Apparatus for filling core-boxes	875,228	Dec. 31	5976	1245	131	2280
Wolff, Herbert W. (See Frame, Robert E., assignor.)						
Woltmann, Ernst, New York, N. Y. Train-stop for electric railways	875,028	Dec. 31	5588	1167	131	2186
Wood, James J., Fort Wayne, Ind. Electric switch	875,029	Dec. 31	5590	1167	131	2186
Wood, James J., Fort Wayne, Ind. Switch for electric meters	875,030	Dec. 31	5592	1167	131	2186
Woodbury, James H., Keokuk, Iowa. Weather-strip	875,308	Dec. 31	6124	1278	131	2274
Woodhouse, William B., assignor to Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine	875,032	Dec. 31	5595	1168	131	2187
Woods, Erastus W., Chicago, Ill. Heating and ventilating system	875,400	Dec. 31	6315	1316-17	131	2304
Woods, Robert, Minto, N. D. Shocker	875,031	Dec. 31	5593	1168	131	2187
Woodward, Russel G., Waukegan, assignor to Union Special Sewing Machine Company, Chicago, Ill. Stripper-blade support and guide for ruffling-machines	875,639	Dec. 31	6875	1435	131	2382
Woodward, Russel G., Waukegan, assignor to Union Special Machine Company, Chicago, Ill. Presser-foot for overseaming-machines	875,640	Dec. 31	6878	1435	131	2382
Worsey, Charles H., Lynn, Mass., assignor to General Electric Company. Governing mechanism for turbines	875,033	Dec. 31	5597	1168-9	131	2187
Worthington, James, Manitowoc, Wis. Variable-speed and reversing gear	875,401	Dec. 31	6317	1317	131	2304
Wrench, James O., Beloit, Kans. Rail-joint	875,229	Dec. 31	5978	1245	131	2251
Wright, Emmett R., Park City, Utah. Tripod-head	875,034	Dec. 31	5600	1169	131	2188
Wyatt, James H. (See Wyatt, William G., assignor.)						
Wyatt, William G., assignor of one-half to J. H. Wyatt, Boreing, Ky. Artificial limb	875,482	Dec. 31	6471	1352	131	2330
Wygant, Frederick A. (See Bartz and Wygant.)						
Ybarrondo, Vincent C. de, Los Angeles, Cal. Electrical igniting device for gas-stoves	875,035	Dec. 31	5602	1170	131	2188
Young, George B. and J. H., El Paso, Tex. Corn-popper	875,483	Dec. 31	6472	1352	131	2331
Young, Joseph H. (See Young, George B. and J. H.)						
Young, Thomas J., Martin, Ga. Automatic grain-scale	875,402	Dec. 31	6318	1317-18	131	2305
Youngman, Thomas H., Mitchell, S. D. Game-board	875,230	Dec. 31	5979	1246	131	2251
Ypsilanti Hay Press Co. (See Christensen, John, assignor.)						
Zimmerman, Charles H., *et al.* (See Bowser, Albert C., assignor.)						
Zweigart, Charles W. (See Cummings, Robert T., assignor.)						

DESIGNS.

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Advance Glass Company. (See Woltjen, Fred, assignor.)				
Barry, David P., New York, N. Y. Pin or button head	38,965	Dec. 31	131	2396
Becvar, Joseph, Cleveland, assignor to Wehrle Company, Newark, Ohio. Range	38,974	Dec. 31	131	2397
Burnam, Virginia D., Huntsville, Ala. Combined seat and cabinet	38,978	Dec. 31	131	2398
Buskey, Albert, Wheeling, W. Va. Glass vessel	38,909	Dec. 31	131	2396
Cope, George W., assignor to W. F. Stimpson, Detroit, Mich. Scale-frame	38,976	Dec. 31	131	2398
Fabrique Nationale d'Armes de Guerre Société Anonyme. (See Kelecom, Paul, assignor.)				
Gair, Robert, New York, N. Y. Dolly	38,968	Dec. 31	131	2396
Goehst, John H., Chicago, Ill. Ceiling-fixture for electric lamps	38,972	Dec. 31	131	2397
Gutermann, Edward A., assignor to Manning, Bowman & Company, Meriden, Conn. Percolator, stand, and lamp	38,971	Dec. 31	131	2397
Harper, Thomas R., Philadelphia, Pa. Flask	38,970	Dec. 31	131	2397
Herzog, Joseph L., New York, N. Y. Finger-ring or similar article	38,966	Dec. 31	131	2396
Kelecom, Paul, Liege, assignor to Fabrique Nationale d'Armes de Guerre Société Anonyme, Herstal, Belgium. Motor-cycle frame	38,977	Dec. 31	131	2398
Kramer, Joseph, Chicago, Ill. Post-card	38,967	Dec. 31	131	2396
Manning, Bowman & Company. (See Gutermann, Edward A., assignor.)				
Neidl, William J., New Britain, Conn. Hinge-leaf	38,975	Dec. 31	131	2397
Sheppard, Erle R., Baltimore, Md. Badge or emblem	38,964	Dec. 31	131	2396
Stimpson, Walter F. (See Cope, George W., assignor.)				
Wehrle, August T., Newark, Ohio. Gas-heater	38,973	Dec. 31	131	2397
Wehrle Company. (See Becvar, Joseph, assignor.)				
Woltjen, Fred, assignor to Advance Glass Company, Utica, Ohio. Sheet-glass	38,979	Dec. 31	131	2398

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Abbott & Company, A. Theodore, Philadelphia, Pa. Certain tapestry goods	66,828	Dec. 31	131	2412
Abrasive Material Co., Philadelphia, Pa. Abrasive material	66,810	Dec. 31	131	2411
Alart & McGuire, New York, N. Y. Worcestershire sauce	66,890	Dec. 31	131	2414
American Chemical & Textile Coloring Co., Wilmington, N. C. Antiseptic preparation	66,780	Dec. 31	131	2411
American Sash & Door Co., Kansas City, Mo. Paper and felt roofing and sheathing	66,817	Dec. 31	131	2411
Auto Radium Co., East Cleveland, Ohio. Composition for purifying water	66,781	Dec. 31	131	2412
Beiersdorf & Co., P., Hamburg, Germany. Collapsible tubes	66,829	Dec. 31	131	2412
Bissell Carpet Sweeper Company, Grand Rapids, Mich. Carpet-sweepers	66,818	Dec. 31	131	2412
Black Hills Brewing Co., Central City, S. D. Beer	66,855	Dec. 31	131	2413
Blan, Jules, New York, N. Y. Liquid disinfectant and antiseptic preparation	66,782	Dec. 31	131	2411
Bluthenthal & Bickart, Atlanta, Ga. Whisky and gin	66,791	Dec. 31	131	2411
Boericke & Tafel, Philadelphia, Pa. Grape-juice	66,870	Dec. 31	131	2413

TRADE-MARKS—Continued.

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Buegeleisen & Jacobson, New York, N. Y. Accordions	66,856	Dec. 31	131	2413
Burgoyne, William R., Steubenville, Ohio. Remedies for ague and malarial fevers	66,830	Dec. 31	131	2412
California Wine Association, San Francisco, Cal. Wine	66,811	Dec. 31	131	2411
Campe & Co., Henry, San Francisco, Cal. Whisky	66,812	Dec. 31	131	2412
Charles & Co., New York, N. Y. Candies, glacé fruits, chocolates, bonbons, and candy kisses	66,792	Dec. 31	131	2411
Chas. S. Crossman & Co., New York, N. Y. Certain jewelry	66,873	Dec. 31	131	2413
China & Japan Trading Company Limited, New York, N. Y. Certain textiles	66,819	Dec. 31	131	2412
China & Japan Trading Company Limited, New York, N. Y. Certain textiles	66,820	Dec. 31	131	2412
China & Japan Trading Company Limited, New York, N. Y. Certain textiles	66,821	Dec. 31	131	2412
China & Japan Trading Company Limited, New York, N. Y. Certain textiles	66,822	Dec. 31	131	2412
China & Japan Trading Company Limited, New York, N. Y. Certain textiles	66,823	Dec. 31	131	2412
Clifford Bros., Cleveland, Ohio. Charcoal	66,831	Dec. 31	131	2412
Clysmic Spring Co., New York, N. Y. Natural mineral water	66,871	Dec. 31	131	2413
Consolidated Rubber Company, Trenton, N. J. Rubber fruit-jar rings	66,872	Dec. 31	131	2413
Crofut & Knapp Co., South Norwalk, Conn. Fur hats	66,857	Dec. 31	131	2412
Deariso, William I., Albany, Ga. Remedy for syphilis	66,832	Dec. 31	131	2412
Dewsbury, Alfred, Walsall, England. Certain metal articles	66,833	Dec. 31	131	2413
Duparquet, Huot & Moneuse Co., New York, N. Y. Fire-brick	66,858	Dec. 31	131	2413
Edw. B. Bruce Co., Baltimore, Md. Whisky, gin, and brandy	66,793	Dec. 31	131	2411
Elfreth, Jacob R., Philadelphia, Pa. Chocolate	66,794	Dec. 31	131	2411
Elmore Mill Co., Elmore, Minn. Wheat-flour	66,813	Dec. 31	131	2412
Estlingen, Everett S., Los Angeles, Cal. Tooth-powder	66,834	Dec. 31	131	2412
Fabric Fire Hose Company, Sandy Hook, Conn., and New York, N. Y. Rubber hose and fabric hose	66,874	Dec. 31	131	2413
Faxon, Williams & Faxon, Buffalo, N. Y. Certain chemical preparations	66,783	Dec. 31	131	2411
Fischer, Anthony, Flushing, N. Y. Stomach-bitters	66,835	Dec. 31	131	2412
Fischer Chemical Importing Co., New York, N. Y. Certain medicine	66,836	Dec. 31	131	2412
Fiske Brothers Refining Co., New York, N. Y. Camphorated liquid soap	66,859	Dec. 31	131	2413
Florence Manufacturing Company, Northampton, Mass. Tooth-brushes	66,814	Dec. 31	131	2412
Forbes, Andrew, Philadelphia, Pa. Gin	66,795	Dec. 31	131	2411
Garratt, John E., London, England. Certain exercising apparatus	66,875	Dec. 31	131	2413
Gavin, Joseph A., Buffalo, N. Y. Weekly publication	66,876	Dec. 31	131	2413
Gilbert, George W., Boston, Mass. Certain chemical	66,787	Dec. 31	131	2411
Goerg, Oscar P., East Chicago, Ind. Skin remedy	66,837	Dec. 31	131	2412
Goll Chemical Works, Bruno H., Chicago, Ill. Toilet cream	66,838	Dec. 31	131	2412
Gooderham & Worts Ltd., Toronto, Ontario, Canada. Whisky	66,796	Dec. 31	131	2411
H. B. Claflin Company, New York, N. Y. Soaps	66,860	Dec. 31	131	2413
H. E. Bucklen & Company, Chicago, Ill. Certain medicine	66,839	Dec. 31	131	2412
H. F. Brammer Manufacturing Company, Davenport, Iowa. Washing-machines for laundry purposes	66,840	Dec. 31	131	2412
Hale Publishing Co., St. Louis, Mo. Periodical	66,861	Dec. 31	131	2413
Harris, Henry H., Jacksboro, Tex. Remedy for rheumatism, neuralgia, and chills	66,841	Dec. 31	131	2412
Hartford Suspension Company, New York, N. Y. Frictional suspension devices	66,862	Dec. 31	131	2413
Haynes, Sparrell & Co., Boston, Mass. Leather boots and shoes	66,877	Dec. 31	131	2413
Hills, William, Jr., New York, N. Y. Figs	66,797	Dec. 31	131	2411
Hirschman & Co., A., St. Paul, Minn. Whisky	66,798	Dec. 31	131	2411
Homestead Valve Manufacturing Company, Homestead, Pa. Valves	66,824	Dec. 31	131	2412
Industry Publishing Company, Pittsburg, Pa. Magazine	66,863	Dec. 31	131	2413
J. G. Brill Company. (See J. G. Brill Company, assignor.)				
J. G. Brill Company, Philadelphia, Pa., assignor to The J. G. Brill Company. Sand-boxes for railway-cars	66,825	Dec. 31	131	2412
Jos. Mayer & Bros., Seattle, Wash. Certain precious-metal goods	66,878	Dec. 31	131	2413
Kahn, Arthur J., New York, N. Y. Linen thread for machine-sewing and lace-making	66,784	Dec. 31	131	2411
Kerr Brothers, Toronto, Ontario, Canada. Butter-scotch	66,799	Dec. 31	131	2411
L. Adler Bros. & Co., Rochester, N. Y. Coats, overcoats, vests, and trousers	66,879	Dec. 31	131	2413
Landesman Hirscheimer Company, Cleveland, Ohio. Ladies' cloaks, outer suits, and outer skirts	66,880	Dec. 31	131	2413
Libby, McNeill & Libby, Chicago, Ill. Corned beef and roast-beef	66,800	Dec. 31	131	2411
Lichterman & Judt, Brooklyn, N. Y. Tonics for rheumatism	66,842	Dec. 31	131	2412
Louis Bergdoll Brewing Company, Philadelphia, Pa. Lager-beer	66,864	Dec. 31	131	2413
M. Lindsay Rubber Manufacturing Company, New York, N. Y., and Washington, D. C. Certain surgical goods	66,881	Dec. 31	131	2413
Mansfield, Witham & Co., Lowell, Mass. Syrup	66,801	Dec. 31	131	2411
Marmola Company, Detroit, Mich. Obesity remedies	66,843	Dec. 31	131	2412
Massachusetts Saw Works, Chicopee, Mass. Nail-sets and punches	66,785	Dec. 31	131	2411
Master Soap Co., Boston, Mass. Soap	66,882	Dec. 31	131	2413
McKibbin, Driscoll & Dorsey, St. Paul, Minn. Coats	66,883	Dec. 31	131	2413
Miniotti, Peter P., New York, N. Y. Certain medicine	66,844	Dec. 31	131	2412
Miol Manufacturing Co., Limited, London, England. Certain medicine	66,845	Dec. 31	131	2412
Morgan & Wright, Detroit, Mich. Rubber hoof-pads	66,865	Dec. 31	131	2413
Morgan & Wright, Detroit, Mich. Hose and packing	66,889	Dec. 31	131	2414
Neuhaus Mfg. Co., Glen Rock, Pa. Wire screens and wire-screen doors	66,826	Dec. 31	131	2412
New England Gas & Coke Company, Boston and Everett, Mass. Coke	66,846	Dec. 31	131	2412
O'Bryan Bros., Louisville, Ky. Whisky	66,802	Dec. 31	131	2411
O'Bryan Bros., Louisville, Ky. Whisky	66,803	Dec. 31	131	2411
Offley, Forrester & Co., London, England. Port-wine	66,815	Dec. 31	131	2412
Pacific Coast Rubber Co., Seattle, Wash. Certain rubber goods	66,866	Dec. 31	131	2413
Pacific Coast Rubber Co., Seattle, Wash. Certain rubber goods	66,867	Dec. 31	131	2413
Pennsylvania Primo Feed Company, Harrisburg, Pa. Stock and poultry food	66,804	Dec. 31	131	2411
Piranio, Carlo T., Dallas, Tex. Carbonated beverage	66,884	Dec. 31	131	2413
Ramage, James S., Chicago, Ill. Tooth-soap	66,847	Dec. 31	131	2412
Records & Goldsborough, Baltimore, Md. Whisky	66,805	Dec. 31	131	2411
Regina Flour Mill Co., St. Louis, Mo. Wheat-flour	66,788	Dec. 31	131	2411
Regina Flour Mill Co., St. Louis, Mo. Wheat-flour	66,789	Dec. 31	131	2411
Reife, Harris, New York, N. Y. Antispasmodic expectorant sedative	66,848	Dec. 31	131	2412
Royal Grape Juice Co., Harrisburg, Pa. Unfermented grape-juice	66,885	Dec. 31	131	2413
Samurai Company, New York, N. Y. Certain toilet preparation	66,849	Dec. 31	131	2412
Schulze, Reinhard, Baltimore, Md. Furniture-polish	66,850	Dec. 31	131	2413
Sea Foam Baking Powder Co., New York, N. Y. Baking-powder	66,786	Dec. 31	131	2411
Seel, William E., Harrisburg, Pa. Whisky	66,806	Dec. 31	131	2411
Sharp & Dohme, Baltimore, Md. Muscular and nerve tonic	66,851	Dec. 31	131	2413
Smith & Egge Mfg. Co., Bridgeport, Conn. Locks and keys	66,816	Dec. 31	131	2412
Spaethe, Wilhelme, Gera, Germany. Accordions	66,886	Dec. 31	131	2414

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Stanley Rule & Level Company, New Britain, Conn. Planes	66,827	Dec. 31	131	2412
Stark-Tuscarawas Breweries Co., Canton, Ohio. Beer	66,808	Dec. 31	131	2413
Starlight Brothers, New York, N. Y. Cigars	66,887	Dec. 31	131	2414
Stein Brothers, Chicago, Ill. Whisky	66,807	Dec. 31	131	2411
Stevens-Duryea Company, Chicopee Falls, Mass. Automobiles	66,790	Dec. 31	131	2411
Taylor, Horace B., Philadelphia, Pa. Pills for female complaints	66,852	Dec. 31	131	2413
Thos. Harper & Sons Ltd., London, England. Certain needles	66,809	Dec. 31	131	2413
Vogt-Applegate Company, Louisville, Ky. Whisky	66,808	Dec. 31	131	2411
Waldo, Eugene L., New York, N. Y. Certain textiles	66,853	Dec. 31	131	2413
Wester Bros., New York, N. Y. Certain cutlery	66,854	Dec. 31	131	2413
Wheeler, Harriet P., New York, N. Y. Ladies' drawers manufactured from textile material	66,888	Dec. 31	131	2414
Wheeler, Harriet P., New York, N. Y. Ladies' knitted, netted, and lace drawers	66,891	Dec. 31	131	2414
Wiglesworth Bros. Co., Poindexter, Ky. Whisky	66,809	Dec. 31	131	2411

LABELS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Page.
Borden, W. E., Goldsboro, N. C. "Punch-I-Nello." (For Soft Drinks)	13,955	Dec. 31	131	2415
Bunte Brothers, Chicago, Ill. "Bunte Brothers." (For Chocolate)	13,956	Dec. 31	131	2415
Damascus Chemical Co., Butler, Pa. "Tanaline Cream Lotion." (For a Lotion for the Complexion)	13,958	Dec. 31	131	2415
Gutradt, Joseph, New York, N. Y. "Delightful." (For Scouring-Soap)	13,960	Dec. 31	131	2415
Kirkland & Co., Elmer E., Binghamton, N. Y. "Sinn Fein." (For Cigars)	13,954	Dec. 31	131	2415
Munson, James G., San Jose, Cal. "Munson's Ye-Ti-Va Remedy." (For Medicine)	13,959	Dec. 31	131	2415
Newark Billiard Ball & Mfg. Co., Newark, N. J. "The Grote Billiard Balls." (For Billiard-Balls)	13,962	Dec. 31	131	2415
Newark Billiard Ball & Mfg. Co., Newark, N. J. "The New Grote Pool Balls." (For Pool-Balls)	13,963	Dec. 31	131	2415
Royal Pure Food Co., Passaic, N. J., and New York, N. Y. "Royal Cake Icing." (For Cake-Icing)	13,957	Dec. 31	131	2415
Whitman, James T., Detroit, Mich. "Whitman's Kilrat Exterminator." (For a Rat-Exterminator)	13,961	Dec. 31	131	2415

PRINTS.

Name, residence, and title.	No.	Date.	Official Gazette. Vol.	Page.
Lytton, H. C., Chicago, Ill. "Men's and Boys' Apparel." (For Men's and Boys' Apparel)	2,188	Dec. 31	131	2415

TRADE-MARKS.

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Actien-Gesellschaft für Anilin-Fabrikation, Berlin, Germany. Remedy for urinary diseases	29,116	Dec. 31	131	2402
Alta Vista Creamery Company, Fort Worth, Tex. Ice-cream, ices, sherbets, and frozen custards	30,272	Dec. 31	131	2404
Amalgamated Gum Company, Troy, N. Y. Starch preparations	29,574	Dec. 31	131	2403
American Brewing Co., Indianapolis, Ind. Beer	30,948	Dec. 31	131	2406
American Dehydrating Company, Waukesha, Wis. Dehydrated vegetables and fruit	30,818	Dec. 31	131	2406
American-La France Fire Engine Co., Elmira, N. Y. Chemical-engines, fire-extinguishing apparatus, &c	31,179	Dec. 31	131	2405
American-La France Fire Engine Co., Elmira, N. Y. Fire-extinguishing apparatus	31,355	Dec. 31	131	2410
Armitage, S., London, England. Skin and cold cream and hair-lotions	30,435	Dec. 31	131	2405
Armstrong Mfg. Co., Bridgeport, Conn. Threading and cutting-off machines	31,255	Dec. 31	131	2409
Atlantic Paint Company, New York, N. Y. Mixed paints	30,554	Dec. 31	131	2405
Ault & Wiborg Co., Cincinnati, Ohio. Printing-ink	30,466	Dec. 31	131	2405
Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Indigo and indigo preparations, coal-tar dyes, &c	29,058	Dec. 31	131	2402
Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Dyestuffs	30,801	Dec. 31	131	2406
Becker Bros., Cincinnati, Ohio. Cigars, cigarettes, cheroots, stogies, and tobacco	30,152	Dec. 31	131	2404
Bellman & Co., A. B., Chicago, Ill. Preparations for the hair	30,362	Dec. 31	131	2404
Bird & Son, F. W., East Walpole, Mass. Roofing-paper	31,345	Dec. 31	131	2415

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Bisi, Emilia, executrix. (See Bisi, Ernesto.)				
Bisi, Ernesto, deceased; E. Bisi, Carnegie, Pa., executrix. Macaroni and vermicelli	31,308	Dec. 31	131	2410
Bowers, James, Essex Fells, N. J. Liquid-dispensing apparatus	30,638	Dec. 31	131	2405
Bridge & Beach Manufacturing Company, St. Louis, Mo. Stoves and ranges	31,124	Dec. 31	131	2408
Briggs Co., D. F., Attleboro, Mass. Chains for personal adornment	31,230	Dec. 31	131	2409
Buegeleisen & Jacobson, New York, N. Y. Mandolins, guitars, banjos, and their parts	31,263	Dec. 31	131	2409
C. Kern Brewing Co., Port Huron, Mich. Porter	23,946	Dec. 31	131	2401
Chandon et Co., Epernay, France. Champagne-wine	7,811	Dec. 31	131	2399
Chandon et Co., Epernay, France. Champagne-wine	24,607–10	Dec. 31	131	2401
Chemische Werke Hansa Gesellschaft mit beschränkter Haftung, Hemelingen, Germany. Soap	29,434	Dec. 31	131	2403
Chemische Werke Hansa Gesellschaft mit beschränkter Haftung, Hemelingen, Germany. Lubricating-oils and lubricants	29,435	Dec. 31	131	2403
Chillington Tool Co. Ld., Wolverhampton, England. Hoes, spades, shovels, picks, wedges, &c	23,753	Dec. 31	131	2401
Common Sense Gum Co., Boston, Mass. Chewing-gum	30,443	Dec. 31	131	2405
Cooper & Nephews, William, Berkhamsted, England. Dressing for mange in cattle, horses, and dogs	29,604	Dec. 31	131	2403
Cudahy Packing Co., Chicago, Ill., and Omaha, Nebr. Abrasive scouring-soap	31,291	Dec. 31	131	2410
De Vecchi, Pietro, Milan, Italy. Stomach tonics or bitters	20,268	Dec. 31	131	2400
Eagle Tool Co., Cincinnati, Ohio. Washing-machines	31,035	Dec. 31	131	2407
Engelhard, Theodor, Cassel, Germany. Cramp remedy for pigs	23,914	Dec. 31	131	2401
Ey Company, J., San Jose, Cal. Liquid hair-tonic	29,935	Dec. 31	131	2404
Faber, A. W., Stein, near Nürnberg and Berlin, Germany. Lead and colored pencils	20,480	Dec. 31	131	2401
Farmers Feed Company, New York, N. Y. Brewers' wet and dried grains	31,231	Dec. 31	131	2409
Flournoy and Johnson, Odessa, Mo. Remedy for hog and chicken cholera, gapes, thumps, &c	29,000	Dec. 31	131	2402
Foote and Jenks, Jackson, Mich. Perfumes	31,034	Dec. 31	131	2407
Frankenthal Brothers Company, New York, N. Y. Shirt and dress waists	31,033	Dec. 31	131	2407
Frederick Stearns & Co., Detroit, Mich. Remedies for indigestion and dyspepsia	30,714	Dec. 31	131	2405
Frye & Co., Jed, New York, N. Y. Canned fish	29,529	Dec 21	131	2403
Fulton Company, Knoxville, Tenn. Heat or temperature regulators	30,602	Dec. 31	131	2405
General Phonograph Supply Co., New York, N. Y. Talking-machines and supplies therefor	30,975	Dec. 31	131	2407
Geo. W. Torrey Company, Boston, Mass. Whisky	27,573	Dec. 31	131	2402
Gering, Martin, Gering, Nebr. Medical compounds containing iron	31,057	Dec. 31	131	2407
Greamba, George, Denver, Colo. Hair-restorative	31,147	Dec. 31	131	2408
Green, Frederick H., Muscatine, Iowa. Tonic laxatives	31,113	Dec. 31	131	2408
Greenhut & Company, New York, N. Y. Kid gloves	31,094	Dec. 31	131	2407
Grünthal, Julius, Berlin, Germany. Remedies for constipation	30,736	Dec. 31	131	2405
Heymann, William, New York, N. Y. Collars and cuffs made of celluloid, &c	31,038	Dec. 31	131	2407
Heywood Boot & Shoe Company, Worcester, Mass. Leather boots and shoes	31,234	Dec. 31	131	2409
Howell, Frank A., New York, N. Y. Sheet metal	26,947	Dec. 31	131	2402
Hulman & Co., Terre Haute, Ind. Sorghum and syrup	31,112	Dec. 31	131	2408
Hunter Brothers Milling Company, St. Louis, Mo., and Edwardsville, Ill. Wheat-flour	31,278	Dec. 31	131	2409
J. B. Williams Company, Glastonbury, Conn. Shaving and other toilet soaps	30,757	Dec. 31	131	2405
J. L. Brandeis and Sons, Omaha, Nebr. Hosiery	31,210	Dec. 31	131	2409
Janesville Barb Wire Company, Janesville, Wis. Wire fence	31,229	Dec. 31	131	2409
Jenkinson & Co., W. A., Jacksonville, Ill. Coffee	31,235	Dec. 31	131	2409
Johann Froeschels Lyra-Bleistiftfabrik, Nuremberg, Germany. Lead-pencils and oil-chalk crayons	14,601	Dec. 31	131	2400
Joseph F. McCoy Co., New York, N. Y. Wood rules	29,417	Dec. 31	131	2402
Kay Graham Co., Portsmouth, Ohio. Musical-instrument strings	30,158	Dec. 31	131	2404
Keystone Mfg. Co., Buffalo, N. Y. Ratchets for operating drills, taps, and wrenches	31,322	Dec. 31	131	2410
L. Frank Saddlery Co., San Antonio, Tex. Saddles, harness, horse-collars, whips, &c	29,546	Dec. 31	131	2403
L. Sonneborn Sons, Inc., New York, N. Y. Lubricating-oils, greases, and pastes	30,913	Dec. 31	131	2406
Lay, Harry, Kansas City, Mo. Hair-tonic	3,023	Dec. 31	131	2399
Lindenthal and Sons, H. M., Chicago, Ill. Coats, pants, vests, and overcoats	30,770	Dec. 31	131	2406
Lord & Taylor, New York, N. Y. Knitted underwear	30,313	Dec. 31	131	2404
Mangis, Luin F., Portland, Oreg. Washing-powder for laundry purposes	29,768	Dec. 31	131	2403
Mayer, M. & C., New York, N. Y. Knit hosiery and underwear	30,501	Dec. 31	131	2405
Miller Brothers, New York, N. Y. Nail-polishing paste	31,022	Dec. 31	131	2407
Mislig, Abraham, New York, N. Y. Cosmetic preparations	30,909	Dec. 31	131	2406
Mitedals Taendstikfabrik, Grönvoid in Östre Aker, near Christiania, Norway. Matches	24,181	Dec. 31	131	2401
Monarch Tile Co., Weston, W. Va. Glass tiles	30,130–1	Dec. 31	131	2404
Morse, Felicia V., Canton, Mass. Black lead, plumbago, graphite, and foundry-facings	22,277	Dec. 31	131	2401
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Hammers	14,614	Dec. 31	131	2400
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Augers, auger-bits, reamers, gimlets, &c	14,612	Dec. 31	131	2400
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Pliers, pincers, wrenches, and putty-knives	14,615	Dec. 31	131	2400
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Ice-skates	14,616	Dec. 31	131	2400
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Picks, grub-hoes, trowels, shovels, and spades	14,617	Dec. 31	131	2400
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Lawn-mowers	14,618	Dec. 31	131	2400
Norvell-Shapleigh Hardware Company, St. Louis, Mo. Boring-bit braces, screw-drivers, nail-sets, &c	14,628	Dec. 31	131	2400
Norwich Pharmacal Company, Norwich and New York, N. Y. Pills, granules, tablets, horse-balls, &c	19,859	Dec. 31	131	2400
Ohio Suspender Company, Mansfield, Ohio. Suspenders	30,996	Dec. 31	131	2407
Patton Paint Company, Milwaukee, Wis. Turpentine substitute	30,618	Dec. 31	131	2405
Peabody Coal Company, Chicago, Ill. Coal	29,951	Dec. 31	131	2404
Peace, Norman K., Sheffield, England. Machine lathe-tools, planing-tools, twist-drills, &c	19,386	Dec. 31	131	2400
Penn-Allen Portland Cement Co., Allentown, Pa. Portland cement	30,810	Dec. 31	131	2406
Perimutters, Jersey City, N. J. Gloves and cloaks	30,030	Dec. 31	131	2404
Philadelphia Drying Machinery Company, Philadelphia, Pa. Machinery for drying cotton stock, wool, hair, &c	31,282	Dec. 31	131	2409
Pierson & Hough Co., Detroit, Mich. Harness, horse-collars, and saddles	28,213	Dec. 31	131	2402
Prudential Worsted Company, Philadelphia, Pa. Textile worsteds	30,882	Dec. 31	131	2406
Robinson Bros. & Company, Incorporated, Portland, Me., and Malden, Mass. Medicinal and toilet cologne	31,193	Dec. 31	131	2408
Robinson Bros. & Company, Incorporated, Portland, Me., and Malden, Mass. Medicinal and toilet soap	31,195	Dec. 31	131	2408
Royal Solvent Co., New York, N. Y. Soaps	31,197	Dec. 31	131	2408
Shapleigh Coffee Company, Boston, Mass. Coffee and tea	31,151	Dec. 31	131	2408
Shapleigh Coffee Company, Boston, Mass. Coffee and tea	31,335–7	Dec. 31	131	2410
Shapleigh Coffee Company, Boston, Mass. Coffee and tea	31,390	Dec. 31	131	2410

TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

Name, residence, and title.	Serial No.	Date.	Official Gazette. Vol.	Page.
Smith & Son, H. E., Worcester, Mass. Leather boots and shoes	31,326	Dec. 31	131	2410
Snyder Med. Co., J. H., Jonesboro, Ark. Fever and headache powders, bitters, liniment, &c.	30,848	Dec. 31	131	2406
Standard Fuel Company, Birmingham, Ala. Artificial fuel	31,209	Dec. 31	131	2408
Stark-Tuscarawas Breweries Co., Canton, Ohio. Beer	31,020	Dec. 31	131	2407
Strohmeyer & Arpe Company, New York, N. Y. Salad, olive, cotton, &c., oil	30,331	Dec. 31	131	2404
Supplee Hardware Company, Philadelphia, Pa. Shovels, spades, scoops, and hammers	25,335	Dec. 31	131	2402
Supplee Hardware Company, Philadelphia, Pa. Hatchets and axes	25,336	Dec. 31	131	2405
Tanqueray Gordon & Co., Ltd., London, England. Orange bitters	31,074	Dec. 31	131	2407
Union Bag & Paper Company, New York, N. Y. Paper bags	29,411	Dec. 31	131	2402
Vereinigte Ultramarinfabriken Aktien-Gesellschaft vormals Leverkus, Zeltner & Consorten, in Köln am Rhein, Cologne-on-Rhine, Germany. Ultramarine blue	29,797	Dec. 31	131	2403
Victor Talking Machine Company, Camden, N. J. Recording and reproducing sound-boxes for talking-machines	25,713	Dec. 31	131	2402
W. T. Hanson Co., Schenectady, N. Y. Pills for diseases of the blood and nerves	13,354	Dec. 31	131	2399
Waldberg & Co., G. m b H., Berlin, Germany. Chemical nickel salt	23,919	Dec. 31	131	2401
Waterbury Chemical Company, Des Moines, Iowa. Face-lotions	2,072	Dec. 31	131	2399
Wheeler Manufacturing Co., Dallas, Tex. Massage and face cream	29,579	Dec. 31	131	2403
Whitman & Co., Clarence, New York, N. Y. Cotton piece goods	30,860	Dec. 31	131	2406
Witte, Conrad D., Cincinnati, Ohio. Chemical sweeping compound	29,394	Dec. 31	131	2402

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FOR WHICH

PATENTS WERE ISSUED ON THE 31ST DAY OF DECEMBER, 1907.

Invention.	Name.	No.	Date.	Monthly volume. Specification.	Drawing.	Official Gazette. Volume.	Page.
Absorbent material	W. R. Green	875,066	Dec. 31	5660	1181	131	2198
Acid. Purifying hydrochloric	L. B. Skinner	875,558	Dec. 31	6608	1382	131	2354
Acid. Succinyl-dioxytoluic	R. Berendes and J. Callsen	874,928	Dec. 31	5381	.....	131	2153
Acid. Succinyl-disalicylic	R. Berendes and J. Callsen	874,929	Dec. 31	5382	.....	131	2153
Adding-machine	W. F. Gatewood	875,423	Dec. 31	6355	1324–6	131	2311
Air and gas mixer	W. H. Hess	875,175	Dec. 31	5872	1224–5	131	2232
Air-brake	E. B. Powers	875,454	Dec. 31	6416	1339	131	2321
Alarm: *See* Burglar-alarm.							
Alarm-circuit	J. F. Bastel	875,491	Dec. 31	6485	1354	131	2333
Alarm device. Electrical	B. Menkin	875,091	Dec. 31	5712	1190–1	131	2206
Album	T. A. Macdonald	875,545	Dec. 31	6589	1377	131	2350
Animal-trap	H. J. Houtsinger	875,265	Dec. 31	6041	1260	131	2262
Annunciator. Time-limit	A. Sanders	875,112	Dec. 31	5746	1198	131	2213
Anthraquinone derivative	P. Thomaschewski	875,300	Dec. 31	6291	.....	131	2301
Antisiphon-trap	A. L. Bower	874,930	Dec. 31	5383	1125	131	2153
Aqueous solutions. Clarifying	J. A. Maignen	875,088	Dec. 31	5708	.....	131	2205
Arch or center. Collapsible	C. W. McDonald	875,551	Dec. 31	6597	1379	131	2352
Automatic brake	J. Lynch	875,543	Dec. 31	6585	1375–6	131	2349
Automobile frame member	M. W. Gartshore	875,254	Dec. 31	6021	1255	131	2259
Automobile-frames. Shaped iron or steel for	E. C. F. Verschave	875,018	Dec. 31	5571	1164	131	2163
Automobile-top bows. Holder for	S. D. Hunter	874,963	Dec. 31	5461	1142	131	2164
Automobile-train	A. De Luigi and C. Ramazzotti	875,508	Dec. 31	6521	1360	131	2338
Automobiles and like purposes. Reversible sign for	W. Schumacher	874,998	Dec. 31	5529	1154	131	2176
Axle. Car-	G. F. Price	875,455	Dec. 31	6418	1339	131	2322
Bag: *See* Feed-bag. Hand-bag.							
Bag machines. Cutting apparatus for filled-	C. McNeil and D. S. Seymour	875,670	Dec. 31	6657	1448–9	131	2392
Bag seaming, cutting, and conveying apparatus	C. McNeil and D. S. Seymour	875,589	Dec. 31	6678	1394–5	131	2364
Bag seaming, cutting, and conveying apparatus	C. McNeil and D. S. Seymour	875,590	Dec. 31	6680	1395–6	131	2365
Bag seaming, cutting, and delivering apparatus	C. McNeil and D. S. Seymour	875,591	Dec. 31	6681	1396	131	2365
Baker's peel	F. Nelson and D. A. Bye	875,451	Dec. 31	6411	1338	131	2320
Bale-tying attachment	J. Christensen	875,654	Dec. 31	6911	1440	131	2387
Baling-machine	W. S. Bryan	875,652	Dec. 31	6905	1439–40	131	2386
Baling-press	G. E. Jackson	875,271	Dec. 31	6050	1262–4	131	2264
Band-cutter and feeder	A. Mahlen	874,975	Dec. 31	5484	1146	131	2168
Bark from trees. Device for cutting	W. T. Tinsley	875,391	Dec. 31	6293	1312	131	2301
Basin-trap	A. M. Morrison	875,587	Dec. 31	6674	1393	131	2363
Basket-holder	G. S. Paine	875,452	Dec. 31	6412	1338	131	2321
Bath: *See* Horse's foot and leg bath.							
Battery: *See* Secondary or storage battery.							
Bearing. Adjustable	N. J. Theede	875,389	Dec. 31	6290	1311	131	2301
Bed	C. E. Kilbourne	875,184	Dec. 31	5893	1228–9	131	2236
Bed-canopy	L. E. Osborne	875,206	Dec. 31	5930	1236–7	131	2243
Bed-rest	N. P. Ellicott	875,335	Dec. 31	6191	1290	131	2283
Beet-blocker	L. F. Haynes	875,522	Dec. 31	6543	1364–5	131	2343
Beet-handling apparatus	D. L. Joehnck	875,529	Dec. 31	6559	1370	131	2345
Beet-puller	E. A. Smith	875,126	Dec. 31	5773	1205	131	2217
Bell	H. Koch	875,187	Dec. 31	5898	1229	131	2237
Belt	J. Askins	875,486	Dec. 31	6478	1353	131	2332
Belt. Conveyer-	H. C. Norton	874,982	Dec. 31	5495	1148	131	2170
Belt. Drive-	A. H. Gits	875,426	Dec. 31	6374	1328	131	2313
Blade-fastening	M. Rotter	875,629	Dec. 31	6855	1430	131	2378
Blade-fastening	N. C. Bassett	875,645	Dec. 31	6892	1437	131	2384
Blade-fastening	N. C. Bassett	875,646	Dec. 31	6894	1438	131	2384
Blade-fastening	N. C. Bassett	875,647	Dec. 31	6897	1438	131	2385
Blade-fastening	N. C. Bassett	875,648	Dec. 31	6898	1438	131	2385
Blade-fastening	N. C. Bassett	875,649	Dec. 31	6899	1438	131	2385
Blade-fastening	N. C. Bassett	875,650	Dec. 31	6901	1439	131	2386
Block: *See* Tackle-block.							
Block-signal apparatus	A. Bevan	875,313	Dec. 31	6130	1279–80	131	2275
Block-signal. Automatic electric	W. A. D. Short	875,120	Dec. 31	5764	1201–2	131	2215
Board: *See* Bulletin-board. Game-board.							
Bobbin-slotting machine	D. S. Courtney	875,327	Dec. 31	6173	1287	131	2280
Boiler: *See* Steam-boiler.							
Boiler-setting	F. D. Warren	875,475	Dec. 31	6460	1349–50	131	2328

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Boilers. Water-eliminator for steam-	J. Long	874,971	Dec. 31	5477	1144	131	2167
Bolster. Sham roll-	J. David	875,329	Dec. 31	6181	1288	131	2281
Bolster. Spring-	F. Helmick and T. B. Perkins	875,523	Dec. 31	6545	1365	131	2344
Bolt and nut lock	G. W. Ketteringham	875,438	Dec. 31	6392	1433	131	2317
Book-mark	L. B. Chadwick	875,502	Dec. 31	6511	1358	131	2337
Boot and shoe polishing machine	M. Schuppe	875,115	Dec. 31	5749	1199–1200	131	2214
Boots and shoes. Instep-supporter for	A. G. Gefvert	875,517	Dec. 31	6536	1363	131	2342
Bottle. Non-refillable	C. M. Conradson	875,157	Dec. 31	5836	1218	131	2227
Bottle. Nursing-	T. H. Cook	874,942	Dec. 31	5410	1130	131	2157
Bottle-scrubbing machine	W. Seidel	875,001	Dec. 31	5537	1156	131	2177
Bottle-stopper	E. M. Willis	875,397	Dec. 31	6311	1315	131	2303
Bottle-washing machine	G. W. Goehns	874,958	Dec. 31	5453	1140	131	2163
Bottles and the like. Carrying and setting-up machine for	H. J. Stiebel	875,009	Dec. 31	5550	1159–60	131	2179
Bow-rest	W. J. Decker	875,052	Dec. 31	5633	1176	131	2193
Box: *See* Coin-counting box. Collapsible box. Foldable box. Junction or connecting box. Knockdown box. Mail-box. Paper box. Powder-box.							
Box	C. C. Mengel	875,276	Dec. 31	6064	1266	131	2265
Box-setting-up machine	J. E. Erickson	875,164	Dec. 31	5845	1220–1	131	2229
Braiding-machine	A. Le Blanc	875,190	Dec. 31	5902	1230–1	131	2238
Brake: *See* Air-brake. Automatic brake.							
Brake and steering-knuckle. Combined	J. E. Landry	875,358	Dec. 31	6235	1301	131	2290
Brake-shoe	C. J. Egler	875,249	Dec. 31	6012	1254	131	2257
Branding or marking composition	J. Hauser	875,174	Dec. 31	5871	.....	131	2232
Brick, &c., and making same. Composition for	L. House	875,662	Dec. 31	6942	.....	131	2390
Brooder	L. C. Ellis	875,417	Dec. 31	6348	1323	131	2310
Brush. Fountain	A. Schnurmacher	875,464	Dec. 31	6439	1345	131	2325
Brush. Fountain marking and stencil	R. L. Short	875,005	Dec. 31	5544	1157	131	2178
Buckle. Trace-	E. A. and C. A. Garvey	875,422	Dec. 31	6353	1324	131	2311
Buffer and coupling. Central	G. E. Williamson	875,305	Dec. 31	6116	1276	131	2273
Building-construction clamp	G. Johnston	875,434	Dec. 31	6385	1331	131	2315
Building constructions. Clamping device for	H. E. White	875,396	Dec. 31	6309	1315	131	2303
Bulletin-board	C. H. Scammell	875,219	Dec. 31	5959	1241	131	2248
Buoy	T. M. Shank	875,003	Dec. 31	5542	1157	131	2178
Burglar-alarm	T. L. Willson	875,140	Dec. 31	5805	1211	131	2222
Burner: *See* Gas-burner.	U. Magni	875,197	Dec. 31	5915	1232	131	2241
Butter-fat. Extracting or obtaining	H. D. Cooke	875,325	Dec. 31	6169	.....	131	2279
Camphor from camphene, isoborneol, or other camphor-producing substances. Producing	C. Glaser	875,062	Dec. 31	5653	.....	131	2197
Can: *See* Milk-handling can. Oil-can.							
Can-capping machine	G. G. Glass	874,956	Dec. 31	5446	1139–40	131	2162
Can-cover clip	G. Ackermann	875,311	Dec. 31	6127	1278	131	2275
Can-marking machine	I. S. Merrell	875,092	Dec. 31	5714	1191	131	2206
Candy-dipping machine	A. Kunitz	875,189	Dec. 31	5900	1230	131	2238
Canoe-carriage	J. J. Ravaillier	875,210	Dec. 31	5938	1238	131	2245
Car-coupling	P. J. Dugan	875,330	Dec. 31	6182	1288–9	131	2281
Car-door	J. L. Severns and W. P. McDermott.	875,465	Dec. 31	6440	1345–6	131	2325
Car-fender	G. A. Parmenter	875,373	Dec. 31	6262	1306	131	2296
Car fender. Street-	M. Lund	875,541	Dec. 31	6582	1375	131	2340
Car-underframe	R. E. Frame	875,167	Dec. 31	5853	1222	131	2230
Car-unloading device	C. H. Smith	875,385	Dec. 31	6282	1310	131	2299
Car-ventilating device	G. W. Ruggles	875,290	Dec. 31	6095	1272	131	2269
Car-vestibule diaphragm	F. C. Arey	875,642	Dec. 31	6881	1436	131	2383
Carbid-feeding device	N. D. Shaffer	875,466	Dec. 31	6441	1346	131	2325
Carbon tetrachlorid. Refining	C. E. Acker	875,232	Dec. 31	5981	.....	131	2251
Carnations. Fastening device for split	A. J. Baur	875,236	Dec. 31	5987	1247	131	2253
Case: *See* Medicine-case.							
Cash-register	W. R. Helnitz	875,075	Dec. 31	5679	1184	131	2200
Cash-register	E. J. Hall	875,661	Dec. 31	6937	1446	131	2390
Cash-register	W. Murphy	875,669	Dec. 31	6954	1448	131	2392
Casting. Producing an alloy for use in steel-	M. Meslans	875,668	Dec. 31	6953	.....	131	2392
Centering and measuring instrument	A. Frank	875,341	Dec. 31	6201	1292	131	2285
Chain. Conveyer-	J. Dierdorff and W. W. Willson	875,247	Dec. 31	6009	1254	131	2256
Chain. Conveyer-	J. Dierdorff and W. W. Willson	875,248	Dec. 31	6011	1254	131	2257
Chairs. Ball-bearing for	I. E. Bedell	875,494	Dec. 31	6489	1355	131	2334
Chimney	C. Weber	875,395	Dec. 31	6308	1315	131	2303
China-kiln	J. C. Hinz	875,350	Dec. 31	6218	1296–7	131	2287
Chuck	J. H. Westcott	875,022	Dec. 31	5577	1165	131	2184
Chuck. Quick-acting brace-	M. A. Beard	875,493	Dec. 31	6488	1355	131	2334
Chute and controlling mechanism therefor for elevators, bins, and the like.	R. A. Ogle	875,283	Dec. 31	6083	1269	131	2267
Chute feeder. Coal-	A. C. Miley	875,447	Dec. 31	6405	1337	131	2319
Cigar-bunch structures. Producing	O. Hammerstein	875,071	Dec. 31	5672	1183	131	2199
Cipher. Apparatus for correspondence in	C. Haas and H. Studt	875,070	Dec. 31	5670	1183	131	2199
Clamp: *See* Building-construction clamp. Hose-clamp. Rope-clamp. Sash-clamp. Screw-clamp.							
Clamp	B. H. Meese	874,976	Dec. 31	5485	1146	131	2160
Clamping device	E. F. Glock	875,344	Dec. 31	6209	1295	131	2286
Clasp: *See* Cuff-holder clasp. Garment-supporter clasp. Garter-clasp. Hose-supporter clasp. Jewelry-clasp.							
Clasp	C. E. Peterson	875,102	Dec. 31	5729	1194	131	2209
Claw. Artificial	W. Grabowsky	875,346	Dec. 31	6213	1295	131	2286
Cleaner: *See* Knife-cleaner. Vacuum-cleaner.							
Cleaning implement	P. R. Cottrell	875,412	Dec. 31	6341	1321–2	131	2280

Invention.	Name.	No.	Date.	Monthly volume. Spec.	Monthly volume. Drg.	Official Gazette. Vol.	Official Gazette. Page.
Clip: *See* Can-cover clip.							
Clock. Electric	U. L. Collins	874,941	Dec. 31	5407	1130	131	2157
Clutch. Fluid-controlled	J. G. Leyner	875,192	Dec. 31	5907	1231	131	2239
Coal-tar pitch. Producing	J. F. Lovejoy	875,196	Dec. 31	5914	.....	131	2240
Coffee-mill	F. Bartz and F. A. Wygant	874,925	Dec. 31	5377	1124	131	2152
Coffee-mill receptacle	F. Bartz and F. A. Wygant	874,924	Dec. 31	5375	1124	131	2152
Coin-containing box	F. Stiebel	875,388	Dec. 31	6289	1311	131	2301
Coke-oven	A. O. Jones	875,436	Dec. 31	6387	1331–2	131	2315
Coke-oven and similar devices. Closure for	H. Koppers	875,356	Dec. 31	6293	1300	131	2290
Coke-oven-charging machine	A. Ernst	875,571	Dec. 31	6632	1387–8	131	2358
Collapsible box	H. T. Brown	875,409	Dec. 31	6330	1319–20	131	2307
Compound engine	D. Parrett	875,453	Dec. 31	6413	1338–9	131	2321
Compressor. Rotary blade-	C. Kohler	875,188	Dec. 31	5899	1230	131	2238
Computing-meter	W. E. Boyce	875,238	Dec. 31	5993	1249	131	2253
Concrete building construction. Reinforcing-frame for	M. L. Cooper	875,158	Jan. 7	5837	1218	131	2227
Concrete. Manufacture of bituminous	J. L. Rake and C. Richardson	875,288	Dec. 31	6092	.....	131	2269
Control system	H. D. James	875,663	Dec. 31	6943	1447	131	2390
Control system. Multiple-voltage	H. D. James	875,584	Dec. 31	6064	1391	131	2362
Conveying apparatus	T. S. Miller	875,199	Dec. 31	5918	1233–4	131	2241
Cooking or culinary utensil	L. J. Ellis	875,509	Dec. 31	6523	1360	131	2339
Cooking vessels. Audible alarm for electric	J. I. Ayer	875,310	Dec. 31	6126	1278	131	2275
Copper and other metals from roasted pyrites. Extraction of	A. Tixier and C. Tortel	875,012	Dec. 31	5560	.....	131	2181
Copper-refining apparatus	F. L. Antisell	875,641	Dec. 31	6880	1436	131	2382
Copy-holder	J. Gramelspacher	875,170	Dec. 31	5860	1223	131	2231
Core and casting	R. Milne	875,448	Dec. 31	6407	1337	131	2320
Core-box-filling apparatus	E. E. Witham	875,226	Dec. 31	5976	1245	131	2250
Core. Collapsible	G. F. McKee and W. F. Schilling	875,097	Dec. 31	5723	1192	131	2208
Cork-puller	H. Clark	875,323	Dec. 31	6166	1286	131	2278
Corn-popper	G. B. and J. H. Young	875,483	Dec. 31	6472	1352	131	2331
Cot or divan. Folding	B. McIntosh	875,450	Dec. 31	6410	1337	131	2320
Counting-machine	J. M. Johnson	875,585	Dec. 31	6666	1391–2	131	2363
Counting mechanism	H. Aron	875,037	Dec. 31	5610	1171	131	2189
Coupling: *See* Car-coupling. Lubricated coupling. Pipe-coupling. Rail and tie coupling. Toy-car coupling.							
Cranes. Clutch arrangement for traveling	A. H. McDougall	875,367	Dec. 31	6250	1304	131	2293
Crate. Banana-	C. Howe and H. H. Eldredge	875,266	Dec. 31	6043	1260	131	2262
Crate. Knockdown	J. F. Schoeppl	874,996	Dec. 31	5525	1153	131	2175
Crate structure	E. F. Hulbert	875,267	Dec. 31	6044	1261	131	2262
Cribs. Clothes-fastener for	W. F. Lazaro	875,359	Dec. 31	6237	1301	131	2290
Crusher: *See* Stone-crusher.							
Cuff-holder clasp	S. G. Smith	875,006	Dec. 31	5545	1158	131	2178
Cultivator-shovel	P. Priess	875,456	Dec. 31	6419	1340	131	2322
Cultivator. Wheeled	S. D. Poole and J. Kiel	874,988	Dec. 31	5507	1150	131	2172
Cultivators. Spring-trip for	L. Reeves and G. K. Gilchrist	875,211	Dec. 31	5940	1238	131	2245
Curb-protector	S. Whinery	875,025	Dec. 31	5553	1166	131	2185
Current motor. Alternating-	D. C. Jackson	875,179	Dec. 31	5882	1226	131	2234
Curtain-fixture	G. A. Miller	875,365	Dec. 31	6248	1303	131	2293
Curtain-stretcher	M. W. Hearn	875,261	Dec. 31	6035	1259	131	2260
Curtain-stretcher	H. A. Schwarz	875,292	Dec. 31	6098	1272–3	131	2270
Cut-off. Automatic	F. Hoelder and C. J. Welzin	875,264	Dec. 31	6040	1260	131	2262
Cutlery-glazing machine	J. G. Blessing	875,237	Dec. 31	5988	1248–9	131	2253
Cutter: *See* Band-cutter. Paper-cutter.							
Cutting-machine	C. von Philp	875,103	Dec. 31	5729	1194–5	131	2209
Cutting-tool	J. W. Eckley	875,334	Dec. 31	6189	1290	131	2282
Desiccating apparatus	M. W. Barse	875,405	Dec. 31	6323	1318	131	2306
Desks. Folding joint for school-	J. F. Field	875,251	Dec. 31	6015	1255	131	2257
Detinning and producing tin compounds and other products.	E. A. Sperry	875,632	Dec. 31	6860	1431–2	131	2379
Directory. Telephone-	A. Weinraub	875,478	Dec. 31	6464	1351	131	2329
Disinfecting, antiseptic, and other purposes. Composition for.	L. H. Reuter	875,380	Dec. 31	6272	.....	131	2298
Distillation. Apparatus for wood	G. B. Frankforter	875,342	Dec. 31	6202	1293	131	2285
Door-fastener	M. J. Flannery	875,572	Dec. 31	6634	1388	131	2358
Door-holder	T. C. Scheld	875,114	Dec. 31	5749	1199	131	2213
Door-mat	E. W. Crulkshank	875,568	Dec. 31	6627	1386	131	2357
Door. Warehouse-	J. G. Wilson	875,306	Dec. 31	6117	1276–7	131	2273
Draw-bar hook. Auxiliary	B. Burgess	875,319	Dec. 31	6154	1284	131	2277
Dredge-pipe. Rifle	G. Dickson and M. McKinnon	875,414	Dec. 31	6345	1322	131	2309
Drier: *See* Stocking-drier.							
Drying apparatus	G. W. McMullen	875,368	Dec. 31	6252	1304–5	131	2294
Dumping-bucket	J. Hamilton	875,520	Dec. 31	6541	1364	131	2343
Dye. Greenish-black azo	W. König	874,967	Dec. 31	5469	.....	131	2166
Dye. Violet-black azo	W. König	874,968	Dec. 31	5470	.....	131	2166
Dyeing apparatus	F. N. Patterson	875,551	Dec. 31	6600	1379	131	2352
Easel	W. D. Smith	875,220	Dec. 31	5961	1242	131	2248
Egg-opener	F. Fleischmann	875,419	Dec. 31	6350	1323	131	2310
Elastic webbing	S. Kops	875,439	Dec. 31	6393	1433	131	2317
Electric cables. Carriage for conveying drums of	W. A. Turner	875,013	Dec. 31	5561	1161–2	131	2181
Electric controller	J. Ledwinka	875,536	Dec. 31	6571	1373	131	2347
Electric heater	A. Voelker	875,394	Dec. 31	6307	1314	131	2302
Electric-light hanger. Adjustable	J. McGavin	875,280	Dec. 31	6073	1267	131	2267
Electric machine. Hydro-	H. E. Fry	875,059	Dec. 31	5649	1178	131	2196
Electric motor	D. C. Jackson	875,178	Dec. 31	5878	1226	131	2234
Electric regulation	M. Moskowitz	875,205	Dec. 31	5928	1236	131	2243
Electric switch	J. J. Wood	875,029	Dec. 31	5590	1167	131	2180
Electric time-switch	J. C. Van Slyke	875,017	Dec. 31	5569	1163	131	2182
Electrolytic receiver	F. C. Pickett	875,105	Dec. 31	5733	1195	131	2210
Elevator: *See* Ice-elevator.							
Elevator-boot	C. Bradford	875,145	Dec. 31	5812	1213	131	2223
Embroidery machine. Scalloping-	W. N. Parkes	875,628	Dec. 31	6847	1428–30	131	2378

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Emulsion of oil and the like	O. A. H. H. Kösters	875,665	Dec. 31	6048		113	2391
Engine:							
See Compound engine. Oil-engine. Gas-engine. Rotary engine. Gasolene-engine. Steam-engine. Hoisting-engine. Internal-combustion engine.							
Engine construction. Traction	W. H. Colean	875,324	Dec. 31	6167	1286	131	2273
Engine exhaust-control mechanism. Gas	E. C. Maddox	874,974	Dec. 31	5483	1145	131	2168
Engine regulating device. Internal-combustion	O. Podhajsky	875,378	Dec. 31	6268	1306	131	2297
Engine sparking mechanism. Explosion	L. A. Gianoli	874,955	Dec. 31	5445	1138	131	2162
Engines. Dust-protector for traction	S. Hughes	874,962	Dec. 31	5459	1141	131	2164
Engines. Induction-coil and box for explosion	R. Varley	875,472	Dec. 31	6454	1348	131	2327
Engines. Magneto igniting device for explosive	H. de La Valette	875,534	Dec. 31	6568	1372	131	2346
Eraser-cleaning apparatus. Blackboard	S. M. Case	874,937	Dec. 31	5394	1127	131	2155
Excavator	C. A. Frayer	875,420	Dec. 31	6351	1324	131	2310
Exercise-bat	C. E. Kimble	875,273	Dec. 31	6060	1265	131	2265
Extractor:							
See Honey-extractor.							
Eyeglass nose-guard	L. F. Adt	875,233	Dec. 31	5982	1246	131	2252
Farm-gate	W. A. Crawford	875,326	Dec. 31	6171	1286	131	2279
Feed-bag	H. E. Locke and W. A. Scott	875,194	Dec. 31	5912	1232	131	2240
Feeding apparatus. Stock	E. McGlinchay	874,980	Dec. 31	5493	1147	131	2170
Fence-machine	R. Kirkwood and J. W. Kimberling.	875,185	Dec. 31	5894	1229	131	2237
Fence-post	C. S. Beebe	875,039	Dec. 31	5614	1172	131	2189
Fence-wire tightener	H. Broome and C. J. Bowlus	874,934	Dec. 31	5388	1126	131	2155
Fencing-machine	W. B. Sorrells	875,559	Dec. 31	6609	1382	131	2354
Fender:							
See Car-fender. Vehicle-fender. Grate-fender.							
Ferrovanadium. Producing	E. F. Price	875,208	Dec. 31	5923		131	2244
Fertilizer-distributer	O. T. Little	875,539	Dec. 31	6579	1374	131	2348
Fertilizer-distributer	J. R. Ayers	875,564	Dec. 31	6616	1384	131	2355
Fiber strands. Machine for making	W. R. Green	875,067	Dec. 31	5662	1151–2	131	2198
Filing device. Credit-account	W. Eagrett	875,054	Dec. 31	5636	1176	131	2194
Filter medium	E. M. Knight	875,355	Dec. 31	6232	1300	131	2289
Finish-remover	C. Ellis	875,416	Dec. 31	6347		131	2309
Fire-box door	W. D. Westbrook	875,021	Dec. 31	5576	1165	131	2184
Fire-escape	R. Watson and C. E. Stevenson	875,227	Dec. 31	5974	1245	131	2250
Fire-extinguisher system. Bucket-and-tank	A. C. Rowe	875,289	Dec. 31	6093	1271	131	2269
Firearm. Automatic	C. L. H. Prinke	875,209	Dec. 31	5934	1237	131	2244
Fireproof stair structure	E. E. Schachner	875,113	Dec. 31	5747	1198	131	2213
Flooring	F. Burchartz	875,318	Dec. 31	6152	1284	131	2277
Flowers, &c. Portable stand for	J. F. Bastel	875,235	Dec. 31	5985	1247	131	2252
Fluid-pressure system	W. J. Richards. (Reissue)	12,737	Dec. 31	6978	1482	131	2395
Flush-tank	W. L. Reed	875,457	Dec. 31	6420	1340	131	2222
Foldable box	J. E. Turton, Jr., and J. T. Henshaw.	875,014	Dec. 31	5563	1162	131	2181
Folding table and receptacle. Combined	J. E. Loftin	875,195	Dec. 31	5912	1232	131	2240
Forging in dies. Apparatus for	E. Lelong	875,443	Dec. 31	6399	1334	131	2318
Formaldehyde. Gene rating	A. Eichengrün	875,415	Dec. 31	6346		131	2309
Formates. Making	C. Ellis and K. P. McElroy	876,055	Dec. 31	5640	1177	131	2194
Frame:							
See Shovel A-frame. Truck side frame.							
Fuel-feeding device	J. W. Ormsby	875,371	Dec. 31	6258	1306	131	2295
Furnace:							
See Granular furnace. Portable furnace. Heating-furnace.							
Gage:							
See Knife-setting gage.							
Gage	M. D. Brown	875,045	Dec. 31	5623	1173–4	131	2191
Game apparatus	H. C. Loudon	875,065	Dec. 31	5702	1189	131	2204
Game-board	T. H. Youngman	875,230	Dec. 31	5979	1246	131	2251
Garment-supporter clasp	J. Maltby and J. J. Buchanan	875,089	Dec. 31	5709	1190	131	2205
Garter-clasp	W. C. Finney	875,418	Dec. 31	6348	1323	131	2310
Gas-burner	E. Ruud	875,218	Dec. 31	5958	1240	131	2247
Gas burner. Acetylene and like	K. Thurnauer	875,301	Dec. 31	6110	1275	131	2272
Gas-engine	J. B. Hoover	875,077	Dec. 31	5682	1185	131	2201
Gas-generator	W. Kirkwood	875,186	Dec. 31	5896	1229	131	2237
Gas generator. Acetylene	T. F. Little	874,970	Dec. 31	5475	1143	131	2166
Gas generator. Acetylene	F. E. Stover and C. L. Darnall	875,468	Dec. 31	6448	1347	131	2326
Gas-generators. Means for automatically regulating the supply of oil to	H. C. Hanson	875,173	Dec. 31	5870	1224	131	2232
Gas-lighter	C. C. Hartley	875,348	Dec. 31	6215	1296	131	2287
Gas-meter	J. R. Armstrong	875,485	Dec. 31	6476	1353	131	2332
Gas-regulator. Automatic	D. H. Kent	875,183	Dec. 31	5892	1228	131	2236
Gasolene-engine	G. W. Stanley	875,297	Dec. 31	6104	1274	131	2271
Gate:							
See Farm-gate.							
Gate	J. H. Wilson	875,399	Dec. 31	6313	1316	131	2304
Gear. Variable-speed and reversing	J. Worthington	875,401	Dec. 31	6317	1317	131	2304
Gearing. Power-transmission	V. D. Munger	874,978	Dec. 31	5488	1146	131	2169
Generator:							
See Gas-generator.							
Glass caskets, bath-tubs, or similar articles. Mold for	J. Bonshire and J. M. Stafford	875,567	Dec. 31	6024	1386	131	2357
Goods-handler	J. C. Hoover	875,078	Dec. 31	5683	1186	131	2201
Grain-conveyer	E. J. Vraalstad	875,225	Dec. 31	5972	1244	131	2250
Grain-treating apparatus	C. P. Thompson	875,635	Dec. 31	6868	1433	131	2380
Granular furnace	H. N. Potter	875,284	Dec. 31	6085	1270–1	131	2268
Grasshopper-destroying machine	B. Francisco	875,514	Dec. 31	6332	1362	131	2341
Grate-fender	M. J. Adams	875,403	Dec. 31	6320	1318	131	2305
Grinding-mill and pulverizer	J. W. Boileau	875,143	Dec. 31	5810	1213	131	2223
Gun. Gas	W. S. Franklin	874,952	Dec. 31	5439	1137	131	2161
Gun hand-protector	P. North	874,981	Dec. 31	5494	1147	131	2170
Gun-sight. Removable	J. B. Uren and A. W. A. Phair	875,016	Dec. 31	5568	1163	131	2182
Gynecological sling	M. C. Burrus	875,046	Dec. 31	5625	1174	131	2192
Gyroscope	N. Ach	875,036	Dec. 31	5604	1170	131	2188
Hair-clipping device	I. N. Brigham	874,932	Dec. 31	5386	1125	131	2154

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Hand-bag	G. T. Willis	875,398	Dec. 31	6312	1315	131	2303
Handle:							
See Scoop-handle. Tool-handle. Switch-handle.							
Hanger:							
See Electric-light hanger. Pipe-hanger. Sash-hanger.							
Harness	R. T. Cummings	875,051	Dec. 31	5632	1176	131	2193
Harrow	J. W. Wandell	875,474	Dec. 31	6458	1349	131	2328
Harvester attachment. Bean	G. E. Lewis	875,275	Dec. 31	6063	1265	131	2265
Harvester. Pea	J. F. Wheeler	875,024	Dec. 31	5581	1165–6	131	2185
Hat and coat rest	A. J. Le Messurier	875,537	Dec. 31	6577	1373	131	2348
Heater:							
See Electric heater. Water-heater.							
Heater	C. T. Bride	875,044	Dec. 31	5623	1173	131	2191
Heating and ventilating system	E. W. Woods	875,400	Dec. 31	6315	1316–17	131	2304
Heating apparatus. Hot-water	A. B. Reck	875,107	Dec. 31	5735	1196	131	2211
Heating apparatus. Steam and water	E. S. Manny	875,362	Dec. 31	6242	1302	131	2291
Heating-furnace. Continuous	J. Reuleaux	875,458	Dec. 31	6421	1340–1	131	2322
Heating-furnace. Continuous	J. Reuleaux	875,459	Dec. 31	6423	1341–2	131	2323
Heating system	S. V. Sharood	875,119	Dec. 31	5762	1201	131	2215
Heating system	A. McGonagle	875,449	Dec. 31	6408	1337	131	2320
Heddle-manufacturing machine	W. Fehr	875,059	Dec. 31	6021	1442–6	131	2389
Heel-attaching machines. Top-lift or heel holder for	J. W. Baddock	874,921	Dec. 31	5370	1123	131	2151
Hides and skins. Bating	O. Röhm	875,382	Dec. 31	6277		131	2299
Hinge	W. R. Corbin	875,242	Dec. 31	6003	1252	131	2255
Hoisting apparatus. Pivotal head for	W. H. Arnold	875,563	Dec. 31	6614	1383	131	2355
Hoisting-engine. Compound-geared friction	J. P. Karr and J. D. Rauch	875,532	Dec. 31	6565	1371	131	2346
Hollow ware. Producing enamel-lined articles of	E. B. and C. R. Manning	875,667	Dec. 31	6851	1448	131	2391
Honey-extractor	C. G. Luft	875,086	Dec. 31	5703	1189	131	2204
Hook:							
See Draw-bar hook. Lace-hook.							
Hook and eye	C. H. Gaskins and W. H. Keiser	875,255	Dec. 31	6022	1256	131	2259
Horse's foot and leg bath	H. R. O'Brian and J. R. Coulter	874,983	Dec. 31	5496	1148	131	2171
Horseshoe	M. Gates	875,257	Dec. 31	6025	1257	131	2259
Hose-clamp	H. A. Wahlert	875,019	Dec. 31	5573	1164	131	2183
Hose-supporter clasp	H. Binney	875,142	Dec. 31	5806	1212	131	2223
Ice-elevator. Automatic	W. H. Lynch	875,544	Dec. 31	6586	1376	131	2349
Impact-wheels. Bucket for	W. A. Doble	875,161	Dec. 31	5841	1219	131	2226
Incandescent mantle	G. J. Seckel	875,118	Dec. 31	5762	1201	131	2213
Incubator	G. L. Scott	875,557	Dec. 31	6606	1381	131	2353
Indicator:							
See Street-indicator.							
Ink-well	H. G. Campbell	875,148	Dec. 31	5817	1214	131	2224
Inking apparatus	R. T. Johnston	875,079	Dec. 31	5685	1186	131	2202
Insect-cremator	S. F. Snyder	875,221	Dec. 31	5962	1242	131	2248
Insulated rail-joint	A. Morrison	875,204	Dec. 31	5926	1236	131	2243
Internal-combustion engine	G. J. Altham	874,920	Dec. 31	5369	1123	131	2151
Jewelry-clasp	G. Godley	874,957	Dec. 31	5453	1140	131	2162
Joint:							
See Insulated rail-joint. Riveted joint. Rail-joint.							
Journal-box lid	C. D. Whiting	875,026	Dec. 31	5584	1166	131	2185
Junction or connecting box	J. A. McCoy	875,279	Dec. 31	6071	1267	131	2266
Kiln:							
See China-kiln.							
Knife:							
See Welt-slitting-machine knife.							
Knife-cleaner	J. Brown	874,935	Dec. 31	5390	1127	131	2155
Knife-setting gage	C. H. West	875,479	Dec. 31	6465	1351	131	2329
Knockdown box	A. N. Miller	875,548	Dec. 31	6584	1378	131	2351
Lace and fastener. Shoe	P. M. Chartres	875,152	Dec. 31	5824	1216	131	2225
Lace hook. Shoe	O. H. Eliel	875,570	Dec. 31	6630	1387	131	2358
Lamp filaments. Machine and apparatus for manufacturing electric-incandescent	F. M. F. Cazin	874,938	Dec. 31	5395	1128	131	2156
Lamp fixture. Incandescent	J. Stubbers	875,634	Dec. 31	6866	1432	131	2380
Lamp for burning carbureted air	F. W. Suter	875,010	Dec. 31	5553	1160–1	131	2180
Lamp. Incandescent electric	C. L. R. E. Menges	874,977	Dec. 31	5486		131	2169
Lamp-socket	W. R. Lambert	875,357	Dec. 31	6234	1300	131	2290
Last	W. E. Trufant	875,136	Dec. 31	5798	1210	131	2221
Lawn-shears	F. C. Brown	875,240	Dec. 31	6000	1251	131	2254
Leather-dressing. Liquid	G. W. Childs	875,653	Dec. 31	6911		131	2387
Leather-skiving machines. Feed-roll for	A. Hirth	875,528	Dec. 31	6558	1369	131	2345
Legging	M. Rosenwasser	875,555	Dec. 31	6602	1380	131	2353
Letter-sheet	C. M. Tubbs	875,636	Dec. 31	6869	1433	131	2380
Level and gage. Combined spirit	T. D. Rowan	875,462	Dec. 31	6432	1344	131	2324
Level and square	C. J. Cramer	875,243	Dec. 31	6004	1252	131	2255
Levers. Adjusting-gage for	E. C. Mershon	875,364	Dec. 31	6246	1303	131	2292
Lifter:							
See Transom-lifter.							
Limb. Artificial	W. G. Wyatt	875,482	Dec. 31	6471	1352	131	2330
Liquid-feeding device	J. F. Smith	875,295	Dec. 31	6102	1273	131	2271
Loader. Shock	J. W. Laverence	875,535	Dec. 31	6569	1372	131	2347
Loader. Shock and hay	F. Forman	874,950	Dec. 31	5436	1136	131	2160
Loading device. Conveyer	J. L. Wilson	875,307	Dec. 31	6119	1277	131	2274
Loading-machine	T. N. Carter	875,150	Dec. 31	5822	1215	131	2225
Loading machine. Earth	A. Meierhoff and H. C. Beckmann	875,445	Dec. 31	6401	1335–6	131	2319
Lock:							
See Bolt and nut lock. Sash-lock. Nut-lock. Seal-lock. Nut and screw-bolt lock.							
Lock	A. Schmidtke	875,291	Dec. 31	6097	1272	131	2209
Lock and latch	N. B. Hurd	875,177	Dec. 31	5876	1225	131	2233
Locking device	J. P. Geraghty	875,576	Dec. 31	6639	1389	131	2360
Locomotive-cinder-collecting attachment	J. Speier	875,223	Dec. 31	5969	1243	131	2249
Log-skidding machine	J. R. McGiffert	875,096	Dec. 31	5720	1192	131	2208
Loom stop-motion	F. Pick	875,104	Dec. 31	5732	1195	131	2210
Loom thread-parting mechanism	A. E. Rhoades	875,461	Dec. 31	6430	1343	131	2324
Lubricated coupling	R. A. McKee	875,588	Dec. 31	6676	1394	131	2364
Lubricator	W. N. Durant	875,657	Dec. 31	6919	1441	131	2388

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Magnet. Field-	W. D. Pomeroy	875,207	Dec. 31	5032	1237	131	2244
Mail-box	C. M. Hartwell	875,073	Dec. 31	5674	1184	131	2200
Mail-cabinet	C. W. Moore	875,366	Dec. 31	6249	1303	131	2293
Marking-pin	W. W. Morrell	875,094	Dec. 31	5717	1191	131	2207
Mask. Catcher's	A. C. Ferry	875,337	Dec. 31	6194	1291	131	2283
Mat: *See* Door-mat. Table-mat.							
Measurer. Distance and angle	J. M. Kauffmann	875,437	Dec. 31	6389	1332–3	131	2316
Measuring and drafting device. Garment	M. C. Pelton	875,554	Dec. 31	6601	1380	131	2352
Measuring device	D. E. Conlon	875,050	Dec. 31	5631	1175	131	2193
Measuring device. Liquid-	A. E. Thomson	875,470	Dec. 31	6451	1347	131	2327
Measuring device. Rotary	H. V. Johnson	875,181	Dec. 31	5886	1227	131	2235
Mechanical movement	M. H. Richardson	874,994	Dec. 31	5522	1152	131	2175
Mechanical movement	G. Brenner	874,931	Dec. 31	5384	1125	131	2154
Medicine-case	M. John	875,180	Dec. 31	5885	1227	131	2234
Metal-drawing machine	J. Bristow, Jr.	874,933	Dec. 31	5387	1126	131	2154
Metal. Expanded	G. W. Frohlich	874,953	Dec. 31	5441	1137–8	131	2161
Metal. Expanded	N. E. Clark	875,154	Dec. 31	5829	1217	131	2226
Metal-working machine	N. E. Clark	875,155	Dec. 31	5830	1217	131	2226
Meter: *See* Computing-meter. Gas-meter.	N. E. Clark	875,153	Dec. 31	5828	1216–17	131	2225
Meters. Switch for electric	J. J. Wood	875,030	Dec. 31	5592	1167	131	2186
Military equipment	A. J. Davey	874,945	Dec. 31	5420	1133	131	2158
Milk-handling can	W. Seidel	875,000	Dec. 31	5535	1155	131	2176
Milking-machine	A. H. Loqvist	874,972	Dec. 31	5478	1144–5	131	2167
Mill: *See* Coffee-mill. Grinding-mill.							
Mills. Resilient connection for pendulum-	H. Behr	874,926	Dec. 31	5379	1125	131	2153
Mine-roof support	F. C. Keighley	875,182	Dec. 31	5889	1227	131	2235
Mining-machine	H. Specht	875,296	Dec. 31	6103	1274	131	2271
Mixer: *See* Air and gas mixer.							
Mixing apparatus	C. Mastain and A. Delfosse	875,444	Dec. 31	6400	1336	131	2318
Mixing-machine	M. H. Avram	875,254	Dec. 31	5983	1246–7	131	2252
Moistener	M. A. Metzner	875,546	Dec. 31	6591	1377	131	2350
Mold: *See* Sewer-mold.							
Mop-head	H. M. Sturgeon	875,299	Dec. 31	6107	1275	131	2272
Motor: *See* Current-motor. Electric motor. Pneumatic motor. Rotating motor. Wave-motor.							
Motor control. Electric-	H. D. James	875,583	Dec. 31	6660	1391	131	2362
Motor control. Multiple-voltage system of	W. H. Powell	874,990	Dec. 31	5512	1151	131	2173
Motor-control system. Electric-	H. D. James	875,582	Dec. 31	6656	1390	131	2362
Motors. Exhaust-silencer for gas-	A. Weber	875,581	Dec. 31	6651	1389	131	2361
Mowers. Grass-catcher for lawn-	D. Fergesen	875,303	Dec. 31	6114	1276	131	2273
Mowing-machine	M. Jewell	875,056	Dec. 31	5643	1177	131	2195
Music-stands and the like. Sheet-holder for	C. H. French	875,353	Dec. 31	6225	1298–9	131	2289
Musical instrument. Self-playing	L. B. Doman	875,421	Dec. 31	6352	1324	131	2311
Musical instruments. Take-up roll for automatic	M. Clark	875,656	Dec. 31	6917	1441	131	2388
Nail-driving tool	S. F. Dutton	875,505	Dec. 31	6517	1359	131	2338
Necktie	C. W. T. Davies	875,658	Dec. 31	6921	1441	131	2389
Needle-threading machine	H. E. Noon	875,246	Dec. 31	6008	1253	131	2256
Nut and screw-bolt lock	A. D. Gaston	875,282	Dec. 31	6075	1268–9	131	2267
Nut-lock	H. J. Berkley	875,168	Dec. 31	5854	1222	131	2230
Nut-lock	D. Verna	875,141	Dec. 31	5807	1212	131	2222
Oil-can	F. D. Borland	875,561	Dec. 31	6611	1382	131	2355
Oil-engine	O. Gassett	875,316	Dec. 31	6148	1283	131	2276
Ophthalmometer	E. B. Meyrowitz	875,256	Dec. 31	6023	1256	131	2259
Optical tool	G. F. Schofield	875,278	Dec. 31	6068	1266–7	131	2266
Ore desulfurizing and agglomerating furnace	A. J. Dull and J. Weatherby, Jr	875,383	Dec. 31	6278	1309	131	2299
Ores and matter. Extracting metallic	E. Günther and R. Franke	875,331	Dec. 31	6184	1289	131	2281
Ores and the subsequent separation of the liquids from the solids. Appratus for leaching	J. H. Gillies	875,249	Dec. 31	6028	.....	131	2260
Ores by the precipitation process. Metallurgical treatment of sulfurous	A. H. Imbert	875,425	Dec. 31	6370	1327–8	131	2312
Ores containing zinc and other volatilizable metals. Treating complex	G. M. Rice	875,579	Dec. 31	6648	.....	131	2361
Ores. Desulfurizing and agglomerating comminuted	A. J. Dull and J. Weatherby, Jr	875,381	Dec. 31	6274	1309	131	2298
Oven. Collapsible warming-	W. E. Sloan	875,332	Dec. 31	6186	1289–90	131	2282
Overseaming-machines. Presser-foot for	R. G. Woodward	875,124	Dec. 31	5771	1204	131	2216
Overshoe-retainer	R. F. Fraizer	875,640	Dec. 31	6878	1435	131	2382
Package-fastener	P. R. Le Boeuf	874,951	Dec. 31	5438	1137	131	2161
Packing. Piston-rod	R. E. L. Martin	875,442	Dec. 31	6397	1334	131	2318
Packing. Pump piston-	J. J. McGee	875,363	Dec. 31	6244	1302	131	2292
Packing. Rod-	O. J. Garlock	875,095	Dec. 31	5718	1192	131	2207
Packing. Shaft-	F. Samuelson	875,574	Dec. 31	6637	1389	131	2349
Paint-removers. Applying	C. Ellis	874,995	Dec. 31	5524	1153	131	2175
Pan: *See* Roasting-pan.		875,163	Dec. 31	5843	1220	131	2228
Paper bag	C. Underwood	875,224	Dec. 31	5971	1243–4	131	2249
Paper-bag-making apparatus	O. Hesser	875,526	Dec. 31	6548	1366–9	131	2344
Paper box	G. W. Swift, Jr	875,011	Dec. 31	5557	1161	131	2180
Paper-coating machine	M. Cantine	875,241	Dec. 31	6002	1251–2	131	2254
Paper-cutter	C. L. Smith	875,630	Dec. 31	6657	1430–1	131	2379
Paper-feeding mechanism	H. B. Cooley	874,943	Dec. 31	5411	1131–2	131	2157
Paper-making machine	C. Eichhorn and C. W. Campbell	874,946	Dec. 31	5422	1133–4	131	2159
Paper-making machines. Calender-feed for rolls of	R. Smith	875,386	Dec. 31	6285	1310	131	2300
Paper manufacture	W. R. Green	875,068	Dec. 31	5665	1182	131	2198
Paper manufacture	W. R. Green	875,069	Dec. 31	5667	1182	131	2199
Paper-pulp from straw. Making	L. K. Böhm	875,315	Dec. 31	6147	.....	131	2276
Paper-sheet-handling machines. Automatic stop mechanism for	B. Gustafson	875,260	Dec. 31	6029	1257–9	131	2260
Patterns. Tailor's templet for making	J. F. Schoeppl	874,997	Dec. 31	5528	1153–4	131	2176
Pegging-machine	J. A. Caron	875,149	Dec. 31	5819	1215	131	2224
Pen and pencil holder	G. B. Graves	875,064	Dec. 31	5657	1180	131	2197
Penholder-guiding attachment	B. H. Collins	875,506	Dec. 31	6518	1359	131	2338

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Pencil-sharpener	W. F. Herdrich	874,961	Dec. 31	5457	1141	131	2163
Phonograph	E. L. Aiken	875,309	Dec. 31	6125	1278	131	2274
Picture-exhibiting machine	B. B. Cole	874,940	Dec. 31	5405	1130	131	2156
Picture film. Moving-	F. L. Dyer and D. Holden	875,333	Dec. 31	6187	1290	131	2282
Picture-holder	H. Meltzer and L. Karron	875,099	Dec. 31	5710	1190	131	2206
Pin: *See* Marking-pin. Safety-pin.							
Pipe: *See* Smoking-pipe.							
Pipe-coupling. Detachable	A. L. Shears	875,004	Dec. 31	5543	1157	131	2178
Pipe-hanger	I. G. Lane	875,533	Dec. 31	6567	1372	131	2346
Pipe, tube, and tubular structure	W. H. Wilkening	875,304	Dec. 31	6115	1276	131	2273
Pipes. Automatic regulator for steam-	F. W. Gove	874,959	Dec. 31	5454	1140	131	2163
Plow	W. Taylor	875,133	Dec. 31	5790	1209	131	2230
Plow attachment	J. Bingaman	875,407	Dec. 31	6327	1319	131	2307
Plows. Adjustable scraper attachment for disk	J. P. Fell	875,166	Dec. 31	5851	1222	131	2229
Pneumatic motor and speed-governor	T. Danquard. (Reissue)	12,736	Dec. 31	6973	1482	131	2395
Pole and like erecting machine	J. H. Green	875,065	Dec. 31	5658	1181	131	2197
Pool bowling-table	T. A. Upton	875,015	Dec. 31	5566	1163	131	2182
Portable furnace	G. E. Ruhmann	875,216	Dec. 31	5954	1240	131	2247
Post: *See* Fence-post.							
Potato-masher	D. E. Johnston	875,530	Dec. 31	6562	1370	131	2345
Powder-box	C. Bokay	875,497	Dec. 31	6501	1356	131	2335
Press: *See* Baling-press. Printing-press.							
Presses. Vibrating distributing-roller for platen-	J. H. Schussler	875,116	Dec. 31	5757	1200	131	2214
Printing apparatus. Ticket-	J. A. Walton	875,139	Dec. 31	5804	1211	131	2222
Printing leaves for books. Machine for	G. A. Walstead and S. Moe	875,638	Dec. 31	6872	1434–5	131	2381
Printing machine. Ticket-	W. C. Reynolds	875,460	Dec. 31	6424	1342–3	131	2326
Printing mechanism for adding-machines	W. F. Gatewood	875,343	Dec. 31	6206	1294–5	131	2285
Printing-press	G. W. Prouty	875,287	Dec. 31	6090	1271	131	2268
Printing-press gage attachment	J. T. Gay	875,060	Dec. 31	5650	1178	131	2196
Projectile	C. V. Wheeler and A. G. McKenna	875,023	Dec. 31	5579	1165	131	2184
Propeller	A. A. Anderson	875,484	Dec. 31	6474	1352	131	2331
Puller: *See* Beet-puller. Cork-puller.							
Pulley. Friction-clutch	L. H. Geisendorff	874,954	Dec. 31	5443	1138	131	2161
Pump. Air-	B. Hamann	874,960	Dec. 31	5456	1141	131	2163
Pump for vacuum-cleaners	A. Mestitz	875,446	Dec. 31	6404	1336	131	2319
Pump. Oil-	W. A. Odell	875,370	Dec. 31	6257	1305	131	2294
Pump-rod connection	W. E. Boyd	875,408	Dec. 31	6329	1319	131	2307
Puzzle novelty	L. J. Monahan	875,200	Dec. 31	5921	1234	131	2241
Rail and tie coupling	P. A. Olson	875,098	Dec. 31	5724	1193	131	2208
Rail-bond. Electric	F. M. Marcy	875,198	Dec. 31	5917	1233	131	2241
Rail-fastener	S. G. Petterson	875,100	Dec. 31	5727	1193–4	131	2209
Rail. Guard-	A. Morrison	875,203	Dec. 31	5925	1235	131	2242
Rail-joint	J. L. Fenn, Jr.	874,948	Dec. 31	5431	1134	131	2159
Rail-joint	J. O. Wrench	875,229	Dec. 31	5978	1245	131	2251
Railway and other vehicles. Brake for	A. J. Reid	875,108	Dec. 31	5738	1196–7	131	2211
Railway and other vehicles. Coupling for controlling rods of brakes between	A. J. Reid	875,109	Dec. 31	5740	1197	131	2212
Railway construction	C. R. Bowen	875,499	Dec. 31	6503	1357	131	2336
Railway-motors. Ventilation of electric	G. Gibbs	875,061	Dec. 31	5651	1179	131	2196
Railway-signal	P. H. Slaughter	875,123	Dec. 31	5770	1203–4	131	2216
Railway-switch	F. J. Reilly	875,110	Dec. 31	5741	1197–8	131	2212
Railway-switch frog	J. E. Graham	875,169	Dec. 31	5858	1223	131	2231
Railway-tie	E. T. Forrester	875,057	Dec. 31	5646	1177	131	2195
Railway-tie	C. S. Smallwood	875,125	Dec. 31	5772	1204–5	131	2217
Railway-tie and fastener. Metallic	J. G. Smith	875,127	Dec. 31	5774	1206	131	2217
Railway train-stop. Electric-	E. Woltmann	875,028	Dec. 31	5588	1167	131	2186
Railway-vehicles. Automatic coupling for	W. Thorn and M. F. Mann	875,134	Dec. 31	5794	1209–10	131	2230
Razor-blade protector. Safety-	F. B. King	875,274	Dec. 31	6061	1265	131	2265
Razor. Safety-	J. J. Steinharter	875,008	Dec. 31	5549	1159	131	2179
Razor. Safety-	P. K. Stern	875,130	Dec. 31	5786	1208	131	2218
Receptacle-closure. Safety	L. A. Wilson	875,481	Dec. 31	6468	1352	131	2330
Recorder: *See* Time-recorder.							
Reel: *See* Wire-reel.							
Refrigerator-building	F. B. Clayton and G. D. Spielberger.	874,939	Dec. 31	5401	1128–9	131	2156
Refuse-receptacle	E. E. Irish	875,270	Dec. 31	6049	1262	131	2263
Register: *See* Cash-register.							
Regulator: *See* Gas-regulator. Speed-regulator							
River-banks. Means for protecting	C. M. Westenhaver	875,480	Dec. 31	6460	1351	131	2330
River-beds and waterways. Means for causing an automatic scouring action for the removal of silt from	L. J. Audouin	875,487	Dec. 31	6479	1353	131	2332
Riveted joint	A. Hertwig	875,263	Dec. 31	6038	1260	131	2261
Roasting-pan	P. Scott	875,117	Dec. 31	5781	1200	131	2215
Roll-housing	R. Moon	875,201	Dec. 31	5922	1234–5	131	2242
Roller: *See* Wire-roller.							
Rolling tie-plates	A. Morrison	875,202	Dec. 31	5923	1235	131	2242
Roofing. Composite	G. F. Bishopric	875,041	Dec. 31	5619	1172	131	2190
Roofing. Flexible	F. C. Overbury	875,595	Dec. 31	6687	1398	131	2366
Roofing-strip	F. C. Overbury	875,099	Dec. 31	5725	1193	131	2209
Rope-clamp	L. D. Shryock	875,121	Dec. 31	5767	1202	131	2215
Rotary engine	M. Frauenthal	875,515	Dec. 31	6533	1362	131	2341
Rotary trimmer	A. C. Bowser	875,500	Dec. 31	6504	1357	131	2336
Rotating motor with rectilinear cylinders	A. Bagnulo	875,488	Dec. 31	6481	1353	131	2332
Rubber compound and material for use in making same	E. W. Strain	875,298	Dec. 31	6106	.....	131	2272
Rubber sandal	A. O. Bourn	875,144	Dec. 31	5811	1213	131	2223
Ruffling-machines. Tripper-blade support and guide for	R. G. Woodward	875,639	Dec. 31	6875	1435	131	2382

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Ruling-machine crimping attachment	A. Peterson	874,987	Dec. 31	5505	1149–50	131	2172
Safety-pin	H. Kaspar and J. Krejci	875,080	Dec. 31	5687	1187	131	2202
Salt-shaker	O. Kampfe	875,531	Dec. 31	6563	1371	131	2346
Sash-balance	F. Harbach	875,072	Dec. 31	5673	1183	131	2199
Sash clamp. Window-	J. S. Wallace	875,226	Dec. 31	5974	1244	131	2250
Sash-fastener	A. H. Hansen	875,521	Dec. 31	6542	1364	131	2343
Sash hanger or separable hinge. Storm-	F. Bursik	875,047	Dec. 31	5626	1174	131	2192
Sash-lock	L. Foery	875,338	Dec. 31	6195	1291	131	2283
Sash-lock. Duplex	W. Lipps	875,360	Dec. 31	6238	1301	131	2290
Saw-set	P. J. Leavens	875,441	Dec. 31	6396	1334	131	2318
Scale. Automatic grain-	T. J. Young	875,402	Dec. 31	6318	1317–18	131	2305
Scarf-pin-securing device	A. and B. Rainess	875,379	Dec. 31	6271	1308	131	2298
Scoop-handle	H. D. Clark	875,504	Dec. 31	6516	1359	131	2337
Scraper. Culinary	W. A. Johnston	875,435	Dec. 31	6386	1331	131	2315
Screen: *See* Window-screen.							
Screen or grating	M. Levy	875,191	Dec. 31	5906	1231	131	2239
Screw-clamp	A. N. Verdin	875,302	Dec. 31	6111	1275	131	2272
Seal-lock	H. B. Mackintosh	875,087	Dec. 31	5705	1189	131	2205
Sealing cap. Receptacle-	W. E. Heath	875,074	Dec. 31	5675	1184	131	2200
Seaming machine. Butt-	C. L. Turner	875,137	Dec. 31	5801	1210–11	131	2221
Secondary or storage battery	H. Rodman and G. M. Howard	875,213	Dec. 31	5960	.....	131	2246
Self-lubricating wheel	W. C. Fownes, Jr., and R. J. Gardner.	875,340	Dec. 31	6199	1292	131	2284
Sewed articles. Seam for	L. Onderdonk	875,594	Dec. 31	6686	1398	131	2366
Sewer-mold. Sectional	G. Georgenson	875,518	Dec. 31	6538	1363	131	2342
Sewing-machine	W. N. Parkes	875,615	Dec. 31	6777	1412	131	2373
Sewing-machine. Automatic embroidery or ornamental stitch	W. N. Parkes	875,624	Dec. 31	6820	1419–22	131	2377
Sewing-machine. Blindstitch	W. N. Parkes	875,599	Dec. 31	6704	1401	131	2368
Sewing-machine bobbin-case-threading mechanism	W. N. Parkes	875,621	Dec. 31	6806	1417–18	131	2376
Sewing-machine bobbin-controller. Automatic	W. N. Parkes	875,603	Dec. 31	6731	1405	131	2369
Sewing-machine bobbin-controlling mechanism	W. N. Parkes	875,613	Dec. 31	6767	1410	131	2373
Sewing machine. Buttonhole-	W. N. Parkes	875,598	Dec. 31	6697	1400–1	131	2367
Sewing machine. Buttonhole-	L. Onderdonk	875,602	Dec. 31	6720	1403–5	131	2369
Sewing machine. Chain-stitch	J. Twinem	875,592	Dec. 31	6683	1396–7	131	2365
Sewing-machine cover and chair. Combined	W. N. Parkes	875,471	Dec. 31	6453	1348	131	2327
Sewing-machine. Embroidery or ornamental stitch	W. N. Parkes	875,625	Dec. 31	6830	1422–3	131	2377
Sewing-machine. Embroidery or ornamental stitch	W. N. Parkes	875,626	Dec. 31	6834	1423–7	131	2377
Sewing-machine feeding mechanism	W. N. Parkes	875,611	Dec. 31	6758	1409–10	131	2372
Sewing-machine feeding mechanism	J. Bigelow	875,616	Dec. 31	6782	1413–14	131	2374
Sewing machine. Filled-bag-	C. H. Foster	875,314	Dec. 31	6135	1280–3	131	2276
Sewing machine. Filled bag-	W. E. Barnes	875,513	Dec. 31	6529	1362	131	2340
Sewing-machine folding guide	C. R. Morley	875,490	Dec. 31	6484	1354	131	2333
Sewing machine. Glove-tip-	J. Hudson	875,586	Dec. 31	6672	1392–3	131	2363
Sewing-machine guide and presser-foot	W. N. Parkes	875,577	Dec. 31	6642	1390	131	2360
Sewing-machine. Hemstitch	W. N. Parkes	875,600	Dec. 31	6710	1402	131	2368
Sewing-machine looper mechanism	W. N. Parkes	875,612	Dec. 31	6763	1410	131	2372
Sewing-machine looper mechanism	W. N. Parkes	875,623	Dec. 31	6816	1419	131	2376
Sewing-machine looper mechanisms. Lubricator for	W. N. Parkes	875,618	Dec. 31	6795	1415	131	2375
Sewing-machine looper movement	L. Onderdonk	875,627	Dec. 31	6844	1428	131	2378
Sewing-machine looper-operating mechanism	L. Onderdonk	875,593	Dec. 31	6684	1379	131	2366
Sewing-machine looper-operating mechanism	W. N. Parkes	875,671	Dec. 31	6961	1450	131	2393
Sewing-machine needle-actuating mechanism	W. N. Parkes	875,620	Dec. 31	6802	1416–17	131	2375
Sewing-machine needle-adjusting device	W. N. Parkes	875,606	Dec. 31	6742	1406	131	2370
Sewing-machine. Ornamental-stitch	W. N. Parkes	875,601	Dec. 31	6717	1403	131	2368
Sewing-machine. Ornamental-stitch	W. N. Parkes	875,604	Dec. 31	6735	1405–6	131	2369
Sewing-machine ruffler attachment	A. G. Lamb	875,607	Dec. 31	6744	1409	131	2370
Sewing-machine stop mechanism	W. N. Parkes	875,083	Dec. 31	5698	1183	131	2203
Sewing-machine take-up and needle-bar mechanism	W. N. Parkes	875,609	Dec. 31	6752	1408–9	131	2371
Sewing-machine thread-controlling mechanism	W. N. Parkes	875,608	Dec. 31	6748	1408	131	2371
Sewing-machine thread-controlling mechanism	W. N. Parkes	875,597	Dec. 31	6689	1398–1400	131	2367
Sewing-machine thread-cutting device	C. H. Foster	875,610	Dec. 31	6755	1409	131	2372
Sewing-machine tucking mechanism	W. N. Parkes	875,512	Dec. 31	6528	1361	131	2339
Sewing-machine work-clamp mechanism	W. N. Parkes	875,605	Dec. 31	6739	1406	131	2370
Sewing-machines. Apparatus for delivering filled bags to	C. H. Foster	875,622	Dec. 31	6810	1418–19	131	2376
Shackle for transmission-ropes	J. G. Scott	875,339	Dec. 31	6197	1292	131	2284
Shade fixture. Window-	S. T. Williams	875,293	Dec. 31	6100	1273	131	2270
Shade. Window-	E. B. Stephenson	875,027	Dec. 31	5586	1167	131	2185
Sharpener. Lawn-mower	J. Chesbro	875,129	Dec. 31	5784	1207	131	2218
Shears: *See* Lawn-shears.		875,411	Dec. 31	6339	1321	131	2308
Sheet-metal container	J. Brenzinger	875,317	Dec. 31	6140	1283–4	131	2277
Ships. Automatic leak-indicator for	C. Bergström	875,040	Dec. 31	5617	1172	131	2190
Shocker	R. Woods	875,031	Dec. 31	5593	1168	131	2187
Shoe-protector	E. Vaughan	875,560	Dec. 31	6611	1382	131	2354
Shovel: *See* Cultivator-shovel.							
Shovel A-frame and connection. Steam-	O. Hetlesaeter	875,431	Dec. 31	6382	1330	131	2314
Shovel-bucket	O. Hetlesaeter	875,432	Dec. 31	6383	1330	131	2315
Signal: *See* Block-signal. Railway-signal. Toy signal. Toy-railway signal.							
Signaling device. Safety car	G. W. Goddard	875,063	Dec. 31	5654	1179–80	131	2197
Signaling. Electric	D. M. Daboo	875,413	Dec. 31	6342	1322	131	2309
Signature-gatherer	C. L. Smith	875,384	Dec. 31	6279	1309	131	2299
Silicon carbid. Making	H. N. Potter	875,673	Dec. 31	6964	.....	131	2393
Silicon dioxid. Making	H. N. Potter	875,674	Dec. 31	6964	.....	131	2393
Silicon. Making	H. N. Potter	875,285	Dec. 31	6088	.....	131	2268
Silicon. Making	H. N. Potter	875,672	Dec. 31	6963	.....	131	2393
Silicon monoxid powder. Preparing	H. N. Potter	875,676	Dec. 31	6965	.....	131	2394
Silicon monoxid. Producing	H. N. Potter	875,286	Dec. 31	6089	.....	131	2268
Silicon monoxid. Producing	C. M. Faust and M. B. Grout	875,675	Dec. 31	6964	.....	131	2394
Skate. Roller-	L. D. Hyatt	875,165	Dec. 31	5849	1221	131	2229
Sled	W. J. La Fleur	875,268	Dec. 31	6046	1261	131	2263
Sled-runner attachment	J. E. Walston	874,969	Dec. 31	5471	1143	131	2166
Slicer. Fruit and vegetable		875,473	Dec. 31	6457	1349	131	2328

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Small-arms. Automatic safety appliance for locking the hammer and the sear of	J. Tambour	875,409	Dec. 31	6450	1347	131	2326
Smelter smoke and extracting values from ores or metallurgical waste products. Treating	S. S. Sörensen and G. C. Westby	875,222	Dec. 31	5964	1242–3	131	2249
Smelting. Electric	F. Creelman	874,944	Dec. 31	5415	1132	131	2158
Smoking-pipe	R. J. McMurray	875,300	Dec. 31	6255	1305	131	2294
Soda-water glasses. Holder for	W. Livingstone	875,666	Dec. 31	6950	1447	131	2391
Solder to sheet metal. Applying molten	W. G. Daugherty	875,507	Dec. 31	6520	1360	131	2338
Soldering apparatus. Can-	C. W. Sleeper	875,677	Dec. 31	6966	1480–1	131	2394
Sound-records. Making	I. Kitsee	874,966	Dec. 31	5468	1143	131	2166
Spark and contact-spark device. Combined jump-	C. R. Greuter	875,258	Dec. 31	6026	1257	131	2260
Speed-regulator	C. Schmitthenner	875,463	Dec. 31	6436	1345	131	2325
Spindle: *See* Spinning-spindle.							
Spinning-mule attachment	R. J. Harrington	875,655	Dec. 31	6913	1440–1	131	2387
Spinning-spindle and bearing therefor	C. H. Chapman	875,503	Dec. 31	6513	1359	131	2337
Spraying fruit-trees. Compound for	C. J. Herring	875,525	Dec. 31	6548	.....	131	2344
Spring-plank	R. E. Frame	875,058	Dec. 31	5647	1177	131	2195
Stamp. Time-	H. O. Jackson and H. W. Pidgeon	875,272	Dec. 31	6057	1264	131	2264
Steam-boiler	F. J. Hickey	875,349	Dec. 31	6217	1296	131	2287
Steam-engine	A. Siabloff	875,294	Dec. 31	6101	1273	131	2270
Steering-gear	G. G. Porter	874,989	Dec. 31	5510	1151	131	2173
Stenciling designs on post-cards, &c. Apparatus for	A. G. Pirkis	875,106	Dec. 31	5735	1195	131	2210
Stitch machine. Ornamental-	W. N. Parkes	875,619	Dec. 31	6798	1416	131	2375
Stitch machine. Zigzag and ornamental	W. N. Parkes	875,617	Dec. 31	6787	1414–15	131	2374
Stitching machine. Eyelet or embroidery	W. N. Parkes	875,614	Dec. 31	6772	1411	131	2373
Stocking-drier	P. J. Timberlake	875,135	Dec. 31	5797	1210	131	2230
Stoker. Automatic	H. E. Wallis	875,020	Dec. 31	5574	1164	131	2183
Stone-crusher	G. R. Starnes	875,633	Dec. 31	6904	1432	131	2380
Stop. Automatic non-reversing	S. F. Evans	875,336	Dec. 31	6192	1291	131	2283
Stopper: *See* Bottle-stopper.							
Stove base. Cook-	A. Darrow	875,245	Dec. 31	6007	1253	131	2256
Stoves. Electrical igniting device for gas-	V. C. de Ybarrondo	875,035	Dec. 31	5602	1170	131	2188
Stoves. Hot-water attachment for	M. P. Freebey and G. Moore	875,253	Dec. 31	6019	1255	131	2258
Stovepipe-fastener	G. O. Helvig	875,524	Dec. 31	6546	1365	131	2344
Street-indicator for cars	D. W. De Sylvia	875,569	Dec. 31	6629	1387	131	2357
Street-sweeper	F. E. Penfold	875,375	Dec. 31	6265	1307	131	2296
Stringed instrument with spring-hammers. Mechanical	P. Lochmann	875,193	Dec. 31	5910	1232	131	2240
Sulfur. Making chlorids of	C. E. Acker	875,231	Dec. 31	5980	1246	131	2251
Switch: *See* Electric switch. Railway-switch. Electric time-switch.							
Switch	C. N. Bergmann	875,406	Dec. 31	6326	1319	131	2306
Switch handle. Rotary-snap-	J. G. Peterson	875,376	Dec. 31	6266	1307	131	4297
Switch-operating apparatus	G. J. Beard	875,651	Dec. 31	6903	1439	131	2386
Table: *See* Folding table. Pool bowling-table.							
Table	D. W. Inman	875,269	Dec. 31	6047	1262	131	2263
Table-mat	H. M. Hinman	875,076	Dec. 31	5681	1185	131	2201
Tackle-block	W. H. Stam	875,387	Dec. 31	6288	1311	131	2300
Talking-machine	A. J. O'Neill	874,985	Dec. 31	5500	1148	131	2171
Talking-machine recorder and reproducer. Combined	T. H. Macdonald	874,973	Dec. 31	5481	1145	131	2168
Talking-machine sound-recorder	W. N. Hunter	875,352	Dec. 31	6223	1297	131	2288
Tank: *See* Flush-tank.							
Telegraph. Printing-	J. C. Barclay	875,643	Dec. 31	6884	1437	131	2383
Telegraph. Printing-	F. J. Haig	875,660	Dec. 31	6935	1446	131	2389
Telegraph receiver. Printing-	J. Burry	875,410	Dec. 31	6331	1320–1	131	2307
Telephone attachment	D. A. Case and W. H. Smith	875,151	Dec. 31	5823	1216	131	2225
Telephone-dictating system or apparatus	J. W. Kelly, Jr.	875,081	Dec. 31	5689	1187	131	2202
Telephone-transmitter	C. Umbach	875,138	Dec. 31	5803	1211	131	2221
Telephone-transmitter	H. P. Clausen	875,156	Dec. 31	5831	1217–18	131	2226
Thermic process	H. Goldschmidt	875,345	Dec. 31	6210	.....	131	2286
Thread-cutting tool. Taper-	B. Borden	875,043	Dec. 31	5621	1173	131	2191
Threshing-machine	J. McCorkell	875,550	Dec. 31	6596	1378	131	2351
Tie: *See* Railway-tie.							
Tie-shield	G. E. Figg	875,511	Dec. 31	6526	1361	131	2339
Tile. Conduit-	J. Balch	875,489	Dec. 31	6482	1354	131	2333
Tiling. Finishing member for	G. Ayres	875,038	Dec. 31	5612	1171	131	2189
Tiling. Finishing member for	G. Ayres	875,312	Dec. 31	6128	1279	131	2275
Time-recorder. Workman's	F. J. Tran and F. Cals	875,392	Dec. 31	6294	1312–13	131	2302
Time-recorder. Workman's	F. J. Tran and F. Cals	875,393	Dec. 31	6302	1313–14	131	2302
Tire. Pneumatic	C. E. Duryea	875,053	Dec. 31	5634	1176	131	2194
Tire protector. Pneumatic-	W. M. Jamieson	874,964	Dec. 31	5463	1142	131	2165
Tire. Resilient	I. W. Hodgson	875,351	Dec. 31	6220	1297	131	2288
Tire-tightener	J. H. Cameron	875,147	Dec. 31	5816	1214	131	2224
Tire-tool	G. Mohme and A. V. Hadlock	875,093	Dec. 31	5716	1191	131	2207
Tire-valve-stem protector	C. W. Lurtey	875,542	Dec. 31	6584	1375	131	2349
Tires. Implement for applying rubber	S. A. Oliva	874,984	Dec. 31	5498	1148	131	2171
Tongs. Blacksmith-	F. L. Casper	875,501	Dec. 31	6510	1358	131	2336
Tongue or pole. Wagon	S. G. Gay	875,575	Dec. 31	6638	1389	131	2360
Tool-handle	H. M. Crow	875,159	Dec. 31	5838	1219	131	2227
Toy-car coupling and buffer	W. R. Haberlin	875,519	Dec. 31	6540	1364	131	2342
Toy-railway signal and switch	W. R. Haberlin	875,429	Dec. 31	6378	1329	131	2314
Toy signal and train-stopping device	W. R. Haberlin	875,427	Dec. 31	6375	1328	131	2313
Toy telegraph-pole, base, and reel	W. R. Haberlin	875,428	Dec. 31	6376	1329	131	2313
Track-sander	J. M. Smith	875,631	Dec. 31	6858	1431	131	2379
Training device	V. Pilia and H. Booker	875,377	Dec. 31	6267	1307–8	131	2297
Transmission mechanism	S. C. Carter	875,321	Dec. 31	6157	1285	131	2278
Transom-lifter	T. Rolley	875,214	Dec. 31	5951	1239	131	2246
Transom-lifter	F. J. Chell	875,322	Dec. 31	6165	1285	131	2278
Trap: *See* Animal-trap. Basin-trap. Antisiphon-trap.							
Trap-setter	P. Engen	875,510	Dec. 31	6525	1361	131	2339
Tray. Serving-	C. D. Mitchell	875,549	Dec. 31	6595	1378	131	2351
Tread for steps. Safety-	W. S. Lamson	875,440	Dec. 31	6395	1333	131	2317

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Trimmer:							
See Rotary trimmer.							
Tripod-head	E. R. Wright	875,034	Dec. 31	5600	1160	131	2188
Trolley-harp	W. J. Murphy	874,979	Dec. 31	5491	1147	131	2170
Trolley-pole	F. M. Ross	875,215	Dec. 31	5952	1240	131	2246
Trolley-pole retriever	L. M. Perkins	875,596	Dec. 31	6688	1399	131	2367
Trough:							
See Water-trough.							
Truck. Car-	J. C. Barber	875,565	Dec. 31	6619	1385	131	2356
Truck. Car-	J. C. Barber	875,566	Dec. 31	6622	1385–6	131	2356
Truck for undertakers' use	W. U. Colthar	875,049	Dec. 31	5629	1175	131	2198
Truck side frame and journal-box	G. G. Floyd	874,949	Dec. 31	5432	1135–6	131	2160
Trunk-fastener	E. J. Davis	874,100	Dec. 24	5839	1219	131	2227
Truss	B. S. Sills	875,122	Dec. 31	5768	1203	131	2216
Tunneling-machine	S. A. Knowles and W. E. Carr	875,082	Dec. 31	5692	1187–8	131	2203
Tunneling-machine	J. P. Karns	875,664	Dec. 31	6046	1447	131	2391
Turbine	B. Stevens	875,131	Dec. 31	5788	1208	131	2219
Turbine-bucket	W. F. Rice	874,993	Dec. 31	5521	1152	131	2174
Turbine. Elastic-fluid	F. Samuelson	875,111	Dec. 31	5743	1198	131	2212
Turbine. Elastic-fluid	C. G. Curtis	875,244	Dec. 31	6006	1252	131	2255
Turbine-governing mechanism	J. G. Callan	874,936	Dec. 31	5391	1127	131	2155
Turbine-governing mechanism	C. H. Worsey	875,033	Dec. 31	5567	1166–9	131	2187
Turbine. Multiple-stage impact-	O. Junggren	874,965	Dec. 31	5464	1142	131	2165
Turbine. Steam-	C. F. Barth	875,644	Dec. 31	6801	1437	131	2384
Turbine-vane	J. F. M. Patitz	875,374	Dec. 31	6264	1307	131	2296
Turbines. Bearing for elastic-fluid	W. L. R. Emmet and O. Junggren	874,947	Dec. 31	5425	1134	131	2159
Turbines. Nozzle for elastic-fluid	H. S. Baldwin	874,923	Dec. 31	5373	1124	131	2151
Turning-machine	W. H. Berkheiser	875,495	Dec. 31	6490	1355	131	2334
Type-writing machine	W. B. Woodhouse	875,032	Dec. 31	5565	1168	131	2187
Type-writing machine	H. A. Briggs	875,239	Dec. 31	5994	1249–51	131	2254
Type-writing machine carriage-feed mechanism	W. F. Helmond	875,262	Dec. 31	6037	1259	131	2261
Type-writing machines. Carriage stop mechanism for	J. B. Secor	874,999	Dec. 31	5530	1154–5	131	2176
Typographic machine	F. X. Wagner	875,637	Dec. 31	6870	1434	131	2381
Umbrella	F. H. Richards	875,212	Dec. 31	5941	1238–9	131	2245
Umbrella. Folding	M. Bowden-Hammond	875,498	Dec. 31	6502	1356	131	2335
Upholstery. Apparatus for manufacturing	G. Meyer	875,547	Dec. 31	6592	1377	131	2351
Vacuum-producing apparatus	G. M. Finckel	875,252	Dec. 31	6017	1255	131	2258
Valve	C. A. Parsons	874,986	Dec. 31	5501	1149	131	2172
Valve. Automatic	H. Burnet	875,320	Dec. 31	6156	1284	131	2277
Valve. Automatic stop-	S. W. Peregrine	875,101	Dec. 31	5728	1194	131	2209
Valve for air-compressors. Rotary	J. G. Harris and T. P. Mattimore	875,347	Dec. 31	6213	1295	131	2286
Valve for stand-pipes	G. W. Meyer	875,277	Dec. 31	6066	1266	131	2265
Valve-gear	W. H. Sellew	875,092	Dec. 31	5540	1156–7	131	2177
Valve. High-pressure	H. Lentz and C. Bellens	875,538	Dec. 31	6578	1374	131	2348
Valve mechanism. Automatic shut-off-	J. A. Bishop	875,496	Dec. 31	6492	1356	131	2335
Valve-operating mechanism. Thermostatic-	J. Huebsch	875,176	Dec. 31	5874	1225	131	2233
Vault. Grave-	E Ruud	875,217	Dec. 31	5955	1240–1	131	2247
Vault-light construction	L. Williams and H. C. Brennecke	875,562	Dec. 31	6613	1383	131	2356
Vehicle fender	J. Baker	874,922	Dec. 31	5372	1123	131	2151
Vehicle sand-band	J. L. Schureman	875,556	Dec. 31	6604	1380	131	2353
Vehicle step	F. Bennett	874,927	Dec. 31	5380	1125	131	2153
Vehicles. Motive power for	J. G. Lohner	875,540	Dec. 31	6582	1374–5	131	2348
Vending-machine. Coin-controlled	M Slotkin	875,467	Dec. 31	6444	1346–7	131	2326
Ventilator:	E. F. Spaulding	875,128	Dec. 31	5776	1206–7	131	2217
See Window-ventilator.							
Ventilator	G. D. Spielberger	875,007	Dec. 31	5546	1158–9	131	2179
Vessels. Making enameled	H. T. McGregor	875,281	Dec. 31	6074	1268	131	2267
Vessels with fluid under pressure. Machine for filling and capping	J. M. Hicks	875,678	Dec. 31	6970	1481–2	131	2394
Vibrator	J. W. Swindell	875,132	Dec. 31	5789	1208	131	2219
Vise. Quick-acting	T. C. Prouty	874,992	Dec. 31	5517	1152	131	2174
Wagon	W. Hubbard	875,433	Dec. 31	6384	1331	131	2315
Wagon	F. Weber	875,477	Dec. 31	6462	1350	131	2329
Wagon-bolster	E. G. Hines	875,527	Dec. 31	6556	1369	131	2344
Waistband for garments	J. Kaplan	875,354	Dec. 31	6231	1300	131	2289
Washing and wringing machine. Combined	J. H. Lohr	875,361	Dec. 31	6240	1301–2	131	2291
Water-heater	R. B. Prien	874,991	Dec. 31	5517	1151	131	2174
Water-trough	I. S. Earhart	875,162	Dec. 31	5841	1219	131	2228
Wave-motor	E. J. Bissell	875,042	Dec. 31	5620	1173	131	2190
Weather-strip	W. H. Etter	875,250	Dec. 31	6013	1254	131	2257
Weather-strip	J. H. Woodbury	875,308	Dec. 31	6124	1278	131	2274
Well device. Oil-	V. H. Palm	875,372	Dec. 31	6260	1306	131	2295
Well-drilling tool	F. S. Freeland	875,516	Dec. 31	6535	1363	131	2341
Welt-slitting-machine knife	J. B. Hadaway	875,172	Dec. 31	5868	1224	131	2232
Welts. Machine for operating on	J. B. Hadaway	875,171	Dec. 31	5862	1223–4	131	2231
Wheel:							
See Self-lubricating wheel.							
Window-closure. Automatic	T. Lee	875,084	Dec. 31	5700	1189	131	2204
Window-screen	C. H. McGee	875,552	Dec. 31	6599	1379	131	2352
Window-screen. Extension	H. G. Foster	875,573	Dec. 31	6636	1388	131	2359
Window-ventilator	J. F. Sykes	875,300	Dec. 31	6108	1275	131	2272
Wire-netting machines. Cop and cop-holder for	A. E. Barlow	875,404	Dec. 31	6321	1318	131	2305
Wire-reel	B. F. Wasson	875,476	Dec. 31	6461	1350	131	2329
Wire-roller	J. H. Bauman	875,492	Dec. 31	6487	1354	131	2334
Woodworking-machine	D. S. Courtney	875,328	Dec. 31	6177	1287	131	2280
Wrench	M. Clevenstine	875,048	Dec. 31	5628	1175	131	2192
Writing-machine	E. B. Hess	875,430	Dec. 31	6379	1329–30	131	2314
Yokes. Shock-absorber for neck-	P. E. Breckheimer	875,146	Dec. 31	5815	1214	131	2224
Zinc and lead sulfid ores. Treating	A. H. Imbert	875,578	Dec. 31	6644	.....	131	2361
Zinc ores (calamins, oxids, silicates) by the precipitation process. Metallurgical method of treating oxidized	A. H. Imbert	875,580	Dec. 31	6650	.....	132	2361
Zinciferous ores and metallurgical products. Treatment of	J. H. Gillies	875,424	Dec. 31	6367	1327	131	2312

DESIGNS.

Design.	Name.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Badge or emblem	E. R. Seppard	38,964	Dec. 31	131	2396
Cycle frame. Motor-	P. Kelecom	38,977	Dec. 31	131	2398
Dolly	R. Gair	38,968	Dec. 31	131	2396
Finger-ring or similar article	J. L. Herzog	38,966	Dec. 31	131	2396
Flask	T. R. Harper	38,970	Dec. 31	131	2397
Gas-heater	A. T. Wehrle	38,973	Dec. 31	131	2397
Glass. Sheet	F. Woltjen	38,979	Dec. 31	131	2398
Glass vessel	A. Buskey	38,969	Dec. 31	131	2396
Hinge-leaf	W. J. Neidl	38,975	Dec. 31	131	2397
Lamps. Ceiling fixture for electric	J. H. Goehst	38,972	Dec. 31	131	2397
Percolator stand and lamp	E. A. Gutermann	38,971	Dec. 31	131	2397
Pin or button head	D. P. Barry	38,965	Dec. 31	131	2396
Post-card	J. Kramer	38,967	Dec. 31	131	2396
Range	J. Becvar	38,974	Dec. 31	131	2397
Scale-frame	G. W. Cope	38,976	Dec. 31	131	2398
Seat and cabinet. Combined	V. D. Burnam	38,978	Dec. 31	131	2398

TRADE-MARKS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Official Gazette. Page.
Abrasive material	Abrasive Material Co	66,810	Dec. 31	131	2411
Accordions	Buegeleisen & Jacobson	66,856	Dec. 31	131	2413
Accordions	W. Spaethe	66,886	Dec. 31	131	2414
Antiseptic preparation	American Chemical & Textile Coloring Co.	66,780	Dec. 31	131	2411
Automobiles	Stevens-Duryea Company	66,790	Dec. 31	131	2411
Baking-powder	Sea Foam Baking Powder Co	66,786	Dec. 31	131	2411
Beef. Corned and roast	Libby, McNeill & Libby	66,800	Dec. 31	131	2411
Beer	Black Hills Brewing Co	66,855	Dec. 31	131	2413
Beer	Stark-Tuscarawas Breweries Co	66,868	Dec. 31	131	2413
Beer. Lager-	Louis Bergdoll Brewing Company.	66,864	Dec. 31	131	2413
Beverage. Carbonated	C. T. Piranio	66,884	Dec. 31	131	2413
Bitters. Stomach-	A. Fischer	66,835	Dec. 31	131	2412
Boots and shoes. Leather	Haynes, Sparrell & Co	66,877	Dec. 31	131	2413
Brick. Fire-	Duparquet, Huot & Moneuse Co	66,858	Dec. 31	131	2413
Brushes. Tooth-	Florence Manufacturing Company.	66,814	Dec. 31	131	2412
Butter-scotch	Kerr Brothers	66,799	Dec. 31	131	2411
Candies, glacé fruits, chocolates, &c	Charles & Co	66,792	Dec. 31	131	2411
Car sand-boxes. Railway-	J. G. Brill Company	66,825	Dec. 31	131	2412
Carpet-sweepers	Bissell Carpet Sweeper Company	66,818	Dec. 31	131	2412
Charcoal	Clifford Bros	66,831	Dec. 31	131	2412
Chemical. Certain	G. W. Gilbert	66,787	Dec. 31	131	2411
Chemical preparations. Certain	Faxon Williams & Faxon	66,783	Dec. 31	131	2411
Chocolate	J. R. Elfreth	66,794	Dec. 31	131	2411
Cigars	Starlight Brothers	66,887	Dec. 31	131	2414
Cloaks, outer suits, and skirts	Landesman Hirscheimer Company.	66,880	Dec. 31	131	2413
Coats	McKibbin, Driscoll & Dorsey	66,883	Dec. 31	131	2413
Coats, overcoats, vests, and trousers	L. Adler Bros. & Co	66,879	Dec. 31	131	2413
Coke	New England Gas & Coke Company.	66,846	Dec. 31	131	2412
Cream. Toilet	Bruno H. Goll Chemical Works	66,838	Dec. 31	131	2412
Cutlery. Certain	Wester Bros	66,854	Dec. 31	131	2413
Disinfectant and antiseptic preparation	J. Blan	66,782	Dec. 31	131	2411
Drawers. Ladies'	H. P. Wheeler	66,888	Dec. 31	131	2414
Exercising apparatus. Certain	J. E. Garratt	66,875	Dec. 31	131	2413
Figs	W. Hills, Jr	66,797	Dec. 31	131	2411
Flour. Wheat-	Regina Flour Mill Co	66,788	Dec. 31	131	2411
Flour. Wheat-	Regina Flour Mill Co	66,789	Dec. 31	131	2411
Flour. Wheat-	Elmore Mill Co	66,813	Dec. 31	131	2412
Food. Stock and poultry	Pennsylvania Primo Feed Company.	66,804	Dec. 31	131	2411
Furniture-polish	R. Schulze	66,850	Dec. 31	131	2413
Gin	A. Forbes	66,795	Dec. 31	131	2411
Grape-juice	Boericke & Tafel	66,870	Dec. 31	131	2413
Grape-juice	Royal Grape Juice Co	66,885	Dec. 31	131	2413
Hats. Fur	Crofut & Knapp Co	66,857	Dec. 31	131	2413
Hose and packing	Morgan & Wright	66,889	Dec. 31	131	2414
Jewelry. Certain	C. S. Crossman & Co	66,873	Dec. 31	131	2413
Knitted, netted, and lace drawers. Ladies'	H. P. Wheeler	66,891	Dec. 31	131	2414
Locks and keys	Smith & Egge Mfg. Co	66,816	Dec. 31	131	2412
Magazine	Industry Publishing Company	66,863	Dec. 31	131	2413
Medicine. Certain	Fischer Chemical Importing Co	66,836	Dec. 31	131	2412
Medicine. Certain	H. E. Bucklen & Company	66,839	Dec. 31	131	2412
Medicine. Certain	P. P. Miniotte	66,844	Dec. 31	131	2412
Medicine. Certain	Miol Manufacturing Co	66,845	Dec. 31	131	2412
Metal articles. Certain	A. Dewsbury	66,833	Dec. 31	131	2412

TRADE-MARKS—Continued.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
Nail-sets and punches	Massachusetts Saw Works	66,785	Dec. 31	131	2411
Needles. Certain	Thos. Harper & Sons	66,869	Dec. 31	131	2413
Periodical	Hale Publishing Co	66,861	Dec. 31	131	2413
Pills for female complaints	H. B. Taylor	66,852	Dec. 31	131	2413
Planes	Stanley Rule & Level Company	66,827	Dec. 31	131	2412
Powder. Tooth-	E. S. Estlingen	66,834	Dec. 31	131	2412
Precious-metal goods. Certain	Jos. Mayer & Bros	66,878	Dec. 31	131	2413
Publication. Weekly	J. A. Gavin	66,876	Dec. 31	131	2413
Remedies for ague and malarial fevers	W. R. Burgoyne	66,830	Dec. 31	131	2413
Remedies. Obesity	Marmola Company	66,843	Dec. 31	131	2413
Remedy for rheumatism, neuralgia, and chills	H. H. Harris	66,841	Dec. 31	131	2412
Remedy for syphilis	W. I. Deariso	66,832	Dec. 31	131	2412
Remedy. Skin	O. P. Goerg	66,837	Dec. 31	131	2412
Roofing and sheathing. Paper and felt for	American Sash & Door Co	66,817	Dec. 31	131	2412
Rubber and fabric hose	Fabric Fire Hose Company	66,874	Dec. 31	131	2412
Rubber fruit-jar rings	Consolidated Rubber Company	66,872	Dec. 31	131	2413
Rubber goods. Certain	Pacific Coast Rubber Co	66,866	Dec. 31	131	2413
Rubber goods. Certain	Pacific Coast Rubber Co	66,867	Dec. 31	131	2413
Rubber hoof-pads	Morgan & Wright	66,865	Dec. 31	131	2413
Sauce. Worcestershire	Alart & McGuire	66,890	Dec. 31	131	2413
Sedative. Antispasmodic expectorant	H. Reife	66,848	Dec. 31	131	2414
Soap	Master Soap Co	66,882	Dec. 31	131	2412
Soap. Camphorated liquid	Flake Brothers Refining Co	66,859	Dec. 31	131	2413
Soap. Tooth-	J. S. Ramage	66,847	Dec. 31	131	2413
Soaps	H. B. Claflin Company	66,860	Dec. 31	131	2412
Surgical goods. Certain	M. Lindsay Rubber Manufacturing Company.	66,881	Dec. 31	131	2413
Suspension devices. Frictional	Hartford Suspension Company	66,862	Dec. 31	131	2413
Syrup	Mansfield, Witham & Co	66,801	Dec. 31	131	2411
Tapestry goods. Certain	A. T. Abbott & Company	66,828	Dec. 31	131	2412
Textiles. Certain	China & Japan Trading Company	66,819	Dec. 31	131	2412
Textiles. Certain	China & Japan Trading Company	66,820	Dec. 31	131	2412
Textiles. Certain	China & Japan Trading Company	66,821	Dec. 31	131	2412
Textiles. Certain	China & Japan Trading Company	66,822	Dec. 31	131	2412
Textiles. Certain	China & Japan Trading Company	66,823	Dec. 31	131	2412
Thread for machine-sewing and lace-making	E. L. Waldo	66,853	Dec. 31	131	2413
Toilet preparation. Certain	A. J. Kahn	66,784	Dec. 31	131	2411
Tonic. Muscular and nerve	Samural Company	66,849	Dec. 31	131	2412
Tonics for rheumatism	Sharp & Dohme	66,851	Dec. 31	131	2413
Tubes. Collapsible	Lichterman & Judt	66,842	Dec. 31	131	2412
Valves	P. Beiersdorf & Co	66,829	Dec. 31	131	2412
Washing-machines for laundry purposes	Homestead Valve Manufacturing Company.	66,824	Dec. 31	131	2412
Water. Natural mineral	H. F. Brammer Manufacturing Company.	66,840	Dec. 31	131	2412
Water-purifying composition	Clysmic Spring Co	66,871	Dec. 31	131	2413
Whisky	Auto Radium Co	66,781	Dec. 31	131	2411
Whisky	Gooderham & Worts	66,796	Dec. 31	131	2411
Whisky	A. Hirschman & Co	66,798	Dec. 31	131	2411
Whisky	O'Bryan Bros	66,802	Dec. 31	131	2411
Whisky	O'Bryan Bros	66,803	Dec. 31	131	2411
Whisky	Records & Goldsborough	66,805	Dec. 31	131	2411
Whisky	W. E. Seel	66,806	Dec. 31	131	2411
Whisky	Stein Brothers	66,807	Dec. 31	131	2411
Whisky	Vogt-Applegate Company	66,808	Dec. 31	131	2411
Whisky	Wigglesworth Bros. Co	66,809	Dec. 31	131	2411
Whisky and gin	H. Campe & Co	66,812	Dec. 31	131	2412
Whisky, gin, and brandy	Bluthenthal & Bickart	66,791	Dec. 31	131	2411
Wine	Edw. B. Bruce Co	66,793	Dec. 31	131	2411
Wine. Port-	California Wine Association	66,811	Dec. 31	131	2411
Wire screens and screen doors	Offley, Forrester & Co	66,815	Dec. 31	131	2412
	Neuhaus Mfg. Co	66,826	Dec. 31	131	2412

LABELS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
"Bunte Brothers." (For Chocolate)	Bunte Brothers	13,956	Dec. 31	131	2415
"Delightful." (For Scouring-Soap)	J. Gutradt	13,960	Dec. 31	131	2415
"Munson's Ye-Ti-Va Remedy." (For Medicine)	J. G. Munson	13,959	Dec. 31	131	2415
"Punch-I-Nello." (For Soft Drinks)	W. E. Borden	13,955	Dec. 31	131	2415
"Royal Cake Icing." (For Cake-Icing)	Royal Pure Food Co	13,957	Dec. 31	131	2415
"Sinn Fein." (For Cigars)	E. E. Kirkland & Co	13,954	Dec. 31	131	2415
"Tanaline Cream Lotion." (For a Lotion for the Complexion)	Damascus Chemical Co	13,958	Dec. 31	131	2415
"The Grote Billiard Balls." (For Billiard-Balls)	Newark Billiard Ball & Mfg. Co	13,962	Dec. 31	131	2415
"The New Grote Pool Balls." (For Pool-Balls)	Newark Billiard Ball & Mfg. Co	13,963	Dec. 31	131	2415
"Whitman's Kilrat Exterminator." (For Rat-Exterminator)	J. F. Whitman	13,961	Dec. 31	131	2415

PRINTS.

Title.	Name.	No.	Date.	Official Gazette. Vol.	Page.
"Men's and Boys' Apparel." (For Men's and Boys' Apparel)	H. C. Lytton	2,188	Dec. 31	131	2415

TRADE-MARKS.

(REGISTRATION APPLIED FOR.)

Title.	Name.	Serial No.	Date.	Official Gazette. Vol.	Page.
Augers, auger-bits, reamers, gimlets, &c	Norvell - Shapleigh Hardware Company.	14,612	Dec. 31	131	2400
Beer	American Brewing Co	30,948	Dec. 31	131	2406
Beer	Stark-Tuscarawas Breweries Co	31,020	Dec. 31	131	2407
Bitters. Orange	Tanqueray Gordon & Co	31,074	Dec. 31	131	2407
Blue. Ultramarine	Vereinigte Ultramarinefabriken Aktien - Gesellschaft vormals Leverkus, Zeltner & Consorten, in Köln am Rhein.	29,797	Dec. 31	131	2403
Boots and shoes. Leather	Heywood Boot & Shoe Company	31,234	Dec. 31	131	2409
Boots and shoes. Leather	H. E. Smith & Son	31,326	Dec. 31	131	2410
Boring-bit braces, screw-drivers, nail-sets, &c	Norvell - Shapleigh Hardware Company.	14,628	Dec. 31	131	2400
Canned fish	J. Frye & Co	29,529	Dec. 31	131	2403
Cement. Portland	Penn-Allen Portland Cement Co	30,810	Dec. 31	131	2406
Chains for personal adornment	D. F. Briggs Co	31,230	Dec. 31	131	2409
Cigars, cigarettes, cheroots, stogies, and tobacco	Becker Bros	30,152	Dec. 31	131	2404
Coal	Peabody Coal Company	29,951	Dec. 31	131	2404
Coats, vests, pants, and overcoats	H. M. Lindenthal and Sons	30,770	Dec. 31	131	2406
Coffee	W. A. Jenkinson & Co	31,235	Dec. 31	131	2409
Coffee and tea	Shapleigh Coffee Company	31,181	Dec. 31	131	2406
Coffee and tea	Shapleigh Coffee Company	31,335-7	Dec. 31	131	2410
Coffee and tea	Shapleigh Coffee Company	31,390	Dec. 31	131	2410
Collars and cuffs	W. Heymann	31,038	Dec. 31	131	2407
Cosmetic preparations	A. Mislig	30,909	Dec. 31	131	2406
Cotton piece goods	C. Whitman & Co	30,860	Dec. 31	131	2406
Cream and hair-lotions. Skin and cold	S. Armitage	30,435	Dec. 31	131	2405
Cream. Massage and face	Wheeler Manufacturing Co	29,579	Dec. 31	131	2403
Drying cotton stock, wool, hair, rags, &c. Machinery for	Philadelphia Drying Machinery Company.	31,282	Dec. 31	131	2409
Dyestuffs	Badische Anilin & Soda Fabrik	30,801	Dec. 31	131	2406
Fence. Wire	Janesville Barb Wire Company	31,229	Dec. 31	131	2409
Fire-extinguishing apparatus	American-La France Fire Engine Co.	31,355	Dec. 31	131	2410
Fire-extinguishing apparatus, chemical engines, and hand-grenades	American-La France Fire Engine Co.	31,179	Dec. 31	131	2408
Flour. Wheat-	Hunter Brothers Milling Company.	31,278	Dec. 31	131	2409
Fuel. Artificial	Standard Fuel Company	31,209	Dec. 31	131	2408
Glass tiles	Monarch Tile Co	30,130-1	Dec. 31	131	2404
Gloves and cloaks. Kid	Perlmutters	30,030	Dec. 31	131	2404
Gloves. Kid	Greenhut & Company	31,094	Dec. 31	131	2407
Grains. Brewers' wet and dried	Farmers Feed Company	31,231	Dec. 31	131	2409
Gum. Chewing-	Common Sense Gum Co	30,443	Dec. 31	131	2405
Hair preparations	A. B. Bellman & Co	30,362	Dec. 31	131	2405
Hair-restorative	G. Greamba	31,147	Dec. 31	131	2408
Hair-tonic	J. Ey Company	29,935	Dec. 31	131	2404
Hair-tonic	H. Lay	30,023	Dec. 31	131	2399
Hammers	Norvell - Shapleigh Hardware Company.	14,614	Dec. 31	131	2400
Harness, horse-collars, and saddles	Pierson & Hough Co	28,213	Dec. 31	131	2402
Hatchets and axes	Supplee Hardware Company	25,336	Dec. 31	131	2402
Heat or temperature regulators	Fulton Company	30,603	Dec. 31	131	2405
Hoes, spades, shovels, picks, wedges, &c	Chillington Tool Co	23,753	Dec. 31	131	2401
Hosiery	J. L. Brandeis and Sons	31,210	Dec. 31	131	2409
Ice-cream, ices, sherbets, and frozen custards	Alta Vista Creamery Company	30,272	Dec. 31	131	2404
Indigo and indigo preparations, coal-tar dyes, &c	Badische Anilin & Soda Fabrik	29,058	Dec. 31	131	2402
Ink. Printing-	Ault & Wiborg Co	30,466	Dec. 31	131	2405
Knit hosiery and underwear	M. & C. Mayer	30,501	Dec. 31	131	2405
Knitted underwear	Lord & Taylor	80,313	Dec. 31	131	2404
Lead, plumbago, graphite, and foundry-facings. Black	F. V. Morse	22,277	Dec. 31	131	2401
Liquid-dispensing apparatus	J. Bowers	30,638	Dec. 31	131	2405
Lotions. Face-	Waterbury Chemical Company	2,072	Dec. 31	131	2399
Macaroni and vermicelli	E. Bisi	31,308	Dec. 31	131	2410
Machine lathe, planing, and slotting tools, &c	N. K. Peace	19,386	Dec. 31	131	2400
Mandolins, guitars, banjos, and parts of same	Bugeleisen & Jacobson	31,263	Dec. 31	131	2409
Mange in cattle, horses, and dogs. Dressing for	W. Cooper & Nephews	29,604	Dec. 31	131	2403
Matches	Nitedals Taendstikfabrik	24,181	Dec. 31	131	2401
Medical compounds containing iron	M. Gering	31,057	Dec. 31	131	2407
Medicinal and toilet cologne	Robinson Bros. & Company	31,193	Dec. 31	131	2408
Mowers. Lawn-	Norvell - Shapleigh Hardware Company.	14,618	Dec. 31	131	2400
Musical-instrument strings	Kay Graham Co	30,158	Dec. 31	131	2404

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TRADE-MARKS—Continued.

(REGISTRATION APPLIED FOR.)

Title.	Name.	Serial No.	Date.	Official Gazette. Vol.	Page.
Nail-polishing paste	Miller Brothers	31,022	Dec. 31	131	2407
Nickel salt	Waldberg & Co., G. m. b. H.	23,919	Dec. 31	131	2401
Oil. Salad, olive, cotton, &c.	Strohmeyer & Arpe Company	30,331	Dec. 31	131	2401
Oils and lubricants. Lubricating	Chemische Werke Hansa Gesellschaft mit beschränkter Haftung.	29,435	Dec. 31	131	2403
Oils, greases, and pastes. Lubricating	L. Sonneborn Sons	30,913	Dec. 31	131	2406
Paints. Mixed	Atlantic Paint Company	30,554	Dec. 31	131	2405
Paper bags	Union Bag & Paper Company	29,411	Dec. 31	131	2402
Paper. Roofing	F. W. Bird & Son	31,345	Dec. 31	131	2410
Pencils and oil-chalk crayons. Lead	Johann Froeschels Lyra-Bleistiftfabrik.	14,601	Dec. 31	131	2400
Pencils. Lead and colored	A. W. Faber	20,480	Dec. 31	131	2401
Perfumes	Foote and Jenks	31,034	Dec. 31	131	2407
Picks, grub-hoes, trowels, shovels, and spades	Norwell-Shapleigh Hardware Company.	14,617	Dec. 31	131	2400
Pills for blood and nerve diseases	W. T. Hanson Co	13,354	Dec. 31	131	2399
Pills, granules, tablets, horse balls, &c	Norwich Pharmacal Company	19,859	Dec. 31	131	2400
Pliers, pincers, wrenches, and putty-knives	Norwell-Shapleigh Hardware Company.	14,615	Dec. 31	131	2400
Porter	C. Kern Brewing Co	23,946	Dec. 31	131	2401
Powders, bitters, liniment, &c.	J. H. Snyder Med. Co	30,848	Dec. 31	131	2400
Ratchets for operating drills, taps, and wrenches	Keystone Mfg. Co	31,322	Dec. 31	131	2410
Remedies for constipation	J. Grünthal	30,736	Dec. 31	131	2405
Remedies for indigestion and dyspepsia	Frederick Stearns & Co	30,714	Dec. 31	131	2405
Remedy for hog and chicken cholera, gapes, thumps, &c	Flournoy and Johnson	29,000	Dec. 31	131	2402
Remedy for pigs. Cramp	T. Engelhard	23,914	Dec. 31	131	2401
Remedy for urinary diseases	Actien-Gesellschaft für Anilin-Fabrikation.	29,116	Dec. 31	131	2402
Rules. Wood	Joseph F. McCoy Co	29,417	Dec. 31	131	2402
Saddles, harness, horse-collars, whips, &c.	L. Frank Saddlery Co	29,546	Dec. 31	131	2403
Sheet metal	F. A. Howell	26,947	Dec. 31	131	2402
Shirt and dress waists	Frankenthal Brothers Company	31,033	Dec. 31	131	2407
Shovels, spades, scoops, and hammers	Supplee Hardware Company	25,335	Dec. 31	131	2402
Skates. Ice	Norwell-Shapleigh Hardware Company.	14,616	Dec. 31	131	2400
Soap	Chemische Werke Hansa Gesellschaft mit beschränkter Haftung.	29,434	Dec. 31	131	2403
Soap. Abrasive scouring	Cudahy Packing Co	31,291	Dec. 31	131	2410
Soap. Medicinal and toilet	Robinson Bros. & Company	31,195	Dec. 31	131	2408
Soaps	Royal Solvent Co	31,197	Dec. 31	131	2408
Soaps. Toilet	J. B. Williams Company	30,757	Dec. 31	131	2406
Sorghum and syrup	Hulman & Co	31,112	Dec. 31	131	2408
Starch preparations	Amalgamated Gum Company	29,574	Dec. 31	131	2403
Stoves and ranges	Bridge & Beach Manufacturing Company.	31,124	Dec. 31	131	2408
Suspenders	Ohio Suspender Company	30,996	Dec. 31	131	2407
Sweeping compound. Chemical	C. D. Witte	29,394	Dec. 31	131	2402
Talking-machine recording and reproducing sound-boxes	Victor Talking Machine Company	25,713	Dec. 31	131	2402
Talking-machines and their supplies	General Phonograph Supply Co	30,975	Dec. 31	131	2407
Threading and cutting-off machines	Armstrong Mfg. Co	31,255	Dec. 31	131	2409
Tonic laxatives	F. H. Green	31,113	Dec. 31	131	2406
Tonics or bitters. Stomach	P. De Vecchi	20,268	Dec. 31	131	2400
Turpentine substitute	Patton Paint Company	30,618	Dec. 31	131	2405
Vegetables and fruit. Dehydrated	American Dehydrating Company	30,818	Dec. 31	131	2406
Washing-machines	Eagle Tool Co	31,035	Dec. 31	131	2407
Washing-powder for laundry purposes	L. F. Mangis	29,768	Dec. 31	131	2403
Whisky	Geo. W. Torrey Company	27,573	Dec. 31	131	2402
Wine. Champagne	Chandon et Co	7,811	Dec. 31	131	2400
Wine. Champagne	Chandon et Co	24,607-10	Dec. 31	131	2401
Worsteds. Textile	Prudential Worsted Company	30,882	Dec. 31	131	2400

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